

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

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

EMNRD- OCD ARTESIA

REC'D: 06/01/2020

FORM C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-46476	² Pool Code 98220	³ Pool Name Purple Sage; Wolfcamp (Gas)
⁴ Property Code 326434	⁵ Property Name RAY STATE COM	⁶ Well Number 223H
⁷ GRID No. 228937	⁸ Operator Name MATADOR PRODUCTION COMPANY	⁹ Elevation 2961'

¹⁰Surface Location

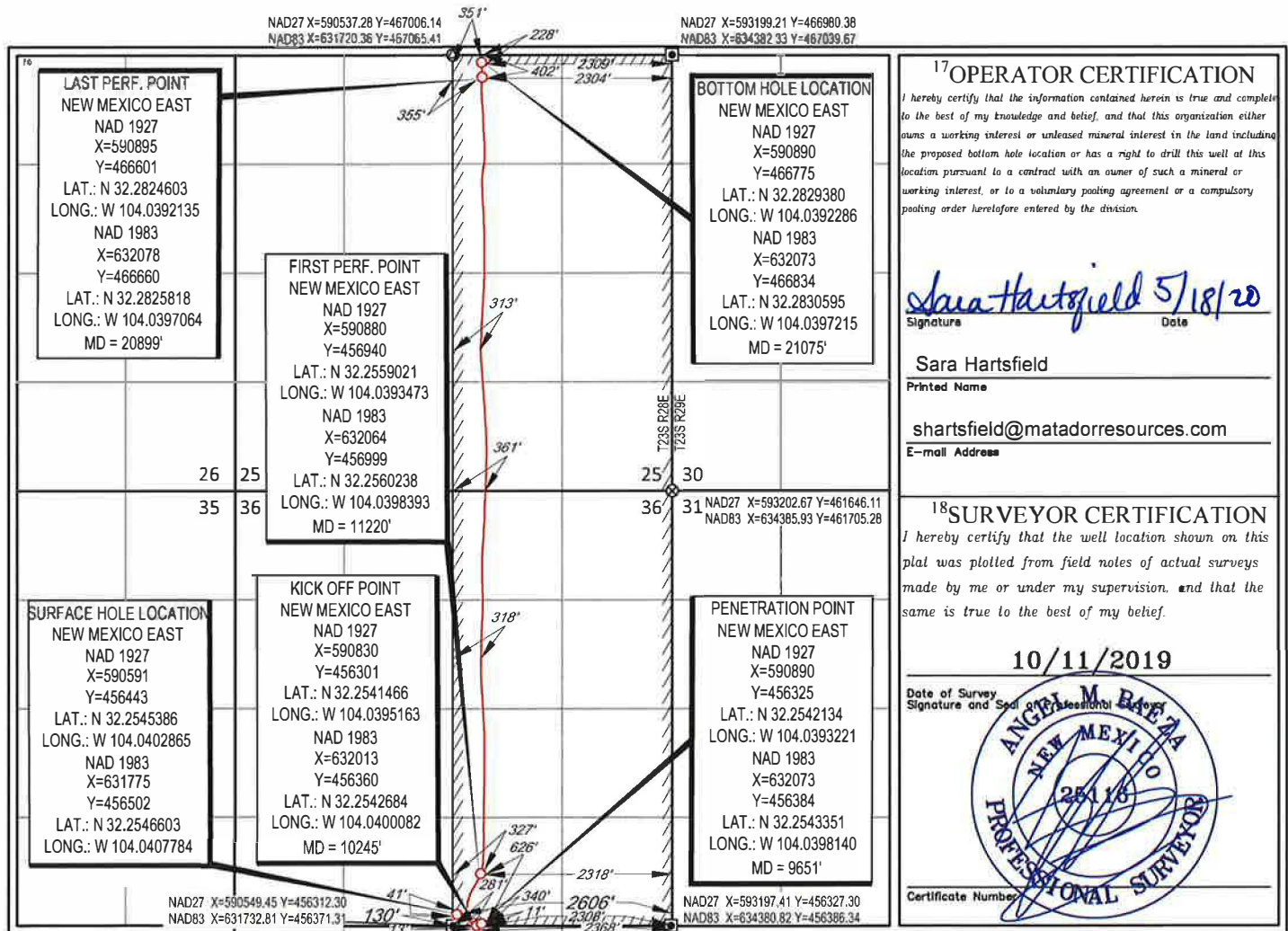
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	36	23-S	28-E	-	130'	SOUTH	2606'	EAST	EDDY

¹¹Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	25	23-S	28-E	-	228'	NORTH	2309'	EAST	EDDY

¹² Dedicated Acres 640	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		
Operator Name:	Property Name:	Well Number

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



SECTION 36, TOWNSHIP 23-S, RANGE 28-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

FND. BRASS CAP,
U.S. G.L.O. SUR.



LAST PERF. POINT
NEW MEXICO EAST
NAD 1927
X=590895
Y=466601
LAT.: N 32.2824603
LONG.: W 104.0392135
NAD 1983
X=632078
Y=466660
LAT.: N 32.2825818
LONG.: W 104.0397064
MD = 20899'

BOTTOM HOLE LOCATION
NEW MEXICO EAST
NAD 1927
X=590890
Y=466775
LAT.: N 32.2829380
LONG.: W 104.0392286
NAD 1983
X=632073
Y=466834
LAT.: N 32.2830595
LONG.: W 104.0397215
MD = 21075'

COTTON SPINDLE
FOUND

1/2" IRON ROD
FOUND

SURFACE LOCATION
NEW MEXICO EAST
NAD 1927
X=590591
Y=456443
LAT.: N 32.2545386
LONG.: W 104.0402865
NAD 1983
X=631775
Y=456502
LAT.: N 32.2546603
LONG.: W 104.0407784

FIRST PERF. POINT
NEW MEXICO EAST
NAD 1927
X=590880
Y=456940
LAT.: N 32.2559021
LONG.: W 104.0393473
NAD 1983
X=632064
Y=456999
LAT.: N 32.2560238
LONG.: W 104.0398393
MD = 11220'

PENETRATION POINT
NEW MEXICO EAST
NAD 1927
X=590890
Y=456325
LAT.: N 32.2542134
LONG.: W 104.0393221
NAD 1983
X=632073
Y=456384
LAT.: N 32.2543351
LONG.: W 104.0398140
MD = 9651'

KICK OFF POINT
NEW MEXICO EAST
NAD 1927
X=590830
Y=456301
LAT.: N 32.2541466
LONG.: W 104.0395163
NAD 1983
X=632013
Y=456360
LAT.: N 32.2542684
LONG.: W 104.0400082
MD = 10245'

FND. BRASS CAP,
U.S. G.L.O. SUR.
1942

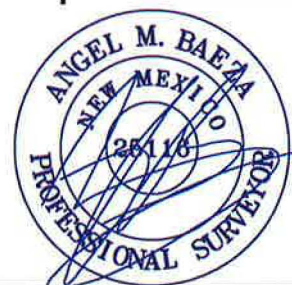
FND. BRASS CAP,
U.S. G.L.O. SUR.
1942

FND. BRASS CAP,
U.S. G.L.O. SUR.
1942

LEASE NAME & WELL NO.: RAY STATE COM 223H
SECTION 36 TWP 23-S RGE 28-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM
DESCRIPTION 130' FSL & 2606' FEL

DISTANCE & DIRECTION

FROM INT. OF NM-31 & STATE HWY 387. GO SOUTH ON STATE HWY 387. ±2.0 MILES, THENCE CONTINUING ON STATE HWY 387 EAST (LEFT) ±1.0 MILES, THENCE SOUTH (RIGHT) ON GIOVENGO RD. ±1.0 MILES, THENCE EAST (LEFT) ON RABBIT HILL RD. ±0.5 MILES, THENCE SOUTHEAST (RIGHT) ON LEASE RD. ±0.9 MILES, THENCE SOUTHEAST (LEFT) ON PROPOSED RD. ±647 FEET TO A POINT ±385 FEET NORTHEAST OF THE LOCATION.



Angel M. Baeza, P.S. No. 25116
MAY 07, 2020



TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

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

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



Final MWD Survey Certification

Eddy County, NM

Client: Matador Resources Company

Well Name: Ray State Com 223H

Total Job No: SW-190031

API No: 30-015-46476

Start Date: January 02, 2020

End Date: January 08, 2020

Start Depth: 0'

End Depth: 10126'

I, Drew Weinstein, MWD Operator, hereby certify that; I am employed by Total Directional Services, LLC and we conducted or supervised the taking of these open hole MWD surveys at the request of this client. This data is true, correct, complete and within the limitations of the tool as set forth by Total Directional Services, LLC. I am authorized and qualified to make this report and have reviewed this report and find that it conforms to the principals and procedures as set forth by Total Directional Services, LLC.

Date: 01/08/20

Signed: *Drew Weinstein*



Matador Resources Company

Eddy County, NM (NAD27-Grid)

Ray State Com

Ray State Com 223H

OH

Design: OH

Standard Survey Report

28 January, 2020





Total Directional Services

Survey Report



Company:	Matador Resources Company	Local Co-ordinate Reference:	Well Ray State Com 223H
Project:	Eddy County, NM (NAD27-Grid)	TVD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Site:	Ray State Com	MD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Well:	Ray State Com 223H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.15 Single User Db

Project	Eddy County, NM (NAD27-Grid)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site		Ray State Com			
Site Position:		Northing:	455,390.00 usft	Latitude:	32.251627
From:	Map	Easting:	592,880.00 usft	Longitude:	-104.032893
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.16 °

Well	Ray State Com 223H					
Well Position	+N/-S	0.00 usft	Northing:	456,443.00 usft	Latitude:	32.254539
	+E/-W	0.00 usft	Easting:	590,591.00 usft	Longitude:	-104.040288
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	2,962.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/10/2019	6.91	59.98	47,655.06627134

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	118.12	

Survey Program	Date	1/16/2020			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
200.00	10,005.00	Survey #1 (OH)	MWD+HRGM	OWSG MWD + HRGM	
10,126.00	10,126.00	Survey #2 - Proj to TD (OH)	BLIND	OWSG BLIND	

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	
SHL (Ray State Com 223H)										
17.06	0.09	9.30	17.06	0.01	0.00	0.00	0.50	0.50	0.00	
Malaga Offset - 182.27' Radius										
200.00	1.00	9.30	199.99	1.72	0.28	-0.56	0.50	0.50	0.00	
291.00	1.00	232.10	290.98	2.02	-0.22	-1.14	2.05	0.00	-150.77	
380.00	1.30	200.20	379.97	0.59	-1.18	-1.32	0.78	0.34	-35.84	
469.00	0.80	175.60	468.95	-0.97	-1.48	-0.85	0.74	-0.56	-27.64	
562.00	0.70	170.90	561.94	-2.18	-1.34	-0.15	0.13	-0.11	-5.05	



Total Directional Services

Survey Report



Company:	Matador Resources Company	Local Co-ordinate Reference:	Well Ray State Com 223H
Project:	Eddy County, NM (NAD27-Grid)	TVD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Site:	Ray State Com	MD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Well:	Ray State Com 223H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.15 Single User Db

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)
653.00	0.60	113.30	652.94	-2.92	-0.81	0.66	0.69	-0.11	-63.30
743.00	1.10	104.70	742.93	-3.32	0.45	1.97	0.57	0.56	-9.56
834.00	1.20	85.50	833.91	-3.47	2.25	3.62	0.44	0.11	-21.10
924.00	0.80	59.90	923.90	-3.08	3.73	4.75	0.66	-0.44	-28.44
1,014.00	0.50	344.90	1,013.89	-2.39	4.17	4.81	0.92	-0.33	-83.33
1,105.00	0.40	351.40	1,104.89	-1.69	4.02	4.35	0.12	-0.11	7.14
1,195.00	0.30	302.30	1,194.89	-1.25	3.78	3.92	0.34	-0.11	-54.56
1,286.00	0.80	295.80	1,285.88	-0.85	3.00	3.05	0.55	0.55	-7.14
1,376.00	0.70	280.40	1,375.88	-0.48	1.90	1.90	0.25	-0.11	-17.11
1,469.00	0.20	279.30	1,468.87	-0.35	1.18	1.20	0.54	-0.54	-1.18
1,563.00	0.60	302.20	1,562.87	-0.06	0.60	0.56	0.45	0.43	24.36
1,657.00	1.00	288.40	1,656.86	0.46	-0.59	-0.74	0.47	0.43	-14.68
1,750.00	1.80	279.80	1,749.83	0.97	-2.80	-2.93	0.89	0.86	-9.25
1,844.00	0.80	243.00	1,843.81	0.92	-4.84	-4.71	1.33	-1.06	-39.15
1,937.00	0.90	149.00	1,936.80	0.00	-5.05	-4.45	1.34	0.11	-101.08
2,030.00	1.50	149.00	2,029.78	-1.67	-4.04	-2.78	0.65	0.65	0.00
2,124.00	2.10	167.90	2,123.74	-4.41	-3.05	-0.61	0.89	0.64	20.11
2,217.00	0.50	115.40	2,216.71	-6.25	-2.32	0.90	1.98	-1.72	-56.45
2,311.00	1.00	109.60	2,310.70	-6.70	-1.18	2.12	0.54	0.53	-6.17
2,404.00	1.80	140.00	2,403.68	-8.09	0.52	4.28	1.15	0.86	32.69
2,497.00	2.30	133.60	2,496.62	-10.50	2.81	7.43	0.59	0.54	-6.88
2,590.00	0.40	42.30	2,589.59	-11.55	4.38	9.31	2.52	-2.04	-98.17
2,684.00	1.50	336.90	2,683.58	-10.17	4.12	8.43	1.47	1.17	-69.57
2,807.00	0.90	346.10	2,806.55	-7.75	3.26	6.53	0.51	-0.49	7.48
2,900.00	1.40	345.60	2,899.53	-5.94	2.80	5.27	0.54	0.54	-0.54
2,994.00	1.00	39.50	2,993.51	-4.20	3.04	4.66	1.22	-0.43	57.34
3,087.00	1.20	89.60	3,086.50	-3.56	4.53	5.67	1.02	0.22	53.87
3,181.00	1.90	111.60	3,180.46	-4.13	6.96	8.08	0.96	0.74	23.40
3,274.00	3.70	111.80	3,273.35	-5.81	11.18	12.60	1.94	1.94	0.22
3,368.00	5.00	104.80	3,367.08	-7.99	17.96	19.60	1.49	1.38	-7.45
3,461.00	6.00	99.90	3,459.65	-9.86	26.66	28.16	1.19	1.08	-5.27
3,554.00	6.90	98.90	3,552.06	-11.56	36.97	38.05	0.98	0.97	-1.08
3,648.00	6.90	96.80	3,645.38	-13.10	48.15	48.64	0.27	0.00	-2.23
3,741.00	6.90	95.50	3,737.70	-14.30	59.26	59.00	0.17	0.00	-1.40
3,835.00	7.50	99.60	3,830.96	-15.86	70.93	70.03	0.84	0.64	4.36
3,928.00	7.80	99.40	3,923.13	-17.90	83.14	81.77	0.32	0.32	-0.22
4,022.00	7.80	104.10	4,016.27	-20.50	95.62	94.00	0.68	0.00	5.00
4,115.00	7.60	102.70	4,108.43	-23.39	107.74	106.05	0.29	-0.22	-1.51
4,209.00	7.50	102.10	4,201.61	-26.04	119.80	117.94	0.14	-0.11	-0.64
4,302.00	7.60	103.50	4,293.81	-28.75	131.72	129.72	0.23	0.11	1.51
4,396.00	6.80	106.20	4,387.06	-31.75	143.11	141.18	0.92	-0.85	2.87
4,489.00	6.80	106.50	4,479.41	-34.85	153.67	151.96	0.04	0.00	0.32
4,583.00	6.80	105.10	4,572.75	-37.88	164.38	162.83	0.18	0.00	-1.49



Total Directional Services

Survey Report



Company:	Matador Resources Company	Local Co-ordinate Reference:	Well Ray State Com 223H
Project:	Eddy County, NM (NAD27-Grid)	TVD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Site:	Ray State Com	MD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Well:	Ray State Com 223H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.15 Single User Db

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)
4,676.00	6.70	104.70	4,665.10	-40.69	174.95	173.47	0.12	-0.11	-0.43
4,770.00	6.70	106.10	4,758.46	-43.61	185.52	184.17	0.17	0.00	1.49
4,863.00	6.10	103.90	4,850.88	-46.30	195.53	194.27	0.70	-0.65	-2.37
4,957.00	6.00	105.10	4,944.36	-48.78	205.12	203.89	0.17	-0.11	1.28
5,050.00	5.80	104.80	5,036.87	-51.24	214.35	213.20	0.22	-0.22	-0.32
5,144.00	5.40	106.90	5,130.42	-53.74	223.18	222.16	0.48	-0.43	2.23
5,237.00	4.80	106.40	5,223.05	-56.11	231.10	230.26	0.65	-0.65	-0.54
5,331.00	5.40	104.80	5,316.68	-58.35	239.15	238.42	0.66	0.64	-1.70
5,424.00	5.80	104.80	5,409.23	-60.67	247.92	247.25	0.43	0.43	0.00
5,518.00	5.90	103.40	5,502.74	-63.00	257.21	256.55	0.19	0.11	-1.49
5,611.00	5.30	105.90	5,595.30	-65.29	265.99	265.37	0.70	-0.65	2.69
5,705.00	5.10	108.70	5,688.91	-67.82	274.13	273.73	0.34	-0.21	2.98
5,798.00	4.80	106.30	5,781.57	-70.24	281.78	281.62	0.39	-0.32	-2.58
5,892.00	4.80	109.30	5,875.24	-72.64	289.26	289.35	0.27	0.00	3.19
5,985.00	4.40	108.60	5,967.94	-75.06	296.32	296.72	0.43	-0.43	-0.75
6,079.00	4.00	113.70	6,061.68	-77.53	302.74	303.54	0.58	-0.43	5.43
6,172.00	3.90	112.00	6,154.46	-80.02	308.64	309.92	0.17	-0.11	-1.83
6,266.00	3.40	129.70	6,248.28	-83.00	313.75	315.83	1.30	-0.53	18.83
6,359.00	3.30	157.90	6,341.12	-87.24	316.88	320.59	1.76	-0.11	30.32
6,453.00	3.10	162.30	6,434.98	-92.17	318.67	324.49	0.34	-0.21	4.68
6,546.00	1.70	190.80	6,527.90	-95.92	319.17	326.70	1.93	-1.51	30.65
6,639.00	1.90	240.50	6,620.85	-98.03	317.57	326.29	1.64	0.22	53.44
6,733.00	1.90	248.20	6,714.80	-99.38	314.77	324.45	0.27	0.00	8.19
6,826.00	1.70	263.60	6,807.76	-100.11	311.97	322.32	0.56	-0.22	16.56
6,920.00	2.60	251.10	6,901.69	-100.95	308.57	319.72	1.07	0.96	-13.30
7,013.00	2.90	256.70	6,994.58	-102.18	304.28	316.52	0.43	0.32	6.02
7,106.00	3.50	268.50	7,087.44	-102.79	299.15	312.29	0.95	0.65	12.69
7,200.00	4.10	275.50	7,181.23	-102.54	292.94	306.69	0.81	0.64	7.45
7,293.00	3.20	273.90	7,274.04	-102.05	287.04	301.25	0.97	-0.97	-1.72
7,387.00	2.80	277.50	7,367.91	-101.57	282.15	296.71	0.47	-0.43	3.83
7,480.00	2.80	273.10	7,460.80	-101.15	277.63	292.53	0.23	0.00	-4.73
7,574.00	1.90	285.20	7,554.72	-100.62	273.83	288.93	1.09	-0.96	12.87
7,667.00	2.40	299.30	7,647.66	-99.26	270.64	285.48	0.78	0.54	15.16
7,761.00	2.40	314.90	7,741.58	-96.91	267.53	281.63	0.69	0.00	16.60
7,854.00	2.20	23.90	7,834.52	-93.90	266.88	279.63	2.81	-0.22	74.19
7,947.00	2.40	38.90	7,927.44	-90.76	268.82	279.86	0.68	0.22	16.13
8,041.00	2.10	50.10	8,021.37	-88.12	271.38	280.88	0.56	-0.32	11.91
8,135.00	2.50	80.80	8,115.30	-86.69	274.73	283.15	1.36	0.43	32.66
8,229.00	2.30	81.70	8,209.22	-86.09	278.62	286.30	0.22	-0.21	0.96
8,322.00	2.10	92.00	8,302.15	-85.88	282.17	289.33	0.48	-0.22	11.08
8,416.00	1.90	103.30	8,396.09	-86.29	285.40	292.38	0.47	-0.21	12.02
8,509.00	1.40	111.00	8,489.05	-87.06	287.96	295.00	0.59	-0.54	8.28
8,603.00	1.20	108.50	8,583.03	-87.78	289.97	297.11	0.22	-0.21	-2.66
8,696.00	1.00	121.20	8,676.01	-88.51	291.59	298.88	0.34	-0.22	13.66



Total Directional Services

Survey Report



Company:	Matador Resources Company	Local Co-ordinate Reference:	Well Ray State Com 223H
Project:	Eddy County, NM (NAD27-Grid)	TVD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Site:	Ray State Com	MD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Well:	Ray State Com 223H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.15 Single User Db

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)	
8,790.00	1.70	114.90	8,769.99	-89.52	293.55	301.09	0.76	0.74	-6.70	
8,883.00	1.50	124.30	8,862.95	-90.79	295.81	303.68	0.35	-0.22	10.11	
8,977.00	1.80	142.10	8,956.91	-92.65	297.73	306.25	0.63	0.32	18.94	
9,070.00	1.80	137.80	9,049.87	-94.88	299.61	308.96	0.15	0.00	-4.62	
9,164.00	1.60	140.20	9,143.82	-96.98	301.44	311.57	0.23	-0.21	2.55	
9,257.00	2.50	130.60	9,236.76	-99.30	303.81	314.75	1.03	0.97	-10.32	
9,351.00	2.60	159.50	9,330.67	-102.63	306.12	318.35	1.36	0.11	30.74	
9,445.00	3.00	197.80	9,424.57	-106.97	306.11	320.40	1.99	0.43	40.74	
9,538.00	3.30	214.50	9,517.43	-111.49	303.85	320.53	1.03	0.32	17.96	
9,632.00	4.70	225.40	9,611.20	-116.43	299.58	319.09	1.69	1.49	11.60	
9,725.00	4.60	230.00	9,703.90	-121.50	294.01	316.57	0.42	-0.11	4.95	
9,819.00	5.00	214.20	9,797.57	-127.31	288.82	314.73	1.46	0.43	-16.81	
9,912.00	5.00	223.80	9,890.22	-133.59	283.74	313.21	0.90	0.00	10.32	
10,005.00	4.40	228.80	9,982.90	-138.86	278.25	310.85	0.78	-0.65	5.38	
10,126.00	4.40	228.80	10,103.55	-144.98	271.26	307.57	0.00	0.00	0.00	
PBHL (Ray State Com 223H) - LP (Ray State Com 223H)										

Checked By: _____	Approved By: _____	Date: _____
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Final MWD Survey Certification

Eddy County, NM

Client: Matador Resources Company

Well Name: Ray State Com 223H ST01

Total Job No: SW-190031

API No: 30-015-46476

Start Date: January 02, 2020

End Date: January 27, 2020

Start Depth: 0'

End Depth: 21075'

I, Brett Yeo, MWD Operator, hereby certify that; I am employed by Total Directional Services, LLC and we conducted or supervised the taking of these open hole MWD surveys at the request of this client. This data is true, correct, complete and within the limitations of the tool as set forth by Total Directional Services, LLC. I am authorized and qualified to make this report and have reviewed this report and find that it conforms to the principals and procedures as set forth by Total Directional Services, LLC.

Date: 01/27/20

Signed: *Brett Yeo*



Matador Resources Company

Eddy County, NM (NAD27-Grid)

Ray State Com

Ray State Com 223H

ST01

Design: ST01

Standard Survey Report

28 January, 2020





Total Directional Services

Survey Report



Company:	Matador Resources Company	Local Co-ordinate Reference:	Well Ray State Com 223H
Project:	Eddy County, NM (NAD27-Grid)	TVD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Site:	Ray State Com	MD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Well:	Ray State Com 223H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	EDM 5000.15 Single User Db

Project	Eddy County, NM (NAD27-Grid)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site		Ray State Com			
Site Position:		Northing:	455,390.00 usft	Latitude:	32.251627
From:	Map	Easting:	592,880.00 usft	Longitude:	-104.032893
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.16 °

Well	Ray State Com 223H					
Well Position	+N/-S	0.00 usft	Northing:	456,443.00 usft	Latitude:	32.254539
	+E/-W	0.00 usft	Easting:	590,591.00 usft	Longitude:	-104.040288
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	2,962.00 usft

Wellbore	ST01				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/9/2020	6.90	59.98	47,646.65676355

Design	ST01				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	9,912.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	1.65	

Survey Program	Date	1/28/2020			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
200.00	9,912.00	Survey #1 (OH)	MWD+HRGM	OWSG MWD + HRGM	
10,057.00	20,990.00	Survey #1 (ST01)	MWD+HRGM	OWSG MWD + HRGM	
21,075.00	21,075.00	Survey #2 - Proj to TD (ST01)	BLIND	OWSG BLIND	

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	
ST01 SHL (Ray State Com 223H)										
200.00	1.00	9.30	199.99	1.72	0.28	1.73	0.50	0.50	0.00	
291.00	1.00	232.10	290.98	2.02	-0.22	2.01	2.05	0.00	-150.77	
380.00	1.30	200.20	379.97	0.59	-1.18	0.56	0.78	0.34	-35.84	
469.00	0.80	175.60	468.95	-0.97	-1.48	-1.02	0.74	-0.56	-27.64	
562.00	0.70	170.90	561.94	-2.18	-1.34	-2.22	0.13	-0.11	-5.05	
653.00	0.60	113.30	652.94	-2.92	-0.81	-2.94	0.69	-0.11	-63.30	
743.00	1.10	104.70	742.93	-3.32	0.45	-3.31	0.57	0.56	-9.56	



Total Directional Services

Survey Report



Company:	Matador Resources Company	Local Co-ordinate Reference:	Well Ray State Com 223H
Project:	Eddy County, NM (NAD27-Grid)	TVD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Site:	Ray State Com	MD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Well:	Ray State Com 223H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	EDM 5000.15 Single User Db

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)
834.00	1.20	85.50	833.91	-3.47	2.25	-3.41	0.44	0.11	-21.10
924.00	0.80	59.90	923.90	-3.08	3.73	-2.97	0.66	-0.44	-28.44
1,014.00	0.50	344.90	1,013.89	-2.39	4.17	-2.27	0.92	-0.33	-83.33
1,105.00	0.40	351.40	1,104.89	-1.69	4.02	-1.57	0.12	-0.11	7.14
1,195.00	0.30	302.30	1,194.89	-1.25	3.78	-1.14	0.34	-0.11	-54.56
1,286.00	0.80	295.80	1,285.88	-0.85	3.00	-0.76	0.55	0.55	-7.14
1,376.00	0.70	280.40	1,375.88	-0.48	1.90	-0.42	0.25	-0.11	-17.11
1,469.00	0.20	279.30	1,468.87	-0.35	1.18	-0.31	0.54	-0.54	-1.18
1,563.00	0.60	302.20	1,562.87	-0.06	0.60	-0.04	0.45	0.43	24.36
1,657.00	1.00	288.40	1,656.86	0.46	-0.59	0.44	0.47	0.43	-14.68
1,750.00	1.80	279.80	1,749.83	0.97	-2.80	0.88	0.89	0.86	-9.25
1,844.00	0.80	243.00	1,843.81	0.92	-4.84	0.78	1.33	-1.06	-39.15
1,937.00	0.90	149.00	1,936.80	0.00	-5.05	-0.15	1.34	0.11	-101.08
2,030.00	1.50	149.00	2,029.78	-1.67	-4.04	-1.79	0.65	0.65	0.00
2,124.00	2.10	167.90	2,123.74	-4.41	-3.05	-4.50	0.89	0.64	20.11
2,217.00	0.50	115.40	2,216.71	-6.25	-2.32	-6.31	1.98	-1.72	-56.45
2,311.00	1.00	109.60	2,310.70	-6.70	-1.18	-6.73	0.54	0.53	-6.17
2,404.00	1.80	140.00	2,403.68	-8.09	0.52	-8.07	1.15	0.86	32.69
2,497.00	2.30	133.60	2,496.62	-10.50	2.81	-10.41	0.59	0.54	-6.88
2,590.00	0.40	42.30	2,589.59	-11.55	4.38	-11.41	2.52	-2.04	-98.17
2,684.00	1.50	336.90	2,683.58	-10.17	4.12	-10.05	1.47	1.17	-69.57
2,807.00	0.90	346.10	2,806.55	-7.75	3.26	-7.65	0.51	-0.49	7.48
2,900.00	1.40	345.60	2,899.53	-5.94	2.80	-5.86	0.54	0.54	-0.54
2,994.00	1.00	39.50	2,993.51	-4.20	3.04	-4.11	1.22	-0.43	57.34
3,087.00	1.20	89.60	3,086.50	-3.56	4.53	-3.43	1.02	0.22	53.87
3,181.00	1.90	111.60	3,180.46	-4.13	6.96	-3.93	0.96	0.74	23.40
3,274.00	3.70	111.80	3,273.35	-5.81	11.18	-5.49	1.94	1.94	0.22
3,368.00	5.00	104.80	3,367.08	-7.99	17.96	-7.46	1.49	1.38	-7.45
3,461.00	6.00	99.90	3,459.65	-9.86	26.66	-9.08	1.19	1.08	-5.27
3,554.00	6.90	98.90	3,552.06	-11.56	36.97	-10.48	0.98	0.97	-1.08
3,648.00	6.90	96.80	3,645.38	-13.10	48.15	-11.70	0.27	0.00	-2.23
3,741.00	6.90	95.50	3,737.70	-14.30	59.26	-12.58	0.17	0.00	-1.40
3,835.00	7.50	99.60	3,830.96	-15.86	70.93	-13.81	0.84	0.64	4.36
3,928.00	7.80	99.40	3,923.13	-17.90	83.14	-15.50	0.32	0.32	-0.22
4,022.00	7.80	104.10	4,016.27	-20.50	95.62	-17.73	0.68	0.00	5.00
4,115.00	7.60	102.70	4,108.43	-23.39	107.74	-20.27	0.29	-0.22	-1.51
4,209.00	7.50	102.10	4,201.61	-26.04	119.80	-22.57	0.14	-0.11	-0.64
4,302.00	7.60	103.50	4,293.81	-28.75	131.72	-24.93	0.23	0.11	1.51
4,396.00	6.80	106.20	4,387.06	-31.75	143.11	-27.61	0.92	-0.85	2.87
4,489.00	6.80	106.50	4,479.41	-34.85	153.67	-30.40	0.04	0.00	0.32
4,583.00	6.80	105.10	4,572.75	-37.88	164.38	-33.12	0.18	0.00	-1.49
4,676.00	6.70	104.70	4,665.10	-40.69	174.95	-35.63	0.12	-0.11	-0.43
4,770.00	6.70	106.10	4,758.46	-43.61	185.52	-38.23	0.17	0.00	1.49



Total Directional Services

Survey Report



Company:	Matador Resources Company	Local Co-ordinate Reference:	Well Ray State Com 223H
Project:	Eddy County, NM (NAD27-Grid)	TVD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Site:	Ray State Com	MD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Well:	Ray State Com 223H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	EDM 5000.15 Single User Db

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)
4,863.00	6.10	103.90	4,850.88	-46.30	195.53	-40.63	0.70	-0.65	-2.37
4,957.00	6.00	105.10	4,944.36	-48.78	205.12	-42.83	0.17	-0.11	1.28
5,050.00	5.80	104.80	5,036.87	-51.24	214.35	-45.03	0.22	-0.22	-0.32
5,144.00	5.40	106.90	5,130.42	-53.74	223.18	-47.28	0.48	-0.43	2.23
5,237.00	4.80	106.40	5,223.05	-56.11	231.10	-49.42	0.65	-0.65	-0.54
5,331.00	5.40	104.80	5,316.68	-58.35	239.15	-51.42	0.66	0.64	-1.70
5,424.00	5.80	104.80	5,409.23	-60.67	247.92	-53.49	0.43	0.43	0.00
5,518.00	5.90	103.40	5,502.74	-63.00	257.21	-55.55	0.19	0.11	-1.49
5,611.00	5.30	105.90	5,595.30	-65.29	265.99	-57.58	0.70	-0.65	2.69
5,705.00	5.10	108.70	5,688.91	-67.82	274.13	-59.88	0.34	-0.21	2.98
5,798.00	4.80	106.30	5,781.57	-70.24	281.78	-62.07	0.39	-0.32	-2.58
5,892.00	4.80	109.30	5,875.24	-72.64	289.26	-64.26	0.27	0.00	3.19
5,985.00	4.40	108.60	5,967.94	-75.06	296.32	-66.48	0.43	-0.43	-0.75
6,079.00	4.00	113.70	6,061.68	-77.53	302.74	-68.76	0.58	-0.43	5.43
6,172.00	3.90	112.00	6,154.46	-80.02	308.64	-71.08	0.17	-0.11	-1.83
6,266.00	3.40	129.70	6,248.28	-83.00	313.75	-73.90	1.30	-0.53	18.83
6,359.00	3.30	157.90	6,341.12	-87.24	316.88	-78.05	1.76	-0.11	30.32
6,453.00	3.10	162.30	6,434.98	-92.17	318.67	-82.93	0.34	-0.21	4.68
6,546.00	1.70	190.80	6,527.90	-95.92	319.17	-86.66	1.93	-1.51	30.65
6,639.00	1.90	240.50	6,620.85	-98.03	317.57	-88.82	1.64	0.22	53.44
6,733.00	1.90	248.20	6,714.80	-99.38	314.77	-90.25	0.27	0.00	8.19
6,826.00	1.70	263.60	6,807.76	-100.11	311.97	-91.06	0.56	-0.22	16.56
6,920.00	2.60	251.10	6,901.69	-100.95	308.57	-92.00	1.07	0.96	-13.30
7,013.00	2.90	256.70	6,994.58	-102.18	304.28	-93.35	0.43	0.32	6.02
7,106.00	3.50	268.50	7,087.44	-102.79	299.15	-94.11	0.95	0.65	12.69
7,200.00	4.10	275.50	7,181.23	-102.54	292.94	-94.04	0.81	0.64	7.45
7,293.00	3.20	273.90	7,274.04	-102.05	287.04	-93.72	0.97	-0.97	-1.72
7,387.00	2.80	277.50	7,367.91	-101.57	282.15	-93.38	0.47	-0.43	3.83
7,480.00	2.80	273.10	7,460.80	-101.15	277.63	-93.09	0.23	0.00	-4.73
7,574.00	1.90	285.20	7,554.72	-100.62	273.83	-92.67	1.09	-0.96	12.87
7,667.00	2.40	299.30	7,647.66	-99.26	270.64	-91.41	0.78	0.54	15.16
7,761.00	2.40	314.90	7,741.58	-96.91	267.53	-89.14	0.69	0.00	16.60
7,854.00	2.20	23.90	7,834.52	-93.90	266.88	-86.16	2.81	-0.22	74.19
7,947.00	2.40	38.90	7,927.44	-90.76	268.82	-82.96	0.68	0.22	16.13
8,041.00	2.10	50.10	8,021.37	-88.12	271.38	-80.25	0.56	-0.32	11.91
8,135.00	2.50	80.80	8,115.30	-86.69	274.73	-78.72	1.36	0.43	32.66
8,229.00	2.30	81.70	8,209.22	-86.09	278.62	-78.01	0.22	-0.21	0.96
8,322.00	2.10	92.00	8,302.15	-85.88	282.17	-77.69	0.48	-0.22	11.08
8,416.00	1.90	103.30	8,396.09	-86.29	285.40	-78.02	0.47	-0.21	12.02
8,509.00	1.40	111.00	8,489.05	-87.06	287.96	-78.71	0.59	-0.54	8.28
8,603.00	1.20	108.50	8,583.03	-87.78	289.97	-79.37	0.22	-0.21	-2.66
8,696.00	1.00	121.20	8,676.01	-88.51	291.59	-80.05	0.34	-0.22	13.66
8,790.00	1.70	114.90	8,769.99	-89.52	293.55	-81.01	0.76	0.74	-6.70
8,883.00	1.50	124.30	8,862.95	-90.79	295.81	-82.21	0.35	-0.22	10.11



Total Directional Services

Survey Report



Company:	Matador Resources Company	Local Co-ordinate Reference:	Well Ray State Com 223H
Project:	Eddy County, NM (NAD27-Grid)	TVD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Site:	Ray State Com	MD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Well:	Ray State Com 223H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	EDM 5000.15 Single User Db

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)
8,977.00	1.80	142.10	8,956.91	-92.65	297.73	-84.01	0.63	0.32	18.94
9,070.00	1.80	137.80	9,049.87	-94.88	299.61	-86.19	0.15	0.00	-4.62
9,164.00	1.60	140.20	9,143.82	-96.98	301.44	-88.24	0.23	-0.21	2.55
9,257.00	2.50	130.60	9,236.76	-99.30	303.81	-90.49	1.03	0.97	-10.32
9,351.00	2.60	159.50	9,330.67	-102.63	306.12	-93.75	1.36	0.11	30.74
9,445.00	3.00	197.80	9,424.57	-106.97	306.11	-98.09	1.99	0.43	40.74
9,538.00	3.30	214.50	9,517.43	-111.49	303.85	-102.68	1.03	0.32	17.96
9,632.00	4.70	225.40	9,611.20	-116.43	299.58	-107.73	1.69	1.49	11.60
9,725.00	4.60	230.00	9,703.90	-121.50	294.01	-112.96	0.42	-0.11	4.95
9,819.00	5.00	214.20	9,797.57	-127.31	288.82	-118.92	1.46	0.43	-16.81
9,912.00	5.00	223.80	9,890.22	-133.59	283.74	-125.34	0.90	0.00	10.32
10,057.00	8.20	245.80	10,034.26	-142.39	269.92	-134.54	2.77	2.21	15.17
10,151.00	9.10	273.30	10,127.23	-144.71	256.38	-137.25	4.46	0.96	29.26
10,245.00	13.20	282.70	10,219.44	-141.93	238.48	-134.98	4.76	4.36	10.00
10,292.00	17.20	287.00	10,264.79	-138.71	226.60	-132.11	8.84	8.51	9.15
10,338.00	21.10	295.40	10,308.24	-133.17	212.60	-126.97	10.36	8.48	18.26
10,385.00	26.50	304.20	10,351.25	-123.64	196.27	-117.92	13.72	11.49	18.72
10,432.00	28.70	316.60	10,392.93	-109.53	179.83	-104.29	13.06	4.68	26.38
10,479.00	32.20	327.60	10,433.47	-90.74	165.35	-85.92	13.98	7.45	23.40
10,526.00	35.50	334.50	10,472.52	-67.83	152.76	-63.39	10.77	7.02	14.68
10,573.00	38.70	340.60	10,510.01	-41.64	142.00	-37.52	10.37	6.81	12.98
10,619.00	42.90	346.00	10,544.83	-12.86	133.43	-9.00	11.92	9.13	11.74
10,666.00	47.10	351.80	10,578.08	19.73	127.09	23.39	12.48	8.94	12.34
10,713.00	50.90	358.30	10,608.92	55.03	124.09	58.59	13.20	8.09	13.83
10,760.00	54.30	4.70	10,637.48	92.31	125.12	95.89	13.01	7.23	13.62
10,807.00	58.80	8.20	10,663.39	131.26	129.55	134.94	11.41	9.57	7.45
10,854.00	66.00	12.60	10,685.16	172.17	137.12	176.06	17.42	15.32	9.36
10,900.00	70.50	17.90	10,702.21	213.36	148.38	217.55	14.50	9.78	11.52
10,932.45	75.00	22.39	10,711.84	242.43	159.06	246.92	19.13	13.86	13.82
75 INC Marker									
10,946.00	76.90	24.20	10,715.13	254.50	164.25	259.14	19.13	14.05	13.39
10,992.00	81.40	30.30	10,723.79	294.63	184.94	299.84	16.29	9.78	13.26
11,043.23	83.63	29.91	10,730.47	338.56	210.41	344.50	4.41	4.35	-0.76
LP (Ray State Com 223H Prototype)									
11,084.00	85.40	29.60	10,734.36	373.80	230.55	380.30	4.41	4.35	-0.76
11,169.65	88.69	26.59	10,738.78	449.24	270.82	456.87	5.21	3.85	-3.52
313' FWL HL Crossing									
11,175.00	88.90	26.40	10,738.89	454.03	273.21	461.73	5.21	3.85	-3.51
11,201.72	89.04	22.80	10,739.37	478.31	284.33	486.32	13.49	0.53	-13.48
ST01 LP (Ray State Com 223H)									
11,210.47	89.09	21.62	10,739.51	486.41	287.63	494.51	13.49	0.54	-13.48
330' FWL HL Crossing									
11,267.00	89.40	14.00	10,740.26	540.19	304.91	548.77	13.49	0.55	-13.48
11,359.00	90.50	3.00	10,740.34	631.04	318.49	639.97	12.02	1.20	-11.96



Total Directional Services

Survey Report



Company:	Matador Resources Company	Local Co-ordinate Reference:	Well Ray State Com 223H
Project:	Eddy County, NM (NAD27-Grid)	TVD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Site:	Ray State Com	MD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Well:	Ray State Com 223H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	EDM 5000.15 Single User Db

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)
11,451.00	91.00	2.00	10,739.14	722.94	322.50	731.95	1.22	0.54	-1.09
11,542.00	90.40	1.70	10,738.02	813.89	325.44	822.94	0.74	-0.66	-0.33
11,634.00	92.40	359.90	10,735.78	905.84	326.72	914.90	2.92	2.17	-1.96
11,726.00	92.70	358.80	10,731.68	997.74	325.68	1,006.73	1.24	0.33	-1.20
11,818.00	89.00	1.30	10,730.32	1,089.71	325.76	1,098.66	4.85	-4.02	2.72
11,936.00	86.90	1.10	10,734.54	1,207.60	328.23	1,216.57	1.79	-1.78	-0.17
12,028.00	87.80	359.70	10,738.79	1,299.50	328.87	1,308.45	1.81	0.98	-1.52
12,120.00	93.20	1.40	10,737.99	1,391.45	329.75	1,400.39	6.15	5.87	1.85
12,212.00	93.00	0.50	10,733.01	1,483.30	331.28	1,492.25	1.00	-0.22	-0.98
12,306.00	90.90	1.10	10,729.82	1,577.23	332.59	1,586.18	2.32	-2.23	0.64
12,399.00	88.00	1.60	10,730.71	1,670.19	334.78	1,679.16	3.16	-3.12	0.54
12,493.00	87.90	0.30	10,734.07	1,764.12	336.34	1,773.09	1.39	-0.11	-1.38
12,587.00	91.20	1.00	10,734.81	1,858.10	337.40	1,867.06	3.59	3.51	0.74
12,681.00	88.90	359.70	10,734.73	1,952.09	337.98	1,961.03	2.81	-2.45	-1.38
12,774.00	92.60	359.50	10,733.51	2,045.06	337.33	2,053.95	3.98	3.98	-0.22
12,868.00	91.10	358.10	10,730.48	2,138.99	335.36	2,147.78	2.18	-1.60	-1.49
12,962.00	91.00	356.20	10,728.75	2,232.85	330.69	2,241.47	2.02	-0.11	-2.02
13,056.00	86.50	357.00	10,730.80	2,326.64	325.11	2,335.05	4.86	-4.79	0.85
13,149.00	84.30	357.50	10,738.26	2,419.22	320.67	2,427.47	2.43	-2.37	0.54
13,243.00	92.20	356.50	10,741.13	2,512.98	315.75	2,521.04	8.47	8.40	-1.06
13,337.00	89.50	357.00	10,739.74	2,606.81	310.42	2,614.68	2.92	-2.87	0.53
13,431.00	88.40	355.70	10,741.46	2,700.60	304.44	2,708.26	1.81	-1.17	-1.38
13,524.00	90.90	356.10	10,742.03	2,793.35	297.79	2,800.78	2.72	2.69	0.43
13,618.00	92.30	359.70	10,739.40	2,887.23	294.35	2,894.53	4.11	1.49	3.83
13,711.00	91.50	359.20	10,736.32	2,980.17	293.46	2,987.40	1.01	-0.86	-0.54
13,805.00	90.00	0.80	10,735.09	3,074.16	293.46	3,081.35	2.33	-1.60	1.70
13,899.00	88.70	0.30	10,736.15	3,168.15	294.36	3,175.33	1.48	-1.38	-0.53
13,993.00	91.90	1.50	10,735.66	3,262.12	295.83	3,269.30	3.64	3.40	1.28
14,087.00	92.60	0.60	10,731.97	3,356.03	297.56	3,363.22	1.21	0.74	-0.96
14,181.00	89.00	2.90	10,730.66	3,449.96	300.43	3,457.19	4.54	-3.83	2.45
14,275.00	89.30	4.00	10,732.05	3,543.77	306.08	3,551.13	1.21	0.32	1.17
14,367.00	89.30	3.20	10,733.18	3,635.59	311.86	3,643.07	0.87	0.00	-0.87
14,461.00	89.10	0.30	10,734.49	3,729.52	314.73	3,737.05	3.09	-0.21	-3.09
14,554.00	91.50	358.60	10,734.00	3,822.51	313.84	3,829.97	3.16	2.58	-1.83
14,648.00	91.40	358.80	10,731.62	3,916.45	311.70	3,923.82	0.24	-0.11	0.21
14,742.00	90.60	357.80	10,729.98	4,010.39	308.92	4,017.64	1.36	-0.85	-1.06
14,835.00	90.70	359.70	10,728.93	4,103.36	306.89	4,110.51	2.05	0.11	2.04
14,929.00	90.80	0.90	10,727.70	4,197.35	307.38	4,204.48	1.28	0.11	1.28
15,023.00	83.50	0.10	10,732.37	4,291.17	308.20	4,298.28	7.81	-7.77	-0.85
15,118.00	87.20	1.20	10,740.07	4,385.83	309.28	4,392.93	4.06	3.89	1.16
15,213.00	91.10	3.90	10,741.48	4,480.70	313.50	4,487.88	4.99	4.11	2.84
15,308.00	89.80	3.80	10,740.73	4,575.48	319.88	4,582.81	1.37	-1.37	-0.11
15,403.00	88.10	3.40	10,742.47	4,670.27	325.84	4,677.73	1.84	-1.79	-0.42



Total Directional Services

Survey Report



Company:	Matador Resources Company	Local Co-ordinate Reference:	Well Ray State Com 223H
Project:	Eddy County, NM (NAD27-Grid)	TVD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Site:	Ray State Com	MD Reference:	2962' GE + 28.5' KB @ 2990.50usft
Well:	Ray State Com 223H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	EDM 5000.15 Single User Db

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)
15,498.00	88.40	3.70	10,745.37	4,765.05	331.72	4,772.64	0.45	0.32	0.32
15,593.00	88.80	0.30	10,747.70	4,859.94	335.04	4,867.59	3.60	0.42	-3.58
15,688.00	90.20	3.30	10,748.52	4,954.88	338.02	4,962.58	3.48	1.47	3.16
15,782.00	90.30	2.50	10,748.11	5,048.76	342.78	5,056.55	0.86	0.11	-0.85
15,876.00	89.70	1.00	10,748.11	5,142.71	345.65	5,150.55	1.72	-0.64	-1.60
15,971.00	92.10	4.60	10,746.62	5,237.56	350.29	5,245.49	4.55	2.53	3.79
16,066.00	88.20	0.50	10,746.37	5,332.43	354.51	5,340.44	5.96	-4.11	-4.32
16,161.00	89.70	0.40	10,748.11	5,427.41	355.26	5,435.40	1.58	1.58	-0.11
16,256.00	91.00	1.90	10,747.53	5,522.38	357.16	5,530.39	2.09	1.37	1.58
16,351.00	88.00	359.50	10,748.36	5,617.36	358.32	5,625.36	4.04	-3.16	-2.53
16,446.00	87.10	358.40	10,752.42	5,712.25	356.59	5,720.16	1.50	-0.95	-1.16
16,541.00	88.40	357.80	10,756.15	5,807.12	353.44	5,814.91	1.51	1.37	-0.63
16,636.00	90.10	356.60	10,757.40	5,902.00	348.80	5,909.61	2.19	1.79	-1.26
16,731.00	90.80	358.00	10,756.65	5,996.88	344.32	6,004.33	1.65	0.74	1.47
16,825.00	89.10	355.90	10,756.73	6,090.74	339.32	6,098.00	2.87	-1.81	-2.23
16,920.00	89.30	354.70	10,758.06	6,185.41	331.54	6,192.41	1.28	0.21	-1.26
17,015.00	93.40	357.20	10,755.82	6,280.12	324.83	6,286.88	5.05	4.32	2.63
17,110.00	92.10	355.60	10,751.26	6,374.82	318.87	6,381.37	2.17	-1.37	-1.68
17,204.00	90.20	355.60	10,749.38	6,468.52	311.66	6,474.82	2.02	-2.02	0.00
17,299.00	91.10	355.90	10,748.30	6,563.25	304.62	6,569.31	1.00	0.95	0.32
17,394.00	90.10	355.80	10,747.30	6,657.99	297.75	6,663.82	1.06	-1.05	-0.11
17,489.00	89.80	356.20	10,747.39	6,752.76	291.12	6,758.35	0.53	-0.32	0.42
17,583.00	92.10	359.20	10,745.83	6,846.66	287.35	6,852.10	4.02	2.45	3.19
17,678.00	94.20	3.50	10,740.61	6,941.46	289.58	6,946.93	5.03	2.21	4.53
17,773.00	89.80	2.90	10,737.29	7,036.23	294.88	7,041.81	4.67	-4.63	-0.63
17,868.00	89.40	2.70	10,737.95	7,131.11	299.52	7,136.79	0.47	-0.42	-0.21
17,962.00	89.90	3.20	10,738.53	7,224.99	304.36	7,230.76	0.75	0.53	0.53
18,056.00	90.20	2.80	10,738.45	7,318.86	309.28	7,324.74	0.53	0.32	-0.43
18,151.00	91.20	3.40	10,737.29	7,413.71	314.41	7,419.70	1.23	1.05	0.63
18,246.00	90.80	2.90	10,735.63	7,508.55	319.63	7,514.65	0.67	-0.42	-0.53
18,340.00	89.70	2.50	10,735.22	7,602.45	324.06	7,608.63	1.25	-1.17	-0.43
18,434.00	89.60	3.00	10,735.79	7,696.33	328.57	7,702.61	0.54	-0.11	0.53
18,530.00	89.20	359.50	10,736.80	7,792.29	330.66	7,798.59	3.67	-0.42	-3.65
18,625.00	91.10	1.30	10,736.55	7,887.28	331.33	7,893.56	2.75	2.00	1.89
18,720.00	90.90	0.20	10,734.89	7,982.26	332.57	7,988.53	1.18	-0.21	-1.16
18,814.00	90.60	359.50	10,733.66	8,076.25	332.32	8,082.48	0.81	-0.32	-0.74
18,909.00	90.70	0.10	10,732.58	8,171.24	331.99	8,177.42	0.64	0.11	0.63
19,003.00	89.30	357.40	10,732.58	8,265.21	329.94	8,271.29	3.24	-1.49	-2.87
19,098.00	88.70	358.30	10,734.24	8,360.12	326.38	8,366.06	1.14	-0.63	0.95
19,192.00	90.20	358.80	10,735.14	8,454.09	324.00	8,459.92	1.68	1.60	0.53
19,287.00	89.60	354.50	10,735.31	8,548.90	318.45	8,554.53	4.57	-0.63	-4.53
19,382.00	87.80	356.40	10,737.46	8,643.57	310.92	8,648.94	2.75	-1.89	2.00
19,477.00	90.00	359.60	10,739.29	8,738.48	307.60	8,743.71	4.09	2.32	3.37