YATES PETROLEUM CORPORATION

30-025-42007

Yates Petroleum

Lea County, NM (NAD-83)
Juice Bud State Com
#4H

OH

Design: OH

Standard Survey Report

26 January, 2015

YATES PETROLEUM CORPORATION

Survey Report

Company:	Yates Petroleum	**Local Co-ordinate Reference:**	Well #4H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Site:	Juice Bud State Com	**MD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Well:	#4H	**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 Juice Bud State Com

Site Position:		**Northing:**	531,165.90 usft	**Latitude:**	32° 27' 27.272 N
From:	Map	**Easting:**	793,949.70 usft	**Longitude:**	103° 30' 51.632 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.44 °

Well #4H

Well Position	**+N/-S**	0.0 usft	**Northing:**	531,165.90 usft	**Latitude:**	32° 27' 27.272 N
	+E/-W	0.0 usft	**Easting:**	793,949.70 usft	**Longitude:**	103° 30' 51.632 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	3,673.0 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/7/2015	7.14	60.32	48,404

Design OH

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	10,293.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	357.19

Survey Program **Date** 1/26/2015

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	1,800.0	Survey #1 - Gyros (Pilot Hole)	CB-GYRO-MS	Camera based gyro multishot
1,905.0	10,293.0	Survey #2 - Crescent MWD Surveys (Pilot	MWD	MWD - Standard
10,359.0	18,053.0	Survey #3 - Crescent MWD Surveys (OH)	MWD	MWD - Standard
18,133.0	18,133.0	Survey #4 - 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	0.11	179.37	100.0	-0.1	0.0	-0.1	0.11	0.11	0.00
200.0	0.23	153.89	200.0	-0.4	0.1	-0.4	0.14	0.12	-25.48
300.0	0.32	187.94	300.0	-0.8	0.1	-0.8	0.18	0.09	34.05
400.0	0.33	145.69	400.0	-1.3	0.3	-1.4	0.23	0.01	-42.25
500.0	0.22	47.80	500.0	-1.5	0.6	-1.5	0.42	-0.11	-97.89
600.0	0.21	331.49	600.0	-1.2	0.6	-1.2	0.27	-0.01	-76.31
700.0	0.14	330.05	700.0	-0.9	0.5	-0.9	0.07	-0.07	-1.44

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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)
800.0	0.26	51.25	800.0	-0.6	0.6	-0.7	0.28	0.12	81.20
900.0	0.39	14.49	900.0	-0.2	0.9	-0.2	0.24	0.13	-36.76
1,000.0	0.40	347.86	1,000.0	0.5	0.9	0.5	0.18	0.01	-26.63
1,100.0	0.44	319.43	1,100.0	1.1	0.5	1.1	0.21	0.04	-28.43
1,200.0	0.41	307.22	1,200.0	1.6	0.0	1.6	0.10	-0.03	-12.21
1,300.0	0.38	268.64	1,300.0	1.8	-0.6	1.9	0.26	-0.03	-38.58
1,400.0	0.31	241.61	1,400.0	1.7	-1.2	1.8	0.18	-0.07	-27.03
1,500.0	0.26	224.03	1,500.0	1.4	-1.6	1.5	0.10	-0.05	-17.58
1,600.0	0.22	193.47	1,600.0	1.1	-1.8	1.2	0.13	-0.04	-30.56
1,700.0	0.07	218.97	1,700.0	0.8	-1.9	0.9	0.16	-0.15	25.50
1,800.0	0.02	138.66	1,800.0	0.8	-1.9	0.9	0.07	-0.05	-80.31
1,905.0	0.30	277.60	1,905.0	0.8	-2.1	0.9	0.30	0.27	132.32
2,093.0	0.30	328.80	2,093.0	1.3	-2.9	1.4	0.14	0.00	27.23
2,283.0	0.10	52.50	2,283.0	1.8	-3.0	2.0	0.16	-0.11	44.05
2,471.0	0.10	230.10	2,471.0	1.8	-3.0	1.9	0.11	0.00	94.47
2,660.0	0.10	108.30	2,660.0	1.6	-3.0	1.8	0.09	0.00	-64.44
2,849.0	0.10	148.40	2,849.0	1.5	-2.7	1.6	0.04	0.00	21.22
3,038.0	0.10	129.20	3,038.0	1.2	-2.5	1.3	0.02	0.00	-10.16
3,226.0	0.40	61.00	3,226.0	1.4	-1.8	1.5	0.20	0.16	-36.28
3,416.0	0.40	61.90	3,416.0	2.1	-0.7	2.1	0.00	0.00	0.47
3,606.0	0.40	67.00	3,606.0	2.6	0.5	2.6	0.02	0.00	2.68
3,794.0	0.30	84.30	3,794.0	2.9	1.6	2.8	0.08	-0.05	9.20
3,940.0	0.20	63.80	3,940.0	3.1	2.2	3.0	0.09	-0.07	-14.04
4,077.0	0.10	300.30	4,077.0	3.2	2.4	3.1	0.20	-0.07	-90.15
4,266.0	0.10	256.40	4,266.0	3.3	2.0	3.2	0.04	0.00	-23.23
4,456.0	0.20	171.50	4,456.0	2.9	1.9	2.8	0.11	0.05	-44.68
4,644.0	0.20	117.20	4,644.0	2.5	2.3	2.3	0.10	0.00	-28.88
4,834.0	0.20	328.20	4,834.0	2.6	2.4	2.5	0.20	0.00	-78.42
5,023.0	0.30	26.80	5,023.0	3.3	2.4	3.2	0.14	0.05	31.01
5,213.0	0.10	115.00	5,213.0	3.7	2.8	3.5	0.16	-0.11	46.42
5,402.0	0.20	43.30	5,402.0	3.8	3.2	3.7	0.10	0.05	-37.94
5,517.0	0.30	327.00	5,517.0	4.2	3.2	4.1	0.28	0.09	-66.35
5,651.0	0.10	357.30	5,651.0	4.7	3.0	4.5	0.16	-0.15	22.61
5,840.0	1.00	246.60	5,839.9	4.2	1.5	4.1	0.55	0.48	-58.57
6,030.0	1.10	246.20	6,029.9	2.8	-1.7	2.9	0.05	0.05	-0.21
6,219.0	1.00	250.60	6,218.9	1.5	-5.0	1.7	0.07	-0.05	2.33
6,408.0	0.90	250.40	6,407.9	0.4	-7.9	0.8	0.05	-0.05	-0.11
6,597.0	0.80	254.00	6,596.8	-0.4	-10.6	0.1	0.06	-0.05	1.90
6,787.0	0.70	245.20	6,786.8	-1.3	-12.9	-0.6	0.08	-0.05	-4.63
6,977.0	0.60	216.20	6,976.8	-2.6	-14.5	-1.8	0.18	-0.05	-15.26
7,167.0	0.60	214.90	7,166.8	-4.2	-15.7	-3.4	0.01	0.00	-0.68
7,356.0	0.70	212.80	7,355.8	-6.0	-16.9	-5.1	0.05	0.05	-1.11
7,546.0	0.70	200.40	7,545.8	-8.0	-17.9	-7.1	0.08	0.00	-6.53

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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)
7,735.0	0.60	190.50	7,734.8	-10.1	-18.5	-9.2	0.08	-0.05	-5.24
7,923.0	0.40	199.20	7,922.7	-11.7	-18.9	-10.7	0.11	-0.11	4.63
8,114.0	0.40	232.80	8,113.7	-12.7	-19.7	-11.7	0.12	0.00	17.59
8,304.0	0.40	240.70	8,303.7	-13.4	-20.8	-12.4	0.03	0.00	4.16
8,494.0	0.50	256.90	8,493.7	-13.9	-22.1	-12.8	0.08	0.05	8.53
8,684.0	0.40	244.20	8,683.7	-14.4	-23.6	-13.2	0.07	-0.05	-6.68
8,874.0	0.50	255.10	8,873.7	-14.9	-24.9	-13.7	0.07	0.05	5.74
9,064.0	0.50	275.60	9,063.7	-15.0	-26.6	-13.7	0.09	0.00	10.79
9,255.0	0.60	318.70	9,254.7	-14.2	-28.1	-12.8	0.22	0.05	22.57
9,445.0	0.30	211.00	9,444.7	-13.9	-29.0	-12.5	0.39	-0.16	-56.68
9,566.0	0.40	235.00	9,565.7	-14.4	-29.5	-12.9	0.14	0.08	19.83
9,662.0	1.30	229.60	9,661.7	-15.3	-30.6	-13.8	0.94	0.94	-5.63
9,853.0	0.60	167.50	9,852.7	-17.7	-32.0	-16.1	0.60	-0.37	-32.51
10,044.0	0.80	302.50	10,043.7	-17.9	-32.9	-16.3	0.68	0.10	70.68
10,140.0	0.50	297.60	10,139.7	-17.4	-33.9	-15.7	0.32	-0.31	-5.10
10,235.0	1.10	184.50	10,234.6	-18.1	-34.3	-16.4	1.45	0.63	-119.05
10,293.0	0.90	199.70	10,292.6	-19.1	-34.5	-17.4	0.57	-0.34	26.21
10,359.0	0.70	208.40	10,358.6	-19.9	-34.9	-18.2	0.35	-0.30	13.18
KOP: 10359.0' MD, 10358.6' TVD									
10,381.0	0.50	244.50	10,380.6	-20.1	-35.0	-18.4	1.90	-0.91	164.09
10,406.0	2.00	341.80	10,405.6	-19.7	-35.3	-18.0	8.49	6.00	389.20
10,454.0	7.10	350.00	10,453.5	-16.0	-36.0	-14.2	10.68	10.63	17.08
10,501.0	12.40	351.30	10,499.8	-8.2	-37.3	-6.3	11.29	11.28	2.77
10,549.0	17.80	351.10	10,546.1	4.2	-39.2	6.1	11.25	11.25	-0.42
10,596.0	22.90	351.30	10,590.1	20.3	-41.7	22.4	10.85	10.85	0.43
10,644.0	27.60	352.10	10,633.5	40.6	-44.7	42.7	9.82	9.79	1.67
10,691.0	31.20	353.10	10,674.5	63.5	-47.6	65.7	7.73	7.66	2.13
10,739.0	35.30	355.90	10,714.6	89.7	-50.1	92.0	9.12	8.54	5.83
10,786.0	39.70	357.90	10,751.9	118.2	-51.6	120.6	9.71	9.36	4.26
10,816.0	42.20	358.16	10,774.6	137.9	-52.3	140.3	8.35	8.33	0.86
Cross 330' Hardline:10816.0' MD, 10774.6' TVD, 42.20° INC									
10,834.0	43.70	358.30	10,787.7	150.1	-52.7	152.5	8.35	8.33	0.79
10,881.0	47.90	356.90	10,820.5	183.8	-54.1	186.2	9.19	8.94	-2.98
10,929.0	52.40	354.10	10,851.2	220.5	-57.0	223.0	10.39	9.38	-5.83
10,976.0	57.70	354.90	10,878.2	258.8	-60.7	261.5	11.36	11.28	1.70
11,024.0	63.00	356.00	10,901.9	300.4	-64.0	303.2	11.22	11.04	2.29
11,071.0	67.50	356.20	10,921.6	343.0	-66.9	345.9	9.58	9.57	0.43
11,119.0	71.30	355.30	10,938.5	387.8	-70.2	390.8	8.11	7.92	-1.88
11,166.0	76.60	355.20	10,951.4	432.8	-74.0	435.9	11.28	11.28	-0.21
11,214.0	83.00	355.00	10,959.9	479.8	-78.0	483.1	13.34	13.33	-0.42
11,244.0	85.60	356.10	10,962.9	509.6	-80.3	512.9	9.40	8.67	3.67
11,276.0	89.60	356.30	10,964.3	541.5	-82.4	544.9	12.52	12.50	0.63
11,298.0	91.04	356.37	10,964.1	563.4	-83.9	566.9	6.57	6.56	0.31
EOC: 11298.0' MD, 10964.1' TVD, 91.04° INC, 356.37° AZ, 566.9' VS									

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11,308.0	91.70	356.40	10,963.9	573.4	-84.5	576.9	6.57	6.56	0.31
11,433.0	89.80	358.40	10,962.3	698.3	-90.2	701.8	2.21	-1.52	1.60
11,528.0	90.80	358.20	10,961.8	793.2	-93.0	796.8	1.07	1.05	-0.21
11,622.0	89.60	358.00	10,961.4	887.2	-96.1	890.8	1.29	-1.28	-0.21
11,717.0	90.20	358.60	10,961.6	982.1	-98.9	985.8	0.89	0.63	0.63
11,812.0	91.50	358.40	10,960.2	1,077.1	-101.4	1,080.7	1.38	1.37	-0.21
11,907.0	90.60	357.30	10,958.4	1,172.0	-105.0	1,175.7	1.50	-0.95	-1.16
12,001.0	90.30	358.10	10,957.7	1,265.9	-108.7	1,269.7	0.91	-0.32	0.85
12,096.0	89.80	357.60	10,957.6	1,360.8	-112.3	1,364.7	0.74	-0.53	-0.53
12,190.0	90.70	357.90	10,957.2	1,454.8	-116.0	1,458.7	1.01	0.96	0.32
12,285.0	90.10	357.60	10,956.6	1,549.7	-119.7	1,553.7	0.71	-0.63	-0.32
12,380.0	88.90	357.00	10,957.4	1,644.6	-124.2	1,648.7	1.41	-1.26	-0.63
12,475.0	89.30	356.90	10,958.9	1,739.4	-129.2	1,743.7	0.43	0.42	-0.11
12,570.0	89.80	356.70	10,959.6	1,834.3	-134.5	1,838.7	0.57	0.53	-0.21
12,664.0	91.20	356.40	10,958.8	1,928.1	-140.2	1,932.7	1.52	1.49	-0.32
12,759.0	89.20	356.60	10,958.5	2,022.9	-146.0	2,027.6	2.12	-2.11	0.21
12,854.0	90.20	356.70	10,959.0	2,117.8	-151.5	2,122.6	1.06	1.05	0.11
12,949.0	90.90	356.50	10,958.1	2,212.6	-157.2	2,217.6	0.77	0.74	-0.21
13,043.0	89.90	357.20	10,957.4	2,306.4	-162.3	2,311.6	1.30	-1.06	0.74
13,138.0	90.40	357.30	10,957.2	2,401.3	-166.9	2,406.6	0.54	0.53	0.11
13,233.0	90.80	357.40	10,956.2	2,496.2	-171.3	2,501.6	0.43	0.42	0.11
13,328.0	90.40	357.50	10,955.2	2,591.1	-175.5	2,596.6	0.43	-0.42	0.11
13,423.0	90.00	357.70	10,954.8	2,686.0	-179.5	2,691.6	0.47	-0.42	0.21
13,518.0	90.70	357.60	10,954.2	2,781.0	-183.4	2,786.6	0.74	0.74	-0.11
13,612.0	90.10	358.60	10,953.6	2,874.9	-186.5	2,880.6	1.24	-0.64	1.06
13,707.0	90.50	358.80	10,953.1	2,969.9	-188.7	2,975.6	0.47	0.42	0.21
13,802.0	90.60	359.40	10,952.2	3,064.9	-190.2	3,070.5	0.64	0.11	0.63
13,897.0	88.80	358.60	10,952.7	3,159.8	-191.8	3,165.4	2.07	-1.89	-0.84
13,992.0	89.30	358.50	10,954.3	3,254.8	-194.2	3,260.4	0.54	0.53	-0.11
14,086.0	90.00	358.50	10,954.8	3,348.8	-196.7	3,354.4	0.74	0.74	0.00
14,178.0	91.00	358.50	10,954.0	3,440.7	-199.1	3,446.3	1.09	1.09	0.00
14,273.0	90.60	357.70	10,952.7	3,535.7	-202.2	3,541.3	0.94	-0.42	-0.84
14,368.0	89.90	357.10	10,952.3	3,630.6	-206.6	3,636.3	0.97	-0.74	-0.63
14,462.0	90.50	357.20	10,952.0	3,724.4	-211.2	3,730.3	0.65	0.64	0.11
14,557.0	90.20	357.80	10,951.4	3,819.4	-215.4	3,825.3	0.71	-0.32	0.63
14,652.0	89.50	357.90	10,951.6	3,914.3	-218.9	3,920.3	0.74	-0.74	0.11
14,747.0	90.00	357.80	10,952.0	4,009.2	-222.5	4,015.3	0.54	0.53	-0.11
14,843.0	90.90	357.70	10,951.3	4,105.1	-226.3	4,111.3	0.94	0.94	-0.10
14,938.0	90.20	357.60	10,950.4	4,200.1	-230.2	4,206.3	0.74	-0.74	-0.11
15,032.0	91.00	357.40	10,949.4	4,294.0	-234.3	4,300.3	0.88	0.85	-0.21
15,127.0	90.70	357.00	10,948.0	4,388.8	-238.9	4,395.3	0.53	-0.32	-0.42
15,221.0	90.30	357.10	10,947.2	4,482.7	-243.7	4,489.3	0.44	-0.43	0.11
15,316.0	90.20	357.10	10,946.7	4,577.6	-248.5	4,584.3	0.11	-0.11	0.00

Company:	Yates Petroleum	**Local Co-ordinate Reference:**	Well #4H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Site:	Juice Bud State Com	**MD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Well:	#4H	**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)
15,410.0	90.10	357.50	10,946.5	4,671.5	-253.0	4,678.3	0.44	-0.11	0.43
15,505.0	89.50	357.70	10,946.8	4,766.4	-256.9	4,773.3	0.67	-0.63	0.21
15,600.0	89.80	357.80	10,947.4	4,861.3	-260.7	4,868.3	0.33	0.32	0.11
15,695.0	89.80	357.90	10,947.7	4,956.2	-264.2	4,963.2	0.11	0.00	0.11
15,789.0	89.50	357.80	10,948.3	5,050.2	-267.8	5,057.2	0.34	-0.32	-0.11
15,884.0	89.90	357.40	10,948.8	5,145.1	-271.7	5,152.2	0.60	0.42	-0.42
15,979.0	90.30	357.40	10,948.6	5,240.0	-276.1	5,247.2	0.42	0.42	0.00
16,068.0	91.70	357.80	10,947.1	5,328.9	-279.8	5,336.2	1.64	1.57	0.45
16,162.0	92.40	358.70	10,943.7	5,422.8	-282.7	5,430.1	1.21	0.74	0.96
16,257.0	90.90	358.70	10,941.0	5,517.7	-284.8	5,525.1	1.58	-1.58	0.00
16,352.0	90.60	357.10	10,939.8	5,612.7	-288.3	5,620.0	1.71	-0.32	-1.68
16,446.0	89.10	357.50	10,940.0	5,706.5	-292.7	5,714.0	1.65	-1.60	0.43
16,541.0	89.80	357.80	10,940.9	5,801.5	-296.6	5,809.0	0.80	0.74	0.32
16,634.0	90.20	358.20	10,940.9	5,894.4	-299.9	5,902.0	0.61	0.43	0.43
16,729.0	88.10	357.90	10,942.3	5,989.3	-303.1	5,997.0	2.23	-2.21	-0.32
16,824.0	89.50	358.20	10,944.3	6,084.3	-306.3	6,092.0	1.51	1.47	0.32
16,918.0	88.00	358.30	10,946.4	6,178.2	-309.2	6,185.9	1.60	-1.60	0.11
17,012.0	90.10	358.90	10,947.9	6,272.1	-311.5	6,279.9	2.32	2.23	0.64
17,107.0	90.50	359.10	10,947.4	6,367.1	-313.1	6,374.8	0.47	0.42	0.21
17,202.0	90.00	359.10	10,947.0	6,462.1	-314.6	6,469.8	0.53	-0.53	0.00
17,295.0	89.50	358.80	10,947.4	6,555.1	-316.3	6,562.7	0.63	-0.54	-0.32
17,390.0	89.50	359.10	10,948.2	6,650.1	-318.1	6,657.7	0.32	0.00	0.32
17,485.0	90.50	359.10	10,948.2	6,745.1	-319.6	6,752.6	1.05	1.05	0.00
17,580.0	90.00	359.00	10,947.8	6,840.1	-321.1	6,847.6	0.54	-0.53	-0.11
17,674.0	89.70	357.30	10,948.1	6,934.0	-324.2	6,941.6	1.84	-0.32	-1.81
17,769.0	91.60	356.70	10,947.0	7,028.9	-329.2	7,036.5	2.10	2.00	-0.63
17,864.0	91.40	356.20	10,944.5	7,123.6	-335.0	7,131.5	0.57	-0.21	-0.53
17,958.0	91.40	356.80	10,942.2	7,217.4	-340.8	7,225.5	0.64	0.00	0.64
18,053.0	90.50	357.60	10,940.6	7,312.3	-345.4	7,320.5	1.27	-0.95	0.84
Final MWD Survey: 18053.0' MD, 10940.6' TVD									
18,133.0	90.50	357.60	10,939.9	7,392.2	-348.8	7,400.4	0.00	0.00	0.00
BHL: 18133.0' MD, 10939.9' TVD, 90.50° INC, 357.60° AZ, 7392.2' +N/-S, -348.8' +E/-W, 7400.4' VS - PBHL(JBSC#4H) - 330TD(JBSC#4H)									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
10,359.0	10,358.6	-19.9	-34.9	KOP: 10359.0' MD, 10358.6' TVD
10,816.0	10,774.6	137.9	-52.3	Cross 330' Hardline:10816.0' MD, 10774.6' TVD, 42.20° INC
11,298.0	10,964.1	563.4	-83.9	EOC: 11298.0' MD, 10964.1' TVD, 91.04° INC, 356.37° AZ, 566.9' VS
18,053.0	10,940.6	7,312.3	-345.4	Final MWD Survey: 18053.0' MD, 10940.6' TVD
18,133.0	10,939.9	7,392.2	-348.8	BHL: 18133.0' MD, 10939.9' TVD, 90.50° INC, 357.60° AZ, 7392.2' +N/-S, -348.

Company:	Yates Petroleum	**Local Co-ordinate Reference:**	Well #4H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Site:	Juice Bud State Com	**MD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Well:	#4H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Houston R5000 Database

Checked By: _____ Approved By: _____ Date: _____

YATES PETROLEUM CORPORATION

Yates Petroleum
Project: Lea County, NM (NAD-83)
Site: Juice Bud State Com
Well: #4H
Wellbore: OH
Plan: Plan #2 (#4H/OH)

WELL DETAILS: #4H

Ground Elevation:: 3673.0
RKB Elevation: RKB @ 3698.0usft (Cactus 124 - KB=25')
Rig Name: Cactus 124 - KB=25'

Surface Hole Location

Northing	Easting	Latittude	Longitude
531165.90	793949.70	32° 27' 27.272 N	103° 30' 51.632 W

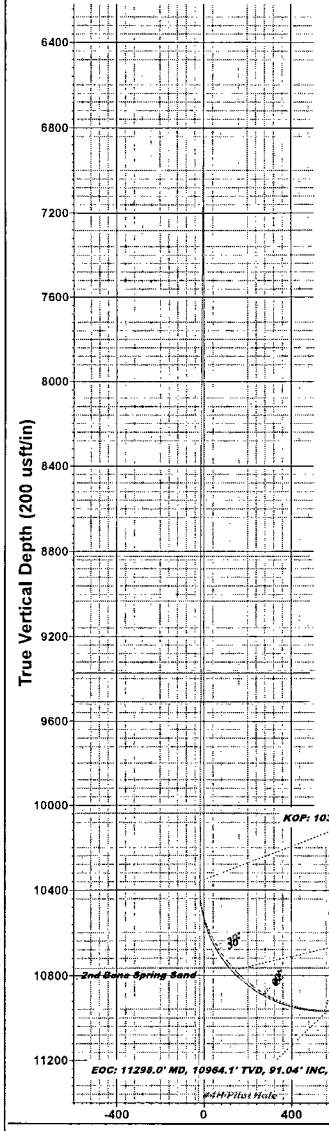
G T M

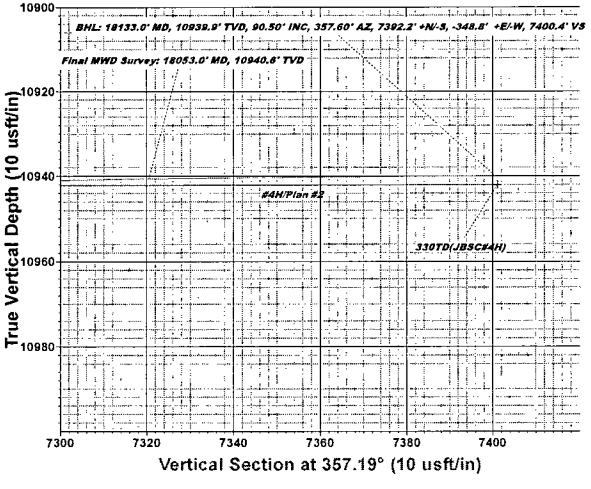
Azimuths to Grid North
True North: -0.44°
Magnetic North: 6.70°

Magnetic Field
Strength: 48404.0snT
Dip Angle: 60.32°
Date: 1/7/2015
Model: IGRF2010

Section Details

	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	10293.0	0.90	199.70	10292.6	-19.1	-34.5	0.00	0.00	-17.4
2	10392.9	0.43	203.32	10392.5	-20.2	-34.9	0.47	176.70	-18.4
3	11304.7	90.80	355.74	10969.2	559.0	-80.1	10.00	152.42	562.3
4	11399.7	90.80	357.64	10967.9	653.8	-85.6	2.00	89.99	657.2
5	11742.5	90.80	357.64	10963.1	996.3	-99.7	0.00	0.00	1000.0
6	11762.5	90.40	357.64	10962.9	1016.3	-100.5	2.00	180.00	1020.0
7	13342.6	90.40	357.64	10951.9	2595.0	-165.6	0.00	0.00	2600.0
8	13356.7	90.12	357.64	10951.8	2609.1	-166.2	2.00	-179.98	2614.1
9	18143.9	90.12	357.64	10942.0	7392.2	-363.3	0.00	0.00	7401.1



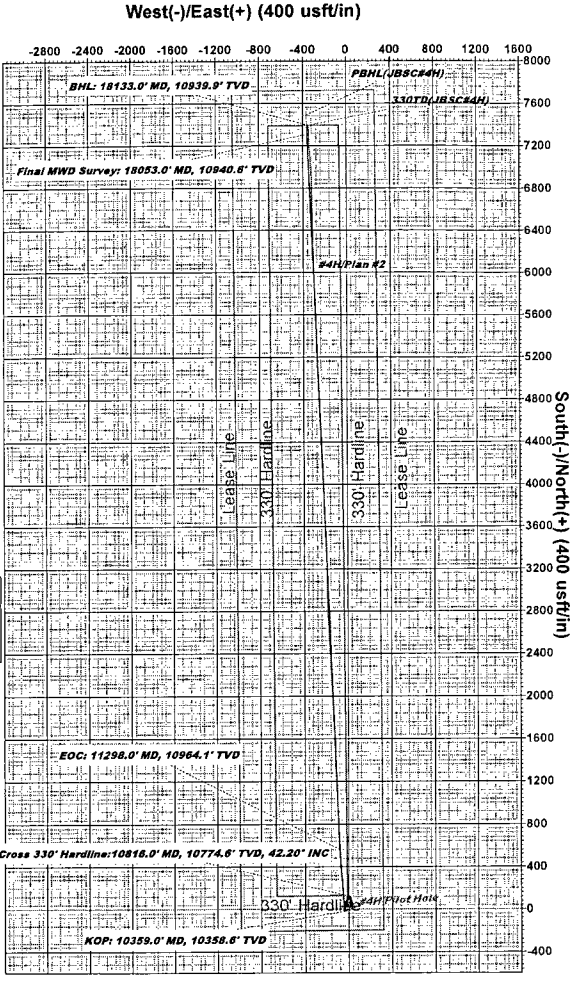


DESIGN TARGET DETAILS

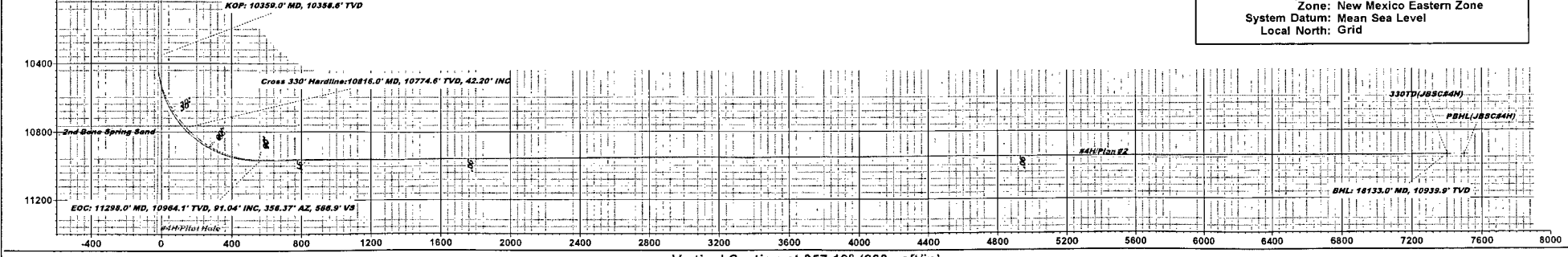
Name	+N/-S	+E/-W	Northing	Easting
330TD(JBSC#4H)	7392.2	-363.3	538558.10	793586.40
PBHL(JBSC#4H)	7490.1	-368.1	538656.00	793581.60

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1847.5	1847.5	Rustler
1987.5	1987.5	Top Salt
3437.5	3437.5	Base Salt
3487.5	3487.5	Tansill
3612.5	3612.5	Yates
3952.5	3952.5	Capitan
5892.5	5892.6	Cherry Canyon
7282.5	7282.7	Brushy Canyon
8822.5	8822.8	Bone Springs LM
9032.5	9032.8	Avalon Sand
9372.5	9372.8	Middle Avalon
9507.5	9507.8	Lower Avalon
10037.5	10037.8	1st Bone Spring Sand
10766.0	10798.5	2nd Bone Spring Sand

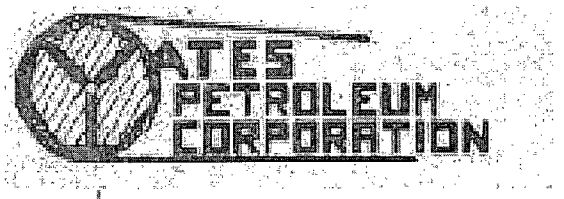


PROJECT DETAILS: Lea County, NM (NAD-83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level
Local North: Grid



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

Plan: Plan #2 (#4H/OH)
Created By: Adrian Castro Date: 15:55, January 26 2015



Yates Petroleum

Lea County, NM (NAD-83)
Juice Bud State Com
#4H

OH

Design: OH

Survey Report - Geographic

26 January, 2015

YATES PETROLEUM CORPORATION

Survey Report - Geographic

Company:	Yates Petroleum	**Local Co-ordinate Reference:**	Well #4H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Site:	Juice Bud State Com	**MD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Well:	#4H	**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 Juice Bud State Com

Site Position:		**Northing:**	531,165.90 usft	**Latitude:**	32° 27' 27.272 N
From:	Map	**Easting:**	793,949.70 usft	**Longitude:**	103° 30' 51.632 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.44 °

Well #4H

Well Position	**+N/-S**	0.0 usft	**Northing:**	531,165.90 usft	**Latitude:**	32° 27' 27.272 N
	+E/-W	0.0 usft	**Easting:**	793,949.70 usft	**Longitude:**	103° 30' 51.632 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	3,673.0 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/7/2015	7.14	60.32	48,404

Design OH

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	10,293.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	357.19

Survey Program **Date** 1/26/2015

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	1,800.0	Survey #1 - Gyros (Pilot Hole)	CB-GYRO-MS	Camera based gyro multishot
1,905.0	10,293.0	Survey #2 - Crescent MWD Surveys (Pilot	MWD	MWD - Standard
10,359.0	18,053.0	Survey #3 - Crescent MWD Surveys (OH)	MWD	MWD - Standard
18,133.0	18,133.0	Survey #4 - 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)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	531,165.90	793,949.70	32° 27' 27.272 N	103° 30' 51.632 W
100.0	0.11	179.37	100.0	-0.1	0.0	531,165.81	793,949.70	32° 27' 27.271 N	103° 30' 51.632 W
200.0	0.23	153.89	200.0	-0.4	0.1	531,165.53	793,949.79	32° 27' 27.268 N	103° 30' 51.631 W
300.0	0.32	187.94	300.0	-0.8	0.1	531,165.07	793,949.84	32° 27' 27.264 N	103° 30' 51.631 W
400.0	0.33	145.69	400.0	-1.3	0.3	531,164.56	793,949.96	32° 27' 27.259 N	103° 30' 51.629 W
500.0	0.22	47.80	500.0	-1.5	0.6	531,164.45	793,950.27	32° 27' 27.258 N	103° 30' 51.626 W
600.0	0.21	331.49	600.0	-1.2	0.6	531,164.74	793,950.32	32° 27' 27.260 N	103° 30' 51.625 W
700.0	0.14	330.05	700.0	-0.9	0.5	531,165.01	793,950.17	32° 27' 27.263 N	103° 30' 51.627 W
800.0	0.26	51.25	800.0	-0.6	0.6	531,165.25	793,950.29	32° 27' 27.266 N	103° 30' 51.626 W

YATES PETROLEUM CORPORATION

Survey Report - Geographic

Company:	Yates Petroleum	**Local Co-ordinate Reference:**	Well #4H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Site:	Juice Bud State Com	**MD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Well:	#4H	**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
900.0	0.39	14.49	900.0	-0.2	0.9	531,165.73	793,950.55	32° 27' 27.270 N	103° 30' 51.622 W
1,000.0	0.40	347.86	1,000.0	0.5	0.9	531,166.40	793,950.56	32° 27' 27.277 N	103° 30' 51.622 W
1,100.0	0.44	319.43	1,100.0	1.1	0.5	531,167.03	793,950.24	32° 27' 27.283 N	103° 30' 51.626 W
1,200.0	0.41	307.22	1,200.0	1.6	0.0	531,167.54	793,949.70	32° 27' 27.288 N	103° 30' 51.632 W
1,300.0	0.38	268.64	1,300.0	1.8	-0.6	531,167.75	793,949.09	32° 27' 27.290 N	103° 30' 51.639 W
1,400.0	0.31	241.61	1,400.0	1.7	-1.2	531,167.61	793,948.52	32° 27' 27.289 N	103° 30' 51.646 W
1,500.0	0.26	224.03	1,500.0	1.4	-1.6	531,167.32	793,948.12	32° 27' 27.286 N	103° 30' 51.651 W
1,600.0	0.22	193.47	1,600.0	1.1	-1.8	531,166.97	793,947.92	32° 27' 27.283 N	103° 30' 51.653 W
1,700.0	0.07	218.97	1,700.0	0.8	-1.9	531,166.73	793,947.84	32° 27' 27.280 N	103° 30' 51.654 W
1,800.0	0.02	138.66	1,800.0	0.8	-1.9	531,166.67	793,947.81	32° 27' 27.280 N	103° 30' 51.654 W
1,905.0	0.30	277.60	1,905.0	0.8	-2.1	531,166.70	793,947.55	32° 27' 27.280 N	103° 30' 51.657 W
2,093.0	0.30	328.80	2,093.0	1.3	-2.9	531,167.18	793,946.81	32° 27' 27.285 N	103° 30' 51.666 W
2,283.0	0.10	52.50	2,283.0	1.8	-3.0	531,167.71	793,946.68	32° 27' 27.290 N	103° 30' 51.667 W
2,471.0	0.10	230.10	2,471.0	1.8	-3.0	531,167.70	793,946.69	32° 27' 27.290 N	103° 30' 51.667 W
2,660.0	0.10	108.30	2,660.0	1.6	-3.0	531,167.55	793,946.72	32° 27' 27.288 N	103° 30' 51.667 W
2,849.0	0.10	148.40	2,849.0	1.5	-2.7	531,167.35	793,946.96	32° 27' 27.287 N	103° 30' 51.664 W
3,038.0	0.10	129.20	3,038.0	1.2	-2.5	531,167.11	793,947.17	32° 27' 27.284 N	103° 30' 51.662 W
3,226.0	0.40	61.00	3,226.0	1.4	-1.8	531,167.32	793,947.87	32° 27' 27.286 N	103° 30' 51.654 W
3,416.0	0.40	61.90	3,416.0	2.1	-0.7	531,167.96	793,949.04	32° 27' 27.292 N	103° 30' 51.640 W
3,606.0	0.40	67.00	3,606.0	2.6	0.5	531,168.53	793,950.23	32° 27' 27.298 N	103° 30' 51.626 W
3,794.0	0.30	84.30	3,794.0	2.9	1.6	531,168.83	793,951.33	32° 27' 27.301 N	103° 30' 51.613 W
3,940.0	0.20	63.80	3,940.0	3.1	2.2	531,168.98	793,951.94	32° 27' 27.302 N	103° 30' 51.606 W
4,077.0	0.10	300.30	4,077.0	3.2	2.4	531,169.15	793,952.05	32° 27' 27.304 N	103° 30' 51.605 W
4,266.0	0.10	256.40	4,266.0	3.3	2.0	531,169.19	793,951.75	32° 27' 27.304 N	103° 30' 51.608 W
4,456.0	0.20	171.50	4,456.0	2.9	1.9	531,168.83	793,951.63	32° 27' 27.301 N	103° 30' 51.610 W
4,644.0	0.20	117.20	4,644.0	2.5	2.3	531,168.35	793,951.97	32° 27' 27.296 N	103° 30' 51.606 W
4,834.0	0.20	328.20	4,834.0	2.6	2.4	531,168.48	793,952.09	32° 27' 27.297 N	103° 30' 51.604 W
5,023.0	0.30	26.80	5,023.0	3.3	2.4	531,169.21	793,952.14	32° 27' 27.304 N	103° 30' 51.604 W
5,213.0	0.10	115.00	5,213.0	3.7	2.8	531,169.58	793,952.52	32° 27' 27.308 N	103° 30' 51.599 W
5,402.0	0.20	43.30	5,402.0	3.8	3.2	531,169.75	793,952.89	32° 27' 27.310 N	103° 30' 51.595 W
5,517.0	0.30	327.00	5,517.0	4.2	3.2	531,170.15	793,952.87	32° 27' 27.314 N	103° 30' 51.595 W
5,651.0	0.10	357.30	5,651.0	4.7	3.0	531,170.56	793,952.67	32° 27' 27.318 N	103° 30' 51.597 W
5,840.0	1.00	246.60	5,839.9	4.2	1.5	531,170.07	793,951.15	32° 27' 27.313 N	103° 30' 51.615 W
6,030.0	1.10	246.20	6,029.9	2.8	-1.7	531,168.67	793,947.96	32° 27' 27.300 N	103° 30' 51.652 W
6,219.0	1.00	250.60	6,218.9	1.5	-5.0	531,167.39	793,944.74	32° 27' 27.287 N	103° 30' 51.690 W
6,408.0	0.90	250.40	6,407.9	0.4	-7.9	531,166.35	793,941.79	32° 27' 27.277 N	103° 30' 51.725 W
6,597.0	0.80	254.00	6,596.8	-0.4	-10.6	531,165.49	793,939.12	32° 27' 27.269 N	103° 30' 51.756 W
6,787.0	0.70	245.20	6,786.8	-1.3	-12.9	531,164.63	793,936.79	32° 27' 27.260 N	103° 30' 51.783 W
6,977.0	0.60	216.20	6,976.8	-2.6	-14.5	531,163.35	793,935.15	32° 27' 27.248 N	103° 30' 51.802 W
7,167.0	0.60	214.90	7,166.8	-4.2	-15.7	531,161.73	793,934.00	32° 27' 27.232 N	103° 30' 51.816 W
7,356.0	0.70	212.80	7,355.8	-6.0	-16.9	531,159.94	793,932.81	32° 27' 27.214 N	103° 30' 51.830 W
7,546.0	0.70	200.40	7,545.8	-8.0	-17.9	531,157.88	793,931.77	32° 27' 27.194 N	103° 30' 51.842 W
7,735.0	0.60	190.50	7,734.8	-10.1	-18.5	531,155.83	793,931.19	32° 27' 27.174 N	103° 30' 51.849 W
7,923.0	0.40	199.20	7,922.7	-11.7	-18.9	531,154.24	793,930.79	32° 27' 27.158 N	103° 30' 51.854 W
8,114.0	0.40	232.80	8,113.7	-12.7	-19.7	531,153.21	793,930.04	32° 27' 27.148 N	103° 30' 51.863 W
8,304.0	0.40	240.70	8,303.7	-13.4	-20.8	531,152.48	793,928.94	32° 27' 27.141 N	103° 30' 51.876 W
8,494.0	0.50	256.90	8,493.7	-13.9	-22.1	531,151.97	793,927.55	32° 27' 27.136 N	103° 30' 51.892 W
8,684.0	0.40	244.20	8,683.7	-14.4	-23.6	531,151.49	793,926.15	32° 27' 27.131 N	103° 30' 51.909 W
8,874.0	0.50	255.10	8,873.7	-14.9	-24.9	531,150.99	793,924.75	32° 27' 27.126 N	103° 30' 51.925 W
9,064.0	0.50	275.60	9,063.7	-15.0	-26.6	531,150.86	793,923.12	32° 27' 27.125 N	103° 30' 51.944 W
9,255.0	0.60	318.70	9,254.7	-14.2	-28.1	531,151.69	793,921.63	32° 27' 27.133 N	103° 30' 51.961 W
9,445.0	0.30	211.00	9,444.7	-13.9	-29.0	531,152.01	793,920.72	32° 27' 27.137 N	103° 30' 51.972 W
9,566.0	0.40	235.00	9,565.7	-14.4	-29.5	531,151.50	793,920.21	32° 27' 27.132 N	103° 30' 51.978 W
9,662.0	1.30	229.60	9,661.7	-15.3	-30.6	531,150.60	793,919.11	32° 27' 27.123 N	103° 30' 51.991 W
9,853.0	0.60	167.50	9,852.7	-17.7	-32.0	531,148.22	793,917.67	32° 27' 27.099 N	103° 30' 52.008 W

Company:	Yates Petroleum	**Local Co-ordinate Reference:**	Well #4H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Site:	Juice Bud State Com	**MD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Well:	#4H	**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
10,044.0	0.80	302.50	10,043.7	-17.9	-32.9	531,147.96	793,916.77	32° 27' 27.097 N	103° 30' 52.018 W
10,140.0	0.50	297.60	10,139.7	-17.4	-33.9	531,148.51	793,915.83	32° 27' 27.102 N	103° 30' 52.029 W
10,235.0	1.10	184.50	10,234.6	-18.1	-34.3	531,147.80	793,915.39	32° 27' 27.095 N	103° 30' 52.034 W
10,293.0	0.90	199.70	10,292.6	-19.1	-34.5	531,146.81	793,915.19	32° 27' 27.086 N	103° 30' 52.037 W
10,359.0	0.70	208.40	10,358.6	-19.9	-34.9	531,145.97	793,914.83	32° 27' 27.077 N	103° 30' 52.041 W
KOP: 10359.0' MD, 10358.6' TVD									
10,381.0	0.50	244.50	10,380.6	-20.1	-35.0	531,145.81	793,914.68	32° 27' 27.076 N	103° 30' 52.043 W
10,406.0	2.00	341.80	10,405.6	-19.7	-35.3	531,146.18	793,914.44	32° 27' 27.079 N	103° 30' 52.046 W
10,454.0	7.10	350.00	10,453.5	-16.0	-36.0	531,149.90	793,913.66	32° 27' 27.116 N	103° 30' 52.054 W
10,501.0	12.40	351.30	10,499.8	-8.2	-37.3	531,157.75	793,912.39	32° 27' 27.194 N	103° 30' 52.068 W
10,549.0	17.80	351.10	10,546.1	4.2	-39.2	531,170.10	793,910.48	32° 27' 27.317 N	103° 30' 52.090 W
10,596.0	22.90	351.30	10,590.1	20.3	-41.7	531,186.25	793,907.98	32° 27' 27.476 N	103° 30' 52.117 W
10,644.0	27.60	352.10	10,633.5	40.6	-44.7	531,206.51	793,905.04	32° 27' 27.677 N	103° 30' 52.150 W
10,691.0	31.20	353.10	10,674.5	63.5	-47.6	531,229.38	793,902.08	32° 27' 27.904 N	103° 30' 52.182 W
10,739.0	35.30	355.90	10,714.6	89.7	-50.1	531,255.57	793,899.59	32° 27' 28.163 N	103° 30' 52.209 W
10,786.0	39.70	357.90	10,751.9	118.2	-51.6	531,284.13	793,898.07	32° 27' 28.446 N	103° 30' 52.224 W
10,816.0	42.20	358.16	10,774.6	137.9	-52.3	531,303.78	793,897.40	32° 27' 28.640 N	103° 30' 52.230 W
Cross 330' Hardline:10816.0' MD, 10774.6' TVD, 42.20° INC									
10,834.0	43.70	358.30	10,787.7	150.1	-52.7	531,316.04	793,897.02	32° 27' 28.762 N	103° 30' 52.234 W
10,881.0	47.90	356.90	10,820.5	183.8	-54.1	531,349.70	793,895.59	32° 27' 29.095 N	103° 30' 52.247 W
10,929.0	52.40	354.10	10,851.2	220.5	-57.0	531,386.41	793,892.67	32° 27' 29.458 N	103° 30' 52.278 W
10,976.0	57.70	354.90	10,878.2	258.8	-60.7	531,424.75	793,888.99	32° 27' 29.838 N	103° 30' 52.318 W
11,024.0	63.00	356.00	10,901.9	300.4	-64.0	531,466.32	793,885.69	32° 27' 30.249 N	103° 30' 52.352 W
11,071.0	67.50	356.20	10,921.6	343.0	-66.9	531,508.89	793,882.79	32° 27' 30.671 N	103° 30' 52.383 W
11,119.0	71.30	355.30	10,938.5	387.8	-70.2	531,553.69	793,879.46	32° 27' 31.114 N	103° 30' 52.417 W
11,166.0	76.60	355.20	10,951.4	432.8	-74.0	531,598.68	793,875.72	32° 27' 31.560 N	103° 30' 52.457 W
11,214.0	83.00	355.00	10,959.9	479.8	-78.0	531,645.73	793,871.69	32° 27' 32.026 N	103° 30' 52.500 W
11,244.0	85.60	356.10	10,962.9	509.6	-80.3	531,675.49	793,869.37	32° 27' 32.320 N	103° 30' 52.524 W
11,276.0	89.60	356.30	10,964.3	541.5	-82.4	531,707.38	793,867.25	32° 27' 32.636 N	103° 30' 52.546 W
11,298.0	91.04	356.37	10,964.1	563.4	-83.9	531,729.34	793,865.85	32° 27' 32.853 N	103° 30' 52.561 W
EOC: 11298.0' MD, 10964.1' TVD, 91.04° INC, 356.37° AZ, 566.9' VS									
11,308.0	91.70	356.40	10,963.9	573.4	-84.5	531,739.31	793,865.21	32° 27' 32.952 N	103° 30' 52.567 W
11,433.0	89.80	358.40	10,962.3	698.3	-90.2	531,864.16	793,859.55	32° 27' 34.188 N	103° 30' 52.622 W
11,528.0	90.80	358.20	10,961.8	793.2	-93.0	531,959.12	793,856.73	32° 27' 35.128 N	103° 30' 52.646 W
11,622.0	89.60	358.00	10,961.4	887.2	-96.1	532,053.06	793,853.61	32° 27' 36.057 N	103° 30' 52.674 W
11,717.0	90.20	358.60	10,961.6	982.1	-98.9	532,148.02	793,850.79	32° 27' 36.997 N	103° 30' 52.699 W
11,812.0	91.50	358.40	10,960.2	1,077.1	-101.4	532,242.98	793,848.31	32° 27' 37.937 N	103° 30' 52.719 W
11,907.0	90.60	357.30	10,958.4	1,172.0	-105.0	532,337.89	793,844.74	32° 27' 38.876 N	103° 30' 52.752 W
12,001.0	90.30	358.10	10,957.7	1,265.9	-108.7	532,431.81	793,840.97	32° 27' 39.806 N	103° 30' 52.788 W
12,096.0	89.80	357.60	10,957.6	1,360.8	-112.3	532,526.74	793,837.41	32° 27' 40.746 N	103° 30' 52.821 W
12,190.0	90.70	357.90	10,957.2	1,454.8	-116.0	532,620.67	793,833.72	32° 27' 41.675 N	103° 30' 52.856 W
12,285.0	90.10	357.60	10,956.6	1,549.7	-119.7	532,715.59	793,829.99	32° 27' 42.615 N	103° 30' 52.891 W
12,380.0	88.90	357.00	10,957.4	1,644.6	-124.2	532,810.48	793,825.51	32° 27' 43.554 N	103° 30' 52.935 W
12,475.0	89.30	356.90	10,958.9	1,739.4	-129.2	532,905.33	793,820.46	32° 27' 44.493 N	103° 30' 52.985 W
12,570.0	89.80	356.70	10,959.6	1,834.3	-134.5	533,000.18	793,815.16	32° 27' 45.432 N	103° 30' 53.038 W
12,664.0	91.20	356.40	10,958.8	1,928.1	-140.2	533,094.01	793,809.50	32° 27' 46.361 N	103° 30' 53.096 W
12,759.0	89.20	356.60	10,958.5	2,022.9	-146.0	533,188.82	793,803.70	32° 27' 47.299 N	103° 30' 53.155 W
12,854.0	90.20	356.70	10,959.0	2,117.8	-151.5	533,283.66	793,798.15	32° 27' 48.238 N	103° 30' 53.212 W
12,949.0	90.90	356.50	10,958.1	2,212.6	-157.2	533,378.49	793,792.51	32° 27' 49.177 N	103° 30' 53.269 W
13,043.0	89.90	357.20	10,957.4	2,306.4	-162.3	533,472.34	793,787.35	32° 27' 50.106 N	103° 30' 53.321 W
13,138.0	90.40	357.30	10,957.2	2,401.3	-166.9	533,567.23	793,782.79	32° 27' 51.045 N	103° 30' 53.365 W
13,233.0	90.80	357.40	10,956.2	2,496.2	-171.3	533,662.12	793,778.40	32° 27' 51.984 N	103° 30' 53.408 W
13,328.0	90.40	357.50	10,955.2	2,591.1	-175.5	533,757.02	793,774.17	32° 27' 52.924 N	103° 30' 53.449 W
13,423.0	90.00	357.70	10,954.8	2,686.0	-179.5	533,851.94	793,770.20	32° 27' 53.863 N	103° 30' 53.487 W
13,518.0	90.70	357.60	10,954.2	2,781.0	-183.4	533,946.86	793,766.30	32° 27' 54.803 N	103° 30' 53.524 W

YATES PETROLEUM CORPORATION

Survey Report - Geographic

Company:	Yates Petroleum	**Local Co-ordinate Reference:**	Well #4H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Site:	Juice Bud State Com	**MD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Well:	#4H	**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
13,612.0	90.10	358.60	10,953.6	2,874.9	-186.5	534,040.80	793,763.18	32° 27' 55.732 N	103° 30' 53.552 W
13,707.0	90.50	358.80	10,953.1	2,969.9	-188.7	534,135.78	793,761.03	32° 27' 56.672 N	103° 30' 53.569 W
13,802.0	90.60	359.40	10,952.2	3,064.9	-190.2	534,230.76	793,759.54	32° 27' 57.612 N	103° 30' 53.577 W
13,897.0	88.80	358.60	10,952.7	3,159.8	-191.8	534,325.74	793,757.88	32° 27' 58.552 N	103° 30' 53.588 W
13,992.0	89.30	358.50	10,954.3	3,254.8	-194.2	534,420.70	793,755.47	32° 27' 59.492 N	103° 30' 53.608 W
14,086.0	90.00	358.50	10,954.8	3,348.8	-196.7	534,514.66	793,753.01	32° 28' 0.422 N	103° 30' 53.628 W
14,178.0	91.00	358.50	10,954.0	3,440.7	-199.1	534,606.63	793,750.61	32° 28' 1.332 N	103° 30' 53.648 W
14,273.0	90.60	357.70	10,952.7	3,535.7	-202.2	534,701.56	793,747.46	32° 28' 2.272 N	103° 30' 53.676 W
14,368.0	89.90	357.10	10,952.3	3,630.6	-206.6	534,796.46	793,743.15	32° 28' 3.211 N	103° 30' 53.718 W
14,462.0	90.50	357.20	10,952.0	3,724.4	-211.2	534,890.35	793,738.47	32° 28' 4.140 N	103° 30' 53.764 W
14,557.0	90.20	357.80	10,951.4	3,819.4	-215.4	534,985.25	793,734.33	32° 28' 5.080 N	103° 30' 53.804 W
14,652.0	89.50	357.90	10,951.6	3,914.3	-218.9	535,080.19	793,730.77	32° 28' 6.019 N	103° 30' 53.837 W
14,747.0	90.00	357.80	10,952.0	4,009.2	-222.5	535,175.12	793,727.20	32° 28' 6.959 N	103° 30' 53.870 W
14,843.0	90.90	357.70	10,951.3	4,105.1	-226.3	535,271.04	793,723.43	32° 28' 7.908 N	103° 30' 53.906 W
14,938.0	90.20	357.60	10,950.4	4,200.1	-230.2	535,365.95	793,719.54	32° 28' 8.848 N	103° 30' 53.943 W
15,032.0	91.00	357.40	10,949.4	4,294.0	-234.3	535,459.86	793,715.44	32° 28' 9.777 N	103° 30' 53.982 W
15,127.0	90.70	357.00	10,948.0	4,388.8	-238.9	535,554.73	793,710.80	32° 28' 10.716 N	103° 30' 54.028 W
15,221.0	90.30	357.10	10,947.2	4,482.7	-243.7	535,648.61	793,705.96	32° 28' 11.645 N	103° 30' 54.076 W
15,316.0	90.20	357.10	10,946.7	4,577.6	-248.5	535,743.48	793,701.15	32° 28' 12.585 N	103° 30' 54.123 W
15,410.0	90.10	357.50	10,946.5	4,671.5	-253.0	535,837.38	793,696.73	32° 28' 13.514 N	103° 30' 54.167 W
15,505.0	89.50	357.70	10,946.8	4,766.4	-256.9	535,932.29	793,692.75	32° 28' 14.453 N	103° 30' 54.205 W
15,600.0	89.80	357.80	10,947.4	4,861.3	-260.7	536,027.22	793,689.02	32° 28' 15.393 N	103° 30' 54.240 W
15,695.0	89.80	357.90	10,947.7	4,956.2	-264.2	536,122.15	793,685.45	32° 28' 16.333 N	103° 30' 54.273 W
15,789.0	89.50	357.80	10,948.3	5,050.2	-267.8	536,216.08	793,681.93	32° 28' 17.262 N	103° 30' 54.306 W
15,884.0	89.90	357.40	10,948.8	5,145.1	-271.7	536,311.00	793,677.95	32° 28' 18.202 N	103° 30' 54.344 W
15,979.0	90.30	357.40	10,948.6	5,240.0	-276.1	536,405.90	793,673.64	32° 28' 19.141 N	103° 30' 54.385 W
16,068.0	91.70	357.80	10,947.1	5,328.9	-279.8	536,494.81	793,669.91	32° 28' 20.021 N	103° 30' 54.421 W
16,162.0	92.40	358.70	10,943.7	5,422.8	-282.7	536,588.70	793,667.04	32° 28' 20.950 N	103° 30' 54.446 W
16,257.0	90.90	358.70	10,941.0	5,517.7	-284.8	536,683.63	793,664.89	32° 28' 21.890 N	103° 30' 54.463 W
16,352.0	90.60	357.10	10,939.8	5,612.7	-288.3	536,778.56	793,661.41	32° 28' 22.829 N	103° 30' 54.495 W
16,446.0	89.10	357.50	10,940.0	5,706.5	-292.7	536,872.45	793,656.98	32° 28' 23.759 N	103° 30' 54.538 W
16,541.0	89.80	357.80	10,940.9	5,801.5	-296.6	536,967.37	793,653.09	32° 28' 24.698 N	103° 30' 54.575 W
16,634.0	90.20	358.20	10,940.9	5,894.4	-299.9	537,060.31	793,649.84	32° 28' 25.618 N	103° 30' 54.605 W
16,729.0	88.10	357.90	10,942.3	5,989.3	-303.1	537,155.24	793,646.61	32° 28' 26.557 N	103° 30' 54.634 W
16,824.0	89.50	358.20	10,944.3	6,084.3	-306.3	537,250.16	793,643.38	32° 28' 27.497 N	103° 30' 54.663 W
16,918.0	88.00	358.30	10,946.4	6,178.2	-309.2	537,344.09	793,640.51	32° 28' 28.427 N	103° 30' 54.688 W
17,012.0	90.10	358.90	10,947.9	6,272.1	-311.5	537,438.05	793,638.21	32° 28' 29.356 N	103° 30' 54.706 W
17,107.0	90.50	359.10	10,947.4	6,367.1	-313.1	537,533.03	793,636.55	32° 28' 30.296 N	103° 30' 54.717 W
17,202.0	90.00	359.10	10,947.0	6,462.1	-314.6	537,628.02	793,635.06	32° 28' 31.236 N	103° 30' 54.726 W
17,295.0	89.50	358.80	10,947.4	6,555.1	-316.3	537,721.00	793,633.36	32° 28' 32.157 N	103° 30' 54.738 W
17,390.0	89.50	359.10	10,948.2	6,650.1	-318.1	537,815.98	793,631.62	32° 28' 33.096 N	103° 30' 54.750 W
17,485.0	90.50	359.10	10,948.2	6,745.1	-319.6	537,910.97	793,630.12	32° 28' 34.036 N	103° 30' 54.759 W
17,580.0	90.00	359.00	10,947.8	6,840.1	-321.1	538,005.95	793,628.55	32° 28' 34.976 N	103° 30' 54.768 W
17,674.0	89.70	357.30	10,948.1	6,934.0	-324.2	538,099.90	793,625.51	32° 28' 35.906 N	103° 30' 54.795 W
17,769.0	91.60	356.70	10,947.0	7,028.9	-329.2	538,194.76	793,620.54	32° 28' 36.845 N	103° 30' 54.845 W
17,864.0	91.40	356.20	10,944.5	7,123.6	-335.0	538,289.54	793,614.66	32° 28' 37.783 N	103° 30' 54.905 W
17,958.0	91.40	356.80	10,942.2	7,217.4	-340.8	538,383.34	793,608.93	32° 28' 38.712 N	103° 30' 54.964 W
18,053.0	90.50	357.60	10,940.6	7,312.3	-345.4	538,478.21	793,604.29	32° 28' 39.651 N	103° 30' 55.009 W
Final MWD Survey: 18053.0' MD, 10940.6' TVD									
18,133.0	90.50	357.60	10,939.9	7,392.2	-348.8	538,558.14	793,600.94	32° 28' 40.442 N	103° 30' 55.041 W
BHL: 18133.0' MD, 10939.9' TVD, 90.50° INC, 357.60° AZ, 7392.2' +N/-S, -348.8' +E/-W, 7400.4' VS - PBHL(JBSC#4H) - 330TD(JBSC#4H)									

Company:	Yates Petroleum	**Local Co-ordinate Reference:**	Well #4H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Site:	Juice Bud State Com	**MD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Well:	#4H	**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 +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
10,359.0	10,358.6	-19.9	-34.9	KOP: 10359.0' MD, 10358.6' TVD
10,816.0	10,774.6	137.9	-52.3	Cross 330' Hardline:10816.0' MD, 10774.6' TVD, 42.20° INC
11,298.0	10,964.1	563.4	-83.9	EOC: 11298.0' MD, 10964.1' TVD, 91.04° INC, 356.37° AZ, 566.9' VS
18,053.0	10,940.6	7,312.3	-345.4	Final MWD Survey: 18053.0' MD, 10940.6' TVD
18,133.0	10,939.9	7,392.2	-348.8	BHL: 18133.0' MD, 10939.9' TVD, 90.50° INC, 357.60° AZ, 7392.2' +N/-S, -348.

Checked By: _____ Approved By: _____ Date: _____

Yates Petroleum

Lea County, NM (NAD-83)
Juice Bud State Com
#4H

OH
OH

Anticollision Report

26 January, 2015

YATES PETROLEUM CORPORATION

Anticollision Report

Company:	Yates Petroleum	**Local Co-ordinate Reference:**	Well #4H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Reference Site:	Juice Bud State Com	**MD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	#4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Houston R5000 Database
Reference Design:	OH	**Offset TVD Reference:**	Offset Datum

Reference OH

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum separation factor of 20.00	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Program **Date** 1/26/2015

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	1,800.0	Survey #1 - Gyros (Pilot Hole)	CB-GYRO-MS	Camera based gyro multishot
1,905.0	10,293.0	Survey #2 - Crescent MWD Surveys (Pilot	MWD	MWD - Standard
10,359.0	18,053.0	Survey #3 - Crescent MWD Surveys (OH)	MWD	MWD - Standard
18,133.0	18,133.0	Survey #4 - PTB (OH)	BLIND	Blind drilling, where no tool is applied

Summary

Site Name / Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Juice Bud State Com						
#4H - Pilot Hole - Pilot Hole	10,331.3	10,331.3	0.0	-0.1	0.204	Level 1, CC, SF
#4H - Pilot Hole - Pilot Hole	10,359.0	10,359.0	0.1	-0.1	0.358	Level 1, ES

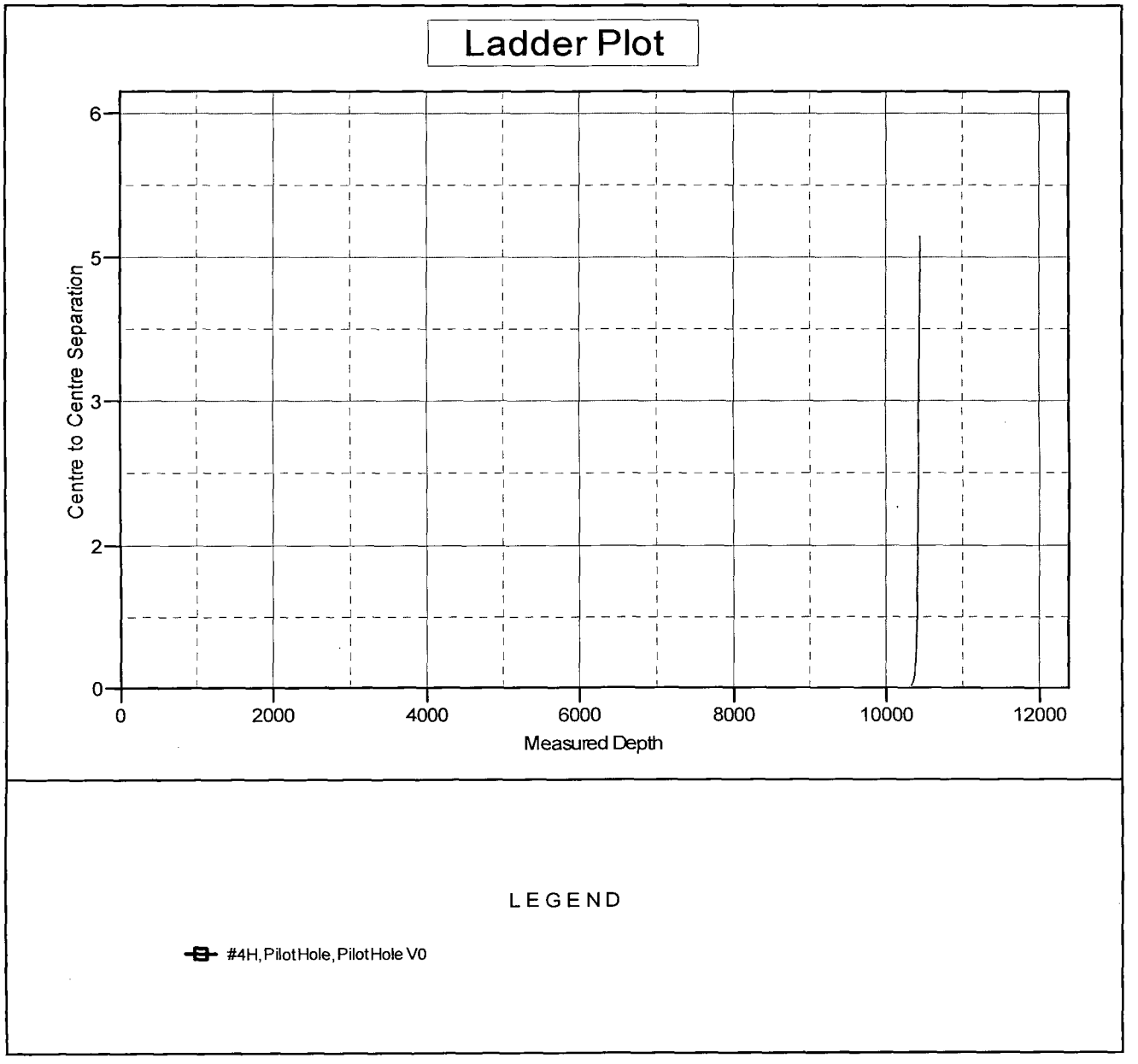
Offset Design Juice Bud State Com - #4H - Pilot Hole - Pilot Hole — **Offset Site Error:** 0.0 usft

Survey Program: 100-CB-GYRO-MS, 1905-MWD, 12150-BLIND — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,331.3	10,330.9	10,331.3	10,330.9	0.0	0.1	-143.51	-19.6	-34.7	0.0	-0.1	0.13	0.204	Level 1, CC, SF
10,359.0	10,358.6	10,359.0	10,358.6	0.1	0.1	-147.70	-19.9	-34.8	0.1	-0.1	0.22	0.358	Level 1, ES
10,381.0	10,380.6	10,381.0	10,380.6	0.1	0.1	-156.54	-20.1	-34.9	0.1	0.0	0.18	0.783	Level 1
10,406.0	10,405.6	10,406.0	10,405.6	0.1	0.2	168.97	-20.3	-35.0	0.6	0.2	0.46	1.335	Level 3
10,454.0	10,453.5	10,453.8	10,453.4	0.1	0.3	178.39	-20.6	-35.1	4.7	4.1	0.63	7.490	

Company:	Yates Petroleum	**Local Co-ordinate Reference:**	Well #4H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Reference Site:	Juice Bud State Com	**MD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	#4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Houston R5000 Database
Reference Design:	OH	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to RKB @ 3698.0usft (Cactus 124 - KB=	Coordinates are relative to: #4H
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Central Meridian is 104° 20' 0.000 W	Grid Convergence at Surface is: 0.44°



Company:	Yates Petroleum	**Local Co-ordinate Reference:**	Well #4H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Reference Site:	Juice Bud State Com	**MD Reference:**	RKB @ 3698.0usft (Cactus 124 - KB=25')
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	#4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Houston R5000 Database
Reference Design:	OH	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to RKB @ 3698.0usft (Cactus 124 - KB=

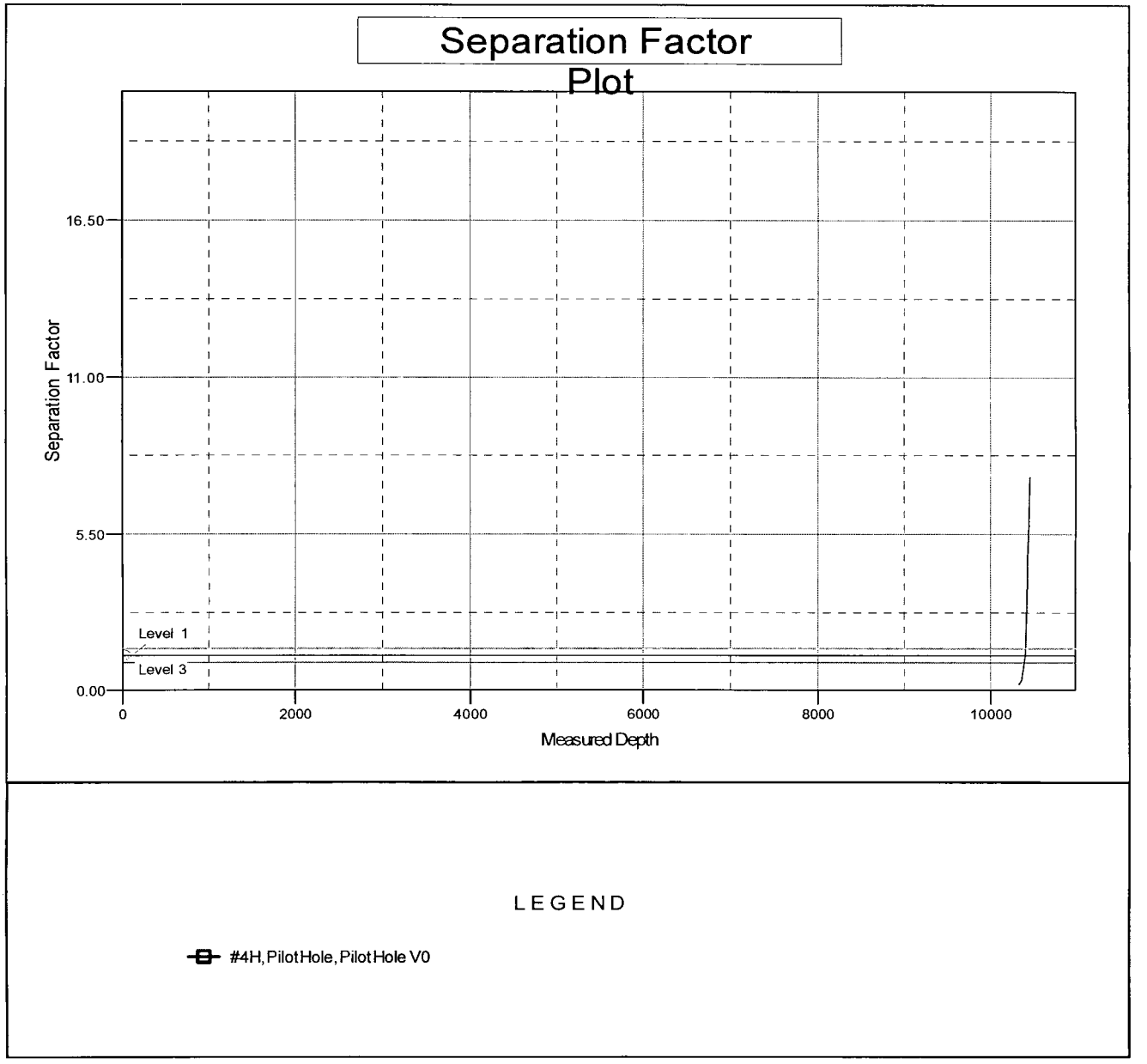
Offset Depths are relative to Offset Datum

Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: #4H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Grid Convergence at Surface is: 0.44°



CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

MS Energy Services

Job Number: SVMO-141750
Company: Yates Petroleum Corporation
Lease/Well: Juice Bud State Com 004H
Location: Lea County, NM
Rig Name: Cactus #134
RKB: 25'
G.L. or M.S.L.: GL

State/Country: New Mexico/USA
Declination: 6.72°
Grid: East To Grid North
File name: S:\2014SU~1\YATES\MO\JUICEB~1\004H.SVY
Date/Time: 02-Jan-15 / 11:28
Curve Name: Surface - 1800' M.D. (Rate Gyro)

MS SURVEY

We hereby certify that our survey data from Surface MD to 1,800' MD is, to the best of our knowledge a true and accurate account of the well bore.
Travis Pack 1/2/15
MS Energy Services Date

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 357.64
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.11	179.37	100.00	-.10	.00	-.10	.10	179.36	.11
200.00	.23	153.89	200.00	-.37	.09	-.38	.38	166.34	.14
300.00	.32	187.94	300.00	-.83	.14	-.83	.84	170.40	.18
400.00	.33	145.69	400.00	-1.34	.26	-1.35	1.37	168.88	.23
500.00	.22	47.80	500.00	-1.45	.57	-1.47	1.56	158.62	.42
600.00	.21	331.49	600.00	-1.16	.62	-1.19	1.32	151.80	.27
700.00	.14	330.05	700.00	-.90	.47	-.91	1.01	152.07	.07
800.00	.26	51.25	799.99	-.65	.59	-.67	.88	137.63	.28
900.00	.39	14.49	899.99	-.18	.85	-.21	.87	101.66	.24

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
1000.00	.40	347.86	999.99	.49	.86	.46	1.00	60.22	.18
1100.00	.44	319.43	1099.99	1.13	.54	1.10	1.25	25.65	.21
1200.00	.41	307.22	1199.99	1.64	.01	1.63	1.64	.24	.10
1300.00	.38	268.64	1299.98	1.84	-.61	1.87	1.94	341.71	.26
1400.00	.31	241.61	1399.98	1.71	-1.18	1.75	2.08	325.38	.18
1500.00	.26	221.03	1499.98	1.41	-1.57	1.47	2.11	311.96	.11
1600.00	.22	193.47	1599.98	1.05	-1.76	1.12	2.05	300.83	.12
1700.00	.07	218.97	1699.98	.82	-1.84	.89	2.02	293.88	.16
Last Survey Depth Recorded									
1800.00	.02	138.66	1799.98	.76	-1.87	.83	2.02	292.00	.07