



PHOENIX
TECHNOLOGY SERVICES

June 23, 2014

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

HOBBS OCD

JUN 30 2014

Dear District 1 - Hobbs

RECEIVED

Re: Matador Resources /
Pickard State Unit #1H /
Lea Co., New Mexico /
API #30-025-41586 /
Job No. 1410898

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	Drainhole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Buck Johnson	1H	7,543	14,472	05/27/14	06/05/14	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,

Dana Robinson

Dana Robinson
Operations Administrator

Certified mail receipt number: 7011 1570 0001 4365 2124

Phoenix Technology Services SURVEY DATA CERTIFICATION

JUN 30 2014



PHOENIX JOB NUMBER

1410898

OPERATOR

Matador Resources

RECEIVED

WELL NAME

Pickard State #1H

COUNTY & STATE

Lea Co, NM

API WELL NUMBER

30-025-41586

PROPOSED DIRECTION

353.43

TIE-IN DATA						
MEASURED DEPTH	VERTICAL DEPTH	INCLIN	AZIMUTH	N-S COORD	E-W COORD	DATA SOURCE
7,462 ft	7,436.14 ft	15.11	226.45	-214.36 ft	-251.31 ft	BAKER HUGHES

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

SURVEY INSTRUMENT TYPE
Phoenix MWD

LAST SURVEY DATE	LAST SURVEY 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 TD SURVEY DATE	PROJECTED TD SURVEY 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)

HOBBS OCD

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-4122
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

JUN 30 2014

State of New Mexico
Energy, Minerals & Natural Resources
Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

HOBBS OCD

FORM C-102

Revised August 1, 2011

JAN 06 2014

Submit one copy to appropriate

District Office

RECEIVED

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-075-41586	² Pool Code 45793	³ Pool Name MESEALERO ESCARPE; BONE SPRING
⁴ Property Code	⁵ Property Name QUERECHO PLAINS PICKARD 20-18-34	⁶ Well Number #1H
⁷ GRID No. 228977	⁸ Operator Name MATADOR PRODUCTION COMPANY	⁹ Elevation 4053'

¹⁰Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	20	18-S	34-E	-	699'	SOUTH	1806'	EAST	LEA

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	20	18-S	34-E	-	240'	NORTH	2265'	EAST	LEA

¹¹ Dedicated Acres 160	¹² Joint or Infill	¹³ Consolidation Code	¹⁴ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

¹⁵20 BOTTOM HOLE LOCATION NEW MEXICO EAST NAD 1927 X=731386 Y=633642 LAT.: N 32.7397183 LONG.: W 103.5808189 LAST PERFORATION POINT NEW MEXICO EAST NAD 1927 X=731387 Y=633552 LAT.: N 32.7394710 LONG.: W 103.5808183 FIRST PERFORATION POINT NEW MEXICO EAST NAD 1927 X=731432 Y=628699 LAT.: N 32.7261293 LONG.: W 103.5807830 BACK BUILD NEW MEXICO EAST NAD 1927 X=731432 Y=628699 LAT.: N 32.7261293 LONG.: W 103.5807830 SURFACE LOCATION NEW MEXICO EAST NAD 1927 X=731886 Y=629300 LAT.: N 32.7277737 LONG.: W 103.5792926 Diagram showing well location and acreage dedication plat with bearings and distances.	¹⁷OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undivided mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature _____ Date _____ Printed Name _____ E-mail Address _____ ¹⁸SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true to the best of my belief. Date of Survey _____ Signature and Seal of Professional Surveyor _____ 11-06-2013 MICHAEL BROWN NEW MEXICO 18329 PROFESSIONAL SURVEYOR Certificate Number _____
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JAN 07 2014



Matador Resources

Lea County, NM (NAD 27)

Pickard State

#1H

Wellbore #1 Job #1410898

Survey: Phoenix MWD Surveys

HOBBS OCD

JUN 30 2014

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Standard Survey Report

06 June, 2014





HOBBS OCD

JUN 30 2014

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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:		Northing:	629,300.00 usft	Latitude: 32° 43' 39.98524 N
From: Map		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
	+E/-W	0.00 usft	Easting:	731,886.00 usft
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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MD Reference: KB: 25' @ 4078.00usft (Patterson 203)
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	-491.89	-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	-408.00	-428.00	9.39	8.39	9.32
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



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)
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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)
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	3.53	-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	1.96	-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	-436.68	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



Phoenix Technology Services

Survey Report



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Site: Pickard State
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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

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)
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	-466.96	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	-229.75	-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: _____