



PHOENIX
TECHNOLOGY SERVICES

NM OIL CONSERVATION
ARTESIA DISTRICT

MAR 28 2016

RECEIVED

February 19, 2016

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

Dear District 2 - Artesia

Re: Matador Resources
Jimmy Kone 05-24S-28E RB 208H
Eddy County, New Mexico
API #30-015-43542
Job No. 1514819

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	208H	9,680	15,618	01/20/16	02/25/16	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 5425

Phoenix Technology Services
SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER

1514819

ENERGY COMPANY **Matador Resources**

WELL NAME

Jimmy Kone 05-24S-28E RB 228H

COUNTY & STATE

Eddy County, NM

API WELL NUMBER

30-015-43542

PROPOSED DIRECTION

269.51°

TIE-IN DATA

MEASURED DEPTH	VERTICAL DEPTH	INCLIN	AZIMUTH	N-S COORD	E-W COORD	DATA SOURCE
9,601.42 ft	9,600.61 ft	0.18	98.06	-35.78 ft	2.34 ft	Gyro

FIRST
SURVEY
DATE

FIRST
SURVEY
DEPTH

INCLIN

AZIMUTH

20-Jan-16

9,680.00 ft

0.30

81.30

SURVEY INSTRUMENT
TYPE

Phoenix MWD

LAST
SURVEY
DATE

LAST
SURVEY
DEPTH

INCLIN

AZIMUTH

25-Feb-16

15,618.00 ft

88.8°

272.4°

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

25-Feb-16

15,684.00 ft

88.8°

272.4°

Gary Harmon

PRINT YOUR NAME ABOVE

Gary Harmon

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED

7.34

DECLINATION OR GRID

GRID

2/25/2016

TODAY'S DATE

MWD SUPERVISOR 1

Gary Harmon

DIRECTIONAL DRILLER 1

Vinn Adams

MWD SUPERVISOR 2

Clint Gortmaker

DIRECTIONAL DRILLER 2

Rusty Harris



NM OIL CONSERVATION

ARTESIA DISTRICT

MAR 28 2016

RECEIVED

Matador Resources

Eddy County, NM (NAD27 NME)

Jimmy Kone 05-24S-28E RB

228H

OH / Job #1514819

Survey: Phoenix MWD Surveys

Standard Survey Report

25 February, 2016





Phoenix Technology Services
Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well 228H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 3062.50usft (Patterson 809)
Site:	Jimmy Kone 05-24S-28E RB	MD Reference:	RKB @ 3062.50usft (Patterson 809)
Well:	228H	North Reference:	Grid
Wellbore:	OH / Job #1514819	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 809)	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	Jimmy Kone 05-24S-28E RB		
Site Position:		Northing:	451,120.00 usft
From:	Map	Easting:	572,362.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 14' 24.10506 N
		Longitude:	104° 5' 57.45146 W
		Grid Convergence:	0.12 °

Well	228H		
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° 14' 24.40197 N
		Longitude:	104° 5' 57.46234 W
		Ground Level:	3,034.00 usft

Wellbore	OH / Job #1514819		
Magnetics	Model Name	Sample Date	Declination
			(°)
	HDGM	12/28/2015	7.47
			Dip Angle
			(°)
			60.08
			Field Strength
			(nT)
			48,261

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
			(°)
			269.51

Survey Program	Date 2/25/2016		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
83.33	9,601.42	Phoenix Gyro Surveys (OH / Job #151481	PHX_SPT_GTD
9,680.00	15,684.00	Phoenix MWD Surveys (OH / Job #151481	PHX+MWD+HDGM
			Description
			PHX Continuous north-seeking 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)	
9,601.42	0.18	98.06	9,600.61	-35.78	2.34	-2.04	0.00	0.00	0.00	
Tie-in to Phoenix Gyro Surveys										
9,680.00	0.30	81.30	9,679.18	-35.77	2.67	-2.36	0.18	0.15	-21.33	
First Phoenix MWD Survey										
9,774.00	0.20	26.20	9,773.18	-35.59	2.98	-2.68	0.26	-0.11	-58.62	
9,804.00	2.10	293.40	9,803.18	-35.32	2.50	-2.20	7.06	6.33	-309.33	
9,836.00	6.00	292.50	9,835.09	-34.45	0.42	-0.12	12.19	12.19	-2.81	
9,867.00	9.70	292.50	9,865.80	-32.83	-3.49	3.77	11.94	11.94	0.00	
9,898.00	13.00	296.90	9,896.19	-30.25	-9.02	9.27	11.00	10.65	14.19	



Phoenix Technology Services
Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well 228H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 3062.50usft (Patterson 809)
Site:	Jimmy Kone 05-24S-28E RB	MD Reference:	RKB @ 3062.50usft (Patterson 809)
Well:	228H	North Reference:	Grid
Wellbore:	OH / Job #1514819	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)
9,929.00	15.00	301.70	9,926.26	-26.56	-15.54	15.77	7.46	6.45	15.48
9,961.00	18.50	300.50	9,956.90	-21.81	-23.44	23.63	10.99	10.94	-3.75
9,992.00	22.10	297.30	9,985.97	-16.64	-32.86	33.00	12.15	11.61	-10.32
10,023.00	25.10	294.20	10,014.38	-11.27	-44.04	44.14	10.47	9.68	-10.00
10,055.00	28.50	293.50	10,042.94	-5.44	-57.24	57.29	10.67	10.63	-2.19
10,086.00	32.20	292.20	10,069.68	0.63	-71.68	71.67	12.12	11.94	-4.19
10,116.00	36.00	291.90	10,094.52	6.95	-87.26	87.20	12.68	12.67	-1.00
10,148.00	38.70	288.60	10,119.96	13.65	-105.48	105.35	10.50	8.44	-10.31
10,179.00	41.50	287.50	10,143.67	19.83	-124.46	124.29	9.32	9.03	-3.55
10,210.00	43.60	287.40	10,166.51	26.11	-144.46	144.23	6.78	6.77	-0.32
10,242.00	46.30	288.00	10,189.15	32.99	-165.99	165.70	8.54	8.44	1.88
10,272.00	49.50	288.60	10,209.26	39.98	-187.12	186.77	10.77	10.67	2.00
10,303.00	52.20	289.90	10,228.83	47.91	-209.81	209.40	9.30	8.71	4.19
10,335.00	53.50	291.00	10,248.16	56.82	-233.71	233.21	4.90	4.06	3.44
10,366.00	53.40	290.40	10,266.62	65.62	-257.00	256.43	1.59	-0.32	-1.94
10,397.00	53.90	288.00	10,284.99	73.83	-280.58	279.94	6.44	1.61	-7.74
10,428.00	55.30	286.00	10,302.95	81.22	-304.74	304.04	6.93	4.52	-6.45
10,460.00	57.60	286.70	10,320.64	88.73	-330.33	329.56	7.42	7.19	2.19
10,491.00	59.40	287.40	10,336.83	96.48	-355.60	354.76	6.12	5.81	2.26
10,522.00	61.20	287.70	10,352.19	104.60	-381.27	380.37	5.87	5.81	0.97
10,554.00	63.70	288.00	10,366.99	113.29	-408.28	407.29	7.86	7.81	0.94
10,585.00	65.70	287.50	10,380.24	121.84	-434.97	433.91	6.61	6.45	-1.61
10,616.00	67.90	287.30	10,392.45	130.36	-462.16	461.02	7.12	7.10	-0.65
10,648.00	70.30	286.90	10,403.87	139.14	-490.73	489.52	7.59	7.50	-1.25
10,679.00	72.80	286.00	10,413.68	147.47	-518.93	517.65	8.52	8.06	-2.90
10,782.00	77.60	286.60	10,439.98	175.42	-614.48	612.96	4.69	4.66	0.58
10,813.00	78.50	285.30	10,446.40	183.75	-643.64	642.04	5.03	2.90	-4.19
10,844.00	79.00	283.50	10,452.45	191.31	-673.09	671.42	5.92	1.81	-5.81
10,876.00	79.20	282.30	10,458.50	198.32	-703.71	701.99	3.74	0.63	-3.75
10,883.00	79.58	281.80	10,459.79	199.76	-710.44	708.71	8.88	5.47	-7.13
HL Crossing: 10883' MD, 80° Inc, 709' VS									
10,907.00	80.90	280.10	10,463.85	204.25	-733.66	731.89	8.88	5.49	-7.09
10,938.00	82.30	277.40	10,468.38	208.92	-763.97	762.16	9.73	4.52	-8.71
10,970.00	83.80	274.60	10,472.26	212.24	-795.56	793.71	9.87	4.69	-8.75
11,001.00	86.80	271.90	10,474.80	213.99	-826.40	824.54	13.00	9.68	-8.71
11,033.00	89.20	269.70	10,475.91	214.43	-858.37	856.51	10.17	7.50	-6.88
11,065.00	89.20	269.40	10,476.36	214.18	-890.37	888.50	0.94	0.00	-0.94
11,160.00	88.40	268.10	10,478.35	212.11	-985.32	983.47	1.61	-0.84	-1.37
11,254.00	90.30	267.40	10,479.42	208.42	-1,079.24	1,077.41	2.15	2.02	-0.74
11,349.00	92.20	268.80	10,477.34	205.27	-1,174.16	1,172.36	2.48	2.00	1.47
11,443.00	92.30	269.10	10,473.65	203.55	-1,268.07	1,266.28	0.34	0.11	0.32
11,537.00	90.70	267.70	10,471.19	200.92	-1,361.99	1,360.22	2.26	-1.70	-1.49
11,631.00	89.90	267.50	10,470.70	196.99	-1,455.91	1,454.17	0.88	-0.85	-0.21
11,726.00	90.60	267.00	10,470.29	192.43	-1,550.80	1,549.09	0.91	0.74	-0.53



Phoenix Technology Services

Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well 228H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 3062.50usft (Patterson 809)
Site:	Jimmy Kone 05-24S-28E RB	MD Reference:	RKB @ 3062.50usft (Patterson 809)
Well:	228H	North Reference:	Grid
Wellbore:	OH / Job #1514819	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)
11,820.00	92.80	269.90	10,467.50	189.89	-1,644.71	1,643.02	3.87	2.34	3.09
11,914.00	92.60	269.60	10,463.07	189.48	-1,738.60	1,736.92	0.38	-0.21	-0.32
12,009.00	93.40	270.00	10,458.10	189.15	-1,833.47	1,831.78	0.94	0.84	0.42
12,103.00	86.90	268.20	10,457.85	187.67	-1,927.40	1,925.73	7.17	-6.91	-1.91
12,197.00	88.80	268.40	10,461.38	184.88	-2,021.29	2,019.64	2.03	2.02	0.21
12,292.00	91.30	267.10	10,461.29	181.15	-2,116.21	2,114.58	2.97	2.63	-1.37
12,386.00	91.80	267.30	10,458.75	176.56	-2,210.06	2,208.47	0.57	0.53	0.21
12,480.00	92.10	267.80	10,455.55	172.55	-2,303.92	2,302.36	0.62	0.32	0.53
12,574.00	90.90	270.70	10,453.09	171.32	-2,397.87	2,396.31	3.34	-1.28	3.09
12,668.00	91.80	269.60	10,450.88	171.57	-2,491.84	2,490.28	1.51	0.96	-1.17
12,762.00	92.90	270.00	10,447.02	171.24	-2,585.76	2,584.20	1.25	1.17	0.43
12,857.00	91.70	267.20	10,443.21	168.92	-2,680.64	2,679.10	3.20	-1.26	-2.95
12,951.00	93.30	271.60	10,439.11	167.93	-2,774.52	2,772.98	4.98	1.70	4.68
13,045.00	91.80	268.60	10,434.93	168.09	-2,868.41	2,866.87	3.57	-1.60	-3.19
13,140.00	94.90	274.00	10,429.37	170.24	-2,963.18	2,961.62	6.55	3.26	5.68
13,233.00	93.10	273.60	10,422.88	176.39	-3,055.75	3,054.13	1.98	-1.94	-0.43
13,329.00	90.10	271.00	10,420.20	180.23	-3,151.61	3,149.96	4.13	-3.13	-2.71
13,423.00	90.50	271.30	10,419.71	182.12	-3,245.59	3,243.92	0.53	0.43	0.32
13,518.00	90.00	269.20	10,419.30	182.54	-3,340.58	3,338.90	2.27	-0.53	-2.21
13,612.00	89.60	268.60	10,419.62	180.73	-3,434.57	3,432.89	0.77	-0.43	-0.64
13,706.00	94.60	271.10	10,416.18	180.48	-3,528.47	3,526.79	5.95	5.32	2.66
13,801.00	91.20	269.30	10,411.37	180.81	-3,623.32	3,621.65	4.05	-3.58	-1.89
13,895.00	94.30	269.20	10,406.86	179.58	-3,717.20	3,715.53	3.30	3.30	-0.11
13,989.00	92.10	267.70	10,401.62	177.04	-3,811.01	3,809.35	2.83	-2.34	-1.60
14,083.00	90.20	266.50	10,399.73	172.29	-3,904.86	3,903.25	2.39	-2.02	-1.28
14,178.00	93.60	268.70	10,396.58	168.31	-3,999.71	3,998.12	4.26	3.58	2.32
14,272.00	89.50	268.20	10,394.04	165.77	-4,093.62	4,092.05	4.39	-4.36	-0.53
14,366.00	93.20	270.10	10,391.82	164.37	-4,187.56	4,186.00	4.42	3.94	2.02
14,460.00	91.50	270.70	10,387.97	165.03	-4,281.48	4,279.91	1.92	-1.81	0.64
14,555.00	90.90	269.30	10,385.98	165.03	-4,376.45	4,374.88	1.60	-0.63	-1.47
14,649.00	91.50	269.30	10,384.01	163.88	-4,470.42	4,468.86	0.64	0.64	0.00
14,744.00	92.30	268.70	10,380.86	162.22	-4,565.36	4,563.80	1.05	0.84	-0.63
14,838.00	89.70	266.70	10,378.61	157.05	-4,664.21	4,662.70	2.54	-2.02	-1.55
14,932.00	89.10	266.70	10,379.60	151.64	-4,768.05	4,766.58	0.64	-0.64	0.00
15,026.00	93.50	268.80	10,377.44	147.91	-4,862.93	4,861.48	5.13	4.63	2.21
15,120.00	90.40	269.30	10,374.28	146.37	-4,957.85	4,956.42	3.38	-3.33	0.54
15,214.00	91.60	271.40	10,372.62	146.95	-5,052.83	5,051.40	2.55	1.26	2.21
15,308.00	89.30	273.30	10,371.88	150.80	-5,147.73	5,146.35	3.17	-2.45	2.02
15,402.00	90.00	273.20	10,372.46	156.19	-5,242.68	5,241.25	0.74	0.74	-0.11
15,496.00	88.90	272.60	10,373.36	160.94	-5,337.64	5,336.25	1.33	-1.17	-0.64
15,590.00	88.84	272.49	10,374.31	163.07	-5,432.61	5,431.25	0.26	-0.12	-0.24
HL Crossing: 15581' MD, 89° Inc, 5400' VS									
15,618.00	88.80	272.40	10,375.07	164.65	-5,438.35	5,436.75	0.26	-0.12	-0.24



Phoenix Technology Services
Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well 228H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 3062.50usft (Patterson 809)
Site:	Jimmy Kone 05-24S-28E RB	MD Reference:	RKB @ 3062.50usft (Patterson 809)
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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)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Final Phoenix MWD Survey									
15,684.00	88.80	272.40	10,376.45	167.41	-5,504.28	5,502.65	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)	
9,601.42	9,600.61	-35.78	2.34	Tie-in to Phoenix GYRO Surveys
9,680.00	9,679.18	-35.77	2.67	First Phoenix MWD Survey
10,883.00	10,459.79	199.76	-710.44	HL Crossing: 10883' MD, 80° Inc, 709' VS
15,581.00	10,374.31	163.07	-5,401.39	HL Crossing: 15581' MD, 89° Inc, 5400' VS
15,618.00	10,375.07	164.65	-5,438.35	Final Phoenix MWD Survey
15,684.00	10,376.45	167.41	-5,504.28	Projection to TD

Checked By: _____	Approved By: _____	Date: _____
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