



PHOENIX
TECHNOLOGY SERVICES

March 28, 2016

Oil Conservation Division
State of New Mexico
811 S. First St.
Artesia, New Mexico 88210

Accepted for record
NMOCD
JS

NM OIL CONSERVATION
ARTESIA DISTRICT

APR 18 2016

RECEIVED

Dear District 2 - Artesia

Re: Matador Resources
Paul 25-24S-28E RB #221H
Eddy County, New Mexico
API #30-015-43018
Job No. 1610177

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	
Shane King	221H	8,953	14,398	03/16/16	03/22/16	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 5432



Matador Resources

Eddy County, NM (NAD27 NME)

Paul 25-24S-28E RB

#221H

OH / Job 1610177

Survey: Phoenix MWD Surveys

Standard Survey Report

23 March, 2016





Phoenix Technology Services

Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well #221H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 2947.50usft (Patterson 297)
Site:	Paul 25-24S-28E RB	MD Reference:	RKB @ 2947.50usft (Patterson 297)
Well:	#221H	North Reference:	Grid
Wellbore:	OH / Job 1610177	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 297)	Database:	Compass 5000 GCR

Project	Eddy County, NM (NAD27 NME)		
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	Paul 25-24S-28E RB		
Site Position:		Northing:	434,675.78 usft
From:	Map	Easting:	588,192.69 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 11' 40.98984 N
		Longitude:	104° 2' 53.63628 W
		Grid Convergence:	0.15 °

Well	#221H		
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° 11' 40.98984 N
		Longitude:	104° 2' 53.63628 W
		Ground Level:	2,920.00 usft

Wellbore	OH / Job 1610177		
Magnetics	Model Name	Sample Date	Declination
			(°)
	HDGM	3/2/2016	7.37
			Dip Angle
			(°)
			Field Strength
			(nT)
			60.03
			48,245

Design	Surveys (Patterson 297)		
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
			(°)
			90.11

Survey Program	Date 3/23/2016		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
171.55	8,881.00	VES Gyro Surveys (OH / Job 1610177)	ISCWSA-GYRO-3
8,953.00	14,468.00	Phoenix MWD Surveys (OH / Job 1610177)	PHX+MWD+HDGM
			Description
			Biaxial Semi-Cont. Gyro
			PHX+OWSG MWD + HDGM

Survey									
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)
8,881.00	1.22	232.51	8,868.10	-26.41	-187.80	-187.75	0.00	0.00	0.00
Tie In to VES Gyro Surveys									
8,953.00	1.40	230.40	8,940.08	-27.44	-189.09	-189.03	0.26	0.25	-2.93
First Phoenix MWD Survey									
9,047.00	0.30	201.60	9,034.07	-28.40	-190.06	-190.01	1.22	-1.17	-30.64
9,094.00	5.10	74.50	9,081.01	-27.95	-188.09	-188.04	11.25	10.21	-270.43
9,141.00	10.60	74.50	9,127.55	-28.24	-181.91	-181.86	11.70	11.70	0.00
9,187.00	15.90	79.00	9,172.31	-23.90	-171.64	-171.59	11.73	11.52	9.78
9,234.00	21.20	82.10	9,216.85	-21.51	-156.89	-156.85	11.47	11.28	6.60



Phoenix Technology Services

Survey Report



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Site:	Paul 25-24S-28E RB	MD Reference:	RKB @ 2947.50usft (Patterson 297)
Well:	#221H	North Reference:	Grid
Wellbore:	OH / Job 1810177	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 297)	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)
9,281.00	25.00	78.80	9,260.08	-18.41	-138.72	-138.69	8.54	8.09	-7.02
9,328.00	30.30	77.50	9,301.70	-13.91	-117.39	-117.36	11.35	11.28	-2.77
9,375.00	35.80	82.40	9,341.08	-9.52	-92.17	-92.15	13.00	11.70	10.43
9,422.00	41.30	86.00	9,377.83	-6.62	-63.04	-63.03	12.63	11.70	7.66
9,468.00	45.60	87.80	9,411.22	-4.93	-31.46	-31.45	9.73	9.35	3.91
9,515.00	49.30	86.20	9,443.00	-3.10	3.11	3.11	8.26	7.87	-3.40
9,561.00	52.10	86.20	9,472.13	-0.74	38.62	38.62	6.09	6.09	0.00
9,608.00	54.60	85.80	9,500.18	1.89	76.23	76.23	5.36	5.32	-0.85
9,655.00	57.60	88.40	9,526.40	3.85	115.19	115.18	7.66	6.38	5.53
9,702.00	59.80	90.00	9,550.81	4.40	155.34	155.33	5.51	4.68	3.40
9,748.00	62.30	92.50	9,573.08	3.51	195.57	195.56	7.22	5.43	5.43
9,795.00	65.10	93.90	9,593.90	1.15	237.63	237.63	6.53	5.96	2.98
9,842.00	69.50	94.10	9,612.04	-1.87	280.88	280.88	9.37	9.36	0.43
9,889.00	74.30	93.60	9,626.64	-4.87	325.44	325.45	10.26	10.21	-1.06
9,935.00	79.00	92.30	9,637.25	-7.16	370.12	370.14	10.58	10.22	-2.83
10,104.00	86.00	86.90	9,659.32	-5.93	537.50	537.51	5.21	4.14	-3.20
10,198.00	86.30	88.00	9,665.63	-1.76	631.20	631.20	1.21	0.32	1.17
10,292.00	87.10	88.30	9,671.04	1.27	724.99	724.99	0.91	0.85	0.32
10,386.00	89.90	89.10	9,673.50	3.40	818.93	818.92	3.10	2.98	0.85
10,480.00	91.00	89.60	9,672.76	4.47	912.91	912.90	1.29	1.17	0.53
10,575.00	92.30	91.40	9,670.02	3.64	1,007.87	1,007.86	2.34	1.37	1.89
10,669.00	91.80	90.70	9,666.66	1.92	1,101.79	1,101.78	0.91	-0.53	-0.74
10,763.00	91.50	90.40	9,663.96	1.02	1,195.75	1,195.74	0.45	-0.32	-0.32
10,857.00	90.40	92.90	9,662.40	-1.69	1,289.68	1,289.69	2.91	-1.17	2.66
10,952.00	90.00	92.50	9,662.07	-6.17	1,384.58	1,384.59	0.60	-0.42	-0.42
11,046.00	89.10	92.40	9,662.80	-10.18	1,478.49	1,478.50	0.96	-0.96	-0.11
11,141.00	88.90	92.20	9,664.46	-14.00	1,573.40	1,573.42	0.30	-0.21	-0.21
11,235.00	88.00	91.40	9,667.00	-16.95	1,667.31	1,667.34	1.28	-0.96	-0.85
11,330.00	87.20	90.40	9,670.98	-18.44	1,762.22	1,762.25	1.35	-0.84	-1.05
11,425.00	86.30	90.50	9,674.71	-19.18	1,857.14	1,857.17	1.16	1.16	0.11
11,519.00	89.40	90.10	9,676.60	-19.68	1,951.12	1,951.15	1.25	1.17	-0.43
11,613.00	89.20	90.20	9,677.75	-19.92	2,045.11	2,045.15	0.24	-0.21	0.11
11,707.00	88.20	90.20	9,679.88	-20.25	2,139.08	2,139.12	1.08	-1.06	0.00
11,802.00	89.30	88.50	9,681.95	-19.17	2,234.05	2,234.08	2.13	1.16	-1.78
11,897.00	89.00	88.10	9,683.36	-16.35	2,329.00	2,329.03	0.53	-0.32	-0.42
11,991.00	89.40	88.40	9,684.67	-13.48	2,422.95	2,422.97	0.53	0.43	0.32
12,085.00	88.80	88.40	9,686.15	-10.86	2,516.90	2,516.91	0.64	-0.64	0.00
12,179.00	89.00	88.60	9,687.95	-8.40	2,610.85	2,610.86	0.30	0.21	0.21
12,274.00	88.30	88.90	9,690.19	-6.33	2,705.80	2,705.80	0.80	-0.74	0.32
12,367.00	87.90	88.50	9,693.28	-4.22	2,798.72	2,798.72	0.61	-0.43	-0.43
12,461.00	88.40	88.20	9,696.31	-1.51	2,892.63	2,892.63	0.62	0.53	-0.32
12,556.00	90.40	88.90	9,697.31	0.89	2,987.59	2,987.59	2.23	2.11	0.74
12,649.00	90.80	88.80	9,696.33	2.76	3,080.57	3,080.56	0.44	0.43	-0.11



Phoenix Technology Services
Survey Report



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Site:	Paul 25-24S-28E RB	MD Reference:	RKB @ 2947.50usft (Patterson 297)
Well:	#221H	North Reference:	Grid
Wellbore:	OH / Job 1610177	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 297)	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)	
12,744.00	90.80	89.80	9,695.01	3.92	3,175.55	3,175.54	1.05	0.00	1.05	
12,838.00	89.80	90.10	9,694.51	4.00	3,269.55	3,269.53	1.11	-1.06	0.32	
12,932.00	88.70	89.10	9,695.74	4.66	3,363.54	3,363.52	1.58	-1.17	-1.06	
13,026.00	88.40	89.80	9,698.12	5.56	3,457.50	3,457.48	0.81	-0.32	0.74	
13,121.00	90.80	91.90	9,698.79	4.15	3,552.47	3,552.46	3.36	2.53	2.21	
13,216.00	90.40	92.00	9,697.79	0.92	3,647.41	3,647.41	0.43	-0.42	0.11	
13,310.00	88.80	92.70	9,698.45	-2.94	3,741.33	3,741.33	1.86	-1.70	0.74	
13,404.00	88.50	92.60	9,700.66	-7.28	3,835.20	3,835.21	0.34	-0.32	-0.11	
13,498.00	88.10	92.40	9,703.45	-11.38	3,929.07	3,929.09	0.48	-0.43	-0.21	
13,592.00	87.50	92.10	9,707.06	-15.07	4,022.93	4,022.95	0.71	-0.64	-0.32	
13,686.00	86.60	91.60	9,711.90	-18.10	4,116.75	4,116.78	1.09	-0.96	-0.53	
13,780.00	88.60	93.20	9,715.83	-22.03	4,210.58	4,210.62	2.72	2.13	1.70	
13,874.00	88.60	93.00	9,718.13	-27.12	4,304.42	4,304.46	0.21	0.00	-0.21	
13,968.00	89.30	94.00	9,719.85	-32.85	4,398.22	4,398.28	1.30	0.74	1.06	
14,063.00	89.20	94.40	9,721.10	-39.81	4,492.96	4,493.03	0.43	-0.11	0.42	
14,157.00	87.30	94.10	9,723.97	-46.77	4,586.65	4,586.73	2.05	-2.02	-0.32	
14,251.00	88.80	95.00	9,727.16	-54.23	4,680.30	4,680.39	1.86	1.60	0.96	
14,345.00	90.00	94.70	9,728.15	-62.17	4,773.96	4,774.07	1.32	1.28	-0.32	
14,398.00	88.90	94.10	9,728.66	-66.24	4,826.80	4,826.91	2.36	-2.08	-1.13	
Final Phoenix MWD Survey										
14,468.00	88.90	94.10	9,730.00	-71.24	4,896.60	4,896.73	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	
8,881.00	8,868.10	-26.41	-187.80	Tie In to VES Gyro Surveys	
8,953.00	8,940.08	-27.44	-189.09	First Phoenix MWD Survey	
14,398.00	9,728.66	-66.24	4,826.80	Final Phoenix MWD Survey	
14,468.00	9,730.00	-71.24	4,896.60	Projection to TD	

Checked By: _____ Approved By: _____ Date: _____

Phoenix Technology Services
SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER

1610177

ENERGY COMPANY

Matador Resources

WELL NAME

Paul 25-24S-28E RB #221H

COUNTY & STATE

Eddy County, New Mexico

API WELL NUMBER

30-015-43018

PROPOSED DIRECTION

90.11°

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
8,881.00 ft	8,868.10 ft	1.22°	232.51°	-26.41 ft	-187.80 ft	VES Gyro

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
16-Mar-16	8,953.00 ft	1.40°	230.40°

SURVEY INSTRUMENT

TYPE

Phoenix MWD

LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
22-Mar-16	14,398.00 ft	88.90°	94.10°

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
22-Mar-16	14,468.00 ft	88.90°	94.10°

Shane King

PRINT YOUR NAME ABOVE

Shane King

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	7.22
DECLINATION OR GRID	GRID

3/22/2016

TODAY'S DATE

MWD SUPERVISOR 1

Shane King

DIRECTIONAL DRILLER 1

Dustin Barnett

MWD SUPERVISOR 2

Brian Pittman

DIRECTIONAL DRILLER 2

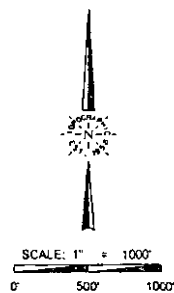
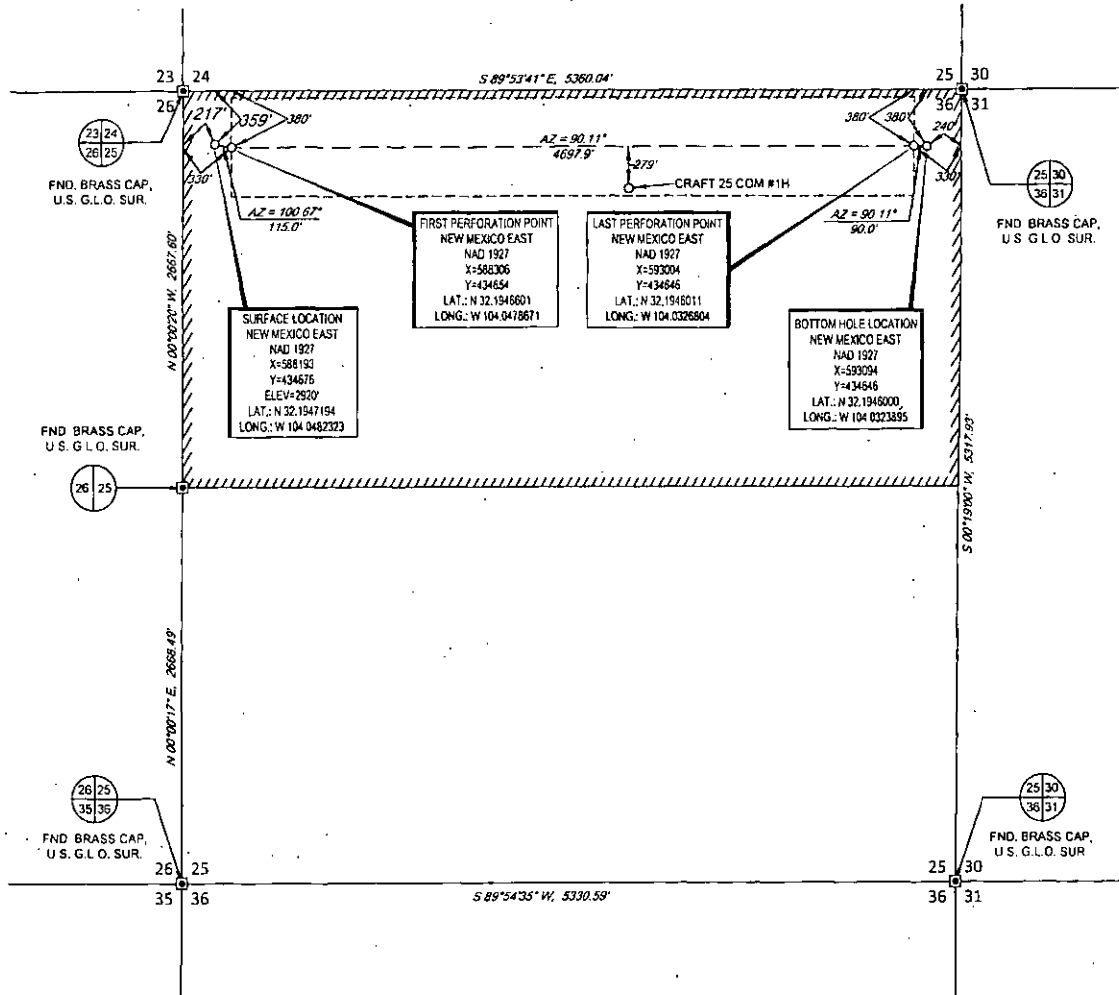
Vinn Adams

12329 Cutten Rd., Houston, Texas 77066

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



SECTION 25, TOWNSHIP 24-S, RANGE 28-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



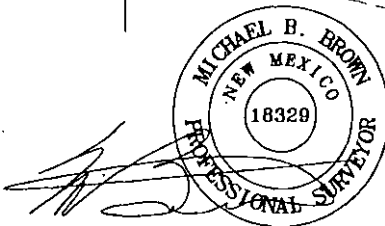
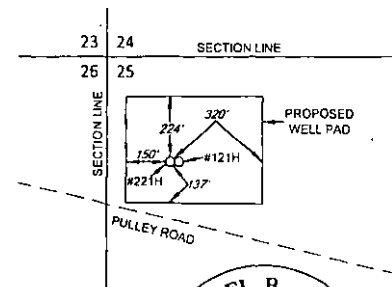
LEASE NAME & WELL NO.: PAUL 25-24S-28E RB #221H

SECTION 25 TWP 24-S RGE 28-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM
DESCRIPTION 359' FNL & 217' FWL

DISTANCE & DIRECTION
FROM THE INT. OF US-285 S. & HWY-720 GO SOUTH ON US-285
S ±2.1 MILES, THENCE EAST (LEFT) ON PULLEY RD. ±1.0 MILES
TO A POINT ±200 FEET SOUTH 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.



Michael Blake Brown, P.S. No. 18329
MARCH 3, 2015

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
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