



CNX WDTN19DHSM Surveys 0ft to 23238ft MD Survey Geodetic Report

(Def Survey)

Report Date: November 14, 2022 - 08:50 AM
 Client: CNX
 Field: WV Monongalia County (NAD 27)
 Structure / Slot: CNX WDTN19 Pad / WDTN19DHSM
 Well: WDTN19DHSM
 Borehole: Original Borehole
 UWI / API#: Unknown / Unknown
 Survey Name: CNX WDTN19DHSM Surveys 0ft to 23238ft MD
 Survey Date: November 01, 2022
 Tort / AHD / DDI / ERD Ratio: 271.075 ° / 16845.310 ft / 7.123 / 2.108
 Coordinate Reference System: NAD27 West Virginia State Plane, Northern Zone, US Feet
 Location Lat / Long: N 39° 41' 35.89622", W 80° 20' 7.92699"
 Location Grid N/E Y/X: N 435721.896 ftUS, E 1764881.052 ftUS
 CRS Grid Convergence Angle: -0.5329 °
 Grid Scale Factor: 0.99994143
 Version / Patch: 2.10.834.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 145.000 ° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: KB
 TVD Reference Elevation: 1293.000 ft above MSL
 Seabed / Ground Elevation: 1264.000 ft above MSL
 Magnetic Declination: -8.912 °
 Total Gravity Field Strength: 999.3417mgn (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 51791.525 nT
 Magnetic Dip Angle: 66.378 °
 Declination Date: November 01, 2022
 Magnetic Declination Model: HDGM 2022
 North Reference: Grid North
 Grid Convergence Used: -0.5329 °
 Total Corr Mag North->Grid North: -8.3792 °
 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 Location	0.00	0.00	0.00	0.00	-1293.00	0.00	0.00	0.00	N/A	N/A	N/A	435721.90	1764881.05	39.69330451	-80.33553527
	50.00	0.47	228.40	50.00	-1243.00	0.02	-0.14	-0.15	0.94	0.94	0.00	435721.76	1764880.90	39.69330413	-80.33553581
	100.00	0.20	223.80	100.00	-1193.00	0.06	-0.34	-0.37	0.54	-0.54	-9.20	435721.56	1764880.68	39.69330358	-80.33553657
	150.00	0.25	199.56	150.00	-1143.00	0.14	-0.50	-0.46	0.21	0.10	-48.48	435721.39	1764880.59	39.69330312	-80.33553691
	200.00	0.30	204.87	200.00	-1093.00	0.27	-0.72	-0.56	0.11	0.10	10.62	435721.17	1764880.50	39.69330251	-80.33553722
	250.00	0.29	205.74	250.00	-1043.00	0.40	-0.96	-0.67	0.02	-0.02	1.74	435720.94	1764880.39	39.69330187	-80.33553761
	300.00	0.42	193.34	300.00	-993.00	0.58	-1.25	-0.76	0.30	0.26	-24.80	435720.65	1764880.29	39.69330106	-80.33553794
	350.00	0.23	189.16	350.00	-943.00	0.78	-1.53	-0.82	0.38	-0.38	-8.36	435720.37	1764880.23	39.69330030	-80.33553814
	400.00	0.52	212.36	399.99	-893.01	0.94	-1.82	-0.96	0.64	0.58	46.40	435720.08	1764880.09	39.69329950	-80.33553862
	450.00	0.54	216.41	449.99	-843.01	1.10	-2.20	-1.22	0.08	0.04	8.10	435719.70	1764879.83	39.69329844	-80.33553954
	500.00	0.48	199.78	499.99	-793.01	1.30	-2.58	-1.43	0.32	-0.12	-33.26	435719.31	1764879.62	39.69329738	-80.33554027
	550.00	0.37	174.36	549.99	-743.01	1.56	-2.94	-1.49	0.43	-0.22	-50.84	435718.95	1764879.57	39.69329639	-80.33554046
	600.00	0.31	155.72	599.99	-693.01	1.83	-3.23	-1.41	0.25	-0.12	-37.28	435718.67	1764879.64	39.69329562	-80.33554019
	650.00	0.34	178.20	649.99	-643.01	2.09	-3.50	-1.35	0.26	0.06	44.96	435718.40	1764879.70	39.69329487	-80.33553997
	700.00	0.35	153.32	699.99	-593.01	2.36	-3.78	-1.28	0.30	0.02	-49.76	435718.11	1764879.77	39.69329409	-80.33553970
	750.00	0.38	162.73	749.99	-543.01	2.67	-4.08	-1.16	0.13	0.06	18.82	435717.82	1764879.89	39.69329329	-80.33553927
	800.00	0.36	159.21	799.98	-493.02	2.98	-4.38	-1.06	0.06	-0.04	-7.04	435717.51	1764879.99	39.69329245	-80.33553889
	850.00	0.17	192.12	849.98	-443.02	3.19	-4.60	-1.02	0.47	-0.38	65.82	435717.30	1764880.03	39.69329185	-80.33553874
	900.00	0.13	235.89	899.98	-393.02	3.23	-4.71	-1.08	0.24	-0.08	87.54	435717.19	1764879.97	39.69329156	-80.33553896
	950.00	0.15	207.22	949.98	-343.02	3.26	-4.80	-1.16	0.14	0.04	-57.34	435717.10	1764879.90	39.69329131	-80.33553923
	1000.00	0.15	113.27	999.98	-293.02	3.35	-4.88	-1.13	0.44	0.00	-187.90	435717.02	1764879.93	39.69329108	-80.33553912
	1050.00	0.16	108.09	1049.98	-243.02	3.46	-4.93	-1.00	0.03	0.02	-10.36	435716.97	1764880.05	39.69329096	-80.33553867
	1100.00	0.23	156.64	1099.98	-193.02	3.62	-5.04	-0.89	0.35	0.14	97.10	435716.86	1764880.16	39.69329065	-80.33553828
	1150.00	0.31	117.33	1149.98	-143.02	3.83	-5.20	-0.73	0.39	0.16	-78.62	435716.70	1764880.32	39.69329023	-80.33553771
	1199.00	0.37	123.47	1198.98	-94.02	4.10	-5.34	-0.48	0.14	0.12	12.53	435716.55	1764880.57	39.69328983	-80.33553682
	1275.00	0.38	90.83	1274.98	-18.02	4.47	-5.48	-0.03	0.28	0.01	-42.95	435716.41	1764881.02	39.69328946	-80.33553519
	1369.00	0.27	89.14	1368.98	75.98	4.78	-5.48	0.51	0.12	-0.12	-1.80	435716.41	1764881.56	39.69328947	-80.33553330
	1463.00	0.30	80.35	1462.98	169.98	5.01	-5.44	0.97	0.06	0.03	-9.35	435716.46	1764882.02	39.69328960	-80.33553165
	1558.00	0.41	29.42	1557.98	264.98	4.97	-5.10	1.38	0.34	0.12	-53.61	435716.80	1764882.43	39.69329054	-80.33553020
	1652.00	0.62	64.90	1651.97	358.97	4.91	-4.59	2.01	0.40	0.22	37.74	435717.30	1764883.06	39.69329195	-80.33552799
	1747.00	0.77	30.73	1746.97	453.97	4.74	-3.83	2.80	0.46	0.16	-35.97	435718.07	1764883.85	39.69329408	-80.33552520
	1840.00	1.13	351.23	1839.95	546.95	3.66	-2.38	2.98	0.78	0.39	-42.47	435719.51	1764884.03	39.69329804	-80.33552461
	1934.00	1.31	339.58	1933.93	640.93	1.79	-0.46	2.46	0.33	0.19	-12.39	435721.44	1764883.51	39.69330331	-80.33552651
	2029.00	1.18	335.64	2028.91	735.91	-0.22	1.45	1.68	0.16	-0.14	-4.15	435723.35	1764882.73	39.69330853	-80.33552935
	2123.00	1.21	342.21	2122.89	829.89	-2.12	3.28	0.98	0.15	0.03	6.99	435725.17	1764882.03	39.69331353	-80.33553191
	2216.00	1.45	338.83	2215.86	922.86	-4.20	5.31	0.25	0.27	0.26	-3.63	435727.20	1764881.30	39.69331909	-80.33553455
	2310.00	1.62	336.43	2309.83	1016.83	-6.66	7.64	-0.71	0.19	0.18	-2.55	435729.53	1764880.34	39.69332545	-80.33553804
	2405.00	1.34	323.38	2404.80	1111.80	-9.09	9.76	-1.91	0.46	-0.29	-13.74	435731.65	1764879.14	39.69333125	-80.33554238
	2499.00	1.37	305.15	2498.77	1205.77	-11.24	11.29	-3.48	0.46	0.03	-19.39	435733.18	1764877.57	39.69333540	-80.33554802
	2593.00	0.81	353.96	2592.76	1299.76	-12.88	12.59	-4.47	1.10	-0.60	51.93	435734.49	1764876.58	39.69333897	-80.33555158
	2687.00	1.00	13.26	2686.75	1393.75	-14.01	14.05	-4.35	0.38	0.20	20.53	435735.95	1764876.70	39.69334298	-80.33555121

...CNX WDTN19 Pad\WDTN19DHSMOriginal Borehole\CNX WDTN19DHSM Surveys 0ft to 23238ft 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 (°)
	2780.00	1.23	4.80	2779.73	1486.73	-15.32	15.84	-4.08	0.30	0.25	-9.10	435737.73	1764876.97	39.69334788	-80.33555031
	2875.00	1.34	359.36	2874.70	1581.70	-17.02	17.97	-4.01	0.17	0.12	-5.73	435739.86	1764877.04	39.69335372	-80.33555012
	2969.00	0.65	11.92	2968.69	1675.69	-18.29	19.59	-3.91	0.77	-0.73	13.36	435741.48	1764877.14	39.69335817	-80.33554982
	2985.00	0.56	356.36	2984.69	1691.69	-18.42	19.75	-3.90	1.17	-0.56	-97.25	435741.65	1764877.15	39.69335863	-80.33554978
	3071.00	0.34	293.43	3070.69	1777.69	-18.99	20.27	-4.16	0.59	-0.26	-73.17	435742.17	1764876.89	39.69336006	-80.33555072
	3169.00	0.63	226.63	3168.68	1875.68	-19.16	20.02	-4.82	0.60	0.30	-68.16	435741.91	1764876.23	39.69335934	-80.33555305
	3263.00	0.93	271.97	3262.68	1969.68	-19.55	19.69	-5.96	0.70	0.32	48.23	435741.59	1764875.10	39.69335841	-80.33555709
	3358.00	0.84	262.27	3357.66	2064.66	-20.33	19.62	-7.42	0.18	-0.09	-10.21	435741.52	1764873.64	39.69335819	-80.33556228
	3451.00	0.62	247.85	3450.66	2157.66	-20.75	19.34	-8.56	0.31	-0.24	-15.51	435741.24	1764872.49	39.69335739	-80.33556632
	3545.00	2.34	278.29	3544.62	2251.62	-22.18	19.43	-10.93	1.95	1.63	32.38	435741.32	1764870.12	39.69335756	-80.33557475
	3637.00	2.70	284.58	3636.53	2343.53	-25.12	20.24	-14.88	0.49	0.39	6.84	435742.14	1764866.17	39.69335970	-80.33558883
	3731.00	2.15	277.85	3730.45	2437.45	-28.00	21.04	-18.77	0.66	-0.59	-7.16	435742.94	1764862.28	39.69336179	-80.33560268
	3823.00	3.50	288.97	3822.34	2529.34	-31.45	22.19	-23.14	1.58	1.47	12.09	435744.08	1764857.91	39.69336483	-80.33561823
	3917.00	5.00	290.62	3916.08	2623.08	-37.15	24.57	-29.69	1.60	1.60	1.76	435746.46	1764851.37	39.69337119	-80.33564157
	4010.00	6.65	291.88	4008.59	2715.59	-45.01	28.00	-38.48	1.78	1.77	1.35	435749.89	1764842.58	39.69338039	-80.33567292
	4103.00	8.04	292.30	4100.83	2807.83	-54.99	32.47	-49.49	1.50	1.49	0.45	435754.37	1764831.56	39.69339239	-80.33571221
	4197.00	9.23	285.50	4193.76	2900.76	-66.34	36.98	-62.84	1.67	1.27	-7.23	435758.88	1764818.22	39.69340443	-80.33575978
	4290.00	10.63	280.93	4285.37	2992.37	-78.26	40.60	-78.45	1.73	1.51	-4.91	435762.50	1764802.61	39.69341397	-80.33581537
	4382.00	11.03	272.74	4375.73	3082.73	-89.74	42.63	-95.57	1.73	0.43	-8.90	435764.53	1764785.48	39.69341910	-80.33587628
	4477.00	10.86	268.42	4469.01	3176.01	-100.23	42.82	-113.60	0.88	-0.18	-4.55	435764.71	1764767.46	39.69341916	-80.33594033
	4569.00	11.83	265.65	4559.21	3266.21	-109.82	41.87	-131.66	1.21	1.05	-3.01	435763.76	1764749.40	39.69341608	-80.33600449
	4662.00	12.85	258.32	4650.07	3357.07	-118.77	39.05	-151.30	2.01	1.10	-7.88	435760.94	1764729.76	39.69340784	-80.33607417
	4760.00	12.61	254.17	4745.66	3452.66	-126.60	33.93	-172.26	0.96	-0.24	-4.23	435755.82	1764708.80	39.69339324	-80.33614849
	4852.00	13.85	252.52	4835.22	3542.22	-133.21	27.88	-192.43	1.41	1.35	-1.79	435749.77	1764688.64	39.69337612	-80.33621994
	4946.00	15.95	252.77	4926.05	3633.05	-140.54	20.67	-215.50	2.24	2.24	0.27	435742.57	1764665.57	39.69335575	-80.33630168
	5040.00	16.69	250.46	5016.26	3723.26	-148.08	12.33	-240.56	1.05	0.79	-2.46	435734.23	1764640.51	39.69333221	-80.33639044
	5134.00	17.69	250.95	5106.12	3813.12	-155.55	3.21	-266.61	0.82	0.82	0.52	435725.11	1764614.46	39.69330652	-80.33648270
	5227.00	19.07	249.44	5194.43	3901.43	-163.18	-6.68	-294.02	1.80	1.73	-0.62	435715.22	1764587.05	39.69327867	-80.33657978
	5321.00	20.99	249.43	5282.74	3989.74	-171.20	-17.98	-324.16	2.04	2.04	-0.01	435703.91	1764556.91	39.69324685	-80.33668651
	5416.00	22.69	246.42	5370.92	4077.92	-179.07	-31.29	-356.89	2.14	1.79	-3.17	435690.60	1764524.18	39.69320948	-80.33680236
	5509.00	24.60	243.72	5456.11	4163.11	-185.56	-47.04	-390.69	2.36	2.05	-2.90	435674.86	1764490.39	39.69316539	-80.33692194
	5603.00	26.18	243.90	5541.03	4248.03	-191.73	-64.83	-426.86	1.68	1.68	0.19	435657.07	1764454.22	39.69311563	-80.33704986
	5696.00	29.69	246.37	5623.18	4330.18	-199.45	-83.09	-466.39	3.97	3.77	2.66	435638.81	1764414.69	39.69306449	-80.33718974
	5791.00	31.10	244.17	5705.13	4412.13	-208.00	-103.21	-510.04	1.89	1.48	-2.32	435618.69	1764371.05	39.69300813	-80.33734414
Last 3rd Party MWD	5884.00	30.20	241.23	5785.14	4492.14	-214.36	-124.94	-552.16	1.88	-0.97	-3.16	435596.97	1764328.92	39.69294742	-80.33749311
First SLB_MWD	5924.00	29.80	239.96	5819.78	4526.78	-216.31	-134.76	-569.58	1.88	-1.01	-3.18	435587.15	1764311.50	39.69292002	-80.33755468
	6016.00	29.65	244.51	5899.69	4606.69	-222.05	-155.99	-609.92	2.46	-0.16	4.95	435565.91	1764271.17	39.69286069	-80.33769729
	6111.00	29.59	244.81	5982.28	4689.28	-229.93	-176.09	-652.35	0.17	-0.06	0.31	435545.82	1764228.75	39.69280444	-80.33784739
	6205.00	29.55	244.58	6064.03	4771.03	-237.74	-195.92	-694.28	0.13	-0.03	-0.25	435525.99	1764186.81	39.69274893	-80.33799573
	6298.00	29.56	246.10	6144.94	4851.94	-245.97	-215.05	-735.97	0.81	0.00	1.64	435506.85	1764145.13	39.69269532	-80.33814322
	6392.00	29.49	246.14	6226.73	4933.73	-254.91	-233.80	-778.32	0.07	-0.07	0.04	435488.11	1764102.77	39.69264277	-80.33829310
	6486.00	29.17	245.83	6308.68	5015.68	-263.68	-252.54	-820.39	0.38	-0.34	-0.33	435469.37	1764060.71	39.69259026	-80.33844194
	6580.00	29.34	245.98	6390.69	5097.69	-272.38	-271.29	-862.32	0.19	0.18	0.16	435450.62	1764018.78	39.69253771	-80.33859031
	6675.00	29.08	245.98	6473.61	5180.61	-281.21	-290.16	-904.66	0.27	-0.27	-0.01	435431.75	1763976.45	39.69248483	-80.33874014
	6770.00	29.25	246.04	6556.57	5263.57	-290.05	-308.98	-946.96	0.19	0.19	0.07	435412.93	1763934.15	39.69243207	-80.33889890
	6864.00	29.28	245.41	6638.57	5345.57	-298.60	-327.88	-988.85	0.33	0.03	-0.67	435394.04	1763892.26	39.69237913	-80.33903802
	6959.00	29.31	246.00	6721.42	5428.42	-307.23	-347.01	-1031.22	0.31	0.03	0.62	435374.91	1763849.89	39.69232553	-80.33918794
	7053.00	29.36	245.52	6803.36	5510.36	-315.83	-365.91	-1073.22	0.25	0.05	-0.51	435356.01	1763807.90	39.69227255	-80.33933653
	7148.00	29.33	245.38	6886.17	5593.17	-324.28	-385.25	-1115.56	0.08	-0.04	-0.15	435336.67	1763765.56	39.69221837	-80.33948635
	7243.00	29.14	245.57	6969.07	5676.07	-332.72	-404.51	-1157.77	0.22	-0.19	0.20	435317.41	1763723.35	39.69216443	-80.33963570
	7337.00	29.38	246.00	7051.08	5758.08	-341.32	-423.35	-1199.68	0.34	0.25	0.45	435298.57	1763681.45	39.69211163	-80.33978397
	7432.00	29.26	245.67	7133.91	5840.91	-350.06	-442.40	-1242.12	0.21	-0.13	-0.35	435279.53	1763639.00	39.69205826	-80.33993415
	7527.00	28.24	239.83	7217.21	5924.21	-356.26	-463.26	-1282.72	3.14	-1.07	-6.15	435258.66	1763598.41	39.69199994	-80.34007770
	7622.00	28.50	217.63	7301.04	6008.04	-351.37	-492.59	-1316.08	11.05	0.27	-23.37	435229.34	1763565.05	39.69191857	-80.34019527
	7716.00	30.80	201.88	7382.85	6089.85	-331.49	-532.75	-1338.78	8.62	2.45	-16.76	435189.18	1763542.35	39.69180774	-80.34027458
	7811.00	35.04	191.09	7462.65	6169.65	-299.24	-582.15	-1353.11	7.60	4.46	-11.36	435139.78	1763528.03	39.69167177	-80.34032386
	7905.00	39.58	185.03	7537.42	6244.42	-257.56	-638.51	-1360.93	6.21	4.83	-6.45	435083.43	1763520.20	39.69151685	-80.34034978
	7999.00	42.89	184.52	7608.10	6315.10	-209.94	-700.24	-1366.08	3.54	3.52	-0.54	435021.69	1763515.07	39.69134724	-80.34036602
	8094.00	48.94	178.45	7674.19	6381.19	-155.05	-768.37	-1367.66	7.84	6.37	-6.39	434953.57	1763513.47	39.69116018	-80.34036937
	8188.00	54.42	170.30	7732.52	6439.52	-90.80	-841.61	-1360.25	8.95	5.83	-8.37	434880.34	1763520.89	39.69095932	-80.34034060
	8283.00	61.71	163.21	7782.78	6489.78	-15.97	-919.91	-1341.61	9.94	7.67	-7.46	434802.04	1763539.52	39.69074485	-80.34027179
	8377.00	69.24	158.01	7821.79	6528.79	66.33	-1000.44	-1313.15	9.46	8.01	-5.53	434721.51	1763567.99	39.69052450	-80.34016796
	8472.00	76.32	152.86	7849.91	6556.91	155.49	-1082.85	-1275.39	9.07	7.45	-5.42	434639.11	1763605.74	39.69029924	-80.34003107
	8566.00	78.13	148.69	7870.71	6577.71	246.67	-1162.83	-1230.63	4.74	1.93	-4.44	434559.14	1763650.49	39.69008084	-80.33986939
	8661.00	84.12	146.32	7885.36	6592.36	340.40	-1241.95	-1180.22	6.77	6.31	-2.49	434480.03	1763700.90	39.68986495	-80.33968765
	8756.00	84.95	146.01												

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 (°)
	9227.00	89.44	144.03	7899.33	6606.33	905.80	-1707.69	-859.61	1.87	-0.63	-1.76	434014.31	1764021.50	39.68859464	-80.33853303
	9322.00	89.75	144.55	7900.00	6607.00	1000.79	-1784.82	-804.16	0.64	0.33	0.55	433937.18	1764076.94	39.68838431	-80.33833346
	9416.00	89.50	142.76	7900.61	6607.61	1094.76	-1860.53	-748.45	1.93	-0.27	-1.91	433861.48	1764132.65	39.68817791	-80.33813302
	9511.00	89.60	141.90	7901.35	6608.35	1189.65	-1935.72	-690.39	0.91	0.11	-0.90	433786.30	1764190.70	39.68797299	-80.33792424
	9605.00	89.88	145.74	7901.78	6608.78	1283.62	-2011.57	-634.90	4.10	0.29	4.09	433710.45	1764246.19	39.68776618	-80.33772459
	9699.00	89.92	143.33	7901.95	6608.95	1377.61	-2088.12	-580.37	2.56	0.04	-2.56	433633.90	1764300.72	39.68755742	-80.33752829
	9794.00	89.78	144.43	7902.20	6609.20	1472.59	-2164.86	-524.37	1.17	-0.14	1.16	433557.16	1764356.71	39.68734819	-80.33732679
	9888.00	89.85	144.01	7902.51	6609.51	1566.58	-2241.12	-469.41	0.46	0.07	-0.45	433480.91	1764411.67	39.68714025	-80.33712900
	9983.00	89.90	146.30	7902.72	6609.72	1661.57	-2319.08	-415.13	2.41	0.06	2.41	433402.96	1764465.94	39.68692763	-80.33693358
	10078.00	89.93	144.99	7902.86	6609.86	1756.56	-2397.51	-361.52	1.38	0.03	-1.38	433324.53	1764519.55	39.68671371	-80.33674051
	10172.00	89.81	146.17	7903.07	6610.07	1850.55	-2475.05	-308.39	1.27	-0.13	1.26	433247.00	1764572.68	39.68650220	-80.33654917
	10267.00	89.68	146.18	7903.50	6610.50	1945.53	-2553.97	-255.51	0.14	-0.14	0.01	433168.08	1764625.56	39.68628690	-80.33635868
	10362.00	89.37	146.12	7904.29	6611.29	2040.51	-2632.86	-202.59	0.33	-0.32	-0.07	433089.19	1764678.47	39.68607168	-80.33616806
	10457.00	88.74	143.68	7905.86	6612.86	2135.49	-2710.57	-147.98	2.65	-0.66	-2.57	433011.49	1764733.08	39.68585976	-80.33597145
	10552.00	88.27	144.76	7908.34	6615.34	2230.45	-2787.61	-92.45	1.24	-0.49	1.14	432934.46	1764788.60	39.68564969	-80.33577163
	10646.00	88.51	143.57	7910.99	6617.99	2324.40	-2863.78	-37.44	1.29	0.25	-1.27	432858.29	1764843.61	39.68544198	-80.33557367
	10740.00	88.57	144.35	7913.39	6620.39	2418.35	-2939.77	17.84	0.84	0.07	0.84	432782.31	1764898.89	39.68523480	-80.33537474
	10835.00	88.51	144.92	7915.81	6622.81	2513.32	-3017.21	72.81	0.59	-0.06	0.59	432704.86	1764953.86	39.68502360	-80.33517690
	10929.00	88.11	143.83	7918.58	6625.58	2607.27	-3093.58	127.54	1.23	-0.42	-1.16	432628.50	1765008.59	39.68481536	-80.33497992
	11024.00	87.91	144.21	7921.87	6628.87	2702.20	-3170.41	183.32	0.46	-0.21	0.41	432551.67	1765064.36	39.68460586	-80.33477921
	11118.00	87.79	143.88	7925.39	6632.39	2796.12	-3246.45	238.47	0.38	-0.13	-0.36	432475.64	1765119.51	39.68439853	-80.33458075
	11213.00	87.30	144.73	7929.46	6636.46	2891.02	-3323.53	293.86	1.03	-0.52	0.89	432398.57	1765174.89	39.68418835	-80.33438144
	11308.00	87.39	144.53	7933.86	6640.86	2985.92	-3400.91	348.79	0.23	0.10	-0.20	432321.19	1765229.82	39.68397733	-80.33418373
	11403.00	87.47	144.87	7938.13	6645.13	3080.82	-3478.37	403.63	0.36	0.08	0.35	432243.74	1765284.66	39.68376610	-80.33398634
	11497.00	87.38	144.92	7942.35	6649.35	3174.73	-3555.19	457.63	0.11	-0.09	0.05	432166.92	1765338.66	39.68355658	-80.33379194
	11591.00	87.26	144.31	7946.75	6653.75	3268.62	-3631.74	512.01	0.66	-0.13	-0.65	432090.37	1765393.03	39.68334782	-80.33359625
	11686.00	87.63	144.77	7950.98	6657.98	3363.52	-3709.04	567.06	0.62	0.39	0.48	432013.08	1765448.08	39.68313701	-80.33339809
	11781.00	87.37	144.77	7955.12	6662.12	3458.43	-3786.57	621.81	0.27	-0.27	0.00	431935.56	1765502.83	39.68292558	-80.33320103
	11876.00	87.73	145.55	7959.19	6666.19	3553.35	-3864.47	676.04	0.90	0.38	0.82	431857.66	1765557.05	39.68271312	-80.33300582
	11971.00	87.52	144.90	7963.12	6670.12	3648.26	-3942.43	730.17	0.72	-0.22	-0.68	431779.70	1765611.18	39.68250047	-80.33281092
	12065.00	87.24	144.08	7967.42	6674.42	3742.16	-4018.87	784.71	0.92	-0.30	-0.87	431703.27	1765665.72	39.68229202	-80.33261464
	12160.00	87.11	143.98	7972.10	6679.10	3837.03	-4095.66	840.45	0.17	-0.14	-0.11	431626.48	1765721.45	39.68208263	-80.33241411
	12255.00	87.78	144.58	7976.34	6683.34	3931.93	-4172.71	895.85	0.95	0.71	0.63	431549.43	1765776.85	39.68187252	-80.33221473
	12350.00	87.50	144.62	7980.25	6687.25	4026.84	-4250.09	950.84	0.30	-0.29	0.04	431472.07	1765831.83	39.68166152	-80.33201684
	12444.00	87.46	144.21	7984.38	6691.38	4120.75	-4326.46	1005.48	0.44	-0.04	-0.44	431395.70	1765886.48	39.68145326	-80.33182019
	12539.00	87.38	143.65	7988.65	6695.65	4215.64	-4403.17	1061.36	0.59	-0.08	-0.59	431318.99	1765942.35	39.68124410	-80.33161916
	12633.00	89.52	146.00	7991.19	6698.19	4309.59	-4479.97	1115.48	3.38	2.27	2.50	431242.20	1765996.47	39.68103465	-80.33142435
Deepest TVD	12728.00	90.16	144.33	7991.46	6698.46	4404.58	-4557.94	1169.75	1.88	0.67	-1.76	431164.23	1766050.73	39.68082198	-80.33122901
	12823.00	90.15	144.38	7991.20	6698.20	4499.58	-4635.14	1225.11	0.05	-0.01	0.05	431087.04	1766108.09	39.68061146	-80.33102978
	12918.00	90.12	145.35	7990.97	6697.97	4594.58	-4712.83	1279.79	1.03	-0.03	1.03	431009.36	1766160.76	39.68039958	-80.33083300
	13012.00	90.02	145.48	7990.85	6697.85	4688.57	-4790.22	1333.14	0.17	-0.11	0.14	430931.97	1766214.11	39.68018848	-80.33064091
	13107.00	90.00	145.08	7990.84	6697.84	4783.57	-4868.30	1387.25	0.42	-0.02	-0.42	430853.89	1766268.22	39.67997550	-80.33044612
	13202.00	89.04	145.11	7990.80	6697.80	4878.57	-4946.21	1441.61	0.05	0.04	0.03	430775.98	1766322.57	39.67976300	-80.33025044
	13296.00	89.72	144.52	7991.00	6698.00	4972.57	-5023.04	1495.77	0.71	-0.34	-0.63	430699.16	1766376.74	39.67955348	-80.33005550
	13391.00	89.92	145.98	7991.30	6698.30	5067.57	-5101.09	1549.92	1.55	0.21	1.54	430621.12	1766430.88	39.67934058	-80.32986057
	13486.00	90.28	144.76	7991.13	6698.13	5162.56	-5179.26	1603.91	1.34	0.38	-1.28	430542.95	1766484.86	39.67912736	-80.32966622
	13581.00	90.05	144.94	7990.86	6697.86	5257.56	-5256.93	1658.60	0.31	-0.24	0.19	430465.28	1766539.55	39.67891552	-80.32946938
	13676.00	90.85	144.48	7990.11	6697.11	5352.56	-5334.47	1713.48	0.97	0.84	-0.48	430387.75	1766594.43	39.67870405	-80.32927187
	13771.00	91.09	144.10	7988.50	6695.50	5447.54	-5411.60	1768.92	0.47	0.25	-0.40	430310.62	1766649.87	39.67849373	-80.32907239
	13866.00	91.26	144.41	7986.56	6693.56	5542.51	-5488.69	1824.41	0.37	0.18	0.33	430233.54	1766705.35	39.67828351	-80.32887275
	13961.00	90.75	145.54	7984.89	6691.89	5637.49	-5566.47	1878.92	1.30	-0.54	1.19	430155.76	1766759.86	39.67807137	-80.32867654
	14056.00	90.88	145.62	7983.54	6690.54	5732.48	-5644.83	1932.62	0.16	0.14	0.08	430077.41	1766813.55	39.67785762	-80.32848322
	14150.00	92.06	145.74	7981.13	6688.13	5826.44	-5722.44	1985.60	1.26	1.26	0.13	429999.81	1766868.63	39.67764591	-80.32829247
	14245.00	92.04	146.31	7977.73	6684.73	5921.36	-5801.17	2038.65	0.60	-0.02	0.60	429921.08	1766919.58	39.67743112	-80.32810142
	14340.00	92.15	146.06	7974.26	6681.26	6016.28	-5880.05	2091.48	0.29	0.12	-0.26	429842.21	1766972.41	39.67721593	-80.32791115
	14435.00	92.07	145.53	7970.76	6677.76	6111.20	-5958.56	2144.85	0.56	-0.08	-0.56	429763.70	1767025.77	39.67700174	-80.32771899
	14531.00	91.88	146.09	7967.45	6674.45	6207.14	-6037.92	2198.77	0.61	-0.20	0.58	429684.34	1767079.69	39.67678525	-80.32752487
	14626.00	92.02	145.26	7964.22	6671.22	6302.07	-6116.33	2252.31	0.88	0.15	-0.87	429605.94	1767133.22	39.67657135	-80.32733211
	14721.00	92.03	146.47	7960.86	6667.86	6397.00	-6194.92	2305.58	1.28	0.01	1.28	429527.36	1767186.49	39.67635697	-80.32714031
	14816.00	91.99	144.53	7957.53	6664.53	6491.94	-6273.16	2359.35	2.05	-0.05	-2.05	429449.12	1767240.26	39.67614354	-80.32694673
	14911.00	91.86	145.18	7954.34	6661.34	6586.88	-6350.79	2414.01	0.69	-0.13	0.68	429371.49	1767294.91	39.67593180	-80.32675002
	15006.00	91.94	145.28	7951.19	6658.19	6681.83	-6428.78	2468.16	1.14	0.08	0.11	429293.50	1767349.06	39.67571907	-80.32655511
	15101.00	92.54	144.63	7947.48	6654.48	6776.75	-6506.50	2522.67	0.93	0.63	-0.69	429215.79	1767403.57	39.67550710	-80.32635893
	15196.00	92.55	144.95	7943.26	6650.26	6871.66	-6584.04	2577.39	0.34	0.01	0.34	429138.26	176745		

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 (°)
	16049.00	91.50	146.27	7911.58	6618.58	7723.97	-7280.51	3068.69	1.24	-0.07	1.24	428441.83	1767949.56	39.67339608	-80.32439402
	16144.00	91.50	145.59	7909.10	6616.10	7818.93	-7359.17	3121.89	0.72	0.00	-0.72	428363.17	1768002.76	39.67318147	-80.32420248
	16239.00	91.47	145.74	7906.64	6613.64	7913.89	-7437.59	3175.46	0.16	-0.03	0.16	428284.75	1768056.32	39.67296754	-80.32400965
	16333.00	91.49	144.90	7904.21	6611.21	8007.85	-7514.87	3228.93	0.90	0.02	-0.90	428207.49	1768109.78	39.67275676	-80.32381720
	16427.00	91.38	146.84	7901.85	6608.85	8101.81	-7592.65	3281.65	2.07	-0.11	2.07	428129.71	1768162.50	39.67254456	-80.32362739
	16521.00	91.40	145.21	7899.57	6606.57	8195.76	-7670.58	3334.16	1.74	0.02	-1.74	428051.78	1768215.01	39.67233195	-80.32343833
	16616.00	91.67	146.20	7897.02	6604.02	8290.72	-7749.03	3387.67	1.08	0.28	1.04	427973.34	1768268.52	39.67211793	-80.32324570
	16710.00	91.74	145.92	7894.23	6601.23	8384.66	-7826.98	3440.13	0.30	0.07	-0.29	427895.39	1768320.97	39.67190526	-80.32305683
	16804.00	91.21	144.89	7891.81	6598.81	8478.63	-7904.34	3493.47	1.24	-0.56	-1.10	427818.04	1768374.31	39.67169425	-80.32286481
	16898.00	91.48	145.82	7889.60	6596.60	8572.60	-7981.64	3546.90	1.03	0.29	0.98	427740.73	1768427.74	39.67148336	-80.32267252
	16994.00	91.33	145.09	7887.24	6594.24	8668.57	-8060.69	3601.32	0.77	-0.16	-0.75	427661.69	1768482.16	39.67126773	-80.32247663
	17088.00	91.04	145.38	7885.30	6592.30	8762.55	-8137.90	3654.91	0.44	-0.31	0.31	427584.49	1768535.74	39.67105713	-80.32228378
	17183.00	91.08	145.33	7883.54	6590.54	8857.53	-8216.04	3708.90	0.08	0.05	-0.06	427506.35	1768589.73	39.67084397	-80.32209044
	17277.00	90.75	145.30	7882.03	6589.03	8951.51	-8293.33	3762.39	0.35	-0.35	-0.03	427429.07	1768643.21	39.67063315	-80.32189695
	17372.00	90.47	144.38	7881.02	6588.02	9046.51	-8370.99	3817.09	1.01	-0.30	-0.97	427351.41	1768697.91	39.67042132	-80.32170013
	17466.00	90.72	144.63	7880.04	6587.04	9140.50	-8447.52	3871.66	0.38	0.26	0.26	427274.89	1768752.48	39.67021261	-80.32150378
	17560.00	90.72	145.31	7878.85	6585.85	9234.49	-8524.49	3925.61	0.73	0.00	0.73	427197.93	1768806.43	39.67000268	-80.32130965
	17655.00	90.99	145.38	7877.43	6584.43	9329.48	-8602.63	3979.62	0.29	0.28	0.07	427119.79	1768860.43	39.66978952	-80.32111526
	17749.00	90.84	145.07	7875.93	6582.93	9423.46	-8679.83	4033.23	0.37	-0.16	-0.34	427042.59	1768914.04	39.66957893	-80.32092235
	17844.00	90.93	144.78	7874.46	6581.46	9518.45	-8757.57	4087.81	0.32	0.10	-0.30	426964.86	1768968.62	39.66936690	-80.32072593
	17938.00	90.81	145.02	7873.04	6580.04	9612.44	-8834.46	4141.86	0.29	-0.13	0.26	426887.97	1769022.66	39.66915716	-80.32053147
	18033.00	90.82	144.01	7871.69	6578.69	9707.43	-8911.81	4197.00	1.06	0.01	-1.06	426810.62	1769077.79	39.66894621	-80.32033311
	18127.00	90.25	142.45	7870.82	6577.82	9801.38	-8987.11	4253.26	1.77	-0.61	-1.66	426735.33	1769134.05	39.66874092	-80.32013083
	18222.00	90.70	144.32	7870.04	6577.04	9896.33	-9063.35	4309.92	2.02	0.48	1.96	426659.09	1769190.71	39.66853303	-80.31992710
	18316.00	90.52	144.75	7869.03	6576.03	9990.32	-9139.90	4364.46	0.50	-0.19	0.46	426582.55	1769245.25	39.66832425	-80.31973089
	18411.00	89.99	143.82	7868.61	6575.61	10085.31	-9217.03	4419.91	1.12	-0.56	-0.97	426505.42	1769300.70	39.66811390	-80.31953141
	18506.00	90.47	144.73	7868.22	6575.22	10180.30	-9294.16	4475.38	1.08	0.95	0.95	426428.30	1769356.16	39.66790357	-80.31933189
	18600.00	90.46	146.00	7867.46	6574.46	10274.29	-9371.50	4528.80	1.36	-0.01	1.36	426350.97	1769409.58	39.66769260	-80.31913964
	18695.00	90.28	144.90	7866.85	6573.85	10369.29	-9449.74	4582.68	1.18	-0.19	-1.16	426272.73	1769463.45	39.66747916	-80.31894575
	18790.00	90.40	144.80	7866.29	6573.29	10464.29	-9527.41	4637.37	0.17	0.13	-0.11	426195.06	1769518.14	39.66726730	-80.31874896
	18884.00	90.14	144.40	7865.84	6572.84	10558.28	-9604.03	4691.83	0.51	-0.28	-0.42	426118.45	1769572.59	39.66705833	-80.31855307
	18979.00	90.45	145.22	7865.36	6572.36	10653.28	-9681.67	4746.57	0.92	0.32	0.87	426040.81	1769627.34	39.66684657	-80.31835610
	19073.00	90.31	145.51	7864.74	6571.74	10747.28	-9759.01	4799.99	0.34	-0.15	0.31	425963.48	1769680.76	39.66663559	-80.31816385
	19169.00	90.08	145.07	7864.42	6571.42	10843.27	-9837.93	4854.66	0.52	-0.24	-0.46	425884.57	1769735.41	39.66642031	-80.31796714
	19264.00	90.37	145.30	7864.05	6571.05	10938.27	-9915.92	4908.89	0.39	0.31	0.24	425806.57	1769789.64	39.66620755	-80.31777199
	19359.00	90.21	145.32	7863.57	6570.57	11033.27	-9994.04	4962.95	0.17	-0.17	0.02	425728.46	1769843.70	39.66599446	-80.31757744
	19454.00	90.42	144.74	7863.05	6570.05	11128.27	-10071.89	5017.40	0.65	0.22	-0.61	425650.62	1769898.15	39.66578211	-80.31738155
	19549.00	90.29	145.25	7862.47	6569.47	11223.27	-10149.70	5071.89	0.55	-0.13	0.53	425572.81	1769952.64	39.66556986	-80.31718547
	19644.00	90.15	144.53	7862.10	6569.10	11318.26	-10227.41	5126.53	0.76	-0.15	-0.75	425495.10	1770007.27	39.66535789	-80.31698889
	19739.00	90.12	145.62	7861.87	6568.87	11413.26	-10305.31	5180.91	1.15	-0.04	-1.15	425417.21	1770061.65	39.66514542	-80.31679322
	19834.00	90.21	144.89	7861.61	6568.61	11508.26	-10383.37	5235.05	0.78	0.10	-0.77	425339.16	1770115.79	39.66493247	-80.31659841
	19929.00	90.19	144.27	7861.27	6568.27	11603.26	-10460.79	5290.11	0.65	-0.02	-0.65	425261.74	1770170.84	39.66472132	-80.31640037
	20024.00	90.25	145.08	7860.90	6567.90	11698.25	-10538.30	5345.03	0.85	0.06	0.85	425184.24	1770225.76	39.66450990	-80.31620278
	20119.00	90.00	144.76	7860.69	6567.69	11793.25	-10616.04	5399.63	0.43	-0.27	-0.34	425106.50	1770280.36	39.66429785	-80.31600635
	20214.00	90.05	144.40	7860.66	6567.66	11888.25	-10693.46	5454.69	0.38	0.05	-0.38	425029.09	1770335.42	39.66408670	-80.31580829
	20309.00	89.92	145.02	7860.69	6567.69	11983.25	-10771.00	5509.58	0.67	-0.14	0.66	424951.55	1770390.30	39.66387520	-80.31561085
	20404.00	89.92	144.69	7860.82	6567.82	12078.25	-10848.68	5564.27	0.35	0.01	-0.35	424873.87	1770444.98	39.66366332	-80.31541411
	20594.00	89.96	144.30	7861.01	6568.01	12268.24	-11003.35	5674.62	0.21	0.02	-0.20	424719.22	1770555.32	39.66324147	-80.31501719
	20689.00	90.07	144.74	7860.99	6567.99	12363.24	-11080.70	5729.76	0.47	0.11	0.46	424641.86	1770610.46	39.66303048	-80.31481884
	20784.00	89.75	144.41	7861.14	6568.14	12458.23	-11158.12	5784.83	0.48	-0.34	-0.34	424564.46	1770665.53	39.66281935	-80.31462076
	20879.00	90.02	144.61	7861.33	6568.33	12553.23	-11235.46	5839.98	0.36	0.29	0.21	424487.11	1770720.68	39.66260838	-80.31442238
	20974.00	89.75	144.51	7861.52	6568.52	12648.23	-11312.86	5895.07	0.31	-0.29	-0.11	424409.72	1770775.77	39.66239729	-80.31422423
	21069.00	89.66	144.15	7862.01	6569.01	12743.22	-11390.03	5950.47	0.39	-0.09	-0.38	424332.55	1770831.16	39.66218682	-80.31402498
	21164.00	90.12	144.79	7862.20	6569.20	12838.21	-11467.34	6005.68	0.83	0.48	0.68	424255.25	1770886.37	39.66197596	-80.31382641
	21259.00	89.89	144.48	7862.19	6569.19	12933.21	-11544.82	6060.66	0.40	-0.23	-0.33	424177.78	1770941.34	39.66176464	-80.31362865
	21353.00	89.84	144.55	7862.41	6569.41	13027.21	-11621.36	6115.22	0.09	-0.06	0.07	424101.24	1770995.90	39.66155587	-80.31343241
	21448.00	89.57	144.05	7862.91	6569.91	13122.20	-11698.51	6170.65	0.60	-0.28	-0.53	424024.10	1771051.33	39.66134546	-80.31323305
	21543.00	89.72	144.62	7863.50	6570.50	13217.19	-11775.69	6226.04	0.62	0.15	0.60	423946.92	1771106.71	39.66113496	-80.31303387
	21637.00	90.48	145.22	7863.34	6570.34	13311.19	-11852.62	6280.06	1.03	0.81	0.64	423870.00	1771160.73	39.66092512	-80.31283953
	21732.00	90.27	145.35	7862.72	6569.72	13406.19	-11930.71	6334.16	0.26	-0.22	0.14	423791.91	1771214.82	39.66071209	-80.31264489
	21826.00	90.32	145.21	7862.24	6569.24	13500.18	-12007.97	6387.69	0.16	0.05	-0.15	423714.65	1771268.35	39.66050132	-80.31245228
	21921.00	90.42	144.90	7861.64	6568.64	13595.18	-12085.84	6442.10	0.35	0.11	-0.33	423636.78	1771322.76	39.66028890	-80.31225653
	22015.00	90.27	145.36	7861.07	6568.07	13689.18	-12162.97	6495.84	0.52	-0.16	0.49	423559.67	1771376.50	39.66007851	-80.31206320
	22110.00	89.37	143.56												

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 (°)
	22962.00	90.18	145.39	7860.52	6567.52	14636.15	-12937.55	7040.60	0.24	0.01	0.24	422785.13	1771921.23	39.65796563	-80.31010364
	23057.00	90.11	145.20	7860.27	6567.27	14731.14	-13015.65	7094.69	0.22	-0.08	-0.21	422707.03	1771975.31	39.65775257	-80.30990906
	23152.00	89.76	145.29	7860.38	6567.38	14826.14	-13093.70	7148.84	0.38	-0.37	0.09	422628.99	1772029.46	39.65753964	-80.30971423
Final SLB_MWD	23211.00	89.69	144.80	7860.66	6567.66	14885.14	-13142.06	7182.65	0.84	-0.12	-0.83	422580.63	1772063.26	39.65740773	-80.30959263
Projection to TD	23238.00	89.69	144.80	7860.81	6567.81	14912.14	-13164.12	7198.21	0.00	0.00	0.00	422558.57	1772078.82	39.65734755	-80.30953665

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 WDTN19DHSM Surveys 0ft to 23238ft MD
	1	29.000	29.000	Act Stns	17.500	13.375	A020Ga_GYRO-NS-Depth Only	Original Borehole / CNX WDTN19DHSM Surveys 0ft to 23238ft MD
	1	29.000	1199.000	Act Stns	17.500	13.375	A020Ga_GYRO-NS	Original Borehole / CNX WDTN19DHSM Surveys 0ft to
	1	1199.000	3100.000	Act Stns	12.250	9.625	A001Mb_MWD	Original Borehole / CNX WDTN19DHSM Surveys 0ft to
	1	3100.000	5884.000	Act Stns	8.750	5.500	A001Mb_MWD	Original Borehole / CNX WDTN19DHSM Surveys 0ft to
	1	5884.000	23238.000	Act Stns	8.500	5.500	B006Mb_MWD+IGRF	Original Borehole / CNX WDTN19DHSM Surveys 0ft to

...CNX WDTN19 Pad\WDTN19DHSM\Original Borehole\CNX WDTN19DHSM Surveys 0ft to 23238ft MD

