**Table 27.--Semiquantitative spectrographic, chemical, and radiometric analyses of ashed surface samples of lignite and carbonaceous shale from Tongue River Member of Fort Union Formation, North Cave Hills, Harding County, South Dakota**

[Samples from Riley Pass area were collected by N. M. Denson and J. R. Gill; data on samples from other areas listed in this table are from Pipiringos, G. N., Chisholm, W. A., and Kepferle, R. C., 1965, Geology and uranium deposits in the Cave Hills area, Harding County, South Dakota: U.S. Geol. Survey Prof. Paper 476-A, in press. Analyses shown graphically on plate 18D in U.S. Geol. Survey Prof. Paper 463, 1965. For explanation of code used in semiquantitative spectrographic analyses see Prof. Paper 463, p. 51.

Tr, near threshold (below limit of sensitivity); 0, looked for but not detected; n.d., not determined. Analysts: Spectrographic, Charles Annell, Mona Frank, J. C. Hamilton, R. G. Havens, K. E. Valentine; radiometric, C. G. Angelo, B. A. McCall, P. Moore; chemical, H. E. Bivens, Joseph Budinsky, R. P. Cox, Grafton Daniels, Maryse Delevaux, G. Edgington, S. P. Furman, W. D. Goss, C. Johnson, Irving May, Roosevelt Moore, D. L. Skinner, A. Sweeney, James Wahlberg]

| Sample No. | Location in T. 22 N. R. 5 E. | Bed thickness (feet) | Source of sample | Ash (percent) | Chemical: Uranium in ash (percent) | Chemical: Uranium in sample (percent) | Radiometric: Equivalent Uranium | Si | Al | Fe | Ca | Na | Mg | K | As | Mo | Ba | Ti | P | Sr | B | Zr | Mn | Ni | V | Y | Cu | La | Co | Pb | Li | Ge | Cr | Ga | Sc | Yb | Sn | Be | Nb | Ag | Other elements |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **North Riley Pass area** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 145574 | SWNE 15 | 0.6 | | 61 | 0.006 | 0.004 | 0.009 | 1 | 1 | 2+ | 2 | 3+ | 3+ | 3+ | 4 | 4+ | 3 | 3 | 0 | 4+ | 4+ | 4+ | 4 | 4 | 4 | 4- | 4- | 5 | 5+ | 5+ | 0 | 5 | 4- | 5+ | 5- | 5- | 0 | 5- | 0 | 0 | |
| 237407 | SWNW 21 | 3.6 | Upper 0.6 ft | 67 | .010 | .007 | .016 | 1 | 1 | 2+ | 2+ | 2- | 3+ | 3+ | 3- | 4- | 4+ | 3 | 0 | 4+ | 5+ | 4- | 4 | 5+ | 5 | 5 | 5- | 0 | 5- | 5 | 0 | 5 | 5+ | 5- | 5- | 6 | 0 | 6- | 0 | 0 | |
| 408 | do | 3.6 | Next 1.0 ft | 13 | .15 | .019 | .015 | 2+ | 1 | 2 | 1 | 2 | 2 | 2- | 0 | 4 | 3- | 3 | 0 | 3+ | 4- | 3- | 3- | 4 | 5- | 5+ | 4- | 0 | 4- | 5- | 0 | 5- | 5+ | 5 | 5 | 6+ | 0 | 6 | 0 | 7 | |
| 409 | do | 3.6 | do | 11 | .045 | .005 | .004 | 2+ | 1 | 2 | 2+ | 2+ | 2- | 3 | 4+ | 4 | 3- | 3 | 0 | 3 | 3- | 3 | 4+ | 5+ | 5- | 5 | 4 | 0 | 5- | 5- | 0 | 0 | 5+ | 5 | 5 | 6 | 0 | 6- | 0 | 7 | |
| 410 | do | 3.6 | Lower 1.0 ft | 12 | .034 | .004 | .005 | 2+ | 1 | 2 | 2+ | 2+ | 2- | 3 | 0 | 4 | 3- | 3 | 0 | 3 | 3- | 3 | 4+ | 5+ | 5- | 5 | 4 | 0 | 5- | 5- | 0 | 0 | 5+ | 5 | 5- | 6 | 0 | 6- | 0 | 7 | |
| 414 | do | 3.0 | Upper 1.0 ft | 37 | .24 | .089 | .088 | 1 | 1 | 2 | 3+ | 2 | 4+ | 3+ | 4+ | 3- | 4+ | 3 | 0 | 4+ | 5+ | 3- | 5- | 4- | 5- | 4- | 4- | 0 | 5 | 5- | 0 | 0 | 4- | 5+ | 5 | 5- | 0 | 5- | 0 | 7 | Ce, 4. |
| 415 | do | 3.0 | Next 1.0 ft | 36 | .33 | .12 | .15 | 1 | 2+ | 2+ | 3+ | 2- | 4+ | 3+ | 3- | 3- | 4+ | 3 | 0 | 4+ | 5+ | 3- | 5 | 4- | 5- | 5+ | 4- | 0 | 5 | 5- | 0 | 0 | 5+ | 5 | 5 | 6 | 0 | 6- | 0 | 7 | |
| 416 | do | 3.0 | 0.1 ft, begin 2 ft from top. | 26 | .92 | .24 | .22 | 1 | 1 | 2+ | 2- | 2- | 3 | 2- | 4+ | 3- | 3- | 3 | 0 | 3- | 5+ | 3- | 5 | 4 | 5- | 4- | 4 | 0 | 4- | 5- | 0 | 0 | 5+ | 5+ | 5 | 6+ | 0 | 5- | 0 | 7 | |
| 417 | do | 3.0 | Lower 1.0 ft | 66 | .038 | .014 | .021 | 1 | 1 | 2 | 4+ | 2 | 4+ | 3 | 0 | 4+ | 4+ | 3 | 0 | 4 | 5+ | 4- | 5- | 5 | 5 | 5- | 5 | 0 | 5- | 5- | 0 | 0 | 5+ | 5- | 5- | 6- | 0 | 6- | 0 | 0 | |
| 145575 | SESE 22 | .9 | | 45 | .12 | .056 | .053 | 2+ | 2+ | 1 | 1 | 2 | 2+ | 3 | 3 | 4 | 3 | 3- | 0 | 4+ | 4+ | 3- | 5 | 4- | 4- | 4- | 4- | 5 | 5 | 4- | 0 | 5 | 5+ | 5+ | 5- | 6+ | 0 | 6- | 0 | 6- | |
| 569 | do | 1.0 | | 41 | .38 | .15 | .091 | 1 | 1 | 2+ | 3+ | 2- | 3+ | 2- | 4+ | 3 | 3- | 3- | 0 | 4+ | 4+ | 4+ | 5 | 4 | 4- | 6+ | 4- | 5 | 5+ | 4- | 0 | 5- | 5+ | 5+ | 5 | 6+ | 0 | 6+ | 0 | 0 | |
| 570 | do | 1.0 | | 22 | .21 | .047 | .029 | 1 | 1 | 2+ | 2 | 2 | 3+ | 3+ | 4+ | 3 | 3 | 3- | 0 | 4+ | 4+ | 3- | 4- | 4 | 4 | 4- | 4- | 5+ | 4- | 4+ | 0 | 5 | 5+ | 5+ | 5 | 5- | 0 | 6+ | 0 | 6- | |
| 571 | do | 1.8 | | 21 | 1.6 | .34 | .15 | 2+ | 1 | 2+ | 2 | 2 | 3+ | 3+ | 3- | 3+ | 3 | 3- | 0 | 4+ | 4+ | 4+ | 4- | 4 | 4- | 4- | 4- | 5 | 4- | 4 | 0 | 5 | 5+ | 5+ | 5 | 5- | 0 | 6+ | 0 | 6- | |
| 572 | do | 1.7 | | 36 | .32 | .12 | .039 | 1 | 1 | 2+ | 2 | 2- | 2 | 2- | 4+ | 3+ | 3+ | 3- | 0 | 4+ | 4+ | 4+ | 5+ | 4- | 4 | 4- | 4- | 5 | 5+ | 5- | 0 | 0 | 4- | 5+ | 5- | 5- | 0 | 6+ | 0 | 0 | |
| 573 | do | 1.6 | | 31 | .46 | .14 | .076 | 1 | 1 | 2+ | 2 | 2 | 3+ | 3+ | 3- | 3 | 3 | 3- | 0 | 4+ | 4+ | 4+ | 5+ | 4- | 4- | 5+ | 4- | 5 | 5+ | 5+ | 0 | 5- | 5+ | 5+ | 5- | 6+ | 5- | 6+ | 0 | 0 | |
| 566 | NWSW 23 | 1.7 | Upper 0.9 ft | 24 | .62 | .15 | .086 | 1 | 1 | 2+ | 2 | 2+ | 3+ | 3+ | 0 | 3+ | 3- | 3- | 0 | 3- | 4- | 4+ | 5- | 4 | 4- | 5+ | 4 | 5 | 5+ | 4- | 0 | 0 | 5+ | 5+ | 5+ | 6+ | 5- | 6 | 0 | 6- | |
| 567 | do | 1.7 | Lower 0.8 ft | 23 | 1.6 | .36 | .13 | 1 | 2+ | 2+ | 2+ | 2+ | 2- | 3+ | 3- | 3+ | 3 | 3- | 0 | 3 | 4+ | 4+ | 5+ | 4 | 4 | 4- | 4- | 5+ | 4- | 4- | 0 | 5+ | 5+ | 5+ | 5 | 5 | 5- | 6+ | 0 | 6- | |
| 568 | do | 1.7 | Middle 0.6 ft | 19 | 1.2 | .24 | .15 | 1 | 2+ | 2+ | 2 | 2+ | 3+ | 3 | 4 | 3+ | 3- | 4+ | 0 | 3- | 4 | 4+ | 5- | 4 | 4- | 5+ | 4- | 5 | 5+ | 5+ | 0 | 0 | 5 | 5+ | 5 | 6+ | 5- | 6+ | 0 | 6- | |
| 565 | NESE 23 | 1.5 | Lower 1.3 ft | 24 | .44 | .11 | .057 | 1 | 1 | 2+ | 2 | 2- | 2 | 0 | 4+ | 3 | 3+ | 3- | 0 | 3 | 4+ | 4+ | 5+ | 4 | 4 | 5+ | 4 | 5 | 5+ | 4- | 0 | 5 | 5+ | 5+ | 5 | 5- | 5- | 6+ | 0 | 6- | |
| 594 | SWNW 26 | 1.2 | | 36 | .88 | .26 | .15 | 2+ | 2+ | 1 | 2 | 2 | 3+ | 3+ | 4+ | 3 | 3+ | 3- | 0 | 4+ | 4 | 4 | 5+ | 4 | 4+ | 4- | 4 | 5+ | 4- | 4+ | 0 | 5+ | 5 | 5+ | 5 | 5- | 0 | 5- | 0 | 0 | |
| 593 | do | 1.0 | | 36 | 2.38 | .86 | .41 | 2+ | 2+ | 1 | 2+ | 2 | 2- | 3+ | 3 | 4+ | 3 | 3 | 0 | 3- | 4 | 4+ | 4- | 4 | 4+ | 4- | 5+ | 5+ | 4 | 4 | 0 | 5+ | 5 | 5+ | 5+ | 5- | 0 | 5- | 0 | 0 | |
| 695 | do | 1.0 | | 40 | .45 | .18 | .10 | 1 | 2+ | 1 | 2 | 2- | 3+ | 3+ | 4+ | 3+ | 3+ | 3- | 0 | 4+ | 4+ | 4+ | 5+ | 4 | 4- | 5+ | 5+ | 5+ | 4- | 5+ | 0 | 5 | 5+ | 5+ | 5+ | 5- | 0 | 6+ | 0 | 6- | |
| 592 | SENE 27 | 1.4 | | 36 | .20 | .074 | .06 | 1 | 2+ | 1 | 3+ | 2 | 3 | 3 | 4- | 4+ | 3 | 3- | 0 | 4+ | 4 | 4+ | 5- | 4 | 4+ | 4- | 5+ | 5+ | 4 | 4- | 0 | 5 | 5 | 5+ | 5- | 5- | 0 | 6+ | 0 | 0 | |
| 591 | do | 1.4 | | 34 | .92 | .31 | .18 | 1 | 1 | 2+ | 3+ | 2 | 3 | 3+ | 3 | 4+ | 3- | 4+ | 0 | 4+ | 4 | 4 | 5- | 4 | 4 | 5+ | 5+ | 5+ | 5+ | 5+ | 0 | 0 | 5 | 5+ | 5- | 5- | 0 | 6+ | 0 | 0 | |
| 590 | do | 1.1 | | 28 | 1.41 | .41 | .19 | 2+ | 2+ | 1 | 2 | 2 | 2 | 0 | 3 | 4+ | 3 | 4+ | 0 | 3- | 4 | 4 | 5+ | 4 | 4+ | 4- | 5+ | 5+ | 4- | 4+ | 0 | 5+ | 5 | 5+ | 5+ | 5- | 0 | 5- | 0 | 0 | |
| 588 | do | 1.6 | Upper 0.8 ft | 35 | .34 | .12 | .12 | 2+ | 2 | 1 | 2- | 2 | 3+ | 0 | 3- | 3- | 3- | 3- | 0 | 4+ | 4 | 4+ | 5- | 4 | 4 | 5+ | 5+ | 0 | 5+ | 5+ | 0 | 5 | 5- | 5+ | 5- | 5- | 0 | 6 | 0 | 0 | |
| 589 | do | 1.6 | Lower 0.8 ft | 22 | .56 | .12 | .059 | 2+ | 2+ | 1 | 2+ | 2 | 2 | 3+ | 4 | 4 | 3 | 3- | 0 | 3- | 4 | 4+ | 5+ | 4+ | 4+ | 4 | 4- | 4- | 4+ | 4+ | 0 | 5 | 4- | 5+ | 5+ | 5- | 0 | 5- | 0 | 0 | |
| 586 | NENE 27 | 1.5 | Upper 0.8 ft | 34 | .076 | .026 | .019 | 2+ | 2+ | 1 | 2 | 2 | 3+ | 3+ | 4 | 4 | 4+ | 3- | 0 | 3- | 4 | 4+ | 5 | 4 | 4 | 5+ | 5+ | 5 | 4- | 5+ | 0 | 5- | 5 | 5+ | 5 | 5- | 0 | 6+ | 0 | 0 | |
| 587 | do | 1.5 | Lower 0.7 ft | 20 | .17 | .035 | .089 | 2+ | 2+ | 1 | 2+ | 2 | 3+ | 3+ | 4- | 4 | 3- | 3- | 0 | 3 | 4 | 4+ | 5+ | 4+ | 4+ | 4- | 4- | 5+ | 4+ | 4+ | 0 | 5 | 0 | 5+ | 5 | 5- | 0 | 5- | 0 | 0 | |
| 696 | do | 1.0 | | 36 | .15 | .053 | .026 | 1 | 2+ | 1 | 2- | 2+ | 3+ | 3+ | 0 | 4+ | 3 | 3- | 0 | 4+ | 4+ | 4+ | 5- | 4 | 4- | 4- | 5+ | 5+ | 5+ | 4- | 4- | 0 | 5- | 5 | 5+ | 5- | 5- | 0 | 6+ | 0 | 6- | |
| 697 | do | .5 | | 45 | .66 | .30 | .11 | 1 | 2+ | 1 | 2+ | 3+ | 2- | 3+ | 4+ | 4+ | 3 | 3- | 0 | 3- | 4 | 4+ | 5 | 4- | 4- | 5+ | 5+ | 5 | 5+ | 4- | 0 | 5 | 5+ | 5+ | 5- | 5- | 0 | 6+ | 0 | 6- | |
| 698 | do | .9 | | 60 | .02 | .012 | .01 | 2+ | 2+ | 1 | 2- | 0 | 3+ | 3+ | 4 | 4- | 3- | 3- | 0 | 4+ | 4+ | 4 | 4 | 4- | 4- | 5+ | 5+ | 5 | 4- | 5- | 0 | 5+ | 5+ | 5+ | 5- | 5- | 0 | 6 | 0 | 6- | |
| 699 | do | 1.5 | | 21 | .33 | .07 | .051 | 1 | 2+ | 1 | 3+ | 2+ | 3+ | 3+ | 4+ | 3 | 3 | 3- | 0 | 4+ | 4+ | 4+ | 5- | 4 | 4+ | 4- | 4- | 5+ | 4- | 4+ | 0 | 5+ | 5+ | 5+ | 5 | 5- | 0 | 6+ | 0 | 6- | |
| 700 | do | 1.2 | | 32 | .50 | .16 | .10 | 1 | 2+ | 2+ | 2+ | 3+ | 2- | 3+ | 3- | 3- | 3 | 3- | 0 | 4+ | 4 | 4+ | 5+ | 4 | 4- | 4- | 5+ | 5+ | 4- | 5 | 0 | 5- | 5+ | 5+ | 5- | 5- | 0 | 6+ | 0 | 6- | |
| 701 | do | 1.4 | | 23 | .39 | .092 | .047 | 1 | 2+ | 2+ | 2 | 2+ | 3+ | 3+ | 4 | 4+ | 3 | 3- | 0 | 4+ | 4 | 4+ | 5- | 4 | 4- | 5+ | 4- | 5+ | 4- | 4+ | 0 | 5- | 5 | 5+ | 5- | 5- | 0 | 6+ | 0 | 6- | |
| 702 | do | .6 | | 37 | .48 | .18 | .10 | 1 | 1 | 2+ | 2+ | 3+ | 2- | 3+ | 3+ | 3- | 3 | 3- | 0 | 4+ | 4 | 4+ | 5 | 4 | 4- | 5+ | 5+ | 5+ | 4- | 4- | 0 | 5- | 5+ | 5+ | 5- | 5- | 0 | 6+ | 0 | 6- | |
| 703 | NWNENE 27 | .7 | | 44 | .091 | .040 | .054 | 1 | 2+ | 2+ | 2+ | 3+ | 2- | 3+ | 3+ | 4+ | 3 | 3- | 0 | 4+ | 4 | 3- | 5- | 4 | 4 | 4- | 4- | 5+ | 5+ | 4 | 0 | 5- | 5+ | 5+ | 5- | 5- | 0 | 6+ | 0 | 6- | |
| 704 | do | 1.0 | | 37 | .17 | .064 | .062 | 1 | 2+ | 2+ | 2+ | 2 | 2- | 3+ | 3- | 4+ | 3 | 3- | 0 | 4+ | 4 | 4+ | 5- | 4 | 4- | 4- | 4- | 5+ | 5+ | 4 | 0 | 5 | 5+ | 5+ | 5- | 5- | 0 | 6+ | 0 | 6- | |
| 577 | SWNENE 27 | 1.2 | | 36 | .021 | .008 | .016 | 2+ | 2+ | 2+ | 1 | 2- | 2 | 3 | 4+ | 4 | 3 | 4+ | 0 | 4+ | 4 | 3- | 5+ | 4 | 4 | 4- | 4- | 5+ | 5+ | 4 | 0 | 5 | 5 | 5+ | 5 | 5- | 0 | 5- | 0 | 0 | |
| 578 | do | 1.2 | | 24 | .062 | .015 | .038 | 1 | 1 | 2+ | 2 | 2+ | 3+ | 3+ | 0 | 4+ | 3- | 3- | 0 | 3- | 4+ | 4+ | 5- | 4+ | 4 | 4 | 4- | 5+ | 4 | 4 | 0 | 5 | 5+ | 5+ | 5+ | 5- | 0 | 6+ | 0 | 6- | |
| 579 | do | 1.1 | | 24 | .15 | .036 | .023 | 2+ | 2+ | 2+ | 1 | 3+ | 2+ | 3 | 3- | 4 | 3 | 3- | 0 | 4+ | 4+ | 4+ | 4- | 4+ | 4 | 4 | 4- | 5+ | 4- | 4 | 0 | 5 | 5+ | 5+ | 5 | 5- | 0 | 5- | 0 | 0 | |
| 580 | do | 1.2 | | 29 | .38 | .11 | .053 | 2+ | 2+ | 1 | 2 | 2+ | 2 | 3 | 4+ | 4+ | 3 | 4+ | 0 | 3- | 4 | 4 | 4- | 4 | 4+ | 4- | 5+ | 5+ | 4 | 4+ | 0 | 5 | 5 | 5+ | 5 | 5- | 0 | 5- | 0 | 0 | |
| 581 | do | 1.4 | | 21 | .48 | .10 | .061 | 2+ | 2+ | 1 | 2 | 2 | 3+ | 3 | 4+ | 3+ | 3 | 4+ | 0 | 4+ | 4 | 4+ | 4- | 4 | 4+ | 4- | 5+ | 5+ | 4 | 4 | 0 | 5+ | 5 | 5+ | 5 | 5- | 0 | 5- | 0 | 0 | |
| 582 | do | .3 | | 27 | .22 | .060 | .035 | 2+ | 2+ | 1 | 2 | 2 | 3+ | 3+ | 4+ | 4+ | 3 | 4+ | 0 | 3- | 4+ | 4 | 4 | 4+ | 4+ | 4- | 4- | 4- | 4 | 4+ | 0 | 5 | 5+ | 5+ | 5 | 5- | 0 | 5- | 0 | 0 | |
| 583 | NWSENE 27 | 1.0 | | 33 | .48 | .17 | .064 | 2+ | 2+ | 1 | 2+ | 2- | 2- | 3+ | 4 | 4+ | 3 | 3- | 0 | 4+ | 4 | 4 | 4- | 4+ | 4+ | 5+ | 5+ | 5 | 4 | 4 | 0 | 5 | 5+ | 5+ | 5 | 5- | 0 | 5- | 0 | 0 | |
| 584 | do | 1.4 | | 26 | .15 | .040 | .025 | 2+ | 2+ | 1 | 2 | 2- | 3 | 0 | 4+ | 4+ | 3- | 3- | 0 | 4+ | 4 | 4+ | 5+ | 4 | 4+ | 5+ | 5+ | 5 | 4- | 4 | 0 | 5 | 5 | 5+ | 5- | 5- | 0 | 6+ | 0 | 0 | |
| 585 | NESWNE 27 | 1.1 | | 40 | .095 | .038 | .022 | 2+ | 2+ | 1 | 2- | 2 | 3+ | 3+ | 4 | 4- | 3- | 3- | 0 | 3- | 4 | 4+ | 5 | 4 | 4 | 4- | 5+ | 5+ | 4 | 4- | 0 | 5 | 5+ | 5+ | 5 | 5- | 0 | 6+ | 0 | 0 | |
| 705 | do | 1.3 | | 49 | .011 | .005 | .017 | 1 | 2+ | 2+ | 2 | 3+ | 3+ | 2- | 4 | 4- | 3- | 3- | 0 | 3- | 4- | 3- | 4- | 4- | 4 | 4- | 5- | 5 | 5+ | 5 | 0 | 5 | 5 | 5 | 5- | 5- | 5- | 6+ | 5- | 6- | |
| 706 | do | 1.4 | | 27 | .27 | .064 | .038 | 1 | 1 | 2+ | 2 | 2 | 2- | 2- | 4+ | 4 | 3- | 3- | 0 | 3 | 5 | 3- | 5 | 4- | 4 | 4- | 5 | 4 | 4- | 5+ | 0 | 5 | 5 | 5 | 5- | 5- | 5- | 6+ | 5- | 6- | |
| 707 | do | 1.2 | | 28 | .043 | .016 | .012 | 1 | 2+ | 2+ | 2+ | 2+ | 3+ | 3+ | 4 | 4- | 3 | 3- | 0 | 3- | 4 | 4+ | 5+ | 4+ | 3- | 4- | 5+ | 5+ | 4 | 4 | 0 | 4- | 5 | 5+ | 5 | 5- | 0 | 5- | 0 | 6- | Zn, 3-. |
| 708 | NWSENE 27 | 1.1 | | 36 | .14 | .049 | .11 | 1 | 2+ | 2+ | 2+ | 2+ | 3+ | 3+ | 0 | 4 | 3+ | 3- | 0 | 4+ | 4 | 4+ | 5 | 4 | 4- | 4- | 5+ | 5+ | 4 | 4- | 0 | 5 | 5 | 5+ | 5- | 6+ | 0 | 6+ | 0 | 6- | Zn, 4-. |
| 784 | NWNWSW 28 | .1 | | 94 | .003 | .003 | .001 | 1 | 2+ | 3 | 3+ | 2+ | 3 | 0 | 0 | 5 | 4 | 3 | 0 | 4- | 5- | 4- | 5+ | 5- | 4- | 5+ | 4- | 5+ | 0 | 5 | 0 | 0 | 4 | 5- | 5- | 6 | 0 | 6- | 0 | 0 | |
| **Western part of South Riley Pass area** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 145777 | SWSW 26 | 0.7 | Basal 0.4 ft | 59 | 1.86 | 1.10 | 0.55 | 1 | 1 | 2+ | 2 | 2+ | 3+ | 3+ | 3- | 3- | 3 | 3 | 0 | 0 | 4- | 4+ | 5 | 4 | 4 | 4- | 4- | 5+ | 4- | 4- | 0 | 5+ | 4- | 5+ | 5 | 5- | 5- | 6 | 0 | 0 | |
| 785 | do | .6 | | 77 | .015 | .012 | .022 | 1 | 1 | 2 | 2 | 2- | 3+ | 2- | 0 | 4- | 3- | 3 | 0 | 4+ | 4 | 5+ | 5+ | 4- | 5+ | 5+ | 4- | 5 | 5 | 4 | 0 | 5- | 5+ | 5+ | 5- | 6+ | 5 | 6- | 0 | 0 | |
| 776 | do | 1.0 | | 46 | 2.39 | 1.10 | .46 | 1 | 1 | 2+ | 2- | 2 | 3 | 3+ | 3 | 3+ | 3- | 3- | 0 | 0 | 4- | 4+ | 5- | 4 | 4- | 4- | 4- | 5+ | 5+ | 4- | 0 | 5- | 5+ | 5+ | 5 | 5- | 5- | 6 | 0 | 0 | |
| 783 | do | .9 | | 55 | 1.41 | .78 | .41 | 1 | 1 | 2 | 2 | 2- | 3+ | 3+ | 3 | 3 | 3- | 3 | 0 | 4+ | 4 | 4 | 5 | 4- | 4- | 5+ | 5+ | 5 | 5 | 5 | 0 | 5- | 5+ | 5+ | 5- | 6+ | 5- | 6 | 0 | 0 | |
| 794 | do | .7 | | 57 | 1.22 | .70 | .35 | 1 | 1 | 2+ | 2 | 2- | 3+ | 3+ | 3- | 3+ | 3- | 3 | 0 | 4+ | 4 | 4+ | 5+ | 4- | 4- | 5+ | 4- | 5 | 5 | 4- | 0 | 5- | 5+ | 5+ | 5- | 6+ | 5- | 6- | 0 | 0 | |
| 784 | do | .9 | | 63 | .492 | .31 | .24 | 1 | 1 | 2 | 3+ | 2 | 3 | 3+ | 4 | 4+ | 3 | 3 | 0 | 4+ | 4 | 4 | 5 | 4- | 5+ | 5+ | 4- | 5 | 5 | 5+ | 0 | 5 | 5+ | 5+ | 5- | 6+ | 5+ | 6 | 0 | 0 | |
| 146014 | do | 1.0 | | 59 | 1.2 | .70 | .39 | 1 | 2+ | 2 | 2 | 2 | 3+ | 2- | 3 | 2- | 4+ | 3- | 0 | 4 | 5 | 3- | 4- | 4- | 4- | 5+ | 5+ | 0 | 5 | 5+ | 0 | 0 | 4- | 5- | 5 | 5- | 5+ | 6 | 0 | 7+ | |
| 042 | do | 1.0 | Upper 0.4 ft | 53 | 1.8 | .96 | .59 | 1 | 2+ | 2+ | 2- | 2- | 3- | 2- | 2- | 2- | 3- | 3- | 0 | 4 | 5- | 3- | 4- | 5+ | 4- | 5+ | 5+ | 0 | 5 | 5+ | 0 | 5 | 4- | 5- | 5 | 5- | 5+ | 6 | 0 | 7+ | |
| 145775 | do | 1.3 | | 38 | .71 | .27 | .11 | 1 | 2+ | 2+ | 2- | 2- | 3 | 3+ | 3- | 3 | 3- | 3- | 0 | 0 | 4- | 4+ | 5- | 4- | 4- | 5+ | 4- | 5 | 5+ | 5 | 0 | 5 | 5+ | 5+ | 5- | 6+ | 5- | 6 | 0 | 0 | |
| 782 | do | .7 | | 51 | 1.84 | .94 | .44 | 1 | 1 | 2 | 2 | 2- | 3+ | 3+ | 3 | 3- | 3- | 3 | 0 | 4+ | 4- | 4 | 5 | 4- | 5+ | 5+ | 5+ | 5 | 5 | 5+ | 0 | 5- | 5+ | 5+ | 5- | 6+ | 5- | 6 | 0 | 0 | |
| 790 | do | 1.1 | | 51 | .372 | .19 | .14 | 1 | 1 | 2+ | 3+ | 2 | 3 | 3+ | 3- | 3 | 3 | 3 | 0 | 4+ | 4- | 4 | 5- | 4- | 4- | 0 | 4- | 5 | 5 | 5+ | 0 | 5+ | 5 | 5+ | 5- | 6+ | 5- | 6 | 0 | 0 | |
| 774 | do | 1.4 | | 45 | .911 | .41 | .25 | 1 | 1 | 2+ | 2- | 2 | 3+ | 2- | 3- | 3- | 3 | 3 | 0 | 0 | 4- | 4+ | 5- | 4- | 4- | 5+ | 5+ | 5 | 5+ | 5 | 0 | 5- | 4- | 5+ | 5- | 6+ | 5- | 6- | 0 | 0 | |
| 781 | do | .5 | | 70 | .14 | .098 | .059 | 1 | 1 | 2+ | 2 | 2- | 3+ | 2- | 3- | 4+ | 3 | 3 | 0 | 4+ | 4- | 4- | 4- | 4 | 4- | 5+ | 5+ | 5 | 5+ | 5+ | 0 | 5- | 5+ | 5+ | 5- | 6+ | 5- | 6 | 0 | 0 | |
| 789 | do | .8 | | 53 | .886 | .47 | .26 | 1 | 1 | 2+ | 3+ | 2 | 3 | 3+ | 3- | 3 | 3 | 3 | 0 | 4+ | 4- | 4 | 5- | 4- | 4- | 0 | 4- | 5 | 5 | 5+ | 0 | 5+ | 5 | 5+ | 5- | 6+ | 0 | 6 | 0 | 0 | |
| 773 | do | 1.0 | | 63 | .453 | .29 | .18 | 1 | 1 | 2+ | 2- | 2- | 3+ | 2- | 3- | 3+ | 3- | 3 | 0 | 0 | 4- | 4+ | 5 | 5+ | 4- | 5+ | 5+ | 5 | 5 | 5 | 0 | 5- | 4- | 5+ | 5- | 6+ | 5- | 6- | 0 | 0 | |
| 780 | do | .4 | | 73 | .128 | .094 | .053 | 1 | 1 | 2+ | 2- | 2- | 3+ | 3+ | 4+ | 4+ | 3- | 3- | 0 | 4+ | 4- | 5+ | 4 | 4- | 4- | 5+ | 4- | 5 | 5+ | 5 | 0 | 5 | 5+ | 5+ | 5- | 6+ | 5+ | 6 | 0 | 0 | |
| 788 | do | .5 | | 73 | .589 | .43 | .20 | 1 | 1 | 2+ | 2- | 2- | 3+ | 3+ | 4+ | 3- | 3- | 3 | 0 | 4+ | 4 | 4- | 4 | 4- | 4- | 0 | 4- | 5 | 5 | 5+ | 0 | 5 | 5 | 5+ | 5- | 6+ | 5- | 6 | 0 | 0 | |
| 772 | do | .9 | | 48 | .625 | .30 | .20 | 1 | 2+ | 2+ | 2 | 2 | 3+ | 3+ | 3- | 3- | 3 | 3- | 0 | 0 | 4- | 4+ | 5- | 4 | 4- | 5+ | 4- | 5 | 4- | 5+ | 0 | 5 | 4- | 5+ | 5- | 6+ | 4- | 6 | 0 | 0 | |