



30 015 4/158

Yates Petroleum

Eddy, NM (NAD-83)

Bodacious BSM Federal

#1H

OH

Design: OH

Survey Report - Geographic

06 May, 2013





Survey Report - Geographic



Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1H
Project:	Eddy, NM (NAD-83)	TVD Reference:	WELL @ 3303.0usft (Sidewinder #223 - 25' KB)
Site:	Bodacious BSM Federal	MD Reference:	WELL @ 3303.0usft (Sidewinder #223 - 25' KB)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Houston R5000 Database

Project:	Eddy, NM (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:	Bodacious BSM Federal		
Site Position:		Northing:	387,682.50 usft
From:	Map	Easting:	566,118.30 usft
Position Uncertainty:	2.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 3' 56.857 N
		Longitude:	104° 15' 12.006 W
		Grid Convergence:	0.04 °

Well:	#1H		
Well Position	+N-S	0.0 usft	Northing: 387,682.50 usft
	+E-W	0.0 usft	Easting: 566,118.30 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Ground Level:	3,278.0 usft

Wellbore:	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	3/25/2013	7.67
			Dip Angle (°)
			59.88
			Field Strength (nT)
			48,269

Design:	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	7,254.0
Vertical Section	Depth From (TVD)	+N-S	+E-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction (°)
			255.74

Survey Program	Date: 5/6/2013		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
100.0	400.0	Survey #1 - MSGyro1 (Pilot)	CB-GYRO-MS
412.0	7,254.0	Survey #2 - Crescent1 (Pilot)	MWD
7,278.0	11,981.0	Survey #1 - Crescent2 (OH)	MWD
12,036.8	12,036.8	Survey #2 - PT8 (OH)	BLIND
			Description
			Camera based gyro multishot
			MWD - Standard
			MWD - Standard
			Blind drilling, where no tool is applied

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	387,682.50	566,118.30	32° 3' 56.857 N	104° 15' 12.006 W	
100.0	0.49	172.67	100.0	-0.4	0.1	387,682.07	566,118.36	32° 3' 56.853 N	104° 15' 12.005 W	
200.0	0.75	183.28	200.0	-1.5	0.3	387,681.02	566,118.60	32° 3' 56.843 N	104° 15' 12.003 W	
300.0	1.06	176.75	300.0	-3.0	0.5	387,679.47	566,118.84	32° 3' 56.827 N	104° 15' 12.000 W	
400.0	1.12	168.69	400.0	-4.9	0.8	387,677.59	566,119.08	32° 3' 56.809 N	104° 15' 11.997 W	
412.0	1.40	161.80	412.0	-5.2	0.9	387,677.34	566,119.15	32° 3' 56.806 N	104° 15' 11.998 W	
502.0	1.50	169.20	501.9	-7.4	1.4	387,675.14	566,119.72	32° 3' 56.785 N	104° 15' 11.990 W	
628.0	2.60	164.40	627.8	-11.7	2.5	387,670.76	566,120.80	32° 3' 56.741 N	104° 15' 11.977 W	
691.0	1.30	167.50	690.8	-13.8	3.0	387,668.69	566,121.33	32° 3' 56.721 N	104° 15' 11.971 W	

Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1H
Project:	Eddy, NM (NAD-83)	IVD Reference:	WELL @ 3303.0usft (Sidewinder #223 - 25' KB)
Site:	Bodacious BSM Federal	MD Reference:	WELL @ 3303.0usft (Sidewinder #223 - 25' KB)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Houston R5000 Database

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
786.0	0.70	189.00	785.8	-15.4	3.2	387,667.06	566,121.48	32° 3' 56.705 N	104° 15' 11.969 W
976.0	0.80	202.40	975.8	-17.8	2.5	387,664.69	566,120.79	32° 3' 56.681 N	104° 15' 11.977 W
1,166.0	1.00	167.80	1,165.8	-20.7	2.3	387,661.84	566,120.63	32° 3' 56.653 N	104° 15' 11.979 W
1,356.0	2.60	140.40	1,355.7	-25.6	5.4	387,656.90	566,123.73	32° 3' 56.604 N	104° 15' 11.943 W
1,451.0	1.20	149.00	1,450.6	-28.1	7.3	387,654.39	566,125.62	32° 3' 56.579 N	104° 15' 11.921 W
1,546.0	1.00	127.00	1,545.6	-29.5	8.5	387,653.04	566,126.79	32° 3' 56.566 N	104° 15' 11.908 W
1,736.0	1.70	123.10	1,735.5	-32.0	12.2	387,650.50	566,130.48	32° 3' 56.541 N	104° 15' 11.865 W
1,831.0	1.00	108.10	1,830.5	-33.0	14.1	387,649.47	566,132.45	32° 3' 56.531 N	104° 15' 11.842 W
1,868.0	0.90	109.00	1,867.5	-33.2	14.7	387,649.28	566,133.03	32° 3' 56.529 N	104° 15' 11.835 W
1,934.0	0.70	109.00	1,933.5	-33.5	15.6	387,648.98	566,133.90	32° 3' 56.526 N	104° 15' 11.825 W
2,124.0	0.70	120.30	2,123.5	-34.5	17.7	387,648.02	566,136.00	32° 3' 56.516 N	104° 15' 11.801 W
2,314.0	0.70	124.70	2,313.5	-35.7	19.7	387,646.77	566,137.95	32° 3' 56.504 N	104° 15' 11.778 W
2,504.0	0.40	279.40	2,503.5	-36.3	20.0	387,646.22	566,138.25	32° 3' 56.498 N	104° 15' 11.775 W
2,694.0	0.40	253.70	2,693.5	-36.4	18.7	387,646.14	566,136.96	32° 3' 56.497 N	104° 15' 11.790 W
2,884.0	0.40	255.60	2,883.5	-36.7	17.4	387,645.79	566,135.68	32° 3' 56.494 N	104° 15' 11.804 W
3,074.0	0.40	240.20	3,073.5	-37.2	16.2	387,645.29	566,134.47	32° 3' 56.489 N	104° 15' 11.819 W
3,264.0	0.40	251.10	3,263.4	-37.7	15.0	387,644.75	566,133.26	32° 3' 56.484 N	104° 15' 11.833 W
3,454.0	0.70	255.80	3,453.4	-38.2	13.2	387,644.25	566,131.51	32° 3' 56.479 N	104° 15' 11.853 W
3,644.0	1.20	283.20	3,643.4	-38.1	10.1	387,644.42	566,128.45	32° 3' 56.481 N	104° 15' 11.888 W
3,834.0	0.70	264.30	3,833.4	-37.7	7.1	387,644.76	566,125.36	32° 3' 56.484 N	104° 15' 11.924 W
4,024.0	1.10	250.70	4,023.4	-38.5	4.2	387,644.04	566,122.48	32° 3' 56.477 N	104° 15' 11.958 W
4,214.0	0.90	268.30	4,213.3	-39.1	1.0	387,643.39	566,119.27	32° 3' 56.470 N	104° 15' 11.995 W
4,404.0	0.70	268.50	4,403.3	-39.2	-1.7	387,643.32	566,116.62	32° 3' 56.470 N	104° 15' 12.026 W
4,594.0	0.70	294.00	4,593.3	-38.7	-3.9	387,643.76	566,114.40	32° 3' 56.474 N	104° 15' 12.052 W
4,783.0	0.70	295.40	4,782.3	-37.8	-6.0	387,644.72	566,112.30	32° 3' 56.484 N	104° 15' 12.076 W
4,973.0	0.70	274.80	4,972.3	-37.2	-8.2	387,645.32	566,110.09	32° 3' 56.490 N	104° 15' 12.102 W
5,163.0	0.50	257.10	5,162.3	-37.3	-10.2	387,645.23	566,108.13	32° 3' 56.489 N	104° 15' 12.125 W
5,353.0	0.50	280.30	5,352.3	-37.3	-11.8	387,645.20	566,106.51	32° 3' 56.488 N	104° 15' 12.144 W
5,543.0	0.90	290.30	5,542.2	-36.6	-14.0	387,645.86	566,104.29	32° 3' 56.495 N	104° 15' 12.169 W
5,733.0	1.80	322.10	5,732.2	-33.8	-17.2	387,648.73	566,101.06	32° 3' 56.523 N	104° 15' 12.207 W
5,923.0	1.10	353.70	5,922.1	-29.6	-19.3	387,652.90	566,099.02	32° 3' 56.565 N	104° 15' 12.230 W
6,113.0	0.90	238.60	6,112.1	-28.6	-20.8	387,653.94	566,097.55	32° 3' 56.575 N	104° 15' 12.248 W
6,303.0	1.20	300.30	6,302.1	-28.3	-23.7	387,654.16	566,094.56	32° 3' 56.577 N	104° 15' 12.282 W
6,493.0	1.20	295.40	6,492.0	-26.5	-27.3	387,656.02	566,091.04	32° 3' 56.596 N	104° 15' 12.323 W
6,683.0	0.90	350.70	6,682.0	-24.2	-29.3	387,658.35	566,089.01	32° 3' 56.619 N	104° 15' 12.347 W
6,873.0	1.40	2.70	6,872.0	-20.4	-29.4	387,662.14	566,088.87	32° 3' 56.656 N	104° 15' 12.348 W
7,063.0	0.90	343.00	7,061.9	-16.6	-29.8	387,665.88	566,088.55	32° 3' 56.693 N	104° 15' 12.352 W
7,254.0	0.70	40.10	7,252.9	-14.3	-29.4	387,668.21	566,088.86	32° 3' 56.716 N	104° 15' 12.348 W
Tie into Pilot - KOP @ 7254' MD									
7,278.0	1.80	15.50	7,276.9	-13.8	-29.2	387,668.68	566,089.05	32° 3' 56.721 N	104° 15' 12.346 W
7,310.0	5.80	2.20	7,308.8	-11.7	-29.1	387,670.79	566,089.25	32° 3' 56.742 N	104° 15' 12.344 W
7,341.0	10.20	357.10	7,339.5	-7.4	-29.1	387,675.09	566,089.17	32° 3' 56.784 N	104° 15' 12.345 W
7,373.0	14.70	355.70	7,370.8	-0.5	-29.6	387,681.98	566,088.72	32° 3' 56.852 N	104° 15' 12.350 W
7,405.0	19.00	355.80	7,401.4	8.7	-30.3	387,691.22	566,088.04	32° 3' 56.944 N	104° 15' 12.358 W
7,437.0	23.00	357.10	7,431.3	20.2	-31.0	387,702.67	566,087.34	32° 3' 57.057 N	104° 15' 12.366 W
7,468.0	26.60	357.80	7,459.4	33.2	-31.5	387,715.66	566,086.77	32° 3' 57.186 N	104° 15' 12.372 W
7,500.0	30.60	359.90	7,487.5	48.5	-31.8	387,730.97	566,086.48	32° 3' 57.337 N	104° 15' 12.376 W
7,532.0	34.30	0.40	7,514.5	65.6	-31.8	387,748.13	566,086.53	32° 3' 57.507 N	104° 15' 12.375 W
7,563.0	38.40	0.40	7,539.4	84.0	-31.6	387,766.50	566,086.65	32° 3' 57.689 N	104° 15' 12.373 W
7,595.0	42.20	0.90	7,563.9	104.7	-31.4	387,787.19	566,086.89	32° 3' 57.894 N	104° 15' 12.370 W
7,627.0	44.80	1.50	7,587.1	126.7	-30.9	387,809.22	566,087.36	32° 3' 58.112 N	104° 15' 12.365 W
7,659.0	47.00	2.30	7,609.3	149.7	-30.2	387,832.18	566,088.12	32° 3' 58.339 N	104° 15' 12.356 W
7,690.0	49.20	2.70	7,630.0	172.7	-29.2	387,855.23	566,089.13	32° 3' 58.567 N	104° 15' 12.344 W
7,722.0	52.00	3.40	7,650.3	197.4	-27.9	387,879.92	566,090.45	32° 3' 58.811 N	104° 15' 12.328 W
7,754.0	52.60	3.60	7,669.9	222.7	-26.3	387,905.19	566,091.99	32° 3' 59.061 N	104° 15' 12.310 W



Survey Report - Geographic



Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1H
Project:	Eddy, NM (NAD-83)	TVD Reference:	WELL @ 3303.0usft (Sidewinder #223 - 25' KB)
Site:	Bodacious BSM Federal	MD Reference:	WELL @ 3303.0usft (Sidewinder #223 - 25' KB)
Well:	#1H	North Reference:	Grid
Wallbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Houston R5000 Database

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
7,785.0	54.10	3.60	7,688.4	247.5	-24.7	387,930.01	566,093.56	32° 3' 59.307 N	104° 15' 12.292 W
7,817.0	57.30	2.90	7,706.4	273.9	-23.3	387,956.40	566,095.05	32° 3' 59.568 N	104° 15' 12.274 W
7,849.0	61.80	2.30	7,722.7	301.5	-22.0	387,983.95	566,096.30	32° 3' 59.841 N	104° 15' 12.259 W
7,880.0	67.00	1.60	7,736.0	329.4	-21.1	388,011.88	566,097.25	32° 4' 0.117 N	104° 15' 12.248 W
7,909.0	71.30	0.90	7,746.4	356.5	-20.5	388,038.97	566,097.83	32° 4' 0.385 N	104° 15' 12.241 W
7,940.0	76.00	0.90	7,755.1	386.2	-20.0	388,068.71	566,098.30	32° 4' 0.680 N	104° 15' 12.235 W
7,971.0	78.30	1.80	7,762.0	416.4	-19.3	388,098.92	566,099.01	32° 4' 0.979 N	104° 15' 12.227 W
8,003.0	80.90	3.60	7,767.8	447.9	-17.8	388,130.35	566,100.50	32° 4' 1.290 N	104° 15' 12.209 W
8,035.0	83.40	5.20	7,772.1	479.5	-15.4	388,161.96	566,102.93	32° 4' 1.602 N	104° 15' 12.181 W
8,067.0	86.00	5.70	7,775.1	511.2	-12.3	388,193.67	566,105.96	32° 4' 1.916 N	104° 15' 12.145 W
8,098.0	88.60	6.00	7,776.5	542.0	-9.2	388,224.48	566,109.11	32° 4' 2.221 N	104° 15' 12.108 W
8,130.0	89.30	5.90	7,777.1	573.8	-5.9	388,256.30	566,112.43	32° 4' 2.536 N	104° 15' 12.069 W
8,150.0	89.61	6.09	7,777.3	593.7	-3.8	388,276.19	566,114.52	32° 4' 2.733 N	104° 15' 12.045 W
EOC - 8150.0' MD, 7777.3' TVD, 89.61° INC, -142.6° VS.									
8,162.0	89.80	6.20	7,777.4	605.6	-2.5	388,288.12	566,115.80	32° 4' 2.851 N	104° 15' 12.030 W
8,193.0	90.10	6.00	7,777.4	636.4	0.8	388,318.94	566,119.10	32° 4' 3.156 N	104° 15' 11.991 W
8,225.0	90.10	5.20	7,777.4	668.3	3.9	388,350.79	566,122.22	32° 4' 3.471 N	104° 15' 11.955 W
8,320.0	92.30	1.10	7,775.4	763.1	9.1	388,445.60	566,127.44	32° 4' 4.409 N	104° 15' 11.893 W
8,415.0	91.10	1.30	7,772.5	858.0	11.1	388,540.53	566,129.43	32° 4' 5.349 N	104° 15' 11.869 W
8,510.0	89.60	359.90	7,772.0	953.0	12.1	388,635.52	566,130.42	32° 4' 6.289 N	104° 15' 11.857 W
8,605.0	90.20	359.20	7,772.1	1,048.0	11.4	388,730.52	566,129.68	32° 4' 7.229 N	104° 15' 11.865 W
8,700.0	88.40	359.00	7,773.3	1,143.0	9.9	388,825.50	566,128.18	32° 4' 8.169 N	104° 15' 11.881 W
8,795.0	89.40	359.40	7,775.1	1,238.0	8.6	388,920.47	566,126.86	32° 4' 9.109 N	104° 15' 11.896 W
8,890.0	90.00	359.70	7,775.6	1,333.0	7.8	389,015.46	566,126.11	32° 4' 10.049 N	104° 15' 11.904 W
8,985.0	89.50	0.40	7,776.0	1,428.0	7.9	389,110.46	566,126.20	32° 4' 10.989 N	104° 15' 11.902 W
9,080.0	90.20	0.90	7,776.3	1,523.0	9.0	389,205.45	566,127.27	32° 4' 11.929 N	104° 15' 11.889 W
9,175.0	90.40	1.60	7,775.8	1,617.9	11.0	389,300.43	566,129.35	32° 4' 12.869 N	104° 15' 11.864 W
9,270.0	89.60	1.60	7,775.8	1,712.9	13.7	389,395.39	566,132.00	32° 4' 13.809 N	104° 15' 11.832 W
9,365.0	89.80	2.50	7,776.3	1,807.8	17.1	389,490.33	566,135.40	32° 4' 14.748 N	104° 15' 11.792 W
9,460.0	89.10	2.90	7,777.2	1,902.7	21.6	389,585.22	566,139.87	32° 4' 15.687 N	104° 15' 11.739 W
9,555.0	89.00	1.30	7,778.8	1,997.6	25.0	389,680.14	566,143.35	32° 4' 16.626 N	104° 15' 11.698 W
9,650.0	89.30	1.60	7,780.2	2,092.6	27.5	389,775.10	566,145.76	32° 4' 17.566 N	104° 15' 11.669 W
9,745.0	89.30	1.60	7,781.3	2,187.6	30.1	389,870.05	566,148.41	32° 4' 18.506 N	104° 15' 11.637 W
9,840.0	89.00	2.20	7,782.7	2,282.5	33.3	389,964.99	566,151.56	32° 4' 19.445 N	104° 15' 11.600 W
9,935.0	88.60	1.30	7,784.7	2,377.4	36.2	390,059.92	566,154.46	32° 4' 20.385 N	104° 15' 11.565 W
10,029.0	88.30	0.40	7,787.3	2,471.4	37.5	390,153.88	566,155.85	32° 4' 21.315 N	104° 15' 11.548 W
10,125.0	88.20	0.90	7,790.2	2,567.3	38.6	390,249.83	566,156.94	32° 4' 22.264 N	104° 15' 11.535 W
10,219.0	89.10	1.30	7,792.4	2,661.3	40.4	390,343.78	566,158.74	32° 4' 23.194 N	104° 15' 11.513 W
10,315.0	89.80	1.50	7,793.3	2,757.2	42.8	390,439.75	566,161.09	32° 4' 24.144 N	104° 15' 11.485 W
10,410.0	89.90	1.10	7,793.6	2,852.2	44.9	390,534.72	566,163.25	32° 4' 25.084 N	104° 15' 11.459 W
10,505.0	90.00	1.10	7,793.7	2,947.2	46.8	390,629.71	566,165.07	32° 4' 26.024 N	104° 15' 11.437 W
10,600.0	90.40	0.80	7,793.3	3,042.2	48.3	390,724.69	566,166.64	32° 4' 26.964 N	104° 15' 11.418 W
10,695.0	89.40	0.40	7,793.5	3,137.2	49.3	390,819.68	566,167.64	32° 4' 27.904 N	104° 15' 11.406 W
10,790.0	88.60	0.90	7,795.2	3,232.2	50.4	390,914.66	566,168.72	32° 4' 28.844 N	104° 15' 11.392 W
10,885.0	88.50	1.30	7,797.6	3,327.1	52.2	391,009.61	566,170.54	32° 4' 29.783 N	104° 15' 11.370 W
10,980.0	89.30	1.60	7,799.4	3,422.1	54.6	391,104.57	566,172.94	32° 4' 30.723 N	104° 15' 11.342 W
11,075.0	89.40	2.30	7,800.5	3,517.0	57.9	391,199.50	566,176.18	32° 4' 31.662 N	104° 15' 11.303 W
11,170.0	89.40	1.80	7,801.5	3,611.9	61.3	391,294.44	566,179.57	32° 4' 32.602 N	104° 15' 11.263 W
11,265.0	89.30	2.00	7,802.5	3,706.9	64.4	391,389.38	566,182.72	32° 4' 33.541 N	104° 15' 11.225 W
11,360.0	89.90	3.20	7,803.2	3,801.8	68.7	391,484.28	566,187.03	32° 4' 34.480 N	104° 15' 11.174 W
11,455.0	91.10	2.70	7,802.4	3,896.6	73.6	391,579.15	566,191.92	32° 4' 35.419 N	104° 15' 11.117 W
11,550.0	91.20	2.00	7,800.5	3,991.5	77.5	391,674.05	566,195.82	32° 4' 36.358 N	104° 15' 11.071 W
11,645.0	90.30	359.50	7,799.2	4,086.5	78.8	391,769.02	566,197.06	32° 4' 37.298 N	104° 15' 11.055 W
11,740.0	88.10	359.20	7,800.6	4,181.5	77.7	391,864.00	566,195.98	32° 4' 38.238 N	104° 15' 11.067 W
11,835.0	89.30	359.90	7,802.7	4,276.5	76.9	391,958.97	566,195.24	32° 4' 39.178 N	104° 15' 11.075 W



Survey Report - Geographic



Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1H
Project:	Eddy, NM (NAD-83)	TVD Reference:	WELL @ 3303.0usft (Sidewinder #223 - 25' KB)
Site:	Bodacious BSM Federal	MD Reference:	WELL @ 3303.0usft (Sidewinder #223 - 25' KB)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Houston R5000 Database

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
11,930.0	88.50	0.20	7,804.5	4,371.5	77.0	392,053.95	566,195.32	32° 4' 40.118 N	104° 15' 11.073 W
11,981.0	88.80	0.20	7,805.7	4,422.4	77.2	392,104.94	566,195.50	32° 4' 40.623 N	104° 15' 11.071 W
12,036.8	88.80	0.20	7,806.9	4,478.2	77.4	392,160.72	566,195.69	32° 4' 41.175 N	104° 15' 11.068 W
BHL - 12036.8' MD, 7806.9' TVD, 88.80° INC, 0.20° AZI, 4478.2' N, 77.4' E, -1178.2' VS									

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N-S (usft)	+E-W (usft)	Comment	
7,254.0	7,252.9	-14.3	-29.4	Tie into Pilot - KOP @ 7254' MD	
8,150.0	7,777.3	593.7	-3.8	EOC - 8150.0' MD, 7777.3' TVD, 89.61° INC, -142.6' VS	
12,036.8	7,806.9	4,478.2	77.4	BHL - 12036.8' MD, 7806.9' TVD, 88.80° INC, 0.20° AZI, 4478.2' N, 77.4' E, -1178.2' VS	

Checked By: _____ Approved By: _____ Date: _____



Yates Petroleum
Project: Eddy, NM (NAD-83)
Site: Bodacious BSM Federal
Well: #1H
Wellbore: OH
Plan: Plan #3 (#1H/OH)

Section Details

	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSeet	Target
1	7300.0	0.68	63.94	7298.9	-14.0	-29.0	0.00	0.00	-14.4	
2	8043.6	89.55	1.27	7773.7	459.5	-13.5	12.00	-62.67	459.2	
3	12063.5	89.55	1.27	7805.3	4478.3	75.6	0.00	0.00	4478.9	PBHL (BBSM#1H)

WELL DETAILS: #1H

Ground Elevation:: 3278.0
RKB Elevation: WELL @ 3303.0usft (Sidewinder #223 - 25' KB)
Rig Name: Sidewinder #223 - 25' KB

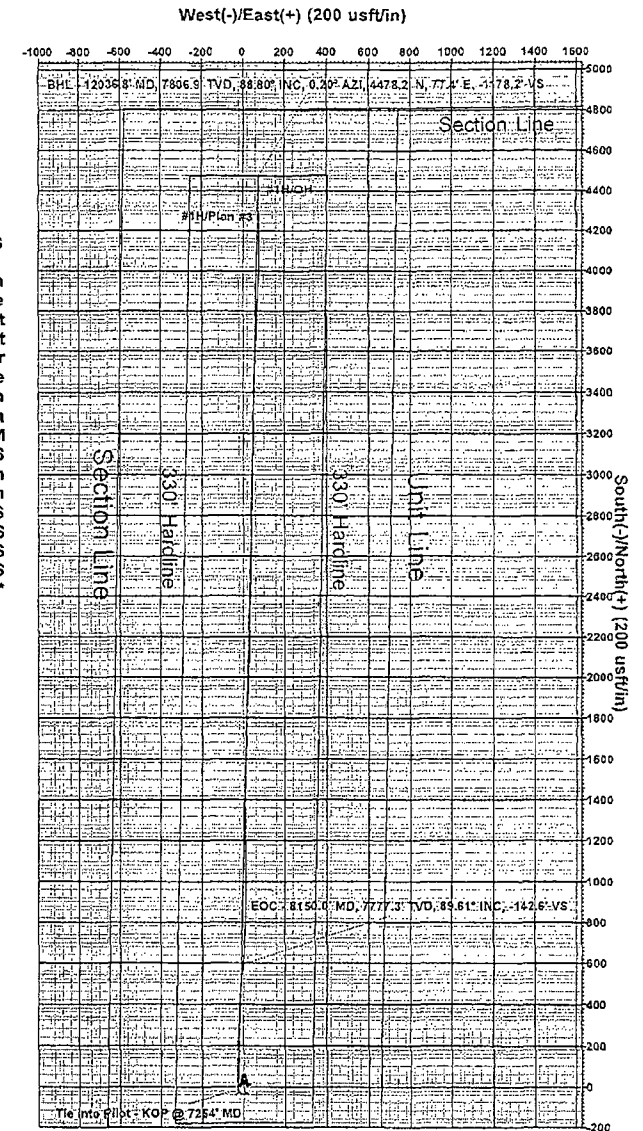
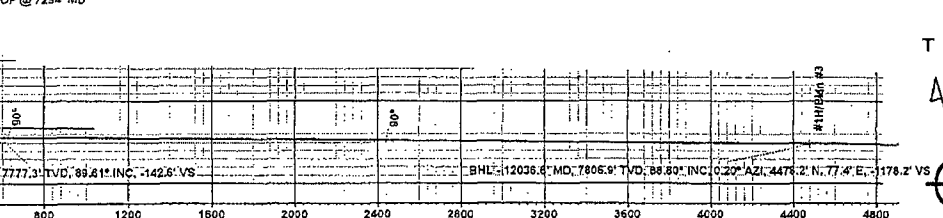
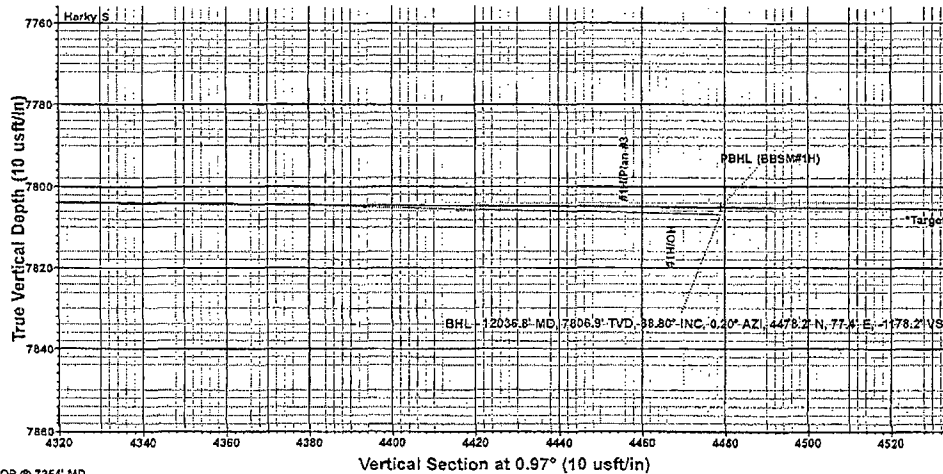
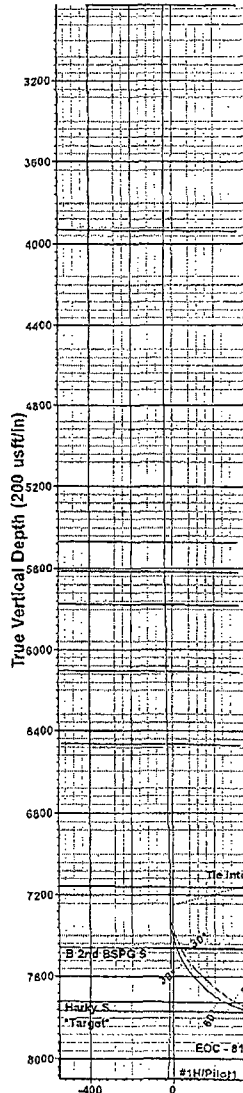
Surface Hole Location
Northing 387682.50 Easting 566118.30 Latitude 32° 3' 56.857 N Longitude 104° 15' 12.006 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
PBHL (BBSM#1H)	7805.0	4478.3	75.6	392160.80	566193.90

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
333.0	333.0	Castille
383.0	383.0	T of Salt
1716.8	1717.2	B of Salt
1907.7	1908.2	Lamar
1957.7	1958.2	T of Delaware
2822.7	2823.3	Cherry Cnyn
3937.7	3938.3	Brushy Cnyn
5472.7	5473.5	BSPG LM
5617.7	5618.5	Avalon S
5777.7	5778.6	M Avalon
6107.8	6108.7	L Avalon
6467.8	6468.7	1st BSPG S
7162.9	7163.9	2nd BSPG S
7461.1	7465.7	B 2nd BSPG S
7725.0	7829.7	Harky S
7773.5	8034.1	*Target*



Azimuths to Grid North
True North: -0.04°
Magnetic North: 7.62°

Magnetic Field
Strength: 48268.7snT
Dip Angle: 59.88°
Date: 3/25/2013
Model: IGRF2010

PROJECT DETAILS: Eddy, NM (NAD-83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level
Local North: Grid



Crescent Directional Drilling
7715 West Industrial Ave. Midland, Tx 79706
Phone: 432-618-1135

Plan: Plan #3 (#1H/OH)
Created By: Matt Higgins Date: 12:40, May 06 2013



3335 Pollok Drive
Conroe, Texas 77303

936.442.2500 (office)
936.442.2599 (fax)
www.msenergyservices.com

Surveyor Certification Form

Survey Company: MS ENERGY SERVICES
Surveyors Name: JOSHUA SMITH
Survey Job Type: RATE GYRO
Customer: YATES PETROLEUM CORP.
Well: BODACIOUS BSM FEDERAL 1H
API: 30-015-41158-00-X1
Surveyed from: SURFACE TO A DEPTH OF 400' MD
Survey Run Date: 4-11-13 to 4-11-13
Surface Location: EDDY COUNTY, NM

I certify that the data is true, correct, and complete and within the limitations of the tool set forth by MS Energy Services; that I am authorized and qualified to make this report; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by MS Energy Services.

Joshua Smith

Digitally signed by Joshua Smith
DN: cn=Joshua Smith, o=MS Energy Services, ou=MS
Survey, email=josmith@msenergyservices.com, c=US
Date: 2013.01.02 15:47:41 -06'00'

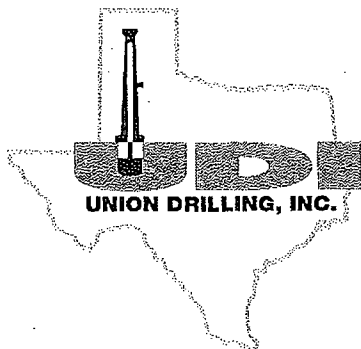


Job Number: SVMQ-130223
 Company: Yates Petroleum Corporation
 Lease/Well: Bodacious BSM Federal 1H
 Location: Eddy County, NM
 Rig Name: Sidewinder #223
 RKB: 27'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 7.65°
 Grid: East To Grid North
 File name: F:\SURVEY\2013SU-1\YATES\MO\BODACI-1\1H.SVY
 Date/Time: 15-Apr-13 / 16:03
 Curve Name: Surface - 400' M.D. (Rate Gyro)

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane .97
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.49	172.67	100.00	-.42	.05	-.42	.43	172.67	.49
200.00	.75	163.28	199.99	-1.48	.30	-1.47	1.50	168.60	.28
300.00	1.06	176.75	299.98	-3.03	.54	-3.02	3.07	169.91	.37
Last Survey Depth Recorded									
400.00	1.12	168.69	399.96	-4.91	.78	-4.89	4.97	170.94	.16



Well Name & Number: Bodacious BSM Federal #1H

API Number: 30-015-41158

Location: 510 FSL & 660 FWL, Lot M, Sec. 1, Township 26S, Range 26 E, Eddy County, New Mexico

Operator: Yates Petroleum Corporation

Drilling Contractor: Union Drilling, Inc.

The undersigned hereby certifies that he is an authorized representative of the drilling Contractor who drilled the above described well and that deviation survey tests were conducted and he obtained the following results:

RECORD OF INCLINATION

*11. Measured Depth (feet)	12. Course Length (Hundreds of feet)	*13. Angle of Inclination (Degrees)	14. Displacement per Hundred Feet (Sine of Angle X100)	15. Course Displacement (feet)	16. Accumulative Displacement (feet)
459	459	1.4	2.44	11.22	11.22
1451	992	1.2	2.09	20.78	31.99
2124	673	.7	1.22	8.22	40.21
3074	950	.4	0.70	6.63	46.85
3834	760	.7	1.22	9.29	56.13
4594	760	.7	1.22	9.29	65.42
5543	949	.9	1.57	14.91	80.32
6303	760	1.2	2.09	15.92	96.24
7278	975	1.8	3.14	30.63	126.87
DIRECTIONAL					
TOOK OVER					

Drilling Contractor: Union Drilling, Inc.

By: Jackie Loveless
Jackie Loveless
Title: Operations Manager

Subscribed and sworn to before me this 8th Day of May, 2013.

Laura Jo Young
Notary Public
My Commission Expires: July 29, 2014

COUNTY OF TAYLOR)
STATE OF TEXAS)

