

Results of Directional Survey

API number:	30-025-41121	H	
OGRID:		Operator:	YATES PETROLEUM CORPORATION
		Property:	BELFAST BSL STATE COM # 1-Y

surface	ULSTR:	M	06	T 21S	R 34E
				2750 FSL	660 FWL

BH Loc	ULSTR:	D	06	T 21S	R 34E
15407	MD	10800.5	TVD	328 FNL	637 FWL
				7585 FSL	

7913

Top Perf/OH	ULSTR:	M	06	T 21S	R 34E
11036	MD	10787.6	TVD	3215 FSL	650 FWL

Bot Perf/OH	ULSTR:	D	06	T 21S	R 34E
15330	MD	10800.1	TVD	405 FNL	634 FWL
				7508 FSL	

	MD	N/S	E/W	VD
	11031	460.00	-9.60	10787
TOP PERFS/OH	11036	464.95	-9.65	10787.58
	11063	491.70	-9.90	10790.70
	15283	4710.60	-26.80	10800.10
BOT PERFS/OH	15330	4757.60	-25.51	10800.10
	15352	4779.60	-24.90	10800.10

NEXT TO LAST	15352	4779.60	-24.90	10800.10
LAST READING	15407	4834.60	-23.40	10800.50
TD	15407	4834.60	-23.40	10800.50

Surface Location	2750	FS	660	FW
Projected BHL	7585	FS	637	FW
Location of				
Top Perfs/OH	3215	FS	650	FW
Bottom Perfs/OH	7508	FS	634	FW

SUMMARY of Subsurface Locations

Surface Location	M-06-21S-34E	2750	FS	660	FW	Vert. Depth
Top Perfs/OH	M-06-21S-34E	3215	FS	650	FW	10787.58
Bottom Perfs/OH	D-06-21S-34E	7508	FS	634	FW	10800.10
Projected TD	D-06-21S-34E	7585	FS	637	FW	10800.50

OCT 07 2013



Job Number: SVMO-130275
 Company: Yates Petroleum Corporation
 Lease/Well: Belfast BSL State Com 1Y
 Location: Lea County, NM
 Rig Name: Cactus #124
 RKB: 28'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 7.35°
 Grid: East To Grid North
 File name: F:\SURVEY\2013SU~1\YATES\MO\BELFAS~1\1Y.SVY
 Date/Time: 07-May-13 / 16:24
 Curve Name: 4100' - 5900' M.D. (Rate Gyro)

HOBBS OCD
 SEP 12 2013
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WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 359.57
 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	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
4057.00	.50	153.50	4056.83	7.32	4.75	7.28	8.73	32.98	.00
Tied Rate Gyro Surveys Into Crescent Directional Drilling Surveys - Information Provided By Operator									
4100.00	.48	125.67	4099.83	7.05	4.98	7.01	8.63	35.25	.55
4200.00	.40	75.63	4199.83	6.89	5.66	6.85	8.92	39.40	.38
4400.00	.57	54.99	4399.82	7.63	7.15	7.58	10.46	43.13	.12
4600.00	.49	150.50	4599.81	7.46	8.39	7.40	11.22	48.34	.39
4800.00	.38	137.27	4799.81	6.23	9.26	6.16	11.16	56.07	.07
5000.00	.32	114.64	4999.80	5.51	10.21	5.43	11.60	61.66	.07
5200.00	.46	123.70	5199.80	4.83	11.39	4.74	12.37	67.02	.08
5400.00	.56	128.10	5399.79	3.78	12.83	3.69	13.37	73.57	.05

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
5600.00	.59	137.16	5599.78	2.42	14.30	2.32	14.50	80.38	.05
5800.00	.33	121.37	5799.77	1.37	15.49	1.25	15.55	84.95	.14
Last Survey Depth Recorded									
5900.00	.42	104.20	5899.77	1.13	16.09	1.01	16.13	85.99	.14



Job Number: SVMO-130258
 Company: Yates Petroleum Corporation
 Lease/Well: Belfast BSL State Com 1Y
 Location: Lea County, NM
 Rig Name: Cactus #124
 RKB: 28'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 6.94°
 Grid: East To Grid North
 File name: F:\SURVEY\2013SU~1\YATES\MO\BELFAS~1\1Y.SVY
 Date/Time: 29-Apr-13 / 13:50
 Curve Name: Surface - 1800' M.D. (Rate Gyro)

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SEP 12 2013

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WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 359.57
 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	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.47	307.53	100.00	.25	-.33	.25	.41	307.53	.47
200.00	.47	305.11	200.00	.74	-.99	.74	1.23	306.72	.02
300.00	.49	308.54	299.99	1.24	-1.66	1.25	2.07	306.78	.04
400.00	.36	292.98	399.99	1.63	-2.28	1.64	2.80	305.52	.17
500.00	.31	240.54	499.99	1.62	-2.80	1.64	3.24	299.96	.30
600.00	.37	265.79	599.99	1.46	-3.36	1.49	3.67	293.47	.16
700.00	.35	278.69	699.98	1.48	-3.99	1.51	4.25	290.40	.08
800.00	.35	282.10	799.98	1.59	-4.59	1.63	4.86	289.15	.02
900.00	.30	303.42	899.98	1.80	-5.10	1.84	5.41	289.43	.13

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
1000.00	.34	301.15	999.98	2.10	-5.58	2.14	5.96	290.62	.04
1100.00	.31	301.19	1099.98	2.39	-6.06	2.44	6.52	291.53	.03
1200.00	.14	333.42	1199.98	2.64	-6.35	2.69	6.88	292.59	.21
1300.00	.13	334.65	1299.98	2.85	-6.45	2.90	7.05	293.86	.01
1400.00	.21	333.56	1399.98	3.12	-6.58	3.17	7.28	295.36	.08
1500.00	.15	267.28	1499.98	3.28	-6.79	3.33	7.54	295.76	.20
1600.00	.39	273.23	1599.97	3.29	-7.26	3.34	7.97	294.37	.24
1700.00	.64	278.83	1699.97	3.40	-8.16	3.46	8.83	292.60	.25
Last Survey Depth Recorded									
1800.00	.69	289.76	1799.96	3.68	-9.27	3.75	9.98	291.67	.14

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Yates Petroleum

Eddy, NM (NAD-83)
Belfast BSL State Com
#1Y

OH

Design: OH

Standard Survey Report

13 May, 2013



Survey Report



Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1Y
Project:	Eddy, NM (NAD-83)	TVD Reference:	WELL @ 3765.0usft (Cactus #124 - 25' KB)
Site:	Belfast BSL State Com	MD Reference:	WELL @ 3765.0usft (Cactus #124 - 25' KB)
Well:	#1Y	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	Belfast BSL State Com				
Site Position:		Northing:	549,511.09 usft	Latitude:	32° 30' 28.827 N
From:	Map	Easting:	793,475.98 usft	Longitude:	103° 30' 55.519 W
Position Uncertainty:	2.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.44 °

Well	#1Y					
Well Position	+N/-S	0.0 usft	Northing:	549,561.09 usft	Latitude:	32° 30' 29.322 N
	+E/-W	0.0 usft	Easting:	793,475.60 usft	Longitude:	103° 30' 55.519 W
Position Uncertainty		2.0 usft	Wellhead Elevation:	usft	Ground Level:	3,740.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/16/2013	7.35	60.41	48,607

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	359.57	

Survey Program		Date	5/13/2013		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	1,800.0	Survey #1 - MS1 (OH)	CB-GYRO-MS	Camera based gyro multishot	
1,970.0	4,057.0	Survey #2 - Crescent1 (OH)	MWD	MWD - Standard	
4,100.0	5,900.0	Survey #3 - MS2 (OH)	CB-GYRO-MS	Camera based gyro multishot	
5,938.0	15,352.0	Survey #4 - Crescent2 (OH)	MWD	MWD - Standard	
15,407.0	15,407.0	Survey #5 - PTB (OH)	BLIND	Blind drilling, where no tool is applied	

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	0.47	307.53	100.0	0.2	-0.3	0.3	0.47	0.47	0.00
200.0	0.47	305.11	200.0	0.7	-1.0	0.7	0.02	0.00	-2.42
300.0	0.49	308.54	300.0	1.2	-1.7	1.3	0.04	0.02	3.43
400.0	0.36	292.98	400.0	1.6	-2.3	1.6	0.17	-0.13	-15.56
500.0	0.31	240.54	500.0	1.6	-2.8	1.6	0.30	-0.05	-52.44
600.0	0.37	265.79	600.0	1.5	-3.4	1.5	0.16	0.06	25.25

Survey Report



Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1Y
Project:	Eddy, NM (NAD-83)	TV Reference:	WELL @ 3765.0usft (Cactus #124 - 25' KB)
Site:	Belfast BSL State Corn	D Reference:	WELL @ 3765.0usft (Cactus #124 - 25' KB)
Well:	#1Y	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Houston R5000 Database

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)
700.0	0.35	278.69	700.0	1.5	-4.0	1.5	0.08	-0.02	12.90
800.0	0.35	282.10	800.0	1.6	-4.6	1.6	0.02	0.00	3.41
900.0	0.30	303.42	900.0	1.8	-5.1	1.8	0.13	-0.05	21.32
1,000.0	0.34	301.15	1,000.0	2.1	-5.6	2.1	0.04	0.04	-2.27
1,100.0	0.31	301.19	1,100.0	2.4	-6.1	2.4	0.03	-0.03	0.04
1,200.0	0.14	333.42	1,200.0	2.6	-6.3	2.7	0.21	-0.17	32.23
1,300.0	0.13	334.65	1,300.0	2.9	-6.5	2.9	0.01	-0.01	1.23
1,400.0	0.21	333.56	1,400.0	3.1	-6.6	3.2	0.08	0.08	-1.09
1,500.0	0.15	267.28	1,500.0	3.3	-6.8	3.3	0.20	-0.06	-66.28
1,600.0	0.39	273.23	1,600.0	3.3	-7.3	3.3	0.24	0.24	5.95
1,700.0	0.64	278.83	1,700.0	3.4	-8.2	3.5	0.25	0.25	5.60
1,800.0	0.69	289.76	1,800.0	3.7	-9.3	3.8	0.14	0.05	10.93
Tie into MS Gyro @ 1800' MD									
1,970.0	0.40	300.50	1,970.0	4.3	-10.7	4.4	0.18	-0.17	6.32
2,160.0	0.40	8.50	2,160.0	5.3	-11.2	5.4	0.24	0.00	35.79
2,350.0	0.50	43.20	2,349.9	6.6	-10.6	6.7	0.15	0.05	18.26
2,540.0	0.50	37.10	2,539.9	7.9	-9.5	7.9	0.03	0.00	-3.21
2,730.0	0.40	53.10	2,729.9	8.9	-8.5	9.0	0.08	-0.05	8.42
2,920.0	0.60	56.40	2,919.9	9.9	-7.1	9.9	0.11	0.11	1.74
3,014.0	1.00	56.30	3,013.9	10.6	-6.0	10.6	0.43	0.43	-0.11
3,109.0	1.00	70.80	3,108.9	11.3	-4.5	11.4	0.27	0.00	15.26
3,204.0	0.80	74.20	3,203.9	11.8	-3.1	11.8	0.22	-0.21	3.58
3,299.0	0.90	101.70	3,298.9	11.8	-1.7	11.8	0.44	0.11	28.95
3,394.0	0.70	128.60	3,393.9	11.3	-0.6	11.3	0.44	-0.21	28.32
3,488.0	0.40	157.60	3,487.9	10.6	0.0	10.6	0.43	-0.32	30.85
3,583.0	0.50	109.90	3,582.9	10.2	0.5	10.2	0.39	0.11	-50.21
3,678.0	1.00	95.70	3,677.9	10.0	1.7	9.9	0.56	0.53	-14.95
3,773.0	0.60	142.90	3,772.8	9.5	2.9	9.5	0.78	-0.42	49.68
3,867.0	0.50	143.90	3,866.8	8.8	3.4	8.7	0.11	-0.11	1.06
3,962.0	0.70	128.60	3,961.8	8.1	4.1	8.0	0.27	0.21	-16.11
4,057.0	0.50	153.50	4,056.8	7.3	4.7	7.3	0.34	-0.21	26.21
4,100.0	0.48	125.67	4,099.8	7.0	5.0	7.0	0.55	-0.05	-64.72
Start MS Gyro Svys @ 4100' MD									
4,200.0	0.40	75.63	4,199.8	6.9	5.7	6.8	0.38	-0.08	-50.04
4,400.0	0.57	54.99	4,399.8	7.6	7.1	7.6	0.12	0.09	-10.32
4,600.0	0.49	150.50	4,599.8	7.5	8.4	7.4	0.39	-0.04	47.76
4,800.0	0.38	137.27	4,799.8	6.2	9.3	6.2	0.07	-0.06	-6.62
5,000.0	0.32	114.64	4,999.8	5.5	10.2	5.4	0.07	-0.03	-11.32
5,200.0	0.46	123.70	5,199.8	4.8	11.4	4.7	0.08	0.07	4.53
5,400.0	0.56	128.10	5,399.8	3.8	12.8	3.7	0.05	0.05	2.20
5,600.0	0.59	137.16	5,599.8	2.4	14.3	2.3	0.05	0.02	4.53
5,800.0	0.33	121.37	5,799.8	1.4	15.5	1.3	0.14	-0.13	-7.90
5,900.0	0.42	104.20	5,899.8	1.1	16.1	1.0	0.14	0.09	-17.17
Tie into MS Gyro @ 5900' MD									

Survey Report



Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1Y
Project:	Eddy, NM (NAD-83)	TVD Reference:	WELL @ 3765.0usft (Cactus #124 - 25' KB)
Site:	Belfast BSL State Com	MD Reference:	WELL @ 3765.0usft (Cactus #124 - 25' KB)
Well:	#1Y	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)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,938.0	0.30	86.70	5,937.8	1.1	16.3	1.0	0.42	-0.32	-46.05
6,128.0	0.40	66.00	6,127.8	1.4	17.4	1.3	0.08	0.05	-10.89
6,223.0	0.40	67.20	6,222.8	1.7	18.0	1.5	0.01	0.00	1.26
6,413.0	0.60	5.90	6,412.8	2.9	18.7	2.8	0.28	0.11	-32.26
6,602.0	1.10	307.60	6,601.7	5.0	17.4	4.9	0.50	0.26	-30.85
6,795.0	1.00	304.20	6,794.7	7.1	14.5	7.0	0.06	-0.05	-1.76
6,988.0	0.90	303.90	6,987.7	8.9	11.9	8.8	0.05	-0.05	-0.16
7,181.0	0.80	289.80	7,180.7	10.2	9.4	10.1	0.12	-0.05	-7.31
7,371.0	0.80	276.40	7,370.6	10.8	6.8	10.7	0.10	0.00	-7.05
7,560.0	1.00	269.10	7,559.6	10.9	3.8	10.9	0.12	0.11	-3.86
7,749.0	1.00	262.70	7,748.6	10.7	0.6	10.7	0.06	0.00	-3.39
7,939.0	1.20	247.00	7,938.6	9.7	-2.9	9.7	0.19	0.11	-8.26
8,033.0	1.10	250.30	8,032.5	9.0	-4.7	9.0	0.13	-0.11	3.51
8,127.0	1.10	244.70	8,126.5	8.3	-6.3	8.3	0.11	0.00	-5.96
8,222.0	1.00	241.20	8,221.5	7.5	-7.9	7.6	0.13	-0.11	-3.68
8,317.0	0.40	334.10	8,316.5	7.4	-8.8	7.5	1.15	-0.63	97.79
8,412.0	0.40	320.90	8,411.5	8.0	-9.1	8.0	0.10	0.00	-13.89
8,507.0	0.30	301.70	8,506.5	8.3	-9.5	8.4	0.16	-0.11	-20.21
8,602.0	0.40	289.00	8,601.5	8.6	-10.1	8.7	0.13	0.11	-13.37
8,696.0	0.20	185.60	8,695.5	8.5	-10.4	8.6	0.52	-0.21	-110.00
8,791.0	1.00	157.30	8,790.5	7.6	-10.1	7.7	0.87	0.84	-29.79
8,885.0	0.60	150.10	8,884.5	6.4	-9.5	6.5	0.44	-0.43	-7.66
8,979.0	0.60	128.10	8,978.5	5.7	-8.9	5.7	0.24	0.00	-23.40
9,074.0	0.40	134.00	9,073.5	5.1	-8.3	5.2	0.22	-0.21	6.21
9,169.0	0.40	206.60	9,168.5	4.6	-8.2	4.7	0.50	0.00	76.42
9,264.0	0.60	222.20	9,263.5	4.0	-8.7	4.0	0.25	0.21	16.42
9,358.0	0.50	323.70	9,357.5	3.9	-9.2	4.0	0.91	-0.11	107.98
9,453.0	0.40	202.70	9,452.5	3.9	-9.6	4.0	0.83	-0.11	-127.37
9,548.0	0.40	342.80	9,547.5	4.0	-9.8	4.0	0.79	0.00	147.47
9,642.0	1.30	154.60	9,641.5	3.3	-9.5	3.4	1.81	0.96	182.77
9,737.0	1.40	177.80	9,736.4	1.2	-9.0	1.2	0.58	0.11	24.42
9,832.0	1.30	193.10	9,831.4	-1.0	-9.2	-1.0	0.39	-0.11	16.11
9,927.0	1.20	207.50	9,926.4	-3.0	-9.9	-2.9	0.35	-0.11	15.16
10,021.0	1.10	220.00	10,020.4	-4.5	-10.9	-4.4	0.29	-0.11	13.30
10,116.0	0.80	304.20	10,115.4	-4.9	-12.0	-4.8	1.36	-0.32	88.63
10,210.0	1.10	295.50	10,209.3	-4.1	-13.4	-4.0	0.35	0.32	-9.26
10,242.0	1.10	292.70	10,241.3	-3.8	-13.9	-3.7	0.17	0.00	-8.75
KOP - 10242.0' MD, 10241.3' TVD, 1.10° INC, -3.7° VS									
10,274.0	1.80	325.90	10,273.3	-3.3	-14.5	-3.2	3.33	2.19	103.75
10,305.0	5.50	346.40	10,304.3	-1.5	-15.1	-1.4	12.47	11.94	66.13
10,337.0	8.70	352.00	10,336.0	2.4	-15.8	2.5	10.22	10.00	17.50
10,368.0	11.60	355.80	10,366.5	7.9	-16.4	8.0	9.60	9.35	12.26
10,400.0	14.50	358.40	10,397.7	15.1	-16.7	15.2	9.24	9.06	8.13

Survey Report



Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1Y
Project:	Eddy, NM (NAD-83)	TVD Reference:	WELL @ 3765.0usft (Cactus #124 - 25' KB)
Site:	Belfast BSL State Com	MD Reference:	WELL @ 3765.0usft (Cactus #124 - 25' KB)
Well:	#1Y	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Houston R5000 Database

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)
10,431.0	17.60	359.60	10,427.5	23.6	-16.9	23.8	10.06	10.00	3.87
10,463.0	20.40	1.50	10,457.7	34.1	-16.8	34.2	8.96	8.75	5.94
10,494.0	23.00	2.40	10,486.5	45.5	-16.4	45.6	8.46	8.39	2.90
10,526.0	25.90	1.60	10,515.7	58.7	-15.9	58.9	9.12	9.06	-2.50
10,558.0	29.40	0.90	10,544.0	73.6	-15.6	73.7	10.98	10.94	-2.19
10,588.0	33.10	0.10	10,569.6	89.1	-15.5	89.3	12.41	12.33	-2.67
10,620.0	37.70	358.80	10,595.7	107.7	-15.7	107.8	14.57	14.38	-4.06
10,652.0	42.80	358.60	10,620.1	128.3	-16.1	128.5	15.94	15.94	-0.63
10,683.0	46.90	359.20	10,642.1	150.2	-16.5	150.3	13.30	13.23	1.94
10,715.0	49.60	0.50	10,663.4	174.1	-16.6	174.2	8.97	8.44	4.06
10,747.0	52.60	0.90	10,683.5	199.0	-16.3	199.1	9.43	9.38	1.25
10,773.2	55.81	1.24	10,698.8	220.2	-15.9	220.3	12.30	12.26	1.30
Cross into 330' Lease - 10773.2' MD, 10698.8' TVD, 55.81° INC, 220.3' VS									
10,778.0	56.40	1.30	10,701.5	224.2	-15.8	224.3	12.30	12.26	1.24
10,810.0	60.20	1.40	10,718.3	251.4	-15.2	251.5	11.88	11.88	0.31
10,841.0	63.50	1.60	10,732.9	278.7	-14.4	278.8	10.66	10.65	0.65
10,867.0	66.30	1.60	10,744.0	302.3	-13.8	302.4	10.77	10.77	0.00
10,905.0	70.90	1.60	10,757.8	337.6	-12.8	337.7	12.11	12.11	0.00
10,936.0	74.20	2.40	10,767.1	367.2	-11.8	367.2	10.93	10.65	2.58
10,968.0	76.60	1.90	10,775.2	398.1	-10.6	398.2	7.65	7.50	-1.56
10,999.0	79.10	1.10	10,781.7	428.4	-9.8	428.5	8.45	8.06	-2.58
11,031.0	82.00	359.80	10,787.0	460.0	-9.6	460.0	9.91	9.06	-4.06
11,063.0	84.50	358.90	10,790.7	491.7	-9.9	491.8	8.30	7.81	-2.81
11,094.0	87.50	358.40	10,792.9	522.6	-10.7	522.7	9.81	9.68	-1.61
11,189.0	91.80	359.30	10,793.5	617.6	-12.6	617.7	4.62	4.53	0.95
EOC - 11189.0' MD, 10793.5' TVD, 91.80° INC, 617.7' VS									
11,283.0	91.50	359.40	10,790.8	711.6	-13.6	711.6	0.34	-0.32	0.11
11,378.0	91.10	359.40	10,788.6	806.5	-14.6	806.6	0.42	-0.42	0.00
11,472.0	91.10	359.30	10,786.8	900.5	-15.7	900.6	0.11	0.00	-0.11
11,567.0	91.30	359.60	10,784.8	995.5	-16.6	995.6	0.38	0.21	0.32
11,661.0	91.00	359.90	10,782.9	1,089.5	-17.0	1,089.6	0.45	-0.32	0.32
11,756.0	91.50	359.80	10,780.9	1,184.4	-17.3	1,184.5	0.54	0.53	-0.11
11,850.0	91.30	359.60	10,778.6	1,278.4	-17.8	1,278.5	0.30	-0.21	-0.21
11,944.0	90.80	359.10	10,776.8	1,372.4	-18.8	1,372.5	0.75	-0.53	-0.53
12,040.0	90.40	359.00	10,775.8	1,468.4	-20.4	1,468.5	0.43	-0.42	-0.10
12,135.0	90.40	359.40	10,775.2	1,563.4	-21.7	1,563.5	0.42	0.00	0.42
12,229.0	89.40	359.20	10,775.3	1,657.3	-22.9	1,657.5	1.08	-1.06	-0.21
12,324.0	89.00	359.40	10,776.7	1,752.3	-24.0	1,752.5	0.47	-0.42	0.21
12,419.0	89.60	0.50	10,777.8	1,847.3	-24.1	1,847.4	1.32	0.63	1.16
12,514.0	90.60	359.90	10,777.7	1,942.3	-23.8	1,942.4	1.23	1.05	-0.63
12,609.0	91.70	0.10	10,775.8	2,037.3	-23.8	2,037.4	1.18	1.16	0.21
12,704.0	91.60	359.50	10,773.0	2,132.3	-24.1	2,132.4	0.64	-0.11	-0.63
12,798.0	90.30	359.40	10,771.5	2,226.2	-25.0	2,226.4	1.39	-1.38	-0.11
12,918.0	90.30	359.10	10,770.8	2,346.2	-26.6	2,346.4	0.25	0.00	-0.25

Survey Report



Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1Y
Project:	Eddy, NM (NAD-83)	TVD Reference:	WELL @ 3765.0usft (Cactus #124 - 25' KB)
Site:	Belfast BSL State Com.	MD Reference:	WELL @ 3765.0usft (Cactus #124 - 25' KB)
Well:	#1Y	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)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,012.0	90.00	359.30	10,770.6	2,440.2	-27.9	2,440.4	0.38	-0.32	0.21
13,106.0	89.30	359.20	10,771.2	2,534.2	-29.1	2,534.4	0.75	-0.74	-0.11
13,201.0	90.30	359.10	10,771.5	2,629.2	-30.6	2,629.3	1.06	1.05	-0.11
13,296.0	90.20	359.10	10,771.1	2,724.2	-32.0	2,724.3	0.11	-0.11	0.00
13,391.0	90.40	359.40	10,770.6	2,819.2	-33.3	2,819.3	0.38	0.21	0.32
13,485.0	89.30	358.60	10,770.8	2,913.2	-34.9	2,913.3	1.45	-1.17	-0.85
13,580.0	89.60	359.10	10,771.7	3,008.1	-36.8	3,008.3	0.61	0.32	0.53
13,675.0	90.10	359.20	10,772.0	3,103.1	-38.2	3,103.3	0.54	0.53	0.11
13,771.0	89.20	359.50	10,772.6	3,199.1	-39.3	3,199.3	0.99	-0.94	0.31
13,865.0	89.30	359.50	10,773.8	3,293.1	-40.2	3,293.3	0.11	0.11	0.00
13,960.0	88.50	0.60	10,775.6	3,388.1	-40.1	3,388.3	1.43	-0.84	1.16
14,054.0	88.30	0.10	10,778.2	3,482.0	-39.5	3,482.2	0.57	-0.21	-0.53
14,149.0	88.70	0.20	10,780.7	3,577.0	-39.2	3,577.2	0.43	0.42	0.11
14,243.0	89.50	0.90	10,782.2	3,671.0	-38.3	3,671.2	1.13	0.85	0.74
14,338.0	89.70	1.20	10,782.9	3,766.0	-36.6	3,766.1	0.38	0.21	0.32
14,433.0	89.30	1.10	10,783.7	3,860.9	-34.7	3,861.1	0.43	-0.42	-0.11
14,528.0	89.40	1.20	10,784.8	3,955.9	-32.8	3,956.1	0.15	0.11	0.11
14,622.0	88.60	0.80	10,786.4	4,049.9	-31.2	4,050.0	0.95	-0.85	-0.43
14,717.0	88.50	0.70	10,788.8	4,144.9	-29.9	4,145.0	0.15	-0.11	-0.11
14,811.0	88.80	0.80	10,791.0	4,238.8	-28.7	4,238.9	0.34	0.32	0.11
14,904.0	87.70	0.60	10,793.9	4,331.8	-27.5	4,331.9	1.20	-1.18	-0.22
14,999.0	88.10	359.70	10,797.4	4,426.7	-27.3	4,426.8	1.04	0.42	-0.95
15,094.0	88.40	359.50	10,800.3	4,521.7	-28.0	4,521.7	0.38	0.32	-0.21
15,188.0	90.70	0.20	10,801.0	4,615.6	-28.2	4,615.7	2.56	2.45	0.74
15,283.0	90.40	1.50	10,800.1	4,710.6	-26.8	4,710.7	1.40	-0.32	1.37
15,352.0	89.60	1.60	10,800.1	4,779.6	-24.9	4,779.7	1.17	-1.16	0.14
15,407.0	89.60	1.60	10,800.5	4,834.6	-23.4	4,834.6	0.00	0.00	0.00
BHL - 15407.0' MD, 10800.5' TVD, 89.60° INC, 1.60° AZI, 4834.6' N, -23.4' E, 4834.6' VS									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,800.0	1,800.0	3.7	-9.3	Tie into MS Gyro @ 1800' MD
4,100.0	4,099.8	7.0	5.0	Start MS Gyro Svys @ 4100' MD
5,900.0	5,899.8	1.1	16.1	Tie into MS Gyro @ 5900' MD
10,242.0	10,241.3	-3.8	-13.9	KOP - 10242.0' MD, 10241.3' TVD, 1.10° INC, -3.7' VS
10,773.2	10,698.8	220.2	-15.9	Cross into 330' Lease - 10773.2' MD, 10698.8' TVD, 55.81° INC, 220.3' VS
11,189.0	10,793.5	617.6	-12.6	EOC - 11189.0' MD, 10793.5' TVD, 91.80° INC, 617.7' VS
15,407.0	10,800.5	4,834.6	-23.4	BHL - 15407.0' MD, 10800.5' TVD, 89.60° INC, 1.60° AZI, 4834.6' N, -23.4' E, 4

Checked By: _____ Approved By: _____ Date: _____

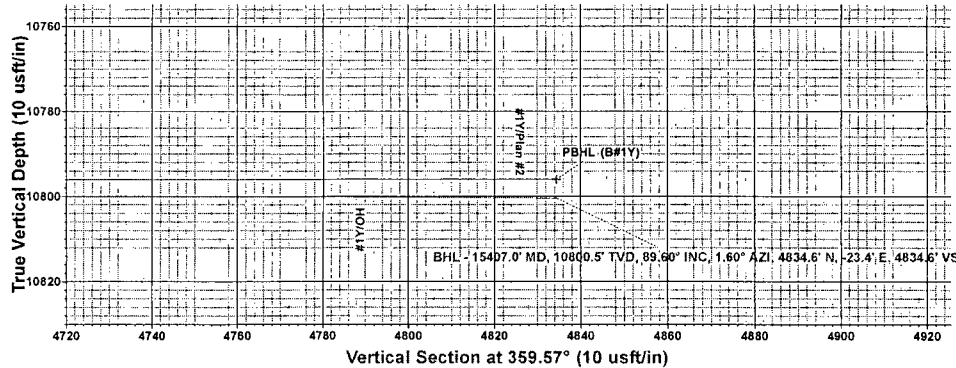
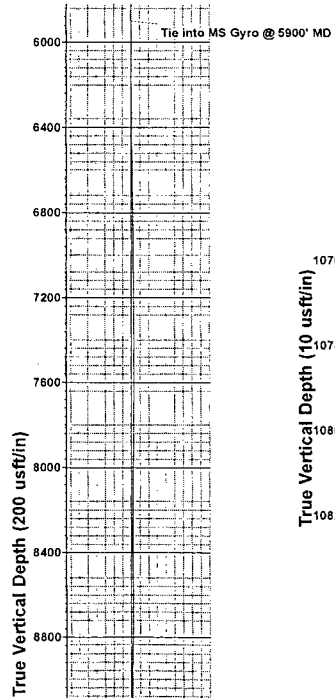
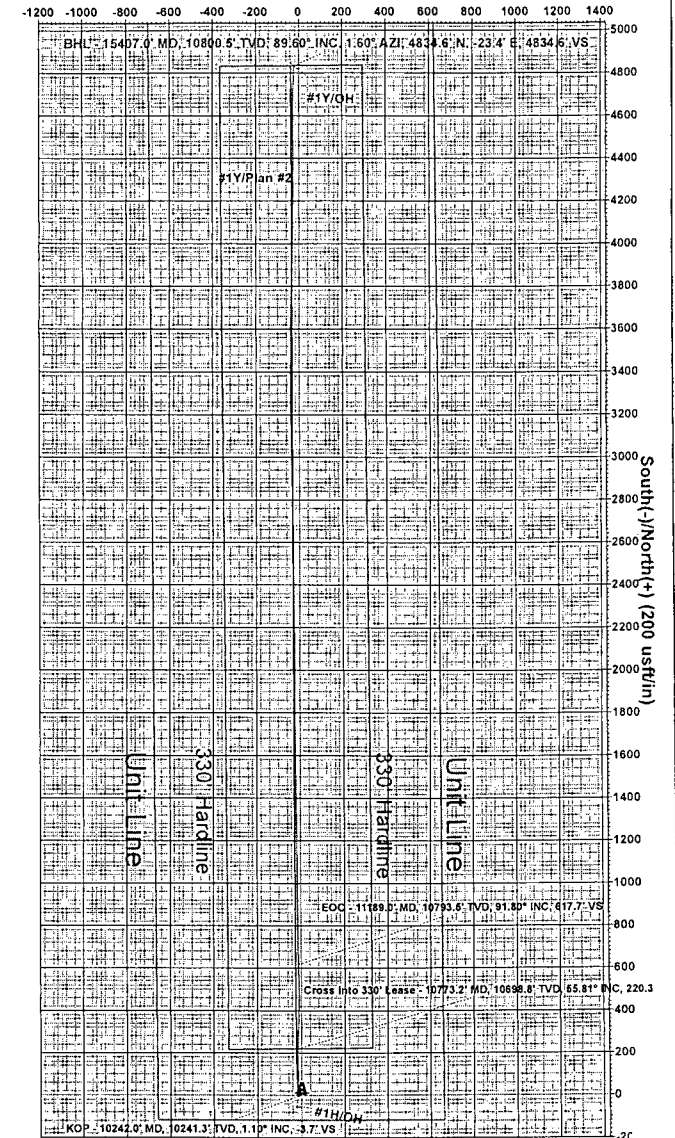


Yates Petroleum
Project: Eddy, NM (NAD-83)
Site: Belfast BSL State Com
Well: #1Y
Wellbore: OH
Plan: Plan #2 (#1Y/OH)

Section Details

	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	10242.0	1.10	292.70	10241.3	-3.8	-13.9	0.00	0.00	-3.7	
2	10323.0	1.10	292.70	10322.3	-3.2	-15.4	0.00	0.00	-3.1	
3	11069.2	90.00	359.84	10796.0	474.0	-25.1	12.00	67.14	474.2	
4	11095.0	90.00	359.84	10796.0	499.8	-25.2	0.00	0.00	500.0	
5	11156.0	91.22	359.84	10795.4	560.8	-25.3	2.00	0.00	561.0	
6	11595.1	91.22	359.84	10786.0	999.8	-26.6	0.00	0.00	1000.0	
7	11598.6	91.15	359.84	10785.9	1003.3	-26.6	2.00	180.00	1003.5	
8	12065.1	91.15	359.84	10776.6	1469.7	-27.9	0.00	0.00	1469.9	
9	12122.6	90.00	359.84	10776.0	1527.2	-28.0	2.00	180.00	1527.4	
10	13595.2	90.00	359.84	10776.0	2999.8	-32.1	0.00	0.00	3000.0	
11	13624.7	89.41	359.84	10776.1	3029.3	-32.2	2.00	180.00	3029.5	
12	14095.3	89.41	359.84	10781.0	3499.8	-33.5	0.00	0.00	3500.0	
13	14123.8	88.84	359.84	10781.4	3528.3	-33.6	2.00	180.00	3528.5	
14	14595.4	88.84	359.84	10791.0	3999.9	-34.9	0.00	0.00	4000.0	
15	14625.9	89.45	359.85	10791.4	4030.4	-35.0	2.00	0.94	4030.5	
16	15091.4	89.45	359.85	10795.9	4495.9	-36.2	0.00	0.00	4496.0	
17	15119.4	90.00	359.93	10796.0	4523.9	-36.3	2.00	8.33	4524.0	
18	15429.8	90.00	359.93	10796.0	4834.3	-36.7	0.00	0.00	4834.4	PBHL (#1Y)

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



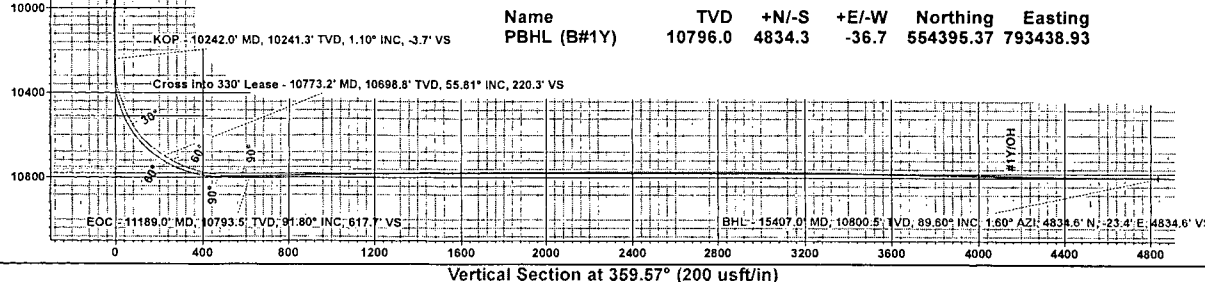
WELL DETAILS: #1Y

Ground Elevation:: 3740.0
RKB Elevation: WELL @ 3765.0usft (Cactus #124 - 25' KB)
Rig Name: Cactus #124 - 25' KB

Surface Hole Location	North	East	Lat	Long
	549561.09	793476.60	32° 30' 29.322 N	103° 30' 55.519 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	North	East
PBHL (#1Y)	10796.0	4834.3	-36.7	554395.37	793438.93



Azimuths to Grid North
True North: -0.44°
Magnetic North: 6.91°

Magnetic Field
Strength: 48607.4snT
Dip Angle: 60.41°
Date: 4/16/2013
Model: IGRF2010

PROJECT DETAILS: Eddy, NM (NAD-83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1
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 #2 (#1Y/OH)
Created By: Matt Higgins Date: 9:46, May 13