

March 30, 2017

The Railroad Commission of Texas
Oil and Gas Division
PO Drawer 12967
Capital Station
Austin, Texas 78711-2967

Attn: Pam Johns

RE: EP Energy E&P Company, L.P.
University Stonegate 3819HH (Permit No. 823898)
Survey: UL / Abstract: Not Available
Field: LIN (Wolfcamp)
Crockett County, TX
API number: 42-105-42362

Dear Pam Johns:

Please find enclosed the original and one copy of the survey performed on the above referenced well by MS Energy Services; RRC Operator No. 592474. Other information required by your office is as follows:

Name of surveyor	Drainhole number	Surveyed depths	Date performed	Type of Survey
Curtis Bingeman	Original	Surface - 850'	3/20/2017 - 3/20/2017	Rate Gyro

A certified plat, on which the bottom hole location is oriented, both to the surface location and to the lease lines (or unit lines in case of pooling), is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Sincerely,

Ryan Moran
MS Survey

PERMIT TO DRILL, DEEPEN, PLUG BACK, OR RE-ENTER ON A REGULAR OR ADMINISTRATIVE EXCEPTION LOCATION

Page 3 of 5



Job Number: SVMO-170220
 Company: EP Energy E&P Co.
 Lease/Well: University Stonegate 3819HH
 Location: Crockett County, TX
 Rig Name: MS Mast
 RKB: 0'
 G.L. or M.S.L.: GL

State/Country: Texas/USA (X 2061563.85) (Y 10339203.59)
 Declination: Declination See Details Below - NAD 27
 Grid: East To Grid North
 File name: C:\WINSER~1\2017\EPENER~1\MO\UNIVER~1\STONEG~1\3819HH.SVY
 Date/Time: 22-Mar-17 / 15:35
 Curve Name: Surface - 850' M.D. (Rate Gyro)

MS Energy

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane .00
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Declination To True North: 5.79°
 Grid Convergence Factor: -0° 23' 9.68139"
 Total Correction Mag to Grid: 6.12°

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
50.00	.38	49.01	50.00	.11	.13	.11	.17	49.01	.76
100.00	.21	346.10	100.00	.31	.23	.31	.38	36.68	.68
150.00	.25	13.75	150.00	.50	.23	.50	.55	24.85	.23
200.00	.31	7.09	200.00	.74	.27	.74	.79	20.34	.14
250.00	.30	21.42	250.00	1.00	.34	1.00	1.05	18.79	.15
300.00	.30	358.42	300.00	1.25	.38	1.25	1.31	17.05	.24
350.00	.51	18.29	350.00	1.59	.45	1.59	1.65	15.77	.50
400.00	.42	324.79	399.99	1.95	.41	1.95	2.00	11.96	.85
450.00	.37	342.30	449.99	2.26	.26	2.26	2.27	6.55	.26
500.00	.29	358.30	499.99	2.54	.21	2.54	2.55	4.65	.24
550.00	.39	9.46	549.99	2.83	.23	2.83	2.84	4.66	.24
600.00	.20	17.22	599.99	3.08	.28	3.08	3.10	5.27	.39

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
650.00	.26	17.08	649.99	3.27	.34	3.27	3.29	5.99	.12
700.00	.18	338.45	699.99	3.46	.35	3.46	3.47	5.75	.33
750.00	.03	61.22	749.99	3.54	.33	3.54	3.55	5.34	.36
800.00	.10	77.78	799.99	3.55	.38	3.55	3.57	6.18	.14
Last Survey Depth Recorded									
850.00	.07	355.54	849.99	3.59	.43	3.59	3.62	6.75	.23

NAD 83, Central Zone 4203
Surface Hole Location (SHL Sec. 19)
Latitude: 31.030195° N
Longitude: 101.083726° W
X=2061563.85
Y=10339203.59
Elev.=2619'
30' FSL & 2290' FEL

NAD 27, Central Zone 4203
Surface Hole Location (SHL Sec. 19)
Latitude: 31.030029° N
Longitude: 101.083337° W
X=1765096.86
Y=496624.60
Elev.=2619'
30' FSL & 2290' FEL

Point of Penetration (PP Sec. 19)
Latitude: 31.030899° N
Longitude: 101.085860° W
X=1764308.92
Y=496946.47
350' FSL & 2342' FWL

First Take Point (FTP Sec. 22)
Latitude: 31.029524° N
Longitude: 101.085854° W
X=1764307.60
Y=496446.47
150' FNL & 2342' FWL

Last Take Point (LTP Sec. 29)
Latitude: 31.008252° N
Longitude: 101.085752° W
X=1764287.05
Y=488710.01
2450' FNL & 2342' FWL

Bottom Hole Location (BHL Sec. 29)
Latitude: 31.008115° N
Longitude: 101.085751° W
X=1764286.92
Y=488660.01
2500' FNL & 2342' FWL

Unit Boundary Distance	
SHL	Off Lease
PP	Off Lease
FTP	150' FNL & 2342' FWL
LTP	2986' FSL & 2342' FWL
BHL	2936' FSL & 2342' FWL

EP ENERGY

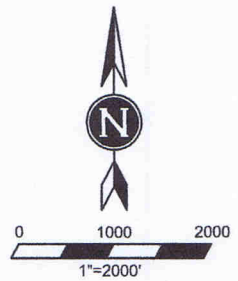
Well Name
UNIVERSITY STONEGATE 3819HH
Drilling Field
LIN (WOLFCAMP) FIELD
Nearest Town
8.57 MILES SOUTHEAST OF BARNHART, TEXAS

NOTE: This Plat does not, in anyway represent a "Boundary Survey", and does not comply with the current T.B.P.L.S. Minimum Standards of Procedures for Boundary Survey. Shown Acreages were furnished by others. The information contained on this plat is intended for the sole use of EP ENERGY E&P COMPANY, L.P.

NOTE: Bearings and coordinates refer to the Texas Coordinate System of 1927, Central Zone (4203), as observed by GPS observations

I, Damian M. Jagers do hereby certify that the above described well location was surveyed on the ground under my supervision, as shown.

Damian M. Jagers 2/28/2017
DATE
DAMIAN M. JAGERS
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 6269



EP ENERGY E&P COMPANY, L.P.

UNIVERSITY STONEGATE 3819HH
Block 38, Section 19
Block 38, Section 22
Block 38, Section 29
Crockett County, Texas

Surveyor Certification Form

Survey company: **MS Energy Services**
Surveyors name: **Curtis Bingeman**
Survey job type: **Rate Gyro**
Customer: **EP Energy E&P Company, L.P.**
Well: **University Stonegate 3819HH**
API: **42-105-42362**
Surveyed from: **Surface to a depth of 850' MD**
Survey run date: **3/20/2017 to 3/20/2017**
Surface location: **Crockett County, TX**

I certify that the data is true, correct, complete and within the limitations of the tool set forth by MS Energy Services; that I am authorized and qualified to make this report; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by MS Energy Services.

**Curtis
Bingeman**

Digitally signed by Curtis
Bingeman
DN: cn=Curtis Bingeman, o=MS
Energy Services, ou=MS Survey,
email=CBingeman@msenergys
ervices.com, c=US
Date: 2017.03.30 13:30:57
-05'00'



EP Energy E&P Company, L.P.

Crockett Co, TX
University 3819
Stonegate 3819HH
OH

Survey: NDS MWD

Completion Report

01 May, 2017





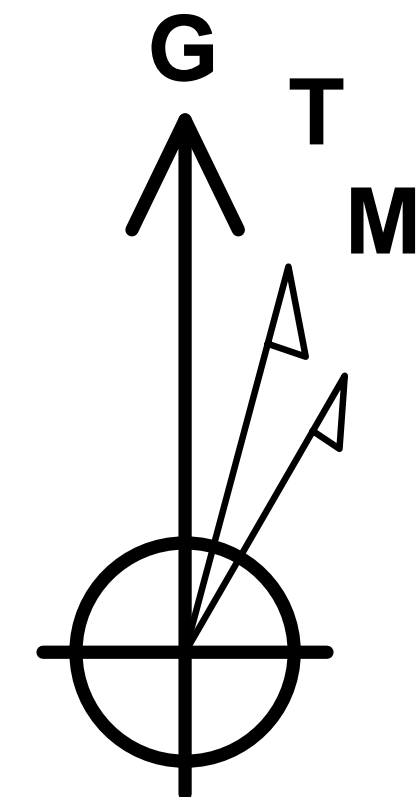
PROJECT DETAILS: Crockett Co, TX
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Texas Central 4203

System Datum: Mean Sea Level
Local North: Grid

WELL DETAILS: Stonegate 3819HH

Ground Elevation: 2619.00
RKB Elevation: KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Rig Name: Nabors F34

Project: Crockett Co, TX
Site: University 3819
Well: Stonegate 3819HH
Wellbore: OH
Plan: PN2 (Stonegate 3819HH/OH)



Azimuths to Grid North
True North: 0.39°
Magnetic North: 5.85°

Magnetic Field
Strength: 47583.0snT
Dip Angle: 59.63°
Date: 3/7/2017
Model: HDGM



SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
880.00	0.07	355.54	879.99	3.59	0.42	0.00	0.00	-3.59
1000.01	0.07	355.54	1000.00	3.74	0.41	0.00	0.00	-3.74
1826.65	12.43	291.82	1820.16	37.44	-82.54	1.50	-64.00	-36.85
4752.88	12.43	291.82	4677.79	271.59	-667.29	0.00	0.00	-266.80
5581.58	0.00	0.00	5500.00	304.87	-750.42	1.50	180.00	-299.49
6112.14	0.00	0.00	6030.56	304.87	-750.42	0.00	0.00	-299.49
6866.40	90.51	180.41	6508.01	-176.84	-753.90	12.00	180.41	182.23
10563.31	90.51	180.41	6475.03	-3873.51	-780.61	0.00	0.00	3879.00
10580.76	90.16	180.41	6474.93	-3890.96	-780.74	2.00	-179.34	3896.45
12319.32	90.16	180.41	6470.02	-5629.47	-793.18	0.00	0.00	5635.00
12340.42	89.74	180.41	6470.03	-5650.57	-793.33	2.00	180.00	5656.10
13439.33	89.74	180.41	6475.02	-6749.44	-801.19	0.00	0.00	6755.00
13464.43	90.24	180.41	6475.03	-6774.54	-801.37	2.00	0.29	6780.10
14654.54	90.24	180.41	6470.00	-7964.61	-809.94	0.00	0.00	7970.20

ANNOTATIONS

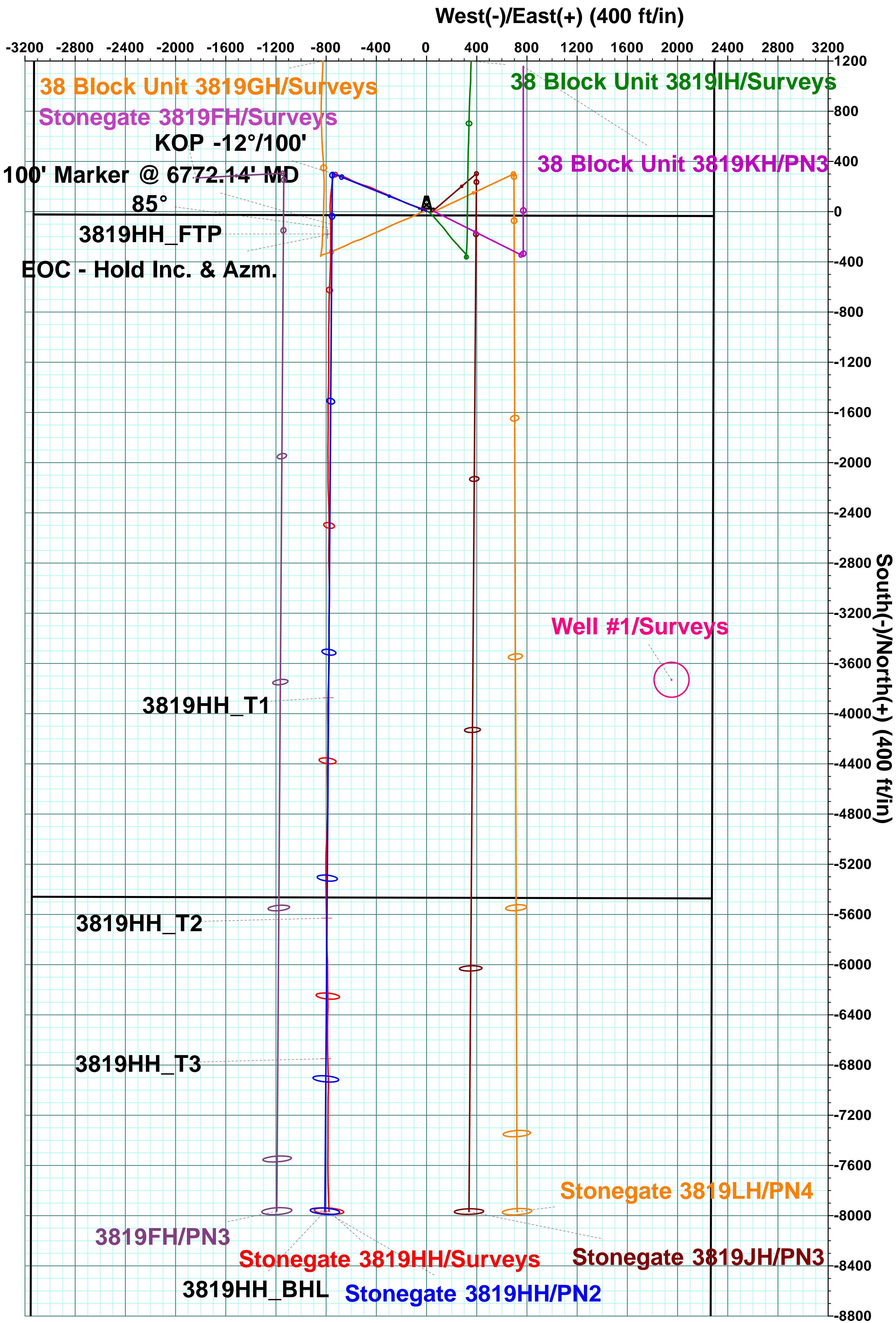
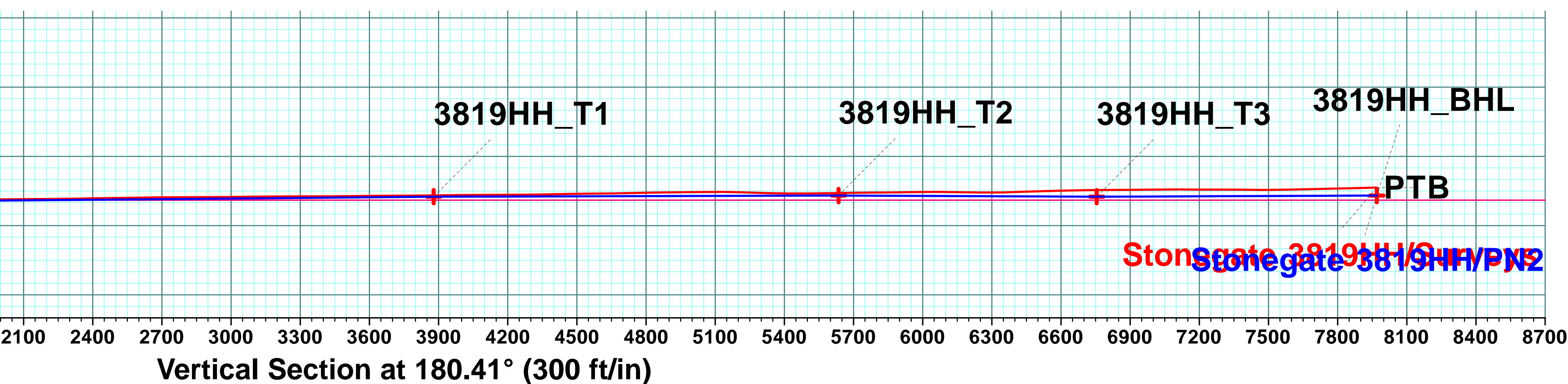
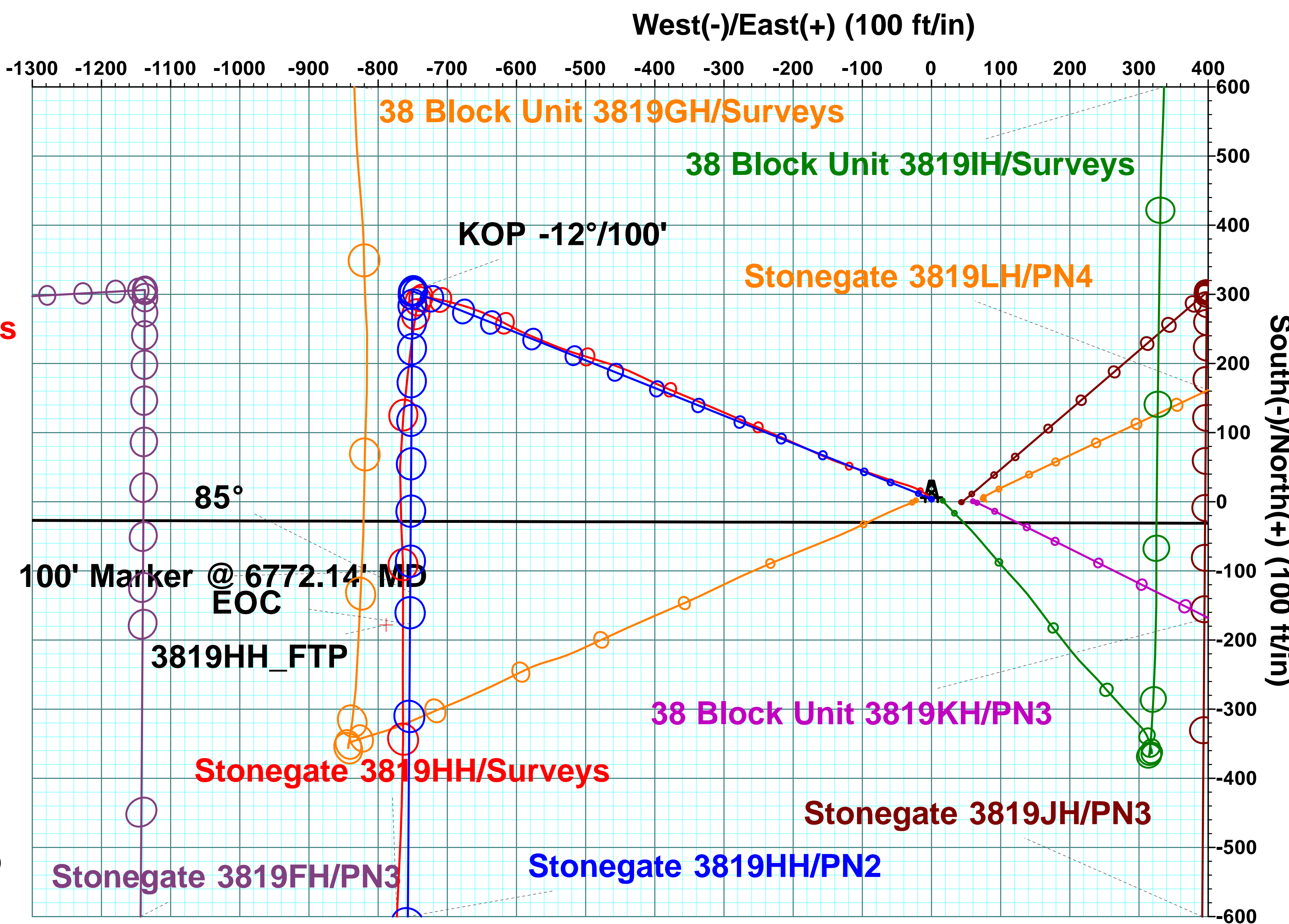
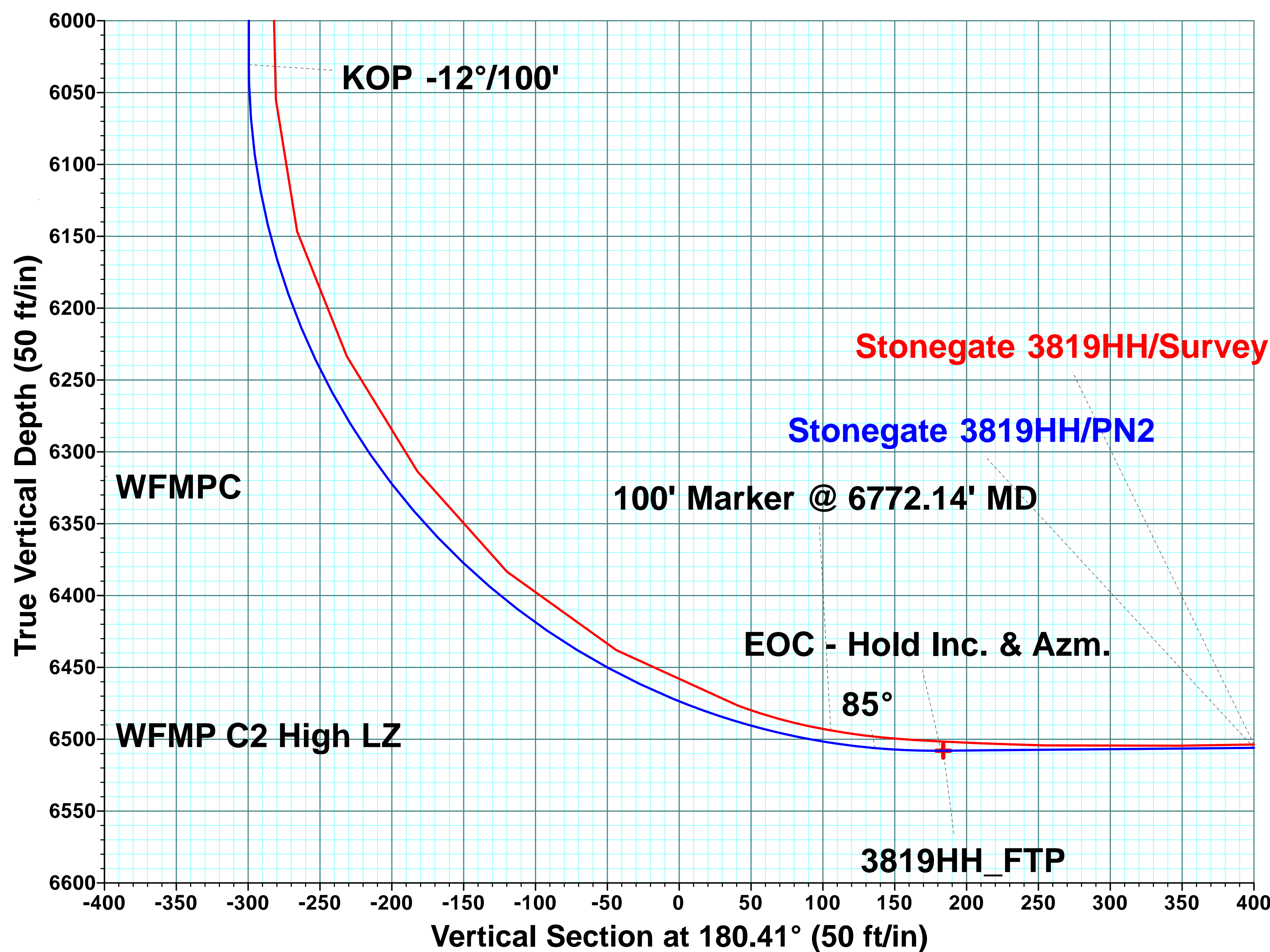
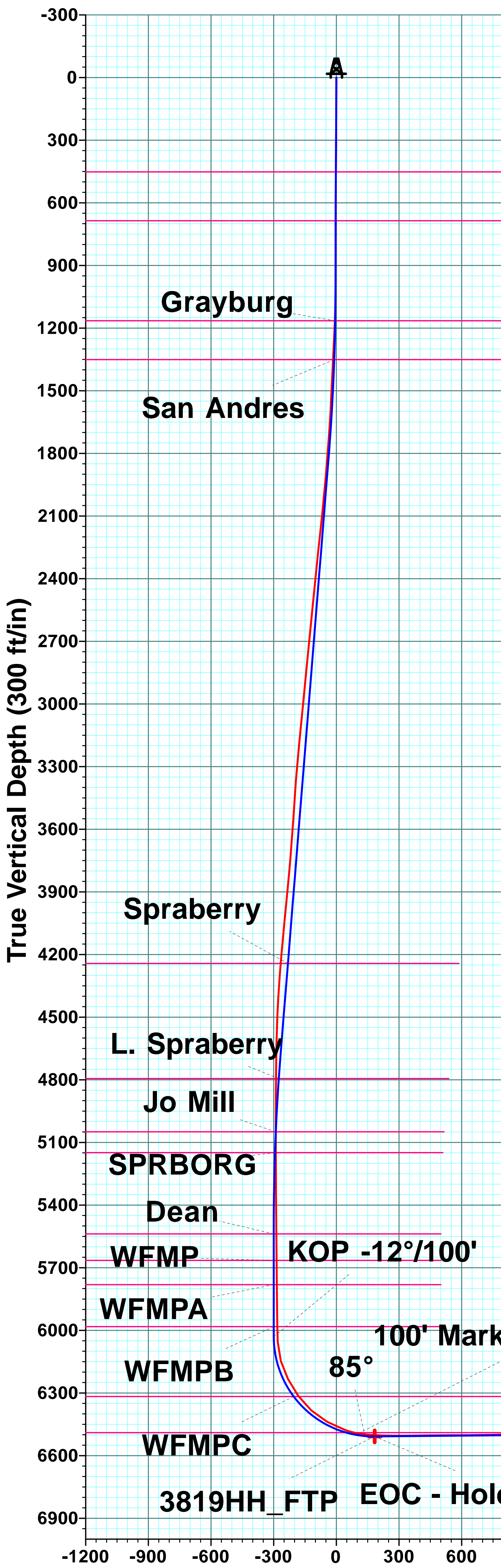
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
6112.14	0.00	0.00	6030.56	304.87	-750.42	-299.49	809.15	KOP -12°/100'
6820.47	85.00	180.41	6506.21	-130.97	-753.57	136.36	1245.01	85°
6866.40	90.51	180.41	6508.01	-176.84	-753.90	182.23	1290.88	EOC - Hold Inc. & Azm.

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
452.00	452.01	Base Cretaceous
686.00	686.01	Yates
1165.00	1165.06	Grayburg
1351.00	1351.52	San Andres
4243.00	4307.66	Spraberry
4794.00	4871.50	Lower Spraberry
5049.00	5129.52	Jo Mill
5149.00	5230.08	SPRBORG
5538.00	5619.58	Dean
5665.00	5746.58	WFMP
5781.00	5862.58	WFMPA
5982.00	6063.58	WFMPB
6317.00	6419.34	WFMPC
6490.00	6730.53	WFMP C2 High LZ

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
3819HH_BHL	6470.00	-7964.61	-809.94	488660.010	1764286.920
3819HH_FTP	6508.00	-178.13	-788.42	496446.470	1764308.440
3819HH_T1	6475.00	-3873.51	-780.61	492751.098	1764316.252
3819HH_T2	6470.00	-5629.47	-793.18	490995.141	1764303.682
3819HH_T3	6475.00	-6749.44	-801.19	489875.173	1764295.672



Company: EP Energy E&P Company, L.P.		Local Co-ordinate Reference: Well Stonegate 3819HH	
Project: Crockett Co, TX		TVD Reference: KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)	
Site: University 3819		MD Reference: KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)	
Well: Stonegate 3819HH		North Reference: Grid	
Wellbore: OH		Survey Calculation Method: Minimum Curvature	
Design: Surveys		Database: RyanUSA_Compass	

Project Crockett Co, TX, Crockett Co, TX			
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 3819			
Site Position:		Northing:	496,894.180 usft
From: Map		Easting:	1,763,159.760 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	31° 1' 50.64154 N
		Longitude:	101° 5' 22.30053 W
		Grid Convergence:	-0.39 °

Well Stonegate 3819HH			
Well Position	+N/-S	0.00 ft	Northing: 496,624.600 usft
	+E/-W	0.00 ft	Easting: 1,765,096.860 usft
Position Uncertainty		0.00 ft	Wellhead Elevation: ft
			Latitude: 31° 1' 48.10296 N
			Longitude: 101° 5' 0.01481 W
			Ground Level: 2,619.00 ft

Wellbore OH			
Magnetics	Model Name	Sample Date	Declination (°)
	HDGM	3/7/2017	5.47
			Dip Angle (°) 59.63
			Field Strength (nT) 47,583.00000000

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 (°) 180.41

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well Stonegate 3819HH
Project:	Crockett Co, TX	TVD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Site:	University 3819	MD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Well:	Stonegate 3819HH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey Program		Date 5/1/2017		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
30.00	880.00	MS Energy (OH)	GYRO-NS	OWSG Gyrocompass Gyro
987.00	14,639.00	NDS MWD (OH)	MWD+HRGM	OWSG MWD + HRGM

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Closure Distance (ft)	Closure Azimuth (°)	
880.00	0.07	355.54	879.99	3.59	0.42	-3.59	0.00	3.62	6.75	
987.00	0.00	332.80	986.99	3.66	0.42	-3.66	0.07	3.68	6.55	
1,175.00	3.38	313.29	1,174.88	7.46	-3.62	-7.43	1.80	8.29	334.14	
1,362.00	6.06	299.76	1,361.23	16.14	-16.20	-16.02	1.54	22.87	314.89	
1,550.00	9.81	286.22	1,547.42	25.54	-40.20	-25.25	2.22	47.63	302.43	
1,737.00	13.44	289.03	1,730.55	37.08	-76.06	-36.54	1.96	84.61	295.99	
1,925.00	14.44	288.15	1,913.01	51.51	-118.99	-50.66	0.54	129.66	293.41	
2,112.00	15.13	294.83	2,093.83	69.02	-163.29	-67.85	0.98	177.28	292.91	
2,300.00	14.81	293.60	2,275.45	88.94	-207.58	-87.46	0.24	225.83	293.19	
2,488.00	14.13	293.43	2,457.49	107.69	-250.65	-105.89	0.36	272.81	293.25	
2,675.00	14.13	293.60	2,638.83	125.90	-292.51	-123.81	0.02	318.46	293.29	
2,863.00	14.31	293.08	2,821.07	144.20	-334.92	-141.80	0.12	364.64	293.29	
3,051.00	14.31	292.02	3,003.24	162.02	-377.83	-159.31	0.14	411.10	293.21	
3,238.00	13.31	296.94	3,184.84	180.43	-418.44	-177.43	0.82	455.69	293.33	
3,426.00	12.75	288.86	3,368.01	196.95	-457.37	-193.67	1.01	497.97	293.30	
3,614.00	13.44	285.69	3,551.12	209.56	-498.04	-205.99	0.53	540.33	292.82	
3,801.00	13.13	291.49	3,733.13	223.22	-538.73	-219.36	0.73	583.14	292.51	
3,989.00	14.06	293.25	3,915.86	240.06	-579.58	-235.90	0.54	627.33	292.50	
4,177.00	11.38	299.40	4,099.24	258.18	-616.73	-253.76	1.60	668.59	292.72	
4,364.00	11.81	291.67	4,282.43	274.30	-650.59	-269.64	0.86	706.05	292.86	
4,552.00	9.69	285.34	4,467.13	285.60	-683.73	-280.70	1.29	740.98	292.67	

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well Stonegate 3819HH
Project:	Crockett Co, TX	TVD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Site:	University 3819	MD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Well:	Stonegate 3819HH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Closure Distance (ft)	Closure Azimuth (°)	
4,740.00	6.44	281.83	4,653.24	291.94	-709.31	-286.86	1.75	767.04	292.37	
4,927.00	4.25	272.69	4,839.42	294.42	-726.50	-289.21	1.25	783.89	292.06	
5,115.00	1.06	278.31	5,027.20	295.00	-735.18	-289.73	1.70	792.16	291.86	
5,302.00	0.75	255.64	5,214.17	294.94	-738.08	-289.66	0.25	794.83	291.78	
5,490.00	0.69	219.95	5,402.16	293.77	-740.00	-288.47	0.24	796.18	291.65	
5,678.00	0.69	219.78	5,590.15	292.03	-741.45	-286.72	0.00	796.89	291.50	
5,865.00	0.63	177.06	5,777.13	290.14	-742.12	-284.82	0.26	796.82	291.35	
6,053.00	0.75	206.59	5,965.12	288.01	-742.62	-282.69	0.20	796.51	291.20	
6,143.00	2.00	189.37	6,055.09	285.93	-743.13	-280.61	1.45	796.25	291.05	
6,236.00	16.50	189.37	6,146.64	271.22	-745.56	-265.88	15.59	793.36	289.99	
6,330.00	27.31	188.14	6,233.72	236.60	-750.80	-231.22	11.51	787.20	287.49	
6,424.00	36.13	186.03	6,313.61	187.60	-756.78	-182.18	9.46	779.69	283.92	
6,518.00	47.63	186.20	6,383.48	125.31	-763.46	-119.84	12.23	773.68	279.32	
6,612.00	61.25	181.46	6,438.03	49.21	-768.29	-43.71	15.05	769.86	273.66	
6,705.00	69.75	176.18	6,476.59	-35.28	-766.42	40.76	10.49	767.23	267.36	
6,763.00	79.00	178.64	6,492.20	-91.01	-763.92	96.48	16.46	769.32	263.21	
6,772.14	80.06	179.04	6,493.86	-100.00	-763.74	105.46	12.40	770.26	262.54	
100' Marker @ 6772.14' MD										
6,828.00	86.56	181.46	6,500.36	-155.44	-763.99	160.91	12.40	779.65	258.50	
6,851.05	87.07	180.81	6,501.64	-178.45	-764.45	183.92	3.57	785.00	256.86	
3819HH_FTP										
6,922.00	88.63	178.82	6,504.31	-249.35	-764.22	254.81	3.57	803.87	251.93	
7,016.00	91.13	180.75	6,504.50	-343.34	-763.87	348.79	3.36	837.48	245.80	
7,110.00	90.63	181.63	6,503.06	-437.30	-765.82	442.77	1.08	881.88	240.27	
7,204.00	90.38	183.04	6,502.23	-531.22	-769.65	536.71	1.52	935.18	235.39	
7,298.00	89.69	182.16	6,502.17	-625.12	-773.91	630.64	1.19	994.84	231.07	
7,391.00	91.81	180.75	6,500.96	-718.07	-776.27	723.61	2.74	1,057.47	227.23	

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well Stonegate 3819HH
Project:	Crockett Co, TX	TVD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Site:	University 3819	MD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Well:	Stonegate 3819HH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey									
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Closure Distance (ft)	Closure Azimuth (°)
7,485.00	90.06	180.05	6,499.42	-812.06	-776.93	817.59	2.01	1,123.86	223.73
7,579.00	91.38	182.51	6,498.24	-906.02	-779.03	911.57	2.97	1,194.89	220.69
7,673.00	90.69	178.99	6,496.54	-999.98	-780.26	1,005.53	3.82	1,268.37	217.96
7,766.00	90.94	179.87	6,495.22	-1,092.96	-779.33	1,098.51	0.98	1,342.36	215.49
7,860.00	90.88	180.75	6,493.73	-1,186.95	-779.84	1,192.50	0.94	1,420.21	213.31
7,954.00	89.94	179.87	6,493.05	-1,280.94	-780.35	1,286.49	1.37	1,499.92	211.35
8,048.00	89.25	180.40	6,493.72	-1,374.94	-780.57	1,380.49	0.93	1,581.06	209.58
8,142.00	91.31	182.69	6,493.26	-1,468.89	-783.11	1,474.46	3.28	1,664.60	208.06
8,236.00	90.19	178.99	6,492.03	-1,562.86	-784.48	1,568.43	4.11	1,748.69	206.65
8,329.00	91.25	180.05	6,490.86	-1,655.84	-783.70	1,661.41	1.61	1,831.94	205.33
8,423.00	90.81	180.40	6,489.17	-1,749.83	-784.07	1,755.39	0.60	1,917.46	204.14
8,517.00	90.13	180.93	6,488.40	-1,843.82	-785.16	1,849.39	0.92	2,004.03	203.07
8,611.00	91.31	179.70	6,487.22	-1,937.80	-785.68	1,943.38	1.81	2,091.02	202.07
8,705.00	90.13	179.17	6,486.04	-2,031.79	-784.75	2,037.35	1.38	2,178.07	201.12
8,798.00	90.94	180.93	6,485.17	-2,124.78	-784.84	2,130.34	2.08	2,265.10	200.27
8,892.00	89.56	177.24	6,484.76	-2,218.75	-783.33	2,224.30	4.19	2,352.97	199.45
8,986.00	91.56	178.29	6,483.84	-2,312.67	-779.67	2,318.19	2.40	2,440.56	198.63
9,080.00	91.06	178.82	6,481.69	-2,406.61	-777.30	2,412.11	0.78	2,529.03	197.90
9,174.00	90.63	180.05	6,480.30	-2,500.60	-776.37	2,506.09	1.39	2,618.35	197.25
9,267.00	90.81	180.93	6,479.13	-2,593.58	-777.17	2,599.08	0.97	2,707.52	196.68
9,361.00	90.75	181.46	6,477.85	-2,687.55	-779.13	2,693.06	0.57	2,798.21	196.17
9,455.00	90.06	178.29	6,477.19	-2,781.54	-778.92	2,787.04	3.45	2,888.54	195.64
9,549.00	90.25	178.47	6,476.94	-2,875.50	-776.27	2,880.98	0.28	2,978.44	195.11
9,643.00	90.38	178.82	6,476.42	-2,969.47	-774.04	2,974.94	0.40	3,068.70	194.61
9,737.00	91.00	180.58	6,475.29	-3,063.46	-773.55	3,068.92	1.98	3,159.62	194.17
9,831.00	90.38	181.10	6,474.15	-3,157.44	-774.93	3,162.91	0.86	3,251.15	193.79
9,924.00	90.13	181.81	6,473.74	-3,250.41	-777.29	3,255.89	0.81	3,342.06	193.45

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well Stonegate 3819HH
Project:	Crockett Co, TX	TVD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Site:	University 3819	MD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Well:	Stonegate 3819HH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Closure Distance (ft)	Closure Azimuth (°)	
10,018.00	90.00	178.29	6,473.63	-3,344.40	-777.37	3,349.87	3.75	3,433.55	193.09	
10,112.00	90.38	179.17	6,473.32	-3,438.37	-775.29	3,443.83	1.02	3,524.70	192.71	
10,206.00	90.88	180.58	6,472.29	-3,532.36	-775.08	3,537.82	1.59	3,616.40	192.38	
10,300.00	90.63	181.63	6,471.05	-3,626.34	-776.90	3,631.80	1.15	3,708.62	192.09	
10,393.00	90.06	182.51	6,470.49	-3,719.27	-780.25	3,724.76	1.13	3,800.24	191.85	
10,487.00	90.31	181.63	6,470.19	-3,813.21	-783.65	3,818.72	0.97	3,892.90	191.61	
10,547.10	90.83	181.97	6,469.59	-3,873.28	-785.54	3,878.80	1.04	3,952.13	191.46	
3819HH_T1										
10,581.00	91.13	182.16	6,469.01	-3,907.15	-786.76	3,912.68	1.04	3,985.58	191.39	
10,675.00	90.13	178.82	6,467.97	-4,001.13	-787.56	4,006.66	3.71	4,077.90	191.14	
10,769.00	90.69	179.17	6,467.30	-4,095.11	-785.91	4,100.63	0.70	4,169.84	190.86	
10,863.00	90.25	180.05	6,466.53	-4,189.10	-785.27	4,194.61	1.05	4,262.07	190.62	
10,956.00	90.13	180.93	6,466.22	-4,282.10	-786.07	4,287.61	0.95	4,353.65	190.40	
11,050.00	91.50	181.98	6,464.88	-4,376.05	-788.45	4,381.58	1.84	4,446.52	190.21	
11,144.00	91.13	178.99	6,462.72	-4,470.02	-789.25	4,475.55	3.20	4,539.16	190.01	
11,238.00	90.38	179.17	6,461.49	-4,563.99	-787.74	4,569.51	0.82	4,631.48	189.79	
11,332.00	90.69	179.87	6,460.61	-4,657.99	-786.95	4,663.50	0.81	4,724.00	189.59	
11,425.00	91.44	180.75	6,458.88	-4,750.97	-787.46	4,756.48	1.24	4,815.78	189.41	
11,519.00	91.00	181.46	6,456.88	-4,844.93	-789.27	4,850.45	0.89	4,908.80	189.25	
11,613.00	90.19	181.98	6,455.90	-4,938.88	-792.09	4,944.42	1.02	5,001.99	189.11	
11,707.00	91.19	183.74	6,454.77	-5,032.75	-796.78	5,038.32	2.15	5,095.43	189.00	
11,801.00	89.44	181.28	6,454.25	-5,126.65	-800.90	5,132.25	3.21	5,188.83	188.88	
11,894.00	88.25	179.87	6,456.13	-5,219.62	-801.83	5,225.22	1.98	5,280.85	188.73	
11,988.00	88.13	179.52	6,459.10	-5,313.57	-801.33	5,319.17	0.39	5,373.66	188.58	
12,082.00	89.50	179.35	6,461.04	-5,407.55	-800.40	5,413.13	1.47	5,466.46	188.42	
12,175.00	90.44	179.17	6,461.09	-5,500.54	-799.20	5,506.11	1.03	5,558.29	188.27	
12,269.00	91.13	179.35	6,459.80	-5,594.52	-797.99	5,600.09	0.76	5,651.14	188.12	

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well Stonegate 3819HH
Project:	Crockett Co, TX	TVD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Site:	University 3819	MD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Well:	Stonegate 3819HH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Closure Distance (ft)	Closure Azimuth (°)	
12,303.80	91.10	179.35	6,459.12	-5,629.31	-797.59	5,634.88	0.07	5,685.54	188.06	
3819HH_T2										
12,363.00	91.06	179.35	6,458.01	-5,688.50	-796.92	5,694.05	0.07	5,744.05	187.97	
12,456.00	90.13	179.17	6,457.04	-5,781.48	-795.72	5,787.03	1.02	5,835.98	187.84	
12,550.00	90.81	178.29	6,456.27	-5,875.45	-793.64	5,880.98	1.18	5,928.81	187.69	
12,644.00	91.06	177.76	6,454.73	-5,969.39	-790.40	5,974.89	0.62	6,021.49	187.54	
12,738.00	89.25	179.87	6,454.48	-6,063.36	-788.45	6,068.84	2.96	6,114.40	187.41	
12,831.00	89.50	179.87	6,455.49	-6,156.35	-788.24	6,161.83	0.27	6,206.61	187.30	
12,925.00	88.94	178.12	6,456.77	-6,250.32	-786.59	6,255.79	1.95	6,299.62	187.17	
13,019.00	91.63	181.46	6,456.31	-6,344.30	-786.25	6,349.76	4.56	6,392.83	187.06	
13,113.00	92.13	181.28	6,453.22	-6,438.22	-788.50	6,443.70	0.57	6,486.33	186.98	
13,207.00	91.38	180.05	6,450.34	-6,532.17	-789.59	6,537.65	1.53	6,579.72	186.89	
13,300.00	91.06	179.17	6,448.36	-6,625.14	-788.95	6,630.62	1.01	6,671.96	186.79	
13,394.00	91.13	179.52	6,446.57	-6,719.12	-787.88	6,724.59	0.38	6,765.16	186.69	
13,423.69	90.77	178.91	6,446.07	-6,748.81	-787.47	6,754.27	2.38	6,794.59	186.66	
3819HH_T3										
13,488.00	90.00	177.59	6,445.64	-6,813.08	-785.51	6,818.53	2.38	6,858.21	186.58	
13,582.00	90.50	178.29	6,445.23	-6,907.02	-782.13	6,912.44	0.92	6,951.16	186.46	
13,676.00	90.94	182.16	6,444.05	-7,000.99	-782.50	7,006.41	4.14	7,044.59	186.38	
13,770.00	89.50	180.23	6,443.69	-7,094.96	-784.46	7,100.40	2.56	7,138.20	186.31	
13,864.00	89.94	180.23	6,444.15	-7,188.96	-784.84	7,194.39	0.47	7,231.68	186.23	
13,957.00	90.19	180.58	6,444.04	-7,281.96	-785.49	7,287.39	0.46	7,324.20	186.16	
14,051.00	89.25	179.52	6,444.50	-7,375.96	-785.58	7,381.39	1.51	7,417.67	186.08	
14,145.00	89.38	180.75	6,445.63	-7,469.95	-785.80	7,475.38	1.32	7,511.16	186.01	
14,239.00	91.75	180.40	6,444.70	-7,563.93	-786.74	7,569.37	2.55	7,604.74	185.94	
14,332.00	90.94	178.64	6,442.52	-7,656.90	-785.96	7,662.33	2.08	7,697.13	185.86	
14,426.00	91.31	178.64	6,440.67	-7,750.85	-783.73	7,756.26	0.39	7,790.38	185.77	

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well Stonegate 3819HH
Project:	Crockett Co, TX	TVD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Site:	University 3819	MD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Well:	Stonegate 3819HH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

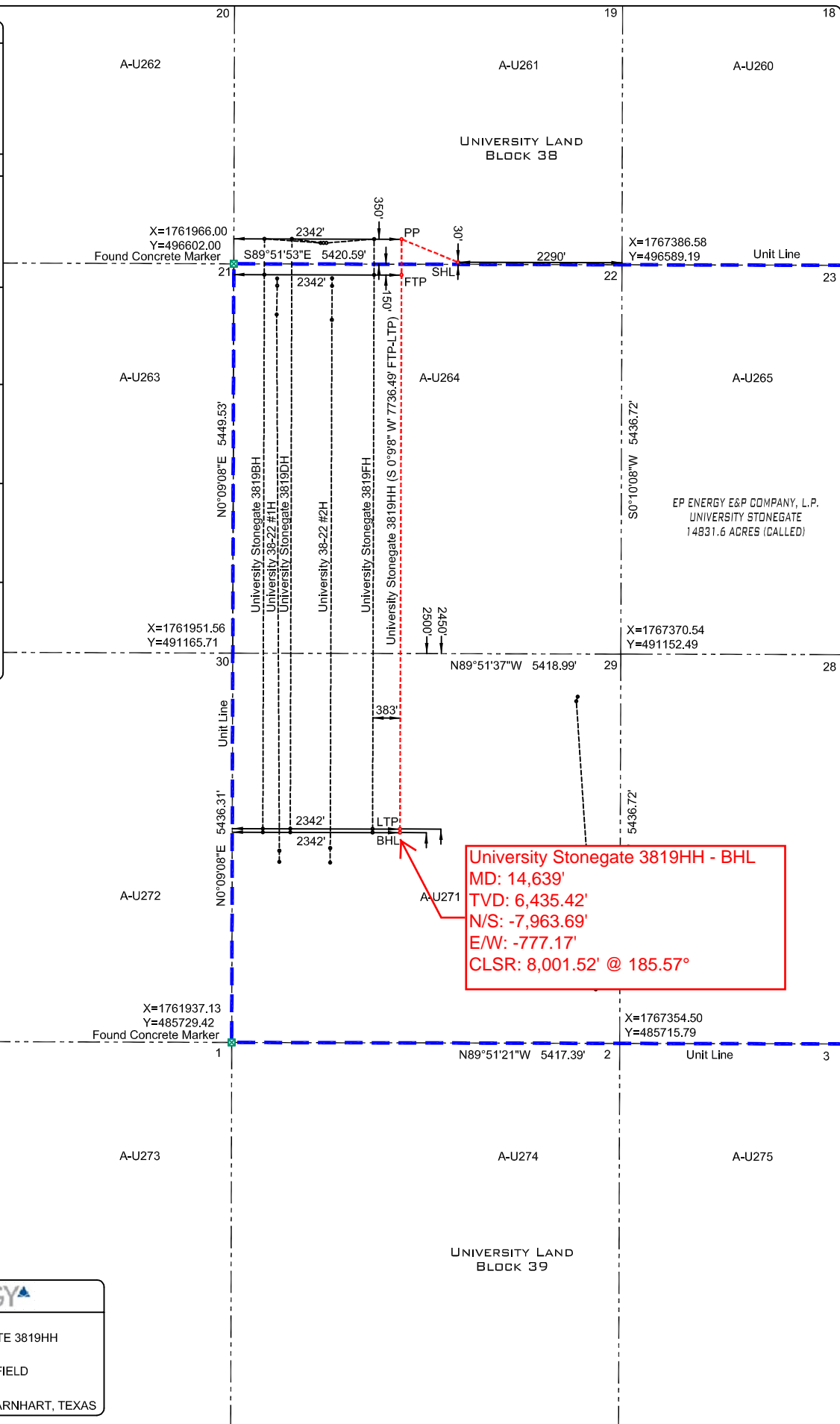
Survey									
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Closure Distance (ft)	Closure Azimuth (°)
14,519.00	91.44	178.12	6,438.44	-7,843.79	-781.10	7,849.18	0.58	7,882.58	185.69
14,637.98	91.44	178.12	6,435.45	-7,962.66	-777.20	7,968.02	0.00	8,000.50	185.57
3819HH_BHL									
14,639.00	91.44	178.12	6,435.42	-7,963.69	-777.17	7,969.04	0.00	8,001.52	185.57
PTB									

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
6,772.14	6,493.86	-100.00	-763.74	100' Marker @ 6772.14' MD
14,639.00	6,435.42	-7,963.69	-777.17	PTB

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------

NAD 83, Central Zone 4203
Surface Hole Location (SHL Sec. 19)
Latitude: 31.030195° N
Longitude: 101.083726° W
X=2061563.85
Y=10393203.59
Elev.=2619'
30' FSL & 2290' FEL
NAD 27, Central Zone 4203
Surface Hole Location (SHL Sec. 19)
Latitude: 31.030029° N
Longitude: 101.083337° W
X=1765096.86
Y=496624.60
Elev.=2619'
30' FSL & 2290' FEL
Point of Penetration (PP Sec. 19)
Latitude: 31.030899° N
Longitude: 101.085860° W
X=1764308.92
Y=496946.47
350' FNL & 2342' FWL
First Take Point (FTP Sec. 22)
Latitude: 31.029524° N
Longitude: 101.085854° W
X=1764307.60
Y=496446.47
150' FNL & 2342' FWL
Last Take Point (LTP Sec. 29)
Latitude: 31.008252° N
Longitude: 101.085752° W
X=1764287.05
Y=488710.01
2450 FNL & 2342' FWL
Bottom Hole Location (BHL Sec. 29)
Latitude: 31.008115° N
Longitude: 101.085751° W
X=1764286.92
Y=488660.01
2500' FNL & 2342' FWL

Unit Boundary Distance	
SHL	Off Lease
PP	Off Lease
FTP	150' FNL & 2342' FWL
LTP	2986' FSL & 2342' FWL
BHL	2936' FSL & 2342' FWL



University Stonegate 3819HH - BHL
MD: 14,639'
TVD: 6,435.42'
N/S: -7,963.69'
E/W: -777.17'
CLSR: 8,001.52' @ 185.57°

Well Name
UNIVERSITY STONEGATE 3819HH
Drilling Field
LIN (WOLFCAMP) FIELD
Nearest Town
MILES SOUTHEAST OF BARNHART, TEXAS

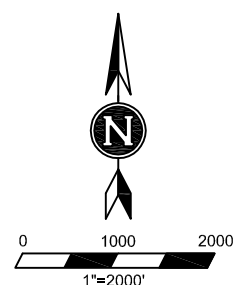
NOTE: This Plat does not, in anyway represent a "Boundary Survey", and does not comply with the current T.B.P.L.S. Minimum Standards of Procedures for Boundary Survey. Shown Acreages were furnished by others. The information contained on this plat is intended for the sole use of EP ENERGY E&P COMPANY, L.P.

NOTE: Bearings and coordinates refer to the Texas Coordinate System of 1927, Central Zone (4203), as observed by GPS observations

I, Damian M. Jagers do hereby certify that the above described well location was surveyed on the ground under my supervision, as shown.

Preliminary, this document shall not be recorded for any purpose and shall not be used or viewed or relied upon as a final survey document.

DAMIAN M. JAGERS **DATE**
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 6269



EP ENERGY E&P COMPANY, L.P.

UNIVERSITY STONEGATE 3819HH
Block 38, Section 19
Block 38, Section 22
Block 38, Section 29
Crockett County, Texas



NABORS DRILLING TECHNOLOGIES USA, INC.

515 West Greens Road

Houston, TX 77067

Phone: 281.874.0035

Fax: 281.872.5205

Sunday, April 30, 2017

Railroad Commission of Texas

Oil and Gas Division

PO Box 12967

Capitol Station

Austin, TX 78711-2967

Subject: **Survey Certification Letter**

Attention: **Pam Johns**

Survey Company: **NABORS DRILLING TECH USA, INC.**

Job Number: **T2988**

Survey Job Type: **Nabors MWD**

Customer: **EP Energy E&P Company**

Well Name: **University Stonegate 3819 HH**

Rig Name: **Nabors F-34**

Operator #: **598880**

Surface: **31°1' 48.10296N / 101°5' 0.01481W**

A.P.I. No: **42-105-42362**

Location: **Crockett, Tx**

RKB Height: **30'**

Distance to Bit: **58'**

								<i>TD Straight</i>
<i>Surveyor Name</i>	<i>Surveyor Title</i>	<i>Borehole</i>	<i>Start</i>	<i>End</i>	<i>Start</i>	<i>End</i>	<i>Type</i>	<i>Line</i>
		<i>Number</i>	<i>Depth</i>	<i>Depth</i>	<i>Date</i>	<i>Date</i>	<i>of</i>	<i>Projection</i>
David Foley Jr	MWD Supervisor	OH	880'	14519'	04/26/17	04/30/17	MWD	14639'

The data and calculations for this survey have been checked by me and conform to the calibration standards and operational procedures set forth by NABORS DRILLING TECHNOLOGIES USA, INC. I am authorized and qualified to review the data, calculations and these reports; the reports represents true and correct Directional Surveys of this well based on the original data, the minimum curvature method, corrected to Grid North and obtained at the well site.


David Foley Jr
MWD Supervisor
NABORS DRILLING TECHNOLOGIES USA, INC.



EP Energy E&P Company, L.P.

Crockett Co, TX
University 3819
Stonegate 3819HH
OH

Survey: NDS MWD

Completion Report

01 May, 2017





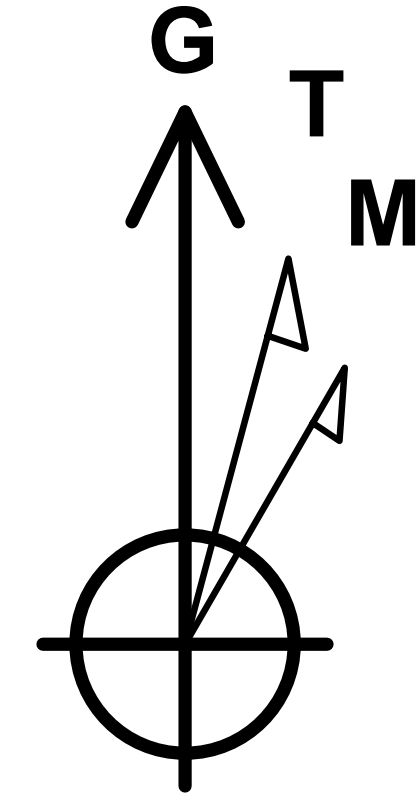
PROJECT DETAILS: Crockett Co, TX
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Texas Central 4203

System Datum: Mean Sea Level
Local North: Grid

WELL DETAILS: Stonegate 3819HH

Ground Elevation: 2619.00
RKB Elevation: KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Rig Name: Nabors F34

Project: Crockett Co, TX
Site: University 3819
Well: Stonegate 3819HH
Wellbore: OH
Plan: PN2 (Stonegate 3819HH/OH)



Azimuths to Grid North
True North: 0.39°
Magnetic North: 5.85°

Magnetic Field
Strength: 47583.0snT
Dip Angle: 59.63°
Date: 3/7/2017
Model: HDGM



SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
880.00	0.07	355.54	879.99	3.59	0.42	0.00	0.00	-3.59
1000.01	0.07	355.54	1000.00	3.74	0.41	0.00	0.00	-3.74
1826.65	12.43	291.82	1820.16	37.44	-82.54	1.50	-64.00	-36.85
4752.88	12.43	291.82	4677.79	271.59	-667.29	0.00	0.00	-266.80
5581.58	0.00	0.00	5500.00	304.87	-750.42	1.50	180.00	-299.49
6112.14	0.00	0.00	6030.56	304.87	-750.42	0.00	0.00	-299.49
6866.40	90.51	180.41	6508.01	-176.84	-753.90	12.00	180.41	182.23
10563.31	90.51	180.41	6475.03	-3873.51	-780.61	0.00	0.00	3879.00
10580.76	90.16	180.41	6474.93	-3890.96	-780.74	2.00	-179.34	3896.45
12319.32	90.16	180.41	6470.02	-5629.47	-793.18	0.00	0.00	5635.00
12340.42	89.74	180.41	6470.03	-5650.57	-793.33	2.00	180.00	5656.10
13439.33	89.74	180.41	6475.02	-6749.44	-801.19	0.00	0.00	6755.00
13464.43	90.24	180.41	6475.03	-6774.54	-801.37	2.00	0.29	6780.10
14654.54	90.24	180.41	6470.00	-7964.61	-809.94	0.00	0.00	7970.20

ANNOTATIONS

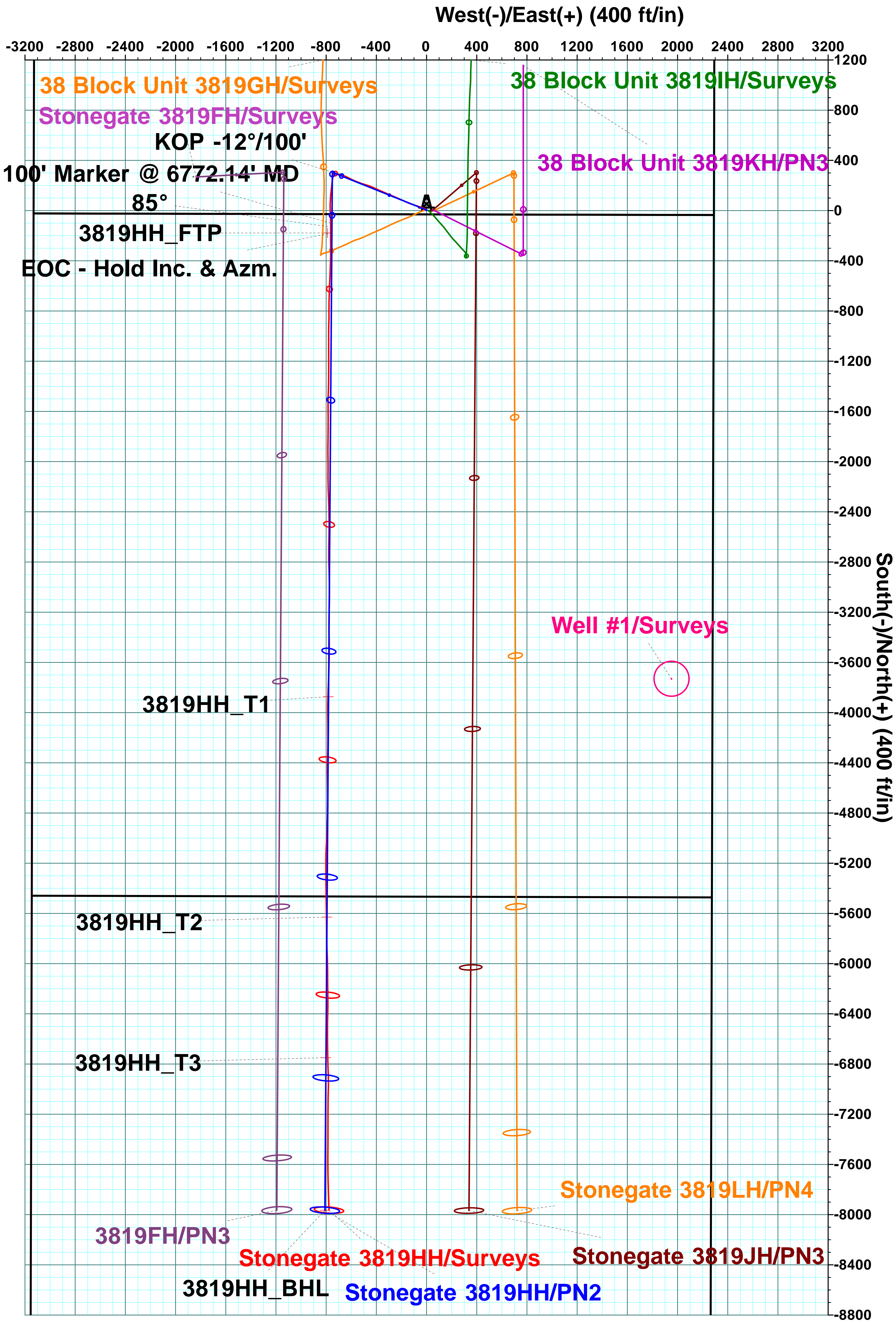
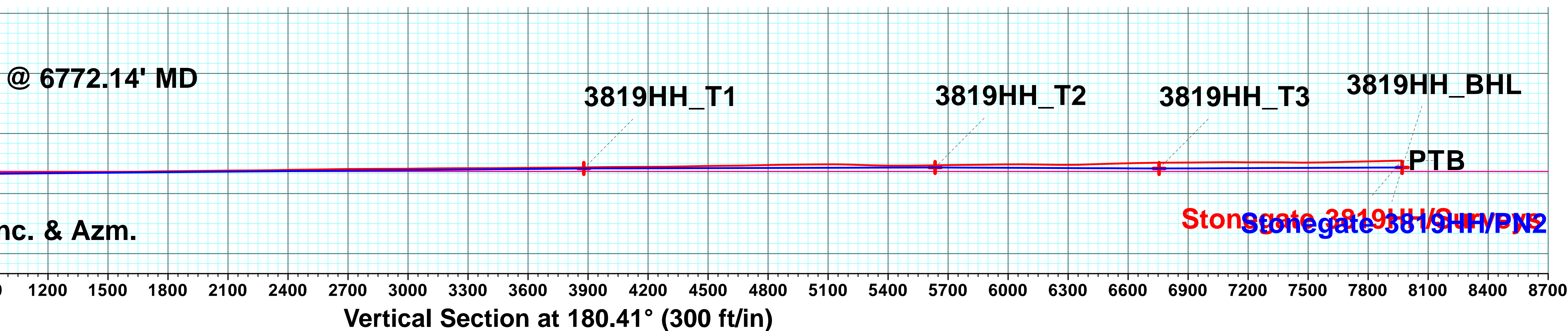
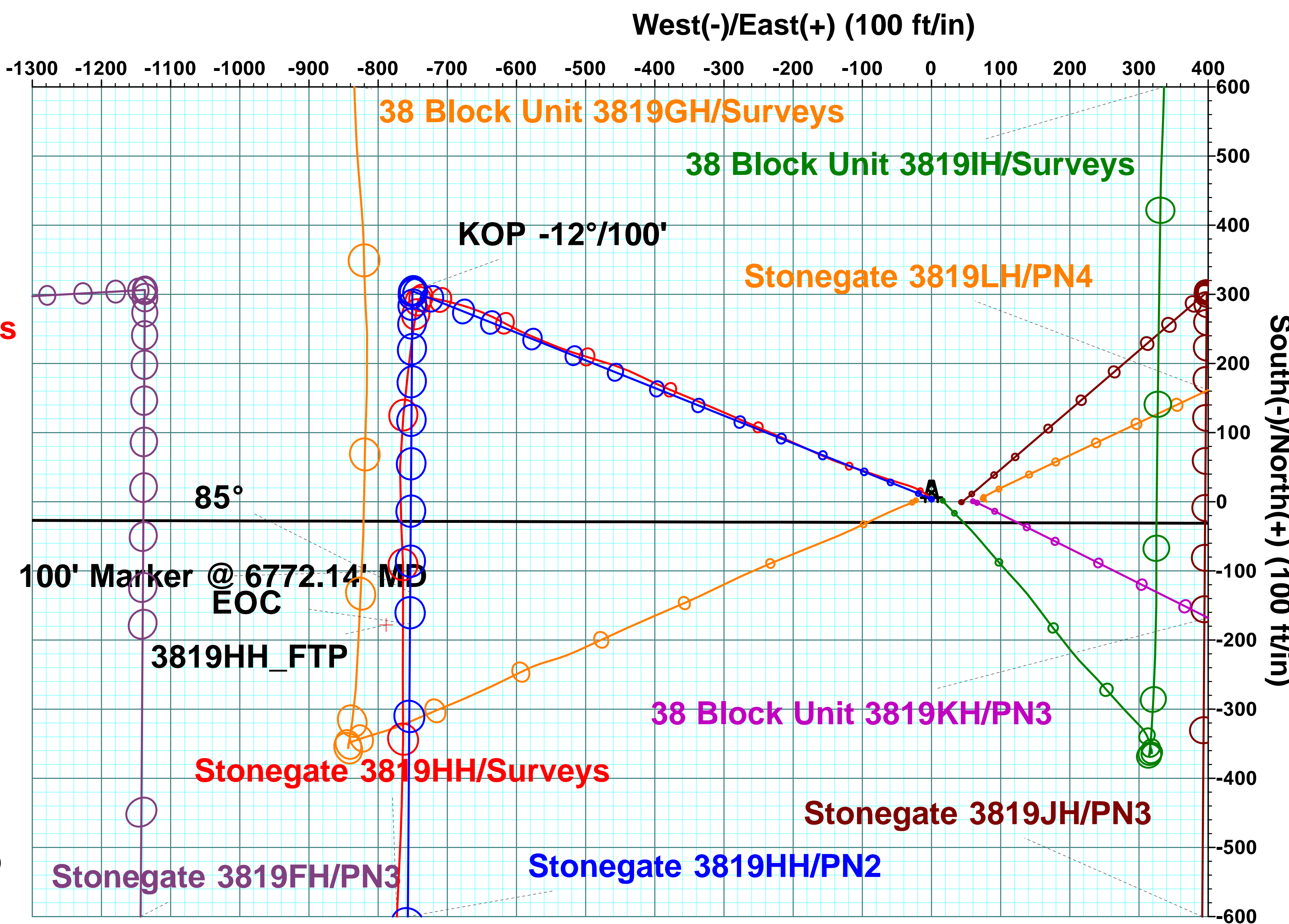
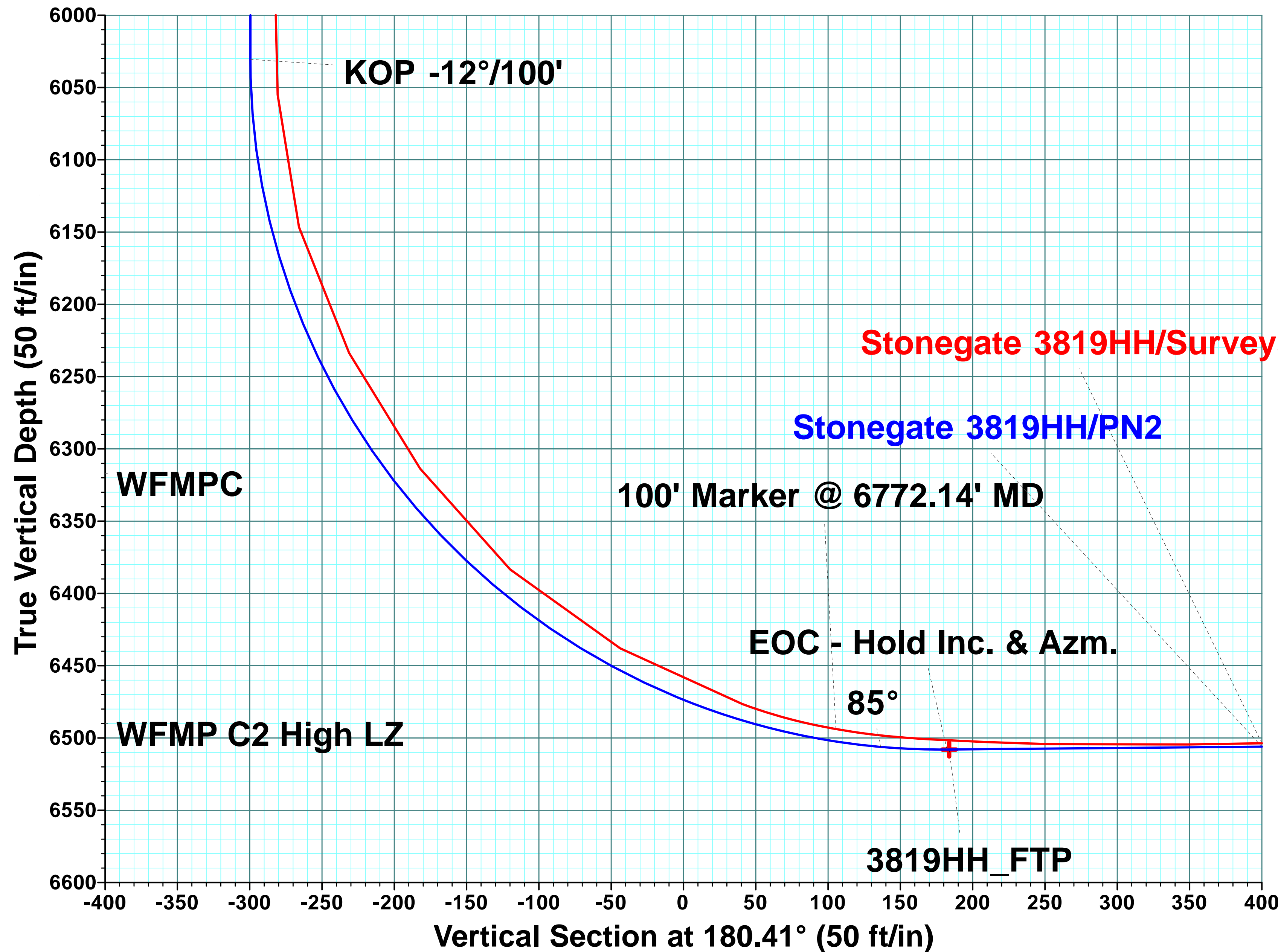
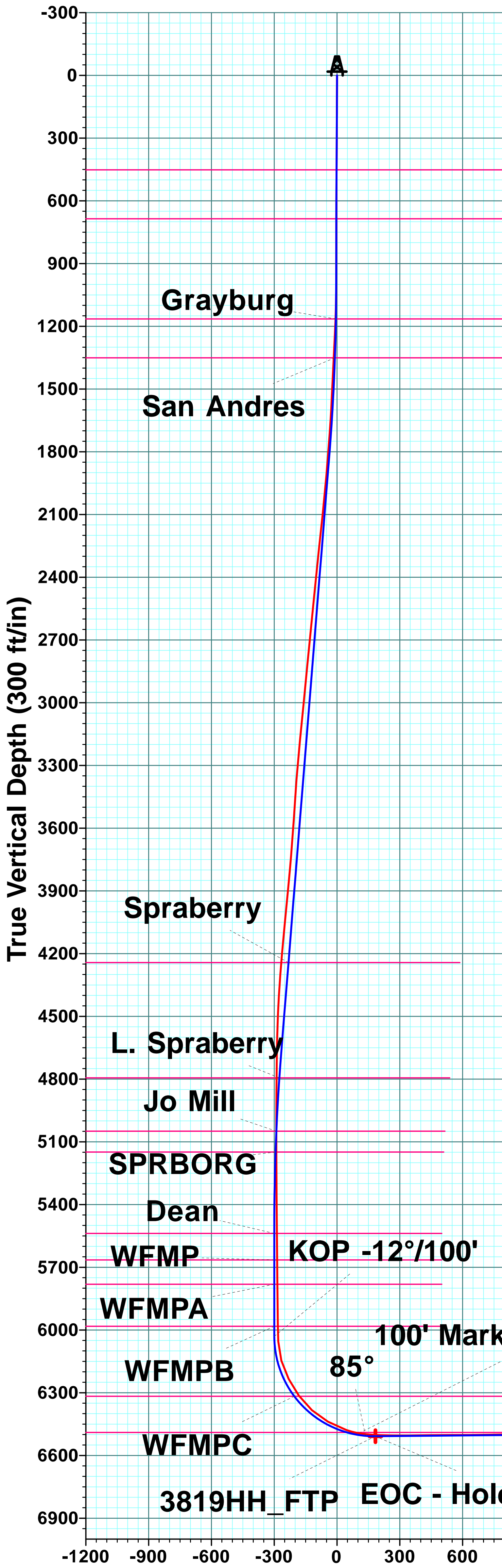
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
6112.14	0.00	0.00	6030.56	304.87	-750.42	-299.49	809.15	KOP -12°/100'
6820.47	85.00	180.41	6506.21	-130.97	-753.57	136.36	1245.01	85°
6866.40	90.51	180.41	6508.01	-176.84	-753.90	182.23	1290.88	EOC - Hold Inc. & Azm.

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
452.00	452.01	Base Cretaceous
686.00	686.01	Yates
1165.00	1165.06	Grayburg
1351.00	1351.52	San Andres
4243.00	4307.66	Spraberry
4794.00	4871.50	Lower Spraberry
5049.00	5129.52	Jo Mill
5149.00	5230.08	SPRBORG
5538.00	5619.58	Dean
5665.00	5746.58	WFMP
5781.00	5862.58	WFMPA
5982.00	6063.58	WFMPB
6317.00	6419.34	WFMPC
6490.00	6730.53	WFMP C2 High LZ

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
3819HH_BHL	6470.00	-7964.61	-809.94	488660.010	1764286.920
3819HH_FTP	6508.00	-178.13	-788.42	496446.470	1764308.440
3819HH_T1	6475.00	-3873.51	-780.61	492751.098	1764316.252
3819HH_T2	6470.00	-5629.47	-793.18	490995.141	1764303.682
3819HH_T3	6475.00	-6749.44	-801.19	489875.173	1764295.672



Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well Stonegate 3819HH
Project:	Crockett Co, TX	TVD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Site:	University 3819	MD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Well:	Stonegate 3819HH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Project	Crockett Co, TX, Crockett Co, TX		
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 3819		
Site Position:		Northing:	496,894.180 usft
From:	Map	Easting:	1,763,159.760 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	31° 1' 50.64154 N
		Longitude:	101° 5' 22.30053 W
		Grid Convergence:	-0.39 °

Well		Stonegate 3819HH				
Well Position	+N/-S	0.00 ft	Northing:	496,624.600 usft	Latitude:	31° 1' 48.10296 N
	+E/-W	0.00 ft	Easting:	1,765,096.860 usft	Longitude:	101° 5' 0.01481 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	2,619.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	3/7/2017	5.47	59.63	47,583.00000000

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)	Direction (°)
	0.00	0.00	0.00	180.41

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well Stonegate 3819HH
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Site:	University 3819	MD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Well:	Stonegate 3819HH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey Program		Date 5/1/2017			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
30.00	880.00	MS Energy (OH)	GYRO-NS	OWSG Gyrocompass Gyro	
987.00	14,639.00	NDS MWD (OH)	MWD+HRGM	OWSG MWD + HRGM	

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Closure Distance (ft)	Closure Azimuth (°)	
880.00	0.07	355.54	879.99	3.59	0.42	-3.59	0.00	3.62	6.75	
987.00	0.00	332.80	986.99	3.66	0.42	-3.66	0.07	3.68	6.55	
1,175.00	3.38	313.29	1,174.88	7.46	-3.62	-7.43	1.80	8.29	334.14	
1,362.00	6.06	299.76	1,361.23	16.14	-16.20	-16.02	1.54	22.87	314.89	
1,550.00	9.81	286.22	1,547.42	25.54	-40.20	-25.25	2.22	47.63	302.43	
1,737.00	13.44	289.03	1,730.55	37.08	-76.06	-36.54	1.96	84.61	295.99	
1,925.00	14.44	288.15	1,913.01	51.51	-118.99	-50.66	0.54	129.66	293.41	
2,112.00	15.13	294.83	2,093.83	69.02	-163.29	-67.85	0.98	177.28	292.91	
2,300.00	14.81	293.60	2,275.45	88.94	-207.58	-87.46	0.24	225.83	293.19	
2,488.00	14.13	293.43	2,457.49	107.69	-250.65	-105.89	0.36	272.81	293.25	
2,675.00	14.13	293.60	2,638.83	125.90	-292.51	-123.81	0.02	318.46	293.29	
2,863.00	14.31	293.08	2,821.07	144.20	-334.92	-141.80	0.12	364.64	293.29	
3,051.00	14.31	292.02	3,003.24	162.02	-377.83	-159.31	0.14	411.10	293.21	
3,238.00	13.31	296.94	3,184.84	180.43	-418.44	-177.43	0.82	455.69	293.33	
3,426.00	12.75	288.86	3,368.01	196.95	-457.37	-193.67	1.01	497.97	293.30	
3,614.00	13.44	285.69	3,551.12	209.56	-498.04	-205.99	0.53	540.33	292.82	
3,801.00	13.13	291.49	3,733.13	223.22	-538.73	-219.36	0.73	583.14	292.51	
3,989.00	14.06	293.25	3,915.86	240.06	-579.58	-235.90	0.54	627.33	292.50	
4,177.00	11.38	299.40	4,099.24	258.18	-616.73	-253.76	1.60	668.59	292.72	
4,364.00	11.81	291.67	4,282.43	274.30	-650.59	-269.64	0.86	706.05	292.86	
4,552.00	9.69	285.34	4,467.13	285.60	-683.73	-280.70	1.29	740.98	292.67	

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well Stonegate 3819HH
Project:	Crockett Co, TX	TVD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Site:	University 3819	MD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Well:	Stonegate 3819HH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Closure Distance (ft)	Closure Azimuth (°)	
4,740.00	6.44	281.83	4,653.24	291.94	-709.31	-286.86	1.75	767.04	292.37	
4,927.00	4.25	272.69	4,839.42	294.42	-726.50	-289.21	1.25	783.89	292.06	
5,115.00	1.06	278.31	5,027.20	295.00	-735.18	-289.73	1.70	792.16	291.86	
5,302.00	0.75	255.64	5,214.17	294.94	-738.08	-289.66	0.25	794.83	291.78	
5,490.00	0.69	219.95	5,402.16	293.77	-740.00	-288.47	0.24	796.18	291.65	
5,678.00	0.69	219.78	5,590.15	292.03	-741.45	-286.72	0.00	796.89	291.50	
5,865.00	0.63	177.06	5,777.13	290.14	-742.12	-284.82	0.26	796.82	291.35	
6,053.00	0.75	206.59	5,965.12	288.01	-742.62	-282.69	0.20	796.51	291.20	
6,143.00	2.00	189.37	6,055.09	285.93	-743.13	-280.61	1.45	796.25	291.05	
6,236.00	16.50	189.37	6,146.64	271.22	-745.56	-265.88	15.59	793.36	289.99	
6,330.00	27.31	188.14	6,233.72	236.60	-750.80	-231.22	11.51	787.20	287.49	
6,424.00	36.13	186.03	6,313.61	187.60	-756.78	-182.18	9.46	779.69	283.92	
6,518.00	47.63	186.20	6,383.48	125.31	-763.46	-119.84	12.23	773.68	279.32	
6,612.00	61.25	181.46	6,438.03	49.21	-768.29	-43.71	15.05	769.86	273.66	
6,705.00	69.75	176.18	6,476.59	-35.28	-766.42	40.76	10.49	767.23	267.36	
6,763.00	79.00	178.64	6,492.20	-91.01	-763.92	96.48	16.46	769.32	263.21	
6,772.14	80.06	179.04	6,493.86	-100.00	-763.74	105.46	12.40	770.26	262.54	
100' Marker @ 6772.14' MD										
6,828.00	86.56	181.46	6,500.36	-155.44	-763.99	160.91	12.40	779.65	258.50	
6,851.05	87.07	180.81	6,501.64	-178.45	-764.45	183.92	3.57	785.00	256.86	
3819HH_FTP										
6,922.00	88.63	178.82	6,504.31	-249.35	-764.22	254.81	3.57	803.87	251.93	
7,016.00	91.13	180.75	6,504.50	-343.34	-763.87	348.79	3.36	837.48	245.80	
7,110.00	90.63	181.63	6,503.06	-437.30	-765.82	442.77	1.08	881.88	240.27	
7,204.00	90.38	183.04	6,502.23	-531.22	-769.65	536.71	1.52	935.18	235.39	
7,298.00	89.69	182.16	6,502.17	-625.12	-773.91	630.64	1.19	994.84	231.07	
7,391.00	91.81	180.75	6,500.96	-718.07	-776.27	723.61	2.74	1,057.47	227.23	

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well Stonegate 3819HH
Project:	Crockett Co, TX	TVD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Site:	University 3819	MD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Well:	Stonegate 3819HH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey									
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Closure Distance (ft)	Closure Azimuth (°)
7,485.00	90.06	180.05	6,499.42	-812.06	-776.93	817.59	2.01	1,123.86	223.73
7,579.00	91.38	182.51	6,498.24	-906.02	-779.03	911.57	2.97	1,194.89	220.69
7,673.00	90.69	178.99	6,496.54	-999.98	-780.26	1,005.53	3.82	1,268.37	217.96
7,766.00	90.94	179.87	6,495.22	-1,092.96	-779.33	1,098.51	0.98	1,342.36	215.49
7,860.00	90.88	180.75	6,493.73	-1,186.95	-779.84	1,192.50	0.94	1,420.21	213.31
7,954.00	89.94	179.87	6,493.05	-1,280.94	-780.35	1,286.49	1.37	1,499.92	211.35
8,048.00	89.25	180.40	6,493.72	-1,374.94	-780.57	1,380.49	0.93	1,581.06	209.58
8,142.00	91.31	182.69	6,493.26	-1,468.89	-783.11	1,474.46	3.28	1,664.60	208.06
8,236.00	90.19	178.99	6,492.03	-1,562.86	-784.48	1,568.43	4.11	1,748.69	206.65
8,329.00	91.25	180.05	6,490.86	-1,655.84	-783.70	1,661.41	1.61	1,831.94	205.33
8,423.00	90.81	180.40	6,489.17	-1,749.83	-784.07	1,755.39	0.60	1,917.46	204.14
8,517.00	90.13	180.93	6,488.40	-1,843.82	-785.16	1,849.39	0.92	2,004.03	203.07
8,611.00	91.31	179.70	6,487.22	-1,937.80	-785.68	1,943.38	1.81	2,091.02	202.07
8,705.00	90.13	179.17	6,486.04	-2,031.79	-784.75	2,037.35	1.38	2,178.07	201.12
8,798.00	90.94	180.93	6,485.17	-2,124.78	-784.84	2,130.34	2.08	2,265.10	200.27
8,892.00	89.56	177.24	6,484.76	-2,218.75	-783.33	2,224.30	4.19	2,352.97	199.45
8,986.00	91.56	178.29	6,483.84	-2,312.67	-779.67	2,318.19	2.40	2,440.56	198.63
9,080.00	91.06	178.82	6,481.69	-2,406.61	-777.30	2,412.11	0.78	2,529.03	197.90
9,174.00	90.63	180.05	6,480.30	-2,500.60	-776.37	2,506.09	1.39	2,618.35	197.25
9,267.00	90.81	180.93	6,479.13	-2,593.58	-777.17	2,599.08	0.97	2,707.52	196.68
9,361.00	90.75	181.46	6,477.85	-2,687.55	-779.13	2,693.06	0.57	2,798.21	196.17
9,455.00	90.06	178.29	6,477.19	-2,781.54	-778.92	2,787.04	3.45	2,888.54	195.64
9,549.00	90.25	178.47	6,476.94	-2,875.50	-776.27	2,880.98	0.28	2,978.44	195.11
9,643.00	90.38	178.82	6,476.42	-2,969.47	-774.04	2,974.94	0.40	3,068.70	194.61
9,737.00	91.00	180.58	6,475.29	-3,063.46	-773.55	3,068.92	1.98	3,159.62	194.17
9,831.00	90.38	181.10	6,474.15	-3,157.44	-774.93	3,162.91	0.86	3,251.15	193.79
9,924.00	90.13	181.81	6,473.74	-3,250.41	-777.29	3,255.89	0.81	3,342.06	193.45

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Site:	University 3819	MD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Well:	Stonegate 3819HH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Closure Distance (ft)	Closure Azimuth (°)	
10,018.00	90.00	178.29	6,473.63	-3,344.40	-777.37	3,349.87	3.75	3,433.55	193.09	
10,112.00	90.38	179.17	6,473.32	-3,438.37	-775.29	3,443.83	1.02	3,524.70	192.71	
10,206.00	90.88	180.58	6,472.29	-3,532.36	-775.08	3,537.82	1.59	3,616.40	192.38	
10,300.00	90.63	181.63	6,471.05	-3,626.34	-776.90	3,631.80	1.15	3,708.62	192.09	
10,393.00	90.06	182.51	6,470.49	-3,719.27	-780.25	3,724.76	1.13	3,800.24	191.85	
10,487.00	90.31	181.63	6,470.19	-3,813.21	-783.65	3,818.72	0.97	3,892.90	191.61	
10,547.10	90.83	181.97	6,469.59	-3,873.28	-785.54	3,878.80	1.04	3,952.13	191.46	
3819HH_T1										
10,581.00	91.13	182.16	6,469.01	-3,907.15	-786.76	3,912.68	1.04	3,985.58	191.39	
10,675.00	90.13	178.82	6,467.97	-4,001.13	-787.56	4,006.66	3.71	4,077.90	191.14	
10,769.00	90.69	179.17	6,467.30	-4,095.11	-785.91	4,100.63	0.70	4,169.84	190.86	
10,863.00	90.25	180.05	6,466.53	-4,189.10	-785.27	4,194.61	1.05	4,262.07	190.62	
10,956.00	90.13	180.93	6,466.22	-4,282.10	-786.07	4,287.61	0.95	4,353.65	190.40	
11,050.00	91.50	181.98	6,464.88	-4,376.05	-788.45	4,381.58	1.84	4,446.52	190.21	
11,144.00	91.13	178.99	6,462.72	-4,470.02	-789.25	4,475.55	3.20	4,539.16	190.01	
11,238.00	90.38	179.17	6,461.49	-4,563.99	-787.74	4,569.51	0.82	4,631.48	189.79	
11,332.00	90.69	179.87	6,460.61	-4,657.99	-786.95	4,663.50	0.81	4,724.00	189.59	
11,425.00	91.44	180.75	6,458.88	-4,750.97	-787.46	4,756.48	1.24	4,815.78	189.41	
11,519.00	91.00	181.46	6,456.88	-4,844.93	-789.27	4,850.45	0.89	4,908.80	189.25	
11,613.00	90.19	181.98	6,455.90	-4,938.88	-792.09	4,944.42	1.02	5,001.99	189.11	
11,707.00	91.19	183.74	6,454.77	-5,032.75	-796.78	5,038.32	2.15	5,095.43	189.00	
11,801.00	89.44	181.28	6,454.25	-5,126.65	-800.90	5,132.25	3.21	5,188.83	188.88	
11,894.00	88.25	179.87	6,456.13	-5,219.62	-801.83	5,225.22	1.98	5,280.85	188.73	
11,988.00	88.13	179.52	6,459.10	-5,313.57	-801.33	5,319.17	0.39	5,373.66	188.58	
12,082.00	89.50	179.35	6,461.04	-5,407.55	-800.40	5,413.13	1.47	5,466.46	188.42	
12,175.00	90.44	179.17	6,461.09	-5,500.54	-799.20	5,506.11	1.03	5,558.29	188.27	
12,269.00	91.13	179.35	6,459.80	-5,594.52	-797.99	5,600.09	0.76	5,651.14	188.12	

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well Stonegate 3819HH
Project:	Crockett Co, TX	TVD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Site:	University 3819	MD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Well:	Stonegate 3819HH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Closure Distance (ft)	Closure Azimuth (°)	
12,303.80	91.10	179.35	6,459.12	-5,629.31	-797.59	5,634.88	0.07	5,685.54	188.06	
3819HH_T2										
12,363.00	91.06	179.35	6,458.01	-5,688.50	-796.92	5,694.05	0.07	5,744.05	187.97	
12,456.00	90.13	179.17	6,457.04	-5,781.48	-795.72	5,787.03	1.02	5,835.98	187.84	
12,550.00	90.81	178.29	6,456.27	-5,875.45	-793.64	5,880.98	1.18	5,928.81	187.69	
12,644.00	91.06	177.76	6,454.73	-5,969.39	-790.40	5,974.89	0.62	6,021.49	187.54	
12,738.00	89.25	179.87	6,454.48	-6,063.36	-788.45	6,068.84	2.96	6,114.40	187.41	
12,831.00	89.50	179.87	6,455.49	-6,156.35	-788.24	6,161.83	0.27	6,206.61	187.30	
12,925.00	88.94	178.12	6,456.77	-6,250.32	-786.59	6,255.79	1.95	6,299.62	187.17	
13,019.00	91.63	181.46	6,456.31	-6,344.30	-786.25	6,349.76	4.56	6,392.83	187.06	
13,113.00	92.13	181.28	6,453.22	-6,438.22	-788.50	6,443.70	0.57	6,486.33	186.98	
13,207.00	91.38	180.05	6,450.34	-6,532.17	-789.59	6,537.65	1.53	6,579.72	186.89	
13,300.00	91.06	179.17	6,448.36	-6,625.14	-788.95	6,630.62	1.01	6,671.96	186.79	
13,394.00	91.13	179.52	6,446.57	-6,719.12	-787.88	6,724.59	0.38	6,765.16	186.69	
13,423.69	90.77	178.91	6,446.07	-6,748.81	-787.47	6,754.27	2.38	6,794.59	186.66	
3819HH_T3										
13,488.00	90.00	177.59	6,445.64	-6,813.08	-785.51	6,818.53	2.38	6,858.21	186.58	
13,582.00	90.50	178.29	6,445.23	-6,907.02	-782.13	6,912.44	0.92	6,951.16	186.46	
13,676.00	90.94	182.16	6,444.05	-7,000.99	-782.50	7,006.41	4.14	7,044.59	186.38	
13,770.00	89.50	180.23	6,443.69	-7,094.96	-784.46	7,100.40	2.56	7,138.20	186.31	
13,864.00	89.94	180.23	6,444.15	-7,188.96	-784.84	7,194.39	0.47	7,231.68	186.23	
13,957.00	90.19	180.58	6,444.04	-7,281.96	-785.49	7,287.39	0.46	7,324.20	186.16	
14,051.00	89.25	179.52	6,444.50	-7,375.96	-785.58	7,381.39	1.51	7,417.67	186.08	
14,145.00	89.38	180.75	6,445.63	-7,469.95	-785.80	7,475.38	1.32	7,511.16	186.01	
14,239.00	91.75	180.40	6,444.70	-7,563.93	-786.74	7,569.37	2.55	7,604.74	185.94	
14,332.00	90.94	178.64	6,442.52	-7,656.90	-785.96	7,662.33	2.08	7,697.13	185.86	
14,426.00	91.31	178.64	6,440.67	-7,750.85	-783.73	7,756.26	0.39	7,790.38	185.77	

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well Stonegate 3819HH
Project:	Crockett Co, TX	TVD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Site:	University 3819	MD Reference:	KB=30 (Nabors F34) @ 2649.00ft (Nabors F34)
Well:	Stonegate 3819HH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

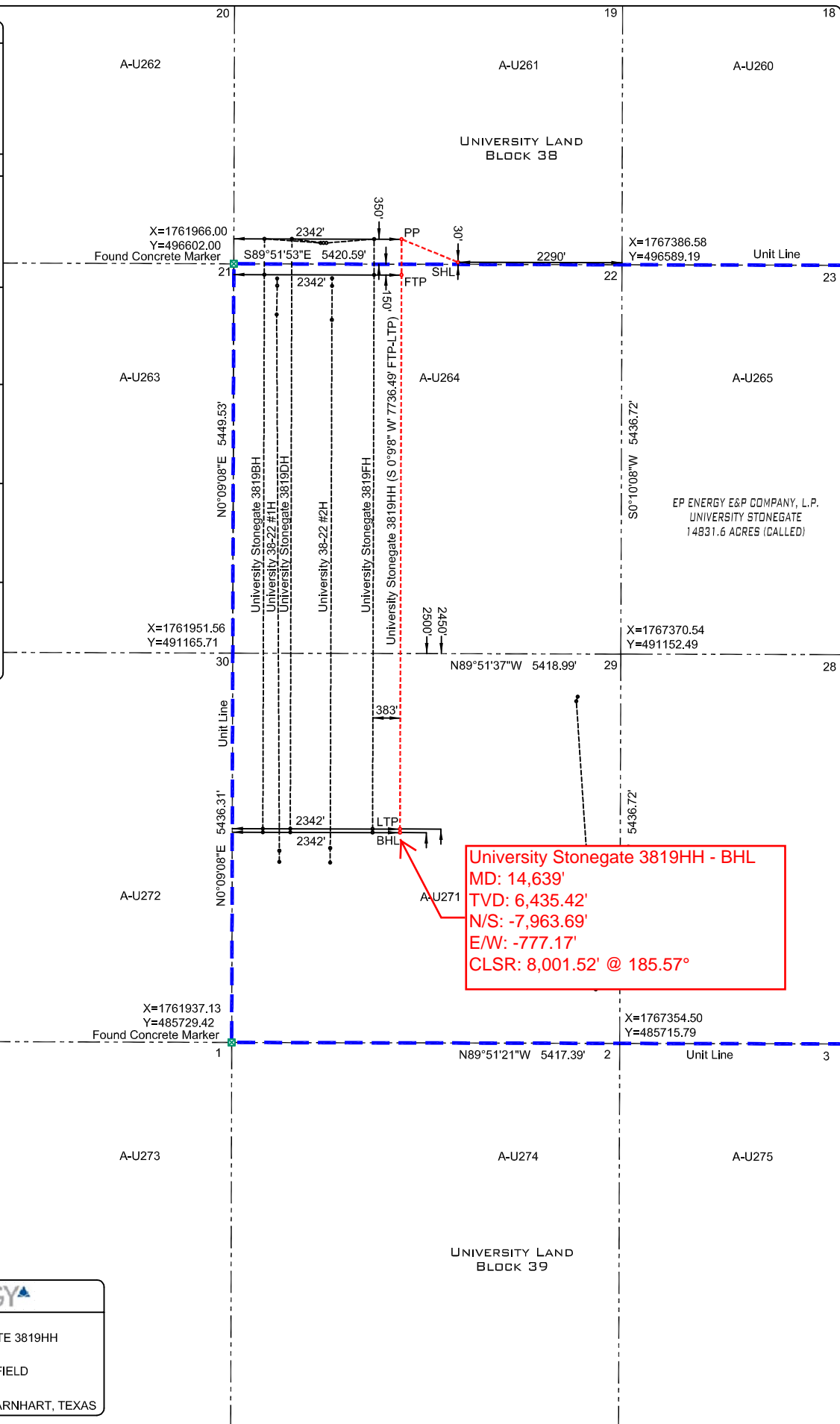
Survey									
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Closure Distance (ft)	Closure Azimuth (°)
14,519.00	91.44	178.12	6,438.44	-7,843.79	-781.10	7,849.18	0.58	7,882.58	185.69
14,637.98	91.44	178.12	6,435.45	-7,962.66	-777.20	7,968.02	0.00	8,000.50	185.57
3819HH_BHL									
14,639.00	91.44	178.12	6,435.42	-7,963.69	-777.17	7,969.04	0.00	8,001.52	185.57
PTB									

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
6,772.14	6,493.86	-100.00	-763.74	100' Marker @ 6772.14' MD
14,639.00	6,435.42	-7,963.69	-777.17	PTB

Checked By: _____	Approved By: _____	Date: _____
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NAD 83, Central Zone 4203
Surface Hole Location (SHL Sec. 19)
Latitude: 31.030195° N
Longitude: 101.083726° W
X=2061563.85
Y=10393203.59
Elev.=2619'
30' FSL & 2290' FEL
NAD 27, Central Zone 4203
Surface Hole Location (SHL Sec. 19)
Latitude: 31.030029° N
Longitude: 101.083337° W
X=1765096.86
Y=496624.60
Elev.=2619'
30' FSL & 2290' FEL
Point of Penetration (PP Sec. 19)
Latitude: 31.030899° N
Longitude: 101.085860° W
X=1764308.92
Y=496946.47
350' FNL & 2342' FWL
First Take Point (FTP Sec. 22)
Latitude: 31.029524° N
Longitude: 101.085854° W
X=1764307.60
Y=496446.47
150' FNL & 2342' FWL
Last Take Point (LTP Sec. 29)
Latitude: 31.008252° N
Longitude: 101.085752° W
X=1764287.05
Y=488710.01
2450 FNL & 2342' FWL
Bottom Hole Location (BHL Sec. 29)
Latitude: 31.008115° N
Longitude: 101.085751° W
X=1764286.92
Y=488660.01
2500' FNL & 2342' FWL

Unit Boundary Distance	
SHL	Off Lease
PP	Off Lease
FTP	150' FNL & 2342' FWL
LTP	2986' FSL & 2342' FWL
BHL	2936' FSL & 2342' FWL



University Stonegate 3819HH - BHL
MD: 14,639'
TVD: 6,435.42'
N/S: -7,963.69'
E/W: -777.17'
CLSR: 8,001.52' @ 185.57°

EP ENERGY

Well Name
UNIVERSITY STONEGATE 3819HH
Drilling Field
LIN (WOLFCAMP) FIELD
Nearest Town

8.57 MILES SOUTHEAST OF BARNHART, TEXAS

NOTE: This Plat does not, in anyway represent a "Boundary Survey", and does not comply with the current T.B.P.L.S. Minimum Standards of Procedures for Boundary Survey. Shown Acreages were furnished by others. The information contained on this plat is intended for the sole use of EP ENERGY E&P COMPANY, L.P.

NOTE: Bearings and coordinates refer to the Texas Coordinate System of 1927, Central Zone (4203), as observed by GPS observations

I, Damian M. Jagers do hereby certify that the above described well location was surveyed on the ground under my supervision, as shown.

Preliminary, this document shall not be recorded for any purpose and shall not be used or viewed or relied upon as a final survey document.

DAMIAN M. JAGERS
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 6269

DATE _____



EP ENERGY E&P COMPANY, L.P.

UNIVERSITY STONEGATE 3819HH
Block 38, Section 19
Block 38, Section 22
Block 38, Section 29
Crockett County, Texas

