

EOG Resources - Midland

Lea County, NM (NAD 27 NME)

Jolly Roger 16 State

#504H

OH

Design: OH

EOG PVA

20 January, 2015

HOBBSOCD

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EOG Resources, Inc.
EOG PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #504H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 24 @ 3581.0usft (H&P 328)
Site:	Jolly Roger 16 State	MD Reference:	KB = 24 @ 3581.0usft (H&P 328)
Well:	#504H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Project	Lea County, NM (NAD 27 NME)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Jolly Roger 16 State		
Site Position:		Northing:	446,370.00 usft
From:	Map	Easting:	765,216.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 13' 27.402 N
		Longitude:	103° 28' 32.531 W
		Grid Convergence:	0.46 °

Well	#504H		
Well Position	+N/-S	0.0 usft	Northing: 446,362.00 usft
	+E/-W	0.0 usft	Easting: 763,952.00 usft
Position Uncertainty		0.0 usft	Wellhead Elevation: 0.0 usft
			Latitude: 32° 13' 27.423 N
			Longitude: 103° 28' 47.245 W
			Ground Level: 3,557.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	1/7/2015	7.17
			Dip Angle (°) 60.11
			Field Strength (nT) 48,199

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)
	0.0	0.0	0.0
			Direction (°) 186.30

Survey Program	Date	1/20/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
159.0	15,311.0	MWD #1 (OH)	MWD	MWD - Standard

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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey											
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0	0.0
159.0	1.20	176.40	159.0	-1.7	0.1	0.75	0.75	0.00	-1.7	0.0	
343.0	1.50	193.30	342.9	-5.9	-0.3	0.27	0.16	9.18	-5.8	1.0	
528.0	1.50	208.90	527.9	-10.4	-2.1	0.22	0.00	8.43	-10.1	3.2	
711.0	1.50	252.80	710.8	-13.2	-5.5	0.61	0.00	23.99	-9.2	11.0	
893.0	1.30	248.80	892.8	-14.7	-9.7	0.12	-0.11	-2.20	-14.3	10.2	
1,073.0	1.40	266.90	1,072.7	-15.5	-13.8	0.24	0.06	10.06	-14.6	14.8	
1,221.0	1.70	270.60	1,220.7	-15.6	-17.8	0.21	0.20	2.50	-17.6	15.8	
1,350.0	1.50	290.90	1,349.6	-15.0	-21.3	0.46	-0.16	15.74	-14.5	21.6	
1,445.0	1.70	299.00	1,444.6	-13.8	-23.7	0.32	0.21	8.53	-14.0	23.6	
1,634.0	1.90	298.10	1,633.5	-11.0	-28.9	0.11	0.11	-0.48	-20.3	23.3	
1,824.0	1.90	295.70	1,823.4	-8.2	-34.5	0.04	0.00	-1.26	-27.6	22.3	
2,013.0	2.00	296.10	2,012.3	-5.3	-40.3	0.05	0.05	0.21	-33.8	22.5	
2,203.0	2.50	298.20	2,202.1	-1.9	-46.9	0.27	0.26	1.11	-40.4	23.9	
2,392.0	2.60	302.40	2,390.9	2.3	-54.2	0.11	0.05	2.22	-47.0	27.1	
2,582.0	2.70	307.60	2,580.7	7.4	-61.4	0.14	0.05	2.74	-53.1	31.6	
2,771.0	2.60	317.50	2,769.5	13.2	-67.8	0.25	-0.05	5.24	-55.5	41.1	
2,866.0	3.50	300.90	2,864.4	16.3	-71.7	1.32	0.95	-17.47	-69.9	22.9	
2,961.0	4.60	293.00	2,959.2	19.3	-77.7	1.30	1.16	-8.32	-79.1	12.7	
3,055.0	6.80	282.10	3,052.7	21.9	-86.6	2.60	2.34	-11.60	-89.3	-3.3	
3,150.0	7.10	280.20	3,147.0	24.1	-97.9	0.40	0.32	-2.00	-100.6	-6.5	
3,245.0	6.60	280.50	3,241.3	26.2	-109.1	0.53	-0.53	0.32	-112.0	-5.9	
3,339.0	6.40	280.00	3,334.7	28.1	-119.5	0.22	-0.21	-0.53	-122.6	-6.9	
3,434.0	6.20	281.20	3,429.1	30.0	-129.8	0.25	-0.21	1.26	-133.1	-4.2	
3,529.0	7.20	273.80	3,523.5	31.4	-140.8	1.39	1.05	-7.79	-142.5	-22.2	
3,623.0	7.30	269.50	3,616.7	31.7	-152.6	0.59	0.11	-4.57	-152.3	-33.3	
3,718.0	7.00	277.10	3,711.0	32.4	-164.4	1.04	-0.32	8.00	-167.1	-11.9	

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Survey											
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3,813.0	7.00	272.50	3,805.3	33.3	-175.9	0.59	0.00	-4.84	-177.2	-25.8	
3,907.0	6.50	279.30	3,898.6	34.5	-186.9	1.00	-0.53	7.23	-190.0	-3.8	
4,002.0	6.20	281.20	3,993.1	36.3	-197.2	0.39	-0.32	2.00	-200.5	2.7	
4,097.0	5.80	281.00	4,087.5	38.2	-207.0	0.42	-0.42	-0.21	-210.5	2.0	
4,192.0	5.70	281.20	4,182.1	40.1	-216.3	0.11	-0.11	0.21	-220.0	2.7	
4,287.0	5.50	278.10	4,276.6	41.6	-225.4	0.38	-0.21	-3.26	-229.1	-9.5	
4,381.0	5.80	286.50	4,370.2	43.6	-234.5	0.93	0.32	8.94	-237.2	24.9	
4,476.0	5.00	291.50	4,464.7	46.5	-242.9	0.98	-0.84	5.26	-243.0	45.9	
4,571.0	4.70	281.40	4,559.4	48.8	-250.6	0.95	-0.32	-10.63	-255.0	1.7	
4,666.0	6.60	271.90	4,653.9	49.7	-259.9	2.22	2.00	-10.00	-259.2	-40.9	
4,760.0	6.90	274.30	4,747.3	50.3	-270.9	0.44	0.32	2.55	-268.3	-29.3	
4,855.0	6.10	278.20	4,841.7	51.5	-281.6	0.96	-0.84	4.11	-275.3	-10.3	
4,950.0	4.90	276.10	4,936.2	52.6	-290.6	1.28	-1.26	-2.21	-277.1	-20.0	
5,044.0	5.90	276.90	5,029.8	53.6	-299.4	1.07	1.06	0.85	-277.9	-15.6	
5,139.0	6.10	277.70	5,124.3	54.9	-309.2	0.23	0.21	0.84	-278.5	-11.1	
5,304.0	5.40	279.90	5,288.5	57.4	-325.6	0.44	-0.42	1.33	-278.4	0.0	
5,399.0	5.60	280.00	5,383.0	59.0	-334.5	0.21	0.21	0.11	-277.9	0.6	
5,494.0	5.90	280.40	5,477.5	60.7	-343.9	0.32	0.32	0.42	-277.8	2.6	
5,589.0	6.20	276.30	5,572.0	62.1	-353.8	0.55	0.32	-4.32	-277.6	-16.8	
5,683.0	6.20	276.10	5,665.5	63.2	-363.9	0.02	0.00	-0.21	-278.2	-17.0	
5,778.0	6.20	274.20	5,759.9	64.1	-374.1	0.22	0.00	-2.00	-278.2	-25.3	
5,873.0	6.10	290.50	5,854.4	66.3	-384.0	1.83	-0.11	17.16	-274.6	53.1	
5,968.0	6.40	291.80	5,948.8	70.0	-393.6	0.35	0.32	1.37	-274.3	57.6	
6,062.0	7.00	289.20	6,042.2	73.8	-403.9	0.72	0.64	-2.77	-278.1	43.5	
6,157.0	6.70	285.80	6,136.5	77.2	-414.7	0.53	-0.32	-3.58	-281.9	25.7	
6,252.0	6.60	284.90	6,230.8	80.2	-425.3	0.15	-0.11	-0.95	-283.7	20.5	
6,346.0	6.40	283.70	6,324.2	82.8	-435.6	0.26	-0.21	-1.28	-285.2	14.0	

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6,441.0	6.40	283.00	6,418.6	85.2	-445.9	0.08	0.00	-0.74	-286.3	10.0	
6,536.0	6.50	282.30	6,513.0	87.6	-456.3	0.13	0.11	-0.74	-287.4	6.2	
6,631.0	6.70	280.70	6,607.4	89.7	-467.0	0.29	0.21	-1.68	-288.7	-2.0	
6,725.0	6.90	281.00	6,700.8	91.8	-478.0	0.22	0.21	0.32	-290.3	-0.5	
6,820.0	7.00	278.20	6,795.1	93.8	-489.3	0.37	0.11	-2.95	-291.8	-14.5	
6,915.0	6.10	278.50	6,889.4	95.3	-500.0	0.95	-0.95	0.32	-293.1	-12.6	
7,009.0	5.50	278.10	6,983.0	96.7	-509.4	0.64	-0.64	-0.43	-293.0	-14.3	
7,104.0	5.40	277.00	7,077.5	97.9	-518.3	0.15	-0.11	-1.16	-292.0	-19.4	
7,199.0	4.20	288.00	7,172.2	99.5	-526.1	1.59	-1.26	11.58	-288.7	36.0	
7,294.0	4.00	291.30	7,266.9	101.8	-532.5	0.33	-0.21	3.47	-283.5	50.9	
7,388.0	3.90	291.80	7,360.7	104.2	-538.5	0.11	-0.11	0.53	-280.1	51.5	
7,483.0	3.70	284.40	7,455.5	106.1	-544.5	0.56	-0.21	-7.79	-281.0	14.1	
7,578.0	4.00	280.90	7,550.3	107.5	-550.7	0.40	0.32	-3.68	-278.1	-3.2	
7,673.0	3.10	282.20	7,645.1	108.7	-556.5	0.95	-0.95	1.37	-274.3	2.9	
7,767.0	2.30	272.40	7,739.0	109.3	-560.8	0.98	-0.85	-10.43	-265.8	-42.8	
7,862.0	2.20	259.20	7,833.9	109.0	-564.5	0.55	-0.11	-13.89	-243.7	-99.1	
7,957.0	2.20	259.40	7,928.9	108.4	-568.1	0.01	0.00	0.21	-238.7	-94.8	
8,052.0	1.20	226.50	8,023.8	107.3	-570.6	1.43	-1.05	-34.63	-145.9	-202.3	
8,146.0	1.00	235.90	8,117.8	106.2	-572.0	0.29	-0.21	10.00	-171.9	-169.0	
8,241.0	1.30	233.90	8,212.8	105.1	-573.6	0.32	0.32	-2.11	-161.2	-167.9	
8,336.0	1.30	229.50	8,307.8	103.8	-575.3	0.11	0.00	-4.63	-144.0	-172.3	
8,431.0	1.00	243.80	8,402.8	102.7	-576.8	0.43	-0.32	15.05	-176.1	-125.5	
8,525.0	1.40	240.10	8,496.7	101.8	-578.6	0.43	0.43	-3.94	-162.4	-130.4	
8,620.0	1.30	259.30	8,591.7	101.0	-580.6	0.49	-0.11	20.21	-189.4	-86.0	
8,715.0	1.00	260.30	8,686.7	100.7	-582.5	0.32	-0.32	1.05	-183.3	-59.3	
8,810.0	0.10	150.50	8,781.7	100.4	-583.3	1.09	-0.95	-115.58	112.0	-145.7	
8,904.0	0.30	23.00	8,875.7	100.6	-583.1	0.39	0.21	-135.64	45.1	168.2	

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8,999.0	0.30	288.20	8,970.7	100.9	-583.3	0.46	0.00	-99.79	-162.0	29.4	
9,093.0	0.20	251.40	9,064.7	100.9	-583.7	0.20	-0.11	-39.15	-139.4	-69.0	
9,188.0	0.80	282.20	9,159.7	101.0	-584.5	0.67	0.63	32.42	-146.2	11.9	
9,283.0	0.50	265.50	9,254.7	101.1	-585.5	0.37	-0.32	-17.58	-135.2	-28.3	
9,378.0	1.00	225.50	9,349.7	100.5	-586.5	0.73	0.53	-42.11	-81.1	-100.8	
9,472.0	1.80	228.10	9,443.6	98.9	-588.2	0.85	0.85	2.77	-82.2	-89.4	
9,567.0	2.40	224.20	9,538.6	96.5	-590.7	0.65	0.63	-4.11	-74.1	-86.8	
9,662.0	2.10	220.10	9,633.5	93.8	-593.2	0.36	-0.32	-4.32	-66.6	-83.6	
9,756.0	2.10	210.50	9,727.4	91.0	-595.2	0.37	0.00	-10.21	-51.9	-84.8	
9,851.0	2.00	201.10	9,822.4	87.9	-596.7	0.37	-0.11	-9.89	-39.0	-83.0	
9,946.0	2.20	210.30	9,917.3	84.8	-598.2	0.41	0.21	9.68	-51.9	-66.3	
10,048.0	3.90	213.00	10,019.2	80.2	-601.1	1.67	1.67	2.65	-56.4	-54.1	
10,095.0	10.50	195.50	10,065.8	74.7	-603.1	14.64	14.04	-37.23	-43.1	-64.2	
10,142.0	17.60	192.50	10,111.3	63.6	-605.8	15.18	15.11	-6.38	-50.3	-62.3	
10,189.0	27.10	191.70	10,154.8	46.2	-609.5	20.22	20.21	-1.70	-65.6	-60.3	
10,237.0	32.60	188.90	10,196.4	22.7	-613.7	11.82	11.46	-5.83	-83.2	-60.5	
10,284.0	34.20	183.80	10,235.6	-3.0	-616.6	6.87	3.40	-10.85	-97.3	-63.7	
10,332.0	36.70	179.80	10,274.7	-30.8	-617.4	7.10	5.21	-8.33	-109.6	-64.8	
10,379.0	38.10	179.20	10,312.1	-59.4	-617.2	3.08	2.98	-1.28	-121.2	-59.7	
10,427.0	37.80	180.40	10,349.9	-88.9	-617.1	1.66	-0.62	2.50	-128.6	-51.8	
10,474.0	43.60	177.50	10,385.5	-119.5	-616.5	12.98	12.34	-6.17	-128.7	-51.3	
10,521.0	49.70	175.90	10,417.8	-153.6	-614.5	13.21	12.98	-3.40	-128.7	-47.1	
10,558.9	54.86	175.98	10,441.0	-183.5	-612.3	13.62	13.62	0.22	-128.6	-41.5	
HL Crossing, MD:10558.9', TVD:10441.0', N/S:-183.5', E/W:-612.3', INC:54.86											
10,568.0	56.10	176.00	10,446.1	-191.0	-611.8	13.62	13.62	0.20	-128.4	-40.2	
10,616.0	59.70	177.10	10,471.6	-231.6	-609.4	7.75	7.50	2.29	-125.9	-33.3	
10,663.0	61.70	178.20	10,494.6	-272.5	-607.7	4.72	4.26	2.34	-119.2	-28.9	

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10,711.0	63.60	178.40	10,516.7	-315.1	-606.4	3.98	3.96	0.42	-107.6	-26.7
10,758.0	67.30	178.90	10,536.2	-357.9	-605.4	7.93	7.87	1.06	-92.8	-25.5
10,805.0	72.00	178.10	10,552.5	-401.9	-604.3	10.13	10.00	-1.70	-77.2	-24.3
10,852.0	77.10	176.60	10,565.0	-447.1	-602.2	11.28	10.85	-3.19	-65.0	-22.1
10,900.0	79.20	176.10	10,574.9	-494.0	-599.2	4.49	4.37	-1.04	-55.5	-19.3
10,947.0	80.90	176.40	10,583.0	-540.2	-596.2	3.67	3.62	0.64	-47.6	-16.5
10,994.0	81.10	176.40	10,590.4	-586.5	-593.2	0.43	0.43	0.00	-40.5	-14.0
11,042.0	82.50	177.00	10,597.2	-634.0	-590.5	3.17	2.92	1.25	-33.8	-11.6
11,090.0	86.30	178.20	10,601.9	-681.7	-588.5	8.30	7.92	2.50	-29.4	-10.0
11,191.0	92.80	179.80	10,602.7	-782.6	-586.7	6.63	6.44	1.58	-29.1	-9.1
11,286.0	91.60	180.20	10,599.1	-877.5	-586.7	1.33	-1.26	0.42	-33.1	-9.9
11,380.0	89.50	180.40	10,598.2	-971.5	-587.2	2.24	-2.23	0.21	-34.5	-11.3
11,475.0	87.30	181.50	10,600.8	-1,066.5	-588.8	2.59	-2.32	1.16	-32.2	-13.7
11,570.0	86.20	182.20	10,606.2	-1,161.3	-591.9	1.37	-1.16	0.74	-27.3	-17.6
11,664.0	86.90	180.20	10,611.8	-1,255.1	-593.8	2.25	0.74	-2.13	-22.0	-20.4
11,759.0	88.00	179.80	10,616.1	-1,350.0	-593.8	1.23	1.16	-0.42	-18.2	-21.2
11,854.0	89.10	178.70	10,618.5	-1,444.9	-592.6	1.64	1.16	-1.16	-16.3	-20.8
11,948.0	88.90	179.10	10,620.1	-1,538.9	-590.8	0.48	-0.21	0.43	-15.0	-19.9
12,043.0	90.20	179.90	10,620.9	-1,633.9	-590.0	1.61	1.37	0.84	-14.7	-19.9
12,138.0	91.50	179.80	10,619.5	-1,728.9	-589.7	1.37	1.37	-0.11	-16.5	-20.5
12,232.0	92.20	179.90	10,616.4	-1,822.8	-589.5	0.75	0.74	0.11	-20.0	-21.1
12,327.0	90.10	180.30	10,614.5	-1,917.8	-589.6	2.25	-2.21	0.42	-22.3	-22.1
12,422.0	90.70	180.60	10,613.9	-2,012.8	-590.4	0.71	0.63	0.32	-23.6	-23.7
12,517.0	91.40	179.70	10,612.1	-2,107.8	-590.6	1.20	0.74	-0.95	-25.9	-24.8
12,611.0	91.10	179.60	10,610.1	-2,201.8	-590.1	0.34	-0.32	-0.11	-28.6	-25.0
12,706.0	90.80	178.20	10,608.5	-2,296.7	-588.2	1.51	-0.32	-1.47	-30.8	-24.0
12,801.0	88.20	174.50	10,609.3	-2,391.5	-582.2	4.76	-2.74	-3.89	-30.6	-18.8

EOG Resources, Inc.
EOG PVA

Company: EOG Resources - Midland			Local Co-ordinate Reference: Well #504H		
Project: Lea County, NM (NAD 27 NME)			TVD Reference: KB = 24 @ 3581.0usft (H&P 328)		
Site: Jolly Roger 16 State			MD Reference: KB = 24 @ 3581.0usft (H&P 328)		
Well: #504H			North Reference: Grid		
Wellbore: OH			Survey Calculation Method: Minimum Curvature		
Design: OH			Database: EDM 5000.1 Single User Db		

Survey										
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
12,895.0	90.60	175.30	10,610.3	-2,485.1	-573.8	2.69	2.55	0.85	-30.2	-11.3
12,990.0	88.00	176.10	10,611.5	-2,579.8	-566.7	2.86	-2.74	0.84	-29.7	-5.0
13,085.0	87.50	176.10	10,615.2	-2,674.5	-560.3	0.53	-0.53	0.00	-26.6	0.6
13,180.0	87.70	176.90	10,619.2	-2,769.3	-554.5	0.87	0.21	0.84	-23.3	5.5
13,274.0	88.70	177.60	10,622.1	-2,863.1	-549.9	1.30	1.06	0.74	-20.9	9.2
13,369.0	87.50	177.60	10,625.3	-2,958.0	-546.0	1.26	-1.26	0.00	-18.4	12.3
13,464.0	89.10	178.20	10,628.1	-3,052.9	-542.5	1.80	1.68	0.63	-16.2	15.0
13,559.0	88.60	178.70	10,630.0	-3,147.8	-539.9	0.74	-0.53	0.53	-14.9	16.7
13,654.0	90.20	179.70	10,631.0	-3,242.8	-538.6	1.99	1.68	1.05	-14.6	17.2
13,749.0	91.10	179.90	10,629.9	-3,337.8	-538.3	0.97	0.95	0.21	-16.3	16.7
13,843.0	92.10	179.80	10,627.3	-3,431.8	-538.0	1.07	1.06	-0.11	-19.5	16.1
13,938.0	88.80	179.80	10,626.5	-3,526.7	-537.7	3.47	-3.47	0.00	-20.7	15.6
14,033.0	88.20	181.50	10,629.0	-3,621.7	-538.8	1.90	-0.63	1.79	-18.5	13.6
14,128.0	88.40	181.20	10,631.8	-3,716.6	-541.0	0.38	0.21	-0.32	-16.1	10.5
14,223.0	89.10	180.00	10,633.9	-3,811.6	-542.0	1.46	0.74	-1.26	-14.3	8.7
14,318.0	88.40	179.30	10,636.0	-3,906.6	-541.4	1.04	-0.74	-0.74	-12.6	8.4
14,412.0	86.70	178.40	10,640.0	-4,000.5	-539.5	2.05	-1.81	-0.96	-8.9	9.5
14,507.0	87.50	178.60	10,644.8	-4,095.3	-537.1	0.87	0.84	0.21	-4.4	11.1
14,602.0	88.80	179.80	10,647.9	-4,190.2	-535.7	1.86	1.37	1.26	-1.7	11.6
14,697.0	90.20	179.40	10,648.7	-4,285.2	-535.1	1.53	1.47	-0.42	-1.2	11.4
14,791.0	91.50	179.10	10,647.3	-4,379.2	-533.8	1.42	1.38	-0.32	-2.9	11.8
14,886.0	90.50	178.20	10,645.7	-4,474.2	-531.6	1.42	-1.05	-0.95	-4.9	13.2
14,981.0	90.80	178.20	10,644.6	-4,569.1	-528.6	0.32	0.32	0.00	-6.3	15.4
15,076.0	93.10	179.50	10,641.3	-4,664.0	-526.7	2.78	2.42	1.37	-9.8	16.4
15,171.0	92.20	179.50	10,637.0	-4,758.9	-525.9	0.95	-0.95	0.00	-14.5	16.4
Last MWD Survey										

EOG Resources, Inc.

EOG PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #504H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 24 @ 3581.0usft (H&P 328)
Site:	Jolly Roger 16 State	MD Reference:	KB = 24 @ 3581.0usft (H&P 328)
Well:	#504H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey										
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
15,213.8	92.20	179.50	10,635.3	-4,801.7	-525.5	0.00	0.00	0.00	-16.3	16.4
HL Crossing, MD:15213.8', TVD:10635.3', N/S:-4801.7', E/W:-525.5', INC:92.20										
15,311.0	92.20	179.50	10,631.6	-4,898.8	-524.7	0.00	0.00	0.00	-20.4	16.4
Projection To Bit										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,558.9	10,441.0	-183.5	-612.3	HL Crossing, MD:10558.9', TVD:10441.0', N/S:-183.5', E/W:-612.3', INC:54.86
15,171.0	10,637.0	-4,758.9	-525.9	Last MWD Survey
15,213.8	10,635.3	-4,801.7	-525.5	HL Crossing, MD:15213.8', TVD:10635.3', N/S:-4801.7', E/W:-525.5', INC:92.20
15,311.0	10,631.6	-4,898.8	-524.7	Projection To Bit

Checked By: _____	Approved By: _____	Date: _____
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Lea County, NM (NAD 27 NME)
Jolly Roger 16 State #504H
H&P 328
Plan #5

PROJECT DETAILS: Lea County, NM (NAD 27 NME)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

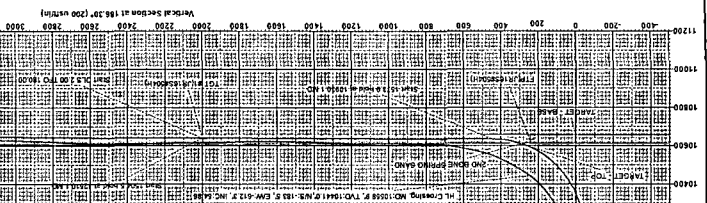
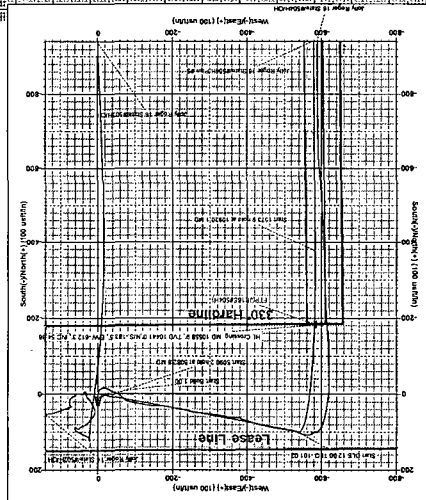
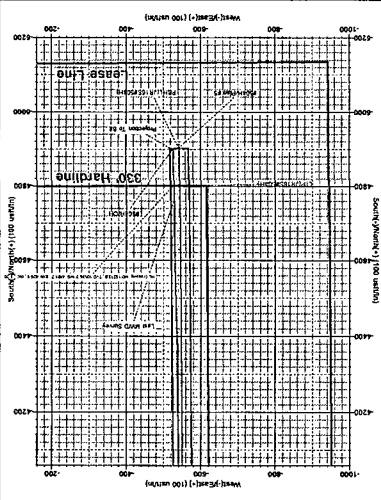
WELL DETAILS: #504H
Ground Level: 3557.0
KB = 24 @ 3581 Bush (H&P 328)
Easting: 75392.00
Latitude: 32° 13' 27.423" N
Longitude: 107° 28' 47.245" W

Atimuths to Grid North
True North: 0.45°
Magnetic North: 0.72°
Strength: 48185 Gauss
Date: 1/17/2015
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 0.72°
To convert a True Direction to a Grid Direction, Subtract 0.45°

SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N/S	+E/W	Dip	Face	Vsect	Target	
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	4500.0	0.0	0.0	4500.0	0.0	0.0	0.0	0.0	0.0		
3	5082.8	5.83	280.54	5081.8	-29.1	1.00	280.54	-2.2	0.0		
4	10172.9	5.83	280.54	10145.6	-57.7	1.00	280.54	-40.5	0.0		
5	10930.1	89.74	179.49	10630.0	-375.7	12.00	-101.02	437.2	0.0		
6	12504.0	89.74	179.49	10637.0	-1949.5	0.00	0.00	2000.0	0.0		
7	12510.1	89.62	179.49	10637.0	-1956.6	0.00	0.00	2006.1	0.0		
8	14014.7	89.62	179.49	10647.0	-3460.1	0.00	0.00	3500.0	0.0		
9	14023.7	89.80	179.49	10647.0	-3469.2	0.00	0.00	3509.0	0.0		
10	15456.6	89.80	179.49	10652.0	-541.0	0.00	0.00	4931.8	0.0		

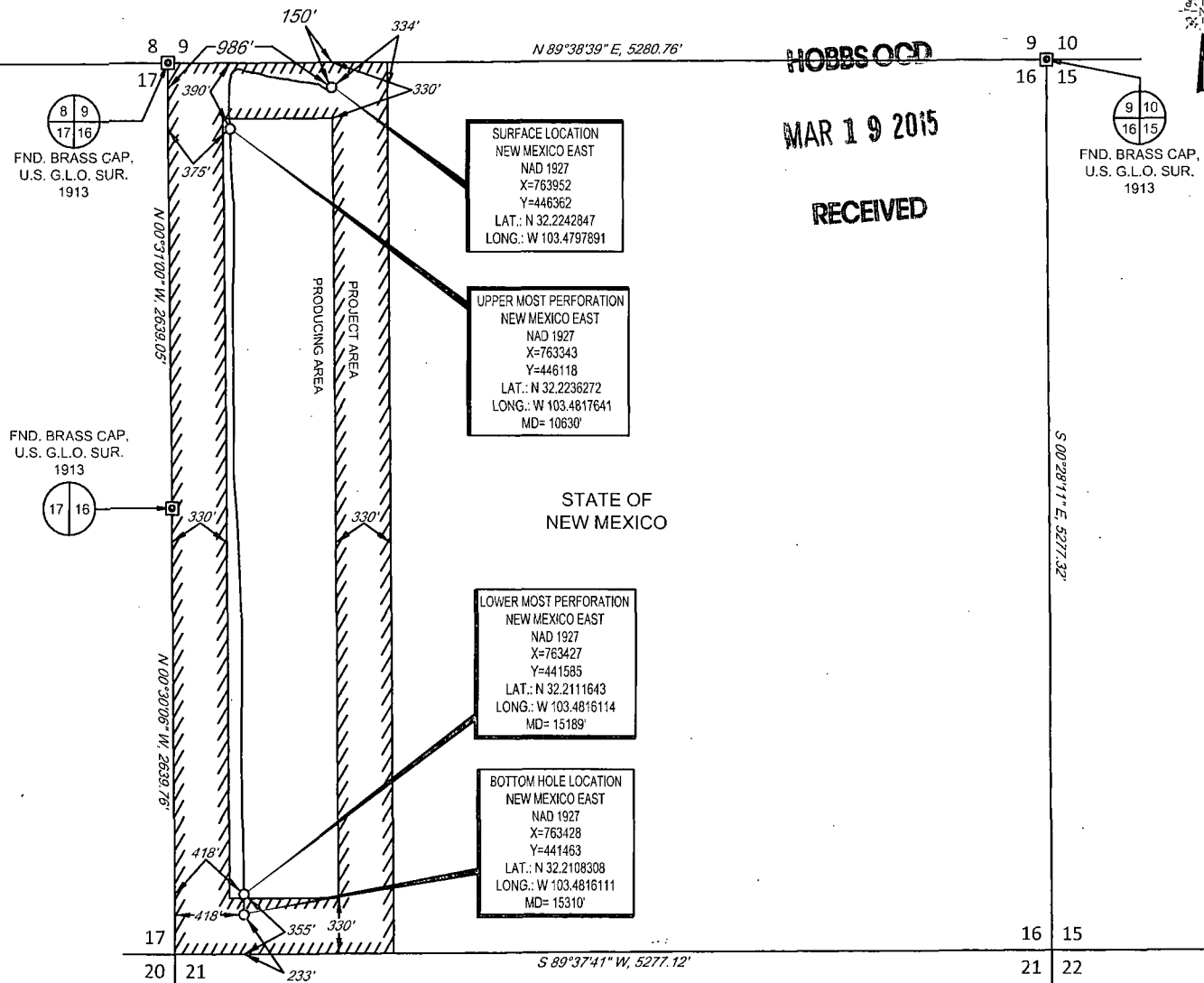
WELLBORE TARGET DETAILS (MAP COORDINATES)											
Name	FTPLR16S#504H	TGT #1 (JRLR16S#504H)	TGT #2 (JRLR16S#504H)	PBHL (JRLR16S#504H)	FTPLR16S#504H	FTPLR16S#504H	FTPLR16S#504H	FTPLR16S#504H	FTPLR16S#504H	FTPLR16S#504H	FTPLR16S#504H
Easting	753410.00	753410.00	753410.00	753410.00	753410.00	753410.00	753410.00	753410.00	753410.00	753410.00	753410.00
Latitude	32° 13' 27.423" N	32° 13' 27.423" N	32° 13' 27.423" N	32° 13' 27.423" N	32° 13' 27.423" N	32° 13' 27.423" N	32° 13' 27.423" N	32° 13' 27.423" N	32° 13' 27.423" N	32° 13' 27.423" N	32° 13' 27.423" N



SCALE: 1" = 1000'

0' 500' 1000'

SECTION 16, TOWNSHIP 24 SOUTH, RANGE 34 EAST, N.M.P.M.
LEA COUNTY, NEW MEXICO



HOBBS OGD

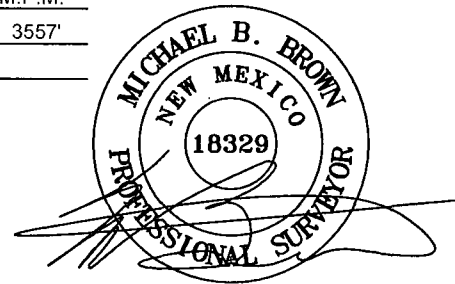
MAR 19 2015

RECEIVED

LEASE NAME & WELL NO.: JOLLY ROGER 16 STATE #504H
SECTION 16 TWP. 24-S RGE 34-E SURVEY N.M.P.M.
COUNTY LEA STATE NM ELEVATION 3557'
DESCRIPTION 150' FNL & 986' FWL



1400 EVERMAN PARKWAY, Ste. 197 - FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 - FAX (817) 744-7548
2903 NORTH BIG SPRING - MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 - FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM



Michael Blake Brown, P.S. No. 18329
FEBRUARY 10, 2015



JOLLY ROGER 16 STATE #504H AD-COMPLETED	REVISION:	
	INT	DATE
DATE: 02/10/15		
FILE: AD_JOLLYROGER16STATE_504H		
DRAWN BY: G.J.U.		
SHEET: 1 OF 1		

NOTES:

1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.