



PRODIRECTIONAL

30-015 43201

NM OIL CONSERVATION
ARTESIA DISTRICT

AUG 29 2017

RECEIVED



Stebbins Fed 20 No. 123H(ST01)

Eddy County, NM

March 08, 2017

Job No. LNM5133017

ORIGINAL

Survey Completion Report

March 08, 2017



Operator Name: Matador Resources
 Well Name: Stebbins Federal 20 No. 123H(ST01)
 County/Parish: Eddy County,
 State: NM
 Rig Name: Patterson 809
 Job Number: LNM5133017

This is to certify the surveys performed on the referenced well by Professional Directional Ent., Inc. are true and correct MWD Surveys, data provided as follows:

<u>Surveyor</u>	<u>Surveyed Depths</u>	<u>Projection to Bit</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
ProDirectional	7,119' MD – 7,322' MD	7,394' MD	03/02/17 – 03/02/17	MWD-OWSG

Sincerely,



Mike Coats
 Well Planning
 Professional Directional

850 Conroe Park West Drive | Conroe, TX 77303 | Phone: 936.441.7266

prodirectional.com



Matador Resources

Eddy County, NM Stebbins

Federal 20

No. 123H

ST01

Survey: ProDirectional

Survey Report

08 March, 2017

NM OIL CONSERVATION
ARTESIA DISTRICT

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ProDirectional Survey Report



Company: Matador Resources	Well No.: 123H
Project: Eddy County, NM	Local Co-ordinate Reference:
Site: Stebbins Federal 20 (113-123-133-203)	TVD Reference: Well @ 3273.50usft (GL: 3245' + KB: 28.5' (Pat809))
Well: No. 123H	MD Reference: Well @ 3273.50usft (GL: 3245' + KB: 28.5' (Pat809))
Wellbore: Lateral	North Reference: Grid
Design: MWD	Survey Calculation Method: Minimum Curvature
	Database: WellPlanner1

Project	Eddy County, NM	
Map System:	US State Plane 1927 (Exact solution)	
Geo Datum:	NAD 1927 (NADCON CONUS)	
Map Zone:	New Mexico East 3001	
System Datum:	Mean Sea Level	

Site	Stebbins Federal 20 (113-123-133-203)			
Site Position:				
From:	Map	566,123.00 usft	Latitude:	32° 33' 22.220 N
Position Uncertainty:	3.30 usft	570,396.00 usft	Longitude:	104° 6' 17.481 W
		13-3/16 "	Grid Convergence:	0.12 °

Well	No. 123H			
Well Position	+N/-S	0.00 usft	Latitude:	32° 33' 22.517 N
	+E/-W	0.00 usft	Longitude:	104° 6' 17.481 W
Position Uncertainty	0.00 usft		Ground Level:	3,245.00 usft

Wellbore	Lateral			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)
	HDGM	2/4/2017	7.43	60.42
				48,239.50

Design	MWD			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth:
Vertical Section:		Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
		0.00	0.00	0.00
			Direction (°)	90.05



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North Reference: Grid
Survey Calculation Method: Minimum Curvature
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Well No. 123H

Well @ 3273.50ust (GL: 3245' + KB: 28.5' (Pat809))

Well @ 3273.50ust (GL: 3245' + KB: 28.5' (Pat809))

Grid

Minimum Curvature

WellPlanner1

Survey Program		Date	3/8/2017	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
91.19	938.00	Survey #1 (Pilot)	GYD_DP_MS	Gyrodata gyro-compassing and drop
1,037.00	7,082.00	Survey #2 (Pilot)	MWD - OWSG	MWD - OWSG
7,119.00	7,394.00	Survey #1 (Lateral)	MWD - OWSG	MWD - OWSG

MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (")	Northing (usft)	Easting (usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	566,153.00	570,396.00
91.19	0.50	88.21	91.19	0.40	0.01	0.40	0.40	88.21	566,153.01	570,396.40
185.28	0.52	89.37	185.28	1.23	0.03	1.23	1.23	88.61	566,153.03	570,397.23
279.37	0.62	46.57	279.36	2.03	0.38	2.03	2.07	79.28	566,153.38	570,398.03
373.46	0.68	53.09	373.44	2.85	1.07	2.85	3.04	69.41	566,154.07	570,398.85
467.55	0.60	86.40	467.53	3.78	1.44	3.79	4.05	69.23	566,154.44	570,399.79
561.64	0.77	121.79	561.61	4.81	1.13	4.81	4.95	76.75	566,154.13	570,400.81
655.73	1.10	137.24	655.69	5.97	0.14	5.97	5.97	88.68	566,153.14	570,401.97
749.82	1.43	135.08	749.76	7.41	-1.36	7.41	7.53	100.38	566,151.64	570,403.41
843.91	1.50	128.06	843.82	9.21	-2.95	9.21	9.67	107.75	566,150.05	570,405.21
938.00	1.32	131.11	937.88	11.00	-4.42	10.99	11.85	111.90	566,148.58	570,406.99
1,037.00	1.00	151.30	1,036.86	12.27	-5.93	12.27	13.62	115.79	566,147.07	570,408.27
1,130.00	0.60	313.20	1,129.85	12.31	-6.30	12.30	13.82	117.14	566,146.70	570,408.30
1,223.00	1.20	308.00	1,222.84	11.18	-5.37	11.18	12.40	115.67	566,147.63	570,407.18
1,317.00	0.50	231.90	1,316.83	10.08	-5.02	10.08	11.26	116.47	566,147.98	570,406.08
1,410.00	0.70	192.90	1,409.83	9.64	-5.82	9.63	11.26	121.15	566,147.18	570,405.63
1,504.00	0.40	272.70	1,503.83	9.18	-6.37	9.18	11.17	124.75	566,146.63	570,405.18
1,598.00	1.60	324.20	1,597.81	8.09	-5.29	8.08	9.66	123.19	566,147.71	570,404.08
1,691.00	2.30	329.90	1,690.76	6.39	-2.62	6.39	6.90	112.30	566,150.38	570,402.39
1,785.00	2.10	331.60	1,784.69	4.62	0.53	4.62	4.65	83.50	566,153.53	570,400.62



ProDirectional Survey Report



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Well: No. 123H
Wellbore: Lateral
Design: MWD

Local Co-ordinate Reference:
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MD Reference: Well @ 3273.50usft (GL: 3245' + KB: 28.5' (Patt809))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Well No. 123H

Well @ 3273.50usft (GL: 3245' + KB: 28.5' (Patt809))
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Grid

Minimum Curvature

WellPlanner1

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)	
1,878.00	2.00	326.70	1,877.63	2.92	3.38	2.92	4.47	40.82	566,156.38	570,398.92	
1,972.00	1.90	323.10	1,971.57	1.08	6.00	1.08	6.10	10.25	566,159.00	570,397.08	
2,066.00	2.00	335.10	2,065.52	-0.55	8.73	-0.54	8.75	356.45	566,161.73	570,395.46	
2,159.00	2.00	346.70	2,158.46	-1.61	11.78	-1.60	11.89	352.28	566,164.78	570,394.40	
2,253.00	1.90	352.10	2,252.41	-2.20	14.92	-2.19	15.08	351.65	566,167.92	570,393.81	
2,346.00	1.80	346.90	2,345.36	-2.75	17.87	-2.73	18.08	351.31	566,170.87	570,393.27	
2,439.00	1.80	326.20	2,438.32	-3.89	20.51	-3.88	20.87	349.30	566,173.51	570,392.12	
2,533.00	2.20	316.30	2,532.26	-5.96	23.04	-5.94	23.80	345.54	566,176.04	570,390.06	
2,626.00	2.30	313.90	2,625.19	-8.54	25.63	-8.52	27.01	341.61	566,178.63	570,387.48	
2,720.00	2.40	311.90	2,719.11	-11.37	28.25	-11.35	30.44	338.12	566,181.25	570,384.65	
2,813.00	2.80	317.20	2,812.01	-14.37	31.22	-14.34	34.35	335.33	566,184.22	570,381.66	
2,906.00	2.70	315.20	2,904.90	-17.46	34.44	-17.43	38.59	333.16	566,187.44	570,378.57	
3,000.00	2.50	314.20	2,998.81	-20.49	37.44	-20.46	42.66	331.35	566,190.44	570,375.54	
3,054.00	2.60	313.60	3,052.75	-22.22	39.10	-22.19	44.96	330.43	566,192.10	570,373.81	
3,120.00	2.10	309.50	3,118.70	-24.24	40.90	-24.20	47.53	329.39	566,193.90	570,371.80	
3,216.00	2.30	347.50	3,214.63	-26.02	43.90	-25.98	51.01	329.39	566,196.90	570,370.02	
3,308.00	2.20	347.50	3,306.56	-26.80	47.43	-26.76	54.46	330.57	566,200.43	570,368.24	
3,402.00	2.30	344.30	3,400.49	-27.71	51.01	-27.66	58.02	331.53	566,204.01	570,366.34	
3,495.00	2.40	346.00	3,493.41	-28.68	54.69	-28.64	61.74	332.36	566,207.69	570,367.36	
3,589.00	2.30	343.30	3,587.33	-29.71	58.41	-29.65	65.51	333.08	566,211.41	570,366.35	
3,682.00	2.50	342.00	3,680.25	-30.87	62.13	-30.82	69.35	333.62	566,215.13	570,365.18	
3,776.00	2.50	340.70	3,774.16	-32.19	66.01	-32.13	73.41	334.05	566,219.01	570,363.87	
3,869.00	2.50	350.20	3,867.07	-33.21	69.92	-33.14	77.38	334.64	566,222.92	570,362.86	
3,963.00	2.20	346.70	3,960.99	-33.97	73.70	-33.91	81.13	335.29	566,226.70	570,362.09	
4,057.00	2.40	347.60	4,054.92	-34.81	77.38	-34.75	84.82	335.82	566,230.38	570,361.25	
4,150.00	2.50	348.40	4,147.93	-35.64	81.27	-35.57	88.71	336.36	566,234.27	570,360.43	
4,244.00	2.50	345.10	4,241.74	-36.59	85.26	-36.51	92.74	336.82	566,238.26	570,359.49	



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Minimum Curvature

WellPlanner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
4,337.00	2.50	344.90	4,334.65	-37.64	89.17	-37.56	96.76	337.16	566,242.17	570,358.44
4,431.00	2.60	346.70	4,428.56	-38.67	93.23	-38.59	100.90	337.52	566,246.23	570,357.41
4,524.00	2.60	345.90	4,521.47	-39.67	97.33	-39.59	105.07	337.87	566,250.33	570,356.41
4,618.00	2.80	345.60	4,615.36	-40.76	101.62	-40.68	109.46	338.18	566,254.62	570,355.32
4,711.00	2.80	342.40	4,708.25	-42.02	105.98	-41.93	113.98	338.42	566,258.98	570,354.07
4,805.00	2.80	341.60	4,802.14	-43.44	110.35	-43.35	118.56	338.55	566,263.35	570,352.85
4,899.00	2.90	340.30	4,896.02	-44.97	114.77	-44.87	123.23	338.65	566,267.77	570,351.13
4,993.00	2.90	347.10	4,989.90	-46.31	119.32	-46.20	127.96	338.83	566,272.32	570,349.80
5,086.00	2.90	349.10	5,082.78	-47.28	123.93	-47.18	132.60	339.16	566,276.93	570,348.82
5,179.00	3.00	348.60	5,175.66	-48.21	128.62	-48.10	137.32	339.50	566,281.62	570,347.90
5,273.00	3.00	346.00	5,269.53	-49.30	133.42	-49.18	142.20	339.76	566,286.42	570,346.82
5,366.00	3.10	339.00	5,362.40	-50.79	138.13	-50.67	147.13	339.85	566,291.13	570,345.33
5,460.00	2.50	342.70	5,456.29	-52.32	142.46	-52.19	151.72	339.88	566,295.46	570,343.81
5,553.00	2.30	346.70	5,549.21	-53.35	146.21	-53.23	155.60	340.00	566,299.21	570,342.77
5,646.00	2.30	343.50	5,642.13	-54.32	149.82	-54.18	159.32	340.12	566,302.82	570,341.82
5,740.00	2.40	335.40	5,736.05	-55.67	153.42	-55.54	163.16	340.10	566,306.42	570,340.46
5,833.00	1.90	370	5,828.99	-56.39	156.73	-56.25	166.51	340.26	566,309.73	570,339.75
5,927.00	1.60	270	5,922.94	-56.23	159.59	-56.09	169.16	340.84	566,312.59	570,339.91
6,020.00	1.60	210	6,015.91	-56.12	162.19	-55.98	171.58	340.96	566,315.19	570,340.02
6,114.00	1.70	1050	6,109.87	-55.82	164.87	-55.68	174.02	341.34	566,317.87	570,340.32
6,207.00	1.60	351.60	6,202.83	-55.76	167.51	-55.62	176.50	341.63	566,320.51	570,340.38
6,301.00	1.90	343.50	6,296.79	-56.40	170.30	-56.25	179.35	341.72	566,323.30	570,339.75
6,395.00	1.90	340.80	6,390.74	-57.36	173.27	-57.20	182.47	341.73	566,326.27	570,338.80
6,489.00	2.40	336.10	6,484.67	-58.67	176.54	-58.51	185.98	341.66	566,329.54	570,337.49
6,582.00	1.30	356.30	6,577.62	-59.53	179.37	-59.37	188.94	341.69	566,332.37	570,336.63
6,708.00	1.20	7.20	6,703.59	-59.46	182.11	-59.30	191.52	341.96	566,335.11	570,336.70
6,801.00	0.90	83.00	6,796.58	-58.61	183.16	-58.45	192.26	342.30	566,336.16	570,337.55



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Well @ 3273.50usft (GL: 3245' + KB: 28.5' (Pat809))

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Minimum Curvature

WellPlanner1

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	6,895.00	1.20	90.70	6,890.56	-56.89	183.24	-56.73	191.82	342.80	566,336.24	570,339.27
	6,988.00	1.30	75.20	6,983.54	-54.90	183.50	-54.74	191.49	343.39	566,336.50	570,341.26
	7,082.00	1.00	87.40	7,077.52	-53.05	183.81	-52.89	191.27	343.95	566,336.81	570,343.11
	7,119.00	1.50	95.90	7,114.51	-52.25	183.77	-52.09	191.01	344.18	566,336.77	570,343.91
First ST01 Survey: 7119' MD											
	7,181.00	9.10	86.20	7,176.20	-46.54	184.01	-46.38	189.77	345.85	566,337.01	570,349.62
	7,228.00	17.70	82.30	7,221.88	-35.73	185.22	-35.57	188.60	349.13	566,338.22	570,360.43
	7,275.00	22.50	79.10	7,266.01	-19.81	187.88	-19.65	188.90	354.03	566,340.88	570,376.35
	7,322.00	24.80	79.30	7,309.06	-1.30	191.41	-1.13	191.41	359.66	566,344.41	570,394.87
Last Survey(ST): 7322' MD, 7309.06' TVD											
	7,394.00	24.80	79.30	7,374.42	28.37	197.02	28.55	199.08	8.24	566,350.02	570,424.55
PTB(ST): 7394' MD											

Design Annotations	Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
			+N-S (usft)	+E-W (usft)		
	7,119.00	7,114.51	183.77	-52.09		First ST01 Survey: 7119' MD
	7,322.00	7,309.06	191.41	-1.13		Last Survey(ST): 7322' MD, 7309.06' TVD
	7,394.00	7,374.42	197.02	28.55		PTB(ST): 7394' MD