



HOBBS OCD

APR 07 2016

RECEIVED

HOBBS OCD

FEB 16 2016

RECEIVED

Matador Resources

Lea County, NM (NAD 27)

Pickard State 20-18S-34E RN

124H

OH / Job 1514671

Survey: Phoenix MWD Surveys

Standard Survey Report

03 January, 2016



PHOENIX
TECHNOLOGY SERVICES

MAY 05 2016

Handwritten signature or initials



Phoenix Technology Services LP

Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well 124H
Project:	Lea County, NM (NAD 27)	TVD Reference:	RKB @ 4073.50usft (Patterson 809)
Site:	Pickard State 20-18S-34E RN	MD Reference:	RKB @ 4073.50usft (Patterson 809)
Well:	124H	North Reference:	Grid
Wellbore:	OH / Job 1514671	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 809)	Database:	Compass 5000 GCR

Project:	Lea County, NM (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:	Pickard State 20-18S-34E RN		
Site Position:		Northing:	629,300.00 usft
From:	Map	Easting:	731,886.00 usft
Position Uncertainty:	0.00 usft	Spot Radius:	13-3/16
		Latitude:	32° 43' 39.98524 N
		Longitude:	103° 34' 45.45748 W
		Grid Convergence:	0.41 °

Well:	124H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 43' 35.51848 N
		Longitude:	103° 34' 28.39273 W
		Ground Level:	4,045.00 usft

Wellbore:	OH / Job 1514671		
Magnetics	Model Name	Sample Date	Declination
	HDGM	11/30/2015	(°)
			6.87
			Dip Angle
			(°)
			60.80
			Field Strength
			(nT)
			48,520

Design:	Surveys (Patterson 809)		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			355.37

Survey Program:	Date 1/3/2016		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		Description
161.00	14,770.00	Phoenix MWD Surveys (OH / Job 1514671)	PHX+MWD+HDGM
			PHX+OWSG/MWD + HDGM

Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
161.00	0.30	160.00	161.00	-0.41	0.09	-0.42	0.18	0.19	0.00
First Phoenix Survey									
295.00	0.40	162.20	295.00	-1.20	0.30	-1.22	0.08	0.07	-4.33
390.00	0.40	159.70	389.99	-1.83	0.52	-1.86	0.02	0.00	-2.63
516.00	0.30	290.00	515.99	-2.13	0.36	-2.15	0.51	-0.08	103.41
577.00	0.40	304.41	576.99	-1.95	0.04	-1.95	0.22	0.16	23.62
669.00	0.80	227.70	668.99	-2.20	-0.70	-2.14	0.88	0.43	83.38
761.00	0.80	231.80	760.98	-3.03	-1.68	-2.89	0.06	0.00	4.46
853.00	0.60	227.30	852.97	-3.76	-2.54	-3.54	0.23	-0.22	-4.89



Phoenix Technology Services LP

Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well: 124H
Project:	Lea County, NM (NAD 27)	TVD Reference:	RKB @ 4073.50usft (Patterson 809)
Site:	Pickard State 20-18S-34E RN	MD Reference:	RKB @ 4073.50usft (Patterson 809)
Well:	124H	North Reference:	Grid
Wellbore:	OH / Job 1514671	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 809)	Database:	Compass 5000 GCR

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)
947.00	0.90	224.30	946.96	-4.62	-3.42	-4.33	0.32	0.32	-3.19
1,041.00	0.80	224.90	1,040.95	-5.61	-4.40	-5.24	0.11	-0.11	0.64
1,135.00	0.70	217.00	1,134.95	-6.54	-5.21	-6.09	0.15	-0.11	-8.40
1,228.00	0.70	219.50	1,227.94	-7.43	-5.91	-6.93	0.03	0.00	2.69
1,322.00	0.80	213.20	1,321.93	-8.42	-6.63	-7.86	0.14	0.11	-6.70
1,416.00	1.00	200.90	1,415.92	-9.73	-7.29	-9.11	0.29	-0.21	-13.09
1,509.00	0.90	206.60	1,508.91	-11.15	-7.90	-10.47	0.15	-0.11	6.13
1,603.00	0.50	217.10	1,602.90	-12.13	-8.48	-11.41	0.45	-0.43	11.17
1,696.00	0.60	222.80	1,695.89	-12.61	-9.06	-12.04	0.12	0.11	6.13
1,789.00	0.70	251.10	1,788.89	-13.36	-9.92	-12.51	0.36	0.11	30.43
1,882.00	0.50	228.80	1,881.88	-13.81	-10.77	-12.89	0.33	-0.22	-23.98
1,976.00	0.40	229.60	1,975.88	-14.29	-11.33	-13.33	0.11	-0.11	0.85
2,069.00	0.30	179.10	2,068.88	-14.74	-11.57	-13.76	0.34	-0.11	-54.30
2,163.00	0.40	227.30	2,162.88	-15.21	-11.81	-14.21	0.32	0.11	51.28
2,256.00	0.90	259.00	2,255.87	-15.57	-12.76	-14.49	0.64	0.54	34.09
2,350.00	1.40	254.30	2,349.85	-16.02	-14.59	-14.79	0.54	0.53	-5.00
2,443.00	2.30	264.80	2,442.80	-16.50	-17.54	-15.03	1.03	0.97	11.29
2,537.00	3.10	260.50	2,536.70	-17.09	-21.93	-15.26	0.88	0.85	-4.57
2,630.00	4.50	254.80	2,629.49	-18.46	-27.93	-16.15	1.56	1.51	-6.13
2,724.00	5.80	251.40	2,723.11	-20.94	-35.99	-17.97	1.42	1.38	-3.62
2,818.00	6.40	244.40	2,816.58	-24.72	-45.22	-20.99	1.02	0.64	-7.45
2,911.00	7.10	234.70	2,908.94	-30.28	-54.58	-25.78	1.44	0.75	-10.43
3,005.00	7.40	232.60	3,002.19	-37.32	-64.13	-32.02	0.43	0.32	-2.23
3,099.00	6.80	233.20	3,095.46	-44.33	-73.40	-38.26	0.64	-0.64	0.64
3,192.00	7.00	231.80	3,187.79	-51.13	-82.26	-44.32	0.28	0.22	-1.51
3,286.00	6.60	232.60	3,281.13	-57.94	-91.07	-50.40	0.44	-0.43	1.06
3,379.00	6.60	233.30	3,373.51	-64.36	-99.61	-56.11	0.06	0.00	0.54
3,473.00	6.80	232.20	3,466.87	-71.00	-108.34	-62.03	0.25	0.21	-1.17
3,566.00	7.20	234.10	3,559.18	-77.79	-117.41	-68.06	0.50	0.43	2.04
3,660.00	7.80	233.90	3,652.37	-85.01	-127.33	-74.45	0.64	0.64	-0.21
3,753.00	7.00	233.00	3,744.60	-92.14	-136.96	-80.78	0.87	-0.66	-0.97
3,847.00	7.70	232.20	3,837.83	-99.44	-146.51	-87.29	0.75	0.74	-0.85
3,941.00	7.30	231.20	3,931.02	-107.04	-156.14	-94.09	0.45	-0.43	-1.06
4,034.00	7.20	233.10	4,023.28	-114.25	-165.40	-100.52	0.28	-0.11	2.04
4,128.00	6.90	236.60	4,116.57	-120.89	-174.83	-106.38	0.56	-0.32	-3.72
4,221.00	6.60	237.70	4,208.92	-126.82	-184.01	-111.56	0.35	-0.32	1.18
4,315.00	6.90	234.30	4,302.27	-133.00	-193.16	-116.98	0.53	0.32	-3.62
4,409.00	6.50	233.10	4,395.63	-139.49	-202.00	-122.73	0.45	-0.43	-1.28
4,502.00	6.90	234.70	4,487.99	-145.88	-210.77	-128.39	0.47	0.43	1.72
4,596.00	6.80	235.80	4,581.32	-152.27	-219.98	-134.02	0.18	-0.11	1.17



Phoenix Technology Services LP

Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well 124H
Project:	Lea County, NM (NAD 27)	TVD Reference:	RKB @ 4073.50usft (Patterson 809)
Site:	Pickard State 20-18S-34E RN	MD Reference:	RKB @ 4073.50usft (Patterson 809)
Well:	124H	North Reference:	Grid
Wellbore:	OH / Job 1514671	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 809)	Database:	Compass 5000 GCR

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,690.00	6.40	235.10	4,674.70	-158.40	-228.88	-139.41	0.43	-0.43	-0.74	
4,783.00	6.20	234.40	4,767.14	-164.29	-237.22	-144.60	0.23	-0.22	-0.75	
4,877.00	6.10	232.50	4,860.60	-170.28	-245.31	-149.93	0.24	-0.11	-2.02	
4,970.00	6.10	235.70	4,953.07	-176.08	-253.31	-155.05	0.37	0.00	3.44	
5,064.00	5.90	236.60	5,048.56	-181.55	-261.47	-159.85	0.24	-0.21	0.96	
5,158.00	5.20	236.10	5,140.11	-186.59	-269.04	-164.26	0.75	-0.74	-0.53	
5,251.00	4.70	236.80	5,232.77	-191.02	-275.72	-168.14	0.54	-0.54	0.75	
5,345.00	3.80	236.30	5,326.51	-194.86	-281.54	-171.50	0.96	-0.96	-0.53	
5,438.00	3.70	235.90	5,419.31	-198.25	-286.58	-174.47	0.11	-0.11	-0.43	
5,532.00	1.90	243.90	5,513.19	-200.64	-290.50	-176.53	1.95	-1.91	8.51	
5,617.00	1.20	254.80	5,598.16	-201.49	-292.62	-177.21	0.89	-0.82	12.82	
5,758.00	1.10	192.50	5,739.14	-203.20	-294.34	-178.78	0.85	-0.07	-44.18	
5,852.00	1.10	196.90	5,833.12	-204.94	-294.80	-180.48	0.09	0.00	4.88	
5,946.00	1.30	86.50	5,927.11	-205.74	-293.99	-181.34	2.10	0.21	-117.45	
6,039.00	2.30	70.40	6,020.06	-205.05	-291.18	-180.88	1.19	1.08	-17.31	
6,133.00	2.70	78.40	6,113.97	-203.97	-287.24	-180.12	0.56	0.43	8.51	
6,226.00	1.80	69.30	6,206.90	-203.02	-283.72	-179.45	1.04	-0.97	-9.78	
6,320.00	1.20	346.10	6,300.88	-201.54	-282.59	-178.07	2.17	-0.64	-88.51	
6,413.00	2.10	320.60	6,393.84	-199.28	-283.90	-175.71	1.23	0.97	-27.42	
6,507.00	2.30	328.20	6,487.77	-196.34	-285.98	-172.62	0.38	0.21	8.09	
6,600.00	1.50	328.60	6,580.72	-193.72	-287.60	-169.87	0.86	-0.86	0.43	
6,694.00	1.30	327.70	6,674.69	-191.77	-288.81	-167.83	0.21	-0.21	-0.96	
6,788.00	0.50	339.50	6,768.68	-190.48	-289.52	-166.49	0.87	-0.85	12.55	
6,881.00	0.80	23.10	6,861.67	-189.50	-289.41	-165.52	0.60	0.32	46.88	
6,975.00	0.40	71.90	6,955.67	-188.80	-288.84	-164.87	0.65	-0.43	51.91	
7,069.00	1.70	127.10	7,049.65	-189.54	-287.42	-165.72	1.60	1.38	58.72	
7,163.00	2.40	110.40	7,143.59	-191.06	-284.46	-167.48	0.97	-0.74	-17.77	
7,257.00	1.80	128.50	7,237.53	-192.67	-281.46	-169.32	0.94	-0.64	19.26	
7,350.00	0.90	147.00	7,330.50	-194.19	-279.92	-170.96	1.06	-0.97	19.89	
7,444.00	0.60	230.80	7,424.50	-195.12	-279.90	-171.89	1.09	-0.32	89.15	
7,537.00	0.60	253.80	7,517.49	-195.57	-280.74	-172.27	0.26	0.00	-24.73	
7,631.00	0.60	239.00	7,611.49	-195.98	-281.64	-172.58	0.16	0.00	-15.74	
7,725.00	0.60	233.90	7,705.48	-196.50	-282.46	-173.06	0.06	0.00	-5.43	
7,819.00	0.70	247.50	7,799.48	-197.01	-283.39	-173.49	0.19	0.11	14.47	
7,912.00	1.00	263.30	7,892.47	-197.32	-284.72	-173.70	0.41	0.32	16.99	
8,006.00	1.10	273.70	7,986.45	-197.36	-286.43	-173.59	0.23	0.11	11.06	
8,099.00	1.40	292.70	8,079.43	-196.86	-288.37	-172.94	0.55	0.32	20.43	
8,193.00	1.80	306.20	8,173.39	-195.55	-290.62	-171.45	0.58	0.43	14.36	
8,286.00	0.50	271.80	8,266.37	-194.67	-292.21	-170.45	1.52	-1.40	-36.99	
8,380.00	0.70	224.30	8,360.37	-195.07	-293.02	-170.78	0.55	0.21	-50.53	



Phoenix Technology Services LP

Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well 124H
Project:	Lea County, NM (NAD 27)	TVD Reference:	RKB @ 4073.50usft (Patterson 809)
Site:	Pickard State 20-18S-34E RN	MD Reference:	RKB @ 4073.50usft (Patterson 809)
Well:	124H	North Reference:	Grid
Wellbore:	OH / Job 1514871	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 809)	Database:	Compass 5000 GCR

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,473.00	0.60	296.00	8,453.36	-195.26	-293.85	-170.91	0.82	-0.11	77.10
8,567.00	0.90	327.70	8,547.35	-194.42	-294.69	-170.00	0.53	0.32	33.72
8,660.00	1.00	341.90	8,640.34	-193.04	-295.33	-168.57	0.27	0.11	15.27
8,754.00	1.30	347.80	8,734.32	-191.21	-295.81	-166.71	0.34	0.32	6.28
8,847.00	1.50	355.90	8,827.29	-188.97	-296.12	-164.45	0.30	0.22	8.71
8,941.00	0.50	48.60	8,921.28	-187.47	-295.90	-162.97	1.34	-1.06	56.06
9,034.00	0.40	73.10	9,014.28	-187.11	-295.29	-162.66	0.23	-0.11	26.34
9,111.00	0.10	97.80	9,091.28	-187.04	-294.96	-162.62	0.41	-0.39	32.08
9,204.00	0.30	129.50	9,184.28	-187.20	-294.69	-162.80	0.24	0.22	34.09
9,266.00	0.20	324.90	9,246.28	-187.22	-294.63	-162.82	0.80	-0.16	-265.48
9,288.00	3.30	349.40	9,278.26	-166.27	-294.83	-161.86	9.75	9.69	76.56
9,328.00	7.10	346.20	9,308.13	-183.62	-295.43	-159.17	12.70	12.67	-10.67
9,359.00	11.00	346.00	9,338.74	-178.88	-296.61	-154.36	12.58	12.58	-0.65
9,391.00	14.30	350.30	9,369.96	-172.03	-298.01	-147.41	10.72	10.31	13.44
9,422.00	17.10	354.10	9,399.80	-163.72	-299.13	-139.04	9.62	9.03	12.26
9,453.00	18.60	355.80	9,429.30	-154.25	-299.96	-129.54	5.12	4.84	5.48
9,484.00	19.60	358.30	9,458.60	-144.12	-300.47	-119.40	4.17	3.23	8.06
9,515.00	20.80	359.60	9,487.69	-133.42	-300.67	-108.72	4.13	3.87	4.19
9,546.00	22.80	358.70	9,516.47	-121.91	-300.84	-97.23	6.54	6.45	-2.90
9,578.00	25.10	358.10	9,545.72	-108.93	-301.21	-84.26	7.23	7.19	-1.88
9,609.00	28.00	357.60	9,573.44	-95.08	-301.73	-70.42	9.38	9.35	-1.61
9,640.00	29.90	357.20	9,600.57	-80.09	-302.41	-55.42	6.16	6.13	-1.29
9,672.00	31.00	356.80	9,628.15	-63.90	-303.26	-39.21	3.50	3.44	-1.25
9,703.00	33.30	356.90	9,654.40	-47.43	-304.17	-22.72	7.42	7.42	0.32
9,734.00	35.30	357.80	9,680.01	-29.98	-304.97	-5.26	6.66	6.45	2.90
9,766.00	36.60	358.70	9,705.91	-11.20	-305.54	13.50	4.39	4.06	2.81
9,798.00	37.50	358.50	9,731.45	8.07	-306.01	32.75	2.84	2.81	-0.63
9,829.00	39.80	358.40	9,755.66	27.43	-306.54	52.08	7.42	7.42	-0.32
9,860.00	42.60	358.70	9,778.98	47.84	-307.05	72.47	9.05	9.03	0.97
9,891.00	46.80	358.30	9,801.01	69.63	-307.63	94.23	13.58	13.55	-1.29
9,903.50	48.25	358.01	9,809.45	78.84	-307.92	103.44	11.74	11.61	-2.33
HL Crossing: -9904' MD; 103° VS; 48.25° Inc									
9,922.00	50.40	357.60	9,821.51	92.86	-308.46	117.46	11.74	11.62	-2.21
9,954.00	52.20	359.30	9,841.52	117.83	-309.13	142.39	6.99	5.63	5.31
9,985.00	54.60	0.40	9,860.00	142.71	-309.19	167.20	8.25	7.74	3.55
10,016.00	57.40	0.90	9,877.33	168.41	-308.90	192.79	9.13	9.03	1.61
10,047.00	60.90	2.20	9,893.23	195.00	-308.18	219.24	11.85	11.29	4.19
10,078.00	62.80	2.70	9,907.83	222.32	-307.01	246.38	6.61	6.45	-1.61
10,110.00	66.80	2.70	9,921.43	251.25	-305.64	275.10	12.19	12.19	0.00
10,142.00	70.50	3.40	9,933.07	281.01	-304.05	304.64	11.74	11.56	-2.19



Phoenix Technology Services LP

Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well 124H
Project:	Lea County, NM (NAD 27)	TVD Reference:	RKB @ 4073.50usft (Patterson 809)
Site:	Pickard State 20-18S-34E RN	MD Reference:	RKB @ 4073.50usft (Patterson 809)
Well:	124H	North Reference:	Grid
Wellbore:	OH / Job 1514671	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 809)	Database:	Compass 5000 GCR

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)
10,171.00	75.30	3.40	9,941.60	308.67	-302.41	332.07	16.55	16.55	0.00
10,203.00	80.60	3.20	9,948.28	339.90	-300.61	363.06	16.57	16.56	-0.63
10,234.00	85.70	2.50	9,951.97	370.63	-299.08	393.57	16.60	16.45	-2.26
10,351.00	93.80	356.90	9,952.48	487.49	-299.69	510.09	8.41	6.92	-4.79
10,445.00	96.50	355.20	9,944.05	580.87	-306.14	603.69	3.39	2.87	-1.81
10,539.00	96.60	353.00	9,933.32	673.76	-315.74	697.05	2.33	0.11	-2.34
10,632.00	96.50	352.60	9,922.71	765.42	-327.32	789.35	0.44	-0.11	-0.43
10,726.00	96.10	354.10	9,912.40	858.22	-338.14	882.72	1.64	-0.43	1.60
10,819.00	91.20	354.60	9,906.48	950.56	-347.27	975.49	5.30	-5.27	-0.54
10,913.00	87.80	354.70	9,907.30	1,044.13	-356.03	1,069.46	3.62	-3.62	0.11
11,006.00	88.30	354.50	9,910.46	1,136.66	-364.78	1,162.40	0.58	0.54	-0.22
11,100.00	88.20	354.00	9,913.33	1,230.14	-374.19	1,256.34	0.54	-0.11	-0.53
11,194.00	87.60	353.50	9,916.78	1,323.52	-384.42	1,350.23	0.83	-0.64	-0.53
11,288.00	88.60	353.60	9,919.89	1,416.88	-394.97	1,444.13	1.07	1.08	0.11
11,381.00	88.50	353.10	9,922.25	1,509.22	-405.74	1,537.05	0.55	-0.11	-0.54
11,475.00	89.20	352.30	9,924.13	1,602.44	-417.68	1,630.92	1.13	-0.74	-0.85
11,568.00	91.00	352.80	9,923.97	1,694.65	-429.74	1,723.81	2.01	1.94	0.54
11,662.00	92.50	353.30	9,921.10	1,787.91	-441.11	1,817.68	1.68	1.60	0.53
11,756.00	95.00	354.90	9,914.95	1,881.20	-450.75	1,911.45	3.16	2.66	1.70
11,850.00	93.00	353.80	9,908.40	1,974.51	-459.98	2,005.20	2.43	-2.13	-1.17
11,943.00	93.10	353.60	9,903.45	2,066.82	-470.17	2,098.03	0.24	0.11	-0.22
12,037.00	93.00	353.10	9,898.45	2,160.05	-481.05	2,191.84	0.54	-0.11	-0.53
12,131.00	91.00	351.00	9,895.17	2,253.08	-494.04	2,285.61	3.08	-2.13	-2.23
12,225.00	90.80	350.00	9,893.69	2,345.78	-509.55	2,379.28	1.08	-0.21	-1.06
12,319.00	95.10	355.20	9,888.85	2,438.82	-521.64	2,472.97	7.17	4.57	5.53
12,412.00	95.00	354.20	9,880.66	2,531.06	-530.20	2,565.60	1.08	-0.11	-1.08
12,506.00	94.40	354.10	9,872.96	2,624.26	-539.75	2,659.26	0.65	-0.64	-0.11
12,599.00	93.50	354.40	9,866.56	2,716.57	-549.04	2,752.02	1.02	-0.97	0.32
12,693.00	93.60	354.80	9,860.73	2,809.97	-557.87	2,845.83	0.44	0.11	0.43
12,787.00	93.60	354.60	9,854.83	2,903.39	-566.54	2,939.64	0.21	0.00	0.21
12,880.00	94.30	354.90	9,848.43	2,995.77	-575.03	3,032.42	0.82	0.75	0.32
12,974.00	96.40	355.60	9,839.66	3,089.04	-582.76	3,126.00	2.35	2.23	0.74
13,067.00	99.40	355.40	9,826.88	3,180.86	-590.00	3,218.11	3.23	3.23	-0.22
13,160.00	90.50	354.30	9,818.86	3,273.04	-598.32	3,310.66	9.64	-9.57	-1.18
13,254.00	87.80	355.50	9,820.26	3,366.65	-606.67	3,404.64	3.14	-2.87	-1.28
13,348.00	90.40	356.20	9,821.74	3,460.39	-613.47	3,498.61	2.86	2.77	0.74
13,441.00	92.60	356.00	9,819.30	3,553.13	-619.80	3,591.57	2.38	2.37	-0.22
13,536.00	93.20	355.80	9,814.49	3,647.77	-626.58	3,686.44	0.67	0.63	-0.21
13,629.00	94.40	355.60	9,808.33	3,740.30	-633.54	3,779.23	1.31	1.29	-0.22
13,722.00	93.60	355.10	9,801.84	3,832.77	-641.06	3,872.01	1.01	-0.86	-0.54



Phoenix Technology Services LP

Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well 124H
Project:	Lea County, NM (NAD 27)	TVD Reference:	RKB @ 4073.50usft (Patterson 809)
Site:	Pickard State 20-18S-34E RN	MD Reference:	RKB @ 4073.50usft (Patterson 809)
Well:	124H	North Reference:	Grid
Wellbore:	OH / Job 1514671	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 809)	Database:	Compass 5000 GCR

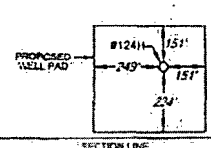
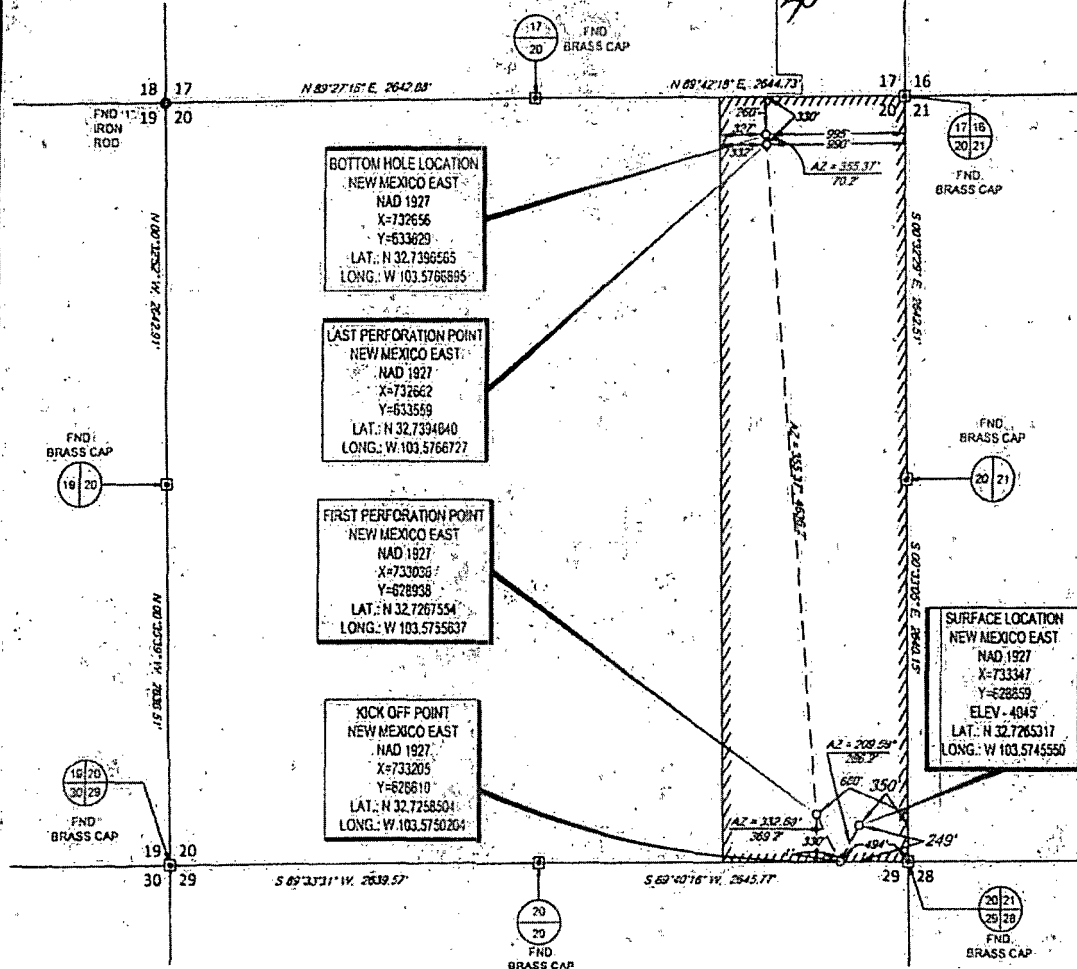
Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (%/100usft)	Build Rate (%/100usft)	Turn Rate (%/100usft)	
13,815.00	94.60	354.80	9,795.19	3,925.17	-649.22	3,964.76	1.12	1.08	-0.32	
13,908.00	95.40	354.30	9,787.09	4,017.39	-658.02	4,057.40	1.01	0.86	-0.54	
14,002.00	95.70	354.90	9,778.00	4,110.54	-666.83	4,150.95	0.71	0.32	0.64	
14,096.00	94.50	354.90	9,769.64	4,203.79	-675.15	4,244.57	1.28	-1.28	0.00	
14,189.00	95.40	354.40	9,761.62	4,296.04	-683.79	4,337.22	1.11	0.97	-0.54	
14,283.00	96.20	354.30	9,752.12	4,389.11	-693.00	4,430.72	0.86	-0.85	-0.11	
14,377.00	95.30	354.50	9,742.70	4,482.18	-702.12	4,524.23	0.98	-0.96	0.21	
14,470.00	96.60	353.50	9,733.06	4,574.17	-711.79	4,616.70	1.76	-1.40	-1.08	
14,564.00	97.30	353.00	9,721.69	4,666.84	-722.76	4,709.95	0.91	0.74	-0.53	
14,597.00	97.55	352.93	9,717.42	4,699.31	-726.76	4,742.84	0.77	0.74	-0.21	
HL Crossing - 14597' MD, 4743' VS, 97.55° Inc										
14,658.00	98.00	352.80	9,709.17	4,759.28	-734.27	4,803.02	0.77	0.74	-0.21	
14,711.00	98.30	352.40	9,701.66	4,811.31	-741.03	4,855.43	0.94	0.57	-0.75	
Final Phoenix Survey										
14,770.00	98.30	352.40	9,693.14	4,869.18	-748.75	4,913.73	0.00	0.00	0.00	
Projection to TD										

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
161.00	161.00	-0.41	0.09	First Phoenix Survey	
9,903.50	9,809.45	78.84	-307.92	HL Crossing - 9904' MD, 103° VS, 48.25° Inc	
14,597.00	9,717.42	4,699.31	-726.76	HL Crossing - 14597' MD, 4743' VS, 97.55° Inc	
14,711.00	9,701.66	4,811.31	-741.03	Final Phoenix Survey	
14,770.00	9,693.14	4,869.18	-748.75	Projection to TD	



SECTION 20, TOWNSHIP 18S, RANGE 34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

30-025-42499



LEASE NAME & WELL NO.: PICKARD STATE 20-18S-34E RN #124H

SECTION 20 TWP 18-S RGE 34-E SURVEY N.M.P.M.
COUNTY LEA STATE NM
DESCRIPTION 249' FSL & 350' FEL

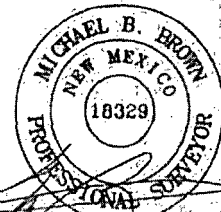
DISTANCE & DIRECTION

FROM INT. OF NM-529 & NM-233, GO WEST ON NM-529 3.9 MILES
TO A POINT 900 FEET NORTHEAST OF THE LOCATION

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID
BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF 11C
NORTH AMERICAN DATUM 1927, 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.

DETAIL VIEW
SCALE: 1" = 50'



Michael Blake Brown, P.S. No. 18329
NOVEMBER 11, 2015

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1420 EVERMAN PARKWAY, SUITE 101, FORT WORTH, TEXAS 76103
TELEPHONE (817) 744-7517 • FAX (817) 744-7541
7503 NORTH BAY DR., MIDLAND, TEXAS 79703
TELEPHONE (432) 683-1833 OR (800) 781-1833 • FAX (432) 683-1743
WWW.TOPOGRAPHIC.COM

NOV 23 2015