

Results of Directional Survey

API number:	30-025-41586		
OGRID:		Operator:	MATADOR PRODUCTION COMPANY
		Property:	PICKARD STATE # 1H

surface	ULSTR:	O	20	T	18S	R	34E
				699	FSL	1806	FEL

BH Loc	ULSTR:	B	20	T	18S	R	34E
14528	MD	9805.8	TVD	230	FNL	2288	FEL
				5050	FSL		

Top Perf/OH	ULSTR:	O	20	T	18S	R	34E
10286	MD	9911.2	TVD	813	FSL	2223	FEL

Bot Perf/OH	ULSTR:	B	20	T	18S	R	34E
14418	MD	9810.3	TVD	340	FNL	2281	FEL
				4940	FSL		

	MD	N/S	E/W	VD
	10266	94.57	-417.22	9906.63
TOP PERFS/OH	10286	114.05	-417.48	9911.17
	10297	124.76	-417.62	9913.66
	14359	4182.65	-471.02	9812.34
BOT PERFS/OH	14418	4241.49	-474.92	9810.33
	14453	4276.39	-477.24	9809.14

NEXT TO LAST	14472	4295.32	-478.58	9808.35
LAST READING	14528	4351.14	-482.39	9805.81
TD	14528	4351.14	-482.39	9805.81

Surface Location	699	FS	1806	FE
Projected BHL	5050	FS	2288	FE
Location of				
Top Perfs/OH	813	FS	2223	FE
Bottom Perfs/OH	4940	FS	2281	FE

SUMMARY of Subsurface Locations

Surface Location	O-20-18S-34E	699	FS	1806	FE	Vert. Depth
Top Perfs/OH	O-20-18S-34E	813	FS	2223	FE	9911.17
Bottom Perfs/OH	B-20-18S-34E	4940	FS	2281	FE	9810.33
Projected TD	B-20-18S-34E	5050	FS	2288	FE	9805.81

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TECHNOLOGY SERVICES

Matador Resources

Lea County, NM (NAD 27)

Pickard State

#1H

Wellbore #1 Job #1410898

Survey: Phoenix MWD Surveys

Standard Survey Report

06 June, 2014





Phoenix Technology Services

Survey Report



Company: Matador Resources
 Project: Lea County, NM (NAD 27)
 Site: Pickard State
 Well: #1H
 Wellbore: Wellbore #1 Job #1410898
 Design: Surveys (Patterson 203)

Local Co-ordinate Reference: Well #1H
 TVD Reference: KB: 25' @ 4078.00usft (Patterson 203)
 MD Reference: KB: 25' @ 4078.00usft (Patterson 203)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: Compass 5000 GCR DB

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		
Site Position:	From: Map	Northing: 629,300.00 usft	Latitude: 32° 43' 39.98524 N
		Easting: 731,886.00 usft	Longitude: 103° 34' 45.45748 W
Position Uncertainty:	0.00 usft	Slot Radius: 13-3/16 "	Grid Convergence: 0.41 °

Well	#1H		
Well Position	+N/-S 0.00 usft	Northing: 629,300.00 usft	Latitude: 32° 43' 39.98524 N
	+E/-W 0.00 usft	Easting: 731,886.00 usft	Longitude: 103° 34' 45.45748 W
Position Uncertainty	0.00 usft	Wellhead Elevation: usft	Ground Level: 4,053.00 usft

Wellbore	Wellbore #1 Job #1410898				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	2014/05/25	7.26	60.58	48,619

Design	Surveys (Patterson 203)				
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	353.43	

Survey Program	Date 2014/06/06				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
25.00	7,462.00	NaviTrak (Wellbore #1 Job #1410898)	MWD	MWD - Standard	
7,543.00	14,528.00	Phoenix MWD Surveys (Wellbore #1 Job #	MWD	MWD - Standard	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,462.00	15.11	226.45	7,436.14	-214.36	-251.31	-184.20	0.00	0.00	0.00
7,543.00	14.50	216.90	7,514.47	-229.75	-265.05	-197.91	3.10	-0.75	-11.79
First Phoenix MWD Survey									
7,637.00	15.10	215.70	7,605.35	-249.10	-279.27	-215.51	0.72	0.64	-1.28
7,732.00	14.10	217.50	7,697.28	-268.33	-293.53	-232.99	1.16	-1.05	1.89
7,826.00	12.40	219.00	7,788.77	-285.26	-306.85	-248.28	1.84	-1.81	1.60
7,921.00	11.60	211.80	7,881.70	-301.31	-318.31	-262.91	1.79	-0.84	-7.58
8,015.00	11.50	208.00	7,973.80	-317.61	-327.69	-278.03	0.82	-0.11	-4.04
8,110.00	10.50	203.60	8,067.06	-333.91	-335.60	-293.32	1.37	-1.05	-4.63
8,204.00	10.70	204.70	8,159.45	-349.68	-342.67	-308.18	0.30	0.21	1.17



Phoenix Technology Services

Survey Report



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 Site: Pickard State
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 Wellbore: Wellbore #1 Job #1410898
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 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: Compass 5000 GCR DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,298.00	9.10	207.70	8,252.05	-364.19	-349.78	-321.78	1.79	-1.70	3.19
8,393.00	9.90	197.20	8,345.75	-378.65	-355.68	-335.47	2.01	0.84	-11.05
8,487.00	9.40	200.40	8,438.42	-393.56	-360.75	-349.70	0.78	-0.53	3.40
8,581.00	10.10	199.70	8,531.06	-408.52	-366.20	-363.94	0.76	0.74	-0.74
8,676.00	10.60	201.60	8,624.52	-424.48	-372.23	-379.11	0.64	0.53	2.00
8,771.00	9.00	202.50	8,718.13	-439.47	-378.29	-393.31	1.69	-1.68	0.95
8,865.00	7.90	199.40	8,811.11	-452.36	-383.25	-405.54	1.27	-1.17	-3.30
8,974.00	8.90	201.30	8,918.94	-467.28	-388.80	-419.73	0.95	0.92	1.74
9,068.00	6.40	211.30	9,012.10	-478.54	-394.16	-430.29	3.00	-2.66	10.64
9,162.00	4.60	213.30	9,105.66	-486.16	-398.95	-437.32	1.93	-1.91	2.13
9,257.00	3.00	232.30	9,200.45	-490.87	-403.01	-441.53	2.12	-1.68	20.00
9,288.00	2.50	239.30	9,231.42	-491.71	-404.24	-442.23	1.94	-1.61	22.58
9,321.00	2.00	289.10	9,264.39	-491.88	-405.40	-442.27	5.90	-1.52	150.91
9,351.00	4.20	333.00	9,294.35	-490.74	-406.39	-441.02	10.29	7.33	146.33
9,382.00	6.50	348.20	9,325.22	-488.01	-407.27	-438.21	8.65	7.42	49.03
9,414.00	8.70	352.50	9,356.93	-483.84	-407.95	-433.98	7.10	6.88	13.44
9,445.00	11.30	352.40	9,387.46	-478.50	-408.66	-428.60	8.39	8.39	-0.32
9,477.00	14.60	349.50	9,418.64	-471.42	-409.81	-421.44	10.51	10.31	-9.06
9,508.00	17.50	348.60	9,448.43	-463.01	-411.45	-412.90	9.39	9.35	-2.90
9,540.00	19.70	349.80	9,478.76	-452.99	-413.35	-402.72	6.98	6.88	3.75
9,572.00	22.50	353.50	9,508.61	-441.59	-415.00	-391.21	9.69	8.75	11.56
9,604.00	25.70	355.80	9,537.82	-428.58	-416.20	-378.15	10.42	10.00	7.19
9,635.00	30.00	356.30	9,565.22	-414.14	-417.19	-363.69	13.89	13.87	1.61
9,666.00	34.50	355.70	9,591.43	-397.64	-418.35	-347.17	14.55	14.52	-1.94
9,698.00	37.20	357.40	9,617.37	-378.94	-419.47	-328.46	8.99	8.44	5.31
9,730.00	39.20	359.20	9,642.52	-359.16	-420.05	-308.74	7.15	6.25	5.63
9,761.00	39.60	0.60	9,666.47	-339.49	-420.09	-289.19	3.14	1.29	4.52
9,793.00	41.30	1.80	9,690.82	-318.73	-419.65	-268.62	5.84	5.31	3.75
9,824.00	44.40	2.70	9,713.55	-297.67	-418.81	-247.79	10.19	10.00	2.90
9,856.00	49.20	2.10	9,735.45	-274.37	-417.84	-224.76	15.06	15.00	-1.88
9,887.00	52.70	1.70	9,754.97	-250.31	-417.05	-200.95	11.33	11.29	-1.29
9,919.00	55.80	1.00	9,773.67	-224.35	-416.44	-175.23	9.85	9.69	-2.19
9,950.00	58.30	0.80	9,790.53	-198.34	-416.03	-149.44	8.08	8.06	-0.65
9,982.00	61.10	0.50	9,806.67	-170.72	-415.72	-122.03	8.79	8.75	-0.94
10,013.00	64.00	0.20	9,820.96	-143.21	-415.55	-94.73	9.39	9.35	-0.97
10,045.00	67.40	359.50	9,834.12	-114.05	-415.63	-65.75	10.81	10.63	-2.19
10,077.00	69.10	358.70	9,845.98	-84.33	-416.10	-36.17	5.80	5.31	-2.50
10,108.00	69.30	358.60	9,856.99	-55.36	-416.78	-7.31	0.71	0.65	-0.32
10,140.00	70.30	359.00	9,868.04	-25.34	-417.41	22.59	3.34	3.13	1.25
10,171.00	71.30	0.00	9,878.23	3.94	-417.66	51.70	4.44	3.23	3.23
10,203.00	71.70	0.60	9,888.39	34.28	-417.50	81.83	2.17	1.25	1.88
10,234.00	72.80	0.40	9,897.84	63.80	-417.25	111.12	3.60	3.55	-0.65
10,266.00	75.30	359.70	9,906.63	94.57	-417.22	141.69	8.09	7.81	-2.19



Phoenix Technology Services

Survey Report



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Site: Pickard State
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Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Bulld Rate (°/100usft)	Turn Rate (°/100usft)
10,297.00	78.50	358.80	9,913.66	124.76	-417.62	171.72	10.70	10.32	-2.90
10,329.00	82.10	358.90	9,919.05	156.29	-418.25	203.12	11.25	11.25	0.31
10,360.00	86.10	358.90	9,922.23	187.11	-418.84	233.80	12.90	12.90	0.00
10,391.00	89.20	358.80	9,923.51	218.07	-419.46	264.64	10.01	10.00	-0.32
10,486.00	91.40	358.50	9,923.01	313.04	-421.70	359.23	2.34	2.32	-0.32
10,580.00	91.20	357.80	9,920.88	406.97	-424.74	452.89	0.77	-0.21	-0.74
10,675.00	91.00	358.40	9,919.05	501.90	-427.89	547.56	0.67	-0.21	0.63
10,769.00	90.10	0.70	9,918.15	595.88	-428.62	641.01	2.63	-0.96	2.45
10,864.00	90.50	1.90	9,917.65	690.85	-426.47	735.11	1.33	0.42	1.26
10,958.00	91.30	2.50	9,916.18	784.77	-422.86	828.00	1.06	0.85	0.64
11,053.00	92.40	3.40	9,913.11	879.59	-417.97	921.64	1.50	1.16	0.95
11,147.00	93.00	2.30	9,908.68	973.37	-413.31	1,014.27	1.33	0.64	-1.17
11,242.00	92.80	358.90	9,903.87	1,068.23	-412.31	1,108.39	3.58	-0.21	-3.58
11,336.00	91.90	359.10	9,900.02	1,162.14	-413.95	1,201.87	0.98	-0.96	0.21
11,431.00	93.30	359.40	9,895.71	1,257.03	-415.19	1,296.28	1.51	1.47	0.32
11,525.00	91.90	0.00	9,891.44	1,350.93	-415.68	1,389.62	1.62	-1.49	0.64
11,620.00	90.20	359.30	9,889.70	1,445.91	-416.27	1,484.04	1.94	-1.79	-0.74
11,714.00	90.70	359.20	9,888.97	1,539.89	-417.50	1,577.55	0.54	0.53	-0.11
11,809.00	91.10	359.00	9,887.47	1,634.87	-418.99	1,672.07	0.47	0.42	-0.21
11,904.00	92.20	359.00	9,884.74	1,729.82	-420.64	1,766.58	1.16	1.16	0.00
11,998.00	93.10	358.20	9,880.39	1,823.69	-422.94	1,860.10	1.28	0.96	-0.85
12,092.00	91.60	359.00	9,876.54	1,917.57	-425.23	1,953.64	1.81	-1.60	0.85
12,187.00	92.10	358.90	9,873.47	2,012.51	-426.97	2,048.15	0.54	0.53	-0.11
12,281.00	92.90	358.80	9,869.37	2,106.40	-428.86	2,141.64	0.86	0.85	-0.11
12,376.00	91.70	359.20	9,865.56	2,201.31	-430.51	2,236.11	1.33	-1.26	0.42
12,470.00	92.40	358.30	9,862.20	2,295.22	-432.56	2,329.64	1.21	-0.74	-0.96
12,564.00	90.70	359.00	9,859.65	2,389.16	-434.78	2,423.21	1.66	-1.81	0.74
12,659.00	91.30	359.10	9,857.99	2,484.13	-436.35	2,517.74	0.64	0.63	0.11
12,753.00	92.70	359.50	9,854.71	2,578.06	-437.50	2,611.19	1.55	1.49	0.43
12,848.00	90.90	0.30	9,851.73	2,673.01	-437.66	2,705.53	2.07	-1.89	0.84
12,943.00	91.30	0.10	9,849.91	2,767.99	-437.33	2,799.85	0.47	0.42	-0.21
13,037.00	92.60	0.20	9,846.71	2,861.94	-437.09	2,893.15	1.39	1.38	0.11
13,131.00	94.00	0.20	9,841.30	2,955.78	-436.76	2,986.34	1.49	1.49	0.00
13,226.00	91.70	359.90	9,836.57	3,050.65	-436.88	3,080.58	2.44	-2.42	-0.32
13,321.00	90.60	359.60	9,834.67	3,145.63	-437.09	3,174.99	1.20	-1.16	-0.32
13,415.00	90.10	359.20	9,834.09	3,239.63	-438.08	3,268.47	0.68	-0.53	-0.43
13,509.00	90.80	359.00	9,833.35	3,333.61	-439.55	3,362.01	0.77	0.74	-0.21
13,604.00	90.90	358.60	9,831.95	3,428.58	-441.54	3,456.58	0.43	0.11	-0.42
13,698.00	91.70	357.90	9,829.81	3,522.51	-444.41	3,550.22	1.13	0.85	-0.74
13,793.00	92.30	357.50	9,826.50	3,617.37	-448.22	3,644.90	0.76	0.63	-0.42
13,887.00	90.50	358.10	9,824.20	3,711.27	-451.83	3,738.60	2.02	-1.91	0.64
13,981.00	89.90	357.30	9,823.87	3,805.19	-455.60	3,832.33	1.06	-0.64	-0.85
14,076.00	91.00	357.40	9,823.13	3,900.09	-459.99	3,927.11	1.16	1.16	0.11



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14,170.00	92.30	357.80	9,820.42	3,993.97	-463.93	4,020.82	1.45	1.38	0.43
14,264.00	92.90	358.50	9,816.16	4,087.82	-466.98	4,114.40	0.98	0.64	0.74
14,359.00	91.70	356.60	9,812.34	4,182.65	-471.02	4,209.07	2.36	-1.26	-2.00
14,453.00	92.20	355.80	9,809.14	4,276.39	-477.24	4,302.91	1.00	0.53	-0.85
14,472.00	92.60	356.10	9,808.35	4,295.32	-478.58	4,321.87	2.63	2.11	1.58
Final Phoenix MWD Survey									
14,528.00	92.60	356.10	9,805.81	4,351.14	-482.39	4,377.75	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)	
7,543.00	7,514.47	-228.75	-265.05	First Phoenix MWD Survey
14,472.00	9,808.35	4,295.32	-478.58	Final Phoenix MWD Survey
14,528.00	9,805.81	4,351.14	-482.39	Projection to TD

Checked By: _____ Approved By: _____ Date: _____

SEP 04 2014

Phoenix Technology Services SURVEY DATA CERTIFICATION

RECEIVED



PHOENIX JOB NUMBER 1410898

OPERATOR Matador Resources

WELL NAME Pickard State #1H

COUNTY & STATE

Lea Co, NM

API WELL NUMBER	30-025-41586
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PROPOSED DIRECTION	353.43
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TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
7,462 ft	7,436.14 ft	15.11	226.45	-214.36 ft	-251.31 ft	BAKER HUGHES

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
27-May-14	7,543 ft	14.5	216.9

SURVEY INSTRUMENT
TYPE
Phoenix MWD

LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
5-Jun-14	14,472 ft	92.6	356.1

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
5-Jun-14	14,528 ft	92.6	356.1

Buck Johnson

PRINT YOUR NAME ABOVE

Buck Johnson

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	6.85
DECLINATION OR GRID	GRID

5-Jun-14

TODAY'S DATE

MWD SUPERVISOR 1

Buck Johnson

DIRECTIONAL DRILLER 1

Vinn Adams

MWD SUPERVISOR 2

J. Broussard/B. Carnes

DIRECTIONAL DRILLER 2

Fernando Cano

1805 Brittmore Road

Houston, Texas 77043

(713)3370609 (Voice), (713)337-0599 (Fax)