

Results of Directional Survey

API number:	30-025-41631		
OGRID:		Operator:	YATES PETROLEUM CORPORATION
		Property:	ACTION BTI STATE COM # 2H

surface	ULSTR:	C	16	T 24S	R 33E
				320 FNL	1980 FWL

BH Loc	ULSTR:	N	16	T 24S	R 33E
15671	MD	11171.8	TVD	291 FSL	2014 FWL
				4989 FNL	

Top Perf/OH	ULSTR:	C	16	T 24S	R 33E
11458	MD	11199.9	TVD	777 FNL	1993 FWL

Bot Perf/OH	ULSTR:	N	16	T 24S	R 33E
15562	MD	11171.6	TVD	400 FSL	2014 FWL
				4880 FNL	

	MD	N/S	E/W	VD
	11435	-433.70	13.20	11198.5
TOP PERFS/OH	11458	-456.62	13.20	11199.88
	11465	-463.60	13.20	11200.30
	15498	-4496.20	34.70	11171.30
BOT PERFS/OH	15562	-4560.20	34.44	11171.56
	15571	-4569.20	34.40	11171.60

NEXT TO LAST	15592	-4590.20	34.40	11171.70
LAST READING	15671	-4669.20	34.10	11171.80
TD	15671	-4669.20	34.10	11171.80

Surface Location	320	FN	1980	FW
Projected BHL	4989	FN	2014	FW
Location of				
Top Perfs/OH	777	FN	1993	FW
Bottom Perfs/OH	4880	FN	2014	FW

SUMMARY of Subsurface Locations

Surface Location	C-16-24S-33E	320	FN	1980	FW	Vert. Depth
Top Perfs/OH	C-16-24S-33E	777	FN	1993	FW	11199.88
Bottom Perfs/OH	N-16-24S-33E	4880	FN	2014	FW	11171.56
Projected TD	N-16-24S-33E	4989	FN	2014	FW	11171.80

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Yates Petroleum

Lea County, NM (NAD-83)

Action BTI State Com

#2H

OH

Design: OH

Standard Survey Report

13 May, 2014

Survey Report

Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #2H
Project:	Lea County, NM (NAD-83)	TVD Reference:	WELL @ 3633.0usft (Cactus #124 KB=25')
Site:	Action BTI State Com	MD Reference:	WELL @ 3633.0usft (Cactus #124 KB=25')
Well:	#2H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Houston R5000 Database

Project	Lea County, 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	Action BTI State Com		
Site Position:		Northing:	446,166.50 usft
From:	Lat/Long	Easting:	773,328.88 usft
Position Uncertainty:	2.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 13' 27.702 N
		Longitude:	103° 34' 59.239 W
		Grid Convergence:	0.40 °

Well	#2H		
Well Position	+N/-S	0.0 usft	Northing: 446,062.30 usft
	+E/-W	0.0 usft	Easting: 774,491.70 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
		Latitude:	32° 13' 26.590 N
		Longitude:	103° 34' 45.711 W
		Ground Level:	3,608.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	4/7/2014	7.24
			(°)
			60.12
			48,333
			(nT)

Design	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			179.58
			(°)

Survey Program	Date 5/13/2014		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
200.0	1,200.0	Survey #1 - Gyros (OH)	Good_gyro
1,337.0	15,671.0	Survey #2 - Crescent MWD Surveys (OH)	MWD
			Good Gyro
			MWD - Standard

Survey										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn	
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate	
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
200.0	0.57	229.07	200.0	-0.7	-0.8	0.6	0.29	0.29	0.00	
400.0	0.66	230.90	400.0	-2.0	-2.4	2.0	0.05	0.05	0.92	
600.0	0.51	245.57	600.0	-3.1	-4.1	3.1	0.11	-0.08	7.34	
800.0	0.31	218.19	800.0	-3.9	-5.2	3.9	0.14	-0.10	-13.69	
1,000.0	0.35	270.59	1,000.0	-4.3	-6.2	4.3	0.15	0.02	26.20	
1,200.0	0.50	246.06	1,200.0	-4.7	-7.6	4.6	0.12	0.08	-12.27	
1,337.0	0.70	247.30	1,337.0	-5.3	-8.9	5.2	0.15	0.15	0.91	
1,527.0	0.30	264.10	1,526.9	-5.7	-10.5	5.7	0.22	-0.21	8.84	
1,622.0	0.20	327.40	1,621.9	-5.6	-10.8	5.6	0.29	-0.11	66.63	

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Site:	Action BTI State Com	MD Reference:	WELL @ 3633.0usft (Cactus #124 KB=25')
Well:	#2H	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)
1,812.0	0.20	249.70	1,811.9	-5.5	-11.3	5.4	0.13	0.00	-40.89
2,002.0	0.10	21.00	2,001.9	-5.4	-11.6	5.3	0.15	-0.05	69.11
2,190.0	0.30	22.20	2,189.9	-4.8	-11.3	4.7	0.11	0.11	0.64
2,380.0	0.20	332.40	2,379.9	-4.1	-11.3	4.0	0.12	-0.05	-26.21
2,570.0	0.20	306.70	2,569.9	-3.6	-11.7	3.5	0.05	0.00	-13.53
2,759.0	0.20	320.40	2,758.9	-3.1	-12.2	3.0	0.03	0.00	7.25
2,949.0	0.20	331.60	2,948.9	-2.6	-12.5	2.5	0.02	0.00	5.89
3,138.0	0.20	350.30	3,137.9	-2.0	-12.8	1.9	0.03	0.00	9.89
3,328.0	0.10	24.10	3,327.9	-1.5	-12.7	1.4	0.07	-0.05	17.79
3,517.0	0.20	93.40	3,516.9	-1.4	-12.4	1.3	0.10	0.05	36.67
3,706.0	0.10	110.70	3,705.9	-1.4	-11.9	1.3	0.06	-0.05	9.15
3,895.0	0.10	272.40	3,894.9	-1.5	-11.9	1.4	0.10	0.00	85.56
3,990.0	0.10	156.70	3,989.9	-1.6	-11.9	1.5	0.18	0.00	-121.79
4,085.0	0.10	307.10	4,084.9	-1.6	-12.0	1.5	0.20	0.00	158.32
4,180.0	0.20	301.20	4,179.9	-1.4	-12.2	1.4	0.11	0.11	-6.21
4,275.0	0.20	307.70	4,274.9	-1.3	-12.4	1.2	0.02	0.00	6.84
4,370.0	0.10	100.40	4,369.9	-1.2	-12.5	1.1	0.31	-0.11	160.74
4,465.0	0.30	106.20	4,464.9	-1.3	-12.2	1.2	0.21	0.21	6.11
4,560.0	0.70	100.30	4,559.9	-1.4	-11.4	1.3	0.42	0.42	-6.21
4,654.0	0.40	102.60	4,653.9	-1.6	-10.5	1.5	0.32	-0.32	2.45
4,749.0	0.30	110.30	4,748.9	-1.8	-9.9	1.7	0.12	-0.11	8.11
4,843.0	0.50	119.90	4,842.9	-2.1	-9.3	2.0	0.22	0.21	10.21
4,938.0	0.80	117.60	4,937.9	-2.6	-8.4	2.5	0.32	0.32	-2.42
5,033.0	0.10	330.90	5,032.9	-2.8	-7.8	2.7	0.93	-0.74	-154.42
5,174.0	0.20	42.70	5,173.9	-2.5	-7.7	2.5	0.14	0.07	50.92
5,310.0	0.40	99.00	5,309.9	-2.4	-7.1	2.4	0.25	0.15	41.40
5,500.0	0.40	80.60	5,499.9	-2.4	-5.8	2.4	0.07	0.00	-9.68
5,690.0	0.30	76.00	5,689.9	-2.2	-4.7	2.1	0.05	-0.05	-2.42
5,879.0	0.50	66.70	5,878.9	-1.7	-3.4	1.7	0.11	0.11	-4.92
6,069.0	0.40	50.30	6,068.9	-1.0	-2.1	1.0	0.09	-0.05	-8.63
6,258.0	0.40	46.10	6,257.9	-0.1	-1.2	0.1	0.02	0.00	-2.22
6,448.0	0.40	42.40	6,447.9	0.8	-0.2	-0.8	0.01	0.00	-1.95
6,637.0	0.50	37.70	6,636.9	2.0	0.7	-2.0	0.06	0.05	-2.49
6,826.0	0.50	19.50	6,825.9	3.4	1.5	-3.4	0.08	0.00	-9.63
7,015.0	0.40	21.60	7,014.9	4.8	2.0	-4.8	0.05	-0.05	1.11
7,205.0	0.20	354.10	7,204.9	5.8	2.2	-5.7	0.13	-0.11	-14.47
7,395.0	0.40	45.30	7,394.9	6.6	2.7	-6.5	0.17	0.11	26.95
7,585.0	0.40	75.80	7,584.9	7.2	3.8	-7.2	0.11	0.00	16.05
7,774.0	0.50	72.70	7,773.8	7.6	5.2	-7.5	0.05	0.05	-1.64
7,963.0	0.70	95.70	7,962.8	7.7	7.1	-7.7	0.16	0.11	12.17
8,152.0	0.50	97.30	8,151.8	7.5	9.1	-7.4	0.11	-0.11	0.85
8,338.0	0.70	116.50	8,337.8	6.9	10.9	-6.8	0.15	0.11	10.32
8,528.0	0.80	127.70	8,527.8	5.6	13.0	-5.5	0.09	0.05	5.89

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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)
8,718.0	0.80	124.80	8,717.8	4.0	15.1	-3.9	0.02	0.00	-1.53
8,907.0	0.70	320.10	8,906.8	4.1	15.5	-4.0	0.79	-0.05	-87.14
9,096.0	1.30	302.40	9,095.7	6.2	12.9	-6.1	0.35	0.32	-9.37
9,191.0	1.60	320.30	9,190.7	7.8	11.2	-7.7	0.57	0.32	18.84
9,286.0	1.50	314.40	9,285.7	9.6	9.4	-9.6	0.20	-0.11	-6.21
9,381.0	1.90	302.90	9,380.6	11.4	7.2	-11.3	0.55	0.42	-12.11
9,475.0	1.50	333.40	9,474.6	13.3	5.4	-13.3	1.04	-0.43	32.45
9,570.0	1.10	358.70	9,569.6	15.3	4.8	-15.3	0.73	-0.42	26.63
9,665.0	1.00	330.10	9,664.6	17.0	4.4	-16.9	0.56	-0.11	-30.11
9,759.0	0.20	358.20	9,758.6	17.8	4.0	-17.8	0.88	-0.85	29.89
9,854.0	0.80	244.70	9,853.6	17.7	3.3	-17.7	0.95	0.63	-119.47
9,949.0	0.70	238.60	9,948.5	17.1	2.3	-17.1	0.13	-0.11	-6.42
10,043.0	1.20	226.50	10,042.5	16.2	1.0	-16.2	0.57	0.53	-12.87
10,138.0	1.50	236.00	10,137.5	14.8	-0.7	-14.8	0.39	0.32	10.00
10,233.0	0.70	260.70	10,232.5	14.0	-2.3	-14.0	0.96	-0.84	26.00
10,327.0	0.70	243.60	10,326.5	13.6	-3.4	-13.7	0.22	0.00	-18.19
10,422.0	0.70	242.50	10,421.5	13.1	-4.4	-13.2	0.01	0.00	-1.16
10,517.0	0.60	215.70	10,516.5	12.5	-5.2	-12.5	0.33	-0.11	-28.21
10,612.0	0.40	174.40	10,611.5	11.7	-5.5	-11.8	0.42	-0.21	-43.47
10,708.0	0.70	123.30	10,707.5	11.1	-5.0	-11.1	0.57	0.31	-53.23
KOP: 10708.0' MD, 10707.5' TVD									
10,740.0	3.40	156.70	10,739.4	10.1	-4.4	-10.1	8.88	8.44	104.38
10,772.0	7.20	158.50	10,771.3	7.3	-3.3	-7.4	11.88	11.88	5.63
10,803.0	11.10	159.40	10,801.9	2.7	-1.5	-2.8	12.59	12.58	2.90
10,834.0	14.80	161.60	10,832.1	-3.8	0.8	3.8	12.04	11.94	7.10
10,858.0	17.72	163.50	10,855.1	-10.2	2.8	10.2	12.38	12.18	7.90
Cross 330' Hardline at 10858.0' MD, 17.72° INC, 163.50° AZ									
10,866.0	18.70	164.00	10,862.7	-12.6	3.5	12.6	12.38	12.22	6.30
10,897.0	22.20	166.60	10,891.8	-23.1	6.2	23.1	11.66	11.29	8.39
10,929.0	25.80	168.60	10,921.0	-35.8	9.0	35.9	11.53	11.25	6.25
10,980.0	31.40	172.70	10,965.8	-59.9	12.8	60.0	11.63	10.98	8.04
11,024.0	37.10	174.70	11,002.1	-84.5	15.5	84.6	13.20	12.95	4.55
11,071.0	43.70	177.30	11,037.9	-114.9	17.6	115.0	14.49	14.04	5.53
11,118.0	49.60	180.10	11,070.2	-149.0	18.3	149.1	13.28	12.55	5.96
11,150.0	52.70	181.30	11,090.2	-173.9	18.0	174.1	10.12	9.69	3.75
11,182.0	55.80	181.50	11,108.9	-199.9	17.4	200.0	9.70	9.69	0.63
11,213.0	58.80	181.80	11,125.7	-226.0	16.6	226.1	9.71	9.68	0.97
11,245.0	62.10	182.00	11,141.4	-253.8	15.7	253.9	10.33	10.31	0.63
11,277.0	65.60	182.00	11,155.5	-282.5	14.7	282.6	10.94	10.94	0.00
11,308.0	68.00	181.70	11,167.8	-311.0	13.8	311.0	7.79	7.74	-0.97
11,340.0	71.60	181.00	11,178.8	-341.0	13.1	341.1	11.44	11.25	-2.19
11,371.0	75.80	180.10	11,187.5	-370.7	12.8	370.8	13.83	13.55	-2.90
11,403.0	80.00	179.50	11,194.2	-402.0	12.9	402.1	13.25	13.13	-1.88
11,435.0	84.60	179.60	11,198.5	-433.7	13.2	433.8	14.38	14.38	0.31

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11,465.0	88.60	180.20	11,200.3	-463.6	13.2	463.7	13.48	13.33	2.00
11,487.0	89.90	180.40	11,200.6	-485.6	13.1	485.7	5.98	5.91	0.91
EOC: 11487.0' MD, 11200.6' TVD, 89.90° INC, 180.40° AZ, 485.7' VS									
11,528.0	90.10	180.60	11,200.6	-526.6	12.8	526.7	0.69	0.49	0.49
11,622.0	89.50	180.40	11,200.9	-620.6	11.9	620.7	0.67	-0.64	-0.21
11,717.0	89.90	179.30	11,201.4	-715.6	12.2	715.7	1.23	0.42	-1.16
11,811.0	91.20	179.00	11,200.5	-809.6	13.6	809.7	1.42	1.38	-0.32
11,904.0	90.70	178.60	11,198.9	-902.6	15.5	902.7	0.69	-0.54	-0.43
11,999.0	90.80	179.90	11,197.7	-997.6	16.8	997.7	1.37	0.11	1.37
12,093.0	90.00	179.50	11,197.0	-1,091.6	17.3	1,091.7	0.95	-0.85	-0.43
12,187.0	91.20	181.00	11,196.1	-1,185.5	16.8	1,185.6	2.04	1.28	1.60
12,282.0	90.90	180.90	11,194.3	-1,280.5	15.3	1,280.6	0.33	-0.32	-0.11
12,377.0	90.50	180.50	11,193.2	-1,375.5	14.1	1,375.6	0.60	-0.42	-0.42
12,471.0	91.00	180.20	11,191.9	-1,469.5	13.5	1,469.6	0.62	0.53	-0.32
12,566.0	90.90	180.20	11,190.4	-1,564.5	13.2	1,564.5	0.11	-0.11	0.00
12,660.0	90.40	179.90	11,189.3	-1,658.5	13.1	1,658.5	0.62	-0.53	-0.32
12,755.0	90.20	179.70	11,188.8	-1,753.5	13.5	1,753.5	0.30	-0.21	-0.21
12,850.0	90.00	179.50	11,188.6	-1,848.5	14.1	1,848.5	0.30	-0.21	-0.21
12,944.0	90.00	179.50	11,188.6	-1,942.5	14.9	1,942.5	0.00	0.00	0.00
13,039.0	89.60	179.70	11,189.0	-2,037.5	15.6	2,037.5	0.47	-0.42	0.21
13,133.0	90.60	180.10	11,188.8	-2,131.5	15.8	2,131.5	1.15	1.06	0.43
13,228.0	90.60	180.20	11,187.8	-2,226.5	15.5	2,226.5	0.11	0.00	0.11
13,322.0	90.00	180.50	11,187.3	-2,320.5	14.9	2,320.5	0.71	-0.64	0.32
13,415.0	90.70	180.00	11,186.7	-2,413.4	14.5	2,413.5	0.92	0.75	-0.54
13,510.0	90.40	180.60	11,185.8	-2,508.4	14.0	2,508.5	0.71	-0.32	0.63
13,605.0	90.40	179.00	11,185.2	-2,603.4	14.4	2,603.5	1.68	0.00	-1.68
13,700.0	90.20	179.00	11,184.7	-2,698.4	16.0	2,698.5	0.21	-0.21	0.00
13,795.0	90.30	179.00	11,184.3	-2,793.4	17.7	2,793.5	0.11	0.11	0.00
13,889.0	89.90	178.70	11,184.1	-2,887.4	19.6	2,887.5	0.53	-0.43	-0.32
13,984.0	91.40	179.10	11,183.0	-2,982.4	21.4	2,982.4	1.63	1.58	0.42
14,079.0	91.30	179.10	11,180.8	-3,077.3	22.9	3,077.4	0.11	-0.11	0.00
14,174.0	91.10	179.20	11,178.8	-3,172.3	24.3	3,172.4	0.24	-0.21	0.11
14,268.0	91.10	179.10	11,177.0	-3,266.3	25.7	3,266.4	0.11	0.00	-0.11
14,363.0	90.30	179.50	11,175.8	-3,361.2	26.9	3,361.4	0.94	-0.84	0.42
14,457.0	90.10	179.10	11,175.5	-3,455.2	28.0	3,455.4	0.48	-0.21	-0.43
14,552.0	89.80	179.10	11,175.6	-3,550.2	29.5	3,550.3	0.32	-0.32	0.00
14,646.0	89.60	179.40	11,176.1	-3,644.2	30.7	3,644.3	0.38	-0.21	0.32
14,740.0	90.80	179.60	11,175.7	-3,738.2	31.5	3,738.3	1.29	1.28	0.21
14,835.0	90.70	179.50	11,174.5	-3,833.2	32.3	3,833.3	0.15	-0.11	-0.11
14,930.0	90.40	179.50	11,173.6	-3,928.2	33.1	3,928.3	0.32	-0.32	0.00
15,025.0	90.30	179.50	11,173.0	-4,023.2	33.9	4,023.3	0.11	-0.11	0.00
15,120.0	90.60	179.50	11,172.3	-4,118.2	34.8	4,118.3	0.32	0.32	0.00
15,214.0	90.20	180.00	11,171.6	-4,212.2	35.2	4,212.3	0.68	-0.43	0.53

Survey Report

Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #2H
Project:	Lea County, NM (NAD-83)	TVD Reference:	WELL @ 3633.0usft (Cactus #124 KB=25')
Site:	Action BTI State Com	MD Reference:	WELL @ 3633.0usft (Cactus #124 KB=25')
Well:	#2H	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)
15,309.0	90.40	180.20	11,171.1	-4,307.2	35.0	4,307.3	0.30	0.21	0.21
15,403.0	89.90	180.00	11,170.9	-4,401.2	34.9	4,401.3	0.57	-0.53	-0.21
15,498.0	89.60	180.20	11,171.3	-4,496.2	34.7	4,496.3	0.38	-0.32	0.21
15,571.0	89.83	180.20	11,171.6	-4,569.2	34.4	4,569.3	0.32	0.32	0.00
Cross 330' Hardline at 15571.0' MD, 89.83° INC, 180.20° AZ									
15,592.0	89.90	180.20	11,171.7	-4,590.2	34.4	4,590.3	0.32	0.32	0.00
Final MWD Survey: 15592.0' MD, 11171.7' TVD, -4590.2' +N/-S, 34.4' +E/-W									
15,671.0	89.90	180.20	11,171.8	-4,669.2	34.1	4,669.3	0.00	0.00	0.00
BHL: 15671.0' MD, 11171.8' TVD, 89.90° INC, 180.20° AZ, -4669.2' +N/-S, 34.1' +E/-W, 4669.3' VS - TD: 15671.0' MD, 11171.8' TVD									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,708.0	10,707.5	11.1	-5.0	KOP: 10708.0' MD, 10707.5' TVD
10,858.0	10,855.1	-10.2	2.8	Cross 330' Hardline at 10858.0' MD, 17.72° INC, 163.50° AZ
11,487.0	11,200.6	-485.6	13.1	EOC: 11487.0' MD, 11200.6' TVD, 89.90° INC, 180.40° AZ, 485.7' VS
15,571.0	11,171.6	-4,569.2	34.4	Cross 330' Hardline at 15571.0' MD, 89.83° INC, 180.20° AZ
15,592.0	11,171.7	-4,590.2	34.4	Final MWD Survey: 15592.0' MD, 11171.7' TVD, -4590.2' +N/-S, 34.4' +E/-W
15,671.0	11,171.8	-4,669.2	34.1	BHL: 15671.0' MD, 11171.8' TVD, 89.90° INC, 180.20° AZ, -4669.2' +N/-S, 34.1
15,671.0	11,171.8	-4,669.2	34.1	TD: 15671.0' MD, 11171.8' TVD

Checked By: _____	Approved By: _____	Date: _____
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WELL DETAILS: #2H

Ground Elevation:: 3608.0
RKB Elevation: WELL @ 3633.0usft (Cactus #124 KB=25')
Rig Name: Cactus #124 KB=25'

Yates Petroleum
Project: Lea County, NM (NAD-83)
Site: Action BTI State Com
Well: #2H
Wellbore: OH
Plan: Plan #1 (#2H/OH)

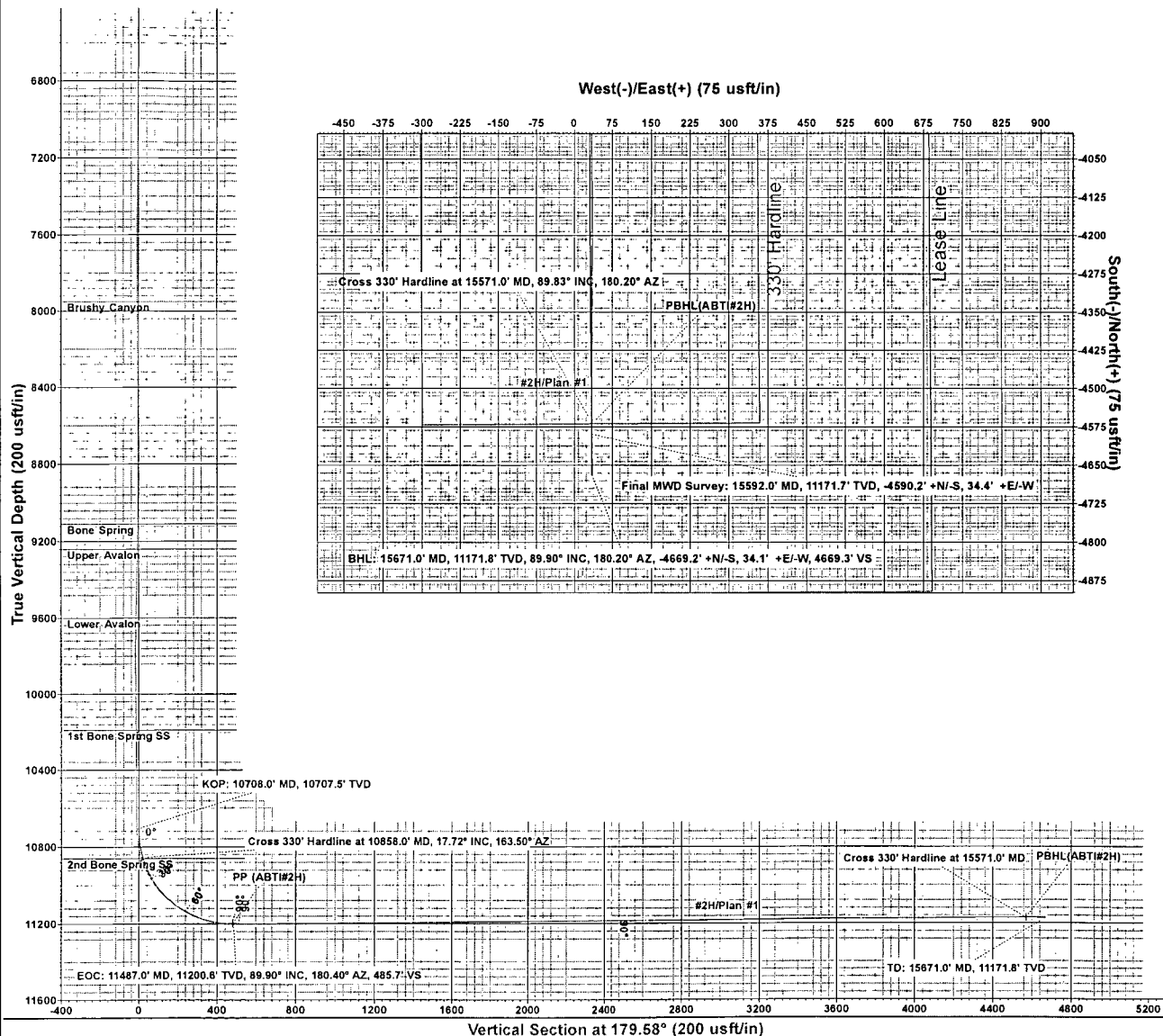
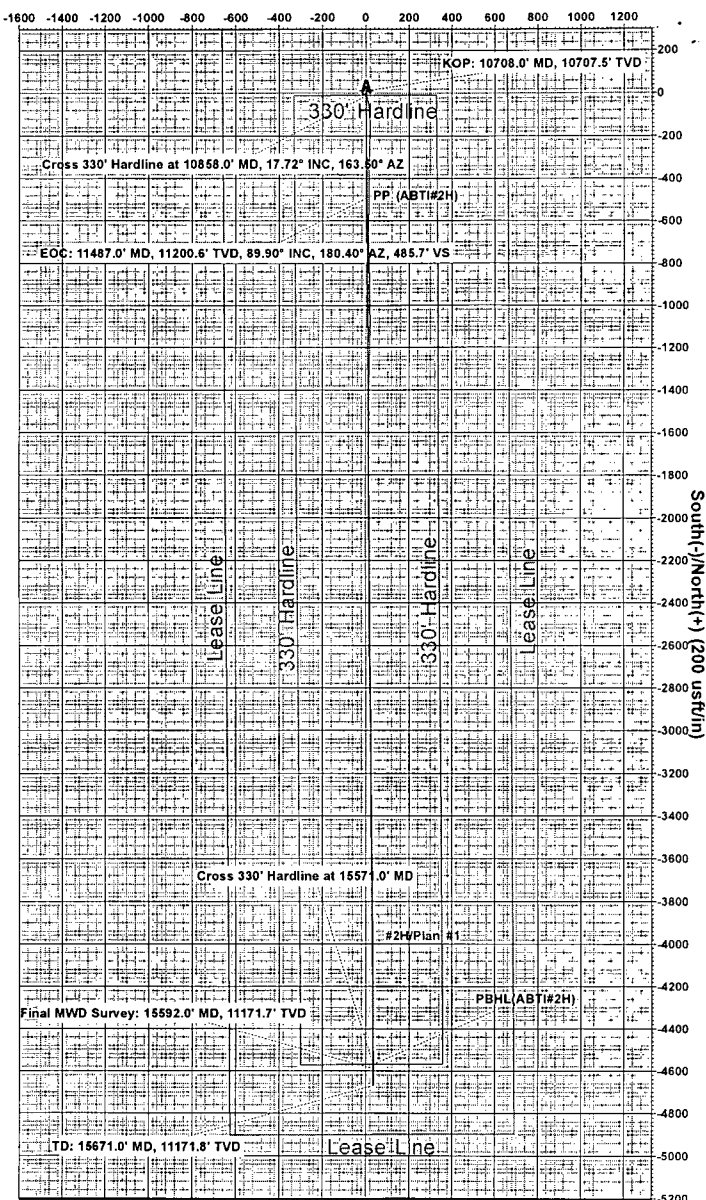
Surface Hole Location
Northing: 446062.30
Easting: 774491.70
Latitude: 32° 13' 26.590 N
Longitude: 103° 34' 45.711 W



Azimuths to Grid North
True North: -0.40°
Magnetic North: 6.84°

Magnetic Field
Strength: 48332.8snT
Dip Angle: 60.12°
Date: 4/7/2014
Model: IGRF2010

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



PROJECT DETAILS: Lea County, 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 #1 (#2H/OH)
Created By: Adrian Castro Date: 8:52, May 13 2014



Job Number: SVM0-140566
 Company: Yates Petroleum Corporation
 Lease/Well: Action BTI ST 2H
 Location: Lea County, NM
 Rig Name: Cactus #124
 RKB: 25'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 6.87°
 Grid: East To Grid North
 File name: S:\2014SU~1\YATES\MO\ACTION~1\2H.SVY
 Date/Time: 05-May-14 / 10:10
 Curve Name: Surface - 1200' M.D. (Rate Gyro)

MS SURVEY

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane .00
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from
 Surface MD to 1200' MD is, to the best of
 our knowledge a true and accurate account of
 the well bore.
 Shawn Cooper 5/5/14
 MS Energy Services Date

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
200.00	.57	229.07	200.00	-.65	-.75	-.65	.99	229.07	.28
400.00	.66	230.90	399.99	-2.03	-2.40	-2.03	3.14	229.74	.05
600.00	.51	245.57	599.97	-3.12	-4.10	-3.12	5.16	232.70	.11
800.00	.31	218.19	799.97	-3.92	-5.25	-3.92	6.55	233.25	.14
1000.00	.35	270.59	999.97	-4.34	-6.19	-4.34	7.56	234.99	.15
Last Survey Depth Recorded									
1200.00	.50	246.06	1199.96	-4.68	-7.60	-4.68	8.93	238.35	.12