

NM OIL CONSERVATION
ARTESIA DISTRICT

MAR 30 2017

RECEIVED

VES SURVEY

30-015-43774

I Dustin Byers certify that I am employed by VES Survey International. That I did on the day(s) of 01/14/17 through 01/14/17 conduct or supervise the taking of a Rate Gyro survey from a depth of 0.00 feet to a depth of 9,660.00 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Vaughn Energy Services, that I am authorized and qualified to make this report; that this survey was conducted at the request of Matador Production Company for the Brantley State Com Well # #221H API # 30-015-43774 in Eddy County / Parish New Mexico; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by VES Survey International.



Dustin Byers
Service Technician
VES Survey International



Company: MATADOR PRODUCTION COMPANY
 Lease/Well: BRANTLEY STATE COM 13 24 27 RB/221H

Rig Name: PATTERSON 274
 State/County: NEW MEXICO/EDDY
 VS-Azi: 269.14 Degrees

Latitude: 32.22315, Longitude: -104.13441
 Grid North = True North -0.11 degs (NAD 27)
 Grid Correction Applied = -0.11 degs



DRILLOG HA GYRO SURVEY CALCULATIONS
 Filename: e-line-de_01.ut
 Minimum Curvature Method
 Report Date/Time: 1/19/2017 / 15:45

VES Survey International
 West Texas
 432-563-5444

Surveyor: Dustin Byers

Brantley State Com 13 24 27 RB No. 221H / API 30-015-43774

Depth Reference : 28.5

MM OIL CONSERVATION
 ARTESIA DISTRICT
 MAR 30 2017
 RECEIVED

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/S FT	+E/W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.64	143.23	100.00	-0.45	0.34	-0.33	0.56	143.23	0.64
200.00	0.30	149.33	199.99	-1.12	0.80	-0.79	1.38	144.38	0.35
300.00	0.25	358.21	299.99	-1.13	0.93	-0.91	1.46	140.47	0.53
400.00	0.51	87.48	399.99	-0.89	1.37	-1.36	1.63	122.97	0.57
500.00	1.13	114.24	499.98	-1.27	2.72	-2.70	3.00	115.13	0.71
600.00	1.14	112.87	599.96	-2.06	4.53	-4.50	4.98	114.50	0.03
700.00	1.01	118.17	699.94	-2.87	6.22	-6.18	6.85	114.73	0.16
800.00	1.20	129.25	799.93	-3.94	7.80	-7.74	8.74	116.80	0.29
900.00	1.17	140.08	899.91	-5.38	9.27	-9.18	10.72	120.15	0.23
1000.00	1.07	146.18	999.89	-6.94	10.44	-10.33	12.54	123.61	0.15
1100.00	1.09	125.82	1099.87	-8.27	11.73	-11.60	14.35	125.19	0.38
1200.00	1.05	145.91	1199.85	-9.59	13.01	-12.86	16.16	126.38	0.37
1300.00	0.74	144.57	1299.84	-10.87	13.90	-13.73	17.64	128.03	0.32
1400.00	0.47	140.64	1399.83	-11.71	14.53	-14.35	18.66	128.87	0.27
1500.00	0.57	104.87	1499.83	-12.15	15.27	-15.08	19.51	128.52	0.33
1600.00	0.47	106.54	1599.83	-12.39	16.14	-15.95	20.35	127.53	0.10

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1700.00	1.62	85.74	1699.81	-12.41	17.94	-17.75	21.81	124.66	1.20
1800.00	2.53	80.64	1799.74	-11.94	21.54	-21.36	24.63	119.00	0.93
1900.00	2.10	72.46	1899.66	-11.03	25.46	-25.29	27.75	113.42	0.55
2000.00	2.30	69.94	1999.59	-9.79	29.09	-28.94	30.69	108.60	0.22
2100.00	2.31	46.18	2099.51	-7.71	32.43	-32.31	33.33	103.37	0.95
2200.00	1.89	11.86	2199.44	-4.70	34.22	-34.15	34.54	97.81	1.30
2300.00	2.35	339.78	2299.38	-1.16	33.85	-33.83	33.87	91.96	1.25
2400.00	1.88	340.49	2399.31	2.31	32.60	-32.63	32.68	85.94	0.48
2500.00	1.78	343.50	2499.26	5.35	31.61	-31.69	32.06	80.40	0.13
2600.00	2.19	345.92	2599.20	8.69	30.70	-30.83	31.91	74.19	0.42
2700.00	4.42	349.46	2699.03	14.33	29.53	-29.74	32.83	64.11	2.23
2800.00	5.93	355.97	2798.62	23.27	28.46	-28.81	36.77	50.73	1.62
2900.00	5.92	354.93	2898.08	33.56	27.65	-28.15	43.48	39.48	0.11
3000.00	5.53	342.69	2997.59	43.30	25.76	-26.40	50.38	30.74	1.28
3100.00	5.20	335.82	3097.15	52.04	22.46	-23.24	56.68	23.35	0.72
3200.00	5.28	332.56	3196.73	60.26	18.49	-19.39	63.04	17.05	0.31
3300.00	5.13	326.85	3296.32	68.09	13.92	-14.94	69.50	11.55	0.54
3400.00	5.35	325.93	3395.90	75.70	8.86	-10.00	76.22	6.68	0.23
3500.00	5.47	326.82	3495.46	83.55	3.64	-4.89	83.63	2.49	0.15
3600.00	5.50	319.87	3595.00	91.21	-2.06	0.69	91.23	358.71	0.66
3700.00	5.45	317.17	3694.54	98.35	-8.37	6.90	98.71	355.13	0.26
3800.00	5.57	316.31	3794.08	105.34	-14.95	13.37	106.40	351.92	0.15
3900.00	5.61	326.62	3893.61	112.93	-20.99	19.29	114.87	349.47	1.00
4000.00	5.77	340.08	3993.12	121.74	-25.40	23.57	124.36	348.22	1.34
4100.00	4.71	358.28	4092.71	130.57	-27.23	25.27	133.38	348.22	1.96
4200.00	2.94	26.28	4192.49	136.98	-26.22	24.16	139.46	349.16	2.52
4300.00	2.83	21.75	4292.36	141.57	-24.17	22.04	143.62	350.31	0.25
4400.00	2.54	20.48	4392.25	145.94	-22.48	20.28	147.66	351.24	0.30
4500.00	3.21	22.22	4492.13	150.61	-20.64	18.38	152.02	352.20	0.67
4600.00	3.31	350.22	4591.97	156.04	-20.07	17.73	157.33	352.67	1.80
4700.00	3.53	353.12	4691.79	161.94	-20.93	18.50	163.29	352.63	0.28
4800.00	5.33	338.24	4791.49	169.31	-23.02	20.48	170.87	352.26	2.12
4900.00	5.02	340.71	4891.09	177.75	-26.19	23.52	179.67	351.62	0.38
5000.00	4.62	334.22	4990.73	185.50	-29.39	26.60	187.82	351.00	0.67
5100.00	4.27	328.35	5090.43	192.30	-33.09	30.20	195.13	350.24	0.58
5200.00	4.13	331.90	5190.17	198.64	-36.74	33.75	202.01	349.52	0.29
5300.00	3.93	334.13	5289.92	204.91	-39.93	36.85	208.76	348.97	0.25
5400.00	3.72	324.85	5389.70	210.64	-43.30	40.13	215.05	348.39	0.65
5500.00	2.74	332.86	5489.54	215.43	-46.26	43.02	220.34	347.88	1.08

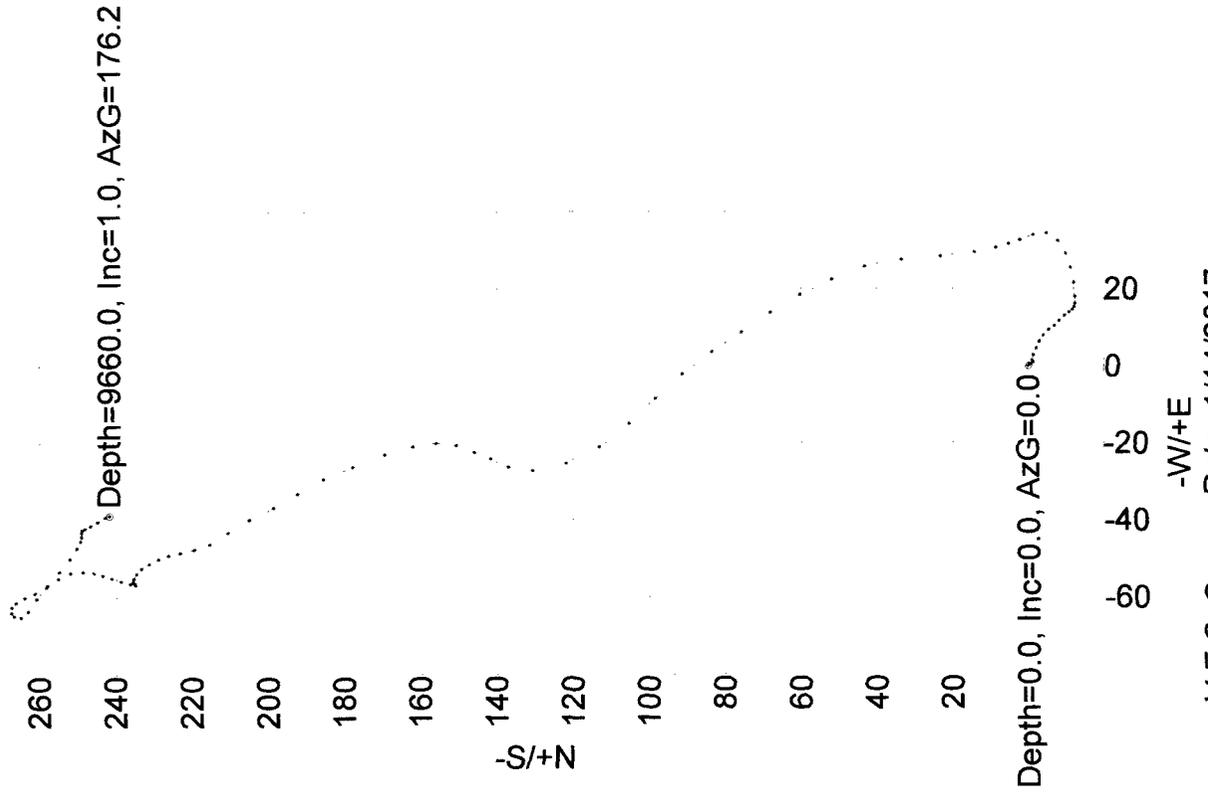
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5600.00	2.27	353.27	5589.44	219.53	-47.58	44.28	224.62	347.77	1.00
5700.00	2.10	341.51	5689.37	223.24	-48.39	45.04	228.42	347.77	0.48
5800.00	1.55	349.84	5789.32	226.31	-49.22	45.81	231.60	347.73	0.61
5900.00	1.74	332.91	5889.28	229.00	-50.15	46.70	234.43	347.65	0.52
6000.00	1.33	335.26	5989.24	231.41	-51.32	47.84	237.03	347.49	0.41
6100.00	1.33	324.26	6089.21	233.41	-52.49	48.98	239.23	347.33	0.26
6200.00	0.94	298.32	6189.20	234.74	-53.89	50.36	240.84	347.07	0.64
6300.00	0.70	302.75	6289.19	235.46	-55.12	51.58	241.82	346.82	0.25
6400.00	0.35	242.63	6389.18	235.65	-55.91	52.37	242.19	346.65	0.61
6500.00	0.42	220.70	6489.18	235.23	-56.42	52.89	241.90	346.51	0.16
6600.00	0.12	325.59	6589.18	235.03	-56.72	53.19	241.78	346.43	0.47
6700.00	1.46	15.58	6689.17	236.35	-56.44	52.88	242.99	346.57	1.39
6800.00	1.47	15.07	6789.13	238.81	-55.76	52.17	245.24	346.86	0.01
6900.00	1.47	21.03	6889.10	241.24	-54.97	51.34	247.43	347.16	0.15
7000.00	1.39	15.57	6989.07	243.60	-54.19	50.52	249.56	347.46	0.16
7100.00	1.31	13.42	7089.04	245.88	-53.59	49.90	251.66	347.70	0.09
7200.00	1.94	356.91	7189.00	248.69	-53.42	49.68	254.36	347.88	0.78
7300.00	1.93	353.71	7288.95	252.05	-53.69	49.91	257.70	347.97	0.11
7400.00	2.23	321.91	7388.88	255.25	-55.08	51.24	261.12	347.82	1.17
7500.00	2.15	326.78	7488.81	258.35	-57.30	53.42	264.63	347.49	0.20
7600.00	1.81	341.74	7588.75	261.42	-58.83	54.90	267.96	347.32	0.62
7700.00	1.60	332.16	7688.71	264.16	-59.98	56.00	270.88	347.21	0.36
7800.00	1.31	321.73	7788.67	266.28	-61.33	57.33	273.26	347.03	0.39
7900.00	0.68	285.56	7888.66	267.34	-62.61	58.59	274.57	346.82	0.86
8000.00	0.94	269.74	7988.65	267.50	-64.01	59.98	275.05	346.54	0.34
8100.00	0.80	185.35	8088.64	266.80	-64.89	60.88	274.58	346.33	1.17
8200.00	1.25	187.28	8188.63	265.02	-65.09	61.11	272.90	346.20	0.45
8300.00	2.13	117.14	8288.59	263.09	-63.57	59.62	270.67	346.42	2.07
8400.00	2.34	128.72	8388.51	260.97	-60.32	56.40	267.85	346.98	0.50
8500.00	2.70	129.37	8488.42	258.19	-56.91	53.03	264.39	347.57	0.36
8600.00	2.76	134.28	8588.30	255.02	-53.36	49.53	260.54	348.18	0.24
8700.00	2.26	125.04	8688.21	252.21	-50.03	46.24	257.12	348.78	0.64
8800.00	1.56	123.49	8788.15	250.33	-47.28	43.52	254.75	349.30	0.70
8900.00	0.79	108.99	8888.13	249.35	-45.49	41.75	253.47	349.66	0.82
9000.00	0.56	89.97	8988.12	249.13	-44.35	40.61	253.05	349.91	0.31
9100.00	0.64	91.79	9088.12	249.11	-43.31	39.56	252.85	350.14	0.08
9200.00	0.28	136.13	9188.12	248.92	-42.59	38.85	252.54	350.29	0.48
9300.00	0.68	160.76	9288.11	248.19	-42.22	38.49	251.75	350.34	0.44
9400.00	1.17	149.52	9388.10	246.75	-41.51	37.80	250.21	350.45	0.52

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
9500.00	1.36	148.14	9488.07	244.86	-40.36	36.68	248.16	350.64	0.19
9600.00	1.35	150.07	9588.05	242.83	-39.15	35.50	245.97	350.84	0.05
9660.00	0.99	176.22	9648.03	241.70	-38.77	35.13	244.79	350.89	1.06



VES Survey International
West Texas
432-563-5444

Surveyor: Dustin Byers
Brantley State Com 13 24 27 RB No. 221H / API 30-015-43774





NM OIL CONSERVATION
ARTESIA DISTRICT

MAR 30 2017

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Brantley State Com No. 221H(OH)

Eddy County, NM

January 29, 2017

Job No. LNM5130717

Document

Survey Completion Report



PRODIRECTIONAL

Survey Certification Letter

NM OIL CONSERVATION
ARTESIA DISTRICT

MAR 30 2017

January 29, 2017

RECEIVED



Operator Name: Matador Resources
 Well Name: Brantley State Com 13-24S-27E RB No. 221H(OH)
 County/Parish: Eddy County,
 State: NM
 Rig Name: Patterson 274
 Job Number: LNM5130717

This is to certify the surveys performed on the referenced well by Professional Directional Ent., Inc. are true and correct MWD Surveys, data provided as follows:

Surveyor	Surveyed Depths	Projection to Bit	Dates Performed	Type of Survey
ProDirectional	9,704' MD – 12,540' MD	12,654' MD	01/13/17 – 01/22/17	MWD-OWSG

Sincerely,

Mike Coats
 Well Planning
 Professional Directional

850 Conroe Park West Drive | Conroe, TX 77303 | Phone: 936.441.7266

prodirectional.com



NEW OIL CONSERVATION
ARTESIA DISTRICT
MAR 30 2017

RECEIVED

Matador Resources

Eddy County, NM
Brantley State Com
No. 221H
OH

Survey: ProDirectional

Survey Report

29 January, 2017





ProDirectional
Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Brantley State Com
Well: No. 221H
Wellbore: OH
Design: MWD

Local Co-ordinate Reference: Well No. 221H
TVD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Patt274))
MD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Patt274))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

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

Site Brantley State Com
Site Position:
From: Map
Position Uncertainty: 0.00 usft
Northing: 444,957.00 usft
Easting: 561,517.00 usft
Slot Radius: 13-3/16 "
Latitude: 32.223147
Longitude: -104.134405
Grid Convergence: 0.11 °

Well No. 221H
Well Position +N/-S 0.00 usft
 +E/-W 0.00 usft
Position Uncertainty 0.00 usft
Northing: 444,957.00 usft
Easting: 561,517.00 usft
Wellhead Elevation: usft
Latitude: 32.223147
Longitude: -104.134405
Ground Level: 3,089.00 usft

Wellbore OH
Magnetics Model Name HDGM
 Sample Date 12/31/2016
 Dip Angle (°) 7.40
 Field Strength (nT) 60.05
 48,139,000,000,000

Design MWD
Audit Notes:
Version: 1.0
Phase: ACTUAL
Tie On Depth: 0.00
Vertical Section: Depth From (TVD) (usft) 0.00
 +N/-S (usft) 0.00
 +E/-W (usft) 0.00
 Direction (°) 269.64



ProDirectional
Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Brantley State Com
Well: No. 221H
Wellbore: OH
Design: MWD

Local Co-ordinate Reference:
TVD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Pat274))
MD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Pat274))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Well No. 221H

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
2,100.00	2.31	46.18	2,099.51	-32.40	-7.73	32.45	33.36	103.40	444,949.27	561,549.45
2,200.00	1.89	11.86	2,199.44	-34.21	-4.72	34.24	34.56	97.85	444,952.28	561,551.24
2,300.00	2.35	339.78	2,299.38	-33.86	-1.18	33.87	33.89	92.00	444,955.82	561,550.87
2,400.00	1.88	340.49	2,399.31	-32.63	2.29	32.61	32.69	85.99	444,959.29	561,549.61
2,500.00	1.78	343.50	2,499.26	-31.66	5.32	31.63	32.07	80.45	444,962.32	561,548.63
2,600.00	2.19	345.92	2,599.20	-30.77	8.67	30.72	31.92	74.25	444,965.67	561,547.72
2,700.00	4.42	349.46	2,699.03	-29.64	14.31	29.55	32.83	64.16	444,971.31	561,546.55
2,800.00	5.93	355.97	2,798.62	-28.63	23.25	28.48	36.77	50.78	444,980.25	561,545.48
2,900.00	5.92	354.93	2,898.08	-27.87	33.54	27.66	43.48	39.52	444,990.54	561,544.66
3,000.00	5.53	342.69	2,997.59	-26.04	43.28	25.77	50.37	30.78	445,000.28	561,542.77
3,100.00	5.20	335.82	3,097.15	-22.81	52.01	22.48	56.66	23.38	445,009.01	561,539.48
3,200.00	5.28	332.56	3,196.73	-18.88	60.23	18.51	63.01	17.08	445,017.23	561,535.51
3,300.00	5.13	326.85	3,296.32	-14.37	68.06	13.94	69.47	11.58	445,025.06	561,530.94
3,400.00	5.35	325.93	3,395.90	-9.36	75.66	8.89	76.18	6.70	445,032.66	561,525.89
3,500.00	5.47	326.82	3,495.46	-4.19	83.51	3.67	83.59	2.51	445,040.51	561,520.67
3,600.00	5.50	319.87	3,595.00	1.46	91.16	-2.03	91.19	358.72	445,048.16	561,514.97
3,700.00	5.45	317.17	3,694.54	7.73	98.31	-8.35	98.66	355.15	445,055.31	561,508.65
3,800.00	5.57	316.31	3,794.08	14.27	105.30	-14.93	106.36	351.93	445,062.30	561,502.07
3,900.00	5.61	326.62	3,893.61	20.26	112.89	-20.97	114.83	349.48	445,069.89	561,496.03
4,000.00	5.77	340.08	3,993.12	24.61	121.70	-25.37	124.32	348.22	445,078.70	561,491.63
4,100.00	4.71	358.28	4,092.71	26.39	130.53	-27.21	133.34	348.23	445,087.53	561,489.79
4,200.00	2.94	26.28	4,192.49	25.34	136.94	-26.20	139.42	349.17	445,093.94	561,490.80
4,300.00	2.83	21.75	4,292.36	23.26	141.53	-24.15	143.57	350.32	445,098.53	561,492.85
4,400.00	2.54	20.48	4,392.25	21.54	145.90	-22.46	147.62	351.25	445,102.90	561,494.54
4,500.00	3.21	22.22	4,492.13	19.68	150.57	-20.62	151.97	352.20	445,107.57	561,496.38
4,600.00	3.31	350.22	4,591.97	19.07	156.00	-20.05	157.29	352.67	445,113.00	561,496.95
4,700.00	3.53	353.12	4,691.80	19.90	161.90	-20.91	163.25	352.64	445,118.90	561,496.09



ProDirectional Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Brantley State Com
Well: No. 221H
Wellbore: OH
Design: MWD

Local Co-ordinate Reference: Well No. 221H
TVD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Patt274))
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North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (")	Northing (usft)	Easting (usft)
4,800.00	5.33	338.24	4,791.50	21.94	169.27	-23.00	170.83	352.26	445,126.27	561,494.00
4,900.00	5.02	340.71	4,891.09	25.05	177.72	-26.17	179.63	351.62	445,134.72	561,490.83
5,000.00	4.62	334.22	4,990.73	28.20	185.47	-29.37	187.79	351.00	445,142.47	561,487.63
5,100.00	4.27	328.35	5,090.43	31.86	192.27	-33.07	195.09	350.24	445,149.27	561,483.93
5,200.00	4.13	331.90	5,190.17	35.47	198.62	-36.72	201.98	349.52	445,155.62	561,480.28
5,300.00	3.93	334.13	5,289.92	38.63	204.88	-39.91	208.73	348.98	445,161.88	561,477.09
5,400.00	3.72	324.85	5,389.70	41.95	210.61	-43.28	215.01	348.39	445,167.61	561,473.72
5,500.00	2.74	332.86	5,489.54	44.88	215.39	-46.24	220.30	347.88	445,172.39	561,470.76
5,600.00	2.27	353.27	5,589.44	46.18	219.49	-47.56	224.58	347.77	445,176.49	561,469.44
5,700.00	2.10	341.51	5,689.37	46.97	223.19	-48.37	228.37	347.77	445,180.19	561,468.63
5,800.00	1.55	349.84	5,789.32	47.77	226.26	-49.19	231.54	347.73	445,183.26	561,467.81
5,900.00	1.74	332.91	5,889.28	48.68	228.94	-50.12	234.36	347.65	445,185.94	561,466.88
6,000.00	1.33	335.26	5,989.24	49.84	231.35	-51.30	236.97	347.50	445,188.35	561,465.70
6,100.00	1.33	324.26	6,089.22	50.99	233.34	-52.46	239.17	347.33	445,190.34	561,464.54
6,200.00	0.94	298.32	6,189.20	52.39	234.67	-53.86	240.78	347.07	445,191.67	561,463.14
6,300.00	0.70	302.75	6,289.19	53.62	235.39	-55.10	241.76	346.83	445,192.39	561,461.90
6,400.00	0.35	242.63	6,389.18	54.40	235.58	-55.88	242.12	346.66	445,192.58	561,461.12
6,500.00	0.42	220.70	6,489.18	54.91	235.17	-56.39	241.83	346.52	445,192.17	561,460.61
6,600.00	0.12	325.59	6,589.18	55.21	234.97	-56.69	241.72	346.44	445,191.97	561,460.31
6,700.00	1.46	15.58	6,689.17	54.92	236.29	-56.41	242.93	346.57	445,193.29	561,460.59
6,800.00	1.47	15.07	6,789.14	54.23	238.75	-55.73	245.17	346.86	445,195.75	561,461.27
6,900.00	1.47	21.03	6,889.10	53.42	241.19	-54.94	247.37	347.17	445,198.19	561,462.06
7,000.00	1.39	15.57	6,989.07	52.62	243.55	-54.15	249.50	347.46	445,200.55	561,462.85
7,100.00	1.31	13.42	7,089.04	52.02	245.84	-53.56	251.60	347.71	445,202.84	561,463.44
7,200.00	1.94	356.91	7,189.00	51.82	248.64	-53.39	254.30	347.88	445,205.64	561,463.61
7,300.00	1.93	353.71	7,288.95	52.08	252.00	-53.66	257.65	347.98	445,209.00	561,463.34
7,400.00	2.23	321.91	7,388.88	53.44	255.21	-55.05	261.08	347.83	445,212.21	561,461.95



ProDirectional

Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Brantley State Com
Well: No. 221H
Wellbore: OH
Design: MWD

Local Co-ordinate Reference: Well No. 221H
TVD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Pat274))
MD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Pat274))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
7,500.00	2.15	326.78	7,488.81	55.65	258.31	-57.28	264.58	347.50	445,215.31	561,459.72
7,600.00	1.81	341.74	7,588.75	57.15	261.38	-58.80	267.91	347.32	445,218.38	561,458.20
7,700.00	1.60	332.16	7,688.71	58.28	264.11	-59.95	270.83	347.21	445,221.11	561,457.05
7,800.00	1.31	321.73	7,788.68	59.63	266.24	-61.31	273.21	347.03	445,223.24	561,455.69
7,900.00	0.68	285.56	7,888.66	60.90	267.30	-62.58	274.53	346.82	445,224.30	561,454.42
8,000.00	0.94	269.74	7,988.65	62.29	267.45	-63.98	275.00	346.55	445,224.45	561,453.02
8,100.00	0.80	185.35	8,088.64	63.18	266.76	-64.86	274.53	346.33	445,223.76	561,452.14
8,200.00	1.25	187.28	8,188.63	63.40	264.98	-65.07	272.85	346.20	445,221.98	561,451.93
8,300.00	2.13	117.14	8,288.59	61.90	263.05	-63.55	270.62	346.42	445,220.05	561,453.45
8,400.00	2.34	128.72	8,388.52	58.66	260.92	-60.30	267.80	346.99	445,217.92	561,456.70
8,500.00	2.70	129.37	8,488.42	55.27	258.15	-56.89	264.35	347.57	445,215.15	561,460.11
8,600.00	2.76	134.28	8,588.31	51.74	254.98	-53.35	260.50	348.18	445,211.98	561,463.65
8,700.00	2.26	125.04	8,688.21	48.42	252.16	-50.01	257.08	348.78	445,209.16	561,466.99
8,800.00	1.56	123.49	8,788.15	45.68	250.28	-47.26	254.70	349.31	445,207.28	561,469.74
8,900.00	0.79	108.99	8,888.13	43.90	249.31	-45.47	253.42	349.66	445,206.31	561,471.53
9,000.00	0.56	89.97	8,988.13	42.76	249.08	-44.33	253.00	349.91	445,206.08	561,472.67
9,100.00	0.64	91.79	9,088.12	41.72	249.06	-43.28	252.80	350.14	445,206.06	561,473.72
9,200.00	0.28	136.13	9,188.12	40.99	248.87	-42.56	252.48	350.30	445,205.87	561,474.44
9,300.00	0.68	160.76	9,288.11	40.63	248.13	-42.19	251.70	350.35	445,205.13	561,474.81
9,400.00	1.17	149.52	9,388.10	39.93	246.69	-41.48	250.16	350.46	445,203.69	561,475.52
9,500.00	1.36	148.14	9,488.08	38.79	244.81	-40.33	248.11	350.64	445,201.81	561,476.67
9,600.00	1.35	150.07	9,588.05	37.59	242.78	-39.12	245.91	350.85	445,199.78	561,477.88
9,660.00	0.99	176.22	9,648.04	37.21	241.65	-38.73	244.73	350.89	445,198.65	561,478.27
9,704.00	6.10	278.30	9,691.95	39.50	241.61	-41.02	245.06	350.36	445,198.61	561,475.98
Pro MWD First Survey: 9704' MID										
9,736.00	10.00	280.70	9,723.63	43.91	242.37	-45.44	246.59	349.38	445,199.37	561,471.56
9,768.00	13.60	281.80	9,754.95	50.32	243.65	-51.85	249.11	347.99	445,200.65	561,465.15



ProDirectional Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Branley State Com
Well: No. 221H
Wellbore: OH
Design: MWD

Local Co-ordinate Reference:
TVD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Patt274))
MD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Patt274))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Well No. 221H
Well @ 3118.00usft (GL: 3089' + KB: 29' (Patt274))
Well @ 3118.00usft (GL: 3089' + KB: 29' (Patt274))
Grid
Minimum Curvature
WellPlanner1

MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (")	Northing (usft)	Easting (usft)
9,799.00	17.00	281.50	9,784.85	58.32	245.30	-59.86	252.50	346.29	445,202.30	561,457.14
9,831.00	20.30	280.30	9,815.16	68.36	247.23	-69.91	256.92	344.21	445,204.23	561,447.09
9,863.00	23.80	279.50	9,844.82	80.18	249.29	-81.74	262.35	341.85	445,206.29	561,435.26
9,895.00	28.00	278.90	9,873.60	93.96	251.52	-95.54	269.05	339.20	445,208.52	561,421.46
9,926.00	30.90	277.70	9,900.59	109.02	253.71	-110.62	276.78	336.44	445,210.71	561,406.38
9,958.00	31.30	276.00	9,927.99	125.42	255.68	-127.03	285.50	333.58	445,212.68	561,389.97
9,990.00	32.60	272.60	9,955.14	142.29	256.94	-143.91	294.50	330.75	445,213.94	561,373.09
10,021.00	32.80	269.30	9,981.23	159.03	257.22	-160.65	303.26	328.01	445,214.22	561,356.35
10,053.00	35.00	268.20	10,007.79	176.87	256.82	-178.49	312.76	325.20	445,213.82	561,338.51
10,085.00	38.80	267.70	10,033.38	196.08	256.13	-197.69	323.55	322.34	445,213.13	561,319.31
10,117.00	43.30	267.10	10,057.50	217.07	255.17	-218.68	336.05	319.40	445,212.17	561,298.32
10,148.00	45.50	268.10	10,079.65	238.74	254.27	-240.35	349.88	316.61	445,211.27	561,276.65
10,195.00	47.30	269.00	10,112.06	272.77	253.41	-274.37	373.49	312.73	445,210.41	561,242.63
10,243.00	50.50	268.80	10,143.61	308.93	252.71	-310.53	400.37	309.14	445,209.71	561,206.47
10,291.00	53.00	265.90	10,173.33	346.59	250.96	-348.17	429.19	305.78	445,207.96	561,168.83
10,339.00	56.20	264.70	10,201.13	385.60	247.74	-387.16	459.64	302.62	445,204.74	561,129.84
10,386.00	61.00	264.90	10,225.61	425.56	244.11	-427.10	491.94	299.75	445,201.11	561,089.90
10,434.00	64.90	266.00	10,247.44	468.18	240.73	-469.71	527.80	297.14	445,197.73	561,047.29
10,481.00	69.10	266.20	10,265.80	511.36	237.79	-512.86	565.30	294.87	445,194.79	561,004.14
10,488.00	69.44	266.23	10,268.28	517.89	237.35	-519.39	571.06	294.56	445,194.35	560,997.61
HL Xing: 10488' MD										
10,529.00	71.40	266.40	10,282.02	556.45	234.87	-557.94	605.36	292.83	445,191.87	560,959.06
10,544.00	72.40	266.70	10,286.68	570.69	234.01	-572.17	618.18	292.24	445,191.01	560,944.83
10,649.00	81.80	268.40	10,310.09	672.85	229.67	-674.31	712.35	288.81	445,186.67	560,842.69
10,681.00	85.70	266.80	10,313.58	704.64	228.34	-706.08	742.09	287.92	445,185.34	560,810.92
10,712.00	88.00	266.70	10,315.28	735.55	226.58	-736.99	771.03	287.09	445,183.58	560,780.01
10,744.00	88.80	267.40	10,316.17	767.50	224.94	-768.93	801.16	286.31	445,181.94	560,748.07



ProDirectional

Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Brantley State Com
Well: No. 221H
Wellbore: OH
Design: MWD

Local Co-ordinate Reference: Well No. 221H
TVD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Pat274))
MD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Pat274))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey	MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Eastings (usft)	
	10,839.00	92.10	270.10	10,315.43	862.47	222.86	-863.88	892.17	284.47	445,179.86	560,653.12	
	10,933.00	94.00	271.80	10,310.43	956.30	224.42	-957.73	983.67	283.19	445,181.42	560,569.27	
	11,028.00	92.70	271.90	10,304.87	1,051.07	227.48	-1,052.52	1,076.82	282.20	445,184.48	560,464.48	
	11,123.00	88.00	269.30	10,304.29	1,146.02	228.47	-1,147.47	1,170.00	281.26	445,185.47	560,369.53	
	11,217.00	87.00	267.10	10,308.40	1,239.89	225.53	-1,241.33	1,261.65	280.30	445,182.53	560,275.67	
	11,312.00	87.70	265.40	10,312.79	1,334.62	219.32	-1,336.02	1,353.90	279.32	445,176.32	560,180.98	
	11,406.00	94.10	264.70	10,311.31	1,428.26	211.21	-1,429.61	1,445.13	278.40	445,168.21	560,087.39	
	11,501.00	98.00	264.50	10,301.30	1,522.34	202.33	-1,523.64	1,537.02	277.56	445,159.33	559,993.36	
	11,596.00	97.60	265.60	10,288.41	1,616.16	194.21	-1,617.41	1,629.03	276.85	445,151.21	559,899.59	
	11,690.00	95.40	269.40	10,277.76	1,709.47	190.14	-1,710.70	1,721.23	276.34	445,147.14	559,806.30	
	11,785.00	93.80	270.20	10,270.14	1,804.16	189.81	-1,805.39	1,815.34	276.00	445,146.81	559,711.61	
	11,879.00	92.10	270.70	10,265.31	1,898.02	190.55	-1,899.25	1,908.79	275.73	445,147.55	559,617.75	
	11,974.00	92.00	271.50	10,261.91	1,992.93	192.37	-1,994.18	2,003.43	275.51	445,149.37	559,522.82	
	12,068.00	93.40	277.00	10,257.48	2,086.48	199.32	-2,087.77	2,097.27	275.45	445,156.32	559,429.23	
	12,163.00	86.90	274.80	10,257.23	2,180.86	209.08	-2,182.21	2,192.21	275.47	445,166.08	559,334.79	
	12,257.00	86.50	271.70	10,262.64	2,274.50	214.40	-2,275.90	2,285.97	275.38	445,171.40	559,241.10	
	12,351.00	94.70	268.40	10,261.66	2,368.40	214.49	-2,369.80	2,379.48	275.17	445,171.49	559,147.20	
	12,445.00	92.60	266.90	10,255.67	2,462.15	210.64	-2,463.52	2,472.51	274.89	445,167.64	559,053.48	
	12,540.00	95.20	265.30	10,249.21	2,556.74	204.19	-2,558.07	2,566.21	274.56	445,161.19	558,958.93	
	Last Survey(OH): 12540' MD, 10249.21' TVD											
	12,634.00	95.20	265.30	10,238.88	2,669.94	194.89	-2,671.22	2,678.32	274.17	445,151.89	558,845.78	
	PTB(OH): 12654' MD, 10238.88' TVD											



ProDirectional Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Brantley State Corn
Well: No. 221H
Wellbore: OH
Design: MWD

Local Co-ordinate Reference: Well No. 221H
TVD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Patt274))
MD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Patt274))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,704.00	9,691.95	241.61	-41.02	Pro MWD First Survey: 9704' MD
10,488.00	10,268.28	237.35	-519.39	HL X'ing: 10488' MD
12,540.00	10,249.21	204.19	-2,558.07	Last Survey(OH): 12540' MD, 10249.21' TVD
12,654.00	10,238.88	194.89	-2,671.22	PTB(OH): 12654' MD, 10238.88' TVD

PRO DIRECTIONAL

NM OIL CONSERVATION
ARTESIA DISTRICT
MAR 30 2017

RECEIVED



Brantley State Com No. 221H(ST01)
Eddy County, NM

January 29, 2017

Job No. LNM5130717

Survey Completion Report

NM OIL CONSERVATION
ARTESIA DISTRICT

MAR 30 2017

RECEIVED

January 29, 2017



Operator Name: Matador Resources
Well Name: Brantley State Com 13-24S-27E RB No. 221H(ST01)
County/Parish: Eddy County,
State: NM
Rig Name: Patterson 274
Job Number: LNM5130717

This is to certify the surveys performed on the referenced well by Professional Directional Ent., Inc. are true and correct MWD Surveys, data provided as follows:

<u>Surveyor</u>	<u>Surveyed Depths</u>	<u>Projection to Bit</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
ProDirectional	12,280' MD – 15,278' MD	15,311' MD	01/24/17 – 01/29/17	MWD-OWSG

Sincerely,

A handwritten signature in black ink that reads "Mike Coats". The signature is written in a cursive, flowing style.

Mike Coats
Well Planning
Professional Directional

850 Conroe Park West Drive | Conroe, TX 77303 | Phone: 936.441.7266

prodirectional.com



NM OIL CONSERVATION
ARTESIA DISTRICT
MAR 30 2017

RECEIVED

Matador Resources

**Eddy County, NM
Brantley State Com
No. 221H
ST01**

Survey: ProDirectional

Survey Report

08 February, 2017





ProDIRECTIONAL
Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Brantley State Com
Well: No. 221H
Wellbore: ST01
Design: ST01-12280'-15278', Proj. 15311'

Local Co-ordinate Reference:
TVD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Pat274))
MD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Pat274))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

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

Site	Brantley State Com		
Site Position:		Latitude:	32° 13' 23.330 N
From:	Map	Longitude:	104° 8' 3.858 W
Position Uncertainty:	0.00 usft	Grid Convergence:	0.11 °

Well	No. 221H		
Well Position	+N/-S	Northing:	444,957.00 usft
	+E/-W	Easting:	561,517.00 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 13' 23.330 N
		Longitude:	104° 8' 3.858 W
		Ground Level:	3,089.00 usft

Wellbore	ST01		
Magnetics	Model Name	Sample Date	Field Strength (nT)
	HDGM	12/31/2016	48,144.00
		Dip Angle (°)	60.05
		Declination (°)	7.42

Design	ST01-12280'-15278', Proj. 15311'		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
Vertical Section:		Depth From (TVD) (usft)	Tie On Depth:
		0.00	+E/-W (usft)
		+N/-S (usft)	Direction (°)
		0.00	269.64
			12,257.00



ProDirectional
Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Brantley State Com
Well: No. 221H
Wellbore: ST01
Design: ST01-12280'-15278', Proj. 15311'

Local Co-ordinates Reference:
TVD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Patiz274))
MD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Patiz274))
North Reference: Grd
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Well No. 221H
 Well @ 3118.00usft (GL: 3089' + KB: 29' (Patiz274))
 Well @ 3118.00usft (GL: 3089' + KB: 29' (Patiz274))
 Grd
 Minimum Curvature
 WellPlanner1

Survey Program		Date		2/8/2017	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.00	9,660.00	Survey #1 (OH)	GVD_DP_MS	Gyrodata gyro-compassing and drop	
9,704.00	12,257.00	Survey #2 (OH)	MWD - OWSG	MWD - OWSG	
12,280.00	15,311.00	Survey #1 (ST01)	MWD - OWSG	MWD - OWSG	

MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (")	Northing (usft)	Easting (usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	444,957.00	561,517.00
100.00	0.64	143.23	100.00	-0.33	-0.45	0.33	0.56	143.23	444,956.55	561,517.33
200.00	0.30	149.33	199.99	-0.80	-1.12	0.80	1.38	144.39	444,955.88	561,517.80
300.00	0.25	358.21	299.99	-0.92	-1.13	0.93	1.46	140.51	444,955.87	561,517.93
400.00	0.51	87.48	399.99	-1.36	-0.89	1.37	1.63	123.06	444,956.11	561,518.37
500.00	1.13	114.24	499.98	-2.70	-1.27	2.71	3.00	115.19	444,955.73	561,519.71
600.00	1.14	112.87	599.96	-4.51	-2.07	4.53	4.98	114.54	444,954.93	561,521.53
700.00	1.01	118.17	699.94	-6.20	-2.87	6.22	6.85	114.76	444,954.13	561,523.22
800.00	1.20	129.25	799.93	-7.78	-3.95	7.81	8.75	116.82	444,953.05	561,524.81
900.00	1.17	140.08	899.90	-9.24	-5.39	9.27	10.73	120.18	444,951.61	561,526.27
1,000.00	1.07	146.18	999.89	-10.40	-6.95	10.45	12.55	123.64	444,950.05	561,527.45
1,100.00	1.09	125.82	1,099.87	-11.69	-8.28	11.74	14.37	125.21	444,948.72	561,528.74
1,200.00	1.05	145.91	1,199.85	-12.96	-9.60	13.02	16.18	126.39	444,947.40	561,530.02
1,300.00	0.74	144.57	1,299.84	-13.84	-10.88	13.91	17.66	128.04	444,946.12	561,530.91
1,400.00	0.47	140.64	1,399.83	-14.47	-11.73	14.55	18.69	128.88	444,945.27	561,531.55
1,500.00	0.57	104.87	1,499.83	-15.21	-12.17	15.29	19.54	128.53	444,944.83	561,532.29
1,600.00	0.47	106.54	1,599.83	-16.08	-12.42	16.16	20.38	127.54	444,944.58	561,533.16
1,700.00	1.62	85.74	1,699.81	-17.89	-12.43	17.96	21.84	124.68	444,944.57	561,534.96
1,800.00	2.53	80.64	1,799.74	-21.48	-11.96	21.55	24.65	119.04	444,945.04	561,538.55
1,900.00	2.10	72.46	1,899.66	-25.41	-11.05	25.48	27.77	113.45	444,945.95	561,542.48



ProDirectional
Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Brantley State Corn
Well: No. 221H
Wellbore: ST01
Design: ST01-12280'-15278', Proj. 15311'

Local Co-ordinate Reference: Well No. 221H
TVD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Pat1274))
MD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Pat1274))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Databases: WellPlanner1

MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (")	Northing (usft)	Easting (usft)
2,000.00	2.30	69.94	1,999.59	-29.05	-9.81	29.11	30.72	108.63	444,947.19	561,546.11
2,100.00	2.31	46.18	2,099.51	-32.40	-7.73	32.45	33.36	103.40	444,949.27	561,549.45
2,200.00	1.89	11.86	2,199.44	-34.21	-4.72	34.24	34.56	97.85	444,952.28	561,551.24
2,300.00	2.35	339.78	2,299.38	-33.86	-1.18	33.87	33.89	92.00	444,955.82	561,550.87
2,400.00	1.88	340.49	2,399.31	-32.63	2.29	32.61	32.69	85.99	444,959.29	561,549.61
2,500.00	1.78	343.50	2,499.26	-31.66	5.32	31.63	32.07	80.45	444,962.32	561,548.63
2,600.00	2.19	345.92	2,599.20	-30.77	8.67	30.72	31.92	74.25	444,965.67	561,547.72
2,700.00	4.42	349.46	2,699.03	-29.84	14.31	29.55	32.83	64.16	444,971.31	561,546.55
2,800.00	5.93	355.97	2,798.62	-28.63	23.25	28.48	36.77	50.78	444,980.25	561,545.48
2,900.00	5.92	354.93	2,898.08	-27.87	33.54	27.66	43.48	39.52	444,990.54	561,544.66
3,000.00	5.53	342.69	2,997.59	-26.04	43.28	25.77	50.37	30.78	445,000.28	561,542.77
3,100.00	5.20	335.82	3,097.15	-22.81	52.01	22.48	56.66	23.38	445,009.01	561,539.48
3,200.00	5.28	332.56	3,196.73	-18.88	60.23	18.51	63.01	17.08	445,017.23	561,535.51
3,300.00	5.13	326.85	3,296.32	-14.37	68.06	13.94	69.47	11.58	445,025.06	561,530.94
3,400.00	5.35	325.93	3,395.90	-9.36	75.66	8.89	76.18	6.70	445,032.66	561,525.89
3,500.00	5.47	326.82	3,495.46	-4.19	83.51	3.67	83.59	2.51	445,040.51	561,520.67
3,600.00	5.50	319.87	3,595.00	1.46	91.16	-2.03	91.19	358.72	445,048.16	561,514.97
3,700.00	5.45	317.17	3,694.54	7.73	98.31	-8.35	98.66	355.15	445,055.31	561,508.65
3,800.00	5.57	316.31	3,794.08	14.27	105.30	-14.93	106.36	351.93	445,062.30	561,502.07
3,900.00	5.61	326.62	3,893.61	20.26	112.89	-20.97	114.83	349.48	445,069.89	561,496.03
4,000.00	5.77	340.08	3,993.12	24.61	121.70	-25.37	124.32	348.22	445,078.70	561,491.63
4,100.00	4.71	358.28	4,092.71	26.39	130.53	-27.21	133.34	348.23	445,087.53	561,489.79
4,200.00	2.94	26.28	4,192.49	25.34	136.94	-26.20	139.42	349.17	445,093.94	561,490.80
4,300.00	2.83	21.75	4,292.36	23.26	141.53	-24.15	143.57	350.32	445,098.53	561,492.85
4,400.00	2.54	20.48	4,392.25	21.54	145.90	-22.46	147.62	351.25	445,102.90	561,494.54
4,500.00	3.21	22.22	4,492.13	19.68	150.57	-20.62	151.97	352.20	445,107.57	561,496.38
4,600.00	3.31	350.22	4,591.97	19.07	156.00	-20.05	157.29	352.67	445,113.00	561,496.95



ProDirectional
Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Brantley State Com
Well: No. 221H
Wellbore: ST01
Design: ST01-12280'-15278', Proj. 15311'

Local Co-ordinate Reference:
TVD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Pat274))
MD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Pat274))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Well No. 221H
Well @ 3118.00usft (GL: 3089' + KB: 29' (Pat274))
Well @ 3118.00usft (GL: 3089' + KB: 29' (Pat274))
Grid
Minimum Curvature
WellPlanner1

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
4,700.00	3.53	353.12	4,691.80	19.90	161.90	-20.91	163.25	352.64	445,118.90	561,496.09
4,800.00	5.33	338.24	4,791.50	21.94	169.27	-23.00	170.83	352.26	445,126.27	561,494.00
4,900.00	5.02	340.71	4,891.09	25.05	177.72	-26.17	179.63	351.62	445,134.72	561,490.83
5,000.00	4.62	334.22	4,990.73	28.20	185.47	-29.37	187.79	351.00	445,142.47	561,487.63
5,100.00	4.27	328.35	5,090.43	31.86	192.27	-33.07	195.09	350.24	445,149.27	561,483.93
5,200.00	4.13	331.90	5,190.17	35.47	198.62	-36.72	201.98	349.52	445,155.62	561,480.28
5,300.00	3.93	334.13	5,289.92	38.63	204.88	-39.91	208.73	348.98	445,161.88	561,477.09
5,400.00	3.72	324.85	5,389.70	41.95	210.61	-43.28	215.01	348.39	445,167.61	561,473.72
5,500.00	2.74	332.86	5,489.54	44.88	215.39	-46.24	220.30	347.88	445,172.39	561,470.76
5,600.00	2.27	353.27	5,589.44	46.18	219.49	-47.56	224.58	347.77	445,176.49	561,469.44
5,700.00	2.10	341.51	5,689.37	46.97	223.19	-48.37	228.37	347.77	445,180.19	561,468.63
5,800.00	1.55	349.84	5,789.32	47.77	226.26	-49.19	231.54	347.73	445,183.26	561,467.81
5,900.00	1.74	332.91	5,889.28	48.68	228.94	-50.12	234.36	347.65	445,185.94	561,466.88
6,000.00	1.33	335.26	5,989.24	49.84	231.35	-51.30	236.97	347.50	445,188.35	561,465.70
6,100.00	1.33	324.26	6,089.22	50.99	233.34	-52.46	239.17	347.33	445,190.34	561,464.54
6,200.00	0.94	298.32	6,189.20	52.39	234.67	-53.86	240.78	347.07	445,191.67	561,463.14
6,300.00	0.70	302.75	6,289.19	53.62	235.39	-55.10	241.76	346.83	445,192.39	561,461.90
6,400.00	0.35	242.63	6,389.18	54.40	235.58	-55.88	242.12	346.66	445,192.58	561,461.12
6,500.00	0.42	220.70	6,489.18	54.91	235.17	-56.39	241.83	346.52	445,192.17	561,460.61
6,600.00	0.12	325.59	6,589.18	55.21	234.97	-56.69	241.72	346.44	445,191.97	561,460.31
6,700.00	1.46	15.58	6,689.17	54.92	236.29	-56.41	242.93	346.57	445,193.29	561,460.59
6,800.00	1.47	15.07	6,789.14	54.23	238.75	-55.73	245.17	346.86	445,195.75	561,461.27
6,900.00	1.47	21.03	6,889.10	53.42	241.19	-54.94	247.37	347.17	445,198.19	561,462.06
7,000.00	1.39	15.57	6,989.07	52.62	243.55	-54.15	249.50	347.46	445,200.55	561,462.85
7,100.00	1.31	13.42	7,089.04	52.02	245.84	-53.56	251.60	347.71	445,202.84	561,463.44
7,200.00	1.94	356.91	7,189.00	51.82	248.64	-53.39	254.30	347.88	445,205.64	561,463.61
7,300.00	1.93	353.71	7,288.95	52.08	252.00	-53.66	257.65	347.98	445,209.00	561,463.34



ProDirectional
Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Brantley State Com
Well: No. 221H
Wellbore: ST01
Design: ST01-12280-15278; Proj. 15311'

Local Co-ordinate Reference: Well No. 221H
TVD Reference: Well @ 3118.00usft (GL: 3089' + KB: 28' (Pat274))
MD Reference: Well @ 3118.00usft (GL: 3089' + KB: 28' (Pat274))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
7,400.00	2.23	321.91	7,388.88	53.44	255.21	-55.05	261.08	347.83	445,212.21	561,461.95
7,500.00	2.15	326.78	7,488.81	55.65	258.31	-57.28	264.58	347.50	445,215.31	561,459.72
7,600.00	1.81	341.74	7,588.75	57.15	261.38	-58.80	267.91	347.32	445,218.38	561,458.20
7,700.00	1.60	332.16	7,688.71	58.28	264.11	-59.95	270.83	347.21	445,221.11	561,457.05
7,800.00	1.31	321.73	7,788.68	59.63	266.24	-61.31	273.21	347.03	445,223.24	561,455.69
7,900.00	0.68	285.56	7,888.66	60.90	267.30	-62.58	274.53	346.82	445,224.30	561,454.42
8,000.00	0.94	269.74	7,988.65	62.29	267.45	-63.98	275.00	346.55	445,224.45	561,453.02
8,100.00	0.80	185.35	8,088.64	63.18	266.76	-64.86	274.53	346.33	445,223.76	561,452.14
8,200.00	1.25	187.28	8,188.63	63.40	264.98	-65.07	272.85	346.20	445,221.98	561,451.93
8,300.00	2.13	117.14	8,288.59	61.90	263.05	-63.55	270.62	346.42	445,220.05	561,453.45
8,400.00	2.34	128.72	8,388.52	58.66	260.92	-60.30	267.80	346.99	445,217.92	561,456.70
8,500.00	2.70	129.37	8,488.42	55.27	258.15	-56.89	264.35	347.57	445,215.15	561,460.11
8,600.00	2.76	134.28	8,588.31	51.74	254.98	-53.35	260.50	348.18	445,211.98	561,463.65
8,700.00	2.26	125.04	8,688.21	48.42	252.16	-50.01	257.08	348.78	445,209.16	561,466.99
8,800.00	1.56	123.49	8,788.15	45.68	250.28	-47.26	254.70	349.31	445,207.28	561,469.74
8,900.00	0.79	108.99	8,888.13	43.90	249.31	-45.47	253.42	349.66	445,206.31	561,471.53
9,000.00	0.56	89.97	8,988.13	42.76	249.08	-44.33	253.00	349.91	445,206.08	561,472.67
9,100.00	0.64	91.79	9,088.12	41.72	249.06	-43.28	252.80	350.14	445,206.06	561,473.72
9,200.00	0.28	136.13	9,188.12	40.99	248.87	-42.56	252.48	350.30	445,205.87	561,474.44
9,300.00	0.68	160.76	9,288.11	40.63	248.13	-42.19	251.70	350.35	445,205.13	561,474.81
9,400.00	1.17	149.52	9,388.10	39.93	246.69	-41.48	250.16	350.46	445,203.69	561,475.52
9,500.00	1.36	148.14	9,488.08	38.79	244.81	-40.33	248.11	350.64	445,201.81	561,476.67
9,600.00	1.35	150.07	9,588.05	37.59	242.78	-39.12	245.91	350.85	445,199.78	561,477.88
9,660.00	0.99	176.22	9,648.04	37.21	241.65	-38.73	244.73	350.89	445,198.65	561,476.27
9,704.00	6.10	278.30	9,691.95	39.50	241.61	-41.02	245.06	350.36	445,198.61	561,475.98
9,736.00	10.00	280.70	9,723.63	43.91	242.37	-45.44	246.59	349.38	445,199.37	561,471.56
9,768.00	13.60	281.80	9,754.95	50.32	243.65	-51.85	249.11	347.99	445,200.65	561,465.15



ProDirectional Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Brantley State Corn
Well: No. 221H
Wellbore: ST01
Design: ST01-12280'-15278', Proj. 15311'

Local Co-ordinate Reference:
TVD Reference: Well @ 3118.00usft (GL: 3089' + KB: 28' (Pat1274))
MD Reference: Well @ 3118.00usft (GL: 3089' + KB: 28' (Pat1274))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Well No. 221H
Well @ 3118.00usft (GL: 3089' + KB: 28' (Pat1274))
Well @ 3118.00usft (GL: 3089' + KB: 28' (Pat1274))
Grid
Minimum Curvature
WellPlanner1

MD (usft)	Inc (°)	Adj (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
9,799.00	17.00	281.50	9,784.85	58.32	245.30	-59.86	252.50	346.29	445,202.30	561,457.14
9,831.00	20.30	280.30	9,815.16	68.36	247.23	-69.91	256.92	344.21	445,204.23	561,447.09
9,863.00	23.80	279.50	9,844.82	80.18	249.29	-81.74	262.35	341.85	445,206.29	561,435.26
9,895.00	28.00	278.90	9,873.60	93.96	251.52	-95.54	269.05	339.20	445,208.52	561,421.46
9,926.00	30.90	277.70	9,900.59	109.02	253.71	-110.62	276.78	336.44	445,210.71	561,406.38
9,958.00	31.30	276.00	9,927.99	125.42	255.68	-127.03	285.50	333.58	445,212.68	561,389.97
9,990.00	32.60	272.60	9,955.14	142.29	256.94	-143.91	294.50	330.75	445,213.94	561,373.09
10,021.00	32.80	269.30	9,981.23	159.03	257.22	-160.65	303.26	328.01	445,214.22	561,356.35
10,053.00	35.00	268.20	10,007.79	176.87	256.82	-178.49	312.76	325.20	445,213.82	561,338.51
10,085.00	38.80	267.70	10,033.38	196.08	256.13	-197.69	323.55	322.34	445,213.13	561,319.31
10,117.00	43.30	267.10	10,057.50	217.07	255.17	-218.68	336.05	319.40	445,212.17	561,298.32
10,148.00	45.50	268.10	10,079.65	238.74	254.27	-240.35	349.88	316.61	445,211.27	561,276.65
10,195.00	47.30	269.00	10,112.06	272.77	253.41	-274.37	373.49	312.73	445,210.41	561,242.63
10,243.00	50.50	268.80	10,143.61	308.93	252.71	-310.53	400.37	309.14	445,209.71	561,206.47
10,291.00	53.00	265.90	10,173.33	346.59	250.96	-348.17	429.19	305.78	445,207.96	561,168.83
10,339.00	56.20	264.70	10,201.13	385.60	247.74	-387.16	459.64	302.62	445,204.74	561,129.84
10,386.00	61.00	264.90	10,225.61	425.56	244.11	-427.10	491.94	299.75	445,201.11	561,089.90
10,434.00	64.90	266.00	10,247.44	468.18	240.73	-469.71	527.80	297.14	445,197.73	561,047.29
10,481.00	69.10	266.20	10,265.80	511.36	237.79	-512.86	565.30	294.87	445,194.79	561,004.14
10,529.00	71.40	266.40	10,282.02	556.45	234.87	-557.94	605.36	292.83	445,191.87	560,959.06
10,544.00	72.40	266.70	10,286.68	570.69	234.01	-572.17	618.18	292.24	445,191.01	560,944.83
10,649.00	81.80	268.40	10,310.09	672.85	229.67	-674.31	712.35	288.81	445,186.67	560,842.69
10,681.00	85.70	266.80	10,313.58	704.64	228.34	-706.08	742.09	287.92	445,185.34	560,810.92
10,712.00	88.00	266.70	10,315.28	735.55	226.58	-736.99	771.03	287.09	445,183.58	560,780.01
10,744.00	88.80	267.40	10,316.17	767.50	224.94	-768.93	801.16	286.31	445,181.94	560,748.07
10,839.00	92.10	270.10	10,315.43	862.47	222.86	-863.88	892.17	284.47	445,179.86	560,653.12
10,933.00	94.00	271.80	10,310.43	956.30	224.42	-957.73	983.67	283.19	445,181.42	560,559.27



ProDirectional

Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Brantley State Corn
Well: No. 221H
Wellbore: ST01
Design: ST01-12280'-15278', Proj. 15311'

Local Co-ordinate Reference:
TVD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Patt274))
MD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Patt274))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Well No. 221H
Well @ 3118.00usft (GL: 3089' + KB: 29' (Patt274))
Well @ 3118.00usft (GL: 3089' + KB: 29' (Patt274))
Grid
Minimum Curvature
WellPlanner1

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
11,028.00	92.70	271.90	10,304.87	1,051.07	227.48	-1,052.52	1,076.82	282.20	445,184.48	560,464.48
11,123.00	88.00	269.30	10,304.29	1,146.02	228.47	-1,147.47	1,170.00	281.26	445,185.47	560,369.53
11,217.00	87.00	267.10	10,308.40	1,239.89	225.53	-1,241.33	1,261.65	280.30	445,182.53	560,275.67
11,312.00	87.70	265.40	10,312.79	1,334.82	219.32	-1,336.02	1,353.90	279.32	445,176.32	560,180.98
11,406.00	94.10	264.70	10,311.31	1,428.26	211.21	-1,429.61	1,445.13	278.40	445,168.21	560,087.39
11,501.00	98.00	264.50	10,301.30	1,522.34	202.33	-1,523.64	1,537.02	277.56	445,159.33	559,993.36
11,596.00	97.60	265.60	10,298.41	1,616.16	194.21	-1,617.41	1,629.03	276.85	445,151.21	559,899.59
11,690.00	95.40	269.40	10,277.76	1,709.47	190.14	-1,710.70	1,721.23	276.34	445,147.14	559,806.30
11,785.00	93.80	270.20	10,270.14	1,804.16	189.81	-1,805.39	1,815.34	276.00	445,146.81	559,711.61
11,879.00	92.10	270.70	10,265.31	1,898.02	190.55	-1,899.25	1,908.79	275.73	445,147.55	559,617.75
11,974.00	92.00	271.50	10,261.91	1,992.93	192.37	-1,994.18	2,003.43	275.51	445,149.37	559,522.82
12,068.00	93.40	277.00	10,257.48	2,086.48	199.32	-2,087.77	2,097.27	275.45	445,156.32	559,429.23
12,163.00	86.90	274.80	10,257.23	2,180.86	209.08	-2,182.21	2,192.21	275.47	445,166.08	559,334.79
12,257.00	86.50	271.70	10,262.64	2,274.50	214.40	-2,275.90	2,285.97	275.38	445,171.40	559,241.10
12,280.00	85.00	271.50	10,264.35	2,297.43	215.04	-2,298.82	2,308.86	275.34	445,172.04	559,218.18
First ST01 Survey: 12280' MD										
12,295.00	83.50	273.00	10,265.85	2,312.34	215.63	-2,313.74	2,323.76	275.32	445,172.63	559,203.26
12,310.00	84.00	274.80	10,267.48	2,327.20	216.64	-2,328.61	2,338.67	275.32	445,173.64	559,188.39
12,349.00	87.30	278.10	10,270.44	2,365.81	221.01	-2,367.24	2,377.54	275.33	445,178.01	559,149.76
12,444.00	88.10	277.20	10,274.25	2,459.80	233.65	-2,461.32	2,472.38	275.42	445,190.65	559,055.68
12,538.00	91.00	273.60	10,274.99	2,553.30	242.49	-2,554.87	2,566.36	275.42	445,199.49	558,962.13
12,632.00	92.80	271.00	10,271.87	2,647.13	246.26	-2,648.73	2,660.16	275.31	445,203.26	558,868.27
12,727.00	93.70	269.20	10,266.49	2,741.97	246.43	-2,743.58	2,754.62	275.13	445,203.43	558,773.42
12,821.00	93.80	268.10	10,260.34	2,835.76	244.22	-2,837.35	2,847.84	274.92	445,201.22	558,679.65
12,915.00	92.10	267.10	10,255.50	2,929.57	240.29	-2,931.14	2,940.97	274.69	445,197.29	558,585.86
13,010.00	95.40	268.80	10,249.29	3,024.31	236.89	-3,025.85	3,035.11	274.48	445,193.89	558,491.15
13,104.00	93.70	269.00	10,241.83	3,118.00	235.09	-3,119.54	3,128.38	274.31	445,192.09	558,397.46



ProDirectional Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Brantley State Corn
Well: No. 221H
Wellbore: ST01
Design: ST01-12280'-15278', Proj. 15311'

Local Co-ordinate Reference:
TVD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Pat274))
MD Reference: Well @ 3118.00usft (GL: 3089' + KB: 29' (Pat274))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Well No. 221H
Well @ 3118.00usft (GL: 3089' + KB: 29' (Pat274))
Well @ 3118.00usft (GL: 3089' + KB: 29' (Pat274))
Grid
Minimum Curvature
WellPlanner1

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
13,199.00	93.80	271.00	10,235.62	3,212.79	235.09	-3,214.33	3,222.92	274.18	445,192.09	558,302.67
13,293.00	93.20	271.40	10,229.88	3,306.58	237.06	-3,308.13	3,316.62	274.10	445,194.06	558,208.87
13,387.00	91.90	270.20	10,225.70	3,400.46	238.37	-3,402.03	3,410.37	274.01	445,195.37	558,114.97
13,482.00	94.70	270.10	10,220.23	3,495.29	238.62	-3,496.86	3,504.99	273.90	445,195.62	558,020.14
13,576.00	94.20	270.90	10,212.94	3,589.00	239.44	-3,590.57	3,598.55	273.82	445,196.44	557,926.43
13,670.00	92.30	272.20	10,207.61	3,682.79	241.98	-3,684.38	3,692.32	273.76	445,198.98	557,832.62
13,765.00	89.10	272.30	10,206.45	3,777.67	245.70	-3,779.29	3,787.27	273.72	445,202.70	557,737.71
13,859.00	89.60	272.90	10,207.51	3,871.54	249.97	-3,873.18	3,881.24	273.69	445,206.97	557,643.82
13,954.00	91.60	271.90	10,206.52	3,966.42	253.95	-3,968.09	3,976.21	273.66	445,210.95	557,548.91
14,048.00	90.20	270.40	10,205.04	4,060.37	255.83	-4,062.05	4,070.10	273.60	445,212.83	557,454.95
14,143.00	93.10	266.70	10,202.31	4,155.28	253.43	-4,156.96	4,164.68	273.49	445,210.43	557,360.04
14,237.00	90.70	267.80	10,199.19	4,249.14	249.93	-4,250.79	4,258.07	273.35	445,205.93	557,266.21
14,332.00	90.80	264.10	10,197.95	4,343.92	242.22	-4,345.53	4,352.27	273.19	445,199.22	557,171.47
14,427.00	88.80	265.40	10,198.28	4,438.57	233.53	-4,440.12	4,446.26	273.01	445,190.53	557,076.88
14,521.00	92.30	263.80	10,197.38	4,532.18	224.68	-4,533.68	4,539.25	272.84	445,181.68	556,983.32
14,616.00	94.30	264.70	10,191.91	4,626.60	215.18	-4,628.04	4,633.04	272.66	445,172.18	556,888.96
14,710.00	96.80	266.90	10,182.82	4,719.93	208.33	-4,721.34	4,725.93	272.53	445,165.33	556,795.66
14,805.00	97.70	269.20	10,170.82	4,814.13	205.12	-4,815.51	4,819.88	272.44	445,162.12	556,701.49
14,900.00	96.50	270.10	10,159.08	4,908.40	204.54	-4,909.78	4,914.04	272.39	445,161.54	556,607.22
14,994.00	94.40	270.90	10,150.16	5,001.96	205.36	-5,003.35	5,007.56	272.35	445,162.36	556,513.65
15,089.00	94.80	271.20	10,142.54	5,096.62	207.10	-5,098.02	5,102.23	272.33	445,164.10	556,418.98
15,183.00	93.20	271.80	10,135.98	5,190.34	209.55	-5,191.76	5,195.99	272.31	445,166.55	556,325.24
15,222.00	93.73	271.72	10,133.62	5,229.24	210.75	-5,230.67	5,234.91	272.31	445,167.75	556,286.33
HL Xing: 15222' MD, 10134' TVD										
15,278.00	94.50	271.60	10,129.60	5,285.06	212.36	-5,286.50	5,290.77	272.30	445,169.36	556,230.50
Last Survey(ST01): 15278' MD, 10130' TVD										



ProDirectional
Survey Report



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Project: Eddy County, NM
Site: Brantley State Corn
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Wellbore: ST01
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Local Co-ordinate Reference:
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Well No. 221H

Well @ 3118.00usft (GL: 3089' + KB: 29' (Patt274))
 Well @ 3118.00usft (GL: 3089' + KB: 29' (Patt274))
 Grid
 Minimum Curvature
 WellPlanner1

Survey

MD (usft)	Inc (°)	Asz (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
15,311.00	94.50	271.60	10,127.01	5,317.94	213.28	-5,319.39	5,323.66	272.30	445,170.28	556,197.61
PTB: 15311' MD, 10127' TVD										

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,280.00	10,264.35	215.04	-2,298.82	First ST01 Survey: 12280' MD
15,222.00	10,133.62	210.75	-5,230.67	HL Xing: 15222' MD, 10134' TVD
15,278.00	10,129.60	212.36	-5,286.50	Last Survey(ST01): 15278' MD, 10130' TVD
15,311.00	10,127.01	213.28	-5,319.39	PTB: 15311' MD, 10127' TVD