

399-4-14 (C5707) Log Data Report

Borehole Information:

Borehole: 399-4-14 (C5707)			Site: 300-FF-5		
Coordinates (WA St Plane)		GWL¹ (ft): 42.9 ft	GWL Date: 10/24/2007		
North (m)	East (m)	Drill Date	TOC Elevation	Total Depth (ft)	Type
Unknown	Unknown	10/2007	Unknown	136 ft	Cable tool

Casing Information:

Casing Type	Stickup (ft)	Outer Diameter (in.)	Inside Diameter (in.)	Thickness (in.)	Top (ft)	Bottom (ft)
Threaded steel	0.6'	11 3/4	10 7/8	7/16	0	133

Borehole Notes:

Logger measured depth-to-water employing an e-tape.

Logger measured casing with a steel tape and rounded to the nearest 1/16 in. Driller reported depth of borehole and casing.

Zero reference = top of ground

Logging Equipment Information:

Logging System: Gamma 4 E	Type: 70% HPGe SGLS Serial No.: 34TP40587A
Effective Calibration Date: 05/17/2007	Calibration Reference: HGLP-CC-015
	Logging Procedure: HGLP-MAN-002; Rev.0

Logging System: Gamma 4 H	Type: NMLS Serial No.: H310700352
Effective Calibration Date: 11/22/2006	Calibration Reference: HGLP-CC-002
	Logging Procedure: HGLP-MAN-002; Rev.0

Spectral Gamma Logging System (SGLS) Log Run Information:

Log Run	1	2	3 Repeat
Date	10/24/07	10/25/07	10/25/07
Logging Engineer	Bob Spatz	Bob Spatz	Bob Spatz
Start Depth (ft)	134.5'	60.0'	43.0'
Finish Depth (ft)	59.0'	0.0'	30.0'
Count Time (sec)	100 s	100 s	100 s
Live/Real	R	R	R
Shield (Y/N)	NA	NA	NA
MSA Interval (ft)	0.5 ft	0.5 ft	0.5 ft
ft/min	NA	NA	NA
Pre-Verification	DEH01CAB	DEH11CAB	DEH11CAB
Start File	DEH01000	DEH11000	DEH11121

Log Run	1	2	3 Repeat	
Finish File	DEH01151	DEH11120	DEH11147	
Post-Verification	DEH01CAA	DEH11CAA	DEH11CAA	
Depth Return Error (in.)	0	0	0	
Comments	Fine gain adjustment made after file 069 and 132.	No gain adjustments.	Repeat Section	

Neutron Moisture Logging System (NMLS) Log Run Information:

Log Run	1	2		
Date	10/25/07	10/25/07		
Logging Engineer	Bob Spatz	Bob Spatz		
Start Depth (ft)	0.0'	40.0'		
Finish Depth (ft)	42.5'	30.0'		
Count Time (sec)	15 s	15 s		
Live/Real	R	R		
Shield (Y/N)	NA	NA		
Sample Interval (ft)	0.25 ft	0.25 ft		
ft/min	NA	NA		
Pre-Verification	DH762CAB	DH762CAB		
Start File	DH762000	DH762171		
Finish File	DH762170	DH762211		
Post-Verification	DH762CAA	DH762CAA		
Depth Return Error (in.)	0	Low 1"		
Comments	None	Repeat Section		

Logging Operation Notes:

Data were collected using Gamma 4, HO 68B-3573. Pre- and post-survey verification measurements were acquired in the Amersham KUT Serial #115 field verifier. Maximum logging depth achieved was 134.5 ft, approximately 1.5 ft below casing. A centralizer was installed on the sonde.

Analysis Notes:

Analyst:	LEGLER	Date:	11/20/07	Reference:	GJO-HGLP 1.6.3, Rev. 0
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The pre- and post-run verification spectra met the acceptance criteria established for the system.

A casing correction factor for a 7/16-in. thick steel casing was applied to SGLS spectra during analysis. Water correction factors were also applied during analysis from 42.9 ft to total depth of borehole.

SLGLS spectra were processed in batch mode in APTEC SUPERVISOR to identify individual peaks and count rates. Concentrations were calculated with an EXCEL template identified as GE4May07.xls.

NMLS spectra were processed in batch mode in APTEC SUPERVISOR to identify count rates. Concentrations were calculated with an EXCEL template identified as G4HNov06.xls. File headers in NMLS spectra were incorrectly labeled, but were corrected during analysis.

NMLS data are presented in cps.

Results and Interpretations:

The only man-made radionuclide detected in this borehole was Cs-137, which was detected at 35 ft, 37.5 ft, 40.5 ft, 95.5 ft, 99.5 ft, and 108 ft near their respective MDAs. The detections appear to be statistical fluctuations.

The KUT concentrations appear to bias high at depths where water is present suggesting that water correction factors may be overcorrecting.

Repeat log section showed repeatability for depth and radionuclide concentrations, suggesting that the logging system was operating properly.

List of Log Plots:

Depth Reference is top of ground

Depth Scale - 20 ft/inch except for repeat logs

Man-made Radionuclides

Natural Gamma Logs

Combination Plot

Combination Plot (0-140 ft)

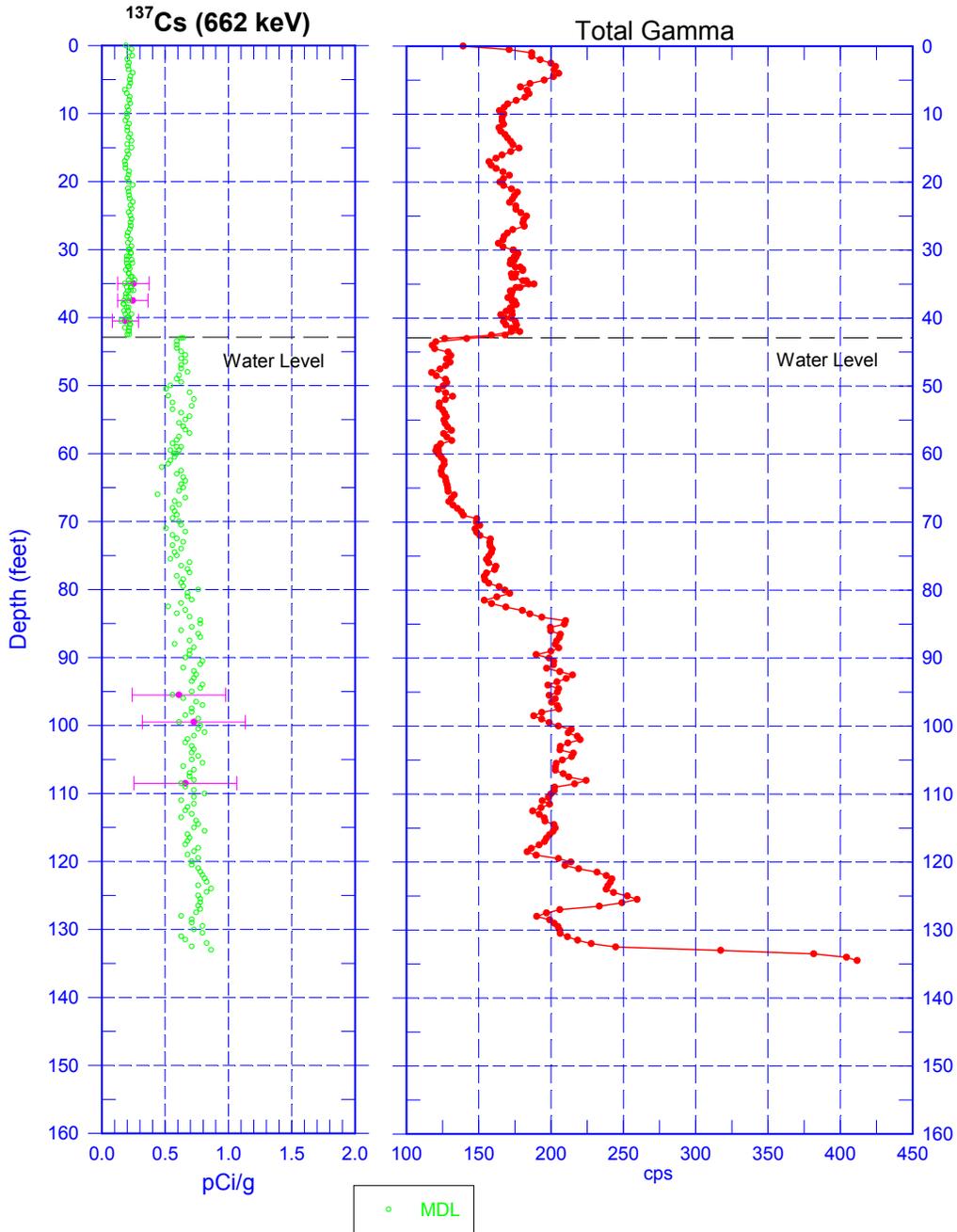
Total Gamma, Moisture, & Dead Time

Repeat Section of Natural Gamma Logs

Neutron Moisture

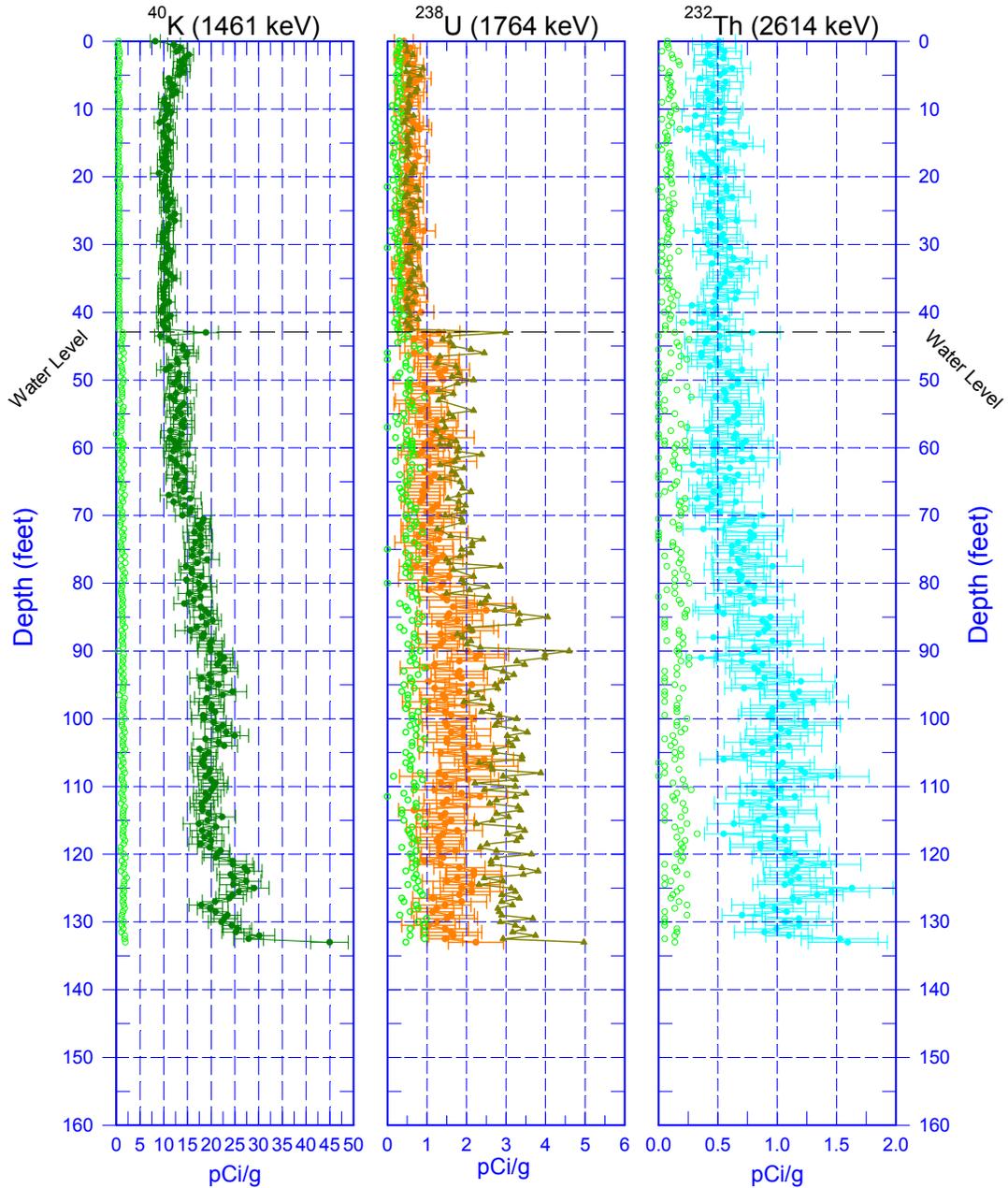
¹ GWL – groundwater level

399-4-14 (C5707) Manmade Radionuclides



Zero Reference - Ground Surface

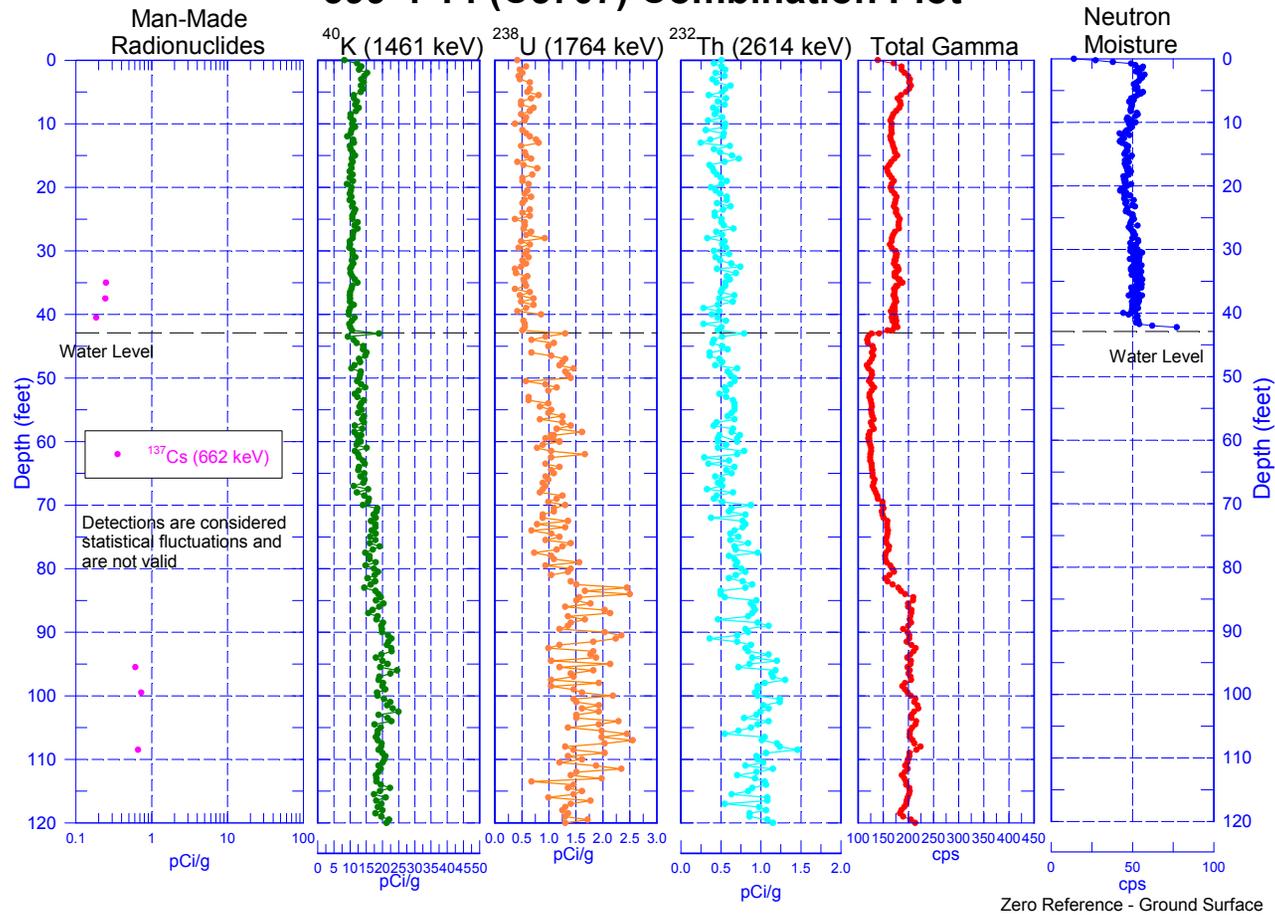
399-4-14 (C5707) Natural Gamma Logs



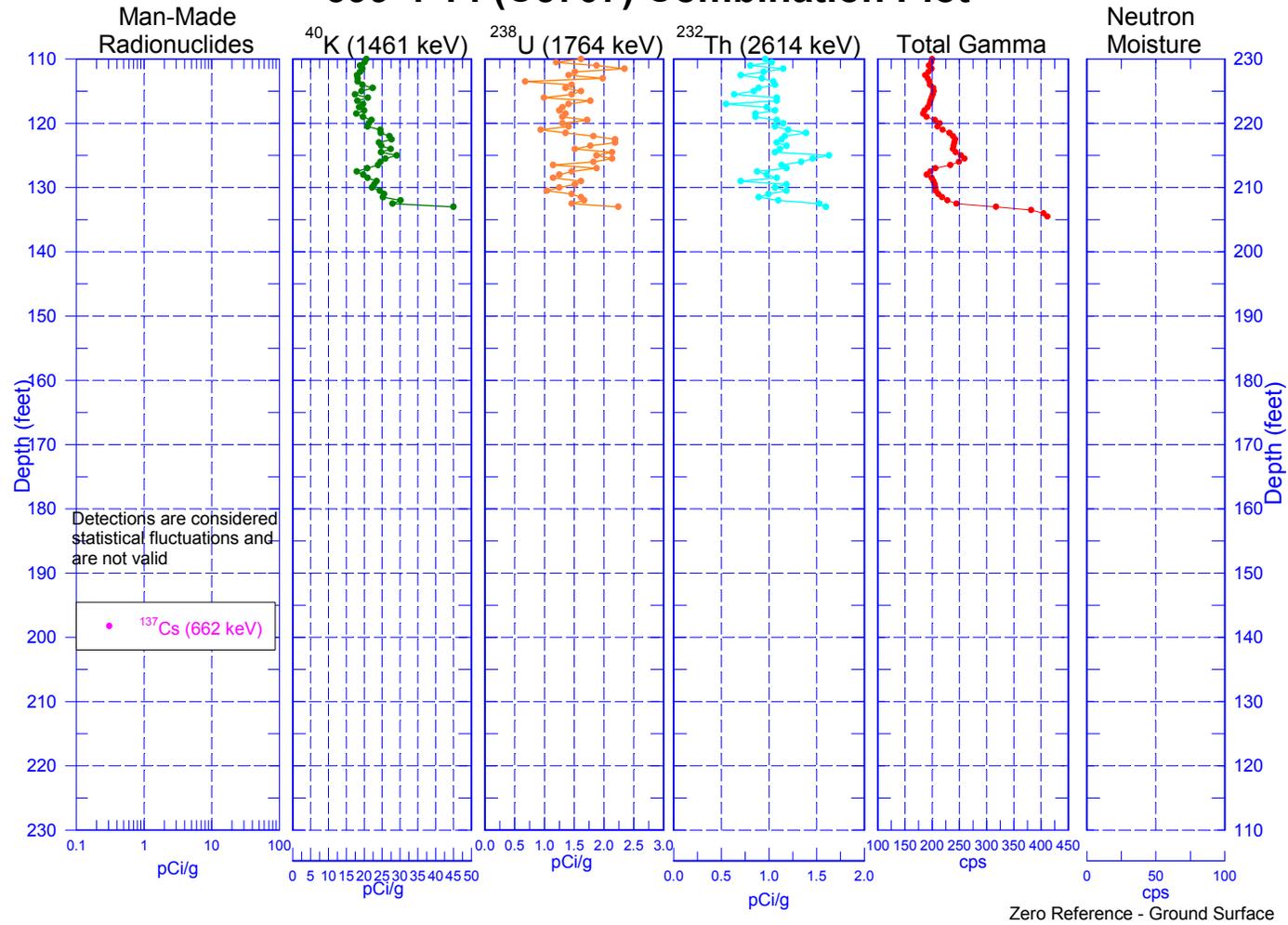
Zero Reference - Ground Surface



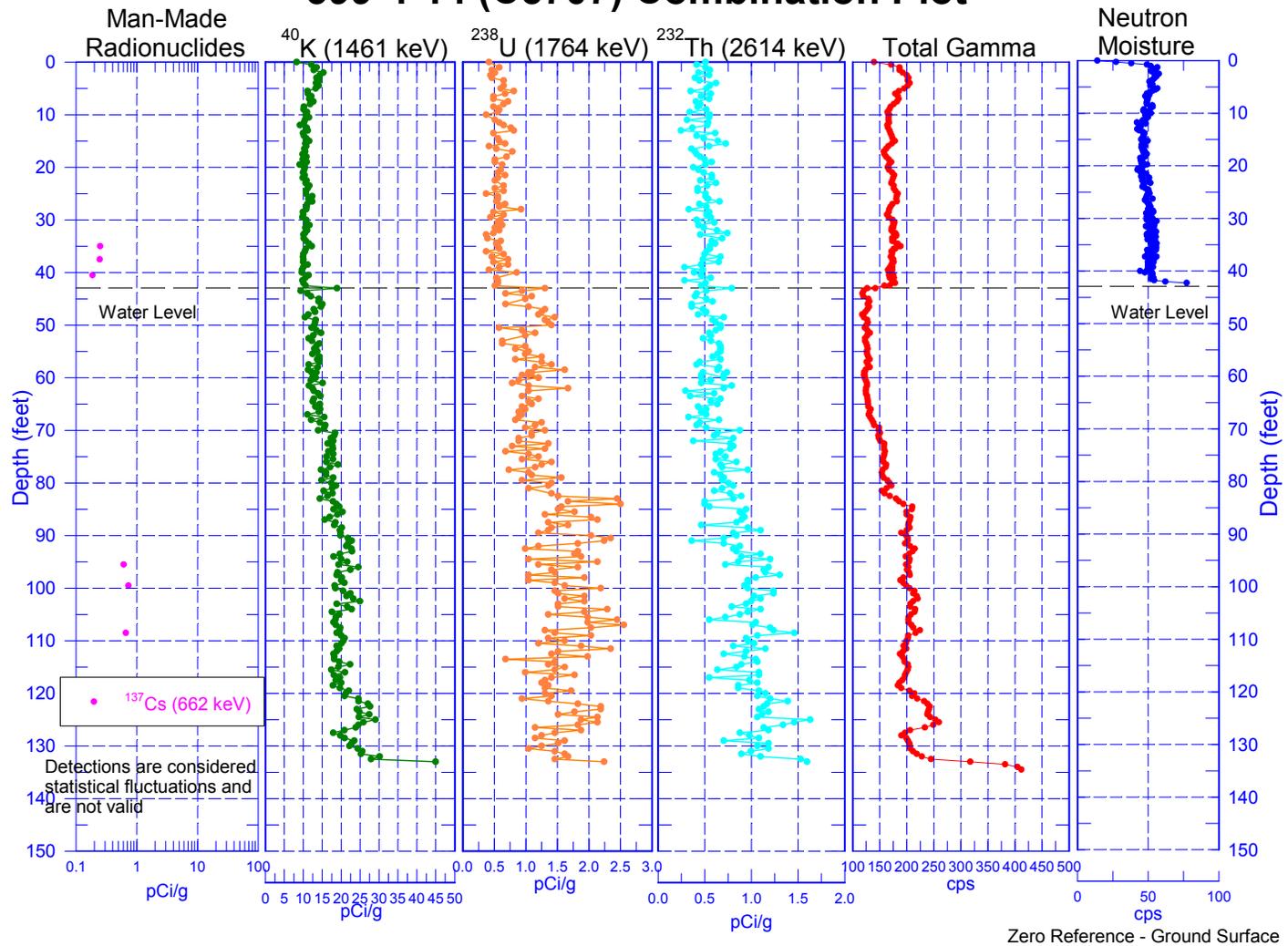
399-4-14 (C5707) Combination Plot



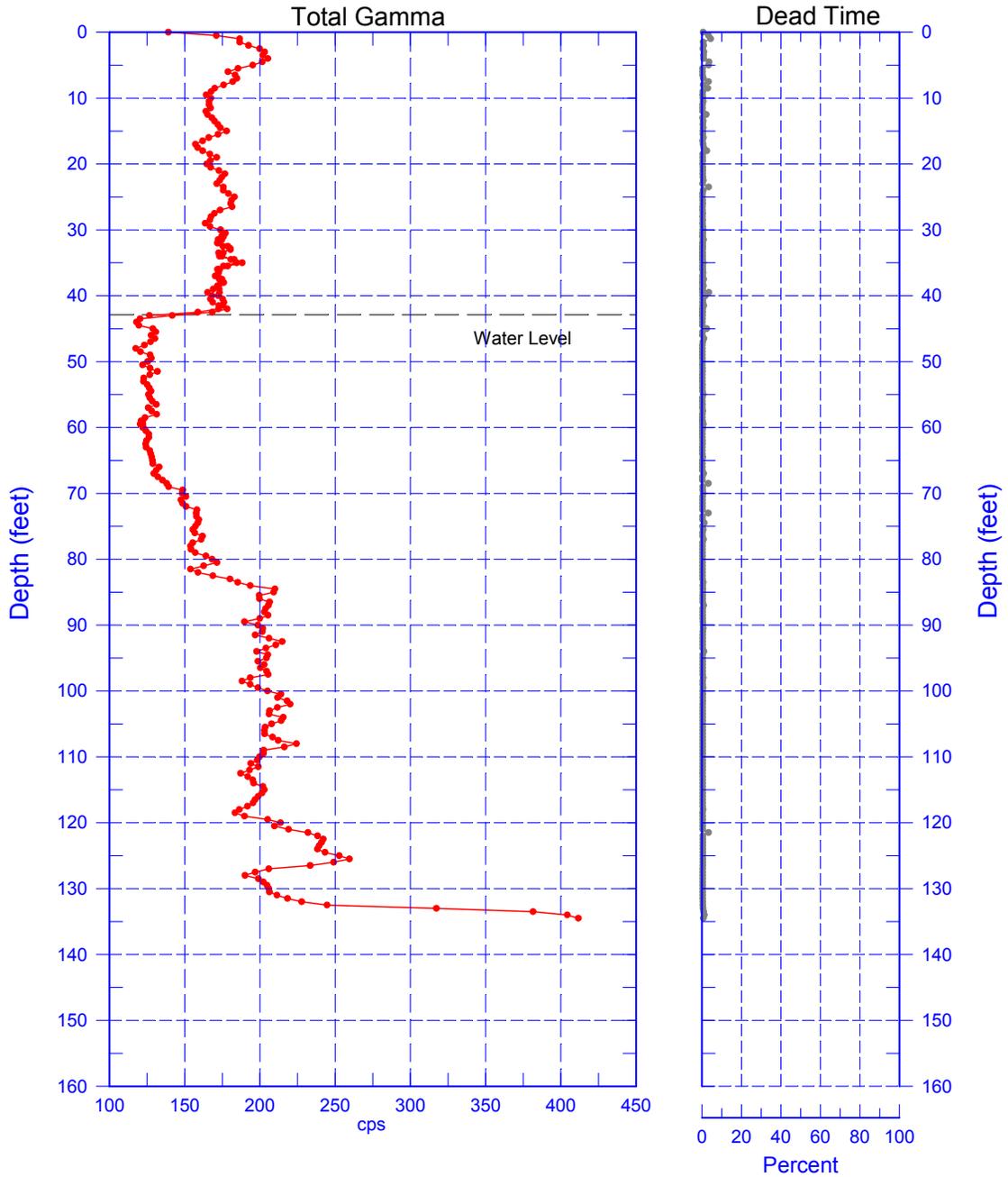
399-4-14 (C5707) Combination Plot



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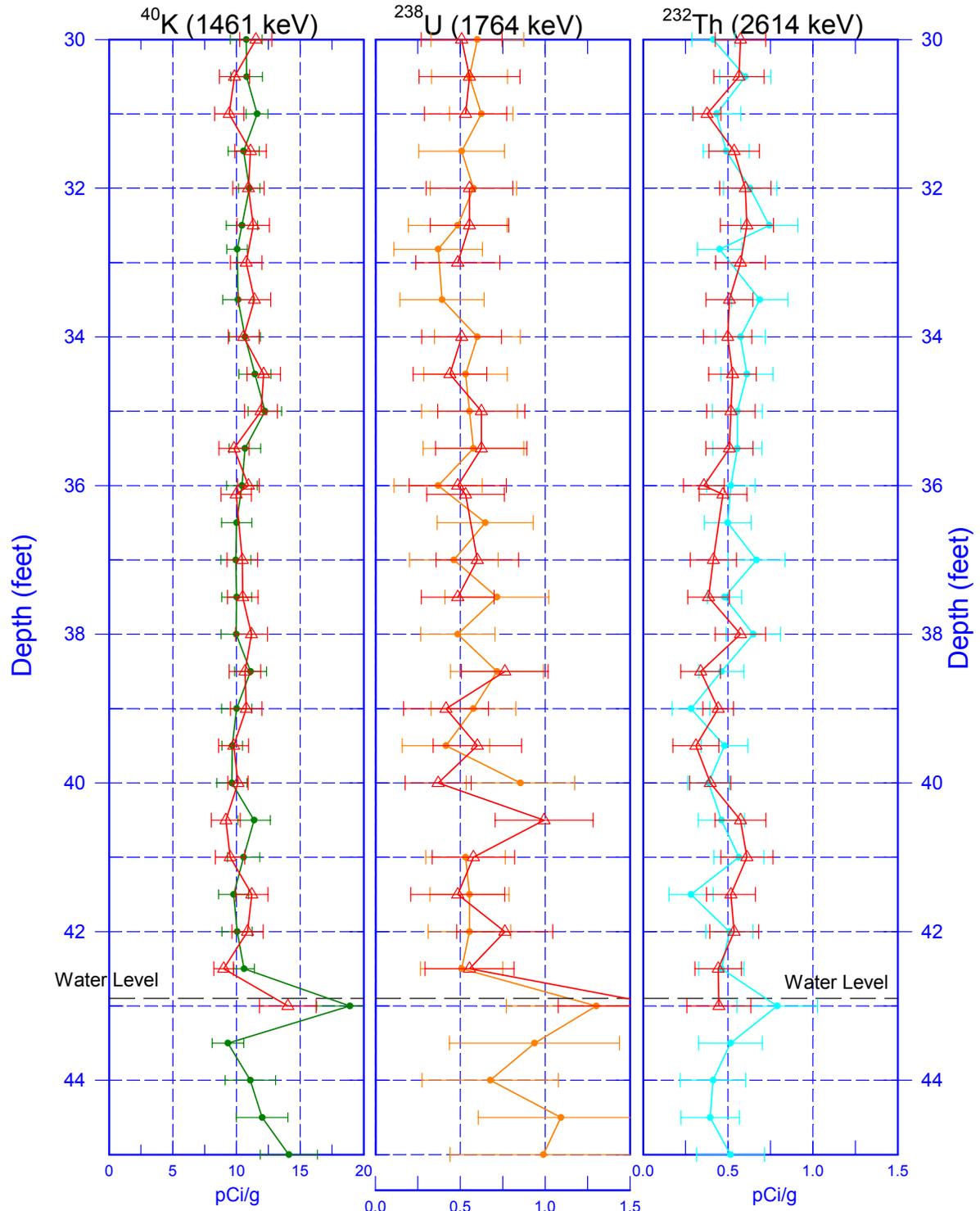


399-4-14 (C5707) Total Gamma & Dead Time

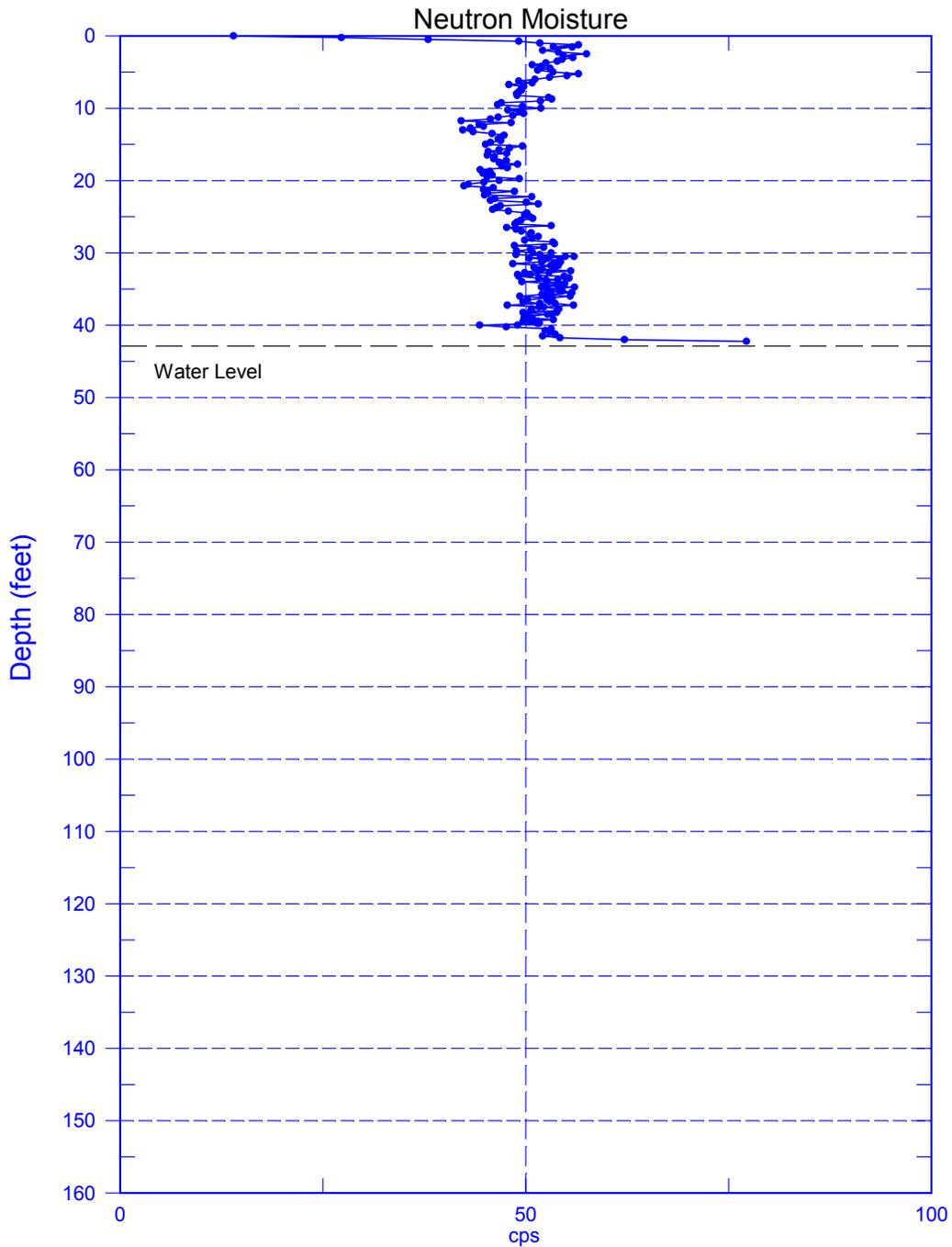


Reference - Ground Surface

399-4-14 (C5707) Repeat Section of Natural Gamma Logs



399-4-14 (C5707) Neutron Moisture



Reference - Ground Surface