**Table 2.** Velocities and Stiffness Constants for Rocks with Hexagonal Symmetry[a]

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX1 (Slate, Hsinwu, Taiwan), Density = 2590 kg/m³* | | | | | | | | | | |
| 20 | 5.033 | 5.504 | 4.962 | 3.499 | 2.993 | 78.46 | 15.06 | 65.61 | 23.20 | 8.46 |
| 40 | 5.219 | 5.712 | 5.272 | 3.653 | 3.163 | 84.50 | 15.39 | 70.54 | 25.92 | 14.02 |
| 60 | 5.323 | 5.822 | 5.423 | 3.727 | 3.252 | 87.79 | 15.86 | 73.39 | 27.38 | 16.40 |
| 80 | 5.395 | 5.896 | 5.518 | 3.773 | 3.310 | 90.02 | 16.28 | 75.39 | 28.37 | 17.71 |
| 100 | 5.450 | 5.951 | 5.585 | 3.806 | 3.352 | 91.71 | 16.69 | 76.93 | 29.09 | 18.50 |
| 200 | 5.614 | 6.114 | 5.765 | 3.893 | 3.471 | 96.83 | 18.32 | 81.64 | 31.20 | 19.96 |
| 400 | 5.770 | 6.272 | 5.907 | 3.962 | 3.575 | 101.90 | 20.59 | 86.24 | 33.10 | 19.90 |
| 600 | 5.858 | 6.365 | 5.976 | 3.995 | 3.630 | 104.94 | 22.24 | 88.88 | 34.12 | 19.24 |
| 800 | 5.919 | 6.432 | 6.019 | 4.017 | 3.666 | 107.16 | 23.59 | 90.72 | 34.81 | 18.47 |
| 1000 | 5.965 | 6.485 | 6.050 | 4.032 | 3.693 | 108.94 | 24.74 | 92.14 | 35.33 | 17.75 |
| *MRX2 (Slate, Kuanyuan, Taiwan), Density = 2697 kg/m³* | | | | | | | | | | |
| 20 | 5.014 | 6.194 | 5.330 | 3.864 | 2.832 | 103.46 | 22.92 | 67.80 | 21.63 | 20.75 |
| 40 | 5.263 | 6.271 | 5.500 | 3.892 | 2.947 | 106.06 | 24.35 | 74.71 | 23.42 | 23.40 |
| 60 | 5.391 | 6.318 | 5.591 | 3.909 | 3.012 | 107.66 | 25.24 | 78.38 | 24.46 | 24.53 |
| 80 | 5.475 | 6.352 | 5.653 | 3.921 | 3.057 | 108.80 | 25.87 | 80.84 | 25.20 | 25.25 |
| 100 | 5.537 | 6.379 | 5.700 | 3.931 | 3.092 | 109.73 | 26.40 | 82.69 | 25.78 | 25.75 |
| 200 | 5.709 | 6.464 | 5.838 | 3.962 | 3.196 | 112.69 | 28.04 | 87.90 | 27.55 | 27.05 |
| 400 | 5.857 | 6.554 | 5.965 | 3.995 | 3.298 | 115.83 | 29.77 | 92.52 | 29.33 | 27.91 |
| 600 | 5.934 | 6.608 | 6.034 | 4.016 | 3.357 | 117.75 | 30.75 | 94.97 | 30.39 | 28.16 |
| 800 | 5.984 | 6.647 | 6.081 | 4.033 | 3.398 | 119.16 | 31.45 | 96.58 | 31.13 | 28.27 |
| 1000 | 6.020 | 6.678 | 6.116 | 4.046 | 3.429 | 120.28 | 31.97 | 97.74 | 31.72 | 28.28 |
| *MRX3 (Slate, Lushan, Taiwan), Density = 2742 kg/m³* | | | | | | | | | | |
| 20 | 4.730 | 6.013 | 4.896 | 3.533 | 2.653 | 99.14 | 30.69 | 61.35 | 19.30 | 6.42 |
| 40 | 4.862 | 6.041 | 5.023 | 3.561 | 2.712 | 100.07 | 30.53 | 64.82 | 20.16 | 10.96 |
| 60 | 4.943 | 6.062 | 5.101 | 3.579 | 2.749 | 100.76 | 30.52 | 67.00 | 20.72 | 13.44 |
| 80 | 5.003 | 6.080 | 5.158 | 3.593 | 2.777 | 101.35 | 30.55 | 68.63 | 21.14 | 15.11 |
| 100 | 5.050 | 6.096 | 5.203 | 3.605 | 2.800 | 101.90 | 30.65 | 69.93 | 21.49 | 16.33 |
| 200 | 5.202 | 6.159 | 5.347 | 3.646 | 2.876 | 104.01 | 31.11 | 74.20 | 22.68 | 19.78 |
| 400 | 5.363 | 6.251 | 5.501 | 3.696 | 2.962 | 107.14 | 32.25 | 78.87 | 24.05 | 22.76 |
| 600 | 5.462 | 6.324 | 5.594 | 3.730 | 3.017 | 109.64 | 33.37 | 81.80 | 24.95 | 24.04 |
| 800 | 5.535 | 6.386 | 5.662 | 3.757 | 3.059 | 111.80 | 34.42 | 84.01 | 25.65 | 24.72 |
| 1000 | 5.592 | 6.441 | 5.716 | 3.780 | 3.093 | 113.76 | 35.42 | 85.74 | 26.22 | 25.10 |
| *MRX4 (Slate, Poultney, VT), Density = 2760 kg/m³* | | | | | | | | | | |
| 20 | 4.971 | 6.308 | 5.030 | 3.853 | 2.690 | 109.82 | 27.88 | 68.20 | 19.97 | 2.57 |
| 40 | 5.022 | 6.324 | 5.064 | 3.882 | 2.731 | 110.38 | 27.20 | 69.61 | 20.59 | 2.74 |
| 60 | 5.043 | 6.338 | 5.091 | 3.895 | 2.758 | 110.87 | 27.13 | 70.19 | 20.99 | 3.14 |
| 80 | 5.061 | 6.348 | 5.120 | 3.903 | 2.778 | 111.22 | 27.13 | 70.69 | 21.29 | 4.06 |
| 100 | 5.092 | 6.357 | 5.168 | 3.910 | 2.795 | 111.54 | 27.15 | 71.56 | 21.55 | 6.36 |
| 200 | 5.150 | 6.397 | 5.292 | 3.943 | 2.861 | 112.93 | 27.11 | 73.20 | 22.59 | 10.90 |
| 400 | 5.291 | 6.465 | 5.412 | 3.999 | 2.948 | 115.34 | 27.06 | 77.27 | 23.99 | 12.77 |
| 600 | 5.410 | 6.526 | 5.485 | 4.036 | 3.008 | 117.53 | 27.61 | 80.78 | 24.96 | 12.75 |
| 800 | 5.504 | 6.582 | 5.535 | 4.064 | 3.052 | 119.57 | 28.40 | 83.61 | 25.70 | 12.06 |
| 1000 | 5.570 | 6.635 | 5.573 | 4.085 | 3.087 | 121.49 | 29.37 | 85.63 | 26.30 | 11.22 |
| *MRX5 (Slate, West Castleton, VT), Density = 2772 kg/m³* | | | | | | | | | | |
| 20 | 5.375 | 6.416 | 5.299 | 3.879 | 3.078 | 114.12 | 30.70 | 80.09 | 26.27 | 1.19 |
| 40 | 5.436 | 6.444 | 5.381 | 3.898 | 3.095 | 115.10 | 30.86 | 81.90 | 26.55 | 4.80 |
| 60 | 5.475 | 6.459 | 5.410 | 3.910 | 3.107 | 115.63 | 30.87 | 83.08 | 26.76 | 5.52 |
| 80 | 5.505 | 6.471 | 5.468 | 3.919 | 3.120 | 116.07 | 30.94 | 84.01 | 26.98 | 8.30 |
| 100 | 5.530 | 6.482 | 5.551 | 3.925 | 3.132 | 116.48 | 31.07 | 84.78 | 27.20 | 12.78 |
| 200 | 5.623 | 6.530 | 5.728 | 3.942 | 3.186 | 118.21 | 32.04 | 87.65 | 28.15 | 20.33 |
| 400 | 5.745 | 6.589 | 5.900 | 3.955 | 3.249 | 120.35 | 33.61 | 91.50 | 29.27 | 26.70 |
| 600 | 5.833 | 6.624 | 5.970 | 3.962 | 3.287 | 121.65 | 34.61 | 94.32 | 29.95 | 28.12 |
| 800 | 5.902 | 6.650 | 6.002 | 3.967 | 3.314 | 122.58 | 35.33 | 96.56 | 30.44 | 27.83 |
| 1000 | 5.957 | 6.670 | 6.020 | 3.971 | 3.335 | 123.31 | 35.89 | 98.38 | 30.83 | 27.08 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX6 (Slate, Hampton, NY), Density = 2795 kg/m³* | | | | | | | | | | |
| 20 | 5.403 | 6.166 | 5.201 | 3.691 | 3.095 | 106.26 | 30.12 | 81.58 | 26.77 | 1.14 |
| 40 | 5.447 | 6.190 | 5.324 | 3.706 | 3.117 | 107.09 | 30.32 | 82.93 | 27.15 | 7.08 |
| 60 | 5.478 | 6.207 | 5.422 | 3.716 | 3.131 | 107.70 | 30.50 | 83.88 | 27.40 | 11.98 |
| 80 | 5.504 | 6.222 | 5.498 | 3.725 | 3.145 | 108.22 | 30.67 | 84.67 | 27.65 | 15.67 |
| 100 | 5.526 | 6.236 | 5.581 | 3.732 | 3.159 | 108.68 | 30.83 | 85.37 | 27.88 | 19.93 |
| 200 | 5.614 | 6.291 | 5.760 | 3.759 | 3.211 | 110.60 | 31.60 | 88.09 | 28.82 | 27.37 |
| 400 | 5.733 | 6.374 | 5.929 | 3.796 | 3.273 | 113.54 | 32.99 | 91.87 | 29.94 | 32.99 |
| 600 | 5.814 | 6.437 | 6.015 | 3.820 | 3.318 | 115.82 | 34.24 | 94.48 | 30.76 | 34.71 |
| 800 | 5.872 | 6.488 | 6.095 | 3.837 | 3.338 | 117.64 | 35.32 | 96.37 | 31.13 | 37.58 |
| 1000 | 5.914 | 6.528 | 6.158 | 3.850 | 3.359 | 119.12 | 36.27 | 97.75 | 31.53 | 39.70 |
| *MRX7 (Slate, Hampton, NY), Density = 2810 kg/m³* | | | | | | | | | | |
| 20 | 4.903 | 6.353 | 5.302 | 3.916 | 2.436 | 113.41 | 27.23 | 67.55 | 16.68 | 28.69 |
| 40 | 4.951 | 6.401 | 5.340 | 3.938 | 2.482 | 115.13 | 27.98 | 68.88 | 17.30 | 28.09 |
| 60 | 4.956 | 6.428 | 5.398 | 3.947 | 2.512 | 116.09 | 28.54 | 69.02 | 17.72 | 30.30 |
| 80 | 5.015 | 6.450 | 5.412 | 3.952 | 2.534 | 116.89 | 29.11 | 70.67 | 18.04 | 29.43 |
| 100 | 5.040 | 6.491 | 5.472 | 3.956 | 2.553 | 118.38 | 30.42 | 71.38 | 18.31 | 31.52 |
| 200 | 5.143 | 6.548 | 5.606 | 3.981 | 2.622 | 120.46 | 31.40 | 74.33 | 19.32 | 35.97 |
| 400 | 5.293 | 6.605 | 5.744 | 4.027 | 2.714 | 122.59 | 31.45 | 78.73 | 20.69 | 39.52 |
| 600 | 5.403 | 6.639 | 5.826 | 4.059 | 2.781 | 123.85 | 31.26 | 82.03 | 21.73 | 40.95 |
| 800 | 5.488 | 6.664 | 5.884 | 4.083 | 2.835 | 124.77 | 31.08 | 84.63 | 22.59 | 41.64 |
| 1000 | 5.554 | 6.683 | 5.930 | 4.101 | 2.880 | 125.48 | 30.97 | 86.68 | 23.31 | 42.12 |
| *MRX8 (Slate, Fair Havgn, VT), Density = 2819 kg/m³* | | | | | | | | | | |
| 20 | 5.311 | 6.196 | 5.240 | 3.706 | 3.109 | 108.23 | 30.80 | 79.52 | 27.25 | 3.22 |
| 40 | 5.357 | 6.215 | 5.287 | 3.725 | 3.132 | 108.87 | 30.66 | 80.89 | 27.65 | 4.50 |
| 60 | 5.389 | 6.231 | 5.323 | 3.737 | 3.148 | 109.44 | 30.72 | 81.88 | 27.94 | 5.49 |
| 80 | 5.416 | 6.246 | 5.385 | 3.746 | 3.162 | 109.97 | 30.84 | 82.69 | 28.19 | 8.33 |
| 100 | 5.439 | 6.260 | 5.435 | 3.754 | 3.176 | 110.46 | 31.01 | 83.41 | 28.44 | 10.45 |
| 200 | 5.531 | 6.320 | 5.580 | 3.782 | 3.229 | 112.61 | 31.98 | 86.24 | 29.39 | 15.44 |
| 400 | 5.655 | 6.409 | 5.690 | 3.815 | 3.286 | 115.79 | 33.73 | 90.16 | 30.44 | 16.98 |
| 600 | 5.740 | 6.468 | 5.755 | 3.835 | 3.320 | 117.94 | 35.00 | 92.87 | 31.07 | 17.60 |
| 800 | 5.799 | 6.508 | 5.814 | 3.849 | 3.345 | 119.41 | 35.88 | 94.81 | 31.54 | 18.91 |
| 1000 | 5.842 | 6.536 | 5.856 | 3.859 | 3.364 | 120.41 | 36.46 | 96.22 | 31.90 | 19.83 |
| *MRX9 (Phyllite, Haast, Lindis Pass, S. Island, New Zealand), Density = 2626 kg/m³* | | | | | | | | | | |
| 20 | 3.431 | 4.415 | 3.770 | 2.699 | 2.358 | 51.18 | 12.92 | 30.91 | 14.59 | 1.48 |
| 40 | 3.900 | 4.805 | 4.187 | 2.980 | 2.622 | 60.64 | 14.00 | 39.94 | 18.05 | 3.30 |
| 60 | 4.237 | 5.080 | 4.431 | 3.172 | 2.752 | 67.76 | 14.92 | 47.15 | 19.88 | 3.75 |
| 80 | 4.500 | 5.286 | 4.673 | 3.310 | 2.940 | 73.38 | 15.84 | 53.18 | 22.70 | 4.17 |
| 100 | 4.711 | 5.446 | 4.865 | 3.412 | 3.042 | 77.89 | 16.75 | 58.28 | 24.30 | 6.08 |
| 200 | 5.330 | 5.878 | 5.417 | 3.656 | 3.301 | 90.73 | 20.53 | 74.59 | 28.61 | 13.47 |
| 400 | 5.768 | 6.149 | 5.792 | 3.788 | 3.453 | 99.28 | 23.92 | 87.37 | 31.30 | 19.92 |
| 600 | 5.954 | 6.260 | 5.948 | 3.848 | 3.521 | 102.92 | 25.15 | 93.10 | 32.55 | 22.49 |
| 800 | 6.079 | 6.335 | 6.052 | 3.890 | 3.570 | 105.38 | 25.91 | 97.03 | 33.46 | 24.09 |
| 1000 | 6.176 | 6.392 | 6.134 | 3.923 | 3.606 | 107.31 | 26.48 | 100.16 | 34.14 | 25.50 |
| *MRX10 (Phyllite, Leech River Complex, Botanical Beach, Vancouver Island, BC), Density = 2666 kg/m³* | | | | | | | | | | |
| 20 | 5.221 | 6.262 | 5.640 | 3.819 | 3.152 | 104.54 | 26.78 | 72.67 | 26.49 | 25.65 |
| 40 | 5.380 | 6.329 | 5.770 | 3.840 | 3.193 | 106.79 | 28.17 | 77.17 | 27.18 | 29.27 |
| 60 | 5.476 | 6.368 | 5.847 | 3.852 | 3.222 | 108.11 | 28.99 | 79.94 | 27.68 | 31.25 |
| 80 | 5.544 | 6.396 | 5.902 | 3.861 | 3.243 | 109.06 | 29.58 | 81.94 | 28.04 | 32.66 |
| 100 | 5.598 | 6.417 | 5.946 | 3.868 | 3.259 | 109.78 | 30.01 | 83.55 | 28.32 | 33.85 |
| 200 | 5.769 | 6.485 | 6.082 | 3.889 | 3.306 | 112.12 | 31.48 | 88.73 | 29.14 | 37.52 |
| 400 | 5.944 | 6.554 | 6.222 | 3.910 | 3.344 | 114.52 | 33.00 | 94.19 | 29.81 | 41.72 |
| 600 | 5.982 | 6.608 | 6.241 | 3.926 | 3.360 | 116.41 | 34.23 | 95.40 | 30.10 | 40.81 |
| 800 | 6.020 | 6.662 | 6.260 | 3.942 | 3.376 | 118.32 | 35.47 | 96.62 | 30.39 | 39.87 |
| 1000 | 6.058 | 6.716 | 6.279 | 3.958 | 3.392 | 120.25 | 36.72 | 97.84 | 30.67 | 38.93 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX11 (Phyllite, Leech River Complex, Soule Ck., Vancouver Island, BC), Density = 2718 kg/m³* | | | | | | | | | | |
| 20 | 5.932 | 6.259 | 6.035 | 3.627 | 3.330 | 106.46 | 34.95 | 95.64 | 30.14 | 36.44 |
| 40 | 5.987 | 6.313 | 6.065 | 3.645 | 3.350 | 108.32 | 36.10 | 97.42 | 30.50 | 35.86 |
| 60 | 6.019 | 6.345 | 6.090 | 3.656 | 3.363 | 109.42 | 36.77 | 98.47 | 30.74 | 35.96 |
| 80 | 6.042 | 6.368 | 6.115 | 3.663 | 3.378 | 110.22 | 37.28 | 99.22 | 31.02 | 36.30 |
| 100 | 6.060 | 6.386 | 6.130 | 3.669 | 3.388 | 110.84 | 37.67 | 99.82 | 31.20 | 36.32 |
| 200 | 6.116 | 6.442 | 6.178 | 3.687 | 3.422 | 112.78 | 38.88 | 101.67 | 31.83 | 36.38 |
| 400 | 6.173 | 6.498 | 6.255 | 3.705 | 3.462 | 114.77 | 40.15 | 103.57 | 32.58 | 38.14 |
| 600 | 6.213 | 6.523 | 6.307 | 3.727 | 3.468 | 115.65 | 40.14 | 104.92 | 32.69 | 40.38 |
| 800 | 6.253 | 6.548 | 6.359 | 3.749 | 3.474 | 116.54 | 40.14 | 106.27 | 32.80 | 42.63 |
| 1000 | 6.293 | 6.573 | 6.411 | 3.771 | 3.480 | 117.43 | 40.13 | 107.64 | 32.92 | 44.91 |
| *MRX12 (Phyllite, Leech River Complex, Botanical Beach, Vancouver Island, BC), Density = 2690 kg/m³* | | | | | | | | | | |
| 20 | 5.677 | 6.301 | 5.725 | 3.691 | 3.240 | 106.80 | 33.51 | 86.69 | 28.24 | 22.12 |
| 40 | 5.774 | 6.350 | 5.832 | 3.700 | 3.273 | 108.45 | 34.80 | 89.68 | 28.82 | 25.48 |
| 60 | 5.832 | 6.379 | 5.895 | 3.708 | 3.298 | 109.44 | 35.47 | 91.49 | 29.26 | 27.27 |
| 80 | 5.874 | 6.399 | 5.941 | 3.716 | 3.319 | 110.15 | 35.86 | 92.82 | 29.63 | 28.50 |
| 100 | 5.906 | 6.415 | 5.976 | 3.722 | 3.336 | 110.70 | 36.17 | 93.83 | 29.94 | 29.40 |
| 200 | 6.008 | 6.465 | 6.088 | 3.748 | 3.382 | 112.41 | 36.84 | 97.10 | 30.77 | 32.65 |
| 400 | 6.111 | 6.515 | 6.201 | 3.770 | 3.402 | 114.18 | 37.71 | 100.46 | 31.13 | 36.95 |
| 600 | 6.151 | 6.555 | 6.241 | 3.779 | 3.418 | 115.58 | 38.75 | 101.78 | 31.43 | 37.68 |
| 800 | 6.191 | 6.595 | 6.281 | 3.788 | 3.434 | 117.00 | 39.80 | 103.10 | 31.72 | 38.41 |
| 1000 | 6.231 | 6.635 | 6.321 | 3.797 | 3.450 | 118.42 | 40.86 | 104.44 | 32.02 | 39.15 |
| *MRX13 (Phyllite, Leech River Complex, Soule Ck., Vancouver Island, BC), Density = 2699 kg/m³* | | | | | | | | | | |
| 20 | 5.707 | 6.338 | 5.763 | 3.796 | 3.233 | 108.42 | 30.64 | 87.91 | 28.21 | 23.69 |
| 40 | 5.780 | 6.396 | 5.846 | 3.810 | 3.247 | 110.41 | 32.06 | 90.17 | 28.46 | 26.35 |
| 60 | 5.823 | 6.431 | 5.896 | 3.818 | 3.261 | 111.61 | 32.92 | 91.52 | 28.70 | 27.80 |
| 80 | 5.854 | 6.455 | 5.931 | 3.824 | 3.275 | 112.44 | 33.51 | 92.49 | 28.95 | 28.66 |
| 100 | 5.878 | 6.474 | 5.959 | 3.829 | 3.289 | 113.11 | 33.96 | 93.25 | 29.20 | 29.27 |
| 200 | 5.953 | 6.533 | 6.045 | 3.843 | 3.359 | 115.19 | 35.47 | 95.65 | 30.45 | 30.15 |
| 400 | 6.029 | 6.593 | 6.133 | 3.857 | 3.499 | 117.30 | 37.00 | 98.11 | 33.04 | 28.50 |
| 600 | 6.069 | 6.633 | 6.173 | 3.873 | 3.515 | 118.73 | 37.76 | 99.41 | 33.35 | 29.19 |
| 800 | 6.109 | 6.673 | 6.213 | 3.889 | 3.531 | 120.17 | 38.52 | 100.73 | 33.65 | 29.88 |
| 1000 | 6.149 | 6.713 | 6.253 | 3.905 | 3.547 | 121.61 | 39.30 | 102.05 | 33.96 | 30.58 |
| *MRX14 (Phyllite, Leech River Complex, San Juan Point, Vancouver Island, BC), Density = 2701 kg/m³* | | | | | | | | | | |
| 20 | 5.690 | 6.319 | 5.851 | 3.630 | 3.179 | 107.85 | 36.67 | 87.45 | 27.30 | 31.82 |
| 40 | 5.820 | 6.397 | 5.943 | 3.637 | 3.242 | 110.53 | 39.07 | 91.49 | 28.39 | 32.27 |
| 60 | 5.885 | 6.443 | 5.998 | 3.644 | 3.280 | 112.13 | 40.39 | 93.54 | 29.06 | 32.70 |
| 80 | 5.930 | 6.476 | 6.036 | 3.650 | 3.307 | 113.28 | 41.31 | 94.98 | 29.54 | 32.94 |
| 100 | 5.955 | 6.502 | 6.067 | 3.656 | 3.328 | 114.19 | 41.98 | 95.78 | 29.92 | 33.36 |
| 200 | 6.055 | 6.582 | 6.162 | 3.682 | 3.394 | 117.02 | 43.78 | 99.03 | 31.11 | 34.25 |
| 400 | 6.130 | 6.663 | 6.259 | 3.720 | 3.462 | 119.91 | 45.16 | 101.50 | 32.37 | 35.55 |
| 600 | 6.202 | 6.703 | 6.299 | 3.743 | 3.478 | 121.36 | 45.67 | 103.89 | 32.67 | 35.81 |
| 800 | 6.274 | 6.743 | 6.339 | 3.766 | 3.494 | 122.81 | 46.19 | 106.32 | 32.97 | 36.07 |
| 1000 | 6.346 | 6.783 | 6.379 | 3.789 | 3.510 | 124.27 | 46.72 | 108.77 | 33.28 | 36.31 |
| *MRX15 (Phyllite, Pelona, Lytle Ck., CA), Density = 2720 kg/m³* | | | | | | | | | | |
| 20 | 3.836 | 5.228 | 4.554 | 2.865 | 2.597 | 74.34 | 29.69 | 40.03 | 18.35 | 14.76 |
| 40 | 4.330 | 5.514 | 4.963 | 3.031 | 2.792 | 82.70 | 32.72 | 51.00 | 21.20 | 21.92 |
| 60 | 4.663 | 5.719 | 5.233 | 3.148 | 2.927 | 88.96 | 35.05 | 59.14 | 23.30 | 26.13 |
| 80 | 4.898 | 5.875 | 5.421 | 3.236 | 3.028 | 93.88 | 36.92 | 65.25 | 24.93 | 28.55 |
| 100 | 5.069 | 5.996 | 5.556 | 3.304 | 3.195 | 97.79 | 38.40 | 69.89 | 27.77 | 26.80 |
| 200 | 5.462 | 6.317 | 5.859 | 3.482 | 3.303 | 108.54 | 42.58 | 81.15 | 29.68 | 31.03 |
| 400 | 5.672 | 6.496 | 6.024 | 3.582 | 3.414 | 114.78 | 44.98 | 87.51 | 31.69 | 31.42 |
| 600 | 5.771 | 6.560 | 6.106 | 3.620 | 3.458 | 117.05 | 45.76 | 90.59 | 32.53 | 32.62 |
| 800 | 5.842 | 6.601 | 6.164 | 3.646 | 3.488 | 118.52 | 46.20 | 92.83 | 33.08 | 33.63 |
| 1000 | 5.898 | 6.634 | 6.209 | 3.666 | 3.511 | 119.71 | 46.60 | 94.62 | 33.52 | 34.37 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX16 (Phyllite, Chugach, Valdez, AK), Density = 2723 kg/m³* | | | | | | | | | | |
| 20 | 4.514 | 5.666 | 4.770 | 3.556 | 2.916 | 87.40 | 18.54 | 55.48 | 23.15 | 1.44 |
| 40 | 4.802 | 5.835 | 4.985 | 3.622 | 3.008 | 92.71 | 21.27 | 62.79 | 24.63 | 4.73 |
| 60 | 5.008 | 5.950 | 5.173 | 3.669 | 3.076 | 96.40 | 23.09 | 68.29 | 25.76 | 9.14 |
| 80 | 5.167 | 6.049 | 5.300 | 3.707 | 3.137 | 99.64 | 24.80 | 72.70 | 26.80 | 10.88 |
| 100 | 5.272 | 6.100 | 5.401 | 3.725 | 3.174 | 101.31 | 25.74 | 75.68 | 27.42 | 13.57 |
| 200 | 5.637 | 6.306 | 5.734 | 3.828 | 3.314 | 108.28 | 28.48 | 86.53 | 29.91 | 20.69 |
| 400 | 5.887 | 6.477 | 5.983 | 3.899 | 3.415 | 114.22 | 31.43 | 94.37 | 31.76 | 26.30 |
| 600 | 5.994 | 6.547 | 6.084 | 3.931 | 3.456 | 116.72 | 32.56 | 97.83 | 32.51 | 28.56 |
| 800 | 6.065 | 6.589 | 6.147 | 3.950 | 3.481 | 118.22 | 33.25 | 100.16 | 33.00 | 29.95 |
| 1000 | 6.121 | 6.620 | 6.195 | 3.965 | 3.501 | 119.33 | 33.72 | 102.02 | 33.37 | 31.02 |
| *MRX17 (Phyllite, Leech River Complex, Murton Ck., Vancouver Island, BC), Density = 2730 kg/m³* | | | | | | | | | | |
| 20 | 4.730 | 6.690 | 5.250 | 4.015 | 2.720 | 122.18 | 34.17 | 61.08 | 20.20 | 3.49 |
| 40 | 4.790 | 6.760 | 5.311 | 4.024 | 2.740 | 124.74 | 36.33 | 62.64 | 20.50 | 4.45 |
| 60 | 4.842 | 6.801 | 5.346 | 4.034 | 2.755 | 126.25 | 37.40 | 64.01 | 20.72 | 4.71 |
| 80 | 4.888 | 6.830 | 5.413 | 4.042 | 2.770 | 127.35 | 38.15 | 65.23 | 20.95 | 8.42 |
| 100 | 4.927 | 6.853 | 5.465 | 4.049 | 2.788 | 128.21 | 38.70 | 66.27 | 21.22 | 10.89 |
| 200 | 5.057 | 6.925 | 5.630 | 4.074 | 2.860 | 130.90 | 40.28 | 69.82 | 22.33 | 17.73 |
| 400 | 5.192 | 6.997 | 5.800 | 4.105 | 2.945 | 133.64 | 41.63 | 73.59 | 23.68 | 24.05 |
| 600 | 5.232 | 7.037 | 5.841 | 4.127 | 2.961 | 135.19 | 42.19 | 74.73 | 23.94 | 24.84 |
| 800 | 5.272 | 7.078 | 5.882 | 4.149 | 2.977 | 136.75 | 42.76 | 75.88 | 24.20 | 25.64 |
| 1000 | 5.312 | 7.118 | 5.923 | 4.171 | 2.993 | 138.32 | 43.33 | 77.03 | 24.46 | 26.45 |
| *MRX18 (Phyllite, Chugach, Valdez, AK), Density = 2734 kg/m³* | | | | | | | | | | |
| 20 | 5.478 | 6.298 | 5.400 | 3.943 | 3.316 | 108.45 | 23.44 | 82.04 | 30.07 | 1.40 |
| 40 | 5.640 | 6.384 | 5.489 | 3.967 | 3.354 | 111.42 | 25.36 | 86.97 | 30.76 | 1.82 |
| 60 | 5.719 | 6.433 | 5.601 | 3.982 | 3.379 | 113.15 | 26.43 | 89.42 | 31.21 | 5.99 |
| 80 | 5.766 | 6.465 | 5.699 | 3.993 | 3.396 | 114.29 | 27.11 | 90.91 | 31.54 | 10.32 |
| 100 | 5.800 | 6.488 | 5.731 | 4.001 | 3.409 | 115.09 | 27.57 | 91.98 | 31.78 | 10.97 |
| 200 | 5.899 | 6.546 | 5.983 | 4.020 | 3.443 | 117.16 | 28.77 | 95.15 | 32.41 | 23.70 |
| 400 | 5.999 | 6.597 | 6.151 | 4.035 | 3.465 | 118.98 | 29.96 | 98.38 | 32.83 | 31.72 |
| 600 | 6.058 | 6.627 | 6.220 | 4.043 | 3.477 | 120.05 | 30.69 | 100.32 | 33.05 | 34.54 |
| 800 | 6.100 | 6.648 | 6.253 | 4.048 | 3.485 | 120.82 | 31.21 | 101.73 | 33.20 | 35.46 |
| 1000 | 6.133 | 6.664 | 6.273 | 4.052 | 3.491 | 121.42 | 31.62 | 102.83 | 33.32 | 35.78 |
| *MRX19 (Phyllite, Chugach, Valdez, AK), Density = 2739 kg/m³* | | | | | | | | | | |
| 20 | 5.128 | 6.231 | 5.260 | 3.887 | 3.181 | 106.33 | 23.56 | 72.03 | 27.71 | 2.44 |
| 40 | 5.414 | 6.365 | 5.421 | 3.934 | 3.251 | 110.97 | 26.19 | 80.28 | 28.95 | 4.07 |
| 60 | 5.581 | 6.416 | 5.589 | 3.964 | 3.299 | 112.73 | 26.66 | 85.31 | 29.81 | 10.19 |
| 80 | 5.676 | 6.431 | 5.703 | 3.980 | 3.322 | 113.26 | 26.49 | 88.24 | 30.23 | 15.27 |
| 100 | 5.708 | 6.467 | 5.758 | 3.990 | 3.331 | 114.53 | 27.32 | 89.24 | 30.38 | 17.32 |
| 200 | 5.852 | 6.545 | 5.883 | 4.025 | 3.380 | 117.33 | 28.58 | 93.80 | 31.28 | 20.13 |
| 400 | 5.949 | 6.606 | 5.988 | 4.046 | 3.420 | 119.53 | 29.85 | 96.94 | 32.03 | 22.99 |
| 600 | 6.004 | 6.641 | 6.049 | 4.057 | 3.443 | 120.78 | 30.62 | 98.74 | 32.46 | 24.71 |
| 800 | 6.044 | 6.666 | 6.093 | 4.064 | 3.459 | 121.69 | 31.22 | 100.06 | 32.76 | 25.98 |
| 1000 | 6.074 | 6.685 | 6.127 | 4.070 | 3.471 | 122.40 | 31.66 | 101.05 | 33.00 | 26.98 |
| *MRX20 (Phyllite, Leech River Complex, Port Renfrew, Vancouver Island, BC), Density = 2746 kg/m³* | | | | | | | | | | |
| 20 | 5.165 | 6.565 | 5.345 | 4.035 | 2.912 | 118.35 | 28.93 | 73.26 | 23.29 | 7.07 |
| 40 | 5.293 | 6.643 | 5.467 | 4.048 | 2.939 | 121.18 | 31.19 | 76.93 | 23.72 | 11.24 |
| 60 | 5.370 | 6.688 | 5.540 | 4.059 | 2.957 | 122.83 | 32.34 | 79.19 | 24.01 | 13.67 |
| 80 | 5.425 | 6.721 | 5.593 | 4.068 | 2.970 | 124.04 | 33.16 | 80.82 | 24.22 | 15.42 |
| 100 | 5.468 | 6.747 | 5.634 | 4.078 | 2.982 | 124.99 | 33.65 | 82.10 | 24.42 | 16.69 |
| 200 | 5.604 | 6.826 | 5.763 | 4.117 | 3.012 | 127.95 | 34.86 | 86.24 | 24.91 | 20.97 |
| 400 | 5.743 | 6.906 | 5.895 | 4.153 | 3.048 | 130.97 | 36.24 | 90.57 | 25.51 | 25.19 |
| 600 | 5.780 | 6.944 | 5.935 | 4.168 | 3.063 | 132.39 | 36.98 | 91.74 | 25.76 | 26.01 |
| 800 | 5.817 | 6.981 | 5.975 | 4.183 | 3.078 | 133.83 | 37.73 | 92.92 | 26.02 | 26.85 |
| 1000 | 5.854 | 7.019 | 6.015 | 4.198 | 3.093 | 135.27 | 38.48 | 94.10 | 26.27 | 27.69 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX21 (Phyllite, Leech River Complex, Port Renfrew, Vancouver Island, BC), Density = 2753 kg/m³* | | | | | | | | | | |
| 20 | 4.955 | 6.664 | 5.423 | 4.044 | 2.585 | 122.24 | 32.20 | 67.59 | 18.40 | 21.81 |
| 40 | 5.120 | 6.721 | 5.522 | 4.056 | 2.625 | 124.34 | 33.76 | 72.17 | 18.97 | 24.47 |
| 60 | 5.220 | 6.760 | 5.581 | 4.066 | 2.655 | 125.79 | 34.76 | 75.02 | 19.41 | 25.62 |
| 80 | 5.292 | 6.795 | 5.623 | 4.074 | 2.680 | 127.11 | 35.73 | 77.10 | 19.77 | 26.06 |
| 100 | 5.348 | 6.813 | 5.655 | 4.080 | 2.705 | 127.79 | 36.13 | 78.74 | 20.14 | 26.47 |
| 200 | 5.527 | 6.900 | 5.758 | 4.108 | 2.795 | 131.07 | 38.15 | 84.10 | 21.51 | 26.52 |
| 400 | 5.712 | 6.992 | 5.863 | 4.144 | 2.910 | 134.59 | 40.04 | 89.82 | 23.31 | 25.55 |
| 600 | 5.750 | 7.032 | 5.901 | 4.160 | 2.924 | 136.11 | 40.83 | 91.02 | 23.54 | 26.22 |
| 800 | 5.788 | 7.071 | 5.939 | 4.176 | 2.938 | 137.65 | 41.63 | 92.23 | 23.76 | 26.88 |
| 1000 | 5.826 | 7.111 | 5.977 | 4.192 | 2.952 | 139.19 | 42.43 | 93.44 | 23.99 | 27.56 |
| *MRX22 (Phyllite, Haast, Lake Hawea, S. Island, New Zealand), Density = 2765 kg/m³* | | | | | | | | | | |
| 20 | 3.643 | 5.316 | 4.366 | 3.317 | 2.375 | 78.14 | 17.30 | 36.70 | 15.60 | 9.31 |
| 40 | 4.053 | 5.562 | 4.753 | 3.434 | 2.559 | 85.52 | 20.31 | 45.42 | 18.10 | 18.07 |
| 60 | 4.344 | 5.733 | 5.005 | 3.520 | 2.688 | 90.86 | 22.34 | 52.18 | 19.97 | 22.91 |
| 80 | 4.569 | 5.865 | 5.202 | 3.587 | 2.787 | 95.10 | 23.94 | 57.72 | 21.47 | 26.81 |
| 100 | 4.749 | 5.971 | 5.348 | 3.640 | 2.866 | 98.56 | 25.29 | 62.36 | 22.70 | 29.23 |
| 200 | 5.283 | 6.286 | 5.722 | 3.787 | 3.096 | 109.24 | 29.93 | 77.17 | 26.50 | 32.73 |
| 400 | 5.675 | 6.518 | 6.018 | 3.872 | 3.260 | 117.45 | 34.54 | 89.05 | 29.39 | 36.75 |
| 600 | 5.850 | 6.616 | 6.140 | 3.900 | 3.332 | 121.01 | 36.90 | 94.63 | 30.70 | 38.01 |
| 800 | 5.967 | 6.680 | 6.167 | 3.918 | 3.381 | 123.36 | 38.47 | 98.45 | 31.60 | 35.06 |
| 1000 | 6.059 | 6.729 | 6.173 | 3.931 | 3.418 | 125.18 | 39.73 | 101.51 | 32.29 | 31.71 |
| *MRX23 (Phyllite, Haast, Fish River, S. Island, New Zealand), Density = 2770 kg/m³* | | | | | | | | | | |
| 20 | 2.939 | 5.621 | 4.403 | 3.523 | 2.280 | 87.51 | 18.76 | 23.93 | 14.39 | 5.09 |
| 40 | 3.541 | 5.889 | 4.676 | 3.674 | 2.503 | 96.06 | 21.28 | 34.74 | 17.35 | 5.74 |
| 60 | 3.961 | 6.070 | 4.933 | 3.778 | 2.654 | 102.06 | 22.99 | 43.45 | 19.50 | 11.35 |
| 80 | 4.270 | 6.201 | 5.124 | 3.851 | 2.755 | 106.51 | 24.35 | 50.50 | 21.02 | 15.37 |
| 100 | 4.504 | 6.299 | 5.235 | 3.903 | 2.838 | 109.89 | 25.49 | 56.19 | 22.31 | 15.62 |
| 200 | 5.102 | 6.543 | 5.785 | 4.014 | 3.022 | 118.57 | 29.31 | 72.10 | 25.30 | 35.16 |
| 400 | 5.474 | 6.687 | 6.093 | 4.054 | 3.124 | 123.86 | 32.79 | 83.01 | 27.03 | 45.34 |
| 600 | 5.656 | 6.752 | 6.211 | 4.068 | 3.173 | 126.28 | 34.59 | 88.60 | 27.89 | 48.20 |
| 800 | 5.787 | 6.797 | 6.290 | 4.078 | 3.208 | 127.97 | 35.85 | 92.77 | 28.50 | 49.87 |
| 1000 | 5.892 | 6.832 | 6.353 | 4.085 | 3.234 | 129.29 | 36.84 | 96.17 | 28.96 | 51.25 |
| *MRX24 (Phyllite, Haast, White Point, S. Island, New Zealand), Density = 2783 kg/m³* | | | | | | | | | | |
| 20 | 4.122 | 5.930 | 4.850 | 3.743 | 2.869 | 97.85 | 19.87 | 47.29 | 22.91 | 1.95 |
| 40 | 4.677 | 6.211 | 5.179 | 3.843 | 3.133 | 107.34 | 25.14 | 60.88 | 27.32 | 2.58 |
| 60 | 5.042 | 6.387 | 5.451 | 3.908 | 3.247 | 113.53 | 28.52 | 70.75 | 29.34 | 9.00 |
| 80 | 5.294 | 6.505 | 5.663 | 3.951 | 3.326 | 117.75 | 30.86 | 78.00 | 30.78 | 14.94 |
| 100 | 5.472 | 6.586 | 5.781 | 3.980 | 3.381 | 120.71 | 32.55 | 83.33 | 31.81 | 16.91 |
| 200 | 5.859 | 6.760 | 6.120 | 4.042 | 3.502 | 127.18 | 36.24 | 95.53 | 34.13 | 26.84 |
| 400 | 6.055 | 6.861 | 6.345 | 4.074 | 3.562 | 130.99 | 38.60 | 102.03 | 35.31 | 35.49 |
| 600 | 6.150 | 6.914 | 6.420 | 4.094 | 3.590 | 133.02 | 39.73 | 105.26 | 35.86 | 37.25 |
| 800 | 6.219 | 6.952 | 6.442 | 4.102 | 3.609 | 134.48 | 40.83 | 107.64 | 36.25 | 36.20 |
| 1000 | 6.273 | 6.981 | 6.458 | 4.111 | 3.624 | 135.63 | 41.56 | 109.51 | 36.55 | 35.29 |
| *MRX25 (Phyllite, Haast, Lake Hawea, S. Island, New Zealand), Density = 3002 kg/m³* | | | | | | | | | | |
| 20 | 3.804 | 5.259 | 4.479 | 3.292 | 2.649 | 83.01 | 17.94 | 43.44 | 21.07 | 9.20 |
| 40 | 4.588 | 5.601 | 5.049 | 3.463 | 2.883 | 94.16 | 22.16 | 63.19 | 24.95 | 21.99 |
| 60 | 5.052 | 5.830 | 5.348 | 3.575 | 3.033 | 102.04 | 25.30 | 76.62 | 27.61 | 25.69 |
| 80 | 5.335 | 5.993 | 5.539 | 3.652 | 3.133 | 107.80 | 27.73 | 85.44 | 29.46 | 27.58 |
| 100 | 5.513 | 6.112 | 5.670 | 3.705 | 3.201 | 112.13 | 29.71 | 91.24 | 30.75 | 28.93 |
| 200 | 5.828 | 6.387 | 6.005 | 3.815 | 3.339 | 122.44 | 35.06 | 101.97 | 33.47 | 36.62 |
| 400 | 5.983 | 6.532 | 6.148 | 3.862 | 3.406 | 128.09 | 38.54 | 107.46 | 34.83 | 38.80 |
| 600 | 6.069 | 6.599 | 6.190 | 3.883 | 3.440 | 130.73 | 40.20 | 110.57 | 35.51 | 37.68 |
| 800 | 6.131 | 6.646 | 6.198 | 3.898 | 3.464 | 132.60 | 41.37 | 112.84 | 36.01 | 35.22 |
| 1000 | 6.180 | 6.684 | 6.209 | 3.909 | 3.482 | 134.10 | 42.35 | 114.65 | 36.40 | 33.62 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX26 (Quartz Mica Schist, Yukon Tanana, Salcha River, AK), Density = 2633 kg/m³* | | | | | | | | | | |
| 20 | 4.119 | 5.385 | 4.440 | 3.426 | 2.635 | 76.35 | 14.55 | 44.67 | 18.29 | 1.07 |
| 40 | 4.370 | 5.518 | 4.581 | 3.507 | 2.752 | 80.17 | 15.41 | 50.28 | 19.94 | 0.54 |
| 60 | 4.534 | 5.603 | 4.721 | 3.560 | 2.831 | 82.66 | 15.93 | 54.13 | 21.10 | 2.85 |
| 80 | 4.657 | 5.667 | 4.799 | 3.599 | 2.892 | 84.55 | 16.33 | 57.10 | 22.01 | 2.89 |
| 100 | 4.756 | 5.717 | 4.864 | 3.630 | 2.941 | 86.06 | 16.66 | 59.56 | 22.77 | 3.02 |
| 200 | 5.059 | 5.874 | 5.151 | 3.724 | 3.097 | 90.84 | 17.80 | 67.39 | 25.26 | 8.09 |
| 400 | 5.332 | 6.013 | 5.409 | 3.802 | 3.234 | 95.19 | 19.09 | 74.86 | 27.53 | 12.72 |
| 600 | 5.441 | 6.084 | 5.480 | 3.840 | 3.299 | 97.48 | 19.82 | 77.95 | 28.66 | 11.96 |
| 800 | 5.481 | 6.134 | 5.535 | 3.867 | 3.341 | 99.06 | 20.33 | 79.10 | 29.39 | 12.29 |
| 1000 | 5.493 | 6.172 | 5.571 | 3.887 | 3.372 | 100.29 | 20.73 | 79.45 | 29.95 | 12.41 |
| *MRX27 (Quartz Mica Schist, Leech River Complex, J. Elliott Ck, Vancouver Island, BC), Density = 2646 kg/m³* | | | | | | | | | | |
| 20 | 5.072 | 5.695 | 5.357 | 3.615 | 3.189 | 85.80 | 16.65 | 68.07 | 26.91 | 20.29 |
| 40 | 5.204 | 5.762 | 5.475 | 3.635 | 3.223 | 87.83 | 17.91 | 71.66 | 27.49 | 23.27 |
| 60 | 5.283 | 5.808 | 5.546 | 3.651 | 3.243 | 89.24 | 18.70 | 73.85 | 27.83 | 25.01 |
| 80 | 5.340 | 5.844 | 5.596 | 3.665 | 3.257 | 90.37 | 19.28 | 75.45 | 28.07 | 26.16 |
| 100 | 5.384 | 5.874 | 5.635 | 3.680 | 3.268 | 91.28 | 19.62 | 76.70 | 28.26 | 27.05 |
| 200 | 5.525 | 5.967 | 5.760 | 3.749 | 3.303 | 94.21 | 19.83 | 80.77 | 28.87 | 29.97 |
| 400 | 5.669 | 6.086 | 5.887 | 3.815 | 3.338 | 98.01 | 20.99 | 85.04 | 29.48 | 32.58 |
| 600 | 5.762 | 6.168 | 5.984 | 3.865 | 3.362 | 100.65 | 21.60 | 87.85 | 29.91 | 35.12 |
| 800 | 5.855 | 6.249 | 6.081 | 3.915 | 3.386 | 103.33 | 22.22 | 90.71 | 30.34 | 37.71 |
| 1000 | 5.948 | 6.331 | 6.178 | 3.965 | 3.410 | 106.04 | 22.84 | 93.61 | 30.77 | 40.35 |
| *MRX28 (Quartz Mica Schist, Leech River Complex, N. Sombrio River, Vancouver Island, BC), Density = 2654 kg/m³* | | | | | | | | | | |
| 20 | 4.400 | 5.870 | 5.200 | 3.610 | 2.980 | 91.45 | 22.27 | 51.38 | 23.57 | 20.65 |
| 40 | 4.820 | 5.957 | 5.323 | 3.635 | 3.060 | 94.18 | 24.04 | 61.66 | 24.85 | 19.92 |
| 60 | 5.001 | 6.009 | 5.397 | 3.655 | 3.108 | 95.82 | 24.91 | 66.38 | 25.64 | 19.92 |
| 80 | 5.130 | 6.045 | 5.449 | 3.670 | 3.143 | 96.98 | 25.49 | 69.85 | 26.22 | 19.80 |
| 100 | 5.221 | 6.074 | 5.490 | 3.680 | 3.170 | 97.92 | 26.03 | 72.35 | 26.67 | 19.79 |
| 200 | 5.490 | 6.164 | 5.620 | 3.725 | 3.255 | 100.84 | 27.19 | 79.99 | 28.12 | 19.88 |
| 400 | 5.701 | 6.255 | 5.753 | 3.780 | 3.342 | 103.84 | 28.00 | 86.26 | 29.64 | 20.58 |
| 600 | 5.847 | 6.315 | 5.878 | 3.824 | 3.399 | 105.84 | 28.22 | 90.73 | 30.66 | 23.26 |
| 800 | 5.993 | 6.375 | 6.003 | 3.868 | 3.456 | 107.86 | 28.45 | 95.32 | 31.70 | 25.95 |
| 1000 | 6.139 | 6.435 | 6.128 | 3.912 | 3.513 | 109.90 | 28.67 | 100.02 | 32.75 | 28.66 |
| *MRX29 (Quartz Mica Schist, Haast, Fox Glacier, S. Island, New Zealand), Density = 2656 kg/m³* | | | | | | | | | | |
| 20 | 4.104 | 5.523 | 4.584 | 3.027 | 2.341 | 81.02 | 32.36 | 44.73 | 14.56 | 14.42 |
| 40 | 4.433 | 5.790 | 4.869 | 3.187 | 2.495 | 89.03 | 35.09 | 52.19 | 16.54 | 17.59 |
| 60 | 4.643 | 5.944 | 5.057 | 3.303 | 2.605 | 93.84 | 35.89 | 57.27 | 18.02 | 20.09 |
| 80 | 4.793 | 6.039 | 5.193 | 3.390 | 2.689 | 96.87 | 35.81 | 61.02 | 19.20 | 22.19 |
| 100 | 4.905 | 6.101 | 5.294 | 3.457 | 2.756 | 98.86 | 35.37 | 63.90 | 20.17 | 23.81 |
| 200 | 5.207 | 6.225 | 5.552 | 3.620 | 2.948 | 102.93 | 33.31 | 72.01 | 23.09 | 27.80 |
| 400 | 5.454 | 6.300 | 5.723 | 3.691 | 3.080 | 105.41 | 33.05 | 79.01 | 25.20 | 29.81 |
| 600 | 5.596 | 6.340 | 5.811 | 3.710 | 3.135 | 106.76 | 33.65 | 83.17 | 26.10 | 31.01 |
| 800 | 5.699 | 6.369 | 5.874 | 3.722 | 3.170 | 107.73 | 34.15 | 86.26 | 26.69 | 31.94 |
| 1000 | 5.780 | 6.391 | 5.923 | 3.731 | 3.197 | 108.49 | 34.54 | 88.74 | 27.14 | 32.65 |
| *MRX30 (Quartz Mica Schist, S. Brooks Range, Coldfoot, AK), Density = 2657 kg/m* | | | | | | | | | | |
| 20 | 4.200 | 5.426 | 4.601 | 3.451 | 2.597 | 78.21 | 14.93 | 46.87 | 17.91 | 10.03 |
| 40 | 4.541 | 5.609 | 4.878 | 3.562 | 2.774 | 83.59 | 16.17 | 54.79 | 20.45 | 13.43 |
| 60 | 4.789 | 5.819 | 5.100 | 3.648 | 2.905 | 89.95 | 19.23 | 60.94 | 22.42 | 15.23 |
| 80 | 4.952 | 5.893 | 5.279 | 3.702 | 2.989 | 92.27 | 19.44 | 65.16 | 23.73 | 19.86 |
| 100 | 5.077 | 5.960 | 5.457 | 3.786 | 3.033 | 94.38 | 18.21 | 68.49 | 24.44 | 26.30 |
| 200 | 5.418 | 6.157 | 5.763 | 3.892 | 3.182 | 100.72 | 20.23 | 78.00 | 26.89 | 32.26 |
| 400 | 5.673 | 6.292 | 5.952 | 3.936 | 3.262 | 105.19 | 22.86 | 85.51 | 28.27 | 35.61 |
| 600 | 5.800 | 6.357 | 6.059 | 3.948 | 3.294 | 107.36 | 24.53 | 89.38 | 28.82 | 38.48 |
| 800 | 5.889 | 6.401 | 6.133 | 3.956 | 3.314 | 108.87 | 25.70 | 92.15 | 29.18 | 40.51 |
| 1000 | 5.958 | 6.436 | 6.192 | 3.962 | 3.331 | 110.06 | 26.64 | 94.32 | 29.47 | 42.18 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX31 (Quartz Mica Schist, Leech River Complex, S. Sombrio River, Vancouver Island, BC), Density = 2669 kg/m³* | | | | | | | | | | |
| 20 | 5.189 | 5.810 | 5.417 | 3.215 | 2.992 | 90.10 | 34.92 | 71.87 | 23.89 | 27.06 |
| 40 | 5.296 | 5.876 | 5.523 | 3.249 | 3.030 | 92.15 | 35.81 | 74.86 | 24.50 | 29.63 |
| 60 | 5.360 | 5.915 | 5.586 | 3.269 | 3.052 | 93.37 | 36.32 | 76.68 | 24.86 | 31.20 |
| 80 | 5.406 | 5.943 | 5.632 | 3.284 | 3.068 | 94.27 | 36.70 | 78.00 | 25.12 | 32.37 |
| 100 | 5.442 | 5.965 | 5.667 | 3.295 | 3.080 | 94.97 | 37.01 | 79.04 | 25.32 | 33.25 |
| 200 | 5.555 | 6.033 | 5.778 | 3.330 | 3.119 | 97.14 | 37.95 | 82.36 | 25.96 | 36.09 |
| 400 | 5.670 | 6.102 | 5.891 | 3.365 | 3.158 | 99.36 | 38.92 | 85.81 | 26.62 | 39.08 |
| 600 | 5.742 | 6.150 | 5.931 | 3.391 | 3.186 | 100.93 | 39.55 | 88.00 | 27.09 | 38.81 |
| 800 | 5.814 | 6.198 | 5.971 | 3.417 | 3.214 | 102.51 | 40.19 | 90.22 | 27.57 | 38.52 |
| 1000 | 5.886 | 6.246 | 6.011 | 3.443 | 3.242 | 104.11 | 40.83 | 92.47 | 28.05 | 38.23 |
| *MRX32 (Quartz Mica Schist, Leech River Complex, Sombrio Point, Vancouver Island, BC), Density = 2695 kg/m³* | | | | | | | | | | |
| 20 | 5.700 | 6.050 | 5.850 | 3.516 | 3.034 | 98.64 | 32.01 | 87.56 | 24.81 | 41.51 |
| 40 | 5.760 | 6.102 | 5.875 | 3.526 | 3.064 | 100.33 | 33.32 | 89.41 | 25.30 | 40.34 |
| 60 | 5.795 | 6.138 | 5.900 | 3.534 | 3.081 | 101.52 | 34.20 | 90.50 | 25.58 | 40.22 |
| 80 | 5.820 | 6.164 | 5.920 | 3.542 | 3.095 | 102.38 | 34.76 | 91.29 | 25.82 | 40.20 |
| 100 | 5.840 | 6.183 | 5.935 | 3.550 | 3.103 | 103.01 | 35.08 | 91.92 | 25.95 | 40.27 |
| 200 | 5.901 | 6.242 | 6.001 | 3.576 | 3.130 | 105.00 | 36.08 | 93.85 | 26.40 | 41.65 |
| 400 | 5.964 | 6.303 | 6.095 | 3.620 | 3.143 | 107.05 | 36.42 | 95.86 | 26.62 | 45.32 |
| 600 | 6.011 | 6.353 | 6.145 | 3.653 | 3.149 | 108.77 | 36.85 | 97.38 | 26.72 | 46.79 |
| 800 | 6.058 | 6.404 | 6.195 | 3.686 | 3.155 | 110.51 | 37.28 | 98.91 | 26.83 | 48.28 |
| 1000 | 6.105 | 6.454 | 6.245 | 3.719 | 3.161 | 112.26 | 37.71 | 100.45 | 26.93 | 49.78 |
| *MRX33 (Quartz Mica Schist, Leech River Complex, N. Sombrio River, Vancouver Island, BC), Density = 2695 kg/m³* | | | | | | | | | | |
| 20 | 5.477 | 6.017 | 5.271 | 3.618 | 3.216 | 97.55 | 27.00 | 80.84 | 27.87 | 3.72 |
| 40 | 5.575 | 6.102 | 5.443 | 3.643 | 3.255 | 100.35 | 28.81 | 83.76 | 28.55 | 9.63 |
| 60 | 5.634 | 6.153 | 5.546 | 3.658 | 3.278 | 102.02 | 29.89 | 85.55 | 28.96 | 13.30 |
| 80 | 5.675 | 6.189 | 5.621 | 3.669 | 3.294 | 103.21 | 30.65 | 86.79 | 29.24 | 16.08 |
| 100 | 5.708 | 6.217 | 5.679 | 3.677 | 3.307 | 104.15 | 31.27 | 87.81 | 29.47 | 18.22 |
| 200 | 5.811 | 6.305 | 5.865 | 3.703 | 3.347 | 107.13 | 33.23 | 91.00 | 30.19 | 25.37 |
| 400 | 5.915 | 6.395 | 6.057 | 3.728 | 3.388 | 110.20 | 35.29 | 94.29 | 30.94 | 33.14 |
| 600 | 5.945 | 6.413 | 6.081 | 3.739 | 3.421 | 110.82 | 35.47 | 95.25 | 31.54 | 32.73 |
| 800 | 5.975 | 6.431 | 6.105 | 3.750 | 3.454 | 111.44 | 35.65 | 96.21 | 32.15 | 32.31 |
| 1000 | 6.005 | 6.449 | 6.129 | 3.761 | 3.487 | 112.07 | 35.82 | 97.18 | 32.77 | 31.88 |
| *MRX34 (Quartz Mica Schist, Leech River Complex, J. Elliott Ck, Vancouver Island, BC), Density = 2709 kg/m³* | | | | | | | | | | |
| 20 | 5.511 | 6.095 | 5.883 | 3.480 | 2.960 | 100.62 | 35.01 | 82.28 | 23.74 | 48.01 |
| 40 | 5.597 | 6.168 | 5.959 | 3.501 | 2.991 | 103.06 | 36.65 | 84.86 | 24.24 | 49.40 |
| 60 | 5.648 | 6.212 | 6.004 | 3.516 | 3.010 | 104.54 | 37.56 | 86.42 | 24.54 | 50.20 |
| 80 | 5.684 | 6.243 | 6.036 | 3.527 | 3.031 | 105.57 | 38.17 | 87.52 | 24.89 | 50.54 |
| 100 | 5.713 | 6.267 | 6.061 | 3.535 | 3.035 | 106.40 | 38.69 | 88.42 | 24.95 | 51.19 |
| 200 | 5.802 | 6.343 | 6.139 | 3.554 | 3.080 | 108.98 | 40.54 | 91.19 | 25.70 | 52.20 |
| 400 | 5.893 | 6.420 | 6.218 | 3.565 | 3.130 | 111.64 | 42.78 | 94.08 | 26.54 | 53.06 |
| 600 | 5.913 | 6.478 | 6.274 | 3.578 | 3.171 | 113.68 | 44.32 | 94.72 | 27.24 | 54.04 |
| 800 | 5.933 | 6.537 | 6.330 | 3.591 | 3.212 | 115.74 | 45.88 | 95.36 | 27.95 | 55.02 |
| 1000 | 5.953 | 6.595 | 6.386 | 3.604 | 3.253 | 117.83 | 47.45 | 96.00 | 28.67 | 56.00 |
| *MRX35 (Quartz Mica Schist, Haast, Douglas Bluff, S. Island, New Zealand), Density = 2715 kg/m³* | | | | | | | | | | |
| 20 | 2.467 | 4.793 | 3.849 | 2.974 | 2.156 | 62.37 | 14.34 | 16.52 | 12.62 | 4.11 |
| 40 | 3.446 | 5.353 | 4.633 | 3.320 | 2.489 | 77.81 | 17.96 | 32.24 | 16.81 | 21.66 |
| 60 | 4.098 | 5.730 | 5.177 | 3.542 | 2.710 | 89.15 | 21.03 | 45.60 | 19.93 | 34.07 |
| 80 | 4.543 | 5.993 | 5.402 | 3.689 | 2.861 | 97.51 | 23.61 | 56.03 | 22.22 | 33.52 |
| 100 | 4.850 | 6.179 | 5.532 | 3.788 | 2.966 | 103.66 | 25.75 | 63.87 | 23.88 | 31.17 |
| 200 | 5.476 | 6.580 | 5.802 | 3.978 | 3.179 | 117.56 | 31.63 | 81.41 | 27.43 | 25.45 |
| 400 | 5.743 | 6.758 | 5.959 | 4.053 | 3.264 | 123.98 | 34.79 | 89.56 | 28.92 | 25.56 |
| 600 | 5.871 | 6.835 | 6.020 | 4.087 | 3.300 | 126.82 | 36.12 | 93.57 | 29.57 | 24.98 |
| 800 | 5.965 | 6.889 | 6.043 | 4.111 | 3.327 | 128.85 | 37.08 | 96.61 | 30.04 | 23.08 |
| 1000 | 6.041 | 6.932 | 6.065 | 4.130 | 3.347 | 130.45 | 37.83 | 99.09 | 30.42 | 21.84 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX36 (Quartz Mica Schist, Haast, Halfway Bluff, S. Island, New Zealand), Density = 2718 kg/m³* | | | | | | | | | | |
| 20 | 3.855 | 5.459 | 4.450 | 3.372 | 2.616 | 81.00 | 19.19 | 40.39 | 18.59 | 1.20 |
| 40 | 4.430 | 5.715 | 4.745 | 3.524 | 2.822 | 88.77 | 21.27 | 53.34 | 21.64 | 2.20 |
| 60 | 4.783 | 5.734 | 4.868 | 3.627 | 2.950 | 89.36 | 17.85 | 62.18 | 23.65 | 2.41 |
| 80 | 5.011 | 6.004 | 5.115 | 3.699 | 3.102 | 97.96 | 23.58 | 68.25 | 26.15 | 3.27 |
| 100 | 5.163 | 6.090 | 5.242 | 3.750 | 3.093 | 100.81 | 24.36 | 72.45 | 26.00 | 7.90 |
| 200 | 5.472 | 6.304 | 5.598 | 3.862 | 3.220 | 108.00 | 26.92 | 81.38 | 28.17 | 17.41 |
| 400 | 5.651 | 6.436 | 5.789 | 3.911 | 3.293 | 112.57 | 29.42 | 86.80 | 29.47 | 21.96 |
| 600 | 5.750 | 6.501 | 5.881 | 3.931 | 3.332 | 114.87 | 30.87 | 89.86 | 30.18 | 23.86 |
| 800 | 5.823 | 6.547 | 5.947 | 3.944 | 3.360 | 116.50 | 31.94 | 92.16 | 30.68 | 25.26 |
| 1000 | 5.879 | 6.583 | 5.998 | 3.955 | 3.382 | 117.79 | 32.76 | 93.94 | 31.08 | 26.32 |
| *MRX37 (Quartz Mica Schist, Haast, Halfway Bluff, S. Island, New Zealand), Density = 2719 kg/m³* | | | | | | | | | | |
| 20 | 3.324 | 4.356 | 3.665 | 2.768 | 2.130 | 51.59 | 9.94 | 30.03 | 12.34 | 4.38 |
| 40 | 4.044 | 4.907 | 4.200 | 3.039 | 2.439 | 65.47 | 15.26 | 44.46 | 16.17 | 6.29 |
| 60 | 4.518 | 5.280 | 4.555 | 3.228 | 2.640 | 75.82 | 19.15 | 55.50 | 18.95 | 7.39 |
| 80 | 4.841 | 5.543 | 4.881 | 3.366 | 2.775 | 83.55 | 21.92 | 63.73 | 20.94 | 12.62 |
| 100 | 5.066 | 5.731 | 5.107 | 3.469 | 2.867 | 89.31 | 23.86 | 69.78 | 22.35 | 16.37 |
| 200 | 5.536 | 6.145 | 5.576 | 3.715 | 3.055 | 102.66 | 27.60 | 83.33 | 25.37 | 24.42 |
| 400 | 5.757 | 6.331 | 5.784 | 3.834 | 3.135 | 108.97 | 29.02 | 90.13 | 26.72 | 28.15 |
| 600 | 5.865 | 6.410 | 5.880 | 3.881 | 3.171 | 111.72 | 29.82 | 93.53 | 27.34 | 30.00 |
| 800 | 5.943 | 6.466 | 5.949 | 3.913 | 3.197 | 113.68 | 30.42 | 96.03 | 27.78 | 31.38 |
| 1000 | 6.005 | 6.510 | 6.003 | 3.938 | 3.217 | 115.24 | 30.91 | 98.04 | 28.14 | 32.44 |
| *MRX38 (Quartz Mica Schist, Leech River Complex, Parkinson Ck., Vancouver Island, BC), Density = 2728 kg/m³* | | | | | | | | | | |
| 20 | 5.789 | 6.118 | 6.013 | 3.604 | 3.467 | 102.11 | 31.24 | 91.42 | 32.79 | 34.71 |
| 40 | 5.864 | 6.178 | 6.066 | 3.626 | 3.492 | 104.12 | 32.39 | 93.81 | 33.27 | 35.07 |
| 60 | 5.909 | 6.214 | 6.098 | 3.645 | 3.506 | 105.34 | 32.85 | 95.25 | 33.53 | 35.34 |
| 80 | 5.940 | 6.239 | 6.120 | 3.661 | 3.517 | 106.19 | 33.06 | 96.25 | 33.74 | 35.47 |
| 100 | 5.965 | 6.259 | 6.138 | 3.671 | 3.525 | 106.87 | 33.34 | 97.07 | 33.90 | 35.62 |
| 200 | 6.042 | 6.320 | 6.192 | 3.696 | 3.550 | 108.96 | 34.43 | 99.59 | 34.38 | 36.00 |
| 400 | 6.121 | 6.382 | 6.248 | 3.718 | 3.575 | 111.11 | 35.69 | 102.21 | 34.87 | 36.46 |
| 600 | 6.181 | 6.411 | 6.272 | 3.749 | 3.593 | 112.12 | 35.44 | 104.22 | 35.22 | 35.91 |
| 800 | 6.241 | 6.440 | 6.296 | 3.780 | 3.611 | 113.14 | 35.18 | 106.26 | 35.57 | 35.35 |
| 1000 | 6.301 | 6.469 | 6.320 | 3.811 | 3.629 | 114.16 | 34.92 | 108.31 | 35.93 | 34.78 |
| *MRX39 (Quartz Mica Schist, Orocopia, S. Gavilan Hills, CA), Density = 2731 kg/m³* | | | | | | | | | | |
| 20 | 4.761 | 6.151 | 5.163 | 3.714 | 3.064 | 103.33 | 27.99 | 61.90 | 25.64 | 5.44 |
| 40 | 5.194 | 6.276 | 5.350 | 3.786 | 3.127 | 107.57 | 29.28 | 73.68 | 26.70 | 8.45 |
| 60 | 5.384 | 6.339 | 5.474 | 3.822 | 3.165 | 109.74 | 29.95 | 79.17 | 27.36 | 11.61 |
| 80 | 5.497 | 6.384 | 5.564 | 3.846 | 3.193 | 111.30 | 30.51 | 82.52 | 27.84 | 14.09 |
| 100 | 5.574 | 6.418 | 5.634 | 3.863 | 3.215 | 112.49 | 30.98 | 84.85 | 28.22 | 16.16 |
| 200 | 5.764 | 6.521 | 5.829 | 3.909 | 3.285 | 116.13 | 32.67 | 90.73 | 29.47 | 21.66 |
| 400 | 5.897 | 6.623 | 5.979 | 3.948 | 3.354 | 119.78 | 34.64 | 94.97 | 30.72 | 25.08 |
| 600 | 5.956 | 6.683 | 6.055 | 3.967 | 3.392 | 121.96 | 36.00 | 96.88 | 31.41 | 26.67 |
| 800 | 5.991 | 6.726 | 6.107 | 3.980 | 3.418 | 123.55 | 37.03 | 98.02 | 31.90 | 27.78 |
| 1000 | 6.014 | 6.760 | 6.174 | 3.989 | 3.438 | 124.80 | 37.89 | 98.78 | 32.27 | 30.54 |
| *MRX40 (Quartz Mica Schist, Yukon Tanana, Black Rapids, AK), Density = 2751 kg/m³* | | | | | | | | | | |
| 20 | 5.348 | 6.224 | 5.782 | 3.861 | 3.395 | 106.58 | 24.57 | 78.70 | 31.70 | 26.24 |
| 40 | 5.619 | 6.347 | 5.879 | 3.909 | 3.443 | 110.82 | 26.77 | 86.86 | 32.61 | 24.86 |
| 60 | 5.738 | 6.414 | 5.973 | 3.938 | 3.473 | 113.16 | 27.84 | 90.59 | 33.18 | 27.02 |
| 80 | 5.800 | 6.454 | 6.033 | 3.957 | 3.493 | 114.58 | 28.41 | 92.55 | 33.57 | 28.59 |
| 100 | 5.838 | 6.480 | 6.070 | 3.971 | 3.508 | 115.53 | 28.76 | 93.76 | 33.85 | 29.45 |
| 200 | 5.933 | 6.545 | 6.177 | 4.004 | 3.548 | 117.83 | 29.64 | 96.83 | 34.63 | 32.53 |
| 400 | 6.024 | 6.600 | 6.264 | 4.027 | 3.579 | 119.83 | 30.60 | 99.84 | 35.24 | 34.86 |
| 600 | 6.078 | 6.632 | 6.310 | 4.040 | 3.595 | 121.00 | 31.19 | 101.64 | 35.55 | 36.01 |
| 800 | 6.117 | 6.655 | 6.346 | 4.050 | 3.605 | 121.84 | 31.61 | 102.94 | 35.75 | 37.08 |
| 1000 | 6.147 | 6.673 | 6.378 | 4.057 | 3.613 | 122.50 | 31.95 | 103.96 | 35.90 | 38.20 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX41 (Quartz Mica Schist, Thomaston, CT), Density = 2753 kg/m³* | | | | | | | | | | |
| 20 | 4.055 | 5.739 | 4.606 | 3.471 | 2.601 | 90.69 | 24.34 | 45.28 | 18.63 | 1.29 |
| 40 | 4.398 | 5.916 | 4.800 | 3.657 | 2.705 | 96.37 | 22.73 | 53.25 | 20.14 | 3.38 |
| 60 | 4.630 | 6.044 | 4.925 | 3.776 | 2.775 | 100.55 | 22.04 | 59.03 | 21.20 | 3.89 |
| 80 | 4.801 | 6.141 | 5.029 | 3.857 | 2.828 | 103.82 | 21.89 | 63.46 | 22.02 | 4.84 |
| 100 | 4.932 | 6.218 | 5.105 | 3.915 | 2.870 | 106.44 | 22.06 | 66.95 | 22.68 | 5.14 |
| 200 | 5.277 | 6.431 | 5.382 | 4.042 | 3.000 | 113.85 | 23.89 | 76.66 | 24.78 | 10.02 |
| 400 | 5.510 | 6.561 | 5.623 | 4.117 | 3.107 | 118.51 | 25.18 | 83.58 | 26.58 | 16.48 |
| 600 | 5.625 | 6.608 | 5.790 | 4.156 | 3.157 | 120.21 | 25.11 | 87.12 | 27.44 | 23.43 |
| 800 | 5.707 | 6.637 | 5.894 | 4.184 | 3.189 | 121.26 | 24.89 | 89.67 | 27.99 | 27.63 |
| 1000 | 5.772 | 6.659 | 5.981 | 4.205 | 3.213 | 122.06 | 24.69 | 91.71 | 28.41 | 31.36 |
| *MRX42 (Quartz Mica Schist, Haast, Fox Glacier, S. Island, New Zealand), Density = 2765 kg/m³* | | | | | | | | | | |
| 20 | 3.790 | 4.778 | 4.694 | 3.155 | 2.608 | 63.12 | 8.08 | 39.72 | 18.80 | 31.48 |
| 40 | 4.377 | 5.266 | 4.980 | 3.464 | 2.818 | 76.66 | 10.31 | 52.97 | 21.96 | 27.00 |
| 60 | 4.721 | 5.576 | 5.220 | 3.657 | 2.944 | 85.95 | 12.00 | 61.63 | 23.97 | 27.55 |
| 80 | 4.930 | 5.781 | 5.333 | 3.780 | 3.023 | 92.41 | 13.39 | 67.20 | 25.27 | 25.39 |
| 100 | 5.063 | 5.920 | 5.434 | 3.860 | 3.075 | 96.89 | 14.49 | 70.88 | 26.14 | 25.53 |
| 200 | 5.312 | 6.198 | 5.701 | 4.002 | 3.180 | 106.20 | 17.63 | 78.02 | 27.95 | 30.03 |
| 400 | 5.458 | 6.327 | 5.886 | 4.054 | 3.241 | 110.69 | 19.80 | 82.37 | 29.04 | 35.44 |
| 600 | 5.541 | 6.391 | 5.998 | 4.078 | 3.276 | 112.92 | 20.95 | 84.89 | 29.67 | 39.30 |
| 800 | 5.600 | 6.437 | 6.034 | 4.096 | 3.301 | 114.55 | 21.77 | 86.71 | 30.12 | 39.09 |
| 1000 | 5.648 | 6.472 | 6.045 | 4.109 | 3.320 | 115.82 | 22.45 | 88.20 | 30.47 | 37.75 |
| *MRX43 (Quartz Mica Schist, Thomaston, CT), Density = 2771 kg/m³* | | | | | | | | | | |
| 20 | 4.939 | 5.630 | 5.248 | 3.508 | 3.061 | 87.84 | 19.66 | 67.61 | 25.96 | 21.93 |
| 40 | 5.077 | 5.766 | 5.418 | 3.592 | 3.142 | 92.11 | 20.59 | 71.41 | 27.35 | 25.22 |
| 60 | 5.157 | 5.852 | 5.551 | 3.648 | 3.188 | 94.91 | 21.15 | 73.68 | 28.16 | 29.19 |
| 80 | 5.214 | 5.917 | 5.643 | 3.688 | 3.220 | 97.02 | 21.63 | 75.32 | 28.73 | 31.89 |
| 100 | 5.258 | 5.968 | 5.703 | 3.718 | 3.245 | 98.71 | 22.09 | 76.60 | 29.18 | 33.27 |
| 200 | 5.399 | 6.126 | 5.869 | 3.796 | 3.325 | 104.01 | 24.16 | 80.76 | 30.63 | 36.25 |
| 400 | 5.550 | 6.269 | 6.003 | 3.849 | 3.413 | 108.89 | 26.80 | 85.35 | 32.27 | 37.06 |
| 600 | 5.644 | 6.344 | 6.060 | 3.876 | 3.468 | 111.51 | 28.26 | 88.27 | 33.32 | 36.03 |
| 800 | 5.712 | 6.394 | 6.085 | 3.895 | 3.508 | 113.30 | 29.23 | 90.42 | 34.09 | 34.21 |
| 1000 | 5.766 | 6.433 | 6.099 | 3.910 | 3.539 | 114.66 | 29.96 | 92.14 | 34.70 | 32.41 |
| *MRX44 (Quartz Mica Schist, Leech River Complex, Minute Ck., Vancouver Island, BC), Density = 2776 kg/m³* | | | | | | | | | | |
| 20 | 5.735 | 5.950 | 5.801 | 3.650 | 3.170 | 98.28 | 24.31 | 91.30 | 27.90 | 5.31 |
| 40 | 5.780 | 6.054 | 5.871 | 3.662 | 3.196 | 101.74 | 27.29 | 92.74 | 28.36 | 14.99 |
| 60 | 5.825 | 6.115 | 5.913 | 3.672 | 3.216 | 103.80 | 28.94 | 94.19 | 28.71 | 20.58 |
| 80 | 5.855 | 6.159 | 5.942 | 3.682 | 3.236 | 105.30 | 30.03 | 95.16 | 29.07 | 25.85 |
| 100 | 5.880 | 6.194 | 5.965 | 3.689 | 3.247 | 106.50 | 30.95 | 95.98 | 29.27 | 29.67 |
| 200 | 5.940 | 6.302 | 6.037 | 3.712 | 3.281 | 110.25 | 33.75 | 97.95 | 29.88 | 39.96 |
| 400 | 6.035 | 6.411 | 6.110 | 3.732 | 3.305 | 114.10 | 36.77 | 101.11 | 30.32 | 45.24 |
| 600 | 6.076 | 6.473 | 6.215 | 3.747 | 3.325 | 116.31 | 38.36 | 102.48 | 30.69 | 47.88 |
| 800 | 6.117 | 6.535 | 6.320 | 3.762 | 3.345 | 118.55 | 39.98 | 103.87 | 31.06 | 49.85 |
| 1000 | 6.158 | 6.597 | 6.425 | 3.777 | 3.365 | 120.81 | 41.61 | 105.27 | 31.43 | 49.93 |
| *MRX45 (Quartz Mica Schist, Torrington, CT), Density = 2912 kg/m³* | | | | | | | | | | |
| 20 | 5.016 | 5.856 | 5.302 | 3.533 | 3.157 | 99.86 | 27.17 | 73.27 | 29.02 | 17.25 |
| 40 | 5.173 | 5.980 | 5.520 | 3.600 | 3.220 | 104.13 | 28.65 | 77.93 | 30.19 | 24.50 |
| 60 | 5.274 | 6.059 | 5.650 | 3.641 | 3.259 | 106.92 | 29.72 | 81.00 | 30.93 | 28.70 |
| 80 | 5.347 | 6.117 | 5.764 | 3.670 | 3.288 | 108.94 | 30.52 | 83.26 | 31.48 | 33.16 |
| 100 | 5.403 | 6.160 | 5.845 | 3.692 | 3.311 | 110.49 | 31.11 | 85.02 | 31.92 | 36.19 |
| 200 | 5.562 | 6.282 | 6.063 | 3.757 | 3.382 | 114.92 | 32.70 | 90.08 | 33.31 | 43.99 |
| 400 | 5.690 | 6.396 | 6.205 | 3.819 | 3.449 | 119.14 | 34.21 | 94.27 | 34.65 | 47.30 |
| 600 | 5.759 | 6.471 | 6.280 | 3.855 | 3.486 | 121.92 | 35.39 | 96.57 | 35.39 | 48.72 |
| 800 | 5.808 | 6.528 | 6.345 | 3.880 | 3.511 | 124.09 | 36.40 | 98.22 | 35.91 | 50.54 |
| 1000 | 5.846 | 6.574 | 6.383 | 3.900 | 3.531 | 125.86 | 37.27 | 99.52 | 36.31 | 50.99 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX46 (Quartzofeldspathic Biotite Gneiss, Rupal, Nanga Parbat, Pakistan), Density = 2610 kg/m³* | | | | | | | | | | |
| 20 | 3.898 | 5.225 | 5.038 | 2.994 | 2.540 | 71.26 | 24.46 | 39.66 | 16.84 | 41.25 |
| 40 | 4.250 | 5.386 | 5.114 | 3.183 | 2.758 | 75.70 | 22.81 | 47.14 | 19.85 | 33.51 |
| 60 | 4.505 | 5.581 | 5.171 | 3.310 | 2.902 | 81.28 | 24.09 | 52.97 | 21.97 | 26.48 |
| 80 | 4.700 | 5.709 | 5.218 | 3.398 | 3.001 | 85.05 | 24.78 | 57.66 | 23.51 | 21.73 |
| 100 | 4.852 | 5.799 | 5.261 | 3.462 | 3.072 | 87.76 | 25.19 | 61.44 | 24.62 | 18.68 |
| 200 | 5.262 | 6.012 | 5.435 | 3.606 | 3.236 | 94.34 | 26.46 | 72.27 | 27.32 | 14.83 |
| 400 | 5.492 | 6.158 | 5.688 | 3.682 | 3.331 | 98.97 | 28.21 | 78.72 | 28.96 | 21.10 |
| 600 | 5.574 | 6.235 | 5.870 | 3.718 | 3.381 | 101.46 | 29.31 | 81.09 | 29.83 | 28.04 |
| 800 | 5.628 | 6.290 | 6.006 | 3.743 | 3.415 | 103.26 | 30.13 | 82.67 | 30.43 | 33.65 |
| 1000 | 5.669 | 6.333 | 6.108 | 3.763 | 3.442 | 104.68 | 30.76 | 83.88 | 30.92 | 37.84 |
| *MRX47 (Quartzofeldspathic Biotite Gneiss, Yukon Tanana, Birch Lake, AK), Density = 2641 kg/m* | | | | | | | | | | |
| 20 | 4.882 | 5.735 | 5.005 | 3.561 | 3.046 | 86.86 | 19.86 | 62.94 | 24.50 | 6.18 |
| 40 | 5.019 | 5.843 | 5.198 | 3.624 | 3.106 | 90.17 | 20.78 | 66.54 | 25.48 | 11.57 |
| 60 | 5.105 | 5.911 | 5.339 | 3.663 | 3.150 | 92.29 | 21.42 | 68.83 | 26.20 | 16.01 |
| 80 | 5.168 | 5.960 | 5.445 | 3.690 | 3.183 | 93.82 | 21.91 | 70.55 | 26.75 | 19.47 |
| 100 | 5.219 | 5.997 | 5.499 | 3.710 | 3.209 | 94.99 | 22.31 | 71.94 | 27.19 | 20.50 |
| 200 | 5.386 | 6.101 | 5.683 | 3.764 | 3.278 | 98.30 | 23.45 | 76.60 | 28.38 | 25.31 |
| 400 | 5.557 | 6.186 | 5.810 | 3.812 | 3.316 | 101.06 | 24.29 | 81.55 | 29.05 | 28.08 |
| 600 | 5.653 | 6.233 | 5.890 | 3.840 | 3.329 | 102.60 | 24.71 | 84.38 | 29.28 | 30.51 |
| 800 | 5.717 | 6.266 | 5.940 | 3.860 | 3.337 | 103.70 | 25.01 | 86.33 | 29.42 | 31.91 |
| 1000 | 5.766 | 6.292 | 5.983 | 3.875 | 3.344 | 104.57 | 25.25 | 87.80 | 29.53 | 33.28 |
| *MRX48 (Quartzofeldspathic Biotite Gneiss, Rupal, Nanga Parbat, Pakistan), Density = 2645 kg/m³* | | | | | | | | | | |
| 20 | 3.555 | 4.733 | 4.914 | 2.595 | 2.243 | 59.24 | 23.63 | 33.43 | 13.30 | 53.56 |
| 40 | 4.140 | 5.057 | 5.160 | 2.876 | 2.548 | 67.64 | 23.90 | 45.33 | 17.17 | 49.11 |
| 60 | 4.537 | 5.278 | 5.350 | 3.070 | 2.752 | 73.68 | 23.83 | 54.45 | 20.03 | 46.57 |
| 80 | 4.817 | 5.441 | 5.501 | 3.209 | 2.894 | 78.29 | 23.82 | 61.37 | 22.15 | 45.40 |
| 100 | 5.020 | 5.566 | 5.623 | 3.311 | 2.994 | 81.93 | 23.95 | 66.66 | 23.71 | 45.15 |
| 200 | 5.488 | 5.899 | 5.975 | 3.542 | 3.210 | 92.03 | 25.68 | 79.66 | 27.25 | 48.30 |
| 400 | 5.737 | 6.127 | 6.178 | 3.645 | 3.307 | 99.28 | 28.99 | 87.06 | 28.93 | 50.63 |
| 600 | 5.856 | 6.241 | 6.230 | 3.685 | 3.351 | 103.01 | 31.17 | 90.70 | 29.69 | 48.82 |
| 800 | 5.942 | 6.322 | 6.256 | 3.713 | 3.382 | 105.72 | 32.79 | 93.39 | 30.24 | 46.73 |
| 1000 | 6.010 | 6.387 | 6.274 | 3.735 | 3.406 | 107.88 | 34.11 | 95.54 | 30.68 | 44.93 |
| *MRX49 (Quartzofeldspathic Biotite Gneiss, Astor River, Nanga Parbat, Pakistan), Density = 2656 kg/m³* | | | | | | | | | | |
| 20 | 3.959 | 4.920 | 4.807 | 2.829 | 2.528 | 64.29 | 21.78 | 41.63 | 16.38 | 35.81 |
| 40 | 4.130 | 5.194 | 5.035 | 3.006 | 2.678 | 71.65 | 23.65 | 45.30 | 18.49 | 37.68 |
| 60 | 4.553 | 5.371 | 5.188 | 3.122 | 2.778 | 76.62 | 24.84 | 55.06 | 19.98 | 36.15 |
| 80 | 4.730 | 5.499 | 5.303 | 3.204 | 2.851 | 80.30 | 25.77 | 59.42 | 21.13 | 36.33 |
| 100 | 4.866 | 5.594 | 5.397 | 3.265 | 2.906 | 83.11 | 26.49 | 62.89 | 22.02 | 36.83 |
| 200 | 5.227 | 5.842 | 5.688 | 3.412 | 3.055 | 90.65 | 28.81 | 72.57 | 24.56 | 40.51 |
| 400 | 5.474 | 6.008 | 5.939 | 3.507 | 3.163 | 95.87 | 30.54 | 79.59 | 26.45 | 46.28 |
| 600 | 5.596 | 6.090 | 6.062 | 3.556 | 3.217 | 98.49 | 31.32 | 83.17 | 27.40 | 49.20 |
| 800 | 5.683 | 6.146 | 6.144 | 3.591 | 3.255 | 100.33 | 31.83 | 85.78 | 28.09 | 50.96 |
| 1000 | 5.752 | 6.189 | 6.208 | 3.619 | 3.285 | 101.74 | 32.16 | 87.88 | 28.61 | 52.39 |
| *MRX50 (Quartzofeldspathic Biotite Gneiss, Tato, Nanga Parbat, Pakistan), Density = 2676 kg/m³* | | | | | | | | | | |
| 20 | 3.794 | 4.620 | 4.408 | 3.055 | 2.827 | 57.12 | 7.18 | 38.52 | 22.05 | 10.78 |
| 40 | 4.171 | 4.892 | 4.757 | 3.181 | 2.910 | 64.03 | 9.87 | 46.56 | 23.20 | 18.51 |
| 60 | 4.420 | 5.078 | 4.947 | 3.255 | 2.971 | 68.99 | 12.30 | 52.28 | 24.08 | 21.43 |
| 80 | 4.600 | 5.216 | 5.076 | 3.306 | 3.020 | 72.81 | 14.31 | 56.62 | 24.79 | 22.92 |
| 100 | 4.736 | 5.323 | 5.173 | 3.345 | 3.060 | 75.82 | 15.94 | 60.02 | 25.40 | 23.88 |
| 200 | 5.103 | 5.614 | 5.456 | 3.457 | 3.195 | 84.32 | 20.36 | 69.69 | 27.52 | 26.77 |
| 400 | 5.384 | 5.807 | 5.714 | 3.539 | 3.319 | 90.24 | 23.21 | 77.57 | 29.63 | 31.25 |
| 600 | 5.538 | 5.897 | 5.854 | 3.562 | 3.373 | 93.04 | 25.16 | 82.07 | 30.60 | 34.43 |
| 800 | 5.650 | 5.959 | 5.950 | 3.559 | 3.403 | 95.01 | 27.22 | 85.43 | 31.12 | 36.84 |
| 1000 | 5.739 | 6.007 | 6.021 | 3.544 | 3.422 | 96.56 | 29.34 | 88.14 | 31.46 | 38.63 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX51 (Quartzofeldspathic Biotite Gneiss, Tato, Nanga Parbat, Pakistan), Density = 2682 kg/m³* | | | | | | | | | | |
| 20 | 3.026 | 3.866 | 4.457 | 2.535 | 2.138 | 40.09 | 5.62 | 24.56 | 12.25 | 49.24 |
| 40 | 3.726 | 4.478 | 4.805 | 2.847 | 2.468 | 53.78 | 10.30 | 37.23 | 16.34 | 45.11 |
| 60 | 4.207 | 4.903 | 5.046 | 3.064 | 2.684 | 64.46 | 14.10 | 47.47 | 19.32 | 41.38 |
| 80 | 4.549 | 5.206 | 5.224 | 3.222 | 2.830 | 72.69 | 17.00 | 55.50 | 21.48 | 38.72 |
| 100 | 4.795 | 5.426 | 5.359 | 3.338 | 2.931 | 78.96 | 19.20 | 61.67 | 23.04 | 37.04 |
| 200 | 5.346 | 5.921 | 5.703 | 3.605 | 3.142 | 94.03 | 24.32 | 76.65 | 26.47 | 35.58 |
| 400 | 5.597 | 6.136 | 5.906 | 3.726 | 3.241 | 100.96 | 26.49 | 84.02 | 28.16 | 37.74 |
| 600 | 5.705 | 6.218 | 5.995 | 3.772 | 3.289 | 103.70 | 27.38 | 87.29 | 29.00 | 38.79 |
| 800 | 5.781 | 6.277 | 6.058 | 3.805 | 3.323 | 105.66 | 28.00 | 89.63 | 29.62 | 39.52 |
| 1000 | 5.843 | 6.322 | 6.106 | 3.829 | 3.351 | 107.19 | 28.55 | 91.57 | 30.11 | 39.96 |
| *MRX52 (Quartzofeldspathic Biotite Gneiss, Tato, Nanga Parbat, Pakistan), Density = 2693 kg/m³* | | | | | | | | | | |
| 20 | 3.764 | 4.270 | 4.882 | 2.882 | 2.649 | 49.10 | 4.38 | 38.15 | 18.89 | 46.73 |
| 40 | 4.223 | 4.712 | 5.209 | 3.018 | 2.799 | 59.79 | 10.75 | 48.03 | 21.10 | 49.79 |
| 60 | 4.552 | 5.006 | 5.367 | 3.103 | 2.901 | 67.47 | 15.61 | 55.80 | 22.66 | 47.94 |
| 80 | 4.797 | 5.212 | 5.467 | 3.163 | 2.974 | 73.14 | 19.26 | 61.97 | 23.82 | 45.56 |
| 100 | 4.982 | 5.360 | 5.538 | 3.209 | 3.028 | 77.37 | 21.91 | 66.84 | 24.69 | 43.50 |
| 200 | 5.438 | 5.707 | 5.726 | 3.329 | 3.159 | 87.70 | 28.01 | 79.64 | 26.87 | 39.07 |
| 400 | 5.655 | 5.906 | 5.876 | 3.404 | 3.234 | 93.92 | 31.51 | 86.12 | 28.17 | 39.50 |
| 600 | 5.731 | 6.005 | 5.948 | 3.431 | 3.269 | 97.09 | 33.71 | 88.45 | 28.77 | 40.10 |
| 800 | 5.782 | 6.075 | 5.994 | 3.445 | 3.293 | 99.39 | 35.47 | 90.03 | 29.20 | 40.24 |
| 1000 | 5.821 | 6.131 | 6.026 | 3.455 | 3.312 | 101.23 | 36.95 | 91.25 | 29.54 | 40.08 |
| *MRX53 (Quartzofeldspathic Biotite Gneiss, Rupal, Nanga Parbat, Pakistan), Density = 2699 kg/m³* | | | | | | | | | | |
| 20 | 3.495 | 4.928 | 4.728 | 3.155 | 2.520 | 65.53 | 11.80 | 32.97 | 17.14 | 34.60 |
| 40 | 4.007 | 5.226 | 5.126 | 3.343 | 2.692 | 73.71 | 13.40 | 43.34 | 19.55 | 42.37 |
| 60 | 4.340 | 5.421 | 5.321 | 3.465 | 2.803 | 79.32 | 14.51 | 50.84 | 21.21 | 43.80 |
| 80 | 4.570 | 5.561 | 5.461 | 3.550 | 2.880 | 83.45 | 15.44 | 56.37 | 22.39 | 44.92 |
| 100 | 4.735 | 5.664 | 5.564 | 3.608 | 2.935 | 86.57 | 16.30 | 60.51 | 23.25 | 45.81 |
| 200 | 5.116 | 5.927 | 5.852 | 3.734 | 3.062 | 94.80 | 19.56 | 70.64 | 25.30 | 50.58 |
| 400 | 5.359 | 6.109 | 5.978 | 3.793 | 3.138 | 100.73 | 23.07 | 77.51 | 26.57 | 49.76 |
| 600 | 5.490 | 6.205 | 6.055 | 3.821 | 3.177 | 103.92 | 25.11 | 81.35 | 27.24 | 49.98 |
| 800 | 5.586 | 6.275 | 6.111 | 3.841 | 3.205 | 106.26 | 26.64 | 84.22 | 27.72 | 50.14 |
| 1000 | 5.662 | 6.328 | 6.155 | 3.856 | 3.226 | 108.08 | 27.82 | 86.53 | 28.09 | 50.28 |
| *MRX54 (Quartzofeldspathic Biotite Gneiss, Inner Piedmont, ADCOH drill hole 1 (278.6 m), Westminster, SC), Density = 2718 kg/m³* | | | | | | | | | | |
| 20 | 5.115 | 5.529 | 5.453 | 3.417 | 3.190 | 83.08 | 19.61 | 71.10 | 27.65 | 28.93 |
| 40 | 5.498 | 5.960 | 5.729 | 3.661 | 3.424 | 96.55 | 23.71 | 82.17 | 31.87 | 24.86 |
| 60 | 5.693 | 6.166 | 5.881 | 3.807 | 3.538 | 103.32 | 24.54 | 88.10 | 34.02 | 23.76 |
| 80 | 5.798 | 6.270 | 5.979 | 3.869 | 3.595 | 106.85 | 25.46 | 91.36 | 35.12 | 24.48 |
| 100 | 5.857 | 6.327 | 6.054 | 3.902 | 3.625 | 108.81 | 26.06 | 93.24 | 35.71 | 26.31 |
| 200 | 5.961 | 6.425 | 6.198 | 3.947 | 3.668 | 112.21 | 27.53 | 96.57 | 36.56 | 30.86 |
| 400 | 6.032 | 6.493 | 6.295 | 3.972 | 3.692 | 114.60 | 28.85 | 98.89 | 37.05 | 34.13 |
| 600 | 6.073 | 6.533 | 6.360 | 3.986 | 3.706 | 116.00 | 29.64 | 100.26 | 37.34 | 36.66 |
| 800 | 6.103 | 6.561 | 6.395 | 3.996 | 3.716 | 117.01 | 30.21 | 101.24 | 37.54 | 37.69 |
| 1000 | 6.126 | 6.583 | 6.434 | 4.004 | 3.724 | 117.80 | 30.65 | 102.01 | 37.70 | 39.33 |
| *MRX55 (Quartzofeldspathic Biotite Gneiss, Inner Piedmont, ADCOH drill hole 1 (83.8 m), Westminster, SC), Density = 2721 kg/m³* | | | | | | | | | | |
| 20 | 4.313 | 5.349 | 5.104 | 3.491 | 3.219 | 77.84 | 11.52 | 50.62 | 28.19 | 19.25 |
| 40 | 5.001 | 5.745 | 5.501 | 3.662 | 3.407 | 89.81 | 16.84 | 68.05 | 31.58 | 21.49 |
| 60 | 5.386 | 5.946 | 5.715 | 3.749 | 3.507 | 96.20 | 19.71 | 78.93 | 33.46 | 22.60 |
| 80 | 5.608 | 6.054 | 5.862 | 3.795 | 3.562 | 99.72 | 21.34 | 85.58 | 34.52 | 24.89 |
| 100 | 5.740 | 6.116 | 5.980 | 3.821 | 3.594 | 101.79 | 22.33 | 89.65 | 35.15 | 28.31 |
| 200 | 5.954 | 6.231 | 6.231 | 3.864 | 3.647 | 105.65 | 24.40 | 96.46 | 36.18 | 37.73 |
| 400 | 6.058 | 6.315 | 6.310 | 3.891 | 3.677 | 108.52 | 26.13 | 99.86 | 36.78 | 38.81 |
| 600 | 6.116 | 6.364 | 6.330 | 3.906 | 3.694 | 110.21 | 27.18 | 101.78 | 37.12 | 37.70 |
| 800 | 6.157 | 6.400 | 6.344 | 3.918 | 3.706 | 111.44 | 27.90 | 103.15 | 37.36 | 36.89 |
| 1000 | 6.190 | 6.427 | 6.351 | 3.926 | 3.715 | 112.40 | 28.52 | 104.26 | 37.55 | 35.96 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX56 (Quartzofeldspathic Biotite Gneiss, Inner Piedmont, ADCOH drill hole 1 (174.7 m), Westminster, SC), Density = 2748 kg/m³* | | | | | | | | | | |
| 20 | 4.715 | 5.673 | 5.693 | 3.560 | 3.242 | 88.44 | 30.67 | 61.09 | 28.88 | 44.33 |
| 40 | 5.162 | 5.935 | 5.830 | 3.687 | 3.378 | 96.80 | 22.08 | 73.22 | 31.35 | 38.10 |
| 60 | 5.447 | 6.074 | 5.919 | 3.753 | 3.463 | 101.37 | 23.96 | 81.53 | 32.96 | 34.47 |
| 80 | 5.634 | 6.153 | 5.971 | 3.789 | 3.521 | 104.02 | 25.12 | 87.23 | 34.07 | 31.65 |
| 100 | 5.759 | 6.201 | 6.019 | 3.811 | 3.561 | 105.67 | 25.85 | 91.14 | 34.85 | 30.61 |
| 200 | 5.998 | 6.300 | 6.149 | 3.853 | 3.653 | 109.07 | 27.48 | 98.86 | 36.67 | 30.31 |
| 400 | 6.095 | 6.377 | 6.273 | 3.885 | 3.709 | 111.75 | 28.80 | 102.09 | 37.79 | 33.60 |
| 600 | 6.140 | 6.423 | 6.350 | 3.904 | 3.734 | 113.35 | 29.59 | 103.60 | 38.30 | 36.37 |
| 800 | 6.173 | 6.455 | 6.399 | 3.917 | 3.751 | 114.50 | 30.18 | 104.72 | 38.66 | 37.95 |
| 1000 | 6.198 | 6.480 | 6.441 | 3.927 | 3.764 | 115.39 | 30.63 | 105.57 | 38.93 | 39.51 |
| *MRX57 (Mylonite, Brevard Fault, ADCOH drill hole 2 (52.7 m), Walhalla, SC), Density = 2654 kg/m³* | | | | | | | | | | |
| 20 | 4.997 | 5.627 | 5.435 | 3.973 | 3.247 | 84.03 | 0.25 | 66.27 | 27.98 | 24.94 |
| 40 | 5.310 | 5.795 | 5.585 | 4.008 | 3.344 | 89.13 | 3.86 | 74.83 | 29.68 | 23.76 |
| 60 | 5.510 | 5.909 | 5.663 | 4.050 | 3.408 | 92.65 | 5.59 | 80.58 | 30.83 | 21.62 |
| 80 | 5.643 | 5.990 | 5.728 | 4.064 | 3.451 | 95.23 | 7.56 | 84.51 | 31.61 | 20.80 |
| 100 | 5.734 | 6.051 | 5.786 | 4.080 | 3.481 | 97.16 | 8.80 | 87.26 | 32.16 | 20.94 |
| 200 | 5.923 | 6.197 | 5.926 | 4.120 | 3.542 | 101.91 | 11.80 | 93.11 | 33.30 | 22.13 |
| 400 | 6.019 | 6.278 | 6.028 | 4.137 | 3.565 | 104.59 | 13.74 | 96.15 | 33.73 | 24.90 |
| 600 | 6.067 | 6.315 | 6.090 | 4.146 | 3.575 | 105.84 | 14.60 | 97.69 | 33.92 | 27.12 |
| 800 | 6.101 | 6.341 | 6.128 | 4.152 | 3.582 | 106.71 | 15.21 | 98.79 | 34.05 | 28.35 |
| 1000 | 6.128 | 6.361 | 6.161 | 4.155 | 3.587 | 107.39 | 15.75 | 99.66 | 34.15 | 29.54 |
| *MRX58 (Mylonite, Brevard Fault, ADCOH drill hole 2 (43.6 m), Walhalla, SC), Density = 2655 kg/m³* | | | | | | | | | | |
| 20 | 4.751 | 5.732 | 5.198 | 3.492 | 3.190 | 87.23 | 22.48 | 59.93 | 27.02 | 13.63 |
| 40 | 5.092 | 5.894 | 5.399 | 3.549 | 3.310 | 92.23 | 25.35 | 68.84 | 29.08 | 14.55 |
| 60 | 5.324 | 6.007 | 5.558 | 3.587 | 3.384 | 95.80 | 27.48 | 75.26 | 30.40 | 16.61 |
| 80 | 5.488 | 6.090 | 5.661 | 3.616 | 3.433 | 98.47 | 29.04 | 79.96 | 31.29 | 17.50 |
| 100 | 5.607 | 6.154 | 5.749 | 3.638 | 3.467 | 100.53 | 30.26 | 83.47 | 31.91 | 18.96 |
| 200 | 5.875 | 6.317 | 5.948 | 3.697 | 3.543 | 105.95 | 33.37 | 91.64 | 33.33 | 21.95 |
| 400 | 6.004 | 6.409 | 6.075 | 3.735 | 3.591 | 109.06 | 34.98 | 95.71 | 34.23 | 24.76 |
| 600 | 6.060 | 6.447 | 6.100 | 3.753 | 3.616 | 110.34 | 35.54 | 97.50 | 34.72 | 23.89 |
| 800 | 6.099 | 6.472 | 6.103 | 3.765 | 3.635 | 111.21 | 35.94 | 98.76 | 35.07 | 22.32 |
| 1000 | 6.130 | 6.492 | 6.115 | 3.774 | 3.649 | 111.90 | 36.27 | 99.77 | 35.35 | 21.70 |
| *MRX59 (Mylonite, Brevard Fault, ADCOH drill hole 2 (303.9 m), Walhalla, SC), Density = 2685 kg/m³* | | | | | | | | | | |
| 20 | 4.663 | 5.573 | 5.320 | 3.491 | 3.168 | 83.38 | 17.93 | 58.38 | 26.95 | 25.75 |
| 40 | 5.250 | 5.901 | 5.585 | 3.638 | 3.354 | 93.50 | 22.42 | 74.01 | 30.20 | 22.45 |
| 60 | 5.560 | 6.080 | 5.702 | 3.721 | 3.454 | 99.24 | 24.89 | 83.00 | 32.02 | 18.78 |
| 80 | 5.730 | 6.181 | 5.795 | 3.769 | 3.509 | 102.58 | 26.30 | 88.16 | 33.06 | 18.34 |
| 100 | 5.828 | 6.243 | 5.848 | 3.797 | 3.542 | 104.63 | 27.21 | 91.20 | 33.68 | 17.95 |
| 200 | 5.991 | 6.352 | 6.014 | 3.840 | 3.594 | 108.33 | 29.15 | 96.37 | 34.68 | 22.19 |
| 400 | 6.089 | 6.420 | 6.115 | 3.858 | 3.624 | 110.67 | 30.74 | 99.55 | 35.26 | 24.91 |
| 600 | 6.145 | 6.458 | 6.170 | 3.867 | 3.641 | 111.98 | 31.68 | 101.39 | 35.59 | 26.35 |
| 800 | 6.186 | 6.486 | 6.215 | 3.874 | 3.653 | 112.94 | 32.34 | 102.75 | 35.82 | 27.74 |
| 1000 | 6.218 | 6.508 | 6.244 | 3.879 | 3.662 | 113.70 | 32.90 | 103.81 | 36.01 | 28.40 |
| *MRX60 (Mylonite, Brevard Fault, ADCOH drill hole 2 (274.9 m), Walhalla, SC), Density = 2695 kg/m³* | | | | | | | | | | |
| 20 | 4.814 | 5.751 | 5.395 | 3.548 | 3.205 | 89.12 | 21.27 | 62.46 | 27.67 | 24.06 |
| 40 | 5.317 | 6.010 | 5.616 | 3.675 | 3.358 | 97.33 | 24.53 | 76.19 | 30.39 | 21.39 |
| 60 | 5.584 | 6.162 | 5.758 | 3.748 | 3.445 | 102.31 | 26.60 | 84.03 | 31.98 | 20.78 |
| 80 | 5.733 | 6.257 | 5.883 | 3.792 | 3.496 | 105.51 | 28.01 | 88.58 | 32.94 | 22.99 |
| 100 | 5.820 | 6.319 | 5.940 | 3.818 | 3.527 | 107.61 | 29.04 | 91.29 | 33.53 | 23.10 |
| 200 | 5.973 | 6.446 | 6.160 | 3.864 | 3.580 | 111.98 | 31.50 | 96.15 | 34.53 | 30.93 |
| 400 | 6.070 | 6.526 | 6.313 | 3.885 | 3.607 | 114.78 | 33.42 | 99.30 | 35.06 | 37.24 |
| 600 | 6.126 | 6.572 | 6.360 | 3.897 | 3.623 | 116.38 | 34.53 | 101.14 | 35.37 | 38.14 |
| 800 | 6.166 | 6.604 | 6.380 | 3.905 | 3.633 | 117.54 | 35.34 | 102.46 | 35.57 | 37.87 |
| 1000 | 6.198 | 6.629 | 6.392 | 3.912 | 3.641 | 118.41 | 35.92 | 103.53 | 35.73 | 37.42 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX61 (Mylonite, Alpine fault, Franz Josef, S. Island, New Zealand), Density = 2701 kg/m³* | | | | | | | | | | |
| 20 | 3.997 | 5.437 | 4.405 | 3.397 | 2.545 | 79.84 | 17.51 | 43.15 | 17.49 | 0.70 |
| 40 | 4.694 | 5.739 | 4.809 | 3.587 | 2.797 | 88.96 | 19.46 | 59.51 | 21.12 | 4.52 |
| 60 | 5.055 | 5.925 | 5.306 | 3.705 | 2.937 | 94.80 | 20.65 | 69.02 | 23.29 | 21.79 |
| 80 | 5.251 | 6.046 | 5.473 | 3.781 | 3.019 | 98.72 | 21.49 | 74.48 | 24.62 | 24.51 |
| 100 | 5.363 | 6.127 | 5.586 | 3.830 | 3.069 | 101.40 | 22.15 | 77.69 | 25.44 | 26.81 |
| 200 | 5.556 | 6.300 | 5.792 | 3.920 | 3.161 | 107.19 | 24.18 | 83.38 | 26.98 | 30.77 |
| 400 | 5.685 | 6.401 | 5.893 | 3.958 | 3.217 | 110.65 | 26.02 | 87.29 | 27.95 | 31.59 |
| 600 | 5.761 | 6.455 | 5.971 | 3.977 | 3.250 | 112.54 | 27.10 | 89.64 | 28.52 | 33.41 |
| 800 | 5.816 | 6.494 | 6.023 | 3.991 | 3.273 | 113.89 | 27.85 | 91.36 | 28.94 | 34.48 |
| 1000 | 5.859 | 6.524 | 6.055 | 4.002 | 3.291 | 114.96 | 28.44 | 92.72 | 29.25 | 34.75 |
| *MRX62 (Mylonite, Rocky Pt., S. Island, New Zealand), Density = 2677 kg/m³* | | | | | | | | | | |
| 20 | 4.595 | 5.134 | 4.682 | 3.303 | 2.982 | 70.56 | 12.15 | 56.52 | 23.80 | 5.40 |
| 40 | 5.023 | 5.467 | 5.164 | 3.451 | 3.165 | 80.00 | 16.23 | 67.54 | 26.82 | 14.91 |
| 60 | 5.303 | 5.682 | 5.382 | 3.546 | 3.283 | 86.43 | 19.11 | 75.28 | 28.84 | 16.20 |
| 80 | 5.492 | 5.828 | 5.561 | 3.601 | 3.360 | 90.93 | 21.50 | 80.74 | 30.22 | 19.03 |
| 100 | 5.621 | 5.930 | 5.649 | 3.652 | 3.413 | 94.12 | 22.71 | 84.58 | 31.18 | 18.91 |
| 200 | 5.883 | 6.146 | 5.910 | 3.735 | 3.519 | 101.10 | 26.41 | 92.65 | 33.14 | 23.69 |
| 400 | 5.992 | 6.252 | 6.043 | 3.766 | 3.568 | 104.64 | 28.70 | 96.12 | 34.07 | 26.85 |
| 600 | 6.041 | 6.303 | 6.099 | 3.780 | 3.592 | 106.33 | 29.83 | 97.69 | 34.53 | 27.93 |
| 800 | 6.076 | 6.340 | 6.122 | 3.789 | 3.608 | 107.59 | 30.72 | 98.83 | 34.85 | 27.60 |
| 1000 | 6.103 | 6.368 | 6.138 | 3.797 | 3.621 | 108.54 | 31.35 | 99.71 | 35.10 | 27.23 |
| *MRX63 (Mylonite, Brevard Fault, ADCOH drill hole 2 (212.5 m), Walhalla, SC), Density = 2727 kg/m³* | | | | | | | | | | |
| 20 | 5.532 | 6.023 | 5.564 | 3.649 | 3.412 | 98.93 | 26.31 | 83.45 | 31.75 | 13.51 |
| 40 | 5.774 | 6.210 | 5.740 | 3.709 | 3.484 | 105.15 | 30.12 | 90.92 | 33.09 | 14.96 |
| 60 | 5.896 | 6.318 | 5.853 | 3.741 | 3.521 | 108.84 | 32.51 | 94.80 | 33.80 | 16.94 |
| 80 | 5.963 | 6.384 | 5.918 | 3.760 | 3.543 | 111.14 | 34.03 | 96.97 | 34.23 | 18.02 |
| 100 | 6.003 | 6.427 | 5.982 | 3.772 | 3.559 | 112.64 | 35.04 | 98.27 | 34.54 | 20.16 |
| 200 | 6.087 | 6.516 | 6.110 | 3.803 | 3.606 | 115.77 | 36.89 | 101.04 | 35.46 | 23.83 |
| 400 | 6.156 | 6.575 | 6.180 | 3.829 | 3.654 | 117.87 | 37.91 | 103.34 | 36.41 | 24.44 |
| 600 | 6.196 | 6.608 | 6.200 | 3.845 | 3.684 | 119.06 | 38.43 | 104.69 | 37.01 | 23.33 |
| 800 | 6.225 | 6.632 | 6.207 | 3.856 | 3.706 | 119.93 | 38.83 | 105.67 | 37.44 | 22.01 |
| 1000 | 6.248 | 6.650 | 6.214 | 3.865 | 3.722 | 120.60 | 39.12 | 106.46 | 37.78 | 21.10 |
| *MRX64 (Mylonite, Alpine fault, Franz Josef, S. Island, New Zealand), Density = 2731 kg/m³* | | | | | | | | | | |
| 20 | 3.818 | 5.600 | 4.752 | 3.512 | 2.418 | 85.63 | 18.26 | 39.81 | 15.96 | 22.38 |
| 40 | 4.479 | 5.956 | 5.020 | 3.682 | 2.605 | 96.86 | 22.81 | 54.79 | 18.53 | 19.30 |
| 60 | 4.860 | 6.156 | 5.337 | 3.775 | 2.725 | 103.50 | 25.66 | 64.51 | 20.28 | 27.17 |
| 80 | 5.089 | 6.277 | 5.460 | 3.828 | 2.808 | 107.60 | 27.57 | 70.73 | 21.53 | 27.25 |
| 100 | 5.232 | 6.355 | 5.548 | 3.859 | 2.866 | 110.28 | 28.94 | 74.76 | 22.42 | 27.70 |
| 200 | 5.503 | 6.521 | 5.709 | 3.911 | 3.004 | 116.13 | 32.59 | 82.70 | 24.64 | 26.68 |
| 400 | 5.670 | 6.645 | 5.963 | 3.940 | 3.090 | 120.57 | 35.78 | 87.80 | 26.08 | 35.74 |
| 600 | 5.768 | 6.717 | 6.054 | 3.957 | 3.134 | 123.20 | 37.68 | 90.86 | 26.82 | 37.51 |
| 800 | 5.838 | 6.768 | 6.123 | 3.968 | 3.166 | 125.10 | 39.10 | 93.08 | 27.37 | 39.06 |
| 1000 | 5.894 | 6.809 | 6.201 | 3.977 | 3.189 | 126.60 | 40.21 | 94.87 | 27.77 | 41.96 |
| *MRX65 (Mylonite, Brevard Fault, ADCOH drill hole 2 (121.9m), Walhalla, SC), Density = 2743 kg/m³* | | | | | | | | | | |
| 20 | 5.393 | 6.209 | 5.549 | 3.845 | 3.376 | 105.75 | 24.64 | 79.78 | 31.25 | 11.73 |
| 40 | 5.506 | 6.276 | 5.668 | 3.879 | 3.418 | 108.04 | 25.50 | 83.16 | 32.04 | 14.95 |
| 60 | 5.573 | 6.316 | 5.793 | 3.901 | 3.444 | 109.41 | 25.92 | 85.19 | 32.53 | 20.39 |
| 80 | 5.619 | 6.344 | 5.861 | 3.916 | 3.463 | 110.38 | 26.25 | 86.61 | 32.89 | 22.94 |
| 100 | 5.654 | 6.365 | 5.920 | 3.927 | 3.476 | 111.13 | 26.53 | 87.69 | 33.14 | 25.41 |
| 200 | 5.752 | 6.429 | 6.043 | 3.953 | 3.512 | 113.36 | 27.63 | 90.75 | 33.83 | 29.62 |
| 400 | 5.844 | 6.491 | 6.109 | 3.971 | 3.487 | 115.55 | 29.05 | 93.68 | 33.35 | 32.51 |
| 600 | 5.899 | 6.528 | 6.130 | 3.980 | 3.555 | 116.87 | 29.97 | 95.45 | 34.66 | 29.79 |
| 800 | 5.937 | 6.555 | 6.143 | 3.986 | 3.565 | 117.84 | 30.68 | 96.69 | 34.86 | 29.17 |
| 1000 | 5.968 | 6.575 | 6.149 | 3.992 | 3.574 | 118.58 | 31.16 | 97.70 | 35.03 | 28.38 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX66 (Mylonite, Brevard Fault, ADCOH drill hole 2 (77.7 m), Walhalla, SC), Density = 2768 kg/m³* | | | | | | | | | | |
| 20 | 5.195 | 6.190 | 5.447 | 2.971 | 3.292 | 106.07 | 57.20 | 74.71 | 30.00 | 10.97 |
| 40 | 5.305 | 6.248 | 5.610 | 2.900 | 3.362 | 108.06 | 61.50 | 77.91 | 31.29 | 16.35 |
| 60 | 5.386 | 6.279 | 5.699 | 4.002 | 3.410 | 109.12 | 20.46 | 80.30 | 32.19 | 18.72 |
| 80 | 5.451 | 6.299 | 5.763 | 4.015 | 3.444 | 109.84 | 20.60 | 82.26 | 32.83 | 20.40 |
| 100 | 5.505 | 6.315 | 5.819 | 4.021 | 3.470 | 110.38 | 20.87 | 83.90 | 33.33 | 22.10 |
| 200 | 5.678 | 6.366 | 5.971 | 4.032 | 3.536 | 112.16 | 22.16 | 89.23 | 34.61 | 26.40 |
| 400 | 5.809 | 6.428 | 6.135 | 4.038 | 3.576 | 114.38 | 24.11 | 93.42 | 35.40 | 32.87 |
| 600 | 5.856 | 6.471 | 6.223 | 4.046 | 3.593 | 115.90 | 25.27 | 94.93 | 35.73 | 36.75 |
| 800 | 5.881 | 6.502 | 6.288 | 4.051 | 3.606 | 117.03 | 26.18 | 95.74 | 35.99 | 39.77 |
| 1000 | 5.898 | 6.527 | 6.344 | 4.055 | 3.616 | 117.93 | 26.90 | 96.30 | 36.19 | 42.57 |
| *MRX67 (Mylonite, Brevard Fault, ADCOH drill hole 2 (29.0 m), Walhalla, SC), Density = 2782 kg/m³* | | | | | | | | | | |
| 20 | 4.690 | 6.240 | 5.124 | 3.533 | 2.938 | 108.32 | 38.87 | 61.19 | 24.01 | 4.93 |
| 40 | 4.937 | 6.356 | 5.252 | 3.591 | 2.997 | 112.39 | 40.64 | 67.81 | 24.99 | 6.27 |
| 60 | 5.091 | 6.424 | 5.331 | 3.627 | 3.034 | 114.81 | 41.61 | 72.11 | 25.61 | 7.10 |
| 80 | 5.195 | 6.471 | 5.381 | 3.651 | 3.060 | 116.48 | 42.31 | 75.08 | 26.05 | 7.33 |
| 100 | 5.267 | 6.505 | 5.426 | 3.668 | 3.080 | 117.72 | 42.86 | 77.18 | 26.38 | 8.08 |
| 200 | 5.437 | 6.598 | 5.562 | 3.708 | 3.136 | 121.11 | 44.61 | 82.24 | 27.36 | 11.10 |
| 400 | 5.553 | 6.681 | 5.695 | 3.737 | 3.187 | 124.18 | 46.47 | 85.79 | 28.26 | 14.89 |
| 600 | 5.618 | 6.729 | 5.764 | 3.753 | 3.217 | 125.97 | 47.60 | 87.81 | 28.78 | 16.55 |
| 800 | 5.665 | 6.764 | 5.799 | 3.764 | 3.238 | 127.26 | 48.43 | 89.28 | 29.17 | 16.73 |
| 1000 | 5.701 | 6.790 | 5.812 | 3.772 | 3.255 | 128.24 | 49.08 | 90.42 | 29.48 | 15.88 |
| *MRX68 (Mylonite, Brevard Fault, ADCOH drill hole 2 (167.9 m), Walhalla, SC), Density = 2782 kg/m³* | | | | | | | | | | |
| 20 | 5.717 | 6.371 | 5.783 | 3.696 | 3.212 | 112.92 | 36.91 | 90.93 | 28.70 | 25.65 |
| 40 | 5.782 | 6.414 | 5.849 | 3.718 | 3.237 | 114.45 | 37.54 | 93.01 | 29.15 | 27.31 |
| 60 | 5.816 | 6.438 | 5.919 | 3.732 | 3.252 | 115.29 | 37.80 | 94.10 | 29.42 | 30.46 |
| 80 | 5.839 | 6.455 | 5.965 | 3.742 | 3.264 | 115.92 | 38.01 | 94.85 | 29.64 | 32.43 |
| 100 | 5.857 | 6.469 | 6.009 | 3.750 | 3.274 | 116.40 | 38.16 | 95.44 | 29.82 | 34.50 |
| 200 | 5.920 | 6.515 | 6.123 | 3.775 | 3.308 | 118.06 | 38.77 | 97.50 | 30.44 | 39.18 |
| 400 | 6.003 | 6.568 | 6.214 | 3.797 | 3.345 | 119.99 | 39.78 | 100.25 | 31.13 | 41.80 |
| 600 | 6.058 | 6.601 | 6.257 | 3.809 | 3.366 | 121.20 | 40.48 | 102.10 | 31.52 | 42.53 |
| 800 | 6.098 | 6.624 | 6.296 | 3.817 | 3.380 | 122.05 | 40.98 | 103.45 | 31.78 | 43.67 |
| 1000 | 6.129 | 6.643 | 6.322 | 3.823 | 3.390 | 122.75 | 41.43 | 104.51 | 31.97 | 44.27 |
| *MRX69 (Mylonite, Brevard Fault, ADCOH drill hole 2 (34.8 m), Walhalla, SC), Density = 2783 kg/m³* | | | | | | | | | | |
| 20 | 5.245 | 5.654 | 5.395 | 3.741 | 3.206 | 88.97 | 11.07 | 102.68 | 28.61 | 8.34 |
| 40 | 5.455 | 5.813 | 5.504 | 3.790 | 3.282 | 94.04 | 14.09 | 105.29 | 29.97 | 8.61 |
| 60 | 5.576 | 5.911 | 5.639 | 3.822 | 3.329 | 97.24 | 15.93 | 106.84 | 30.83 | 13.02 |
| 80 | 5.651 | 5.977 | 5.720 | 3.843 | 3.361 | 99.41 | 17.20 | 107.98 | 31.44 | 15.35 |
| 100 | 5.702 | 6.023 | 5.770 | 3.859 | 3.384 | 100.96 | 18.07 | 108.85 | 31.86 | 16.52 |
| 200 | 5.825 | 6.142 | 5.944 | 3.897 | 3.438 | 104.99 | 20.46 | 111.69 | 32.89 | 22.44 |
| 400 | 5.927 | 6.229 | 6.056 | 3.922 | 3.473 | 107.98 | 22.37 | 114.71 | 33.56 | 25.58 |
| 600 | 5.987 | 6.275 | 6.121 | 3.935 | 3.492 | 109.58 | 23.40 | 116.57 | 33.93 | 27.51 |
| 800 | 6.030 | 6.307 | 6.143 | 3.944 | 3.505 | 110.70 | 24.12 | 117.98 | 34.19 | 27.21 |
| 1000 | 6.063 | 6.332 | 6.160 | 3.951 | 3.516 | 111.57 | 24.68 | 119.11 | 34.39 | 26.97 |
| *MRX70 (Mylonite, Brevard Fault, ADCOH drill hole 2 (84.4 m), Walhalla, SC), Density = 2813 kg/m³* | | | | | | | | | | |
| 20 | 3.923 | 6.523 | 5.211 | 4.102 | 2.955 | 119.69 | 25.03 | 43.29 | 24.56 | 2.33 |
| 40 | 4.354 | 6.623 | 5.330 | 4.103 | 3.047 | 123.39 | 28.68 | 53.33 | 26.11 | 2.71 |
| 60 | 4.619 | 6.692 | 5.423 | 4.104 | 3.105 | 125.97 | 31.22 | 60.02 | 27.11 | 4.02 |
| 80 | 4.796 | 6.744 | 5.487 | 4.105 | 3.147 | 127.94 | 33.14 | 64.70 | 27.85 | 4.47 |
| 100 | 4.919 | 6.783 | 5.566 | 4.106 | 3.179 | 129.42 | 34.57 | 68.07 | 28.43 | 7.34 |
| 200 | 5.212 | 6.882 | 5.730 | 4.117 | 3.272 | 133.23 | 37.87 | 76.42 | 30.12 | 10.76 |
| 400 | 5.435 | 6.938 | 5.913 | 4.133 | 3.350 | 135.41 | 39.31 | 83.09 | 31.56 | 17.84 |
| 600 | 5.565 | 6.960 | 5.980 | 4.143 | 3.393 | 136.27 | 39.70 | 87.12 | 32.38 | 19.19 |
| 800 | 5.660 | 6.976 | 6.011 | 4.150 | 3.423 | 136.89 | 40.00 | 90.12 | 32.95 | 18.84 |
| 1000 | 5.734 | 6.988 | 6.020 | 4.156 | 3.446 | 137.37 | 40.19 | 92.49 | 33.40 | 17.42 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX71 (Mylonite, Brevard Fault, ADCOH drill hole 2 (113.7 m), Walhalla, SC), Density = 2855 kg/m³* | | | | | | | | | | |
| 20 | 5.647 | 6.528 | 5.722 | 3.891 | 3.298 | 121.67 | 35.22 | 91.04 | 31.05 | 16.07 |
| 40 | 5.709 | 6.574 | 5.923 | 3.902 | 3.321 | 123.37 | 36.43 | 93.05 | 31.49 | 27.21 |
| 60 | 5.739 | 6.600 | 5.998 | 3.908 | 3.334 | 124.36 | 37.16 | 94.03 | 31.74 | 30.95 |
| 80 | 5.759 | 6.618 | 6.054 | 3.919 | 3.344 | 125.02 | 37.33 | 94.69 | 31.93 | 33.84 |
| 100 | 5.774 | 6.631 | 6.089 | 3.924 | 3.351 | 125.54 | 37.61 | 95.18 | 32.06 | 35.54 |
| 200 | 5.828 | 6.675 | 6.172 | 3.942 | 3.374 | 127.19 | 38.46 | 96.97 | 32.50 | 38.85 |
| 400 | 5.904 | 6.722 | 6.214 | 3.966 | 3.398 | 129.00 | 39.19 | 99.52 | 32.97 | 38.80 |
| 600 | 5.958 | 6.752 | 6.245 | 3.972 | 3.412 | 130.16 | 40.07 | 101.35 | 33.24 | 39.04 |
| 800 | 5.997 | 6.774 | 6.265 | 3.976 | 3.422 | 131.01 | 40.74 | 102.68 | 33.43 | 39.04 |
| 1000 | 6.028 | 6.792 | 6.277 | 3.980 | 3.430 | 131.69 | 41.24 | 103.74 | 33.59 | 38.75 |
| *MRX72 (Greenschist, Tienhsiang, Taiwan), Density = 2780 kg/m³* | | | | | | | | | | |
| 20 | 4.513 | 5.983 | 5.497 | 3.502 | 2.907 | 99.51 | 31.33 | 56.62 | 23.50 | 39.39 |
| 40 | 5.155 | 6.197 | 5.762 | 3.600 | 3.066 | 106.74 | 34.71 | 73.88 | 26.14 | 40.00 |
| 60 | 5.439 | 6.326 | 5.891 | 3.653 | 3.126 | 111.23 | 37.04 | 82.24 | 27.16 | 40.36 |
| 80 | 5.609 | 6.409 | 5.971 | 3.677 | 3.170 | 114.17 | 39.00 | 87.46 | 27.93 | 40.26 |
| 100 | 5.726 | 6.454 | 6.029 | 3.699 | 3.201 | 115.78 | 39.73 | 91.15 | 28.48 | 40.59 |
| 200 | 6.014 | 6.631 | 6.181 | 3.757 | 3.282 | 122.22 | 43.76 | 100.55 | 29.95 | 40.32 |
| 400 | 6.219 | 6.764 | 6.301 | 3.804 | 3.345 | 127.17 | 46.74 | 107.52 | 31.11 | 40.51 |
| 600 | 6.310 | 6.830 | 6.360 | 3.827 | 3.393 | 129.68 | 48.27 | 110.69 | 32.01 | 40.08 |
| 800 | 6.364 | 6.872 | 6.396 | 3.842 | 3.382 | 131.28 | 49.23 | 112.59 | 31.80 | 41.33 |
| 1000 | 6.400 | 6.903 | 6.422 | 3.852 | 3.407 | 132.47 | 49.97 | 113.87 | 32.27 | 41.00 |
| *MRX73 (Greenschist, Haast, Lake Wanaka, South Island, New Zealand), Density = 2821 kg/m³* | | | | | | | | | | |
| 20 | 3.238 | 5.117 | 4.510 | 3.150 | 2.649 | 73.85 | 17.87 | 29.58 | 19.79 | 17.37 |
| 40 | 4.198 | 5.593 | 4.899 | 3.395 | 2.944 | 88.25 | 23.22 | 49.72 | 24.44 | 12.86 |
| 60 | 4.805 | 5.914 | 5.250 | 3.554 | 3.135 | 98.66 | 27.40 | 65.14 | 27.72 | 15.00 |
| 80 | 5.197 | 6.137 | 5.579 | 3.662 | 3.261 | 106.24 | 30.58 | 76.20 | 30.00 | 22.28 |
| 100 | 5.454 | 6.294 | 5.752 | 3.736 | 3.348 | 111.76 | 33.01 | 83.92 | 31.61 | 23.89 |
| 200 | 5.919 | 6.629 | 6.304 | 3.885 | 3.517 | 123.96 | 38.80 | 98.84 | 34.88 | 42.03 |
| 400 | 6.090 | 6.768 | 6.461 | 3.949 | 3.584 | 129.23 | 41.25 | 104.63 | 36.23 | 45.22 |
| 600 | 6.171 | 6.826 | 6.510 | 3.978 | 3.614 | 131.46 | 42.18 | 107.44 | 36.85 | 45.10 |
| 800 | 6.230 | 6.867 | 6.544 | 3.999 | 3.636 | 133.03 | 42.81 | 109.50 | 37.29 | 44.94 |
| 1000 | 6.277 | 6.899 | 6.570 | 4.015 | 3.653 | 134.27 | 43.32 | 111.15 | 37.63 | 44.75 |
| *MRX74 (Greenschist, Shuksan, Iron Mountain, WA), Density = 3003 kg/m³* | | | | | | | | | | |
| 20 | 5.486 | 6.448 | 5.639 | 3.852 | 3.529 | 124.84 | 35.72 | 90.38 | 37.40 | 5.23 |
| 40 | 5.780 | 6.424 | 5.849 | 3.919 | 3.618 | 123.91 | 31.67 | 100.33 | 39.30 | 13.45 |
| 60 | 5.974 | 6.710 | 6.058 | 3.964 | 3.676 | 135.21 | 40.83 | 107.17 | 40.57 | 16.39 |
| 80 | 6.111 | 6.789 | 6.184 | 3.999 | 3.718 | 138.39 | 42.34 | 112.15 | 41.51 | 20.01 |
| 100 | 6.211 | 6.850 | 6.295 | 4.025 | 3.749 | 140.91 | 43.61 | 115.85 | 42.21 | 24.03 |
| 200 | 6.452 | 7.025 | 6.519 | 4.095 | 3.828 | 148.18 | 47.46 | 125.01 | 43.99 | 29.75 |
| 400 | 6.597 | 7.152 | 6.680 | 4.138 | 3.879 | 153.61 | 50.77 | 130.69 | 45.17 | 34.69 |
| 600 | 6.669 | 7.212 | 6.790 | 4.156 | 3.904 | 156.20 | 52.46 | 133.56 | 45.76 | 39.76 |
| 800 | 6.720 | 7.253 | 6.874 | 4.168 | 3.922 | 157.98 | 53.64 | 135.61 | 46.18 | 43.95 |
| 1000 | 6.760 | 7.285 | 6.936 | 4.177 | 3.936 | 159.37 | 54.58 | 137.23 | 46.51 | 46.96 |
| *MRX75 (Amphibolite, Big Bluff, S. Island, New Zealand), Density = 2853 kg/m³* | | | | | | | | | | |
| 20 | 5.014 | 5.350 | 5.381 | 3.136 | 2.879 | 81.66 | 25.54 | 71.73 | 23.65 | 41.04 |
| 40 | 5.164 | 5.659 | 5.521 | 3.246 | 2.954 | 91.37 | 31.24 | 76.08 | 24.89 | 39.98 |
| 60 | 5.256 | 5.852 | 5.581 | 3.317 | 3.000 | 97.69 | 34.91 | 78.82 | 25.68 | 37.42 |
| 80 | 5.322 | 5.983 | 5.661 | 3.370 | 3.033 | 102.11 | 37.31 | 80.81 | 26.25 | 38.04 |
| 100 | 5.375 | 6.077 | 5.757 | 3.410 | 3.058 | 105.36 | 39.01 | 82.43 | 26.68 | 40.90 |
| 200 | 5.546 | 6.320 | 5.894 | 3.528 | 3.135 | 113.96 | 42.93 | 87.75 | 28.03 | 40.06 |
| 400 | 5.728 | 6.490 | 6.078 | 3.623 | 3.211 | 120.17 | 45.27 | 93.61 | 29.42 | 43.88 |
| 600 | 5.837 | 6.569 | 6.168 | 3.669 | 3.258 | 123.11 | 46.30 | 97.20 | 30.28 | 45.25 |
| 800 | 5.914 | 6.623 | 6.232 | 3.701 | 3.294 | 125.13 | 46.97 | 99.79 | 30.96 | 46.21 |
| 1000 | 5.974 | 6.664 | 6.282 | 3.755 | 3.320 | 126.70 | 46.24 | 101.82 | 31.45 | 47.05 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX76 (Amphibolite, Inner Peidmont, ADCOH drill hole 1 (109.7 m), Westminster, SC), Density = 2857 kg/m³* | | | | | | | | | | |
| 20 | 4.957 | 6.074 | 5.602 | 3.664 | 3.225 | 105.41 | 28.70 | 70.20 | 29.72 | 29.53 |
| 40 | 5.461 | 6.468 | 5.999 | 3.855 | 3.456 | 119.52 | 34.61 | 85.20 | 34.12 | 32.86 |
| 60 | 5.752 | 6.692 | 6.182 | 3.969 | 3.592 | 127.95 | 37.93 | 94.53 | 36.86 | 31.40 |
| 80 | 5.927 | 6.825 | 6.320 | 4.038 | 3.674 | 133.08 | 39.91 | 100.36 | 38.57 | 32.52 |
| 100 | 6.035 | 6.908 | 6.425 | 4.081 | 3.724 | 136.34 | 41.17 | 104.06 | 39.62 | 34.71 |
| 200 | 6.227 | 7.063 | 6.664 | 4.152 | 3.805 | 142.50 | 44.00 | 110.78 | 41.36 | 42.90 |
| 400 | 6.326 | 7.154 | 6.749 | 4.178 | 3.834 | 146.22 | 46.48 | 114.33 | 42.00 | 44.54 |
| 600 | 6.381 | 7.206 | 6.774 | 4.190 | 3.849 | 148.33 | 48.02 | 116.33 | 42.33 | 43.74 |
| 800 | 6.420 | 7.242 | 6.836 | 4.199 | 3.860 | 149.84 | 49.09 | 117.76 | 42.57 | 46.66 |
| 1000 | 6.451 | 7.270 | 6.871 | 4.206 | 3.868 | 151.00 | 49.92 | 118.90 | 42.75 | 47.91 |
| *MRX77 (Amphibolite, Gaunt Ck., S. Island, New Zealand), Density = 2967 kg/m³* | | | | | | | | | | |
| 20 | 4.458 | 5.893 | 5.060 | 3.273 | 2.995 | 103.02 | 39.45 | 58.97 | 26.61 | 11.87 |
| 40 | 4.935 | 6.153 | 5.530 | 3.487 | 3.210 | 112.33 | 40.18 | 72.26 | 30.57 | 24.50 |
| 60 | 5.269 | 6.327 | 5.710 | 3.639 | 3.357 | 118.77 | 40.19 | 82.37 | 33.43 | 23.20 |
| 80 | 5.520 | 6.459 | 6.023 | 3.750 | 3.463 | 123.76 | 40.31 | 90.41 | 35.57 | 35.10 |
| 100 | 5.713 | 6.577 | 6.193 | 3.834 | 3.542 | 128.34 | 41.12 | 96.84 | 37.21 | 38.96 |
| 200 | 6.226 | 6.852 | 6.604 | 4.035 | 3.742 | 139.30 | 42.69 | 115.01 | 41.54 | 47.75 |
| 400 | 6.542 | 7.050 | 6.862 | 4.128 | 3.861 | 147.45 | 46.33 | 126.98 | 44.23 | 53.21 |
| 600 | 6.681 | 7.143 | 6.936 | 4.161 | 3.918 | 151.36 | 48.62 | 132.43 | 45.53 | 52.05 |
| 800 | 6.778 | 7.204 | 6.972 | 4.182 | 3.957 | 153.98 | 50.20 | 136.31 | 46.46 | 49.98 |
| 1000 | 6.853 | 7.250 | 7.003 | 4.199 | 3.988 | 155.95 | 51.33 | 139.34 | 47.19 | 48.63 |
| *MRX78 (Amphibolite, Otago, Rob Roy St., S. Island, New Zealand), Density = 3030 kg/m³* | | | | | | | | | | |
| 20 | 2.955 | 4.613 | 4.400 | 2.323 | 2.296 | 64.48 | 11.63 | 26.46 | 15.97 | 36.58 |
| 40 | 3.855 | 5.199 | 5.147 | 2.699 | 2.691 | 81.88 | 16.49 | 45.03 | 21.94 | 50.91 |
| 60 | 4.490 | 5.624 | 5.571 | 2.960 | 2.961 | 95.84 | 21.01 | 61.09 | 26.57 | 54.65 |
| 80 | 4.951 | 5.948 | 5.898 | 3.148 | 3.152 | 107.18 | 25.16 | 74.27 | 30.10 | 58.36 |
| 100 | 5.290 | 6.199 | 6.149 | 3.285 | 3.289 | 116.42 | 28.96 | 84.79 | 32.77 | 61.68 |
| 200 | 6.070 | 6.856 | 6.805 | 3.599 | 3.591 | 142.42 | 41.89 | 111.64 | 39.06 | 74.43 |
| 400 | 6.419 | 7.208 | 7.103 | 3.740 | 3.724 | 157.42 | 50.68 | 124.85 | 42.01 | 79.50 |
| 600 | 6.557 | 7.332 | 7.280 | 3.797 | 3.777 | 162.87 | 53.66 | 130.27 | 43.21 | 87.16 |
| 800 | 6.654 | 7.412 | 7.343 | 3.836 | 3.815 | 166.46 | 55.50 | 134.16 | 44.09 | 87.28 |
| 1000 | 6.732 | 7.475 | 7.401 | 3.867 | 3.845 | 169.30 | 56.94 | 137.32 | 44.78 | 88.10 |
| *MRX79 (Amphibolite, Gaunt Ck, S. Island, New Zealand), Density = 3030 kg/m³* | | | | | | | | | | |
| 20 | 4.907 | 6.266 | 6.240 | 3.770 | 3.191 | 118.97 | 32.84 | 72.96 | 30.85 | 75.84 |
| 40 | 5.381 | 6.536 | 6.361 | 3.915 | 3.391 | 129.42 | 36.54 | 87.73 | 34.83 | 64.81 |
| 60 | 5.683 | 6.718 | 6.462 | 4.011 | 3.504 | 136.75 | 39.26 | 97.86 | 37.19 | 59.43 |
| 80 | 5.884 | 6.851 | 6.540 | 4.080 | 3.572 | 142.20 | 41.32 | 104.90 | 38.66 | 56.52 |
| 100 | 6.021 | 6.950 | 6.615 | 4.129 | 3.616 | 146.34 | 43.02 | 109.85 | 39.61 | 56.15 |
| 200 | 6.298 | 7.193 | 6.864 | 4.243 | 3.708 | 156.75 | 47.65 | 120.18 | 41.65 | 62.15 |
| 400 | 6.435 | 7.331 | 7.061 | 4.302 | 3.775 | 162.84 | 50.69 | 125.47 | 43.17 | 70.12 |
| 600 | 6.503 | 7.393 | 7.140 | 4.329 | 3.814 | 165.61 | 52.04 | 128.14 | 44.08 | 72.41 |
| 800 | 6.552 | 7.436 | 7.169 | 4.348 | 3.843 | 167.54 | 52.98 | 130.07 | 44.74 | 71.67 |
| 1000 | 6.591 | 7.470 | 7.211 | 4.362 | 3.865 | 169.05 | 53.75 | 131.63 | 45.25 | 72.79 |
| *MRX80 (Amphibolite, Trio Peak, Fiordland, S. Island, New Zealand), Density = 3032 kg/m³* | | | | | | | | | | |
| 20 | 4.349 | 4.796 | 4.854 | 2.842 | 2.730 | 69.73 | 20.75 | 57.35 | 22.59 | 33.82 |
| 40 | 4.753 | 5.237 | 5.203 | 3.129 | 2.990 | 83.14 | 23.77 | 68.50 | 27.11 | 33.69 |
| 60 | 5.046 | 5.549 | 5.400 | 3.330 | 3.175 | 93.34 | 26.10 | 77.20 | 30.56 | 29.91 |
| 80 | 5.274 | 5.783 | 5.602 | 3.479 | 3.313 | 101.38 | 27.99 | 84.34 | 33.27 | 30.34 |
| 100 | 5.456 | 5.963 | 5.749 | 3.591 | 3.419 | 107.79 | 29.60 | 90.26 | 35.43 | 29.95 |
| 200 | 5.977 | 6.432 | 6.149 | 3.868 | 3.693 | 125.44 | 34.71 | 108.32 | 41.35 | 29.19 |
| 400 | 6.315 | 6.701 | 6.469 | 4.011 | 3.850 | 136.15 | 38.59 | 120.91 | 44.93 | 35.01 |
| 600 | 6.443 | 6.808 | 6.575 | 4.067 | 3.912 | 140.51 | 40.21 | 125.87 | 46.40 | 35.84 |
| 800 | 6.524 | 6.881 | 6.598 | 4.106 | 3.956 | 143.54 | 41.30 | 129.05 | 47.44 | 32.49 |
| 1000 | 6.587 | 6.937 | 6.611 | 4.136 | 3.989 | 145.89 | 42.15 | 131.55 | 48.25 | 29.49 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX81 (Amphibolite, Copper Center, AK), Density = 3048 kg/m³* | | | | | | | | | | |
| 20 | 5.156 | 7.002 | 6.132 | 4.197 | 3.443 | 149.45 | 42.07 | 81.03 | 36.13 | 33.80 |
| 40 | 5.491 | 7.087 | 6.203 | 4.227 | 3.515 | 153.07 | 44.14 | 91.91 | 37.66 | 30.18 |
| 60 | 5.696 | 7.144 | 6.255 | 4.249 | 3.556 | 155.55 | 45.50 | 98.89 | 38.54 | 28.46 |
| 80 | 5.831 | 7.188 | 6.315 | 4.266 | 3.583 | 157.47 | 46.54 | 103.63 | 39.14 | 29.16 |
| 100 | 5.924 | 7.223 | 6.360 | 4.279 | 3.603 | 159.03 | 47.39 | 106.98 | 39.57 | 29.70 |
| 200 | 6.143 | 7.333 | 6.561 | 4.319 | 3.659 | 163.92 | 50.20 | 115.01 | 40.82 | 37.59 |
| 400 | 6.304 | 7.424 | 6.708 | 4.345 | 3.711 | 167.99 | 52.90 | 121.13 | 41.98 | 42.60 |
| 600 | 6.397 | 7.464 | 6.790 | 4.354 | 3.739 | 169.81 | 54.23 | 124.71 | 42.61 | 45.73 |
| 800 | 6.463 | 7.489 | 6.810 | 4.360 | 3.758 | 170.95 | 55.07 | 127.32 | 43.05 | 44.81 |
| 1000 | 6.515 | 7.508 | 6.828 | 4.364 | 3.772 | 171.80 | 55.69 | 129.39 | 43.38 | 44.33 |
| *MRX82 (Amphibolite, Kola Drillhole (8732 m), Kola Peninsula, Russia), Density = 3066 kg/m³* | | | | | | | | | | |
| 20 | 4.250 | 4.598 | 4.265 | 2.341 | 2.269 | 65.53 | 31.55 | 55.99 | 15.95 | 19.80 |
| 40 | 5.131 | 5.262 | 5.155 | 2.922 | 2.765 | 85.82 | 32.88 | 81.61 | 23.70 | 33.60 |
| 60 | 5.669 | 5.822 | 5.742 | 3.292 | 3.091 | 105.06 | 37.87 | 99.63 | 29.62 | 42.79 |
| 80 | 6.008 | 6.228 | 6.131 | 3.571 | 3.320 | 120.24 | 41.18 | 111.90 | 34.16 | 48.56 |
| 100 | 6.221 | 6.516 | 6.393 | 3.739 | 3.493 | 131.60 | 44.92 | 119.97 | 37.82 | 51.78 |
| 200 | 6.561 | 7.150 | 6.902 | 4.068 | 3.786 | 158.46 | 55.86 | 133.45 | 44.44 | 59.79 |
| 400 | 6.639 | 7.346 | 7.051 | 4.171 | 3.878 | 167.29 | 59.43 | 136.64 | 46.62 | 61.96 |
| 600 | 6.680 | 7.395 | 7.115 | 4.202 | 3.907 | 169.50 | 60.03 | 138.33 | 47.32 | 64.22 |
| 800 | 6.700 | 7.417 | 7.156 | 4.225 | 3.937 | 170.51 | 59.84 | 139.16 | 48.04 | 65.50 |
| 1000 | 6.718 | 7.441 | 7.183 | 4.245 | 3.948 | 171.62 | 59.90 | 139.91 | 48.31 | 66.43 |
| *MRX83 (Amphibolite, Inner Peidmont, ADCOH drill hole 1 (235.0 m), Westminster, SC), Density = 3100 kg/m³* | | | | | | | | | | |
| 20 | 5.086 | 5.950 | 5.700 | 3.708 | 3.347 | 109.73 | 24.48 | 80.18 | 34.73 | 35.49 |
| 40 | 5.714 | 6.590 | 6.102 | 3.991 | 3.629 | 134.61 | 35.85 | 101.22 | 40.82 | 29.35 |
| 60 | 6.055 | 6.943 | 6.303 | 4.139 | 3.768 | 149.42 | 43.20 | 113.64 | 44.01 | 24.46 |
| 80 | 6.245 | 7.143 | 6.451 | 4.218 | 3.839 | 158.17 | 47.86 | 120.92 | 45.68 | 24.70 |
| 100 | 6.356 | 7.260 | 6.550 | 4.261 | 3.876 | 163.39 | 50.83 | 125.23 | 46.56 | 26.10 |
| 200 | 6.531 | 7.441 | 6.800 | 4.326 | 3.927 | 171.64 | 55.61 | 132.24 | 47.81 | 36.87 |
| 400 | 6.621 | 7.521 | 6.951 | 4.357 | 3.953 | 175.35 | 57.66 | 135.88 | 48.44 | 45.00 |
| 600 | 6.671 | 7.565 | 7.080 | 4.374 | 3.967 | 177.39 | 58.77 | 137.96 | 48.79 | 53.66 |
| 800 | 6.707 | 7.596 | 7.139 | 4.387 | 3.978 | 178.87 | 59.54 | 139.46 | 49.06 | 56.90 |
| 1000 | 6.735 | 7.621 | 7.198 | 4.397 | 3.986 | 180.02 | 60.16 | 140.63 | 49.25 | 60.64 |
| *MRX84 (Antigorite Schist, Iron Mountain, WA), Density = 2648 kg/m³* | | | | | | | | | | |
| 20 | 6.031 | 6.442 | 6.071 | 3.739 | 3.472 | 109.87 | 35.84 | 96.32 | 31.92 | 27.88 |
| 40 | 6.069 | 6.540 | 6.182 | 3.748 | 3.479 | 113.24 | 38.85 | 97.53 | 32.05 | 32.43 |
| 60 | 6.107 | 6.609 | 6.230 | 3.753 | 3.488 | 115.64 | 41.05 | 98.76 | 32.21 | 33.40 |
| 80 | 6.145 | 6.642 | 6.263 | 3.759 | 3.495 | 116.80 | 41.97 | 99.99 | 32.35 | 34.12 |
| 100 | 6.171 | 6.676 | 6.298 | 3.768 | 3.504 | 118.02 | 42.83 | 100.84 | 32.51 | 35.07 |
| 200 | 6.264 | 6.756 | 6.357 | 3.785 | 3.528 | 120.85 | 44.98 | 103.90 | 32.95 | 35.22 |
| 400 | 6.373 | 6.833 | 6.417 | 3.808 | 3.552 | 123.62 | 46.82 | 107.55 | 33.40 | 35.23 |
| 600 | 6.414 | 6.868 | 6.438 | 3.817 | 3.570 | 124.89 | 47.73 | 108.94 | 33.74 | 34.66 |
| 800 | 6.433 | 6.892 | 6.451 | 3.829 | 3.587 | 125.78 | 48.13 | 109.58 | 34.06 | 34.11 |
| 1000 | 6.449 | 6.910 | 6.461 | 3.839 | 3.597 | 126.44 | 48.39 | 110.13 | 34.26 | 33.79 |
| *MRX85 (Antigorite Schist, Gee Point, WA), Density = 2669 kg/m³* | | | | | | | | | | |
| 20 | 6.756 | 6.268 | 6.519 | 3.482 | 3.697 | 104.86 | 40.14 | 121.82 | 36.48 | 40.08 |
| 40 | 6.799 | 6.296 | 6.571 | 3.538 | 3.755 | 105.78 | 38.96 | 123.38 | 37.63 | 40.14 |
| 60 | 6.824 | 6.315 | 6.617 | 3.581 | 3.785 | 106.44 | 37.99 | 124.29 | 38.24 | 41.39 |
| 80 | 6.842 | 6.331 | 6.653 | 3.602 | 3.819 | 106.98 | 37.72 | 124.94 | 38.92 | 41.98 |
| 100 | 6.856 | 6.345 | 6.678 | 3.640 | 3.840 | 107.43 | 36.71 | 125.46 | 39.35 | 42.42 |
| 200 | 6.900 | 6.394 | 6.755 | 3.662 | 3.878 | 109.10 | 37.52 | 127.07 | 40.13 | 44.76 |
| 400 | 6.944 | 6.457 | 6.817 | 3.689 | 3.893 | 111.28 | 38.64 | 128.70 | 40.45 | 46.74 |
| 600 | 6.971 | 6.503 | 6.842 | 3.697 | 3.903 | 112.87 | 39.91 | 129.70 | 40.66 | 46.88 |
| 800 | 6.990 | 6.540 | 6.851 | 3.708 | 3.908 | 114.16 | 40.76 | 130.41 | 40.76 | 46.36 |
| 1000 | 7.004 | 6.571 | 6.857 | 3.719 | 3.914 | 115.24 | 41.41 | 130.93 | 40.89 | 45.77 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX86 (Antigorite Schist, Iron Mountain, WA), Density = 2680 kg/m³* | | | | | | | | | | |
| 20 | 6.120 | 6.454 | 5.930 | 3.716 | 3.524 | 111.63 | 37.62 | 100.38 | 33.28 | 15.59 |
| 40 | 6.220 | 6.521 | 6.133 | 3.748 | 3.548 | 113.96 | 38.66 | 103.69 | 33.73 | 25.11 |
| 60 | 6.305 | 6.616 | 6.219 | 3.767 | 3.567 | 117.29 | 41.23 | 106.54 | 34.09 | 26.97 |
| 80 | 6.355 | 6.665 | 6.306 | 3.781 | 3.580 | 119.05 | 42.43 | 108.24 | 34.35 | 30.58 |
| 100 | 6.395 | 6.713 | 6.328 | 3.791 | 3.594 | 120.76 | 43.72 | 109.60 | 34.61 | 30.00 |
| 200 | 6.482 | 6.815 | 6.442 | 3.824 | 3.639 | 124.45 | 46.07 | 112.60 | 35.48 | 32.69 |
| 400 | 6.572 | 6.876 | 6.560 | 3.856 | 3.683 | 126.69 | 46.99 | 115.75 | 36.34 | 36.55 |
| 600 | 6.603 | 6.914 | 6.609 | 3.875 | 3.707 | 128.10 | 47.61 | 116.85 | 36.83 | 37.78 |
| 800 | 6.620 | 6.942 | 6.659 | 3.888 | 3.727 | 129.13 | 48.11 | 117.45 | 37.22 | 39.73 |
| 1000 | 6.630 | 6.963 | 6.708 | 3.899 | 3.742 | 129.92 | 48.43 | 117.80 | 37.53 | 42.04 |
| *MRX87 (Olivine Antigorite Schist, Val Malenco, Italy), Density = 2751 kg/m³* | | | | | | | | | | |
| 20 | 5.999 | 7.577 | 6.155 | 3.571 | 3.188 | 157.94 | 87.78 | 99.00 | 27.95 | 14.92 |
| 40 | 6.086 | 7.647 | 6.241 | 3.771 | 3.277 | 160.87 | 82.63 | 101.90 | 29.53 | 14.97 |
| 60 | 6.139 | 7.686 | 6.294 | 3.849 | 3.316 | 162.51 | 81.00 | 103.68 | 30.24 | 15.78 |
| 80 | 6.177 | 7.712 | 6.332 | 3.893 | 3.339 | 163.62 | 80.23 | 104.97 | 30.67 | 16.61 |
| 100 | 6.207 | 7.732 | 6.362 | 3.921 | 3.355 | 164.47 | 79.88 | 105.99 | 30.96 | 17.40 |
| 200 | 6.302 | 7.791 | 6.457 | 3.984 | 3.397 | 166.99 | 79.66 | 109.26 | 31.75 | 20.32 |
| 400 | 6.401 | 7.846 | 6.555 | 4.022 | 3.432 | 169.35 | 80.35 | 112.72 | 32.39 | 23.87 |
| 600 | 6.461 | 7.876 | 6.660 | 4.037 | 3.450 | 170.65 | 80.98 | 114.84 | 32.73 | 29.90 |
| 800 | 6.504 | 7.897 | 6.688 | 4.046 | 3.462 | 171.56 | 81.49 | 116.37 | 32.97 | 30.45 |
| 1000 | 6.538 | 7.912 | 6.701 | 4.051 | 3.472 | 172.21 | 81.92 | 117.59 | 33.15 | 30.22 |
| *MRX88 (Greenschist, Tonsina, AK), Density = 2955 kg/m³* | | | | | | | | | | |
| 20 | 6.391 | 5.887 | 5.748 | 3.415 | 3.669 | 102.41 | 33.49 | 120.70 | 39.78 | 3.19 |
| 40 | 6.580 | 6.147 | 6.055 | 3.484 | 3.742 | 111.66 | 39.92 | 127.94 | 41.37 | 13.55 |
| 60 | 6.701 | 6.277 | 6.255 | 3.552 | 3.811 | 116.43 | 41.86 | 132.69 | 42.91 | 20.34 |
| 80 | 6.784 | 6.370 | 6.375 | 3.582 | 3.850 | 119.91 | 44.08 | 136.00 | 43.80 | 24.16 |
| 100 | 6.863 | 6.443 | 6.470 | 3.616 | 3.876 | 122.65 | 45.37 | 139.18 | 44.38 | 27.24 |
| 200 | 7.074 | 6.634 | 6.768 | 3.711 | 3.944 | 130.05 | 48.66 | 147.87 | 45.95 | 39.38 |
| 400 | 7.211 | 6.780 | 6.953 | 3.790 | 3.994 | 135.84 | 50.95 | 153.66 | 47.14 | 46.27 |
| 600 | 7.269 | 6.860 | 7.047 | 3.823 | 4.021 | 139.06 | 52.69 | 156.14 | 47.77 | 49.99 |
| 800 | 7.307 | 6.917 | 7.122 | 3.844 | 4.039 | 141.36 | 54.03 | 157.77 | 48.21 | 53.46 |
| 1000 | 7.337 | 6.961 | 7.180 | 3.859 | 4.054 | 143.19 | 55.18 | 159.07 | 48.55 | 56.14 |
| *MRX89 (Phengite Schist, Mayguan, Qanshan, China), Density = 2959 kg/m³* | | | | | | | | | | |
| 20 | 6.413 | 5.639 | 5.763 | 3.409 | 3.551 | 94.09 | 25.32 | 121.69 | 37.31 | 12.14 |
| 40 | 6.595 | 5.803 | 6.084 | 3.542 | 3.668 | 99.63 | 25.38 | 128.70 | 39.80 | 23.65 |
| 60 | 6.712 | 5.911 | 6.222 | 3.622 | 3.738 | 103.37 | 25.73 | 133.31 | 41.35 | 26.45 |
| 80 | 6.790 | 5.986 | 6.280 | 3.671 | 3.783 | 106.03 | 26.28 | 136.42 | 42.35 | 25.81 |
| 100 | 6.944 | 6.042 | 6.322 | 3.704 | 3.813 | 108.00 | 26.81 | 142.68 | 43.02 | 22.90 |
| 200 | 6.956 | 6.176 | 6.438 | 3.768 | 3.874 | 112.85 | 28.82 | 143.17 | 44.40 | 26.89 |
| 400 | 7.012 | 6.257 | 6.520 | 3.806 | 3.909 | 115.85 | 30.12 | 145.49 | 45.21 | 29.02 |
| 600 | 7.040 | 6.291 | 6.564 | 3.827 | 3.928 | 117.09 | 30.41 | 146.65 | 45.66 | 30.38 |
| 800 | 7.060 | 6.311 | 6.594 | 3.842 | 3.942 | 117.85 | 30.50 | 147.49 | 45.98 | 31.28 |
| 1000 | 7.075 | 6.327 | 6.614 | 3.853 | 3.953 | 118.45 | 30.60 | 148.12 | 46.23 | 31.75 |
| *MRX90 (Blueschist, Tonsina, AK), Density = 3022 kg/m³* | | | | | | | | | | |
| 20 | 6.681 | 5.902 | 5.980 | 3.453 | 3.682 | 105.25 | 33.19 | 134.89 | 40.96 | 12.12 |
| 40 | 6.801 | 6.115 | 6.219 | 3.538 | 3.748 | 113.00 | 37.35 | 139.78 | 42.44 | 21.09 |
| 60 | 6.883 | 6.261 | 6.395 | 3.587 | 3.790 | 118.44 | 40.68 | 143.17 | 43.41 | 28.50 |
| 80 | 6.945 | 6.343 | 6.502 | 3.633 | 3.819 | 121.59 | 41.81 | 145.76 | 44.06 | 32.77 |
| 100 | 7.003 | 6.399 | 6.584 | 3.660 | 3.841 | 123.74 | 42.78 | 148.21 | 44.57 | 35.96 |
| 200 | 7.128 | 6.584 | 6.809 | 3.727 | 3.895 | 130.98 | 47.03 | 153.54 | 45.85 | 45.57 |
| 400 | 7.225 | 6.719 | 6.939 | 3.771 | 3.942 | 136.43 | 50.48 | 157.75 | 46.95 | 49.44 |
| 600 | 7.276 | 6.774 | 7.036 | 3.794 | 3.966 | 138.67 | 51.67 | 159.99 | 47.52 | 54.28 |
| 800 | 7.311 | 6.839 | 7.085 | 3.810 | 3.981 | 141.32 | 53.59 | 161.53 | 47.89 | 55.69 |
| 1000 | 7.338 | 6.877 | 7.124 | 3.823 | 3.993 | 142.92 | 54.59 | 162.72 | 48.18 | 57.09 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX91 (Eclogite, Maowu, Taihu, China), Density = 3476 kg/m³* | | | | | | | | | | |
| 20 | 6.980 | 7.626 | 6.911 | 4.340 | 4.219 | 202.12 | 71.18 | 169.35 | 61.86 | 20.98 |
| 40 | 7.222 | 7.752 | 7.301 | 4.466 | 4.329 | 208.86 | 70.20 | 181.30 | 65.13 | 44.38 |
| 60 | 7.324 | 7.837 | 7.400 | 4.530 | 4.391 | 213.46 | 70.80 | 186.46 | 67.01 | 45.92 |
| 80 | 7.435 | 7.898 | 7.529 | 4.566 | 4.431 | 216.83 | 71.89 | 192.15 | 68.23 | 52.50 |
| 100 | 7.491 | 7.944 | 7.695 | 4.588 | 4.458 | 219.36 | 73.02 | 195.06 | 69.07 | 65.76 |
| 200 | 7.657 | 8.070 | 7.853 | 4.635 | 4.523 | 226.35 | 77.00 | 203.80 | 71.10 | 71.02 |
| 400 | 7.782 | 8.155 | 8.000 | 4.676 | 4.575 | 231.17 | 79.16 | 210.51 | 72.74 | 78.26 |
| 600 | 7.866 | 8.192 | 8.064 | 4.699 | 4.604 | 233.27 | 79.77 | 215.07 | 73.68 | 80.27 |
| 800 | 7.927 | 8.216 | 8.083 | 4.716 | 4.625 | 234.64 | 80.02 | 218.42 | 74.34 | 78.79 |
| 1000 | 7.974 | 8.234 | 8.100 | 4.729 | 4.641 | 235.67 | 80.20 | 221.02 | 74.87 | 77.86 |
| *MRX92 (Mangerite, Digermulen, Norway), Density = 2739 kg/m³* | | | | | | | | | | |
| 20 | 6.249 | 6.436 | 5.990 | 3.553 | 3.483 | 113.46 | 44.30 | 106.96 | 33.23 | 19.79 |
| 40 | 6.307 | 6.502 | 6.128 | 3.587 | 3.519 | 115.79 | 45.31 | 108.95 | 33.92 | 25.40 |
| 60 | 6.341 | 6.504 | 6.220 | 3.602 | 3.539 | 115.85 | 44.77 | 110.13 | 34.31 | 30.27 |
| 80 | 6.364 | 6.570 | 6.300 | 3.611 | 3.553 | 118.21 | 46.78 | 110.93 | 34.58 | 33.60 |
| 100 | 6.382 | 6.591 | 6.344 | 3.618 | 3.563 | 118.99 | 47.28 | 111.56 | 34.77 | 35.56 |
| 200 | 6.344 | 6.655 | 6.461 | 3.639 | 3.590 | 121.31 | 48.77 | 110.24 | 35.30 | 42.11 |
| 400 | 6.501 | 6.716 | 6.537 | 3.675 | 3.614 | 123.54 | 49.56 | 115.76 | 35.76 | 42.81 |
| 600 | 6.539 | 6.752 | 6.560 | 3.704 | 3.628 | 124.85 | 49.70 | 117.12 | 36.04 | 42.58 |
| 800 | 6.565 | 6.777 | 6.575 | 3.727 | 3.638 | 125.78 | 49.69 | 118.05 | 36.24 | 42.33 |
| 1000 | 6.586 | 6.797 | 6.593 | 3.745 | 3.645 | 126.52 | 49.69 | 118.81 | 36.39 | 42.58 |
| *MRX93 (Restite, Skeena River, AK), Density = 2740 kg/m³* | | | | | | | | | | |
| 20 | 4.424 | 5.945 | 5.009 | 3.591 | 3.070 | 96.83 | 26.17 | 53.63 | 25.83 | 3.52 |
| 40 | 4.744 | 6.090 | 5.254 | 3.685 | 3.189 | 101.62 | 27.22 | 61.66 | 27.87 | 8.81 |
| 60 | 4.956 | 6.222 | 5.396 | 3.741 | 3.265 | 106.07 | 29.38 | 67.29 | 29.21 | 9.92 |
| 80 | 5.109 | 6.291 | 5.502 | 3.778 | 3.318 | 108.43 | 30.23 | 71.51 | 30.17 | 11.69 |
| 100 | 5.524 | 6.412 | 5.576 | 3.803 | 3.357 | 112.64 | 33.40 | 83.61 | 30.88 | 7.87 |
| 200 | 5.735 | 6.560 | 5.820 | 3.860 | 3.454 | 117.90 | 36.24 | 90.13 | 32.68 | 14.23 |
| 400 | 5.846 | 6.652 | 6.073 | 3.902 | 3.518 | 121.26 | 37.83 | 93.65 | 33.91 | 25.24 |
| 600 | 5.975 | 6.720 | 6.208 | 3.926 | 3.551 | 123.73 | 39.28 | 97.82 | 34.55 | 30.04 |
| 800 | 6.162 | 6.738 | 6.280 | 3.943 | 3.574 | 124.39 | 39.21 | 104.04 | 35.00 | 31.14 |
| 1000 | 6.182 | 6.437 | 6.332 | 3.956 | 3.592 | 113.52 | 27.77 | 104.72 | 35.35 | 39.76 |
| *MRX94 (Mafic Granulite, Malaspina Reach, Fiordland, New Zealand), Density = 2765 kg/m³* | | | | | | | | | | |
| 20 | 3.669 | 4.992 | 4.200 | 3.300 | 2.503 | 68.89 | 8.67 | 37.22 | 17.32 | 4.76 |
| 40 | 4.265 | 5.350 | 4.621 | 3.434 | 2.763 | 79.13 | 13.92 | 50.30 | 21.11 | 7.76 |
| 60 | 4.674 | 5.604 | 4.892 | 3.519 | 2.940 | 86.83 | 18.35 | 60.41 | 23.90 | 8.32 |
| 80 | 4.967 | 5.795 | 5.129 | 3.577 | 3.065 | 92.84 | 22.08 | 68.22 | 25.98 | 11.00 |
| 100 | 5.184 | 5.941 | 5.297 | 3.617 | 3.155 | 97.58 | 25.23 | 74.31 | 27.52 | 12.52 |
| 200 | 5.700 | 6.315 | 5.802 | 3.705 | 3.362 | 110.25 | 34.34 | 89.84 | 31.25 | 22.65 |
| 400 | 5.987 | 6.516 | 6.136 | 3.760 | 3.464 | 117.38 | 39.20 | 99.11 | 33.18 | 32.98 |
| 600 | 6.122 | 6.589 | 6.321 | 3.786 | 3.509 | 120.04 | 40.78 | 103.63 | 34.05 | 40.57 |
| 800 | 6.219 | 6.638 | 6.351 | 3.806 | 3.541 | 121.83 | 41.73 | 106.94 | 34.67 | 38.95 |
| 1000 | 6.295 | 6.676 | 6.394 | 3.822 | 3.566 | 123.22 | 42.43 | 109.57 | 35.16 | 39.06 |
| *MRX95 (Mangerite, Stokmarknes, Norway), Density = 3004 kg/m³* | | | | | | | | | | |
| 20 | 6.146 | 6.289 | 6.028 | 3.558 | 3.507 | 118.83 | 42.77 | 121.18 | 36.94 | 24.42 |
| 40 | 6.272 | 6.412 | 6.163 | 3.603 | 3.542 | 123.50 | 45.51 | 125.75 | 37.69 | 28.19 |
| 60 | 6.350 | 6.488 | 6.248 | 3.631 | 3.563 | 126.45 | 47.24 | 128.75 | 38.13 | 30.67 |
| 80 | 6.403 | 6.541 | 6.305 | 3.651 | 3.577 | 128.52 | 48.44 | 130.96 | 38.43 | 32.23 |
| 100 | 6.442 | 6.580 | 6.347 | 3.666 | 3.588 | 130.06 | 49.31 | 132.67 | 38.67 | 33.32 |
| 200 | 6.543 | 6.682 | 6.483 | 3.707 | 3.619 | 134.14 | 51.58 | 137.50 | 39.34 | 37.99 |
| 400 | 6.625 | 6.765 | 6.619 | 3.739 | 3.648 | 137.47 | 53.48 | 141.32 | 39.98 | 43.85 |
| 600 | 6.672 | 6.811 | 6.686 | 3.757 | 3.664 | 139.36 | 54.56 | 143.35 | 40.33 | 46.53 |
| 800 | 6.705 | 6.844 | 6.711 | 3.770 | 3.677 | 140.72 | 55.33 | 144.76 | 40.61 | 46.61 |
| 1000 | 6.730 | 6.870 | 6.723 | 3.779 | 3.686 | 141.78 | 55.98 | 145.88 | 40.81 | 46.09 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX96 (Mafic Granulite, S.W. Greenland), Density = 3180 kg/m³* | | | | | | | | | | |
| 20 | 6.538 | 6.550 | 6.117 | 3.762 | 3.854 | 136.42 | 46.41 | 135.94 | 47.23 | 7.33 |
| 40 | 6.725 | 6.805 | 6.282 | 3.858 | 3.913 | 147.27 | 52.61 | 143.82 | 48.68 | 8.06 |
| 60 | 6.839 | 6.962 | 6.529 | 3.923 | 3.950 | 154.12 | 56.24 | 148.73 | 49.60 | 20.43 |
| 80 | 6.914 | 7.064 | 6.668 | 3.971 | 3.975 | 158.70 | 58.41 | 152.02 | 50.23 | 26.88 |
| 100 | 6.966 | 7.135 | 6.760 | 4.006 | 3.992 | 161.88 | 59.82 | 154.33 | 50.68 | 31.09 |
| 200 | 7.087 | 7.293 | 6.952 | 4.086 | 4.034 | 169.13 | 62.95 | 159.74 | 51.75 | 39.33 |
| 400 | 7.175 | 7.400 | 7.112 | 4.123 | 4.062 | 174.12 | 66.01 | 163.69 | 52.47 | 47.71 |
| 600 | 7.224 | 7.459 | 7.181 | 4.137 | 4.077 | 176.93 | 68.08 | 165.94 | 52.85 | 50.70 |
| 800 | 7.259 | 7.501 | 7.218 | 4.147 | 4.086 | 178.95 | 69.57 | 167.55 | 53.09 | 51.77 |
| 1000 | 7.286 | 7.535 | 7.254 | 4.154 | 4.094 | 180.53 | 70.78 | 168.82 | 53.30 | 53.23 |
| *MRX97 (Marble, Brooks Range, AK), Density = 2691 kg/m³* | | | | | | | | | | |
| 20 | 5.593 | 6.415 | 5.400 | 3.444 | 3.229 | 110.74 | 46.91 | 84.18 | 28.07 | 0.40 |
| 40 | 5.781 | 6.511 | 5.495 | 3.466 | 3.267 | 114.06 | 49.42 | 89.94 | 28.72 | 0.69 |
| 60 | 5.911 | 6.576 | 5.599 | 3.480 | 3.292 | 116.35 | 51.17 | 94.02 | 29.16 | 3.34 |
| 80 | 6.006 | 6.622 | 5.611 | 3.490 | 3.310 | 118.01 | 52.44 | 97.06 | 29.48 | 1.22 |
| 100 | 6.077 | 6.656 | 5.650 | 3.498 | 3.322 | 119.23 | 53.40 | 99.37 | 29.69 | 1.58 |
| 200 | 6.251 | 6.737 | 5.811 | 3.514 | 3.348 | 122.12 | 55.67 | 105.14 | 30.16 | 6.83 |
| 400 | 6.343 | 6.776 | 6.011 | 3.522 | 3.358 | 123.57 | 56.82 | 108.25 | 30.34 | 17.26 |
| 600 | 6.381 | 6.793 | 6.147 | 3.526 | 3.362 | 124.18 | 57.26 | 109.56 | 30.41 | 25.20 |
| 800 | 6.407 | 6.804 | 6.198 | 3.528 | 3.364 | 124.59 | 57.60 | 110.46 | 30.46 | 27.88 |
| 1000 | 6.427 | 6.813 | 6.224 | 3.530 | 3.367 | 124.92 | 57.85 | 111.17 | 30.50 | 29.05 |
| *MRX98 (Marble, Chipan,Taiwan), Density = 2699 kg/m³* | | | | | | | | | | |
| 20 | 6.025 | 6.013 | 6.016 | 3.311 | 3.311 | 97.59 | 38.41 | 97.98 | 29.59 | 38.41 |
| 40 | 6.221 | 6.407 | 6.135 | 3.425 | 3.379 | 110.79 | 47.47 | 104.45 | 30.81 | 33.86 |
| 60 | 6.302 | 6.551 | 6.194 | 3.462 | 3.403 | 115.81 | 51.11 | 107.19 | 31.26 | 32.94 |
| 80 | 6.349 | 6.627 | 6.231 | 3.481 | 3.416 | 118.51 | 53.11 | 108.80 | 31.50 | 32.75 |
| 100 | 6.380 | 6.674 | 6.257 | 3.492 | 3.424 | 120.22 | 54.40 | 109.86 | 31.64 | 32.80 |
| 200 | 6.453 | 6.777 | 6.328 | 3.515 | 3.442 | 123.94 | 57.25 | 112.39 | 31.98 | 33.79 |
| 400 | 6.501 | 6.835 | 6.385 | 3.527 | 3.453 | 126.09 | 58.94 | 114.07 | 32.17 | 35.38 |
| 600 | 6.520 | 6.857 | 6.413 | 3.531 | 3.456 | 126.90 | 59.60 | 114.74 | 32.24 | 36.44 |
| 800 | 6.532 | 6.869 | 6.431 | 3.532 | 3.459 | 127.35 | 60.01 | 115.16 | 32.28 | 37.16 |
| 1000 | 6.539 | 6.876 | 6.443 | 3.535 | 3.460 | 127.61 | 60.15 | 115.41 | 32.31 | 37.69 |
| *MRX99 (Dunite, Cypress Island, WA), Density = 3292 kg/m³* | | | | | | | | | | |
| 20 | 8.708 | 7.655 | 8.001 | 4.266 | 4.451 | 192.91 | 73.09 | 249.63 | 65.22 | 66.76 |
| 40 | 8.746 | 7.686 | 8.032 | 4.279 | 4.468 | 194.45 | 73.90 | 251.81 | 65.70 | 67.16 |
| 60 | 8.780 | 7.711 | 8.059 | 4.291 | 4.480 | 195.72 | 74.49 | 253.78 | 66.07 | 67.61 |
| 80 | 8.809 | 7.737 | 8.081 | 4.301 | 4.493 | 197.06 | 75.27 | 255.45 | 66.46 | 67.64 |
| 100 | 8.844 | 7.784 | 8.103 | 4.317 | 4.515 | 199.44 | 76.74 | 257.49 | 67.09 | 66.53 |
| 200 | 8.924 | 7.841 | 8.180 | 4.366 | 4.555 | 202.40 | 76.89 | 262.17 | 68.30 | 68.44 |
| 400 | 9.012 | 7.913 | 8.266 | 4.398 | 4.596 | 206.13 | 78.78 | 267.36 | 69.52 | 70.77 |
| 600 | 9.061 | 7.964 | 8.320 | 4.421 | 4.618 | 208.77 | 80.08 | 270.28 | 70.21 | 72.55 |
| 800 | 9.098 | 8.000 | 8.358 | 4.439 | 4.629 | 210.66 | 80.93 | 272.49 | 70.53 | 74.04 |
| 1000 | 9.125 | 8.028 | 8.383 | 4.457 | 4.636 | 212.14 | 81.35 | 274.11 | 70.74 | 74.83 |

**Table 2.** (Continued)

| P | $V_p(0°)$ | $Vp(90°)_{avg}$ | $V_p(45°)$ | $V_{SH}(90°)$ | $V_{SVavg}$ | $C_{11}$ | $C_{12}$ | $C_{33}$ | $C_{44}$ | $C_{13}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| *MRX100 (Dunite, Twin Sisters, WA), Density = 3317 kg/m³* | | | | | | | | | | |
| 20 | 8.632 | 7.768 | 8.122 | 4.655 | 4.770 | 200.13 | 56.38 | 247.15 | 75.47 | 61.03 |
| 40 | 8.673 | 7.802 | 8.154 | 4.674 | 4.782 | 201.91 | 56.98 | 249.51 | 75.84 | 61.66 |
| 60 | 8.708 | 7.824 | 8.172 | 4.683 | 4.790 | 203.02 | 57.54 | 251.53 | 76.09 | 61.45 |
| 80 | 8.742 | 7.861 | 8.201 | 4.696 | 4.802 | 204.98 | 58.68 | 253.49 | 76.47 | 61.89 |
| 100 | 8.773 | 8.044 | 8.217 | 4.709 | 4.816 | 214.60 | 67.50 | 255.30 | 76.93 | 57.58 |
| 200 | 8.823 | 8.086 | 8.258 | 4.735 | 4.844 | 216.85 | 68.11 | 258.21 | 77.83 | 57.64 |
| 400 | 8.883 | 8.137 | 8.306 | 4.760 | 4.871 | 219.59 | 69.28 | 261.74 | 78.69 | 58.03 |
| 600 | 8.930 | 8.177 | 8.341 | 4.765 | 4.883 | 221.79 | 71.16 | 264.51 | 79.07 | 58.60 |
| 800 | 8.965 | 8.208 | 8.365 | 4.768 | 4.891 | 223.47 | 72.65 | 266.59 | 79.35 | 58.80 |
| 1000 | 8.986 | 8.226 | 8.374 | 4.771 | 4.900 | 224.45 | 73.45 | 267.84 | 79.63 | 58.11 |

[a]P is pressure in MPa; velocities are in km/s, and stiffness constants in GPa. $Vp(0°)$ and $Vp(90°)_{avg}$ are compressional wave velocities parallel and perpendicular to the symmetry axis. $Vp(45°)$ is a quasicompressional wave velocity for propagation at 45° degrees to the symmetry axis. $V_{SH}(90°)$ is a shear wave velocity with propagation and vibration directions normal to the symmetry axis. $V_{SVavg}$ is an average shear wave velocity for (1) propagation parallel to the symmetry axis and (2) propagation normal and vibration parallel to the symmetry axis.