

299-W22-26 (A4968) Log Data Report

Borehole Information:

Borehole: 299-W22-26 (A4968)			Site: 216-S-9 Crib		
Coordinates (WA St Plane)		GWL¹ (ft): 242.0		GWL Date: 09/25/07	
North (m)	East (m)	Drill Date	TOC Elevation	Total Depth (ft)	Type
134465.229	567205.187	12/64	683.66 ft	300	Cable

Casing Information:

Casing Type	Stickup (ft)	Outer Diameter (in.)	Inside Diameter (in.)	Thickness (in.)	Top (ft)	Bottom (ft)
Welded steel	3.35	4 5/8	4	5/16	3.35	195
Welded Steel	3.0	8 5/8	8	5/16	3.0	300

Borehole Notes:

The logging engineer measured the casing diameters with a caliper and steel tape. The 4-in. casing exists to 195 ft. Grout was emplaced in the annular space between the 4- and 8-in. casings.

Logging Equipment Information:

Logging System:	Gamma 1B	Type:	SGLS HpGe (35%)
Effective Calibration Date:	05/25/07	Serial No.:	36TP21095A
	Calibration Reference:	HGLP-CC-017	
	Logging Procedure:	HGLP-MAN-002, Rev. 0	

Spectral Gamma Logging System (SGLS) Log Run Information:

Log Run	1	2	3	4	5 Repeat
Date	09/25/07	09/28/07	09/28/07	10/04/07	10/08/07
Logging Engineer	Spatz	Spatz	Spatz	Spatz	Spatz
Start Depth (ft)	100.0	160.0	23.0	241.0	241.0
Finish Depth (ft)	22.0	99.0	15.0	168.0	215.0
Count Time (sec)	200	200	200	200	200
Live/Real	R	R	R	R	R
Shield (Y/N)	N	N	N	N	N
MSA Interval (ft)	1.0	1.0	1.0	1.0	1.0
Pre-Verification	AB008CAB	AB009CAB	AB009CAB	AB010CAB	AB011CAB
Start File	AB008000	AB009000	AB009062	AB010000	AB011000
Finish File	AB008078	AB009061	AB009070	AB010073	AB011026
Post-Verification	AB008CAA	AB009CAA	AB009CAA	AB010CAA	AB011CAA
Depth Return Error (in.)	- 0.5	N/A	N/A	0	0
Comments	No fine gain adjustment				

Log Run	6	7			
Date	10/08/07	10/08/07			
Logging Engineer	Spatz	Spatz			
Start Depth (ft)	169.0	16.0			
Finish Depth (ft)	159.0	13.0			
Count Time (sec)	200	200			
Live/Real	R	R			

HGLP-LDR-207, Rev. 0

Log Run	6	7			
Shield (Y/N)	N	N			
MSA Interval (ft)	1.0	1.0			
Pre-Verification	AB011CAB	AB011CAB			
Start File	AB011027	AB011038			
Finish File	AB011037	AB011051			
Post-Verification	AB011CAA	AB011CAA			
Depth Return Error (in.)	0	- 0.5			
Comments	No fine gain adjustment	No fine gain adjustment			

Logging Operation Notes:

Logging was conducted with no centralizer on the sonde. All measurements are referenced to top of casing.

Analysis Notes:

Analyst:	Henwood	Date:	02/21/08	Reference:	GJO-HGLP 1.6.3, Rev. 0
-----------------	---------	--------------	----------	-------------------	------------------------

Pre- and post-run verifications for the logging system were performed before and after each day's data acquisition. The acceptance criteria were met.

A combined casing correction of 0.625-in.-thick (0.3125 + 0.3125 for the 4- and 8-in. casings) casing was applied to the SGLS data to 195 ft. Below 195 ft, a correction for 0.3125-in. thick casing was applied for the single 8-in. casing.

SGLS spectra were processed in batch mode using APTEC SUPERVISOR to identify individual energy peaks and determine count rates. Concentrations were calculated with EXCEL worksheet template identified as G1BMay07.xls using efficiency functions and corrections for casing, dead time, and water as determined from annual calibrations.

Results and Interpretations:

Cs-137 was detected from 30 to 58 ft. The maximum Cs-137 concentration was measured at 1250 pCi/g at 38 ft. Other sporadic detections of Cs-137 using the routine processing software were determined to be statistical fluctuations and are not valid full energy peaks.

Co-60 was detected at sporadic depth locations between 196 and 241 ft. Concentrations are all below 1 pCi/g.

Eu-154 was detected from 31 to 46 ft. The maximum concentration was measured at approximately 2 pCi/g at 39 ft. One other detection near the MDL occurred at 76 ft in depth. Repeat sections acquired for the logging system indicate good repeatability.

List of Log Plots:

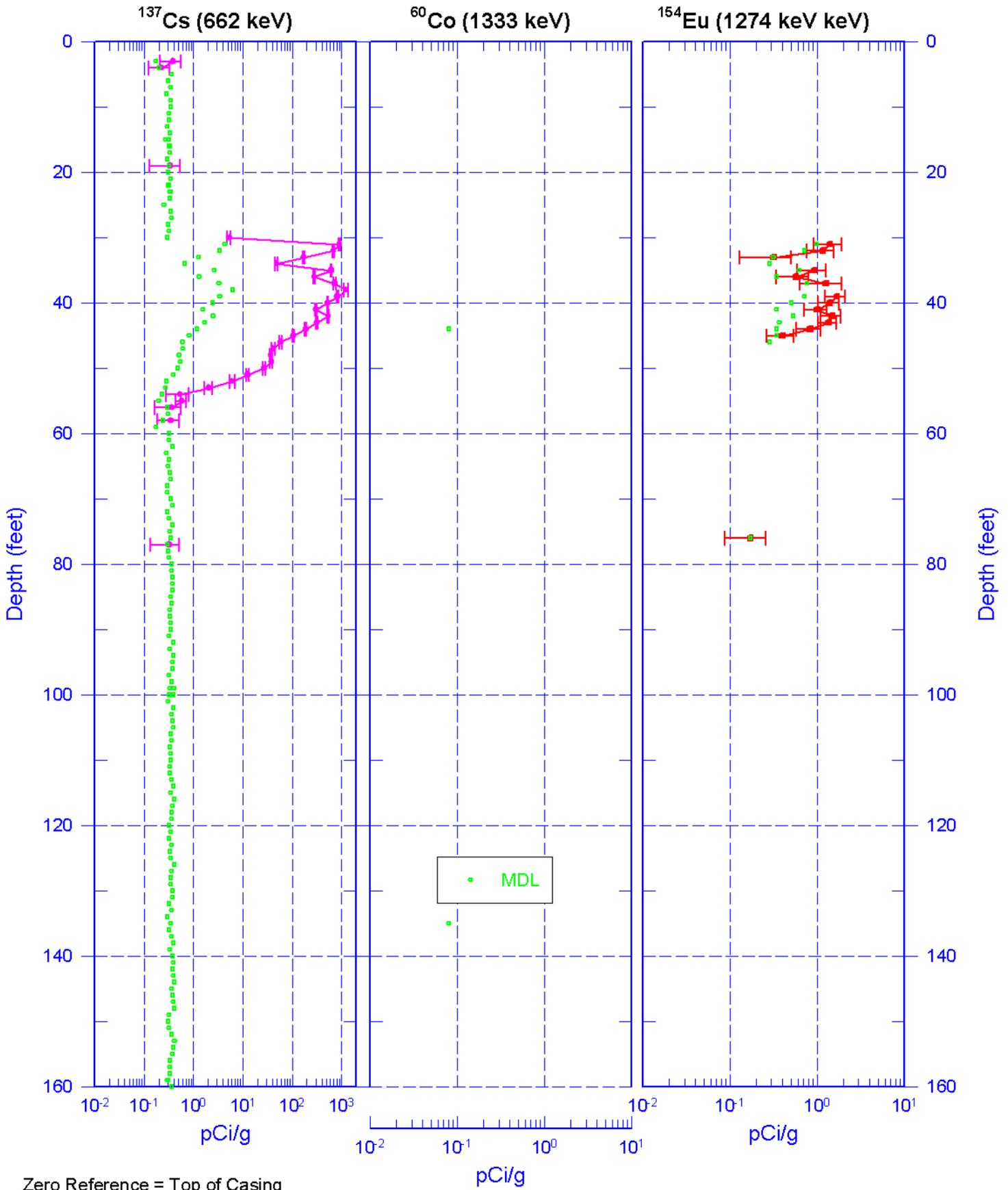
Depth Reference is top of casing

- Manmade Radionuclides (2 pages)
- Natural Gamma Logs (2 pages)
- Combination Plot (2 pages)
- Combination Plot (0 to 280 ft)
- Total Gamma & Dead Time
- Repeat of Manmade Radionuclides
- Repeat Section of Natural Gamma Logs

¹ GWL – groundwater level

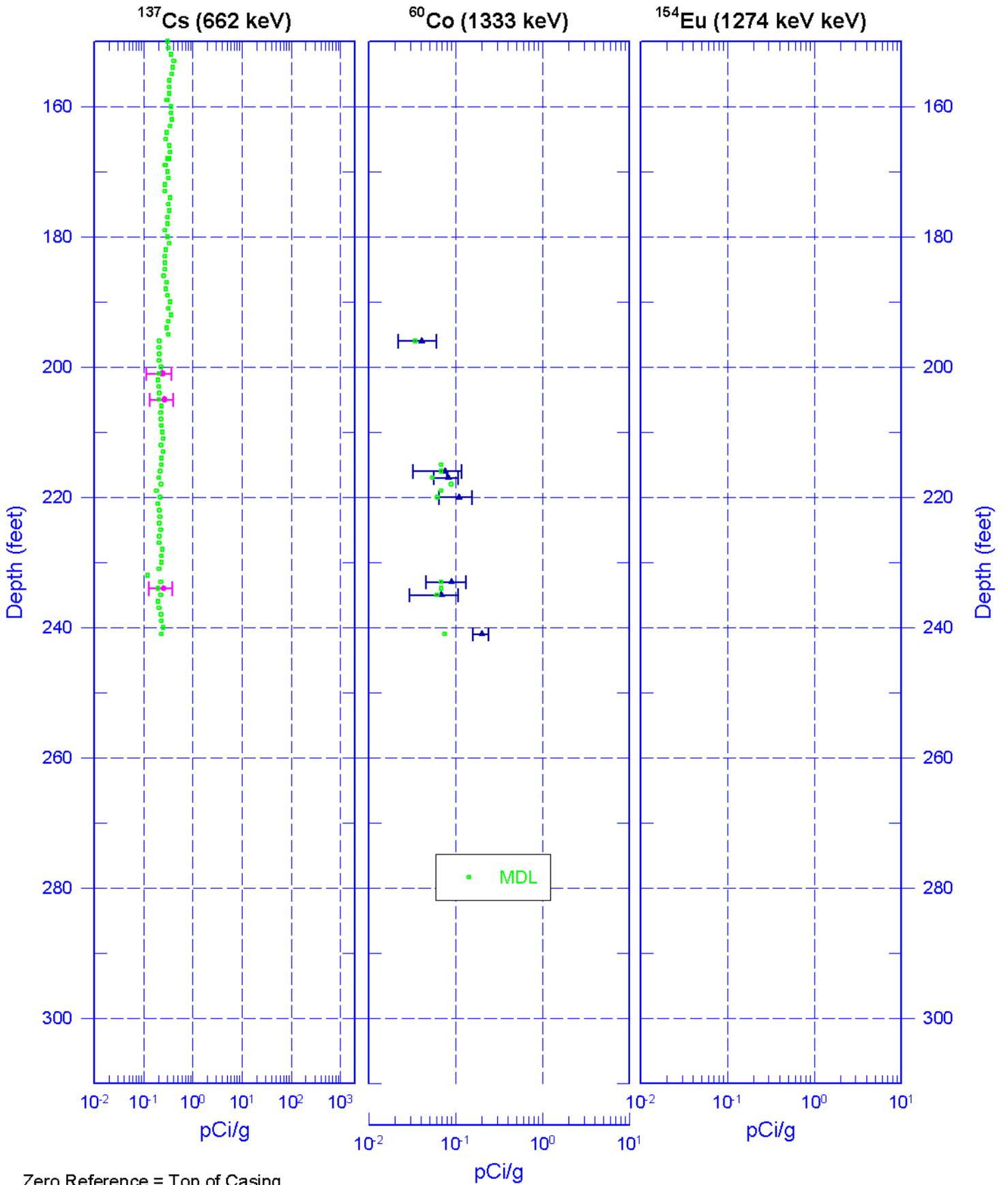
299-W22-26 (A4968)

Man-Made Radionuclides

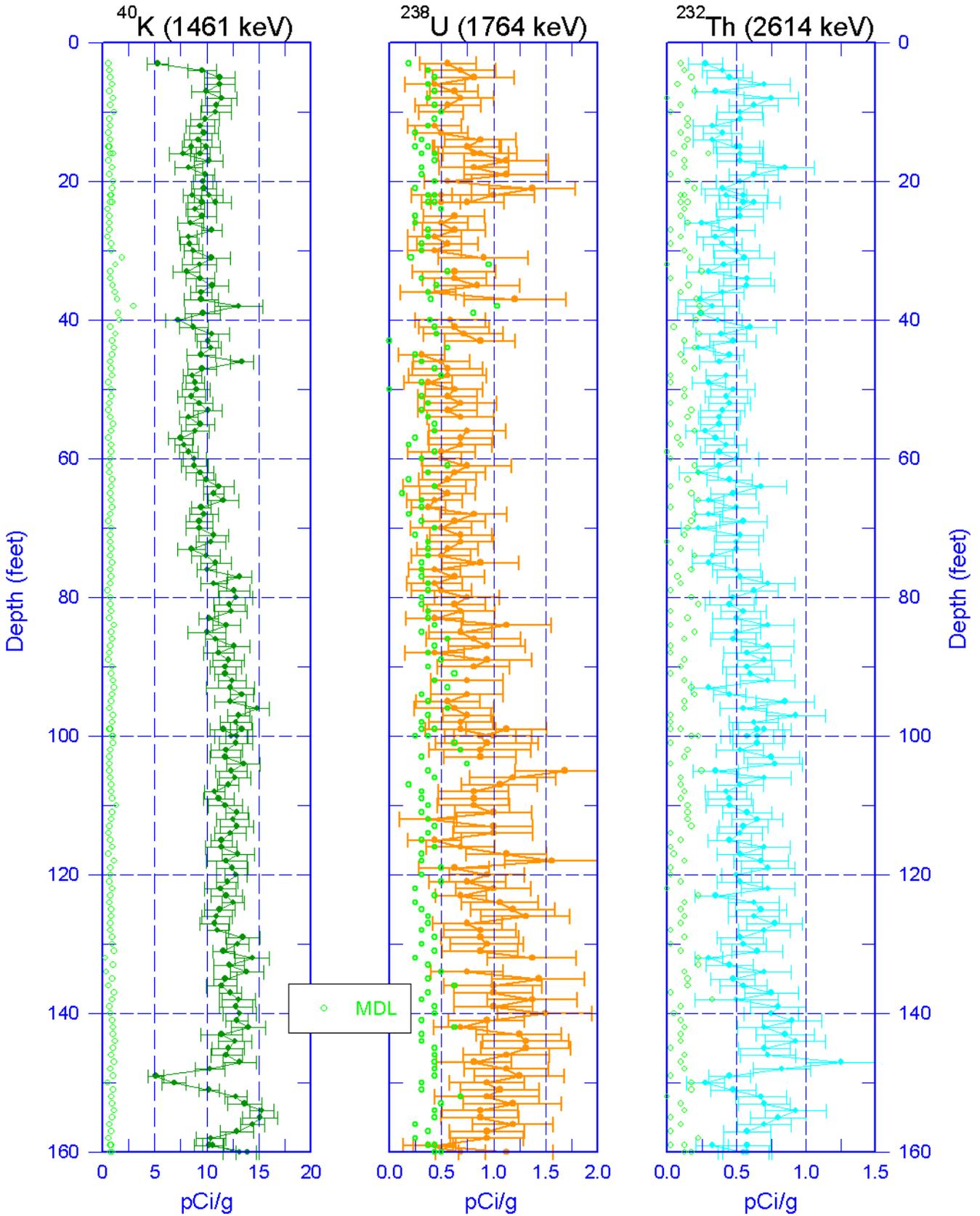


299-W22-26 (A4968)

Man-Made Radionuclides

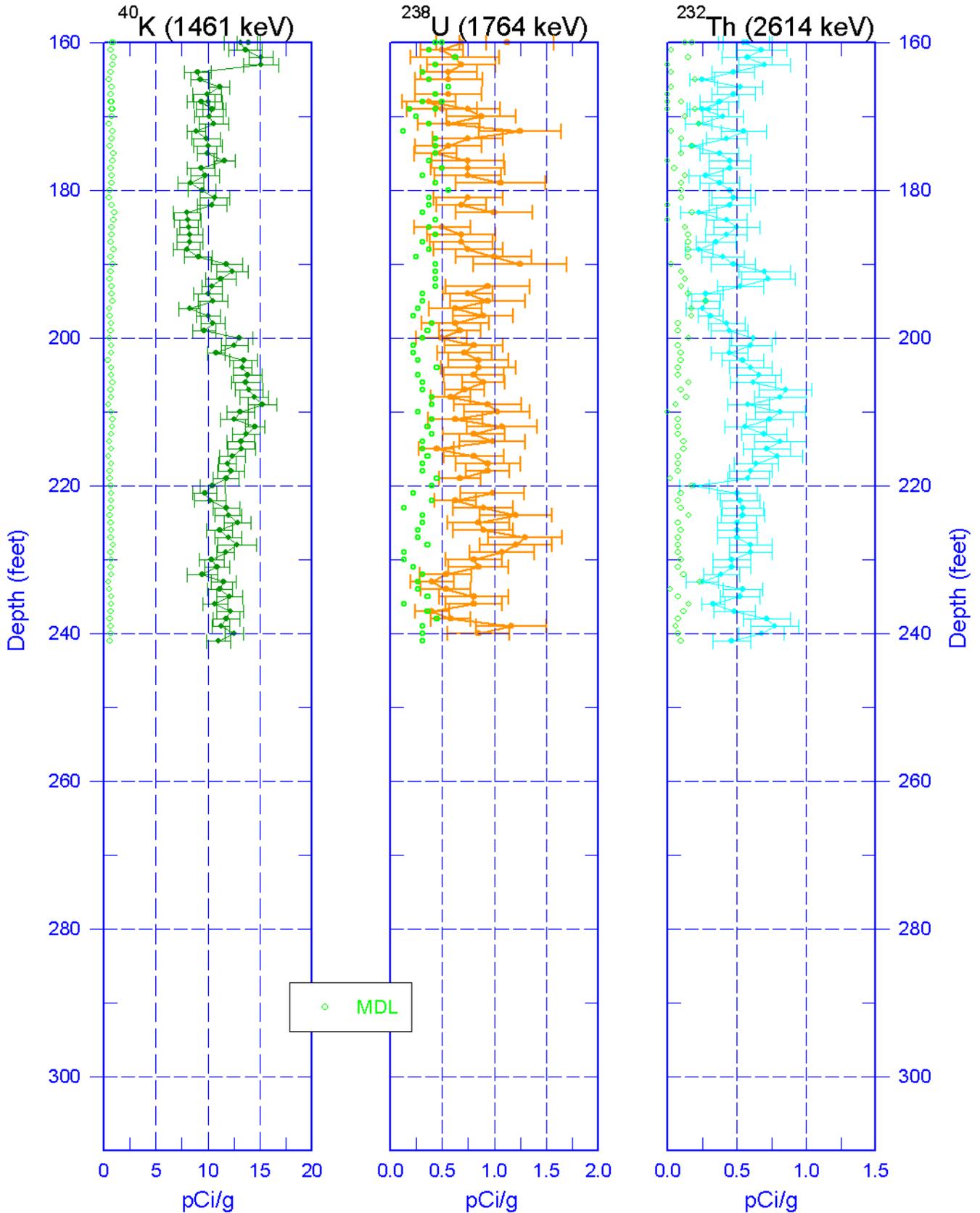


299-W22-26 (A4968) Natural Gamma Logs



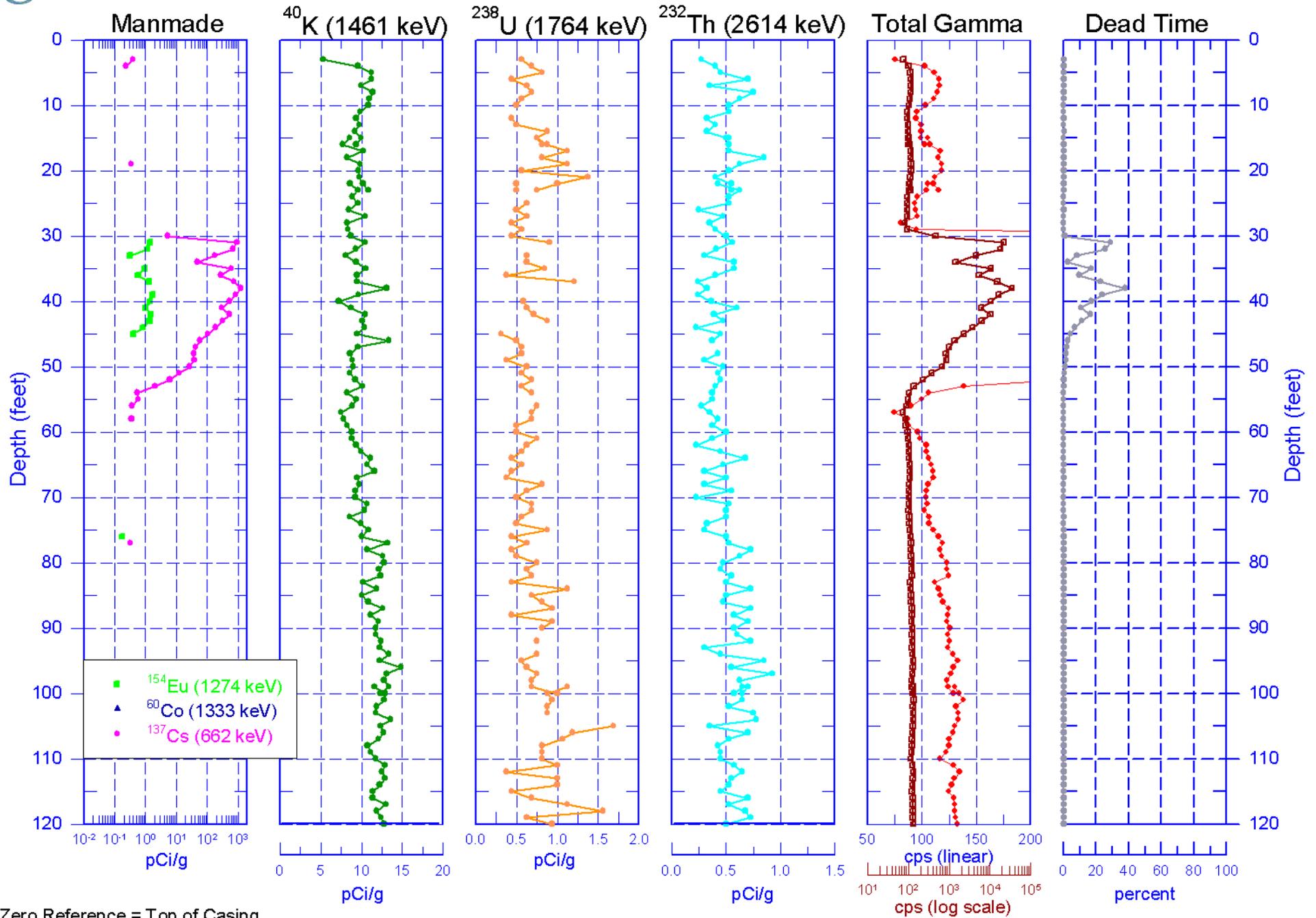
Zero Reference = Top of Casing

299-W22-26 (A4968) Natural Gamma Logs



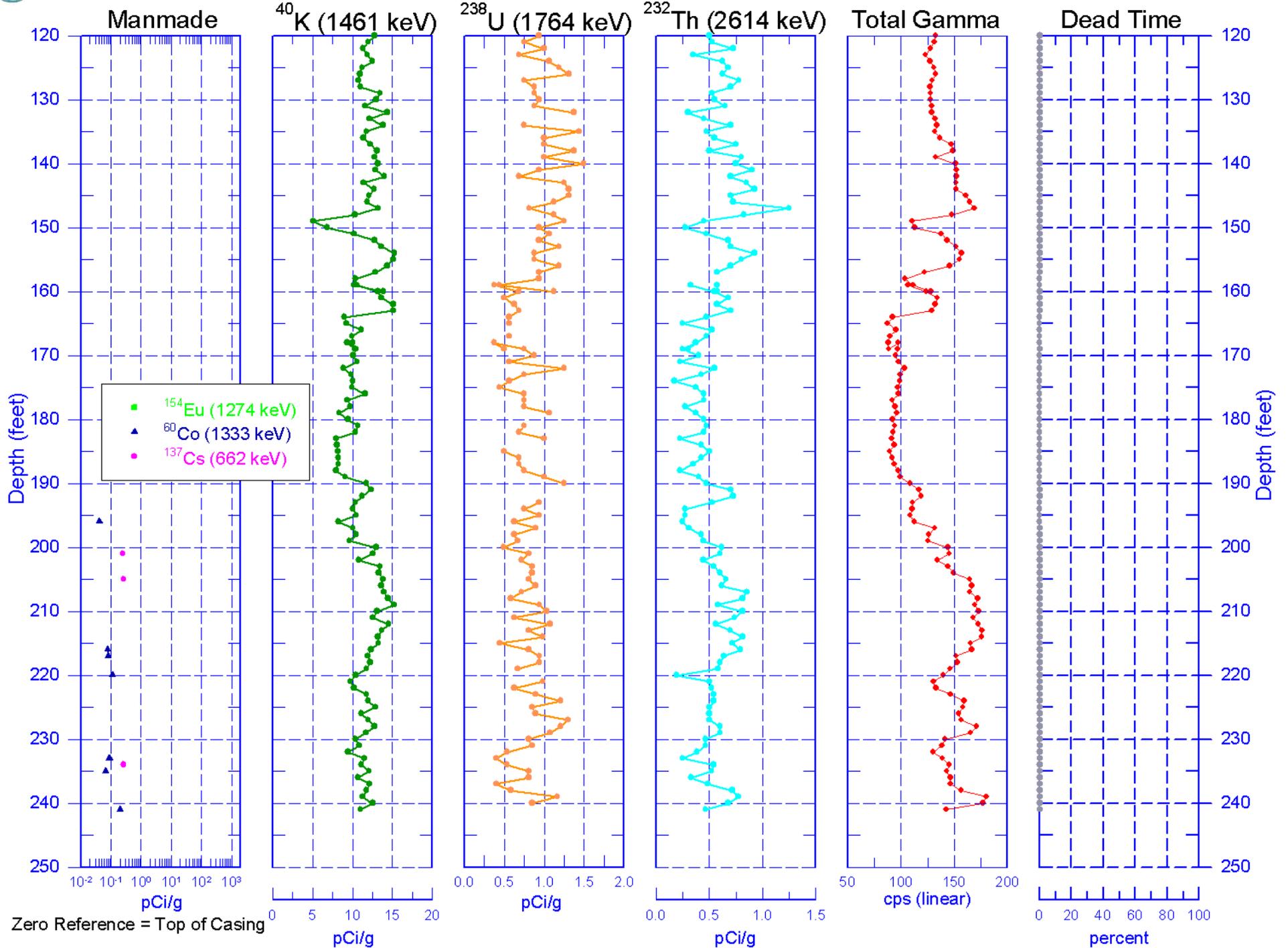
Zero Reference = Top of Casing

299-W22-26 (A4968) Combination Plot

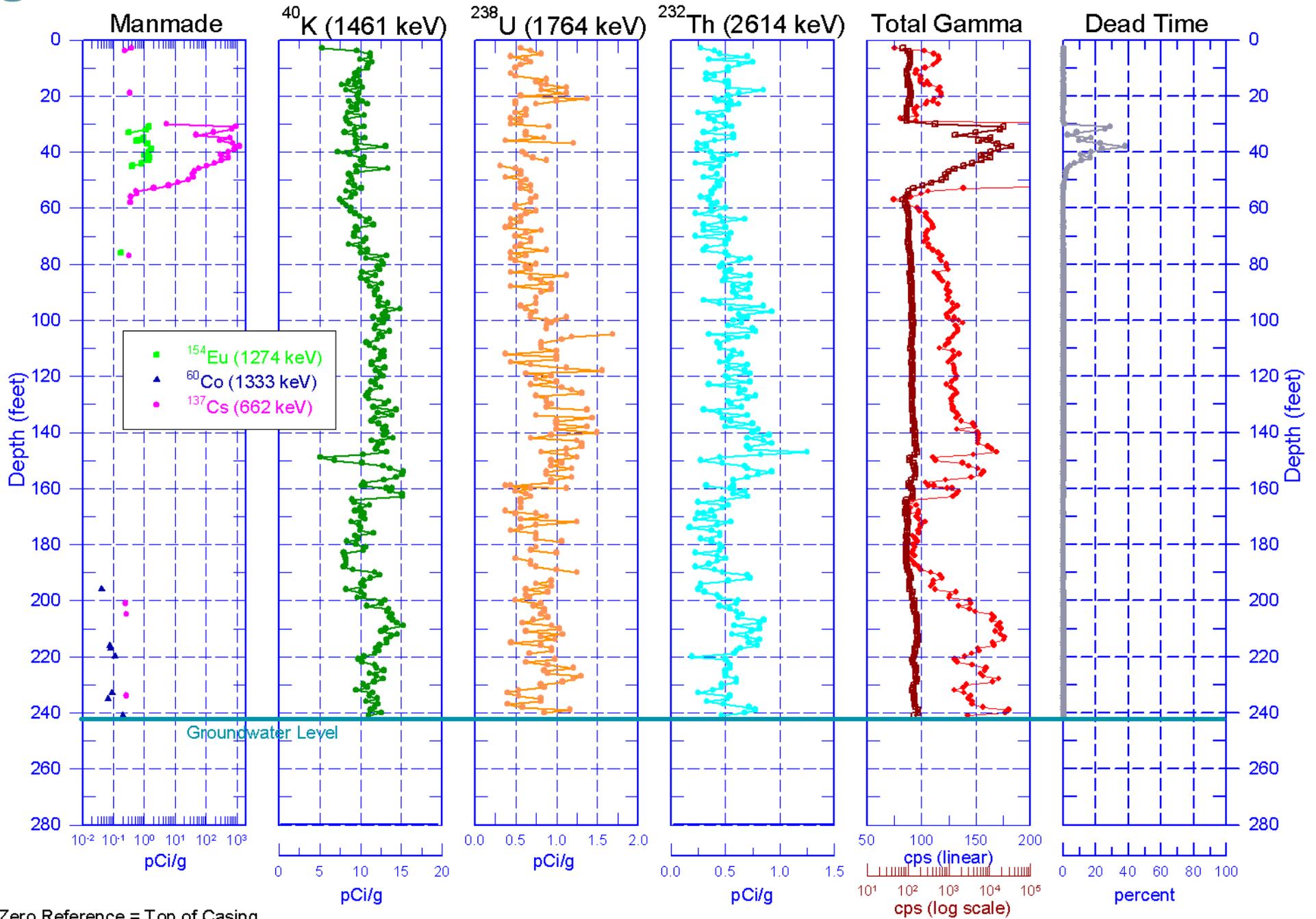


Zero Reference = Top of Casing

299-W22-26 (A4968) Combination Plot

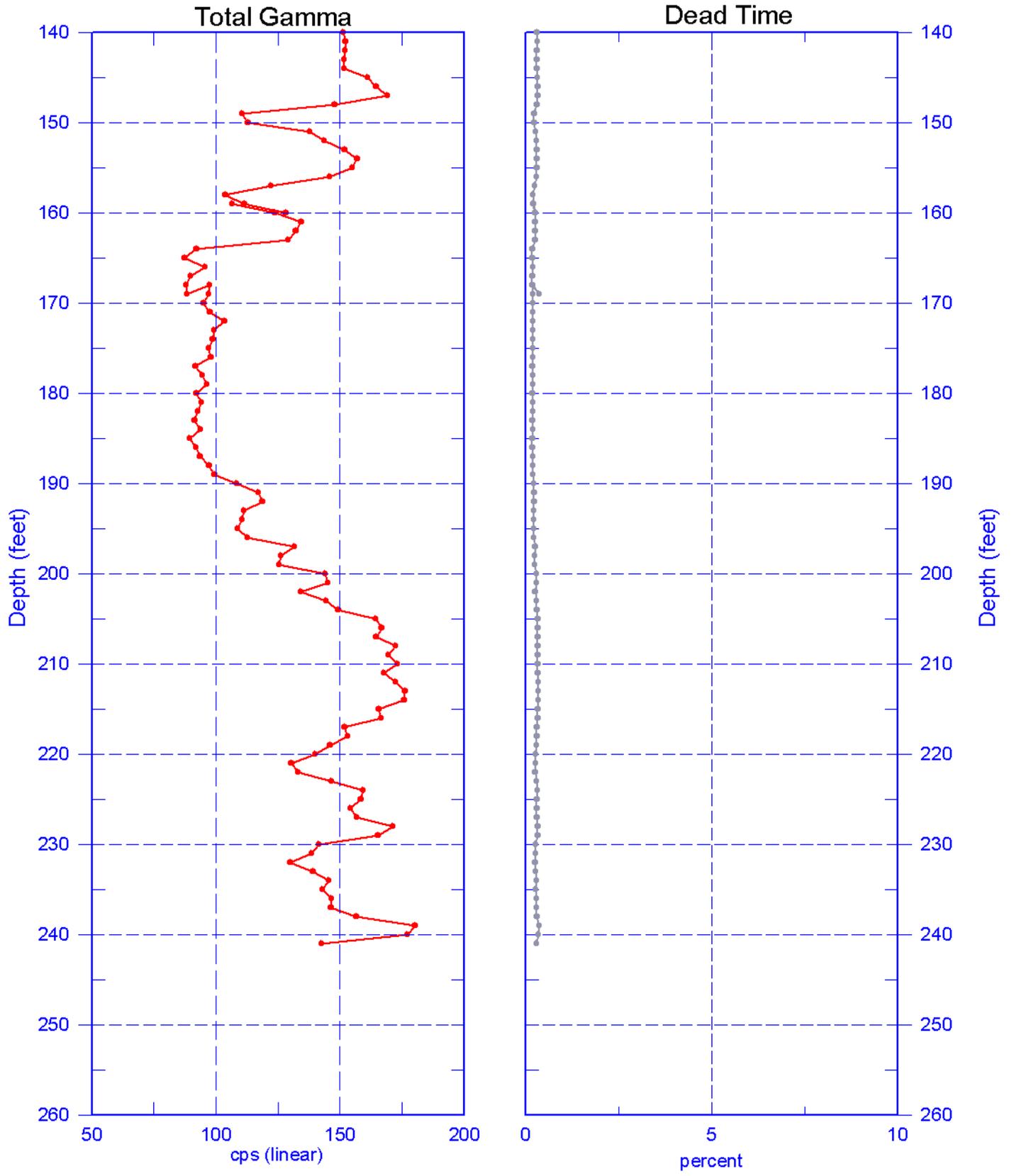


299-W22-26 (A4968) Combination Plot



Zero Reference = Top of Casing

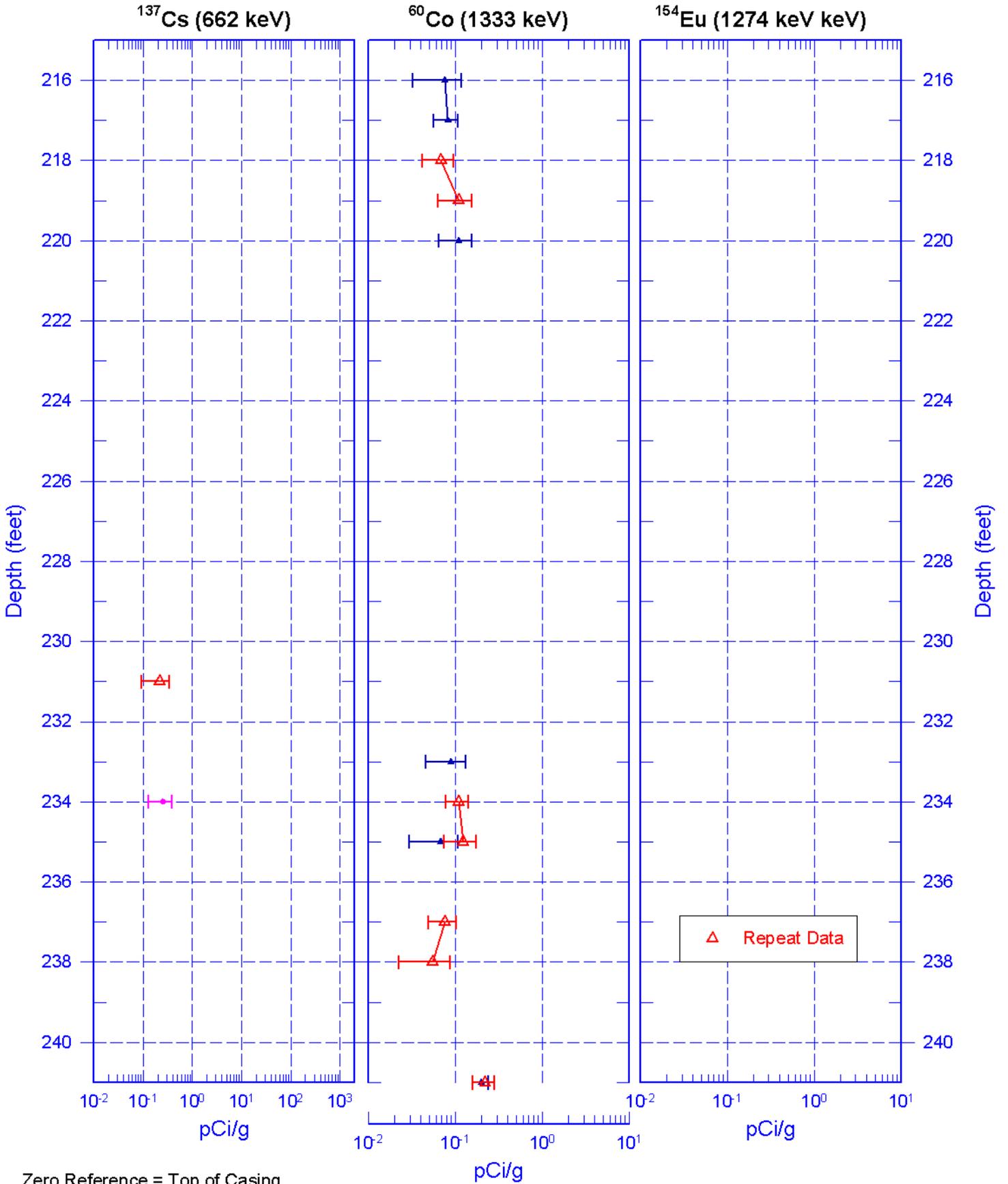
299-W22-26 (A4968) Total Gamma & Dead Time



Reference - Top of Casing

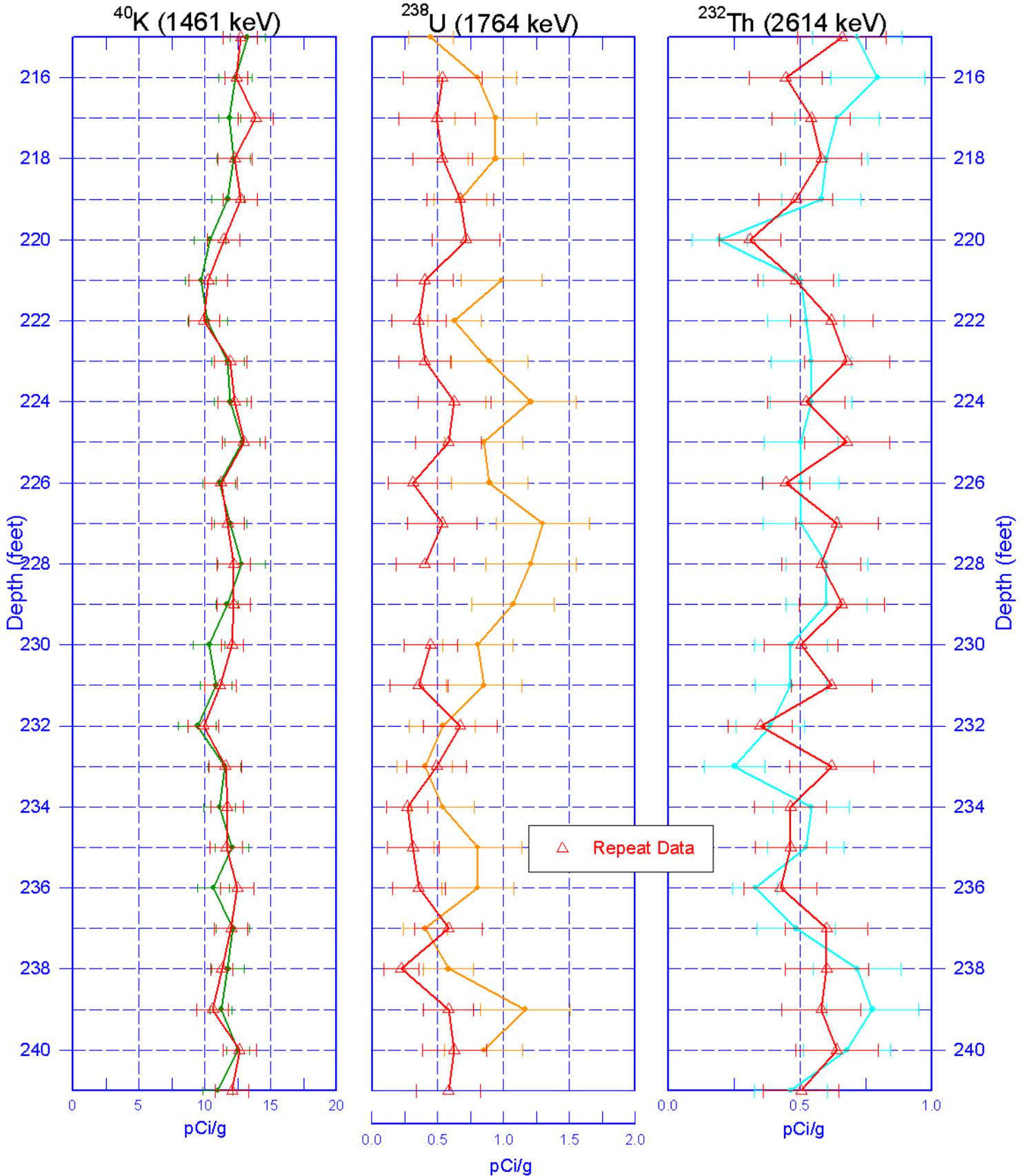
299-W22-26 (A4968)

Repeat of Manmade Radionuclides



299-W22-26 (A4968)

Repeat Section of Natural Gamma Logs



Zero Reference = Top of Casing