U.S. Department of the Interior

Geological Survey

# Selected Chemical Composition of the C Coal Bed, Emery Coal Field, Utah

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## Introduction

The C coal bed, Ferron Sandstone Member of the Mancos Shale (Upper Cretaceous), is located in the Emery Coal Field of central Utah. Previous work indicated that the C coal peat swamp probably formed in a deltaic setting on the western shoreline of the Interior Cretaceous Seaway (Ryer, 1981a).

Members of the U.S. Geological Survey Quitchupah Project drilled 14 cores in the C coal bed (fig. 1), for the purpose of relating the depositional setting of the coal bed to lateral variations in coal petrography, palynology, and coal geochemistry (Ryer, 1981b). Descriptions of the cores are available in the U.S. Geological Survey Open-File Report 81-460 (Ryer, 1981b). The cores were drilled in a NNE trend that approximately paralleled the structural strike of the study area (Ryer, 1981b). The landward direction of the deltaic paleoenvironment is represented by the southwestern edge of the drilled area, and the seaward direction is represented by the northeastern edge (Ryer, 1981b). Each core was divided into coal and rock samples based on macroscopic characteristics.

## Methods

This paper summarizes the chemical data available for 243 coal and rock samples in the C coal bed. The samples were

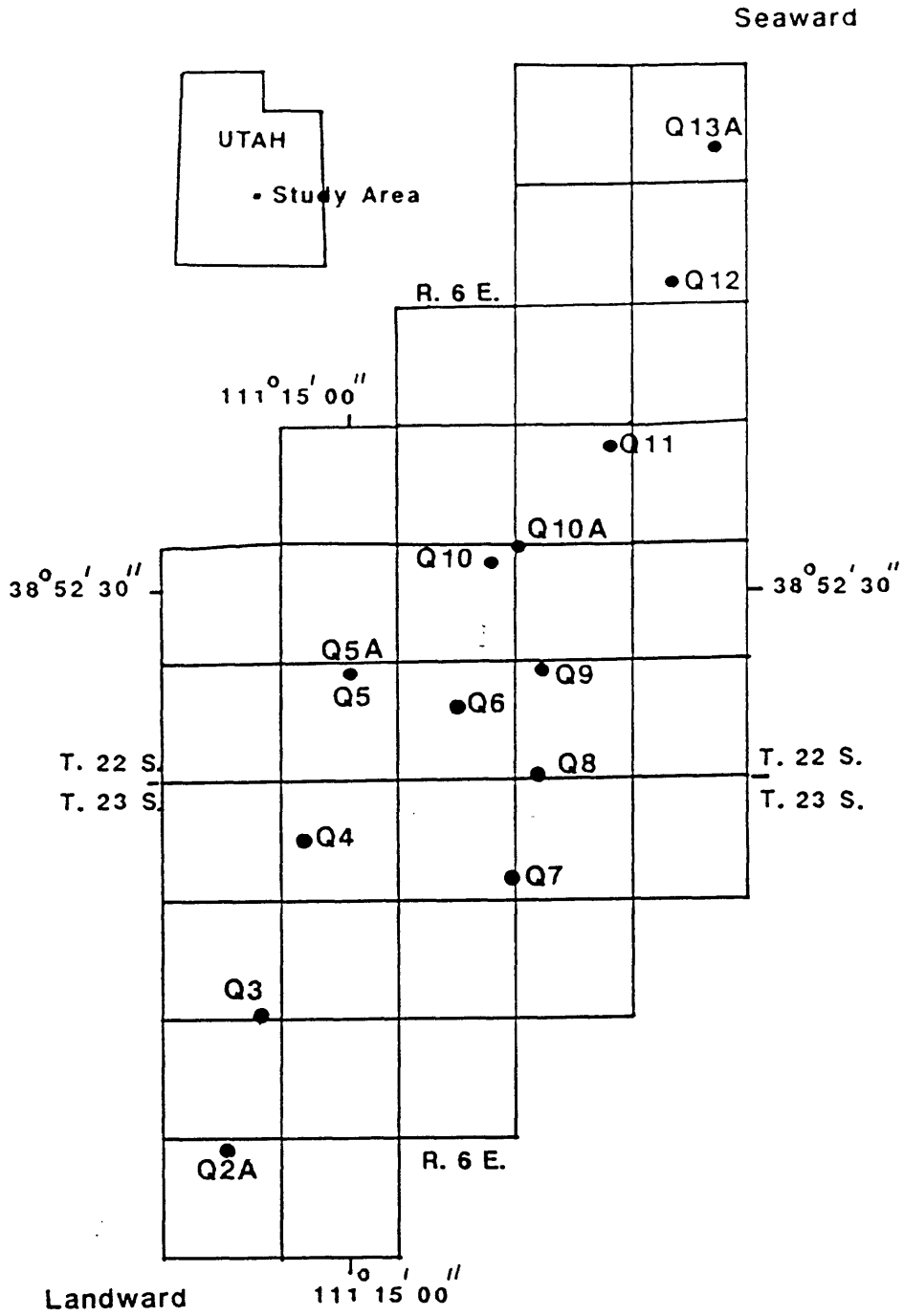


Figure 1. Index map showing locations of 14 core holes (Q2A-Q13) in the C coal bed (modified from Ryer, 1982).

analyzed for 71 elements by U.S. Geological Survey Analytical Labs, using the methods in figure 2. Tables 1 through 3 contain the following data for all 243 coal and rock samples:
1) descriptive data for each sample, including location and lithology, 2) concentrations of oxides on a coal ash basis, and 3) concentrations of trace elements on a whole coal basis.

Elemental concentrations determined by instrumental neutron activation, flameless atomic absorption, and specific ion electrode methods were reported on a whole coal basis. Data for elements determined by X-ray fluorescence, optical emission spectrographic, and atomic absorption methods were reported on a coal ash basis. Data from optical emission spectrographic and atomic absorption methods were recalculated to a whole coal basis for inclusion in Table 3.

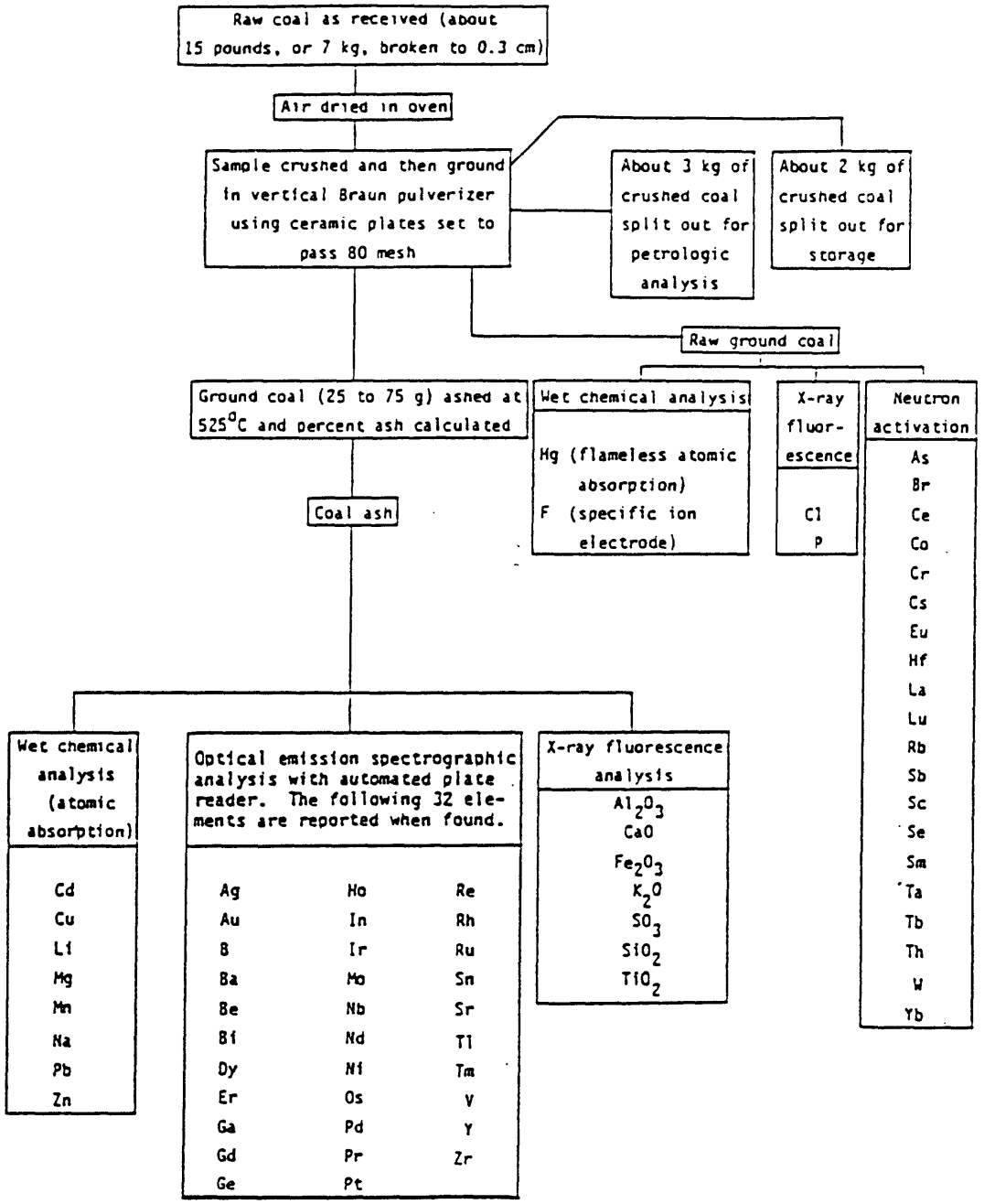


Figure 2. Flow diagram illustrating procedures used for coal sample analysis (modified from Currens and others, 1987).

## Acknowledgments

We would like to thank Thomas A. Ryer (The ARIES Group, Inc., Louisville, Colorado) and Ronald H. Affolter (Branch of Coal Geology, U.S. Geological Survey) for their help in the collection of C coal bed core samples.

## References

Currens, J.C., Bragg, L.J., and Hower, J.C., 1987, Analysis of coal samples from the Southwestern District, Kentucky: Kentucky Geological Survey, Information Circular 21, 338 p.

Ryer, T.A., 1981a, Deltaic coals of Ferron Sandstone Member of the Mancos Shale: Predictive model for Cretaceous coal bearing strata of Western Interior: American Association of Petroleum Geologists Bulletin., v. 65, no. 11, p. 2323-2340.

Ryer, T.A., 1981b, The Muddy and Quitchupah projects: A progress report with descriptions of cores of the I, J, and C coal beds from the Emery coal field, central Utah: U.S. Geological Survey Open-File Report 81-460, 34 p.

Ryer, T.A., 1982, 1982 Rocky Mountain Coal Symposium field trip, first day road log: Ferron Sandstone Member: Utah Geological and Mineral Survey, Bulletin 118, Proceedings-5th ROMOCO Symposium, p. 274-300.

Table 1. Descriptions for 243 coal and rock samples in the C coal bed.

| SAMPLE ID | LAB ID | | LATITUDE | LONGITUDE | DEPTH (FT) | THICKNESS (INCHES) | LITHOLOGY |
|---|---|---|---|---|---|---|---|
| Q2A-2 | W | 212014 | 384824N | 1111611W | 118.92 | 14.00 | COAL |
| Q2A-3 | W | 212053 | 384824N | 1111611W | 120.08 | 10.00 | COAL |
| Q2A-6 | W | 212001 | 384824N | 1111611W | 127.42 | 4.00 | SILTSTONE |
| Q2A-7 | W | 211963 | 384824N | 1111611W | 127.67 | 19.00 | COAL |
| Q2A-8-D | W | 212042 | 384824N | 1111611W | 129.33 | 14.00 | COAL |
| Q2A-8 | W | 211990 | 384824N | 1111611W | 129.33 | 26.00 | COAL |
| Q2A-9 | W | 212010 | 384824N | 1111611W | 131.50 | 14.00 | SILTSTONE |
| Q2A-11-D | W | 211996 | 384824N | 1111611W | 139.00 | 14.00 | SILTSTONE |
| Q2A-11 | W | 211824 | 384824N | 1111611W | 139.00 | 14.00 | SILTSTONE |
| Q2A-12 | W | 211852 | 384824N | 1111611W | 140.17 | 10.00 | COAL |
| Q2A-13 | W | 211948 | 384824N | 1111611W | 141.00 | 14.00 | COAL |
| Q2A-14 | W | 211971 | 384824N | 1111611W | 142.17 | 7.00 | COAL |
| Q2A-15 | W | 236191 | 384824N | 1111611W | 142.75 | 0.00 | TONSTEIN |
| Q3-1 | W | 211962 | 384923N | 1111550W | 225.00 | 7.00 | COAL |
| Q3-2 | W | 211858 | 384923N | 1111550W | 225.58 | 7.00 | SHALE |
| Q3-3 | W | 211836 | 384923N | 1111550W | 226.17 | 10.00 | SHALE |
| Q3-8 | W | 211969 | 384923N | 1111550W | 232.42 | 5.00 | SHALE |
| Q3-9-D | W | 211872 | 384923N | 1111550W | 232.83 | 22.00 | COAL |
| Q3-9 | W | 211991 | 384923N | 1111550W | 232.83 | 22.00 | COAL |
| Q3-11 | W | 211825 | 384923N | 1111550W | 234.85 | 16.00 | COAL |
| Q3-11-D | W | 211826 | 384923N | 1111550W | 234.85 | 16.00 | COAL |
| Q3-12 | W | 212016 | 384923N | 1111550W | 236.17 | 12.00 | COAL |
| Q3-13 | W | 211905 | 384923N | 1111550W | 237.17 | 14.00 | COAL |
| Q3-14 | W | 211844 | 384923N | 1111550W | 238.42 | 16.00 | COAL |
| Q3-15 | W | 211935 | 384923N | 1111550W | 239.67 | 13.00 | COAL |
| Q3-16 | W | 211829 | 384923N | 1111550W | 240.75 | 20.00 | COAL |
| Q3-17 | W | 236181 | 384923N | 1111550W | 242.42 | 14.80 | TONSTEIN |
| Q3-18 | W | 211975 | 384923N | 1111550W | 243.65 | 14.00 | COAL |
| Q3-19 | W | 211904 | 384923N | 1111550W | 244.83 | 17.00 | COAL |
| Q3-21 | W | 211842 | 384923N | 1111550W | 246.58 | 5.00 | COAL |
| Q3-22 | W | 211832 | 384923N | 1111550W | 247.00 | 6.00 | SHALE |
| Q3-23 | W | 211839 | 384923N | 1111550W | 247.50 | 6.00 | SHALE |
| Q3-24 | W | 211861 | 384923N | 1111550W | 248.00 | 6.00 | COAL |
| Q3-25 | W | 211993 | 384923N | 1111550W | 248.50 | 12.00 | COAL |
| Q3-26A | W | 211959 | 385923N | 1111550W | 249.83 | 4.00 | SHALE |
| Q3-27 | W | 212050 | 384923N | 1111550W | 250.08 | 14.00 | COAL |
| Q3-28 | W | 211902 | 384923N | 1111550W | 251.33 | 8.00 | SHALE |
| Q4-1 | W | 211942 | 385041N | 1111526W | 238.67 | 17.00 | COAL |
| Q4-1-D | W | 211859 | 385041N | 1111526W | 238.70 | 16.80 | SHALE |
| Q4-2 | W | 211939 | 385041N | 1111526W | 240.08 | 2.00 | SHALE |
| Q4-3 | W | 211925 | 385041N | 1111526W | 244.58 | 5.00 | SILTSTONE |
| Q4-4 | W | 212048 | 385041N | 1111526W | 245.00 | 21.00 | COAL |
| Q4-5 | W | 212041 | 385041N | 1111526W | 245.75 | 9.00 | COAL |
| Q4-6 | W | 211896 | 385041N | 1111526W | 246.50 | 8.00 | SHALE |

| SAMPLE ID | LAB ID | | LATITUDE | LONGITUDE | DEPTH (FT) | THICKNESS (INCHES) | LITHOLOGY |
|---|---|---|---|---|---|---|---|
| Q4-7 | W | 211862 | 385041N | 1111526W | 247.17 | 12.00 | COAL |
| Q4-8 | W | 212023 | 385041N | 1111526W | 248.17 | 7.00 | COAL |
| Q4-9 | W | 211934 | 385041N | 1111526W | 248.83 | 11.00 | COAL |
| Q4-10 | W | 211912 | 385041N | 1111526W | 249.67 | 11.00 | COAL |
| Q4-11 | W | 211822 | 385041N | 1111526W | 250.58 | 5.00 | COAL |
| Q4-12 | W | 211874 | 385041N | 1111526W | 251.00 | 10.00 | COAL |
| Q4-13 | W | 211882 | 385041N | 1111526W | 251.83 | 2.00 | SHALE |
| Q4-14 | W | 236182 | 385041N | 1111526W | 252.00 | 17.00 | TONSTEIN |
| Q4-15 | W | 211987 | 385041N | 1111526W | 253.42 | 11.00 | COAL |
| Q4-16 | W | 212033 | 385041N | 1111526W | 254.33 | 17.00 | COAL |
| Q4-18 | W | 211895 | 385041N | 1111526W | 255.75 | 12.00 | COAL |
| Q4-20 | W | 211909 | 385041N | 1111526W | 256.85 | 7.00 | COAL |
| Q4-21 | W | 211946 | 385041N | 1111526W | 257.42 | 10.00 | COAL |
| Q4-22 | W | 211973 | 385041N | 1111526W | 258.17 | 5.00 | COAL |
| Q4-23 | W | 212021 | 385041N | 1111526W | 258.67 | 2.00 | SHALE |
| Q4-25 | W | 211945 | 385041N | 1111526W | 258.95 | 2.00 | SHALE |
| Q4-26 | W | 211950 | 385041N | 1111526W | 259.15 | 14.00 | COAL |
| Q4-27 | W | 211860 | 385041N | 1111526W | 260.33 | 11.00 | COAL |
| Q4-28 | W | 211988 | 385041N | 1111526W | 261.25 | 4.00 | SHALE |
| Q4-29 | W | 211843 | 385041N | 1111526W | 261.58 | 22.00 | SILTSTONE |
| Q5A-0-D | W | 211878 | 385154N | 1111500W | 233.15 | 9.00 | SHALE |
| Q5A-0 | W | 211890 | 385154N | 1111500W | 233.15 | 9.00 | SHALE |
| Q5A-1 | W | 211828 | 385154N | 1111500W | 233.92 | 8.00 | SHALE |
| Q5A-2 | W | 211966 | 385154N | 1111500W | 234.58 | 10.00 | COAL |
| Q5A-4 | W | 212000 | 385154N | 1111500W | 235.67 | 11.00 | COAL |
| Q5A-5 | W | 211853 | 385154N | 1111500W | 236.58 | 11.00 | COAL |
| Q5A-6 | W | 211986 | 385154N | 1111500W | 237.50 | 13.00 | COAL |
| Q5A-7 | W | 211879 | 385154N | 1111500W | 238.55 | 14.00 | COAL |
| Q5A-8 | W | 211850 | 385154N | 1111500W | 239.75 | 2.00 | SHALE |
| Q5A-9 | W | 236183 | 385154N | 1111500W | 239.92 | 15.00 | TONSTEIN |
| Q5A-10 | W | 212040 | 385154N | 1111500W | 241.17 | 11.00 | COAL |
| Q5A-11 | W | 212049 | 385154N | 1111500W | 242.08 | 13.00 | COAL |
| Q5A-13 | W | 211851 | 385154N | 1111500W | 243.42 | 5.00 | COAL |
| Q5A-15 | W | 211915 | 385154N | 1111500W | 243.92 | 11.00 | COAL |
| Q5A-16 | W | 211854 | 385154N | 1111500W | 244.83 | 8.00 | COAL |
| Q5A-18 | W | 211891 | 385154N | 1111500W | 245.75 | 2.00 | SHALE |
| Q5A-19 | W | 212022 | 385154N | 1111500W | 245.92 | 10.00 | COAL |
| Q5A-20 | W | 212007 | 385154N | 1111500W | 246.67 | 11.00 | COAL |
| Q5A-21 | W | 211911 | 385154N | 1111500W | 247.58 | 7.00 | COAL |
| Q5A-22 | W | 211955 | 385154N | 1111500W | 248.17 | 4.00 | COAL |
| Q5A-23 | W | 212051 | 385154N | 1111500W | 248.50 | 12.00 | CLAYSTONE |
| Q5-1 | W | 211881 | 385154N | 1111500W | 235.00 | 13.00 | COAL |
| Q5-1-D | W | 211982 | 385154N | 1111500W | 235.00 | 13.00 | COAL |
| Q5-2 | W | 211933 | 385154N | 1111500W | 236.08 | 12.00 | COAL |
| Q5-3 | W | 211883 | 385154N | 1111500W | 237.08 | 2.00 | COAL |
| Q5-4 | W | 212043 | 385154N | 1111500W | 237.33 | 12.00 | COAL |
| Q5-5 | W | 211920 | 385154N | 1111500W | 238.33 | 10.00 | COAL |
| Q5-6 | W | 211893 | 385154N | 1111500W | 239.08 | 13.00 | COAL |
| Q5-7 | W | 211924 | 385154N | 1111500W | 240.17 | 7.00 | COAL |

| SAMPLE ID | LAB ID | | LATITUDE | LONGITUDE | DEPTH (FT) | THICKNESS (INCHES) | LITHOLOGY |
|---|---|---|---|---|---|---|---|
| Q5-8 | W | 211892 | 385154N | 1111500W | 240.83 | 5.00 | SHALE |
| Q5-10 | W | 211857 | 385154N | 1111500W | 241.33 | 10.00 | COAL |
| Q5-11 | W | 211995 | 385154N | 1111500W | 242.08 | 13.00 | COAL |
| Q5-13 | W | 211900 | 385154N | 1111500W | 243.50 | 5.00 | COAL |
| Q5-15 | W | 212045 | 385154N | 1111500W | 244.00 | 12.00 | COAL |
| Q5-16 | W | 211834 | 385154N | 1111500W | 245.00 | 8.00 | COAL |
| Q5-16A | W | 211992 | 385154N | 1111500W | 245.65 | 2.00 | SHALE |
| Q5-17A | W | 211907 | 385154N | 1111500W | 245.92 | 3.00 | SHALE |
| Q5-18 | W | 212009 | 385154N | 1111500W | 246.15 | 11.00 | COAL |
| Q5-19 | W | 211956 | 385154N | 1111500W | 247.08 | 16.00 | COAL |
| Q5-20 | W | 211838 | 385154N | 1111500W | 248.42 | 2.00 | SHALE |
| Q6-2 | W | 212025 | 385139N | 1111401W | 77.45 | 3.00 | COAL |
| Q6-3 | W | 211880 | 385139N | 1111401W | 77.67 | 18.00 | COAL |
| Q6-3-D | W | 211957 | 385139N | 1111401W | 77.67 | 18.00 | COAL |
| Q6-4 | W | 211958 | 385139N | 1111401W | 79.17 | 12.00 | COAL |
| Q6-5 | W | 211833 | 385139N | 1111401W | 80.17 | 18.00 | COAL |
| Q6-6 | W | 211885 | 385139N | 1111401W | 81.67 | 2.00 | SHALE |
| Q6-7 | W | 211887 | 385139N | 1111401W | 81.85 | 9.00 | COAL |
| Q6-8 | W | 211953 | 385139N | 1111401W | 82.58 | 16.00 | COAL |
| Q6-10 | W | 236184 | 385139N | 1111401W | 83.92 | 15.00 | TONSTEIN |
| Q6-11 | W | 212002 | 385139N | 1111401W | 85.17 | 10.00 | COAL |
| Q6-12 | W | 211940 | 385139N | 1111401W | 86.00 | 17.00 | COAL |
| Q6-14 | W | 211871 | 385139N | 1111401W | 87.58 | 4.00 | COAL |
| Q6-16 | W | 211949 | 385139N | 1111401W | 88.05 | 20.00 | COAL |
| Q6-16-D | W | 211919 | 385139N | 1111401W | 88.05 | 20.00 | COAL |
| Q6-18 | W | 211930 | 385139N | 1111401W | 89.92 | 16.00 | COAL |
| Q6-19 | W | 211923 | 385139N | 1111401W | 91.25 | 11.00 | COAL |
| Q6-20 | W | 212028 | 385139N | 1111401W | 92.17 | 2.00 | SILTSTONE |
| Q7-1 | W | 211886 | 385026N | 1111327W | 196.33 | 1.00 | SHALE |
| Q7-2 | W | 211989 | 385026N | 1111327W | 196.42 | 14.00 | COAL |
| Q7-3A | W | 212052 | 385026N | 1111327W | 204.55 | 3.00 | SHALE |
| Q7-3 | W | 211967 | 385026N | 1111327W | 204.83 | 13.00 | COAL |
| Q7-4 | W | 212004 | 385026N | 1111327W | 205.85 | 14.00 | COAL |
| Q7-5 | W | 212012 | 385026N | 1111327W | 207.00 | 14.00 | COAL |
| Q7-6 | W | 211831 | 385026N | 1111327W | 208.17 | 2.00 | SHALE |
| Q7-7 | W | 212039 | 385026N | 1111327W | 208.35 | 12.00 | COAL |
| Q7-9 | W | 212008 | 385026N | 1111327W | 209.45 | 11.00 | COAL |
| Q7-10 | W | 212032 | 385026N | 1111327W | 210.42 | 10.00 | COAL |
| Q7-12 | W | 211840 | 385026N | 1111327W | 211.42 | 5.00 | COAL |
| Q7-14 | W | 211943 | 385026N | 1111327W | 212.00 | 11.00 | COAL |
| Q7-15 | W | 211974 | 385026N | 1111327W | 212.92 | 8.00 | COAL |
| Q7-17 | W | 211903 | 385026N | 1111327W | 213.75 | 13.00 | COAL |
| Q7-18 | W | 211941 | 385026N | 1111327W | 214.83 | 11.00 | COAL |
| Q7-19 | W | 211898 | 385026N | 1111327W | 215.67 | 8.00 | COAL |
| Q7-20 | W | 211877 | 385026N | 1111327W | 216.42 | 1.00 | SHALE |
| Q7-23 | W | 212034 | 385026N | 1111327W | 217.58 | 2.00 | SHALE |
| Q7-24 | W | 211929 | 385026N | 1111327W | 217.75 | 10.00 | COAL |
| Q7-25 | W | 211978 | 385026N | 1111327W | 218.55 | 2.00 | COAL |
| Q7-26 | W | 211876 | 385026N | 1111327W | 218.67 | 8.00 | COAL |

| SAMPLE ID | | LAB ID | LATITUDE | LONGITUDE | DEPTH (FT) | THICKNESS (INCHES) | LITHOLOGY |
|---|---|---|---|---|---|---|---|
| Q7-27 | W | 211999 | 385026N | 1111327W | 219.42 | 16.00 | COAL |
| Q7-28 | W | 211984 | 385026N | 1111327W | 220.75 | 3.00 | SHALE |
| Q7-29 | W | 211889 | 385026N | 1111327W | 221.00 | 19.00 | COAL |
| Q7-30 | W | 212047 | 385026N | 1111327W | 222.58 | 14.00 | COAL |
| Q7-31 | W | 211954 | 385026N | 1111327W | 223.58 | 12.00 | COAL |
| Q8-1 | W | 211985 | 385108N | 1111312W | 90.92 | 12.00 | SHALE |
| Q8-1-D | W | 211994 | 385108N | 1111312W | 90.92 | 12.00 | SHALE |
| Q8-2 | W | 211865 | 385108N | 1111312W | 91.92 | 11.00 | COAL |
| Q8-3 | W | 211884 | 385108N | 1111312W | 92.83 | 11.00 | COAL |
| Q8-4 | W | 211827 | 385108N | 1111312W | 93.67 | 2.00 | SHALE |
| Q8-5 | W | 211936 | 385108N | 1111312W | 93.92 | 16.00 | COAL |
| Q8-6 | W | 211897 | 385108N | 1111312W | 95.17 | 13.00 | COAL |
| Q8-6-D | W | 212027 | 385108N | 1111312W | 95.17 | 13.00 | COAL |
| Q8-7 | W | 211981 | 385108N | 1111312W | 96.25 | 9.00 | COAL |
| Q8-8 | W | 211848 | 385108N | 1111312W | 97.00 | 2.00 | COAL |
| Q8-9 | W | 236185 | 385108N | 1111312W | 97.17 | 18.00 | TONSTEIN |
| Q8-10 | W | 212031 | 385108N | 1111312W | 98.67 | 11.00 | COAL |
| Q8-11 | W | 211947 | 385108N | 1111312W | 99.58 | 15.00 | COAL |
| Q8-13 | W | 212005 | 385108N | 1111312W | 100.95 | 5.00 | COAL |
| Q8-15 | W | 211830 | 385108N | 1111312W | 101.50 | 8.00 | COAL |
| Q8-16 | W | 211873 | 385108N | 1111312W | 102.17 | 13.00 | COAL |
| Q8-18-D | W | 212035 | 385108N | 1111312W | 103.58 | 13.00 | COAL |
| Q8-18 | W | 212038 | 385108N | 1111312W | 103.58 | 13.00 | COAL |
| Q8-19 | W | 211976 | 385108N | 1111312W | 103.58 | 13.00 | COAL |
| Q8-20 | W | 211869 | 385108N | 1111312W | 105.42 | 12.00 | COAL |
| Q8-21 | W | 211977 | 385108N | 1111312W | 106.42 | 5.00 | COAL |
| Q9-1 | W | 211845 | 385153N | 1111310W | 141.58 | 13.00 | COAL |
| Q9-2 | W | 212026 | 385153N | 1111310W | 142.67 | 14.00 | COAL |
| Q9-3 | W | 211979 | 385153N | 1111310W | 143.92 | 9.00 | COAL |
| Q9-4 | W | 211914 | 385153N | 1111310W | 144.67 | 15.00 | COAL |
| Q9-5 | W | 211875 | 385153N | 1111310W | 144.92 | 2.00 | SHALE |
| Q9-6 | W | 211837 | 385153N | 1111310W | 145.08 | 4.00 | SHALE |
| Q9-7 | W | 236186 | 385153N | 1111310W | 145.42 | 8.00 | TONSTEIN |
| Q9-8 | W | 211997 | 385153N | 1111310W | 146.08 | 11.00 | COAL |
| Q9-9 | W | 212036 | 385153N | 1111310W | 147.00 | 13.00 | COAL |
| Q9-11 | W | 211965 | 385153N | 1111310W | 148.17 | 4.00 | COAL |
| Q9-13 | W | 211972 | 385153N | 1111310W | 148.58 | 13.00 | COAL |
| Q9-14 | W | 212013 | 385153N | 1111310W | 149.67 | 12.00 | COAL |
| Q9-16 | W | 211921 | 385153N | 1111310W | 150.92 | 11.00 | COAL |
| Q9-17 | W | 211964 | 385153N | 1111310W | 151.83 | 17.00 | COAL |
| Q10A-1 | W | 212024 | 385250N | 1111324W | 242.92 | 4.20 | COAL |
| Q10A-2 | W | 212017 | 385250N | 1111324W | 243.25 | 5.00 | SHALE |
| Q10A-3-D | W | 212030 | 385250N | 1111324W | 243.67 | 16.00 | COAL |
| Q10A-3 | W | 212006 | 385250N | 1111324W | 243.67 | 16.00 | COAL |
| Q10A-4 | W | 212037 | 385250N | 1111324W | 245.00 | 18.00 | COAL |
| Q10A-4-D | W | 211855 | 385250N | 1111324W | 245.00 | 18.00 | COAL |
| Q10A-5 | W | 211961 | 385250N | 1111324W | 246.50 | 3.00 | SHALE |
| Q10A-6 | W | 236187 | 385250N | 1111324W | 246.75 | 13.00 | TONSTEIN |

| SAMPLE ID | LAB ID | LATITUDE | LONGITUDE | DEPTH (FT) | THICKNESS (INCHES) | LITHOLOGY |
|---|---|---|---|---|---|---|
| Q10A-7 | W 211910 | 385250N | 1111324W | 247.85 | 12.00 | COAL |
| Q10A-8 | W 211823 | 385250N | 1111324W | 248.85 | 13.00 | COAL |
| Q10A-10 | W 211983 | 385250N | 1111324W | 250.00 | 3.00 | COAL |
| Q10A-12 | W 211867 | 385250N | 1111324W | 250.33 | 14.00 | COAL |
| Q10A-13 | W 211938 | 385250N | 1111324W | 251.50 | 12.00 | COAL |
| Q10A-14 | W 212003 | 385250N | 1111324W | 252.50 | 2.00 | SHALE |
| Q10A-16 | W 211908 | 385250N | 1111324W | 252.83 | 2.00 | SHALE |
| Q10A-17 | W 211841 | 385250N | 1111324W | 253.00 | 11.00 | COAL |
| Q10A-18 | W 211901 | 385250N | 1111324W | 253.92 | 11.00 | COAL |
| Q10A-19 | W 212029 | 385250N | 1111324W | 254.83 | 82.00 | SHALE |
| Q11-1 | W 212018 | 385334N | 1111230W | 209.00 | 7.00 | SILTSTONE |
| Q11-2 | W 211916 | 385334N | 1111230W | 209.55 | 4.00 | COAL |
| Q11-3 | W 211913 | 385334N | 1111230W | 209.92 | 3.00 | SHALE |
| Q11-4 | W 236188 | 385334N | 1111230W | 210.17 | 12.00 | TONSTEIN |
| Q11-5 | W 211906 | 385334N | 1111230W | 211.17 | 8.00 | COAL |
| Q11-6 | W 212019 | 385334N | 1111230W | 211.92 | 13.00 | COAL |
| Q11-7 | W 211856 | 385334N | 1111230W | 213.00 | 14.00 | COAL |
| Q11-8 | W 211866 | 385334N | 1111230W | 214.17 | 16.00 | COAL |
| Q11-10 | W 211899 | 385334N | 1111230W | 215.67 | 1.00 | SHALE |
| Q11-12 | W 211870 | 385334N | 1111230W | 215.92 | 10.00 | COAL |
| Q11-13 | W 212044 | 385334N | 1111230W | 216.67 | 8.00 | COAL |
| Q11-14 | W 211847 | 385334N | 1111230W | 217.42 | 46.00 | CLAYSTONE |
| Q11-15 | W 211970 | 385334N | 1111230W | 221.17 | 10.00 | COAL |
| Q11-16-D | W 212046 | 385334N | 1111230W | 222.00 | 14.00 | SHALE |
| Q11-16 | W 211926 | 385334N | 1111230W | 222.00 | 14.00 | SHALE |
| Q12-1 | W 211932 | 385446N | 1111154W | 280.00 | 6.00 | COAL |
| Q12-2 | W 211864 | 385446N | 1111154W | 280.50 | 4.00 | SHALE |
| Q12-3 | W 236189 | 385446N | 1111154W | 280.83 | 19.00 | TONSTEIN |
| Q12-4 | W 211917 | 385446N | 1111154W | 282.42 | 13.00 | COAL |
| Q12-5 | W 212011 | 385446N | 1111154W | 283.50 | 11.00 | COAL |
| Q12-6 | W 211951 | 385446N | 1111154W | 284.42 | 11.00 | COAL |
| Q12-7 | W 211928 | 385446N | 1111154W | 285.33 | 16.00 | COAL |
| Q12-7-D | W 212020 | 385446N | 1111154W | 285.33 | 16.00 | COAL |
| Q12-8 | W 211960 | 385446N | 1111154W | 286.58 | 13.00 | COAL |
| Q12-10 | W 211835 | 385446N | 1111154W | 287.92 | 6.00 | COAL |
| Q12-11 | W 211888 | 385446N | 1111154W | 288.42 | 16.00 | COAL |
| Q12-11-D | W 211937 | 385446N | 1111154W | 288.42 | 16.00 | COAL |
| Q12-12 | W 211931 | 385446N | 1111154W | 289.67 | 4.00 | SHALE |
| Q12-13 | W 211868 | 385446N | 1111154W | 290.00 | 13.00 | SHALE |
| Q12-14 | W 211894 | 385446N | 1111154W | 291.08 | 10.00 | SHALE |
| Q13A-1 | W 211922 | 385544N | 1111129W | 620.08 | 7.00 | COAL |
| Q13A-2 | W 236190 | 385544N | 1111129W | 620.67 | 16.00 | TONSTEIN |
| Q13A-3 | W 211944 | 385544N | 1111129W | 622.00 | 11.00 | COAL |
| Q13A-4 | W 211849 | 385544N | 1111129W | 622.92 | 13.00 | COAL |
| Q13A-6 | W 211952 | 385544N | 1111129W | 624.08 | 7.00 | COAL |
| Q13A-8 | W 211918 | 385544N | 1111129W | 624.75 | 13.00 | COAL |
| Q13A-9 | W 212015 | 385544N | 1111129W | 625.83 | 14.00 | COAL |
| Q13A-10 | W 211927 | 385544N | 1111129W | 627.00 | 6.00 | SHALE |

| SAMPLE ID | | LAB ID | LATITUDE | LONGITUDE | DEPTH (FT) | THICKNESS (INCHES) | LITHOLOGY |
|---|---|---|---|---|---|---|---|
| Q13A-12 | W | 211998 | 385544N | 1111129W | 627.67 | 8.00 | SHALE |
| Q13A-12-D | W | 211846 | 385544N | 1111129W | 627.67 | 8.00 | SHALE |
| Q13A-13 | W | 211863 | 385544N | 1111129W | 628.42 | 12.00 | COAL |
| Q13A-14 | W | 211980 | 385544N | 1111129W | 629.42 | 8.00 | COAL |
| Q13A-15 | W | 211968 | 385544N | 1111129W | 630.08 | 10.00 | COAL |

Table 2. Major and minor oxide composition of the laboratory ash of 243 coal and rock samples in the C coal bed. [Samples were ashed at 525° centigrade; values are in percent of ash value. L=less than the average shown.]

| SAMPLE ID | ASH | SiO2 | Al2O3 | CaO | MgO | Na2O | K2O |
|---|---|---|---|---|---|---|---|
| Q2A-2 | 17.0 | 55 | 40 | 0.87 | 0.56 | 0.27 | 0.27 |
| Q2A-3 | 12.1 | 59 | 29 | 2.4 | 1.2 | .31 | 1.7 |
| Q2A-6 | 77.5 | 61 | 25 | .52 | 1.1 | .17 | 2.1 |
| Q2A-7 | 6.0 | 62 | 21 | 2.7 | .40 | .16 | .27 |
| Q2A-8-D | 10.4 | 75 | 19 | .81 | .40 | .13 | .32 |
| Q2A-8 | 13.0 | 74 | 21 | .88 | .43 | .13 | .35 |
| Q2A-9 | 91.7 | 73 | 21 | .36 | .86 | .17 | 2.3 |
| Q2A-11-D | 80.3 | 65 | 24 | .70 | 1.4 | .15 | 2.7 |
| Q2A-11 | 81.1 | 64 | 25 | .74 | 1.5 | .16 | 2.7 |
| Q2A-12 | 17.1 | 66 | 18 | .65 | .28 | .17 | .49 |
| Q2A-13 | 15.2 | 71 | 20 | .71 | .43 | .16 | .72 |
| Q2A-14 | 19.6 | 65 | 26 | .57 | .33 | .19 | .75 |
| Q2A-15 | 95.9 | 81 | 14 | .30 | .45 | .61 | 1.5 |
| Q3-1 | 4.4 | 51 | 27 | 5.8 | 1.3 | .47 | .21 |
| Q3-2 | 52.6 | 62 | 28 | 3.1 | 1.4 | .61 | 2.0 |
| Q3-3 | 77.1 | 65 | 25 | .30 | .53 | .40 | 2.1 |
| Q3-8 | 24.7 | 43 | 16 | 2.7 | .30 | .15 | .72 |
| Q3-9-D | 10.8 | 57 | 25 | 5.4 | 1.2 | .89 | .28 |
| Q3-9 | 10.4 | 56 | 23 | 6.8 | 1.3 | .75 | .27 |
| Q3-11 | 12.6 | 50 | 30 | 9.1 | 2.7 | .53 | .15 |
| Q3-11-D | 11.9 | 50 | 30 | 8.4 | 2.2 | .57 | .18 |
| Q3-12 | 14.0 | 56 | 29 | 4.0 | 1.6 | .81 | .09 |
| Q3-13 | 19.6 | 57 | 31 | 2.8 | 1.5 | .82 | .15 |
| Q3-14 | 7.5 | 51 | 27 | 6.7 | 2.8 | 1.5 | .11 |
| Q3-15 | 9.8 | 51 | 31 | 7.0 | 1.4 | .40 | .13 |
| Q3-16 | 6.2 | 52 | 26 | 7.4 | 2.2 | .96 | .18 |
| Q3-17 | 90.2 | 61 | 33 | 1.9 | 1.4 | 1.2 | .58 |
| Q3-18 | 9.5 | 64 | 16 | 8.1 | 1.7 | .30 | .07 |
| Q3-19 | 9.0 | 51 | 31 | 5.8 | 1.6 | 1.1 | .31 |
| Q3-21 | 15.9 | 51 | 27 | 16 | .56 | .34 | .29 |
| Q3-22 | 37.1 | 66 | 29 | .71 | 1.2 | .39 | 1.5 |
| Q3-23 | 69.7 | 66 | 23 | 2.6 | 1.3 | .42 | 2.0 |
| Q3-24 | 60.1 | 73 | 20 | .50 | 1.4 | .69 | 1.6 |
| Q3-25 | 33.0 | 63 | 22 | 2.0 | 1.1 | .67 | 1.2 |
| Q3-26A | 45.1 | 57 | 34 | .69 | .46 | .24 | .58 |
| Q3-27 | 8.7 | 8.5 | 44 | 12 | 1.5 | .57 | .27 |
| Q3-28 | 47.0 | 69 | 24 | .88 | .85 | .61 | 1.1 |
| Q4-1 | 7.1 | 62 | 19 | 8.1 | .60 | .30 | .22 |
| Q4-1-D | 7.3 | 64 | 19 | 6.3 | .46 | .39 | .23 |
| Q4-2 | 58.1 | 85 | 10 | .22 | .31 | .26 | 1.4 |
| Q4-3 | 71.4 | 76 | 11 | 1.4 | .89 | .35 | 1.4 |
| Q4-4 | 18.5 | 63 | 18 | 2.0 | .53 | .54 | .99 |
| Q4-5 | 16.4 | 55 | 28 | 6.3 | .50 | .57 | .45 |
| Q4-6 | 64.7 | 61 | 32 | .44 | 1.1 | .96 | 1.3 |

| SAMPLE ID | ASH | SiO2 | Al2O3 | CaO | MgO | Na2O | K2O |
|---|---|---|---|---|---|---|---|
| Q4-7 | 17.6 | 54 | 31 | 4.4 | 0.71 | 0.69 | 0.55 |
| Q4-8 | 31.6 | 56 | 37 | .99 | .50 | .40 | .38 |
| Q4-9 | 24.9 | 49 | 18 | 1.5 | .91 | .50 | .81 |
| Q4-10 | 8.4 | 57 | 30 | 2.8 | 1.2 | 1.6 | .12 |
| Q4-11 | 11.6 | 53 | 27 | 9.5 | 2.5 | .66 | .20 |
| Q4-12 | 7.8 | 38 | 18 | 25 | 2.8 | 1.1 | .21 |
| Q4-13 | 59.3 | 69 | 28 | .29 | .51 | .61 | .37 |
| Q4-14 | 91.7 | 60 | 29 | 2.5 | 2.0 | 1.4 | .73 |
| Q4-15 | 12.6 | 67 | 14 | 9.7 | 3.3 | .40 | .12 |
| Q4-16 | 12.2 | 58 | 33 | 2.9 | .89 | .65 | .28 |
| Q4-18 | 15.3 | 51 | 33 | 8.1 | 1.8 | .88 | .40 |
| Q4-20 | 11.8 | 49 | 27 | 13 | 2.0 | .96 | .22 |
| Q4-21 | 6.4 | 67 | 21 | 2.0 | .46 | 1.4 | .11 |
| Q4-22 | 23.8 | 54 | 36 | 3.2 | .35 | .32 | .43 |
| Q4-23 | 83.1 | 56 | 39 | .21 | .40 | .27 | .61 |
| Q4-25 | 68.5 | 58 | 38 | .25 | .36 | .24 | .57 |
| Q4-26 | 11.1 | 55 | 33 | 3.2 | 1.1 | .43 | .32 |
| Q4-27 | 9.2 | 62 | 29 | 2.3 | .38 | .61 | .19 |
| Q4-28 | 13.9 | 65 | 21 | 5.2 | 2.0 | .13 | .13 |
| Q4-29 | 94.3 | 76 | 18 | .26 | .43 | .34 | 2.4 |
| Q5A-0-D | 58.3 | 64 | 23 | .48 | .65 | .59 | 1.9 |
| Q5A-0 | 58.6 | 64 | 24 | .48 | .71 | .59 | 1.8 |
| Q5A-1 | 40.9 | 53 | 29 | .47 | .53 | .40 | 1.3 |
| Q5A-2 | 26.9 | 62 | 31 | 1.8 | .40 | .43 | .98 |
| Q5A-4 | 16.7 | 55 | 26 | 2.1 | .48 | .40 | .51 |
| Q5A-5 | 23.2 | 56 | 29 | 3.4 | .46 | .22 | .37 |
| Q5A-6 | 12.6 | 53 | 23 | 8.8 | 1.6 | .67 | .19 |
| Q5A-7 | 15.6 | 64 | 27 | 2.7 | .89 | .46 | .17 |
| Q5A-8 | 67.4 | 58 | 37 | .44 | .43 | .43 | .64 |
| Q5A-9 | 90.3 | 60 | 33 | 1.1 | 1.2 | .97 | .89 |
| Q5A-10 | 13.0 | 58 | 23 | 9.1 | 2.0 | .27 | .29 |
| Q5A-11 | 9.5 | 46 | 27 | 12 | 2.7 | .54 | .13 |
| Q5A-13 | 10.3 | 53 | 38 | 1.9 | .73 | .59 | .30 |
| Q5A-15 | 11.5 | 56 | 33 | 4.2 | .86 | 1.2 | .19 |
| Q5A-16 | 8.7 | 50 | 31 | 7.7 | 2.2 | 1.0 | .27 |
| Q5A-18 | 46.5 | 57 | 39 | .32 | .26 | .48 | .37 |
| Q5A-19 | 10.5 | 46 | 29 | 13 | 2.2 | .67 | .13 |
| Q5A-20 | 9.3 | 60 | 27 | 3.6 | .75 | 1.3 | .14 |
| Q5A-21 | 6.3 | 42 | 26 | 17 | 1.3 | 1.2 | .36 |
| Q5A-22 | 86.1 | 76 | 20 | .23 | .40 | .13 | 1.6 |
| Q5A-23 | 92.1 | 71 | 23 | .15 | .55 | .27 | 2.3 |
| Q5-1 | 55.6 | 58 | 31 | .43 | .81 | .66 | 1.6 |
| Q5-1-D | 55.0 | 58 | 30 | .46 | .86 | .70 | 1.7 |
| Q5-2 | 20.3 | 62 | 31 | 1.8 | .43 | .54 | .50 |
| Q5-3 | 45.4 | 59 | 34 | .58 | .96 | .75 | 1.6 |
| Q5-4 | 15.6 | 44 | 24 | 2.5 | .50 | .24 | .80 |
| Q5-5 | 11.9 | 45 | 27 | 5.1 | 1.1 | .81 | .19 |
| Q5-6 | 13.8 | 58 | 24 | 8.1 | 1.5 | .85 | .20 |
| Q5-7 | 19.3 | 64 | 26 | 2.5 | .96 | .38 | .20 |

| SAMPLE ID | ASH | SiO2 | Al2O3 | CaO | MgO | Na2O | K2O |
|---|---|---|---|---|---|---|---|
| Q5-8 | 66.6 | 56 | 41 | 0.38 | 0.53 | 0.48 | 0.50 |
| Q5-10 | 10.5 | 55 | 31 | 5.5 | 2.8 | .26 | .26 |
| Q5-11 | 5.1 | 52 | 28 | 4.7 | 1.5 | .92 | .19 |
| Q5-13 | 12.4 | 41 | 30 | 17 | 2.2 | .70 | .22 |
| Q5-15 | 8.5 | 54 | 35 | 1.8 | .66 | .81 | .24 |
| Q5-16 | 6.2 | 48 | 28 | 10 | 2.2 | .94 | .22 |
| Q5-16A | 28.0 | 56 | 36 | 1.6 | .45 | .40 | .40 |
| Q5-17A | 57.8 | 57 | 39 | .28 | .26 | .42 | .42 |
| Q5-18 | 9.4 | 55 | 36 | 1.7 | .51 | .81 | .18 |
| Q5-19 | 7.4 | 51 | 25 | 11 | 1.7 | 1.5 | .14 |
| Q5-20 | 88.5 | 71 | 25 | .28 | .56 | .23 | 1.8 |
| Q6-2 | 19.2 | 57 | 19 | 1.1 | .40 | .24 | .86 |
| Q6-3 | 45.9 | 55 | 28 | .66 | 1.1 | .20 | 1.6 |
| Q6-3-D | 44.4 | 54 | 30 | .62 | 1.1 | .07 | 1.5 |
| Q6-4 | 25.3 | 42 | 21 | 2.9 | .22 | .03 | .19 |
| Q6-5 | 10.9 | 49 | 26 | 7.6 | 1.4 | .24 | .33 |
| Q6-6 | 43.4 | 61 | 33 | .50 | .36 | .20 | .26 |
| Q6-7 | 16.5 | 62 | 30 | 2.5 | .73 | .42 | .17 |
| Q6-8 | 14.2 | 62 | 31 | 1.2 | .70 | .15 | .32 |
| Q6-10 | 89.8 | 60 | 32 | 1.6 | 1.7 | .17 | .83 |
| Q6-11 | 10.2 | 60 | 21 | 7.0 | 2.5 | .22 | .17 |
| Q6-12 | 6.9 | 50 | 25 | 10 | 2.0 | .73 | .15 |
| Q6-14 | 10.0 | 54 | 37 | 1.8 | .73 | .69 | .31 |
| Q6-16 | 10.9 | 53 | 26 | 9.7 | 1.1 | .40 | .24 |
| Q6-16-D | 11.7 | 52 | 27 | 10 | 1.3 | .90 | .22 |
| Q6-18 | 10.8 | 54 | 35 | 2.7 | .99 | .88 | .20 |
| Q6-19 | 8.7 | 55 | 28 | 6.2 | .88 | 1.1 | .17 |
| Q6-20 | 89.0 | 86 | 11 | .18 | .25 | .11 | 1.4 |
| Q7-1 | 51.2 | 58 | 24 | .43 | 1.1 | .47 | 2.3 |
| Q7-2 | 11.7 | 55 | 24 | 1.4 | .80 | .54 | .89 |
| Q7-3A | 53.1 | 58 | 17 | .39 | .56 | .26 | 1.2 |
| Q7-3 | 17.8 | 52 | 32 | 1.5 | .30 | .11 | .20 |
| Q7-4 | 12.5 | 66 | 23 | 3.7 | .83 | .48 | .06 |
| Q7-5 | 14.4 | 54 | 32 | 4.5 | 1.3 | .40 | .13 |
| Q7-6 | 14.4 | 18 | 8.0 | 58 | 6.0 | .34 | .07 |
| Q7-7 | 25.0 | 53 | 40 | 2.5 | .81 | .35 | .27 |
| Q7-9 | 6.8 | 46 | 28 | 9.0 | 2.8 | .54 | .07 |
| Q7-10 | 4.7 | 40 | 27 | 15 | 2.2 | 2.0 | .14 |
| Q7-12 | 7.9 | 46 | 37 | 6.0 | 1.8 | .58 | .15 |
| Q7-14 | 8.6 | 50 | 30 | 8.7 | 1.8 | 1.5 | .09 |
| Q7-15 | 11.9 | 51 | 35 | 4.8 | 1.2 | .51 | .27 |
| Q7-17 | 16.3 | 51 | 35 | 5.5 | 1.6 | .71 | .19 |
| Q7-18 | 9.0 | 45 | 23 | 15 | 2.8 | 1.1 | .08 |
| Q7-19 | 5.6 | 46 | 32 | 6.2 | 1.8 | 1.5 | .13 |
| Q7-20 | 44.0 | 62 | 32 | .66 | 1.1 | .34 | 1.1 |
| Q7-23 | 28.8 | 60 | 24 | .59 | .66 | .28 | .68 |
| Q7-24 | 7.7 | 51 | 24 | 3.4 | 1.4 | .48 | .33 |
| Q7-25 | 5.9 | 56 | 30 | 2.5 | 1.3 | .16 | .28 |
| Q7-26 | 12.3 | 47 | 22 | 11 | 1.5 | .57 | .08 |

| SAMPLE ID | ASH | SiO2 | Al2O3 | CaO | MgO | Na2O | K2O |
|---|---|---|---|---|---|---|---|
| Q7-27 | 6.0 | 47 | 24 | 12 | 1.7 | 0.94 | 0.12 |
| Q7-28 | 74.4 | 56 | 42 | .19 | .35 | .16 | .42 |
| Q7-29 | 12.8 | 57 | 28 | 6.9 | .99 | .88 | .25 |
| Q7-30 | 17.7 | 81 | 10 | 2.8 | .50 | .54 | .02 |
| Q7-31 | 7.8 | 57 | 24 | 8.8 | .38 | .53 | .09 |
| Q8-1 | 36.9 | 59 | 26 | .81 | .63 | .08 | 1.5 |
| Q8-1-D | 36.4 | 58 | 26 | 1.0 | .61 | .16 | 1.5 |
| Q8-2 | 24.6 | 54 | 32 | 2.0 | .70 | .20 | .70 |
| Q8-3 | 16.8 | 38 | 19 | 4.3 | .26 | .24 | .11 |
| Q8-4 | 52.1 | 58 | 36 | .65 | .41 | .07 | .39 |
| Q8-5 | 16.5 | 62 | 27 | 3.8 | 1.0 | .89 | .14 |
| Q8-6 | 20.1 | 64 | 26 | 3.6 | .63 | .24 | .21 |
| Q8-6-D | 18.2 | 61 | 27 | 4.9 | .85 | .24 | .21 |
| Q8-7 | 43.6 | 62 | 35 | .22 | .33 | .09 | .25 |
| Q8-8 | 64.6 | 67 | 30 | .61 | .43 | .07 | .55 |
| Q8-9 | 88.7 | 63 | 29 | 3.1 | 2.5 | .31 | .64 |
| Q8-10 | 17.6 | 63 | 24 | 2.2 | 2.5 | .16 | .17 |
| Q8-11 | 7.1 | 52 | 22 | 13 | 1.7 | .27 | .18 |
| Q8-13 | 10.3 | 54 | 35 | 3.4 | 1.6 | .54 | .18 |
| Q8-15 | 11.6 | 60 | 22 | 8.5 | 2.3 | .30 | .12 |
| Q8-16 | 8.0 | 41 | 23 | 17 | 2.0 | .77 | .29 |
| Q8-18-D | 10.8 | 44 | 22 | 22 | 1.6 | .27 | .14 |
| Q8-18 | 10.7 | 45 | 23 | 21 | 1.5 | .27 | .13 |
| Q8-19 | 7.1 | 59 | 28 | 3.1 | .36 | .26 | .14 |
| Q8-20 | 5.6 | 52 | 32 | 2.6 | .85 | .67 | .27 |
| Q8-21 | 63.5 | 64 | 28 | .73 | 1.3 | .07 | 1.8 |
| Q9-1 | 12.3 | 66 | 25 | .44 | 1.2 | .20 | 2.0 |
| Q9-2 | 14.4 | 66 | 26 | 1.8 | .73 | .30 | .11 |
| Q9-3 | 25.7 | 50 | 30 | 3.5 | .30 | .11 | .39 |
| Q9-4 | 10.6 | 58 | 32 | 2.2 | .88 | .22 | .26 |
| Q9-5 | 63.9 | 61 | 35 | .53 | .68 | .17 | .57 |
| Q9-6 | 85.7 | 57 | 40 | .51 | .46 | .07 | .70 |
| Q9-7 | 89.3 | 62 | 30 | 2.2 | 2.3 | .28 | .74 |
| Q9-8 | 65.9 | 79 | 17 | .41 | .46 | .31 | 1.9 |
| Q9-9 | 14.7 | 47 | 26 | 18 | 1.6 | .16 | .21 |
| Q9-11 | 9.9 | 55 | 38 | 1.1 | .35 | .16 | .31 |
| Q9-13 | 9.2 | 61 | 26 | 4.0 | 1.0 | .17 | .12 |
| Q9-14 | 8.4 | 36 | 19 | 27 | 2.2 | .54 | .18 |
| Q9-16 | 14.3 | 55 | 34 | 3.2 | .93 | .24 | .24 |
| Q9-17 | 5.7 | 51 | 33 | 4.9 | .91 | .59 | .17 |
| Q10A-1 | 9.1 | 50 | 37 | 1.5 | .50 | .54 | .39 |
| Q10A-2 | 39.2 | 58 | 35 | .42 | .51 | .27 | .60 |
| Q10A-3-D | 12.2 | 63 | 25 | 2.2 | .50 | .67 | .17 |
| Q10A-3 | 11.8 | 63 | 26 | 1.8 | .48 | .69 | .18 |
| Q10A-4 | 13.6 | 57 | 27 | 6.3 | .89 | .40 | .27 |
| Q10A-4-D | 13.2 | 61 | 29 | 3.8 | .53 | .31 | .31 |
| Q10A-5 | 58.6 | 60 | 33 | .48 | .99 | .24 | .85 |
| Q10A-6 | 88.9 | 61 | 33 | 1.5 | 1.4 | .69 | .75 |

| SAMPLE ID | ASH | SiO2 | Al2O3 | CaO | MgO | Na2O | K2O |
|---|---|---|---|---|---|---|---|
| Q10A-7 | 13.1 | 57 | 23 | 9.2 | 1.6 | 0.32 | 0.20 |
| Q10A-8 | 8.2 | 55 | 29 | 6.0 | 1.5 | .46 | .26 |
| Q10A-10 | 20.5 | 57 | 37 | .99 | .70 | .40 | .39 |
| Q10A-12 | 10.0 | 63 | 20 | 6.5 | 1.1 | 1.2 | .14 |
| Q10A-13 | 6.0 | 45 | 26 | 8.3 | 2.5 | 1.6 | .29 |
| Q10A-14 | 69.7 | 57 | 38 | .25 | .45 | .40 | .95 |
| Q10A-16 | 37.7 | 59 | 33 | 2.6 | .56 | .53 | .48 |
| Q10A-17 | 7.8 | 46 | 28 | 13 | 2.2 | .48 | .22 |
| Q10A-18 | 8.9 | 60 | 30 | 1.5 | .58 | .92 | .21 |
| Q10A-19 | 67.6 | 66 | 25 | .36 | 1.1 | .84 | 2.1 |
| Q11-1 | 93.6 | 80 | 9.1 | 1.6 | .99 | .40 | 2.1 |
| Q11-2 | 9.2 | 41 | 22 | 9.3 | .38 | .46 | .31 |
| Q11-3 | 70.2 | 58 | 34 | .80 | .55 | .42 | 1.1 |
| Q11-4 | 91.1 | 59 | 35 | 1.0 | .86 | .61 | 1.0 |
| Q11-5 | 10.1 | 44 | 21 | 15 | .70 | .79 | .20 |
| Q11-6 | 15.7 | 53 | 33 | 4.7 | .53 | .65 | .19 |
| Q11-7 | 12.8 | 52 | 37 | 4.0 | 1.3 | .71 | .27 |
| Q11-8 | 9.0 | 40 | 21 | 12 | 1.2 | 1.1 | .22 |
| Q11-10 | 75.6 | 56 | 39 | .26 | .41 | .54 | 1.2 |
| Q11-12 | 12.9 | 59 | 28 | 3.8 | .83 | .61 | .58 |
| Q11-13 | 12.0 | 65 | 23 | 2.7 | .73 | .54 | .32 |
| Q11-14 | 91.0 | 67 | 25 | .33 | 1.5 | .84 | 2.5 |
| Q11-15 | 10.3 | 46 | 18 | 14 | .85 | .22 | .32 |
| Q11-16-D | 65.4 | 64 | 27 | .22 | .91 | .73 | 2.2 |
| Q11-16 | 65.9 | 64 | 27 | .26 | .89 | .63 | 2.1 |
| Q12-1 | 10.8 | 43 | 24 | 3.9 | .78 | .40 | .20 |
| Q12-2 | 66.6 | 63 | 31 | .60 | 1.0 | .90 | .97 |
| Q12-3 | 89.0 | 66 | 25 | 2.5 | 2.9 | 2.1 | 1.3 |
| Q12-4 | 26.5 | 66 | 19 | 1.6 | 1.2 | .82 | 1.1 |
| Q12-5 | 14.1 | 56 | 20 | 6.4 | 1.5 | .54 | .78 |
| Q12-6 | 46.9 | 49 | 21 | 1.6 | 1.1 | .35 | 1.2 |
| Q12-7 | 46.4 | 68 | 22 | .55 | 1.0 | .58 | 1.9 |
| Q12-7-D | 46.7 | 68 | 21 | .56 | 1.0 | .63 | 1.9 |
| Q12-8 | 37.3 | 62 | 25 | .96 | 1.2 | .55 | 1.7 |
| Q12-10 | 44.3 | 62 | 24 | 1.7 | .50 | .55 | 1.4 |
| Q12-11 | 25.6 | 49 | 16 | 1.5 | 1.1 | .62 | .86 |
| Q12-11-D | 11.1 | 58 | 34 | 1.8 | .63 | 1.0 | .14 |
| Q12-12 | 68.9 | 61 | 34 | .52 | 1.5 | .35 | 1.3 |
| Q12-13 | 26.4 | 57 | 40 | .56 | .71 | .38 | .52 |
| Q12-14 | 80.1 | 70 | 24 | .57 | .96 | .26 | 2.1 |
| Q13A-1 | 42.4 | 57 | 17 | .28 | .76 | .63 | 1.6 |
| Q13A-2 | 82.9 | 65 | 27 | .95 | 1.6 | 2.1 | 1.4 |
| Q13A-3 | 9.4 | 64 | 24 | 1.6 | .41 | .31 | .29 |
| Q13A-4 | 10.1 | 54 | 29 | 4.3 | 1.4 | .61 | .23 |
| Q13A-6 | 17.3 | 60 | 29 | 1.4 | .36 | .26 | .15 |
| Q13A-8 | 7.2 | 37 | 20 | 12 | 1.2 | 1.6 | .14 |
| Q13A-9 | 20.5 | 54 | 27 | 4.4 | 1.1 | .65 | 1.0 |
| Q13A-10 | 54.5 | 57 | 34 | 1.3 | .83 | .46 | 1.6 |

| SAMPLE ID | ASH | SiO2 | Al2O3 | CaO | MgO | Na2O | K2O |
|---|---|---|---|---|---|---|---|
| Q13A-12 | 46.9 | 67 | 24 | 0.44 | 0.78 | 0.61 | 1.9 |
| Q13A-12-D | 47.9 | 46 | 33 | 5.0 | .53 | .58 | .14 |
| Q13A-13 | 23.1 | 45 | 14 | 4.6 | .65 | .44 | .85 |
| Q13A-14 | 13.9 | 56 | 32 | 4.0 | 1.1 | .12 | .24 |
| Q13A-15 | 5.7 | 49 | 30 | 3.1 | .40 | .44 | .19 |

Table 2. (Continued)

| SAMPLE ID | Fe2O3 | MnO | TiO2 | SO3 | P2O5 | |
|---|---|---|---|---|---|---|
| Q2A-2 | 1.6 | 0.01 | 1.1 | 1.2 | 0.06 | L |
| Q2A-3 | 4.4 | .01 | 1.1 | 2.1 | .01 | L |
| Q2A-6 | 9.1 | .01 | 1.0 | .91 | .03 | |
| Q2A-7 | 11 | .01 | 1.6 | 2.4 | .17 | L |
| Q2A-8-D | 2.1 | 0.0 | 1.4 | 1.0 | .01 | L |
| Q2A-8 | 2.2 | 0.0 | 1.4 | .80 | .08 | |
| Q2A-9 | 1.7 | 0.0 | 1.0 | .42 | 0.0 | N |
| Q2A-11-D | 5.3 | .01 | .94 | 1.4 | 0.0 | N |
| Q2A-11 | 5.6 | .01 | .95 | 1.3 | .02 | |
| Q2A-12 | 12 | 0.0 | 1.5 | .78 | .06 | L |
| Q2A-13 | 6.1 | 0.0 | 1.6 | .77 | .07 | L |
| Q2A-14 | 5.4 | 0.0 | 1.3 | .57 | .05 | L |
| Q2A-15 | 1.4 | 20 | .78 | .28 | .01 | L |
| Q3-1 | 8.5 | .01 | 1.3 | 6.0 | .23 | L |
| Q3-2 | 3.4 | .01 | .83 | .97 | .02 | L |
| Q3-3 | 5.2 | .01 | .88 | 1.3 | .01 | L |
| Q3-8 | 34 | .01 | .80 | 2.3 | .04 | L |
| Q3-9-D | 6.5 | .01 | 1.2 | 5.0 | .01 | L |
| Q3-9 | 7.1 | .01 | 1.2 | 5.6 | .10 | L |
| Q3-11 | 5.5 | .02 | 1.1 | 5.1 | .08 | L |
| Q3-11-D | 5.5 | .02 | 1.1 | 4.4 | .08 | L |
| Q3-12 | 3.5 | .01 | 2.0 | 5.0 | .07 | L |
| Q3-13 | 3.7 | .01 | 2.7 | 2.6 | .05 | L |
| Q3-14 | 8.0 | .01 | 1.0 | 5.6 | .13 | L |
| Q3-15 | 3.7 | .03 | 1.0 | 6.2 | .10 | L |
| Q3-16 | 8.4 | .01 | 1.0 | 5.3 | .16 | L |
| Q3-17 | 2.7 | 20 | .87 | .37 | .01 | L |
| Q3-18 | 4.7 | .01 | 1.2 | 5.4 | .11 | L |
| Q3-19 | 5.0 | .01 | 1.6 | 4.8 | .11 | L |
| Q3-21 | 2.3 | .01 | .92 | 2.7 | .06 | L |
| Q3-22 | 1.7 | 0.0 | .92 | .56 | .03 | L |
| Q3-23 | 4.3 | .01 | .72 | 1.5 | .01 | L |
| Q3-24 | 3.2 | 0.0 | .99 | .78 | .02 | L |
| Q3-25 | 9.5 | 0.0 | .91 | 1.9 | .03 | L |
| Q3-26A | 6.2 | 0.0 | 1.2 | .48 | .02 | L |
| Q3-27 | 23 | .01 | 1.9 | 10 | .01 | L |
| Q3-28 | 2.4 | .01 | 1.5 | .63 | .02 | L |
| Q4-1 | 5.7 | .01 | 1.3 | 3.9 | .14 | L |
| Q4-1-D | 5.2 | .01 | 1.3 | 3.9 | .14 | L |
| Q4-2 | 2.2 | 0.0 | .72 | .39 | .02 | L |
| Q4-3 | 8.4 | .01 | .54 | 2.1 | .01 | L |
| Q4-4 | 13 | .01 | .91 | 2.2 | .05 | L |
| Q4-5 | 4.8 | .01 | .90 | 3.9 | .06 | L |
| Q4-6 | 3.0 | 0.0 | 1.4 | .57 | .01 | L |
| Q4-7 | 5.8 | .01 | 1.2 | 3.2 | .06 | L |

| SAMPLE ID | Fe2O3 | MnO | TiO2 | SO3 | P2O5 | |
|---|---|---|---|---|---|---|
| Q4-8 | 1.8 | 0.0 | 2.4 | 0.84 | 0.23 | |
| Q4-9 | 28 | .02 | .71 | 2.0 | .04 | L |
| Q4-10 | 5.0 | 0.0 | 1.3 | 3.6 | .12 | L |
| Q4-11 | 3.9 | .01 | 1.4 | 5.5 | .09 | L |
| Q4-12 | 4.8 | .02 | .77 | 14 | .13 | L |
| Q4-13 | 1.6 | 0.0 | 1.0 | .32 | .02 | L |
| Q4-14 | 5.4 | 60 | .79 | 1.3 | .01 | L |
| Q4-15 | 3.4 | .01 | .77 | 5.2 | .08 | L |
| Q4-16 | 2.7 | .01 | 1.2 | 2.4 | .01 | L |
| Q4-18 | 2.2 | .01 | 1.1 | 4.2 | .01 | L |
| Q4-20 | 2.9 | .02 | .92 | 7.4 | .08 | L |
| Q4-21 | 5.4 | 0.0 | 2.0 | 2.3 | .16 | L |
| Q4-22 | 2.9 | .01 | 1.8 | 1.3 | .04 | L |
| Q4-23 | 2.3 | 0.0 | 1.4 | .67 | .01 | L |
| Q4-25 | 1.8 | 0.0 | 1.2 | .19 | .01 | L |
| Q4-26 | 4.0 | .01 | 1.2 | 3.1 | .09 | L |
| Q4-27 | 2.4 | 0.0 | 2.5 | 1.2 | .11 | L |
| Q4-28 | 2.5 | .02 | 1.3 | 5.0 | .07 | L |
| Q4-29 | 1.3 | 0.0 | .81 | .34 | .03 | |
| Q5A-0-D | 8.5 | .01 | .75 | .88 | .02 | L |
| Q5A-0 | 8.1 | .01 | .71 | 1.2 | .02 | L |
| Q5A-1 | 14 | .01 | .83 | 1.6 | .20 | |
| Q5A-2 | 2.0 | .01 | 1.6 | .70 | .04 | L |
| Q5A-4 | 13 | 0.0 | 1.5 | 1.5 | .06 | L |
| Q5A-5 | 7.3 | .01 | 2.2 | 1.8 | .04 | L |
| Q5A-6 | 6.8 | .01 | 1.2 | 6.7 | .08 | L |
| Q5A-7 | 2.3 | .01 | 1.8 | 2.5 | .06 | L |
| Q5A-8 | 2.1 | 0.0 | 1.2 | .34 | .01 | L |
| Q5A-9 | 3.0 | 50 | .86 | .54 | .01 | L |
| Q5A-10 | 4.4 | .01 | 1.0 | 4.2 | .08 | L |
| Q5A-11 | 5.7 | .02 | 1.6 | 8.1 | .01 | L |
| Q5A-13 | 3.5 | 0.0 | 1.7 | 1.7 | .10 | L |
| Q5A-15 | 2.9 | .02 | 1.4 | 2.6 | .09 | L |
| Q5A-16 | 5.9 | .03 | 2.4 | 2.8 | .11 | L |
| Q5A-18 | 1.7 | 0.0 | 1.2 | .21 | .02 | L |
| Q5A-19 | 5.3 | .04 | .87 | 5.9 | .01 | L |
| Q5A-20 | 3.5 | .01 | 2.6 | 3.3 | .11 | L |
| Q5A-21 | 5.1 | .04 | 2.1 | 7.4 | .16 | L |
| Q5A-22 | .93 | 0.0 | .90 | .16 | .01 | L |
| Q5A-23 | 1.3 | 0.0 | .86 | .77 | 0.0 | N |
| Q5-1 | 7.1 | .01 | .79 | 1.3 | .02 | L |
| Q5-1-D | 7.4 | .01 | .79 | .99 | .02 | L |
| Q5-2 | 1.6 | .01 | 1.9 | 1.0 | .05 | L |
| Q5-3 | 2.7 | .01 | 1.2 | .48 | .01 | L |
| Q5-4 | 25 | 0.0 | .88 | 2.5 | .01 | L |
| Q5-5 | 17 | .01 | 1.1 | 4.7 | .08 | L |
| Q5-6 | 3.6 | .01 | 1.2 | 4.7 | .01 | L |
| Q5-7 | 2.0 | .01 | 2.4 | 2.4 | .05 | L |
| Q5-8 | 1.5 | 0.0 | .89 | .35 | .01 | L |

| SAMPLE ID | Fe2O3 | MnO | TiO2 | SO3 | P2O5 | |
|---|---|---|---|---|---|---|
| Q5-10 | 4.8 | 0.01 | 1.2 | 2.6 | 0.10 | L |
| Q5-11 | 7.1 | .01 | 1.6 | 5.8 | .20 | L |
| Q5-13 | 3.5 | 0.0 | 1.1 | 7.0 | .01 | L |
| Q5-15 | 4.2 | 0.0 | 1.6 | 2.4 | .01 | |
| Q5-16 | 6.4 | .04 | 2.5 | 5.1 | .16 | L |
| Q5-16A | 2.9 | .01 | 2.0 | .94 | .04 | L |
| Q5-17A | 2.0 | 0.0 | 1.2 | .21 | .02 | L |
| Q5-18 | 4.1 | .01 | 1.1 | 1.9 | .11 | L |
| Q5-19 | 4.5 | .02 | 1.9 | 6.6 | .14 | L |
| Q5-20 | 1.2 | 0.0 | .89 | .31 | .01 | L |
| Q6-2 | 19 | .01 | 1.8 | 1.7 | .05 | L |
| Q6-3 | 12 | .01 | .84 | 1.0 | .02 | L |
| Q6-3-D | 13 | .01 | .83 | 1.3 | .02 | L |
| Q6-4 | 32 | .01 | 1.3 | .96 | .04 | L |
| Q6-5 | 12 | .03 | 1.6 | 3.3 | .09 | L |
| Q6-6 | 1.7 | .01 | 2.8 | .69 | .02 | L |
| Q6-7 | 1.6 | .01 | 1.5 | 2.6 | .06 | L |
| Q6-8 | 2.5 | .01 | 1.6 | 1.6 | .07 | L |
| Q6-10 | 3.3 | 70 | .82 | .99 | .01 | L |
| Q6-11 | 4.2 | .01 | 1.1 | 6.9 | .10 | L |
| Q6-12 | 5.9 | .02 | 1.2 | 7.5 | .14 | L |
| Q6-14 | 3.0 | .01 | 1.7 | 2.2 | .01 | L |
| Q6-16 | 3.8 | .03 | 1.8 | 4.9 | .09 | L |
| Q6-16-D | 3.3 | .03 | 1.8 | 5.0 | .09 | L |
| Q6-18 | 3.8 | .01 | 1.1 | 3.0 | .09 | L |
| Q6-19 | 3.7 | .02 | 2.4 | 4.3 | .11 | L |
| Q6-20 | .16 | 0.0 | .73 | .89 | .01 | L |
| Q7-1 | 13 | .01 | .91 | 1.3 | .02 | |
| Q7-2 | 16 | .01 | 1.1 | 1.7 | .09 | L |
| Q7-3A | 21 | .01 | .65 | 1.5 | .04 | |
| Q7-3 | 12 | .01 | 1.8 | .98 | .06 | L |
| Q7-4 | 2.6 | .01 | 2.0 | 3.1 | .08 | L |
| Q7-5 | 3.8 | .01 | 1.4 | 4.0 | .07 | L |
| Q7-6 | 5.6 | .08 | .24 | 10 | .07 | L |
| Q7-7 | 1.3 | 0.0 | .93 | 1.8 | .04 | L |
| Q7-9 | 5.8 | .01 | 1.2 | 10 | .15 | L |
| Q7-10 | 7.7 | .01 | 1.4 | 8.9 | .21 | L |
| Q7-12 | 5.1 | .01 | 1.5 | 4.3 | .13 | L |
| Q7-14 | 4.8 | .01 | 1.6 | 5.7 | .12 | L |
| Q7-15 | 4.8 | .01 | 2.0 | 2.2 | .08 | L |
| Q7-17 | 3.4 | .01 | 1.0 | 3.5 | .06 | L |
| Q7-18 | 5.5 | .02 | 1.4 | 10 | .11 | L |
| Q7-19 | 8.3 | .01 | 2.3 | 4.9 | .01 | L |
| Q7-20 | 2.4 | .01 | .95 | .47 | .02 | L |
| Q7-23 | 12 | .01 | 1.4 | 1.2 | .03 | L |
| Q7-24 | 16 | .01 | 1.4 | 4.5 | .13 | L |
| Q7-25 | 6.7 | .01 | 1.5 | 3.8 | .17 | L |
| Q7-26 | 8.9 | .02 | 1.1 | 10 | .01 | L |
| Q7-27 | 7.7 | .02 | 1.3 | 7.6 | .17 | L |

| SAMPLE ID | Fe2O3 | MnO | TiO2 | SO3 | P2O5 | |
|---|---|---|---|---|---|---|
| Q7-28 | 1.5 | 0.0 | 0.45 | 0.29 | 0.01 | L |
| Q7-29 | 2.7 | .03 | .92 | 4.0 | .01 | L |
| Q7-30 | 1.9 | .02 | 1.7 | 2.1 | .01 | L |
| Q7-31 | 3.3 | .04 | 1.3 | 5.0 | .13 | L |
| Q8-1 | 10 | .01 | 1.1 | 1.5 | .03 | L |
| Q8-1-D | 11 | 0.0 | 1.1 | 2.0 | .03 | L |
| Q8-2 | 8.0 | .01 | 1.2 | 2.0 | .04 | L |
| Q8-3 | 34 | .02 | .84 | 3.4 | .06 | L |
| Q8-4 | 1.3 | .01 | 3.2 | .34 | .02 | L |
| Q8-5 | 2.8 | .01 | 1.7 | 2.7 | .06 | L |
| Q8-6 | 1.8 | .02 | 1.9 | 2.3 | .05 | L |
| Q8-6-D | 2.2 | .02 | 1.8 | 3.1 | .01 | L |
| Q8-7 | .72 | 0.0 | 1.0 | .69 | .02 | L |
| Q8-8 | 1.1 | 0.0 | 1.0 | .29 | .02 | L |
| Q8-9 | 3.2 | 60 | .72 | .66 | .01 | L |
| Q8-10 | 6.6 | .03 | 1.7 | 2.2 | .06 | L |
| Q8-11 | 4.3 | .03 | 1.1 | 7.0 | .14 | L |
| Q8-13 | 2.1 | .01 | 1.3 | 4.3 | .10 | L |
| Q8-15 | 3.2 | .01 | 1.5 | 4.3 | .09 | L |
| Q8-16 | 6.4 | .04 | 1.8 | 11 | .01 | L |
| Q8-18-D | 3.9 | .04 | .77 | 6.9 | .01 | L |
| Q8-18 | 3.7 | .04 | .79 | 6.4 | .01 | L |
| Q8-19 | 5.4 | .01 | 2.0 | 3.0 | .14 | L |
| Q8-20 | 7.4 | .01 | 2.2 | 3.1 | .01 | L |
| Q8-21 | 3.8 | 0.0 | .81 | .26 | .02 | L |
| Q9-1 | 5.0 | .06 | 1.1 | .57 | .08 | L |
| Q9-2 | 2.7 | .01 | 1.9 | 2.0 | .07 | L |
| Q9-3 | 12 | .01 | 1.1 | 2.8 | .04 | L |
| Q9-4 | 3.1 | .01 | 1.6 | 2.6 | .09 | L |
| Q9-5 | 1.3 | 0.0 | 1.2 | .30 | .01 | L |
| Q9-6 | .96 | 0.0 | .96 | .16 | .01 | L |
| Q9-7 | 3.8 | 100 | .77 | .92 | .01 | L |
| Q9-8 | .82 | 0.0 | .78 | .23 | .02 | L |
| Q9-9 | 2.5 | .06 | .96 | 5.4 | .01 | L |
| Q9-11 | 2.5 | 0.0 | 1.9 | 1.2 | .10 | L |
| Q9-13 | 4.3 | .02 | 1.8 | 3.1 | .11 | L |
| Q9-14 | 4.7 | .11 | 2.1 | 11 | .12 | L |
| Q9-16 | 3.8 | .02 | 1.0 | 3.1 | .07 | L |
| Q9-17 | 4.7 | .03 | 2.7 | 3.4 | .18 | L |
| Q10A-1 | 8.0 | .01 | 2.0 | 1.5 | .11 | L |
| Q10A-2 | 2.2 | .01 | 2.6 | .44 | .03 | L |
| Q10A-3-D | 6.6 | .01 | 1.7 | 2.2 | .01 | L |
| Q10A-3 | 5.2 | .01 | 1.7 | 1.8 | .08 | L |
| Q10A-4 | 4.4 | .03 | 1.8 | 3.0 | .07 | L |
| Q10A-4-D | 2.6 | .02 | 2.1 | 1.6 | .08 | L |
| Q10A-5 | 5.2 | 0.0 | 1.0 | .23 | .02 | L |
| Q10A-6 | 3.0 | 70 | .85 | .45 | .01 | L |
| Q10A-7 | 3.6 | .02 | 1.0 | 5.5 | .08 | L |

| SAMPLE ID | Fe2O3 | MnO | TiO2 | SO3 | P2O5 | |
|---|---|---|---|---|---|---|
| Q10A-8 | 4.0 | 0.01 | 1.9 | 3.8 | 0.12 | L |
| Q10A-10 | 1.7 | 0.0 | 1.8 | 1.3 | .05 | L |
| Q10A-12 | 3.6 | .02 | 2.0 | 4.9 | .01 | L |
| Q10A-13 | 7.3 | .02 | 2.0 | 10 | .17 | L |
| Q10A-14 | 2.7 | 0.0 | 1.3 | .21 | .01 | L |
| Q10A-16 | 2.3 | .01 | .94 | .92 | .03 | L |
| Q10A-17 | 7.2 | .02 | 1.2 | 5.1 | .13 | L |
| Q10A-18 | 3.8 | .01 | 1.9 | 1.9 | .01 | L |
| Q10A-19 | 4.6 | 0.0 | .82 | 1.1 | .01 | L |
| Q11-1 | 4.0 | .01 | .49 | 2.3 | 0.0 | N |
| Q11-2 | 22 | .03 | .91 | 3.7 | .11 | L |
| Q11-3 | 4.2 | 0.0 | .98 | .31 | .01 | L |
| Q11-4 | 2.9 | 50 | .90 | .39 | .01 | L |
| Q11-5 | 12 | .03 | .75 | 6.6 | .10 | L |
| Q11-6 | 4.4 | .02 | 1.3 | 3.5 | .06 | L |
| Q11-7 | 3.0 | .03 | 1.2 | 2.1 | .08 | L |
| Q11-8 | 18 | .04 | 1.5 | 7.8 | .01 | L |
| Q11-10 | 1.4 | .01 | 1.4 | .50 | .01 | L |
| Q11-12 | 3.9 | .03 | 1.3 | 3.0 | .16 | |
| Q11-13 | 4.2 | .02 | 2.3 | 2.3 | .01 | L |
| Q11-14 | 4.0 | .01 | .85 | .63 | .01 | L |
| Q11-15 | 12 | .06 | .88 | 9.0 | .10 | L |
| Q11-16-D | 5.4 | 0.0 | .80 | .95 | .01 | L |
| Q11-16 | 5.3 | .01 | .81 | .69 | .02 | L |
| Q12-1 | 24 | .02 | .81 | 4.5 | .09 | L |
| Q12-2 | 3.1 | 0.0 | .85 | .69 | .01 | L |
| Q12-3 | 3.6 | 100 | .66 | .86 | .01 | L |
| Q12-4 | 9.5 | .01 | .74 | 1.6 | .04 | L |
| Q12-5 | 9.9 | .05 | .89 | 6.6 | .07 | L |
| Q12-6 | 23 | .01 | .56 | 3.2 | .02 | L |
| Q12-7 | 5.9 | .01 | .82 | .95 | .02 | L |
| Q12-7-D | 5.8 | .01 | .84 | 1.1 | .02 | L |
| Q12-8 | 8.5 | .01 | .92 | 1.3 | .03 | L |
| Q12-10 | 9.0 | .02 | .66 | 1.0 | .02 | L |
| Q12-11 | 29 | .02 | .73 | 2.6 | .01 | L |
| Q12-11-D | 3.0 | 0.0 | 1.2 | 1.8 | .09 | L |
| Q12-12 | 2.6 | .01 | .77 | .35 | .01 | L |
| Q12-13 | 1.4 | .01 | .71 | .53 | .01 | L |
| Q12-14 | 1.8 | .01 | .90 | .62 | .01 | L |
| Q13A-1 | 23 | .01 | .67 | .79 | .02 | L |
| Q13A-2 | 3.5 | 30 | .79 | .60 | .01 | L |
| Q13A-3 | 7.7 | .01 | 1.4 | 1.3 | .11 | L |
| Q13A-4 | 6.8 | .04 | 1.9 | 3.4 | .10 | L |
| Q13A-6 | 7.6 | .01 | 1.4 | .98 | .06 | L |
| Q13A-8 | 19 | .04 | 1.0 | 11 | .14 | L |
| Q13A-9 | 9.1 | .03 | .90 | 3.6 | .05 | L |
| Q13A-10 | 3.9 | .01 | .99 | .81 | .02 | L |
| Q13A-12 | 5.1 | .01 | 1.1 | .52 | .02 | L |

| SAMPLE ID | Fe2O3 | MnO | TiO2 | SO3 | P2O5 | |
|---|---|---|---|---|---|---|
| Q13A-12-D | 12 | 0.01 | 1.2 | 3.1 | 0.02 | L |
| Q13A-13 | 30 | .03 | .88 | 4.2 | .01 | L |
| Q13A-14 | 2.7 | .02 | 1.5 | 3.3 | .07 | L |
| Q13A-15 | 14 | .03 | .78 | 3.0 | .18 | L |

Table 3. Trace element composition of 243 coal and rock samples in the C coal bed. [Values are in parts per million. L=less than the average shown; N=not detected; B=not determined.]

| SAMPLE ID | Ag | As | Au | B | Ba | Be | Bi | Br | Cd | Ce |
|---|---|---|---|---|---|---|---|---|---|---|
| Q2A-2 | .05 | 0.4 | 1.7 L | 71 | 20 | 5.8 | 1.7 L | 4.0 L | 0.02 | 29 |
| Q2A-3 | .02 | .8 | 1.2 L | 68 | 63 | 4.4 | 1.2 L | 4.0 L | .01 | 14 |
| Q2A-6 | .10 | 14 | 7.8 L | 93 | 150 | 3.3 | 7.8 L | .5 L | .47 | 110 |
| Q2A-7 | .02 | 1.6 | .60 L | 40 | 6.6 | 1.4 | .6 L | 2.0 L | .01 | 7 |
| Q2A-8-D | .02 | .6 | 1.0 L | 42 | 17 | 2.7 | 1.0 L | 4.0 L | .01 | 15 |
| Q2A-8 | .03 | .6 | 1.3 L | 72 | 21 | 3.9 | 1.3 L | 4.0 L | .03 | 15 |
| Q2A-9 | .09 L | 9.1 | 9.2 L | 83 | 280 | 2.5 | 9.2 L | 1.0 L | .09 | 68 |
| Q2A-11-D | .08 L | 14 | 8.0 L | 88 | 177 | 3.2 | 8.0 L | 2.0 L | .29 | 96 |
| Q2A-11 | .08 L | 22 | 8.1 L | 72 | 170 | 2.7 | 8.1 L | 1.0 L | .35 | 92 |
| Q2A-12 | .03 | 5.5 | 1.7 L | 60 | 29 | 3.3 | 1.7 L | 1.0 L | .05 | 15 |
| Q2A-13 | .03 | 3.7 | 1.5 L | 68 | 18 | 1.2 | 1.5 L | 2.0 | .03 | 16 |
| Q2A-14 | .07 | 28 | 2.0 L | 61 | 12 | 5.5 | 2.0 L | 2.0 L | .04 | 14 |
| Q2A-15 | .18 | 4.1 | 6.7 L | 85 | 182 | 1.3 | 9.6 L | 1.1 L | .19 | 60 |
| Q3-1 | .01 | .6 | .44 L | 35 | 28 | 1.1 | .4 L | 4.5 | .01 | 7 |
| Q3-2 | .05 L | 1.8 | 5.3 L | 79 | 358 | 3.0 | 5.3 L | 2.0 L | .16 | 49 |
| Q3-3 | .08 L | 12 | 7.7 L | 69 | 285 | 2.3 | 7.7 L | 2.0 L | .59 | 70 |
| Q3-8 | .04 | 51 | 2.5 L | 54 | 40 | 4.7 | 2.5 L | 3.0 | .04 | 16 |
| Q3-9-D | .04 | 1.2 | 1.1 L | 73 | 65 | .6 | 1.1 L | 4.0 | .01 | 11 |
| Q3-9 | .03 | 1.4 | 1.0 L | 31 | 75 | .8 | 1.0 L | 3.4 | .08 | 12 |
| Q3-11 | .02 | .6 | 1.3 L | 58 | 74 | .5 | 1.3 L | 2.0 L | .05 | 13 |
| Q3-11-D | .02 | .4 | 1.2 L | 67 | 71 | .5 | 1.2 L | 1.0 L | .04 | 12 |
| Q3-12 | .06 | .8 | 1.4 L | 57 | 83 | .7 | 1.4 L | 3.0 | .03 | 16 |
| Q3-13 | .04 | .6 | 2.0 L | 47 | 108 | .6 | 2.0 L | 1.0 L | .02 | 16 |
| Q3-14 | .01 L | .6 | .75 L | 27 | 46 | .2 | .8 L | 1.0 L | .01 | 8 |
| Q3-15 | .01 L | 1.0 | .98 L | 66. | 22 | .5 | 1.0 L | 1.0 L | .02 | 12 |
| Q3-16 | .01 | .4 | .62 L | 59 | 42 | 1.7 | .6 L | 1.0 L | .02 | 8 |
| Q3-17 | .12 | 2.8 L | 6.3 L | 52 | 280 | .9 L | 9.0 L | 1.8 L | .34 | 60 |
| Q3-18 | .01 L | .4 | .95 L | 38 | 42 | 3.5 | 1.0 L | 2.0 L | .01 L | 27 |
| Q3-19 | .03 | 1.7 | .90 L | 40 | 49 | .5 | .9 L | 2.0 L | .01 | 11 |
| Q3-21 | .02 | 1.1 | 1.6 L | 75 | 60 | .7 | 1.6 L | 2.0 L | .03 | 16 |
| Q3-22 | .04 | .8 | 3.7 L | 71 | 96 | .9 | 3.7 L | 2.0 L | .24 | 27 |
| Q3-23 | .09 | 17 | 7.0 L | 77 | 223 | 1.2 | 7.0 L | 2.0 L | .21 | 63 |
| Q3-24 | .09 | 4.3 | 6.0 L | 78 | 180 | 1.5 | 6.0 L | 2.0 L | .18 | 53 |
| Q3-25 | .10 | 13 | 3.3 L | 96 | 83 | 1.7 | 3.3 L | 1.0 L | .08 | 31 |
| Q3-26A | .05 L | 13 | 4.5 L | 63 | 99 | 1.7 | 4.5 L | 1.0 L | .08 | 68 |
| Q3-27 | .02 | 2.8 | .87 L | 48 | 35 | 2.3 | .9 L | 2.0 L | .01 | 19 |
| Q3-28 | .08 | 1.5 | 4.7 L | 41 | 99 | 5.2 | 4.7 L | 4.0 L | .06 | 24 |
| Q4-1 | .02 | 1.1 | .71 L | 48 | 36 | 4.0 | .7 L | 3.9 | .01 | 8 |
| Q4-1-D | .01 | 1.1 | .73 L | 72 | 36 | 3.9 | .7 L | 8.0 | .01 L | 6 |
| Q4-2 | .08 | 2.1 | 5.8 L | 105 | 110 | 3.1 | 5.8 L | 2.0 L | .13 | 28 |
| Q4-3 | .11 | 29 | 7.1 L | 71 | 193 | 2.1 | 7.1 L | 2.0 L | .13 | 53 |
| Q4-4 | .04 | 8.0 | 1.9 L | 54 | 78 | 1.8 | 1.9 L | 4.0 | .03 | 18 |
| Q4-5 | .05 | 1.5 | 1.6 L | 61 | 36 | 1.4 | 1.6 L | 3.0 | .03 | 13 |

| SAMPLE ID | Ag | As | Au | B | Ba | Be | Bi | Br | Cd | Ce |
|---|---|---|---|---|---|---|---|---|---|---|
| Q4-6 | 0.09 | 1.2 | 6.5 L | 116 | 239 | 1.6 | 6.5 L | 2.0 L | 0.06 | 93 |
| Q4-7 | .03 | 1.8 | 1.8 L | 70 | 48 | 1.4 | 1.8 L | 2.0 | .03 | 21 |
| Q4-8 | .09 | .6 | 3.2 L | 66 | 130 | .9 | 3.2 L | 1.0 L | .08 | 21 |
| Q4-9 | .05 | .6 | 2.5 L | 92 | 50 | 1.3 | 2.5 L | 4.0 L | .05 | 10 |
| Q4-10 | .03 | .7 | .84 L | 67 | 51 | .5 | .8 L | 4.0 L | .02 | 8 |
| Q4-11 | .02 | .6 | 1.2 L | 94 | 63 | .4 | 1.2 L | 2.0 L | .03 | 13 |
| Q4-12 | .02 | .4 | .78 L | 62 | 61 | 2.7 | .8 L | 3.0 | .01 | 10 |
| Q4-13 | .06 L | .5 | 5.9 L | 77 | 136 | 4.8 | 5.9 L | 2.0 L | .14 | 98 |
| Q4-14 | .09 L | 7.5 | 6.4 L | 46 | 339 | .9 L | 9.2 L | 2.0 L | .18 | 47 |
| Q4-15 | .01 L | .7 | 1.3 L | 54 | 67 | 6.7 | 1.3 L | 2.0 L | .02 | 55 |
| Q4-16 | .02 | 1.6 | 1.2 L | 57 | 50 | .5 | 1.2 L | 4.0 L | .02 | 15 |
| Q4-18 | .02 | .6 | 1.5 L | 60 | 89 | 1.1 | 1.5 L | 3.0 | .02 L | 15 |
| Q4-20 | .01 L | .5 | 1.2 L | 45 | 58 | 1.0 | 1.2 L | 2.0 | .02 | 22 |
| Q4-21 | .02 | .9 | .64 L | 32 | 35 | .5 | .6 L | 2.0 | .04 | 14 |
| Q4-22 | .13 | .7 | 2.4 L | 67 | 69 | 1.5 | 2.4 L | 3.0 | .02 L | 18 |
| Q4-23 | .08 L | 1.4 | 8.3 L | 91 | 175 | .9 | 8.3 L | 1.0 L | .10 | 76 |
| Q4-25 | .09 | 1.0 | 6.9 L | 96 | 247 | 1.5 | 6.9 L | 2.0 L | .21 | 120 |
| Q4-26 | .04 | .4 | 1.1 L | 51 | 38 | 1.1 | 1.1 L | 4.0 L | .01 L | 28 |
| Q4-27 | .04 | .6 | .92 L | 41 | 13 | 2.7 | .9 L | 4.0 L | .01 | 12 |
| Q4-28 | .02 | .9 | 1.4 L | 54 | 99 | 5.6 | 1.4 L | 2.0 L | .03 | 68 |
| Q4-29 | .10 | 7.5 | 9.4 L | 67 | 302 | 2.4 | 9.4 L | 2.0 L | .72 | 110 |
| Q5A-0-D | .08 | 20 | 5.8 L | 93 | 175 | 3.1 | 5.8 L | 4.0 L | .06 | 55 |
| Q5A-0 | .08 | 26 | 5.9 L | 94 | 234 | 3.5 | 5.9 L | 2.0 L | .07 | 52 |
| Q5A-1 | .05 | 53 | 4.1 L | 61 | 115 | 1.5 | 4.1 L | 2.0 L | .20 | 32 |
| Q5A-2 | .05 | 1.0 | 2.7 L | 56 | 81 | 1.3 | 2.7 L | 2.0 L | .08 | 26 |
| Q5A-4 | .04 | 6.5 | 1.7 L | 67 | 35 | 1.0 | 1.7 L | 2.0 | .04 | 19 |
| Q5A-5 | .06 | 5.3 | 2.3 L | 56 | 84 | 1.0 | 2.3 L | 2.0 L | .05 | 24 |
| Q5A-6 | .03 | 6.3 | 1.3 L | 44 | 63 | .6 | 1.3 L | 9.8 | .02 | 14 |
| Q5A-7 | .06 | .7 | 1.6 L | 55 | 44 | 3.3 | 1.6 L | 4.0 L | .04 | 11 |
| Q5A-8 | .07 L | .8 | 6.7 L | 94 | 236 | 2.5 | 6.7 L | 1.0 L | .07 L | 64 |
| Q5A-9 | .19 | 1.6 L | 6.3 L | 77 | 488 | .9 L | 9.0 L | 1.5 | .18 | 66 |
| Q5A-10 | .01 L | .4 | 1.3 L | 40 | 42 | 3.4 | 1.3 L | 2.0 L | .07 | 27 |
| Q5A-11 | .02 | .5 | .95 L | 65 | 55 | .5 | 1.0 L | 2.0 L | .01 | 12 |
| Q5A-13 | .01 L | .6 | 1.0 L | 60 | 54 | .9 | 1.0 L | 4.0 L | .01 L | 17 |
| Q5A-15 | .02 | .6 | 1.2 L | 67 | 45 | .9 | 1.2 L | 4.0 L | .02 | 17 |
| Q5A-16 | .10 | .8 | .87 L | 85 | 44 | 1.3 | .9 L | 2.0 L | .01 L | 14 |
| Q5A-18 | .21 | .9 | 4.7 L | 98 | 135 | 2.8 | 4.7 L | 3.0 | .05 L | 120 |
| Q5A-19 | .01 L | .6 | 1.1 L | 48 | 28 | 1.2 | 1.1 L | 4.0 L | .05 | 16 |
| Q5A-20 | .04 | .5 | .93 L | 45 | 23 | .8 | .9 L | 4.0 L | .03 | 12 |
| Q5A-21 | .08 | .5 | .63 L | 47 | 15 | 6.9 | .8 | 4.0 L | .02 | 5 |
| Q5A-22 | .09 L | 1.7 | 8.6 L | 77 | 293 | 2.8 | 8.6 L | 1.0 L | .09 | 43 |
| Q5A-23 | .10 | 6.3 | 9.2 L | 73 | 350 | 3.0 | 9.2 L | 2.0 L | .11 | 78 |
| Q5-1 | .06 L | 26 | 5.6 L | 95 | 167 | 2.2 | 5.6 L | 4.0 L | .06 | 49 |
| Q5-1-D | .08 | 21 | 5.5 L | 94 | 237 | 2.2 | 5.5 L | 2.0 L | .18 | 44 |
| Q5-2 | .07 | 1.3 | 2.0 L | 63 | 43 | 1.6 | 2.0 L | 2.0 L | .02 | 25 |
| Q5-3 | .12 | .9 | 4.5 L | 100 | 145 | 1.1 | 4.5 L | 2.0 L | .05 L | 46 |
| Q5-4 | .04 | 25 | 1.6 L | 55 | 42 | .6 | 2.2 | 4.0 L | .03 | 20 |
| Q5-5 | .04 | 13 | 1.2 L | 71 | 39 | .5 | 1.2 L | 4.0 L | .02 | 11 |
| Q5-6 | .03 | 1.6 | 1.4 L | 80 | 84 | .6 | 1.4 L | 4.8 | .02 | 11 |

| SAMPLE ID | Ag | As | Au | B | Ba | Be | Bi | Br | Cd | Ce |
|---|---|---|---|---|---|---|---|---|---|---|
| Q5-7 | 0.08 | 0.8 | 1.9 L | 87 | 58 | 2.3 | 1.9 L | 2.0 L | 0.02 | 13 |
| Q5-8 | .07 L | .6 | 6.7 L | 113 | 147 | 2.1 | 6.7 L | 2.0 L | .07 L | 71 |
| Q5-10 | .01 L | .3 | 1.1 L | 37 | 39 | 3.6 | 1.1 L | 2.0 L | .01 L | 37 |
| Q5-11 | .02 | .5 | .51 L | 36 | 38 | .5 | .5 L | 4.0 L | .03 | 11 |
| Q5-13 | .01 L | .6 | 1.2 L | 81 | 61 | 1.0 | 1.2 L | 4.0 L | .03 | 12 |
| Q5-15 | .01 | 1.0 | .85 L | 43 | 38 | .7 | .9 L | 4.0 L | .01 | 18 |
| Q5-16 | .06 | .6 | .62 L | 57 | 35 | .7 | .6 | 4.0 L | .01 | 14 |
| Q5-16A | .11 | .8 | 2.8 L | 78 | 70 | 2.1 | 2.8 L | 2.0 L | .03 | 17 |
| Q5-17A | .21 | 1.3 | 5.8 L | 87 | 139 | 2.6 | 5.8 L | 2.0 L | .10 | 160 |
| Q5-18 | .02 | .4 | .94 L | 50 | 19 | 1.7 | .9 L | 4.0 L | .03 | 20 |
| Q5-19 | .03 | .4 | .74 L | 42 | 17 | 3.3 | .7 L | 4.0 L | .03 | 10 |
| Q5-20 | .09 L | 2.1 | 8.9 L | 65 | 283 | 2.6 | 8.9 L | 2.0 L | .32 | 54 |
| Q6-2 | .05 | 3.1 | 1.9 L | 54 | 60 | 6.0 | 1.9 L | 2.0 L | .02 | 36 |
| Q6-3 | .08 | 35 | 4.6 L | 87 | 230 | 1.6 | 4.6 L | 2.0 L | .13 | 34 |
| Q6-3-D | .04 | 30 | 4.4 L | 71 | 220 | 1.3 | 4.4 L | 2.0 L | .08 | 25 |
| Q6-4 | .07 | 48 | 2.5 L | 33 | 14 | .7 | 2.5 L | 2.0 L | .03 L | 21 |
| Q6-5 | .02 | 6.4 | 1.1 L | 65 | 49 | .4 | 1.1 L | 2.0 L | .03 | 17 |
| Q6-6 | .11 | .8 | 4.3 L | 69 | 140 | 1.2 | 4.3 L | 4.0 L | .10 | 34 |
| Q6-7 | .07 | .9 | 1.7 L | 59 | 74 | 1.1 | 1.7 L | 2.0 | .05 | 27 |
| Q6-8 | .07 | .6 | 1.4 L | 74 | 130 | 2.7 | 1.4 L | 4.0 L | .01 L | 14 |
| Q6-10 | .12 | .8 | 6.3 L | 50 | 210 | .9 L | 9.0 L | 1.4 L | .34 | 60 |
| Q6-11 | .02 | .5 | 1.0 L | 54 | 54 | 5.8 | 1.0 L | 4.2 | .02 | 52 |
| Q6-12 | .01 | .3 | .69 L | 50 | 50 | .6 | .7 L | 3.0 | .02 | 14 |
| Q6-14 | .04 | .6 | 1.0 L | 46 | 58 | 1.4 | 1.0 L | 4.0 | .01 | 19 |
| Q6-16 | .05 | .7 | 1.1 L | 60 | 78 | .9 | 1.1 L | 4.0 L | .02 | 20 |
| Q6-16-D | .08 | .7 | 1.2 L | 73 | 67 | .8 | 1.2 L | 4.0 L | .02 | 19 |
| Q6-18 | .04 | .6 | 1.1 L | 59 | 29 | 1.4 | 1.1 L | 3.0 | .01 | 23 |
| Q6-19 | .07 | .7 | .87 L | 59 | 25 | 7.6 | .9 L | 4.0 L | .03 | 9 |
| Q6-20 | .09 L | 1.2 | 8.9 L | 38 | 540 | 3.4 | 8.9 L | 1.0 L | .18 | 34 |
| Q7-1 | .11 | 38 | 5.1 L | 82 | 246 | 5.6 | 5.1 L | 2.0 L | .05 L | 64 |
| Q7-2 | .03 | 2.4 | 1.2 L | 37 | 25 | 3.7 | 1.2 L | 2.0 L | .05 | 8 |
| Q7-3A | .15 | 26 | 5.3 L | 45 | 53 | 1.3 | 5.3 L | 2.0 L | .08 | 36 |
| Q7-3 | .06 | 8.0 | 1.8 L | 57 | 15 | 1.6 | 1.8 L | 2.0 L | .03 | 11 |
| Q7-4 | .04 | 1.4 | 1.3 L | 63 | 19 | .4 | 1.3 L | 2.0 L | .03 | 13 |
| Q7-5 | .05 | 2.2 | 1.4 L | 104 | 32 | .5 | 1.4 L | 4.1 | .03 | 11 |
| Q7-6 | .01 L | .2 | 1.4 L | 59 | 79 | .5 | 1.4 L | 2.0 L | .05 | 6 |
| Q7-7 | .03 L | .4 | 2.5 L | 73 | 65 | .9 | 2.5 L | 2.0 L | .03 | 31 |
| Q7-9 | .01 | .4 | .68 L | 54 | 48 | 1.0 | .7 L | 2.0 | .03 | 24 |
| Q7-10 | .02 | .5 | .47 L | 52 | 43 | .4 | .5 L | 4.0 L | .01 | 11 |
| Q7-12 | .01 | .4 | .79 L | 77 | 40 | .8 | .8 L | 4.0 L | .02 | 12 |
| Q7-14 | .01 | .7 | .86 L | 40 | 57 | .7 | .9 L | 2.0 L | .02 | 17 |
| Q7-15 | .09 | .6 | 1.2 L | 57 | 63 | .9 | 1.2 L | 2.0 L | .01 L | 15 |
| Q7-17 | .03 | .6 | 1.6 L | 37 | 88 | 1.4 | 1.6 L | 2.0 L | .02 | 30 |
| Q7-18 | .02 | .8 | .90 L | 63 | 53 | .3 | .9 L | 2.0 L | .02 | 11 |
| Q7-19 | .07 | .4 | .56 L | 48 | 44 | 1.9 | .6 L | 4.0 L | .06 | 9 |
| Q7-20 | .07 | 1.1 | 4.4 L | 101 | 92 | 2.7 | 4.4 L | 2.0 L | .08 | 76 |
| Q7-23 | .12 | 37 | 2.9 L | 49 | 89 | 3.2 | 2.9 L | 2.0 L | .25 | 79 |
| Q7-24 | .03 | 9.8 | .77 L | 60 | 32 | 3.7 | .8 L | 4.0 L | .05 | 20 |
| Q7-25 | .01 | 2.0 | .59 L | 53 | 27 | 3.1 | .6 L | 1.0 L | .02 | 28 |

| SAMPLE ID | Ag | As | Au | B | Ba | Be | Bi | Br | Cd | Ce |
|---|---|---|---|---|---|---|---|---|---|---|
| Q7-26 | 0.01 | 5.7 | 1.2 L | 57 | 59 | 1.0 | 1.2 L | 2.0 L | 0.01 | 13 |
| Q7-27 | .01 | .4 | .60 L | 39 | 38 | .6 | .6 L | 4.0 L | .02 | 8 |
| Q7-28 | .07 L | .9 | 7.4 L | 97 | 130 | .8 | 7.4 L | .5 L | .07 | 35 |
| Q7-29 | .03 | 1.0 | 1.3 L | 77 | 60 | 1.8 | 1.3 L | 4.0 L | .05 | 17 |
| Q7-30 | .02 | .7 | 1.8 L | 51 | 44 | .4 | 1.8 L | 2.0 L | .02 | 10 |
| Q7-31 | .01 | .3 | .78 L | 58 | 26 | 4.4 | .8 L | 2.0 L | .03 | 9 |
| Q8-1 | .04 | 33 | 3.7 L | 70 | 177 | 3.2 | 3.7 L | 2.0 L | .07 | 36 |
| Q8-1-D | .09 | 36 | 3.6 L | 76 | 229 | 3.4 | 3.6 L | 4.0 L | .08 | 32 |
| Q8-2 | .06 | 7.2 | 2.5 L | 71 | 81 | 1.3 | 2.5 L | 3.1 | .06 | 24 |
| Q8-3 | .03 | 9.1 | 1.7 L | 69 | 24 | .7 | 1.7 L | 2.0 L | .02 | 15 |
| Q8-4 | .16 | .9 | 5.2 L | 63 | 190 | .9 | 5.2 L | 2.0 L | .19 | 28 |
| Q8-5 | .04 | .6 | 1.7 L | 83 | 71 | .5 | 1.7 L | 2.0 L | .02 | 11 |
| Q8-6 | .11 | .9 | 2.0 L | 68 | 70 | .8 | 2.0 L | 3.0 | .02 L | 14 |
| Q8-6-D | .07 | .6 | 1.8 L | 62 | 67 | .7 | 1.8 L | 1.0 L | .03 | 13 |
| Q8-7 | .04 L | .4 | 4.4 L | 83 | 61 | 1.4 | 4.4 L | 2.0 | .08 | 8 |
| Q8-8 | .47 | .7 | 6.5 L | 78 | 536 | 3.2 | 6.5 L | 1.0 L | .06 L | 62 |
| Q8-9 | .12 | .9 L | 6.2 L | 42 | 210 | .9 L | 8.9 L | 1.3 | .18 | 49 |
| Q8-10 | .02 L | .4 | 1.8 L | 48 | 77 | 4.4 | 1.8 L | 2.0 L | .02 | 46 |
| Q8-11 | .01 | .4 | .71 L | 46 | 47 | .4 | .7 L | 2.0 L | .02 | 9 |
| Q8-13 | .03 | .4 | 1.0 L | 79 | 54 | 1.4 | 1.0 L | 4.0 L | .01 | 17 |
| Q8-15 | .01 L | .5 | 1.2 L | 46 | 67 | .9 | 1.2 L | 4.0 L | .03 | 16 |
| Q8-16 | .04 | .5 | .80 L | 72 | 49 | .5 | .8 L | 4.0 | .08 | 12 |
| Q8-18-D | .01 L | .5 | 1.1 L | 41 | 54 | .7 | 1.1 L | 2.0 L | .01 | 17 |
| Q8-18 | .01 L | .5 | 1.1 L | 52 | 57 | .7 | 1.1 L | 2.0 L | .01 | 16 |
| Q8-19 | .01 | .7 | .71 L | 50 | 32 | .3 | .7 L | 4.0 L | .03 | 8 |
| Q8-20 | .09 | .4 | .56 L | 50 | 27 | 4.3 | .6 L | 4.0 | .01 | 7 |
| Q8-21 | .06 L | 1.5 | 6.4 L | 83 | 230 | 3.6 | 6.4 L | 4.0 L | .06 | 46 |
| Q9-1 | .01 L | 2.3 | 1.2 L | 75 | 33 | 3.8 | 1.2 L | 2.0 L | .03 | 13 |
| Q9-2 | .04 | 1.3 | 1.4 L | 46 | 22 | .7 | 1.4 L | 4.0 L | .02 | 14 |
| Q9-3 | .03 L | .9 | 2.6 L | 80 | 28 | .5 | 2.6 L | 3.0 | .05 | 11 |
| Q9-4 | .04 | .4 | 1.1 L | 65 | 254 | 6.9 | 1.1 L | 2.0 | .04 | 9 |
| Q9-5 | .06 L | .8 | 6.4 L | 89 | 479 | 3.0 | 6.4 L | 2.0 L | .06 | 62 |
| Q9-6 | .09 L | .4 | 8.6 L | 67 | 190 | 1.1 | 8.6 L | 2.0 L | .12 | 41 |
| Q9-7 | .11 | .9 | 6.3 L | 40 | 220 | .9 L | 8.9 L | 1.2 | .85 | 66 |
| Q9-8 | .07 L | 1.9 | 6.6 L | 72 | 260 | 4.9 | 6.6 L | 2.0 | .14 | 50 |
| Q9-9 | .01 L | .6 | 1.5 L | 56 | 31 | .6 | 1.5 L | 2.0 | .10 | 14 |
| Q9-11 | .03 | 1.1 | .99 L | 41 | 44 | 1.2 | 1.0 L | 3.0 | .01 L | 24 |
| Q9-13 | .01 | .7 | .92 L | 60 | 35 | .8 | .9 L | 4.0 L | .01 L | 22 |
| Q9-14 | .08 | .5 | .84 L | 69 | 49 | .6 | .8 L | 4.2 | .07 | 14 |
| Q9-16 | .05 | .5 | 1.4 L | 64 | 23 | 1.7 | 1.4 L | 2.0 L | .02 | 25 |
| Q9-17 | .04 | .4 | .57 L | 29 | 17 | 3.9 | .6 L | 2.0 L | .01 | 10 |
| Q10A-1 | .04 | 1.9 | .91 L | 46 | 70 | 7.2 | .9 L | 4.0 | .04 | 17 |
| Q10A-2 | .11 | 2.6 | 3.9 L | 78 | 110 | 2.6 | 3.9 L | 2.0 | .09 | 35 |
| Q10A-3-D | .04 | 3.7 | 1.2 L | 49 | 32 | .7 | 1.2 L | 4.0 L | .06 | 16 |
| Q10A-3 | .05 | 3.7 | 1.2 L | 47 | 30 | .7 | 1.2 L | 2.0 | .09 | 15 |
| Q10A-4 | .07 | 3.3 | 1.4 L | 49 | 29 | 1.4 | 1.4 L | 3.0 | .09 | 10 |
| Q10A-4-D | .06 | 1.6 | 1.3 L | 53 | 28 | 1.9 | 1.3 L | 4.0 L | .01 | 11 |
| Q10A-5 | .06 L | 1.2 | 5.9 L | 88 | 470 | 2.6 | 5.9 L | 2.0 L | .06 L | 44 |

| SAMPLE ID | Ag | As | Au | B | Ba | Be | Bi | Br | Cd | Ce |
|---|---|---|---|---|---|---|---|---|---|---|
| Q10A-6 | 0.19 | 1.4 L | 6.2 L | 71 | 300 | 0.9 L | 8.9 L | 1.4 L | 0.18 | 82 |
| Q10A-7 | .01 L | .6 | 1.3 L | 47 | 42 | 4.2 | 1.3 L | 4.0 L | .03 | 29 |
| Q10A-8 | .01 | .5 | .82 L | 71 | 48 | .5 | .8 L | 4.0 L | .03 | 12 |
| Q10A-10 | .03 | .6 | 2.1 L | 64 | 82 | 1.2 | 2.1 L | 2.5 | .02 | 20 |
| Q10A-12 | .02 | .6 | 1.0 L | 58 | 60 | .7 | 1.0 L | 4.0 L | .08 | 16 |
| Q10A-13 | .07 | .6 | .60 L | 47 | 45 | .6 | .6 L | 4.0 L | .03 | 9 |
| Q10A-14 | .09 | 1.1 | 7.0 L | 91 | 250 | 1.5 | 7.0 L | 1.0 L | .22 | 72 |
| Q10A-16 | .18 | 1.0 | 3.8 L | 64 | 124 | 3.8 | 3.8 L | 2.0 L | .07 | 96 |
| Q10A-17 | .01 | .6 | .78 L | 70 | 33 | 1.3 | .8 L | 4.0 L | .07 | 16 |
| Q10A-18 | .04 | .6 | .89 L | 53 | 36 | 3.9 | .9 L | 5.7 | .04 | 11 |
| Q10A-19 | .09 | 1.6 | 6.8 L | 74 | 180 | 3.0 | 6.8 L | 3.0 | .46 | 66 |
| Q11-1 | .09 L | 23 | 9.4 L | 76 | 230 | 1.6 | 9.4 L | 1.0 L | .09 | 63 |
| Q11-2 | .02 | 11 | .92 L | 64 | 37 | 10 | 1.2 | 2.0 | .02 | 6 |
| Q11-3 | .07 L | 2.1 | 7.0 L | 140 | 300 | 3.2 | 7.0 L | 2.0 L | .10 | 71 |
| Q11-4 | .13 | 2.7 | 6.4 L | 100 | 210 | .9 L | 9.1 L | 2.3 L | .18 | 44 |
| Q11-5 | .01 L | 1.9 | 1.0 L | 36 | 150 | 3.0 | 1.1 | 4.0 L | .03 | 51 |
| Q11-6 | .03 | 1.8 | 1.6 L | 64 | 39 | .7 | 1.6 L | 4.0 | .03 | 16 |
| Q11-7 | .01 L | .8 | 1.3 L | 60 | 44 | .5 | 1.3 L | 8.0 L | .10 | 21 |
| Q11-8 | .05 | 19 | .90 L | 41 | 48 | .4 | .9 L | 2.5 | .01 | 11 |
| Q11-10 | .08 L | 3.6 | 7.6 L | 129 | 260 | 1.0 | 7.6 L | 2.0 L | .08 L | 96 |
| Q11-12 | .08 | 1.2 | 1.3 L | 58 | 59 | 1.3 | 1.3 L | 4.05 | .02 | 21 |
| Q11-13 | .03 | 1.5 | 1.2 L | 54 | 46 | 4.2 | 1.2 L | 4.6 | .01 | 16 |
| Q11-14 | .10 | 11 | 9.1 L | 80 | 290 | 2.1 | 9.1 L | 2.0 L | .69 | 100 |
| Q11-15 | .01 L | 2.1 | 1.0 L | 41 | 18 | 5.7 | 1.0 L | 3.0 | .06 | 8 |
| Q11-16-D | .07 L | 9.4 | 6.5 L | 78 | 200 | 2.8 | 6.5 L | 2.0 L | .26 | 66 |
| Q11-16 | .12 | 11 | 6.6 L | 145 | 250 | 3.2 | 6.6 L | 2.0 L | .14 | 67 |
| Q12-1 | .03 | 13 | 1.1 L | 54 | 29 | 4.1 | 1.1 L | 3.0 | .02 | 11 |
| Q12-2 | .07 L | 4.4 | 6.7 L | 120 | 233 | 3.1 | 6.7 L | 2.0 L | .07 | 28 |
| Q12-3 | .09 L | 1.6 | 6.2 L | 72 | 310 | 1.0 | 8.9 L | 2.2 L | .18 | 67 |
| Q12-4 | .03 L | 9.0 | 2.7 L | 90 | 80 | 2.7 | 2.7 L | 2.0 L | .05 | 41 |
| Q12-5 | .01 L | 1.5 | 1.4 L | 59 | 38 | .6 | 1.4 L | 4.0 L | .08 | 14 |
| Q12-6 | .07 | 29 | 4.7 L | 80 | 117 | .8 | 4.7 L | 2.0 L | .14 | 69 |
| Q12-7 | .06 | 5.4 | 4.6 L | 148 | 130 | 1.4 | 4.6 L | 2.0 L | .07 | 41 |
| Q12-7-D | .05 L | 6.2 | 4.7 L | 103 | 126 | 1.4 | 4.7 L | 2.0 L | .11 | 44 |
| Q12-8 | .04 L | 5.5 | 3.7 L | 86 | 150 | 1.6 | 3.7 L | 2.0 L | .04 | 48 |
| Q12-10 | .04 L | 7.9 | 4.4 L | 80 | 130 | 1.7 | 4.4 L | 2.0 L | .25 | 48 |
| Q12-11 | .08 | 11 | 2.6 L | 79 | 64 | 1.2 | 2.6 L | 4.0 L | .15 | 21 |
| Q12-11-D | .02 | 12 | 1.1 L | 78 | 51 | .5 | 1.1 L | 4.0 L | .03 | 20 |
| Q12-12 | .09 | 1.7 | 6.9 L | 172 | 180 | 2.1 | 6.9 L | 1.0 L | .12 | 120 |
| Q12-13 | .09 | .6 | 2.6 L | 87 | 63 | 3.2 | 2.6 L | 3.5 | .03 | 74 |
| Q12-14 | .08 L | 2.3 | 8.0 L | 120 | 112 | 4.9 | 8.0 L | 2.0 L | .08 L | 75 |
| Q13A-1 | .09 | 55 | 4.2 L | 93 | 55 | 2.3 | 4.2 L | 2.0 L | .09 | 40 |
| Q13A-2 | .08 | 2.4 | 5.8 L | 91 | 230 | 1.2 | 8.3 L | 2.2 L | .17 | 59 |
| Q13A-3 | .02 | 1.8 | .94 L | 39 | 15 | 3.1 | .9 L | 4.0 | .09 | 18 |
| Q13A-4 | .02 | 3.0 | 1.0 L | 96 | 61 | .5 | 1.0 L | 4.0 L | .01 L | 17 |
| Q13A-6 | .03 | 12 | 1.7 L | 62 | 57 | .9 | 1.7 L | 2.0 | .02 | 24 |
| Q13A-8 | .01 | 5.3 | .72 L | 54 | 56 | .3 | .7 L | 2.0 L | .01 | 11 |
| Q13A-9 | .03 | 8.4 | 2.1 L | 84 | 59 | 1.4 | 2.0 L | 4.0 L | .05 | 27 |

| SAMPLE ID | Ag | As | Au | B | Ba | Be | Bi | Br | Cd | Ce |
|---|---|---|---|---|---|---|---|---|---|---|
| Q13A-10 | 0.13 | 5.6 | 5.5 L | 174 | 150 | 2.3 | 5.5 L | 1.0 L | 0.19 | 110 |
| Q13A-12 | .08 | 7.3 | 4.7 L | 108 | 200 | 2.2 | 4.7 L | 2.0 L | .08 | 64 |
| Q13A-12-D | .06 | 7.3 | 4.8 L | 91 | 150 | 2.4 | 4.8 L | 1.0 L | .17 | 64 |
| Q13A-13 | .04 | 5.7 | 2.3 L | 65 | 76 | .7 | 2.3 L | 3.0 | .08 | 18 |
| Q13A-14 | .07 | 5.2 | 1.4 L | 54 | 25 | 1.0 | 1.4 L | 3.0 | .01 | 27 |
| Q13A-15 | .01 | 1.3 | .57 L | 46 | 8.0 | 1.9 | .6 L | 4.2 | .02 | 17 |

Table 3. (Continued)

| SAMPLE ID | Cl | | Co | Cr | Cs | | Cu | Dy | | Er | | Eu | F | Ga |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q2A-2 | 100 | L | 1.3 | 5.8 | 0.1 | | 5.6 | 3.7 | L | 1.7 | L | 0.34 | 20 | 5.8 |
| Q2A-3 | 110 | | 2.4 | 16 | 1.9 | | 9.3 | 2.7 | L | 1.2 | L | .27 | 80 | 2.8 |
| Q2A-6 | 100 | L | 21 | 75 | 12 | | 16 | 17 | L | 7.8 | L | 1.8 | 620 | 19 |
| Q2A-7 | 100 | | 1.4 | 5.5 | .2 | | 6.6 | 1.3 | L | .6 | L | .15 | 20 | 1.0 |
| Q2A-8-D | 100 | | 2.5 | 11 | .1 | | 8.6 | 2.3 | L | 1.0 | L | .27 | 50 | 2.0 |
| Q2A-8 | 100 | L | 2.4 | 10 | .1 | | 11 | 2.9 | L | 1.3 | L | .27 | 30 | 3.3 |
| Q2A-9 | 0 | N | 17 | 72 | 12 | | 18 | 20 | L | 9.2 | L | .85 | 520 | 16 |
| Q2A-11-D | 0 | N | 12 | 81 | 13 | | 32 | 18 | L | 8.0 | L | 1.5 | 500 | 13 |
| Q2A-11 | 100 | L | 12 | 84 | 14 | | 41 | 18 | L | 8.1 | L | 1.5 | 780 | 14 |
| Q2A-12 | 100 | L | 2.3 | 15 | .5 | | 11 | 3.8 | L | 1.7 | L | .30 | 70 | 3.4 |
| Q2A-13 | 100 | L | 4.4 | 14 | .6 | | 9.6 | 3.3 | L | 1.5 | L | .33 | 60 | 3.3 |
| Q2A-14 | 100 | L | 9.2 | 23 | 1.0 | | 18 | 4.3 | L | 2.0 | L | .39 | 90 | 4.9 |
| Q2A-15 | 100 | L | 6.1 | 66 | 8.7 | | 19 | 21 | L | 4.8 | L | .95 | 470 | 14 |
| Q3-1 | 540 | | 1.4 | 4.4 | .2 | L | 5 | 1.4 | | 1.0 | | .27 | 40 | .9 |
| Q3-2 | 100 | L | 5.8 | 57 | 8.4 | | 35 | 12 | L | 5.3 | L | .87 | 480 | 9.5 |
| Q3-3 | 100 | L | 8.3 | 80 | 14 | | 31 | 17 | L | 7.7 | L | 1.1 | 610 | 12 |
| Q3-8 | 140 | | 7.9 | 24 | 1.3 | | 15 | 5.4 | L | 2.5 | L | .52 | 40 | 4.5 |
| Q3-9-D | 350 | | 1.3 | 8 | .2 | | 12 | 2.4 | L | 1.1 | L | .24 | 40 | 2.3 |
| Q3-9 | 370 | | 1.2 | 7.7 | .2 | | 11 | 2.3 | L | 1.0 | L | .24 | 10 | 1.9 |
| Q3-11 | 100 | L | 1.3 | 7.9 | .2 | | 12 | 2.8 | L | 1.3 | L | .21 | 100 | 2.0 |
| Q3-11-D | 100 | | 1.2 | 8.1 | .4 | L | 11 | 2.6 | L | 1.2 | L | .12 | 10 | 2.4 |
| Q3-12 | 100 | L | .8 | 10 | .1 | | 15 | 3.1 | L | 1.4 | L | .22 | 50 | 5.2 |
| Q3-13 | 100 | L | 1.1 | 10 | .1 | | 9.2 | 4.3 | L | 2.0 | L | .23 | 60 | 6.3 |
| Q3-14 | 100 | L | .8 | 6.2 | .3 | L | 7.1 | 1.7 | L | .8 | L | .14 | 70 | 1.8 |
| Q3-15 | 100 | L | .6 | 9.8 | .1 | | 9.6 | 2.2 | L | 1.0 | L | .17 | 50 | 3.2 |
| Q3-16 | 100 | L | 2.5 | 2.7 | .3 | L | 4.0 | 1.4 | L | .6 | L | .13 | 30 | 1.7 |
| Q3-17 | 100 | L | 1.8 | 4.6 | .6 | | 7.2 | 19.8 | L | 4.5 | L | .56 | 900 | 34 |
| Q3-18 | 100 | L | 3.3 | 4.8 | .2 | L | 13 | 2.1 | L | 1.0 | L | .47 | 10 | 1.5 |
| Q3-19 | 100 | L | 1.2 | 3.2 | .1 | | 8.7 | 2.0 | L | .9 | L | .19 | 30 | 3.0 |
| Q3-21 | 100 | L | 2.7 | 6.1 | .5 | | 14 | 3.5 | L | 1.6 | L | .30 | 100 | 2.9 |
| Q3-22 | 100 | L | 2.9 | 27 | 6.0 | | 23 | 8.2 | L | 3.7 | L | .44 | 440 | 5.2 |
| Q3-23 | 100 | L | 7.5 | 63 | 9.1 | | 35 | 15 | L | 7.0 | L | .95 | 620 | 7.7 |
| Q3-24 | 100 | L | 3.0 | 49 | 8.8 | | 20 | 13 | L | 6.0 | L | .83 | 580 | 9.6 |
| Q3-25 | 100 | L | 2.2 | 32 | 3.6 | | 19 | 7.3 | L | 3.3 | L | .56 | 350 | 6.9 |
| Q3-26A | 100 | L | 5.3 | 13 | .6 | | 22 | 9.9 | L | 4.5 | L | .85 | 260 | 9.0 |
| Q3-27 | 110 | | 6.4 | 4.6 | .1 | | 8.0 | 1.9 | L | 1.1 | | .40 | 40 | 2.0 |
| Q3-28 | 100 | L | 7.0 | 28 | 4.0 | | 26 | 10 | L | 4.7 | L | .45 | 540 | 8.0 |
| Q4-1 | 590 | | 6.3 | 5.1 | .1 | | 6.3 | 1.6 | L | .7 | L | .17 | 50 | 1.8 |
| Q4-1-D | 620 | | 6.3 | 7.3 | .2 | | 7.3 | 1.6 | L | .7 | L | .18 | 10 | 1.6 |
| Q4-2 | 100 | L | 4.4 | 33 | 3.9 | | 22 | 13 | L | 5.8 | L | .47 | 290 | 4.1 |
| Q4-3 | 100 | L | 6.6 | 34 | 3.5 | | 26 | 16 | L | 7.1 | L | .89 | 640 | 5.7 |
| Q4-4 | 390 | | 2.2 | 16 | 1.1 | | 14 | 4.1 | L | 1.9 | L | .39 | 90 | 3.0 |
| Q4-5 | 120 | | 2.2 | 12 | .4 | | 13 | 3.6 | L | 1.6 | L | .30 | 50 | 4.8 |
| Q4-6 | 100 | L | 2.6 | 67 | 7.0 | | 53 | 14 | L | 6.5 | L | 1.4 | 610 | 19 |

| SAMPLE ID | Cl | | Co | Cr | Cs | | Cu | Dy | | Er | | Eu | F | Ga |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q4-7 | 2100 | | 2.1 | 13 | 0.6 | | 15 | 3.9 | L | 1.8 | L | 0.50 | 50 | 3.9 |
| Q4-8 | 100 | | 1.1 | 18 | .5 | | 16 | 7.0 | L | 3.2 | L | .38 | 160 | 9.2 |
| Q4-9 | 240 | | 1.5 | 6.0 | .1 | | 13 | 5.5 | L | 2.5 | L | .20 | 30 | 5.2 |
| Q4-10 | 230 | | .8 | 4.1 | .1 | | 8.4 | 1.9 | L | .8 | L | .13 | 50 | 3.1 |
| Q4-11 | 220 | | .9 | 6.2 | .3 | L | 9.1 | 2.6 | L | 1.2 | L | .16 | 20 | 2.6 |
| Q4-12 | 360 | | 3.3 | 5.2 | .2 | | 4.5 | 1.7 | L | .8 | L | .23 | 40 | 1.3 |
| Q4-13 | 100 | L | 1.7 | 9.6 | .5 | | 12 | 13 | L | 5.9 | L | .75 | 280 | 12 |
| Q4-14 | 100 | L | 7.0 | 3.9 | .7 | | 6.4 | 20 | L | 4.6 | L | .47 | 800 | 30 |
| Q4-15 | 140 | | 4.9 | 5.6 | .1 | | 6.6 | 2.9 | | 2.1 | | .89 | 30 | 1.8 |
| Q4-16 | 160 | | 1.0 | 4.9 | .2 | | 11 | 2.7 | L | 1.2 | L | .20 | 70 | 3.2 |
| Q4-18 | 160 | | 1.8 | 4.1 | .1 | | 20 | 3.4 | L | 1.5 | L | .33 | 50 | 2.6 |
| Q4-20 | 160 | | 2.0 | 3.0 | .1 | | 10 | 2.6 | L | 1.2 | L | .32 | 70 | 2.6 |
| Q4-21 | 290 | | 1.3 | 5.0 | .1 | | 7.7 | 1.4 | L | .6 | L | .21 | 60 | 1.0 |
| Q4-22 | 240 | | 3.1 | 5.8 | .5 | | 17 | 5.2 | L | 2.4 | L | .36 | 30 | 7.1 |
| Q4-23 | 100 | L | 1.8 | 10 | 1.6 | | 8.3 | 18 | L | 8.3 | L | .88 | 460 | 20 |
| Q4-25 | 100 | L | 1.3 | 16 | 1.0 | | 12 | 15 | L | 6.9 | L | 1.4 | 420 | 16 |
| Q4-26 | 140 | | 2.4 | 5.5 | .2 | | 8.2 | 2.4 | L | 1.1 | L | .45 | 50 | 3.4 |
| Q4-27 | 240 | | 6.0 | 7.7 | .1 | | 12 | 2.0 | L | .9 | L | .22 | 30 | 2.2 |
| Q4-28 | 110 | | 4.2 | 8.5 | .2 | L | 11 | 3.1 | L | 1.8 | | .96 | 20 | 2.8 |
| Q4-29 | 100 | L | 8.6 | 61 | 9.1 | | 32 | 20.8 | L | 9.4 | L | 1.5 | 580 | 10 |
| Q5A-0-D | 100 | L | 7.6 | 46 | 10 | | 30 | 13 | L | 5.8 | L | .80 | 430 | 11 |
| Q5A-0 | 100 | L | 6.8 | 51 | 11 | | 30 | 13 | L | 5.9 | L | .82 | 490 | 16 |
| Q5A-1 | 100 | L | 5.0 | 38 | 6.2 | | 29 | 9.0 | L | 4.1 | L | .50 | 160 | 9.8 |
| Q5A-2 | 100 | L | 1.1 | 28 | 2.0 | | 25 | 5.9 | L | 2.7 | L | .59 | 90 | 7.0 |
| Q5A-4 | 170 | | 2.3 | 8 | .5 | | 18 | 3.7 | L | 1.7 | L | .44 | 30 | 3.2 |
| Q5A-5 | 170 | | 1.3 | 13 | .7 | | 20 | 5.1 | L | 2.3 | L | .36 | 90 | 4.9 |
| Q5A-6 | 140 | | 1.1 | 6.5 | .1 | | 15 | 2.8 | L | 1.3 | L | .21 | 30 | 2.8 |
| Q5A-7 | 140 | | 2.8 | 9.0 | .2 | | 22 | 3.4 | L | 1.6 | L | .18 | 40 | 4.2 |
| Q5A-8 | 100 | L | 1.8 | 7.7 | 1.2 | | 88 | 15 | L | 6.7 | L | .67 | 420 | 16 |
| Q5A-9 | 100 | L | 3.4 | 5.2 | 1.0 | | 6.3 | 20 | L | 4.5 | L | .61 | | 33 |
| Q5A-10 | 100 | | 2.8 | 5.1 | .1 | | 7.7 | 2.9 | L | 1.3 | L | .40 | 70 | 2.7 |
| Q5A-11 | 150 | | 1.1 | 3.7 | .1 | | 8.0 | 2.1 | L | 1.0 | L | .18 | 110 | 1.8 |
| Q5A-13 | 320 | | 2.6 | 4.8 | .2 | | 14 | 2.3 | L | 1.0 | L | .33 | 40 | 3.1 |
| Q5A-15 | 160 | | 1.3 | 4.5 | .1 | | 13 | 2.5 | L | 1.2 | L | .30 | 50 | 3.1 |
| Q5A-16 | 210 | | 2.0 | 6.4 | .2 | | 12 | 1.9 | L | .9 | L | .29 | 30 | 3.0 |
| Q5A-18 | 100 | L | 1.1 | 17 | .6 | | 21 | 10 | L | 4.7 | L | 1.1 | 80 | 12 |
| Q5A-19 | 100 | | 2.0 | 4.6 | .1 | | 8.4 | 2.3 | L | 1.1 | L | .39 | 50 | 2.6 |
| Q5A-20 | 150 | | 2.2 | 6.1 | .1 | | 12 | 2.1 | L | .9 | L | .19 | 40 | 3.2 |
| Q5A-21 | 280 | | 12 | 4.9 | .2 | | 6.3 | 1.4 | L | .6 | L | .16 | 50 | 4.4 |
| Q5A-22 | 100 | L | 2.2 | 55 | 11 | | 20 | 19 | L | 8.6 | L | .57 | 420 | 10 |
| Q5A-23 | 0 | N | 9.5 | 74 | 14 | | 34 | 20 | L | 9.2 | L | .88 | 660 | 13 |
| Q5-1 | 100 | L | 5.5 | 48 | 12 | | 33 | 12 | L | 5.6 | L | .71 | 560 | 12 |
| Q5-1-D | 100 | L | 5.3 | 54 | 12 | | 28 | 12 | L | 5.5 | L | .75 | 520 | 14 |
| Q5-2 | 100 | L | 1.0 | 29 | .6 | | 20 | 4.5 | L | 2.6 | | .57 | 60 | 6.9 |
| Q5-3 | 100 | L | 2.3 | 44 | 6.9 | | 64 | 10 | L | 4.5 | L | .63 | 540 | 11 |
| Q5-4 | 190 | | 2.7 | 11 | 1.4 | | 15 | 3.4 | L | 1.6 | L | .35 | 90 | 3.3 |
| Q5-5 | 190 | | 2.0 | 4.8 | .1 | | 11 | 2.6 | L | 1.2 | L | .19 | 50 | 2.4 |
| Q5-6 | 170 | | 1.0 | 7.3 | .1 | | 17 | 3.0 | L | 1.4 | L | .30 | 40 | 2.8 |
| Q5-7 | 110 | | 1.5 | 12 | .2 | | 19 | 4.3 | L | 1.9 | L | .21 | 40 | 6.4 |

| SAMPLE ID | Cl | | Co | Cr | Cs | | Cu | Dy | | Er | | Eu | F | Ga |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q5-8 | 100 | L | 2.2 | 8.1 | 0.9 | | 10 | 15 | L | 6.7 | L | 0.78 | 310 | 21 |
| Q5-10 | 140 | | 3.5 | 6.7 | .4 | L | 7.4 | 2.3 | L | 1.1 | L | .61 | 70 | 2.3 |
| Q5-11 | 330 | | 1.4 | 3.0 | 0.0 | | 6.1 | 1.1 | L | .5 | L | .15 | 20 | 2.3 |
| Q5-13 | 190 | | 2.0 | 5.6 | .1 | | 12 | 2.7 | L | 1.2 | L | .26 | 70 | 3.8 |
| Q5-15 | 210 | | 1.4 | 3.7 | .1 | | 10 | 1.9 | L | .9 | L | .26 | 50 | 2.5 |
| Q5-16 | 300 | | 1.5 | 4.6 | .2 | | 9.9 | 1.4 | L | .6 | L | .25 | 20 | 1.5 |
| Q5-16A | 100 | | 2.9 | 9.1 | .7 | | 10 | 6.2 | L | 2.8 | L | .37 | 70 | 12 |
| Q5-17A | 100 | L | 1.2 | 14 | .6 | | 19 | 12.7 | L | 5.8 | L | 1.6 | 180 | 17 |
| Q5-18 | 110 | | 1.8 | 4.2 | .1 | | 9.4 | 2.1 | L | 1.2 | | .46 | 40 | 3.4 |
| Q5-19 | 130 | | 5.3 | 3.7 | .1 | | 6.4 | 1.6 | L | .7 | L | .20 | 20 | 2.0 |
| Q5-20 | 100 | L | 2.7 | 55 | 10 | | 62 | 19.5 | L | 8.9 | L | .59 | 560 | 13 |
| Q6-2 | 100. | L | 1.7 | 17 | .7 | | 13 | 4.2 | L | 1.9 | L | .42 | 80 | 6.5 |
| Q6-3 | 100. | L | 4.5 | 37 | 9.1 | | 33 | 10 | L | 4.6 | L | .54 | 300 | 8.7 |
| Q6-3-D | 100. | L | 3.9 | 36 | 8.3 | | 25 | 9.8 | L | 4.4 | L | .51 | 480 | 10 |
| Q6-4 | 100. | L | .7 | 11 | .3 | | 16 | 5.6 | L | 2.5 | L | .40 | 10 | 6.8 |
| Q6-5 | 180. | | 1.6 | 6.8 | .1 | | 11 | 2.4 | L | 1.1 | L | .28 | 20 | 2.0 |
| Q6-6 | 100. | L | 1.9 | 19 | .4 | | 20 | 9.6 | L | 4.3 | L | .44 | 40 | 10 |
| Q6-7 | 110. | | 1.1 | 13 | .4 | L | 25 | 3.6 | L | 1.7 | L | .40 | 40 | 3.8 |
| Q6-8 | 120. | | 2.4 | 6.6 | .2 | | 12 | 3.1 | L | 1.4 | L | .21 | 40 | 5.3 |
| Q6-10 | 100. | L | 3.5 | 4.0 | 1.2 | | 7.2 | 20 | L | 4.5 | L | .54 | 800 | 34 |
| Q6-11 | 150 | | 4.0 | 5.3 | .2 | L | 6.4 | 2.2 | L | 1.5 | | .82 | 40 | 2.4 |
| Q6-12 | 200 | | 1.2 | 3.1 | .1 | | 7.6 | 1.5 | L | .7 | L | .20 | 20 | 1.8 |
| Q6-14 | 190 | | 2.3 | 4.4 | .4 | | 15 | 2.2 | L | 1.0 | L | .38 | 10 | 2.9 |
| Q6-16 | 160 | | 1.6 | 5.0 | .1 | | 10 | 2.4 | L | 1.1 | L | .35 | 100 | 2.9 |
| Q6-16-D | 180 | | 1.5 | 5.2 | .2 | | 12 | 2.6 | L | 1.2 | L | .30 | 30 | 3.9 |
| Q6-18 | 120 | | 1.8 | 5.3 | .1 | | 8.6 | 2.4 | L | 1.1 | L | .38 | 30 | 3.0 |
| Q6-19 | 150 | | 10 | 6.2 | .2 | | 9.6 | 1.9 | L | .9 | L | .16 | 10 | 3.0 |
| Q6-20 | 100 | L | 2.3 | 33 | 5.2 | | 8.9 | 20 | L | 8.9 | L | .49 | 180 | 4.5 |
| Q7-1 | 100 | L | 9.7 | 45 | 8.0 | | 40 | 11 | L | 5.1 | L | .91 | 630 | 12 |
| Q7-2 | 170 | | 2.0 | 10 | .9 | | 13 | 2.6 | L | 1.2 | L | .22 | 20 | 3.0 |
| Q7-3A | 100 | L | 12 | 42 | 6.7 | | 20 | 12 | L | 5.3 | L | .52 | 340 | 11 |
| Q7-3 | 100 | | 1.1 | 7.1 | .1 | | 12 | 3.9 | L | 1.8 | L | .23 | 30 | 4.1 |
| Q7-4 | 100 | | .7 | 8.4 | .2 | L | 15 | 2.8 | L | 1.3 | L | .18 | 70 | 3.0 |
| Q7-5 | 100 | | .8 | 7.4 | .1 | | 13 | 3.2 | L | 1.4 | L | .17 | 120 | 5.0 |
| Q7-6 | 150 | | .7 | 2.1 | .1 | | 3.5 | 3.2 | L | 1.4 | L | .09 | 100 | .6 |
| Q7-7 | 100 | | 1.4 | 3.8 | .2 | | 13 | 5.5 | L | 2.5 | L | .35 | 60 | 6.8 |
| Q7-9 | 230 | | 1.2 | 3.1 | .2 | L | 7.5 | 1.5 | L | .8 | | .34 | 50 | 1.6 |
| Q7-10 | 250 | | 1.3 | 2.4 | .1 | | 5.2 | 1.0 | L | .5 | L | .17 | 80 | 1.7 |
| Q7-12 | 200 | | 2.6 | 5.6 | .1 | | 13 | 1.7 | L | .8 | L | .29 | 30 | 2.5 |
| Q7-14 | 120 | | 1.5 | 4.7 | .1 | | 10 | 1.9 | L | .9 | L | .28 | 80 | 2.8 |
| Q7-15 | 180 | | 1.8 | 4.2 | .2 | | 11 | 2.6 | L | 1.2 | L | .24 | 10 | 4.6 |
| Q7-17 | 100 | L | 1.3 | 6.5 | .2 | | 11 | 3.6 | L | 1.6 | L | .45 | 40 | 4.2 |
| Q7-18 | 100 | | 1.0 | 5.3 | .1 | | 10 | 2.0 | L | .9 | L | .17 | 10 | 2.3 |
| Q7-19 | 230 | | 3.5 | 5.3 | .3 | L | 7.3 | 1.2 | L | .6 | L | .19 | 20 | 2.2 |
| Q7-20 | 100 | L | 4.9 | 32 | 4.9 | | 26 | 9.7 | L | 4.4 | L | .75 | 360 | 10.6 |
| Q7-23 | 100 | L | 37 | 61 | 1.4 | | 27 | 6.3 | L | 2.9 | L | 1.3 | 160 | 4.6 |
| Q7-24 | 240 | | 4.7 | 9.4 | .2 | | 8.5 | 1.7 | L | 1.5 | | .48 | 40 | 4.5 |
| Q7-25 | 100 | L | 2.6 | 14 | .6 | | 1.7 | 1.3 | L | .6 | L | .45 | 120 | 1.5 |
| Q7-26 | 110 | | 1.2 | 7.6 | .3 | L | 11 | 2.7 | L | 1.2 | L | .26 | 10 | 2.3 |

| SAMPLE ID | Cl | | Co | Cr | Cs | | Cu | Dy | | Er | | Eu | F | Ga |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q7-27 | 180 | | 1.0 | 4.4 | 0.1 | | 5.4 | 1.3 | L | 0.6 | L | 0.13 | 30 | 1.4 |
| Q7-28 | 100 | L | .5 | 6.0 | .9 | | 13 | 16 | L | 7.4 | L | .33 | 120 | 21 |
| Q7-29 | 130 | | 1.4 | 5.2 | .2 | | 9.1 | 2.8 | L | 1.3 | L | .39 | 30 | 3.7 |
| Q7-30 | 100 | | .6 | 10 | .1 | | 14 | 3.9 | L | 1.8 | L | .19 | 40 | 1.4 |
| Q7-31 | 130 | | 1.6 | 8.1 | .2 | L | 6.6 | 1.7 | L | .8 | L | .15 | 20 | 3.5 |
| Q8-1 | 100 | L | 1.6 | 34 | 6.6 | | 23 | 8.1 | L | 3.7 | L | .50 | 380 | 6.6 |
| Q8-1-D | 100 | L | 1.7 | 33 | 6.6 | | 31 | 8.0 | L | 3.6 | L | .50 | 240 | 9.5 |
| Q8-2 | 100 | L | 1.4 | 17 | 1.3 | | 27 | 5.4 | L | 2.5 | L | .47 | 80 | 6.6 |
| Q8-3 | 100 | | 1.6 | 5.6 | .4 | L | 9.2 | 3.7 | L | 1.7 | L | .26 | 40 | 4.4 |
| Q8-4 | 100 | L | 1.5 | 26 | .9 | | 23 | 11 | L | 5.2 | L | .39 | 250 | 16 |
| Q8-5 | 100 | | 1.1 | 6.1 | .2 | L | 15 | 3.6 | L | 1.7 | L | .19 | 30 | 4.8 |
| Q8-6 | 100 | L | .9 | 11 | .2 | | 22 | 4.4 | L | 2.0 | L | .20 | 40 | 5.8 |
| Q8-6-D | 100 | L | .8 | 9.8 | .2 | | 17 | 4.0 | L | 1.8 | L | .20 | 180 | 5.5 |
| Q8-7 | 180 | | 4.0 | 1.9 | .1 | | 20 | 9.6 | L | 4.4 | L | .16 | 30 | 8.3 |
| Q8-8 | 100 | L | 2.1 | 7.1 | .9 | | 61 | 14 | L | 6.5 | L | .71 | 430 | 13 |
| Q8-9 | 100 | L | 2.1 | 3.9 | .8 | | 5.3 | 20 | L | 4.4 | L | .48 | | 29 |
| Q8-10 | 100 | | 3.2 | 5.7 | .2 | L | 9.0 | 3.9 | L | 2.1 | | .72 | 100 | 3.0 |
| Q8-11 | 190 | | 1.2 | 2.9 | 0.0 | | 5.7 | 1.6 | L | .7 | L | .14 | 120 | 1.9 |
| Q8-13 | 140 | | 1.9 | 4.7 | .2 | L | 16 | 2.3 | L | 1.0 | L | .32 | 50 | 6.2 |
| Q8-15 | 120 | | 1.4 | 7.1 | .1 | | 19 | 2.6 | L | 1.2 | L | .33 | 30 | 1.6 |
| Q8-16 | 170 | | 1.7 | 5.4 | .3 | L | 7.5 | 1.8 | L | .8 | L | .20 | 20 | 2.2 |
| Q8-18-D | 100 | | 1.3 | 3.5 | .1 | | 7.1 | 2.4 | L | 1.1 | L | .29 | 40 | 1.8 |
| Q8-18 | 100 | | 1.3 | 3.2 | .2 | L | 7.0 | 2.4 | L | 1.1 | L | .30 | 40 | 1.8 |
| Q8-19 | 130 | | .9 | 4.4 | .1 | | 3.6 | 1.6 | L | .7 | L | .13 | 10 | 1.3 |
| Q8-20 | 290 | | 5.6 | 4.7 | .1 | | 6.7 | 1.2 | L | .6 | L | .19 | 10 | 1.6 |
| Q8-21 | 100 | L | 4.4 | 50 | 11 | | 45 | 14 | L | 6.4 | L | .54 | 520 | 15 |
| Q9-1 | 160 | | 1.4 | 10 | .4 | L | 9.4 | 2.7 | L | 1.2 | L | .26 | 60 | 3.7 |
| Q9-2 | 100 | | .7 | 9.8 | .1 | | 17 | 3.2 | L | 1.4 | L | .20 | 20 | 3.2 |
| Q9-3 | 200 | | 1.5 | 6.2 | .1 | | 24 | 5.7 | L | 2.6 | L | .17 | 60 | 4.6 |
| Q9-4 | 190 | | 6.3 | 3.0 | .1 | | 8.0 | 2.3 | L | 1.1 | L | .18 | 30 | 4.4 |
| Q9-5 | 100 | L | 3.7 | 8.7 | 1.3 | | 12 | 14 | L | 6.4 | L | .56 | 360 | 15 |
| Q9-6 | 100 | L | .9 | 4.9 | 1.2 | | 6.9 | 19 | L | 8.6 | L | .45 | 560 | 18 |
| Q9-7 | 100 | L | 3.7 | 5.2 | 1.3 | | 11 | 20 | L | 4.5 | L | .64 | | 24 |
| Q9-8 | 100 | L | 5.4 | 36 | 6.8 | | 28 | 15 | L | 6.6 | L | .69 | 100 | 6.6 |
| Q9-9 | 140 | | 1.2 | 4.1 | .1 | | 11 | 3.2 | L | 1.5 | L | .18 | 60 | 2.9 |
| Q9-11 | 230 | | 3.2 | 5.9 | .2 | | 13 | 2.2 | L | 1.0 | L | .39 | 60 | 3.1 |
| Q9-13 | 170 | | 1.3 | 6.0 | 0.0 | | 5.4 | 2.0 | L | .9 | L | .37 | 40 | 1.7 |
| Q9-14 | 190 | | 1.7 | 2.9 | .1 | | 9.2 | 1.9 | L | .8 | L | .23 | 10 | 4.4 |
| Q9-16 | 100 | L | 2.3 | 6.5 | .1 | | 11 | 3.2 | L | 1.4 | L | .47 | 40 | 3.6 |
| Q9-17 | 150 | | 10 | 3.5 | .1 | | 7.4 | 1.3 | L | .6 | | .22 | 10 | 2.1 |
| Q10A-1 | 180 | | 1.5 | 8.8 | .2 | | 11 | 2.0 | L | 1.3 | | .34 | 40 | 6.3 |
| Q10A-2 | 100 | L | 2.5 | 22 | 1.1 | | 3.1 | 8.6 | L | 3.9 | L | .60 | 70 | 9.8 |
| Q10A-3-D | 140 | | 1.0 | 7.6 | .1 | | 15 | 2.7 | L | 1.2 | L | .24 | 90 | 3.2 |
| Q10A-3 | 170 | | .9 | 8.1 | .2 | | 15 | 2.6 | L | 1.3 | L | .23 | 60 | 3.1 |
| Q10A-4 | 250 | | 2.4 | 7.4 | .2 | | 13 | 3.0 | L | 1.4 | L | .17 | 40 | 4.4 |
| Q10A-4-D | 310 | | 2.8 | 11 | .3 | | 16 | 2.9 | L | 1.3 | L | .35 | 80 | 4.1 |
| Q10A-5 | 100 | L | 5.9 | 8.4 | 1.8 | | 5.3 | 13 | L | 5.9 | L | .56 | 260 | 14.1 |
| Q10A-6 | 100 | L | 1.6 | 6.5 | 1.5 | | 6.2 | 20 | L | 4.5 | L | .72 | 700 | 35 |

| SAMPLE ID | Cl | | Co | Cr | Cs | | Cu | Dy | | Er | | Eu | F | Ga |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q10A-7 | 200 | | 4.3 | 5.2 | 0.1 | | 11 | 2.9 | L | 1.3 | L | 0.42 | 50 | 3.7 |
| Q10A-8 | 430 | | 1.6 | 3.4 | .1 | | 9.0 | 1.8 | L | .8 | L | .16 | 10 | 2.1 |
| Q10A-10 | 140 | | 1.7 | 7.4 | .4 | | 18 | 4.5 | L | 2.1 | L | .35 | 40 | 6.8 |
| Q10A-12 | 280 | | 1.1 | 6.1 | .3 | L | 13 | 2.2 | L | 1.0 | L | .26 | 10 | 1.6 |
| Q10A-13 | 350 | | 2.0 | 2.6 | .1 | | 6.6 | 1.3 | L | .7 | | .18 | 10 | 2.6 |
| Q10A-14 | 100 | L | 2.7 | 11 | 1.5 | | 16 | 15 | L | 7.0 | L | .90 | 60 | 20 |
| Q10A-16 | 100 | L | 1.4 | 19 | .2 | | 28 | 8.3 | L | 3.8 | L | 1.1 | 130 | 7.2 |
| Q10A-17 | 300 | | 3.7 | 3.9 | .4 | L | 11 | 1.7 | L | .8 | L | .42 | 30 | 2.2 |
| Q10A-18 | 460 | | 5.7 | 7.2 | .2 | | 14 | 2.0 | L | 1.5 | | .32 | 10 | 2.2 |
| Q10A-19 | 100 | L | 2.9 | 63 | 13 | | 43 | 15 | L | 6.8 | L | .96 | 620 | 16 |
| Q11-1 | 0 | N | 4.7 | 41 | 4.7 | | 11 | 21 | L | 9.4 | L | 1.0 | 520 | 4.7 |
| Q11-2 | 280 | | 6.5 | 4.4 | .1 | | 6.7 | 2.0 | L | 1.7 | | .22 | 30 | 5.5 |
| Q11-3 | 100 | L | 4.5 | 8.9 | 2.9 | | 14 | 15 | L | 7.0 | L | .74 | 540 | 20 |
| Q11-4 | 100 | L | 2.3 | 6.3 | 2.8 | | 5.5 | 20 | L | 4.6 | L | .42 | 640 | 36 |
| Q11-5 | 170 | | 5.0 | 3.9 | .1 | | 7.8 | 2.3 | | 1.0 | L | .68 | 50 | 2.7 |
| Q11-6 | 170 | | 1.3 | 4.8 | .2 | | 15 | 3.5 | L | 1.6 | L | .23 | 10 | 4.6 |
| Q11-7 | 200 | | 1.3 | 3.7 | .2 | | 12 | 2.8 | L | 1.3 | L | .32 | 30 | 2.8 |
| Q11-8 | 320 | | 1.2 | 3.9 | .2 | | 7.0 | 2.0 | L | .9 | L | .23 | 10 | 2.4 |
| Q11-10 | 100 | L | 2.7 | 12 | 4.1 | | 30 | 17 | L | 7.6 | L | .86 | 230 | 25 |
| Q11-12 | 320 | | 1.1 | 8.0 | .1 | | 9.9 | 2.8 | L | 1.3 | L | .43 | 10 | 2.7 |
| Q11-13 | 400 | | 3.4 | 9.6 | .2 | | 12 | 2.6 | L | 1.2 | L | .36 | 40 | 4.0 |
| Q11-14 | 100 | L | 8.5 | 92 | 15 | | 16 | 20 | L | 9.1 | L | 1.5 | 800 | 17 |
| Q11-15 | 360 | | 5.2 | 7.1 | .2 | | 7.9 | 2.8 | | 1.0 | L | .40 | 20 | 2.4 |
| Q11-16-D | 100 | L | 5.9 | 61 | 11 | | 35 | 14 | L | 6.5 | L | 1.2 | 620 | 13 |
| Q11-16 | 100 | L | 5.9 | 56 | 11 | | 38 | 15 | L | 6.6 | L | 1.2 | 680 | 18 |
| Q12-1 | 280 | | 1.6 | 2.4 | .1 | | 7.8 | 2.4 | L | 1.1 | L | .19 | 50 | 2.8 |
| Q12-2 | 100 | L | 2.9 | 6.3 | 2.4 | | 6.0 | 15 | L | 6.7 | L | .30 | 530 | 17 |
| Q12-3 | 100 | L | 4.1 | 4.6 | 4.4 | | 5.3 | 20 | L | 4.5 | L | .71 | 800 | 27 |
| Q12-4 | 100 | | 2.9 | 10 | 2.7 | | 15 | 5.8 | L | 2.7 | L | .61 | 130 | 5.3 |
| Q12-5 | 140 | | .9 | 5.8 | .6 | | 6.1 | 3.1 | L | 1.4 | L | .31 | 140 | 2.5 |
| Q12-6 | 100 | L | 8.5 | 15 | 4.5 | | 16 | 10 | L | 4.7 | L | .91 | 260 | 7.0 |
| Q12-7 | 100 | L | 2.9 | 22 | 4.9 | | 21 | 10 | L | 4.6 | L | .66 | 320 | 10 |
| Q12-7-D | 100 | L | 3.0 | 23 | 4.9 | | 13 | 10 | L | 4.7 | L | .65 | 500 | 8.9 |
| Q12-8 | 100 | L | 2.4 | 13 | 4.4 | | 12 | 8.2 | L | 3.7 | L | .79 | 380 | 7.8 |
| Q12-10 | 100 | L | 3.0 | 15 | 2.3 | | 14 | 9.8 | L | 4.4 | L | .76 | 310 | 6.7 |
| Q12-11 | 100 | L | 3.0 | 7.6 | .8 | | 13 | 5.6 | | 2.6 | L | .38 | 110 | 5.6 |
| Q12-11-D | 100 | | 2.9 | 8.9 | .8 | | 10 | 2.4 | L | 1.1 | L | .42 | 60 | 3.1 |
| Q12-12 | 100 | L | 2.6 | 44 | 11 | | 41 | 15 | L | 6.9 | L | 1.2 | 130 | 19 |
| Q12-13 | 200 | | 1.9 | 7.3 | .9 | | 11 | 5.8 | L | 2.6 | L | .77 | 90 | 6.6 |
| Q12-14 | 100 | L | 3.8 | 59 | 15 | | 30 | 18 | L | 8.0 | L | 1.0 | 660 | 11 |
| Q13A-1 | 100 | L | 5.6 | 23 | 4.2 | | 19 | 9.3 | L | 4.2 | L | .74 | 320 | 5.9 |
| Q13A-2 | 100 | L | 2.9 | 6.5 | 4.0 | | 4.1 | 18 | L | 4.1 | L | .66 | 580 | 29 |
| Q13A-3 | 300 | | 2.8 | 6.2 | .1 | | 9.4 | 2.1 | L | .9 | L | .31 | 160 | 1.9 |
| Q13A-4 | 390 | | .9 | 6.9 | .4 | L | 1.4 | 2.2 | L | 1.0 | L | .37 | 10 | 2.4 |
| Q13A-6 | 220 | | 1.7 | 6.7 | .2 | | 15 | 3.8 | L | 1.7 | L | .36 | 80 | 4.5 |
| Q13A-8 | 200 | | .9 | 2.9 | .1 | | 6.3 | 1.6 | L | .7 | L | .17 | 40 | 1.5 |
| Q13A-9 | 160 | | 1.3 | 10 | 2.3 | | 8.2 | 4.5 | L | 2.1 | L | .52 | 70 | 4.3 |
| Q13A-10 | 100 | L | 4.8 | 21 | 5.3 | | 31 | 12 | L | 5.5 | L | 1.4 | 440 | 16 |

| SAMPLE ID | Cl | | Co | Cr | Cs | Cu | Dy | | Er | | Eu | F | Ga |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q13A-12 | 100 | L | 2.8 | 27 | 3.5 | 18 | 10 | L | 4.7 | L | 1.0 | 240 | 13 |
| Q13A-12-D | 100 | L | 2.8 | 30 | 4.4 | 15 | 11 | L | 4.8 | L | 1.2 | 180 | 10 |
| Q13A-13 | 100 | L | 1.6 | 12 | 1.0 | 8.8 | 5.1 | L | 2.3 | L | .4 | 20 | 4.6 |
| Q13A-14 | 310 | | 1.8 | 5.4 | .4 | 13 | 3.1 | L | 1.4 | L | .3 | 40 | 3.8 |
| Q13A-15 | 660 | | 1.1 | 3.2 | .1 | 4.6 | 1.4 | | .9 | | .4 | 10 | .7 |

Table 3. (Continued)

| SAMPLE ID | Gd | Ge | Hf | Hg | Ho | In | Ir | La | Li | Lu |
|---|---|---|---|---|---|---|---|---|---|---|
| Q2A-2 | 2.6 L | 6.3 | 3.3 | 0.07 | 1.2 L | 1.2 L | 2.6 L | 15 | 19 | 0.2 |
| Q2A-3 | 1.8 L | 3.2 | .7 | .48 | .8 L | .8 L | 1.8 L | 8 | 10 | .2 |
| Q2A-6 | 12 L | .78 L | 3.8 | .32 | 5.3 L | 5.3 L | 12 L | 60 | 64 | .4 |
| Q2A-7 | .90 L | .54 | .7 | .38 | .4 L | .4 L | .9 L | 4 | 4.4 | .1 |
| Q2A-8-D | 1.6 L | 1.3 | 1.3 | .12 | .7 L | .7 L | 1.6 L | 10 | 9.8 | .1 |
| Q2A-8 | 2.0 L | 1.2 | 1.4 | .14 | .9 L | .9 L | 2.0 L | 10 | 13 | .1 |
| Q2A-9 | 14 L | .92 L | 6.7 | .32 | 6.2 L | 6.2 L | 14 L | 40 | 45 | .4 |
| Q2A-11-D | 12 L | .80 L | 3.5 | .30 | 5.5 L | 5.5 L | 12 L | 53 | 62 | .5 |
| Q2A-11 | 12 L | .81 L | 3.3 | .45 | 5.5 L | 5.5 L | 12 L | 54 | 79 | .4 |
| Q2A-12 | 2.6 L | 2.2 | 1.2 | .13 | 1.2 L | 1.2 L | 2.6 L | 8 | 17 | .2 |
| Q2A-13 | 2.3 L | .30 | 1.2 | .22 | 1.0 L | 1.0 L | 2.3 L | 9 | 13 | .1 |
| Q2A-14 | 2.9 L | 33 | 2.2 | .13 | 1.3 L | 1.3 L | 2.9 L | 8 | 22 | .2 |
| Q2A-15 | 31 L | 4.8 L | 6.7 | .07 | 6.5 L | 9.6 L | 14 L | 37 | 72 | .3 |
| Q3-1 | .66 L | .09 | .4 | .48 | .3 | .3 L | .7 L | 4 | 3.0 | .1 |
| Q3-2 | 7.9 L | .53 L | 1.8 | .30 | 3.6 L | 3.6 L | 7.9 L | 30 | 37 | .3 |
| Q3-3 | 12 L | .77 L | 3.0 | .35 | 5.2 L | 5.2 L | 11.6 L | 41 | 56 | .5 |
| Q3-8 | 3.7 L | 1.7 | 1.5 | .80 | 1.7 L | 1.7 L | 3.7 L | 8 | 15 | .4 |
| Q3-9-D | 1.6 L | .11 L | .7 | .085 | .7 L | .7 L | 1.6 L | 7 | 12 | .1 |
| Q3-9 | 1.6 L | .10 L | .6 | .48 | .7 L | .7 L | 1.6 L | 8 | 7.9 | .1 |
| Q3-11 | 1.9 L | .13 L | .7 | .14 | .9 L | .9 L | 1.9 L | 6 | 19 | .0 |
| Q3-11-D | 1.8 L | .12 L | .8 | .075 | .8 L | .8 L | 1.8 L | 7 | 19 | .0 |
| Q3-12 | 2.1 L | .14 L | 1.7 | .072 | 1.0 L | 1.0 L | 2.1 L | 11 | 14 | .1 |
| Q3-13 | 2.9 L | .20 L | 2.6 | .11 | 1.3 L | 1.3 L | 2.9 L | 10 | 18 | .1 |
| Q3-14 | 1.1 L | .08 L | .5 | .16 | .5 L | .5 L | 1.1 L | 5 | 5.3 | .0 |
| Q3-15 | 1.5 L | .29 | 1.4 | .29 | .7 L | .7 L | 1.5 L | 8 | 11 | .1 |
| Q3-16 | .93 L | 1.2 | .6 | .29 | .4 L | .4 L | .9 L | 5 | 2.5 | .1 |
| Q3-17 | 29 L | 4.5 L | 7.5 | .050 | 6.1 L | 9.0 L | 14 L | 43 | 24 | .2 L |
| Q3-18 | 1.4 L | .67 | .9 | .095 | .7 L | .7 L | 1.4 L | 16 | 3.5 | .2 |
| Q3-19 | 1.4 L | .09 L | 1.0 | .16 | .6 L | .6 L | 1.4 L | 7 | 4.9 | .1 |
| Q3-21 | 2.4 L | .48 | 1.2 | .090 | 1.1 L | 1.1 L | 2.4 L | 7 | 7.6 | .1 |
| Q3-22 | 5.6 L | .37 L | 2.3 | .21 | 2.5 L | 2.5 L | 5.6 L | 17 | 20 | .2 |
| Q3-23 | 10 L | .70 L | 2.8 | .47 | 4.7 L | 4.7 L | 10 L | 40 | 24 | .2 |
| Q3-24 | 9.0 L | .60 L | 2.7 | .39 | 4.1 L | 4.1 L | 9.0 L | 32 | 42 | .3 |
| Q3-25 | 5.0 L | .33 L | 1.5 | .21 | 2.2 L | 2.2 L | 5.0 L | 19 | 22 | .2 |
| Q3-26A | 6.8 L | .45 L | 3.8 | .67 | 3.1 L | 3.1 L | 6.8 L | 41 | 50 | .2 |
| Q3-27 | 1.3 L | .09 L | .7 | .24 | .6 L | .6 L | 1.3 L | 10 | 4.6 | .2 |
| Q3-28 | 7.1 L | .47 L | 3.6 | .23 | 3.2 L | 3.2 L | 7.1 L | 13 | 28 | .3 |
| Q4-1 | 1.1 L | 3.4 | .6 | .13 | .5 L | .5 L | 1.1 L | 3 | 4.5 | .1 |
| Q4-1-D | 1.1 L | 2.9 | .7 | .16 | .5 L | .5 L | 1.1 L | 3 | 4.8 | .2 |
| Q4-2 | 8.7 L | 2.3 | 4.1 | .22 | 4.0 L | 4.0 L | 8.7 L | 16 | 21 | .3 |
| Q4-3 | 10.7 L | .71 L | 7.2 | .12 | 4.9 L | 4.9 L | 10.7 L | 30 | 24 | .3 |
| Q4-4 | 2.8 L | .37 | 1.4 | .42 | 1.3 L | 1.3 L | 2.8 L | 10 | 9.6 | .1 |
| Q4-5 | 2.5 L | .49 | .9 | .21 | 1.1 L | 1.1 L | 2.5 L | 8 | 26 | .1 |

| SAMPLE ID | Gd | | Ge | | Hf | Hg | Ho | | In | | Ir | | La | Li | Lu | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q4-6 | 9.7 | L | 0.65 | L | 3.0 | 0.12 | 4.4 | L | 4.4 | L | 9.7 | L | 53 | 65 | 0.3 | |
| Q4-7 | 2.6 | L | .18 | L | 1.0 | .27 | 1.2 | L | 1.2 | L | 2.6 | L | 10 | 33 | .2 | |
| Q4-8 | 4.7 | L | .32 | L | 3.5 | .093 | 2.2 | L | 2.2 | L | 4.7 | L | 11 | 73 | .1 | |
| Q4-9 | 3.7 | L | .25 | L | .8 | .10 | 1.7 | L | 1.7 | L | 3.7 | L | 7 | 15 | .0 | |
| Q4-10 | 1.3 | L | .17 | | .6 | .17 | .6 | L | .6 | L | 1.3 | L | 5 | 11 | .1 | |
| Q4-11 | 1.7 | L | .35 | | .7 | .13 | .8 | L | .8 | L | 1.7 | L | 6 | 16 | .0 | |
| Q4-12 | 1.2 | L | 1.6 | | .9 | .095 | .5 | L | .5 | L | 1.2 | L | 5 | 3.7 | .1 | |
| Q4-13 | 8.9 | L | .59 | L | 4.0 | .27 | 4.0 | L | 4.0 | L | 8.9 | L | 68 | 45 | .3 | |
| Q4-14 | 29 | L | 4.6 | L | 6.7 | .11 | 6.2 | L | 9.2 | L | 14 | L | 35 | 19 | .1 | L |
| Q4-15 | 1.9 | L | 1.8 | | 1.3 | .072 | 1.9 | L | .9 | L | 1.9 | L | 31 | 3.5 | .2 | |
| Q4-16 | 1.8 | L | .12 | L | 1.3 | .072 | .8 | L | .8 | L | 1.8 | L | 9 | 9.8 | .1 | |
| Q4-18 | 2.3 | L | .15 | L | 1.8 | .070 | 1.0 | L | 1.0 | L | 2.3 | L | 8 | 11 | .1 | |
| Q4-20 | 1.8 | L | .12 | L | 1.3 | .082 | .8 | L | .8 | L | 1.8 | L | 12 | 6.1 | .1 | |
| Q4-21 | .96 | L | .06 | L | .8 | .095 | .4 | L | .4 | L | 1.0 | L | 8 | 3.8 | .1 | |
| Q4-22 | 3.6 | L | .24 | L | 3.0 | .14 | 1.6 | L | 1.6 | L | 3.6 | L | 11 | 26 | .1 | |
| Q4-23 | 12 | L | .83 | L | 7.9 | .072 | 5.7 | L | 5.7 | L | 13 | L | 47 | 83 | .2 | |
| Q4-25 | 10 | L | .69 | L | 5.9 | .18 | 4.7 | L | 4.7 | L | 10 | L | 74 | 68 | .2 | |
| Q4-26 | 1.7 | L | .11 | L | 1.5 | .075 | .8 | L | .8 | L | 1.7 | L | 15 | 9.7 | .1 | |
| Q4-27 | 1.4 | L | .18 | | 1.0 | .085 | .6 | L | .6 | L | 1.4 | L | 6 | 6.3 | .1 | |
| Q4-28 | 2.1 | L | 1.5 | | 1.6 | .12 | 1.0 | L | 1.0 | L | 2.1 | L | 40 | 7.5 | .3 | |
| Q4-29 | 14 | L | .94 | L | 7.0 | .13 | 6.4 | L | 6.4 | L | 14 | L | 60 | 23 | .5 | |
| Q5A-0-D | 8.7 | L | 1.2 | | 2.6 | .40 | 4.0 | L | 4.0 | L | 8.7 | L | 31 | 40 | .3 | |
| Q5A-0 | 8.8 | L | 1.2 | | 2.7 | .19 | 4.0 | L | 4.0 | L | 8.8 | L | 32 | 42 | .4 | |
| Q5A-1 | 6.1 | L | .41 | L | 1.5 | .16 | 2.8 | L | 2.8 | L | 6.1 | L | 19 | 49 | .2 | |
| Q5A-2 | 4.0 | L | .27 | L | 2.0 | .18 | 1.8 | L | 1.8 | L | 4.0 | L | 15 | 30 | .2 | |
| Q5A-4 | 2.5 | L | .17 | L | 1.2 | .26 | 1.1 | L | 1.1 | L | 2.5 | L | 11 | 20 | .1 | |
| Q5A-5 | 3.5 | L | .23 | L | 2.1 | .44 | 1.6 | L | 1.6 | L | 3.5 | L | 14 | 46 | .1 | |
| Q5A-6 | 1.9 | L | .13 | L | .8 | .18 | .9 | L | .9 | L | 1.9 | L | 9 | 12 | .0 | |
| Q5A-7 | 2.3 | L | 1.9 | | 1.8 | .19 | 1.1 | L | 1.1 | L | 2.3 | L | 6 | 19 | .1 | |
| Q5A-8 | 10 | L | .67 | L | 5.6 | .14 | 4.6 | L | 4.6 | L | 10.1 | L | 46 | 67 | .2 | |
| Q5A-9 | 29 | L | 4.5 | L | 7.6 | .050 | 6.1 | L | 9.0 | L | 13.6 | L | 44 | 35 | .2 | L |
| Q5A-10 | 2.0 | L | 1.4 | | 1.7 | .065 | .9 | L | .9 | L | 2.0 | L | 18 | 7.3 | .2 | |
| Q5A-11 | 1.4 | L | .10 | L | .6 | .072 | .7 | L | .7 | L | 1.4 | L | 8 | 8.6 | .0 | |
| Q5A-13 | 1.6 | L | .21 | | 1.8 | .28 | .7 | L | .7 | L | 1.6 | L | 9 | 20 | .1 | |
| Q5A-15 | 1.7 | L | .12 | L | 1.2 | .14 | .8 | L | .8 | L | 1.7 | L | 10 | 22 | .1 | |
| Q5A-16 | 1.3 | L | .17 | | 1.4 | .12 | .6 | L | .6 | L | 1.3 | L | 9 | 16 | .1 | |
| Q5A-18 | 7.0 | L | .47 | L | 4.4 | .17 | 3.2 | L | 3.2 | L | 7.0 | L | 66 | 74 | .2 | |
| Q5A-19 | 1.6 | L | .42 | | 1.2 | .062 | .7 | L | .7 | L | 1.6 | L | 8 | 11 | .2 | |
| Q5A-20 | 1.4 | L | .09 | L | .9 | .072 | .6 | L | .6 | L | 1.4 | L | 7 | 9.3 | .1 | |
| Q5A-21 | .95 | L | 8.8 | | 1.0 | .082 | .4 | L | .4 | L | 1.0 | L | 2 | 5.5 | .1 | |
| Q5A-22 | 13 | L | .86 | L | 7.4 | .22 | 5.9 | L | 5.9 | L | 12.9 | L | 26 | 40 | .3 | |
| Q5A-23 | 14 | L | .92 | L | 7.3 | .96 | 6.3 | L | 6.3 | L | 13.8 | L | 44 | 37 | .4 | |
| Q5-1 | 8.3 | L | .56 | L | 2.1 | .085 | 3.8 | L | 3.8 | L | 8.3 | L | 29 | 67 | .3 | |
| Q5-1-D | 8.3 | L | .55 | L | 2.1 | .092 | 3.7 | L | 3.7 | L | 8.3 | L | 27 | 47 | .2 | |
| Q5-2 | 3.1 | L | .41 | | 1.6 | .082 | 1.4 | L | 1.4 | L | 3.1 | L | 14 | 26 | .2 | |
| Q5-3 | 6.8 | L | .45 | L | 1.9 | .47 | 3.1 | L | 3.1 | L | 6.8 | L | 28 | 64 | .2 | |
| Q5-4 | 2.3 | L | .31 | | .9 | .43 | 1.1 | L | 1.1 | L | 2.3 | L | 12 | 12 | .1 | |
| Q5-5 | 1.8 | L | .12 | L | .9 | .38 | .8 | L | .8 | L | 1.8 | L | 7 | 14 | .0 | |
| Q5-6 | 2.1 | L | .14 | L | 1.0 | .070 | .9 | L | .9 | L | 2.1 | L | 9 | 18 | .0 | |

| SAMPLE ID | Gd | Ge | Hf | Hg | Ho | In | Ir | La | Li | Lu |
|---|---|---|---|---|---|---|---|---|---|---|
| Q5-7 | 2.9 L | 0.39 | 1.4 | 0.082 | 1.3 L | 1.3 L | 2.9 L | 8 | 17 | 0.1 |
| Q5-8 | 10 L | .67 L | 3.3 | .082 | 4.5 L | 4.5 L | 10 L | 47 | 40 | .2 |
| Q5-10 | 1.6 L | .63 | 1.5 | .17 | .7 L | .7 L | 1.6 L | 22 | 8.8 | .2 |
| Q5-11 | .77 L | .15 | .6 | .15 | .4 L | .4 L | .8 L | 7 | 5.6 | .1 |
| Q5-13 | 1.9 L | .74 | 2.0 | .090 | .8 L | .8 L | 1.9 L | 7 | 19 | .1 |
| Q5-15 | 1.3 L | .17 | 1.2 | .20 | .6 L | .6 L | 1.3 L | 12 | 10 | .1 |
| Q5-16 | .93 L | .12 | .7 | .075 | .4 L | .4 L | .9 L | 9 | 9.9 | .1 |
| Q5-16A | 4.2 L | .28 L | 5.4 | .40 | 1.9 L | 1.9 L | 4.2 L | 10 | 34 | .2 |
| Q5-17A | 8.7 L | .58 L | 5.1 | .12 | 3.9 L | 3.9 L | 8.7 L | 93 | 64 | .2 |
| Q5-18 | 1.4 L | .28 | 1.2 | .11 | .6 L | .6 L | 1.4 L | 10 | 9.4 | .1 |
| Q5-19 | 1.1 L | 1.0 | .7 | .095 | .5 L | .5 L | 1.1 L | 5 | 7.0 | .12 |
| Q5-20 | 13 L | .89 L | 7.6 | .40 | 6.0 L | 6.0 L | 13.3 L | 35 | 37 | .35 |
| Q6-2 | 2.9 L | 13 | 4.6 | .093 | 1.3 L | 1.3 L | 2.9 L | 20 | 19 | .3 |
| Q6-3 | 6.9 L | .46 L | 2.0 | .13 | 3.1 L | 3.1 L | 6.9 L | 20 | 60 | .2 |
| Q6-3-D | 6.7 L | .44 L | 1.7 | .80 | 3.0 L | 3.0 L | 6.7 L | 18 | 39 | .2 |
| Q6-4 | 3.8 L | .25 L | 2.2 | .70 | 1.7 L | 1.7 L | 3.8 L | 11 | 28 | .1 |
| Q6-5 | 1.6 L | .11 L | .9 | .20 | .7 L | .7 L | 1.6 L | 9 | 17 | .1 |
| Q6-6 | 6.5 L | .43 L | 6.8 | .26 | 3.0 L | 3.0 L | 6.5 L | 20 | 104 | .2 |
| Q6-7 | 2.5 L | .33 | 1.7 | .082 | 1.1 L | 1.1 L | 2.5 L | 16 | 43 | .1 |
| Q6-8 | 2.1 L | 3.6 | 1.6 | .095 | 1.0 L | 1.0 L | 2.1 L | 9 | 13 | .1 |
| Q6-10 | 29 L | 4.5 L | 8.0 | .040 | 6.1 L | 9.0 L | 13.5 L | 43 | 27 | .2 L |
| Q6-11 | 1.5 L | 2.5 | 1.5 | .13 | 1.5 L | .7 L | 1.5 L | 29 | 4.7 | .3 |
| Q6-12 | 1.0 L | .14 | .7 | .14 | .5 L | .5 L | 1.0 L | 9 | 6.1 | .1 |
| Q6-14 | 1.5 L | .50 | 2.5 | .12 | 1.5 L | .7 L | 1.5 L | 11 | 17 | .1 |
| Q6-16 | 1.6 L | .11 L | 1.4 | .095 | .7 L | .7 L | 1.6 L | 12 | 10 | .1 |
| Q6-16-D | 1.8 L | .23 | 1.4 | .060 | .8 L | .8 L | 1.8 L | 0 L | 11 | .1 |
| Q6-18 | 1.6 L | .11 L | 1.1 | .070 | .7 L | .7 L | 1.6 L | 13 | 12 | .1 |
| Q6-19 | 1.3 L | 3.0 | 1.3 | .36 | .6 L | .6 L | 1.3 L | 6 | 9.6 | .1 |
| Q6-20 | 13 L | 1.8 | 9.5 | .14 | 6.1 L | 6.1 L | 13.4 L | 19 | 16 | .3 |
| Q7-1 | 7.7 L | 7.7 | 2.2 | .41 | 3.5 L | 3.5 L | 7.7 L | 35 | 51 | .3 |
| Q7-2 | 1.8 L | .70 | .6 | .072 | .8 L | .8 L | 1.8 L | 5 | 10 | .2 |
| Q7-3A | 8.0 L | 1.1 | 3.9 | .27 | 3.6 L | 3.6 L | 8.0 L | 21 | 24 | .2 |
| Q7-3 | 2.7 L | .18 L | 1.7 | .35 | 1.2 L | 1.2 L | 2.7 L | 5 | 23 | .1 |
| Q7-4 | 1.9 L | .13 L | 1.3 | .092 | .9 L | .9 L | 1.9 L | 10 | 13 | .1 |
| Q7-5 | 2.2 L | .14 L | 1.3 | .13 | 1.0 L | 1.0 L | 2.2 L | 7 | 13 | .0 |
| Q7-6 | 2.2 L | .14 L | .2 | .075 | 1.0 L | 1.0 L | 2.2 L | 5 | 4.9 | .0 |
| Q7-7 | 3.8 L | .25 L | 3.3 | .23 | 1.7 L | 1.7 L | 3.8 L | 21 | 18 | .1 |
| Q7-9 | 1.0 L | .07 L | .6 | .092 | .5 L | .5 L | 1.0 L | 15 | 5.4 | .1 |
| Q7-10 | .71 L | .14 | .5 | .093 | .3 L | .3 L | .7 L | 8 | 3.5 | .0 |
| Q7-12 | 1.2 L | .24 | 1.7 | .099 | .5 L | .5 L | 1.2 L | 7 | 6.3 | .1 |
| Q7-14 | 1.3 L | .17 | 1.1 | .11 | .6 L | .6 L | 1.3 L | 10 | 6.6 | .1 |
| Q7-15 | 1.8 L | .36 | 1.8 | .072 | .8 L | .8 L | 1.8 L | 9 | 11 | .1 |
| Q7-17 | 2.4 L | .16 L | 1.7 | .18 | 1.1 L | 1.1 L | 2.4 L | 16 | 15 | .1 |
| Q7-18 | 1.4 L | .09 L | .7 | .12 | .6 L | .6 L | 1.4 L | 7 | 6.8 | .1 L |
| Q7-19 | .84 L | .34 | .7 | .19 | .4 L | .4 L | .8 L | 5 | 6.7 | .1 |
| Q7-20 | 6.6 L | .44 L | 3.2 | .11 | 3.0 L | 3.0 L | 6.6 L | 38 | 28 | .4 |
| Q7-23 | 4.3 L | .29 L | 4.7 | .40 | 2.0 L | 2.0 L | 4.3 L | 35 | 20 | .4 |
| Q7-24 | 1.2 L | 2.2 | 1.1 | .14 | 1.2 L | .5 L | 1.2 L | 11 | 4.9 | .3 |
| Q7-25 | .89 L | 1.8 | 3.1 | .095 | .4 L | .4 L | .9 L | 15 | 4.4 | .3 |

| SAMPLE ID | Gd | | Ge | | Hf | Hg | Ho | | In | | Ir | | La | Li | Lu | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q7-26 | 1.9 | L | 0.12 | L | 0.8 | 0.19 | 0.8 | L | 0.8 | L | 1.9 | L | 8 | 12 | 0.1 | |
| Q7-27 | .90 | L | .06 | L | .4 | .24 | .4 | L | .4 | L | .9 | L | 6 | 5.2 | .0 | |
| Q7-28 | 11 | L | .74 | L | 2.9 | .092 | 5.1 | L | 5.1 | L | 11 | L | 20 | 52 | .0 | |
| Q7-29 | 1.9 | L | .26 | | 2.0 | .20 | .9 | L | .8 | L | 1.9 | L | 9 | 11 | .2 | |
| Q7-30 | 2.7 | L | .18 | L | 2.4 | .085 | 1.2 | L | 1.2 | L | 2.7 | L | 7 | 8.3 | .1 | |
| Q7-31 | 1.2 | L | 7.1 | | 1.1 | .20 | .5 | L | .5 | L | 1.2 | L | 5 | 6.9 | .1 | |
| Q8-1 | 5.5 | L | .37 | L | 2.4 | .32 | 2.5 | L | 2.5 | L | 5.5 | L | 21 | 41 | .3 | |
| Q8-1-D | 5.5 | L | .73 | | 3.1 | .30 | 2.5 | L | 2.5 | L | 5.5 | L | 18 | 40 | .3 | |
| Q8-2 | 3.7 | L | .25 | L | 1.4 | .27 | 1.7 | L | 1.7 | L | 3.7 | L | 15 | 57 | .1 | |
| Q8-3 | 2.5 | L | .34 | | 1.1 | .81 | 1.1 | L | 1.1 | L | 2.5 | L | 8 | 25 | .1 | |
| Q8-4 | 7.8 | L | .52 | L | 6.3 | .070 | 3.5 | L | 3.5 | L | 7.8 | L | 17 | 104 | .1 | |
| Q8-5 | 2.5 | L | .17 | L | .9 | .19 | 1.1 | L | 1.1 | L | 2.5 | L | 6 | 8.3 | .1 | |
| Q8-6 | 3.0 | L | .20 | L | 1.7 | .15 | 1.4 | L | 1.4 | L | 3.0 | L | 9 | 16 | .1 | |
| Q8-6-D | 2.7 | L | .18 | L | 1.6 | .24 | 1.2 | L | 1.2 | L | 2.7 | L | 9 | 11 | .1 | |
| Q8-7 | 6.5 | L | .44 | L | .6 | .095 | 3.0 | L | 3.0 | L | 6.5 | L | 5 | 48 | .1 | |
| Q8-8 | 9.7 | L | .65 | L | 4.5 | .12 | 4.4 | L | 4.4 | L | 9.7 | L | 44 | 57 | .3 | |
| Q8-9 | 28 | L | 4.4 | L | 6.9 | .040 | 6.0 | L | 8.9 | L | 13.3 | L | 35 | 25 | .1 | L |
| Q8-10 | 2.6 | L | 4.6 | | 1.4 | .072 | 1.2 | L | 1.2 | L | 2.6 | L | 28 | 4.8 | .3 | |
| Q8-11 | 1.1 | L | .07 | L | .6 | .075 | .5 | L | .5 | L | 1.1 | L | 7 | 4.8 | .0 | |
| Q8-13 | 1.6 | L | 1.8 | | 2.3 | .11 | .7 | L | .7 | L | 1.6 | L | 9 | 7.1 | .1 | |
| Q8-15 | 1.7 | L | .12 | L | 1.4 | .13 | .8 | L | .8 | L | 1.7 | L | 9 | 8.1 | .1 | |
| Q8-16 | 1.2 | L | .16 | | .8 | .072 | .5 | L | .5 | L | 1.2 | L | 9 | 6.5 | .1 | |
| Q8-18-D | 1.6 | L | .11 | L | .8 | .42 | .7 | L | .7 | L | 1.6 | L | 10 | 6.5 | .1 | |
| Q8-18 | 1.6 | L | .11 | L | .9 | .093 | .7 | L | .7 | L | 1.6 | L | 9 | 6.2 | .1 | |
| Q8-19 | 1.1 | L | .07 | L | .6 | .075 | .5 | L | .5 | L | 1.1 | L | 6 | 6.0 | .1 | |
| Q8-20 | .84 | L | .73 | | .5 | .16 | .4 | L | .4 | L | .8 | L | 3 | 6.7 | .2 | |
| Q8-21 | 9.5 | L | 1.9 | | 5.1 | .43 | 4.3 | L | 4.3 | L | 9.5 | L | 27 | 40 | .4 | |
| Q9-1 | 1.9 | L | 3.4 | | 1.0 | .46 | .8 | L | .8 | L | 1.9 | L | 7 | .3 | .1 | |
| Q9-2 | 2.2 | L | .14 | L | 1.4 | .13 | 1.0 | L | 1.0 | L | 2.2 | L | 10 | 22 | .1 | |
| Q9-3 | 3.9 | L | .26 | L | .9 | .075 | 1.8 | L | 1.8 | L | 3.9 | L | 8 | 33 | .1 | |
| Q9-4 | 1.6 | L | 2.4 | | 1.4 | .31 | .7 | L | .7 | L | 1.6 | L | 5 | 8.8 | .2 | |
| Q9-5 | 9.6 | L | .64 | L | 4.7 | .10 | 4.4 | L | 4.4 | L | 9.6 | L | 42 | 89 | .3 | |
| Q9-6 | 13 | L | .86 | L | 7.5 | .075 | 5.8 | L | 5.8 | L | 12.9 | L | 31 | 39 | .1 | |
| Q9-7 | 29 | L | 4.5 | L | 8.0 | .040 | 6.1 | L | 8.9 | L | 13.4 | L | 45 | 28 | .2 | L |
| Q9-8 | 9.9 | L | 2.6 | | 6.6 | .40 | 4.5 | L | 4.5 | L | 9.9 | L | 27 | 20 | .4 | |
| Q9-9 | 2.2 | L | .15 | L | 1.0 | .14 | 1.0 | L | 1.0 | L | 2.2 | L | 10 | 9.6 | .1 | |
| Q9-11 | 1.5 | L | .20 | | 2.9 | .13 | .7 | L | .7 | L | 1.5 | L | 13 | 8.2 | .1 | |
| Q9-13 | 1.4 | L | .09 | L | 1.2 | .095 | .6 | L | .6 | L | 1.4 | L | 13 | 8.7 | .1 | |
| Q9-14 | 1.3 | L | .59 | | 1.1 | .46 | .6 | L | .6 | L | 1.3 | L | 9 | 6.3 | .0 | |
| Q9-16 | 2.2 | L | .14 | L | 1.4 | .082 | 1.0 | L | 1.0 | L | 2.2 | L | 14 | 16 | .1 | |
| Q9-17 | .86 | L | 3.9 | | .7 | .12 | .4 | L | .4 | L | .9 | L | 6 | 6.3 | .1 | |
| Q10A-1 | 1.4 | L | 9.1 | | 1.2 | .12 | .6 | L | .6 | L | 1.4 | L | 9 | 30 | .3 | |
| Q10A-2 | 5.9 | L | .39 | L | 4.8 | .32 | 2.7 | L | 2.7 | L | 5.9 | L | 17 | 51 | .3 | |
| Q10A-3-D | 1.8 | L | .12 | L | 1.2 | .14 | .8 | L | .8 | L | 1.8 | L | 9 | 24 | .0 | |
| Q10A-3 | 1.8 | L | .12 | L | 1.2 | .092 | .8 | L | .8 | L | 1.8 | L | 9 | 15 | .1 | |
| Q10A-4 | 2.0 | L | .41 | | 1.0 | .12 | .9 | L | .9 | L | 2.0 | L | 7 | 8.3 | .1 | |
| Q10A-4-D | 2.0 | L | .40 | | 1.2 | .14 | .9 | L | .9 | L | 2.0 | L | 7 | 10 | .1 | |
| Q10A-5 | 8.8 | L | .59 | L | 5.6 | .075 | 4.0 | L | 4.0 | L | 8.8 | L | 33 | 35 | .2 | |

| SAMPLE ID | Gd | | Ge | | Hf | Hg | Ho | | In | | Ir | | La | Li | Lu | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q10A-6 | 28 | L | 4.5 | L | 8.4 | 0.12 | 6.1 | L | 8.9 | L | 13 | L | 53 | 30 | 0.2 | L |
| Q10A-7 | 2.0 | L | .79 | | 1.2 | .060 | .9 | L | .9 | L | 2.0 | L | 19 | 7.1 | .2 | |
| Q10A-8 | 1.2 | L | .08 | L | .7 | .085 | .6 | L | .6 | L | 1.2 | L | 8 | 6.1 | .1 | |
| Q10A-10 | 3.1 | L | .21 | L | 3.4 | .072 | 1.4 | L | 1.4 | L | 3.1 | L | 10 | 17 | .1 | |
| Q10A-12 | 1.5 | L | .10 | L | 1.2 | .085 | .7 | L | .7 | L | 1.5 | L | 10 | 10 | .1 | |
| Q10A-13 | .90 | L | .84 | | 1.0 | .29 | .4 | L | .4 | L | .9 | L | 6 | 5.2 | .1 | |
| Q10A-14 | 10 | L | .70 | L | 7.8 | .072 | 4.7 | L | 4.7 | L | 10 | L | 43 | 77 | .2 | |
| Q10A-16 | 5.7 | L | .38 | L | 3.7 | .16 | 2.6 | L | 2.6 | L | 5.7 | L | 49 | 34 | .2 | |
| Q10A-17 | 1.2 | L | .94 | | 1.4 | .075 | .5 | L | .5 | L | 1.2 | L | 8 | 7.2 | .1 | |
| Q10A-18 | 1.3 | L | .53 | | .9 | .070 | .6 | L | .6 | L | 1.3 | L | 6 | 9.8 | .2 | |
| Q10A-19 | 10 | L | 1.4 | | 3.3 | .30 | 4.6 | L | 4.6 | L | 10 | L | 36 | 28 | .4 | |
| Q11-1 | 14 | L | .94 | L | 11.1 | .38 | 6.4 | L | 6.4 | L | 14 | L | 36 | 17 | .3 | |
| Q11-2 | 1.4 | L | 23 | | 1.7 | .35 | .6 | L | .6 | L | 1.4 | L | 4 | 6.7 | .3 | |
| Q11-3 | 11 | L | .70 | L | 9.0 | .12 | 4.8 | L | 4.8 | L | 11 | L | 51 | 45 | .2 | |
| Q11-4 | 29 | L | 4.6 | L | 8.2 | .030 | 6.2 | L | 9.1 | L | 14 | L | 44 | 36 | .2 | L |
| Q11-5 | 1.5 | L | 1.0 | | 1.0 | .25 | .7 | L | .7 | L | 1.5 | L | 32 | 6.2 | .3 | |
| Q11-6 | 2.4 | L | .16 | L | 1.3 | .24 | 1.1 | L | 1.1 | L | 2.4 | L | 10 | 15 | .1 | |
| Q11-7 | 1.9 | L | .38 | | 1.0 | .15 | .9 | L | .9 | L | 1.9 | L | 12 | 17 | .1 | |
| Q11-8 | 1.4 | L | .09 | | .9 | .42 | .6 | L | .6 | L | 1.4 | L | 7 | 11 | .0 | |
| Q11-10 | 11 | L | .76 | L | 4.6 | .19 | 5.1 | L | 5 | L | 11 | L | 53 | 136 | .2 | |
| Q11-12 | 1.9 | L | .13 | L | 1.8 | .27 | .9 | L | .9 | L | 1.9 | L | 12 | 19 | .1 | |
| Q11-13 | 1.8 | L | 2.5 | | 1.4 | .24 | .8 | L | .8 | L | 1.8 | L | 8 | 11 | .4 | |
| Q11-14 | 14 | L | .91 | L | 4.3 | .39 | 6.2 | L | 6.2 | L | 14 | L | 62 | 53 | .4 | |
| Q11-15 | 1.6 | L | 2.5 | | 1.1 | .18 | 1.6 | L | .7 | L | 1.6 | L | 3 | 8.0 | .6 | |
| Q11-16-D | 9.8 | L | .65 | L | 2.9 | .24 | 4.5 | L | 4.5 | L | 9.8 | L | 37 | 48 | .4 | |
| Q11-16 | 9.9 | L | .66 | L | 3.0 | .48 | 4.6 | L | 4.5 | L | 9.9 | L | 40 | 57 | .3 | |
| Q12-1 | 1.6 | L | 2.5 | | .7 | .070 | .7 | L | .7 | L | 1.6 | L | 6 | 7.6 | .1 | |
| Q12-2 | 10 | L | .67 | L | 5.7 | .090 | 4.5 | L | 4.5 | L | 10 | L | 15 | 33 | .2 | |
| Q12-3 | 28 | L | 4.5 | L | 6.7 | .040 | 6.1 | L | 8.9 | L | 13 | L | 41 | 25 | .3 | L |
| Q12-4 | 4.0 | L | .80 | | 1.2 | .17 | 1.8 | L | 1.8 | L | 4.0 | L | 24 | 18 | .2 | |
| Q12-5 | 2.1 | L | .42 | | .7 | .28 | 1.0 | L | 1.0 | L | 2.1 | L | 8 | 10 | .1 | |
| Q12-6 | 7.0 | L | .47 | L | 2.0 | .25 | 3.2 | L | 3.2 | L | 7.0 | L | 39 | 39 | .2 | |
| Q12-7 | 7.0 | L | .46 | L | 2.6 | .13 | 3.2 | L | 3.2 | L | 7.0 | L | 24 | 32 | .2 | |
| Q12-7-D | 7.0 | L | .47 | L | 2.6 | .15 | 3.2 | L | 3.2 | L | 7.0 | L | 25 | 27 | .2 | |
| Q12-8 | 5.6 | L | .37 | L | 2.4 | .20 | 2.5 | L | 2.5 | L | 5.6 | L | 25 | 34 | .2 | |
| Q12-10 | 6.7 | L | .89 | | 3.2 | .23 | 3.0 | L | 3.0 | L | 6.7 | L | 28 | 49 | .2 | |
| Q12-11 | 3.8 | L | .26 | | 1.5 | .25 | 1.7 | L | 1.7 | L | 3.8 | L | 10 | 17 | .2 | |
| Q12-11-D | 1.7 | L | .11 | L | 1.3 | .14 | .8 | L | .8 | L | 1.7 | L | 10 | 14 | .2 | |
| Q12-12 | 10 | L | .69 | L | 5.2 | .082 | 4.7 | L | 4.7 | L | 10 | L | 68 | 68 | .3 | |
| Q12-13 | 4.0 | L | 1.3 | | 2.8 | .13 | 1.8 | L | 1.8 | L | 4.0 | L | 37 | 50 | .3 | |
| Q12-14 | 12 | L | 7.2 | | 4.6 | .045 | 5.5 | L | 5.5 | L | 12 | L | 41 | 66 | .4 | |
| Q13A-1 | 6.4 | L | .85 | | 2.5 | .48 | 2.9 | L | 2.9 | L | 6.4 | L | 22 | 23 | .3 | |
| Q13A-2 | 27 | L | 4.1 | L | 6.2 | .050 | 5.6 | L | 8.3 | L | 12.4 | L | 41 | 27 | .3 | L |
| Q13A-3 | 1.4 | L | 3.5 | | .9 | .095 | .6 | L | .6 | L | 1.4 | L | 11 | 6.0 | .2 | |
| Q13A-4 | 1.5 | L | .10 | L | 1.2 | .12 | .7 | L | .7 | L | 1.5 | L | 11 | 9.1 | .1 | |
| Q13A-6 | 2.6 | L | .17 | L | 2.3 | .16 | 1.2 | L | 1.2 | L | 2.6 | L | 12 | 13 | .1 | |
| Q13A-8 | 1.1 | L | .14 | | .6 | .082 | .5 | L | .5 | L | 1.1 | L | 7 | 4.6 | .0 | |
| Q13A-9 | 3.1 | L | .41 | | 1.2 | .28 | 1.4 | L | 1.4 | L | 3.1 | L | 14 | 21 | .2 | |

| SAMPLE ID | Gd | Ge | Hf | Hg | Ho | In | Ir | La | Li | Lu |
|---|---|---|---|---|---|---|---|---|---|---|
| Q13A-10 | 8.2 L | 1.1 | 4.3 | 0.28 | 3.7 L | 3.7 L | 8.2 L | 59 | 65 | 0.2 |
| Q13A-12 | 7.0 L | .47 L | 3.5 | .43 | 3.2 L | 3.2 L | 7.0 L | 36 | 45 | .3 |
| Q13A-12-D | 7.2 L | .48 L | 3.6 | .47 | 3.3 L | 3.3 L | 7.2 L | 31 | 62 | .1 |
| Q13A-13 | 3.5 L | .69 | 1.2 | .080 | 1.6 L | 1.6 L | 3.5 L | 11 | 20 | .1 |
| Q13A-14 | 2.1 L | .14 L | 2.0 | .31 | 1.0 L | 1.0 L | 2.1 L | 16 | 10 | .1 |
| Q13A-15 | .86 L | .17 | .7 | .40 | .4 L | .4 L | .9 L | 8 | 4.9 | .2 |

Table 3. (Continued)

| SAMPLE ID | Mo | Nb | Nd | Ni | Os | Pb | Pd | Pr | Pt | Rb |
|---|---|---|---|---|---|---|---|---|---|---|
| Q2A-2 | 0.17 L | 4.6 | 11 | 2.4 | 3.7 L | 9.7 | 0.2 L | 12 L | 0.8 L | 30 L |
| Q2A-3 | .13 | 2.8 | 6.3 | 6.2 | 2.7 L | 4.0 | .1 L | 8.2 L | .6 L | 17 |
| Q2A-6 | .78 L | 11 | 42 | 40 | 17 L | 38 | .8 L | 53 L | 3.6 L | 90 |
| Q2A-7 | .36 | 1.3 | 3.3 | 3.2 | 1.3 L | 4.0 | .1 L | 4.1 L | .3 L | 40 L |
| Q2A-8-D | .56 | 3.2 | 4.6 | 4.2 | 2.3 L | 7.6 | .1 L | 7.1 L | .5 L | 60 L |
| Q2A-8 | .75 | 3.6 | 7.3 | 6.2 | 2.9 L | 12 | .1 L | 8.8 L | .6 L | 30 L |
| Q2A-9 | .92 L | 19 | 29 L | 27 | 20 L | 26 | .9 L | 62 L | 4.2 L | 85 |
| Q2A-11-D | .80 L | 7.8 | 26 L | 31 | 18 L | 13 | .8 L | 55 L | 3.7 L | 90 |
| Q2A-11 | .81 L | 11 | 26 L | 33 | 18 L | 50 | .8 L | 55 L | 3.7 L | 94 |
| Q2A-12 | 1.9 | 5.3 | 5.5 L | 9.9 | 3.8 L | 4.1 | .2 L | 12 L | .8 L | 40 L |
| Q2A-13 | .84 | 3.0 | 5.0 | 11 | 3.3 L | 7.8 | .2 L | 10 L | .7 L | 70 L |
| Q2A-14 | 1.5 | 2.6 | 6.3 L | 15 | 4.3 L | 13 | .2 L | 13 L | .9 L | 60 L |
| Q2A-15 | 4.9 | 13.4 | 57 | 33 | 14 L | 30 | 1.0 L | 96 L | 2.1 L | 130 L |
| Q3-1 | 1.2 | .88 | 2.2 | 4.1 | 1.0 L | 6.6 | 0.0 L | 3.0 L | .2 L | 50 L |
| Q3-2 | 1.1 | 7.9 | 17 L | 13 | 12 L | 14 | .5 L | 36 L | 2.4 L | 31 |
| Q3-3 | .77 L | 15 | 25 L | 23 | 17 L | 34 | .8 L | 52 L | 3.6 L | 86 |
| Q3-8 | 2.5 | 2.5 | 7.9 | 19 | 5.4 L | 9.9 | .3 L | 17 L | 1.1 L | 90 L |
| Q3-9-D | .28 | 1.2 | 3.5 L | 3.4 | 2.4 L | 2.7 | .1 L | 7.3 L | .5 L | 30 L |
| Q3-9 | .46 | 2.1 | 3.3 L | 3.5 | 2.3 L | 3.0 | .1 L | 7.1 L | .5 L | 40 L |
| Q3-11 | .83 | 2.1 | 4.0 L | 2.0 | 2.8 L | 9.6 | .1 L | 8.6 L | .6 L | 70 L |
| Q3-11-D | .92 | 1.2 | 3.8 L | 2.0 | 2.6 L | 8.3 | .1 L | 8.1 L | .6 L | 70 L |
| Q3-12 | .91 | 5.7 | 11 | 2.1 | 3.1 L | 8.3 | .1 L | 9.5 L | .6 L | 40 L |
| Q3-13 | .65 | 8.4 | 6.3 L | 2.7 | 4.3 L | 9.2 | .2 L | 13 L | .9 L | 200 L |
| Q3-14 | .61 | .75 | 2.4 L | 1.1 | 1.7 L | .8 | .1 L | 5.1 L | .4 L | 60 L |
| Q3-15 | .91 | 3.1 | 3.1 L | 1.9 | 2.2 L | 4.1 | .1 L | 6.7 L | .5 L | 60 L |
| Q3-16 | 2.4 | 1.4 | 2.0 L | 2.2 | 1.4 L | 6.8 | .1 L | 4.2 L | .3 L | 60 L |
| Q3-17 | 3.9 | 12 | 29 L | 5.7 | 14 L | 43 | .9 L | 90 L | 2.0 L | 130 L |
| Q3-18 | 1.3 | 1.8 | 3.6 | 2.6 | 2.1 L | 4.7 | .1 L | 6.5 L | .4 L | 40 L |
| Q3-19 | 1.5 | 3.6 | 4.0 | 4.4 | 2.0 L | 5.7 | .1 L | 6.1 L | .4 L | 100 L |
| Q3-21 | 3.8 | 4.9 | 5.1 L | 5.7 | 3.5 L | 8.3 | .2 L | 11 L | .7 L | 50 L |
| Q3-22 | .89 | 3.1 | 12 L | 5.9 | 8.2 L | 37 | .4 L | 25 L | 1.7 L | 30 |
| Q3-23 | .98 | 9.8 | 26 | 15 | 15 L | 24 | .7 L | 47 L | 3.2 L | 70 |
| Q3-24 | 3.1 | 7.2 | 19 L | 20 | 13 L | 12 | .6 L | 41 L | 2.8 L | 50 |
| Q3-25 | 5.6 | 8.3 | 19 | 13 | 7.3 L | 6.6 | .3 L | 22 L | 1.5 L | 80 L |
| Q3-26A | 4.2 | 5.0 | 14 L | 19 | 9.9 L | 45 | .5 L | 31 L | 2.1 L | 100 L |
| Q3-27 | 1.3 | 1.0 | 4.8 | 8.7 | 1.9 L | 3.1 | .1 L | 5.9 L | .4 L | 40 L |
| Q3-28 | 1.3 | 12 | 15 L | 8.5 | 32 L | 19 | .5 L | 32 L | 2.2 L | 200 L |
| Q4-1 | .16 | 1.9 | 2.3 L | 6.3 | 1.6 L | 3.6 | .1 L | 4.8 L | .3 L | 70 L |
| Q4-1-D | .26 | 1.5 | 2.3 L | 6.9 | 1.6 L | 1.8 | .1 L | 5.0 L | .3 L | 40 L |
| Q4-2 | .58 L | 9.9 | 19 L | 12 | 13 L | 5.2 | .6 L | 40 L | 2.7 L | 57 |
| Q4-3 | 2.6 | 8.6 | 23 L | 14 | 16 L | 7.1 | .7 L | 49 L | 3.3 L | 92 |
| Q4-4 | 2.6 | 5.0 | 8.7 | 7.2 | 4.1 L | 4.4 | .2 L | 13 L | .9 L | 50 L |

| SAMPLE ID | Mo | Nb | Nd | Ni | Os | Pb | Pd | Pr | Pt | Rb |
|---|---|---|---|---|---|---|---|---|---|---|
| Q4-5 | 1.3 | 2.6 | 5.3 L | 6.4 | 3.6 L | 9.4 | 0.2 L | 11 L | 0.8 L | 90 L |
| Q4-6 | .65 L | 13 | 23 | 12 | 14 L | 21 | .7 L | 44 L | 3.0 L | 100 L |
| Q4-7 | .84 | 3.2 | 5.6 L | 4.9 | 3.9 L | 6.3 | .2 L | 12 L | .8 L | 40 L |
| Q4-8 | .98 | 15 | 10 L | 5.7 | 7.0 L | 15 | .3 L | 21 L | 1.5 L | 200 L |
| Q4-9 | 1.7 L | 3.7 | 8.0 L | 5.2 | 5.5 L | 4.0 | .3 L | 17 L | 1.2 L | 70 L |
| Q4-10 | 1.6 | 3.1 | 4.4 | 2.0 | 1.9 L | 3.5 | .1 L | 5.7 L | .4 L | 100 L |
| Q4-11 | 1.5 | 2.6 | 3.7 L | 1.3 | 2.6 L | 7.9 | .1 L | 7.9 L | .5 L | 80 L |
| Q4-12 | 3.3 | 2.1 | 2.5 L | 2.1 | 1.7 L | 3.5 | .1 L | 5.3 L | .4 L | 30 L |
| Q4-13 | .59 L | 11 | 19 L | 2.6 | 13 L | 33 | .6 L | 40 L | 2.7 L | 200 L |
| Q4-14 | 3.9 | 13 | 29 L | 8.6 | 14 L | 50 | .9 L | 92 L | 2.0 L | 90 L |
| Q4-15 | 3.9 | 6.8 | 28 | 2.7 | 2.8 L | 3.9 | .1 L | 8.6 L | .6 L | 50 L |
| Q4-16 | 1.2 | 2.2 | 3.9 L | 2.0 | 2.7 L | 6.6 | .1 L | 8.3 L | .6 L | 200 L |
| Q4-18 | 1.1 | 3.2 | 4.9 L | 1.7 | 3.4 L | 14 | .2 L | 10 L | .7 L | 30 L |
| Q4-20 | .9 | 1.3 | 3.8 L | 3.0 | 2.6 L | 9.8 | .1 L | 8.0 L | .5 L | 90 L |
| Q4-21 | 1.3 | 2.4 | 6.3 | 3.1 | 1.4 L | 3.9 | .1 L | 4.4 L | .3 L | 200 L |
| Q4-22 | 1.1 | 12 | 7.6 L | 4.8 | 5.2 L | 18 | .2 L | 16 L | 1.1 L | 60 L |
| Q4-23 | .83 L | 30 | 27 L | 4.2 | 18 L | 17 | .8 L | 57 L | 3.8 L | 70 L |
| Q4-25 | .69 L | 27 | 33 | 3.4 | 15 L | 50 | .7 L | 47 L | 3.2 L | 70 L |
| Q4-26 | .49 | 2.0 | 4.1 | 7.0 | 2.4 L | 12 | .1 L | 7.6 L | .5 L | 90 L |
| Q4-27 | .92 | 5.2 | 3.8 | 8.6 | 2.0 L | 11 | .1 L | 6.3 L | .4 L | 50 L |
| Q4-28 | 2.0 | 7.2 | 18 | 2.9 | 3.1 L | 7.1 | .1 L | 9.5 L | .6 L | 50 L |
| Q4-29 | .94 L | 18 | 38 | 17 | 21 L | 23 | .9 L | 64 L | 4.3 L | 91 |
| Q5A-0-D | 5.8 | 11 | 19 L | 21 | 13 L | 8.7 | .6 L | 40 L | 2.7 L | 74 |
| Q5A-0 | 5.0 | 5.9 | 24 | 22 | 13 L | 10 | .6 L | 40 L | 2.7 L | 61 |
| Q5A-1 | 4.5 | 2.5 | 13 L | 12 | 9.0 L | 33 | .4 L | 28 L | 1.9 L | 27 |
| Q5A-2 | .75 | 5.9 | 11 | 5.1 | 5.9 L | 16 | .3 L | 18 L | 1.2 L | 80 L |
| Q5A-4 | 2.2 | 5.0 | 15 | 5.3 | 3.7 L | 5.9 | .2 L | 11 L | .8 L | 40 L |
| Q5A-5 | 1.5 | 9.7 | 7.9 | 3.3 | 5.1 L | 5.1 | .2 L | 16 L | 1.1 L | 50 L |
| Q5A-6 | 1.6 | 1.8 | 4.0 L | 2.0 | 2.8 L | 3.8 | .1 L | 8.6 L | .6 L | 70 L |
| Q5A-7 | 3.3 | 7.0 | 5.0 L | 2.7 | 3.4 L | 11 | .2 L | 11 L | .7 L | 20 L |
| Q5A-8 | .88 | 22 | 22 L | 3.7 | 15 L | 13 | .7 L | 46 L | 3.1 L | 60 L |
| Q5A-9 | 4.7 | 14 | 70 | 8.3 | 14 L | 44 | .9 L | 90 L | 2.0 L | 240 L |
| Q5A-10 | 1.7 | 4.2 | 4.2 L | 2.0 | 2.9 L | 5.2 | .1 L | 8.8 L | .6 L | 90 L |
| Q5A-11 | 1.8 | 5.3 | 3.0 L | 1.7 | 2.1 L | 4.0 | .1 L | 6.5 L | .4 L | 50 L |
| Q5A-13 | 1.8 | 6.9 | 6.4 | 2.9 | 2.3 L | 11 | .1 L | 7.0 L | .5 L | 50 L |
| Q5A-15 | .90 | 2.7 | 3.7 L | 3.0 | 2.5 L | 8.2 | .1 L | 7.8 L | .8 L | 90 L |
| Q5A-16 | .96 | 4.1 | 6.3 | 4.3 | 1.9 L | 11 | .1 L | 5.9 L | .4 L | 50 L |
| Q5A-18 | .65 | 18 | 35 | 2.8 | 10 L | 42 | .5 L | 32 L | 2.1 L | 90 L |
| Q5A-19 | .70 | 2.3 | 5.3 | 4.2 | 2.3 L | 10 | .1 L | 7.1 L | .5 L | 200 L |
| Q5A-20 | .89 | 3.7 | 3.3 | 7.4 | 2.1 L | 4.5 | .1 L | 6.3 L | .4 L | 40 L |
| Q5A-21 | .69 | 3.3 | 2.0 L | 13 | 1.4 L | 5.2 | .1 L | 4.3 L | .3 L | 70 L |
| Q5A-22 | .86 L | 15 | 28 L | 7.2 | 19 L | 36 | .9 L | 59 L | 4.0 L | 72 |
| Q5A-23 | .92 L | 19 | 29 L | 16 | 20 L | 26 | .9 L | 63 L | 4.2 L | 100 |
| Q5-1 | 4.8 | 8.3 | 18 L | 17 | 12 L | 11 | .6 L | 38 L | 2.6 L | 55 |
| Q5-1-D | 4.8 | 3.9 | 18 L | 20 | 12 L | 16 | .6 L | 37 L | 2.5 L | 43 |
| Q5-2 | .99 | 7.9 | 7.3 | 4.3 | 4.5 L | 13 | .2 L | 14 L | .9 L | 60 L |
| Q5-3 | .45 L | 5.5 | 15 L | 7.7 | 10 L | 9.5 | .5 L | 31 L | 2.1 L | 50 |
| Q5-4 | 2.7 | 3.4 | 11 | 5.9 | 3.4 L | 7.2 | .2 L | 11 | .7 L | 90 L |
| Q5-5 | 1.1 | 1.8 | 3.8 L | 2.6 | 2.6 L | 5.0 | .1 L | 8.1 L | .6 L | 70 L |

| SAMPLE ID | Mo | Nb | Nd | Ni | Os | Pb | Pd | Pr | Pt | Rb |
|---|---|---|---|---|---|---|---|---|---|---|
| Q5-6 | 1.9 | 3.6 | 4.4 L | 2.1 | 3.0 L | 3.9 | 0.1 L | 9.4 L | 0.6 L | 30 L |
| Q5-7 | 2.9 | 9.8 | 6.2 L | 2.5 | 4.3 L | 9.8 | .2 L | 13 L | .9 L | 50 L |
| Q5-8 | .67 L | 13 | 21 L | 3.8 | 15 L | 28 | .7 L | 45 L | 3.1 L | 100 L |
| Q5-10 | 1.8 | 2.5 | 11 | 2.4 | 2.3 L | 2.3 | .1 L | 7.1 L | .5 L | 30 L |
| Q5-11 | 1.7 | 1.7 | 2.0 | 1.9 | 1.1 L | 3.5 | .1 L | 3.5 L | .2 L | 40 L |
| Q5-13 | 1.7 | 6.7 | 4.0 L | 2.2 | 2.7 L | 11 | .1 L | 8.4 L | .6 L | 30 L |
| Q5-15 | .79 | 1.4 | 3.8 | 2.3 | 1.9 L | 6.5 | .1 L | 5.8 L | .4 | 100 L |
| Q5-16 | .74 | 1.9 | 3.3 | 3.3 | 1.4 L | 9.9 | .1 L | 4.2 L | .3 L | 60 L |
| Q5-16A | .56 | 13 | 9.0 L | 4.8 | 6.2 L | 31 | .3 L | 19 L | 1.3 L | 70 L |
| Q5-17A | .58 L | 18 | 38 | 3.6 | 13 L | 35 | .6 L | 39 L | 2.7 L | 200 L |
| Q5-18 | .50 | 2.4 | 11 | 5.4 | 2.1 L | 13 | .1 L | 6.4 L | .6 L | 30 L |
| Q5-19 | .81 | 2.4 | 2.6 | 6.8 | 1.6 L | 4.3 | .1 L | 5.0 L | .3 L | 80 L |
| Q5-20 | .89 L | 13 | 28 L | 5.9 | 19 L | 35 | .9 L | 60 L | 4.1 L | 74 |
| Q6-2 | 3.1 | 10 | 14 | 6.5 | 4.2 L | 9.2 | .2 L | 13 L | .9 L | 100 L |
| Q6-3 | 9.2 | 7.8 | 15 L | 17 | 10 L | 11 | .5 L | 31 L | 2.1 L | 23 |
| Q6-3-D | 5.3 | 2.7 | 14 L | 13 | 9.8 L | 19 | .4 L | 30 L | 2.0 L | 50 |
| Q6-4 | 5.6 | 4.1 | 8.1 L | 2.8 | 5.6 L | 10 | .3 L | 17 L | 1.2 L | 50 L |
| Q6-5 | 1.6 | 2.1 | 3.5 L | 2.6 | 2.4 L | 12 | .1 L | 7.4 L | .5 L | 40 L |
| Q6-6 | .43 L | 21 | 14 L | 3.6 | 9.6 L | 22 | .4 L | 30 L | 2.0 L | 60 L |
| Q6-7 | 1.7 | 6.9 | 11 | 2.0 | 3.6 L | 9.2 | .2 L | 11 L | .8 L | 30 L |
| Q6-8 | 3.1 | 6.1 | 4.5 L | 2.6 | 3.1 L | 12 | .1 L | 9.7 L | .7 L | 60 L |
| Q6-10 | 2.4 | 9.9 | 29 L | 6.5 | 13 L | 47 | .9 L | 90 L | 2.0 L | 120 L |
| Q6-11 | 3.0 | 11 | 19 | 2.4 | 2.2 L | 4.2 | .1 L | 7.9 | .5 L | 40 L |
| Q6-12 | 2.0 | 1.7 | 2.8 | 2.5 | 1.5 L | 3.4 | .1 L | 4.7 L | .3 L | 50 L |
| Q6-14 | 1.4 | 9.6 | 8.0 | 2.5 | 2.2 L | 18 | .1 L | 6.8 L | .5 L | 30 L |
| Q6-16 | .99 | 2.9 | 3.5 L | 3.2 | 2.4 L | 10 | .1 L | 7.4 L | .5 L | 100 L |
| Q6-16-D | .77 | 2.8 | 3.7 L | 2.8 | 2.6 L | 9.4 | .1 L | 8.0 L | .8 L | 70 L |
| Q6-18 | .57 | 3.4 | 7.3 | 5.7 | 2.4 L | 12 | .1 L | 7.3 L | .5 L | 60 L |
| Q6-19 | .50 | 4.4 | 2.8 L | 15 | 1.9 L | 4.8 | .1 L | 5.9 L | .4 L | 70 L |
| Q6-20 | .89 L | 12 | 28 L | 4.5 | 20 L | 34 | .9 L | 61 L | 4.1 L | 51 |
| Q7-1 | 1.1 | 7.7 | 16 L | 21 | 11 L | 18 | .5 L | 35 L | 2.4 L | 65 |
| Q7-2 | .90 | 2.9 | 4.5 | 6.8 | 2.6 L | 3.4 | .1 L | 8.0 L | .5 L | 13 |
| Q7-3A | .80 | 4.5 | 17 L | 25 | 12 L | 25 | .5 L | 36 L | 2.4 L | 39 |
| Q7-3 | .78 | 3.7 | 5.7 L | 2.3 | 3.9 L | 11 | .2 L | 12 L | .8 L | 60 L |
| Q7-4 | .75 | 4.4 | 4.0 L | 1.9 | 8.5 L | 4.0 | .1 L | 8.5 L | .6 L | 30 L |
| Q7-5 | .69 | 2.7 | 4.6 L | 2.2 | 3.2 L | 9.2 | .1 L | 9.8 L | .7 L | 30 L |
| Q7-6 | .95 | 1.1 | 4.6 L | .8 | 3.2 L | 9.8 | .1 L | 9.8 L | .7 L | 40 L |
| Q7-7 | .60 | 2.0 | 8.0 L | 1.5 | 5.5 L | 15 | .3 L | 17 L | 1.2 L | 90 L |
| Q7-9 | .82 | .95 | 5.1 | 1.8 | 1.5 L | 3.5 | .1 L | 4.6 L | .5 L | 30 L |
| Q7-10 | .89 | 1.1 | 1.7 | 1.4 | 1.0 L | 4.2 | .1 L | 3.2 L | .2 L | 100 L |
| Q7-12 | .77 | 2.8 | 2.5 L | 1.7 | 1.7 L | 20 | .1 L | 5.4 L | .4 L | 30 |
| Q7-14 | .72 | 1.3 | 2.8 | 1.9 | 1.9 L | 8.6 | .1 L | 5.9 L | .4 L | 200 L |
| Q7-15 | 1.2 | 4.9 | 3.8 L | 3.1 | 2.6 L | 21 | .1 L | 8.1 L | .6 L | 50 L |
| Q7-17 | .70 | 5.5 | 6.7 | 2.4 | 3.6 L | 12 | .2 L | 11 L | .8 L | 200 L |
| Q7-18 | .80 | 1.4 | 2.9 L | 3.0 | 2.0 L | 2.7 | .1 L | 6.1 L | .4 L | 60 L |
| Q7-19 | 1.5 | 3.0 | 2.9 | 9.0 | 1.2 L | 4.3 | .1 L | 3.8 L | .3 L | 20 L |
| Q7-20 | .44 L | 15 | 17.2 | 8.4 | 9.7 L | 11 | .4 L | 30 L | 2.0 L | 37 |
| Q7-23 | 3.5 | 5.8 | 23.6 | 49 | 6.3 L | 35 | .3 L | 20 L | 1.3 L | 40 L |
| Q7-24 | 2.6 | 3.4 | 8.5 | 12 | 1.7 L | 4.2 | .1 L | 5.2 L | .4 L | 50 L |

| SAMPLE ID | Mo | Nb | Nd | Ni | Os | Pb | Pd | Pr | Pt | Rb |
|---|---|---|---|---|---|---|---|---|---|---|
| Q7-25 | 3.2 | 3.3 | 3.0 | 2.0 | 1.3 L | 6.5 | 0.1 L | 4.0 L | 0.3 L | 90 L |
| Q7-26 | 1.6 | 4.9 | 3.9 L | 4.3 | 2.7 L | 3.0 | .1 L | 8.4 L | .6 L | 30 L |
| Q7-27 | .96 | 1.3 | 1.9 L | 3.4 | 1.3 L | 2.8 | .1 L | 4.1 L | .3 L | 40 L |
| Q7-28 | .74 L | 25 | 24 L | 2.4 | 16 L | 24 | .7 L | 51 L | 3.4 L | 80 L |
| Q7-29 | .67 | 4.2 | 4.1 L | 3.6 | 2.8 L | 14 | .1 L | 8.7 L | .6 L | 30 L |
| Q7-30 | .35 | 4.4 | 5.7 | 2.5 | 3.9 L | 1.8 | .2 L | 12 L | .8 L | 60 L |
| Q7-31 | .15 | 2.8 | 2.5 L | 5.2 | 1.7 L | 4.8 | .1 L | 5.3 L | .4 L | 80 L |
| Q8-1 | 4.1 | 8.9 | 12 L | 6.3 | 8.1 L | 81 | .4 L | 25 L | 1.7 L | 43 |
| Q8-1-D | 4.4 | 3.6 | 12 | 7.6 | 8.0 L | 12 | .4 L | 25 L | 1.7 L | 27 |
| Q8-2 | 1.3 | 4.2 | 8.1 | 5.7 | 5.4 L | 7.6 | .3 L | 17 L | 1.1 L | 8 |
| Q8-3 | 1.7 | 5.2 | 5.4 L | 4.5 | 3.7 L | 1.7 | .2 L | 11 L | .8 L | 20 L |
| Q8-4 | .52 L | 22 | 17 L | 5.7 | 11 L | 46 | .5 L | 35 L | 2.4 L | 40 L |
| Q8-5 | .61 | 4.1 | 5.3 L | 1.8 | 3.6 L | 6.4 | .2 L | 11 L | .8 L | 40 L |
| Q8-6 | 1.6 | 7.2 | 6.4 L | 2.0 | 4.4 L | 8.0 | .2 L | 14 L | .9 L | 20 L |
| Q8-6-D | 1.4 | 5.5 | 5.8 L | 2.4 | 4.0 L | 8.0 | .2 L | 12 L | .8 L | 30 |
| Q8-7 | .44 L | 2.8 | 14 L | 5.2 | 9.6 L | 40 | .4 L | 30 L | 2.0 L | 60 L |
| Q8-8 | .65 L | 16 | 21 L | 3.4 | 44 L | 19 | .7 L | 44 L | 3.0 L | 50 L |
| Q8-9 | 3.8 | 12 | 70 | 5.9 | 13 L | 41 | .9 L | 89 L | 2.0 L | 100 L |
| Q8-10 | 2.3 | 11 | 19 | 2.3 | 3.9 L | 4.8 | .2 L | 12 L | .8 L | 70 L |
| Q8-11 | 1.9 | 1.4 | 2.3 L | 1.6 | 1.6 L | 4.9 | .1 L | 4.8 L | .3 L | 60 L |
| Q8-13 | 1.4 | 9.9 | 5.6 | 2.4 | 2.3 L | 16 | .1 L | 7.0 L | .5 L | 30 L |
| Q8-15 | .85 | 2.8 | 3.7 L | 1.4 | 2.6 L | 16 | .1 L | 7.9 L | .5 L | 50 L |
| Q8-16 | 1.0 | 2.6 | 2.6 | 2.2 | 1.8 L | 6.4 | .1 L | 5.4 L | .4 L | 30 L |
| Q8-18-D | .77 | 2.3 | 4.1 | 1.8 | 2.4 L | 5.8 | .1 L | 7.3 L | .5 L | 80 L |
| Q8-18 | .72 | 2.6 | 3.4 L | 1.6 | 2.4 L | 6.3 | .1 L | 7.3 L | .5 L | 80 L |
| Q8-19 | .42 | 2.2 | 3.2 | 2.5 | 1.6 L | 4.2 | .1 L | 4.8 L | .3 L | 70 L |
| Q8-20 | .54 | 2.5 | 2.9 | 7.3 | 1.2 L | 6.2 | .1 L | 3.8 L | .3 L | 20 L |
| Q8-21 | .64 L | 11 | 20 L | 14 | 14 L | 33 | .6 L | 43 L | 2.9 L | 93 |
| Q9-1 | .90 | 2.8 | 3.9 L | 1.9 | 2.7 L | 3.7 | .1 L | 8.4 L | .6 L | 40 L |
| Q9-2 | .78 | 4.8 | 4.6 L | 1.9 | 3.2 L | 4.9 | .1 L | 9.8 L | .7 L | 90 L |
| Q9-3 | .57 | 1.3 | 8.2 L | 2.3 | 5.7 L | 14 | .3 L | 17 L | 1.2 L | 70 L |
| Q9-4 | 2.8 | 6.3 | 4.5 | 3.8 | 2.3 L | 14 | .1 L | 7.2 L | .5 L | 50 L |
| Q9-5 | 1.5 | 24 | 20 L | 4.1 | 14 L | 27 | .6 L | 43 L | 2.9 L | 70 L |
| Q9-6 | 1.3 | 15 | 27 L | 2.6 | 19 L | 67 | .9 L | 58 L | 3.9 L | 35 |
| Q9-7 | 3.4 | 14 | 40 | 7.4 | 13 L | 39 | .9 L | 89 L | 2.0 L | 120 L |
| Q9-8 | .66 L | 7.3 | 21 L | 13 | 15 L | 16 | .7 L | 45 L | 3.0 L | 40 |
| Q9-9 | 2.1 | 2.4 | 4.7 L | 2.5 | 3.2 L | 4.9 | .2 L | 10 L | .7 L | 70 L |
| Q9-11 | .99 | 3.7 | 5.8 | 3.0 | 2.2 L | 20 | .1 L | 6.7 L | .5 L | 50 L |
| Q9-13 | 1.1 | 3.3 | 6.5 | 3.5 | 2.0 L | 6.6 | .1 L | 6.3 L | .4 L | 40 L |
| Q9-14 | 1.2 | 5.6 | 2.7 L | 5.0 | 1.9 L | 5.8 | .1 L | 5.7 L | .4 L | 30 L |
| Q9-16 | .29 | 1.6 | 4.6 L | 4.4 | 3.2 L | 13 | .1 L | 9.7 L | .7 L | 50 L |
| Q9-17 | .68 | 2.8 | 2.1 | 8.0 | 1.3 L | 11 | .1 L | 3.9 L | .3 L | 60 L |
| Q10A-1 | .91 | 4.3 | 3.5 | 4.0 | 2.0 L | 5.6 | .1 L | 6.2 L | .4 L | 200 L |
| Q10A-2 | 2.2 | 22 | 23 | 9.4 | 8.6 L | 19 | .4 L | 27 L | 1.8 L | 13 |
| Q10A-3-D | .99 | 3.5 | 3.9 L | 2.1 | 2.7 L | 5.3 | .1 L | 8.3 L | .6 L | 200 L |
| Q10A-3 | .93 | 4.7 | 7.6 | 2.1 | 2.6 L | 5.9 | .1 L | 8.0 L | .5 L | 40 L |
| Q10A-4 | 1.6 | 2.7 | 4.4 L | 2.5 | 3.0 L | 7.8 | .1 L | 9.3 L | .6 L | 80 L |
| Q10A-4-D | 1.2 | 2.2 | 4.2 L | 2.2 | 2.9 L | 3.4 | .1 L | 9.0 L | .6 L | 30 L |

| SAMPLE ID | Mo | Nb | Nd | Ni | Os | Pb | Pd | Pr | Pt | Rb |
|---|---|---|---|---|---|---|---|---|---|---|
| Q10A-5 | 0.59 L | 8.2 | 19 L | 3.1 | 13 L | 28 | 0.6 L | 40 L | 2.7 L | 48 |
| Q10A-6 | 3.3 | 17 | 28 L | 6.1 | 13 L | 36 | .9 L | 89 L | 2.0 L | 180 L |
| Q10A-7 | 2.9 | 2.9 | 8.7 | 3.3 | 2.9 L | 8.5 | .1 L | 8.9 L | .6 L | 60 L |
| Q10A-8 | 1.1 | 1.5 | 2.6 L | 2.1 | 1.8 L | 8.2 | .1 L | 5.6 L | .4 L | 60 L |
| Q10A-10 | .94 | 8.8 | 6.6 L | 2.7 | 4.5 L | 23 | .2 L | 14 L | .9 L | 70 L |
| Q10A-12 | .92 | 3.5 | 4.6 | 2.4 | 2.2 L | 3.6 | .1 L | 6.8 L | .5 L | 40 L |
| Q10A-13 | 1.0 | 1.9 | 1.9 L | 3.6 | 1.3 L | 5.6 | .1 L | 4.1 L | .3 L | 60 L |
| Q10A-14 | .70 L | 28 | 22 L | 4.3 | 15 L | 21 | .7 L | 47 L | 3.2 L | 80 L |
| Q10A-16 | .38 L | 7.2 | 12 | 3.0 | 26 L | 41 | .4 L | 26 L | 1.7 L | 200 L |
| Q10A-17 | 1.0 | 2.0 | 3.5 | 5.2 | 1.7 L | 7.8 | .1 L | 5.3 L | .4 L | 50 L |
| Q10A-18 | 2.1 | 3.9 | 6.8 | 8.9 | 2.0 L | 3.7 | .1 L | 6.1 L | .4 L | 20 L |
| Q10A-19 | .68 L | 8.8 | 22 L | 13 | 15 L | 24 | .7 L | 46 L | 3.1 L | 110 |
| Q11-1 | .94 L | 8.1 | 41 | 11 | 21 L | 10 | .9 L | 64 L | 4.3 L | 80 |
| Q11-2 | 3.0 | 3.7 | 2.9 L | 4.0 | 2.0 L | 10 | .1 L | 6.3 L | .4 L | 60 L |
| Q11-3 | .70 L | 17 | 22 L | 4.4 | 15 L | 20 | .7 L | 48 L | 4.8 L | 29 |
| Q11-4 | 4.5 | 18 | 29 L | 10 | 14 L | 45 | .9 L | 91 L | 2.0 L | 100 |
| Q11-5 | 4.1 | 5.0 | 14 | 2.4 | 6.9 L | 3.9 | .1 L | 9.2 | .5 L | 80 L |
| Q11-6 | 1.0 | 4.7 | 5.0 L | 2.0 | 3.5 L | 7.9 | .2 L | 11 L | .7 L | 30 L |
| Q11-7 | .73 | 1.5 | 4.1 L | 1.4 | 2.8 L | 5.9 | .1 L | 8.7 L | .6 L | 50 L |
| Q11-8 | 1.3 | 2.2 | 2.9 L | 2.9 | 2.0 L | 2.3 | .1 L | 6.1 L | .4 L | 40 L |
| Q11-10 | 1.6 | 36 | 29 | 6.7 | 17 L | 20 | .8 L | 51 L | 3.5 L | 90 L |
| Q11-12 | 1.1 | 5.0 | 4.6 | 4.1 | 2.8 L | 6.6 | .1 L | 8.8 L | .6 L | 30 L |
| Q11-13 | 1.3 | 6.1 | 3.8 L | 7.9 | 2.6 L | 6.1 | .1 L | 8.2 L | .6 | 70 L |
| Q11-14 | .91 L | 20 | 30 | 22 | 20 L | 18 | .9 L | 62 L | 4.2 L | 130 |
| Q11-15 | 2.6 | 3.0 | 3.3 L | 8.1 | 2.3 L | 5.7 | .1 L | 7.0 L | .5 L | 50 L |
| Q11-16-D | 1.2 | 5.6 | 20.9 L | 21 | 14 L | 16 | .7 L | 44 L | 3.0 L | 97 |
| Q11-16 | 1.3 | 6.6 | 21 L | 28 | 15 L | 16 | .7 L | 45 L | 3.0 L | 71 |
| Q12-1 | 5.2 | 3.2 | 3.5 L | 2.6 | 2.4 L | 10 | .1 L | 7.3 L | .5 L | 60 L |
| Q12-2 | 1.5 | 13 | 21 L | 3.3 | 15 L | 21 | .7 L | 45 L | 3.1 L | 100 L |
| Q12-3 | 3.8 | 12 | 68 | 6.6 | 13 L | 35 | .9 L | 89 L | 2.0 L | 310 L |
| Q12-4 | 3.2 | 4.0 | 12 | 6.4 | 5.8 L | 8.5 | .3 L | 18 L | 1.2 L | 200 L |
| Q12-5 | 1.8 | 3.4 | 4.5 | 3.7 | 3.1 L | 5.5 | .1 L | 9.6 L | .7 L | 50 L |
| Q12-6 | 1.0 | 4.1 | 19 | 8.4 | 10 L | 15 | .5 L | 32 L | 2.2 L | 58 |
| Q12-7 | 1.6 | 8.4 | 16 | 11 | 10 L | 10 | .5 L | 32 L | 2.1 L | 66 |
| Q12-7-D | 1.5 | 7.5 | 17 | 10 | 10 L | 11 | .5 L | 32 L | 2.2 L | 40 |
| Q12-8 | 3.5 | 7.1 | 18 | 6.0 | 8.2 L | 18 | .4 L | 25 L | 1.7 L | 100 L |
| Q12-10 | 1.9 | 16 | 15 | 6.2 | 9.8 L | 49 | .4 L | 30 L | 2.0 L | 60 L |
| Q12-11 | 1.7 L | 3.8 | 9.0 | 5.9 | 5.6 L | 4.1 | .3 L | 22 | 1.2 L | 70 L |
| Q12-11-D | .80 | 2.0 | 3.6 | 2.1 | 2.4 L | 4.3 | .1 L | 7.6 L | .5 L | 90 L |
| Q12-12 | 1.5 | 21 | 26 | 9.0 | 15 L | 24 | .7 L | 47 L | 3.2 L | 71 |
| Q12-13 | .82 | 14 | 19 | 4.2 | 5.8 L | 19 | .3 L | 18 L | 1.2 L | 80 L |
| Q12-14 | .80 L | 16 | 26 L | 8.8 | 18 L | 19 | .8 L | 54 L | 3.7 L | 78 |
| Q13A-1 | 5.5 | 4.7 | 14 L | 12 | 9.3 L | 11 | .4 L | 29 L | 2.0 L | 77 |
| Q13A-2 | 4.1 | 17 | 27 L | 7.0 | 12 L | 47 | .8 L | 83 L | 1.8 L | 300 L |
| Q13A-3 | 2.3 | 3.8 | 7.1 | 1.7 | 2.1 L | 5.2 | .1 L | 6.4 L | .4 L | 80 L |
| Q13A-4 | .99 | 3.0 | 3.2 L | 1.4 | 2.2 L | 4.4 | .1 L | 6.9 L | .5 L | 50 L |
| Q13A-6 | 1.5 | 3.5 | 5.5 | 1.9 | 3.8 L | 11 | .2 L | 12 L | .8 L | 90 L |
| Q13A-8 | .68 | .56 | 2.3 L | 1.1 | 1.6 L | 3.5 | .1 L | 4.9 L | .3 L | 80 L |

| SAMPLE ID | Mo | Nb | Nd | Ni | Os | Pb | Pd | Pr | Pt | Rb |
|---|---|---|---|---|---|---|---|---|---|---|
| Q13A-9 | 3.3 | 3.5 | 6.6 L | 6.4 | 4.5 L | 6.2 | 0.2 L | 14 L | 0.9 L | 40 L |
| Q13A-10 | 7.6 | 18.5 | 38 | 13 | 12 L | 24 | .6 L | 37 L | 2.5 L | 73 |
| Q13A-12 | 2.1 | 9.9 | 28 | 13 | 10 L | 14 | .5 L | 32 L | 2.2 L | 41 |
| Q13A-12-D | 3.0 | 7.7 | 22 | 11 | 11 L | 8.6 | .5 L | 33 L | 2.2 L | 80 L |
| Q13A-13 | 1.6 L | 3.9 | 7.4 L | 5.1 | 5.1 L | 3.2 | .2 L | 35 L | 1.1 L | 40 L |
| Q13A-14 | 2.2 | 3.2 | 4.5 L | 2.5 | 3.1 L | 10 | .1 L | 9.5 L | .6 L | 54 |
| Q13A-15 | .39 | .39 | 5.4 | 1.8 | 1.3 L | 2.5 | .1 L | 3.9 L | .3 L | 60 L |

Table 3. (Continued)

| SAMPLE ID | Re | Rh | Ru | Sb | Se | Sc | Sm | Sn | Sr | Ta |
|---|---|---|---|---|---|---|---|---|---|---|
| Q2A-2 | 1.7 L | 0.4 L | 0.4 L | 2.0 L | 0.8 | 4.0 | 2.0 | 1.6 | 29 | 0.6 |
| Q2A-3 | 1.2 L | .3 L | .3 L | 1.0 L | 1.0 | 7.5 | 1.1 | .70 | 52 | .2 |
| Q2A-6 | 7.8 L | 1.7 L | 1.7 L | 1.0 L | 1.1 | 14 | 7.9 | 1.6 | 190 | 1.2 |
| Q2A-7 | .6 L | .1 L | .1 L | 1.0 L | .9 | 2.2 | .5 | .12 | 52 | .1 |
| Q2A-8-D | 1.0 L | .2 L | .2 L | 2.0 L | 1.3 | 5.1 | 1.1 | .53 | 68 | .3 |
| Q2A-8 | 1.3 L | .3 L | .3 L | 2.0 L | 1.0 | 5.2 | 1.1 | .68 | 98 | .3 |
| Q2A-9 | 9.2 L | 2.0 L | 2.0 L | 1.0 L | .6 | 13 | 4.0 | 2.7 | 190 | 1.7 |
| Q2A-11-D | 8.0 L | 1.8 L | 1.8 L | 1.0 L | 2.0 | 14 | 6.5 | 3.9 | 190 | 1.2 |
| Q2A-11 | 8.1 L | 1.8 L | 1.8 L | 1.0 L | 3.0 | 14 | 6.7 | 5.0 | 200 | 1.2 |
| Q2A-12 | 1.7 L | .4 L | .4 L | 1.0 L | 2.5 | 4.9 | 1.2 | .43 | 44 | .3 |
| Q2A-13 | 1.5 L | .3 L | .3 L | 2.0 L | 1.4 | 3.1 | 1.2 | .23 L | 44 | .3 |
| Q2A-14 | 2.0 L | .4 L | .4 L | 3.0 | 1.8 | 11 | 1.4 | .29 L | 31 | .4 |
| Q2A-15 | 9.6 L | 2.1 L | 2.1 L | .8 | .7 L | 8.1 | 5.4 | 4.4 L | 77 | 1.2 |
| Q3-1 | .4 L | .1 L | .1 L | .5 L | 1.0 | 1.7 | .9 | .10 | 79 | .1 |
| Q3-2 | 5.3 L | 1.2 L | 1.2 L | 2.0 L | 2.9 | 10 | 3.8 | 2.5 | 200 | .7 |
| Q3-3 | 7.7 L | 1.7 L | 1.7 L | 2.0 L | 2.0 | 13 | 5.3 | 3.6 | 190 | .9 |
| Q3-8 | 2.5 L | .5 L | .5 L | 2.0 L | 4.8 | 10 | 1.8 | .37 L | 99 | .4 |
| Q3-9-D | 1.1 L | .2 L | .2 L | 2.0 L | 1.1 | 2.0 | .9 | .33 | 110 | .3 L |
| Q3-9 | 1.0 L | .2 L | .2 L | 2.0 L | 1.0 | 1.9 | .9 | .26 | 150 | .2 |
| Q3-11 | 1.3 L | .3 L | .3 L | 2.0 L | 1.6 | 2.1 | .7 | .73 | 160 | .2 |
| Q3-11-D | 1.2 L | .3 L | .3 L | .3 L | 1.1 | 2.0 | .7 | .76 | 150 | .3 |
| Q3-12 | 1.4 L | .3 L | .3 L | 3.0 | 2.9 | 3.3 | 1.0 | 1.7 | 140 | .5 |
| Q3-13 | 2.0 L | .4 L | .4 L | 1.0 L | 2.1 | 3.5 | 1.0 | 1.9 | 120 | .8 |
| Q3-14 | .8 L | .2 L | .2 L | .5 L | 1.1 | 1.2 | .4 | .11 L | 98 | .3 L |
| Q3-15 | 1.0 L | .2 L | .2 L | 1.0 L | 3.3 | 2.5 | .7 | .90 | 98 | .5 |
| Q3-16 | .6 L | .1 L | .1 L | 2.0 L | .7 | 1.0 | .4 | .14 | 99 | .1 |
| Q3-17 | 9.0 L | 2.0 L | 2.0 L | 1.3 | 1.3 | 3.7 | 2.5 | 5.1 | 430 | 2.7 |
| Q3-18 | 1.0 L | .2 L | .2 L | 2.0 L | 1.7 | 2.9 | 2.0 | .18 | 140 | .2 |
| Q3-19 | .9 L | .2 L | .2 L | 2.0 L | 1.3 | 1.5 | .7 | .44 | 120 | .4 |
| Q3-21 | 1.6 L | .4 L | .4 L | 1.0 L | 2.4 | 2.2 | 1.2 | .78 | 240 | .4 L |
| Q3-22 | 3.7 L | .8 L | .8 L | 2.0 L | 2.9 | 4.7 | 2.0 | .96 | 130 | .7 |
| Q3-23 | 7.0 L | 1.5 L | 1.5 L | 2.0 L | 4.6 | 7.4 | 4.2 | 2.4 | 260 | .9 |
| Q3-24 | 6.0 L | 1.3 L | 1.3 L | 2.0 L | 4.2 | 7.9 | 3.8 | 2.5 | 240 | .8 |
| Q3-25 | 3.3 L | .7 L | .7 L | 1.0 L | 2.9 | 4.7 | 2.3 | .50 L | 190 | .5 |
| Q3-26A | 4.5 L | 1.0 L | 1.0 L | .5 L | 1.9 | 7.6 | 4.2 | .68 L | 120 | 1.1 |
| Q3-27 | .9 L | .2 L | .2 L | 1.0 L | 1.3 | 2.0 | 1.5 | .13 L | 96 | .2 |
| Q3-28 | 4.7 L | 1.0 L | 1.0 L | 2.0 | 2.9 | 7.9 | 2.0 | 2.0 | 170 | 1.0 |
| Q4-1 | .7 L | .2 L | .2 L | 1.0 L | .8 L | 2.8 | .5 | .11 L | 130 | .2 |
| Q4-1-D | .7 L | .2 L | .2 L | 2.9 | 1.0 | 2.9 | .6 | .16 | 130 | .2 |
| Q4-2 | 5.8 L | 1.3 L | 1.3 L | .5 L | .7 | 5.9 | 2.0 | 1.3 | 120 | .7 |
| Q4-3 | 7.1 L | 1.6 L | 1.6 L | 1.0 L | 1.8 | 5.0 | 3.6 | 1.2 L | 170 | .7 |
| Q4-4 | 1.9 L | .4 L | .4 L | 2.0 L | 1.3 | 3.2 | 1.4 | .80 | 150 | .2 |
| Q4-5 | 1.6 L | .4 L | .4 L | 2.0 | 1.0 | 3.5 | 1.2 | .43 | 130 | .3 |

| SAMPLE ID | Re | Rh | Ru | Sb | Se | Sc | Sm | Sn | Sr | Ta |
|---|---|---|---|---|---|---|---|---|---|---|
| Q4-6 | 6.5 L | 1.4 L | 1.4 L | 2.0 L | 3.4 | 15 | 6.2 | 4.5 | 430 | 1.6 |
| Q4-7 | 1.8 L | .4 L | .4 L | 2.0 L | 2.2 | 4.3 | 1.8 | .55 | 190 | .4 |
| Q4-8 | 3.2 L | .7 L | .7 L | 1.0 L | 4.9 | 6.2 | 1.5 | 2.3 | 320 | 1.3 |
| Q4-9 | 2.5 L | .6 L | .6 L | 1.0 L | 1.9 | 2.1 | .8 | .37 L | 120 | .2 |
| Q4-10 | .8 L | .2 L | .2 L | 1.0 L | 2.1 | 1.5 | .5 | .38 | 140 | .1 |
| Q4-11 | 1.2 L | .3 L | .3 L | 1.0 L | 3.9 | 1.6 | .4 | .93 | 160 | .3 |
| Q4-12 | .8 L | .2 L | .2 L | 3.6 | 1.9 | 1.5 | .5 | .12 L | 190 | .4 |
| Q4-13 | 5.9 L | 1.3 L | 1.3 L | 2.5 | 1.8 | 4.9 | 2.9 | 2.1 | 220 | 1.6 |
| Q4-14 | 9.2 L | 2.0 L | 2.0 L | 4.4 | 1.2 L | 3.7 | 1.9 | 7.2 | 510 | 2.4 |
| Q4-15 | 1.3 L | .3 L | .3 L | 2.0 | .9 | 3.7 | 3.6 | 1.1 | 210 | .2 |
| Q4-16 | 1.2 L | .3 L | .3 L | 2.0 L | 1.8 | 1.9 | .9 | .79 | 120 | .4 |
| Q4-18 | 1.5 L | .3 L | .3 L | 2.0 L | 2.5 | 2.4 | 1.0 | .70 | 170 | .5 |
| Q4-20 | 1.2 L | .3 L | .3 L | 2.0 L | 1.7 | 2.5 | 1.4 | 1.0 | 180 | .2 |
| Q4-21 | .6 L | .1 L | .1 L | 1.0 L | 1.7 | 1.4 | .7 | .18 | 110 | .2 |
| Q4-22 | 2.4 L | .5 L | .5 L | 2.0 L | 3.2 | 4.2 | 1.4 | 1.7 | 150 | 1.2 |
| Q4-23 | 8.3 L | 1.8 L | 1.8 L | 1.0 L | 2.3 | 5.0 | 3.6 | 3.5 | 200 | 3.2 |
| Q4-25 | 6.9 L | 1.5 L | 1.5 L | 2.0 L | 4.1 | 8.7 | 5.6 | 2.3 | 210 | 2.1 |
| Q4-26 | 1.1 L | .2 L | .2 L | 2.0 L | 2.4 | 2.7 | 1.7 | .84 | 100 | .4 |
| Q4-27 | .9 L | .2 L | .2 L | 1.0 L | 2.8 | 2.9 | .9 | .66 | 60 | .3 |
| Q4-28 | 1.4 L | .3 L | .3 L | 2.0 L | 1.5 | 3.8 | 3.9 | 1.1 | 100 | .4 |
| Q4-29 | 9.4 L | 2.1 L | 2.1 L | 2.0 L | 1.4 | 11 | 7.6 | 2.6 | 230 | 1.2 |
| Q5A-0-D | 5.8 L | 1.3 L | 1.3 L | 2.0 L | 1.9 | 8.6 | 3.8 | 1.3 | 150 | .7 |
| Q5A-0 | 5.9 L | 1.3 L | 1.3 L | 2.0 L | 3.1 | 9.2 | 3.8 | .88 L | 180 | .7 |
| Q5A-1 | 4.1 L | .9 L | .9 L | 2.0 L | 3.7 | 7.4 | 2.6 | .61 | 95 | .4 |
| Q5A-2 | 2.7 L | .6 L | .6 L | 1.0 L | 2.1 | 6.8 | 2.5 | 1.4 | 78 | .7 |
| Q5A-4 | 1.7 L | .4 L | .4 L | 2.0 L | 2.1 | 3.0 | 1.8 | .60 | 63 | .4 |
| Q5A-5 | 2.3 L | .5 L | .5 L | .5 L | 5.6 | 4.4 | 1.6 | .56 | 125 | .8 |
| Q5A-6 | 1.3 L | .3 L | .3 L | 4.8 | 2.6 | 2.1 | .8 | .50 | 180 | .2 |
| Q5A-7 | 1.6 L | .3 L | .3 L | 3.0 | 3.3 | 3.0 | .8 | 1.3 | 100 | .5 |
| Q5A-8 | 6.7 L | 1.5 L | 1.5 L | 2.0 L | 1.9 | 3.7 | 2.4 | 3.8 | 200 | 2.1 |
| Q5A-9 | 9.0 L | 2.0 L | 2.0 L | 1.1 | 1.0 | 4.0 | 2.5 | 6.6 | 380 | 2.8 |
| Q5A-10 | 1.3 L | .3 L | .3 L | 2.0 | 1.3 | 2.8 | 1.6 | 1.3 | 110 | .4 |
| Q5A-11 | 1.0 L | .2 L | .2 L | .5 L | 1.6 | 1.5 | .7 | .80 | 110 | .3 |
| Q5A-13 | 1.0 L | .2 L | .2 L | 2.0 L | 1.5 | 2.9 | 1.3 | .61 | 100 | .4 |
| Q5A-15 | 1.2 L | .3 L | .3 L | 2.0 L | 1.7 | 2.1 | 1.2 | .69 | 110 | .4 |
| Q5A-16 | .9 L | .2 L | .2 L | .5 L | 2.6 | 2.8 | 1.1 | .36 | 110 | .6 |
| Q5A-18 | 4.7 L | 1.0 L | 1.0 L | 2.0 | 5.0 | 9.9 | 5.2 | 2.2 | 150 | 1.6 |
| Q5A-19 | 1.1 L | .2 L | .2 L | 2.0 L | 2.2 | 2.6 | 1.6 | .24 | 100 | .2 |
| Q5A-20 | .9 L | .2 L | .2 L | 2.0 L | 2.4 | 2.3 | .8 | .65 | 81 | .3 |
| Q5A-21 | .6 L | .1 L | .1 L | 2.0 L | 1.7 | 4.2 | .8 | .28 | 52 | .3 |
| Q5A-22 | 8.6 L | 1.9 L | 1.9 L | 1.0 L | 1.4 | 9.7 | 2.4 | 2.8 | 181 | 1.6 |
| Q5A-23 | 9.2 L | 2.0 L | 2.0 L | 2.0 L | 20 L | 13 | 4.3 | 3.8 | 220 | 2.0 |
| Q5-1 | 5.6 L | 1.2 L | 1.2 L | 2.0 L | 2.8 | 9.1 | 3.6 | .83 L | 140 | .7 |
| Q5-1-D | 5.5 L | 1.2 L | 1.2 L | 2.0 L | 2.8 | 9.4 | 3.3 | .88 | 180 | .7 |
| Q5-2 | 2.0 L | .5 L | .5 L | 1.0 L | 1.6 | 6.9 | 2.5 | 1.9 | 59 | .6 |
| Q5-3 | 4.5 L | 1.0 L | 1.0 L | 2.0 L | 2.8 | 9.1 | 2.8 | 2.2 | 150 | 1.0 |
| Q5-4 | 1.6 L | .3 L | .3 L | 1.0 L | 2.5 | 2.8 | 1.5 | .23 L | 53 | .2 |
| Q5-5 | 1.2 L | .3 L | .3 L | 2.0 L | 2.6 | 1.8 | .8 | .18 L | 100 | .2 |
| Q5-6 | 1.4 L | .3 L | .3 L | 3.0 | 2.6 | 2.1 | .8 | 1.3 | 190 | .2 |

| SAMPLE ID | Re | Rh | Ru | Sb | Se | Sc | Sm | Sn | Sr | Ta |
|---|---|---|---|---|---|---|---|---|---|---|
| Q5-7 | 1.9 L | 0.4 L | 0.4 L | 2.0 L | 4.4 | 3.2 | 1.0 | 1.9 | 140 | 0.6 |
| Q5-8 | 6.7 L | 1.5 L | 1.5 L | 2.0 L | 1.0 | 3.7 | 2.8 | 3.3 | 170 | 2.1 |
| Q5-10 | 1.1 L | .2 L | .2 L | 2.0 L | 1.0 | 4.3 | 2.6 | .76 | 100 | .4 |
| Q5-11 | .5 L | .1 L | .1 L | 1.0 L | .9 | 1.2 | .7 | .19 | 92 | .1 |
| Q5-13 | 1.2 L | .3 L | .3 L | 2.0 | 1.2 | 2.8 | 1.1 | .88 | 160 | .4 |
| Q5-15 | .9 L | .2 L | .2 L | 1.0 L | 1.5 | 1.9 | 1.2 | .60 | 80 | .4 |
| Q5-16 | .6 L | .1 L | .1 L | 1.0 L | 1.9 | 1.7 | .9 | .68 | 93 | .3 |
| Q5-16A | 2.8 L | .6 L | .6 L | 1.0 L | 2.8 | 5.6 | 1.5 | 2.1 | 110 | 1.3 |
| Q5-17A | 5.8 L | 1.3 L | 1.3 L | 2.0 L | 4.6 | 9.0 | 6.9 | 3.0 | 160 | 2.0 |
| Q5-18 | .9 L | .2 L | .2 L | 2.0 L | 1.9 | 2.3 | 1.9 | .29 | 60 | .3 |
| Q5-19 | .7 L | .2 L | .2 L | 2.0 L | 1.9 | 2.4 | .8 | .21 | 71 | .2 |
| Q5-20 | 8.9 L | 2.0 L | 2.0 L | 2.0 L | .4 | 9.5 | 2.9 | 3.5 | 190 | 1.7 |
| Q6-2 | 1.9 L | .4 L | .4 L | 1.0 L | 1.1 | 7.6 | 2.6 | .29 L | 79 | .7 |
| Q6-3 | 4.6 L | 1.0 L | 1.0 L | 2.0 L | 3.8 | 7.4 | 2.4 | .69 L | 110 | .6 |
| Q6-3-D | 4.4 L | 1.0 L | 1.0 L | 2.0 L | 3.4 | 6.9 | 2.2 | .67 L | 98 | .5 |
| Q6-4 | 2.5 L | .6 L | .6 L | 2.0 L | 4.6 | 4.1 | 1.6 | .38 L | 40 | .7 |
| Q6-5 | 1.1 L | .2 L | .2 L | .5 L | 2.6 | 1.9 | 1.0 | .32 | 77 | .3 |
| Q6-6 | 4.3 L | 1.0 L | 1.0 L | 2.0 L | 7.1 | 7.5 | 2.1 | 2.0 | 160 | 2.2 |
| Q6-7 | 1.7 L | .4 L | .4 L | 2.0 L | 3.3 | 4.2 | 1.6 | .92 | 160 | .4 |
| Q6-8 | 1.4 L | .3 L | .3 L | 2.0 | 3.3 | 2.4 | .9 | .89 | 110 | .4 |
| Q6-10 | 9.0 L | 2.0 L | 2.0 L | 1.5 | 1.0 | 4.0 | 2.3 | 6.3 | 270 | 2.7 |
| Q6-11 | 1.0 L | .2 L | .2 L | 2.6 | 1.5 | 3.8 | 3.3 | .89 | 120 | .3 |
| Q6-12 | .7 L | .2 L | .2 L | 2.0 L | 1.4 | 1.3 | .8 | .45 | 120 | .2 |
| Q6-14 | 1.0 L | .2 L | .2 L | 3.0 | 1.7 | 3.5 | 1.5 | .45 | 100 | .5 |
| Q6-16 | 1.1 L | .2 L | .2 L | 1.0 L | 2.1 | 2.3 | 1.3 | .89 | 120 | .5 |
| Q6-16-D | 1.2 L | .3 L | .3 L | 1.0 L | 1.8 | 2.2 | 1.4 | .99 | 130 | .4 |
| Q6-18 | 1.1 L | .2 L | .2 L | 2.0 L | 2.5 | 2.5 | 1.7 | .99 | 73 | .3 |
| Q6-19 | .9 L | .2 L | .2 L | 1.0 L | 2.3 | 3.7 | .8 | 1.0 | 80 | .3 |
| Q6-20 | 8.9 L | 2.0 L | 2.0 L | 1.0 L | .4 | 6.2 | 2.1 | 1.3 L | 85 | 1.2 |
| Q7-1 | 5.1 L | 1.1 L | 1.1 L | 2.0 L | 2.3 | 9.9 | 4.2 | .77 L | 160 | .7 |
| Q7-2 | 1.2 L | .3 L | .3 L | .5 L | 1.5 | 3.4 | .9 | .18 L | 56 | .2 |
| Q7-3A | 5.3 L | 1.2 L | 1.2 L | 2.0 L | 5.2 | 6.4 | 2.1 | .80 L | 110 | .5 |
| Q7-3 | 1.8 L | .4 L | .4 L | 1.0 L | 2.6 | 4.1 | .9 | .52 | 55 | .4 |
| Q7-4 | 1.3 L | .3 L | .3 L | 1.0 L | 2.1 | 2.0 | .7 | 1.4 | 150 | .3 |
| Q7-5 | 1.4 L | .3 L | .3 L | 2.0 | 4.0 | 2.2 | .7 | 1.0 | 130 | .3 |
| Q7-6 | 1.4 L | .3 L | .3 L | 1.0 L | 1.2 | .5 | .3 | .22 L | 300 | .3 L |
| Q7-7 | 2.5 L | .6 L | .6 L | 2.0 L | 1.8 | 2.1 | 1.4 | 1.3 | 100 | .8 |
| Q7-9 | .7 L | .2 L | .2 L | 2.0 L | 1.4 | 1.6 | 1.3 | .27 | 150 | .2 |
| Q7-10 | .5 L | .1 L | .1 L | 1.0 L | 1.3 | 1.3 | .7 | .20 | 110 | .2 |
| Q7-12 | .8 L | .2 L | .2 L | 2.0 L | 2.0 | 3.1 | 1.0 | .43 | 100 | .2 |
| Q7-14 | .9 L | .2 L | .2 L | 1.0 L | 1.8 | 2.0 | 1.1 | .19 | 120 | .3 |
| Q7-15 | 1.2 L | .3 L | .3 L | 2.0 L | 2.1 | 2.7 | 1.0 | .63 | 200 | .7 |
| Q7-17 | 1.6 L | .4 L | .4 L | 1.0 L | 2.3 | 3.7 | 1.8 | 1.3 | 160 | .4 |
| Q7-18 | .9 L | .2 L | .2 L | 1.0 L | 1.9 | 1.8 | .7 | .57 | 130 | .2 |
| Q7-19 | .6 L | .1 L | .1 L | 2.0 L | 2.3 | 2.2 | .9 | .13 | 100 | .3 |
| Q7-20 | 4.4 L | 1.0 L | 1.0 L | 2.0 L | 2.4 | 9.4 | 4.5 | 2.2 | 230 | 1.3 |
| Q7-23 | 2.9 L | .6 L | .6 L | 2.0 | 9.9 | 16 | 6.8 | .84 | 120 | .6 |
| Q7-24 | .8 L | .2 L | .2 L | 2.0 | 2.2 | 4.1 | 2.3 | .12 L | 92 | .2 |
| Q7-25 | .6 L | .1 L | .1 L | 1.0 L | 6.2 | 4.1 | 2.0 | .18 | 71 | 1.6 |

| SAMPLE ID | Re | | Rh | | Ru | | Sb | | Se | Sc | Sm | Sn | | Sr | Ta |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q7-26 | 1.2 | L | 0.3 | L | 0.3 | L | 2.0 | L | 2.3 | 1.9 | 1.1 | 0.32 | | 180 | 0.3 |
| Q7-27 | .6 | L | .1 | L | .1 | L | 1.0 | L | 1.1 | 1.1 | .5 | .20 | | 240 | .2 |
| Q7-28 | 7.4 | L | 1.6 | L | 1.6 | L | .3 | L | 1.5 | 2.2 | 1.5 | 2.3 | | 160 | 2.2 |
| Q7-29 | 1.3 | L | .3 | L | .3 | L | 2.0 | L | 1.4 | 2.2 | 1.4 | ./2 | | 130 | .3 |
| Q7-30 | 1.8 | L | .4 | L | .4 | L | 1.0 | L | 2.1 | 2.7 | .7 | 1.1 | | 74 | .4 |
| Q7-31 | .8 | L | .2 | L | .2 | L | 1.0 | L | 1.9 | 2.8 | .5 | .51 | | 46 | .2 |
| Q8-1 | 3.7 | L | .8 | L | .8 | L | 1.0 | L | 3.7 | 6.8 | 2.8 | .55 | L | 74 | .6 |
| Q8-1-D | 3.6 | L | .8 | L | .8 | L | 1.0 | L | 3.6 | 7.1 | 2.7 | 1.1 | | 87 | .6 |
| Q8-2 | 2.5 | L | .5 | L | .5 | L | 2.8 | | 2.9 | 4.7 | 1.8 | .49 | | 66 | .5 |
| Q8-3 | 1.7 | L | .4 | L | .4 | L | 2.0 | L | 2.8 | 2.0 | 1.1 | .25 | L | 59 | .2 |
| Q8-4 | 5.2 | L | 1.2 | L | 1.2 | L | 2.0 | L | 7.2 | 9.5 | 1.6 | 3.9 | | 110 | 2.5 |
| Q8-5 | 1.7 | L | .4 | L | .4 | L | 1.0 | L | 2.1 | 1.8 | .7 | 1.4 | | 250 | .2 |
| Q8-6 | 2.0 | L | .4 | L | .4 | L | 2.0 | | 4.2 | 3.0 | .9 | 1.5 | | 130 | .5 |
| Q8-6-D | 1.8 | L | .4 | L | .4 | L | 1.0 | L | 3.8 | 2.8 | .8 | 2.0 | | 130 | .4 |
| Q8-7 | 4.4 | L | 1.1 | L | 1.0 | L | 2.0 | | 1.5 | 1.2 | .7 | 1.9 | | 110 | .2 |
| Q8-8 | 6.5 | L | 1.4 | L | 1.4 | L | 2.0 | L | 2.0 | 3.2 | 2.5 | 3.2 | | 150 | 1.6 |
| Q8-9 | 8.9 | L | 2.0 | L | 2.0 | L | 1.0 | | .8 | 3.6 | 2.0 | 4.9 | | 200 | 2.3 |
| Q8-10 | 1.8 | L | .4 | L | .4 | L | 2.2 | | 1.3 | 3.0 | 3.0 | 1.5 | | 140 | .3 |
| Q8-11 | .7 | L | .2 | L | .2 | L | 1.0 | L | 1.3 | 1.1 | .6 | .23 | | 110 | .2 |
| Q8-13 | 1.0 | L | .2 | L | .2 | L | 2.0 | L | 1.8 | 3.4 | 1.5 | .67 | | 130 | .3 |
| Q8-15 | 1.2 | L | .3 | L | .3 | L | 2.0 | L | 2.7 | 2.7 | 1.1 | .61 | | 140 | .3 |
| Q8-16 | .8 | L | .2 | L | .2 | L | 2.0 | | 1.7 | 1.7 | .8 | .34 | | 120 | .4 |
| Q8-18-D | 1.1 | L | .2 | L | .2 | L | 1.0 | L | 1.7 | 1.8 | 1.2 | .16 | L | 120 | .2 |
| Q8-18 | 1.1 | L | .2 | L | .2 | L | 1.0 | L | 1.9 | 1.8 | 1.2 | .16 | L | 120 | .2 |
| Q8-19 | .7 | L | .2 | L | .2 | L | 1.0 | L | 1.7 | 1.5 | .5 | .40 | | 64 | .2 |
| Q8-20 | .6 | L | .1 | L | .1 | L | 2.0 | L | 1.7 | 1.8 | .8 | .28 | | 78 | .3 |
| Q8-21 | 6.4 | L | 1.4 | L | 1.4 | L | 2.0 | | 2.2 | 11 | 2.3 | 3.5 | | 150 | 1.6 |
| Q9-1 | 1.2 | L | .3 | L | .3 | L | .5 | L | 2.1 | 4.1 | .9 | .23 | | 39 | .3 |
| Q9-2 | 1.4 | L | .3 | L | .3 | L | 2.0 | L | 2.9 | 2.7 | .9 | 1.2 | | 62 | .4 |
| Q9-3 | 2.6 | L | .6 | L | .6 | L | 2.0 | L | 3.9 | 2.3 | .7 | .39 | L | 95 | .3 |
| Q9-4 | 1.1 | L | .2 | L | .2 | L | 2.5 | | 2.2 | 2.1 | .8 | 1.1 | | 68 | .4 |
| Q9-5 | 6.4 | L | 1.4 | L | 1.4 | L | 2.0 | L | 2.1 | 3.7 | 2.0 | 4.1 | | 110 | 1.9 |
| Q9-6 | 8.6 | L | 1.9 | L | 1.9 | L | 2.0 | L | 2.0 | 2.8 | 1.8 | 3.9 | | 32 | 2.4 |
| Q9-7 | 8.9 | L | 2.0 | L | 2.0 | L | 1.3 | | .8 | 5.0 | 2.7 | 5.8 | | 190 | 2.5 |
| Q9-8 | 6.6 | L | 1.5 | L | 1.5 | L | 3.0 | | .6 | 7.5 | 3.2 | 2.0 | | 140 | 1.1 |
| Q9-9 | 1.5 | L | .3 | L | .3 | L | 1.0 | L | 1.8 | 1.7 | .8 | .96 | | 120 | .3 |
| Q9-11 | 1.0 | L | .2 | L | .2 | L | 2.0 | L | 2.5 | 4.2 | 1.8 | .44 | | 69 | .6 |
| Q9-13 | .9 | L | .2 | L | .2 | L | 1.0 | L | 1.9 | 2.0 | 1.5 | .71 | | 92 | .4 |
| Q9-14 | .8 | L | .2 | L | .2 | L | 2.0 | | 2.0 | 1.9 | 1.0 | .39 | | 100 | .4 |
| Q9-16 | 1.4 | L | .3 | L | .3 | L | 1.0 | L | 2.7 | 3.7 | 2.1 | .84 | | 64 | .4 |
| Q9-17 | .6 | L | .1 | L | .1 | L | 1.0 | L | 1.9 | 2.7 | .9 | .57 | | 41 | .3 |
| Q10A-1 | .9 | L | .2 | L | .2 | L | 2.2 | | 1.6 | 7.0 | 1.3 | .29 | | 46 | .3 |
| Q10A-2 | 3.9 | L | .9 | L | .9 | L | 2.0 | L | 5.6 | 8.4 | 2.8 | 2.7 | | 150 | 1.8 |
| Q10A-3-D | 1.2 | L | .3 | L | .3 | L | 2.0 | L | 2.3 | 2.2 | .9 | .40 | | 57 | .3 |
| Q10A-3 | 1.2 | L | .3 | L | .3 | L | 2.0 | L | 2.2 | 2.3 | 1.0 | .46 | | 66 | .3 |
| Q10A-4 | 1.4 | L | .3 | L | .3 | L | 2.0 | | 4.3 | 2.5 | .7 | .88 | | 83 | .4 |
| Q10A-4-D | 1.3 | L | .3 | L | .3 | L | 2.0 | L | 4.7 | 2.9 | .8 | 1.2 | | 77 | .5 |
| Q10A-5 | 5.9 | L | 1.3 | L | 1.3 | L | 2.0 | | 2.1 | 4.1 | 1.8 | .88 | L | 250 | 1.6 |

| SAMPLE ID | Re | Rh | Ru | Sb | Se | Sc | Sm | Sn | Sr | Ta |
|---|---|---|---|---|---|---|---|---|---|---|
| Q10A-6 | 8.9 L | 2.0 L | 2.0 L | 0.9 | 1.0 L | 5.7 | 3.3 | 7.1 | 520 | 2.8 |
| Q10A-7 | 1.3 L | .3 L | .3 L | 2.0 L | 1.6 | 2.2 | 1.7 | .98 | 130 | .3 |
| Q10A-8 | .8 L | .2 L | .2 L | .5 L | 1.5 | 1.5 | .6 | .55 | 98 | .4 |
| Q10A-10 | 2.1 L | .5 L | .5 L | 2.0 L | 3.0 | 4.5 | 1.6 | .78 | 110 | .9 |
| Q10A-12 | 1.0 L | .2 L | .2 L | 2.0 L | 1.6 | 1.9 | 1.0 | .96 | 130 | .4 |
| Q10A-13 | .6 L | .1 L | .1 L | 1.0 L | 1.7 | 1.8 | .7 | .32 | 100 | .3 |
| Q10A-14 | 7.0 L | 1.5 L | 1.5 L | 1.1 | 3.3 | 5.6 | 3.7 | 2.5 | 200 | 2.5 |
| Q10A-16 | 3.8 L | .8 L | .8 L | 1.0 L | 5.4 | 10 | 5.0 | 1.9 | 180 | .9 |
| Q10A-17 | .8 L | .2 L | .2 L | 1.0 L | 1.7 | 2.7 | 1.2 | .12 L | 100 | .3 |
| Q10A-18 | .9 L | .2 L | .2 L | 2.0 | 1.7 | 2.7 | 1.1 | .64 | 85 | .3 |
| Q10A-19 | 6.8 L | 1.5 L | 1.5 L | 2.7 | 2.5 | 11 | 4.3 | 5.5 | 200 | 1.1 |
| Q11-1 | 9.4 L | 2.1 L | 2.1 L | .5 L | .4 | 4.8 | 4.2 | 3.4 | 130 | .7 |
| Q11-2 | .9 L | .2 L | .4 L | 2.0 | 1.0 | 6.1 | .7 | .14 L | 29 | .2 |
| Q11-3 | 7.0 L | 1.5 L | 1.5 L | 2.9 | .7 | 4.1 | 2.5 | 4.6 | 190 | 2.0 |
| Q11-4 | 9.1 L | 2.0 L | 2.0 L | 1.5 | 1.7 L | 4.6 | 3.0 | 7.2 | 150 | 2.9 |
| Q11-5 | 1.0 L | .2 L | .2 L | 2.0 L | 1.4 | 2.5 | 2.6 | .46 | 59 | .2 |
| Q11-6 | 1.6 L | .4 L | .4 L | 2.0 L | 2.4 | 2.2 | 1.1 | .24 L | 99 | .5 |
| Q11-7 | 1.3 L | .3 L | .3 L | 2.0 L | 2.1 | 2.0 | 1.2 | .59 | 91 | .5 |
| Q11-8 | .9 L | .2 L | .2 L | 2.0 L | 3.5 | 1.7 | .7 | .14 L | 110 | .4 |
| Q11-10 | 7.6 L | 1.7 L | 1.7 L | 2.0 L | 4.8 | 5.5 | 3.8 | 3.0 | 170 | 4.2 |
| Q11-12 | 1.3 L | .3 L | .3 L | 2.0 | 2.2 | 3.8 | 1.5 | 1.0 | 110 | .4 |
| Q11-13 | 1.2 L | .3 L | .3 L | 2.0 L | 2.5 | 4.7 | 1.6 | .80 | 94 | .4 |
| Q11-14 | 9.1 L | 2.0 L | 2.0 L | 2.0 L | 3.0 L | 14 | 7.3 | 5.4 | 240 | 1.4 |
| Q11-15 | 1.0 L | .2 L | .2 L | 2.0 L | 1.6 | 4.5 | 1.5 | .23 | 59 | .2 |
| Q11-16-D | 6.5 L | 1.4 L | 1.4 L | 2.0 L | 3.1 | 11 | 5.3 | 3.1 | 200 | 1.2 |
| Q11-16 | 6.6 L | 1.5 L | 1.5 L | 1.0 L | 2.3 | 11 | 5.2 | .99 L | 260 | 1.2 |
| Q12-1 | 1.1 L | .2 L | .5 L | 2.0 L | 1.4 | 1.5 | .8 | .16 L | 76 | .2 |
| Q12-2 | 6.7 L | 1.5 L | 1.5 L | 2.5 | 1.0 | 3.1 | 1.2 | 3.3 | 160 | 1.8 |
| Q12-3 | 8.9 L | 2.0 L | 2.0 L | 1.6 | 1.2 L | 4.3 | 2.8 | 5.3 | 360 | 2.2 |
| Q12-4 | 2.7 L | .6 L | .6 L | 2.0 L | 2.0 | 3.5 | 2.9 | .61 | 110 | .4 |
| Q12-5 | 1.4 L | .3 L | .3 L | .5 L | 1.2 | 1.8 | 1.3 | .21 L | 97 | .2 |
| Q12-6 | 4.7 L | 1.0 L | 1.0 L | 1.0 L | 2.3 | 3.9 | 3.4 | .70 L | 140 | .6 |
| Q12-7 | 4.6 L | 1.0 L | 1.0 L | 1.0 L | 2.0 | 4.8 | 2.8 | .70 L | 170 | .8 |
| Q12-7-D | 4.7 L | 1.0 L | 1.0 L | 1.0 L | 2.4 | 4.7 | 3.0 | .70 L | 150 | .8 |
| Q12-8 | 3.7 L | .8 L | .8 L | 1.0 L | 2.9 | 4.8 | 3.1 | .56 L | 160 | .9 |
| Q12-10 | 4.4 L | 1.0 L | 1.0 L | 1.0 L | 2.0 | 5.4 | 3.4 | .66 L | 170 | .9 |
| Q12-11 | 2.6 L | .6 L | .6 L | 2.0 L | 2.4 | 2.7 | 1.6 | .38 L | 120 | .2 |
| Q12-11-D | 1.1 L | .2 L | .2 L | 1.0 L | 2.0 | 2.8 | 1.7 | .56 | 160 | .4 |
| Q12-12 | 6.9 L | 1.5 L | 1.5 L | 2.0 L | 2.9 | 9.0 | 6.7 | 3.8 | 430 | 2.1 |
| Q12-13 | 2.6 L | .6 L | .6 L | 2.0 L | 1.6 | 3.2 | 4.5 | 1.5 | 110 | 1.1 |
| Q12-14 | 8.0 L | 1.8 L | 1.8 L | 2.0 L | .9 | 12 | 4.4 | 2.2 | 280 | 1.3 |
| Q13A-1 | 4.2 L | .9 L | .9 L | 2.0 | 3.0 | 4.2 | 2.5 | .64 L | 68 | .6 |
| Q13A-2 | 8.3 L | 1.8 L | 1.8 L | 1.9 | 1.3 L | 4.1 | 2.7 | 4.4 | 220 | 2.2 |
| Q13A-3 | .9 L | .2 L | .2 L | 3.0 | 1.7 | 2.4 | 1.3 | .14 L | 37 | .3 |
| Q13A-4 | 1.0 L | .2 L | .2 L | 1.0 L | 2.6 | 2.0 | .9 | .31 | 100 | .5 |
| Q13A-6 | 1.7 L | .4 L | .4 L | 2.0 L | 5.2 | 3.2 | 1.5 | .26 L | 100 | .5 |
| Q13A-8 | .7 L | .2 L | .2 L | 1.0 L | 1.7 | 1.0 | .7 | .11 L | 120 | .2 |
| Q13A-9 | 2.1 L | .5 L | .5 L | 2.0 L | 2.4 | 3.4 | 2.4 | .31 L | 140 | .4 |

| SAMPLE ID | Re | Rh | Ru | Sb | Se | Sc | Sm | Sn | Sr | Ta |
|---|---|---|---|---|---|---|---|---|---|---|
| Q13A-10 | 5.5 L | 1.2 L | 1.2 L | 1.0 L | 2.6 | 7.3 | 6.2 | 4.0 | 260 | 1.6 |
| Q13A-12 | 4.7 L | 1.0 L | 1.0 L | 1.0 L | 3.0 | 7.4 | 4.2 | .70 L | 200 | .9 |
| Q13A-12-D | 4.8 L | 1.1 L | 1.1 L | 1.0 L | 4.2 | 8.1 | 3.5 | 3.2 | 190 | 1.0 |
| Q13A-13 | 2.3 L | .5 L | .5 L | 2.0 L | 3.1 | 2.6 | 1.3 | .35 L | 110 | .3 |
| Q13A-14 | 1.4 L | .3 L | .3 L | 2.0 L | 2.2 | 2.9 | 1.6 | 1.1 | 79 | .6 |
| Q13A-15 | .6 L | .1 L | .1 L | .5 L | .8 | 1.7 | 1.7 | .09 L | 35 | .1 |

Table 3. (Continued)

| SAMPLE ID | Tb | Th | Tl | Tm | U | V | W | Y | Zn | Zr |
|---|---|---|---|---|---|---|---|---|---|---|
| Q2A-2 | 0.3 | 12 | 4.6 L | 0.8 L | 5.0 | 14 | 1.2 | 7.8 | 5.6 | 100 |
| Q2A-3 | .3 | 3.5 | 4.6 L | .6 L | 2.3 | 16 | 1.1 | 10 | 5.0 | 50 |
| Q2A-6 | 1.1 | 18 | 4.6 L | 3.6 L | 5.2 | 76 | 1.7 | 19 | 85 | 75 |
| Q2A-7 | .2 | 1.7 | 4.6 L | .3 L | .81 | 5.5 | .6 | 3.4 | 6.6 | 17 |
| Q2A-8-D | .2 | 3.2 | 4.6 L | .5 L | 1.8 | 10 | .9 | 5.0 | 4.4 | 49 |
| Q2A-8 | .2 | 3.1 | 4.6 L | .6 L | 1.9 | 14 | .7 | 6.8 | 4.6 | 85 |
| Q2A-9 | .8 | 19 | 4.6 L | 4.2 L | 4.2 | 81 | 2.0 | 18 | 28 | 260 |
| Q2A-11-D | 1.0 | 17 | 4.6 L | 3.7 L | 9.1 | 76 | 1.4 | 18 | 77 | 96 |
| Q2A-11 | 1.1 | 18 | 4.6 L | 3.7 L | 9.3 | 79 | 1.8 | 16 | 97 | 79 |
| Q2A-12 | .3 | 3.1 | 4.6 L | .8 L | 3.5 | 17 | 1.0 | 8.9 | 12 | 51 |
| Q2A-13 | .3 | 2.8 | 4.6 L | .7 L | 2.4 | 14 | .6 | 6.1 | 7.9 | 53 |
| Q2A-14 | .3 | 4.4 | 4.6 L | .9 L | 3.4 | 31 | .8 | 6.5 | 22 | 74 |
| Q2A-15 | .5 | 11 | 10 L | 4.4 L | 0.0 B | 65 | 1.1 | 19 | 82 | 130 |
| Q3-1 | .3 | 1.1 | 4.6 L | .2 L | 1.5 | 5.7 | .7 | 8.4 | 3.9 | 8.4 |
| Q3-2 | .6 | 11 | 4.6 L | 2.4 L | 8.9 | 74 | 1.0 | 15 | 84 | 58 |
| Q3-3 | .8 | 14 | 4.6 L | 3.6 L | 12 | 76 | 1.9 | 15 | 93 | 85 |
| Q3-8 | .6 | 6.1 | 4.6 L | 1.1 L | 5.8 | 42 | .4 | 10 | 19 | 32 |
| Q3-9-D | .2 | 1.8 | 4.6 L | .5 L | .65 | 11 | .3 | 3.5 | 21 | 14 |
| Q3-9 | .2 | 1.9 | 4.6 L | .5 L | 1.0 | 12 | .5 | 6.3 | 19 | 30 |
| Q3-11 | .2 | 3.2 | 4.6 L | .6 L | 1.4 | 12 | .5 | 3.7 | 4.5 | 29 |
| Q3-11-D | .1 | 3.2 | 4.6 L | .6 L | 1.5 | 12 | .5 | 3.0 | 3.8 | 20 |
| Q3-12 | .2 | 4.9 | 4.6 L | .6 L | 3.0 | 20 | 1.1 | 3.5 | 2.4 | 56 |
| Q3-13 | .3 | 6.9 | 4.6 L | .9 L | 2.5 | 24 | .7 | 3.9 | 6.3 | 63 |
| Q3-14 | .4 | 1.6 | 4.6 L | .4 L | .71 | 7.5 | .2 | 1.6 | 4.1 | 12 |
| Q3-15 | .2 | 4.8 | 4.6 L | .5 L | 2.0 | 15 | .7 | 2.4 | 11 | 31 |
| Q3-16 | .2 L | 1.4 | 4.6 L | .3 L | 2.7 | 6.0 | 1.8 | 2.2 | 4.5 | 24 |
| Q3-17 | .2 | 46 | 10 L | 4.2 L | 0.0 B | 34 | 4.0 | 6.3 | 40 | 120 |
| Q3-18 | .3 | 2.6 | 4.6 L | .4 L | 3.0 | 12 | 1.5 | 4.6 | 3.0 | 29 |
| Q3-19 | .1 | 4.0 | 4.6 L | .4 L | 2.8 | 12 | .6 | 4.2 | 7.2 | 41 |
| Q3-21 | .2 | 4.4 | 4.6 L | .7 L | 7.2 | 17 | 2.1 | 5.7 | 2.9 | 56 |
| Q3-22 | .3 | 11 | 4.6 L | 1.7 L | 6.5 | 31 | .9 | 3.7 | 41 | 48 |
| Q3-23 | .4 | 14 | 4.6 L | 3.2 L | 9.3 | 48 | 1.7 | 12 | 91 | 130 |
| Q3-24 | .4 | 7.1 | 4.6 L | 2.8 L | 15 | 59 | 1.7 | 10 | 35 | 84 |
| Q3-25 | .3 | 5.1 | 4.6 L | 1.5 L | 9.1 | 43 | .9 | 13 | 19 | 73 |
| Q3-26A | .2 | 20 | 4.6 L | 2.1 L | 21 | 50 | 1.3 | 4.5 | 54 | 50 |
| Q3-27 | .3 | 1.9 | 4.6 L | .4 L | 1.9 | 9.6 | .4 | 6.6 | 4.1 | 16 |
| Q3-28 | .8 | 12 | 4.6 L | 2.2 L | 5.5 | 40 | 1.0 | 15 | 28 | 160 |
| Q4-1 | .2 | 1.4 | 4.6 L | .3 L | 1.9 | 7.1 | .6 | 5.6 | 3.3 | 33 |
| Q4-1-D | .3 | 1.5 | 4.6 L | .3 L | 2.0 | 7.3 | .8 | 5.8 | 2.0 | 33 |
| Q4-2 | .4 | 6.0 | 4.6 L | 2.7 L | 3.0 | 30 | .5 | 10 | 42 | 150 |
| Q4-3 | .5 | 9.2 | 4.6 L | 3.3 L | 5.2 | 32 | .6 | 16 | 27 | 160 |
| Q4-4 | .2 | 3.5 | 4.6 L | .9 L | 2.3 | 17 | .7 | 9.8 | 14 | 68 |
| Q4-5 | .3 | 3.7 | 4.6 L | .8 L | 3.8 | 20 | .8 | 6.6 | 11 | 31 |

| SAMPLE ID | Tb | | Th | Tl | | Tm | | U | | V | W | | Y | Zn | Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q4-6 | 0.9 | | 20 | 4.6 | L | 3.0 | L | 6.7 | | 78 | 2.6 | | 12 | 40 | 84 |
| Q4-7 | .4 | | 4.1 | 4.6 | L | .8 | L | 2.9 | | 26 | .7 | | 7.0 | 8.8 | 32 |
| Q4-8 | .3 | | 12 | 4.6 | L | 1.5 | L | 3.8 | | 41 | 1.1 | | 7.9 | 10 | 95 |
| Q4-9 | .2 | | 2.8 | 4.6 | L | 1.2 | L | 1.5 | | 13 | .5 | | 7.0 | 30 | 37 |
| Q4-10 | .1 | | 2.0 | 4.6 | L | .4 | L | .90 | | 10 | .4 | | 2.7 | 5.1 | 32 |
| Q4-11 | .2 | L | 2.6 | 4.6 | L | .5 | L | 1.3 | | 11 | .5 | | 2.2 | 14 | 23 |
| Q4-12 | .2 | | 2.3 | 4.6 | L | .4 | L | 3.1 | | 5.8 | 2.1 | | 3.9 | 12 | 41 |
| Q4-13 | .3 | | 28 | 4.6 | L | 2.7 | L | 8.4 | | 40 | 3.0 | | 5.3 | 18 | 200 |
| Q4-14 | .2 | | 38 | 10 | L | 4.2 | L | 0.0 | B | 28 | 3.5 | | 5.5 | 48 | 59 |
| Q4-15 | .5 | | 6.3 | 4.6 | L | .6 | L | 7.3 | | 23 | 2.4 | | 13 | 10 | 160 |
| Q4-16 | .1 | | 6.3 | 4.6 | L | .6 | L | 2.4 | | 11 | .9 | | 2.9 | 9.9 | 29 |
| Q4-18 | .3 | L | 7.0 | 4.6 | L | .7 | L | 4.3 | | 23 | .7 | | 4.1 | 7.2 | 98 |
| Q4-20 | .3 | | 7.7 | 4.6 | L | .5 | L | 5.4 | | 14 | .4 | | 5.3 | 4.3 | 53 |
| Q4-21 | .1 | | 2.4 | 4.6 | L | .3 | L | 1.1 | | 9.0 | .6 | | 4.4 | 7.7 | 35 |
| Q4-22 | .2 | | 7.5 | 4.6 | L | 1.1 | L | 5.0 | | 26 | 1.1 | | 6.9 | 20 | 98 |
| Q4-23 | .5 | | 24 | 4.6 | L | 3.8 | L | 5.7 | | 38 | 3.9 | | 7.5 | 40 | 180 |
| Q4-25 | .7 | | 39 | 4.6 | L | 3.2 | L | 6.4 | | 44 | 2.1 | | 10 | 30 | 140 |
| Q4-26 | .2 | | 5.1 | 4.6 | L | .5 | L | 3.9 | | 14 | .4 | | 3.9 | 9.6 | 28 |
| Q4-27 | .2 | | 2.4 | 4.6 | L | .4 | L | 2.4 | | 13 | .9 | | 7.9 | 7.4 | 40 |
| Q4-28 | .4 | | 12 | 4.6 | L | .6 | L | 7.3 | | 25 | 1.3 | | 8.9 | 6.4 | 110 |
| Q4-29 | 1.1 | | 19 | 4.6 | L | 4.3 | L | 8.0 | | 70 | 2.1 | | 25 | 94 | 210 |
| Q5A-0-D | .6 | | 8.1 | 4.6 | L | 2.7 | L | 15 | | 76 | 1.0 | | 15 | 87 | 100 |
| Q5A-0 | .4 | | 8.5 | 4.6 | L | 2.7 | L | 15 | | 70 | 1.0 | | 12 | 82 | 64 |
| Q5A-1 | .5 | | 8.2 | 4.6 | L | 1.9 | L | 8.1 | | 35 | .9 | | 6.1 | 61 | 28 |
| Q5A-2 | .4 | | 7.1 | 4.6 | L | 1.2 | L | 4.1 | | 38 | 1.4 | | 8.9 | 14 | 48 |
| Q5A-4 | .3 | | 3.5 | 4.6 | L | .8 | L | 2.6 | | 20 | 1.1 | | 8.7 | 6.4 | 48 |
| Q5A-5 | .1 | | 7.4 | 4.6 | L | 1.1 | L | 3.8 | | 32 | .7 | | 5.8 | 9.3 | 88 |
| Q5A-6 | .1 | | 2.5 | 4.6 | L | .6 | L | 1.3 | | 14 | .9 | | 3.5 | 3.2 | 30 |
| Q5A-7 | .3 | L | 5.7 | 4.6 | L | .7 | L | 5.5 | | 19 | 1.9 | | 4.7 | 17 | 86 |
| Q5A-8 | .3 | L | 30 | 4.6 | L | 3.1 | L | 7.6 | | 47 | 5.2 | | 6.7 | 26 | 160 |
| Q5A-9 | .2 | | 47 | 10 | L | 4.2 | L | 0.0 | B | 42 | 3.0 | | 5.4 | 69 | 66 |
| Q5A-10 | .3 | | 6.8 | 4.6 | L | .6 | L | 4.5 | | 20 | 1.4 | | 4.4 | 13 | 57 |
| Q5A-11 | .1 | | 2.1 | 4.6 | L | .4 | L | 1.7 | | 10 | 1.1 | | 3.5 | 4.2 | 37 |
| Q5A-13 | .3 | L | 6.6 | 4.6 | L | .5 | L | 5.6 | | 15 | .9 | | 4.7 | 3.7 | 89 |
| Q5A-15 | 2.0 | L | 5.9 | 4.6 | L | .5 | L | 3.3 | | 14 | .4 | | 5.0 | 9.6 | 41 |
| Q5A-16 | .2 | | 4.3 | 4.6 | L | .4 | L | 3.6 | | 14 | .5 | | 5.0 | 5.9 | 44 |
| Q5A-18 | .4 | L | 37 | 4.6 | L | 2.1 | L | 8.7 | | 56 | 1.4 | | 12 | 21 | 140 |
| Q5A-19 | .2 | | 3.1 | 4.6 | L | .5 | L | 4.5 | | 14 | .4 | | 5.7 | 10 | 37 |
| Q5A-20 | .2 | | 2.6 | 4.6 | L | .4 | L | .96 | | 18 | .6 | | 4.6 | 8.3 | 32 |
| Q5A-21 | .2 | | 2.4 | 4.6 | L | .3 | L | 7.0 | | 9.5 | 1.1 | | 5.9 | 13 | 54 |
| Q5A-22 | .6 | | 21 | 4.6 | L | 4.0 | L | 4.9 | | 59 | 1.8 | | 15 | 60 | 240 |
| Q5A-23 | .7 | | 31 | 4.6 | L | 4.2 | L | 4.3 | | 67 | 2.9 | | 18 | 59 | 250 |
| Q5-1 | .5 | | 11 | 4.6 | L | 2.6 | L | 14 | | 83 | 1.1 | | 11 | 89 | 78 |
| Q5-1-D | .5 | | 9.9 | 4.6 | L | 2.5 | L | 16 | | 72 | 1.1 | | 9.4 | 72 | 49 |
| Q5-2 | .6 | | 7.4 | 4.6 | L | .9 | L | 4.2 | | 35 | 1.2 | | 11 | 9.5 | 61 |
| Q5-3 | .4 | | 9.6 | 4.6 | L | 2.1 | L | 4.8 | | 77 | 1.0 | | 8.2 | 29 | 54 |
| Q5-4 | .2 | | 2.9 | 4.6 | L | .7 | L | 2.1 | | 22 | .8 | | 5.3 | 11 | 36 |
| Q5-5 | 2.0 | L | 3.0 | 4.6 | L | .6 | L | 1.2 | | 13 | .7 | L | 2.4 | 5.0 | 26 |
| Q5-6 | .3 | L | 2.5 | 4.6 | L | .6 | L | 1.1 | | 18 | .7 | | 5.1 | 4.7 | 63 |

| SAMPLE ID | Tb | Th | Tl | Tm | U | V | W | Y | Zn | Zr |
|---|---|---|---|---|---|---|---|---|---|---|
| Q5-7 | 0.2 | 7.1 | 4.6 L | 0.9 L | 4.8 | 25 | 2.2 | 5.8 | 13 | 75 |
| Q5-8 | .3 L | 35 | 4.6 L | 3.1 L | 11 | 44 | 4.1 | 5.3 | 20 | 93 |
| Q5-10 | .3 | 7.6 | 4.6 L | .5 L | 4.1 | 18 | 1.4 | 6.4 | 11 | 44 |
| Q5-11 | .1 | 1.9 | 4.6 L | .2 L | 2.2 | 7.7 | 1.7 | 2.1 | 4.6 | 15 |
| Q5-13 | .3 | 5.8 | 4.6 L | .6 L | 6.8 | 22 | 1.2 | 4.2 | 3.4 | 94 |
| Q5-15 | .1 | 6.9 | 4.6 L | .4 L | 3.6 | 10 | 1.0 | 1.8 | 5.4 | 15 |
| Q5-16 | .1 | 2.1 | 4.6 L | .3 L | 2.2 | 6.2 | .4 | 3.0 | 4.3 | 15 |
| Q5-16A | .2 | 12 | 4.6 L | 1.3 L | 8.7 | 39 | 1.4 | 5.6 | 12 | 130 |
| Q5-17A | .6 | 40 | 4.6 L | 2.7 L | 8.3 | 51 | 1.5 | 9.8 | 25 | 110 |
| Q5-18 | .3 | 3.0 | 4.6 L | .4 L | 5.0 | 15 | .9 L | 5.3 | 9.4 | 35 |
| Q5-19 | .2 | 1.7 | 4.6 L | .3 L | 2.6 | 10 | .7 | 4.9 | 8.9 | 32 |
| Q5-20 | .4 L | 27 | 4.6 L | 4.1 L | 8.1 | 48 | 2.7 | 7.1 | 85 | 220 |
| Q6-2 | .5 | 12 | 4.6 L | .9 L | 7.2 | 25 | .8 | 11 | 11 | 54 |
| Q6-3 | .3 | 7.7 | 4.6 L | 2.1 L | 10 | 60 | .9 | 8.3 | 60 | 60 |
| Q6-3-D | .2 | 7.4 | 4.6 L | 2.0 L | 11 | 41 | .8 | 5.3 | 44 | 37 |
| Q6-4 | .4 | 5.8 | 53 | 1.2 L | 3.2 | 17 | 1.0 | 3.8 | 7.3 | 46 |
| Q6-5 | .1 | 2.7 | 4.6 L | .5 L | 2.4 | 11 | .6 | 2.8 | 6.5 | 20 |
| Q6-6 | .3 | 14 | 4.6 L | 2.0 L | 3.2 | 56 | 1.6 | 6.9 | 19 | 200 |
| Q6-7 | .4 | 6.5 | 4.6 L | .8 L | 2.3 | 30 | .6 | 6.6 | 7.3 | 89 |
| Q6-8 | .2 | 5.2 | 4.6 L | .7 L | 5.5 | 17 | 2.4 | 3.8 | 11 | 78 |
| Q6-10 | .2 | 47 | 10 L | 4.1 L | 0.0 B | 29 | 3.1 | 5.4 | 70 | 48 |
| Q6-11 | .5 | 8.3 | 4.6 L | .5 L | 6.4 | 16 | 2.0 | 11 | 8.2 | 190 |
| Q6-12 | .2 | 1.9 | 4.6 L | .3 L | 1.6 | 8.3 | 1.1 | 3.9 | 7.6 | 18 |
| Q6-14 | .3 | 8.5 | 4.6 L | .5 L | 8.2 | 16 | .7 | 5.8 | 3.3 | 130 |
| Q6-16 | .2 | 4.6 | 4.6 L | .5 L | 3.2 | 14 | .7 | 4.5 | 9.3 | 31 |
| Q6-16-D | .2 L | 4.9 | 4.6 L | .5 L | 3.2 | 13 | .9 | 2.7 | 9.9 | 30 |
| Q6-18 | 2.0 L | 4.5 | 4.6 L | .5 L | 3.4 | 13 | .4 | 5.9 | 6.7 | 43 |
| Q6-19 | .1 | 2.6 | 4.6 L | .4 L | 1.9 | 14 | .6 | 6.4 | 9.6 | 52 |
| Q6-20 | .5 | 14 | 4.6 L | 4.1 L | 3.4 | 28 | 1.5 | 11 | 28.5 | 320 |
| Q7-1 | .7 | 12 | 4.6 L | 2.4 L | 6.1 | 50 | .8 | 14 | 56 | 56 |
| Q7-2 | .2 | 2.1 | 4.6 L | .5 L | 3.8 | 20 | 1.2 | 7.0 | 13 | 19 |
| Q7-3A | .4 | 7.4 | 4.6 L | 2.4 L | 4.4 | 28 | .9 | 6.4 | 46 | 80 |
| Q7-3 | .2 | 4.3 | 4.6 L | .8 L | 2.3 | 17 | .9 | 5.2 | 6.8 | 36 |
| Q7-4 | .2 | 3.3 | 4.6 L | .6 L | 1.6 | 15 | .5 | 3.6 | 5.0 | 71 |
| Q7-5 | .1 | 4.4 | 4.6 L | .7 L | 2.1 | 16 | .5 | 2.2 | 12 | 36 |
| Q7-6 | 0.0 | .8 | 4.6 L | .7 L | .45 | 4.8 | .7 | 2.0 | 4.6 | 12 |
| Q7-7 | .2 | 16 | 4.6 L | 1.2 L | 5.6 | 13 | .8 | 2.0 | 16 | 53 |
| Q7-9 | .2 | 3.4 | 4.6 L | .3 L | 1.9 | 7.5 | .5 | 3.1 | 8.2 | 15 |
| Q7-10 | .1 | 1.7 | 4.6 L | .2 L | 2.7 | 4.7 | .8 | 1.7 | 3.1 | 13 |
| Q7-12 | .1 | 5.1 | 4.6 L | .4 L | 7.0 | 13 | .7 | 2.1 | 5.5 | 27 |
| Q7-14 | .1 | 3.6 | 4.6 L | .4 L | 2.6 | 11 | .8 | 2.5 | 4.0 | 22 |
| Q7-15 | .2 | 5.3 | 4.6 L | .6 L | 3.4 | 18 | .9 | 3.5 | 8.1 | 36 |
| Q7-17 | .4 | 9.4 | 4.6 L | .8 L | 3.7 | 20 | .5 | 5.9 | 9.1 | 72 |
| Q7-18 | .0 | 2.0 | 4.6 L | .4 L | .65 | 8.5 | .2 | 2.4 | 11 | 15 |
| Q7-19 | .2 | 1.3 | 4.6 L | .3 L | 3.8 | 9.0 | .9 | 5.6 | 17 | 16 |
| Q7-20 | .6 | 14 | 4.6 L | 2.0 L | 5.7 | 53 | 1.0 | 14 | 27 | 160 |
| Q7-23 | 1.0 | 12 | 4.6 L | 1.3 L | 32 | 120 | .8 | 16 | 60 | 130 |
| Q7-24 | .5 | 3.1 | 4.6 L | .4 L | 4.6 | 18 | 1.2 | 10 | 20 | 32 |
| Q7-25 | .4 | 14 | 4.6 L | .3 L | 4.7 | 7.7 | .8 | 3.7 | 9.4 | 40 |

| SAMPLE ID | Tb | Th | Tl | Tm | U | V | W | Y | Zn | Zr |
|---|---|---|---|---|---|---|---|---|---|---|
| Q7-26 | 0.3 | 2.5 | 4.6 L | 0.6 L | 1.3 | 14 | 0.5 | 7.3 | 9.8 | 44 |
| Q7-27 | .1 | 1.1 | 4.6 L | .3 L | .85 | 5.8 | .3 | 2.5 | 6.6 | 14 |
| Q7-28 | .2 | 16 | 4.6 L | 3.4 L | 2.4 | 23 | 1.6 | 3.0 | 13 | 63 |
| Q7-29 | .3 | 3.6 | 4.6 L | .6 L | 3.1 | 14 | .6 L | 7.0 | 19 | 58 |
| Q7-30 | .1 | 3.7 | 4.6 L | .8 L | 1.4 | 13 | .6 | 5.0 | 9.7 | 96 |
| Q7-31 | .1 | 1.9 | 4.6 L | .4 L | .81 | 11 | .4 | 4.1 | 12 | 43 |
| Q8-1 | .3 | 9.7 | 4.6 L | 1.7 L | 14 | 59 | 1.0 | 10 | 21 | 110 |
| Q8-1-D | .5 | 9.7 | 4.6 L | 1.7 L | 17 | 47 | .9 | 6.9 | 20 | 58 |
| Q8-2 | .3 | 5.5 | 4.6 L | 1.1 L | 3.3 | 25 | .8 | 5.4 | 14 | 59 |
| Q8-3 | .2 | 2.3 | 4.6 L | .8 L | 2.7 | 15 | .7 | 4.7 | 24 | 69 |
| Q8-4 | .3 | 19 | 4.6 L | 2.4 L | 4.0 | 43 | 2.4 | 5.2 | 28 | 170 |
| Q8-5 | .4 L | 2.9 | 4.6 L | .8 L | 1.6 | 17 | .6 | 2.0 | 6.3 | 50 |
| Q8-6 | .2 | 5.8 | 4.6 L | .9 L | 2.5 | 26 | .9 | 4.4 | 3.2 | 90 |
| Q8-6-D | .2 | 5.4 | 4.6 L | .8 L | 2.3 | 22 | .9 | 3.8 | 4.6 | 44 |
| Q8-7 | .1 | 1.8 | 4.6 L | 2.0 L | 6.5 | 20 | 2.7 | 7.0 | 21 | 61 |
| Q8-8 | .3 L | 26 | 4.6 L | 3.0 L | 9.3 | 43 | 3.6 | 5.8 | 17 | 250 |
| Q8-9 | .2 | 39 | 10 L | 4.1 L | 0.0 B | 28 | 2.5 | 3.6 | 63 | 74 |
| Q8-10 | .4 | 8.6 | 4.6 L | .8 L | 6.3 | 28 | 2.1 | 9.9 | 11 | 120 |
| Q8-11 | .1 | 2.1 | 4.6 L | .3 L | 1.7 | 7.1 | 1.5 | 2.3 | 8.5 | 15 |
| Q8-13 | .2 | 8.5 | 4.6 L | .5 L | 9.1 | 26 | .7 | 4.8 | 2.6 | 100 |
| Q8-15 | .2 | 7.1 | 4.6 L | .5 L | 4.9 | 14 | .5 | 4.5 | 2.1 | 53 |
| Q8-16 | .2 | 2.4 | 4.6 L | .4 L | 1.4 | 8.8 | .9 | 3.0 | 26 | 23 |
| Q8-18-D | .2 | 2.7 | 4.6 L | .5 L | 2.6 | 9.6 | .5 | 4.1 | 4.3 | 39 |
| Q8-18 | .2 | 2.9 | 4.6 L | .5 L | 2.7 | 9.2 | .4 | 3.9 | 4.0 | 36 |
| Q8-19 | .1 | 1.5 | 4.6 L | .3 L | 1.1 | 7.8 | .4 | 2.5 | 9.9 | 21 |
| Q8-20 | .2 | 1.7 | 4.6 L | .3 L | 3.3 | 6.7 | .8 | 5.6 | 5.0 | 22 |
| Q8-21 | .6 | 22 | 4.6 L | 2.9 L | 6.4 | 56 | 1.0 | 11 | 70 | 180 |
| Q9-1 | .1 | 3.5 | 4.6 L | .6 L | 2.0 | 12 | .8 | 5.0 | 9.4 | 26 |
| Q9-2 | .2 | 5.0 | 4.6 L | .7 L | 1.7 | 17 | .8 | 3.5 | 5.0 | 48 |
| Q9-3 | .2 | 4.3 | 4.6 L | 1.2 L | 3.3 | 8.2 | 1.2 | 2.3 | 12 | 26 |
| Q9-4 | .2 | 4.8 | 4.6 L | .5 L | 8.9 | 13 | 1.6 | 6.2 | 21 | 100 |
| Q9-5 | .2 | 28 | 4.6 L | 2.9 L | 8.5 | 49 | 4.2 | 5.1 | 17 | 200 |
| Q9-6 | .3 L | 37 | 4.6 L | 3.9 L | 15 | 32 | 6.9 | 3.4 | 17 | 60 |
| Q9-7 | .3 | 46 | 10 L | 4.1 L | 0.0 B | 30 | 1.9 | 5.4 | 300 | 55 |
| Q9-8 | .6 | 15 | 4.6 L | 3.0 L | 4.9 | 40 | 1.2 | 13 | 35 | 200 |
| Q9-9 | .1 | 4.9 | 4.6 L | .7 L | 2.6 | 11 | 1.3 | 3.2 | 16 | 32 |
| Q9-11 | .3 | 14 | 4.6 L | .5 L | 11 | 24 | .5 | 3.6 | 5.5 | 57 |
| Q9-13 | .2 | 5.1 | 4.6 L | .4 L | 3.0 | 14 | .8 | 5.7 | 6.6 | 52 |
| Q9-14 | .2 | 2.4 | 4.6 L | .4 L | 2.9 | 12 | .9 | 4.6 | 12 | 39 |
| Q9-16 | .4 | 8.4 | 4.6 L | .7 L | 4.5 | 16 | .4 | 3.3 | 7.6 | 33 |
| Q9-17 | .2 | 1.5 | 4.6 L | .3 L | 2.4 | 9.1 | .5 | 4.5 | 6.3 | 29 |
| Q10A-1 | .3 | 3.0 | 4.6 L | .4 L | 4.8 | 22 | .5 | 6.5 | 8.4 | 26 |
| Q10A-2 | .4 | 15 | 4.6 L | 1.8 L | 7.9 | 63 | 1.8 | 14 | 16 | 180 |
| Q10A-3-D | .2 | 3.2 | 4.6 L | .6 L | 1.5 | 15 | .7 | 3.7 | 18 | 37 |
| Q10A-3 | .2 | 3.4 | 4.6 L | .5 L | 1.7 | 17 | 1.0 L | 5.1 | 15 | 66 |
| Q10A-4 | .1 | 4.3 | 4.6 L | .6 L | 3.7 | 15 | 1.5 | 2.6 | 16 | 27 |
| Q10A-4-D | .2 | 5.9 | 4.6 L | .6 L | 4.1 | 13 | 1.4 | 2.2 | 9.2 | 28 |
| Q10A-5 | .3 | 25 | 4.6 L | 2.7 L | 5.8 | 42 | 2.6 | 5.3 | 24 | 130 |

| SAMPLE ID | Tb | Th | Tl | Tm | U | V | W | Y | Zn | Zr |
|---|---|---|---|---|---|---|---|---|---|---|
| Q10A-6 | 0.3 | 45 | 10 L | 4.1 L | 0.0 B | 45 | 3.3 | 3.6 | 60 | 63 |
| Q10A-7 | .4 | 10 | 4.6 L | .6 L | 6.7 | 18 | 1.0 | 7.7 | 13 | 76 |
| Q10A-8 | .1 | 3.3 | 4.6 L | .4 L | 2.6 | 7.0 | 1.1 | 1.7 | 3.3 | 15 |
| Q10A-10 | .2 | 16 | 4.6 L | .9 L | 10. | 35 | 1.2 | 4.7 | 2.3 | 130 |
| Q10A-12 | .2 | 4.3 | 4.6 L | .5 L | 2.6 | 12 | .7 | 4.2 | 22 | 50 |
| Q10A-13 | .2 | 2.7 | 4.6 L | .3 L | 2.9 | 7.2 | 1.1 | 2.0 | 14 | 13 |
| Q10A-14 | .4 | 32 | 4.6 L | 3.2 L | 6.4 | 56 | 2.3 | 8.4 | 43 | 250 |
| Q10A-16 | .8 | 22 | 4.6 L | 1.7 L | 8.6 | 45 | .6 | 7.9 | 25 | 83 |
| Q10A-17 | .2 | 2.1 | 4.6 L | .4 L | 5.7 | 12 | .7 | 4.1 | 18 | 20 |
| Q10A-18 | .3 | 2.2 | 4.6 L | .4 L | 3.4 | 13 | 1.0 | 14 | 12 | 47 |
| Q10A-19 | .7 | 16 | 4.6 L | 3.1 L | 7.2 | 66 | 1.4 | 14 | 95 | 130 |
| Q11-1 | .7 | 9.7 | 4.6 L | 4.3 L | 3.7 | 37 | 2.0 L | 27 | 12 | 490 |
| Q11-2 | 1.0 L | 3.7 | 4.6 L | .4 L | 5.0 | 16 | 1.7 | 10 | 12 | 68 |
| Q11-3 | 2.0 L | 37 | 4.6 L | 3.2 L | 12 | 52 | 3.7 | 7.0 | 28 | 200 |
| Q11-4 | .2 | 40 | 10 L | 4.2 L | 0.0 B | 37 | 5.0 L | 6.4 | 75 | 52 |
| Q11-5 | .7 | 6.7 | 4.6 L | .5 L | 4.8 | 14 | 1.3 | 9.2 | 18 | 96 |
| Q11-6 | .2 | 6.3 | 4.6 L | .7 L | 3.8 | 17 | 1.5 | 3.5 | 7.4 | 47 |
| Q11-7 | .2 | 6.0 | 4.6 L | .6 L | 3.2 | 9.9 | .9 | 2.2 | 4.6 | 20 |
| Q11-8 | .2 | 2.5 | 4.6 L | .4 L | 1.2 | 6.2 | .7 | 2.0 | 5.9 | 22 |
| Q11-10 | .3 L | 33 | 4.6 L | 3.5 L | 7.8 | 61 | 3.9 | 4.5 | 45 | 140 |
| Q11-12 | .3 | 5.2 | 4.6 L | .6 L | 2.7 | 19 | .6 | 6.8 | 10 | 40 |
| Q11-13 | .4 | 3.6 | 4.6 L | .6 L | 6.5 | 16 | .9 | 9.0 | 7.9 | 72 |
| Q11-14 | 1.1 | 22 | 4.6 L | 4.2 L | 8.4 | 91 | 2.4 | 19 | 110 | 130 |
| Q11-15 | .6 | 2.0 | 4.6 L | .5 L | 5.9 | 12 | 1.9 | 19 | 21 | 67 |
| Q11-16-D | .8 | 13 | 4.6 L | 3.0 L | 11 | 65 | 1.5 | 14 | 72 | 65 |
| Q11-16 | 1.4 | 12 | 4.6 L | 3.0 L | 11 | 86 | 1.1 | 16 | 66 | 66 |
| Q12-1 | 2.0 L | 4.7 | 4.6 L | .5 L | 4.8 | 8.4 | 2.5 | 4.8 | 5.3 | 39 |
| Q12-2 | .3 L | 29 | 4.6 L | 3.1 L | 15 | 36 | 3.4 | 4.7 | 23 | 210 |
| Q12-3 | .3 | 37 | 10 L | 4.1 L | 0.0 B | 34 | 2.0 L | 8.0 | 66 | 49 |
| Q12-4 | 0.0 B | 8.2 | 4.6 L | 1.2 L | 7.0 | 26 | 2.2 | 4.5 | 18 | 32 |
| Q12-5 | .2 | 2.1 | 4.6 L | .7 L | 2.3 | 16 | 1.5 | 7.6 | 9.6 | 37 |
| Q12-6 | .5 | 8.1 | 4.6 L | 2.2 L | 7.8 | 26 | .7 | 7.5 | 66 | 56 |
| Q12-7 | .6 | 9.2 | 4.6 L | 2.1 L | 11 | 45 | 1.3 | 6.5 | 36 | 56 |
| Q12-7-D | .4 | 9.6 | 4.6 L | 2.2 L | 10 | 47 | 1.3 | 9.3 | 32 | 89 |
| Q12-8 | .4 | 8.4 | 4.6 L | 1.7 L | 11 | 37 | 1.3 | 7.5 | 33 | 56 |
| Q12-10 | .4 | 6.7 | 4.6 L | 2.0 L | 7.8 | 34 | .9 | 8.0 | 49 | 93 |
| Q12-11 | .3 | 3.2 | 4.6 L | 1.2 L | 3.6 | 17 | 1.3 | 9.2 | 51 | 44 |
| Q12-11-D | .1 | 3.8 | 4.6 L | .5 L | 3.8 | 13 | 1.2 | 2.0 | 4.3 | 21 |
| Q12-12 | 1.6 | 27 | 4.6 L | 3.2 L | 9.5 | 63 | 1.7 | 17 | 66 | 150 |
| Q12-13 | .7 | 17 | 4.6 L | 1.2 L | 6.6 | 16 | 1.3 | 16 | 50 | 98 |
| Q12-14 | .8 | 14 | 4.6 L | 3.7 L | 4.9 | 68 | 1.7 | 15 | 71 | 130 |
| Q13A-1 | .6 | 9.8 | 29 | 2.0 L | 6.3 | 20 | 1.0 | 9.3 | 36 | 72 |
| Q13A-2 | .2 | 37 | 10 L | 3.8 L | 0.0 B | 35 | 2.7 | 7.5 | 60 | 80 |
| Q13A-3 | .2 | 3.0 | 4.6 L | .4 L | 4.0 | 13 | 3.1 | 7.0 | 18 | 42 |
| Q13A-4 | .2 | 5.4 | 4.6 L | .5 L | 1.8 | 9.4 | 1.1 | 2.6 | 6.7 | 30 |
| Q13A-6 | .2 | 8.3 | 4.6 L | .8 L | 7.1 | 16 | 1.1 | 2.9 | 7.3 | 47 |
| Q13A-8 | 2.0 L | 2.5 | 4.6 L | .3 L | 2.3 | 5.9 | .4 | 2.2 | 5.4 | 17 |
| Q13A-9 | .3 | 4.4 | 4.6 L | .9 L | 15 | 31 | 1.0 | 6.4 | 7.8 | 27 |

| SAMPLE ID | Tb | Th | Tl | Tm | U | V | W | Y | Zn | Zr |
|---|---|---|---|---|---|---|---|---|---|---|
| Q13A-10 | 1.2 | 18 | 4.8 | 2.5 L | 26 | 93 | 1.3 | 14 | 65 | 150 |
| Q13A-12 | .6 | 9.7 | 4.6 L | 2.2 L | 8.6 | 52 | 1.2 | 11 | 26 | 84 |
| Q13A-12-D | .7 | 11 | 4.6 L | 2.2 L | 8.4 | 53 | .6 L | 12 | 34 | 81 |
| Q13A-13 | .3 | 2.9 | 4.6 L | 1.1 L | .96 | 15 | 1.1 | 6.0 | 21 | 37 |
| Q13A-14 | .3 | 7.7 | 4.6 L | .6 L | 3.3 | 17 | 1.0 | 5.3 | 13 | 31 |
| Q13A-15 | .4 | 1.8 | 4.6 L | .3 L | .78 | 3.5 | 1.0 | 7.4 | 9.1 | 13 |