



HOBBS OCD

SEP 25 2019

RECEIVED

EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Savage 2 State Com

#504H

OH

Design: OH

Midland PVA

29 April, 2019



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #504H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3545.0usft
Site:	Savage 2 State Com	MD Reference:	KB = 25' @ 3545.0usft
Well:	#504H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Project	Lea County, NM (NAD 83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Savage 2 State Com		
Site Position:		Northing:	424,489.00 usft
From:	Map	Easting:	751,845.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 9' 54.412 N
		Longitude:	103° 39' 10.929 W
		Grid Convergence:	0.38 "

Well	#504H					
Well Position	+N-S	0.0 usft	Northing:	424,590.00 usft	Latitude:	32° 9' 55.533 N
	+E-W	0.0 usft	Easting:	753,055.00 usft	Longitude:	103° 38' 56.843 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,520.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2015	2/21/2019	(°)	(°)	(nT)
			8.80	59.97	47,721.07848844

Design	OH			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N-S	+E-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	174.38

Survey Program		Date 4/29/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
173.0	15,780.0	Lean MWD (OH)	MWD	OWSG MWD - Standard



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Savage 2 State Com
 Well: #504H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #504H
 TVD Reference: KB = 25' @ 3545.0usft
 MD Reference: KB = 25' @ 3545.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey

MD (usft)	Inc (")	Azi (azimuth) (°)	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
173.0	0.90	39.00	173.0	1.1	0.9	0.52	0.52	0.00	-1.4	0.0
202.0	0.80	204.60	202.0	1.1	0.9	5.13	-1.03	571.03	1.4	0.4
348.0	0.70	210.20	348.0	-0.4	0.2	0.08	0.07	3.84	-0.2	0.3
529.0	0.80	255.80	529.0	-1.6	-1.6	0.33	0.06	25.19	-2.0	1.2
685.0	0.90	242.60	685.0	-2.5	-3.8	0.14	0.06	-8.46	-4.5	0.5
873.0	1.30	247.10	872.9	-4.0	-7.0	0.22	0.21	2.39	-8.0	0.9
967.0	1.90	235.00	966.9	-5.3	-9.3	0.73	0.64	-12.87	-10.6	-1.0
1,060.0	1.60	237.50	1,059.8	-6.9	-11.6	0.33	-0.32	2.69	-13.5	-0.5
1,154.0	0.40	48.20	1,153.8	-7.4	-12.5	2.12	-1.28	181.60	16.1	2.7
1,247.0	2.00	53.80	1,246.8	-8.2	-11.0	1.72	1.72	6.02	19.1	0.2
1,341.0	4.00	53.80	1,340.7	-3.3	-7.0	2.13	2.13	0.00	22.0	-1.4
1,434.0	5.90	61.90	1,433.3	0.9	-0.2	2.17	2.04	8.71	22.8	-7.2
1,527.0	7.70	62.20	1,525.7	8.1	9.6	1.94	1.94	0.32	21.1	-10.7
1,621.0	8.50	60.30	1,618.7	12.4	21.2	0.90	0.85	-2.02	17.7	-13.2
1,715.0	8.30	50.10	1,711.7	20.2	32.4	1.60	-0.21	-10.85	15.9	-12.5
1,809.0	8.40	42.80	1,804.7	29.6	42.3	1.12	0.11	-7.66	13.7	-11.3
1,997.0	7.90	40.10	1,990.8	49.5	60.0	0.34	-0.27	-1.49	7.5	-10.5
2,090.0	7.70	40.20	2,083.0	59.2	68.1	0.22	-0.22	0.11	4.7	-10.1
2,184.0	8.30	43.60	2,178.1	68.9	76.8	0.81	0.64	3.62	1.0	-10.2
2,278.0	8.30	45.70	2,269.1	78.6	86.4	0.32	0.00	2.23	-3.0	-10.5
2,372.0	8.00	48.20	2,362.1	87.8	96.0	0.33	-0.32	0.53	-6.5	-11.1
2,466.0	7.70	48.00	2,455.2	98.7	105.2	0.32	-0.32	-0.21	-9.4	-11.7
2,559.0	7.30	48.70	2,547.4	105.1	114.0	0.44	-0.43	0.75	-11.8	-12.3
2,653.0	6.90	48.70	2,640.7	113.1	122.4	0.43	-0.43	0.00	-13.5	-13.0
2,746.0	6.70	46.40	2,733.1	120.7	130.4	0.22	-0.22	-0.32	-14.6	-13.8
2,840.0	6.40	47.30	2,826.5	128.0	138.3	0.34	-0.32	0.96	-15.6	-14.3



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Savage 2 State Com
 Well: #504H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #504H
 TVD Reference: KB = 25' @ 3545.0usft
 MD Reference: KB = 25' @ 3545.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
2,934.0	6.10	47.10	2,919.9	134.9	145.8	0.32	-0.32	-0.21	-15.8	-15.2
3,121.0	5.50	49.20	3,105.9	147.6	159.8	0.34	-0.32	1.12	-15.6	-16.6
3,215.0	5.50	50.30	3,199.5	153.4	186.7	0.11	0.00	1.17	-15.0	-17.5
3,309.0	5.30	40.20	3,293.1	159.6	173.0	1.03	-0.21	-10.74	-10.5	-20.3
3,403.0	5.50	33.40	3,386.7	166.7	176.3	0.71	0.21	-7.23	-7.0	-20.3
3,497.0	4.70	32.50	3,480.3	173.7	182.8	0.86	-0.85	-0.96	-5.2	-18.8
3,590.0	5.50	38.90	3,572.9	180.4	187.5	0.98	0.88	4.73	-5.0	-17.1
3,684.0	6.50	42.50	3,666.4	188.0	193.8	1.23	1.08	5.98	-6.5	-16.1
3,777.0	6.10	41.80	3,758.9	195.5	200.7	0.44	-0.43	-0.75	-6.6	-16.1
3,871.0	6.60	40.80	3,852.3	203.3	207.5	0.54	0.53	-1.06	-6.8	-16.0
3,965.0	6.70	42.00	3,945.6	211.5	214.7	0.18	0.11	1.28	-8.0	-15.6
4,152.0	5.90	49.00	4,131.5	225.9	229.3	0.59	-0.43	3.74	-10.6	-15.5
4,246.0	5.80	52.20	4,225.0	232.0	236.7	0.36	-0.11	3.40	-11.2	-16.3
4,339.0	5.40	56.10	4,317.6	237.3	244.0	0.59	-0.43	4.19	-11.7	-17.5
4,434.0	5.20	64.30	4,412.2	241.7	251.6	0.82	-0.21	8.63	-13.4	-18.8
4,527.0	5.20	69.60	4,504.8	245.0	259.4	0.52	0.00	5.70	-14.7	-21.6
4,621.0	5.30	76.50	4,598.4	247.5	267.6	0.68	0.11	7.34	-17.5	-24.7
4,715.0	4.70	77.30	4,692.0	249.3	275.6	0.64	-0.64	0.85	-17.8	-30.1
4,795.0	4.00	65.00	4,771.8	251.2	281.3	1.45	-0.87	-15.37	-9.2	-37.2
4,889.0	5.60	53.10	4,865.5	255.4	287.9	2.00	1.70	-12.68	0.7	-40.8
4,982.0	6.20	34.80	4,958.0	262.2	294.4	2.11	0.65	-19.68	13.8	-38.6
5,076.0	7.60	48.70	5,051.3	270.5	302.0	2.31	1.49	14.79	3.0	-40.7
5,170.0	8.30	56.40	5,144.4	278.4	312.3	1.35	0.74	8.19	-5.7	-42.3
5,264.0	9.60	42.40	5,237.3	287.9	323.3	2.69	1.38	-14.89	0.1	-44.0
5,358.0	9.20	37.60	5,330.0	299.6	333.1	0.94	-0.43	-5.11	-1.7	-43.7
5,452.0	9.20	33.40	5,422.8	311.9	341.9	0.71	0.00	-4.47	-3.7	-42.7
5,545.0	9.10	38.90	5,514.6	324.0	350.4	0.61	-0.11	3.76	-11.3	-41.0



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Savage 2 State Com
 Well: #504H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #504H
 TVD Reference: KB = 25' @ 3545.0usft
 MD Reference: KB = 25' @ 3545.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey

MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	N/S (usft)	E/W (usft)	DLeg ("/100usft)	Buld ("/100usft)	Turn ("/100usft)	High to Plan (usft)	Right to Plan (usft)
5,639.0	8.50	37.40	5,607.5	335.4	359.0	0.64	-0.64	0.53	-16.1	-39.9
5,733.0	6.90	37.30	5,700.7	345.4	366.7	1.70	-1.70	-0.11	-18.7	-39.1
5,920.0	7.70	38.80	5,886.2	364.1	381.3	0.44	0.43	0.80	-23.7	-37.0
6,013.0	7.40	34.40	5,978.4	373.9	386.6	0.70	-0.32	-4.73	-23.2	-37.8
6,107.0	7.30	34.80	6,071.6	383.8	395.5	0.12	-0.11	0.43	-25.6	-36.2
6,200.0	6.90	25.10	6,163.9	393.7	401.2	1.36	-0.43	-10.43	-21.2	-38.1
6,294.0	5.80	25.50	6,257.3	403.1	405.6	1.17	-1.17	0.43	-22.3	-35.0
6,387.0	6.20	41.10	6,349.8	411.2	411.0	1.80	0.43	16.77	-30.5	-26.2
6,481.0	5.00	40.20	6,443.3	418.1	416.9	1.28	-1.28	-0.96	-29.3	-28.4
6,574.0	6.80	35.70	6,535.8	425.7	422.8	2.00	1.94	-4.84	-26.9	-27.8
6,668.0	6.20	36.00	6,629.2	434.3	429.0	0.64	-0.64	0.32	-27.8	-26.5
6,762.0	5.50	28.10	6,722.8	442.4	434.1	1.13	-0.74	-8.40	-23.8	-28.2
6,856.0	5.80	33.00	6,816.3	450.4	438.8	0.60	0.32	5.21	-25.5	-24.1
6,949.0	2.70	59.80	6,909.0	455.4	443.3	3.87	-3.33	28.82	-30.5	-10.9
7,042.0	1.80	156.10	7,002.0	455.2	445.8	3.66	-0.97	103.55	-12.0	26.2
7,136.0	1.90	202.00	7,095.9	452.4	445.8	1.54	0.11	46.83	3.0	26.1
7,324.0	1.80	175.90	7,283.9	446.9	444.8	0.45	-0.16	-13.88	-15.7	21.7
7,511.0	1.50	186.70	7,470.8	441.8	444.7	0.16	-0.05	5.78	-16.4	24.8
7,605.0	1.30	179.80	7,564.8	439.5	444.6	0.28	-0.21	-7.34	-21.5	22.5
7,698.0	1.50	189.30	7,657.7	437.3	444.4	0.33	0.22	10.22	-19.8	25.9
7,791.0	1.80	177.40	7,750.7	434.6	444.2	0.49	0.32	-12.80	-27.4	21.0
7,885.0	1.80	169.40	7,844.7	431.7	444.6	0.27	0.00	-8.51	-33.0	16.8
7,979.0	1.80	164.80	7,938.6	428.8	445.2	0.15	0.00	-4.79	-37.1	14.0
8,073.0	1.90	161.00	8,032.6	425.9	446.1	0.17	0.11	-4.15	-41.0	11.4
8,166.0	2.40	160.10	8,125.5	422.6	447.3	0.54	0.54	-0.97	-44.7	10.7
8,260.0	0.30	295.30	8,219.5	420.9	447.7	2.79	-2.23	143.83	40.4	25.3
8,447.0	1.00	338.20	8,406.5	422.6	446.7	0.43	0.37	22.94	44.8	-8.7



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Savage 2 State Com
 Well: #504H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #504H
 TVD Reference: KB = 25' @ 3545.0usft
 MD Reference: KB = 25' @ 3545.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLog (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
8,541.0	0.40	340.50	8,500.4	423.7	448.3	0.84	-0.84	2.45	43.3	-10.4	
8,634.0	0.40	257.90	8,593.4	423.9	445.8	0.57	0.00	-88.82	15.5	41.3	
8,728.0	0.50	212.00	8,687.4	423.5	445.3	0.39	0.11	-48.83	-19.5	39.8	
8,822.0	1.30	209.50	8,781.4	422.2	444.6	0.85	0.85	-2.68	-22.6	38.7	
8,915.0	1.00	212.30	8,874.4	420.6	443.6	0.33	-0.32	3.01	-22.6	39.8	
9,009.0	0.90	210.40	8,968.4	419.3	442.8	0.11	-0.11	-2.02	-25.4	39.0	
9,103.0	1.10	245.40	9,062.4	418.3	441.6	0.67	0.21	37.23	0.0	47.0	
9,197.0	1.80	203.70	9,156.4	416.6	440.2	1.30	0.74	-44.36	-33.4	34.5	
9,291.0	1.30	208.60	9,250.3	414.3	439.1	0.55	-0.53	5.21	-32.9	37.4	
9,384.0	1.10	247.80	9,343.3	413.0	437.8	0.89	-0.22	42.15	-3.6	50.4	
9,478.0	1.80	340.80	9,437.3	414.1	436.4	2.39	0.85	98.94	49.0	1.8	
9,572.0	2.40	354.20	9,531.2	417.6	435.7	0.75	0.53	14.26	44.6	-9.2	
9,665.0	3.30	342.10	9,624.1	422.0	434.7	1.16	0.97	-13.01	41.0	-0.1	
9,760.0	3.30	333.40	9,718.9	427.1	432.6	0.53	0.00	-9.16	35.1	5.7	
9,853.0	3.30	321.50	9,811.8	431.6	429.7	0.74	0.00	-12.80	27.8	12.3	
9,947.0	2.80	314.80	9,905.7	435.3	426.4	0.65	-0.53	-7.13	21.2	15.1	
10,041.0	2.50	306.40	9,999.6	438.2	423.2	0.52	-0.32	-8.94	14.5	17.7	
10,164.0	3.10	295.00	10,122.4	441.1	418.0	0.68	0.49	-9.27	4.7	19.7	
10,257.0	3.10	291.60	10,215.3	443.1	413.4	0.20	0.00	-3.66	-1.5	19.8	
10,350.0	3.60	221.30	10,308.1	441.9	409.1	4.17	0.54	-75.59	-22.9	2.9	
10,443.0	8.40	208.90	10,400.6	433.6	404.1	5.37	5.16	-15.48	-28.7	-5.8	
10,537.0	20.20	189.70	10,491.6	411.4	388.2	13.21	12.55	-18.30	-29.5	-19.5	
10,630.0	32.10	180.30	10,574.9	370.7	385.4	13.51	12.80	-10.11	-32.9	-27.0	
10,723.0	42.70	182.50	10,648.7	314.3	393.9	11.49	11.40	2.37	-43.1	-27.8	
10,816.0	51.40	178.90	10,712.0	246.3	393.2	9.77	9.35	-3.87	-50.6	-30.8	
10,909.0	55.20	179.10	10,767.6	171.8	394.5	4.09	4.09	0.22	-53.2	-29.9	
11,003.0	60.60	175.80	10,817.5	92.3	398.1	6.47	5.74	-3.51	-45.8	-27.9	



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Savage 2 State Com
 Well: #504H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #504H
 TVD Reference: KB = 25' @ 3545.0usft
 MD Reference: KB = 25' @ 3545.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
11,097.0	68.60	174.90	10,859.3	8.4	404.9	6.44	6.38	-0.96	-31.9	-21.3
11,180.0	72.40	174.90	10,891.9	-78.3	412.7	6.24	6.24	0.00	-12.2	-13.6
11,283.0	77.10	174.20	10,916.3	-167.6	421.2	5.11	5.05	-0.75	11.0	-5.4
11,377.0	85.90	175.40	10,930.2	-260.1	429.6	9.45	9.36	1.28	25.0	2.4
11,475.0	89.90	177.20	10,933.8	-357.8	435.9	4.48	4.08	1.84	28.8	8.0
11,568.0	90.50	177.50	10,933.5	-450.7	440.2	0.72	0.65	0.32	28.7	11.6
11,661.0	88.90	177.70	10,934.0	-543.6	444.1	1.73	-1.72	0.22	29.3	14.9
11,755.0	87.40	177.70	10,937.0	-637.5	447.9	1.60	-1.60	0.00	32.5	18.0
11,849.0	89.30	178.40	10,939.7	-731.4	451.1	2.15	2.02	0.74	35.4	20.5
11,942.0	89.30	178.20	10,940.8	-824.3	453.8	0.22	0.00	-0.22	36.7	22.6
12,036.0	90.50	178.80	10,941.0	-918.3	456.3	1.43	1.28	0.64	37.1	24.3
12,130.0	89.40	179.30	10,941.1	-1,012.3	457.9	1.29	-1.17	0.53	37.3	25.2
12,224.0	90.00	179.50	10,941.6	-1,106.3	458.8	0.67	0.64	0.21	38.0	25.5
12,317.0	92.70	181.20	10,939.4	-1,199.2	458.3	3.43	2.90	1.83	36.0	24.3
12,411.0	91.80	180.20	10,935.7	-1,293.2	457.1	1.43	-0.96	-1.06	32.5	22.5
12,504.0	92.00	179.80	10,932.6	-1,388.1	457.1	0.48	0.22	-0.43	29.6	21.8
12,598.0	91.00	180.30	10,930.2	-1,480.1	457.1	1.19	-1.06	0.53	27.3	21.0
12,692.0	90.50	181.20	10,928.9	-1,574.1	455.8	1.10	-0.53	0.96	26.2	19.1
12,785.0	90.00	181.60	10,928.5	-1,667.0	453.6	0.69	-0.54	0.43	26.0	16.2
12,880.0	89.70	181.70	10,928.8	-1,762.0	450.8	0.33	-0.32	0.11	26.4	12.8
12,974.0	89.10	181.90	10,929.8	-1,855.9	447.9	0.67	-0.64	0.21	27.8	9.1
13,067.0	88.90	182.50	10,931.4	-1,948.9	444.3	0.68	-0.22	0.65	29.4	4.9
13,161.0	89.30	182.60	10,932.9	-2,042.7	440.1	0.44	0.43	0.11	31.1	0.0
13,254.0	89.30	182.30	10,934.0	-2,135.7	436.1	0.32	0.00	-0.32	32.4	-4.6
13,348.0	88.60	181.80	10,935.7	-2,229.6	432.7	0.86	-0.74	-0.43	34.3	-8.7
13,442.0	87.40	181.60	10,938.0	-2,323.5	429.8	1.32	-1.28	-0.32	37.7	-12.3
13,535.0	90.00	181.40	10,941.1	-2,418.4	427.4	2.80	2.80	-0.22	40.0	-15.4



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Savage 2 State Com
 Well: #504H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #504H
 TVD Reference: KB = 25' @ 3545.0usft
 MD Reference: KB = 25' @ 3545.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
13,629.0	91.30	180.50	10,940.0	-2,510.4	425.8	1.88	1.38	-0.98	39.3	-17.8
13,722.0	92.20	180.50	10,937.2	-2,603.3	425.0	0.97	0.97	0.00	37.1	-19.1
13,816.0	91.30	179.80	10,934.3	-2,697.3	424.8	1.21	-0.98	-0.74	34.9	-20.0
13,910.0	90.90	179.50	10,932.5	-2,791.3	425.3	0.53	-0.43	-0.32	33.8	-20.1
14,004.0	90.10	179.50	10,931.7	-2,885.3	426.2	0.85	-0.85	0.00	33.8	-20.0
14,097.0	88.90	179.50	10,932.5	-2,978.3	427.0	1.29	-1.28	0.00	35.1	-19.8
14,191.0	90.50	178.90	10,933.0	-3,072.2	428.3	1.82	1.70	-0.84	36.3	-19.2
14,284.0	89.90	178.40	10,932.7	-3,165.2	430.5	0.84	-0.65	-0.54	36.6	-17.7
14,377.0	89.70	178.20	10,933.0	-3,258.2	433.2	0.30	-0.22	-0.22	37.6	-15.6
14,471.0	90.70	178.10	10,932.7	-3,352.1	438.3	1.07	1.08	-0.11	37.9	-13.2
14,565.0	89.80	177.50	10,932.3	-3,446.1	439.9	1.15	-0.98	-0.64	38.2	-10.3
14,659.0	89.30	177.00	10,933.0	-3,539.9	444.4	0.75	-0.53	-0.53	39.6	-8.5
14,753.0	88.40	176.80	10,934.9	-3,633.8	449.5	0.98	-0.98	-0.21	42.2	-2.1
14,847.0	89.50	177.40	10,936.6	-3,727.6	454.2	1.33	1.17	0.84	44.6	2.0
14,940.0	90.00	176.70	10,937.0	-3,820.5	459.0	0.92	0.54	-0.75	45.6	6.1
15,034.0	90.20	177.20	10,936.9	-3,914.4	464.0	0.57	0.21	0.53	46.3	10.4
15,127.0	91.10	177.20	10,935.8	-4,007.3	468.6	0.97	0.97	0.00	46.5	14.3
15,221.0	90.60	178.80	10,934.4	-4,101.2	471.8	1.78	-0.53	1.70	46.2	16.9
15,315.0	91.60	178.40	10,932.6	-4,195.1	474.1	1.15	1.08	-0.43	45.6	18.5
15,408.0	91.50	178.10	10,930.1	-4,288.1	477.0	0.34	-0.11	-0.32	44.3	20.7
15,502.0	91.40	177.50	10,927.7	-4,382.0	480.6	0.65	-0.11	-0.64	43.1	23.6
15,596.0	91.90	177.70	10,925.0	-4,475.9	484.5	0.57	0.53	0.21	41.6	26.9
15,689.0	91.50	177.40	10,922.2	-4,568.7	488.5	0.54	-0.43	-0.32	40.1	30.1
15,726.0	91.90	177.40	10,921.1	-4,605.7	490.2	1.08	1.08	0.00	39.4	31.6
15,780.0	91.90	177.40	10,919.4	-4,659.6	492.6	0.00	0.00	0.00	38.3	33.6



Midland PVA

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Savage 2 State Com
Well: #504H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #504H
TVD Reference: KB = 25' @ 3545.0usft
MD Reference: KB = 25' @ 3545.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
10,330.0	10,288.2	442.7	409.9	KOP, MD:10330.0', TVD:10288.2', N/S:442.7', E/W:409.9', INC:3.12
10,538.2	10,492.7	411.0	398.2	FTP Crossing, MD:10538.2', TVD:10492.7', N/S:411.0', E/W:398.2', INC:20.35
15,726.0	10,921.1	-4,605.7	490.2	Last MWD Survey (MD=15726.0')
15,780.0	10,919.4	-4,659.8	492.6	Projection to Bit (MD=15780.0')

Checked By: _____ Approved By: _____ Date: _____



Lea County, NM (NAD 83 NME)

Savage 2 State Com #504H

Plan #1

PROJECT DETAILS: Lea County, NM (NAD 83 NME)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

WELL DETAILS: #504H

KB = 25' @ 3545.0ust
Northing 424593.00 Easting 753553.00 Longitude 12° 0' 53.533 N 103° 30' 56.843 W

To convert a Magnetic Direction to a Grid Direction, Add 6.44°
To convert a Magnetic Direction to a True Direction, Add 8.80° East
To convert a True Direction to a Grid Direction, Subtract 0.36°

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Diag	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1050.0	0.00	0.00	1050.0	0.0	0.0	0.00	0.00	0.0	
3	1354.6	6.09	42.47	1354.1	11.9	10.9	2.00	42.47	-10.8	
4	6938.0	8.09	42.47	6905.9	449.1	411.1	0.00	0.00	-406.7	
5	7242.7	0.00	0.00	7210.0	461.0	422.0	2.00	180.00	-417.5	Brushy Top(Savage 2 State Com #504H)
6	10365.2	0.00	0.00	10332.5	461.0	422.0	0.00	0.00	-417.5	
7	11266.3	90.11	179.59	10905.5	-113.0	426.1	10.00	179.59	154.2	TGT#1(Savage 2 State Com #504H)
8	13621.8	90.11	179.59	10901.0	-2468.5	443.1	0.00	0.00	2500.0	TGT#2(Savage 2 State Com #504H)
9	13636.8	90.41	179.59	10900.9	-2483.5	443.3	2.00	0.00	2515.0	
10	15027.6	90.41	179.59	10891.0	-3874.2	453.3	0.00	0.00	3900.0	
11	15043.5	90.73	179.59	10890.8	-3890.1	453.4	2.00	0.00	3915.8	
12	15818.5	90.73	179.59	10881.0	-4865.0	459.0	0.00	0.00	4687.5	PBHL (Savage 2 State Com #504H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP COORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
Brushy Top(Savage 2 State Com #504H)	7210.0	461.0	422.0	425051.00	753477.00
P504 (Savage 2 State Com #504H)	10891.0	-4865.0	443.0	418925.00	753514.00
TGT#1(Savage 2 State Com #504H)	10891.0	-3874.2	453.3	420716.80	753508.29
TGT#2(Savage 2 State Com #504H)	10901.0	-2468.8	443.1	422121.80	753498.18
PTP (Savage 2 State Com #504H)	10907.0	-411.0	422.0	425001.00	753477.00

