



Eddy County, NM

May 08, 2018

Job No. LNM5169918

30-015-44688

ORIGINAL

Survey Completion Report



Survey Certification Letter

May 08, 2018



Operator Name: Matador Resources
Well Name: Marbob 19 State Com No. 133H
County/Parish: Eddy County,
State: NM
Rig Name: Patterson 809
Job Number: LNM5169918

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	198' MD – 13,285' MD	13,375' MD	03/28/18 – 04/10/18	MWD

Sincerely,

Mike Coats
Regulatory Specialist
Professional Directional

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

prodirectional.com



Matador Resources

**Eddy County, NM
Marbob 19 State Com
No. 133H
OH**

Survey: ProDirectional

Survey Report

08 May, 2018





ProDirectional Survey Report



Company: Matador Resources
Project: Eddy County, NM(NAD 83)
Site: Marbob State
Well: No. 133H
Wellbore: OH
Design: MWD-198'-13285', Proj. 13375'

Local Co-ordinate Reference: Well No. 133H
TVD Reference: Well @ 3388.50usft
MD Reference: Well @ 3388.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Project Eddy County, NM(NAD 83)

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

Site Marbob State

Site Position:	Northing:	597,912.00 usft	Latitude:	32° 38' 36.7032 N
From: Map	Easting:	606,710.00 usft	Longitude:	104° 7' 15.4186 W
Position Uncertainty:	Slot Radius:	13-3/16 "	Grid Convergence:	0.11 °

Well No. 133H

Well Position	+N/-S	0.00 usft	Northing:	597,912.00 usft	Latitude:	32° 38' 36.7032 N
	+E/-W	0.00 usft	Easting:	606,710.00 usft	Longitude:	104° 7' 15.4186 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,360.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	3/23/2018	7.37	60.45	48,102.50

Design MWD-198'-13285', Proj. 13375'

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	90.33	

Survey Program Date 5/8/2018

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
198.00	13,375.00	Survey #1 (OH)	MWD+HDGM	OWSG MWD + HRGM



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Survey											
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0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	597,912.00	606,710.00	
198.00	0.40	10.40	198.00	0.12	0.68	0.12	0.69	10.40	597,912.68	606,710.12	
Pro MWD First Survey: 198' MD											
291.00	0.30	313.30	291.00	0.00	1.17	0.01	1.17	0.30	597,913.17	606,710.01	
319.00	0.70	319.50	319.00	-0.17	1.35	-0.16	1.36	353.30	597,913.35	606,709.84	
414.00	1.50	299.40	413.98	-1.63	2.40	-1.62	2.89	325.99	597,914.40	606,708.38	
506.00	1.70	294.00	505.94	-3.93	3.54	-3.91	5.28	312.16	597,915.54	606,706.09	
599.00	1.50	302.90	598.91	-6.22	4.77	-6.20	7.82	307.57	597,916.77	606,703.80	
689.00	1.00	323.10	688.88	-7.69	6.03	-7.66	9.75	308.24	597,918.03	606,702.34	
781.00	0.90	332.90	780.87	-8.51	7.32	-8.47	11.19	310.84	597,919.32	606,701.53	
872.00	0.90	320.70	871.86	-9.30	8.51	-9.25	12.57	312.62	597,920.51	606,700.75	
964.00	0.80	324.70	963.85	-10.13	9.59	-10.08	13.91	313.59	597,921.59	606,699.92	
1,056.00	0.80	317.80	1,055.84	-10.94	10.59	-10.88	15.18	314.24	597,922.59	606,699.12	
1,150.00	0.70	305.20	1,149.83	-11.85	11.41	-11.79	16.40	314.07	597,923.41	606,698.21	
1,243.00	0.70	314.30	1,242.83	-12.73	12.13	-12.66	17.53	313.79	597,924.13	606,697.34	
1,337.00	0.70	299.10	1,336.82	-13.64	12.81	-13.57	18.66	313.36	597,924.81	606,696.43	
1,430.00	0.70	296.90	1,429.81	-14.65	13.35	-14.57	19.76	312.48	597,925.35	606,695.43	
1,524.00	0.80	296.60	1,523.80	-15.75	13.90	-15.67	20.95	311.57	597,925.90	606,694.33	
1,617.00	0.90	297.40	1,616.79	-16.99	14.53	-16.90	22.29	310.68	597,926.53	606,693.10	
1,710.00	1.00	306.40	1,709.78	-18.29	15.35	-18.20	23.81	310.13	597,927.35	606,691.80	
1,804.00	1.90	316.70	1,803.75	-20.03	16.97	-19.93	26.18	310.40	597,928.97	606,690.07	
1,898.00	4.30	323.40	1,897.61	-23.22	20.93	-23.10	31.17	312.17	597,932.93	606,686.90	
1,991.00	5.80	328.30	1,990.24	-27.81	27.73	-27.65	39.16	315.08	597,939.73	606,682.35	
2,085.00	5.70	331.10	2,083.77	-32.61	35.86	-32.40	48.33	317.90	597,947.86	606,677.60	
2,179.00	5.60	329.60	2,177.31	-37.23	43.90	-36.98	57.40	319.89	597,955.90	606,673.02	
2,272.00	5.50	332.50	2,269.88	-41.63	51.76	-41.33	66.24	321.39	597,963.76	606,668.67	
2,366.00	5.50	333.80	2,363.45	-45.75	59.80	-45.40	75.08	322.79	597,971.80	606,664.60	



ProDirectional Survey Report



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Wellbore: OH
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Local Co-ordinate Reference: Well No. 133H
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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)	Easting (usft)	
2,459.00	5.70	335.20	2,456.00	-49.70	67.99	-49.31	83.99	324.05	597,979.99	606,660.69	
2,553.00	5.50	337.90	2,549.55	-53.40	76.41	-52.96	92.97	325.27	597,988.41	606,657.04	
2,646.00	5.50	340.50	2,642.13	-56.61	84.74	-56.13	101.64	326.48	597,996.74	606,653.87	
2,740.00	5.40	344.30	2,735.70	-59.36	93.24	-58.83	110.25	327.75	598,005.24	606,651.17	
2,833.00	5.20	345.30	2,828.30	-61.66	101.53	-61.08	118.49	328.97	598,013.53	606,648.92	
2,926.00	4.90	347.80	2,920.94	-63.62	109.49	-62.99	126.31	330.09	598,021.49	606,647.01	
3,020.00	4.80	351.30	3,014.61	-65.11	117.30	-64.43	133.83	331.22	598,029.30	606,645.57	
3,113.00	4.20	351.00	3,107.32	-66.27	124.51	-65.55	140.71	332.23	598,036.51	606,644.45	
3,150.00	4.10	351.10	3,144.22	-66.70	127.15	-65.97	143.25	332.58	598,039.15	606,644.03	
3,300.00	3.50	352.90	3,293.89	-68.15	137.00	-67.36	152.66	333.82	598,049.00	606,642.64	
3,394.00	6.10	348.20	3,387.55	-69.57	144.73	-68.74	160.23	334.59	598,056.73	606,641.26	
3,487.00	6.40	347.40	3,480.00	-71.77	154.63	-70.88	170.10	335.37	598,066.63	606,639.12	
3,581.00	6.00	347.40	3,573.45	-74.04	164.54	-73.10	180.04	336.05	598,076.54	606,636.90	
3,674.00	5.40	344.80	3,665.99	-76.30	173.50	-75.30	189.14	336.54	598,085.50	606,634.70	
3,768.00	6.80	336.20	3,759.46	-79.76	182.86	-78.71	199.08	336.71	598,094.86	606,631.29	
3,861.00	7.70	334.00	3,851.71	-84.78	193.50	-83.66	210.81	336.62	598,105.50	606,626.34	
3,955.00	7.30	331.10	3,944.91	-90.49	204.39	-89.31	223.05	336.40	598,116.39	606,620.69	
4,048.00	6.90	332.70	4,037.20	-95.96	214.53	-94.73	234.51	336.18	598,126.53	606,615.27	
4,142.00	6.40	329.00	4,130.56	-101.30	224.03	-100.02	245.35	335.94	598,136.03	606,609.98	
4,235.00	5.60	323.90	4,223.05	-106.69	232.14	-105.36	254.93	335.59	598,144.14	606,604.64	
4,329.00	7.30	323.80	4,316.46	-112.97	240.67	-111.59	265.28	335.12	598,152.67	606,598.41	
4,422.00	7.70	324.60	4,408.66	-120.13	250.52	-118.69	277.21	334.65	598,162.52	606,591.31	
4,516.00	7.00	324.20	4,501.89	-127.18	260.30	-125.69	289.05	334.23	598,172.30	606,584.31	
4,609.00	6.40	320.50	4,594.25	-133.84	268.89	-132.30	299.68	333.80	598,180.89	606,577.70	
4,703.00	5.90	319.80	4,687.71	-140.34	276.62	-138.75	309.47	333.36	598,188.62	606,571.25	
4,796.00	5.60	319.70	4,780.24	-146.40	283.74	-144.77	318.53	332.97	598,195.74	606,565.23	
4,890.00	4.90	315.30	4,873.85	-152.23	290.09	-150.56	326.83	332.57	598,202.09	606,559.44	



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4,983.00	4.70	309.00		4,966.52	-158.01	295.31	-156.31	334.13	332.11	598,207.31	606,553.69
5,077.00	4.90	304.30		5,060.19	-164.35	299.99	-162.62	341.24	331.54	598,211.99	606,547.38
5,170.00	5.50	319.90		5,152.82	-170.53	305.64	-168.78	349.15	331.09	598,217.64	606,541.22
5,264.00	4.80	322.80		5,246.44	-175.85	312.22	-174.06	357.46	330.86	598,224.22	606,535.94
5,357.00	4.60	318.30		5,339.12	-180.72	318.10	-178.89	364.95	330.65	598,230.10	606,531.11
5,451.00	5.80	322.90		5,432.73	-186.13	324.71	-184.26	373.35	330.43	598,236.71	606,525.74
5,546.00	5.70	323.20		5,527.26	-191.89	332.31	-189.98	382.79	330.24	598,244.31	606,520.02
5,640.00	5.50	322.50		5,620.81	-197.47	339.62	-195.52	391.88	330.07	598,251.62	606,514.48
5,733.00	5.40	319.90		5,713.39	-203.05	346.51	-201.05	400.61	329.88	598,258.51	606,508.95
5,826.00	5.30	318.80		5,805.98	-208.73	353.09	-206.70	409.14	329.65	598,265.09	606,503.30
5,919.00	4.80	316.80		5,898.62	-214.26	359.16	-212.19	417.16	329.42	598,271.16	606,497.81
6,013.00	5.40	326.80		5,992.25	-219.41	365.72	-217.31	425.41	329.28	598,277.72	606,492.69
6,106.00	5.40	326.80		6,084.84	-224.25	373.05	-222.10	434.16	329.23	598,285.05	606,487.90
6,200.00	4.40	319.90		6,178.49	-229.03	379.51	-226.85	442.14	329.13	598,291.51	606,483.15
6,293.00	3.70	311.20		6,271.26	-233.61	384.21	-231.40	448.51	328.94	598,296.21	606,478.60
6,387.00	3.20	308.50		6,365.09	-237.97	387.84	-235.74	453.87	328.71	598,299.84	606,474.26
6,479.00	2.90	304.50		6,456.96	-241.91	390.76	-239.66	458.40	328.48	598,302.76	606,470.34
6,573.00	1.90	295.70		6,550.88	-245.29	392.78	-243.03	461.89	328.25	598,304.78	606,466.97
6,666.00	3.00	331.80		6,643.80	-247.84	395.60	-245.57	465.62	328.17	598,307.60	606,464.43
6,759.00	3.40	326.70		6,736.65	-250.53	400.05	-248.23	470.80	328.18	598,312.05	606,461.77
6,853.00	2.30	309.40		6,830.54	-253.54	403.57	-251.22	475.38	328.10	598,315.57	606,458.78
6,946.00	2.50	296.10		6,923.45	-256.82	405.65	-254.48	478.87	327.90	598,317.65	606,455.52
7,040.00	4.10	328.80		7,017.30	-260.42	409.43	-258.07	483.97	327.78	598,321.43	606,451.93
7,133.00	2.70	308.10		7,110.14	-263.89	413.62	-261.51	489.36	327.70	598,325.62	606,448.49
7,227.00	2.00	283.80		7,204.06	-267.24	415.38	-264.85	492.63	327.48	598,327.38	606,445.15
7,320.00	1.70	280.00		7,297.01	-270.17	416.01	-267.78	494.74	327.23	598,328.01	606,442.22
7,414.00	4.10	348.60		7,390.91	-272.23	419.54	-269.82	498.82	327.25	598,331.54	606,440.18



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7,507.00	3.80	343.30	7,483.69	-273.81	425.75	-271.36	504.88	327.49	598,337.75	606,438.64
7,601.00	3.00	345.60	7,577.52	-275.35	431.12	-272.87	510.22	327.67	598,343.12	606,437.13
7,694.00	2.20	347.50	7,670.43	-276.36	435.22	-273.86	514.21	327.82	598,347.22	606,436.14
7,788.00	1.50	339.20	7,764.38	-277.21	438.13	-274.69	517.12	327.91	598,350.13	606,435.31
7,882.00	1.20	318.40	7,858.35	-278.31	440.02	-275.78	519.30	327.92	598,352.02	606,434.22
7,975.00	0.90	256.20	7,951.34	-279.67	440.57	-277.13	520.49	327.83	598,352.57	606,432.87
8,068.00	2.30	27.50	8,044.32	-279.52	442.05	-276.98	521.66	327.93	598,354.05	606,433.02
8,162.00	2.20	19.60	8,138.24	-278.07	445.43	-275.51	523.74	328.26	598,357.43	606,434.49
8,255.00	1.40	9.10	8,231.20	-277.30	448.23	-274.73	525.72	328.50	598,360.23	606,435.27
8,333.00	2.30	88.20	8,309.17	-275.60	449.22	-273.01	525.68	328.71	598,361.22	606,436.99
8,379.00	10.10	97.70	8,354.86	-270.67	448.71	-268.09	522.69	329.14	598,360.71	606,441.91
8,427.00	18.30	96.70	8,401.36	-258.98	447.26	-256.41	515.55	330.17	598,359.26	606,453.59
8,473.00	26.50	92.10	8,443.85	-241.52	446.04	-238.95	506.01	331.82	598,358.04	606,471.05
8,520.00	27.80	91.00	8,485.67	-220.07	445.47	-217.51	495.73	333.97	598,357.47	606,492.49
8,566.00	32.00	93.80	8,525.54	-197.17	444.47	-194.61	485.21	336.35	598,356.47	606,515.39
8,614.00	38.90	98.30	8,564.63	-169.51	441.45	-166.97	471.97	339.28	598,353.45	606,543.03
8,707.00	45.80	96.40	8,633.32	-107.37	433.51	-104.87	446.01	346.40	598,345.51	606,605.13
8,801.00	54.30	96.50	8,693.62	-35.78	425.42	-33.33	426.72	355.52	598,337.42	606,676.67
8,894.00	58.30	94.10	8,745.22	41.28	418.31	43.69	420.58	5.96	598,330.31	606,753.69
8,988.00	65.20	94.00	8,789.68	123.86	412.47	126.23	431.35	17.02	598,324.47	606,836.23
9,081.00	72.30	93.60	8,823.37	210.32	406.73	212.66	458.97	27.60	598,318.73	606,922.66
9,175.00	78.60	91.30	8,846.98	301.19	402.87	303.51	504.41	36.99	598,314.87	607,013.51
9,223.00	84.50	89.30	8,854.03	348.64	402.63	350.97	534.13	41.08	598,314.63	607,060.97
9,268.00	84.30	89.10	8,858.42	393.42	403.25	395.75	565.01	44.46	598,315.25	607,105.75
9,362.00	87.20	90.10	8,865.38	487.14	403.91	489.48	634.61	50.47	598,315.91	607,199.48
9,455.00	86.80	89.40	8,870.25	580.01	404.31	582.35	708.94	55.23	598,316.31	607,292.35
9,549.00	90.20	90.50	8,872.71	673.96	404.39	676.30	787.98	59.12	598,316.39	607,386.30



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Wellbore: OH
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9,642.00	92.10	90.00		8,870.84	766.94	403.99	769.28	868.90	62.29	598,315.99	607,479.28
9,736.00	91.70	89.70		8,867.73	860.88	404.23	863.23	953.19	64.91	598,316.23	607,573.23
9,829.00	91.20	89.90		8,865.37	953.85	404.56	956.19	1,038.26	67.07	598,316.56	607,666.19
9,923.00	91.40	89.60		8,863.24	1,047.82	404.97	1,050.17	1,125.55	68.91	598,316.97	607,760.17
10,016.00	91.40	89.30		8,860.97	1,140.78	405.86	1,143.14	1,213.05	70.45	598,317.86	607,853.14
10,110.00	91.60	89.30		8,858.51	1,234.73	407.01	1,237.10	1,302.33	71.79	598,319.01	607,947.10
10,202.00	87.00	88.40		8,859.63	1,326.67	408.85	1,329.05	1,390.51	72.90	598,320.85	608,039.05
10,295.00	86.20	88.10		8,865.15	1,419.44	411.69	1,421.84	1,480.24	73.85	598,323.69	608,131.84
10,388.00	86.50	87.50		8,871.07	1,512.16	415.25	1,514.58	1,570.48	74.67	598,327.25	608,224.58
10,481.00	86.60	86.90		8,876.67	1,604.86	419.79	1,607.30	1,661.22	75.36	598,331.79	608,317.30
10,575.00	88.00	86.50		8,881.09	1,698.56	425.19	1,701.04	1,753.37	75.97	598,337.19	608,411.04
10,669.00	90.80	89.40		8,882.08	1,792.46	428.55	1,794.95	1,845.41	76.57	598,340.55	608,504.95
10,762.00	90.90	90.80		8,880.70	1,885.44	428.39	1,887.94	1,935.93	77.22	598,340.39	608,597.94
10,855.00	91.50	90.30		8,878.75	1,978.42	427.50	1,980.92	2,026.52	77.82	598,339.50	608,690.92
10,949.00	89.70	90.90		8,877.77	2,072.41	426.51	2,074.90	2,118.29	78.38	598,338.51	608,784.90
11,041.00	88.40	90.80		8,879.29	2,164.39	425.15	2,166.88	2,208.19	78.90	598,337.15	608,876.88
11,135.00	88.00	90.20		8,882.24	2,258.35	424.33	2,260.83	2,300.30	79.37	598,336.33	608,970.83
11,228.00	87.70	89.80		8,885.73	2,351.28	424.33	2,353.76	2,391.70	79.78	598,336.33	609,063.76
11,326.00	88.10	89.40		8,889.32	2,449.20	425.01	2,451.69	2,488.26	80.17	598,337.01	609,161.69
11,419.00	89.30	88.90		8,891.43	2,542.16	426.39	2,544.66	2,580.13	80.49	598,338.39	609,254.66
11,513.00	87.90	89.60		8,893.73	2,636.11	427.62	2,638.62	2,673.04	80.79	598,339.62	609,348.62
11,606.00	88.40	89.40		8,896.73	2,729.05	428.43	2,731.56	2,764.96	81.09	598,340.43	609,441.56
11,696.00	88.60	89.00		8,899.09	2,819.00	429.69	2,821.52	2,854.06	81.34	598,341.69	609,531.52
11,790.00	87.70	90.40		8,902.12	2,912.95	430.18	2,915.47	2,947.04	81.61	598,342.18	609,625.47
11,883.00	87.90	90.50		8,905.69	3,005.88	429.45	3,008.40	3,038.90	81.88	598,341.45	609,718.40
11,977.00	88.70	90.10		8,908.48	3,099.83	428.96	3,102.36	3,131.87	82.13	598,340.96	609,812.36
12,070.00	89.80	90.70		8,909.70	3,192.82	428.31	3,195.34	3,223.92	82.37	598,340.31	609,905.34



ProDirectional Survey Report



Company: Matador Resources
Project: Eddy County, NM(NAD 83)
Site: Marbob State
Well: No. 133H
Wellbore: OH
Design: MWD-198'-13285', Proj. 13375'

Local Co-ordinate Reference: Well No. 133H
TVD Reference: Well @ 3388.50usft
MD Reference: Well @ 3388.50usft
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)	Easting (usft)
12,164.00	90.30	90.40	8,909.62	3,286.82	427.41	3,289.34	3,316.99	82.60	598,339.41	609,999.34
12,257.00	90.50	89.90	8,908.97	3,379.82	427.17	3,382.34	3,409.20	82.80	598,339.17	610,092.34
12,351.00	91.10	91.50	8,907.66	3,473.81	426.02	3,476.32	3,502.32	83.01	598,338.02	610,186.32
12,444.00	92.70	92.60	8,904.57	3,566.71	422.69	3,569.20	3,594.14	83.25	598,334.69	610,279.20
12,538.00	93.90	91.80	8,899.16	3,660.50	419.09	3,662.97	3,686.87	83.47	598,331.09	610,372.97
12,631.00	93.10	92.30	8,893.48	3,753.28	415.77	3,755.74	3,778.68	83.68	598,327.77	610,465.74
12,724.00	89.80	92.80	8,891.13	3,846.17	411.63	3,848.61	3,870.56	83.90	598,323.63	610,558.61
12,818.00	89.00	93.50	8,892.12	3,940.05	406.47	3,942.46	3,963.35	84.11	598,318.47	610,652.46
12,912.00	88.10	93.30	8,894.49	4,033.88	400.90	4,036.26	4,056.12	84.33	598,312.90	610,746.26
13,005.00	87.90	93.50	8,897.74	4,126.69	395.38	4,129.04	4,147.93	84.53	598,307.38	610,839.04
13,098.00	88.10	93.10	8,900.99	4,219.51	390.03	4,221.83	4,239.81	84.72	598,302.03	610,931.83
13,192.00	88.10	92.30	8,904.10	4,313.38	385.61	4,315.67	4,332.86	84.89	598,297.61	611,025.67
13,285.00	88.70	92.30	8,906.70	4,406.29	381.88	4,408.56	4,425.07	85.05	598,293.88	611,118.56
Last Survey: 13285' MD										
13,375.00	88.70	92.30	8,908.74	4,496.21	378.27	4,498.46	4,514.34	85.19	598,290.27	611,208.46
PTB: 13375' MD										

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
198.00	198.00	0.68	0.12	Pro MWD First Survey: 198' MD
13,285.00	8,906.70	381.88	4,408.56	Last Survey: 13285' MD
13,375.00	8,908.74	378.27	4,498.46	PTB: 13375' MD