



HOBBS OCD
SEP 25 2019
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EOG Resources - Midland

Lea County, NM (NAD 83 NME)
Savage 2 State Com
#507H
OH

Design: OH

Midland PVA

05 May, 2019



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Savage 2 State Com
 Well: #507H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #507H
 TVD Reference: KB = 25' @ 3569.0usft
 MD Reference: KB = 25' @ 3569.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Project Lea County, NM (NAD 83 NME)

Map System: US State Plane 1983
 Geo Datum: North American Datum 1983
 Map Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

Site Savage 2 State Com

Site Position:	Northing:	424,469.00 usft	Latitude:	32° 9' 54.412 N
From: Map	Easting:	751,845.00 usft	Longitude:	103° 38' 10.929 W
Position Uncertainty:	Slot Radius:	13-3/16 "	Grid Convergence:	0.36 "

Well #507H

Well Position	+N-S	0.0 usft	Northing:	424,652.00 usft	Latitude:	32° 9' 55.987 N
	+E-W	0.0 usft	Easting:	755,575.00 usft	Longitude:	103° 38' 27.522 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,544.0 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/22/2019	6.80	59.98	47,722.14533303

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	177.89

Survey Program Date 5/5/2019

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
122.0	15,936.0	Newsco MWD (OH)	MWD	OWSG MWD - Standard



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0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
122.0	0.50	264.50	122.0	-0.1	-0.5	0.41	0.41	0.00	-0.5	0.0
239.0	0.40	262.50	239.0	-0.2	-1.4	0.09	-0.09	-1.71	-1.5	0.0
359.0	0.70	202.80	359.0	-0.9	-2.1	0.51	0.25	-49.75	-1.6	-1.6
509.0	0.30	231.10	509.0	-2.0	-2.8	0.31	-0.27	18.87	-3.4	-0.2
701.0	1.30	236.30	701.0	-3.5	-5.0	0.52	0.52	2.71	-6.1	0.1
888.0	1.20	215.90	887.9	-6.3	-7.9	0.24	-0.05	-10.91	-9.7	-2.7
1,037.0	1.80	203.00	1,038.9	-9.7	-9.7	0.46	0.40	-8.66	-12.7	-5.2
1,169.0	1.80	249.30	1,168.8	-12.3	-12.5	1.07	0.00	35.08	-16.0	7.1
1,357.0	5.20	0.90	1,356.6	-4.8	-15.1	3.24	1.81	59.36	9.2	16.3
1,544.0	8.90	18.50	1,542.1	17.4	-10.4	2.27	1.88	9.41	7.0	15.2
1,730.0	8.40	19.70	1,728.0	43.8	-1.3	0.28	-0.27	0.65	-1.3	14.7
1,917.0	8.20	23.00	1,911.1	68.9	8.6	0.28	-0.11	1.76	-8.0	13.9
2,104.0	7.30	25.70	2,098.3	91.9	18.9	0.52	-0.48	1.44	-13.2	12.2
2,280.0	6.90	26.60	2,280.9	112.6	29.0	0.22	-0.22	0.48	-16.8	9.7
2,477.0	6.20	26.80	2,466.7	131.6	38.6	0.37	-0.37	0.11	-18.8	6.8
2,663.0	5.30	24.10	2,651.8	148.4	48.7	0.51	-0.48	-1.45	-18.4	3.3
2,850.0	6.60	19.80	2,837.7	166.4	53.8	0.73	0.70	-2.30	-18.4	0.6
3,038.0	5.90	24.20	3,024.6	185.4	61.5	0.45	-0.37	2.34	-19.2	0.7
3,225.0	6.50	10.40	3,210.5	204.6	67.3	0.86	0.32	-7.38	-19.4	-3.6
3,412.0	5.90	11.70	3,396.5	224.4	71.2	0.33	-0.32	0.70	-20.2	-0.8
3,588.0	5.30	7.40	3,581.6	242.3	74.2	0.39	-0.32	-2.31	-19.1	0.6
3,768.0	8.50	11.30	3,768.2	264.5	78.1	1.72	1.70	2.07	-22.1	4.7
3,972.0	7.60	4.00	3,952.3	290.3	81.6	0.73	-0.48	-3.92	-29.6	4.8
4,158.0	6.80	359.00	4,136.9	313.5	82.3	0.55	-0.43	-2.69	-34.8	7.5
4,345.0	4.70	9.80	4,322.9	332.2	83.4	1.26	-1.12	5.78	-32.0	18.7
4,533.0	2.80	27.90	4,510.5	344.0	86.9	1.14	-0.96	9.63	-17.3	26.7



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4,720.0	2.30	61.30	4,697.3	349.9	92.4	0.86	-0.32	17.88	6.8	21.0
4,806.0	1.70	61.40	4,783.3	351.4	85.1	0.70	-0.70	0.12	10.3	14.8
4,987.0	3.30	48.70	4,864.1	356.1	101.3	0.83	0.88	-7.02	15.2	6.4
5,174.0	5.80	23.70	5,150.5	368.3	109.2	1.68	1.34	-13.37	16.3	8.0
5,361.0	5.80	25.00	5,336.8	385.5	117.0	0.07	0.00	0.70	16.9	5.5
5,548.0	5.50	28.30	5,522.7	402.0	125.2	0.24	-0.16	1.76	15.5	2.0
5,734.0	3.20	4.50	5,708.1	415.0	129.8	1.55	-1.24	-12.80	5.5	5.8
5,922.0	2.70	337.80	5,895.8	424.3	128.6	0.77	-0.27	-14.20	-6.8	5.2
6,110.0	2.80	335.90	6,083.7	432.6	125.0	0.07	0.05	-1.01	-16.0	4.9
6,298.0	1.00	127.10	6,271.6	435.8	124.5	1.97	-0.96	80.43	18.8	5.7
6,485.0	0.80	109.50	6,458.6	434.4	127.1	0.16	-0.05	-9.41	13.1	10.6
6,671.0	0.60	116.30	6,644.6	433.4	129.4	0.17	-0.16	4.73	12.2	8.7
6,858.0	0.40	173.10	6,831.6	432.3	130.3	0.26	-0.11	29.30	12.9	-4.2
7,045.0	0.70	215.60	7,018.5	430.7	129.7	0.26	0.16	22.73	5.1	-11.3
7,232.0	1.10	220.20	7,205.5	428.4	127.9	0.22	0.21	2.46	1.2	-11.6
7,419.0	1.00	194.30	7,392.5	425.5	126.4	0.26	-0.05	-13.85	2.9	-10.7
7,607.0	1.40	200.60	7,580.5	421.7	125.1	0.22	0.21	3.35	-2.2	-10.8
7,795.0	1.70	193.80	7,768.4	416.9	123.7	0.19	0.16	-3.62	-6.0	-11.2
7,983.0	1.60	201.00	7,956.3	411.7	122.1	0.12	-0.05	3.83	-12.7	-10.0
8,170.0	1.40	201.00	8,143.2	407.1	120.3	0.11	-0.11	0.00	-17.6	-10.0
8,357.0	1.50	199.10	8,330.2	402.7	118.7	0.06	0.05	-1.02	-22.0	-10.7
8,544.0	1.60	204.40	8,517.1	398.0	116.8	0.09	0.05	2.83	-28.0	-8.4
8,732.0	1.70	212.70	8,705.0	393.3	114.2	0.14	0.05	4.41	-34.3	-3.9
8,919.0	0.40	8.40	8,892.0	391.6	112.8	1.11	-0.70	83.26	31.5	18.8
9,105.0	0.70	328.70	9,078.0	393.2	112.3	0.25	0.16	-21.34	10.6	34.2
9,293.0	0.40	290.00	9,266.0	394.4	111.1	0.25	-0.16	-20.59	-14.6	32.6
9,481.0	1.10	2.10	9,454.0	386.4	110.6	0.56	0.37	38.35	24.5	24.6



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9,668.0	1.30	325.40	9,640.9	400.0	109.4	0.42	0.11	-19.63	1.4	33.3
9,876.0	0.70	266.30	9,848.9	401.8	108.8	0.54	-0.29	-28.41	-30.3	16.2
9,969.0	2.90	68.20	9,941.9	402.7	108.4	3.84	2.37	174.09	32.0	-5.9
10,084.0	2.10	69.90	10,036.8	404.2	112.3	0.85	-0.84	1.79	27.7	-6.7
10,250.0	1.60	81.50	10,222.7	408.6	117.8	0.31	-0.27	-4.52	22.4	-3.1
10,343.0	1.60	142.90	10,315.7	406.2	119.7	2.24	0.00	87.53	-1.2	-21.4
10,390.0	3.60	175.50	10,362.6	404.2	120.2	5.13	4.26	69.36	-14.5	-17.0
10,437.0	7.00	188.20	10,409.4	399.8	120.0	7.50	7.23	22.77	-21.7	-13.8
10,530.0	12.50	188.40	10,501.0	384.6	116.2	6.29	5.91	13.12	-34.4	-9.6
10,624.0	16.80	206.80	10,592.0	362.9	108.9	5.09	4.57	8.94	-39.9	-13.3
10,671.0	21.60	204.50	10,636.4	348.9	100.2	10.34	10.21	-4.89	-39.5	-22.4
10,717.0	22.10	208.80	10,679.0	333.6	92.5	3.64	1.09	9.35	-40.4	-28.8
10,764.0	23.90	211.20	10,722.3	317.7	83.4	4.32	3.83	5.11	-38.9	-39.4
10,844.0	28.60	202.30	10,794.1	286.1	67.7	7.65	5.87	-11.12	-21.8	-65.9
10,938.0	40.70	187.10	10,871.4	234.6	55.3	15.74	12.87	-16.17	12.0	-83.7
10,985.0	45.60	177.50	10,905.7	202.8	54.1	17.41	10.43	-20.43	29.0	-82.9
11,031.0	51.30	169.50	10,936.2	168.4	58.1	17.95	12.39	-17.39	41.6	-75.7
11,125.0	67.30	165.90	10,984.1	89.8	75.5	17.33	17.02	-3.83	45.2	-58.6
11,218.0	83.10	166.60	11,007.8	2.7	96.8	17.00	16.99	0.75	34.5	-40.7
11,265.0	86.50	173.10	11,012.0	-43.3	105.0	15.58	7.23	13.83	26.9	-34.1
11,279.0	86.70	173.60	11,012.9	-57.2	106.6	3.84	1.43	3.57	25.3	-32.7
11,372.0	88.00	177.50	11,017.2	-149.8	113.8	4.42	1.40	4.19	21.5	-26.4
11,467.0	91.70	178.50	11,017.4	-244.7	117.1	4.03	3.89	1.05	22.1	-23.8
11,560.0	92.10	178.90	11,014.3	-337.6	119.2	0.61	0.43	0.43	19.4	-22.4
11,654.0	91.80	178.80	11,011.1	-431.6	121.1	0.34	-0.32	-0.11	16.6	-21.2
11,748.0	91.60	178.70	11,008.3	-525.5	123.2	0.24	-0.21	-0.11	14.2	-19.8
11,841.0	91.30	178.20	11,006.0	-616.4	125.7	0.63	-0.32	-0.54	12.3	-18.0



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11,935.0	91.50	177.80	11,003.7	-712.4	129.0	0.48	0.21	-0.43	10.4	-15.4
12,028.0	91.30	180.20	11,001.4	-805.3	130.6	2.59	-0.22	2.58	8.5	-14.5
12,120.0	90.30	178.60	11,000.1	-897.3	131.6	2.05	-1.09	-1.74	7.8	-14.2
12,214.0	90.50	178.80	10,999.5	-891.3	133.7	0.30	0.21	0.21	7.3	-12.8
12,308.0	89.60	178.90	10,999.4	-1,085.2	137.2	2.24	-0.98	-2.02	7.5	-8.9
12,401.0	89.80	177.40	10,999.9	-1,178.1	141.8	0.58	0.22	0.54	8.1	-6.0
12,495.0	89.70	177.30	11,000.3	-1,272.0	148.2	0.15	-0.11	-0.11	8.6	-2.3
12,588.0	89.40	177.40	11,001.0	-1,364.9	150.5	0.34	-0.32	0.11	9.5	1.3
12,681.0	89.40	177.50	11,002.0	-1,457.8	154.6	0.11	0.00	0.11	10.8	4.7
12,775.0	89.50	177.70	11,002.9	-1,551.7	158.6	0.24	0.11	0.21	11.6	8.0
12,868.0	89.50	177.50	11,003.7	-1,644.6	162.5	0.22	0.00	-0.22	12.5	11.2
12,962.0	90.80	179.00	11,003.5	-1,738.6	165.3	2.11	1.38	1.60	12.4	13.3
13,056.0	90.40	179.60	11,002.5	-1,832.5	166.5	0.77	-0.43	0.64	11.5	13.8
13,149.0	90.50	179.00	11,001.8	-1,925.5	167.6	0.85	0.11	-0.65	10.9	14.2
13,243.0	90.20	179.10	11,001.2	-2,019.5	169.2	0.34	-0.32	0.11	10.5	15.1
13,336.0	89.80	179.00	11,001.2	-2,112.5	170.7	0.44	-0.43	-0.11	10.6	16.0
13,430.0	93.00	180.20	10,998.9	-2,206.5	171.4	3.64	3.40	1.28	8.4	15.9
13,524.0	92.60	179.80	10,994.3	-2,300.3	171.4	0.60	-0.43	-0.43	4.0	15.2
13,617.0	93.00	180.20	10,989.7	-2,393.2	171.4	0.61	0.43	0.43	-0.5	14.5
13,710.0	90.00	180.00	10,987.3	-2,486.2	171.2	3.23	-3.23	-0.22	-2.8	13.7
13,804.0	89.90	179.50	10,987.4	-2,580.2	171.6	0.54	-0.11	-0.53	-2.4	13.4
13,897.0	89.90	179.60	10,987.6	-2,673.2	172.3	0.11	0.00	0.11	-1.6	13.4
13,990.0	90.00	179.70	10,987.6	-2,766.2	172.9	0.15	0.11	0.11	-0.9	13.3
14,083.0	90.00	179.60	10,987.6	-2,859.2	173.5	0.11	0.00	-0.11	-0.3	13.2
14,176.0	89.90	179.30	10,987.7	-2,952.2	174.4	0.34	-0.11	-0.32	0.4	13.4
14,270.0	90.10	179.30	10,987.7	-3,046.2	175.5	0.21	0.21	0.00	1.1	13.9
14,363.0	89.80	178.90	10,987.8	-3,139.2	177.0	0.54	-0.32	-0.43	1.8	14.8



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14,457.0	89.80	178.80	10,988.1	-3,233.1	178.9	0.11	0.00	-0.11	2.7	15.8
14,551.0	89.80	178.90	10,988.5	-3,327.1	180.8	0.11	0.00	0.11	3.7	17.0
14,644.0	89.60	179.10	10,988.9	-3,420.1	182.4	0.30	-0.22	0.22	4.8	17.9
14,737.0	89.60	179.30	10,989.6	-3,513.1	183.7	0.22	0.00	0.22	6.1	18.6
14,831.0	91.90	179.90	10,988.4	-3,607.1	184.3	2.53	2.45	0.64	5.5	18.5
14,924.0	91.60	179.50	10,985.5	-3,700.0	184.8	0.54	-0.32	-0.43	3.3	18.3
15,018.0	92.40	179.50	10,982.2	-3,794.0	185.6	0.85	0.85	0.00	0.9	18.4
15,113.0	92.30	179.20	10,978.3	-3,888.9	186.7	0.33	-0.11	-0.32	-2.1	18.8
15,207.0	92.50	178.70	10,974.4	-3,982.8	188.4	0.57	0.21	-0.53	-5.0	19.8
15,300.0	92.40	178.50	10,970.4	-4,075.7	190.7	0.24	-0.11	-0.22	-8.0	21.4
15,393.0	90.60	180.00	10,968.0	-4,168.6	191.9	2.52	-1.94	1.61	-9.6	22.0
15,487.0	90.70	179.50	10,966.9	-4,262.6	192.3	0.54	0.11	-0.53	-9.7	21.7
15,580.0	91.80	179.80	10,964.9	-4,355.6	192.9	1.23	1.18	0.32	-10.7	21.5
15,688.0	90.70	181.50	10,962.5	-4,463.6	191.7	1.67	-1.02	1.57	-12.0	19.5
15,767.0	90.50	181.40	10,961.7	-4,542.5	189.7	0.28	-0.25	-0.13	-12.0	16.9
15,936.0	90.50	181.40	10,960.2	-4,711.5	185.6	0.00	0.00	0.00	-11.8	11.6

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
10,313.0	10,285.7	408.6	119.2	KOP, MD:10313.0', TVD:10285.7', N/S:408.6', E/W:119.2', INC:1.27
11,182.7	11,001.7	36.5	88.6	FTP Crossing, MD:11182.7', TVD:11001.7', N/S:36.5', E/W:88.6', INC:77.10
15,767.0	10,961.7	-4,542.5	189.7	Last MWD Survey (MD=15767.0')
15,936.0	10,960.2	-4,711.5	185.6	Projection to Bit (MD=15936.0')

Checked By: _____ Approved By: _____ Date: _____

