

30-025-42499

HOBBS OCD

FEB 16 2016

RECEIVED



PHOENIX
TECHNOLOGY SERVICES

January 14, 2016

State of New Mexico
1625 N. French Drive
Hobbs, New Mexico 88240

Dear District 1 - Hobbs

Re: Matador Resources
Pickard State 20-18S-34E RN 124H
Lea Co., New Mexico
API #30-025-42499
Job No. 1514671

Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced Well by Phoenix Technology Services, Inc. (P-5 No. 664171). Other information required by your office is as follows:

Name & Title of Surveyor	Drain hole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Gary Harmon	124H	161	14,711	12/08/15	01/02/16	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

Claudia Carreon

Claudia Carreon
Operations Administrator

Certified mail receipt number: 7015 0640 0000 9907 5258

FEB 17 2016

Phoenix Technology Services
SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER

1514671

ENERGY COMPANY

Matador Resources

WELL NAME

Pickard State 20-18S-34E RN 124H

COUNTY & STATE

Lea County, NM

API WELL NUMBER

30-025-42499

PROPOSED DIRECTION

355.37°

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
.00 ft	.00 ft	0°	0°	.00 ft	.00 ft	Surface

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
8-Dec-15	161.00 ft	0.3°	168.0°

SURVEY INSTRUMENT
TYPE
Phoenix MWD

LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
2-Jan-16	14,711.00 ft	98.3°	352.4°

TO THE BEST OF MY KNOWLEDGE I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

PROJECTED	PROJECTED		
TD SURVEY	TD SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
2-Jan-16	14,770.00 ft	98.3°	352.4°

Gary Harmon

PRINT YOUR NAME ABOVE

Gary Harmon

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	6.46
DECLINATION OR GRID	GRID

1/2/2016

TODAY'S DATE

MWD SUPERVISOR 1

Gary Harmon

DIRECTIONAL DRILLER 1

Brandon Ivy

MWD SUPERVISOR 2

Clint Gortmaker

DIRECTIONAL DRILLER 2

Rusty Harris

12329 Cutten Rd.,

Houston, Texas 777066

(713)337-0600 (Voice), (713)337-0599 (Fax)



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FEB 16 2016

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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 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	Slot 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: 628,859.00 usft
	+E/-W	0.00 usft	Easting: 733,347.00 usft
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 (usft)	To (usft)	Survey (Wellbore)	Tool Name
161.00	14,770.00	Phoenix MWD Surveys (OH / Job 1514671)	PHX+MWD+HDGM
			Description
			PHX+OWSG MWD + HDGM

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	
161.00	0.30	168.00	161.00	-0.41	0.09	-0.42	0.19	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

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)
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	-12.81	-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	232.80	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	-0.86	-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	5,046.56	-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	4.68
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	-282.58	-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	-195.96	-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 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)
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
9,298.00	3.30	349.40	9,278.26	-186.27	-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	62.90	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

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)
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	1.06	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	2,379.26	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	-582.78	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	4,742.64	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									

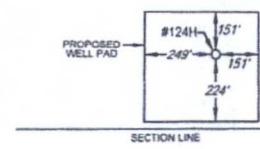
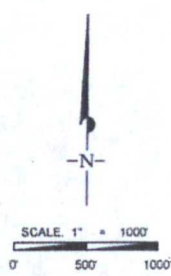
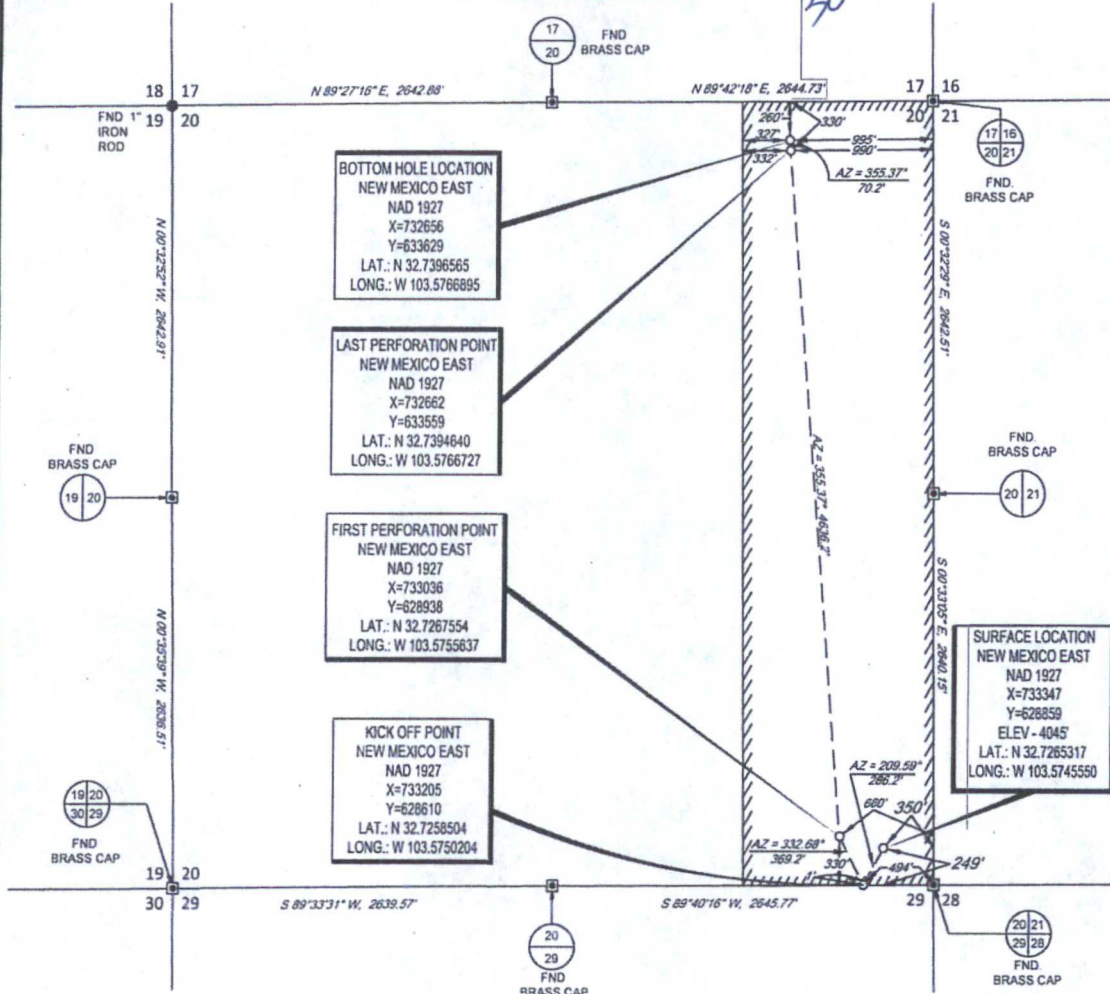
Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
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 ±9.3 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 THE
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" = 500'



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

NOV 23 2015

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