



CNX



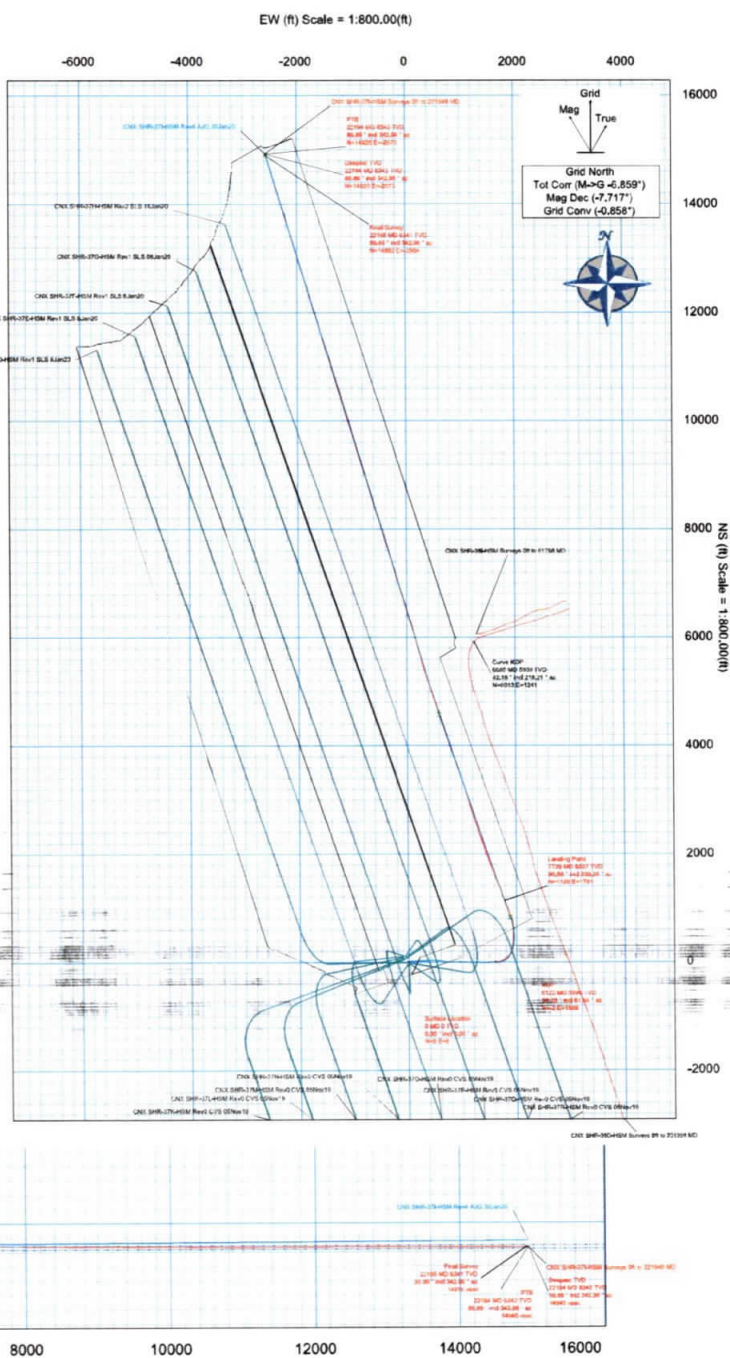
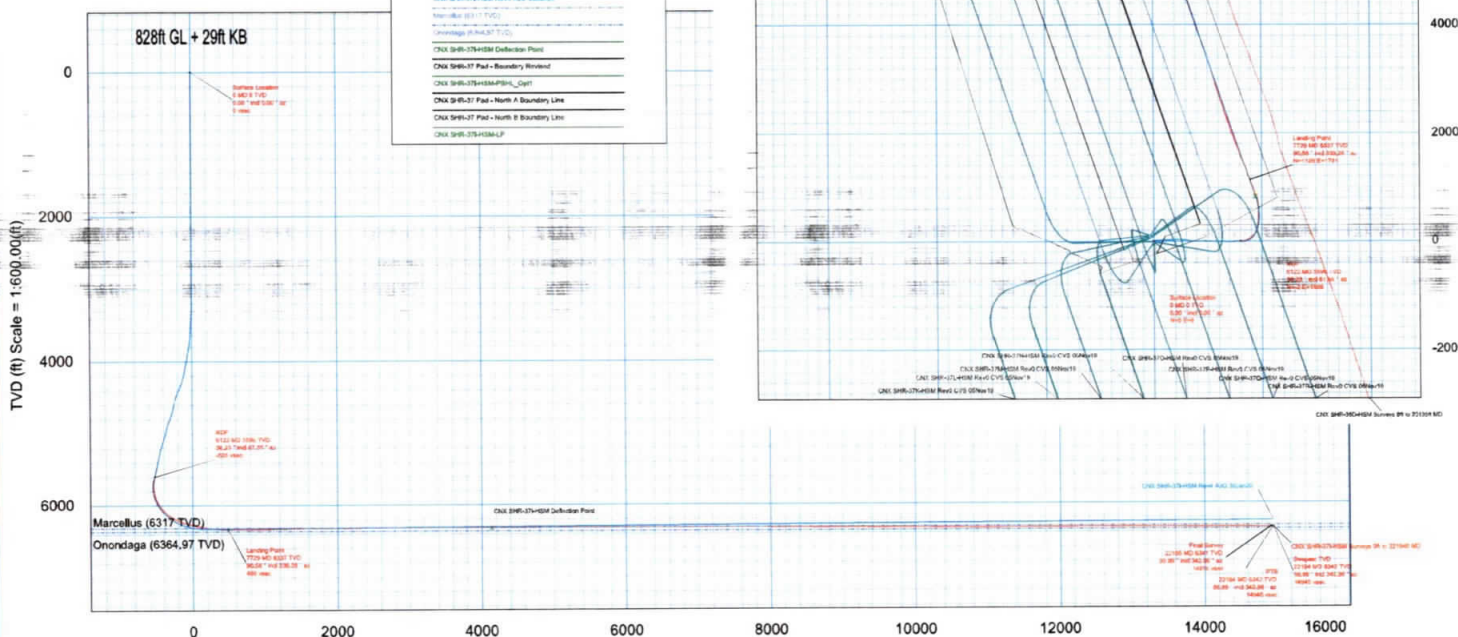
Borehole: Original Borehole	Well: SHR-371-HSM	Field: WV Tyler County (NAD 27)	Structure: CNX SHR-37 Pad
Gravity & Magnetic Parameters		Surface Location	Miscellaneous
Model: HDGM 2019 Dip: 66.365° Date: 30-Jan-2020 MagDec: -7.171° FS: 51741.634mT Gravity FS: 995.338mg (S.80665 Based)		NAD27 West Virginia State Plane, Northern Zone, US Feet Lat: N 38 21 11.55 Northings: 313605.21RU5 Grid Conv: -0.8582° Lon: W 88 50 44.45 Eastings: 1619460.21RU5 Scale Fact: 6.99995201	Slot: SHR-371-HSM TVD Ref: RKB(8778 above MSL) Plan: CNX SHR-371-HSM Surveys 06 to 22194N MD

Point	NO	ECL	ADM	TVD	VSEC	RTV/FV	RTV/H	SUR
Surface Location	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
MDP	1122.00	38.21	87.81	5096.20	-206.21	-2.40	1686.16	0.86
Minimale	1564.41	81.23	306.67	6117.00	264.78	893.60	1871.41	3.17
Landing Point	1738.00	85.56	338.28	6317.28	87.64	178.80	1780.79	4.31
Minimale	1965.80	90.83	381.34	6717.00	306.80	389.70	875.11	5.10
Minimale	1897.20	88.87	341.17	6378.80	178.80	178.80	1780.79	4.31
Minimale	1199.60	81.78	341.00	5717.00	407.17	509.50	126.21	5.07
Minimale	1364.73	81.78	341.00	6117.00	671.04	705.49	-153.12	5.29
Final Survey	2219.20	91.83	342.36	6347.49	1491.84	1492.27	-254.11	5.19
Original TVD	2219.20	91.83	342.36	6347.49	1491.84	1492.27	-254.11	5.19
TVR	2219.20	91.83	342.36	6347.49	1491.84	1492.27	-254.11	5.19
Overage	None							

Point	NO	ECL	ADM	TVD	VSEC	RTV/FV	RTV/H	SUR
1	1	828	30	30	0	20	150.00	1.00
2	2	828	30	30	29	20	150.00	1.00
3	3	828	30	30	29	20	150.00	1.00
4	4	828	30	30	29	20	150.00	1.00

Target Description	Northings	Eastings	Latitude	Longitude	View Azimuth	SALR					
Target Name	313605.21	1619460.21	N 38 21 11.55	W 88 50 44.45							
Target Description <td>Ships <td>Dimension <td>Altitude <td>Longitude <td>Northings <td>Eastings <td>TVS <td>VSEC <td>RTV/FV <td>RTV/H <td>SUR </td></td></td></td></td></td></td></td></td></td></td>	Ships <td>Dimension <td>Altitude <td>Longitude <td>Northings <td>Eastings <td>TVS <td>VSEC <td>RTV/FV <td>RTV/H <td>SUR </td></td></td></td></td></td></td></td></td></td>	Dimension <td>Altitude <td>Longitude <td>Northings <td>Eastings <td>TVS <td>VSEC <td>RTV/FV <td>RTV/H <td>SUR </td></td></td></td></td></td></td></td></td>	Altitude <td>Longitude <td>Northings <td>Eastings <td>TVS <td>VSEC <td>RTV/FV <td>RTV/H <td>SUR </td></td></td></td></td></td></td></td>	Longitude <td>Northings <td>Eastings <td>TVS <td>VSEC <td>RTV/FV <td>RTV/H <td>SUR </td></td></td></td></td></td></td>	Northings <td>Eastings <td>TVS <td>VSEC <td>RTV/FV <td>RTV/H <td>SUR </td></td></td></td></td></td>	Eastings <td>TVS <td>VSEC <td>RTV/FV <td>RTV/H <td>SUR </td></td></td></td></td>	TVS <td>VSEC <td>RTV/FV <td>RTV/H <td>SUR </td></td></td></td>	VSEC <td>RTV/FV <td>RTV/H <td>SUR </td></td></td>	RTV/FV <td>RTV/H <td>SUR </td></td>	RTV/H <td>SUR </td>	SUR
CNX SHR-37 Pad - Boundary	NA		W 39.24 52.98	W 89.50 46.70	313626.76	1619626.13	807.00	211.623	22458.67	198.12	
CNX SHR-37 Pad - North A	NA		W 39.21 11.23	W 89.50 44.14	313472.86	1619502.00	807.00	-96.28	-82.38	23.81	
CNX SHR-37 Pad - North B	NA		W 39.21 11.23	W 89.50 44.14	313472.86	1619502.00	807.00	-96.28	-82.38	23.81	
CNX SHR-37 Pad - Boundary Line	NA		W 39.21 11.23	W 89.50 44.14	313472.86	1619502.00	807.00	-96.28	-82.38	23.81	
CNX SHR-37 Pad - Boundary Line	NA		W 39.21 11.23	W 89.50 44.14	313472.86	1619502.00	807.00	-96.28	-82.38	23.81	
CNX SHR-37 Pad - Boundary Line	NA		W 39.21 11.23	W 89.50 44.14	313472.86	1619502.00	807.00	-96.28	-82.38	23.81	
CNX SHR-37 Pad - Boundary Line	NA		W 39.21 11.23	W 89.50 44.14	313472.86	1619502.00	807.00	-96.28	-82.38	23.81	
CNX SHR-37 Pad - Boundary Line	NA		W 39.21 11.23	W 89.50 44.14	313472.86	1619502.00	807.00	-96.28	-82.38	23.81	

- CNX SHR-371-HSM Survey 06 to 22194N MD
- CNX SHR-371-HSM Rev 0 C.V.S 09Nov19
- CNX SHR-371-HSM Rev 1 SLS 06Nov20
- CNX SHR-371-HSM Rev 2 SLS 18Nov20
- CNX SHR-371-HSM Rev 3 SLS 06Nov20
- CNX SHR-371-HSM Rev 4 SLS 06Nov20
- CNX SHR-371-HSM Rev 5 SLS 06Nov20
- CNX SHR-371-HSM Rev 6 SLS 06Nov20
- CNX SHR-371-HSM Rev 7 SLS 06Nov20
- CNX SHR-371-HSM Rev 8 SLS 06Nov20
- CNX SHR-371-HSM Rev 9 SLS 06Nov20
- CNX SHR-371-HSM Rev 10 SLS 06Nov20
- CNX SHR-371-HSM Rev 11 SLS 06Nov20
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- CNX SHR-371-HSM Rev 14 SLS 06Nov20
- CNX SHR-371-HSM Rev 15 SLS 06Nov20
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- CNX SHR-371-HSM Rev 97 SLS 06Nov20
- CNX SHR-371-HSM Rev 98 SLS 06Nov20
- CNX SHR-371-HSM Rev 99 SLS 06Nov20
- CNX SHR-371-HSM Rev 100 SLS 06Nov20



CONTROLLED

Plan ref:	CNX SHR-371-HSM Survey 06 to 22194N MD
Drawing ref:	08/27/2021
Drawn by:	AT
Date:	27-Aug-2021
Checked by:	J. Shannon
Drawn by:	J. Shannon
Drawn by:	J. Shannon

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Environmental Protection

08/27/2021

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	TF (°)	BR (°/100ft)	TR (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)	Directional Difficulty Index
	19721.00	90.17	342.71	8333.33	5476.38	12473.13	12554.07	-1849.58	0.13	147.06R	0.06	-0.12	326159.58	1617630.52	39.38759594	-80.85288811	7.13
	19816.00	90.00	342.82	8333.19	5476.19	12568.08	12645.71	-1877.73	0.21	157.62R	-0.18	0.12	326250.29	1617602.37	39.38784385	-80.85299252	7.14
	19910.00	89.86	342.96	8333.47	5476.47	12662.03	12735.55	-1905.38	0.39	71.57L	-0.36	0.15	326340.12	1617574.72	39.38809933	-80.85309513	7.14
	20005.00	89.78	342.80	8333.93	5476.93	12755.88	12826.29	-1933.51	0.40	128.90R	0.13	-0.38	326430.88	1617546.80	39.38833726	-80.85319046	7.15
	20099.00	89.61	342.81	8334.43	5477.43	12850.94	12918.04	-1961.45	0.29	87.08R	-0.18	0.22	326520.60	1617518.85	39.38858247	-80.85330309	7.15
	20193.00	89.66	343.79	8335.03	5478.03	12944.86	13006.07	-1988.46	1.04	96.47L	0.05	1.04	326610.83	1617491.85	39.38882851	-80.85340344	7.16
	20288.00	89.55	342.82	8335.89	5478.89	13039.78	13097.06	-2015.75	1.03	22.38R	-0.12	-1.02	326701.62	1617464.36	39.38907716	-80.85350483	7.16
	20382.00	89.72	342.80	8336.29	5479.29	13133.73	13188.88	-2043.46	0.20	55.46R	0.18	0.07	326791.43	1617436.65	39.38932259	-80.85360785	7.17
	20476.00	89.83	343.05	8336.66	5479.66	13227.67	13278.78	-2070.99	0.21	90R	0.12	0.17	326881.31	1617409.12	39.38956817	-80.85370983	7.17
	20570.00	89.83	343.07	8336.94	5479.94	13321.61	13366.68	-2098.38	0.02	1.47L	0.00	0.02	326971.22	1617381.73	39.38981388	-80.85381151	7.18
	20665.00	90.22	343.06	8336.89	5479.89	13415.55	13457.56	-2126.05	0.41	135.58L	0.41	-0.01	327062.10	1617354.08	39.39006222	-80.85391425	7.18
	20759.00	89.72	342.57	8336.94	5479.94	13510.50	13547.36	-2153.83	0.74	86.53R	-0.53	-0.52	327151.90	1617326.29	39.39030759	-80.85401728	7.19
	20853.00	89.78	343.56	8337.35	5480.35	13604.44	13637.29	-2181.21	1.06	86.28R	0.06	1.05	327241.82	1617298.91	39.39055330	-80.85411894	7.20
	20948.00	89.89	345.25	8337.83	5480.83	13699.27	13728.79	-2208.75	1.78	97.36L	0.12	1.78	327333.31	1617273.37	39.39080342	-80.85424148	7.20
	21042.00	89.50	342.23	8338.13	5481.13	13793.15	13819.01	-2233.06	3.24	76.61L	-0.41	-3.21	327423.53	1617247.06	39.39105002	-80.85431207	7.21
	21136.00	89.55	342.02	8338.91	5481.91	13887.13	13908.47	-2261.91	0.23	77.87R	0.05	-0.22	327512.99	1617218.21	39.39129440	-80.85441891	7.22
	21231.00	89.78	343.09	8339.46	5482.46	13982.09	13999.10	-2290.39	1.15	32.47R	0.24	1.13	327603.61	1617189.73	39.39154201	-80.85452449	7.22
	21325.00	89.89	343.16	8339.73	5482.73	14076.02	14086.05	-2317.68	0.14	49.76L	0.12	0.07	327693.56	1617162.45	39.39178781	-80.85462582	7.23
	21419.00	90.00	343.03	8339.82	5482.82	14169.96	14178.99	-2345.01	0.18	93.18L	0.12	-0.14	327783.49	1617135.11	39.39203357	-80.85472732	7.23
	21514.00	89.98	342.67	8339.84	5482.84	14264.91	14269.77	-2373.03	0.38	87.51R	-0.02	-0.38	327874.28	1617107.10	39.39228160	-80.85483126	7.24
	21608.00	90.00	343.13	8339.86	5482.86	14358.86	14359.61	-2400.67	0.49	126.87L	0.02	0.49	327964.10	1617079.46	39.39252709	-80.85493384	7.24
	21702.00	89.61	342.61	8340.18	5483.18	14452.81	14449.44	-2428.35	0.69	45R	-0.41	-0.55	328053.93	1617051.78	39.39277253	-80.85503656	7.25
	21797.00	90.00	343.00	8340.50	5483.50	14547.76	14540.19	-2456.44	0.58	117.85R	0.41	0.41	328144.68	1617023.70	39.39302050	-80.85514078	7.25
	21891.00	89.89	343.21	8340.59	5483.59	14641.70	14630.14	-2483.75	0.25	127.48L	-0.12	0.22	328234.61	1616996.38	39.39326627	-80.85524222	7.26
	21985.00	89.66	342.91	8340.96	5483.96	14735.63	14720.06	-2511.14	0.40	23.5L	-0.24	-0.32	328324.53	1616968.99	39.39351196	-80.85534391	7.26
	22080.00	89.89	342.91	8341.33	5484.33	14830.58	14810.84	-2539.14	0.26	90R	0.24	-0.11	328415.31	1616941.00	39.39376002	-80.85544781	7.26
Final Survey	22185.00	89.89	342.96	8341.49	5484.49	14915.54	14892.07	-2564.15	0.18	HS	0.00	0.18	328496.54	1616915.98	39.39399199	-80.85554064	7.27
PTB	22194.00	89.89	342.96	8341.55	5484.55	14944.52	14919.80	-2572.65	0.00		0.00	0.00	328524.28	1616907.49	39.39405775	-80.85557218	7.27

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7855 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	1/08.425	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / CNX SHR-37I-HSM Surveys Off to 22194ft MD
	1	29.000	29.000	Acf Sins	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / CNX SHR-37I-HSM Surveys Off to 22194ft MD
	1	29.000	385.000	Acf Sins	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / CNX SHR-37I-HSM Surveys Off to 22194ft MD
	1	385.000	22194.000	Acf Sins	30.000	30.000	NAL_MWD_1.0_DEG	Original Borehole / CNX SHR-37I-HSM Surveys Off to 22194ft MD

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