WMA A/AX Sample Depth Selection and Field Status Update
(Locations: C9360, C9362, C9364, C9366 C9370, C9378, C9382, and C9384)
Meeting Minutes

MEETING DATES: November 25, 2014 and April 7, 2015

ATTENDEES:

Harold Sydnor (WRPS) – attended both meetings	Cindy Tabor (WRPS) – attended 4/7/15 meeting
Joe Caggiano (Ecology) – attended both meetings	Anna Radloff (WRPS) – attended 4/17/15 meeting
Susan Eberlein (WRPS) – attended 11/25/14 meeting	Andrew Yonkofski (Terragraphics) attended 4/17/15 meeting
Ted Repasky (Energy*Solutions*) – attended 11/25/14 meeting	Penny Berlin (Energy*Solutions*) – attended 11/25/14 meeting
Jacob Throolin (WRPS) – attended 11/25/14 meeting	

Note: Ryan Beach (DOE- ORP) and Bruce Williams (CHPRC) were briefed in early December 2015 on sample depth process, selection and field status. Ryan Beach was also updated the week of April 7, 2015 on field status.

BACKGROUND: These meetings were part of the continuing effort to ensure communication between Ecology and DOE representatives regarding the Closure and Corrective Measures field work. Specifically RPP-PLAN-57332, *Field Sampling and Analysis Plan for Soil Samples at Waste Management Area A-AX* states that "geophysical logging data along with any available quick turnaround analysis results ("quick turn") for two mobile contaminants (^{99}Tc and nitrate) will be used to aid in determining sample depths. The sampling horizons will be selected in an open meeting to which WRPS staff, U.S. Department of Energy (DOE), Washington State Department of Ecology (Ecology), U.S. Environmental Protection Agency (EPA), and other Site contractors shall be invited."

DISCUSSION: In these meetings, Ecology was provided information on the four direct push locations in AX Farm and the four direct push locations in A Farm. In November 2014, it was identified that all the exploratory holes had been pushed and logged. Sample depth selection process and depths were discussed and agreed upon in this meeting. DOE-ORP was additionally provided an update in early December 2014 regarding information discussed in November.

In April 2015, a status of field activities was provided to Ecology and DOE-ORP. During the meeting with Ecology, it was identified that the draft logs provided in November 2014 had been finalized. It was also identified that during the finalization of these logs that the depth tool was recalibrated, which in-turn caused some of the depth information on the logs to be updated. For this reason, some of sample depths, agreed to in November, vary slightly (i.e., 0.5 ft to 1 ft). However, it should be noted that all updated sample depths correspond to the agreed upon intervals in the November 2014 meeting.

The following is the information provided to Ecology in the April 2015 meeting:

- Two courtesy copies of RPP-PLAN-57332, *Field Sampling and Analysis Plan for Soil Samples at Waste Management Area A-AX*.

- Two tables identifying summary information about the eight direct push locations in WMA A/AX (refer to Tables 1 and 2 included in these meeting minutes)
- Final geophysical logs of the eight direct push exploratory holes in WMA A/AX that show the selected sample depths along with lithologic/stratigraphic unit information (see attached)

Ryan E. Beach	Ryan E Beach	4/30/15
DOE Project Manager (print)	DOE Project Manager (signature)	Date
JOSEPH CAGGIANO	Joseph Caggiano	5-7-15
Ecology Project Manager (print)	Ecology Project Manager (signature)	Date

Table 1. Sample Depth and Field Summary Information for AX Tank Farm Locations, C9360, C9362, C9364, and C9366

Location (surface elevation ft amsl)		**C9359/C9360** (686.48)		**C9361/C9362** (685.43)		**C9363/C9364** (686.48)		**C9365/C9366** (686.35)	
Sample Depth ft bgs (center depth ft amsl)		50-52 (635.48)		52-54 (623.43)		45.5-47.5 (639.98)		99.5-101.5 (585.85)	
Moisture Content (%)		NA		~7.5		NA		NA	
Nitrate µg/g	Tc-99 pCi/g	NA	NA	~7	ND	NA	NA	NA	NA
Sample Depth ft bgs (center depth ft amsl)		115-117 (570.48)		125.5-127.5 (558.93)		121-123 (564.48)		143-145 (542.35)	
Moisture Content (%)		NA		~5.9		NA		NA	
Nitrate µg/g	Tc-99 pCi/g	NA	NA	~7	ND	NA	NA	NA	NA
Sample Depth ft bgs (center depth ft amsl)		179.5-181.5 (505.98)		202-204 (482.43)		145.5-147.5 (539.98)		182-184 (503.35)	
Moisture Content (%)		NA		~5.6		NA		NA	
Nitrate µg/g	Tc-99 pCi/g	NA	NA	~13	~0.16	NA	NA	NA	NA
Comment		-1 Interval near Backfill/H1 transition - 1 interval near H1/H2 (fines) transition -1 Interval in H2 (coarse)		-1 Interval in H1 (below transition from Backfill) -1 Interval at H1/H2 (fines) transition -1 Interval in H2 (coarse - at bottom of borehole)		-1 Interval near Backfill/H1 transition -1 Interval at H1/H2 (fines) transition -1 Interval in H2 (fines)		-1 Interval at H1/H2 transition -2 Intervals in H2 (1 in fines and 1 in coarse)	
Sample Hole Decommissioning Dates		3/11/15		2/24/15		Not Started Yet		Collected two sample depths	

Notes: Red and Blue #s = preliminary quick-turn laboratory results, NA = Not available. Final data will be released in a data package generated by the laboratory.
ft bgs = feet below ground surface, ft amsl = feet above mean sea level

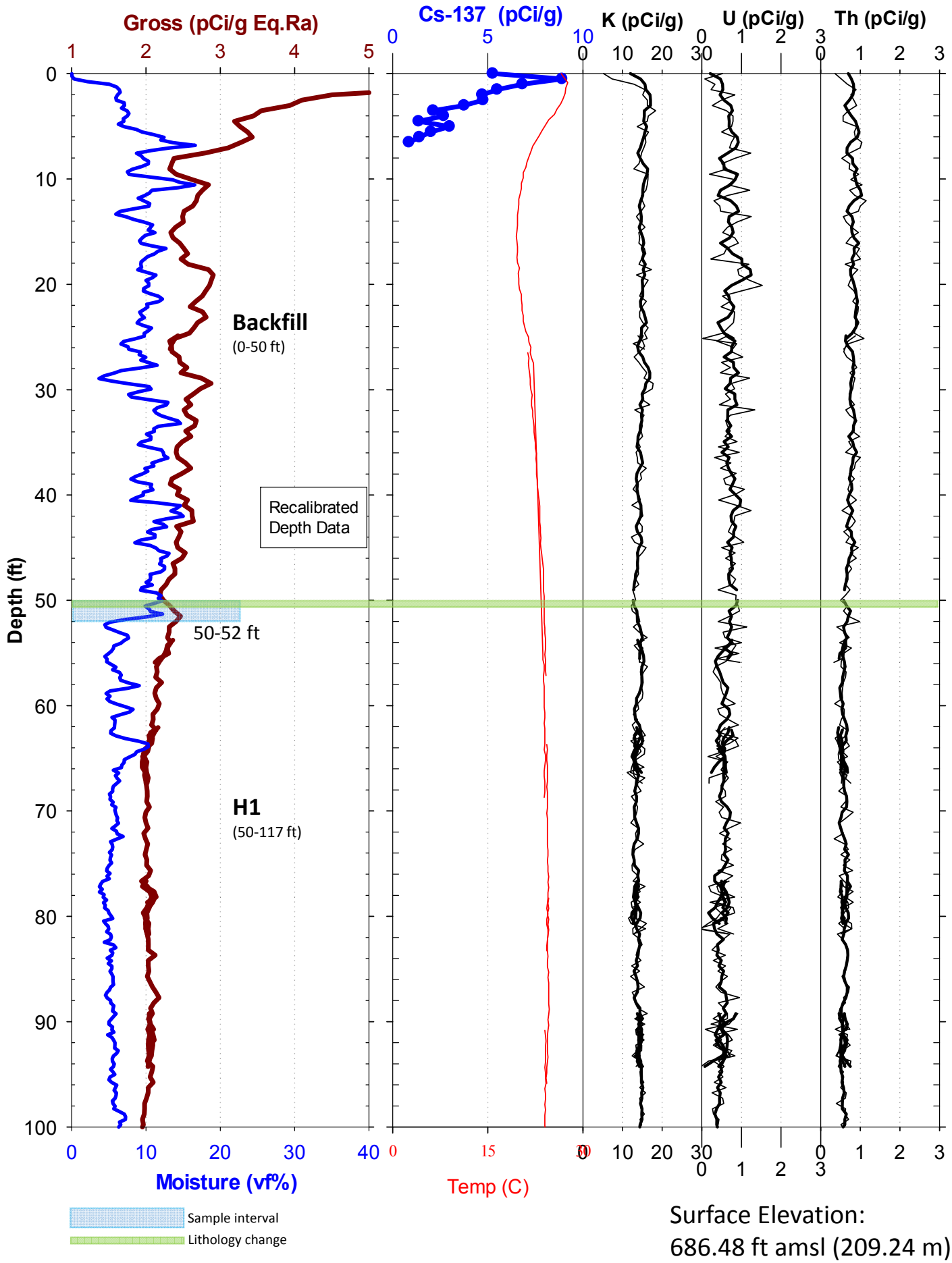
Table 2. Sample Depth and Field Summary Information for A Tank Farm Locations, C9370, C9378, C9382, and C9384

Location (surface elevation ft amsl)	**C9369/C9370** (674.87)	**C9377/C9378** (675.36)	**C9381/C9382** (677.85)	**C9383/C9384** (675.98)
Sample Depth ft bgs (center depth ft amsl)	52-54 (621.87)	53-55 (621.36)	54-56 (622.85)	51-53 (623.98)
Sample Depth ft bgs (center depth ft amsl)	139-141 (534.87)	124-126 (550.36)	99-101 (577.85)	74-76 (600.98)
Sample Depth ft bgs (center depth ft amsl)	173-175 (500.87)	126-128 (548.36)	140-142 (536.85)	132-134 (542.98)
Comment	• 1 Interval near Backfill/H1 transition • 1 Interval in H2 (fines) • 1 Interval in H2 (coarse)	• 1 Interval near Backfill/H1 transition • 2 intervals in H2 fines (1 Interval near H1/H2 [fines] transition)	• 1 Interval near Backfill/H1 transition • 1 Interval near H1/H2 (fines) transition • 1 Interval near H2 fines/H2 coarse transition	• 1 Interval at Backfill/H1 transition • 1 Interval at H1/H2 (fines) transition • 1 Interval near H2 fines/H2 coarse transition
Sample Hole Decommissioning Dates	Not Started Yet	Not Started Yet	Not Started Yet	Not Started Yet

ft bgs = feet below ground surface, ft amsl = feet above mean sea level

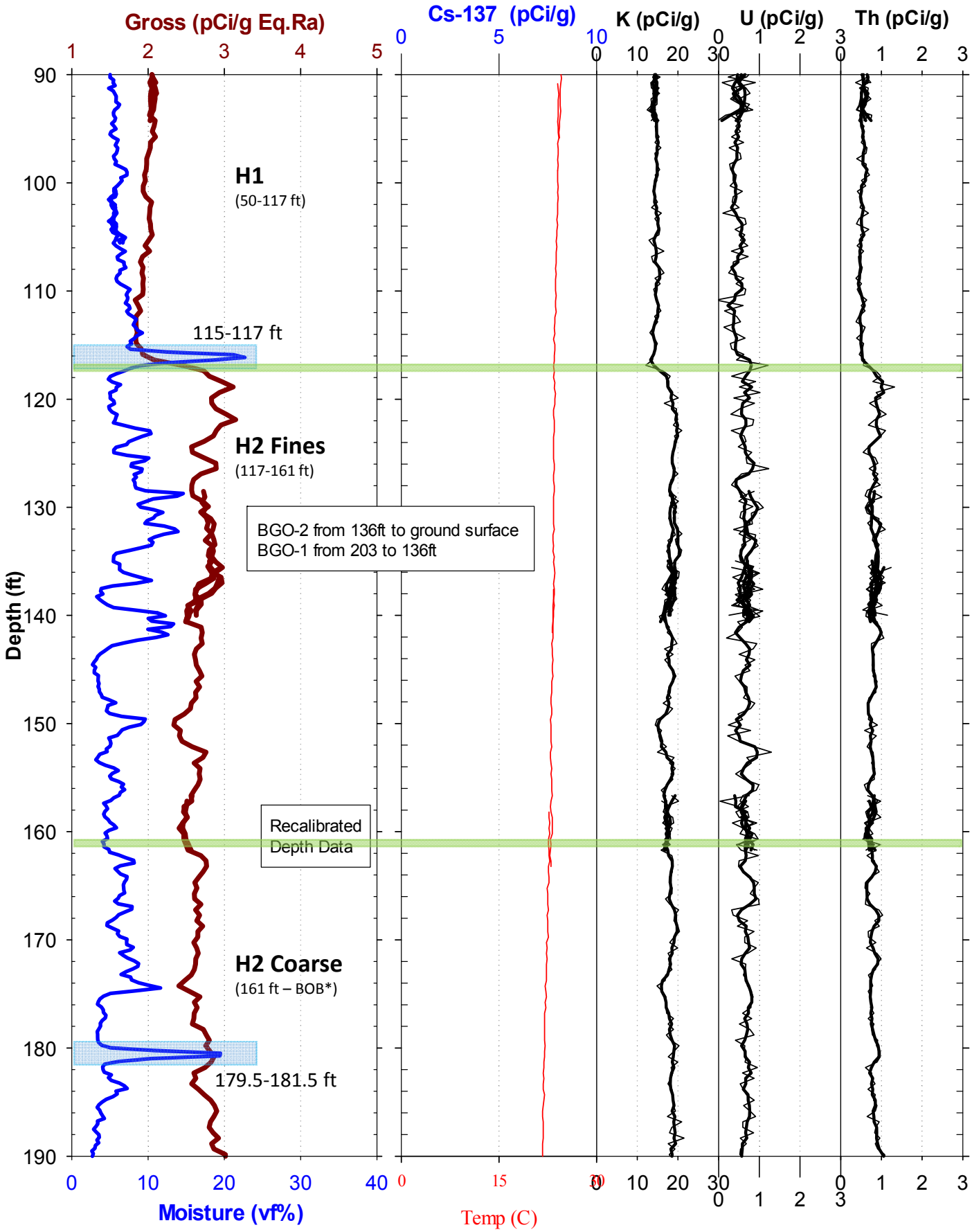
Note: After the meeting, Location C9377 was renumbered as C9379. The associated geophysical log plot has also been updated to C9379.

AX - C9359 - Spectra Gamma & Moisture Survey



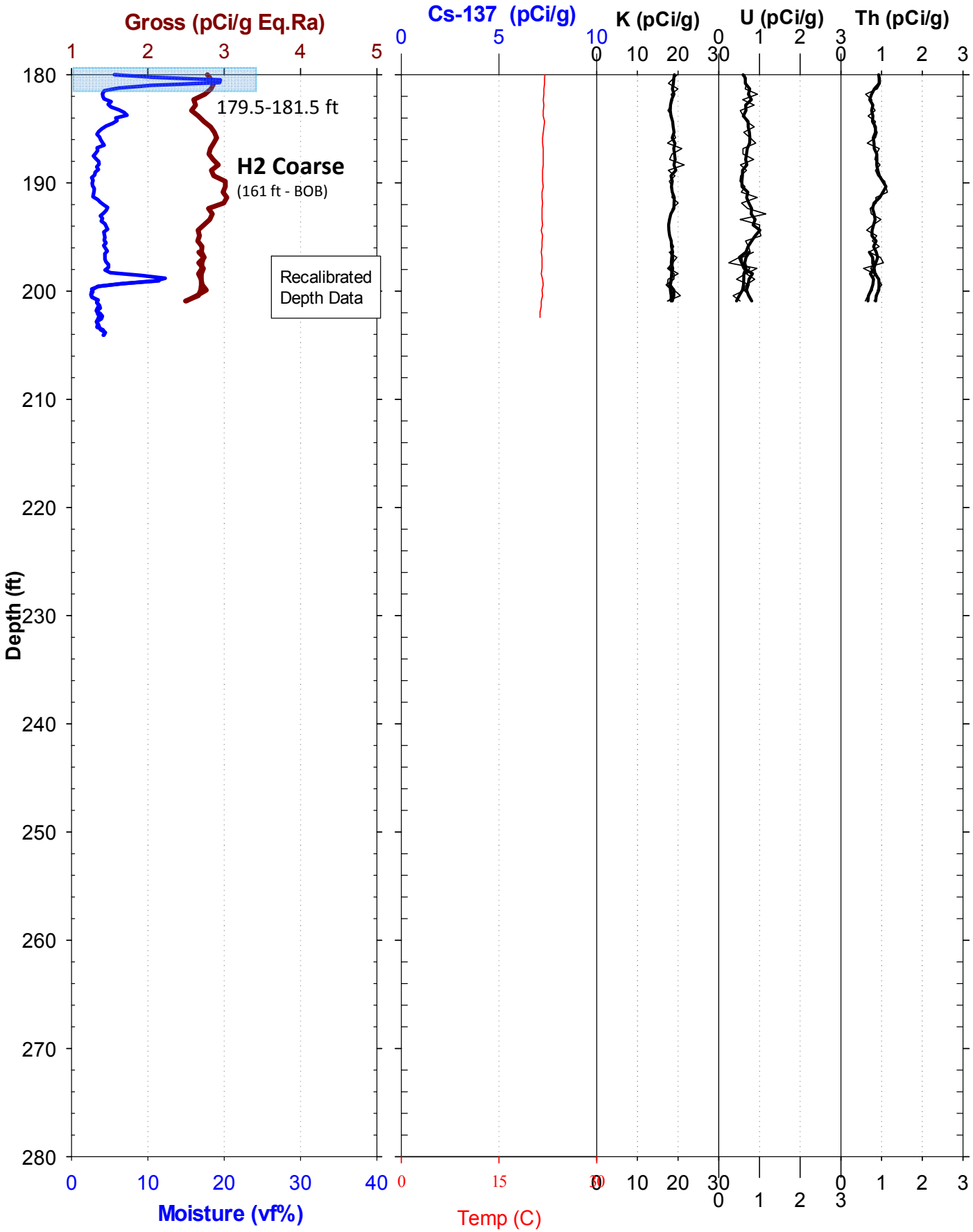
Surface Elevation:
686.48 ft amsl (209.24 m)

AX - C9359 - Spectra Gamma & Moisture Survey

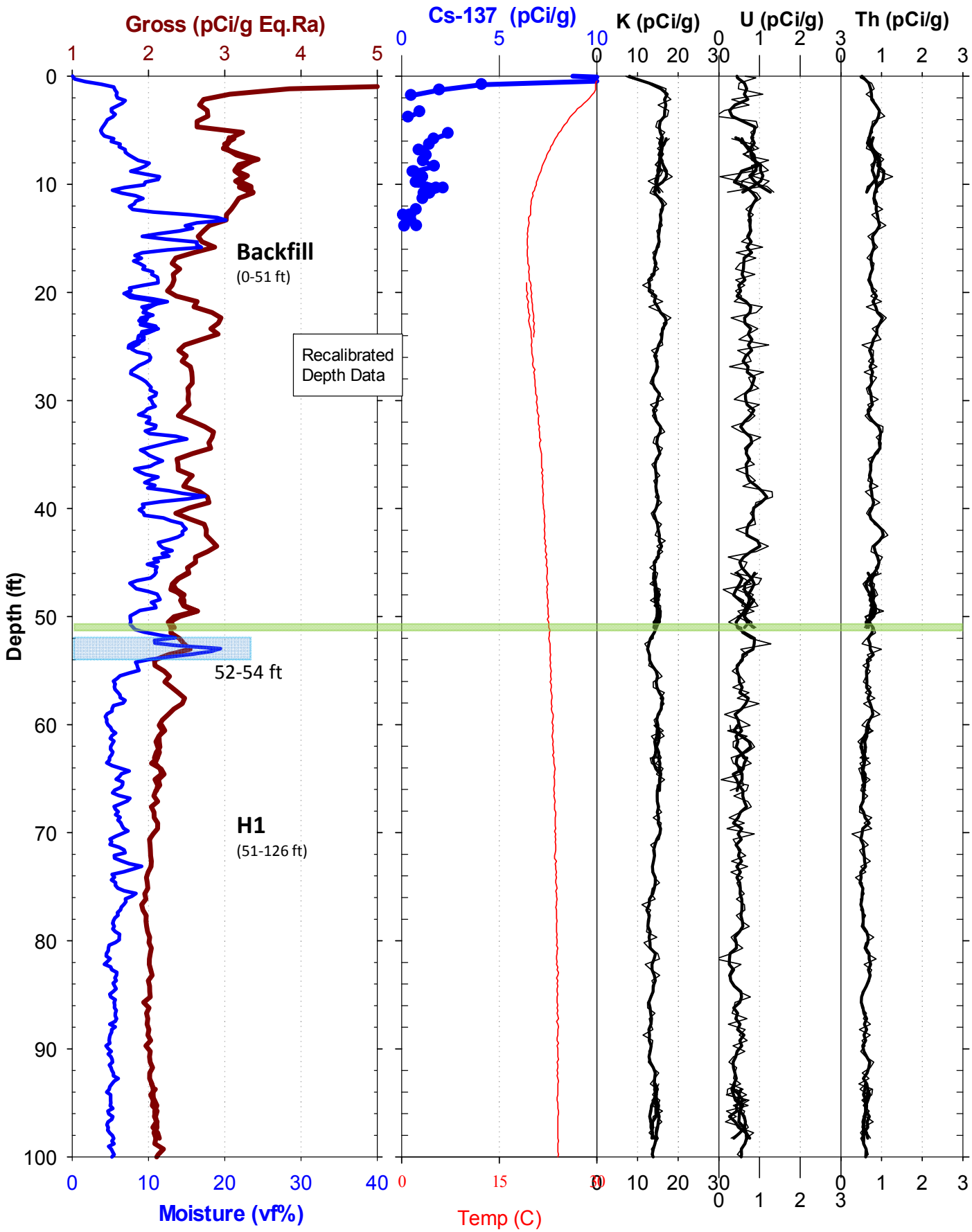


*BOB = bottom of boring

AX - C9359 - Spectra Gamma & Moisture Survey

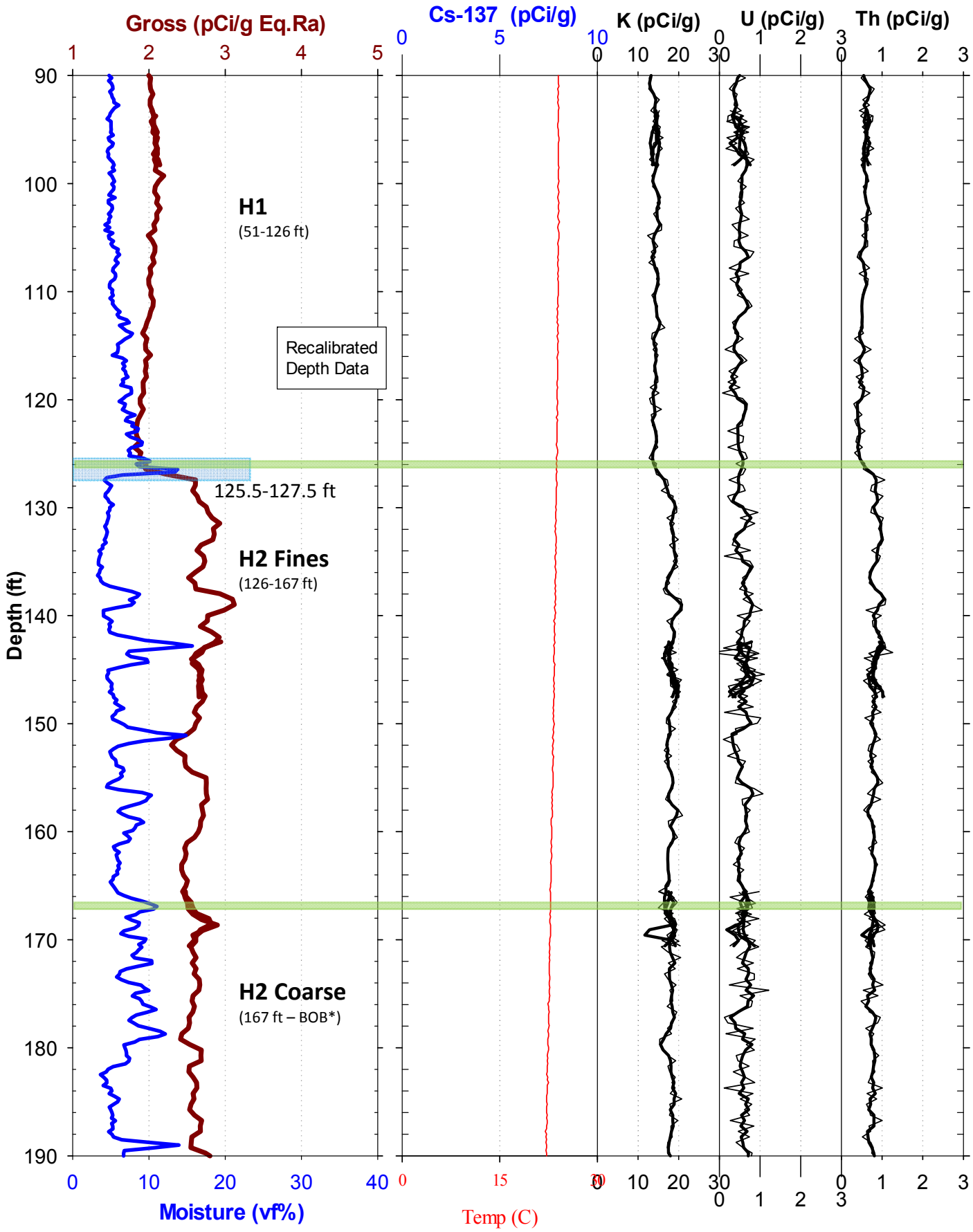


AX - C9361 - Spectra Gamma & Moisture Survey



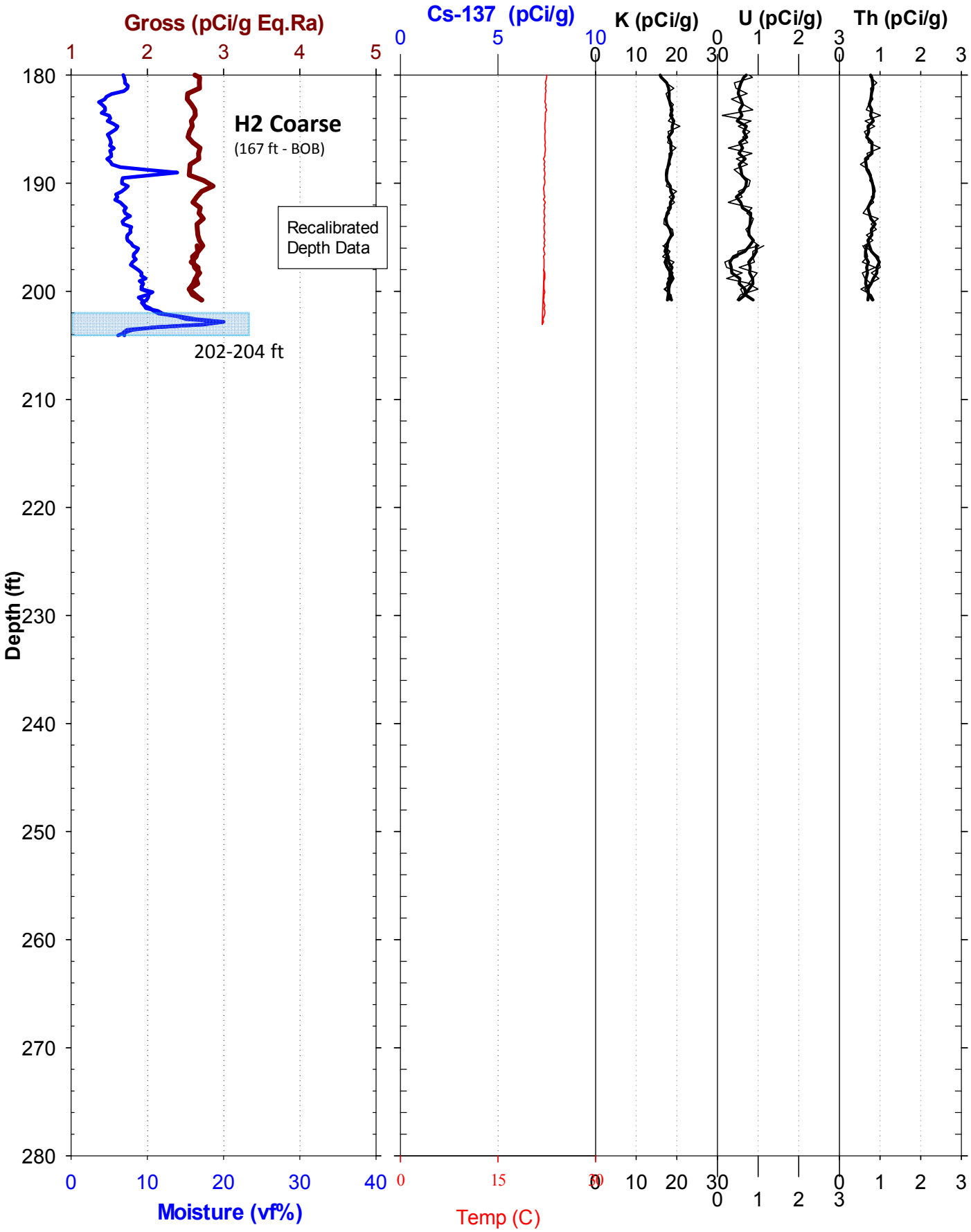
Surface Elevation:
685.43 ft amsl (208.92 m)

AX - C9361 - Spectra Gamma & Moisture Survey

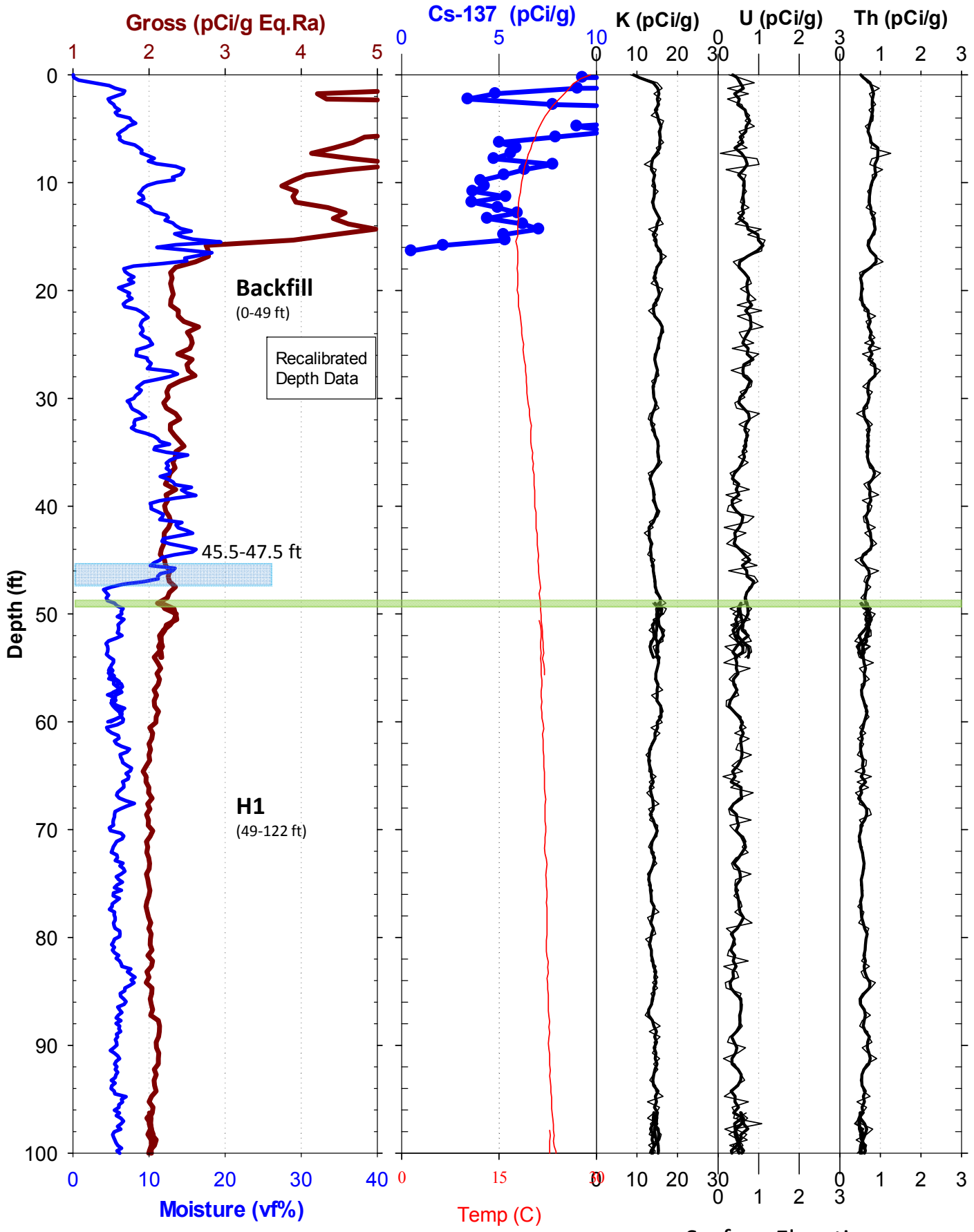


*BOB = bottom of boring

AX - C9361 - Spectra Gamma & Moisture Survey

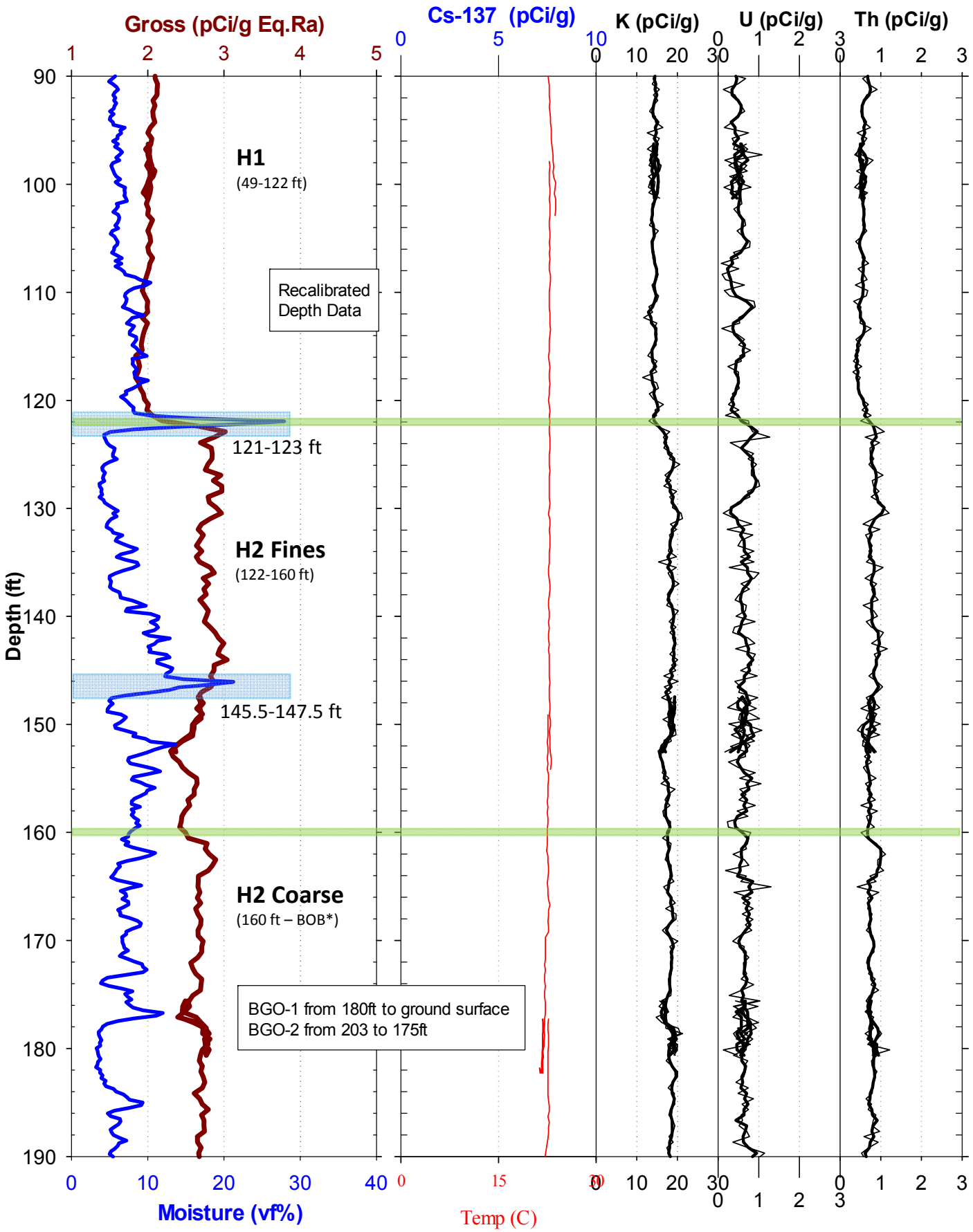


AX - C9363 - Spectra Gamma & Moisture Survey



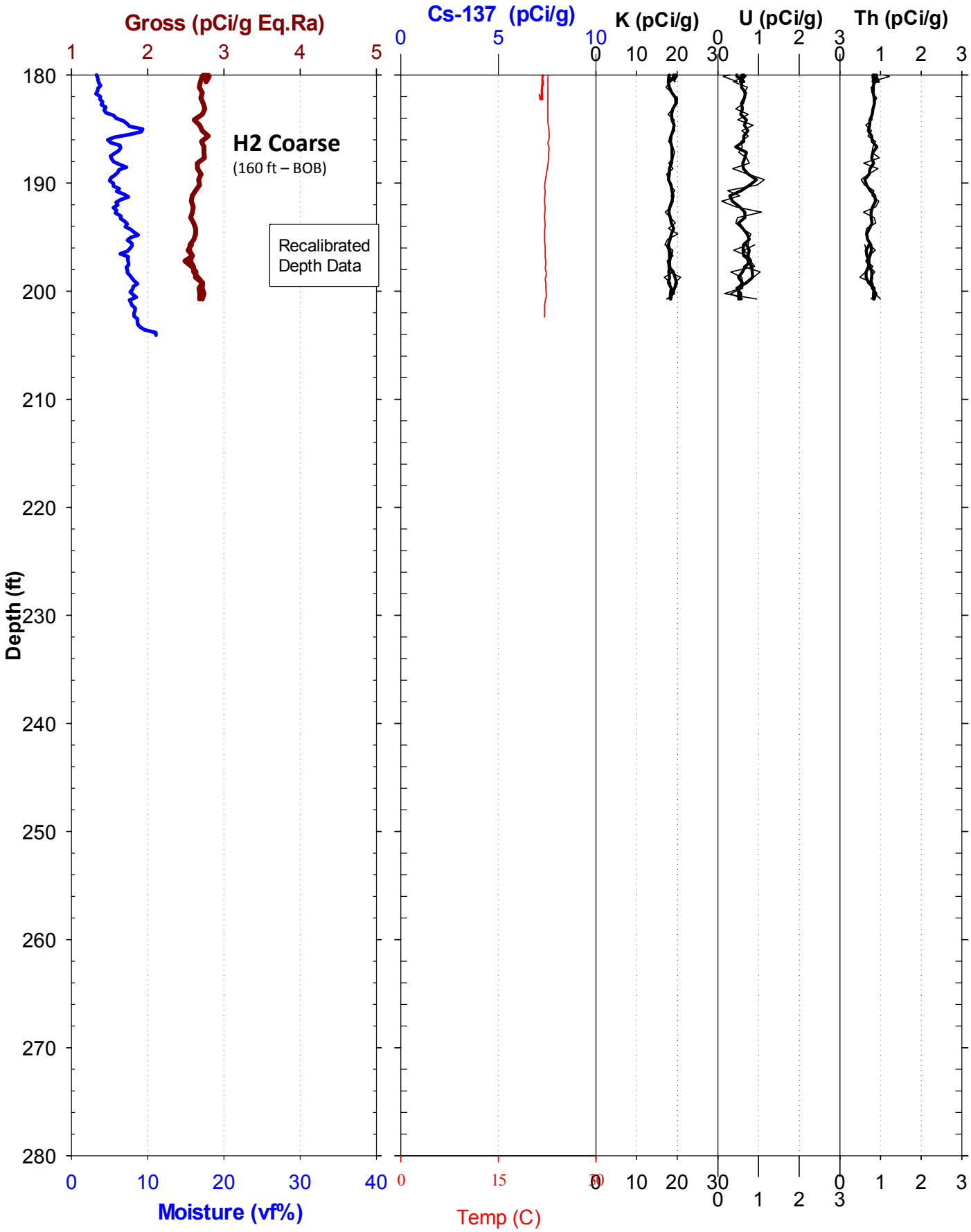
Surface Elevation:
686.48 ft amsl (209.24 m)

AX - C9363 - Spectra Gamma & Moisture Survey

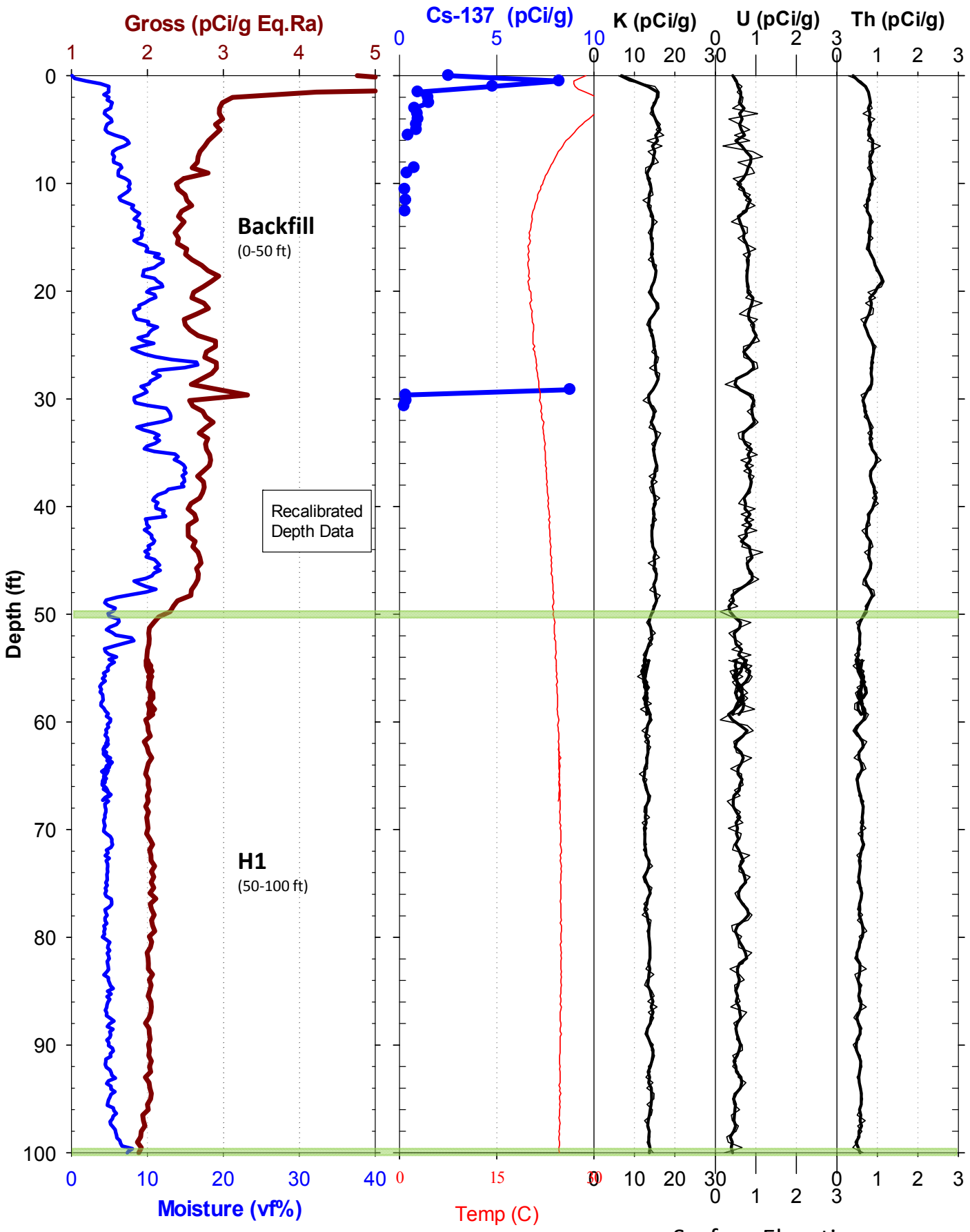


*BOB = bottom of boring

AX - C9363 - Spectra Gamma & Moisture Survey

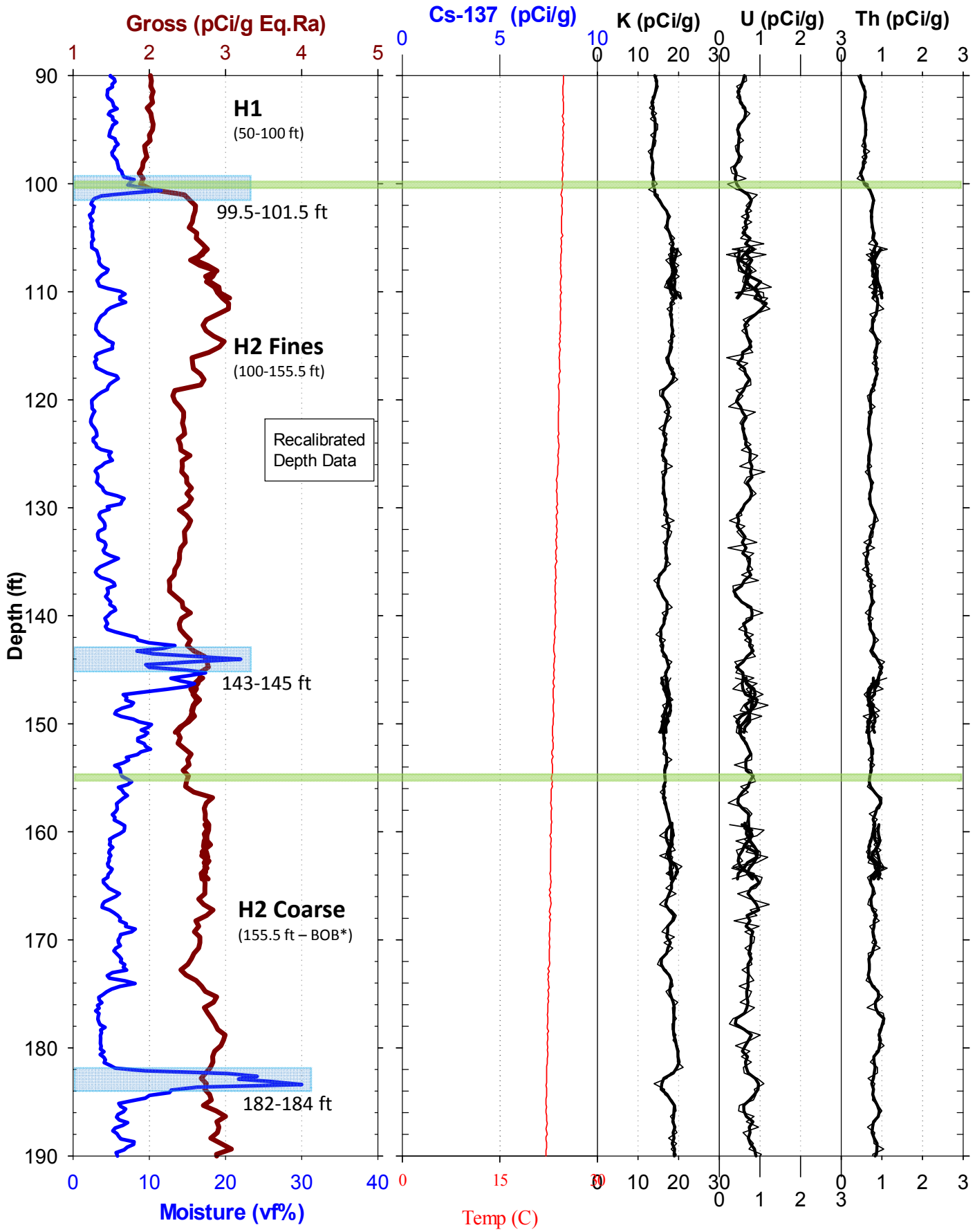


AX - C9365 - Spectra Gamma & Moisture Survey



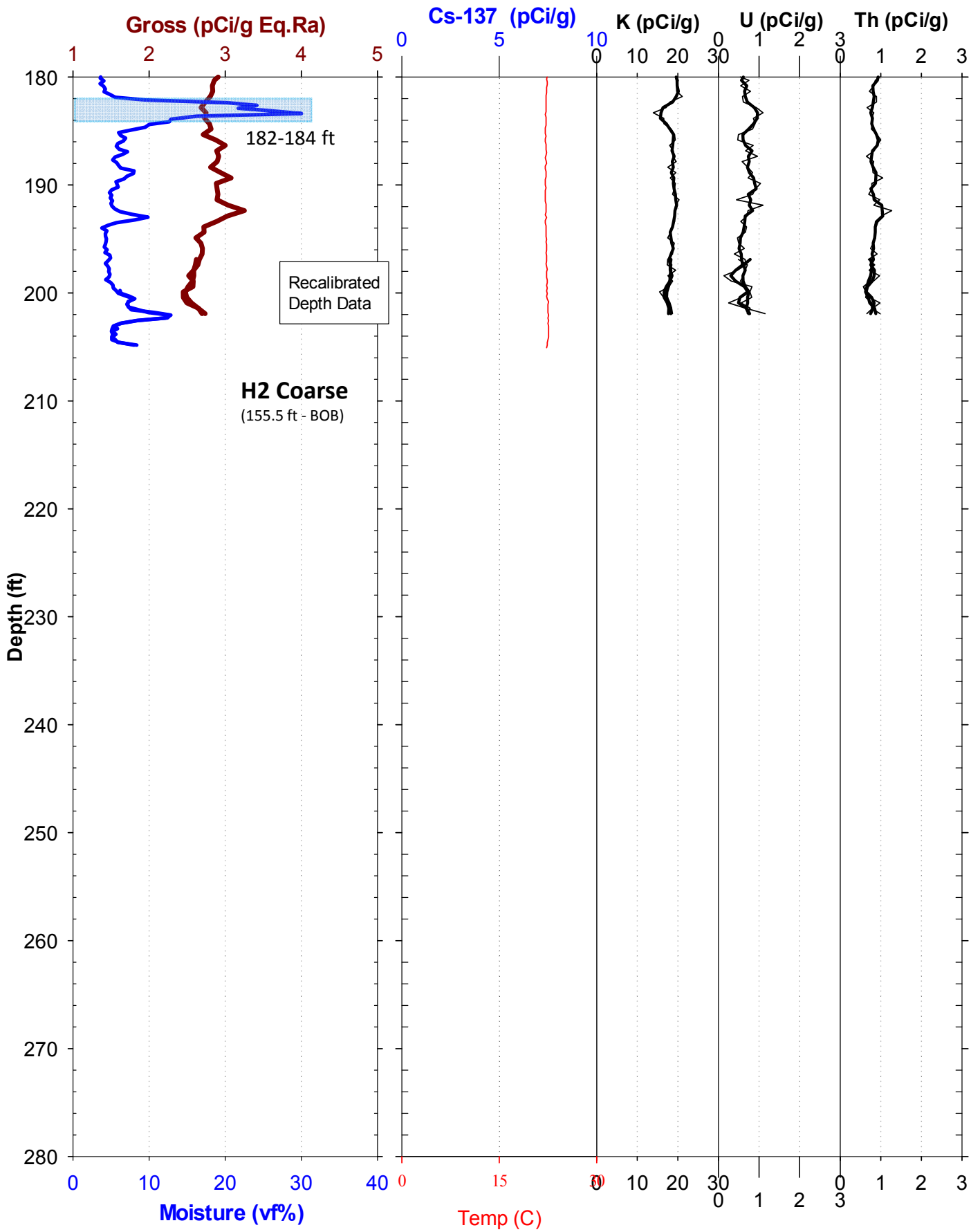
Surface Elevation:
686.35 ft amsl (209.20 m)

AX - C9365 - Spectra Gamma & Moisture Survey

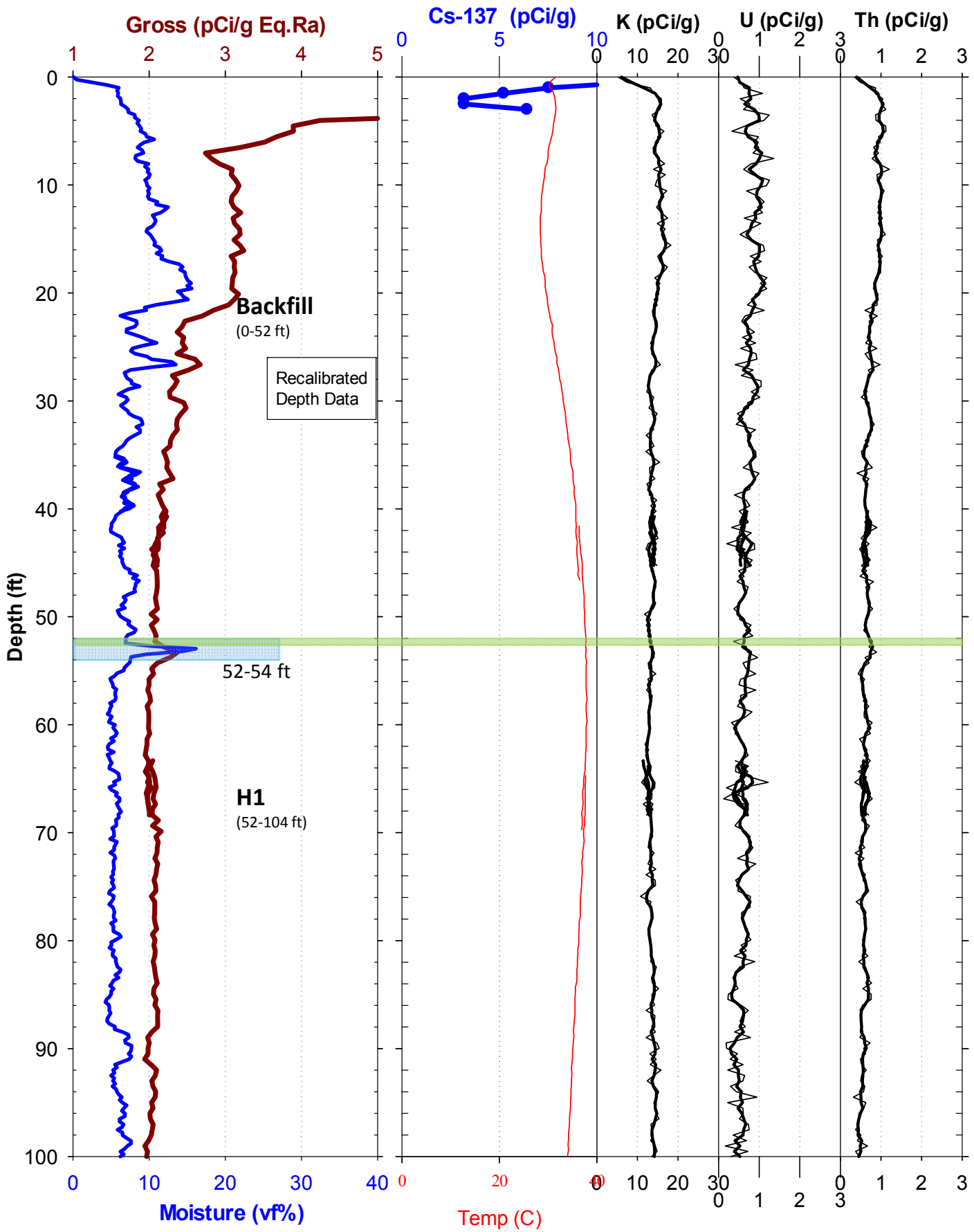


*BOB = bottom of boring

AX - C9365 - Spectra Gamma & Moisture Survey

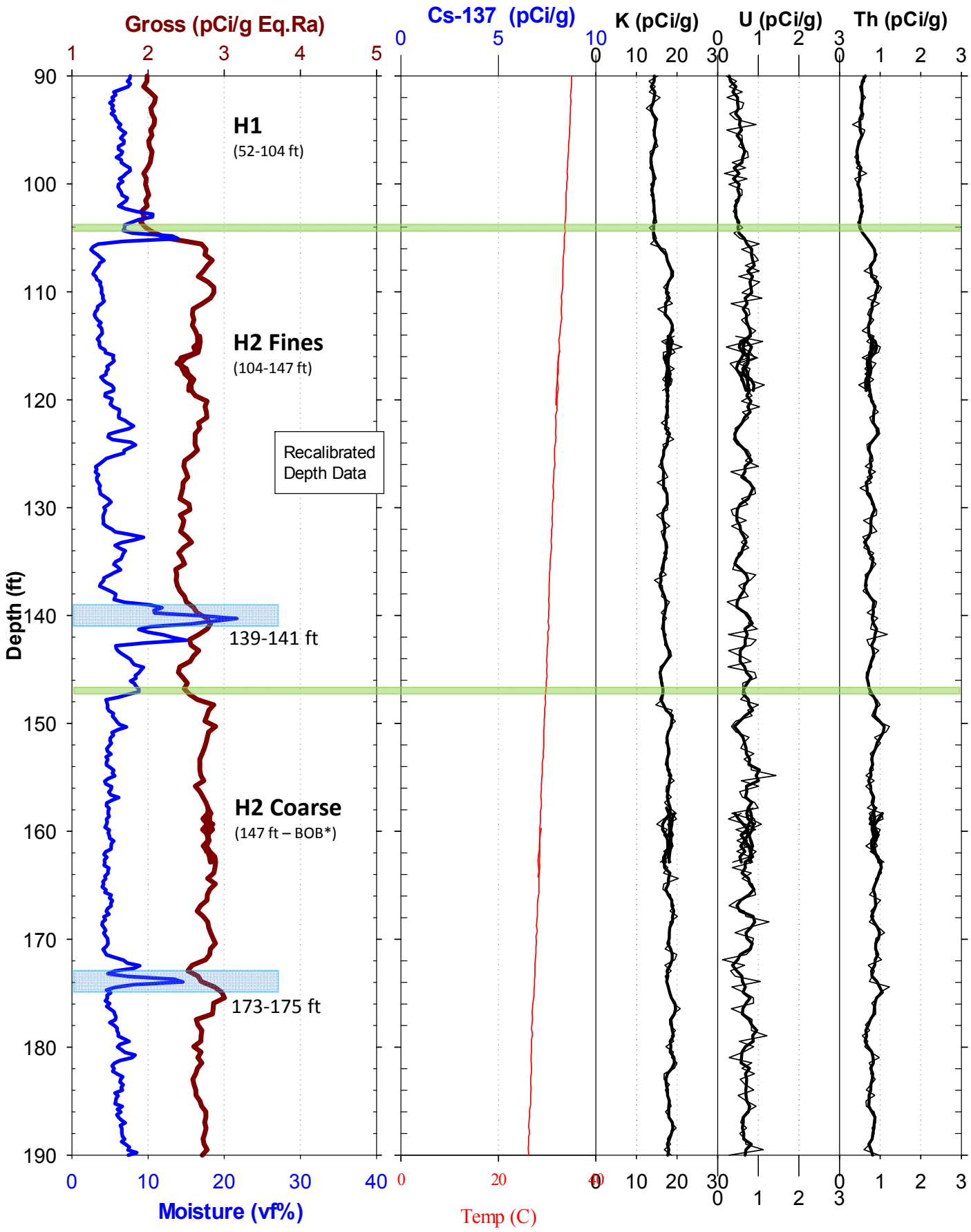


A - C9369 - Spectra Gamma & Moisture Survey



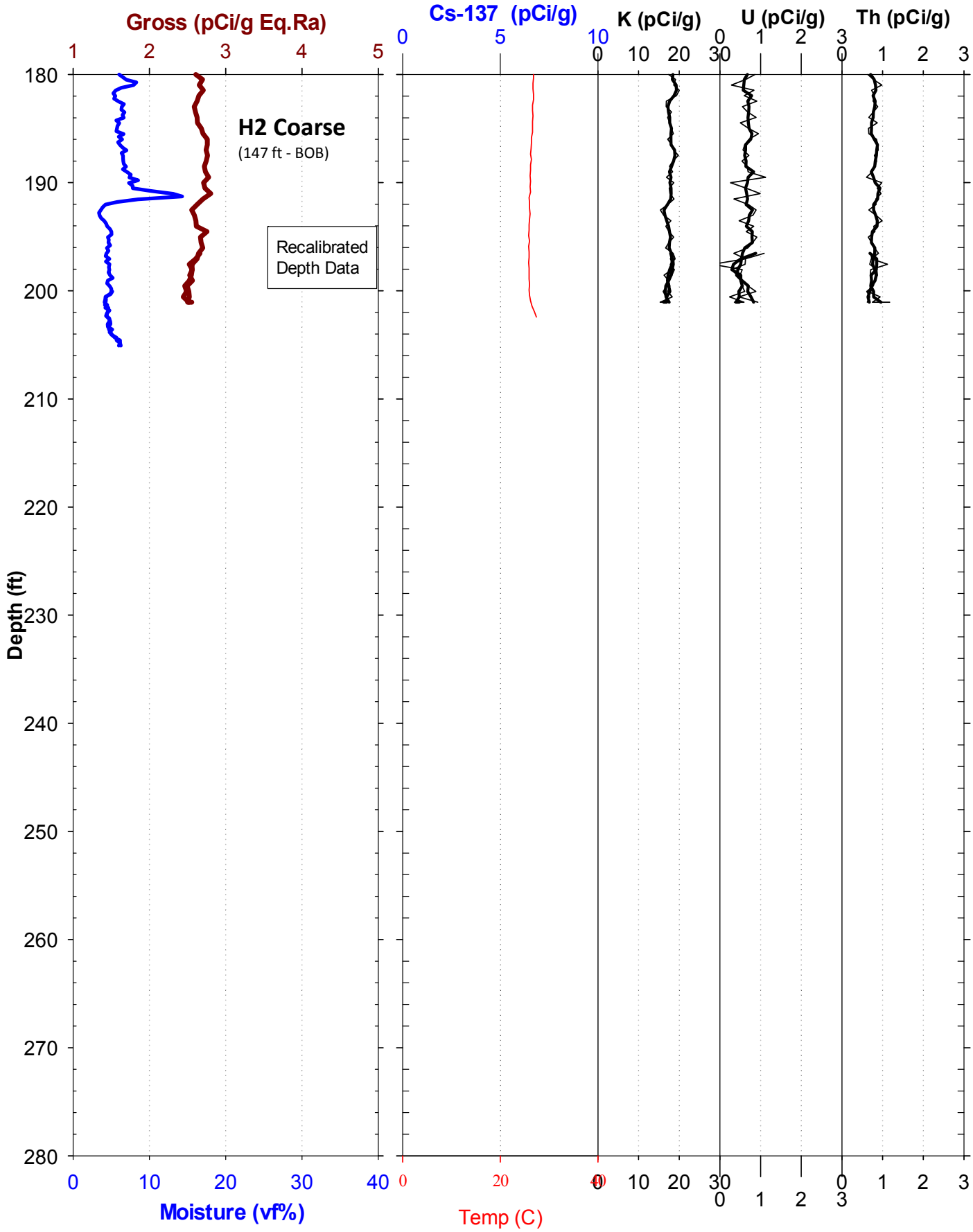
Surface Elevation:
674.87 ft amsl (205.70 m)

A - C9369 - Spectra Gamma & Moisture Survey

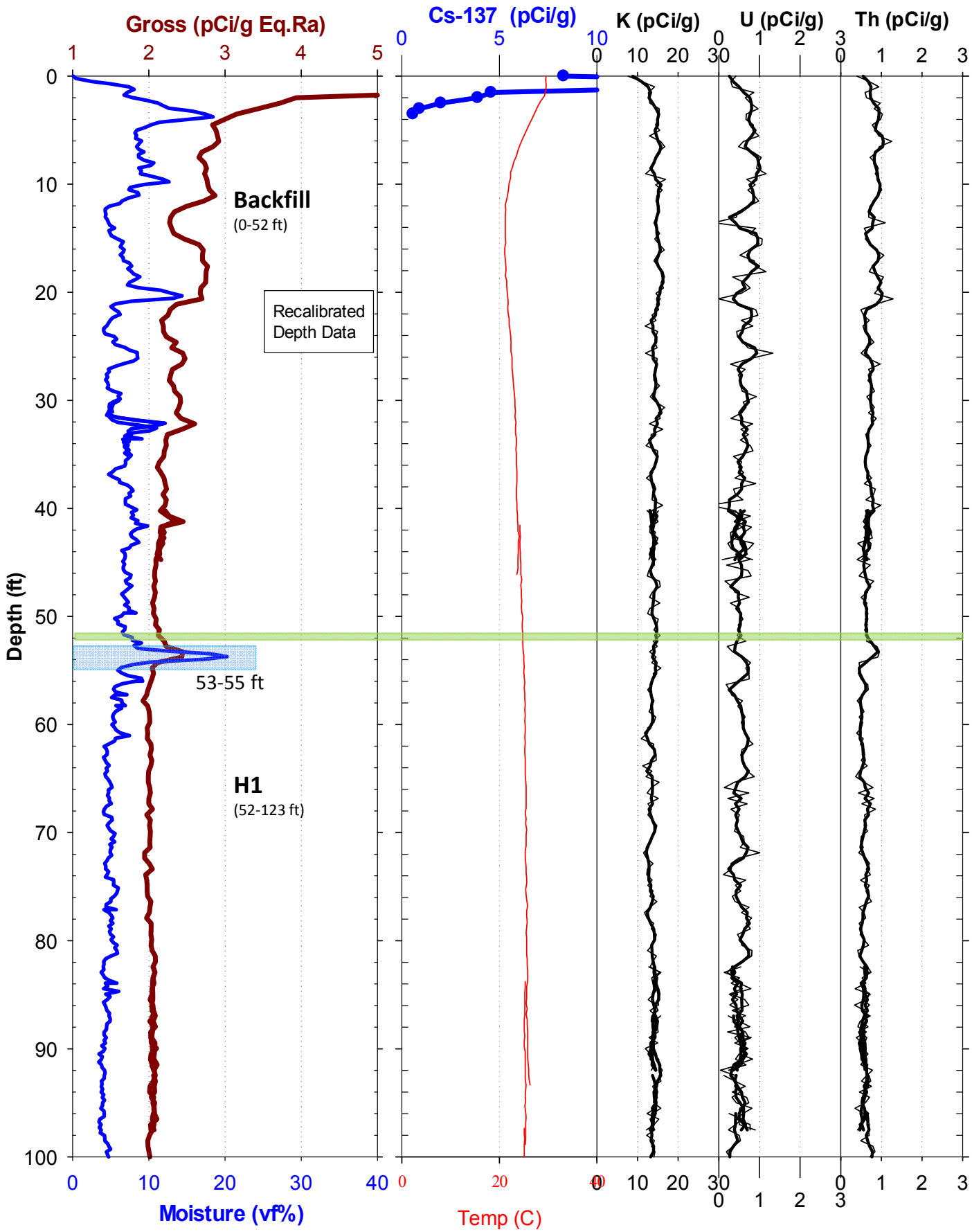


*BOB = bottom of boring

A - C9369 - Spectra Gamma & Moisture Survey

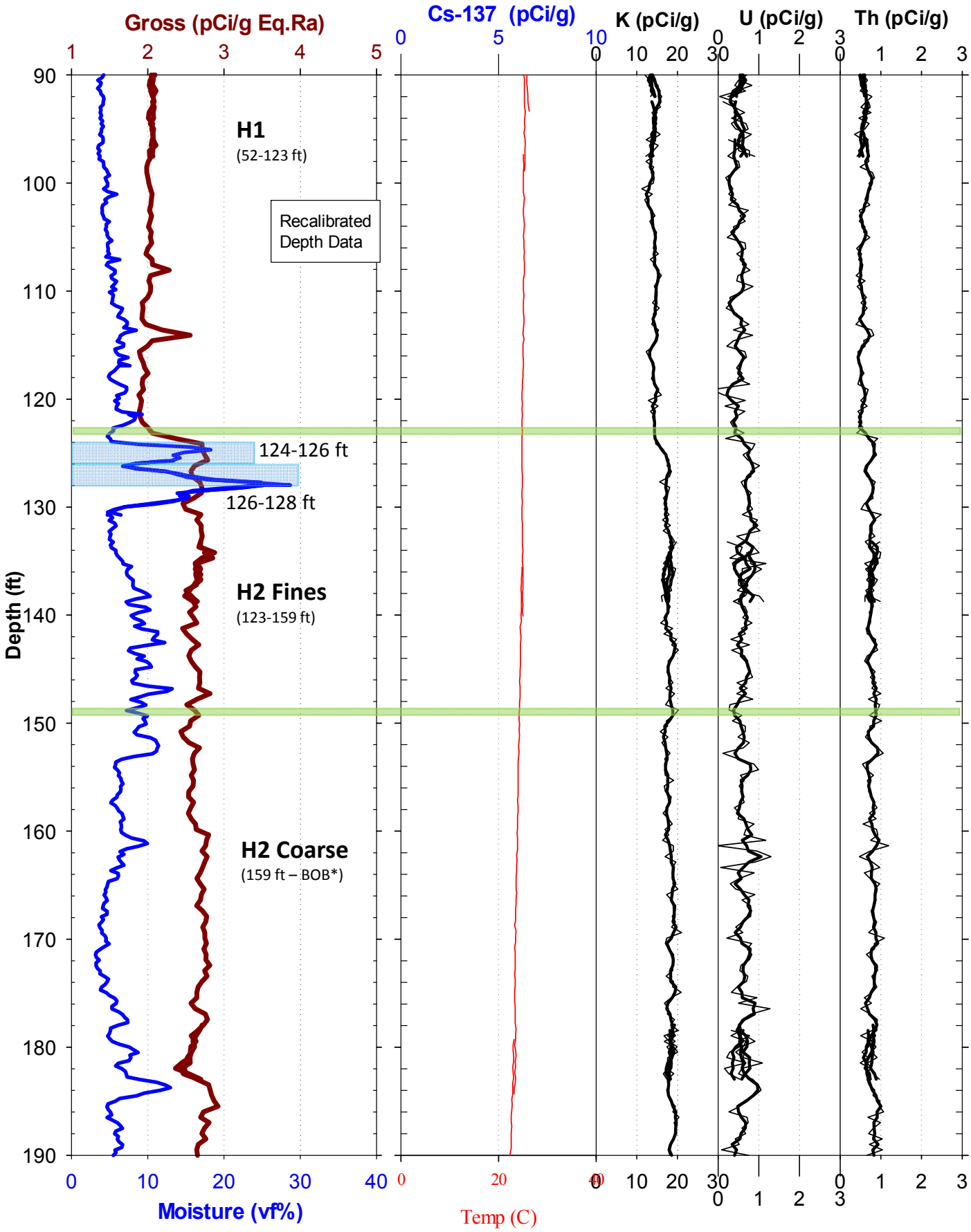


A - C9379 - Spectra Gamma & Moisture Survey



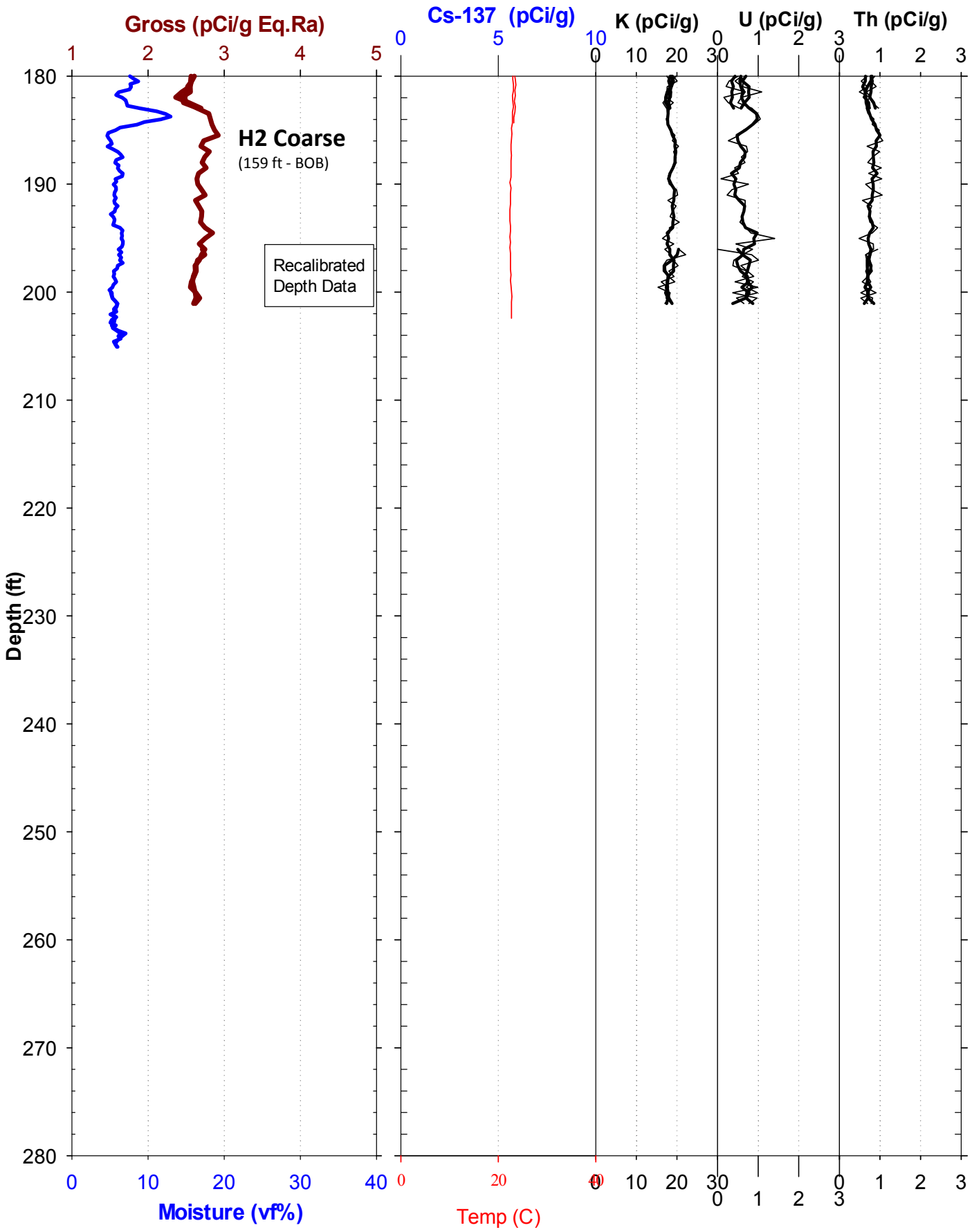
Surface Elevation:
675.36ft amsl (205.85 m)

A - C9379 - Spectra Gamma & Moisture Survey

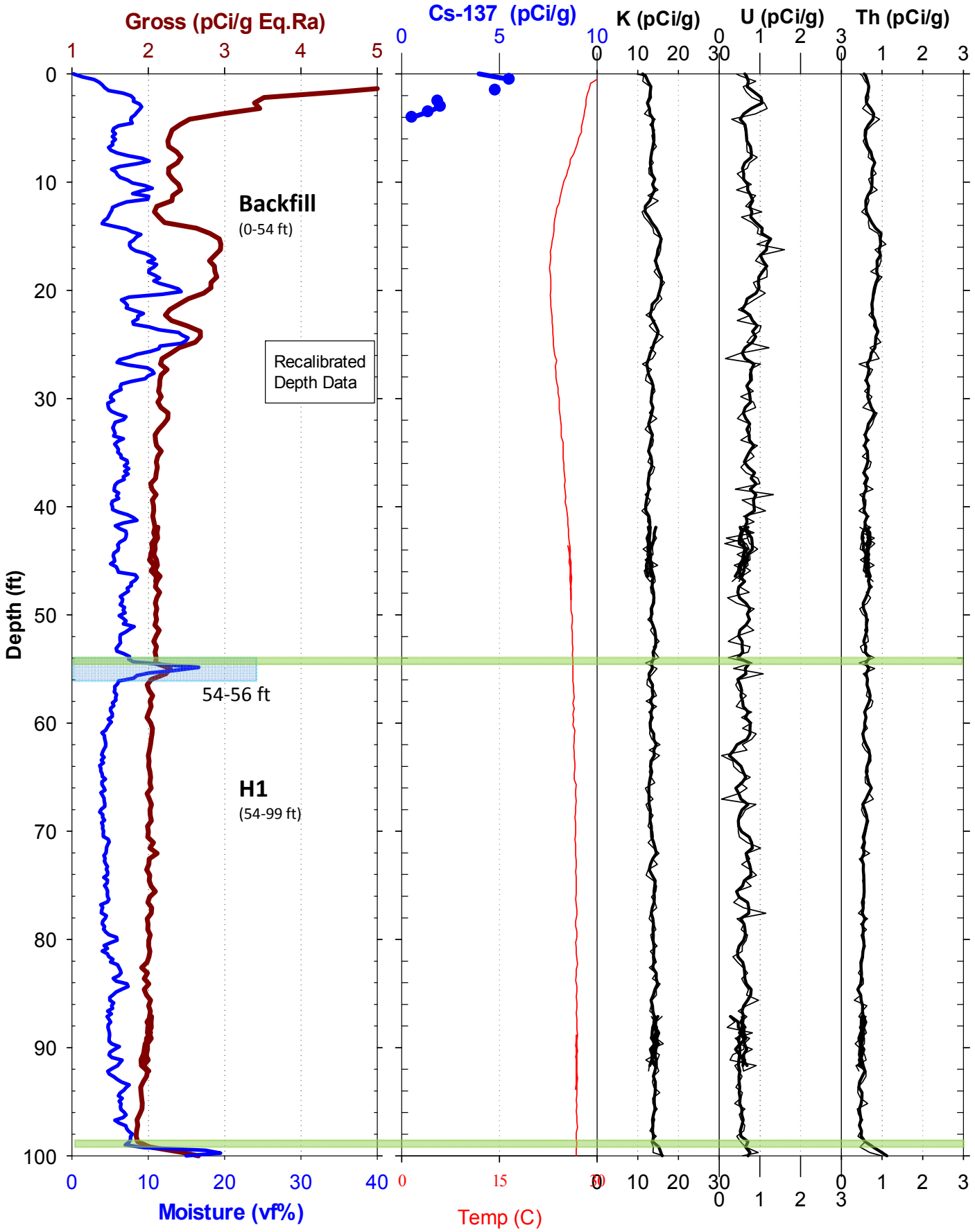


*BOB = bottom of boring

A - C9379 - Spectra Gamma & Moisture Survey

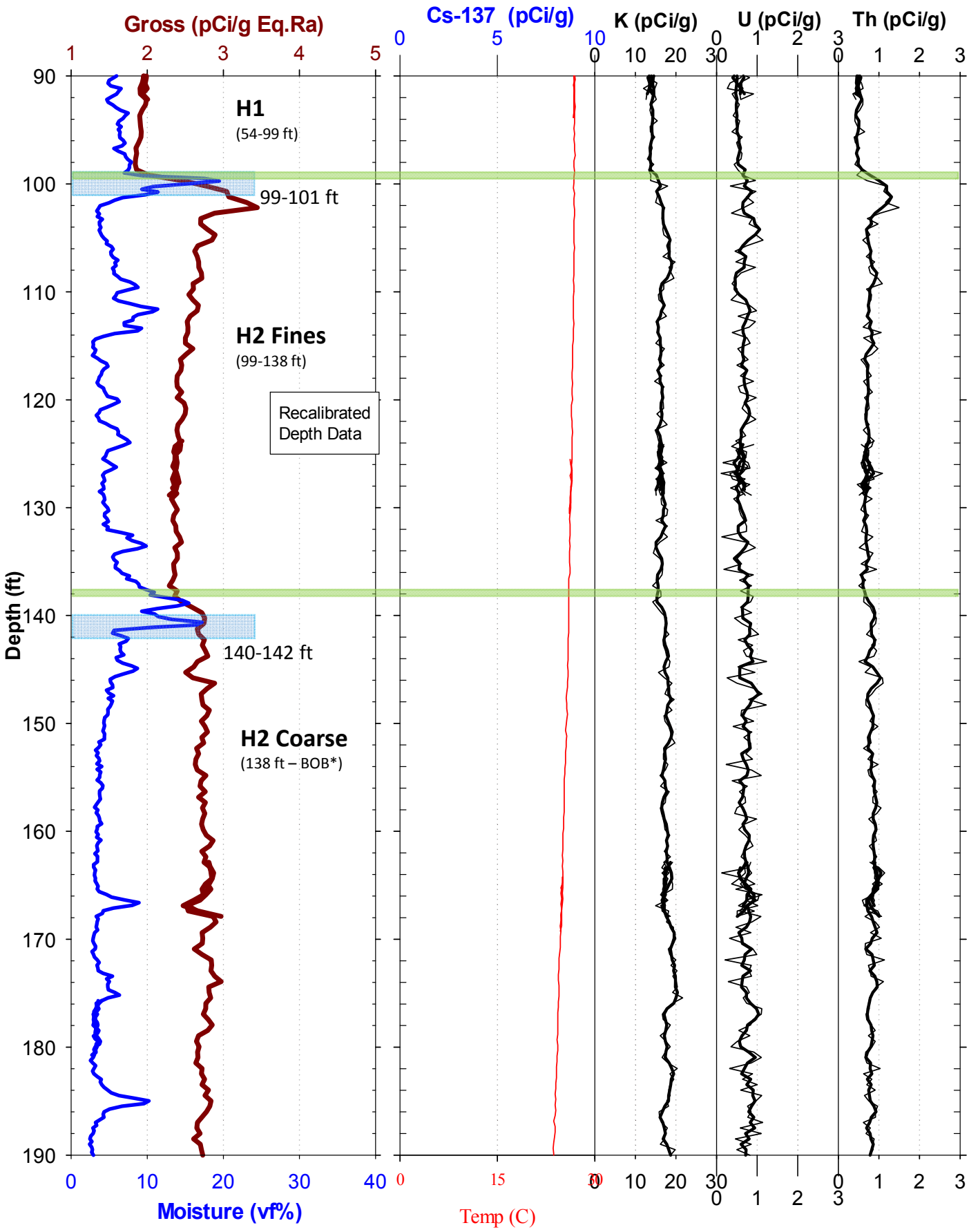


A - C9381 - Spectra Gamma & Moisture Survey



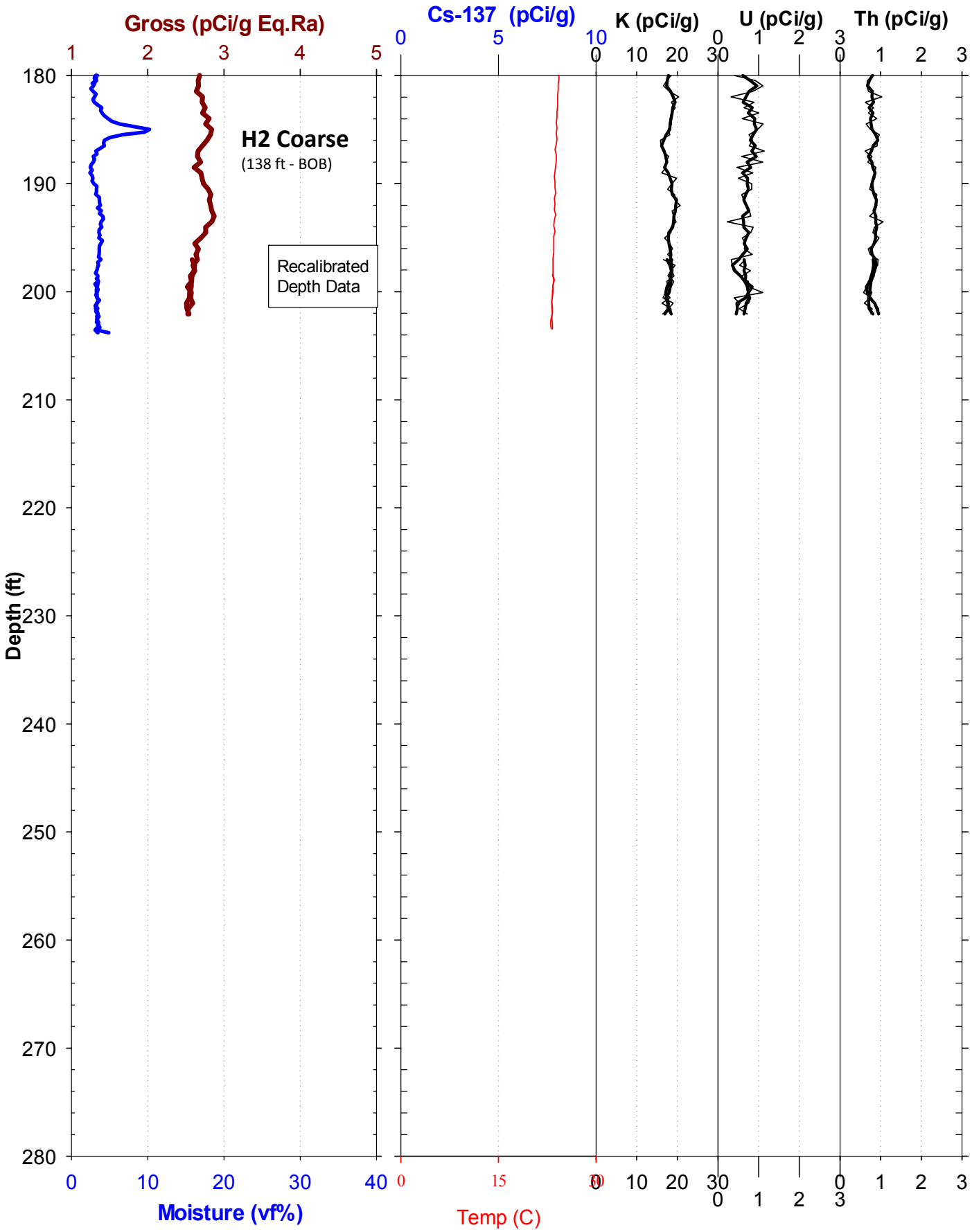
Surface Elevation:
677.85 ft amsl (206.61 m)

A - C9381 - Spectra Gamma & Moisture Survey

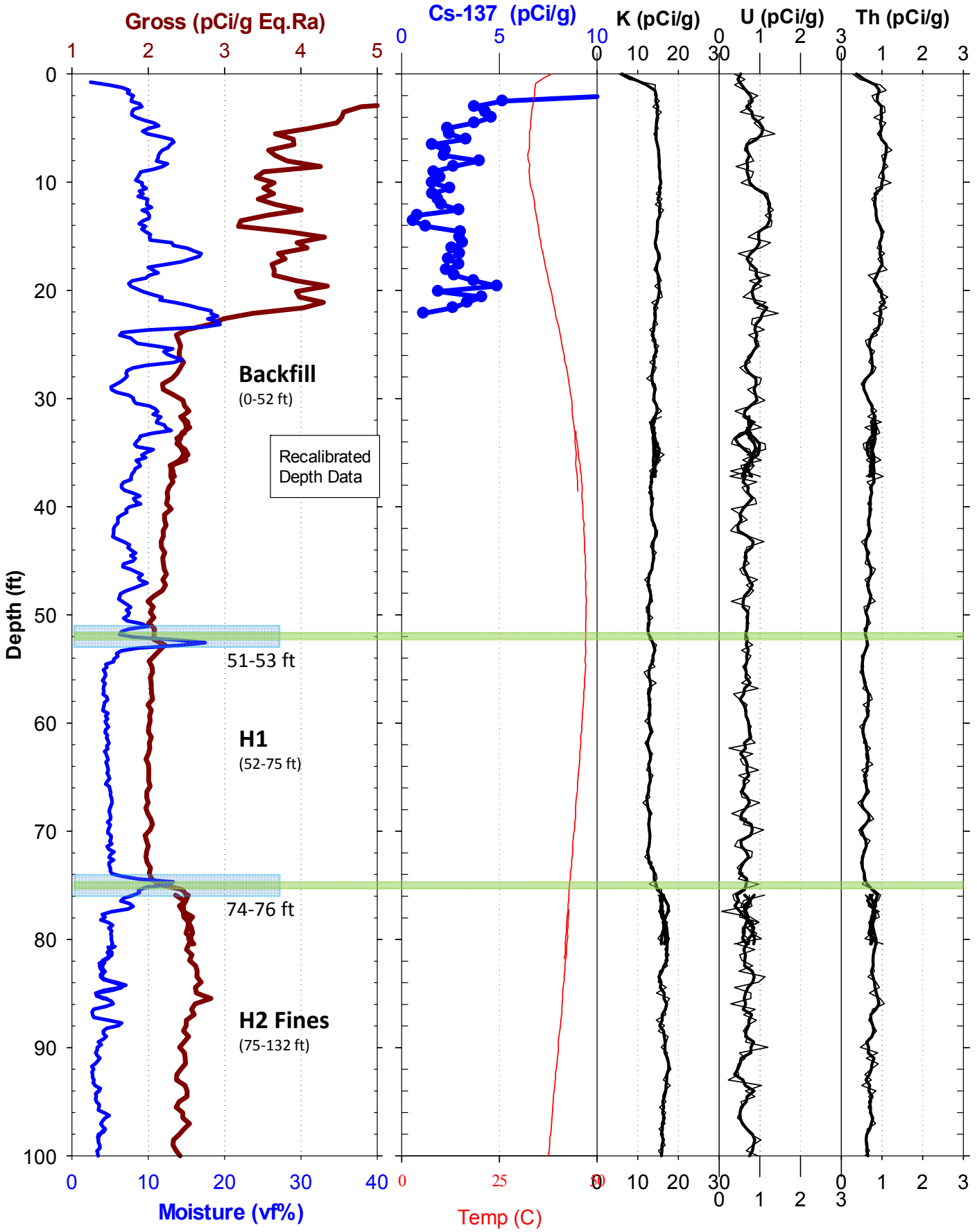


*BOB = bottom of boring

A - C9381 - Spectra Gamma & Moisture Survey

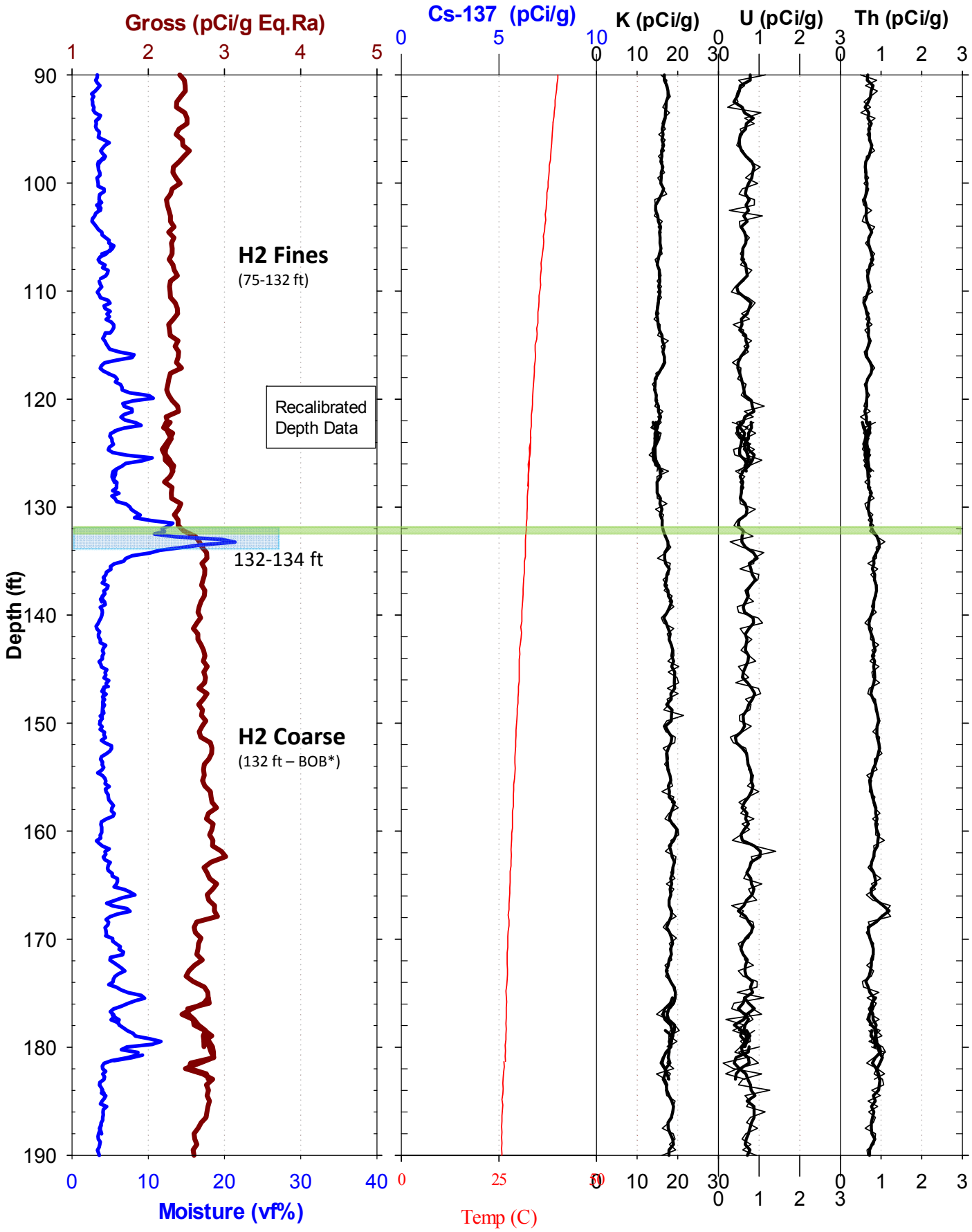


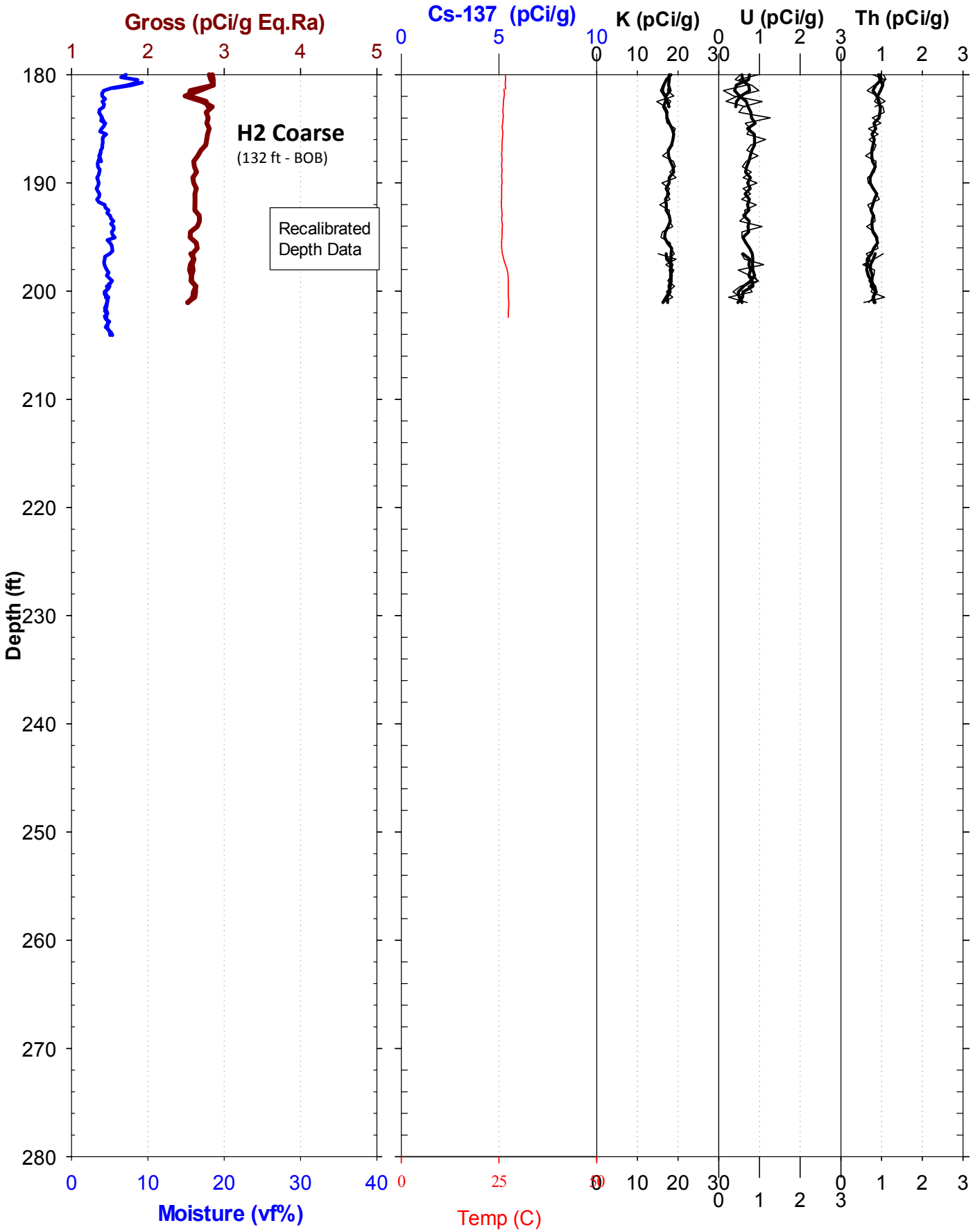
A - C9383 - Spectra Gamma & Moisture Survey



Surface Elevation:
675.98 ft amsl (206.04 m)

A - C9383 - Spectra Gamma & Moisture Survey



*BOB = bottom of boring

A - C9383 - Spectra Gamma & Moisture Survey