CONSOL ENERGY
OXF13FHS
DODDRIDGE COUNTY, WV
PLAN 3

Plan Data for FHS

Plan Point Information:
DogLeg Severity Unit: °/100.00ft Position offsets from Slot centre

MD (USft)	Inc (°)	Az (°)	TVD (USft)	+N/-S (USft)	+E/-W (USft)	VSec (USft)	DLS (DLSU)	Build (DLSU)	Turn (DLSU)
2800.00	0.34	314.11	2799.94	11.48	-6.84	-13.13	0.17	0.16	15.89
3000.00	0.34	314.11	2999.94	12.30	-7.70	-14.19	0.00	0.00	0.00
3340.25	7.01	6.36	3339.31	33.66	-6.12	-33.72	2.00	1.96	15.36
6153.13	7.01	6.36	6131.18	374.73	31.90	-341.22	0.00	0.00	0.00
7356.58	90.00	160.00	6924.49	-279.43	316.07	370.68	8.00	6.90	12.77
12272.58	90.00	160.00	6924.49	-4898.96	1997.44	5286.68	0.00	0.00	0.00

Plan Data for FHS

Field: CONSOL ENERGY_DODDRIDGE COUNTY, WV_NAD 27 (WV NORTH)
Map Unit: USFt Vertical Reference Datum (VRD): Mean Sea Level
Projected Coordinate System: NAD27 / West Virginia North

Site: OXF 13 PAD
Unit: USFeet TVD Reference:
Company Name: CONSOL ENERGY
Position: Northing: 246003.53USft Latitude: 39°10'7.237"
Easting: 1646174.06USft Longitude: -80°44'52.693"
North Reference: Grid Grid Convergence: -0.80°
Elevation Above VRD: 1152.00USft

Slot: FHS
Position:
Offset is from Site centre
+N/-S: -2.80USft Northing: 246000.74USft Latitude: 39°10'7.207"
+E/-W: -19.85USft Easting: 1646154.21USft Longitude: -80°44'52.945"
Elevation Above VRD: 1152.27USft

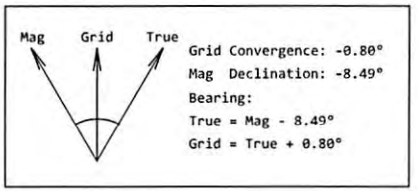
Well: FHS
Type: Main-Well
File Number:
Vertical Section: Position offset of origin from Slot centre:
+N/-S: 0.00USft Azimuth: 160.00°
+E/-W: 0.00USft
Magnetic Parameters:

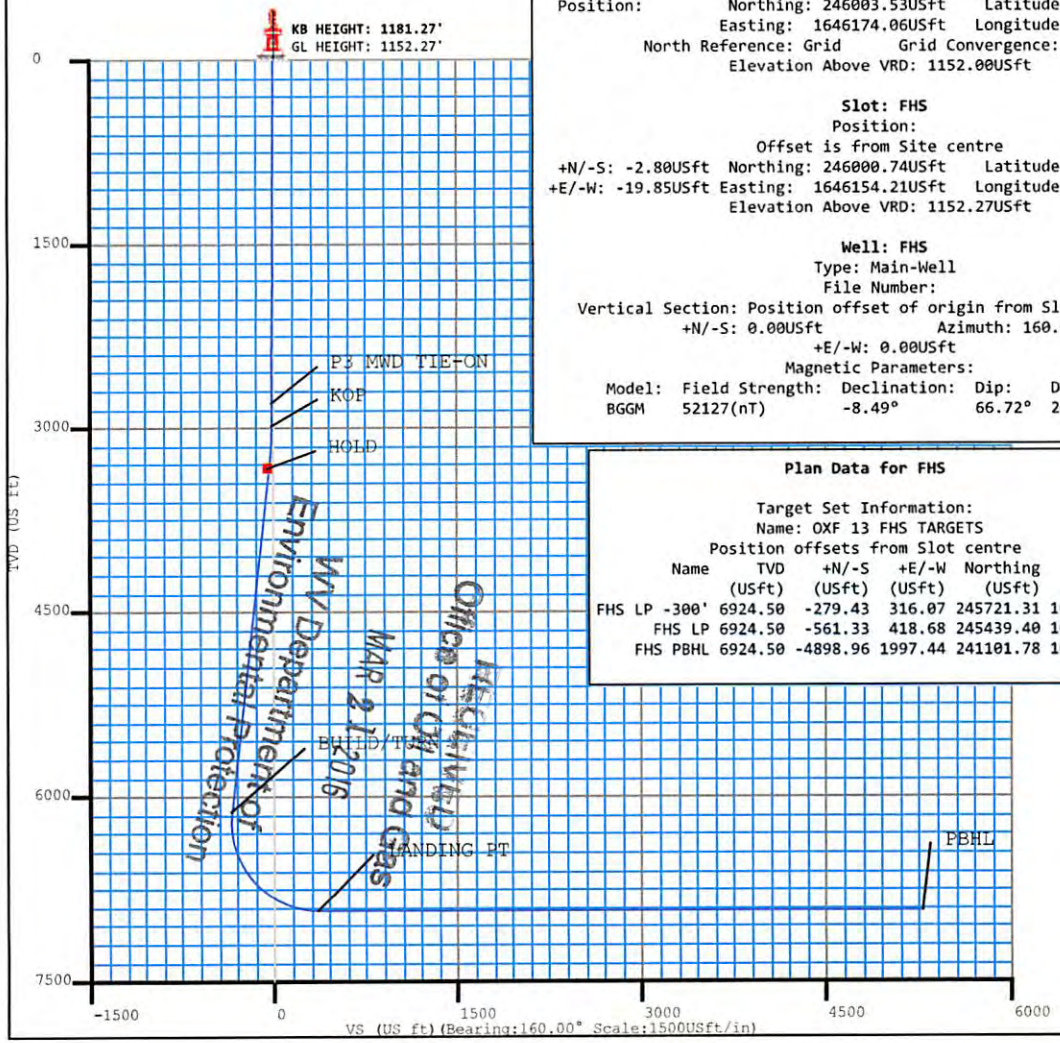
Model:	Field Strength:	Declination:	Dip:	Date:
BGGM	52127(nT)	-8.49°	66.72°	2015-05-06

Plan Data for FHS

Target Set Information:
Name: OXF 13 FHS TARGETS
Position offsets from Slot centre

Name	TVD (USft)	+N/-S (USft)	+E/-W (USft)	Northing (USft)	Easting (USft)
FHS LP -300'	6924.50	-279.43	316.07	245721.31	1646470.28
FHS LP	6924.50	-561.33	418.68	245439.40	1646572.88
FHS PBHL	6924.50	-4898.96	1997.44	241101.78	1648151.65





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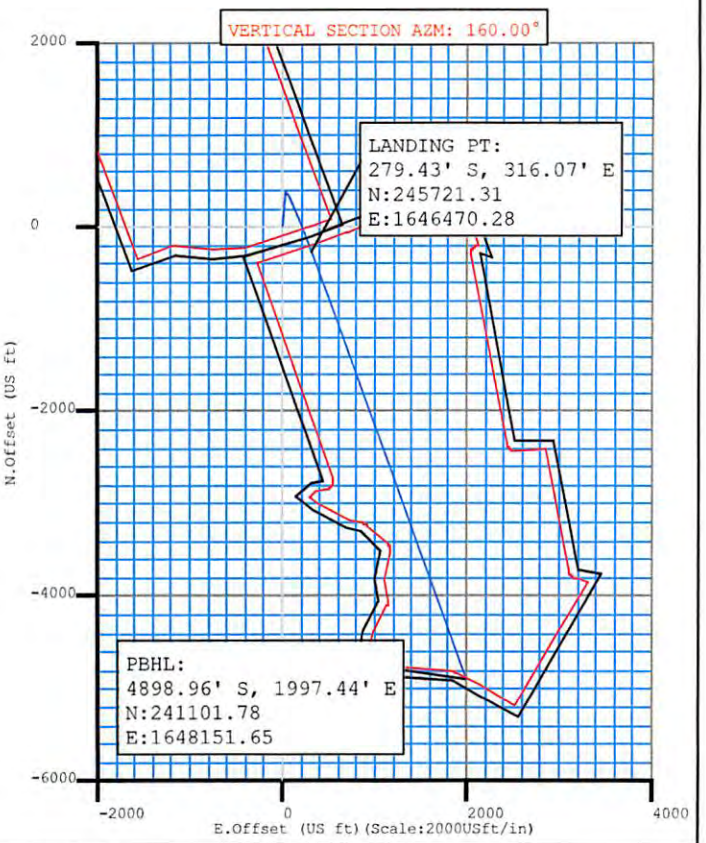

BAKER HUGHES

Company: CNX Gas Company
Well: OXFD-13F-HS
Location: Doddridge County, WV
Rig: Patterson 805

Job Number: 7337612
Magnetic Decl.: -7.73
Grid Corr.: 0.80
Total Grid Corr.: -6.93

Calculation Method: Minimum Curvature
Proposed Azimuth: 160
Depth Reference: Rig Floor
Tie Into: MWD Declination Corrected

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Direction	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Distance (ft)	Closure Angle (deg)	Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
Tie In Coordinates														
N/A	0.0	0.00	0.00	N 0.0 E	0	0	0	0 N	0 W					
Gyro	28.5	0.00	8.22	N 8.2 E	29	28.50	0.00	0.00 N	0.00 E	0.00	0.00	0.00	0.00	28.84
Gyro	100.0	0.55	8.22	N 8.2 E	72	100.00	-0.30	0.34 N	0.05 E	0.34	8.22	0.77	0.77	0.00
Gyro	200.0	0.20	343.76	N 16.2 W	100	200.00	-0.90	0.98 N	0.07 E	0.98	4.01	0.38	-0.35	-24.46
Gyro	300.0	0.25	276.90	N 83.1 W	100	300.00	-1.17	1.18 N	0.20 W	1.19	350.51	0.25	0.05	-66.86
Gyro	400.0	0.21	354.20	N 5.8 W	100	400.00	-1.45	1.38 N	0.43 W	1.45	342.69	0.29	-0.04	77.30
Gyro	500.0	0.40	3.69	N 3.7 E	100	499.99	-1.95	1.92 N	0.43 W	1.96	347.41	0.20	0.19	9.49
Gyro	600.0	0.38	356.18	N 3.8 W	100	599.99	-2.58	2.59 N	0.43 W	2.63	350.65	0.05	-0.02	-7.51
Gyro	700.0	0.41	301.69	N 58.3 W	100	699.99	-3.18	3.11 N	0.75 W	3.20	346.39	0.36	0.03	-54.49
Gyro	800.0	0.46	282.17	N 77.8 W	100	799.99	-3.68	3.39 N	1.45 W	3.68	336.81	0.16	0.05	-19.52
Gyro	900.0	0.35	264.66	S 84.7 W	100	899.98	-3.97	3.44 N	2.15 W	4.06	328.04	0.16	-0.11	-17.51
Gyro	1000.0	0.24	304.44	N 55.6 W	100	999.98	-4.22	3.53 N	2.62 W	4.40	323.39	0.23	-0.11	39.78
Gyro	1100.0	0.21	305.15	N 54.9 W	100	1099.98	-4.54	3.76 N	2.95 W	4.77	321.89	0.03	-0.03	0.71
Gyro	1200.0	0.48	311.01	N 49.0 W	100	1199.98	-5.05	4.14 N	3.41 W	5.36	320.48	0.27	0.27	5.86
Gyro	1300.0	0.52	341.89	N 18.1 W	100	1299.98	-5.87	4.84 N	3.87 W	6.20	321.37	0.27	0.04	30.88
Gyro	1400.0	0.45	357.93	N 2.1 W	100	1399.97	-6.70	5.67 N	4.02 W	6.95	324.61	0.15	-0.07	16.04
Gyro	1500.0	0.66	3.63	N 3.6 E	100	1499.97	-7.60	6.63 N	4.00 W	7.75	328.89	0.22	0.21	5.70
Gyro	1600.0	0.44	6.73	N 6.7 E	100	1599.96	-8.47	7.59 N	3.92 W	8.54	332.68	0.22	-0.22	3.10
Gyro	1700.0	0.12	322.09	N 37.9 W	100	1699.96	-8.92	8.05 N	3.94 W	8.97	333.93	0.36	-0.32	-44.64
Gyro	1800.0	0.26	70.97	N 71.0 E	100	1799.96	-9.01	8.21 N	3.79 W	9.04	335.22	0.32	0.14	108.88
Gyro	1900.0	0.60	1.86	N 1.9 E	100	1899.96	-9.49	8.81 N	3.56 W	9.50	338.00	0.56	0.34	-69.11
Gyro	2000.0	0.59	356.84	N 3.2 W	100	1999.95	-10.47	9.84 N	3.57 W	10.47	340.07	0.05	-0.01	-5.02
Gyro	2100.0	0.31	348.53	N 11.5 W	100	2099.95	-11.23	10.62 N	3.65 W	11.23	341.03	0.29	-0.28	-8.31
Gyro	2200.0	0.14	324.60	N 35.4 W	100	2199.95	-11.62	10.99 N	3.78 W	11.62	341.03	0.19	-0.17	-23.93
Gyro	2300.0	0.28	268.79	S 88.8 W	100	2299.95	-11.81	11.08 N	4.09 W	11.81	339.74	0.23	0.14	-55.81
Gyro	2400.0	0.48	279.69	N 80.3 W	100	2399.95	-12.10	11.15 N	4.75 W	12.12	336.93	0.21	0.20	10.90
Gyro	2500.0	0.42	254.75	S 74.8 W	100	2499.94	-12.34	11.12 N	5.52 W	12.42	333.62	0.20	-0.06	-24.94
Gyro	2600.0	0.29	265.65	S 85.7 W	100	2599.94	-12.44	11.01 N	6.12 W	12.59	330.92	0.15	-0.13	10.90
Gyro	2700.0	0.18	298.22	N 61.8 W	100	2699.94	-12.62	11.06 N	6.51 W	12.84	329.51	0.17	-0.11	32.57
Gyro	2800.0	0.34	314.11	N 45.9 W	100	2799.94	-13.01	11.34 N	6.86 W	13.26	328.82	0.17	0.16	15.89
Gyro	2887.0	1.15	313.81	N 46.2 W	87	2886.93	-14.02	12.13 N	7.68 W	14.35	327.66	0.93	0.93	-0.34
Gyro	2980.0	1.68	326.72	N 33.3 W	93	2979.90	-16.19	13.91 N	9.10 W	16.62	326.81	0.66	0.57	13.88
Gyro	3074.0	4.37	2.90	N 2.9 E	94	3073.77	-20.83	18.64 N	9.68 W	21.00	332.57	3.38	2.86	38.49
Gyro	3167.0	6.16	10.36	N 10.4 E	93	3166.37	-28.40	27.09 N	8.60 W	28.42	342.39	2.06	1.92	8.02

BAKER HUGHES

Company: CNX Gas Company
Well: OXFD-13F-HS
Location: Doddridge County, WV
Rig: Patterson 805

Job Number: 7337612
Magnetic Decl.: -7.73
Grid Corr.: 0.80
Total Grid Corr.: -6.93

Calculation Method: Minimum Curvature
Proposed Azimuth: 160
Depth Reference: Rig Floor
Tie Into: MWD Declination Corrected

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Direction	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Distance (ft)	Closure Angle (deg)	Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
Gyro	3261.0	6.90	12.78	N 12.8 E	94	3259.76	-37.50	37.56 N	6.44 W	38.11	350.27	0.84	0.79	2.57
Gyro	3355.0	6.95	12.65	N 12.7 E	94	3353.08	-47.03	48.61 N	3.95 W	48.77	355.36	0.06	0.05	-0.14
Gyro	3449.0	6.95	13.23	N 13.2 E	94	3446.39	-56.58	59.70 N	1.40 W	59.72	358.66	0.07	0.00	0.62
Gyro	3542.0	6.87	5.09	N 5.1 E	93	3538.71	-66.32	70.72 N	0.38 E	70.72	0.31	1.06	-0.09	-8.75
Gyro	3636.0	7.14	1.58	N 1.6 E	94	3632.01	-76.85	82.16 N	1.04 E	82.16	0.72	0.54	0.29	-3.73
Gyro	3730.0	6.78	12.48	N 12.5 E	94	3725.32	-86.96	93.41 N	2.40 E	93.45	1.47	1.45	-0.38	11.60
Gyro	3823.0	5.84	6.76	N 6.8 E	93	3817.76	-95.82	103.47 N	4.14 E	103.56	2.29	1.21	-1.01	-6.15
Gyro	3917.0	6.03	8.64	N 8.6 E	94	3911.26	-104.42	113.10 N	5.45 E	113.23	2.76	0.29	0.20	2.00
Gyro	4010.0	6.41	13.73	N 13.7 E	93	4003.71	-113.02	122.98 N	7.41 E	123.20	3.45	0.72	0.41	5.47
Gyro	4104.0	6.08	9.53	N 9.5 E	94	4097.15	-121.72	132.98 N	9.48 E	133.32	4.08	0.60	-0.35	-4.47
Gyro	4198.0	6.58	16.11	N 16.1 E	94	4190.58	-130.40	143.07 N	11.80 E	143.55	4.72	0.94	0.53	7.00
Gyro	4291.0	6.87	10.78	N 10.8 E	93	4282.94	-139.49	153.65 N	14.32 E	154.32	5.32	0.74	0.31	-5.73
Gyro	4385.0	7.62	4.84	N 4.8 E	94	4376.19	-149.97	165.38 N	15.90 E	166.15	5.49	1.13	0.80	-6.32
Gyro	4478.0	8.86	11.54	N 11.5 E	93	4468.23	-161.67	178.55 N	17.85 E	179.44	5.71	1.68	1.33	7.20
Gyro	4572.0	8.27	15.77	N 15.8 E	94	4561.18	-173.33	192.14 N	21.14 E	193.30	6.28	0.92	-0.63	4.50
Gyro	4666.0	6.17	15.45	N 15.5 E	94	4654.43	-182.93	203.52 N	24.32 E	204.97	6.81	2.23	-2.23	-0.34
Gyro	4759.0	6.26	6.34	N 6.3 E	93	4746.89	-191.54	213.38 N	26.21 E	214.98	7.00	1.06	0.10	-9.80
Gyro	4853.0	7.77	16.44	N 16.4 E	94	4840.19	-201.25	224.57 N	28.58 E	226.38	7.25	2.07	1.61	10.74
Gyro	4947.0	7.17	10.73	N 10.7 E	94	4933.39	-211.40	236.42 N	31.47 E	238.51	7.58	1.01	-0.64	-6.07
Gyro	5040.0	6.57	356.48	N 3.5 W	93	5025.73	-221.50	247.44 N	32.22 E	249.53	7.42	1.94	-0.65	-15.32
Gyro	5134.0	7.45	357.49	N 2.5 W	94	5119.03	-232.46	258.89 N	31.62 E	260.82	6.96	0.95	0.94	1.07
Gyro	5227.0	7.82	0.68	N 0.7 E	93	5211.20	-244.13	271.24 N	31.43 E	273.06	6.61	0.60	0.40	3.43
Gyro	5321.0	7.90	358.09	N 1.9 W	94	5304.32	-256.26	284.09 N	31.30 E	285.81	6.29	0.39	0.09	-2.76
Gyro	5415.0	7.34	356.05	N 3.9 W	94	5397.49	-268.17	296.54 N	30.67 E	298.12	5.90	0.66	-0.60	-2.17
Gyro	5509.0	6.39	2.82	N 2.8 E	94	5490.81	-278.76	307.76 N	30.51 E	309.27	5.66	1.33	-1.01	7.20
Gyro	5602.0	6.36	14.14	N 14.1 E	93	5583.24	-287.80	317.92 N	32.02 E	319.53	5.75	1.35	-0.03	12.17
Gyro	5696.0	6.40	28.15	N 28.2 E	94	5676.67	-295.60	327.59 N	35.77 E	329.54	6.23	1.65	0.04	14.90
Gyro	5790.0	7.03	42.68	N 42.7 E	94	5770.03	-301.74	336.44 N	42.14 E	339.07	7.14	1.92	0.67	15.46
Gyro	5884.0	7.83	58.24	N 58.2 E	94	5863.25	-305.68	344.04 N	51.48 E	347.87	8.51	2.29	0.85	16.55
Gyro	5977.0	6.88	67.22	N 67.2 E	93	5955.48	-307.24	349.53 N	62.01 E	354.99	10.06	1.60	-1.02	9.66
MWD	6029.0	6.79	67.50	N 67.5 E	52	6007.11	-307.53	351.91 N	67.72 E	358.37	10.89	0.18	-0.17	0.54
MWD	6062.0	5.87	76.01	N 76.0 E	33	6039.91	-307.44	353.07 N	71.16 E	360.17	11.39	3.97	-2.79	25.79
MWD	6108.0	6.00	117.65	S 62.4 E	46	6085.69	-305.41	352.52 N	75.57 E	360.53	12.10	9.16	0.28	90.52
MWD	6161.0	7.70	152.89	S 27.1 E	53	6138.33	-299.84	348.07 N	79.65 E	357.07	12.89	8.39	3.21	66.49
MWD	6202.0	8.03	177.40	S 2.6 E	41	6178.96	-294.38	342.76 N	81.03 E	352.21	13.30	8.16	0.80	59.78

BAKER HUGHES

Company:	CNX Gas Company	Job Number:	7337612	Calculation Method	Minimum Curvature
Well:	OXFD-13F-HS	Magnetic Decl.:	-7.73	Proposed Azimuth	160
Location:	Doddridge County, WV	Grid Corr.:	0.80	Depth Reference	Rig Floor
Rig:	Patterson 805	Total Grid Corr.:	-6.93	Tie Into:	MWD Declination Corrected

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Direction	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Distance (ft)	Closure Angle (deg)	Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
MWD	6247.0	6.23	184.28	S 4.3 W	45	6223.61	-289.15	337.19 N	80.99 E	346.78	13.51	4.42	-4.00	15.29
MWD	6295.0	6.92	164.42	S 15.6 E	48	6271.30	-283.90	331.81 N	81.57 E	341.68	13.81	4.92	1.44	-41.38
MWD	6344.0	10.18	151.74	S 28.3 E	49	6319.75	-276.67	325.15 N	84.41 E	335.92	14.55	7.65	6.65	-25.88
MWD	6388.0	11.87	141.27	S 38.7 E	44	6362.94	-268.53	318.19 N	89.09 E	330.43	15.64	5.94	3.84	-23.80
MWD	6438.0	13.42	145.20	S 34.8 E	50	6411.73	-258.05	309.41 N	95.62 E	323.85	17.17	3.54	3.10	7.86
MWD	6482.0	16.01	152.61	S 27.4 E	44	6454.28	-247.09	299.83 N	101.32 E	316.49	18.67	7.27	5.89	16.84
MWD	6532.0	19.89	159.54	S 20.5 E	50	6501.85	-231.74	285.73 N	107.47 E	305.28	20.61	8.85	7.76	13.86
MWD	6575.0	22.26	159.90	S 20.1 E	43	6541.97	-216.28	271.23 N	112.83 E	293.76	22.59	5.52	5.51	0.84
MWD	6625.0	26.98	156.41	S 23.6 E	50	6587.41	-195.48	251.93 N	120.63 E	279.32	25.59	9.87	9.44	-6.98
MWD	6669.0	32.30	155.48	S 24.5 E	44	6625.64	-173.78	232.07 N	129.51 E	265.76	29.16	12.14	12.09	-2.11
MWD	6720.0	37.19	156.09	S 23.9 E	51	6667.54	-144.80	205.57 N	141.42 E	249.51	34.53	9.61	9.59	1.20
MWD	6763.0	41.69	157.30	S 22.7 E	43	6700.74	-117.54	180.48 N	152.21 E	236.09	40.14	10.62	10.47	2.81
MWD	6822.0	47.62	157.57	S 22.4 E	59	6742.69	-76.13	142.20 N	168.11 E	220.19	49.77	10.06	10.05	0.46
MWD	6857.0	50.82	158.58	S 21.4 E	35	6765.54	-49.65	117.62 N	178.00 E	213.35	56.54	9.40	9.14	2.89
MWD	6904.0	54.79	159.85	S 20.2 E	47	6793.95	-12.22	82.62 N	191.27 E	208.35	66.64	8.72	8.45	2.70
MWD	6950.0	58.27	161.44	S 18.6 E	46	6819.32	26.14	46.42 N	203.97 E	209.19	77.18	8.10	7.57	3.46
MWD	7005.0	62.98	161.25	S 18.8 E	55	6846.29	74.04	1.03 N	219.30 E	219.30	89.73	8.57	8.56	-0.35
MWD	7044.0	66.18	160.19	S 19.8 E	39	6863.03	109.26	32.22 S	230.93 E	233.17	97.94	8.56	8.21	-2.72
MWD	7090.0	70.69	159.32	S 20.7 E	46	6879.93	152.03	72.34 S	245.74 E	256.17	106.40	9.96	9.80	-1.89
MWD	7138.0	75.32	158.73	S 21.3 E	48	6893.96	197.91	115.19 S	262.17 E	286.36	113.72	9.72	9.65	-1.23
MWD	7186.0	77.44	158.57	S 21.4 E	48	6905.26	244.55	158.64 S	279.15 E	321.08	119.61	4.43	4.42	-0.33
MWD	7232.0	75.13	158.95	S 21.1 E	46	6916.17	289.22	200.29 S	295.34 E	356.85	124.14	5.09	-5.02	0.83
MWD	7325.0	84.52	161.74	S 18.3 E	93	6932.58	380.64	286.40 S	326.06 E	433.98	131.29	10.52	10.10	3.00
MWD	7419.0	88.43	161.17	S 18.8 E	94	6938.36	474.42	375.33 S	355.90 E	517.24	136.52	4.20	4.16	-0.61
MWD	7513.0	88.83	160.26	S 19.7 E	94	6940.61	568.38	464.03 S	386.93 E	604.18	140.18	1.06	0.43	-0.97
MWD	7606.0	89.35	159.56	S 20.4 E	93	6942.08	661.37	551.36 S	418.87 E	692.42	142.78	0.94	0.56	-0.75
MWD	7700.0	89.38	158.39	S 21.6 E	94	6943.13	755.35	639.09 S	452.59 E	783.12	144.69	1.25	0.03	-1.24
MWD	7793.0	89.38	158.08	S 21.9 E	93	6944.13	848.30	725.46 S	487.08 E	873.80	146.12	0.33	0.00	-0.33
MWD	7887.0	89.97	160.09	S 19.9 E	94	6944.66	942.28	813.26 S	520.63 E	965.63	147.37	2.23	0.63	2.14
MWD	7981.0	90.03	162.38	S 17.6 E	94	6944.66	1036.25	902.25 S	550.87 E	1057.13	148.59	2.44	0.06	2.44
MWD	8075.0	89.75	160.76	S 19.2 E	94	6944.85	1130.21	991.43 S	580.58 E	1148.92	149.65	1.75	-0.30	-1.72
MWD	8168.0	89.48	159.16	S 20.8 E	93	6945.47	1223.21	1078.79 S	612.45 E	1240.52	150.42	1.74	-0.29	-1.72
MWD	8262.0	89.54	158.99	S 21.0 E	94	6946.27	1317.19	1166.59 S	646.02 E	1333.52	151.02	0.19	0.06	-0.18
MWD	8356.0	89.54	159.02	S 21.0 E	94	6947.03	1411.17	1254.35 S	679.70 E	1426.67	151.55	0.03	0.00	0.03
MWD	8449.0	89.54	160.83	S 19.2 E	93	6947.78	1504.17	1341.69 S	711.62 E	1518.73	152.06	1.95	0.00	1.95

BAKER HUGHES

Company:	CNX Gas Company	Job Number:	7337612	Calculation Method	Minimum Curvature
Well:	OXFD-13F-HS	Magnetic Decl.:	-7.73	Proposed Azimuth	160
Location:	Doddridge County, WV	Grid Corr.:	0.80	Depth Reference	Rig Floor
Rig:	Patterson 805	Total Grid Corr.:	-6.93	Tie Into:	MWD Declination Corrected

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Direction	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Distance (ft)	Closure Angle (deg)	Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
MWD	8543.0	90.15	160.90	S 19.1 E	94	6948.03	1598.15	1430.50 S	742.43 E	1611.69	152.57	0.65	0.65	0.07
MWD	8636.0	90.12	163.34	S 16.7 E	93	6947.81	1691.08	1519.00 S	770.98 E	1703.46	153.09	2.62	-0.03	2.62
MWD	8730.0	90.25	162.15	S 17.9 E	94	6947.51	1784.97	1608.77 S	798.87 E	1796.19	153.59	1.27	0.14	-1.27
MWD	8823.0	89.60	159.18	S 20.8 E	93	6947.63	1877.96	1696.51 S	829.65 E	1888.51	153.94	3.27	-0.70	-3.19
MWD	8917.0	89.63	157.47	S 22.5 E	94	6948.26	1971.91	1783.86 S	864.37 E	1982.24	154.15	1.82	0.03	-1.82
MWD	9011.0	89.57	157.11	S 22.9 E	94	6948.92	2065.80	1870.57 S	900.66 E	2076.11	154.29	0.39	-0.06	-0.38
MWD	9104.0	89.57	156.45	S 23.6 E	93	6949.61	2158.65	1956.03 S	937.32 E	2169.02	154.40	0.71	0.00	-0.71
MWD	9198.0	89.57	157.29	S 22.7 E	94	6950.32	2252.51	2042.47 S	974.25 E	2262.93	154.50	0.89	0.00	0.89
MWD	9292.0	89.63	158.86	S 21.1 E	94	6950.98	2346.45	2129.67 S	1009.34 E	2356.75	154.64	1.67	0.06	1.67
MWD	9385.0	89.60	157.81	S 22.2 E	93	6951.60	2439.41	2216.10 S	1043.68 E	2449.56	154.78	1.13	-0.03	-1.13
MWD	9479.0	89.66	157.65	S 22.4 E	94	6952.21	2533.33	2303.08 S	1079.30 E	2543.44	154.89	0.18	0.06	-0.17
MWD	9573.0	89.45	160.05	S 20.0 E	94	6952.94	2627.30	2390.74 S	1113.21 E	2637.21	155.03	2.56	-0.22	2.55
MWD	9666.0	89.60	163.25	S 16.8 E	93	6953.71	2720.25	2479.00 S	1142.49 E	2729.60	155.26	3.44	0.16	3.44
MWD	9760.0	89.45	162.01	S 18.0 E	94	6954.49	2814.15	2568.71 S	1170.55 E	2822.84	155.50	1.33	-0.16	-1.32
MWD	9853.0	89.51	163.11	S 16.9 E	93	6955.33	2907.05	2657.43 S	1198.42 E	2915.15	155.73	1.18	0.06	1.18
MWD	9947.0	89.57	165.45	S 14.6 E	94	6956.09	3000.78	2747.90 S	1223.88 E	3008.13	155.99	2.49	0.06	2.49
MWD	10041.0	88.98	165.42	S 14.6 E	94	6957.28	3094.35	2838.87 S	1247.52 E	3100.89	156.28	0.63	-0.63	-0.03
MWD	10134.0	89.08	162.97	S 17.0 E	93	6958.85	3187.08	2928.34 S	1272.84 E	3193.01	156.51	2.64	0.11	-2.63
MWD	10228.0	88.98	161.64	S 18.4 E	94	6960.44	3280.98	3017.88 S	1301.41 E	3286.52	156.67	1.42	-0.11	-1.41
MWD	10322.0	89.05	159.95	S 20.1 E	94	6962.06	3374.96	3106.63 S	1332.33 E	3380.27	156.79	1.80	0.07	-1.80
MWD	10415.0	88.98	157.51	S 22.5 E	93	6963.66	3467.91	3193.27 S	1366.06 E	3473.20	156.84	2.62	-0.08	-2.62
MWD	10509.0	89.20	156.82	S 23.2 E	94	6965.15	3561.79	3279.90 S	1402.53 E	3567.18	156.85	0.77	0.23	-0.73
MWD	10603.0	89.17	158.56	S 21.4 E	94	6966.49	3655.70	3366.85 S	1438.21 E	3661.16	156.87	1.85	-0.03	1.85
MWD	10696.0	88.98	158.78	S 21.2 E	93	6967.99	3748.66	3453.46 S	1472.03 E	3754.10	156.91	0.31	-0.20	0.24
MWD	10790.0	89.11	158.68	S 21.3 E	94	6969.56	3842.62	3541.05 S	1506.13 E	3848.05	156.96	0.17	0.14	-0.11
MWD	10883.0	89.05	157.43	S 22.6 E	93	6971.05	3935.56	3627.30 S	1540.88 E	3941.01	156.98	1.35	-0.06	-1.34
MWD	10977.0	89.42	158.15	S 21.9 E	94	6972.30	4029.48	3714.32 S	1576.41 E	4035.00	157.00	0.86	0.39	0.77
MWD	11070.0	89.72	159.95	S 20.1 E	93	6973.00	4122.46	3801.16 S	1609.66 E	4127.93	157.05	1.96	0.32	1.94
MWD	11164.0	89.75	160.97	S 19.0 E	94	6973.44	4216.45	3889.75 S	1641.10 E	4221.77	157.12	1.09	0.03	1.09
MWD	11258.0	90.00	160.12	S 19.9 E	94	6973.64	4310.45	3978.38 S	1672.40 E	4315.60	157.20	0.94	0.27	-0.90
MWD	11352.0	90.62	160.21	S 19.8 E	94	6973.13	4404.45	4066.80 S	1704.30 E	4409.48	157.26	0.67	0.66	0.10
MWD	11445.0	90.55	161.53	S 18.5 E	93	6972.18	4497.43	4154.66 S	1734.77 E	4502.29	157.34	1.42	-0.08	1.42
MWD	11539.0	89.88	160.36	S 19.6 E	94	6971.83	4591.41	4243.50 S	1765.46 E	4596.10	157.41	1.43	-0.71	-1.24
MWD	11633.0	89.91	160.01	S 20.0 E	94	6972.00	4685.41	4331.94 S	1797.33 E	4690.00	157.47	0.37	0.03	-0.37
MWD	11726.0	89.51	159.55	S 20.5 E	93	6972.47	4778.41	4419.20 S	1829.47 E	4782.92	157.51	0.66	-0.43	-0.49

BAKER HUGHES

Company: CNX Gas Company
Well: OXFD-13F-HS
Location: Doddridge County, WV
Rig: Patterson 805

Job Number: 7337612
Magnetic Decl.: -7.73
Grid Corr.: 0.80
Total Grid Corr.: -6.93

Calculation Method: Minimum Curvature
Proposed Azimuth: 160
Depth Reference: Rig Floor
Tie Into: MWD Declination Corrected

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Direction	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Distance (ft)	Closure Angle (deg)	Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
MWD	11820.0	89.57	161.44	S 18.6 E	94	6973.23	4872.40	4507.80 S	1860.85 E	4876.79	157.57	2.01	0.06	2.01
MWD	11914.0	89.69	160.02	S 20.0 E	94	6973.84	4966.39	4596.53 S	1891.87 E	4970.64	157.63	1.52	0.13	-1.51
MWD	12007.0	89.60	160.34	S 19.7 E	93	6974.41	5059.38	4684.02 S	1923.40 E	5063.55	157.68	0.36	-0.10	0.34
MWD	12101.0	89.60	161.55	S 18.5 E	94	6975.07	5153.37	4772.87 S	1954.09 E	5157.40	157.73	1.29	0.00	1.29
MWD	12195.0	89.72	162.89	S 17.1 E	94	6975.63	5247.29	4862.37 S	1982.80 E	5251.11	157.82	1.43	0.13	1.43
MWD	12234.0	89.72	162.89	S 17.1 E	39	6975.82	5286.24	4899.65 S	1994.27 E	5289.96	157.85	0.00	0.00	0.00
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BAKER HUGHES

Company:	CNX Gas Company	Job Number:	7337612	Calculation Method	Minimum Curvature
Well:	OXFD-13F-HS	Magnetic Decl.:	-7.73	Proposed Azimuth	160
Location:	Doddridge County, WV	Grid Corr.:	0.80	Depth Reference	Rig Floor
Rig:	Patterson 805	Total Grid Corr.:	-6.93	Tie Into:	MWD Declination Corrected

Survey Tool Type	Survey Depth (ft)	Inclina-tion (deg)	Azimuth (deg)	Direction	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Distance (ft)	Closure Angle (deg)	Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
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Company:	CNX Gas Company	Job Number:	7337612	Calculation Method	Minimum Curvature
Well:	OXFD-13F-HS	Magnetic Decl.:	-7.73	Proposed Azimuth	160
Location:	Doddridge County, WV	Grid Corr.:	0.80	Depth Reference	Rig Floor
Rig:	Patterson 805	Total Grid Corr.:	-6.93	Tie Into:	MWD Declination Corrected

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Direction	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Distance (ft)	Closure Angle (deg)	Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
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Company:	CNX Gas Company	Job Number:	7337612	Calculation Method	Minimum Curvature
Well:	OXFD-13F-HS	Magnetic Decl.:	-7.73	Proposed Azimuth	160
Location:	Doddridge County, WV	Grid Corr.:	0.80	Depth Reference	Rig Floor
Rig:	Patterson 805	Total Grid Corr.:	-6.93	Tie Into:	MWD Declination Corrected

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Direction	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Distance (ft)	Closure Angle (deg)	Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
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Company:	CNX Gas Company	Job Number:	7337612	Calculation Method	Minimum Curvature
Well:	OXFD-13F-HS	Magnetic Decl.:	-7.73	Proposed Azimuth	160
Location:	Doddridge County, WV	Grid Corr.:	0.80	Depth Reference	Rig Floor
Rig:	Patterson 805	Total Grid Corr.:	-6.93	Tie Into:	MWD Declination Corrected

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Direction	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Distance (ft)	Closure Angle (deg)	Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
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Company:	CNX Gas Company	Job Number:	7337612	Calculation Method	Minimum Curvature
Well:	OXFD-13F-HS	Magnetic Decl.:	-7.73	Proposed Azimuth	160
Location:	Doddridge County, WV	Grid Corr.:	0.80	Depth Reference	Rig Floor
Rig:	Patterson 805	Total Grid Corr.:	-6.93	Tie Into:	MWD Declination Corrected

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Direction	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Distance (ft)	Closure Angle (deg)	Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
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Company:	CNX Gas Company	Job Number:	7337612	Calculation Method	Minimum Curvature
Well:	OXFD-13F-HS	Magnetic Decl.:	-7.73	Proposed Azimuth	160
Location:	Doddridge County, WV	Grid Corr.:	0.80	Depth Reference	Rig Floor
Rig:	Patterson 805	Total Grid Corr.:	-6.93	Tie Into:	MWD Declination Corrected

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Direction	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Distance (ft)	Closure Angle (deg)	Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
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Company:	CNX Gas Company	Job Number:	7337612	Calculation Method	Minimum Curvature
Well:	OXFD-13F-HS	Magnetic Decl.:	-7.73	Proposed Azimuth	160
Location:	Doddridge County, WV	Grid Corr.:	0.80	Depth Reference	Rig Floor
Rig:	Patterson 805	Total Grid Corr.:	-6.93	Tie Into:	MWD Declination Corrected

Survey Tool Type	Survey Depth (ft)	Inclina-tion (deg)	Azimuth (deg)	Direction	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Distance (ft)	Closure Angle (deg)	Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
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