



COMPANY: Mewbourne Oil Company
WELL: Ram 3 B3PA State Com #1H
COUNTY: Lea County N. M. Nad (83)
DATUM: North American Datum 1983
RIG: Patterson 220



OFFICE: 936.582.7296

GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 6.37°

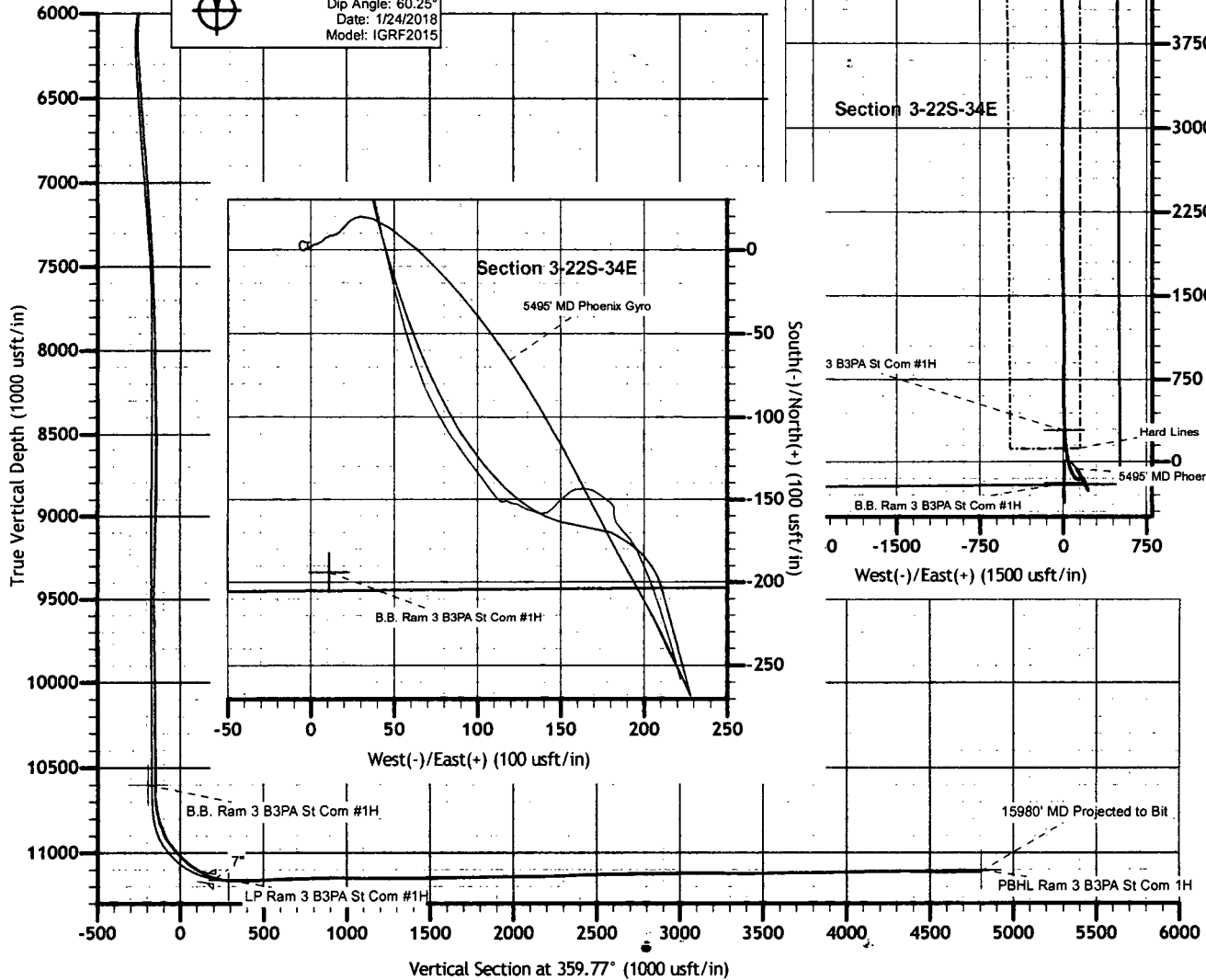
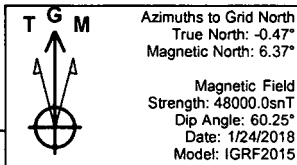
GEODETTIC ZONE: New Mexico Eastern Zone
3588 + 27 @ 3615.0usft (Patterson 220)
GROUND ELEVATION: 3588.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	515483.40	813657.80	32° 24' 50.546 N	103° 27' 3.144 W	

PLAN SECTIONS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	5495.0	22.14	145.88	5477.7	-65.9	119.4	0.00	0.00	-66.4	
2	5684.0	26.70	152.90	5649.8	-133.2	158.7	2.86	35.71	-133.9	
3	5767.0	25.50	152.60	5724.3	-165.7	175.4	1.45	-173.86	-166.4	
4	5862.0	22.50	150.60	5811.1	-199.7	193.8	3.27	-165.74	-200.5	
5	6000.0	17.00	155.00	5940.9	-241.0	215.3	4.13	166.93	-241.9	
6	6200.0	0.00	0.00	6138.0	-267.7	227.7	8.50	180.00	-268.6	
7	6500.0	4.50	345.00	6437.7	-256.3	224.7	1.50	345.00	-257.2	
8	7200.0	4.50	345.00	7135.5	-203.3	210.5	0.00	0.00	-204.1	
9	7400.0	4.50	325.00	7334.9	-189.3	203.9	0.78	-99.97	-190.1	
10	7700.0	4.50	300.00	7634.0	-173.8	187.0	0.65	-102.46	-174.5	
11	7900.0	0.00	0.00	7833.8	-169.8	180.2	2.25	180.00	-170.6	
12	10680.0	0.00	0.00	10613.8	-169.8	180.2	0.00	0.00	-170.6	
13	10837.6	20.04	281.51	10768.2	-164.4	153.5	12.72	281.51	-165.0	
14	11519.2	90.76	359.65	11162.0	289.8	8.1	12.72	78.59	289.8	LP Ram 3 B3PA St Com #1H
15	16037.4	90.76	359.65	11102.0	4807.5	-19.2	0.00	0.00	4807.5	PBHL Ram 3 B3PA St Com 1H

SHL: 205' FSL; 510' FEL
Section 3-22S-34E
PBHL: 330' FNL; 500' FEL
Section 3-22S-34E





Mewbourne Oil Company

Lea County N. M. Nad (83)

Section 3-22S-34E Ram 3 B3PA State Com #1H

Ram 3 B3PA State Com #1H

Original Hole

Design: Original Hole

Standard Survey Report

26 February, 2018





Microsoft Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Ram 3 B3PA State Com #1H
Project:	Lea County N. M. Nad (83)	TVD Reference:	3588 + 27 @ 3615.0usft (Patterson 220)
Site:	Section 3-22S-34E Ram 3 B3PA State Com #1H	MD Reference:	3588 + 27 @ 3615.0usft (Patterson 220)
Well:	Ram 3 B3PA State Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

Project	Lea County N. M. Nad (83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site						Section 3-22S-34E Ram 3 B3PA State Com #1H					
Site Position:				Northing:		515,483.40 usft		Latitude:		32° 24' 50.546 N	
From:		Map		Easting:		813,657.80 usft		Longitude:		103° 27' 3.144 W	
Position Uncertainty:		0.0 usft		Slot Radius:		13-3/16 "		Grid Convergence:		0.47 °	

Well	Ram 3 B3PA State Com #1H					
Well Position	+N/-S	0.0 usft	Northing:	515,483.40 usft	Latitude:	32° 24' 50.546 N
	+E/-W	0.0 usft	Easting:	813,657.80 usft	Longitude:	103° 27' 3.144 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	27.0 usft	Ground Level:	3,588.0 usft

Wellbore	Original Hole				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/24/2018	6.85	60.25	48,000.00887323

Design	Original Hole				
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Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	74.97

Survey Program	Date 2/26/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	5,495.0	Phoenix Gyro Survey (Original Hole)	SRG-GYRO-MS	surface readout gyro multishot
5,684.0	15,980.0	MWD Survey 2 (Original Hole)	MWD	MWD v3:standard declination

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.27	322.50	100.0	0.2	-0.1	-0.1	0.27	0.27	0.00
200.0	0.22	294.07	200.0	0.5	-0.5	-0.3	0.13	-0.05	-28.43
300.0	0.25	297.13	300.0	0.6	-0.8	-0.6	0.03	0.03	3.06
400.0	0.34	25.35	400.0	1.0	-0.9	-0.6	0.42	0.09	88.22
500.0	0.20	330.05	500.0	1.4	-0.9	-0.5	0.28	-0.14	-55.30
600.0	0.45	303.47	600.0	1.8	-1.3	-0.8	0.29	0.25	-26.58
700.0	0.54	330.81	700.0	2.4	-1.8	-1.1	0.25	0.09	27.34
800.0	0.58	8.79	800.0	3.3	-2.0	-1.1	0.37	0.04	37.98
900.0	0.42	27.65	900.0	4.1	-1.7	-0.6	0.23	-0.16	18.86

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Ram 3 B3PA State Com #1H
Project:	Lea County N. M. Nad (83)	TVD Reference:	3588 + 27 @ 3615.0usft (Patterson 220)
Site:	Section 3-22S-34E Ram 3 B3PA State Com #1H	MD Reference:	3588 + 27 @ 3615.0usft (Patterson 220)
Well:	Ram 3 B3PA State Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

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)
1,000.0	0.30	89.83	1,000.0	4.5	-1.3	-0.1	0.39	-0.12	62.18
1,100.0	0.14	336.31	1,100.0	4.6	-1.1	0.1	0.38	-0.16	-113.52
1,200.0	0.52	260.02	1,200.0	4.6	-1.6	-0.3	0.51	0.38	-76.29
1,300.0	0.57	273.03	1,300.0	4.6	-2.5	-1.3	0.13	0.05	13.01
1,400.0	0.55	256.77	1,400.0	4.5	-3.5	-2.2	0.16	-0.02	-16.26
1,500.0	0.25	2.53	1,500.0	4.6	-4.0	-2.6	0.66	-0.30	105.76
1,600.0	0.24	288.34	1,600.0	4.9	-4.1	-2.7	0.30	-0.01	-74.19
1,700.0	0.48	69.08	1,700.0	5.1	-3.9	-2.5	0.68	0.24	140.74
1,800.0	0.80	276.45	1,800.0	5.3	-4.3	-2.7	1.25	0.32	-152.63
1,900.0	0.81	245.68	1,900.0	5.1	-5.6	-4.1	0.43	0.01	-30.77
2,000.0	1.09	207.36	1,999.9	4.0	-6.7	-5.4	0.68	0.28	-38.32
2,100.0	0.67	150.91	2,099.9	2.6	-6.8	-5.9	0.91	-0.42	-56.45
2,200.0	0.69	184.59	2,199.9	1.5	-6.6	-6.0	0.39	0.02	33.68
2,300.0	0.92	136.63	2,299.9	0.3	-6.1	-5.8	0.69	0.23	-47.96
2,400.0	0.59	84.71	2,399.9	-0.2	-5.0	-4.9	0.72	-0.33	-51.92
2,500.0	0.18	246.12	2,499.9	-0.2	-4.7	-4.6	0.76	-0.41	161.41
2,600.0	0.63	96.30	2,599.9	-0.4	-4.2	-4.2	0.79	0.45	-149.82
2,700.0	0.55	17.09	2,699.9	0.0	-3.6	-3.4	0.75	-0.08	-79.21
2,800.0	0.73	56.45	2,799.9	0.9	-2.9	-2.6	0.46	0.18	39.36
2,900.0	0.50	93.22	2,899.9	1.2	-1.9	-1.6	0.45	-0.23	36.77
3,000.0	0.29	91.84	2,999.9	1.1	-1.2	-0.9	0.21	-0.21	-1.38
3,100.0	0.31	35.57	3,099.9	1.4	-0.8	-0.4	0.28	0.02	-56.27
3,200.0	0.79	78.22	3,199.9	1.7	0.0	0.5	0.60	0.48	42.65
3,300.0	0.47	6.54	3,299.9	2.3	0.7	1.3	0.78	-0.32	-71.68
3,400.0	0.97	73.73	3,399.9	2.9	1.6	2.3	0.90	0.50	67.19
3,500.0	1.20	71.28	3,499.9	3.5	3.4	4.2	0.23	0.23	-2.45
3,600.0	1.11	66.85	3,599.8	4.2	5.3	6.2	0.13	-0.09	-4.43
3,700.0	1.27	48.70	3,699.8	5.3	7.0	8.1	0.41	0.16	-18.15
3,800.0	0.92	37.39	3,799.8	6.7	8.3	9.8	0.41	-0.35	-11.31
3,900.0	0.92	81.00	3,899.8	7.4	9.6	11.2	0.68	0.00	43.61
4,000.0	0.84	47.14	3,999.8	8.1	10.9	12.6	0.52	-0.08	-33.86
4,100.0	0.36	85.84	4,099.8	8.6	11.8	13.6	0.60	-0.48	38.70
4,200.0	0.86	104.50	4,199.8	8.4	12.8	14.6	0.53	0.50	18.66
4,300.0	0.28	331.28	4,299.8	8.5	13.4	15.2	1.07	-0.58	-133.22
4,400.0	1.53	73.45	4,399.7	9.1	14.6	16.4	1.61	1.25	102.17
4,500.0	1.88	46.14	4,499.7	10.6	17.1	19.2	0.87	0.35	-27.31
4,600.0	2.19	45.63	4,599.6	13.0	19.6	22.3	0.31	0.31	-0.51
4,700.0	1.99	38.86	4,699.6	15.7	22.1	25.4	0.32	-0.20	-6.77
4,800.0	2.52	62.25	4,799.5	18.1	25.1	28.9	1.05	0.53	23.39
4,900.0	3.32	75.76	4,899.4	19.8	29.8	34.0	1.05	0.80	13.51
5,000.0	5.61	112.29	4,999.1	18.7	37.2	40.8	3.54	2.29	36.53
5,100.0	8.86	123.58	5,098.3	12.6	48.1	49.7	3.53	3.25	11.29
5,200.0	12.23	131.54	5,196.6	1.3	62.5	60.7	3.66	3.37	7.96

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Well:	Ram 3 B3PA State Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

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)
5,300.0	16.02	136.76	5,293.5	-15.8	79.9	73.0	3.99	3.79	5.22
5,400.0	19.29	141.58	5,388.8	-38.8	99.6	86.1	3.58	3.27	4.82
5,495.0	22.14	145.88	5,477.7	-65.9	119.4	98.2	3.40	3.00	4.53
5495' MD Phoenix Gyro									
5,684.0	26.70	152.90	5,649.8	-133.2	158.7	118.7	2.86	2.41	3.71
5,767.0	25.50	152.60	5,724.3	-165.7	175.4	126.5	1.45	-1.45	-0.36
5,862.0	22.50	150.60	5,811.1	-199.7	193.8	135.3	3.27	-3.16	-2.11
5,962.0	16.80	155.20	5,905.2	-229.5	209.2	142.6	5.90	-5.70	4.60
5,994.0	14.10	156.10	5,936.1	-237.3	212.8	143.9	8.47	-8.44	2.81
6,026.0	11.60	152.20	5,967.2	-243.7	215.8	145.3	8.27	-7.81	-12.19
6,057.0	10.20	153.50	5,997.7	-248.9	218.5	146.5	4.58	-4.52	4.19
6,089.0	7.20	157.60	6,029.3	-253.3	220.6	147.3	9.57	-9.38	12.81
6,120.0	3.90	164.70	6,060.2	-256.1	221.6	147.6	10.85	-10.65	22.90
6,152.0	2.40	172.50	6,092.1	-257.8	222.0	147.5	4.86	-4.69	24.38
6,247.0	2.10	343.20	6,187.1	-258.1	221.7	147.2	4.72	-0.32	179.68
6,341.0	4.00	345.80	6,281.0	-253.3	220.4	147.2	2.03	2.02	2.77
6,435.0	4.50	345.40	6,374.7	-246.6	218.7	147.2	0.53	0.53	-0.43
6,530.0	4.60	344.00	6,469.4	-239.3	216.7	147.2	0.16	0.11	-1.47
6,624.0	4.60	341.80	6,563.1	-232.1	214.5	146.9	0.19	0.00	-2.34
6,719.0	4.70	343.30	6,657.8	-224.7	212.2	146.6	0.17	0.11	1.58
6,813.0	4.80	341.80	6,751.5	-217.3	209.8	146.3	0.17	0.11	-1.60
6,908.0	4.60	341.80	6,846.1	-209.9	207.4	145.8	0.21	-0.21	0.00
7,002.0	4.30	340.10	6,939.9	-203.0	205.0	145.3	0.35	-0.32	-1.81
7,096.0	4.20	337.80	7,033.6	-196.5	202.5	144.6	0.21	-0.11	-2.45
7,190.0	4.00	336.40	7,127.4	-190.3	199.9	143.7	0.24	-0.21	-1.49
7,285.0	3.70	336.30	7,222.1	-184.5	197.3	142.7	0.32	-0.32	-0.11
7,379.0	3.60	335.40	7,316.0	-179.0	194.9	141.8	0.12	-0.11	-0.96
7,474.0	4.40	320.80	7,410.7	-173.5	191.3	139.8	1.36	0.84	-15.37
7,568.0	4.40	313.70	7,504.4	-168.2	186.5	136.5	0.58	0.00	-7.55
7,663.0	2.20	337.50	7,599.3	-164.0	183.1	134.3	2.68	-2.32	25.05
7,757.0	1.50	350.90	7,693.2	-161.1	182.2	134.2	0.87	-0.74	14.26
7,852.0	1.40	357.30	7,788.2	-158.7	182.0	134.6	0.20	-0.11	6.74
7,946.0	1.20	356.00	7,882.2	-156.6	181.9	135.0	0.22	-0.21	-1.38
8,040.0	1.20	353.10	7,976.2	-154.6	181.7	135.4	0.06	0.00	-3.09
8,134.0	1.70	316.80	8,070.1	-152.7	180.6	134.8	1.09	0.53	-38.62
8,229.0	1.80	305.50	8,165.1	-150.8	178.4	133.2	0.38	0.11	-11.89
8,323.0	1.80	307.10	8,259.0	-149.0	176.1	131.4	0.05	0.00	1.70
8,418.0	1.70	307.00	8,354.0	-147.3	173.7	129.6	0.11	-0.11	-0.11
8,512.0	1.80	299.10	8,448.0	-145.7	171.3	127.7	0.28	0.11	-8.40
8,607.0	2.20	296.80	8,542.9	-144.2	168.4	125.2	0.43	0.42	-2.42
8,702.0	2.00	262.70	8,637.8	-143.5	165.1	122.2	1.31	-0.21	-35.89
8,796.0	2.20	272.30	8,731.8	-143.7	161.7	118.9	0.43	0.21	10.21
8,891.0	1.90	254.90	8,826.7	-144.0	158.4	115.6	0.72	-0.32	-18.32

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Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

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)
8,985.0	2.20	232.30	8,920.7	-145.5	155.4	112.4	0.91	0.32	-24.04
9,079.0	1.80	227.90	9,014.6	-147.6	152.9	109.4	0.46	-0.43	-4.68
9,174.0	1.50	230.00	9,109.6	-149.4	150.8	106.9	0.32	-0.32	2.21
9,268.0	2.20	226.40	9,203.5	-151.5	148.6	104.2	0.75	0.74	-3.83
9,363.0	3.40	218.50	9,298.4	-154.9	145.5	100.4	1.32	1.26	-8.32
9,457.0	2.80	246.30	9,392.3	-158.0	141.7	95.8	1.70	-0.64	29.57
9,546.0	1.70	284.60	9,481.2	-158.6	138.4	92.5	2.03	-1.24	43.03
9,640.0	1.50	288.60	9,575.2	-157.8	135.9	90.3	0.24	-0.21	4.26
9,735.0	1.60	282.20	9,670.1	-157.1	133.4	88.1	0.21	0.11	-6.74
9,829.0	1.90	291.50	9,764.1	-156.3	130.7	85.7	0.44	0.32	9.89
9,924.0	2.10	295.30	9,859.0	-155.0	127.7	83.1	0.25	0.21	4.00
10,019.0	1.10	311.40	9,954.0	-153.6	125.4	81.3	1.14	-1.05	16.95
10,113.0	1.10	290.20	10,048.0	-152.7	123.9	80.0	0.43	0.00	-22.55
10,207.0	1.50	274.00	10,141.9	-152.3	121.8	78.1	0.57	0.43	-17.23
10,302.0	0.70	288.50	10,236.9	-152.1	120.0	76.5	0.89	-0.84	15.26
10,396.0	0.80	298.70	10,330.9	-151.6	118.9	75.5	0.18	0.11	10.85
10,491.0	0.80	285.40	10,425.9	-151.1	117.7	74.5	0.20	0.00	-14.00
10,585.0	0.80	241.70	10,519.9	-151.2	116.5	73.3	0.63	0.00	-46.49
10,632.0	1.30	258.50	10,566.9	-151.5	115.6	72.4	1.24	1.06	35.74
10,668.0	1.73	271.86	10,602.8	-151.5	114.7	71.5	1.55	1.21	37.15
B.B. Ram 3 B3PA St Com #1H									
10,673.0	1.80	273.20	10,607.9	-151.5	114.5	71.3	1.55	1.31	26.59
10,737.0	3.40	317.60	10,671.8	-150.1	112.3	69.5	3.84	2.50	69.38
10,773.0	7.10	321.70	10,707.7	-147.5	110.2	68.1	10.32	10.28	11.39
10,805.0	12.00	324.00	10,739.2	-143.3	107.0	66.2	15.36	15.31	7.19
10,836.0	15.80	323.50	10,769.3	-137.3	102.6	63.5	12.26	12.26	-1.61
10,868.0	19.00	323.80	10,799.8	-129.6	96.9	60.0	10.00	10.00	0.94
10,899.0	22.90	325.30	10,828.8	-120.5	90.5	56.1	12.70	12.58	4.84
10,931.0	26.00	327.30	10,857.9	-109.5	83.2	51.9	10.03	9.69	6.25
10,962.0	28.90	330.60	10,885.4	-97.3	75.8	48.0	10.56	9.35	10.65
10,994.0	31.70	337.20	10,913.0	-82.8	68.7	44.9	13.58	8.75	20.63
11,025.0	35.30	340.90	10,938.9	-66.8	62.7	43.2	13.35	11.61	11.94
11,057.0	38.40	344.10	10,964.5	-48.5	56.9	42.4	11.39	9.69	10.00
11,088.0	42.00	346.10	10,988.2	-29.2	51.8	42.4	12.34	11.61	6.45
11,119.0	44.60	346.80	11,010.7	-8.5	46.8	43.0	8.53	8.39	2.26
11,151.0	47.40	347.30	11,033.0	13.9	41.6	43.8	8.82	8.75	1.56
11,183.0	50.50	348.10	11,054.0	37.5	36.5	45.0	9.87	9.69	2.50
11,214.0	53.30	349.90	11,073.1	61.5	31.9	46.7	10.12	9.03	5.81
11,246.0	55.80	351.90	11,091.7	87.2	27.7	49.4	9.32	7.81	6.25
11,277.0	59.00	354.00	11,108.4	113.1	24.5	53.0	11.79	10.32	6.77
11,308.0	63.00	354.90	11,123.4	140.1	21.9	57.5	13.15	12.90	2.90
11,340.0	67.50	355.40	11,136.8	169.0	19.5	62.7	14.13	14.06	1.56
11,372.0	72.60	355.30	11,147.7	199.0	17.0	68.1	15.94	15.94	-0.31
11,403.0	77.60	355.30	11,155.7	228.9	14.6	73.4	16.13	16.13	0.00

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Ram 3 B3PA State Com #1H
Project:	Lea County N. M. Nad (83)	TVD Reference:	3588 + 27 @ 3615.0usft (Patterson 220)
Site:	Section 3-22S-34E Ram 3 B3PA State Com #1H	MD Reference:	3588 + 27 @ 3615.0usft (Patterson 220)
Well:	Ram 3 B3PA State Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

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)
11,435.0	82.30	355.70	11,161.2	260.3	12.1	79.2	14.74	14.69	1.25
11,463.0	87.00	356.60	11,163.8	288.1	10.2	84.6	17.09	16.79	3.21
11,464.8	87.09	356.61	11,163.9	289.9	10.1	85.0	5.05	5.00	0.73
LP Ram 3 B3PA St Com #1H									
11,545.0	91.10	357.20	11,165.2	369.9	5.8	101.6	5.05	5.00	0.73
11,639.0	91.40	358.50	11,163.2	463.8	2.3	122.5	1.42	0.32	1.38
11,734.0	93.80	0.10	11,158.8	558.7	1.1	146.0	3.04	2.53	1.68
11,829.0	91.10	1.00	11,154.8	653.6	2.0	171.5	3.00	-2.84	0.95
11,923.0	91.30	0.80	11,152.8	747.6	3.5	197.3	0.30	0.21	-0.21
12,017.0	91.90	0.70	11,150.2	841.5	4.7	222.9	0.65	0.64	-0.11
12,111.0	89.80	0.70	11,148.8	935.5	5.9	248.3	2.23	-2.23	0.00
12,206.0	88.50	0.50	11,150.2	1,030.5	6.9	273.9	1.38	-1.37	-0.21
12,301.0	88.30	0.10	11,152.9	1,125.5	7.4	299.1	0.47	-0.21	-0.42
12,396.0	91.20	359.00	11,153.3	1,220.4	6.6	323.0	3.26	3.05	-1.16
12,490.0	90.50	359.10	11,151.9	1,314.4	5.1	345.8	0.75	-0.74	0.11
12,584.0	89.50	358.90	11,151.9	1,408.4	3.4	368.6	1.08	-1.06	-0.21
12,679.0	91.40	357.80	11,151.1	1,503.4	0.7	390.6	2.31	2.00	-1.16
12,774.0	91.00	357.90	11,149.1	1,598.3	-2.9	411.8	0.43	-0.42	0.11
12,869.0	90.10	357.90	11,148.2	1,693.2	-6.3	433.1	0.95	-0.95	0.00
12,963.0	91.70	358.40	11,146.8	1,787.1	-9.4	454.5	1.78	1.70	0.53
13,058.0	90.50	357.80	11,144.9	1,882.1	-12.5	476.1	1.41	-1.26	-0.63
13,153.0	92.90	359.70	11,142.1	1,977.0	-14.6	498.7	3.22	2.53	2.00
13,248.0	88.20	358.80	11,141.2	2,072.0	-15.8	522.1	5.04	-4.95	-0.95
13,343.0	91.10	0.20	11,141.8	2,166.9	-16.7	546.0	3.39	3.05	1.47
13,439.0	92.50	0.70	11,138.8	2,262.9	-15.9	571.6	1.55	1.46	0.52
13,534.0	92.40	1.10	11,134.7	2,357.8	-14.4	597.6	0.43	-0.11	0.42
13,629.0	92.70	359.70	11,130.5	2,452.7	-13.8	622.9	1.51	0.32	-1.47
13,723.0	90.30	0.10	11,128.0	2,546.6	-13.9	647.1	2.59	-2.55	0.43
13,819.0	92.60	0.80	11,125.6	2,642.6	-13.2	672.7	2.50	2.40	0.73
13,914.0	91.10	0.90	11,122.5	2,737.5	-11.8	698.7	1.58	-1.58	0.11
14,008.0	89.20	0.30	11,122.3	2,831.5	-10.8	724.0	2.12	-2.02	-0.64
14,102.0	91.60	0.70	11,121.6	2,925.5	-10.0	749.2	2.59	2.55	0.43
14,197.0	90.50	1.30	11,119.9	3,020.5	-8.3	775.4	1.32	-1.16	0.63
14,292.0	89.90	0.10	11,119.6	3,115.5	-7.1	801.2	1.41	-0.63	-1.26
14,386.0	88.40	1.80	11,120.9	3,209.4	-5.6	827.1	2.41	-1.60	1.81
14,481.0	88.40	2.50	11,123.6	3,304.3	-2.0	855.1	0.74	0.00	0.74
14,575.0	89.10	0.90	11,125.6	3,398.3	0.8	882.2	1.86	0.74	-1.70
14,669.0	93.00	0.10	11,123.9	3,492.2	1.6	907.3	4.24	4.15	-0.85
14,764.0	92.90	358.40	11,119.0	3,587.1	0.3	930.8	1.79	-0.11	-1.79
14,859.0	90.20	359.00	11,116.5	3,682.0	-1.8	953.3	2.91	-2.84	0.63
14,953.0	90.20	358.50	11,116.1	3,776.0	-3.9	975.7	0.53	0.00	-0.53
15,047.0	89.60	358.50	11,116.3	3,870.0	-6.3	997.7	0.64	-0.64	0.00
15,142.0	90.80	358.90	11,116.0	3,964.9	-8.5	1,020.2	1.33	1.26	0.42

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Ram 3 B3PA State Com #1H
Project:	Lea County N. M. Nad (83)	TVD Reference:	3588 + 27 @ 3615.0usft (Patterson 220)
Site:	Section 3-22S-34E Ram 3 B3PA State Com #1H	MD Reference:	3588 + 27 @ 3615.0usft (Patterson 220)
Well:	Ram 3.B3PA State Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

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)
15,236.0	91.60	359.00	11,114.0	4,058.9	-10.2	1,042.9	0.86	0.85	0.11
15,331.0	89.90	358.40	11,112.8	4,153.9	-12.4	1,065.5	1.90	-1.79	-0.63
15,425.0	92.00	359.10	11,111.2	4,247.8	-14.4	1,087.9	2.35	2.23	0.74
15,519.0	89.80	359.30	11,109.7	4,341.8	-15.7	1,111.0	2.35	-2.34	0.21
15,614.0	87.60	359.50	11,111.9	4,436.8	-16.7	1,134.7	2.33	-2.32	0.21
15,708.0	89.90	358.50	11,113.9	4,530.7	-18.4	1,157.5	2.67	2.45	-1.06
15,802.0	90.80	357.70	11,113.4	4,624.7	-21.5	1,178.8	1.28	0.96	-0.85
15,897.0	90.30	357.00	11,112.4	4,719.6	-25.9	1,199.2	0.91	-0.53	-0.74
15,927.0	90.90	357.00	11,112.1	4,749.5	-27.4	1,205.4	2.00	2.00	0.00
15,980.0	90.90	357.00	11,111.3	4,802.4	-30.2	1,216.5	0.00	0.00	0.00

15980' MD Projected to Bit - PBHL Ram 3 B3PA St Com 1H

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,495.0	5,477.7	-65.9	119.4	5495' MD Phoenix Gyro
15,980.0	11,111.3	4,802.4	-30.2	15980' MD Projected to Bit



March 22, 2018

Survey Certification Report

STATE OF TEXAS

COUNTY OF Montgomery

I, Todd Estes, certify that I am employed by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C., and that I did on the day(s) of February 10, 2018, through February 25, 2018 conduct or supervise the taking of a SEDS Original Hole MWD Survey from a depth of 5,684 feet to a depth of 15,927 feet; that I am authorized and qualified to make this report; that this survey was conducted at the request of Mewbourne Oil Company, for the Ram 3 B3PA State Com #001H well, API # **30-025-43425** in Lea County, New Mexico; and that I have reviewed this report and find that it conforms to the principles as set forth by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

Todd Estes

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

P.O. Box 1250

Montgomery, TX 77356

Office (936) 582-7296 * Fax (936)-588-4163



March 22, 2018

New Mexico Energy, Minerals and Natural Resources Department
Attn: Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

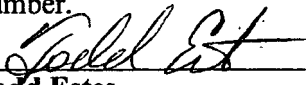
Attn: Jackie Lathan

Re: Mewbourne Oil Company
Ram 3 B3PA State Com #001H
Ojo Chiso; Bone Spring
Lea County, New Mexico
API# 30-025-43425

Enclosed please find the original and one (1) copy of the survey performed on the reference well by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C. Other information required by your office is as follows:

<u>Name & Title</u>	<u>Drainhole No.</u>	<u>Survey Depths</u>	<u>Dates Performed</u>	<u>Type Survey</u>
Martin Pina	Original Hole	5,684ft. to 15,927ft.	02-10-18 to 02-25-18	MWD Survey

A certified plat on which the bottom-hole location is oriented to both 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.


Todd Estes

Enclosures

CC:

Mewbourne Oil Company
Attn: Frosty Lathan
P.O. Box 5720
Hobbs, NM 88241

Mewbourne Oil Company
Attn: Robin Terrell
P.O. Box 5720
Hobbs, NM 88241

NMEMaNRD\Mewbourne Oil Company\Ram 3 B3PA State Com #1H\181021

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.
P.O. Box 1250
Montgomery, TX 77356
Office (936) 582-7296 * Fax (936)-588-4163



TECHNOLOGY SERVICES USA INC.

Celebrating 20 Years of Focused Solutions

3610 Elkins Road, Midland, Texas 79705 T. 432.684.0057 F. 432.686.7964 www.phxtech.com

February 13, 2018

Mewbourne Oil
Attention: Regulatory Department
701 S Cecil St
Hobbs, New Mexico 88240

Re: Mewbourne Oil
Ram 3 B3PA State Com 1H
Lea County, New Mexico
API #30-025-43425
Job No. 62331

Dear Regulatory Department;

Phoenix Technology Services, Inc. has filed the Survey Data Certification, Surveys, and Lease Plat for the above referenced well with the State of New Mexico Oil Conservation Division – District 1 via certified mail. A copy of the filing is attached for your records.

Name of Surveyor	Drain Hole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Noe Garza	1H	0	5,495	2/11/18	2/11/18	Gyro

Thank you for the opportunity to be of service. Please contact me if you have any questions or require additional information.

Best Regards,

Brittany Carley

Brittany Carley
Operations Administrator

SURVEY CERTIFICATION FORM

3610 Elkins Road Midland, TX 79705 t:432-684-0057 f: 432-686-7964



PHOENIX
TECHNOLOGY SERVICES

Company: Mewbourne

Job #: 62331

Well Name: Ram 3 B3PA State Com 1H

County/State: Lea Co., New Mexico

Survey Instrument Type: North Seek Rate Gyro

API # 30-025-43425

TIE-IN DATA

Measure Depth (ft)	Vertical Depth (ft)	Inclination (°)	Azimuth (°)	N-S Coordinates	E-W Coordinates	Data Source
0	0	0	0	0	0	Surface

First Survey

Date	Depth (ft)	Inclination (°)	Azimuth (°)
2018-02-11	0	0	0

Last Survey

Date	Depth (ft)	Inclination (°)	Azimuth (°)
2018-02-11	5495	22.14	145.88

Projected TD Survey

Date	Depth (ft)	Inclination (°)	Azimuth (°)
0	0	0	0

Grid Correction
-0.47

Gyro Operator: Phoenix Technology Services USA Ltd.

Gyro Supervisor: Angel Guebara

To the best of my knowledge I certify this survey data to be correct and true

Date:

02-11-18

Print Name: Noe Garza

Signature:



Company: Mewbourne
 Well: Ram 3 B3PA State Com 1H
 Location: Lea Co., New Mexico
 Rig: Patterson 220

Job Number: 62331
 Grid Corr.: -0.47
 Lat: 32.43
 Long: -103.45

Date: 02-11-18
 Calculation Method: Minimum Curvature
 Proposed Azimuth:
 RKB - MSL in feet: 26.5
 Tie Into: Surface

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
Enter Tie-In Survey on Line 10					FIELD COPY, NON-DEFINITIVE								
TIE IN	0			0	0	0	0	0					
Gyro	100.00	0.27	322.50	100	100.00	0.19	0.19 N	0.14 W	0.24	322.50	0.27	0.27	322.50
	200.00	0.22	294.07	100	200.00	0.45	0.45 N	0.46 W	0.65	314.37	0.13	-0.05	-28.43
	300.00	0.25	297.13	100	300.00	0.63	0.63 N	0.83 W	1.04	307.14	0.03	0.03	3.06
	400.00	0.34	25.35	100	400.00	1.00	1.00 N	0.90 W	1.34	317.98	0.42	0.09	-271.78
	500.00	0.20	330.05	100	500.00	1.42	1.42 N	0.86 W	1.66	328.78	0.28	-0.14	304.70
	600.00	0.45	303.47	100	599.99	1.78	1.78 N	1.27 W	2.19	324.49	0.29	0.25	-26.58
	700.00	0.54	330.81	100	699.99	2.41	2.41 N	1.83 W	3.03	322.81	0.25	0.09	27.34
	800.00	0.58	8.79	100	799.99	3.32	3.32 N	1.98 W	3.87	329.18	0.37	0.04	-322.02
	900.00	0.42	27.65	100	899.98	4.15	4.15 N	1.74 W	4.50	337.30	0.23	-0.16	18.86
	1000.00	0.30	89.83	100	999.98	4.47	4.47 N	1.30 W	4.66	343.75	0.39	-0.12	62.18
	1100.00	0.14	336.31	100	1099.98	4.59	4.59 N	1.09 W	4.72	346.62	0.38	-0.16	246.48
	1200.00	0.52	260.02	100	1199.98	4.62	4.62 N	1.59 W	4.89	341.04	0.51	0.38	-76.29
	1300.00	0.57	273.03	100	1299.97	4.57	4.57 N	2.53 W	5.22	331.01	0.13	0.05	13.01
	1400.00	0.55	256.77	100	1399.97	4.48	4.48 N	3.49 W	5.69	322.07	0.16	-0.02	-16.26
	1500.00	0.25	2.53	100	1499.97	4.59	4.59 N	3.95 W	6.06	319.28	0.66	-0.30	-254.24
	1600.00	0.24	288.34	100	1599.97	4.88	4.88 N	4.14 W	6.40	319.66	0.30	-0.01	285.81
	1700.00	0.48	69.08	100	1699.97	5.09	5.09 N	3.95 W	6.44	322.20	0.68	0.24	-219.26
	1800.00	0.80	276.45	100	1799.96	5.32	5.32 N	4.25 W	6.81	321.37	1.25	0.32	207.37
	1900.00	0.81	245.68	100	1899.95	5.11	5.11 N	5.59 W	7.57	312.42	0.43	0.01	-30.77
	2000.00	1.09	207.36	100	1999.94	3.97	3.97 N	6.67 W	7.76	300.77	0.68	0.28	-38.32
	2100.00	0.67	150.91	100	2099.93	2.62	2.62 N	6.82 W	7.31	290.97	0.91	-0.42	-56.45
	2200.00	0.69	184.59	100	2199.92	1.50	1.50 N	6.59 W	6.76	282.87	0.39	0.02	33.68
	2300.00	0.92	136.63	100	2299.91	0.32	0.32 N	6.08 W	6.09	273.02	0.69	0.23	-47.96
	2400.00	0.59	84.71	100	2399.91	-0.22	0.22 S	5.02 W	5.03	267.54	0.72	-0.33	-51.92
	2500.00	0.18	246.12	100	2499.91	-0.23	0.23 S	4.65 W	4.66	267.15	0.76	-0.41	161.41
	2600.00	0.63	96.30	100	2599.90	-0.36	0.36 S	4.25 W	4.26	265.22	0.79	0.45	-149.82
	2700.00	0.55	17.09	100	2699.90	0.04	0.04 N	3.56 W	3.56	270.69	0.75	-0.08	-79.21



Company: Mewbourne
 Well: Ram 3 B3PA State Com 1H
 Location: Lea Co., New Mexico
 Rig: Patterson 220

Job Number: 62331
 Grid Corr.: -0.47
 Lat: 32.43
 Long: -103.45

Calculation Method: Minimum Curvature
 Proposed Azimuth:
 RKB - MSL in feet: 26.5
 Tie Into: Surface

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
	2800.00	0.73	56.45	100	2799.89	0.85	0.85 N	2.89 W	3.01	286.47	0.46	0.18	39.36
	2900.00	0.50	93.22	100	2899.89	1.18	1.18 N	1.92 W	2.26	301.57	0.45	-0.23	36.77
	3000.00	0.29	91.84	100	2999.89	1.15	1.15 N	1.23 W	1.69	312.95	0.21	-0.21	-1.38
	3100.00	0.31	35.57	100	3099.89	1.36	1.36 N	0.82 W	1.59	328.81	0.28	0.02	-56.27
	3200.00	0.79	78.22	100	3199.88	1.72	1.72 N	0.01 E	1.72	0.28	0.60	0.48	42.65
	3300.00	0.47	6.54	100	3299.88	2.27	2.27 N	0.73 E	2.38	17.83	0.78	-0.32	-71.68
	3400.00	0.97	73.73	100	3399.87	2.91	2.91 N	1.59 E	3.32	28.61	0.90	0.50	67.19
	3500.00	1.20	71.28	100	3499.85	3.49	3.49 N	3.39 E	4.87	44.22	0.23	0.23	-2.45
	3600.00	1.11	66.85	100	3599.83	4.20	4.20 N	5.28 E	6.75	51.45	0.13	-0.09	-4.43
	3700.00	1.27	48.70	100	3699.81	5.32	5.32 N	7.00 E	8.79	52.78	0.41	0.16	-18.15
	3800.00	0.92	37.39	100	3799.79	6.69	6.69 N	8.32 E	10.67	51.21	0.41	-0.35	-11.31
	3900.00	0.92	81.00	100	3899.78	7.45	7.45 N	9.60 E	12.15	52.19	0.68	0.00	43.61
	4000.00	0.84	47.14	100	3999.77	8.07	8.07 N	10.93 E	13.59	53.55	0.52	-0.08	-33.86
	4100.00	0.36	85.84	100	4099.76	8.60	8.60 N	11.78 E	14.58	53.89	0.60	-0.48	38.70
	4200.00	0.86	104.50	100	4199.76	8.43	8.43 N	12.82 E	15.34	56.67	0.53	0.50	18.66
	4300.00	0.28	331.28	100	4299.75	8.46	8.46 N	13.43 E	15.87	57.80	1.07	-0.58	226.78
	4400.00	1.53	73.45	100	4399.74	9.05	9.05 N	14.59 E	17.17	58.19	1.61	1.25	-257.83
	4500.00	1.88	46.14	100	4499.70	10.57	10.57 N	17.05 E	20.06	58.22	0.87	0.35	-27.31
	4600.00	2.19	45.63	100	4599.64	13.04	13.04 N	19.60 E	23.54	56.37	0.31	0.31	-0.51
	4700.00	1.99	38.86	100	4699.57	15.73	15.73 N	22.06 E	27.09	54.51	0.32	-0.20	-6.77
	4800.00	2.52	62.25	100	4799.49	18.10	18.10 N	25.09 E	30.94	54.19	1.05	0.53	23.39
	4900.00	3.32	75.76	100	4899.36	19.84	19.84 N	29.85 E	35.84	56.39	1.05	0.80	13.51
	5000.00	5.61	112.29	100	4999.07	18.70	18.70 N	37.18 E	41.61	63.30	3.54	2.29	36.53
	5100.00	8.86	123.58	100	5098.27	12.58	12.58 N	48.12 E	49.74	75.35	3.53	3.25	11.29
	5200.00	12.23	131.54	100	5196.57	1.30	1.30 N	62.47 E	62.48	88.81	3.66	3.37	7.96
	5300.00	16.02	136.76	100	5293.53	-15.79	15.79 S	79.86 E	81.40	101.18	3.99	3.79	5.22
	5400.00	19.29	141.58	100	5388.81	-38.79	38.79 S	99.58 E	106.87	111.28	3.58	3.27	4.82
	5495.00	22.14	145.88	95	5477.67	-65.91	65.91 S	119.38 E	136.36	118.90	3.40	3.00	4.53