

30 05 38419



COMPANY: Mewbourne Oil Company
 WELL: Coltrane 36 B2PA St #1H
 COUNTY: Eddy County, New Mexico
 DATUM: NAD 1927 (NADCON CONUS)
 RIG: Patterson 36



GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 6.91°

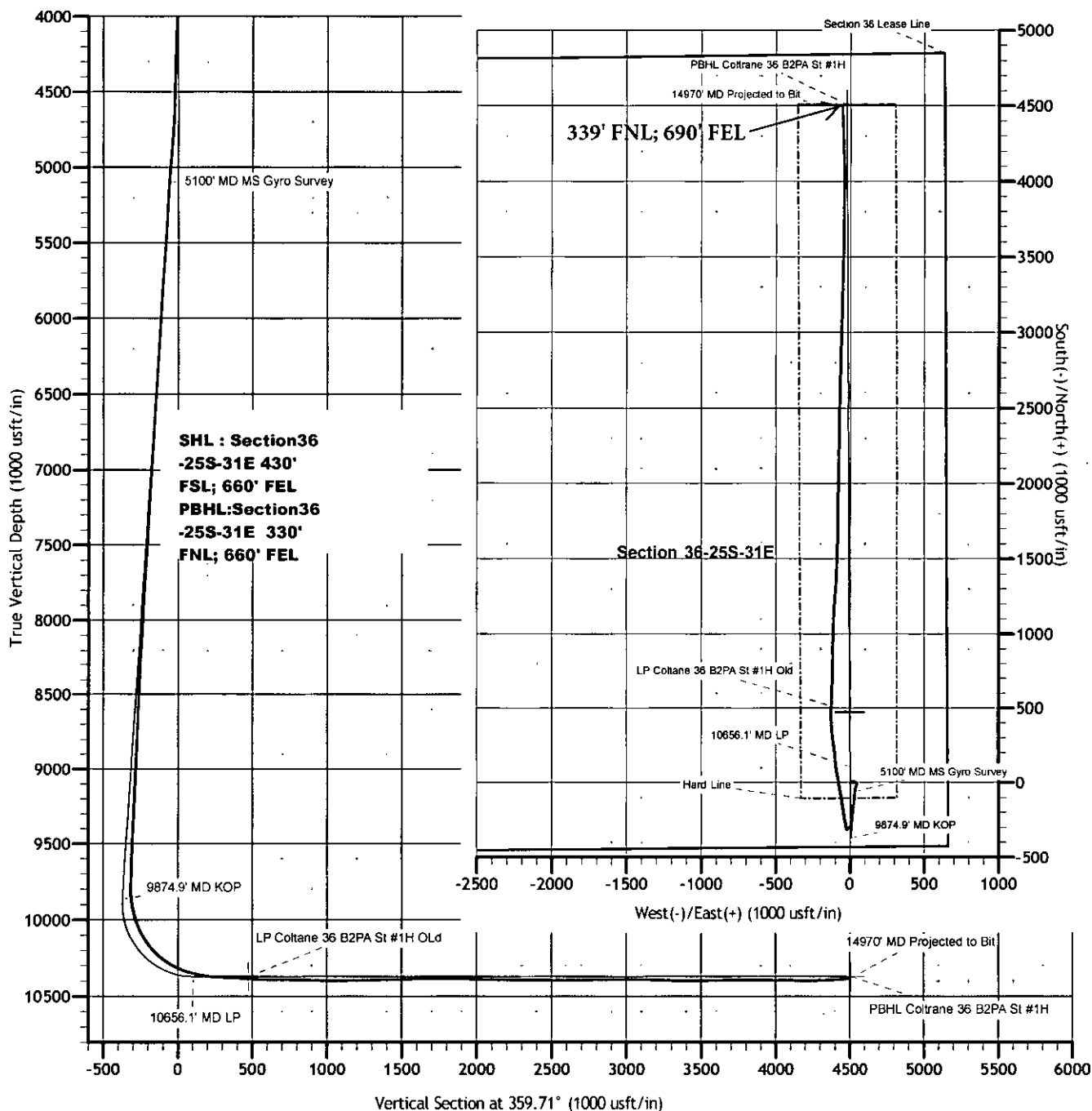
OFFICE: 936.582.7296

GEODETTIC ZONE: New Mexico East 3001
 3299 + 22 @ 3321.0usft (Patterson 36)
 GROUND ELEVATION: 3299.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	393576.46	688502.32	32° 4' 50.144 N	103° 43' 29.003 W	

PLAN SECTIONS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFact	Target
1	5100.0	3.76	184.68	5097.7	-57.4	30.4	0.00	0.00	-57.6	
2	9874.9	3.76	184.68	9852.3	-369.5	4.9	0.00	0.00	-369.5	
3	10656.1	90.00	359.71	10371.0	106.9	-0.5	12.00	175.01	106.9	
4	15059.1	90.00	359.71	10371.0	4509.8	-23.1	0.00	0.00	4509.9	PBHL Coltrane 36 B2PA St #1H





Mewbourne Oil Company .

Eddy County, New Mexico

Section 36-25S-31E Coltrane 36 B2PA State #001H

Coltane 36 B2PA St #1H

Original Hole

Design: Original Hole

Standard Survey Report

15 June, 2015





Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Collane 36 B2PA St #1H
Project:	Eddy County, New Mexico	TVD Reference:	3299 + 22 @ 3321.0usft (Patterson 36)
Site:	Section 36-25S-31E Coltrane 36 B2PA State #001H	MD Reference:	3299 + 22 @ 3321.0usft (Patterson 36)
Well:	Collane 36 B2PA St #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

Project	Eddy County, New Mexico		
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	Section 36-25S-31E Coltrane 36 B2PA State #001H		
Site Position:	Northing:	393,576.46 usft	Latitude: 32° 4' 50.144 N
From: Map	Easting:	688,502.31 usft	Longitude: 103° 43' 29.003 W
Position Uncertainty: 0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.32 °

Well	Collane 36 B2PA St #1H		
Well Position	+N/-S	0.0 usft	Northing: 393,576.46 usft
	+E/-W	0.0 usft	Easting: 688,502.31 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
		Ground Level:	3,299.0 usft

Wellbore	Original Hole		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/22/2015	7.24	59.93	48,050

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	359.71

Survey Program	Date 6/15/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	5,100.0	MS Gyro Survey (Original Hole)	NSG-CT_WL	Continuous north-seeking gyro on wireline
5,221.0	14,970.0	Stryker MWD Survey #2 (Original Hole)	MWD	MWD v3:standard declination

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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.82	153.06	100.0	-0.6	0.3	-0.6	0.82	0.82	0.00	
200.0	0.55	54.95	200.0	-1.0	1.0	-1.0	1.05	-0.27	-98.11	
300.0	0.63	24.78	300.0	-0.2	1.7	-0.2	0.32	0.08	-30.17	
400.0	0.79	35.21	400.0	0.8	2.3	0.8	0.21	0.16	10.43	
500.0	0.69	33.27	500.0	1.9	3.0	1.9	0.10	-0.10	-1.94	
600.0	0.67	36.12	600.0	2.9	3.7	2.9	0.04	-0.02	2.85	
700.0	1.24	46.68	699.9	4.1	4.8	4.1	0.59	0.57	10.56	
800.0	1.35	69.83	799.9	5.2	6.7	5.2	0.53	0.11	23.15	



Stryker Directional Survey Report



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Site:	Section 36-25S-31E Coltrane 36 B2PA State #001H	MD Reference:	3299 + 22 @ 3321.0usft (Patterson 36)
Well:	Coltane 36 B2PA St #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)
900.0	1.41	90.24	899.9	5.6	9.1	5.6	0.49	0.06	20.41
1,000.0	1.50	108.85	999.9	5.2	11.5	5.2	0.48	0.09	18.61
1,100.0	1.46	114.49	1,099.8	4.3	13.9	4.2	0.15	-0.04	5.64
1,200.0	1.21	99.62	1,199.8	3.6	16.1	3.5	0.43	-0.25	-14.87
1,300.0	1.61	87.85	1,299.8	3.4	18.6	3.3	0.49	0.40	-11.77
1,400.0	1.70	92.74	1,399.7	3.4	21.5	3.3	0.17	0.09	4.89
1,500.0	0.99	50.01	1,499.7	3.9	23.6	3.8	1.18	-0.71	-42.73
1,600.0	0.65	20.20	1,599.7	5.0	24.5	4.9	0.53	-0.34	-29.81
1,700.0	0.83	23.96	1,699.7	6.2	24.9	6.1	0.19	0.18	3.76
1,800.0	0.75	337.07	1,799.7	7.4	25.0	7.3	0.63	-0.08	-46.89
1,900.0	0.83	333.83	1,899.7	8.7	24.4	8.6	0.09	0.08	-3.24
2,000.0	1.45	291.67	1,999.7	9.8	22.9	9.7	1.00	0.62	-42.16
2,100.0	1.71	287.13	2,099.6	10.7	20.3	10.6	0.29	0.26	-4.54
2,200.0	0.40	102.06	2,199.6	11.1	19.2	11.0	2.11	-1.31	174.93
2,300.0	1.24	140.06	2,299.6	10.2	20.3	10.1	0.96	0.84	38.00
2,400.0	1.43	144.35	2,399.6	8.3	21.7	8.2	0.21	0.19	4.29
2,500.0	1.34	119.17	2,499.5	6.8	23.4	6.6	0.61	-0.09	-25.18
2,600.0	1.30	103.03	2,599.5	5.9	25.6	5.8	0.37	-0.04	-16.14
2,700.0	0.85	96.65	2,699.5	5.6	27.4	5.5	0.46	-0.45	-6.38
2,800.0	0.86	90.17	2,799.5	5.5	28.9	5.4	0.10	0.01	-6.48
2,900.0	0.87	98.83	2,899.5	5.4	30.4	5.2	0.13	0.01	8.66
3,000.0	1.02	113.50	2,999.5	4.9	32.0	4.8	0.28	0.15	14.67
3,100.0	1.25	124.82	3,099.4	3.9	33.7	3.8	0.32	0.23	11.32
3,200.0	2.04	118.44	3,199.4	2.5	36.1	2.3	0.81	0.79	-6.38
3,300.0	2.16	115.26	3,299.3	0.8	39.4	0.6	0.17	0.12	-3.18
3,400.0	1.29	99.19	3,399.3	-0.2	42.2	-0.4	0.99	-0.87	-16.07
3,500.0	0.27	80.27	3,499.3	-0.3	43.6	-0.5	1.04	-1.02	-18.92
3,600.0	0.19	209.09	3,599.3	-0.4	43.7	-0.6	0.42	-0.08	128.82
3,700.0	0.43	188.43	3,699.3	-0.9	43.6	-1.1	0.26	0.24	-20.66
3,800.0	1.41	161.48	3,799.3	-2.5	43.9	-2.7	1.05	0.98	-26.95
3,900.0	1.52	166.00	3,899.2	-4.9	44.6	-5.1	0.16	0.11	4.52
4,000.0	1.46	192.94	3,999.2	-7.4	44.7	-7.7	0.70	-0.06	26.94
4,100.0	2.21	189.45	4,099.1	-10.6	44.1	-10.8	0.76	0.75	-3.49
4,200.0	1.47	207.97	4,199.1	-13.6	43.1	-13.8	0.94	-0.74	18.52
4,300.0	1.39	205.18	4,299.1	-15.9	42.0	-16.1	0.11	-0.08	-2.79
4,400.0	1.22	218.74	4,399.0	-17.8	40.8	-18.0	0.35	-0.17	13.56
4,500.0	1.83	204.38	4,499.0	-20.1	39.5	-20.3	0.72	0.61	-14.36
4,600.0	2.52	197.98	4,598.9	-23.6	38.2	-23.8	0.73	0.69	-6.40
4,700.0	3.85	199.59	4,698.8	-28.9	36.4	-29.1	1.33	1.33	1.61
4,800.0	4.12	196.03	4,798.5	-35.5	34.3	-35.7	0.37	0.27	-3.56
4,900.0	4.21	194.47	4,898.3	-42.5	32.3	-42.7	0.14	0.09	-1.56
5,000.0	4.68	185.03	4,998.0	-50.1	31.1	-50.3	0.87	0.47	-9.44

Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Coltane 36 B2PA St #1H
Project:	Eddy County, New Mexico	TVD Reference:	3299 + 22 @ 3321.0usft (Patterson 36)
Site:	Section 36-25S-31E Coltrane 36 B2PA State #001H	MD Reference:	3299 + 22 @ 3321.0usft (Patterson 36)
Well:	Coltane 36 B2PA St #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)
5,100.0	3.76	184.68	5,097.7	-57.4	30.4	-57.6	0.92	-0.92	-0.35
5100' MD MS Gyro Survey									
5,221.0	3.60	185.80	5,218.4	-65.2	29.7	-65.3	0.14	-0.13	0.93
5,410.0	3.50	183.60	5,407.1	-76.8	28.8	-77.0	0.09	-0.05	-1.16
5,601.0	3.50	183.00	5,597.7	-88.5	28.1	-88.6	0.02	0.00	-0.31
5,792.0	4.00	187.20	5,788.3	-100.9	27.0	-101.0	0.30	0.26	2.20
5,982.0	3.70	178.20	5,977.9	-113.6	26.3	-113.7	0.35	-0.16	-4.74
6,173.0	3.20	190.90	6,168.5	-125.0	25.5	-125.1	0.48	-0.26	6.65
6,363.0	3.30	192.00	6,358.2	-135.6	23.4	-135.7	0.06	0.05	0.58
6,553.0	3.50	194.70	6,547.9	-146.5	20.8	-146.6	0.13	0.11	1.42
6,744.0	4.00	176.00	6,738.5	-158.8	19.7	-158.9	0.69	0.26	-9.79
6,933.0	3.70	183.60	6,927.1	-171.5	19.8	-171.6	0.31	-0.16	4.02
7,124.0	3.60	185.40	7,117.7	-183.6	18.9	-183.7	0.08	-0.05	0.94
7,314.0	3.20	191.70	7,307.3	-194.7	17.2	-194.8	0.29	-0.21	3.32
7,504.0	2.80	196.10	7,497.1	-204.4	14.9	-204.4	0.24	-0.21	2.32
7,695.0	4.00	188.30	7,687.7	-215.4	12.6	-215.5	0.67	0.63	-4.08
7,885.0	3.70	186.20	7,877.3	-228.1	11.0	-228.2	0.17	-0.16	-1.11
8,075.0	3.30	185.20	8,067.0	-239.6	9.8	-239.7	0.21	-0.21	-0.53
8,266.0	3.10	181.50	8,257.7	-250.3	9.2	-250.3	0.15	-0.10	-1.94
8,456.0	2.50	178.70	8,447.4	-259.6	9.2	-259.6	0.32	-0.32	-1.47
8,646.0	2.50	195.20	8,637.3	-267.7	8.2	-267.7	0.38	0.00	8.68
8,837.0	1.90	194.60	8,828.1	-274.8	6.3	-274.8	0.31	-0.31	-0.31
9,027.0	2.70	190.80	9,018.0	-282.2	4.7	-282.2	0.43	0.42	-2.00
9,217.0	3.60	220.80	9,207.7	-291.1	-0.1	-291.1	0.97	0.47	15.79
9,409.0	3.20	222.30	9,399.4	-299.7	-7.6	-299.6	0.21	-0.21	0.78
9,599.0	3.10	222.60	9,589.1	-307.4	-14.7	-307.3	0.05	-0.05	0.16
9,751.0	3.00	227.30	9,740.8	-313.1	-20.4	-313.0	0.18	-0.07	3.09
9,780.0	2.90	234.50	9,769.8	-314.0	-21.5	-313.9	1.32	-0.34	24.83
9,811.0	2.10	277.00	9,800.8	-314.4	-22.7	-314.3	6.32	-2.58	137.10
9,843.0	3.80	338.40	9,832.7	-313.4	-23.7	-313.2	10.46	5.31	191.88
9,875.0	6.50	351.50	9,864.6	-310.6	-24.4	-310.5	9.15	8.44	40.94
9,907.0	8.90	357.20	9,896.3	-306.3	-24.8	-306.2	7.86	7.50	17.81
9,938.0	11.30	352.60	9,926.8	-300.9	-25.3	-300.8	8.16	7.74	-14.84
9,970.0	14.20	347.10	9,958.1	-294.0	-26.5	-293.8	9.81	9.06	-17.19
10,002.0	17.30	346.10	9,988.8	-285.5	-28.6	-285.4	9.72	9.69	-3.13
10,033.0	20.60	346.00	10,018.2	-275.8	-31.0	-275.6	10.65	10.65	-0.32
10,065.0	24.00	346.60	10,047.8	-264.0	-33.9	-263.8	10.65	10.63	1.88
10,097.0	27.70	347.60	10,076.6	-250.4	-37.0	-250.2	11.64	11.56	3.13
10,129.0	31.10	349.10	10,104.4	-235.0	-40.1	-234.8	10.87	10.63	4.69
10,160.0	34.30	350.80	10,130.5	-218.5	-43.0	-218.3	10.74	10.32	5.48
10,192.0	37.80	351.80	10,156.4	-199.9	-45.9	-199.6	11.09	10.94	3.13
10,224.0	41.20	352.10	10,181.1	-179.7	-48.7	-179.5	10.64	10.63	0.94
10,255.0	44.40	353.20	10,203.8	-158.8	-51.4	-158.6	10.60	10.32	3.55

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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)
10,287.0	48.30	352.50	10,225.9	-135.9	-54.3	-135.6	12.29	12.19	-2.19
10,319.0	51.50	351.50	10,246.5	-111.6	-57.7	-111.3	10.28	10.00	-3.13
10,351.0	55.10	350.80	10,265.6	-86.3	-61.7	-86.0	11.39	11.25	-2.19
10,382.0	58.20	349.90	10,282.7	-60.8	-66.0	-60.4	10.29	10.00	-2.90
10,414.0	61.70	349.20	10,298.7	-33.5	-71.0	-33.2	11.10	10.94	-2.19
10,446.0	65.40	349.70	10,312.9	-5.4	-76.3	-5.0	11.65	11.56	1.56
10,477.0	69.20	350.40	10,324.9	22.8	-81.2	23.2	12.43	12.26	2.26
10,509.0	73.00	349.60	10,335.3	52.6	-86.5	53.0	12.11	11.88	-2.50
10,541.0	76.90	349.60	10,343.6	83.0	-92.1	83.5	12.19	12.19	0.00
10,572.0	77.30	352.80	10,350.5	112.8	-96.7	113.3	10.14	1.29	10.32
10,604.0	77.60	355.60	10,357.5	143.9	-99.8	144.4	8.59	0.94	8.75
10,636.0	79.20	355.00	10,363.9	175.2	-102.4	175.7	5.33	5.00	-1.88
10,668.0	81.80	354.20	10,369.2	206.6	-105.4	207.1	8.49	8.13	-2.50
10,695.0	84.00	353.30	10,372.5	233.2	-108.3	233.8	8.79	8.15	-3.33
10,723.0	88.00	351.40	10,374.5	260.9	-112.0	261.5	15.81	14.29	-6.79
10,755.0	88.00	352.80	10,375.6	292.6	-116.4	293.1	4.37	0.00	4.38
10,785.0	87.60	353.40	10,376.7	322.3	-120.0	322.9	2.40	-1.33	2.00
10,817.0	87.60	355.20	10,378.1	354.1	-123.2	354.8	5.62	0.00	5.63
10,848.0	86.80	357.10	10,379.6	385.0	-125.3	385.7	6.64	-2.58	6.13
10,880.0	86.80	357.20	10,381.4	416.9	-126.8	417.6	0.31	0.00	0.31
10,912.0	86.70	358.60	10,383.2	448.9	-128.0	449.5	4.38	-0.31	4.38
10,938.3	86.95	0.13	10,384.6	475.1	-128.3	475.8	5.88	0.97	5.81
LP Coltane 36 B2PA St #1H									
10,943.0	87.00	0.40	10,384.9	479.8	-128.3	480.5	5.88	0.97	5.81
10,975.0	88.30	1.90	10,386.2	511.8	-127.6	512.4	6.20	4.06	4.69
11,007.0	88.30	2.70	10,387.1	543.7	-126.4	544.4	2.50	0.00	2.50
11,038.0	88.40	2.20	10,388.0	574.7	-125.0	575.3	1.64	0.32	-1.61
11,101.0	89.80	1.90	10,389.0	637.6	-122.8	638.3	2.27	2.22	-0.48
11,165.0	89.60	1.40	10,389.4	701.6	-120.9	702.2	0.84	-0.31	-0.78
11,228.0	88.60	1.50	10,390.4	764.6	-119.3	765.2	1.60	-1.59	0.16
11,323.0	87.80	1.50	10,393.3	859.5	-116.9	860.1	0.84	-0.84	0.00
11,386.0	89.50	1.20	10,394.8	922.5	-115.4	923.0	2.74	2.70	-0.48
11,449.0	89.20	0.70	10,395.5	985.5	-114.3	986.0	0.93	-0.48	-0.79
11,512.0	89.40	1.90	10,396.3	1,048.4	-112.9	1,049.0	1.93	0.32	1.90
11,607.0	90.20	3.80	10,396.6	1,143.3	-108.2	1,143.9	2.17	0.84	2.00
11,702.0	91.90	4.00	10,394.9	1,238.1	-101.7	1,238.6	1.80	1.79	0.21
11,796.0	91.70	3.30	10,391.9	1,331.8	-95.7	1,332.3	0.77	-0.21	-0.74
11,891.0	92.90	3.00	10,388.1	1,426.6	-90.5	1,427.1	1.30	1.26	-0.32
11,986.0	91.60	2.40	10,384.4	1,521.4	-86.1	1,521.9	1.51	-1.37	-0.63
12,081.0	89.50	1.20	10,383.5	1,616.4	-83.1	1,616.8	2.55	-2.21	-1.26
12,176.0	90.20	0.10	10,383.7	1,711.4	-82.0	1,711.8	1.37	0.74	-1.16
12,270.0	89.10	0.90	10,384.3	1,805.4	-81.2	1,805.8	1.45	-1.17	0.85
12,365.0	90.10	0.40	10,385.0	1,900.4	-80.1	1,900.7	1.18	1.05	-0.53



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Coltane 36 B2PA St #1H
Project:	Eddy County, New Mexico	TVD Reference:	3299 + 22 @ 3321.0usft (Patterson 36)
Site:	Section 36-25S-31E Coltrane 36 B2PA State #001H	MD Reference:	3299 + 22 @ 3321.0usft (Patterson 36)
Well:	Coltane 36 B2PA St #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)
12,461.0	89.20	0.30	10,385.6	1,996.3	-79.5	1,996.7	0.94	-0.94	-0.10
12,556.0	88.00	1.00	10,387.9	2,091.3	-78.4	2,091.7	1.46	-1.26	0.74
12,651.0	88.80	2.30	10,390.5	2,186.2	-75.7	2,186.6	1.61	0.84	1.37
12,746.0	89.90	0.90	10,391.6	2,281.2	-73.0	2,281.5	1.87	1.16	-1.47
12,841.0	89.30	0.00	10,392.3	2,376.2	-72.3	2,376.5	1.14	-0.63	-0.95
12,936.0	89.10	1.80	10,393.6	2,471.2	-70.8	2,471.5	1.91	-0.21	1.89
13,031.0	90.30	1.00	10,394.1	2,566.1	-68.5	2,566.4	1.52	1.26	-0.84
13,126.0	91.30	0.80	10,392.8	2,661.1	-67.0	2,661.4	1.07	1.05	-0.21
13,221.0	90.50	1.30	10,391.3	2,756.1	-65.3	2,756.4	0.99	-0.84	0.53
13,317.0	92.00	0.60	10,389.2	2,852.0	-63.7	2,852.3	1.72	1.56	-0.73
13,412.0	91.00	2.00	10,386.7	2,947.0	-61.5	2,947.2	1.81	-1.05	1.47
13,507.0	89.20	2.70	10,386.5	3,041.9	-57.6	3,042.1	2.03	-1.89	0.74
13,601.0	87.30	2.50	10,389.4	3,135.7	-53.3	3,136.0	2.03	-2.02	-0.21
13,696.0	88.10	1.50	10,393.2	3,230.6	-50.0	3,230.8	1.35	0.84	-1.05
13,791.0	89.10	0.90	10,395.5	3,325.6	-48.0	3,325.8	1.23	1.05	-0.63
13,886.0	89.40	1.50	10,396.8	3,420.5	-46.1	3,420.7	0.71	0.32	0.63
13,972.0	91.10	1.00	10,396.4	3,506.5	-44.2	3,506.7	2.06	1.98	-0.58
14,067.0	91.70	0.10	10,394.1	3,601.5	-43.3	3,601.6	1.14	0.63	-0.95
14,163.0	89.80	1.50	10,392.8	3,697.4	-41.9	3,697.6	2.46	-1.98	1.46
14,258.0	89.60	0.80	10,393.3	3,792.4	-40.0	3,792.6	0.77	-0.21	-0.74
14,352.0	89.80	1.40	10,393.8	3,886.4	-38.2	3,886.5	0.67	0.21	0.64
14,447.0	89.70	0.30	10,394.2	3,981.4	-36.8	3,981.5	1.16	-0.11	-1.16
14,542.0	89.50	358.90	10,394.9	4,076.4	-37.5	4,076.5	1.49	-0.21	-1.47
14,637.0	88.80	357.90	10,396.3	4,171.3	-40.1	4,171.5	1.28	-0.74	-1.05
14,732.0	91.60	357.90	10,396.0	4,266.3	-43.6	4,266.4	2.95	2.95	0.00
14,827.0	92.90	358.00	10,392.2	4,361.1	-47.0	4,361.3	1.37	1.37	0.11
14,924.0	93.40	357.40	10,386.9	4,457.9	-50.9	4,458.1	0.80	0.52	-0.62
14,970.0	93.40	357.40	10,384.2	4,503.8	-53.0	4,504.0	0.00	0.00	0.00
14970' MD Projected to Bit - PBHL Coltrane 36 B2PA St #1H									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,100.0	5,097.7	-57.4	30.4	5100' MD MS Gyro Survey
14,970.0	10,384.2	4,503.8	-53.0	14970' MD Projected to Bit



Mewbourne Oil Company .

Eddy County, New Mexico

Section 36-25S-31E Coltrane 36 B2PA State #001H

Coltane 36 B2PA St #1H

Original Hole

Design: Original Hole

Survey Report - Geographic

15 June, 2015





Stryker Directional Survey Report - Geographic



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Collane 36 B2PA St #1H
Project:	Eddy County, New Mexico	TVD Reference:	3299 + 22 @ 3321.0usft (Patterson 36)
Site:	Section 36-25S-31E Coltrane 36 B2PA State #001H	MD Reference:	3299 + 22 @ 3321.0usft (Patterson 36)
Well:	Collane 36 B2PA St #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

Project	Eddy County, New Mexico		
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	Section 36-25S-31E Coltrane 36 B2PA State #001H				
Site Position:		Northing:	393,576.46 usft	Latitude:	32° 4' 50.144 N
From:	Map	Easting:	688,502.31 usft	Longitude:	103° 43' 29.003 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.32 °

Well	Collane 36 B2PA St #1H				
Well Position	+N/-S	0.0 usft	Northing:	393,576.46 usft	Latitude: 32° 4' 50.144 N
	+E/-W	0.0 usft	Easting:	688,502.31 usft	Longitude: 103° 43' 29.003 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level: 3,299.0 usft

Wellbore	Original Hole				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/22/2015	7.24	59.93	48,050

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	359.71

Survey Program	Date 6/15/2015				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	5,100.0	MS Gyro Survey (Original Hole)	NSG-CT_WL	Continuous north-seeking gyro on wireline	
5,221.0	14,970.0	Stryker MWD Survey #2 (Original Hole)	MWD	MWD v3:standard declination	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	393,576.46	688,502.31	32° 4' 50.144 N	103° 43' 29.003 W
100.0	0.82	153.06	100.0	-0.6	0.3	393,575.82	688,502.64	32° 4' 50.138 N	103° 43' 28.999 W
200.0	0.55	54.95	200.0	-1.0	1.0	393,575.46	688,503.35	32° 4' 50.134 N	103° 43' 28.991 W
300.0	0.63	24.78	300.0	-0.2	1.7	393,576.24	688,503.98	32° 4' 50.142 N	103° 43' 28.983 W
400.0	0.79	35.21	400.0	0.8	2.3	393,577.30	688,504.60	32° 4' 50.152 N	103° 43' 28.976 W
500.0	0.69	33.27	500.0	1.9	3.0	393,578.37	688,505.33	32° 4' 50.163 N	103° 43' 28.967 W
600.0	0.67	36.12	600.0	2.9	3.7	393,579.34	688,506.01	32° 4' 50.173 N	103° 43' 28.960 W
700.0	1.24	46.68	699.9	4.1	4.8	393,580.56	688,507.14	32° 4' 50.185 N	103° 43' 28.946 W
800.0	1.35	69.83	799.9	5.2	6.7	393,581.71	688,509.03	32° 4' 50.196 N	103° 43' 28.924 W
900.0	1.41	90.24	899.9	5.6	9.1	393,582.11	688,511.37	32° 4' 50.200 N	103° 43' 28.897 W



Stryker Directional Survey Report - Geographic



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Coltane 36 B2PA St #1H
Project:	Eddy County, New Mexico	TVD Reference:	3299 + 22 @ 3321.0usft (Patterson 36)
Site:	Section 36-25S-31E Coltrane 36 B2PA State #001H	MD Reference:	3299 + 22 @ 3321.0usft (Patterson 36)
Well:	Coltane 36 B2PA St #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)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,000.0	1.50	108.85	999.9	5.2	11.5	393,581.68	688,513.84	32° 4' 50.195 N	103° 43' 28.868 W
1,100.0	1.46	114.49	1,099.8	4.3	13.9	393,580.73	688,516.24	32° 4' 50.186 N	103° 43' 28.841 W
1,200.0	1.21	99.62	1,199.8	3.6	16.1	393,580.02	688,518.44	32° 4' 50.179 N	103° 43' 28.815 W
1,300.0	1.61	87.85	1,299.8	3.4	18.6	393,579.90	688,520.88	32° 4' 50.177 N	103° 43' 28.787 W
1,400.0	1.70	92.74	1,399.7	3.4	21.5	393,579.88	688,523.77	32° 4' 50.177 N	103° 43' 28.753 W
1,500.0	0.99	50.01	1,499.7	3.9	23.6	393,580.36	688,525.91	32° 4' 50.182 N	103° 43' 28.728 W
1,600.0	0.65	20.20	1,599.7	5.0	24.5	393,581.45	688,526.77	32° 4' 50.192 N	103° 43' 28.718 W
1,700.0	0.83	23.96	1,699.7	6.2	24.9	393,582.65	688,527.26	32° 4' 50.204 N	103° 43' 28.712 W
1,800.0	0.75	337.07	1,799.7	7.4	25.0	393,583.91	688,527.30	32° 4' 50.217 N	103° 43' 28.712 W
1,900.0	0.83	333.83	1,899.7	8.7	24.4	393,585.16	688,526.72	32° 4' 50.229 N	103° 43' 28.718 W
2,000.0	1.45	291.67	1,999.7	9.8	22.9	393,586.28	688,525.23	32° 4' 50.240 N	103° 43' 28.736 W
2,100.0	1.71	287.13	2,099.6	10.7	20.3	393,587.19	688,522.62	32° 4' 50.249 N	103° 43' 28.766 W
2,200.0	0.40	102.06	2,199.6	11.1	19.2	393,587.55	688,521.54	32° 4' 50.253 N	103° 43' 28.779 W
2,300.0	1.24	140.06	2,299.6	10.2	20.3	393,586.65	688,522.58	32° 4' 50.244 N	103° 43' 28.767 W
2,400.0	1.43	144.35	2,399.6	8.3	21.7	393,584.81	688,524.00	32° 4' 50.226 N	103° 43' 28.750 W
2,500.0	1.34	119.17	2,499.5	6.8	23.4	393,583.22	688,525.75	32° 4' 50.210 N	103° 43' 28.730 W
2,600.0	1.30	103.03	2,599.5	5.9	25.6	393,582.40	688,527.87	32° 4' 50.202 N	103° 43' 28.705 W
2,700.0	0.85	96.65	2,699.5	5.6	27.4	393,582.06	688,529.71	32° 4' 50.198 N	103° 43' 28.684 W
2,800.0	0.86	90.17	2,799.5	5.5	28.9	393,581.97	688,531.20	32° 4' 50.197 N	103° 43' 28.667 W
2,900.0	0.87	98.83	2,899.5	5.4	30.4	393,581.85	688,532.70	32° 4' 50.196 N	103° 43' 28.649 W
3,000.0	1.02	113.50	2,999.5	4.9	32.0	393,581.38	688,534.27	32° 4' 50.191 N	103° 43' 28.631 W
3,100.0	1.25	124.82	3,099.4	3.9	33.7	393,580.40	688,535.98	32° 4' 50.181 N	103° 43' 28.611 W
3,200.0	2.04	118.44	3,199.4	2.5	36.1	393,578.93	688,538.44	32° 4' 50.167 N	103° 43' 28.583 W
3,300.0	2.16	115.26	3,299.3	0.8	39.4	393,577.28	688,541.71	32° 4' 50.150 N	103° 43' 28.545 W
3,400.0	1.29	99.19	3,399.3	-0.2	42.2	393,576.30	688,544.53	32° 4' 50.140 N	103° 43' 28.512 W
3,500.0	0.27	80.27	3,499.3	-0.3	43.6	393,576.16	688,545.87	32° 4' 50.139 N	103° 43' 28.496 W
3,600.0	0.19	209.09	3,599.3	-0.4	43.7	393,576.05	688,546.02	32° 4' 50.138 N	103° 43' 28.495 W
3,700.0	0.43	188.43	3,699.3	-0.9	43.6	393,575.53	688,545.89	32° 4' 50.133 N	103° 43' 28.496 W
3,800.0	1.41	161.48	3,799.3	-2.5	43.9	393,574.00	688,546.22	32° 4' 50.117 N	103° 43' 28.493 W
3,900.0	1.52	166.00	3,899.2	-4.9	44.6	393,571.54	688,546.93	32° 4' 50.093 N	103° 43' 28.484 W
4,000.0	1.46	192.94	3,999.2	-7.4	44.7	393,569.01	688,546.97	32° 4' 50.068 N	103° 43' 28.484 W
4,100.0	2.21	189.45	4,099.1	-10.6	44.1	393,565.87	688,546.37	32° 4' 50.037 N	103° 43' 28.491 W
4,200.0	1.47	207.97	4,199.1	-13.6	43.1	393,562.84	688,545.45	32° 4' 50.007 N	103° 43' 28.502 W
4,300.0	1.39	205.18	4,299.1	-15.9	42.0	393,560.61	688,544.33	32° 4' 49.985 N	103° 43' 28.515 W
4,400.0	1.22	218.74	4,399.0	-17.8	40.8	393,558.68	688,543.15	32° 4' 49.966 N	103° 43' 28.529 W
4,500.0	1.83	204.38	4,499.0	-20.1	39.5	393,556.39	688,541.82	32° 4' 49.943 N	103° 43' 28.545 W
4,600.0	2.52	197.98	4,598.9	-23.6	38.2	393,552.85	688,540.49	32° 4' 49.908 N	103° 43' 28.561 W
4,700.0	3.85	199.59	4,698.8	-28.9	36.4	393,547.59	688,538.68	32° 4' 49.857 N	103° 43' 28.582 W
4,800.0	4.12	196.03	4,798.5	-35.5	34.3	393,540.98	688,536.56	32° 4' 49.791 N	103° 43' 28.607 W
4,900.0	4.21	194.47	4,898.3	-42.5	32.3	393,533.97	688,534.65	32° 4' 49.722 N	103° 43' 28.630 W
5,000.0	4.68	185.03	4,998.0	-50.1	31.1	393,526.35	688,533.38	32° 4' 49.647 N	103° 43' 28.645 W
5,100.0	3.76	184.68	5,097.7	-57.4	30.4	393,519.02	688,532.75	32° 4' 49.574 N	103° 43' 28.653 W
5100' MD MS Gyro Survey									
5,221.0	3.60	185.80	5,218.4	-65.2	29.7	393,511.29	688,532.05	32° 4' 49.498 N	103° 43' 28.661 W
5,410.0	3.50	183.60	5,407.1	-76.8	28.8	393,499.63	688,531.08	32° 4' 49.382 N	103° 43' 28.673 W
5,601.0	3.50	183.00	5,597.7	-88.5	28.1	393,487.99	688,530.41	32° 4' 49.267 N	103° 43' 28.682 W
5,792.0	4.00	187.20	5,788.3	-100.9	27.0	393,475.55	688,529.27	32° 4' 49.144 N	103° 43' 28.696 W
5,982.0	3.70	178.20	5,977.9	-113.6	26.3	393,462.85	688,528.64	32° 4' 49.018 N	103° 43' 28.704 W
6,173.0	3.20	190.90	6,168.5	-125.0	25.5	393,451.46	688,527.82	32° 4' 48.906 N	103° 43' 28.714 W
6,363.0	3.30	192.00	6,358.2	-135.6	23.4	393,440.90	688,525.68	32° 4' 48.801 N	103° 43' 28.740 W
6,553.0	3.50	194.70	6,547.9	-146.5	20.8	393,429.94	688,523.07	32° 4' 48.693 N	103° 43' 28.771 W
6,744.0	4.00	176.00	6,738.5	-158.8	19.7	393,417.66	688,522.06	32° 4' 48.572 N	103° 43' 28.784 W
6,933.0	3.70	183.60	6,927.1	-171.5	19.8	393,404.99	688,522.13	32° 4' 48.446 N	103° 43' 28.784 W
7,124.0	3.60	185.40	7,117.7	-183.6	18.9	393,392.87	688,521.18	32° 4' 48.326 N	103° 43' 28.795 W



Stryker Directional Survey Report - Geographic



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Coltane 36 B2PA St #1H
Project:	Eddy County, New Mexico	TVD Reference:	3299 + 22 @ 3321.0usft (Patterson 36)
Site:	Section 36-25S-31E Coltrane 36 B2PA State #001H	MD Reference:	3299 + 22 @ 3321.0usft (Patterson 36)
Well:	Coltane 36 B2PA St #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)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
7,314.0	3.20	191.70	7,307.3	-194.7	17.2	393,381.74	688,519.55	32° 4' 48.216 N	103° 43' 28.815 W
7,504.0	2.80	196.10	7,497.1	-204.4	14.9	393,372.09	688,517.18	32° 4' 48.121 N	103° 43' 28.843 W
7,695.0	4.00	188.30	7,687.7	-215.4	12.6	393,361.02	688,514.93	32° 4' 48.011 N	103° 43' 28.870 W
7,885.0	3.70	186.20	7,877.3	-228.1	11.0	393,348.36	688,513.31	32° 4' 47.886 N	103° 43' 28.890 W
8,075.0	3.30	185.20	8,067.0	-239.6	9.8	393,336.82	688,512.15	32° 4' 47.772 N	103° 43' 28.904 W
8,266.0	3.10	181.50	8,257.7	-250.3	9.2	393,326.18	688,511.52	32° 4' 47.667 N	103° 43' 28.912 W
8,456.0	2.50	178.70	8,447.4	-259.6	9.2	393,316.91	688,511.48	32° 4' 47.575 N	103° 43' 28.913 W
8,646.0	2.50	195.20	8,637.3	-267.7	8.2	393,308.76	688,510.49	32° 4' 47.495 N	103° 43' 28.925 W
8,837.0	1.90	194.60	8,828.1	-274.8	6.3	393,301.68	688,508.60	32° 4' 47.425 N	103° 43' 28.948 W
9,027.0	2.70	190.80	9,018.0	-282.2	4.7	393,294.24	688,506.96	32° 4' 47.351 N	103° 43' 28.967 W
9,217.0	3.60	220.80	9,207.7	-291.1	-0.1	393,285.32	688,502.23	32° 4' 47.263 N	103° 43' 29.023 W
9,409.0	3.20	222.30	9,399.4	-299.7	-7.6	393,276.80	688,494.68	32° 4' 47.179 N	103° 43' 29.111 W
9,599.0	3.10	222.60	9,589.1	-307.4	-14.7	393,269.09	688,487.63	32° 4' 47.103 N	103° 43' 29.193 W
9,751.0	3.00	227.30	9,740.8	-313.1	-20.4	393,263.37	688,481.93	32° 4' 47.047 N	103° 43' 29.260 W
9,780.0	2.90	234.50	9,769.8	-314.0	-21.5	393,262.43	688,480.77	32° 4' 47.038 N	103° 43' 29.274 W
9,811.0	2.10	277.00	9,800.8	-314.4	-22.7	393,262.04	688,479.57	32° 4' 47.034 N	103° 43' 29.288 W
9,843.0	3.80	338.40	9,832.7	-313.4	-23.7	393,263.10	688,478.60	32° 4' 47.045 N	103° 43' 29.299 W
9,875.0	6.50	351.50	9,864.6	-310.6	-24.4	393,265.88	688,477.94	32° 4' 47.072 N	103° 43' 29.306 W
9,907.0	8.90	357.20	9,896.3	-306.3	-24.8	393,270.14	688,477.55	32° 4' 47.114 N	103° 43' 29.311 W
9,938.0	11.30	352.60	9,926.8	-300.9	-25.3	393,275.55	688,477.04	32° 4' 47.168 N	103° 43' 29.316 W
9,970.0	14.20	347.10	9,958.1	-294.0	-26.5	393,282.49	688,475.76	32° 4' 47.237 N	103° 43' 29.331 W
10,002.0	17.30	346.10	9,988.8	-285.5	-28.6	393,290.93	688,473.74	32° 4' 47.320 N	103° 43' 29.353 W
10,033.0	20.60	346.00	10,018.2	-275.8	-31.0	393,300.70	688,471.32	32° 4' 47.417 N	103° 43' 29.381 W
10,065.0	24.00	346.60	10,047.8	-264.0	-33.9	393,312.50	688,468.45	32° 4' 47.534 N	103° 43' 29.414 W
10,097.0	27.70	347.60	10,076.6	-250.4	-37.0	393,326.10	688,465.34	32° 4' 47.669 N	103° 43' 29.449 W
10,129.0	31.10	349.10	10,104.4	-235.0	-40.1	393,341.48	688,462.18	32° 4' 47.821 N	103° 43' 29.485 W
10,160.0	34.30	350.80	10,130.5	-218.5	-43.0	393,357.97	688,459.27	32° 4' 47.984 N	103° 43' 29.517 W
10,192.0	37.80	351.80	10,156.4	-199.9	-45.9	393,376.58	688,456.43	32° 4' 48.169 N	103° 43' 29.549 W
10,224.0	41.20	352.10	10,181.1	-179.7	-48.7	393,396.74	688,453.58	32° 4' 48.368 N	103° 43' 29.581 W
10,255.0	44.40	353.20	10,203.8	-158.8	-51.4	393,417.62	688,450.89	32° 4' 48.575 N	103° 43' 29.611 W
10,287.0	48.30	352.50	10,225.9	-135.9	-54.3	393,440.59	688,448.00	32° 4' 48.803 N	103° 43' 29.643 W
10,319.0	51.50	351.50	10,246.5	-111.6	-57.7	393,464.83	688,444.59	32° 4' 49.043 N	103° 43' 29.681 W
10,351.0	55.10	350.80	10,265.6	-86.3	-61.7	393,490.17	688,440.64	32° 4' 49.294 N	103° 43' 29.725 W
10,382.0	58.20	349.90	10,282.7	-60.8	-66.0	393,515.70	688,436.30	32° 4' 49.547 N	103° 43' 29.774 W
10,414.0	61.70	349.20	10,298.7	-33.5	-71.0	393,542.93	688,431.27	32° 4' 49.816 N	103° 43' 29.831 W
10,446.0	65.40	349.70	10,312.9	-5.4	-76.3	393,571.09	688,426.03	32° 4' 50.095 N	103° 43' 29.890 W
10,477.0	69.20	350.40	10,324.9	22.8	-81.2	393,599.26	688,421.09	32° 4' 50.374 N	103° 43' 29.945 W
10,509.0	73.00	349.60	10,335.3	52.6	-86.5	393,629.07	688,415.83	32° 4' 50.670 N	103° 43' 30.004 W
10,541.0	76.90	349.60	10,343.6	83.0	-92.1	393,659.45	688,410.26	32° 4' 50.971 N	103° 43' 30.067 W
10,572.0	77.30	352.80	10,350.5	112.8	-96.7	393,689.31	688,405.64	32° 4' 51.266 N	103° 43' 30.119 W
10,604.0	77.60	355.60	10,357.5	143.9	-99.8	393,720.38	688,402.48	32° 4' 51.574 N	103° 43' 30.154 W
10,636.0	79.20	355.00	10,363.9	175.2	-102.4	393,751.62	688,399.91	32° 4' 51.883 N	103° 43' 30.181 W
10,668.0	81.80	354.20	10,369.2	206.6	-105.4	393,783.04	688,396.94	32° 4' 52.194 N	103° 43' 30.214 W
10,695.0	84.00	353.30	10,372.5	233.2	-108.3	393,809.67	688,394.02	32° 4' 52.458 N	103° 43' 30.246 W
10,723.0	88.00	351.40	10,374.5	260.9	-112.0	393,837.35	688,390.30	32° 4' 52.732 N	103° 43' 30.287 W
10,755.0	88.00	352.80	10,375.6	292.6	-116.4	393,869.03	688,385.91	32° 4' 53.046 N	103° 43' 30.336 W
10,785.0	87.60	353.40	10,376.7	322.3	-120.0	393,898.79	688,382.31	32° 4' 53.341 N	103° 43' 30.376 W
10,817.0	87.60	355.20	10,378.1	354.1	-123.2	393,930.60	688,379.13	32° 4' 53.656 N	103° 43' 30.411 W
10,848.0	86.80	357.10	10,379.6	385.0	-125.3	393,961.49	688,377.05	32° 4' 53.962 N	103° 43' 30.433 W
10,880.0	86.80	357.20	10,381.4	416.9	-126.8	393,993.40	688,375.46	32° 4' 54.277 N	103° 43' 30.450 W
10,912.0	86.70	358.60	10,383.2	448.9	-128.0	394,025.33	688,374.29	32° 4' 54.593 N	103° 43' 30.461 W
10,938.3	86.95	0.13	10,384.6	475.1	-128.3	394,051.61	688,374.00	32° 4' 54.853 N	103° 43' 30.463 W
LP Coltane 36 B2PA St #1H									
10,943.0	87.00	0.40	10,384.9	479.8	-128.3	394,056.28	688,374.02	32° 4' 54.900 N	103° 43' 30.462 W



Stryker Directional Survey Report - Geographic



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Coltane 36 B2PA St #1H
Project:	Eddy County, New Mexico	TVD Reference:	3299 + 22 @ 3321.0usft (Patterson 36)
Site:	Section 36-25S-31E Coltrane 36 B2PA State #001H	MD Reference:	3299 + 22 @ 3321.0usft (Patterson 36)
Well:	Coltane 36 B2PA St #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)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
10,975.0	88.30	1.90	10,386.2	511.8	-127.6	394,088.24	688,374.67	32° 4' 55.216 N	103° 43' 30.453 W	
11,007.0	88.30	2.70	10,387.1	543.7	-126.4	394,120.20	688,375.95	32° 4' 55.532 N	103° 43' 30.436 W	
11,038.0	88.40	2.20	10,388.0	574.7	-125.0	394,151.16	688,377.27	32° 4' 55.838 N	103° 43' 30.418 W	
11,101.0	89.80	1.90	10,389.0	637.6	-122.8	394,214.11	688,379.53	32° 4' 56.461 N	103° 43' 30.388 W	
11,165.0	89.60	1.40	10,389.4	701.6	-120.9	394,278.08	688,381.37	32° 4' 57.094 N	103° 43' 30.362 W	
11,228.0	88.60	1.50	10,390.4	764.6	-119.3	394,341.06	688,382.96	32° 4' 57.717 N	103° 43' 30.340 W	
11,323.0	87.80	1.50	10,393.3	859.5	-116.9	394,435.98	688,385.45	32° 4' 58.657 N	103° 43' 30.305 W	
11,386.0	89.50	1.20	10,394.8	922.5	-115.4	394,498.94	688,386.93	32° 4' 59.280 N	103° 43' 30.283 W	
11,449.0	89.20	0.70	10,395.5	985.5	-114.3	394,561.93	688,387.98	32° 4' 59.903 N	103° 43' 30.267 W	
11,512.0	89.40	1.90	10,396.3	1,048.4	-112.9	394,624.90	688,389.41	32° 5' 0.526 N	103° 43' 30.246 W	
11,607.0	90.20	3.80	10,396.6	1,143.3	-108.2	394,719.78	688,394.13	32° 5' 1.465 N	103° 43' 30.185 W	
11,702.0	91.90	4.00	10,394.9	1,238.1	-101.7	394,814.54	688,400.59	32° 5' 2.402 N	103° 43' 30.104 W	
11,796.0	91.70	3.30	10,391.9	1,331.8	-95.7	394,908.30	688,406.57	32° 5' 3.330 N	103° 43' 30.028 W	
11,891.0	92.90	3.00	10,388.1	1,426.6	-90.5	395,003.08	688,411.79	32° 5' 4.267 N	103° 43' 29.961 W	
11,986.0	91.60	2.40	10,384.4	1,521.4	-86.1	395,097.90	688,416.26	32° 5' 5.205 N	103° 43' 29.903 W	
12,081.0	89.50	1.20	10,383.5	1,616.4	-83.1	395,192.84	688,419.24	32° 5' 6.145 N	103° 43' 29.862 W	
12,176.0	90.20	0.10	10,383.7	1,711.4	-82.0	395,287.83	688,420.32	32° 5' 7.085 N	103° 43' 29.844 W	
12,270.0	89.10	0.90	10,384.3	1,805.4	-81.2	395,381.83	688,421.14	32° 5' 8.015 N	103° 43' 29.828 W	
12,365.0	90.10	0.40	10,385.0	1,900.4	-80.1	395,476.82	688,422.22	32° 5' 8.955 N	103° 43' 29.809 W	
12,461.0	89.20	0.30	10,385.6	1,996.3	-79.5	395,572.81	688,422.80	32° 5' 9.905 N	103° 43' 29.796 W	
12,556.0	88.00	1.00	10,387.9	2,091.3	-78.4	395,667.77	688,423.88	32° 5' 10.844 N	103° 43' 29.777 W	
12,651.0	88.80	2.30	10,390.5	2,186.2	-75.7	395,762.70	688,426.62	32° 5' 11.784 N	103° 43' 29.739 W	
12,746.0	89.90	0.90	10,391.6	2,281.2	-73.0	395,857.65	688,429.27	32° 5' 12.723 N	103° 43' 29.702 W	
12,841.0	89.30	0.00	10,392.3	2,376.2	-72.3	395,952.64	688,430.01	32° 5' 13.663 N	103° 43' 29.687 W	
12,936.0	89.10	1.80	10,393.6	2,471.2	-70.8	396,047.62	688,431.51	32° 5' 14.603 N	103° 43' 29.664 W	
13,031.0	90.30	1.00	10,394.1	2,566.1	-68.5	396,142.58	688,433.83	32° 5' 15.543 N	103° 43' 29.630 W	
13,126.0	91.30	0.80	10,392.8	2,661.1	-67.0	396,237.56	688,435.32	32° 5' 16.482 N	103° 43' 29.607 W	
13,221.0	90.50	1.30	10,391.3	2,756.1	-65.3	396,332.53	688,437.06	32° 5' 17.422 N	103° 43' 29.580 W	
13,317.0	92.00	0.60	10,389.2	2,852.0	-63.7	396,428.49	688,438.65	32° 5' 18.372 N	103° 43' 29.556 W	
13,412.0	91.00	2.00	10,386.7	2,947.0	-61.5	396,523.43	688,440.81	32° 5' 19.311 N	103° 43' 29.524 W	
13,507.0	89.20	2.70	10,386.5	3,041.9	-57.6	396,618.35	688,444.70	32° 5' 20.250 N	103° 43' 29.473 W	
13,601.0	87.30	2.50	10,389.4	3,135.7	-53.3	396,712.20	688,448.96	32° 5' 21.179 N	103° 43' 29.417 W	
13,696.0	88.10	1.50	10,393.2	3,230.6	-50.0	396,807.07	688,452.28	32° 5' 22.117 N	103° 43' 29.372 W	
13,791.0	89.10	0.90	10,395.5	3,325.6	-48.0	396,902.02	688,454.26	32° 5' 23.057 N	103° 43' 29.343 W	
13,886.0	89.40	1.50	10,396.8	3,420.5	-46.1	396,996.99	688,456.25	32° 5' 23.996 N	103° 43' 29.314 W	
13,972.0	91.10	1.00	10,396.4	3,506.5	-44.2	397,082.96	688,458.13	32° 5' 24.847 N	103° 43' 29.286 W	
14,067.0	91.70	0.10	10,394.1	3,601.5	-43.3	397,177.93	688,459.04	32° 5' 25.787 N	103° 43' 29.269 W	
14,163.0	89.80	1.50	10,392.8	3,697.4	-41.9	397,273.90	688,460.38	32° 5' 26.737 N	103° 43' 29.248 W	
14,258.0	89.60	0.80	10,393.3	3,792.4	-40.0	397,368.88	688,462.29	32° 5' 27.676 N	103° 43' 29.219 W	
14,352.0	89.80	1.40	10,393.8	3,886.4	-38.2	397,462.86	688,464.09	32° 5' 28.606 N	103° 43' 29.192 W	
14,447.0	89.70	0.30	10,394.2	3,981.4	-36.8	397,557.85	688,465.50	32° 5' 29.546 N	103° 43' 29.169 W	
14,542.0	89.50	358.90	10,394.9	4,076.4	-37.5	397,652.84	688,464.84	32° 5' 30.486 N	103° 43' 29.171 W	
14,637.0	88.80	357.90	10,396.3	4,171.3	-40.1	397,747.79	688,462.19	32° 5' 31.426 N	103° 43' 29.196 W	
14,732.0	91.60	357.90	10,396.0	4,266.3	-43.6	397,842.72	688,458.71	32° 5' 32.366 N	103° 43' 29.230 W	
14,827.0	92.90	358.00	10,392.2	4,361.1	-47.0	397,937.58	688,455.31	32° 5' 33.305 N	103° 43' 29.263 W	
14,924.0	93.40	357.40	10,386.9	4,457.9	-50.9	398,034.36	688,451.42	32° 5' 34.263 N	103° 43' 29.302 W	
14,970.0	93.40	357.40	10,384.2	4,503.8	-53.0	398,080.23	688,449.34	32° 5' 34.717 N	103° 43' 29.323 W	

14970' MD Projected to Bit - PBHL Coltrane 36 B2PA St #1H



Stryker Directional Survey Report - Geographic



Company:	Mewbourne Oil Company .	Local Co-ordinate Reference:	Well Coltane 36 B2PA St #1H
Project:	Eddy County, New Mexico	TVD Reference:	3299 + 22 @ 3321.0usft (Patterson 36)
Site:	Section 36-25S-31E Coltrane 36 B2PA State #001H	MD Reference:	3299 + 22 @ 3321.0usft (Patterson 36)
Well:	Coltane 36 B2PA St #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,100.0	5,097.7	-57.4	30.4	5100' MD MS Gyro Survey
14,970.0	10,384.2	4,503.8	-53.0	14970' MD Projected to Bit



Job Number: SVMO-150420
Company: Mewbourne Oil & Gas
Lease/Well: Coltrane 36 B2PA State 001H
Location: Eddy County, NM
Rig Name: Patterson #36
RKB: 22
G.L. or M.S.L.: GL

State/Country: New Mexico/USA
Declination: 6.91°
Grid: East To Grid North
File name: W:\WINSER-12015SU-1MEWBOU-1MO\COLTRANE36B2PA\STATE001
Date/Time: 01-Jun-15 / 15:31
Curve Name: Surface - 5100' M.D. (Rate Gyro)

MS Survey

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 359.71
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from
Surface MD to 5100' MD is, to the best of
our knowledge a true and accurate account of
the well bore
HARRY PATTERSON 6/11/15
MS Energy Services Date -

Measured Depth FT	Incl Angle Deg	Drit Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.82	153.06	100.00	-.64	.32	-.64	.72	153.06	.82
200.00	.55	54.95	199.99	-1.00	1.04	-1.01	1.44	133.85	1.05
300.00	.63	24.78	299.99	-.23	1.66	-.23	1.68	97.71	.32
400.00	.79	35.21	399.98	.84	2.29	.83	2.44	69.94	.21
500.00	.69	33.27	499.97	1.90	3.02	1.89	3.57	57.78	.10
600.00	.67	36.12	599.96	2.88	3.70	2.86	4.68	52.07	.04
700.00	1.24	46.68	699.95	4.09	4.83	4.07	6.33	49.70	.59
800.00	1.35	69.83	799.92	5.24	6.72	5.21	8.52	52.04	.53
900.00	1.41	90.24	899.90	5.64	9.06	5.60	10.67	58.07	.49
1000.00	1.50	108.85	999.86	5.22	11.53	5.16	12.65	65.65	.48
1100.00	1.46	114.49	1099.83	4.26	13.92	4.19	14.56	72.97	.15
1200.00	1.21	99.62	1199.80	3.56	16.12	3.48	16.51	77.55	.43

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S		E-W		Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
				FT		FT			Distance FT	Direction Deg	
1300.00	1.61	87.85	1299.77	3.44		18.57		3.34	18.88	79.52	.49
1400.00	1.70	92.74	1399.73	3.42		21.45		3.31	21.72	80.95	.17
1500.00	.99	50.01	1499.71	3.90		23.60		3.78	23.92	80.61	1.18
1600.00	.65	20.20	1599.70	4.99		24.46		4.87	24.96	78.47	.53
1700.00	.83	23.96	1699.69	6.18		24.95		6.06	25.70	76.08	.19
1800.00	.75	337.07	1799.68	7.45		24.98		7.32	26.07	73.40	.63
1900.00	.83	333.83	1899.67	8.70		24.41		8.58	25.91	70.38	.09
2000.00	1.45	291.67	1999.65	9.82		22.91		9.70	24.93	66.80	1.00
2100.00	1.71	287.13	2099.61	10.73		20.31		10.62	22.97	62.17	.29
2200.00	.40	102.06	2199.60	11.09		19.23		10.99	22.20	60.02	2.11
2300.00	1.24	140.06	2299.59	10.19		20.26		10.09	22.68	63.31	.96
2400.00	1.43	144.35	2399.56	8.35		21.69		8.24	23.24	68.95	.21
2500.00	1.34	119.17	2499.54	6.76		23.43		6.64	24.39	73.90	.61
2600.00	1.30	103.03	2599.51	5.94		25.56		5.81	26.24	76.92	.37
2700.00	.85	96.65	2699.49	5.59		27.40		5.46	27.97	78.46	.46
2800.00	.86	90.17	2799.48	5.51		28.89		5.36	29.41	79.21	.10
2900.00	.87	98.83	2899.47	5.39		30.39		5.23	30.86	79.95	.13
3000.00	1.02	113.50	2999.46	4.92		31.96		4.75	32.33	81.25	.28
3100.00	1.25	124.82	3099.44	3.94		33.67		3.77	33.90	83.33	.32
3200.00	2.04	118.44	3199.39	2.47		36.13		2.29	36.21	86.09	.81
3300.00	2.16	115.26	3299.33	.82		39.40		.62	39.41	88.81	.17
3400.00	1.29	99.19	3399.28	-.17		42.21		-.38	42.21	90.23	.99
3500.00	.27	80.27	3499.27	-.31		43.56		-.53	43.56	90.40	1.04
3600.00	.19	209.09	3599.27	-.41		43.71		-.63	43.71	90.54	.42
3700.00	.43	188.43	3699.27	-.93		43.57		-.15	43.58	91.22	.26
3800.00	1.41	161.48	3799.25	-2.47		43.91		-2.69	43.98	93.22	1.05
3900.00	1.52	166.00	3899.22	-4.92		44.62		-5.15	44.89	96.29	.16
4000.00	1.46	192.94	3999.19	-7.45		44.66		-7.67	45.27	99.47	.70
4100.00	2.21	189.45	4099.14	-10.59		44.05		-10.81	45.31	103.52	.76
4200.00	1.47	207.97	4199.09	-13.63		43.14		-13.85	45.24	107.53	.94
4300.00	1.39	205.18	4299.05	-15.86		42.02		-16.07	44.91	110.68	.11
4400.00	1.22	218.74	4399.03	-17.79		40.84		-17.99	44.54	113.53	.35
4500.00	1.83	204.38	4498.99	-20.07		39.51		-20.27	44.32	116.93	.72
4600.00	2.52	197.98	4598.92	-23.62		38.17		-23.81	44.89	121.74	.73

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
4700.00	3.85	199.59	4698.76	-28.87	36.37	-29.05	46.43	128.44	1.33
4800.00	4.12	196.03	4798.52	-35.49	34.25	-35.66	49.32	136.01	.37
4900.00	4.21	194.47	4898.26	-42.49	32.34	-42.66	53.40	142.72	.14
5000.00	4.68	185.03	4997.96	-50.11	31.07	-50.27	58.96	148.20	.87
Last Survey Depth Recorded									
5100.00	3.76	184.68	5097.69	-57.44	30.44	-57.60	65.01	152.08	.92