

HOBBS OGD
SEP 11 2019
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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Ares 4 State

#503H

OH

Design: OH

Midland PVA

26 June, 2019



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Area 4 State
 Well: #503H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #503H
 TVD Reference: KB = 25' @ 3609.0usft
 MD Reference: KB = 25' @ 3609.0usft
 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 Area 4 State

Site Position:		Northing:	451,993.00 usft	Latitude:	32° 14' 25.072 N
From: Map		Easting:	777,413.00 usft	Longitude:	103° 34' 11.215 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.41 "

Well #503H

Well Position	+N-S	0.0 usft	Northing:	452,057.00 usft	Latitude:	32° 14' 25.712 N
	+E-W	0.0 usft	Easting:	777,312.00 usft	Longitude:	103° 34' 12.385 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,584.0 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	4/20/2017	6.97	80.08	47,963.34081397

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	348.05

Survey Program Date 6/26/2019

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
185.0	16,185.0	Intrepid MWD#1 (OH)	MWD	OWSG MWD - Standard



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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
185.0	0.18	191.83	185.0	-0.3	-0.1	0.10	0.10	0.00	-0.3	0.0
331.0	0.35	218.90	331.0	-0.9	-0.4	0.14	0.12	18.54	-0.9	0.2
506.0	0.66	234.20	506.0	-1.9	-1.5	0.19	0.18	8.74	-2.3	0.8
683.0	0.66	217.50	683.0	-3.3	-3.0	0.11	0.00	-9.44	-4.4	-0.4
776.0	0.44	247.47	776.0	-3.8	-3.6	0.38	-0.24	32.23	-4.8	2.1
867.0	0.40	231.65	867.0	-4.2	-4.2	0.13	-0.04	-17.38	-5.9	0.6
960.0	0.44	252.48	960.0	-4.5	-4.8	0.17	0.04	22.40	-5.9	2.8
1,052.0	0.66	266.45	1,052.0	-4.6	-5.7	0.26	0.24	15.18	-6.0	4.2
1,144.0	0.44	237.62	1,144.0	-4.8	-6.5	0.38	-0.24	-31.34	-8.1	0.6
1,236.0	0.31	235.34	1,236.0	-5.2	-7.0	0.14	-0.14	-2.48	-8.7	0.3
1,381.0	0.48	318.75	1,381.0	-4.9	-7.7	0.37	0.12	57.52	-1.4	9.1
1,504.0	0.57	322.88	1,504.0	-4.1	-8.4	0.08	0.07	3.36	-1.9	9.2
1,596.0	2.29	248.08	1,595.8	-4.4	-10.4	2.40	1.87	-81.30	-9.7	0.2
1,691.0	4.75	243.51	1,690.7	-6.8	-15.7	2.80	2.59	-4.81	-10.8	-0.1
1,786.0	5.41	247.82	1,785.4	-10.3	-23.4	0.80	0.69	4.54	-11.2	1.3
1,881.0	8.92	249.14	1,879.6	-14.6	-34.4	3.70	3.69	1.39	-12.0	1.8
1,976.0	9.27	249.58	1,973.4	-19.9	-48.5	0.38	0.37	0.46	-12.8	2.1
2,070.0	11.21	246.85	2,065.9	-28.1	-64.0	2.13	2.06	-2.90	-12.5	2.2
2,165.0	11.96	247.73	2,159.0	-33.5	-81.6	0.81	0.79	0.83	-11.2	3.4
2,260.0	13.32	248.79	2,251.7	-41.2	-100.9	1.45	1.43	1.12	-10.7	4.3
2,355.0	12.84	249.75	2,344.2	-48.8	-121.0	0.55	-0.51	1.01	-10.9	4.8
2,450.0	12.48	250.28	2,438.9	-55.9	-140.5	0.40	-0.38	0.56	-10.5	4.9
2,545.0	12.00	249.84	2,529.7	-62.8	-159.5	0.51	-0.51	-0.46	-9.5	4.8
2,640.0	11.60	249.58	2,622.7	-69.5	-177.7	0.42	-0.42	-0.27	-7.7	5.0
2,735.0	11.60	249.23	2,715.8	-76.2	-195.6	0.07	0.00	-0.37	-5.6	5.3
2,830.0	13.41	251.07	2,808.5	-83.2	-214.9	1.95	1.91	1.94	-4.7	5.4



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2,925.0	13.01	250.48	2,901.0	-90.3	-235.4	0.45	-0.42	-0.64	-5.3	5.2
3,020.0	12.68	250.81	2,993.6	-97.3	-255.3	0.38	-0.37	0.37	-5.2	5.0
3,114.0	12.13	251.25	3,085.5	-103.9	-274.4	0.57	-0.56	0.47	-4.3	4.7
3,209.0	11.58	250.19	3,178.4	-110.3	-292.8	0.64	-0.60	-1.12	-2.7	4.5
3,304.0	11.65	251.34	3,271.5	-116.6	-310.9	0.26	0.09	1.21	-0.4	4.3
3,399.0	12.57	251.25	3,364.4	-123.0	-329.7	0.97	0.97	-0.09	0.8	3.8
3,495.0	12.00	251.16	3,458.2	-129.6	-349.1	0.59	-0.59	-0.09	1.9	3.5
3,590.0	11.52	251.85	3,551.2	-135.7	-367.4	0.53	-0.51	0.83	3.8	2.9
3,685.0	10.99	252.48	3,644.4	-141.4	-385.1	0.57	-0.56	0.56	6.5	2.1
3,780.0	11.21	251.51	3,737.8	-147.0	-402.5	0.30	0.23	-1.02	9.4	1.6
3,874.0	10.15	248.35	3,829.9	-153.0	-418.9	1.29	-1.13	-3.36	13.0	2.3
3,969.0	10.95	244.57	3,923.3	-160.0	-434.8	1.11	0.84	-3.98	16.6	4.6
4,064.0	12.53	243.95	4,018.4	-168.4	-452.2	1.67	1.66	-0.65	18.4	7.0
4,159.0	11.43	243.95	4,109.3	-177.0	-469.9	1.16	-1.16	0.00	19.8	9.3
4,254.0	11.47	246.50	4,202.4	-184.9	-487.0	0.53	0.04	2.68	22.5	10.2
4,349.0	11.74	248.44	4,295.4	-192.2	-504.7	0.50	0.28	2.04	25.0	10.4
4,444.0	10.15	244.92	4,388.7	-199.3	-521.3	1.81	-1.67	-3.71	27.5	13.3
4,539.0	9.67	238.85	4,482.3	-207.0	-535.7	1.21	-0.51	-6.39	30.5	19.3
4,634.0	10.29	239.03	4,575.9	-215.5	-549.8	0.65	0.65	0.19	35.0	23.3
4,729.0	12.09	239.47	4,669.1	-224.9	-565.6	1.90	1.89	0.46	37.7	27.0
4,824.0	12.92	243.78	4,761.8	-234.7	-583.7	1.31	0.87	4.54	40.1	27.3
4,919.0	12.44	244.13	4,854.5	-243.8	-602.4	0.51	-0.51	0.37	40.5	29.4
5,055.0	10.33	242.99	4,987.8	-255.8	-626.5	1.56	-1.55	-0.84	43.3	33.7
5,193.0	9.58	241.23	5,123.7	-268.9	-647.6	0.59	-0.54	-1.28	48.9	39.4
5,288.0	13.32	263.46	5,216.9	-272.0	-665.4	6.02	3.94	23.40	62.5	16.6
5,383.0	16.13	287.42	5,308.7	-273.8	-689.5	3.14	2.96	4.17	59.5	6.8
5,478.0	16.31	288.47	5,400.0	-274.8	-716.0	0.36	0.19	1.11	53.1	-0.7



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5,573.0	16.26	268.91	5,491.1	-275.4	-742.8	0.14	-0.05	0.46	46.3	-7.8
5,668.0	16.40	263.82	5,582.3	-277.1	-769.2	1.51	0.15	-5.36	40.6	-9.9
5,763.0	16.26	258.10	5,673.5	-281.3	-795.6	1.70	-0.15	-6.02	35.6	-10.1
5,858.0	15.56	254.15	5,764.9	-287.5	-820.9	1.36	-0.74	-4.16	31.2	-10.1
5,952.0	16.75	252.83	5,855.1	-294.9	-845.9	1.32	1.27	-1.40	28.0	-10.7
6,047.0	16.04	249.40	5,946.3	-303.6	-871.3	1.26	-0.75	-3.61	20.8	-9.7
6,142.0	10.24	253.80	6,038.8	-310.6	-891.7	6.19	-6.11	4.63	19.4	-11.5
6,237.0	7.30	251.88	6,132.6	-314.8	-905.6	3.11	-3.09	-2.04	24.0	-11.7
6,332.0	7.12	247.03	6,226.9	-319.0	-916.7	0.67	-0.19	-5.08	28.4	-9.3
6,427.0	3.60	242.19	6,321.5	-322.7	-924.8	3.73	-3.71	-5.09	32.5	-5.7
6,522.0	2.37	229.27	6,416.3	-325.3	-928.9	1.47	-1.29	-13.60	36.7	4.3
6,617.0	2.59	228.92	6,511.2	-328.0	-932.0	0.23	0.23	-0.37	38.1	6.7
6,712.0	2.24	233.58	6,606.1	-330.5	-935.1	0.42	-0.37	4.81	37.2	4.6
6,806.0	2.37	221.63	6,700.1	-333.1	-937.9	0.53	0.14	-12.71	31.9	11.9
6,901.0	2.42	229.89	6,795.0	-335.8	-940.7	0.37	0.05	8.69	29.3	7.5
6,996.0	1.19	213.28	6,889.9	-338.0	-942.8	1.39	-1.29	-17.48	23.1	15.0
7,091.0	0.88	255.11	6,984.9	-339.0	-944.1	0.84	-0.33	44.03	25.7	-3.5
7,186.0	1.10	223.03	7,079.9	-339.8	-945.4	0.62	0.23	-33.77	22.1	10.3
7,281.0	0.84	217.59	7,174.9	-341.0	-946.4	0.29	-0.27	-5.73	19.5	12.2
7,376.0	0.88	252.83	7,269.9	-341.8	-947.5	0.55	0.04	37.09	21.7	-0.8
7,471.0	0.97	220.22	7,364.9	-342.6	-948.8	0.55	0.09	-34.33	17.3	10.6
7,566.0	1.05	240.00	7,459.9	-343.7	-950.0	0.37	0.08	20.82	18.2	4.4
7,660.0	1.14	216.88	7,553.8	-344.9	-951.3	0.48	0.10	-24.60	13.3	10.8
7,755.0	0.97	200.62	7,648.8	-346.4	-952.2	0.36	-0.18	-17.12	8.0	13.9
7,850.0	0.97	203.00	7,743.8	-347.9	-952.8	0.04	0.00	2.51	7.0	13.6
7,945.0	1.32	210.20	7,838.8	-349.6	-953.7	0.40	0.37	7.58	6.7	12.7
8,040.0	1.19	225.58	7,933.8	-351.2	-954.9	0.38	-0.14	16.19	7.8	10.7



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8,135.0	1.41	209.76	8,028.8	-352.9	-958.2	0.44	0.23	-16.85	2.5	12.2
8,229.0	1.23	202.82	8,122.7	-354.8	-957.2	0.26	-0.19	-7.38	-1.2	12.3
8,325.0	1.27	196.58	8,218.7	-358.8	-957.9	0.15	0.04	-6.50	-4.6	11.9
8,420.0	0.84	197.89	8,313.7	-358.5	-958.4	0.45	-0.45	1.48	-8.0	12.1
8,515.0	1.19	185.68	8,408.7	-360.1	-958.7	0.43	0.37	-12.86	-10.1	10.4
8,609.0	0.84	202.38	8,502.7	-381.7	-959.1	0.48	-0.37	17.77	-8.4	13.1
8,704.0	1.19	207.92	8,597.6	-383.2	-959.8	0.38	0.37	5.83	-8.7	13.9
8,799.0	0.57	231.56	8,692.6	-384.4	-960.6	0.74	-0.65	24.88	-3.8	16.7
8,894.0	0.84	269.62	8,787.6	-384.7	-961.7	0.55	0.28	40.06	6.2	15.7
8,989.0	0.82	251.60	8,882.6	-384.9	-963.1	0.30	0.08	-18.97	-0.4	16.7
9,084.0	0.70	215.65	8,977.6	-365.7	-964.2	0.57	-0.23	-37.84	-11.3	12.8
9,179.0	0.70	242.11	9,072.6	-366.4	-965.0	0.34	0.00	27.85	-5.5	16.8
9,274.0	0.70	199.39	9,167.6	-367.2	-965.7	0.54	0.00	-44.97	-16.4	8.2
9,369.0	1.05	225.23	9,262.6	-368.4	-966.5	0.55	0.37	27.20	-12.6	14.8
9,464.0	0.70	207.83	9,357.6	-369.5	-967.4	0.46	-0.37	-18.32	-17.9	10.1
9,559.0	0.70	237.89	9,452.6	-370.3	-968.2	0.38	0.00	31.64	-11.5	18.0
9,654.0	1.32	232.35	9,547.5	-371.3	-969.5	0.66	0.85	-5.83	-14.8	16.7
9,749.0	1.23	238.42	9,642.5	-372.5	-971.3	0.17	-0.09	6.39	-15.1	18.3
9,844.0	1.19	236.83	9,737.5	-373.6	-973.0	0.05	-0.04	-1.67	-17.6	17.9
9,938.0	0.75	282.19	9,831.5	-374.0	-974.4	0.61	-0.47	48.26	-1.0	25.8
10,034.0	1.54	319.98	9,927.5	-372.9	-975.8	1.10	0.82	39.36	13.2	21.3
10,129.0	1.49	310.31	10,022.4	-371.1	-977.6	0.27	-0.05	-10.18	7.0	23.0
10,224.0	1.38	282.89	10,117.4	-370.0	-979.6	0.72	-0.14	-28.86	-6.6	23.1
10,319.0	1.80	244.74	10,212.4	-370.4	-982.1	1.17	0.46	-40.16	-21.9	13.4
10,414.0	1.54	253.09	10,307.3	-371.4	-984.6	0.37	-0.27	8.79	-22.5	16.6
10,509.0	1.19	249.49	10,402.3	-372.1	-986.8	0.38	-0.37	-3.79	-25.7	15.1
10,587.0	1.32	234.02	10,480.3	-373.0	-988.3	0.46	0.17	-19.83	-30.5	7.5



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10,647.0	1.10	246.50	10,540.3	-373.6	-989.4	0.57	-0.37	20.80	-29.4	14.0
10,742.0	6.24	13.15	10,635.1	-368.9	-989.0	7.32	5.41	133.32	24.7	15.9
10,837.0	14.51	10.08	10,728.5	-352.2	-985.8	8.72	8.71	-3.23	17.9	14.8
10,987.0	24.35	8.58	10,850.9	-309.5	-978.9	7.58	7.57	-1.15	13.5	8.7
11,062.0	31.96	3.40	10,934.6	-265.0	-974.5	8.41	8.01	-5.45	13.9	5.0
11,157.0	37.58	2.87	11,012.6	-210.9	-971.5	5.92	5.92	-0.56	19.4	1.6
11,252.0	47.56	358.80	11,082.5	-148.8	-972.0	11.35	10.51	-6.39	27.2	3.2
11,347.0	60.40	357.07	11,138.3	-70.2	-976.1	13.52	13.52	0.28	31.1	6.5
11,442.0	78.15	359.70	11,171.8	18.2	-978.5	18.66	18.68	2.77	24.8	7.6
11,536.0	87.78	1.11	11,183.3	111.4	-977.8	10.35	10.24	1.50	10.8	6.2
11,632.0	87.52	1.11	11,187.2	207.3	-976.0	0.27	-0.27	0.00	4.0	3.5
11,727.0	88.84	359.88	11,190.2	302.3	-975.2	1.90	1.39	-1.29	7.2	1.9
11,822.0	91.34	358.27	11,190.1	397.3	-975.9	2.71	2.63	-0.64	7.6	1.9
11,917.0	89.98	359.70	11,189.0	492.2	-976.7	1.50	-1.43	0.45	7.1	2.0
12,012.0	90.20	359.70	11,188.8	587.2	-977.2	0.23	0.23	0.00	7.5	1.7
12,106.0	90.33	359.62	11,188.4	681.2	-977.8	0.16	0.14	-0.09	7.6	1.5
12,201.0	90.90	359.27	11,187.4	776.2	-978.7	0.70	0.60	-0.37	7.2	1.7
12,296.0	90.81	358.74	11,186.0	871.2	-980.3	0.57	-0.09	-0.56	6.1	2.6
12,391.0	91.78	358.47	11,183.8	966.2	-982.6	1.08	1.02	-0.28	4.2	4.1
12,486.0	90.37	358.83	11,182.0	1,061.1	-984.9	1.53	-1.48	0.38	2.7	5.6
12,581.0	90.68	358.47	11,181.2	1,156.1	-987.1	0.50	0.33	-0.38	2.0	7.1
12,676.0	89.93	0.41	11,180.7	1,251.1	-988.1	2.19	-0.79	2.04	1.7	7.2
12,771.0	90.37	0.14	11,180.4	1,346.1	-987.6	0.54	0.46	-0.28	1.7	6.0
12,866.0	88.26	0.85	11,181.5	1,441.0	-988.8	2.34	-2.22	0.75	3.1	4.4
12,961.0	87.69	0.67	11,184.9	1,536.0	-985.5	0.63	-0.60	-0.19	6.7	2.4
13,056.0	87.47	359.79	11,188.9	1,630.9	-985.1	0.95	-0.23	-0.93	10.9	1.3
13,151.0	90.90	0.41	11,190.3	1,725.9	-985.0	3.67	3.61	0.65	12.5	0.3



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Area 4 State
 Well: #503H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #503H
 TVD Reference: KB = 25' @ 3609.0usft
 MD Reference: KB = 25' @ 3609.0usft
 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)
13,246.0	92.04	0.32	11,187.8	1,820.8	-984.4	1.20	1.20	-0.09	10.3	-1.0
13,340.0	90.55	1.48	11,185.7	1,914.8	-982.9	2.00	-1.59	1.21	8.4	-3.2
13,435.0	90.86	1.11	11,184.5	2,009.8	-980.8	0.49	0.33	-0.37	7.5	-8.1
13,530.0	91.47	0.58	11,182.6	2,104.7	-979.4	0.85	0.64	-0.56	5.8	-8.3
13,625.0	89.27	359.79	11,182.0	2,199.7	-979.1	2.46	-2.32	-0.83	5.4	-9.4
13,720.0	89.14	358.91	11,183.3	2,294.7	-980.1	0.94	-0.14	-0.93	6.9	-9.0
13,814.0	88.48	358.03	11,185.3	2,388.6	-982.7	1.17	-0.70	-0.94	9.1	-7.3
13,909.0	89.80	357.77	11,186.7	2,483.6	-986.1	1.42	1.39	-0.27	10.8	-4.6
14,005.0	90.99	357.51	11,186.0	2,579.5	-990.1	1.27	1.24	-0.27	10.3	-1.4
14,099.0	91.87	359.62	11,183.7	2,673.4	-992.4	2.43	0.94	2.24	8.2	0.2
14,185.0	90.64	0.23	11,181.6	2,769.4	-992.6	1.43	-1.28	0.84	6.4	-0.4
14,280.0	90.90	0.14	11,180.3	2,864.4	-992.3	0.29	0.27	-0.09	5.3	-1.5
14,385.0	91.43	359.62	11,178.4	2,959.4	-992.5	0.78	0.56	-0.55	3.6	-2.0
14,480.0	89.93	0.06	11,177.2	3,054.4	-992.7	1.65	-1.58	0.46	2.6	-2.5
14,575.0	89.14	359.53	11,178.0	3,149.4	-993.1	1.00	-0.83	-0.56	3.6	-3.0
14,670.0	88.22	358.91	11,180.2	3,244.3	-994.4	1.17	-0.97	-0.65	6.0	-2.4
14,765.0	89.23	359.35	11,182.3	3,339.3	-995.8	1.16	1.06	0.46	8.3	-1.8
14,859.0	90.42	358.91	11,182.6	3,433.3	-997.2	1.35	1.27	-0.47	8.7	-1.1
14,954.0	88.97	358.12	11,183.1	3,528.2	-999.7	1.74	-1.53	-0.83	9.4	0.6
15,049.0	89.98	358.91	11,184.0	3,623.2	-1,002.1	1.35	1.06	0.83	10.5	2.3
15,144.0	91.43	359.27	11,182.8	3,718.2	-1,003.7	1.57	1.53	0.38	9.5	3.1
15,239.0	90.99	358.03	11,180.8	3,813.1	-1,005.9	1.38	-0.46	-1.31	7.7	4.5
15,334.0	91.38	358.21	11,178.8	3,908.0	-1,009.0	0.45	0.41	0.19	5.8	6.9
15,429.0	92.04	358.03	11,176.0	4,003.0	-1,012.1	0.72	0.69	-0.19	3.0	9.3
15,523.0	91.96	359.97	11,172.7	4,098.9	-1,013.8	2.06	-0.09	2.06	-0.3	10.1
15,618.0	91.21	1.55	11,170.1	4,191.8	-1,012.5	1.84	-0.79	1.66	-2.9	8.1
15,713.0	88.00	1.55	11,170.7	4,286.8	-1,009.9	3.38	-3.38	0.00	-2.2	4.8



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
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 Design: OH

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 TVD Reference: KB = 25' @ 3609.0usft
 MD Reference: KB = 25' @ 3609.0usft
 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)
15,808.0	87.78	0.85	11,174.2	4,381.7	-1,007.9	0.77	-0.23	-0.74	1.2	2.0
15,902.0	88.13	1.11	11,177.6	4,475.6	-1,008.3	0.46	0.37	0.28	4.6	-0.3
15,997.0	89.76	1.64	11,178.3	4,570.6	-1,004.1	1.80	1.72	0.56	6.4	-3.4
16,092.0	90.24	0.85	11,178.3	4,665.6	-1,002.0	0.97	0.51	-0.83	6.4	-6.2
16,122.0	90.55	0.94	11,179.1	4,695.5	-1,001.5	1.08	1.03	0.30	6.1	-6.9
16,185.0	90.55	0.94	11,178.5	4,758.5	-1,000.5	0.00	0.00	0.00	5.5	-8.4

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
10,651.0	10,544.3	-373.6	-889.4	KOP, MD:10651.0', TVD:10544.3', N/S:-373.6', E/W:-889.4', INC:0.92
10,994.1	10,875.4	-298.0	-877.3	FTP Crossing, MD:10994.1', TVD:10875.4', N/S:-298.0', E/W:-877.3', INC:26.50
16,122.0	11,179.1	4,695.5	-1,001.5	Last MWD Survey (MD=16122.0')
16,185.0	11,178.5	4,758.5	-1,000.5	Projection to Bit (MD=16185.0')

Checked By: _____ Approved By: _____ Date: _____



Lea County, NM (NAD 83 NME)

Ares 4 State #503H

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: #503H

Ground Level: 3584.0
KB = 25' @ 3609.00ft
Northing: 452057.00
Easting: 777312.00
Latitude: 32° 14' 25.712 N
Longitude: 103° 34' 12.385 W

SECTION DETAILS

Sec	MD	Inc	Adj	TVD	+H/S	+E/W	Diag	TFace	VFace	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	1600.0	0.00	0.00	1600.0	0.0	0.0	0.00	0.00	0.0		
3	2144.0	12.80	250.17	2139.3	-34.8	-68.0	2.00	250.17	-8.9		
4	8108.0	12.80	250.17	8082.7	-324.5	-600.0	0.00	0.00	-131.1		
5	8752.8	0.00	0.00	8642.0	-348.0	-688.0	2.00	180.00	-141.0		
6	10721.3	0.00	0.00	10510.5	-348.0	-688.0	0.00	0.00	-141.0		
7	11624.7	80.34	339.84	11183.4	-227.3	-872.8	10.00	339.84	-423.7		
8	12212.7	80.34	339.84	11180.0	-818.3	-877.3	0.00	0.00	1000.0		TOTW(Ares 4 State #503H)
9	12222.8	80.14	339.84	11180.0	-825.1	-877.4	2.00	180.00	1000.8		
10	14263.7	80.14	339.84	11178.0	-2858.3	-883.7	0.00	0.00	3000.0		TOTW2(Ares 4 State #503H)
11	14263.1	80.11	339.84	11178.0	-2857.8	-883.7	2.00	180.00	3001.4		
12	18274.1	90.11	339.84	11173.0	-3874.8	-1091.9	0.00	0.00	4000.0		TOTW3(Ares 4 State #503H)
13	18279.7	90.00	339.84	11173.0	-3882.2	-1091.9	2.00	180.00	4000.8		
14	18165.8	90.00	339.84	11173.0	-4763.0	-1090.0	0.00	0.00	4873.8		PEHL(Ares 4 State #503H)

CASING DETAILS

No casing data is available

WELLBORE YARDSTICK DETAILS (MAP CO-ORDINATES)

Name	TVD	+H/S	+E/W	Northing	Easting
TOTW(Ares 4 State #503H)	11180.0	-818.3	-877.3	452872.30	776334.67
TOTW2(Ares 4 State #503H)	11178.0	-2858.2	-883.7	454913.20	776318.32
TOTW3(Ares 4 State #503H)	11173.0	-3874.8	-1091.9	456393.20	776310.14
PEHL(Ares 4 State #503H)	11173.0	-4763.0	-1090.0	456825.00	776303.00
Brushy Top(Ares 4 State #503H)	7492.0	-348.0	-688.0	451702.00	776344.00
FTP(Ares 4 State #503H)	11180.0	-398.0	-688.0	451789.00	776344.00

