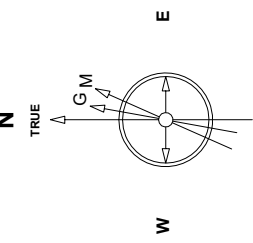


Great Western Operating Company, LLC

Location	Colorado	Slot	N03 - Kortum LD 33-179HN
Field	Wattenburg	Well	Kortum LD 33-179HN
Installation	Kortum	Wellbore	Kortum LD 33-179HN (AWB)

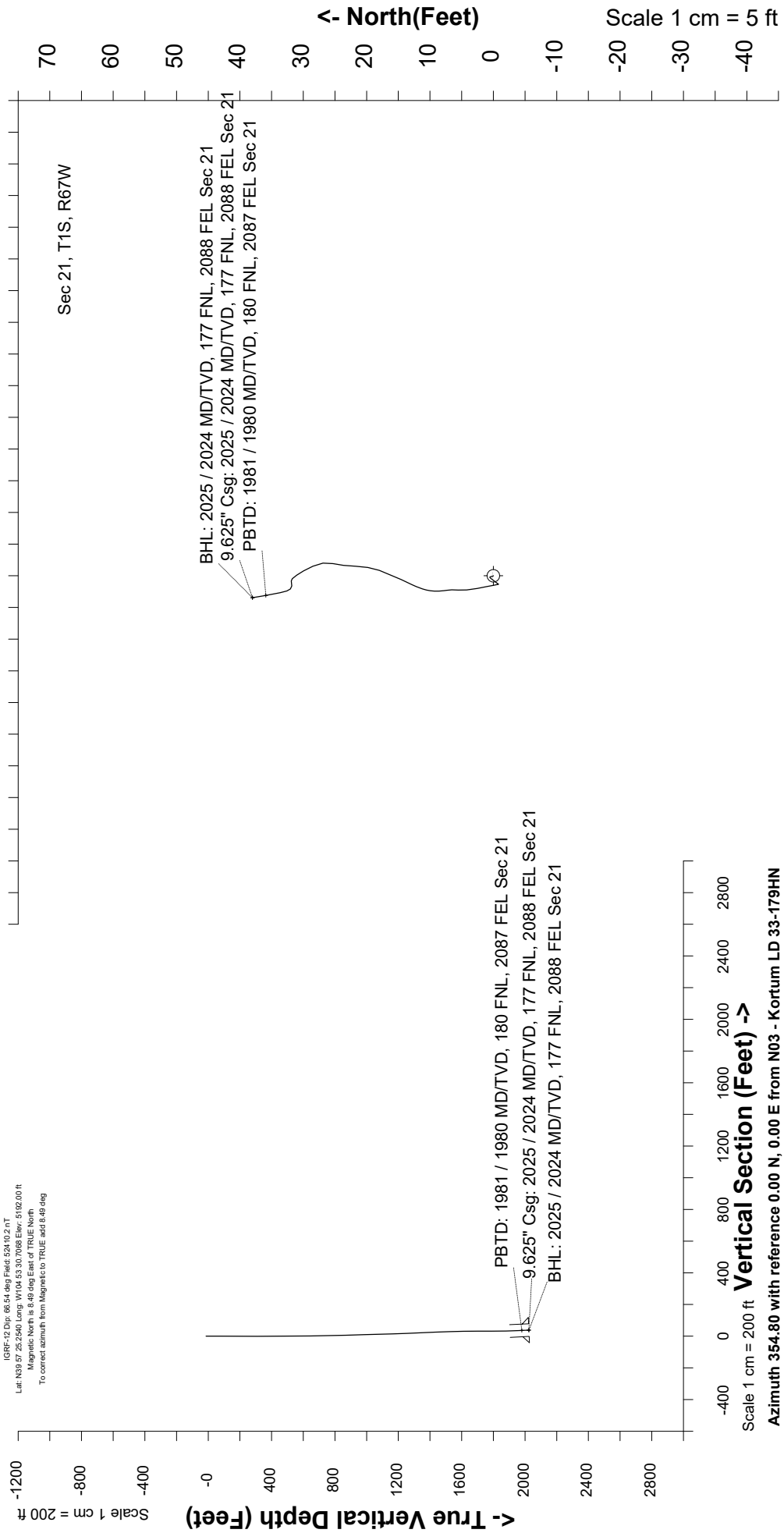
Created by	mmount
Date plotted	9-Sep-2020
Plot reference is	Kortum LD 33-179HN (AWB).
Ref wellpath is	Kortum LD 33-179HN (AWP#1).
Coordinates are in	Feet reference N03 - Kortum LD 33-179HN.
True Vertical Depths are	reference Rig Datum.
Measured Depths are	reference Rig Datum.
Rig Datum:	Floor
Rig Datum to Mean Sea Level	5198.00 ft.
Plot North is aligned to	TRUE North.



Feb-16-2015
 IGRF-12 Date: 68.54 deg Field: 524.10, 2 nT
 Lat: N19 57 25.2540 Long: W104 53 30.7088 Elev: 5192.00 ft
 Magnetic North is 8.49 deg East of TRUE North.
 To correct azimuth from Magnetic to TRUE: add 8.49 deg

Scale 1 cm = 5 ft

Scale 1 cm = 5 ft



Scale 1 cm = 200 ft

Vertical Section (Feet) ->

Azimuth 354.80 with reference 0.00 N, 0.00 E from N03 - Kortum LD 33-179HN

Great Western Operating Co, LLC
 Directional Survey Report
 Wellpath: Kortum LD 33-179HN
 MDs and TVDs are from Rig Floor 5198.0ft above Mean Sea Level

Wellpath Report

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	DLS [deg/100ft]	Vertical Section[ft]
0.00	0.00	0.00	0.00	0.00	0.00	==>	0.00
83.00	0.01	277.98	83.00	0.00	-0.01	0.01	0.00
175.00	0.13	324.91	175.00	0.09	-0.08	0.13	0.09
262.00	0.35	355.85	262.00	0.43	-0.15	0.28	0.45
354.00	0.48	216.63	354.00	0.40	-0.40	0.85	0.44
444.00	0.70	218.65	443.99	-0.33	-0.97	0.25	-0.24
533.00	0.09	192.99	532.99	-0.82	-1.32	0.70	-0.70
623.00	1.01	349.26	622.99	-0.11	-1.49	1.21	0.03
713.00	2.42	349.08	712.94	2.54	-2.00	1.57	2.71
803.00	1.45	4.64	802.89	5.54	-2.26	1.22	5.72
893.00	0.92	349.70	892.87	7.38	-2.30	0.68	7.56
983.00	1.45	0.60	982.85	9.23	-2.42	0.64	9.41
1072.00	1.71	21.08	1071.82	11.60	-1.93	0.69	11.72
1162.00	2.46	26.26	1161.76	14.58	-0.59	0.86	14.58
1252.00	2.29	19.23	1251.68	18.01	0.86	0.37	17.86
1342.00	2.59	1.56	1341.60	21.74	1.50	0.90	21.52
1432.00	2.02	13.17	1431.53	25.32	1.92	0.82	25.04
1522.00	2.29	334.58	1521.47	28.49	1.51	1.61	28.23
1612.00	1.45	325.35	1611.42	31.05	0.09	0.99	30.91
1702.00	0.35	247.83	1701.41	31.88	-0.81	1.57	31.82
1791.00	0.70	273.85	1790.41	31.82	-1.61	0.47	31.83
1881.00	0.97	341.17	1880.40	32.57	-2.40	1.06	32.66
1970.00	2.77	350.23	1969.35	35.41	-3.01	2.04	35.53
2025.00	2.77	350.23	2024.28	38.03	-3.46	==>	38.18