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Analytical results and sample locality maps  
of heavy-mineral-concentrate and rock samples from the  
West Potrillo/Mt. Riley Wilderness Study Area (030-052),  
Luna and Dona Ana Counties, New Mexico

By

Janet L. Jones<sup>1</sup>, James E. Kilburn<sup>1</sup>,  
David R. Zimbelman<sup>1</sup>, and David F. Siems<sup>1</sup>

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<sup>1</sup>DFC, Box 25046, MS 973, Denver, CO 80225

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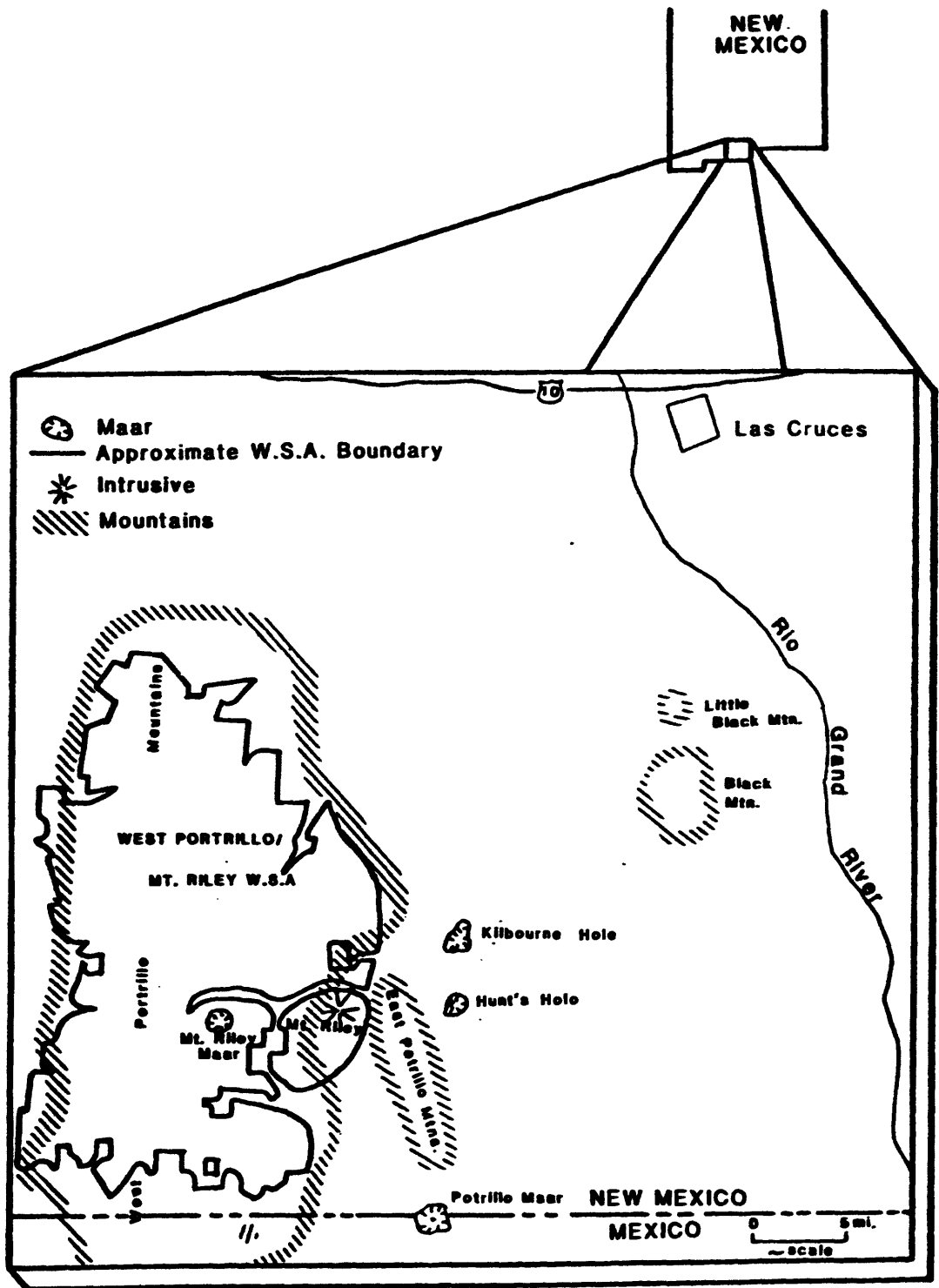


Figure 1. Index map of the West Potrillo/Mt. Riley Wilderness Study Area (030-052), Luna and Dona Ana Counties, New Mexico.

## Sample Collection

Samples were collected at 163 sites (plate 1). At these sites either a heavy-mineral-concentrate sample or a rock sample was taken. Where suitable outcrop and stream sediment were available, both sample types were taken. There were 108 heavy-mineral-concentrate samples taken and 76 rock samples taken; only at 5 sites were both sample types collected. Fourteen samples were taken from outside of the studied area; these samples were taken from known mineralized areas adjacent to the WSA to help define mineralization that might be found within the WSA. For the heavy-mineral concentrates sampling density was about 1 sample site per 2 mi<sup>2</sup>. For rocks collected, average sample density was about 1 sample site per 3 mi<sup>2</sup>.

### Heavy-mineral-concentrate samples

Heavy-mineral-concentrate samples were collected from active alluvium taken from 1st or 2nd order stream channels. Each bulk sample was screened with a 2.0-mm (10-mesh) screen to remove the coarse material. The less than 2.0-mm fraction was panned until most of the quartz, feldspar, organic material, and clay-sized material were removed.

### Rock samples

Rock samples were collected from outcrops or exposures in the vicinity of the plotted site location. Samples were collected from unaltered and/or altered and/or mineralized rocks.

## Sample Preparation

The heavy-mineral-concentrate samples were air dried, then sieved using 35-mesh (0.12-mm) stainless-steel sieves. The portion of the concentrate passing through the sieve was saved for analysis.

After air drying, bromoform (specific gravity 2.8) was used to remove the remaining quartz and feldspar from the heavy-mineral-concentrate samples that had been panned in the field. The resultant heavy-mineral sample was separated into three fractions using a large electromagnet (in this case a modified Frantz Isodynamic Separator). The most magnetic material, primarily magnetite, was not analyzed. The second fraction, largely ferromagnesian silicates and iron oxides, was saved for archival storage. The third fraction (the least magnetic material which may include the nonmagnetic ore minerals, zircon, sphene, etc.) was split using a Jones splitter. One split was hand ground for spectrographic analysis; the other split was saved for mineralogical analysis. These magnetic separates are the same separates that would be produced by using a Frantz Isodynamic Separator set at a slope of 15° and a tilt of 10° with a current of 0.1 ampere to remove the magnetite and ilmenite, and a current of 1.0 ampere to split the remainder of the sample into paramagnetic and nonmagnetic fractions.

Rock samples were crushed and then pulverized to minus 0.15 mm with ceramic plates.

## Sample Analysis

### Spectrographic method

The heavy-mineral-concentrate and rock samples were analyzed for 31 elements using a semiquantitative, direct-current arc emission spectrographic method (Grimes and Marranzino, 1968). The elements analyzed and their lower limits of determination are listed in table 1. Spectrographic results were obtained by visual comparison of spectra derived from the sample against spectra obtained from standards made from pure oxides and carbonates. Standard concentrations are geometrically spaced over any given order of magnitude of concentration as follows: 100, 50, 20, 10, and so forth. Samples whose concentrations are estimated to fall between those values are assigned values of 70, 30, 15, and so forth. The precision of the analytical method is approximately plus or minus one reporting interval at the 83 percent confidence level and plus or minus two reporting intervals at the 96 percent confidence level (Motooka and Grimes, 1976). Values determined for the major elements (iron, magnesium, calcium, and titanium) are given in weight percent; all others are given in parts per million (micrograms/gram). Analytical data for samples from the West Potrillo/Mt. Riley WSA are listed in tables 3 and 4.

### ROCK ANALYSIS STORAGE SYSTEM

Upon completion of all analytical work, the analytical results were entered into a computer-based file called Rock Analysis Storage System (RASS). This data base contains both descriptive geological information and analytical data. Any or all of this information may be retrieved and converted to a binary form (STATPAC) for computerized statistical analysis or publication (VanTrump and Miesch, 1977).

### DESCRIPTION OF DATA TABLES

Tables 3 and 4 list the results of analyses for the samples of heavy-mineral concentrate and rock, respectively. For the two tables, the data are arranged so that column 1 contains the USGS-assigned sample numbers. These numbers correspond to the numbers shown on the site location map (plate 1), the prefixes "wp" and "ep", however, have been deleted on the map to help eliminate the crowding of numbers and to improve the overall clarity of the map itself. The letter "s" below the element symbol indicates emission spectrographic analysis. A letter "N" in the tables indicates that a given element was looked for but not detected at the lower limit of determination shown for that element in table 1. If an element was observed but was below the lowest reporting value, a "less than" symbol (<) was entered in the tables in front of the lower limit of determination. If an element was observed but was above the highest reporting value, a "greater than" symbol (>) was entered in the tables in front of the upper limit of determination. If an element was not looked for in a sample, two dashes (--) are entered in tables 3 and 4 in place of an analytical value. Because of the formatting used in the computer program that produced tables 3 and 4, some of the elements listed in these tables (Fe, Mg, Ca, Ti, Ag, and Be) carry one or more nonsignificant digits to the right of the significant digits. The analysts did not determine these elements to the accuracy suggested by the extra zeros.

## REFERENCES CITED

- Grimes, D. J., and Marranzino, A. P., 1968, Direct-current arc and alternating-current spark emission spectrographic field methods for the semiquantitative analysis of geologic materials: U.S. Geological Survey Circular 591, 6 p.
- Motooka, J. M., and Grimes, D. J., 1976, Analytical precision of one-sixth order semiquantitative spectrographic analyses: U.S. Geological Survey Circular 738, 25 p.
- VanTrump, George, Jr., and Miesch, A. T., 1977, The U.S. Geological Survey RASS-STATPAC system for management and statistical reduction of geochemical data: Computers and Geosciences, v. 3, p. 475-488.

**TABLE 1.--Limits of determination for the spectrographic analysis of rocks,  
based on a 10-mg sample**

[The spectrographic limits of determination for heavy-mineral-concentrate samples are based on a 5-mg sample, and are therefore two reporting intervals higher than the limits given for rocks]

| Elements          | Lower determination limit | Upper determination limit |
|-------------------|---------------------------|---------------------------|
| Percent           |                           |                           |
| Iron (Fe)         | 0.05                      | 20                        |
| Magnesium (Mg)    | .02                       | 10                        |
| Calcium (Ca)      | .05                       | 20                        |
| Titanium (Ti)     | .002                      | 1                         |
| Parts per million |                           |                           |
| Manganese (Mn)    | 10                        | 5,000                     |
| Silver (Ag)       | 0.5                       | 5,000                     |
| Arsenic (As)      | 200                       | 10,000                    |
| Gold (Au)         | 10                        | 500                       |
| Boron (B)         | 10                        | 2,000                     |
| Barium (Ba)       | 20                        | 5,000                     |
| Beryllium (Be)    | 1                         | 1,000                     |
| Bismuth (Bi)      | 10                        | 1,000                     |
| Cadmium (Cd)      | 20                        | 500                       |
| Cobalt (Co)       | 5                         | 2,000                     |
| Chromium (Cr)     | 10                        | 5,000                     |
| Copper (Cu)       | 5                         | 20,000                    |
| Lanthanum (La)    | 20                        | 1,000                     |
| Molybdenum (Mo)   | 5                         | 2,000                     |
| Niobium (Nb)      | 20                        | 2,000                     |
| Nickel (Ni)       | 5                         | 5,000                     |
| Lead (Pb)         | 10                        | 20,000                    |
| Antimony (Sb)     | 100                       | 10,000                    |
| Scandium (Sc)     | 5                         | 100                       |
| Tin (Sn)          | 10                        | 1,000                     |
| Strontium (Sr)    | 100                       | 5,000                     |
| Vanadium (V)      | 10                        | 10,000                    |
| Tungsten (W)      | 50                        | 10,000                    |
| Yttrium (Y)       | 10                        | 2,000                     |
| Zinc (Zn)         | 200                       | 10,000                    |
| Zirconium (Zr)    | 10                        | 1,000                     |
| Thorium (Th)      | 100                       | 2,000                     |

TABLE 2.--Description of rock samples

[0 = outcrop; F = float; D = mine dump or prospect]

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|         |   |  |
|---------|---|--|
| EP100R  | D | Calcite-siderite(?)                              |
| WP556RE | F | Rhyolite   |
| WP103R  | O | Aplite dike                                      |
| EP501RA | D | Barite with cherty limestone                     |
| WP121R  | O | Calcite vein                                     |
| WP117R  | O | Rhyolite   |
| WP126R  | O | Limestone conglomerate; calcite veinlets         |
| WP120R  | O | Lahar  |
| WP344R  | O | Olivine basalt                                   |
| WP347R  | O | Olivine basalt                                   |
| WP346R  | O | Olivine basalt                                   |
| WP591R  | O | Andesite   |
| WP569R  | O | Oxidized fault material                          |
| WP119R  | O | Iron-rich calcite vein                           |
| WP569RJ | O | Oxidized fault material                          |
| WP118R  | O | Fault material; calcite veinlets                 |
| WP114R  | O | Rhyodacite                                       |
| WP566RB | O | Rhyolite   |
| EP300RA | O | Oxidized dolomitic limestone                     |
| WP590RA | D | Oxide-stained calcite                            |
| EP300R  | O | Brecciated silicified dolomitic limestone        |
| EP502R  | D | Iron-stained limestone breccia; calcite veinlets |
| WP350R  | O | Olivine basalt                                   |
| WP105R  | O | Rhyodacite                                       |
| WP556RC | F | Partially silicified limestone                   |
| WP112R  | O | Rhyodacite                                       |
| WP110R  | O | Rhyodacite                                       |
| WP124R  | O | Clayey gouge material                            |
| WP109RA | O | Oxidized joint coatings                          |
| EP500R  | O | Limonitic, partially silicified fault material   |
| WP131R  | O | Manganese-rich joint coatings                    |
| WP350R  | O | Olivine basalt                                   |
| WP566RA | F | Limestone  |
| EP501RB | D | Jasperoid  |
| WP567R  | F | Dolomite   |
| WP101R  | O | Rhyodacite                                       |
| WP107R  | O | Rhyodacite                                       |
| WP102R  | O | Sandstone  |
| WP109RB | O | Silicified rhyodacite                            |
| WP563R  | O | Weathered andesite                               |
| WP583R  | O | Oxide-stained rhyolite                           |
| WP126RA | O | Limonitic replacement rock; calcite veinlets     |
| WP131RB | O | Clay-rich gouge material                         |
| WP345R  | O | Olivine basalt                                   |
| WP584R  | O | Rhyolite   |
| WP341R  | O | Olivine basalt                                   |
| WP585RB | O | Rhyolite   |
| WP556RB | F | Gossan-like rock; stockwork quartz and calcite   |
| WP342R  | O | Olivine basalt                                   |



TABLE 2. (continued)

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|         |   |  |
|---------|---|--|
| WP351R  | 0 | Olivine basalt                                 |
| WP140R  | 0 | Calcite vein                                   |
| WP585RA | 0 | Rhyodacite                                     |
| WP595RA | D | Silicified cherty limestone                    |
| WP586R  | 0 | Rhyodacite                                     |
| WP115R  | 0 | Iron-rich calcite vein                         |
| WP129R  | 0 | Rhyodacite                                     |
| WP128R  | 0 | Rhyodacite                                     |
| WP126RC | 0 | Calcite vein                                   |
| WP126RB | 0 | Limestone conglomerate                         |
| WP556RA | F | Dolomite                                       |
| WP587R  | 0 | Rhyolite                                       |
| WP582R  | 0 | Rhyolite                                       |
| WP595RB | 0 | Massive calcite vein                           |
| WP556RD | F | Partially silicified limestone                 |
| WP127R  | 0 | Rhyolite; joint surface                        |
| WP135R  | 0 | Iron-rich calcite vein                         |
| WP130R  | 0 | Calcite breccia; rhyolite clasts               |
| WP134R  | 0 | Rhyodacite                                     |
| WP590RB | D | Oxidized high-grade ore; galena                |
| WP340R  | 0 | Olivine basalt                                 |
| WP348R  | 0 | Olivine basalt                                 |
| WP136R  | 0 | Oxide-stained rhyolite                         |
| WP133R  | 0 | Iron-manganese coatings; calcite vein material |
| WP349R  | 0 | Olivine basalt                                 |

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TABLE 3. SPECTROGRAPHIC RESULTS OF CONCENTRATES FROM THE WEST PORRILLO/HT. RILEY W.S.A., NFW MEXICO.  
 [N, not detected; <, detected but below the limit of determination shown; >, determined to be greater than the value shown.]

| Sample | Latitude | Longitude | Fer-pct.<br>S | Mg-pct.<br>S | Ca-pct.<br>S | Ti-pct.<br>S | Mn-pdm<br>S | Ag-pdm<br>S | As-pdm<br>S | Au-pdm<br>S | B-pdm<br>S | Ba-pdm<br>S |
|--------|----------|-----------|---------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|------------|-------------|
| WP138  | 31 54 33 | 107 5 37  | 1.5           | .50          | 3.0          | 2.00         | 700         | N           | N           | N           | 100        | 500         |
| WP139  | 31 54 43 | 107 5 44  | 1.0           | .10          | 2.0          | 1.50         | 200         | N           | N           | N           | 30         | 500         |
| WP301  | 32 0 5   | 107 7 0   | .7            | .20          | .7           | 1.50         | 100         | N           | N           | N           | 30         | 500         |
| WP302  | 32 0 21  | 107 7 59  | .7            | .15          | .7           | .70          | 70          | N           | N           | N           | 20         | 700         |
| WP303  | 32 0 13  | 107 7 53  | .7            | .50          | .7           | 1.50         | 70          | N           | N           | N           | 70         | 500         |
| WP304  | 32 1 18  | 107 8 46  | .7            | .20          | 1.0          | 1.00         | 100         | N           | N           | N           | 20         | 500         |
| WP305  | 32 1 50  | 107 9 17  | .7            | .30          | 2.0          | 1.00         | 200         | N           | N           | N           | 50         | 300         |
| WP306  | 32 2 0   | 107 9 18  | 1.0           | .70          | 1.0          | 2.00         | 200         | N           | N           | N           | 50         | 500         |
| WP307  | 32 3 16  | 107 9 47  | 1.0           | .50          | 3.0          | 2.00         | 300         | N           | N           | N           | 50         | 300         |
| WP308  | 32 3 8   | 107 9 42  | 1.0           | .50          | .7           | .50          | 70          | N           | N           | N           | 30         | 700         |
| WP309  | 32 4 8   | 107 8 1   | 1.0           | .70          | 1.0          | 1.50         | 200         | N           | N           | N           | 50         | 500         |
| WP310  | 32 4 33  | 107 8 54  | 1.0           | .50          | .7           | 2.00         | 150         | N           | N           | N           | 20         | 500         |
| WP311  | 32 4 53  | 107 9 21  | 1.0           | .50          | 1.0          | .70          | 100         | N           | N           | N           | 50         | 700         |
| WP312  | 32 6 13  | 107 11 15 | .5            | .20          | 1.5          | .70          | 70          | N           | N           | N           | 30         | 3,000       |
| WP313  | 32 5 44  | 107 11 31 | .7            | .10          | .5           | .20          | 50          | N           | N           | N           | 20         | 1,000       |
| WP314  | 32 5 7   | 107 12 26 | .5            | .15          | .7           | .50          | 70          | N           | N           | N           | 20         | 500         |
| WP315  | 32 4 19  | 107 11 47 | .7            | .20          | .7           | .30          | 50          | N           | N           | N           | 30         | 700         |
| WP316  | 32 3 51  | 107 12 21 | .7            | .20          | 1.5          | .50          | 100         | N           | N           | N           | 30         | 700         |
| WP317  | 32 3 34  | 107 12 23 | .7            | .20          | 1.0          | .50          | 70          | N           | N           | N           | 20         | 500         |
| WP318  | 32 3 25  | 107 12 45 | .5            | .10          | .5           | .15          | 20          | N           | N           | N           | 20         | 700         |
| WP319  | 32 2 42  | 107 12 17 | .5            | .10          | 1.0          | .70          | 70          | N           | N           | N           | 20         | 500         |
| WP320  | 32 2 21  | 107 13 0  | .5            | .10          | .3           | .20          | 50          | N           | N           | N           | 20         | 500         |
| WP321  | 32 1 45  | 107 12 41 | .5            | .10          | .5           | .50          | 50          | N           | N           | N           | 30         | 500         |
| WP322  | 32 0 32  | 107 12 7  | .5            | .10          | .2           | .30          | 30          | N           | N           | N           | 20         | 500         |
| WP343  | 32 0 16  | 107 10 36 | .7            | .10          | .3           | 2.00         | 70          | N           | N           | N           | 30         | 300         |
| WP503  | 31 54 59 | 107 7 20  | .7            | .30          | 1.0          | 1.00         | 70          | N           | N           | N           | 50         | 700         |
| WP504  | 31 54 29 | 107 8 0   | 1.0           | .20          | 1.5          | 2.00         | 100         | N           | N           | N           | 70         | 500         |
| WP505  | 31 55 37 | 107 10 0  | 7.0           | .50          | 1.5          | 2.00         | 1,000       | N           | N           | N           | 30         | 300         |
| WP506  | 31 56 42 | 107 9 17  | 1.0           | .20          | 10.0         | 1.50         | 500         | N           | N           | N           | 20         | 200         |
| WP507  | 31 56 56 | 107 7 7   | 1.5           | 1.00         | 2.0          | 2.00         | 500         | N           | N           | N           | 20         | 200         |
| WP508  | 31 56 51 | 107 7 5   | .7            | .15          | 5.0          | 2.00         | 300         | N           | N           | N           | 20         | 300         |
| WP509  | 31 57 43 | 107 6 28  | 1.0           | .20          | 1.5          | 2.00         | 300         | N           | N           | N           | 50         | 300         |
| WP510  | 31 58 22 | 107 6 47  | 1.0           | .70          | 1.0          | 2.00         | 200         | N           | N           | N           | 20         | 500         |
| WP511  | 31 54 21 | 107 8 55  | .7            | .50          | 1.0          | 2.00         | 150         | N           | N           | N           | 30         | 700         |
| WP512  | 31 53 42 | 107 8 59  | 1.0           | 1.00         | 5.0          | 2.00         | 500         | N           | N           | N           | 200        | 300         |
| WP513  | 31 53 27 | 107 10 32 | .5            | .20          | .3           | 1.50         | 50          | N           | N           | N           | <20        | 700         |
| WP514  | 31 52 15 | 107 6 40  | .7            | .20          | .7           | 2.00         | 70          | N           | N           | N           | 20         | 500         |
| WP515  | 31 52 29 | 107 9 51  | 2.0           | 1.00         | 1.0          | 2.00         | 300         | N           | N           | N           | 20         | 300         |
| WP516  | 31 53 26 | 107 12 18 | 1.5           | .70          | 2.0          | 2.00         | 300         | N           | N           | N           | 20         | 500         |
| WP517  | 31 53 3  | 107 13 27 | .5            | .10          | .5           | 2.00         | 200         | N           | N           | N           | 20         | 500         |
| WP518  | 31 53 10 | 107 13 35 | .7            | .15          | 1.0          | 2.00         | 100         | N           | N           | N           | 20         | 700         |
| WP519  | 31 54 2  | 107 13 9  | .7            | .20          | 1.0          | 1.50         | 100         | N           | N           | N           | 30         | 500         |
| WP520  | 31 49 20 | 107 14 52 | .7            | .15          | 1.0          | 2.00         | 200         | N           | N           | N           | 20         | 500         |
| WP521  | 31 49 24 | 107 14 56 | .7            | .15          | .5           | 2.00         | 200         | N           | N           | N           | 20         | 500         |
| WP522  | 31 49 15 | 107 11 40 | .7            | .10          | .7           | 2.00         | 100         | N           | N           | N           | 20         | 500         |

TABLE 3. SPECTROGRAPHIC RESULTS OF CONCENTRATES FROM THE WEST POTRILLO/MT. RILEY U.S.A., NEW MEXICO.--Continued

| Sample | Be-ppm<br>S | Bi-ppm<br>S | Cd-ppm<br>S | Co-ppm<br>S | Cr-ppm<br>S | Cu-ppm<br>S | La-ppm<br>S | Mo-ppm<br>S | Nb-ppm<br>S | Ni-ppm<br>S | Pb-ppm<br>S |
|--------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| WP138  | 3           | N           | N           | N           | 70          | N           | 500         | N           | 150         | N           | <20         |
| WP139  | 3           | N           | N           | N           | <20         | N           | 100         | N           | 50          | N           | <20         |
| WP301  | <2          | N           | N           | N           | 30          | N           | 100         | N           | 70          | N           | 30          |
| WP302  | <2          | N           | N           | N           | 20          | N           | 100         | N           | 50          | N           | 20          |
| WP303  | <2          | N           | N           | N           | 30          | N           | 50          | N           | 70          | N           | 30          |
| WP304  | 2           | N           | N           | N           | 20          | N           | 100         | N           | 50          | N           | 30          |
| WP305  | 2           | N           | N           | N           | 20          | N           | 200         | N           | 50          | N           | 20          |
| WP306  | 2           | N           | N           | N           | 50          | N           | 150         | N           | 100         | N           | 70          |
| WP307  | 2           | N           | N           | N           | 30          | N           | 200         | N           | 100         | N           | 50          |
| WP308  | <2          | N           | N           | N           | 20          | N           | <50         | N           | <50         | N           | 30          |
| WP309  | 2           | N           | N           | N           | 30          | N           | 200         | N           | 70          | N           | 30          |
| WP310  | 2           | N           | N           | N           | 30          | N           | 150         | N           | 100         | N           | 20          |
| WP311  | 2           | N           | N           | N           | 70          | N           | 70          | N           | 70          | N           | 30          |
| WP312  | 2           | N           | N           | N           | 20          | N           | 100         | N           | N           | N           | N           |
| WP313  | 2           | N           | N           | N           | 20          | N           | 50          | N           | N           | N           | 20          |
| WP314  | 2           | N           | N           | N           | 20          | N           | <50         | N           | <50         | N           | N           |
| WP315  | 2           | N           | N           | N           | 20          | N           | 50          | N           | N           | N           | <20         |
| WP316  | 2           | N           | N           | N           | 20          | N           | 100         | N           | N           | N           | <20         |
| WP317  | 2           | N           | N           | N           | 20          | N           | 70          | N           | N           | N           | <20         |
| WP318  | <2          | N           | N           | N           | 20          | N           | <50         | N           | N           | N           | 20          |
| WP319  | 2           | N           | N           | N           | 20          | N           | 50          | N           | 70          | N           | 70          |
| WP320  | <2          | N           | N           | N           | 20          | N           | 50          | N           | N           | N           | 20          |
| WP321  | 2           | N           | N           | N           | 20          | N           | <50         | N           | N           | N           | <20         |
| WP322  | 2           | N           | N           | N           | <20         | N           | <50         | N           | N           | N           | <20         |
| WP343  | 2           | N           | N           | N           | 30          | N           | 50          | N           | 70          | N           | 70          |
| WP503  | 2           | N           | N           | N           | 30          | N           | 100         | N           | 70          | N           | 50          |
| WP504  | 2           | N           | N           | N           | 30          | N           | 100         | N           | 100         | N           | 50          |
| WP505  | 2           | N           | N           | 20          | 200         | N           | 200         | N           | 70          | 10          | 20          |
| WP506  | 2           | N           | N           | N           | 20          | N           | 300         | N           | 50          | N           | <20         |
| WP507  | 2           | N           | N           | N           | 100         | N           | 300         | N           | 100         | N           | <20         |
| WP508  | 2           | N           | N           | N           | 30          | N           | 300         | N           | 100         | N           | 150         |
| WP509  | 10          | N           | N           | N           | 20          | N           | 200         | N           | 100         | N           | 100         |
| WP510  | 5           | N           | N           | N           | 150         | N           | 100         | N           | 100         | N           | 70          |
| WP511  | 2           | N           | N           | N           | 70          | N           | 150         | N           | 70          | N           | 70          |
| WP512  | 2           | N           | N           | N           | 300         | N           | 300         | N           | 70          | 15          | 50          |
| WP513  | 2           | N           | N           | N           | <20         | N           | 50          | N           | N           | N           | <20         |
| WP514  | 3           | N           | N           | N           | 20          | N           | 70          | N           | 50          | N           | 30          |
| WP515  | 2           | N           | N           | 20          | 100         | N           | 200         | N           | 100         | 20          | <20         |
| WP516  | 2           | N           | N           | 10          | 50          | N           | 200         | N           | 150         | N           | 20          |
| WP517  | 2           | N           | N           | N           | 20          | N           | 150         | N           | 150         | 10          | 20          |
| WP518  | 2           | N           | N           | N           | 20          | N           | 70          | N           | 50          | N           | <20         |
| WP519  | 2           | N           | N           | N           | 20          | N           | 150         | N           | 70          | N           | 30          |
| WP520  | 2           | N           | N           | N           | 20          | N           | 200         | N           | 100         | N           | <20         |
| WP521  | 3           | N           | N           | N           | 20          | N           | 150         | N           | 150         | N           | <20         |
| WP522  | 2           | N           | N           | N           | 30          | N           | 100         | N           | 100         | N           | <20         |

TABLE 3. SPECTROGRAPHIC RESULTS OF CONCENTRATES FROM THE WEST POTRILLO/MT. RILEY U.S.A., NEW MEXICO.--Continued

| Sample | Sb-ppm<br>S | Sc-ppm<br>S | Sn-ppm<br>S | Sr-ppm<br>S | Y-ppm<br>S | M-ppm<br>S | Y-ppm<br>S | Zn-ppm<br>S | Zr-ppm<br>S | Th-ppm<br>S |
|--------|-------------|-------------|-------------|-------------|------------|------------|------------|-------------|-------------|-------------|
| WP138  | N           | 70          | N           | 200         | 200        | N          | 700        | N           | >2,000      | N           |
| WP139  | N           | 50          | N           | 200         | 100        | N          | 500        | N           | >2,000      | N           |
| WP301  | N           | 20          | N           | 200         | 100        | N          | 500        | N           | >2,000      | N           |
| WP302  | N           | <10         | N           | 200         | 70         | N          | 200        | N           | >2,000      | N           |
| WP303  | N           | 10          | N           | 300         | 150        | N          | 200        | N           | >2,000      | N           |
| WP304  | N           | 20          | N           | 500         | 100        | N          | 300        | N           | >2,000      | N           |
| WP305  | N           | 30          | 30          | 500         | 100        | N          | 500        | N           | >2,000      | N           |
| WP306  | N           | 70          | N           | 300         | 150        | N          | 700        | N           | >2,000      | N           |
| WP307  | N           | 70          | N           | 500         | 150        | N          | 700        | N           | >2,000      | N           |
| WP308  | N           | <10         | N           | 300         | 70         | N          | 150        | N           | >2,000      | N           |
| WP309  | N           | 20          | N           | 500         | 100        | N          | 500        | N           | >2,000      | N           |
| WP310  | N           | 30          | N           | 200         | 100        | N          | 500        | N           | >2,000      | N           |
| WP311  | N           | 10          | N           | 200         | 100        | N          | 150        | N           | >2,000      | N           |
| WP312  | N           | 70          | N           | 300         | 100        | N          | 500        | N           | >2,000      | N           |
| WP313  | N           | 10          | N           | 200         | 50         | N          | 30         | N           | >2,000      | N           |
| WP314  | N           | 50          | N           | 200         | 100        | N          | 500        | N           | >2,000      | N           |
| WP315  | N           | <10         | N           | 300         | 50         | N          | 150        | N           | >2,000      | N           |
| WP316  | N           | 15          | N           | 300         | 50         | N          | 200        | N           | >2,000      | N           |
| WP317  | N           | 30          | 70          | 300         | 70         | N          | 500        | N           | >2,000      | N           |
| WP318  | N           | N           | N           | 200         | 30         | N          | 20         | N           | >2,000      | N           |
| WP319  | N           | 30          | N           | 300         | 70         | N          | 500        | N           | >2,000      | N           |
| WP320  | N           | <10         | N           | 200         | 50         | N          | 150        | N           | >2,000      | N           |
| WP321  | N           | 15          | N           | 300         | 70         | N          | 300        | N           | >2,000      | N           |
| WP322  | N           | 15          | N           | 200         | 50         | N          | 300        | N           | >2,000      | N           |
| WP343  | N           | 100         | N           | 300         | 100        | N          | 1,000      | N           | >2,000      | N           |
| WP503  | N           | 15          | N           | <200        | 100        | N          | 300        | N           | >2,000      | N           |
| WP504  | N           | 30          | N           | 200         | 150        | N          | 700        | N           | >2,000      | N           |
| WP505  | N           | 70          | N           | 300         | 300        | N          | 1,000      | N           | >2,000      | N           |
| WP506  | N           | 30          | N           | 1,000       | 100        | N          | 700        | N           | >2,000      | N           |
| WP507  | N           | 50          | N           | 500         | 200        | N          | 1,000      | N           | >2,000      | N           |
| WP508  | N           | 20          | 50          | 700         | 150        | N          | 700        | N           | >2,000      | N           |
| WP509  | N           | 70          | 70          | 500         | 150        | N          | 100        | N           | >2,000      | N           |
| WP510  | N           | 30          | N           | 200         | 150        | N          | 500        | N           | >2,000      | N           |
| WP511  | N           | 15          | N           | 200         | 150        | N          | 300        | N           | >2,000      | N           |
| WP512  | N           | 20          | 30          | 1,000       | 150        | N          | 500        | N           | >2,000      | N           |
| WP513  | N           | 30          | N           | 200         | 100        | N          | 500        | N           | >2,000      | N           |
| WP514  | N           | 70          | 50          | 300         | 100        | N          | 700        | N           | >2,000      | N           |
| WP515  | N           | 50          | 30          | 300         | 150        | N          | 1,000      | N           | >2,000      | N           |
| WP516  | N           | 70          | 70          | 300         | 150        | N          | 1,000      | N           | >2,000      | N           |
| WP517  | N           | 100         | 70          | 300         | 150        | N          | 1,500      | N           | >2,000      | N           |
| WP518  | N           | 50          | 70          | 300         | 100        | N          | 700        | N           | >2,000      | N           |
| WP519  | N           | 30          | 50          | 500         | 100        | N          | 500        | N           | >2,000      | N           |
| WP520  | N           | 70          | 20          | 300         | 150        | N          | 1,000      | N           | >2,000      | N           |
| WP521  | N           | 100         | 70          | 500         | 150        | N          | 1,000      | N           | >2,000      | N           |
| WP522  | N           | 100         | 20          | 300         | 150        | N          | 1,000      | N           | >2,000      | N           |

TABLE 3. SPECTROGRAPHIC RESULTS OF CONCENTRATES FROM THE WEST POTRILLO/MT. RILEY W.S.A., NEW MEXICO.--Continued

| Sample | Latitude | Longitude | Fe-pct.<br>S | Mg-pct.<br>S | Ca-pct.<br>S | Tl-pct.<br>S | Mn-ppm<br>S | Ag-ppm<br>S | As-ppm<br>S | Au-ppm<br>S | B-ppm<br>S | Ba-ppm<br>S |
|--------|----------|-----------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|------------|-------------|
| WP523  | 31 48 13 | 107 10 12 | .5           | .10          | .5           | 2.00         | 70          | N           | N           | N           | 20         | 500         |
| WP524  | 31 49 44 | 107 15 36 | .7           | .20          | .7           | 2.00         | 100         | N           | N           | N           | 20         | 500         |
| WP525  | 31 49 45 | 107 15 41 | .5           | .10          | .2           | 2.00         | 100         | N           | N           | N           | 20         | 500         |
| WP526  | 31 49 38 | 107 15 23 | .7           | .30          | 1.0          | 2.00         | 100         | N           | N           | N           | 20         | 700         |
| WP527  | 31 52 9  | 107 15 29 | .5           | .15          | .5           | 2.00         | 100         | N           | N           | N           | 20         | 500         |
| WP528  | 31 56 2  | 107 13 54 | .7           | .30          | 1.5          | 2.00         | 150         | N           | N           | N           | 30         | 500         |
| WP529  | 31 56 10 | 107 13 53 | .5           | .20          | .7           | .50          | 50          | N           | N           | N           | 20         | 500         |
| WP530  | 31 56 29 | 107 13 55 | 1.0          | 1.00         | 2.0          | >2.00        | 500         | N           | N           | N           | <20        | 500         |
| WP531  | 31 57 18 | 107 13 56 | 1.0          | .50          | 1.0          | 2.00         | 300         | N           | N           | N           | 20         | 300         |
| WP532  | 31 59 31 | 107 13 7  | 1.0          | .30          | 1.5          | 2.00         | 300         | N           | N           | N           | 20         | 300         |
| WP533  | 31 59 35 | 107 13 30 | 1.0          | .70          | 3.0          | 2.00         | 500         | N           | N           | N           | 20         | 300         |
| WP534  | 31 58 33 | 107 15 21 | 1.0          | .20          | .5           | 2.00         | 300         | N           | N           | N           | 70         | 300         |
| WP535  | 31 58 51 | 107 15 42 | .5           | .10          | .3           | 1.50         | 150         | N           | N           | N           | 20         | 300         |
| WP536  | 31 55 13 | 107 12 23 | 1.0          | .30          | 1.0          | 1.00         | 100         | N           | N           | N           | 30         | 700         |
| WP537  | 31 56 32 | 107 11 48 | .5           | .20          | .7           | 2.00         | 100         | N           | N           | N           | 50         | 500         |
| WP538  | 31 56 56 | 107 11 12 | .5           | .20          | .7           | 2.00         | 200         | N           | N           | N           | 50         | 300         |
| WP539  | 31 57 31 | 107 10 59 | .7           | .20          | 7.0          | 2.00         | 500         | N           | N           | N           | 20         | 200         |
| WP540  | 31 58 14 | 107 10 55 | 1.0          | .50          | 1.0          | .50          | 70          | N           | N           | N           | 50         | 500         |
| WP541  | 31 58 28 | 107 10 56 | .7           | .20          | 10.0         | .30          | 500         | N           | N           | N           | 30         | 300         |
| WP542  | 31 59 7  | 107 10 48 | .7           | .20          | 10.0         | .50          | 700         | N           | N           | N           | 30         | 300         |
| WP543  | 31 59 16 | 107 11 39 | 1.0          | .30          | 10.0         | 1.50         | 700         | N           | N           | N           | 30         | 300         |
| WP544  | 31 58 49 | 107 12 40 | .7           | .30          | 1.0          | 1.50         | 100         | N           | N           | N           | 30         | 500         |
| WP545  | 31 58 17 | 107 12 17 | .7           | .20          | .7           | 1.50         | 70          | N           | N           | N           | 50         | 300         |
| WP546  | 31 56 23 | 107 12 44 | .5           | .20          | 1.0          | 2.00         | 100         | N           | N           | N           | 20         | 200         |
| WP547  | 31 55 53 | 107 14 42 | .7           | .50          | 1.0          | 2.00         | 150         | N           | N           | N           | 30         | 300         |
| WP548  | 31 55 6  | 107 14 12 | .7           | .30          | 1.0          | 1.50         | 70          | N           | N           | N           | 20         | 500         |
| WP549  | 31 55 40 | 107 5 26  | .7           | .20          | 3.0          | >2.00        | 500         | N           | N           | N           | 100        | 500         |
| WP550  | 31 55 31 | 107 5 21  | 1.0          | .70          | 3.0          | >2.00        | 1,000       | N           | N           | N           | 100        | 700         |
| WP551  | 31 55 28 | 107 5 21  | .7           | .15          | 2.0          | 2.00         | 200         | N           | N           | N           | 30         | 500         |
| WP552  | 31 55 16 | 107 5 17  | .7           | .15          | 2.0          | >2.00        | 200         | N           | N           | N           | 30         | >10,000     |
| WP553  | 31 55 3  | 107 5 43  | 1.5          | .50          | 3.0          | >2.00        | 1,000       | N           | N           | N           | 100        | 5,000       |
| WP554  | 31 54 47 | 107 5 56  | 1.0          | .30          | 2.0          | >2.00        | 700         | N           | N           | N           | 100        | 500         |
| WP555  | 31 54 41 | 107 5 57  | 1.0          | .50          | 3.0          | >2.00        | 700         | N           | N           | N           | 100        | 1,500       |
| WP556  | 31 54 3  | 107 5 40  | .7           | .50          | 3.0          | 2.00         | 300         | N           | N           | N           | 70         | 700         |
| WP557  | 31 54 7  | 107 5 12  | .5           | .20          | 2.0          | 2.00         | 200         | N           | N           | N           | 30         | 1,500       |
| WP558  | 31 54 2  | 107 4 52  | 1.0          | .30          | 2.0          | >2.00        | 500         | N           | N           | N           | 70         | 300         |
| WP559  | 31 55 17 | 107 4 25  | 2.0          | .70          | 5.0          | -2.00        | 1,000       | N           | N           | N           | 100        | 500         |
| WP560  | 31 55 14 | 107 4 29  | .5           | .15          | 1.5          | .70          | 100         | N           | N           | N           | 20         | 1,000       |
| WP561  | 31 55 8  | 107 4 26  | 1.0          | .20          | 1.5          | 1.00         | 200         | N           | N           | N           | 30         | 700         |
| WP562  | 31 55 9  | 107 4 16  | .7           | .10          | 1.5          | .70          | 150         | N           | N           | N           | 30         | 700         |
| WP563  | 31 54 59 | 107 3 30  | .5           | .10          | 1.5          | 1.00         | 150         | N           | N           | N           | 30         | 1,000       |
| WP564  | 31 55 5  | 107 3 29  | .7           | .10          | 1.5          | 1.00         | 150         | N           | N           | N           | 50         | 700         |
| WP565  | 31 55 59 | 107 4 22  | .7           | .10          | 2.0          | 1.50         | 200         | N           | N           | N           | 30         | 7,000       |
| WP566  | 31 56 4  | 107 5 25  | .2           | .07          | 2.0          | .50          | 150         | N           | N           | N           | <20        | >10,000     |
| WP567  | 31 56 11 | 107 5 18  | .7           | .15          | 1.5          | 1.00         | 150         | N           | N           | N           | 30         | 5,000       |

TABLE 3. SPECTROGRAPHIC RESULTS OF CONCENTRATES FROM THE WEST POTRILLO/MT. WILEY U.S.A., NEW MEXICO.--Continued

| Sample | Be-DDM<br>S | Bi-DDA<br>S | Cd-DDM<br>S | Co-DDM<br>S | Cr-DDM<br>S | Cu-DDM<br>S | La-DDM<br>S | Mo-DDM<br>S | Nb-DDM<br>S | Ni-DDM<br>S | Pb-DDM<br>S |
|--------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| WP523  | 2           | N           | N           | N           | 20          | N           | 50          | N           | 70          | N           | <20         |
| WP524  | 2           | N           | N           | N           | 20          | N           | 200         | N           | 150         | N           | 20          |
| WP525  | 2           | N           | N           | N           | 20          | N           | 50          | N           | 70          | N           | 20          |
| WP526  | 2           | N           | N           | N           | 50          | N           | 70          | N           | 150         | N           | <20         |
| WP527  | 3           | N           | N           | N           | 20          | N           | 50          | N           | 100         | N           | 50          |
| WP528  | 2           | N           | N           | N           | 30          | N           | 100         | N           | 100         | N           | 30          |
| WP529  | <2          | N           | N           | N           | 20          | N           | <50         | N           | N           | N           | N           |
| WP530  | <2          | N           | N           | N           | 50          | N           | 200         | N           | 200         | 10          | N           |
| WP531  | 3           | N           | N           | N           | 30          | N           | 100         | N           | 100         | N           | <20         |
| WP532  | 2           | N           | N           | N           | 30          | N           | 100         | N           | 100         | N           | <20         |
| WP533  | 2           | N           | N           | N           | 20          | N           | 300         | N           | 100         | N           | 20          |
| WP534  | 2           | N           | N           | N           | 20          | N           | 200         | N           | 150         | N           | 20          |
| WP535  | 2           | N           | N           | N           | <20         | N           | 50          | N           | 100         | N           | N           |
| WP536  | <2          | N           | N           | N           | 30          | N           | 100         | N           | 70          | N           | <20         |
| WP537  | 3           | N           | N           | N           | 20          | N           | 50          | N           | 50          | N           | 20          |
| WP538  | 2           | N           | N           | N           | 20          | N           | 100         | N           | 100         | N           | 20          |
| WP539  | 2           | N           | N           | N           | 20          | N           | 500         | N           | 100         | N           | 20          |
| WP540  | <2          | N           | N           | N           | 30          | N           | 70          | N           | N           | N           | <20         |
| WP541  | <2          | N           | N           | N           | 20          | N           | 1,000       | N           | N           | N           | <20         |
| WP542  | 2           | N           | N           | N           | 20          | N           | 1,000       | N           | N           | N           | <20         |
| WP543  | 2           | N           | N           | N           | 30          | N           | 1,000       | N           | 100         | N           | N           |
| WP544  | 2           | N           | N           | N           | 30          | N           | 100         | N           | 70          | N           | <20         |
| WP545  | 2           | N           | N           | N           | 20          | N           | 50          | N           | 50          | N           | 20          |
| WP546  | 3           | N           | N           | N           | 30          | N           | 200         | N           | N           | N           | 20          |
| WP547  | 2           | N           | N           | N           | 50          | N           | 150         | N           | 70          | N           | 20          |
| WP548  | 2           | N           | N           | N           | 20          | N           | 70          | N           | 50          | N           | <20         |
| WP549  | 2           | N           | N           | N           | 70          | N           | 500         | N           | 150         | N           | 20          |
| WP550  | 3           | N           | N           | N           | 70          | N           | 700         | N           | 150         | N           | 30          |
| WP551  | 2           | N           | N           | N           | 20          | N           | 100         | N           | 100         | N           | 300         |
| WP552  | 2           | N           | N           | N           | 30          | N           | 150         | N           | 150         | N           | N           |
| WP553  | 3           | N           | N           | N           | 100         | N           | 700         | N           | 100         | N           | 20          |
| WP554  | 2           | N           | N           | N           | 70          | 100         | 500         | N           | 150         | N           | N           |
| WP555  | 2           | N           | N           | N           | 70          | N           | 500         | N           | 200         | N           | N           |
| WP556  | 2           | N           | N           | N           | 20          | N           | 200         | N           | 100         | N           | 20          |
| WP557  | 2           | N           | N           | N           | 20          | N           | 150         | N           | 70          | N           | N           |
| WP558  | 2           | N           | N           | N           | 50          | N           | 300         | N           | 150         | N           | N           |
| WP559  | 2           | N           | N           | N           | 150         | N           | 700         | N           | 200         | N           | 70          |
| WP560  | 2           | N           | N           | N           | <20         | N           | 70          | N           | 50          | N           | N           |
| WP561  | 2           | N           | N           | N           | 30          | N           | 100         | N           | 70          | N           | N           |
| WP562  | 2           | N           | N           | N           | 20          | N           | 70          | N           | 50          | N           | N           |
| WP563  | 2           | N           | N           | N           | <20         | N           | 70          | N           | 50          | N           | N           |
| WP564  | 2           | N           | N           | N           | <20         | N           | 150         | N           | 100         | N           | 50          |
| WP565  | 3           | N           | N           | N           | <20         | N           | 150         | N           | 70          | N           | 30          |
| WP566  | 2           | N           | N           | N           | <20         | N           | 70          | N           | N           | N           | 100         |
| WP567  | 2           | N           | N           | N           | 20          | N           | 70          | N           | <50         | N           | 20          |

TABLE 3. SPECTROGRAPHIC RESULTS OF CONCENTRATES FROM THE WEST POTRILLO/HT. RILEY M.S.A., NEW MEXICO.--Continued

| Sample | Sb-ppm<br>s | Sc-ppm<br>s | Sn-ppm<br>s | Si-ppm<br>s | V-ppm<br>s | N-ppm<br>s | Y-ppm<br>s | Zn-ppm<br>s | Zr-ppm<br>s | Th-ppm<br>s |
|--------|-------------|-------------|-------------|-------------|------------|------------|------------|-------------|-------------|-------------|
| WP523  | N           | 50          | N           | 300         | 100        | N          | 700        | N           | >2,000      | N           |
| WP524  | N           | 50          | 50          | 200         | 150        | N          | 1,000      | N           | >2,000      | N           |
| WP525  | N           | 70          | 100         | 300         | 100        | N          | 1,000      | N           | >2,000      | N           |
| WP526  | N           | 70          | 30          | 200         | 150        | N          | 500        | N           | >2,000      | N           |
| WP527  | N           | 70          | N           | 200         | 100        | N          | 700        | N           | >2,000      | N           |
| WP528  | N           | 100         | 50          | 200         | 150        | N          | 700        | N           | >2,000      | N           |
| WP529  | N           | 10          | N           | 200         | 50         | N          | 200        | N           | >2,000      | N           |
| WP530  | N           | 50          | 50          | 200         | 300        | 150        | 500        | N           | >2,000      | N           |
| WP531  | N           | 100         | N           | 300         | 150        | N          | 700        | N           | >2,000      | N           |
| WP532  | N           | 100         | N           | 300         | 100        | N          | 700        | N           | >2,000      | N           |
| WP533  | N           | 100         | N           | 500         | 150        | N          | 700        | N           | >2,000      | N           |
| WP534  | N           | 150         | N           | 200         | 150        | N          | 1,000      | N           | >2,000      | N           |
| WP535  | N           | 70          | N           | 200         | 100        | N          | 1,000      | N           | >2,000      | N           |
| WP536  | N           | <10         | N           | 200         | 70         | N          | 200        | N           | >2,000      | N           |
| WP537  | N           | 100         | N           | 200         | 100        | N          | 500        | N           | >2,000      | N           |
| WP538  | N           | 100         | <20         | 200         | 100        | N          | 700        | N           | >2,000      | N           |
| WP539  | N           | 50          | N           | 700         | 100        | N          | 500        | N           | >2,000      | N           |
| WP540  | N           | 10          | N           | 300         | 70         | N          | 150        | N           | >2,000      | N           |
| WP541  | N           | <10         | N           | 1,000       | 50         | N          | 200        | N           | >2,000      | N           |
| WP542  | N           | <10         | N           | 1,000       | 70         | N          | 300        | N           | >2,000      | N           |
| WP543  | N           | 20          | N           | 1,000       | 150        | N          | 500        | N           | >2,000      | N           |
| WP544  | N           | 20          | N           | 300         | 100        | N          | 500        | N           | >2,000      | N           |
| WP545  | N           | 30          | N           | 200         | 100        | N          | 500        | N           | >2,000      | N           |
| WP546  | N           | 50          | N           | <200        | 150        | N          | 1,000      | N           | >2,000      | N           |
| WP547  | N           | 100         | N           | 300         | 150        | N          | 1,000      | N           | >2,000      | N           |
| WP548  | N           | 20          | N           | 300         | 100        | N          | 500        | N           | >2,000      | N           |
| WP549  | N           | 100         | N           | 300         | 200        | N          | 700        | N           | >2,000      | N           |
| WP550  | N           | 50          | N           | 300         | 200        | N          | 500        | N           | >2,000      | N           |
| WP551  | N           | 50          | N           | 300         | 100        | N          | 700        | N           | >2,000      | N           |
| WP552  | N           | 50          | N           | 700         | 150        | N          | 500        | N           | >2,000      | N           |
| WP553  | N           | 70          | 20          | 500         | 200        | N          | 700        | N           | >2,000      | N           |
| WP554  | N           | 70          | 20          | 300         | 200        | N          | 700        | N           | >2,000      | N           |
| WP555  | N           | 70          | 20          | 300         | 200        | N          | 700        | N           | >2,000      | N           |
| WP556  | N           | 50          | N           | 300         | 150        | N          | 500        | N           | >2,000      | N           |
| WP557  | N           | 70          | N           | 300         | 100        | N          | 700        | N           | >2,000      | N           |
| WP558  | N           | 50          | N           | 200         | 150        | N          | 500        | N           | >2,000      | N           |
| WP559  | N           | 70          | N           | 200         | 200        | N          | 700        | N           | >2,000      | N           |
| WP560  | N           | 15          | N           | 300         | 70         | N          | 200        | N           | >2,000      | N           |
| WP561  | N           | 20          | 70          | 200         | 100        | N          | 300        | N           | >2,000      | N           |
| WP562  | N           | 20          | N           | 300         | 70         | N          | 300        | N           | >2,000      | N           |
| WP563  | N           | 15          | N           | 200         | 100        | N          | 300        | N           | >2,000      | N           |
| WP564  | N           | 20          | 30          | 200         | 100        | N          | 700        | N           | >2,000      | N           |
| WP565  | N           | 50          | N           | 1,000       | 100        | N          | 300        | N           | >2,000      | N           |
| WP566  | N           | 10          | N           | 5,000       | 70         | N          | 200        | N           | >2,000      | N           |
| WP567  | N           | 20          | N           | 500         | 100        | N          | 300        | N           | >2,000      | N           |

TABLE 3. SPECTROGRAPHIC RESULTS OF CONCENTRATES FROM THE WEST POTRILLO/MT. RILEY W.S.A., NEW MEXICO.--Continued

| Sample | Latitude | Longitude | Fe-pct.<br>S | Mg-pct.<br>S | Ca-pct.<br>S | Ti-pct.<br>S | Mn-ppm<br>S | Ag-ppm<br>S | As-ppm<br>S | Au-ppm<br>S | B-ppm<br>S | Re-ppm<br>S |
|--------|----------|-----------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|------------|-------------|
| WP568  | 31 56 24 | 107 5 22  | .7           | .20          | 2.0          | 1.00         | 500         | N           | N           | N           | 50         | >10,000     |
| WP569  | 31 56 23 | 107 4 52  | 1.0          | .50          | 2.0          | 1.50         | 700         | N           | N           | N           | 70         | 1,000       |
| WP570  | 31 56 17 | 107 3 55  | .7           | .20          | 2.0          | 2.00         | 500         | N           | N           | N           | 30         | 2,000       |
| WP571  | 31 59 5  | 107 1 45  | .3           | .20          | 1.0          | .50          | 50          | 15          | N           | N           | 20         | >10,000     |
| WP572  | 31 53 51 | 107 2 17  | .7           | 2.00         | 1.5          | 1.00         | 100         | N           | N           | N           | 30         | >10,000     |
| WP574  | 31 51 5  | 107 9 2   | .7           | .20          | .3           | 2.00         | 100         | N           | N           | N           | 20         | 1,000       |
| WP575  | 31 50 21 | 107 9 2   | .5           | .20          | 1.5          | >2.00        | 300         | N           | N           | N           | 20         | 500         |
| WP576  | 31 49 55 | 107 9 40  | 2.0          | 1.00         | .7           | 2.00         | 200         | N           | N           | N           | 50         | 1,500       |
| WP577  | 31 49 36 | 107 10 8  | 1.0          | .30          | .5           | 2.00         | 70          | N           | N           | N           | 30         | 700         |
| WP578  | 31 49 26 | 107 12 59 | 1.0          | .20          | .7           | 2.00         | 150         | N           | N           | N           | 20         | 500         |
| WP579  | 31 54 24 | 107 10 27 | .7           | .30          | 2.0          | 1.00         | 150         | N           | N           | N           | 70         | 700         |
| WP580  | 31 55 27 | 107 10 19 | 1.0          | .50          | .7           | .70          | 100         | N           | N           | N           | 50         | 700         |
| WP581  | 31 53 53 | 107 14 20 | 1.0          | .20          | .5           | 2.00         | 200         | N           | N           | N           | 20         | 300         |
| WP588  | 31 55 17 | 107 4 49  | .7           | .15          | 1.5          | 2.00         | 500         | N           | N           | N           | 50         | 1,500       |
| WP589  | 31 55 16 | 107 4 57  | 1.0          | .50          | 3.0          | >2.00        | 700         | N           | N           | N           | 100        | 1,500       |
| WP592  | 31 55 13 | 107 19 30 | 1.5          | 3.00         | 10.0         | .50          | 700         | N           | N           | N           | 150        | 200         |
| WP593  | 31 55 11 | 107 19 28 | 1.0          | 2.00         | 1.5          | 2.00         | 200         | 5           | N           | N           | 50         | 700         |
| WP594  | 31 55 1  | 107 20 38 | 1.0          | .50          | 2.0          | >2.00        | 500         | N           | N           | N           | 100        | 3,000       |



TABLE 3. SPECTROGRAPHIC RESULTS OF CONCENTRATES FROM THE WEST POZORILLO/HT. RILEY M.S.A., NEW MEXICO.--Continued

| Sample | Be-ppm<br>S | Bi-ppm<br>S | Cd-ppm<br>S | Co-ppm<br>S | Cr-ppm<br>S | Cu-ppm<br>S | La-ppm<br>S | Mo-ppm<br>S | Nb-ppm<br>S | Ni-ppm<br>S | Pb-ppm<br>S |
|--------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| WP568  | 2           | N           | N           | N           | 20          | N           | 150         | N           | 70          | N           | 50          |
| WP569  | 2           | N           | N           | N           | 70          | N           | 300         | N           | 100         | N           | 20          |
| WP570  | 2           | N           | N           | N           | 20          | N           | 100         | N           | 150         | N           | N           |
| WP571  | <2          | N           | N           | N           | 20          | 10          | 70          | 50          | <50         | N           | 5,000       |
| WP572  | 2           | N           | N           | N           | 50          | N           | 50          | N           | 70          | N           | 1,000       |
| WP574  | 5           | N           | N           | N           | 30          | N           | 70          | N           | 100         | 15          | N           |
| WP575  | 2           | N           | N           | N           | 50          | N           | 300         | N           | 150         | 10          | 20          |
| WP576  | 2           | N           | N           | N           | 70          | N           | 150         | N           | 70          | 10          | 50          |
| WP577  | 2           | N           | N           | N           | 30          | N           | 50          | N           | 70          | N           | 50          |
| WP578  | 2           | N           | N           | N           | 50          | N           | 100         | N           | 100         | N           | <20         |
| WP579  | 2           | N           | N           | N           | 30          | N           | 200         | N           | 70          | N           | 30          |
| WP580  | 2           | N           | N           | N           | 70          | N           | 100         | N           | 50          | N           | 20          |
| WP581  | 2           | N           | N           | N           | 20          | N           | 150         | N           | 100         | N           | 30          |
| WP588  | 3           | N           | N           | N           | 20          | N           | 100         | N           | 70          | N           | 30          |
| WP589  | 3           | N           | N           | N           | 70          | N           | 700         | N           | 150         | N           | 20          |
| WP592  | <2          | N           | N           | N           | 30          | N           | 50          | N           | <50         | N           | 1,500       |
| WP593  | N           | N           | N           | N           | 30          | N           | 200         | N           | 500         | N           | 1,500       |
| WP594  | <2          | N           | N           | N           | 50          | 20          | 500         | N           | 200         | N           | 50          |

TABLE 3. SPECTROGRAPHIC RESULTS OF CONCENTRATES FROM THE WEST POTRILLO/MT. RILEY U.S.A., NEW MEXICO.--Continued

| Sample | Sb-ppm<br>S | Sc-ppm<br>S | Sn-ppm<br>S | Sr-ppm<br>S | V-ppm<br>S | W-ppm<br>S | Y-ppm<br>S | Zn-ppm<br>S | Zr-ppm<br>S | Th-ppm<br>S |
|--------|-------------|-------------|-------------|-------------|------------|------------|------------|-------------|-------------|-------------|
| WP568  | N           | 15          | N           | 1,500       | 100        | N          | 300        | N           | >2,000      | N           |
| WP569  | N           | 20          | N           | 300         | 150        | N          | 500        | N           | >2,000      | N           |
| WP570  | N           | 50          | N           | 200         | 100        | N          | 500        | N           | >2,000      | N           |
| WP571  | N           | 10          | N           | 10,000      | 70         | N          | 150        | N           | >2,000      | N           |
| WP572  | N           | 20          | 70          | 3,000       | 200        | N          | 300        | N           | >2,000      | N           |
| WP574  | N           | 100         | N           | 200         | 100        | N          | 700        | N           | >2,000      | N           |
| WP575  | N           | 70          | 20          | 200         | 150        | N          | 500        | N           | >2,000      | N           |
| WP576  | N           | 30          | N           | 200         | 150        | N          | 500        | N           | >2,000      | N           |
| WP577  | N           | 50          | N           | 200         | 100        | N          | 500        | N           | >2,000      | N           |
| WP578  | N           | 100         | N           | 200         | 200        | N          | 700        | N           | >2,300      | N           |
| WP579  | N           | 20          | N           | 500         | 100        | N          | 300        | N           | >2,000      | N           |
| WP580  | N           | 10          | N           | 200         | 100        | N          | 200        | N           | >2,000      | N           |
| WP581  | N           | 100         | <20         | 200         | 150        | N          | 700        | N           | >2,300      | N           |
| WP588  | N           | 50          | 50          | 200         | 100        | N          | 500        | N           | >2,000      | N           |
| WP589  | N           | 100         | 20          | 300         | 200        | N          | 700        | N           | >2,000      | N           |
| WP592  | N           | 15          | N           | 300         | 300        | N          | 300        | N           | >2,000      | N           |
| WP593  | N           | 50          | 70          | 200         | 200        | N          | 700        | N           | >2,000      | N           |
| WP594  | N           | 30          | 20          | 700         | 200        | N          | 700        | N           | >2,000      | N           |

TABLE 4. SPECTROGRAPHIC RESULTS OF ROCKS FROM THE WEST POTRILLO/MT. RILEY W.S.A., NEW MEXICO.  
 [N, not detected; <, detected but below the limit of determination shown; >, determined to be greater than the value shown.]

| Sample  | Latitude | Longitude | Fe-ppm<br>S | Mg-ppm<br>S | Ca-ppm<br>S | Ti-ppm<br>S | Mn-ppm<br>S | Ag-ppm<br>S | As-ppm<br>S | Au-ppm<br>S | B-ppm<br>S | Ra-ppm<br>S |
|---------|----------|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|-------------|
| EP100R  | 31 54 3  | 107 1 48  | 2.00        | .30         | >20.00      | .007        | >5,000      | N           | N           | N           | <10        | 700         |
| EP300R  | 31 53 43 | 107 1 31  | 1.50        | .30         | 1.00        | .070        | 100         | 10.0        | N           | N           | 30         | 3,000       |
| EP300RA | 31 53 43 | 107 1 31  | .30         | .03         | .10         | .050        | 200         | 3.0         | <200        | N           | 20         | 3,000       |
| EP500R  | 31 53 52 | 107 1 40  | 2.00        | 1.00        | .70         | .300        | 200         | <.5         | N           | N           | 200        | 700         |
| EP501RA | 31 53 45 | 107 1 17  | 10.00       | .07         | .10         | .150        | 20          | 7.0         | 200         | N           | 50         | >5,000      |
| EP501RB | 31 53 45 | 107 1 17  | >20.00      | .07         | .70         | .100        | 300         | 15.0        | 500         | N           | 50         | 700         |
| EP502R  | 31 54 15 | 107 1 38  | 5.00        | .20         | 20.00       | .100        | 1,000       | <.5         | 500         | N           | 70         | 300         |
| WP101R  | 31 54 50 | 107 5 0   | 3.00        | .70         | 1.00        | .200        | 1,000       | N           | N           | N           | 15         | 1,000       |
| WP102R  | 31 54 53 | 107 4 23  | 3.00        | .70         | .20         | .200        | 700         | N           | N           | N           | 30         | 300         |
| WP103R  | 31 54 57 | 107 4 33  | 1.50        | 1.00        | .30         | .100        | 300         | N           | N           | N           | 30         | 300         |
| WP105R  | 31 55 7  | 107 5 15  | 2.00        | .70         | 1.00        | .200        | 700         | N           | N           | N           | 15         | 1,000       |
| WP107R  | 31 55 7  | 107 5 44  | 3.00        | 1.00        | 1.50        | .200        | 1,000       | N           | N           | N           | 15         | 1,000       |
| WP109RA | 31 55 21 | 107 5 11  | 5.00        | .70         | 1.50        | .300        | 300         | N           | N           | N           | 20         | 1,500       |
| WP109RB | 31 55 21 | 107 5 11  | 2.00        | .50         | 1.00        | .200        | 100         | N           | N           | N           | 20         | 700         |
| WP110R  | 31 55 31 | 107 4 46  | 5.00        | 1.00        | .70         | .300        | 1,000       | N           | N           | N           | 20         | 1,000       |
| WP112R  | 31 55 42 | 107 4 23  | 3.00        | 1.00        | 1.50        | .300        | 500         | N           | N           | N           | 20         | 1,500       |
| WP113R  | 31 55 42 | 107 4 37  | 2.00        | 1.50        | 1.00        | .200        | 700         | .7          | N           | N           | 20         | 1,000       |
| WP114R  | 31 55 36 | 107 4 22  | 3.00        | .50         | 1.00        | .200        | 1,000       | N           | N           | N           | 30         | 1,500       |
| WP115R  | 31 55 52 | 107 4 37  | .10         | .10         | >20.00      | .010        | >5,000      | N           | N           | N           | N          | 700         |
| WP117R  | 31 56 11 | 107 5 17  | 3.00        | 2.00        | 2.00        | .200        | 500         | N           | N           | N           | 15         | 1,500       |
| WP118R  | 31 56 2  | 107 5 21  | 5.00        | 2.00        | 1.50        | .300        | 500         | N           | N           | N           | <10        | 1,000       |
| WP119R  | 31 56 0  | 107 5 16  | .70         | .70         | >20.00      | .070        | 5,000       | N           | N           | N           | <10        | 1,500       |
| WP120R  | 31 55 59 | 107 5 13  | 1.00        | 1.00        | 5.00        | .200        | 500         | 1.0         | N           | N           | 50         | 700         |
| WP121R  | 31 55 59 | 107 5 13  | .15         | .30         | >20.00      | .030        | 500         | N           | N           | N           | 30         | 100         |
| WP124R  | 31 55 45 | 107 3 47  | 3.00        | 1.00        | 1.00        | .200        | 1,000       | N           | N           | N           | 20         | 1,000       |
| WP125R  | 31 55 24 | 107 3 37  | 3.00        | .70         | 5.00        | .200        | 1,000       | N           | N           | N           | 20         | 500         |
| WP126R  | 31 54 15 | 107 5 5   | 1.50        | 5.00        | 20.00       | .070        | 500         | 10.0        | N           | N           | 20         | 100         |
| WP126RA | 31 54 15 | 107 5 5   | 5.00        | 1.50        | >20.00      | .100        | 1,000       | N           | N           | N           | 30         | 500         |
| WP126RB | 31 54 15 | 107 5 5   | 5.00        | 3.00        | 10.00       | .200        | 300         | .5          | N           | N           | 200        | 300         |
| WP126RC | 31 54 15 | 107 5 5   | .50         | .50         | >20.00      | .020        | 1,000       | N           | N           | N           | N          | 30          |
| WP127R  | 31 54 15 | 107 5 5   | 3.00        | .70         | 15.00       | .200        | 1,500       | N           | N           | N           | 30         | 1,500       |
| WP128R  | 31 54 23 | 107 5 16  | 1.50        | .50         | .50         | .100        | 300         | N           | N           | N           | 20         | 1,000       |
| WP129R  | 31 54 58 | 107 4 59  | 2.00        | .70         | 1.50        | .200        | 1,000       | N           | N           | N           | 20         | 1,000       |
| WP130R  | 31 55 17 | 107 5 0   | 3.00        | .70         | 5.00        | .200        | 5,000       | N           | N           | N           | 15         | 1,500       |
| WP131R  | 31 55 17 | 107 4 45  | 3.00        | .70         | 1.50        | .200        | 1,000       | N           | N           | N           | 300        | 1,500       |
| WP131RB | 31 55 17 | 107 4 44  | 3.00        | .70         | 1.00        | .150        | 300         | N           | N           | N           | 50         | 700         |
| WP133R  | 31 55 13 | 107 4 52  | 3.00        | .50         | 2.00        | .200        | >5,000      | N           | N           | N           | 30         | 1,000       |
| WP134R  | 31 55 6  | 107 4 54  | 3.00        | 1.00        | 1.00        | .300        | 1,000       | .5          | N           | N           | 10         | 1,000       |
| WP135R  | 31 55 15 | 107 4 20  | 5.00        | 1.50        | 20.00       | .150        | >5,000      | N           | N           | N           | 30         | 1,000       |
| WP136R  | 31 55 13 | 107 4 37  | 2.00        | .30         | 1.00        | .200        | 100         | N           | N           | N           | 30         | 1,000       |
| WP140R  | 31 56 0  | 107 4 31  | .20         | .15         | >20.00      | .020        | >5,000      | N           | N           | N           | N          | 1,500       |
| WP340R  | 32 5 23  | 107 12 19 | 10.00       | 5.00        | 10.00       | 1.000       | 1,500       | N           | N           | N           | N          | 500         |
| WP341R  | 32 1 45  | 107 12 33 | 7.00        | 5.00        | 10.00       | 1.000       | 1,500       | N           | N           | N           | 15         | 700         |
| WP342R  | 32 1 45  | 107 11 24 | 7.00        | 5.00        | 10.00       | 1.000       | 1,000       | N           | N           | N           | <10        | 500         |
| WP344R  | 32 0 22  | 107 10 23 | 10.00       | 5.00        | 7.00        | 1.000       | 1,500       | N           | N           | N           | N          | 700         |

TABLE 4. SPECTROGRAPHIC RESULTS OF ROCKS FROM THE WEST POTRILLO/MT. RILEY U.S.A., NEW MEXICO.--Continued

| Sample  | Be-ppm<br>s | Bi-ppm<br>s | Cd-ppm<br>s | Co-ppm<br>s | Cr-ppm<br>s | Cu-ppm<br>s | Ia-ppm<br>s | Mo-ppm<br>s | Nb-ppm<br>s | Ni-ppm<br>s | Pb-ppm<br>s |
|---------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| EP100R  | 2.0         | N           | N           | N           | N           | N           | N           | N           | N           | <5          | N           |
| EP300R  | 1.5         | N           | N           | 5           | 20          | 5           | N           | N           | N           | 5           | 10          |
| EP300RA | 1.0         | N           | N           | N           | 10          | <5          | 20          | N           | N           | <5          | <10         |
| EP500R  | 1.0         | N           | N           | 15          | 70          | 15          | N           | 10          | <20         | 30          | 100         |
| EP501RA | <1.0        | N           | N           | 7           | 20          | 20          | 30          | 5           | N           | 7           | 100         |
| EP501RB | <1.0        | N           | N           | 20          | 30          | 100         | 50          | 20          | N           | 50          | 200         |
| EP502R  | <1.0        | N           | N           | 7           | 20          | 20          | <20         | 20          | N           | 20          | 30          |
| WP101R  | 1.5         | N           | N           | 10          | <10         | 5           | 50          | N           | 20          | <5          | 20          |
| WP102R  | 1.0         | N           | N           | 10          | 50          | 5           | 30          | N           | N           | 10          | <10         |
| WP103R  | 2.0         | N           | N           | <5          | <10         | 7           | 70          | N           | 20          | <5          | <10         |
| WP105R  | 2.0         | N           | N           | 7           | <10         | 5           | 30          | N           | 20          | <5          | 30          |
| WP107K  | 1.5         | N           | N           | 10          | <10         | 7           | 30          | N           | <20         | <5          | 20          |
| WP109RA | 1.0         | N           | N           | 10          | <10         | N           | 50          | N           | 20          | <5          | 50          |
| WP109RB | 1.5         | N           | N           | 7           | <10         | N           | 30          | N           | <20         | <5          | 30          |
| WP110R  | 1.0         | N           | N           | 10          | <10         | 5           | 50          | N           | 20          | <5          | 30          |
| WP112R  | 1.0         | N           | N           | 10          | 10          | 5           | 50          | 5           | 20          | 5           | 30          |
| WP113R  | 1.5         | N           | N           | 10          | <10         | 5           | 50          | N           | <20         | 5           | 30          |
| WP114R  | 1.0         | N           | N           | 5           | 10          | 50          | 50          | N           | 20          | <5          | 70          |
| WP115R  | 1.0         | N           | N           | N           | N           | N           | 30          | N           | N           | <5          | 20          |
| WP117R  | <1.0        | N           | N           | 20          | 50          | 20          | 30          | N           | N           | 30          | 15          |
| WP118R  | <1.0        | N           | N           | 20          | 50          | 20          | 50          | N           | N           | 20          | 30          |
| WP119R  | <1.0        | N           | N           | 5           | 10          | 10          | 50          | N           | N           | <5          | 50          |
| WP120R  | 1.0         | N           | N           | 7           | 20          | 20          | 20          | N           | N           | 7           | 15          |
| WP121R  | <1.0        | N           | N           | 5           | <10         | 10          | <20         | N           | N           | <5          | N           |
| WP124K  | 1.5         | N           | N           | 10          | 10          | 10          | 50          | N           | 20          | 5           | 30          |
| WP125R  | 2.0         | N           | N           | 10          | <10         | 10          | 30          | N           | <20         | <5          | 70          |
| WP126K  | <1.0        | N           | N           | 5           | 10          | <5          | 20          | N           | N           | 5           | <10         |
| WP126RA | 1.0         | N           | N           | 7           | 30          | 200         | 20          | N           | N           | 7           | 15          |
| WP126RB | 2.0         | N           | N           | 7           | 50          | 15          | 30          | N           | <20         | 30          | 20          |
| WP126RC | N           | N           | N           | N           | <10         | N           | 20          | N           | N           | <5          | <10         |
| WP127R  | 2.0         | N           | N           | 7           | <10         | 5           | 50          | N           | <20         | <5          | 30          |
| WP128R  | 2.0         | N           | N           | N           | <10         | N           | 70          | N           | 20          | <5          | 50          |
| WP129R  | 1.5         | N           | N           | 10          | <10         | 10          | 30          | N           | <20         | <5          | 30          |
| WP130R  | 2.0         | N           | N           | 10          | <10         | 15          | 30          | N           | N           | <5          | 30          |
| WP131R  | 2.0         | N           | N           | 10          | <10         | 10          | 50          | N           | 20          | <5          | 50          |
| WP131RB | 2.0         | N           | N           | 10          | <10         | <5          | 20          | N           | <20         | <5          | 20          |
| WP133R  | 2.0         | N           | N           | 10          | 10          | 10          | 50          | N           | N           | <5          | 30          |
| WP134R  | 1.5         | N           | N           | 10          | <10         | <5          | 50          | N           | <20         | <5          | 20          |
| WP135R  | 2.0         | N           | N           | 7           | <10         | 30          | 70          | N           | <20         | <5          | 30          |
| WP136R  | 1.0         | N           | N           | 5           | <10         | <5          | 50          | N           | <20         | <5          | 50          |
| WP140R  | 1.0         | N           | N           | N           | N           | 5           | 50          | N           | N           | <5          | 50          |
| WP340R  | <1.0        | N           | N           | 70          | 200         | 70          | 50          | N           | 30          | 200         | 15          |
| WP341R  | 1.0         | N           | N           | 70          | 300         | 100         | 30          | N           | 30          | 200         | 10          |
| WP342R  | 1.0         | N           | N           | 50          | 300         | 50          | 50          | N           | 30          | 150         | 20          |
| WP344R  | <1.0        | N           | N           | 50          | 300         | 50          | 50          | N           | 30          | 150         | 10          |

TABLE 4. SPECTROGRAPHIC RESULTS OF ROCKS FROM THE WEST POTRILLO/MT. RILEY U.S.A., NEW MEXICO.--Continued

| Sample  | Sb-ppm<br>S | Sc-ppm<br>S | Sn-ppm<br>S | Sr-ppm<br>S | V-ppm<br>S | N-ppm<br>S | Y-ppm<br>S | Zn-ppm<br>S | Zr-ppm<br>S | Th-ppm<br>S |
|---------|-------------|-------------|-------------|-------------|------------|------------|------------|-------------|-------------|-------------|
| EP100R  | N           | N           | N           | 300         | 100        | N          | <10        | N           | N           | N           |
| EP300R  | N           | <5          | N           | 200         | 70         | N          | <10        | N           | 70          | N           |
| EP300RA | N           | <5          | N           | 500         | 10         | N          | <10        | N           | 10          | N           |
| EP500R  | N           | 7           | N           | N           | 100        | N          | 10         | 500         | 500         | N           |
| EP501RA | N           | <5          | N           | 1,500       | 30         | N          | 15         | 1,000       | 150         | N           |
| EP501RB | N           | N           | N           | N           | 50         | N          | 20         | 2,000       | 200         | N           |
| EP502R  | N           | 7           | N           | 150         | 150        | N          | 20         | 100         | 100         | N           |
| WP101R  | N           | 7           | N           | 300         | 70         | N          | 20         | N           | 150         | N           |
| WP102R  | N           | 7           | N           | 200         | 100        | N          | 20         | N           | 200         | N           |
| WP103R  | N           | 5           | N           | 150         | 15         | N          | 20         | N           | 150         | N           |
| WP105R  | N           | 7           | N           | 300         | 70         | N          | 20         | N           | 100         | N           |
| WP107R  | N           | 7           | N           | 500         | 70         | N          | 20         | N           | 100         | N           |
| WP109RA | N           | 7           | N           | 500         | 100        | N          | 30         | N           | 100         | N           |
| WP109RB | N           | 7           | N           | 300         | 70         | N          | 20         | N           | 100         | N           |
| WP110R  | N           | 7           | N           | 300         | 100        | N          | 30         | N           | 100         | N           |
| WP112R  | N           | 10          | N           | 500         | 100        | N          | 20         | N           | 100         | N           |
| WP113R  | N           | 7           | N           | 500         | 100        | N          | 20         | N           | 100         | N           |
| WP114R  | N           | 10          | N           | 500         | 100        | N          | 20         | N           | 100         | N           |
| WP115R  | N           | <5          | N           | 700         | 20         | N          | 70         | N           | N           | N           |
| WP117R  | N           | 7           | N           | 1,000       | 100        | N          | 10         | N           | 150         | N           |
| WP118R  | N           | 10          | N           | 1,000       | 200        | N          | 10         | N           | 70          | N           |
| WP119R  | N           | 5           | N           | 1,500       | 50         | N          | 20         | N           | 20          | N           |
| WP120R  | N           | 7           | N           | 300         | 70         | N          | 15         | N           | 70          | N           |
| WP121R  | N           | N           | N           | 300         | 30         | N          | <10        | N           | 15          | N           |
| WP124R  | N           | 7           | N           | 300         | 70         | N          | 20         | N           | 100         | N           |
| WP125R  | N           | 7           | N           | 300         | 100        | N          | 20         | N           | 100         | N           |
| WP126R  | N           | 5           | N           | 200         | 70         | N          | 10         | N           | 20          | N           |
| WP126RA | N           | 5           | N           | 300         | 150        | N          | 20         | N           | 50          | N           |
| WP126RB | N           | 10          | N           | 200         | 100        | N          | 30         | N           | 500         | N           |
| WP126RC | N           | <5          | N           | 500         | <10        | N          | 10         | N           | N           | N           |
| WP127R  | N           | 5           | N           | 200         | 50         | N          | 30         | N           | 200         | N           |
| WP128R  | N           | 5           | N           | 300         | 10         | N          | 30         | N           | 200         | N           |
| WP129R  | N           | 7           | N           | 300         | 70         | N          | 20         | N           | 100         | N           |
| WP130R  | N           | 7           | N           | 500         | 70         | N          | 20         | N           | 100         | N           |
| WP131R  | N           | 7           | N           | 500         | 70         | N          | 20         | N           | 100         | N           |
| WP131RB | N           | 7           | N           | 700         | 70         | N          | 20         | N           | 100         | N           |
| WP133R  | N           | 10          | N           | 300         | 50         | N          | 30         | N           | 100         | N           |
| WP134R  | N           | 7           | N           | 300         | 70         | N          | 15         | N           | 100         | N           |
| WP135R  | N           | 7           | N           | 300         | 100        | N          | 30         | N           | 100         | N           |
| WP136R  | N           | 7           | N           | 300         | 50         | N          | 20         | N           | 150         | N           |
| WP140R  | N           | <5          | N           | 700         | 50         | N          | 100        | N           | N           | N           |
| WP340R  | N           | 20          | N           | 1,000       | 200        | N          | 20         | N           | 200         | N           |
| WP341R  | N           | 30          | N           | 500         | 150        | N          | 30         | N           | 200         | N           |
| WP342R  | N           | 20          | N           | 700         | 200        | N          | 50         | N           | 200         | N           |
| WP344R  | N           | 30          | N           | 1,000       | 200        | N          | 30         | N           | 150         | N           |

TABLE 4. SPECTROGRAPHIC RESULTS OF ROCKS FROM THE WEST POTRILLO/MT. RILEY W.S.A., NEW MEXICO.--Continued

| Sample  | Latitude | Longitude | Fe-pct.<br>% | Mg-pct.<br>% | Ca-pct.<br>% | Ti-pct.<br>% | Mn-ppm<br>S | Ag-pps<br>S | As-ppm<br>S | Au-ppm<br>S | R-ppm<br>S | Ba-ppm<br>S |
|---------|----------|-----------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|------------|-------------|
| WP345R  | 31 48 30 | 107 11 10 | 7.00         | 5.00         | 10.00        | 1.000        | 1,000       | N           | N           | N           | <10        | 500         |
| WP346R  | 31 57 28 | 107 12 34 | 10.00        | 5.00         | 7.00         | 1.000        | 1,500       | N           | N           | N           | N          | 300         |
| WP347R  | 31 56 29 | 107 9 47  | 10.00        | 5.00         | 7.00         | 1.000        | 1,500       | N           | N           | N           | <10        | 500         |
| WP348R  | 31 55 8  | 107 12 30 | 10.00        | 5.00         | 10.00        | 1.000        | 1,500       | N           | N           | N           | N          | 700         |
| WP349R  | 31 53 49 | 107 12 23 | 15.00        | 7.00         | 10.00        | 1.000        | 2,000       | N           | N           | N           | <10        | 1,500       |
| WP350R  | 31 50 24 | 107 13 15 | 3.00         | 1.00         | 1.50         | .200         | 1,000       | N           | N           | N           | 15         | 1,000       |
| WP350R  | 31 50 24 | 107 13 15 | 10.00        | 7.00         | 15.00        | 1.000        | 1,500       | N           | N           | N           | N          | 500         |
| WP351R  | 31 51 25 | 107 9 12  | 7.00         | 7.00         | 10.00        | 1.000        | 1,500       | N           | N           | N           | <10        | 500         |
| WP556RA | 31 54 3  | 107 5 40  | .20          | 10.00        | >20.00       | .007         | 300         | N           | N           | N           | N          | 150         |
| WP556RB | 31 54 3  | 107 5 40  | .70          | 5.00         | 10.00        | .050         | 200         | N           | N           | N           | 30         | 70          |
| WP556RC | 31 54 3  | 107 5 40  | 3.00         | .50          | 2.00         | .200         | 1,000       | N           | N           | N           | 20         | 1,500       |
| WP556RD | 31 54 3  | 107 5 40  | 2.00         | .50          | >20.00       | .010         | 700         | 1.0         | N           | N           | 20         | 150         |
| WP556RE | 31 54 3  | 107 5 40  | 5.00         | 1.00         | 1.50         | .150         | 1,000       | N           | N           | N           | 20         | 1,000       |
| WP563R  | 31 54 59 | 107 3 53  | 3.00         | 1.50         | .70          | .150         | 1,000       | 5.0         | N           | N           | 70         | 700         |
| WP566RA | 31 56 4  | 107 5 25  | 5.00         | 3.00         | 20.00        | .200         | 700         | <.5         | N           | N           | 100        | 500         |
| WP566RB | 31 56 4  | 107 5 21  | 5.00         | 1.50         | 3.00         | .500         | 700         | <.5         | N           | N           | 10         | 700         |
| WP567R  | 31 56 11 | 107 5 18  | 5.00         | 2.00         | 1.00         | .300         | 500         | N           | N           | N           | <10        | 1,000       |
| WP569R  | 31 56 17 | 107 3 55  | 3.00         | .70          | 1.50         | .150         | 500         | N           | N           | N           | 50         | 1,500       |
| WP569RJ | 31 56 23 | 107 4 52  | 5.00         | .70          | 1.00         | .200         | 500         | N           | N           | N           | 30         | 1,000       |
| WP582R  | 31 55 11 | 107 3 25  | 3.00         | 1.50         | 1.50         | .300         | 1,000       | N           | N           | N           | 20         | 1,000       |
| WP583R  | 31 55 18 | 107 3 33  | 3.00         | .70          | 1.00         | .300         | 700         | N           | N           | N           | 10         | 1,000       |
| WP584R  | 31 55 27 | 107 3 38  | 3.00         | 1.00         | .70          | .200         | 1,000       | N           | N           | N           | 20         | 1,000       |
| WP585RA | 31 55 28 | 107 3 51  | 3.00         | 1.00         | 1.00         | .200         | 1,000       | N           | N           | N           | 20         | 1,000       |
| WP585RB | 31 55 28 | 107 3 51  | 3.00         | 1.00         | 1.00         | .200         | 700         | 1.5         | N           | N           | 15         | 1,000       |
| WP586R  | 31 55 3  | 107 3 40  | 5.00         | .70          | 1.50         | .200         | 1,000       | N           | N           | N           | 20         | 1,500       |
| WP587R  | 31 55 19 | 107 3 49  | 3.00         | 1.00         | 1.00         | .200         | 1,000       | N           | N           | N           | 30         | 1,000       |
| WP590RA | 31 55 5  | 107 19 30 | 3.00         | .30          | >20.00       | .010         | 5,000       | .7          | N           | N           | N          | 100         |
| WP590RB | 31 55 5  | 107 19 27 | 20.00        | .02          | .05          | .007         | 30          | 500.0       | 500         | N           | 20         | 100         |
| WP591R  | 31 55 6  | 107 19 27 | 5.00         | 1.50         | 5.00         | .300         | 700         | .5          | N           | N           | 15         | 1,000       |
| WP595RA | 31 55 8  | 107 20 32 | 10.00        | .02          | .10          | .002         | 100         | <.5         | 700         | N           | 10         | 20          |
| WP595RB | 31 55 8  | 107 20 32 | .05          | .70          | >20.00       | .010         | 300         | N           | N           | N           | N          | <20         |

TABLE 4. SPECTROGRAPHIC RESULTS OF ROCKS FROM THE WEST POTRILLO/MT. RILEY W.S.A., NEW MEXICO.--Continued

| Sample  | Ba-ppm<br>S | Bi-ppm<br>S | Cd-ppm<br>S | Co-ppm<br>S | Cr-ppm<br>S | Cu-ppm<br>S | La-ppm<br>S | Mo-ppm<br>S | Nb-ppm<br>S | Ni-ppm<br>S | Pb-ppm<br>S |
|---------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| WP345R  | 1.5         | N           | N           | 50          | 200         | 70          | 50          | N           | 50          | 200         | 10          |
| WP346R  | <1.0        | N           | N           | 50          | 300         | 70          | 50          | N           | 30          | 150         | 10          |
| WP347R  | <1.0        | N           | N           | 50          | 300         | 50          | 50          | N           | 30          | 150         | 10          |
| WP348R  | <1.0        | N           | N           | 50          | 150         | 70          | 50          | N           | 30          | 150         | 20          |
| WP349R  | <1.0        | N           | N           | 50          | 500         | 70          | 50          | N           | 50          | 200         | 30          |
| WP350R  | 2.0         | N           | N           | 10          | <10         | 5           | 50          | N           | 20          | <5          | 30          |
| WP350R  | <1.0        | N           | N           | 70          | 500         | 50          | 50          | N           | 30          | 200         | <10         |
| WP351R  | 1.0         | N           | N           | 70          | 500         | 70          | 50          | N           | 50          | 200         | <10         |
| WP556RA | N           | N           | N           | N           | <10         | N           | 20          | N           | N           | <5          | 10          |
| WP556RB | <1.0        | N           | N           | <5          | 20          | <5          | <20         | N           | N           | 5           | <10         |
| WP556RC | 1.5         | N           | N           | 10          | <10         | 7           | 50          | 7           | 20          | 7           | 30          |
| WP556RD | <1.0        | N           | N           | 7           | 15          | <5          | <20         | N           | N           | 5           | <10         |
| WP556RE | 2.0         | N           | N           | 10          | <10         | 7           | 50          | N           | <20         | <5          | 20          |
| WP563R  | 1.5         | N           | N           | 10          | 10          | 5           | 50          | N           | 20          | <5          | 10          |
| WP566RA | 1.0         | N           | N           | 15          | 70          | 10          | 30          | N           | N           | 20          | 20          |
| WP566RB | <1.0        | N           | N           | 20          | 100         | 100         | 50          | N           | N           | 20          | 30          |
| WP567R  | <1.0        | N           | N           | 30          | 50          | 20          | 50          | N           | N           | 50          | 20          |
| WP569R  | 1.5         | N           | N           | 10          | <10         | <5          | 20          | N           | <20         | <5          | 30          |
| WP569RJ | 1.5         | N           | N           | 10          | <10         | <5          | 50          | N           | 20          | <5          | 30          |
| WP582R  | 1.5         | N           | N           | 20          | 10          | 15          | 30          | N           | <20         | 10          | 20          |
| WP583R  | 1.0         | N           | N           | 10          | <10         | <5          | 50          | N           | 20          | <5          | 30          |
| WP584R  | 1.5         | N           | N           | 10          | 10          | 10          | 50          | N           | <20         | 7           | 30          |
| WP585RA | 1.5         | N           | N           | 10          | <10         | 10          | 30          | N           | N           | 5           | 30          |
| WP585RB | 2.0         | N           | N           | 10          | 10          | 10          | 50          | N           | N           | 7           | 30          |
| WP586R  | 2.0         | N           | N           | 10          | <10         | 7           | 30          | N           | <20         | <5          | 50          |
| WP587R  | 1.5         | N           | N           | 10          | <10         | 5           | 30          | N           | 20          | <5          | 30          |
| WP590RA | 1.0         | N           | 500         | N           | <10         | 15          | 20          | 20          | N           | <5          | 10,000      |
| WP590RB | 1.5         | 500         | N           | N           | 10          | 200         | <20         | 100         | N           | <5          | >20,000     |
| WP591R  | 3.0         | N           | N           | 15          | 50          | 100         | 100         | N           | 50          | 15          | 50          |
| WP595RA | 20.0        | N           | N           | N           | 10          | N           | <20         | 70          | N           | 7           | 10          |
| WP595RB | 2.0         | N           | N           | N           | <10         | N           | <20         | N           | N           | <5          | N           |

TABLE 4. SPECTROGRAPHIC RESULTS OF ROCKS FROM THE WEST POTRILLO/MT. RILEY U.S.A., NEW MEXICO.--Continued

| Sample  | Sb-ppm<br>S | Sc-ppm<br>S | Sn-ppm<br>S | Str-ppm<br>S | Y-ppm<br>S | W-ppm<br>S | Y-ppm<br>S | Zn-ppm<br>S | Zr-ppm<br>S | Th-ppm<br>S |
|---------|-------------|-------------|-------------|--------------|------------|------------|------------|-------------|-------------|-------------|
| WP345R  | N           | 20          | N           | 700          | 200        | N          | 50         | N           | 200         | N           |
| WP346R  | N           | 30          | N           | 1,000        | 200        | N          | 20         | N           | 150         | N           |
| WP347R  | N           | 30          | N           | 1,000        | 200        | N          | 30         | N           | 100         | N           |
| WP348R  | N           | 20          | N           | 1,000        | 200        | N          | 30         | N           | 200         | N           |
| WP349R  | N           | 20          | N           | 1,000        | 200        | N          | 30         | N           | 200         | N           |
| WP350R  | N           | 7           | N           | 500          | 100        | N          | 20         | N           | 150         | N           |
| WP350R  | N           | 20          | N           | 500          | 150        | N          | 20         | N           | 100         | N           |
| WP351R  | N           | 30          | N           | 500          | 200        | N          | 30         | N           | 200         | N           |
| WP556RA | N           | N           | N           | N            | 10         | N          | N          | N           | N           | N           |
| WP556RB | N           | <5          | N           | 100          | 20         | N          | <10        | N           | 20          | N           |
| WP556RC | N           | 7           | N           | 500          | 100        | N          | 20         | N           | 100         | N           |
| WP556RD | N           | N           | N           | 200          | 100        | N          | 10         | N           | N           | N           |
| WP556RE | N           | 10          | N           | 500          | 70         | N          | 30         | N           | 150         | N           |
| WP563R  | N           | 7           | N           | 100          | 50         | N          | 20         | N           | 100         | N           |
| WP566RA | N           | 10          | N           | 500          | 100        | N          | 30         | N           | 100         | N           |
| WP566RB | N           | 10          | N           | 700          | 150        | N          | 15         | N           | 100         | N           |
| WP567R  | N           | 7           | N           | 700          | 100        | N          | 10         | N           | 150         | N           |
| WP569R  | N           | 7           | N           | 500          | 30         | N          | 20         | N           | 100         | N           |
| WP569RJ | N           | 7           | N           | 300          | 70         | N          | 20         | N           | 150         | N           |
| WP582R  | N           | 10          | N           | 500          | 100        | N          | 20         | N           | 200         | N           |
| WP583R  | N           | 7           | N           | 500          | 100        | N          | 20         | N           | 150         | N           |
| WP584R  | N           | 10          | N           | 300          | 70         | N          | 30         | N           | 150         | N           |
| WP585RA | N           | 10          | N           | 300          | 70         | N          | 20         | N           | 150         | N           |
| WP585RB | N           | 7           | N           | 300          | 100        | N          | 20         | N           | 150         | N           |
| WP586R  | N           | 5           | N           | 300          | 70         | N          | 20         | N           | 150         | N           |
| WP587R  | N           | 5           | N           | 300          | 70         | N          | 20         | N           | 150         | N           |
| WP590RA | N           | <5          | N           | 300          | 30         | N          | 70         | 1,000       | N           | N           |
| WP590RB | 1,000       | N           | N           | 2,000        | <10        | N          | <10        | 10,000      | N           | N           |
| WP591R  | N           | 10          | N           | 500          | 100        | N          | 100        | N           | 300         | N           |
| WP595RA | N           | N           | N           | N            | 500        | N          | <10        | N           | N           | N           |
| WP595RB | N           | N           | N           | 500          | N          | N          | N          | N           | N           | N           |