

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

NMOCD-rec'd 8/10/2020

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 30-015-46450	² Pool Code 98220	³ Pool Name PURPLE SAGE;WOLFCAMP (GAS)
⁴ Property Code 326434	⁵ Property Name RAY STATE COM	⁶ Well Number 217H
⁷ OGRID No. 228937	⁸ Operator Name MATADOR PRODUCTION COMPANY	⁹ Elevation 2963'

¹⁰Surface Location

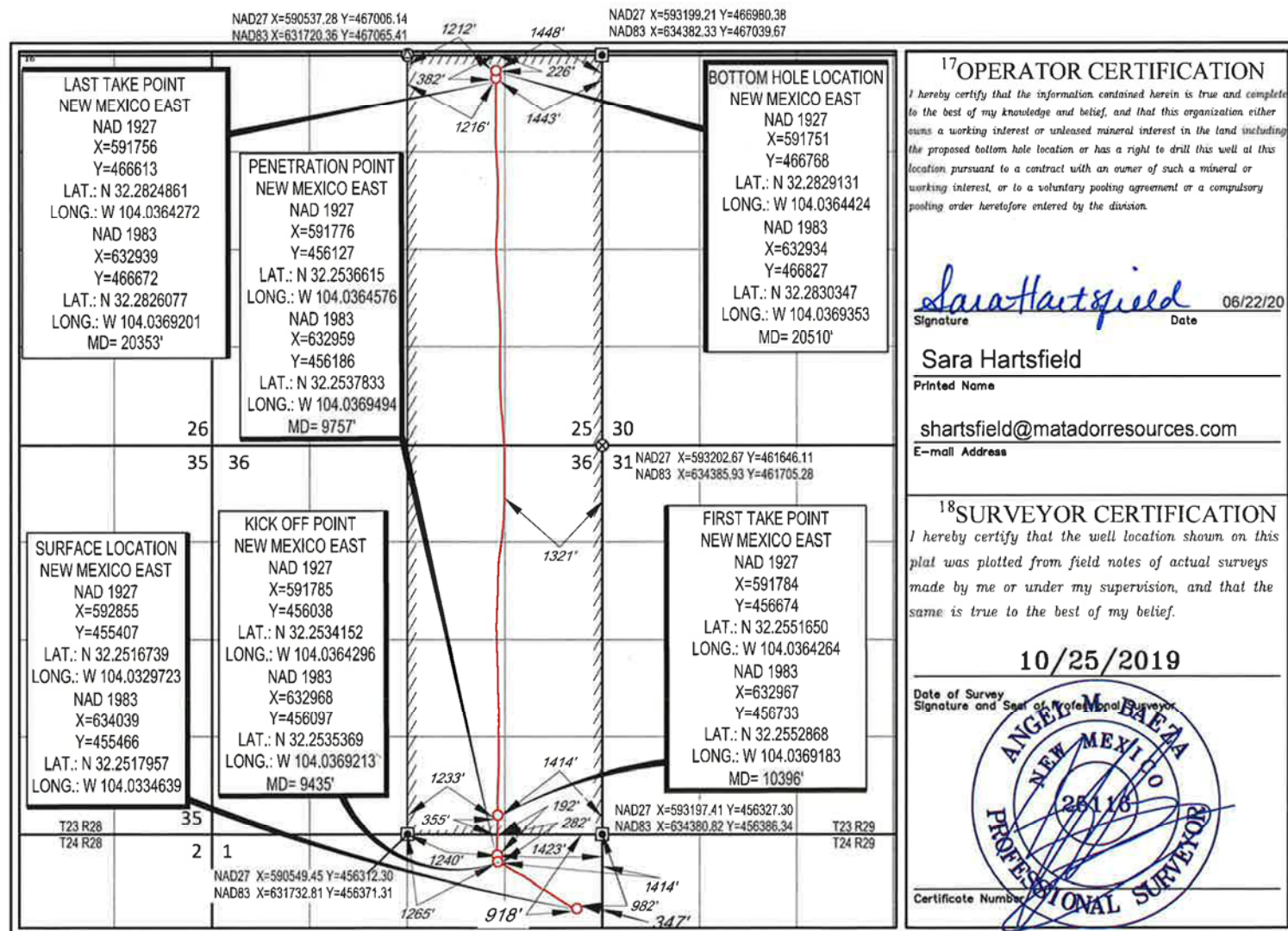
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	1	24-S	28-E	-	918'	NORTH	347'	EAST	EDDY

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	-	226'	NORTH	1448'	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.



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



SECTION 1, TOWNSHIP 24-S, RANGE 28-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

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



LAST TAKE POINT
NEW MEXICO EAST
NAD 1927
X=591756
Y=466613
LAT.: N 32.2824861
LONG.: W 104.0364272
NAD 1983
X=632939
Y=466672
LAT.: N 32.2826077
LONG.: W 104.0369201
MD= 20353'

60D NAIL
FOUND

COTTON
SPINDLE
FOUND

1/2" IRON ROD
FOUND

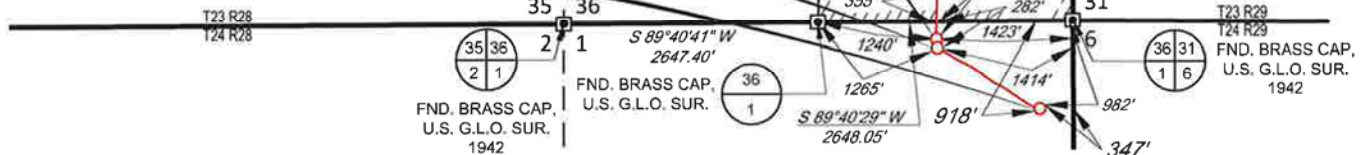
BOTTOM HOLE LOCATION
NEW MEXICO EAST
NAD 1927
X=591751
Y=466768
LAT.: N 32.2829131
LONG.: W 104.0364424
NAD 1983
X=632934
Y=466827
LAT.: N 32.2830347
LONG.: W 104.0369353
MD= 20510'

SURFACE LOCATION
NEW MEXICO EAST
NAD 1927
X=592855
Y=455407
LAT.: N 32.2516739
LONG.: W 104.0329723
NAD 1983
X=634039
Y=455466
LAT.: N 32.2517957
LONG.: W 104.0334639

KICK OFF POINT
NEW MEXICO EAST
NAD 1927
X=591785
Y=456038
LAT.: N 32.2534152
LONG.: W 104.0364296
NAD 1983
X=632968
Y=456097
LAT.: N 32.2535369
LONG.: W 104.0369213
MD= 9435'

PENETRATION POINT
NEW MEXICO EAST
NAD 1927
X=591776
Y=456127
LAT.: N 32.2536615
LONG.: W 104.0364576
NAD 1983
X=632959
Y=456186
LAT.: N 32.2537833
LONG.: W 104.0369494
MD= 9757'

FIRST TAKE POINT
NEW MEXICO EAST
NAD 1927
X=591784
Y=456674
LAT.: N 32.2551650
LONG.: W 104.0364264
NAD 1983
X=632967
Y=456733
LAT.: N 32.2552868
LONG.: W 104.0369183
MD= 10396'



LEASE NAME & WELL NO.: RAY STATE COM 217H
SECTION 1 TWP 24-S RGE 28-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM
DESCRIPTION 918' FNL & 347' FEL

DISTANCE & DIRECTION
FROM INT. OF NM-387. & STATE HWY 285. GO SOUTH ON STATE HWY 285. ±4.8
MILES, THENCE EAST (LEFT) ON DUARTE RD. ±0.8 MILES, THENCE NORTH (LEFT) ON
HARROUN RD. ±2.7 MILES, THENCE NORTH (LEFT) PROPOSED RD. ±2943 FEET TO A
POINT ±445 FEET WEST OF THE LOCATION.



Angel M. Baeza, P.S. No. 25116
MARCH 20, 2020

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.



TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
2803 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1553 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

Intent ☐ As Drilled ☒

API #
30-015-46450

Operator Name: MATADOR PRODUCTION COMPANY	Property Name: RAY STATE COM	Well Number 217H
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Kick Off Point (KOP)

UL B	Section 1	Township 24S	Range 28E	Lot 2	Feet 282	From N/S N	Feet 1414	From E/W E	County EDDY
Latitude N 32.2535369					Longitude W 104.0369213			NAD 83	

First Take Point (FTP)

UL O	Section 36	Township 23S	Range 28E	Lot	Feet 355	From N/S S	Feet 1414	From E/W E	County EDDY
Latitude N 32.2552868					Longitude W 104.0369183			NAD 83	

Last Take Point (LTP)

UL B	Section 25	Township 23S	Range 28E	Lot	Feet 382	From N/S N	Feet 1443	From E/W E	County EDDY
Latitude N 32.2826077					Longitude W 104.0369201			NAD 83	

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

Is this well an infill well? ☐ N

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
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MS Directional Survey Data Certification

MS Directional Job Number: MSMO-72955
Survey Type: MWD
Operating Company: Matador Production Company
Well Name & Number: Ray State COM #217H
Location: Eddy County, NM
API Number: 30-015-46450

Original Wellbore

Tie In Depth: 2,639' MD
Surveyed Depths: 2,837' – 17,054' MD
Projected TD Survey: 17,110' MD

Sidetrack

Tie In Depth: 13,752' MD
Surveyed Depths: 13,809' – 20,459' MD
Projected TD Survey: 20,510' MD

Dates Performed: 12/15/2019 – 03/01/2020

I certify that the data is true, correct and complete and within the limitations of the tool set forth by MS Directional; that I am authorized and qualified to make this report and that I have reviewed this report and find it conforms to the principles and procedures as set forth by MS Directional.

Digitally signed by:

A handwritten signature in black ink, appearing to read "Benjamin Parrelli", written over a horizontal line.

MWD Surveyor Name: Benjamin Parrelli

Date: 04-01-2020

Email: Benjamin.Parrelli@msdir.com

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V09.04.02

Company:		Matador Production Company												
Well Name:		Ray State COM #217H - Original Wellbore												
Location:		Eddy County, NM												
Rig:		Patterson #282				Magnetic Declination:		6.82		REFERENCED TO GRID NORTH				
Job Number:		MSMO-72955												
API #:		30-015-46450												
Vertical Section Azimuth:			0.01		Proposed Direction:		0.01							
Survey Calculation Method:			Minimum Curvature											
PTB:	MD		INC		AZM		TVD		N/S		E/W		VS	
	17,110		92.10		356.40		9859.87		7970.94		-1079.65		7970.75	
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance	Azm	DLS/ 100	BUR/ 100'			
TIE IN	2,639	8.75	304.84	2626.82	93.83	-190.44		212.30	296.23					
1	2,837	8.50	302.10	2822.58	110.21	-215.20	110.17	241.78	297.12	0.24	-0.13			
2	3,035	8.40	303.10	3018.43	125.88	-239.71	125.84	270.75	297.71	0.09	-0.05			
3	3,231	10.80	303.50	3211.67	143.84	-267.02	143.79	303.30	298.31	1.22	1.22			
4	3,419	10.50	303.70	3396.43	163.07	-295.96	163.01	337.91	298.85	0.16	-0.16			
5	3,607	9.70	304.20	3581.52	181.47	-323.31	181.42	370.76	299.31	0.43	-0.43			
6	3,796	8.90	303.50	3768.03	198.49	-348.67	198.43	401.21	299.65	0.43	-0.42			
7	3,985	8.60	301.60	3954.83	213.97	-372.90	213.90	429.92	299.85	0.22	-0.16			
8	4,173	8.10	301.40	4140.84	228.23	-396.17	228.16	457.21	299.95	0.27	-0.27			
9	4,361	9.30	299.10	4326.68	242.52	-420.75	242.45	485.64	299.96	0.66	0.64			
10	4,549	9.10	297.60	4512.26	256.80	-447.20	256.72	515.69	299.87	0.17	-0.11			
11	4,737	9.00	295.20	4697.92	269.95	-473.68	269.86	545.20	299.68	0.21	-0.05			
12	4,925	9.60	307.10	4883.46	285.66	-499.49	285.58	575.41	299.77	1.07	0.32			
13	5,113	8.30	303.70	5069.17	302.65	-523.29	302.56	604.51	300.04	0.75	-0.69			
14	5,301	6.70	302.00	5255.56	315.99	-543.88	315.90	629.01	300.16	0.86	-0.85			
15	5,488	8.00	306.90	5441.02	329.59	-563.54	329.49	652.84	300.32	0.77	0.70			
16	5,677	9.00	309.30	5627.94	346.85	-585.49	346.74	680.52	300.64	0.56	0.53			
17	5,865	9.30	305.10	5813.55	364.90	-609.30	364.79	710.21	300.92	0.39	0.16			
18	6,054	8.60	302.80	6000.25	381.33	-633.68	381.22	739.57	301.04	0.42	-0.37			
19	6,242	7.50	302.10	6186.39	395.47	-655.88	395.35	765.88	301.09	0.59	-0.59			
20	6,430	9.80	304.90	6372.24	411.14	-679.40	411.02	794.12	301.18	1.24	1.22			
21	6,619	7.40	301.40	6559.11	426.69	-702.99	426.57	822.35	301.26	1.30	-1.27			
22	6,808	8.90	300.70	6746.19	440.50	-725.95	440.37	849.14	301.25	0.80	0.79			
23	6,996	7.50	297.10	6932.27	453.51	-749.38	453.38	875.92	301.18	0.79	-0.74			
24	7,186	10.90	296.70	7119.79	467.24	-776.47	467.10	906.21	301.04	1.79	1.79			
25	7,373	10.20	292.90	7303.63	481.62	-807.52	481.48	940.24	300.81	0.53	-0.37			
26	7,563	9.70	304.90	7490.80	497.33	-836.15	497.18	972.87	300.74	1.12	-0.26			
27	7,752	9.50	293.70	7677.17	512.71	-863.49	512.56	1004.24	300.70	0.99	-0.11			
28	7,941	11.30	298.10	7863.06	527.70	-894.11	527.55	1038.22	300.55	1.04	0.95			
29	8,128	10.70	308.80	8046.64	547.21	-923.81	547.05	1073.71	300.64	1.14	-0.32			
30	8,317	7.00	303.40	8233.36	564.55	-947.10	564.39	1102.60	300.80	2.00	-1.96			
31	8,506	7.80	298.40	8420.79	576.99	-968.00	576.82	1126.92	300.80	0.54	0.42			

V09.04.02

Company:		Matador Production Company										
Well Name:		Ray State COM #217H - Original Wellbore										
Location:		Eddy County, NM										
Rig:		Patterson #282				Magnetic Declination:		6.82		REFERENCED TO GRID NORTH		
Job Number:		MSMO-72955										
API #:		30-015-46450										
Vertical Section Azimuth:			0.01		Proposed Direction:		0.01					
Survey Calculation Method:			Minimum Curvature									
PTB:	MD		INC		AZM	TVD	N/S		E/W		VS	
	17,110		92.10		356.40	9859.87	7970.94		-1079.65		7970.75	
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance	Azm	DLS/ 100	BUR/ 100'	
32	8,695	9.00	300.60	8607.76	590.62	-992.01	590.44	1154.51	300.77	0.66	0.63	
33	8,884	8.70	297.70	8794.51	604.79	-1017.39	604.61	1183.57	300.73	0.28	-0.16	
34	8,978	7.90	298.90	8887.52	611.21	-1029.34	611.03	1197.13	300.70	0.87	-0.85	
35	9,073	6.60	296.20	8981.76	616.78	-1039.95	616.60	1209.10	300.67	1.41	-1.37	
36	9,167	5.80	294.50	9075.21	621.13	-1049.12	620.95	1219.20	300.63	0.87	-0.85	
37	9,261	5.10	290.40	9168.78	624.56	-1057.36	624.38	1228.04	300.57	0.85	-0.74	
38	9,311	4.80	290.40	9218.60	626.06	-1061.40	625.88	1232.29	300.53	0.60	-0.60	
39	9,388	4.70	287.90	9295.33	628.16	-1067.42	627.97	1238.54	300.48	0.30	-0.13	
40	9,435	5.20	322.00	9342.17	630.43	-1070.57	630.24	1242.40	300.49	6.25	1.06	
41	9,482	9.90	327.20	9388.75	635.50	-1074.07	635.32	1248.00	300.61	10.09	10.00	
42	9,533	15.40	343.50	9438.51	645.69	-1078.37	645.51	1256.90	300.91	12.76	10.78	
43	9,577	18.30	355.70	9480.63	658.19	-1080.55	658.00	1265.23	301.35	10.36	6.59	
44	9,671	18.80	3.10	9569.75	688.03	-1080.84	687.85	1281.25	302.48	2.56	0.53	
45	9,718	20.70	4.60	9613.99	703.88	-1079.76	703.69	1288.93	303.10	4.18	4.04	
46	9,790	27.90	358.20	9679.58	733.44	-1079.27	733.26	1304.90	304.20	10.63	10.00	
47	9,838	38.60	357.00	9719.66	759.70	-1080.41	759.51	1320.77	305.11	22.33	22.29	
48	9,885	47.00	0.80	9754.12	791.59	-1080.94	791.40	1339.79	306.22	18.69	17.87	
49	9,932	50.20	1.20	9785.20	826.83	-1080.32	826.64	1360.42	307.43	6.84	6.81	
50	9,979	56.10	1.60	9813.37	864.41	-1079.40	864.22	1382.86	308.69	12.57	12.55	
51	10,026	62.00	1.20	9837.53	904.69	-1078.42	904.50	1407.64	309.99	12.57	12.55	
52	10,073	68.00	0.80	9857.39	947.26	-1077.68	947.07	1434.81	311.31	12.79	12.77	
53	10,109	75.10	1.00	9868.77	981.39	-1077.14	981.20	1457.17	312.34	19.73	19.72	
54	10,155	79.40	1.80	9878.92	1026.23	-1076.04	1026.04	1486.95	313.64	9.50	9.35	
55	10,168	80.80	2.00	9881.16	1039.03	-1075.62	1038.84	1495.50	314.01	10.88	10.77	
56	10,262	88.10	1.60	9890.24	1132.48	-1072.68	1132.29	1559.86	316.55	7.78	7.77	
57	10,356	87.80	0.30	9893.61	1226.40	-1071.12	1226.21	1628.30	318.87	1.42	-0.32	
58	10,450	87.00	359.00	9897.87	1320.30	-1071.70	1320.11	1700.51	320.93	1.62	-0.85	
59	10,545	89.20	0.10	9901.02	1415.24	-1072.44	1415.05	1775.68	322.85	2.59	2.32	
60	10,639	88.20	0.10	9903.15	1509.21	-1072.28	1509.02	1851.35	324.61	1.06	-1.06	
61	10,734	90.20	2.80	9904.48	1604.16	-1069.88	1603.97	1928.20	326.30	3.54	2.11	
62	10,828	90.90	2.70	9903.58	1698.04	-1065.37	1697.86	2004.58	327.90	0.75	0.74	
63	10,922	91.40	2.20	9901.69	1791.94	-1061.35	1791.75	2082.67	329.36	0.75	0.53	
64	11,017	92.40	2.50	9898.54	1886.81	-1057.45	1886.62	2162.93	330.73	1.10	1.05	

Page 2-

Company:		Matador Production Company											
Well Name:		Ray State COM #217H - Original Wellbore											
Location:		Eddy County, NM											
Rig:		Patterson #282					Magnetic Declination:		6.82		REFERENCED TO GRID NORTH		▼
Job Number:		MSMO-72955											
API #:		30-015-46450											
Vertical Section Azimuth:				0.01		Proposed Direction:		0.01					
Survey Calculation Method:				Minimum Curvature									
PTB:	MD		INC		AZM	TVD	N/S		E/W		VS		
	17,110		92.10		356.40	9859.87	7970.94		-1079.65		7970.75		
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance		Azm	DLS/ 100	BUR/ 100'	
65	11,111	88.70	0.10	9897.64	1980.75	-1055.32	1980.57	2244.35	331.95	4.69	-3.94		
66	11,205	89.50	1.20	9899.12	2074.73	-1054.26	2074.55	2327.23	333.06	1.45	0.85		
67	11,299	89.20	359.10	9900.18	2168.72	-1054.01	2168.54	2411.29	334.08	2.26	-0.32		
68	11,394	91.30	359.30	9899.77	2263.71	-1055.34	2263.52	2497.62	335.01	2.22	2.21		
69	11,488	89.20	358.60	9899.36	2357.68	-1057.06	2357.50	2583.81	335.85	2.35	-2.23		
70	11,582	95.30	1.00	9895.67	2451.56	-1057.39	2451.38	2669.87	336.67	6.97	6.49		
71	11,677	96.50	359.90	9885.90	2546.05	-1056.65	2545.87	2756.61	337.46	1.71	1.26		
72	11,771	91.10	0.40	9879.67	2639.81	-1056.40	2639.62	2843.34	338.19	5.77	-5.74		
73	11,865	83.90	357.20	9883.77	2733.62	-1058.36	2733.44	2931.35	338.84	8.38	-7.66		
74	11,960	85.50	358.00	9892.55	2828.13	-1062.32	2827.95	3021.07	339.41	1.88	1.68		
75	12,053	89.80	358.70	9896.36	2920.99	-1064.99	2920.81	3109.09	339.97	4.68	4.62		
76	12,148	90.00	359.10	9896.53	3015.97	-1066.82	3015.79	3199.09	340.52	0.47	0.21		
77	12,242	89.50	359.00	9896.94	3109.96	-1068.38	3109.77	3288.36	341.04	0.54	-0.53		
78	12,336	89.60	358.40	9897.68	3203.93	-1070.51	3203.75	3378.04	341.52	0.65	0.11		
79	12,431	88.60	357.30	9899.17	3298.85	-1074.07	3298.66	3469.30	341.97	1.56	-1.05		
80	12,525	88.90	356.50	9901.22	3392.69	-1079.15	3392.50	3560.19	342.36	0.91	0.32		
81	12,619	93.40	0.80	9899.33	3486.60	-1081.37	3486.41	3650.44	342.77	6.62	4.79		
82	12,713	89.70	357.90	9896.79	3580.53	-1082.44	3580.34	3740.57	343.18	5.00	-3.94		
83	12,808	89.40	357.50	9897.53	3675.45	-1086.25	3675.26	3832.61	343.54	0.53	-0.32		
84	12,902	90.20	358.40	9897.86	3769.39	-1089.61	3769.20	3923.72	343.88	1.28	0.85		
85	12,997	90.10	2.00	9897.61	3864.37	-1089.28	3864.18	4014.96	344.26	3.79	-0.11		
86	13,091	89.80	3.20	9897.70	3958.28	-1085.02	3958.09	4104.29	344.67	1.32	-0.32		
87	13,186	89.80	2.50	9898.03	4053.16	-1080.29	4052.97	4194.65	345.08	0.74	0.00		
88	13,280	90.40	1.70	9897.86	4147.09	-1076.85	4146.90	4284.62	345.44	1.06	0.64		
89	13,374	90.40	1.80	9897.21	4241.05	-1073.98	4240.86	4374.92	345.79	0.11	0.00		
90	13,469	93.20	2.20	9894.22	4335.93	-1070.67	4335.75	4466.17	346.13	2.98	2.95		
91	13,563	91.20	1.30	9890.62	4429.81	-1067.80	4429.63	4556.69	346.45	2.33	-2.13		
92	13,658	89.00	0.90	9890.45	4524.79	-1065.97	4524.60	4648.66	346.74	2.35	-2.32		
93	13,752	87.60	1.00	9893.24	4618.73	-1064.42	4618.55	4739.80	347.02	1.49	-1.49		
94	13,847	92.50	2.00	9893.15	4713.67	-1061.93	4713.48	4831.81	347.30	5.26	5.16		
95	13,941	92.90	2.20	9888.73	4807.50	-1058.49	4807.32	4922.65	347.58	0.48	0.43		
96	14,035	92.20	1.80	9884.54	4901.35	-1055.21	4901.17	5013.65	347.85	0.86	-0.74		

V09.04.02

Company:		Matador Production Company									
Well Name:		Ray State COM #217H - Original Wellbore									
Location:		Eddy County, NM									
Rig:		Patterson #282				Magnetic Declination:		6.82		REFERENCED TO GRID NORTH	
Job Number:		MSMO-72955									
API #:		30-015-46450									
Vertical Section Azimuth:			0.01		Proposed Direction:		0.01				
Survey Calculation Method:			Minimum Curvature								
PTB:	MD		INC		AZM	TVD	N/S	E/W		VS	
	17,110		92.10		356.40	9859.87	7970.94	-1079.65		7970.75	
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance	Azm	DLS/ 100	BUR/ 100'
97	14,129	92.30	1.30	9880.85	4995.24	-1052.67	4995.06	5104.96	348.10	0.54	0.11
98	14,224	92.10	1.30	9877.21	5090.15	-1050.52	5089.97	5197.42	348.34	0.21	-0.21
99	14,318	89.80	359.50	9875.65	5184.12	-1049.86	5183.94	5289.36	348.55	3.11	-2.45
100	14,412	93.20	0.80	9873.19	5278.08	-1049.62	5277.89	5381.43	348.75	3.87	3.62
101	14,506	84.60	0.90	9874.99	5371.96	-1048.22	5371.78	5473.27	348.96	9.15	-9.15
102	14,600	92.30	1.20	9877.53	5465.84	-1046.50	5465.66	5565.12	349.16	8.20	8.19
103	14,695	92.10	0.80	9873.89	5560.75	-1044.85	5560.57	5658.06	349.36	0.47	-0.21
104	14,789	89.60	359.30	9872.49	5654.73	-1044.77	5654.55	5750.44	349.53	3.10	-2.66
105	14,884	87.30	357.70	9875.06	5749.66	-1047.25	5749.47	5844.25	349.68	2.95	-2.42
106	14,978	88.70	357.20	9878.34	5843.50	-1051.43	5843.32	5937.34	349.80	1.58	1.49
107	15,072	91.90	355.50	9877.85	5937.30	-1057.41	5937.11	6030.72	349.90	3.85	3.40
108	15,167	89.10	356.60	9877.02	6032.06	-1063.96	6031.87	6125.17	350.00	3.17	-2.95
109	15,261	90.60	356.20	9877.27	6125.87	-1069.86	6125.68	6218.59	350.09	1.65	1.60
110	15,356	94.40	357.30	9873.12	6220.61	-1075.24	6220.42	6312.85	350.19	4.16	4.00
111	15,449	98.40	357.60	9862.76	6312.92	-1079.35	6312.73	6404.52	350.30	4.31	4.30
112	15,543	97.70	358.90	9849.59	6405.94	-1082.19	6405.75	6496.71	350.41	1.56	-0.74
113	15,637	93.30	0.50	9840.59	6499.48	-1082.68	6499.29	6589.04	350.54	4.98	-4.68
114	15,731	89.10	1.60	9838.62	6593.42	-1080.95	6593.24	6681.45	350.69	4.62	-4.47
115	15,826	87.10	2.40	9841.77	6688.31	-1077.64	6688.12	6774.57	350.85	2.27	-2.11
116	15,921	88.10	1.80	9845.75	6783.16	-1074.16	6782.97	6867.68	351.00	1.23	1.05
117	16,015	88.50	1.70	9848.53	6877.07	-1071.29	6876.89	6960.02	351.15	0.44	0.43
118	16,109	90.70	0.80	9849.19	6971.04	-1069.24	6970.86	7052.57	351.28	2.53	2.34
119	16,204	92.20	359.50	9846.79	7066.01	-1068.99	7065.82	7146.41	351.40	2.09	1.58
120	16,298	89.40	0.10	9845.47	7159.99	-1069.32	7159.80	7239.40	351.51	3.05	-2.98
121	16,393	89.70	0.50	9846.22	7254.98	-1068.83	7254.80	7333.29	351.62	0.53	0.32
122	16,488	91.70	0.50	9845.06	7349.97	-1068.00	7349.78	7427.16	351.73	2.11	2.11
123	16,582	88.70	1.90	9844.73	7443.93	-1066.03	7443.75	7519.88	351.85	3.52	-3.19
124	16,676	88.00	0.90	9847.44	7537.87	-1063.73	7537.68	7612.55	351.97	1.30	-0.74
125	16,771	85.00	358.30	9853.24	7632.67	-1064.39	7632.48	7706.53	352.06	4.18	-3.16
126	16,866	86.70	357.60	9860.11	7727.35	-1067.78	7727.17	7800.78	352.13	1.93	1.79
127	16,960	89.50	357.90	9863.23	7821.22	-1071.47	7821.03	7894.27	352.20	3.00	2.98
128	17,054	92.10	356.40	9861.92	7915.08	-1076.14	7914.90	7987.90	352.26	3.19	2.77



SURVEY CALCULATION PROGRAM

3/27/20 15:12

V09.04.02

Company:		Matador Production Company												
Well Name:		Ray State COM #217H - Original Wellbore												
Location:		Eddy County, NM												
Rig:		Patterson #282					Magnetic Declination:		6.82		REFERENCED TO GRID NORTH ▼			
Job Number:		MSMO-72955												
API #:		30-015-46450												
Vertical Section Azimuth:				0.01		Proposed Direction:		0.01						
Survey Calculation Method:				Minimum Curvature										
PTB:	MD		INC		AZM		TVD		N/S		E/W		VS	
	17,110		92.10		356.40		9859.87		7970.94		-1079.65		7970.75	
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance	Azm	DLS/ 100	BUR/ 100'			
PTB:	17,110	92.10	356.40	9859.87	7970.94	-1079.65	7970.75	8043.72	352.29	0.00	0.00			

V09.04.02

Company:		Matador Production Company												
Well Name:		Ray State COM #217H - Sidetrack												
Location:		Eddy County, NM												
Rig:		Patterson #282				Magnetic Declination:		6.82		REFERENCED TO GRID NORTH				
Job Number:		MSMO-72955												
API #:		30-015-46450												
Vertical Section Azimuth:				0.01		Proposed Direction:		0.01						
Survey Calculation Method:				Minimum Curvature										
PTB:	MD		INC		AZM		TVD		N/S		E/W		VS	
	20,510		90.70		357.70		9846.29		11361.28		-1104.53		11361.09	
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance Azm		DLS/ 100	BUR/ 100'			
TIE IN	13,752	87.60	1.00	9893.23	4618.75	-1064.43		4739.82	347.02					
1	13,809	90.20	2.20	9894.32	4675.71	-1062.84	4675.53	4794.99	347.19	5.02	4.56			
2	13,842	89.10	5.90	9894.53	4708.62	-1060.51	4708.44	4826.57	347.31	11.70	-3.33			
3	13,937	91.50	8.90	9894.03	4802.81	-1048.28	4802.63	4915.88	347.69	4.04	2.53			
4	14,031	93.00	9.30	9890.34	4895.55	-1033.42	4895.37	5003.44	348.08	1.65	1.60			
5	14,125	91.90	7.80	9886.32	4988.42	-1019.46	4988.24	5091.53	348.45	1.98	-1.17			
6	14,220	91.30	5.20	9883.67	5082.76	-1008.71	5082.59	5181.89	348.78	2.81	-0.63			
7	14,315	92.20	5.20	9880.77	5177.33	-1000.10	5177.15	5273.04	349.07	0.95	0.95			
8	14,409	93.70	3.90	9875.93	5270.90	-992.66	5270.73	5363.56	349.33	2.11	1.60			
9	14,503	94.10	2.00	9869.53	5364.56	-987.83	5364.38	5454.75	349.57	2.06	0.43			
10	14,597	92.00	2.80	9864.53	5458.34	-983.90	5458.16	5546.30	349.78	2.39	-2.23			
11	14,691	90.60	0.40	9862.40	5552.27	-981.28	5552.09	5638.31	349.98	2.96	-1.49			
12	14,785	90.20	359.70	9861.74	5646.26	-981.19	5646.09	5730.88	350.14	0.86	-0.43			
13	14,880	93.50	359.40	9858.68	5741.20	-981.94	5741.03	5824.56	350.29	3.49	3.47			
14	14,974	89.70	0.80	9856.05	5835.14	-981.77	5834.97	5917.16	350.45	4.31	-4.04			
15	15,068	90.80	359.30	9855.64	5929.14	-981.69	5928.96	6009.86	350.60	1.98	1.17			
16	15,163	91.10	2.30	9854.07	6024.10	-980.37	6023.93	6103.35	350.76	3.17	0.32			
17	15,257	88.70	359.90	9854.23	6118.07	-978.56	6117.90	6195.84	350.91	3.61	-2.55			
18	15,351	84.90	357.20	9859.48	6211.87	-980.93	6211.70	6288.84	351.03	4.96	-4.04			
19	15,445	87.10	356.10	9866.04	6305.47	-986.41	6305.30	6382.16	351.11	2.62	2.34			
20	15,558	88.50	355.70	9870.37	6418.10	-994.49	6417.92	6494.69	351.19	1.29	1.24			
21	15,652	88.50	356.00	9872.83	6511.82	-1001.29	6511.64	6588.35	351.26	0.32	0.00			
22	15,746	90.80	356.40	9873.41	6605.60	-1007.52	6605.43	6682.00	351.33	2.48	2.45			
23	15,841	88.10	353.50	9874.32	6700.21	-1015.88	6700.03	6776.79	351.38	4.17	-2.84			
24	15,935	88.80	354.00	9876.86	6793.62	-1026.10	6793.44	6870.67	351.41	0.92	0.74			
25	16,029	89.70	357.50	9878.09	6887.34	-1033.07	6887.15	6964.38	351.47	3.84	0.96			
26	16,124	88.90	358.00	9879.25	6982.25	-1036.80	6982.07	7058.81	351.55	0.99	-0.84			
27	16,218	89.90	358.70	9880.24	7076.21	-1039.50	7076.03	7152.15	351.64	1.30	1.06			
28	16,312	86.20	359.50	9883.44	7170.12	-1040.98	7169.94	7245.30	351.74	4.03	-3.94			
29	16,406	89.00	1.80	9887.37	7264.02	-1039.91	7263.84	7338.08	351.85	3.85	2.98			
30	16,501	91.50	359.70	9886.96	7359.00	-1038.67	7358.82	7431.94	351.97	3.44	2.63			
31	16,595	92.90	359.50	9883.35	7452.92	-1039.33	7452.74	7525.04	352.06	1.50	1.49			

Company:		Matador Production Company										
Well Name:		Ray State COM #217H - Sidetrack										
Location:		Eddy County, NM										
Rig:		Patterson #282				Magnetic Declination:		6.82		REFERENCED TO GRID NORTH		
Job Number:		MSMO-72955										
API #:		30-015-46450										
Vertical Section Azimuth:			0.01		Proposed Direction:		0.01					
Survey Calculation Method:			Minimum Curvature									
PTB:	MD		INC		AZM	TVD	N/S		E/W		VS	
	20,510		90.70		357.70	9846.29	11361.28		-1104.53		11361.09	
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance		Azm	DLS/ 100	BUR/ 100'
32	16,689	91.60	0.40	9879.66	7546.85	-1039.41	7546.67	7618.09	352.16	1.68	-1.38	
33	16,784	92.80	359.00	9876.01	7641.77	-1039.90	7641.59	7712.21	352.25	1.94	1.26	
34	16,878	93.70	3.70	9870.68	7735.57	-1037.70	7735.39	7804.86	352.36	5.08	0.96	
35	16,972	95.00	358.00	9863.54	7829.25	-1036.30	7829.07	7897.53	352.46	6.20	1.38	
36	17,067	93.50	357.60	9856.50	7923.91	-1039.94	7923.73	7991.86	352.52	1.63	-1.58	
37	17,161	91.80	357.50	9852.16	8017.72	-1043.95	8017.54	8085.40	352.58	1.81	-1.81	
38	17,255	93.80	357.90	9847.57	8111.53	-1047.72	8111.35	8178.91	352.64	2.17	2.13	
39	17,350	89.40	356.50	9844.92	8206.35	-1052.36	8206.17	8273.55	352.69	4.86	-4.63	
40	17,444	88.90	355.40	9846.31	8300.11	-1059.00	8299.92	8367.39	352.73	1.29	-0.53	
41	17,539	89.60	356.20	9847.55	8394.84	-1065.95	8394.66	8462.25	352.76	1.12	0.74	
42	17,633	88.40	357.40	9849.19	8488.68	-1071.20	8488.49	8556.00	352.81	1.81	-1.28	
43	17,727	88.70	357.00	9851.57	8582.54	-1075.79	8582.35	8649.70	352.86	0.53	0.32	
44	17,822	87.70	356.10	9854.56	8677.31	-1081.50	8677.13	8744.45	352.90	1.42	-1.05	
45	17,916	91.00	356.70	9855.62	8771.11	-1087.41	8770.92	8838.26	352.93	3.57	3.51	
46	18,010	91.20	358.80	9853.82	8865.01	-1091.10	8864.82	8931.91	352.98	2.24	0.21	
47	18,104	91.50	358.60	9851.60	8958.96	-1093.23	8958.77	9025.42	353.04	0.38	0.32	
48	18,199	96.40	3.70	9845.06	9053.66	-1091.34	9053.47	9119.20	353.13	7.43	5.16	
49	18,293	95.20	4.10	9835.56	9146.96	-1084.98	9146.77	9211.08	353.24	1.34	-1.28	
50	18,388	89.60	2.50	9831.58	9241.68	-1079.52	9241.49	9304.51	353.34	6.13	-5.89	
51	18,482	89.50	1.50	9832.32	9335.62	-1076.24	9335.43	9397.45	353.42	1.07	-0.11	
52	18,577	87.20	0.40	9835.05	9430.56	-1074.66	9430.37	9491.59	353.50	2.68	-2.42	
53	18,671	87.00	0.80	9839.81	9524.43	-1073.68	9524.24	9584.76	353.57	0.48	-0.21	
54	18,765	88.60	1.20	9843.42	9618.34	-1072.04	9618.16	9677.90	353.64	1.75	1.70	
55	18,860	89.40	0.40	9845.08	9713.32	-1070.72	9713.13	9772.15	353.71	1.19	0.84	
56	18,955	88.60	358.70	9846.73	9808.30	-1071.46	9808.11	9866.65	353.77	1.98	-0.84	
57	19,050	87.20	357.90	9850.22	9903.19	-1074.28	9903.00	9961.29	353.81	1.70	-1.47	
58	19,144	87.70	357.20	9854.40	9997.01	-1078.29	9996.82	10054.99	353.84	0.91	0.53	
59	19,239	86.30	355.70	9859.37	10091.69	-1084.16	10091.50	10149.76	353.87	2.16	-1.47	
60	19,334	86.80	356.40	9865.09	10186.29	-1090.70	10186.10	10244.52	353.89	0.90	0.53	
61	19,429	87.10	357.30	9870.14	10281.01	-1095.91	10280.82	10339.26	353.92	1.00	0.32	
62	19,516	89.70	358.60	9872.57	10367.92	-1099.02	10367.72	10426.00	353.95	3.34	2.99	
63	19,611	90.00	0.20	9872.82	10462.91	-1100.01	10462.71	10520.57	354.00	1.71	0.32	
64	19,706	91.20	1.20	9871.82	10557.89	-1098.85	10557.70	10614.92	354.06	1.64	1.26	

V09.04.02

Company:		Matador Production Company												
Well Name:		Ray State COM #217H - Sidetrack												
Location:		Eddy County, NM												
Rig:		Patterson #282					Magnetic Declination:		6.82		REFERENCED TO GRID NORTH ▼			
Job Number:		MSMO-72955												
API #:		30-015-46450												
Vertical Section Azimuth:				0.01		Proposed Direction:		0.01						
Survey Calculation Method:				Minimum Curvature										
PTB:	MD		INC		AZM		TVD		N/S		E/W		VS	
	20,510		90.70		357.70		9846.29		11361.28		-1104.53		11361.09	
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance		Azm	DLS/ 100	BUR/ 100'		
65	19,800	91.00	0.10	9870.02	10651.87	-1097.79	10651.67	10708.29	354.12	1.19	-0.21			
66	19,895	93.20	0.30	9866.54	10746.80	-1097.46	10746.60	10802.69	354.17	2.33	2.32			
67	19,989	92.90	359.40	9861.54	10840.66	-1097.70	10840.47	10896.10	354.22	1.01	-0.32			
68	20,083	92.80	0.10	9856.86	10934.54	-1098.11	10934.35	10989.55	354.27	0.75	-0.11			
69	20,177	92.00	0.20	9852.93	11028.46	-1097.87	11028.27	11082.97	354.32	0.86	-0.85			
70	20,273	91.40	359.50	9850.08	11124.42	-1098.12	11124.22	11178.48	354.36	0.96	-0.62			
71	20,367	90.90	358.70	9848.19	11218.39	-1099.59	11218.19	11272.15	354.40	1.00	-0.53			
72	20,459	90.70	357.70	9846.91	11310.33	-1102.48	11310.14	11363.94	354.43	1.11	-0.22			
PTB:	20,510	90.70	357.70	9846.29	11361.28	-1104.53	11361.09	11414.85	354.45	0.00	0.00			



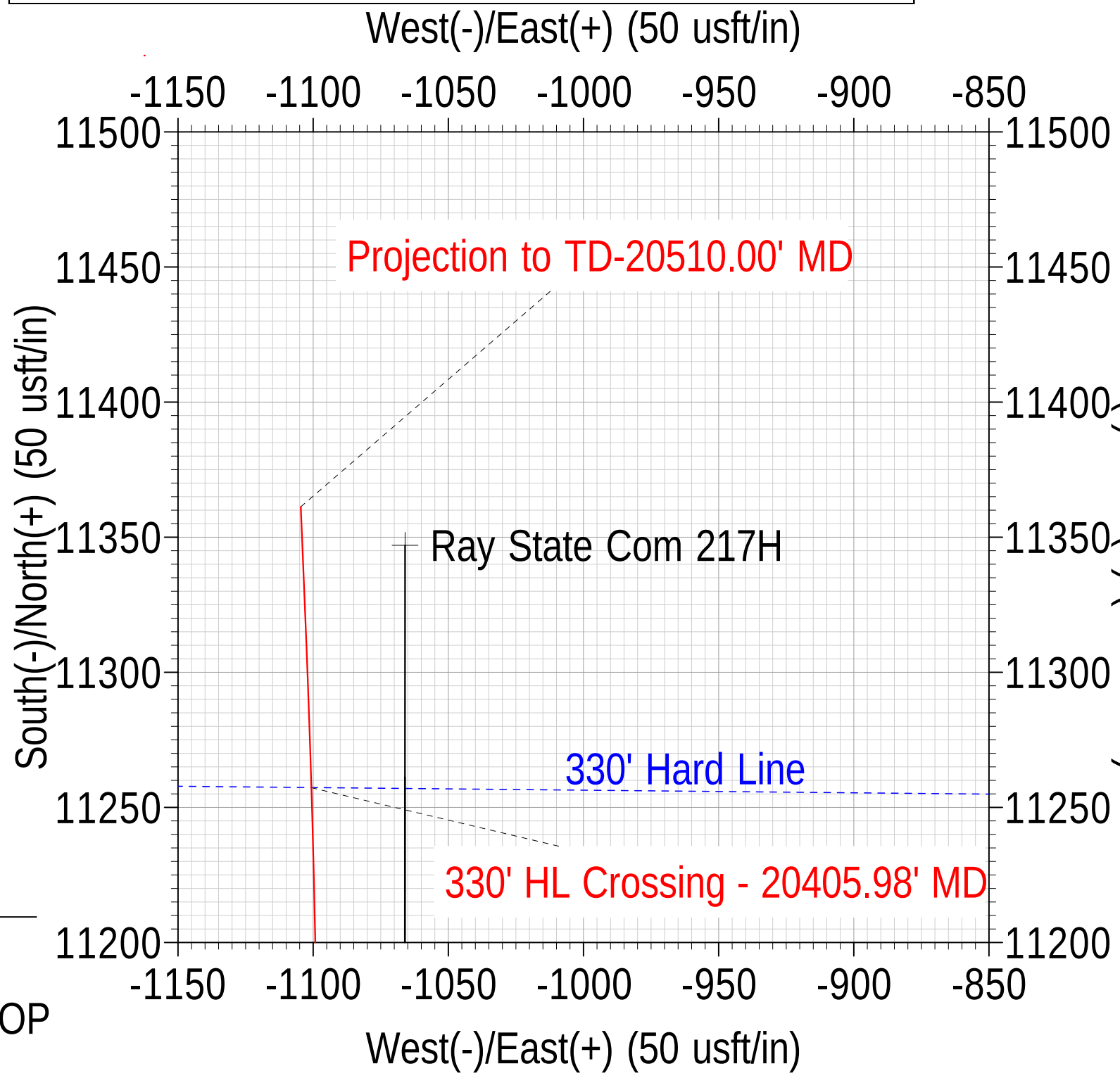
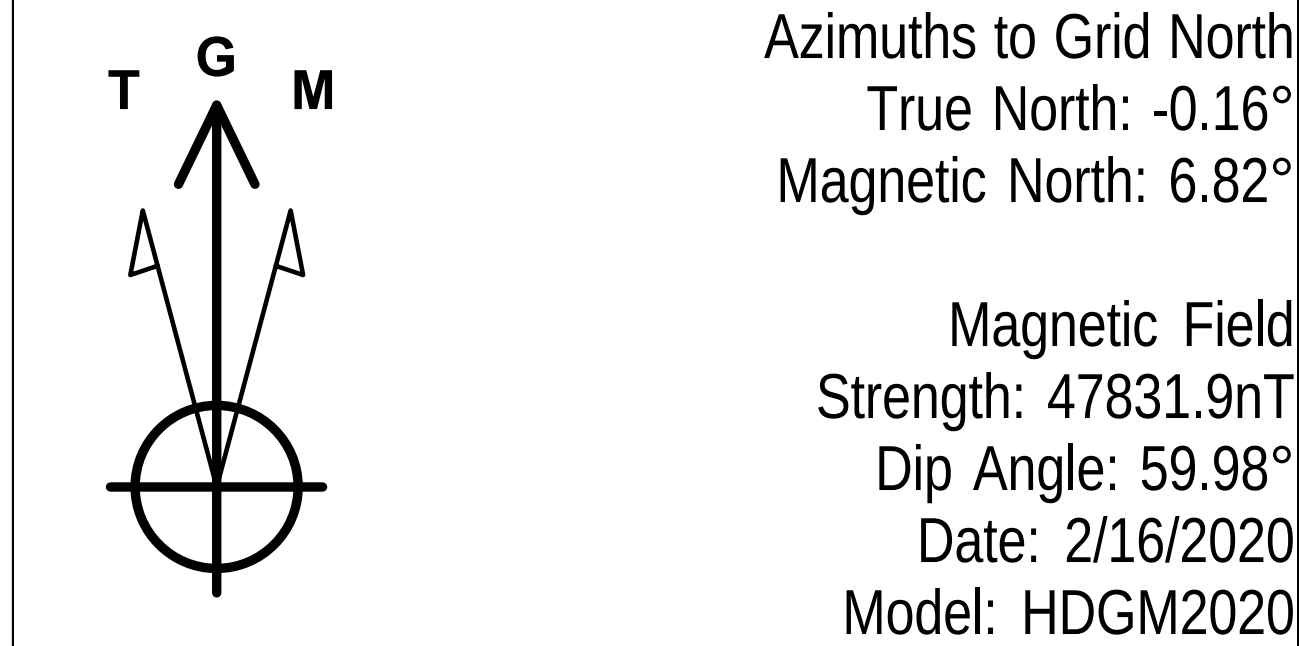
Company: Matador Resources
Well: Ray State Com 217H
County: Eddy County, New Mexico (NAD 27)
Rig: Patterson 282
Wellbore: Wellbore #2
Design: Design #4
Created By: SAR
Date: 12:17, March 03 2020

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

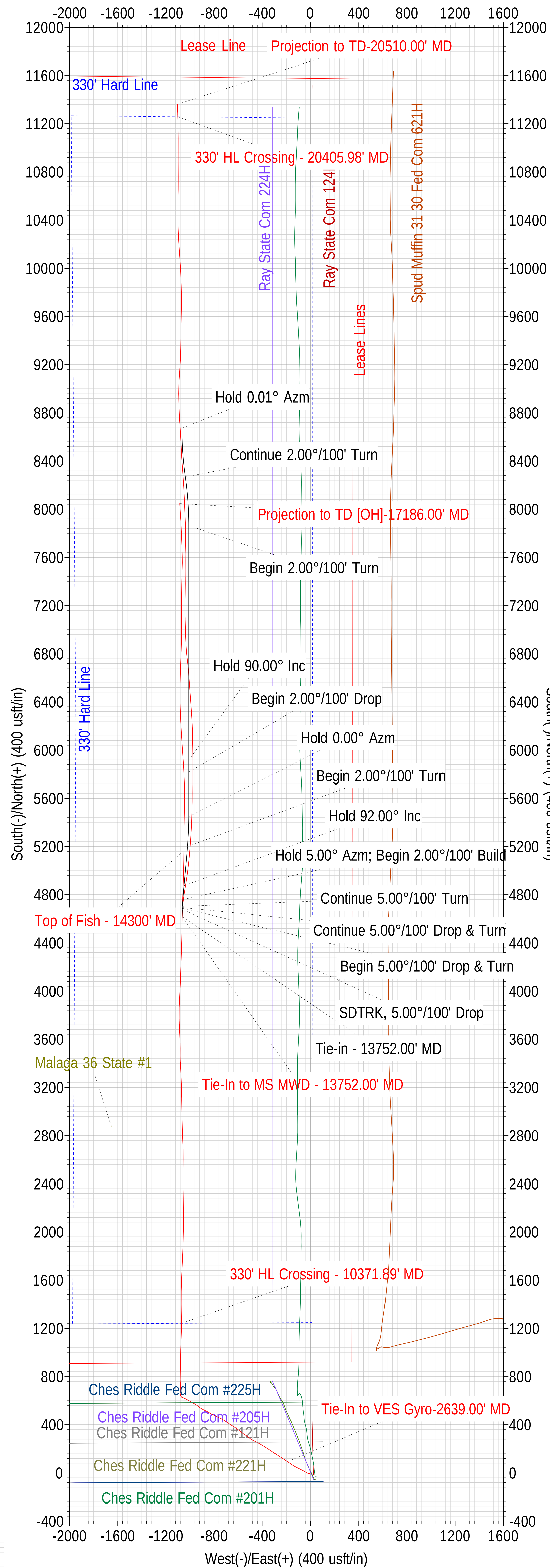
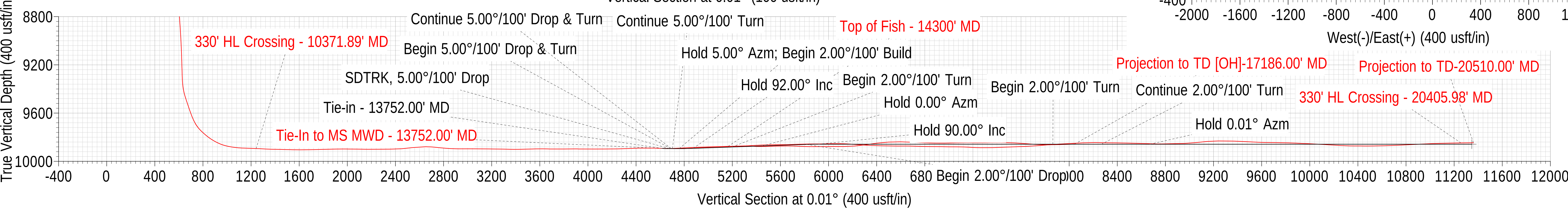
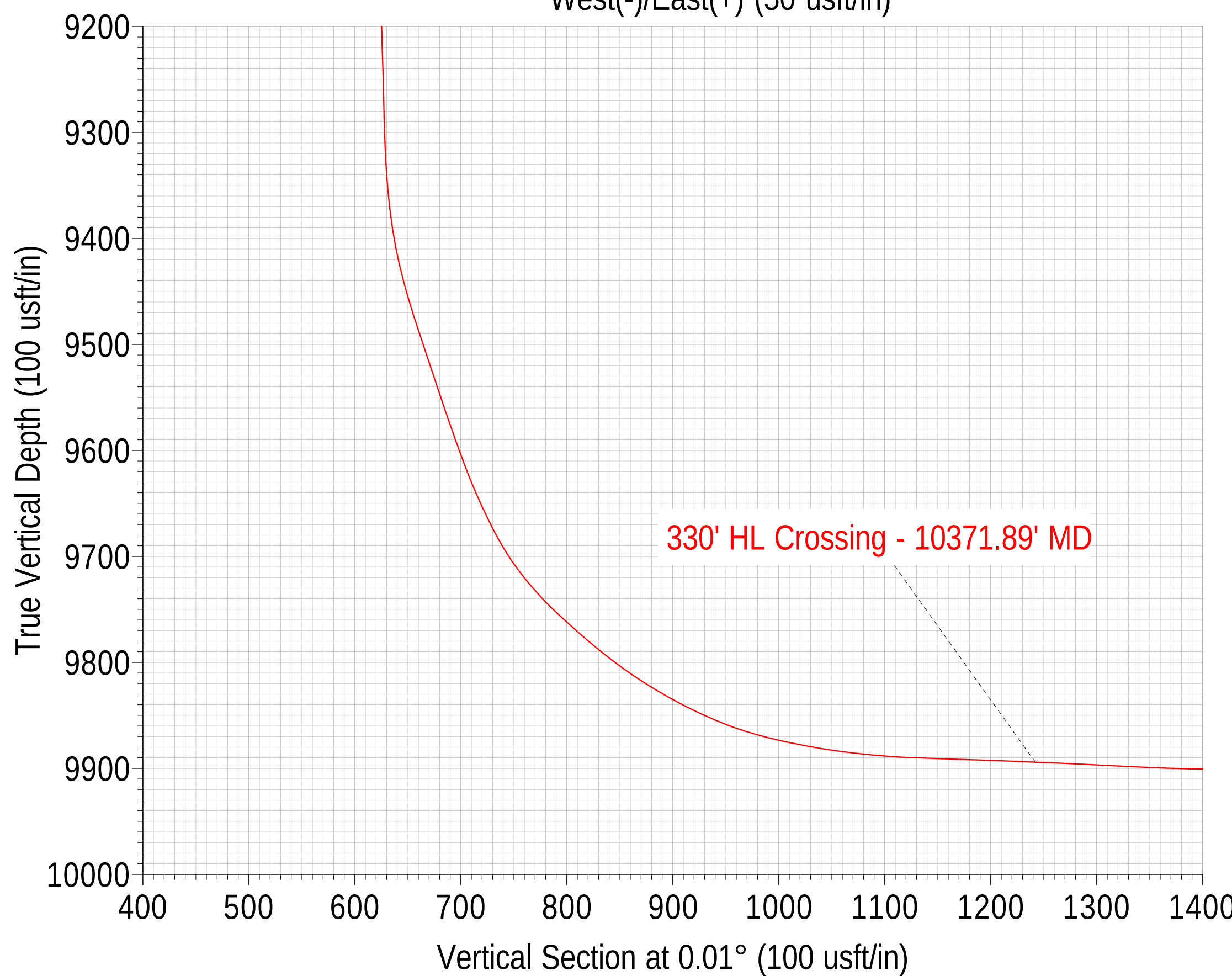
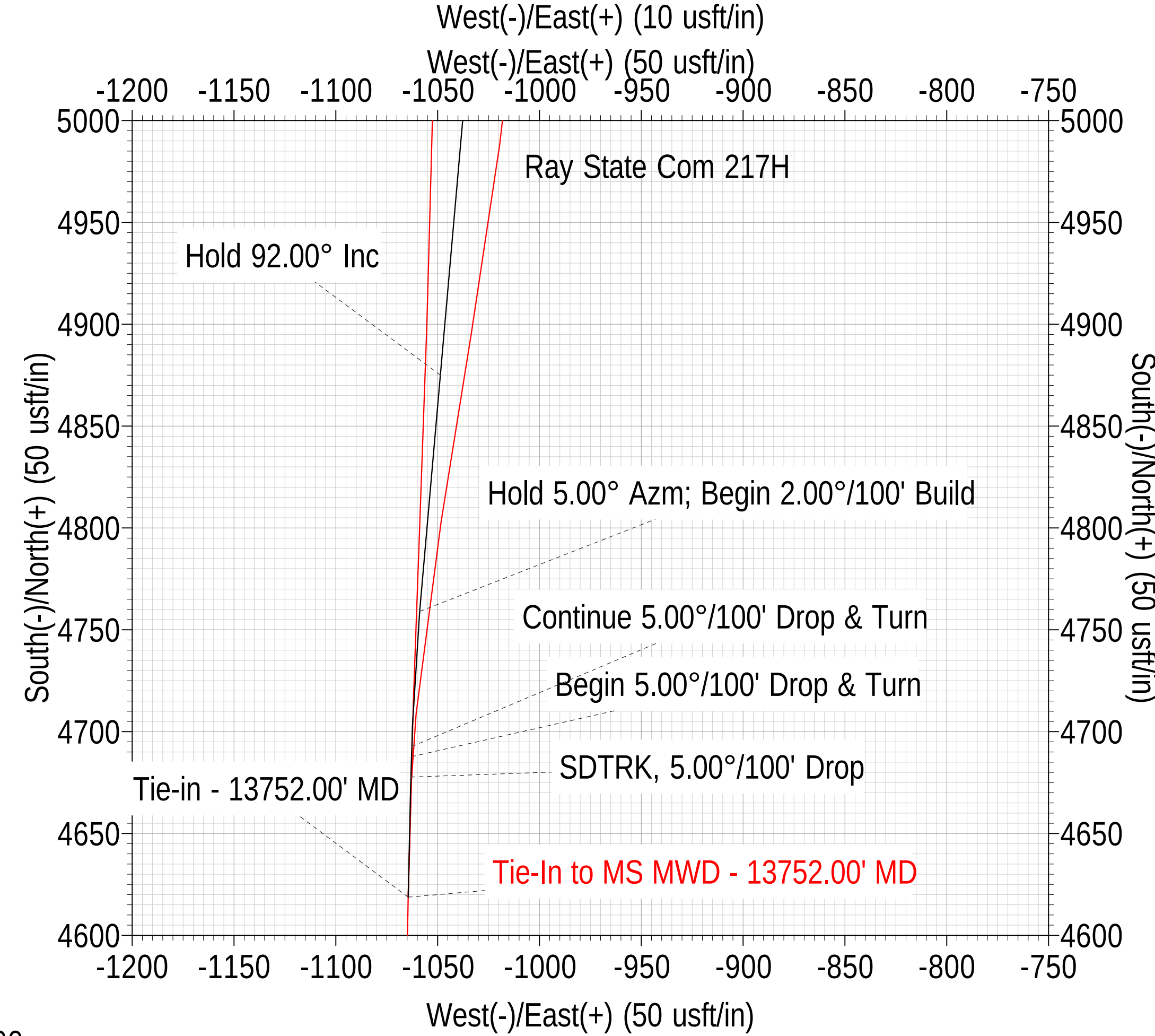
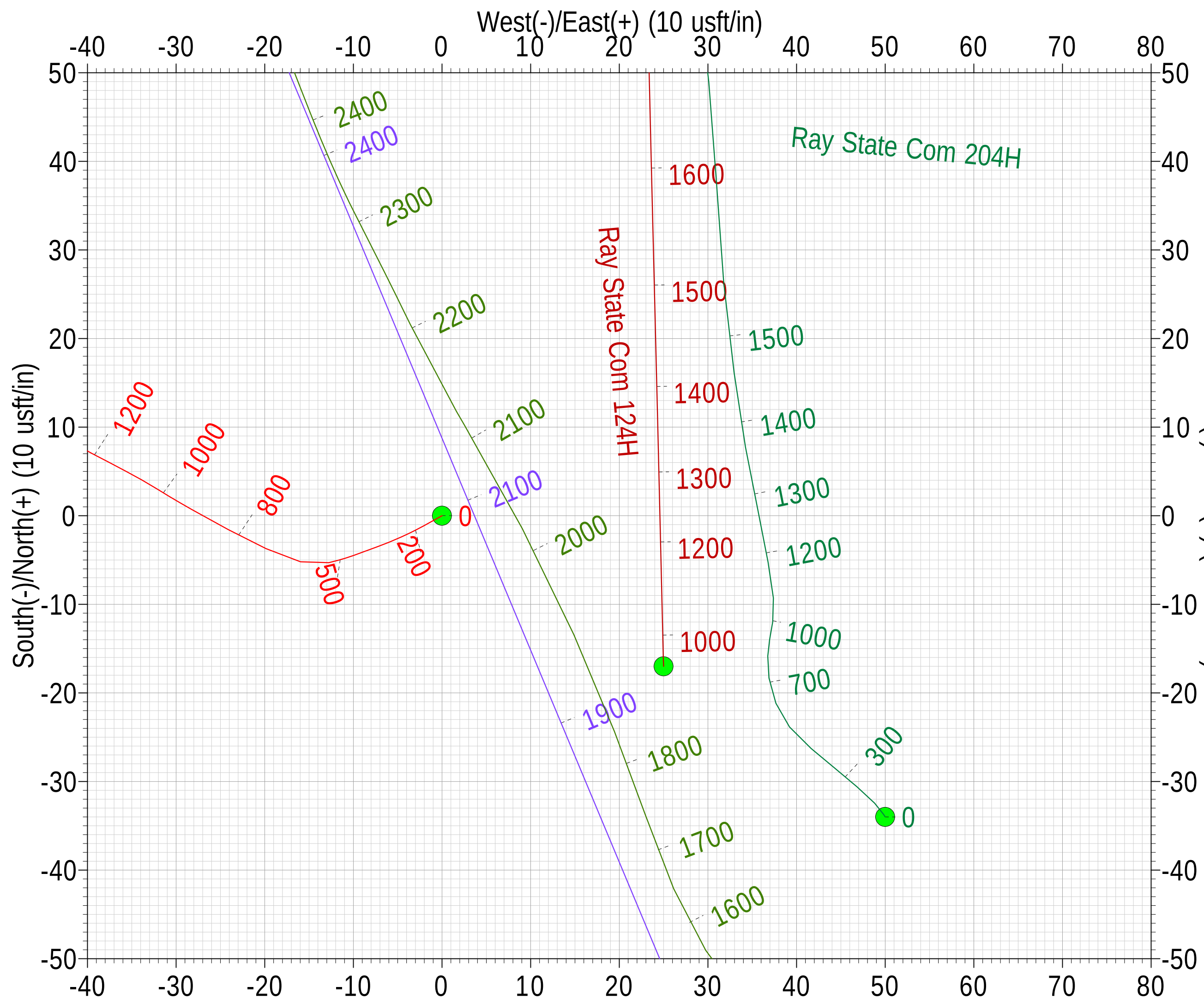
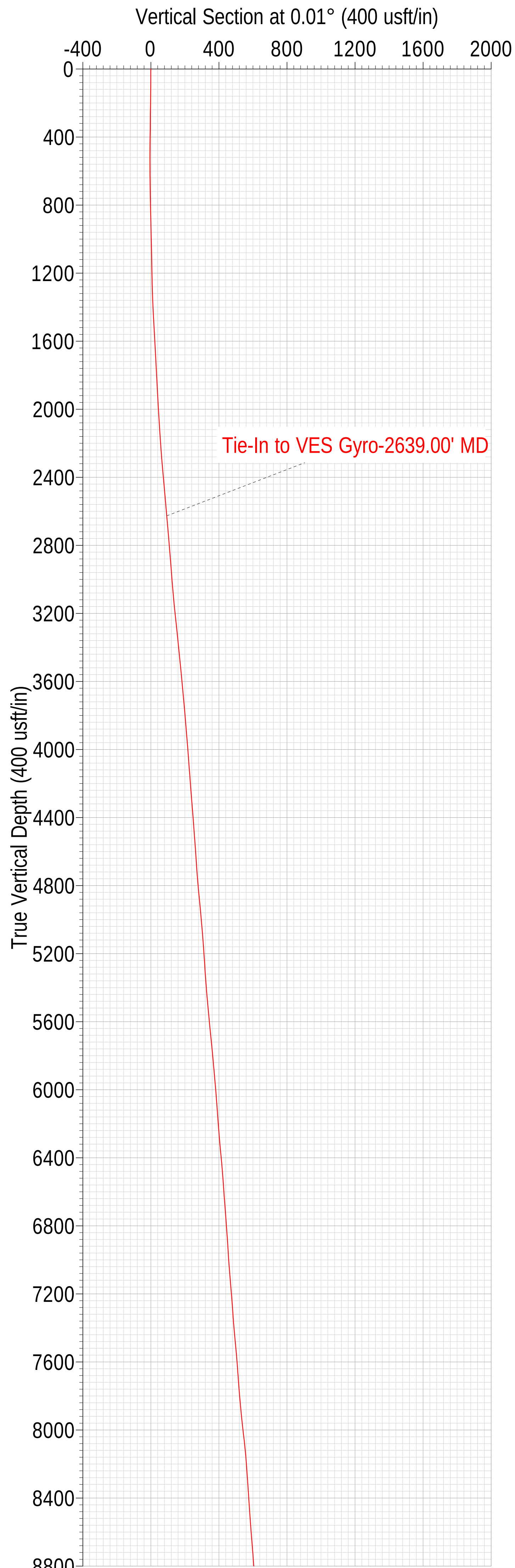
To convert a Magnetic Direction to a Grid Direction, Add 6.823°
To convert a Magnetic Direction to a True Direction, Add 6.983° East
To convert a True Direction to a Grid Direction, Subtract 0.160°

SURVEY PROGRAM

Depth From	Depth To	Survey/Plan	Tool
164.66	2639.00	VES Gyro (Wellbore #1)	VESSI_GYRO_DROP
2837.00	13752.00	MS MWD (Wellbore #1)	MWD+HRGM
3752.00	20485.45	Design #4 (Wellbore #2)	MWD+HRGM



WELL DETAILS: Ray State Com 217H									
		GL @ 2962.00		WELL @ 2990.50usft (Patterson 282)					
		+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
		0.00	0.00	455407.00	592855.00	32° 15' 6.026 N	104° 1' 58.704 W		
DESIGN TARGET DETAILS									
Name	TVD		+N/-S	+E/-W	Northing	Easting	Latitude		Longitude
PBHL v4 - Ray State Com #217H	9858.00		11347.00	-1066.00	466754.00	591789.00	32° 16' 58.347 N		104° 2' 10.751 W
SECTION TARGET DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
13752.00	87.60	1.00	9893.23	4618.75	-1064.43	0.00	0.000	4618.56	Tie-in - 13752.00' MD
13811.00	90.64	1.62	9894.14	4677.72	-1063.08	5.26	11.532	4677.54	SDTRK, 5.00°/100' Drop
13821.00	90.14	1.62	9894.07	4687.72	-1062.80	5.00	180.000	4687.53	Begin 5.00°/100' Drop & Turn
13826.00	89.92	1.74	9894.07	4692.71	-1062.65	5.00	150.000	4692.53	Continue 5.00°/100' Drop & Turn
13836.00	89.67	2.18	9894.10	4702.71	-1062.31	5.00	120.000	4702.52	Continue 5.00°/100' Turn
13892.44	89.67	5.00	9894.43	4759.03	-1058.77	5.00	90.079	4758.84	Hold 5.00° Azm; Begin 2.00°/100' Build
14008.94	92.00	5.00	9892.73	4875.07	-1048.62	2.00	0.000	4874.88	Hold 92.00° Inc
14333.94	92.00	5.00	9881.39	5198.63	-1020.31	0.00	0.000	5198.45	Begin 2.00°/100' Turn
14583.79	92.00	0.00	9872.66	5448.01	-1009.43	2.00	-89.913	5447.83	Hold 0.00° Azm
14953.79	92.00	0.00	9859.75	5817.79	-1009.43	0.00	0.000	5817.61	Begin 2.00°/100' Drop
15053.79	90.00	0.00	9858.00	5917.76	-1009.43	2.00	-180.000	5917.59	Hold 90.00° Inc
17001.38	90.00	0.00	9858.00	7865.36	-1009.43	0.00	0.000	7865.18	Begin 2.00°/100' Turn
17405.79	90.00	351.91	9858.00	8268.43	-1037.95	2.00	-89.997	8268.25	Continue 2.00°/100' Turn
17810.71	90.00	0.01	9858.00	8672.00	-1066.47	2.00	90.003	8671.81	Hold 0.01° Azm
20485.71	90.00	0.01	9858.00	11347.00	-1066.00	0.00	0.000	11346.81	PBHL





Matador Resources

Eddy County, New Mexico (NAD 27)

Ray State Com

Ray State Com 217H

Wellbore #1

Design: Surveys

Standard Survey Report

03 March, 2020





Company:	Matador Resources	Local Co-ordinate Reference:	Well Ray State Com 217H
Project:	Eddy County, New Mexico (NAD 27)	TVD Reference:	WELL @ 2990.50usft (Patterson 282)
Site:	Ray State Com	MD Reference:	WELL @ 2990.50usft (Patterson 282)
Well:	Ray State Com 217H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.1 Conroe DB

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		

Site	Ray State Com		
Site Position:		Northing:	455,390.00 usft
From:	Map	Easting:	592,880.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 15' 5.857 N
		Longitude:	104° 1' 58.413 W
		Grid Convergence:	0.160 °

Well	Ray State Com 217H		
Well Position	+N/-S	0.00 usft	Northing: 455,407.00 usft
	+E/-W	0.00 usft	Easting: 592,855.00 usft
Position Uncertainty	0.00 usft		Wellhead Elevation: usft
			Latitude: 32° 15' 6.026 N
			Longitude: 104° 1' 58.704 W
			Ground Level: 2,962.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2020	1/22/2020	6.983	59.983	47,839.10

Design	Surveys				
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		0.01

Survey Program	Date	3/3/2020			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
164.66	2,639.00	VES Gyro (Wellbore #1)	VESSI_GYRO_DROP	VESSI Gyroflex GS2 Drop	
2,837.00	17,186.00	MS MWD (Wellbore #1)	MWD+HRGM	OWSG MWD + HRGM	

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	
164.66	1.64	241.05	164.64	-1.14	-2.06	-1.14	1.00	1.00	0.00	
259.25	1.83	245.87	259.18	-2.41	-4.62	-2.41	0.25	0.20	5.10	
353.84	1.71	249.74	353.73	-3.52	-7.33	-3.52	0.18	-0.13	4.09	
448.43	1.71	250.39	448.28	-4.48	-9.98	-4.48	0.02	0.00	0.69	
543.02	1.81	256.88	542.82	-5.29	-12.76	-5.30	0.24	0.11	6.86	
637.61	2.17	284.23	637.36	-5.19	-15.96	-5.20	1.06	0.38	28.91	
732.20	2.90	295.64	731.85	-3.72	-19.85	-3.72	0.93	0.77	12.06	
826.79	2.88	298.16	826.32	-1.56	-24.10	-1.57	0.14	-0.02	2.66	
921.38	2.79	299.42	920.80	0.69	-28.20	0.69	0.12	-0.10	1.33	



MS Directional Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well Ray State Com 217H
Project:	Eddy County, New Mexico (NAD 27)	TVD Reference:	WELL @ 2990.50usft (Patterson 282)
Site:	Ray State Com	MD Reference:	WELL @ 2990.50usft (Patterson 282)
Well:	Ray State Com 217H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.1 Conroe 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)
1,015.97	2.60	301.80	1,015.28	2.95	-32.03	2.95	0.23	-0.20	2.52
1,110.56	2.57	297.60	1,109.78	5.07	-35.73	5.06	0.20	-0.03	-4.44
1,205.15	2.39	297.83	1,204.28	6.97	-39.36	6.96	0.19	-0.19	0.24
1,299.74	3.17	298.77	1,298.76	9.15	-43.39	9.14	0.83	0.82	0.99
1,394.33	4.85	302.47	1,393.11	12.55	-49.06	12.55	1.80	1.78	3.91
1,488.92	6.69	295.66	1,487.22	17.09	-57.40	17.08	2.07	1.95	-7.20
1,583.51	6.94	299.08	1,581.14	22.25	-67.36	22.24	0.50	0.26	3.62
1,678.10	6.85	294.85	1,675.05	27.40	-77.47	27.39	0.55	-0.10	-4.47
1,772.69	6.86	296.97	1,768.96	32.33	-87.63	32.32	0.27	0.01	2.24
1,867.28	6.77	297.54	1,862.88	37.47	-97.61	37.45	0.12	-0.10	0.60
1,961.87	7.01	296.32	1,956.79	42.61	-107.72	42.59	0.30	0.25	-1.29
2,056.46	7.02	296.43	2,050.67	47.74	-118.07	47.72	0.02	0.01	0.12
2,151.05	8.08	298.00	2,144.44	53.43	-129.12	53.41	1.14	1.12	1.66
2,245.64	8.00	301.48	2,238.10	59.99	-140.60	59.97	0.52	-0.08	3.68
2,340.23	9.02	303.75	2,331.65	67.55	-152.38	67.52	1.14	1.08	2.40
2,434.82	8.96	305.85	2,425.08	75.98	-164.52	75.95	0.35	-0.06	2.22
2,529.41	8.90	303.81	2,518.52	84.37	-176.57	84.34	0.34	-0.06	-2.16
2,639.00	8.75	304.84	2,626.81	93.85	-190.45	93.81	0.20	-0.14	0.94
Final VES Gyro-2639.00' MD - Tie-In to VES Gyro-2639.00' MD									
2,837.00	8.50	302.10	2,822.58	110.23	-215.21	110.19	0.24	-0.13	-1.38
3,035.00	8.40	303.10	3,018.43	125.90	-239.72	125.86	0.09	-0.05	0.51
3,231.00	10.80	303.50	3,211.67	143.86	-267.03	143.81	1.22	1.22	0.20
3,419.00	10.50	303.70	3,396.43	163.08	-295.97	163.03	0.16	-0.16	0.11
3,607.00	9.70	304.20	3,581.51	181.49	-323.32	181.43	0.43	-0.43	0.27
3,796.00	8.90	303.50	3,768.03	198.51	-348.68	198.45	0.43	-0.42	-0.37
3,985.00	8.60	301.60	3,954.83	213.98	-372.91	213.92	0.22	-0.16	-1.01
4,173.00	8.10	301.40	4,140.84	228.25	-396.19	228.18	0.27	-0.27	-0.11
4,361.00	9.30	299.10	4,326.67	242.54	-420.77	242.47	0.66	0.64	-1.22
4,549.00	9.10	297.60	4,512.25	256.81	-447.21	256.74	0.17	-0.11	-0.80
4,737.00	9.00	295.20	4,697.91	269.96	-473.69	269.88	0.21	-0.05	-1.28
4,925.00	9.60	307.10	4,883.46	285.68	-499.51	285.59	1.07	0.32	6.33
5,113.00	8.30	303.70	5,069.17	302.67	-523.30	302.58	0.75	-0.69	-1.81
5,301.00	6.70	302.00	5,255.55	316.01	-543.89	315.91	0.86	-0.85	-0.90
5,488.00	8.00	306.90	5,441.01	329.60	-563.55	329.51	0.77	0.70	2.62
5,677.00	9.00	309.30	5,627.94	346.86	-585.51	346.76	0.56	0.53	1.27
5,865.00	9.30	305.10	5,813.54	364.91	-609.31	364.81	0.39	0.16	-2.23
6,054.00	8.60	302.80	6,000.24	381.35	-633.69	381.24	0.42	-0.37	-1.22
6,242.00	7.50	302.10	6,186.39	395.48	-655.90	395.37	0.59	-0.59	-0.37
6,430.00	9.80	304.90	6,372.24	411.16	-679.42	411.04	1.24	1.22	1.49
6,619.00	7.40	301.40	6,559.10	426.71	-703.00	426.58	1.30	-1.27	-1.85
6,808.00	8.90	300.70	6,746.19	440.51	-725.96	440.39	0.80	0.79	-0.37
6,996.00	7.50	297.10	6,932.26	453.53	-749.39	453.40	0.79	-0.74	-1.91
7,186.00	10.90	296.70	7,119.79	467.25	-776.48	467.12	1.79	1.79	-0.21



Company:	Matador Resources	Local Co-ordinate Reference:	Well Ray State Com 217H
Project:	Eddy County, New Mexico (NAD 27)	TVD Reference:	WELL @ 2990.50usft (Patterson 282)
Site:	Ray State Com	MD Reference:	WELL @ 2990.50usft (Patterson 282)
Well:	Ray State Com 217H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.1 Conroe 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)
7,373.00	10.20	292.90	7,303.63	481.64	-807.53	481.50	0.53	-0.37	-2.03
7,563.00	9.70	304.90	7,490.79	497.35	-836.16	497.20	1.12	-0.26	6.32
7,752.00	9.50	293.70	7,677.16	512.73	-863.50	512.58	0.99	-0.11	-5.93
7,941.00	11.30	298.10	7,863.05	527.72	-894.12	527.56	1.04	0.95	2.33
8,128.00	10.70	308.80	8,046.63	547.23	-923.82	547.07	1.14	-0.32	5.72
8,317.00	7.00	303.40	8,233.35	564.57	-947.11	564.40	2.00	-1.96	-2.86
8,506.00	7.80	298.40	8,420.78	577.01	-968.01	576.84	0.54	0.42	-2.65
8,695.00	9.00	300.60	8,607.75	590.63	-992.02	590.46	0.66	0.63	1.16
8,884.00	8.70	297.70	8,794.50	604.80	-1,017.40	604.63	0.28	-0.16	-1.53
8,978.00	7.90	298.90	8,887.52	611.23	-1,029.35	611.05	0.87	-0.85	1.28
9,073.00	6.60	296.20	8,981.75	616.80	-1,039.96	616.61	1.41	-1.37	-2.84
9,167.00	5.80	294.50	9,075.20	621.15	-1,049.13	620.97	0.87	-0.85	-1.81
9,261.00	5.10	290.40	9,168.78	624.58	-1,057.37	624.39	0.85	-0.74	-4.36
9,311.00	4.80	290.40	9,218.59	626.08	-1,061.41	625.90	0.60	-0.60	0.00
9,388.00	4.70	287.90	9,295.33	628.17	-1,067.43	627.99	0.30	-0.13	-3.25
9,435.00	5.20	322.00	9,342.16	630.44	-1,070.58	630.26	6.25	1.06	72.55
9,482.00	9.90	327.20	9,388.74	635.52	-1,074.08	635.33	10.09	10.00	11.06
9,533.00	15.40	343.50	9,438.50	645.71	-1,078.38	645.52	12.76	10.78	31.96
9,577.00	18.30	355.70	9,480.62	658.21	-1,080.56	658.02	10.36	6.59	27.73
9,671.00	18.80	3.10	9,569.75	688.05	-1,080.85	687.86	2.56	0.53	7.87
9,718.00	20.70	4.60	9,613.98	703.90	-1,079.77	703.71	4.18	4.04	3.19
9,790.00	27.90	358.20	9,679.57	733.46	-1,079.28	733.27	10.63	10.00	-8.89
9,838.00	38.60	357.00	9,719.66	759.72	-1,080.42	759.53	22.33	22.29	-2.50
9,885.00	47.00	0.80	9,754.12	791.60	-1,080.95	791.42	18.69	17.87	8.09
9,932.00	50.20	1.20	9,785.19	826.85	-1,080.33	826.66	6.84	6.81	0.85
9,979.00	56.10	1.60	9,813.37	864.43	-1,079.41	864.24	12.57	12.55	0.85
10,026.00	62.00	1.20	9,837.53	904.71	-1,078.43	904.52	12.57	12.55	-0.85
10,073.00	68.00	0.80	9,857.38	947.28	-1,077.69	947.09	12.79	12.77	-0.85
10,109.00	75.10	1.00	9,868.77	981.40	-1,077.15	981.21	19.73	19.72	0.56
10,155.00	79.40	1.80	9,878.92	1,026.24	-1,076.05	1,026.06	9.50	9.35	1.74
10,168.00	80.80	2.00	9,881.15	1,039.04	-1,075.63	1,038.86	10.88	10.77	1.54
10,262.00	88.10	1.60	9,890.24	1,132.49	-1,072.69	1,132.31	7.78	7.77	-0.43
10,356.00	87.80	0.30	9,893.60	1,226.42	-1,071.14	1,226.23	1.42	-0.32	-1.38
10,371.89	87.66	0.08	9,894.23	1,242.30	-1,071.08	1,242.11	1.62	-0.85	-1.38
330' HL Crossing - 10371.89' MD									
10,450.00	87.00	359.00	9,897.87	1,320.32	-1,071.71	1,320.13	1.62	-0.85	-1.38
10,545.00	89.20	0.10	9,901.02	1,415.25	-1,072.45	1,415.07	2.59	2.32	1.16
10,639.00	88.20	0.10	9,903.15	1,509.23	-1,072.29	1,509.04	1.06	-1.06	0.00
10,734.00	90.20	2.80	9,904.47	1,604.18	-1,069.89	1,603.99	3.54	2.11	2.84
10,828.00	90.90	2.70	9,903.57	1,698.06	-1,065.38	1,697.88	0.75	0.74	-0.11
10,922.00	91.40	2.20	9,901.69	1,791.96	-1,061.36	1,791.77	0.75	0.53	-0.53
11,017.00	92.40	2.50	9,898.54	1,886.82	-1,057.47	1,886.64	1.10	1.05	0.32
11,111.00	88.70	0.10	9,897.63	1,980.77	-1,055.33	1,980.59	4.69	-3.94	-2.55
11,205.00	89.50	1.20	9,899.11	2,074.75	-1,054.27	2,074.57	1.45	0.85	1.17



Company:	Matador Resources	Local Co-ordinate Reference:	Well Ray State Com 217H
Project:	Eddy County, New Mexico (NAD 27)	TVD Reference:	WELL @ 2990.50usft (Patterson 282)
Site:	Ray State Com	MD Reference:	WELL @ 2990.50usft (Patterson 282)
Well:	Ray State Com 217H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.1 Conroe 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)
11,299.00	89.20	359.10	9,900.18	2,168.74	-1,054.02	2,168.56	2.26	-0.32	-2.23
11,394.00	91.30	359.30	9,899.76	2,263.72	-1,055.35	2,263.54	2.22	2.21	0.21
11,488.00	89.20	358.60	9,899.35	2,357.70	-1,057.07	2,357.52	2.35	-2.23	-0.74
11,582.00	95.30	1.00	9,895.66	2,451.58	-1,057.40	2,451.39	6.97	6.49	2.55
11,677.00	96.50	359.90	9,885.90	2,546.07	-1,056.66	2,545.88	1.71	1.26	-1.16
11,771.00	91.10	0.40	9,879.67	2,639.83	-1,056.41	2,639.64	5.77	-5.74	0.53
11,865.00	83.90	357.20	9,883.77	2,733.64	-1,058.37	2,733.46	8.38	-7.66	-3.40
11,960.00	85.50	358.00	9,892.54	2,828.15	-1,062.33	2,827.96	1.88	1.68	0.84
12,053.00	89.80	358.70	9,896.36	2,921.01	-1,065.01	2,920.82	4.68	4.62	0.75
12,148.00	90.00	359.10	9,896.52	3,015.99	-1,066.83	3,015.81	0.47	0.21	0.42
12,242.00	89.50	359.00	9,896.93	3,109.98	-1,068.39	3,109.79	0.54	-0.53	-0.11
12,336.00	89.60	358.40	9,897.67	3,203.95	-1,070.52	3,203.76	0.65	0.11	-0.64
12,431.00	88.60	357.30	9,899.16	3,298.87	-1,074.08	3,298.68	1.56	-1.05	-1.16
12,525.00	88.90	356.50	9,901.21	3,392.71	-1,079.17	3,392.52	0.91	0.32	-0.85
12,619.00	93.40	0.80	9,899.33	3,486.62	-1,081.38	3,486.43	6.62	4.79	4.57
12,713.00	89.70	357.90	9,896.78	3,580.55	-1,082.45	3,580.36	5.00	-3.94	-3.09
12,808.00	89.40	357.50	9,897.53	3,675.47	-1,086.26	3,675.28	0.53	-0.32	-0.42
12,902.00	90.20	358.40	9,897.86	3,769.41	-1,089.62	3,769.22	1.28	0.85	0.96
12,997.00	90.10	2.00	9,897.61	3,864.39	-1,089.29	3,864.20	3.79	-0.11	3.79
13,091.00	89.80	3.20	9,897.69	3,958.29	-1,085.03	3,958.10	1.32	-0.32	1.28
13,186.00	89.80	2.50	9,898.02	4,053.17	-1,080.30	4,052.99	0.74	0.00	-0.74
13,280.00	90.40	1.70	9,897.86	4,147.11	-1,076.86	4,146.92	1.06	0.64	-0.85
13,374.00	90.40	1.80	9,897.20	4,241.06	-1,073.99	4,240.88	0.11	0.00	0.11
13,469.00	93.20	2.20	9,894.22	4,335.95	-1,070.68	4,335.76	2.98	2.95	0.42
13,563.00	91.20	1.30	9,890.61	4,429.83	-1,067.81	4,429.64	2.33	-2.13	-0.96
13,658.00	89.00	0.90	9,890.44	4,524.81	-1,065.99	4,524.62	2.35	-2.32	-0.42
13,752.00	87.60	1.00	9,893.23	4,618.75	-1,064.43	4,618.56	1.49	-1.49	0.11
13,847.00	92.50	2.00	9,893.15	4,713.69	-1,061.94	4,713.50	5.26	5.16	1.05
13,941.00	92.90	2.20	9,888.72	4,807.52	-1,058.50	4,807.34	0.48	0.43	0.21
14,035.00	92.20	1.80	9,884.54	4,901.37	-1,055.22	4,901.18	0.86	-0.74	-0.43
14,129.00	92.30	1.30	9,880.85	4,995.26	-1,052.68	4,995.08	0.54	0.11	-0.53
14,224.00	92.10	1.30	9,877.20	5,090.17	-1,050.53	5,089.98	0.21	-0.21	0.00
14,300.00	90.24	359.84	9,875.65	5,166.14	-1,049.77	5,165.96	3.11	-2.45	-1.92
Top of Fish - 14300' MD									
14,318.00	89.80	359.50	9,875.64	5,184.14	-1,049.87	5,183.96	3.11	-2.45	-1.91
14,412.00	93.20	0.80	9,873.18	5,278.09	-1,049.63	5,277.91	3.87	3.62	1.38
14,506.00	84.60	0.90	9,874.99	5,371.98	-1,048.24	5,371.79	9.15	-9.15	0.11
14,600.00	92.30	1.20	9,877.53	5,465.86	-1,046.51	5,465.67	8.20	8.19	0.32
14,695.00	92.10	0.80	9,873.88	5,560.77	-1,044.86	5,560.59	0.47	-0.21	-0.42
14,789.00	89.60	359.30	9,872.49	5,654.75	-1,044.78	5,654.57	3.10	-2.66	-1.60
14,884.00	87.30	357.70	9,875.06	5,749.67	-1,047.26	5,749.49	2.95	-2.42	-1.68
14,978.00	88.70	357.20	9,878.34	5,843.52	-1,051.44	5,843.34	1.58	1.49	-0.53
15,072.00	91.90	355.50	9,877.84	5,937.31	-1,057.42	5,937.13	3.85	3.40	-1.81



Company:	Matador Resources	Local Co-ordinate Reference:	Well Ray State Com 217H
Project:	Eddy County, New Mexico (NAD 27)	TVD Reference:	WELL @ 2990.50usft (Patterson 282)
Site:	Ray State Com	MD Reference:	WELL @ 2990.50usft (Patterson 282)
Well:	Ray State Com 217H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.1 Conroe 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)
15,167.00	89.10	356.60	9,877.01	6,032.07	-1,063.97	6,031.89	3.17	-2.95	1.16
15,261.00	90.60	356.20	9,877.26	6,125.89	-1,069.87	6,125.70	1.65	1.60	-0.43
15,356.00	94.40	357.30	9,873.12	6,220.62	-1,075.25	6,220.44	4.16	4.00	1.16
15,449.00	98.40	357.60	9,862.75	6,312.93	-1,079.36	6,312.74	4.31	4.30	0.32
15,543.00	97.70	358.90	9,849.59	6,405.96	-1,082.20	6,405.77	1.56	-0.74	1.38
15,637.00	93.30	0.50	9,840.58	6,499.50	-1,082.69	6,499.31	4.98	-4.68	1.70
15,731.00	89.10	1.60	9,838.61	6,593.44	-1,080.97	6,593.25	4.62	-4.47	1.17
15,826.00	87.10	2.40	9,841.76	6,688.33	-1,077.65	6,688.14	2.27	-2.11	0.84
15,921.00	88.10	1.80	9,845.74	6,783.18	-1,074.17	6,782.99	1.23	1.05	-0.63
16,015.00	88.50	1.70	9,848.53	6,877.09	-1,071.31	6,876.91	0.44	0.43	-0.11
16,109.00	90.70	0.80	9,849.19	6,971.06	-1,069.26	6,970.87	2.53	2.34	-0.96
16,204.00	92.20	359.50	9,846.78	7,066.03	-1,069.01	7,065.84	2.09	1.58	-1.37
16,298.00	89.40	0.10	9,845.47	7,160.01	-1,069.33	7,159.82	3.05	-2.98	0.64
16,393.00	89.70	0.50	9,846.22	7,255.00	-1,068.84	7,254.81	0.53	0.32	0.42
16,488.00	91.70	0.50	9,845.06	7,349.99	-1,068.01	7,349.80	2.11	2.11	0.00
16,582.00	88.70	1.90	9,844.73	7,443.95	-1,066.04	7,443.77	3.52	-3.19	1.49
16,676.00	88.00	0.90	9,847.43	7,537.88	-1,063.74	7,537.70	1.30	-0.74	-1.06
16,771.00	85.00	358.30	9,853.23	7,632.68	-1,064.40	7,632.50	4.18	-3.16	-2.74
16,866.00	86.70	357.60	9,860.11	7,727.37	-1,067.79	7,727.18	1.93	1.79	-0.74
16,960.00	89.50	357.90	9,863.22	7,821.24	-1,071.48	7,821.05	3.00	2.98	0.32
17,054.00	92.10	356.40	9,861.91	7,915.10	-1,076.15	7,914.91	3.19	2.77	-1.60
17,186.00	92.10	356.40	9,857.08	8,046.75	-1,084.43	8,046.56	0.00	0.00	0.00
Projection to TD [OH]-17186.00' MD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,639.00	2,626.81	93.85	-190.45	Final VES Gyro-2639.00' MD
2,639.00	2,626.81	93.85	-190.45	Tie-In to VES Gyro-2639.00' MD
10,371.89	9,894.23	1,242.30	-1,071.08	330' HL Crossing - 10371.89' MD
14,300.00	9,875.65	5,166.14	-1,049.77	Top of Fish - 14300' MD
17,186.00	9,857.08	8,046.75	-1,084.43	Projection to TD [OH]-17186.00' MD



Matador Resources

Eddy County, New Mexico (NAD 27)

Ray State Com

Ray State Com 217H

Wellbore #2

Design: Surveys

Standard Survey Report

03 March, 2020





Company:	Matador Resources	Local Co-ordinate Reference:	Well Ray State Com 217H
Project:	Eddy County, New Mexico (NAD 27)	TVD Reference:	WELL @ 2990.50usft (Patterson 282)
Site:	Ray State Com	MD Reference:	WELL @ 2990.50usft (Patterson 282)
Well:	Ray State Com 217H	North Reference:	Grid
Wellbore:	Wellbore #2	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.1 Conroe DB

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		

Site	Ray State Com		
Site Position:		Northing:	455,390.00 usft
From:	Map	Easting:	592,880.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 15' 5.857 N
		Longitude:	104° 1' 58.413 W
		Grid Convergence:	0.160 °

Well	Ray State Com 217H		
Well Position	+N/-S	0.00 usft	Northing: 455,407.00 usft
	+E/-W	0.00 usft	Easting: 592,855.00 usft
Position Uncertainty	0.00 usft		Latitude: 32° 15' 6.026 N
		Wellhead Elevation:	usft
			Longitude: 104° 1' 58.704 W
			Ground Level: 2,962.00 usft

Wellbore	Wellbore #2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2020	2/16/2020	6.983	59.983	47,831.90

Design	Surveys				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	13,752.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00		0.01

Survey Program	Date	3/3/2020			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
164.66	2,639.00	VES Gyro (Wellbore #1)	VESSI_GYRO_DROP	VESSI Gyroflex GS2 Drop	
2,837.00	13,752.00	MS MWD (Wellbore #1)	MWD+HRGM	OWSG MWD + HRGM	
13,809.00	20,510.00	MS MWD (Wellbore #2)	MWD+HRGM	OWSG MWD + HRGM	

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	
164.66	1.64	241.05	164.64	-1.14	-2.06	-1.14	1.00	1.00	0.00	
259.25	1.83	245.87	259.18	-2.41	-4.62	-2.41	0.25	0.20	5.10	
353.84	1.71	249.74	353.73	-3.52	-7.33	-3.52	0.18	-0.13	4.09	
448.43	1.71	250.39	448.28	-4.48	-9.98	-4.48	0.02	0.00	0.69	
543.02	1.81	256.88	542.82	-5.29	-12.76	-5.30	0.24	0.11	6.86	
637.61	2.17	284.23	637.36	-5.19	-15.96	-5.20	1.06	0.38	28.91	
732.20	2.90	295.64	731.85	-3.72	-19.85	-3.72	0.93	0.77	12.06	
826.79	2.88	298.16	826.32	-1.56	-24.10	-1.57	0.14	-0.02	2.66	



MS Directional Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well Ray State Com 217H
Project:	Eddy County, New Mexico (NAD 27)	TVD Reference:	WELL @ 2990.50usft (Patterson 282)
Site:	Ray State Com	MD Reference:	WELL @ 2990.50usft (Patterson 282)
Well:	Ray State Com 217H	North Reference:	Grid
Wellbore:	Wellbore #2	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.1 Conroe 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)
921.38	2.79	299.42	920.80	0.69	-28.20	0.69	0.12	-0.10	1.33
1,015.97	2.60	301.80	1,015.28	2.95	-32.03	2.95	0.23	-0.20	2.52
1,110.56	2.57	297.60	1,109.78	5.07	-35.73	5.06	0.20	-0.03	-4.44
1,205.15	2.39	297.83	1,204.28	6.97	-39.36	6.96	0.19	-0.19	0.24
1,299.74	3.17	298.77	1,298.76	9.15	-43.39	9.14	0.83	0.82	0.99
1,394.33	4.85	302.47	1,393.11	12.55	-49.06	12.55	1.80	1.78	3.91
1,488.92	6.69	295.66	1,487.22	17.09	-57.40	17.08	2.07	1.95	-7.20
1,583.51	6.94	299.08	1,581.14	22.25	-67.36	22.24	0.50	0.26	3.62
1,678.10	6.85	294.85	1,675.05	27.40	-77.47	27.39	0.55	-0.10	-4.47
1,772.69	6.86	296.97	1,768.96	32.33	-87.63	32.32	0.27	0.01	2.24
1,867.28	6.77	297.54	1,862.88	37.47	-97.61	37.45	0.12	-0.10	0.60
1,961.87	7.01	296.32	1,956.79	42.61	-107.72	42.59	0.30	0.25	-1.29
2,056.46	7.02	296.43	2,050.67	47.74	-118.07	47.72	0.02	0.01	0.12
2,151.05	8.08	298.00	2,144.44	53.43	-129.12	53.41	1.14	1.12	1.66
2,245.64	8.00	301.48	2,238.10	59.99	-140.60	59.97	0.52	-0.08	3.68
2,340.23	9.02	303.75	2,331.65	67.55	-152.38	67.52	1.14	1.08	2.40
2,434.82	8.96	305.85	2,425.08	75.98	-164.52	75.95	0.35	-0.06	2.22
2,529.41	8.90	303.81	2,518.52	84.37	-176.57	84.34	0.34	-0.06	-2.16
2,639.00	8.75	304.84	2,626.81	93.85	-190.45	93.81	0.20	-0.14	0.94
2,837.00	8.50	302.10	2,822.58	110.23	-215.21	110.19	0.24	-0.13	-1.38
3,035.00	8.40	303.10	3,018.43	125.90	-239.72	125.86	0.09	-0.05	0.51
3,231.00	10.80	303.50	3,211.67	143.86	-267.03	143.81	1.22	1.22	0.20
3,419.00	10.50	303.70	3,396.43	163.08	-295.97	163.03	0.16	-0.16	0.11
3,607.00	9.70	304.20	3,581.51	181.49	-323.32	181.43	0.43	-0.43	0.27
3,796.00	8.90	303.50	3,768.03	198.51	-348.68	198.45	0.43	-0.42	-0.37
3,985.00	8.60	301.60	3,954.83	213.98	-372.91	213.92	0.22	-0.16	-1.01
4,173.00	8.10	301.40	4,140.84	228.25	-396.19	228.18	0.27	-0.27	-0.11
4,361.00	9.30	299.10	4,326.67	242.54	-420.77	242.47	0.66	0.64	-1.22
4,549.00	9.10	297.60	4,512.25	256.81	-447.21	256.74	0.17	-0.11	-0.80
4,737.00	9.00	295.20	4,697.91	269.96	-473.69	269.88	0.21	-0.05	-1.28
4,925.00	9.60	307.10	4,883.46	285.68	-499.51	285.59	1.07	0.32	6.33
5,113.00	8.30	303.70	5,069.17	302.67	-523.30	302.58	0.75	-0.69	-1.81
5,301.00	6.70	302.00	5,255.55	316.01	-543.89	315.91	0.86	-0.85	-0.90
5,488.00	8.00	306.90	5,441.01	329.60	-563.55	329.51	0.77	0.70	2.62
5,677.00	9.00	309.30	5,627.94	346.86	-585.51	346.76	0.56	0.53	1.27
5,865.00	9.30	305.10	5,813.54	364.91	-609.31	364.81	0.39	0.16	-2.23
6,054.00	8.60	302.80	6,000.24	381.35	-633.69	381.24	0.42	-0.37	-1.22
6,242.00	7.50	302.10	6,186.39	395.48	-655.90	395.37	0.59	-0.59	-0.37
6,430.00	9.80	304.90	6,372.24	411.16	-679.42	411.04	1.24	1.22	1.49
6,619.00	7.40	301.40	6,559.10	426.71	-703.00	426.58	1.30	-1.27	-1.85
6,808.00	8.90	300.70	6,746.19	440.51	-725.96	440.39	0.80	0.79	-0.37
6,996.00	7.50	297.10	6,932.26	453.53	-749.39	453.40	0.79	-0.74	-1.91
7,186.00	10.90	296.70	7,119.79	467.25	-776.48	467.12	1.79	1.79	-0.21



Company:	Matador Resources	Local Co-ordinate Reference:	Well Ray State Com 217H
Project:	Eddy County, New Mexico (NAD 27)	TVD Reference:	WELL @ 2990.50usft (Patterson 282)
Site:	Ray State Com	MD Reference:	WELL @ 2990.50usft (Patterson 282)
Well:	Ray State Com 217H	North Reference:	Grid
Wellbore:	Wellbore #2	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.1 Conroe 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)
7,373.00	10.20	292.90	7,303.63	481.64	-807.53	481.50	0.53	-0.37	-2.03
7,563.00	9.70	304.90	7,490.79	497.35	-836.16	497.20	1.12	-0.26	6.32
7,752.00	9.50	293.70	7,677.16	512.73	-863.50	512.58	0.99	-0.11	-5.93
7,941.00	11.30	298.10	7,863.05	527.72	-894.12	527.56	1.04	0.95	2.33
8,128.00	10.70	308.80	8,046.63	547.23	-923.82	547.07	1.14	-0.32	5.72
8,317.00	7.00	303.40	8,233.35	564.57	-947.11	564.40	2.00	-1.96	-2.86
8,506.00	7.80	298.40	8,420.78	577.01	-968.01	576.84	0.54	0.42	-2.65
8,695.00	9.00	300.60	8,607.75	590.63	-992.02	590.46	0.66	0.63	1.16
8,884.00	8.70	297.70	8,794.50	604.80	-1,017.40	604.63	0.28	-0.16	-1.53
8,978.00	7.90	298.90	8,887.52	611.23	-1,029.35	611.05	0.87	-0.85	1.28
9,073.00	6.60	296.20	8,981.75	616.80	-1,039.96	616.61	1.41	-1.37	-2.84
9,167.00	5.80	294.50	9,075.20	621.15	-1,049.13	620.97	0.87	-0.85	-1.81
9,261.00	5.10	290.40	9,168.78	624.58	-1,057.37	624.39	0.85	-0.74	-4.36
9,311.00	4.80	290.40	9,218.59	626.08	-1,061.41	625.90	0.60	-0.60	0.00
9,388.00	4.70	287.90	9,295.33	628.17	-1,067.43	627.99	0.30	-0.13	-3.25
9,435.00	5.20	322.00	9,342.16	630.44	-1,070.58	630.26	6.25	1.06	72.55
9,482.00	9.90	327.20	9,388.74	635.52	-1,074.08	635.33	10.09	10.00	11.06
9,533.00	15.40	343.50	9,438.50	645.71	-1,078.38	645.52	12.76	10.78	31.96
9,577.00	18.30	355.70	9,480.62	658.21	-1,080.56	658.02	10.36	6.59	27.73
9,671.00	18.80	3.10	9,569.75	688.05	-1,080.85	687.86	2.56	0.53	7.87
9,718.00	20.70	4.60	9,613.98	703.90	-1,079.77	703.71	4.18	4.04	3.19
9,790.00	27.90	358.20	9,679.57	733.46	-1,079.28	733.27	10.63	10.00	-8.89
9,838.00	38.60	357.00	9,719.66	759.72	-1,080.42	759.53	22.33	22.29	-2.50
9,885.00	47.00	0.80	9,754.12	791.60	-1,080.95	791.42	18.69	17.87	8.09
9,932.00	50.20	1.20	9,785.19	826.85	-1,080.33	826.66	6.84	6.81	0.85
9,979.00	56.10	1.60	9,813.37	864.43	-1,079.41	864.24	12.57	12.55	0.85
10,026.00	62.00	1.20	9,837.53	904.71	-1,078.43	904.52	12.57	12.55	-0.85
10,073.00	68.00	0.80	9,857.38	947.28	-1,077.69	947.09	12.79	12.77	-0.85
10,109.00	75.10	1.00	9,868.77	981.40	-1,077.15	981.21	19.73	19.72	0.56
10,155.00	79.40	1.80	9,878.92	1,026.24	-1,076.05	1,026.06	9.50	9.35	1.74
10,168.00	80.80	2.00	9,881.15	1,039.04	-1,075.63	1,038.86	10.88	10.77	1.54
10,262.00	88.10	1.60	9,890.24	1,132.49	-1,072.69	1,132.31	7.78	7.77	-0.43
10,356.00	87.80	0.30	9,893.60	1,226.42	-1,071.14	1,226.23	1.42	-0.32	-1.38
10,450.00	87.00	359.00	9,897.87	1,320.32	-1,071.71	1,320.13	1.62	-0.85	-1.38
10,545.00	89.20	0.10	9,901.02	1,415.25	-1,072.45	1,415.07	2.59	2.32	1.16
10,639.00	88.20	0.10	9,903.15	1,509.23	-1,072.29	1,509.04	1.06	-1.06	0.00
10,734.00	90.20	2.80	9,904.47	1,604.18	-1,069.89	1,603.99	3.54	2.11	2.84
10,828.00	90.90	2.70	9,903.57	1,698.06	-1,065.38	1,697.88	0.75	0.74	-0.11
10,922.00	91.40	2.20	9,901.69	1,791.96	-1,061.36	1,791.77	0.75	0.53	-0.53
11,017.00	92.40	2.50	9,898.54	1,886.82	-1,057.47	1,886.64	1.10	1.05	0.32
11,111.00	88.70	0.10	9,897.63	1,980.77	-1,055.33	1,980.59	4.69	-3.94	-2.55
11,205.00	89.50	1.20	9,899.11	2,074.75	-1,054.27	2,074.57	1.45	0.85	1.17
11,299.00	89.20	359.10	9,900.18	2,168.74	-1,054.02	2,168.56	2.26	-0.32	-2.23



Company:	Matador Resources	Local Co-ordinate Reference:	Well Ray State Com 217H
Project:	Eddy County, New Mexico (NAD 27)	TVD Reference:	WELL @ 2990.50usft (Patterson 282)
Site:	Ray State Com	MD Reference:	WELL @ 2990.50usft (Patterson 282)
Well:	Ray State Com 217H	North Reference:	Grid
Wellbore:	Wellbore #2	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.1 Conroe 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)
11,394.00	91.30	359.30	9,899.76	2,263.72	-1,055.35	2,263.54	2.22	2.21	0.21
11,488.00	89.20	358.60	9,899.35	2,357.70	-1,057.07	2,357.52	2.35	-2.23	-0.74
11,582.00	95.30	1.00	9,895.66	2,451.58	-1,057.40	2,451.39	6.97	6.49	2.55
11,677.00	96.50	359.90	9,885.90	2,546.07	-1,056.66	2,545.88	1.71	1.26	-1.16
11,771.00	91.10	0.40	9,879.67	2,639.83	-1,056.41	2,639.64	5.77	-5.74	0.53
11,865.00	83.90	357.20	9,883.77	2,733.64	-1,058.37	2,733.46	8.38	-7.66	-3.40
11,960.00	85.50	358.00	9,892.54	2,828.15	-1,062.33	2,827.96	1.88	1.68	0.84
12,053.00	89.80	358.70	9,896.36	2,921.01	-1,065.01	2,920.82	4.68	4.62	0.75
12,148.00	90.00	359.10	9,896.52	3,015.99	-1,066.83	3,015.81	0.47	0.21	0.42
12,242.00	89.50	359.00	9,896.93	3,109.98	-1,068.39	3,109.79	0.54	-0.53	-0.11
12,336.00	89.60	358.40	9,897.67	3,203.95	-1,070.52	3,203.76	0.65	0.11	-0.64
12,431.00	88.60	357.30	9,899.16	3,298.87	-1,074.08	3,298.68	1.56	-1.05	-1.16
12,525.00	88.90	356.50	9,901.21	3,392.71	-1,079.17	3,392.52	0.91	0.32	-0.85
12,619.00	93.40	0.80	9,899.33	3,486.62	-1,081.38	3,486.43	6.62	4.79	4.57
12,713.00	89.70	357.90	9,896.78	3,580.55	-1,082.45	3,580.36	5.00	-3.94	-3.09
12,808.00	89.40	357.50	9,897.53	3,675.47	-1,086.26	3,675.28	0.53	-0.32	-0.42
12,902.00	90.20	358.40	9,897.86	3,769.41	-1,089.62	3,769.22	1.28	0.85	0.96
12,997.00	90.10	2.00	9,897.61	3,864.39	-1,089.29	3,864.20	3.79	-0.11	3.79
13,091.00	89.80	3.20	9,897.69	3,958.29	-1,085.03	3,958.10	1.32	-0.32	1.28
13,186.00	89.80	2.50	9,898.02	4,053.17	-1,080.30	4,052.99	0.74	0.00	-0.74
13,280.00	90.40	1.70	9,897.86	4,147.11	-1,076.86	4,146.92	1.06	0.64	-0.85
13,374.00	90.40	1.80	9,897.20	4,241.06	-1,073.99	4,240.88	0.11	0.00	0.11
13,469.00	93.20	2.20	9,894.22	4,335.95	-1,070.68	4,335.76	2.98	2.95	0.42
13,563.00	91.20	1.30	9,890.61	4,429.83	-1,067.81	4,429.64	2.33	-2.13	-0.96
13,658.00	89.00	0.90	9,890.44	4,524.81	-1,065.99	4,524.62	2.35	-2.32	-0.42
13,752.00	87.60	1.00	9,893.23	4,618.75	-1,064.43	4,618.56	1.49	-1.49	0.11
Tie-In to MS MWD - 13752.00' MD									
13,809.00	90.20	2.20	9,894.33	4,675.71	-1,062.84	4,675.53	5.02	4.56	2.11
13,842.00	89.10	5.90	9,894.53	4,708.62	-1,060.51	4,708.44	11.70	-3.33	11.21
13,937.00	91.50	8.90	9,894.03	4,802.81	-1,048.27	4,802.63	4.04	2.53	3.16
14,031.00	93.00	9.30	9,890.34	4,895.55	-1,033.42	4,895.37	1.65	1.60	0.43
14,125.00	91.90	7.80	9,886.32	4,988.42	-1,019.46	4,988.24	1.98	-1.17	-1.60
14,220.00	91.30	5.20	9,883.67	5,082.77	-1,008.71	5,082.59	2.81	-0.63	-2.74
14,315.00	92.20	5.20	9,880.77	5,177.33	-1,000.10	5,177.15	0.95	0.95	0.00
14,409.00	93.70	3.90	9,875.93	5,270.90	-992.65	5,270.73	2.11	1.60	-1.38
14,503.00	94.10	2.00	9,869.54	5,364.56	-987.83	5,364.39	2.06	0.43	-2.02
14,597.00	92.00	2.80	9,864.54	5,458.34	-983.90	5,458.16	2.39	-2.23	0.85
14,691.00	90.60	0.40	9,862.40	5,552.27	-981.27	5,552.09	2.96	-1.49	-2.55
14,785.00	90.20	359.70	9,861.75	5,646.26	-981.19	5,646.09	0.86	-0.43	-0.74
14,880.00	93.50	359.40	9,858.68	5,741.20	-981.94	5,741.03	3.49	3.47	-0.32
14,974.00	89.70	0.80	9,856.06	5,835.14	-981.77	5,834.97	4.31	-4.04	1.49
15,068.00	90.80	359.30	9,855.65	5,929.14	-981.69	5,928.96	1.98	1.17	-1.60
15,163.00	91.10	2.30	9,854.07	6,024.10	-980.36	6,023.93	3.17	0.32	3.16
15,257.00	88.70	359.90	9,854.23	6,118.07	-978.56	6,117.90	3.61	-2.55	-2.55



MS Directional
Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well Ray State Com 217H
Project:	Eddy County, New Mexico (NAD 27)	TVD Reference:	WELL @ 2990.50usft (Patterson 282)
Site:	Ray State Com	MD Reference:	WELL @ 2990.50usft (Patterson 282)
Well:	Ray State Com 217H	North Reference:	Grid
Wellbore:	Wellbore #2	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.1 Conroe 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)
15,351.00	84.90	357.20	9,859.48	6,211.87	-980.93	6,211.70	4.96	-4.04	-2.87
15,445.00	87.10	356.10	9,866.04	6,305.47	-986.41	6,305.30	2.62	2.34	-1.17
15,558.00	88.50	355.70	9,870.38	6,418.10	-994.48	6,417.92	1.29	1.24	-0.35
15,652.00	88.50	356.00	9,872.84	6,511.82	-1,001.28	6,511.64	0.32	0.00	0.32
15,746.00	90.80	356.40	9,873.41	6,605.60	-1,007.51	6,605.43	2.48	2.45	0.43
15,841.00	88.10	353.50	9,874.32	6,700.21	-1,015.87	6,700.03	4.17	-2.84	-3.05
15,935.00	88.80	354.00	9,876.87	6,793.62	-1,026.10	6,793.44	0.92	0.74	0.53
16,029.00	89.70	357.50	9,878.10	6,887.34	-1,033.07	6,887.16	3.84	0.96	3.72
16,124.00	88.90	358.00	9,879.26	6,982.25	-1,036.80	6,982.07	0.99	-0.84	0.53
16,218.00	89.90	358.70	9,880.24	7,076.21	-1,039.50	7,076.03	1.30	1.06	0.74
16,312.00	86.20	359.50	9,883.44	7,170.13	-1,040.98	7,169.94	4.03	-3.94	0.85
16,406.00	89.00	1.80	9,887.38	7,264.02	-1,039.91	7,263.84	3.85	2.98	2.45
16,501.00	91.50	359.70	9,886.96	7,359.00	-1,038.67	7,358.82	3.44	2.63	-2.21
16,595.00	92.90	359.50	9,883.35	7,452.93	-1,039.32	7,452.74	1.50	1.49	-0.21
16,689.00	91.60	0.40	9,879.66	7,546.85	-1,039.40	7,546.67	1.68	-1.38	0.96
16,784.00	92.80	359.00	9,876.02	7,641.77	-1,039.90	7,641.59	1.94	1.26	-1.47
16,878.00	93.70	3.70	9,870.68	7,735.57	-1,037.69	7,735.39	5.08	0.96	5.00
16,972.00	95.00	358.00	9,863.55	7,829.25	-1,036.30	7,829.07	6.20	1.38	-6.06
17,067.00	93.50	357.60	9,856.51	7,923.91	-1,039.94	7,923.73	1.63	-1.58	-0.42
17,161.00	91.80	357.50	9,852.16	8,017.72	-1,043.95	8,017.54	1.81	-1.81	-0.11
17,255.00	93.80	357.90	9,847.57	8,111.53	-1,047.72	8,111.35	2.17	2.13	0.43
17,350.00	89.40	356.50	9,844.92	8,206.35	-1,052.36	8,206.17	4.86	-4.63	-1.47
17,444.00	88.90	355.40	9,846.31	8,300.11	-1,058.99	8,299.92	1.29	-0.53	-1.17
17,539.00	89.60	356.20	9,847.56	8,394.84	-1,065.95	8,394.66	1.12	0.74	0.84
17,633.00	88.40	357.40	9,849.20	8,488.68	-1,071.20	8,488.49	1.81	-1.28	1.28
17,727.00	88.70	357.00	9,851.58	8,582.54	-1,075.79	8,582.35	0.53	0.32	-0.43
17,822.00	87.70	356.10	9,854.56	8,677.32	-1,081.50	8,677.13	1.42	-1.05	-0.95
17,916.00	91.00	356.70	9,855.63	8,771.11	-1,087.40	8,770.92	3.57	3.51	0.64
18,010.00	91.20	358.80	9,853.82	8,865.02	-1,091.09	8,864.82	2.24	0.21	2.23
18,104.00	91.50	358.60	9,851.61	8,958.96	-1,093.22	8,958.77	0.38	0.32	-0.21
18,199.00	96.40	3.70	9,845.06	9,053.66	-1,091.34	9,053.47	7.43	5.16	5.37
18,293.00	95.20	4.10	9,835.56	9,146.96	-1,084.98	9,146.77	1.34	-1.28	0.43
18,388.00	89.60	2.50	9,831.58	9,241.68	-1,079.52	9,241.49	6.13	-5.89	-1.68
18,482.00	89.50	1.50	9,832.32	9,335.62	-1,076.24	9,335.43	1.07	-0.11	-1.06
18,577.00	87.20	0.40	9,835.06	9,430.56	-1,074.66	9,430.37	2.68	-2.42	-1.16
18,671.00	87.00	0.80	9,839.81	9,524.43	-1,073.68	9,524.24	0.48	-0.21	0.43
18,765.00	88.60	1.20	9,843.42	9,618.34	-1,072.04	9,618.16	1.75	1.70	0.43
18,860.00	89.40	0.40	9,845.08	9,713.32	-1,070.71	9,713.13	1.19	0.84	-0.84
18,955.00	88.60	358.70	9,846.74	9,808.30	-1,071.46	9,808.11	1.98	-0.84	-1.79
19,050.00	87.20	357.90	9,850.22	9,903.19	-1,074.27	9,903.00	1.70	-1.47	-0.84
19,144.00	87.70	357.20	9,854.40	9,997.01	-1,078.29	9,996.82	0.91	0.53	-0.74
19,239.00	86.30	355.70	9,859.37	10,091.69	-1,084.16	10,091.50	2.16	-1.47	-1.58
19,334.00	86.80	356.40	9,865.09	10,186.29	-1,090.69	10,186.10	0.90	0.53	0.74



Company:	Matador Resources	Local Co-ordinate Reference:	Well Ray State Com 217H
Project:	Eddy County, New Mexico (NAD 27)	TVD Reference:	WELL @ 2990.50usft (Patterson 282)
Site:	Ray State Com	MD Reference:	WELL @ 2990.50usft (Patterson 282)
Well:	Ray State Com 217H	North Reference:	Grid
Wellbore:	Wellbore #2	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.1 Conroe 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)
19,429.00	87.10	357.30	9,870.14	10,281.01	-1,095.91	10,280.82	1.00	0.32	0.95
19,516.00	89.70	358.60	9,872.57	10,367.92	-1,099.02	10,367.72	3.34	2.99	1.49
19,611.00	90.00	0.20	9,872.82	10,462.91	-1,100.01	10,462.71	1.71	0.32	1.68
19,706.00	91.20	1.20	9,871.83	10,557.89	-1,098.85	10,557.70	1.64	1.26	1.05
19,800.00	91.00	0.10	9,870.02	10,651.87	-1,097.79	10,651.68	1.19	-0.21	-1.17
19,895.00	93.20	0.30	9,866.54	10,746.80	-1,097.45	10,746.61	2.33	2.32	0.21
19,989.00	92.90	359.40	9,861.54	10,840.66	-1,097.70	10,840.47	1.01	-0.32	-0.96
20,083.00	92.80	0.10	9,856.87	10,934.54	-1,098.11	10,934.35	0.75	-0.11	0.74
20,177.00	92.00	0.20	9,852.93	11,028.46	-1,097.86	11,028.27	0.86	-0.85	0.11
20,273.00	91.40	359.50	9,850.08	11,124.42	-1,098.11	11,124.23	0.96	-0.63	-0.73
20,367.00	90.90	358.70	9,848.20	11,218.39	-1,099.59	11,218.19	1.00	-0.53	-0.85
20,405.98	90.82	358.28	9,847.61	11,257.35	-1,100.62	11,257.16	1.11	-0.22	-1.09
330' HL Crossing - 20405.98' MD									
20,459.00	90.70	357.70	9,846.91	11,310.33	-1,102.48	11,310.14	1.11	-0.22	-1.09
20,510.00	90.70	357.70	9,846.29	11,361.29	-1,104.53	11,361.09	0.00	0.00	0.00
Projection to TD-20510.00' MD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
13,752.00	9,893.23	4,618.75	-1,064.43	Tie-In to MS MWD - 13752.00' MD
20,405.98	9,847.61	11,257.35	-1,100.62	330' HL Crossing - 20405.98' MD
20,510.00	9,846.29	11,361.29	-1,104.53	Projection to TD-20510.00' MD