

SCALE: 1" = 1000'
0' 500' 1000'

FND. BRASS CAP,
U.S. G.L.O. SUR.

SECTION 32, TOWNSHIP 22-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

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UPPER MOST PERFORATION
NEW MEXICO EAST
NAD 1927
X=731274
Y=493388
LAT.: N 32.3542147
LONG.: W 103.5843926
MD = 9560'

SURFACE LOCATION
NEW MEXICO EAST
NAD 1927
X=730880
Y=493618
LAT.: N 32.3548564
LONG.: W 103.5856618

LOWER MOST PERFORATION
NEW MEXICO EAST
NAD 1927
X=731293
Y=488884
LAT.: N 32.3418350
LONG.: W 103.5844316
MD = 14067'

BOTTOM HOLE LOCATION
NEW MEXICO EAST
NAD 1927
X=731290
Y=488722
LAT.: N 32.3413888
LONG.: W 103.5844465
MD = 14229'

POINT	UTM ZONE 13 COORDINATES	
SHL	X=2076881.860	Y=11747555.795
UMP	X=2077276.797	Y=11747327.549
LMP	X=2077324.414	Y=11742824.629
BHL	X=2077321.979	Y=11742662.261

LEASE NAME & WELL NO.: LEGHORN 32 STATE #201H

SECTION 32 TWP. 22-S RGE. 33-E SURVEY N.M.P.M.

COUNTY LEA STATE NM ELEVATION 3591'

DESCRIPTION 200' FNL & 50' FEL



TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
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Michael Blake Brown, P.S. No. 18329
OCTOBER 19, 2016

EOG resources, Inc.

LEGHORN 32 STATE
#201H
AS-COMPLETED

REVISION:

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 19 27.
3. THIS WELL 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.

DATE: 10/19/16

FILE:AD_LEGHORN32STATE_201H

DRAWN BY: A.C.C.

SHEET: 1 OF 1



Minimum Curvature Calculation

Client: EOG Resources **Job #:** PB-161242
Well: Leghorn 32 State #201H **M.W.D. Operators:** S. Hardy / T. Nawara
County, ST: Lea County, NM **Directional Drillers:** K. Smith / M. Greer
Rig: H&P 651 **Tool Azimuth to Grid North:** 6.55
Lat / Long: 32° 21' 17.478 N / 103° 35' 8.382 W **Geomagnetic Model:** HDGM
API#: 30-025-43004 **Single or Multi-well Pad (# /total):** 2 of 2
RKB / GL: 3616 / 3591 **DSI Corrected Runs:**
Vertical Section Angle: 174.91

Survey #	Meas. Depth	Inc.	Azm.	T.V.D.	Ver. Sect.	+N / -S	+E / -W	DLS
Tie In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gyro	100.00	0.32	161.52	100.00	0.27	-0.26	0.09	0.32
Gyro	200.00	0.62	118.57	200.00	0.84	-0.79	0.65	0.44
Gyro	300.00	1.22	115.64	299.98	1.69	-1.51	2.09	0.60
Gyro	400.00	1.29	118.17	399.96	2.85	-2.50	4.04	0.09
Gyro	500.00	1.26	116.81	499.93	4.05	-3.53	6.01	0.04
Gyro	600.00	1.25	104.74	599.91	5.00	-4.30	8.05	0.26
Gyro	700.00	1.20	99.73	699.89	5.64	-4.76	10.14	0.12
Gyro	800.00	1.32	95.43	799.86	6.11	-5.04	12.31	0.15
Gyro	900.00	1.31	85.95	899.84	6.34	-5.07	14.60	0.22
Gyro	1000.00	1.42	77.48	999.81	6.21	-4.72	16.95	0.23
Gyro	1100.00	1.49	70.86	1099.78	5.73	-4.03	19.39	0.18
Gyro	1127.00	1.61	64.27	1126.77	5.51	-3.75	20.06	0.80
1	1239.00	1.76	62.10	1238.72	4.29	-2.26	23.00	0.15
2	1431.00	2.02	65.79	1430.61	2.04	0.51	28.69	0.15
3	1623.00	3.25	69.04	1622.41	-0.56	3.84	36.86	0.65
4	1815.00	4.22	58.41	1814.00	-5.20	9.49	47.96	0.62
5	2007.00	5.54	52.78	2005.30	-13.28	18.80	61.36	0.73
6	2199.00	5.89	51.90	2196.35	-23.58	30.48	76.49	0.19
7	2391.00	6.77	69.30	2387.19	-31.99	40.56	94.83	1.09
8	2583.00	7.03	74.31	2577.80	-37.20	47.74	116.73	0.34
9	2775.00	6.68	74.84	2768.43	-41.31	53.84	138.82	0.19
10	2966.00	6.51	72.64	2958.17	-45.55	59.98	159.88	0.16
11	3158.00	6.51	73.87	3148.93	-49.95	66.25	180.72	0.07
12	3351.00	6.24	75.72	3340.73	-53.72	71.87	201.40	0.18
13	3543.00	5.01	77.21	3531.81	-56.51	76.30	219.69	0.65
14	3734.00	4.66	79.15	3722.13	-58.41	79.61	235.44	0.20
15	3926.00	4.40	73.43	3913.53	-60.66	83.18	250.16	0.27
16	4118.00	4.75	71.85	4104.92	-63.92	87.76	264.77	0.19
17	4310.00	4.13	59.28	4296.34	-68.71	93.76	278.27	0.60
18	4502.00	3.87	63.85	4487.88	-74.02	100.15	290.03	0.21
19	4695.00	3.52	67.19	4680.47	-78.17	105.32	301.34	0.21
20	4820.00	2.90	67.37	4805.28	-80.29	108.02	307.79	0.50
21	4983.00	2.55	67.81	4968.09	-82.60	110.98	314.96	0.22
22	5176.00	3.17	68.78	5160.85	-85.34	114.53	323.91	0.32
23	5367.00	2.90	68.16	5351.58	-88.20	118.24	333.31	0.14
24	5558.00	2.99	63.85	5542.33	-91.39	122.23	342.27	0.13
25	5750.00	2.81	60.25	5734.09	-95.15	126.78	350.85	0.13
26	5943.00	2.64	51.11	5926.87	-99.60	131.91	358.42	0.24
27	6134.00	2.55	49.00	6117.67	-104.53	137.46	365.05	0.07
28	6326.00	2.64	46.63	6309.48	-109.78	143.30	371.49	0.07
29	6519.00	2.46	42.23	6502.28	-115.34	149.42	377.50	0.14
30	6710.00	0.79	59.02	6693.20	-118.69	153.13	381.39	0.90
31	6902.00	0.62	75.63	6885.19	-119.44	154.07	383.53	0.14
32	7093.00	0.53	60.87	7076.18	-119.97	154.76	385.30	0.09
33	7285.00	0.70	67.55	7268.17	-120.68	155.64	387.16	0.10
34	7478.00	0.53	95.76	7461.16	-120.86	156.00	389.14	0.18
35	7670.00	0.53	95.58	7653.15	-120.53	155.83	390.90	0.00
36	7862.00	0.44	102.44	7845.14	-120.14	155.58	392.51	0.06
37	8053.00	0.53	109.73	8036.13	-119.55	155.12	394.06	0.06
38	8245.00	0.35	159.22	8228.13	-118.61	154.28	395.10	0.21
39	8437.00	0.44	152.18	8420.12	-117.37	153.08	395.65	0.05

Survey #	Meas. Depth	Inc.	Azm.	T.V.D.	Ver. Sect.	+N / -S	+E / -W	DLS
40	8628.00	0.62	190.24	8611.12	-115.70	151.41	395.81	0.20
41	8820.00	0.62	196.48	8803.11	-113.73	149.39	395.33	0.04
42	8953.00	8.71	169.32	8935.56	-103.02	138.79	397.00	6.14
43	9001.00	15.56	174.68	8982.46	-92.95	128.79	398.27	14.45
44	9049.00	20.05	175.92	9028.15	-78.28	114.17	399.45	9.39
45	9097.00	23.65	179.52	9072.70	-60.45	96.33	400.12	8.00
46	9145.00	27.61	180.75	9115.96	-39.78	75.57	400.05	8.32
47	9193.00	32.62	182.24	9157.47	-15.87	51.51	399.40	10.55
48	9241.00	37.20	182.68	9196.82	11.36	24.07	398.22	9.56
49	9290.00	41.77	181.54	9234.63	42.26	-7.06	397.08	9.44
50	9338.00	46.17	180.13	9269.17	75.40	-40.37	396.61	9.39
51	9385.00	51.09	181.63	9300.23	110.47	-75.63	396.06	10.74
52	9433.00	56.81	181.98	9328.46	148.98	-114.40	394.83	11.93
53	9482.00	64.19	181.36	9352.57	191.30	-157.00	393.60	15.10
54	9530.00	71.23	180.40	9370.77	235.44	-201.38	392.92	14.78
55	9578.00	79.05	177.15	9383.07	281.69	-247.72	393.94	17.55
56	9599.00	82.39	176.18	9386.46	302.40	-268.41	395.14	16.54
57	9656.00	88.90	177.23	9390.78	359.18	-325.12	398.41	11.57
58	9752.00	90.48	179.69	9391.30	454.98	-421.07	400.99	3.05
59	9848.00	91.28	179.34	9389.83	550.66	-517.05	401.80	0.91
60	9944.00	92.68	180.40	9386.51	646.24	-612.99	402.02	1.83
61	10040.00	92.15	180.13	9382.47	741.74	-708.91	401.57	0.62
62	10136.00	91.71	179.34	9379.23	837.34	-804.85	402.02	0.94
63	10232.00	90.40	179.52	9377.47	933.03	-900.83	402.97	1.38
64	10328.00	90.84	179.78	9376.43	1028.69	-996.82	403.56	0.53
65	10424.00	89.96	180.57	9375.76	1124.28	-1092.81	403.27	1.23
66	10521.00	90.75	180.40	9375.16	1220.82	-1189.81	402.44	0.83
67	10616.00	90.48	181.54	9374.14	1315.28	-1284.79	400.84	1.23
68	10712.00	88.90	181.45	9374.66	1410.65	-1380.75	398.33	1.65
69	10808.00	88.37	180.13	9376.94	1506.11	-1476.71	397.01	1.48
70	10904.00	87.93	179.08	9380.04	1601.74	-1572.66	397.67	1.19
71	11001.00	89.96	179.34	9381.83	1698.44	-1669.63	399.01	2.11
72	11096.00	89.78	179.96	9382.04	1793.12	-1764.62	399.59	0.68
73	11192.00	89.69	180.49	9382.49	1888.70	-1860.62	399.21	0.56
74	11288.00	88.64	179.78	9383.89	1984.29	-1956.61	398.98	1.32
75	11355.00	89.08	179.43	9385.22	2051.05	-2023.59	399.45	0.84
76	11451.00	92.07	180.13	9384.26	2146.69	-2119.58	399.81	3.20
77	11547.00	91.89	180.05	9380.94	2242.24	-2215.52	399.66	0.21
78	11643.00	93.91	180.40	9376.08	2337.70	-2311.39	399.29	2.14
79	11772.00	93.39	180.75	9367.87	2465.81	-2440.12	398.00	0.49
80	11868.00	88.29	179.43	9366.46	2561.37	-2536.08	397.85	5.49
81	11964.00	89.08	179.78	9368.67	2657.03	-2632.05	398.51	0.90
82	12060.00	89.25	180.05	9370.07	2752.65	-2728.04	398.65	0.33
83	12156.00	89.52	180.66	9371.10	2848.21	-2824.03	398.05	0.69
84	12251.00	87.49	181.01	9373.57	2942.67	-2918.98	396.67	2.17
85	12347.00	86.53	179.87	9378.58	3038.09	-3014.85	395.93	1.55
86	12443.00	87.49	179.08	9383.59	3133.65	-3110.71	396.81	1.29
87	12539.00	88.20	177.76	9387.20	3229.40	-3206.60	399.46	1.56
88	12634.00	87.85	177.76	9390.47	3324.22	-3301.47	403.17	0.37
89	12730.00	89.16	177.50	9392.98	3420.08	-3397.36	407.14	1.39
90	12826.00	89.08	176.97	9394.45	3515.99	-3493.23	411.77	0.56
91	12922.00	89.34	178.73	9395.78	3611.85	-3589.15	415.37	1.85
92	13017.00	90.31	178.46	9396.07	3706.65	-3684.12	417.70	1.06
93	13113.00	90.31	178.46	9395.55	3802.47	-3780.09	420.28	0.00
94	13209.00	88.55	179.87	9396.50	3898.19	-3876.07	421.68	2.35
95	13305.00	88.55	179.87	9398.93	3993.80	-3972.03	421.90	0.00
96	13401.00	88.46	179.87	9401.44	4089.41	-4068.00	422.11	0.09
97	13497.00	90.31	181.98	9402.47	4184.87	-4163.97	420.56	2.92
98	13593.00	88.64	181.28	9403.35	4280.20	-4259.93	417.83	1.89
99	13689.00	88.46	180.13	9405.78	4375.68	-4355.89	416.65	1.21
100	13785.00	88.81	180.31	9408.06	4471.24	-4451.86	416.28	0.41
101	13881.00	89.34	180.49	9409.61	4566.78	-4547.84	415.61	0.58
102	13977.00	89.69	180.84	9410.43	4662.30	-4643.83	414.50	0.52
103	14073.00	90.22	181.01	9410.50	4757.77	-4739.82	412.95	0.58
104	14169.00	90.48	181.28	9409.91	4853.20	-4835.80	411.03	0.39

<i>Survey #</i>	<i>Meas. Depth</i>	<i>Inc.</i>	<i>Azm.</i>	<i>T.V.D.</i>	<i>Ver. Sect.</i>	<i>+N / -S</i>	<i>+E / -W</i>	<i>DLS</i>
PTB	14230.00	90.65	181.45	9409.31	4913.81	-4896.78	409.58	0.39