

NM OIL CONSERVATION

ARTESIA DISTRICT

JUN 06 2017

OCD Artesia

RECEIVED

Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

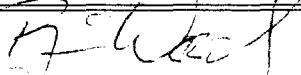
FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. SHL: fee BHL: NMNM-117120
1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator MATADOR PRODUCTION COMPANY		7. If Unit or CA Agreement, Name and No. will comm. w/ fee lease
3a. Address 5400 LBJ FREEWAY, SUITE 1500 DALLAS, TX 75240		8. Lease Name and Well No. Zach McCormick Fed Com 221H 317797
3b. Phone No. (include area code) 972 371 5241		9. API Well No. 30-015- 44241
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 712' FNL & 291' FWL 18-24S-29E At proposed prod. zone 331' FNL & 240' FEL 18-24S-29E		10. Field and Pool, or Exploratory PIERCE CROSS., WOLFCAMP, NMLC 98220
14. Distance in miles and direction from nearest town or post office* 2 AIR MILES E OF MALAGA, NM		11. Sec., T. R. M. or Blk. and Survey or Area SHL: Lot 1 18-24S-29E NMPM BHL: NENE 18-24S-29E NMPM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) SHL: 291' BHL: 240'	16. No. of acres in lease BLM lease = 520 acres comm. area = 319.28 acres	17. Spacing Unit dedicated to this well Lots 1 & 2, E2NW, & NE4 18-24S-29E
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. SHL: 30' (Zach 201H) BHL: 805' (ditto)	19. Proposed Depth TVD: 10550' MD: 15432'	20. BLM/BIA Bond No. on file BLM NMB-001079
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 2953' UNGRADED	22. Approximate date work will start* 12/01/2016	23. Estimated duration 3 MONTHS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

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

25. Signature 	Name (Printed/Typed) BRIAN WOOD (PHONE: 505 466-8120)	Date 08/13/2016
---	--	--------------------

Title CONSULTANT (FAX: 505 466-9682)

Approved by (Signature) 	Name (Printed/Typed) Cedy R. Lantier	Date 06/02/17
Title FIELD MANAGER	Office BLM-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.

(Continued on page 2)

*(Instructions on page 2)

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

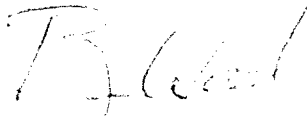
6.7.17 RWP

Matador Production Company
Zach McCormick Fed Com 221H
SHL 712' FNL & 291' FWL Sec. 18
BHL 331' FNL & 240' FEL Sec. 18
T. 24 S., R. 29 E., Eddy County, NM

SURFACE PLAN PAGE 5

CERTIFICATION

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U. S. C. 1001 for the filing of false statements. Executed this 13th day of August, 2016.



Brian Wood, Consultant

Permits West, Inc.

37 Verano Loop, Santa Fe, NM 87508

(505) 466-8120

FAX: (505) 466-9682

Cellular: (505) 699-2276

Field representative will be:

Sam Pryor, Senior Staff Landman

Matador Production Company

5400 LBJ Freeway, Suite 1500

Dallas TX 75240

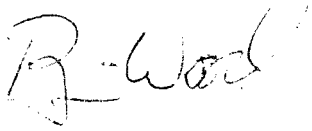
Phone: (972) 371-5241

FAX: (214) 866-4841

August 13, 2016

To Who it May Concern regarding Zach McCormick Fed Com 221H:

Matador Resources Company has a private surface owner agreement with Evelyn Kay Walker Faulk (P. O. Box 115, Malaga NM 88263) for the existing road in NENE Section 13, T. 24 S., R. 28 E.; Eddy County, NM and with Roy Burkham (P. O. Box 84, Malaga NM 88263) for the existing road and existing pad in Lot 1 Section 18, T. 24 S., R. 29 E., Eddy County, NM.

A handwritten signature in black ink, appearing to read "B. Wood". The signature is stylized with a large, looped initial "B" and a cursive "Wood".

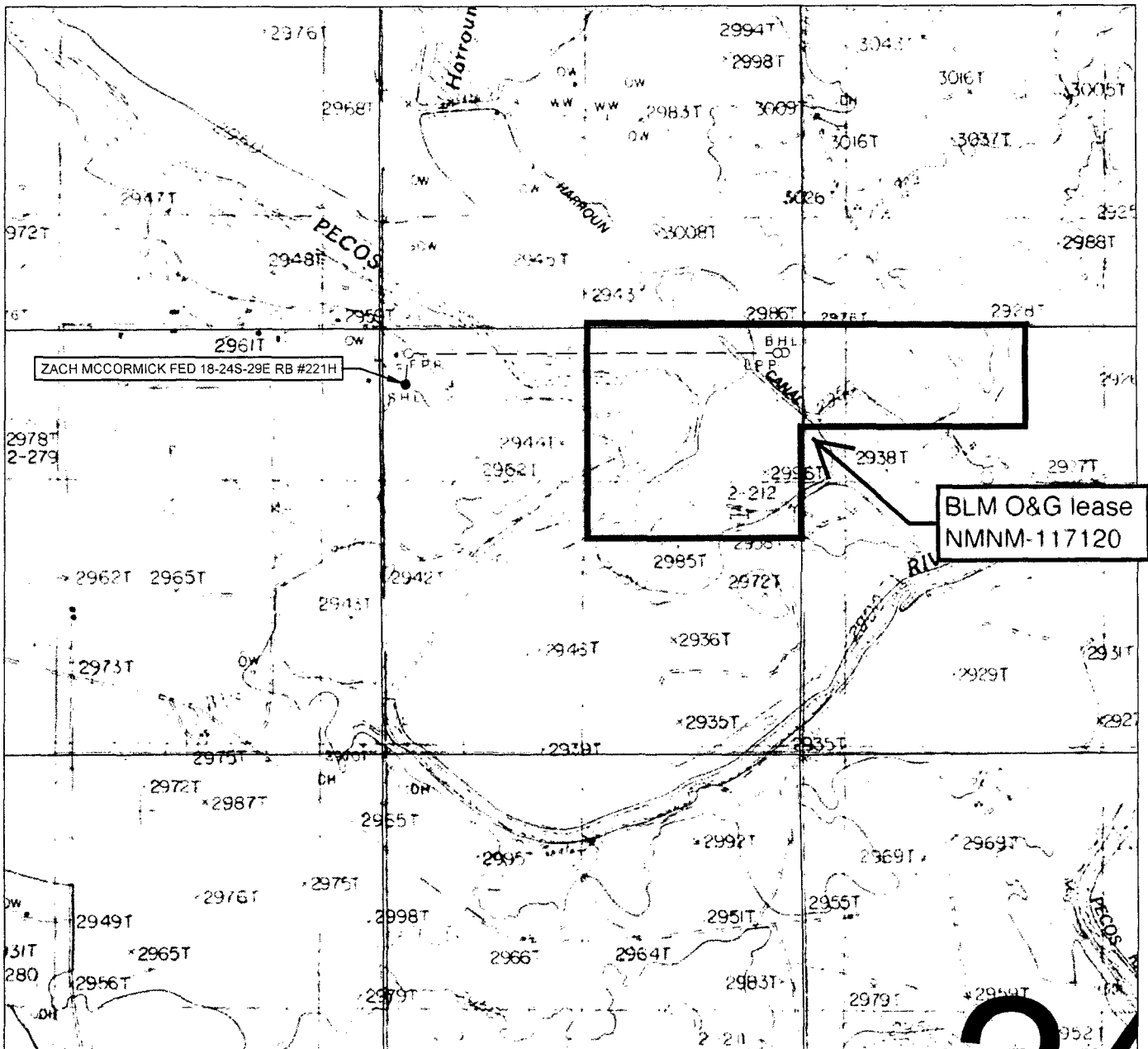
Brian Wood

Operating Rights

Matador Production Company proposed this well to its partners and is negotiating a form of Joint Operating Agreement naming Matador Production Company as the Operator. Per our discussions with our partners, all parties are agreeable to name Matador Production Company as Operator for this well. Matador's partners include: Horned Frog Oil and Gas, LP, RSC Resources LP, Amy Flores, Marty Young, BucJag Investments, LLC, and COG.

Please let us know if you have any questions or concerns.

LOCATION & ELEVATION VERIFICATION MAP



LEASE NAME & WELL NO.: ZACH MCCORMICK FEDERAL 18-24S-29E RB #221H

SECTION 18 TWP 24-S RGE 29-E SURVEY N.M.P.M.
 COUNTY EDDY STATE NM ELEVATION 2953'
 DESCRIPTION 712' FNL & 291' FWL

LATITUDE N 32.2229382 LONGITUDE W 104.0308313



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 STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1927, U.S. SURVEY FEET.

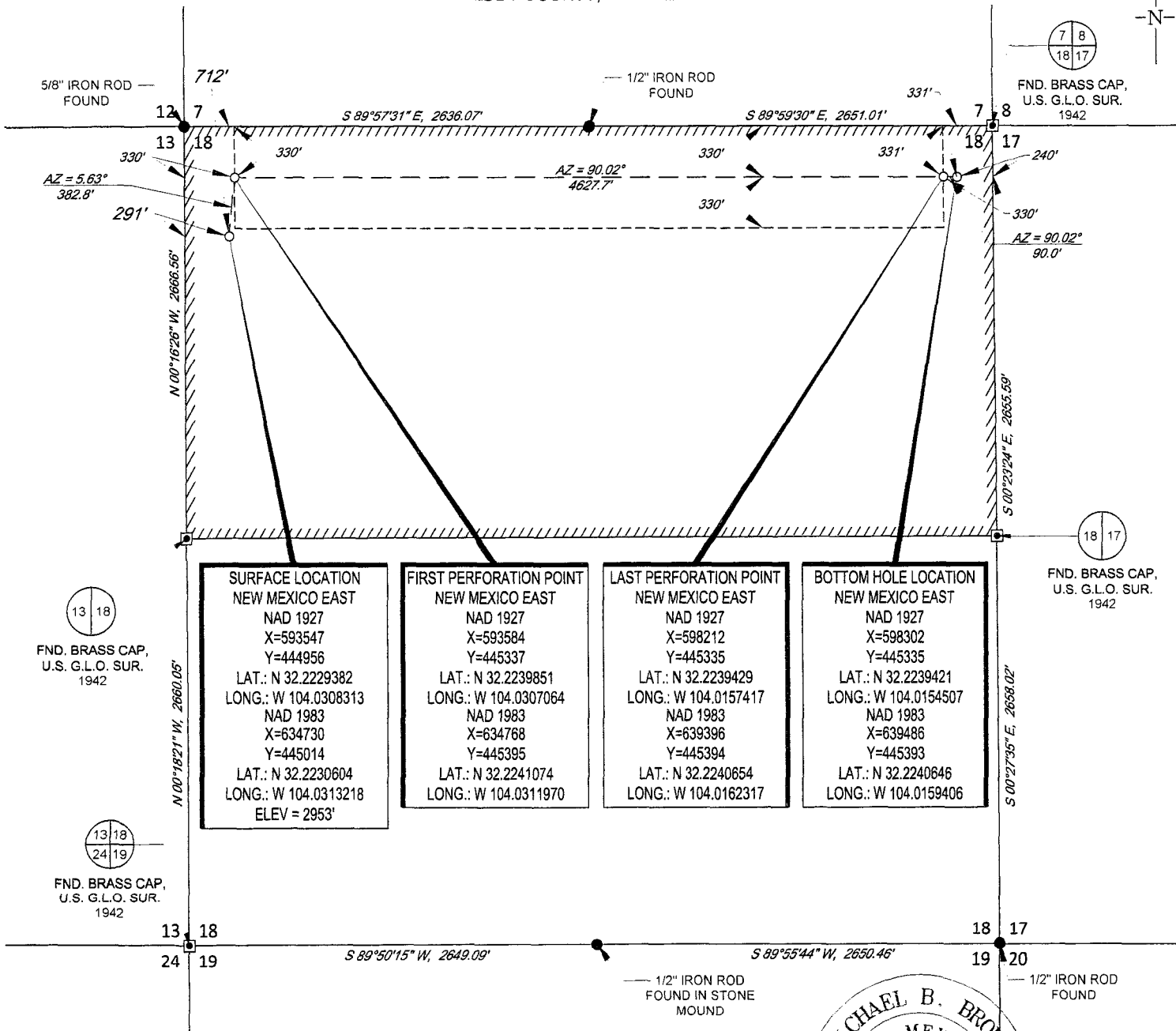


WWW.TOPOGRAPHIC.COM

SCALE: 1" = 1000'
0' 500' 1000'



SECTION 18, TOWNSHIP 24-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

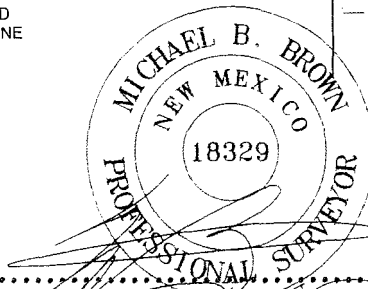


LEASE NAME & WELL NO.: ZACH MCCORMICK FEDERAL 18-24S-29E RB #221H

SECTION 18 TWP 24-S RGE 29-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM
DESCRIPTION 712' FNL & 291' FWL

DISTANCE & DIRECTION

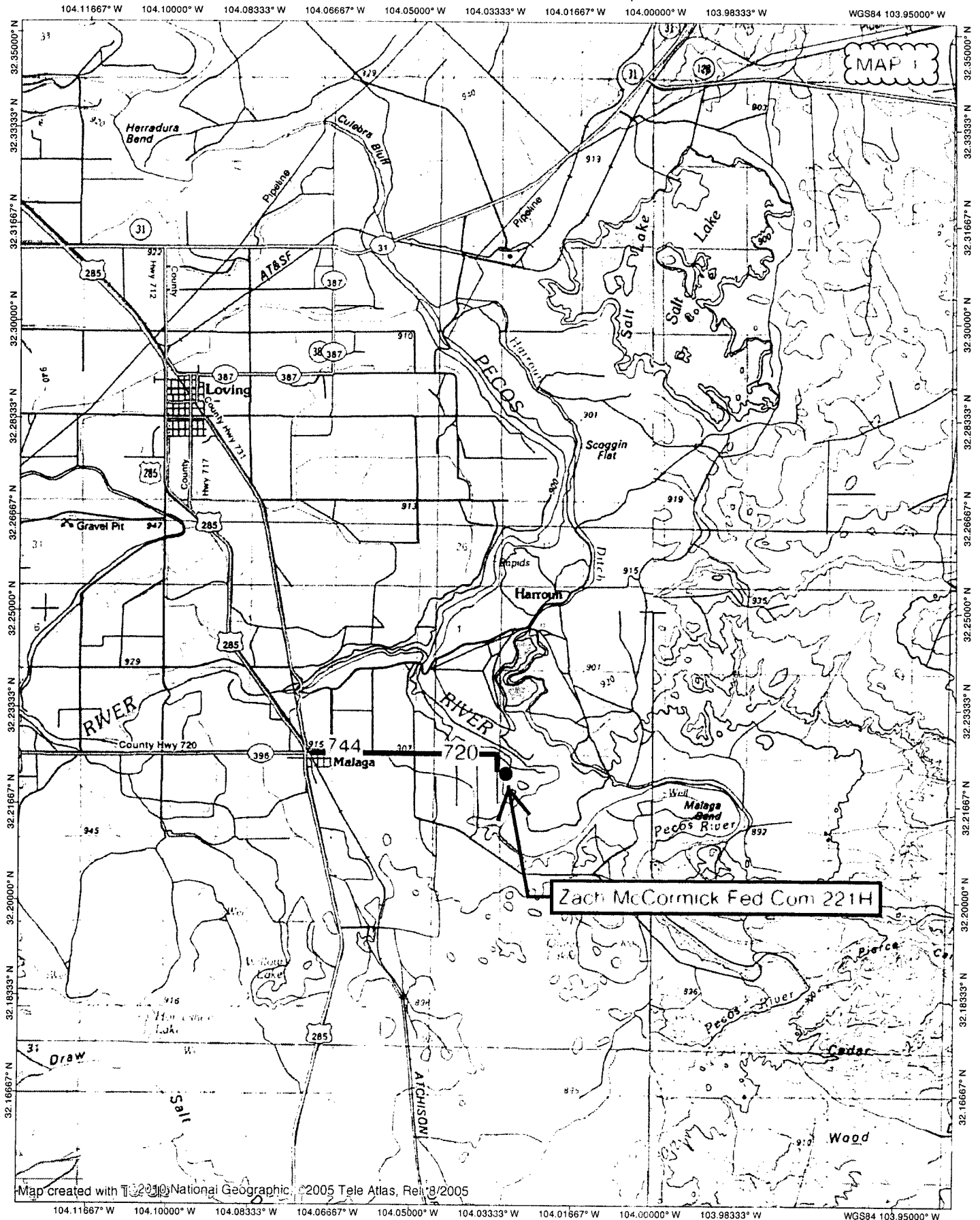
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AS OF THE DATE OF SURVEY, ALL ABOVE GROUND APPURTENANCES WITHIN 300' OF THE STAKED LOCATION ARE SHOWN HEREON.



Michael Blake Brown, P.S. No. 18329
MAY 09, 2016

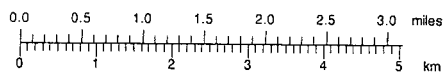


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Map created with T2010 National Geographic, ©2005 Tele Atlas, Rel. 8/2005

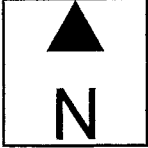
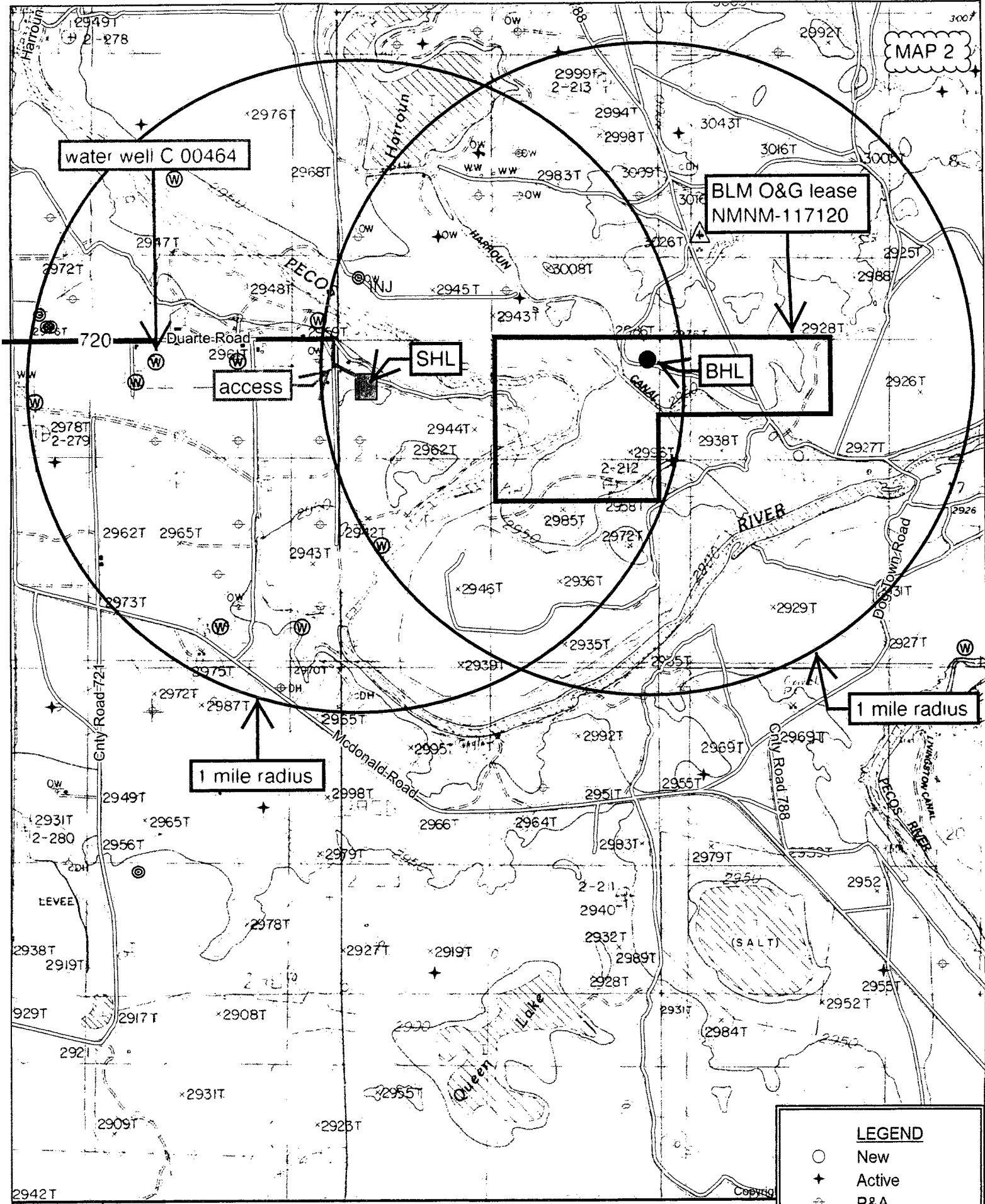
NATIONAL
GEOGRAPHIC



TN MN

7.5°

12/18/15



Quad: MALAGA
Scale: 1 inch = 2,000 ft.

LEGEND	
○	New
+	Active
⊕	P&A
⊙	INJ
⊙	SWD
⊙	Water

720

32-22306, -104.03132



Zach McCormick Fed Com 221H

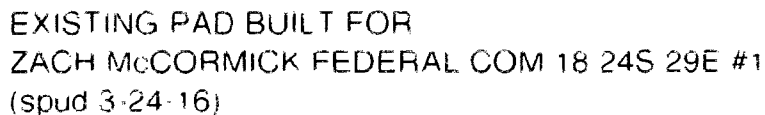
MAP 3

600 ft

arth



DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: ZACH MCCORMICK FEDERAL 18-24S-29E RB #221H
#221H LATITUDE N 32.2229382 #221H LONGITUDE W 104.0308313

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



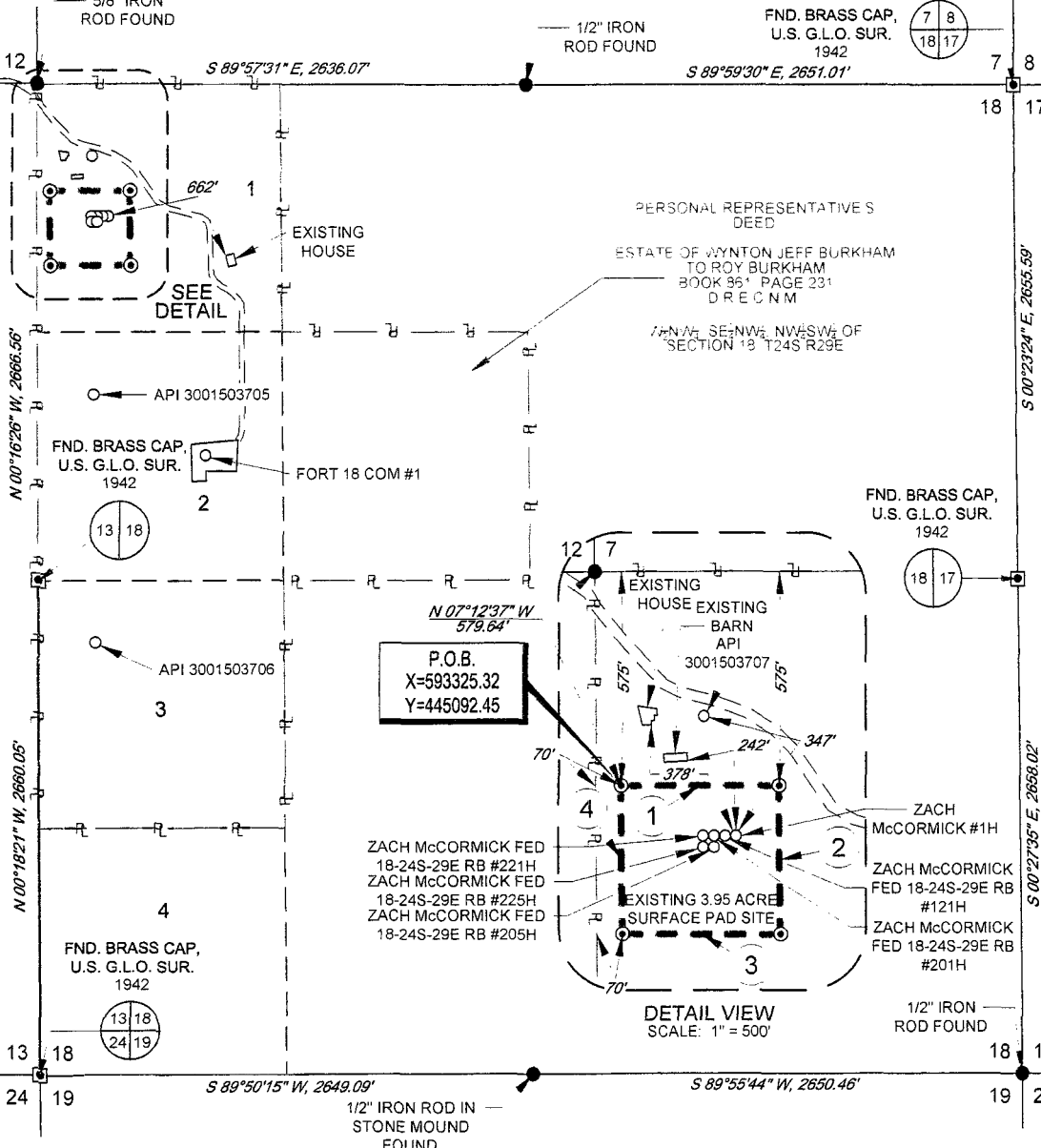
WWW.TOPOGRAPHIC.COM

SCALE: 1" = 1000'

0' 500' 1000'

SECTION 18, TOWNSHIP 24-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO
EXISTING 3.95 ACRE SITE

MAP 5



ZACK McCORMICK FED 18-24S-29E RB #201H SURFACE PAD SITE

Metes and Bounds Description of an existing 3.95 acre surface pad site located within Lot 1, of Section 18, Township 24 South, Range 29 East, N.M.P.M., in Eddy County, New Mexico.

BEGINNING at a 1/2" iron rod with cap set for the Northwest corner of this site, from whence an iron rod found for the Northwest corner of said Section 18, bears N 07°12'37" W, a distance of 579.64 feet;

Thence S 89°57'31" E, a distance of 430.00 feet to a 1/2" iron rod with cap set for the Northeast corner of this site;

Thence S 00°16'26" E, a distance of 400.00 feet to a 1/2" iron rod with cap set for the Southeast corner of this site;

Thence N 89°57'31" W, a distance of 430.00 feet to a 1/2" iron rod with cap set for the Southwest corner of this site;

Thence N 00°16'26" W, a distance of 400.00 feet to the Point of Beginning.

LEGEND

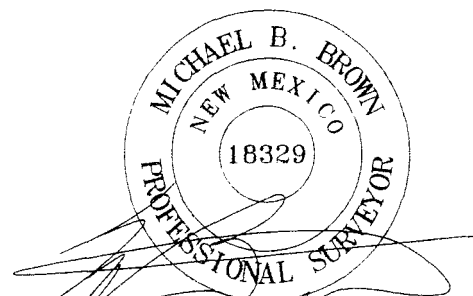
- EXISTING SITE
- SURVEY/SECTION LINE
- TRACT BORDER
- == ROAD WAY
- IRON ROD SET
- IRON ROD FOUND
- MONUMENT

ZACK McCORMICK FED 18-24S-29E RB #201H SURFACE PAD SITE

LINE	BEARING	DISTANCE
1	S 89°57'31" E	430.00'
2	S 00°16'26" E	400.00'
3	N 89°57'31" W	430.00'
4	N 00°16'26" W	400.00'



1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM



Michael Blake Brown, R.P.L.S. No. 18329
MAY 10, 2016

ZACK McCORMICK FED 18-24S-29E RB #201H SURFACE PAD SITE DATE: 02/10/16 FILE: 30 ZACK McCORMICK FED 18-24S-29E RB #201H SURFACE PAD SITE REV1 DRAWN BY: GJU SHEET: 1 OF 1	REVISION:		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 STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927. 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. P.O.B. = POINT OF BEGINNING
	A.C.C.	05/10/16	

Matador Production Company
Zach McCormick Fed Com 221H
SHL 712' FNL & 291' FWL Sec. 18
BHL 331' FNL & 240' FEL Sec. 18
T. 24 S., R. 29 E., Eddy County, NM

DRILL PLAN PAGE 1

Drilling Program

1. ESTIMATED TOPS

Formation Name	TVD	Bearing
Quaternary	GL	water
top of salt	808.5'	salt
Lamar/base of salt	2681.5'	barren
Bell Canyon	2731.5'	barren
Cherry Canyon	3661.5'	hydrocarbon
Brushy Canyon	4886.5'	hydrocarbon
Bone Spring Lime	6465.5'	hydrocarbon
1st Bone Spring Sand	7407.5'	hydrocarbon
2nd Bone Spring Carbonate	7720.5'	hydrocarbon
2nd Bone Spring Sand	8319.5'	hydrocarbon
3 rd Bone Spring Carbonate	8558.5'	hydrocarbon
3rd Bone Spring Sand	9274.5'	hydrocarbon
Wolfcamp	9632.5'	hydrocarbon
Wolfcamp X	9664.5'	hydrocarbon
Wolfcamp Y	9729.5'	hydrocarbon
Wolfcamp B	10323.5'	hydrocarbon (& goal)
TVD (Wolfcamp B)	10550'	ditto
MD (Wolfcamp B)	15432'	ditto

2. NOTABLE ZONES

Closest water well (C 00983) is 1210' to the northwest. Depth to water is 40' in this 92' deep well.

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T. 24 S., R. 29 E., Eddy County, NM

DRILL PLAN PAGE 2

3. PRESSURE CONTROL

A BOP stack consisting of 3 rams with 2 pipe rams, 1 blind ram and 1 annular preventer will be installed. The BOP will be used below surface casing to TD. See attached BOP and choke manifold diagrams.

An accumulator compliant with Onshore Order 2 for the pressure rating of the BOP stack will be present. Rotating head will be installed as needed.

Pressure tests will be conducted before drilling out from under all casing strings. BOP will be inspected and operated as recommended 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. Test pressures will be as follows: After surface casing is set and the BOP is nipped up, the BOP pressure tests will be made to 250 psi low and 2000 psi high. On the intermediate #1, pressure tests will be made to 250 psi low and 3000 psi high. On the intermediate #2, pressure tests will be made to 250 psi low and 7500 psi high. The annular preventer will be tested to 250 psi low and 1000 psi high on the surface casing, and 250 psi low and 1500 psi high on the intermediate #1 and #2 casing. In the case of running a speed head with landing mandrel for 9-5/8" and 7" casing the initial, after surface casing is set, BOP test pressures will be 250 psi low and 3000 psi high with wellhead seals tested to 5000 psi once the 9-5/8" casing has been landed and cemented. BOP will then be lifted to install the 'C-section' of the wellhead. Matador will nipple the BOP back up and the pressure tests will be made to 250 psi low and 7500 psi high and the annular will be tested to 250 psi low and 1500 psi high.

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 Production Company
 Zach McCormick Fed Com 221H
 SHL 712' FNL & 291' FWL Sec. 18
 BHL 331' FNL & 240' FEL Sec. 18
 T. 24 S., R. 29 E., Eddy County, NM

DRILL PLAN PAGE 3

4. CASING & CEMENT

Hole will extend east of the last perforation point to allow for pump installation. All perforations will be $\geq 330'$ from the dedication perimeter.

Hole O. D.	Set @ (MD)	Casing O. D.	Age	Weight (lb/ft)	Grade	Thread Collar	Collapse	Burst	Tension
17.5"	650'	13.375"	New	54.5	J-55	BTC	1.125	1.125	1.8
12.25"	2750'	9.625"	New	40	J-55	BTC	1.125	1.125	1.8
8.75"	10794'	7"	New	29	P-110	BTC	1.125	1.125	1.8
6.125"	15432'	4.5"	New	13.5	P-110	BTC/TXP	1.125	1.125	1.8

Name	Type	Sacks	Yield	Cu. Ft.	Weight	Blend
Surface	Lead	240	1.82	436.8	12.8	Class C + Bentonite + 2% CaCl ₂ + 3% NaCl + LCM
	Tail	350	1.38	483	14.8	Class C + 5% NaCl + LCM
TOC = GL		100% Excess			Centralizers per Onshore Order 2.III.B.1f	
Intermediate	Lead	550	2.13	1171.5	12.6	Class C + Bentonite + 1% CaCl ₂ + 8% NaCl + LCM
	Tail	270	1.38	372.6	14.8	Class C + 5% NaCl + LCM
TOC = GL		100% Excess			2 on btm jt, 1 on 2nd jt, 1 every 4th jt to surface	
Intermediate 2	Lead	600	2.36	1416	11.5	TXI + Fluid Loss + Dispersant + Retarder + LCM
	Tail	300	1.38	414	13.2	TXI + Fluid Loss + Dispersant + Retarder + LCM
TOC = 1600'		35% Excess			2 on btm jt, 1 on 2nd jt, 1 every other jt to top of tail cement (500' above TOC)	
Production	Tail	570	1.17	666.9	15.8	Class H + Fluid Loss + Dispersant + Retarder + LCM
TOC = 9700'		10% Excess			2 on btm jt, 1 on 2nd jt, 1 every third jt to top of curve	

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T. 24 S., R. 29 E., Eddy County, NM

DRILL PLAN PAGE 4

5. MUD PROGRAM

An electronic Pason mud monitoring system satisfying the requirements of Onshore Order 1 will be used. All necessary mud products for weight addition and fluid loss control will be on location at all times. Mud program is subject to change due to hole conditions.

Name	Hole Size	Mud Weight	Visc	Fluid Loss	Type Mud
Surface	17.5"	8.30	28	NC	FW Spud Mud
Intermediate	12.25"	10.00	30-32	NC	Brine Water
Intermediate 2	8.75"	9.00	30-31	NC	FW/Cut Brine
Production	6.125"	12.50	50-60	<10	OBM

6. CORES, TESTS, & LOGS

No core or drill stem test is planned.

A 2-person mud-logging program will be used from $\approx 10800'$ to TD.

No electric logs are planned. 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 TOC.

7. DOWN HOLE CONDITIONS

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is ≈ 7500 psi. Expected bottom hole temperature is $\approx 170^\circ$ F.

In accordance with Onshore Order 6, Matador does not anticipate that there will be enough H_2S from the surface to the Bone Spring to meet the BLM's minimum requirements for the submission of an " H_2S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since Matador has an H_2S safety package on all wells, an " H_2S Drilling Operations Plan" is attached.

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DRILL PLAN PAGE 5

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 equipment being used.

8. OTHER INFORMATION

Anticipated spud date is upon approval. It is expected it will take $\approx$ 3 months to drill and complete the well.

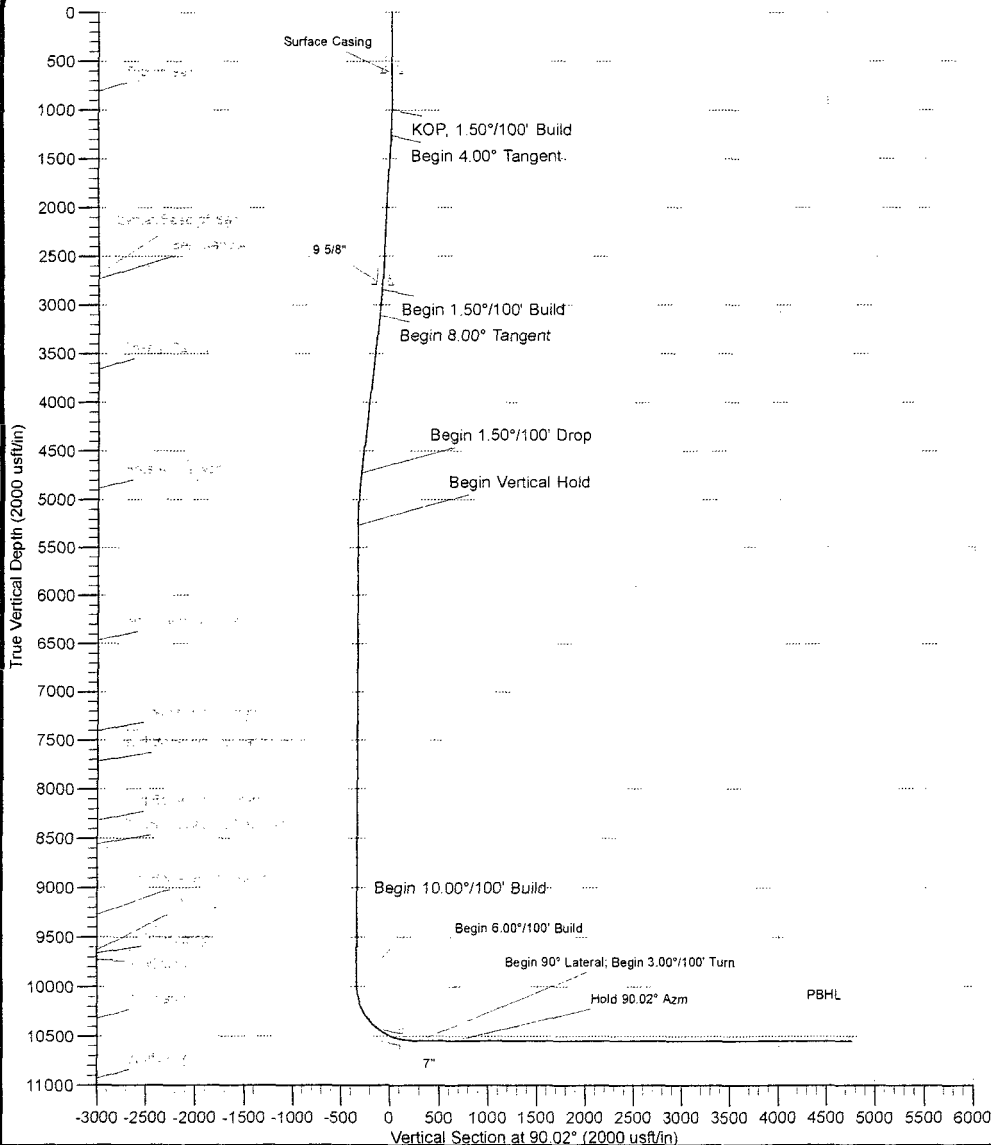
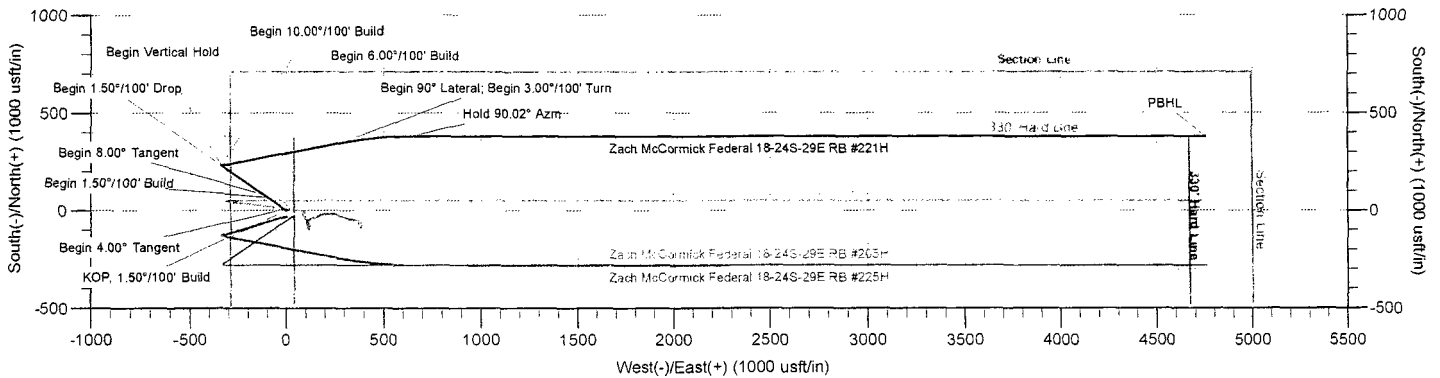


Company: Matador Resources
Site: Zach McCormick Federal 18-24S-29E RB
Well: #221H
Project: Eddy County, New Mexico (NAD 27)
Rig: Patterson 297



ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	KOP, 1.50°/100' Build
1266.67	4.00	304.07	1266.45	5.21	-7.71	-7.71	9.30	Begin 4.00° Tangent
2850.00	4.00	304.07	2845.92	67.09	-99.20	-99.22	119.75	Begin 1.50°/100' Build
3116.66	8.00	304.07	3111.08	82.70	-122.28	-122.31	147.62	Begin 8.00° Tangent
4753.24	8.00	304.07	4731.73	210.30	-310.95	-311.02	375.39	Begin 1.50°/100' Drop
5286.58	0.00	0.00	5263.33	231.13	-341.74	-341.82	412.56	Begin Vertical Hold
9994.49	0.00	0.00	9971.24	231.13	-341.74	-341.82	412.56	Begin 10.00°/100' Build
10794.49	80.00	79.45	10535.49	317.82	123.72	123.61	886.03	Begin 6.00°/100' Build
10961.15	90.00	79.45	10550.00	348.18	286.74	286.62	1051.85	Begin 90° Lateral; Begin 3.00°/100' Turn
11313.54	90.00	90.02	10550.00	380.46	637.14	637.01	1404.23	Hold 90.02° Azm
15431.68	90.00	90.02	10550.00	378.92	4755.28	4755.15	5522.37	PBHL



T

G

M

Azimuths to Grid North

True North: -0.16°

Magnetic North: 7.16°

Magnetic Field

Strength: 48068.8nT

Dip Angle: 60.00°

Date: 6/22/2016

Model: BGGM2016

US State Plane 1927 (Exact solution)

New Mexico East 3001

Created By: HLH

Date: 14:06, June 24 2016

Plan: Design #1



Company: Matador Resources
Site: Zach McCormick Federal 18-24S-29E RB
Well: #221H
Project: Eddy County, New Mexico (NAD 27)
Rig: Patterson 297

MS Energy Services.
WWW.MSENERGYSERVICES.COM

T

G

M

Azimuths to Grid North

True North: -0.16°

Magnetic North: 7.16°

Magnetic Field

Strength: 48068.8snT

Dip Angle: 60.00°

Date: 6/22/2016

Model: BGGM2016

US State Plane 1927 (Exact solution)

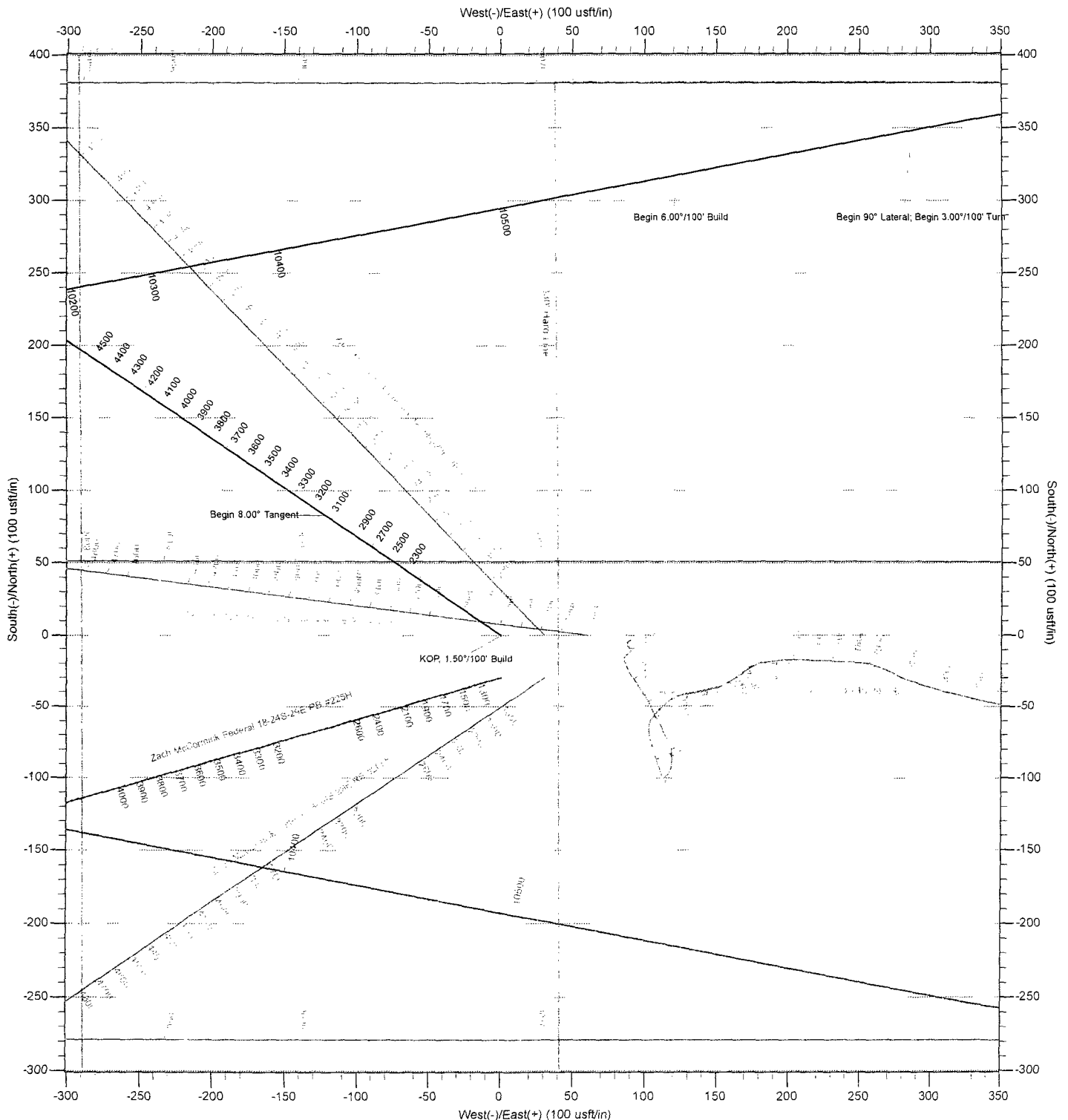
New Mexico East 3001

Created By: HLH

Date: 13:04, June 24 2016

Plan: Design #1

ANNOTATIONS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation	
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	KOP, 1.50°/100' Build	
1266.67	4.00	304.07	1266.45	5.21	-7.71	-7.71	9.30	Begin 4.00° Tangent	
2850.00	4.00	304.07	2845.92	67.09	-99.20	-99.22	119.75	Begin 1.50°/100' Build	
3116.66	8.00	304.07	3111.08	82.70	-122.28	-122.31	147.62	Begin 8.00° Tangent	
4753.24	8.00	304.07	4731.73	210.30	-310.95	-311.02	375.39	Begin 1.50°/100' Drop	
5286.58	0.00	0.00	5263.33	231.13	-341.74	-341.82	412.56	Begin Vertical Hold	
9994.49	0.00	0.00	9971.24	231.13	-341.74	-341.82	412.56	Begin 10.00°/100' Build	
10794.49	80.00	79.45	10535.49	317.82	123.72	123.61	886.03	Begin 6.00°/100' Build	
10961.15	90.00	79.45	10550.00	348.18	286.74	286.62	1051.85	Begin 90° Lateral; Begin 3.00°/100' Turn	
11313.54	90.00	90.02	10550.00	380.46	637.14	637.01	1404.23	Hold 90.02° Azm	
15431.68	90.00	90.02	10550.00	378.92	4755.28	4755.15	5522.37	PBHL	





Matador Resources

Eddy County, New Mexico (NAD 27)
Zach McCormick Federal 18-24S-29E RB
#221H

Wellbore #1

Plan: Design #1

Standard Planning Report

24 June, 2016



Planning Report

Database: EDM 5000.1 Conroe DB
Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Site: Zach McCormick Federal 18-24S-29E RB
Well: #221H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Eddy County, New Mexico (NAD 27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Well	#221H			
Well Position	+N/-S	444,955.65 usft	Northing:	444,955.65 usft
	+E/-W	593,546.61 usft	Easting:	593,546.61 usft
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft
			Ground Level:	2,952.93 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	6/22/2016	7.32	60.00	48,069

Design	Design #1				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	90.02	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,266.67	4.00	304.07	1,266.45	5.21	-7.71	1.50	1.50	0.00	304.07	VP - Zach McCormick
2,850.00	4.00	304.07	2,845.92	67.09	-99.20	0.00	0.00	0.00	0.00	
3,116.66	8.00	304.07	3,111.08	82.70	-122.28	1.50	1.50	0.00	0.00	
4,753.24	8.00	304.07	4,731.73	210.30	-310.95	0.00	0.00	0.00	0.00	
5,286.58	0.00	0.00	5,263.33	231.13	-341.74	1.50	-1.50	0.00	180.00	VP - Zach McCormick
9,994.49	0.00	0.00	9,971.24	231.13	-341.74	0.00	0.00	0.00	0.00	
10,794.49	80.00	79.45	10,535.49	317.82	123.72	10.00	10.00	0.00	79.45	
10,961.15	90.00	79.45	10,550.00	348.18	286.74	6.00	6.00	0.00	0.00	
11,313.54	90.00	90.02	10,550.00	380.46	637.14	3.00	0.00	3.00	90.00	
15,431.68	90.00	90.02	10,550.00	378.92	4,755.28	0.00	0.00	0.00	0.00	PBHL - Zach McCormick



Planning Report

Database: EDM 5000.1 Conroe DB
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Project: Eddy County, New Mexico (NAD 27)
Site: Zach McCormick Federal 18-24S-29E RB
Well: #221H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 1.50°/100' Build									
1,100.00	1.50	304.07	1,099.99	0.73	-1.08	-1.08	1.50	1.50	0.00
1,200.00	3.00	304.07	1,199.91	2.93	-4.34	-4.34	1.50	1.50	0.00
1,266.67	4.00	304.07	1,266.45	5.21	-7.71	-7.71	1.50	1.50	0.00
Begin 4.00° Tangent									
1,300.00	4.00	304.07	1,299.70	6.52	-9.63	-9.64	0.00	0.00	0.00
1,400.00	4.00	304.07	1,399.46	10.42	-15.41	-15.42	0.00	0.00	0.00
1,500.00	4.00	304.07	1,499.22	14.33	-21.19	-21.19	0.00	0.00	0.00
1,600.00	4.00	304.07	1,598.97	18.24	-26.97	-26.97	0.00	0.00	0.00
1,700.00	4.00	304.07	1,698.73	22.15	-32.75	-32.75	0.00	0.00	0.00
1,800.00	4.00	304.07	1,798.48	26.06	-38.52	-38.53	0.00	0.00	0.00
1,900.00	4.00	304.07	1,898.24	29.96	-44.30	-44.31	0.00	0.00	0.00
2,000.00	4.00	304.07	1,998.00	33.87	-50.08	-50.09	0.00	0.00	0.00
2,100.00	4.00	304.07	2,097.75	37.78	-55.86	-55.87	0.00	0.00	0.00
2,200.00	4.00	304.07	2,197.51	41.69	-61.64	-61.65	0.00	0.00	0.00
2,300.00	4.00	304.07	2,297.27	45.60	-67.42	-67.43	0.00	0.00	0.00
2,400.00	4.00	304.07	2,397.02	49.50	-73.19	-73.21	0.00	0.00	0.00
2,500.00	4.00	304.07	2,496.78	53.41	-78.97	-78.99	0.00	0.00	0.00
2,600.00	4.00	304.07	2,596.54	57.32	-84.75	-84.77	0.00	0.00	0.00
2,700.00	4.00	304.07	2,696.29	61.23	-90.53	-90.55	0.00	0.00	0.00
2,800.00	4.00	304.07	2,796.05	65.14	-96.31	-96.33	0.00	0.00	0.00
2,850.00	4.00	304.07	2,845.92	67.09	-99.20	-99.22	0.00	0.00	0.00
Begin 1.50°/100' Build									
2,900.00	4.75	304.07	2,895.78	69.23	-102.35	-102.38	1.50	1.50	0.00
3,000.00	6.25	304.07	2,995.32	74.60	-110.29	-110.32	1.50	1.50	0.00
3,100.00	7.75	304.07	3,094.57	81.42	-120.39	-120.42	1.50	1.50	0.00
3,116.66	8.00	304.07	3,111.08	82.70	-122.28	-122.31	1.50	1.50	0.00
Begin 8.00° Tangent									
3,200.00	8.00	304.07	3,193.60	89.20	-131.89	-131.92	0.00	0.00	0.00
3,300.00	8.00	304.07	3,292.63	97.00	-143.42	-143.45	0.00	0.00	0.00
3,400.00	8.00	304.07	3,391.65	104.79	-154.94	-154.98	0.00	0.00	0.00
3,500.00	8.00	304.07	3,490.68	112.59	-166.47	-166.51	0.00	0.00	0.00
3,600.00	8.00	304.07	3,589.71	120.39	-178.00	-178.04	0.00	0.00	0.00
3,700.00	8.00	304.07	3,688.73	128.18	-189.53	-189.57	0.00	0.00	0.00
3,800.00	8.00	304.07	3,787.76	135.98	-201.06	-201.10	0.00	0.00	0.00
3,900.00	8.00	304.07	3,886.79	143.78	-212.58	-212.63	0.00	0.00	0.00
4,000.00	8.00	304.07	3,985.82	151.57	-224.11	-224.17	0.00	0.00	0.00
4,100.00	8.00	304.07	4,084.84	159.37	-235.64	-235.70	0.00	0.00	0.00
4,200.00	8.00	304.07	4,183.87	167.17	-247.17	-247.23	0.00	0.00	0.00
4,300.00	8.00	304.07	4,282.90	174.97	-258.70	-258.76	0.00	0.00	0.00
4,400.00	8.00	304.07	4,381.92	182.76	-270.23	-270.29	0.00	0.00	0.00
4,500.00	8.00	304.07	4,480.95	190.56	-281.75	-281.82	0.00	0.00	0.00
4,600.00	8.00	304.07	4,579.98	198.36	-293.28	-293.35	0.00	0.00	0.00



Planning Report

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Project: Eddy County, New Mexico (NAD 27)
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Well: #221H
Wellbore: Wellbore #1
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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)
4,700.00	8.00	304.07	4,679.00	206.15	-304.81	-304.88	0.00	0.00	0.00
4,753.24	8.00	304.07	4,731.73	210.30	-310.95	-311.02	0.00	0.00	0.00
Begin 1.50°/100' Drop									
4,800.00	7.30	304.07	4,778.07	213.79	-316.10	-316.18	1.50	-1.50	0.00
4,900.00	5.80	304.07	4,877.41	220.18	-325.55	-325.63	1.50	-1.50	0.00
5,000.00	4.30	304.07	4,977.02	225.11	-332.84	-332.92	1.50	-1.50	0.00
5,100.00	2.80	304.07	5,076.83	228.58	-337.97	-338.05	1.50	-1.50	0.00
5,200.00	1.30	304.07	5,176.76	230.58	-340.93	-341.01	1.50	-1.50	0.00
5,285.58	0.00	0.00	5,263.33	231.13	-341.74	-341.82	1.50	-1.50	0.00
Begin Vertical Hold									
5,300.00	0.00	0.00	5,276.75	231.13	-341.74	-341.82	0.00	0.00	0.00
5,400.00	0.00	0.00	5,376.75	231.13	-341.74	-341.82	0.00	0.00	0.00
5,500.00	0.00	0.00	5,476.75	231.13	-341.74	-341.82	0.00	0.00	0.00
5,600.00	0.00	0.00	5,576.75	231.13	-341.74	-341.82	0.00	0.00	0.00
5,700.00	0.00	0.00	5,676.75	231.13	-341.74	-341.82	0.00	0.00	0.00
5,800.00	0.00	0.00	5,776.75	231.13	-341.74	-341.82	0.00	0.00	0.00
5,900.00	0.00	0.00	5,876.75	231.13	-341.74	-341.82	0.00	0.00	0.00
6,000.00	0.00	0.00	5,976.75	231.13	-341.74	-341.82	0.00	0.00	0.00
6,100.00	0.00	0.00	6,076.75	231.13	-341.74	-341.82	0.00	0.00	0.00
6,200.00	0.00	0.00	6,176.75	231.13	-341.74	-341.82	0.00	0.00	0.00
6,300.00	0.00	0.00	6,276.75	231.13	-341.74	-341.82	0.00	0.00	0.00
6,400.00	0.00	0.00	6,376.75	231.13	-341.74	-341.82	0.00	0.00	0.00
6,500.00	0.00	0.00	6,476.75	231.13	-341.74	-341.82	0.00	0.00	0.00
6,600.00	0.00	0.00	6,576.75	231.13	-341.74	-341.82	0.00	0.00	0.00
6,700.00	0.00	0.00	6,676.75	231.13	-341.74	-341.82	0.00	0.00	0.00
6,800.00	0.00	0.00	6,776.75	231.13	-341.74	-341.82	0.00	0.00	0.00
6,900.00	0.00	0.00	6,876.75	231.13	-341.74	-341.82	0.00	0.00	0.00
7,000.00	0.00	0.00	6,976.75	231.13	-341.74	-341.82	0.00	0.00	0.00
7,100.00	0.00	0.00	7,076.75	231.13	-341.74	-341.82	0.00	0.00	0.00
7,200.00	0.00	0.00	7,176.75	231.13	-341.74	-341.82	0.00	0.00	0.00
7,300.00	0.00	0.00	7,276.75	231.13	-341.74	-341.82	0.00	0.00	0.00
7,400.00	0.00	0.00	7,376.75	231.13	-341.74	-341.82	0.00	0.00	0.00
7,500.00	0.00	0.00	7,476.75	231.13	-341.74	-341.82	0.00	0.00	0.00
7,600.00	0.00	0.00	7,576.75	231.13	-341.74	-341.82	0.00	0.00	0.00
7,700.00	0.00	0.00	7,676.75	231.13	-341.74	-341.82	0.00	0.00	0.00
7,800.00	0.00	0.00	7,776.75	231.13	-341.74	-341.82	0.00	0.00	0.00
7,900.00	0.00	0.00	7,876.75	231.13	-341.74	-341.82	0.00	0.00	0.00
8,000.00	0.00	0.00	7,976.75	231.13	-341.74	-341.82	0.00	0.00	0.00
8,100.00	0.00	0.00	8,076.75	231.13	-341.74	-341.82	0.00	0.00	0.00
8,200.00	0.00	0.00	8,176.75	231.13	-341.74	-341.82	0.00	0.00	0.00
8,300.00	0.00	0.00	8,276.75	231.13	-341.74	-341.82	0.00	0.00	0.00
8,400.00	0.00	0.00	8,376.75	231.13	-341.74	-341.82	0.00	0.00	0.00
8,500.00	0.00	0.00	8,476.75	231.13	-341.74	-341.82	0.00	0.00	0.00
8,600.00	0.00	0.00	8,576.75	231.13	-341.74	-341.82	0.00	0.00	0.00
8,700.00	0.00	0.00	8,676.75	231.13	-341.74	-341.82	0.00	0.00	0.00
8,800.00	0.00	0.00	8,776.75	231.13	-341.74	-341.82	0.00	0.00	0.00
8,900.00	0.00	0.00	8,876.75	231.13	-341.74	-341.82	0.00	0.00	0.00
9,000.00	0.00	0.00	8,976.75	231.13	-341.74	-341.82	0.00	0.00	0.00
9,100.00	0.00	0.00	9,076.75	231.13	-341.74	-341.82	0.00	0.00	0.00
9,200.00	0.00	0.00	9,176.75	231.13	-341.74	-341.82	0.00	0.00	0.00
9,300.00	0.00	0.00	9,276.75	231.13	-341.74	-341.82	0.00	0.00	0.00
9,400.00	0.00	0.00	9,376.75	231.13	-341.74	-341.82	0.00	0.00	0.00
9,500.00	0.00	0.00	9,476.75	231.13	-341.74	-341.82	0.00	0.00	0.00



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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)
9,600.00	0.00	0.00	9,576.75	231.13	-341.74	-341.82	0.00	0.00	0.00
9,700.00	0.00	0.00	9,676.75	231.13	-341.74	-341.82	0.00	0.00	0.00
9,800.00	0.00	0.00	9,776.75	231.13	-341.74	-341.82	0.00	0.00	0.00
9,900.00	0.00	0.00	9,876.75	231.13	-341.74	-341.82	0.00	0.00	0.00
9,994.49	0.00	0.00	9,971.24	231.13	-341.74	-341.82	0.00	0.00	0.00
Begin 10.00°/100' Build									
10,000.00	0.55	79.45	9,976.75	231.13	-341.71	-341.79	10.00	10.00	0.00
10,050.00	5.55	79.45	10,026.67	231.62	-339.10	-339.18	10.00	10.00	0.00
10,100.00	10.55	79.45	10,076.16	232.90	-332.22	-332.30	10.00	10.00	0.00
10,150.00	15.55	79.45	10,124.85	234.97	-321.12	-321.20	10.00	10.00	0.00
10,200.00	20.55	79.45	10,172.38	237.81	-305.89	-305.98	10.00	10.00	0.00
10,250.00	25.55	79.45	10,218.37	241.39	-286.65	-286.74	10.00	10.00	0.00
10,300.00	30.55	79.45	10,262.48	245.69	-263.54	-263.63	10.00	10.00	0.00
10,350.00	35.55	79.45	10,304.38	250.68	-236.74	-236.83	10.00	10.00	0.00
10,400.00	40.55	79.45	10,343.74	256.33	-206.46	-206.54	10.00	10.00	0.00
10,450.00	45.55	79.45	10,380.26	262.57	-172.91	-173.00	10.00	10.00	0.00
10,500.00	50.55	79.45	10,413.68	269.38	-136.36	-136.46	10.00	10.00	0.00
10,550.00	55.55	79.45	10,443.72	276.69	-97.09	-97.19	10.00	10.00	0.00
10,600.00	60.55	79.45	10,470.17	284.46	-55.40	-55.50	10.00	10.00	0.00
10,650.00	65.55	79.45	10,492.82	292.62	-11.59	-11.70	10.00	10.00	0.00
10,700.00	70.55	79.45	10,511.51	301.11	33.98	33.88	10.00	10.00	0.00
10,750.00	75.55	79.45	10,526.08	309.86	80.99	80.88	10.00	10.00	0.00
10,794.49	80.00	79.45	10,535.49	317.82	123.72	123.61	10.00	10.00	0.00
Begin 6.00°/100' Build									
10,800.00	80.33	79.45	10,536.44	318.81	129.06	128.95	6.00	6.00	0.00
10,850.00	83.33	79.45	10,543.54	327.87	177.71	177.60	6.00	6.00	0.00
10,900.00	86.33	79.45	10,548.04	336.99	226.66	226.54	6.00	6.00	0.00
10,950.00	89.33	79.45	10,549.94	346.14	275.78	275.65	6.00	6.00	0.00
10,961.15	90.00	79.45	10,550.00	348.18	286.74	286.62	6.00	6.00	0.00
Begin 90° Lateral; Begin 3.00°/100' Turn									
11,000.00	90.00	80.62	10,550.00	354.90	325.00	324.88	3.00	0.00	3.00
11,100.00	90.00	83.62	10,550.00	368.62	424.04	423.91	3.00	0.00	3.00
11,200.00	90.00	86.62	10,550.00	377.13	523.67	523.54	3.00	0.00	3.00
11,300.00	90.00	89.62	10,550.00	380.42	623.60	623.47	3.00	0.00	3.00
11,313.54	90.00	90.02	10,550.00	380.46	637.14	637.01	3.00	0.00	3.00
Hold 90.02° Azm									
11,400.00	90.00	90.02	10,550.00	380.43	723.60	723.47	0.00	0.00	0.00
11,500.00	90.00	90.02	10,550.00	380.39	823.60	823.47	0.00	0.00	0.00
11,600.00	90.00	90.02	10,550.00	380.36	923.60	923.47	0.00	0.00	0.00
11,700.00	90.00	90.02	10,550.00	380.32	1,023.60	1,023.47	0.00	0.00	0.00
11,800.00	90.00	90.02	10,550.00	380.28	1,123.60	1,123.47	0.00	0.00	0.00
11,900.00	90.00	90.02	10,550.00	380.24	1,223.60	1,223.47	0.00	0.00	0.00
12,000.00	90.00	90.02	10,550.00	380.21	1,323.60	1,323.47	0.00	0.00	0.00
12,100.00	90.00	90.02	10,550.00	380.17	1,423.60	1,423.47	0.00	0.00	0.00
12,200.00	90.00	90.02	10,550.00	380.13	1,523.60	1,523.47	0.00	0.00	0.00
12,300.00	90.00	90.02	10,550.00	380.09	1,623.60	1,623.47	0.00	0.00	0.00
12,400.00	90.00	90.02	10,550.00	380.06	1,723.60	1,723.47	0.00	0.00	0.00
12,500.00	90.00	90.02	10,550.00	380.02	1,823.60	1,823.47	0.00	0.00	0.00
12,600.00	90.00	90.02	10,550.00	379.98	1,923.60	1,923.47	0.00	0.00	0.00
12,700.00	90.00	90.02	10,550.00	379.94	2,023.60	2,023.47	0.00	0.00	0.00
12,800.00	90.00	90.02	10,550.00	379.91	2,123.60	2,123.47	0.00	0.00	0.00
12,900.00	90.00	90.02	10,550.00	379.87	2,223.60	2,223.47	0.00	0.00	0.00
13,000.00	90.00	90.02	10,550.00	379.83	2,323.60	2,323.47	0.00	0.00	0.00



Planning Report

Database: EDM 5000.1 Conroe DB
 Company: Matador Resources
 Project: Eddy County, New Mexico (NAD 27)
 Site: Zach McCormick Federal 18-24S-29E RB
 Well: #221H
 Wellbore: Wellbore #1
 Design: Design #1

Local Co-ordinate Reference: Well #221H
 TVD Reference: WELL @ 2981.93usft (Patterson 297)
 MD Reference: WELL @ 2981.93usft (Patterson 297)
 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)
13,100.00	90.00	90.02	10,550.00	379.79	2,423.60	2,423.47	0.00	0.00	0.00
13,200.00	90.00	90.02	10,550.00	379.76	2,523.60	2,523.47	0.00	0.00	0.00
13,300.00	90.00	90.02	10,550.00	379.72	2,623.60	2,623.47	0.00	0.00	0.00
13,400.00	90.00	90.02	10,550.00	379.68	2,723.60	2,723.47	0.00	0.00	0.00
13,500.00	90.00	90.02	10,550.00	379.64	2,823.60	2,823.47	0.00	0.00	0.00
13,600.00	90.00	90.02	10,550.00	379.61	2,923.60	2,923.47	0.00	0.00	0.00
13,700.00	90.00	90.02	10,550.00	379.57	3,023.60	3,023.47	0.00	0.00	0.00
13,800.00	90.00	90.02	10,550.00	379.53	3,123.60	3,123.47	0.00	0.00	0.00
13,900.00	90.00	90.02	10,550.00	379.49	3,223.60	3,223.47	0.00	0.00	0.00
14,000.00	90.00	90.02	10,550.00	379.46	3,323.60	3,323.47	0.00	0.00	0.00
14,100.00	90.00	90.02	10,550.00	379.42	3,423.60	3,423.47	0.00	0.00	0.00
14,200.00	90.00	90.02	10,550.00	379.38	3,523.60	3,523.47	0.00	0.00	0.00
14,300.00	90.00	90.02	10,550.00	379.34	3,623.60	3,623.47	0.00	0.00	0.00
14,400.00	90.00	90.02	10,550.00	379.31	3,723.60	3,723.47	0.00	0.00	0.00
14,500.00	90.00	90.02	10,550.00	379.27	3,823.60	3,823.47	0.00	0.00	0.00
14,600.00	90.00	90.02	10,550.00	379.23	3,923.60	3,923.47	0.00	0.00	0.00
14,700.00	90.00	90.02	10,550.00	379.19	4,023.60	4,023.47	0.00	0.00	0.00
14,800.00	90.00	90.02	10,550.00	379.16	4,123.60	4,123.47	0.00	0.00	0.00
14,900.00	90.00	90.02	10,550.00	379.12	4,223.60	4,223.47	0.00	0.00	0.00
15,000.00	90.00	90.02	10,550.00	379.08	4,323.60	4,323.47	0.00	0.00	0.00
15,100.00	90.00	90.02	10,550.00	379.04	4,423.60	4,423.47	0.00	0.00	0.00
15,200.00	90.00	90.02	10,550.00	379.01	4,523.60	4,523.47	0.00	0.00	0.00
15,300.00	90.00	90.02	10,550.00	378.97	4,623.60	4,623.47	0.00	0.00	0.00
15,400.00	90.00	90.02	10,550.00	378.93	4,723.60	4,723.47	0.00	0.00	0.00
15,431.68	90.00	90.02	10,550.00	378.92	4,755.28	4,755.15	0.00	0.00	0.00
PBHL									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
VP - Zach McCormick - plan hits target center - Point	0.00	0.00	5,263.33	231.13	-341.74	445,186.78	593,204.87	32° 13' 24.874 N	104° 1' 54.963 W
PBHL - Zach McCormick - plan hits target center - Point	0.00	0.00	10,550.00	378.92	4,755.28	445,334.57	598,301.89	32° 13' 26.192 N	104° 0' 55.623 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
625.00	625.00	Surface Casing	10-3/4	12-1/4
2,800.00	2,796.05	9 5/8"	9-5/8	12-1/4
10,794.49	10,535.49	7"	7	7-1/2



Planning Report

Database: EDM 5000.1 Conroe DB
Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Site: Zach McCormick Federal 18-24S-29E RB
Well: #221H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
808.93	808.93	Top of Salt		0.00	90.02
2,685.60	2,681.93	Lamar/Base of Salt		0.00	90.02
2,735.73	2,731.93	Bell Canyon		0.00	90.02
3,672.93	3,661.93	Cherry Canyon		0.00	90.02
4,909.56	4,886.93	Brushy Canyon		0.00	90.02
6,489.18	6,465.93	Bone Spring Lime		0.00	90.02
7,431.18	7,407.93	1st Bone Spring Sand		0.00	90.02
7,744.18	7,720.93	2nd Bone Spring Carbonate		0.00	90.02
8,343.18	8,319.93	2nd Bone Spring Sand		0.00	90.02
8,582.18	8,558.93	3rd Bone Spring Carbonate		0.00	90.02
9,298.18	9,274.93	3rd Bone Spring Sand		0.00	90.02
9,656.18	9,632.93	Wolfcamp		0.00	90.02
9,688.18	9,664.93	Wolfcamp X		0.00	90.02
9,753.18	9,729.93	Wolfcamp Y		0.00	90.02
10,374.41	10,323.93	Wolfcamp B		0.00	90.02

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,000.00	1,000.00	0.00	0.00	KOP, 1.50°/100' Build
1,266.67	1,266.45	5.21	-7.71	Begin 4.00° Tangent
2,850.00	2,845.92	67.09	-99.20	Begin 1.50°/100' Build
3,116.66	3,111.08	82.70	-122.28	Begin 8.00° Tangent
4,753.24	4,731.73	210.30	-310.95	Begin 1.50°/100' Drop
5,286.58	5,263.33	231.13	-341.74	Begin Vertical Hold
9,994.49	9,971.24	231.13	-341.74	Begin 10.00°/100' Build
10,794.49	10,535.49	317.82	123.72	Begin 6.00°/100' Build
10,961.15	10,550.00	348.18	286.74	Begin 90° Lateral; Begin 3.00°/100' Turn
11,313.54	10,550.00	380.46	637.14	Hold 90.02° Azm
15,431.68	10,550.00	378.92	4,755.28	PBHL



Matador Resources

**Eddy County, New Mexico (NAD 27)
Zach McCormick Federal 18-24S-29E RB
#221H**

**Wellbore #1
Design #1**

Anticollision Report

24 June, 2016



Anticollision Report

Company: Matador Resources
 Project: Eddy County, New Mexico (NAD 27)
 Reference Site: Zach McCormick Federal 18-24S-29E RB
 Site Error: 0.00 usft
 Reference Well: #221H
 Well Error: 0.00 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
 TVD Reference: WELL @ 2981.93usft (Patterson 297)
 MD Reference: WELL @ 2981.93usft (Patterson 297)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Conroe DB
 Offset TVD Reference: Offset Datum

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

Survey Tool Program Date 6/23/2016

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	15,431.55	Design #1 (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						
Fort 18 Corn						
#1 - 122H - Surveys	1,071.38	1,088.19	1,396.32	1,389.07	192.459	CC
#1 - 122H - Surveys	1,100.00	1,116.22	1,396.42	1,388.96	187.315	ES
#1 - 122H - Surveys	10,800.00	10,543.74	1,593.54	1,518.40	21.208	SF
Zach McCormick Federal 18-24S-29E RB						
#1 - Wellbore #1 - Surveys	794.69	792.78	87.29	82.17	17.043	CC
#1 - Wellbore #1 - Surveys	900.00	897.44	87.72	81.85	14.958	ES
#1 - Wellbore #1 - Surveys	11,000.00	10,552.84	434.42	358.23	5.702	SF
#121H - Wellbore #1 - Design #1	1,000.00	1,000.08	60.04	53.33	8.951	CC, ES
#121H - Wellbore #1 - Design #1	7,900.00	7,899.07	180.36	123.47	3.170	SF
#122H - Wellbore #1 - Design #1	7,711.67	7,719.87	1,500.03	1,444.46	26.996	CC
#122H - Wellbore #1 - Design #1	8,000.00	7,996.59	1,500.70	1,443.12	26.063	ES
#122H - Wellbore #1 - Design #1	15,431.68	13,211.22	2,760.77	2,597.92	16.952	SF
#201H - Wellbore #1 - Design #1	1,000.00	1,000.23	30.02	23.31	4.475	CC
#201H - Wellbore #1 - Design #1	1,900.00	1,902.68	33.00	19.79	2.497	ES
#201H - Wellbore #1 - Design #1	9,300.00	9,310.17	150.54	83.47	2.245	SF
#202H - Wellbore #1 - Design #1	9,111.72	9,158.22	1,170.02	1,104.46	17.845	CC
#202H - Wellbore #1 - Design #1	9,300.00	9,343.92	1,170.13	1,103.25	17.496	ES
#202H - Wellbore #1 - Design #1	15,431.68	14,651.66	1,547.44	1,328.35	7.063	SF
#205H - Wellbore #1 - Design #1	1,000.00	999.67	42.53	35.82	6.342	CC, ES
#205H - Wellbore #1 - Design #1	1,200.00	1,199.92	46.85	38.76	5.788	SF
#206H - Wellbore #1 - Design #1	3,825.12	3,947.08	1,761.80	1,733.63	62.539	CC
#206H - Wellbore #1 - Design #1	3,900.00	4,005.66	1,762.18	1,733.47	61.390	ES
#206H - Wellbore #1 - Design #1	15,431.68	14,595.95	2,137.81	1,901.34	9.040	SF
#222H - Wellbore #1 - Design #1	10,739.67	10,996.40	1,299.11	1,219.07	16.231	CC
#222H - Wellbore #1 - Design #1	15,431.68	15,450.47	1,320.00	1,066.06	5.198	ES, SF
#225H - Wellbore #1 - Design #1	1,000.00	1,000.02	30.08	23.37	4.485	CC, ES
#225H - Wellbore #1 - Design #1	15,431.68	15,425.94	660.00	410.54	2.646	SF
#226H - Wellbore #1 - Design #1	1,000.00	1,001.16	1,803.97	1,797.26	268.801	CC
#226H - Wellbore #1 - Design #1	15,431.68	15,413.12	1,980.00	1,725.70	7.786	ES, SF

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Fort 18 Com - #1 - 122H - Surveys													Offset Site Error:	0.00 usft
Survey Program: 111-GYRO-NS													Offset Well Error:	0.00 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		
0.00	0.00	0.00	0.00	0.00	0.00	154.31	-1,268.80	610.44	1,408.02					
100.00	100.00	104.02	104.01	0.13	0.16	154.34	-1,268.80	609.59	1,407.68	1,407.39	0.29	4,931.613		
200.00	200.00	205.95	205.93	0.49	0.51	154.41	-1,268.80	607.71	1,406.88	1,405.89	1.00	1,411.000		
300.00	300.00	307.29	307.25	0.84	0.88	154.48	-1,268.81	605.62	1,405.99	1,404.27	1.72	816.654		
400.00	400.00	408.17	408.10	1.20	1.25	154.57	-1,268.81	603.34	1,405.02	1,402.58	2.44	575.222		
500.00	500.00	509.05	508.95	1.56	1.61	154.66	-1,268.81	600.91	1,404.00	1,400.83	3.16	443.811		
600.00	600.00	609.91	609.78	1.92	1.98	154.75	-1,268.82	598.33	1,402.91	1,399.02	3.88	361.163		
700.00	700.00	710.43	710.27	2.28	2.32	154.85	-1,268.82	595.69	1,401.79	1,397.20	4.59	305.405		
800.00	800.00	814.74	814.52	2.64	2.69	154.97	-1,268.83	592.47	1,400.48	1,395.16	5.32	263.309		
900.00	900.00	918.99	918.69	3.00	3.06	155.12	-1,268.83	588.48	1,398.87	1,392.82	6.05	231.313		
1,000.00	1,000.00	1,021.06	1,020.67	3.35	3.43	155.29	-1,268.84	583.86	1,396.98	1,390.21	6.77	206.422		
1,071.38	1,071.38	1,088.19	1,087.74	3.61	3.66	-148.70	-1,268.84	581.09	1,396.32	1,389.07	7.26	192.459 CC		
1,100.00	1,099.99	1,116.22	1,115.74	3.71	3.76	-148.67	-1,268.84	580.03	1,396.42	1,388.96	7.45	187.315 ES		
1,200.00	1,199.91	1,215.93	1,215.39	4.06	4.11	-148.61	-1,268.85	576.43	1,398.28	1,390.12	8.16	171.401		
1,266.67	1,266.45	1,285.23	1,284.64	4.30	4.35	-148.58	-1,268.85	573.71	1,400.67	1,392.03	8.64	162.143		
1,300.00	1,299.70	1,319.87	1,319.25	4.42	4.47	-148.57	-1,268.85	572.23	1,402.06	1,393.18	8.88	157.908		
1,400.00	1,399.46	1,421.88	1,421.15	4.78	4.84	-148.55	-1,268.86	567.58	1,406.13	1,396.54	9.60	146.540		
1,500.00	1,499.22	1,518.83	1,518.00	5.14	5.18	-148.53	-1,268.87	563.16	1,410.20	1,399.91	10.30	136.978		
1,600.00	1,598.97	1,615.83	1,614.92	5.50	5.52	-148.53	-1,268.87	559.33	1,414.52	1,403.53	10.99	128.662		
1,700.00	1,698.73	1,714.26	1,713.29	5.86	5.86	-148.55	-1,268.88	555.81	1,419.00	1,407.30	11.70	121.309		
1,800.00	1,798.48	1,814.16	1,813.12	6.23	6.21	-148.57	-1,268.88	552.32	1,423.51	1,411.10	12.41	114.740		
1,900.00	1,898.24	1,909.24	1,908.16	6.60	6.54	-148.60	-1,268.89	549.39	1,428.19	1,415.09	13.10	109.039		
2,000.00	1,998.00	2,007.50	2,006.40	6.96	6.88	-148.66	-1,268.89	547.06	1,433.17	1,419.37	13.80	103.845		
2,100.00	2,097.75	2,110.90	2,109.76	7.33	7.24	-148.70	-1,268.89	544.27	1,438.01	1,423.48	14.52	99.018		
2,200.00	2,197.51	2,217.63	2,216.42	7.70	7.62	-148.72	-1,268.90	540.49	1,442.50	1,427.24	15.26	94.528		
2,300.00	2,297.27	2,323.53	2,322.20	8.07	7.99	-148.69	-1,268.90	535.53	1,446.51	1,430.52	16.00	90.429		
2,400.00	2,397.02	2,427.29	2,425.81	8.44	8.36	-148.64	-1,268.91	529.84	1,450.20	1,433.47	16.73	86.700		
2,500.00	2,496.78	2,529.36	2,527.69	8.81	8.72	-148.57	-1,268.92	523.77	1,453.69	1,436.24	17.45	83.291		
2,600.00	2,596.54	2,628.49	2,626.64	9.18	9.07	-148.49	-1,268.93	517.73	1,457.13	1,438.96	18.17	80.203		
2,700.00	2,696.29	2,724.76	2,722.76	9.55	9.42	-148.43	-1,268.94	512.26	1,460.73	1,441.85	18.88	77.374		
2,800.00	2,796.05	2,821.03	2,818.90	9.92	9.77	-148.40	-1,268.94	507.37	1,464.59	1,445.00	19.59	74.764		
2,850.00	2,845.92	2,869.16	2,866.98	10.11	9.95	-148.39	-1,268.95	505.14	1,466.61	1,446.67	19.94	73.533		
2,900.00	2,895.78	2,917.16	2,914.94	10.29	10.12	-148.37	-1,268.95	503.07	1,468.97	1,448.68	20.30	72.375		
3,000.00	2,995.32	3,012.91	3,010.62	10.67	10.45	-148.38	-1,268.96	499.41	1,475.57	1,454.58	21.00	70.274		
3,100.00	3,094.57	3,111.38	3,109.03	11.06	10.79	-148.43	-1,268.96	496.06	1,484.57	1,462.86	21.71	68.376		
3,116.66	3,111.08	3,127.76	3,125.40	11.12	10.85	-148.44	-1,268.96	495.52	1,486.30	1,464.46	21.83	68.080		
3,200.00	3,193.60	3,209.65	3,207.25	11.45	11.14	-148.58	-1,268.96	492.89	1,495.10	1,472.68	22.43	66.663		
3,300.00	3,292.63	3,308.99	3,306.54	11.85	11.48	-148.75	-1,268.97	489.81	1,505.73	1,482.58	23.15	65.050		
3,400.00	3,391.65	3,409.44	3,406.94	12.25	11.84	-148.91	-1,268.97	486.57	1,516.32	1,492.45	23.87	63.519		
3,500.00	3,490.68	3,509.93	3,507.37	12.65	12.19	-149.07	-1,268.98	483.15	1,526.84	1,502.25	24.60	62.074		
3,600.00	3,589.71	3,607.29	3,604.67	13.05	12.53	-149.22	-1,268.98	479.90	1,537.41	1,512.10	25.31	60.741		
3,700.00	3,688.73	3,704.59	3,701.93	13.45	12.87	-149.38	-1,268.99	476.95	1,548.11	1,522.09	26.02	59.487		
3,800.00	3,787.76	3,802.16	3,799.46	13.85	13.21	-149.55	-1,268.99	474.29	1,558.96	1,532.22	26.74	58.303		
3,900.00	3,886.79	3,901.46	3,898.73	14.26	13.55	-149.72	-1,268.99	471.69	1,569.87	1,542.41	27.46	57.170		
4,000.00	3,985.82	4,071.25	3,997.99	14.66	14.14	-149.89	-1,269.00	469.09	1,580.79	1,552.36	28.43	55.609		
4,100.00	4,084.84	4,100.04	4,097.25	15.07	14.25	-150.05	-1,269.00	466.49	1,591.72	1,562.82	28.90	55.072		
4,200.00	4,183.87	4,199.34	4,196.51	15.47	14.59	-150.22	-1,269.00	463.89	1,602.67	1,573.04	29.63	54.097		
4,300.00	4,282.90	4,298.63	4,295.77	15.88	14.94	-150.38	-1,269.01	461.29	1,613.63	1,583.28	30.35	53.168		
4,400.00	4,381.92	4,397.93	4,395.03	16.29	15.29	-150.54	-1,269.01	458.70	1,624.60	1,593.53	31.07	52.283		
4,500.00	4,480.95	4,497.22	4,494.29	16.70	15.64	-150.70	-1,269.02	456.10	1,635.59	1,603.79	31.80	51.439		
4,600.00	4,579.98	4,596.14	4,593.17	17.10	15.98	-150.85	-1,269.02	453.52	1,646.59	1,614.08	32.52	50.635		
4,700.00	4,679.00	4,694.80	4,691.80	17.51	16.33	-151.01	-1,269.02	451.03	1,657.65	1,624.41	33.24	49.870		

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



Anticollision Report

Company: Matador Resources
 Project: Eddy County, New Mexico (NAD 27)
 Reference Site: Zach McCormick Federal 18-24S-29E RB
 Site Error: 0.00 usft
 Reference Well: #221H
 Well Error: 0.00 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
 TVD Reference: WELL @ 2981.93usft (Patterson 297)
 MD Reference: WELL @ 2981.93usft (Patterson 297)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Conros DB
 Offset TVD Reference: Offset Datum

Offset Design Fort 18 Com - #1 - 122H - Surveys													Offset Site Error: 0.00 usft	
Survey Program: 111-GYRO-NS													Offset Well Error: 0.00 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)	Offset Wellbore Centre +E/-W (usft)				Between Centres (usft)	Between Ellipses (usft)	
4,753.24	4,731.73	4,747.32	4,744.31	17.73	16.51	-151.09	-1,269.02	449.74	1,663.55	1,629.93	33.62	49.477		
4,800.00	4,778.07	4,793.47	4,790.44	17.92	16.67	-151.20	-1,269.03	448.62	1,668.50	1,634.54	33.96	49.132		
4,900.00	4,877.41	4,892.37	4,889.31	18.32	17.02	-151.38	-1,269.03	446.29	1,677.44	1,642.76	34.68	48.374		
5,000.00	4,977.02	4,991.47	4,988.38	18.70	17.37	-151.50	-1,269.03	444.04	1,684.13	1,648.74	35.39	47.589		
5,100.00	5,076.83	5,090.70	5,087.60	19.07	17.71	-151.56	-1,269.04	441.86	1,688.57	1,652.47	36.10	46.777		
5,200.00	5,176.76	5,189.99	5,186.86	19.43	18.06	-151.57	-1,269.04	439.78	1,690.74	1,653.94	36.80	45.944		
5,286.58	5,263.33	5,275.97	5,272.83	19.72	18.36	152.53	-1,269.04	438.04	1,690.80	1,653.40	37.40	45.206		
5,300.00	5,276.75	5,289.30	5,286.15	19.77	18.40	152.54	-1,269.04	437.78	1,690.68	1,653.18	37.50	45.091		
5,400.00	5,376.75	5,388.61	5,385.44	20.10	18.75	152.60	-1,269.04	435.86	1,689.79	1,651.61	38.19	44.251		
5,500.00	5,476.75	5,487.91	5,484.73	20.44	19.09	152.66	-1,269.05	434.03	1,688.95	1,650.07	38.88	43.442		
5,600.00	5,576.75	5,587.50	5,584.30	20.77	19.44	152.71	-1,269.05	432.28	1,688.14	1,648.57	39.57	42.661		
5,700.00	5,676.75	5,687.48	5,684.27	21.11	19.79	152.76	-1,269.05	430.54	1,687.35	1,647.08	40.27	41.904		
5,800.00	5,776.75	5,787.47	5,784.24	21.45	20.14	152.81	-1,269.05	428.79	1,686.55	1,645.59	40.96	41.173		
5,900.00	5,876.75	5,887.45	5,884.21	21.78	20.48	152.87	-1,269.06	427.05	1,685.75	1,644.10	41.66	40.466		
6,000.00	5,976.75	5,987.44	5,984.18	22.12	20.83	152.92	-1,269.06	425.30	1,684.96	1,642.61	42.35	39.782		
6,100.00	6,076.75	6,087.42	6,084.15	22.46	21.18	152.97	-1,269.06	423.56	1,684.17	1,641.12	43.05	39.120		
6,200.00	6,176.75	6,187.41	6,184.11	22.80	21.53	153.03	-1,269.06	421.81	1,683.38	1,639.63	43.75	38.480		
6,300.00	6,276.75	6,287.39	6,284.08	23.14	21.87	153.08	-1,269.07	420.07	1,682.59	1,638.15	44.44	37.858		
6,400.00	6,376.75	6,387.37	6,384.05	23.48	22.22	153.13	-1,269.07	418.32	1,681.80	1,636.66	45.14	37.256		
6,500.00	6,476.75	6,487.36	6,484.02	23.83	22.57	153.18	-1,269.07	416.58	1,681.02	1,635.18	45.84	36.671		
6,600.00	6,576.75	6,587.34	6,583.99	24.17	22.92	153.24	-1,269.07	414.83	1,680.23	1,633.69	46.54	36.104		
6,700.00	6,676.75	6,687.33	6,683.96	24.51	23.27	153.29	-1,269.08	413.09	1,679.45	1,632.21	47.24	35.553		
6,800.00	6,776.75	6,788.77	6,785.39	24.85	23.62	153.35	-1,269.08	411.28	1,678.65	1,630.71	47.94	35.013		
6,900.00	6,876.75	6,892.86	6,889.45	25.20	23.99	153.42	-1,269.08	408.98	1,677.66	1,629.00	48.66	34.476		
7,000.00	6,976.75	6,996.92	6,993.47	25.54	24.35	153.50	-1,269.09	406.10	1,676.43	1,627.05	49.38	33.949		
7,100.00	7,076.75	7,100.94	7,097.43	25.88	24.72	153.61	-1,269.09	402.66	1,674.96	1,624.86	50.10	33.432		
7,200.00	7,176.75	7,204.92	7,201.34	26.23	25.08	153.73	-1,269.10	398.65	1,673.26	1,622.44	50.82	32.926		
7,300.00	7,276.75	7,310.66	7,306.97	26.57	25.45	153.88	-1,269.10	393.92	1,671.29	1,619.74	51.54	32.425		
7,400.00	7,376.75	7,412.82	7,408.99	26.92	25.81	154.04	-1,269.11	388.62	1,669.01	1,616.76	52.25	31.940		
7,500.00	7,476.75	7,503.45	7,499.53	27.27	26.13	154.17	-1,269.12	384.51	1,667.04	1,614.11	52.92	31.501		
7,600.00	7,576.75	7,614.96	7,610.91	27.61	26.52	154.33	-1,269.12	379.20	1,664.97	1,611.30	53.67	31.024		
7,700.00	7,676.75	7,713.12	7,708.92	27.96	26.86	154.50	-1,269.13	373.79	1,662.59	1,608.23	54.36	30.582		
7,800.00	7,776.75	7,810.61	7,806.28	28.30	27.20	154.66	-1,269.14	368.76	1,660.38	1,605.32	55.06	30.157		
7,900.00	7,876.75	7,910.04	7,905.59	28.65	27.55	154.81	-1,269.14	363.90	1,658.30	1,602.54	55.76	29.740		
8,000.00	7,976.75	8,010.92	8,006.34	29.00	27.90	154.97	-1,269.15	358.76	1,656.14	1,599.67	56.47	29.329		
8,100.00	8,076.75	8,104.83	8,100.15	29.35	28.23	155.11	-1,269.16	354.39	1,654.18	1,597.04	57.15	28.945		
8,200.00	8,176.75	8,199.68	8,194.93	29.69	28.56	155.22	-1,269.16	350.79	1,652.59	1,594.76	57.83	28.576		
8,300.00	8,276.75	8,299.62	8,294.81	30.04	28.91	155.33	-1,269.17	347.30	1,651.13	1,592.60	58.53	28.208		
8,400.00	8,376.75	8,397.62	8,392.75	30.39	29.26	155.44	-1,269.17	344.00	1,649.74	1,590.51	59.23	27.853		
8,500.00	8,476.75	8,495.31	8,490.40	30.74	29.60	155.53	-1,269.18	341.03	1,648.48	1,588.55	59.92	27.510		
8,600.00	8,576.75	8,593.34	8,588.39	31.09	29.94	155.61	-1,269.18	338.37	1,647.36	1,586.74	60.62	27.176		
8,700.00	8,676.75	8,692.47	8,687.50	31.44	30.29	155.69	-1,269.18	335.86	1,646.32	1,585.00	61.32	26.849		
8,800.00	8,776.75	8,791.62	8,786.61	31.78	30.64	155.77	-1,269.19	333.48	1,645.33	1,583.32	62.02	26.530		
8,900.00	8,876.75	8,890.77	8,885.74	32.13	30.99	155.84	-1,269.19	331.21	1,644.40	1,581.68	62.72	26.220		
9,000.00	8,976.75	8,992.84	8,987.78	32.48	31.35	155.92	-1,269.19	328.86	1,643.46	1,580.03	63.43	25.910		
9,100.00	9,076.75	9,096.35	9,091.25	32.83	31.71	156.01	-1,269.20	325.96	1,642.32	1,578.17	64.15	25.602		
9,200.00	9,176.75	9,199.84	9,194.68	33.18	32.07	156.12	-1,269.20	322.51	1,640.97	1,576.10	64.87	25.297		
9,300.00	9,276.75	9,303.28	9,298.04	33.53	32.44	156.25	-1,269.21	318.51	1,639.41	1,573.83	65.59	24.996		
9,400.00	9,376.75	9,406.22	9,400.89	33.88	32.80	156.39	-1,269.21	314.00	1,637.66	1,571.36	66.30	24.700		
9,500.00	9,476.75	9,508.78	9,503.33	34.23	33.16	156.55	-1,269.22	309.08	1,635.75	1,568.73	67.02	24.407		
9,600.00	9,576.75	9,608.81	9,603.23	34.58	33.51	156.71	-1,269.23	303.95	1,633.72	1,565.99	67.73	24.122		
9,700.00	9,676.75	9,705.70	9,700.01	34.94	33.85	156.86	-1,269.23	299.31	1,631.84	1,563.41	68.42	23.850		

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Fort 18 Com - #1 - 122H - Surveys													Offset Site Error:	0.00 usft
Survey Program: 111-GYRO-NS													Offset Well Error:	0.00 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		
9,800.00	9,776.75	9,802.64	9,796.85	35.29	34.19	157.00	-1,269.24	295.11	1,630.14	1,561.03	69.12	23.585		
9,900.00	9,876.75	9,899.61	9,893.75	35.64	34.53	157.12	-1,269.25	291.36	1,628.64	1,558.83	69.81	23.329		
9,994.49	9,971.24	9,999.71	9,993.78	35.97	34.89	157.25	-1,269.25	287.48	1,627.23	1,556.73	70.50	23.081		
10,000.00	9,976.75	10,005.78	9,999.84	35.99	34.91	77.82	-1,269.25	287.20	1,627.12	1,556.58	70.54	23.066		
10,050.00	10,026.67	10,060.57	10,054.56	36.15	35.10	78.16	-1,269.26	284.44	1,625.60	1,554.70	70.90	22.928		
10,100.00	10,076.16	10,107.46	10,101.39	36.31	35.26	78.70	-1,269.26	282.05	1,623.20	1,551.98	71.23	22.790		
10,150.00	10,124.85	10,154.81	10,148.68	36.45	35.43	79.46	-1,269.26	279.67	1,620.05	1,548.50	71.55	22.643		
10,200.00	10,172.38	10,200.86	10,194.67	36.59	35.59	80.40	-1,269.27	277.41	1,616.26	1,544.40	71.86	22.491		
10,250.00	10,218.37	10,245.70	10,239.46	36.72	35.75	81.51	-1,269.27	275.25	1,612.00	1,539.83	72.17	22.337		
10,300.00	10,262.48	10,288.88	10,282.59	36.84	35.90	82.74	-1,269.27	273.16	1,607.43	1,534.97	72.46	22.182		
10,350.00	10,304.38	10,329.64	10,323.30	36.95	36.05	84.05	-1,269.27	271.17	1,602.77	1,530.02	72.75	22.031		
10,400.00	10,343.74	10,367.65	10,361.26	37.05	36.18	85.39	-1,269.28	269.30	1,598.23	1,525.20	73.03	21.885		
10,450.00	10,380.26	10,402.62	10,396.20	37.16	36.30	86.71	-1,269.28	267.56	1,594.07	1,520.77	73.30	21.748		
10,500.00	10,413.68	10,434.30	10,427.84	37.27	36.41	87.95	-1,269.28	265.98	1,590.52	1,516.96	73.56	21.621		
10,550.00	10,443.72	10,462.44	10,455.94	37.39	36.51	89.06	-1,269.28	264.56	1,587.82	1,513.99	73.83	21.508		
10,600.00	10,470.17	10,486.84	10,480.30	37.53	36.60	89.99	-1,269.28	263.33	1,586.18	1,512.09	74.09	21.410		
10,639.32	10,488.31	10,503.26	10,496.71	37.66	36.66	90.57	-1,269.29	262.49	1,585.76	1,511.47	74.29	21.344		
10,650.00	10,492.82	10,507.30	10,500.74	37.70	36.67	90.71	-1,269.29	262.29	1,585.79	1,511.45	74.35	21.329		
10,700.00	10,511.51	10,523.67	10,517.09	37.89	36.73	91.16	-1,269.29	261.45	1,586.82	1,512.21	74.61	21.268		
10,750.00	10,526.08	10,535.85	10,529.25	38.11	36.77	91.33	-1,269.29	260.83	1,589.38	1,514.51	74.87	21.227		
10,794.49	10,535.49	10,543.07	10,536.47	38.33	36.80	91.23	-1,269.29	260.46	1,593.00	1,517.89	75.11	21.209		
10,800.00	10,536.44	10,543.74	10,537.13	38.36	36.80	91.22	-1,269.29	260.43	1,593.54	1,518.40	75.14	21.208 SF		
10,850.00	10,543.54	10,548.35	10,541.73	38.63	36.82	91.03	-1,269.29	260.19	1,599.30	1,523.89	75.40	21.210		
10,900.00	10,548.04	10,550.33	10,543.72	38.92	36.82	90.66	-1,269.29	260.09	1,606.63	1,530.96	75.67	21.231		
10,950.00	10,549.94	10,549.70	10,543.09	39.25	36.82	90.10	-1,269.29	260.12	1,615.50	1,539.56	75.94	21.272		
10,961.15	10,550.00	10,549.20	10,542.59	39.32	36.82	89.95	-1,269.29	260.15	1,617.69	1,541.68	76.00	21.284		
11,000.00	10,550.00	10,547.24	10,540.63	39.59	36.81	89.88	-1,269.29	260.25	1,625.49	1,549.26	76.22	21.326		
11,100.00	10,550.00	10,542.17	10,535.56	40.39	36.79	89.70	-1,269.29	260.51	1,646.07	1,569.24	76.83	21.425		
11,200.00	10,550.00	10,537.08	10,530.48	41.31	36.78	89.52	-1,269.29	260.77	1,667.33	1,589.83	77.50	21.513		
11,300.00	10,550.00	10,531.98	10,525.39	42.34	36.76	89.35	-1,269.29	261.03	1,689.19	1,610.96	78.22	21.594		
11,313.54	10,550.00	10,531.29	10,524.70	42.49	36.76	89.33	-1,269.29	261.06	1,692.18	1,613.86	78.32	21.605		
11,400.00	10,550.00	10,526.89	10,520.31	43.47	36.74	89.17	-1,269.29	261.29	1,713.44	1,634.46	78.97	21.696		
11,500.00	10,550.00	10,521.81	10,515.23	44.71	36.72	89.00	-1,269.29	261.55	1,743.04	1,663.31	79.73	21.861		
11,600.00	10,550.00	10,516.74	10,510.17	46.03	36.70	88.82	-1,269.29	261.81	1,777.76	1,697.29	80.48	22.091		
11,700.00	10,550.00	10,511.69	10,505.12	47.45	36.69	88.65	-1,269.29	262.07	1,817.32	1,736.12	81.20	22.382		
11,800.00	10,550.00	10,506.64	10,500.08	48.94	36.67	88.47	-1,269.29	262.32	1,861.40	1,779.52	81.88	22.732		
11,900.00	10,550.00	10,501.60	10,495.05	50.50	36.65	88.30	-1,269.29	262.58	1,909.69	1,827.16	82.53	23.139		
12,000.00	10,550.00	10,496.57	10,490.02	52.13	36.63	88.12	-1,269.29	262.83	1,961.88	1,878.75	83.13	23.599		
12,100.00	10,550.00	10,491.55	10,485.01	53.82	36.62	87.95	-1,269.29	263.09	2,017.67	1,933.98	83.69	24.109		
12,200.00	10,550.00	10,486.55	10,480.01	55.56	36.60	87.78	-1,269.28	263.34	2,076.76	1,992.56	84.20	24.664		
12,300.00	10,550.00	10,481.55	10,475.02	57.35	36.58	87.60	-1,269.28	263.60	2,138.89	2,054.22	84.67	25.262		
12,400.00	10,550.00	10,476.56	10,470.04	59.19	36.56	87.43	-1,269.28	263.85	2,203.79	2,118.70	85.09	25.899		
12,500.00	10,550.00	10,471.58	10,465.07	61.07	36.55	87.26	-1,269.28	264.10	2,271.23	2,185.76	85.47	26.572		
12,600.00	10,550.00	10,466.61	10,460.11	62.98	36.53	87.09	-1,269.28	264.35	2,340.99	2,255.17	85.82	27.278		
12,700.00	10,550.00	10,461.66	10,455.16	64.93	36.51	86.92	-1,269.28	264.60	2,412.87	2,326.74	86.13	28.014		
12,800.00	10,550.00	10,456.71	10,450.21	66.91	36.49	86.74	-1,269.28	264.85	2,486.68	2,400.27	86.41	28.777		
12,900.00	10,550.00	10,451.77	10,445.28	68.92	36.48	86.57	-1,269.28	265.10	2,562.26	2,475.60	86.67	29.565		
13,000.00	10,550.00	10,446.84	10,440.36	70.96	36.46	86.40	-1,269.28	265.35	2,639.46	2,552.57	86.89	30.376		
13,100.00	10,550.00	10,441.92	10,435.45	73.01	36.44	86.23	-1,269.28	265.59	2,718.13	2,631.04	87.10	31.207		
13,200.00	10,550.00	10,437.02	10,430.55	75.09	36.42	86.06	-1,269.28	265.84	2,798.16	2,710.88	87.28	32.058		
13,300.00	10,550.00	10,432.12	10,425.65	77.19	36.41	85.89	-1,269.28	266.09	2,879.43	2,791.98	87.45	32.927		
13,400.00	10,550.00	10,427.23	10,420.77	79.31	36.39	85.73	-1,269.28	266.33	2,961.84	2,874.23	87.60	33.811		

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Fort 18 Com - #1 - 122H - Surveys													Offset Site Error:	0.00 usft
Survey Program: 111-GYRO-NS													Offset Well Error:	0.00 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		
13,500.00	10,550.00	10,422.35	10,415.90	81.45	36.37	85.56	-1,269.28	266.57	3,045.29	2,957.55	87.74	34.710		
13,600.00	10,550.00	10,417.48	10,411.03	83.60	36.36	85.39	-1,269.28	266.82	3,129.70	3,041.84	87.86	35.622		
13,700.00	10,550.00	10,412.62	10,406.18	85.76	36.34	85.22	-1,269.28	267.06	3,215.00	3,127.03	87.97	36.546		
13,800.00	10,550.00	10,407.77	10,401.34	87.94	36.32	85.06	-1,269.28	267.30	3,301.12	3,213.05	88.07	37.482		
13,900.00	10,550.00	10,402.93	10,396.50	90.13	36.30	84.89	-1,269.28	267.54	3,388.00	3,299.83	88.17	38.428		
14,000.00	10,550.00	10,398.10	10,391.68	92.34	36.29	84.72	-1,269.28	267.78	3,475.57	3,387.32	88.25	39.383		
14,100.00	10,550.00	10,393.28	10,386.86	94.55	36.27	84.56	-1,269.28	268.02	3,563.79	3,475.46	88.33	40.347		
14,200.00	10,550.00	10,388.46	10,382.05	96.78	36.25	84.39	-1,269.28	268.26	3,652.61	3,564.21	88.40	41.320		
14,300.00	10,550.00	10,383.66	10,377.26	99.01	36.24	84.23	-1,269.28	268.50	3,741.99	3,653.52	88.47	42.299		
14,400.00	10,550.00	10,378.87	10,372.47	101.25	36.22	84.06	-1,269.28	268.74	3,831.89	3,743.36	88.53	43.285		
14,500.00	10,550.00	10,374.08	10,367.69	103.50	36.20	83.90	-1,269.28	268.98	3,922.27	3,833.68	88.58	44.278		
14,600.00	10,550.00	10,369.31	10,362.92	105.76	36.19	83.73	-1,269.28	269.21	4,013.10	3,924.46	88.64	45.276		
14,700.00	10,550.00	10,364.54	10,358.16	108.03	36.17	83.57	-1,269.28	269.45	4,104.35	4,015.66	88.69	46.279		
14,800.00	10,550.00	10,359.79	10,353.41	110.30	36.15	83.41	-1,269.28	269.68	4,195.99	4,107.26	88.73	47.288		
14,900.00	10,550.00	10,355.04	10,348.67	112.58	36.14	83.25	-1,269.28	269.92	4,288.01	4,199.23	88.78	48.300		
15,000.00	10,550.00	10,350.30	10,343.94	114.86	36.12	83.08	-1,269.28	270.15	4,380.37	4,291.54	88.82	49.317		
15,100.00	10,550.00	10,345.58	10,339.22	117.15	36.10	82.92	-1,269.27	270.38	4,473.05	4,384.19	88.86	50.338		
15,200.00	10,550.00	10,340.86	10,334.51	119.45	36.09	82.76	-1,269.27	270.62	4,566.03	4,477.13	88.90	51.362		
15,300.00	10,550.00	10,336.15	10,329.80	121.75	36.07	82.60	-1,269.27	270.85	4,659.30	4,570.36	88.94	52.389		
15,400.00	10,550.00	10,331.45	10,325.11	124.05	36.05	82.44	-1,269.27	271.08	4,752.84	4,663.87	88.97	53.419		
15,431.68	10,550.00	10,329.96	10,323.62	124.78	36.05	82.39	-1,269.27	271.15	4,782.52	4,693.54	88.98	53.746		

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #1 - Wellbore #1 - Surveys														Offset Site Error:	0.00 usft
Survey Program: 125-GYRO-NS														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance									
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	Warning		
0.00	0.00	0.00	0.00	0.00	0.00	92.34	-3.65	89.39	89.49						
100.00	100.00	98.16	98.16	0.13	0.14	92.30	-3.59	89.34	89.42	89.15	0.26	341.339			
138.78	138.78	136.97	136.97	0.27	0.19	92.27	-3.54	89.30	89.37	88.91	0.45	196.767			
200.00	200.00	197.78	197.78	0.49	0.43	92.20	-3.43	89.43	89.49	88.58	0.91	98.200			
300.00	300.00	298.23	298.23	0.84	0.78	92.08	-3.25	89.54	89.60	87.98	1.62	55.303			
400.00	400.00	398.50	398.50	1.20	1.13	91.99	-3.09	89.25	89.30	86.98	2.33	38.348			
500.00	500.00	498.72	498.72	1.56	1.48	92.26	-3.49	88.54	88.61	85.57	3.04	29.168			
600.00	600.00	598.64	598.63	1.92	1.83	92.88	-4.42	87.88	87.99	84.25	3.75	23.492			
700.00	700.00	698.39	698.37	2.28	2.17	93.57	-5.46	87.36	87.53	83.08	4.45	19.657			
794.69	794.69	792.78	792.76	2.62	2.50	94.19	-6.38	87.06	87.29	82.17	5.12	17.043 CC			
800.00	800.00	798.06	798.04	2.64	2.52	94.22	-6.42	87.05	87.29	82.13	5.16	16.919			
900.00	900.00	897.44	897.41	3.00	2.87	94.64	-7.10	87.42	87.72	81.85	5.86	14.958 ES			
1,000.00	1,000.00	997.24	997.21	3.35	3.22	95.05	-7.80	88.24	88.59	82.02	6.57	13.483			
1,100.00	1,099.99	1,097.10	1,097.06	3.71	3.57	151.66	-8.35	89.19	90.74	83.47	7.27	12.476			
1,200.00	1,199.91	1,196.91	1,196.87	4.06	3.91	152.90	-8.72	90.31	95.37	87.40	7.97	11.961			
1,266.67	1,266.45	1,263.72	1,263.67	4.30	4.15	154.00	-8.91	90.99	99.71	91.27	8.44	11.810			
1,300.00	1,299.70	1,297.39	1,297.34	4.42	4.27	154.62	-9.00	91.21	102.03	93.36	8.68	11.757			
1,400.00	1,399.46	1,398.54	1,398.48	4.78	4.62	156.62	-9.71	90.86	108.17	98.78	9.38	11.526			
1,500.00	1,499.22	1,498.61	1,498.55	5.14	4.97	158.54	-10.51	89.54	113.48	103.40	10.09	11.250			
1,600.00	1,598.97	1,598.13	1,598.05	5.50	5.32	160.48	-11.73	88.26	119.07	108.28	10.79	11.034			
1,700.00	1,698.73	1,697.57	1,697.47	5.86	5.67	162.20	-12.98	87.32	125.10	113.61	11.49	10.884			
1,800.00	1,798.48	1,797.52	1,797.41	6.23	6.02	163.80	-14.26	86.30	131.17	118.97	12.20	10.752			
1,900.00	1,898.24	1,897.09	1,896.97	6.60	6.36	165.26	-15.55	85.18	137.25	124.34	12.90	10.636			
2,000.00	1,998.00	1,994.75	1,994.62	6.96	6.71	166.64	-17.17	84.61	144.05	130.45	13.60	10.592			
2,100.00	2,097.75	2,090.70	2,090.50	7.33	7.04	168.22	-20.45	85.75	153.21	138.93	14.28	10.729			
2,200.00	2,197.51	2,189.35	2,189.02	7.70	7.39	169.91	-24.97	87.87	163.82	148.84	14.98	10.937			
2,300.00	2,297.27	2,284.70	2,284.18	8.07	7.72	171.44	-30.16	90.89	175.85	160.20	15.65	11.239			
2,400.00	2,397.02	2,379.68	2,378.80	8.44	8.06	173.00	-36.92	95.49	190.23	173.93	16.30	11.668			
2,500.00	2,496.78	2,480.47	2,479.09	8.81	8.41	174.67	-45.41	100.86	205.80	188.77	17.03	12.086			
2,600.00	2,596.54	2,585.71	2,584.04	9.18	8.78	175.95	-52.13	104.48	218.86	201.07	17.79	12.303			
2,700.00	2,696.29	2,688.33	2,686.54	9.55	9.14	176.78	-56.64	106.68	229.88	211.36	18.52	12.413			
2,800.00	2,796.05	2,789.61	2,787.75	9.92	9.50	177.40	-60.06	108.13	239.81	220.57	19.24	12.465			
2,850.00	2,845.92	2,840.05	2,838.17	10.11	9.67	177.61	-61.34	108.82	244.53	224.94	19.60	12.479			
2,900.00	2,895.78	2,889.80	2,887.90	10.29	9.85	177.79	-62.49	109.50	249.53	229.58	19.95	12.508			
3,000.00	2,995.32	2,988.82	2,986.89	10.67	10.19	178.13	-64.79	110.89	261.52	240.86	20.66	12.660			
3,100.00	3,094.57	3,088.43	3,086.47	11.06	10.54	178.48	-67.04	111.99	275.83	254.46	21.37	12.908			
3,116.66	3,111.08	3,104.84	3,102.87	11.12	10.60	178.54	-67.42	112.19	278.48	256.99	21.49	12.961			
3,200.00	3,193.60	3,187.73	3,185.73	11.45	10.89	178.80	-69.25	113.16	291.87	269.79	22.08	13.220			
3,300.00	3,292.63	3,285.93	3,283.91	11.85	11.23	179.06	-71.27	114.27	307.83	285.05	22.78	13.513			
3,400.00	3,391.65	3,385.02	3,382.97	12.25	11.58	179.30	-73.36	115.48	323.90	300.41	23.49	13.789			
3,500.00	3,490.68	3,484.30	3,482.22	12.65	11.93	179.56	-75.65	116.48	339.91	315.71	24.20	14.046			
3,600.00	3,589.71	3,584.15	3,582.05	13.05	12.28	179.80	-77.71	117.09	355.46	330.55	24.91	14.268			
3,700.00	3,688.73	3,683.80	3,681.68	13.45	12.63	-180.00	-79.57	117.61	370.84	345.21	25.63	14.470			
3,800.00	3,787.76	3,783.11	3,780.96	13.85	12.97	-179.80	-81.44	118.01	386.13	359.79	26.34	14.660			
3,900.00	3,886.79	3,883.50	3,881.34	14.26	13.33	-179.62	-83.07	118.12	401.05	374.00	27.06	14.823			
4,000.00	3,985.82	3,982.37	3,980.21	14.66	13.67	-179.49	-84.35	118.23	415.77	388.01	27.76	14.975			
4,100.00	4,084.84	4,081.23	4,079.06	15.07	14.02	-179.39	-85.61	118.49	430.63	402.16	28.47	15.124			
4,200.00	4,183.87	4,182.05	4,179.87	15.47	14.37	-179.28	-86.86	118.48	445.23	416.04	29.19	15.251			
4,300.00	4,282.90	4,281.11	4,278.93	15.88	14.72	-179.18	-87.88	118.26	459.55	429.65	29.91	15.367			
4,400.00	4,381.92	4,379.22	4,377.03	16.29	15.06	-179.09	-88.89	118.19	473.99	443.38	30.61	15.484			
4,500.00	4,480.95	4,475.33	4,473.13	16.70	15.40	-179.01	-90.04	118.19	488.60	457.29	31.30	15.608			
4,600.00	4,579.98	4,578.65	4,576.44	17.10	15.76	-178.91	-91.32	118.09	503.13	471.09	32.04	15.703			

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #1 - Wellbore #1 - Surveys													Offset Site Error: 0.00 usft	
Survey Program: 125-GYRO-NS													Offset Well Error: 0.00 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		
4,700.00	4,679.00	4,677.03	4,674.81	17.51	16.11	-178.81	-92.47	117.76	517.44	484.69	32.75	15.801		
4,753.24	4,731.73	4,730.65	4,728.43	17.73	16.29	-178.77	-93.04	117.58	525.03	491.90	33.13	15.847		
4,800.00	4,778.07	4,775.85	4,773.63	17.92	16.45	-178.73	-93.51	117.43	531.41	497.95	33.46	15.883		
4,900.00	4,877.41	4,876.07	4,873.84	18.32	16.80	-178.66	-94.64	117.31	543.36	509.19	34.17	15.900		
5,000.00	4,977.02	4,976.19	4,973.95	18.70	17.15	-178.54	-95.87	116.63	552.31	517.43	34.89	15.832		
5,100.00	5,076.83	5,076.78	5,074.53	19.07	17.51	-178.39	-97.27	115.86	558.69	523.09	35.60	15.695		
5,200.00	5,176.76	5,178.38	5,176.11	19.43	17.86	-178.22	-98.70	114.74	562.19	525.88	36.31	15.482		
5,286.58	5,263.33	5,266.83	5,264.55	19.72	18.17	126.01	-99.79	113.50	562.82	525.89	36.93	15.241		
5,300.00	5,276.75	5,280.50	5,278.21	19.77	18.22	126.04	-99.94	113.30	562.74	525.71	37.02	15.200		
5,400.00	5,376.75	5,395.72	5,393.40	20.10	18.62	126.04	-98.62	111.51	560.81	523.03	37.78	14.843		
5,500.00	5,476.75	5,493.85	5,491.46	20.44	18.96	125.84	-95.19	110.10	557.60	519.13	38.47	14.494		
5,600.00	5,576.75	5,593.48	5,591.03	20.77	19.30	125.64	-91.91	108.81	554.63	515.46	39.16	14.162		
5,700.00	5,676.75	5,705.11	5,702.52	21.11	19.69	125.30	-86.69	107.11	550.67	510.78	39.89	13.804		
5,800.00	5,776.75	5,803.53	5,800.73	21.45	20.02	124.89	-80.67	105.41	545.74	505.16	40.58	13.448		
5,900.00	5,876.75	5,901.98	5,899.02	21.78	20.36	124.52	-75.26	103.76	541.23	499.95	41.27	13.113		
6,000.00	5,976.75	5,997.24	5,994.14	22.12	20.69	124.13	-70.07	102.71	537.25	495.29	41.96	12.805		
6,100.00	6,076.75	6,094.69	6,091.44	22.46	21.03	123.69	-64.87	102.27	533.89	491.24	42.64	12.519		
6,200.00	6,176.75	6,180.82	6,177.44	22.80	21.33	123.23	-60.29	103.05	531.76	488.48	43.28	12.286		
6,220.95	6,197.70	6,199.17	6,195.77	22.87	21.39	123.12	-59.42	103.56	531.71	488.29	43.41	12.248		
6,300.00	6,276.75	6,271.46	6,267.89	23.14	21.64	122.60	-55.65	106.61	532.26	488.34	43.92	12.119		
6,400.00	6,376.75	6,370.63	6,366.79	23.48	21.98	121.83	-50.31	111.63	533.68	489.06	44.61	11.962		
6,500.00	6,476.75	6,460.02	6,455.91	23.83	22.29	121.12	-45.71	116.85	536.01	490.78	45.23	11.851		
6,600.00	6,576.75	6,541.34	6,536.82	24.17	22.57	120.39	-42.00	124.02	541.28	495.53	45.74	11.833		
6,700.00	6,676.75	6,646.21	6,641.25	24.51	22.94	119.74	-40.36	133.38	548.25	501.75	46.50	11.791		
6,800.00	6,776.75	6,755.15	6,749.94	24.85	23.32	119.24	-39.01	140.77	553.54	506.26	47.29	11.706		
6,900.00	6,876.75	6,852.97	6,847.61	25.20	23.66	118.89	-38.01	146.08	557.80	509.83	47.97	11.628		
7,000.00	6,976.75	6,958.66	6,953.06	25.54	24.03	118.39	-36.08	152.72	562.46	513.74	48.72	11.544		
7,100.00	7,076.75	7,054.39	7,048.50	25.88	24.36	117.74	-32.31	159.23	566.63	517.24	49.39	11.473		
7,200.00	7,176.75	7,154.78	7,148.36	26.23	24.72	116.83	-26.54	167.71	571.52	521.42	50.09	11.409		
7,300.00	7,276.75	7,243.53	7,236.62	26.57	25.03	116.06	-21.91	175.71	577.27	526.59	50.68	11.390		
7,400.00	7,376.75	7,329.43	7,322.01	26.92	25.33	115.43	-19.15	184.61	585.21	533.98	51.22	11.424		
7,500.00	7,476.75	7,433.00	7,425.02	27.27	25.70	114.86	-17.70	195.31	593.99	542.01	51.97	11.428		
7,600.00	7,576.75	7,516.17	7,507.74	27.61	25.99	114.47	-17.14	203.92	603.23	550.76	52.46	11.498		
7,700.00	7,676.75	7,607.55	7,598.33	27.96	26.31	114.05	-17.75	215.82	615.35	562.31	53.05	11.600		
7,800.00	7,776.75	7,701.61	7,691.46	28.30	26.65	113.60	-18.27	228.98	628.39	574.72	53.67	11.709		
7,900.00	7,876.75	7,806.31	7,795.19	28.65	27.02	113.16	-19.08	243.22	641.18	586.73	54.45	11.775		
8,000.00	7,976.75	7,906.64	7,894.69	29.00	27.38	112.85	-20.69	255.97	653.52	598.35	55.17	11.846		
8,100.00	8,076.75	8,009.12	7,996.44	29.35	27.74	112.79	-24.80	267.44	665.39	609.48	55.91	11.900		
8,200.00	8,176.75	8,105.72	8,092.34	29.69	28.09	112.81	-29.50	278.08	677.43	620.85	56.58	11.973		
8,300.00	8,276.75	8,194.29	8,180.09	30.04	28.40	112.76	-33.59	289.30	690.84	633.72	57.13	12.093		
8,400.00	8,376.75	8,299.64	8,284.52	30.39	28.78	112.68	-38.09	302.52	704.06	646.14	57.92	12.156		
8,500.00	8,476.75	8,404.41	8,388.44	30.74	29.16	112.53	-41.46	315.33	716.59	657.89	58.69	12.209		
8,600.00	8,576.75	8,513.59	8,496.86	31.09	29.55	112.34	-44.11	327.95	728.24	668.71	59.52	12.234		
8,700.00	8,676.75	8,633.84	8,616.56	31.44	29.98	112.20	-46.73	339.05	737.62	677.16	60.46	12.200		
8,800.00	8,776.75	8,749.04	8,731.49	31.78	30.38	112.08	-48.13	346.73	744.21	682.91	61.31	12.139		
8,900.00	8,876.75	8,839.50	8,821.76	32.13	30.70	111.96	-48.81	352.60	750.53	688.60	61.93	12.119		
9,000.00	8,976.75	8,936.54	8,918.50	32.48	31.04	111.83	-50.04	360.01	758.08	695.47	62.61	12.108		
9,100.00	9,076.75	9,053.66	9,035.39	32.83	31.45	111.76	-51.79	367.15	764.28	700.82	63.47	12.042		
9,200.00	9,176.75	9,169.58	9,151.20	33.18	31.86	111.76	-53.68	371.67	768.53	704.24	64.29	11.955		
9,300.00	9,276.75	9,280.29	9,261.86	33.53	32.24	111.86	-55.95	373.73	771.03	705.97	65.05	11.852		
9,400.00	9,376.75	9,378.01	9,359.53	33.88	32.58	112.07	-59.13	374.05	772.56	706.81	65.75	11.751		
9,500.00	9,476.75	9,478.46	9,459.90	34.23	32.93	112.34	-63.22	374.62	774.63	708.17	66.45	11.657		

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #1 - Wellbore #1 - Surveys													Offset Site Error:	0.00 usft
Survey Program: 125-GYRO-NS													Offset Well Error:	0.00 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	
9,600.00	9,576.75	9,572.49	9,553.85	34.58	33.26	112.57	-66.86	375.31	776.78	709.66	67.12	11.573		
9,700.00	9,676.75	9,675.02	9,656.34	34.94	33.62	112.58	-68.17	377.83	779.55	711.71	67.84	11.491		
9,800.00	9,776.75	9,778.65	9,759.92	35.29	33.98	112.42	-66.96	380.63	781.60	713.03	68.57	11.399		
9,900.00	9,876.75	9,876.81	9,858.06	35.64	34.32	112.33	-66.53	383.08	783.74	714.47	69.26	11.316		
9,994.49	9,971.24	9,968.15	9,949.36	35.97	34.64	112.24	-66.15	385.45	785.87	715.95	69.91	11.241		
10,000.00	9,976.75	9,973.21	9,954.42	35.99	34.65	32.77	-66.14	385.60	785.98	716.04	69.95	11.237		
10,050.00	10,026.67	10,021.80	10,002.99	36.15	34.82	32.88	-66.07	387.05	785.10	714.82	70.28	11.171		
10,100.00	10,076.16	10,071.25	10,052.42	36.31	34.99	33.38	-66.23	388.45	780.58	709.97	70.62	11.054		
10,150.00	10,124.85	10,119.43	10,100.57	36.45	35.16	34.27	-66.52	389.80	772.53	701.59	70.94	10.889		
10,200.00	10,172.38	10,170.23	10,151.35	36.59	35.34	35.62	-66.84	391.16	760.96	689.67	71.29	10.675		
10,250.00	10,218.37	10,216.69	10,197.81	36.72	35.50	37.41	-67.23	392.27	746.01	674.42	71.60	10.420		
10,300.00	10,262.48	10,263.82	10,244.92	36.84	35.67	39.76	-67.55	393.34	727.92	656.01	71.91	10.123		
10,350.00	10,304.38	10,307.75	10,288.84	36.95	35.82	42.67	-67.93	394.15	706.91	634.70	72.20	9.790		
10,400.00	10,343.74	10,350.46	10,331.55	37.05	35.97	46.29	-68.50	394.69	683.36	610.87	72.49	9.427		
10,450.00	10,380.26	10,390.55	10,371.62	37.16	36.11	50.61	-69.18	394.87	657.64	584.86	72.77	9.037		
10,500.00	10,413.68	10,423.80	10,404.87	37.27	36.22	55.36	-69.95	394.79	630.33	557.31	73.02	8.632		
10,550.00	10,443.72	10,453.45	10,434.50	37.39	36.33	60.57	-70.75	394.66	602.16	528.89	73.27	8.218		
10,600.00	10,470.17	10,479.38	10,460.43	37.53	36.42	66.03	-71.48	394.54	573.76	500.23	73.53	7.803		
10,650.00	10,492.82	10,502.29	10,483.33	37.70	36.50	71.55	-72.14	394.40	545.83	472.03	73.80	7.396		
10,700.00	10,511.51	10,520.74	10,501.77	37.89	36.56	76.70	-72.71	394.21	519.19	445.10	74.09	7.007		
10,750.00	10,526.08	10,534.51	10,515.52	38.11	36.61	81.14	-73.17	394.03	494.75	420.34	74.41	6.649		
10,794.49	10,535.49	10,542.98	10,523.99	38.33	36.64	84.33	-73.46	393.90	475.59	400.88	74.71	6.366		
10,800.00	10,536.44	10,543.80	10,524.81	38.36	36.64	84.58	-73.49	393.89	473.42	398.67	74.75	6.333		
10,850.00	10,543.54	10,549.73	10,530.74	38.63	36.66	86.45	-73.70	393.80	456.15	381.03	75.12	6.073		
10,900.00	10,548.04	10,553.20	10,534.20	38.92	36.67	87.68	-73.82	393.74	443.65	368.15	75.50	5.876		
10,950.00	10,549.94	10,553.95	10,534.95	39.25	36.68	88.22	-73.85	393.73	436.43	360.57	75.86	5.753		
10,961.15	10,550.00	10,553.75	10,534.75	39.32	36.68	88.24	-73.84	393.73	435.58	359.64	75.94	5.736		
10,997.31	10,550.00	10,552.90	10,533.90	39.58	36.67	88.13	-73.81	393.74	434.42	358.24	76.18	5.703		
11,000.00	10,550.00	10,552.84	10,533.84	39.59	36.67	88.12	-73.81	393.75	434.42	358.23	76.19	5.702 SF		
11,100.00	10,550.00	10,550.68	10,531.69	40.39	36.67	87.85	-73.73	393.78	443.69	366.99	76.70	5.785		
11,200.00	10,550.00	10,548.83	10,529.84	41.31	36.66	87.64	-73.67	393.81	469.49	392.56	76.93	6.103		
11,300.00	10,550.00	10,547.23	10,528.24	42.34	36.65	87.49	-73.61	393.84	509.25	432.34	76.90	6.622		
11,313.54	10,550.00	10,547.03	10,528.04	42.49	36.65	87.47	-73.60	393.84	515.53	438.65	76.89	6.705		
11,400.00	10,550.00	10,545.78	10,526.79	43.47	36.65	87.32	-73.56	393.86	561.51	484.79	76.72	7.319		
11,500.00	10,550.00	10,544.36	10,525.37	44.71	36.64	87.14	-73.51	393.88	625.46	548.99	76.47	8.179		
11,600.00	10,550.00	10,542.98	10,523.99	46.03	36.64	86.96	-73.46	393.90	697.93	621.71	76.22	9.157		
11,700.00	10,550.00	10,541.63	10,522.64	47.45	36.63	86.79	-73.41	393.93	776.54	700.55	75.99	10.219		
11,800.00	10,550.00	10,540.32	10,521.33	48.94	36.63	86.63	-73.37	393.95	859.60	783.80	75.80	11.341		
11,900.00	10,550.00	10,539.03	10,520.05	50.50	36.62	86.47	-73.32	393.96	945.94	870.31	75.63	12.507		
12,000.00	10,550.00	10,537.78	10,518.80	52.13	36.62	86.31	-73.28	393.98	1,034.75	959.25	75.50	13.706		
12,100.00	10,550.00	10,536.56	10,517.57	53.82	36.62	86.16	-73.24	394.00	1,125.43	1,050.05	75.38	14.929		
12,200.00	10,550.00	10,535.36	10,516.38	55.56	36.61	86.00	-73.20	394.02	1,217.57	1,142.28	75.29	16.172		
12,300.00	10,550.00	10,534.20	10,515.21	57.35	36.61	85.86	-73.16	394.03	1,310.86	1,235.65	75.21	17.428		
12,400.00	10,550.00	10,533.05	10,514.07	59.19	36.60	85.71	-73.12	394.05	1,405.07	1,329.92	75.15	18.696		
12,500.00	10,550.00	10,531.94	10,512.96	61.07	36.60	85.57	-73.08	394.07	1,500.04	1,424.93	75.10	19.974		
12,600.00	10,550.00	10,530.85	10,511.87	62.98	36.60	85.44	-73.04	394.08	1,595.61	1,520.55	75.06	21.258		
12,700.00	10,550.00	10,529.78	10,510.80	64.93	36.59	85.30	-73.01	394.10	1,691.70	1,616.67	75.03	22.548		
12,800.00	10,550.00	10,528.74	10,509.76	66.91	36.59	85.17	-72.97	394.11	1,788.22	1,713.21	75.00	23.842		
12,900.00	10,550.00	10,527.72	10,508.74	68.92	36.59	85.04	-72.94	394.12	1,885.09	1,810.11	74.98	25.140		
13,000.00	10,550.00	10,526.72	10,507.74	70.96	36.58	84.92	-72.91	394.14	1,982.28	1,907.31	74.97	26.441		
13,100.00	10,550.00	10,525.00	10,506.02	73.01	36.58	84.70	-72.85	394.16	2,079.73	2,004.78	74.96	27.746		
13,200.00	10,550.00	10,525.00	10,506.02	75.09	36.58	84.70	-72.85	394.16	2,177.42	2,102.46	74.96	29.050		

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #1 - Wellbore #1 - Surveys													Offset Site Error:	0.00 usft
Survey Program: 125-GYRO-NS													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							
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	Warning	
13,300.00	10,550.00	10,525.00	10,506.02	77.19	36.58	84.70	-72.85	394.16	2,275.30	2,200.35	74.96	30.355		
13,400.00	10,550.00	10,525.00	10,506.02	79.31	36.58	84.70	-72.85	394.16	2,373.37	2,298.40	74.96	31.660		
13,500.00	10,550.00	10,525.00	10,506.02	81.45	36.58	84.70	-72.85	394.16	2,471.58	2,396.61	74.97	32.967		
13,600.00	10,550.00	10,521.60	10,502.62	83.60	36.56	84.27	-72.74	394.20	2,569.93	2,494.96	74.97	34.279		
13,700.00	10,550.00	10,520.85	10,501.88	85.76	36.56	84.18	-72.71	394.21	2,668.41	2,593.42	74.98	35.587		
13,800.00	10,550.00	10,520.12	10,501.15	87.94	36.56	84.09	-72.69	394.22	2,766.99	2,691.99	75.00	36.894		
13,900.00	10,550.00	10,519.41	10,500.43	90.13	36.56	84.00	-72.67	394.23	2,865.67	2,790.66	75.01	38.202		
14,000.00	10,550.00	10,518.71	10,499.74	92.34	36.55	83.91	-72.64	394.24	2,964.44	2,889.41	75.03	39.509		
14,100.00	10,550.00	10,518.04	10,499.06	94.55	36.55	83.83	-72.62	394.24	3,063.29	2,988.24	75.05	40.815		
14,200.00	10,550.00	10,517.38	10,498.40	96.78	36.55	83.75	-72.60	394.25	3,162.21	3,087.14	75.08	42.120		
14,300.00	10,550.00	10,516.73	10,497.76	99.01	36.55	83.66	-72.58	394.26	3,261.20	3,186.10	75.10	43.424		
14,400.00	10,550.00	10,516.10	10,497.13	101.25	36.55	83.59	-72.56	394.26	3,360.25	3,285.12	75.13	44.728		
14,500.00	10,550.00	10,515.49	10,496.52	103.50	36.54	83.51	-72.54	394.27	3,459.35	3,384.20	75.15	46.030		
14,600.00	10,550.00	10,514.89	10,495.92	105.76	36.54	83.43	-72.52	394.28	3,558.50	3,483.32	75.18	47.330		
14,700.00	10,550.00	10,514.30	10,495.33	108.03	36.54	83.36	-72.50	394.28	3,657.70	3,582.48	75.22	48.629		
14,800.00	10,550.00	10,513.73	10,494.76	110.30	36.54	83.29	-72.49	394.29	3,756.94	3,681.69	75.25	49.927		
14,900.00	10,550.00	10,513.17	10,494.20	112.58	36.53	83.22	-72.47	394.30	3,856.22	3,780.94	75.28	51.223		
15,000.00	10,550.00	10,512.62	10,493.65	114.86	36.53	83.15	-72.45	394.30	3,955.53	3,880.22	75.32	52.518		
15,100.00	10,550.00	10,512.09	10,493.12	117.15	36.53	83.08	-72.43	394.31	4,054.88	3,979.53	75.36	53.810		
15,200.00	10,550.00	10,511.56	10,492.59	119.45	36.53	83.02	-72.42	394.31	4,154.26	4,078.87	75.39	55.101		
15,300.00	10,550.00	10,511.05	10,492.08	121.75	36.53	82.95	-72.40	394.32	4,253.67	4,178.24	75.43	56.390		
15,400.00	10,550.00	10,510.55	10,491.58	124.05	36.53	82.89	-72.39	394.32	4,353.11	4,277.63	75.47	57.677		
15,431.68	10,550.00	10,510.39	10,491.42	124.78	36.53	82.87	-72.38	394.32	4,384.61	4,309.12	75.49	58.084		



Anticollision Report

Company: Matador Resources
 Project: Eddy County, New Mexico (NAD 27)
 Reference Site: Zach McCormick Federal 18-24S-29E RB
 Site Error: 0.00 usft
 Reference Well: #221H
 Well Error: 0.00 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
 TVD Reference: WELL @ 2981.93usft (Patterson 297)
 MD Reference: WELL @ 2981.93usft (Patterson 297)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Conroe DB
 Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #121H - Wellbore #1 - Design #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Distance							
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	Warning
0.00	0.00	0.08	-0.08	0.00	0.00	90.05	-0.05	60.04	60.04	59.79	0.25	235.634	
100.00	100.00	100.08	99.92	0.13	0.13	90.05	-0.05	60.04	60.04	59.07	0.97	61.786	
200.00	200.00	200.08	199.92	0.49	0.49	90.05	-0.05	60.04	60.04	58.35	1.69	35.554	
300.00	300.00	300.08	299.92	0.84	0.84	90.05	-0.05	60.04	60.04	57.63	2.41	24.958	
400.00	400.00	400.08	399.92	1.20	1.20	90.05	-0.05	60.04	60.04	56.92	3.12	19.228	
500.00	500.00	500.08	499.92	1.56	1.56	90.05	-0.05	60.04	60.04	56.20	3.84	15.637	
600.00	600.00	600.08	599.92	1.92	1.92	90.05	-0.05	60.04	60.04	55.48	4.56	13.177	
700.00	700.00	700.08	699.92	2.28	2.28	90.05	-0.05	60.04	60.04	54.77	5.27	11.385	
800.00	800.00	800.08	799.92	2.64	2.64	90.05	-0.05	60.04	60.04	54.05	5.99	10.023	
900.00	900.00	900.08	899.92	3.00	3.00	90.05	-0.05	60.04	60.04	53.33	6.71	8.951 CC, ES	
1,000.00	1,000.00	1,000.08	999.92	3.35	3.35	90.05	-0.05	60.04	60.04	61.13	7.42	8.238	
1,100.00	1,099.99	1,100.09	1,099.91	3.71	3.71	146.65	-0.05	60.04	64.45	56.31	8.13	7.926	
1,200.00	1,199.91	1,200.17	1,199.83	4.06	4.07	148.55	-0.05	60.04	67.95	59.35	8.60	7.897	
1,266.67	1,266.45	1,266.37	1,266.37	4.30	4.31	150.31	-0.05	60.04	69.98	61.14	8.84	7.913	
1,300.00	1,299.70	1,300.38	1,299.62	4.42	4.43	151.25	-0.05	60.04	76.18	66.62	9.56	7.970	
1,400.00	1,399.46	1,400.62	1,399.38	4.78	4.79	153.78	-0.05	60.04	82.49	72.23	10.26	8.037	
1,500.00	1,499.22	1,499.14	1,499.14	5.14	5.14	155.92	-0.05	60.04	87.60	76.63	10.98	7.981	
1,600.00	1,598.97	1,601.22	1,601.20	5.50	5.50	157.86	0.12	58.71	90.14	78.47	11.68	7.720	
1,700.00	1,698.73	1,703.51	1,703.42	5.86	5.85	159.78	0.64	54.66	90.32	77.94	12.38	7.297	
1,800.00	1,798.48	1,804.94	1,804.63	6.23	6.21	161.81	1.47	48.16	90.11	77.02	13.08	6.888	
1,900.00	1,898.24	1,904.89	1,904.34	6.60	6.56	163.86	2.35	41.25	90.01	76.22	13.79	6.527	
2,000.00	1,998.00	2,004.84	2,004.04	6.96	6.92	165.91	3.23	34.33	90.00	75.96	14.04	6.411	
2,035.03	2,032.94	2,039.85	2,038.97	7.09	7.04	166.63	3.54	31.91	90.03	75.53	14.50	6.209	
2,100.00	2,097.75	2,104.79	2,103.75	7.33	7.27	167.97	4.11	27.41	90.16	74.95	15.21	5.927	
2,200.00	2,197.51	2,204.74	2,203.45	7.70	7.63	170.02	5.00	20.50	90.41	74.48	15.92	5.677	
2,300.00	2,297.27	2,304.68	2,303.16	8.07	7.99	172.07	5.88	13.58	90.77	74.13	16.64	5.455	
2,400.00	2,397.02	2,404.63	2,402.86	8.44	8.35	174.10	6.76	6.67	91.25	73.89	17.36	5.257	
2,500.00	2,496.78	2,504.58	2,502.56	8.81	8.71	176.11	7.64	-0.25	91.84	73.76	18.08	5.081	
2,600.00	2,596.54	2,604.53	2,602.27	9.18	9.08	178.10	8.53	-7.17	92.53	73.74	18.80	4.923	
2,700.00	2,696.29	2,704.47	2,701.97	9.55	9.44	-179.94	9.41	-14.08	93.34	73.82	19.52	4.782	
2,800.00	2,796.05	2,804.42	2,801.68	9.92	9.81	-178.01	10.29	-21.00	93.78	73.89	19.88	4.717	
2,850.00	2,845.92	2,854.49	2,851.62	10.11	9.99	-177.06	10.74	-24.46	94.23	73.99	20.24	4.656	
2,900.00	2,895.78	2,905.55	2,902.52	10.29	10.18	-175.98	11.24	-28.39	95.51	74.55	20.96	4.557	
3,000.00	2,995.32	3,007.59	3,004.08	10.67	10.56	-173.33	12.50	-38.27	97.41	75.72	21.69	4.492	
3,100.00	3,094.57	3,109.54	3,105.24	11.06	10.95	-170.07	14.10	-50.82	97.81	75.99	21.81	4.484	
3,116.66	3,111.08	3,126.32	3,121.85	11.12	11.01	-169.49	14.39	-53.13	100.10	77.65	22.44	4.460	
3,200.00	3,193.60	3,209.48	3,204.21	11.45	11.33	-166.68	15.86	-64.61	103.15	79.94	23.21	4.444	
3,300.00	3,292.63	3,309.27	3,303.03	11.85	11.72	-163.48	17.62	-78.39	106.50	82.52	23.99	4.440	
3,400.00	3,391.65	3,409.06	3,401.85	12.25	12.11	-160.47	19.38	-92.16	110.14	85.37	24.77	4.447	
3,500.00	3,490.68	3,508.85	3,500.67	12.65	12.51	-157.65	21.13	-105.94	114.02	88.46	25.55	4.462	
3,600.00	3,589.71	3,608.65	3,599.49	13.05	12.90	-155.02	22.89	-119.72	118.12	91.78	26.34	4.484	
3,700.00	3,688.73	3,708.44	3,698.31	13.45	13.30	-152.57	24.65	-133.49	122.43	95.29	27.14	4.511	
3,800.00	3,787.76	3,808.23	3,797.13	13.85	13.70	-150.28	26.41	-147.27	126.92	98.98	27.94	4.543	
3,900.00	3,886.79	3,908.02	3,895.95	14.26	14.10	-148.16	28.17	-161.04	131.57	102.83	28.74	4.578	
4,000.00	3,985.82	4,007.81	3,994.77	14.66	14.50	-146.18	29.93	-174.82	136.36	106.82	29.55	4.615	
4,100.00	4,084.84	4,107.61	4,093.59	15.07	14.90	-144.33	31.68	-188.60	141.29	110.94	30.35	4.655	
4,200.00	4,183.87	4,207.40	4,192.41	15.47	15.30	-142.62	33.44	-202.37	146.34	115.17	31.17	4.695	
4,300.00	4,282.90	4,307.19	4,291.23	15.88	15.70	-141.02	35.20	-216.15	151.49	119.51	31.98	4.737	
4,400.00	4,381.92	4,406.98	4,390.05	16.29	16.11	-139.53	36.96	-229.93	156.74	123.95	32.79	4.779	
4,500.00	4,480.95	4,506.77	4,488.88	16.70	16.51	-138.13	38.72	-243.70	162.08	128.47	33.61	4.822	
4,600.00	4,579.98	4,606.57	4,587.70	17.10	16.92	-136.83	40.48	-257.48	167.49	133.06	34.43	4.865	
4,700.00	4,679.00	4,706.36	4,686.52	17.51	17.33	-135.61	42.23	-271.26					

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



Anticollision Report

Company: Matador Resources
 Project: Eddy County, New Mexico (NAD 27)
 Reference Site: Zach McCormick Federal 18-24S-29E RB
 Site Error: 0.00 usft
 Reference Well: #221H
 Well Error: 0.00 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
 TVD Reference: WELL @ 2981.93usft (Patterson 297)
 MD Reference: WELL @ 2981.93usft (Patterson 297)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Conroe DB
 Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #121H - Wellbore #1 - Design #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 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	
4,753.24	4,731.73	4,759.49	4,739.13	17.73	17.54	-135.00	43.17	-278.59	170.40	135.54	34.87	4.887	
4,800.00	4,778.07	4,806.15	4,785.34	17.92	17.73	-134.43	43.99	-285.03	172.77	137.53	35.25	4.902	
4,900.00	4,877.41	4,905.95	4,884.16	18.32	18.14	-132.81	45.75	-298.81	176.60	140.53	36.07	4.896	
5,000.00	4,977.02	5,004.98	4,982.30	18.70	18.55	-130.78	47.43	-312.00	178.97	142.08	36.89	4.851	
5,100.00	5,076.83	5,103.74	5,080.45	19.07	18.94	-128.90	48.81	-322.81	180.44	142.76	37.68	4.788	
5,200.00	5,176.76	5,202.67	5,179.03	19.43	19.31	-127.18	49.87	-331.12	180.99	142.54	38.45	4.708	
5,286.58	5,263.33	5,288.45	5,264.65	19.72	19.63	178.26	50.53	-336.27	180.69	141.61	39.08	4.623	
5,300.00	5,276.75	5,301.76	5,277.94	19.77	19.68	178.46	50.61	-336.90	180.59	141.41	39.18	4.609	
5,400.00	5,376.75	5,401.03	5,377.16	20.10	20.03	179.49	51.02	-340.13	180.11	140.23	39.88	4.516	
5,500.00	5,476.75	5,500.55	5,476.67	20.44	20.37	179.73	51.12	-340.88	180.01	139.45	40.56	4.438	
5,600.00	5,576.75	5,600.55	5,576.67	20.77	20.70	179.73	51.12	-340.88	180.01	138.78	41.23	4.366	
5,700.00	5,676.75	5,700.55	5,676.67	21.11	21.03	179.73	51.12	-340.88	180.01	138.10	41.91	4.295	
5,800.00	5,776.75	5,800.55	5,776.67	21.45	21.37	179.73	51.12	-340.88	180.01	137.43	42.58	4.227	
5,900.00	5,876.75	5,900.55	5,876.67	21.78	21.70	179.73	51.12	-340.88	180.01	136.75	43.26	4.161	
6,000.00	5,976.75	6,000.55	5,976.67	22.12	22.04	179.73	51.12	-340.88	180.01	136.07	43.94	4.097	
6,100.00	6,076.75	6,100.55	6,076.67	22.46	22.38	179.73	51.12	-340.88	180.01	135.39	44.62	4.034	
6,200.00	6,176.75	6,200.55	6,176.67	22.80	22.71	179.73	51.12	-340.88	180.01	134.71	45.30	3.974	
6,300.00	6,276.75	6,300.55	6,276.67	23.14	23.05	179.73	51.12	-340.88	180.01	134.03	45.98	3.915	
6,400.00	6,376.75	6,400.55	6,376.67	23.48	23.39	179.73	51.12	-340.88	180.01	133.35	46.66	3.858	
6,500.00	6,476.75	6,500.55	6,476.67	23.83	23.73	179.73	51.12	-340.88	180.01	132.66	47.35	3.802	
6,600.00	6,576.75	6,600.55	6,576.67	24.17	24.07	179.73	51.12	-340.88	180.01	131.98	48.03	3.748	
6,700.00	6,676.75	6,700.55	6,676.67	24.51	24.41	179.73	51.12	-340.88	180.01	131.29	48.72	3.695	
6,800.00	6,776.75	6,800.55	6,776.67	24.85	24.75	179.73	51.12	-340.88	180.01	130.61	49.41	3.644	
6,900.00	6,876.75	6,900.55	6,876.67	25.20	25.09	179.73	51.12	-340.88	180.01	129.92	50.09	3.594	
7,000.00	6,976.75	7,000.55	6,976.67	25.54	25.44	179.73	51.12	-340.88	180.01	129.23	50.78	3.545	
7,100.00	7,076.75	7,100.55	7,076.67	25.88	25.78	179.73	51.12	-340.88	180.01	128.54	51.47	3.497	
7,200.00	7,176.75	7,200.55	7,176.67	26.23	26.12	179.73	51.12	-340.88	180.01	127.85	52.16	3.451	
7,300.00	7,276.75	7,300.55	7,276.67	26.57	26.46	179.73	51.12	-340.88	180.01	127.16	52.85	3.406	
7,400.00	7,376.75	7,400.55	7,376.67	26.92	26.81	179.73	51.12	-340.88	180.01	126.47	53.54	3.362	
7,500.00	7,476.75	7,500.55	7,476.67	27.27	27.15	179.73	51.12	-340.88	180.01	125.78	54.23	3.319	
7,600.00	7,576.75	7,600.55	7,576.67	27.61	27.50	179.73	51.12	-340.88	180.01	125.08	54.93	3.277	
7,700.00	7,676.75	7,700.55	7,676.67	27.96	27.84	179.73	51.12	-340.88	180.01	124.39	55.62	3.236	
7,713.27	7,690.02	7,713.82	7,689.94	28.00	27.89	179.73	51.12	-340.88	180.01	124.30	55.71	3.231	
7,800.00	7,776.75	7,800.54	7,776.66	28.30	28.18	179.70	51.12	-340.80	180.01	123.70	56.31	3.197	
7,800.23	7,776.98	7,800.76	7,776.88	28.30	28.19	179.70	51.12	-340.80	180.01	123.70	56.31	3.197	
7,900.00	7,876.75	7,899.07	7,874.55	28.65	28.48	176.49	51.12	-330.70	180.36	123.47	56.90	3.170 SF	
8,000.00	7,976.75	7,991.58	7,963.63	29.00	28.72	168.80	51.10	-306.10	183.98	126.84	57.14	3.220	
8,100.00	8,076.75	8,074.40	8,039.10	29.35	28.91	158.87	51.09	-272.17	196.64	140.21	56.43	3.485	
8,200.00	8,176.75	8,146.11	8,099.91	29.69	29.06	149.17	51.07	-234.27	223.30	169.14	54.16	4.123	
8,300.00	8,276.75	8,206.98	8,147.49	30.04	29.20	141.08	51.06	-196.34	265.06	214.37	50.69	5.229	
8,400.00	8,376.75	8,258.22	8,184.23	30.39	29.32	134.84	51.04	-160.65	319.78	272.90	46.88	6.821	
8,500.00	8,476.75	8,300.00	8,211.73	30.74	29.42	130.28	51.03	-129.21	384.44	341.23	43.22	8.895	
8,600.00	8,576.75	8,337.62	8,234.48	31.09	29.53	126.60	51.02	-99.26	456.44	416.19	40.25	11.341	
8,700.00	8,676.75	8,368.44	8,251.62	31.44	29.63	123.90	51.00	-73.65	533.85	496.18	37.66	14.175	
8,800.00	8,776.75	8,400.00	8,267.71	31.78	29.74	121.39	50.99	-46.50	615.35	579.51	35.84	17.172	
8,900.00	8,876.75	8,417.45	8,275.96	32.13	29.81	120.11	50.99	-31.13	699.84	666.08	33.76	20.730	
9,000.00	8,976.75	8,437.11	8,284.69	32.48	29.88	118.76	50.98	-13.52	786.78	754.47	32.31	24.350	
9,100.00	9,076.75	8,450.00	8,290.09	32.83	29.93	117.92	50.97	-1.81	875.63	844.69	30.94	28.302	
9,200.00	9,176.75	8,469.40	8,297.71	33.18	30.02	116.73	50.97	16.03	965.94	935.79	30.15	32.037	
9,300.00	9,276.75	8,482.78	8,302.61	33.53	30.08	115.95	50.96	28.48	1,057.51	1,028.15	29.36	36.021	
9,400.00	9,376.75	8,500.00	8,308.48	33.88	30.16	115.00	50.95	44.67	1,150.13	1,121.25	28.88	39.821	
9,500.00	9,476.75	8,500.00	8,308.48	34.23	30.16	115.00	50.95	44.67	1,243.56	1,215.52	28.04	44.346	

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #121H - Wellbore #1 - Design #1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD												Offset Well Error:	0.00 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	
9,600.00	9,576.75	8,500.00	8,308.48	34.58	30.16	115.00	50.95	44.67	1,337.94	1,310.55	27.39	48.640	
9,700.00	9,676.75	8,523.65	8,315.76	34.94	30.28	113.78	50.94	67.17	1,432.40	1,404.94	27.46	52.159	
9,800.00	9,776.75	8,531.54	8,317.98	35.29	30.32	113.40	50.94	74.75	1,527.65	1,500.44	27.22	56.128	
9,900.00	9,876.75	8,550.00	8,322.76	35.64	30.41	112.53	50.93	92.57	1,623.50	1,596.23	27.27	59.536	
9,994.49	9,971.24	8,550.00	8,322.76	35.97	30.41	112.53	50.93	92.57	1,714.16	1,687.14	27.01	63.453	
10,000.00	9,976.75	8,550.00	8,322.76	35.99	30.41	32.06	50.93	92.57	1,719.45	1,692.45	27.00	63.681	
10,050.00	10,026.67	8,550.00	8,322.76	36.15	30.41	24.85	50.93	92.57	1,766.92	1,740.07	26.86	65.788	
10,100.00	10,076.16	8,550.00	8,322.76	36.31	30.41	20.17	50.93	92.57	1,813.20	1,786.52	26.68	67.964	
10,150.00	10,124.85	8,550.00	8,322.76	36.45	30.41	16.94	50.93	92.57	1,858.03	1,831.55	26.47	70.182	
10,200.00	10,172.38	8,550.00	8,322.76	36.59	30.41	14.62	50.93	92.57	1,901.18	1,874.93	26.25	72.420	
10,250.00	10,218.37	8,571.42	8,327.58	36.72	30.54	12.88	50.92	113.44	1,941.94	1,915.60	26.33	73.742	
10,300.00	10,262.48	8,578.57	8,329.02	36.84	30.58	11.58	50.92	120.44	1,980.74	1,954.56	26.18	75.662	
10,350.00	10,304.38	8,600.00	8,332.80	36.95	30.70	10.60	50.91	141.54	2,017.37	1,991.17	26.21	76.982	
10,400.00	10,343.74	8,600.00	8,332.80	37.05	30.70	9.80	50.91	141.54	2,051.06	2,025.11	25.94	79.063	
10,450.00	10,380.26	8,600.00	8,332.80	37.16	30.70	9.14	50.91	141.54	2,082.17	2,056.47	25.70	81.011	
10,500.00	10,413.68	8,600.00	8,332.80	37.27	30.70	8.61	50.91	141.54	2,110.61	2,085.11	25.50	82.780	
10,550.00	10,443.72	8,620.79	8,335.71	37.39	30.83	8.25	50.90	162.12	2,135.77	2,110.25	25.52	83.687	
10,600.00	10,470.17	8,630.20	8,336.78	37.53	30.89	7.93	50.90	171.46	2,158.01	2,132.55	25.46	84.765	
10,650.00	10,492.82	8,650.00	8,338.54	37.70	31.02	7.73	50.89	191.19	2,177.19	2,151.68	25.51	85.351	
10,700.00	10,511.51	8,650.00	8,338.54	37.89	31.02	7.51	50.89	191.19	2,192.89	2,167.43	25.46	86.143	
10,750.00	10,526.08	8,650.00	8,338.54	38.11	31.02	7.34	50.89	191.19	2,205.49	2,180.01	25.48	86.569	
10,794.49	10,535.49	8,668.48	8,339.56	38.33	31.15	7.31	50.88	209.65	2,213.69	2,188.06	25.63	86.372	
10,800.00	10,536.44	8,669.60	8,339.60	38.36	31.16	7.31	50.88	210.76	2,214.54	2,188.89	25.64	86.357	
10,850.00	10,543.54	8,690.92	8,340.00	38.63	31.30	7.35	50.87	232.08	2,221.47	2,195.61	25.86	85.913	
10,900.00	10,548.04	8,690.92	8,340.00	38.92	31.30	7.31	50.87	232.08	2,226.43	2,200.37	26.06	85.435	
10,950.00	10,549.94	8,734.49	8,340.00	39.25	31.65	7.49	50.85	275.65	2,229.50	2,203.10	26.40	84.449	
10,961.15	10,550.00	8,745.46	8,340.00	39.32	31.74	7.53	50.85	286.61	2,229.83	2,203.35	26.48	84.204	
11,000.00	10,550.00	8,783.71	8,340.00	39.59	32.05	7.73	50.83	324.87	2,230.74	2,203.98	26.77	83.343	
11,100.00	10,550.00	8,882.75	8,340.00	40.39	32.98	8.13	50.79	423.91	2,232.66	2,205.11	27.55	81.047	
11,200.00	10,550.00	8,982.37	8,340.00	41.31	34.06	8.39	50.75	523.53	2,233.89	2,205.51	28.38	78.717	
11,300.00	10,550.00	9,082.31	8,340.00	42.34	35.28	8.49	50.70	623.46	2,234.38	2,205.14	29.24	76.404	
11,313.54	10,550.00	9,104.16	8,340.00	42.49	35.56	8.49	50.70	637.00	2,234.39	2,204.99	29.40	75.989	
11,400.00	10,550.00	9,182.31	8,340.00	43.47	36.62	8.49	50.66	723.46	2,234.39	2,204.24	30.15	74.106	
11,500.00	10,550.00	9,282.31	8,340.00	44.71	38.07	8.49	50.62	823.46	2,234.39	2,203.27	31.12	71.789	
11,600.00	10,550.00	9,382.31	8,340.00	46.03	39.61	8.49	50.57	923.46	2,234.39	2,202.23	32.16	69.483	
11,700.00	10,550.00	9,482.31	8,340.00	47.45	41.24	8.49	50.53	1,023.46	2,234.39	2,201.15	33.25	67.209	
11,800.00	10,550.00	9,582.31	8,340.00	48.94	42.95	8.49	50.49	1,123.46	2,234.39	2,200.01	34.38	64.987	
11,900.00	10,550.00	9,682.31	8,340.00	50.50	44.71	8.49	50.44	1,223.46	2,234.39	2,198.83	35.56	62.828	
12,000.00	10,550.00	9,782.31	8,340.00	52.13	46.54	8.49	50.40	1,323.46	2,234.39	2,197.61	36.79	60.742	
12,100.00	10,550.00	9,882.31	8,340.00	53.82	48.43	8.49	50.36	1,423.46	2,234.40	2,196.35	38.04	58.733	
12,200.00	10,550.00	9,982.31	8,340.00	55.56	50.35	8.49	50.32	1,523.46	2,234.40	2,195.06	39.33	56.806	
12,300.00	10,550.00	10,082.31	8,340.00	57.35	52.32	8.49	50.27	1,623.46	2,234.40	2,193.74	40.65	54.960	
12,400.00	10,550.00	10,182.31	8,340.00	59.19	54.33	8.49	50.23	1,723.46	2,234.40	2,192.40	42.00	53.197	
12,500.00	10,550.00	10,282.31	8,340.00	61.07	56.37	8.49	50.19	1,823.46	2,234.40	2,191.02	43.37	51.514	
12,600.00	10,550.00	10,382.31	8,340.00	62.98	58.43	8.49	50.14	1,923.46	2,234.40	2,189.63	44.77	49.909	
12,700.00	10,550.00	10,482.31	8,340.00	64.93	60.53	8.49	50.10	2,023.46	2,234.40	2,188.22	46.18	48.380	
12,800.00	10,550.00	10,582.31	8,340.00	66.91	62.65	8.49	50.06	2,123.46	2,234.40	2,186.78	47.62	46.924	
12,900.00	10,550.00	10,682.31	8,340.00	68.92	64.79	8.49	50.01	2,223.46	2,234.40	2,185.33	49.07	45.536	
13,000.00	10,550.00	10,782.31	8,340.00	70.96	66.95	8.49	49.97	2,323.46	2,234.40	2,183.87	50.53	44.215	
13,100.00	10,550.00	10,882.31	8,340.00	73.01	69.12	8.49	49.93	2,423.46	2,234.40	2,182.39	52.02	42.957	
13,200.00	10,550.00	10,982.31	8,340.00	75.09	71.32	8.49	49.88	2,523.46	2,234.40	2,180.90	53.51	41.758	
13,300.00	10,550.00	11,082.31	8,340.00	77.19	73.52	8.49	49.84	2,623.46	2,234.41	2,179.39	55.01	40.615	

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



Anticollision Report

Company: Matador Resources
 Project: Eddy County, New Mexico (NAD 27)
 Reference Site: Zach McCormick Federal 18-24S-29E RB
 Site Error: 0.00 usft
 Reference Well: #221H
 Well Error: 0.00 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
 TVD Reference: WELL @ 2981.93usft (Patterson 297)
 MD Reference: WELL @ 2981.93usft (Patterson 297)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Conroe DB
 Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #121H - Wellbore #1 - Design #1											Offset Site Error: 0.00 usft		
Survey Program: 0-MWD											Offset Well Error: 0.00 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
13,400.00	10,550.00	11,182.31	8,340.00	79.31	75.74	8.49	49.80	2,723.46	2,234.41	2,177.88	56.53	39.525	
13,500.00	10,550.00	11,282.31	8,340.00	81.45	77.98	8.49	49.75	2,823.46	2,234.41	2,176.35	58.06	38.486	
13,600.00	10,550.00	11,382.31	8,340.00	83.60	80.22	8.49	49.71	2,923.46	2,234.41	2,174.81	59.59	37.493	
13,700.00	10,550.00	11,482.31	8,340.00	85.76	82.48	8.49	49.67	3,023.46	2,234.41	2,173.27	61.14	36.546	
13,800.00	10,550.00	11,582.31	8,340.00	87.94	84.74	8.49	49.63	3,123.46	2,234.41	2,171.72	62.69	35.640	
13,900.00	10,550.00	11,682.31	8,340.00	90.13	87.01	8.49	49.58	3,223.46	2,234.41	2,170.16	64.26	34.774	
14,000.00	10,550.00	11,782.31	8,340.00	92.34	89.29	8.49	49.54	3,323.46	2,234.41	2,168.59	65.82	33.945	
14,100.00	10,550.00	11,882.31	8,340.00	94.55	91.58	8.49	49.50	3,423.46	2,234.41	2,167.01	67.40	33.152	
14,200.00	10,550.00	11,982.31	8,340.00	96.78	93.87	8.49	49.45	3,523.46	2,234.41	2,165.43	68.98	32.392	
14,300.00	10,550.00	12,082.31	8,340.00	99.01	96.17	8.49	49.41	3,623.46	2,234.41	2,163.85	70.57	31.664	
14,400.00	10,550.00	12,182.31	8,340.00	101.25	98.48	8.49	49.37	3,723.46	2,234.41	2,162.26	72.16	30.965	
14,500.00	10,550.00	12,282.31	8,340.00	103.50	100.79	8.49	49.32	3,823.46	2,234.42	2,160.66	73.76	30.295	
14,600.00	10,550.00	12,382.31	8,340.00	105.76	103.11	8.49	49.28	3,923.46	2,234.42	2,159.06	75.36	29.651	
14,700.00	10,550.00	12,482.31	8,340.00	108.03	105.43	8.49	49.24	4,023.46	2,234.42	2,157.45	76.96	29.032	
14,800.00	10,550.00	12,582.31	8,340.00	110.30	107.76	8.49	49.19	4,123.46	2,234.42	2,155.84	78.57	28.437	
14,900.00	10,550.00	12,682.31	8,340.00	112.58	110.09	8.49	49.15	4,223.46	2,234.42	2,154.23	80.19	27.865	
15,000.00	10,550.00	12,782.31	8,340.00	114.86	112.42	8.49	49.11	4,323.46	2,234.42	2,152.61	81.81	27.313	
15,100.00	10,550.00	12,882.31	8,340.00	117.15	114.76	8.49	49.06	4,423.46	2,234.42	2,150.99	83.43	26.783	
15,200.00	10,550.00	12,982.31	8,340.00	119.45	117.11	8.49	49.02	4,523.46	2,234.42	2,149.37	85.05	26.271	
15,300.00	10,550.00	13,082.31	8,340.00	121.75	119.45	8.49	48.98	4,623.46	2,234.42	2,147.74	86.68	25.778	
15,400.00	10,550.00	13,182.31	8,340.00	124.05	121.80	8.49	48.93	4,723.46	2,234.42	2,146.11	88.31	25.302	
15,431.68	10,550.00	13,213.98	8,340.00	124.78	122.54	8.49	48.92	4,755.14	2,234.42	2,145.59	88.83	25.154	



Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #122H - Wellbore #1 - Design #1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD												Offset Well Error:	0.00 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	
0.00	0.00	3.45	3.45	0.00	0.00	-160.48	-1,673.67	-593.45	1,775.77				
100.00	100.00	103.45	103.45	0.13	0.14	-160.48	-1,673.67	-593.45	1,775.77	1,775.50	0.27	6,653.749	
200.00	200.00	203.45	203.45	0.49	0.50	-160.48	-1,673.67	-593.45	1,775.77	1,774.78	0.98	1,804.963	
300.00	300.00	303.45	303.45	0.84	0.86	-160.48	-1,673.67	-593.45	1,775.77	1,774.07	1.70	1,044.098	
400.00	400.00	403.45	403.45	1.20	1.22	-160.48	-1,673.67	-593.45	1,775.77	1,773.35	2.42	734.483	
500.00	500.00	503.45	503.45	1.56	1.57	-160.48	-1,673.67	-593.45	1,775.77	1,772.63	3.13	566.496	
600.00	600.00	603.45	603.45	1.92	1.93	-160.48	-1,673.67	-593.45	1,775.77	1,771.92	3.85	461.047	
700.00	700.00	703.45	703.45	2.28	2.29	-160.48	-1,673.67	-593.45	1,775.77	1,771.20	4.57	388.695	
800.00	800.00	803.45	803.45	2.64	2.65	-160.48	-1,673.67	-593.45	1,775.77	1,770.48	5.29	335.971	
900.00	900.00	903.45	903.45	3.00	3.01	-160.48	-1,673.67	-593.45	1,775.77	1,769.77	6.00	295.842	
1,000.00	1,000.00	1,006.31	1,006.31	3.35	3.38	-160.48	-1,673.67	-593.45	1,775.77	1,769.04	6.73	263.877	
1,100.00	1,099.99	1,188.89	1,188.82	3.71	4.03	-104.69	-1,669.74	-590.93	1,773.61	1,765.87	7.73	229.386	
1,200.00	1,199.91	1,323.75	1,323.39	4.06	4.51	-104.99	-1,662.48	-586.29	1,768.24	1,759.68	8.56	206.561	
1,266.67	1,266.45	1,409.87	1,389.62	4.30	4.82	-105.20	-1,658.58	-583.80	1,764.77	1,755.66	9.10	193.850	
1,300.00	1,299.70	1,423.31	1,422.71	4.42	4.87	-105.29	-1,656.63	-582.55	1,763.11	1,753.84	9.27	190.188	
1,400.00	1,399.46	1,522.84	1,522.00	4.78	5.23	-105.56	-1,650.78	-578.81	1,758.18	1,748.19	9.99	176.073	
1,500.00	1,499.22	1,622.36	1,621.28	5.14	5.59	-105.84	-1,644.93	-575.07	1,753.28	1,742.58	10.70	163.809	
1,600.00	1,598.97	1,721.89	1,720.56	5.50	5.95	-106.11	-1,639.08	-571.33	1,748.43	1,737.00	11.42	153.060	
1,700.00	1,698.73	1,821.41	1,819.85	5.86	6.32	-106.39	-1,633.23	-567.59	1,743.61	1,731.47	12.14	143.568	
1,800.00	1,798.48	1,920.94	1,919.13	6.23	6.68	-106.67	-1,627.38	-563.85	1,738.84	1,725.97	12.87	135.128	
1,900.00	1,898.24	2,020.47	2,018.41	6.60	7.05	-106.95	-1,621.53	-560.11	1,734.10	1,720.51	13.59	127.577	
2,000.00	1,998.00	2,119.99	2,117.70	6.96	7.41	-107.23	-1,615.68	-556.37	1,729.41	1,715.10	14.32	120.784	
2,100.00	2,097.75	2,219.52	2,216.98	7.33	7.78	-107.51	-1,609.84	-552.63	1,724.77	1,709.72	15.04	114.642	
2,200.00	2,197.51	2,319.04	2,316.26	7.70	8.15	-107.79	-1,603.99	-548.89	1,720.16	1,704.39	15.77	109.063	
2,300.00	2,297.27	2,418.57	2,415.55	8.07	8.52	-108.08	-1,598.14	-545.14	1,715.60	1,699.10	16.50	103.974	
2,400.00	2,397.02	2,518.10	2,514.83	8.44	8.88	-108.37	-1,592.29	-541.40	1,711.08	1,693.85	17.23	99.315	
2,500.00	2,496.78	2,617.62	2,614.11	8.81	9.25	-108.66	-1,586.44	-537.66	1,706.60	1,688.64	17.96	95.033	
2,600.00	2,596.54	2,717.15	2,713.40	9.18	9.62	-108.95	-1,580.59	-533.92	1,702.17	1,683.48	18.69	91.085	
2,700.00	2,696.29	2,816.67	2,812.68	9.55	9.99	-109.24	-1,574.74	-530.18	1,697.78	1,678.36	19.42	87.434	
2,800.00	2,796.05	2,916.19	2,912.02	9.92	10.54	-109.69	-1,568.61	-526.70	1,692.49	1,672.19	20.30	83.391	
2,850.00	2,845.92	3,050.16	3,045.14	10.11	10.87	-109.98	-1,562.62	-518.59	1,688.39	1,667.63	20.76	81.324	
2,900.00	2,895.78	3,127.51	3,121.81	10.29	11.17	-110.35	-1,548.04	-513.10	1,683.39	1,662.19	21.20	79.409	
3,000.00	2,995.32	3,226.11	3,219.46	10.67	11.55	-110.95	-1,536.48	-505.71	1,673.50	1,651.56	21.94	76.280	
3,100.00	3,094.57	3,324.44	3,316.83	11.06	11.94	-111.61	-1,524.95	-498.34	1,664.68	1,641.99	22.69	73.376	
3,116.66	3,111.08	3,340.79	3,333.02	11.12	12.01	-111.73	-1,523.03	-497.11	1,663.31	1,640.50	22.81	72.913	
3,200.00	3,193.60	3,422.56	3,413.99	11.45	12.33	-112.23	-1,513.44	-490.98	1,656.64	1,633.20	23.44	70.670	
3,300.00	3,292.63	3,520.67	3,511.15	11.85	12.72	-112.83	-1,501.94	-483.62	1,648.82	1,624.62	24.20	68.134	
3,400.00	3,391.65	3,618.78	3,608.31	12.25	13.11	-113.44	-1,490.44	-476.26	1,641.18	1,616.22	24.96	65.755	
3,500.00	3,490.68	3,716.89	3,705.47	12.65	13.50	-114.06	-1,478.93	-468.91	1,633.73	1,608.01	25.72	63.519	
3,600.00	3,589.71	3,815.01	3,802.62	13.05	13.89	-114.68	-1,467.43	-461.55	1,626.48	1,600.00	26.48	61.414	
3,700.00	3,688.73	3,913.12	3,899.78	13.45	14.29	-115.31	-1,455.93	-454.19	1,619.43	1,592.18	27.25	59.432	
3,800.00	3,787.76	4,011.23	3,996.94	13.85	14.68	-115.94	-1,444.42	-446.84	1,612.58	1,584.56	28.01	57.562	
3,900.00	3,886.79	4,109.35	4,094.10	14.26	15.08	-116.58	-1,432.92	-439.48	1,605.93	1,577.15	28.78	55.796	
4,000.00	3,985.82	4,207.46	4,191.26	14.66	15.47	-117.22	-1,421.42	-432.12	1,599.49	1,569.94	29.55	54.126	
4,100.00	4,084.84	4,305.57	4,288.41	15.07	15.87	-117.87	-1,409.91	-424.77	1,593.26	1,562.94	30.32	52.547	
4,200.00	4,183.87	4,403.68	4,385.57	15.47	16.27	-118.52	-1,398.41	-417.41	1,587.24	1,556.15	31.09	51.050	
4,300.00	4,282.90	4,501.80	4,482.73	15.88	16.66	-119.18	-1,386.91	-410.05	1,581.43	1,549.57	31.86	49.631	
4,400.00	4,381.92	4,599.91	4,579.89	16.29	17.06	-119.84	-1,375.40	-402.70	1,575.84	1,543.20	32.64	48.284	
4,500.00	4,480.95	4,701.98	4,677.05	16.70	17.48	-120.50	-1,363.90	-395.34	1,570.46	1,537.04	33.43	46.985	
4,600.00	4,579.98	4,803.86	4,774.20	17.10	17.89	-121.17	-1,352.40	-387.98	1,565.31	1,531.10	34.21	45.751	
4,700.00	4,679.00	4,905.75	4,871.36	17.51	18.31	-121.85	-1,340.89	-380.63	1,560.38	1,525.38	35.00	44.578	
4,753.24	4,731.73	4,946.49	4,923.09	17.73	18.47	-122.21	-1,334.77	-376.71	1,557.85	1,522.47	35.37	44.041	

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #122H - Wellbore #1 - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD													Offset Well Error:	0.00 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		
4,800.00	4,778.07	5,007.60	4,968.56	17.92	18.72	-122.49	-1,329.39	-373.27	1,555.52	1,519.73	35.79	43.460		
4,900.00	4,877.41	5,090.82	5,066.02	18.32	19.06	-123.02	-1,317.85	-365.89	1,549.66	1,513.16	36.50	42.456		
5,000.00	4,977.02	5,189.49	5,163.73	18.70	19.47	-123.47	-1,306.28	-358.49	1,542.53	1,505.27	37.26	41.402		
5,100.00	5,076.83	5,276.39	5,249.81	19.07	19.82	-123.77	-1,296.22	-352.06	1,534.26	1,496.29	37.97	40.404		
5,200.00	5,176.76	5,350.46	5,323.33	19.43	20.11	-123.93	-1,288.71	-347.25	1,526.03	1,487.39	38.64	39.497		
5,286.58	5,263.33	5,414.87	5,387.41	19.72	20.37	-179.93	-1,283.15	-343.69	1,519.07	1,479.88	39.19	38.760		
5,300.00	5,276.75	5,424.88	5,397.37	19.77	20.40	-179.94	-1,282.36	-343.19	1,518.02	1,478.75	39.28	38.650		
5,400.00	5,376.75	5,500.00	5,472.24	20.10	20.69	179.93	-1,277.20	-339.89	1,511.13	1,471.23	39.90	37.874		
5,500.00	5,476.75	5,574.48	5,546.57	20.44	20.96	179.83	-1,273.30	-337.40	1,505.90	1,465.39	40.51	37.177		
5,600.00	5,576.75	5,649.54	5,621.56	20.77	21.23	179.77	-1,270.61	-335.67	1,502.32	1,461.22	41.10	36.551		
5,700.00	5,676.75	5,724.69	5,696.70	21.11	21.49	179.73	-1,269.16	-334.75	1,500.39	1,458.71	41.68	35.994		
5,799.46	5,776.21	5,807.66	5,779.66	21.44	21.77	179.73	-1,268.88	-334.57	1,500.03	1,457.74	42.29	35.469		
5,800.00	5,776.75	5,808.20	5,780.20	21.45	21.77	179.73	-1,268.88	-334.57	1,500.03	1,457.73	42.29	35.466		
5,900.00	5,876.75	5,908.20	5,880.20	21.78	22.11	179.73	-1,268.88	-334.57	1,500.03	1,457.05	42.98	34.899		
6,000.00	5,976.75	6,008.20	5,980.20	22.12	22.44	179.73	-1,268.88	-334.57	1,500.03	1,456.36	43.67	34.349		
6,100.00	6,076.75	6,108.20	6,080.20	22.46	22.78	179.73	-1,268.88	-334.57	1,500.03	1,455.67	44.36	33.815		
6,200.00	6,176.75	6,208.20	6,180.20	22.80	23.11	179.73	-1,268.88	-334.57	1,500.03	1,454.98	45.05	33.297		
6,300.00	6,276.75	6,308.20	6,280.20	23.14	23.45	179.73	-1,268.88	-334.57	1,500.03	1,454.29	45.74	32.794		
6,400.00	6,376.75	6,408.20	6,380.20	23.48	23.79	179.73	-1,268.88	-334.57	1,500.03	1,453.59	46.43	32.306		
6,500.00	6,476.75	6,508.20	6,480.20	23.83	24.13	179.73	-1,268.88	-334.57	1,500.03	1,452.90	47.13	31.831		
6,600.00	6,576.75	6,608.20	6,580.20	24.17	24.46	179.73	-1,268.88	-334.57	1,500.03	1,452.21	47.82	31.369		
6,700.00	6,676.75	6,708.20	6,680.20	24.51	24.80	179.73	-1,268.88	-334.57	1,500.03	1,451.52	48.51	30.921		
6,800.00	6,776.75	6,808.20	6,780.20	24.85	25.14	179.73	-1,268.88	-334.57	1,500.03	1,450.82	49.21	30.484		
6,900.00	6,876.75	6,908.20	6,880.20	25.20	25.48	179.73	-1,268.88	-334.57	1,500.03	1,450.13	49.90	30.060		
7,000.00	6,976.75	7,008.20	6,980.20	25.54	25.83	179.73	-1,268.88	-334.57	1,500.03	1,449.43	50.60	29.646		
7,100.00	7,076.75	7,108.20	7,080.20	25.88	26.17	179.73	-1,268.88	-334.57	1,500.03	1,448.73	51.29	29.244		
7,200.00	7,176.75	7,208.20	7,180.20	26.23	26.51	179.73	-1,268.88	-334.57	1,500.03	1,448.04	51.99	28.852		
7,300.00	7,276.75	7,308.20	7,280.20	26.57	26.85	179.73	-1,268.88	-334.57	1,500.03	1,447.34	52.69	28.470		
7,400.00	7,376.75	7,408.20	7,380.20	26.92	27.19	179.73	-1,268.88	-334.57	1,500.03	1,446.64	53.39	28.098		
7,500.00	7,476.75	7,508.20	7,480.20	27.27	27.54	179.73	-1,268.88	-334.57	1,500.03	1,445.94	54.08	27.735		
7,600.00	7,576.75	7,608.20	7,580.20	27.61	27.88	179.73	-1,268.88	-334.57	1,500.03	1,445.24	54.78	27.381		
7,700.00	7,676.75	7,708.20	7,680.20	27.96	28.22	179.73	-1,268.88	-334.57	1,500.03	1,444.54	55.48	27.036		
7,711.67	7,688.42	7,719.87	7,691.87	28.00	28.26	179.73	-1,268.88	-334.57	1,500.03	1,444.46	55.56	26.996 CC		
7,800.00	7,776.75	7,808.02	7,780.02	28.30	28.57	179.72	-1,268.88	-334.42	1,500.03	1,443.85	56.18	26.699		
7,900.00	7,876.75	7,905.30	7,876.62	28.65	28.91	179.32	-1,268.88	-323.99	1,500.12	1,443.24	56.88	26.373		
8,000.00	7,976.75	7,996.59	7,964.46	29.00	29.27	178.39	-1,268.90	-299.49	1,500.70	1,443.12	57.58	26.063 ES		
8,100.00	8,076.75	8,078.38	8,038.98	29.35	29.60	177.11	-1,268.91	-265.93	1,502.52	1,444.28	58.24	25.799		
8,200.00	8,176.75	8,150.00	8,099.73	29.69	29.92	175.67	-1,268.93	-228.09	1,506.51	1,447.68	58.82	25.610		
8,300.00	8,276.75	8,209.67	8,146.42	30.04	30.20	174.26	-1,268.94	-190.98	1,513.55	1,454.27	59.28	25.531		
8,400.00	8,376.75	8,260.58	8,183.02	30.39	30.46	172.93	-1,268.96	-155.62	1,524.40	1,464.80	59.60	25.579		
8,500.00	8,476.75	8,300.00	8,209.13	30.74	30.67	171.82	-1,268.97	-126.09	1,539.57	1,479.88	59.69	25.792		
8,600.00	8,576.75	8,339.69	8,233.29	31.09	30.91	170.65	-1,268.98	-94.62	1,559.41	1,499.73	59.68	26.129		
8,700.00	8,676.75	8,370.47	8,250.50	31.44	31.10	169.70	-1,268.99	-69.10	1,584.09	1,524.65	59.45	26.648		
8,800.00	8,776.75	8,400.00	8,265.70	31.78	31.30	168.77	-1,269.01	-43.78	1,613.66	1,554.58	59.07	27.316		
8,900.00	8,876.75	8,419.51	8,275.02	32.13	31.44	168.14	-1,269.01	-26.64	1,648.02	1,589.55	58.47	28.187		
9,000.00	8,976.75	8,450.00	8,288.40	32.48	31.66	167.14	-1,269.02	0.75	1,687.12	1,629.20	57.92	29.129		
9,100.00	9,076.75	8,450.00	8,288.40	32.83	31.66	167.14	-1,269.02	0.75	1,730.53	1,673.67	56.86	30.436		
9,200.00	9,176.75	8,471.62	8,296.99	33.18	31.83	166.42	-1,269.03	20.59	1,778.16	1,722.09	56.06	31.716		
9,300.00	9,276.75	8,485.06	8,301.95	33.53	31.93	165.97	-1,269.04	33.08	1,829.75	1,774.63	55.11	33.199		
9,400.00	9,376.75	8,500.00	8,307.12	33.88	32.05	165.47	-1,269.04	47.09	1,885.00	1,830.83	54.17	34.798		
9,500.00	9,476.75	8,500.00	8,307.12	34.23	32.05	165.47	-1,269.04	47.09	1,943.67	1,890.66	53.01	36.669		
9,600.00	9,576.75	8,517.43	8,312.69	34.58	32.20	164.88	-1,269.05	63.61	2,005.35	1,953.23	52.12	38.477		

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #122H - Wellbore #1 - Design #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Distance		Minimum Separation		Separation Factor		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)	Ellipses (usft)	Minimum Separation (usft)		
9,700.00	9,676.75	8,526.17	8,315.30	34.94	32.27	164.58	-1,269.06	71.96	2,069.95	2,018.82	51.12	40.488	
9,800.00	9,776.75	8,550.00	8,321.74	35.29	32.48	163.77	-1,269.07	94.89	2,137.37	2,086.99	50.38	42.427	
9,900.00	9,876.75	8,550.00	8,321.74	35.64	32.48	163.77	-1,269.07	94.89	2,206.82	2,157.48	49.33	44.733	
9,994.49	9,971.24	8,550.00	8,321.74	35.97	32.48	163.77	-1,269.07	94.89	2,274.53	2,226.14	48.39	47.003	
10,000.00	9,976.75	8,550.00	8,321.74	35.99	32.48	83.74	-1,269.07	94.89	2,278.54	2,230.20	48.34	47.139	
10,050.00	10,026.67	8,550.00	8,321.74	36.15	32.48	78.50	-1,269.07	94.89	2,314.94	2,267.10	47.85	48.384	
10,100.00	10,076.16	8,550.00	8,321.74	36.31	32.48	73.37	-1,269.07	94.89	2,351.26	2,303.90	47.36	49.647	
10,150.00	10,124.85	8,550.00	8,321.74	36.45	32.48	68.48	-1,269.07	94.89	2,387.23	2,340.34	46.88	50.919	
10,200.00	10,172.38	8,550.00	8,321.74	36.59	32.48	63.91	-1,269.07	94.89	2,422.59	2,376.17	46.42	52.188	
10,250.00	10,218.37	8,574.17	8,327.30	36.72	32.70	59.27	-1,269.08	118.41	2,456.58	2,410.29	46.29	53.074	
10,300.00	10,262.48	8,581.32	8,328.75	36.84	32.77	55.43	-1,269.08	125.41	2,489.68	2,443.73	45.95	54.185	
10,350.00	10,304.38	8,600.00	8,332.14	36.95	32.94	51.89	-1,269.09	143.78	2,521.48	2,475.71	45.77	55.089	
10,400.00	10,343.74	8,600.00	8,332.14	37.05	32.94	49.00	-1,269.09	143.78	2,551.47	2,506.07	45.40	56.204	
10,450.00	10,380.26	8,600.00	8,332.14	37.16	32.94	46.46	-1,269.09	143.78	2,579.78	2,534.71	45.06	57.251	
10,500.00	10,413.68	8,600.00	8,332.14	37.27	32.94	44.24	-1,269.09	143.78	2,606.25	2,561.48	44.77	58.215	
10,550.00	10,443.72	8,623.55	8,335.55	37.39	33.17	42.22	-1,269.10	167.08	2,630.25	2,585.46	44.78	58.731	
10,600.00	10,470.17	8,650.00	8,338.23	37.53	33.43	40.53	-1,269.11	193.40	2,652.42	2,607.56	44.86	59.121	
10,650.00	10,492.82	8,650.00	8,338.23	37.70	33.43	39.18	-1,269.11	193.40	2,671.73	2,627.01	44.72	59.741	
10,700.00	10,511.51	8,650.00	8,338.23	37.89	33.43	38.06	-1,269.11	193.40	2,688.70	2,644.06	44.64	60.226	
10,750.00	10,526.08	8,650.00	8,338.23	38.11	33.43	37.13	-1,269.11	193.40	2,703.25	2,658.61	44.63	60.565	
10,794.49	10,535.49	8,671.21	8,339.50	38.33	33.65	36.50	-1,269.12	214.57	2,713.70	2,668.82	44.88	60.470	
10,800.00	10,536.44	8,672.32	8,339.55	38.36	33.66	36.46	-1,269.12	215.67	2,714.87	2,669.97	44.89	60.472	
10,850.00	10,543.54	8,695.04	8,340.00	38.63	33.89	36.14	-1,269.13	238.39	2,724.87	2,679.66	45.20	60.279	
10,900.00	10,548.04	8,695.04	8,340.00	38.92	33.89	35.84	-1,269.13	238.39	2,733.21	2,687.84	45.37	60.242	
10,950.00	10,549.94	8,731.73	8,340.00	39.25	34.30	35.70	-1,269.14	275.08	2,740.11	2,694.21	45.90	59.693	
10,961.15	10,550.00	8,742.69	8,340.00	39.32	34.42	35.69	-1,269.15	286.04	2,741.37	2,695.32	46.05	59.528	
11,000.00	10,550.00	8,780.95	8,340.00	39.59	34.86	35.90	-1,269.16	324.30	2,745.35	2,698.77	46.58	58.939	
11,100.00	10,550.00	8,879.99	8,340.00	40.39	36.07	36.33	-1,269.21	423.34	2,753.51	2,705.48	48.03	57.330	
11,200.00	10,550.00	8,979.61	8,340.00	41.31	37.41	36.59	-1,269.25	522.96	2,758.61	2,709.03	49.58	55.638	
11,300.00	10,550.00	9,079.54	8,340.00	42.34	38.86	36.70	-1,269.29	622.89	2,760.60	2,709.39	51.22	53.901	
11,313.54	10,550.00	9,106.92	8,340.00	42.49	39.27	36.70	-1,269.30	636.43	2,760.63	2,709.06	51.58	53.526	
11,400.00	10,550.00	9,179.54	8,340.00	43.47	40.40	36.70	-1,269.34	722.89	2,760.63	2,707.69	52.94	52.146	
11,500.00	10,550.00	9,279.54	8,340.00	44.71	42.03	36.70	-1,269.38	822.89	2,760.64	2,705.85	54.79	50.386	
11,600.00	10,550.00	9,379.54	8,340.00	46.03	43.73	36.70	-1,269.42	922.89	2,760.64	2,703.89	56.75	48.643	
11,700.00	10,550.00	9,479.54	8,340.00	47.45	45.50	36.70	-1,269.47	1,022.89	2,760.64	2,701.83	58.82	46.936	
11,800.00	10,550.00	9,579.54	8,340.00	48.94	47.32	36.70	-1,269.51	1,122.89	2,760.65	2,699.67	60.97	45.277	
11,900.00	10,550.00	9,679.54	8,340.00	50.50	49.20	36.70	-1,269.55	1,222.89	2,760.65	2,697.44	63.21	43.674	
12,000.00	10,550.00	9,779.54	8,340.00	52.13	51.12	36.70	-1,269.59	1,322.89	2,760.65	2,695.13	65.52	42.133	
12,100.00	10,550.00	9,879.54	8,340.00	53.82	53.09	36.70	-1,269.64	1,422.89	2,760.66	2,692.76	67.90	40.657	
12,200.00	10,550.00	9,979.54	8,340.00	55.56	55.09	36.70	-1,269.68	1,522.89	2,760.66	2,690.32	70.34	39.247	
12,300.00	10,550.00	10,079.54	8,340.00	57.35	57.12	36.70	-1,269.72	1,622.89	2,760.66	2,687.83	72.83	37.904	
12,400.00	10,550.00	10,179.54	8,340.00	59.19	59.18	36.70	-1,269.77	1,722.89	2,760.67	2,685.29	75.37	36.626	
12,500.00	10,550.00	10,279.54	8,340.00	61.07	61.27	36.70	-1,269.81	1,822.89	2,760.67	2,682.71	77.96	35.411	
12,600.00	10,550.00	10,379.54	8,340.00	62.98	63.39	36.70	-1,269.85	1,922.89	2,760.67	2,680.09	80.59	34.258	
12,700.00	10,550.00	10,479.54	8,340.00	64.93	65.52	36.70	-1,269.90	2,022.89	2,760.68	2,677.43	83.25	33.162	
12,800.00	10,550.00	10,579.54	8,340.00	66.91	67.68	36.70	-1,269.94	2,122.89	2,760.68	2,674.74	85.94	32.123	
12,900.00	10,550.00	10,679.54	8,340.00	68.92	69.85	36.70	-1,269.98	2,222.89	2,760.68	2,672.02	88.67	31.136	
13,000.00	10,550.00	10,779.54	8,340.00	70.96	72.04	36.70	-1,270.03	2,322.89	2,760.69	2,669.27	91.42	30.198	
13,100.00	10,550.00	10,879.54	8,340.00	73.01	74.24	36.70	-1,270.07	2,422.89	2,760.69	2,666.50	94.19	29.308	
13,200.00	10,550.00	10,979.54	8,340.00	75.09	76.46	36.70	-1,270.11	2,522.89	2,760.69	2,663.70	96.99	28.462	
13,300.00	10,550.00	11,079.54	8,340.00	77.19	78.69	36.70	-1,270.16	2,622.89	2,760.70	2,660.88	99.81	27.658	
13,400.00	10,550.00	11,179.54	8,340.00	79.31	80.93	36.70	-1,270.20	2,722.89	2,760.70	2,658.05	102.65	26.893	

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



Anticollision Report

Company: Matador Resources
 Project: Eddy County, New Mexico (NAD 27)
 Reference Site: Zach McCormick Federal 18-24S-29E RB
 Site Error: 0.00 usft
 Reference Well: #221H
 Well Error: 0.00 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
 TVD Reference: WELL @ 2981.93usft (Patterson 297)
 MD Reference: WELL @ 2981.93usft (Patterson 297)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Conroe DB
 Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #122H - Wellbore #1 - Design #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 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	
13,500.00	10,550.00	11,279.54	8,340.00	81.45	83.18	36.70	-1,270.24	2,822.89	2,760.70	2,655.19	105.51	26.165	
13,600.00	10,550.00	11,379.54	8,340.00	83.60	85.44	36.70	-1,270.28	2,922.89	2,760.71	2,652.32	108.39	25.471	
13,700.00	10,550.00	11,479.54	8,340.00	85.76	87.71	36.70	-1,270.33	3,022.89	2,760.71	2,649.44	111.27	24.810	
13,800.00	10,550.00	11,579.54	8,340.00	87.94	89.98	36.70	-1,270.37	3,122.89	2,760.71	2,646.54	114.18	24.179	
13,900.00	10,550.00	11,679.54	8,340.00	90.13	92.27	36.70	-1,270.41	3,222.89	2,760.72	2,643.63	117.09	23.577	
14,000.00	10,550.00	11,779.54	8,340.00	92.34	94.56	36.70	-1,270.46	3,322.89	2,760.72	2,640.70	120.02	23.002	
14,100.00	10,550.00	11,879.54	8,340.00	94.55	96.86	36.70	-1,270.50	3,422.89	2,760.72	2,637.77	122.96	22.452	
14,200.00	10,550.00	11,979.54	8,340.00	96.78	99.16	36.70	-1,270.54	3,522.89	2,760.73	2,634.82	125.91	21.927	
14,300.00	10,550.00	12,079.54	8,340.00	99.01	101.47	36.70	-1,270.59	3,622.89	2,760.73	2,631.87	128.87	21.423	
14,400.00	10,550.00	12,179.54	8,340.00	101.25	103.78	36.70	-1,270.63	3,722.89	2,760.73	2,628.90	131.83	20.941	
14,500.00	10,550.00	12,279.54	8,340.00	103.50	106.10	36.70	-1,270.67	3,822.89	2,760.74	2,625.93	134.81	20.479	
14,600.00	10,550.00	12,379.54	8,340.00	105.76	108.43	36.70	-1,270.72	3,922.89	2,760.74	2,622.95	137.79	20.035	
14,700.00	10,550.00	12,479.54	8,340.00	108.03	110.76	36.70	-1,270.76	4,022.89	2,760.74	2,619.96	140.78	19.610	
14,800.00	10,550.00	12,579.54	8,340.00	110.30	113.09	36.70	-1,270.80	4,122.89	2,760.75	2,616.97	143.78	19.201	
14,900.00	10,550.00	12,679.54	8,340.00	112.58	115.43	36.70	-1,270.85	4,222.89	2,760.75	2,613.96	146.79	18.808	
15,000.00	10,550.00	12,779.54	8,340.00	114.86	117.77	36.70	-1,270.89	4,322.89	2,760.75	2,610.96	149.80	18.430	
15,100.00	10,550.00	12,879.54	8,340.00	117.15	120.11	36.70	-1,270.93	4,422.89	2,760.76	2,607.94	152.81	18.066	
15,200.00	10,550.00	12,979.54	8,340.00	119.45	122.45	36.70	-1,270.97	4,522.89	2,760.76	2,604.93	155.83	17.716	
15,300.00	10,550.00	13,079.54	8,340.00	121.75	124.80	36.70	-1,271.02	4,622.89	2,760.76	2,601.90	158.86	17.378	
15,400.00	10,550.00	13,179.54	8,340.00	124.05	127.16	36.70	-1,271.06	4,722.89	2,760.77	2,598.88	161.89	17.053	
15,431.68	10,550.00	13,211.22	8,340.00	124.78	127.90	36.70	-1,271.07	4,754.57	2,760.77	2,597.92	162.85	16.952 SF	



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #201H - Wellbore #1 - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD													Offset Well Error:	0.00 usft
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)						
0.00	0.00	0.23	-0.23	0.00	0.00	90.10	-0.05	30.02	30.02					
100.00	100.00	100.23	99.77	0.13	0.13	90.10	-0.05	30.02	30.02	29.76	0.26	117.569		
200.00	200.00	200.23	199.77	0.49	0.49	90.10	-0.05	30.02	30.02	29.05	0.97	30.876		
300.00	300.00	300.23	299.77	0.84	0.85	90.10	-0.05	30.02	30.02	28.33	1.69	17.771		
400.00	400.00	400.23	399.77	1.20	1.20	90.10	-0.05	30.02	30.02	27.61	2.41	12.476		
500.00	500.00	500.23	499.77	1.56	1.56	90.10	-0.05	30.02	30.02	26.90	3.12	9.612		
600.00	600.00	600.23	599.77	1.92	1.92	90.10	-0.05	30.02	30.02	26.18	3.84	7.818		
700.00	700.00	700.23	699.77	2.28	2.28	90.10	-0.05	30.02	30.02	25.46	4.56	6.588		
800.00	800.00	800.23	799.77	2.64	2.64	90.10	-0.05	30.02	30.02	24.75	5.27	5.692		
900.00	900.00	900.23	899.77	3.00	3.00	90.10	-0.05	30.02	30.02	24.03	5.99	5.011		
1,000.00	1,000.00	1,000.23	999.77	3.35	3.35	90.10	-0.05	30.02	30.02	23.31	6.71	4.475 CC		
1,100.00	1,099.99	1,100.24	1,099.76	3.71	3.71	147.36	-0.05	30.02	31.11	23.69	7.42	4.193		
1,200.00	1,199.91	1,200.01	1,200.00	4.06	4.07	150.54	0.17	29.81	34.26	26.13	8.13	4.214		
1,266.67	1,266.45	1,267.09	1,267.08	4.30	4.31	152.18	1.20	28.81	36.74	28.14	8.60	4.272		
1,300.00	1,299.70	1,300.66	1,300.62	4.42	4.43	152.71	2.04	28.00	37.91	29.08	8.84	4.291		
1,400.00	1,399.46	1,401.44	1,401.26	4.78	4.79	152.58	5.81	24.34	40.07	30.53	9.54	4.199		
1,500.00	1,499.22	1,502.23	1,501.74	5.14	5.15	150.06	11.49	18.83	40.22	29.97	10.25	3.924		
1,600.00	1,598.97	1,602.90	1,601.85	5.50	5.51	144.82	19.07	11.49	38.59	27.63	10.96	3.521		
1,700.00	1,698.73	1,703.21	1,701.30	5.86	5.88	135.89	28.46	2.38	35.80	24.11	11.69	3.062		
1,800.00	1,798.48	1,802.94	1,800.06	6.23	6.26	124.44	38.43	-7.28	33.66	21.21	12.45	2.704		
1,891.25	1,889.51	1,906.05	1,890.19	6.56	6.66	113.11	47.52	-16.09	33.00	19.80	13.20	2.500		
1,900.00	1,898.24	1,902.68	1,898.83	6.60	6.64	112.01	48.40	-16.94	33.00	19.79	13.22	2.497 ES		
2,000.00	1,998.00	2,002.41	1,997.59	6.96	7.03	99.68	58.36	-26.60	33.93	19.94	13.99	2.426		
2,100.00	2,097.75	2,102.15	2,096.36	7.33	7.42	88.49	68.33	-36.26	36.31	21.57	14.74	2.463		
2,200.00	2,197.51	2,201.88	2,195.12	7.70	7.81	78.98	78.30	-45.92	39.90	24.41	15.48	2.577		
2,300.00	2,297.27	2,301.62	2,293.89	8.07	8.20	71.20	88.26	-55.58	44.39	28.17	16.22	2.737		
2,400.00	2,397.02	2,401.36	2,392.65	8.44	8.60	64.95	98.23	-65.24	49.54	32.60	16.94	2.925		
2,500.00	2,496.78	2,501.09	2,491.42	8.81	9.00	59.91	108.20	-74.90	55.17	37.51	17.66	3.124		
2,600.00	2,596.54	2,600.83	2,590.18	9.18	9.40	55.83	118.16	-84.56	61.15	42.77	18.39	3.326		
2,700.00	2,696.29	2,700.56	2,688.95	9.55	9.80	52.50	128.13	-94.23	67.38	48.27	19.11	3.526		
2,800.00	2,796.05	2,800.30	2,787.71	9.92	10.21	49.73	138.10	-103.89	73.80	53.97	19.83	3.721		
2,850.00	2,845.92	2,850.16	2,837.09	10.11	10.41	48.52	143.08	-108.72	77.07	56.87	20.19	3.816		
2,900.00	2,895.78	2,900.06	2,886.50	10.29	10.61	47.55	148.07	-113.55	80.14	59.58	20.56	3.898		
3,000.00	2,995.32	3,000.07	2,985.40	10.67	11.02	46.77	158.05	-123.22	85.00	63.70	21.30	3.990		
3,100.00	3,094.57	3,100.12	3,084.37	11.06	11.42	47.32	168.03	-132.90	88.08	66.00	22.07	3.990		
3,116.66	3,111.08	3,116.53	3,100.87	11.12	11.49	47.53	169.70	-134.52	88.42	66.22	22.20	3.983		
3,200.00	3,193.60	3,200.17	3,183.36	11.45	11.83	48.66	178.02	-142.59	90.02	67.17	22.86	3.939		
3,300.00	3,292.63	3,300.21	3,282.35	11.85	12.24	49.97	188.01	-152.27	92.00	68.35	23.65	3.890		
3,400.00	3,391.65	3,400.25	3,381.33	12.25	12.65	51.23	198.00	-161.95	94.01	69.57	24.44	3.847		
3,500.00	3,490.68	3,499.71	3,480.32	12.65	13.06	52.43	207.99	-171.63	96.07	70.84	25.24	3.807		
3,600.00	3,589.71	3,600.33	3,579.31	13.05	13.47	53.58	217.98	-181.32	98.18	72.14	26.04	3.771		
3,700.00	3,688.73	3,700.37	3,678.29	13.45	13.88	54.68	227.97	-191.00	100.32	73.47	26.84	3.737		
3,800.00	3,787.76	3,800.41	3,777.28	13.85	14.30	55.73	237.96	-200.68	102.49	74.84	27.65	3.707		
3,900.00	3,886.79	3,900.45	3,876.26	14.26	14.71	56.74	247.95	-210.36	104.70	76.24	28.46	3.679		
4,000.00	3,985.82	4,000.49	3,975.25	14.66	15.12	57.71	257.94	-220.05	106.94	77.67	29.27	3.654		
4,100.00	4,084.84	4,100.54	4,074.24	15.07	15.53	58.64	267.92	-229.73	109.21	79.13	30.08	3.630		
4,200.00	4,183.87	4,200.58	4,173.22	15.47	15.95	59.53	277.91	-239.41	111.50	80.61	30.90	3.609		
4,300.00	4,282.90	4,300.62	4,272.21	15.88	16.36	60.39	287.90	-249.09	113.83	82.11	31.72	3.589		
4,400.00	4,381.92	4,400.66	4,371.19	16.29	16.77	61.21	297.89	-258.78	116.17	83.64	32.53	3.571		
4,500.00	4,480.95	4,500.70	4,470.18	16.70	17.19	61.99	307.88	-268.46	118.54	85.19	33.36	3.554		
4,600.00	4,579.98	4,600.74	4,569.17	17.10	17.60	62.75	317.87	-278.14	120.93	86.76	34.18	3.538		
4,700.00	4,679.00	4,699.22	4,668.15	17.51	18.01	63.48	327.86	-287.82	123.34	88.35	34.99	3.525		

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



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 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Conroe DB
 Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #201H - Wellbore #1 - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD													Offset Well Error:	0.00 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		
4,753.24	4,731.73	4,752.44	4,720.86	17.73	18.23	63.85	333.18	-292.98	124.64	89.20	35.43	3.517		
4,800.00	4,778.07	4,800.82	4,767.14	17.92	18.43	64.08	337.85	-297.51	125.90	90.08	35.82	3.515		
4,900.00	4,877.41	4,900.89	4,866.10	18.32	18.85	63.78	347.83	-307.19	129.44	92.84	36.60	3.536		
5,000.00	4,977.02	4,999.71	4,965.75	18.70	19.26	62.56	357.78	-316.82	134.09	96.74	37.34	3.591		
5,100.00	5,076.83	5,101.89	5,067.22	19.07	19.67	61.11	368.36	-325.14	138.69	100.62	38.07	3.643		
5,200.00	5,176.76	5,204.23	5,169.14	19.43	20.06	59.63	372.99	-331.57	142.91	104.15	38.76	3.687		
5,286.58	5,263.33	5,292.97	5,257.68	19.72	20.38	2.40	377.16	-335.61	146.26	106.93	39.33	3.719		
5,300.00	5,276.75	5,306.74	5,271.43	19.77	20.43	2.20	377.67	-336.11	146.74	107.32	39.42	3.723		
5,400.00	5,376.75	5,409.45	5,374.07	20.10	20.79	1.15	380.38	-338.74	149.30	109.25	40.06	3.727		
5,500.00	5,476.75	5,511.91	5,476.52	20.44	21.13	0.87	381.13	-339.46	150.02	109.31	40.71	3.685		
5,600.00	5,576.75	5,611.91	5,576.52	20.77	21.46	0.87	381.13	-339.46	150.02	108.63	41.38	3.625		
5,700.00	5,676.75	5,711.91	5,676.52	21.11	21.79	0.87	381.13	-339.46	150.02	107.96	42.06	3.567		
5,800.00	5,776.75	5,811.91	5,776.52	21.45	22.11	0.87	381.13	-339.46	150.02	107.28	42.74	3.510		
5,900.00	5,876.75	5,911.91	5,876.52	21.78	22.44	0.87	381.13	-339.46	150.02	106.60	43.42	3.455		
6,000.00	5,976.75	6,011.91	5,976.52	22.12	22.77	0.87	381.13	-339.46	150.02	105.92	44.10	3.402		
6,100.00	6,076.75	6,111.91	6,076.52	22.46	23.10	0.87	381.13	-339.46	150.02	105.24	44.78	3.350		
6,200.00	6,176.75	6,211.91	6,176.52	22.80	23.44	0.87	381.13	-339.46	150.02	104.55	45.46	3.300		
6,300.00	6,276.75	6,311.91	6,276.52	23.14	23.77	0.87	381.13	-339.46	150.02	103.87	46.15	3.251		
6,400.00	6,376.75	6,411.91	6,376.52	23.48	24.10	0.87	381.13	-339.46	150.02	103.18	46.83	3.203		
6,500.00	6,476.75	6,511.91	6,476.52	23.83	24.44	0.87	381.13	-339.46	150.02	102.50	47.52	3.157		
6,600.00	6,576.75	6,611.91	6,576.52	24.17	24.77	0.87	381.13	-339.46	150.02	101.81	48.21	3.112		
6,700.00	6,676.75	6,711.91	6,676.52	24.51	25.11	0.87	381.13	-339.46	150.02	101.12	48.90	3.068		
6,800.00	6,776.75	6,811.91	6,776.52	24.85	25.44	0.87	381.13	-339.46	150.02	100.43	49.58	3.026		
6,900.00	6,876.75	6,911.91	6,876.52	25.20	25.78	0.87	381.13	-339.46	150.02	99.74	50.27	2.984		
7,000.00	6,976.75	7,011.91	6,976.52	25.54	26.12	0.87	381.13	-339.46	150.02	99.05	50.96	2.944		
7,100.00	7,076.75	7,111.91	7,076.52	25.88	26.45	0.87	381.13	-339.46	150.02	98.36	51.66	2.904		
7,200.00	7,176.75	7,211.91	7,176.52	26.23	26.79	0.87	381.13	-339.46	150.02	97.67	52.35	2.866		
7,300.00	7,276.75	7,311.91	7,276.52	26.57	27.13	0.87	381.13	-339.46	150.02	96.98	53.04	2.828		
7,400.00	7,376.75	7,411.91	7,376.52	26.92	27.47	0.87	381.13	-339.46	150.02	96.29	53.73	2.792		
7,500.00	7,476.75	7,511.91	7,476.52	27.27	27.81	0.87	381.13	-339.46	150.02	95.59	54.43	2.756		
7,600.00	7,576.75	7,611.91	7,576.52	27.61	28.15	0.87	381.13	-339.46	150.02	94.90	55.12	2.722		
7,700.00	7,676.75	7,711.91	7,676.52	27.96	28.49	0.87	381.13	-339.46	150.02	94.20	55.81	2.688		
7,800.00	7,776.75	7,811.91	7,776.52	28.30	28.83	0.87	381.13	-339.46	150.02	93.51	56.51	2.655		
7,900.00	7,876.75	7,911.91	7,876.52	28.65	29.17	0.87	381.13	-339.46	150.02	92.81	57.21	2.622		
8,000.00	7,976.75	8,011.91	7,976.52	29.00	29.51	0.87	381.13	-339.46	150.02	92.11	57.90	2.591		
8,100.00	8,076.75	8,111.91	8,076.52	29.35	29.86	0.87	381.13	-339.46	150.02	91.42	58.60	2.560		
8,200.00	8,176.75	8,211.91	8,176.52	29.69	30.20	0.87	381.13	-339.46	150.02	90.72	59.30	2.530		
8,300.00	8,276.75	8,311.91	8,276.52	30.04	30.54	0.87	381.13	-339.46	150.02	90.02	59.99	2.501		
8,400.00	8,376.75	8,411.91	8,376.52	30.39	30.89	0.87	381.13	-339.46	150.02	89.32	60.69	2.472		
8,500.00	8,476.75	8,511.91	8,476.52	30.74	31.23	0.87	381.13	-339.46	150.02	88.63	61.39	2.444		
8,600.00	8,576.75	8,611.91	8,576.52	31.09	31.57	0.87	381.13	-339.46	150.02	87.93	62.09	2.416		
8,700.00	8,676.75	8,711.91	8,676.52	31.44	31.92	0.87	381.13	-339.46	150.02	87.23	62.79	2.389		
8,800.00	8,776.75	8,811.91	8,776.52	31.78	32.26	0.87	381.13	-339.46	150.02	86.53	63.49	2.363		
8,900.00	8,876.75	8,911.91	8,876.52	32.13	32.61	0.87	381.13	-339.46	150.02	85.83	64.19	2.337		
9,000.00	8,976.75	9,011.91	8,976.52	32.48	32.95	0.87	381.13	-339.46	150.02	85.13	64.89	2.312		
9,100.00	9,076.75	9,111.91	9,076.52	32.83	33.30	0.87	381.13	-339.46	150.02	84.42	65.59	2.287		
9,112.93	9,089.68	9,124.84	9,089.45	32.88	33.34	0.87	381.13	-339.46	150.02	84.33	65.68	2.284		
9,200.00	9,176.75	9,211.87	9,176.48	33.18	33.64	0.91	381.13	-339.37	150.02	83.73	66.29	2.263		
9,300.00	9,276.75	9,310.17	9,274.13	33.53	33.94	4.78	381.13	-329.21	150.54	83.47	67.07	2.245 SF		
9,400.00	9,376.75	9,402.45	9,362.98	33.88	34.19	13.90	381.11	-304.62	155.10	87.37	67.73	2.290		
9,500.00	9,476.75	9,485.08	9,438.27	34.23	34.37	25.33	381.10	-270.76	170.27	103.06	67.21	2.533		
9,600.00	9,576.75	9,556.64	9,498.97	34.58	34.51	35.96	381.08	-232.95	200.84	136.24	64.60	3.109		

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #201H - Wellbore #1 - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD													Offset Well Error:	0.00 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)						
9,700.00	9,676.75	9,617.41	9,546.48	34.94	34.61	44.36	381.07	-195.10	246.77	186.20	60.57	4.074		
9,800.00	9,776.75	9,668.59	9,583.20	35.29	34.69	50.56	381.05	-159.47	305.08	248.79	56.29	5.420		
9,900.00	9,876.75	9,711.63	9,611.51	35.64	34.76	55.07	381.04	-127.07	372.54	320.14	52.40	7.110		
9,994.49	9,971.24	9,750.00	9,634.65	35.97	34.83	58.57	381.02	-96.47	442.46	392.88	49.58	8.925		
10,000.00	9,976.75	9,750.00	9,634.65	35.99	34.83	-20.65	381.02	-96.47	446.65	397.40	49.25	9.069		
10,050.00	10,026.67	9,765.16	9,643.21	36.15	34.86	-17.69	381.02	-83.96	484.02	436.48	47.55	10.180		
10,100.00	10,076.16	9,782.89	9,652.80	36.31	34.90	-15.20	381.01	-69.05	519.83	473.80	46.03	11.293		
10,150.00	10,124.85	9,800.00	9,661.62	36.45	34.93	-13.24	381.01	-54.39	553.93	509.48	44.45	12.461		
10,200.00	10,172.38	9,819.64	9,671.20	36.59	34.98	-11.56	381.00	-37.24	586.20	543.16	43.03	13.622		
10,250.00	10,218.37	9,838.53	9,679.85	36.72	35.03	-10.21	380.99	-20.45	616.53	574.98	41.55	14.839		
10,300.00	10,262.48	9,850.00	9,684.83	36.84	35.06	-9.29	380.99	-10.12	644.94	605.32	39.62	16.278		
10,350.00	10,304.38	9,877.12	9,695.77	36.95	35.15	-8.13	380.98	14.69	671.05	632.42	38.64	17.368		
10,400.00	10,343.74	9,900.00	9,704.09	37.05	35.23	-7.25	380.97	36.01	695.11	657.71	37.40	18.584		
10,450.00	10,380.26	9,916.53	9,709.56	37.16	35.30	-6.62	380.96	51.60	716.91	681.03	35.88	19.982		
10,500.00	10,413.68	9,936.47	9,715.56	37.27	35.38	-6.02	380.95	70.62	736.43	701.84	34.59	21.290		
10,550.00	10,443.72	9,950.00	9,719.25	37.39	35.43	-5.59	380.95	83.64	753.69	720.56	33.13	22.750		
10,600.00	10,470.17	9,976.70	9,725.63	37.53	35.56	-5.02	380.94	109.56	768.45	736.16	32.29	23.799		
10,650.00	10,492.82	10,001.63	9,730.49	37.70	35.68	-4.53	380.92	134.00	780.89	749.43	31.46	24.821		
10,700.00	10,511.51	10,021.98	9,733.81	37.89	35.79	-4.16	380.92	154.08	790.72	760.11	30.62	25.827		
10,750.00	10,526.08	10,050.00	9,737.68	38.11	35.95	-3.72	380.90	181.84	797.76	767.66	30.09	26.509		
10,794.49	10,535.49	10,072.27	9,740.18	38.33	36.09	-3.39	380.89	203.97	801.61	771.94	29.68	27.013		
10,800.00	10,536.44	10,075.21	9,740.47	38.36	36.10	-3.35	380.89	206.90	801.94	772.31	29.63	27.062		
10,850.00	10,543.54	10,100.00	9,742.56	38.63	36.26	-3.01	380.88	231.59	804.31	774.99	29.32	27.434		
10,900.00	10,548.04	10,128.58	9,744.18	38.92	36.45	-2.63	380.87	260.12	805.53	776.35	29.19	27.600		
10,950.00	10,549.94	10,155.25	9,744.91	39.25	36.63	-2.29	380.86	286.78	805.62	776.44	29.18	27.612		
10,961.15	10,550.00	10,161.20	9,744.97	39.32	36.68	-2.21	380.86	292.73	805.48	776.29	29.19	27.590		
11,000.00	10,550.00	10,206.52	9,745.00	39.59	37.02	-1.82	380.84	325.01	805.19	775.86	29.33	27.457		
11,100.00	10,550.00	10,307.49	9,745.00	40.39	37.88	-0.86	380.80	424.05	804.86	775.16	29.70	27.099		
11,200.00	10,550.00	10,407.87	9,745.00	41.31	38.87	-0.26	380.76	523.67	804.78	774.54	30.24	26.613		
11,300.00	10,550.00	10,507.93	9,745.00	42.34	39.98	-0.02	380.71	623.60	804.77	773.86	30.91	26.039		
11,313.54	10,550.00	10,505.60	9,745.00	42.49	39.96	-0.02	380.71	637.14	804.77	773.83	30.94	26.008		
11,400.00	10,550.00	10,607.93	9,745.00	43.47	41.21	-0.02	380.67	723.60	804.77	773.10	31.67	25.412		
11,500.00	10,550.00	10,707.93	9,745.00	44.71	42.53	-0.02	380.63	823.60	804.77	772.28	32.49	24.771		
11,600.00	10,550.00	10,807.93	9,745.00	46.03	43.95	-0.02	380.58	923.60	804.77	771.41	33.36	24.122		
11,700.00	10,550.00	10,907.93	9,745.00	47.45	45.45	-0.02	380.54	1,023.60	804.77	770.49	34.28	23.473		
11,800.00	10,550.00	11,007.93	9,745.00	48.94	47.03	-0.02	380.50	1,123.60	804.77	769.52	35.25	22.828		
11,900.00	10,550.00	11,107.93	9,745.00	50.50	48.68	-0.01	380.45	1,223.60	804.77	768.51	36.26	22.192		
12,000.00	10,550.00	11,207.93	9,745.00	52.13	50.39	-0.01	380.41	1,323.60	804.77	767.46	37.31	21.588		
12,100.00	10,550.00	11,307.93	9,745.00	53.82	52.16	-0.01	380.37	1,423.60	804.77	766.37	38.40	20.959		
12,200.00	10,550.00	11,407.93	9,745.00	55.56	53.97	-0.01	380.32	1,523.60	804.77	765.25	39.52	20.366		
12,300.00	10,550.00	11,507.93	9,745.00	57.35	55.84	-0.01	380.28	1,623.60	804.77	764.11	40.66	19.792		
12,400.00	10,550.00	11,607.93	9,745.00	59.19	57.74	-0.01	380.24	1,723.60	804.77	762.93	41.84	19.236		
12,500.00	10,550.00	11,707.93	9,745.00	61.07	59.69	-0.01	380.19	1,823.60	804.77	761.73	43.04	18.700		
12,600.00	10,550.00	11,807.93	9,745.00	62.98	61.66	-0.01	380.15	1,923.60	804.77	760.51	44.26	18.184		
12,700.00	10,550.00	11,907.93	9,745.00	64.93	63.67	-0.01	380.10	2,023.60	804.77	759.27	45.50	17.687		
12,800.00	10,550.00	12,007.93	9,745.00	66.91	65.71	-0.01	380.06	2,123.60	804.77	758.01	46.76	17.209		
12,900.00	10,550.00	12,107.93	9,745.00	68.92	67.77	-0.01	380.02	2,223.60	804.77	756.72	48.05	16.750		
13,000.00	10,550.00	12,207.93	9,745.00	70.96	69.85	-0.01	379.97	2,323.60	804.77	755.43	49.34	16.310		
13,100.00	10,550.00	12,307.93	9,745.00	73.01	71.96	-0.01	379.93	2,423.60	804.77	754.11	50.66	15.887		
13,200.00	10,550.00	12,407.93	9,745.00	75.09	74.08	-0.01	379.89	2,523.60	804.77	752.79	51.98	15.481		
13,300.00	10,550.00	12,507.93	9,745.00	77.19	76.23	-0.01	379.84	2,623.60	804.77	751.45	53.32	15.092		
13,400.00	10,550.00	12,607.93	9,745.00	79.31	78.39	-0.01	379.80	2,723.60	804.77	750.09	54.68	14.719		

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



Anticollision Report

Company: Matador Resources
 Project: Eddy County, New Mexico (NAD 27)
 Reference Site: Zach McCormick Federal 18-24S-29E RB
 Site Error: 0.00 usft
 Reference Well: #221H
 Well Error: 0.00 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
 TVD Reference: WELL @ 2981.93usft (Patterson 297)
 MD Reference: WELL @ 2981.93usft (Patterson 297)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Conroe DB
 Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #201H - Wellbore #1 - Design #1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD												Offset Well Error:	0.00 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	
13,500.00	10,550.00	12,707.93	9,745.00	81.45	80.56	-0.01	379.76	2,823.60	804.77	748.73	56.04	14.360	
13,600.00	10,550.00	12,807.93	9,745.00	83.60	82.75	-0.01	379.71	2,923.60	804.77	747.35	57.42	14.017	
13,700.00	10,550.00	12,907.93	9,745.00	85.76	84.95	-0.01	379.67	3,023.60	804.77	745.97	58.80	13.687	
13,800.00	10,550.00	13,007.93	9,745.00	87.94	87.16	-0.01	379.63	3,123.60	804.77	744.58	60.19	13.370	
13,900.00	10,550.00	13,107.93	9,745.00	90.13	89.39	-0.01	379.58	3,223.60	804.77	743.18	61.59	13.066	
14,000.00	10,550.00	13,207.93	9,745.00	92.34	91.62	-0.01	379.54	3,323.60	804.77	741.77	63.00	12.773	
14,100.00	10,550.00	13,307.93	9,745.00	94.55	93.87	-0.01	379.50	3,423.60	804.77	740.35	64.42	12.492	
14,200.00	10,550.00	13,407.93	9,745.00	96.78	96.12	-0.01	379.45	3,523.60	804.77	738.93	65.84	12.222	
14,300.00	10,550.00	13,507.93	9,745.00	99.01	98.38	0.00	379.41	3,623.60	804.77	737.50	67.27	11.962	
14,400.00	10,550.00	13,607.93	9,745.00	101.25	100.65	0.00	379.37	3,723.60	804.77	736.06	68.71	11.712	
14,500.00	10,550.00	13,707.93	9,745.00	103.50	102.92	0.00	379.32	3,823.60	804.77	734.62	70.15	11.472	
14,600.00	10,550.00	13,807.93	9,745.00	105.76	105.20	0.00	379.28	3,923.60	804.77	733.17	71.60	11.240	
14,700.00	10,550.00	13,907.93	9,745.00	108.03	107.49	0.00	379.24	4,023.60	804.77	731.72	73.05	11.016	
14,800.00	10,550.00	14,007.93	9,745.00	110.30	109.78	0.00	379.19	4,123.60	804.77	730.26	74.51	10.801	
14,900.00	10,550.00	14,107.93	9,745.00	112.58	112.08	0.00	379.15	4,223.60	804.77	728.80	75.97	10.593	
15,000.00	10,550.00	14,207.93	9,745.00	114.86	114.39	0.00	379.11	4,323.60	804.77	727.33	77.44	10.393	
15,100.00	10,550.00	14,307.93	9,745.00	117.15	116.70	0.00	379.06	4,423.60	804.77	725.86	78.91	10.199	
15,200.00	10,550.00	14,407.93	9,745.00	119.45	119.01	0.00	379.02	4,523.60	804.77	724.39	80.38	10.012	
15,300.00	10,550.00	14,507.93	9,745.00	121.75	121.33	0.00	378.98	4,623.60	804.77	722.91	81.86	9.831	
15,400.00	10,550.00	14,592.07	9,745.00	124.05	123.28	0.00	378.93	4,723.60	804.77	721.55	83.22	9.670	
15,431.68	10,550.00	14,623.75	9,745.00	124.78	124.02	0.00	378.92	4,755.28	804.77	721.08	83.69	9.616	



Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #202H - Wellbore #1 - Design #1													Offset Site Error: 0 00 usft
Survey Program: 0-MWD													Offset Well Error: 0 00 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	
0.00	0.00	2.57	2.57	0.00	0.00	-159.81	-1,613.70	-593.47	1,719.37				
100.00	100.00	102.57	102.57	0.13	0.14	-159.81	-1,613.70	-593.47	1,719.37	1,719.11	0.26	6,519.487	
200.00	200.00	202.57	202.57	0.49	0.49	-159.81	-1,613.70	-593.47	1,719.37	1,718.39	0.98	1,753.259	
300.00	300.00	302.57	302.57	0.84	0.85	-159.81	-1,613.70	-593.47	1,719.37	1,717.67	1.70	1,012.816	
400.00	400.00	402.57	402.57	1.20	1.21	-159.81	-1,613.70	-593.47	1,719.37	1,716.96	2.41	712.085	
500.00	500.00	502.57	502.57	1.56	1.57	-159.81	-1,613.70	-593.47	1,719.37	1,716.24	3.13	549.056	
600.00	600.00	602.57	602.57	1.92	1.93	-159.81	-1,613.70	-593.47	1,719.37	1,715.52	3.85	446.770	
700.00	700.00	702.57	702.57	2.28	2.29	-159.81	-1,613.70	-593.47	1,719.37	1,714.80	4.57	376.610	
800.00	800.00	802.57	802.57	2.64	2.65	-159.81	-1,613.70	-593.47	1,719.37	1,714.09	5.28	325.495	
900.00	900.00	902.57	902.57	3.00	3.00	-159.81	-1,613.70	-593.47	1,719.37	1,713.37	6.00	286.596	
1,000.00	1,000.00	1,004.67	1,004.67	3.35	3.37	-159.81	-1,613.70	-593.47	1,719.37	1,712.65	6.72	255.716	
1,100.00	1,099.99	1,186.38	1,186.31	3.71	4.02	-103.99	-1,609.45	-591.85	1,717.18	1,709.46	7.72	222.296	
1,200.00	1,199.91	1,367.28	1,366.72	4.06	4.67	-104.32	-1,597.21	-587.18	1,710.89	1,702.18	8.71	196.472	
1,266.67	1,266.45	1,487.05	1,485.73	4.30	5.11	-104.66	-1,584.72	-582.42	1,704.45	1,695.10	9.35	182.248	
1,300.00	1,299.70	1,540.70	1,538.90	4.42	5.31	-104.79	-1,578.01	-579.86	1,700.55	1,690.90	9.65	176.170	
1,400.00	1,399.46	1,639.71	1,636.95	4.78	5.68	-105.03	-1,565.13	-574.95	1,688.39	1,678.02	10.36	162.905	
1,500.00	1,499.22	1,738.72	1,734.99	5.14	6.06	-105.27	-1,552.26	-570.04	1,676.25	1,665.17	11.08	151.293	
1,600.00	1,598.97	1,837.73	1,833.03	5.50	6.44	-105.52	-1,539.38	-565.13	1,664.15	1,652.35	11.80	141.056	
1,700.00	1,698.73	1,936.73	1,931.08	5.86	6.83	-105.77	-1,526.51	-560.22	1,652.08	1,639.56	12.52	131.970	
1,800.00	1,798.48	2,035.74	2,029.12	6.23	7.22	-106.02	-1,513.63	-555.31	1,640.04	1,626.80	13.24	123.855	
1,900.00	1,898.24	2,134.75	2,127.16	6.60	7.61	-106.28	-1,500.76	-550.40	1,628.03	1,614.06	13.97	116.568	
2,000.00	1,998.00	2,233.76	2,225.21	6.96	8.00	-106.54	-1,487.88	-545.49	1,616.06	1,601.36	14.69	109.990	
2,100.00	2,097.75	2,332.76	2,323.25	7.33	8.40	-106.80	-1,475.01	-540.58	1,604.11	1,588.69	15.42	104.025	
2,200.00	2,197.51	2,431.77	2,421.30	7.70	8.80	-107.07	-1,462.13	-535.68	1,592.21	1,576.06	16.15	98.593	
2,300.00	2,297.27	2,530.78	2,519.34	8.07	9.19	-107.35	-1,449.26	-530.77	1,580.34	1,563.46	16.88	93.626	
2,400.00	2,397.02	2,629.78	2,617.38	8.44	9.59	-107.62	-1,436.38	-525.86	1,568.50	1,550.89	17.61	89.069	
2,500.00	2,496.78	2,728.79	2,715.43	8.81	10.00	-107.91	-1,423.51	-520.95	1,556.70	1,538.36	18.34	84.872	
2,600.00	2,596.54	2,827.80	2,813.47	9.18	10.40	-108.19	-1,410.63	-516.04	1,544.94	1,525.87	19.07	80.997	
2,700.00	2,696.29	2,944.73	2,929.23	9.55	10.87	-108.53	-1,395.19	-510.15	1,533.06	1,513.21	19.85	77.223	
2,800.00	2,796.05	3,108.42	3,090.47	9.92	11.57	-109.04	-1,368.89	-500.12	1,518.12	1,497.39	20.73	73.244	
2,850.00	2,845.92	3,189.37	3,169.72	10.11	11.93	-109.31	-1,353.51	-494.26	1,509.09	1,487.94	21.15	71.355	
2,900.00	2,895.78	3,261.92	3,240.45	10.29	12.25	-109.72	-1,338.41	-488.50	1,499.19	1,477.64	21.55	69.564	
3,000.00	2,895.32	3,359.31	3,335.24	10.67	12.70	-110.44	-1,317.55	-480.54	1,479.52	1,457.22	22.29	66.368	
3,100.00	3,094.57	3,456.56	3,429.90	11.06	13.15	-111.26	-1,296.73	-472.60	1,460.85	1,437.80	23.04	63.395	
3,116.66	3,111.08	3,472.74	3,445.66	11.12	13.23	-111.40	-1,293.26	-471.28	1,457.84	1,434.67	23.17	62.921	
3,200.00	3,193.60	3,553.68	3,524.44	11.45	13.61	-111.92	-1,275.93	-464.67	1,442.94	1,419.14	23.80	60.620	
3,300.00	3,292.63	3,650.80	3,618.97	11.85	14.06	-112.56	-1,255.13	-456.74	1,425.22	1,400.65	24.57	58.016	
3,400.00	3,391.65	3,747.92	3,713.51	12.25	14.52	-113.21	-1,234.33	-448.81	1,407.67	1,382.34	25.33	55.569	
3,500.00	3,490.68	3,845.03	3,808.04	12.65	14.98	-113.88	-1,213.53	-440.88	1,390.32	1,364.22	26.10	53.267	
3,600.00	3,589.71	3,942.15	3,902.57	13.05	15.44	-114.57	-1,192.73	-432.95	1,373.16	1,346.28	26.87	51.099	
3,700.00	3,688.73	4,039.27	3,997.11	13.45	15.91	-115.27	-1,171.93	-425.02	1,356.20	1,328.55	27.65	49.055	
3,800.00	3,787.76	4,136.39	4,091.64	13.85	16.37	-115.99	-1,151.13	-417.09	1,339.45	1,311.02	28.42	47.125	
3,900.00	3,886.79	4,233.51	4,186.17	14.26	16.84	-116.73	-1,130.33	-409.15	1,322.91	1,293.71	29.20	45.300	
4,000.00	3,985.82	4,330.63	4,280.71	14.66	17.30	-117.48	-1,109.53	-401.22	1,306.61	1,276.62	29.99	43.575	
4,100.00	4,084.84	4,427.75	4,375.24	15.07	17.77	-118.26	-1,088.74	-393.29	1,290.53	1,259.76	30.77	41.941	
4,200.00	4,183.87	4,524.87	4,469.78	15.47	18.24	-119.05	-1,067.94	-385.36	1,274.70	1,243.14	31.56	40.393	
4,300.00	4,282.90	4,621.99	4,564.31	15.88	18.71	-119.86	-1,047.14	-377.43	1,259.12	1,226.77	32.35	38.924	
4,400.00	4,381.92	4,710.69	4,650.67	16.29	19.14	-120.62	-1,028.23	-370.22	1,243.92	1,210.79	33.14	37.539	
4,500.00	4,480.95	4,785.01	4,723.29	16.70	19.49	-121.25	-1,013.45	-364.58	1,230.44	1,196.53	33.91	36.282	
4,600.00	4,579.98	4,859.84	4,796.70	17.10	19.83	-121.88	-999.90	-359.42	1,219.04	1,184.36	34.68	35.152	
4,700.00	4,679.00	4,935.12	4,870.82	17.51	20.17	-122.50	-987.63	-354.74	1,209.72	1,174.29	35.43	34.142	
4,753.24	4,731.73	4,975.37	4,910.56	17.73	20.34	-122.82	-981.63	-352.45	1,205.61	1,169.78	35.83	33.649	

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



Anticollision Report

Company: Matador Resources
 Project: Eddy County, New Mexico (NAD 27)
 Reference Site: Zach McCormick Federal 18-24S-29E RB
 Site Error: 0.00 usft
 Reference Well: #221H
 Well Error: 0.00 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
 TVD Reference: WELL @ 2981.93usft (Patterson 297)
 MD Reference: WELL @ 2981.93usft (Patterson 297)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Conroe DB
 Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #202H - Wellbore #1 - Design #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Distance						
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	Warning
4,800.00	4,778.07	5,010.82	4,945.61	17.92	20.50	-123.05	-976.67	-350.56	1,202.33	1,166.16	36.17	33.239	
4,900.00	4,877.41	5,087.04	5,021.12	18.32	20.81	-123.48	-967.04	-346.89	1,195.77	1,158.88	36.89	32.417	
5,000.00	4,977.02	5,163.71	5,097.28	18.70	21.11	-123.83	-958.77	-343.73	1,189.77	1,152.19	37.57	31.666	
5,100.00	5,076.83	5,240.76	5,173.98	19.07	21.41	-124.07	-951.90	-341.12	1,184.27	1,146.04	38.23	30.977	
5,200.00	5,176.76	5,318.10	5,251.10	19.43	21.69	-124.22	-946.47	-339.04	1,179.23	1,140.37	38.86	30.346	
5,286.58	5,263.33	5,385.23	5,318.12	19.72	21.93	179.80	-942.93	-337.69	1,175.23	1,135.85	39.38	29.845	
5,300.00	5,276.75	5,395.65	5,328.53	19.77	21.96	179.79	-942.48	-337.52	1,174.65	1,135.19	39.46	29.771	
5,400.00	5,376.75	5,473.33	5,406.17	20.10	22.22	179.75	-939.96	-336.56	1,171.41	1,131.38	40.03	29.264	
5,500.00	5,476.75	5,551.09	5,483.92	20.44	22.47	179.73	-938.91	-336.16	1,170.06	1,129.48	40.58	28.830	
5,542.02	5,518.78	5,588.52	5,521.35	20.58	22.58	179.73	-938.88	-336.15	1,170.02	1,129.18	40.84	28.647	
5,600.00	5,576.75	5,646.50	5,579.32	20.77	22.76	179.73	-938.88	-336.15	1,170.02	1,128.79	41.24	28.374	
5,700.00	5,676.75	5,746.50	5,679.32	21.11	23.07	179.73	-938.88	-336.15	1,170.02	1,128.11	41.91	27.915	
5,800.00	5,776.75	5,846.50	5,779.32	21.45	23.38	179.73	-938.88	-336.15	1,170.02	1,127.43	42.59	27.469	
5,900.00	5,876.75	5,946.50	5,879.32	21.78	23.69	179.73	-938.88	-336.15	1,170.02	1,126.75	43.28	27.036	
6,000.00	5,976.75	6,046.50	5,979.32	22.12	24.00	179.73	-938.88	-336.15	1,170.02	1,126.06	43.96	26.617	
6,100.00	6,076.75	6,146.50	6,079.32	22.46	24.32	179.73	-938.88	-336.15	1,170.02	1,125.38	44.64	26.209	
6,200.00	6,176.75	6,246.50	6,179.32	22.80	24.63	179.73	-938.88	-336.15	1,170.02	1,124.70	45.33	25.813	
6,300.00	6,276.75	6,346.50	6,279.32	23.14	24.95	179.73	-938.88	-336.15	1,170.02	1,124.01	46.01	25.428	
6,400.00	6,376.75	6,446.50	6,379.32	23.48	25.26	179.73	-938.88	-336.15	1,170.02	1,123.32	46.70	25.055	
6,500.00	6,476.75	6,546.50	6,479.32	23.83	25.58	179.73	-938.88	-336.15	1,170.02	1,122.64	47.39	24.691	
6,600.00	6,576.75	6,646.50	6,579.32	24.17	25.90	179.73	-938.88	-336.15	1,170.02	1,121.95	48.07	24.338	
6,700.00	6,676.75	6,746.50	6,679.32	24.51	26.22	179.73	-938.88	-336.15	1,170.02	1,121.26	48.76	23.994	
6,800.00	6,776.75	6,846.50	6,779.32	24.85	26.54	179.73	-938.88	-336.15	1,170.02	1,120.57	49.45	23.659	
6,900.00	6,876.75	6,946.50	6,879.32	25.20	26.87	179.73	-938.88	-336.15	1,170.02	1,119.88	50.14	23.333	
7,000.00	6,976.75	7,046.50	6,979.32	25.54	27.19	179.73	-938.88	-336.15	1,170.02	1,119.19	50.84	23.016	
7,100.00	7,076.75	7,146.50	7,079.32	25.88	27.51	179.73	-938.88	-336.15	1,170.02	1,118.49	51.53	22.706	
7,200.00	7,176.75	7,246.50	7,179.32	26.23	27.84	179.73	-938.88	-336.15	1,170.02	1,117.80	52.22	22.405	
7,300.00	7,276.75	7,346.50	7,279.32	26.57	28.16	179.73	-938.88	-336.15	1,170.02	1,117.11	52.91	22.112	
7,400.00	7,376.75	7,446.50	7,379.32	26.92	28.49	179.73	-938.88	-336.15	1,170.02	1,116.41	53.61	21.825	
7,500.00	7,476.75	7,546.50	7,479.32	27.27	28.82	179.73	-938.88	-336.15	1,170.02	1,115.72	54.30	21.546	
7,600.00	7,576.75	7,646.50	7,579.32	27.61	29.14	179.73	-938.88	-336.15	1,170.02	1,115.02	55.00	21.274	
7,700.00	7,676.75	7,746.50	7,679.32	27.96	29.47	179.73	-938.88	-336.15	1,170.02	1,114.33	55.69	21.008	
7,800.00	7,776.75	7,846.50	7,779.32	28.30	29.80	179.73	-938.88	-336.15	1,170.02	1,113.63	56.39	20.748	
7,900.00	7,876.75	7,946.50	7,879.32	28.65	30.13	179.73	-938.88	-336.15	1,170.02	1,112.94	57.09	20.495	
8,000.00	7,976.75	8,046.50	7,979.32	29.00	30.46	179.73	-938.88	-336.15	1,170.02	1,112.24	57.78	20.248	
8,100.00	8,076.75	8,146.50	8,079.32	29.35	30.79	179.73	-938.88	-336.15	1,170.02	1,111.54	58.48	20.006	
8,200.00	8,176.75	8,246.50	8,179.32	29.69	31.13	179.73	-938.88	-336.15	1,170.02	1,110.84	59.18	19.770	
8,300.00	8,276.75	8,346.50	8,279.32	30.04	31.46	179.73	-938.88	-336.15	1,170.02	1,110.14	59.88	19.540	
8,400.00	8,376.75	8,446.50	8,379.32	30.39	31.79	179.73	-938.88	-336.15	1,170.02	1,109.44	60.58	19.314	
8,500.00	8,476.75	8,546.50	8,479.32	30.74	32.13	179.73	-938.88	-336.15	1,170.02	1,108.75	61.28	19.094	
8,600.00	8,576.75	8,646.50	8,579.32	31.09	32.46	179.73	-938.88	-336.15	1,170.02	1,108.05	61.98	18.878	
8,700.00	8,676.75	8,746.50	8,679.32	31.44	32.79	179.73	-938.88	-336.15	1,170.02	1,107.34	62.68	18.667	
8,800.00	8,776.75	8,846.50	8,779.32	31.78	33.13	179.73	-938.88	-336.15	1,170.02	1,106.64	63.38	18.461	
8,900.00	8,876.75	8,946.50	8,879.32	32.13	33.46	179.73	-938.88	-336.15	1,170.02	1,105.94	64.08	18.259	
9,000.00	8,976.75	9,046.50	8,979.32	32.48	33.80	179.73	-938.88	-336.15	1,170.02	1,105.24	64.78	18.061	
9,100.00	9,076.75	9,146.50	9,079.32	32.83	34.14	179.73	-938.88	-336.15	1,170.02	1,104.54	65.48	17.867	
9,111.72	9,088.47	9,158.22	9,091.04	32.87	34.18	179.73	-938.88	-336.15	1,170.02	1,104.46	65.57	17.845 CC	
9,200.00	9,176.75	9,246.36	9,179.18	33.18	34.47	179.72	-938.88	-336.00	1,170.02	1,103.84	66.18	17.678	
9,300.00	9,276.75	9,343.92	9,276.06	33.53	34.81	179.21	-938.88	-325.53	1,170.13	1,103.25	66.88	17.496 ES	
9,400.00	9,376.75	9,435.45	9,364.11	33.88	35.14	178.00	-938.90	-300.90	1,170.84	1,103.27	67.57	17.329	
9,500.00	9,476.75	9,517.41	9,438.75	34.23	35.44	176.35	-938.91	-267.20	1,173.11	1,104.93	68.19	17.204	
9,600.00	9,576.75	9,588.45	9,498.98	34.58	35.72	174.53	-938.93	-229.63	1,178.16	1,109.47	68.69	17.153	

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



Anticollision Report

Company: Matador Resources
 Project: Eddy County, New Mexico (NAD 27)
 Reference Site: Zach McCormick Federal 18-24S-29E RB
 Site Error: 0.00 usft
 Reference Well: #221H
 Well Error: 0.00 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
 TVD Reference: WELL @ 2981.93usft (Patterson 297)
 MD Reference: WELL @ 2981.93usft (Patterson 297)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Conroe DB
 Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #202H - Wellbore #1 - Design #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,700.00	9,676.75	9,650.00	9,547.08	34.94	35.96	172.67	-938.94	-191.26	1,187.10	1,118.09	69.01	17.203	
9,800.00	9,776.75	9,700.00	9,582.94	35.29	36.17	171.00	-938.96	-156.44	1,200.84	1,131.78	69.06	17.389	
9,900.00	9,876.75	9,742.64	9,611.02	35.64	36.36	169.48	-938.97	-124.37	1,219.99	1,151.15	68.84	17.723	
9,994.49	9,971.24	9,777.00	9,631.87	35.97	36.53	168.19	-938.98	-97.06	1,243.36	1,175.00	68.37	18.186	
10,000.00	9,976.75	9,778.86	9,632.95	35.99	36.54	88.51	-938.98	-55.55	1,244.89	1,176.56	68.33	18.218	
10,050.00	10,026.67	9,800.00	9,644.89	36.15	36.64	86.22	-938.99	-78.11	1,259.43	1,191.38	68.05	18.508	
10,100.00	10,076.16	9,813.71	9,652.29	36.31	36.71	84.11	-939.00	-66.56	1,275.06	1,207.46	67.60	18.863	
10,150.00	10,124.85	9,831.86	9,661.65	36.45	36.81	81.79	-939.00	-51.02	1,291.55	1,224.37	67.18	19.224	
10,200.00	10,172.38	9,850.00	9,670.52	36.59	36.91	79.46	-939.01	-35.19	1,308.67	1,241.93	66.74	19.608	
10,250.00	10,218.37	9,869.24	9,679.37	36.72	37.02	77.11	-939.02	-18.11	1,326.19	1,259.88	66.31	19.999	
10,300.00	10,262.48	9,888.37	9,687.59	36.84	37.13	74.82	-939.02	-0.84	1,343.89	1,278.01	65.88	20.400	
10,350.00	10,304.38	9,900.00	9,692.31	36.95	37.20	72.74	-939.03	9.79	1,361.61	1,296.29	65.32	20.845	
10,400.00	10,343.74	9,927.32	9,702.53	37.05	37.38	70.46	-939.04	35.13	1,379.03	1,313.95	65.07	21.192	
10,450.00	10,380.26	9,950.00	9,710.09	37.16	37.53	68.41	-939.05	56.51	1,396.11	1,331.34	64.77	21.555	
10,500.00	10,413.68	9,966.97	9,715.19	37.27	37.64	66.57	-939.06	72.70	1,412.62	1,348.19	64.43	21.926	
10,550.00	10,443.72	9,987.00	9,720.59	37.39	37.79	64.84	-939.06	91.98	1,428.45	1,364.25	64.19	22.252	
10,600.00	10,470.17	10,000.00	9,723.73	37.53	37.88	63.31	-939.07	104.59	1,443.48	1,379.56	63.92	22.582	
10,650.00	10,492.82	10,033.42	9,730.49	37.70	38.14	61.81	-939.08	137.31	1,457.51	1,393.47	64.04	22.760	
10,700.00	10,511.51	10,050.00	9,733.23	37.89	38.27	60.58	-939.09	153.67	1,470.42	1,406.42	63.99	22.977	
10,750.00	10,526.08	10,078.43	9,737.26	38.11	38.51	59.50	-939.10	181.81	1,482.01	1,417.80	64.22	23.078	
10,794.49	10,535.49	10,100.00	9,739.76	38.33	38.69	58.71	-939.11	203.24	1,491.14	1,426.69	64.44	23.139	
10,800.00	10,536.44	10,100.00	9,739.76	38.36	38.69	58.66	-939.11	203.24	1,492.20	1,427.76	64.44	23.157	
10,850.00	10,543.54	10,131.70	9,742.55	38.63	38.97	58.24	-939.13	234.81	1,501.42	1,436.54	64.68	23.141	
10,900.00	10,548.04	10,150.00	9,743.69	38.92	39.14	57.84	-939.13	253.08	1,510.07	1,444.86	65.21	23.157	
10,950.00	10,549.94	10,184.96	9,744.88	39.25	39.47	57.55	-939.15	288.01	1,518.01	1,452.20	65.82	23.064	
10,961.15	10,550.00	10,190.90	9,744.96	39.32	39.52	57.48	-939.15	293.95	1,519.71	1,453.77	65.94	23.048	
11,000.00	10,550.00	10,221.39	9,745.00	39.59	39.83	57.68	-939.16	324.44	1,525.38	1,458.89	66.49	22.942	
11,100.00	10,550.00	10,320.43	9,745.00	40.39	40.89	58.14	-939.21	423.48	1,537.07	1,468.83	68.24	22.525	
11,200.00	10,550.00	10,420.05	9,745.00	41.31	42.06	58.43	-939.25	523.10	1,544.36	1,474.21	70.15	22.016	
11,300.00	10,550.00	10,519.98	9,745.00	42.34	43.34	58.54	-939.29	623.03	1,547.20	1,475.00	72.20	21.431	
11,313.54	10,550.00	10,533.52	9,745.00	42.49	43.53	58.54	-939.30	636.57	1,547.24	1,474.75	72.48	21.346	
11,400.00	10,550.00	10,619.98	9,745.00	43.47	44.73	58.54	-939.34	723.03	1,547.24	1,472.86	74.39	20.800	
11,500.00	10,550.00	10,719.98	9,745.00	44.71	46.19	58.54	-939.38	823.03	1,547.25	1,470.50	76.74	20.161	
11,600.00	10,550.00	10,819.98	9,745.00	46.03	47.74	58.54	-939.42	923.03	1,547.25	1,468.00	79.25	19.523	
11,700.00	10,550.00	10,919.98	9,745.00	47.45	49.36	58.54	-939.47	1,023.03	1,547.26	1,465.35	81.90	18.891	
11,800.00	10,550.00	11,019.98	9,745.00	48.94	51.05	58.54	-939.51	1,123.03	1,547.26	1,462.58	84.68	18.272	
11,900.00	10,550.00	11,119.98	9,745.00	50.50	52.79	58.54	-939.55	1,223.03	1,547.27	1,459.70	87.57	17.669	
12,000.00	10,550.00	11,219.98	9,745.00	52.13	54.58	58.54	-939.60	1,323.03	1,547.27	1,456.71	90.56	17.085	
12,100.00	10,550.00	11,319.98	9,745.00	53.82	56.42	58.54	-939.64	1,423.03	1,547.28	1,453.62	93.65	16.522	
12,200.00	10,550.00	11,419.98	9,745.00	55.56	58.31	58.54	-939.68	1,523.03	1,547.28	1,450.46	96.82	15.980	
12,300.00	10,550.00	11,519.98	9,745.00	57.35	60.23	58.54	-939.73	1,623.03	1,547.29	1,447.21	100.07	15.462	
12,400.00	10,550.00	11,619.98	9,745.00	59.19	62.19	58.54	-939.77	1,723.03	1,547.29	1,443.90	103.39	14.966	
12,500.00	10,550.00	11,719.98	9,745.00	61.07	64.18	58.54	-939.81	1,823.03	1,547.30	1,440.52	106.77	14.492	
12,600.00	10,550.00	11,819.98	9,745.00	62.98	66.20	58.54	-939.85	1,923.03	1,547.30	1,437.09	110.21	14.040	
12,700.00	10,550.00	11,919.98	9,745.00	64.93	68.25	58.54	-939.90	2,023.03	1,547.30	1,433.60	113.70	13.609	
12,800.00	10,550.00	12,019.98	9,745.00	66.91	70.32	58.54	-939.94	2,123.03	1,547.31	1,430.07	117.24	13.198	
12,900.00	10,550.00	12,119.98	9,745.00	68.92	72.41	58.54	-939.98	2,223.03	1,547.31	1,426.50	120.82	12.807	
13,000.00	10,550.00	12,219.98	9,745.00	70.96	74.53	58.54	-940.03	2,323.03	1,547.32	1,422.88	124.44	12.434	
13,100.00	10,550.00	12,319.98	9,745.00	73.01	76.66	58.54	-940.07	2,423.03	1,547.32	1,419.23	128.10	12.079	
13,200.00	10,550.00	12,419.98	9,745.00	75.09	78.81	58.54	-940.11	2,523.03	1,547.33	1,415.54	131.79	11.741	
13,300.00	10,550.00	12,519.98	9,745.00	77.19	80.97	58.54	-940.16	2,623.03	1,547.33	1,411.83	135.51	11.419	
13,400.00	10,550.00	12,619.98	9,745.00	79.31	83.15	58.54	-940.20	2,723.03	1,547.34	1,408.08	139.25	11.112	

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



Anticollision Report



Company: Matador Resources
 Project: Eddy County, New Mexico (NAD 27)
 Reference Site: Zach McCormick Federal 18-24S-29E RB
 Site Error: 0.00 usft
 Reference Well: #221H
 Well Error: 0.00 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
 TVD Reference: WELL @ 2981.93usft (Patterson 297)
 MD Reference: WELL @ 2981.93usft (Patterson 297)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Conroe DB
 Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #202H - Wellbore #1 - Design #1												Offset Site Error:	0 00 usft
Survey Program: 0-MWVD												Offset Well Error:	0 00 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	
13,500.00	10,550.00	12,719.98	9,745.00	81.45	85.34	58.54	-940.24	2,823.03	1,547.34	1,404.31	143.03	10.818	
13,600.00	10,550.00	12,819.98	9,745.00	83.60	87.54	58.54	-940.29	2,923.03	1,547.35	1,400.52	146.83	10.539	
13,700.00	10,550.00	12,919.98	9,745.00	85.76	89.76	58.54	-940.33	3,023.03	1,547.35	1,396.71	150.65	10.271	
13,800.00	10,550.00	13,019.98	9,745.00	87.94	91.99	58.54	-940.37	3,123.03	1,547.36	1,392.87	154.49	10.016	
13,900.00	10,550.00	13,119.98	9,745.00	90.13	94.22	58.54	-940.42	3,223.03	1,547.36	1,389.02	158.35	9.772	
14,000.00	10,550.00	13,219.98	9,745.00	92.34	96.47	58.54	-940.46	3,323.03	1,547.37	1,385.14	162.22	9.539	
14,100.00	10,550.00	13,319.98	9,745.00	94.55	98.72	58.54	-940.50	3,423.03	1,547.37	1,381.26	166.12	9.315	
14,200.00	10,550.00	13,419.98	9,745.00	96.78	100.98	58.54	-940.54	3,523.03	1,547.38	1,377.35	170.02	9.101	
14,300.00	10,550.00	13,519.98	9,745.00	99.01	103.25	58.54	-940.59	3,623.03	1,547.38	1,373.44	173.95	8.896	
14,400.00	10,550.00	13,619.98	9,745.00	101.25	105.53	58.54	-940.63	3,723.03	1,547.39	1,369.50	177.88	8.699	
14,500.00	10,550.00	13,719.98	9,745.00	103.50	107.81	58.54	-940.67	3,823.03	1,547.39	1,365.56	181.83	8.510	
14,600.00	10,550.00	13,819.98	9,745.00	105.76	110.10	58.54	-940.72	3,923.03	1,547.40	1,361.61	185.79	8.329	
14,700.00	10,550.00	13,919.98	9,745.00	108.03	112.39	58.54	-940.76	4,023.03	1,547.40	1,357.64	189.76	8.155	
14,800.00	10,550.00	14,019.98	9,745.00	110.30	114.69	58.54	-940.80	4,123.03	1,547.41	1,353.66	193.74	7.987	
14,900.00	10,550.00	14,119.98	9,745.00	112.58	116.99	58.54	-940.85	4,223.03	1,547.41	1,349.68	197.73	7.826	
15,000.00	10,550.00	14,219.98	9,745.00	114.86	119.30	58.54	-940.89	4,323.03	1,547.42	1,345.68	201.73	7.671	
15,100.00	10,550.00	14,319.98	9,745.00	117.15	121.62	58.54	-940.93	4,423.03	1,547.42	1,341.68	205.74	7.521	
15,200.00	10,550.00	14,419.98	9,745.00	119.45	123.93	58.54	-940.98	4,523.03	1,547.43	1,337.67	209.75	7.377	
15,300.00	10,550.00	14,519.98	9,745.00	121.75	126.26	58.54	-941.02	4,623.03	1,547.43	1,333.65	213.78	7.239	
15,400.00	10,550.00	14,619.98	9,745.00	124.05	128.58	58.54	-941.06	4,723.03	1,547.43	1,329.63	217.81	7.105	
15,431.68	10,550.00	14,651.66	9,745.00	124.78	129.32	58.54	-941.08	4,754.71	1,547.44	1,328.35	219.09	7.063 SF	



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #205H - Wellbore #1 - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Highside Toolface (°)	Distance				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)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)			
0.00	0.00	0.33	-0.33	0.00	0.00	135.04	-30.09	30.05	42.53					
100.00	100.00	100.33	99.67	0.13	0.13	135.04	-30.09	30.05	42.53	0.26	166.311			
200.00	200.00	200.33	199.67	0.49	0.49	135.04	-30.09	30.05	42.53	41.55	0.97	43.722		
300.00	300.00	300.33	299.67	0.84	0.85	135.04	-30.09	30.05	42.53	40.84	1.69	25.189		
400.00	400.00	400.33	399.67	1.20	1.20	135.04	-30.09	30.05	42.53	40.12	2.41	17.671		
500.00	500.00	500.33	499.67	1.56	1.56	135.04	-30.09	30.05	42.53	39.40	3.12	13.615		
600.00	600.00	600.33	599.67	1.92	1.92	135.04	-30.09	30.05	42.53	38.68	3.84	11.073		
700.00	700.00	700.33	699.67	2.28	2.28	135.04	-30.09	30.05	42.53	37.97	4.56	9.331		
800.00	800.00	800.33	799.67	2.64	2.64	135.04	-30.09	30.05	42.53	37.25	5.27	8.063		
900.00	900.00	900.33	899.67	3.00	3.00	135.04	-30.09	30.05	42.53	36.53	5.99	7.098		
1,000.00	1,000.00	999.67	999.67	3.35	3.35	135.04	-30.09	30.05	42.53	35.82	6.71	6.342 CC, ES		
1,100.00	1,099.99	1,099.86	1,099.85	3.71	3.70	-167.67	-30.82	28.97	43.57	36.17	7.41	5.884		
1,200.00	1,199.91	1,199.92	1,199.83	4.06	4.03	-163.95	-33.01	25.71	46.85	38.76	8.09	5.788 SF		
1,266.67	1,266.45	1,266.50	1,266.28	4.30	4.26	-160.61	-35.28	22.34	50.43	41.87	8.56	5.892		
1,300.00	1,299.70	1,300.27	1,299.43	4.42	4.38	-158.92	-36.58	20.42	52.54	43.74	8.79	5.975		
1,400.00	1,399.46	1,400.58	1,398.88	4.78	4.72	-154.59	-40.46	14.65	59.10	49.61	9.50	6.224		
1,500.00	1,499.22	1,500.88	1,498.34	5.14	5.08	-151.13	-44.35	8.88	65.94	55.73	10.20	6.461		
1,600.00	1,598.97	1,601.18	1,597.79	5.50	5.43	-148.34	-48.23	3.12	72.97	62.05	10.92	6.683		
1,700.00	1,698.73	1,701.49	1,697.24	5.86	5.79	-146.03	-52.12	-2.65	80.14	68.50	11.64	6.887		
1,800.00	1,798.48	1,798.21	1,796.69	6.23	6.14	-144.11	-56.00	-8.42	87.42	75.07	12.34	7.082		
1,900.00	1,898.24	1,902.10	1,896.15	6.60	6.51	-142.49	-59.89	-14.19	94.78	81.70	13.08	7.246		
2,000.00	1,998.00	2,002.40	1,995.60	6.96	6.88	-141.10	-63.77	-19.96	102.21	88.40	13.80	7.404		
2,100.00	2,097.75	2,102.71	2,095.05	7.33	7.24	-139.90	-67.66	-25.72	109.68	95.15	14.53	7.548		
2,200.00	2,197.51	2,203.01	2,194.50	7.70	7.61	-138.85	-71.54	-31.49	117.20	101.94	15.26	7.681		
2,300.00	2,297.27	2,303.32	2,293.96	8.07	7.98	-137.93	-75.43	-37.26	124.76	108.77	15.99	7.803		
2,400.00	2,397.02	2,403.62	2,393.41	8.44	8.35	-137.11	-79.31	-43.03	132.34	115.62	16.72	7.915		
2,500.00	2,496.78	2,503.93	2,492.86	8.81	8.72	-136.39	-83.20	-48.80	139.95	122.50	17.45	8.019		
2,600.00	2,596.54	2,604.23	2,592.32	9.18	9.09	-135.74	-87.08	-54.56	147.57	129.39	18.19	8.115		
2,700.00	2,696.29	2,704.54	2,691.77	9.55	9.46	-135.15	-90.97	-60.33	155.22	136.30	18.92	8.204		
2,800.00	2,796.05	2,804.84	2,791.22	9.92	9.83	-134.62	-94.85	-66.10	162.88	143.22	19.65	8.288		
2,850.00	2,845.02	2,845.00	2,840.94	10.11	9.98	-134.37	-96.80	-68.98	166.71	146.73	19.98	8.342		
2,900.00	2,895.78	2,894.17	2,889.97	10.29	10.16	-134.11	-98.81	-71.98	170.85	150.50	20.35	8.397		
3,000.00	2,995.32	2,991.78	2,987.17	10.67	10.53	-133.51	-103.84	-79.44	181.25	160.18	21.07	8.601		
3,100.00	3,094.57	3,088.90	3,083.61	11.06	10.91	-132.83	-110.22	-88.91	194.50	172.69	21.81	8.919		
3,116.66	3,111.08	3,105.03	3,099.60	11.12	10.97	-132.70	-111.41	-90.68	196.98	175.05	21.93	8.982		
3,200.00	3,193.60	3,186.95	3,180.73	11.45	11.29	-132.17	-117.76	-100.10	209.76	187.20	22.56	9.297		
3,300.00	3,292.63	3,285.74	3,278.55	11.85	11.69	-131.59	-125.44	-111.50	225.13	201.80	23.33	9.652		
3,400.00	3,391.65	3,384.52	3,376.38	12.25	12.08	-131.09	-133.12	-122.91	240.52	216.43	24.09	9.983		
3,500.00	3,490.68	3,483.31	3,474.21	12.65	12.48	-130.64	-140.80	-134.31	255.93	231.07	24.86	10.294		
3,600.00	3,589.71	3,582.10	3,572.03	13.05	12.88	-130.25	-148.48	-145.71	271.35	245.72	25.63	10.586		
3,700.00	3,688.73	3,680.89	3,669.86	13.45	13.28	-129.90	-156.16	-157.12	286.78	260.38	26.41	10.860		
3,800.00	3,787.76	3,779.67	3,767.68	13.85	13.68	-129.59	-163.84	-168.52	302.23	275.04	27.18	11.118		
3,900.00	3,886.79	3,878.46	3,865.51	14.26	14.08	-129.30	-171.52	-179.92	317.68	289.72	27.96	11.362		
4,000.00	3,985.82	3,977.25	3,963.34	14.66	14.48	-129.04	-179.20	-191.32	333.13	304.39	28.74	11.592		
4,100.00	4,084.84	4,076.04	4,061.16	15.07	14.88	-128.81	-186.88	-202.73	348.60	319.08	29.52	11.809		
4,200.00	4,183.87	4,174.82	4,158.99	15.47	15.29	-128.59	-194.56	-214.13	364.07	333.76	30.30	12.015		
4,300.00	4,282.90	4,273.61	4,256.82	15.88	15.69	-128.40	-202.24	-225.53	379.54	348.45	31.08	12.210		
4,400.00	4,381.92	4,372.40	4,354.64	16.29	16.10	-128.21	-209.92	-236.94	395.02	363.15	31.87	12.395		
4,500.00	4,480.95	4,471.19	4,452.47	16.70	16.50	-128.05	-217.60	-248.34	410.50	377.84	32.65	12.571		
4,600.00	4,579.98	4,569.97	4,550.29	17.10	16.91	-127.89	-225.29	-259.74	425.98	392.54	33.44	12.739		
4,700.00	4,679.00	4,668.76	4,648.12	17.51	17.32	-127.74	-232.97	-271.15	441.47	407.24	34.23	12.898		
4,753.24	4,731.73	4,721.36	4,700.21	17.73	17.54	-127.67	-237.06	-277.22	449.71	415.07	34.65	12.980		

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #205H - Wellbore #1 - Design #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 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	
4,800.00	4,778.07	4,767.57	4,745.97	17.92	17.73	-127.66	-240.65	-292.55	456.78	421.77	35.01	13.046	
4,900.00	4,877.41	4,866.55	4,843.98	18.32	18.14	-127.46	-248.34	-293.98	470.75	434.96	35.79	13.152	
5,000.00	4,977.02	4,965.64	4,942.11	18.70	18.55	-127.01	-256.05	-305.41	483.18	446.62	36.56	13.216	
5,100.00	5,076.83	5,070.09	5,045.65	19.07	18.97	-126.36	-263.73	-316.82	493.73	456.36	37.36	13.214	
5,200.00	5,176.76	5,177.00	5,151.97	19.43	19.40	-125.71	-270.00	-326.13	501.40	463.24	38.16	13.139	
5,286.58	5,263.33	5,269.95	5,244.62	19.72	19.75	178.92	-274.11	-332.22	505.66	466.83	38.82	13.024	
5,300.00	5,276.75	5,284.38	5,259.02	19.77	19.80	179.01	-274.63	-333.00	506.13	467.21	38.93	13.003	
5,400.00	5,376.75	5,392.11	5,366.62	20.10	20.19	179.51	-277.58	-337.38	508.82	469.16	39.67	12.827	
5,500.00	5,476.75	5,500.06	5,474.54	20.44	20.57	179.72	-278.93	-339.24	509.97	469.58	40.39	12.627	
5,600.00	5,576.75	5,601.94	5,576.42	20.77	20.89	179.73	-278.88	-339.31	510.02	468.96	41.06	12.421	
5,700.00	5,676.75	5,701.94	5,676.42	21.11	21.21	179.73	-278.88	-339.31	510.02	468.29	41.72	12.223	
5,800.00	5,776.75	5,801.94	5,776.42	21.45	21.53	179.73	-278.88	-339.31	510.02	467.62	42.39	12.031	
5,900.00	5,876.75	5,901.94	5,876.42	21.78	21.85	179.73	-278.88	-339.31	510.02	466.96	43.06	11.844	
6,000.00	5,976.75	6,001.94	5,976.42	22.12	22.17	179.73	-278.88	-339.31	510.02	466.29	43.73	11.663	
6,100.00	6,076.75	6,101.94	6,076.42	22.46	22.50	179.73	-278.88	-339.31	510.02	465.62	44.40	11.487	
6,200.00	6,176.75	6,201.94	6,176.42	22.80	22.82	179.73	-278.88	-339.31	510.02	464.94	45.07	11.315	
6,300.00	6,276.75	6,301.94	6,276.42	23.14	23.15	179.73	-278.88	-339.31	510.02	464.27	45.75	11.149	
6,400.00	6,376.75	6,401.94	6,376.42	23.48	23.47	179.73	-278.88	-339.31	510.02	463.59	46.42	10.987	
6,500.00	6,476.75	6,501.94	6,476.42	23.83	23.80	179.73	-278.88	-339.31	510.02	462.92	47.10	10.829	
6,600.00	6,576.75	6,601.94	6,576.42	24.17	24.13	179.73	-278.88	-339.31	510.02	462.24	47.78	10.675	
6,700.00	6,676.75	6,701.94	6,676.42	24.51	24.46	179.73	-278.88	-339.31	510.02	461.56	48.45	10.526	
6,800.00	6,776.75	6,801.94	6,776.42	24.85	24.78	179.73	-278.88	-339.31	510.02	460.88	49.13	10.380	
6,900.00	6,876.75	6,901.94	6,876.42	25.20	25.12	179.73	-278.88	-339.31	510.02	460.20	49.82	10.238	
7,000.00	6,976.75	7,001.94	6,976.42	25.54	25.45	179.73	-278.88	-339.31	510.02	459.52	50.50	10.100	
7,100.00	7,076.75	7,101.94	7,076.42	25.88	25.78	179.73	-278.88	-339.31	510.02	458.84	51.18	9.965	
7,200.00	7,176.75	7,201.94	7,176.42	26.23	26.11	179.73	-278.88	-339.31	510.02	458.15	51.86	9.834	
7,300.00	7,276.75	7,301.94	7,276.42	26.57	26.44	179.73	-278.88	-339.31	510.02	457.47	52.55	9.706	
7,400.00	7,376.75	7,401.94	7,376.42	26.92	26.78	179.73	-278.88	-339.31	510.02	456.78	53.23	9.581	
7,500.00	7,476.75	7,501.94	7,476.42	27.27	27.11	179.73	-278.88	-339.31	510.02	456.10	53.92	9.459	
7,600.00	7,576.75	7,601.94	7,576.42	27.61	27.45	179.73	-278.88	-339.31	510.02	455.41	54.61	9.340	
7,700.00	7,676.75	7,701.94	7,676.42	27.96	27.78	179.73	-278.88	-339.31	510.02	454.72	55.30	9.223	
7,800.00	7,776.75	7,801.94	7,776.42	28.30	28.12	179.73	-278.88	-339.31	510.02	454.03	55.98	9.110	
7,900.00	7,876.75	7,901.94	7,876.42	28.65	28.46	179.73	-278.88	-339.31	510.02	453.34	56.67	8.999	
8,000.00	7,976.75	8,001.94	7,976.42	29.00	28.79	179.73	-278.88	-339.31	510.02	452.65	57.36	8.891	
8,100.00	8,076.75	8,101.94	8,076.42	29.35	29.13	179.73	-278.88	-339.31	510.02	451.96	58.05	8.785	
8,200.00	8,176.75	8,201.94	8,176.42	29.69	29.47	179.73	-278.88	-339.31	510.02	451.27	58.75	8.682	
8,300.00	8,276.75	8,301.94	8,276.42	30.04	29.81	179.73	-278.88	-339.31	510.02	450.58	59.44	8.581	
8,400.00	8,376.75	8,401.94	8,376.42	30.39	30.15	179.73	-278.88	-339.31	510.02	449.89	60.13	8.482	
8,500.00	8,476.75	8,501.94	8,476.42	30.74	30.49	179.73	-278.88	-339.31	510.02	449.19	60.82	8.385	
8,600.00	8,576.75	8,601.94	8,576.42	31.09	30.83	179.73	-278.88	-339.31	510.02	448.50	61.52	8.291	
8,700.00	8,676.75	8,701.94	8,676.42	31.44	31.17	179.73	-278.88	-339.31	510.02	447.81	62.21	8.198	
8,800.00	8,776.75	8,801.94	8,776.42	31.78	31.51	179.73	-278.88	-339.31	510.02	447.11	62.90	8.108	
8,900.00	8,876.75	8,901.94	8,876.42	32.13	31.85	179.73	-278.88	-339.31	510.02	446.42	63.60	8.019	
9,000.00	8,976.75	9,001.94	8,976.42	32.48	32.19	179.73	-278.88	-339.31	510.02	445.72	64.30	7.932	
9,100.00	9,076.75	9,101.94	9,076.42	32.83	32.53	179.73	-278.88	-339.31	510.02	445.02	64.99	7.847	
9,112.96	9,089.71	9,114.90	9,089.38	32.88	32.58	179.73	-278.88	-339.31	510.02	444.93	65.08	7.837	
9,200.00	9,176.75	9,201.90	9,176.38	33.18	32.87	179.72	-278.88	-339.22	510.02	444.33	65.69	7.764	
9,300.00	9,276.75	9,300.13	9,273.96	33.53	33.18	178.58	-278.88	-329.09	510.18	443.83	66.34	7.690	
9,400.00	9,376.75	9,392.36	9,362.76	33.88	33.42	175.83	-278.90	-304.55	511.56	444.64	66.93	7.644	
9,500.00	9,476.75	9,474.95	9,438.04	34.23	33.62	172.07	-278.91	-270.74	516.39	449.07	67.32	7.671	
9,600.00	9,576.75	9,546.50	9,498.75	34.58	33.77	167.96	-278.93	-232.96	527.28	459.98	67.30	7.835	
9,700.00	9,676.75	9,607.28	9,546.28	34.94	33.88	163.96	-278.94	-195.13	546.45	479.81	66.64	8.200	

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



Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #205H - Wellbore #1 - Design #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Distance							
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	Warning
9,800.00	9,776.75	9,658.46	9,583.02	35.29	33.98	160.34	-278.96	-159.51	575.15	509.91	65.24	8.816	
9,900.00	9,876.75	9,700.00	9,610.40	35.64	34.07	157.29	-278.97	-128.29	613.62	550.47	63.15	9.717	
9,994.49	9,971.24	9,735.99	9,632.24	35.97	34.14	154.62	-278.98	-99.70	658.40	597.54	60.87	10.817	
10,000.00	9,976.75	9,737.85	9,633.32	35.99	34.15	74.71	-278.98	-98.18	661.24	600.52	60.72	10.890	
10,050.00	10,026.67	9,750.00	9,640.26	36.15	34.18	70.89	-278.99	-88.20	687.55	628.30	59.25	11.604	
10,100.00	10,076.16	9,772.80	9,652.69	36.31	34.23	66.51	-279.00	-69.09	714.37	656.23	58.14	12.288	
10,150.00	10,124.85	9,800.00	9,666.50	36.45	34.31	62.20	-279.01	-45.67	741.50	684.32	57.18	12.968	
10,200.00	10,172.38	9,800.00	9,666.50	36.59	34.31	59.42	-279.01	-45.67	768.36	712.97	55.40	13.870	
10,250.00	10,218.37	9,828.46	9,679.75	36.72	34.39	55.70	-279.02	-20.49	794.62	740.04	54.57	14.560	
10,300.00	10,262.48	9,850.00	9,688.94	36.84	34.46	52.62	-279.03	-1.00	820.26	766.67	53.59	15.305	
10,350.00	10,304.38	9,867.05	9,695.70	36.95	34.52	49.98	-279.03	14.65	844.92	792.36	52.56	16.074	
10,400.00	10,343.74	9,886.67	9,702.88	37.05	34.60	47.59	-279.04	32.91	868.44	816.74	51.70	16.798	
10,450.00	10,380.26	9,900.00	9,707.41	37.16	34.65	45.58	-279.05	45.45	890.69	839.90	50.79	17.536	
10,500.00	10,413.68	9,926.41	9,715.50	37.27	34.76	43.68	-279.06	70.58	911.37	861.06	50.31	18.115	
10,550.00	10,443.72	9,950.00	9,721.75	37.39	34.87	42.09	-279.07	93.33	930.53	880.66	49.87	18.659	
10,600.00	10,470.17	9,966.64	9,725.59	37.53	34.95	40.79	-279.07	109.52	947.98	898.55	49.44	19.176	
10,650.00	10,492.82	9,991.76	9,730.49	37.70	35.07	39.68	-279.08	134.15	963.70	914.42	49.29	19.554	
10,700.00	10,511.51	10,011.87	9,733.78	37.89	35.18	38.79	-279.09	153.99	977.44	928.23	49.21	19.864	
10,750.00	10,526.08	10,038.44	9,737.47	38.11	35.33	38.13	-279.10	180.31	989.00	939.63	49.36	20.035	
10,794.49	10,535.49	10,062.17	9,740.15	38.33	35.47	37.72	-279.11	203.88	997.39	947.77	49.63	20.098	
10,800.00	10,536.44	10,065.11	9,740.44	38.36	35.49	37.71	-279.12	206.81	998.32	948.65	49.66	20.101	
10,850.00	10,543.54	10,100.00	9,743.21	38.63	35.71	37.64	-279.13	241.58	1,006.24	956.09	50.15	20.064	
10,900.00	10,548.04	10,118.47	9,744.17	38.92	35.84	37.52	-279.14	260.03	1,013.12	962.52	50.60	20.021	
10,950.00	10,549.94	10,150.00	9,744.96	39.25	36.06	37.55	-279.15	291.55	1,019.16	967.92	51.24	19.890	
10,961.15	10,550.00	10,150.00	9,744.96	39.32	36.06	37.51	-279.15	291.55	1,020.35	969.00	51.36	19.868	
11,000.00	10,550.00	10,183.18	9,745.00	39.59	36.31	37.86	-279.17	324.73	1,024.47	972.53	51.94	19.724	
11,100.00	10,550.00	10,282.21	9,745.00	40.39	37.14	38.66	-279.21	423.76	1,033.04	979.54	53.50	19.309	
11,200.00	10,550.00	10,381.84	9,745.00	41.31	38.11	39.16	-279.25	523.38	1,038.43	983.37	55.06	18.859	
11,300.00	10,550.00	10,481.77	9,745.00	42.34	39.21	39.35	-279.30	623.32	1,040.54	983.93	56.61	18.380	
11,313.54	10,550.00	10,504.69	9,745.00	42.49	39.48	39.35	-279.30	636.85	1,040.57	983.68	56.89	18.290	
11,400.00	10,550.00	10,581.77	9,745.00	43.47	40.43	39.35	-279.34	723.32	1,040.57	982.37	58.20	17.880	
11,500.00	10,550.00	10,681.77	9,745.00	44.71	41.75	39.35	-279.38	823.32	1,040.58	980.65	59.92	17.365	
11,600.00	10,550.00	10,781.77	9,745.00	46.03	43.17	39.35	-279.42	923.32	1,040.58	978.80	61.78	16.845	
11,700.00	10,550.00	10,881.77	9,745.00	47.45	44.67	39.35	-279.47	1,023.32	1,040.58	976.84	63.74	16.324	
11,800.00	10,550.00	10,981.77	9,745.00	48.94	46.25	39.35	-279.51	1,123.32	1,040.59	974.77	65.82	15.810	
11,900.00	10,550.00	11,081.77	9,745.00	50.50	47.90	39.35	-279.55	1,223.32	1,040.59	972.60	67.99	15.305	
12,000.00	10,550.00	11,181.77	9,745.00	52.13	49.62	39.35	-279.60	1,323.32	1,040.59	970.34	70.25	14.812	
12,100.00	10,550.00	11,281.77	9,745.00	53.82	51.39	39.35	-279.64	1,423.32	1,040.60	968.01	72.59	14.335	
12,200.00	10,550.00	11,381.77	9,745.00	55.56	53.21	39.35	-279.68	1,523.32	1,040.60	965.60	75.00	13.874	
12,300.00	10,550.00	11,481.77	9,745.00	57.35	55.08	39.35	-279.73	1,623.32	1,040.60	963.12	77.48	13.431	
12,400.00	10,550.00	11,581.77	9,745.00	59.19	56.99	39.35	-279.77	1,723.32	1,040.61	960.59	80.02	13.005	
12,500.00	10,550.00	11,681.77	9,745.00	61.07	58.94	39.35	-279.81	1,823.32	1,040.61	958.00	82.61	12.597	
12,600.00	10,550.00	11,781.77	9,745.00	62.98	60.93	39.35	-279.86	1,923.32	1,040.62	955.37	85.25	12.207	
12,700.00	10,550.00	11,881.77	9,745.00	64.93	62.94	39.35	-279.90	2,023.32	1,040.62	952.69	87.93	11.835	
12,800.00	10,550.00	11,981.77	9,745.00	66.91	64.98	39.35	-279.94	2,123.32	1,040.62	949.97	90.65	11.479	
12,900.00	10,550.00	12,081.77	9,745.00	68.92	67.05	39.35	-279.99	2,223.32	1,040.63	947.21	93.42	11.140	
13,000.00	10,550.00	12,181.77	9,745.00	70.96	69.14	39.35	-280.03	2,323.32	1,040.63	944.42	96.21	10.816	
13,100.00	10,550.00	12,281.77	9,745.00	73.01	71.25	39.35	-280.07	2,423.32	1,040.63	941.60	99.04	10.508	
13,200.00	10,550.00	12,381.77	9,745.00	75.09	73.38	39.35	-280.12	2,523.32	1,040.64	938.75	101.89	10.213	
13,300.00	10,550.00	12,481.77	9,745.00	77.19	75.53	39.35	-280.16	2,623.32	1,040.64	935.87	104.77	9.932	
13,400.00	10,550.00	12,581.77	9,745.00	79.31	77.70	39.35	-280.20	2,723.32	1,040.64	932.97	107.68	9.665	
13,500.00	10,550.00	12,681.77	9,745.00	81.45	79.88	39.35	-280.24	2,823.32	1,040.65	930.04	110.60	9.409	

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



Anticollision Report

Company: Matador Resources
 Project: Eddy County, New Mexico (NAD 27)
 Reference Site: Zach McCormick Federal 18-24S-29E RB
 Site Error: 0.00 usft
 Reference Well: #221H
 Well Error: 0.00 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
 TVD Reference: WELL @ 2981.93usft (Patterson 297)
 MD Reference: WELL @ 2981.93usft (Patterson 297)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Conroe DB
 Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #205H - Wellbore #1 - Design #1												Offset Site Error:	0 00 usft
Survey Program: 0-MWVD												Offset Well Error:	0 00 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	
13,600.00	10,550.00	12,781.77	9,745.00	83.60	82.07	39.35	-280.29	2,923.32	1,040.65	927.10	113.55	9.165	
13,700.00	10,550.00	12,881.77	9,745.00	85.76	84.28	39.35	-280.33	3,023.32	1,040.65	924.14	116.52	8.931	
13,800.00	10,550.00	12,981.77	9,745.00	87.94	86.49	39.36	-280.37	3,123.32	1,040.66	921.16	119.50	8.708	
13,900.00	10,550.00	13,081.77	9,745.00	90.13	88.72	39.36	-280.42	3,223.32	1,040.66	918.16	122.50	8.495	
14,000.00	10,550.00	13,181.77	9,745.00	92.34	90.96	39.36	-280.46	3,323.32	1,040.67	915.15	125.52	8.291	
14,100.00	10,550.00	13,281.77	9,745.00	94.55	93.21	39.36	-280.50	3,423.32	1,040.67	912.12	128.54	8.096	
14,200.00	10,550.00	13,381.77	9,745.00	96.78	95.46	39.36	-280.55	3,523.32	1,040.67	909.09	131.59	7.909	
14,300.00	10,550.00	13,481.77	9,745.00	99.01	97.73	39.36	-280.59	3,623.32	1,040.68	906.04	134.64	7.729	
14,400.00	10,550.00	13,581.77	9,745.00	101.25	100.00	39.36	-280.63	3,723.32	1,040.68	902.97	137.71	7.557	
14,500.00	10,550.00	13,681.77	9,745.00	103.50	102.28	39.36	-280.68	3,823.32	1,040.68	899.90	140.78	7.392	
14,600.00	10,550.00	13,781.77	9,745.00	105.76	104.57	39.36	-280.72	3,923.32	1,040.69	896.82	143.87	7.234	
14,700.00	10,550.00	13,881.77	9,745.00	108.03	106.86	39.36	-280.76	4,023.32	1,040.69	893.73	146.96	7.081	
14,800.00	10,550.00	13,981.77	9,745.00	110.30	109.15	39.36	-280.81	4,123.32	1,040.69	890.63	150.07	6.935	
14,900.00	10,550.00	14,081.77	9,745.00	112.58	111.46	39.36	-280.85	4,223.32	1,040.70	887.52	153.18	6.794	
15,000.00	10,550.00	14,181.77	9,745.00	114.86	113.76	39.36	-280.89	4,323.32	1,040.70	884.40	156.30	6.658	
15,100.00	10,550.00	14,281.77	9,745.00	117.15	116.08	39.36	-280.93	4,423.32	1,040.70	881.28	159.42	6.528	
15,200.00	10,550.00	14,381.77	9,745.00	119.45	118.39	39.36	-280.98	4,523.32	1,040.71	878.15	162.56	6.402	
15,300.00	10,550.00	14,481.77	9,745.00	121.75	120.72	39.36	-281.02	4,623.32	1,040.71	875.01	165.70	6.281	
15,400.00	10,550.00	14,581.77	9,745.00	124.05	123.04	39.36	-281.06	4,723.32	1,040.72	871.87	168.85	6.164	
15,431.68	10,550.00	14,613.45	9,745.00	124.78	123.78	39.36	-281.08	4,755.00	1,040.72	870.87	169.84	6.128	



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #206H - Wellbore #1 - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD													Offset Well Error:	0.00 usft
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)						
0.00	0.00	1.14	1.14	0.00	0.00	-161.10	-1,733.59	-593.49	1,832.37					
100.00	100.00	101.14	101.14	0.13	0.13	-161.10	-1,733.59	-593.49	1,832.37	1,832.11	0.26	7,085.668		
200.00	200.00	201.14	201.14	0.49	0.49	-161.10	-1,733.59	-593.49	1,832.37	1,831.39	0.98	1,878.300		
300.00	300.00	301.14	301.14	0.84	0.85	-161.10	-1,733.59	-593.49	1,832.37	1,830.67	1.69	1,082.646		
400.00	400.00	401.14	401.14	1.20	1.21	-161.10	-1,733.59	-593.49	1,832.37	1,829.96	2.41	760.497		
500.00	500.00	501.14	501.14	1.56	1.57	-161.10	-1,733.59	-593.49	1,832.37	1,829.24	3.13	586.099		
600.00	600.00	601.14	601.14	1.92	1.92	-161.10	-1,733.59	-593.49	1,832.37	1,828.52	3.84	476.767		
700.00	700.00	701.14	701.14	2.28	2.28	-161.10	-1,733.59	-593.49	1,832.37	1,827.81	4.56	401.812		
800.00	800.00	801.14	801.14	2.64	2.64	-161.10	-1,733.59	-593.49	1,832.37	1,827.09	5.28	347.223		
900.00	900.00	901.14	901.14	3.00	3.00	-161.10	-1,733.59	-593.49	1,832.37	1,826.37	5.99	305.693		
1,000.00	1,000.00	1,001.74	1,001.74	3.35	3.36	-161.10	-1,733.59	-593.49	1,832.37	1,825.65	6.71	272.951		
1,100.00	1,099.99	1,154.62	1,154.58	3.71	3.90	-105.32	-1,732.15	-590.71	1,831.23	1,823.63	7.61	240.750		
1,200.00	1,199.91	1,307.08	1,292.64	4.06	4.44	-105.70	-1,728.47	-583.60	1,828.03	1,819.54	8.49	215.226		
1,266.67	1,266.45	1,359.17	1,358.73	4.30	4.63	-105.95	-1,726.35	-579.49	1,825.80	1,816.89	8.92	204.779		
1,300.00	1,299.70	1,407.74	1,391.74	4.42	4.80	-106.07	-1,725.29	-577.44	1,824.78	1,815.57	9.21	198.186		
1,400.00	1,399.46	1,508.46	1,490.78	4.78	5.16	-106.44	-1,722.11	-571.29	1,821.76	1,811.83	9.93	183.519		
1,500.00	1,499.22	1,609.18	1,589.82	5.14	5.53	-106.80	-1,718.93	-565.14	1,818.81	1,808.16	10.65	170.783		
1,600.00	1,598.97	1,709.90	1,688.85	5.50	5.89	-107.16	-1,715.75	-558.99	1,815.94	1,804.56	11.38	159.632		
1,700.00	1,698.73	1,789.38	1,787.89	5.86	6.18	-107.53	-1,712.57	-552.84	1,813.14	1,801.11	12.03	150.752		
1,800.00	1,798.48	1,888.66	1,886.93	6.23	6.54	-107.89	-1,709.39	-546.69	1,810.42	1,797.66	12.75	141.967		
1,900.00	1,898.24	1,987.94	1,985.97	6.60	6.91	-108.26	-1,706.20	-540.53	1,807.77	1,794.29	13.48	134.115		
2,000.00	1,998.00	2,087.22	2,085.01	6.96	7.27	-108.63	-1,703.02	-534.38	1,805.19	1,790.99	14.21	127.060		
2,100.00	2,097.75	2,186.51	2,184.05	7.33	7.64	-109.00	-1,699.84	-528.23	1,802.70	1,787.76	14.94	120.687		
2,200.00	2,197.51	2,285.79	2,283.09	7.70	8.00	-109.37	-1,696.66	-522.08	1,800.27	1,784.61	15.67	114.904		
2,300.00	2,297.27	2,385.07	2,382.13	8.07	8.37	-109.74	-1,693.48	-515.93	1,797.93	1,781.53	16.40	109.636		
2,400.00	2,397.02	2,484.35	2,481.16	8.44	8.74	-110.11	-1,690.30	-509.78	1,795.66	1,778.53	17.13	104.816		
2,500.00	2,496.78	2,583.63	2,580.20	8.81	9.10	-110.49	-1,687.12	-503.62	1,793.47	1,775.61	17.86	100.392		
2,600.00	2,596.54	2,682.91	2,679.24	9.18	9.47	-110.86	-1,683.94	-497.47	1,791.36	1,772.76	18.60	96.317		
2,700.00	2,696.29	2,782.19	2,778.28	9.55	9.84	-111.24	-1,680.75	-491.32	1,789.32	1,769.99	19.33	92.553		
2,800.00	2,796.05	2,885.00	2,890.80	9.92	10.26	-111.67	-1,677.02	-484.10	1,787.24	1,767.13	20.11	88.855		
2,850.00	2,845.92	2,965.73	2,961.23	10.11	10.52	-111.97	-1,674.07	-478.40	1,785.63	1,765.07	20.55	86.872		
2,900.00	2,895.78	3,036.06	3,031.14	10.29	10.79	-112.35	-1,670.55	-471.58	1,783.58	1,762.58	20.99	84.955		
3,000.00	2,995.32	3,157.95	3,151.96	10.67	11.27	-113.16	-1,663.14	-457.26	1,778.85	1,757.02	21.82	81.516		
3,100.00	3,094.57	3,255.42	3,248.48	11.06	11.65	-113.91	-1,656.91	-445.21	1,775.01	1,752.42	22.58	78.593		
3,116.66	3,111.08	3,271.61	3,264.52	11.12	11.72	-114.04	-1,655.87	-443.21	1,774.50	1,751.78	22.71	78.128		
3,200.00	3,193.60	3,352.56	3,344.68	11.45	12.04	-114.65	-1,650.70	-433.20	1,772.15	1,748.80	23.35	75.882		
3,300.00	3,292.63	3,449.70	3,440.87	11.85	12.42	-115.40	-1,644.49	-421.20	1,769.63	1,745.50	24.13	73.349		
3,400.00	3,391.65	3,546.84	3,537.06	12.25	12.81	-116.14	-1,638.28	-409.19	1,767.41	1,742.51	24.90	70.978		
3,500.00	3,490.68	3,643.97	3,633.25	12.65	13.20	-116.89	-1,632.07	-397.18	1,765.52	1,739.84	25.68	68.757		
3,600.00	3,589.71	3,741.11	3,729.44	13.05	13.59	-117.64	-1,625.86	-385.17	1,763.95	1,737.49	26.46	66.673		
3,700.00	3,688.73	3,838.25	3,825.64	13.45	13.98	-118.39	-1,619.65	-373.16	1,762.69	1,735.45	27.24	64.716		
3,800.00	3,787.76	3,927.51	3,914.05	13.85	14.34	-119.07	-1,614.00	-362.24	1,761.84	1,733.85	27.99	62.942		
3,825.12	3,812.64	3,947.08	3,933.46	13.95	14.42	-119.22	-1,612.85	-360.01	1,761.80	1,733.63	28.17	62.539 CC		
3,900.00	3,886.79	4,005.66	3,991.62	14.26	14.65	-119.64	-1,609.66	-353.85	1,762.18	1,733.47	28.70	61.390 ES		
4,000.00	3,985.82	4,084.38	4,069.94	14.66	14.96	-120.16	-1,606.03	-346.83	1,763.84	1,734.43	29.41	59.976		
4,100.00	4,084.84	4,163.62	4,148.93	15.07	15.25	-120.64	-1,603.12	-341.21	1,766.78	1,736.67	30.11	58.687		
4,200.00	4,183.87	4,243.32	4,228.49	15.47	15.55	-121.08	-1,600.96	-337.02	1,770.94	1,740.15	30.79	57.510		
4,300.00	4,282.90	4,323.41	4,308.52	15.88	15.84	-121.48	-1,599.56	-334.31	1,776.30	1,744.83	31.47	56.438		
4,400.00	4,381.92	4,403.81	4,388.91	16.29	16.12	-121.82	-1,598.92	-333.08	1,782.80	1,750.65	32.15	55.461		
4,500.00	4,480.95	4,503.01	4,482.09	16.70	16.45	-122.18	-1,598.88	-333.00	1,790.17	1,757.30	32.88	54.450		
4,600.00	4,579.98	4,603.98	4,581.12	17.10	16.80	-122.55	-1,598.88	-333.00	1,797.68	1,764.06	33.62	53.472		
4,700.00	4,679.00	4,704.95	4,680.14	17.51	17.14	-122.92	-1,598.88	-333.00	1,805.25	1,770.89	34.36	52.537		

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #206H - Wellbore #1 - Design #1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD												Offset Well Error:	0.00 usft
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	Warning
4,753.24	4,731.73	4,747.77	4,732.87	17.73	17.29	-123.12	-1,598.88	-333.00	1,809.32	1,774.60	34.72	52.113	
4,800.00	4,778.07	4,805.89	4,779.21	17.92	17.48	-123.32	-1,598.88	-333.00	1,812.75	1,777.65	35.10	51.641	
4,900.00	4,877.41	4,906.54	4,878.55	18.32	17.83	-123.70	-1,598.88	-333.00	1,819.08	1,783.24	35.83	50.763	
5,000.00	4,977.02	5,006.93	4,978.16	18.70	18.17	-123.99	-1,598.88	-333.00	1,823.99	1,787.43	36.56	49.896	
5,100.00	5,076.83	5,107.13	5,077.97	19.07	18.52	-124.20	-1,598.88	-333.00	1,827.46	1,790.20	37.27	49.037	
5,200.00	5,176.76	5,207.20	5,177.90	19.43	18.86	-124.31	-1,598.88	-333.00	1,829.48	1,791.51	37.97	48.186	
5,286.58	5,263.33	5,279.37	5,264.47	19.72	19.11	179.73	-1,598.88	-333.00	1,830.03	1,791.52	38.51	47.515	
5,300.00	5,276.75	5,307.20	5,277.89	19.77	19.20	179.73	-1,598.88	-333.00	1,830.03	1,791.37	38.66	47.341	
5,400.00	5,376.75	5,407.20	5,377.89	20.10	19.55	179.73	-1,598.88	-333.00	1,830.03	1,790.69	39.34	46.518	
5,500.00	5,476.75	5,507.20	5,477.89	20.44	19.89	179.73	-1,598.88	-333.00	1,830.03	1,790.00	40.03	45.721	
5,600.00	5,576.75	5,607.20	5,577.89	20.77	20.24	179.73	-1,598.88	-333.00	1,830.03	1,789.32	40.71	44.950	
5,700.00	5,676.75	5,707.20	5,677.89	21.11	20.59	179.73	-1,598.88	-333.00	1,830.03	1,788.63	41.40	44.203	
5,800.00	5,776.75	5,807.20	5,777.89	21.45	20.93	179.73	-1,598.88	-333.00	1,830.03	1,787.94	42.09	43.479	
5,900.00	5,876.75	5,907.20	5,877.89	21.78	21.28	179.73	-1,598.88	-333.00	1,830.03	1,787.25	42.78	42.778	
6,000.00	5,976.75	6,007.20	5,977.89	22.12	21.63	179.73	-1,598.88	-333.00	1,830.03	1,786.56	43.47	42.099	
6,100.00	6,076.75	6,107.20	6,077.89	22.46	21.97	179.73	-1,598.88	-333.00	1,830.03	1,785.87	44.16	41.440	
6,200.00	6,176.75	6,207.20	6,177.89	22.80	22.32	179.73	-1,598.88	-333.00	1,830.03	1,785.18	44.85	40.800	
6,300.00	6,276.75	6,307.20	6,277.89	23.14	22.67	179.73	-1,598.88	-333.00	1,830.03	1,784.48	45.55	40.180	
6,400.00	6,376.75	6,407.20	6,377.89	23.48	23.02	179.73	-1,598.88	-333.00	1,830.03	1,783.79	46.24	39.577	
6,500.00	6,476.75	6,507.20	6,477.89	23.83	23.37	179.73	-1,598.88	-333.00	1,830.03	1,783.10	46.93	38.991	
6,600.00	6,576.75	6,607.20	6,577.89	24.17	23.72	179.73	-1,598.88	-333.00	1,830.03	1,782.40	47.63	38.422	
6,700.00	6,676.75	6,707.20	6,677.89	24.51	24.07	179.73	-1,598.88	-333.00	1,830.03	1,781.71	48.33	37.869	
6,800.00	6,776.75	6,807.20	6,777.89	24.85	24.42	179.73	-1,598.88	-333.00	1,830.03	1,781.01	49.02	37.331	
6,900.00	6,876.75	6,907.20	6,877.89	25.20	24.77	179.73	-1,598.88	-333.00	1,830.03	1,780.31	49.72	36.808	
7,000.00	6,976.75	7,007.20	6,977.89	25.54	25.12	179.73	-1,598.88	-333.00	1,830.03	1,779.62	50.42	36.299	
7,100.00	7,076.75	7,107.20	7,077.89	25.88	25.47	179.73	-1,598.88	-333.00	1,830.03	1,778.92	51.11	35.803	
7,200.00	7,176.75	7,207.20	7,177.89	26.23	25.82	179.73	-1,598.88	-333.00	1,830.03	1,778.22	51.81	35.320	
7,300.00	7,276.75	7,307.20	7,277.89	26.57	26.17	179.73	-1,598.88	-333.00	1,830.03	1,777.52	52.51	34.850	
7,400.00	7,376.75	7,407.20	7,377.89	26.92	26.52	179.73	-1,598.88	-333.00	1,830.03	1,776.82	53.21	34.392	
7,500.00	7,476.75	7,507.20	7,477.89	27.27	26.87	179.73	-1,598.88	-333.00	1,830.03	1,776.12	53.91	33.946	
7,600.00	7,576.75	7,607.20	7,577.89	27.61	27.22	179.73	-1,598.88	-333.00	1,830.03	1,775.42	54.61	33.510	
7,700.00	7,676.75	7,707.20	7,677.89	27.96	27.57	179.73	-1,598.88	-333.00	1,830.03	1,774.72	55.31	33.086	
7,800.00	7,776.75	7,807.20	7,777.89	28.30	27.93	179.73	-1,598.88	-333.00	1,830.03	1,774.02	56.01	32.672	
7,900.00	7,876.75	7,907.20	7,877.89	28.65	28.28	179.73	-1,598.88	-333.00	1,830.03	1,773.32	56.71	32.267	
8,000.00	7,976.75	8,007.20	7,977.89	29.00	28.63	179.73	-1,598.88	-333.00	1,830.03	1,772.61	57.42	31.873	
8,100.00	8,076.75	8,107.20	8,077.89	29.35	28.98	179.73	-1,598.88	-333.00	1,830.03	1,771.91	58.12	31.488	
8,200.00	8,176.75	8,207.20	8,177.89	29.69	29.33	179.73	-1,598.88	-333.00	1,830.03	1,771.21	58.82	31.112	
8,300.00	8,276.75	8,307.20	8,277.89	30.04	29.69	179.73	-1,598.88	-333.00	1,830.03	1,770.51	59.52	30.744	
8,400.00	8,376.75	8,407.20	8,377.89	30.39	30.04	179.73	-1,598.88	-333.00	1,830.03	1,769.80	60.23	30.385	
8,500.00	8,476.75	8,507.20	8,477.89	30.74	30.39	179.73	-1,598.88	-333.00	1,830.03	1,769.10	60.93	30.034	
8,600.00	8,576.75	8,607.20	8,577.89	31.09	30.75	179.73	-1,598.88	-333.00	1,830.03	1,768.40	61.64	29.691	
8,700.00	8,676.75	8,707.20	8,677.89	31.44	31.10	179.73	-1,598.88	-333.00	1,830.03	1,767.69	62.34	29.356	
8,800.00	8,776.75	8,807.20	8,777.89	31.78	31.45	179.73	-1,598.88	-333.00	1,830.03	1,766.99	63.04	29.028	
8,900.00	8,876.75	8,907.20	8,877.89	32.13	31.81	179.73	-1,598.88	-333.00	1,830.03	1,766.28	63.75	28.707	
9,000.00	8,976.75	9,007.20	8,977.89	32.48	32.16	179.73	-1,598.88	-333.00	1,830.03	1,765.58	64.45	28.393	
9,100.00	9,076.75	9,107.20	9,077.89	32.83	32.51	179.73	-1,598.88	-333.00	1,830.03	1,764.87	65.16	28.085	
9,112.30	9,089.05	9,105.10	9,090.19	32.88	32.51	179.73	-1,598.88	-333.00	1,830.03	1,764.84	65.20	28.070	
9,200.00	9,176.75	9,192.61	9,177.70	33.18	32.82	179.72	-1,598.88	-332.89	1,830.03	1,764.22	65.81	27.806	
9,300.00	9,276.75	9,289.66	9,274.10	33.53	33.17	179.41	-1,598.88	-322.76	1,830.12	1,763.60	66.52	27.514	
9,400.00	9,376.75	9,380.84	9,361.91	33.88	33.53	178.65	-1,598.89	-298.55	1,830.60	1,763.39	67.22	27.234	
9,500.00	9,476.75	9,462.63	9,436.54	34.23	33.88	177.61	-1,598.91	-265.23	1,832.10	1,764.22	67.88	26.990	
9,600.00	9,576.75	9,533.64	9,496.92	34.58	34.20	176.44	-1,598.93	-227.95	1,835.38	1,766.90	68.48	26.801	

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #206H - Wellbore #1 - Design #1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD												Offset Well Error:	0.00 usft
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	Warning
9,700.00	9,676.75	9,594.10	9,544.36	34.94	34.49	175.28	-1,598.94	-190.51	1,841.16	1,772.17	68.99	26.689	
9,800.00	9,776.75	9,645.14	9,581.15	35.29	34.76	174.18	-1,598.96	-155.17	1,850.06	1,780.69	69.37	26.669	
9,900.00	9,876.75	9,688.14	9,609.62	35.64	34.99	173.18	-1,598.97	-122.94	1,862.56	1,792.94	69.62	26.754	
9,994.49	9,971.24	9,722.64	9,630.65	35.97	35.20	172.34	-1,598.98	-95.61	1,877.94	1,808.23	69.71	26.938	
10,000.00	9,976.75	9,724.50	9,631.74	35.99	35.21	92.74	-1,598.98	-94.09	1,878.95	1,809.24	69.71	26.952	
10,050.00	10,026.67	9,750.00	9,646.14	36.15	35.36	91.13	-1,598.99	-73.06	1,888.81	1,819.02	69.79	27.066	
10,100.00	10,076.16	9,759.49	9,651.26	36.31	35.42	89.80	-1,599.00	-65.07	1,899.67	1,829.99	69.67	27.265	
10,150.00	10,124.85	9,777.68	9,660.70	36.45	35.54	88.19	-1,599.00	-49.51	1,911.47	1,841.84	69.63	27.452	
10,200.00	10,172.38	9,800.00	9,671.59	36.59	35.69	86.45	-1,599.01	-30.04	1,924.04	1,854.43	69.61	27.642	
10,250.00	10,218.37	9,815.16	9,678.56	36.72	35.79	84.81	-1,599.02	-16.58	1,937.18	1,867.68	69.50	27.873	
10,300.00	10,262.48	9,834.33	9,686.86	36.84	35.93	83.08	-1,599.02	0.71	1,950.76	1,881.33	69.43	28.097	
10,350.00	10,304.38	9,850.00	9,693.20	36.95	36.04	81.40	-1,599.03	15.03	1,964.63	1,895.31	69.32	28.341	
10,400.00	10,343.74	9,873.36	9,701.93	37.05	36.22	79.64	-1,599.04	36.70	1,978.61	1,909.29	69.32	28.545	
10,450.00	10,380.26	9,900.00	9,710.80	37.16	36.42	77.90	-1,599.05	61.82	1,992.60	1,923.24	69.36	28.729	
10,500.00	10,413.68	9,913.08	9,714.72	37.27	36.52	76.37	-1,599.06	74.29	2,006.38	1,937.09	69.28	28.959	
10,550.00	10,443.72	9,933.13	9,720.19	37.39	36.69	74.83	-1,599.06	93.58	2,019.90	1,950.57	69.32	29.138	
10,600.00	10,470.17	9,950.00	9,724.25	37.53	36.82	73.40	-1,599.07	109.96	2,033.01	1,963.64	69.36	29.309	
10,650.00	10,492.82	9,981.14	9,730.49	37.70	37.09	71.99	-1,599.08	140.46	2,045.61	1,976.00	69.61	29.386	
10,700.00	10,511.51	10,000.00	9,733.58	37.89	37.25	70.77	-1,599.09	159.07	2,057.51	1,987.72	69.79	29.483	
10,750.00	10,526.08	10,024.20	9,737.01	38.11	37.48	69.65	-1,599.10	183.03	2,068.57	1,998.49	70.08	29.517	
10,794.49	10,535.49	10,050.00	9,740.00	38.33	37.71	68.77	-1,599.11	208.65	2,077.61	2,007.17	70.44	29.496	
10,800.00	10,536.44	10,050.00	9,740.00	38.36	37.71	68.71	-1,599.11	208.65	2,078.68	2,008.23	70.45	29.505	
10,850.00	10,543.54	10,077.51	9,742.41	38.63	37.98	68.19	-1,599.13	236.05	2,088.15	2,017.24	70.90	29.450	
10,900.00	10,548.04	10,100.00	9,743.80	38.92	38.19	67.70	-1,599.14	258.50	2,097.20	2,025.85	71.35	29.395	
10,950.00	10,549.94	10,130.81	9,744.85	39.25	38.51	67.27	-1,599.15	289.29	2,105.78	2,033.85	71.93	29.276	
10,961.15	10,550.00	10,136.76	9,744.94	39.32	38.57	67.18	-1,599.15	295.23	2,107.64	2,035.58	72.05	29.251	
11,000.00	10,550.00	10,165.68	9,745.00	39.59	38.87	67.31	-1,599.16	324.16	2,113.82	2,041.23	72.59	29.119	
11,100.00	10,550.00	10,264.72	9,745.00	40.39	39.98	67.60	-1,599.21	423.19	2,126.55	2,052.16	74.39	28.587	
11,200.00	10,550.00	10,364.34	9,745.00	41.31	41.20	67.77	-1,599.25	522.82	2,134.47	2,058.08	76.39	27.943	
11,300.00	10,550.00	10,464.27	9,745.00	42.34	42.53	67.84	-1,599.29	622.75	2,137.55	2,058.97	78.58	27.203	
11,313.54	10,550.00	10,477.81	9,745.00	42.49	42.71	67.84	-1,599.30	636.28	2,137.60	2,058.71	78.89	27.098	
11,400.00	10,550.00	10,564.27	9,745.00	43.47	43.95	67.84	-1,599.34	722.75	2,137.60	2,056.65	80.95	26.407	
11,500.00	10,550.00	10,664.27	9,745.00	44.71	45.45	67.84	-1,599.38	822.75	2,137.61	2,054.11	83.50	25.601	
11,600.00	10,550.00	10,764.27	9,745.00	46.03	47.04	67.84	-1,599.42	922.75	2,137.61	2,051.40	86.21	24.796	
11,700.00	10,550.00	10,864.27	9,745.00	47.45	48.69	67.84	-1,599.46	1,022.75	2,137.62	2,048.55	89.07	24.000	
11,800.00	10,550.00	10,964.27	9,745.00	48.94	50.40	67.84	-1,599.51	1,122.75	2,137.62	2,045.56	92.06	23.220	
11,900.00	10,550.00	11,064.27	9,745.00	50.50	52.17	67.84	-1,599.55	1,222.75	2,137.63	2,042.46	95.17	22.461	
12,000.00	10,550.00	11,164.27	9,745.00	52.13	54.00	67.84	-1,599.59	1,322.75	2,137.63	2,039.24	98.39	21.725	
12,100.00	10,550.00	11,264.27	9,745.00	53.82	55.86	67.84	-1,599.64	1,422.75	2,137.64	2,035.92	101.71	21.016	
12,200.00	10,550.00	11,364.27	9,745.00	55.56	57.77	67.84	-1,599.68	1,522.75	2,137.64	2,032.52	105.13	20.334	
12,300.00	10,550.00	11,464.27	9,745.00	57.35	59.72	67.84	-1,599.72	1,622.75	2,137.65	2,029.03	108.62	19.680	
12,400.00	10,550.00	11,564.27	9,745.00	59.19	61.70	67.84	-1,599.77	1,722.75	2,137.65	2,025.47	112.19	19.054	
12,500.00	10,550.00	11,664.27	9,745.00	61.07	63.71	67.85	-1,599.81	1,822.75	2,137.66	2,021.84	115.82	18.457	
12,600.00	10,550.00	11,764.27	9,745.00	62.98	65.75	67.85	-1,599.85	1,922.75	2,137.66	2,018.15	119.52	17.886	
12,700.00	10,550.00	11,864.27	9,745.00	64.93	67.81	67.85	-1,599.90	2,022.75	2,137.67	2,014.40	123.27	17.342	
12,800.00	10,550.00	11,964.27	9,745.00	66.91	69.90	67.85	-1,599.94	2,122.75	2,137.67	2,010.61	127.07	16.823	
12,900.00	10,550.00	12,064.27	9,745.00	68.92	72.01	67.85	-1,599.98	2,222.75	2,137.68	2,006.76	130.92	16.329	
13,000.00	10,550.00	12,164.27	9,745.00	70.96	74.14	67.85	-1,600.03	2,322.75	2,137.68	2,002.88	134.80	15.858	
13,100.00	10,550.00	12,264.27	9,745.00	73.01	76.28	67.85	-1,600.07	2,422.75	2,137.69	1,998.96	138.73	15.409	
13,200.00	10,550.00	12,364.27	9,745.00	75.09	78.44	67.85	-1,600.11	2,522.75	2,137.70	1,995.00	142.70	14.981	
13,300.00	10,550.00	12,464.27	9,745.00	77.19	80.62	67.85	-1,600.15	2,622.75	2,137.70	1,991.01	146.69	14.573	
13,400.00	10,550.00	12,564.27	9,745.00	79.31	82.81	67.85	-1,600.20	2,722.75	2,137.71	1,986.99	150.72	14.183	

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #206H - Wellbore #1 - Design #1													Offset Site Error:	0 00 usft
Survey Program: 0-MWD													Offset Well Error:	0 00 usft
Reference		Offset		Semi Major Axis			Distance							
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	Warning	
13,500.00	10,550.00	12,664.27	9,745.00	81.45	85.02	67.85	-1,600.24	2,822.75	2,137.71	1,982.94	154.77	13.812		
13,600.00	10,550.00	12,764.27	9,745.00	83.60	87.23	67.85	-1,600.28	2,922.75	2,137.72	1,978.86	158.85	13.457		
13,700.00	10,550.00	12,864.27	9,745.00	85.76	89.46	67.85	-1,600.33	3,022.75	2,137.72	1,974.76	162.96	13.118		
13,800.00	10,550.00	12,964.27	9,745.00	87.94	91.69	67.85	-1,600.37	3,122.75	2,137.73	1,970.65	167.08	12.795		
13,900.00	10,550.00	13,064.27	9,745.00	90.13	93.94	67.85	-1,600.41	3,222.75	2,137.73	1,966.50	171.23	12.485		
14,000.00	10,550.00	13,164.27	9,745.00	92.34	96.19	67.85	-1,600.46	3,322.75	2,137.74	1,962.35	175.39	12.188		
14,100.00	10,550.00	13,264.27	9,745.00	94.55	98.45	67.85	-1,600.50	3,422.75	2,137.74	1,958.17	179.57	11.905		
14,200.00	10,550.00	13,364.27	9,745.00	96.78	100.72	67.85	-1,600.54	3,522.75	2,137.75	1,953.98	183.77	11.633		
14,300.00	10,550.00	13,464.27	9,745.00	99.01	103.00	67.85	-1,600.59	3,622.75	2,137.75	1,949.77	187.98	11.372		
14,400.00	10,550.00	13,564.27	9,745.00	101.25	105.28	67.85	-1,600.63	3,722.75	2,137.76	1,945.55	192.21	11.122		
14,500.00	10,550.00	13,664.27	9,745.00	103.50	107.57	67.85	-1,600.67	3,822.75	2,137.76	1,941.31	196.45	10.882		
14,600.00	10,550.00	13,764.27	9,745.00	105.76	109.86	67.85	-1,600.72	3,922.75	2,137.77	1,937.06	200.71	10.651		
14,700.00	10,550.00	13,864.27	9,745.00	108.03	112.17	67.85	-1,600.76	4,022.75	2,137.77	1,932.80	204.97	10.430		
14,800.00	10,550.00	13,964.27	9,745.00	110.30	114.47	67.85	-1,600.80	4,122.75	2,137.78	1,928.53	209.25	10.217		
14,900.00	10,550.00	14,064.27	9,745.00	112.58	116.78	67.85	-1,600.84	4,222.75	2,137.78	1,924.25	213.53	10.011		
15,000.00	10,550.00	14,164.27	9,745.00	114.86	119.10	67.85	-1,600.89	4,322.75	2,137.79	1,919.96	217.83	9.814		
15,100.00	10,550.00	14,264.27	9,745.00	117.15	121.42	67.85	-1,600.93	4,422.75	2,137.79	1,915.66	222.13	9.624		
15,200.00	10,550.00	14,364.27	9,745.00	119.45	123.74	67.85	-1,600.97	4,522.75	2,137.80	1,911.35	226.45	9.441		
15,300.00	10,550.00	14,464.27	9,745.00	121.75	126.07	67.85	-1,601.02	4,622.75	2,137.80	1,907.03	230.77	9.264		
15,400.00	10,550.00	14,564.27	9,745.00	124.05	128.40	67.85	-1,601.06	4,722.75	2,137.81	1,902.71	235.10	9.093		
15,431.68	10,550.00	14,595.95	9,745.00	124.78	129.13	67.85	-1,601.07	4,754.43	2,137.81	1,901.34	236.47	9.040 SF		



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #222H - Wellbore #1 - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD													Offset Well Error:	0.00 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		
0.00	0.00	2.89	2.89	0.00	0.00	-160.15	-1,643.64	-593.41	1,747.48					
100.00	100.00	102.89	102.89	0.13	0.14	-160.15	-1,643.64	-593.41	1,747.48	1,747.22	0.26	6,597.379		
200.00	200.00	202.89	202.89	0.49	0.50	-160.15	-1,643.64	-593.41	1,747.48	1,746.50	0.98	1,779.841		
300.00	300.00	302.89	302.89	0.84	0.85	-160.15	-1,643.64	-593.41	1,747.48	1,745.78	1.70	1,028.679		
400.00	400.00	402.89	402.89	1.20	1.21	-160.15	-1,643.64	-593.41	1,747.48	1,745.06	2.42	723.383		
500.00	500.00	502.89	502.89	1.56	1.57	-160.15	-1,643.64	-593.41	1,747.48	1,744.35	3.13	557.829		
600.00	600.00	602.89	602.89	1.92	1.93	-160.15	-1,643.64	-593.41	1,747.48	1,743.63	3.85	453.939		
700.00	700.00	702.89	702.89	2.28	2.29	-160.15	-1,643.64	-593.41	1,747.48	1,742.91	4.57	382.671		
800.00	800.00	802.89	802.89	2.64	2.65	-160.15	-1,643.64	-593.41	1,747.48	1,742.20	5.28	330.744		
900.00	900.00	902.89	902.89	3.00	3.01	-160.15	-1,643.64	-593.41	1,747.48	1,741.48	6.00	291.226		
1,000.00	1,000.00	1,005.31	1,005.31	3.35	3.37	-160.15	-1,643.64	-593.41	1,747.48	1,740.75	6.73	259.810		
1,100.00	1,099.99	1,188.87	1,188.79	3.71	4.03	-104.34	-1,639.41	-591.44	1,745.27	1,737.54	7.73	225.691		
1,200.00	1,199.91	1,371.55	1,370.96	4.06	4.69	-104.70	-1,627.27	-585.80	1,738.94	1,730.22	8.72	199.373		
1,266.67	1,266.45	1,450.69	1,449.68	4.30	4.97	-104.97	-1,619.86	-582.35	1,733.09	1,723.86	9.24	187.642		
1,300.00	1,299.70	1,483.80	1,482.61	4.42	5.09	-105.05	-1,616.72	-580.89	1,730.22	1,720.74	9.47	182.656		
1,400.00	1,399.46	1,583.13	1,581.39	4.78	5.46	-105.31	-1,607.31	-576.52	1,721.61	1,711.43	10.19	169.010		
1,500.00	1,499.22	1,682.45	1,680.17	5.14	5.83	-105.57	-1,597.90	-572.14	1,713.05	1,702.14	10.90	157.109		
1,600.00	1,598.97	1,781.78	1,778.95	5.50	6.20	-105.84	-1,588.48	-567.76	1,704.51	1,692.89	11.62	146.649		
1,700.00	1,698.73	1,881.10	1,877.74	5.86	6.58	-106.10	-1,579.07	-563.38	1,696.02	1,683.67	12.34	137.388		
1,800.00	1,798.48	1,980.43	1,976.52	6.23	6.95	-106.37	-1,569.65	-559.00	1,687.56	1,674.49	13.07	129.135		
1,900.00	1,898.24	2,079.75	2,075.30	6.60	7.33	-106.64	-1,560.24	-554.63	1,679.14	1,665.35	13.79	121.737		
2,000.00	1,998.00	2,179.08	2,174.08	6.96	7.71	-106.92	-1,550.82	-550.25	1,670.76	1,656.24	14.52	115.071		
2,100.00	2,097.75	2,278.41	2,272.86	7.33	8.09	-107.19	-1,541.41	-545.87	1,662.41	1,647.16	15.25	109.035		
2,200.00	2,197.51	2,377.73	2,371.64	7.70	8.47	-107.47	-1,532.00	-541.49	1,654.11	1,638.13	15.97	103.544		
2,300.00	2,297.27	2,477.06	2,470.43	8.07	8.85	-107.75	-1,522.58	-537.11	1,645.84	1,629.14	16.70	98.530		
2,400.00	2,397.02	2,576.38	2,569.21	8.44	9.23	-108.04	-1,513.17	-532.74	1,637.61	1,620.18	17.43	93.933		
2,500.00	2,496.78	2,675.71	2,667.99	8.81	9.61	-108.33	-1,503.75	-528.36	1,629.43	1,611.27	18.16	89.705		
2,600.00	2,596.54	2,775.03	2,766.77	9.18	9.99	-108.62	-1,494.34	-523.98	1,621.29	1,602.39	18.90	85.803		
2,700.00	2,696.29	2,874.36	2,865.55	9.55	10.38	-108.91	-1,484.92	-519.60	1,613.19	1,593.56	19.63	82.192		
2,800.00	2,796.05	3,022.11	3,012.29	9.92	10.95	-109.37	-1,469.31	-512.34	1,604.09	1,583.60	20.49	78.282		
2,850.00	2,845.92	3,106.32	3,095.59	10.11	11.29	-109.64	-1,458.17	-507.16	1,598.05	1,577.11	20.94	76.313		
2,900.00	2,895.78	3,189.97	3,178.06	10.29	11.64	-110.05	-1,445.47	-501.25	1,591.06	1,569.68	21.38	74.414		
3,000.00	2,995.32	3,321.39	3,307.01	10.67	12.20	-110.88	-1,422.49	-490.57	1,575.19	1,553.01	22.18	71.009		
3,100.00	3,094.57	3,419.04	3,402.70	11.06	12.62	-111.65	-1,404.84	-482.36	1,559.86	1,536.93	22.93	68.019		
3,116.66	3,111.08	3,435.28	3,418.62	11.12	12.69	-111.78	-1,401.90	-480.99	1,557.41	1,534.35	23.06	67.543		
3,200.00	3,193.60	3,516.52	3,498.22	11.45	13.05	-112.30	-1,387.21	-474.16	1,545.31	1,521.62	23.69	65.231		
3,300.00	3,292.63	3,614.00	3,593.75	11.85	13.47	-112.94	-1,369.59	-465.97	1,530.97	1,506.52	24.45	62.614		
3,400.00	3,391.65	3,711.48	3,689.27	12.25	13.90	-113.58	-1,351.97	-457.77	1,516.81	1,491.60	25.21	60.156		
3,500.00	3,490.68	3,808.96	3,784.79	12.65	14.33	-114.24	-1,334.35	-449.58	1,502.86	1,476.88	25.98	57.844		
3,600.00	3,589.71	3,906.44	3,880.31	13.05	14.76	-114.91	-1,316.72	-441.38	1,489.11	1,462.36	26.75	55.667		
3,700.00	3,688.73	4,003.91	3,975.84	13.45	15.20	-115.59	-1,299.10	-433.19	1,475.57	1,448.04	27.52	53.615		
3,800.00	3,787.76	4,101.39	4,071.36	13.85	15.63	-116.28	-1,281.48	-425.00	1,462.24	1,433.94	28.30	51.678		
3,900.00	3,886.79	4,198.87	4,166.88	14.26	16.07	-116.99	-1,263.86	-416.80	1,449.13	1,420.06	29.07	49.848		
4,000.00	3,985.82	4,296.35	4,262.40	14.66	16.51	-117.70	-1,246.24	-408.61	1,436.25	1,406.40	29.85	48.117		
4,100.00	4,084.84	4,393.83	4,357.92	15.07	16.95	-118.43	-1,228.61	-400.41	1,423.61	1,392.98	30.63	46.479		
4,200.00	4,183.87	4,491.31	4,453.45	15.47	17.39	-119.17	-1,210.99	-392.22	1,411.20	1,379.79	31.41	44.926		
4,300.00	4,282.90	4,588.79	4,548.97	15.88	17.83	-119.93	-1,193.37	-384.02	1,399.04	1,366.85	32.20	43.454		
4,400.00	4,381.92	4,686.27	4,644.49	16.29	18.27	-120.70	-1,175.75	-375.83	1,387.13	1,354.15	32.98	42.057		
4,500.00	4,480.95	4,783.75	4,740.01	16.70	18.72	-121.48	-1,158.13	-367.63	1,375.48	1,341.71	33.77	40.730		
4,600.00	4,579.98	4,881.23	4,835.54	17.10	19.04	-122.06	-1,145.61	-361.81	1,365.00	1,330.47	34.53	39.536		
4,700.00	4,679.00	4,930.18	4,884.04	17.51	19.36	-122.63	-1,134.21	-356.51	1,356.51	1,321.24	35.27	38.460		
4,753.24	4,731.73	4,969.56	4,922.93	17.73	19.53	-122.92	-1,128.63	-353.92	1,352.80	1,317.14	35.66	37.933		

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #221H - Wellbore #1 - Design #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 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)	Offset Wellbore Centre +E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,800.00	4,778.07	5,000.00	4,953.05	17.92	19.66	-123.11	-1,124.57	-352.03	1,349.86	1,313.87	35.99	37.504	
4,900.00	4,877.41	5,078.84	5,031.19	18.32	19.98	-123.54	-1,115.07	-347.81	1,343.93	1,307.21	36.71	36.608	
5,000.00	4,977.02	5,153.91	5,105.77	18.70	20.28	-123.85	-1,107.38	-344.03	1,338.46	1,301.07	37.39	35.794	
5,100.00	5,076.83	5,229.36	5,180.90	19.07	20.57	-124.08	-1,100.99	-341.06	1,333.41	1,295.36	38.05	35.044	
5,200.00	5,176.76	5,305.12	5,256.44	19.43	20.85	-124.22	-1,095.93	-338.71	1,328.73	1,290.05	38.68	34.352	
5,286.58	5,263.33	5,370.87	5,322.10	19.72	21.08	179.80	-1,092.64	-337.18	1,324.96	1,285.76	39.20	33.800	
5,300.00	5,276.75	5,381.08	5,332.29	19.77	21.12	179.79	-1,092.22	-336.98	1,324.41	1,285.13	39.28	33.718	
5,400.00	5,376.75	5,457.17	5,408.34	20.10	21.38	179.75	-1,089.88	-335.89	1,321.33	1,281.47	39.86	33.152	
5,500.00	5,476.75	5,533.33	5,484.49	20.44	21.63	179.73	-1,088.91	-335.44	1,320.06	1,279.64	40.42	32.658	
5,541.85	5,518.61	5,570.34	5,521.50	20.58	21.75	179.73	-1,088.88	-335.43	1,320.03	1,279.35	40.68	32.449	
5,600.00	5,576.75	5,628.48	5,579.64	20.77	21.94	179.73	-1,088.88	-335.43	1,320.03	1,278.95	41.08	32.136	
5,700.00	5,676.75	5,728.48	5,679.64	21.11	22.26	179.73	-1,088.88	-335.43	1,320.03	1,278.27	41.76	31.611	
5,800.00	5,776.75	5,828.48	5,779.64	21.45	22.58	179.73	-1,088.88	-335.43	1,320.03	1,277.58	42.44	31.102	
5,900.00	5,876.75	5,928.48	5,879.64	21.78	22.90	179.73	-1,088.88	-335.43	1,320.03	1,276.90	43.13	30.608	
6,000.00	5,976.75	6,028.48	5,979.64	22.12	23.22	179.73	-1,088.88	-335.43	1,320.03	1,276.21	43.81	30.129	
6,100.00	6,076.75	6,128.48	6,079.64	22.46	23.55	179.73	-1,088.88	-335.43	1,320.03	1,275.53	44.50	29.664	
6,200.00	6,176.75	6,228.48	6,179.64	22.80	23.87	179.73	-1,088.88	-335.43	1,320.03	1,274.84	45.19	29.213	
6,300.00	6,276.75	6,328.48	6,279.64	23.14	24.20	179.73	-1,088.88	-335.43	1,320.03	1,274.15	45.87	28.774	
6,400.00	6,376.75	6,428.48	6,379.64	23.48	24.53	179.73	-1,088.88	-335.43	1,320.03	1,273.46	46.56	28.348	
6,500.00	6,476.75	6,528.48	6,479.64	23.83	24.85	179.73	-1,088.88	-335.43	1,320.03	1,272.77	47.25	27.934	
6,600.00	6,576.75	6,628.48	6,579.64	24.17	25.18	179.73	-1,088.88	-335.43	1,320.03	1,272.08	47.95	27.532	
6,700.00	6,676.75	6,728.48	6,679.64	24.51	25.51	179.73	-1,088.88	-335.43	1,320.03	1,271.39	48.64	27.140	
6,800.00	6,776.75	6,828.48	6,779.64	24.85	25.84	179.73	-1,088.88	-335.43	1,320.03	1,270.70	49.33	26.759	
6,900.00	6,876.75	6,928.48	6,879.64	25.20	26.17	179.73	-1,088.88	-335.43	1,320.03	1,270.00	50.02	26.389	
7,000.00	6,976.75	7,028.48	6,979.64	25.54	26.51	179.73	-1,088.88	-335.43	1,320.03	1,269.31	50.72	26.028	
7,100.00	7,076.75	7,128.48	7,079.64	25.88	26.84	179.73	-1,088.88	-335.43	1,320.03	1,268.61	51.41	25.676	
7,200.00	7,176.75	7,228.48	7,179.64	26.23	27.17	179.73	-1,088.88	-335.43	1,320.03	1,267.92	52.11	25.333	
7,300.00	7,276.75	7,328.48	7,279.64	26.57	27.51	179.73	-1,088.88	-335.43	1,320.03	1,267.22	52.80	25.000	
7,400.00	7,376.75	7,428.48	7,379.64	26.92	27.84	179.73	-1,088.88	-335.43	1,320.03	1,266.53	53.50	24.674	
7,500.00	7,476.75	7,528.48	7,479.64	27.27	28.18	179.73	-1,088.88	-335.43	1,320.03	1,265.83	54.19	24.357	
7,600.00	7,576.75	7,628.48	7,579.64	27.61	28.51	179.73	-1,088.88	-335.43	1,320.03	1,265.13	54.89	24.048	
7,700.00	7,676.75	7,728.48	7,679.64	27.96	28.85	179.73	-1,088.88	-335.43	1,320.03	1,264.44	55.59	23.746	
7,800.00	7,776.75	7,828.48	7,779.64	28.30	29.18	179.73	-1,088.88	-335.43	1,320.03	1,263.74	56.29	23.451	
7,900.00	7,876.75	7,928.48	7,879.64	28.65	29.52	179.73	-1,088.88	-335.43	1,320.03	1,263.04	56.99	23.164	
8,000.00	7,976.75	8,028.48	7,979.64	29.00	29.86	179.73	-1,088.88	-335.43	1,320.03	1,262.34	57.69	22.883	
8,100.00	8,076.75	8,128.48	8,079.64	29.35	30.20	179.73	-1,088.88	-335.43	1,320.03	1,261.64	58.39	22.609	
8,200.00	8,176.75	8,228.48	8,179.64	29.69	30.54	179.73	-1,088.88	-335.43	1,320.03	1,260.94	59.09	22.341	
8,300.00	8,276.75	8,328.48	8,279.64	30.04	30.88	179.73	-1,088.88	-335.43	1,320.03	1,260.24	59.79	22.079	
8,400.00	8,376.75	8,428.48	8,379.64	30.39	31.21	179.73	-1,088.88	-335.43	1,320.03	1,259.54	60.49	21.824	
8,500.00	8,476.75	8,528.48	8,479.64	30.74	31.55	179.73	-1,088.88	-335.43	1,320.03	1,258.84	61.19	21.573	
8,600.00	8,576.75	8,628.48	8,579.64	31.09	31.90	179.73	-1,088.88	-335.43	1,320.03	1,258.14	61.89	21.329	
8,700.00	8,676.75	8,728.48	8,679.64	31.44	32.24	179.73	-1,088.88	-335.43	1,320.03	1,257.43	62.59	21.090	
8,800.00	8,776.75	8,828.48	8,779.64	31.78	32.58	179.73	-1,088.88	-335.43	1,320.03	1,256.73	63.29	20.856	
8,900.00	8,876.75	8,928.48	8,879.64	32.13	32.92	179.73	-1,088.88	-335.43	1,320.03	1,256.03	64.00	20.627	
9,000.00	8,976.75	9,028.48	8,979.64	32.48	33.26	179.73	-1,088.88	-335.43	1,320.03	1,255.33	64.70	20.403	
9,100.00	9,076.75	9,128.48	9,079.64	32.83	33.60	179.73	-1,088.88	-335.43	1,320.03	1,254.62	65.40	20.183	
9,200.00	9,176.75	9,228.48	9,179.64	33.18	33.95	179.73	-1,088.88	-335.43	1,320.03	1,253.92	66.11	19.969	
9,300.00	9,276.75	9,328.48	9,279.64	33.53	34.29	179.73	-1,088.88	-335.43	1,320.03	1,253.22	66.81	19.758	
9,400.00	9,376.75	9,428.48	9,379.64	33.88	34.63	179.73	-1,088.88	-335.43	1,320.03	1,252.51	67.51	19.552	
9,500.00	9,476.75	9,528.48	9,479.64	34.23	34.97	179.73	-1,088.88	-335.43	1,320.03	1,251.81	68.22	19.350	
9,600.00	9,576.75	9,628.48	9,579.64	34.58	35.32	179.73	-1,088.88	-335.43	1,320.03	1,251.10	68.92	19.153	
9,700.00	9,676.75	9,728.48	9,679.64	34.94	35.66	179.73	-1,088.88	-335.43	1,320.03	1,250.40	69.63	18.959	

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



Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #221H - Wellbore #1 - Design #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWVD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Distance							
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	Warning
9,800.00	9,776.75	9,828.48	9,779.64	35.29	36.01	179.73	-1,088.88	-335.43	1,320.03	1,249.69	70.33	18.769	
9,900.00	9,876.75	9,928.48	9,879.64	35.64	36.35	179.73	-1,088.88	-335.43	1,320.03	1,248.99	71.04	18.582	
9,994.49	9,971.24	10,024.99	9,976.15	35.97	36.68	179.73	-1,088.88	-335.41	1,320.02	1,248.31	71.71	18.407	
10,000.00	9,976.75	10,034.35	9,985.50	35.99	36.72	100.27	-1,088.85	-335.26	1,320.01	1,248.24	71.77	18.391	
10,050.00	10,026.67	10,118.89	10,069.56	36.15	37.02	100.15	-1,087.32	-327.07	1,319.61	1,247.32	72.28	18.256	
10,100.00	10,076.16	10,202.14	10,150.25	36.31	37.34	99.86	-1,083.63	-307.23	1,318.69	1,245.93	72.76	18.123	
10,150.00	10,124.85	10,283.19	10,225.20	36.45	37.67	99.44	-1,078.01	-277.07	1,317.33	1,244.11	73.23	17.990	
10,200.00	10,172.38	10,361.37	10,292.71	36.59	38.00	98.90	-1,070.81	-238.42	1,315.61	1,241.93	73.68	17.855	
10,250.00	10,218.37	10,436.24	10,351.76	36.72	38.34	98.27	-1,062.40	-193.26	1,313.63	1,239.47	74.16	17.714	
10,300.00	10,262.48	10,507.59	10,402.02	36.84	38.70	97.57	-1,053.14	-143.54	1,311.51	1,236.85	74.66	17.567	
10,350.00	10,304.38	10,575.39	10,443.61	36.95	39.07	96.82	-1,043.35	-90.94	1,309.34	1,234.14	75.20	17.412	
10,400.00	10,343.74	10,639.76	10,476.98	37.05	39.45	96.04	-1,033.28	-36.88	1,307.22	1,231.45	75.77	17.252	
10,450.00	10,380.26	10,700.89	10,502.78	37.16	39.86	95.24	-1,023.14	17.58	1,305.24	1,228.86	76.37	17.090	
10,500.00	10,413.68	10,759.04	10,521.72	37.27	40.28	94.42	-1,013.07	71.60	1,303.45	1,226.45	77.00	16.927	
10,550.00	10,443.72	10,814.48	10,534.49	37.39	40.71	93.60	-1,003.20	124.61	1,301.92	1,224.28	77.64	16.768	
10,600.00	10,470.17	10,865.01	10,542.25	37.53	41.13	92.85	-994.06	173.70	1,300.72	1,222.45	78.27	16.619	
10,650.00	10,492.82	10,914.81	10,547.29	37.70	41.57	92.14	-984.99	222.39	1,299.88	1,220.97	78.91	16.473	
10,700.00	10,511.51	10,964.29	10,549.74	37.89	42.02	91.48	-975.94	270.98	1,299.33	1,219.76	79.57	16.329	
10,739.67	10,523.41	10,996.40	10,550.00	38.06	42.33	91.08	-970.09	302.54	1,299.11	1,219.07	80.04	16.231 CC	
10,750.00	10,526.08	11,000.00	10,550.00	38.11	42.37	91.04	-969.45	306.09	1,299.13	1,219.03	80.10	16.218	
10,794.49	10,535.49	11,028.20	10,550.00	38.33	42.65	90.72	-964.68	333.88	1,299.66	1,219.09	80.57	16.131	
10,800.00	10,536.44	11,031.44	10,550.00	38.36	42.68	90.69	-964.16	337.07	1,299.77	1,219.15	80.63	16.121	
10,850.00	10,543.54	11,060.86	10,550.00	38.63	42.99	90.41	-959.68	366.16	1,301.27	1,220.13	81.14	16.037	
10,900.00	10,548.04	11,100.00	10,550.00	38.92	43.39	90.13	-954.41	404.94	1,303.65	1,221.84	81.80	15.936	
10,950.00	10,549.94	11,120.05	10,550.00	39.25	43.61	89.92	-952.01	424.85	1,306.69	1,224.42	82.26	15.884	
10,961.15	10,550.00	11,126.66	10,550.00	39.32	43.68	89.87	-951.27	431.41	1,307.48	1,225.09	82.40	15.868	
11,000.00	10,550.00	11,149.65	10,550.00	39.59	43.94	89.87	-948.87	454.28	1,310.17	1,227.29	82.88	15.809	
11,100.00	10,550.00	11,200.00	10,550.00	40.39	44.50	89.87	-944.56	504.44	1,315.64	1,231.59	84.05	15.654	
11,200.00	10,550.00	11,267.97	10,550.00	41.31	45.31	89.87	-940.84	572.30	1,318.88	1,233.23	85.65	15.399	
11,300.00	10,550.00	11,327.10	10,550.00	42.34	46.04	89.87	-939.58	631.42	1,320.03	1,232.82	87.20	15.138	
11,313.54	10,550.00	11,339.13	10,550.00	42.49	46.19	89.87	-939.55	643.44	1,320.03	1,232.53	87.49	15.087	
11,344.84	10,550.00	11,363.63	10,550.00	42.84	46.50	89.87	-939.55	667.95	1,320.01	1,231.87	88.14	14.977	
11,400.00	10,550.00	11,418.79	10,550.00	43.47	47.23	89.87	-939.58	723.11	1,320.01	1,230.50	89.51	14.747	
11,500.00	10,550.00	11,518.79	10,550.00	44.71	48.60	89.87	-939.61	823.11	1,320.01	1,227.86	92.15	14.324	
11,600.00	10,550.00	11,618.79	10,550.00	46.03	50.06	89.87	-939.65	923.11	1,320.01	1,225.04	94.97	13.899	
11,700.00	10,550.00	11,718.79	10,550.00	47.45	51.59	89.87	-939.69	1,023.11	1,320.01	1,222.06	97.95	13.476	
11,800.00	10,550.00	11,818.79	10,550.00	48.94	53.18	89.87	-939.72	1,123.11	1,320.01	1,218.93	101.07	13.060	
11,900.00	10,550.00	11,918.79	10,550.00	50.50	54.84	89.87	-939.76	1,223.11	1,320.01	1,215.68	104.33	12.652	
12,000.00	10,550.00	12,018.79	10,550.00	52.13	56.56	89.87	-939.80	1,323.11	1,320.01	1,212.30	107.71	12.256	
12,100.00	10,550.00	12,118.79	10,550.00	53.82	58.32	89.87	-939.84	1,423.11	1,320.01	1,208.82	111.19	11.871	
12,200.00	10,550.00	12,218.79	10,550.00	55.56	60.13	89.87	-939.87	1,523.11	1,320.01	1,205.23	114.78	11.501	
12,300.00	10,550.00	12,318.79	10,550.00	57.35	61.98	89.87	-939.91	1,623.11	1,320.01	1,201.56	118.45	11.144	
12,400.00	10,550.00	12,418.79	10,550.00	59.19	63.87	89.87	-939.95	1,723.11	1,320.01	1,197.80	122.21	10.801	
12,500.00	10,550.00	12,518.79	10,550.00	61.07	65.80	89.87	-939.98	1,823.11	1,320.01	1,193.97	126.04	10.473	
12,600.00	10,550.00	12,618.79	10,550.00	62.98	67.76	89.87	-940.02	1,923.11	1,320.01	1,190.07	129.94	10.159	
12,700.00	10,550.00	12,718.79	10,550.00	64.93	69.75	89.87	-940.06	2,023.11	1,320.01	1,186.11	133.90	9.858	
12,800.00	10,550.00	12,818.79	10,550.00	66.91	71.76	89.87	-940.10	2,123.11	1,320.01	1,182.09	137.92	9.571	
12,900.00	10,550.00	12,918.79	10,550.00	68.92	73.80	89.87	-940.13	2,223.11	1,320.01	1,178.02	141.99	9.297	
13,000.00	10,550.00	13,018.79	10,550.00	70.96	75.87	89.87	-940.17	2,323.11	1,320.01	1,173.90	146.11	9.035	
13,100.00	10,550.00	13,118.79	10,550.00	73.01	77.95	89.87	-940.21	2,423.11	1,320.01	1,169.74	150.27	8.784	
13,200.00	10,550.00	13,218.79	10,550.00	75.09	80.05	89.87	-940.25	2,523.11	1,320.01	1,165.54	154.47	8.545	
13,300.00	10,550.00	13,318.79	10,550.00	77.19	82.17	89.87	-940.28	2,623.11	1,320.01	1,161.30	158.71	8.317	

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



Company: Matador Resources
 Project: Eddy County, New Mexico (NAD 27)
 Reference Site: Zach McCormick Federal 18-24S-29E RB
 Site Error: 0.00 usft
 Reference Well: #221H
 Well Error: 0.00 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Design #1

Local Co-ordinate Reference: Well#221H
 TVD Reference: WELL @ 2981.93usft (Patterson 297)
 MD Reference: WELL @ 2981.93usft (Patterson 297)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Conroe DB
 Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #222H - Wellbore #1 - Design #1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						
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	Warning
13,400.00	10,550.00	13,418.79	10,550.00	79.31	84.31	89.87	-940.32	2,723.11	1,320.01	1,157.02	162.98	8.099	
13,500.00	10,550.00	13,518.79	10,550.00	81.45	86.46	89.87	-940.36	2,823.11	1,320.00	1,152.72	167.29	7.891	
13,600.00	10,550.00	13,618.79	10,550.00	83.60	88.63	89.87	-940.39	2,923.11	1,320.00	1,148.38	171.62	7.691	
13,700.00	10,550.00	13,718.79	10,550.00	85.76	90.81	89.87	-940.43	3,023.11	1,320.00	1,144.02	175.98	7.501	
13,800.00	10,550.00	13,818.79	10,550.00	87.94	93.00	89.87	-940.47	3,123.11	1,320.00	1,139.64	180.37	7.319	
13,900.00	10,550.00	13,918.79	10,550.00	90.13	95.20	89.87	-940.51	3,223.11	1,320.00	1,135.23	184.77	7.144	
14,000.00	10,550.00	14,018.79	10,550.00	92.34	97.41	89.87	-940.54	3,323.11	1,320.00	1,130.80	189.20	6.977	
14,100.00	10,550.00	14,118.79	10,550.00	94.55	99.64	89.87	-940.58	3,423.11	1,320.00	1,126.35	193.65	6.816	
14,200.00	10,550.00	14,218.79	10,550.00	96.78	101.87	89.87	-940.62	3,523.11	1,320.00	1,121.88	198.12	6.663	
14,300.00	10,550.00	14,318.79	10,550.00	99.01	104.11	89.87	-940.66	3,623.11	1,320.00	1,117.39	202.61	6.515	
14,400.00	10,550.00	14,418.79	10,550.00	101.25	106.36	89.87	-940.69	3,723.11	1,320.00	1,112.89	207.11	6.373	
14,500.00	10,550.00	14,518.79	10,550.00	103.50	108.62	89.87	-940.73	3,823.11	1,320.00	1,108.37	211.63	6.237	
14,600.00	10,550.00	14,618.79	10,550.00	105.76	110.88	89.87	-940.77	3,923.11	1,320.00	1,103.84	216.16	6.107	
14,700.00	10,550.00	14,718.79	10,550.00	108.03	113.15	89.87	-940.80	4,023.11	1,320.00	1,099.30	220.71	5.981	
14,800.00	10,550.00	14,818.79	10,550.00	110.30	115.43	89.87	-940.84	4,123.11	1,320.00	1,094.74	225.26	5.860	
14,900.00	10,550.00	14,918.79	10,550.00	112.58	117.71	89.87	-940.88	4,223.11	1,320.00	1,090.17	229.83	5.743	
15,000.00	10,550.00	15,018.79	10,550.00	114.86	120.00	89.87	-940.92	4,323.11	1,320.00	1,085.58	234.42	5.631	
15,100.00	10,550.00	15,118.79	10,550.00	117.15	122.29	89.87	-940.95	4,423.11	1,320.00	1,080.99	239.01	5.523	
15,200.00	10,550.00	15,218.79	10,550.00	119.45	124.59	89.87	-940.99	4,523.11	1,320.00	1,076.39	243.61	5.419	
15,300.00	10,550.00	15,318.79	10,550.00	121.75	126.89	89.87	-941.03	4,623.11	1,320.00	1,071.78	248.22	5.318	
15,400.00	10,550.00	15,418.79	10,550.00	124.05	129.07	89.87	-941.06	4,723.11	1,320.00	1,067.29	252.71	5.223	
15,431.68	10,550.00	15,450.47	10,550.00	124.78	129.58	89.87	-941.08	4,754.79	1,320.00	1,066.06	253.94	5.198 ES, SF	



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
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Well Error: 0.00 usft
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Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #225H - Wellbore #1 - Design #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Distance						
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	Warning
0.00	0.00	0.02	0.02	0.00	0.00	179.98	-30.08	0.01	30.08				
100.00	100.00	100.02	100.02	0.13	0.13	179.98	-30.08	0.01	30.08	29.83	0.25	118.152	
200.00	200.00	200.02	200.02	0.49	0.49	179.98	-30.08	0.01	30.08	29.11	0.97	30.961	
300.00	300.00	300.02	300.02	0.84	0.84	179.98	-30.08	0.01	30.08	28.39	1.69	17.815	
400.00	400.00	400.02	400.02	1.20	1.20	179.98	-30.08	0.01	30.08	27.67	2.41	12.505	
500.00	500.00	500.02	500.02	1.56	1.56	179.98	-30.08	0.01	30.08	26.96	3.12	9.634	
600.00	600.00	600.02	600.02	1.92	1.92	179.98	-30.08	0.01	30.08	26.24	3.84	7.835	
700.00	700.00	700.02	700.02	2.28	2.28	179.98	-30.08	0.01	30.08	25.52	4.56	6.602	
800.00	800.00	800.02	800.02	2.64	2.64	179.98	-30.08	0.01	30.08	24.81	5.27	5.704	
900.00	900.00	900.02	900.02	3.00	3.00	179.98	-30.08	0.01	30.08	24.09	5.99	5.022	
1,000.00	1,000.00	1,000.02	1,000.02	3.35	3.35	179.98	-30.08	0.01	30.08	23.37	6.71	4.485 CC, ES	
1,100.00	1,099.99	1,099.79	1,099.78	3.71	3.70	-123.76	-30.44	-1.24	31.18	23.77	7.41	4.208	
1,200.00	1,199.91	1,199.48	1,199.39	4.06	4.04	-122.91	-31.53	-4.99	34.48	26.38	8.10	4.256	
1,266.67	1,266.45	1,267.47	1,265.65	4.30	4.27	-122.18	-32.66	-8.87	37.90	29.33	8.57	4.421	
1,300.00	1,299.70	1,300.86	1,298.85	4.42	4.39	-121.82	-33.31	-11.10	39.86	31.05	8.81	4.526	
1,400.00	1,399.46	1,401.03	1,398.43	4.78	4.74	-120.95	-35.25	-17.79	45.75	36.23	9.51	4.808	
1,500.00	1,499.22	1,501.21	1,498.01	5.14	5.10	-120.28	-37.19	-24.47	51.64	41.42	10.23	5.049	
1,600.00	1,598.97	1,601.38	1,597.59	5.50	5.45	-119.75	-39.14	-31.16	57.55	46.60	10.95	5.257	
1,700.00	1,698.73	1,701.56	1,697.17	5.86	5.81	-119.31	-41.08	-37.85	63.45	51.79	11.67	5.438	
1,800.00	1,798.48	1,801.74	1,796.75	6.23	6.18	-118.95	-43.02	-44.53	69.36	56.97	12.39	5.597	
1,900.00	1,898.24	1,901.91	1,896.33	6.60	6.54	-118.65	-44.97	-51.22	75.27	62.15	13.12	5.738	
2,000.00	1,998.00	1,997.91	1,995.92	6.96	6.89	-118.39	-46.91	-57.91	81.19	67.35	13.83	5.870	
2,100.00	2,097.75	2,102.26	2,095.50	7.33	7.27	-118.16	-48.85	-64.60	87.10	72.52	14.58	5.975	
2,200.00	2,197.51	2,202.44	2,195.08	7.70	7.64	-117.97	-50.79	-71.28	93.02	77.71	15.31	6.076	
2,300.00	2,297.27	2,302.61	2,294.66	8.07	8.01	-117.79	-52.74	-77.97	98.93	82.89	16.04	6.167	
2,400.00	2,397.02	2,402.79	2,394.24	8.44	8.38	-117.64	-54.68	-84.66	104.85	88.07	16.78	6.250	
2,500.00	2,496.78	2,502.96	2,493.82	8.81	8.75	-117.50	-56.62	-91.34	110.77	93.26	17.51	6.326	
2,600.00	2,596.54	2,603.14	2,593.40	9.18	9.12	-117.38	-58.57	-98.03	116.69	98.44	18.25	6.395	
2,700.00	2,696.29	2,703.32	2,692.98	9.55	9.49	-117.27	-60.51	-104.72	122.61	103.62	18.98	6.459	
2,800.00	2,796.05	2,796.51	2,792.57	9.92	9.83	-117.17	-62.45	-111.40	128.53	108.83	19.69	6.526	
2,850.00	2,845.92	2,846.42	2,842.35	10.11	10.02	-117.12	-63.42	-114.75	131.49	111.42	20.06	6.554	
2,900.00	2,895.78	2,895.69	2,891.49	10.29	10.20	-117.05	-64.46	-118.31	134.70	114.27	20.43	6.594	
3,000.00	2,995.32	2,993.96	2,989.32	10.67	10.57	-116.88	-67.05	-127.23	142.78	121.62	21.16	6.746	
3,100.00	3,094.57	3,091.94	3,086.59	11.06	10.95	-116.68	-70.33	-138.52	153.04	131.13	21.91	6.984	
3,116.66	3,111.08	3,108.24	3,102.73	11.12	11.02	-116.65	-70.94	-140.63	154.96	132.93	22.04	7.032	
3,200.00	3,193.60	3,209.14	3,184.55	11.45	11.42	-116.55	-74.15	-151.66	164.79	142.04	22.75	7.242	
3,300.00	3,292.63	3,309.84	3,282.88	11.85	11.82	-116.44	-78.01	-164.93	176.59	153.05	23.54	7.503	
3,400.00	3,391.65	3,399.46	3,381.22	12.25	12.14	-116.34	-81.86	-178.21	188.39	164.15	24.24	7.772	
3,500.00	3,490.68	3,488.76	3,479.55	12.65	12.54	-116.26	-85.72	-191.48	200.19	175.17	25.02	8.000	
3,600.00	3,589.71	3,588.06	3,577.88	13.05	12.94	-116.19	-89.57	-204.75	211.99	186.18	25.81	8.214	
3,700.00	3,688.73	3,687.36	3,676.22	13.45	13.34	-116.12	-93.43	-218.02	223.79	197.19	26.60	8.414	
3,800.00	3,787.76	3,786.66	3,774.55	13.85	13.74	-116.06	-97.29	-231.29	235.59	208.21	27.39	8.603	
3,900.00	3,886.79	3,885.96	3,872.89	14.26	14.14	-116.00	-101.14	-244.56	247.39	219.21	28.18	8.780	
4,000.00	3,985.82	3,985.26	3,971.22	14.66	14.55	-115.96	-105.00	-257.83	259.19	230.22	28.97	8.947	
4,100.00	4,084.84	4,084.57	4,069.56	15.07	14.95	-115.91	-108.86	-271.10	270.99	241.23	29.76	9.105	
4,200.00	4,183.87	4,183.87	4,167.89	15.47	15.36	-115.87	-112.71	-284.37	282.80	252.23	30.56	9.254	
4,300.00	4,282.90	4,283.17	4,266.23	15.88	15.77	-115.83	-116.57	-297.65	294.60	263.24	31.36	9.395	
4,400.00	4,381.92	4,384.13	4,366.26	16.29	16.18	-115.85	-120.39	-310.82	306.26	274.09	32.17	9.520	
4,500.00	4,480.95	4,486.92	4,468.38	16.70	16.59	-116.28	-123.62	-321.93	316.99	284.00	32.99	9.609	
4,600.00	4,579.98	4,589.76	4,570.84	17.10	16.98	-117.12	-126.08	-330.40	326.69	292.89	33.79	9.667	
4,700.00	4,679.00	4,692.50	4,673.40	17.51	17.36	-118.35	-127.77	-336.22	335.45	300.87	34.58	9.700	
4,753.24	4,731.73	4,747.11	4,727.98	17.73	17.56	-119.15	-128.36	-338.23	339.78	304.79	34.99	9.710	

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #225H - Wellbore #1 - Design #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Distance							
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	Warning
4,800.00	4,778.07	4,795.04	4,775.88	17.92	17.72	-119.94	-128.88	-339.38	343.28	307.93	35.35	9.712	
4,900.00	4,877.41	4,903.41	4,877.43	18.32	18.09	-121.57	-128.88	-340.02	349.36	313.26	36.10	9.678	
5,000.00	4,977.02	5,003.80	4,977.04	18.70	18.41	-122.84	-128.88	-340.02	354.06	317.26	36.80	9.621	
5,100.00	5,076.83	5,103.99	5,076.85	19.07	18.74	-123.71	-128.88	-340.02	357.46	319.97	37.49	9.534	
5,200.00	5,176.76	5,204.06	5,176.78	19.43	19.07	-124.21	-128.88	-340.02	359.46	321.28	38.18	9.415	
5,286.58	5,263.33	5,282.51	5,263.35	19.72	19.33	179.73	-128.88	-340.02	360.01	321.28	38.74	9.294	
5,300.00	5,276.75	5,304.07	5,276.77	19.77	19.40	179.73	-128.88	-340.02	360.01	321.16	38.85	9.266	
5,400.00	5,376.75	5,404.07	5,376.77	20.10	19.73	179.73	-128.88	-340.02	360.01	320.49	39.52	9.109	
5,500.00	5,476.75	5,504.07	5,476.77	20.44	20.07	179.73	-128.88	-340.02	360.01	319.82	40.20	8.956	
5,600.00	5,576.75	5,604.07	5,576.77	20.77	20.40	179.73	-128.88	-340.02	360.01	319.14	40.87	8.808	
5,700.00	5,676.75	5,704.07	5,676.77	21.11	20.73	179.73	-128.88	-340.02	360.01	318.47	41.55	8.665	
5,800.00	5,776.75	5,804.07	5,776.77	21.45	21.07	179.73	-128.88	-340.02	360.01	317.79	42.22	8.526	
5,900.00	5,876.75	5,904.07	5,876.77	21.78	21.40	179.73	-128.88	-340.02	360.01	317.11	42.90	8.391	
6,000.00	5,976.75	6,004.07	5,976.77	22.12	21.74	179.73	-128.88	-340.02	360.01	316.43	43.58	8.261	
6,100.00	6,076.75	6,104.07	6,076.77	22.46	22.08	179.73	-128.88	-340.02	360.01	315.75	44.26	8.134	
6,200.00	6,176.75	6,204.07	6,176.77	22.80	22.41	179.73	-128.88	-340.02	360.01	315.07	44.94	8.010	
6,300.00	6,276.75	6,304.07	6,276.77	23.14	22.75	179.73	-128.88	-340.02	360.01	314.39	45.63	7.890	
6,400.00	6,376.75	6,404.07	6,376.77	23.48	23.09	179.73	-128.88	-340.02	360.01	313.70	46.31	7.774	
6,500.00	6,476.75	6,504.07	6,476.77	23.83	23.43	179.73	-128.88	-340.02	360.01	313.02	47.00	7.660	
6,600.00	6,576.75	6,604.07	6,576.77	24.17	23.77	179.73	-128.88	-340.02	360.01	312.33	47.68	7.550	
6,700.00	6,676.75	6,704.07	6,676.77	24.51	24.11	179.73	-128.88	-340.02	360.01	311.65	48.37	7.443	
6,800.00	6,776.75	6,804.07	6,776.77	24.85	24.45	179.73	-128.88	-340.02	360.01	310.96	49.06	7.339	
6,900.00	6,876.75	6,904.07	6,876.77	25.20	24.79	179.73	-128.88	-340.02	360.01	310.27	49.75	7.237	
7,000.00	6,976.75	7,004.07	6,976.77	25.54	25.14	179.73	-128.88	-340.02	360.01	309.58	50.43	7.138	
7,100.00	7,076.75	7,104.07	7,076.77	25.88	25.48	179.73	-128.88	-340.02	360.01	308.89	51.12	7.042	
7,200.00	7,176.75	7,204.07	7,176.77	26.23	25.82	179.73	-128.88	-340.02	360.01	308.20	51.82	6.948	
7,300.00	7,276.75	7,304.07	7,276.77	26.57	26.17	179.73	-128.88	-340.02	360.01	307.51	52.51	6.857	
7,400.00	7,376.75	7,404.07	7,376.77	26.92	26.51	179.73	-128.88	-340.02	360.01	306.82	53.20	6.767	
7,500.00	7,476.75	7,504.07	7,476.77	27.27	26.85	179.73	-128.88	-340.02	360.01	306.12	53.89	6.680	
7,600.00	7,576.75	7,604.07	7,576.77	27.61	27.20	179.73	-128.88	-340.02	360.01	305.43	54.59	6.595	
7,700.00	7,676.75	7,704.07	7,676.77	27.96	27.54	179.73	-128.88	-340.02	360.01	304.73	55.28	6.513	
7,800.00	7,776.75	7,804.07	7,776.77	28.30	27.89	179.73	-128.88	-340.02	360.01	304.04	55.97	6.432	
7,900.00	7,876.75	7,904.07	7,876.77	28.65	28.23	179.73	-128.88	-340.02	360.01	303.35	56.67	6.353	
8,000.00	7,976.75	8,004.07	7,976.77	29.00	28.58	179.73	-128.88	-340.02	360.01	302.65	57.36	6.276	
8,100.00	8,076.75	8,104.07	8,076.77	29.35	28.92	179.73	-128.88	-340.02	360.01	301.95	58.06	6.201	
8,200.00	8,176.75	8,204.07	8,176.77	29.69	29.27	179.73	-128.88	-340.02	360.01	301.26	58.76	6.127	
8,300.00	8,276.75	8,304.07	8,276.77	30.04	29.62	179.73	-128.88	-340.02	360.01	300.56	59.45	6.055	
8,400.00	8,376.75	8,404.07	8,376.77	30.39	29.97	179.73	-128.88	-340.02	360.01	299.86	60.15	5.985	
8,500.00	8,476.75	8,504.07	8,476.77	30.74	30.31	179.73	-128.88	-340.02	360.01	299.16	60.85	5.916	
8,600.00	8,576.75	8,604.07	8,576.77	31.09	30.66	179.73	-128.88	-340.02	360.01	298.47	61.55	5.849	
8,700.00	8,676.75	8,704.07	8,676.77	31.44	31.01	179.73	-128.88	-340.02	360.01	297.77	62.25	5.784	
8,800.00	8,776.75	8,804.07	8,776.77	31.78	31.36	179.73	-128.88	-340.02	360.01	297.07	62.95	5.719	
8,900.00	8,876.75	8,904.07	8,876.77	32.13	31.70	179.73	-128.88	-340.02	360.01	296.37	63.65	5.656	
9,000.00	8,976.75	9,004.07	8,976.77	32.48	32.05	179.73	-128.88	-340.02	360.01	295.67	64.35	5.595	
9,100.00	9,076.75	9,104.07	9,076.77	32.83	32.40	179.73	-128.88	-340.02	360.01	294.97	65.05	5.535	
9,200.00	9,176.75	9,204.07	9,176.77	33.18	32.75	179.73	-128.88	-340.02	360.01	294.27	65.75	5.476	
9,300.00	9,276.75	9,304.07	9,276.77	33.53	33.10	179.73	-128.88	-340.02	360.01	293.56	66.45	5.418	
9,400.00	9,376.75	9,404.07	9,376.77	33.88	33.45	179.73	-128.88	-340.02	360.01	292.86	67.15	5.361	
9,500.00	9,476.75	9,504.07	9,476.77	34.23	33.80	179.73	-128.88	-340.02	360.01	292.16	67.85	5.306	
9,600.00	9,576.75	9,604.07	9,576.77	34.58	34.15	179.73	-128.88	-340.02	360.01	291.46	68.56	5.251	
9,700.00	9,676.75	9,704.07	9,676.77	34.94	34.50	179.73	-128.88	-340.02	360.01	290.76	69.26	5.198	
9,800.00	9,776.75	9,804.07	9,776.77	35.29	34.85	179.73	-128.88	-340.02	360.01	290.05	69.96	5.146	

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #225H - Wellbore #1 - Design #1													Offset Site Error:	0 00 usft
Survey Program: 0-MWD													Offset Well Error:	0 00 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		
9,900.00	9,876.75	9,904.07	9,876.77	35.64	35.20	179.73	-128.88	-340.02	360.01	289.35	70.66	5.095		
9,994.49	9,971.24	9,990.42	9,971.26	35.97	35.50	179.73	-128.88	-340.02	360.01	288.71	71.30	5.049		
10,000.00	9,976.75	9,995.34	9,976.18	35.99	35.52	100.28	-128.88	-340.00	360.02	288.69	71.33	5.047		
10,050.00	10,026.67	10,040.01	10,020.79	36.15	35.66	100.22	-129.28	-337.91	360.95	289.32	71.63	5.039		
10,100.00	10,076.16	10,084.65	10,065.07	36.31	35.80	100.09	-130.31	-332.42	363.38	291.49	71.89	5.055		
10,150.00	10,124.85	10,129.22	10,108.71	36.45	35.93	99.87	-131.97	-323.57	367.31	295.17	72.14	5.092		
10,200.00	10,172.38	10,173.69	10,151.42	36.59	36.06	99.58	-134.25	-311.45	372.69	300.33	72.36	5.150		
10,250.00	10,218.37	10,218.05	10,192.95	36.72	36.18	99.20	-137.13	-296.15	379.49	306.92	72.57	5.229		
10,300.00	10,262.48	10,262.28	10,233.03	36.84	36.29	98.74	-140.58	-277.80	387.66	314.89	72.77	5.327		
10,350.00	10,304.38	10,306.36	10,271.43	36.95	36.40	98.21	-144.58	-256.54	397.13	324.16	72.97	5.442		
10,400.00	10,343.74	10,350.31	10,307.95	37.05	36.50	97.61	-149.09	-232.53	407.83	334.66	73.17	5.573		
10,450.00	10,380.26	10,394.13	10,342.38	37.16	36.60	96.93	-154.10	-205.91	419.69	346.30	73.39	5.719		
10,500.00	10,413.68	10,437.85	10,374.57	37.27	36.71	96.20	-159.56	-176.86	432.62	358.99	73.63	5.876		
10,550.00	10,443.72	10,481.48	10,404.37	37.39	36.81	95.40	-165.45	-145.54	446.53	372.64	73.89	6.043		
10,600.00	10,470.17	10,525.08	10,431.63	37.53	36.93	94.55	-171.74	-112.11	461.32	387.14	74.18	6.219		
10,650.00	10,492.82	10,568.70	10,456.23	37.70	37.06	93.66	-178.39	-76.73	476.90	402.40	74.50	6.401		
10,700.00	10,511.51	10,612.39	10,478.06	37.89	37.20	92.73	-185.38	-39.55	493.15	418.30	74.85	6.588		
10,750.00	10,526.08	10,656.24	10,497.01	38.11	37.36	91.77	-192.69	-0.70	509.97	434.73	75.24	6.778		
10,794.49	10,535.49	10,695.45	10,511.35	38.33	37.52	90.90	-199.43	35.16	525.33	449.72	75.62	6.947		
10,800.00	10,536.44	10,700.33	10,512.96	38.36	37.54	90.88	-200.28	39.68	527.26	451.59	75.67	6.968		
10,850.00	10,543.54	10,744.88	10,525.82	38.63	37.74	90.53	-208.16	81.60	544.88	468.76	76.12	7.158		
10,900.00	10,548.04	10,789.98	10,535.42	38.92	37.96	90.03	-216.31	124.89	562.72	486.12	76.60	7.346		
10,950.00	10,549.94	10,835.82	10,542.31	39.25	38.22	89.45	-224.68	169.43	580.69	503.56	77.13	7.529		
10,961.15	10,550.00	10,846.08	10,543.55	39.32	38.27	89.32	-226.56	179.43	584.71	507.46	77.25	7.569		
11,000.00	10,550.00	10,882.09	10,547.05	39.59	38.49	89.70	-233.18	214.65	598.36	520.66	77.69	7.701		
11,100.00	10,550.00	10,966.42	10,550.00	40.39	39.20	90.00	-252.23	317.15	629.98	550.87	79.11	7.963		
11,200.00	10,550.00	11,133.39	10,550.00	41.31	40.46	90.00	-271.57	462.80	651.56	570.21	81.34	8.010		
11,300.00	10,550.00	11,285.14	10,550.00	42.34	42.00	90.00	-279.73	614.30	660.22	576.26	83.97	7.863		
11,313.54	10,550.00	11,305.83	10,550.00	42.49	42.23	90.00	-279.91	634.98	660.38	576.04	84.34	7.830		
11,400.00	10,550.00	11,405.74	10,550.00	43.47	43.40	90.00	-279.95	723.42	660.38	573.89	86.49	7.635		
11,500.00	10,550.00	11,505.74	10,550.00	44.71	44.67	90.00	-279.98	823.42	660.37	571.37	89.00	7.420		
11,600.00	10,550.00	11,605.74	10,550.00	46.03	46.03	90.00	-280.00	923.42	660.36	568.67	91.69	7.202		
11,700.00	10,550.00	11,705.74	10,550.00	47.45	47.48	90.00	-280.03	1,023.42	660.35	565.80	94.55	6.984		
11,800.00	10,550.00	11,805.74	10,550.00	48.94	49.01	90.00	-280.06	1,123.42	660.34	562.76	97.58	6.767		
11,900.00	10,550.00	11,905.74	10,550.00	50.50	50.60	90.00	-280.09	1,223.42	660.33	559.59	100.74	6.555		
12,000.00	10,550.00	12,005.74	10,550.00	52.13	52.26	90.00	-280.12	1,323.42	660.32	556.29	104.04	6.347		
12,100.00	10,550.00	12,105.74	10,550.00	53.82	53.97	90.00	-280.14	1,423.42	660.31	552.87	107.45	6.145		
12,200.00	10,550.00	12,205.74	10,550.00	55.56	55.74	90.00	-280.17	1,523.42	660.30	549.34	110.97	5.950		
12,300.00	10,550.00	12,305.74	10,550.00	57.35	57.56	90.00	-280.20	1,623.42	660.29	545.71	114.58	5.763		
12,400.00	10,550.00	12,405.74	10,550.00	59.19	59.42	90.00	-280.23	1,723.42	660.28	542.00	118.29	5.582		
12,500.00	10,550.00	12,505.74	10,550.00	61.07	61.31	90.00	-280.26	1,823.42	660.28	538.20	122.07	5.409		
12,600.00	10,550.00	12,605.74	10,550.00	62.98	63.25	90.00	-280.28	1,923.42	660.27	534.34	125.93	5.243		
12,700.00	10,550.00	12,705.74	10,550.00	64.93	65.22	90.00	-280.31	2,023.42	660.26	530.40	129.85	5.085		
12,800.00	10,550.00	12,805.74	10,550.00	66.91	67.21	90.00	-280.34	2,123.42	660.25	526.41	133.84	4.933		
12,900.00	10,550.00	12,905.74	10,550.00	68.92	69.24	90.00	-280.37	2,223.42	660.24	522.36	137.88	4.789		
13,000.00	10,550.00	13,005.74	10,550.00	70.96	71.29	90.00	-280.40	2,323.42	660.23	518.26	141.97	4.651		
13,100.00	10,550.00	13,105.74	10,550.00	73.01	73.36	90.00	-280.42	2,423.42	660.22	514.11	146.11	4.519		
13,200.00	10,550.00	13,205.74	10,550.00	75.09	75.45	90.00	-280.45	2,523.42	660.21	509.92	150.28	4.393		
13,300.00	10,550.00	13,305.74	10,550.00	77.19	77.56	90.00	-280.48	2,623.42	660.20	505.70	154.50	4.273		
13,400.00	10,550.00	13,405.74	10,550.00	79.31	79.69	90.00	-280.51	2,723.42	660.19	501.43	158.76	4.158		
13,500.00	10,550.00	13,505.74	10,550.00	81.45	81.84	90.00	-280.54	2,823.42	660.18	497.14	163.05	4.049		
13,600.00	10,550.00	13,605.74	10,550.00	83.60	84.00	90.00	-280.56	2,923.42	660.17	492.81	167.36	3.945		

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #225H - Wellbore #1 - Design #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 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	
13,700.00	10,550.00	13,705.74	10,550.00	85.76	86.18	90.00	-280.59	3,023.42	660.16	488.45	171.71	3.845	
13,800.00	10,550.00	13,805.74	10,550.00	87.94	88.36	90.00	-280.62	3,123.42	660.15	484.07	176.08	3.749	
13,900.00	10,550.00	13,905.74	10,550.00	90.13	90.56	90.00	-280.65	3,223.42	660.14	479.66	180.48	3.658	
14,000.00	10,550.00	14,005.74	10,550.00	92.34	92.78	90.00	-280.68	3,323.42	660.13	475.23	184.90	3.570	
14,100.00	10,550.00	14,105.74	10,550.00	94.55	95.00	90.00	-280.71	3,423.42	660.12	470.78	189.34	3.486	
14,200.00	10,550.00	14,205.74	10,550.00	96.78	97.23	90.00	-280.73	3,523.42	660.12	466.31	193.80	3.406	
14,300.00	10,550.00	14,305.74	10,550.00	99.01	99.47	90.00	-280.76	3,623.42	660.11	461.83	198.28	3.329	
14,400.00	10,550.00	14,405.74	10,550.00	101.25	101.72	90.00	-280.79	3,723.42	660.10	457.32	202.77	3.255	
14,500.00	10,550.00	14,505.74	10,550.00	103.50	103.98	90.00	-280.82	3,823.42	660.09	452.80	207.29	3.184	
14,600.00	10,550.00	14,605.74	10,550.00	105.76	106.24	90.00	-280.85	3,923.42	660.08	448.27	211.81	3.116	
14,700.00	10,550.00	14,705.74	10,550.00	108.03	108.51	90.00	-280.87	4,023.42	660.07	443.72	216.35	3.051	
14,800.00	10,550.00	14,805.74	10,550.00	110.30	110.79	90.00	-280.90	4,123.42	660.06	439.15	220.90	2.988	
14,900.00	10,550.00	14,905.74	10,550.00	112.58	113.07	90.00	-280.93	4,223.42	660.05	434.58	225.47	2.927	
15,000.00	10,550.00	15,005.74	10,550.00	114.86	115.36	90.00	-280.96	4,323.42	660.04	429.99	230.05	2.869	
15,100.00	10,550.00	15,105.74	10,550.00	117.15	117.66	90.00	-280.99	4,423.42	660.03	425.39	234.64	2.813	
15,200.00	10,550.00	15,205.74	10,550.00	119.45	119.96	90.00	-281.01	4,523.42	660.02	420.79	239.23	2.759	
15,300.00	10,550.00	15,305.74	10,550.00	121.75	122.26	90.00	-281.04	4,623.42	660.01	416.17	243.84	2.707	
15,400.00	10,550.00	15,394.26	10,550.00	124.05	124.30	90.00	-281.07	4,723.42	660.00	411.81	248.19	2.659	
15,431.68	10,550.00	15,425.94	10,550.00	124.78	124.84	90.00	-281.08	4,755.09	660.00	410.54	249.46	2.646 SF	



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #226H - Wellbore #1 - Design #1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							
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	Warning
0.00	0.00	1.16	1.16	0.00	0.00	-160.79	-1,703.57	-593.42	1,803.97				
100.00	100.00	101.16	101.16	0.13	0.13	-160.79	-1,703.57	-593.42	1,803.97	1,803.71	0.26	6,973.919	
200.00	200.00	201.16	201.16	0.49	0.49	-160.79	-1,703.57	-593.42	1,803.97	1,802.99	0.98	1,849.054	
300.00	300.00	301.16	301.16	0.84	0.85	-160.79	-1,703.57	-593.42	1,803.97	1,802.27	1.69	1,065.822	
400.00	400.00	401.16	401.16	1.20	1.21	-160.79	-1,703.57	-593.42	1,803.97	1,801.56	2.41	748.689	
500.00	500.00	501.16	501.16	1.56	1.57	-160.79	-1,703.57	-593.42	1,803.97	1,800.84	3.13	577.003	
600.00	600.00	601.16	601.16	1.92	1.92	-160.79	-1,703.57	-593.42	1,803.97	1,800.12	3.84	469.369	
700.00	700.00	701.16	701.16	2.28	2.28	-160.79	-1,703.57	-593.42	1,803.97	1,799.41	4.56	395.578	
800.00	800.00	801.16	801.16	2.64	2.64	-160.79	-1,703.57	-593.42	1,803.97	1,798.69	5.28	341.837	
900.00	900.00	901.16	901.16	3.00	3.00	-160.79	-1,703.57	-593.42	1,803.97	1,797.97	5.99	300.951	
1,000.00	1,000.00	1,001.16	1,001.16	3.35	3.36	-160.79	-1,703.57	-593.42	1,803.97	1,797.26	6.71	268.801 CC	
1,100.00	1,099.99	1,101.15	1,101.15	3.71	3.72	-104.90	-1,703.57	-593.42	1,804.30	1,796.88	7.42	243.021	
1,200.00	1,199.91	1,201.07	1,201.07	4.06	4.07	-105.01	-1,703.57	-593.42	1,805.32	1,797.18	8.14	221.902	
1,266.67	1,266.45	1,267.61	1,267.61	4.30	4.31	-105.12	-1,703.57	-593.42	1,806.38	1,797.77	8.61	209.769	
1,300.00	1,299.70	1,300.86	1,300.86	4.42	4.43	-105.19	-1,703.57	-593.42	1,806.99	1,798.14	8.85	204.190	
1,400.00	1,399.46	1,400.62	1,400.62	4.78	4.79	-105.40	-1,703.57	-593.42	1,808.83	1,799.26	9.57	189.089	
1,500.00	1,499.22	1,500.38	1,500.38	5.14	5.15	-105.61	-1,703.57	-593.42	1,810.70	1,800.41	10.28	176.059	
1,600.00	1,598.97	1,600.13	1,600.13	5.50	5.50	-105.82	-1,703.57	-593.42	1,812.59	1,801.59	11.00	164.708	
1,700.00	1,698.73	1,700.11	1,699.89	5.86	5.86	-106.04	-1,703.57	-593.42	1,814.51	1,802.79	11.73	154.725	
1,800.00	1,798.48	1,799.64	1,799.64	6.23	6.22	-106.25	-1,703.57	-593.42	1,816.46	1,804.01	12.45	145.908	
1,900.00	1,898.24	1,906.18	1,906.16	6.60	6.59	-106.52	-1,703.82	-591.97	1,818.24	1,805.05	13.19	137.892	
2,000.00	1,998.00	2,012.19	2,012.08	6.96	6.95	-106.88	-1,704.58	-587.61	1,819.70	1,805.79	13.91	130.784	
2,100.00	2,097.75	2,114.58	2,114.25	7.33	7.30	-107.30	-1,705.73	-580.96	1,820.93	1,806.30	14.63	124.434	
2,200.00	2,197.51	2,213.65	2,213.08	7.70	7.65	-107.73	-1,706.91	-574.15	1,822.22	1,806.87	15.35	118.744	
2,300.00	2,297.27	2,312.72	2,311.91	8.07	7.99	-108.15	-1,708.09	-567.34	1,823.61	1,807.54	16.06	113.545	
2,400.00	2,397.02	2,411.79	2,410.73	8.44	8.34	-108.57	-1,709.28	-560.53	1,825.09	1,808.31	16.78	108.778	
2,500.00	2,496.78	2,510.86	2,509.56	8.81	8.69	-108.99	-1,710.46	-553.72	1,826.68	1,809.18	17.50	104.395	
2,600.00	2,596.54	2,609.93	2,608.39	9.18	9.05	-109.41	-1,711.64	-546.91	1,828.37	1,810.15	18.22	100.353	
2,700.00	2,696.29	2,709.00	2,707.22	9.55	9.40	-109.83	-1,712.82	-540.11	1,830.15	1,811.21	18.94	96.615	
2,800.00	2,796.05	2,808.07	2,806.05	9.92	9.76	-110.24	-1,714.00	-533.30	1,832.04	1,812.37	19.67	93.151	
2,850.00	2,845.92	2,857.85	2,855.70	10.11	9.93	-110.45	-1,714.60	-529.87	1,833.02	1,812.99	20.03	91.508	
2,900.00	2,895.78	2,908.83	2,906.53	10.29	10.12	-110.68	-1,715.28	-525.93	1,834.11	1,813.71	20.40	89.901	
3,000.00	2,995.32	3,009.76	3,006.97	10.67	10.49	-111.23	-1,716.98	-516.15	1,837.00	1,815.85	21.15	86.864	
3,100.00	3,094.57	3,109.01	3,105.45	11.06	10.86	-111.90	-1,719.09	-504.00	1,840.95	1,819.04	21.90	84.054	
3,116.66	3,111.08	3,125.21	3,121.48	11.12	10.92	-112.02	-1,719.47	-501.79	1,841.72	1,819.69	22.03	83.608	
3,200.00	3,193.60	3,205.46	3,200.96	11.45	11.22	-112.68	-1,721.38	-490.78	1,845.82	1,823.16	22.66	81.469	
3,300.00	3,292.63	3,301.76	3,296.32	11.85	11.59	-113.48	-1,723.67	-477.58	1,851.08	1,827.67	23.41	79.058	
3,400.00	3,391.65	3,401.95	3,391.68	12.25	11.98	-114.26	-1,725.96	-464.38	1,856.72	1,832.53	24.19	76.757	
3,500.00	3,490.68	3,505.65	3,487.04	12.65	12.38	-115.05	-1,728.25	-451.18	1,862.73	1,837.75	24.98	74.565	
3,600.00	3,589.71	3,590.65	3,582.40	13.05	12.71	-115.82	-1,730.54	-437.98	1,869.12	1,843.41	25.70	72.721	
3,700.00	3,688.73	3,686.95	3,677.76	13.45	13.09	-116.60	-1,732.83	-424.78	1,875.86	1,849.39	26.47	70.870	
3,800.00	3,787.76	3,783.25	3,773.12	13.85	13.46	-117.36	-1,735.12	-411.58	1,882.97	1,855.74	27.24	69.133	
3,900.00	3,886.79	3,879.54	3,868.48	14.26	13.84	-118.12	-1,737.41	-398.38	1,890.44	1,862.44	28.01	67.501	
4,000.00	3,985.82	3,975.84	3,963.85	14.66	14.23	-118.88	-1,739.70	-385.18	1,898.26	1,869.49	28.78	65.967	
4,100.00	4,084.84	4,072.14	4,059.21	15.07	14.61	-119.63	-1,741.99	-371.98	1,906.43	1,876.89	29.55	64.524	
4,200.00	4,183.87	4,172.91	4,159.10	15.47	15.01	-120.39	-1,744.25	-358.95	1,914.86	1,884.53	30.33	63.129	
4,300.00	4,282.90	4,276.27	4,261.88	15.88	15.41	-121.08	-1,746.12	-348.21	1,923.29	1,892.17	31.12	61.799	
4,400.00	4,381.92	4,380.88	4,366.18	16.29	15.80	-121.69	-1,747.52	-340.15	1,931.62	1,899.71	31.91	60.542	
4,500.00	4,480.95	4,486.63	4,471.78	16.70	16.18	-122.21	-1,748.43	-334.85	1,939.75	1,907.06	32.68	59.351	
4,600.00	4,579.98	4,593.36	4,578.48	17.10	16.56	-122.66	-1,748.85	-332.43	1,947.60	1,914.15	33.45	58.220	
4,700.00	4,679.00	4,704.96	4,680.16	17.51	16.94	-123.01	-1,748.88	-332.28	1,955.23	1,921.00	34.23	57.126	
4,753.24	4,731.73	4,747.77	4,732.89	17.73	17.08	-123.19	-1,748.88	-332.28	1,959.30	1,924.72	34.58	56.657	

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



Anticollision Report

Company: Matador Resources
 Project: Eddy County, New Mexico (NAD 27)
 Reference Site: Zach McCormick Federal 18-24S-29E RB
 Site Error: 0.00 usft
 Reference Well: #221H
 Well Error: 0.00 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
 TVD Reference: WELL @ 2981.93usft (Patterson 297)
 MD Reference: WELL @ 2981.93usft (Patterson 297)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Conroe DB
 Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #226H - Wellbore #1 - Design #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWDD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Distance							
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	Warning
4,800.00	4,778.07	4,805.89	4,779.23	17.92	17.28	-123.39	-1,748.88	-332.28	1,962.74	1,927.78	34.96	56.138	
4,900.00	4,877.41	4,906.55	4,878.57	18.32	17.62	-123.74	-1,748.88	-332.28	1,969.07	1,933.38	35.69	55.172	
5,000.00	4,977.02	5,006.94	4,978.18	18.70	17.97	-124.01	-1,748.88	-332.28	1,973.99	1,937.58	36.41	54.220	
5,100.00	5,076.83	5,107.13	5,077.99	19.07	18.31	-124.20	-1,748.88	-332.28	1,977.47	1,940.35	37.11	53.280	
5,200.00	5,176.76	5,207.20	5,177.92	19.43	18.65	-124.32	-1,748.88	-332.28	1,979.48	1,941.67	37.81	52.349	
5,286.58	5,263.33	5,279.37	5,264.49	19.72	18.90	179.73	-1,748.88	-332.28	1,980.03	1,941.67	38.36	51.619	
5,300.00	5,276.75	5,307.21	5,277.91	19.77	19.00	179.73	-1,748.88	-332.28	1,980.03	1,941.53	38.50	51.430	
5,400.00	5,376.75	5,407.21	5,377.91	20.10	19.34	179.73	-1,748.88	-332.28	1,980.03	1,940.85	39.18	50.533	
5,500.00	5,476.75	5,507.21	5,477.91	20.44	19.69	179.73	-1,748.88	-332.28	1,980.03	1,940.17	39.87	49.666	
5,600.00	5,576.75	5,607.21	5,577.91	20.77	20.03	179.73	-1,748.88	-332.28	1,980.03	1,939.48	40.55	48.827	
5,700.00	5,676.75	5,707.21	5,677.91	21.11	20.38	179.73	-1,748.88	-332.28	1,980.03	1,938.79	41.24	48.014	
5,800.00	5,776.75	5,807.21	5,777.91	21.45	20.72	179.73	-1,748.88	-332.28	1,980.03	1,938.11	41.93	47.227	
5,900.00	5,876.75	5,907.21	5,877.91	21.78	21.07	179.73	-1,748.88	-332.28	1,980.03	1,937.42	42.61	46.464	
6,000.00	5,976.75	6,007.21	5,977.91	22.12	21.42	179.73	-1,748.88	-332.28	1,980.03	1,936.73	43.30	45.724	
6,100.00	6,076.75	6,107.21	6,077.91	22.46	21.76	179.73	-1,748.88	-332.28	1,980.03	1,936.04	43.99	45.007	
6,200.00	6,176.75	6,207.21	6,177.91	22.80	22.11	179.73	-1,748.88	-332.28	1,980.03	1,935.35	44.68	44.311	
6,300.00	6,276.75	6,307.21	6,277.91	23.14	22.46	179.73	-1,748.88	-332.28	1,980.03	1,934.66	45.38	43.635	
6,400.00	6,376.75	6,407.21	6,377.91	23.48	22.81	179.73	-1,748.88	-332.28	1,980.03	1,933.96	46.07	42.979	
6,500.00	6,476.75	6,507.21	6,477.91	23.83	23.16	179.73	-1,748.88	-332.28	1,980.03	1,933.27	46.76	42.342	
6,600.00	6,576.75	6,607.21	6,577.91	24.17	23.51	179.73	-1,748.88	-332.28	1,980.03	1,932.58	47.46	41.723	
6,700.00	6,676.75	6,707.21	6,677.91	24.51	23.85	179.73	-1,748.88	-332.28	1,980.03	1,931.88	48.15	41.121	
6,800.00	6,776.75	6,807.21	6,777.91	24.85	24.20	179.73	-1,748.88	-332.28	1,980.03	1,931.19	48.85	40.536	
6,900.00	6,876.75	6,907.21	6,877.91	25.20	24.55	179.73	-1,748.88	-332.28	1,980.03	1,930.49	49.54	39.966	
7,000.00	6,976.75	7,007.21	6,977.91	25.54	24.90	179.73	-1,748.88	-332.28	1,980.03	1,929.79	50.24	39.412	
7,100.00	7,076.75	7,107.21	7,077.91	25.88	25.25	179.73	-1,748.88	-332.28	1,980.03	1,929.10	50.94	38.873	
7,200.00	7,176.75	7,207.21	7,177.91	26.23	25.60	179.73	-1,748.88	-332.28	1,980.03	1,928.40	51.63	38.347	
7,300.00	7,276.75	7,307.21	7,277.91	26.57	25.95	179.73	-1,748.88	-332.28	1,980.03	1,927.70	52.33	37.836	
7,400.00	7,376.75	7,407.21	7,377.91	26.92	26.31	179.73	-1,748.88	-332.28	1,980.03	1,927.00	53.03	37.337	
7,500.00	7,476.75	7,507.21	7,477.91	27.27	26.66	179.73	-1,748.88	-332.28	1,980.03	1,926.30	53.73	36.852	
7,600.00	7,576.75	7,607.21	7,577.91	27.61	27.01	179.73	-1,748.88	-332.28	1,980.03	1,925.60	54.43	36.378	
7,700.00	7,676.75	7,707.21	7,677.91	27.96	27.36	179.73	-1,748.88	-332.28	1,980.03	1,924.90	55.13	35.916	
7,800.00	7,776.75	7,807.21	7,777.91	28.30	27.71	179.73	-1,748.88	-332.28	1,980.03	1,924.20	55.83	35.465	
7,900.00	7,876.75	7,907.21	7,877.91	28.65	28.06	179.73	-1,748.88	-332.28	1,980.03	1,923.50	56.53	35.026	
8,000.00	7,976.75	8,007.21	7,977.91	29.00	28.41	179.73	-1,748.88	-332.28	1,980.03	1,922.80	57.23	34.596	
8,100.00	8,076.75	8,107.21	8,077.91	29.35	28.77	179.73	-1,748.88	-332.28	1,980.03	1,922.10	57.93	34.177	
8,200.00	8,176.75	8,207.21	8,177.91	29.69	29.12	179.73	-1,748.88	-332.28	1,980.03	1,921.40	58.64	33.768	
8,300.00	8,276.75	8,307.21	8,277.91	30.04	29.47	179.73	-1,748.88	-332.28	1,980.03	1,920.69	59.34	33.368	
8,400.00	8,376.75	8,407.21	8,377.91	30.39	29.82	179.73	-1,748.88	-332.28	1,980.03	1,919.99	60.04	32.978	
8,500.00	8,476.75	8,507.21	8,477.91	30.74	30.18	179.73	-1,748.88	-332.28	1,980.03	1,919.29	60.74	32.596	
8,600.00	8,576.75	8,607.21	8,577.91	31.09	30.53	179.73	-1,748.88	-332.28	1,980.03	1,918.59	61.45	32.223	
8,700.00	8,676.75	8,707.21	8,677.91	31.44	30.88	179.73	-1,748.88	-332.28	1,980.03	1,917.88	62.15	31.858	
8,800.00	8,776.75	8,807.21	8,777.91	31.78	31.24	179.73	-1,748.88	-332.28	1,980.03	1,917.18	62.86	31.501	
8,900.00	8,876.75	8,907.21	8,877.91	32.13	31.59	179.73	-1,748.88	-332.28	1,980.03	1,916.47	63.56	31.152	
9,000.00	8,976.75	9,007.21	8,977.91	32.48	31.94	179.73	-1,748.88	-332.28	1,980.03	1,915.77	64.26	30.811	
9,100.00	9,076.75	9,107.21	9,077.91	32.83	32.30	179.73	-1,748.88	-332.28	1,980.03	1,915.06	64.97	30.477	
9,200.00	9,176.75	9,207.21	9,177.91	33.18	32.65	179.73	-1,748.88	-332.28	1,980.03	1,914.36	65.67	30.149	
9,300.00	9,276.75	9,307.21	9,277.91	33.53	33.00	179.73	-1,748.88	-332.28	1,980.03	1,913.65	66.38	29.829	
9,400.00	9,376.75	9,407.21	9,377.91	33.88	33.36	179.73	-1,748.88	-332.28	1,980.03	1,912.95	67.09	29.515	
9,500.00	9,476.75	9,507.21	9,477.91	34.23	33.71	179.73	-1,748.88	-332.28	1,980.03	1,912.24	67.79	29.208	
9,600.00	9,576.75	9,607.21	9,577.91	34.58	34.06	179.73	-1,748.88	-332.28	1,980.03	1,911.54	68.50	28.907	
9,700.00	9,676.75	9,707.21	9,677.91	34.94	34.42	179.73	-1,748.88	-332.28	1,980.03	1,910.83	69.20	28.612	
9,800.00	9,776.75	9,807.21	9,777.91	35.29	34.77	179.73	-1,748.88	-332.28	1,980.03	1,910.12	69.91	28.323	

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



Anticollision Report

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well#221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #226H - Wellbore #1 - Design #1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD												Offset Well Error:	0.00 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	
9,900.00	9,876.75	9,907.21	9,877.91	35.64	35.13	179.73	-1,748.88	-332.28	1,980.03	1,909.42	70.62	28.039	
9,994.49	9,971.24	9,989.15	9,974.26	35.97	35.42	179.73	-1,748.88	-332.27	1,980.03	1,908.79	71.24	27.794	
10,000.00	9,976.75	10,000.00	9,982.19	35.99	35.46	100.27	-1,748.86	-332.15	1,980.02	1,908.72	71.30	27.771	
10,050.00	10,026.67	10,132.25	10,115.79	36.15	35.95	100.02	-1,745.49	-314.06	1,979.22	1,907.30	71.92	27.520	
10,100.00	10,076.16	10,254.07	10,229.53	36.31	36.44	99.45	-1,737.62	-271.80	1,977.31	1,904.85	72.46	27.288	
10,150.00	10,124.85	10,365.20	10,323.26	36.45	36.93	98.67	-1,726.74	-213.43	1,974.55	1,901.57	72.98	27.056	
10,200.00	10,172.38	10,464.38	10,395.86	36.59	37.42	97.79	-1,714.41	-147.18	1,971.23	1,897.72	73.52	26.814	
10,250.00	10,218.37	10,552.15	10,449.59	36.72	37.90	96.91	-1,701.72	-79.05	1,967.66	1,893.57	74.09	26.558	
10,300.00	10,262.48	10,629.97	10,487.89	36.84	38.38	96.05	-1,689.33	-12.52	1,964.08	1,889.37	74.70	26.291	
10,350.00	10,304.38	10,699.47	10,514.06	36.95	38.85	95.24	-1,677.55	50.72	1,960.66	1,885.32	75.34	26.024	
10,400.00	10,343.74	10,762.17	10,530.84	37.05	39.32	94.46	-1,666.49	110.09	1,957.55	1,881.56	75.99	25.760	
10,450.00	10,380.26	10,814.92	10,540.07	37.16	39.74	93.80	-1,656.99	161.13	1,954.86	1,878.25	76.61	25.518	
10,500.00	10,413.68	10,863.18	10,545.80	37.27	40.14	93.20	-1,648.21	208.24	1,952.71	1,875.50	77.21	25.292	
10,550.00	10,443.72	10,911.01	10,549.09	37.39	40.57	92.60	-1,639.48	255.14	1,951.06	1,873.24	77.82	25.071	
10,600.00	10,470.17	10,958.46	10,549.98	37.53	41.00	92.01	-1,630.79	301.78	1,949.86	1,871.41	78.45	24.854	
10,650.00	10,492.82	10,977.42	10,550.00	37.70	41.19	91.80	-1,627.48	320.44	1,949.40	1,870.55	78.85	24.723	
10,650.44	10,493.00	10,977.62	10,550.00	37.70	41.19	91.80	-1,627.44	320.64	1,949.40	1,870.54	78.85	24.722	
10,700.00	10,511.51	11,000.00	10,550.00	37.89	41.41	91.51	-1,623.76	342.72	1,949.83	1,870.54	79.29	24.592	
10,750.00	10,526.08	11,024.01	10,550.00	38.11	41.66	91.18	-1,620.10	366.44	1,951.09	1,871.32	79.77	24.459	
10,794.49	10,535.49	11,045.49	10,550.00	38.33	41.89	90.87	-1,617.08	387.71	1,952.87	1,872.65	80.21	24.346	
10,800.00	10,536.44	11,048.17	10,550.00	38.36	41.91	90.84	-1,616.72	390.36	1,953.13	1,872.86	80.27	24.332	
10,850.00	10,543.54	11,072.59	10,550.00	38.63	42.17	90.57	-1,613.60	414.58	1,955.88	1,875.09	80.79	24.208	
10,900.00	10,548.04	11,100.00	10,550.00	38.92	42.46	90.30	-1,610.48	441.82	1,959.32	1,877.95	81.37	24.079	
10,950.00	10,549.94	11,121.68	10,550.00	39.25	42.72	90.03	-1,608.28	463.39	1,963.41	1,881.48	81.93	23.965	
10,961.15	10,550.00	11,127.16	10,550.00	39.32	42.78	89.97	-1,607.77	468.84	1,964.41	1,882.35	82.06	23.938	
11,000.00	10,550.00	11,146.23	10,550.00	39.59	43.00	89.97	-1,606.10	487.84	1,967.75	1,885.21	82.54	23.840	
11,100.00	10,550.00	11,200.00	10,550.00	40.39	43.63	89.97	-1,602.40	541.48	1,974.52	1,890.61	83.91	23.531	
11,200.00	10,550.00	11,244.42	10,550.00	41.31	44.19	89.97	-1,600.49	585.86	1,978.60	1,893.28	85.32	23.191	
11,300.00	10,550.00	11,305.17	10,550.00	42.34	44.97	89.97	-1,599.55	646.59	1,980.10	1,893.05	87.05	22.746	
11,313.54	10,550.00	11,305.17	10,550.00	42.49	44.97	89.97	-1,599.55	646.59	1,980.03	1,892.86	87.18	22.713	
11,346.24	10,550.00	11,327.68	10,550.00	42.86	45.27	89.97	-1,599.55	669.10	1,980.01	1,892.17	87.84	22.542	
11,400.00	10,550.00	11,381.44	10,550.00	43.47	46.00	89.97	-1,599.57	722.87	1,980.01	1,890.83	89.18	22.203	
11,500.00	10,550.00	11,481.44	10,550.00	44.71	47.43	89.97	-1,599.61	822.87	1,980.01	1,888.16	91.84	21.559	
11,600.00	10,550.00	11,581.44	10,550.00	46.03	48.94	89.97	-1,599.65	922.87	1,980.01	1,885.33	94.68	20.913	
11,700.00	10,550.00	11,681.44	10,550.00	47.45	50.51	89.97	-1,599.69	1,022.87	1,980.01	1,882.33	97.67	20.272	
11,800.00	10,550.00	11,781.44	10,550.00	48.94	52.16	89.97	-1,599.72	1,122.87	1,980.01	1,879.19	100.81	19.641	
11,900.00	10,550.00	11,881.44	10,550.00	50.50	53.86	89.97	-1,599.76	1,222.87	1,980.01	1,875.92	104.08	19.024	
12,000.00	10,550.00	11,981.44	10,550.00	52.13	55.61	89.97	-1,599.80	1,322.87	1,980.00	1,872.53	107.47	18.424	
12,100.00	10,550.00	12,081.44	10,550.00	53.82	57.42	89.97	-1,599.83	1,422.87	1,980.00	1,869.04	110.97	17.843	
12,200.00	10,550.00	12,181.44	10,550.00	55.56	59.26	89.97	-1,599.87	1,522.87	1,980.00	1,865.44	114.57	17.283	
12,300.00	10,550.00	12,281.44	10,550.00	57.35	61.15	89.97	-1,599.91	1,622.87	1,980.00	1,861.75	118.25	16.744	
12,400.00	10,550.00	12,381.44	10,550.00	59.19	63.08	89.97	-1,599.95	1,722.87	1,980.00	1,857.98	122.02	16.227	
12,500.00	10,550.00	12,481.44	10,550.00	61.07	65.03	89.97	-1,599.98	1,822.87	1,980.00	1,854.14	125.86	15.731	
12,600.00	10,550.00	12,581.44	10,550.00	62.98	67.02	89.97	-1,600.02	1,922.87	1,980.00	1,850.23	129.77	15.257	
12,700.00	10,550.00	12,681.44	10,550.00	64.93	69.04	89.97	-1,600.06	2,022.87	1,980.00	1,846.26	133.75	14.804	
12,800.00	10,550.00	12,781.44	10,550.00	66.91	71.08	89.97	-1,600.10	2,122.87	1,980.00	1,842.23	137.77	14.371	
12,900.00	10,550.00	12,881.44	10,550.00	68.92	73.15	89.97	-1,600.13	2,222.87	1,980.00	1,838.15	141.85	13.958	
13,000.00	10,550.00	12,981.44	10,550.00	70.96	75.23	89.97	-1,600.17	2,322.87	1,980.00	1,834.02	145.98	13.564	
13,100.00	10,550.00	13,081.44	10,550.00	73.01	77.34	89.97	-1,600.21	2,422.87	1,980.00	1,829.85	150.15	13.187	
13,200.00	10,550.00	13,181.44	10,550.00	75.09	79.46	89.97	-1,600.24	2,522.87	1,980.00	1,825.64	154.36	12.827	
13,300.00	10,550.00	13,281.44	10,550.00	77.19	81.60	89.97	-1,600.28	2,622.87	1,980.00	1,821.40	158.60	12.484	
13,400.00	10,550.00	13,381.44	10,550.00	79.31	83.76	89.97	-1,600.32	2,722.87	1,980.00	1,817.12	162.88	12.156	

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



Anticollision Report



Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design Zach McCormick Federal 18-24S-29E RB - #226H - Wellbore #1 - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD													Offset Well Error:	0.00 usft
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 Centra +N/-S (usft)	+E/-W (usft)						
13,500.00	10,550.00	13,481.44	10,550.00	81.45	85.93	89.97	-1,600.36	2,822.87	1,980.00	1,812.81	167.19	11.843		
13,600.00	10,550.00	13,581.44	10,550.00	83.60	88.12	89.97	-1,600.39	2,922.87	1,980.00	1,808.47	171.53	11.543		
13,700.00	10,550.00	13,681.44	10,550.00	85.76	90.31	89.97	-1,600.43	3,022.87	1,980.00	1,804.10	175.90	11.256		
13,800.00	10,550.00	13,781.44	10,550.00	87.94	92.52	89.97	-1,600.47	3,122.87	1,980.00	1,799.71	180.29	10.982		
13,900.00	10,550.00	13,881.44	10,550.00	90.13	94.74	89.97	-1,600.50	3,222.87	1,980.00	1,795.30	184.70	10.720		
14,000.00	10,550.00	13,981.44	10,550.00	92.34	96.97	89.97	-1,600.54	3,322.87	1,980.00	1,790.86	189.14	10.468		
14,100.00	10,550.00	14,081.44	10,550.00	94.55	99.20	89.97	-1,600.58	3,422.87	1,980.00	1,786.40	193.59	10.228		
14,200.00	10,550.00	14,181.44	10,550.00	96.78	101.45	89.97	-1,600.62	3,522.87	1,980.00	1,781.93	198.07	9.997		
14,300.00	10,550.00	14,281.44	10,550.00	99.01	103.70	89.97	-1,600.65	3,622.87	1,980.00	1,777.44	202.56	9.775		
14,400.00	10,550.00	14,381.44	10,550.00	101.25	105.96	89.97	-1,600.69	3,722.87	1,980.00	1,772.93	207.07	9.562		
14,500.00	10,550.00	14,481.44	10,550.00	103.50	108.23	89.97	-1,600.73	3,822.87	1,980.00	1,768.41	211.59	9.358		
14,600.00	10,550.00	14,581.44	10,550.00	105.76	110.51	89.97	-1,600.77	3,922.87	1,980.00	1,763.87	216.12	9.161		
14,700.00	10,550.00	14,681.44	10,550.00	108.03	112.79	89.97	-1,600.80	4,022.87	1,980.00	1,759.32	220.67	8.973		
14,800.00	10,550.00	14,781.44	10,550.00	110.30	115.08	89.97	-1,600.84	4,122.87	1,980.00	1,754.76	225.23	8.791		
14,900.00	10,550.00	14,881.44	10,550.00	112.58	117.37	89.97	-1,600.88	4,222.87	1,980.00	1,750.19	229.81	8.616		
15,000.00	10,550.00	14,981.44	10,550.00	114.86	119.67	89.97	-1,600.91	4,322.87	1,980.00	1,745.60	234.39	8.447		
15,100.00	10,550.00	15,081.44	10,550.00	117.15	121.97	89.97	-1,600.95	4,422.87	1,980.00	1,741.01	238.99	8.285		
15,200.00	10,550.00	15,181.44	10,550.00	119.45	124.28	89.97	-1,600.99	4,522.87	1,980.00	1,736.40	243.59	8.128		
15,300.00	10,550.00	15,281.44	10,550.00	121.75	126.59	89.97	-1,601.03	4,622.87	1,980.00	1,731.79	248.21	7.977		
15,400.00	10,550.00	15,381.44	10,550.00	124.05	128.90	89.97	-1,601.06	4,722.87	1,980.00	1,727.17	252.83	7.831		
15,431.68	10,550.00	15,413.12	10,550.00	124.78	129.64	89.97	-1,601.07	4,754.54	1,980.00	1,725.70	254.30	7.786 ES, SF		

Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 2981.93usft (Patterson 297) Coordinates are relative to: #221H

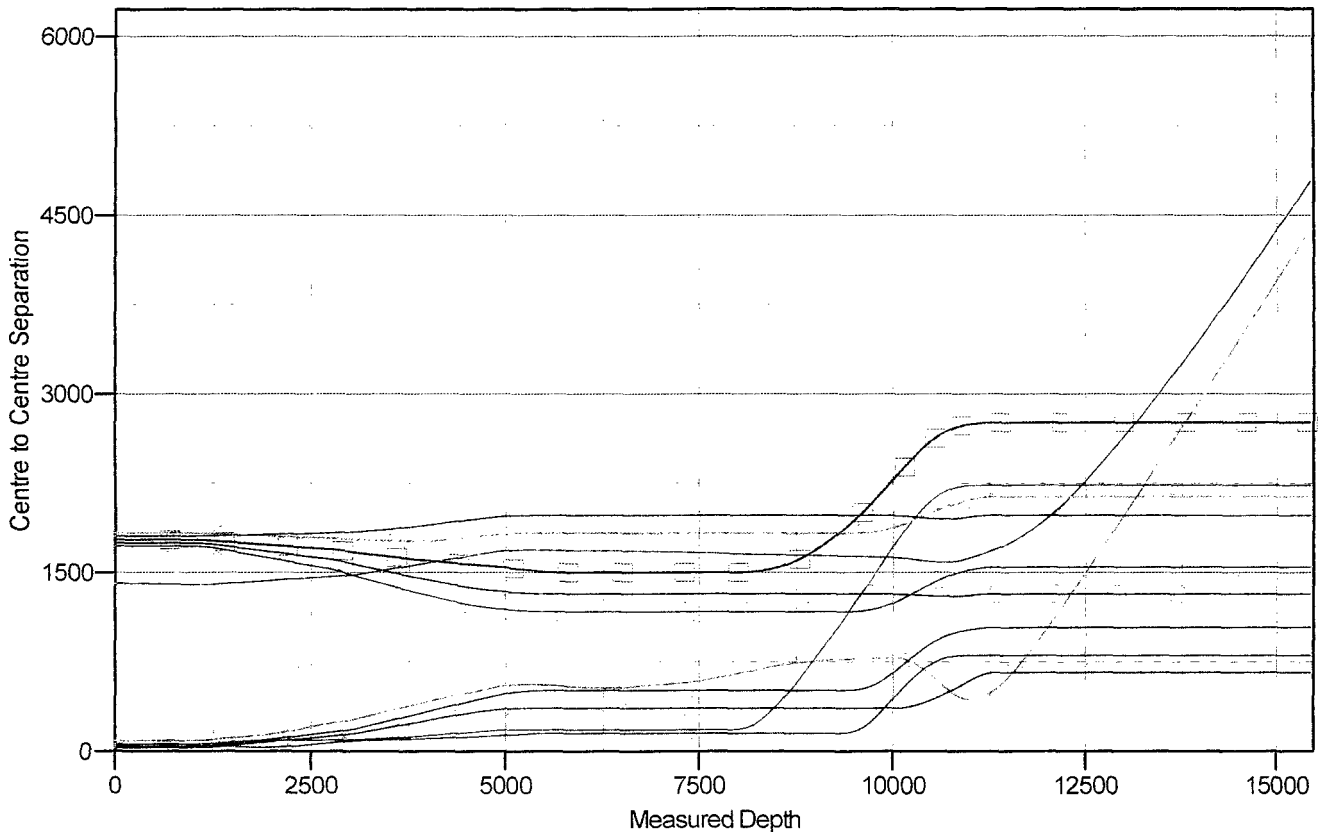
Offset Depths are relative to Offset Datum

Central Meridian is 104° 20' 0.000 W

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30

Grid Convergence at Surface is: 0.16°

Ladder Plot



LEGEND

—■— #1, 122H, Surveys V0	—▲— #121H, Wellbore #1, Design #1 V0	—■— #122H, Wellbore #1, Design #1 V0
—●— #222H, Wellbore #1, Design #1 V0	—✕— #201H, Wellbore #1, Design #1 V0	—●— #206H, Wellbore #1, Design #1 V0
—◆— #1, Wellbore #1, Surveys V0	—▲— #202H, Wellbore #1, Design #1 V0	—◆— #226H, Wellbore #1, Design #1 V0
—✕— #225H, Wellbore #1, Design #1 V0	—✕— #205H, Wellbore #1, Design #1 V0	



Company: Matador Resources
Project: Eddy County, New Mexico (NAD 27)
Reference Site: Zach McCormick Federal 18-24S-29E RB
Site Error: 0.00 usft
Reference Well: #221H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well #221H
TVD Reference: WELL @ 2981.93usft (Patterson 297)
MD Reference: WELL @ 2981.93usft (Patterson 297)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Conroe DB
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 2981.93usft (Patterson 297) Coordinates are relative to: #221H

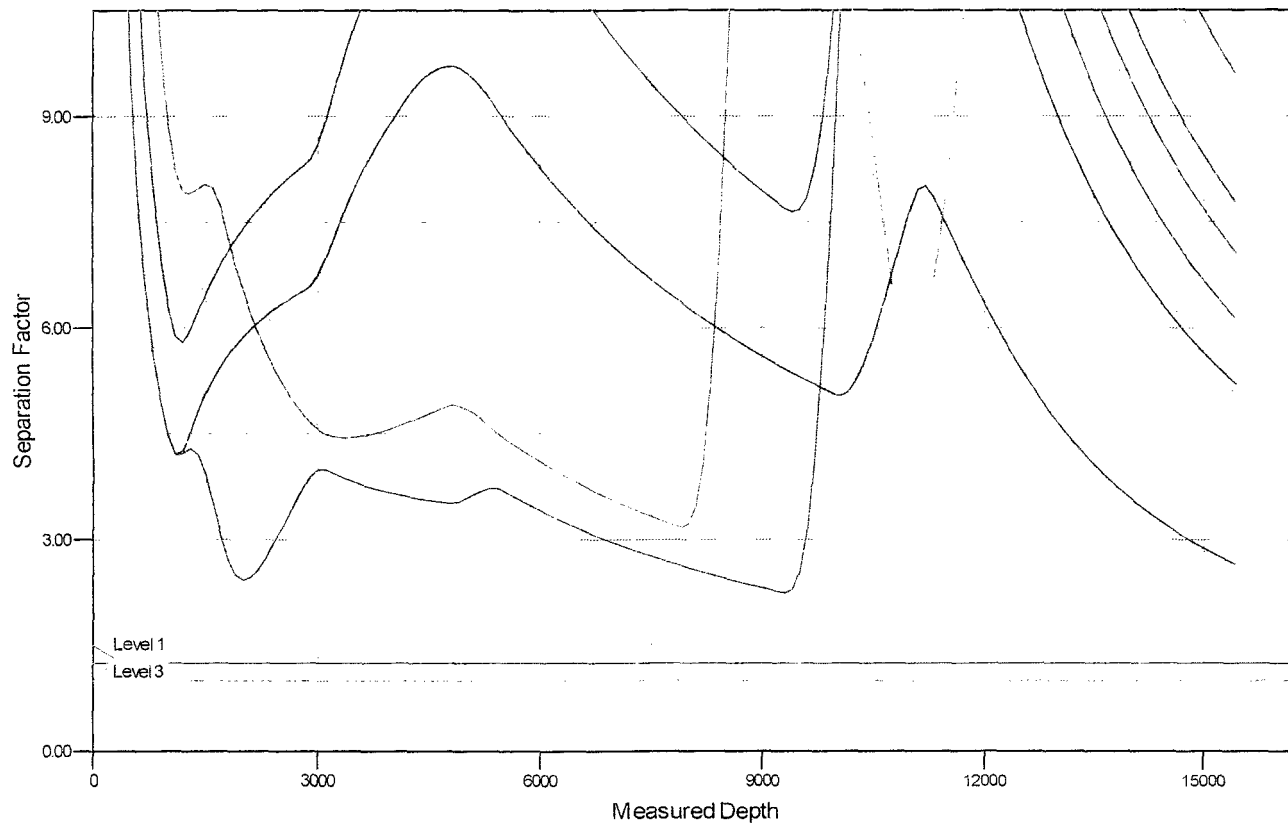
Offset Depths are relative to Offset Datum

Central Meridian is 104° 20' 0.000 W

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30

Grid Convergence at Surface is: 0.16°

Separation Factor Plot



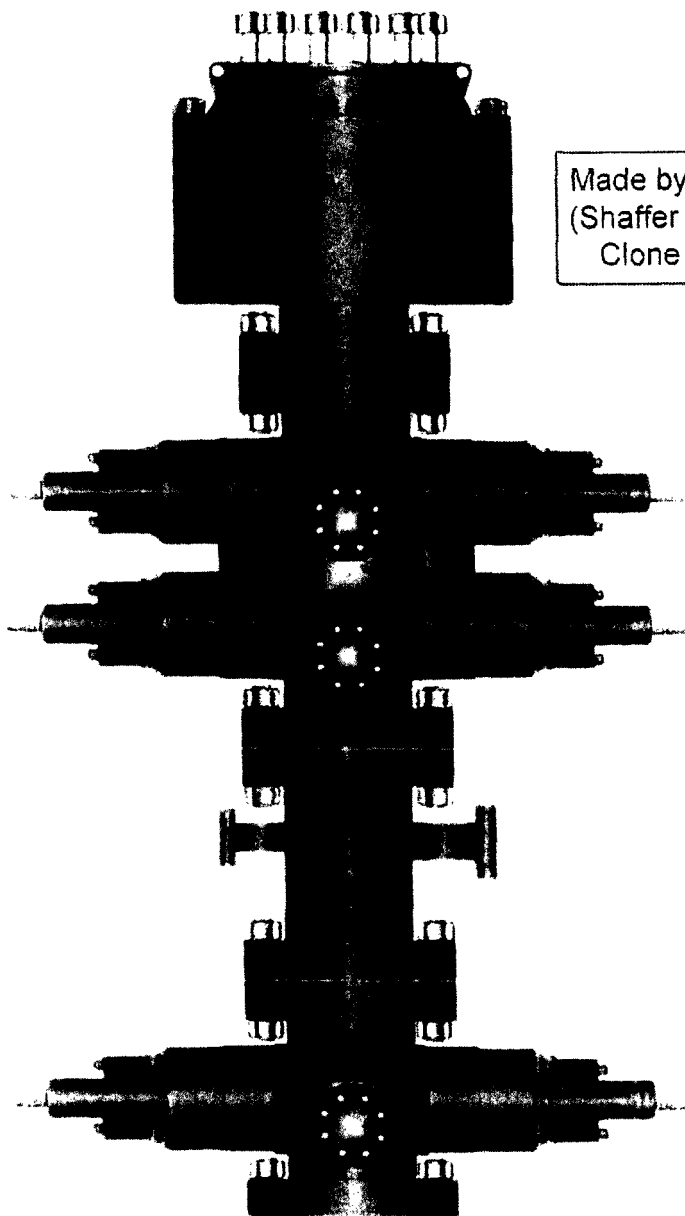
LEGEND

- | | | |
|--------------------------------------|--------------------------------------|--------------------------------------|
| —□— #1, 122H, Surveys V0 | —▲— #121H, Wellbore #1, Design #1 V0 | —□— #122H, Wellbore #1, Design #1 V0 |
| —○— #222H, Wellbore #1, Design #1 V0 | —✕— #201H, Wellbore #1, Design #1 V0 | —○— #206H, Wellbore #1, Design #1 V0 |
| —◆— #1, Wellbore #1, Surveys V0 | —▲— #202H, Wellbore #1, Design #1 V0 | —◆— #226H, Wellbore #1, Design #1 V0 |
| —✕— #225H, Wellbore #1, Design #1 V0 | —◆— #205H, Wellbore #1, Design #1 V0 | |



PATTERSON-UTI

Well Control



Made by Cameron
(Shaffer Spherical)
Clone Annular

PATTERSON-UTI # PS2-628
STYLE: New Shaffer Spherical
BORE 13 5/8" PRESSURE 5,000
HEIGHT: 48 1/2" WEIGHT: 13,800 lbs

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

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

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

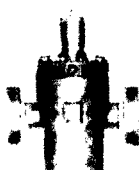
WING VALVES



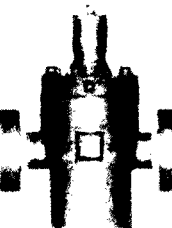
2" Check Valve



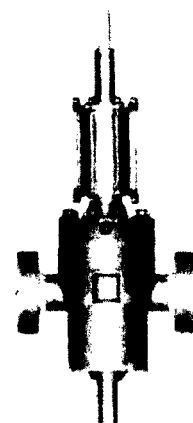
2" Manual Valve



2" Manual Valve



4" Manual Valve



4" Hydraulic Valve

3. PRESSURE CONTROL

A BOP stack consisting of 3 rams with 2 pipe rams, 1 blind ram and 1 annular preventer will be installed. The BOP will be used below surface casing to TD. See attachments for BOP and choke manifold diagrams.

An accumulator that meets the requirements of Onshore Order 2 for the pressure rating of the BOP stack will be present. A rotating head will be installed as needed.

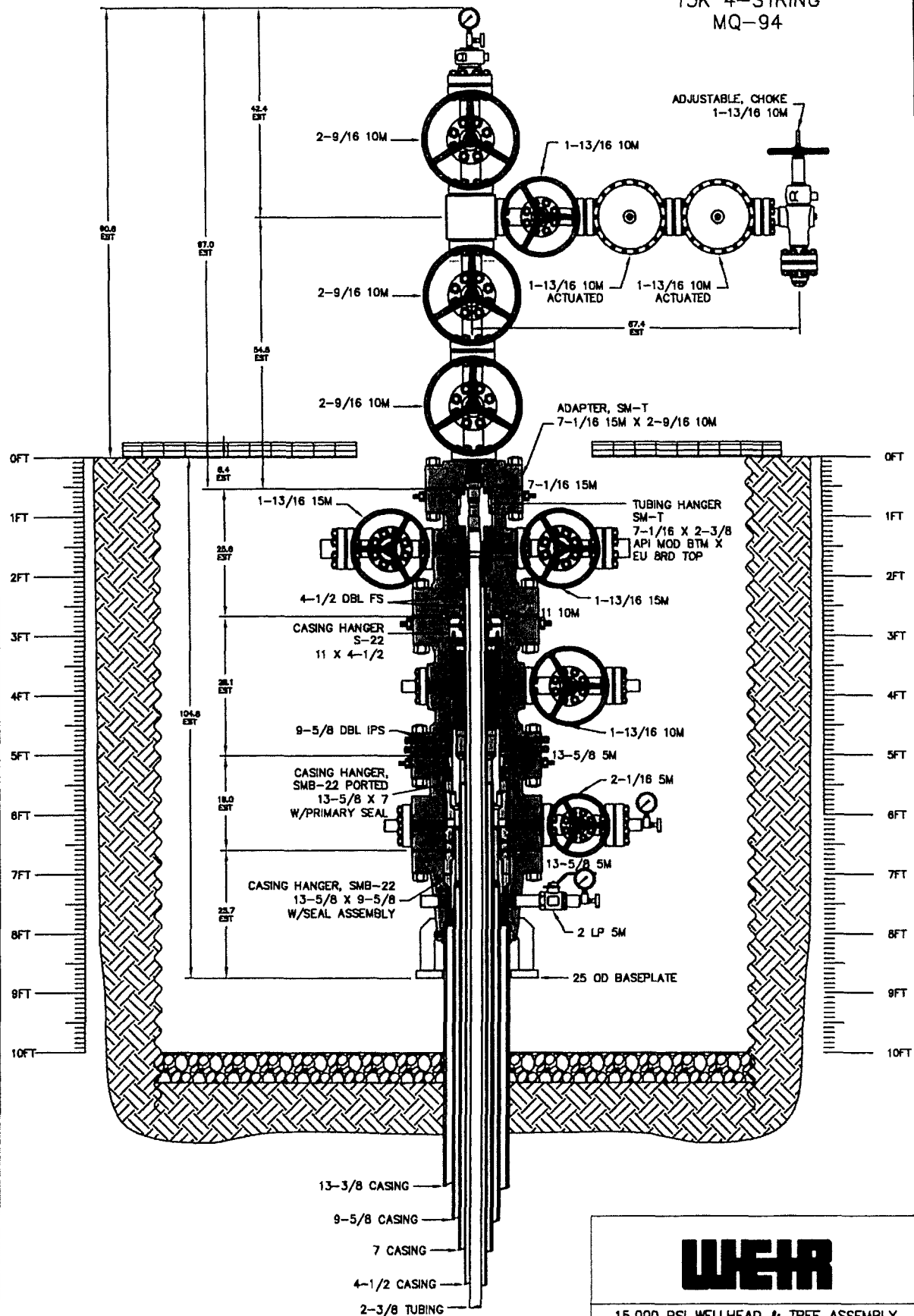
Pressure tests will be conducted before drilling out from under all casing strings. BOP will be inspected and operated as recommended in Onshore Order 2. A Kelly cock and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position.

A third party company will test the BOPs. Test pressures will be as follows: After surface casing is set and the BOP is nipped up, BOP pressure tests will be made to 250 psi low and 2000 psi high. On the intermediate #1, pressure tests will be made to 250 psi low and 3000 psi high. On the intermediate #2, pressure tests will be made to 250 psi low and 5000 psi high. The annular preventer will be tested to 250 psi low and 1000 psi high on the surface casing, and 250 psi low and 2500 psi high on the intermediate #1 and #2 casing. In the case of running a speed head with landing mandrel for 9-5/8" and 7" casing the initial, after surface casing is set, BOP test pressures will be 250 psi low and 3000 psi high with wellhead seals tested to 5000 psi once the 9-5/8" casing has been landed and cemented.

The BOP will then be lifted to install the 'C-section' of the wellhead. Matador will nipple the BOP back up and the pressure tests will be made to 250 psi low and 5000 psi high and the annular will be tested to 250 psi low and 2500 psi high.

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. In the event the specific hose is not available, one of equal or higher rating will be used.

MATADOR
15K 4-STRING
MQ-94



NOTE:
DIMENSIONS SHOWN ON THIS DRAWING ARE
ESTIMATES ONLY AND CAN VARY SIGNIFICANTLY
DEPENDING ON RAW MATERIAL LENGTHS.
NO GUARANTEE OF STACKUP HEIGHT IS IMPLIED.
DIMENSIONS SHOWN SHOULD BE CONSIDERED
FOR REFERENCE PURPOSES ONLY.

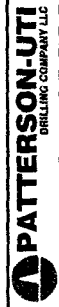
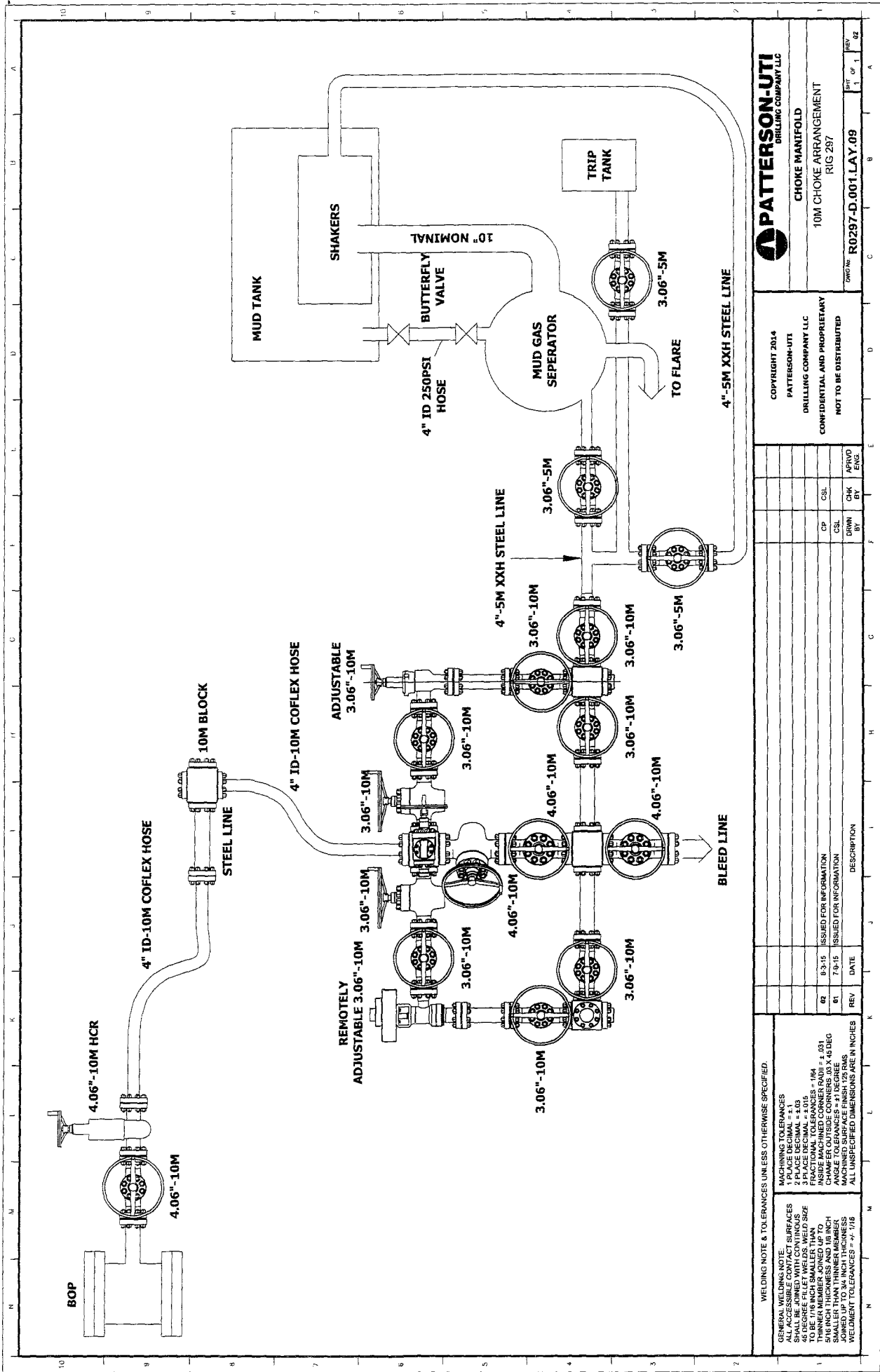
RESTRICTED CONFIDENTIAL DOCUMENT

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CONSENT OF BEARINGS INTERNATIONAL, INC.

WEIR

15,000 PSI WELLHEAD & TREE ASSEMBLY
13-3/8 X 9-5/8 X 7 X 4-1/2 X 2-3/8

DATE	RPL	SCALE	1:10	DATE	18JAN16	REV
CHECKED		DRAWING NO.				
APPROVED		P-20986				



CHOKE MANIFOLD
10M CHOKE ARRANGEMENT
RIG 297

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DRILLING COMPANY LLC
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REV	DATE	DESCRIPTION	BY	CHK	APP
02	8-3-15	ISSUED FOR INFORMATION	CP	CSL	APRVD
01	7-9-15	ISSUED FOR INFORMATION	CSL	DRWN	BY

WELDING NOTE & TOLERANCES UNLESS OTHERWISE SPECIFIED.

GENERAL WELDING NOTE:
ALL WELDS SHALL BE FULL PENETRATION BUTT JOINTS.
ALL SURFACES SHALL BE CLEANED AND GRINDING SHALL BE DONE WITH 60 GRIT WHEELS.
45 DEGREE FILLET WELDS WELD SIZE TO BE 1/16 INCH SMALLER THAN THICKNESS OF THINNER MEMBER.
5/16 INCH THICKNESS AND 1/8 INCH SMALLER THAN THINNER MEMBER.
WELDMENT TOLERANCES = ± .015

MACHINING TOLERANCES:
1 PLACE DECIMAL = ± .1
2 PLACE DECIMAL = ± .05
3 PLACE DECIMAL = ± .015
FRACTIONAL TOLERANCES = 1/16
CHAMFER OUTSIDE CORNERS .03 X 45 DEG
ANGLE TOLERANCES = ± 1 DEGREE
ALL UNSPECIFIED DIMENSIONS ARE IN INCHES

Internal Hydrostatic Test Graph



Midwest Hose
& Specialty, Inc.

Customer: Patterson

Pick Ticket #: 284918

Hose Specifications

Hose Type

Ck

Length

10'

Type of Fitting

4-1/16 10K

Verification

Coupling Method

Swage

Die Size

5.37"

Final O.D.

5.37"

Hose Serial #

10490

Hose Assembly Serial #

284918-2

Working Pressure

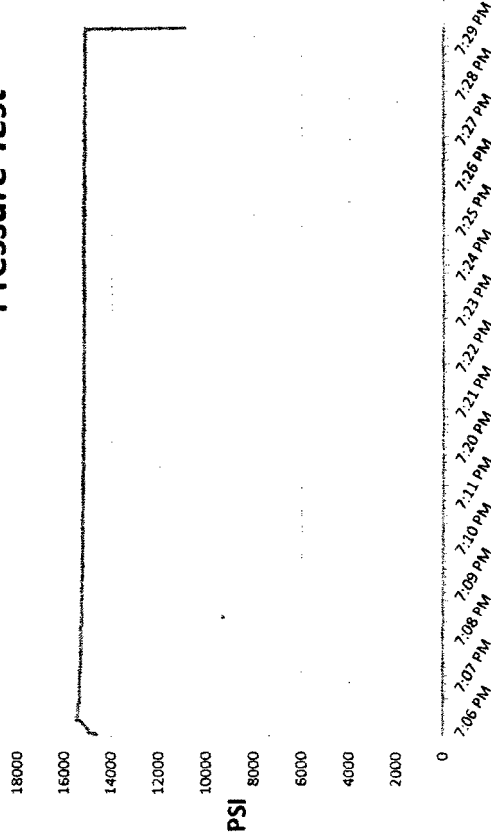
10000 PSI

Burst Pressure

4.79"

Standard Safety Multiplier Applies

Pressure Test



Test Pressure
15000 PSI

Time Held at Test Pressure
15 2/4 Minutes

Actual Burst Pressure

Peak Pressure
15732 PSI

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

Tested By: Tyler Hill

Approved By: Ryan Adams

[Signature: Tyler Hill]

[Signature: Ryan Adams]



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Certificate

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



Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: **PATTERSON B&E**

Customer P.O.# **260471**

Sales Order # **236404**

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

Specifications

Hose Assembly Type: **Choke & Kill**

Assembly Serial # **287918-2**

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

Hose Working Pressure (psi) **10000**

Test Pressure (psi) **15000**

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

Supplier:

Midwest Hose & Specialty, Inc.

3312 S I-35 Service Rd

Oklahoma City, OK 73129

Comments:

Approved By

Date

12/9/2014



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Graph

December 9, 2014

Customer: Patterson

Pick Ticket #: 284918

Hose Specifications

Hose Type
CK

Length
20'

Type of Fitting
4-1/16 TOK

Coupling Method
Swage

I.D.
3"

O.D.
4.77"

Die Size
5.37"

Final O.D.
5.40"

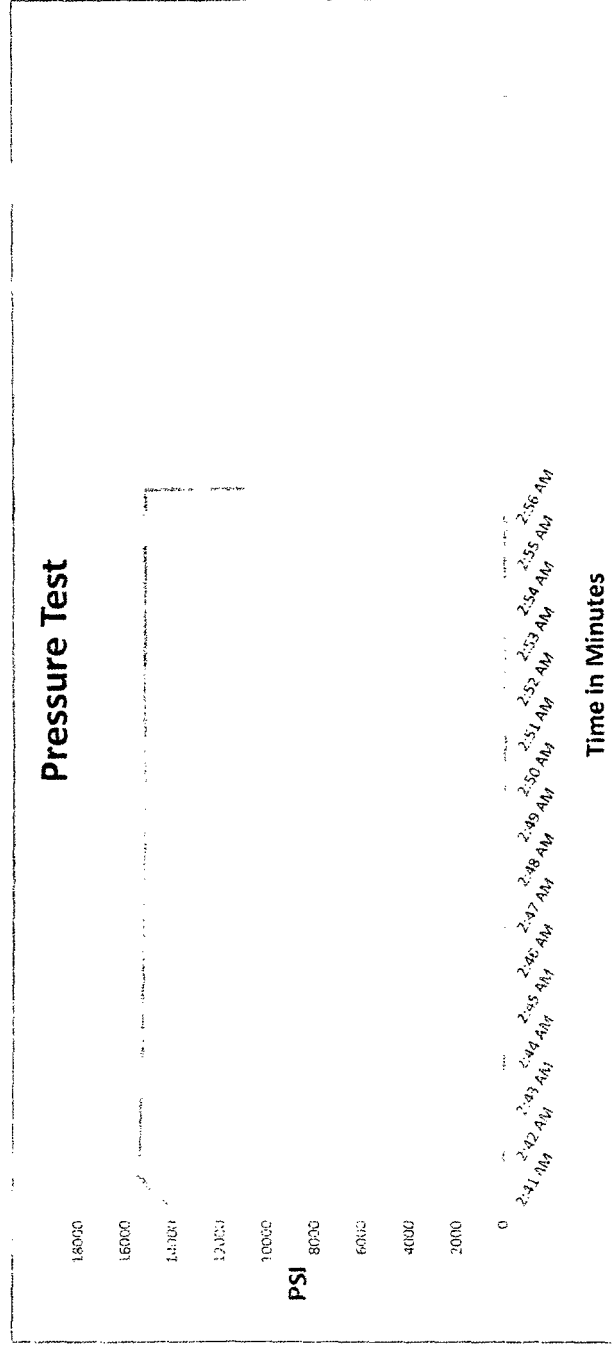
Working Pressure
10000 PSI

Burst Pressure
Standard Safety Multiplier Applies

Hose Serial #
10490

Hose Assembly Serial #
284918-1

Pressure Test



Test Pressure
15000 PSI

Time Held at Test Pressure
15 2/4 Minutes

Actual Burst Pressure

Peak Pressure
15893 PSI

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

Tested By: Tyler Hill

Approved By: Ryan Adams



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Certificate

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



Midwest Hose
& Specialty, Inc.

Certificate of Conformity

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

Specifications

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

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

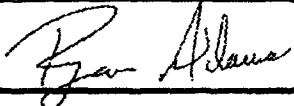
Supplier:

Midwest Hose & Specialty, Inc.

3312 S I-35 Service Rd

Oklahoma City, OK 73129

Comments:

Approved By	Date
	12/9/2014



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Graph

December 9, 2014

Customer: Patterson

Pick Ticket #: 284918

Hose Specifications

Hose Type

Mud

I.D.

3"

Length

70'

O.D.

4.79"

Verification

Type of Fitting

4 1/16 10K

Die Size

5.37"

Coupling Method

Swage

Final O.D.

5.37"

Working Pressure

10000 PSI

Burst Pressure

Standard Safety Multiplier Applies

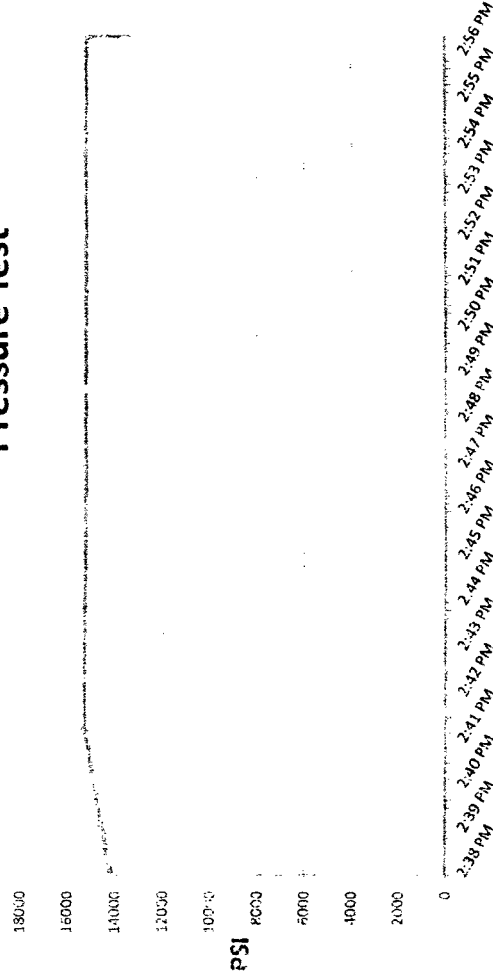
Hose Serial

10490

Hose Assembly Serial

284918-3

Pressure Test



Test Pressure
15000 PSI

Time Held at Test Pressure
16 3/4 Minutes

Actual Burst Pressure

Peak Pressure
15410 PSI

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

Tested By: Tyler Hill

Approved By: Ryan Adams



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	PATTERSON B&E	Hose Assembly Type	Choke & Kill
MWH Sales Representative	AMY WHITE	Certification	API 7K
Date Assembled	12/8/2014	Hose Grade	MUD
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	236404	Hose Lot # and Date Code	10490-01/13
Customer Purchase Order #	260471	Hose I.D. (Inches)	3"
Assembly Serial # (Pick Ticket #)	287918-3	Hose O.D. (Inches)	5.23"
Hose Assembly Length	70'	Armor (yes/no)	YES
Fittings			
End A		End B	
Stem (Part and Revision #)	R3.0X64WB	Stem (Part and Revision #)	R3.0X64WB
Stem (Heat #)	A141420	Stem (Heat #)	A141420
Ferrule (Part and Revision #)	RF3.0	Ferrule (Part and Revision #)	RF3.0
Ferrule (Heat #)	37DA5631	Ferrule (Heat #)	37DA5631
Connection (Part #)	4 1/16 10K	Connection (Part #)	4 1/16 10K
Connection (Heat #)		Connection (Heat #)	
Dies Used	5.37	Dies Used	5.37
Hydrostatic Test Requirements			
Test Pressure (psi)	15,000	Hose assembly was tested with ambient water temperature.	
Test Pressure Hold Time (minutes)	16 3/4		
Date Tested	Tested By	Approved By	
12/9/2014			



Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: **PATTERSON B&E**

Customer P.O.# **260471**

Sales Order # **236404**

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

Specifications

Hose Assembly Type: **Choke & Kill**

Assembly Serial # **287918-3**

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

Hose Working Pressure (psi) **10000**

Test Pressure (psi) **15000**

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

Supplier:

Midwest Hose & Specialty, Inc.

3312 S I-35 Service Rd

Oklahoma City, OK 73129

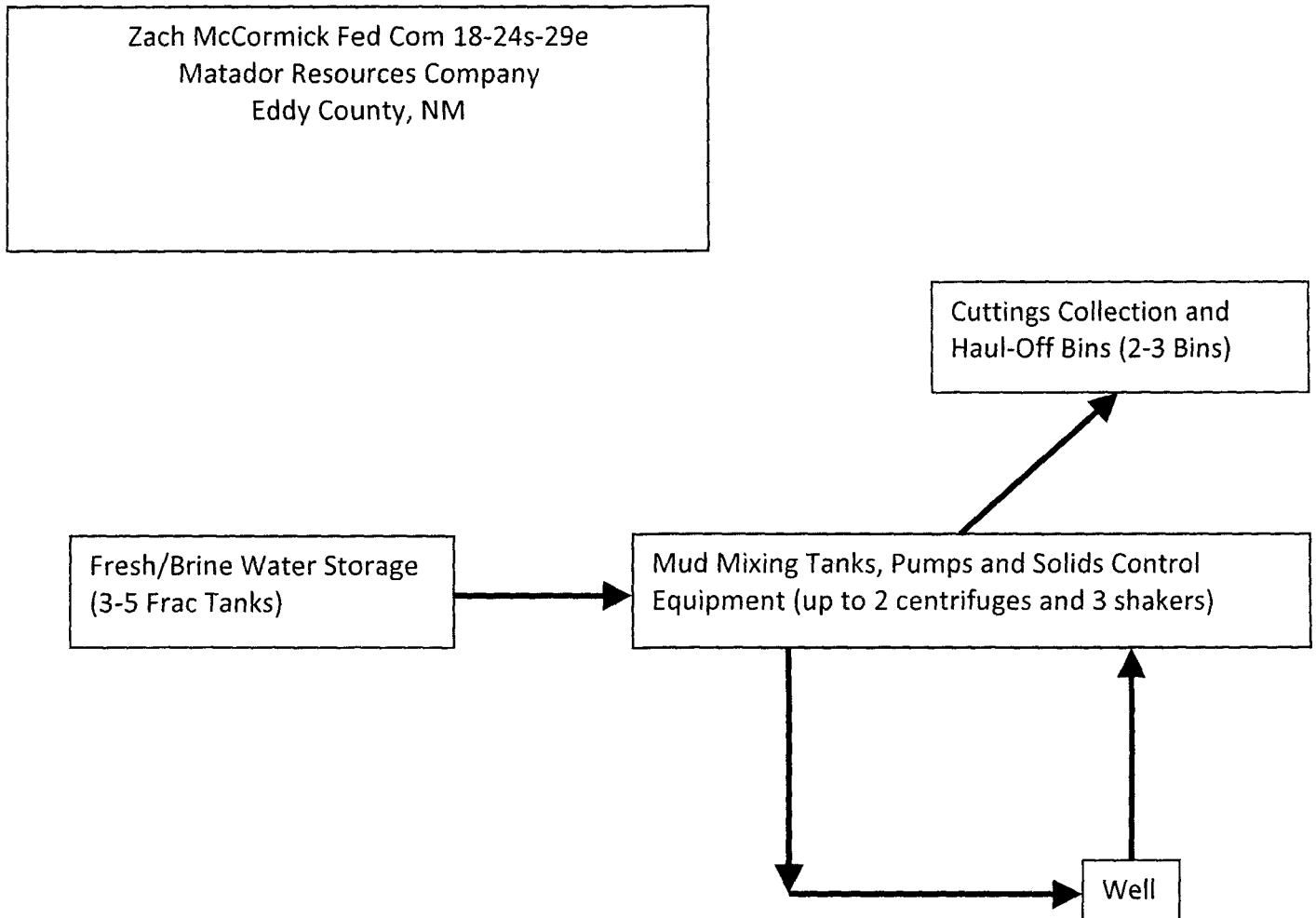
Comments:

Approved By

Date

12/9/2014

Closed-Loop System

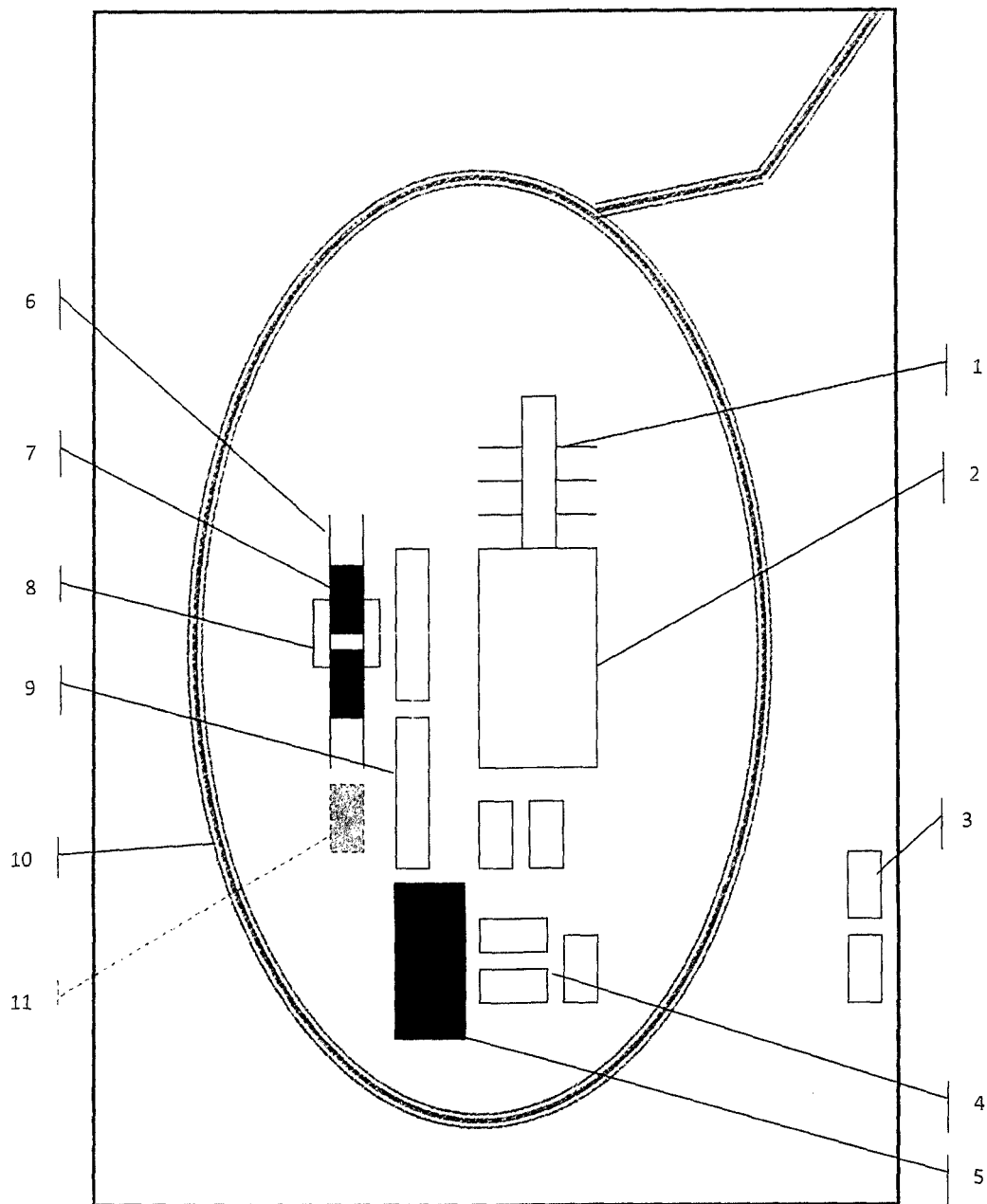


Operating and Maintenance Plan:

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.



Schematic Closed Loop Drilling Rig*

1. Pipe Rack
2. Drill Rig
3. House Trailers/ Offices
4. Generator/Fuel/Storage
5. Overflow-Frac Tank
6. Skids
7. Roll Offs
8. Hopper or Centrifuge
9. Mud Tanks
10. Loop Drive
11. Generator (only for use with centrifuge)

*Not drawn to scale: Closed loop system requires at least 30 feet beyond mud tanks. Ideally 60 feet would be available

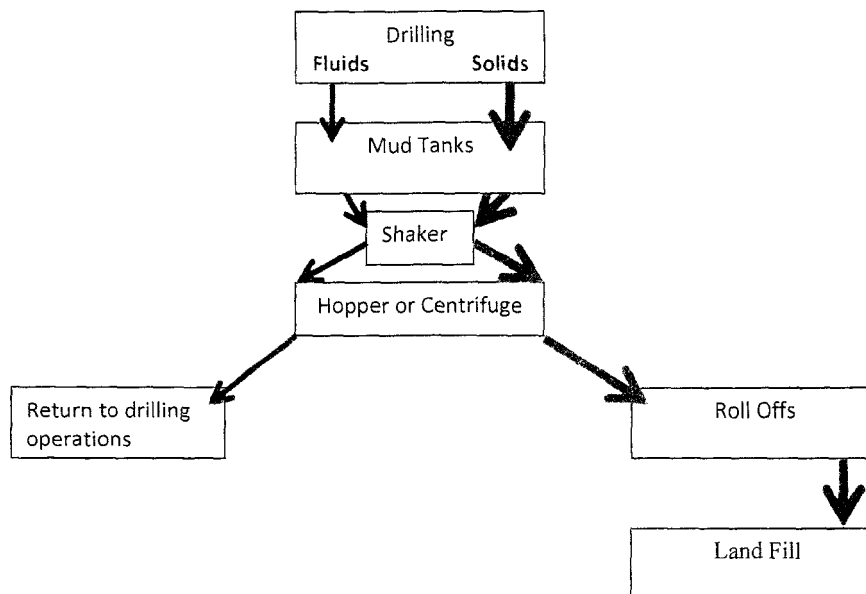


Above: Centrifugal Closed Loop System



Closed Loop Drilling System: Mud tanks to right (1)
Hopper in air to settle out solids (2)
Water return pipe (3)
Shaker between hopper and mud tanks (4)
Roll offs on skids (5)

Flow Chart for Drilling Fluids and Solids

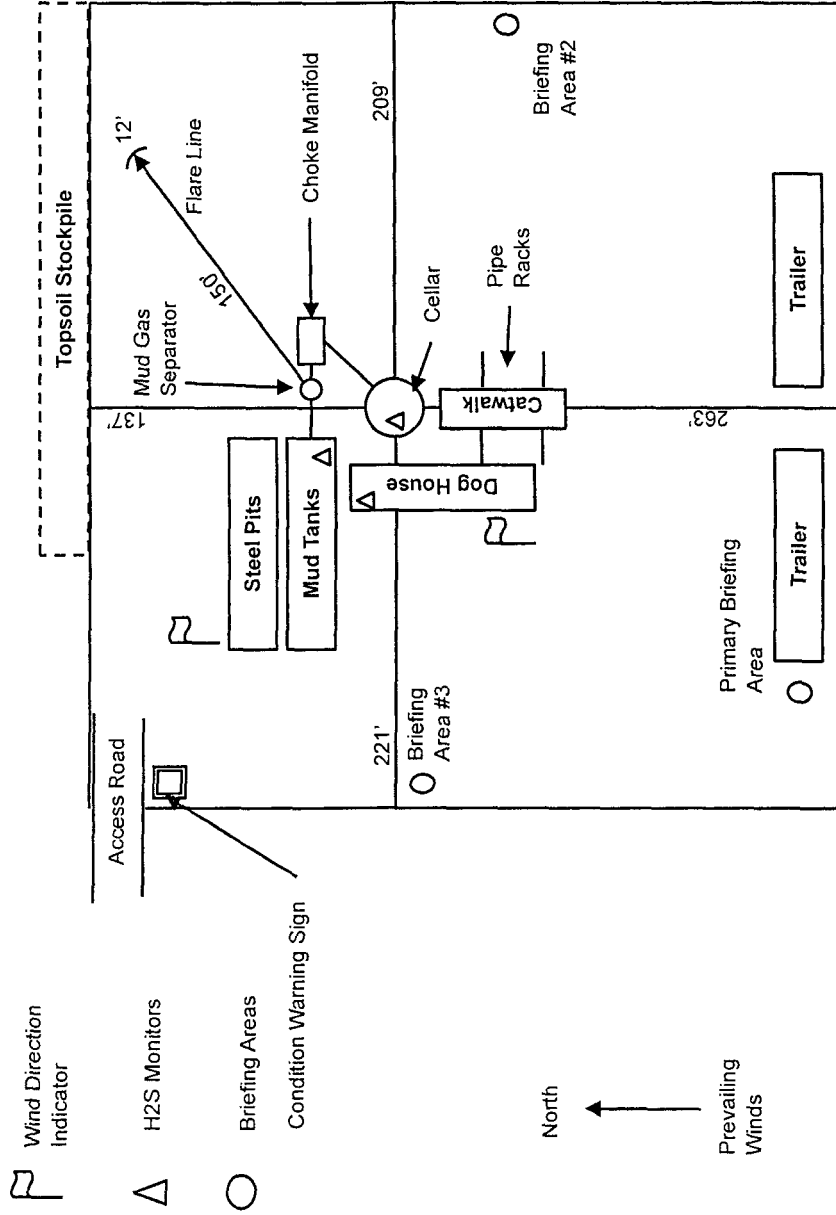


Photos Courtesy of Gandy Corporation Oil
Field Service

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS
47 Mesero Loop Santa Fe, New Mexico 87508 (505) 466-8120

Rig Diagram

Zach McCormick Fed Com 221H
18-24S-29E, Eddy County, NM
SHL 712' FNL & 291' FWL
BHL 331' FNL & 240' FEL





Hydrogen Sulfide Drilling Operations Plan

Matador Production Company

1 H2S safety instructions covering:

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

2 H2S Detection and Alarm Systems:

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

3 Windsocks and / Wind Streamers:

- Windsocks at mud pit area should be high enough to be visible.
- Windsocks 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 APD

6 Communications:

- 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 drilling foreman's trailer or living quarters.



7 Drill Stem Testing:

- No DST or 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

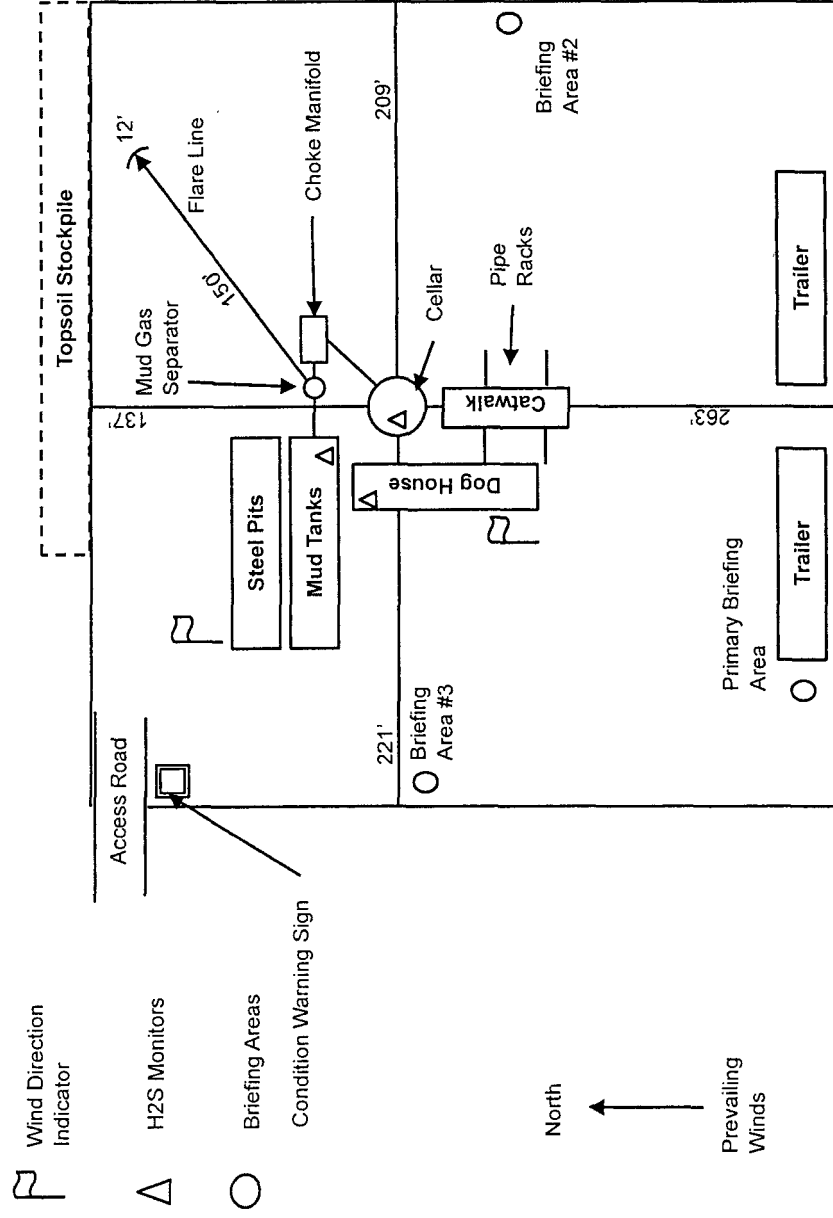
- See next page

H2S Contingency Plan Emergency Contacts
Matador Production Company
Zach McCormick Fed Com 18-24s-29e wells, Eddy County, NM

<u>Company Office</u>			
Matador Production Company	(972)-371-5200		
<u>Key Personnel</u>			
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
Aaron Byrd	Drilling Engineer	972-371-5267	214-507-2333
	Construction Superintendent		
	Construction Superintendent		
<u>Artesia</u>			
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	
<u>Carlsbad</u>			
Ambulance		911	
State Police		575-885-3137	
Loving City Police		575-745-3511	
Sheriff's Office		575-887-7551	
Malaga Fire Department		575-745-2317	
Local Emergency Planning Committee		575-885-3581	
<u>Santa Fe</u>			
New Mexico Emergency Response Commission (Santa Fe)		505-476-9600	
New Mexico Emergency Response Commission (Santa Fe) 24 hrs		505-827-9126	
New Mexico State Emergency Operations Center		505-476-9635	
<u>National</u>			
Carlsbad BLM		575-234-5972	
National Emergency Response Center (Washington, D.C.)		800-424-8802	
<u>Medical</u>			
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	
<u>Other</u>			
Boots & Coots IWC		800-256-9688	or 281-931-8884
Cudd Pressure Control		432-699-0139	or 432-563-3356
Halliburton		575-746-2757	
B.J. Services		575-746-3569	

H2S Rig Diagram

Zach McCormick Fed Com 221H
18-24S-29E, Eddy County, NM
SHL 712' FNL & 291' FWL
BHL 331' FNL & 240' FEL

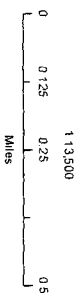


Matador Production Company

Zach McCormick, Federal Com
18-24S-29E RB #221H
His Contingency Plan:
1 Mile Radius Map

Section 18, Township 24S, Range 29E
Eddy County, New Mexico

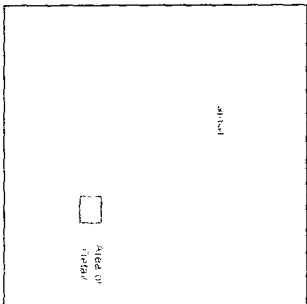
Surface Hole Location



NAD 1927 New Mexico State Plane East
FPS 3001 Feet

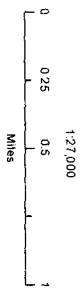
PERMIT

Prepared by Permits West, Inc., June 22, 2016
for Matador Production Company



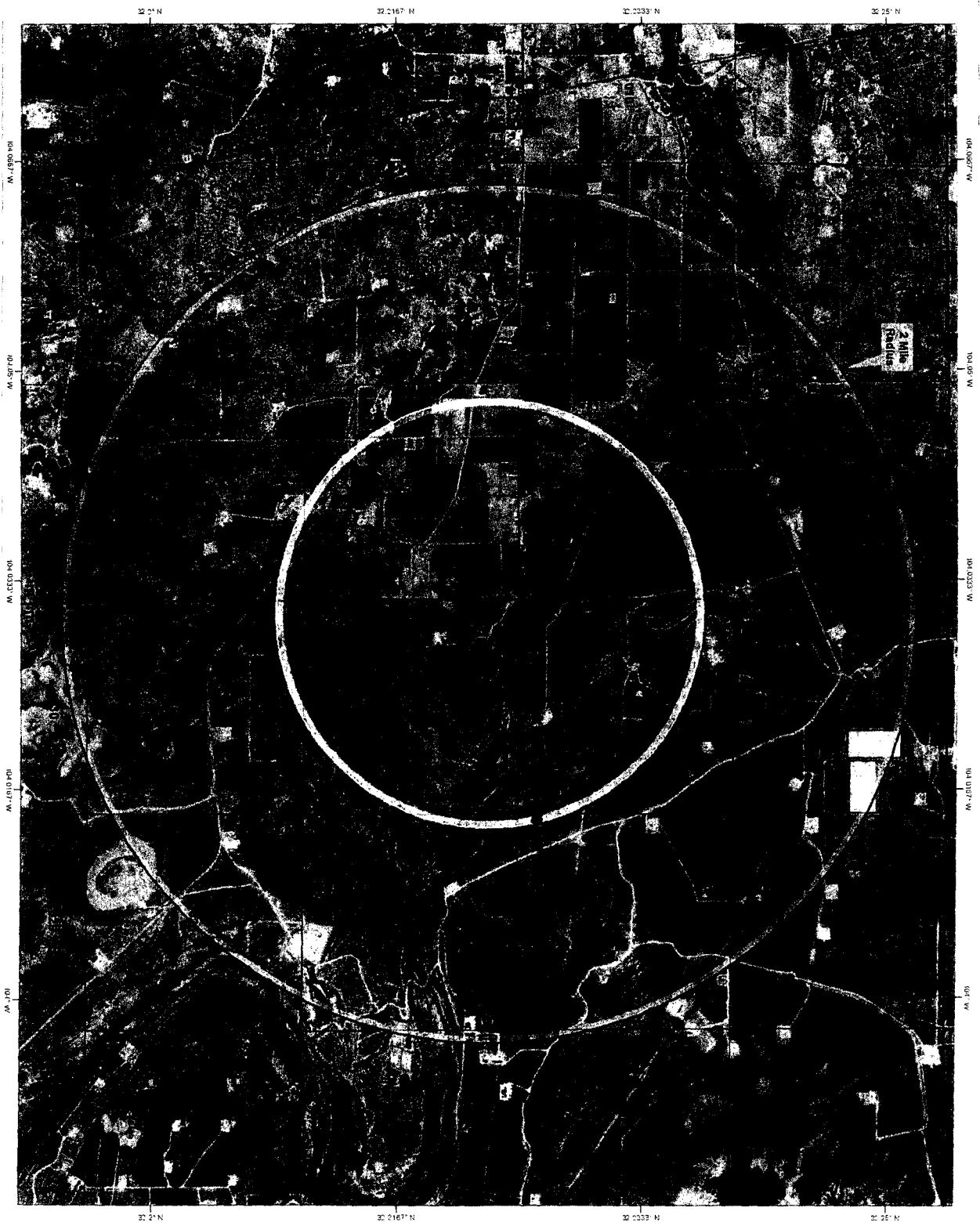
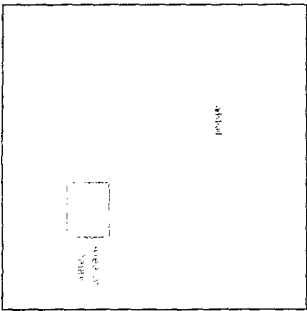
Zach McCormick Federal Com
18-24S-29E RB #221H
H:S Contingency Plan:
2 Mile Radius Map

Surface Hole Location



NAD 1927 New Mexico State Plane East
FIPS 3001 Feet

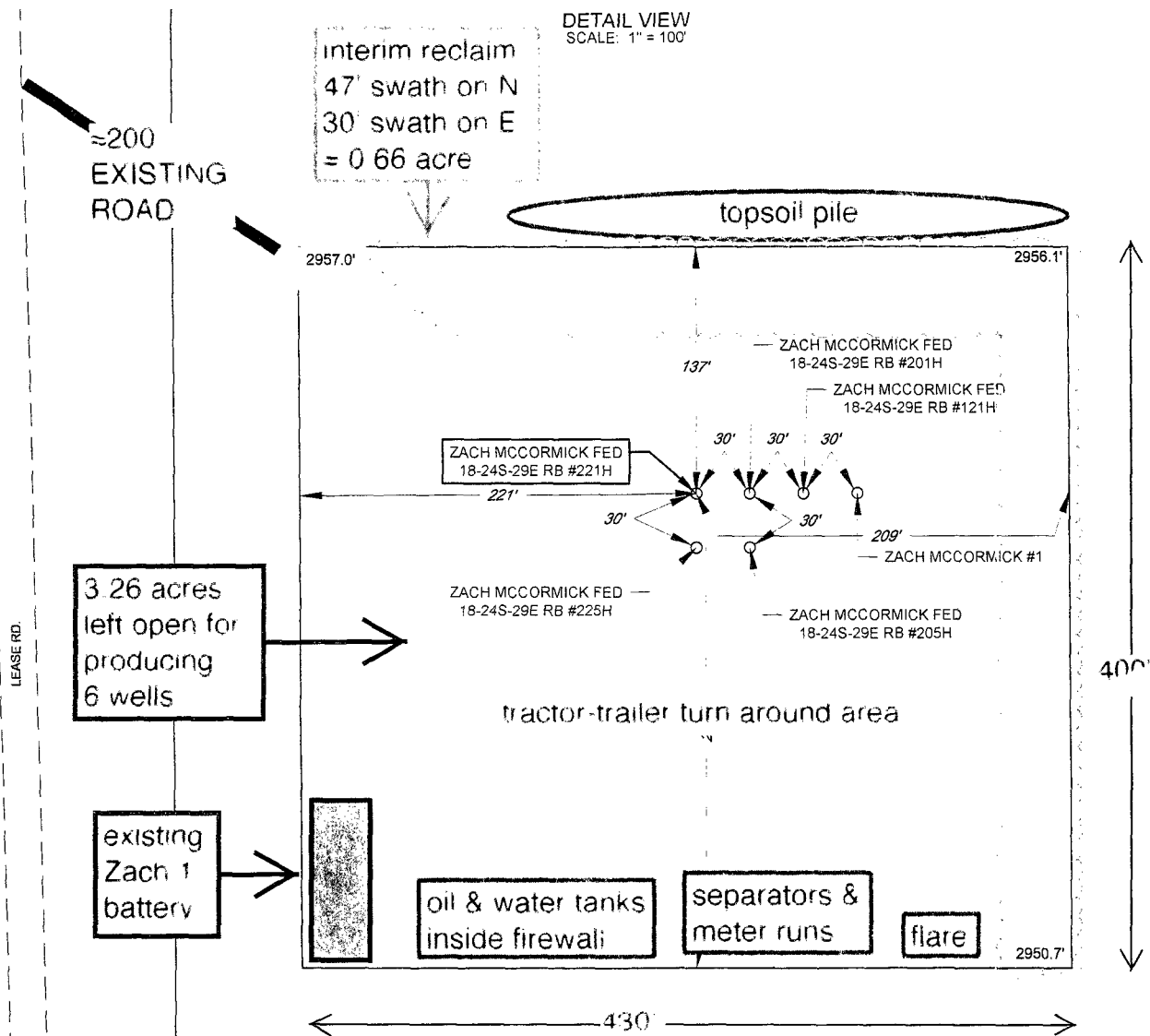
Prepared by Permits West, Inc., June 22, 2016
for Matador Production Company





SECTION 18, TOWNSHIP 24-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



PRODUCTION FACILITY & INTERIM RECLAMATION DIAGRAM

LEASE NAME & WELL NO.: ZACH MCCORMICK FEDERAL 18-24S-29E RB #221H

#221H LATITUDE N 32.2229382 #221H LONGITUDE W 104.0308313

LEGEND

- == == == == EXISTING ROAD
- — — — SECTION LINE
- - - - - ARCH SITE

SCALE: 1" = 100'

0' 50' 100'

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1927, U.S. SURVEY FEET

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



WWW.TOPOGRAPHIC.COM

Matador Production Company
Zach McCormick Fed Com 221H
SHL 712' FNL & 291' FWL Sec. 18
BHL 331' FNL & 240' FEL Sec. 18
T. 24 S., R. 29 E., Eddy County, NM

SURFACE PLAN PAGE 1

Surface Use Plan

1. ROAD DIRECTIONS & DESCRIPTIONS (See MAPS 1 – 4)

From Malaga, NM...

Go East 2.3 miles on paved County Roads 744 and 720

Then turn right onto a caliche road and go South 500'

Then turn left and go Southeast 200' on a caliche road to an existing pad

Non-county roads will be maintained as needed to Gold Book standards. This includes pulling ditches, preserving the crown, and cleaning culverts. This will be done at least once a year, and more often as needed. Caliche will be hauled from existing caliche pits on private land in NWSE 1-24s-28e and NWSW 6-24s-29e.

2. ROAD TO BE BUILT OR UPGRADED

No new road or upgrade is needed. All access is via existing roads.

3. EXISTING WELLS (See MAP 2)

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

4. PROPOSED PRODUCTION FACILITIES (See preceding page)

Oil tanks, water tanks, meter runs, separators, and a flare will be installed on the south side of the pad (see preceding diagram). A berm will surround the fill sides of the facility.

Matador Production Company
Zach McCormick Fed Com 221H
SHL 712' FNL & 291' FWL Sec. 18
BHL 331' FNL & 240' FEL Sec. 18
T. 24 S., R. 29 E., Eddy County, NM

SURFACE PLAN PAGE 2

Longwood Midstream's Black River Gathering System will serve the facility with $\approx 6"$ O. D. steel gas line and $\approx 6"$ O. D. HDPE buried saltwater disposal line laid in the same trench which is under construction to the existing Zach McCormick Federal Com 18-24s-29e #1. Xcel will build a 3-phase raptor safe overhead power line 1/10 mile south to the well pad.

5. WATER SUPPLY (See MAP 2)

Water will be trucked 0.6 mile via existing roads from existing water well C 00464 on private land in NENW 13-24s-28e.

6. CONSTRUCTION MATERIALS & METHODS (see MAPS 4 & 5)

NM One Call (811) will be notified before construction starts. Top $\approx 6"$ of soil and brush is stockpiled north of the pad. Pipe racks will be to the south. A closed loop drilling system will be used. Caliche will be hauled from existing caliche pits on private land in NWSE 1-24s-28e and NWSW 6-24s-29e. A berm will surround the fill sides of the pad.

7. WASTE DISPOSAL

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

Matador Production Company
Zach McCormick Fed Com 221H
SHL 712' FNL & 291' FWL Sec. 18
BHL 331' FNL & 240' FEL Sec. 18
T. 24 S., R. 29 E., Eddy County, NM

SURFACE PLAN PAGE 3

8. ANCILLARY FACILITIES

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

9. WELL SITE LAYOUT

See Rig Layout diagram for depictions of the well pad, trash cage, access onto the location, parking, living facilities, and rig orientation.

10. RECLAMATION

Interim reclamation will be completed within 6 months of completing the last well on the pad. (A variance is requested for the intervening wells.) Interim reclamation will consist of shrinking the pad $\approx 17\%$ by removing caliche and reclaiming the north (47') and east (30') sides. This will leave 3.26 acres for six pump jacks and tractor-trailer turn around. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas. Disturbed areas will be seeded in accordance with the surface owner's requirements. Enough stockpiled topsoil will be retained to cover the remainder of the pad when the wells are plugged. Once the last well is plugged, then the remainder of the pad will be similarly reclaimed within 6 months of plugging. Noxious weeds will be controlled.

11. SURFACE OWNER

All construction occurred on private surface.

Matador Resources Company has a private surface owner agreement with Evelyn Kay Walker Faulk (P. O. Box 115, Malaga NM 88263) for the existing road in NENE Section 13, T. 24 S., R. 28 E. and with Roy Burkham (P. O. Box 84, Malaga

Matador Production Company
Zach McCormick Fed Com 221H
SHL 712' FNL & 291' FWL Sec. 18
BHL 331' FNL & 240' FEL Sec. 18
T. 24 S., R. 29 E., Eddy County, NM

SURFACE PLAN PAGE 4

NM 88263) for the existing road and existing pad in Lot 1 Section 18, T. 24 S., R. 29 E., Eddy County, NM.

12. OTHER INFORMATION

On site inspection was held with Vance Wolf and Bob Ballard (both of BLM) on June 2, 2016.

**PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Matador Production Company
LEASE NO.:	NMNM117120
WELL NAME & NO.:	221H-Zach McCormick Fed Com
SURFACE HOLE FOOTAGE:	712'/N & 291'/W
BOTTOM HOLE FOOTAGE:	331'/N & 240'/E
LOCATION:	Section 18, T.24 S., R.29 E., NMPM
COUNTY:	Eddy County, New Mexico

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, 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.

A. DRILLING OPERATIONS REQUIREMENTS

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

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

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. It is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide. 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, report measured amounts and formations to the BLM.

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

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

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

Wait on cement (WOC) for Water Basin:

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

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

Medium Cave/Karst

Possible water flows in the Artesia Group and Salado.

Possibility of lost circulation in the Artesia Group, Rustler, Capitan Reef, and Delaware.

Abnormal pressure might be encountered upon entering third Bone Spring and subsequent formations.

1. The **13-3/8** inch surface casing shall be set at approximately **650** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **9-5/8** inch 1st intermediate casing is:
☒ 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.**
3. The minimum required fill of cement behind the **7** inch 2nd intermediate casing is:
☒ Cement as proposed. Operator shall provide method of verification.
4. The minimum required fill of cement behind the **4-1/2** inch production casing is:
☒ Cement as proposed. Operator shall provide method of verification. **Excess calculates to 22%. Additional cement may be required.**
5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API 53.
2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **13-3/8** inch surface casing shoe shall be **2000 (2M) annular**.

Option 1:

- i. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** inch second intermediate casing shoe shall be **3000 (3M)** psi.
- ii. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **7** inch third intermediate casing shoe shall be **5000 (5M)** psi.

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

Option 2:

- i. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the second intermediate casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** inch second intermediate 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. Operator shall perform the intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.
- e. After the 9 5/8" casing has been landed and cemented, the operator will then lift up the BOP to install the 'D-section' of the wellhead. Therefore, per Onshore Oil and Gas Order No. 2, the entire BOP/BOPE shall be tested prior to drilling out the second intermediate casing hole.
- f. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

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

- 4. 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. 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).

- c. 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.
- d. The results of the test shall be reported to the appropriate BLM office.
- e. 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.**
- f. 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.
- g. 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.

D. 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.

Proposed mud weight may not be adequate for drilling through Wolfcamp.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

F. 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.

TMAK 05262017

PECOS DISTRICT SURFACE USE CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Matador Production Company
LEASE NO.:	NMNM117120
WELL NAME & NO.:	221H-Zach McCormick Fed Com
SURFACE HOLE FOOTAGE:	712'/N & 291'/W
BOTTOM HOLE FOOTAGE:	331'/N & 240'/E
LOCATION:	Section 18, T.24 S., R.29 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.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
 - Avian Protection
 - Cave/Karst
- ☐ **Construction**
 - Notification
 - Topsoil
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 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines
 - Electric Lines
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

Avian Protection

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 power line structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. The holder without liability or expense shall make such modifications and/or additions to the United States.

COA Mid Karst

Cave and Karst

** Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

Construction:

In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

No Blasting:

No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

Pad Berming:

The entire perimeter of the well pad 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 high with impermeable mineral material (e.g. caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.

- 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.
- 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 access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)

Tank Battery Liners and Berms:

Tank battery locations and all facilities 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.

Leak Detection System:

A method of detecting leaks is required. The method could incorporate gauges to measure loss, siting valves and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

Automatic Shut-off Systems:

Automatic shut off, check valves, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

Rotary Drilling with Fresh Water:

Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

Directional Drilling:

Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

Lost Circulation:

ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

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.

Pressure Testing:

Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

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

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing

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

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

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

Surfacing

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

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

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

Crowning

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

Ditching

Ditching shall be required on both sides of the road.

Turnouts

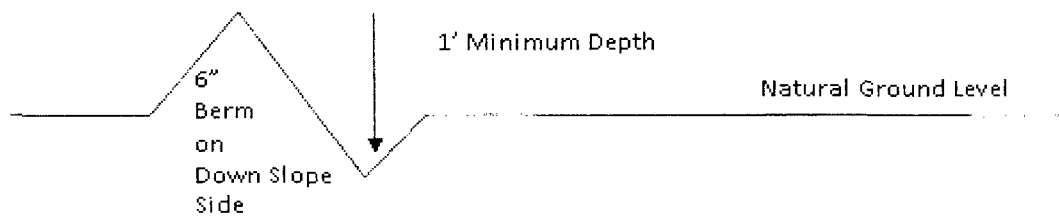
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

Cattle guards

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

Fence Requirement

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

Public Access

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

Construction Steps

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

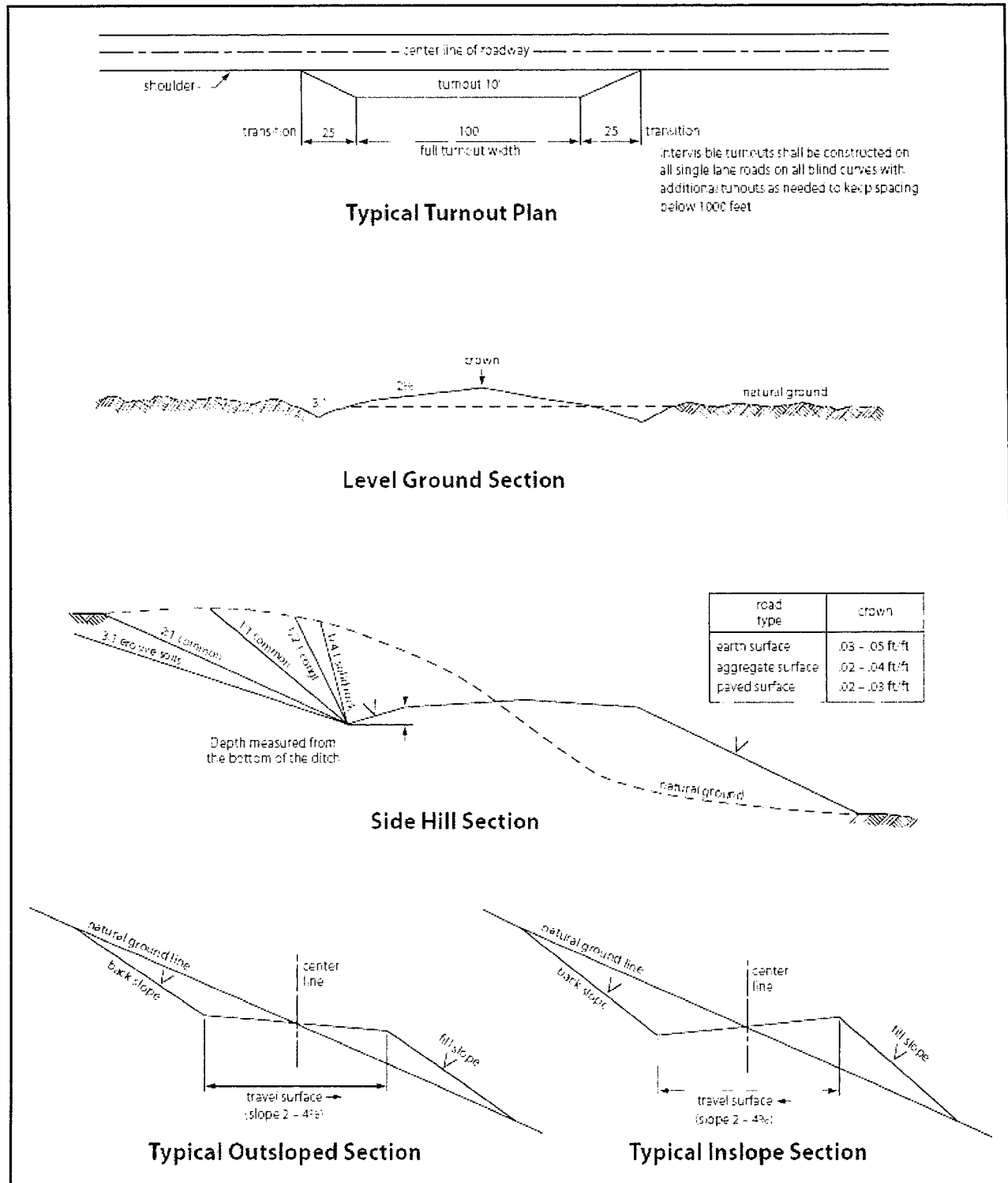


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

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

Exclosure Netting (Open-top Tanks)

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

Chemical and Fuel Secondary Containment and Exclosure Screening

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

Open-Vent Exhaust Stack Exclosures

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

Containment Structures

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

Painting Requirement

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

B. PIPELINES

BURIED PIPELINE STIPULATIONS

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

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

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of

the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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.

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).

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:

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

*Pounds of pure live seed:

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