



EP Energy E&P Company, L.P.

Reagan Co., TX

University Central 0112

MH

OH

Design: Surveys

Standard Survey Report

17 January, 2017





WELL DETAILS: MH

Ground Elevation: 2936.00
RKB Elevation: KB=27' (Nabors 888) @ 2963.00ft
Rig Name:
Wellbore: OH
Plan: PN6

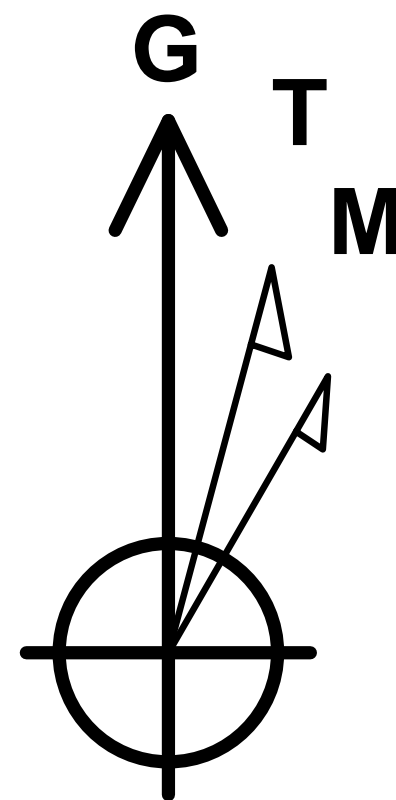
Northing 544370.250 Easting 1577118.010 Latitude 31° 9' 23.11034 N Longitude 101° 41' 7.17854 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
820.00	0.32	333.68	819.99	3.13	-1.19	0.00	0.00	-3.11
841.33	0.00	0.00	841.32	3.19	-1.21	1.50	180.00	-3.16
1000.01	0.00	0.00	1000.00	3.19	-1.21	0.00	0.00	-3.16
1764.14	11.46	304.36	1759.04	46.18	-64.10	1.50	304.36	-44.87
2757.88	11.46	304.36	2732.96	157.63	-227.11	0.00	0.00	-153.00
3522.01	0.00	360.00	3492.00	200.62	-290.00	1.50	180.00	-194.71
7716.58	0.00	360.00	7686.57	200.62	-290.00	0.00	0.00	-194.71
8472.45	90.70	181.43	8164.00	-282.56	-302.09	12.00	181.43	288.62
14468.78	90.70	181.43	8090.29	-6276.57	-452.05	0.00	0.00	6284.43
14483.75	90.59	181.16	8090.12	-6291.53	-452.39	2.00	-113.28	6299.40
18406.80	90.59	181.16	8050.00	-10213.58	-531.67	0.00	0.00	10222.25

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
7716.58	0.00	0.00	7686.57	200.62	-290.00	-194.71	349.89	KOP - 12°/100'
8424.91	85.00	181.43	8162.22	-235.10	-300.90	241.14	785.74	85°
8472.45	90.70	181.43	8164.00	-282.57	-302.09	288.63	833.22	EOC



Azimuths to Grid North
True North: 0.70°
Magnetic North: 6.75°

Magnetic Field
Strength: 47643.5snT
Dip Angle: 59.57°
Date: 12/16/2016
Model: HDGM



NABORS

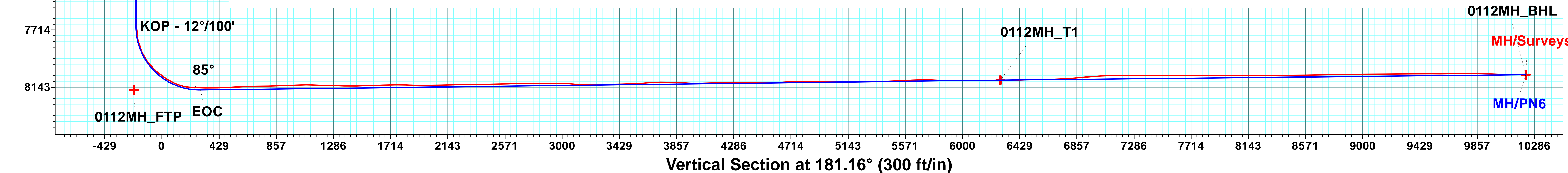
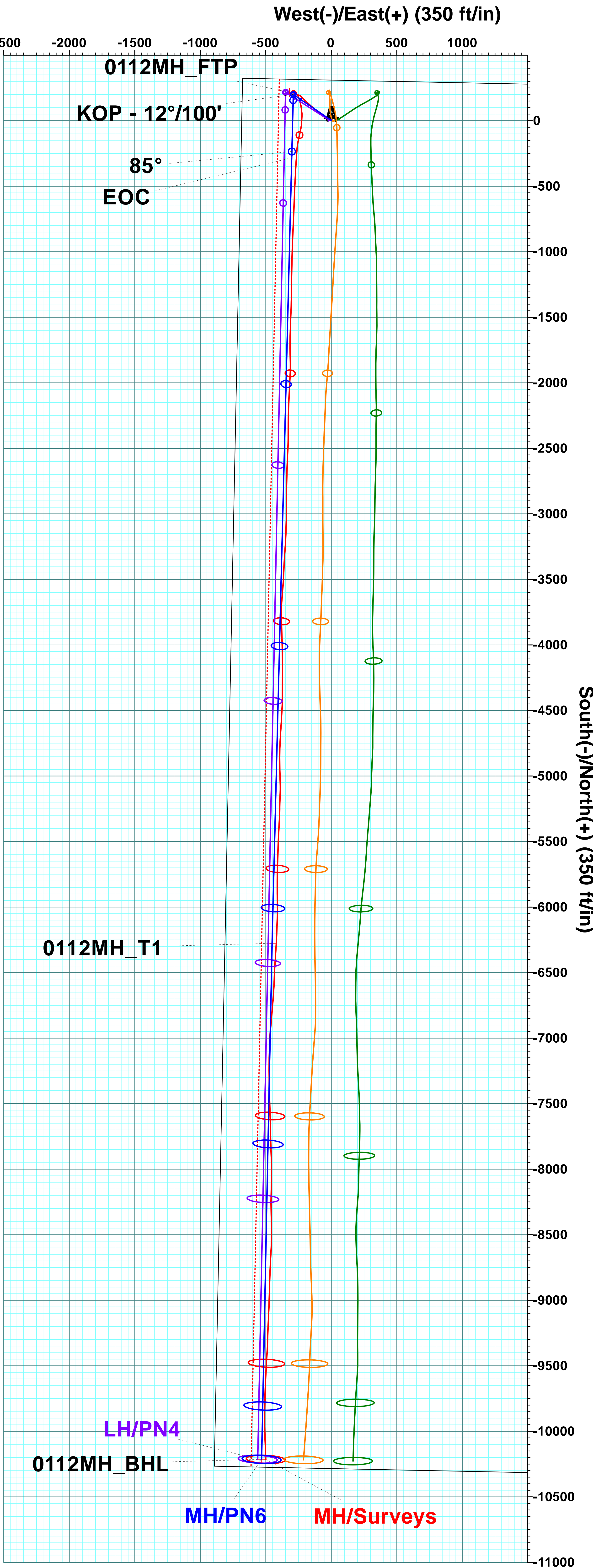
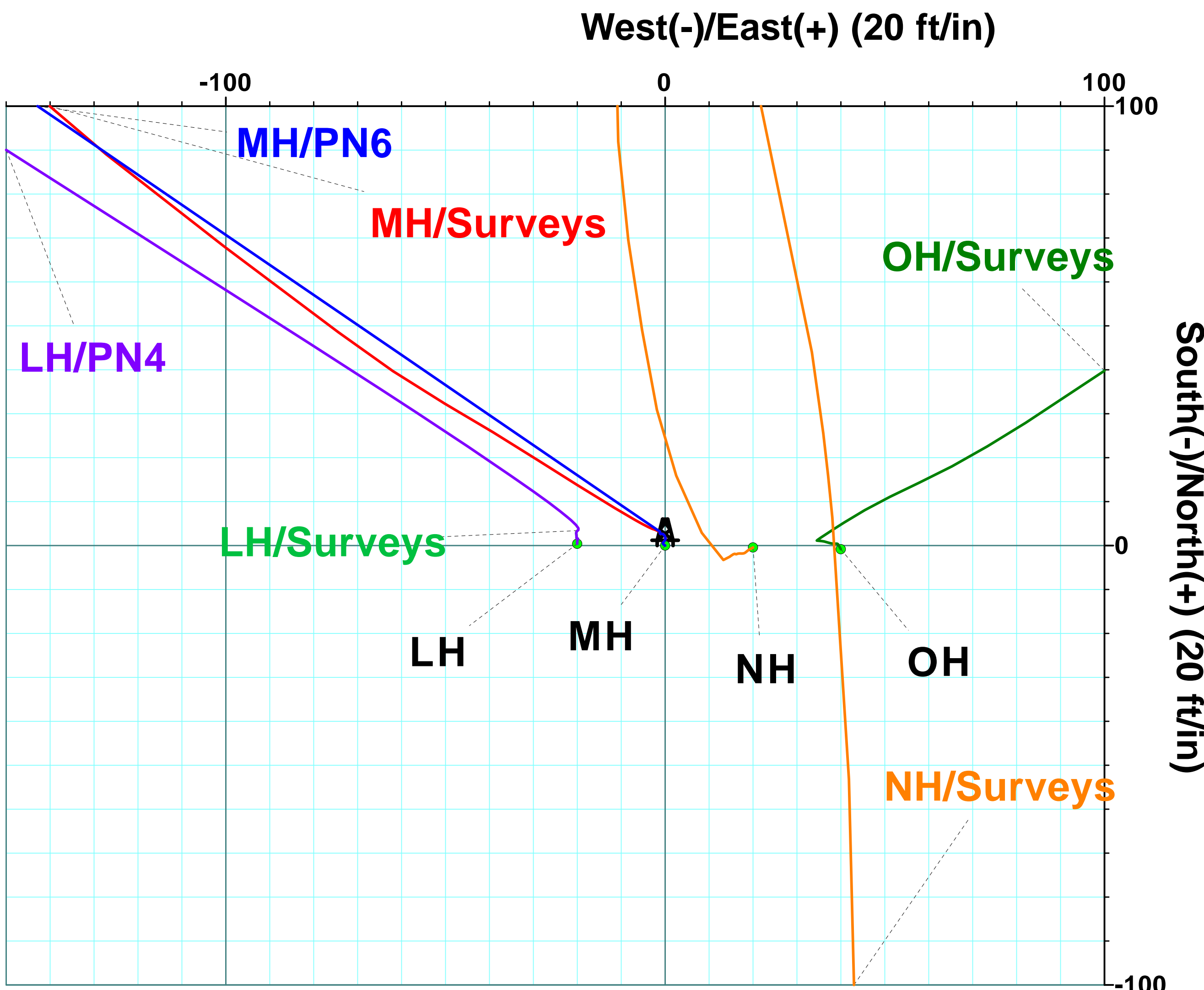
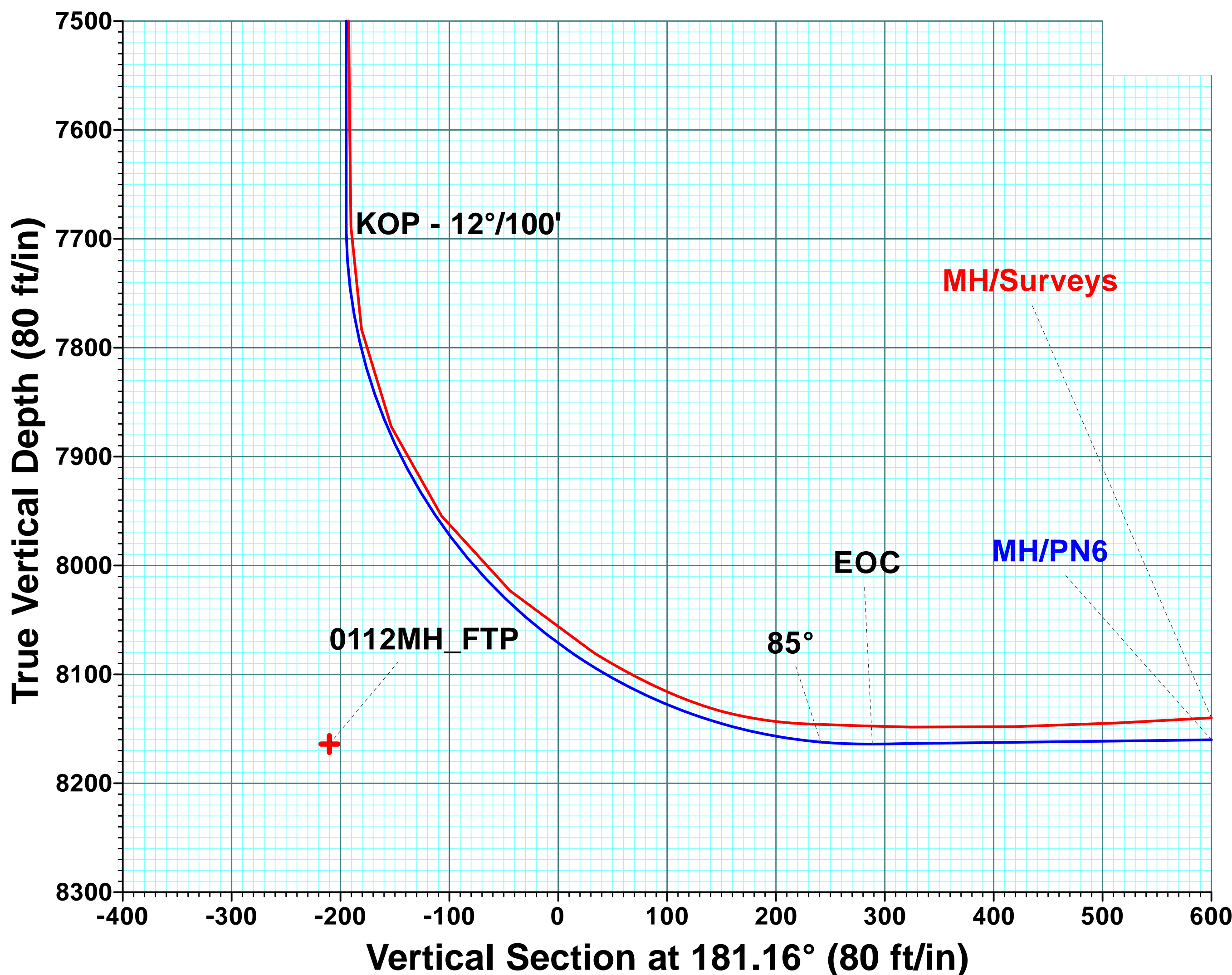
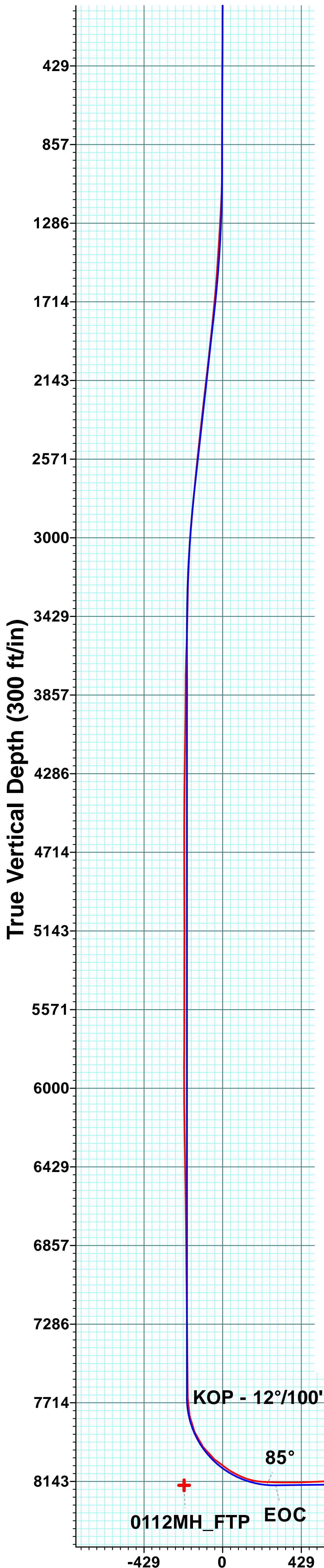
Target

0112MH_T1

0112MH_BHL

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
0112MH_BHL	8050.00	-10213.58	-531.67	534156.690	1576586.340
0112MH_FTP	8164.00	216.62	-319.48	544586.870	1576798.530
0112MH_T1	8090.29	-6276.57	-452.05	538093.697	1576665.964



Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well MH
Project:	Reagan Co., TX	TVD Reference:	KB=27' (Nabors 888) @ 2963.00ft
Site:	University Central 0112	MD Reference:	KB=27' (Nabors 888) @ 2963.00ft
Well:	MH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Project	Reagan Co., TX, Texas, U.S.A.		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Texas Central 4203		

Site	University Central 0112		
Site Position:		Northing:	544,239.070 usft
From:	Map	Easting:	1,580,914.190 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	31° 9' 22.26660 N
		Longitude:	101° 40' 23.47230 W
		Grid Convergence:	-0.69 °

Well	MH		
Well Position	+N/-S	0.00 ft	Northing: 544,370.250 usft
	+E/-W	0.00 ft	Easting: 1,577,118.010 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
		Latitude:	31° 9' 23.11035 N
		Longitude:	101° 41' 7.17854 W
		Ground Level:	2,936.00 ft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	HDGM	12/16/2016	6.05
			Dip Angle (°) 59.57
			Field Strength (nT) 47,643.50000000

Design	Surveys		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)
	0.00	0.00	0.00
			Direction (°) 181.17

Survey Program	Date	1/16/2017		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
27.00	820.00	Survey #1 (OH)	GYRO-NS	OWSG Gyrocompass Gyro
990.00	18,402.00	Survey #2 (OH)	MWD+HRGM	OWSG MWD + HRGM

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27.00	0.00	360.00	27.00	0.00	0.00	0.00	0.00	0.00	0.00
77.00	0.55	307.54	77.00	0.15	-0.19	-0.14	1.10	1.10	0.00
127.00	0.29	320.88	127.00	0.39	-0.46	-0.38	0.55	-0.52	26.68
177.00	0.12	29.10	177.00	0.53	-0.51	-0.52	0.54	-0.34	136.44
227.00	0.15	16.85	227.00	0.64	-0.47	-0.63	0.08	0.06	-24.50
277.00	0.26	51.98	277.00	0.78	-0.36	-0.77	0.32	0.22	70.26
327.00	0.18	19.37	327.00	0.92	-0.25	-0.91	0.29	-0.16	-65.22
377.00	0.48	43.23	377.00	1.15	-0.08	-1.14	0.65	0.60	47.72
427.00	0.53	8.65	426.99	1.53	0.10	-1.53	0.61	0.10	-69.16

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Well:	MH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
477.00	0.42	327.69	476.99	1.91	0.04	-1.91	0.70	-0.22	-81.92
527.00	0.60	335.01	526.99	2.30	-0.17	-2.30	0.38	0.36	14.64
577.00	0.36	293.36	576.99	2.60	-0.43	-2.59	0.82	-0.48	-83.30
627.00	0.47	272.83	626.99	2.67	-0.77	-2.66	0.37	0.22	-41.06
677.00	0.19	260.02	676.99	2.67	-1.06	-2.65	0.58	-0.56	-25.62
727.00	0.14	351.17	726.99	2.72	-1.15	-2.69	0.48	-0.10	182.30
777.00	0.31	6.57	776.99	2.91	-1.15	-2.89	0.36	0.34	30.80
820.00	0.32	333.68	819.99	3.13	-1.19	-3.11	0.42	0.02	-76.49
990.00	0.63	273.94	989.98	3.62	-2.33	-3.58	0.32	0.18	-35.14
1,180.00	5.69	301.01	1,179.63	8.55	-11.45	-8.32	2.70	2.66	14.25
1,369.00	6.94	302.59	1,367.48	19.53	-29.10	-18.93	0.67	0.66	0.84
1,558.00	8.06	300.13	1,554.86	32.33	-50.18	-31.30	0.62	0.59	-1.30
1,747.00	9.69	306.98	1,741.60	48.55	-74.35	-47.02	1.03	0.86	3.62
1,936.00	10.13	306.81	1,927.78	68.08	-100.36	-66.01	0.23	0.23	-0.09
2,125.00	10.63	309.09	2,113.69	89.03	-127.20	-86.41	0.34	0.26	1.21
2,315.00	10.00	311.91	2,300.62	111.10	-153.08	-107.95	0.42	-0.33	1.48
2,504.00	9.25	312.43	2,486.95	132.31	-176.50	-128.68	0.40	-0.40	0.28
2,693.00	8.25	313.66	2,673.75	151.92	-197.53	-147.85	0.54	-0.53	0.65
2,883.00	7.31	314.02	2,862.00	169.73	-216.08	-165.28	0.50	-0.49	0.19
3,072.00	5.63	316.65	3,049.79	184.83	-231.09	-180.07	0.90	-0.89	1.39
3,261.00	4.94	285.54	3,238.02	193.75	-245.30	-188.70	1.54	-0.37	-16.46
3,450.00	5.13	282.02	3,426.30	197.69	-261.40	-192.31	0.19	0.10	-1.86
3,640.00	3.94	304.35	3,615.71	203.14	-275.10	-197.48	1.11	-0.63	11.75
3,829.00	0.69	305.05	3,804.53	207.46	-281.40	-201.67	1.72	-1.72	0.37
4,018.00	1.06	310.32	3,993.51	209.25	-283.66	-203.41	0.20	0.20	2.79
4,208.00	1.25	311.03	4,183.47	211.75	-286.57	-205.85	0.10	0.10	0.37
4,397.00	0.81	314.54	4,372.44	214.04	-289.07	-208.09	0.24	-0.23	1.86
4,586.00	0.19	340.21	4,561.43	215.27	-290.13	-209.30	0.34	-0.33	13.58
4,776.00	0.25	119.25	4,751.43	215.36	-289.88	-209.40	0.22	0.03	73.18
4,965.00	0.38	150.71	4,940.43	214.61	-289.21	-208.66	0.11	0.07	16.65
5,154.00	0.25	83.92	5,129.43	214.11	-288.49	-208.18	0.19	-0.07	-35.34
5,343.00	0.13	307.51	5,318.43	214.28	-288.25	-208.35	0.19	-0.06	-72.17
5,533.00	0.88	80.23	5,508.42	214.66	-286.99	-208.76	0.51	0.39	69.85
5,722.00	1.63	90.95	5,697.37	214.87	-282.87	-209.04	0.41	0.40	5.67
5,912.00	3.25	81.46	5,887.20	215.62	-274.84	-209.96	0.88	0.85	-4.99
6,102.00	0.69	187.98	6,077.09	215.29	-269.67	-209.74	1.85	-1.35	56.06
6,292.00	0.94	178.31	6,267.08	212.60	-269.78	-207.04	0.15	0.13	-5.09
6,481.00	1.00	162.67	6,456.05	209.47	-269.25	-203.93	0.14	0.03	-8.28
6,671.00	0.88	154.23	6,646.02	206.58	-268.12	-201.06	0.10	-0.06	-4.44
6,860.00	0.75	138.23	6,835.00	204.35	-266.66	-198.86	0.14	-0.07	-8.47
7,050.00	0.88	134.02	7,024.99	202.40	-264.79	-196.96	0.08	0.07	-2.22
7,239.00	0.94	125.93	7,213.96	200.49	-262.49	-195.08	0.07	0.03	-4.28
7,429.00	1.00	125.75	7,403.93	198.60	-259.88	-193.26	0.03	0.03	-0.09

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Well:	MH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,618.00	1.00	120.83	7,592.91	196.79	-257.12	-191.50	0.05	0.00	-2.60
7,714.00	1.25	138.76	7,688.89	195.58	-255.72	-190.32	0.45	0.26	18.68
7,809.00	11.69	159.68	7,783.16	185.75	-251.68	-180.57	11.09	10.99	22.02
7,903.00	24.19	163.37	7,872.41	158.25	-242.82	-153.26	13.35	13.30	3.93
7,998.00	36.31	167.77	7,954.33	111.93	-231.25	-107.19	12.96	12.76	4.63
8,074.47	46.83	175.66	8,011.50	61.83	-224.32	-57.23	15.35	13.76	10.32
0112MH_FTP									
8,092.00	49.31	177.08	8,023.21	48.81	-223.50	-44.24	15.35	14.12	8.09
8,187.00	57.94	187.80	8,079.61	-27.33	-227.14	31.96	12.83	9.08	11.28
8,281.00	68.44	193.61	8,121.97	-109.56	-242.89	114.50	12.45	11.17	6.18
8,344.00	79.50	190.27	8,139.35	-168.71	-255.35	173.89	18.28	17.56	-5.30
8,400.00	87.69	184.29	8,145.60	-223.85	-262.37	229.16	18.06	14.63	-10.68
8,495.00	88.88	183.06	8,148.44	-318.60	-268.45	324.02	1.80	1.25	-1.29
8,590.00	91.63	183.59	8,148.02	-413.43	-273.96	418.94	2.95	2.89	0.56
8,684.00	92.44	182.71	8,144.68	-507.23	-279.12	512.83	1.27	0.86	-0.94
8,779.00	93.75	181.65	8,139.55	-602.02	-282.73	607.67	1.77	1.38	-1.12
8,874.00	90.13	182.53	8,136.33	-696.89	-286.19	702.58	3.92	-3.81	0.93
8,968.00	90.88	182.53	8,135.51	-790.79	-290.34	796.55	0.80	0.80	0.00
9,063.00	92.25	182.36	8,132.91	-885.67	-294.39	891.49	1.45	1.44	-0.18
9,158.00	93.19	181.83	8,128.40	-980.49	-297.86	986.37	1.14	0.99	-0.56
9,253.00	89.56	181.13	8,126.12	-1,075.42	-300.32	1,081.33	3.89	-3.82	-0.74
9,347.00	87.69	181.13	8,128.38	-1,169.37	-302.17	1,175.30	1.99	-1.99	0.00
9,442.00	88.50	180.95	8,131.54	-1,264.30	-303.89	1,270.24	0.87	0.85	-0.19
9,537.00	87.88	180.42	8,134.54	-1,359.25	-305.03	1,365.19	0.86	-0.65	-0.56
9,632.00	91.94	182.71	8,134.69	-1,454.18	-307.62	1,460.16	4.91	4.27	2.41
9,727.00	92.06	181.83	8,131.37	-1,549.05	-311.38	1,555.09	0.93	0.13	-0.93
9,822.00	91.75	181.30	8,128.21	-1,643.96	-313.97	1,650.03	0.65	-0.33	-0.56
9,916.00	90.56	179.89	8,126.32	-1,737.93	-314.95	1,744.00	1.96	-1.27	-1.50
10,011.00	88.25	177.79	8,127.31	-1,832.90	-313.03	1,838.91	3.29	-2.43	-2.21
10,106.00	90.00	183.06	8,128.76	-1,927.85	-313.73	1,933.85	5.84	1.84	5.55
10,201.00	90.44	182.71	8,128.39	-2,022.73	-318.51	2,028.81	0.59	0.46	-0.37
10,295.00	91.00	182.53	8,127.21	-2,116.62	-322.81	2,122.77	0.63	0.60	-0.19
10,390.00	91.50	182.00	8,125.14	-2,211.52	-326.57	2,217.73	0.77	0.53	-0.56
10,484.00	91.00	180.77	8,123.09	-2,305.47	-328.84	2,311.70	1.41	-0.53	-1.31
10,579.00	90.94	179.54	8,121.48	-2,400.45	-329.09	2,406.67	1.30	-0.06	-1.29
10,674.00	90.69	182.71	8,120.13	-2,495.41	-330.96	2,501.65	3.35	-0.26	3.34
10,769.00	91.56	182.53	8,118.26	-2,590.30	-335.30	2,596.60	0.94	0.92	-0.19
10,863.00	91.63	181.48	8,115.65	-2,684.20	-338.59	2,690.55	1.12	0.07	-1.12
10,958.00	89.06	180.95	8,115.07	-2,779.17	-340.60	2,785.54	2.76	-2.71	-0.56
11,053.00	90.88	180.95	8,115.12	-2,874.15	-342.18	2,880.54	1.92	1.92	0.00
11,147.00	89.50	179.72	8,114.81	-2,968.15	-342.73	2,974.52	1.97	-1.47	-1.31
11,242.00	85.50	181.65	8,118.96	-3,063.02	-343.86	3,069.41	4.67	-4.21	2.03
11,337.00	88.06	182.00	8,124.29	-3,157.82	-346.88	3,164.24	2.72	2.69	0.37

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Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
11,432.00	91.88	184.11	8,124.34	-3,252.66	-351.94	3,259.17	4.59	4.02	2.22
11,526.00	91.69	183.41	8,121.41	-3,346.41	-358.10	3,353.03	0.77	-0.20	-0.74
11,621.00	89.81	182.18	8,120.17	-3,441.28	-362.73	3,447.97	2.36	-1.98	-1.29
11,716.00	93.25	183.94	8,117.63	-3,536.10	-367.80	3,542.87	4.07	3.62	1.85
11,811.00	95.38	185.17	8,110.49	-3,630.52	-375.32	3,637.43	2.59	2.24	1.29
11,906.00	89.75	180.60	8,106.23	-3,725.24	-380.09	3,732.23	7.63	-5.93	-4.81
12,000.00	89.00	179.19	8,107.26	-3,819.23	-379.91	3,826.20	1.70	-0.80	-1.50
12,095.00	86.56	177.96	8,110.94	-3,914.12	-377.56	3,921.02	2.88	-2.57	-1.29
12,189.00	90.06	178.84	8,113.71	-4,008.03	-374.93	4,014.85	3.84	3.72	0.94
12,284.00	92.50	179.02	8,111.59	-4,102.98	-373.16	4,109.75	2.58	2.57	0.19
12,378.00	92.31	180.25	8,107.64	-4,196.90	-372.56	4,203.63	1.32	-0.20	1.31
12,473.00	88.06	180.60	8,107.34	-4,291.87	-373.27	4,298.60	4.49	-4.47	0.37
12,568.00	88.50	179.72	8,110.19	-4,386.83	-373.53	4,393.54	1.04	0.46	-0.93
12,663.00	89.81	182.88	8,111.59	-4,481.78	-375.69	4,488.52	3.60	1.38	3.33
12,758.00	92.81	183.59	8,109.42	-4,576.59	-381.04	4,583.42	3.25	3.16	0.75
12,852.00	92.50	183.59	8,105.06	-4,670.31	-386.92	4,677.23	0.33	-0.33	0.00
12,947.00	92.06	182.36	8,101.28	-4,765.10	-391.85	4,772.11	1.37	-0.46	-1.29
13,041.00	89.31	180.07	8,100.16	-4,859.06	-393.84	4,866.09	3.81	-2.93	-2.44
13,136.00	89.00	178.66	8,101.56	-4,954.04	-392.79	4,961.03	1.52	-0.33	-1.48
13,231.00	88.50	177.96	8,103.63	-5,048.97	-389.99	5,055.89	0.91	-0.53	-0.74
13,326.00	93.19	182.88	8,102.23	-5,143.91	-390.68	5,150.81	7.15	4.94	5.18
13,419.00	87.88	180.42	8,101.36	-5,236.82	-393.36	5,243.76	6.29	-5.71	-2.65
13,514.00	91.19	183.23	8,102.14	-5,331.75	-396.38	5,338.73	4.57	3.48	2.96
13,608.00	92.31	182.88	8,099.26	-5,425.57	-401.39	5,432.64	1.25	1.19	-0.37
13,702.00	92.00	181.83	8,095.73	-5,519.42	-405.25	5,526.55	1.16	-0.33	-1.12
13,797.00	94.06	181.83	8,090.71	-5,614.24	-408.28	5,621.40	2.17	2.17	0.00
13,891.00	89.19	181.65	8,088.04	-5,708.13	-411.13	5,715.33	5.18	-5.18	-0.19
13,986.00	87.19	180.42	8,091.04	-5,803.06	-412.85	5,810.28	2.47	-2.11	-1.29
14,080.00	89.13	179.37	8,094.06	-5,897.00	-412.67	5,904.20	2.35	2.06	-1.12
14,174.00	88.75	179.02	8,095.80	-5,990.98	-411.35	5,998.13	0.55	-0.40	-0.37
14,269.00	91.63	182.36	8,095.49	-6,085.95	-412.50	6,093.10	4.64	3.03	3.52
14,363.00	89.88	181.48	8,094.25	-6,179.88	-415.65	6,187.08	2.08	-1.86	-0.94
14,458.00	90.31	183.59	8,094.09	-6,274.78	-419.85	6,282.05	2.27	0.45	2.22
14,461.93	90.40	183.60	8,094.07	-6,278.71	-420.09	6,285.98	2.27	2.27	0.18
0112MH_T1									
14,552.00	92.44	183.76	8,091.83	-6,368.56	-425.87	6,375.93	2.27	2.27	0.18
14,647.00	92.38	183.23	8,087.84	-6,463.30	-431.66	6,470.76	0.56	-0.06	-0.56
14,741.00	90.63	182.18	8,085.37	-6,557.15	-436.09	6,564.69	2.17	-1.86	-1.12
14,836.00	90.44	183.23	8,084.48	-6,652.04	-440.57	6,659.65	1.12	-0.20	1.11
14,930.00	93.81	185.34	8,081.00	-6,745.70	-447.59	6,753.43	4.23	3.59	2.24
15,024.00	94.56	184.82	8,074.14	-6,839.08	-455.89	6,846.96	0.97	0.80	-0.55
15,119.00	95.06	184.99	8,066.17	-6,933.40	-463.99	6,941.42	0.56	0.53	0.18
15,214.00	92.94	182.53	8,059.55	-7,027.95	-470.20	7,036.08	3.41	-2.23	-2.59
15,308.00	90.56	181.13	8,056.68	-7,121.85	-473.20	7,130.02	2.94	-2.53	-1.49

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well MH
Project:	Reagan Co., TX	TVD Reference:	KB=27' (Nabors 888) @ 2963.00ft
Site:	University Central 0112	MD Reference:	KB=27' (Nabors 888) @ 2963.00ft
Well:	MH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
15,402.00	91.44	180.25	8,055.03	-7,215.82	-474.33	7,224.00	1.32	0.94	-0.94
15,497.00	89.50	179.37	8,054.26	-7,310.81	-474.01	7,318.97	2.24	-2.04	-0.93
15,591.00	89.69	178.48	8,054.92	-7,404.79	-472.25	7,412.89	0.97	0.20	-0.95
15,686.00	90.88	178.31	8,054.45	-7,499.75	-469.59	7,507.78	1.27	1.25	-0.18
15,780.00	89.13	178.48	8,054.44	-7,593.71	-466.96	7,601.67	1.87	-1.86	0.18
15,874.00	89.44	178.66	8,055.61	-7,687.68	-464.61	7,695.56	0.38	0.33	0.19
15,968.00	90.56	178.66	8,055.61	-7,781.65	-462.41	7,789.47	1.19	1.19	0.00
16,062.00	90.88	177.43	8,054.43	-7,875.59	-459.21	7,883.32	1.35	0.34	-1.31
16,156.00	90.06	178.66	8,053.66	-7,969.53	-456.00	7,977.17	1.57	-0.87	1.31
16,251.00	89.81	181.30	8,053.77	-8,064.52	-455.97	8,072.15	2.79	-0.26	2.78
16,346.00	89.94	181.48	8,053.97	-8,159.49	-458.27	8,167.14	0.23	0.14	0.19
16,439.00	90.50	180.77	8,053.62	-8,252.47	-460.10	8,260.14	0.97	0.60	-0.76
16,533.00	89.88	177.43	8,053.31	-8,346.44	-458.62	8,354.07	3.61	-0.66	-3.55
16,628.00	89.50	179.89	8,053.82	-8,441.41	-456.40	8,448.97	2.62	-0.40	2.59
16,723.00	90.94	180.77	8,053.46	-8,536.40	-456.95	8,543.95	1.78	1.52	0.93
16,817.00	90.75	183.41	8,052.07	-8,630.32	-460.37	8,637.92	2.82	-0.20	2.81
16,912.00	91.25	182.53	8,050.41	-8,725.18	-465.29	8,732.86	1.07	0.53	-0.93
17,007.00	91.81	182.00	8,047.87	-8,820.07	-469.05	8,827.81	0.81	0.59	-0.56
17,101.00	90.06	181.65	8,046.34	-8,914.01	-472.04	8,921.79	1.90	-1.86	-0.37
17,195.00	90.81	181.48	8,045.63	-9,007.97	-474.61	9,015.78	0.82	0.80	-0.18
17,290.00	89.94	182.88	8,045.00	-9,102.89	-478.22	9,110.76	1.74	-0.92	1.47
17,385.00	90.38	182.36	8,044.74	-9,197.79	-482.56	9,205.73	0.72	0.46	-0.55
17,479.00	91.00	181.13	8,043.61	-9,291.74	-485.43	9,299.71	1.47	0.66	-1.31
17,574.00	89.81	183.76	8,042.94	-9,386.64	-489.48	9,394.68	3.04	-1.25	2.77
17,668.00	89.63	182.88	8,043.40	-9,480.48	-494.92	9,488.61	0.96	-0.19	-0.94
17,763.00	90.69	183.06	8,043.13	-9,575.35	-499.84	9,583.56	1.13	1.12	0.19
17,858.00	90.25	182.18	8,042.35	-9,670.25	-504.19	9,678.53	1.04	-0.46	-0.93
17,953.00	89.94	181.30	8,042.19	-9,765.20	-507.07	9,773.52	0.98	-0.33	-0.93
18,047.00	89.56	180.95	8,042.60	-9,859.18	-508.92	9,867.52	0.55	-0.40	-0.37
18,142.00	88.63	179.19	8,044.10	-9,954.17	-509.03	9,962.49	2.10	-0.98	-1.85
18,236.00	87.44	177.43	8,047.33	-10,048.07	-506.26	10,056.31	2.26	-1.27	-1.87
18,331.00	89.69	177.96	8,049.71	-10,142.95	-502.44	10,151.10	2.43	2.37	0.56
18,400.54	89.69	177.96	8,050.08	-10,212.45	-499.97	10,220.53	0.00	0.00	0.00
0112MH_BHL									
18,402.00	89.69	177.96	8,050.09	-10,213.91	-499.92	10,221.98	0.00	0.00	0.00
PTB									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
18,402.00	8,050.09	-10,213.91	-499.92	PTB

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well MH
Project:	Reagan Co., TX	TVD Reference:	KB=27' (Nabors 888) @ 2963.00ft
Site:	University Central 0112	MD Reference:	KB=27' (Nabors 888) @ 2963.00ft
Well:	MH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Checked By: _____	Approved By: _____	Date: _____
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