CNX WDTN19FHSM Surveys 0ft to 22960ft MD Survey Geodetic Report

(Def Survey)

Report Date:	January 05, 2023 - 03:23 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	CNX	**Vertical Section Azimuth:**	145.000 ° (Grid North)
Field:	WV Monongalia County (NAD 27)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	CNX WDTN19 Pad / WDTN19FHSM	**TVD Reference Datum:**	KB
Well:	WDTN19FHSM	**TVD Reference Elevation:**	1293.000 ft above MSL
Borehole:	Original Borehole	**Seabed / Ground Elevation:**	1264.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	-8.914 °
Survey Name:	CNX WDTN19FHSM Surveys 0ft to 22960ft MD	**Total Gravity Field Strength:**	999.3417mgn (9.80665 Based)
Survey Date:	December 18, 2022	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	250.982 ° / 15836.059 ft / 7.057 / 1.979	**Total Magnetic Field Strength:**	51778.669 nT
Coordinate Reference System:	NAD27 West Virginia State Plane, Northern Zone, US Feet	**Magnetic Dip Angle:**	66.366 °
Location Lat / Long:	N 39° 41' 35.72634", W 80° 20' 7.63962"	**Declination Date:**	December 18, 2022
Location Grid N/E Y/X:	N 435704.500 ftUS, E 1764903.354 ftUS	**Magnetic Declination Model:**	HDGM 2022
CRS Grid Convergence Angle:	-0.5328 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99994143	**Grid Convergence Used:**	-0.5328 °
Version / Patch:	2.10.834.0	**Total Corr Mag North->Grid North:**	-8.3809 °
		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 (°)
Surface	0.00	0.00	0.00	0.00	-1293.00	0.00	0.00	0.00	N/A	N/A	N/A	435704.50	1764903.35	39.69325732	-80.33545545
	100.00	0.42	245.42	100.00	-1193.00	-0.07	-0.15	-0.33	0.42	0.42	0.00	435704.35	1764903.02	39.69325689	-80.33545663
	200.00	0.05	45.86	200.00	-1093.00	-0.14	-0.27	-0.64	0.47	-0.37	160.44	435704.23	1764902.72	39.69325655	-80.33545770
	300.00	0.15	284.63	300.00	-993.00	-0.25	-0.21	-0.73	0.18	0.10	-121.23	435704.29	1764902.62	39.69325672	-80.33545804
	400.00	0.19	226.41	400.00	-893.00	-0.32	-0.29	-0.98	0.17	0.04	-58.22	435704.21	1764902.38	39.69325649	-80.33545891
	500.00	0.36	261.46	500.00	-793.00	-0.44	-0.45	-1.41	0.23	0.17	35.05	435704.05	1764901.95	39.69325604	-80.33546044
	600.00	0.16	317.19	600.00	-693.00	-0.71	-0.40	-1.81	0.30	-0.20	55.73	435704.10	1764901.54	39.69325618	-80.33546188
	700.00	0.09	89.39	700.00	-593.00	-0.81	-0.29	-1.83	0.23	-0.07	132.20	435704.21	1764901.52	39.69325646	-80.33546194
	800.00	0.07	119.07	800.00	-493.00	-0.71	-0.32	-1.70	0.05	-0.02	29.68	435704.18	1764901.66	39.69325639	-80.33546147
	900.00	0.11	0.99	900.00	-393.00	-0.73	-0.26	-1.64	0.16	0.04	-118.08	435704.24	1764901.71	39.69325657	-80.33546128
	1000.00	0.09	97.69	1000.00	-293.00	-0.76	-0.17	-1.56	0.15	-0.02	96.70	435704.33	1764901.79	39.69325681	-80.33546100
	1100.00	0.21	174.92	1100.00	-193.00	-0.54	-0.36	-1.47	0.21	0.12	77.23	435704.14	1764901.88	39.69325628	-80.33546066
	1193.00	0.02	66.01	1192.99	-100.01	-0.39	-0.53	-1.44	0.23	-0.20	-117.11	435703.97	1764901.91	39.69325583	-80.33546055
	1269.00	0.07	194.14	1268.99	-24.01	-0.36	-0.57	-1.44	0.11	0.07	168.59	435703.93	1764901.92	39.69325572	-80.33546054
	1364.00	0.80	28.73	1363.99	70.99	-0.62	-0.04	-1.13	0.91	0.77	-174.12	435704.46	1764902.22	39.69325717	-80.33545948
	1457.00	1.36	35.47	1456.98	163.98	-1.27	1.43	-0.18	0.62	0.60	7.25	435705.93	1764903.17	39.69326123	-80.33545614
	1552.00	1.21	44.71	1551.95	258.95	-1.83	3.06	1.18	0.27	-0.16	9.73	435707.56	1764904.53	39.69326574	-80.33545136
	1647.00	1.13	73.74	1646.93	353.93	-1.71	4.03	2.78	0.62	-0.08	30.56	435708.53	1764906.14	39.69326846	-80.33544569
	1741.00	1.58	87.83	1740.91	447.91	-0.71	4.34	4.97	0.59	0.48	14.99	435708.84	1764908.32	39.69326936	-80.33543794
	1840.00	1.40	77.76	1839.87	546.87	0.50	4.65	7.51	0.32	-0.18	-10.17	435709.15	1764910.87	39.69327027	-80.33542891
	1935.00	1.01	33.85	1934.85	641.85	0.65	5.59	9.11	1.02	-0.41	-46.22	435710.09	1764912.47	39.69327290	-80.33542325
	2030.00	1.35	27.41	2029.83	736.83	-0.17	7.28	10.10	0.36	0.36	-6.78	435711.78	1764913.45	39.69327756	-80.33541982
	2124.00	0.71	3.21	2123.82	830.82	-1.14	8.84	10.64	0.81	-0.68	-25.74	435713.34	1764913.99	39.69328187	-80.33541794
	2219.00	0.44	50.03	2218.81	925.81	-1.64	9.67	10.95	0.55	-0.28	49.28	435714.17	1764914.30	39.69328413	-80.33541686
	2314.00	0.59	70.75	2313.81	1020.81	-1.54	10.06	11.69	0.25	0.16	21.81	435714.56	1764915.05	39.69328524	-80.33541424
	2409.00	0.89	55.19	2408.80	1115.80	-1.40	10.64	12.76	0.38	0.32	-16.38	435715.14	1764916.11	39.69328686	-80.33541046
	2503.00	0.78	79.37	2502.79	1209.79	-1.13	11.18	13.99	0.39	-0.12	25.72	435715.68	1764917.34	39.69328836	-80.33540612
	2598.00	0.97	84.89	2597.78	1304.78	-0.47	11.37	15.42	0.22	0.20	5.81	435715.87	1764918.78	39.69328892	-80.33540102
	2692.00	0.87	69.39	2691.77	1398.77	0.11	11.69	16.88	0.28	-0.11	-16.49	435716.19	1764920.24	39.69328984	-80.33539584
	2787.00	0.81	71.07	2786.76	1493.76	0.47	12.16	18.20	0.07	-0.06	1.77	435716.66	1764921.55	39.69329117	-80.33539120
	2882.00	0.79	68.18	2881.75	1588.75	0.81	12.62	19.44	0.05	-0.02	-3.04	435717.12	1764922.79	39.69329247	-80.33538680
	2972.00	1.03	60.47	2971.74	1678.74	1.03	13.25	20.72	0.30	0.27	-8.57	435717.75	1764924.07	39.69329423	-80.33538227
	3070.00	1.54	44.21	3069.71	1776.71	0.86	14.63	22.40	0.63	0.52	-16.59	435719.13	1764925.76	39.69329806	-80.33537633
	3170.00	3.19	49.00	3169.62	1876.62	0.32	17.42	25.44	1.66	1.65	4.79	435721.92	1764928.79	39.69330579	-80.33536563
	3265.00	3.28	55.49	3264.47	1971.47	0.07	20.69	29.67	0.40	0.09	6.83	435725.19	1764933.03	39.69331489	-80.33535069
	3359.00	2.74	69.72	3358.35	2065.35	0.66	23.00	34.00	0.98	-0.57	15.14	435727.50	1764937.35	39.69332132	-80.33533541
	3454.00	3.05	69.84	3453.22	2160.22	1.89	24.66	38.50	0.33	0.33	0.13	435729.15	1764941.85	39.69332598	-80.33531946
	3548.00	2.05	50.92	3547.13	2254.13	2.41	26.58	42.15	1.38	-1.06	-20.13	435731.08	1764945.50	39.69333135	-80.33530655
	3643.00	1.53	1.13	3642.09	2349.09	1.26	28.92	43.50	1.66	-0.55	-52.41	435733.41	1764946.85	39.69333781	-80.33530185
	3738.00	2.59	354.98	3737.03	2444.03	-1.62	32.32	43.33	1.14	1.12	-6.47	435736.82	1764946.69	39.69334715	-80.33530254
	3833.00	3.31	10.08	3831.90	2538.90	-5.42	37.16	43.63	1.11	0.76	15.89	435741.66	1764946.98	39.69336045	-80.33530166
	3927.00	4.40	16.94	3925.69	2632.69	-9.56	43.28	45.15	1.26	1.16	7.30	435747.78	1764948.50	39.69337729	-80.33529644

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 (°)
	4021.00	5.19	20.34	4019.36	2726.36	-14.20	50.72	47.68	0.89	0.84	3.62	435755.22	1764951.03	39.69339777	-80.33528770
	4116.00	6.44	20.31	4113.87	2820.87	-19.67	59.74	51.02	1.32	1.32	-0.03	435764.24	1764954.37	39.69342263	-80.33527612
	4211.00	6.73	18.54	4208.24	2915.24	-26.01	70.02	54.64	0.37	0.31	-1.86	435774.51	1764957.99	39.69345092	-80.33526360
	4306.00	6.70	18.87	4302.59	3009.59	-32.59	80.54	58.20	0.05	-0.03	0.35	435785.04	1764961.56	39.69347990	-80.33525129
	4400.00	6.35	15.99	4395.98	3102.98	-39.09	90.73	61.41	0.51	-0.37	-3.06	435795.22	1764964.76	39.69350794	-80.33524024
	4495.00	6.20	13.20	4490.41	3197.41	-45.82	100.77	64.03	0.36	-0.16	-2.94	435805.26	1764967.38	39.69353559	-80.33523127
	4594.00	6.48	1.88	4588.81	3295.81	-53.85	111.56	65.43	1.29	0.28	-11.43	435816.05	1764968.78	39.69356524	-80.33522664
	4689.00	7.20	358.23	4683.13	3390.13	-63.12	122.87	65.43	0.88	0.76	-3.84	435827.36	1764968.78	39.69359628	-80.33522704
	4783.00	7.91	6.69	4776.32	3483.32	-72.88	135.18	66.00	1.40	0.76	9.00	435839.67	1764969.35	39.69363009	-80.33522541
	4878.00	8.86	5.53	4870.30	3577.30	-83.32	148.95	67.46	1.02	1.00	-1.22	435853.45	1764970.81	39.69366795	-80.33522066
	4973.00	10.42	2.05	4963.96	3670.96	-95.74	164.82	68.48	1.75	1.64	-3.66	435869.31	1764971.83	39.69371153	-80.33521758
	5068.00	11.48	359.72	5057.23	3764.23	-110.37	182.86	68.74	1.21	1.12	-2.45	435887.35	1764972.09	39.69376106	-80.33521725
	5163.00	11.59	356.15	5150.31	3857.31	-126.30	201.84	68.05	0.76	0.12	-3.76	435906.33	1764971.40	39.69381314	-80.33522032
	5257.00	11.92	353.48	5242.34	3949.34	-142.92	220.90	66.31	0.68	0.35	-2.84	435925.39	1764969.66	39.69386543	-80.33522712
	5352.00	11.94	350.68	5335.29	4042.29	-160.40	240.35	63.61	0.61	0.02	-2.95	435944.84	1764966.96	39.69391874	-80.33523738
	5447.00	11.75	348.66	5428.27	4135.27	-178.12	259.53	60.11	0.48	-0.20	-2.13	435964.02	1764963.46	39.69397131	-80.33525042
	5541.00	10.95	345.27	5520.43	4227.43	-195.26	277.55	55.96	1.11	-0.85	-3.61	435982.03	1764959.31	39.69402067	-80.33526577
	5636.00	12.77	347.77	5613.40	4320.40	-213.40	296.54	51.44	1.99	1.92	2.63	436001.02	1764954.79	39.69407268	-80.33528245
Last 3rd Party MWD	5731.00	12.57	345.52	5706.09	4413.09	-232.77	316.81	46.63	0.56	-0.21	-2.37	436021.29	1764949.99	39.69412820	-80.33530021
First SLB _MWD	5780.00	12.97	347.00	5753.87	4460.87	-242.86	327.33	44.06	1.05	0.82	3.02	436031.81	1764947.42	39.69415702	-80.33530969
	5875.00	12.38	343.62	5846.56	4553.56	-262.39	347.49	38.79	1.00	-0.62	-3.56	436051.97	1764942.15	39.69421222	-80.33532909
	5970.00	12.87	347.04	5939.26	4646.26	-281.85	367.57	33.55	0.94	0.52	3.60	436072.05	1764936.90	39.69426722	-80.33534839
	6065.00	12.81	355.17	6031.90	4738.90	-300.77	388.38	30.29	1.90	-0.06	8.56	436092.85	1764933.64	39.69432425	-80.33536066
	6160.00	12.14	0.60	6124.66	4831.66	-317.99	408.86	29.51	1.42	-0.71	5.72	436113.34	1764932.86	39.69438046	-80.33536411
	6255.00	6.23	358.61	6218.40	4925.40	-330.42	424.02	29.49	6.23	-6.22	-2.09	436128.49	1764932.84	39.69442207	-80.33536469
	6350.00	2.01	351.82	6313.13	5020.13	-336.20	430.82	29.12	4.46	-4.44	-7.15	436135.30	1764932.48	39.69444074	-80.33536620
	6445.00	0.18	191.78	6408.11	5115.11	-337.59	432.32	28.86	2.29	-1.93	-168.46	436136.80	1764932.21	39.69444486	-80.33536720
	6540.00	0.13	194.29	6503.11	5210.11	-337.42	432.07	28.80	0.05	-0.05	2.64	436136.55	1764932.15	39.69444417	-80.33536739
	6635.00	0.04	261.55	6598.11	5305.11	-337.36	431.97	28.74	0.13	-0.09	70.80	436136.44	1764932.09	39.69444387	-80.33536760
	6730.00	0.22	266.17	6693.11	5400.11	-337.47	431.95	28.53	0.19	0.19	4.86	436136.42	1764931.88	39.69444382	-80.33536836
	6825.00	0.45	267.89	6788.11	5495.11	-337.77	431.92	27.97	0.24	0.24	1.81	436136.40	1764931.32	39.69444373	-80.33537033
	6920.00	0.55	283.96	6883.11	5590.11	-338.31	432.02	27.16	0.18	0.11	16.92	436136.49	1764930.51	39.69444397	-80.33537323
	7015.00	0.51	265.49	6978.10	5685.10	-338.87	432.10	26.29	0.18	-0.04	-19.44	436136.57	1764929.64	39.69444416	-80.33537631
	7110.00	0.49	272.38	7073.10	5780.10	-339.33	432.08	25.46	0.07	-0.02	7.25	436136.55	1764928.82	39.69444410	-80.33537924
KOP	7205.00	0.94	291.26	7168.09	5875.09	-340.23	432.38	24.33	0.53	0.47	19.87	436136.85	1764927.68	39.69444489	-80.33538328
	7299.00	10.94	136.27	7261.56	5968.56	-332.02	426.19	29.80	12.55	10.64	-164.88	436130.66	1764933.15	39.69442804	-80.33536365
	7394.00	19.85	135.63	7353.06	6060.06	-307.15	408.11	47.34	9.38	9.38	-0.67	436112.59	1764950.70	39.69437886	-80.33530071
	7489.00	25.55	141.96	7440.68	6147.68	-270.74	380.42	71.27	6.52	6.00	6.66	436084.90	1764974.62	39.69430345	-80.33521477
	7584.00	31.97	140.17	7523.92	6230.92	-225.17	344.93	100.03	6.82	6.76	-1.88	436049.41	1765003.38	39.69420677	-80.33511140
	7679.00	39.44	134.56	7601.03	6308.03	-170.35	304.38	137.71	8.58	7.86	-5.91	436008.86	1765041.05	39.69409640	-80.33497619
	7773.00	47.12	133.36	7669.41	6376.41	-107.15	259.71	184.09	8.22	8.17	-1.28	435964.20	1765087.43	39.69397497	-80.33480990
	7868.00	53.70	135.73	7729.92	6436.92	-35.20	208.34	236.18	7.19	6.93	2.49	435912.83	1765139.52	39.69383528	-80.33462311
	7962.00	60.87	138.37	7780.70	6487.70	43.08	150.45	289.97	7.98	7.63	2.81	435854.94	1765193.31	39.69367773	-80.33443007
	8056.00	67.98	141.51	7821.26	6528.26	127.48	85.56	344.45	8.14	7.56	3.34	435790.06	1765247.78	39.69350099	-80.33423437
	8151.00	69.74	142.39	7855.52	6562.52	215.95	15.79	399.05	2.04	1.85	0.93	435720.29	1765302.38	39.69331084	-80.33403803
	8245.00	77.61	144.87	7881.93	6588.93	306.06	-56.81	452.47	8.75	8.37	2.64	435647.69	1765355.80	39.69311291	-80.33384584
	8339.00	83.70	143.95	7897.18	6604.18	398.76	-132.20	506.43	6.55	6.48	-0.98	435572.31	1765409.75	39.69290733	-80.33365162
Landing Point	8415.00	84.58	143.80	7904.94	6611.94	474.35	-193.26	551.00	1.17	1.16	-0.20	435511.25	1765454.32	39.69274083	-80.33349124
	8528.00	86.57	144.49	7913.66	6620.66	587.00	-284.57	616.99	1.86	1.76	0.61	435419.95	1765520.30	39.69249185	-80.33325377
	8622.00	86.87	144.59	7919.04	6626.04	680.84	-361.01	671.43	0.34	0.32	0.11	435343.51	1765574.74	39.69228340	-80.33305780
	8717.00	88.78	144.34	7922.64	6629.64	775.76	-438.26	726.60	2.03	2.01	-0.26	435266.27	1765629.91	39.69207275	-80.33285922
	8812.00	88.75	144.89	7924.69	6631.69	870.74	-515.69	781.60	0.58	-0.03	0.58	435188.84	1765684.91	39.69186158	-80.33266125
	8906.00	89.33	144.97	7926.27	6633.27	964.72	-592.61	835.60	0.62	0.62	0.09	435111.92	1765738.91	39.69165179	-80.33246683
	9000.00	89.68	145.92	7927.08	6634.08	1058.72	-670.03	888.92	1.08	0.37	1.01	435034.51	1765792.22	39.69144063	-80.33227485
	9095.00	89.52	146.28	7927.74	6634.74	1153.70	-748.88	941.90	0.41	-0.17	0.38	434955.67	1765845.20	39.69122552	-80.33208400
	9190.00	89.66	146.29	7928.42	6635.42	1248.67	-827.90	994.63	0.15	0.15	0.01	434876.65	1765897.92	39.69100994	-80.33189404
	9284.00	89.18	145.54	7929.37	6636.37	1342.65	-905.74	1047.31	0.95	-0.51	-0.80	434798.81	1765950.60	39.69079758	-80.33170431
	9378.00	88.08	146.56	7931.62	6638.62	1436.61	-983.69	1099.79	1.60	-1.17	1.09	434720.87	1766003.07	39.69058492	-80.33151528
	9473.00	87.59	146.53	7935.21	6642.21	1531.50	-1062.90	1152.12	0.52	-0.52	-0.03	434641.67	1766055.40	39.69036883	-80.33132673
	9567.00	87.49	147.17	7939.24	6646.24	1625.37	-1141.53	1203.47	0.69	-0.11	0.68	434563.04	1766106.76	39.69015429	-80.33114168
	9662.00	87.56	145.87	7943.35	6650.35	1720.24	-1220.69	1255.83	1.37	0.07	-1.37	434483.89	1766159.11	39.68993830	-80.33095305
	9756.00	87.62	145.83	7947.30	6654.30	1814.15	-1298.41	1308.55	0.08	0.06	-0.04	434406.17	1766211.83	39.68972628	-80.33076317
	9851.00	87.32	146.50	7951.49	6658.49	1909.04	-1377.24	1361.40	0.77	-0.32	0.71	434327.34	1766264.67	39.68951121	-80.33057282
	9945.00	87.55	146.50	7955.70	6662.70	2002.91	-1455.55	1413.23	0.24	0.24	0.00	434249.04	1766316.50	39.68929756	-80.33038609
	10040.00	87.56	149.15	7959.75	6666.75	2097.70	-1535.88	1463.76	2.79	0.01	2.79	434168.71	1766367.03	39.68907832	-80.33020389
	10134.00	86.57	146.44	7964.57	6671.57	2191.46	-1615.31	1513.79	3.07	-1.05	-2.88	434089.29	1766417.05	39.68886155	-80.33002354
	10229.00	86.95	146.24	7969.94	6676.94	2286.28	-1694.25	1566.36	0.45	0.40	-0.21	434010.35	1766469.62	39.68864617	-80.32983417
	10323.00	86.73	146.19	7975.12	6682.12	2380.11	-1772.26	1618.55	0.24	-0.23	-0.05	433932.35	1766521.81	39.68843335	-80.32964617
	10418.00	87.51	146.36	7979.89	6686.89	2474.97	-1851.17	1671.23	0.84	0.82	0.18	433853.44	1766574.48	39.68821805	-80.32945642
	10513.00	88.67	144.91	7983.06	6690.06	2569.91	-1929.54	1724.82	1.95	1.22	-1.53	433775.07	1766628.07	39.68800427	-80.32926343

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 (°)
	10608.00	88.65	145.07	7985.28	6692.28	2664.88	-2007.33	1779.31	0.17	-0.02	0.17	433697.29	1766682.56	39.68779211	-80.32906729
	10702.00	88.84	144.80	7987.34	6694.34	2758.86	-2084.25	1833.30	0.35	0.20	-0.29	433620.37	1766736.54	39.68758231	-80.32887294
	10797.00	88.45	145.35	7989.59	6696.59	2853.83	-2162.12	1887.67	0.71	-0.41	0.58	433542.51	1766790.91	39.68736993	-80.32867720
	10892.00	88.63	147.67	7992.01	6699.01	2948.76	-2241.32	1940.07	2.45	0.19	2.44	433463.32	1766843.31	39.68715385	-80.32848844
	10987.00	88.66	149.15	7994.25	6701.25	3043.56	-2322.22	1989.82	1.56	0.03	1.56	433382.43	1766893.06	39.68693303	-80.32830903
	11082.00	89.17	146.75	7996.05	6703.05	3138.41	-2402.72	2040.22	2.58	0.54	-2.53	433301.93	1766943.45	39.68671332	-80.32812733
	11177.00	89.84	146.00	7996.87	6703.87	3233.38	-2481.82	2092.83	1.06	0.71	-0.79	433222.83	1766996.05	39.68649750	-80.32793784
	11272.00	89.51	145.35	7997.41	6704.41	3328.37	-2560.27	2146.39	0.77	-0.35	-0.68	433144.39	1767049.62	39.68628349	-80.32774495
	11462.00	89.17	145.15	7999.60	6706.60	3518.36	-2716.37	2254.69	0.21	-0.18	-0.11	432988.29	1767157.90	39.68585770	-80.32735509
	11557.00	89.41	144.63	8000.78	6707.78	3613.35	-2794.08	2309.32	0.60	0.25	-0.55	432910.59	1767212.54	39.68564576	-80.32715844
Deepest TVD	11652.00	89.64	146.38	8001.56	6708.56	3708.34	-2872.37	2363.12	1.86	0.24	1.84	432832.30	1767266.33	39.68543219	-80.32696474
	11747.00	91.06	146.05	8000.98	6707.98	3803.31	-2951.33	2415.94	1.53	1.49	-0.35	432753.35	1767319.15	39.68521679	-80.32677448
	11842.00	90.42	143.90	7999.76	6706.76	3898.30	-3029.11	2470.46	2.36	-0.67	-2.26	432675.57	1767373.66	39.68500463	-80.32657825
	11937.00	90.36	144.14	7999.11	6706.11	3993.28	-3105.98	2526.27	0.26	-0.06	0.25	432598.70	1767429.47	39.68479501	-80.32637745
	12032.00	90.88	145.23	7998.08	6705.08	4088.27	-3183.50	2581.18	1.27	0.55	1.15	432521.20	1767484.38	39.68458361	-80.32617983
	12127.00	90.73	144.91	7996.75	6703.75	4183.26	-3261.37	2635.57	0.37	-0.16	-0.34	432443.32	1767538.77	39.68437119	-80.32598405
	12222.00	91.77	144.97	7994.68	6701.68	4278.24	-3339.12	2690.13	1.10	1.09	0.06	432365.59	1767593.32	39.68415915	-80.32578768
	12318.00	92.27	144.17	7991.29	6698.29	4374.18	-3417.29	2745.75	0.98	0.52	-0.83	432287.42	1767648.93	39.68394596	-80.32558753
	12413.00	91.91	142.93	7987.83	6694.83	4469.08	-3493.65	2802.15	1.36	-0.38	-1.31	432211.06	1767705.33	39.68373775	-80.32538465
	12508.00	92.34	144.04	7984.30	6691.30	4563.98	-3569.95	2858.64	1.25	0.45	1.17	432134.76	1767761.82	39.68352972	-80.32518147
	12603.00	91.89	143.49	7980.80	6687.80	4658.89	-3646.53	2914.75	0.75	-0.47	-0.58	432058.20	1767817.93	39.68332093	-80.32497961
	12698.00	91.59	143.45	7977.91	6684.91	4753.82	-3722.83	2971.28	0.32	-0.32	-0.04	431981.90	1767874.45	39.68311289	-80.32477631
	12793.00	91.68	143.60	7975.20	6682.20	4848.75	-3799.19	3027.73	0.18	0.09	0.16	431905.54	1767930.90	39.68290469	-80.32457326
	12888.00	91.52	143.80	7972.55	6679.55	4943.68	-3875.72	3083.95	0.27	-0.17	0.21	431829.01	1767987.11	39.68269601	-80.32437103
	12983.00	91.97	143.91	7969.66	6676.66	5038.62	-3952.40	3139.95	0.49	0.47	0.12	431752.34	1768043.12	39.68248693	-80.32416956
	13077.00	92.14	143.68	7966.29	6673.29	5132.54	-4028.20	3195.44	0.30	0.18	-0.24	431676.54	1768098.60	39.68228024	-80.32396995
	13172.00	91.82	143.40	7963.00	6670.00	5227.45	-4104.56	3251.86	0.45	-0.34	-0.29	431600.19	1768155.02	39.68207204	-80.32376702
	13267.00	92.12	145.05	7959.74	6666.74	5322.38	-4181.59	3307.37	1.76	0.32	1.74	431523.17	1768210.52	39.68186198	-80.32356733
	13362.00	92.26	145.10	7956.11	6663.11	5417.31	-4259.42	3361.71	0.16	0.15	0.05	431445.34	1768264.86	39.68164968	-80.32337171
	13456.00	92.47	145.20	7952.23	6659.23	5511.23	-4336.50	3415.38	0.25	0.22	0.11	431368.27	1768318.53	39.68143944	-80.32317854
	13550.00	92.27	145.22	7948.34	6655.34	5605.15	-4413.63	3468.97	0.21	-0.21	0.02	431291.14	1768372.11	39.68122905	-80.32298565
	13645.00	92.19	145.32	7944.65	6651.65	5700.08	-4491.64	3523.05	0.13	-0.08	0.11	431213.13	1768426.19	39.68101625	-80.32279098
	13740.00	92.46	145.18	7940.79	6647.79	5795.00	-4569.64	3577.16	0.32	0.28	-0.15	431135.14	1768480.29	39.68080350	-80.32259623
	13834.00	92.13	144.95	7937.03	6644.03	5888.92	-4646.64	3630.94	0.43	-0.35	-0.24	431058.15	1768534.08	39.68059348	-80.32240264
	13928.00	91.98	145.29	7933.66	6640.66	5982.86	-4723.70	3684.66	0.40	-0.16	0.36	430981.09	1768587.79	39.68038328	-80.32220929
	14023.00	91.23	144.91	7931.00	6638.00	6077.83	-4801.58	3738.99	0.88	-0.79	-0.40	430903.21	1768642.12	39.68017084	-80.32201374
	14117.00	91.81	145.95	7928.50	6635.50	6171.79	-4878.96	3792.31	1.27	0.62	1.11	430825.84	1768695.44	39.67995977	-80.32182181
	14211.00	91.79	145.41	7925.55	6632.55	6265.73	-4956.55	3845.28	0.57	-0.02	-0.57	430748.25	1768748.41	39.67974809	-80.32163110
	14306.00	91.89	145.56	7922.50	6629.50	6360.68	-5034.79	3899.09	0.19	0.11	0.16	430670.02	1768802.20	39.67953466	-80.32143743
	14401.00	91.81	145.36	7919.43	6626.43	6455.63	-5113.00	3952.92	0.23	-0.08	-0.21	430591.81	1768856.04	39.67932130	-80.32124364
	14590.00	91.90	145.27	7913.32	6620.32	6644.53	-5268.34	4060.42	0.07	0.05	-0.05	430436.48	1768963.53	39.67889759	-80.32085671
	14685.00	91.62	144.65	7910.40	6617.40	6739.48	-5346.08	4114.94	0.72	-0.29	-0.65	430358.74	1769018.04	39.67868553	-80.32066051
	14780.00	91.58	144.33	7907.74	6614.74	6834.44	-5423.38	4170.09	0.34	-0.04	-0.34	430281.45	1769073.20	39.67847471	-80.32046205
	14875.00	91.87	145.51	7904.88	6611.88	6929.40	-5501.09	4224.67	1.28	0.31	1.24	430203.75	1769127.77	39.67826276	-80.32026566
	14970.00	91.92	145.52	7901.74	6608.74	7024.34	-5579.35	4278.43	0.05	0.05	0.01	430125.49	1769181.52	39.67804926	-80.32007214
	15065.00	91.04	143.62	7899.29	6606.29	7119.30	-5656.73	4333.48	2.20	-0.93	-2.00	430048.11	1769236.57	39.67783822	-80.31987407
	15160.00	90.87	145.66	7897.71	6604.71	7214.28	-5734.19	4388.44	2.15	-0.18	2.15	429970.66	1769291.53	39.67762696	-80.31967629
	15255.00	90.79	145.68	7896.33	6603.33	7309.26	-5812.63	4442.01	0.09	-0.08	0.02	429892.22	1769345.10	39.67741296	-80.31948344
	15350.00	90.43	145.45	7895.32	6602.32	7404.25	-5890.98	4495.73	0.45	-0.38	-0.24	429813.88	1769398.81	39.67719922	-80.31929008
	15445.00	90.47	145.28	7894.57	6601.57	7499.25	-5969.14	4549.72	0.18	0.04	-0.18	429735.72	1769452.80	39.67698600	-80.31909574
	15539.00	90.87	145.55	7893.47	6600.47	7593.24	-6046.53	4603.08	0.51	0.43	0.29	429658.34	1769506.15	39.67677491	-80.31890371
	15634.00	90.63	145.71	7892.23	6599.23	7688.23	-6124.93	4656.70	0.30	-0.25	0.17	429579.94	1769559.77	39.67656101	-80.31871067
	15729.00	90.70	145.63	7891.13	6598.13	7783.21	-6203.38	4710.27	0.11	0.07	-0.08	429501.50	1769613.34	39.67634700	-80.31851782
	15823.00	90.78	145.66	7889.91	6596.91	7877.20	-6280.98	4763.32	0.09	0.09	0.03	429423.91	1769666.38	39.67613531	-80.31832688
	15918.00	90.58	145.63	7888.79	6595.79	7972.19	-6359.40	4816.92	0.21	-0.21	-0.03	429345.49	1769719.98	39.67592137	-80.31813391
	16012.00	90.27	144.49	7888.09	6595.09	8066.18	-6436.45	4870.75	1.26	-0.33	-1.21	429268.44	1769773.81	39.67571119	-80.31794019
	16107.00	90.50	145.29	7887.45	6594.45	8161.18	-6514.16	4925.39	0.88	0.24	0.84	429190.73	1769828.45	39.67549922	-80.31774358
	16201.00	90.68	145.66	7886.48	6593.48	8255.17	-6591.60	4978.67	0.44	0.19	0.39	429113.30	1769881.72	39.67528796	-80.31755183
	16296.00	90.68	145.59	7885.35	6592.35	8350.16	-6670.01	5032.30	0.07	0.00	-0.07	429034.90	1769935.35	39.67507407	-80.31735877
	16389.00	90.65	145.34	7884.28	6591.28	8443.15	-6746.61	5085.02	0.27	-0.03	-0.27	428958.30	1769988.06	39.67486509	-80.31716902
	16483.00	90.48	145.84	7883.35	6590.35	8537.14	-6824.16	5138.14	0.56	-0.18	0.53	428880.75	1770041.18	39.67465353	-80.31697783
	16577.00	90.52	145.47	7882.53	6589.53	8631.13	-6901.77	5191.17	0.40	0.04	-0.39	428803.15	1770094.21	39.67444181	-80.31678694
	16671.00	90.81	144.33	7881.44	6588.44	8725.12	-6978.67	5245.21	1.25	0.31	-1.21	428726.25	1770148.25	39.67423205	-80.31659247
	16766.00	90.91	144.56	7880.01	6587.01	8820.11	-7055.95	5300.45	0.26	0.11	0.24	428648.98	1770203.48	39.67402129	-80.31639377
	16861.00	90.70	144.01	7878.68	6585.68	8915.09	-7133.07	5355.90	0.62	-0.22	-0.58	428571.86	1770258.93	39.67381095	-80.31619430
	16955.00	90.68	143.54	7877.54	6584.54	9009.06	-7208.90	5411.44	0.50	-0.02	-0.50	428496.04	1770314.47	39.67360418	-80.31599454
	17050.00	90.69	143.89	7876.41	6583.41	9104.03	-7285.47	5467.66	0.37	0.01	0.37	428419.47	1770370.68	39.67339538	-80.31579237
	17144.00	90.63	144.25	7875.33	6582.33	9198.01	-7361.58	5522.82	0.39	-0.06	0.38	428343.37	1770425.84	39.67318782	-80.31559400
	17239.00	90.92	144.35	7874.04	6581.04	9292.99	-7438.72	5578.25	0.32	0.31	0.11	428266.23	1770481.26	39.67297743	-80.31539460
	17333.00	89.93	143.46	7873.34	6580.34	9386.97	-7514.67	5633.62	1.42	-1.05	-0.95	428190.28	1770536.63	39.67277031	-80.31519545
	17428.00	89.86	143.87	7873.52	6580.52	9481.95	-7591.20	5689.91	0.44	-0.07	0.43	428113.76	1770592.92	39.67256163	-80.31499304
	17523.00	89.84	143.77	7873.77	6580.77	9576.93	-7667.88	5745.99	0.11	-0.02	-0.11	428037.08	1770649.00	39.67235252	-80.31479136

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 (°)
	17618.00	90.10	144.12	7873.82	6580.82	9671.91	-7744.68	5801.90	0.46	0.27	0.37	427960.28	1770704.91	39.67214307	-80.31459027
	17714.00	90.25	144.41	7873.52	6580.52	9767.90	-7822.61	5857.97	0.34	0.16	0.30	427882.36	1770760.97	39.67193055	-80.31438860
	17807.00	89.92	143.70	7873.39	6580.39	9860.89	-7897.90	5912.56	0.84	-0.35	-0.76	427807.08	1770815.56	39.67172522	-80.31419226
	17901.00	90.01	144.05	7873.44	6580.44	9954.87	-7973.83	5967.98	0.38	0.10	0.37	427731.16	1770870.97	39.67151817	-80.31399297
	17994.00	89.85	143.38	7873.56	6580.56	10047.85	-8048.79	6023.02	0.74	-0.17	-0.72	427656.20	1770926.01	39.67131374	-80.31379505
	18087.00	90.23	144.05	7873.49	6580.49	10140.82	-8123.76	6078.05	0.83	0.41	0.72	427581.23	1770981.04	39.67110932	-80.31359714
	18181.00	90.41	144.43	7872.97	6579.97	10234.81	-8200.03	6132.99	0.45	0.19	0.40	427504.96	1771035.97	39.67090129	-80.31339956
	18276.00	90.04	142.57	7872.59	6579.59	10329.77	-8276.40	6189.49	2.00	-0.39	-1.96	427428.60	1771092.47	39.67069307	-80.31319640
	18371.00	89.95	143.93	7872.60	6579.60	10424.73	-8352.51	6246.33	1.43	-0.09	1.43	427352.49	1771149.31	39.67048552	-80.31299205
	18464.00	89.84	145.81	7872.77	6579.77	10517.72	-8428.57	6299.84	2.02	-0.12	2.02	427276.44	1771202.82	39.67027806	-80.31279952
	18557.00	90.54	147.28	7872.46	6579.46	10610.68	-8506.16	6351.11	1.75	0.75	1.58	427198.86	1771254.08	39.67006634	-80.31261492
	18649.00	90.22	146.61	7871.85	6578.85	10702.63	-8583.27	6401.29	0.81	-0.35	-0.73	427121.75	1771304.26	39.66985591	-80.31243421
	18743.00	89.43	146.78	7872.14	6579.14	10796.59	-8661.83	6452.90	0.86	-0.84	0.18	427043.20	1771355.87	39.66964153	-80.31224835
	18836.00	89.71	147.18	7872.84	6579.84	10889.53	-8739.80	6503.58	0.53	0.30	0.43	426965.23	1771406.54	39.66942873	-80.31206584
	18929.00	89.69	147.21	7873.33	6580.33	10982.46	-8817.97	6553.97	0.04	-0.02	0.03	426887.06	1771456.92	39.66921540	-80.31188436
	19023.00	89.55	146.70	7873.95	6580.95	11076.40	-8896.76	6605.22	0.56	-0.15	-0.54	426808.28	1771508.18	39.66900037	-80.31169976
	19116.00	89.52	146.70	7874.70	6581.70	11169.36	-8974.49	6656.28	0.03	-0.03	0.00	426730.55	1771559.23	39.66878826	-80.31151591
	19209.00	89.88	147.32	7875.19	6582.19	11262.30	-9052.49	6706.92	0.77	0.39	0.67	426652.55	1771609.87	39.66857538	-80.31133355
	19302.00	89.78	146.22	7875.47	6582.47	11355.25	-9130.29	6757.88	1.19	-0.11	-1.18	426574.77	1771660.83	39.66836309	-80.31115003
	19395.00	89.26	144.31	7876.25	6583.25	11448.24	-9206.71	6810.87	2.13	-0.56	-2.05	426498.35	1771713.81	39.66815462	-80.31095938
	19489.00	89.63	143.92	7877.16	6584.16	11542.23	-9282.86	6865.96	0.57	0.39	-0.41	426422.20	1771768.90	39.66794692	-80.31076124
	19584.00	89.61	144.11	7877.79	6584.79	11637.21	-9359.73	6921.78	0.20	-0.02	0.20	426345.34	1771824.71	39.66773728	-80.31056051
	19679.00	89.56	144.24	7878.47	6585.47	11732.20	-9436.75	6977.38	0.15	-0.05	0.14	426268.32	1771880.31	39.66752721	-80.31036054
	19773.00	89.95	144.21	7878.88	6585.88	11826.19	-9513.02	7032.34	0.42	0.41	-0.03	426192.06	1771935.26	39.66731922	-80.31016291
	19866.00	90.12	144.41	7878.82	6585.82	11919.18	-9588.55	7086.59	0.28	0.18	0.22	426116.53	1771989.52	39.66711321	-80.30996778
	19960.00	89.77	144.09	7878.91	6585.91	12013.17	-9664.84	7141.51	0.50	-0.37	-0.34	426040.25	1772044.43	39.66690514	-80.30977027
	20054.00	89.82	144.29	7879.25	6586.25	12107.16	-9741.07	7196.51	0.22	0.05	0.21	425964.02	1772099.43	39.66669724	-80.30957248
	20148.00	89.82	143.94	7879.54	6586.54	12201.15	-9817.23	7251.61	0.37	0.00	-0.37	425887.87	1772154.52	39.66648953	-80.30937434
	20241.00	89.63	143.76	7879.99	6586.99	12294.13	-9892.32	7306.47	0.28	-0.20	-0.19	425812.78	1772209.38	39.66628474	-80.30917708
	20335.00	89.55	143.71	7880.66	6587.66	12388.11	-9968.11	7362.07	0.10	-0.09	-0.05	425736.99	1772264.98	39.66607806	-80.30897716
	20429.00	89.88	143.71	7881.13	6588.13	12482.08	-10043.88	7417.71	0.35	0.35	0.00	425661.23	1772320.61	39.66587144	-80.30877713
	20522.00	90.06	144.43	7881.18	6588.18	12575.07	-10119.18	7472.28	0.80	0.19	0.77	425585.93	1772375.18	39.66566607	-80.30858089
	20616.00	89.92	144.52	7881.19	6588.19	12669.07	-10195.68	7526.90	0.18	-0.15	0.10	425509.43	1772429.79	39.66545740	-80.30838445
	20711.00	89.75	143.67	7881.47	6588.47	12764.05	-10272.63	7582.61	0.91	-0.18	-0.89	425432.49	1772485.50	39.66524754	-80.30818411
	20900.00	90.55	144.46	7880.97	6587.97	12953.02	-10425.66	7693.52	0.59	0.42	0.42	425279.47	1772596.41	39.66483019	-80.30778527
	20995.00	89.59	143.33	7880.86	6587.86	13048.00	-10502.41	7749.50	1.56	-1.01	-1.19	425202.73	1772652.39	39.66462087	-80.30758399
	21089.00	89.56	145.05	7881.55	6588.55	13141.99	-10578.64	7804.50	1.83	-0.03	1.83	425126.50	1772707.38	39.66441298	-80.30738623
	21182.00	89.24	146.72	7882.53	6589.53	13234.97	-10655.62	7856.65	1.83	-0.34	1.80	425049.52	1772759.53	39.66420292	-80.30719853
	21276.00	88.99	146.14	7883.98	6590.98	13328.93	-10733.94	7908.62	0.67	-0.27	-0.62	424971.21	1772811.50	39.66398922	-80.30701144
	21369.00	89.48	147.09	7885.22	6592.22	13421.88	-10811.58	7959.79	1.15	0.53	1.02	424893.57	1772862.67	39.66377732	-80.30682722
	21463.00	89.58	147.03	7885.99	6592.99	13515.82	-10890.47	8010.90	0.12	0.11	-0.06	424814.69	1772913.77	39.66356203	-80.30664317
	21561.00	89.80	147.16	7886.52	6593.52	13613.75	-10972.75	8064.14	0.26	0.22	0.13	424732.42	1772967.01	39.66333747	-80.30645146
	21656.00	89.85	146.86	7886.81	6593.81	13708.69	-11052.43	8115.87	0.32	0.05	-0.32	424652.74	1773018.73	39.66312000	-80.30626520
	21749.00	89.67	146.91	7887.20	6594.20	13801.64	-11130.32	8166.68	0.20	-0.19	0.05	424574.85	1773069.54	39.66290742	-80.30608227
	21843.00	89.58	146.90	7887.82	6594.82	13895.59	-11209.07	8218.00	0.10	-0.10	-0.01	424496.11	1773120.86	39.66269251	-80.30589746
	21938.00	89.47	146.33	7888.60	6595.60	13990.54	-11288.39	8270.27	0.61	-0.12	-0.60	424416.79	1773173.13	39.66247604	-80.30570928
	22033.00	89.96	145.15	7889.08	6596.08	14085.53	-11366.91	8323.75	1.34	0.52	-1.24	424338.28	1773226.60	39.66226182	-80.30551684
	22127.00	89.58	143.81	7889.45	6596.45	14179.53	-11443.41	8378.36	1.48	-0.40	-1.43	424261.78	1773281.21	39.66205315	-80.30532045
	22222.00	89.72	144.04	7890.03	6597.03	14274.51	-11520.19	8434.30	0.28	0.15	0.24	424185.00	1773337.15	39.66184374	-80.30511932
	22317.00	89.88	144.60	7890.37	6597.37	14369.50	-11597.36	8489.71	0.61	0.17	0.59	424107.84	1773392.55	39.66163327	-80.30492008
	22412.00	89.58	144.74	7890.81	6597.81	14464.50	-11674.86	8544.65	0.35	-0.32	0.15	424030.34	1773447.48	39.66142186	-80.30472250
	22506.00	89.86	144.09	7891.27	6598.27	14558.49	-11751.31	8599.35	0.75	0.30	-0.69	423953.90	1773502.18	39.66121335	-80.30452580
	22696.00	89.81	144.17	7891.82	6598.82	14748.47	-11905.27	8710.68	0.05	-0.03	0.04	423799.95	1773613.50	39.66079342	-80.30412550
	22885.00	89.77	144.20	7892.51	6599.51	14937.45	-12058.53	8821.27	0.03	-0.02	0.02	423646.70	1773724.09	39.66037540	-80.30372784
Last SLB_MWD	22933.00	89.52	144.13	7892.81	6599.81	14985.44	-12097.45	8849.37	0.54	-0.52	-0.15	423607.79	1773752.19	39.66026927	-80.30362680
Projection to TD	22960.00	89.52	144.13	7893.04	6600.04	15012.44	-12119.33	8865.19	0.00	0.00	0.00	423585.91	1773768.01	39.66020960	-80.30356992

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 3 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

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 WDTN19FHSM Surveys 0ft to 22960ft 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 (°)
		1	29.000	29.000	Act Stns	17.500	13.375	A020Ga_GYRO-NS-Depth Only		Original Borehole / CNX WDTN19FHSM Surveys 0ft to 22960ft MD					
		1	29.000	1193.000	Act Stns	17.500	13.375	A020Ga_GYRO-NS		Original Borehole / CNX WDTN19FHSM Surveys 0ft to					
		1	1193.000	3100.000	Act Stns	12.250	9.625	A001Mb_MWD		Original Borehole / CNX WDTN19FHSM Surveys 0ft to					
		1	3100.000	5731.000	Act Stns	8.750	5.500	A001Mb_MWD		Original Borehole / CNX WDTN19FHSM Surveys 0ft to					
		1	5731.000	22960.000	Act Stns	8.500	5.500	B006Mb_MWD+IGRF		Original Borehole / CNX WDTN19FHSM Surveys 0ft to					

Schlumberger

CNX

CNX

Borehole:	Well:	Field:	Structure:
Original Borehole	WDTN19RHSM	WV Monongalia County (NAD 27)	Patterson 873

Gravity & Magnetic Parameters

Model:	HDGM 2022	Dip:	66.389°	Date:	18-Sep-2022		
MagDec:	-8.911°	FS:	51803.607nT	Gravity FS:	999.342mgn (9.80665 Based)		

Surface Location — NAD27 West Virginia State Plane, Northern Zone, US Feet

Lat:	N 39 41 35.53	Northing:	435684.66ftUS	Grid Conv:	-0.5328°		
Lon:	W 80 20 7.61	Easting:	1764905.81ftUS	Scale Fact:	0.99994143		

Miscellaneous

Slot:	WDTN19RHSM	TVD Ref:	KB(1293ft above MSL)
Plan:	CNX WDTN19RHSM Surveys 0ft to 24683ft MD		

Surface Location

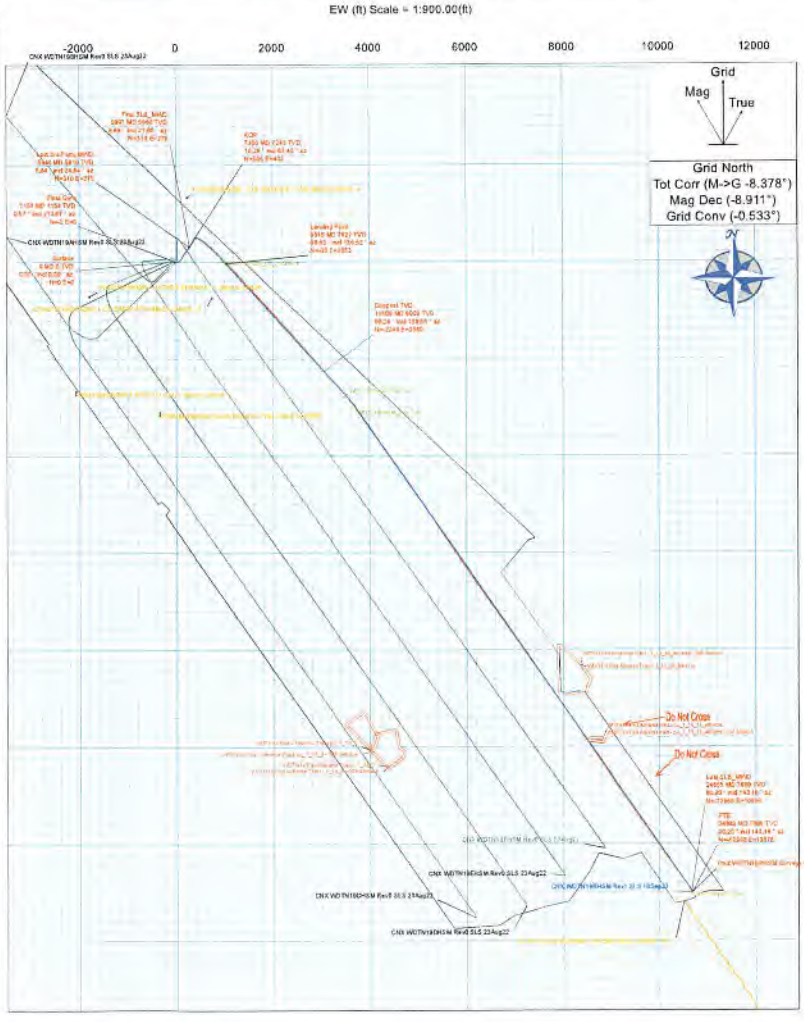
Northing:	435684.661	Easting:	1764905.307	Latitude:	N 39 41 35.53	Longitude:	W 80 20 7.61	Vsec Azimuth:	145.15

Target Description			Surface Location								
						Grid Coord				Local Coord	
Target Name	Shape	Dimension	Latitude	Longitude	Northing	Easting	TVD	VSec	N(+)/S(-)	E(+)/W(-)
WDTN19 Pad Adverse Tract - 1_13_35_adverse	Polyline	N/A	N 39 41 35.50	W 80 20 7.84	435682.20	1764895.84	1293.00	-6.33	-2.45	-10.05
WDTN19 Pad Adverse Tract - pc_1_1_9_10_1_1_9_10_1_adverse - 50ft setback	Polyline	N/A	N 39 41 35.50	W 80 20 7.84	435682.20	1764895.84	1293.00	-6.33	-2.45	-10.05
WDTN19 Pad Adverse Tract - pc_1_19_11_adverse	Polyline	N/A	N 39 41 35.50	W 80 20 7.84	435682.20	1764895.84	1293.00	-6.33	-2.45	-10.05
WDTN19 Pad - Adverse Tract pc_1_19_4 - 50ft setback	Polyline	N/A	N 39 41 35.50	W 80 20 7.84	435682.20	1764895.84	1293.00	-6.33	-2.45	-10.05
WDTN19 Pad Adverse Tract - 1_13_35_adverse - 50ft Setback	Polyline	N/A	N 39 41 35.50	W 80 20 7.84	435682.20	1764895.84	1293.00	-6.33	-2.45	-10.05
WDTN19 Pad Adverse Tract - 1_18_5	Polyline	N/A	N 39 41 35.50	W 80 20 7.84	435682.20	1764895.84	1293.00	-6.33	-2.45	-10.05
WDTN19 Pad - Adverse Tract pc_1_18_4	Polyline	N/A	N 39 41 35.53	W 80 20 7.61	435684.66	1764905.81	1293.00	0.00	0.00	0.00
wdtn19_grid_limits_adverse_(2020)	Polyline	N/A	N 39 41 35.50	W 80 20 7.84	435682.20	1764895.84	1293.00	-6.33	-2.45	-10.05
WDTN19 Pad Adverse Tract - pc_from_1_8_10_1_1_9_10_1_adverse	Polyline	N/A	N 39 41 35.50	W 80 20 7.84	435682.20	1764895.84	1293.00	-6.33	-2.45	-10.05
WDTN19 Pad Adverse Tract - 1_18_5 - 50ft Setback	Polyline	N/A	N 39 41 35.50	W 80 20 7.84	435682.20	1764895.84	1293.00	-6.33	-2.45	-10.05
WDTN19 Pad Adverse tract - pc_1_18_11_adverse - 50ft setback	Polyline	N/A	N 39 41 37.82	W 80 19 57.06	435868.67	1765736.92	7891.00	307.51	204.53	831.16
WDTN19RHSM Marcellus	Plane	N/A	N 39 41 8.65	W 80 18 22.33	432982.77	1768420.09	7913.00	-4266.74	-2752.06	3514.52
WDTN19RHSM Start Turn	Point	N/A	N 39 39 28.11	W 80 17 49.51	432646.37	1770677.60	7913.00	14756.88	-12900.07	5672.84
WDTN19RHSM_BHL	Point	N/A	N 39 41 5.91	W 80 19 10.34	432943.32	1766930.77	7913.00	4636.14	-3041.52	3746.19
WDTN19RHSM_End Turn	Point	N/A	N 39 41 35.05	W 80 18 55.14	435728.05	1768690.43	7913.00	521.35	43.40	974.70
WDTN19RHSM Drainage	Plane	N/A	N 39 41 37.82	W 80 19 57.06	435868.67	1765736.92	7894.00	307.51	204.53	831.16

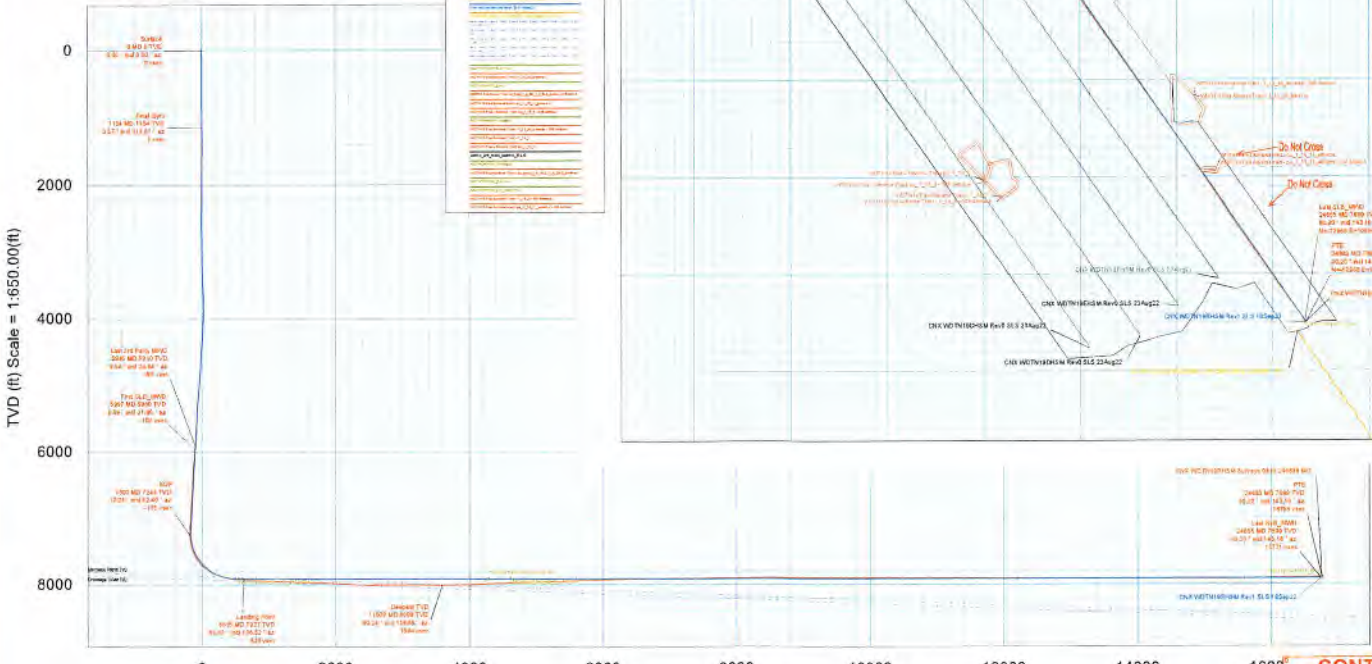
Hole T	Seq.	Survey Tool: Survey Tool Code	VendorTool	Hole Size (in)	Casing Size (in)	Expected MD From (ft)	MD From (ft)	MD To (ft)	Survey Frequency (ft)	2SDV Size (Grid Meters) (m)	2SDV Size (Grid Meters) (m)	Comments/ Contingency
1	1	A020Ga_GYROHS-Depth Only		17.5	13.375		0	29	188.425	0.79	0.729	
1	2	A020Ga_GYROHS-Depth Only		17.5	13.375		29	29	Ad Stns	0.79	0.729	
1	3	A020Ga_GYROHS		17.5	13.375		29	1154	Ad Stns	8.248	6.248	
1	4	A001Mb_MWD		12.25	9.625		1154	3100	Ad Stns	11.335	11.331	
1	5	A001Mb_MWD		8.75	5.5		3100	5945	Ad Stns	20.554	18.54	
1	6	B005Mb_MWD+IFR1		8.5	5.5		5945	24683	Ad Stns	531.525	44.806	

Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
First Dyn	1154.00	3.51	213.87	1153.88	2.27	-2.50	0.54	3.46
Last 3rd Party MWD	5945.00	3.84	24.84	5910.09	-97.54	315.08	274.80	2.21
First SLB_MWD	5997.00	3.69	21.85	5960.36	-102.05	317.92	277.96	0.89
KOP	7300.00	10.28	52.45	7243.39	-195.35	505.52	401.57	4.97
Marcellus	8185.67	74.45	134.61	7891.00	307.51	204.53	831.16	6.51
Landing Point	8615.00	89.83	138.52	7927.49	624.24	-26.15	1053.20	3.23
Deepest TVD	11500.00	90.24	138.50	8000.37	3530.81	-2248.70	3059.72	1.60
Last SLB_MWD	24655.00	90.20	143.16	7999.29	16721.19	-12965.70	10606.87	1.54
PTD	24683.00	90.20	143.16	7999.19	16750.17	-12989.20	10625.85	0.00



1264ft GL + 29ft KB



CONTROLLED

09/15/2023