

Results of Directional Survey

API number:	30-025-26309			
OGRID:		Operator:	YATES PETROLEUM CORP	
		Property:	TRUCKER BRK STATE	# 1H

surface	ULSTR:	L	02	T 24S	R 33E
				1980 FSL	660 FWL

BH Loc	ULSTR:	I	02	T 24S	R 33E
15075 MD		11120.5	TVD	2023 FSL	553 FWL
					4927 FWL

Top Perf/OH	ULSTR:	L	02	T 24S	R 33E
13010 MD		11141.0	TVD	2001 FSL	2863 FWL

Bot Perf/OH	ULSTR:	I	02	T 24S	R 33E
14965 MD		11120.9	TVD	2022 FSL	4817 FWL
					4817 FWL

	MD	N/S	E/W	VD
	12935	21.40	2128.40	11142.4
TOP PERFS/OH	13010	21.08	2203.40	11141.04
	13029	21.00	2222.40	11140.70
	14930	41.30	4122.20	11121.10
BOT PERFS/OH	14965	41.65	4157.20	11120.93
	15011	42.10	4203.20	11120.70

NEXT TO LAST	15011	42.10	4203.20	11120.70
LAST READING	15075	42.90	4267.20	11120.50
TD	15075	42.90	4267.20	11120.50

Surface Location	1980	FS	660	FW
Projected BHL	2023	FS	4927	FW
Location of				
Top Perfs/OH	2001	FS	2863	FW
Bottom Perfs/OH	2022	FS	4817	FW

SUMMARY of Subsurface Locations

Surface Location	L-02-24S-33E	1980	FS	660	FW	Vert. Depth
Top Perfs/OH	L-02-24S-33E	2001	FS	2863	FW	11141.04
Bottom Perfs/OH	I-02-24S-33E	2022	FS	4817	FW	11120.93
Projected TD	I-02-24S-33E	2023	FS	4927	FW	11120.50



Yates Petroleum

Lea County, NM (NAD-83)

Trucker "BRK" State

#1H

OH

Design: OH

HOBBS OCD

JAN 28 2013

RECEIVED

SUR: L-2-24s-33e, 1980/S & 660/W
BHL I-2-24s-33e, 2023/S & 4927/W
API # 30-025-26309

Standard Survey Report

17 December, 2012





Survey Report



Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	WELL @ 3640.0usft (Cactus #124 - 25' KB)
Site:	Trucker "BRK" State	MD Reference:	WELL @ 3640.0usft (Cactus #124 - 25' KB)
Well:	#1H	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	Trucker "BRK" State			
Site Position:		Northing:	453,682.56 usft	Latitude: 32° 14' 41.344 N
From:	Map	Easting:	783,661.32 usft	Longitude: 103° 32' 58.323 W
Position Uncertainty:	2.0 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.42 °

Well	#1H			
Well Position	+N/-S	0.0 usft	Northing:	453,682.56 usft
	+E/-W	0.0 usft	Easting:	783,661.32 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level: 3,615.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	10/17/2012	7.41	60.20	48,537

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	89.51

Survey Program		Date: 12/17/2012		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	10,600.0	Survey #1 - MS1 (OH)	CB-GYRO-MS	Camera based gyro multishot
10,658.0	15,011.0	Survey #2 - Crescent1 (OH)	MWD	MWD - Standard
15,075.0	15,075.0	Survey #3 - PTB (OH)	MWD	MWD - Standard

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	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00	
300.0	0.25	131.60	300.0	-0.1	0.2	0.2	0.25	0.25	0.00	
400.0	0.50	115.46	400.0	-0.5	0.7	0.7	0.27	0.25	-16.14	
500.0	0.50	116.13	500.0	-0.9	1.5	1.5	0.01	0.00	0.67	
600.0	1.00	137.07	600.0	-1.7	2.5	2.5	0.56	0.50	20.94	
700.0	1.50	133.99	700.0	-3.2	4.0	4.0	0.50	0.50	-3.08	
800.0	1.00	151.94	799.9	-4.9	5.4	5.3	0.63	-0.50	17.95	

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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)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
900.0	0.75	139.87	899.9	-6.2	6.2	6.2	0.31	-0.25	-12.07
1,000.0	0.50	151.82	999.9	-7.1	6.8	6.8	0.28	-0.25	11.95
1,100.0	0.75	151.77	1,099.9	-8.0	7.4	7.3	0.25	0.25	-0.05
1,200.0	0.50	159.71	1,199.9	-9.0	7.8	7.7	0.26	-0.25	7.94
1,300.0	0.75	149.67	1,299.9	-10.0	8.3	8.2	0.27	0.25	-10.04
1,400.0	0.75	164.72	1,399.9	-11.2	8.8	8.7	0.20	0.00	15.05
1,500.0	0.25	327.76	1,499.9	-11.6	8.9	8.8	0.99	-0.50	163.04
1,600.0	0.25	245.81	1,599.9	-11.5	8.5	8.4	0.33	0.00	-81.95
1,700.0	0.75	295.86	1,699.9	-11.3	7.8	7.7	0.62	0.50	50.05
1,800.0	0.75	279.90	1,799.9	-10.9	6.5	6.4	0.21	0.00	-15.96
1,900.0	1.00	285.95	1,899.9	-10.6	5.0	4.9	0.27	0.25	6.05
2,000.0	0.75	290.99	1,999.9	-10.1	3.6	3.5	0.26	-0.25	5.04
2,100.0	0.50	311.03	2,099.8	-9.6	2.6	2.6	0.33	-0.25	20.04
2,200.0	0.75	287.08	2,199.8	-9.1	1.7	1.6	0.36	0.25	-23.95
2,300.0	0.50	332.13	2,299.8	-8.5	0.9	0.8	0.53	-0.25	45.05
2,400.0	0.25	326.40	2,399.8	-8.0	0.5	0.5	0.25	-0.25	-5.73
2,500.0	0.25	295.45	2,499.8	-7.7	0.2	0.2	0.13	0.00	-30.95
2,600.0	0.25	332.50	2,599.8	-7.4	-0.1	-0.1	0.16	0.00	37.05
2,700.0	0.25	348.55	2,699.8	-7.0	-0.2	-0.3	0.07	0.00	16.05
2,800.0	0.50	326.60	2,799.8	-6.4	-0.5	-0.6	0.28	0.25	-21.95
2,900.0	0.25	276.64	2,899.8	-6.0	-1.0	-1.0	0.39	-0.25	-49.96
3,000.0	0.50	6.69	2,999.8	-5.6	-1.1	-1.2	0.56	0.25	90.05
3,100.0	0.75	351.74	3,099.8	-4.5	-1.2	-1.2	0.30	0.25	-14.95
3,200.0	1.00	357.79	3,199.8	-3.0	-1.3	-1.3	0.27	0.25	6.05
3,300.0	1.00	15.83	3,299.8	-1.3	-1.1	-1.1	0.31	0.00	18.04
3,400.0	0.50	335.88	3,399.8	0.0	-1.0	-1.0	0.70	-0.50	-39.95
3,500.0	1.00	336.93	3,499.8	1.2	-1.6	-1.5	0.50	0.50	1.05
3,600.0	1.00	349.97	3,599.8	2.8	-2.0	-2.0	0.23	0.00	13.04
3,700.0	1.00	331.02	3,699.7	4.5	-2.6	-2.6	0.33	0.00	-18.95
3,800.0	1.00	320.07	3,799.7	5.9	-3.6	-3.6	0.19	0.00	-10.95
3,900.0	1.00	331.11	3,899.7	7.3	-4.6	-4.5	0.19	0.00	11.04
4,000.0	1.25	348.16	3,999.7	9.2	-5.2	-5.2	0.42	0.25	17.05
4,100.0	1.00	330.20	4,099.7	11.0	-5.9	-5.8	0.43	-0.25	-17.96
4,200.0	1.00	333.22	4,199.7	12.5	-6.7	-6.6	0.05	0.00	3.02
4,300.0	1.00	352.26	4,299.6	14.2	-7.2	-7.1	0.33	0.00	19.04
4,400.0	0.75	333.30	4,399.6	15.6	-7.6	-7.5	0.38	-0.25	-18.96
4,500.0	0.75	37.57	4,499.6	16.7	-7.5	-7.4	0.80	0.00	64.27
4,600.0	1.00	57.61	4,599.6	17.7	-6.4	-6.2	0.39	0.25	20.04
4,700.0	1.50	77.63	4,699.6	18.4	-4.4	-4.2	0.66	0.50	20.02
4,800.0	2.00	81.67	4,799.5	19.0	-1.4	-1.2	0.51	0.50	4.04
4,900.0	2.50	83.70	4,899.5	19.5	2.5	2.7	0.51	0.50	2.03
5,000.0	2.50	82.74	4,999.4	20.0	6.8	7.0	0.04	0.00	-0.96
5,100.0	2.00	78.80	5,099.3	20.6	10.7	10.9	0.52	-0.50	-3.94

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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)
5,200.0	1.75	82.85	5,199.2	21.1	13.9	14.1	0.28	-0.25	4.05
5,300.0	1.50	87.90	5,299.2	21.4	16.8	17.0	0.29	-0.25	5.05
5,400.0	1.50	86.95	5,399.2	21.5	19.4	19.6	0.02	0.00	-0.95
5,500.0	1.25	87.00	5,499.1	21.6	21.8	22.0	0.25	-0.25	0.05
5,600.0	1.25	86.94	5,599.1	21.7	24.0	24.1	0.00	0.00	-0.06
5,700.0	1.00	97.89	5,699.1	21.7	25.9	26.1	0.33	-0.25	10.95
5,800.0	1.00	97.84	5,799.1	21.4	27.6	27.8	0.00	0.00	-0.05
5,900.0	1.00	92.78	5,899.1	21.3	29.4	29.6	0.09	0.00	-5.06
6,000.0	0.75	102.73	5,999.1	21.1	30.9	31.1	0.29	-0.25	9.95
6,100.0	0.50	85.68	6,099.0	21.0	32.0	32.1	0.31	-0.25	-17.05
6,200.0	0.25	87.63	6,199.0	21.0	32.6	32.8	0.25	-0.25	1.95
6,300.0	0.50	74.57	6,299.0	21.1	33.3	33.4	0.26	0.25	-13.06
6,400.0	0.25	31.51	6,399.0	21.4	33.8	34.0	0.36	-0.25	-43.06
6,500.0	0.25	86.46	6,499.0	21.6	34.1	34.3	0.23	0.00	54.95
6,600.0	0.25	107.14	6,599.0	21.6	34.5	34.7	0.09	0.00	20.68
6,700.0	0.25	81.09	6,699.0	21.6	35.0	35.2	0.11	0.00	-26.05
6,800.0	0.25	107.03	6,799.0	21.5	35.4	35.6	0.11	0.00	25.94
6,900.0	0.25	76.99	6,899.0	21.5	35.8	36.0	0.13	0.00	-30.04
7,000.0	0.25	70.93	6,999.0	21.6	36.2	36.4	0.03	0.00	-6.06
7,100.0	0.25	96.87	7,099.0	21.7	36.7	36.8	0.11	0.00	25.94
7,200.0	0.25	100.82	7,199.0	21.6	37.1	37.3	0.02	0.00	3.95
7,300.0	0.25	161.77	7,299.0	21.4	37.4	37.6	0.25	0.00	60.95
7,400.0	0.50	166.71	7,399.0	20.7	37.5	37.7	0.25	0.25	4.94
7,500.0	0.25	172.67	7,499.0	20.1	37.7	37.8	0.25	-0.25	5.96
7,600.0	0.50	175.67	7,599.0	19.4	37.7	37.9	0.25	0.25	3.00
7,700.0	0.50	182.66	7,699.0	18.6	37.7	37.9	0.06	0.00	6.99
7,800.0	0.50	182.66	7,799.0	17.7	37.7	37.9	0.00	0.00	0.00
7,900.0	0.50	195.66	7,899.0	16.8	37.6	37.7	0.11	0.00	13.00
8,000.0	0.50	183.65	7,999.0	16.0	37.4	37.6	0.10	0.00	-12.01
8,100.0	0.50	198.65	8,099.0	15.1	37.3	37.4	0.13	0.00	15.00
8,200.0	0.50	192.64	8,199.0	14.3	37.0	37.1	0.05	0.00	-6.01
8,300.0	0.75	190.64	8,299.0	13.2	36.8	36.9	0.25	0.25	-2.00
8,400.0	0.25	176.64	8,399.0	12.4	36.7	36.8	0.51	-0.50	-14.00
8,500.0	0.75	177.62	8,499.0	11.5	36.7	36.8	0.50	0.50	0.98
8,600.0	0.50	171.61	8,599.0	10.4	36.8 ~	36.9	0.26	-0.25	-6.01
8,700.0	0.75	185.61	8,699.0	9.3	36.8	36.9	0.29	0.25	14.00
8,800.0	0.75	161.61	8,799.0	8.1	37.0	37.0	0.31	0.00	-24.00
8,900.0	0.75	163.60	8,899.0	6.8	37.4	37.4	0.03	0.00	1.99
9,000.0	0.75	155.60	8,999.0	5.6	37.8	37.9	0.10	0.00	-8.00
9,100.0	0.75	158.60	9,098.9	4.4	38.3	38.4	0.04	0.00	3.00
9,200.0	1.25	134.59	9,198.9	3.0	39.3	39.4	0.64	0.50	-24.01
9,300.0	1.25	127.59	9,298.9	1.6	41.0	41.0	0.15	0.00	-7.00
9,400.0	1.75	103.63	9,398.9	0.5	43.3	43.3	0.79	0.50	-23.96

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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)
9,450.0	1.75	101.83	9,448.8	0.2	44.8	44.8	0.11	0.00	-3.60
9,500.0	1.90	99.19	9,498.8	-0.1	46.4	46.4	0.34	0.30	-5.28
9,600.0	1.87	103.70	9,598.8	-0.7	49.6	49.6	0.15	-0.03	4.51
9,700.0	2.22	119.18	9,698.7	-2.1	52.9	52.9	0.65	0.35	15.48
9,800.0	2.37	128.24	9,798.6	-4.3	56.2	56.2	0.39	0.15	9.06
9,900.0	2.51	126.87	9,898.5	-6.9	59.6	59.5	0.15	0.14	-1.37
10,000.0	2.38	119.57	9,998.4	-9.2	63.1	63.0	0.34	-0.13	-7.30
10,100.0	2.24	119.57	10,098.4	-11.2	66.6	66.5	0.14	-0.14	0.00
10,200.0	2.22	119.52	10,198.3	-13.1	70.0	69.9	0.02	-0.02	-0.05
10,300.0	2.06	114.35	10,298.2	-14.8	73.3	73.2	0.25	-0.16	-5.17
10,400.0	2.02	103.16	10,398.2	-16.0	76.7	76.6	0.40	-0.04	-11.19
10,500.0	2.60	79.64	10,498.1	-16.0	80.6	80.5	1.10	0.58	-23.52
10,600.0	2.79	71.37	10,598.0	-14.8	85.2	85.0	0.43	0.19	-8.27
Tie into Pilot - KOP @ 10600' MD									
10,658.0	11.60	56.30	10,655.5	-11.1	91.4	91.3	15.41	15.19	-25.98
10,688.0	16.30	55.00	10,684.6	-7.0	97.3	97.3	15.70	15.67	-4.33
10,719.0	19.60	61.80	10,714.1	-2.0	105.5	105.5	12.59	10.65	21.94
10,751.0	22.10	66.50	10,744.0	2.9	115.7	115.8	9.39	7.81	14.69
10,783.0	24.10	70.70	10,773.4	7.5	127.4	127.5	8.09	6.25	13.13
10,814.0	26.60	75.30	10,801.4	11.3	140.1	140.2	10.26	8.06	14.84
10,846.0	28.80	82.30	10,829.7	14.2	154.7	154.8	12.26	6.88	21.88
10,878.0	32.10	90.70	10,857.3	15.1	170.8	171.0	16.81	10.31	26.25
10,909.0	34.60	94.20	10,883.2	14.4	187.9	188.0	10.17	8.06	11.29
10,941.0	36.80	94.50	10,909.2	12.9	206.5	206.6	6.90	6.88	0.94
10,973.0	38.90	93.80	10,934.5	11.5	226.1	226.2	6.70	6.56	-2.19
11,005.0	41.00	90.50	10,959.0	10.8	246.6	246.7	9.32	6.56	-10.31
11,037.0	44.40	93.50	10,982.5	10.0	268.3	268.3	12.38	10.63	9.38
11,069.0	49.00	92.70	11,004.5	8.7	291.5	291.6	14.49	14.38	-2.50
11,100.0	53.80	91.30	11,023.8	7.9	315.7	315.8	15.88	15.48	-4.52
11,132.0	58.90	89.70	11,041.5	7.7	342.4	342.4	16.47	15.94	-5.00
11,164.0	62.70	88.90	11,057.1	8.0	370.3	370.3	12.07	11.88	-2.50
11,195.0	65.10	89.10	11,070.8	8.5	398.1	398.2	7.76	7.74	0.65
11,227.0	67.30	90.10	11,083.7	8.7	427.4	427.4	7.45	6.88	3.13
11,259.0	70.10	90.30	11,095.3	8.6	457.2	457.3	8.77	8.75	0.63
11,291.0	73.10	90.70	11,105.4	8.3	487.6	487.6	9.45	9.38	1.25
11,319.0	76.10	90.40	11,112.9	8.1	514.5	514.6	10.76	10.71	-1.07
11,350.0	78.40	90.00	11,119.7	8.0	544.8	544.8	7.53	7.42	-1.29
11,382.0	81.30	89.10	11,125.3	8.2	576.3	576.3	9.48	9.06	-2.81
11,414.0	83.10	88.70	11,129.7	8.8	608.0	608.0	5.76	5.63	-1.25
11,446.0	84.60	89.30	11,133.1	9.4	639.8	639.8	5.04	4.69	1.88
11,477.0	86.60	89.90	11,135.5	9.6	670.7	670.7	6.73	6.45	1.94
11,509.0	88.50	89.80	11,136.9	9.7	702.7	702.7	5.95	5.94	-0.31
11,541.0	88.80	90.00	11,137.6	9.7	734.6	734.7	1.13	0.94	0.63
11,572.0	88.70	90.20	11,138.3	9.7	765.6	765.7	0.72	-0.32	0.65

Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	WELL @ 3640.0usft (Cactus #124 - 25' KB)
Site:	Trucker "BRK" State	MD Reference:	WELL @ 3640.0usft (Cactus #124 - 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)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,635.0	89.00	90.00	11,139.5	9.6	828.6	828.7	0.57	0.48	-0.32
11,666.0	89.50	90.00	11,140.0	9.6	859.6	859.7	1.61	1.61	0.00
11,698.0	89.50	90.00	11,140.2	9.6	891.6	891.7	0.00	0.00	0.00
11,750.0	90.00	89.78	11,140.5	9.7	943.6	943.7	1.05	0.96	-0.43
EOC - 11750.0' MD, 11140.5' TVD, 90.00° INC, 89.78° AZI, 943.7' VS									
11,792.0	90.40	89.60	11,140.3	9.9	985.6	985.7	1.05	0.96	-0.43
11,889.0	90.80	89.80	11,139.3	10.4	1,082.6	1,082.7	0.46	0.41	0.21
11,984.0	89.50	90.40	11,139.1	10.2	1,177.6	1,177.7	1.51	-1.37	0.63
12,046.0	89.30	89.60	11,139.7	10.2	1,239.6	1,239.6	1.33	-0.32	-1.29
12,077.0	89.30	89.30	11,140.1	10.5	1,270.6	1,270.6	0.97	0.00	-0.97
12,172.0	88.90	88.60	11,141.6	12.3	1,365.6	1,365.6	0.85	-0.42	-0.74
12,267.0	90.00	88.80	11,142.5	14.4	1,460.5	1,460.6	1.18	1.16	0.21
12,363.0	89.30	87.80	11,143.1	17.3	1,556.5	1,556.6	1.27	-0.73	-1.04
12,458.0	89.80	89.30	11,143.8	19.7	1,651.5	1,651.6	1.66	0.53	1.58
12,554.0	90.90	90.90	11,143.2	19.5	1,747.5	1,747.6	2.02	1.15	1.67
12,650.0	90.30	90.00	11,142.2	18.8	1,843.4	1,843.5	1.13	-0.63	-0.94
12,744.0	90.50	89.90	11,141.6	18.9	1,937.4	1,937.5	0.24	0.21	-0.11
12,839.0	89.30	89.00	11,141.7	19.8	2,032.4	2,032.5	1.58	-1.26	-0.95
12,935.0	89.90	89.10	11,142.4	21.4	2,128.4	2,128.5	0.63	0.63	0.10
13,029.0	92.20	91.30	11,140.7	21.0	2,222.4	2,222.5	3.39	2.45	2.34
13,124.0	90.70	91.00	11,138.3	19.1	2,317.3	2,317.4	1.61	-1.58	-0.32
13,220.0	91.40	90.70	11,136.5	17.7	2,413.3	2,413.4	0.79	0.73	-0.31
13,315.0	90.80	91.30	11,134.7	16.0	2,508.3	2,508.3	0.89	-0.63	0.63
13,410.0	90.70	91.70	11,133.4	13.6	2,603.2	2,603.3	0.43	-0.11	0.42
13,504.0	90.60	91.40	11,132.4	11.0	2,697.2	2,697.2	0.34	-0.11	-0.32
13,598.0	89.20	90.20	11,132.5	9.7	2,791.2	2,791.2	1.96	-1.49	-1.28
13,693.0	87.40	91.10	11,135.4	8.6	2,886.1	2,886.1	2.12	-1.89	0.95
13,788.0	88.40	88.10	11,138.8	9.3	2,981.1	2,981.0	3.33	1.05	-3.16
13,884.0	90.40	87.10	11,139.9	13.3	3,077.0	3,077.0	2.33	2.08	-1.04
13,979.0	92.00	86.80	11,137.9	18.4	3,171.8	3,171.8	1.71	1.68	-0.32
14,073.0	92.20	87.10	11,134.4	23.4	3,265.6	3,265.7	0.38	0.21	0.32
14,168.0	90.40	88.20	11,132.3	27.3	3,360.5	3,360.6	2.22	-1.89	1.16
14,263.0	90.30	88.40	11,131.7	30.1	3,455.4	3,455.6	0.24	-0.11	0.21
14,357.0	90.10	88.90	11,131.4	32.3	3,549.4	3,549.6	0.57	-0.21	0.53
14,453.0	92.20	89.30	11,129.4	33.8	3,645.4	3,645.5	2.23	2.19	0.42
14,549.0	91.80	88.80	11,126.1	35.4	3,741.3	3,741.5	0.67	-0.42	-0.52
14,644.0	90.70	88.60	11,124.0	37.5	3,836.3	3,836.4	1.18	-1.16	-0.21
14,741.0	90.30	89.20	11,123.2	39.4	3,933.2	3,933.4	0.74	-0.41	0.62
14,836.0	90.90	89.50	11,122.2	40.5	4,028.2	4,028.4	0.71	0.63	0.32
14,930.0	90.40	89.50	11,121.1	41.3	4,122.2	4,122.4	0.53	-0.53	0.00
15,011.0	90.20	89.30	11,120.7	42.1	4,203.2	4,203.4	0.35	-0.25	-0.25
15,075.0	90.20	89.30	11,120.5	42.9	4,267.2	4,267.4	0.00	0.00	0.00
BHL - 15075.0' MD, 11120.5' TVD, 90.20° INC, 89.30° AZI, 42.9° N, 4267.2' E, 4267.4' VS									



Survey Report



Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	WELL @ 3640.0usft (Cactus #124 - 25' KB)
Site:	Trucker "BRK" State	MD Reference:	WELL @ 3640.0usft (Cactus #124 - 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)	
10,600.0	10,598.0	-14.8	85.2	Tie into Pilot - KOP @ 10600' MD
11,750.0	11,140.5	9.7	943.6	EOC - 11750.0' MD, 11140.5' TVD, 90.00° INC, 89.78° AZI, 943.7' VS
15,075.0	11,120.5	42.9	4,267.2	BHL - 15075.0' MD, 11120.5' TVD, 90.20° INC, 89.30° AZI, 42.9' N, 4267.2' E, 4

Checked By: _____	Approved By: _____	Date: _____
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HOBBS OCD

JAN 28 2013

RECEIVED

Yates Petroleum

Lea County, NM (NAD-83)

Trucker "BRK" State

#1H

OH

Design: OH

SUR: L-2-24s-33e, 1980/S & 660/W
BHL I-2-24s-33e, 2023/S & 4927/W
API # 30-025-26309

Survey Report - Geographic

17 December, 2012





Survey Report - Geographic



Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	WELL @ 3640.0usft (Cactus #124 - 25' KB)
Site:	Trucker "BRK" State	MD Reference:	WELL @ 3640.0usft (Cactus #124 - 25' KB)
Well:	#1H	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:	Trucker "BRK" State		
Site Position:		Northing:	453,682.56 usft
From:	Map	Easting:	783,661.32 usft
Position Uncertainty:	2.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 14' 41.344 N
		Longitude:	103° 32' 58.323 W
		Grid Convergence:	0.42 °

Well:	#1H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 14' 41.344 N
		Longitude:	103° 32' 58.323 W
		Ground Level:	3,615.0 usft

Wellbore:	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF200510	10/17/2012	7.41
			Dip Angle
			(°)
			Field Strength
			(nT)
			60.20
			48,537

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
			Direction
			(°)
			89.51

Survey Program	Date: 12/17/2012		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100.0	10,600.0	Survey #1 - MS1 (OH)	CB-GYRO-MS
10,658.0	15,011.0	Survey #2 - Crescent1 (OH)	MWD
15,075.0	15,075.0	Survey #3 - PTB (OH)	MWD
			Description
			Camera based gyro multishot
			MWD - Standard
			MWD - Standard

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Map	Map	Latitude	Longitude
Depth	(°)	(°)	Depth	(usft)	(usft)	Northing	Easting		
(usft)			(usft)			(usft)	(usft)		
0.0	0.00	0.00	0.0	0.0	0.0	453,682.56	783,661.32	32° 14' 41.344 N	103° 32' 58.323 W
100.0	0.00	0.00	100.0	0.0	0.0	453,682.56	783,661.32	32° 14' 41.344 N	103° 32' 58.323 W
200.0	0.00	0.00	200.0	0.0	0.0	453,682.56	783,661.32	32° 14' 41.344 N	103° 32' 58.323 W
300.0	0.25	131.60	300.0	-0.1	0.2	453,682.41	783,661.48	32° 14' 41.343 N	103° 32' 58.322 W
400.0	0.50	115.46	400.0	-0.5	0.7	453,682.08	783,662.04	32° 14' 41.340 N	103° 32' 58.315 W
500.0	0.50	116.13	500.0	-0.9	1.5	453,681.70	783,662.83	32° 14' 41.336 N	103° 32' 58.306 W
600.0	1.00	137.07	600.0	-1.7	2.5	453,680.87	783,663.81	32° 14' 41.328 N	103° 32' 58.295 W
700.0	1.50	133.99	700.0	-3.2	4.0	453,679.32	783,665.35	32° 14' 41.312 N	103° 32' 58.277 W
800.0	1.00	151.94	799.9	-4.9	5.4	453,677.64	783,666.70	32° 14' 41.295 N	103° 32' 58.261 W
900.0	0.75	139.87	899.9	-6.2	6.2	453,676.37	783,667.53	32° 14' 41.283 N	103° 32' 58.252 W

Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	WELL @ 3640.0usft (Cactus #124 - 25' KB)
Site:	Trucker "BRK" State	MD Reference:	WELL @ 3640.0usft (Cactus #124 - 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
1,000.0	0.50	151.82	999.9	-7.1	6.8	453,675.49	783,668.16	32° 14' 41.274 N	103° 32' 58.244 W
1,100.0	0.75	151.77	1,099.9	-8.0	7.4	453,674.53	783,668.68	32° 14' 41.264 N	103° 32' 58.238 W
1,200.0	0.50	159.71	1,199.9	-9.0	7.8	453,673.54	783,669.14	32° 14' 41.255 N	103° 32' 58.233 W
1,300.0	0.75	149.67	1,299.9	-10.0	8.3	453,672.57	783,669.62	32° 14' 41.245 N	103° 32' 58.228 W
1,400.0	0.75	164.72	1,399.9	-11.2	8.8	453,671.37	783,670.12	32° 14' 41.233 N	103° 32' 58.222 W
1,500.0	0.25	327.76	1,499.9	-11.6	8.9	453,670.92	783,670.18	32° 14' 41.229 N	103° 32' 58.221 W
1,600.0	0.25	245.81	1,599.9	-11.5	8.5	453,671.02	783,669.86	32° 14' 41.230 N	103° 32' 58.225 W
1,700.0	0.75	295.86	1,699.9	-11.3	7.8	453,671.21	783,669.07	32° 14' 41.232 N	103° 32' 58.234 W
1,800.0	0.75	279.90	1,799.9	-10.9	6.5	453,671.61	783,667.84	32° 14' 41.236 N	103° 32' 58.248 W
1,900.0	1.00	285.95	1,899.9	-10.6	5.0	453,671.96	783,666.36	32° 14' 41.239 N	103° 32' 58.266 W
2,000.0	0.75	290.99	1,999.9	-10.1	3.6	453,672.44	783,664.91	32° 14' 41.244 N	103° 32' 58.282 W
2,100.0	0.50	311.03	2,099.8	-9.6	2.6	453,672.96	783,663.97	32° 14' 41.249 N	103° 32' 58.293 W
2,200.0	0.75	287.08	2,199.8	-9.1	1.7	453,673.44	783,663.01	32° 14' 41.254 N	103° 32' 58.304 W
2,300.0	0.50	332.13	2,299.8	-8.5	0.9	453,674.02	783,662.18	32° 14' 41.260 N	103° 32' 58.314 W
2,400.0	0.25	326.40	2,399.8	-8.0	0.5	453,674.58	783,661.86	32° 14' 41.266 N	103° 32' 58.318 W
2,500.0	0.25	295.45	2,499.8	-7.7	0.2	453,674.86	783,661.54	32° 14' 41.268 N	103° 32' 58.321 W
2,600.0	0.25	332.50	2,599.8	-7.4	-0.1	453,675.15	783,661.24	32° 14' 41.271 N	103° 32' 58.325 W
2,700.0	0.25	348.55	2,699.8	-7.0	-0.2	453,675.55	783,661.10	32° 14' 41.275 N	103° 32' 58.327 W
2,800.0	0.50	326.60	2,799.8	-6.4	-0.5	453,676.13	783,660.81	32° 14' 41.281 N	103° 32' 58.330 W
2,900.0	0.25	276.64	2,899.8	-6.0	-1.0	453,676.52	783,660.36	32° 14' 41.285 N	103° 32' 58.335 W
3,000.0	0.50	6.69	2,999.8	-5.6	-1.1	453,676.98	783,660.19	32° 14' 41.289 N	103° 32' 58.337 W
3,100.0	0.75	351.74	3,099.8	-4.5	-1.2	453,678.06	783,660.15	32° 14' 41.300 N	103° 32' 58.337 W
3,200.0	1.00	357.79	3,199.8	-3.0	-1.3	453,679.58	783,660.02	32° 14' 41.315 N	103° 32' 58.339 W
3,300.0	1.00	15.83	3,299.8	-1.3	-1.1	453,681.29	783,660.22	32° 14' 41.332 N	103° 32' 58.336 W
3,400.0	0.50	335.88	3,399.8	0.0	-1.0	453,682.53	783,660.28	32° 14' 41.344 N	103° 32' 58.335 W
3,500.0	1.00	336.93	3,499.8	1.2	-1.6	453,683.73	783,659.76	32° 14' 41.356 N	103° 32' 58.341 W
3,600.0	1.00	349.97	3,599.8	2.8	-2.0	453,685.39	783,659.27	32° 14' 41.373 N	103° 32' 58.347 W
3,700.0	1.00	331.02	3,699.7	4.5	-2.6	453,687.01	783,658.70	32° 14' 41.389 N	103° 32' 58.354 W
3,800.0	1.00	320.07	3,799.7	5.9	-3.6	453,688.45	783,657.71	32° 14' 41.403 N	103° 32' 58.365 W
3,900.0	1.00	331.11	3,899.7	7.3	-4.6	453,689.88	783,656.73	32° 14' 41.417 N	103° 32' 58.376 W
4,000.0	1.25	348.16	3,999.7	9.2	-5.2	453,691.71	783,656.09	32° 14' 41.435 N	103° 32' 58.384 W
4,100.0	1.00	330.20	4,099.7	11.0	-5.9	453,693.54	783,655.43	32° 14' 41.454 N	103° 32' 58.391 W
4,200.0	1.00	333.22	4,199.7	12.5	-6.7	453,695.07	783,654.60	32° 14' 41.469 N	103° 32' 58.401 W
4,300.0	1.00	352.26	4,299.6	14.2	-7.2	453,696.72	783,654.09	32° 14' 41.485 N	103° 32' 58.406 W
4,400.0	0.75	333.30	4,399.6	15.6	-7.6	453,698.17	783,653.68	32° 14' 41.500 N	103° 32' 58.411 W
4,500.0	0.75	37.57	4,499.6	16.7	-7.5	453,699.27	783,653.78	32° 14' 41.510 N	103° 32' 58.410 W
4,600.0	1.00	57.61	4,599.6	17.7	-6.4	453,700.26	783,654.92	32° 14' 41.520 N	103° 32' 58.396 W
4,700.0	1.50	77.63	4,699.6	18.4	-4.4	453,701.00	783,656.94	32° 14' 41.527 N	103° 32' 58.373 W
4,800.0	2.00	81.67	4,799.5	19.0	-1.4	453,701.54	783,659.94	32° 14' 41.532 N	103° 32' 58.338 W
4,900.0	2.50	83.70	4,899.5	19.5	2.5	453,702.03	783,663.83	32° 14' 41.537 N	103° 32' 58.292 W
5,000.0	2.50	82.74	4,999.4	20.0	6.8	453,702.54	783,668.17	32° 14' 41.542 N	103° 32' 58.242 W
5,100.0	2.00	78.80	5,099.3	20.6	10.7	453,703.16	783,672.04	32° 14' 41.548 N	103° 32' 58.197 W
5,200.0	1.75	82.85	5,199.2	21.1	13.9	453,703.69	783,675.27	32° 14' 41.553 N	103° 32' 58.159 W
5,300.0	1.50	87.90	5,299.2	21.4	16.8	453,703.93	783,678.09	32° 14' 41.555 N	103° 32' 58.126 W
5,400.0	1.50	86.95	5,399.2	21.5	19.4	453,704.04	783,680.71	32° 14' 41.556 N	103° 32' 58.096 W
5,500.0	1.25	87.00	5,499.1	21.6	21.8	453,704.17	783,683.10	32° 14' 41.557 N	103° 32' 58.068 W
5,600.0	1.25	86.94	5,599.1	21.7	24.0	453,704.29	783,685.28	32° 14' 41.558 N	103° 32' 58.043 W
5,700.0	1.00	97.89	5,699.1	21.7	25.9	453,704.22	783,687.23	32° 14' 41.557 N	103° 32' 58.020 W
5,800.0	1.00	97.84	5,799.1	21.4	27.6	453,703.98	783,688.96	32° 14' 41.555 N	103° 32' 58.000 W
5,900.0	1.00	92.78	5,899.1	21.3	29.4	453,703.82	783,690.70	32° 14' 41.553 N	103° 32' 57.980 W
6,000.0	0.75	102.73	5,999.1	21.1	30.9	453,703.64	783,692.21	32° 14' 41.551 N	103° 32' 57.962 W
6,100.0	0.50	85.68	6,099.0	21.0	32.0	453,703.53	783,693.28	32° 14' 41.550 N	103° 32' 57.949 W
6,200.0	0.25	87.63	6,199.0	21.0	32.6	453,703.57	783,693.94	32° 14' 41.550 N	103° 32' 57.942 W
6,300.0	0.50	74.57	6,299.0	21.1	33.3	453,703.69	783,694.57	32° 14' 41.551 N	103° 32' 57.934 W
6,400.0	0.25	31.51	6,399.0	21.4	33.8	453,703.99	783,695.11	32° 14' 41.554 N	103° 32' 57.928 W



Survey Report - Geographic



Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	WELL @ 3640.0usft (Cactus #124 - 25' KB)
Site:	Trucker "BRK" State	MD Reference:	WELL @ 3640.0usft (Cactus #124 - 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	
6,500.0	0.25	86.46	6,499.0	21.6	34.1	453,704.19	783,695.44	32° 14' 41.556 N	103° 32' 57.924 W	
6,600.0	0.25	107.14	6,599.0	21.6	34.5	453,704.14	783,695.87	32° 14' 41.556 N	103° 32' 57.919 W	
6,700.0	0.25	81.09	6,699.0	21.6	35.0	453,704.11	783,696.29	32° 14' 41.555 N	103° 32' 57.914 W	
6,800.0	0.25	107.03	6,799.0	21.5	35.4	453,704.08	783,696.72	32° 14' 41.555 N	103° 32' 57.909 W	
6,900.0	0.25	76.99	6,899.0	21.5	35.8	453,704.07	783,697.14	32° 14' 41.555 N	103° 32' 57.905 W	
7,000.0	0.25	70.93	6,999.0	21.6	36.2	453,704.19	783,697.56	32° 14' 41.556 N	103° 32' 57.900 W	
7,100.0	0.25	96.87	7,099.0	21.7	36.7	453,704.23	783,697.98	32° 14' 41.556 N	103° 32' 57.895 W	
7,200.0	0.25	100.82	7,199.0	21.6	37.1	453,704.17	783,698.41	32° 14' 41.556 N	103° 32' 57.890 W	
7,300.0	0.25	161.77	7,299.0	21.4	37.4	453,703.92	783,698.69	32° 14' 41.553 N	103° 32' 57.886 W	
7,400.0	0.50	166.71	7,399.0	20.7	37.5	453,703.29	783,698.86	32° 14' 41.547 N	103° 32' 57.885 W	
7,500.0	0.25	172.67	7,499.0	20.1	37.7	453,702.65	783,698.99	32° 14' 41.541 N	103° 32' 57.883 W	
7,600.0	0.50	175.67	7,599.0	19.4	37.7	453,701.99	783,699.05	32° 14' 41.534 N	103° 32' 57.882 W	
7,700.0	0.50	182.66	7,699.0	18.6	37.7	453,701.12	783,699.06	32° 14' 41.525 N	103° 32' 57.882 W	
7,800.0	0.50	182.66	7,799.0	17.7	37.7	453,700.25	783,699.02	32° 14' 41.517 N	103° 32' 57.883 W	
7,900.0	0.50	195.66	7,899.0	16.8	37.6	453,699.40	783,698.88	32° 14' 41.508 N	103° 32' 57.885 W	
8,000.0	0.50	183.65	7,999.0	16.0	37.4	453,698.54	783,698.74	32° 14' 41.500 N	103° 32' 57.886 W	
8,100.0	0.50	198.65	8,099.0	15.1	37.3	453,697.69	783,698.57	32° 14' 41.492 N	103° 32' 57.888 W	
8,200.0	0.50	192.64	8,199.0	14.3	37.0	453,696.85	783,698.34	32° 14' 41.483 N	103° 32' 57.891 W	
8,300.0	0.75	190.64	8,299.0	13.2	36.8	453,695.78	783,698.12	32° 14' 41.473 N	103° 32' 57.894 W	
8,400.0	0.25	176.64	8,399.0	12.4	36.7	453,694.92	783,698.01	32° 14' 41.464 N	103° 32' 57.895 W	
8,500.0	0.75	177.62	8,499.0	11.5	36.7	453,694.05	783,698.05	32° 14' 41.456 N	103° 32' 57.895 W	
8,600.0	0.50	171.61	8,599.0	10.4	36.8	453,692.96	783,698.14	32° 14' 41.445 N	103° 32' 57.894 W	
8,700.0	0.75	185.61	8,699.0	9.3	36.8	453,691.88	783,698.14	32° 14' 41.434 N	103° 32' 57.894 W	
8,800.0	0.75	161.61	8,799.0	8.1	37.0	453,690.61	783,698.28	32° 14' 41.422 N	103° 32' 57.892 W	
8,900.0	0.75	163.60	8,899.0	6.8	37.4	453,689.36	783,698.67	32° 14' 41.409 N	103° 32' 57.888 W	
9,000.0	0.75	155.60	8,999.0	5.6	37.8	453,688.14	783,699.13	32° 14' 41.397 N	103° 32' 57.883 W	
9,100.0	0.75	158.60	9,098.9	4.4	38.3	453,686.93	783,699.64	32° 14' 41.385 N	103° 32' 57.877 W	
9,200.0	1.25	134.59	9,198.9	3.0	39.3	453,685.56	783,700.65	32° 14' 41.371 N	103° 32' 57.865 W	
9,300.0	1.25	127.59	9,298.9	1.6	41.0	453,684.12	783,702.30	32° 14' 41.357 N	103° 32' 57.846 W	
9,400.0	1.75	103.63	9,398.9	0.5	43.3	453,683.10	783,704.64	32° 14' 41.347 N	103° 32' 57.819 W	
9,450.0	1.75	101.83	9,448.8	0.2	44.8	453,682.76	783,706.13	32° 14' 41.343 N	103° 32' 57.802 W	
9,500.0	1.90	99.19	9,498.8	-0.1	46.4	453,682.47	783,707.70	32° 14' 41.340 N	103° 32' 57.783 W	
9,600.0	1.87	103.70	9,598.8	-0.7	49.6	453,681.82	783,710.92	32° 14' 41.334 N	103° 32' 57.746 W	
9,700.0	2.22	119.18	9,698.7	-2.1	52.9	453,680.49	783,714.20	32° 14' 41.320 N	103° 32' 57.708 W	
9,800.0	2.37	128.24	9,798.6	-4.3	56.2	453,678.27	783,717.51	32° 14' 41.298 N	103° 32' 57.670 W	
9,900.0	2.51	126.87	9,898.5	-6.9	59.6	453,675.67	783,720.89	32° 14' 41.272 N	103° 32' 57.630 W	
10,000.0	2.38	119.57	9,998.4	-9.2	63.1	453,673.34	783,724.45	32° 14' 41.249 N	103° 32' 57.589 W	
10,100.0	2.24	119.57	10,098.4	-11.2	66.6	453,671.35	783,727.95	32° 14' 41.229 N	103° 32' 57.549 W	
10,200.0	2.22	119.52	10,198.3	-13.1	70.0	453,669.43	783,731.34	32° 14' 41.210 N	103° 32' 57.509 W	
10,300.0	2.06	114.35	10,298.2	-14.8	73.3	453,667.73	783,734.66	32° 14' 41.193 N	103° 32' 57.471 W	
10,400.0	2.02	103.16	10,398.2	-16.0	76.7	453,666.59	783,738.01	32° 14' 41.181 N	103° 32' 57.432 W	
10,500.0	2.60	79.64	10,498.1	-16.0	80.6	453,666.60	783,741.96	32° 14' 41.181 N	103° 32' 57.386 W	
10,600.0	2.79	71.37	10,598.0	-14.8	85.2	453,667.78	783,746.50	32° 14' 41.192 N	103° 32' 57.333 W	
Tie into Pilot - KOP @ 10600' MD										
10,658.0	11.60	56.30	10,655.5	-11.1	91.4	453,671.48	783,752.70	32° 14' 41.228 N	103° 32' 57.260 W	
10,688.0	16.30	55.00	10,684.6	-7.0	97.3	453,675.57	783,758.66	32° 14' 41.268 N	103° 32' 57.191 W	
10,719.0	19.60	61.80	10,714.1	-2.0	105.5	453,680.52	783,766.81	32° 14' 41.317 N	103° 32' 57.095 W	
10,751.0	22.10	66.50	10,744.0	2.9	115.7	453,685.46	783,777.06	32° 14' 41.365 N	103° 32' 56.976 W	
10,783.0	24.10	70.70	10,773.4	7.5	127.4	453,690.02	783,788.75	32° 14' 41.409 N	103° 32' 56.839 W	
10,814.0	26.60	75.30	10,801.4	11.3	140.1	453,693.87	783,801.44	32° 14' 41.446 N	103° 32' 56.691 W	
10,846.0	28.80	82.30	10,829.7	14.2	154.7	453,696.73	783,816.01	32° 14' 41.474 N	103° 32' 56.521 W	
10,878.0	32.10	90.70	10,857.3	15.1	170.8	453,697.65	783,832.17	32° 14' 41.482 N	103° 32' 56.333 W	
10,909.0	34.60	94.20	10,883.2	14.4	187.9	453,696.91	783,849.18	32° 14' 41.473 N	103° 32' 56.135 W	
10,941.0	36.80	94.50	10,909.2	12.9	206.5	453,695.49	783,867.80	32° 14' 41.458 N	103° 32' 55.918 W	
10,973.0	38.90	93.80	10,934.5	11.5	226.1	453,694.07	783,887.39	32° 14' 41.442 N	103° 32' 55.690 W	

Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	WELL @ 3640.0usft (Cactus #124 - 25' KB)
Site:	Trucker "BRK" State	MD Reference:	WELL @ 3640.0usft (Cactus #124 - 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
11,005.0	41.00	90.50	10,959.0	10.8	246.6	453,693.32	783,907.91	32° 14' 41.433 N	103° 32' 55.451 W
11,037.0	44.40	93.50	10,982.5	10.0	268.3	453,692.54	783,929.59	32° 14' 41.424 N	103° 32' 55.199 W
11,069.0	49.00	92.70	11,004.5	8.7	291.5	453,691.29	783,952.84	32° 14' 41.410 N	103° 32' 54.928 W
11,100.0	53.80	91.30	11,023.8	7.9	315.7	453,690.45	783,977.04	32° 14' 41.400 N	103° 32' 54.647 W
11,132.0	58.90	89.70	11,041.5	7.7	342.4	453,690.23	784,003.67	32° 14' 41.396 N	103° 32' 54.337 W
11,164.0	62.70	88.90	11,057.1	8.0	370.3	453,690.58	784,031.60	32° 14' 41.397 N	103° 32' 54.011 W
11,195.0	65.10	89.10	11,070.8	8.5	398.1	453,691.06	784,059.43	32° 14' 41.400 N	103° 32' 53.687 W
11,227.0	67.30	90.10	11,083.7	8.7	427.4	453,691.26	784,088.70	32° 14' 41.400 N	103° 32' 53.346 W
11,259.0	70.10	90.30	11,095.3	8.6	457.2	453,691.16	784,118.52	32° 14' 41.397 N	103° 32' 52.999 W
11,291.0	73.10	90.70	11,105.4	8.3	487.6	453,690.89	784,148.87	32° 14' 41.392 N	103° 32' 52.646 W
11,319.0	76.10	90.40	11,112.9	8.1	514.5	453,690.63	784,175.87	32° 14' 41.387 N	103° 32' 52.332 W
11,350.0	78.40	90.00	11,119.7	8.0	544.8	453,690.53	784,206.10	32° 14' 41.384 N	103° 32' 51.980 W
11,382.0	81.30	89.10	11,125.3	8.2	576.3	453,690.78	784,237.59	32° 14' 41.384 N	103° 32' 51.613 W
11,414.0	83.10	88.70	11,129.7	8.8	608.0	453,691.39	784,269.29	32° 14' 41.388 N	103° 32' 51.244 W
11,446.0	84.60	89.30	11,133.1	9.4	639.8	453,691.94	784,301.10	32° 14' 41.391 N	103° 32' 50.873 W
11,477.0	86.60	89.90	11,135.5	9.6	670.7	453,692.16	784,332.01	32° 14' 41.391 N	103° 32' 50.514 W
11,509.0	88.50	89.80	11,136.9	9.7	702.7	453,692.24	784,363.98	32° 14' 41.389 N	103° 32' 50.141 W
11,541.0	88.80	90.00	11,137.6	9.7	734.6	453,692.30	784,395.97	32° 14' 41.388 N	103° 32' 49.769 W
11,572.0	88.70	90.20	11,138.3	9.7	765.6	453,692.24	784,426.96	32° 14' 41.385 N	103° 32' 49.408 W
11,635.0	89.00	90.00	11,139.5	9.6	828.6	453,692.13	784,489.95	32° 14' 41.379 N	103° 32' 48.675 W
11,666.0	89.50	90.00	11,140.0	9.6	859.6	453,692.13	784,520.94	32° 14' 41.377 N	103° 32' 48.314 W
11,698.0	89.50	90.00	11,140.2	9.6	891.6	453,692.13	784,552.94	32° 14' 41.375 N	103° 32' 47.941 W
11,750.0	90.00	89.78	11,140.5	9.7	943.6	453,692.23	784,604.94	32° 14' 41.372 N	103° 32' 47.336 W
EOC - 11750.0' MD, 11140.5' TVD, 90.00° INC, 89.78° AZI, 943.7' VS									
11,792.0	90.40	89.60	11,140.3	9.9	985.6	453,692.46	784,646.94	32° 14' 41.371 N	103° 32' 46.847 W
11,889.0	90.80	89.80	11,139.3	10.4	1,082.6	453,692.97	784,743.93	32° 14' 41.369 N	103° 32' 45.717 W
11,984.0	89.50	90.40	11,139.1	10.2	1,177.6	453,692.80	784,838.93	32° 14' 41.361 N	103° 32' 44.611 W
12,046.0	89.30	89.60	11,139.7	10.2	1,239.6	453,692.80	784,900.93	32° 14' 41.356 N	103° 32' 43.889 W
12,077.0	89.30	89.30	11,140.1	10.5	1,270.6	453,693.10	784,931.92	32° 14' 41.357 N	103° 32' 43.528 W
12,172.0	88.90	88.60	11,141.6	12.3	1,365.6	453,694.84	785,026.89	32° 14' 41.367 N	103° 32' 42.423 W
12,267.0	90.00	88.80	11,142.5	14.4	1,460.5	453,697.00	785,121.86	32° 14' 41.382 N	103° 32' 41.317 W
12,363.0	89.30	87.80	11,143.1	17.3	1,556.5	453,699.84	785,217.82	32° 14' 41.403 N	103° 32' 40.199 W
12,458.0	89.80	89.30	11,143.8	19.7	1,651.5	453,702.25	785,312.78	32° 14' 41.420 N	103° 32' 39.093 W
12,554.0	90.90	90.90	11,143.2	19.5	1,747.5	453,702.08	785,408.78	32° 14' 41.411 N	103° 32' 37.976 W
12,650.0	90.30	90.00	11,142.2	18.8	1,843.4	453,701.33	785,504.77	32° 14' 41.397 N	103° 32' 36.858 W
12,744.0	90.50	89.90	11,141.6	18.9	1,937.4	453,701.41	785,598.76	32° 14' 41.391 N	103° 32' 35.764 W
12,839.0	89.30	89.00	11,141.7	19.8	2,032.4	453,702.32	785,693.76	32° 14' 41.393 N	103° 32' 34.657 W
12,935.0	89.90	89.10	11,142.4	21.4	2,128.4	453,703.91	785,789.74	32° 14' 41.401 N	103° 32' 33.540 W
13,029.0	92.20	91.30	11,140.7	21.0	2,222.4	453,703.58	785,883.71	32° 14' 41.391 N	103° 32' 32.446 W
13,124.0	90.70	91.00	11,138.3	19.1	2,317.3	453,701.68	785,978.66	32° 14' 41.366 N	103° 32' 31.340 W
13,220.0	91.40	90.70	11,136.5	17.7	2,413.3	453,700.25	786,074.63	32° 14' 41.344 N	103° 32' 30.223 W
13,315.0	90.80	91.30	11,134.7	16.0	2,508.3	453,698.60	786,169.60	32° 14' 41.321 N	103° 32' 29.117 W
13,410.0	90.70	91.70	11,133.4	13.6	2,603.2	453,696.11	786,264.56	32° 14' 41.290 N	103° 32' 28.012 W
13,504.0	90.60	91.40	11,132.4	11.0	2,697.2	453,693.57	786,358.52	32° 14' 41.258 N	103° 32' 26.918 W
13,598.0	89.20	90.20	11,132.5	9.7	2,791.2	453,692.26	786,452.50	32° 14' 41.238 N	103° 32' 25.824 W
13,693.0	87.40	91.10	11,135.4	8.6	2,886.1	453,691.18	786,547.45	32° 14' 41.220 N	103° 32' 24.719 W
13,788.0	88.40	88.10	11,138.8	9.3	2,981.1	453,691.84	786,642.37	32° 14' 41.220 N	103° 32' 23.613 W
13,884.0	90.40	87.10	11,139.9	13.3	3,077.0	453,695.86	786,738.28	32° 14' 41.253 N	103° 32' 22.496 W
13,979.0	92.00	86.80	11,137.9	18.4	3,171.8	453,700.92	786,833.12	32° 14' 41.296 N	103° 32' 21.392 W
14,073.0	92.20	87.10	11,134.4	23.4	3,265.6	453,705.91	786,926.92	32° 14' 41.338 N	103° 32' 20.299 W
14,168.0	90.40	88.20	11,132.3	27.3	3,360.5	453,709.81	787,021.81	32° 14' 41.370 N	103° 32' 19.194 W
14,263.0	90.30	88.40	11,131.7	30.1	3,455.4	453,712.63	787,116.77	32° 14' 41.391 N	103° 32' 18.088 W
14,357.0	90.10	88.90	11,131.4	32.3	3,549.4	453,714.84	787,210.74	32° 14' 41.406 N	103° 32' 16.994 W
14,453.0	92.20	89.30	11,129.4	33.8	3,645.4	453,716.35	787,306.71	32° 14' 41.414 N	103° 32' 15.876 W
14,549.0	91.80	88.80	11,126.1	35.4	3,741.3	453,717.94	787,402.63	32° 14' 41.422 N	103° 32' 14.759 W

Company:	Yates Petroleum	Local Co-ordinate Reference:	Well #1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	WELL @ 3640.0usft (Cactus #124 - 25' KB)
Site:	Trucker "BRK" State	MD Reference:	WELL @ 3640.0usft (Cactus #124 - 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
14,644.0	90.70	88.60	11,124.0	37.5	3,836.3	453,720.09	787,497.58	32° 14' 41.437 N	103° 32' 13.653 W
14,741.0	90.30	89.20	11,123.2	39.4	3,933.2	453,721.96	787,594.56	32° 14' 41.448 N	103° 32' 12.524 W
14,836.0	90.90	89.50	11,122.2	40.5	4,028.2	453,723.03	787,689.55	32° 14' 41.452 N	103° 32' 11.418 W
14,930.0	90.40	89.50	11,121.1	41.3	4,122.2	453,723.85	787,783.54	32° 14' 41.453 N	103° 32' 10.324 W
15,011.0	90.20	89.30	11,120.7	42.1	4,203.2	453,724.70	787,864.54	32° 14' 41.455 N	103° 32' 9.381 W
15,075.0	90.20	89.30	11,120.5	42.9	4,267.2	453,725.48	787,928.53	32° 14' 41.458 N	103° 32' 8.635 W
BHL - 15075.0' MD, 11120.5' TVD, 90.20° INC, 89.30° AZI, 42.9° N, 4267.2' E, 4267.4' VS									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,600.0	10,598.0	-14.8	85.2	Tie into Pilot - KOP @ 10600' MD
11,750.0	11,140.5	9.7	943.6	EOC - 11750.0' MD, 11140.5' TVD, 90.00° INC, 89.78° AZI, 943.7' VS
15,075.0	11,120.5	42.9	4,267.2	BHL - 15075.0' MD, 11120.5' TVD, 90.20° INC, 89.30° AZI, 42.9° N, 4267.2' E, 4

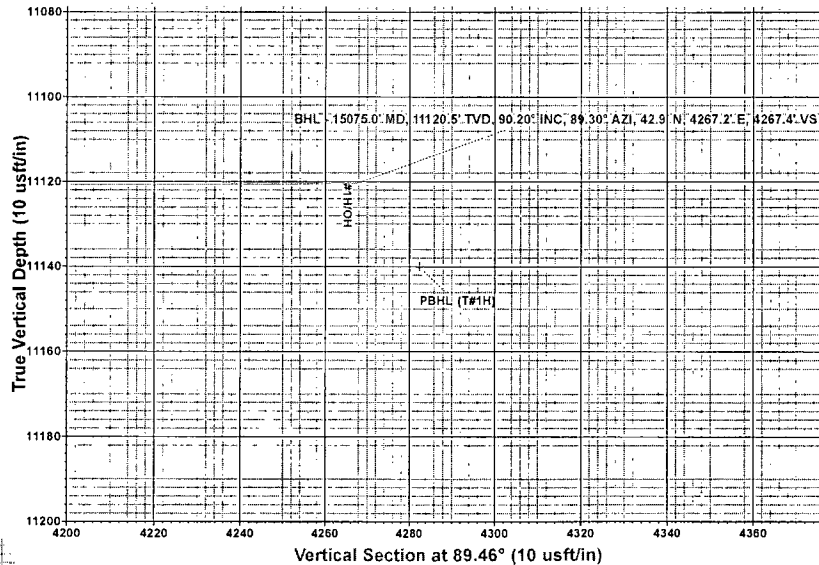
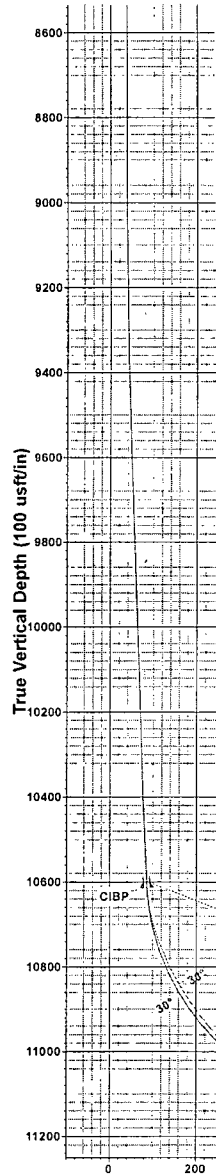
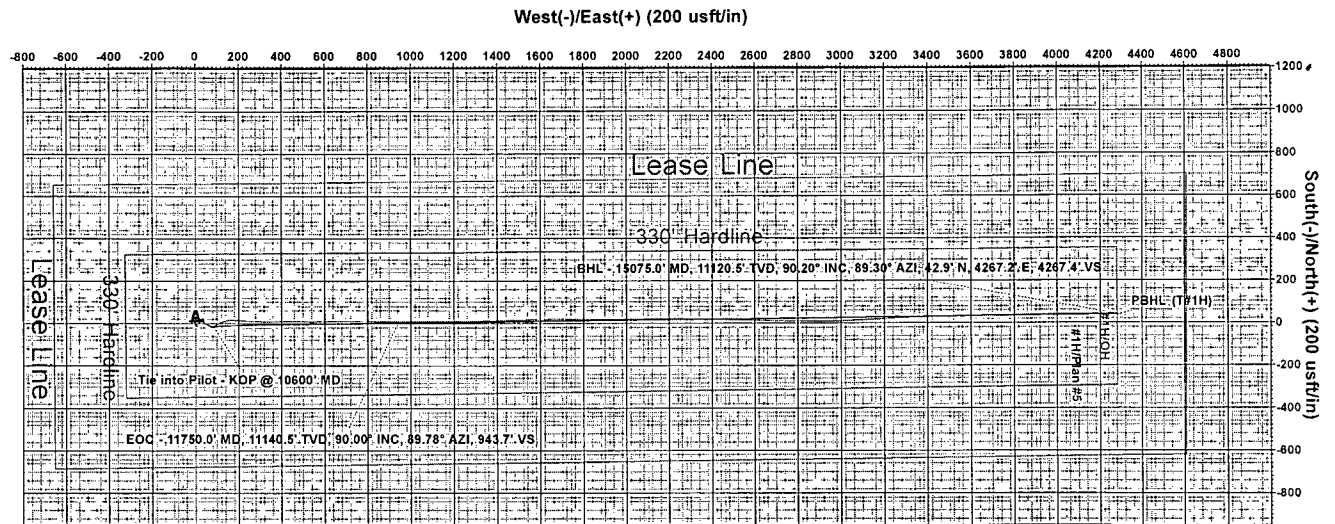
Checked By: _____	Approved By: _____	Date: _____
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Yates Petroleum
Project: Lea County, NM (NAD-83)
Site: Trucker "BRK" State
Well: #1H
Wellbore: OH
Plan: Plan #5 (#1H/OH)



Azimuths to Grid North
True North: -0.42°
Magnetic North: 6.99°

Magnetic Field
Strength: 48537.2snT
Dip Angle: 60.20°
Date: 10/17/2012
Model: IGRF200510



Section Details										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	10606.0	2.78	71.89	10604.0	-14.7	85.5	0.00	0.00	85.3	
2	11462.9	90.00	89.36	11140.0	-0.6	646.8	10.19	17.49	646.8	
3	15098.6	90.00	89.36	11140.0	40.0	4282.2	0.00	0.00	4282.4	PBHL (T#1H)

WELL DETAILS: #1H

Ground Elevation:: 3615.0
RKB Elevation: WELL @ 3640.0usft (Cactus #124 - 25' KB)
Rig Name: Cactus #124 - 25' KB

Surface Hole Location
Northing: 453682.56 Easting: 783661.32 Latitude: 32° 14' 41.344 N Longitude: 103° 32' 58.323 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
PBHL (T#1H)	11140.0	36.8	4282.3	453719.39	787943.58

CASING DETAILS

TVD	MD	Name
10611.9	10614.0	CIBP

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 #5 (#1H/OH)
Created By: Matt Higgins Date: 10:32, December 17 2012



Job Number: SVMO-120021
 Company: Yates Petroleum Corporation
 Lease/Well: TRUCKER BRK STATE 1H
 Location: Lea County, NM
 Rig Name: Workover
 RKB: 0'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 7.09°
 Grid: East To Grid North
 File name: F:\SURVEY\2012SU-1\YATES\MO\TRUCKE-1\1H.SVY
 Date/Time: 22-Oct-12 / 10:23
 Curve Name: 9500' - 11400' M.D. (SRG)

HOBBS OCD
 JAN 28 2013

HOBBS OCD

JAN 28 2013

RECEIVED

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
 9,500' MD to 11,400' MD is, to the best of
 our knowledge a true and accurate account of
 the well bore.
 Brandon Mikeska 10/22/12
 MS Energy Services Date

SUR: L-2-24s-33e, 1980/S & 660/W
 BHL 1-2-24s-33e, 2023/S & 4927/W
 API # 30-025-26309

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	
9450.00	1.75	101.83	9448.85	.21	44.81	.21	44.81	89.73	.00
Tied SRG Surveys Into Gyroscopic Surveys									
9500.00	1.90	99.19	9498.82	-.08	46.38	-.08	46.38	90.10	.34
9600.00	1.87	103.70	9598.77	-.73	49.60	-.73	49.60	90.84	.15
9700.00	2.22	119.18	9698.71	-2.06	52.87	-2.06	52.91	92.23	.65
9800.00	2.37	128.24	9798.63	-4.28	56.19	-4.28	56.35	94.36	.39
9900.00	2.51	126.87	9898.54	-6.88	59.56	-6.88	59.96	96.59	.15
10000.00	2.38	119.57	9998.45	-9.22	63.12	-9.22	63.79	98.31	.34
10100.00	2.24	119.57	10098.36	-11.21	66.63	-11.21	67.56	99.55	.14
10200.00	2.22	119.52	10198.29	-13.12	70.01	-13.12	71.23	100.62	.02

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	
10300.00	2.06	114.35	10298.22	-14.82	73.34	-14.82	74.82	101.42	.25
10400.00	2.02	103.16	10398.16	-15.96	76.69	-15.96	78.33	101.76	.40
10500.00	2.60	79.64	10498.08	-15.96	80.64	-15.96	82.20	101.19	1.10
10600.00	2.79	71.37	10597.97	-14.77	85.17	-14.77	86.45	99.84	.43
10700.00	2.65	80.46	10697.85	-13.61	89.76	-13.61	90.79	98.62	.45
10800.00	2.34	84.25	10797.76	-13.02	94.07	-13.02	94.97	97.88	.35
10900.00	2.23	89.84	10897.68	-12.81	98.05	-12.81	98.88	97.44	.25
11000.00	1.95	91.65	10997.61	-12.86	101.69	-12.86	102.50	97.20	.29
11100.00	1.86	101.17	11097.56	-13.22	104.99	-13.22	105.82	97.18	.33
11200.00	1.84	91.55	11197.51	-13.58	108.18	-13.58	109.03	97.15	.31
11300.00	1.95	86.19	11297.45	-13.51	111.49	-13.51	112.30	96.91	.21
Last Survey Depth Recorded									
11400.00	2.13	87.51	11397.39	-13.31	115.04	-13.31	115.81	96.60	.19