

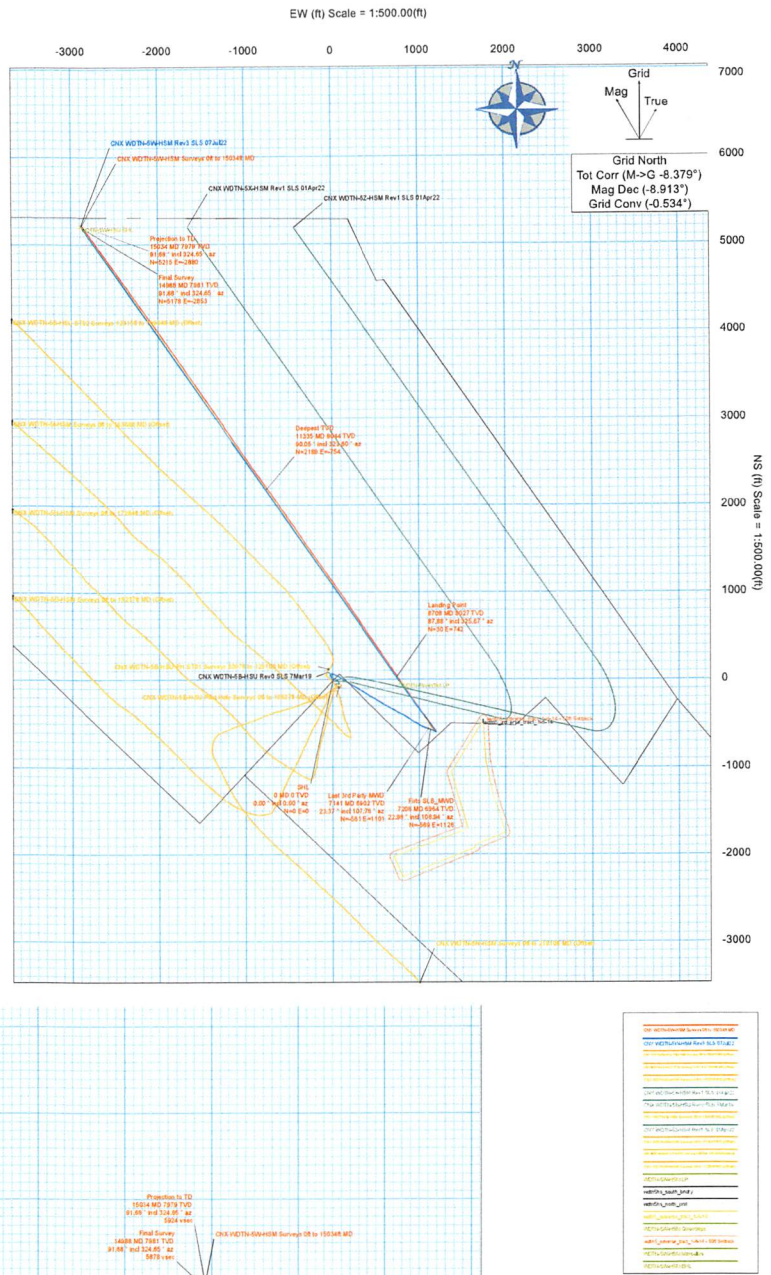
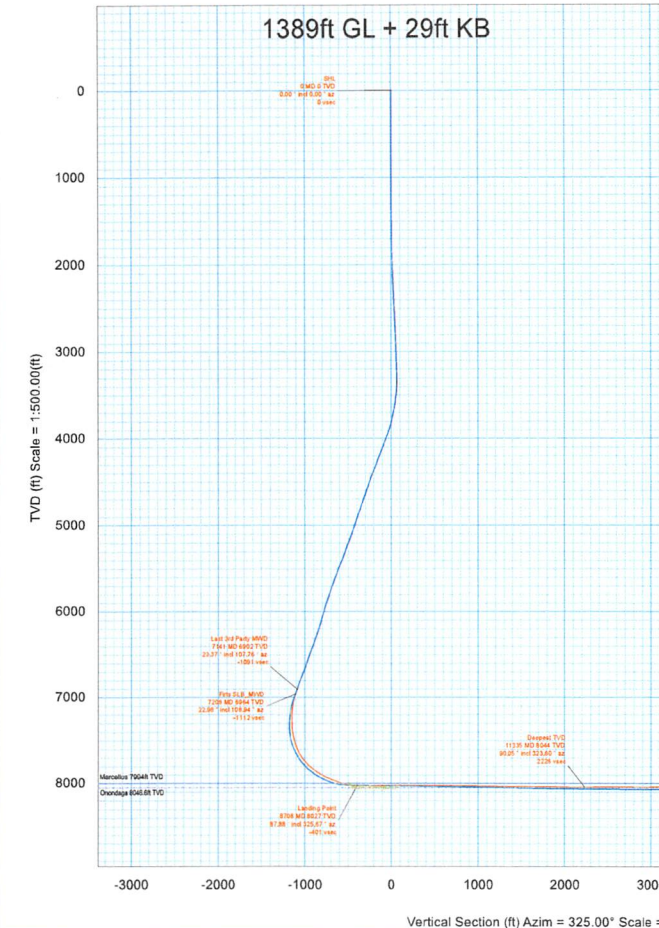
Borehole: Original Borehole	Well: WDTN-5W-HSM	Field: WV Monongalia County (NAD 27)	Structure: Patterson 873
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Gravity & Magnetic Parameters		Surface Location			Miscellaneous	
Model: HDGM 2022	Dip: 66.41°	Date: 09-Jul-2022	Lat: N 39 42 24.16	Northing: 440809.52RUS	Grid Conv: -0.5341'	Slot: WDTN-5W-HSM
MagDec: -8.913°	FS: 61829.864mT	Gravity FS: 999.331mgm (9.80665 Based)	Lon: W 80 20 14.70	Easting: 1764397.11RUS	Scale Fact: 0.99994173	TVD Ref: KB(1418ft above MSL)
			Plan: CNX WDTN-5W-HSM Surveys Off to 150348 MD			

Surface Location		Northing		Easting		TVD		V-Sec Azimuth		325.00	
Target Description	Shape	Dimension	Latitude	Longitude	Northing	Easting	TVD	V-Sec	Mag Dec	Grid Conv	Local Coord
WDTN-5W-HSM	Point	N/A	N 39 42 24.16	W 80 20 14.70	440809.52	1764397.11	1418.00	0.00	0.00	0.00	0.00
WDTN-5W-HSM	Point	N/A	N 39 42 24.16	W 80 20 14.70	440809.52	1764397.11	1418.00	0.00	0.00	0.00	0.00
WDTN-5W-HSM	Point	N/A	N 39 42 24.16	W 80 20 14.70	440809.52	1764397.11	1418.00	0.00	0.00	0.00	0.00
WDTN-5W-HSM	Point	N/A	N 39 42 24.16	W 80 20 14.70	440809.52	1764397.11	1418.00	0.00	0.00	0.00	0.00
WDTN-5W-HSM	Point	N/A	N 39 42 24.16	W 80 20 14.70	440809.52	1764397.11	1418.00	0.00	0.00	0.00	0.00
WDTN-5W-HSM	Point	N/A	N 39 42 24.16	W 80 20 14.70	440809.52	1764397.11	1418.00	0.00	0.00	0.00	0.00
WDTN-5W-HSM	Point	N/A	N 39 42 24.16	W 80 20 14.70	440809.52	1764397.11	1418.00	0.00	0.00	0.00	0.00
WDTN-5W-HSM	Point	N/A	N 39 42 24.16	W 80 20 14.70	440809.52	1764397.11	1418.00	0.00	0.00	0.00	0.00
WDTN-5W-HSM	Point	N/A	N 39 42 24.16	W 80 20 14.70	440809.52	1764397.11	1418.00	0.00	0.00	0.00	0.00
WDTN-5W-HSM	Point	N/A	N 39 42 24.16	W 80 20 14.70	440809.52	1764397.11	1418.00	0.00	0.00	0.00	0.00

PAR#	Seq.	Survey Year	Vendor/Year	Start Date	End Date	MD From	MD To	Survey	Depth (ft)	Depth (m)	Comments
1	1	2022	AD2022_CVR	07/09/2022	07/09/2022	0	29	AD2022_CVR	0.731	0.731	
1	2	2022	AD2022_CVR	07/09/2022	07/09/2022	29	29	AD2022_CVR	0.731	0.731	
1	3	2022	AD2022_CVR	07/09/2022	07/09/2022	29	1341	AD2022_CVR	4.96	4.96	
1	4	2022	AD2022_CVR	07/09/2022	07/09/2022	1341	2980	AD2022_CVR	16.745	16.745	
1	5	2022	AD2022_CVR	07/09/2022	07/09/2022	2980	7141	AD2022_CVR	36.955	36.955	
1	6	2022	AD2022_CVR	07/09/2022	07/09/2022	7141	15034	AD2022_CVR	252.218	252.218	

Point	MD	INCL	AZIM	TVD	VSEC	N(°E/W)	E(W/E)	DLS
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Last 3rd Party MWD	7141.00	23.37	197.76	6922.18	-1091.21	-565.85	1103.14	1.30
First SLS MWD	7208.00	22.88	108.84	6963.88	-1112.18	-568.15	1126.17	0.81
Landing Point	6708.00	87.88	325.67	8024.89	-400.82	30.38	742.36	10.68
Deepest TVD	11335.00	90.05	323.60	8043.82	2255.78	2188.49	-753.74	1.68
Final Survey	14888.00	81.88	334.65	7880.73	5877.89	5177.58	-2953.44	0.18
Projection to TD	15034.00	81.88	324.65	7878.19	5923.87	5215.09	-2960.04	0.00



CONTROLLED	
Plan of	CNX WDTN-5W-HSM Surveys Off to 150348 MD
Drawing ref	473
Copy number	16-04-3023
Drawn by	J. Shuman
Checked by	

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CNX WDTN-5W-HSM Surveys 0ft to 15034ft MD Survey Geodetic Report

(Def Survey)

Report Date: July 14, 2022 - 12:10 PM
 Client: CNX
 Field: WV Monongalia County (NAD 27)
 Structure / Slot: CNX WDTN-5 Pad / WDTN-5W-HSM
 Well: WDTN-5W-HSM
 Borehole: Original Borehole
 UWI / API#: Unknown / Unknown
 Survey Name: CNX WDTN-5W-HSM Surveys 0ft to 15034ft MD
 Survey Date: July 08, 2022
 Tort / AHD / DDI / ERD Ratio: 250.895 ° / 8530.632 ft / 6.602 / 1.061
 Coordinate Reference System: NAD27 West Virginia State Plane, Northern Zone, US Feet
 Location Lat / Long: N 39° 42' 24.15696", W 80° 20' 14.70059"
 Location Grid N/E Y/X: N 440609.518 fTUS, E 1764397.114 fTUS
 CRS Grid Convergence Angle: -0.5341 °
 Grid Scale Factor: 0.99994173
 Version / Patch: 2.10.829.1

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 325.000 ° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: KB
 TVD Reference Elevation: 1418.000 ft above MSL
 Seabed / Ground Elevation: 1389.000 ft above MSL
 Magnetic Declination: -8.913 °
 Total Gravity Field Strength: 999.3311mgn (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 51829.984 nT
 Magnetic Dip Angle: 66.410 °
 Declination Date: July 08, 2022
 Magnetic Declination Model: HDGM 2022
 North Reference: Grid North
 Grid Convergence Used: -0.5341 °
 Total Corr Mag North->Grid North: -8.3790 °
 Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (fTUS)	Easting (fTUS)	Latitude (°)	Longitude (°)
SHL	0.00	0.00	0.00	0.00	-1418.00	0.00	0.00	0.00	N/A	N/A	N/A	440609.52	1764397.11	39.70671027	-80.33741683
	100.00	0.27	56.68	100.00	-1318.00	-0.01	0.13	0.20	0.27	0.27	0.00	440609.65	1764397.31	39.70671063	-80.33741614
	150.00	0.14	157.29	150.00	-1268.00	-0.07	0.14	0.32	0.65	-0.26	201.22	440609.66	1764397.43	39.70671065	-80.33741570
	200.00	0.21	247.42	200.00	-1218.00	-0.11	0.05	0.26	0.51	0.14	180.26	440609.56	1764397.37	39.70671040	-80.33741592
	250.00	0.12	245.58	250.00	-1168.00	-0.08	-0.01	0.13	0.18	-0.18	-3.68	440609.51	1764397.24	39.70671024	-80.33741638
	300.00	0.02	34.04	300.00	-1118.00	-0.07	-0.02	0.08	0.27	-0.20	296.92	440609.49	1764397.20	39.70671020	-80.33741654
	350.00	0.18	272.07	350.00	-1068.00	-0.02	-0.01	0.01	0.38	0.32	-243.94	440609.50	1764397.12	39.70671023	-80.33741680
	400.00	0.25	317.08	400.00	-1018.00	0.14	0.07	-0.14	0.35	0.14	90.02	440609.59	1764396.97	39.70671045	-80.33741734
	450.00	0.24	320.79	450.00	-968.00	0.35	0.23	-0.28	0.04	-0.02	7.42	440609.75	1764396.83	39.70671089	-80.33741785
	500.00	0.08	316.63	500.00	-918.00	0.49	0.34	-0.37	0.32	-0.32	-8.32	440609.85	1764396.74	39.70671118	-80.33741817
	550.00	0.32	61.08	550.00	-868.00	0.51	0.43	-0.28	0.70	0.48	208.90	440609.95	1764396.84	39.70671143	-80.33741783
	600.00	0.39	80.58	600.00	-818.00	0.42	0.52	0.01	0.28	0.14	39.00	440610.04	1764397.13	39.70671170	-80.33741680
	650.00	0.21	128.15	650.00	-768.00	0.26	0.49	0.25	0.59	-0.36	95.14	440610.01	1764397.37	39.70671163	-80.33741594
	700.00	0.18	151.81	700.00	-718.00	0.09	0.37	0.36	0.17	-0.06	47.32	440609.89	1764397.48	39.70671129	-80.33741555
	750.00	0.11	350.76	750.00	-668.00	0.06	0.35	0.39	0.57	-0.14	-322.10	440609.87	1764397.51	39.70671123	-80.33741545
	800.00	0.21	354.10	800.00	-618.00	0.18	0.49	0.38	0.20	0.20	6.68	440610.00	1764397.49	39.70671161	-80.33741551
	850.00	0.16	68.00	850.00	-568.00	0.25	0.60	0.43	0.45	-0.10	147.80	440610.12	1764397.54	39.70671193	-80.33741532
	900.00	0.14	131.61	900.00	-518.00	0.17	0.59	0.54	0.32	-0.04	127.22	440610.11	1764397.66	39.70671190	-80.33741493
	950.00	0.07	242.29	950.00	-468.00	0.12	0.53	0.56	0.35	-0.14	221.36	440610.05	1764397.67	39.70671175	-80.33741486
	1000.00	0.16	355.39	1000.00	-418.00	0.18	0.59	0.53	0.40	0.18	226.20	440610.11	1764397.64	39.70671190	-80.33741498
	1050.00	0.24	352.09	1049.99	-368.01	0.33	0.76	0.61	0.16	0.16	-6.60	440610.28	1764397.62	39.70671237	-80.33741505
	1100.00	0.12	277.08	1099.99	-318.01	0.46	0.87	0.44	0.48	-0.24	-150.02	440610.39	1764397.55	39.70671267	-80.33741529
	1150.00	0.05	270.85	1149.99	-268.01	0.51	0.88	0.37	0.14	-0.14	-12.46	440610.40	1764397.48	39.70671269	-80.33741556
	1200.00	0.16	288.01	1199.99	-218.01	0.58	0.90	0.28	0.23	0.22	34.32	440610.42	1764397.39	39.70671275	-80.33741587
	1250.00	0.20	309.37	1249.99	-168.01	0.72	0.98	0.14	0.15	0.08	42.72	440610.50	1764397.26	39.70671296	-80.33741635
	1300.00	0.30	293.42	1299.99	-118.01	0.91	1.09	-0.04	0.24	0.20	-31.90	440610.60	1764397.07	39.70671325	-80.33741702
	1341.00	0.58	348.28	1340.99	-77.01	1.20	1.33	-0.18	0.16	0.68	133.80	440610.85	1764396.93	39.70671392	-80.33741753
	1443.00	0.31	333.12	1442.99	24.99	1.94	2.08	-0.41	0.29	-0.26	-14.86	440611.60	1764396.70	39.70671597	-80.33741837
	1537.00	0.57	342.99	1536.99	118.99	2.64	2.76	-0.66	0.29	0.28	10.50	440612.27	1764396.45	39.70671782	-80.33741928
	1632.00	0.84	333.99	1631.98	213.98	3.78	3.83	-1.11	0.31	0.28	-9.47	440613.35	1764396.01	39.70672077	-80.33742090
	1725.00	1.34	329.64	1724.96	306.96	5.53	5.39	-1.96	0.54	0.54	-4.68	440614.90	1764395.16	39.70672500	-80.33742396
	1819.00	1.72	327.27	1818.93	400.93	8.04	7.52	-3.28	0.41	0.40	-2.52	440617.04	1764393.84	39.70673083	-80.33742872
	1913.00	2.01	322.06	1912.88	494.88	11.10	10.01	-5.05	0.36	0.31	-5.54	440619.53	1764392.06	39.70673761	-80.33743511
	2006.00	2.15	320.99	2005.82	587.82	14.46	12.65	-7.15	0.16	0.15	-1.15	440622.17	1764389.96	39.70674481	-80.33744267
	2099.00	2.19	321.52	2098.75	680.75	17.98	15.40	-9.36	0.05	0.04	0.57	440624.91	1764387.76	39.70675229	-80.33745059
	2193.00	2.53	323.15	2192.67	774.67	21.84	18.46	-11.72	0.37	0.36	1.73	440627.98	1764385.40	39.70676065	-80.33745909
	2287.00	2.42	324.21	2286.58	868.58	25.90	21.73	-14.12	0.13	-0.12	1.13	440631.25	1764382.99	39.70676956	-80.33746774
	2380.00	2.56	323.93	2379.50	961.50	29.94	25.00	-16.49	0.15	0.15	-0.30	440634.52	1764380.62	39.70677848	-80.33747628
	2474.00	2.50	323.97	2473.40	1055.40	34.09	28.36	-18.94	0.06	-0.06	0.04	440637.87	1764378.18	39.70678763	-80.33748507
	2567.00	2.44	322.65	2566.32	1148.32	38.10	31.57	-21.33	0.09	-0.06	-1.42	440641.09	1764375.79	39.70679639	-80.33749368
	2661.00	2.50	325.04	2660.23	1242.23	42.15	34.84	-23.72	0.13	0.06	2.54	440644.36	1764373.40	39.70680531	-80.33750228
	2755.00	2.39	328.82	2754.14	1336.14	46.15	38.20	-25.91	0.21	-0.12	4.02	440647.72	1764371.21	39.70681447	-80.33751017

...CNX WDTN-5 PadWDTN-5W-HSMOriginal BoreholeCNX WDTN-5W-HSM Surveys 0ft to 15034ft MD

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Comments	MD (ft)	Incl (°)	Azim Grd (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (ft)	Easting (ft)	Latitude (°)	Longitude (°)
	2848.00	2.26	325.03	2847.07	1429.07	49.92	41.36	-27.96	0.22	-0.14	-4.08	440650.88	1764369.15	39.70682310	-80.33751758
	2942.00	2.10	322.41	2941.00	1523.00	53.49	44.25	-30.08	0.20	-0.17	-2.79	440653.76	1764367.04	39.70683096	-80.33752518
	3005.00	1.86	320.44	3003.96	1585.96	55.67	45.95	-31.43	0.40	-0.38	-3.13	440655.46	1764365.69	39.70683560	-80.33753006
	3043.00	1.78	313.21	3041.94	1623.94	56.86	46.83	-32.25	0.64	-0.21	-19.03	440656.34	1764364.86	39.70683799	-80.33753301
	3140.00	2.69	12.50	3138.88	1720.88	59.87	50.08	-32.86	2.42	0.94	61.12	440659.60	1764364.26	39.70684691	-80.33753527
	3233.00	5.87	39.62	3231.62	1813.62	62.61	55.88	-29.35	3.96	3.42	29.16	440665.39	1764367.76	39.70686291	-80.33752300
	3326.00	6.86	54.68	3324.05	1906.05	63.90	62.75	-21.79	2.08	1.06	16.19	440672.27	1764375.33	39.70688197	-80.33749634
	3419.00	6.81	79.32	3416.41	1998.41	61.66	66.99	-11.84	3.13	-0.05	26.49	440676.50	1764385.28	39.70689385	-80.33746111
	3512.00	7.86	109.49	3508.68	2090.68	54.21	65.89	-0.42	4.24	1.13	32.44	440675.40	1764396.70	39.70689112	-80.33742050
	3606.00	9.83	120.12	3601.56	2183.56	41.70	59.71	12.58	2.71	2.10	11.31	440669.23	1764409.70	39.70687451	-80.33737409
	3699.00	12.26	116.03	3692.83	2274.83	25.85	51.40	28.33	2.74	2.61	-4.40	440660.91	1764425.44	39.70685208	-80.33731787
	3791.00	15.63	116.10	3782.11	2364.11	6.45	41.65	48.24	3.66	3.66	0.08	440651.17	1764445.35	39.70682585	-80.33724677
	3884.00	17.89	120.59	3871.16	2453.16	-17.53	28.87	71.79	2.80	2.43	4.83	440638.39	1764468.90	39.70679136	-80.33716265
	3977.00	20.96	124.21	3958.86	2540.86	-46.09	12.25	97.85	3.54	3.30	3.89	440621.76	1764494.96	39.70674639	-80.33706949
	4071.00	23.31	124.63	4045.92	2627.92	-79.25	-7.78	127.06	2.51	2.50	0.45	440601.74	1764524.17	39.70669216	-80.33696501
	4164.00	22.18	122.56	4131.69	2713.69	-112.73	-27.68	157.00	1.49	-1.22	-2.23	440581.84	1764554.10	39.70663829	-80.33685795
	4257.00	23.55	119.13	4217.38	2799.38	-145.67	-46.18	188.03	2.05	1.47	-3.69	440563.34	1764585.13	39.70658831	-80.33674707
	4350.00	22.38	117.83	4303.01	2885.01	-178.14	-63.49	219.91	1.37	-1.26	-1.40	440546.03	1764617.01	39.70654161	-80.33663317
	4443.00	22.87	120.24	4388.86	2970.86	-210.31	-80.85	251.18	1.13	0.53	2.59	440528.67	1764648.28	39.70649473	-80.33652147
	4536.00	24.03	121.39	4474.18	3056.18	-244.07	-99.82	282.96	1.34	1.25	1.24	440509.70	1764680.06	39.70644348	-80.33640790
	4630.00	22.41	119.36	4560.56	3142.56	-277.76	-118.58	314.92	1.92	-1.72	-2.16	440490.95	1764712.01	39.70639281	-80.33629371
	4727.00	20.03	117.13	4650.98	3232.98	-309.12	-135.22	345.82	2.59	-2.45	-2.30	440474.31	1764742.92	39.70634791	-80.33618333
	4821.00	20.68	120.13	4739.11	3321.11	-338.41	-150.89	374.51	1.31	0.69	3.19	440458.64	1764771.60	39.70630562	-80.33608087
	4914.00	21.81	123.67	4825.79	3407.79	-369.40	-168.71	403.09	1.84	1.22	3.81	440440.81	1764800.18	39.70625743	-80.33597870
	5007.00	19.54	120.67	4912.80	3494.80	-399.67	-186.23	430.85	2.69	-2.44	-3.23	440423.30	1764827.94	39.70621006	-80.33587947
	5101.00	20.72	120.37	5001.06	3583.06	-429.11	-202.65	458.72	1.26	1.26	-0.32	440406.88	1764855.80	39.70616567	-80.33577988
	5195.00	22.12	121.74	5088.56	3670.56	-460.49	-220.37	488.12	1.58	1.49	1.46	440389.16	1764885.20	39.70611779	-80.33567481
	5290.00	22.95	120.59	5176.31	3758.31	-493.79	-239.21	519.27	0.99	0.87	-1.21	440370.32	1764916.35	39.70606688	-80.33556346
	5383.00	20.99	118.24	5262.55	3844.55	-525.18	-256.32	549.56	2.31	-2.11	-2.53	440353.22	1764946.64	39.70602068	-80.33545527
	5476.00	21.86	120.14	5349.10	3931.10	-555.83	-272.93	579.27	1.28	1.04	2.04	440336.60	1764976.35	39.70597583	-80.33534912
	5569.00	23.96	121.23	5434.76	4016.76	-588.82	-291.42	610.40	2.09	2.09	1.17	440318.12	1765007.47	39.70592588	-80.33523789
	5663.00	22.25	121.03	5521.24	4103.24	-622.49	-310.45	641.90	1.71	-1.71	-0.21	440299.09	1765038.98	39.70587444	-80.33512529
	5757.00	22.10	118.65	5608.29	4190.29	-654.59	-328.10	672.67	0.97	-0.16	-2.53	440281.44	1765069.75	39.70582677	-80.33501536
	5852.00	20.53	117.38	5696.79	4278.79	-685.37	-344.33	703.15	1.72	-1.65	-1.34	440265.21	1765100.22	39.70578299	-80.33490651
	5946.00	21.87	119.43	5784.43	4366.43	-715.77	-360.52	733.04	1.63	1.43	2.18	440249.02	1765130.11	39.70573932	-80.33479976
	6039.00	20.05	117.67	5871.27	4453.27	-745.56	-376.43	762.24	2.07	-1.96	-1.89	440233.11	1765159.31	39.70569638	-80.33469544
	6133.00	17.18	115.80	5960.35	4542.35	-772.00	-389.96	789.02	3.12	-3.05	-1.89	440219.58	1765186.08	39.70565992	-80.33459983
	6230.00	18.47	119.59	6052.69	4634.69	-798.38	-403.78	815.28	1.79	1.33	3.91	440205.76	1765212.34	39.70562265	-80.33441355
	6325.00	17.83	118.27	6142.97	4724.97	-824.97	-418.10	841.17	0.80	-0.67	-1.39	440191.44	1765238.24	39.70558400	-80.33432413
	6419.00	18.60	124.60	6232.26	4814.26	-851.87	-433.43	866.19	2.26	0.82	6.73	440176.11	1765263.25	39.70554255	-80.33423213
	6514.00	22.34	123.41	6321.25	4903.25	-882.87	-451.98	893.74	3.96	3.94	-1.25	440157.56	1765290.80	39.70549233	-80.33412560
	6609.00	21.21	122.53	6409.47	4991.47	-915.54	-471.17	923.31	1.24	-1.19	-0.93	440138.38	1765320.36	39.70544042	-80.33401199
	6703.00	19.49	120.53	6497.60	5079.60	-945.53	-488.28	951.15	1.97	-1.83	-2.13	440121.27	1765348.21	39.70539416	-80.33402039
	6797.00	22.00	121.34	6585.50	5167.50	-975.94	-505.40	979.70	2.69	2.67	0.86	440104.15	1765376.76	39.70534787	-80.33391836
	6890.00	22.91	118.38	6671.45	5253.45	-1008.08	-523.07	1010.51	1.56	0.98	-3.18	440086.48	1765407.56	39.70530016	-80.33380830
	6983.00	22.83	113.85	6757.15	5339.15	-1039.70	-538.97	1042.94	1.89	-0.09	-4.87	440070.58	1765439.99	39.70525734	-80.33369252
	7077.00	23.34	109.86	6843.62	5425.62	-1070.54	-552.67	1077.13	1.75	0.54	-4.24	440056.88	1765474.18	39.70522060	-80.33357055
Last 3rd Party MWD	7141.00	23.37	107.76	6902.38	5484.38	-1091.01	-560.85	1101.14	1.30	0.05	-3.28	440048.70	1765498.19	39.70519876	-80.33348494
Firts SLB_MWD	7208.00	22.98	108.94	6963.98	5545.98	-1112.16	-569.15	1126.17	0.91	-0.58	1.76	440040.41	1765523.22	39.70517662	-80.33339573
	7300.00	14.57	107.35	7051.00	5633.00	-1135.88	-578.44	1154.25	9.16	-9.14	-1.73	440031.11	1765551.30	39.70515181	-80.33329562
	7394.00	6.76	104.80	7143.31	5725.31	-1149.49	-583.39	1170.91	8.32	-8.31	-2.71	440026.16	1765567.96	39.70513866	-80.33323625
	7488.00	0.56	108.71	7237.07	5819.07	-1154.09	-584.95	1176.70	6.60	-6.60	4.16	440024.60	1765573.74	39.70513451	-80.33321562
	7582.00	1.72	339.30	7331.06	5913.06	-1153.10	-583.78	1176.64	2.26	1.23	-137.67	440025.77	1765573.68	39.70513773	-80.33321589
	7676.00	10.98	316.40	7424.39	6006.39	-1142.85	-575.96	1169.95	10.02	9.85	-24.36	440033.59	1765566.99	39.70515903	-80.33323991
	7768.00	15.78	313.09	7513.86	6095.86	-1121.94	-561.06	1154.76	5.28	5.22	-3.60	440048.49	1765551.81	39.70519954	-80.33329437
	7863.00	24.16	321.92	7603.09	6185.09	-1089.82	-536.88	1133.30	9.35	8.82	9.29	440072.67	1765530.34	39.70526536	-80.33337146
	7956.00	34.24	328.16	7684.19	6266.19	-1044.57	-499.57	1107.68	11.31	10.84	6.71	440109.98	1765504.73	39.70536714	-80.33346371
	8049.00	42.65	327.89	7756.96	6338.96	-986.88	-450.57	1077.08	9.04	9.04	-0.29	440158.97	1765474.13	39.70550087	-80.33357094
	8144.00	50.80	326.23	7822.03	6404.03	-917.81	-392.61	1039.45	8.67	8.58	-1.75	440216.93	1765447.13	39.70550087	-80.33357094
	8238.00	57.44	324.49	7877.10	6459.10	-841.70	-330.02	996.14	7.22	7.06	-1.85	440279.52	1765393.20	39.70582975	-80.33386571
	8332.00	63.34	324.38	7923.52	6505.52	-760.01	-263.57	948.63	6.28	6.28	-0.12	440345.96	1765345.69	39.70601095	-80.33403676
	8426.00	69.57	324.58	7961.05	6543.05	-673.89	-193.46	898.59	6.63	6.63	0.21	440416.07	1765295.65	39.70620213	-80.33421691
	8520.00	72.71	324.66	7991.43	6573.43	-584.95	-120.95	847.09	3.34	3.34	0.09	440488.58	1765244.16	39.70639989	-80.33440232
	8614.00	77.84	325.45	8015.32	6597.32	-494.06	-46.45	795.04	5.52	5.46	0.84	440563.07	1765192.11	39.70660308	-80.33458976
	8708.00	87.88	325.67	8026.99	6608.99	-400.92	30.38	742.36	10.68	10.68	0.23	440639.90	1765139.43	39.70681263	-80.33477952
	8799.00	90.43	3												

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
	9270.00	89.62	325.47	8023.50	6605.50	160.99	494.09	424.96	0.41	-0.37	-0.18	441103.57	1764822.05	39.70807748	-80.33592290
	9363.00	90.15	325.64	8023.69	6605.69	253.98	570.78	372.36	0.60	0.57	0.18	441180.26	1764769.45	39.70828667	-80.33611238
	9458.00	89.84	325.27	8023.69	6605.69	348.98	649.03	318.49	0.51	-0.33	-0.39	441258.51	1764715.58	39.70850010	-80.33630643
	9552.00	89.76	325.71	8024.02	6606.02	442.97	726.49	265.23	0.48	-0.09	0.47	441335.96	1764662.33	39.70871137	-80.33649826
	9647.00	89.52	325.59	8024.62	6606.62	537.97	804.92	211.63	0.28	-0.25	-0.13	441414.39	1764608.73	39.70892531	-80.33669136
	9740.00	89.92	326.01	8025.07	6607.07	630.96	881.84	159.36	0.62	0.43	0.45	441491.30	1764556.46	39.70913512	-80.33687969
	9833.00	89.55	325.21	8025.50	6607.50	723.95	958.58	106.83	0.95	-0.40	-0.86	441568.04	1764503.94	39.70934445	-80.33706892
	9927.00	89.11	324.92	8026.60	6608.60	817.94	1035.63	53.00	0.56	-0.47	-0.31	441645.09	1764450.11	39.70955460	-80.33726277
	10020.00	88.96	324.76	8026.17	6610.17	910.93	1111.66	-0.54	0.24	-0.16	-0.17	441721.11	1764396.57	39.70976192	-80.33745560
	10113.00	88.75	325.20	8030.03	6612.03	1003.91	1187.80	-53.90	0.52	-0.23	0.47	441797.25	1764343.21	39.70996959	-80.33764776
	10208.00	88.82	324.23	8032.04	6614.04	1098.89	1265.33	-108.77	1.02	0.07	-1.02	441874.77	1764288.35	39.71018102	-80.33784532
	10301.00	88.99	325.77	8033.82	6615.82	1191.87	1341.50	-162.10	1.67	0.18	1.66	441950.93	1764235.03	39.71038874	-80.33803739
	10395.00	89.71	325.08	8034.89	6616.89	1285.86	1418.89	-215.44	1.06	0.77	-0.73	442028.32	1764181.69	39.71059983	-80.33822953
	10488.00	89.65	324.52	8035.40	6617.40	1378.85	1494.88	-269.04	0.61	-0.06	-0.60	442104.31	1764128.09	39.71080707	-80.33842258
	10583.00	89.96	326.00	8035.73	6617.73	1473.85	1572.95	-323.18	1.59	0.33	1.56	442182.37	1764073.96	39.71101997	-80.33861757
	10676.00	89.25	325.19	8036.37	6618.37	1566.84	1649.67	-375.73	1.16	-0.76	-0.87	442259.09	1764021.41	39.71122926	-80.33880688
	10769.00	89.43	325.32	8037.44	6619.44	1659.83	1726.09	-428.72	0.24	0.19	0.14	442335.50	1763968.62	39.71143766	-80.33899778
	10864.00	89.25	324.59	8038.53	6620.53	1754.83	1803.86	-483.27	0.79	-0.19	-0.77	442413.27	1763913.87	39.71164976	-80.33919423
	10957.00	89.28	325.18	8039.73	6621.73	1847.82	1879.92	-536.76	0.64	0.03	0.63	442489.33	1763860.38	39.71185720	-80.33938688
	11052.00	89.38	325.47	8040.84	6622.84	1942.81	1958.05	-590.81	0.32	0.11	0.31	442567.45	1763806.34	39.71207027	-80.33958155
	11146.00	88.79	324.85	8042.34	6624.34	2036.80	2035.19	-644.50	0.91	-0.63	-0.66	442644.58	1763752.65	39.71228066	-80.33977495
	11240.00	89.68	325.15	8043.59	6625.59	2130.79	2112.18	-698.41	1.00	0.95	0.32	442721.57	1763698.75	39.71249063	-80.33996912
Deepest TVD	11335.00	90.05	323.60	8043.82	6625.82	2225.78	2189.40	-753.74	1.68	0.39	-1.63	442798.78	1763643.42	39.71270118	-80.34016834
	11429.00	90.72	324.79	8043.19	6625.19	2319.76	2265.63	-808.73	1.45	0.71	1.29	442875.01	1763588.43	39.71290904	-80.34036636
	11522.00	89.82	324.15	8042.75	6624.75	2412.76	2341.31	-862.78	1.19	-0.97	-0.67	442950.69	1763534.39	39.71311541	-80.34056094
	11615.00	90.04	325.11	8042.86	6624.86	2505.75	2417.14	-916.61	1.06	0.24	1.03	443026.52	1763480.56	39.71332221	-80.34075480
	11709.00	90.37	325.33	8042.53	6624.53	2599.75	2494.35	-970.23	0.42	0.35	0.23	443103.72	1763426.94	39.71353277	-80.34094795
	11802.00	90.08	325.34	8042.16	6624.16	2692.75	2570.84	-1023.13	0.31	-0.31	0.01	443180.20	1763374.05	39.71374139	-80.34113850
	11897.00	89.54	324.90	8042.48	6624.48	2787.75	2648.77	-1077.45	0.73	-0.57	-0.41	443258.13	1763319.73	39.71395393	-80.34133419
	11991.00	89.88	325.82	8042.95	6624.95	2881.75	2726.11	-1130.88	1.04	0.36	0.98	443335.46	1763266.30	39.71416486	-80.34152667
	12084.00	89.95	325.86	8043.09	6625.09	2974.74	2803.06	-1183.10	0.09	0.08	0.04	443412.41	1763214.08	39.71437477	-80.34171484
	12178.00	90.25	325.22	8042.93	6624.93	3068.73	2880.57	-1236.29	0.75	0.32	-0.68	443489.91	1763160.90	39.71458616	-80.34190646
	12272.00	90.35	325.17	8042.43	6624.43	3162.73	2957.75	-1289.94	0.12	0.11	-0.05	443567.09	1763107.25	39.71479666	-80.34209974
	12365.00	91.09	325.23	8041.26	6623.26	3255.72	3034.11	-1343.01	0.80	0.80	0.06	443643.45	1763054.18	39.71500491	-80.34229092
	12460.00	91.33	325.43	8039.26	6621.26	3350.70	3112.23	-1397.04	0.33	0.25	0.21	443721.56	1763000.16	39.71521796	-80.34248556
	12554.00	92.00	324.64	8036.53	6618.53	3444.66	3189.23	-1450.89	1.10	0.71	-0.84	443798.55	1762946.31	39.71542795	-80.34267951
	12647.00	92.15	325.20	8033.16	6615.16	3537.59	3265.28	-1504.30	0.62	0.16	0.60	443874.60	1762892.90	39.71563536	-80.34287190
	12741.00	92.37	324.93	8029.45	6611.45	3631.52	3342.28	-1558.09	0.37	0.23	-0.29	443951.60	1762839.12	39.71584535	-80.34306556
	12928.00	91.49	325.32	8023.16	6605.16	3818.41	3495.61	-1664.95	0.51	-0.47	0.21	444104.92	1762782.26	39.71605530	-80.34325990
	13021.00	91.31	325.07	8020.88	6602.88	3911.38	3571.95	-1718.02	0.33	-0.19	-0.27	444181.25	1762729.20	39.71626530	-80.34345460
	13114.00	91.26	325.26	8018.80	6600.80	4004.36	3648.26	-1771.13	0.21	-0.05	0.20	444257.56	1762676.09	39.71647530	-80.34364930
	13208.00	91.24	325.15	8016.75	6598.75	4098.34	3725.44	-1824.76	0.12	-0.02	-0.12	444334.73	1762622.47	39.71668530	-80.34384400
	13302.00	91.15	324.69	8014.79	6596.79	4192.32	3802.35	-1878.77	0.50	-0.10	-0.49	444411.64	1762568.46	39.71689530	-80.34403870
	13394.00	91.28	325.01	8012.84	6594.84	4284.30	3877.55	-1931.72	0.38	0.14	0.35	444488.84	1762514.51	39.71710530	-80.34423340
	13488.00	91.09	325.02	8010.89	6592.89	4378.28	3954.55	-1985.61	0.20	-0.20	0.01	444565.83	1762460.56	39.71731530	-80.34442810
	13581.00	91.09	324.84	8009.12	6591.12	4471.26	4030.65	-2039.03	0.19	0.00	-0.19	444642.82	1762406.61	39.71752530	-80.34462280
	13675.00	90.92	324.58	8007.47	6589.47	4565.24	4107.37	-2093.33	0.33	-0.18	-0.28	444719.81	1762352.66	39.71773530	-80.34481750
	13769.00	90.72	324.27	8006.13	6588.13	4659.23	4183.82	-2148.01	0.39	-0.21	-0.33	444796.80	1762298.71	39.71794530	-80.34501220
	13863.00	90.83	324.30	8004.86	6586.86	4753.21	4260.13	-2202.88	0.12	0.12	0.03	444873.79	1762244.76	39.71815530	-80.34520690
	13957.00	90.28	324.64	8003.95	6585.95	4847.20	4336.62	-2257.50	0.69	-0.59	0.36	444950.78	1762190.81	39.71836530	-80.34540160
	14050.00	91.25	324.80	8002.71	6584.71	4940.19	4412.54	-2311.21	1.06	1.04	0.17	445027.77	1762136.86	39.71857530	-80.34559630
	14144.00	90.55	324.63	8001.23	6583.23	5034.18	4489.26	-2365.50	0.77	-0.74	-0.18	445104.76	1762082.91	39.71878530	-80.34579100
	14238.00	90.82	324.53	8000.10	6582.10	5128.17	4565.85	-2419.98	0.31	0.29	-0.11	445181.75	1762028.96	39.71899530	-80.34598570
	14332.00	90.73	324.80	7998.82	6580.82	5223.16	4643.35	-2474.91	0.30	-0.09	0.28	445258.74	1761975.01	39.71920530	-80.34618040
	14428.00	91.94	325.14	7996.61	6578.61	5318.13	4721.11	-2529.43	1.32	1.27	0.36	445335.73	1761921.06	39.71941530	-80.34637510
	14521.00	91.29	324.78	7993.99	6575.99	5411.09	4797.23	-2582.80	0.80	-0.70	-0.39	445412.72	1761867.11	39.71962530	-80.34656980
	14615.00	91.76	324.69	7991.48	6573.48	5505.06	4873.95	-2637.06	0.51	0.50	-0.10	445489.71	1761813.16	39.71983530	-80.34676450
	14708.00	91.69	324.47	7988.88	6570.88	5598.01	4949.70	-2690.93	0.25	-0.08	-0.24	445566.70	1761759.21	39.72004530	-80.34695920
	14801.00	91.58	324.47	7986.03	6568.03	5690.97	5025.36	-2744.95	0.12	-0.12	0.00	445643.69	1761705.26	39.72025530	-80.34715390
	14895.00	91.62	324.49	7983.41	6565.41	5784.93	5101.84	-2799.55	0.05	0.04	0.02	445720.68	1761651.31	39.72046530	-80.34734860
Final Survey	14988.00	91.68	324.65	7980.73	6562.73	5877.89	5177.58	-2853.44	0.18	0.06	0.17	445797.67	1761597.36	39.72067530	-80.34754330
Projection to TD	15034.00	91.68	324.65	7979.38	6561.38	5923.87	5215.09	-2880.04	0.00	0.00	0.00	445874.66	1761543.41	39.72088530	-80.34773800

Survey Type: Def Survey

Survey Error Model: ISCSA Rev 3 *** 3-D 95.00% Confidence 2.7955 sigma
 Survey Program:

...CNX WDTN-5 Pad\WDTN-5W-HSM\Original Borehole\CNX WDTN-5W-HSM Surveys Off to 15034ft MD

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey							
	1	0.000	29.000	1/98.425	17.500	13.375	A020Ga_GYRO-NS-Depth Only	Original Borehole / CNX WDTN-5W-HSM Surveys 0ft to 15034ft MD							
	1	29.000	29.000	Act Stns	17.500	13.375	A020Ga_GYRO-NS-Depth Only	Original Borehole / CNX WDTN-5W-HSM Surveys 0ft to 15034ft MD							
	1	29.000	1341.000	Act Stns	17.500	13.375	A020Ga_GYRO-NS	Original Borehole / CNX WDTN-5W-HSM Surveys 0ft to 15034ft							
	1	1341.000	2960.000	Act Stns	12.250	9.625	A001Mb_MWD	Original Borehole / CNX WDTN-5W-HSM Surveys 0ft to 15034ft							
	1	2960.000	7141.000	Act Stns	8.750	5.500	A001Mb_MWD	Original Borehole / CNX WDTN-5W-HSM Surveys 0ft to 15034ft							
	1	7141.000	15034.000	Act Stns	8.500	5.500	B006Mb_MWD+IGRF	Original Borehole / CNX WDTN-5W-HSM Surveys 0ft to 15034ft							

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