PIONEER NATURAL RESOURCES

Upton Co., TX
University 3-14 #17H
H&P 606

INTEGRITY Directional Services

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DIeg	TFace	VSect	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
4800.0	0.00	0.00	4800.0	0.0	0.0	0.00	0.00	0.0	
5300.0	5.00	250.00	5299.4	-7.5	-20.5	1.00	250.00	-7.0	
8610.0	5.00	250.00	8596.8	-106.1	-291.6	0.00	0.00	-99.4	
9379.1	90.50	1.12	9087.5	375.9	-322.6	12.00	111.00	383.2	
16806.6	90.50	1.12	9023.0	7801.7	-177.7	0.00	0.00	7803.7	PBHL University 3-14 #17H

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL University 3-14 #17H	9023.0	7801.7	-177.7	598740.68	1528557.37	31° 18' 15.050 N	101° 50' 34.516 W

PROJECT DETAILS: Upton 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

SITE DETAILS: University 3-14

Site Centre Northing: 590954.38
Easting: 1528677.11
Positional Uncertainity: 0.0
Convergence: -0.78
Local North: Grid

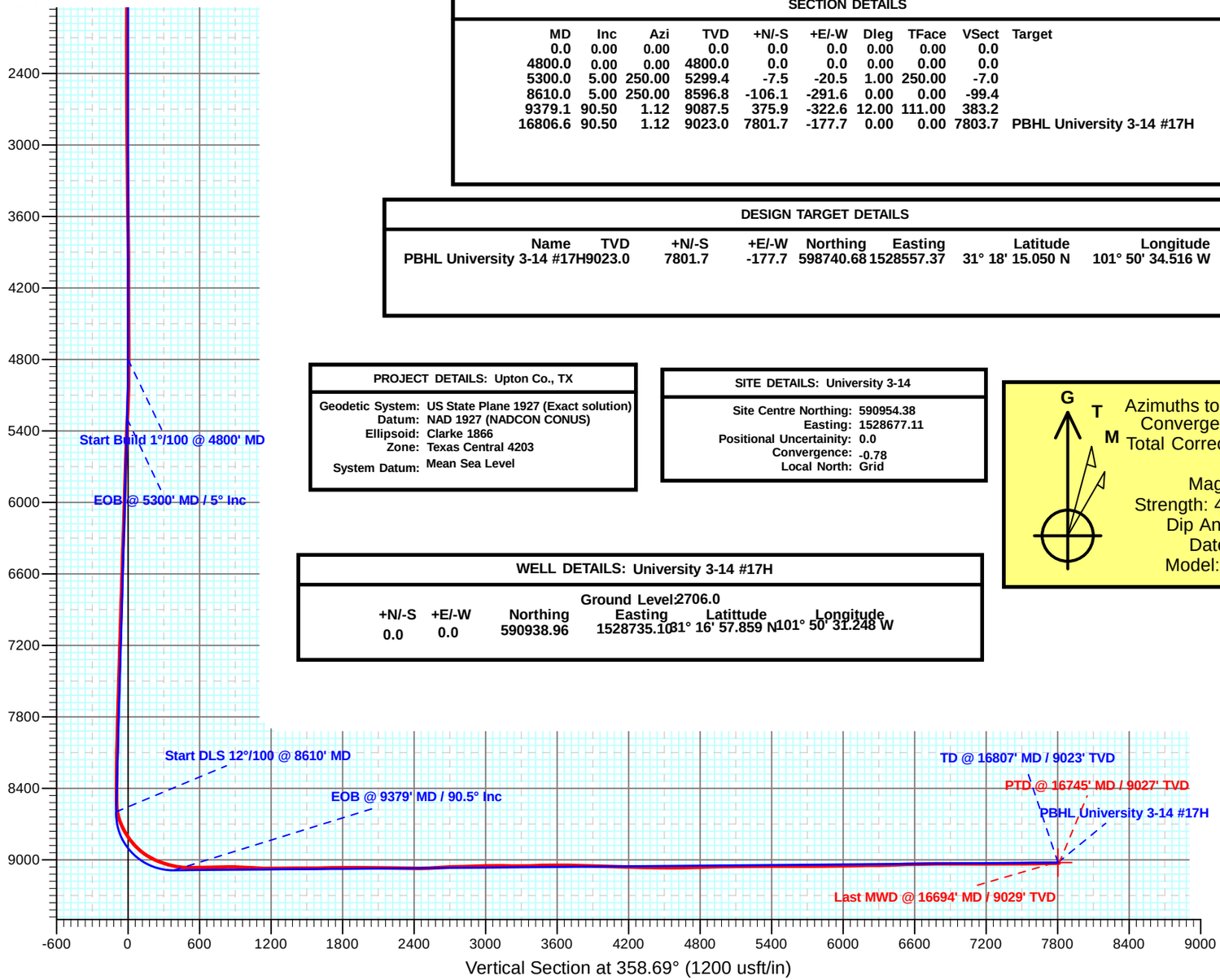
Azimuths to Grid North
Convergence: -0.78°
Total Correction: 7.13°

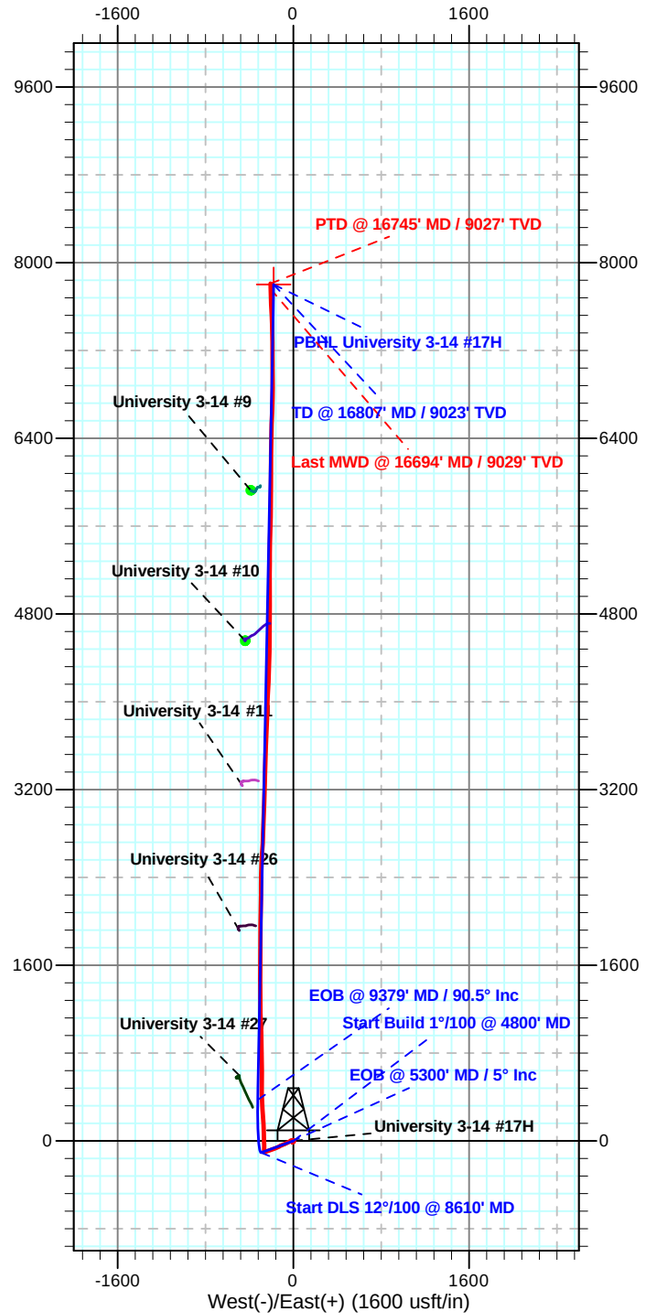
Magnetic Field
Strength: 47942.9snT
Dip Angle: 59.52°
Date: 4/9/2014
Model: IGRF2010

WELL DETAILS: University 3-14 #17H

Ground Level: 2706.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	590938.96	1528735.10	31° 16' 57.859 N	101° 50' 31.248 W





PIONEER
NATURAL RESOURCES

Pioneer Natural Resources

Upton Co., TX
University 3-14
University 3-14 #17H

Wellbore #1

Design: OH

Standard Survey Report

15 September, 2014

INTEGRITY
Directional Services

Company:	Pioneer Natural Resources	**Local Co-ordinate Reference:**	Well University 3-14 #17H
Project:	Upton Co., TX	**TVD Reference:**	Well @ 2733.0usft (H&P 606)
Site:	University 3-14	**MD Reference:**	Well @ 2733.0usft (H&P 606)
Well:	University 3-14 #17H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Project Upton 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 3-14

Site Position:		**Northing:**	590,954.38 usft	**Latitude:**	31° 16' 58.004 N
From:	Map	**Easting:**	1,528,677.11 usft	**Longitude:**	101° 50' 31.918 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	-0.78 °

Well University 3-14 #17H

Well Position	**+N/-S**	0.0 usft	**Northing:**	590,938.96 usft	**Latitude:**	31° 16' 57.859 N
	+E/-W	0.0 usft	**Easting:**	1,528,735.10 usft	**Longitude:**	101° 50' 31.248 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	2,706.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/9/2014	6.35	59.52	47,943

Design OH

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	358.69

Survey Program **Date** 9/15/2014

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
173.0	16,745.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
173.0	0.30	123.60	173.0	-0.3	0.4	-0.3	0.17	0.17	0.00
234.0	0.40	133.60	234.0	-0.5	0.7	-0.5	0.19	0.16	16.39
423.0	0.30	203.10	423.0	-1.4	0.9	-1.4	0.22	-0.05	36.77
608.0	0.40	200.70	608.0	-2.4	0.5	-2.5	0.05	0.05	-1.30
793.0	0.40	245.00	793.0	-3.3	-0.3	-3.3	0.16	0.00	23.95
980.0	0.70	240.00	980.0	-4.2	-1.9	-4.1	0.16	0.16	-2.67
1,168.0	1.00	237.40	1,168.0	-5.6	-4.2	-5.5	0.16	0.16	-1.38
1,245.0	1.10	231.90	1,244.9	-6.4	-5.4	-6.3	0.18	0.13	-7.14
1,394.0	1.30	240.40	1,393.9	-8.2	-8.0	-8.0	0.18	0.13	5.70

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Well:	University 3-14 #17H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,488.0	0.80	246.90	1,487.9	-8.9	-9.5	-8.7	0.55	-0.53	6.91
1,583.0	0.00	0.00	1,582.9	-9.2	-10.1	-9.0	0.84	-0.84	0.00
1,677.0	0.30	113.80	1,676.9	-9.3	-9.9	-9.1	0.32	0.32	0.00
1,772.0	0.60	106.40	1,771.9	-9.5	-9.2	-9.3	0.32	0.32	-7.79
1,866.0	0.70	102.20	1,865.9	-9.8	-8.2	-9.6	0.12	0.11	-4.47
1,960.0	0.60	90.60	1,959.9	-9.9	-7.1	-9.8	0.18	-0.11	-12.34
2,055.0	0.70	85.20	2,054.9	-9.9	-6.0	-9.8	0.12	0.11	-5.68
2,149.0	0.80	91.00	2,148.9	-9.9	-4.8	-9.7	0.13	0.11	6.17
2,243.0	0.80	101.00	2,242.9	-10.0	-3.5	-9.9	0.15	0.00	10.64
2,337.0	0.80	99.40	2,336.8	-10.2	-2.2	-10.2	0.02	0.00	-1.70
2,432.0	0.40	53.60	2,431.8	-10.1	-1.3	-10.1	0.63	-0.42	-48.21
2,526.0	0.40	48.10	2,525.8	-9.7	-0.8	-9.7	0.04	0.00	-5.85
2,621.0	0.40	20.00	2,620.8	-9.2	-0.4	-9.2	0.20	0.00	-29.58
2,715.0	0.40	33.50	2,714.8	-8.6	-0.1	-8.6	0.10	0.00	14.36
2,810.0	0.40	38.40	2,809.8	-8.1	0.3	-8.1	0.04	0.00	5.16
2,904.0	0.50	43.60	2,903.8	-7.5	0.7	-7.5	0.11	0.11	5.53
2,998.0	0.60	52.00	2,997.8	-6.9	1.4	-6.9	0.14	0.11	8.94
3,093.0	0.80	57.70	3,092.8	-6.3	2.4	-6.3	0.22	0.21	6.00
3,187.0	0.70	39.60	3,186.8	-5.5	3.3	-5.5	0.27	-0.11	-19.26
3,282.0	0.70	37.40	3,281.8	-4.6	4.0	-4.6	0.03	0.00	-2.32
3,376.0	0.90	29.10	3,375.8	-3.5	4.7	-3.6	0.25	0.21	-8.83
3,470.0	0.90	39.50	3,469.8	-2.2	5.5	-2.4	0.17	0.00	11.06
3,565.0	0.90	31.80	3,564.8	-1.0	6.4	-1.2	0.13	0.00	-8.11
3,659.0	1.00	23.00	3,658.8	0.4	7.1	0.2	0.19	0.11	-9.36
3,754.0	1.20	32.40	3,753.7	2.0	8.0	1.8	0.28	0.21	9.89
3,848.0	0.90	338.20	3,847.7	3.5	8.2	3.3	1.06	-0.32	-57.66
3,943.0	1.30	282.00	3,942.7	4.4	6.9	4.2	1.15	0.42	-59.16
4,037.0	1.50	269.50	4,036.7	4.6	4.6	4.5	0.39	0.21	-13.30
4,131.0	1.60	270.70	4,130.6	4.6	2.1	4.6	0.11	0.11	1.28
4,226.0	1.10	267.00	4,225.6	4.6	-0.1	4.6	0.53	-0.53	-3.89
4,320.0	0.90	279.30	4,319.6	4.6	-1.8	4.7	0.31	-0.21	13.09
4,414.0	1.00	287.40	4,413.6	5.0	-3.3	5.1	0.18	0.11	8.62
4,509.0	0.90	280.00	4,508.6	5.4	-4.8	5.5	0.17	-0.11	-7.79
4,603.0	0.70	280.10	4,602.6	5.6	-6.1	5.8	0.21	-0.21	0.11
4,697.0	0.70	292.80	4,696.6	5.9	-7.2	6.1	0.16	0.00	13.51
4,792.0	1.20	270.40	4,791.6	6.2	-8.7	6.4	0.65	0.53	-23.58
4,886.0	2.00	265.00	4,885.5	6.0	-11.3	6.3	0.87	0.85	-5.74
4,981.0	2.90	256.60	4,980.4	5.3	-15.3	5.7	1.02	0.95	-8.84
5,075.0	3.60	243.10	5,074.3	3.4	-20.3	3.9	1.10	0.74	-14.36
5,170.0	4.20	235.50	5,169.1	0.1	-25.8	0.7	0.83	0.63	-8.00
5,264.0	4.60	233.60	5,262.8	-4.1	-31.7	-3.3	0.45	0.43	-2.02
5,359.0	4.50	238.70	5,357.5	-8.3	-37.9	-7.4	0.44	-0.11	5.37
5,453.0	4.70	243.90	5,451.2	-11.9	-44.5	-10.8	0.49	0.21	5.53
5,548.0	5.40	243.60	5,545.8	-15.6	-52.0	-14.4	0.74	0.74	-0.32

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Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,642.0	5.30	243.70	5,639.4	-19.5	-59.9	-18.1	0.11	-0.11	0.11
5,736.0	4.70	242.10	5,733.0	-23.2	-67.2	-21.6	0.66	-0.64	-1.70
5,831.0	4.90	245.40	5,827.7	-26.7	-74.3	-25.0	0.36	0.21	3.47
5,925.0	4.40	247.70	5,921.4	-29.7	-81.3	-27.9	0.57	-0.53	2.45
6,020.0	4.40	248.40	6,016.1	-32.5	-88.1	-30.4	0.06	0.00	0.74
6,114.0	4.60	251.10	6,109.8	-35.0	-95.0	-32.8	0.31	0.21	2.87
6,209.0	4.70	248.80	6,204.5	-37.6	-102.2	-35.3	0.22	0.11	-2.42
6,303.0	4.70	241.00	6,298.2	-40.9	-109.2	-38.4	0.68	0.00	-8.30
6,398.0	4.90	241.00	6,392.9	-44.8	-116.1	-42.1	0.21	0.21	0.00
6,492.0	4.20	239.50	6,486.6	-48.4	-122.6	-45.6	0.76	-0.74	-1.60
6,587.0	4.00	238.70	6,581.3	-51.9	-128.4	-49.0	0.22	-0.21	-0.84
6,681.0	4.20	243.60	6,675.1	-55.2	-134.3	-52.1	0.43	0.21	5.21
6,775.0	5.50	247.60	6,768.7	-58.4	-141.6	-55.2	1.43	1.38	4.26
6,870.0	5.80	250.00	6,863.3	-61.8	-150.3	-58.3	0.40	0.32	2.53
6,964.0	4.50	252.00	6,956.9	-64.6	-158.3	-60.9	1.40	-1.38	2.13
7,059.0	4.60	250.10	7,051.6	-67.0	-165.4	-63.2	0.19	0.11	-2.00
7,153.0	6.00	249.30	7,145.2	-70.0	-173.5	-66.0	1.49	1.49	-0.85
7,247.0	4.40	251.60	7,238.8	-72.9	-181.5	-68.7	1.72	-1.70	2.45
7,342.0	5.10	248.80	7,333.5	-75.6	-188.9	-71.2	0.78	0.74	-2.95
7,436.0	5.70	248.40	7,427.1	-78.8	-197.2	-74.3	0.64	0.64	-0.43
7,530.0	5.80	249.40	7,520.6	-82.2	-206.0	-77.5	0.15	0.11	1.06
7,625.0	5.80	250.50	7,615.1	-85.5	-215.0	-80.6	0.12	0.00	1.16
7,719.0	5.00	251.30	7,708.7	-88.4	-223.3	-83.3	0.85	-0.85	0.85
7,814.0	3.80	247.00	7,803.4	-90.9	-230.2	-85.7	1.31	-1.26	-4.53
7,908.0	4.60	250.00	7,897.2	-93.5	-236.6	-88.0	0.88	0.85	3.19
8,003.0	4.50	250.70	7,991.9	-96.0	-243.7	-90.4	0.12	-0.11	0.74
8,097.0	4.20	253.00	8,085.6	-98.2	-250.4	-92.5	0.37	-0.32	2.45
8,192.0	3.40	251.40	8,180.4	-100.1	-256.4	-94.2	0.85	-0.84	-1.68
8,286.0	2.60	250.40	8,274.2	-101.7	-261.1	-95.7	0.85	-0.85	-1.06
8,381.0	1.80	246.00	8,369.2	-103.1	-264.5	-97.0	0.86	-0.84	-4.63
8,395.0	1.70	246.40	8,383.2	-103.2	-264.9	-97.2	0.72	-0.71	2.86
8,546.0	1.80	356.10	8,534.1	-101.8	-267.1	-95.6	1.90	0.07	72.65
8,577.0	6.40	10.10	8,565.0	-99.6	-266.8	-93.5	15.08	14.84	45.16
8,609.0	10.20	8.60	8,596.7	-95.0	-266.1	-88.9	11.89	11.88	-4.69
8,640.0	13.70	7.00	8,627.0	-88.7	-265.2	-82.6	11.34	11.29	-5.16
8,685.0	19.30	3.10	8,670.2	-75.9	-264.2	-69.9	12.68	12.44	-8.67
8,734.0	24.60	359.20	8,715.6	-57.6	-263.9	-51.6	11.21	10.82	-7.96
8,781.0	28.90	358.30	8,757.6	-36.5	-264.3	-30.4	9.19	9.15	-1.91
8,828.0	33.10	358.70	8,797.8	-12.3	-265.0	-6.2	8.95	8.94	0.85
8,875.0	37.50	358.30	8,836.2	14.8	-265.7	20.9	9.37	9.36	-0.85
8,922.0	42.00	357.10	8,872.3	44.9	-266.9	51.0	9.71	9.57	-2.55
8,969.0	47.20	357.50	8,905.8	77.8	-268.5	83.9	11.08	11.06	0.85
9,017.0	51.50	357.50	8,937.0	114.2	-270.0	120.3	8.96	8.96	0.00

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Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,064.0	57.90	357.80	8,964.2	152.5	-271.6	158.7	13.63	13.62	0.64
9,111.0	63.30	357.30	8,987.2	193.4	-273.4	199.6	11.53	11.49	-1.06
9,158.0	66.50	356.40	9,007.2	235.9	-275.7	242.1	7.03	6.81	-1.91
9,205.0	70.60	355.90	9,024.3	279.5	-278.6	285.8	8.78	8.72	-1.06
9,252.0	74.30	356.10	9,038.5	324.2	-281.8	330.6	7.88	7.87	0.43
9,299.0	77.10	356.90	9,050.1	369.7	-284.5	376.1	6.18	5.96	1.70
9,346.0	81.30	357.90	9,058.9	415.8	-286.6	422.2	9.18	8.94	2.13
9,394.0	87.40	359.30	9,063.7	463.5	-287.8	470.0	13.04	12.71	2.92
9,477.0	90.30	0.70	9,065.3	546.5	-287.8	552.9	3.88	3.49	1.69
9,571.0	92.00	1.00	9,063.4	640.4	-286.4	646.8	1.84	1.81	0.32
9,666.0	91.10	359.40	9,060.9	735.4	-286.1	741.8	1.93	-0.95	-1.68
9,760.0	90.10	358.70	9,059.9	829.4	-287.6	835.7	1.30	-1.06	-0.74
9,854.0	87.40	358.70	9,061.9	923.3	-289.8	929.7	2.87	-2.87	0.00
9,949.0	87.40	358.00	9,066.2	1,018.2	-292.5	1,024.6	0.74	0.00	-0.74
10,043.0	87.00	357.40	9,070.8	1,112.0	-296.3	1,118.5	0.77	-0.43	-0.64
10,137.0	90.90	359.70	9,072.6	1,205.9	-298.6	1,212.4	4.82	4.15	2.45
10,232.0	91.40	0.10	9,070.6	1,300.9	-298.8	1,307.4	0.67	0.53	0.42
10,326.0	89.60	359.50	9,069.8	1,394.9	-299.1	1,401.4	2.02	-1.91	-0.64
10,421.0	90.10	359.40	9,070.1	1,489.9	-300.0	1,496.4	0.54	0.53	-0.11
10,515.0	89.70	359.50	9,070.2	1,583.9	-301.0	1,590.4	0.44	-0.43	0.11
10,609.0	91.70	359.70	9,069.1	1,677.9	-301.6	1,684.3	2.14	2.13	0.21
10,704.0	90.00	0.50	9,067.7	1,772.9	-301.4	1,779.3	1.98	-1.79	0.84
10,798.0	91.80	1.50	9,066.2	1,866.8	-299.8	1,873.2	2.19	1.91	1.06
10,893.0	89.80	1.40	9,064.9	1,961.8	-297.4	1,968.1	2.11	-2.11	-0.11
10,987.0	88.70	1.20	9,066.1	2,055.8	-295.3	2,062.0	1.19	-1.17	-0.21
11,081.0	89.40	0.50	9,067.7	2,149.7	-293.9	2,155.9	1.05	0.74	-0.74
11,175.0	88.40	359.30	9,069.5	2,243.7	-294.0	2,249.9	1.66	-1.06	-1.28
11,270.0	89.40	0.80	9,071.3	2,338.7	-294.0	2,344.8	1.90	1.05	1.58
11,364.0	89.10	1.10	9,072.5	2,432.7	-292.4	2,438.7	0.45	-0.32	0.32
11,458.0	93.80	3.10	9,070.2	2,526.5	-289.0	2,532.5	5.43	5.00	2.13
11,553.0	93.40	3.30	9,064.2	2,621.2	-283.7	2,627.0	0.47	-0.42	0.21
11,647.0	93.50	3.60	9,058.5	2,714.9	-278.0	2,720.5	0.34	0.11	0.32
11,741.0	89.10	1.40	9,056.4	2,808.7	-273.9	2,814.3	5.23	-4.68	-2.34
11,836.0	93.80	2.60	9,054.0	2,903.6	-270.6	2,909.0	5.11	4.95	1.26
11,930.0	90.00	1.90	9,050.9	2,997.5	-266.9	3,002.8	4.11	-4.04	-0.74
12,024.0	91.30	2.20	9,049.8	3,091.4	-263.6	3,096.6	1.42	1.38	0.32
12,118.0	87.50	0.30	9,050.8	3,185.4	-261.5	3,190.5	4.52	-4.04	-2.02
12,212.0	90.60	1.30	9,052.4	3,279.3	-260.2	3,284.4	3.47	3.30	1.06
12,307.0	91.90	2.10	9,050.3	3,374.3	-257.4	3,379.3	1.61	1.37	0.84
12,401.0	91.90	2.80	9,047.2	3,468.1	-253.4	3,473.0	0.74	0.00	0.74
12,495.0	89.20	2.00	9,046.3	3,562.0	-249.4	3,566.8	3.00	-2.87	-0.85
12,589.0	90.70	2.10	9,046.3	3,656.0	-246.1	3,660.6	1.60	1.60	0.11
12,684.0	88.40	2.10	9,047.1	3,750.9	-242.6	3,755.4	2.42	-2.42	0.00

Company:	Pioneer Natural Resources	**Local Co-ordinate Reference:**	Well University 3-14 #17H
Project:	Upton Co., TX	**TVD Reference:**	Well @ 2733.0usft (H&P 606)
Site:	University 3-14	**MD Reference:**	Well @ 2733.0usft (H&P 606)
Well:	University 3-14 #17H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,778.0	88.40	2.20	9,049.7	3,844.8	-239.1	3,849.2	0.11	0.00	0.11
12,871.0	87.90	2.20	9,052.7	3,937.7	-235.5	3,942.0	0.54	-0.54	0.00
12,966.0	88.20	1.90	9,055.9	4,032.5	-232.1	4,036.8	0.45	0.32	-0.32
13,060.0	88.30	2.20	9,058.8	4,126.4	-228.7	4,130.6	0.34	0.11	0.32
13,154.0	88.70	2.40	9,061.3	4,220.3	-225.0	4,224.4	0.48	0.43	0.21
13,249.0	88.20	2.60	9,063.9	4,315.2	-220.8	4,319.1	0.57	-0.53	0.21
13,343.0	89.10	1.40	9,066.1	4,409.1	-217.5	4,412.9	1.60	0.96	-1.28
13,438.0	91.00	1.40	9,066.0	4,504.1	-215.2	4,507.8	2.00	2.00	0.00
13,532.0	89.70	359.70	9,065.4	4,598.1	-214.3	4,601.8	2.28	-1.38	-1.81
13,626.0	91.40	359.50	9,064.5	4,692.1	-215.0	4,695.8	1.82	1.81	-0.21
13,721.0	91.50	359.30	9,062.1	4,787.0	-216.0	4,790.7	0.24	0.11	-0.21
13,815.0	92.10	0.80	9,059.1	4,881.0	-215.9	4,884.6	1.72	0.64	1.60
13,909.0	90.50	0.60	9,057.0	4,974.9	-214.7	4,978.6	1.72	-1.70	-0.21
14,004.0	90.90	359.90	9,055.9	5,069.9	-214.3	5,073.5	0.85	0.42	-0.74
14,098.0	91.60	0.00	9,053.8	5,163.9	-214.4	5,167.5	0.75	0.74	0.11
14,193.0	89.60	0.20	9,052.8	5,258.9	-214.2	5,262.4	2.12	-2.11	0.21
14,287.0	89.80	1.00	9,053.3	5,352.9	-213.3	5,356.4	0.88	0.21	0.85
14,381.0	89.90	1.20	9,053.5	5,446.9	-211.4	5,450.3	0.24	0.11	0.21
14,475.0	89.90	1.40	9,053.7	5,540.9	-209.3	5,544.2	0.21	0.00	0.21
14,570.0	89.80	1.50	9,054.0	5,635.8	-206.9	5,639.1	0.15	-0.11	0.11
14,664.0	90.60	0.80	9,053.6	5,729.8	-205.0	5,733.0	1.13	0.85	-0.74
14,758.0	90.90	0.60	9,052.4	5,823.8	-203.9	5,826.9	0.38	0.32	-0.21
14,853.0	91.00	0.50	9,050.8	5,918.8	-203.0	5,921.9	0.15	0.11	-0.11
14,947.0	91.30	0.80	9,048.9	6,012.7	-201.9	6,015.8	0.45	0.32	0.32
15,041.0	90.90	0.80	9,047.1	6,106.7	-200.6	6,109.7	0.43	-0.43	0.00
15,136.0	90.20	359.70	9,046.2	6,201.7	-200.2	6,204.7	1.37	-0.74	-1.16
15,230.0	90.40	0.00	9,045.7	6,295.7	-200.4	6,298.6	0.38	0.21	0.32
15,325.0	92.20	0.50	9,043.6	6,390.7	-200.0	6,393.6	1.97	1.89	0.53
15,419.0	92.50	2.10	9,039.7	6,484.6	-197.9	6,487.4	1.73	0.32	1.70
15,514.0	92.60	2.30	9,035.5	6,579.4	-194.2	6,582.1	0.24	0.11	0.21
15,608.0	89.80	1.70	9,033.5	6,673.3	-191.0	6,675.9	3.05	-2.98	-0.64
15,703.0	89.70	1.30	9,033.9	6,768.3	-188.5	6,770.8	0.43	-0.11	-0.42
15,797.0	90.30	0.30	9,033.9	6,862.3	-187.2	6,864.8	1.24	0.64	-1.06
15,892.0	89.60	359.10	9,034.0	6,957.3	-187.6	6,959.7	1.46	-0.74	-1.26
15,986.0	90.50	359.60	9,033.9	7,051.3	-188.7	7,053.7	1.10	0.96	0.53
16,081.0	90.20	359.20	9,033.4	7,146.3	-189.7	7,148.7	0.53	-0.32	-0.42
16,175.0	91.60	0.50	9,031.9	7,240.2	-190.0	7,242.7	2.03	1.49	1.38
16,269.0	88.60	359.00	9,031.7	7,334.2	-190.4	7,336.7	3.57	-3.19	-1.60
16,364.0	90.20	358.70	9,032.7	7,429.2	-192.3	7,431.7	1.71	1.68	-0.32
16,458.0	89.80	357.00	9,032.7	7,523.1	-195.8	7,525.6	1.86	-0.43	-1.81
16,553.0	91.40	357.90	9,031.7	7,618.0	-200.0	7,620.6	1.93	1.68	0.95
16,647.0	91.30	357.90	9,029.5	7,711.9	-203.5	7,714.6	0.11	-0.11	0.00
16,694.0	91.20	357.90	9,028.5	7,758.9	-205.2	7,761.6	0.21	-0.21	0.00
Last MWD @ 16694' MD / 9029' TVD									

Company:	Pioneer Natural Resources	**Local Co-ordinate Reference:**	Well University 3-14 #17H
Project:	Upton Co., TX	**TVD Reference:**	Well @ 2733.0usft (H&P 606)
Site:	University 3-14	**MD Reference:**	Well @ 2733.0usft (H&P 606)
Well:	University 3-14 #17H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
16,745.0	91.20	357.90	9,027.4	7,809.9	-207.1	7,812.5	0.00	0.00	0.00
PTD @ 16745' MD / 9027' TVD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
16,694.0	9,028.5	7,758.9	-205.2	Last MWD @ 16694' MD / 9029' TVD
16,745.0	9,027.4	7,809.9	-207.1	PTD @ 16745' MD / 9027' TVD

Checked By: _____ Approved By: _____ Date: _____

PIONEER
NATURAL RESOURCES

Pioneer Natural Resources

Upton Co., TX
University 3-14
University 3-14 #17H

Wellbore #1
OH

Anticollision Report

15 September, 2014

INTEGRITY
Directional Services

Reference	OH		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 us	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Program **Date** 9/15/2014

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
173.0	16,745.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
University 3-14						
University 3-14 #10 - Wellbore #1 - OH	13,624.1	9,048.7	55.6	-47.1	0.542	Level 1, CC, ES, SF
University 3-14 #11 - Wellbore #1 - OH	12,216.6	9,032.9	75.7	-2.9	0.963	Level 1, CC, ES, SF
University 3-14 #15H - Uni 3-14 #15H - OH	1,501.0	1,500.4	59.2	53.3	9.944	CC, ES
University 3-14 #15H - Uni 3-14 #15H - OH	16,745.0	16,309.9	490.7	274.5	2.270	SF
University 3-14 #16H - Wellbore #1 - OH	4,107.1	4,106.9	24.9	8.1	1.484	Level 3, CC
University 3-14 #16H - Wellbore #1 - OH	4,131.0	4,130.7	24.9	8.1	1.479	Level 3, ES, SF
University 3-14 #26 - Wellbore #1 - OH	10,895.5	9,044.9	64.7	6.8	1.117	Level 2, CC, ES, SF
University 3-14 #27 - Wellbore #1 - OH	9,397.7	9,053.3	156.1	117.9	4.088	CC, ES, SF
University 3-14 #9 - Wellbore #1 - OH	14,891.8	9,024.9	100.2	-25.7	0.796	Level 1, CC, ES, SF

Offset Design University 3-14 - University 3-14 #10 - Wellbore #1 - OH — **Offset Site Error:** 0.0 usft

Survey Program: 100-NS-GYRO-MS — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-5.48	4,555.8	-437.0	4,576.8				
173.0	173.0	132.6	132.6	0.2	0.2	-129.07	4,556.2	-436.3	4,577.3	4,576.9	0.38	N/A	
234.0	234.0	196.4	196.4	0.3	0.4	-139.07	4,556.4	-435.7	4,577.8	4,577.1	0.69	6,650.432	
423.0	423.0	375.5	375.5	0.7	0.8	151.44	4,557.3	-434.7	4,579.5	4,578.0	1.53	2,998.456	
608.0	608.0	563.3	563.3	1.1	1.3	153.85	4,558.0	-434.4	4,581.2	4,578.9	2.36	1,944.374	
793.0	793.0	748.9	748.9	1.5	1.7	109.56	4,558.7	-434.5	4,582.7	4,579.5	3.15	1,454.338	
980.0	980.0	940.3	940.3	1.9	2.1	114.58	4,559.3	-434.8	4,584.0	4,580.1	3.94	1,163.958	
1,168.0	1,168.0	1,125.9	1,125.9	2.3	2.4	117.20	4,559.9	-435.4	4,585.9	4,581.1	4.72	971.550	
1,245.0	1,244.9	1,207.7	1,207.7	2.5	2.6	122.71	4,560.1	-436.0	4,586.8	4,581.7	5.03	911.692	
1,394.0	1,393.9	1,345.6	1,345.6	2.8	2.8	114.22	4,560.5	-437.1	4,588.9	4,583.3	5.62	816.276	
1,488.0	1,487.9	1,446.1	1,446.1	3.0	3.0	107.74	4,560.8	-438.1	4,589.9	4,583.8	6.01	763.106	
1,583.0	1,582.9	1,538.9	1,538.9	3.2	3.2	-5.36	4,561.1	-438.9	4,590.4	4,584.0	6.40	717.639	
1,677.0	1,676.9	1,630.2	1,630.1	3.4	3.4	-119.17	4,561.4	-439.6	4,590.9	4,584.1	6.79	675.645	
1,772.0	1,771.9	1,732.5	1,732.4	3.6	3.7	-111.79	4,561.6	-440.6	4,591.5	4,584.3	7.21	636.986	
1,866.0	1,865.9	1,826.2	1,826.1	3.7	3.9	-107.61	4,561.8	-441.4	4,592.1	4,584.5	7.60	604.096	
1,960.0	1,959.9	1,909.2	1,909.2	3.9	4.1	-96.03	4,562.1	-442.0	4,592.7	4,584.7	7.98	575.264	
2,055.0	2,054.9	2,012.5	2,012.4	4.1	4.3	-90.65	4,562.4	-442.8	4,593.2	4,584.8	8.42	545.258	
2,149.0	2,148.9	2,111.5	2,111.4	4.3	4.5	-96.48	4,562.6	-443.5	4,593.5	4,584.6	8.85	519.062	
2,243.0	2,242.9	2,189.1	2,189.1	4.5	4.7	-106.50	4,562.9	-443.9	4,594.1	4,584.9	9.24	497.189	
2,337.0	2,336.8	2,280.3	2,280.2	4.7	5.0	-104.92	4,563.4	-444.4	4,595.1	4,585.4	9.67	475.135	
2,432.0	2,431.8	2,383.9	2,383.8	4.9	5.2	-59.14	4,564.0	-445.0	4,595.6	4,585.5	10.13	453.519	
2,526.0	2,525.8	2,472.8	2,472.7	5.1	5.5	-53.65	4,564.4	-445.3	4,595.7	4,585.2	10.55	435.713	
2,621.0	2,620.8	2,557.8	2,557.7	5.3	5.6	-25.55	4,565.0	-445.3	4,595.9	4,584.9	10.94	419.935	
2,715.0	2,714.8	2,651.3	2,651.2	5.5	5.9	-39.06	4,565.8	-445.2	4,596.1	4,584.8	11.36	404.742	
2,810.0	2,809.8	2,758.2	2,758.2	5.7	6.1	-43.96	4,566.5	-445.2	4,596.3	4,584.5	11.80	389.631	
2,904.0	2,903.8	2,854.4	2,854.3	5.9	6.3	-49.16	4,567.0	-445.0	4,596.2	4,584.0	12.20	376.847	
2,998.0	2,997.8	2,946.8	2,946.7	6.1	6.5	-57.57	4,567.5	-444.8	4,596.2	4,583.6	12.59	365.171	
3,093.0	3,092.8	3,049.1	3,049.0	6.3	6.7	-63.28	4,568.0	-444.7	4,596.0	4,583.0	13.02	353.083	
3,187.0	3,186.8	3,152.1	3,152.0	6.5	7.0	-45.19	4,568.2	-444.6	4,595.6	4,582.1	13.44	341.973	
3,282.0	3,281.8	3,244.9	3,244.8	6.7	7.1	-43.00	4,568.4	-444.5	4,594.9	4,581.1	13.82	332.544	
3,376.0	3,375.8	3,334.5	3,334.4	6.9	7.3	-34.71	4,568.7	-444.3	4,594.1	4,579.9	14.20	323.505	
3,470.0	3,469.8	3,434.4	3,434.3	7.1	7.6	-45.12	4,568.9	-444.4	4,593.3	4,578.6	14.63	313.959	
3,565.0	3,564.8	3,532.4	3,532.4	7.3	7.8	-37.44	4,569.0	-444.4	4,592.2	4,577.2	15.03	305.536	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Offset Design University 3-14 - University 3-14 #10 - Wellbore #1 - OH

Survey Program: 100-NS-GYRO-MS

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
3,659.0	3,658.8	3,618.2	3,618.1	7.5	7.9	-28.64	4,569.2	-444.2	4,591.1	4,575.7	15.39	298.226	
3,754.0	3,753.7	3,708.3	3,708.2	7.7	8.1	-38.06	4,569.6	-444.1	4,590.0	4,574.2	15.80	290.462	
3,848.0	3,847.7	3,808.4	3,808.3	7.9	8.4	16.14	4,569.9	-444.1	4,588.8	4,572.5	16.25	282.311	
3,943.0	3,942.7	3,906.2	3,906.1	8.1	8.6	72.36	4,570.1	-444.1	4,588.0	4,571.3	16.68	274.985	
4,009.2	4,008.9	3,965.1	3,965.0	8.2	8.8	81.55	4,570.3	-444.0	4,587.8	4,570.9	16.95	270.617	
4,037.0	4,036.7	3,989.8	3,989.8	8.3	8.8	84.88	4,570.4	-443.9	4,587.8	4,570.8	17.07	268.830	
4,131.0	4,130.6	4,077.3	4,077.2	8.4	9.0	83.72	4,570.9	-443.7	4,588.1	4,570.6	17.47	262.594	
4,226.0	4,225.6	4,176.2	4,176.1	8.6	9.3	87.45	4,571.4	-443.7	4,588.4	4,570.5	17.92	256.053	
4,320.0	4,319.6	4,277.6	4,277.5	8.8	9.5	75.17	4,571.9	-443.6	4,588.6	4,570.2	18.36	249.907	
4,414.0	4,413.6	4,371.8	4,371.8	9.0	9.7	67.10	4,572.2	-443.4	4,588.4	4,569.6	18.76	244.518	
4,499.2	4,498.8	4,451.4	4,451.3	9.2	9.9	73.68	4,572.5	-443.1	4,588.2	4,569.1	19.12	240.000	
4,509.0	4,508.6	4,460.3	4,460.2	9.2	9.9	74.52	4,572.6	-443.0	4,588.2	4,569.0	19.16	239.498	
4,603.0	4,602.6	4,548.0	4,547.9	9.4	10.1	74.44	4,573.1	-442.8	4,588.4	4,568.8	19.56	234.577	
4,697.0	4,696.6	4,645.6	4,645.5	9.6	10.4	61.75	4,573.7	-442.7	4,588.5	4,568.5	20.00	229.386	
4,771.0	4,770.5	4,730.1	4,730.1	9.8	10.6	81.03	4,574.0	-442.7	4,588.5	4,568.1	20.37	225.218	
4,792.0	4,791.6	4,753.8	4,753.7	9.8	10.6	84.17	4,574.1	-442.7	4,588.5	4,568.0	20.47	224.105	
4,886.0	4,885.5	4,849.5	4,849.4	10.0	10.9	89.60	4,574.2	-442.6	4,588.5	4,567.6	20.89	219.625	
4,981.0	4,980.4	4,951.5	4,951.4	10.2	11.1	98.05	4,574.5	-442.2	4,589.0	4,567.8	21.29	215.576	
5,075.0	5,074.3	5,063.8	5,063.7	10.4	11.2	111.61	4,574.4	-441.2	4,590.3	4,568.7	21.63	212.257	
5,170.0	5,169.1	5,167.3	5,167.2	10.6	11.3	119.28	4,574.0	-440.1	4,592.7	4,570.7	21.92	209.539	
5,264.0	5,262.8	5,261.6	5,261.5	10.8	11.4	121.26	4,573.6	-438.9	4,595.8	4,573.6	22.20	206.972	
5,359.0	5,357.5	5,350.7	5,350.5	11.0	11.5	116.26	4,573.2	-437.7	4,598.9	4,576.4	22.51	204.295	
5,453.0	5,451.2	5,434.7	5,434.5	11.3	11.6	111.16	4,573.0	-436.6	4,601.6	4,578.8	22.82	201.614	
5,548.0	5,545.8	5,519.1	5,518.9	11.5	11.7	111.54	4,573.0	-435.4	4,604.6	4,581.4	23.15	198.868	
5,642.0	5,639.4	5,610.7	5,610.6	11.7	11.9	111.55	4,573.1	-434.5	4,607.8	4,584.3	23.51	195.997	
5,736.0	5,733.0	5,715.6	5,715.4	11.9	12.0	113.28	4,573.1	-433.4	4,610.9	4,587.0	23.88	193.115	
5,831.0	5,827.7	5,800.0	5,799.8	12.1	12.1	110.08	4,573.1	-432.3	4,613.7	4,589.5	24.22	190.521	
5,925.0	5,921.4	5,884.3	5,884.1	12.3	12.3	107.89	4,573.2	-431.2	4,616.2	4,591.7	24.58	187.822	
6,020.0	6,016.1	5,980.1	5,980.0	12.5	12.5	107.30	4,573.6	-429.9	4,618.7	4,593.7	24.97	184.986	
6,114.0	6,109.8	6,068.0	6,067.8	12.7	12.6	104.70	4,573.9	-428.4	4,620.9	4,595.6	25.35	182.295	
6,209.0	6,204.5	6,149.4	6,149.2	12.9	12.8	107.09	4,574.4	-426.6	4,623.5	4,597.8	25.72	179.753	
6,303.0	6,298.2	6,226.6	6,226.3	13.1	13.0	114.98	4,575.2	-424.0	4,627.0	4,600.9	26.08	177.409	
6,398.0	6,392.9	6,300.0	6,299.7	13.4	13.1	115.08	4,576.2	-421.4	4,631.5	4,605.0	26.45	175.114	
6,492.0	6,486.6	6,382.0	6,381.6	13.6	13.3	116.72	4,577.6	-418.3	4,636.2	4,609.3	26.84	172.727	
6,587.0	6,581.3	6,456.0	6,455.6	13.8	13.5	117.63	4,579.2	-415.0	4,641.1	4,613.9	27.21	170.542	
6,681.0	6,675.1	6,528.6	6,528.0	14.0	13.6	112.83	4,581.2	-411.3	4,646.2	4,618.6	27.59	168.405	
6,775.0	6,768.7	6,600.0	6,599.3	14.2	13.8	108.88	4,583.4	-407.4	4,651.6	4,623.6	27.97	166.323	
6,870.0	6,863.3	6,673.0	6,672.1	14.5	14.0	106.61	4,586.0	-403.2	4,657.6	4,629.2	28.36	164.204	
6,964.0	6,956.9	6,745.9	6,744.8	14.7	14.1	104.82	4,589.0	-398.9	4,663.4	4,634.7	28.76	162.152	
7,059.0	7,051.6	6,842.4	6,841.0	14.9	14.4	106.88	4,593.2	-392.9	4,669.4	4,640.2	29.20	159.892	
7,153.0	7,145.2	6,994.5	6,992.8	15.1	14.7	107.86	4,598.7	-385.0	4,675.1	4,645.4	29.78	156.987	
7,247.0	7,238.8	7,112.2	7,110.4	15.3	15.0	105.83	4,601.7	-380.0	4,679.9	4,649.6	30.29	154.525	
7,342.0	7,333.5	7,222.8	7,220.9	15.6	15.3	108.76	4,604.1	-375.8	4,684.2	4,653.4	30.76	152.285	
7,436.0	7,427.1	7,326.5	7,324.5	15.8	15.5	109.29	4,606.0	-371.6	4,688.7	4,657.5	31.22	150.179	
7,530.0	7,520.6	7,427.2	7,425.1	16.0	15.7	108.46	4,607.7	-367.6	4,693.2	4,661.5	31.68	148.140	
7,625.0	7,615.1	7,512.8	7,510.6	16.3	15.9	107.50	4,609.1	-364.4	4,697.6	4,665.5	32.11	146.298	
7,719.0	7,708.7	7,582.6	7,580.3	16.5	16.1	106.85	4,610.5	-361.7	4,702.0	4,669.5	32.50	144.675	
7,814.0	7,803.4	7,650.1	7,647.7	16.7	16.2	111.29	4,612.2	-358.9	4,706.7	4,673.8	32.88	143.147	
7,908.0	7,897.2	7,716.2	7,713.7	16.9	16.4	108.35	4,614.3	-355.9	4,711.9	4,678.6	33.26	141.675	
8,003.0	7,991.9	7,784.2	7,781.6	17.1	16.6	107.76	4,616.8	-352.7	4,717.6	4,684.0	33.65	140.193	
8,097.0	8,085.6	7,857.9	7,855.2	17.4	16.8	105.59	4,619.9	-348.9	4,723.6	4,689.5	34.05	138.706	
8,192.0	8,180.4	7,926.0	7,923.1	17.6	16.9	107.34	4,623.1	-345.2	4,729.7	4,695.2	34.44	137.325	
8,286.0	8,274.2	8,000.0	7,996.8	17.8	17.1	108.49	4,627.1	-340.6	4,736.2	4,701.3	34.84	135.954	
8,381.0	8,369.2	8,060.9	8,057.5	18.0	17.3	113.02	4,630.8	-336.7	4,743.0	4,707.8	35.20	134.758	
8,395.0	8,383.2	8,073.5	8,070.1	18.0	17.3	112.64	4,631.6	-335.8	4,744.0	4,708.7	35.26	134.549	
8,546.0	8,534.1	8,254.5	8,250.4	18.3	17.8	3.20	4,642.1	-324.3	4,751.1	4,715.1	36.02	131.897	
8,577.0	8,565.0	8,289.3	8,285.0	18.4	17.9	-10.77	4,644.0	-322.2	4,750.6	4,714.6	36.01	131.941	
8,609.0	8,596.7	8,325.4	8,321.1	18.5	18.0	-9.31	4,645.9	-319.9	4,747.7	4,711.9	35.87	132.365	
8,640.0	8,627.0	8,360.4	8,355.9	18.5	18.0	-7.76	4,647.7	-317.7	4,743.0	4,707.4	35.62	133.145	
8,685.0	8,670.2	8,400.0	8,395.4	18.6	18.1	-3.87	4,649.8	-315.2	4,732.5	4,697.6	34.92	135.509	
8,734.0	8,715.6	8,438.6	8,433.9	18.6	18.2	0.22	4,651.8	-312.7	4,716.6	4,682.6	34.01	138.682	
8,781.0	8,757.6	8,468.7	8,463.9	18.7	18.3	1.26	4,653.5	-310.7	4,697.8	4,664.7	33.11	141.894	
8,828.0	8,797.8	8,500.0	8,495.0	18.8	18.4	0.88	4,655.4	-308.6	4,676.0	4,643.9	32.08	145.748	
8,875.0	8,836.2	8,524.7	8,519.6	18.9	18.5	1.43	4,656.9	-306.9	4,651.2	4,620.4	30.84	150.801	
8,922.0	8,872.3	8,550.1	8,544.9	19.0	18.5	3.08	4,658.5	-305.1	4,623.6	4,594.1	29.45	156.974	
8,969.0	8,905.8	8,574.0	8,568.7	19.1	18.6	2.83	4,660.1	-303.4	4,592.9	4,565.2	27.65	166.096	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Offset Design University 3-14 - University 3-14 #10 - Wellbore #1 - OH

Survey Program: 100-NS-GYRO-MS

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,017.0	8,937.0	8,600.0	8,594.5	19.2	18.7	3.11	4,661.9	-301.5	4,558.7	4,532.6	26.10	174.652	
9,064.0	8,964.2	8,622.5	8,617.0	19.3	18.7	3.11	4,663.5	-299.8	4,522.4	4,498.8	23.60	191.600	
9,111.0	8,987.2	8,646.0	8,640.3	19.5	18.8	4.64	4,665.2	-298.1	4,483.3	4,461.7	21.57	207.855	
9,158.0	9,007.2	8,666.8	8,661.0	19.7	18.8	7.13	4,666.7	-296.6	4,442.3	4,421.7	20.63	215.319	
9,205.0	9,024.3	8,685.1	8,679.2	19.9	18.9	9.62	4,668.0	-295.2	4,400.0	4,380.4	19.57	224.872	
9,252.0	9,038.5	8,701.6	8,695.6	20.2	18.9	10.86	4,669.2	-294.0	4,356.4	4,337.8	18.69	233.144	
9,299.0	9,050.1	8,728.1	8,722.0	20.5	19.0	10.19	4,671.1	-292.0	4,311.9	4,294.1	17.85	241.504	
9,346.0	9,058.9	8,749.3	8,743.1	20.8	19.1	9.30	4,672.5	-290.5	4,266.5	4,249.8	16.73	255.030	
9,394.0	9,063.7	8,763.3	8,757.0	21.2	19.1	6.04	4,673.4	-289.5	4,219.2	4,204.0	15.22	277.238	
9,477.0	9,065.3	8,775.8	8,769.5	21.9	19.1	-11.71	4,674.3	-288.6	4,136.5	4,119.6	16.89	244.910	
9,571.0	9,063.4	8,783.3	8,776.9	22.7	19.1	-31.30	4,674.7	-288.1	4,042.6	4,017.1	25.53	158.365	
9,666.0	9,060.9	8,789.3	8,782.9	23.6	19.2	12.73	4,675.1	-287.7	3,947.7	3,930.1	17.63	223.940	
9,760.0	9,059.9	8,797.4	8,791.0	24.5	19.2	20.46	4,675.6	-287.2	3,853.9	3,832.8	21.05	183.116	
9,854.0	9,061.9	8,809.1	8,802.6	25.4	19.2	12.41	4,676.4	-286.4	3,760.2	3,741.6	18.66	201.489	
9,949.0	9,066.2	8,823.5	8,817.0	26.5	19.2	19.16	4,677.3	-285.4	3,665.8	3,644.0	21.78	168.274	
10,043.0	9,070.8	8,837.9	8,831.2	27.7	19.3	23.52	4,678.1	-284.5	3,572.4	3,548.0	24.45	146.117	
10,137.0	9,072.6	8,847.9	8,841.3	28.9	19.3	12.43	4,678.7	-283.8	3,478.8	3,458.7	20.05	173.493	
10,232.0	9,070.6	8,853.0	8,846.4	30.1	19.3	4.70	4,679.0	-283.5	3,383.9	3,365.2	18.66	181.315	
10,326.0	9,069.8	8,859.4	8,852.7	31.4	19.3	11.86	4,679.4	-283.1	3,290.0	3,268.9	21.08	156.061	
10,421.0	9,070.1	8,867.1	8,860.4	32.7	19.4	16.03	4,679.8	-282.6	3,195.2	3,171.8	23.34	136.920	
10,515.0	9,070.2	8,874.5	8,867.7	34.0	19.4	13.46	4,680.2	-282.1	3,101.3	3,078.4	22.92	135.334	
10,609.0	9,069.1	8,880.0	8,873.2	35.3	19.4	24.06	4,680.5	-281.7	3,007.5	2,978.7	28.70	104.786	
10,704.0	9,067.7	8,885.1	8,878.4	36.6	19.4	-1.88	4,680.8	-281.4	2,912.5	2,891.2	21.34	136.488	
10,798.0	9,066.2	8,890.2	8,883.4	38.0	19.4	-39.18	4,681.1	-281.1	2,818.6	2,778.3	40.33	69.888	
10,893.0	9,064.9	8,895.4	8,888.6	39.4	19.4	-17.40	4,681.4	-280.7	2,723.7	2,695.7	28.01	97.245	
10,987.0	9,066.1	8,902.8	8,895.9	40.8	19.4	-11.16	4,681.8	-280.2	2,630.0	2,604.3	25.66	102.484	
11,081.0	9,067.7	8,909.2	8,902.3	42.2	19.5	-2.80	4,682.1	-279.8	2,536.2	2,512.3	23.90	106.134	
11,175.0	9,069.5	8,915.8	8,908.9	43.6	19.5	12.43	4,682.5	-279.4	2,442.5	2,415.2	27.23	89.700	
11,270.0	9,071.3	8,922.5	8,915.6	45.1	19.5	-6.60	4,682.8	-279.0	2,347.7	2,321.7	25.99	90.328	
11,364.0	9,072.5	8,928.7	8,921.8	46.5	19.5	-10.46	4,683.2	-278.6	2,253.9	2,225.9	28.06	80.330	
11,458.0	9,070.2	8,931.6	8,924.6	48.0	19.5	-103.01	4,683.3	-278.4	2,160.1	2,094.8	65.24	33.109	
11,553.0	9,064.2	8,931.2	8,924.2	49.5	19.5	-94.70	4,683.3	-278.4	2,065.2	1,997.1	68.11	30.322	
11,647.0	9,058.5	8,931.0	8,924.0	50.9	19.5	-95.83	4,683.3	-278.4	1,971.4	1,902.0	69.40	28.405	
11,741.0	9,056.4	8,934.2	8,927.2	52.4	19.5	-20.83	4,683.5	-278.2	1,877.5	1,840.6	36.97	50.781	
11,836.0	9,054.0	8,937.1	8,930.1	53.9	19.5	-103.49	4,683.6	-278.0	1,782.7	1,711.6	71.04	25.095	
11,930.0	9,050.9	8,939.3	8,932.3	55.4	19.5	-36.12	4,683.7	-277.9	1,688.8	1,638.3	50.46	33.470	
12,024.0	9,049.8	8,943.5	8,936.4	56.9	19.6	-56.23	4,684.0	-277.6	1,595.0	1,529.1	65.83	24.227	
12,118.0	9,050.8	8,949.6	8,942.5	58.4	19.6	-9.11	4,684.3	-277.2	1,501.2	1,468.3	32.96	45.548	
12,212.0	9,052.4	8,956.2	8,949.1	60.0	19.6	-38.21	4,684.7	-276.7	1,407.5	1,352.1	55.39	25.410	
12,307.0	9,050.3	8,959.5	8,952.4	61.6	19.6	-67.76	4,684.9	-276.5	1,312.7	1,236.6	76.07	17.256	
12,401.0	9,047.2	8,961.7	8,954.6	63.1	19.6	-72.98	4,685.0	-276.4	1,218.8	1,139.3	79.50	15.332	
12,495.0	9,046.3	8,966.2	8,959.1	64.6	19.6	-40.95	4,685.2	-276.1	1,125.1	1,064.2	60.91	18.473	
12,589.0	9,046.3	8,971.6	8,964.4	66.2	19.6	-57.84	4,685.5	-275.7	1,031.5	956.5	74.94	13.763	
12,684.0	9,047.1	8,977.7	8,970.5	67.7	19.6	-41.53	4,685.9	-275.3	936.9	873.2	63.64	14.722	
12,778.0	9,049.7	8,985.6	8,978.4	69.2	19.7	-45.12	4,686.3	-274.7	843.4	775.6	67.87	12.427	
12,871.0	9,052.7	8,993.9	8,986.7	70.8	19.7	-45.45	4,686.8	-274.2	751.1	681.8	69.32	10.836	
12,966.0	9,055.9	9,002.5	8,995.3	72.3	19.7	-49.41	4,687.2	-273.6	656.9	582.9	73.93	8.885	
13,060.0	9,058.8	9,010.8	9,003.6	73.8	19.7	-55.74	4,687.7	-273.0	563.7	483.6	80.15	7.033	
13,154.0	9,061.3	9,018.8	9,011.5	75.4	19.7	-63.54	4,688.1	-272.5	470.8	384.0	86.79	5.424	
13,249.0	9,063.9	9,026.9	9,019.5	77.0	19.8	-66.93	4,688.6	-271.9	377.3	287.1	90.15	4.185	
13,343.0	9,066.1	9,034.5	9,027.1	78.5	19.8	-74.96	4,689.0	-271.4	285.3	189.9	95.40	2.990	
13,438.0	9,066.0	9,039.8	9,032.4	80.1	19.8	-86.84	4,689.3	-271.1	193.6	94.0	99.58	1.944	
13,532.0	9,065.4	9,044.5	9,037.1	81.7	19.8	-88.20	4,689.6	-270.7	107.5	6.1	101.36	1.061	Level 2
13,624.1	9,064.6	9,048.7	9,041.3	83.2	19.8	-93.89	4,689.8	-270.5	55.6	-47.1	102.71	0.542	Level 1, CC, ES, SF
13,626.0	9,064.5	9,048.8	9,041.4	83.3	19.8	-93.95	4,689.8	-270.4	55.7	-47.1	102.74	0.542	Level 1
13,721.0	9,062.1	9,051.6	9,044.2	84.9	19.8	-96.74	4,690.0	-270.3	111.6	7.7	103.92	1.074	Level 2
13,815.0	9,059.1	9,053.9	9,046.5	86.4	19.8	-98.03	4,690.1	-270.1	199.0	93.8	105.12	1.893	
13,909.0	9,057.0	9,057.1	9,049.6	88.0	19.8	-108.15	4,690.3	-269.9	290.6	187.6	103.05	2.820	
14,004.0	9,055.9	9,061.2	9,053.7	89.6	19.9	-108.68	4,690.5	-269.6	384.3	279.9	104.35	3.682	
14,098.0	9,053.8	9,064.4	9,056.9	91.2	19.9	-107.05	4,690.7	-269.4	477.4	370.7	106.68	4.475	
14,193.0	9,052.8	9,068.7	9,061.2	92.8	19.9	-126.63	4,690.9	-269.1	571.7	477.7	94.04	6.080	
14,287.0	9,053.3	9,074.4	9,066.9	94.4	19.9	-134.35	4,691.2	-268.7	665.2	577.8	87.44	7.608	
14,381.0	9,053.5	9,080.0	9,072.5	96.0	19.9	-139.00	4,691.5	-268.4	758.9	675.4	83.43	9.096	
14,475.0	9,053.7	9,085.5	9,078.0	97.6	19.9	-144.30	4,691.8	-268.0	852.6	774.3	78.29	10.890	
14,570.0	9,054.0	9,091.2	9,083.6	99.1	19.9	-149.04	4,692.2	-267.6	947.3	873.8	73.56	12.878	
14,664.0	9,053.6	9,096.2	9,088.6	100.7	19.9	-136.95	4,692.4	-267.3	1,041.1	951.7	89.36	11.650	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Offset Design University 3-14 - University 3-14 #10 - Wellbore #1 - OH

Offset Site Error: 0.0 usft

Survey Program: 100-NS-GYRO-MS

Offset Well Error: 0.0 usft

Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,758.0	9,052.4	9,100.0	9,092.4	102.3	20.0	-133.81	4,692.6	-267.0	1,134.9	1,040.6	94.24	12.043	
14,853.0	9,050.8	9,103.9	9,096.3	103.9	20.0	-133.88	4,692.9	-266.8	1,229.7	1,134.3	95.42	12.888	
14,947.0	9,048.9	9,107.2	9,099.6	105.5	20.0	-135.87	4,693.0	-266.5	1,323.6	1,229.3	94.25	14.043	
15,041.0	9,047.1	9,110.6	9,102.9	107.1	20.0	-142.77	4,693.2	-266.3	1,417.4	1,330.7	86.76	16.337	
15,136.0	9,046.2	9,114.7	9,107.1	108.7	20.0	-138.22	4,693.5	-266.1	1,512.2	1,418.4	93.85	16.113	
15,230.0	9,045.7	9,119.2	9,111.5	110.3	20.0	-141.32	4,693.7	-265.8	1,606.0	1,515.0	91.00	17.649	
15,325.0	9,043.6	9,122.2	9,114.5	111.9	20.0	-122.77	4,693.9	-265.6	1,700.9	1,586.6	114.25	14.888	
15,419.0	9,039.7	9,123.5	9,115.9	113.5	20.0	-175.55	4,693.9	-265.5	1,794.9	1,739.8	55.06	32.601	
15,514.0	9,035.5	9,124.7	9,117.0	115.2	20.0	168.70	4,694.0	-265.4	1,889.9	1,829.4	60.50	31.239	
15,608.0	9,033.5	9,127.9	9,120.2	116.8	20.0	-172.69	4,694.2	-265.2	1,983.8	1,925.9	57.90	34.264	
15,703.0	9,033.9	9,133.4	9,125.7	118.3	20.0	-167.26	4,694.5	-264.8	2,078.6	2,015.8	62.82	33.090	
15,797.0	9,033.9	9,138.3	9,130.5	119.9	20.1	-149.55	4,694.8	-264.5	2,172.4	2,086.4	86.06	25.243	
15,892.0	9,034.0	9,143.2	9,135.4	121.5	20.1	-142.15	4,695.0	-264.2	2,267.2	2,169.3	97.87	23.165	
15,986.0	9,033.9	9,147.8	9,140.1	123.1	20.1	-140.86	4,695.3	-263.9	2,361.0	2,260.1	100.84	23.412	
16,081.0	9,033.4	9,152.0	9,144.2	124.8	20.1	-140.11	4,695.5	-263.6	2,455.8	2,352.6	103.12	23.814	
16,175.0	9,031.9	9,155.4	9,147.6	126.4	20.1	-144.42	4,695.7	-263.4	2,549.6	2,451.8	97.77	26.077	
16,269.0	9,031.7	9,159.9	9,152.1	128.0	20.1	-150.72	4,695.9	-263.1	2,643.4	2,554.0	89.45	29.550	
16,364.0	9,032.7	9,165.5	9,157.6	129.6	20.1	-137.07	4,696.2	-262.7	2,738.1	2,627.0	111.15	24.635	
16,458.0	9,032.7	9,169.9	9,162.0	131.3	20.1	-127.77	4,696.5	-262.4	2,831.8	2,706.5	125.23	22.612	
16,553.0	9,031.7	9,173.4	9,165.6	132.9	20.1	-117.88	4,696.6	-262.2	2,926.5	2,788.3	138.19	21.178	
16,647.0	9,029.5	9,175.8	9,167.9	134.5	20.2	-119.87	4,696.8	-262.0	3,020.3	2,882.7	137.55	21.957	
16,694.0	9,028.5	9,177.1	9,169.2	135.3	20.2	-121.53	4,696.8	-262.0	3,067.2	2,930.8	136.40	22.486	
16,745.0	9,027.4	9,178.5	9,170.6	136.2	20.2	-121.88	4,696.9	-261.9	3,118.1	2,981.3	136.76	22.799	

Offset Design University 3-14 - University 3-14 #11 - Wellbore #1 - OH

Survey Program: 100-NS-GYRO-MS

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-8.16	3,236.1	-464.0	3,269.3				
173.0	173.0	112.3	112.3	0.2	0.2	-131.75	3,236.8	-463.6	3,270.3	3,270.0	0.33	9,961.145	
234.0	234.0	168.8	168.8	0.3	0.3	-141.75	3,237.5	-463.5	3,271.3	3,270.7	0.61	5,395.552	
423.0	423.0	364.6	364.6	0.7	0.8	148.72	3,239.5	-464.7	3,274.3	3,272.8	1.48	2,218.688	
608.0	608.0	546.1	546.1	1.1	1.2	151.11	3,241.1	-466.0	3,277.1	3,274.8	2.33	1,405.300	
793.0	793.0	733.5	733.4	1.5	1.7	106.80	3,242.8	-467.8	3,279.8	3,276.6	3.20	1,023.736	
980.0	980.0	916.6	916.6	1.9	2.2	111.80	3,244.5	-469.4	3,282.3	3,278.3	4.08	804.818	
1,168.0	1,168.0	1,108.5	1,108.5	2.3	2.7	114.42	3,246.2	-471.0	3,285.3	3,280.3	5.00	656.969	
1,245.0	1,244.9	1,181.5	1,181.4	2.5	2.9	119.93	3,246.9	-471.4	3,286.8	3,281.4	5.36	612.684	
1,394.0	1,393.9	1,335.8	1,335.7	2.8	3.3	111.47	3,248.4	-472.5	3,289.6	3,283.5	6.10	539.434	
1,488.0	1,487.9	1,428.9	1,428.8	3.0	3.6	105.00	3,249.2	-472.9	3,291.1	3,284.6	6.53	503.754	
1,583.0	1,582.9	1,527.0	1,526.9	3.2	3.8	-8.09	3,250.1	-473.4	3,292.2	3,285.2	6.98	471.565	
1,677.0	1,676.9	1,620.8	1,620.7	3.4	4.1	-121.90	3,250.8	-473.9	3,293.1	3,285.7	7.43	443.365	
1,772.0	1,771.9	1,711.7	1,711.6	3.6	4.3	-114.51	3,251.6	-474.4	3,294.4	3,286.5	7.86	419.258	
1,866.0	1,865.9	1,809.1	1,809.0	3.7	4.6	-110.34	3,252.5	-475.0	3,295.7	3,287.4	8.30	396.971	
1,960.0	1,959.9	1,900.0	1,899.9	3.9	4.8	-98.76	3,253.2	-475.5	3,296.8	3,288.1	8.73	377.592	
2,055.0	2,054.9	1,983.4	1,983.2	4.1	5.0	-93.38	3,254.1	-475.9	3,298.0	3,288.8	9.14	360.854	
2,149.0	2,148.9	2,079.8	2,079.6	4.3	5.3	-99.20	3,255.4	-476.2	3,299.4	3,289.8	9.58	344.479	
2,243.0	2,242.9	2,169.9	2,169.8	4.5	5.5	-109.22	3,256.6	-476.3	3,301.0	3,291.0	10.01	329.923	
2,337.0	2,336.8	2,262.0	2,261.8	4.7	5.7	-107.64	3,257.9	-476.5	3,302.7	3,292.3	10.43	316.581	
2,432.0	2,431.8	2,357.0	2,356.9	4.9	6.0	-61.87	3,259.3	-476.6	3,304.2	3,293.3	10.86	304.156	
2,526.0	2,525.8	2,454.9	2,454.8	5.1	6.2	-56.37	3,260.7	-476.5	3,305.2	3,293.9	11.30	292.610	
2,621.0	2,620.8	2,553.8	2,553.6	5.3	6.4	-28.27	3,262.0	-476.2	3,305.9	3,294.1	11.73	281.933	
2,715.0	2,714.8	2,648.6	2,648.4	5.5	6.7	-41.77	3,263.2	-475.9	3,306.5	3,294.3	12.14	272.308	
2,810.0	2,809.8	2,745.7	2,745.5	5.7	6.9	-46.67	3,264.4	-475.7	3,307.1	3,294.5	12.57	263.144	
2,904.0	2,903.8	2,843.6	2,843.4	5.9	7.1	-51.87	3,265.5	-475.3	3,307.6	3,294.6	12.99	254.643	
2,998.0	2,997.8	2,940.5	2,940.3	6.1	7.3	-60.28	3,266.5	-474.9	3,308.0	3,294.6	13.40	246.851	
3,093.0	3,092.8	3,036.8	3,036.5	6.3	7.5	-65.98	3,267.5	-474.4	3,308.4	3,294.6	13.81	239.536	
3,187.0	3,186.8	3,131.6	3,131.4	6.5	7.8	-47.89	3,268.3	-474.0	3,308.5	3,294.3	14.22	232.657	
3,282.0	3,281.8	3,228.0	3,227.8	6.7	8.0	-45.70	3,269.2	-473.6	3,308.6	3,293.9	14.64	226.014	
3,376.0	3,375.8	3,325.3	3,325.1	6.9	8.2	-37.41	3,270.0	-473.2	3,308.3	3,293.2	15.05	219.780	
3,470.0	3,469.8	3,419.8	3,419.6	7.1	8.4	-47.81	3,270.8	-472.7	3,307.9	3,292.4	15.46	214.007	
3,565.0	3,564.8	3,517.5	3,517.2	7.3	8.6	-40.12	3,271.5	-472.3	3,307.4	3,291.6	15.87	208.407	
3,659.0	3,658.8	3,617.5	3,617.3	7.5	8.8	-31.33	3,272.1	-471.7	3,306.7	3,290.4	16.28	203.171	
3,754.0	3,753.7	3,715.7	3,715.5	7.7	9.0	-40.74	3,272.6	-471.2	3,305.6	3,288.9	16.67	198.336	
3,848.0	3,847.7	3,814.4	3,814.1	7.9	9.2	13.47	3,272.9	-470.6	3,304.4	3,287.3	17.04	193.902	
3,943.0	3,942.7	3,913.8	3,913.6	8.1	9.4	69.70	3,273.1	-470.1	3,303.4	3,286.0	17.40	189.866	
4,037.0	4,036.7	4,005.2	4,004.9	8.3	9.5	82.25	3,273.3	-469.6	3,302.9	3,285.2	17.74	186.192	
4,131.0	4,130.6	4,104.2	4,104.0	8.4	9.6	81.10	3,273.5	-469.0	3,302.6	3,284.5	18.09	182.582	
4,226.0	4,225.6	4,197.3	4,197.0	8.6	9.8	84.85	3,273.6	-468.4	3,302.4	3,283.9	18.42	179.259	
4,320.0	4,319.6	4,291.6	4,291.3	8.8	9.9	72.59	3,273.7	-467.6	3,302.1	3,283.3	18.76	175.991	
4,414.0	4,413.6	4,381.9	4,381.7	9.0	10.1	64.53	3,273.9	-466.9	3,301.6	3,282.5	19.11	172.770	
4,509.0	4,508.6	4,474.4	4,474.1	9.2	10.2	71.97	3,274.2	-466.2	3,301.2	3,281.7	19.48	169.477	
4,603.0	4,602.6	4,565.8	4,565.5	9.4	10.4	71.90	3,274.5	-465.5	3,301.0	3,281.2	19.86	166.251	
4,697.0	4,696.6	4,662.0	4,661.7	9.6	10.6	59.23	3,274.9	-464.7	3,300.9	3,280.6	20.24	163.051	
4,792.0	4,791.6	4,756.3	4,756.0	9.8	10.8	81.67	3,275.2	-463.9	3,300.6	3,280.0	20.63	159.994	
4,807.8	4,807.4	4,771.3	4,771.0	9.9	10.8	83.04	3,275.3	-463.8	3,300.6	3,279.9	20.69	159.506	
4,886.0	4,885.5	4,851.7	4,851.4	10.0	11.0	87.13	3,275.6	-463.0	3,300.7	3,279.6	21.01	157.067	
4,981.0	4,980.4	4,949.8	4,949.6	10.2	11.2	95.61	3,275.9	-461.9	3,300.9	3,279.5	21.40	154.244	
5,075.0	5,074.3	5,043.9	5,043.6	10.4	11.4	109.20	3,276.2	-460.7	3,302.3	3,280.5	21.77	151.687	
5,170.0	5,169.1	5,139.8	5,139.5	10.6	11.5	116.89	3,276.5	-459.5	3,304.9	3,282.8	22.14	149.240	
5,264.0	5,262.8	5,234.3	5,234.0	10.8	11.7	118.91	3,276.7	-458.3	3,308.4	3,285.8	22.52	146.904	
5,359.0	5,357.5	5,329.8	5,329.5	11.0	11.9	113.96	3,276.9	-457.0	3,311.8	3,288.9	22.91	144.555	
5,453.0	5,451.2	5,424.6	5,424.3	11.3	12.1	108.91	3,277.0	-455.8	3,314.5	3,291.2	23.29	142.287	
5,548.0	5,545.8	5,516.0	5,515.7	11.5	12.2	109.34	3,277.2	-454.6	3,317.3	3,293.7	23.66	140.185	
5,642.0	5,639.4	5,615.4	5,615.1	11.7	12.3	109.41	3,277.3	-454.2	3,320.2	3,296.3	23.97	138.494	
5,736.0	5,733.0	5,700.0	5,699.7	11.9	12.4	111.13	3,277.2	-454.5	3,323.0	3,298.8	24.22	137.217	
5,831.0	5,827.7	5,786.7	5,786.4	12.1	12.5	107.95	3,277.3	-454.5	3,325.8	3,301.3	24.56	135.391	
5,925.0	5,921.4	5,892.7	5,892.3	12.3	12.7	105.82	3,277.7	-453.9	3,328.4	3,303.3	25.00	133.124	
6,020.0	6,016.1	5,996.4	5,996.0	12.5	12.9	105.27	3,277.7	-453.4	3,330.2	3,304.8	25.39	131.163	
6,114.0	6,109.8	6,094.4	6,094.1	12.7	13.0	102.70	3,277.4	-453.2	3,331.8	3,306.1	25.69	129.685	
6,209.0	6,204.5	6,192.8	6,192.4	12.9	13.0	105.13	3,277.0	-453.2	3,333.2	3,307.3	25.94	128.506	
6,303.0	6,298.2	6,288.3	6,287.9	13.1	13.1	113.03	3,276.6	-453.2	3,335.3	3,309.1	26.20	127.299	
6,398.0	6,392.9	6,380.9	6,380.5	13.4	13.2	113.16	3,276.2	-452.3	3,338.0	3,311.5	26.53	125.805	
6,492.0	6,486.6	6,462.2	6,461.9	13.6	13.3	114.81	3,276.2	-450.6	3,340.7	3,313.9	26.89	124.228	
6,587.0	6,581.3	6,548.2	6,547.8	13.8	13.5	115.76	3,276.5	-447.9	3,343.8	3,316.5	27.27	122.603	

Offset Design University 3-14 - University 3-14 #11 - Wellbore #1 - OH

Survey Program: 100-NS-GYRO-MS

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,681.0	6,675.1	6,640.0	6,639.5	14.0	13.7	111.02	3,277.1	-444.5	3,346.6	3,319.0	27.68	120.916	
6,775.0	6,768.7	6,739.0	6,738.4	14.2	13.9	107.21	3,277.7	-439.6	3,349.4	3,321.3	28.10	119.198	
6,870.0	6,863.3	6,843.5	6,842.7	14.5	14.1	105.08	3,278.1	-434.2	3,352.0	3,323.4	28.54	117.441	
6,964.0	6,956.9	6,938.0	6,937.1	14.7	14.3	103.34	3,278.3	-429.1	3,353.9	3,324.9	28.96	115.817	
7,059.0	7,051.6	7,031.6	7,030.6	14.9	14.5	105.44	3,278.5	-424.2	3,355.5	3,326.2	29.37	114.266	
7,153.0	7,145.2	7,124.9	7,123.7	15.1	14.7	106.42	3,278.7	-419.5	3,357.8	3,328.0	29.78	112.765	
7,247.0	7,238.8	7,224.6	7,223.4	15.3	14.9	104.39	3,278.8	-415.1	3,359.8	3,329.6	30.21	111.213	
7,342.0	7,333.5	7,320.8	7,319.5	15.6	15.1	107.36	3,278.7	-411.3	3,361.7	3,331.0	30.62	109.774	
7,436.0	7,427.1	7,414.6	7,413.3	15.8	15.3	107.94	3,278.5	-408.3	3,364.0	3,332.9	31.04	108.380	
7,530.0	7,520.6	7,500.0	7,498.6	16.0	15.5	107.12	3,278.5	-405.9	3,366.6	3,335.2	31.45	107.057	
7,625.0	7,615.1	7,566.7	7,565.2	16.3	15.6	106.16	3,278.8	-404.2	3,369.7	3,337.8	31.83	105.857	
7,719.0	7,708.7	7,644.5	7,643.1	16.5	15.8	105.55	3,279.7	-402.3	3,373.0	3,340.8	32.24	104.611	
7,814.0	7,803.4	7,729.7	7,728.2	16.7	16.0	110.03	3,280.9	-399.8	3,376.4	3,343.8	32.67	103.356	
7,908.0	7,897.2	7,813.9	7,812.4	16.9	16.2	107.16	3,282.4	-396.6	3,380.1	3,347.0	33.09	102.147	
8,003.0	7,991.9	7,916.5	7,914.8	17.1	16.5	106.67	3,284.3	-392.1	3,383.9	3,350.3	33.56	100.821	
8,097.0	8,085.6	8,031.4	8,029.6	17.4	16.8	104.62	3,285.8	-386.7	3,386.9	3,352.8	34.05	99.455	
8,192.0	8,180.4	8,135.5	8,133.6	17.6	17.0	106.43	3,286.7	-381.8	3,389.2	3,354.7	34.51	98.205	
8,286.0	8,274.2	8,232.6	8,230.6	17.8	17.2	107.61	3,287.4	-377.2	3,391.1	3,356.2	34.94	97.044	
8,381.0	8,369.2	8,323.8	8,321.6	18.0	17.4	112.15	3,288.0	-372.8	3,392.9	3,357.5	35.36	95.952	
8,395.0	8,383.2	8,337.9	8,335.8	18.0	17.5	111.77	3,288.1	-372.1	3,393.1	3,357.7	35.42	95.788	
8,546.0	8,534.1	8,498.7	8,496.3	18.3	17.8	2.27	3,289.2	-363.8	3,392.3	3,356.2	36.10	93.980	
8,577.0	8,565.0	8,535.2	8,532.7	18.4	17.9	-11.78	3,289.3	-361.9	3,390.2	3,354.2	36.07	93.987	
8,609.0	8,596.7	8,572.6	8,570.1	18.5	18.0	-10.35	3,289.4	-359.8	3,385.7	3,349.8	35.92	94.245	
8,640.0	8,627.0	8,608.9	8,606.4	18.5	18.1	-8.82	3,289.4	-357.8	3,379.4	3,343.7	35.67	94.741	
8,685.0	8,670.2	8,662.4	8,659.8	18.6	18.2	-4.93	3,289.3	-354.9	3,366.5	3,331.5	34.98	96.238	
8,734.0	8,715.6	8,715.9	8,713.2	18.6	18.3	-0.78	3,289.1	-352.2	3,347.9	3,313.9	34.07	98.253	
8,781.0	8,757.6	8,760.2	8,757.5	18.7	18.4	0.26	3,288.8	-349.8	3,326.5	3,293.3	33.18	100.246	
8,828.0	8,797.8	8,802.9	8,800.1	18.8	18.5	-0.16	3,288.5	-347.6	3,301.9	3,269.8	32.17	102.655	
8,875.0	8,836.2	8,846.8	8,843.9	18.9	18.6	0.39	3,288.1	-345.4	3,274.4	3,243.5	30.95	105.812	
8,922.0	8,872.3	8,888.0	8,885.1	19.0	18.7	2.11	3,287.7	-343.3	3,244.0	3,214.4	29.56	109.731	
8,969.0	8,905.8	8,924.6	8,921.6	19.1	18.8	1.78	3,287.3	-341.5	3,210.6	3,182.8	27.77	115.615	
9,017.0	8,937.0	8,958.0	8,955.0	19.2	18.8	2.03	3,286.8	-339.8	3,173.7	3,147.5	26.22	121.054	
9,064.0	8,964.2	8,986.9	8,983.8	19.3	18.9	1.89	3,286.4	-338.3	3,135.0	3,111.3	23.72	132.156	
9,111.0	8,987.2	9,011.6	9,008.5	19.5	18.9	3.50	3,286.1	-336.9	3,093.7	3,072.1	21.67	142.746	
9,158.0	9,007.2	9,033.0	9,029.9	19.7	19.0	6.42	3,285.8	-335.6	3,050.9	3,030.2	20.74	147.111	
9,205.0	9,024.3	9,051.3	9,048.1	19.9	19.0	9.52	3,285.5	-334.6	3,006.9	2,987.2	19.75	152.214	
9,252.0	9,038.5	9,066.1	9,062.9	20.2	19.1	11.27	3,285.3	-333.7	2,961.9	2,942.9	19.00	155.906	
9,299.0	9,050.1	9,078.0	9,074.8	20.5	19.1	10.32	3,285.1	-333.0	2,916.3	2,898.1	18.11	161.009	
9,346.0	9,058.9	9,086.8	9,083.5	20.8	19.1	8.81	3,284.9	-332.4	2,870.0	2,853.1	16.89	169.966	
9,394.0	9,063.7	9,091.1	9,087.8	21.2	19.1	-7.34	3,284.8	-332.2	2,822.1	2,806.3	15.89	177.564	
9,477.0	9,065.3	9,091.3	9,088.1	21.9	19.1	-129.47	3,284.8	-332.2	2,739.2	2,706.7	32.48	84.329	
9,571.0	9,063.4	9,087.6	9,084.3	22.7	19.1	-146.67	3,284.9	-332.4	2,645.3	2,619.5	25.82	102.437	
9,666.0	9,060.9	9,083.0	9,079.7	23.6	19.1	-168.15	3,285.0	-332.7	2,550.4	2,532.8	17.63	144.686	
9,760.0	9,059.9	9,080.1	9,076.8	24.5	19.1	167.71	3,285.0	-332.8	2,456.5	2,437.9	18.59	132.109	
9,854.0	9,061.9	9,080.4	9,077.2	25.4	19.1	9.22	3,285.0	-332.8	2,362.5	2,344.5	17.97	131.436	
9,949.0	9,066.2	9,083.2	9,080.0	26.5	19.1	32.10	3,285.0	-332.7	2,267.5	2,239.6	27.94	81.165	
10,043.0	9,070.8	9,086.2	9,083.0	27.7	19.1	39.91	3,284.9	-332.5	2,173.6	2,141.0	32.56	66.759	
10,137.0	9,072.6	9,086.2	9,083.0	28.9	19.1	-161.86	3,284.9	-332.5	2,079.6	2,057.2	22.43	92.704	
10,232.0	9,070.6	9,082.4	9,079.2	30.1	19.1	-156.02	3,285.0	-332.7	1,984.7	1,958.9	25.78	76.993	
10,326.0	9,069.8	9,079.8	9,076.6	31.4	19.1	-140.02	3,285.0	-332.9	1,890.7	1,855.7	35.05	53.943	
10,421.0	9,070.1	9,078.3	9,075.1	32.7	19.1	-158.13	3,285.1	-333.0	1,795.7	1,769.6	26.19	68.556	
10,515.0	9,070.2	9,076.8	9,073.5	34.0	19.1	-141.12	3,285.1	-333.0	1,701.8	1,665.4	36.31	46.863	
10,609.0	9,069.1	9,073.9	9,070.6	35.3	19.1	-163.07	3,285.1	-333.2	1,607.8	1,582.7	25.08	64.105	
10,704.0	9,067.7	9,070.7	9,067.5	36.6	19.1	-120.70	3,285.2	-333.4	1,512.9	1,464.4	48.52	31.184	
10,798.0	9,066.2	9,067.6	9,064.4	38.0	19.1	-134.52	3,285.2	-333.6	1,419.0	1,376.3	42.74	33.203	
10,893.0	9,064.9	9,064.8	9,061.6	39.4	19.1	-105.52	3,285.3	-333.8	1,324.2	1,268.1	56.06	23.621	
10,987.0	9,066.1	9,064.6	9,061.4	40.8	19.1	-85.02	3,285.3	-333.8	1,230.3	1,171.1	59.25	20.764	
11,081.0	9,067.7	9,064.7	9,061.5	42.2	19.1	-100.19	3,285.3	-333.8	1,136.4	1,076.5	59.96	18.954	
11,175.0	9,069.5	9,065.0	9,061.8	43.6	19.1	-70.07	3,285.3	-333.8	1,042.5	983.1	59.45	17.536	
11,270.0	9,071.3	9,065.3	9,062.1	45.1	19.1	-98.45	3,285.3	-333.7	947.6	884.5	63.13	15.011	
11,364.0	9,072.5	9,065.1	9,061.9	46.5	19.1	-92.94	3,285.3	-333.7	853.8	788.6	65.12	13.111	
11,458.0	9,070.2	9,061.3	9,058.1	48.0	19.1	-127.06	3,285.3	-334.0	760.3	705.5	54.78	13.879	
11,553.0	9,064.2	9,053.9	9,050.7	49.5	19.0	-120.65	3,285.5	-334.4	666.3	606.8	59.52	11.195	
11,647.0	9,058.5	9,047.0	9,043.8	50.9	19.0	-116.83	3,285.6	-334.8	573.6	511.0	62.64	9.157	
11,741.0	9,056.4	9,043.5	9,040.4	52.4	19.0	-92.77	3,285.6	-335.0	480.9	410.0	70.95	6.778	
11,836.0	9,054.0	9,039.8	9,036.7	53.9	19.0	-112.99	3,285.7	-335.2	387.6	320.4	67.25	5.764	

Offset Design University 3-14 - University 3-14 #11 - Wellbore #1 - OH

Survey Program: 100-NS-GYRO-MS

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,930.0	9,050.9	9,035.4	9,032.3	55.4	19.0	-96.13	3,285.7	-335.5	296.4	222.8	73.61	4.027	
12,024.0	9,049.8	9,033.1	9,029.9	56.9	19.0	-98.22	3,285.8	-335.6	207.4	132.7	74.75	2.775	
12,118.0	9,050.8	9,032.8	9,029.6	58.4	19.0	-91.12	3,285.8	-335.6	125.0	47.8	77.20	1.619	
12,212.0	9,052.4	9,033.0	9,029.8	60.0	19.0	-93.43	3,285.8	-335.6	75.8	-2.7	78.52	0.966	Level 1
12,216.6	9,052.3	9,032.9	9,029.7	60.1	19.0	-93.34	3,285.8	-335.6	75.7	-2.9	78.60	0.963	Level 1, CC, ES, SF
12,307.0	9,050.3	9,029.6	9,026.5	61.6	19.0	-90.14	3,285.8	-335.8	118.2	38.1	80.18	1.475	Level 3
12,401.0	9,047.2	9,025.4	9,022.2	63.1	19.0	-86.81	3,285.9	-336.1	200.1	118.5	81.59	2.453	
12,495.0	9,046.3	9,023.3	9,020.2	64.6	19.0	-93.56	3,285.9	-336.2	289.4	206.3	83.09	3.483	
12,589.0	9,046.3	9,022.2	9,019.1	66.2	19.0	-86.38	3,285.9	-336.3	380.8	296.2	84.70	4.497	
12,684.0	9,047.1	9,021.7	9,018.6	67.7	19.0	-98.60	3,286.0	-336.3	474.3	388.8	85.47	5.549	
12,778.0	9,049.7	9,023.2	9,020.0	69.2	19.0	-99.76	3,285.9	-336.2	567.2	480.5	86.73	6.540	
12,871.0	9,052.7	9,025.0	9,021.8	70.8	19.0	-104.91	3,285.9	-336.1	659.5	572.7	86.79	7.599	
12,966.0	9,055.9	9,026.9	9,023.8	72.3	19.0	-103.09	3,285.9	-336.0	753.9	665.0	88.91	8.480	
13,060.0	9,058.8	9,028.5	9,025.4	73.8	19.0	-103.98	3,285.8	-335.9	847.4	757.3	90.12	9.404	
13,154.0	9,061.3	9,029.8	9,026.6	75.4	19.0	-100.78	3,285.8	-335.8	941.1	848.5	92.60	10.163	
13,249.0	9,063.9	9,031.1	9,028.0	77.0	19.0	-109.10	3,285.8	-335.7	1,035.8	944.7	91.12	11.367	
13,343.0	9,066.1	9,032.1	9,028.9	78.5	19.0	-94.76	3,285.8	-335.7	1,129.6	1,032.6	96.96	11.649	
13,438.0	9,066.0	9,030.7	9,027.6	80.1	19.0	-70.19	3,285.8	-335.8	1,224.3	1,130.0	94.25	12.990	
13,532.0	9,065.4	9,028.9	9,025.7	81.7	19.0	-87.41	3,285.8	-335.9	1,317.9	1,217.4	100.51	13.113	
13,626.0	9,064.5	9,026.6	9,023.5	83.3	19.0	-70.06	3,285.9	-336.0	1,411.5	1,314.2	97.30	14.506	
13,721.0	9,062.1	9,022.9	9,019.8	84.9	19.0	-68.51	3,285.9	-336.2	1,506.0	1,408.0	98.02	15.365	
13,815.0	9,059.1	9,018.8	9,015.7	86.4	19.0	-52.66	3,286.0	-336.5	1,599.6	1,511.6	88.07	18.162	
13,909.0	9,057.0	9,015.5	9,012.4	88.0	19.0	-72.75	3,286.0	-336.6	1,693.4	1,590.4	103.02	16.437	
14,004.0	9,055.9	9,013.1	9,010.0	89.6	19.0	-69.54	3,286.1	-336.8	1,788.2	1,685.2	103.00	17.361	
14,098.0	9,053.8	9,009.9	9,006.8	91.2	18.9	-59.42	3,286.1	-337.0	1,881.9	1,784.1	97.79	19.245	
14,193.0	9,052.8	9,007.7	9,004.6	92.8	18.9	-86.33	3,286.2	-337.1	1,976.7	1,865.2	111.45	17.736	
14,287.0	9,053.3	9,007.0	9,003.9	94.4	18.9	-80.16	3,286.2	-337.1	2,070.6	1,958.7	111.84	18.514	
14,381.0	9,053.5	9,006.0	9,002.9	96.0	18.9	-76.14	3,286.2	-337.2	2,164.5	2,052.4	112.08	19.312	
14,475.0	9,053.7	9,005.0	9,001.9	97.6	18.9	-74.04	3,286.2	-337.2	2,258.4	2,145.7	112.73	20.034	
14,570.0	9,054.0	9,004.2	9,001.1	99.1	18.9	-75.58	3,286.2	-337.3	2,353.4	2,238.5	114.93	20.477	
14,664.0	9,053.6	9,000.0	8,996.9	100.7	18.9	-60.64	3,286.3	-337.5	2,447.3	2,340.1	107.18	22.833	
14,758.0	9,052.4	9,000.0	8,996.9	102.3	18.9	-57.44	3,286.3	-337.5	2,541.2	2,435.4	105.84	24.010	
14,853.0	9,050.8	9,000.0	8,996.9	103.9	18.9	-56.85	3,286.3	-337.5	2,636.1	2,529.4	106.70	24.706	
14,947.0	9,048.9	8,994.7	8,991.7	105.5	18.9	-46.71	3,286.3	-337.8	2,730.0	2,632.5	97.42	28.022	
15,041.0	9,047.1	8,991.9	8,988.8	107.1	18.9	-52.33	3,286.4	-338.0	2,823.9	2,719.0	104.89	26.922	
15,136.0	9,046.2	8,989.8	8,986.7	108.7	18.9	-74.43	3,286.4	-338.1	2,918.8	2,795.0	123.79	23.578	
15,230.0	9,045.7	8,988.1	8,985.0	110.3	18.9	-68.34	3,286.4	-338.2	3,012.6	2,890.8	121.79	24.736	
15,325.0	9,043.6	8,984.9	8,981.8	111.9	18.9	-35.86	3,286.5	-338.4	3,107.5	3,018.9	88.59	35.079	
15,419.0	9,039.7	8,980.2	8,977.1	113.5	18.9	-7.63	3,286.5	-338.6	3,201.3	3,144.5	56.79	56.370	
15,514.0	9,035.5	8,975.2	8,972.2	115.2	18.9	-3.82	3,286.6	-338.9	3,296.2	3,240.6	55.62	59.258	
15,608.0	9,033.5	8,972.4	8,969.3	116.8	18.9	-61.91	3,286.6	-339.0	3,390.1	3,267.6	122.57	27.659	
15,703.0	9,033.9	8,971.7	8,968.6	118.3	18.9	-74.35	3,286.7	-339.1	3,485.1	3,352.1	132.98	26.208	
15,797.0	9,033.9	8,970.6	8,967.5	119.9	18.9	-66.43	3,286.7	-339.1	3,579.1	3,449.7	129.40	27.658	
15,892.0	9,034.0	8,969.5	8,966.4	121.5	18.9	-85.90	3,286.7	-339.2	3,673.9	3,533.9	140.09	26.226	
15,986.0	9,033.9	8,968.2	8,965.1	123.1	18.9	-67.11	3,286.7	-339.3	3,767.8	3,634.8	132.97	28.336	
16,081.0	9,033.4	8,966.4	8,963.4	124.8	18.9	-74.50	3,286.7	-339.4	3,862.7	3,723.3	139.43	27.703	
16,175.0	9,031.9	8,963.9	8,960.9	126.4	18.8	-36.69	3,286.8	-339.5	3,956.6	3,857.0	99.58	39.731	
16,269.0	9,031.7	8,962.6	8,959.6	128.0	18.8	-103.72	3,286.8	-339.6	4,050.5	3,907.2	143.23	28.280	
16,364.0	9,032.7	8,962.3	8,959.2	129.6	18.8	-75.83	3,286.8	-339.6	4,145.3	4,000.5	144.86	28.617	
16,458.0	9,032.7	8,961.0	8,957.9	131.3	18.8	-84.83	3,286.8	-339.7	4,239.1	4,089.5	149.57	28.342	
16,553.0	9,031.7	8,958.7	8,955.7	132.9	18.8	-62.60	3,286.8	-339.8	4,333.7	4,195.8	137.98	31.409	
16,647.0	9,029.5	8,955.4	8,952.4	134.5	18.8	-63.28	3,286.9	-339.9	4,427.5	4,287.4	140.11	31.601	
16,694.0	9,028.5	8,953.9	8,950.8	135.3	18.8	-64.24	3,286.9	-340.0	4,474.3	4,332.6	141.75	31.565	
16,745.0	9,027.4	8,952.2	8,949.2	136.2	18.8	-63.99	3,286.9	-340.1	4,525.2	4,382.9	142.31	31.798	

Offset Design University 3-14 - University 3-14 #15H - Uni 3-14 #15H - OH

Offset Site Error: 0.0 usft

Survey Program: 172-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-75.11	15.4	-58.0	60.0				
173.0	173.0	173.4	173.4	0.2	0.2	161.69	15.5	-57.4	59.9	59.6	0.33	181.547	
191.2	191.2	191.5	191.5	0.2	0.2	158.16	15.6	-57.3	59.9	59.5	0.41	147.035	
234.0	234.0	234.2	234.2	0.3	0.3	151.95	15.6	-57.1	59.9	59.4	0.59	101.835	
423.0	423.0	422.8	422.8	0.7	0.7	82.93	15.2	-56.9	60.2	58.8	1.37	43.812	
608.0	608.0	607.6	607.6	1.1	1.1	86.30	15.3	-57.7	60.9	58.7	2.16	28.199	
793.0	793.0	792.7	792.7	1.5	1.5	42.65	15.3	-58.8	61.5	58.5	2.94	20.932	
980.0	980.0	979.5	979.5	1.9	1.9	48.79	15.6	-60.1	61.5	57.8	3.73	16.490	
1,168.0	1,168.0	1,167.7	1,167.6	2.3	2.2	52.42	15.0	-61.4	60.8	56.2	4.55	13.367	
1,245.0	1,244.9	1,244.5	1,244.5	2.5	2.4	58.27	14.4	-62.2	60.5	55.6	4.88	12.397	
1,394.0	1,393.9	1,393.5	1,393.5	2.8	2.7	50.33	13.0	-63.8	59.7	54.2	5.52	10.826	
1,488.0	1,487.9	1,487.5	1,487.4	3.0	2.9	43.56	11.8	-65.0	59.3	53.4	5.90	10.037	
1,501.0	1,500.9	1,500.4	1,500.4	3.0	2.9	43.47	11.6	-65.2	59.2	53.3	5.96	9.944	CC, ES
1,583.0	1,582.9	1,582.3	1,582.2	3.2	3.1	-70.62	10.6	-66.5	59.7	53.4	6.29	9.490	
1,677.0	1,676.9	1,676.9	1,676.8	3.4	3.3	174.96	10.2	-67.2	60.5	53.8	6.69	9.046	
1,772.0	1,771.9	1,772.4	1,772.3	3.6	3.5	-177.07	10.6	-66.7	61.0	53.9	7.07	8.622	
1,866.0	1,865.9	1,866.5	1,866.4	3.7	3.7	-171.90	11.5	-65.7	61.4	53.9	7.45	8.232	
1,960.0	1,959.9	1,960.2	1,960.1	3.9	3.9	-159.55	12.3	-64.9	61.9	54.1	7.84	7.897	
2,055.0	2,054.9	2,055.1	2,055.0	4.1	4.1	-153.75	13.0	-64.3	62.6	54.4	8.23	7.610	
2,149.0	2,148.9	2,149.1	2,149.0	4.3	4.3	-159.17	13.8	-63.8	63.6	55.0	8.62	7.378	
2,243.0	2,242.9	2,243.3	2,243.2	4.5	4.5	-168.30	14.9	-63.0	64.5	55.5	9.01	7.158	
2,337.0	2,336.8	2,337.0	2,336.9	4.7	4.7	-165.48	16.3	-62.0	65.4	56.0	9.41	6.955	
2,432.0	2,431.8	2,429.7	2,429.6	4.9	4.9	-118.93	18.2	-62.9	67.8	58.0	9.80	6.923	
2,526.0	2,525.8	2,521.8	2,521.6	5.1	5.1	-113.31	20.6	-66.5	72.5	62.3	10.19	7.111	
2,621.0	2,620.8	2,614.7	2,614.2	5.3	5.3	-85.09	24.1	-72.2	79.4	68.8	10.59	7.494	
2,715.0	2,714.8	2,706.2	2,705.3	5.5	5.5	-98.76	28.1	-80.0	88.4	77.4	10.98	8.049	
2,810.0	2,809.8	2,800.0	2,798.4	5.7	5.7	-105.10	30.9	-90.4	99.3	87.9	11.38	8.724	
2,904.0	2,903.8	2,893.7	2,891.4	5.9	5.9	-112.98	31.0	-102.0	110.4	98.6	11.77	9.377	
2,998.0	2,997.8	2,986.2	2,983.1	6.1	6.2	-124.27	29.8	-113.8	121.8	109.7	12.16	10.014	
3,093.0	3,092.8	3,082.6	3,078.9	6.3	6.4	-132.39	28.6	-125.5	133.3	120.7	12.56	10.609	
3,187.0	3,186.8	3,175.8	3,171.4	6.5	6.6	-116.17	27.6	-135.9	143.9	131.0	12.96	11.110	
3,282.0	3,281.8	3,271.6	3,266.7	6.7	6.8	-115.52	26.9	-146.2	154.2	140.8	13.36	11.545	
3,376.0	3,375.8	3,364.1	3,358.7	6.9	7.1	-108.38	26.7	-155.8	164.2	150.4	13.75	11.942	
3,470.0	3,469.8	3,458.9	3,453.0	7.1	7.3	-119.95	26.3	-165.5	174.2	160.1	14.15	12.317	
3,565.0	3,564.8	3,552.4	3,546.0	7.3	7.5	-113.37	25.6	-175.0	184.3	169.8	14.54	12.672	
3,659.0	3,658.8	3,648.8	3,641.9	7.5	7.8	-105.74	24.5	-184.3	193.7	178.8	14.95	12.960	
3,754.0	3,753.7	3,741.4	3,734.1	7.7	8.0	-116.24	23.3	-193.0	203.1	187.8	15.34	13.239	
3,848.0	3,847.7	3,834.1	3,826.3	7.9	8.2	-63.03	22.3	-202.3	212.5	196.7	15.75	13.494	
3,943.0	3,942.7	3,927.1	3,918.9	8.1	8.5	-7.56	21.3	-212.2	221.0	204.9	16.15	13.681	
4,037.0	4,036.7	4,025.0	4,016.2	8.3	8.7	4.49	20.4	-222.0	228.1	211.5	16.56	13.771	
4,131.0	4,130.6	4,118.9	4,109.7	8.4	8.9	2.98	19.6	-230.5	234.0	217.0	16.96	13.794	
4,226.0	4,225.6	4,212.5	4,202.9	8.6	9.2	6.37	18.7	-239.1	240.5	223.1	17.37	13.847	
4,320.0	4,319.6	4,303.8	4,293.8	8.8	9.4	-6.27	17.7	-248.2	248.2	230.4	17.76	13.970	
4,414.0	4,413.6	4,400.5	4,389.9	9.0	9.7	-14.74	16.7	-257.9	255.9	237.8	18.17	14.087	
4,509.0	4,508.6	4,493.9	4,483.0	9.2	9.9	-7.59	16.4	-266.7	263.4	244.8	18.57	14.183	
4,603.0	4,602.6	4,586.7	4,575.3	9.4	10.1	-7.84	16.2	-275.9	271.4	252.4	18.97	14.305	
4,697.0	4,696.6	4,675.9	4,664.0	9.6	10.4	-20.67	16.2	-285.5	280.4	261.1	19.37	14.480	
4,792.0	4,791.6	4,770.5	4,757.9	9.8	10.7	1.51	15.8	-296.7	290.0	270.3	19.78	14.665	
4,886.0	4,885.5	4,870.6	4,857.4	10.0	10.9	6.66	14.7	-307.3	297.4	277.3	20.19	14.734	
4,981.0	4,980.4	4,967.3	4,953.8	10.2	11.1	14.95	13.7	-316.2	302.1	281.5	20.59	14.675	
5,075.0	5,074.3	5,061.3	5,047.3	10.4	11.4	28.56	12.8	-324.5	305.5	284.5	20.98	14.559	
5,170.0	5,169.1	5,157.1	5,142.8	10.6	11.6	36.59	12.1	-332.8	308.3	286.9	21.39	14.414	
5,264.0	5,262.8	5,250.4	5,235.8	10.8	11.8	39.18	11.9	-340.8	310.7	288.9	21.79	14.258	
5,359.0	5,357.5	5,346.3	5,331.3	11.0	12.1	34.89	12.0	-349.0	312.9	290.7	22.20	14.091	
5,453.0	5,451.2	5,438.6	5,423.3	11.3	12.3	30.41	12.4	-357.0	314.6	292.0	22.60	13.921	
5,548.0	5,545.8	5,531.6	5,515.8	11.5	12.6	31.40	12.7	-365.5	316.2	293.2	23.00	13.745	
5,642.0	5,639.4	5,627.6	5,611.4	11.7	12.8	31.95	12.4	-374.4	317.3	293.9	23.41	13.554	
5,736.0	5,733.0	5,719.5	5,703.0	11.9	13.0	34.10	12.0	-382.8	319.0	295.2	23.82	13.391	
5,831.0	5,827.7	5,814.1	5,797.2	12.1	13.3	31.36	11.8	-391.9	321.4	297.1	24.24	13.260	
5,925.0	5,921.4	5,908.5	5,891.1	12.3	13.5	29.58	11.9	-400.9	323.7	299.0	24.65	13.130	
6,020.0	6,016.1	6,005.4	5,987.6	12.5	13.8	29.41	12.3	-409.7	326.0	300.9	25.07	13.003	
6,114.0	6,109.8	6,099.2	6,081.1	12.7	14.0	27.20	12.8	-417.9	327.7	302.2	25.47	12.864	
6,209.0	6,204.5	6,188.8	6,170.2	12.9	14.2	29.84	12.6	-426.6	330.0	304.1	25.88	12.751	
6,303.0	6,298.2	6,283.0	6,263.8	13.1	14.5	38.02	12.3	-436.6	333.5	307.2	26.30	12.679	
6,398.0	6,392.9	6,377.7	6,358.1	13.4	14.7	38.56	12.2	-446.5	337.1	310.3	26.72	12.613	
6,492.0	6,486.6	6,475.8	6,455.6	13.6	15.0	40.68	12.5	-456.2	340.5	313.4	27.16	12.539	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Offset Design University 3-14 - University 3-14 #15H - Uni 3-14 #15H - OH

Offset Site Error: 0.0 usft

Survey Program: 172-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,587.0	6,581.3	6,569.3	6,548.8	13.8	15.2	42.04	13.0	-464.9	344.2	316.6	27.57	12.482	
6,681.0	6,675.1	6,661.3	6,640.3	14.0	15.5	37.67	13.6	-473.8	348.2	320.2	27.99	12.440	
6,775.0	6,768.7	6,751.6	6,730.1	14.2	15.7	34.20	14.3	-483.4	351.6	323.2	28.39	12.383	
6,870.0	6,863.3	6,844.7	6,822.6	14.5	16.0	32.29	14.5	-494.1	354.5	325.7	28.82	12.302	
6,964.0	6,956.9	6,939.1	6,916.3	14.7	16.3	30.68	14.6	-505.1	358.1	328.8	29.26	12.239	
7,059.0	7,051.6	7,036.2	7,012.8	14.9	16.5	32.89	15.1	-516.0	362.2	332.5	29.68	12.202	
7,153.0	7,145.2	7,132.7	7,108.8	15.1	16.8	34.15	15.5	-526.2	364.7	334.6	30.10	12.118	
7,247.0	7,238.8	7,231.5	7,207.2	15.3	17.0	32.36	16.0	-535.6	366.4	335.8	30.55	11.994	
7,342.0	7,333.5	7,326.0	7,301.3	15.6	17.3	35.60	16.5	-543.9	368.1	337.1	30.97	11.887	
7,436.0	7,427.1	7,418.6	7,393.5	15.8	17.5	36.58	17.4	-552.2	369.3	337.9	31.39	11.764	
7,530.0	7,520.6	7,508.9	7,483.4	16.0	17.8	36.17	18.1	-560.9	370.7	338.9	31.82	11.649	
7,625.0	7,615.1	7,604.3	7,578.3	16.3	18.0	35.61	18.6	-570.8	372.5	340.2	32.27	11.545	
7,719.0	7,708.7	7,699.3	7,672.8	16.5	18.3	35.31	19.2	-580.2	374.5	341.8	32.71	11.449	
7,814.0	7,803.4	7,797.0	7,770.1	16.7	18.5	40.05	20.3	-589.3	377.5	344.3	33.15	11.387	
7,908.0	7,897.2	7,892.8	7,865.5	16.9	18.8	37.56	21.7	-597.2	379.9	346.3	33.57	11.315	
8,003.0	7,991.9	7,980.0	7,952.3	17.1	19.0	37.57	24.7	-604.9	382.9	349.0	34.00	11.264	
8,097.0	8,085.6	8,094.3	8,066.2	17.4	19.3	35.59	24.5	-614.1	384.3	349.9	34.46	11.152	
8,147.0	8,135.5	8,143.3	8,115.0	17.5	19.4	36.17	22.2	-617.4	383.9	349.3	34.68	11.071	
8,192.0	8,180.4	8,175.7	8,147.3	17.6	19.5	36.94	21.3	-620.0	384.7	349.9	34.85	11.040	
8,286.0	8,274.2	8,235.9	8,207.0	17.8	19.6	38.09	22.7	-627.7	393.0	357.8	35.19	11.166	
8,381.0	8,369.2	8,299.9	8,269.2	18.0	19.9	43.69	33.0	-638.4	410.3	374.7	35.56	11.537	
8,395.0	8,383.2	8,311.1	8,279.9	18.0	19.9	43.63	35.8	-640.3	413.4	377.8	35.62	11.606	
8,546.0	8,534.1	8,454.4	8,412.6	18.3	20.3	-59.88	86.5	-656.6	449.4	413.1	36.34	12.368	
8,577.0	8,565.0	8,478.6	8,433.9	18.4	20.4	-71.62	97.7	-658.0	457.3	420.8	36.51	12.527	
8,609.0	8,596.7	8,502.3	8,454.5	18.5	20.4	-68.33	109.6	-659.0	465.3	428.7	36.62	12.706	
8,640.0	8,627.0	8,524.6	8,473.2	18.5	20.5	-65.23	121.6	-659.8	472.8	436.1	36.68	12.889	
8,685.0	8,670.2	8,556.7	8,499.4	18.6	20.6	-59.51	140.2	-660.5	482.6	446.0	36.59	13.189	
8,734.0	8,715.6	8,592.4	8,527.1	18.6	20.7	-54.20	162.7	-660.6	491.4	455.2	36.28	13.545	
8,781.0	8,757.6	8,629.0	8,553.9	18.7	20.8	-51.90	187.6	-659.9	498.2	462.2	35.96	13.855	
8,828.0	8,797.8	8,660.0	8,575.2	18.8	20.9	-50.96	210.0	-658.9	504.2	468.5	35.62	14.154	
8,875.0	8,836.2	8,691.0	8,595.3	18.9	21.0	-49.49	233.6	-657.8	509.6	474.5	35.14	14.503	
8,922.0	8,872.3	8,722.0	8,614.1	19.0	21.1	-47.59	258.2	-656.7	513.9	479.4	34.51	14.894	
8,969.0	8,905.8	8,753.0	8,631.8	19.1	21.2	-47.01	283.7	-655.6	517.1	483.2	33.89	15.257	
9,017.0	8,937.0	8,775.9	8,644.0	19.2	21.3	-46.49	303.0	-655.0	519.3	485.9	33.38	15.558	
9,064.0	8,964.2	8,803.1	8,657.6	19.3	21.4	-46.23	326.6	-654.4	520.4	487.7	32.69	15.918	
9,111.0	8,987.2	8,830.2	8,670.0	19.5	21.5	-45.83	350.8	-654.0	519.9	487.7	32.21	16.142	
9,158.0	9,007.2	8,858.1	8,681.5	19.7	21.6	-45.37	376.1	-653.9	518.4	486.4	32.04	16.179	
9,205.0	9,024.3	8,887.4	8,692.4	19.9	21.8	-45.18	403.3	-653.9	516.1	484.1	31.97	16.142	
9,252.0	9,038.5	8,918.4	8,702.3	20.2	22.0	-45.30	432.7	-653.6	512.9	480.8	32.13	15.964	
9,299.0	9,050.1	8,952.0	8,711.2	20.5	22.2	-45.52	465.1	-652.8	509.5	477.1	32.46	15.695	
9,346.0	9,058.9	8,983.8	8,718.0	20.8	22.4	-45.85	496.1	-651.6	505.9	473.0	32.91	15.374	
9,394.0	9,063.7	9,014.0	8,723.1	21.2	22.6	-46.52	525.8	-650.6	501.5	467.8	33.66	14.898	
9,477.0	9,065.3	9,067.0	8,729.0	21.9	23.0	-47.13	578.5	-649.6	495.0	460.2	34.85	14.203	
9,571.0	9,063.4	9,124.8	8,731.3	22.7	23.5	-47.63	636.3	-650.8	493.1	456.8	36.27	13.595	
9,582.2	9,063.1	9,134.4	8,731.5	22.8	23.6	-47.72	645.9	-651.1	493.0	456.6	36.47	13.520	
9,666.0	9,060.9	9,208.7	8,732.5	23.6	24.3	-48.28	720.0	-654.4	493.7	455.7	37.97	13.001	
9,760.0	9,059.9	9,304.9	8,733.5	24.5	25.3	-48.70	816.2	-659.0	494.6	454.9	39.66	12.471	
9,854.0	9,061.9	9,400.2	8,734.8	25.4	26.2	-48.86	911.4	-663.4	496.7	455.6	41.11	12.084	
9,949.0	9,066.2	9,498.4	8,736.6	26.5	27.3	-48.72	1,009.5	-667.7	499.5	456.7	42.87	11.652	
10,043.0	9,070.8	9,597.2	8,737.5	27.7	28.4	-48.24	1,108.2	-670.1	500.9	456.3	44.58	11.236	
10,137.0	9,072.6	9,694.8	8,738.2	28.9	29.6	-48.11	1,205.7	-671.3	500.7	454.1	46.59	10.746	
10,232.0	9,070.6	9,791.6	8,738.2	30.1	30.8	-48.23	1,302.6	-670.9	499.0	450.2	48.72	10.241	
10,326.0	9,069.8	9,883.6	8,737.3	31.4	32.0	-48.11	1,394.5	-670.0	498.1	447.5	50.57	9.850	
10,421.0	9,070.1	9,979.5	8,736.0	32.7	33.3	-47.83	1,490.4	-668.9	497.7	445.1	52.61	9.460	
10,515.0	9,070.2	10,072.9	8,734.9	34.0	34.6	-47.55	1,583.8	-667.5	496.8	442.3	54.48	9.119	
10,609.0	9,069.1	10,161.7	8,732.0	35.3	35.8	-47.21	1,672.5	-665.7	496.3	439.7	56.58	8.771	
10,656.2	9,068.0	10,209.8	8,730.0	36.0	36.5	-47.02	1,720.6	-664.6	496.0	438.5	57.41	8.638	
10,704.0	9,067.7	10,256.8	8,728.0	36.6	37.2	-46.80	1,767.5	-663.3	496.3	438.1	58.20	8.528	
10,798.0	9,066.2	10,348.1	8,723.6	38.0	38.5	-46.46	1,858.7	-661.0	497.9	437.6	60.24	8.265	
10,893.0	9,064.9	10,444.0	8,720.3	39.4	39.9	-46.42	1,954.6	-659.8	500.1	438.0	62.14	8.048	
10,987.0	9,066.1	10,537.9	8,717.3	40.8	41.2	-46.21	2,048.4	-658.9	503.9	439.9	64.05	7.868	
11,081.0	9,067.7	10,636.0	8,713.4	42.2	42.7	-45.71	2,146.4	-656.9	507.2	441.0	66.18	7.664	
11,175.0	9,069.5	10,737.9	8,710.9	43.6	44.2	-45.09	2,248.2	-653.9	508.0	439.9	68.08	7.462	
11,270.0	9,071.3	10,830.3	8,709.2	45.1	45.6	-44.61	2,340.6	-651.1	508.5	438.7	69.83	7.283	
11,364.0	9,072.5	10,916.8	8,708.5	46.5	46.9	-44.56	2,427.0	-650.8	510.9	439.1	71.82	7.114	
11,458.0	9,070.2	11,006.4	8,708.7	48.0	48.3	-45.03	2,516.6	-653.0	513.1	438.2	74.91	6.850	

Offset Design University 3-14 - University 3-14 #15H - Uni 3-14 #15H - OH

Survey Program: 172-MWD

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,553.0	9,064.2	11,098.5	8,708.0	49.5	49.7	-46.00	2,608.6	-655.3	514.9	437.0	77.93	6.608	
11,647.0	9,058.5	11,197.6	8,705.8	50.9	51.3	-46.79	2,707.7	-656.0	517.0	436.0	81.01	6.382	
11,741.0	9,056.4	11,298.2	8,702.8	52.4	52.9	-47.08	2,808.3	-654.0	519.1	435.8	83.33	6.230	
11,836.0	9,054.0	11,395.8	8,699.4	53.9	54.5	-46.94	2,905.8	-650.6	519.8	433.5	86.28	6.024	
11,886.9	9,051.5	11,448.5	8,698.3	54.7	55.3	-47.12	2,958.5	-649.2	519.4	431.9	87.45	5.939	
11,930.0	9,050.9	11,493.1	8,697.9	55.4	56.0	-47.20	3,003.1	-648.2	519.7	431.3	88.38	5.880	
12,024.0	9,049.8	11,589.1	8,697.0	56.9	57.5	-47.28	3,099.0	-645.7	520.1	429.1	91.04	5.713	
12,032.1	9,049.7	11,597.2	8,696.9	57.0	57.7	-47.29	3,107.1	-645.4	520.1	428.9	91.24	5.701	
12,118.0	9,050.8	11,683.4	8,696.1	58.4	59.1	-47.09	3,193.2	-643.0	520.9	427.9	93.03	5.600	
12,212.0	9,052.4	11,784.5	8,695.1	60.0	60.7	-46.74	3,294.3	-639.5	521.2	425.7	95.48	5.459	
12,307.0	9,050.3	11,884.8	8,696.5	61.6	62.3	-46.97	3,394.5	-635.5	518.2	419.9	98.34	5.270	
12,401.0	9,047.2	11,975.2	8,697.9	63.1	63.7	-47.37	3,484.9	-632.3	515.7	414.6	101.02	5.104	
12,470.7	9,046.1	12,043.5	8,698.9	64.2	64.8	-47.61	3,553.1	-630.4	515.1	412.3	102.79	5.011	
12,495.0	9,046.3	12,068.3	8,699.2	64.6	65.2	-47.64	3,577.8	-629.7	515.1	411.7	103.37	4.983	
12,589.0	9,046.3	12,164.0	8,700.4	66.2	66.8	-47.76	3,673.5	-626.6	514.6	408.4	106.24	4.844	
12,648.9	9,046.4	12,224.8	8,701.0	67.1	67.8	-47.79	3,734.3	-624.3	514.1	406.5	107.61	4.778	
12,684.0	9,047.1	12,260.5	8,701.3	67.7	68.4	-47.75	3,769.9	-622.8	514.3	406.0	108.33	4.747	
12,778.0	9,049.7	12,355.8	8,702.0	69.2	69.9	-47.53	3,865.1	-618.5	515.1	404.5	110.52	4.660	
12,871.0	9,052.7	12,451.4	8,703.1	70.8	71.5	-47.32	3,960.6	-614.1	515.9	403.3	112.61	4.581	
12,966.0	9,055.9	12,553.9	8,704.9	72.3	73.1	-47.05	4,063.0	-608.8	515.8	400.9	114.92	4.488	
13,060.0	9,058.8	12,645.8	8,707.1	73.8	74.6	-46.84	4,154.7	-603.2	514.5	397.5	117.00	4.397	
13,114.4	9,060.3	12,696.1	8,708.1	74.8	75.4	-46.76	4,204.9	-600.6	514.3	396.1	118.29	4.348	
13,154.0	9,061.3	12,733.5	8,708.7	75.4	76.0	-46.72	4,242.3	-598.9	514.4	395.2	119.25	4.314	
13,249.0	9,063.9	12,828.1	8,709.7	77.0	77.5	-46.60	4,336.7	-594.7	515.4	394.0	121.39	4.246	
13,343.0	9,066.1	12,916.1	8,710.5	78.5	79.0	-46.39	4,424.7	-590.5	515.5	391.6	123.88	4.161	
13,438.0	9,066.0	13,000.4	8,708.7	80.1	80.4	-46.11	4,508.8	-586.6	515.4	389.3	126.12	4.087	
13,485.4	9,065.4	13,044.4	8,707.6	80.9	81.1	-46.03	4,552.8	-585.3	515.3	388.1	127.22	4.051	
13,532.0	9,065.4	13,089.7	8,706.7	81.7	81.8	-45.89	4,598.1	-584.4	515.4	387.1	128.24	4.019	
13,626.0	9,064.5	13,182.3	8,704.6	83.3	83.4	-45.61	4,690.6	-582.4	514.3	383.9	130.45	3.943	
13,721.0	9,062.1	13,279.3	8,703.3	84.9	85.0	-45.56	4,787.7	-581.7	512.4	379.5	132.89	3.856	
13,815.0	9,059.1	13,381.3	8,705.7	86.4	86.6	-46.06	4,889.6	-582.3	509.2	373.0	136.16	3.739	
13,909.0	9,057.0	13,472.3	8,708.9	88.0	88.1	-46.65	4,980.5	-583.4	507.1	367.8	139.27	3.641	
14,004.0	9,055.9	13,563.6	8,711.1	89.6	89.7	-47.06	5,071.8	-584.7	506.0	363.5	142.51	3.551	
14,098.0	9,053.8	13,656.5	8,713.0	91.2	91.2	-47.51	5,164.7	-586.2	504.3	358.5	145.80	3.459	
14,161.9	9,052.8	13,719.0	8,713.7	92.3	92.3	-47.68	5,227.2	-586.7	503.6	356.1	147.59	3.413	
14,193.0	9,052.8	13,747.9	8,713.7	92.8	92.8	-47.69	5,256.1	-586.8	503.8	355.5	148.32	3.397	
14,287.0	9,053.3	13,836.2	8,712.5	94.4	94.3	-47.65	5,344.4	-587.3	506.1	355.5	150.60	3.361	
14,381.0	9,053.5	13,933.3	8,710.7	96.0	95.9	-47.63	5,441.4	-587.5	509.0	355.8	153.12	3.324	
14,475.0	9,053.7	14,032.1	8,709.5	97.6	97.6	-47.67	5,540.2	-587.3	511.2	355.5	155.74	3.283	
14,570.0	9,054.0	14,126.2	8,708.3	99.1	99.2	-47.63	5,634.3	-586.0	513.0	354.8	158.15	3.244	
14,664.0	9,053.6	14,209.0	8,705.5	100.7	100.6	-47.48	5,717.0	-585.1	515.6	355.1	160.50	3.212	
14,758.0	9,052.4	14,301.3	8,701.0	102.3	102.2	-47.26	5,809.2	-584.6	518.3	355.6	162.66	3.186	
14,853.0	9,050.8	14,406.5	8,697.3	103.9	103.9	-47.10	5,914.4	-583.5	519.4	354.4	165.05	3.147	
14,947.0	9,048.9	14,505.6	8,695.6	105.5	105.6	-47.13	6,013.4	-582.6	519.4	351.7	167.67	3.098	
15,041.0	9,047.1	14,601.8	8,695.8	107.1	107.1	-47.33	6,109.6	-581.7	518.4	347.9	170.52	3.040	
15,090.6	9,046.5	14,646.7	8,695.5	107.9	107.9	-47.36	6,154.5	-581.4	518.3	346.4	171.85	3.016	
15,136.0	9,046.2	14,690.1	8,694.7	108.7	108.6	-47.30	6,198.0	-581.1	518.3	345.4	172.94	2.997	
15,230.0	9,045.7	14,782.3	8,692.3	110.3	110.2	-47.03	6,290.1	-579.9	518.6	343.7	174.92	2.965	
15,325.0	9,043.6	14,873.6	8,689.9	111.9	111.8	-46.98	6,381.4	-579.4	518.8	341.3	177.53	2.922	
15,332.8	9,043.3	14,881.2	8,689.6	112.1	111.9	-46.99	6,389.0	-579.4	518.8	341.1	177.74	2.919	
15,419.0	9,039.7	14,969.4	8,686.5	113.5	113.4	-47.08	6,477.1	-578.9	519.6	339.4	180.18	2.884	
15,514.0	9,035.5	15,075.8	8,683.7	115.2	115.2	-47.33	6,583.4	-576.2	519.3	335.9	183.39	2.832	
15,543.2	9,034.4	15,104.5	8,683.3	115.7	115.7	-47.42	6,612.1	-575.5	519.1	335.0	184.19	2.819	
15,608.0	9,033.5	15,167.6	8,682.8	116.8	116.7	-47.55	6,675.2	-574.6	519.8	333.9	185.86	2.797	
15,703.0	9,033.9	15,262.2	8,683.1	118.3	118.3	-47.74	6,769.8	-574.6	521.8	332.9	188.83	2.763	
15,797.0	9,033.9	15,361.2	8,684.8	119.9	120.0	-48.03	6,868.7	-575.2	522.0	329.7	192.29	2.715	
15,892.0	9,034.0	15,460.6	8,688.7	121.5	121.6	-48.36	6,968.0	-576.4	520.1	324.4	195.67	2.658	
15,986.0	9,033.9	15,553.0	8,692.6	123.1	123.2	-48.70	7,060.4	-577.2	517.2	318.2	198.99	2.599	
16,081.0	9,033.4	15,641.4	8,694.0	124.8	124.7	-48.79	7,148.8	-577.2	515.1	313.4	201.71	2.553	
16,175.0	9,031.9	15,733.7	8,693.7	126.4	126.3	-48.84	7,241.1	-576.7	513.8	309.3	204.44	2.513	
16,269.0	9,031.7	15,830.8	8,693.0	128.0	128.0	-48.65	7,338.2	-575.5	512.9	306.4	206.50	2.484	
16,364.0	9,032.7	15,928.2	8,693.8	129.6	129.6	-48.45	7,435.6	-574.8	511.1	302.3	208.82	2.448	
16,458.0	9,032.7	16,023.3	8,694.5	131.3	131.3	-48.09	7,530.6	-573.6	507.2	296.6	210.62	2.408	
16,553.0	9,031.7	16,118.9	8,694.5	132.9	132.9	-47.80	7,626.2	-571.7	502.0	289.4	212.57	2.361	
16,647.0	9,029.5	16,213.2	8,694.7	134.5	134.5	-47.57	7,720.5	-569.7	496.2	281.6	214.59	2.312	
16,694.0	9,028.5	16,259.2	8,694.4	135.3	135.3	-47.39	7,766.5	-568.3	493.5	278.1	215.40	2.291	

Offset Design University 3-14 - University 3-14 #15H - Uni 3-14 #15H - OH

Offset Site Error: 0.0 usft

Survey Program: 172-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
16,745.0	9,027.4	16,309.9	8,693.7	136.2	136.2	-47.14	7,817.1	-566.7	490.7	274.5	216.17	2.270	SF

Offset Design University 3-14 - University 3-14 #16H - Wellbore #1 - OH

Survey Program: 200-MWD

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-75.11	7.7	-29.0	30.0				
173.0	173.0	173.0	173.0	0.2	0.2	160.11	6.9	-29.1	30.3	30.0	0.33	90.837	
234.0	234.0	234.1	234.1	0.3	0.3	149.31	6.3	-29.1	30.5	30.0	0.56	54.043	
423.0	423.0	422.9	422.9	0.7	0.7	78.15	4.7	-29.7	31.3	29.9	1.34	23.269	
608.0	608.0	607.8	607.8	1.1	1.0	79.01	2.9	-30.8	31.7	29.6	2.13	14.892	
793.0	793.0	792.8	792.8	1.5	1.4	32.79	1.0	-32.0	32.0	29.1	2.91	11.000	
799.8	799.7	799.6	799.5	1.5	1.4	32.97	0.9	-32.0	32.0	29.1	2.94	10.893	
980.0	980.0	979.6	979.5	1.9	1.8	36.08	-0.7	-34.0	32.4	28.7	3.70	8.741	
1,168.0	1,168.0	1,167.7	1,167.6	2.3	2.2	37.65	-2.8	-36.1	32.0	27.5	4.52	7.093	
1,245.0	1,244.9	1,244.7	1,244.6	2.5	2.4	42.57	-4.0	-37.1	31.8	27.0	4.85	6.556	
1,394.0	1,393.9	1,393.7	1,393.6	2.8	2.7	31.87	-6.9	-39.0	31.0	25.5	5.50	5.644	
1,488.0	1,487.9	1,487.8	1,487.6	3.0	2.9	23.66	-8.6	-40.1	30.5	24.7	5.88	5.190	
1,521.5	1,521.4	1,521.3	1,521.2	3.1	3.0	23.08	-9.1	-40.4	30.5	24.5	6.02	5.064	
1,583.0	1,582.9	1,582.9	1,582.7	3.2	3.1	-90.86	-9.7	-40.8	30.7	24.4	6.27	4.887	
1,677.0	1,676.9	1,677.2	1,677.0	3.4	3.3	157.06	-8.8	-40.8	30.9	24.2	6.66	4.637	
1,772.0	1,771.9	1,772.2	1,772.0	3.6	3.5	168.61	-6.8	-40.3	31.2	24.1	7.04	4.429	
1,866.0	1,865.9	1,866.2	1,866.0	3.7	3.7	177.05	-4.7	-39.7	31.9	24.5	7.42	4.299	
1,960.0	1,959.9	1,960.3	1,960.0	3.9	3.9	-166.65	-2.1	-38.8	32.7	24.8	7.81	4.182	
2,055.0	2,054.9	2,055.5	2,055.2	4.1	4.1	-157.88	0.0	-37.6	33.1	24.9	8.20	4.036	
2,149.0	2,148.9	2,149.6	2,149.3	4.3	4.3	-162.34	0.8	-36.3	33.2	24.6	8.58	3.869	
2,243.0	2,242.9	2,243.4	2,243.1	4.5	4.5	-170.97	1.5	-35.0	33.5	24.6	8.98	3.735	
2,337.0	2,336.8	2,337.4	2,337.1	4.7	4.7	-167.59	2.5	-33.9	34.1	24.8	9.37	3.641	
2,432.0	2,431.8	2,432.4	2,432.1	4.9	4.9	-120.29	3.4	-32.8	34.3	24.5	9.76	3.509	
2,526.0	2,525.8	2,526.4	2,526.0	5.1	5.1	-113.34	4.5	-31.6	34.0	23.8	10.15	3.345	
2,621.0	2,620.8	2,621.3	2,620.9	5.3	5.3	-84.08	5.5	-30.7	33.7	23.1	10.55	3.192	
2,715.0	2,714.8	2,715.5	2,715.1	5.5	5.4	-96.82	6.3	-29.7	33.1	22.2	10.94	3.028	
2,810.0	2,809.8	2,810.5	2,810.1	5.7	5.6	-100.42	7.2	-28.4	32.4	21.1	11.34	2.861	
2,904.0	2,903.8	2,904.4	2,904.0	5.9	5.8	-104.25	8.2	-27.1	32.0	20.2	11.73	2.726	
2,998.0	2,997.8	2,998.5	2,998.0	6.1	6.0	-111.04	9.4	-25.7	31.7	19.5	12.12	2.611	
3,069.0	3,068.8	3,069.4	3,069.0	6.2	6.2	-114.39	10.4	-24.6	31.5	19.1	12.42	2.540	
3,093.0	3,092.8	3,093.4	3,093.0	6.3	6.2	-115.26	10.7	-24.3	31.6	19.0	12.52	2.521	
3,187.0	3,186.8	3,187.3	3,186.8	6.5	6.4	-96.05	12.0	-23.1	31.7	18.8	12.91	2.454	
3,282.0	3,281.8	3,282.3	3,281.8	6.7	6.6	-92.47	13.6	-22.0	31.7	18.4	13.31	2.385	
3,376.0	3,375.8	3,376.3	3,375.8	6.9	6.8	-82.81	15.2	-20.7	31.6	17.9	13.70	2.306	
3,470.0	3,469.8	3,470.4	3,469.9	7.1	7.0	-92.19	16.7	-19.4	31.3	17.2	14.10	2.222	
3,565.0	3,564.8	3,565.5	3,564.9	7.3	7.2	-83.12	18.2	-17.7	30.8	16.3	14.50	2.127	
3,659.0	3,658.8	3,659.3	3,658.7	7.5	7.4	-72.60	20.0	-15.9	30.3	15.4	14.89	2.034	
3,754.0	3,753.7	3,754.4	3,753.7	7.7	7.6	-79.93	22.1	-14.1	29.9	14.6	15.29	1.954	
3,848.0	3,847.7	3,848.4	3,847.8	7.9	7.8	-25.73	23.0	-13.1	29.0	13.3	15.69	1.847	
3,943.0	3,942.7	3,943.3	3,942.7	8.1	8.0	29.30	22.4	-13.7	27.4	11.3	16.08	1.701	
4,037.0	4,036.7	4,037.3	4,036.7	8.3	8.2	41.87	21.5	-14.5	25.5	9.0	16.47	1.549	
4,107.1	4,106.8	4,106.9	4,106.3	8.4	8.4	41.09	21.1	-15.9	24.9	8.1	16.77	1.484	Level 3, CC
4,131.0	4,130.6	4,130.7	4,130.0	8.4	8.4	40.68	21.1	-16.6	24.9	8.1	16.87	1.479	Level 3, ES, SF
4,226.0	4,225.6	4,225.5	4,224.8	8.6	8.6	43.30	21.4	-20.0	26.1	8.8	17.26	1.511	
4,320.0	4,319.6	4,319.5	4,318.7	8.8	8.8	30.01	22.2	-23.2	27.8	10.1	17.65	1.572	
4,414.0	4,413.6	4,413.5	4,412.6	9.0	9.0	18.02	22.0	-27.1	29.3	11.2	18.05	1.621	
4,509.0	4,508.6	4,507.9	4,506.8	9.2	9.2	18.01	20.4	-33.0	31.9	13.5	18.44	1.732	
4,603.0	4,602.6	4,601.5	4,600.1	9.4	9.4	10.64	18.5	-40.1	36.4	17.6	18.83	1.935	
4,697.0	4,696.6	4,695.4	4,693.7	9.6	9.6	-8.59	16.1	-47.5	41.7	22.5	19.22	2.168	
4,792.0	4,791.6	4,790.0	4,787.9	9.8	9.8	8.30	13.3	-55.2	47.1	27.5	19.62	2.402	
4,886.0	4,885.5	4,884.0	4,881.6	10.0	10.0	10.11	10.7	-62.7	51.7	31.7	20.01	2.586	
4,981.0	4,980.4	4,978.6	4,975.9	10.2	10.2	16.40	8.3	-70.4	55.3	34.9	20.40	2.712	
5,075.0	5,074.3	5,072.7	5,069.7	10.4	10.4	29.15	5.8	-78.1	58.1	37.3	20.79	2.794	
5,170.0	5,169.1	5,168.2	5,164.8	10.6	10.6	37.38	3.2	-85.4	59.8	38.6	21.19	2.823	
5,264.0	5,262.8	5,261.6	5,257.9	10.8	10.8	41.15	1.2	-92.6	61.3	39.7	21.58	2.842	
5,359.0	5,357.5	5,356.2	5,352.1	11.0	11.0	39.01	0.4	-100.5	63.4	41.4	21.99	2.883	
5,453.0	5,451.2	5,450.3	5,445.9	11.3	11.3	37.10	0.7	-108.4	65.3	42.9	22.38	2.915	
5,548.0	5,545.8	5,545.8	5,541.1	11.5	11.5	41.00	1.1	-115.6	65.9	43.1	22.79	2.892	
5,549.5	5,547.3	5,547.3	5,542.6	11.5	11.5	41.06	1.1	-115.7	65.9	43.1	22.80	2.891	
5,642.0	5,639.4	5,638.8	5,633.8	11.7	11.7	44.33	1.3	-123.1	66.7	43.5	23.20	2.877	
5,736.0	5,733.0	5,732.2	5,726.9	11.9	11.9	48.52	1.4	-131.6	69.2	45.6	23.62	2.931	
5,831.0	5,827.7	5,827.9	5,822.2	12.1	12.1	47.46	1.3	-140.2	71.8	47.8	24.03	2.987	
5,925.0	5,921.4	5,922.1	5,916.1	12.3	12.3	46.88	1.0	-148.0	73.6	49.1	24.45	3.010	
6,020.0	6,016.1	6,016.1	6,009.7	12.5	12.5	47.48	0.9	-156.2	76.1	51.2	24.87	3.061	
6,114.0	6,109.8	6,111.0	6,104.3	12.7	12.8	46.33	1.2	-164.2	78.3	53.0	25.28	3.098	
6,209.0	6,204.5	6,206.0	6,198.9	12.9	13.0	50.28	1.3	-171.8	79.9	54.2	25.71	3.109	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Offset Design University 3-14 - University 3-14 #16H - Wellbore #1 - OH

Survey Program: 200-MWD

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,303.0	6,298.2	6,300.6	6,293.2	13.1	13.2	59.97	1.2	-178.9	81.6	55.5	26.14	3.123	
6,398.0	6,392.9	6,394.5	6,386.9	13.4	13.4	62.01	1.2	-186.3	84.1	57.5	26.57	3.163	
6,492.0	6,486.6	6,487.8	6,479.9	13.6	13.6	65.16	1.6	-194.3	87.7	60.7	27.01	3.246	
6,587.0	6,581.3	6,583.0	6,574.7	13.8	13.9	67.29	2.3	-202.5	92.0	64.6	27.43	3.354	
6,681.0	6,675.1	6,676.3	6,667.7	14.0	14.1	63.36	2.8	-210.8	96.3	68.4	27.85	3.456	
6,775.0	6,768.7	6,771.6	6,762.6	14.2	14.3	60.52	2.8	-219.1	99.0	70.7	28.28	3.501	
6,870.0	6,863.3	6,865.1	6,855.7	14.5	14.5	59.69	2.8	-227.5	100.9	72.2	28.73	3.514	
6,964.0	6,956.9	6,960.2	6,950.4	14.7	14.8	58.91	3.1	-235.9	103.2	74.0	29.18	3.536	
7,059.0	7,051.6	7,055.6	7,045.6	14.9	15.0	61.98	3.6	-243.1	105.2	75.6	29.61	3.553	
7,153.0	7,145.2	7,150.7	7,140.4	15.1	15.2	64.67	3.7	-249.7	106.1	76.0	30.06	3.530	
7,247.0	7,238.8	7,243.4	7,232.8	15.3	15.4	63.72	3.4	-256.6	107.2	76.6	30.51	3.512	
7,342.0	7,333.5	7,335.8	7,324.8	15.6	15.6	66.93	3.5	-265.3	110.3	79.3	30.95	3.564	
7,436.0	7,427.1	7,429.6	7,418.1	15.8	15.9	67.92	4.0	-275.4	114.3	82.9	31.40	3.640	
7,530.0	7,520.6	7,523.8	7,511.8	16.0	16.1	67.77	4.5	-285.5	118.0	86.1	31.86	3.703	
7,625.0	7,615.1	7,618.6	7,606.0	16.3	16.3	67.44	4.9	-295.6	121.5	89.1	32.32	3.758	
7,719.0	7,708.7	7,714.7	7,701.6	16.5	16.6	67.14	4.7	-305.3	124.2	91.5	32.78	3.790	
7,814.0	7,803.4	7,811.8	7,798.3	16.7	16.8	71.84	4.2	-313.0	126.3	93.0	33.23	3.800	
7,908.0	7,897.2	7,906.9	7,893.3	16.9	17.0	69.76	3.8	-318.6	127.3	93.6	33.67	3.780	
8,003.0	7,991.9	7,994.9	7,981.2	17.1	17.2	71.25	5.5	-322.3	128.8	94.7	34.11	3.777	
8,097.0	8,085.6	8,068.6	8,053.4	17.4	17.4	74.72	19.3	-322.1	141.3	106.8	34.54	4.092	
8,192.0	8,180.4	8,141.1	8,121.7	17.6	17.5	83.33	43.7	-320.5	168.1	133.1	34.94	4.810	
8,286.0	8,274.2	8,207.5	8,181.9	17.8	17.7	89.58	71.7	-319.8	205.1	169.8	35.29	5.811	
8,381.0	8,369.2	8,263.6	8,229.8	18.0	17.8	97.41	100.8	-320.7	253.3	217.7	35.60	7.115	
8,395.0	8,383.2	8,271.8	8,236.5	18.0	17.8	97.45	105.5	-320.8	261.1	225.5	35.64	7.326	
8,546.0	8,534.1	8,352.0	8,299.2	18.3	18.0	-7.70	155.5	-320.9	352.5	316.4	36.07	9.772	
8,577.0	8,565.0	8,367.8	8,310.8	18.4	18.1	-19.67	166.2	-320.8	371.8	335.8	36.02	10.322	
8,609.0	8,596.7	8,383.0	8,321.6	18.5	18.1	-17.23	176.9	-320.7	390.7	354.8	35.84	10.902	
8,640.0	8,627.0	8,395.5	8,330.1	18.5	18.2	-15.07	185.9	-320.6	408.2	372.6	35.54	11.483	
8,685.0	8,670.2	8,413.0	8,341.8	18.6	18.2	-11.03	199.1	-320.5	432.0	397.2	34.81	12.409	
8,734.0	8,715.6	8,434.8	8,355.4	18.6	18.3	-7.50	216.1	-320.3	455.9	422.0	33.88	13.459	
8,781.0	8,757.6	8,455.8	8,367.7	18.7	18.4	-6.40	233.1	-320.1	477.3	444.3	32.98	14.472	
8,828.0	8,797.8	8,475.0	8,378.3	18.8	18.5	-6.23	249.1	-320.0	497.4	465.4	31.98	15.550	
8,875.0	8,836.2	8,506.0	8,394.4	18.9	18.6	-5.56	275.6	-319.8	515.8	485.0	30.81	16.740	
8,922.0	8,872.3	8,537.0	8,409.6	19.0	18.8	-4.54	302.6	-319.9	532.3	502.8	29.48	18.054	
8,969.0	8,905.8	8,553.8	8,417.3	19.1	18.9	-4.50	317.5	-320.1	546.6	518.7	27.81	19.652	
9,017.0	8,937.0	8,567.0	8,423.0	19.2	19.0	-4.35	329.4	-320.4	559.6	533.2	26.36	21.225	
9,064.0	8,964.2	8,598.0	8,435.0	19.3	19.1	-4.29	358.0	-321.4	569.9	545.7	24.14	23.611	
9,111.0	8,987.2	8,617.4	8,441.6	19.5	19.3	-4.04	376.2	-322.3	577.6	555.3	22.26	25.949	
9,158.0	9,007.2	8,639.3	8,448.2	19.7	19.4	-3.72	397.1	-323.5	583.7	562.5	21.24	27.489	
9,205.0	9,024.3	8,660.0	8,453.6	19.9	19.6	-3.54	417.0	-324.8	588.9	568.9	19.99	29.460	
9,252.0	9,038.5	8,692.0	8,460.7	20.2	19.8	-3.55	448.1	-326.9	592.7	573.6	19.05	31.117	
9,299.0	9,050.1	8,716.1	8,465.2	20.5	20.0	-3.68	471.8	-328.3	595.3	576.9	18.48	32.217	
9,346.0	9,058.9	8,741.2	8,469.2	20.8	20.2	-3.83	496.5	-329.4	596.7	579.0	17.76	33.595	
9,394.0	9,063.7	8,755.0	8,471.0	21.2	20.3	-4.00	510.2	-329.9	596.0	578.9	17.16	34.741	
9,477.0	9,065.3	8,802.0	8,473.9	21.9	20.8	-4.19	557.1	-331.0	593.1	575.6	17.47	33.940	
9,571.0	9,063.4	8,868.9	8,473.2	22.7	21.4	-4.39	623.9	-332.1	592.2	574.1	18.09	32.737	
9,582.5	9,063.0	8,878.1	8,473.0	22.8	21.5	-4.43	633.1	-332.2	592.2	574.0	18.17	32.587	
9,666.0	9,060.9	8,958.3	8,469.8	23.6	22.3	-4.59	713.3	-333.3	593.4	574.5	18.83	31.508	
9,760.0	9,059.9	9,066.9	8,467.2	24.5	23.3	-4.69	821.8	-336.1	594.7	575.0	19.73	30.139	
9,854.0	9,061.9	9,154.3	8,466.3	25.4	24.3	-4.72	909.1	-338.5	597.8	577.1	20.68	28.910	
9,949.0	9,066.2	9,251.3	8,463.6	26.5	25.4	-4.59	1,006.1	-340.4	604.7	583.1	21.60	27.992	
10,043.0	9,070.8	9,346.7	8,462.4	27.7	26.6	-4.28	1,101.5	-341.2	610.2	587.6	22.55	27.063	
10,137.0	9,072.6	9,448.0	8,460.6	28.9	27.8	-3.84	1,202.7	-339.7	613.3	589.9	23.41	26.203	
10,232.0	9,070.6	9,540.2	8,460.3	30.1	29.0	-3.68	1,294.9	-338.1	611.7	587.2	24.43	25.042	
10,272.3	9,069.9	9,578.2	8,459.7	30.7	29.5	-3.61	1,332.9	-337.3	611.5	586.6	24.86	24.597	
10,326.0	9,069.8	9,646.7	8,459.5	31.4	30.4	-3.43	1,401.4	-335.7	611.4	585.9	25.55	23.934	
10,408.0	9,070.1	9,721.5	8,460.1	32.5	31.5	-3.17	1,476.1	-333.7	610.9	584.5	26.42	23.125	
10,421.0	9,070.1	9,732.3	8,460.0	32.7	31.6	-3.12	1,487.0	-333.3	610.9	584.4	26.55	23.011	
10,515.0	9,070.2	9,834.3	8,459.4	34.0	33.0	-2.64	1,588.9	-329.2	611.5	583.9	27.65	22.114	
10,609.0	9,069.1	9,915.9	8,459.5	35.3	34.2	-2.28	1,670.4	-325.9	610.1	581.5	28.64	21.299	
10,704.0	9,067.7	10,030.5	8,458.5	36.6	35.9	-1.85	1,784.9	-321.0	609.6	579.7	29.90	20.387	
10,798.0	9,066.2	10,123.3	8,460.5	38.0	37.3	-1.88	1,877.6	-319.4	606.1	575.0	31.08	19.502	
10,873.7	9,064.9	10,186.5	8,461.0	39.1	38.3	-1.91	1,940.8	-318.1	604.2	572.2	31.99	18.888	
10,893.0	9,064.9	10,202.1	8,460.9	39.4	38.5	-1.91	1,956.5	-317.7	604.3	572.1	32.22	18.757	
10,987.0	9,066.1	10,306.7	8,460.0	40.8	40.1	-1.91	2,061.0	-315.4	606.5	572.9	33.53	18.089	
11,081.0	9,067.7	10,388.0	8,460.3	42.2	41.4	-1.91	2,142.3	-314.2	607.7	573.1	34.67	17.532	

Offset Design University 3-14 - University 3-14 #16H - Wellbore #1 - OH

Survey Program: 200-MWD

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,175.0	9,069.5	10,480.2	8,458.3	43.6	42.8	-1.67	2,234.4	-311.7	611.5	575.6	35.88	17.043	
11,270.0	9,071.3	10,583.6	8,457.6	45.1	44.4	-1.60	2,337.9	-311.2	614.0	576.8	37.17	16.518	
11,364.0	9,072.5	10,674.0	8,457.4	46.5	45.9	-1.87	2,428.2	-312.6	615.4	577.0	38.45	16.004	
11,458.0	9,070.2	10,789.5	8,458.0	48.0	47.7	-2.52	2,543.7	-314.9	612.9	572.9	40.00	15.324	
11,553.0	9,064.2	10,876.7	8,460.2	49.5	49.2	-3.24	2,630.8	-317.3	605.0	563.5	41.44	14.600	
11,647.0	9,058.5	10,962.9	8,461.1	50.9	50.6	-3.94	2,717.0	-319.0	598.8	555.9	42.90	13.957	
11,705.4	9,056.4	11,012.9	8,461.1	51.8	51.4	-4.27	2,766.9	-319.8	597.0	553.3	43.71	13.657	
11,741.0	9,056.4	11,041.5	8,460.6	52.4	51.9	-4.38	2,795.6	-319.9	597.7	553.5	44.17	13.531	
11,836.0	9,054.0	11,143.3	8,457.9	53.9	53.6	-4.61	2,897.3	-319.0	598.1	552.4	45.69	13.089	
11,930.0	9,050.9	11,256.8	8,458.6	55.4	55.3	-4.83	3,010.8	-316.6	594.5	547.3	47.17	12.604	
12,024.0	9,049.8	11,355.5	8,461.0	56.9	56.9	-4.80	3,109.4	-312.3	591.1	542.6	48.54	12.179	
12,090.8	9,049.9	11,419.5	8,462.5	58.0	57.9	-4.58	3,173.2	-308.7	589.4	540.1	49.33	11.949	
12,118.0	9,050.8	11,445.2	8,463.0	58.4	58.3	-4.45	3,199.0	-307.2	589.7	540.1	49.64	11.880	
12,212.0	9,052.4	11,531.5	8,464.1	60.0	59.7	-4.07	3,285.1	-302.0	589.8	539.0	50.81	11.608	
12,307.0	9,050.3	11,608.4	8,463.5	61.6	61.0	-3.79	3,361.7	-296.7	588.3	536.3	51.93	11.329	
12,331.1	9,049.5	11,627.1	8,462.9	62.0	61.3	-3.71	3,380.4	-295.3	588.1	535.9	52.20	11.266	
12,401.0	9,047.2	11,702.5	8,460.1	63.1	62.6	-3.47	3,455.5	-289.6	588.3	535.1	53.15	11.069	
12,495.0	9,046.3	11,818.5	8,459.4	64.6	64.4	-3.20	3,571.3	-281.9	587.8	533.3	54.52	10.782	
12,499.2	9,046.3	11,823.7	8,459.5	64.7	64.5	-3.19	3,576.4	-281.6	587.8	533.3	54.58	10.770	
12,589.0	9,046.3	11,910.8	8,460.6	66.2	65.9	-2.94	3,663.3	-275.9	586.5	530.7	55.77	10.517	
12,628.6	9,046.2	11,946.8	8,460.9	66.8	66.5	-2.82	3,699.2	-273.3	586.0	529.8	56.26	10.416	
12,684.0	9,047.1	11,995.4	8,460.7	67.7	67.3	-2.64	3,747.7	-269.7	587.0	530.1	56.93	10.311	
12,778.0	9,049.7	12,092.2	8,459.7	69.2	69.0	-2.33	3,844.2	-263.1	590.5	532.3	58.20	10.145	
12,871.0	9,052.7	12,183.1	8,459.6	70.8	70.4	-2.30	3,935.1	-259.4	593.6	534.1	59.49	9.978	
12,966.0	9,055.9	12,264.4	8,458.4	72.3	71.8	-2.36	4,016.4	-257.2	598.3	537.5	60.77	9.845	
13,060.0	9,058.8	12,355.4	8,455.0	73.8	73.3	-2.40	4,107.3	-254.7	604.6	542.5	62.09	9.737	
13,154.0	9,061.3	12,458.2	8,452.6	75.4	75.0	-2.63	4,210.0	-253.4	609.4	545.8	63.57	9.586	
13,249.0	9,063.9	12,569.6	8,451.9	77.0	76.8	-2.98	4,321.5	-252.4	612.8	547.7	65.14	9.407	
13,343.0	9,066.1	12,656.9	8,452.6	78.5	78.3	-3.11	4,408.7	-250.8	614.4	547.8	66.52	9.236	
13,438.0	9,066.0	12,754.2	8,452.2	80.1	79.9	-3.09	4,505.9	-248.3	614.6	546.8	67.90	9.052	
13,500.8	9,065.4	12,813.9	8,452.3	81.1	80.9	-3.04	4,565.6	-246.9	613.9	545.1	68.76	8.927	
13,532.0	9,065.4	12,841.1	8,452.2	81.7	81.4	-2.97	4,592.9	-246.1	614.1	544.9	69.16	8.879	
13,626.0	9,064.5	12,941.6	8,451.2	83.3	83.1	-2.62	4,693.3	-243.1	614.0	543.6	70.41	8.721	
13,721.0	9,062.1	13,036.8	8,451.6	84.9	84.6	-2.33	4,788.5	-240.8	611.1	539.4	71.67	8.526	
13,815.0	9,059.1	13,124.9	8,451.3	86.4	86.1	-2.30	4,876.6	-240.3	608.3	535.3	72.96	8.337	
13,894.3	9,057.2	13,201.0	8,450.6	87.8	87.4	-2.49	4,952.6	-241.4	607.2	533.0	74.18	8.186	
13,909.0	9,057.0	13,215.3	8,450.4	88.0	87.6	-2.55	4,966.9	-241.9	607.3	532.8	74.41	8.161	
14,004.0	9,055.9	13,309.2	8,449.3	89.6	89.2	-3.10	5,060.7	-247.1	607.5	531.5	75.97	7.997	
14,098.0	9,053.8	13,403.3	8,448.3	91.2	90.8	-3.83	5,154.5	-254.9	606.9	529.3	77.64	7.817	
14,132.3	9,053.1	13,438.0	8,448.0	91.8	91.4	-4.06	5,189.0	-257.4	606.7	528.4	78.27	7.751	
14,193.0	9,052.8	13,499.2	8,447.3	92.8	92.4	-4.41	5,250.1	-261.0	607.4	528.0	79.34	7.655	
14,287.0	9,053.3	13,600.9	8,446.6	94.4	94.1	-4.84	5,351.7	-264.7	608.9	527.9	81.02	7.515	
14,381.0	9,053.5	13,694.0	8,446.6	96.0	95.7	-5.00	5,444.8	-264.6	609.3	526.8	82.49	7.387	
14,475.0	9,053.7	13,780.9	8,445.6	97.6	97.2	-4.90	5,531.7	-261.7	610.5	526.7	83.75	7.289	
14,570.0	9,054.0	13,903.3	8,444.9	99.1	99.2	-4.66	5,654.0	-256.1	611.3	526.1	85.18	7.177	
14,664.0	9,053.6	13,995.8	8,447.3	100.7	100.8	-4.40	5,746.3	-251.5	608.3	521.9	86.41	7.040	
14,758.0	9,052.4	14,086.7	8,449.2	102.3	102.4	-4.07	5,837.1	-246.7	604.8	517.3	87.56	6.908	
14,853.0	9,050.8	14,171.7	8,450.1	103.9	103.8	-3.69	5,922.0	-241.7	602.0	513.3	88.67	6.789	
14,947.0	9,048.9	14,265.0	8,450.0	105.5	105.4	-3.25	6,015.1	-235.9	599.9	510.1	89.80	6.680	
15,041.0	9,047.1	14,351.9	8,449.7	107.1	106.9	-2.89	6,101.8	-230.8	598.2	507.3	90.96	6.577	
15,136.0	9,046.2	14,464.9	8,449.4	108.7	108.8	-2.31	6,214.6	-224.4	597.5	505.3	92.24	6.478	
15,230.0	9,045.7	14,563.5	8,451.9	110.3	110.4	-1.87	6,313.0	-219.8	594.4	500.9	93.48	6.359	
15,325.0	9,043.6	14,649.1	8,453.6	111.9	111.9	-1.52	6,398.6	-215.6	590.2	495.6	94.62	6.238	
15,419.0	9,039.7	14,739.4	8,454.3	113.5	113.4	-1.29	6,488.7	-210.9	585.5	489.6	95.89	6.106	
15,514.0	9,035.5	14,833.2	8,454.8	115.2	115.0	-1.19	6,582.4	-206.1	580.8	483.6	97.22	5.974	
15,608.0	9,033.5	14,926.7	8,455.1	116.8	116.6	-1.03	6,675.7	-201.3	578.5	479.9	98.63	5.866	
15,612.7	9,033.5	14,931.3	8,455.1	116.8	116.7	-1.03	6,680.4	-201.1	578.5	479.8	98.69	5.862	
15,703.0	9,033.9	15,007.4	8,454.7	118.3	117.9	-1.04	6,756.4	-199.2	579.5	479.6	99.90	5.800	
15,797.0	9,033.9	15,089.5	8,451.9	119.9	119.3	-1.08	6,838.4	-198.3	582.6	481.4	101.18	5.758	
15,892.0	9,034.0	15,178.0	8,447.8	121.5	120.8	-1.08	6,926.9	-198.2	587.1	484.6	102.52	5.727	
15,986.0	9,033.9	15,277.0	8,442.6	123.1	122.5	-0.97	7,025.8	-198.5	592.0	488.1	103.88	5.699	
16,081.0	9,033.4	15,375.5	8,439.2	124.8	124.2	-0.87	7,124.2	-198.5	594.6	489.3	105.27	5.648	
16,175.0	9,031.9	15,473.3	8,435.4	126.4	125.8	-0.79	7,221.9	-198.4	596.9	490.3	106.60	5.599	
16,269.0	9,031.7	15,571.1	8,433.1	128.0	127.5	-0.82	7,319.6	-198.6	598.8	490.8	108.03	5.543	
16,364.0	9,032.7	15,691.4	8,431.7	129.6	129.6	-0.55	7,440.0	-198.3	601.1	491.6	109.56	5.487	
16,439.0	9,032.7	15,756.7	8,432.7	130.9	130.7	-0.30	7,505.2	-198.1	600.0	489.5	110.55	5.428	

Offset Design University 3-14 - University 3-14 #16H - Wellbore #1 - OH

Survey Program: 200-MWD

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
16,458.0	9,032.7	15,771.8	8,432.6	131.3	130.9	-0.20	7,520.4	-197.8	600.1	489.3	110.78	5.417	
16,553.0	9,031.7	15,871.4	8,431.9	132.9	132.6	0.54	7,619.8	-194.5	599.8	487.7	112.11	5.350	
16,647.0	9,029.5	15,967.5	8,432.6	134.5	134.2	1.22	7,715.9	-190.9	597.0	483.5	113.55	5.258	
16,694.0	9,028.5	16,014.2	8,433.0	135.3	135.0	1.54	7,762.5	-189.3	595.7	481.4	114.28	5.213	
16,745.0	9,027.4	16,062.0	8,433.3	136.2	135.8	1.87	7,810.4	-187.7	594.4	479.4	115.07	5.166	

Offset Design University 3-14 - University 3-14 #26 - Wellbore #1 - OH

Survey Program: 100-NS-GYRO-MS

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-14.37	1,916.4	-490.9	1,978.5				
173.0	173.0	126.1	126.1	0.2	0.2	-137.96	1,917.2	-490.5	1,979.4	1,979.1	0.36	5,454.927	
234.0	234.0	183.3	183.3	0.3	0.3	-147.96	1,917.9	-490.5	1,980.4	1,979.8	0.64	3,082.367	
423.0	423.0	376.1	376.0	0.7	0.8	142.52	1,919.8	-491.7	1,983.5	1,982.0	1.50	1,319.149	
608.0	608.0	558.5	558.4	1.1	1.3	144.91	1,921.5	-493.0	1,986.4	1,984.0	2.36	840.278	
793.0	793.0	744.7	744.6	1.5	1.8	100.60	1,923.2	-494.8	1,989.1	1,985.9	3.23	615.326	
980.0	980.0	930.0	929.9	1.9	2.2	105.61	1,924.9	-496.5	1,991.6	1,987.5	4.11	484.164	
1,168.0	1,168.0	1,120.0	1,119.9	2.3	2.7	108.25	1,926.6	-498.0	1,994.4	1,989.4	5.03	396.376	
1,245.0	1,244.9	1,194.5	1,194.4	2.5	2.9	113.78	1,927.3	-498.5	1,995.8	1,990.4	5.40	369.610	
1,394.0	1,393.9	1,347.1	1,347.0	2.8	3.3	105.35	1,928.7	-499.5	1,998.4	1,992.3	6.13	326.064	
1,488.0	1,487.9	1,441.2	1,441.1	3.0	3.6	98.90	1,929.6	-499.9	1,999.7	1,993.2	6.57	304.536	
1,583.0	1,582.9	1,537.6	1,537.5	3.2	3.8	-14.19	1,930.4	-500.4	2,000.7	1,993.7	7.01	285.458	
1,677.0	1,676.9	1,631.2	1,631.1	3.4	4.1	-128.00	1,931.2	-500.9	2,001.7	1,994.3	7.46	268.483	
1,772.0	1,771.9	1,724.3	1,724.2	3.6	4.3	-120.62	1,932.0	-501.4	2,003.1	1,995.2	7.89	253.826	
1,866.0	1,865.9	1,819.8	1,819.7	3.7	4.6	-116.45	1,932.9	-502.0	2,004.5	1,996.2	8.33	240.617	
1,960.0	1,959.9	1,912.7	1,912.6	3.9	4.8	-104.89	1,933.6	-502.5	2,005.8	1,997.0	8.76	228.849	
2,055.0	2,054.9	2,000.0	1,999.9	4.1	5.1	-99.52	1,934.6	-502.9	2,007.2	1,998.0	9.18	218.575	
2,149.0	2,148.9	2,097.1	2,097.0	4.3	5.3	-105.35	1,935.9	-503.1	2,008.7	1,999.1	9.62	208.756	
2,243.0	2,242.9	2,187.4	2,187.3	4.5	5.5	-115.38	1,937.1	-503.3	2,010.4	2,000.4	10.05	200.053	
2,337.0	2,336.8	2,281.1	2,281.0	4.7	5.8	-113.81	1,938.5	-503.4	2,012.3	2,001.9	10.48	192.003	
2,432.0	2,431.8	2,376.4	2,376.3	4.9	6.0	-68.04	1,939.9	-503.5	2,013.8	2,002.9	10.91	184.560	
2,526.0	2,525.8	2,474.0	2,473.8	5.1	6.2	-62.54	1,941.3	-503.4	2,014.8	2,003.5	11.34	177.658	
2,621.0	2,620.8	2,570.8	2,570.6	5.3	6.5	-34.44	1,942.5	-503.1	2,015.5	2,003.8	11.77	171.311	
2,715.0	2,714.8	2,665.2	2,665.0	5.5	6.7	-47.94	1,943.7	-502.8	2,016.1	2,003.9	12.18	165.508	
2,810.0	2,809.8	2,761.7	2,761.5	5.7	6.9	-52.84	1,944.9	-502.6	2,016.7	2,004.1	12.61	159.987	
2,904.0	2,903.8	2,858.3	2,858.1	5.9	7.1	-58.04	1,945.9	-502.2	2,017.3	2,004.2	13.02	154.901	
2,998.0	2,997.8	2,954.0	2,953.8	6.1	7.4	-66.44	1,946.9	-501.8	2,017.7	2,004.2	13.43	150.228	
3,093.0	3,092.8	3,049.7	3,049.5	6.3	7.6	-72.15	1,947.8	-501.3	2,018.0	2,004.2	13.84	145.808	
3,187.0	3,186.8	3,144.0	3,143.8	6.5	7.8	-54.06	1,948.7	-500.9	2,018.3	2,004.0	14.25	141.642	
3,282.0	3,281.8	3,240.1	3,239.9	6.7	8.0	-51.88	1,949.6	-500.5	2,018.3	2,003.6	14.67	137.615	
3,376.0	3,375.8	3,336.0	3,335.7	6.9	8.2	-43.59	1,950.4	-500.1	2,018.0	2,003.0	15.08	133.857	
3,470.0	3,469.8	3,430.4	3,430.1	7.1	8.4	-54.00	1,951.1	-499.6	2,017.7	2,002.2	15.48	130.338	
3,565.0	3,564.8	3,527.2	3,527.0	7.3	8.6	-46.31	1,951.9	-499.1	2,017.3	2,001.4	15.89	126.948	
3,659.0	3,658.8	3,624.7	3,624.5	7.5	8.8	-37.53	1,952.4	-498.6	2,016.5	2,000.3	16.29	123.792	
3,754.0	3,753.7	3,721.6	3,721.3	7.7	9.0	-46.95	1,952.9	-498.1	2,015.5	1,998.8	16.68	120.852	
3,848.0	3,847.7	3,818.5	3,818.2	7.9	9.2	7.26	1,953.2	-497.5	2,014.3	1,997.2	17.05	118.154	
3,943.0	3,942.7	3,915.7	3,915.4	8.1	9.4	63.51	1,953.4	-497.1	2,013.1	1,995.7	17.40	115.687	
4,037.0	4,036.7	4,008.5	4,008.3	8.3	9.5	76.08	1,953.6	-496.5	2,012.4	1,994.7	17.74	113.407	
4,131.0	4,130.6	4,105.4	4,105.2	8.4	9.6	74.97	1,953.7	-496.0	2,011.8	1,993.7	18.09	111.205	
4,226.0	4,225.6	4,200.0	4,199.7	8.6	9.8	78.75	1,953.9	-495.3	2,011.2	1,992.7	18.43	109.145	
4,320.0	4,319.6	4,293.7	4,293.5	8.8	9.9	66.52	1,954.0	-494.5	2,010.7	1,991.9	18.77	107.142	
4,414.0	4,413.6	4,385.6	4,385.3	9.0	10.1	58.48	1,954.2	-493.8	2,009.9	1,990.8	19.12	105.145	
4,509.0	4,508.6	4,478.9	4,478.7	9.2	10.3	65.94	1,954.5	-493.1	2,009.3	1,989.8	19.49	103.107	
4,603.0	4,602.6	4,571.3	4,571.1	9.4	10.4	65.89	1,954.8	-492.4	2,009.0	1,989.1	19.87	101.119	
4,697.0	4,696.6	4,667.0	4,666.8	9.6	10.6	53.24	1,955.2	-491.6	2,008.6	1,988.3	20.25	99.167	
4,792.0	4,791.6	4,761.6	4,761.3	9.8	10.8	75.71	1,955.5	-490.8	2,008.1	1,987.4	20.64	97.290	
4,886.0	4,885.5	4,857.0	4,856.7	10.0	11.0	81.22	1,955.9	-489.9	2,007.8	1,986.7	21.02	95.495	
4,981.0	4,980.4	4,954.0	4,953.7	10.2	11.2	89.76	1,956.2	-488.8	2,007.5	1,986.1	21.41	93.767	
4,983.2	4,982.7	4,956.2	4,955.9	10.2	11.2	90.15	1,956.2	-488.8	2,007.5	1,986.1	21.42	93.729	
5,075.0	5,074.3	5,047.9	5,047.6	10.4	11.4	103.42	1,956.5	-487.5	2,008.2	1,986.4	21.78	92.198	
5,170.0	5,169.1	5,143.3	5,143.0	10.6	11.5	111.20	1,956.7	-486.4	2,010.1	1,987.9	22.16	90.721	
5,264.0	5,262.8	5,237.7	5,237.4	10.8	11.7	113.32	1,957.0	-485.2	2,012.8	1,990.2	22.53	89.323	
5,359.0	5,357.5	5,332.8	5,332.5	11.0	11.9	108.47	1,957.2	-483.9	2,015.4	1,992.5	22.92	87.925	
5,453.0	5,451.2	5,426.9	5,426.6	11.3	12.1	103.52	1,957.3	-482.7	2,017.3	1,994.0	23.30	86.564	
5,548.0	5,545.8	5,519.5	5,519.1	11.5	12.2	104.06	1,957.5	-481.5	2,019.3	1,995.6	23.68	85.291	
5,642.0	5,639.4	5,614.1	5,613.7	11.7	12.3	104.22	1,957.6	-481.2	2,021.4	1,997.4	23.98	84.292	
5,736.0	5,733.0	5,707.3	5,707.0	11.9	12.4	106.04	1,957.4	-481.4	2,023.5	1,999.2	24.24	83.492	
5,831.0	5,827.7	5,792.5	5,792.2	12.1	12.5	102.94	1,957.6	-481.4	2,025.6	2,001.1	24.58	82.408	
5,925.0	5,921.4	5,894.6	5,894.3	12.3	12.7	100.90	1,958.0	-480.9	2,027.5	2,002.4	25.01	81.058	
6,020.0	6,016.1	5,994.3	5,994.0	12.5	12.9	100.43	1,957.9	-480.4	2,028.7	2,003.3	25.39	79.891	
6,114.0	6,109.8	6,089.9	6,089.6	12.7	13.0	97.95	1,957.7	-480.1	2,029.6	2,003.9	25.69	78.992	
6,209.0	6,204.5	6,186.4	6,186.1	12.9	13.0	100.46	1,957.3	-480.2	2,030.5	2,004.5	25.94	78.264	
6,303.0	6,298.2	6,282.1	6,281.7	13.1	13.1	108.45	1,956.9	-480.1	2,032.0	2,005.8	26.21	77.537	
6,398.0	6,392.9	6,377.6	6,377.3	13.4	13.2	108.68	1,956.5	-479.3	2,034.0	2,007.4	26.54	76.641	
6,492.0	6,486.6	6,465.3	6,464.9	13.6	13.3	110.42	1,956.4	-477.4	2,036.0	2,009.1	26.91	75.668	
6,587.0	6,581.3	6,555.9	6,555.4	13.8	13.5	111.48	1,956.8	-474.6	2,038.4	2,011.1	27.30	74.668	

Offset Design University 3-14 - University 3-14 #26 - Wellbore #1 - OH

Survey Program: 100-NS-GYRO-MS

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,681.0	6,675.1	6,650.0	6,649.5	14.0	13.7	106.86	1,957.4	-471.0	2,040.5	2,012.8	27.71	73.642	
6,775.0	6,768.7	6,748.8	6,748.2	14.2	13.9	103.22	1,958.1	-466.1	2,042.4	2,014.3	28.13	72.601	
6,870.0	6,863.3	6,848.4	6,847.6	14.5	14.1	101.24	1,958.4	-460.9	2,043.9	2,015.4	28.56	71.556	
6,964.0	6,956.9	6,942.3	6,941.4	14.7	14.3	99.63	1,958.6	-455.8	2,045.0	2,016.0	28.98	70.569	
7,059.0	7,051.6	7,035.8	7,034.8	14.9	14.5	101.86	1,958.8	-451.0	2,045.9	2,016.5	29.39	69.619	
7,153.0	7,145.2	7,128.9	7,127.7	15.1	14.7	103.00	1,959.0	-446.3	2,047.3	2,017.5	29.80	68.703	
7,247.0	7,238.8	7,225.0	7,223.7	15.3	14.9	101.09	1,959.1	-442.0	2,048.6	2,018.4	30.22	67.782	
7,342.0	7,333.5	7,319.8	7,318.5	15.6	15.1	104.19	1,959.0	-438.3	2,049.8	2,019.2	30.64	66.909	
7,436.0	7,427.1	7,412.8	7,411.4	15.8	15.3	104.89	1,958.8	-435.3	2,051.5	2,020.4	31.05	66.070	
7,530.0	7,520.6	7,500.0	7,498.6	16.0	15.5	104.20	1,958.7	-432.9	2,053.5	2,022.1	31.46	65.269	
7,625.0	7,615.1	7,576.2	7,574.8	16.3	15.7	103.37	1,959.1	-430.9	2,056.0	2,024.2	31.87	64.514	
7,719.0	7,708.7	7,661.4	7,659.9	16.5	15.9	102.87	1,960.2	-428.7	2,058.9	2,026.6	32.30	63.745	
7,814.0	7,803.4	7,750.1	7,748.6	16.7	16.1	107.46	1,961.5	-426.0	2,061.9	2,029.2	32.73	62.995	
7,908.0	7,897.2	7,841.2	7,839.7	16.9	16.3	104.73	1,963.2	-422.4	2,065.2	2,032.0	33.17	62.259	
8,003.0	7,991.9	7,943.6	7,941.9	17.1	16.5	104.38	1,965.0	-417.8	2,068.4	2,034.8	33.64	61.483	
8,097.0	8,085.6	8,047.5	8,045.6	17.4	16.8	102.44	1,966.2	-412.9	2,070.8	2,036.7	34.11	60.719	
8,192.0	8,180.4	8,147.4	8,145.4	17.6	17.0	104.37	1,967.1	-408.2	2,072.8	2,038.2	34.55	59.990	
8,286.0	8,274.2	8,242.2	8,240.2	17.8	17.2	105.63	1,967.7	-403.7	2,074.3	2,039.4	34.98	59.303	
8,381.0	8,369.2	8,335.2	8,333.1	18.0	17.5	110.26	1,968.4	-399.2	2,075.8	2,040.4	35.40	58.641	
8,395.0	8,383.2	8,349.3	8,347.2	18.0	17.5	109.89	1,968.5	-398.5	2,076.0	2,040.6	35.46	58.543	
8,546.0	8,534.1	8,507.2	8,504.8	18.3	17.9	0.50	1,969.5	-390.3	2,074.9	2,038.8	36.13	57.434	
8,577.0	8,565.0	8,541.3	8,538.8	18.4	17.9	-13.55	1,969.6	-388.5	2,072.8	2,036.7	36.10	57.419	
8,609.0	8,596.7	8,576.3	8,573.8	18.5	18.0	-12.13	1,969.7	-386.6	2,068.2	2,032.3	35.95	57.531	
8,640.0	8,627.0	8,610.0	8,607.5	18.5	18.1	-10.63	1,969.7	-384.7	2,061.8	2,026.1	35.69	57.767	
8,685.0	8,670.2	8,658.8	8,656.2	18.6	18.2	-6.79	1,969.6	-382.1	2,049.0	2,014.0	35.00	58.550	
8,734.0	8,715.6	8,709.2	8,706.5	18.6	18.3	-2.72	1,969.4	-379.4	2,030.4	1,996.3	34.08	59.584	
8,781.0	8,757.6	8,752.5	8,749.7	18.7	18.4	-1.75	1,969.1	-377.2	2,008.9	1,975.7	33.18	60.547	
8,828.0	8,797.8	8,793.9	8,791.1	18.8	18.5	-2.26	1,968.8	-375.0	1,984.3	1,952.1	32.16	61.696	
8,875.0	8,836.2	8,834.9	8,832.0	18.9	18.6	-1.83	1,968.5	-372.9	1,956.7	1,925.8	30.93	63.255	
8,922.0	8,872.3	8,873.6	8,870.7	19.0	18.7	-0.27	1,968.1	-371.0	1,926.2	1,896.7	29.53	65.239	
8,969.0	8,905.8	8,909.0	8,906.1	19.1	18.7	-0.83	1,967.7	-369.2	1,892.8	1,865.0	27.73	68.252	
9,017.0	8,937.0	8,941.4	8,938.4	19.2	18.8	-0.84	1,967.3	-367.6	1,855.9	1,829.7	26.17	70.917	
9,064.0	8,964.2	8,969.4	8,966.4	19.3	18.9	-1.51	1,967.0	-366.1	1,817.1	1,793.5	23.68	76.740	
9,111.0	8,987.2	8,993.0	8,989.9	19.5	18.9	-0.58	1,966.6	-364.9	1,775.8	1,754.3	21.55	82.401	
9,158.0	9,007.2	9,013.4	9,010.3	19.7	19.0	1.80	1,966.3	-363.7	1,733.0	1,712.6	20.40	84.954	
9,205.0	9,024.3	9,030.8	9,027.7	19.9	19.0	3.95	1,966.1	-362.7	1,688.9	1,669.9	19.05	88.668	
9,252.0	9,038.5	9,045.0	9,041.8	20.2	19.0	4.37	1,965.9	-361.9	1,643.9	1,626.0	17.90	91.848	
9,299.0	9,050.1	9,056.3	9,053.2	20.5	19.0	1.71	1,965.7	-361.2	1,598.1	1,581.2	16.95	94.266	
9,346.0	9,058.9	9,064.8	9,061.5	20.8	19.1	-4.79	1,965.6	-360.7	1,551.8	1,535.6	16.22	95.651	
9,394.0	9,063.7	9,068.9	9,065.6	21.2	19.1	-54.16	1,965.5	-360.5	1,504.0	1,470.4	33.65	44.690	
9,477.0	9,065.3	9,069.2	9,066.0	21.9	19.1	-111.29	1,965.5	-360.4	1,421.1	1,383.2	37.94	37.460	
9,571.0	9,063.4	9,065.7	9,062.5	22.7	19.1	-126.56	1,965.5	-360.7	1,327.4	1,293.3	34.13	38.890	
9,666.0	9,060.9	9,061.4	9,058.2	23.6	19.1	-127.73	1,965.6	-360.9	1,232.7	1,198.2	34.50	35.734	
9,760.0	9,059.9	9,058.7	9,055.5	24.5	19.0	-117.29	1,965.7	-361.1	1,138.9	1,100.0	38.85	29.312	
9,854.0	9,061.9	9,059.1	9,055.9	25.4	19.0	-61.00	1,965.6	-361.0	1,045.0	1,005.3	39.63	26.365	
9,949.0	9,066.2	9,061.8	9,058.6	26.5	19.1	-56.10	1,965.6	-360.9	950.1	911.1	38.98	24.370	
10,043.0	9,070.8	9,064.8	9,061.6	27.7	19.1	-43.45	1,965.6	-360.7	856.2	821.4	34.72	24.662	
10,137.0	9,072.6	9,064.8	9,061.6	28.9	19.1	-115.73	1,965.6	-360.7	762.3	719.1	43.24	17.628	
10,232.0	9,070.6	9,061.3	9,058.1	30.1	19.1	-115.85	1,965.6	-360.9	667.7	623.4	44.34	15.060	
10,326.0	9,069.8	9,058.9	9,055.7	31.4	19.0	-98.84	1,965.6	-361.1	574.2	524.8	49.46	11.610	
10,421.0	9,070.1	9,057.5	9,054.3	32.7	19.0	-102.14	1,965.7	-361.1	479.8	429.5	50.26	9.546	
10,515.0	9,070.2	9,056.1	9,052.9	34.0	19.0	-97.66	1,965.7	-361.2	386.6	334.5	52.18	7.410	
10,609.0	9,069.1	9,053.4	9,050.2	35.3	19.0	-105.94	1,965.7	-361.4	294.1	242.1	52.01	5.654	
10,704.0	9,067.7	9,050.4	9,047.3	36.6	19.0	-96.08	1,965.8	-361.6	202.2	147.2	54.94	3.680	
10,798.0	9,066.2	9,047.6	9,044.4	38.0	19.0	-97.29	1,965.8	-361.7	116.9	60.8	56.06	2.085	
10,893.0	9,064.9	9,044.9	9,041.7	39.4	19.0	-93.40	1,965.9	-361.9	64.7	6.9	57.84	1.119	Level 2
10,895.5	9,064.9	9,044.9	9,041.7	39.4	19.0	-93.38	1,965.9	-361.9	64.7	6.8	57.88	1.117	Level 2, CC, ES, SF
10,987.0	9,066.1	9,044.8	9,041.6	40.8	19.0	-94.05	1,965.9	-361.9	111.9	52.7	59.19	1.891	
11,081.0	9,067.7	9,045.0	9,041.8	42.2	19.0	-92.64	1,965.9	-361.9	196.0	135.3	60.75	3.227	
11,175.0	9,069.5	9,045.3	9,042.1	43.6	19.0	-95.92	1,965.9	-361.9	286.0	224.0	62.04	4.610	
11,270.0	9,071.3	9,045.6	9,042.5	45.1	19.0	-91.90	1,965.9	-361.8	379.0	315.3	63.70	5.949	
11,364.0	9,072.5	9,045.5	9,042.3	46.5	19.0	-93.92	1,965.9	-361.8	472.0	407.0	65.01	7.260	
11,458.0	9,070.2	9,041.9	9,038.8	48.0	19.0	-45.63	1,965.9	-362.1	565.4	513.7	51.66	10.944	
11,553.0	9,064.2	9,034.9	9,031.8	49.5	19.0	-42.66	1,966.0	-362.5	659.9	609.1	50.82	12.986	
11,647.0	9,058.5	9,028.3	9,025.2	50.9	19.0	-35.77	1,966.1	-362.8	753.6	706.5	47.07	16.009	
11,741.0	9,056.4	9,025.1	9,022.0	52.4	19.0	-94.89	1,966.2	-363.0	847.3	776.5	70.75	11.976	

Offset Design University 3-14 - University 3-14 #26 - Wellbore #1 - OH

Survey Program: 100-NS-GYRO-MS

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,836.0	9,054.0	9,021.6	9,018.5	53.9	19.0	-35.22	1,966.2	-363.2	942.0	893.2	48.75	19.323	
11,930.0	9,050.9	9,017.4	9,014.3	55.4	19.0	-81.29	1,966.3	-363.5	1,035.7	962.4	73.37	14.116	
12,024.0	9,049.8	9,015.3	9,012.2	56.9	19.0	-57.45	1,966.3	-363.6	1,129.6	1,063.5	66.08	17.095	
12,118.0	9,050.8	9,015.0	9,011.9	58.4	19.0	-113.35	1,966.3	-363.6	1,223.4	1,151.6	71.75	17.050	
12,212.0	9,052.4	9,015.3	9,012.2	60.0	19.0	-69.88	1,966.3	-363.6	1,317.1	1,242.3	74.88	17.591	
12,307.0	9,050.3	9,012.1	9,009.0	61.6	18.9	-41.88	1,966.4	-363.8	1,412.0	1,352.8	59.20	23.850	
12,401.0	9,047.2	9,008.1	9,005.0	63.1	18.9	-29.72	1,966.4	-364.0	1,505.8	1,455.7	50.09	30.060	
12,495.0	9,046.3	9,006.2	9,003.1	64.6	18.9	-95.92	1,966.4	-364.1	1,599.8	1,517.0	82.80	19.322	
12,589.0	9,046.3	9,005.1	9,002.0	66.2	18.9	-55.91	1,966.5	-364.2	1,693.7	1,620.6	73.15	23.154	
12,684.0	9,047.1	9,004.8	9,001.7	67.7	18.9	-119.29	1,966.5	-364.2	1,788.7	1,711.7	76.97	23.239	
12,778.0	9,049.7	9,006.2	9,003.1	69.2	18.9	-121.90	1,966.4	-364.1	1,882.6	1,805.9	76.67	24.555	
12,871.0	9,052.7	9,007.9	9,004.8	70.8	18.9	-134.31	1,966.4	-364.0	1,975.5	1,907.0	68.52	28.831	
12,966.0	9,055.9	9,009.9	9,006.8	72.3	18.9	-124.11	1,966.4	-363.9	2,070.5	1,992.6	77.85	26.596	
13,060.0	9,058.8	9,011.5	9,008.4	73.8	18.9	-128.05	1,966.4	-363.8	2,164.4	2,088.3	76.15	28.422	
13,154.0	9,061.3	9,012.7	9,009.6	75.4	18.9	-120.95	1,966.4	-363.7	2,258.4	2,175.6	82.77	27.284	
13,249.0	9,063.9	9,014.0	9,010.9	77.0	19.0	-143.02	1,966.3	-363.7	2,353.4	2,288.3	65.09	36.157	
13,343.0	9,066.1	9,015.0	9,011.9	78.5	19.0	-97.42	1,966.3	-363.6	2,447.3	2,350.8	96.50	25.360	
13,438.0	9,066.0	9,013.8	9,010.7	80.1	19.0	-49.94	1,966.3	-363.7	2,542.2	2,461.9	80.38	31.626	
13,532.0	9,065.4	9,012.0	9,008.9	81.7	18.9	-84.50	1,966.4	-363.8	2,636.1	2,535.9	100.20	26.308	
13,626.0	9,064.5	9,009.9	9,006.8	83.3	18.9	-60.62	1,966.4	-363.9	2,729.9	2,638.3	91.62	29.798	
13,721.0	9,062.1	9,006.4	9,003.3	84.9	18.9	-59.97	1,966.4	-364.1	2,824.7	2,732.1	92.58	30.512	
13,815.0	9,059.1	9,000.0	8,996.9	86.4	18.9	-37.21	1,966.5	-364.5	2,918.4	2,845.7	72.73	40.126	
13,909.0	9,057.0	9,000.0	8,996.9	88.0	18.9	-63.33	1,966.5	-364.5	3,012.3	2,914.6	97.70	30.832	
14,004.0	9,055.9	9,000.0	8,996.9	89.6	18.9	-62.59	1,966.5	-364.5	3,107.2	3,008.5	98.67	31.490	
14,098.0	9,053.8	8,993.9	8,990.8	91.2	18.9	-50.22	1,966.6	-364.8	3,201.0	3,111.3	89.70	35.686	
14,193.0	9,052.8	8,991.8	8,988.7	92.8	18.9	-84.20	1,966.6	-364.9	3,295.9	3,184.8	111.16	29.651	
14,287.0	9,053.3	8,991.1	8,988.0	94.4	18.9	-74.04	1,966.7	-365.0	3,389.9	3,280.2	109.63	30.921	
14,381.0	9,053.5	8,990.2	8,987.1	96.0	18.9	-67.52	1,966.7	-365.0	3,483.8	3,376.1	107.70	32.348	
14,475.0	9,053.7	8,989.2	8,986.2	97.6	18.9	-63.35	1,966.7	-365.1	3,577.8	3,471.5	106.34	33.644	
14,570.0	9,054.0	8,988.4	8,985.3	99.1	18.9	-65.09	1,966.7	-365.1	3,672.8	3,563.7	109.03	33.685	
14,664.0	9,053.6	8,987.0	8,983.9	100.7	18.9	-52.64	1,966.7	-365.2	3,766.7	3,666.9	99.87	37.718	
14,758.0	9,052.4	8,984.7	8,981.6	102.3	18.9	-49.23	1,966.7	-365.3	3,860.7	3,763.0	97.65	39.538	
14,853.0	9,050.8	8,982.1	8,979.0	103.9	18.9	-48.37	1,966.8	-365.5	3,955.6	3,857.6	97.99	40.366	
14,947.0	9,048.9	8,979.2	8,976.2	105.5	18.9	-37.93	1,966.8	-365.6	4,049.5	3,962.7	86.78	46.663	
15,041.0	9,047.1	8,976.5	8,973.4	107.1	18.9	-43.85	1,966.9	-365.8	4,143.4	4,048.2	95.23	43.508	
15,136.0	9,046.2	8,974.5	8,971.4	108.7	18.9	-71.58	1,966.9	-365.9	4,238.3	4,116.1	122.26	34.666	
15,230.0	9,045.7	8,972.9	8,969.8	110.3	18.9	-64.45	1,966.9	-366.0	4,332.2	4,213.3	118.93	36.426	
15,325.0	9,043.6	8,969.8	8,966.7	111.9	18.9	-30.13	1,966.9	-366.1	4,427.1	4,346.3	80.87	54.743	
15,419.0	9,039.7	8,965.2	8,962.2	113.5	18.9	-0.66	1,967.0	-366.4	4,521.0	4,466.8	54.23	83.365	
15,514.0	9,035.5	8,960.4	8,957.4	115.2	18.8	2.82	1,967.1	-366.6	4,615.8	4,560.7	55.11	83.764	
15,608.0	9,033.5	8,957.7	8,954.6	116.8	18.8	-45.54	1,967.1	-366.8	4,709.8	4,605.2	104.59	45.032	
15,703.0	9,033.9	8,957.0	8,954.0	118.3	18.8	-68.18	1,967.1	-366.8	4,804.8	4,675.7	129.11	37.213	
15,797.0	9,033.9	8,956.0	8,953.0	119.9	18.8	-62.68	1,967.1	-366.9	4,898.7	4,772.5	126.23	38.810	
15,892.0	9,034.0	8,954.9	8,951.9	121.5	18.8	-85.50	1,967.1	-366.9	4,993.7	4,853.7	140.00	35.668	
15,986.0	9,033.9	8,953.7	8,950.7	123.1	18.8	-64.80	1,967.2	-367.0	5,087.5	4,956.5	131.05	38.820	
16,081.0	9,033.4	8,952.0	8,949.0	124.8	18.8	-73.19	1,967.2	-367.1	5,182.4	5,043.8	138.66	37.374	
16,175.0	9,031.9	8,949.6	8,946.6	126.4	18.8	-32.56	1,967.2	-367.2	5,276.3	5,182.9	93.43	56.474	
16,269.0	9,031.7	8,948.4	8,945.4	128.0	18.8	-104.84	1,967.2	-367.3	5,370.2	5,227.6	142.60	37.659	
16,364.0	9,032.7	8,948.1	8,945.1	129.6	18.8	-75.07	1,967.2	-367.3	5,465.1	5,320.7	144.43	37.839	
16,458.0	9,032.7	8,946.9	8,943.8	131.3	18.8	-84.74	1,967.2	-367.3	5,558.9	5,409.4	149.52	37.177	
16,553.0	9,031.7	8,944.7	8,941.7	132.9	18.8	-61.79	1,967.3	-367.5	5,653.6	5,516.4	137.14	41.224	
16,647.0	9,029.5	8,941.5	8,938.5	134.5	18.8	-62.61	1,967.3	-367.6	5,747.3	5,607.9	139.42	41.222	
16,694.0	9,028.5	8,940.0	8,937.0	135.3	18.8	-63.65	1,967.3	-367.7	5,794.2	5,653.0	141.17	41.045	
16,745.0	9,027.4	8,938.4	8,935.4	136.2	18.8	-63.46	1,967.4	-367.8	5,845.1	5,703.3	141.78	41.227	

Offset Design University 3-14 - University 3-14 #27 - Wellbore #1 - OH

Survey Program: 100-NS-GYRO-MS

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-39.45	596.7	-490.9	773.1				
173.0	173.0	146.9	146.9	0.2	0.3	-163.14	595.8	-491.8	773.0	772.5	0.42	1,833.580	
234.0	234.0	207.7	207.7	0.3	0.4	-173.21	595.3	-492.3	773.3	772.6	0.72	1,075.923	
423.0	423.0	396.0	396.0	0.7	0.9	117.14	593.7	-494.1	774.0	772.4	1.61	480.555	
608.0	608.0	579.8	579.7	1.1	1.4	119.44	592.2	-496.0	774.7	772.2	2.49	310.754	
793.0	793.0	765.3	765.2	1.5	1.9	75.06	591.0	-497.9	775.2	771.8	3.37	229.785	
980.0	980.0	952.1	952.1	1.9	2.4	80.04	589.8	-499.6	774.9	770.7	4.27	181.573	
1,168.0	1,168.0	1,139.6	1,139.5	2.3	2.9	82.68	588.7	-501.5	774.9	769.7	5.18	149.518	
1,194.5	1,194.4	1,166.2	1,166.1	2.4	3.0	84.70	588.5	-501.7	774.9	769.6	5.31	145.876	
1,245.0	1,244.9	1,216.6	1,216.5	2.5	3.1	88.21	588.2	-502.3	774.9	769.3	5.56	139.438	
1,394.0	1,393.9	1,365.0	1,364.9	2.8	3.5	79.81	587.4	-503.9	775.0	768.7	6.27	123.521	
1,488.0	1,487.9	1,459.0	1,458.9	3.0	3.7	73.38	587.0	-504.7	774.8	768.1	6.71	115.433	
1,515.7	1,515.6	1,486.5	1,486.4	3.0	3.8	73.38	586.9	-505.0	774.8	768.0	6.84	113.262	
1,583.0	1,582.9	1,553.1	1,552.9	3.2	4.0	-39.76	586.5	-505.8	774.9	767.8	7.14	108.516	
1,677.0	1,676.9	1,646.8	1,646.7	3.4	4.2	-153.65	586.1	-506.9	775.6	768.0	7.59	102.150	
1,772.0	1,771.9	1,741.7	1,741.6	3.6	4.5	-146.37	585.6	-508.1	776.6	768.6	8.03	96.704	
1,866.0	1,865.9	1,835.8	1,835.7	3.7	4.7	-142.30	585.2	-509.2	777.9	769.4	8.46	91.908	
1,960.0	1,959.9	1,930.4	1,930.3	3.9	5.0	-130.82	584.8	-510.2	779.0	770.1	8.90	87.526	
2,055.0	2,054.9	2,024.2	2,024.0	4.1	5.2	-125.55	584.5	-511.1	780.0	770.7	9.33	83.578	
2,149.0	2,148.9	2,118.9	2,118.7	4.3	5.5	-131.48	584.4	-512.0	781.2	771.4	9.77	79.969	
2,243.0	2,242.9	2,212.0	2,211.9	4.5	5.7	-141.61	584.1	-512.9	782.6	772.4	10.21	76.643	
2,337.0	2,336.8	2,305.5	2,305.3	4.7	5.9	-140.14	583.8	-514.0	784.1	773.5	10.65	73.637	
2,432.0	2,431.8	2,401.4	2,401.2	4.9	6.2	-94.47	583.6	-515.0	785.2	774.1	11.09	70.787	
2,526.0	2,525.8	2,497.4	2,497.2	5.1	6.4	-89.08	583.2	-516.0	785.5	774.0	11.54	68.070	
2,621.0	2,620.8	2,591.5	2,591.3	5.3	6.7	-61.09	582.8	-516.8	785.6	773.6	11.99	65.539	
2,715.0	2,714.8	2,687.2	2,687.0	5.5	6.9	-74.70	582.4	-517.6	785.5	773.1	12.43	63.174	
2,810.0	2,809.8	2,783.2	2,783.0	5.7	7.2	-79.72	581.9	-518.3	785.4	772.5	12.88	60.965	
2,904.0	2,903.8	2,877.4	2,877.2	5.9	7.4	-85.03	581.3	-518.8	785.3	772.0	13.32	58.946	
2,998.0	2,997.8	2,972.5	2,972.3	6.1	7.7	-93.54	580.8	-519.3	785.2	771.4	13.76	57.075	
3,093.0	3,092.8	3,068.8	3,068.6	6.3	7.9	-99.37	580.2	-519.6	785.1	770.9	14.18	55.351	
3,187.0	3,186.8	3,162.8	3,162.6	6.5	8.1	-81.40	579.5	-519.8	784.7	770.1	14.59	53.781	
3,282.0	3,281.8	3,257.4	3,257.3	6.7	8.3	-79.32	579.0	-519.9	784.2	769.2	15.01	52.263	
3,376.0	3,375.8	3,352.5	3,352.3	6.9	8.5	-71.16	578.4	-520.1	783.6	768.1	15.41	50.856	
3,470.0	3,469.8	3,446.9	3,446.7	7.1	8.7	-81.69	577.8	-520.0	782.7	766.9	15.79	49.577	
3,565.0	3,564.8	3,541.7	3,541.5	7.3	8.9	-74.12	577.3	-520.0	782.0	765.8	16.16	48.403	
3,659.0	3,658.8	3,636.5	3,636.3	7.5	9.1	-65.44	576.8	-519.7	780.9	764.4	16.51	47.311	
3,754.0	3,753.7	3,731.7	3,731.5	7.7	9.2	-74.98	576.2	-519.5	779.8	762.9	16.85	46.270	
3,848.0	3,847.7	3,825.3	3,825.1	7.9	9.3	-20.87	575.7	-519.2	778.3	761.1	17.19	45.285	
3,943.0	3,942.7	3,921.0	3,920.8	8.1	9.5	35.37	575.3	-518.8	776.1	758.6	17.51	44.331	
4,037.0	4,036.7	4,015.5	4,015.3	8.3	9.6	47.99	574.8	-518.4	773.8	755.9	17.84	43.374	
4,131.0	4,130.6	4,107.8	4,107.6	8.4	9.7	46.91	574.2	-518.2	771.5	753.3	18.20	42.399	
4,226.0	4,225.6	4,202.8	4,202.6	8.6	9.9	50.73	573.9	-517.9	769.5	751.0	18.54	41.511	
4,320.0	4,319.6	4,297.7	4,297.5	8.8	10.0	38.52	573.6	-517.4	767.8	749.0	18.83	40.772	
4,414.0	4,413.6	4,392.4	4,392.2	9.0	10.1	30.51	573.3	-516.7	765.9	746.8	19.12	40.056	
4,509.0	4,508.6	4,487.3	4,487.1	9.2	10.2	37.98	572.8	-516.2	763.9	744.4	19.44	39.284	
4,603.0	4,602.6	4,581.9	4,581.6	9.4	10.3	37.95	572.3	-515.7	762.1	742.4	19.78	38.532	
4,697.0	4,696.6	4,674.7	4,674.5	9.6	10.5	25.30	572.0	-515.1	760.5	740.4	20.10	37.842	
4,792.0	4,791.6	4,770.2	4,770.0	9.8	10.6	47.80	571.6	-514.5	758.7	738.3	20.42	37.162	
4,886.0	4,885.5	4,864.9	4,864.7	10.0	10.7	53.39	571.2	-513.8	756.3	735.6	20.74	36.466	
4,981.0	4,980.4	4,959.5	4,959.2	10.2	10.8	62.09	570.8	-513.2	753.4	732.3	21.07	35.755	
5,075.0	5,074.3	5,051.8	5,051.5	10.4	11.0	75.99	570.5	-512.5	750.9	729.5	21.39	35.108	
5,170.0	5,169.1	5,143.9	5,143.7	10.6	11.0	84.08	570.5	-512.0	749.4	727.8	21.68	34.577	
5,264.0	5,262.8	5,236.3	5,236.1	10.8	11.1	86.54	570.6	-511.7	748.8	726.9	21.93	34.142	
5,359.0	5,357.5	5,331.5	5,331.3	11.0	11.1	82.06	570.8	-511.4	748.0	725.8	22.19	33.712	
5,453.0	5,451.2	5,424.7	5,424.4	11.3	11.2	77.48	571.1	-510.9	746.5	724.1	22.44	33.266	
5,548.0	5,545.8	5,519.6	5,519.4	11.5	11.3	78.45	571.3	-510.6	744.8	722.1	22.71	32.796	
5,642.0	5,639.4	5,614.1	5,613.8	11.7	11.3	79.05	571.5	-510.1	742.9	719.9	22.99	32.317	
5,736.0	5,733.0	5,707.5	5,707.3	11.9	11.4	81.32	571.9	-509.4	741.3	718.1	23.27	31.860	
5,831.0	5,827.7	5,803.1	5,802.8	12.1	11.5	78.74	572.4	-508.2	739.7	716.2	23.55	31.405	
5,925.0	5,921.4	5,896.2	5,895.9	12.3	11.6	77.13	573.1	-506.9	737.9	714.1	23.84	30.947	
6,020.0	6,016.1	5,989.2	5,988.9	12.5	11.6	77.09	573.9	-505.5	736.2	712.1	24.13	30.504	
6,114.0	6,109.8	6,081.8	6,081.5	12.7	11.7	75.08	574.9	-504.2	734.5	710.1	24.42	30.073	
6,209.0	6,204.5	6,176.3	6,176.0	12.9	11.8	78.07	575.9	-503.1	732.9	708.2	24.73	29.642	
6,303.0	6,298.2	6,270.6	6,270.2	13.1	11.9	86.56	576.9	-501.9	732.1	707.0	25.03	29.247	
6,398.0	6,392.9	6,365.7	6,365.4	13.4	12.0	87.31	577.8	-500.6	731.7	706.4	25.35	28.869	
6,472.0	6,466.7	6,439.0	6,438.7	13.5	12.1	89.00	578.5	-499.6	731.6	706.0	25.59	28.586	

Offset Design University 3-14 - University 3-14 #27 - Wellbore #1 - OH

Survey Program: 100-NS-GYRO-MS

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,492.0	6,486.6	6,458.7	6,458.3	13.6	12.1	89.49	578.6	-499.4	731.6	705.9	25.66	28.512	
6,587.0	6,581.3	6,552.7	6,552.3	13.8	12.2	90.91	579.4	-498.5	731.8	705.9	25.97	28.181	
6,681.0	6,675.1	6,647.2	6,646.8	14.0	12.3	86.62	580.1	-497.8	731.9	705.6	26.29	27.845	
6,775.0	6,768.7	6,742.0	6,741.7	14.2	12.4	83.33	580.5	-497.2	731.3	704.6	26.62	27.470	
6,870.0	6,863.3	6,837.7	6,837.3	14.5	12.5	81.75	580.9	-496.4	730.0	703.0	26.98	27.060	
6,964.0	6,956.9	6,933.4	6,933.0	14.7	12.7	80.47	581.1	-495.4	728.4	701.1	27.34	26.642	
7,059.0	7,051.6	7,029.7	7,029.3	14.9	12.8	83.06	581.2	-494.2	726.8	699.1	27.72	26.220	
7,153.0	7,145.2	7,124.8	7,124.4	15.1	13.0	84.65	581.0	-492.9	725.2	697.1	28.12	25.789	
7,247.0	7,238.8	7,217.6	7,217.2	15.3	13.2	83.05	580.6	-492.0	723.5	695.0	28.52	25.366	
7,342.0	7,333.5	7,311.6	7,311.2	15.6	13.4	86.50	580.3	-491.2	722.2	693.2	28.94	24.956	
7,436.0	7,427.1	7,405.1	7,404.7	15.8	13.6	87.64	579.9	-490.5	721.1	691.7	29.36	24.559	
7,530.0	7,520.6	7,498.2	7,497.8	16.0	13.8	87.42	579.5	-489.9	720.1	690.3	29.79	24.172	
7,625.0	7,615.1	7,600.1	7,599.6	16.3	14.0	87.17	578.7	-489.2	718.6	688.4	30.25	23.757	
7,719.0	7,708.7	7,699.7	7,699.3	16.5	14.2	87.09	576.7	-488.6	716.3	685.6	30.70	23.328	
7,814.0	7,803.4	7,801.7	7,801.2	16.7	14.5	91.88	573.5	-488.5	713.3	682.2	31.16	22.894	
7,908.0	7,897.2	7,905.6	7,905.1	16.9	14.7	89.44	569.0	-488.1	709.4	677.8	31.62	22.436	
8,003.0	7,991.9	8,006.3	8,005.5	17.1	14.9	89.34	563.7	-486.7	704.2	672.2	32.08	21.952	
8,097.0	8,085.6	8,104.2	8,103.3	17.4	15.2	87.63	558.1	-484.8	698.3	665.8	32.53	21.467	
8,192.0	8,180.4	8,202.8	8,201.6	17.6	15.4	89.70	551.8	-482.7	691.8	658.8	32.98	20.976	
8,286.0	8,274.2	8,302.0	8,300.6	17.8	15.6	91.06	544.9	-480.5	684.9	651.4	33.42	20.490	
8,381.0	8,369.2	8,400.0	8,398.3	18.0	15.9	95.75	537.5	-477.5	677.4	643.6	33.86	20.005	
8,395.0	8,383.2	8,415.5	8,413.8	18.0	15.9	95.40	536.3	-477.0	676.3	642.4	33.93	19.932	
8,546.0	8,534.1	8,578.8	8,576.3	18.3	16.3	-14.20	522.0	-470.3	659.7	625.1	34.61	19.061	
8,577.0	8,565.0	8,611.5	8,608.7	18.4	16.4	-28.67	518.8	-468.8	654.4	619.8	34.60	18.913	
8,609.0	8,596.7	8,644.9	8,641.9	18.5	16.5	-27.74	515.5	-467.2	646.8	612.3	34.49	18.753	
8,640.0	8,627.0	8,676.6	8,673.4	18.5	16.5	-26.81	512.2	-465.6	637.7	603.4	34.30	18.592	
8,685.0	8,670.2	8,721.9	8,718.4	18.6	16.7	-24.10	507.4	-463.2	620.9	587.2	33.73	18.411	
8,734.0	8,715.6	8,769.5	8,765.6	18.6	16.8	-21.51	502.0	-460.6	598.2	565.3	32.94	18.161	
8,781.0	8,757.6	8,811.7	8,807.5	18.7	16.9	-22.25	497.0	-458.1	572.8	540.5	32.25	17.759	
8,828.0	8,797.8	8,849.9	8,845.3	18.8	17.0	-24.95	492.3	-455.9	544.6	513.0	31.61	17.227	
8,875.0	8,836.2	8,885.5	8,880.6	18.9	17.1	-27.37	487.9	-453.8	514.0	483.1	30.91	16.630	
8,922.0	8,872.3	8,918.9	8,913.7	19.0	17.1	-29.52	483.6	-451.8	481.0	450.8	30.19	15.934	
8,969.0	8,905.8	8,949.3	8,943.7	19.1	17.2	-35.40	479.6	-449.9	445.7	415.7	29.96	14.875	
9,017.0	8,937.0	8,976.6	8,970.7	19.2	17.3	-41.68	476.0	-448.3	407.8	377.5	30.39	13.422	
9,064.0	8,964.2	8,999.1	8,993.0	19.3	17.3	-52.19	472.9	-447.0	369.4	337.6	31.85	11.599	
9,111.0	8,987.2	9,017.1	9,010.8	19.5	17.4	-62.54	470.3	-445.9	330.1	296.4	33.78	9.772	
9,158.0	9,007.2	9,031.4	9,024.9	19.7	17.4	-70.15	468.3	-445.0	291.0	255.7	35.23	8.258	
9,205.0	9,024.3	9,042.3	9,035.7	19.9	17.4	-78.91	466.7	-444.3	252.9	216.3	36.54	6.921	
9,252.0	9,038.5	9,049.9	9,043.1	20.2	17.5	-85.96	465.6	-443.8	217.4	180.1	37.27	5.833	
9,299.0	9,050.1	9,054.5	9,047.7	20.5	17.5	-90.32	464.9	-443.5	186.9	149.3	37.62	4.969	
9,346.0	9,058.9	9,056.3	9,049.5	20.8	17.5	-93.35	464.6	-443.4	165.1	127.3	37.86	4.362	
9,394.0	9,063.7	9,053.7	9,046.9	21.2	17.5	-93.72	465.0	-443.6	156.1	118.0	38.15	4.093	
9,397.7	9,063.8	9,053.3	9,046.5	21.2	17.5	-93.58	465.0	-443.6	156.1	117.9	38.18	4.088	CC, ES, SF
9,477.0	9,065.3	9,043.1	9,036.4	21.9	17.4	-89.14	466.6	-444.3	175.7	136.8	38.86	4.522	
9,571.0	9,063.4	9,027.8	9,021.3	22.7	17.4	-82.25	468.8	-445.2	234.3	194.9	39.45	5.940	
9,666.0	9,060.9	9,012.1	9,005.8	23.6	17.4	-78.52	471.0	-446.2	310.4	270.3	40.04	7.751	
9,760.0	9,059.9	9,000.0	8,993.9	24.5	17.3	-76.67	472.7	-446.9	392.6	351.9	40.70	9.646	
9,854.0	9,061.9	8,987.9	8,981.9	25.4	17.3	-78.95	474.4	-447.6	478.8	437.0	41.85	11.441	
9,949.0	9,066.2	8,979.5	8,973.6	26.5	17.3	-76.70	475.6	-448.1	568.3	525.7	42.64	13.329	
10,043.0	9,070.8	8,971.6	8,965.8	27.7	17.3	-76.02	476.6	-448.6	658.0	614.4	43.68	15.066	
10,137.0	9,072.6	8,961.4	8,955.7	28.9	17.2	-56.73	478.0	-449.2	748.7	708.8	39.92	18.754	
10,232.0	9,070.6	8,948.1	8,942.6	30.1	17.2	-51.04	479.8	-450.0	841.0	802.2	38.85	21.647	
10,326.0	9,069.8	8,936.3	8,930.8	31.4	17.2	-56.50	481.4	-450.7	932.8	890.8	41.97	22.223	
10,421.0	9,070.1	8,925.4	8,920.1	32.7	17.2	-52.38	482.8	-451.4	1,025.8	984.4	41.47	24.735	
10,515.0	9,070.2	8,914.9	8,909.6	34.0	17.1	-51.49	484.1	-452.0	1,118.1	1,076.0	42.13	26.537	
10,609.0	9,069.1	8,900.0	8,894.9	35.3	17.1	-40.81	486.0	-452.9	1,210.4	1,172.3	38.11	31.763	
10,704.0	9,067.7	8,891.1	8,886.2	36.6	17.1	-42.33	487.1	-453.4	1,303.9	1,264.1	39.77	32.784	
10,798.0	9,066.2	8,878.9	8,874.0	38.0	17.0	-29.55	488.7	-454.2	1,396.6	1,362.9	33.66	41.485	
10,893.0	9,064.9	8,866.7	8,862.0	39.4	17.0	-35.43	490.2	-454.9	1,490.4	1,452.6	37.83	39.398	
10,987.0	9,066.1	8,857.2	8,852.5	40.8	17.0	-40.15	491.4	-455.4	1,583.6	1,542.1	41.46	38.193	
11,081.0	9,067.7	8,847.9	8,843.4	42.2	17.0	-39.38	492.5	-456.0	1,676.8	1,634.7	42.09	39.838	
11,175.0	9,069.5	8,838.9	8,834.5	43.6	16.9	-49.13	493.6	-456.5	1,769.9	1,721.1	48.75	36.303	
11,270.0	9,071.3	8,830.0	8,825.6	45.1	16.9	-34.56	494.8	-457.1	1,864.0	1,822.9	41.10	45.357	
11,364.0	9,072.5	8,820.7	8,816.4	46.5	16.9	-32.80	495.9	-457.6	1,957.3	1,916.4	40.86	47.899	
11,458.0	9,070.2	8,808.4	8,804.2	48.0	16.9	-9.04	497.4	-458.3	2,050.2	2,022.0	28.18	72.761	
11,553.0	9,064.2	8,800.0	8,795.9	49.5	16.8	-8.16	498.4	-458.8	2,143.6	2,115.2	28.48	75.281	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Offset Design University 3-14 - University 3-14 #27 - Wellbore #1 - OH

Survey Program: 100-NS-GYRO-MS

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,647.0	9,058.5	8,781.6	8,777.6	50.9	16.8	-6.23	500.6	-459.9	2,236.2	2,207.7	28.48	78.517	
11,741.0	9,056.4	8,771.8	8,767.9	52.4	16.8	-30.02	501.8	-460.4	2,329.2	2,286.6	42.63	54.636	
11,836.0	9,054.0	8,761.9	8,758.1	53.9	16.7	-10.76	502.9	-461.0	2,423.2	2,391.6	31.56	76.791	
11,930.0	9,050.9	8,751.8	8,748.1	55.4	16.7	-22.08	504.1	-461.5	2,516.1	2,477.4	38.76	64.914	
12,024.0	9,049.8	8,743.4	8,739.8	56.9	16.7	-16.16	505.0	-462.0	2,609.4	2,573.7	35.71	73.077	
12,118.0	9,050.8	8,736.5	8,733.0	58.4	16.7	-47.10	505.8	-462.4	2,702.8	2,643.6	59.12	45.713	
12,212.0	9,052.4	8,730.2	8,726.7	60.0	16.7	-23.07	506.5	-462.7	2,796.2	2,754.2	42.02	66.540	
12,307.0	9,050.3	8,721.4	8,717.9	61.6	16.7	-14.11	507.5	-463.2	2,890.3	2,853.6	36.72	78.709	
12,401.0	9,047.2	8,700.0	8,696.7	63.1	16.6	-8.93	509.8	-464.3	2,983.4	2,948.8	34.66	86.080	
12,495.0	9,046.3	8,700.0	8,696.7	64.6	16.6	-21.15	509.8	-464.3	3,076.7	3,033.8	42.95	71.644	
12,589.0	9,046.3	8,700.0	8,696.7	66.2	16.6	-15.90	509.8	-464.3	3,170.2	3,130.2	40.01	79.240	
12,684.0	9,047.1	8,700.0	8,696.7	67.7	16.6	-23.85	509.8	-464.3	3,264.7	3,218.0	46.75	69.840	
12,778.0	9,049.7	8,685.2	8,682.0	69.2	16.6	-21.60	511.3	-465.1	3,358.4	3,312.7	45.72	73.451	
12,871.0	9,052.7	8,680.2	8,677.0	70.8	16.6	-23.80	511.9	-465.4	3,451.2	3,402.8	48.36	71.363	
12,966.0	9,055.9	8,675.3	8,672.2	72.3	16.5	-25.39	512.4	-465.6	3,545.9	3,495.2	50.66	69.991	
13,060.0	9,058.8	8,670.3	8,667.2	73.8	16.5	-20.92	512.9	-465.9	3,639.6	3,592.0	47.63	76.414	
13,154.0	9,061.3	8,665.0	8,662.0	75.4	16.5	-16.58	513.4	-466.2	3,733.3	3,688.4	44.95	83.052	
13,249.0	9,063.9	8,659.9	8,656.8	77.0	16.5	-15.65	514.0	-466.4	3,828.1	3,783.1	44.98	85.098	
13,343.0	9,066.1	8,654.5	8,651.5	78.5	16.5	-25.26	514.5	-466.7	3,921.8	3,867.6	54.20	72.359	
13,438.0	9,066.0	8,647.5	8,644.6	80.1	16.5	-18.39	515.2	-467.0	4,016.2	3,967.3	48.94	82.060	
13,532.0	9,065.4	8,640.3	8,637.3	81.7	16.5	-35.86	516.0	-467.4	4,109.6	4,042.9	66.69	61.618	
13,626.0	9,064.5	8,632.8	8,629.9	83.3	16.4	-29.59	516.7	-467.8	4,202.8	4,141.4	61.41	68.436	
13,721.0	9,062.1	8,624.3	8,621.5	84.9	16.4	-30.10	517.6	-468.2	4,296.9	4,234.0	62.91	68.299	
13,815.0	9,059.1	8,615.6	8,612.9	86.4	16.4	-18.33	518.4	-468.6	4,389.9	4,337.8	52.15	84.182	
13,909.0	9,057.0	8,600.0	8,597.3	88.0	16.4	-23.80	519.9	-469.3	4,483.2	4,425.0	58.17	77.066	
14,004.0	9,055.9	8,600.0	8,597.3	89.6	16.4	-27.60	519.9	-469.3	4,577.5	4,514.4	63.11	72.531	
14,098.0	9,053.8	8,600.0	8,597.3	91.2	16.4	-24.52	519.9	-469.3	4,670.7	4,610.0	60.77	76.858	
14,193.0	9,052.8	8,584.4	8,581.8	92.8	16.3	-30.22	521.5	-470.1	4,765.1	4,697.3	67.83	70.256	
14,287.0	9,053.3	8,578.0	8,575.5	94.4	16.3	-21.71	522.1	-470.4	4,858.6	4,799.2	59.44	81.741	
14,381.0	9,053.5	8,571.6	8,569.1	96.0	16.3	-19.17	522.7	-470.7	4,952.2	4,894.5	57.67	85.866	
14,475.0	9,053.7	8,565.2	8,562.7	97.6	16.3	-16.98	523.3	-471.0	5,045.8	4,989.5	56.32	89.584	
14,570.0	9,054.0	8,558.9	8,556.4	99.1	16.3	-16.07	523.9	-471.2	5,140.4	5,084.1	56.25	91.387	
14,664.0	9,053.6	8,552.2	8,549.8	100.7	16.2	-20.04	524.5	-471.5	5,233.9	5,172.8	61.09	85.679	
14,758.0	9,052.4	8,544.9	8,542.6	102.3	16.2	-20.58	525.2	-471.9	5,327.3	5,264.8	62.51	85.221	
14,853.0	9,050.8	8,537.4	8,535.1	103.9	16.2	-20.86	525.9	-472.2	5,421.7	5,358.0	63.68	85.139	
14,947.0	9,048.9	8,529.8	8,527.5	105.5	16.2	-17.40	526.6	-472.5	5,515.1	5,454.3	60.79	90.720	
15,041.0	9,047.1	8,522.4	8,520.1	107.1	16.2	-18.30	527.2	-472.8	5,608.4	5,545.9	62.51	89.722	
15,136.0	9,046.2	8,515.5	8,513.3	108.7	16.2	-29.93	527.9	-473.1	5,702.9	5,625.6	77.31	73.766	
15,230.0	9,045.7	8,500.0	8,497.9	110.3	16.1	-25.97	529.3	-473.7	5,796.4	5,723.1	73.24	79.142	
15,325.0	9,043.6	8,500.0	8,497.9	111.9	16.1	-16.67	529.3	-473.7	5,890.7	5,827.4	63.24	93.149	
15,419.0	9,039.7	8,500.0	8,497.9	113.5	16.1	-4.24	529.3	-473.7	5,983.9	5,929.3	54.60	109.604	
15,514.0	9,035.5	8,500.0	8,497.9	115.2	16.1	-2.66	529.3	-473.7	6,078.1	6,023.3	54.79	110.934	
15,608.0	9,033.5	8,500.0	8,497.9	116.8	16.1	-11.64	529.3	-473.7	6,171.6	6,111.0	60.55	101.928	
15,703.0	9,033.9	8,500.0	8,497.9	118.3	16.1	-16.78	529.3	-473.7	6,266.3	6,199.8	66.43	94.333	
15,797.0	9,033.9	8,473.7	8,471.7	119.9	16.1	-24.12	531.6	-474.8	6,359.8	6,283.5	76.32	83.335	
15,892.0	9,034.0	8,469.4	8,467.4	121.5	16.0	-38.11	531.9	-475.0	6,454.3	6,357.7	96.65	66.780	
15,986.0	9,033.9	8,465.1	8,463.1	123.1	16.0	-28.92	532.3	-475.1	6,547.9	6,463.1	84.79	77.220	
16,081.0	9,033.4	8,460.5	8,458.6	124.8	16.0	-33.50	532.7	-475.3	6,642.4	6,550.0	92.35	71.926	
16,175.0	9,031.9	8,455.7	8,453.7	126.4	16.0	-17.09	533.1	-475.5	6,735.8	6,664.9	70.86	95.062	
16,269.0	9,031.7	8,451.5	8,449.6	128.0	16.0	-46.08	533.4	-475.6	6,829.4	6,717.1	112.25	60.839	
16,364.0	9,032.7	8,448.0	8,446.0	129.6	16.0	-37.00	533.7	-475.8	6,923.9	6,823.3	100.68	68.772	
16,458.0	9,032.7	8,443.9	8,442.1	131.3	16.0	-50.12	534.1	-475.9	7,017.3	6,897.3	120.09	58.432	
16,553.0	9,031.7	8,439.4	8,437.6	132.9	16.0	-35.90	534.4	-476.1	7,111.6	7,010.4	101.23	70.251	
16,647.0	9,029.5	8,434.4	8,432.6	134.5	16.0	-36.18	534.8	-476.3	7,204.9	7,102.1	102.75	70.117	
16,694.0	9,028.5	8,432.0	8,430.1	135.3	16.0	-36.57	535.0	-476.4	7,251.5	7,147.6	103.88	69.805	
16,745.0	9,027.4	8,429.4	8,427.6	136.2	15.9	-36.47	535.2	-476.5	7,302.1	7,197.8	104.33	69.988	

Offset Design University 3-14 - University 3-14 #9 - Wellbore #1 - OH

Survey Program: 100-NS-GYRO-MS

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-3.73	5,925.6	-386.1	5,938.2				
173.0	173.0	164.5	164.5	0.2	0.3	-127.32	5,925.2	-385.1	5,938.0	5,937.5	0.47	N/A	
234.0	234.0	225.0	225.0	0.3	0.5	-137.32	5,925.1	-384.5	5,938.1	5,937.3	0.76	7,781.492	
423.0	423.0	443.5	443.5	0.7	1.0	153.20	5,924.2	-381.9	5,938.1	5,936.4	1.73	3,425.862	
608.0	608.0	626.8	626.8	1.1	1.5	155.64	5,922.7	-379.0	5,937.4	5,934.8	2.61	2,273.324	
793.0	793.0	826.0	825.9	1.5	2.1	111.38	5,921.0	-375.4	5,936.4	5,932.9	3.53	1,681.614	
980.0	980.0	1,012.7	1,012.6	1.9	2.5	116.42	5,919.4	-372.5	5,935.4	5,931.0	4.42	1,342.067	
1,155.3	1,155.3	1,177.6	1,177.4	2.3	3.0	118.94	5,917.9	-369.9	5,934.9	5,929.7	5.25	1,130.606	
1,168.0	1,168.0	1,188.8	1,188.6	2.3	3.0	119.07	5,917.9	-369.7	5,934.9	5,929.6	5.31	1,118.291	
1,245.0	1,244.9	1,263.3	1,263.2	2.5	3.2	124.59	5,917.3	-368.8	5,935.1	5,929.4	5.67	1,046.044	
1,394.0	1,393.9	1,412.6	1,412.4	2.8	3.6	116.13	5,916.3	-367.5	5,935.5	5,929.1	6.39	928.834	
1,488.0	1,487.9	1,500.0	1,499.8	3.0	3.8	109.65	5,915.8	-366.6	5,935.6	5,928.8	6.81	871.457	
1,583.0	1,582.9	1,594.1	1,594.0	3.2	4.1	-3.43	5,915.3	-365.7	5,935.3	5,928.0	7.25	818.862	
1,677.0	1,676.9	1,693.9	1,693.7	3.4	4.3	-117.23	5,914.6	-364.8	5,934.7	5,927.0	7.71	769.705	
1,772.0	1,771.9	1,780.3	1,780.1	3.6	4.6	-109.83	5,914.1	-363.8	5,934.4	5,926.2	8.13	730.016	
1,866.0	1,865.9	1,871.1	1,870.9	3.7	4.8	-105.63	5,913.7	-362.9	5,934.2	5,925.6	8.56	693.509	
1,960.0	1,959.9	1,961.2	1,961.0	3.9	5.1	-94.03	5,913.2	-362.2	5,933.9	5,924.9	8.98	660.508	
2,055.0	2,054.9	2,060.1	2,059.9	4.1	5.3	-88.64	5,912.8	-361.5	5,933.4	5,924.0	9.44	628.776	
2,149.0	2,148.9	2,152.5	2,152.3	4.3	5.6	-94.44	5,912.3	-360.8	5,932.9	5,923.1	9.87	600.896	
2,243.0	2,242.9	2,241.7	2,241.5	4.5	5.8	-104.45	5,912.0	-360.0	5,932.7	5,922.4	10.31	575.455	
2,337.0	2,336.8	2,332.0	2,331.7	4.7	6.0	-102.85	5,911.6	-359.1	5,932.6	5,921.9	10.74	552.228	
2,432.0	2,431.8	2,414.6	2,414.4	4.9	6.2	-57.05	5,911.5	-358.4	5,932.4	5,921.2	11.15	532.061	
2,526.0	2,525.8	2,490.1	2,489.9	5.1	6.4	-51.55	5,911.5	-357.7	5,932.0	5,920.4	11.53	514.583	
2,621.0	2,620.8	2,588.4	2,588.1	5.3	6.7	-23.44	5,911.7	-356.7	5,931.6	5,919.6	11.96	496.046	
2,715.0	2,714.8	2,671.7	2,671.5	5.5	6.9	-36.94	5,911.9	-355.7	5,931.2	5,918.8	12.35	480.390	
2,810.0	2,809.8	2,769.1	2,768.8	5.7	7.1	-41.83	5,912.2	-354.7	5,931.0	5,918.2	12.77	464.489	
2,904.0	2,903.8	2,857.6	2,857.3	5.9	7.3	-47.02	5,912.5	-353.5	5,930.7	5,917.5	13.17	450.416	
2,998.0	2,997.8	2,953.1	2,952.9	6.1	7.5	-55.42	5,912.9	-352.5	5,930.5	5,916.9	13.58	436.660	
3,093.0	3,092.8	3,044.9	3,044.7	6.3	7.7	-61.12	5,913.2	-351.5	5,930.1	5,916.1	13.99	423.913	
3,187.0	3,186.8	3,133.2	3,133.0	6.5	7.9	-43.02	5,913.7	-350.6	5,929.8	5,915.4	14.38	412.267	
3,282.0	3,281.8	3,233.1	3,232.9	6.7	8.1	-40.82	5,914.1	-349.8	5,929.3	5,914.5	14.80	400.533	
3,376.0	3,375.8	3,312.4	3,312.1	6.9	8.3	-32.52	5,914.6	-349.2	5,928.7	5,913.5	15.17	390.793	
3,470.0	3,469.8	3,417.7	3,417.5	7.1	8.5	-42.92	5,915.1	-348.4	5,928.0	5,912.4	15.59	380.208	
3,565.0	3,564.8	3,500.0	3,499.7	7.3	8.7	-35.23	5,915.6	-347.8	5,927.4	5,911.4	15.96	371.389	
3,659.0	3,658.8	3,587.5	3,587.2	7.5	8.9	-26.43	5,916.4	-347.1	5,926.8	5,910.4	16.33	362.927	
3,754.0	3,753.7	3,670.4	3,670.1	7.7	9.0	-35.83	5,917.1	-346.4	5,926.0	5,909.3	16.69	355.060	
3,848.0	3,847.7	3,750.1	3,749.7	7.9	9.2	18.37	5,918.0	-345.8	5,925.5	5,908.5	17.04	347.779	
3,872.6	3,872.3	3,770.9	3,770.6	7.9	9.2	36.49	5,918.3	-345.6	5,925.5	5,908.4	17.13	345.929	
3,943.0	3,942.7	3,835.7	3,835.4	8.1	9.4	74.58	5,919.2	-344.9	5,925.8	5,908.4	17.40	340.544	
4,037.0	4,036.7	3,926.9	3,926.5	8.3	9.5	87.11	5,920.5	-344.1	5,926.7	5,908.9	17.77	333.517	
4,131.0	4,130.6	4,011.5	4,011.2	8.4	9.7	85.93	5,921.7	-343.4	5,927.9	5,909.8	18.12	327.160	
4,226.0	4,225.6	4,084.8	4,084.4	8.6	9.8	89.67	5,923.1	-342.8	5,929.5	5,911.1	18.45	321.437	
4,320.0	4,319.6	4,187.7	4,187.3	8.8	10.0	77.40	5,925.1	-341.6	5,931.1	5,912.3	18.84	314.830	
4,414.0	4,413.6	4,284.9	4,284.5	9.0	10.2	69.33	5,926.9	-340.3	5,932.3	5,913.1	19.24	308.405	
4,509.0	4,508.6	4,379.6	4,379.2	9.2	10.4	76.76	5,928.6	-339.1	5,933.5	5,913.8	19.63	302.292	
4,603.0	4,602.6	4,472.8	4,472.4	9.4	10.6	76.68	5,930.2	-338.1	5,934.8	5,914.8	20.01	296.561	
4,697.0	4,696.6	4,569.2	4,568.7	9.6	10.8	64.00	5,931.9	-337.2	5,936.0	5,915.6	20.40	291.031	
4,792.0	4,791.6	4,684.5	4,684.0	9.8	11.0	86.42	5,933.8	-336.3	5,937.2	5,916.4	20.82	285.105	
4,886.0	4,885.5	4,774.9	4,774.4	10.0	11.2	91.84	5,935.1	-335.6	5,938.5	5,917.3	21.21	280.038	
4,981.0	4,980.4	4,881.5	4,881.0	10.2	11.4	100.27	5,936.5	-335.1	5,940.3	5,918.7	21.61	274.857	
5,075.0	5,074.3	4,980.0	4,979.5	10.4	11.6	113.79	5,937.7	-334.6	5,943.0	5,921.0	22.00	270.108	
5,170.0	5,169.1	5,064.5	5,063.9	10.6	11.7	121.41	5,938.8	-334.1	5,947.1	5,924.8	22.37	265.889	
5,264.0	5,262.8	5,170.4	5,169.9	10.8	12.0	123.36	5,940.2	-333.6	5,952.2	5,929.5	22.78	261.315	
5,359.0	5,357.5	5,271.9	5,271.3	11.0	12.2	118.35	5,941.2	-333.1	5,957.1	5,933.9	23.20	256.728	
5,453.0	5,451.2	5,372.7	5,372.1	11.3	12.4	113.22	5,942.2	-332.6	5,961.2	5,937.6	23.63	252.282	
5,548.0	5,545.8	5,472.0	5,471.4	11.5	12.6	113.58	5,943.0	-332.1	5,965.4	5,941.3	24.06	247.961	
5,642.0	5,639.4	5,561.8	5,561.3	11.7	12.8	113.56	5,943.8	-331.5	5,969.6	5,945.2	24.47	243.945	
5,736.0	5,733.0	5,664.6	5,664.1	11.9	13.1	115.26	5,944.7	-331.0	5,973.8	5,948.9	24.91	239.777	
5,831.0	5,827.7	5,755.3	5,754.7	12.1	13.3	112.04	5,945.3	-330.5	5,977.6	5,952.3	25.34	235.891	
5,925.0	5,921.4	5,832.4	5,831.8	12.3	13.5	109.82	5,946.0	-329.9	5,981.2	5,955.5	25.73	232.446	
6,020.0	6,016.1	5,914.5	5,913.9	12.5	13.6	109.18	5,947.0	-329.6	5,984.8	5,958.7	26.12	229.120	
6,114.0	6,109.8	6,033.7	6,033.1	12.7	13.9	106.57	5,948.2	-329.2	5,988.0	5,961.4	26.59	225.211	
6,209.0	6,204.5	6,132.5	6,132.0	12.9	14.1	108.94	5,949.0	-328.7	5,991.1	5,964.1	27.02	221.692	
6,303.0	6,298.2	6,232.7	6,232.1	13.1	14.3	116.80	5,949.8	-328.4	5,994.8	5,967.3	27.45	218.376	
6,398.0	6,392.9	6,329.8	6,329.2	13.4	14.6	116.87	5,950.3	-327.9	5,999.0	5,971.1	27.90	215.048	
6,492.0	6,486.6	6,415.2	6,414.6	13.6	14.8	118.46	5,951.0	-327.1	6,003.1	5,974.7	28.33	211.903	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Offset Design University 3-14 - University 3-14 #9 - Wellbore #1 - OH

Survey Program: 100-NS-GYRO-MS

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,587.0	6,581.3	6,517.0	6,516.4	13.8	15.1	119.33	5,951.7	-326.1	6,007.0	5,978.2	28.80	208.551	
6,681.0	6,675.1	6,600.0	6,599.4	14.0	15.3	114.49	5,952.3	-325.1	6,010.7	5,981.5	29.23	205.607	
6,775.0	6,768.7	6,685.0	6,684.3	14.2	15.5	110.53	5,953.1	-324.0	6,014.5	5,984.9	29.67	202.719	
6,870.0	6,863.3	6,787.8	6,787.2	14.5	15.8	108.23	5,954.1	-322.8	6,018.5	5,988.4	30.16	199.534	
6,964.0	6,956.9	6,874.3	6,873.7	14.7	16.0	106.36	5,954.8	-321.8	6,021.9	5,991.3	30.61	196.722	
7,059.0	7,051.6	6,994.1	6,993.4	14.9	16.3	108.35	5,955.8	-320.3	6,024.9	5,993.8	31.14	193.499	
7,153.0	7,145.2	7,108.1	7,107.4	15.1	16.6	109.21	5,956.2	-319.0	6,028.0	5,996.4	31.65	190.457	
7,247.0	7,238.8	7,212.9	7,212.2	15.3	16.9	107.06	5,956.3	-317.9	6,030.8	5,998.6	32.15	187.587	
7,342.0	7,333.5	7,305.4	7,304.7	15.6	17.1	109.91	5,956.4	-316.7	6,033.3	6,000.7	32.60	185.074	
7,436.0	7,427.1	7,407.7	7,407.0	15.8	17.4	110.39	5,956.4	-315.3	6,036.3	6,003.3	33.08	182.473	
7,530.0	7,520.6	7,507.7	7,507.0	16.0	17.6	109.49	5,956.2	-314.0	6,039.4	6,005.8	33.56	179.971	
7,625.0	7,615.1	7,590.2	7,589.5	16.3	17.8	108.48	5,956.1	-313.1	6,042.4	6,008.4	34.00	177.742	
7,719.0	7,708.7	7,687.4	7,686.7	16.5	18.0	107.80	5,956.1	-312.0	6,045.1	6,010.7	34.47	175.387	
7,814.0	7,803.4	7,778.2	7,777.5	16.7	18.3	112.19	5,956.1	-311.1	6,047.5	6,012.6	34.91	173.210	
7,908.0	7,897.2	7,874.6	7,873.8	16.9	18.5	109.25	5,956.0	-310.2	6,049.9	6,014.6	35.37	171.026	
8,003.0	7,991.9	7,962.5	7,961.8	17.1	18.7	108.62	5,956.0	-309.6	6,052.4	6,016.5	35.82	168.956	
8,097.0	8,085.6	8,051.0	8,050.3	17.4	19.0	106.40	5,956.1	-309.0	6,054.6	6,018.4	36.27	166.926	
8,192.0	8,180.4	8,146.3	8,145.6	17.6	19.2	108.07	5,956.3	-308.4	6,056.6	6,019.9	36.74	164.861	
8,286.0	8,274.2	8,244.5	8,243.8	17.8	19.5	109.14	5,956.4	-307.8	6,058.3	6,021.1	37.20	162.846	
8,381.0	8,369.2	8,343.4	8,342.7	18.0	19.7	113.59	5,956.4	-307.1	6,059.6	6,021.9	37.66	160.891	
8,395.0	8,383.2	8,357.3	8,356.6	18.0	19.8	113.19	5,956.4	-307.1	6,059.8	6,022.0	37.73	160.616	
8,546.0	8,534.1	8,500.0	8,499.3	18.3	20.1	3.53	5,956.5	-306.1	6,058.4	6,020.0	38.39	157.798	
8,577.0	8,565.0	8,523.4	8,522.6	18.4	20.2	-10.53	5,956.6	-305.9	6,056.3	6,018.0	38.32	158.035	
8,609.0	8,596.7	8,554.7	8,554.0	18.5	20.3	-9.11	5,956.7	-305.6	6,051.8	6,013.7	38.14	158.671	
8,640.0	8,627.0	8,584.7	8,584.0	18.5	20.4	-7.59	5,956.7	-305.4	6,045.6	6,007.7	37.84	159.754	
8,685.0	8,670.2	8,627.4	8,626.6	18.6	20.5	-3.69	5,956.9	-305.2	6,033.0	5,995.9	37.07	162.762	
8,734.0	8,715.6	8,672.2	8,671.5	18.6	20.6	0.45	5,957.0	-304.9	6,014.8	5,978.7	36.07	166.770	
8,781.0	8,757.6	8,711.6	8,710.9	18.7	20.7	1.50	5,957.1	-304.8	5,993.8	5,958.7	35.09	170.814	
8,828.0	8,797.8	8,745.5	8,744.7	18.8	20.8	1.09	5,957.2	-304.7	5,969.7	5,935.8	33.96	175.787	
8,875.0	8,836.2	8,777.7	8,777.0	18.9	20.9	1.66	5,957.4	-304.6	5,942.8	5,910.1	32.61	182.223	
8,922.0	8,872.3	8,809.4	8,808.7	19.0	20.9	3.39	5,957.6	-304.5	5,912.9	5,881.8	31.10	190.105	
8,969.0	8,905.8	8,842.0	8,841.2	19.1	21.0	3.14	5,957.8	-304.3	5,880.2	5,851.0	29.15	201.741	
9,017.0	8,937.0	8,872.4	8,871.7	19.2	21.1	3.45	5,958.0	-304.1	5,844.0	5,816.6	27.46	212.834	
9,064.0	8,964.2	8,900.0	8,899.2	19.3	21.2	3.50	5,958.2	-304.0	5,805.9	5,781.1	24.74	234.674	
9,111.0	8,987.2	8,930.3	8,929.6	19.5	21.2	5.27	5,958.4	-303.7	5,765.1	5,742.6	22.56	255.590	
9,158.0	9,007.2	8,957.8	8,957.0	19.7	21.3	8.21	5,958.5	-303.5	5,722.7	5,701.1	21.63	264.625	
9,205.0	9,024.3	8,981.3	8,980.6	19.9	21.4	11.37	5,958.6	-303.2	5,679.1	5,658.4	20.68	274.680	
9,252.0	9,038.5	9,000.0	8,999.2	20.2	21.4	13.28	5,958.6	-303.0	5,634.4	5,614.5	19.97	282.095	
9,299.0	9,050.1	9,010.4	9,009.6	20.5	21.4	12.70	5,958.6	-302.9	5,589.0	5,569.9	19.08	292.935	
9,346.0	9,058.9	9,018.0	9,017.3	20.8	21.5	12.37	5,958.7	-302.8	5,542.9	5,524.9	18.02	307.588	
9,394.0	9,063.7	9,022.2	9,021.4	21.2	21.5	11.15	5,958.7	-302.8	5,495.2	5,478.4	16.79	327.215	
9,477.0	9,065.3	9,023.8	9,023.0	21.9	21.5	-99.14	5,958.7	-302.8	5,412.2	5,369.9	42.32	127.887	
9,571.0	9,063.4	9,022.4	9,021.7	22.7	21.5	-147.41	5,958.7	-302.8	5,318.3	5,291.7	26.59	199.986	
9,666.0	9,060.9	9,020.4	9,019.7	23.6	21.5	156.20	5,958.7	-302.8	5,223.3	5,199.7	23.58	221.493	
9,760.0	9,059.9	9,019.8	9,019.0	24.5	21.5	87.23	5,958.7	-302.8	5,129.3	5,083.8	45.52	112.682	
9,854.0	9,061.9	9,021.8	9,021.0	25.4	21.5	22.67	5,958.7	-302.8	5,035.4	5,011.8	23.53	213.987	
9,949.0	9,066.2	9,025.7	9,025.0	26.5	21.5	34.24	5,958.7	-302.8	4,940.5	4,910.4	30.14	163.897	
10,043.0	9,070.8	9,029.9	9,029.2	27.7	21.5	38.53	5,958.7	-302.7	4,846.7	4,813.5	33.23	145.871	
10,137.0	9,072.6	9,031.7	9,030.9	28.9	21.5	160.86	5,958.7	-302.7	4,752.8	4,728.6	24.16	196.705	
10,232.0	9,070.6	9,030.2	9,029.5	30.1	21.5	-173.11	5,958.7	-302.7	4,657.8	4,638.5	19.33	240.980	
10,326.0	9,069.8	9,029.8	9,029.0	31.4	21.5	38.43	5,958.7	-302.7	4,563.8	4,528.2	35.59	128.234	
10,421.0	9,070.1	9,030.2	9,029.5	32.7	21.5	82.52	5,958.7	-302.7	4,468.8	4,415.5	53.35	83.769	
10,515.0	9,070.2	9,030.6	9,029.9	34.0	21.5	45.11	5,958.7	-302.7	4,374.8	4,333.6	41.25	106.063	
10,609.0	9,069.1	9,029.9	9,029.1	35.3	21.5	169.42	5,958.7	-302.7	4,280.8	4,257.5	23.29	183.805	
10,704.0	9,067.7	9,028.9	9,028.1	36.6	21.5	-71.61	5,958.7	-302.7	4,185.8	4,130.4	55.44	75.509	
10,798.0	9,066.2	9,027.8	9,027.1	38.0	21.5	-136.59	5,958.7	-302.7	4,091.9	4,048.7	43.13	94.877	
10,893.0	9,064.9	9,026.9	9,026.2	39.4	21.5	-76.00	5,958.7	-302.7	3,996.9	3,937.8	59.08	67.654	
10,987.0	9,066.1	9,028.3	9,027.5	40.8	21.5	-41.70	5,958.7	-302.7	3,902.9	3,857.8	45.12	86.501	
11,081.0	9,067.7	9,029.9	9,029.2	42.2	21.5	-39.33	5,958.7	-302.7	3,809.0	3,764.3	44.69	85.240	
11,175.0	9,069.5	9,031.8	9,031.1	43.6	21.5	17.69	5,958.7	-302.7	3,715.0	3,684.7	30.36	122.380	
11,270.0	9,071.3	9,033.7	9,033.0	45.1	21.5	-50.29	5,958.7	-302.7	3,620.0	3,566.2	53.87	67.203	
11,364.0	9,072.5	9,035.1	9,034.4	46.5	21.5	-49.52	5,958.7	-302.7	3,526.1	3,471.5	54.55	64.636	
11,458.0	9,070.2	9,033.3	9,032.5	48.0	21.5	-137.36	5,958.7	-302.7	3,432.2	3,382.3	49.91	68.772	
11,553.0	9,064.2	9,028.2	9,027.4	49.5	21.5	-131.65	5,958.7	-302.7	3,337.5	3,282.6	54.96	60.729	
11,647.0	9,058.5	9,023.3	9,022.6	50.9	21.5	-129.55	5,958.7	-302.8	3,243.9	3,186.4	57.48	56.439	
11,741.0	9,056.4	9,021.7	9,020.9	52.4	21.5	-61.30	5,958.7	-302.8	3,150.1	3,083.9	66.22	47.568	

Offset Design University 3-14 - University 3-14 #9 - Wellbore #1 - OH

Survey Program: 100-NS-GYRO-MS

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,836.0	9,054.0	9,019.7	9,019.0	53.9	21.5	-138.67	5,958.7	-302.8	3,055.2	3,001.8	53.39	57.228	
11,930.0	9,050.9	9,017.2	9,016.4	55.4	21.5	-86.81	5,958.7	-302.9	2,961.4	2,885.0	76.44	38.739	
12,024.0	9,049.8	9,016.4	9,015.7	56.9	21.5	-111.17	5,958.7	-302.9	2,867.5	2,794.3	73.26	39.141	
12,118.0	9,050.8	9,017.6	9,016.8	58.4	21.5	-23.59	5,958.7	-302.8	2,773.6	2,730.5	43.07	64.402	
12,212.0	9,052.4	9,019.3	9,018.5	60.0	21.5	-101.59	5,958.7	-302.8	2,679.7	2,600.1	79.62	33.655	
12,307.0	9,050.3	9,017.6	9,016.9	61.6	21.5	-119.46	5,958.7	-302.8	2,584.8	2,511.5	73.31	35.259	
12,401.0	9,047.2	9,015.0	9,014.2	63.1	21.4	-114.08	5,958.6	-302.9	2,491.0	2,413.4	77.63	32.088	
12,495.0	9,046.3	9,014.4	9,013.7	64.6	21.4	-74.11	5,958.6	-302.9	2,397.2	2,314.1	83.16	28.826	
12,589.0	9,046.3	9,014.8	9,014.0	66.2	21.4	-99.15	5,958.6	-302.9	2,303.4	2,217.2	86.23	26.712	
12,684.0	9,047.1	9,015.7	9,015.0	67.7	21.5	-64.72	5,958.6	-302.9	2,208.6	2,126.7	81.95	26.952	
12,778.0	9,049.7	9,018.5	9,017.7	69.2	21.5	-66.19	5,958.7	-302.8	2,114.8	2,030.7	84.14	25.134	
12,871.0	9,052.7	9,021.6	9,020.8	70.8	21.5	-61.44	5,958.7	-302.8	2,022.1	1,939.3	82.80	24.421	
12,966.0	9,055.9	9,024.9	9,024.1	72.3	21.5	-64.13	5,958.7	-302.8	1,927.4	1,841.5	85.89	22.442	
13,060.0	9,058.8	9,027.9	9,027.1	73.8	21.5	-67.79	5,958.7	-302.7	1,833.7	1,744.4	89.31	20.532	
13,154.0	9,061.3	9,030.5	9,029.8	75.4	21.5	-73.76	5,958.7	-302.7	1,740.1	1,646.6	93.51	18.608	
13,249.0	9,063.9	9,033.3	9,032.5	77.0	21.5	-70.37	5,958.7	-302.7	1,645.5	1,552.0	93.54	17.592	
13,343.0	9,066.1	9,035.7	9,035.0	78.5	21.5	-76.99	5,958.7	-302.7	1,551.9	1,454.1	97.81	15.867	
13,438.0	9,066.0	9,036.0	9,035.2	80.1	21.5	-99.95	5,958.7	-302.7	1,457.2	1,357.3	99.99	14.574	
13,532.0	9,065.4	9,035.7	9,034.9	81.7	21.5	-82.57	5,958.7	-302.7	1,363.5	1,261.0	102.46	13.307	
13,626.0	9,064.5	9,035.1	9,034.4	83.3	21.5	-109.95	5,958.7	-302.7	1,269.7	1,170.5	99.19	12.800	
13,721.0	9,062.1	9,033.1	9,032.3	84.9	21.5	-111.09	5,958.7	-302.7	1,174.9	1,074.8	100.09	11.738	
13,815.0	9,059.1	9,030.5	9,029.8	86.4	21.5	-109.99	5,958.7	-302.7	1,081.2	979.1	102.08	10.592	
13,909.0	9,057.0	9,028.7	9,028.0	88.0	21.5	-93.81	5,958.7	-302.7	987.7	878.5	109.12	9.051	
14,004.0	9,055.9	9,027.9	9,027.1	89.6	21.5	-98.02	5,958.7	-302.7	893.1	783.1	109.99	8.120	
14,098.0	9,053.8	9,026.2	9,025.4	91.2	21.5	-103.24	5,958.7	-302.8	799.7	689.8	109.90	7.276	
14,193.0	9,052.8	9,025.5	9,024.7	92.8	21.5	-86.23	5,958.7	-302.8	705.3	591.4	114.00	6.187	
14,287.0	9,053.3	9,026.2	9,025.5	94.4	21.5	-88.31	5,958.7	-302.8	612.4	496.7	115.66	5.295	
14,381.0	9,053.5	9,026.8	9,026.0	96.0	21.5	-89.19	5,958.7	-302.8	519.9	402.6	117.27	4.433	
14,475.0	9,053.7	9,027.2	9,026.5	97.6	21.5	-89.45	5,958.7	-302.7	428.1	309.3	118.85	3.602	
14,570.0	9,054.0	9,027.8	9,027.0	99.1	21.5	-89.41	5,958.7	-302.7	336.8	216.3	120.43	2.796	
14,664.0	9,053.6	9,027.7	9,027.0	100.7	21.5	-91.54	5,958.7	-302.7	248.9	126.9	122.00	2.040	
14,758.0	9,052.4	9,026.8	9,026.0	102.3	21.5	-91.56	5,958.7	-302.8	167.2	43.7	123.60	1.353	Level 3
14,853.0	9,050.8	9,025.5	9,024.8	103.9	21.5	-90.92	5,958.7	-302.8	107.5	-17.7	125.24	0.858	Level 1
14,891.8	9,050.1	9,024.9	9,024.2	104.5	21.5	-90.60	5,958.7	-302.8	100.2	-25.7	125.90	0.796	Level 1, CC, ES, SF
14,947.0	9,048.9	9,023.9	9,023.1	105.5	21.5	-89.97	5,958.7	-302.8	114.5	-12.4	126.84	0.902	Level 1
15,041.0	9,047.1	9,022.4	9,021.6	107.1	21.5	-89.51	5,958.7	-302.8	179.9	51.5	128.43	1.401	Level 3
15,136.0	9,046.2	9,021.7	9,021.0	108.7	21.5	-90.50	5,958.7	-302.8	263.8	133.8	130.08	2.028	
15,230.0	9,045.7	9,021.5	9,020.7	110.3	21.5	-89.81	5,958.7	-302.8	352.3	220.6	131.68	2.675	
15,325.0	9,043.6	9,019.6	9,018.8	111.9	21.5	-81.75	5,958.7	-302.8	444.1	311.8	132.25	3.358	
15,419.0	9,039.7	9,016.0	9,015.2	113.5	21.5	-76.47	5,958.7	-302.9	536.3	404.5	131.84	4.068	
15,514.0	9,035.5	9,011.9	9,011.2	115.2	21.4	-72.96	5,958.6	-302.9	630.2	498.6	131.64	4.787	
15,608.0	9,033.5	9,010.2	9,009.5	116.8	21.4	-93.43	5,958.6	-302.9	723.4	585.7	137.75	5.252	
15,703.0	9,033.9	9,010.9	9,010.1	118.3	21.4	-94.44	5,958.6	-302.9	817.7	678.5	139.23	5.873	
15,797.0	9,033.9	9,011.2	9,010.4	119.9	21.4	-89.34	5,958.6	-302.9	911.0	769.7	141.29	6.448	
15,892.0	9,034.0	9,011.5	9,010.7	121.5	21.4	-94.65	5,958.6	-302.9	1,005.3	862.8	142.50	7.054	
15,986.0	9,033.9	9,011.6	9,010.9	123.1	21.4	-87.36	5,958.6	-302.9	1,098.6	954.1	144.45	7.605	
16,081.0	9,033.4	9,011.3	9,010.5	124.8	21.4	-90.00	5,958.6	-302.9	1,193.0	1,046.8	146.20	8.160	
16,175.0	9,031.9	9,010.0	9,009.2	126.4	21.4	-72.80	5,958.6	-302.9	1,286.6	1,144.1	142.48	9.030	
16,269.0	9,031.7	9,010.0	9,009.3	128.0	21.4	-105.59	5,958.6	-302.9	1,380.2	1,235.5	144.70	9.538	
16,364.0	9,032.7	9,011.3	9,010.5	129.6	21.4	-89.87	5,958.6	-302.9	1,474.7	1,323.7	151.07	9.762	
16,458.0	9,032.7	9,011.5	9,010.7	131.3	21.4	-93.16	5,958.6	-302.9	1,568.2	1,415.8	152.41	10.289	
16,553.0	9,031.7	9,010.6	9,009.9	132.9	21.4	-77.84	5,958.6	-302.9	1,662.6	1,511.0	151.57	10.969	
16,647.0	9,029.5	9,008.5	9,007.7	134.5	21.4	-78.12	5,958.6	-302.9	1,756.1	1,602.9	153.28	11.457	
16,694.0	9,028.5	9,007.5	9,006.8	135.3	21.4	-78.83	5,958.6	-303.0	1,802.9	1,648.6	154.37	11.679	
16,745.0	9,027.4	9,006.5	9,005.7	136.2	21.4	-78.48	5,958.6	-303.0	1,853.7	1,698.6	155.08	11.953	

PIONEER NATURAL RESOURCES

Upton Co., TX
University 3-14 #17H
H&P 606

INTEGRITY Directional Services

ANNOTATIONS								
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
9028.5	16694.0	91.20	357.90	7758.9	-205.2	7761.6	8208.3	Last MWD @ 16694' MD / 9029' TVD
9027.4	16745.0	91.20	357.90	7809.9	-207.1	7812.5	8259.3	PTD @ 16745' MD / 9027' TVD

PROJECT DETAILS: Upton 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

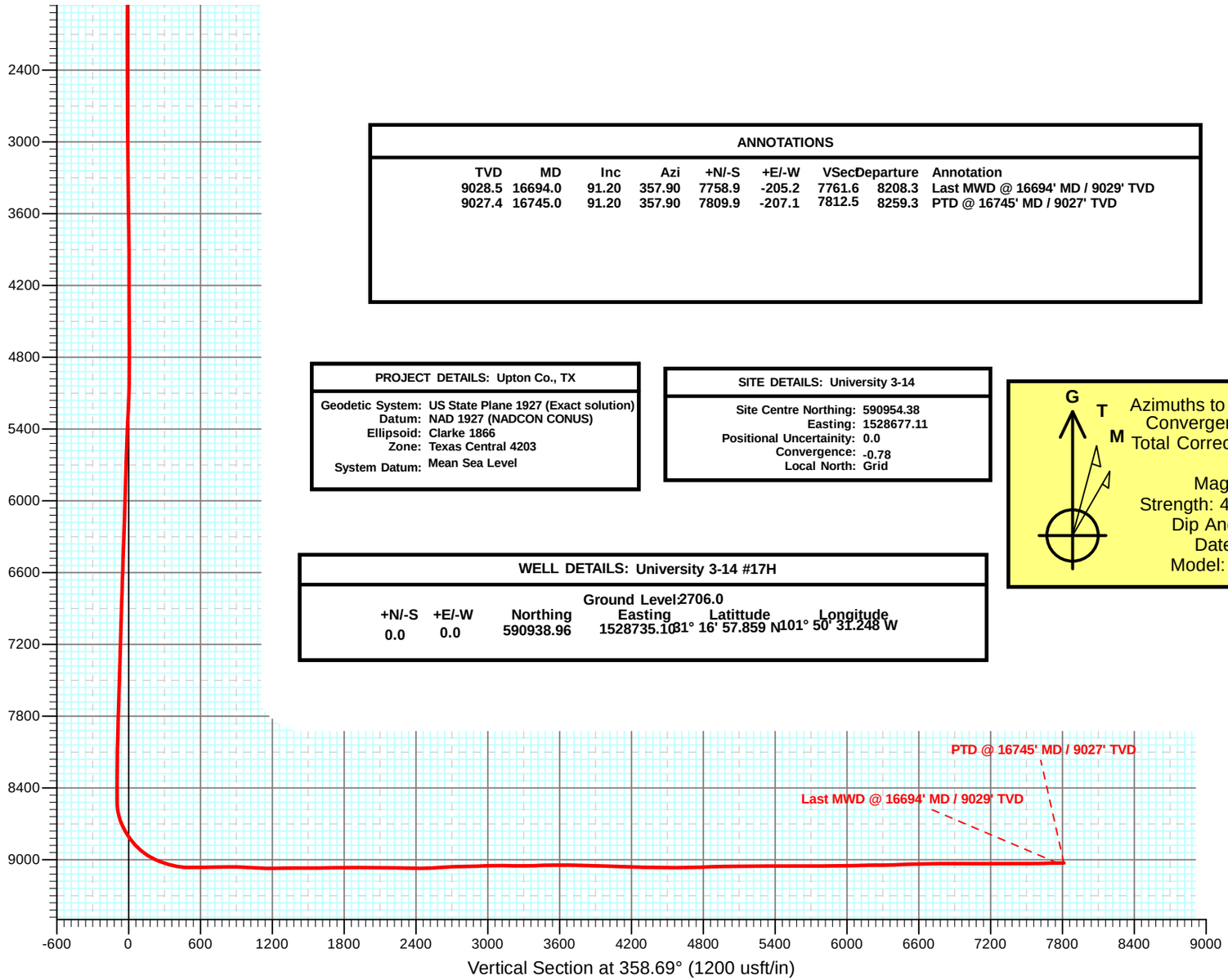
SITE DETAILS: University 3-14	
Site Centre Northing:	590954.38
Easting:	1528677.11
Positional Uncertainity:	0.0
Convergence:	-0.78
Local North:	Grid

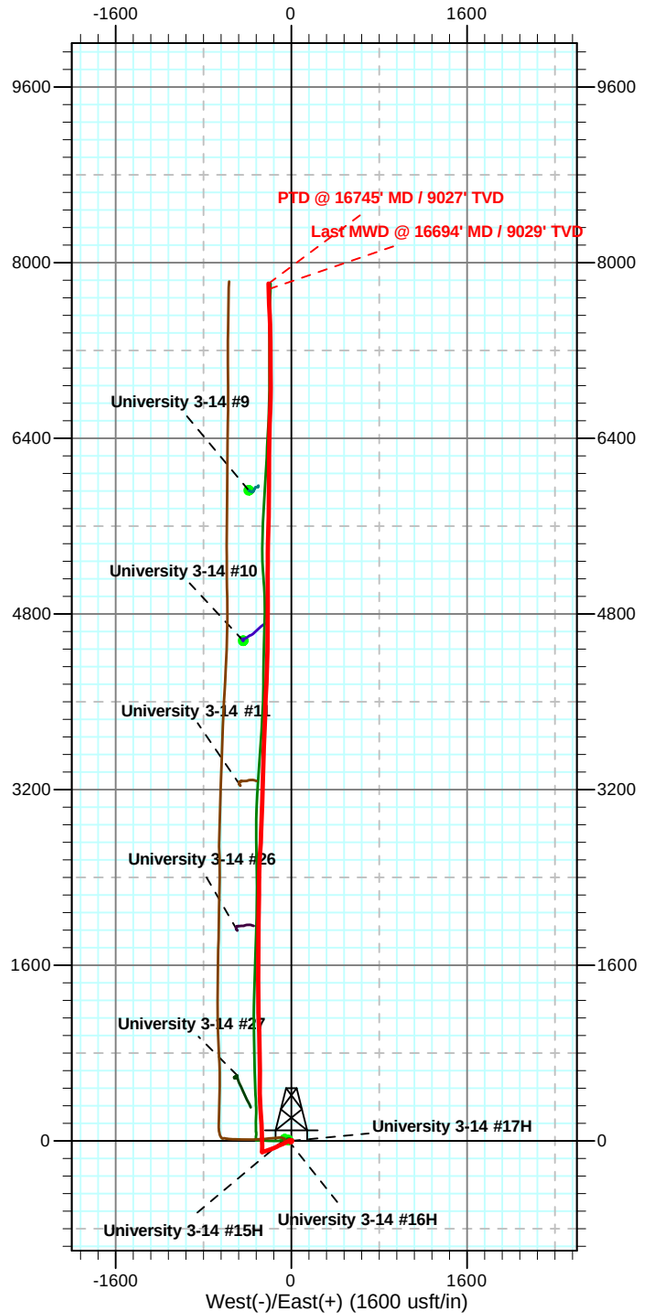
WELL DETAILS: University 3-14 #17H					
Ground Level: 2706.0					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	590938.96	1528735.10	31° 16' 57.859 N	101° 50' 31.248 W

G T M

Azimuths to Grid North
Convergence: -0.78°
Total Correction: 7.13°

Magnetic Field
Strength: 47942.9snT
Dip Angle: 59.52°
Date: 4/9/2014
Model: IGRF2010





PIONEER
NATURAL RESOURCES

Pioneer Natural Resources

Upton Co., TX
University 3-14
University 3-14 #17H

Wellbore #1

Design: OH

Standard Survey Report

15 September, 2014

INTEGRITY
Directional Services

Company:	Pioneer Natural Resources	**Local Co-ordinate Reference:**	Well University 3-14 #17H
Project:	Upton Co., TX	**TVD Reference:**	Well @ 2733.0usft (H&P 606)
Site:	University 3-14	**MD Reference:**	Well @ 2733.0usft (H&P 606)
Well:	University 3-14 #17H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Project Upton 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 3-14

Site Position:		**Northing:**	590,954.38 usft	**Latitude:**	31° 16' 58.004 N
From:	Map	**Easting:**	1,528,677.11 usft	**Longitude:**	101° 50' 31.918 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	-0.78 °

Well University 3-14 #17H

Well Position	**+N/-S**	0.0 usft	**Northing:**	590,938.96 usft	**Latitude:**	31° 16' 57.859 N
	+E/-W	0.0 usft	**Easting:**	1,528,735.10 usft	**Longitude:**	101° 50' 31.248 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	2,706.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/9/2014	6.35	59.52	47,943

Design OH

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	358.69

Survey Program **Date** 9/15/2014

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
173.0	16,745.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
173.0	0.30	123.60	173.0	-0.3	0.4	-0.3	0.17	0.17	0.00
234.0	0.40	133.60	234.0	-0.5	0.7	-0.5	0.19	0.16	16.39
423.0	0.30	203.10	423.0	-1.4	0.9	-1.4	0.22	-0.05	36.77
608.0	0.40	200.70	608.0	-2.4	0.5	-2.5	0.05	0.05	-1.30
793.0	0.40	245.00	793.0	-3.3	-0.3	-3.3	0.16	0.00	23.95
980.0	0.70	240.00	980.0	-4.2	-1.9	-4.1	0.16	0.16	-2.67
1,168.0	1.00	237.40	1,168.0	-5.6	-4.2	-5.5	0.16	0.16	-1.38
1,245.0	1.10	231.90	1,244.9	-6.4	-5.4	-6.3	0.18	0.13	-7.14
1,394.0	1.30	240.40	1,393.9	-8.2	-8.0	-8.0	0.18	0.13	5.70

Company:	Pioneer Natural Resources	**Local Co-ordinate Reference:**	Well University 3-14 #17H
Project:	Upton Co., TX	**TVD Reference:**	Well @ 2733.0usft (H&P 606)
Site:	University 3-14	**MD Reference:**	Well @ 2733.0usft (H&P 606)
Well:	University 3-14 #17H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,488.0	0.80	246.90	1,487.9	-8.9	-9.5	-8.7	0.55	-0.53	6.91
1,583.0	0.00	0.00	1,582.9	-9.2	-10.1	-9.0	0.84	-0.84	0.00
1,677.0	0.30	113.80	1,676.9	-9.3	-9.9	-9.1	0.32	0.32	0.00
1,772.0	0.60	106.40	1,771.9	-9.5	-9.2	-9.3	0.32	0.32	-7.79
1,866.0	0.70	102.20	1,865.9	-9.8	-8.2	-9.6	0.12	0.11	-4.47
1,960.0	0.60	90.60	1,959.9	-9.9	-7.1	-9.8	0.18	-0.11	-12.34
2,055.0	0.70	85.20	2,054.9	-9.9	-6.0	-9.8	0.12	0.11	-5.68
2,149.0	0.80	91.00	2,148.9	-9.9	-4.8	-9.7	0.13	0.11	6.17
2,243.0	0.80	101.00	2,242.9	-10.0	-3.5	-9.9	0.15	0.00	10.64
2,337.0	0.80	99.40	2,336.8	-10.2	-2.2	-10.2	0.02	0.00	-1.70
2,432.0	0.40	53.60	2,431.8	-10.1	-1.3	-10.1	0.63	-0.42	-48.21
2,526.0	0.40	48.10	2,525.8	-9.7	-0.8	-9.7	0.04	0.00	-5.85
2,621.0	0.40	20.00	2,620.8	-9.2	-0.4	-9.2	0.20	0.00	-29.58
2,715.0	0.40	33.50	2,714.8	-8.6	-0.1	-8.6	0.10	0.00	14.36
2,810.0	0.40	38.40	2,809.8	-8.1	0.3	-8.1	0.04	0.00	5.16
2,904.0	0.50	43.60	2,903.8	-7.5	0.7	-7.5	0.11	0.11	5.53
2,998.0	0.60	52.00	2,997.8	-6.9	1.4	-6.9	0.14	0.11	8.94
3,093.0	0.80	57.70	3,092.8	-6.3	2.4	-6.3	0.22	0.21	6.00
3,187.0	0.70	39.60	3,186.8	-5.5	3.3	-5.5	0.27	-0.11	-19.26
3,282.0	0.70	37.40	3,281.8	-4.6	4.0	-4.6	0.03	0.00	-2.32
3,376.0	0.90	29.10	3,375.8	-3.5	4.7	-3.6	0.25	0.21	-8.83
3,470.0	0.90	39.50	3,469.8	-2.2	5.5	-2.4	0.17	0.00	11.06
3,565.0	0.90	31.80	3,564.8	-1.0	6.4	-1.2	0.13	0.00	-8.11
3,659.0	1.00	23.00	3,658.8	0.4	7.1	0.2	0.19	0.11	-9.36
3,754.0	1.20	32.40	3,753.7	2.0	8.0	1.8	0.28	0.21	9.89
3,848.0	0.90	338.20	3,847.7	3.5	8.2	3.3	1.06	-0.32	-57.66
3,943.0	1.30	282.00	3,942.7	4.4	6.9	4.2	1.15	0.42	-59.16
4,037.0	1.50	269.50	4,036.7	4.6	4.6	4.5	0.39	0.21	-13.30
4,131.0	1.60	270.70	4,130.6	4.6	2.1	4.6	0.11	0.11	1.28
4,226.0	1.10	267.00	4,225.6	4.6	-0.1	4.6	0.53	-0.53	-3.89
4,320.0	0.90	279.30	4,319.6	4.6	-1.8	4.7	0.31	-0.21	13.09
4,414.0	1.00	287.40	4,413.6	5.0	-3.3	5.1	0.18	0.11	8.62
4,509.0	0.90	280.00	4,508.6	5.4	-4.8	5.5	0.17	-0.11	-7.79
4,603.0	0.70	280.10	4,602.6	5.6	-6.1	5.8	0.21	-0.21	0.11
4,697.0	0.70	292.80	4,696.6	5.9	-7.2	6.1	0.16	0.00	13.51
4,792.0	1.20	270.40	4,791.6	6.2	-8.7	6.4	0.65	0.53	-23.58
4,886.0	2.00	265.00	4,885.5	6.0	-11.3	6.3	0.87	0.85	-5.74
4,981.0	2.90	256.60	4,980.4	5.3	-15.3	5.7	1.02	0.95	-8.84
5,075.0	3.60	243.10	5,074.3	3.4	-20.3	3.9	1.10	0.74	-14.36
5,170.0	4.20	235.50	5,169.1	0.1	-25.8	0.7	0.83	0.63	-8.00
5,264.0	4.60	233.60	5,262.8	-4.1	-31.7	-3.3	0.45	0.43	-2.02
5,359.0	4.50	238.70	5,357.5	-8.3	-37.9	-7.4	0.44	-0.11	5.37
5,453.0	4.70	243.90	5,451.2	-11.9	-44.5	-10.8	0.49	0.21	5.53
5,548.0	5.40	243.60	5,545.8	-15.6	-52.0	-14.4	0.74	0.74	-0.32

Company:	Pioneer Natural Resources	**Local Co-ordinate Reference:**	Well University 3-14 #17H
Project:	Upton Co., TX	**TVD Reference:**	Well @ 2733.0usft (H&P 606)
Site:	University 3-14	**MD Reference:**	Well @ 2733.0usft (H&P 606)
Well:	University 3-14 #17H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,642.0	5.30	243.70	5,639.4	-19.5	-59.9	-18.1	0.11	-0.11	0.11
5,736.0	4.70	242.10	5,733.0	-23.2	-67.2	-21.6	0.66	-0.64	-1.70
5,831.0	4.90	245.40	5,827.7	-26.7	-74.3	-25.0	0.36	0.21	3.47
5,925.0	4.40	247.70	5,921.4	-29.7	-81.3	-27.9	0.57	-0.53	2.45
6,020.0	4.40	248.40	6,016.1	-32.5	-88.1	-30.4	0.06	0.00	0.74
6,114.0	4.60	251.10	6,109.8	-35.0	-95.0	-32.8	0.31	0.21	2.87
6,209.0	4.70	248.80	6,204.5	-37.6	-102.2	-35.3	0.22	0.11	-2.42
6,303.0	4.70	241.00	6,298.2	-40.9	-109.2	-38.4	0.68	0.00	-8.30
6,398.0	4.90	241.00	6,392.9	-44.8	-116.1	-42.1	0.21	0.21	0.00
6,492.0	4.20	239.50	6,486.6	-48.4	-122.6	-45.6	0.76	-0.74	-1.60
6,587.0	4.00	238.70	6,581.3	-51.9	-128.4	-49.0	0.22	-0.21	-0.84
6,681.0	4.20	243.60	6,675.1	-55.2	-134.3	-52.1	0.43	0.21	5.21
6,775.0	5.50	247.60	6,768.7	-58.4	-141.6	-55.2	1.43	1.38	4.26
6,870.0	5.80	250.00	6,863.3	-61.8	-150.3	-58.3	0.40	0.32	2.53
6,964.0	4.50	252.00	6,956.9	-64.6	-158.3	-60.9	1.40	-1.38	2.13
7,059.0	4.60	250.10	7,051.6	-67.0	-165.4	-63.2	0.19	0.11	-2.00
7,153.0	6.00	249.30	7,145.2	-70.0	-173.5	-66.0	1.49	1.49	-0.85
7,247.0	4.40	251.60	7,238.8	-72.9	-181.5	-68.7	1.72	-1.70	2.45
7,342.0	5.10	248.80	7,333.5	-75.6	-188.9	-71.2	0.78	0.74	-2.95
7,436.0	5.70	248.40	7,427.1	-78.8	-197.2	-74.3	0.64	0.64	-0.43
7,530.0	5.80	249.40	7,520.6	-82.2	-206.0	-77.5	0.15	0.11	1.06
7,625.0	5.80	250.50	7,615.1	-85.5	-215.0	-80.6	0.12	0.00	1.16
7,719.0	5.00	251.30	7,708.7	-88.4	-223.3	-83.3	0.85	-0.85	0.85
7,814.0	3.80	247.00	7,803.4	-90.9	-230.2	-85.7	1.31	-1.26	-4.53
7,908.0	4.60	250.00	7,897.2	-93.5	-236.6	-88.0	0.88	0.85	3.19
8,003.0	4.50	250.70	7,991.9	-96.0	-243.7	-90.4	0.12	-0.11	0.74
8,097.0	4.20	253.00	8,085.6	-98.2	-250.4	-92.5	0.37	-0.32	2.45
8,192.0	3.40	251.40	8,180.4	-100.1	-256.4	-94.2	0.85	-0.84	-1.68
8,286.0	2.60	250.40	8,274.2	-101.7	-261.1	-95.7	0.85	-0.85	-1.06
8,381.0	1.80	246.00	8,369.2	-103.1	-264.5	-97.0	0.86	-0.84	-4.63
8,395.0	1.70	246.40	8,383.2	-103.2	-264.9	-97.2	0.72	-0.71	2.86
8,546.0	1.80	356.10	8,534.1	-101.8	-267.1	-95.6	1.90	0.07	72.65
8,577.0	6.40	10.10	8,565.0	-99.6	-266.8	-93.5	15.08	14.84	45.16
8,609.0	10.20	8.60	8,596.7	-95.0	-266.1	-88.9	11.89	11.88	-4.69
8,640.0	13.70	7.00	8,627.0	-88.7	-265.2	-82.6	11.34	11.29	-5.16
8,685.0	19.30	3.10	8,670.2	-75.9	-264.2	-69.9	12.68	12.44	-8.67
8,734.0	24.60	359.20	8,715.6	-57.6	-263.9	-51.6	11.21	10.82	-7.96
8,781.0	28.90	358.30	8,757.6	-36.5	-264.3	-30.4	9.19	9.15	-1.91
8,828.0	33.10	358.70	8,797.8	-12.3	-265.0	-6.2	8.95	8.94	0.85
8,875.0	37.50	358.30	8,836.2	14.8	-265.7	20.9	9.37	9.36	-0.85
8,922.0	42.00	357.10	8,872.3	44.9	-266.9	51.0	9.71	9.57	-2.55
8,969.0	47.20	357.50	8,905.8	77.8	-268.5	83.9	11.08	11.06	0.85
9,017.0	51.50	357.50	8,937.0	114.2	-270.0	120.3	8.96	8.96	0.00

Company:	Pioneer Natural Resources	**Local Co-ordinate Reference:**	Well University 3-14 #17H
Project:	Upton Co., TX	**TVD Reference:**	Well @ 2733.0usft (H&P 606)
Site:	University 3-14	**MD Reference:**	Well @ 2733.0usft (H&P 606)
Well:	University 3-14 #17H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,064.0	57.90	357.80	8,964.2	152.5	-271.6	158.7	13.63	13.62	0.64
9,111.0	63.30	357.30	8,987.2	193.4	-273.4	199.6	11.53	11.49	-1.06
9,158.0	66.50	356.40	9,007.2	235.9	-275.7	242.1	7.03	6.81	-1.91
9,205.0	70.60	355.90	9,024.3	279.5	-278.6	285.8	8.78	8.72	-1.06
9,252.0	74.30	356.10	9,038.5	324.2	-281.8	330.6	7.88	7.87	0.43
9,299.0	77.10	356.90	9,050.1	369.7	-284.5	376.1	6.18	5.96	1.70
9,346.0	81.30	357.90	9,058.9	415.8	-286.6	422.2	9.18	8.94	2.13
9,394.0	87.40	359.30	9,063.7	463.5	-287.8	470.0	13.04	12.71	2.92
9,477.0	90.30	0.70	9,065.3	546.5	-287.8	552.9	3.88	3.49	1.69
9,571.0	92.00	1.00	9,063.4	640.4	-286.4	646.8	1.84	1.81	0.32
9,666.0	91.10	359.40	9,060.9	735.4	-286.1	741.8	1.93	-0.95	-1.68
9,760.0	90.10	358.70	9,059.9	829.4	-287.6	835.7	1.30	-1.06	-0.74
9,854.0	87.40	358.70	9,061.9	923.3	-289.8	929.7	2.87	-2.87	0.00
9,949.0	87.40	358.00	9,066.2	1,018.2	-292.5	1,024.6	0.74	0.00	-0.74
10,043.0	87.00	357.40	9,070.8	1,112.0	-296.3	1,118.5	0.77	-0.43	-0.64
10,137.0	90.90	359.70	9,072.6	1,205.9	-298.6	1,212.4	4.82	4.15	2.45
10,232.0	91.40	0.10	9,070.6	1,300.9	-298.8	1,307.4	0.67	0.53	0.42
10,326.0	89.60	359.50	9,069.8	1,394.9	-299.1	1,401.4	2.02	-1.91	-0.64
10,421.0	90.10	359.40	9,070.1	1,489.9	-300.0	1,496.4	0.54	0.53	-0.11
10,515.0	89.70	359.50	9,070.2	1,583.9	-301.0	1,590.4	0.44	-0.43	0.11
10,609.0	91.70	359.70	9,069.1	1,677.9	-301.6	1,684.3	2.14	2.13	0.21
10,704.0	90.00	0.50	9,067.7	1,772.9	-301.4	1,779.3	1.98	-1.79	0.84
10,798.0	91.80	1.50	9,066.2	1,866.8	-299.8	1,873.2	2.19	1.91	1.06
10,893.0	89.80	1.40	9,064.9	1,961.8	-297.4	1,968.1	2.11	-2.11	-0.11
10,987.0	88.70	1.20	9,066.1	2,055.8	-295.3	2,062.0	1.19	-1.17	-0.21
11,081.0	89.40	0.50	9,067.7	2,149.7	-293.9	2,155.9	1.05	0.74	-0.74
11,175.0	88.40	359.30	9,069.5	2,243.7	-294.0	2,249.9	1.66	-1.06	-1.28
11,270.0	89.40	0.80	9,071.3	2,338.7	-294.0	2,344.8	1.90	1.05	1.58
11,364.0	89.10	1.10	9,072.5	2,432.7	-292.4	2,438.7	0.45	-0.32	0.32
11,458.0	93.80	3.10	9,070.2	2,526.5	-289.0	2,532.5	5.43	5.00	2.13
11,553.0	93.40	3.30	9,064.2	2,621.2	-283.7	2,627.0	0.47	-0.42	0.21
11,647.0	93.50	3.60	9,058.5	2,714.9	-278.0	2,720.5	0.34	0.11	0.32
11,741.0	89.10	1.40	9,056.4	2,808.7	-273.9	2,814.3	5.23	-4.68	-2.34
11,836.0	93.80	2.60	9,054.0	2,903.6	-270.6	2,909.0	5.11	4.95	1.26
11,930.0	90.00	1.90	9,050.9	2,997.5	-266.9	3,002.8	4.11	-4.04	-0.74
12,024.0	91.30	2.20	9,049.8	3,091.4	-263.6	3,096.6	1.42	1.38	0.32
12,118.0	87.50	0.30	9,050.8	3,185.4	-261.5	3,190.5	4.52	-4.04	-2.02
12,212.0	90.60	1.30	9,052.4	3,279.3	-260.2	3,284.4	3.47	3.30	1.06
12,307.0	91.90	2.10	9,050.3	3,374.3	-257.4	3,379.3	1.61	1.37	0.84
12,401.0	91.90	2.80	9,047.2	3,468.1	-253.4	3,473.0	0.74	0.00	0.74
12,495.0	89.20	2.00	9,046.3	3,562.0	-249.4	3,566.8	3.00	-2.87	-0.85
12,589.0	90.70	2.10	9,046.3	3,656.0	-246.1	3,660.6	1.60	1.60	0.11
12,684.0	88.40	2.10	9,047.1	3,750.9	-242.6	3,755.4	2.42	-2.42	0.00

Company:	Pioneer Natural Resources	**Local Co-ordinate Reference:**	Well University 3-14 #17H
Project:	Upton Co., TX	**TVD Reference:**	Well @ 2733.0usft (H&P 606)
Site:	University 3-14	**MD Reference:**	Well @ 2733.0usft (H&P 606)
Well:	University 3-14 #17H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,778.0	88.40	2.20	9,049.7	3,844.8	-239.1	3,849.2	0.11	0.00	0.11
12,871.0	87.90	2.20	9,052.7	3,937.7	-235.5	3,942.0	0.54	-0.54	0.00
12,966.0	88.20	1.90	9,055.9	4,032.5	-232.1	4,036.8	0.45	0.32	-0.32
13,060.0	88.30	2.20	9,058.8	4,126.4	-228.7	4,130.6	0.34	0.11	0.32
13,154.0	88.70	2.40	9,061.3	4,220.3	-225.0	4,224.4	0.48	0.43	0.21
13,249.0	88.20	2.60	9,063.9	4,315.2	-220.8	4,319.1	0.57	-0.53	0.21
13,343.0	89.10	1.40	9,066.1	4,409.1	-217.5	4,412.9	1.60	0.96	-1.28
13,438.0	91.00	1.40	9,066.0	4,504.1	-215.2	4,507.8	2.00	2.00	0.00
13,532.0	89.70	359.70	9,065.4	4,598.1	-214.3	4,601.8	2.28	-1.38	-1.81
13,626.0	91.40	359.50	9,064.5	4,692.1	-215.0	4,695.8	1.82	1.81	-0.21
13,721.0	91.50	359.30	9,062.1	4,787.0	-216.0	4,790.7	0.24	0.11	-0.21
13,815.0	92.10	0.80	9,059.1	4,881.0	-215.9	4,884.6	1.72	0.64	1.60
13,909.0	90.50	0.60	9,057.0	4,974.9	-214.7	4,978.6	1.72	-1.70	-0.21
14,004.0	90.90	359.90	9,055.9	5,069.9	-214.3	5,073.5	0.85	0.42	-0.74
14,098.0	91.60	0.00	9,053.8	5,163.9	-214.4	5,167.5	0.75	0.74	0.11
14,193.0	89.60	0.20	9,052.8	5,258.9	-214.2	5,262.4	2.12	-2.11	0.21
14,287.0	89.80	1.00	9,053.3	5,352.9	-213.3	5,356.4	0.88	0.21	0.85
14,381.0	89.90	1.20	9,053.5	5,446.9	-211.4	5,450.3	0.24	0.11	0.21
14,475.0	89.90	1.40	9,053.7	5,540.9	-209.3	5,544.2	0.21	0.00	0.21
14,570.0	89.80	1.50	9,054.0	5,635.8	-206.9	5,639.1	0.15	-0.11	0.11
14,664.0	90.60	0.80	9,053.6	5,729.8	-205.0	5,733.0	1.13	0.85	-0.74
14,758.0	90.90	0.60	9,052.4	5,823.8	-203.9	5,826.9	0.38	0.32	-0.21
14,853.0	91.00	0.50	9,050.8	5,918.8	-203.0	5,921.9	0.15	0.11	-0.11
14,947.0	91.30	0.80	9,048.9	6,012.7	-201.9	6,015.8	0.45	0.32	0.32
15,041.0	90.90	0.80	9,047.1	6,106.7	-200.6	6,109.7	0.43	-0.43	0.00
15,136.0	90.20	359.70	9,046.2	6,201.7	-200.2	6,204.7	1.37	-0.74	-1.16
15,230.0	90.40	0.00	9,045.7	6,295.7	-200.4	6,298.6	0.38	0.21	0.32
15,325.0	92.20	0.50	9,043.6	6,390.7	-200.0	6,393.6	1.97	1.89	0.53
15,419.0	92.50	2.10	9,039.7	6,484.6	-197.9	6,487.4	1.73	0.32	1.70
15,514.0	92.60	2.30	9,035.5	6,579.4	-194.2	6,582.1	0.24	0.11	0.21
15,608.0	89.80	1.70	9,033.5	6,673.3	-191.0	6,675.9	3.05	-2.98	-0.64
15,703.0	89.70	1.30	9,033.9	6,768.3	-188.5	6,770.8	0.43	-0.11	-0.42
15,797.0	90.30	0.30	9,033.9	6,862.3	-187.2	6,864.8	1.24	0.64	-1.06
15,892.0	89.60	359.10	9,034.0	6,957.3	-187.6	6,959.7	1.46	-0.74	-1.26
15,986.0	90.50	359.60	9,033.9	7,051.3	-188.7	7,053.7	1.10	0.96	0.53
16,081.0	90.20	359.20	9,033.4	7,146.3	-189.7	7,148.7	0.53	-0.32	-0.42
16,175.0	91.60	0.50	9,031.9	7,240.2	-190.0	7,242.7	2.03	1.49	1.38
16,269.0	88.60	359.00	9,031.7	7,334.2	-190.4	7,336.7	3.57	-3.19	-1.60
16,364.0	90.20	358.70	9,032.7	7,429.2	-192.3	7,431.7	1.71	1.68	-0.32
16,458.0	89.80	357.00	9,032.7	7,523.1	-195.8	7,525.6	1.86	-0.43	-1.81
16,553.0	91.40	357.90	9,031.7	7,618.0	-200.0	7,620.6	1.93	1.68	0.95
16,647.0	91.30	357.90	9,029.5	7,711.9	-203.5	7,714.6	0.11	-0.11	0.00
16,694.0	91.20	357.90	9,028.5	7,758.9	-205.2	7,761.6	0.21	-0.21	0.00
Last MWD @ 16694' MD / 9029' TVD									

Company:	Pioneer Natural Resources	**Local Co-ordinate Reference:**	Well University 3-14 #17H
Project:	Upton Co., TX	**TVD Reference:**	Well @ 2733.0usft (H&P 606)
Site:	University 3-14	**MD Reference:**	Well @ 2733.0usft (H&P 606)
Well:	University 3-14 #17H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
16,745.0	91.20	357.90	9,027.4	7,809.9	-207.1	7,812.5	0.00	0.00	0.00
PTD @ 16745' MD / 9027' TVD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
16,694.0	9,028.5	7,758.9	-205.2	Last MWD @ 16694' MD / 9029' TVD
16,745.0	9,027.4	7,809.9	-207.1	PTD @ 16745' MD / 9027' TVD

Checked By: _____ Approved By: _____ Date: _____

Job Number: TX14342PI
Company: Pioneer Natural Resources
Lease/Well: University 3-14 #17H
Location: Upton Co
Rig Name: H&P 606
RKB:
G.L. or M.S.L.:

State/Country: TX USA
Declination:
Grid:
File name: C:\WINSERVE\TX14342P.SVY
Date/Time: 22-Sep-14 / 16:11
Curve Name: Wellbore #1 - OH

Integrity Directional Services

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 358.69
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100	TFO Deg
Tied Into Surface										
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	90.00
First MWD Survey										
173.00	.30	123.60	173.00	-.25	.38	-.26	.45	123.60	.17	36.48
234.00	.40	133.60	234.00	-.49	.66	-.50	.82	126.17	.19	136.39
423.00	.30	203.10	423.00	-1.40	.95	-1.42	1.69	145.82	.22	-9.54
608.00	.40	200.70	607.99	-2.45	.53	-2.46	2.50	167.78	.05	112.15
793.00	.40	245.00	792.99	-3.32	-.28	-3.32	3.33	184.88	.16	-11.60
980.00	.70	240.00	979.98	-4.17	-1.86	-4.13	4.57	204.09	.16	-8.63
1168.00	1.00	237.40	1167.96	-5.63	-4.24	-5.53	7.05	217.00	.16	-48.00
1245.00	1.10	231.90	1244.95	-6.45	-5.39	-6.32	8.40	219.90	.18	45.97
1394.00	1.30	240.40	1393.91	-8.16	-7.98	-7.98	11.42	224.36	.18	169.84
1488.00	.80	246.90	1487.90	-8.95	-9.51	-8.73	13.06	226.76	.55	180.00
1583.00	.00	.00	1582.89	-9.21	-10.12	-8.97	13.69	227.72	.84	180.00
1677.00	.30	113.80	1676.89	-9.31	-9.90	-9.08	13.59	226.77	.32	-14.68
1772.00	.60	106.40	1771.89	-9.55	-9.19	-9.33	13.26	223.92	.32	-27.59
1866.00	.70	102.20	1865.88	-9.81	-8.16	-9.62	12.76	219.77	.12	-132.94
1960.00	.60	90.60	1959.88	-9.93	-7.11	-9.77	12.22	215.58	.18	-34.21
2055.00	.70	85.20	2054.87	-9.89	-6.03	-9.75	11.59	211.38	.12	40.13
2149.00	.80	91.00	2148.86	-9.85	-4.80	-9.74	10.96	205.99	.13	95.00
2243.00	.80	101.00	2242.85	-9.99	-3.50	-9.91	10.59	199.33	.15	-90.80
2337.00	.80	99.40	2336.85	-10.22	-2.21	-10.17	10.46	192.21	.02	-151.18
2432.00	.40	53.60	2431.84	-10.13	-1.29	-10.10	10.22	187.26	.63	-92.75

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E Distance FT	C L O S U R E Direction Deg	Dogleg Severity Deg/100	TFO Deg
2526.00	.40	48.10	2525.84	-9.72	-.78	-9.70	9.75	184.60	.04	-104.05
2621.00	.40	20.00	2620.84	-9.19	-.42	-9.18	9.20	182.63	.20	96.75
2715.00	.40	33.50	2714.83	-8.61	-.13	-8.60	8.61	180.86	.10	92.45
2810.00	.40	38.40	2809.83	-8.07	.26	-8.07	8.07	178.16	.04	24.83
2904.00	.50	43.60	2903.83	-7.52	.75	-7.53	7.55	174.33	.11	43.13
2998.00	.60	52.00	2997.82	-6.92	1.42	-6.95	7.06	168.42	.14	22.06
3093.00	.80	57.70	3092.82	-6.25	2.37	-6.31	6.69	159.25	.22	-121.76
3187.00	.70	39.60	3186.81	-5.46	3.29	-5.54	6.38	148.93	.27	-91.10
3282.00	.70	37.40	3281.80	-4.55	4.01	-4.64	6.07	138.61	.03	-34.28
3376.00	.90	29.10	3375.79	-3.45	4.72	-3.56	5.85	126.18	.25	95.20
3470.00	.90	39.50	3469.78	-2.24	5.55	-2.36	5.98	111.96	.17	-93.85
3565.00	.90	31.80	3564.77	-1.03	6.42	-1.17	6.50	99.10	.13	-60.03
3659.00	1.00	23.00	3658.76	.35	7.13	.19	7.14	87.15	.19	46.82
3754.00	1.20	32.40	3753.74	1.96	7.98	1.77	8.22	76.22	.28	-132.69
3848.00	.90	338.20	3847.73	3.47	8.24	3.28	8.94	67.13	1.06	-99.29
3943.00	1.30	282.00	3942.71	4.39	6.91	4.23	8.18	57.55	1.15	-63.13
4037.00	1.50	269.50	4036.68	4.60	4.63	4.49	6.53	45.19	.39	18.58
4131.00	1.60	270.70	4130.65	4.61	2.09	4.56	5.06	24.40	.11	-171.96
4226.00	1.10	267.00	4225.62	4.58	-.15	4.58	4.58	358.16	.53	139.01
4320.00	.90	279.30	4319.61	4.65	-1.78	4.69	4.98	339.08	.31	57.42
4414.00	1.00	287.40	4413.59	5.01	-3.29	5.09	5.99	326.74	.18	-132.84
4509.00	.90	280.00	4508.58	5.39	-4.81	5.50	7.23	318.23	.17	179.65
4603.00	.70	280.10	4602.57	5.62	-6.11	5.76	8.30	312.62	.21	96.35
4697.00	.70	292.80	4696.56	5.94	-7.20	6.11	9.34	309.53	.16	-48.16
4792.00	1.20	270.40	4791.55	6.17	-8.73	6.37	10.69	305.27	.65	-13.38
4886.00	2.00	265.00	4885.51	6.04	-11.35	6.30	12.85	298.01	.87	-25.98
4981.00	2.90	256.60	4980.43	5.34	-15.34	5.69	16.24	289.18	1.02	-54.43
5075.00	3.60	243.10	5074.28	3.45	-20.28	3.91	20.57	279.65	1.10	-44.58
5170.00	4.20	235.50	5169.06	.13	-25.81	.72	25.81	270.29	.83	-20.97
5264.00	4.60	233.60	5262.78	-4.06	-31.68	-3.33	31.94	262.70	.45	106.42
5359.00	4.50	238.70	5357.48	-8.25	-37.93	-7.38	38.82	257.72	.44	66.99
5453.00	4.70	243.90	5451.18	-11.86	-44.54	-10.84	46.09	255.09	.49	-2.31
5548.00	5.40	243.60	5545.81	-15.56	-52.04	-14.37	54.32	253.35	.74	174.72
5642.00	5.30	243.70	5639.40	-19.45	-59.89	-18.08	62.97	252.01	.11	-167.71
5736.00	4.70	242.10	5733.04	-23.18	-67.19	-21.64	71.08	250.97	.66	55.74
5831.00	4.90	245.40	5827.71	-26.69	-74.32	-24.98	78.97	250.25	.36	160.69
5925.00	4.40	247.70	5921.40	-29.73	-81.30	-27.86	86.57	249.92	.57	90.35
6020.00	4.40	248.40	6016.12	-32.45	-88.06	-30.43	93.85	249.77	.06	48.00
6114.00	4.60	251.10	6109.83	-35.00	-94.98	-32.82	101.23	249.77	.31	-62.94
6209.00	4.70	248.80	6204.52	-37.64	-102.22	-35.30	108.93	249.78	.22	-93.89
6303.00	4.70	241.00	6298.20	-40.90	-109.17	-38.40	116.59	249.46	.68	.00
6398.00	4.90	241.00	6392.87	-44.76	-116.13	-42.09	124.45	248.92	.21	-171.10
6492.00	4.20	239.50	6486.57	-48.45	-122.60	-45.63	131.83	248.44	.76	-164.44
6587.00	4.00	238.70	6581.33	-51.94	-128.43	-48.99	138.54	247.98	.22	62.74
6681.00	4.20	243.60	6675.09	-55.17	-134.32	-52.09	145.21	247.67	.43	16.58

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E Distance FT	C L O S U R E Direction Deg	Dogleg Severity Deg/100	TFO Deg
6775.00	5.50	247.60	6768.75	-58.42	-141.57	-55.17	153.15	247.58	1.43	39.42
6870.00	5.80	250.00	6863.29	-61.79	-150.29	-58.34	162.49	247.65	.40	173.13
6964.00	4.50	252.00	6956.91	-64.56	-158.26	-60.92	170.92	247.81	1.40	-57.39
7059.00	4.60	250.10	7051.61	-67.01	-165.38	-63.21	178.44	247.94	.19	-3.42
7153.00	6.00	249.30	7145.20	-70.03	-173.52	-66.04	187.12	248.02	1.49	173.72
7247.00	4.40	251.60	7238.81	-72.90	-181.54	-68.73	195.63	248.12	1.72	-19.73
7342.00	5.10	248.80	7333.49	-75.58	-188.94	-71.24	203.49	248.20	.78	-3.79
7436.00	5.70	248.40	7427.07	-78.81	-197.17	-74.28	212.34	248.21	.64	45.55
7530.00	5.80	249.40	7520.60	-82.20	-205.96	-77.47	221.75	248.24	.15	90.55
7625.00	5.80	250.50	7615.11	-85.49	-214.98	-80.55	231.35	248.31	.12	175.02
7719.00	5.00	251.30	7708.69	-88.39	-223.33	-83.26	240.19	248.41	.85	-166.77
7814.00	3.80	247.00	7803.41	-90.95	-230.15	-85.66	247.47	248.44	1.31	16.86
7908.00	4.60	250.00	7897.16	-93.45	-236.56	-88.02	254.35	248.44	.88	151.31
8003.00	4.50	250.70	7991.86	-95.99	-243.66	-90.39	261.88	248.50	.12	150.96
8097.00	4.20	253.00	8085.59	-98.21	-250.43	-92.46	269.00	248.59	.37	-173.25
8192.00	3.40	251.40	8180.38	-100.13	-256.43	-94.24	275.28	248.67	.85	-176.76
8286.00	2.60	250.40	8274.25	-101.73	-261.08	-95.74	280.20	248.71	.85	-170.27
8381.00	1.80	246.00	8369.18	-103.06	-264.47	-96.99	283.84	248.71	.86	173.24
8395.00	1.70	246.40	8383.17	-103.23	-264.86	-97.15	284.27	248.71	.72	143.68
8546.00	1.80	356.10	8534.13	-101.76	-267.08	-95.63	285.81	249.14	1.90	19.33
8577.00	6.40	10.10	8565.04	-99.58	-266.81	-93.45	284.78	249.53	15.08	-4.00
8609.00	10.20	8.60	8596.70	-95.02	-266.07	-88.91	282.53	250.35	11.89	-6.19
8640.00	13.70	7.00	8627.03	-88.66	-265.21	-82.57	279.64	251.52	11.34	-13.07
8685.00	19.30	3.10	8670.16	-75.93	-264.16	-69.87	274.86	253.96	12.68	-17.20
8734.00	24.60	359.20	8715.59	-57.63	-263.86	-51.59	270.08	257.68	11.21	-5.79
8781.00	28.90	358.30	8757.55	-36.49	-264.34	-30.44	266.84	262.14	9.19	2.98
8828.00	33.10	358.70	8797.83	-12.30	-264.97	-6.24	265.25	267.34	8.95	-3.17
8875.00	37.50	358.30	8836.18	14.85	-265.68	20.92	266.10	273.20	9.37	-10.14
8922.00	42.00	357.10	8872.31	44.87	-266.90	50.96	270.65	279.54	9.71	3.24
8969.00	47.20	357.50	8905.76	77.82	-268.45	83.94	279.50	286.17	11.08	.00
9017.00	51.50	357.50	8937.02	114.19	-270.04	120.34	293.19	292.92	8.96	2.28
9064.00	57.90	357.80	8964.17	152.50	-271.61	158.67	311.49	299.31	13.63	-4.74
9111.00	63.30	357.30	8987.23	193.39	-273.36	199.59	334.85	305.28	11.53	-14.48
9158.00	66.50	356.40	9007.17	235.88	-275.70	242.13	362.84	310.55	7.03	-6.57
9205.00	70.60	355.90	9024.35	279.52	-278.64	285.82	394.68	315.09	8.78	2.98
9252.00	74.30	356.10	9038.52	324.22	-281.77	330.57	429.55	319.01	7.88	15.58
9299.00	77.10	356.90	9050.13	369.67	-284.55	376.08	466.50	322.41	6.18	13.26
9346.00	81.30	357.90	9058.93	415.78	-286.64	422.22	505.01	325.42	9.18	12.94
9394.00	87.40	359.30	9063.66	463.51	-287.80	469.97	545.59	328.16	13.04	25.78
9477.00	90.30	.70	9065.32	546.48	-287.80	552.92	617.63	332.23	3.88	10.00
9571.00	92.00	1.00	9063.44	640.45	-286.41	646.83	701.57	335.91	1.84	-119.34
9666.00	91.10	359.40	9060.87	735.41	-286.08	741.76	789.09	338.74	1.93	-145.01
9760.00	90.10	358.70	9059.88	829.39	-287.63	835.75	877.85	340.87	1.30	180.00
9854.00	87.40	358.70	9061.93	923.33	-289.77	929.72	967.73	342.58	2.87	-90.02
9949.00	87.40	358.00	9066.24	1018.20	-292.50	1024.62	1059.38	343.97	.74	-123.74

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E Distance FT	C L O S U R E Direction Deg	Dogleg Severity Deg/100	TFO Deg
10043.00	87.00	357.40	9070.83	1112.01	-296.27	1118.49	1150.80	345.08	.77	30.55
10137.00	90.90	359.70	9072.56	1205.94	-298.64	1212.45	1242.37	346.09	4.82	38.65
10232.00	91.40	.10	9070.65	1300.92	-298.81	1307.41	1334.79	347.06	.67	-161.56
10326.00	89.60	359.50	9069.83	1394.91	-299.14	1401.38	1426.62	347.90	2.02	-11.31
10421.00	90.10	359.40	9070.08	1489.90	-300.05	1496.37	1519.82	348.61	.54	165.96
10515.00	89.70	359.50	9070.24	1583.90	-300.95	1590.37	1612.24	349.24	.44	5.71
10609.00	91.70	359.70	9069.09	1677.88	-301.61	1684.34	1704.78	349.81	2.14	154.79
10704.00	90.00	.50	9067.68	1772.87	-301.44	1779.30	1798.31	350.35	1.98	29.05
10798.00	91.80	1.50	9066.21	1866.84	-299.80	1873.21	1890.76	350.88	2.19	-177.14
10893.00	89.80	1.40	9064.88	1961.79	-297.40	1968.08	1984.21	351.38	2.11	-169.70
10987.00	88.70	1.20	9066.11	2055.76	-295.26	2061.97	2076.86	351.83	1.19	-45.00
11081.00	89.40	.50	9067.67	2149.74	-293.87	2155.89	2169.73	352.22	1.05	-129.82
11175.00	88.40	359.30	9069.47	2243.72	-294.03	2249.85	2262.90	352.53	1.66	56.32
11270.00	89.40	.80	9071.30	2338.69	-293.95	2344.80	2357.10	352.84	1.90	135.00
11364.00	89.10	1.10	9072.53	2432.67	-292.39	2438.72	2450.18	353.15	.45	23.03
11458.00	93.80	3.10	9070.15	2526.55	-288.95	2532.49	2543.02	353.48	5.43	153.47
11553.00	93.40	3.30	9064.19	2621.21	-283.66	2627.01	2636.52	353.82	.47	71.52
11647.00	93.50	3.60	9058.53	2714.87	-278.01	2720.52	2729.07	354.15	.34	-153.41
11741.00	89.10	1.40	9056.40	2808.73	-273.92	2814.26	2822.06	354.43	5.23	14.31
11836.00	93.80	2.60	9053.99	2903.61	-270.60	2909.04	2916.20	354.68	5.11	-169.55
11930.00	90.00	1.90	9050.88	2997.47	-266.92	3002.79	3009.33	354.91	4.11	12.99
12024.00	91.30	2.20	9049.81	3091.40	-263.56	3096.62	3102.62	355.13	1.42	-153.44
12118.00	87.50	.30	9050.80	3185.35	-261.50	3190.50	3196.07	355.31	4.52	17.89
12212.00	90.60	1.30	9052.35	3279.32	-260.19	3284.41	3289.63	355.46	3.47	31.59
12307.00	91.90	2.10	9050.28	3374.25	-257.38	3379.25	3384.05	355.64	1.61	89.99
12401.00	91.90	2.80	9047.16	3468.11	-253.36	3473.00	3477.36	355.82	.74	-163.49
12495.00	89.20	2.00	9046.26	3562.02	-249.42	3566.79	3570.74	355.99	3.00	3.81
12589.00	90.70	2.10	9046.34	3655.96	-246.06	3660.63	3664.23	356.15	1.60	180.00
12684.00	88.40	2.10	9047.09	3750.88	-242.58	3755.45	3758.72	356.30	2.42	90.00
12778.00	88.40	2.20	9049.71	3844.78	-239.06	3849.24	3852.20	356.44	.11	180.00
12871.00	87.90	2.20	9052.72	3937.66	-235.49	3942.02	3944.70	356.58	.54	-44.99
12966.00	88.20	1.90	9055.95	4032.55	-232.09	4036.80	4039.22	356.71	.45	71.56
13060.00	88.30	2.20	9058.82	4126.44	-228.73	4130.59	4132.78	356.83	.34	26.56
13154.00	88.70	2.40	9061.28	4220.33	-224.96	4224.37	4226.33	356.95	.48	158.21
13249.00	88.20	2.60	9063.85	4315.21	-220.82	4319.13	4320.85	357.07	.57	-53.14
13343.00	89.10	1.40	9066.07	4409.12	-217.54	4412.94	4414.49	357.18	1.60	-41.99
13438.00	90.10	.50	9066.73	4504.11	-215.96	4507.87	4509.28	357.25	1.42	-116.57
13532.00	89.70	359.70	9066.89	4598.10	-215.80	4601.84	4603.16	357.31	.95	-6.71
13626.00	91.40	359.50	9065.99	4692.09	-216.45	4695.82	4697.08	357.36	1.82	-63.43
13721.00	91.50	359.30	9063.59	4787.06	-217.45	4790.78	4791.99	357.40	.24	68.17
13815.00	92.10	.80	9060.63	4881.01	-217.37	4884.70	4885.85	357.45	1.72	-172.87
13909.00	90.50	.60	9058.50	4974.97	-216.22	4978.62	4979.67	357.51	1.72	-60.25
14004.00	90.90	359.90	9057.34	5069.97	-215.80	5073.57	5074.56	357.56	.85	8.13
14098.00	91.60	.00	9055.29	5163.94	-215.89	5167.53	5168.45	357.61	.75	174.29
14193.00	89.60	.20	9054.30	5258.93	-215.72	5262.49	5263.35	357.65	2.12	75.97

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E Distance FT	C L O S U R E Direction Deg	Dogleg Severity Deg/100	TFO Deg
14287.00	89.80	1.00	9054.79	5352.92	-214.74	5356.44	5357.23	357.70	.88	63.44
14381.00	89.90	1.20	9055.03	5446.91	-212.93	5450.35	5451.07	357.76	.24	90.00
14475.00	89.90	1.40	9055.20	5540.88	-210.80	5544.25	5544.89	357.82	.21	135.00
14570.00	89.80	1.50	9055.45	5635.85	-208.39	5639.14	5639.70	357.88	.15	-41.19
14664.00	90.60	.80	9055.12	5729.83	-206.51	5733.05	5733.55	357.94	1.13	-33.69
14758.00	90.90	.60	9053.89	5823.82	-205.36	5826.99	5827.44	357.98	.38	-45.00
14853.00	91.00	.50	9052.31	5918.80	-204.45	5921.93	5922.33	358.02	.15	44.99
14947.00	91.30	.80	9050.43	6012.77	-203.38	6015.85	6016.21	358.06	.45	180.00
15041.00	90.90	.80	9048.62	6106.75	-202.07	6109.77	6110.09	358.10	.43	-122.47
15136.00	90.20	359.70	9047.71	6201.74	-201.66	6204.73	6205.02	358.14	1.37	56.31
15230.00	90.40	.00	9047.22	6295.74	-201.90	6298.71	6298.97	358.16	.38	15.52
15325.00	92.20	.50	9045.06	6390.71	-201.49	6393.64	6393.88	358.19	1.97	79.34
15419.00	92.50	2.10	9041.21	6484.60	-199.36	6487.46	6487.67	358.24	1.73	63.41
15514.00	92.60	2.30	9036.98	6579.44	-195.71	6582.19	6582.35	358.30	.24	-167.90
15608.00	89.80	1.70	9035.01	6673.35	-192.43	6676.01	6676.12	358.35	3.05	-104.04
15703.00	89.70	1.30	9035.43	6768.32	-189.95	6770.89	6770.98	358.39	.43	-59.04
15797.00	90.30	.30	9035.43	6862.31	-188.64	6864.82	6864.90	358.43	1.24	-120.26
15892.00	89.60	359.10	9035.51	6957.30	-189.13	6959.81	6959.87	358.44	1.46	29.05
15986.00	90.50	359.60	9035.43	7051.29	-190.20	7053.80	7053.86	358.45	1.10	-126.87
16081.00	90.20	359.20	9034.85	7146.29	-191.19	7148.79	7148.84	358.47	.53	42.87
16175.00	91.60	.50	9033.37	7240.27	-191.44	7242.76	7242.80	358.49	2.03	-153.43
16269.00	88.60	359.00	9033.21	7334.26	-191.85	7336.73	7336.77	358.50	3.57	-10.62
16364.00	90.20	358.70	9034.20	7429.23	-193.76	7431.72	7431.76	358.51	1.71	-103.24
16458.00	89.80	357.00	9034.20	7523.16	-197.28	7525.70	7525.75	358.50	1.86	29.35
16553.00	91.40	357.90	9033.21	7618.06	-201.51	7620.67	7620.72	358.48	1.93	180.00
16647.00	91.30	357.90	9030.99	7711.97	-204.95	7714.64	7714.69	358.48	.11	180.00
Last MWD Survey										
16694.00	91.20	357.90	9029.97	7758.92	-206.67	7761.62	7761.68	358.47	.21	.00
Straight Line Projection to TD										
16745.00	91.20	357.90	9028.90	7809.88	-208.54	7812.60	7812.66	358.47	.00	.00