



Lea County, NM (NAD 83 NME)

Caballo 23 Fed Com #701H

H&P 473

Plan #2

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: #701H

Ground Level: 3342.0  
KB = 25' @ 3367.0uST (H&P 473)  
Northing: 404685.00 Easting: 763786.00 Latitude: 32° 6' 36.494 N Longitude: 103° 33' 1.024 W



To convert a Magnetic Direction to a Grid Direction, Add 6.56°  
To convert a Magnetic Direction to a True Direction, Add 6.97° East  
To convert a True Direction to a Grid Direction, Subtract 0.42°

SECTION DETAILS

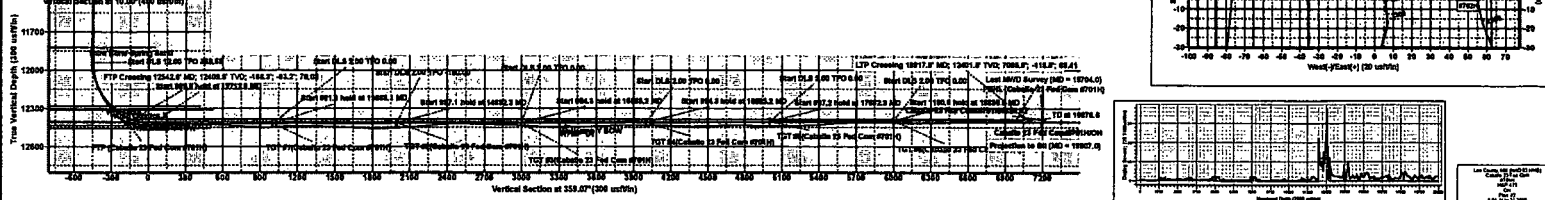
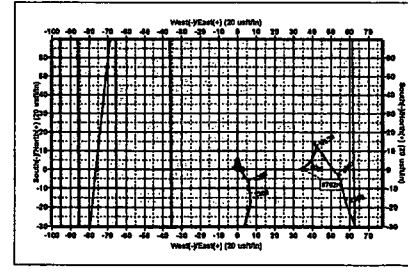
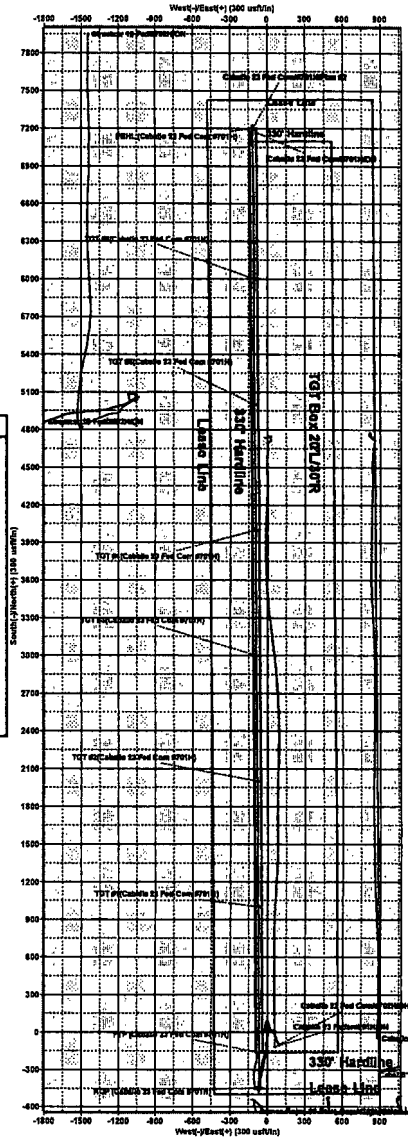
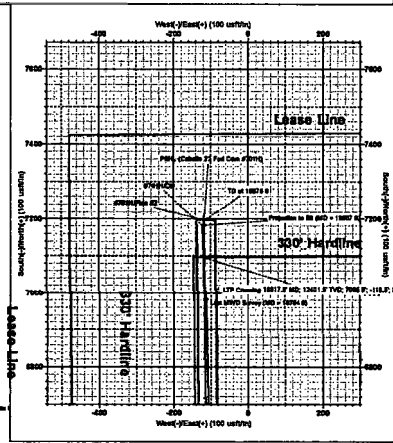
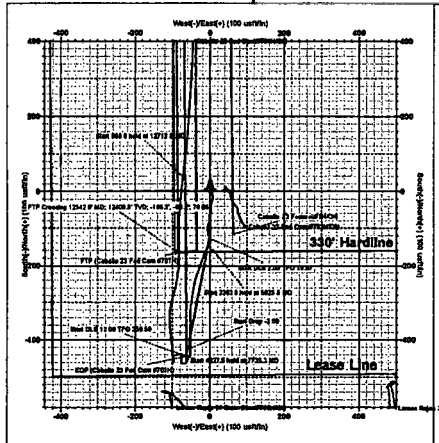
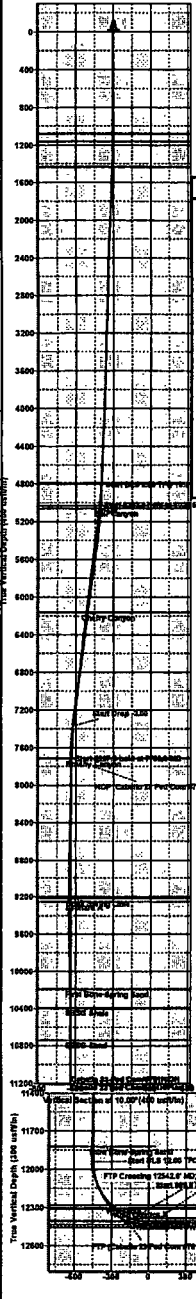
Sec	MD	Inc	Azi	TVD	+N/S	+E/W	Diag	TFace	Vsect	Target
1	4807.0	2.64	178.93	4804.6	-126.9	-2.0	0.00	0.00	-126.9	
2	5025.5	6.92	190.86	5022.2	-144.9	-4.4	2.00	19.07	-144.8	
3	7389.4	6.92	190.86	7388.9	-424.5	-58.1	0.00	0.00	-423.5	
4	7735.3	0.00	0.00	7714.0	-445.0	-62.0	2.00	180.00	-443.9	KOP (Caballo 23 Fed Com #701H)
5	11962.8	0.00	0.00	11941.5	-445.0	-62.0	0.00	0.00	-443.9	
6	12712.8	90.00	359.59	12419.0	32.4	-85.4	12.00	359.59	33.5	
7	13879.4	90.00	359.59	12419.0	999.0	-72.4	0.00	0.00	1000.0	TGT #1(Caballo 23 Fed Com #701H)
8	13688.1	90.17	359.59	12419.0	1007.7	-72.4	2.00	0.00	1008.8	
9	14878.4	90.17	359.59	12418.0	1999.0	-79.6	0.00	0.00	2000.0	TGT #2(Caballo 23 Fed Com #701H)
10	14682.3	90.11	359.59	12416.0	2001.9	-79.6	2.00	-180.00	2002.9	
11	15879.4	90.11	359.59	12414.0	2999.0	-86.8	0.00	0.00	3000.0	TGT #3(Caballo 23 Fed Com #701H)
12	15685.2	90.23	359.59	12414.0	3004.7	-86.8	2.00	0.00	3005.8	
13	16879.4	90.23	359.59	12410.0	3999.0	-94.0	0.00	0.00	4000.0	TGT #4(Caballo 23 Fed Com #701H)
14	16685.2	90.34	359.59	12410.0	4004.7	-94.0	2.00	0.00	4005.7	
15	17879.5	90.34	359.59	12404.0	4999.0	-101.2	0.00	0.00	5000.0	TGT #5(Caballo 23 Fed Com #701H)
16	17882.3	90.40	359.59	12404.0	5001.9	-101.2	2.00	0.00	5002.8	
17	18879.5	90.40	359.59	12397.0	5999.0	-108.4	0.00	0.00	6000.0	TGT #6(Caballo 23 Fed Com #701H)
18	18585.3	90.53	359.59	12396.9	6005.3	-108.4	2.00	0.00	6006.3	
19	19876.6	90.53	359.59	12386.0	7196.0	-117.0	0.00	0.00	7197.0	PBHL (Caballo 23 Fed Com #701H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/S	+E/W	Northing	Easting
KOP (Caballo 23 Fed Com #701H)	7714.0	-445.0	-62.0	404240.01	783724.02
PBHL (Caballo 23 Fed Com #701H)	12386.0	7196.0	-117.0	411891.00	783689.00
TGT #1(Caballo 23 Fed Com #701H)	12387.0	5899.0	-108.4	410984.00	783877.82
TGT #2(Caballo 23 Fed Com #701H)	12404.0	4999.0	-101.2	409894.00	783894.82
TGT #3(Caballo 23 Fed Com #701H)	12410.0	3999.0	-84.0	408984.00	783892.02
TGT #4(Caballo 23 Fed Com #701H)	12414.0	2999.0	-66.8	407684.00	783898.22
TGT #5(Caballo 23 Fed Com #701H)	12416.0	1999.0	-79.6	406894.00	783706.42
TGT #6(Caballo 23 Fed Com #701H)	12419.0	-165.0	-44.0	404520.00	783722.00
TGT #7(Caballo 23 Fed Com #701H)	12419.0	999.0	-72.4	405984.00	783713.82





**EOG Resources - Midland**

Lea County, NM (NAD 83 NME)  
Caballo 23 Fed Com  
#701H  
OH

Design: OH

**Midland PVA**

31 May, 2018

**HOBBS OCD**  
**AUG 29 2018**  
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Midland PVA



<b>Company:</b>	E.O.G Resources - Midland	<b>Local Co-ordinate Reference:</b>	Well #701H
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>TVD Reference:</b>	KB = 25' @ 3367.0usft (H&P 473)
<b>Site:</b>	Caballo 23 Fed Com	<b>MD Reference:</b>	KB = 25' @ 3367.0usft (H&P 473)
<b>Well:</b>	#701H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	EDM 5000.14

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

<b>Site</b>	Caballo 23 Fed Com				
<b>Site Position:</b>		<b>Northing:</b>	404,685.00 usft	<b>Latitude:</b>	32° 6' 36.494 N
<b>From:</b>	Map	<b>Easting:</b>	783,786.00 usft	<b>Longitude:</b>	103° 33' 1.024 W
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.42 °

<b>Well</b>	#701H					
<b>Well Position</b>	+N-S	0.0 usft	<b>Northing:</b>	404,685.00 usft	<b>Latitude:</b>	32° 6' 36.494 N
	+E-W	0.0 usft	<b>Easting:</b>	783,786.00 usft	<b>Longitude:</b>	103° 33' 1.024 W
<b>Position Uncertainty</b>	0.0 usft		<b>Wellhead Elevation:</b>	0.0 usft	<b>Ground Level:</b>	3,342.0 usft

<b>Wellbore</b>	OH				
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<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	4/30/2017	6.97	59.97	47,908.16251725

<b>Design</b>	OH				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N-S (usft)</b>	<b>+E-W (usft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	359.06	



Midland PVA



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<b>Site:</b>	Caballo 23 Fed Com	<b>MD Reference:</b>	KB = 25' @ 3367.0usft (H&P 473)
<b>Well:</b>	#701H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	EDM 5000.14

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
133.0	1,197.0	Cartel 41 8'kb + 17' (OH)	MWD	OWSG MWD - Standard
1,244.0	4,807.0	Gordon Tech MWD (OH)	MWD	OWSG MWD - Standard
5,007.0	19,904.0	Intrepid MWD (OH)	MWD	OWSG MWD - Standard

MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	N/S (usft)	E/W (usft)	DLeg ("/100usft)	Buid ("/100usft)	Turn ("/100usft)	High to Plan (usft)	Right to Plan (usft)
0.0	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.0	0.0
133.0	0.88	105.73	133.0	-0.3	1.0	0.66	0.66	0.00	0.0	0.0
314.0	0.71	153.63	314.0	-1.7	2.8	0.37	-0.09	26.46	0.0	0.0
505.0	0.71	152.92	505.0	-3.8	3.9	0.00	0.00	-0.37	0.0	0.0
695.0	0.40	114.54	695.0	-5.1	5.0	0.25	-0.16	-20.20	0.0	0.0
885.0	0.22	152.04	885.0	-5.7	5.8	0.14	-0.09	19.74	0.0	0.0
1,075.0	0.31	153.14	1,074.9	-6.5	6.2	0.05	0.05	0.58	0.0	0.0
1,141.0	0.09	136.75	1,140.9	-6.7	6.3	0.34	-0.33	-24.83	0.0	0.0
1,197.0	0.09	136.75	1,196.9	-6.7	6.4	0.00	0.00	0.00	0.0	0.0
1,273.0	0.58	210.28	1,272.9	-7.1	6.2	0.74	0.64	96.75	0.0	-0.1
1,317.0	0.58	203.73	1,316.9	-7.5	6.0	0.15	0.00	-14.89	0.0	-0.1
1,360.0	0.98	175.49	1,359.9	-8.1	6.0	1.26	0.93	-65.67	0.1	-0.1
1,404.0	1.76	171.52	1,403.9	-9.1	6.1	1.78	1.77	-9.02	0.1	0.0
1,448.0	2.14	169.30	1,447.9	-10.6	6.3	0.88	0.86	-5.05	0.1	0.0
1,491.0	2.56	170.91	1,490.9	-12.3	6.6	0.99	0.98	3.74	0.1	0.0
1,535.0	2.68	175.56	1,534.8	-14.3	6.9	0.55	0.27	10.57	0.1	-0.1
1,579.0	2.71	176.80	1,578.8	-16.4	7.0	0.15	0.07	2.82	0.1	-0.1
1,622.0	2.47	182.78	1,621.7	-18.3	7.0	0.84	-0.56	13.91	0.1	-0.1
1,666.0	1.82	194.14	1,665.7	-20.0	6.8	1.76	-1.48	25.82	0.1	-0.1
1,709.0	1.51	201.44	1,708.7	-21.1	6.4	0.87	-0.72	16.98	0.0	-0.1



Midland PVA



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<b>Site:</b>	Cabello 23 Fed Com	<b>MD Reference:</b>	KB = 25' @ 3367.0usft (H&P 473)
<b>Well:</b>	#701H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	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)	
1,763.0	1.52	195.54	1,752.7	-22.2	6.1	0.36	0.02	-13.41	0.1	-0.1	
1,797.0	1.45	198.07	1,796.7	-23.3	5.7	0.22	-0.16	5.75	0.0	-0.1	
1,840.0	1.43	193.30	1,839.6	-24.4	5.4	0.28	-0.05	-11.09	0.1	-0.1	
1,884.0	1.90	201.74	1,883.6	-25.6	5.1	1.20	1.07	19.18	0.0	-0.1	
1,972.0	3.00	196.11	1,971.5	-29.2	3.9	1.28	1.25	-6.40	0.1	-0.1	
2,015.0	3.12	194.16	2,014.5	-31.4	3.3	0.37	0.28	-4.53	0.1	-0.1	
2,059.0	3.25	192.28	2,058.4	-33.8	2.7	0.38	0.30	-4.27	0.1	-0.1	
2,102.0	3.00	190.06	2,101.3	-36.1	2.3	0.65	-0.58	-5.16	0.1	-0.1	
2,146.0	2.68	185.51	2,145.3	-38.2	2.0	0.89	-0.73	-10.34	0.1	-0.1	
2,190.0	2.57	178.04	2,189.2	-40.2	1.9	0.82	-0.25	-16.98	0.1	-0.1	
2,233.0	2.49	173.76	2,232.2	-42.1	2.0	0.48	-0.19	-9.95	0.1	0.0	
2,277.0	2.52	178.38	2,276.2	-44.0	2.2	0.46	0.07	10.45	0.1	-0.1	
2,321.0	2.66	175.40	2,320.1	-46.0	2.3	0.44	0.32	-6.73	0.1	-0.1	
2,364.0	2.55	173.32	2,363.1	-48.0	2.5	0.34	-0.26	-4.84	0.1	0.0	
2,408.0	2.67	176.51	2,407.0	-50.0	2.6	0.43	0.27	7.25	0.1	-0.1	
2,451.0	2.17	173.84	2,450.0	-51.8	2.8	1.19	-1.16	-6.21	0.1	0.0	
2,495.0	1.75	182.49	2,494.0	-53.3	2.8	1.16	-0.95	19.66	0.1	-0.1	
2,539.0	1.87	175.87	2,537.9	-54.6	2.9	0.55	0.27	-15.05	0.1	-0.1	
2,582.0	1.95	175.57	2,580.9	-56.1	3.0	0.19	0.19	-0.70	0.1	-0.1	
2,626.0	1.72	180.73	2,624.9	-57.5	3.0	0.64	-0.52	11.73	0.1	-0.1	
2,670.0	1.49	198.84	2,668.9	-58.7	2.8	1.26	-0.52	41.16	0.0	-0.1	
2,713.0	1.54	218.52	2,711.9	-59.7	2.3	1.21	0.12	45.77	0.0	-0.1	
2,757.0	1.45	220.06	2,755.8	-60.6	1.6	0.22	-0.20	3.50	0.0	-0.1	
2,801.0	1.40	224.14	2,799.8	-61.4	0.8	0.26	-0.11	9.27	0.0	-0.1	
2,844.0	1.47	219.68	2,842.8	-62.2	0.1	0.31	0.16	-10.37	0.0	-0.1	
2,888.0	1.43	207.87	2,886.8	-63.1	-0.5	0.68	-0.09	-26.84	0.0	-0.1	
2,931.0	1.31	211.05	2,929.8	-64.0	-1.0	0.33	-0.28	7.40	0.0	-0.1	



Midland PVA



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<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>TVD Reference:</b>	KB = 25' @ 3367.0usft (H&P 473)
<b>Site:</b>	Caballo 23 Fed Com	<b>MD Reference:</b>	KB = 25' @ 3367.0usft (H&P 473)
<b>Well:</b>	#701H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLag (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
2,975.0	1.30	207.07	2,973.8	-64.9	-1.5	0.21	-0.02	-9.05	0.0	0.0	-0.1
3,019.0	1.68	192.60	3,017.8	-65.9	-1.9	1.21	0.86	-32.89	0.1	0.1	-0.1
3,062.0	2.15	184.71	3,060.7	-67.4	-2.1	1.25	1.09	-18.35	0.1	0.1	-0.1
3,106.0	2.44	181.20	3,104.7	-69.1	-2.2	0.73	0.66	-7.98	0.1	0.1	-0.1
3,149.0	2.50	167.95	3,147.7	-70.9	-2.0	1.33	0.14	-30.81	0.1	0.1	0.0
3,193.0	2.72	162.23	3,191.6	-72.9	-1.5	0.77	0.50	-13.00	0.1	0.1	0.0
3,237.0	2.66	154.95	3,235.6	-74.8	-0.7	0.79	-0.14	-16.55	0.1	0.1	0.0
3,280.0	2.60	153.33	3,278.5	-76.6	0.2	0.22	-0.14	-3.77	0.1	0.1	0.0
3,324.0	1.93	153.95	3,322.5	-78.1	0.9	1.52	-1.52	1.41	0.1	0.1	0.0
3,367.0	1.37	167.96	3,365.5	-79.3	1.4	1.60	-1.30	32.58	0.1	0.1	0.0
3,411.0	1.09	202.84	3,409.5	-80.2	1.3	1.78	-0.64	79.27	0.0	0.0	-0.1
3,455.0	1.20	225.74	3,453.5	-80.9	0.8	1.06	0.25	52.05	0.0	0.0	-0.1
3,498.0	1.08	229.65	3,496.4	-81.5	0.2	0.33	-0.28	9.09	0.0	0.0	-0.1
3,542.0	1.16	211.06	3,540.4	-82.1	-0.4	0.84	0.18	-42.25	0.0	0.0	-0.1
3,586.0	1.25	215.72	3,584.4	-82.9	-0.9	0.30	0.20	10.59	0.0	0.0	-0.1
3,629.0	1.49	204.71	3,627.4	-83.8	-1.4	0.83	0.56	-25.60	0.0	0.0	-0.1
3,716.0	1.57	209.83	3,714.4	-85.8	-2.5	0.18	0.09	5.89	0.0	0.0	-0.1
3,760.0	1.61	208.63	3,758.4	-86.9	-3.0	0.12	0.09	-2.73	0.0	0.0	-0.1
3,802.0	1.91	201.84	3,800.3	-88.1	-3.6	0.87	0.71	-16.17	0.0	0.0	-0.1
3,846.0	1.80	195.54	3,844.3	-89.4	-4.0	0.53	-0.25	-14.32	0.1	0.1	-0.1
3,935.0	2.03	196.67	3,933.3	-92.3	-4.9	0.28	0.26	1.27	0.1	0.1	-0.1
3,978.0	2.14	191.21	3,976.2	-93.8	-5.2	0.53	0.26	-12.70	0.1	0.1	-0.1
4,021.0	1.99	190.91	4,019.2	-95.3	-5.5	0.35	-0.35	-0.70	0.1	0.1	-0.1
4,066.0	2.01	189.10	4,064.2	-96.9	-5.8	0.15	0.04	-4.02	0.1	0.1	-0.1
4,109.0	2.35	184.28	4,107.2	-98.5	-6.0	0.90	0.79	-11.21	0.1	0.1	-0.1
4,153.0	2.20	183.84	4,151.1	-100.2	-6.1	0.34	-0.34	-1.00	0.1	0.1	-0.1
4,196.0	2.32	182.25	4,194.1	-101.9	-6.2	0.31	0.28	-3.70	0.1	0.1	-0.1



Midland PVA



<b>Company:</b> EOG Resources - Midland	<b>Local Co-ordinate Reference:</b>	<b>Well #701H</b>
<b>Project:</b> Lea County, NM (NAD 83 NME)	<b>TVD Reference:</b>	KB = 25' @ 3367.0usft (H&P 473)
<b>Site:</b> Caballo 23 Fed Com	<b>MD Reference:</b>	KB = 25' @ 3367.0usft (H&P 473)
<b>Well:</b> #701H	<b>North Reference:</b>	: Grid
<b>Wellbore:</b> OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b> OH	<b>Database:</b>	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)	
4,240.0	2.37	172.40	4,238.0	-103.7	-6.1	0.92	0.11	-22.39	0.1	0.0	
4,284.0	2.56	170.74	4,282.0	-105.6	-5.9	0.46	0.43	-3.77	0.1	0.0	
4,327.0	2.53	165.34	4,325.0	-107.4	-5.5	0.56	-0.07	-12.56	0.1	0.0	
4,371.0	2.38	174.73	4,368.9	-109.3	-5.1	0.97	-0.34	21.34	0.1	-0.1	
4,415.0	2.37	177.09	4,412.9	-111.1	-5.0	0.22	-0.02	5.36	0.1	-0.1	
4,458.0	2.40	170.09	4,455.9	-112.9	-4.8	0.68	0.07	-16.28	0.1	0.0	
4,502.0	2.54	162.29	4,499.8	-114.7	-4.3	0.83	0.32	-17.73	0.1	0.0	
4,545.0	2.53	158.23	4,542.8	-116.5	-3.7	0.42	-0.02	-9.44	0.1	0.0	
4,589.0	2.36	160.11	4,586.7	-118.3	-3.0	0.43	-0.39	4.27	0.1	0.0	
4,632.0	2.16	172.27	4,629.7	-119.9	-2.6	1.21	-0.47	28.28	0.1	0.0	
4,676.0	2.01	170.06	4,673.7	-121.5	-2.4	0.39	-0.34	-5.02	0.1	0.0	
4,719.0	2.38	176.59	4,716.6	-123.1	-2.2	1.04	0.86	15.19	0.1	-0.1	
4,763.0	2.33	178.95	4,760.6	-124.9	-2.1	0.25	-0.11	5.36	0.1	-0.1	
4,807.0	2.64	178.93	4,804.6	-126.8	-2.1	0.70	0.70	-0.05	0.1	-0.1	
5,007.0	2.50	179.70	5,004.4	-135.8	-2.0	0.07	-0.07	0.39	6.9	2.1	
5,178.0	6.00	201.70	5,174.9	-147.8	-5.3	2.22	2.05	12.87	15.0	-3.1	
5,364.0	6.10	204.40	5,359.8	-165.9	-12.9	0.16	0.05	1.45	17.1	-8.6	
5,551.0	8.00	200.00	5,545.4	-187.1	-21.5	1.06	1.02	-2.35	17.0	-11.6	
5,739.0	8.00	197.90	5,731.6	-211.9	-30.0	0.16	0.00	-1.12	13.7	-14.3	
5,927.0	7.40	198.60	5,917.9	-235.8	-37.9	0.32	-0.32	0.37	10.7	-17.3	
6,114.0	7.90	189.70	6,103.2	-259.9	-43.9	0.69	0.27	-4.76	11.0	-16.9	
6,301.0	7.60	187.10	6,288.5	-284.8	-47.6	0.25	-0.16	-1.39	9.0	-15.5	
6,489.0	7.10	187.70	6,475.0	-308.7	-50.7	0.27	-0.27	0.32	7.4	-14.2	
6,676.0	7.70	181.30	6,660.4	-332.7	-52.5	0.54	0.32	-3.42	7.1	-10.8	
6,862.0	7.80	179.60	6,844.7	-357.7	-52.7	0.13	0.05	-0.91	4.3	-6.6	
7,050.0	7.00	178.70	7,031.1	-381.9	-52.3	0.43	-0.43	-0.48	2.3	-2.0	
7,238.0	6.10	179.00	7,217.9	-403.4	-51.9	0.48	-0.48	0.16	3.1	2.7	



Midland PVA



<b>Company:</b>	EOG Resources - Midland	<b>Local Co-ordinate Reference:</b>	Well #701H
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>TVD Reference:</b>	KB = 25' @ 3367.0usft (H&P 473)
<b>Site:</b>	Caballo 23 Fed Com	<b>MD Reference:</b>	KB = 25' @ 3367.0usft (H&P 473)
<b>Well:</b>	#701H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	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)	
7,426.0	5.70	181.50	7,404.9	-422.7	-52.0	0.25	-0.21	1.33	6.0	6.7	
7,613.0	2.80	182.80	7,591.4	-436.6	-52.5	1.55	-1.55	0.70	6.3	8.7	
7,800.0	0.80	205.70	7,778.3	-442.3	-53.2	1.12	-1.07	12.25	6.2	6.7	
7,987.0	1.30	209.90	7,965.3	-445.3	-54.9	0.27	0.27	2.25	3.3	6.3	
8,175.0	1.10	210.90	8,153.2	-448.7	-56.9	0.11	-0.11	0.53	-0.6	6.3	
8,362.0	1.40	205.40	8,340.2	-452.3	-58.8	0.17	0.16	-2.94	-5.2	6.1	
8,550.0	1.40	208.50	8,528.1	-456.4	-60.8	0.04	0.00	1.65	-9.5	6.5	
8,737.0	1.50	207.40	8,715.1	-460.6	-63.1	0.06	0.05	-0.59	-14.3	6.2	
8,924.0	0.70	246.40	8,902.0	-463.2	-65.2	0.56	-0.43	20.86	-10.3	15.4	
9,111.0	0.50	272.40	9,089.0	-463.6	-67.1	0.18	-0.11	13.90	-4.3	18.8	
9,298.0	1.10	257.80	9,276.0	-464.0	-69.7	0.34	0.32	-7.81	-11.5	16.9	
9,489.0	1.30	268.60	9,466.9	-464.4	-73.6	0.16	0.10	5.65	-12.1	18.1	
9,676.0	1.50	7.90	9,653.9	-462.1	-75.4	1.14	0.11	53.10	18.7	11.0	
9,863.0	1.10	357.90	9,840.9	-457.8	-75.1	0.25	-0.21	-5.35	12.4	13.6	
10,049.0	1.40	358.50	10,026.8	-453.8	-75.3	0.16	0.16	0.32	8.4	13.5	
10,236.0	1.70	3.90	10,213.7	-448.7	-75.1	0.18	0.16	2.89	4.6	12.9	
10,422.0	1.50	2.80	10,399.7	-443.5	-74.8	0.11	-0.11	-0.59	-0.8	12.9	
10,610.0	0.90	9.60	10,587.6	-439.6	-74.5	0.33	-0.32	3.62	-3.2	13.2	
10,797.0	0.80	299.50	10,774.6	-437.5	-75.3	0.52	-0.05	-37.49	-15.3	0.1	
10,881.0	0.80	187.10	10,868.6	-437.9	-76.0	1.50	0.11	-119.57	5.3	-14.8	
11,079.0	1.10	263.10	11,056.6	-439.6	-78.0	0.66	0.11	40.43	-15.2	-7.2	
11,265.0	2.30	264.40	11,242.5	-440.2	-83.5	0.65	0.65	0.70	-20.9	-6.9	
11,465.0	4.20	250.90	11,442.2	-443.0	-84.4	1.02	0.95	-6.75	-30.0	-12.5	
11,654.0	2.60	164.50	11,630.9	-449.4	-89.8	2.54	-0.85	-45.71	5.8	-37.6	
11,842.0	2.20	156.80	11,818.8	-456.8	-87.2	0.27	-0.21	-4.10	3.0	-37.1	
11,950.0	1.10	183.30	11,926.7	-459.8	-86.5	1.21	-1.02	24.54	-16.7	-33.6	
11,982.0	6.10	353.60	11,958.7	-458.4	-86.7	22.46	15.63	532.19	9.7	36.0	





Midland PVA



<b>Company:</b>	EOG Resources - Midland	<b>Local Co-ordinate Reference:</b>	Well #701H
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>TVD Reference:</b>	KB = 25' @ 3367.0usft (H&P 473)
<b>Site:</b>	Caballo 23 Fed Com	<b>MD Reference:</b>	KB = 25' @ 3367.0usft (H&P 473)
<b>Well:</b>	#701H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	EDM 5000.14

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	DLag (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
12,028.0	12.90	357.40	12,004.0	-450.8	-97.2	14.84	14.78	8.26	8.2	35.6
12,075.0	17.50	355.90	12,049.4	-438.5	-97.9	9.82	9.79	-3.19	3.2	36.2
12,122.0	20.90	351.90	12,093.7	-423.2	-99.6	7.75	7.23	-8.51	-2.0	37.5
12,169.0	25.80	350.60	12,136.9	-404.8	-102.5	10.48	10.43	-2.77	-4.5	40.0
12,215.0	28.80	354.80	12,177.8	-383.8	-105.1	7.75	6.52	9.13	-2.2	42.6
12,262.0	31.00	357.00	12,218.5	-360.5	-106.8	5.23	4.68	4.68	1.3	44.3
12,308.0	32.80	0.40	12,257.5	-336.2	-107.3	5.53	3.91	7.39	8.3	44.4
12,339.0	35.40	7.30	12,283.2	-318.9	-106.1	15.02	8.39	22.26	17.0	41.6
12,370.0	38.80	12.70	12,308.0	-300.5	-102.8	15.18	10.97	17.42	24.1	36.2
12,402.0	41.60	14.30	12,332.4	-280.4	-88.0	9.33	8.75	5.00	29.0	30.0
12,441.0	48.90	13.80	12,359.8	-253.6	-91.3	18.74	18.72	-1.28	33.2	23.0
12,465.0	53.80	10.00	12,374.9	-235.2	-87.4	23.15	19.58	-15.83	34.1	20.5
12,496.0	59.80	4.20	12,391.9	-209.6	-84.3	25.38	20.00	-18.71	34.5	19.3
12,509.0	63.90	2.00	12,398.0	-198.1	-83.7	34.89	31.54	-16.92	34.3	19.3
12,541.0	75.70	359.70	12,409.0	-168.1	-83.2	37.48	36.88	-7.19	31.1	19.4
12,542.9	76.05	359.74	12,409.5	-166.3	-83.3	18.17	18.04	2.24	30.8	19.4
<b>FTP Crossing 12542.9' MD; 12409.5' TVD; -166.3'; -83.2'; 76.05</b>										
12,587.0	84.00	0.70	12,417.1	-122.9	-83.1	18.17	18.04	2.17	22.7	18.9
12,634.0	83.60	1.00	12,422.2	-76.2	-82.4	1.06	-0.85	0.64	15.4	17.7
12,681.0	85.80	6.20	12,426.6	-29.5	-79.4	11.97	4.68	11.06	11.7	14.3
12,868.0	92.40	6.00	12,429.5	156.3	-59.6	3.53	3.53	-0.11	10.5	-6.7
13,055.0	91.30	1.60	12,423.5	342.8	-47.2	2.42	-0.59	-2.35	4.5	-20.4
13,169.0	88.80	0.80	12,423.4	456.7	-44.8	2.30	-2.19	-0.70	4.4	-23.7
13,287.0	86.80	358.90	12,427.9	574.6	-45.1	2.34	-1.69	-1.61	8.9	-24.2
13,335.0	85.70	358.30	12,431.0	622.5	-46.3	2.61	-2.29	-1.25	12.0	-23.4
13,382.0	85.50	357.10	12,434.6	669.3	-48.2	2.58	-0.43	-2.55	15.7	-21.8
13,429.0	85.40	356.40	12,438.4	716.1	-50.8	1.50	-0.21	-1.49	19.4	-19.5



Midland PVA



<b>Company:</b>	EOG Resources - Midland	<b>Local Co-ordinate Reference:</b>	Well #701H
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>TVD Reference:</b>	KB = 25' @ 3367.0usft (H&P 473)
<b>Site:</b>	Caballo 23 Fed Com	<b>MD Reference:</b>	KB = 25' @ 3367.0usft (H&P 473)
<b>Well:</b>	#701H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	EDM 5000.14

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)
13,522.0	85.80	355.00	12,445.5	808.6	-57.8	1.56	0.43	-1.51	26.5	-13.2
13,615.0	87.30	353.50	12,451.1	900.9	-67.1	2.28	1.61	-1.61	32.1	-4.6
13,708.0	94.10	356.00	12,450.0	993.5	-75.6	7.79	7.31	2.69	31.0	3.3
13,802.0	94.40	355.90	12,443.0	1,087.0	-82.2	0.34	0.32	-0.11	24.2	9.2
13,849.0	95.20	355.80	12,439.1	1,133.7	-85.6	1.72	1.70	-0.21	20.5	12.2
13,896.0	93.00	356.90	12,435.7	1,180.5	-88.6	5.23	-4.68	2.34	17.2	14.9
13,943.0	90.00	0.40	12,434.5	1,227.4	-89.7	9.81	-6.38	7.45	16.1	15.7
13,990.0	87.80	3.60	12,435.4	1,274.4	-88.1	8.26	-4.68	6.81	17.2	13.7
14,084.0	87.00	3.60	12,439.6	1,368.1	-82.2	0.85	-0.85	0.00	21.7	7.1
14,179.0	87.20	2.20	12,444.4	1,462.9	-77.4	1.49	0.21	-1.47	26.8	1.6
14,272.0	88.20	359.50	12,448.2	1,555.8	-76.0	3.09	1.08	-2.90	30.8	-0.4
14,365.0	88.20	0.80	12,451.1	1,648.7	-75.7	1.40	0.00	1.40	34.0	-1.3
14,459.0	87.70	359.70	12,454.5	1,742.6	-75.3	1.28	-0.53	-1.17	37.7	-2.4
14,553.0	90.70	358.70	12,455.8	1,836.6	-76.6	3.36	3.19	-1.06	39.3	-1.8
14,645.0	90.50	358.70	12,454.8	1,928.6	-78.7	0.22	-0.22	0.00	38.6	-0.3
14,739.0	90.70	358.40	12,453.8	2,022.6	-81.1	0.38	0.21	-0.32	37.9	1.4
14,833.0	94.60	358.50	12,449.5	2,116.4	-83.6	4.15	4.15	0.11	33.7	3.2
14,927.0	95.20	356.70	12,441.4	2,210.0	-87.6	2.01	0.64	-1.91	25.9	6.5
15,027.0	96.90	357.70	12,430.9	2,309.3	-92.4	1.97	1.70	1.00	15.5	10.6
15,120.0	93.30	357.40	12,422.6	2,401.8	-96.4	3.88	-3.87	-0.32	7.5	13.9
15,214.0	89.10	357.00	12,420.7	2,495.7	-101.0	4.49	-4.47	-0.43	5.7	17.8
15,307.0	88.80	0.40	12,422.4	2,588.6	-103.1	3.67	-0.32	3.66	7.6	19.3
15,401.0	89.20	0.80	12,424.0	2,682.6	-102.1	0.60	0.43	0.43	9.4	17.6
15,494.0	88.10	2.40	12,426.2	2,775.5	-99.5	2.09	-1.18	1.72	11.8	14.3
15,588.0	88.90	1.60	12,428.7	2,869.4	-96.2	1.20	0.85	-0.85	14.4	10.4
15,681.0	86.50	1.60	12,432.4	2,962.3	-93.6	2.58	-2.58	0.00	18.3	7.1
15,774.0	86.80	0.90	12,437.8	3,055.1	-91.6	0.82	0.32	-0.75	24.1	4.4



Midland PVA



<b>Company:</b> EOG Resources - Midland	<b>Local Co-ordinate Reference:</b> Well #701H
<b>Project:</b> Lea County, NM (NAD 83 NME)	<b>TVD Reference:</b> KB = 25' @ 3367.0usft (H&P 473)
<b>Site:</b> Caballo 23 Fed Com	<b>MD Reference:</b> KB = 25' @ 3367.0usft (H&P 473)
<b>Well:</b> #701H	<b>North Reference:</b> Grid
<b>Wellbore:</b> OH	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> OH	<b>Database:</b> EDM 5000.14

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLag (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
15,867.0	88.10	1.10	12,442.0	3,148.0	-90.0	1.41	1.40	0.22	28.6	2.1
15,961.0	88.60	0.90	12,444.7	3,242.0	-88.3	0.57	0.53	-0.21	31.6	-0.2
16,055.0	89.80	0.30	12,446.0	3,336.0	-87.4	1.43	1.28	-0.64	33.3	-1.8
16,149.0	90.70	359.70	12,445.6	3,430.0	-87.4	1.15	0.98	-0.64	33.3	-2.5
16,242.0	91.20	358.70	12,444.0	3,522.9	-88.7	1.20	0.54	-1.08	32.1	-1.9
16,336.0	93.00	358.90	12,440.6	3,616.8	-90.6	1.93	1.91	0.21	29.1	-0.6
16,431.0	90.90	359.10	12,437.4	3,711.8	-92.3	2.22	-2.21	0.21	26.2	0.4
16,524.0	90.90	1.60	12,435.9	3,804.7	-91.7	2.69	0.00	2.69	25.1	-0.9
16,618.0	92.00	0.60	12,433.5	3,898.7	-89.9	1.58	1.17	-1.06	23.1	-3.3
16,713.0	88.90	359.90	12,432.8	3,993.7	-89.5	3.35	-3.26	-0.74	22.8	-4.4
16,806.0	88.00	359.80	12,435.3	4,086.6	-89.7	0.97	-0.97	-0.11	25.8	-4.9
16,899.0	88.80	359.70	12,437.9	4,179.6	-90.1	0.87	0.86	-0.11	29.0	-5.1
17,025.0	89.20	358.60	12,440.1	4,305.6	-92.0	0.93	0.32	-0.87	31.9	-4.2
17,118.0	90.70	358.90	12,440.2	4,398.5	-94.0	1.64	1.61	0.32	32.6	-2.8
17,211.0	91.20	358.10	12,438.6	4,491.5	-96.5	1.01	0.54	-0.86	31.6	-1.1
17,305.0	92.30	357.50	12,435.8	4,585.4	-100.1	1.33	1.17	-0.64	29.3	1.9
17,399.0	91.70	357.90	12,432.5	4,679.3	-103.9	0.77	-0.64	0.43	26.6	5.0
17,493.0	89.90	359.50	12,431.2	4,773.2	-106.0	2.56	-1.91	1.70	25.8	6.4
17,587.0	86.20	357.60	12,434.4	4,867.1	-108.4	4.42	-3.94	-2.02	29.6	8.1
17,681.0	88.30	358.90	12,438.9	4,960.9	-111.2	2.63	2.23	1.38	34.6	10.3
17,774.0	92.20	1.80	12,438.5	5,053.9	-110.7	5.23	4.19	3.12	34.8	9.1
17,867.0	89.00	0.40	12,437.5	5,146.9	-108.9	3.76	-3.44	-1.51	34.5	6.6
17,961.0	91.20	0.40	12,437.3	5,240.9	-108.2	2.34	2.34	0.00	35.0	5.3
18,054.0	93.70	0.30	12,433.4	5,333.8	-107.7	2.69	2.69	-0.11	31.7	4.1
18,147.0	94.00	359.00	12,427.1	5,426.6	-108.2	1.43	0.32	-1.40	26.1	4.0
18,241.0	93.80	359.60	12,420.7	5,520.3	-109.4	0.67	-0.21	0.64	20.4	4.4
18,334.0	94.40	0.50	12,414.1	5,613.1	-109.3	1.16	0.65	0.97	14.4	3.7



<b>Company:</b> EOG Resources - Midland	<b>Local Co-ordinate Reference:</b> Well #701H
<b>Project:</b> Lea County, NM (NAD 83 NME)	<b>TVD Reference:</b> KB = 25' @ 3367.0usft (H&P 473)
<b>Site:</b> Caballo 23 Fed Com	<b>MD Reference:</b> KB = 25' @ 3367.0usft (H&P 473)
<b>Well:</b> #701H	<b>North Reference:</b> Grid
<b>Wellbore:</b> OH	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> OH	<b>Database:</b> EDM 5000.14

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
18,428.0	91.60	1.80	12,409.1	5,706.9	-107.4	3.28	-2.98	1.38	10.1	1.1	
18,522.0	89.70	1.80	12,408.1	5,800.9	-104.4	2.02	-2.02	0.00	9.7	-2.5	
18,616.0	88.40	1.50	12,408.6	5,894.8	-101.7	1.42	-1.38	-0.32	11.9	-5.9	
18,710.0	88.40	359.90	12,412.3	5,988.8	-100.6	1.70	0.00	-1.70	15.2	-7.7	
18,803.0	86.90	359.20	12,416.1	6,081.7	-101.3	1.78	-1.61	-0.75	19.8	-7.7	
18,897.0	89.90	359.90	12,418.7	6,175.6	-102.1	3.28	3.19	0.74	23.3	-7.6	
18,990.0	91.20	359.70	12,417.8	6,268.6	-102.4	1.41	1.40	-0.22	23.3	-7.9	
19,084.0	92.50	359.50	12,414.8	6,362.6	-103.0	1.40	1.38	-0.21	21.1	-8.0	
19,178.0	90.50	359.40	12,412.3	6,456.5	-103.9	2.13	-2.13	-0.11	19.5	-7.7	
19,271.0	93.10	359.20	12,409.4	6,549.5	-105.1	2.80	2.80	-0.22	17.4	-7.3	
19,365.0	92.00	359.70	12,405.2	6,643.4	-106.0	1.29	-1.17	0.53	14.1	-7.0	
19,406.0	90.70	359.30	12,404.2	6,684.4	-106.3	3.32	-3.17	-0.98	13.5	-7.0	
19,552.0	89.90	358.70	12,403.5	6,830.3	-108.9	0.68	-0.55	-0.41	14.1	-5.5	
19,704.0	91.60	357.60	12,401.5	6,982.3	-113.8	1.33	1.12	-0.72	13.5	-1.7	
<b>Last MWD Survey (MD = 19704.0)</b>											
19,817.8	88.41	357.60	12,401.5	7,096.0	-118.6	2.80	-2.80	0.00	14.6	2.3	
<b>LTP Crossing 19817.8' MD; 12401.5' TVD; 7095.9'; -118.5'; 88.41</b>											
19,904.0	86.00	357.60	12,405.7	7,181.9	-122.2	2.80	-2.80	0.00	19.5	5.3	
<b>Projection to Bit (MD = 19907.0)</b>											

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,542.9	12,409.5	-166.3	-83.3	FTP Crossing 12542.9' MD; 12409.5' TVD; -166.3'; -83.2'; 76.05
19,704.0	12,401.5	6,982.3	-113.8	Last MWD Survey (MD = 19704.0)
19,817.8	12,401.5	7,096.0	-118.6	LTP Crossing 19817.8' MD; 12401.5' TVD; 7095.9'; -118.5'; 88.41
19,904.0	12,405.7	7,181.9	-122.2	Projection to Bit (MD = 19907.0)



Midland PVA



<b>Company:</b>	EEO Resources - Midland	<b>Local Co-ordinate Reference:</b>	Well #701H
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>TVD Reference:</b>	KB = 25' @ 3367.0usft (H&P 473)
<b>Site:</b>	Caballo 23 Fed Com	<b>MD Reference:</b>	KB = 25' @ 3367.0usft (H&P 473)
<b>Well:</b>	#701H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	EDM 5000.14

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_