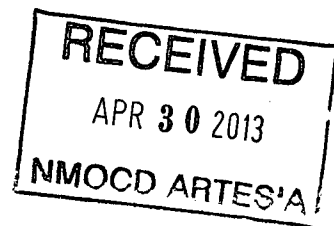


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Yates Petroleum

Eddy, NM (NAD-83)
Oscuro BBC State Com
#1H

OH

Design: OH

Survey Report - Geographic

06 March, 2013



Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1H
Project:	Eddy NM (NAD-83)	TVD Reference:	WELL @ 3125.0usft (Sidewinder #223 - 25' KB)
Site:	Oscuro BBC State Com	MD Reference:	WELL @ 3125.0usft (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:	Oscuro BBC State Com		
Site Position:		Northing:	417,073.64 usft
From:	Map	Easting:	597,605.74 usft
Position Uncertainty:	2.0 usft	Slot Radius:	8-3/4 "
		Latitude:	32° 8' 47.340 N
		Longitude:	104° 9' 5.495 W
		Grid Convergence:	0.10 °

Well	#1H					
Well Position	+N-S	0.0 usft	Northing:	417,073.64 usft	Latitude:	32° 8' 47.340 N
	+E-W	0.0 usft	Easting:	597,605.74 usft	Longitude:	104° 9' 5.495 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,100.0 usft	

Wellbore		OH			
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	1/24/2013	7.65	59.98	48,347

Design:		OH			
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	89.81	

Survey Program	Date	3/6/2013		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
200.0	6,530.0	Survey #1 - MS Gyro (OH)	CB-GYRO-MS	Camera based gyro multishot
6,678.0	12,210.0	Survey #2 - Crescent1 (OH)	MWD	MWD - Standard
12,274.0	12,274.0	Survey #3 - PTB (OH)	MWD	MWD - Standard

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	417,073.64	597,605.74	32° 8' 47.340 N	104° 9' 5.495 W
200.0	0.20	225.33	200.0	-0.2	-0.2	417,073.40	597,605.49	32° 8' 47.338 N	104° 9' 5.498 W
400.0	0.90	207.49	400.0	-1.9	-1.2	417,071.76	597,604.51	32° 8' 47.322 N	104° 9' 5.509 W
600.0	0.95	207.35	600.0	-4.8	-2.7	417,068.89	597,603.03	32° 8' 47.293 N	104° 9' 5.527 W
800.0	1.39	180.44	799.9	-8.6	-3.5	417,065.00	597,602.25	32° 8' 47.255 N	104° 9' 5.536 W
1,000.0	2.03	207.51	999.8	-14.2	-5.1	417,059.43	597,600.59	32° 8' 47.200 N	104° 9' 5.555 W
1,200.0	1.65	221.04	1,199.7	-19.5	-8.7	417,054.11	597,597.07	32° 8' 47.147 N	104° 9' 5.596 W
1,400.0	1.44	245.02	1,399.7	-22.8	-12.8	417,050.88	597,592.90	32° 8' 47.115 N	104° 9' 5.645 W
1,600.0	1.01	277.41	1,599.6	-23.6	-16.9	417,050.05	597,588.87	32° 8' 47.107 N	104° 9' 5.692 W
1,800.0	1.01	38.12	1,799.6	-22.0	-17.5	417,051.66	597,588.21	32° 8' 47.123 N	104° 9' 5.699 W

Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1H
Project:	Eddy, NM (NAD-83)	TVD Reference:	WELL @ 3125.0usft (Sidewinder #223 - 25' KB)
Site:	Oscuro BBC State Com	MD Reference:	WELL @ 3125.0usft (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	
2,000.0	2.39	75.34	1,999.5	-19.5	-12.4	417,054.10	597,593.33	32° 8' 47.147 N	104° 9' 5.640 W	
2,200.0	2.23	81.92	2,199.4	-17.9	-4.5	417,055.71	597,601.22	32° 8' 47.163 N	104° 9' 5.548 W	
2,400.0	0.79	83.85	2,399.3	-17.2	0.7	417,056.40	597,606.44	32° 8' 47.170 N	104° 9' 5.487 W	
2,600.0	0.44	60.13	2,599.3	-16.7	2.7	417,056.93	597,608.48	32° 8' 47.175 N	104° 9' 5.463 W	
2,800.0	0.24	82.11	2,799.3	-16.3	3.8	417,057.37	597,609.56	32° 8' 47.179 N	104° 9' 5.451 W	
3,000.0	0.58	178.76	2,999.3	-17.2	4.3	417,056.42	597,610.00	32° 8' 47.170 N	104° 9' 5.446 W	
3,200.0	0.59	230.71	3,199.2	-18.9	3.5	417,054.75	597,609.22	32° 8' 47.153 N	104° 9' 5.455 W	
3,400.0	0.62	254.23	3,399.2	-19.8	1.6	417,053.81	597,607.39	32° 8' 47.144 N	104° 9' 5.476 W	
3,600.0	0.66	265.14	3,599.2	-20.2	-0.5	417,053.41	597,605.20	32° 8' 47.140 N	104° 9' 5.502 W	
3,800.0	0.58	267.04	3,799.2	-20.4	-2.7	417,053.26	597,603.04	32° 8' 47.139 N	104° 9' 5.527 W	
4,000.0	0.19	238.25	3,999.2	-20.6	-4.0	417,053.04	597,601.75	32° 8' 47.137 N	104° 9' 5.542 W	
4,200.0	0.25	236.24	4,199.2	-21.0	-4.6	417,052.62	597,601.10	32° 8' 47.132 N	104° 9' 5.549 W	
4,400.0	1.25	236.06	4,399.2	-22.5	-6.8	417,051.16	597,598.93	32° 8' 47.118 N	104° 9' 5.575 W	
4,600.0	1.14	198.27	4,599.1	-25.6	-9.2	417,048.05	597,596.49	32° 8' 47.087 N	104° 9' 5.603 W	
4,800.0	0.66	185.16	4,799.1	-28.6	-10.0	417,045.02	597,595.77	32° 8' 47.057 N	104° 9' 5.612 W	
5,000.0	0.38	192.40	4,999.1	-30.4	-10.2	417,043.22	597,595.52	32° 8' 47.039 N	104° 9' 5.614 W	
5,200.0	0.38	186.00	5,199.1	-31.7	-10.4	417,041.91	597,595.31	32° 8' 47.027 N	104° 9' 5.617 W	
5,400.0	0.86	175.56	5,399.1	-33.9	-10.4	417,039.76	597,595.36	32° 8' 47.005 N	104° 9' 5.616 W	
5,600.0	1.50	168.08	5,599.1	-37.9	-9.7	417,035.70	597,596.01	32° 8' 46.965 N	104° 9' 5.609 W	
5,800.0	1.51	182.01	5,799.0	-43.1	-9.3	417,030.51	597,596.46	32° 8' 46.914 N	104° 9' 5.604 W	
6,000.0	1.30	197.50	5,998.9	-47.9	-10.0	417,025.71	597,595.69	32° 8' 46.866 N	104° 9' 5.613 W	
6,200.0	1.82	226.41	6,198.9	-52.3	-13.0	417,021.36	597,592.70	32° 8' 46.823 N	104° 9' 5.648 W	
6,400.0	1.12	288.09	6,398.8	-53.9	-17.2	417,019.77	597,588.55	32° 8' 46.808 N	104° 9' 5.696 W	
6,530.0	3.11	289.59	6,528.7	-52.3	-21.7	417,021.35	597,584.01	32° 8' 46.823 N	104° 9' 5.749 W	
6,678.0	2.10	290.70	6,676.5	-50.0	-28.0	417,023.65	597,577.70	32° 8' 46.846 N	104° 9' 5.822 W	
6,773.0	2.10	292.00	6,771.5	-48.7	-31.3	417,024.92	597,574.45	32° 8' 46.859 N	104° 9' 5.860 W	
6,868.0	2.10	277.90	6,866.4	-47.8	-34.6	417,025.81	597,571.12	32° 8' 46.868 N	104° 9' 5.899 W	
6,963.0	2.30	277.90	6,961.4	-47.3	-38.2	417,026.31	597,567.50	32° 8' 46.873 N	104° 9' 5.941 W	
7,058.0	1.40	309.20	7,056.3	-46.3	-41.0	417,027.31	597,564.72	32° 8' 46.883 N	104° 9' 5.973 W	
7,153.0	1.40	296.20	7,151.3	-45.1	-43.0	417,028.55	597,562.78	32° 8' 46.895 N	104° 9' 5.996 W	
7,248.0	1.60	294.10	7,246.2	-44.0	-45.2	417,029.61	597,560.52	32° 8' 46.905 N	104° 9' 6.022 W	
7,272.0	1.60	294.10	7,270.2	-43.8	-45.8	417,029.88	597,559.91	32° 8' 46.908 N	104° 9' 6.029 W	
7,304.0	0.90	38.80	7,302.2	-43.4	-46.1	417,030.26	597,559.66	32° 8' 46.912 N	104° 9' 6.032 W	
KOP 7304.0' MD 7302.2' TVD 46.2' VS										
7,335.0	4.40	80.30	7,333.2	-43.0	-44.7	417,030.65	597,560.99	32° 8' 46.916 N	104° 9' 6.016 W	
7,367.0	9.30	84.00	7,365.0	-42.5	-41.0	417,031.13	597,564.77	32° 8' 46.920 N	104° 9' 5.972 W	
7,399.0	13.70	86.30	7,396.3	-42.0	-34.6	417,031.64	597,571.13	32° 8' 46.925 N	104° 9' 5.898 W	
7,430.0	16.90	88.60	7,426.2	-41.7	-26.4	417,031.99	597,579.30	32° 8' 46.929 N	104° 9' 5.803 W	
7,462.0	20.10	89.80	7,456.5	-41.5	-16.3	417,032.12	597,589.45	32° 8' 46.930 N	104° 9' 5.685 W	
7,494.0	23.20	91.60	7,486.3	-41.7	-4.5	417,031.97	597,601.25	32° 8' 46.928 N	104° 9' 5.548 W	
7,505.9	24.43	92.01	7,497.2	-41.8	0.3	417,031.81	597,606.05	32° 8' 46.926 N	104° 9' 5.492 W	
Cross into 330' Lease 7505.9' MD 7497.2' TVD 24.43' INC 0.2' VS										
7,525.0	26.40	92.60	7,514.4	-42.2	8.5	417,031.48	597,614.24	32° 8' 46.923 N	104° 9' 5.397 W	
7,557.0	29.20	92.50	7,542.7	-42.8	23.4	417,030.82	597,629.15	32° 8' 46.916 N	104° 9' 5.224 W	
7,589.0	31.80	91.20	7,570.3	-43.3	39.6	417,030.30	597,645.38	32° 8' 46.911 N	104° 9' 5.035 W	
7,620.0	35.20	89.80	7,596.1	-43.5	56.8	417,030.16	597,662.49	32° 8' 46.909 N	104° 9' 4.836 W	
7,652.0	38.90	88.80	7,621.7	-43.2	76.0	417,030.41	597,681.76	32° 8' 46.911 N	104° 9' 4.612 W	
7,684.0	42.80	88.80	7,645.9	-42.8	96.9	417,030.84	597,702.68	32° 8' 46.915 N	104° 9' 4.368 W	
7,715.0	46.60	88.60	7,667.9	-42.3	118.7	417,031.34	597,724.48	32° 8' 46.920 N	104° 9' 4.115 W	
7,747.0	50.70	89.30	7,689.0	-41.9	142.8	417,031.78	597,748.49	32° 8' 46.924 N	104° 9' 3.835 W	
7,779.0	53.50	90.00	7,708.7	-41.7	168.0	417,031.93	597,773.74	32° 8' 46.925 N	104° 9' 3.542 W	
7,810.0	56.30	90.30	7,726.5	-41.8	193.4	417,031.86	597,799.10	32° 8' 46.924 N	104° 9' 3.247 W	
7,842.0	59.60	90.00	7,743.5	-41.9	220.5	417,031.79	597,826.22	32° 8' 46.922 N	104° 9' 2.931 W	
7,874.0	63.90	88.90	7,758.6	-41.6	248.7	417,032.07	597,854.40	32° 8' 46.925 N	104° 9' 2.604 W	
7,905.0	66.90	88.10	7,771.6	-40.8	276.8	417,032.81	597,882.57	32° 8' 46.932 N	104° 9' 2.276 W	

Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1H
Project:	Eddy NM (NAD-83)	TVD Reference:	WELL @ 3125.0usft (Sidewinder #223 - 25 KB)
Site:	Oscura BBC State Com	MD Reference:	WELL @ 3125.0usft (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
7,937.0	69.70	87.70	7,783.4	-39.7	306.5	417,033.90	597,912.28	32° 8' 46.942 N	104° 9' 1.930 W
7,969.0	73.90	88.10	7,793.4	-38.6	336.9	417,035.01	597,942.65	32° 8' 46.952 N	104° 9' 1.577 W
8,000.0	78.10	88.40	7,800.9	-37.7	367.0	417,035.93	597,972.71	32° 8' 46.961 N	104° 9' 1.227 W
8,032.0	81.80	88.20	7,806.5	-36.8	398.5	417,036.86	598,004.20	32° 8' 46.970 N	104° 9' 0.861 W
8,057.0	83.80	88.20	7,809.6	-36.0	423.3	417,037.64	598,028.99	32° 8' 46.977 N	104° 9' 0.573 W
8,125.0	88.00	87.50	7,814.4	-33.5	491.0	417,040.18	598,096.75	32° 8' 47.001 N	104° 8' 59.784 W
8,217.0	88.29	88.86	7,817.4	-30.5	582.9	417,043.11	598,188.65	32° 8' 47.028 N	104° 8' 58.715 W
EOC: 8217.0 MD: 7817.4 TVD: 88.29° INC: 582.8° VS									
8,220.0	88.30	88.90	7,817.5	-30.5	585.9	417,043.17	598,191.65	32° 8' 47.029 N	104° 8' 58.680 W
8,315.0	88.30	89.10	7,820.3	-28.8	680.9	417,044.82	598,286.60	32° 8' 47.044 N	104° 8' 57.576 W
8,410.0	88.20	89.10	7,823.2	-27.3	775.8	417,046.32	598,381.54	32° 8' 47.057 N	104° 8' 56.472 W
8,505.0	87.80	89.10	7,826.6	-25.8	870.7	417,047.81	598,476.47	32° 8' 47.070 N	104° 8' 55.367 W
8,600.0	87.60	89.30	7,830.4	-24.5	965.6	417,049.13	598,571.39	32° 8' 47.082 N	104° 8' 54.263 W
8,695.0	88.30	89.50	7,833.8	-23.5	1,060.6	417,050.13	598,666.32	32° 8' 47.090 N	104° 8' 53.159 W
8,790.0	88.20	89.50	7,836.7	-22.7	1,155.5	417,050.96	598,761.27	32° 8' 47.096 N	104° 8' 52.055 W
8,885.0	88.00	89.60	7,839.8	-21.9	1,250.5	417,051.70	598,856.22	32° 8' 47.102 N	104° 8' 50.950 W
8,980.0	87.80	89.50	7,843.3	-21.2	1,345.4	417,052.45	598,951.15	32° 8' 47.108 N	104° 8' 49.846 W
9,075.0	87.60	89.60	7,847.1	-20.5	1,440.3	417,053.19	599,046.07	32° 8' 47.114 N	104° 8' 48.742 W
9,170.0	88.00	89.60	7,850.8	-19.8	1,535.3	417,053.85	599,141.00	32° 8' 47.119 N	104° 8' 47.638 W
9,265.0	87.80	89.10	7,854.2	-18.7	1,630.2	417,054.93	599,235.93	32° 8' 47.128 N	104° 8' 46.533 W
9,360.0	88.20	88.20	7,857.5	-16.5	1,725.1	417,057.17	599,330.84	32° 8' 47.148 N	104° 8' 45.429 W
9,455.0	88.90	88.10	7,860.0	-13.4	1,820.0	417,060.23	599,425.76	32° 8' 47.177 N	104° 8' 44.325 W
9,550.0	88.00	87.70	7,862.5	-9.9	1,914.9	417,063.71	599,520.66	32° 8' 47.210 N	104° 8' 43.221 W
9,645.0	89.00	87.90	7,865.0	-6.3	2,009.8	417,067.36	599,615.56	32° 8' 47.244 N	104° 8' 42.117 W
9,740.0	89.00	88.40	7,866.7	-3.2	2,104.8	417,070.43	599,710.49	32° 8' 47.273 N	104° 8' 41.013 W
9,835.0	89.00	89.30	7,868.3	-1.3	2,199.7	417,072.33	599,805.46	32° 8' 47.290 N	104° 8' 39.908 W
9,930.0	89.00	91.00	7,870.0	-1.6	2,294.7	417,072.08	599,900.44	32° 8' 47.286 N	104° 8' 38.804 W
10,025.0	88.90	91.00	7,871.7	-3.2	2,389.7	417,070.43	599,995.41	32° 8' 47.268 N	104° 8' 37.699 W
10,120.0	88.70	90.70	7,873.7	-4.6	2,484.6	417,069.02	600,090.38	32° 8' 47.252 N	104° 8' 36.594 W
10,215.0	89.60	90.30	7,875.1	-5.5	2,579.6	417,068.19	600,185.36	32° 8' 47.242 N	104° 8' 35.489 W
10,310.0	89.40	90.20	7,876.0	-5.9	2,674.6	417,067.77	600,280.36	32° 8' 47.237 N	104° 8' 34.384 W
10,405.0	89.00	90.00	7,877.3	-6.0	2,769.6	417,067.61	600,375.35	32° 8' 47.233 N	104° 8' 33.280 W
10,500.0	89.40	89.80	7,878.6	-5.9	2,864.6	417,067.77	600,470.34	32° 8' 47.233 N	104° 8' 32.175 W
10,595.0	89.00	89.60	7,879.9	-5.4	2,959.6	417,068.27	600,565.33	32° 8' 47.236 N	104° 8' 31.070 W
10,690.0	89.40	88.90	7,881.3	-4.1	3,054.6	417,069.51	600,660.31	32° 8' 47.247 N	104° 8' 29.965 W
10,785.0	88.20	88.10	7,883.2	-1.6	3,149.5	417,072.00	600,755.25	32° 8' 47.270 N	104° 8' 28.860 W
10,880.0	88.30	88.10	7,886.1	1.5	3,244.4	417,075.15	600,850.16	32° 8' 47.299 N	104° 8' 27.757 W
10,975.0	89.60	89.30	7,887.9	3.7	3,339.4	417,077.30	600,945.11	32° 8' 47.319 N	104° 8' 26.652 W
11,070.0	88.30	88.20	7,889.6	5.7	3,434.3	417,079.38	601,040.07	32° 8' 47.338 N	104° 8' 25.547 W
11,165.0	88.70	88.90	7,892.1	8.1	3,529.3	417,081.78	601,135.01	32° 8' 47.360 N	104° 8' 24.443 W
11,259.0	89.20	90.00	7,893.8	9.0	3,623.2	417,082.68	601,228.99	32° 8' 47.367 N	104° 8' 23.350 W
11,354.0	90.60	90.90	7,894.0	8.3	3,718.2	417,081.93	601,323.98	32° 8' 47.358 N	104° 8' 22.245 W
11,449.0	90.10	90.30	7,893.4	7.3	3,813.2	417,080.94	601,418.97	32° 8' 47.347 N	104° 8' 21.140 W
11,544.0	90.30	90.50	7,893.1	6.6	3,908.2	417,080.28	601,513.97	32° 8' 47.338 N	104° 8' 20.035 W
11,639.0	89.90	90.30	7,892.9	6.0	4,003.2	417,079.61	601,608.97	32° 8' 47.330 N	104° 8' 18.930 W
11,734.0	90.10	90.30	7,892.9	5.5	4,098.2	417,079.12	601,703.96	32° 8' 47.324 N	104° 8' 17.825 W
11,829.0	90.10	90.70	7,892.8	4.6	4,193.2	417,078.29	601,798.96	32° 8' 47.314 N	104° 8' 16.720 W
11,924.0	89.70	90.00	7,892.9	4.1	4,288.2	417,077.71	601,893.96	32° 8' 47.306 N	104° 8' 15.615 W
12,019.0	89.40	89.30	7,893.7	4.6	4,383.2	417,078.29	601,988.95	32° 8' 47.310 N	104° 8' 14.510 W
12,114.0	89.00	88.90	7,895.0	6.1	4,478.2	417,079.78	602,083.93	32° 8' 47.323 N	104° 8' 13.405 W
12,210.0	89.20	89.10	7,896.5	7.8	4,574.2	417,081.45	602,179.90	32° 8' 47.338 N	104° 8' 12.289 W
12,274.0	89.20	89.10	7,897.4	8.8	4,638.2	417,082.46	602,243.89	32° 8' 47.347 N	104° 8' 11.545 W
BHL: 12274.0 MD: 7897.4 TVD: 89.20° INC: 89.10° AZI: 8.8° N: 4638.2° E: 4638.2° VS									

Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1H
Project:	Eddy NM (NAD-83)	TVD Reference:	WELL @ 3125.0usft (Sidewinder #223 - 25' KB)
Site:	Oscuro BBC State Com	MD Reference:	WELL @ 3125.0usft (Sidewinder #223 - 25' KB)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Houston R5000 Database

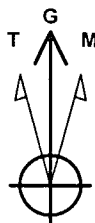
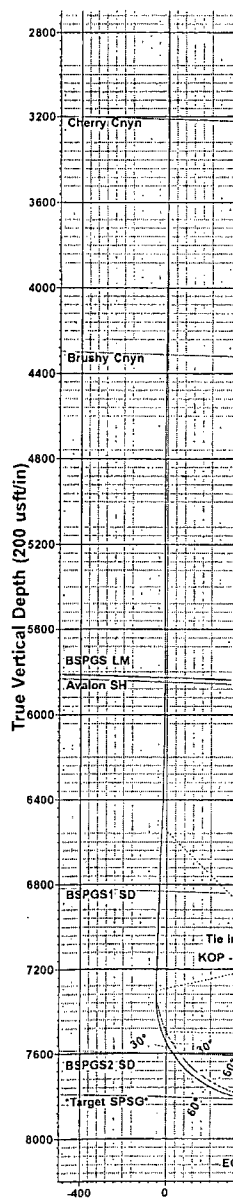
Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,304.0	7,302.2	-43.4	-46.1	KOP - 7304.0' MD, 7302.2' TVD, -46.2' VS
7,505.9	7,497.2	-41.8	0.3	Cross into 330' Lease - 7505.9' MD, 7497.2' TVD, 24.43° INC, 0.2' VS
8,217.0	7,817.4	-30.5	582.9	EOC - 8217.0' MD, 7817.4' TVD, 88.29° INC, 582.8' VS
12,274.0	7,897.4	8.8	4,638.2	BHL - 12274.0' MD, 7897.4' TVD, 89.20° INC, 89.10° AZI, 8.8' N, 4638.2' E, 463

Checked By: _____ Approved By: _____ Date: _____

Yates Petroleum
Project: Eddy, NM (NAD-83)
Site: Oscuro BBC State Com
Well: #1H
Wellbore: OH
Plan: Plan #2 (#1H/OH)

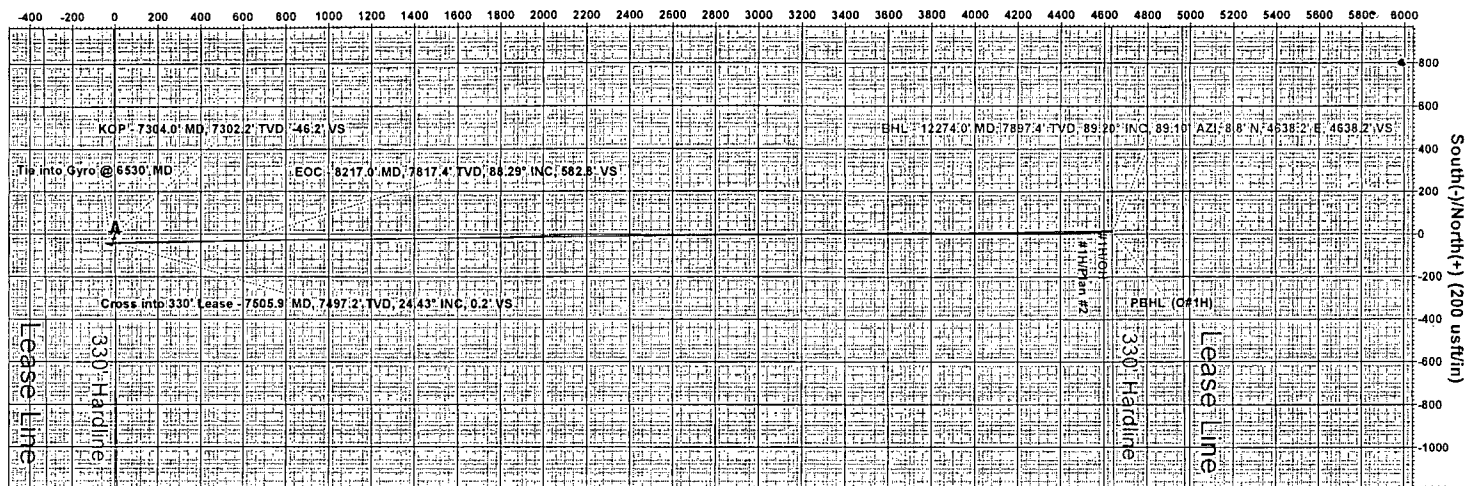


West(-)/East(+) (200 usft/in)



Azimuths to Grid North
True North: -0.10°
Magnetic North: 7.55°

Magnetic Field
Strength: 48346.5nT
Dip Angle: 59.98°
Date: 1/24/2013
Model: IGRF2010



Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	7248.0	1.60	294.10	7246.2	-44.0	-45.2	0.00	0.00	-45.4	
2	7329.5	1.60	294.10	7327.7	-43.1	-47.3	0.00	0.00	-47.4	
3	8077.1	88.29	89.35	7816.9	-32.3	415.5	12.00	155.26	415.4	
4	12302.1	88.29	89.35	7943.0	15.6	4638.4	0.00	0.00	4638.4	PBHL (O#1H)

WELL DETAILS: #1H

Ground Elevation:: 3100.0
RKB Elevation: WELL @ 3125.0usft (Sidewinder #223 - 25' KB)
Rig Name: Sidewinder #223 - 25' KB

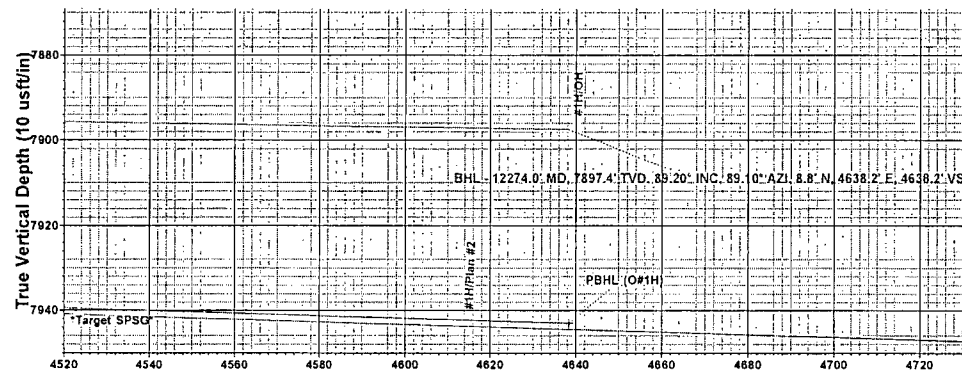
Surface Hole Location

Northing: 417073.65
Easting: 597605.73
Latitude: 32° 8' 47.340 N
Longitude: 104° 9' 5.495 W

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
777.9	778.0	Castile Lower	1.73	89.81
977.8	978.0	T of Salt	1.73	89.81
2132.4	2133.0	B of Salt	1.73	89.81
2332.3	2333.0	Lamar	1.73	89.81
2397.3	2398.0	Delaware	1.73	89.81
3212.2	3213.0	Cherry Cnyn	1.73	89.81
4312.2	4313.0	Brushy Cnyn	1.73	89.81
5827.0	5828.0	BSPGS LM	1.73	89.81
5847.0	5848.0	Avalon SH	1.73	89.81
6831.4	6833.0	BSPGS1 SD	1.73	89.81
7601.8	7619.0	BSPGS2 SD	1.73	89.81
7816.8	8075.0	*Target SPSG*	1.73	89.81

Vertical Section at 89.81° (10 usft/in)



DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
PBHL (O#1H)	7943.0	15.6	4638.4	417089.28	602244.11

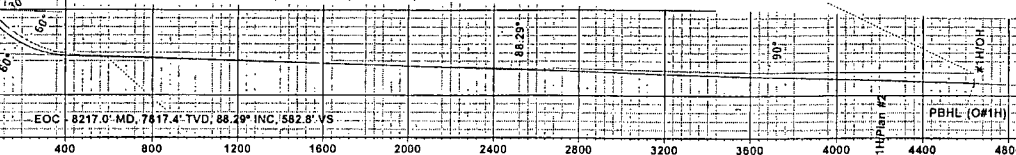
Tie Into Gyro @ 6530' MD
KOP - 7304.0' MD, 7302.2' TVD, -46.2° VS

Cross into 330° Lease - 7505.9' MD, 7497.2' TVD, 24.43° INC, 0.2° VS

BHL - 12274.0' MD, 7897.4' TVD, 89.20° INC, 89.10° AZI, 8.8° N, 4638.2' E, 4638.2' VS

EOC - 8217.0' MD, 7617.4' TVD, 88.29° INC, 582.9° VS

Vertical Section at 89.81° (200 usft/in)



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

Plan: Plan #2 (#1H/OH)
Created By: Matt Higgins Date: 9:14, March 06 2013

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