Appendix A

Schematics

Figure A-1—Detailed lithology of Middle-1823 ..... A-3

Figure A-2—Fence Diagram A-A′: TRA-6A to USGS-80 ..... A-4

Figure A-3—Fence Diagram B-B′: USGS-71 to USGS-80 ..... A-5

Figure A-4—Fence Diagram C-C′: USGS-71 to USGS-70 ..... A-6

Figure A-5—Fence Diagram D-D′: USGS-58 to USGS-66 ..... A-7

Figure A-6—Fence Diagram E-E′: TRA-6A to USGS-80 via TRA-5 (Disposal Well) A-8

Figure A-7—Fence Diagram F-F′: TRA-7 to USGS-80. ..... A-11

Figure A-8—Fence Diagram G-G′: TRA-8 to USGS-66. ..... A-12

Figure A-9—Fence Diagram H-H′: TRA-2 to USGS-66. ..... A-13

Figure A-10—Fence Diagram I-I′: Site-19 to USGS-80. ..... A-14

Figure A-11—Cross Section J-J′: Site-19 to ICCP-SCI-V-214[a] A-15

Figure A-12—Cross Section K-K′: MTR-Test to Middle-1823[a] A-16

Figure A-13—Cross Section L-L′: USGS-64 to USGS-84[a] A-17

Figure A-14—Cross Section M-M′: USGS-79 to NPR-WO-2[a] A-18

Figure A-15—Cross Section N-N′: Middle-1823 to NPR-WO-2[a] A-19

Figure A-16—Cross Section O-O′: NRF-7 to USGS-123[a] A-20

Figure A-17—Fence diagram of central INL wells that might penetrate the Lake Olduvai Beds A-21

Figure A-18—Alternative fence diagram of central INL wells that might penetrate deep sediments east of the flood plain. A-22

Figure A-19—Alternative fence diagram of central INL wells that might penetrate deep sediments west of the flood plain A-23

a. If viewing this report electronically, this figure will be a reduced-scale version of the printed cross section, which is approximately 4 ft × 6 ft in size.

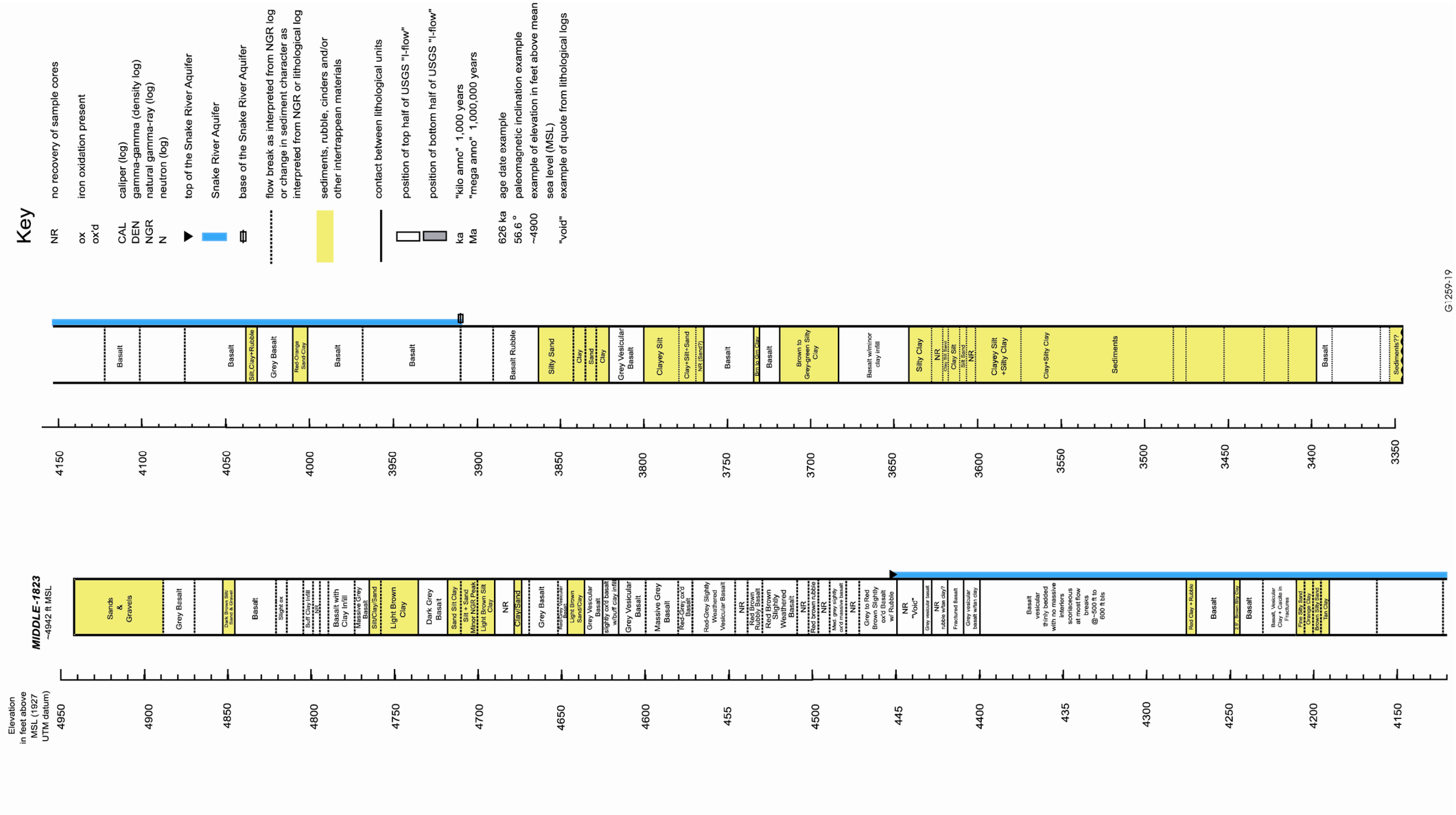


Figure A-1. Detailed lithology of Middle-1823.

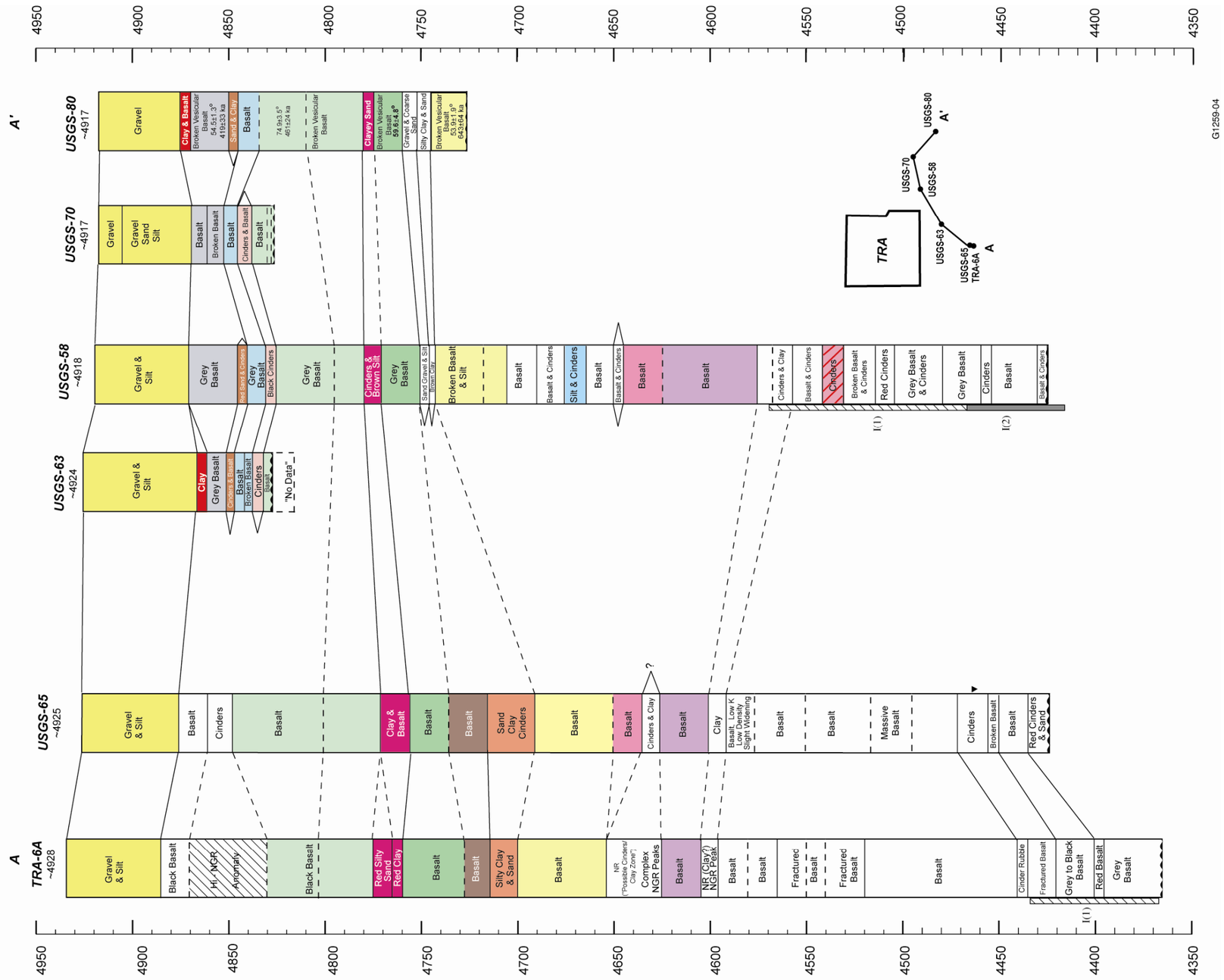


Figure A-2. Fence Diagram A-A': TRA-6A to USGS-80.

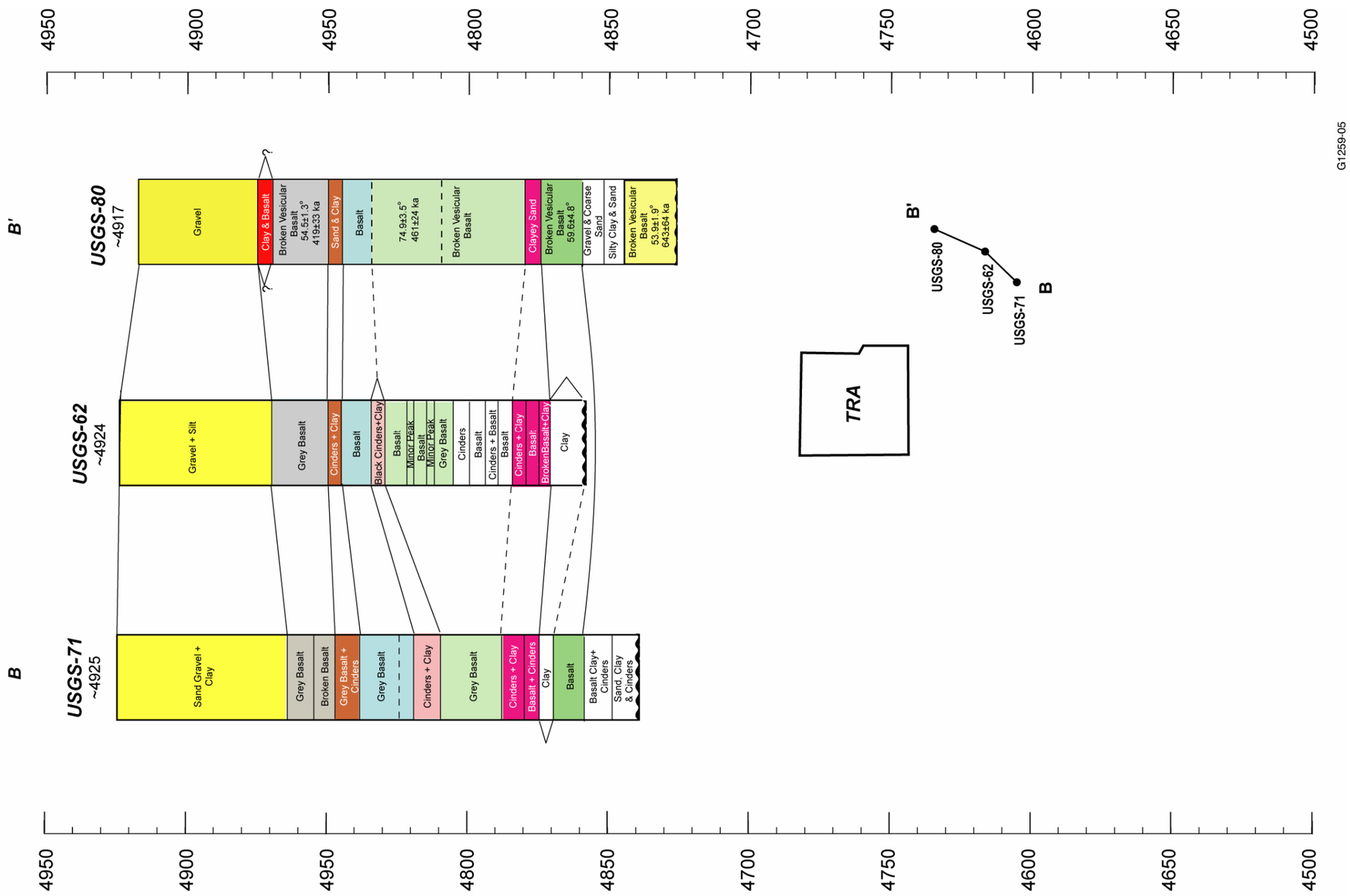


Figure A-3. Fence Diagram B-B': USGS-71 to USGS-80.

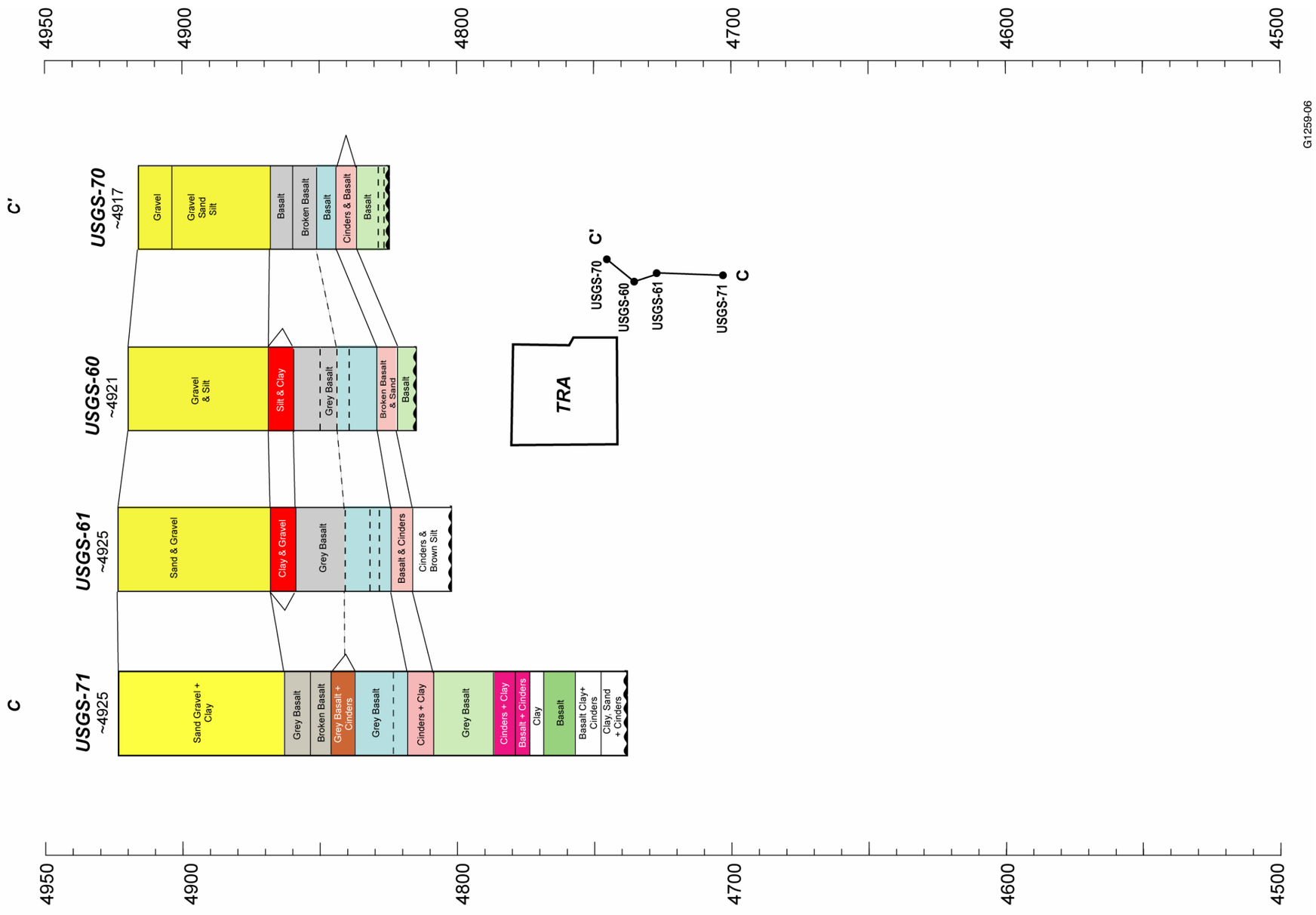


Figure A-4. Fence Diagram C-C': USGS-71 to USGS-70.

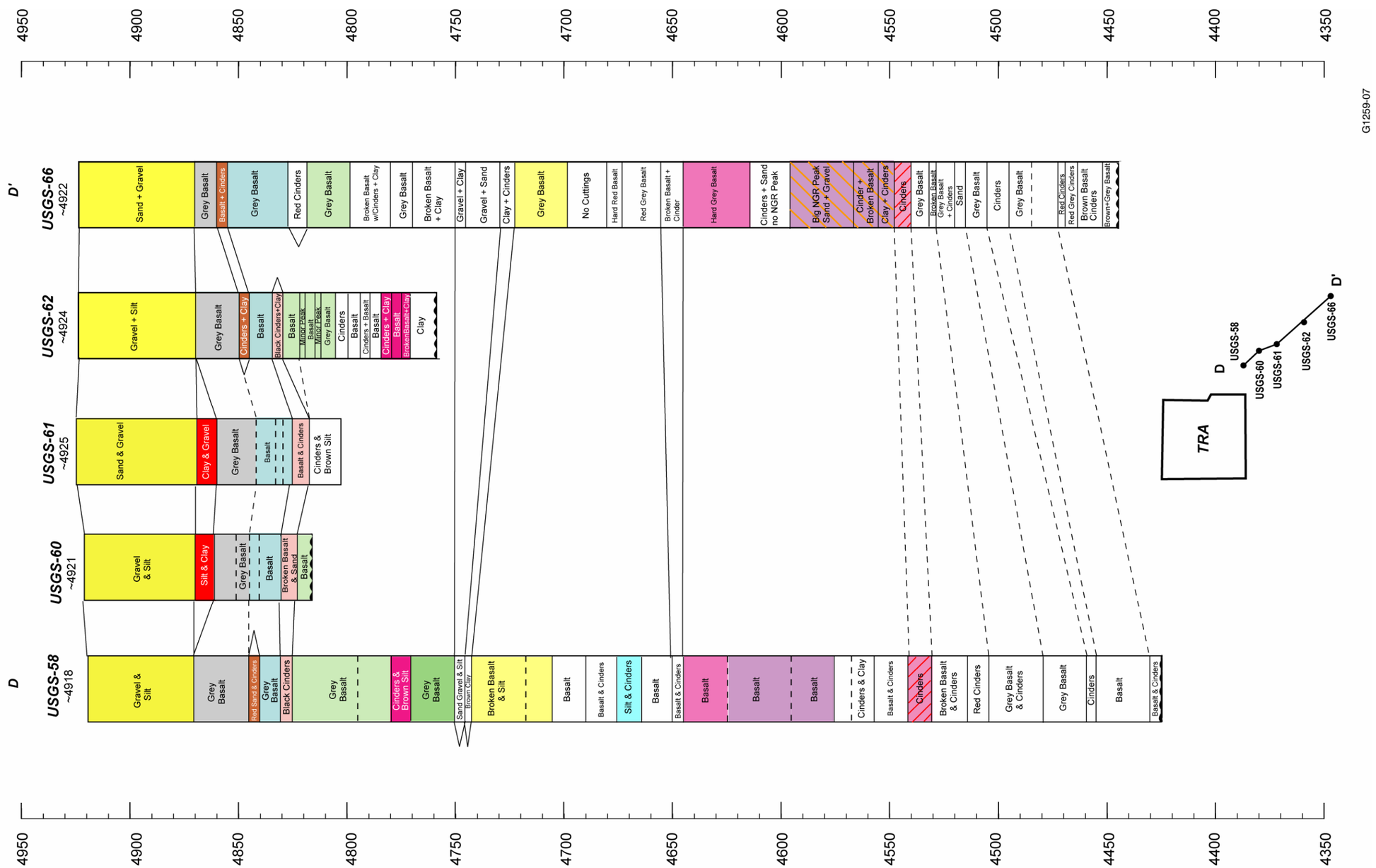


Figure A-5. Fence Diagram D-D': USGS-58 to USGS-66.

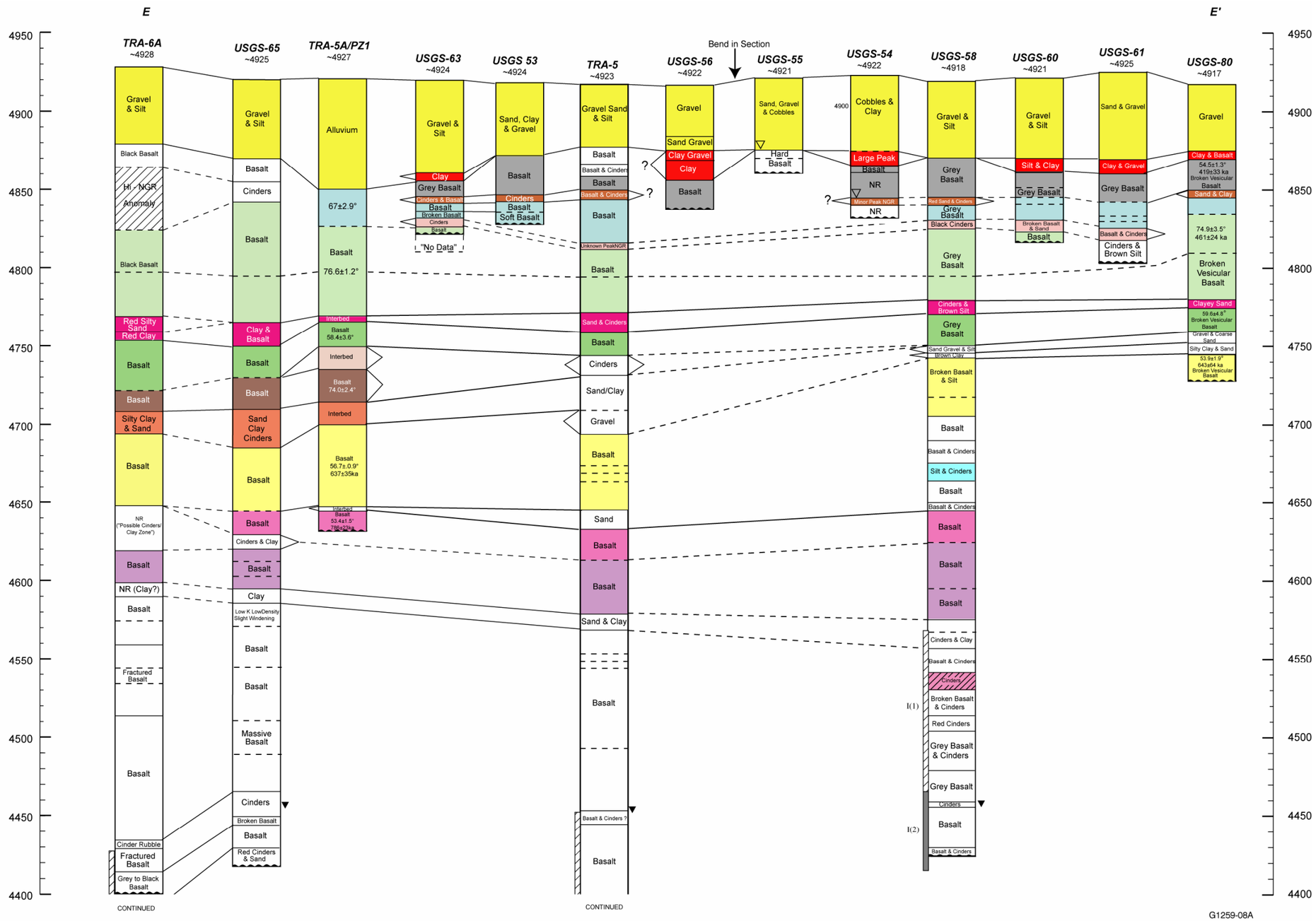


Figure A-6. Fence Diagram E-E': TRA-6A to USGS-80 via TRA-5 (Disposal Well).

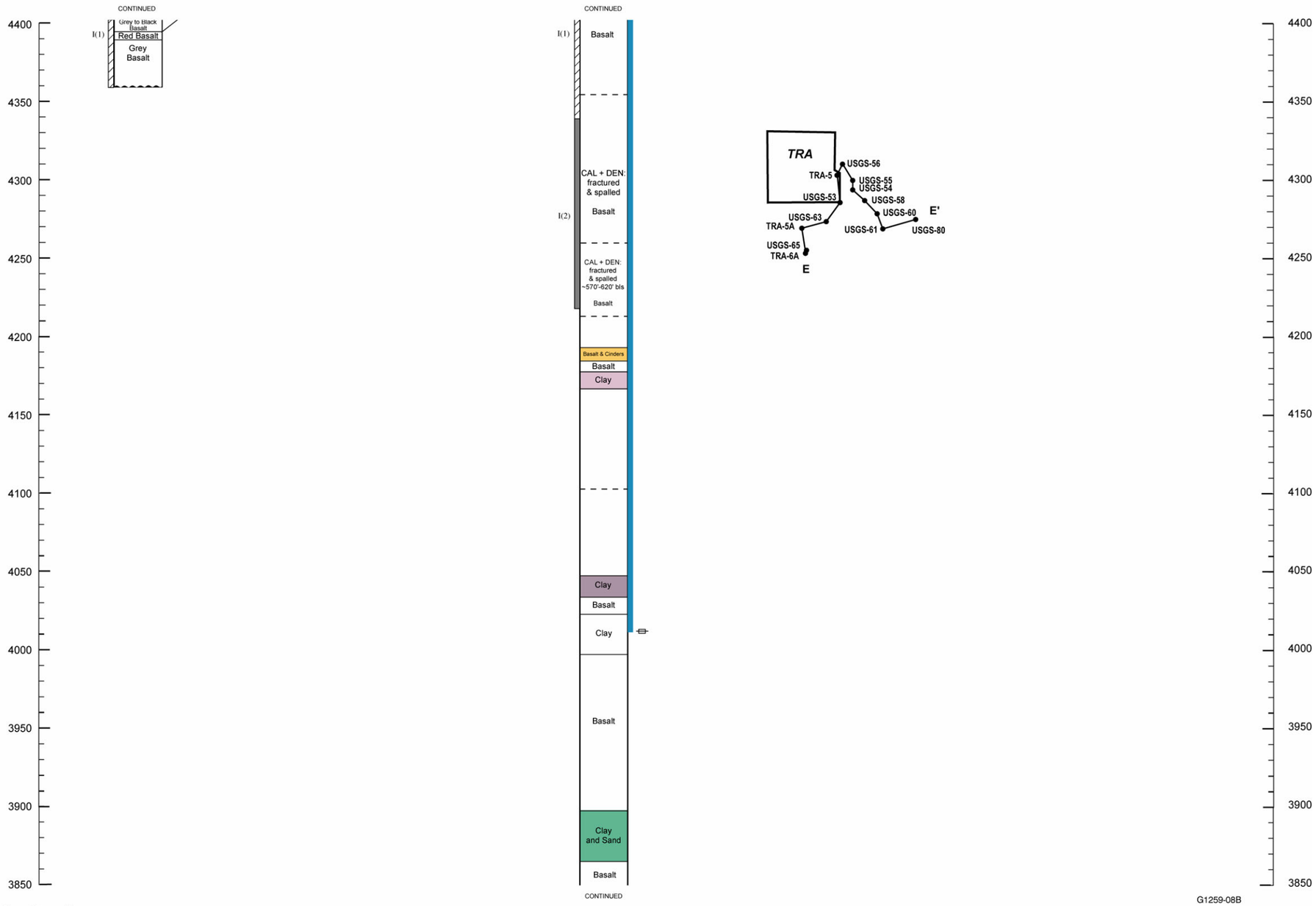


Figure A-6. (continued).

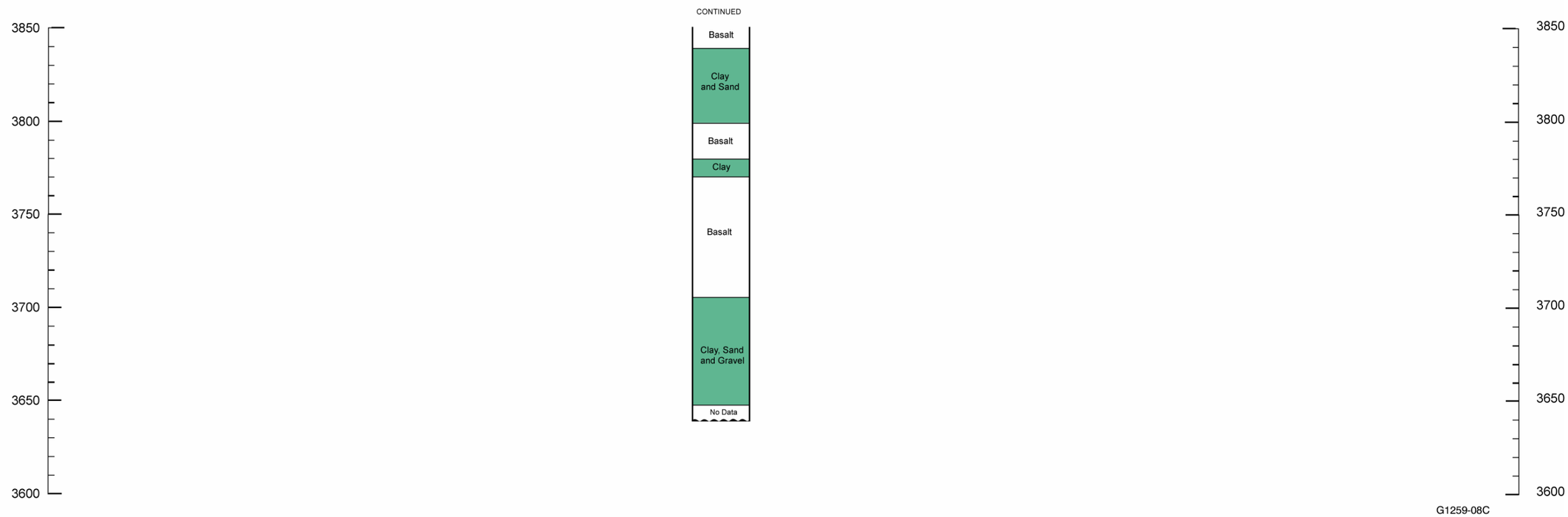


Figure A-6. (continued).

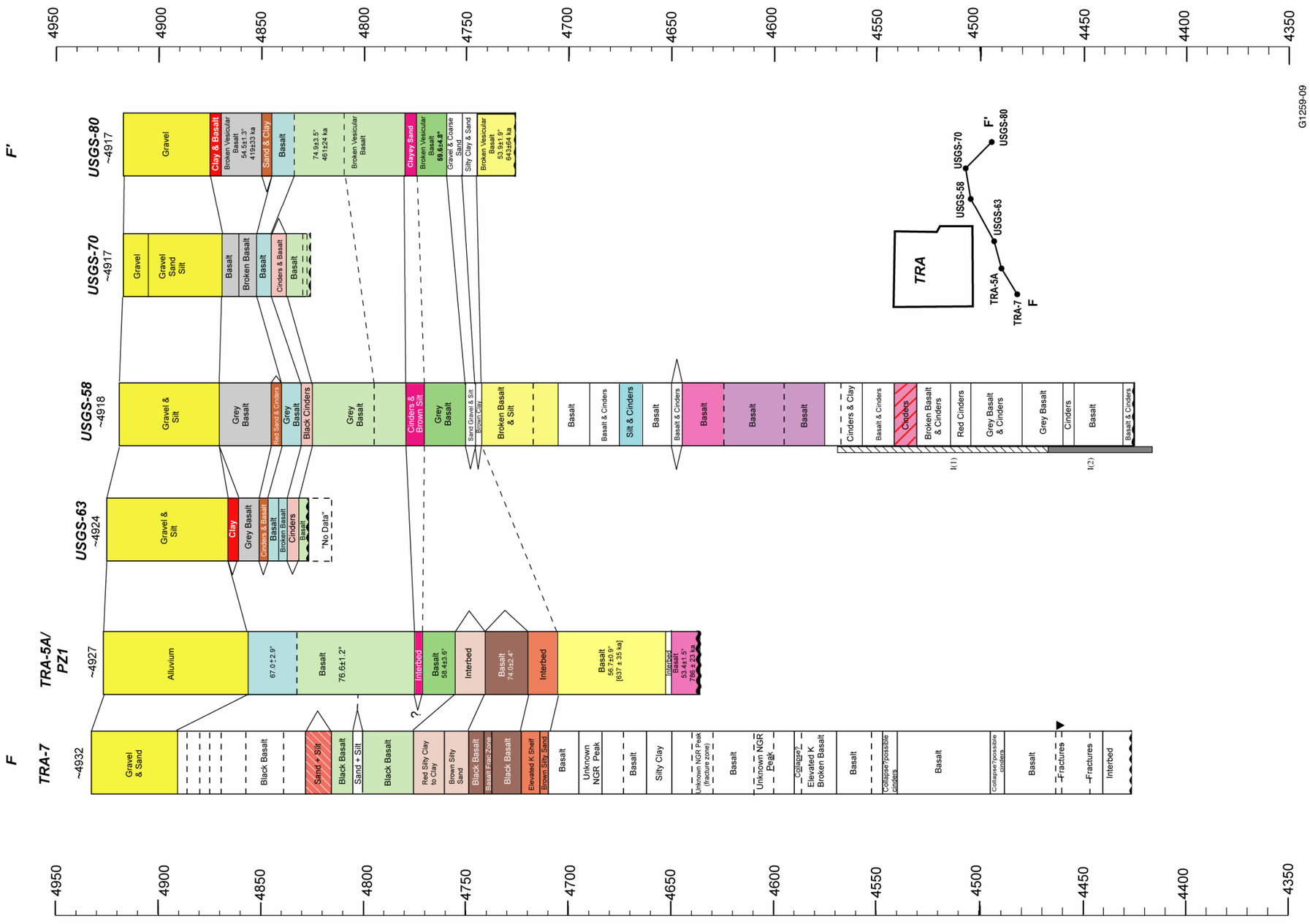


Figure A-7. Fence Diagram F-F': TRA-7 to USGS-80.

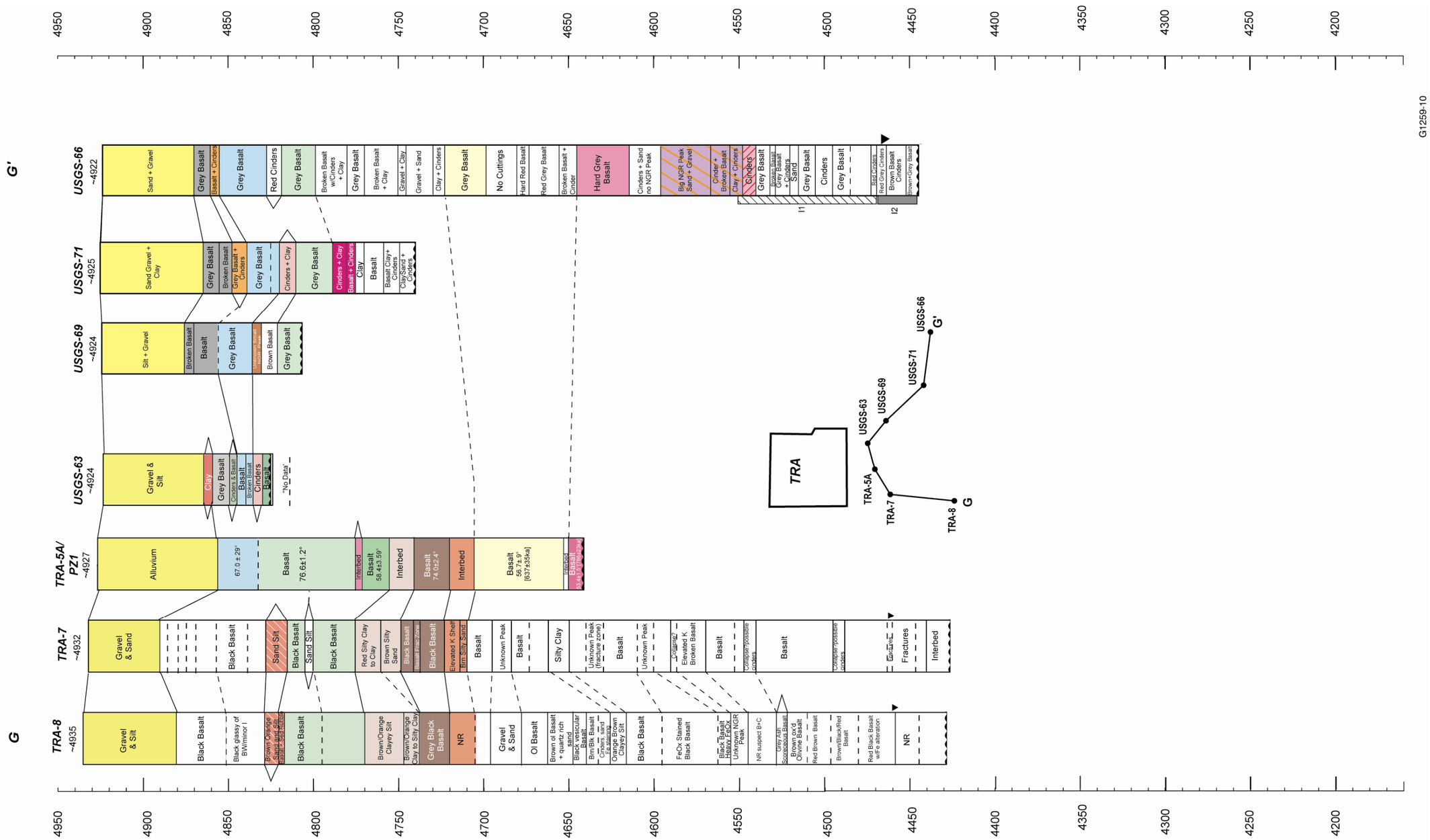


Figure A-8. Fence Diagram G-G': TRA-8 to USGS-66.

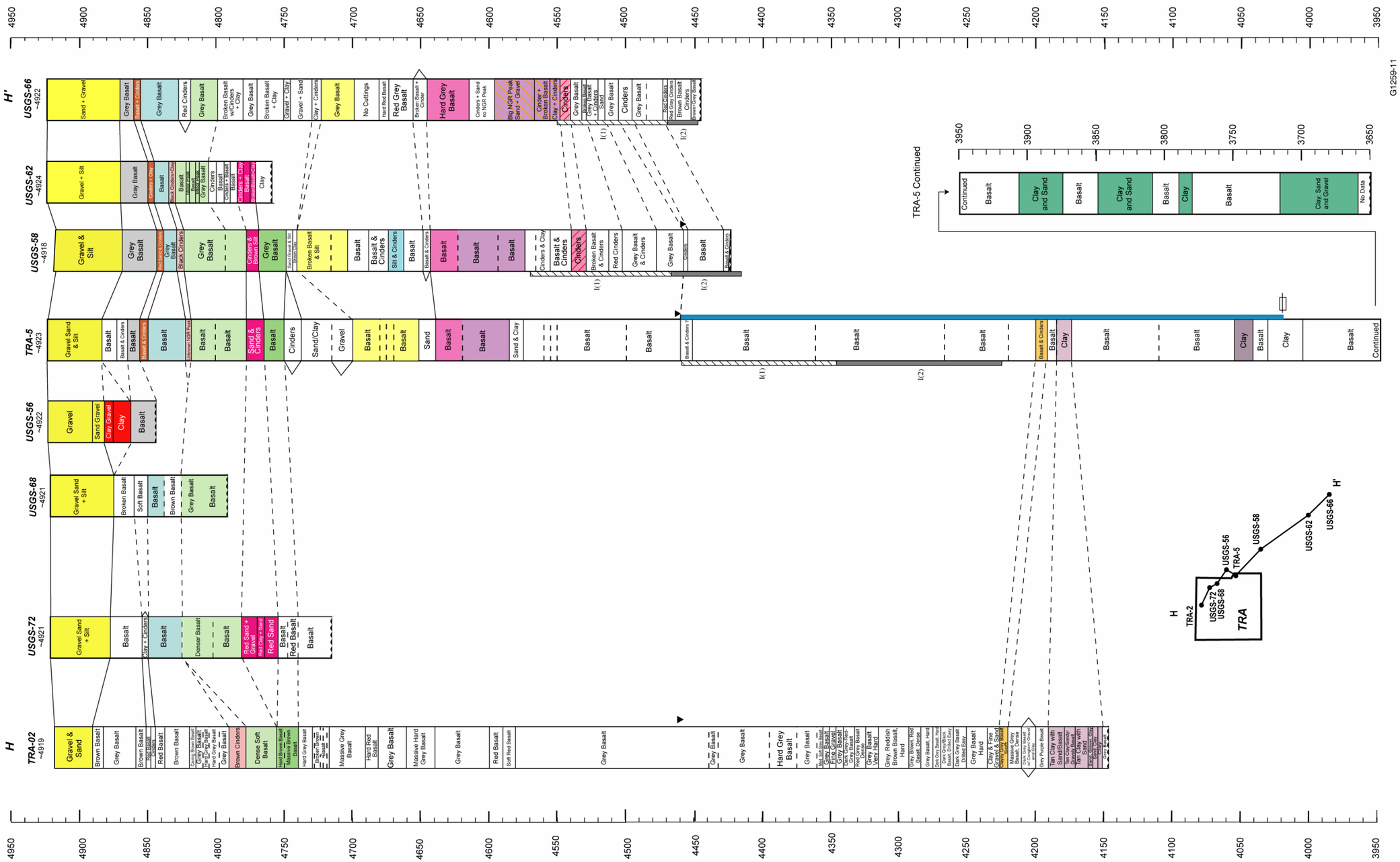


Figure A-9. Fence Diagram H-H': TRA-2 to USGS-66.

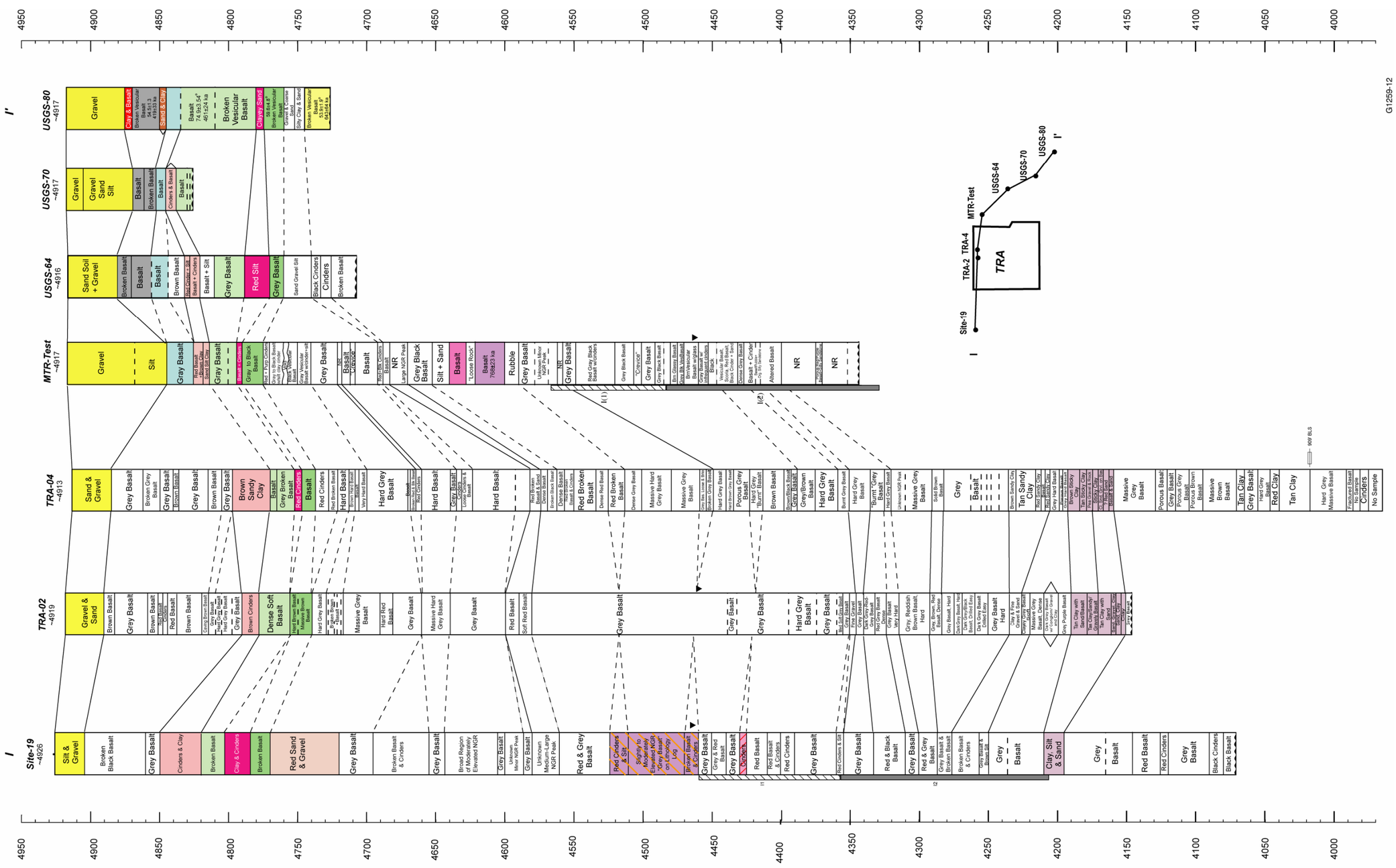


Figure A-10. Fence Diagram I-I': Site-19 to USGS-80.

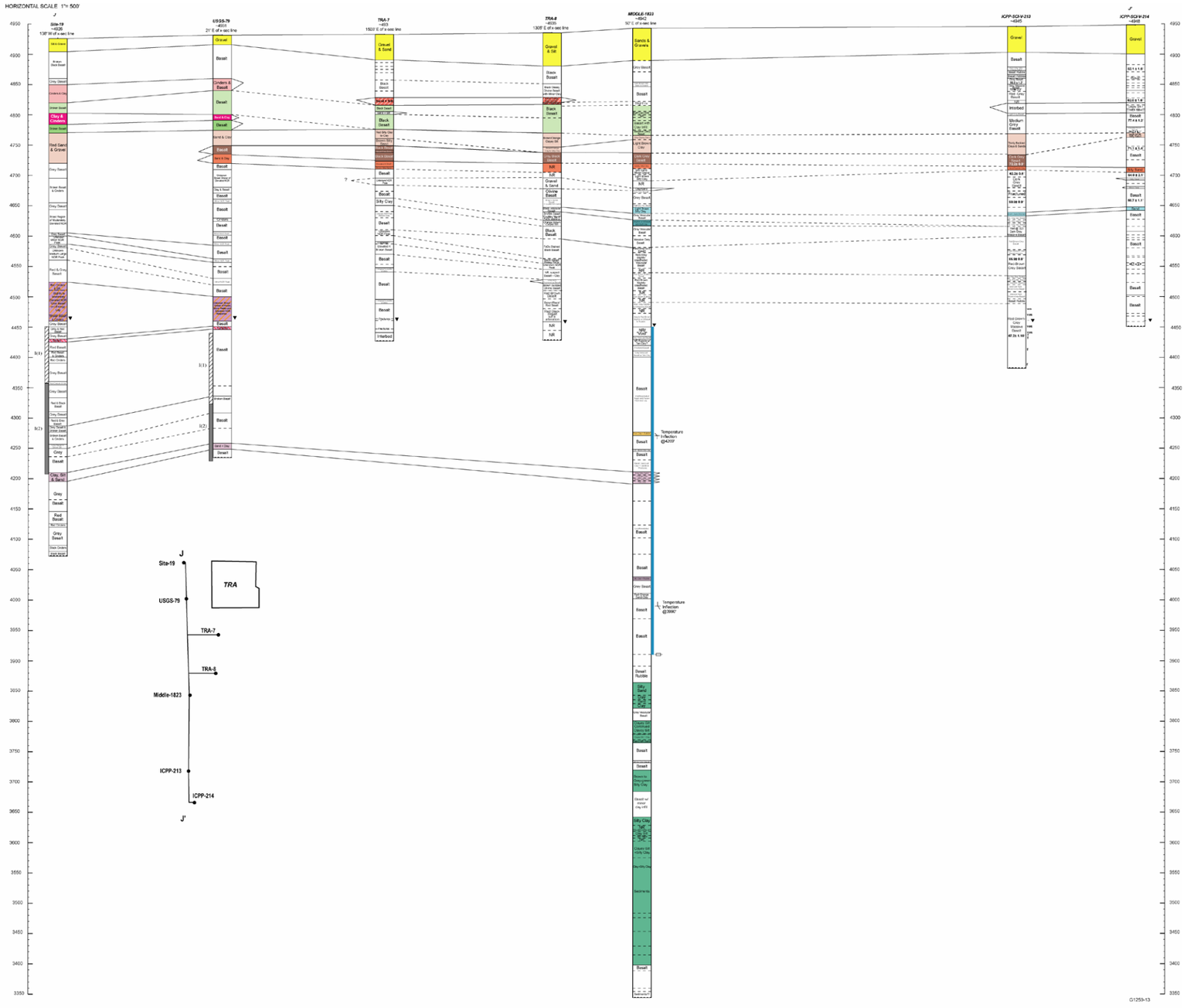


Figure A-11. Cross Section J-J'. Site-19 to ICCP-SCI-V-214.

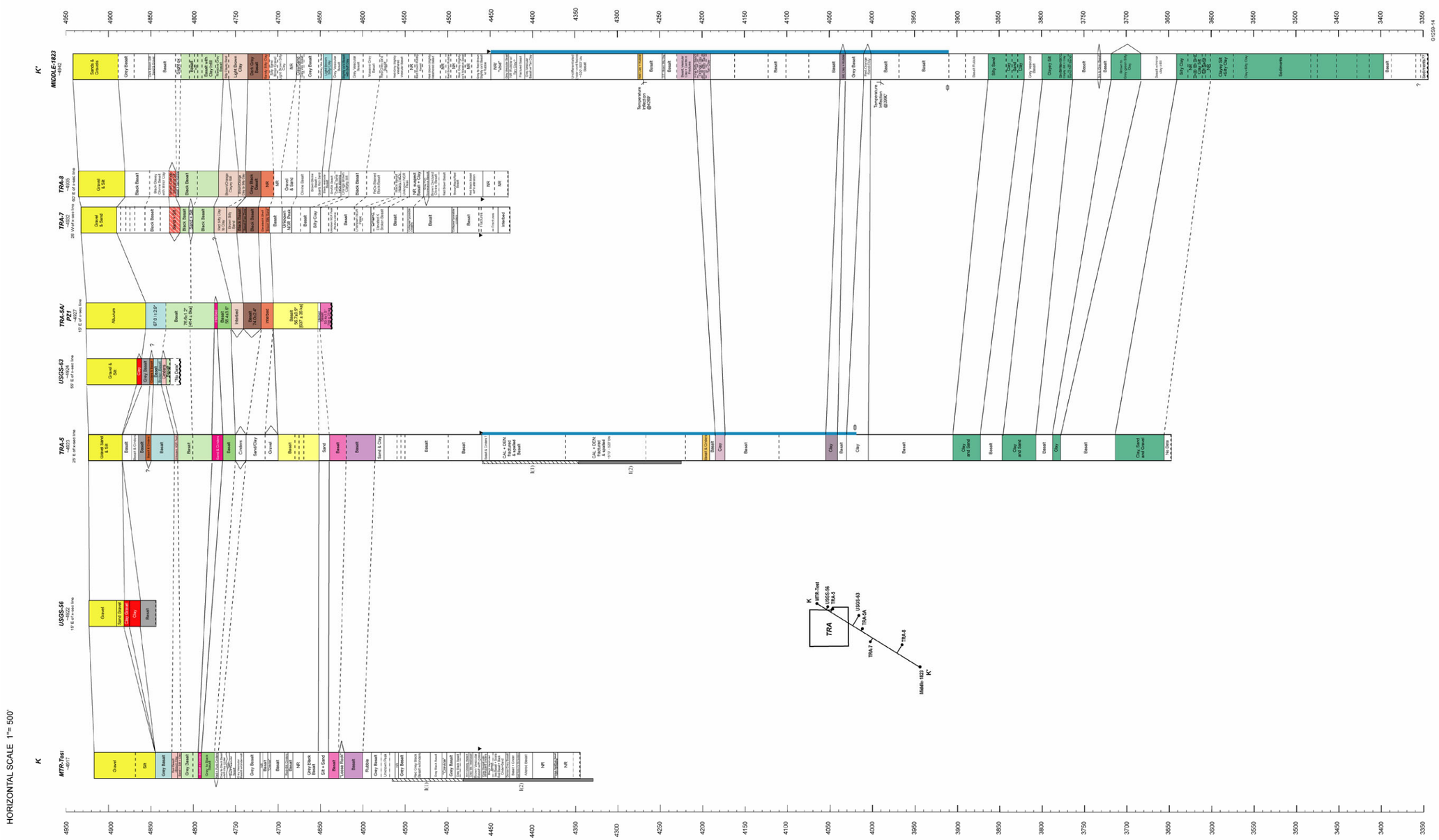


Figure A-12. Cross Section K-K': MTR-Test to Middle-1823.

HORIZONTAL SCALE 1"= 500'

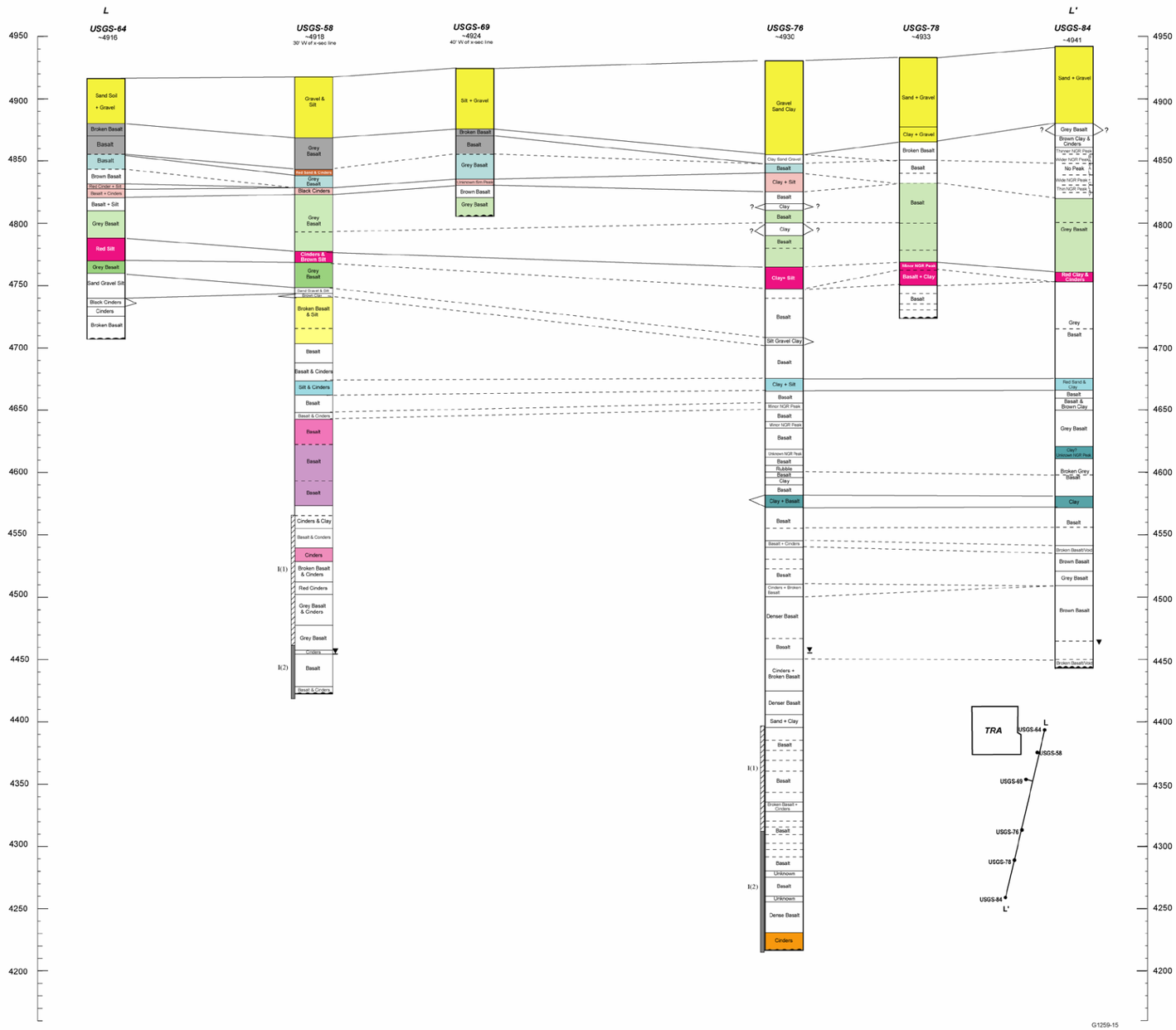


Figure A-13. Cross Section L-L': USGS-64 to USGS-84.

HORIZONTAL SCALE 1"= 500'

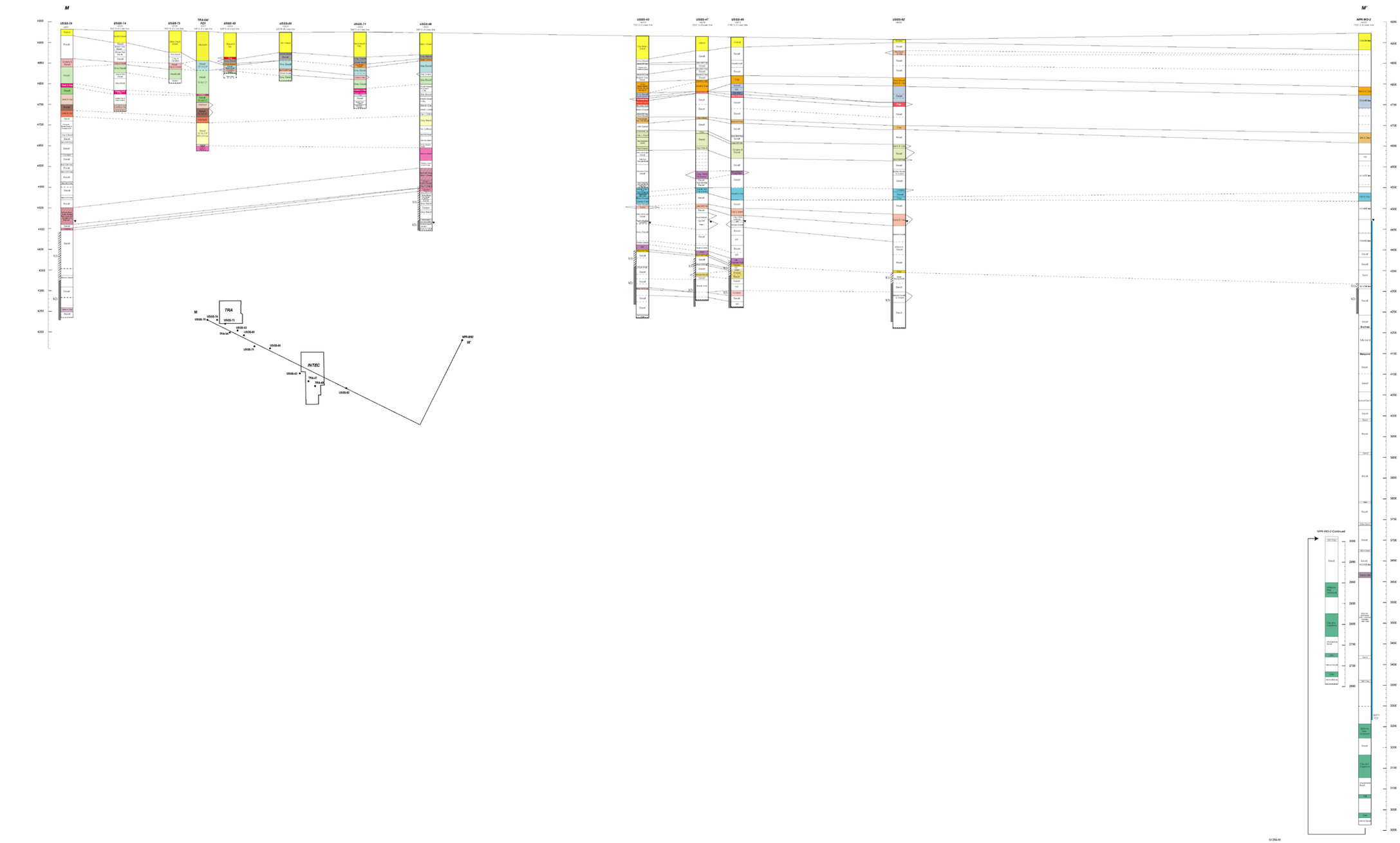


Figure A-14. Cross Section M-M': USGS-79 to NPR-WO-2.

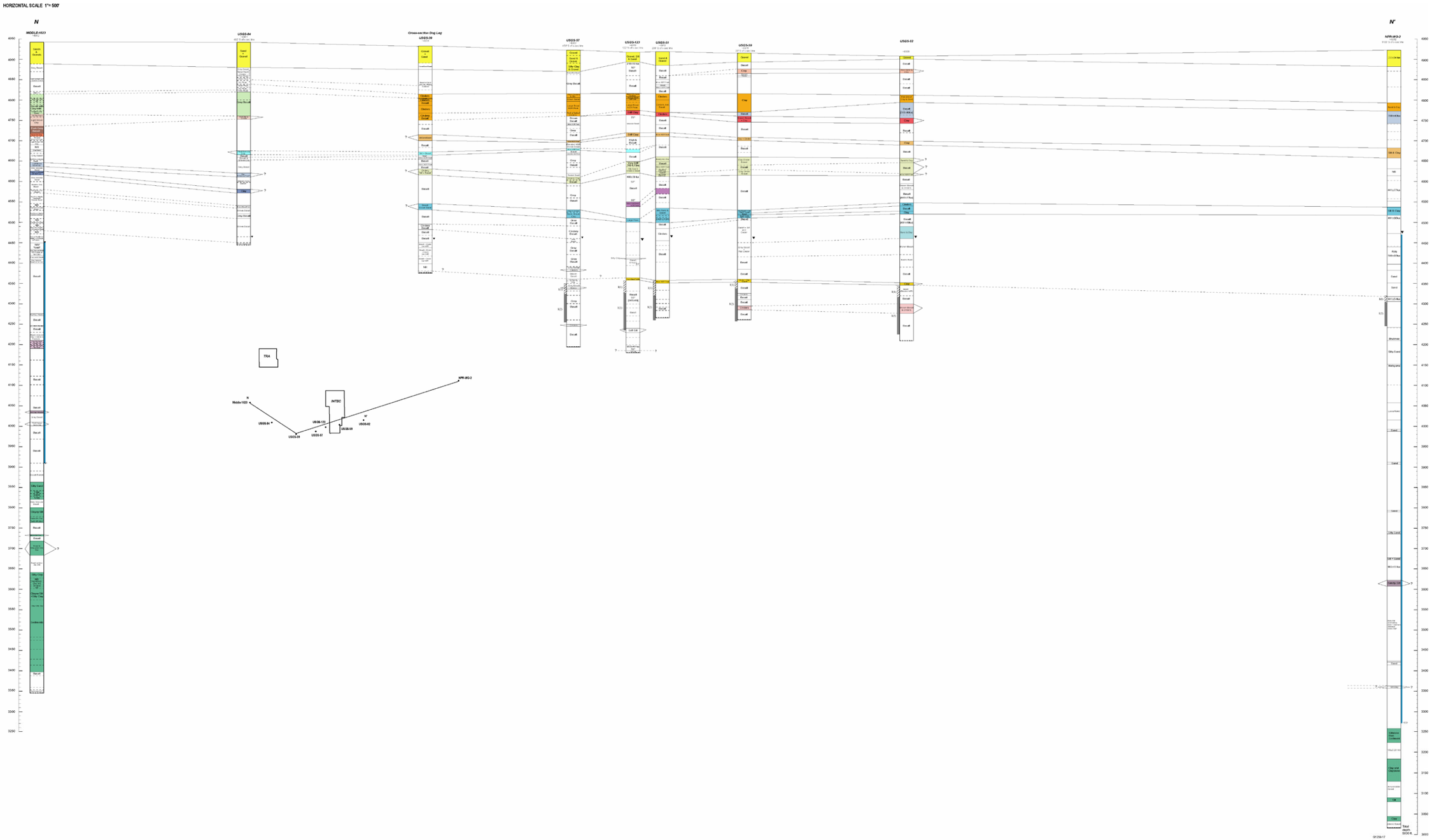


Figure A-15. Cross Section N-N': Middle-1823 to NPR-WO-2.

HORIZONTAL SCALE 1" = 1000'

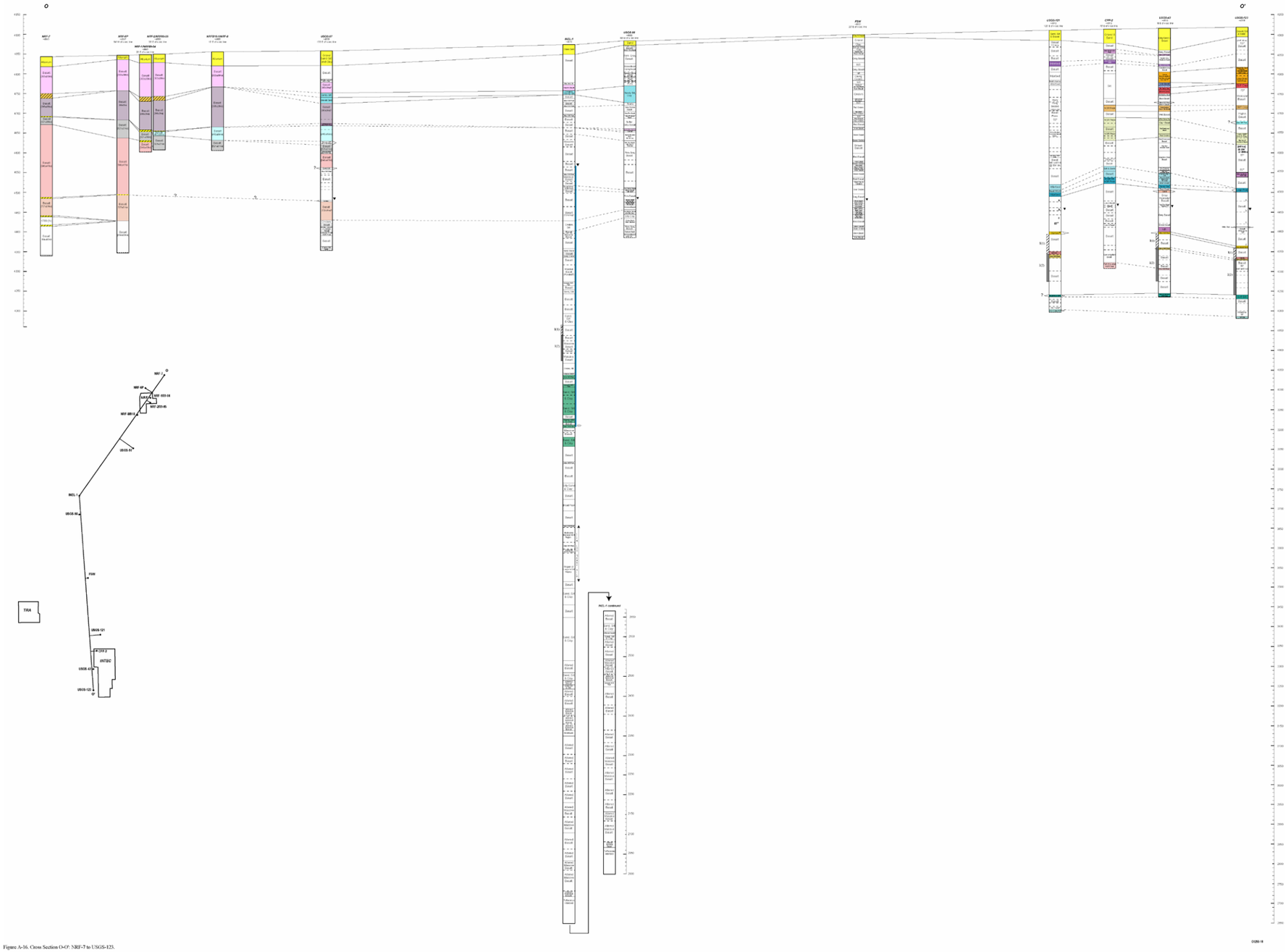
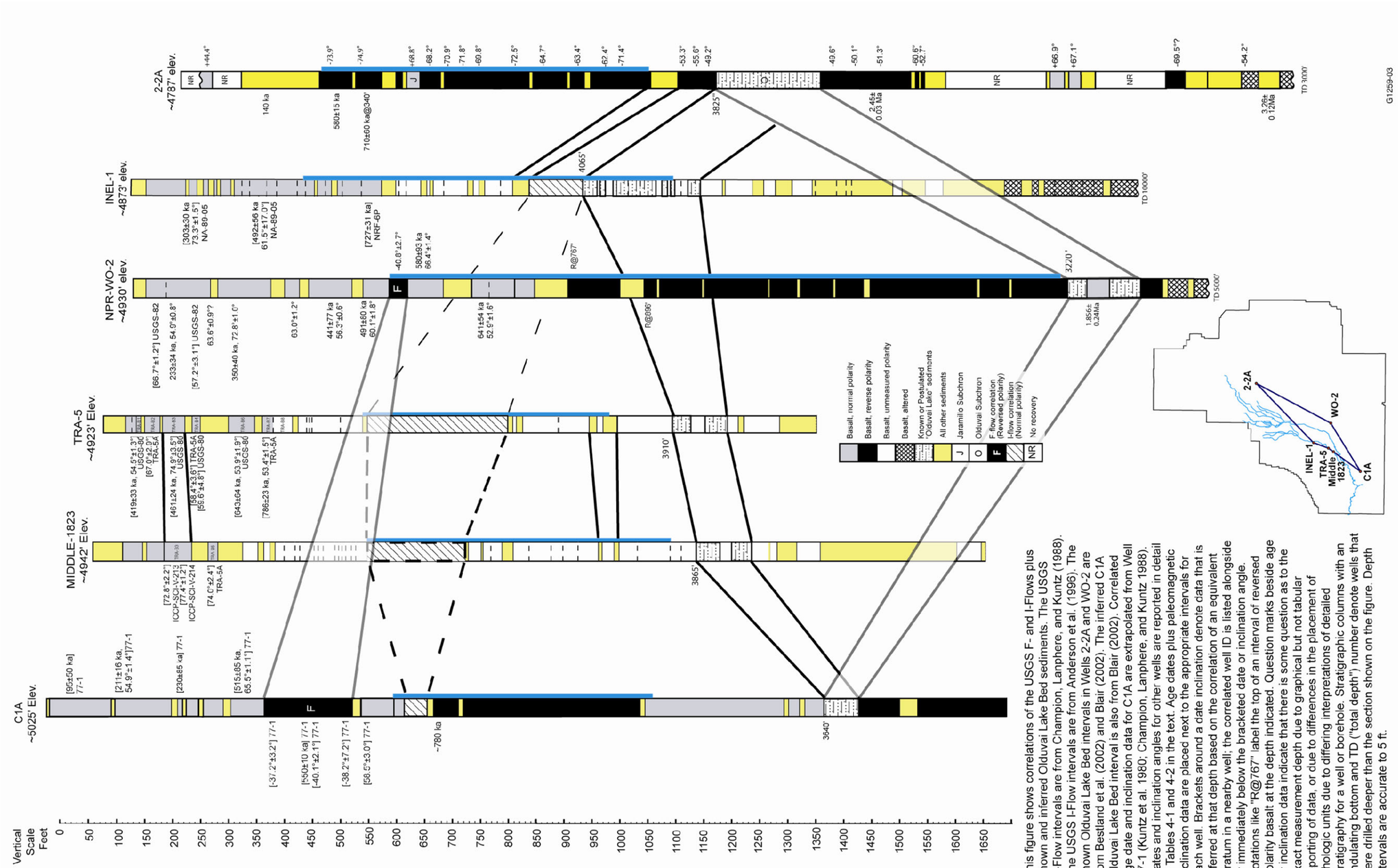


Figure A-16. Cross Section O-O': NRF-7 to USGS-123.



This figure shows correlations of the USGS F- and I-Flows plus known and inferred Olduvai Lake Bed sediments. The USGS F-Flow intervals are from Champion, Lanphere, and Kuntz (1988). The USGS I-Flow intervals are from Anderson et al. (1996). The known Olduvai Lake Bed intervals in Wells 2-2A and WO-2 are from Bestland et al. (2002) and Blair (2002). The inferred C1A Olduvai Lake Bed interval is also from Blair (2002). Correlated age date and inclination data for C1A are extrapolated from Well 77-1 (Kuntz et al. 1980; Champion, Lanphere, and Kuntz 1988). Dates and inclination angles for other wells are reported in detail in Tables 4-1 and 4-2 in the text. Age dates plus paleomagnetic inclination data are placed next to the appropriate intervals for each well. Brackets around a date inclination denote data that is inferred at that depth based on the correlation of an equivalent stratum in a nearby well; the correlated well ID is listed alongside or immediately below the bracketed date or inclination angle. Notations like "R@767" label the top of an interval of reversed polarity basalt at the depth indicated. Question marks beside age or inclination data indicate that there is some question as to the exact measurement depth due to graphical but not tabular reporting of data, or due to differences in the placement of lithologic units due to differing interpretations of detailed stratigraphy for a well or borehole. Stratigraphic columns with an undulating bottom and TD ("total depth") number denote wells that were drilled deeper than the section shown on the figure. Depth intervals are accurate to 5 ft.

Figure A-17. Fence diagram of central INL wells that might penetrate the Lake Olduvai Beds.

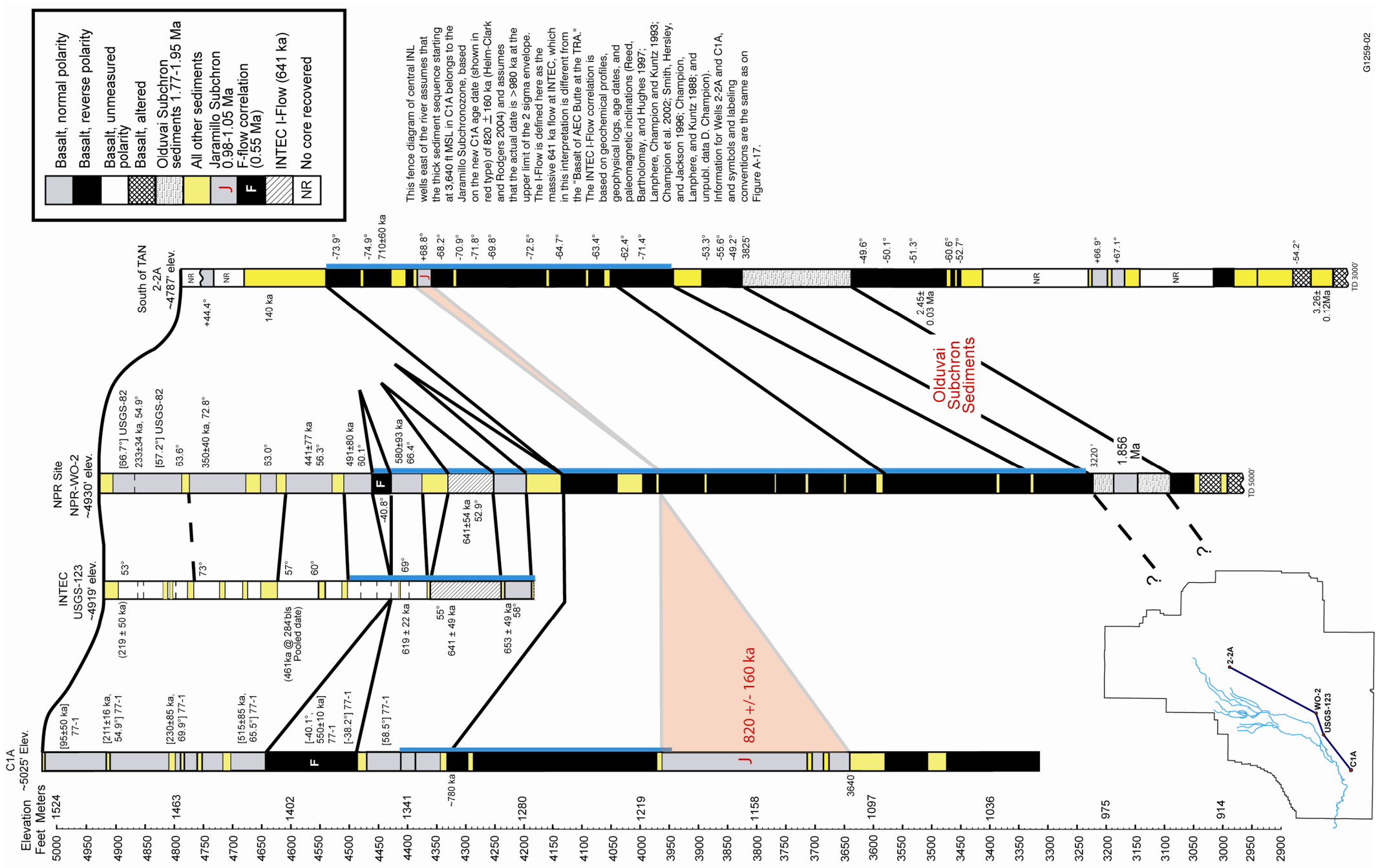
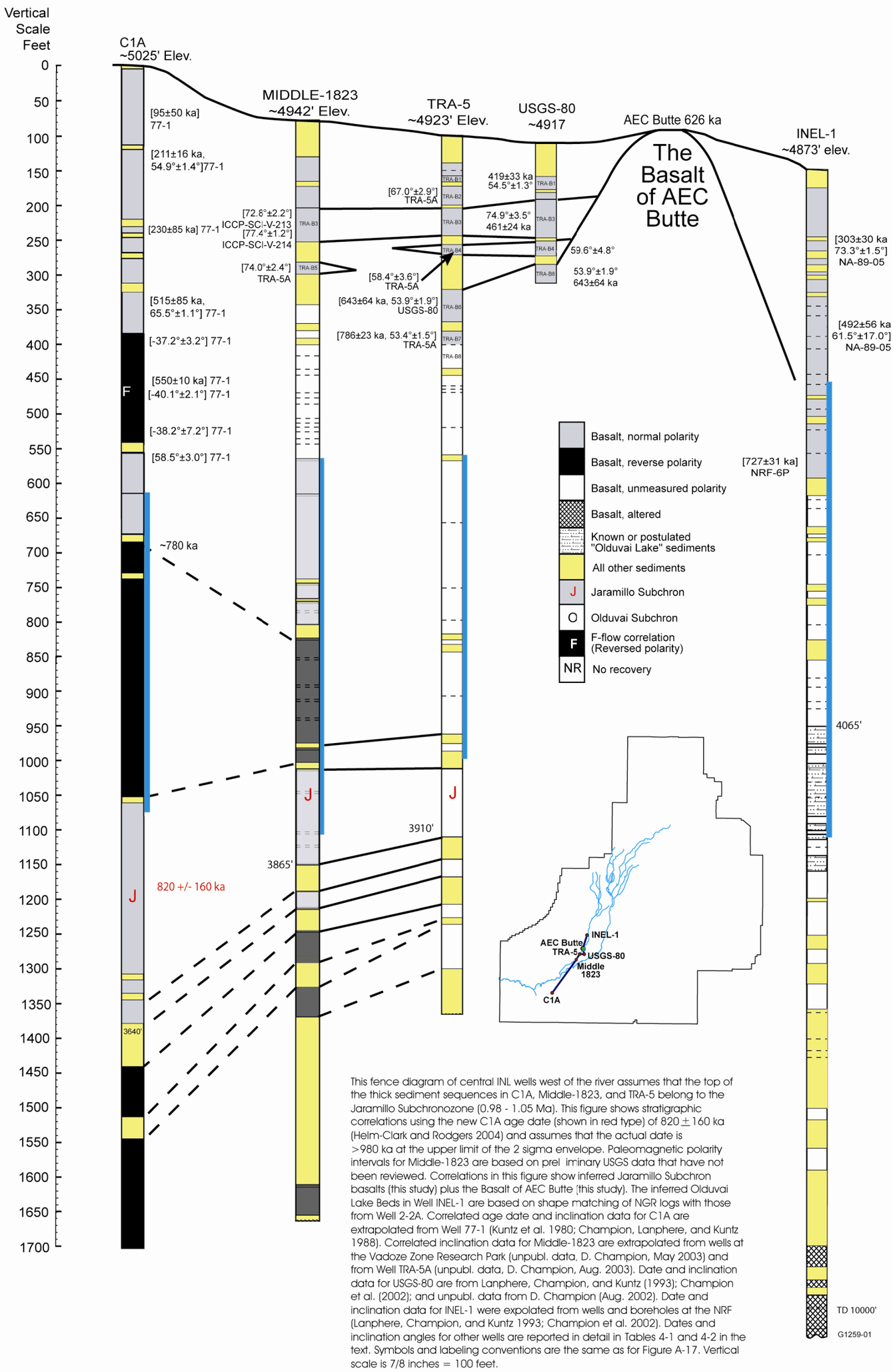


Figure A-18. Alternative fence diagram of central INL wells that might penetrate deep sediments east of the flood plain.



This fence diagram of central INL wells west of the river assumes that the top of the thick sediment sequences in C1A, Middle-1823, and TRA-5 belong to the Jaramillo Subchronozone (0.98 - 1.05 Ma). This figure shows stratigraphic correlations using the new C1A age date (shown in red type) of 820 ± 160 ka (Helm-Clark and Rodgers 2004) and assumes that the actual date is >980 ka at the upper limit of the 2 sigma envelope. Paleomagnetic polarity intervals for Middle-1823 are based on prel iminary USGS data that have not been reviewed. Correlations in this figure show inferred Jaramillo Subchron basalts (this study) plus the Basalt of AEC Butte (this study). The inferred Olduvai Lake Beds in Well INEL-1 are based on shape matching of NGR logs with those from Well 2-2A. Correlated age date and inclination data for C1A are extrapolated from Well 77-1 (Kuntz et al. 1980; Champion, Lanphere, and Kuntz 1988). Correlated inclination data for Middle-1823 are extrapolated from wells at the Vadoze Zone Research Park (unpubl. data, D. Champion, May 2003) and from Well TRA-5A (unpubl. data, D. Champion, Aug. 2003). Date and inclination data for USGS-80 are from Lanphere, Champion, and Kuntz (1993); Champion et al. (2002); and unpubl. data from D. Champion (Aug. 2002). Date and inclination data for INEL-1 were expolated from wells and boreholes at the NRF (Lanphere, Champion, and Kuntz 1993; Champion et al. 2002). Dates and inclination angles for other wells are reported in detail in Tables 4-1 and 4-2 in the text. Symbols and labeling conventions are the same as for Figure A-17. Vertical scale is 7/8 inches = 100 feet.

Figure A-19. Alternative fence diagram of central INL wells that might penetrate deep sediments west of the flood plain.