

NEVADA BUREAU OF MINES AND GEOLOGY

RECONNAISSANCE GEOCHEMICAL ASSESSMENT OF MINERAL RESOURCES IN  
RED SPRING AND CEDAR RIDGE G-E-M RESOURCE AREA  
(WSA'S NV-010-091 AND NV-010-88)  
ELKO COUNTY, NEVADA

Prepared for:

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

ELKO DISTRICT OFFICE

ELKO, NEVADA 89801

Under contract #YA-553 CT1-1058

By

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and

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NEVADA BUREAU OF MINES AND GEOLOGY  
University of Nevada, Reno

John Schilling, Director/State Geologist  
December 1984



# UNIVERSITY OF NEVADA RENO

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This information should be considered preliminary.  
It has not been edited or checked for completeness  
or accuracy.

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Correlation analysis, stream sediment samples

Correlation analysis, panned concentrate samples

## SUMMARY

The Cedar Ridge and Red Springs Wilderness Study Area (WSA NV-010-091) and (WSA NV-010-88) are in northeastern Nevada about 16 miles south of Elko and about 5 miles northwest of Jiggs within the Elko Resource Area (see Figure 1). This study reports the metallic mineral potential as well as the degree of favorability for metallic mineralization within the WSA's.

The survey area is within a northeast-trending Basin and Range fault block that contains rocks ranging in age from Paleozoic miogeoclinal sediments to Tertiary volcanics and volcaniclastic sediments. Large areas along the margins of the WSA's and extending into the adjacent valleys consist of shallow fresh-water limestones, shales and clastics of Tertiary age.

Stream sediments originating from some areas underlain by Paleozoic rocks showed minor to moderate concentrations of both precious and base metals. These areas are rated to have a low to moderate favorability at a moderate confidence level. Sampling defined small areas underlain by Tertiary sediments which had high concentrations of uranium at a high confidence level. In addition, large areas of Tertiary sediments have a moderate favorability for additional concentrations of uranium at a moderate level of confidence. Nearly all the eastward-flowing streams from both WSA's and a high percentage of westward-flowing drainages were abnormally high in barium.

## INTRODUCTION

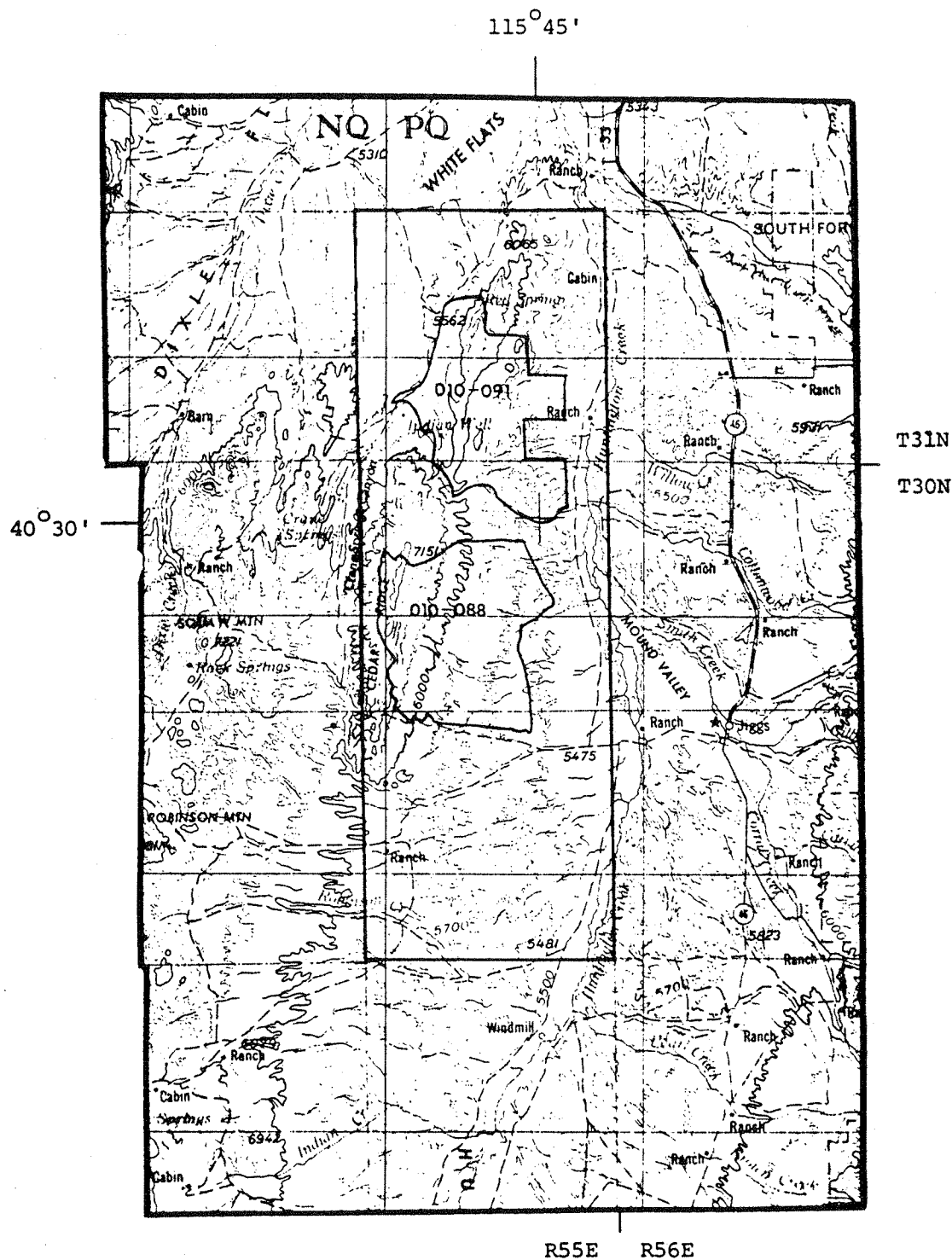
The Nevada Bureau of Mines and Geology was contracted to conduct a detailed stream sediment sampling program within the Cedar Ridge GRA to provide the Bureau of Land Management with field data which would aid in assessing metallic mineral potential. This study should be considered as an extension of the GEM report (Geology, Energy and Mineral) which was prepared as separate Phase I assessment on the Cedar Ridge and Red Spring Wilderness Study areas and includes references and recommendations not presented in this report.

The field work and sample preparation of the geochemical survey were carried out in August 1984 by the Nevada Bureau of Mines and Geology, while the analysis were done by the Branch of Exploration Research, U.S. Geological Survey, through a cooperative agreement between that agency and the Nevada Bureau of Mines and Geology. The analytical results obtained from this program, coupled with data from the National Uranium Resource Evaluation (NURE) program and field observations, have been used to outline and to rank areas for their resource potential using the BLM land classification system.

## LOCATION

The GRA contains about 108 square miles within Townships 29N and 31N and Range 55E, Elko County, Nevada. The northern Red Spring WSA (010-088) comprises about 10,000 acres while the southern Cedar Ridge WSA (010-091) has about 7,800 acres. It is possible to circumnavigate the two WSA's by good, unimproved dirt roads (see Figure 1). The Robinson Mountain, Dixie Flat and Lee 15' quadrangles were utilized both for access and as data bases for this study.

Topographic Map  
Cedar Ridge GRA  
(NV-010-05)  
Elko County, NV



## GEOLOGICAL SETTING

Rocks exposed along the crest of the northeast-trending Cedar Ridge consist of limestones and dolomites with lesser amounts of clastics and tuffs of Pennsylvania and Permian age (Hope and Coats, 1972). Along the flanks of the range and extending into the adjacent valleys are Tertiary sediments of the Humboldt Formation consisting primarily of tuffs, clastics and shallow water limestones (See Figures 2 and 3).

A complete description of the Cedar Ridge and Red Springs areas, their geology and comments concerning mining claim coverage, nonmetallic and energy mineral potential can be found in the G-E-M report of March 1983, prepared for the BLM by Terradata (Mathews and Blackburn, 1983). Details concerning these subjects are not repeated in this report.

## SAMPLE COLLECTION

The geochemical survey included collecting stream sediment and panned concentrates from active drainage systems and rock samples from prospects and outcrops within and along the margins of the WSA's. Stream sediment samples were collected from 4 or 5 different places along the active portion of the stream course at each sample site and sieved to minus 80 mesh. This sample reflects the trace element composition of the major geologic units and mineral deposits cut by each drainage. However, the concentrations will be low because of the dilution by the barren material from the major units.

At the same drainage site a second sample was collected from the active portion of the stream which consisted of 10-15 pounds of minus 16 mesh stream sediment. The second sample was carried to a source of water where it was ultimately panned to 100 grams. Panning concentrates the ore-related minerals as they are of higher specific gravity, resist abrasion and are usually non-magnetic.

In addition to the stream sediment samples, rock samples were chipped from outcrops and selected from dumps and prospects. These rock samples are intentionally "high-graded", and represent the best mineralized material that could be obtained at each site.

During this study, 68 sediment samples were collected from 34 sites in and around the margins of the WSA's. Three rock samples were also collected from the study area (see Figures 4 and 5).

## SAMPLE PREPARATION

At the lab, panned samples were further concentrated using bromoform and an electromagnet to remove the rock-forming minerals and the magnetic fraction. The remaining non-magnetic split was pulverized to minus 80 mesh, as were the rock samples. The three sets of samples were dried at 90°C before being analyzed for 31 elements on an emission spectrograph. After reviewing the results, selected samples were further analyzed by atomic absorption or other techniques to either improve detection limits or to add elements to the data base. Visual and microprobe techniques are also used in special instances for

GEOLOGIC MAP  
Cedar Ridge GRA  
(NV-010-05)  
Elko County, NV.

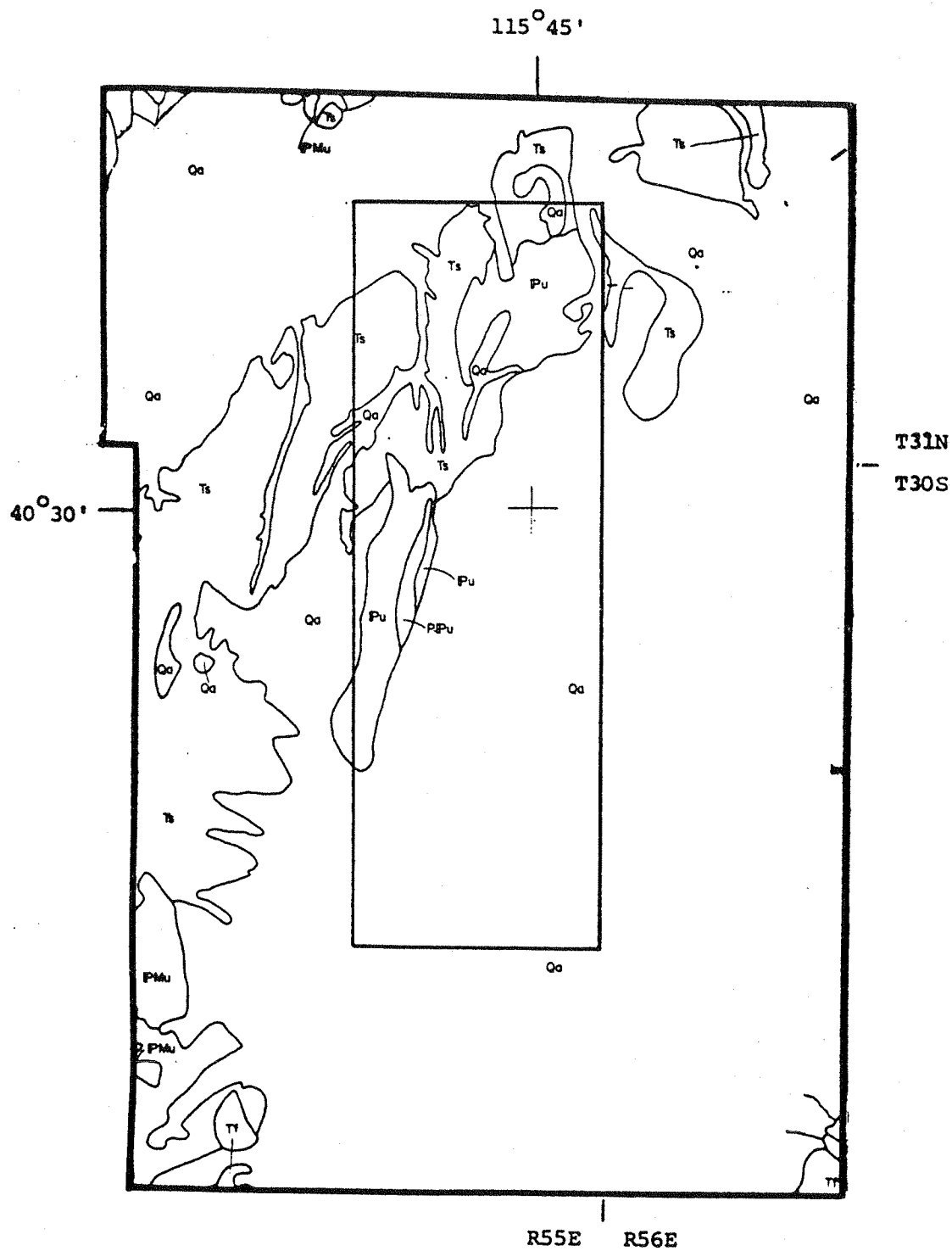


Figure 2.

**Geologic Map Legend For  
Cedar Ridge GRA  
(NV-010-05)  
Elko County, Nevada**


- Qa** - Alluvium: Silt, sand, and gravel along streams, including terrace deposits.
- Ts** - Tertiary Sediment Rocks: Dominantly tuff and welded tuff. Includes minor clastics and carbonates.
- Tf** - Felsic Volcanic Extrusives: Dominantly rhyolites to dacites; flows and domes.
- Ti** - Igneous Intrusives: Mainly granite, rhyolite and quartz monzonite.
- PPu** - Permian-Pennsylvanian Carbonates: Limestone and dolomite. Includes Buckskin Mountain, Beacon Flat, Carlin Canyon, Strathearn, Sunflower, Winecup, and Ferguson Mountain Formations.
- Pu** - Pennsylvanian Sedimentary Rocks, Undifferentiated: Dominantly limestones, minor clastics, and andesitic tuff. Includes Mitchell Creek, Quilici, Moleen, Tomera, and Hogan Formations.
- PMu** - Pennsylvanian-Mississippian Clastic Sedimentary Rocks, Undifferentiated: Dominantly conglomerate, sandstone and shale. Includes Diamond Peak, Chainman, Schoonover, and Webb Formations.
- Cc** - Carbonate Rocks, Minor Quartzite, and Phyllite: Includes Edgemont Formation and Porter Peak Limestone.
-  - Geologic contact (dashed where inferred).

Figure 3.

Dixie Flat & Lee 15' Quadrangles

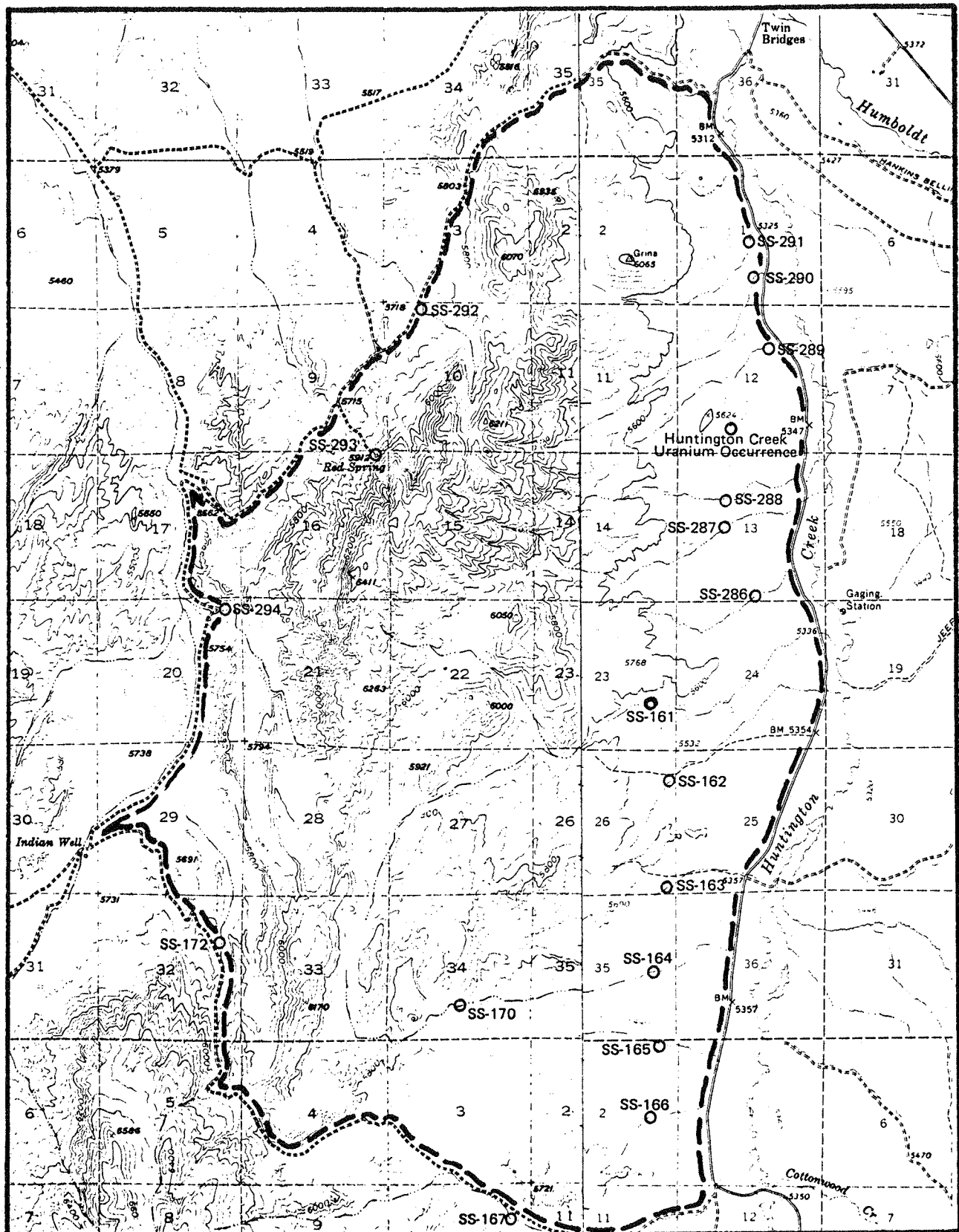


Figure: 4 Sample Location Map

RED SPRING W S A

# Mt. Robinson & Dixie Flat 15' Quadrangle

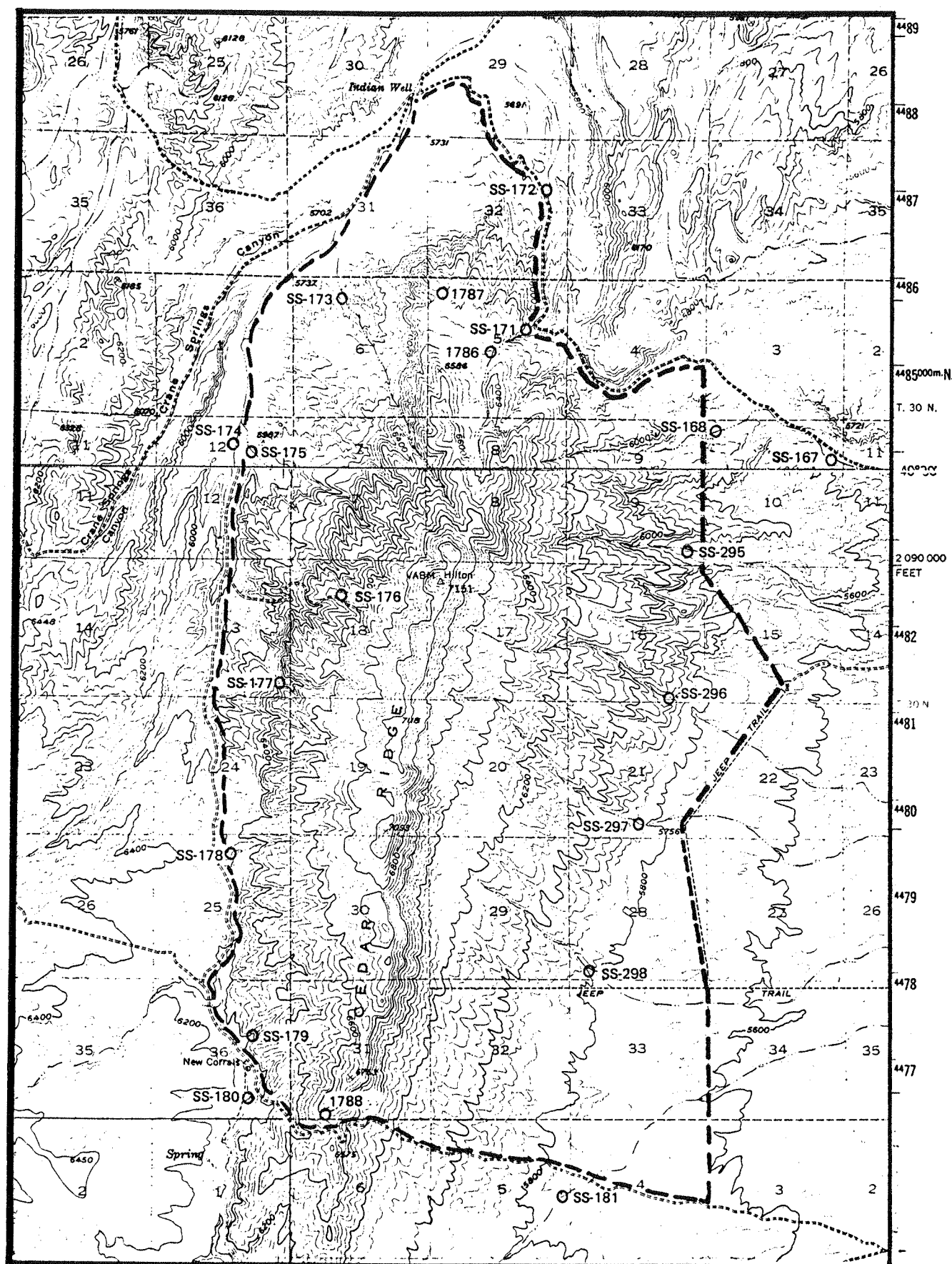


Figure: 5 Sample Location Map

CEDAR RIDGE W S A



mineral identification. Table 1 shows the limits of determination for the spectrographic analysis.

Geochemical anomalies were established using the following criteria: the detection limit of the analysis geologic structures, lithologies, geomorphology, and a tertiary examination of cumulative frequency tables and percent frequency tables.

#### LAND CLASSIFICATION FOR G-E-M RESOURCE POTENTIAL

Land classification areas have the prefix "M" and a number which merely designates various subdivisions of the larger WSA's. In addition, a BLM classification number has been assigned to each of the small areas. These numbers follow the classification scheme described in Table 2. Land classifications have been made only on metallic resource potential (based on geochemical sampling and on field observations made by our staff) and on uranium resource potential (based on NURE data from our files). Land classifications for non-mineral potential for oil and gas and geothermal area, as well as information on leasable and saleable resources are found in the 1983 GEM report by Terradata.

Table 1 Limits of determination for the spectrographic analysis of rocks and stream sediments, based on a 10-mg sample.

| 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

#### CLASSIFICATION SCHEME

1. The geologic environment and the inferred geologic processes do not indicate favorability for accumulation of mineral resources.
2. The geologic environment and the inferred geologic processes indicate low favorability for accumulation of mineral resources.
3. The geologic environment, the inferred geologic processes, and the reported mineral occurrences indicate moderate favorability for accumulation of mineral resources.
4. The geologic environment, the inferred geologic processes, and the reported mineral occurrences, and the known mines or deposits indicate high favorability for accumulation of mineral resources.

#### LEVEL OF CONFIDENCE SCHEME

- A. The available data are either insufficient and/or cannot be considered as direct evidence to support or refute the possible existence of mineral resources within the respective area.
- B. The available data provide indirect evidence to support or refute the possible existence of mineral resources.
- C. The available data provide indirect evidence, but are quantitatively minimal to support or refute the possible existence of mineral resources.
- D. The available data provide abundant direct and indirect evidence to support or refute the possible existence of mineral resources.

## HUNTINGTON CREEK URANIUM OCCURRENCE

The Huntington Creek uranium occurrence is located in the SW 1/4 of Sec. 12, T31N, R55E within the Red Spring WSA. The best access to this area is west from Highway 46 onto the Twin Bridge Road, then south about 3 miles to Bench Mark 5247, then west on foot about one-half mile (see Figure 4). The workings consist of several dozer-cuts.

The deposit is in silty sandstones, limestones, tuffaceous sandstones and pebble conglomerates of the Tertiary Humboldt Formation (Smith and Howard, 1977). The major uranium concentration seems to be in and along the margin of a limestone/sandstone contact that has been partly silicified, but uranium is also present in smaller quantities throughout the section. Figures 6 and 7 are the map and geologic legend of the occurrence with sample sites taken from the National Uranium Resource Evaluation (NURE) report for Elko 2<sup>0</sup> quadrangle by Percival and Bright (1982). Table 3 shows the chemical and radiometric results from the NURE samples. In view of the density and quality of the original samples, no new samples were taken for uranium analysis.

The source for the uranium and the mode of deposition are not well understood. Uraniferous silica-rich solutions moving through the permeable sandstones and concentrating along the contact between the sandstone and the limestone is the most likely explanation, but the absence of alteration products or reductants such as organic debris make this theory suspect as being the complete answer. Concentrations of heavy radioactive minerals as clastics in the conglomerate or sandstone has also been suggested but has not been proven. Another source of uranium may have been the diagenetically altered tuffs and tuffaceous sediments. A petrographic examination of the sandstone indicates a granitic origin which could also contribute uranium. A possible nearby source for the granite might be the Harrison Pass area in the Ruby Mountains which was being uplifted during the time of deposition of the Humboldt Formation.

A similar uranium occurrence in a tuff member of the Humboldt Formation was identified by Percival (1980) in the same NURE report. The occurrence is called the White Hill Claim No. #1, and is located about six miles northeast of the Huntington Creek deposit. Figure 8 shows the uranium occurrences and areas of favorability as defined by Percival and Bright (1982). The same Humboldt Formation sandstones, limestones conglomerates, with a slightly thicker sequence of tuffaceous sediments, were identified in a fluvial-lacustrine environment. Again, the highest uranium concentrations are associated with the silicified zones. There is also slightly more alteration and thicker zones of silicified material presents in the White Hill occurrence. In this deposit there is a stronger case made for the loss of uranium into the sediment by the diagenesis of the tuffs. (Percival and Bright, 1982).

Whatever may be the source or combination of sources, there is clearly good evidence that the Humboldt Formation is a favorable host for uranium deposition. Large areas within the two WSA's are underlain by the Humboldt Formation and much of these areas are covered by alluvium or have only limited exposures due to erosion. Percival and Bright (1982) outlined a limited area within the Humboldt formation favorable for the deposition of uranium. The northeast portion of the Red Spring WSA is included within this favorable area.

# HUNTINGTON CREEK

## EXPLANATION

Alluvium - Qa, Quaternary alluvial material and unconsolidated Humboldt Formation.

\* ls-s, mixture of limestone, sandstone, and gravel, composition variation is common. See detailed stratigraphic column.

\* Sandstone - ss/sh, grey to brown-grey sandstone, tuffaceous, local grain size variations and lithologic gradations common. Calcareous cement. Local pebble-conglomerate lenses occur. Grey, fine-grained shale, locally sandy.

Contact - dotted where approximately located

Strike and dip of bedding

Cut cuts and trenches

MEY322 Sample location with radiometric reading (cps)

Location of radiometric reading (cps)

> Favorable for uranium deposition

Qa

ls-s

ss

TERTIARY - Upper Miocene Humboldt Formation (Th<sup>1</sup>)

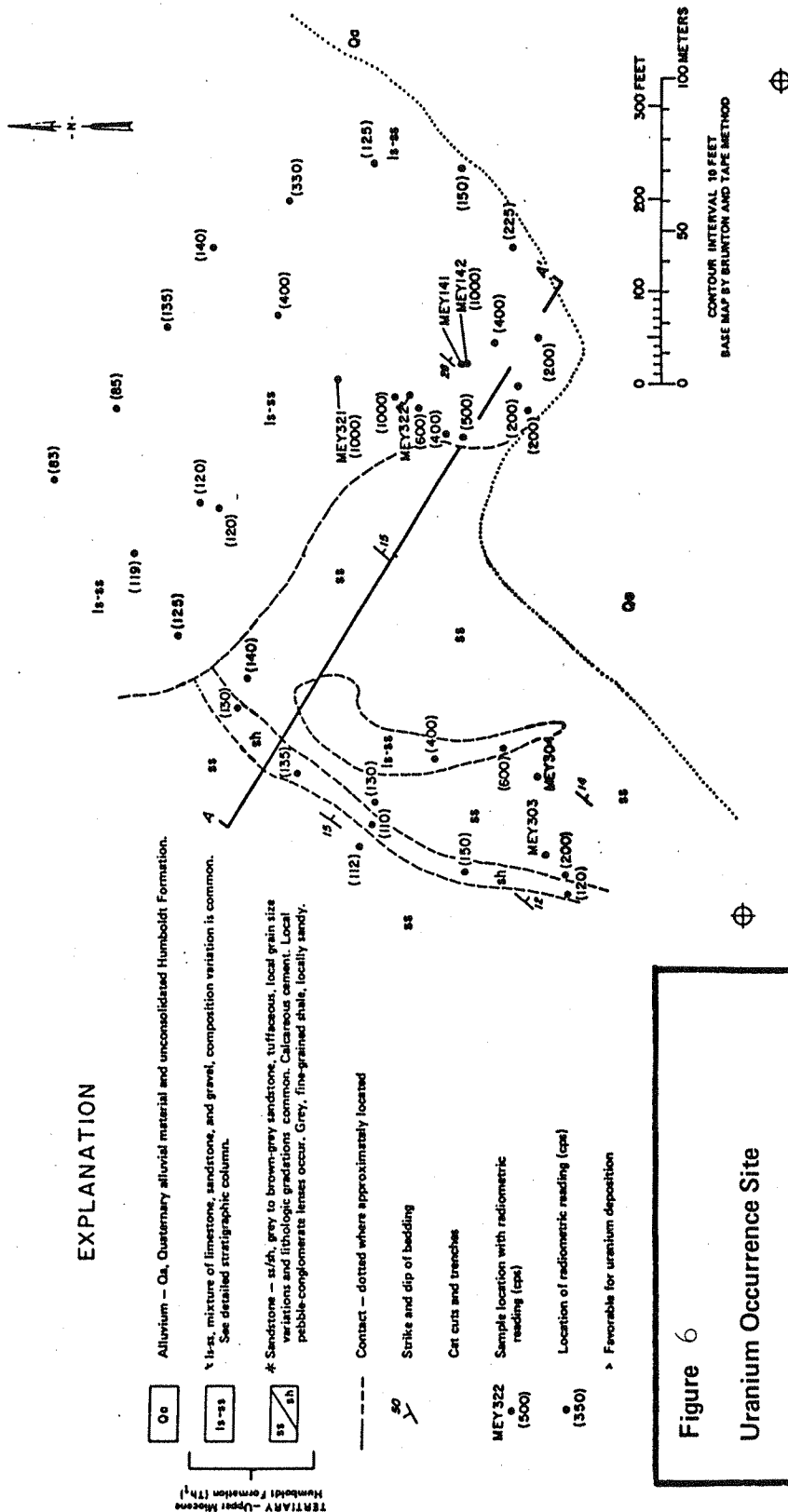


Figure 6  
Uranium Occurrence Site

# HUNTINGTON CREEK GEOLOGIC LEGEND

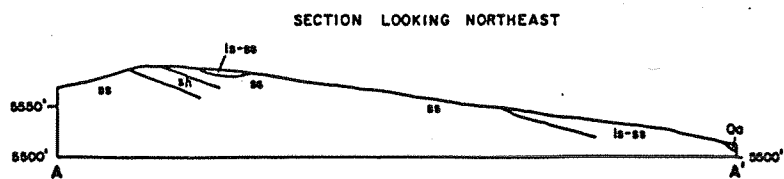
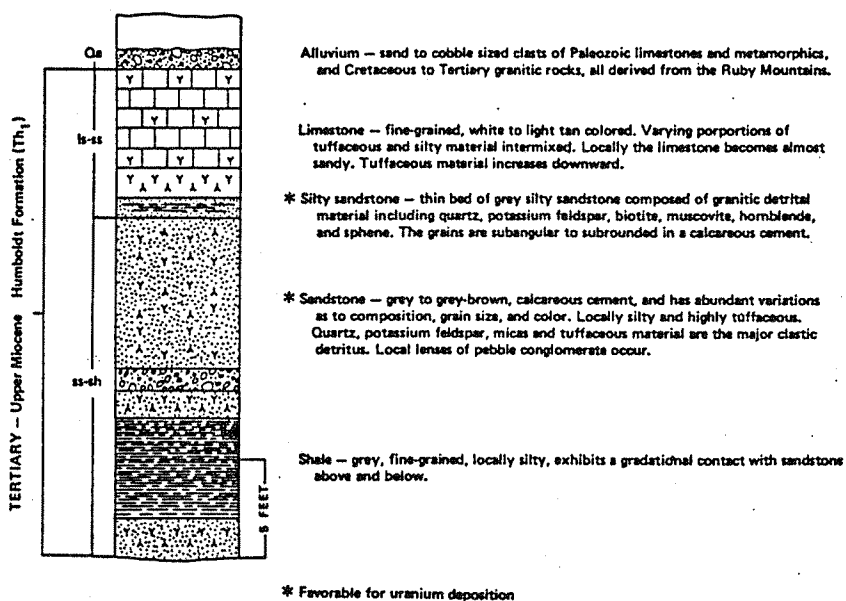


Figure 7.

# ELKO, NEVADA/ UTAH

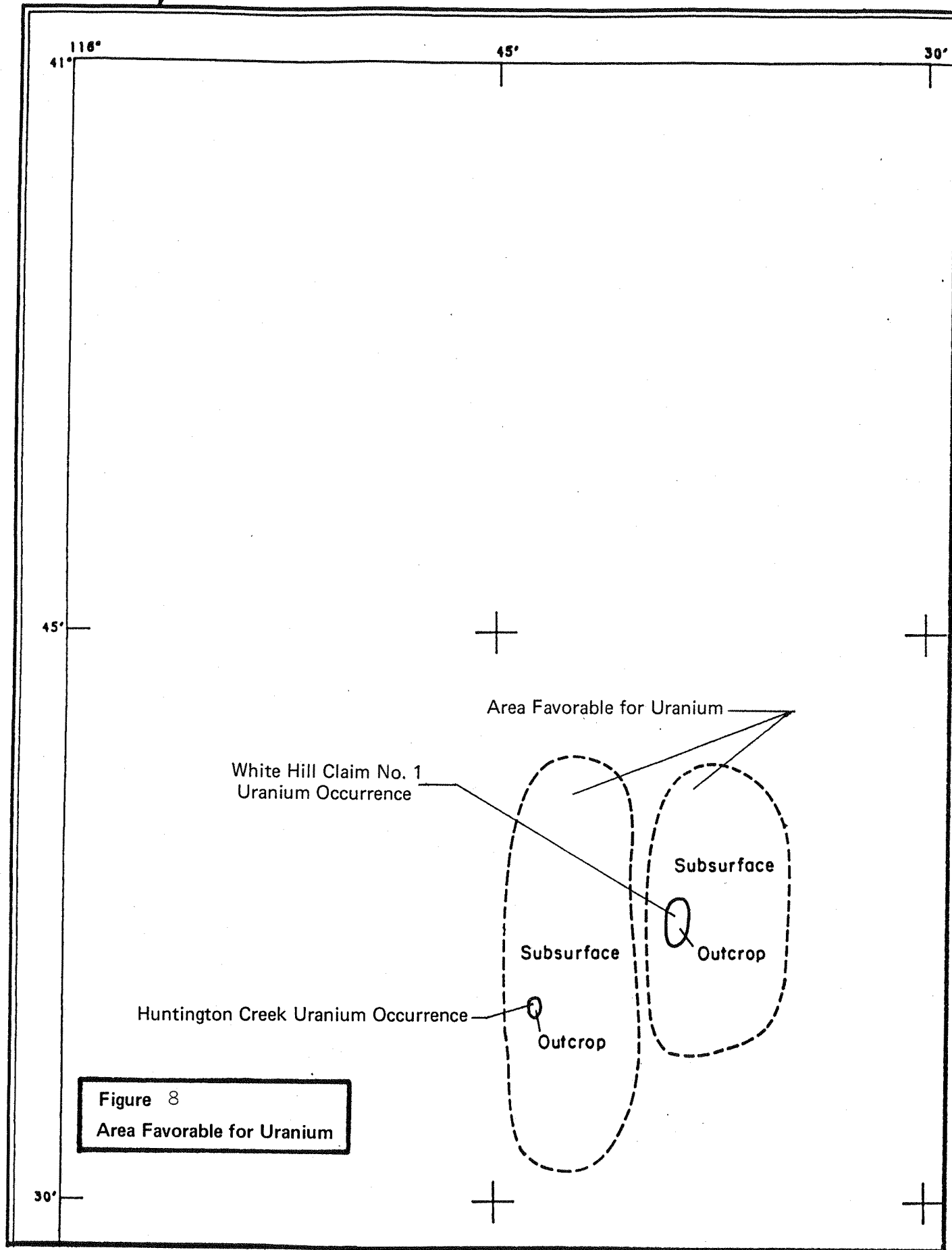


Table 3

RADIOMETRIC AND CHEMICAL RESULTS FROM THE HUNTINGTON CREEK URANIUM OCCURENCE  
(Percival and Bright, 1982)

| Sample<br>Number | Total Gamma<br>Ray Counts<br>(cps)* | $U_3O_8$<br>(ppm) | Th/U | $eU_3O_8^{**}$<br>(ppm) | $eTh^{**}$<br>(ppm) | $K_2O^{**}$<br>(wt.%) | Significant<br>Associated<br>Elements<br>(ppm) |
|------------------|-------------------------------------|-------------------|------|-------------------------|---------------------|-----------------------|--|
| MEY-141          | 1200                                | 240               | .10  | 92                      | 9.7                 | 1.6                   | -  |
| MEY-142          | 1100                                | 35                | -    | -                       | -                   | -                     | -  |
| MEY-303          | 650                                 | 43                | .13  | 39.3                    | 5.27                | 0.27                  | V, CU, TI, MN                                  |
| MEY-304          | 1600                                | 240               | .04  | 248                     | 11.6                | 0.06                  | TI, MN, V                                      |
| MEY-321          | 1000                                | 379               | .07  | 102                     | 7.28                | 1.45                  | Mn, Sr   |
| MEY-322          | 1000                                | 440               | -    | -                       | -                   | -                     | -  |

\*The instrument used was a Mt. Sopris Model SC-131.

\*\*The instrument used was a Scintrex, Model GAD-6.



It is important to understand that the NURE program tested favorability for size and grade by comparing deposits with geologic parameters that were well known and tested with deposits or occurrences that were not tested. For instance, the test for favorability at the Huntington Creek occurrence was not made by field measurements such as dozing, trenching or drilling but was made by comparative techniques. We should not use the same NURE criteria. We should not limit the size of the area of favorability but limit the degree of favorability.

#### MINERAL RESOURCES AREAS, LAND CLASSIFICATION

Each area shown on Figures 9 and 10 has a designation number with an "M" metallic or "U" for uranium prefix and a number rating favorability and letter designation of certainty (see Table 2).

#### RED SPRING WSA (NV-010-091)

U1-3C This area covers all the Tertiary rocks of the Humboldt Formation limestones, sandstones, lithic tuffs, and conglomerates found along the flanks of the range. This environment is considered favorable because of similarities to uranium occurrences at Huntington Creek and White Hill (a similarity of both host rocks and number of apparent source rocks). Favorable areas include those beneath the alluvium (Qal) that overlies much of the Humboldt Formation within the WSA. The area is favorable for sandstone-type deposits where the uranium has been leached from source rocks and transported by groundwater and redeposited in a reducing environment.

M1-3C This classification area covers all the Paleozoic sediments and part of the Tertiary sediments within the WSA (see Figure 9). Strong barium anomalies were detected in panned concentrates from every drainage in the WSA. Two samples (166 and 167) from the southeast edge of the WSA had barium values of 3000 and 5000 ppm respectively, while the remaining fifteen samples (161, 162, 163, 164, 165, 170, 286, 287, 288, 289, 290, 291, 292, 293, and 294) had values of 10,000 ppm or greater. Since most of the drainages originate in the Paleozoic sediments and because these rocks, in other areas, commonly host economic barium deposits they are the most likely source. Because of the large aerial extent of the anomalies it seems likely that bedded rather than vein deposits would be the source. Neither type of barite deposit is known in these areas and, in fact, the closest known deposits are twenty miles to the west in the Pinon Range (Papke 1984). There is, however, the chance that the source rocks of the barite have been removed by erosion and what we are observing is a residual deposit. No deposits of this type have been reported in Nevada (Papke 1984).

Dixie Flat & Lee 15' Quadrangles

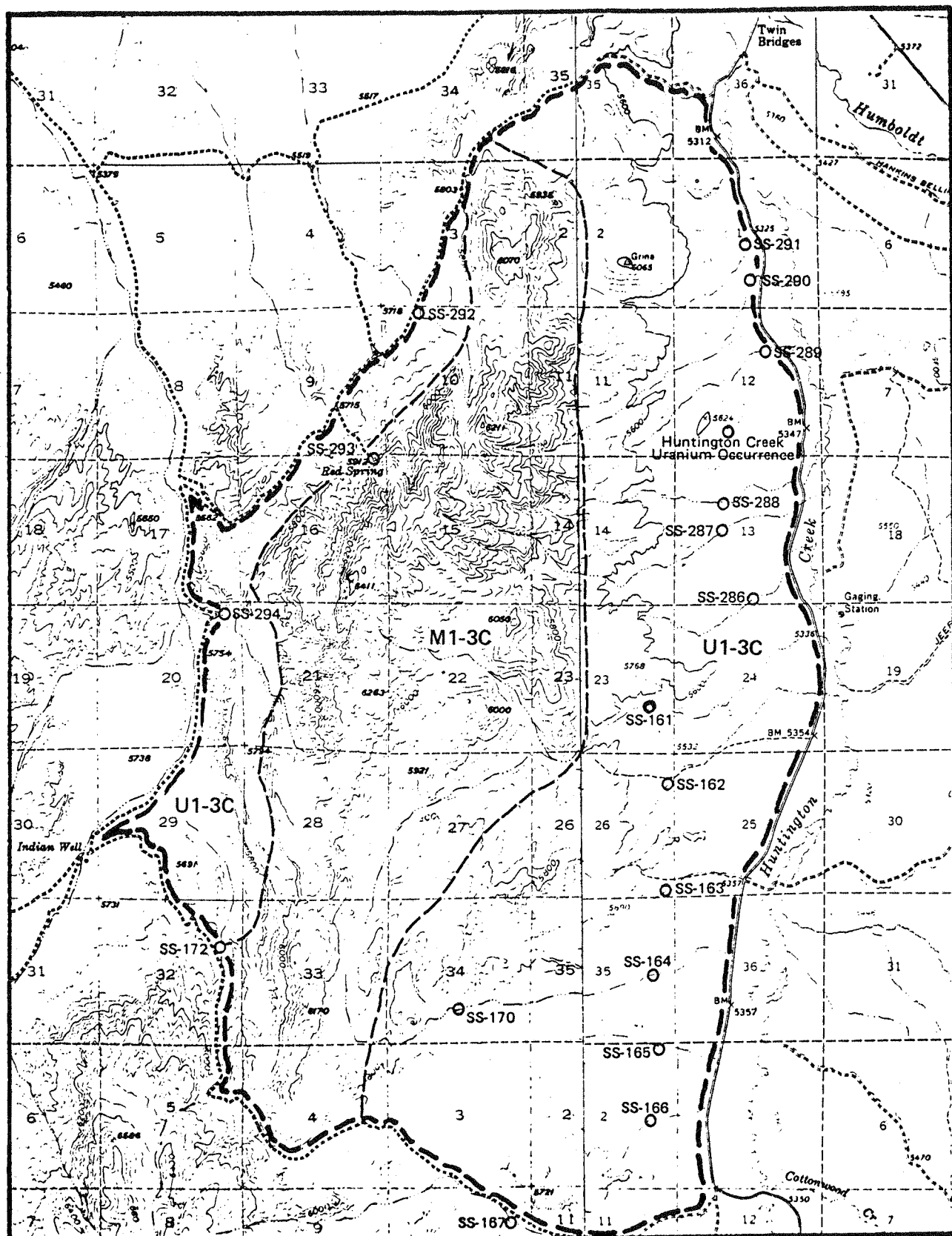


Figure: 9 Land Classification Map

RED SPRING W S A

# Mt. Robinson & Dixie Flat 15' Quadrangle

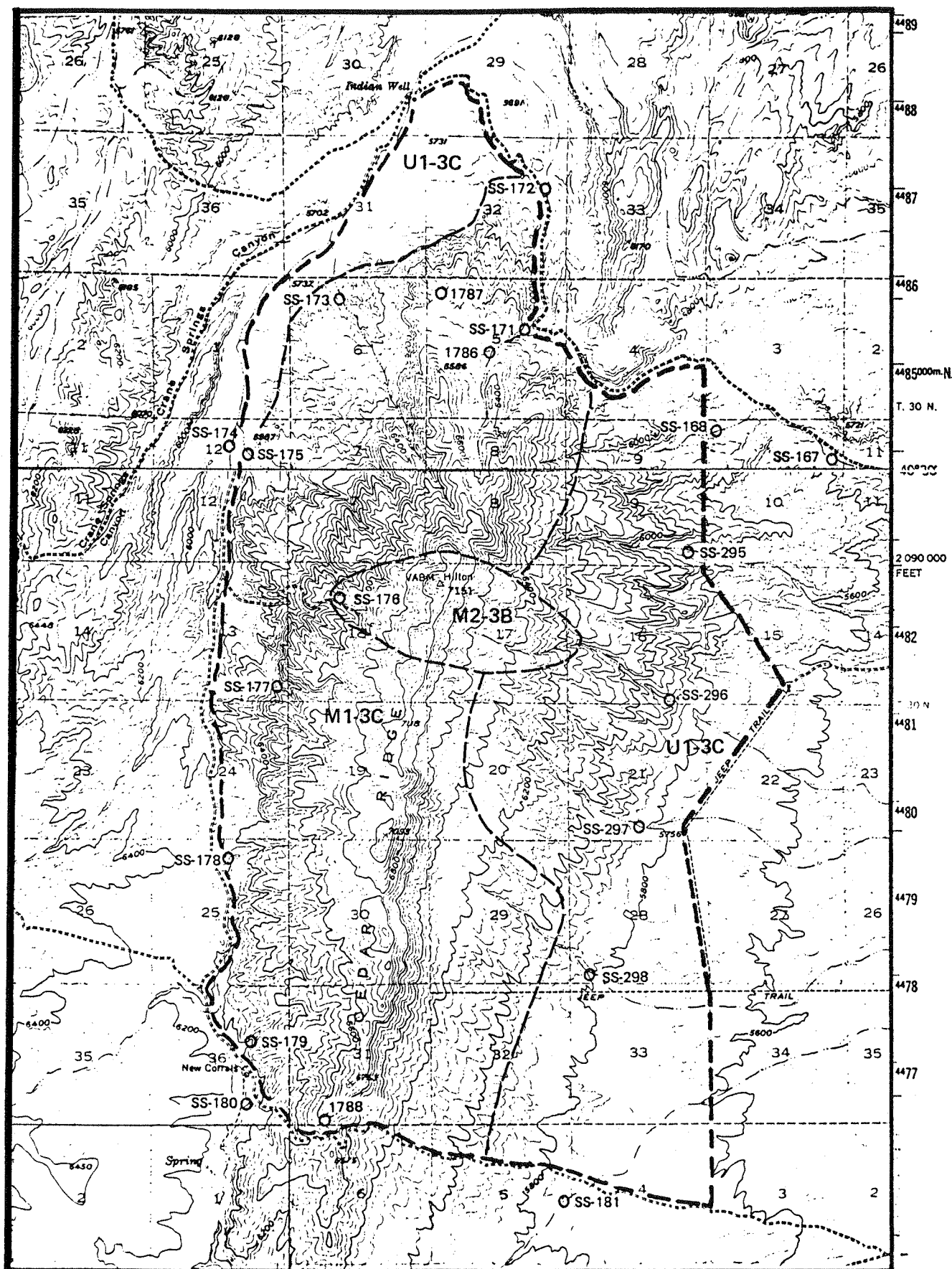


Figure: 10 Land Classification Map

CEDAR RIDGE W S A

## CEDAR RIDGE WSA (NV-010-088)

U1-3C This area is underlain by the same host and source rocks favorable for uranium as those described in the Red Spring WSA (see Figure 10). This environment is considered very favorable for the deposition of sandstone-type uranium deposits, where uranium is leached from a variety of source rocks, transported by groundwater and redeposited in a reducing environment.

M1-3C This land classification includes all of the Paleozoic sediments and adjacent Tertiary sediments from which the sampled drainages originate. Panned concentrates from these drainages all had anomalous barium values, although they were not universally as high as those detected within the Red Spring WSA. Barium values reported for sample sites 168, 169, 170, 171, 176, 179, 180, 181, 295, and 298 were 10,000 ppm or greater while the remainder ranged in value from 2,000 to 5,000 ppm. No specific sources of barium were observed during our field work but the source is thought to be from bedded deposits associated with the Paleozoic sediments.

M2-3B This area includes two opposing drainages that reported anomalous silver values in panned concentrates samples. Sample site 176 from a westward flowing stream course reported 20 ppm silver values while sample 296, from an eastward flowing drainage, had a 100 ppm silver value. Both drainages originate near the highest point in the WSA, near 1751-foot "VABM Hilton" in Section 17 T,R. The source of the silver anomaly was not identified. Another 20 ppm silver anomaly was identified at sample site 181, on the south end of WSA.

### SUGGESTIONS AND RECOMMENDATIONS

1. Investigate the barium anomalies in both WSA's by making east-west traverses of the Paleozoic sections giving special attention to the Diamond Peak Formation.
2. Examine the upper drainages of the two streams that had silver anomalies in the general vicinity of the Hilton Peak area on the Cedar Ridge WSA.

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## APPENDIX A

## APPENDIX

### Rock Sample Description

[illegible]



# Semi-Quantitative Spectrographic Analysis

Element

Sample Number

|                | 1786 | 1787 | 1788 |  |  |  |  |  |  |
|----------------|------|------|------|--|--|--|--|--|--|
| Fe %<br>(.05)  | 1.5  | 3    | 5    |  |  |  |  |  |  |
| Mg %<br>(.02)  | 1    | .2   | .15  |  |  |  |  |  |  |
| Ca %<br>(.05)  | 1.5  | 3    | 1.5  |  |  |  |  |  |  |
| Ti %<br>(.002) | .15  | .1   | .15  |  |  |  |  |  |  |
| Mn<br>(10)     | 500  | 100  | 100  |  |  |  |  |  |  |
| Ag<br>(.5)     | N    | N    | N    |  |  |  |  |  |  |
| As<br>(200)    | N    | 200  | 700  |  |  |  |  |  |  |
| Au<br>(10)     | N    | N    | N    |  |  |  |  |  |  |
| B<br>(10)      | 500  | 50   | 70   |  |  |  |  |  |  |
| Ba<br>(20)     | 700  | 700  | 500  |  |  |  |  |  |  |
| Be<br>(1)      | 2    | 1    | 2    |  |  |  |  |  |  |
| Bi<br>(10)     | N    | N    | N    |  |  |  |  |  |  |
| Cd<br>(20)     | N    | N    | N    |  |  |  |  |  |  |
| Co<br>(5)      | 10   | N    | N    |  |  |  |  |  |  |
| Cr<br>(10)     | 100  | 100  | 100  |  |  |  |  |  |  |
| Cu<br>(5)      | 10   | 20   | 10   |  |  |  |  |  |  |
| La<br>(20)     | 50   | 50   | 50   |  |  |  |  |  |  |
| Mo<br>(5)      | N    | L    | 10   |  |  |  |  |  |  |
| Nb<br>(20)     | L    | L    | L    |  |  |  |  |  |  |
| Ni<br>(5)      | 20   | 30   | 10   |  |  |  |  |  |  |
| Pb<br>(10)     | 30   | L    | L    |  |  |  |  |  |  |
| Sb<br>(100)    | N    | 100  | 300  |  |  |  |  |  |  |
| Sc<br>(5)      | N    | L    | 10   |  |  |  |  |  |  |
| Sn<br>(10)     | N    | N    | N    |  |  |  |  |  |  |
| Sr<br>(100)    | 160  | 300  | 5000 |  |  |  |  |  |  |
| V<br>(10)      | 70   | 200  | 200  |  |  |  |  |  |  |
| W<br>(50)      | N    | N    | 50   |  |  |  |  |  |  |
| Y<br>(10)      | N    | N    | 50   |  |  |  |  |  |  |
| Zn<br>(200)    | N    | N    | N    |  |  |  |  |  |  |
| Zr<br>(10)     | 70   | 100  | 100  |  |  |  |  |  |  |
| Th<br>(100)    | N    | N    | N    |  |  |  |  |  |  |

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado

Fe, Mg, Ti reported in %, all other elements reported in ppm.

Lower limits of determination are in parentheses.

G = greater than value shown, N = not detected at limit of detection, < detected, but below value shown.

## Atomic-Adsorbption Analysis

Element

Sample Number

[illegible]

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado

All elements reported in ppm.

Lower limits of determination are in parentheses.

0 = greater than value shown. N = not detected at limit of detection. < = detected but below value shown.

NURE ROCK SAMPLE ANALYSIS

LAB-ID TSL LABORATORIES SUBCONTRACT NO. 78-191-S DATE \_\_\_\_\_

CALL NO. \_\_\_\_\_ CERTIFY SIGNATURE \_\_\_\_\_

|   | MJC   | MJC   | MJC   | MJC   | MJC   | MJC   | MJC   |  |  |  |
|---|-------|-------|-------|-------|-------|-------|-------|--|--|--|
| BFEC SAMPLE NO.                           | 309   | 480   | 492   | 493   | 494   | 601   | 602   |  |  |  |
| LAB SAMPLE NO.                            |       |       |       |       |       |       |       |  |  |  |
| U <sub>3</sub> O <sub>8</sub> R (ppm)     | 5     | 8     | 4     | 6     | 5     | 5     | 4     |  |  |  |
| U <sub>3</sub> O <sub>8</sub> W (ppb)     |       |       |       |       |       |       |       |  |  |  |
| U <sub>3</sub> O <sub>8</sub> S, SS (ppm) |       |       |       |       |       |       |       |  |  |  |
| LOI S, SS (%)                             |       |       |       |       |       |       |       |  |  |  |
| MEA (ppm)                                 |       |       |       |       |       |       |       |  |  |  |
| Ag  | 2     | 2     | -1    | -1    | 2     | 1     | 6     |  |  |  |
| Al  | 57700 | 81400 | 76000 | 77400 | 81800 | 79700 | 78400 |  |  |  |
| As  | -100  | 125   | 135   | 135   | 145   | 145   | 145   |  |  |  |
| B   | 50    | 385   | 65    | 75    | 79    | 79    | 85    |  |  |  |
| Ba  | 1250  | 485   | 1050  | 840   | 1580  | 680   | 950   |  |  |  |
| Be  | 1     | 6     | 3     | 4     | 4     | 4     | 5     |  |  |  |
| Ca  | 13600 | 5270  | 17300 | 20200 | 23800 | 13900 | 42200 |  |  |  |
| Co  | 4     | 9     | 4     | 4     | 14    | 7     | 33    |  |  |  |
| Cr  | 4     | 11    | 16    | 20    | 32    | 13    | 150   |  |  |  |
| Cu  | 12    | 54    | 35    | 38    | 48    | 34    | 210   |  |  |  |
| Fe  | 16800 | 20100 | 16300 | 22700 | 35000 | 22800 | 49600 |  |  |  |
| La  | 42    | 110   | 38    | 48    | 56    | 44    | 42    |  |  |  |
| Li  | -10   | -10   | -10   | 10    | 17    | 10    | 19    |  |  |  |
| Mn  | 195   | 260   | 130   | 370   | 625   | 395   | 785   |  |  |  |
| Mo  | 4     | 30    | 28    | 28    | 31    | 32    | 35    |  |  |  |
| Na  | 13000 | 11900 | 7800  | 9900  | 19300 | 16600 | 25000 |  |  |  |
| Nb  | 2     | 4     | 2     | 2     | 2     | 2     | 1     |  |  |  |
| Ni  | 22    | 19    | 11    | 13    | 17    | 12    | 94    |  |  |  |
| Pb  | 24    | 86    | 69    | 73    | 77    | 82    | 85    |  |  |  |
| Sb  | -50   | -50   | -50   | -50   | -50   | -50   | 55    |  |  |  |
| Sc  | 3     | 3     | 2     | 3     | 8     | 4     | 16    |  |  |  |
| Sn  | 4     | 48    | 40    | 41    | 48    | 47    | 55    |  |  |  |
| Sr  | -100  | -100  | -100  | -100  | -100  | -100  | 150   |  |  |  |
| Ti  | 1040  | 1580  | 1050  | 1050  | 2860  | 1230  | 5320  |  |  |  |
| V   | 15    | 6     | 15    | 19    | 61    | 22    | 150   |  |  |  |
| W   | -10   | -10   | -10   | -10   | -10   | -10   | -10   |  |  |  |
| Y   | 14    | 72    | 12    | 16    | 26    | 17    | 18    |  |  |  |
| Zn  | 235   | 150   | 120   | 125   | 100   | 170   | 93    |  |  |  |
| Zr  | 62    | 250   | 60    | 67    | 59    | 80    | 15    |  |  |  |

A minus (-) sign means less than

PROPERTY NAME: Sample Site 1786  
OTHER NAMES: \_\_\_\_\_  
MINERAL COMMODITY(IES): Possible sulfides  
TYPE OF DEPOSIT: Outcrop  
ACCESSIBILITY: One-third mile SW of main road  
OWNERSHIP: Unknown  
PRODUCTION: None  
HISTORY: The outcrop has been prospected.

County: Elko  
Mining District: West of Jiggs  
AMS Sheet: Elko  
Quad Sheet: Dixie Flat 15'  
Sec. 5, T 31N, R 55E  
Coordinate (UTM):  
North 4485100m  
East 0598300m  
Zone \_\_\_\_\_

DEVELOPMENT: None

ACTIVITY AT TIME OF EXAMINATION: None

GEOLOGY: Hydrothermal alteration and silication of sandstone/siltstone, some brecciated vein material. The bedding strikes N30W, 40SE. The resistant rock outcrops for about 30 yards along the strike, terminating in the northside of the east-west drainage. Sample 1786 was taken from the silicified and altered portion of the outcrop which may contain sulfides.

Sample 1786

REMARKS: \_\_\_\_\_

REFERENCES: \_\_\_\_\_

EXAMINER: Jack Quade DATE VISITED: 8-9-84



**OTHER NAMES:**

MINERAL COMMODITY(IES): Possible precious metals

TYPE OF DEPOSIT: Epithermal vein/dike

ACCESSIBILITY: Near main road

OWNERSHIP: Unknown

PRODUCTION: None

**HISTORY:**

County: Elko

Mining District: West of Jiggs

AMS Sheet: Elko

Quad Sheet: Robinson Mt. 15'

Sec. SW 1/4 31, T 30N, R 55E

Coordinate (UTM):

North 4 4 7 6 4 0 0 m

East 0 5 9 9 3 0 0 m

Zone

DEVELOPMENT: None

ACTIVITY AT TIME OF EXAMINATION: None

GEOLOGY: Rhyolite dike striking N25W with strong iron oxide alteration and  
minor brecciation is hosted in volcanic and sediments of Tertiary age.

Sample 1787

REMARKS:

### REFERENCES:

EXAMINER: Jack Quade

DATE VISITED: 8-10-84

PROPERTY NAME: Huntington Creek

OTHER NAMES: \_\_\_\_\_

MINERAL COMMODITY(IES): Uranium

TYPE OF DEPOSIT: Secondary enrichment in a sandstone/lacustrine environment....a Fluvial deposit

ACCESSIBILITY: Turn off Highway 46 onto Twin Bridges road, follow road south 3.0 miles to BM 5347; walk west

OWNERSHIP: for .45 miles to dozer-cuts

PRODUCTION: None

HISTORY: \_\_\_\_\_

County: Elko

Mining District: West of Jiggs

AMS Sheet: Elko

Base Sheet: Lee

Sec. 12, T. 31N, R. 55E

Coordinate (UTM):

North                      m

East                      m

Zone                     

DEVELOPMENT: Nine shallow trenches, pits of various depth and lengths and numerous dozer-cuts.

ACTIVITY AT TIME OF EXAMINATION: None

GEOLOGY: The deposit is in tuffaceous sandstones, siltstones and pebble conglomerates of Tertiary age. The majority of the uranium seems to be concentrated along a sandstone-limestone contact that has been partly silicified and within a pebble conglomerate. The units strike N-E and have a shallow dip to the south east. No work has been conducted since the initial activity. No additional sampling was conducted since we were without a geiger counter. The reader is referred to the uranium report by Percival, 1980.

REMARKS: \_\_\_\_\_

REFERENCES: Uranium Resource Evaluation, Elko Quadrangle by Timothy Percival and James Bright April 1980. Prepared for the U.S. Department of Energy Grand Junction, Colo 81501

EXAMINER: Jack Quade

DATE VISITED: 8-12-84

## APPENDIX B



Table 1--Data for stream-sediment samples, Cedar Mountain WSA, Nevada

| Sample | X-COORD. | Y-COORD. | S-FEZ | S-MGZ | S-CAZ | S-TIZ | S-MN  | S-AG | S-AS | S-AU | S-B | S-BA  | S-BE |
|--------|----------|----------|-------|-------|-------|-------|-------|------|------|------|-----|-------|------|
| 161SS  | 60,660   | 448,970  | 2.0   | .7    | 7.0   | .2    | 300   | N    | N    | N    | 50  | 1,500 | 2.0  |
| 162SS  | 60,680   | 448,900  | 1.5   | .7    | 2.0   | .2    | 300   | N    | N    | N    | 50  | 500   | 2.0  |
| 163SS  | 60,680   | 448,770  | 2.0   | 1.0   | 1.5   | .3    | 500   | N    | N    | N    | 70  | 500   | 2.0  |
| 164SS  | 60,670   | 448,680  | 1.5   | .7    | 2.0   | .3    | 300   | N    | N    | N    | 50  | 500   | 2.0  |
| 165SS  | 60,670   | 448,600  | 3.0   | 1.0   | 2.0   | .3    | 700   | N    | N    | N    | 50  | 700   | 2.0  |
| 166SS  | 60,660   | 448,510  | 5.0   | .7    | 1.5   | .5    | 700   | N    | N    | N    | 30  | 500   | 2.0  |
| 167SS  | 60,510   | 448,400  | 3.0   | 1.0   | 1.5   | .3    | 500   | N    | N    | N    | 50  | 700   | 2.0  |
| 168SS  | 60,380   | 448,420  | 1.5   | .7    | 1.5   | .3    | 500   | N    | N    | N    | 30  | 500   | 2.0  |
| 169SS  | 60,360   | 448,460  | 2.0   | 1.0   | 2.0   | .5    | 500   | N    | N    | N    | 50  | 1,000 | 2.0  |
| 170SS  | 60,450   | 448,630  | 1.5   | .7    | 2.0   | .3    | 500   | N    | N    | N    | 50  | 500   | 2.0  |
| 171SS  | 60,140   | 448,510  | 1.0   | 1.0   | 3.0   | .2    | 300   | N    | N    | N    | 70  | 500   | 2.0  |
| 172SS  | 60,190   | 448,690  | 2.0   | 1.0   | 2.0   | .2    | 500   | N    | N    | N    | 50  | 500   | 2.0  |
| 173SS  | 59,960   | 448,570  | 5.0   | 1.0   | 1.5   | .3    | 700   | N    | N    | N    | 50  | 500   | 2.0  |
| 174SS  | 59,840   | 448,390  | 7.0   | 1.0   | 1.5   | .5    | 1,000 | N    | N    | N    | 50  | 500   | 2.0  |
| 175SS  | 59,860   | 448,380  | 5.0   | 1.0   | 1.5   | .3    | 700   | N    | N    | N    | 50  | 700   | 2.0  |
| 176SS  | 59,940   | 448,210  | 3.0   | 1.0   | 3.0   | .3    | 700   | N    | N    | N    | 50  | 500   | 2.0  |
| 177SS  | 59,890   | 448,140  | 2.0   | 1.0   | 1.5   | .3    | 500   | N    | N    | N    | 50  | 500   | 2.0  |
| 178SS  | 59,850   | 447,940  | 7.0   | 1.0   | 2.0   | .5    | 1,500 | N    | N    | N    | 20  | 500   | 2.0  |
| 179SS  | 59,850   | 447,710  | 2.0   | 1.0   | 2.0   | .3    | 500   | N    | N    | N    | 50  | 700   | 2.0  |
| 180SS  | 59,840   | 447,630  | 10.0  | 1.0   | 1.5   | .5    | 1,500 | N    | N    | N    | 20  | 500   | 1.0  |
| 181SS  | 60,190   | 447,520  | 3.0   | 1.0   | 3.0   | .3    | 700   | N    | N    | N    | 70  | 700   | 2.0  |
| 286SS  | 60,770   | 449,090  | 1.5   | 1.0   | 3.0   | .2    | 500   | N    | N    | N    | 50  | 500   | 3.0  |
| 287SS  | 60,730   | 449,170  | 5.0   | 1.0   | 3.0   | .3    | 1,000 | N    | N    | N    | 50  | 1,000 | 3.0  |
| 288SS  | 60,720   | 449,200  | 3.0   | 1.0   | 2.0   | .3    | 700   | N    | N    | N    | 50  | 1,000 | 3.0  |
| 289SS  | 60,780   | 449,370  | 2.0   | 1.0   | 5.0   | .2    | 700   | N    | N    | N    | 50  | 700   | 2.0  |
| 290SS  | 60,760   | 449,450  | 2.0   | 1.0   | 5.0   | .3    | 700   | N    | N    | N    | 70  | 1,000 | 2.0  |
| 291SS  | 60,760   | 449,490  | 2.0   | 1.0   | 7.0   | .3    | 1,000 | N    | N    | N    | 70  | 1,000 | 2.0  |
| 292SS  | 60,400   | 449,410  | 2.0   | 1.5   | 10.0  | .2    | 700   | N    | N    | N    | 50  | 1,000 | 5.0  |
| 293SS  | 60,350   | 449,250  | 1.0   | .2    | 1.5   | .2    | 200   | N    | N    | N    | 70  | 200   | 1.0  |
| 294SS  | 60,180   | 449,070  | 1.5   | 1.0   | 2.0   | .2    | 300   | N    | N    | N    | 70  | 700   | 1.5  |
| 295SS  | 60,360   | 448,300  | 2.0   | .7    | 1.5   | .3    | 700   | N    | N    | N    | 50  | 700   | 1.5  |
| 296SS  | 60,320   | 448,110  | 2.0   | 1.0   | 1.5   | .3    | 700   | N    | N    | N    | 70  | 700   | 1.5  |
| 297SS  | 60,280   | 447,980  | 2.0   | 1.0   | 1.0   | .3    | 500   | N    | N    | N    | 70  | 700   | 2.0  |
| 298SS  | 60,230   | 447,800  | 2.0   | 1.0   | 3.0   | .3    | 500   | N    | N    | N    | 70  | 700   | 1.5  |

Table 1--Data for stream-sediment samples, Cedar Mountain WSA, Nevada

| Sample | S-BI | S-CD | S-CO | S-CR | S-CU | S-LA | S-MO | S-NB | S-NI | S-PB | S-SB | S-SC | S-SN |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 161SS  | N    | N    | 10   | 20   | 20   | 100  | N    | <20  | 10   | 20   | N    | 5    | N    |
| 162SS  | N    | N    | 10   | 20   | 20   | 50   | N    | <20  | 10   | 10   | N    | 5    | N    |
| 163SS  | N    | N    | 10   | 20   | 30   | 100  | N    | <20  | 10   | 15   | N    | 10   | N    |
| 164SS  | N    | N    | 10   | 20   | 20   | 100  | N    | <20  | 10   | 10   | N    | 10   | N    |
| 165SS  | N    | N    | 20   | 30   | 30   | 150  | N    | <20  | 10   | 20   | N    | 10   | N    |
| 166SS  | N    | N    | 10   | 30   | 10   | 100  | N    | <20  | 10   | 20   | N    | 10   | N    |
| 167SS  | N    | N    | 10   | 20   | 20   | 50   | N    | <20  | 15   | 15   | N    | 10   | N    |
| 168SS  | N    | N    | 5    | 10   | 10   | 50   | N    | <20  | 5    | 10   | N    | 10   | N    |
| 169SS  | N    | N    | 5    | 30   | 15   | 100  | N    | <20  | 15   | 20   | N    | 10   | N    |
| 170SS  | N    | N    | 5    | 20   | 10   | 50   | N    | <20  | 10   | <10  | N    | 10   | N    |
| 171SS  | N    | N    | 5    | 30   | 15   | 50   | N    | <20  | 10   | 15   | N    | 5    | N    |
| 172SS  | N    | N    | 5    | 20   | 15   | 70   | N    | <20  | 10   | 20   | N    | 7    | N    |
| 173SS  | N    | N    | 10   | 50   | 15   | 50   | N    | <20  | 15   | 10   | N    | 10   | N    |
| 174SS  | N    | N    | 15   | 50   | 15   | 150  | N    | <20  | 20   | 15   | N    | 10   | N    |
| 175SS  | N    | N    | 10   | 50   | 20   | 70   | N    | <20  | 20   | 20   | N    | 10   | N    |
| 176SS  | N    | N    | 10   | 50   | 10   | 100  | N    | <20  | 20   | 10   | N    | 10   | N    |
| 177SS  | N    | N    | 10   | 30   | 20   | 70   | N    | <20  | 15   | 20   | N    | 10   | N    |
| 178SS  | N    | N    | 10   | 50   | 10   | 500  | N    | <20  | 10   | 10   | N    | 20   | N    |
| 179SS  | N    | N    | 10   | 50   | 15   | 50   | N    | <20  | 20   | 10   | N    | 10   | N    |
| 180SS  | N    | N    | 20   | 50   | 15   | 500  | N    | <20  | 15   | 20   | N    | 20   | N    |
| 181SS  | N    | N    | 10   | 50   | 20   | 70   | N    | <20  | 20   | 20   | N    | 10   | N    |
| 286SS  | N    | N    | 5    | 50   | 20   | 50   | N    | <20  | 10   | 10   | N    | 5    | N    |
| 287SS  | N    | N    | 10   | <10  | 30   | 70   | N    | <20  | 10   | 10   | N    | 10   | N    |
| 288SS  | N    | N    | 10   | <10  | 30   | 100  | N    | <20  | 10   | 20   | N    | 10   | N    |
| 289SS  | N    | N    | 10   | 50   | 30   | 50   | N    | <20  | 15   | 20   | N    | 10   | N    |
| 290SS  | N    | N    | 10   | 50   | 30   | 70   | N    | <20  | 20   | 10   | N    | 10   | N    |
| 291SS  | N    | N    | 10   | 70   | 30   | 50   | N    | <20  | 20   | 20   | N    | 10   | N    |
| 292SS  | N    | N    | 10   | 50   | 30   | 50   | N    | <20  | 15   | 50   | N    | 10   | N    |
| 293SS  | N    | N    | 5    | <10  | 5    | 50   | N    | <20  | 5    | <10  | N    | 5    | N    |
| 294SS  | N    | N    | 5    | 20   | 20   | 50   | N    | <20  | 15   | <10  | N    | 5    | N    |
| 295SS  | N    | N    | 10   | 20   | 20   | 100  | N    | <20  | 10   | 10   | N    | 10   | N    |
| 296SS  | N    | N    | 15   | 70   | 30   | 50   | N    | <20  | 20   | 10   | N    | 10   | N    |
| 297SS  | N    | N    | 15   | 70   | 30   | 50   | N    | <20  | 20   | 20   | N    | 10   | N    |
| 298SS  | N    | N    | 10   | 50   | 30   | 50   | N    | <20  | 15   | 10   | N    | 10   | N    |

Table 1--Data for stream-sediment samples, Cedar Mountain WSA, Nevada

| Sample | S-SR | S-V | S-W | S-Y | S-ZN | S-ZR | S-TH | AA-AS-P | AA-ZN-P | AA-SB-P |
|--------|------|-----|-----|-----|------|------|------|---------|---------|---------|
| 161SS  | 300  | 70  | N   | 20  | <200 | 200  | N    | 20      | 35      | N       |
| 162SS  | 300  | 70  | N   | 20  | N    | 200  | N    | 5       | 35      | N       |
| 163SS  | 200  | 70  | N   | 20  | N    | 70   | N    | 5       | 50      | N       |
| 164SS  | 300  | 70  | N   | 20  | N    | 200  | N    | 5       | 40      | N       |
| 165SS  | 300  | 100 | N   | 20  | N    | 500  | N    | 5       | 45      | N       |
| 166SS  | 300  | 200 | N   | 20  | 200  | 200  | N    | 5       | 120     | 2       |
| 167SS  | 300  | 70  | N   | 10  | N    | 200  | N    | 5       | 50      | <2      |
| 168SS  | 300  | 70  | N   | 10  | N    | 300  | N    | 5       | 55      | N       |
| 169SS  | 300  | 100 | N   | 30  | N    | 200  | N    | 5       | 35      | N       |
| 170SS  | 200  | 70  | N   | 20  | N    | 200  | N    | 10      | 50      | N       |
| 171SS  | 300  | 70  | N   | 10  | N    | 100  | N    | 20      | 50      | N       |
| 172SS  | 300  | 70  | N   | 30  | N    | 200  | N    | 10      | 40      | N       |
| 173SS  | 200  | 100 | N   | 20  | N    | 300  | N    | 10      | 60      | N       |
| 174SS  | 300  | 200 | N   | 30  | 200  | 300  | N    | 10      | 120     | N       |
| 175SS  | 300  | 100 | N   | 20  | N    | 200  | N    | 10      | 50      | N       |
| 176SS  | 300  | 150 | N   | 20  | <200 | 500  | N    | 15      | 75      | N       |
| 177SS  | 200  | 70  | N   | 20  | N    | 200  | N    | 10      | 50      | N       |
| 178SS  | 300  | 200 | N   | 30  | 500  | 500  | N    | 5       | 200     | N       |
| 179SS  | 300  | 100 | N   | 20  | N    | 100  | N    | 10      | 70      | N       |
| 180SS  | 300  | 500 | N   | 30  | 700  | 300  | N    | 5       | 200     | N       |
| 181SS  | 300  | 100 | N   | 20  | N    | 300  | N    | 10      | 55      | N       |
| 286SS  | 300  | 70  | N   | 20  | N    | 100  | N    | 10      | 45      | N       |
| 287SS  | 200  | 100 | N   | 50  | N    | 200  | N    | <5      | 35      | N       |
| 288SS  | 200  | 100 | N   | 50  | N    | 300  | N    | 10      | 40      | N       |
| 289SS  | 500  | 70  | N   | 20  | N    | 100  | N    | 10      | 30      | N       |
| 290SS  | 500  | 70  | N   | 30  | N    | 100  | N    | 10      | 30      | N       |
| 291SS  | 700  | 70  | N   | 20  | N    | 100  | N    | 10      | 30      | N       |
| 292SS  | 200  | 70  | N   | 20  | N    | 50   | N    | N       | 40      | N       |
| 293SS  | N    | 20  | N   | 10  | N    | 300  | N    | <5      | 10      | N       |
| 294SS  | 200  | 70  | N   | 20  | N    | 100  | N    | 10      | 50      | N       |
| 295SS  | 200  | 100 | N   | 20  | <200 | 500  | N    | 10      | 70      | N       |
| 296SS  | 200  | 100 | N   | 20  | N    | 300  | N    | 10      | 70      | N       |
| 297SS  | 200  | 70  | N   | 20  | N    | 100  | N    | 10      | 65      | N       |
| 298SS  | 300  | 70  | N   | 20  | N    | 200  | N    | 10      | 60      | N       |

3



Table 2--Data for concentrate samples, Cedar Mountain WSA, Nevada

| Sample | X-COORD. | Y-COORD. | S-FE% | S-MG% | S-CA% | S-TI% | S-MN  | S-AG | S-AS | S-AU | S-B | S-BA    | S-BE |
|--------|----------|----------|-------|-------|-------|-------|-------|------|------|------|-----|---------|------|
| 161C   | 60,660   | 448,970  | 1.5   | .3    | 10    | .7    | 200   | N    | N    | N    | 20  | >10,000 | 2    |
| 162C   | 60,680   | 448,900  | .5    | 1.0   | 15    | >2.0  | 700   | N    | N    | N    | 70  | >10,000 | 2    |
| 163C   | 60,680   | 448,770  | 1.0   | .5    | 7     | >2.0  | 200   | N    | N    | N    | 50  | 10,000  | 2    |
| 164C   | 60,670   | 448,680  | 1.0   | 1.5   | 10    | >2.0  | 2,000 | N    | N    | N    | 150 | 10,000  | 2    |
| 165C   | 60,670   | 448,600  | 1.5   | 1.0   | 7     | >2.0  | 500   | N    | N    | N    | 30  | 10,000  | 2    |
| 166C   | 60,660   | 448,510  | 1.5   | .5    | 5     | 1.5   | 200   | N    | N    | N    | 50  | 3,000   | 2    |
| 167C   | 60,510   | 448,400  | 3.0   | .5    | 3     | 2.0   | 500   | N    | N    | N    | 50  | 3,000   | 2    |
| 168C   | 60,380   | 448,420  | 2.0   | .5    | 10    | 2.0   | 500   | <1   | N    | N    | 50  | >10,000 | 2    |
| 169C   | 60,360   | 448,460  | 2.0   | .5    | 5     | 1.0   | 300   | N    | N    | N    | 50  | >10,000 | 2    |
| 170C   | 60,450   | 448,630  | 2.0   | .7    | 10    | 1.0   | 500   | N    | N    | N    | 50  | >10,000 | 2    |
| 171C   | 60,140   | 448,510  | 3.0   | 1.0   | 7     | 2.0   | 700   | N    | N    | N    | 50  | >10,000 | 2    |
| 172C   | 60,190   | 448,690  | 3.0   | 1.5   | 7     | 2.0   | 700   | N    | N    | N    | 70  | 5,000   | 2    |
| 173C   | 59,960   | 448,570  | 3.0   | .7    | 10    | 1.0   | 500   | N    | N    | N    | 50  | 5,000   | 2    |
| 174C   | 59,840   | 448,390  | 2.0   | .5    | 5     | 1.0   | 300   | N    | N    | N    | 50  | 3,000   | 2    |
| 175C   | 59,860   | 448,380  | 3.0   | 1.0   | 7     | 2.0   | 1,000 | N    | N    | N    | 50  | 3,000   | 2    |
| 176C   | 59,940   | 448,210  | 2.0   | .3    | 15    | .7    | 500   | 20   | N    | N    | 50  | >10,000 | 2    |
| 177C   | 59,890   | 448,140  | 2.0   | .7    | 5     | 1.0   | 500   | N    | N    | N    | 50  | 5,000   | 2    |
| 178C   | 59,850   | 447,940  | 2.0   | .7    | 5     | 1.0   | 500   | N    | N    | N    | 50  | 2,000   | 2    |
| 179C   | 59,850   | 447,710  | 2.0   | .7    | 15    | 1.0   | 500   | N    | N    | N    | 50  | >10,000 | 2    |
| 180C   | 59,840   | 447,630  | 3.0   | .5    | 7     | 1.0   | 700   | N    | N    | N    | 30  | 10,000  | 2    |
| 181C   | 60,190   | 447,520  | 5.0   | 1.0   | 7     | 1.0   | 1,000 | 20   | N    | N    | 50  | >10,000 | 2    |
| 286C   | 60,770   | 449,090  | .5    | 1.5   | 15    | >2.0  | 500   | N    | N    | N    | 50  | >10,000 | 2    |
| 287C   | 60,730   | 449,170  | .5    | 1.5   | 10    | >2.0  | 500   | N    | N    | N    | 200 | >10,000 | 2    |
| 288C   | 60,720   | 449,200  | 1.0   | .5    | 10    | >2.0  | 500   | N    | N    | N    | 150 | >10,000 | 2    |
| 289C   | 60,780   | 449,370  | 1.0   | 1.5   | 10    | >2.0  | 500   | N    | N    | N    | 200 | >10,000 | 2    |
| 290C   | 60,760   | 449,450  | .5    | .3    | 3     | 1.0   | 150   | N    | N    | N    | 30  | >10,000 | N    |
| 291C   | 60,760   | 449,490  | .5    | .2    | 5     | 1.0   | 200   | N    | N    | N    | 20  | >10,000 | N    |
| 292C   | 60,400   | 449,410  | 1.0   | .3    | 2     | .1    | 150   | N    | N    | N    | <20 | >10,000 | <2   |
| 293C   | 60,350   | 449,250  | 1.0   | .3    | 2     | >2.0  | 200   | N    | N    | N    | 200 | >10,000 | N    |
| 294C   | 60,180   | 449,070  | 1.0   | .3    | 10    | 1.0   | 200   | N    | N    | N    | 50  | >10,000 | <2   |
| 295C   | 60,360   | 448,300  | 1.0   | .5    | 7     | 2.0   | 300   | N    | N    | N    | 50  | 10,000  | 2    |
| 296C   | 60,320   | 448,110  | 1.0   | .5    | 15    | 2.0   | 500   | 100  | N    | N    | 50  | 3,000   | 2    |
| 297C   | 60,280   | 447,980  | 5.0   | 2.0   | 10    | >2.0  | 1,500 | N    | N    | N    | 200 | 5,000   | 2    |
| 298C   | 60,230   | 447,800  | 1.0   | .3    | 15    | 2.0   | 300   | N    | N    | N    | 50  | >10,000 | 2    |

Table 2--Data for concentrate samples, Cedar Mountain USA, Nevada

| Sample | S-BI | S-CD | S-CO | S-CR | S-CU | S-LA  | S-MO | S-NB | S-NI | S-PB | S-SB | S-SC | S-SN  |
|--------|------|------|------|------|------|-------|------|------|------|------|------|------|-------|
| 161C   | N    | N    | N    | <20  | 10   | 200   | N    | 50   | <10  | 20   | N    | <10  | N     |
| 162C   | N    | N    | N    | 200  | 20   | 2,000 | N    | 200  | <10  | 100  | N    | <10  | 50    |
| 163C   | N    | N    | N    | 200  | 20   | 500   | N    | <50  | <10  | 20   | N    | 10   | N     |
| 164C   | N    | N    | N    | 200  | 20   | 1,000 | N    | <50  | 10   | 70   | N    | 10   | 50    |
| 165C   | N    | N    | N    | 150  | 20   | 500   | N    | <50  | <10  | 50   | N    | 20   | 30    |
| 166C   | N    | N    | N    | 50   | 10   | 500   | N    | <50  | <10  | 20   | N    | <10  | N     |
| 167C   | N    | N    | N    | 50   | 10   | 500   | N    | <50  | <10  | <20  | N    | <10  | 200   |
| 168C   | N    | N    | N    | 100  | 10   | 700   | N    | 50   | <10  | <20  | N    | <10  | N     |
| 169C   | N    | N    | N    | 50   | 15   | 300   | N    | <50  | <10  | 100  | N    | <10  | N     |
| 170C   | N    | N    | N    | 50   | 10   | 300   | N    | <50  | <10  | 50   | N    | <10  | 70    |
| 171C   | N    | N    | N    | 150  | 30   | 300   | N    | 100  | 10   | 20   | N    | <10  | 50    |
| 172C   | N    | N    | N    | 100  | 10   | 300   | N    | <50  | 10   | N    | N    | <10  | 70    |
| 173C   | N    | N    | N    | 50   | 10   | 500   | N    | <50  | <10  | 50   | N    | <10  | 200   |
| 174C   | N    | N    | N    | 100  | 10   | 500   | N    | <50  | <10  | <20  | N    | <10  | 70    |
| 175C   | N    | N    | N    | 100  | 15   | 500   | N    | <50  | 10   | <20  | N    | <10  | N     |
| 176C   | N    | N    | N    | 100  | 10   | 500   | N    | <50  | 10   | <20  | N    | <10  | 50    |
| 177C   | N    | N    | N    | 50   | 10   | 200   | N    | <50  | <10  | 50   | N    | <10  | 100   |
| 178C   | N    | N    | N    | 100  | 10   | 300   | N    | <50  | <10  | <20  | N    | <10  | N     |
| 179C   | N    | N    | N    | 70   | 10   | 500   | N    | <50  | 20   | <20  | N    | <10  | N     |
| 180C   | N    | N    | N    | 100  | <10  | 300   | N    | <50  | 20   | <20  | N    | <10  | 200   |
| 181C   | N    | N    | N    | 50   | 30   | 500   | N    | <50  | 20   | <20  | N    | <10  | 100   |
| 286C   | N    | N    | N    | 150  | 10   | 200   | N    | 200  | N    | N    | N    | <10  | 70    |
| 287C   | N    | N    | N    | 150  | 10   | 200   | N    | 200  | <20  | <20  | N    | <10  | 2,000 |
| 288C   | N    | N    | N    | 150  | 20   | 700   | N    | 50   | N    | N    | N    | <10  | 70    |
| 289C   | N    | N    | N    | 300  | 70   | 700   | N    | 100  | <10  | 20   | N    | <10  | 50    |
| 290C   | N    | N    | N    | 100  | <10  | 200   | N    | 50   | N    | N    | N    | <10  | N     |
| 291C   | N    | N    | N    | 50   | <10  | 200   | N    | 50   | N    | N    | N    | <10  | N     |
| 292C   | N    | N    | N    | <20  | 10   | N     | N    | <50  | N    | 50   | N    | <10  | N     |
| 293C   | N    | N    | N    | 100  | 50   | 700   | N    | <50  | N    | <20  | N    | <10  | N     |
| 294C   | N    | N    | N    | <20  | 10   | 500   | N    | <50  | N    | 30   | N    | <10  | 50    |
| 295C   | N    | N    | N    | <20  | <10  | 500   | N    | <50  | N    | <20  | N    | <10  | N     |
| 296C   | N    | N    | N    | 200  | 10   | 1,000 | N    | <50  | 10   | <20  | N    | <10  | N     |
| 297C   | N    | N    | N    | 300  | 30   | 1,000 | N    | <50  | 20   | 20   | N    | 50   | 700   |
| 298C   | N    | N    | N    | 200  | 20   | 1,000 | N    | <50  | 20   | <20  | N    | <10  | 100   |

Table 2--Data for concentrate samples, Cedar Mountain WSA, Nevada

| Sample | S-SR    | S-V | S-W | S-Y   | S-ZN | S-ZR   | S-TH | AA-AS-P | AA-ZN-P | AA-SB-P |
|--------|---------|-----|-----|-------|------|--------|------|---------|---------|---------|
| 161C   | 10,000  | 70  | N   | 500   | N    | >2,000 | N    | --      | --      | --      |
| 162C   | 5,000   | 200 | N   | 2,000 | N    | >2,000 | N    | --      | --      | --      |
| 163C   | 2,000   | 200 | N   | 1,000 | N    | >2,000 | N    | --      | --      | --      |
| 164C   | 2,000   | 200 | N   | 1,000 | N    | >2,000 | N    | --      | --      | --      |
| 165C   | 2,000   | 150 | N   | 1,000 | N    | >2,000 | N    | --      | --      | --      |
| 166C   | 700     | 100 | N   | 700   | N    | >2,000 | N    | --      | --      | --      |
| 167C   | 500     | 100 | N   | 700   | N    | >2,000 | N    | --      | --      | --      |
| 168C   | 1,000   | 200 | N   | 1,000 | N    | >2,000 | N    | --      | --      | --      |
| 169C   | 1,000   | 100 | N   | 500   | N    | >2,000 | N    | --      | --      | --      |
| 170C   | 1,000   | 100 | N   | 700   | N    | >2,000 | N    | --      | --      | --      |
| 171C   | 5,000   | 200 | N   | 500   | N    | >2,000 | N    | --      | --      | --      |
| 172C   | 500     | 150 | N   | 500   | N    | >2,000 | N    | --      | --      | --      |
| 173C   | 1,500   | 100 | N   | 700   | N    | >2,000 | N    | --      | --      | --      |
| 174C   | 1,000   | 100 | N   | 700   | N    | >2,000 | N    | --      | --      | --      |
| 175C   | 1,000   | 150 | N   | 700   | N    | >2,000 | N    | --      | --      | --      |
| 176C   | 3,000   | 150 | N   | 700   | N    | >2,000 | N    | --      | --      | --      |
| 177C   | 500     | 100 | N   | 700   | N    | >2,000 | N    | --      | --      | --      |
| 178C   | 1,000   | 100 | N   | 500   | N    | >2,000 | N    | --      | --      | --      |
| 179C   | 1,500   | 100 | N   | 700   | N    | >2,000 | N    | --      | --      | --      |
| 180C   | 700     | 100 | N   | 700   | N    | >2,000 | N    | --      | --      | --      |
| 181C   | 700     | 200 | N   | 700   | N    | >2,000 | N    | --      | --      | --      |
| 286C   | 1,000   | 200 | N   | 700   | N    | >2,000 | N    | --      | --      | --      |
| 287C   | 1,000   | 200 | N   | 700   | N    | >2,000 | N    | --      | --      | --      |
| 288C   | 3,000   | 200 | N   | 1,500 | N    | >2,000 | N    | --      | --      | --      |
| 289C   | 3,000   | 200 | N   | 700   | N    | >2,000 | N    | --      | --      | --      |
| 290C   | >10,000 | 100 | N   | 500   | N    | >2,000 | N    | --      | --      | --      |
| 291C   | >10,000 | 100 | N   | 500   | N    | >2,000 | N    | --      | --      | --      |
| 292C   | 2,000   | 50  | N   | N     | N    | >2,000 | N    | --      | --      | --      |
| 293C   | 5,000   | 150 | N   | 1,000 | N    | >2,000 | N    | --      | --      | --      |
| 294C   | 3,000   | 70  | N   | 500   | N    | >2,000 | N    | --      | --      | --      |
| 295C   | 700     | 100 | N   | 1,000 | N    | >2,000 | N    | --      | --      | --      |
| 296C   | 700     | 150 | N   | 1,500 | N    | >2,000 | N    | --      | --      | --      |
| 297C   | 700     | 200 | N   | 1,500 | N    | >2,000 | N    | --      | --      | --      |
| 298C   | 700     | 150 | N   | 1,500 | N    | >2,000 | N    | --      | --      | --      |

TITLE  
cedar mountain seds INPUT ID N M \*\*\*\*\* OPTIONS \*\*\*\*\*  
-cor\_seds- 34 36 1 0 0 2 1 0 0 0

VARIABLE NO. 8 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 9 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 10 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 14 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 15 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 20 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 21 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 24 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 26 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 29 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 33 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.

THE MAX AND MIN U.30103E+00 FOR VARIABLE NO. 36 ARE THE SAME. THEREFORE THIS VARIABLE WILL BE SKIPPED.



TITLE INPUT ID N M \*\*\*\*\* OPTIONS \*\*\*\*\*  
cedar mountain seds -cdr\_seds- 34 36 1 0 0 0 2 1 0 0 0 0

NUMBER OF SELECTED VARIABLES = 22

SELECTED VARIABLE INDICES  
3 4 5 6 7 11 12 13 16 17  
18 19 22 23 25 27 28 30 31 32  
34 35

SELECTED VARIABLE IDENTIFIERS  
S-FE% S-MG% S-CAX S-TI% S-MN S-BA S-CR  
S-CU S-LA S-NI S-PB S-SC S-V S-CO S-ZK  
AA-AS-P AA-ZN-P

SELECTED ROW PAIRS  
1 TC 34

LOWER BOUNDARIES OF THE LOWEST CLASSES  
-0.08400 -0.75000 -0.08400 2.25000 1.25000 -0.08400 0.58300 0.91600  
0.58300 1.58300 0.58300 0.91600

CLASS INTERVALS

0.16667 0.16667 0.16667 0.16667 0.16667 0.16667 0.16667 0.16667  
0.16667 0.16667 0.16667 0.16667 0.16667 0.16667 0.16667 0.16667

0.91600  
1.58300

0.58300  
2.25000

-0.08400  
0.91600

2.25000  
1.25000

1.25000  
2.25000

2.25000  
0.58300

-0.75000  
0.91600

-0.08400  
0.58300

0.16667  
0.16667  
0.16667  
0.16667

0.16667  
0.16667  
0.16667  
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0.16667  
0.16667

cedar mountain seeds

## FREQUENCY TABLE FOR VARIABLE 3 (S-FE%)

| LOG LIMITS | UPPER     | OBS<br>FREQ | CUM<br>FREQ | PERCENT<br>FREQ | PERCENT<br>CUM FREQ | THEOR FREQ<br>(NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
|------------|-----------|-------------|-------------|-----------------|---------------------|-----------------------------|---------------------------------------|
| LCWER -    |           |             |             |                 |                     |                             |                                       |
| N          |           | 0           | 0           | 0.00            | 0.00                |                             |                                       |
| L          |           | 0           | 0           | 0.00            | 0.00                |                             |                                       |
| T          |           | 0           | 0           | 0.00            | 0.00                |                             |                                       |
| -8.400E-02 | 8.267E-02 | 2           | 2           | 5.88            | 5.88                | 0.84                        | 0.84                                  |
| 8.267E-02  | 2.493E-01 | 6           | 8           | 17.65           | 23.53               | 2.64                        | 0.15                                  |
| 2.493E-01  | 4.160E-01 | 14          | 22          | 41.18           | 64.71               | 6.16                        | 0.00                                  |
| 4.160E-01  | 5.827E-01 | 5           | 27          | 14.71           | 79.41               | 9.02                        | 2.74                                  |
| 5.827E-01  | 7.493E-01 | 4           | 31          | 11.76           | 91.18               | 8.31                        | 1.32                                  |
| 7.493E-01  | 9.160E-01 | 2           | 33          | 5.88            | 97.06               | 4.81                        | 0.14                                  |
| 9.160E-01  | 1.683E+00 | 1           | 34          | 2.94            | 100.00              | 1.75                        | 0.04                                  |
| G          |           | 0           | 34          | 0.00            | 100.00              | 0.46                        | 0.63                                  |
| H          |           | 0           | 34          |                 |                     | 0.84                        |                                       |
| B          |           | 0           | 34          |                 |                     |                             |                                       |

TOTALS LESS H AND B 34

HISTOGRAM FOR VARIABLE 3 (S-FE%)  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

9.985E-01 XXXXX  
 1.466E+00 XXXXXXXXXXXXXXXXX  
 2.151E+00 XXXXXXXXXXXXXXXXXXXXXXXXX  
 3.157E+00 XXXXXXXXXXXXXXXXX  
 4.634E+00 XXXXXXXXXXXXXXXXX  
 6.802E+00 XXXXX  
 9.985E+00 XXX

## THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 1.00000E+00  
 MAXIMUM ANTILOG = 1.00000E+01  
 GEOMETRIC MEAN = 2.43528E+00  
 GEOMETRIC DEVIATION = 1.73641E+00  
 VARIANCE OF LOGS = 5.74329E-02

PERCENT TABLE FOR VARIABLE 3 (S-FE%) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
 IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
 THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|------------------------|--------------|-------------------|
| 25.00                  | 2.552864E-01 | 1.800058E+00      |
| 50.00                  | 3.564771E-01 | 2.272360E+00      |
| 75.00                  | 5.326679E-01 | 3.409321E+00      |
| 90.00                  | 7.326683E-01 | 5.403415E+00      |
| 95.00                  | 8.576685E-01 | 7.205573E+00      |

98.00  
99.00

1.000000E+35  
1.000000E+35

1.000000E+35  
1.000000E+35

DATE 11/29/84

DC036 GRAPHICAL ANALYSIS - U S G S STATPAC (02/07/82)

cedar mountain seos

| FREQUENCY TABLE FOR VARIABLE 4 (S-MGZ ) |            |             |             |                 |                     |                             |                                       |  |  |
|---|------------|-------------|-------------|-----------------|---------------------|-----------------------------|---------------------------------------|--|--|
| LOG LIMITS                              |            | OBS<br>FREQ | CUM<br>FREQ | PERCENT<br>FREQ | PERCENT<br>CUM FREQ | THEOR FREQ<br>(NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |  |  |
| LOWER                                   | UPPER      |             |             |                 |                     |                             |                                       |  |  |
| N                                       |            |             |             |                 |                     |                             |                                       |  |  |
| L                                       |            |             |             |                 |                     |                             |                                       |  |  |
| T                                       |            |             |             |                 |                     |                             |                                       |  |  |
| -7.500E-01                              | -5.833E-01 | 0           | 0           | 0.00            | 0.00                | 0.00                        | 0.00                                  |  |  |
| -5.833E-01                              | -4.167E-01 | 0           | 0           | 0.00            | 0.00                | 0.00                        | 0.00                                  |  |  |
| -4.167E-01                              | -2.500E-01 | 0           | 0           | 0.00            | 0.00                | 0.11                        | 713.01                                |  |  |
| -2.500E-01                              | -8.333E-02 | 7           | 8           | 20.59           | 23.53               | 2.21                        | 0.11                                  |  |  |
| -8.333E-02                              | 8.333E-02  | 25          | 33          | 73.53           | 97.06               | 11.13                       | 1.53                                  |  |  |
| 8.333E-02                               | 2.500E-01  | 1           | 34          | 2.94            | 100.00              | 14.82                       | 7.00                                  |  |  |
| G                                       |            |             |             |                 |                     |                             |                                       |  |  |
| H                                       |            |             |             |                 |                     |                             |                                       |  |  |
| B                                       |            |             |             |                 |                     |                             |                                       |  |  |
| T                                       |            |             |             |                 |                     |                             |                                       |  |  |
| TOTALS LESS H AND B                     |            |             |             |                 |                     |                             |                                       |  |  |
| 34                                      |            |             |             |                 |                     |                             |                                       |  |  |

HISTOGRAM FOR VARIABLE 4 (S-MGZ )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS  
2.154E-01 XXX  
3.162E-01  
4.642E-01  
6.813E-01 XXXXXXXXXXXXXXXXXX  
1.000E+00 XX  
1.468E+00 XX

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 2.00000E-01  
MAXIMUM ANTILOG = 1.50000E+00  
GEOMETRIC MEAN = 2.96870E-01  
GEOMETRIC DEVIATION = 1.36815E+00  
VARIANCE OF LOGS = 1.85320E-02

PERCENT TABLE FOR VARIABLE 4 (S-MGZ ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE    | ANTI LOG OF VALUE |
|------------------------|---------------|-------------------|
| 25.00                  | -7.999866E-02 | 8.317663E-01      |
| 50.00                  | -2.333188E-02 | 9.476940E-01      |
| 75.00                  | 3.333490E-02  | 1.079779E+00      |
| 90.00                  | 6.733496E-02  | 1.167710E+00      |
| 95.00                  | 7.866832E-02  | 1.198584E+00      |
| 98.00                  | 1.000000E+35  | 1.000000E+35      |
| 99.00                  | 1.000000E+35  | 1.000000E+35      |

## cedar mountain seds

## FREQUENCY TABLE FOR VARIABLE 5 (S-CAZ )

| LOG LIMITS |            | OBS<br>FREQ | CUM<br>FREQ | PERCENT<br>FREQ | PERCENT<br>CUM FREQ | THEOR FREQ<br>(NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
|------------|------------|-------------|-------------|-----------------|---------------------|-----------------------------|---------------------------------------|
| LOWER      | UPPER      |             |             |                 |                     |                             |                                       |
| N          |            | 0           | 0           | 0.00            | 0.00                |                             |                                       |
| L          |            | 0           | 0           | 0.00            | 0.00                | 0.98                        | 0.98                                  |
| T          |            | 0           | 0           | 0.00            | 0.00                | 3.08                        | 1.40                                  |
| -8.400E-02 | -8.207E-02 | 1           | 1           | 2.94            | 2.94                | 6.95                        | 3.67                                  |
| 8.267E-02  | 2.493E-01  | 12          | 13          | 35.29           | 38.24               | 9.53                        | 0.02                                  |
| 2.493E-01  | 4.160E-01  | 10          | 23          | 29.41           | 67.65               | 7.95                        | 0.48                                  |
| 4.160E-01  | 5.827E-01  | 6           | 29          | 17.65           | 85.29               | 4.02                        | 1.02                                  |
| 5.827E-01  | 7.493E-01  | 2           | 31          | 5.88            | 91.18               | 1.24                        | 0.47                                  |
| 7.493E-01  | 9.160E-01  | 2           | 33          | 5.88            | 97.06               | 0.26                        | 2.13                                  |
| 9.160E-01  | 1.083E+00  | 1           | 34          | 2.94            | 100.00              | 0.98                        | 0.98                                  |
| G          |            | 0           | 34          | 0.00            | 100.00              |                             |                                       |
| H          |            | 0           | 34          |                 |                     |                             |                                       |
| B          |            | 0           | 34          |                 |                     |                             |                                       |

TOTALS LESS H AND B 34

HISTOGRAM FOR VARIABLE 5 (S-CAZ )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

9.985E-01 xxx  
 1.400E+00 xx  
 2.151E+00 xx  
 3.157E+00 xx  
 4.634E+00 xxxxxx  
 6.802E+00 xxxxxx  
 9.985E+00 xxx

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 1.00000E+00  
 MAXIMUM ANTILOG = 1.00000E+01  
 GEOMETRIC MEAN = 2.26530E+00  
 GEOMETRIC DEVIATION = 1.70238E+00  
 VARIANCE OF LOGS = 5.33873E-02

PERCENT TABLE FOR VARIABLE 5 (S-CAZ ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
 IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
 THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|------------------------|--------------|-------------------|
| 25.00                  | 1.868339E-01 | 1.537506E+00      |
| 50.00                  | 3.160008E-01 | 2.070145E+00      |
| 75.00                  | 4.854456E-01 | 3.058057E+00      |
| 90.00                  | 7.160016E-01 | 5.199979E+00      |
| 95.00                  | 8.576685E-01 | 7.205573E+00      |

98.00  
99.00

1.000000E+35  
1.000000E+35

1.000000E+35  
1.000000E+35

cedar mountain seeds

## FREQUENCY TABLE FOR VARIABLE 6 (S-TIX )

| LOG LIMITS | UPPER      | OBS<br>FREQ | CUM<br>FREQ | PERCENT<br>FREQ | PERCENT<br>CUM FREQ | THEOR FREQ<br>(NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
|------------|------------|-------------|-------------|-----------------|---------------------|-----------------------------|---------------------------------------|
| N          |            | 0           | 0           | 0.00            | 0.00                |                             |                                       |
| L          |            | 0           | 0           | 0.00            | 0.00                |                             |                                       |
| T          |            | 0           | 0           | 0.00            | 0.00                |                             |                                       |
| -7.500E-01 | -5.835E-01 | 9           | 9           | 26.47           | 26.47               | 1.51                        | 1.51                                  |
| -5.835E-01 | -4.167E-01 | 20          | 29          | 58.82           | 85.29               | 10.57                       | 0.23                                  |
| -4.167E-01 | -2.500E-01 | 5           | 34          | 14.71           | 100.00              | 16.18                       | 0.90                                  |
| G          |            | 0           | 34          | 0.00            | 100.00              | 5.74                        | 0.10                                  |
| H          |            | 0           | 34          |                 |                     | 1.51                        | 1.51                                  |
| B          |            | 0           | 34          |                 |                     |                             |                                       |

TOTALS LESS H AND B 34

HISTOGRAM FOR VARIABLE 6 (S-TIX )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

2.154E-01 XX  
 5.162E-01 XX  
 4.042E-01 XX

## THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 2.00000E-01  
 MAXIMUM ANTILOG = 5.00000E-01  
 GEOMETRIC MEAN = 2.90492E-01  
 GEOMETRIC DEVIATION = 1.33459E+00  
 VARIANCE OF LOGS = 1.57123E-02

PERCENT TABLE FOR VARIABLE 6 (S-TIX ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
 IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
 THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE    | ANTI LOG OF VALUE |
|------------------------|---------------|-------------------|
| 25.00                  | 1.000000E+35  | 1.000000E+35      |
| 50.00                  | -5.16662E-01  | 3.043223E-01      |
| 75.00                  | -4.458327E-01 | 3.582344E-01      |
| 90.00                  | 1.000000E+35  | 1.000000E+35      |
| 95.00                  | 1.000000E+35  | 1.000000E+35      |
| 98.00                  | 1.000000E+35  | 1.000000E+35      |
| 99.00                  | 1.000000E+35  | 1.000000E+35      |

## cedar mountain sed

## FREQUENCY TABLE FOR VARIABLE 7 (S-MN )

| LOG LIMITS |           | OBS<br>FREQ | CUM<br>FREQ | PERCENT<br>FREQ | PERCENT<br>CUM FREQ | THEOR FREQ<br>(NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
|------------|-----------|-------------|-------------|-----------------|---------------------|-----------------------------|---------------------------------------|
| LOWER      | UPPER     |             |             |                 |                     |                             |                                       |
| N          |           | 0           | 0           | 0.00            | 0.00                |                             |                                       |
| L          |           | 0           | 0           | 0.00            | 0.00                |                             |                                       |
| T          |           | 0           | 0           | 0.00            | 0.00                |                             |                                       |
| 2.250E+00  | 2.417E+00 | 1           | 1           | 2.94            | 2.94                | 0.15                        | 0.15                                  |
| 2.417E+00  | 2.583E+00 | 5           | 6           | 14.71           | 17.65               | 1.17                        | 0.03                                  |
| 2.583E+00  | 2.750E+00 | 11          | 17          | 32.35           | 50.00               | 4.85                        | 0.00                                  |
| 2.750E+00  | 2.917E+00 | 12          | 29          | 35.29           | 85.29               | 10.07                       | 0.09                                  |
| 2.917E+00  | 3.083E+00 | 3           | 32          | 8.82            | 94.12               | 10.53                       | 0.20                                  |
| 3.083E+00  | 3.250E+00 | 2           | 34          | 5.88            | 100.00              | 5.55                        | 1.17                                  |
| G          |           | 0           | 34          | 0.00            | 100.00              | 1.68                        | 0.06                                  |
| H          |           | 0           | 34          |                 |                     | 0.15                        |                                       |
| B          |           | 0           | 34          |                 |                     |                             |                                       |

TOTALS LESS H AND B

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HISTOGRAM FOR VARIABLE 7 (S-MN )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

2.154E+02 XXX  
 3.162E+02 XXXXXXXXXXXXXXXX  
 4.642E+02 XXXXXXXXXXXXXXXX  
 6.813E+02 XXXXXXXXXXXXXXXX  
 1.000E+03 XXXXXXXXX  
 1.466E+03 XXXXXX

## THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 2.00000E+02  
 MAXIMUM ANTILOG = 1.50000E+03  
 GEOMETRIC MEAN = 5.76558E+02  
 GEOMETRIC DEVIATION = 1.56754E+00  
 VARIANCE OF LOGS = 3.81108E-02

PERCENT TABLE FOR VARIABLE 7 (S-MN ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
 IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
 THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|------------------------|--------------|-------------------|
| 25.00                  | 2.621213E+00 | 4.180352E+02      |
| 50.00                  | 2.750001E+00 | 5.623426E+02      |
| 75.00                  | 2.868057E+00 | 7.380007E+02      |
| 90.00                  | 3.005557E+00 | 1.012878E+03      |
| 95.00                  | 1.000000E+35 | 1.000000E+35      |
| 98.00                  | 1.000000E+35 | 1.000000E+35      |
| 99.00                  | 1.000000E+35 | 1.000000E+35      |



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| FREQUENCY TABLE FOR VARIABLE 11 (S-B ) |           |      |          |         |          |               |                                       |            |  |
|--|-----------|------|----------|---------|----------|---------------|---------------------------------------|------------|--|
| LOG LIMITS                             |           | OBS  |          | PERCENT |          | PERCENT       |                                       | THEOR FREQ |  |
| LOWER                                  | UPPER     | FREQ | CUM FREQ | FREQ    | CUM FREQ | (NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |            |  |
| N                                      |           | 0    | 0        | 0.00    | 0.00     |               |                                       |            |  |
| L                                      |           | 0    | 0        | 0.00    | 0.00     |               |                                       |            |  |
| T                                      |           | 0    | 0        | 0.00    | 0.00     |               |                                       |            |  |
| 1.250E+00                              | 1.417E+00 | 2    | 2        | 5.88    | 5.88     | 0.02          | 0.02                                  |            |  |
| 1.417E+00                              | 1.583E+00 | 2    | 4        | 5.88    | 11.76    | 0.00          | 0.00                                  |            |  |
| 1.583E+00                              | 1.750E+00 | 20   | 24       | 58.62   | 70.59    | 14.92         | 2.46                                  |            |  |
| 1.750E+00                              | 1.917E+00 | 10   | 34       | 29.41   | 100.00   | 12.70         | 1.73                                  |            |  |
| G                                      |           | 0    | 34       | 0.00    | 100.00   | 0.02          | 0.57                                  |            |  |
| H                                      |           | 0    | 34       |         |          |               | 0.02                                  |            |  |
| B                                      |           | 0    | 34       |         |          |               |                                       |            |  |

TOTALS LESS H AND B 34

HISTOGRAM FOR VARIABLE 11 (S-B )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS  
2.154E+01 XXXXX  
3.102E+01 XXXXX  
4.642E+01 XX  
6.813E+01 XX

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 2.00000E+01  
MAXIMUM ANTILOG = 7.00000E+01  
GEOMETRIC MEAN = 5.07564E+01  
GEOMETRIC DEVIATION = 1.37362E+00  
VARIANCE OF LOGS = 1.90071E-02

PERCENT TABLE FOR VARIABLE 11 (S-B ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|---------------------|--------------|-------------------|
| 25.00               | 1.620834E+00 | 4.176708E+01      |
| 50.00               | 1.691666E+00 | 4.916630E+01      |
| 75.00               | 1.000000E+35 | 1.000000E+35      |
| 90.00               | 1.000000E+35 | 1.000000E+35      |
| 95.00               | 1.000000E+35 | 1.000000E+35      |
| 98.00               | 1.000000E+35 | 1.000000E+35      |
| 99.00               | 1.000000E+35 | 1.000000E+35      |

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FREQUENCY TABLE FOR VARIABLE 12 (S-BA )

| LOG LIMITS |           | OBS<br>FREQ | CUM<br>FREQ | PERCENT<br>FREQ | PERCENT<br>CUM FREQ | THEOR FREQ<br>(NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
|------------|-----------|-------------|-------------|-----------------|---------------------|-----------------------------|---------------------------------------|
| LOWER      | UPPER     |             |             |                 |                     |                             |                                       |
| N          |           | 0           | 0           | 0.00            | 0.00                |                             | 0.01                                  |
| L          |           | 0           | 0           | 0.00            | 0.00                |                             | 2.64                                  |
| T          |           | 0           | 0           | 0.00            | 0.00                | 0.01                        | 2.53                                  |
| -          | 2.250E+00 | 1           | 1           | 2.94            | 2.94                | 0.23                        | 2.71                                  |
| -          | 2.417E+00 | 0           | 1           | 0.00            | 2.94                | 13.55                       | 0.48                                  |
| -          | 2.583E+00 | 0           | 1           | 0.00            | 2.94                | 6.64                        | 0.06                                  |
| -          | 2.750E+00 | 15          | 16          | 44.12           | 47.06               | 1.22                        | 0.04                                  |
| -          | 2.917E+00 | 11          | 27          | 32.35           | 79.41               | 0.61                        |                                       |
| -          | 3.083E+00 | 6           | 33          | 17.65           | 97.06               |                             |                                       |
| -          | 3.250E+00 | 1           | 34          | 2.94            | 100.00              |                             |                                       |
| G          |           | 0           | 34          | 0.00            | 100.00              |                             |                                       |
| H          |           | 0           | 34          |                 |                     |                             |                                       |
| B          |           | 0           | 34          |                 |                     |                             |                                       |

TOTALS LESS H AND B 34

HISTOGRAM FOR VARIABLE 12 (S-EA )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

|           |     |                              |
|-----------|-----|------------------------------|
| 2.154E+02 | XXX | XXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| 3.162E+02 |     | XXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| 4.642E+02 |     | XXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| 6.813E+02 |     | XXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| 1.000E+03 | XXX | XXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| 1.466E+03 | XXX | XXXXXXXXXXXXXXXXXXXXXXXXXXXX |

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

|                     |   |            |
|---------------------|---|------------|
| MINIMUM ANTILOG     | = | 2.0000E+02 |
| MAXIMUM ANTILOG     | = | 1.5000E+03 |
| GEOMETRIC MEAN      | = | 6.3343E+02 |
| GEOMETRIC DEVIATION | = | 1.4330E+00 |
| VARIANCE OF LOGS    | = | 2.4417E-02 |

PERCENT TABLE FOR VARIABLE 12 (S-DATA) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE, IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION, THE DATA VALUE ON THE TABLE IS GIVEN AS 0.99999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|------------------------|--------------|-------------------|
| 25.00                  | 2.583334E+00 | 3.831193E+02      |
| 50.00                  | 2.765153E+00 | 5.823077E+02      |
| 75.00                  | 2.893941E+00 | 7.832277E+02      |
| 90.00                  | 3.016608E+00 | 1.039126E+03      |
| 95.00                  | 3.063891E+00 | 1.158485E+03      |
| 98.00                  | 1.000000E+35 | 1.000000E+35      |
| 99.00                  | 1.000000E+35 | 1.000000E+35      |

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## FREQUENCY TABLE FOR VARIABLE 13 (S-BE )

| LOG LIMITS | LOWER      | UPPER | OBS<br>FREQ | CUM<br>FREQ | PERCENT<br>FREQ | PERCENT<br>CUM FREQ | THEOR FREQ<br>(NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
|------------|------------|-------|-------------|-------------|-----------------|---------------------|-----------------------------|---------------------------------------|
| N          |            |       | 0           | 0           | 0.00            | 0.00                |                             |                                       |
| L          |            |       | 0           | 0           | 0.00            | 0.00                |                             |                                       |
| T          |            |       | 0           | 0           | 0.00            | 0.00                |                             |                                       |
| -8.400E-02 | -8.267E-02 |       | 2           | 2           | 5.88            | 5.88                | 0.03                        | 0.03                                  |
| 8.267E-02  | 2.495E-01  |       | 4           | 6           | 11.76           | 17.65               | 1.35                        | 0.31                                  |
| 2.495E-01  | 4.160E-01  |       | 24          | 30          | 70.59           | 88.24               | 10.58                       | 4.09                                  |
| 4.160E-01  | 5.827E-01  |       | 3           | 33          | 8.82            | 97.06               | 16.49                       | 3.42                                  |
| 5.827E-01  | 7.495E-01  |       | 1           | 34          | 2.94            | 100.00              | 5.22                        | 0.94                                  |
| G          |            |       | 0           | 34          | 0.00            | 100.00              | 0.32                        | 1.41                                  |
| H          |            |       | 0           | 34          | 0.00            | 100.00              | 0.03                        | 0.03                                  |
| B          |            |       | 0           | 34          |                 |                     |                             |                                       |

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HISTOGRAM FOR VARIABLE 13 (S-BE )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

9.985E-01 XXXXX  
 1.460E+00 XXXXXXXXXXXXX  
 2.151E+00 XX  
 3.157E+00 XXXXXXXXX  
 4.634E+00 XXX

## THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 1.00000E+00  
 MAXIMUM ANTILOG = 5.00000E+00  
 GEOMETRIC MEAN = 1.97636E+00  
 GEOMETRIC DEVIATION = 1.32547E+00  
 VARIANCE OF LOGS = 1.49743E-02

PERCENT TABLE FOR VARIABLE 13 (S-BE ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
 IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
 THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|------------------------|--------------|-------------------|
| 25.00                  | 2.666951E-01 | 1.847971E+00      |
| 50.00                  | 3.257230E-01 | 2.117011E+00      |
| 75.00                  | 3.847509E-01 | 2.425219E+00      |
| 90.00                  | 4.493344E-01 | 2.814067E+00      |
| 95.00                  | 5.437790E-01 | 3.497672E+00      |
| 98.00                  | 1.000000E+35 | 1.000000E+35      |
| 99.00                  | 1.000000E+35 | 1.000000E+35      |

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## FREQUENCY TABLE FOR VARIABLE 16 (S-CO )

| LOG LIMITS |           | OBS  |          | PERCENT |          | THEOR FREQ    |                                       |
|------------|-----------|------|----------|---------|----------|---------------|---------------------------------------|
| LOWER      | UPPER     | FREQ | CUM FREQ | FREQ    | CUM FREQ | (NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
| N          |           | 0    | 0        | 0.00    | 0.00     |               |                                       |
| L          |           | 0    | 0        | 0.00    | 0.00     |               |                                       |
| T          |           | 0    | 0        | 0.00    | 0.00     |               |                                       |
| 5.830E-01  | 7.497E-01 | 8    | 8        | 23.53   | 23.53    | 0.43          | 0.43                                  |
| 7.497E-01  | 9.163E-01 | 0    | 8        | 0.00    | 23.53    | 3.14          | 7.52                                  |
| 9.163E-01  | 1.083E+00 | 21   | 29       | 61.76   | 23.53    | 9.79          | 9.79                                  |
| 1.083E+00  | 1.250E+00 | 3    | 32       | 8.82    | 65.29    | 12.52         | 5.75                                  |
| 1.250E+00  | 1.416E+00 | 2    | 34       | 5.88    | 94.12    | 6.58          | 1.95                                  |
| G          |           | 0    | 34       | 0.00    | 100.00   | 1.54          | 0.14                                  |
| H          |           | 0    | 34       | 0.00    | 100.00   | 0.43          | 0.43                                  |
| B          |           | 0    | 34       |         |          |               |                                       |

TOTALS LESS H AND B 34

## HISTOGRAM FOR VARIABLE 16 (S-CO )

MIDPOINTS ARE EXPRESSED AS ANTILOGS

4.638E+00 XXXXXXXXXXXXXXXXXXXXXXXX  
 6.808E+00  
 9.992E+00 XXXXXXXXXXXXXXXXXXXXXXXX  
 1.467E+01 XXXXXXXX  
 2.153E+01 XXXXXX

## THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 5.00000E+00  
 MAXIMUM ANTILOG = 2.00000E+01  
 GEOMETRIC MEAN = 9.17095E+00  
 GEOMETRIC DEVIATION = 1.47834E+00  
 VARIANCE OF LOGS = 2.88238E-02

PERCENT TABLE FOR VARIABLE 16 (S-CO ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
 IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
 THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|------------------------|--------------|-------------------|
| 25.00                  | 7.576035E-01 | 5.722733E+00      |
| 50.00                  | 8.925244E-01 | 7.807724E+00      |
| 75.00                  | 1.027445E+00 | 1.065235E+01      |
| 90.00                  | 1.171890E+00 | 1.485560E+01      |
| 95.00                  | 1.000000E+01 | 1.000000E+01      |
| 98.00                  | 1.000000E+01 | 1.000000E+01      |
| 99.00                  | 1.000000E+01 | 1.000000E+01      |

## cedar mountain seds

## FREQUENCY TABLE FOR VARIABLE 17 (S-CR )

| LOG LIMITS<br>LOWER - UPPER | OBS<br>FREQ | CUM<br>FREQ | PERCENT<br>FREQ | PERCENT<br>CUM FREQ | THEOR FREQ<br>(NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
|-----------------------------|-------------|-------------|-----------------|---------------------|-----------------------------|---------------------------------------|
|                             |             |             |                 |                     |                             |                                       |
| N                           | 0           | 0           | 0.00            | 0.00                | 0.45                        | 0.45                                  |
| L                           | 3           | 3           | 8.82            | 8.82                | 1.51                        | 0.17                                  |
| T                           | 0           | 3           | 0.00            | 8.82                | 4.00                        | 4.00                                  |
| 9.160E+01 - 1.083E+00       | 1           | 4           | 2.94            | 11.76               | 7.14                        | 0.49                                  |
| 1.083E+00 - 1.249E+00       | 0           | 4           | 0.00            | 11.76               | 8.55                        | 1.47                                  |
| 1.249E+00 - 1.416E+00       | 9           | 13          | 26.47           | 38.24               | 6.88                        | 5.44                                  |
| 1.416E+00 - 1.583E+00       | 5           | 18          | 14.71           | 52.94               | 5.46                        | 1.11                                  |
| 1.583E+00 - 1.749E+00       | 13          | 31          | 38.24           | 100.00              | 0.00                        | 0.00                                  |
| 1.749E+00 - 1.916E+00       | 3           | 34          | 8.82            | 100.00              |                             |                                       |
| G                           | 0           | 34          | 0.00            |                     |                             |                                       |
| H                           | 0           | 34          |                 |                     |                             |                                       |
| B                           | 0           | 34          |                 |                     |                             |                                       |

TOTALS LESS H AND B 34

HISTOGRAM FOR VARIABLE 17 (S-CR )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

9.985E+00 XXX  
 1.460E+01  
 2.151E+01 XXXXXXXXXXXXXXXXXXXXXXXX  
 3.157E+01 XXXXXXXXXXXXXXXX  
 4.634E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 6.802E+01 XXXXXXXX

## THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 1.00000E+01  
 MAXIMUM ANTILOG = 7.00000E+01  
 GEOMETRIC MEAN = 3.46139E+01  
 GEOMETRIC DEVIATION = 1.65410E+00  
 VARIANCE OF LOGS = 4.77698E-02

PERCENT TABLE FOR VARIABLE 17 (S-CR ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
 IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
 THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|------------------------|--------------|-------------------|
| 25.00                  | 1.249334E+00 | 1.775554E+01      |
| 50.00                  | 1.549335E+00 | 3.542702E+01      |
| 75.00                  | 1.678822E+00 | 4.773336E+01      |
| 90.00                  | 1.744207E+00 | 5.548899E+01      |
| 95.00                  | 1.000000E+35 | 1.000000E+35      |
| 98.00                  | 1.000000E+35 | 1.000000E+35      |
| 99.00                  | 1.000000E+35 | 1.000000E+35      |

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cedar mountain sed

FREQUENCY TABLE FOR VARIABLE 18 (S-CU )

| LOG LIMITS | UPPER     | OBS FREQ | CUM FREQ | PERCENT FREQ | PERCENT CUM FREQ | THEOR FREQ (NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
|------------|-----------|----------|----------|--------------|------------------|--------------------------|---------------------------------------|
| LOWER      |           |          |          |              |                  |                          |                                       |
| N          |           | 0        | 0        | 0.00         | 0.00             | 0.01                     | 0.01                                  |
| L          |           | 0        | 0        | 0.00         | 0.00             | 0.01                     | 0.01                                  |
| T          |           | 0        | 0        | 0.00         | 0.00             | 0.01                     | 0.01                                  |
| 5.830E-01  | 7.497E-01 | 1        | 1        | 2.94         | 2.94             | 0.11                     | 6.88                                  |
| 7.497E-01  | 9.163E-01 | 0        | 1        | 0.00         | 2.94             | 1.02                     | 1.02                                  |
| 9.163E-01  | 1.083E+00 | 5        | 6        | 14.71        | 17.65            | 4.51                     | 0.05                                  |
| 1.083E+00  | 1.250E+00 | 7        | 13       | 20.59        | 38.24            | 9.90                     | 0.85                                  |
| 1.250E+00  | 1.416E+00 | 10       | 23       | 29.41        | 67.65            | 10.79                    | 0.06                                  |
| 1.416E+00  | 1.583E+00 | 11       | 34       | 32.35        | 100.00           | 7.65                     | 1.47                                  |
| G          |           | 0        | 34       | 0.00         | 100.00           | 0.01                     | 0.01                                  |
| H          |           | 0        | 34       |              |                  |                          |                                       |
| B          |           | 0        | 34       |              |                  |                          |                                       |

TOTALS LESS H AND B 34

HISTOGRAM FOR VARIABLE 18 (S-CU )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

4.638E+00 XXX  
6.808E+00  
9.592E+00 XXXXXXXXXXXXXXXX  
1.467E+01 XXXXXXXXXXXXXXXXXXXX  
2.153E+01 XXXXXXXXXXXXXXXXXXXX  
3.160E+01 XXXXXXXXXXXXXXXXXXXX

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 5.0000E+00  
MAXIMUM ANTILOG = 3.0000E+01  
GEOMETRIC MEAN = 1.8633E+01  
GEOMETRIC DEVIATION = 1.5608E+00  
VARIANCE OF LOGS = 3.7388E-02

PERCENT TABLE FOR VARIABLE 18 (S-CU ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|---------------------|--------------|-------------------|
| 25.00               | 1.142525E+00 | 1.388433E+01      |
| 50.00               | 1.316335E+00 | 2.071738E+01      |
| 75.00               | 1.000000E+35 | 1.000000E+35      |
| 90.00               | 1.000000E+35 | 1.000000E+35      |
| 95.00               | 1.000000E+35 | 1.000000E+35      |
| 98.00               | 1.000000E+35 | 1.000000E+35      |
| 99.00               | 1.000000E+35 | 1.000000E+35      |

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## cedar mountain seds

FREQUENCY TABLE FOR VARIABLE 19 (S-LA )

| LOG LIMITS |           | OBS<br>FREQ | CUM<br>FREQ | PERCENT<br>FREQ | PERCENT<br>CUM FREQ | THEOR FREQ<br>(NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
|------------|-----------|-------------|-------------|-----------------|---------------------|-----------------------------|---------------------------------------|
| LOWER      | UPPER     |             |             |                 |                     |                             |                                       |
|            |           | N           |             |                 |                     |                             |                                       |
|            |           | L           | 0           | 0.00            | 0.00                |                             |                                       |
|            |           | T           | 0           | 0.00            | 0.00                |                             |                                       |
| 1.583E+00  | 1.750E+00 | 16          | 16          | 47.06           | 47.06               | 4.12                        | 4.12                                  |
| 1.750E+00  | 1.916E+00 | 6           | 22          | 17.65           | 64.71               | 6.15                        | 15.77                                 |
| 1.916E+00  | 2.083E+00 | 8           | 30          | 23.53           | 88.24               | 8.52                        | 0.75                                  |
| 2.083E+00  | 2.250E+00 | 2           | 32          | 5.88            | 94.12               | 7.84                        | 0.00                                  |
| 2.250E+00  | 2.416E+00 | 0           | 32          | 0.00            | 94.12               | 1.63                        | 1.63                                  |
| 2.416E+00  | 2.583E+00 | 0           | 32          | 0.00            | 94.12               | 1.95                        | 1.95                                  |
| 2.583E+00  | 2.750E+00 | 2           | 34          | 5.88            | 100.00              | 0.52                        | 0.52                                  |
|            |           | U           | 34          | 0.00            | 100.00              | 0.11                        | 33.93                                 |
|            |           | C           | 34          | 0.00            | 100.00              | 4.12                        | 4.12                                  |
|            |           | H           | 34          |                 |                     |                             |                                       |
|            |           | B           | 34          |                 |                     |                             |                                       |

TOTALS LESS H AND B 34

HISTOGRAM FOR VARIABLE 19 (S-LA )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

MIDPOINTS ARE EXPRESSED AS ANTILOGS

[illegible]

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

|                     |   |             |
|---------------------|---|-------------|
| MINIMUM ANTLOG      | = | 5.00000E+01 |
| MAXIMUM ANTLOG      | = | 5.00000E+02 |
| GEOMETRIC MEAN      | = | 7.62917E+01 |
| GEOMETRIC DEVIATION | = | 1.80320E+00 |
| VARIANCE OF LOGS    | = | 6.5583E-02  |

PERCENT TABLE FOR VARIABLE 19 (S-LA ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE, IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION, THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|---------------------|--------------|-------------------|
| 25.00               | 1.000000E+35 | 1.000000E+35      |
| 50.00               | 1.77445E+00  | 5.980268E+01      |
| 75.00               | 1.569231E+00 | 9.755529E+01      |
| 90.00               | 2.133001E+00 | 1.358317E+02      |
| 95.00               | 1.000000E+35 | 1.000000E+35      |

98.00  
99.00

1.000000E+35  
1.000000E+35

1.000000E+35  
1.000000E+35



cedar mountain seds

## FREQUENCY TABLE FOR VARIABLE 22 (S-NI )

| LOG LIMITS |           | OBS  |      | CUM  |        | PERCENT |        | THEOR FREQ    |       | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |      |
|------------|-----------|------|------|------|--------|---------|--------|---------------|-------|---------------------------------------|------|
| LOWER      | UPPER     | FREQ | FREQ | FREQ | FREQ   | FREQ    | FREQ   | (NORMAL DIST) |       |                                       |      |
| N          |           |      |      |      |        |         |        |               |       |                                       |      |
| L          |           |      |      |      |        |         |        |               |       |                                       |      |
| T          |           |      |      |      |        |         |        |               |       |                                       |      |
| 5.830E-01  | 7.497E-01 | 0    | 0    | 0    | 0.00   | 0.00    | 0.00   | 0.02          | 0.02  | 0.02                                  | 0.02 |
| 7.497E-01  | 9.163E-01 | 0    | 0    | 0    | 0.00   | 0.00    | 0.00   | 0.45          | 0.45  | 5.41                                  | 5.41 |
| 9.163E-01  | 1.083E+00 | 2    | 2    | 2    | 0.00   | 5.88    | 5.88   | 3.57          | 3.57  | 3.57                                  | 3.57 |
| 1.083E+00  | 1.250E+00 | 14   | 16   | 16   | 41.18  | 47.06   | 47.06  | 10.84         | 10.84 | 0.92                                  | 0.92 |
| 1.250E+00  | 1.416E+00 | 9    | 25   | 25   | 26.47  | 73.53   | 73.53  | 12.56         | 12.56 | 1.01                                  | 1.01 |
| 1.416E+00  |           | 0    | 34   | 34   | 100.00 | 100.00  | 100.00 | 6.57          | 6.57  | 0.90                                  | 0.90 |
| G          |           | 0    | 34   | 34   | 0.00   | 100.00  | 100.00 | 0.02          | 0.02  | 0.02                                  | 0.02 |
| H          |           | 0    | 34   | 34   |        |         |        |               |       |                                       |      |
| B          |           | 0    | 34   | 34   |        |         |        |               |       |                                       |      |

TOTALS LESS H AND B 34

HISTOGRAM FOR VARIABLE 22 (S-NI )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

4.638E+00 XXXXX  
6.808E+00  
9.992E+00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
1.467E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
2.153E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 5.00000E+00  
MAXIMUM ANTILOG = 2.00000E+01  
GEOMETRIC MEAN = 1.28407E+01  
GEOMETRIC DEVIATION = 1.45490E+00  
VARIANCE OF LOGS = 2.65142E-02

PERCENT TABLE FOR VARIABLE 22 (S-NI ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|------------------------|--------------|-------------------|
| 25.00                  | 9.044292E-01 | 8.024708E+00      |
| 50.00                  | 1.101520E+00 | 1.263338E+01      |
| 75.00                  | 1.600000E+35 | 1.000000E+35      |
| 90.00                  | 1.000000E+35 | 1.000000E+35      |
| 95.00                  | 1.000000E+35 | 1.000000E+35      |
| 98.00                  | 1.000000E+35 | 1.000000E+35      |
| 99.00                  | 1.000000E+35 | 1.000000E+35      |

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## cedar mountain seeds

## FREQUENCY TABLE FOR VARIABLE 23 (S-PB )

| LOG LIMITS |           | OBS  |      | CUM  |       | PERCENT |       | THEOR FREQ    |  | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |      |
|------------|-----------|------|------|------|-------|---------|-------|---------------|--|---------------------------------------|------|
| LOWER      | UPPER     | FREQ | FREQ | FREQ | FREQ  | FREQ    | FREQ  | (NORMAL DIST) |  |                                       |      |
| N          |           | 0    | 0    | 0    | 0     | 0.00    | 0.00  |               |  |                                       |      |
| L          |           | 3    | 3    | 3    | 3     | 8.82    | 8.82  |               |  |                                       |      |
| T          |           | 0    | 3    | 3    | 3     | 0.00    | 8.82  |               |  |                                       |      |
| 9.16CE-01  | 1.083E+00 | 12   | 15   | 15   | 35.29 | 44.12   | 2.42  |               |  | 2.42                                  | 2.42 |
| 1.083E+00  | 1.249E+00 | 4    | 19   | 19   | 11.76 | 55.88   | 8.24  |               |  | 1.72                                  | 1.72 |
| 1.249E+00  | 1.416E+00 | 14   | 33   | 33   | 41.18 | 97.06   | 12.79 |               |  | 6.04                                  | 6.04 |
| 1.416E+00  | 1.583E+00 | 0    | 33   | 33   | 0.00  | 97.06   | 8.17  |               |  | 4.16                                  | 4.16 |
| 1.583E+00  | 1.749E+00 | 1    | 34   | 34   | 2.94  | 100.00  | 2.14  |               |  | 2.14                                  | 2.14 |
| G          |           | 0    | 34   | 34   | 0.00  | 100.00  | 0.24  |               |  | 2.43                                  | 2.43 |
| H          |           | 0    | 34   | 34   | 0.00  | 100.00  | 0.00  |               |  | 0.00                                  | 0.00 |
| B          |           | 0    | 34   | 34   |       |         |       |               |  |                                       |      |

TOTALS LESS H AND B 34

## HISTOGRAM FOR VARIABLE 23 (S-PB )

MIDPOINTS ARE EXPRESSED AS ANTILOGS

9.985E+00 XX  
 1.466E+01 XXXXXXXXXXXXXXXX  
 2.151E+01 XX  
 3.157E+01  
 4.634E+01 XXX

## THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 1.00000E+01  
 MAXIMUM ANTILOG = 5.00000E+01  
 GEOMETRIC MEAN = 1.51781E+01  
 GEOMETRIC DEVIATION = 1.47785E+00  
 VARIANCE OF LOGS = 2.87740E-02

PERCENT TABLE FOR VARIABLE 23 (S-PB ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
 IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
 THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|------------------------|--------------|-------------------|
| 25.00                  | 1.000000E+35 | 1.000000E+35      |
| 50.00                  | 1.166001E+00 | 1.465550E+01      |
| 75.00                  | 1.326715E+00 | 2.121852E+01      |
| 90.00                  | 1.387430E+00 | 2.440223E+01      |
| 95.00                  | 1.407688E+00 | 2.556829E+01      |
| 98.00                  | 1.000000E+35 | 1.000000E+35      |
| 99.00                  | 1.000000E+35 | 1.000000E+35      |

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## cedar mountain seeds

## FREQUENCY TABLE FOR VARIABLE 25 (S-SC )

| LOG LIMITS |           | OBS<br>FREQ | CUM<br>FREQ | PERCENT<br>FREQ | PERCENT<br>CUM FREQ | THEOR FREQ<br>(NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
|------------|-----------|-------------|-------------|-----------------|---------------------|-----------------------------|---------------------------------------|
| LOWER      | UPPER     |             |             |                 |                     |                             |                                       |
| N          |           | 0           | 0           | 0.00            | 0.00                |                             |                                       |
| L          |           | 0           | 0           | 0.00            | 0.00                |                             |                                       |
| T          |           | 0           | 0           | 0.00            | 0.00                |                             |                                       |
| 5.830E-01  | 7.497E-01 | 6           | 6           | 17.65           | 17.65               | 0.16                        | 0.16                                  |
| 7.497E-01  | 9.163E-01 | 1           | 7           | 2.94            | 20.59               | 2.34                        | 5.72                                  |
| 9.163E-01  | 1.083E+00 | 25          | 32          | 73.53           | 94.12               | 10.48                       | 8.57                                  |
| 1.083E+00  | 1.250E+00 | 0           | 32          | 0.00            | 94.12               | 14.28                       | 8.05                                  |
| 1.250E+00  | 1.416E+00 | 2           | 34          | 5.88            | 100.00              | 5.96                        | 5.96                                  |
| G          |           | 0           | 34          | 0.00            | 100.00              | 0.78                        | 1.91                                  |
| H          |           | 0           | 34          | 0.00            | 100.00              | 0.16                        | 0.16                                  |
| B          |           | 0           | 34          |                 |                     |                             |                                       |

TOTALS LESS H AND B 34

HISTOGRAM FOR VARIABLE 25 (S-SC )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

4.636E+00 XXXXXXXXXXXXXXXXXX  
 6.808E+00 XXX  
 9.992E+00 XX  
 1.407E+01  
 2.153E+01 XXXXXX

## THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 5.00000E+00  
 MAXIMUM ANTILOG = 2.00000E+01  
 GEOMETRIC MEAN = 9.12071E+00  
 GEOMETRIC DEVIATION = 1.39664E+00  
 VARIANCE OF LOGS = 2.10492E-02

PERCENT TABLE FOR VARIABLE 25 (S-SC ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
 IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
 THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|------------------------|--------------|-------------------|
| 25.00                  | 9.263340E-01 | 8.439836E+00      |
| 50.00                  | 9.830008E-01 | 9.616140E+00      |
| 75.00                  | 1.039668E+00 | 1.095639E+01      |
| 90.00                  | 1.073668E+00 | 1.184862E+01      |
| 95.00                  | 1.000000E+00 | 1.000000E+01      |
| 98.00                  | 1.000000E+00 | 1.000000E+01      |
| 99.00                  | 1.000000E+00 | 1.000000E+01      |

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cedar mountain seeds

| FREQUENCY TABLE FOR VARIABLE 27 (S-SR ) |           |             |             |                 |                     |                             |                                       |      |  |
|---|-----------|-------------|-------------|-----------------|---------------------|-----------------------------|---------------------------------------|------|--|
| LOG LIMITS                              |           | OBS<br>FREQ | CUM<br>FREQ | PERCENT<br>FREQ | PERCENT<br>CUM FREQ | THEOR FREQ<br>(NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |      |  |
| LOWER                                   | UPPER     |             |             |                 |                     |                             |                                       |      |  |
| N                                       |           | 1           | 1           | 2.94            | 2.94                |                             |                                       |      |  |
| L                                       |           | 0           | 1           | 0.00            | 2.94                |                             |                                       |      |  |
| T                                       |           | 0           | 1           | 0.00            | 2.94                |                             |                                       |      |  |
| 2.250E+00                               | 2.417E+00 | 11          | 12          | 32.35           | 35.29               | 3.63                        |                                       | 3.63 |  |
| 2.417E+00                               | 2.583E+00 | 19          | 31          | 55.88           | 91.18               | 11.95                       |                                       | 0.08 |  |
| 2.583E+00                               | 2.750E+00 | 2           | 33          | 5.88            | 97.06               | 13.09                       |                                       | 2.67 |  |
| 2.750E+00                               | 2.917E+00 | 1           | 34          | 2.94            | 100.00              | 4.60                        |                                       | 1.47 |  |
| G                                       |           | 0           | 34          | 0.00            | 100.00              | 0.53                        |                                       | 0.42 |  |
| H                                       |           | 0           | 34          | 0.00            | 100.00              | 0.00                        |                                       | 0.00 |  |
| B                                       |           | 0           | 34          | 0.00            | 100.00              | 0.00                        |                                       | 0.00 |  |

TOTALS LESS H AND B 34

HISTOGRAM FOR VARIABLE 27 (S-SR )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

2.154E+02 XX  
3.162E+02 XX  
4.642E+02 XXXXX  
6.813E+02 XXX

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 2.00000E+02  
MAXIMUM ANTILOG = 7.00000E+02  
GEOMETRIC MEAN = 2.7345E+02  
GEOMETRIC DEVIATION = 1.34737E+00  
VARIANCE OF LOGS = 1.67670E-02

PERCENT TABLE FOR VARIABLE 27 (S-SR ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|------------------------|--------------|-------------------|
| 25.00                  | 1.000000E+35 | 1.000000E+35      |
| 50.00                  | 2.460527E+00 | 2.887532E+02      |
| 75.00                  | 2.535088E+00 | 3.428375E+02      |
| 90.00                  | 2.579825E+00 | 3.800364E+02      |
| 95.00                  | 2.691668E+00 | 4.916630E+02      |
| 98.00                  | 1.000000E+35 | 1.000000E+35      |
| 99.00                  | 1.000000E+35 | 1.000000E+35      |

cedar mountain sed

FREQUENCY TABLE FOR VARIABLE 28 (S-V )

| LOG LIMITS |           | OBS<br>FREQ | CUM<br>FREQ | PERCENT<br>FREQ | PERCENT<br>CUM FREQ | THEOR FREQ<br>(NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
|------------|-----------|-------------|-------------|-----------------|---------------------|-----------------------------|---------------------------------------|
| LOWER      | UPPER     |             |             |                 |                     |                             |                                       |
|            |           | N           | 0           | 0.00            | 0.00                | 0.03                        | 0.03                                  |
|            |           | L           | 0           | 0.00            | 0.00                | 0.25                        | 2.25                                  |
|            |           | T           | 0           | 0.00            | 0.00                | 1.40                        | 1.40                                  |
| 1.250E+00  | 1.417E+00 | 1           | 1           | 2.94            | 2.94                | 4.58                        | 4.58                                  |
| 1.417E+00  | 1.583E+00 | 0           | 1           | 0.00            | 2.94                | 8.73                        | 9.85                                  |
| 1.583E+00  | 1.750E+00 | 0           | 1           | 0.00            | 55.88               | 9.71                        | 0.01                                  |
| 1.750E+00  | 1.917E+00 | 18          | 19          | 52.94           | 85.29               | 6.31                        | 4.47                                  |
| 1.917E+00  | 2.083E+00 | 10          | 29          | 29.41           | 88.24               | 2.39                        | 0.15                                  |
| 2.083E+00  | 2.250E+00 | 1           | 30          | 2.94            | 97.06               | 0.53                        | 0.53                                  |
| 2.250E+00  | 2.417E+00 | 3           | 33          | 8.82            | 97.06               | 0.07                        | 11.72                                 |
| 2.417E+00  | 2.583E+00 | 0           | 33          | 0.00            | 100.00              | 0.03                        | 0.03                                  |
| 2.583E+00  | 2.750E+00 | 1           | 34          | 2.94            | 100.00              |                             |                                       |
|            |           | G           | 0           | 0.00            |                     |                             |                                       |
|            |           | H           | 0           | 0.00            |                     |                             |                                       |
|            |           | B           | 0           | 0.00            |                     |                             |                                       |

TOTALS LESS H AND B 34

HISTOGRAM FOR VARIABLE 28 (S-V )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

```

2.154E+01 XXX
3.162E+01
4.642E+01
6.813E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.000E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.468E+02 XXX
2.154E+02 XXXXXXXXX
3.162E+02
4.642E+02 XXX

```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

```

MINIMUM ANTILOG = 2.00000E+01
MAXIMUM ANTILOG = 5.00000E+02
GEOMETRIC MEAN = 8.90705E+01
GEOMETRIC DEVIATION = 1.66714E+00
VARIANCE OF LOGS = 4.92720E-02

```

PERCENT TABLE FOR VARIABLE 28 (S-V ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|------------------------|--------------|-------------------|
| 25.00                  | 1.625001E+00 | 4.216972E+01      |

50.00  
75.00  
90.00  
95.00  
98.00  
99.00

1.861112E+00  
2.025002E+00  
2.283335E+00  
2.377780E+00  
1.000000E+35  
1.000000E+35

7.262938E+01  
1.059258E+02  
1.920151E+02  
2.386602E+02  
1.000000E+35  
1.000000E+35

cedar mountain seeds

FREQUENCY TABLE FOR VARIABLE 30 (S-Y )

| LOG LIMITS | UPPER     | OBS FREQ | CUM FREQ | PERCENT FREQ | PERCENT CUM FREQ | THEOR FREQ (NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
|------------|-----------|----------|----------|--------------|------------------|--------------------------|---------------------------------------|
| LOWER      |           |          |          |              |                  |                          |                                       |
| N          |           | 0        | 0        | 0.00         | 0.00             | 0.00                     | 0.20                                  |
| L          |           | 0        | 0        | 0.00         | 0.00             | 0.00                     | 1.54                                  |
| T          |           | 0        | 0        | 0.00         | 0.00             | 0.00                     | 8.84                                  |
| 9.160E-01  | 1.083E+00 | 4        | 4        | 11.76        | 11.76            | 11.76                    | 5.49                                  |
| 1.083E+00  | 1.249E+00 | 0        | 4        | 0.00         | 11.76            | 11.76                    | 0.35                                  |
| 1.249E+00  | 1.416E+00 | 22       | 26       | 64.71        | 76.47            | 76.47                    | 0.04                                  |
| 1.416E+00  | 1.583E+00 | 6        | 32       | 17.65        | 94.12            | 94.12                    | 0.20                                  |
| 1.583E+00  | 1.749E+00 | 2        | 34       | 5.88         | 100.00           | 100.00                   |                                       |
| G          |           | 0        | 34       | 0.00         | 100.00           | 0.00                     |                                       |
| H          |           | 0        | 34       | 0.00         | 100.00           | 0.00                     |                                       |
| B          |           | 0        | 34       | 0.00         | 100.00           | 0.00                     |                                       |

TOTALS LESS H AND B 34

HISTOGRAM FOR VARIABLE 30 (S-Y )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

9.985E+00 XXXXXXXXXXXX  
1.466E+01  
2.157E+01 XX  
3.157E+01 XXXXXXXXXXXXXXXXXXXX  
4.634E+01 XXXXX

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 1.00000E+01  
MAXIMUM ANTILOG = 5.00000E+01  
GEOMETRIC MEAN = 2.08977E+01  
GEOMETRIC DEVIATION = 1.44798E+00  
VARIANCE OF LOGS = 2.58446E-02

PERCENT TABLE FOR VARIABLE 30 (S-Y ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|---------------------|--------------|-------------------|
| 25.00               | 1.150849E+00 | 1.415301E+01      |
| 50.00               | 1.279637E+00 | 1.903869E+01      |
| 75.00               | 1.408425E+00 | 2.561092E+01      |
| 90.00               | 1.543779E+00 | 3.497672E+01      |
| 95.00               | 1.000000E+35 | 1.000000E+35      |
| 98.00               | 1.000000E+35 | 1.000000E+35      |
| 99.00               | 1.000000E+35 | 1.000000E+35      |

cedar mountain seds

FREQUENCY TABLE FOR VARIABLE 31 (S-ZN )

| LOG LIMITS  | UPPER     | OBS FREQ | CUM FREQ | PERCENT FREQ | PERCENT CUM FREQ | THEOR FREQ (NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
|-------------|-----------|----------|----------|--------------|------------------|--------------------------|---------------------------------------|
| N           |           | 27       | 27       | 79.41        | 79.41            |                          |                                       |
| L           |           | 3        | 30       | 8.62         | 88.24            |                          |                                       |
| T           |           | 0        | 30       | 0.00         | 88.24            | 8.32                     | 8.32                                  |
| 2.250E+00 - | 2.417E+00 | 2        | 32       | 5.88         | 94.12            | 18.20                    | 14.42                                 |
| 2.417E+00 - | 2.583E+00 | 0        | 32       | 0.00         | 94.12            | 7.05                     | 7.05                                  |
| 2.583E+00 - | 2.750E+00 | 1        | 33       | 2.94         | 97.06            | 0.43                     | 0.76                                  |
| 2.750E+00 - | 2.917E+00 | 1        | 34       | 2.94         | 100.00           | 0.00                     | 268.59                                |
| G           |           | 0        | 34       | 0.00         | 100.00           | 0.00                     | 0.00                                  |
| H           |           | 0        | 34       |              |                  |                          |                                       |
| b           |           | 0        | 34       |              |                  |                          |                                       |

TOTALS LESS H AND G 34

HISTOGRAM FOR VARIABLE 31 (S-ZN )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

2.154E+02 XXXXX  
3.162E+02  
4.642E+02 XXX  
6.813E+02 XXX

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 2.00000E+02  
MAXIMUM ANTILOG = 7.00000E+02  
GEOMETRIC MEAN = 3.43979E+02  
GEOMETRIC DEVIATION = 1.89846E+00  
VARIANCE OF LOGS = 7.75072E-02

PERCENT TABLE FOR VARIABLE 31 (S-ZN ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.999999E 50

| SELECTED PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|---------------------|--------------|-------------------|
| 25.00               | 1.000000E+35 | 1.000000E+35      |
| 50.00               | 1.000000E+35 | 1.000000E+35      |
| 75.00               | 1.000000E+35 | 1.000000E+35      |
| 90.00               | 1.000000E+35 | 1.000000E+35      |
| 95.00               | 2.51667E+00  | 3.28597E+02       |
| 98.00               | 1.000000E+35 | 1.000000E+35      |
| 99.00               | 1.000000E+35 | 1.000000E+35      |



cedar mountain sed

## FREQUENCY TABLE FOR VARIABLE 32 (S-ZR )

| LOG LIMITS |           | OBS<br>FREQ | CUM<br>FREQ | PERCENT<br>FREQ | PERCENT<br>CUM FREQ | THEOR FREQ<br>(NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
|------------|-----------|-------------|-------------|-----------------|---------------------|-----------------------------|---------------------------------------|
| LOWER      | UPPER     |             |             |                 |                     |                             |                                       |
| N          |           | 0           | 0           | 0.00            | 0.00                | 0.10                        | 0.10                                  |
| L          |           | 0           | 0           | 0.00            | 0.00                | 0.47                        | 0.47                                  |
| T          |           | 0           | 0           | 0.00            | 0.00                | 1.90                        | 1.90                                  |
| 1.583E+00  | 1.750E+00 | 1           | 1           | 2.94            | 2.94                | 0.51                        | 0.51                                  |
| 1.750E+00  | 1.916E+00 | 1           | 2           | 2.94            | 5.88                | 0.43                        | 0.43                                  |
| 1.916E+00  | 2.083E+00 | 8           | 10          | 23.53           | 29.41               | 4.72                        | 4.72                                  |
| 2.083E+00  | 2.250E+00 | 0           | 10          | 0.00            | 29.41               | 7.78                        | 7.78                                  |
| 2.250E+00  | 2.416E+00 | 12          | 22          | 35.29           | 64.71               | 8.53                        | 8.53                                  |
| 2.416E+00  | 2.583E+00 | 6           | 30          | 23.53           | 88.24               | 6.22                        | 6.22                                  |
| 2.583E+00  | 2.750E+00 | 4           | 34          | 11.76           | 100.00              | 4.23                        | 4.23                                  |
| G          |           | 0           | 34          | 0.00            | 100.00              | 0.01                        | 0.01                                  |
| H          |           | 0           | 34          |                 |                     | 0.10                        | 0.10                                  |
| B          |           | 0           | 34          |                 |                     |                             |                                       |

TOTALS LESS H AND B 34

HISTOGRAM FOR VARIABLE 32 (S-ZR )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

4.638E+01 XXX  
 6.800E+01 XXX  
 9.992E+01 XXXXXXXXXXXXXXXXXXXX  
 1.467E+02  
 2.153E+02 XXXXXXXXXXXXXXXXXXXX  
 3.100E+02 XXXXXXXXXXXXXXXXXXXX  
 4.630E+02 XXXXXXXXXXXXXXXX

## THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 5.00000E+01  
 MAXIMUM ANTILOG = 5.00000E+02  
 GEOMETRIC MEAN = 1.93790E+02  
 GEOMETRIC DEVIATION = 1.80491E+00  
 VARIANCE OF LOGS = 6.57700E-02

PERCENT TABLE FOR VARIABLE 32 (S-ZR ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
 IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
 THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|------------------------|--------------|-------------------|
| 25.00                  | 2.051751E+00 | 1.126551E+02      |
| 50.00                  | 2.277446E+00 | 1.894287E+02      |
| 75.00                  | 2.489252E+00 | 3.084976E+02      |
| 90.00                  | 1.000000E+35 | 1.000000E+35      |
| 95.00                  | 1.000000E+35 | 1.000000E+35      |

98.00  
99.00

1.000000E+35  
1.000000E+35

1.000000E+35  
1.000000E+35

DATE 11/29/84

DDC36 GRAPHICAL ANALYSIS - U S G S STATPAC (02/07/82)

cedar mountain sed

FREQUENCY TABLE FOR VARIABLE 34 (AA-AS-P)

| LOG LIMITS |           | OBS  |          | PERCENT |          | THEOR FREQ    |                                       |
|------------|-----------|------|----------|---------|----------|---------------|---------------------------------------|
| LOWER      | UPPER     | FREQ | CUM FREQ | FREQ    | CUM FREQ | (NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
| N          |           | 1    | 1        | 2.94    | 2.94     |               |                                       |
| L          |           | 2    | 3        | 5.88    | 8.82     |               |                                       |
| T          |           | 0    | 3        | 0.00    | 8.82     | 1.28          | 1.28                                  |
| 5.83CE-01  | 7.497E-01 | 10   | 13       | 29.41   | 38.24    | 5.29          | 4.19                                  |
| 7.497E-01  | 9.163E-01 | 0    | 13       | 0.00    | 38.24    | 11.06         | 11.06                                 |
| 9.163E-01  | 1.083E+00 | 18   | 31       | 52.94   | 91.18    | 10.63         | 5.11                                  |
| 1.083E+00  | 1.25CE+00 | 1    | 32       | 2.94    | 94.12    | 4.70          | 2.91                                  |
| 1.25CE+00  | 1.416E+00 | 2    | 34       | 5.88    | 100.00   | 1.04          | 0.88                                  |
| G          |           | 0    | 34       | 0.00    | 100.00   | 0.00          | 0.00                                  |
| H          |           | 0    | 34       |         |          |               |                                       |
| B          |           | 0    | 34       |         |          |               |                                       |

TOTALS LESS H AND B

34

HISTOGRAM FOR VARIABLE 34 (AA-AS-P)

MIDPOINTS ARE EXPRESSED AS ANTILOGS

4.638E+00 XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
6.808E+00  
9.992E+00 XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
1.467E+01 XXX  
2.153E+01 XXXXXX

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 5.00000E+00  
MAXIMUM ANTILOG = 2.00000E+01  
GEOMETRIC MEAN = 8.47218E+00  
GEOMETRIC DEVIATION = 1.50894E+00  
VARIANCE OF LOGS = 3.19237E-02

PERCENT TABLE FOR VARIABLE 34 (AA-AS-P) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|---------------------|--------------|-------------------|
| 25.00               | 1.000000E+35 | 1.000000E+35      |
| 50.00               | 8.237412E-01 | 6.664096E+00      |
| 75.00               | 9.811489E-01 | 9.575224E+00      |
| 90.00               | 1.075594E+00 | 1.190128E+01      |
| 95.00               | 1.000000E+35 | 1.000000E+35      |
| 98.00               | 1.000000E+35 | 1.000000E+35      |
| 99.00               | 1.000000E+35 | 1.300000E+35      |

cedar mountain seds

FREQUENCY TABLE FOR VARIABLE 35 (AA-ZN-P)

| LOG LIMITS |           | OBS<br>FREQ | CUM<br>FREQ | PERCENT<br>FREQ | PERCENT<br>CUM FREQ | THEOR FREQ<br>(NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
|------------|-----------|-------------|-------------|-----------------|---------------------|-----------------------------|---------------------------------------|
| LOWER      | UPPER     |             |             |                 |                     |                             |                                       |
| N          |           | 0           | 0           | 0.00            | 0.00                |                             |                                       |
| L          |           | 0           | 0           | 0.00            | 0.00                |                             |                                       |
| T          |           | 0           | 0           | 0.00            | 0.00                |                             |                                       |
| 9.160E+01  | 1.083E+00 | 1           | 1           | 2.94            | 2.94                | 0.13                        | 0.02                                  |
| 1.083E+00  | 1.249E+00 | 0           | 1           | 0.00            | 0.00                | 0.13                        | 5.66                                  |
| 1.249E+00  | 1.416E+00 | 0           | 1           | 0.00            | 0.00                | 0.13                        | 0.77                                  |
| 1.416E+00  | 1.583E+00 | 0           | 1           | 0.00            | 0.00                | 2.77                        | 2.77                                  |
| 1.583E+00  | 1.749E+00 | 7           | 8           | 20.59           | 23.53               | 6.31                        | 0.07                                  |
| 1.749E+00  | 1.916E+00 | 15          | 23          | 44.12           | 67.65               | 9.06                        | 3.90                                  |
| 1.916E+00  | 2.083E+00 | 7           | 30          | 20.59           | 88.24               | 8.18                        | 0.17                                  |
| 2.083E+00  | 2.249E+00 | 2           | 32          | 5.88            | 94.12               | 4.66                        | 1.52                                  |
| 2.249E+00  | 2.416E+00 | 2           | 34          | 5.88            | 100.00              | 1.67                        | 1.67                                  |
| G          |           | 0           | 34          | 0.00            | 100.00              | 0.43                        | 5.64                                  |
| H          |           | 0           | 34          | 0.00            | 100.00              | 0.43                        | 0.02                                  |
| B          |           | 0           | 34          | 0.00            | 100.00              | 0.43                        | 0.02                                  |

TOTALS LESS H AND B 34

HISTOGRAM FOR VARIABLE 35 (AA-ZN-P)  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

```

9.985E+00 XXX
1.460E+01
2.151E+01
3.157E+01 XXXXXXXXXXXXXXXXXXXX
4.634E+01 XXXXXXXXXXXXXXXXXXXX
6.802E+01 XXXXXXXXXXXXXXXXXXXX
9.985E+01 XXXXX
1.460E+02
2.151E+02 XXXXX

```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

```

MINIMUM ANTILOG = 1.00000E+01
MAXIMUM ANTILOG = 2.00000E+02
GEOMETRIC MEAN = 5.16200E+01
GEOMETRIC DEVIATION = 1.73899E+00
VARIANCE OF LOGS = 5.77428E-02

```

PERCENT TABLE FOR VARIABLE 35 (AA-ZN-P) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|------------------------|--------------|-------------------|
| 25.00                  | 1.588224E+00 | 3.874571E+01      |

50.00  
75.00  
90.00  
95.00  
98.00  
99.00

1.682668E+00  
1.808859E+00  
1.966002E+00  
1.000000E+35  
1.000000E+35  
1.000000E+35

4.815797E+01  
6.439601E+01  
9.247026E+01  
1.000000E+35  
1.000000E+35  
1.000000E+35

TITLE INPUT ID N M \*\*\*\*\* OPTIONS \*\*\*\*\*  
cedar mtn conc -cdr.conc- 34 36 1 0 0 0 2 1 0 0 0

VARIABLE NO. 9 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 10 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
THE MAX AND MIN 0.30103E+00 FOR VARIABLE NO. 13 ARE THE SAME. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 14 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 15 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 16 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 20 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 24 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 29 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 31 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 32 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 33 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 34 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 35 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.  
VARIABLE NO. 36 CONTAINS NO VALID DATA POINTS. THEREFORE THIS VARIABLE WILL BE SKIPPED.

TITLE INPUT ID N M \*\*\*\*\* OPTIONS \*\*\*\*\*  
cedar mtn conc -cdt.conc- 34 36 1 0 0 2 1 0 0 0

NUMBER OF SELECTED VARIABLES = 19

SELECTED VARIABLE INDICES

|    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| 3  | 4  | 5  | 6  | 7  | 8  | 11 | 12 | 17 | 18 |
| 19 | 21 | 22 | 23 | 25 | 26 | 27 | 28 | 30 |    |

SELECTED VARIABLE IDENTIFIERS

|       |       |       |       |      |      |      |      |      |      |
|-------|-------|-------|-------|------|------|------|------|------|------|
| S-FEX | S-MGA | S-CAZ | S-TIX | S-MN | S-AG | S-B  | S-BA | S-CR | S-CU |
| S-LA  | S-NB  | S-NI  | S-PB  | S-SC | S-SN | S-SR | S-V  | S-Y  |      |

SELECTED ROW PAIRS

1 TO 34

LOWER BOUNDARIES OF THE LOWEST CLASSES

|          |         |         |         |         |         |         |         |         |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|
| -0.41700 | 0.25000 | 1.25000 | 3.25000 | 1.58300 | 1.58300 | 1.58300 | 1.58300 | 0.91600 |
| 2.25000  | 1.58300 | 0.91600 | 0.91600 | 0.91600 | 1.41600 | 2.58300 | 2.58300 |         |

CLASS INTERVALS

|         |         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0.16667 | 0.16667 | 0.16667 | 0.16667 | 0.16667 | 0.16667 | 0.16667 | 0.16667 | 0.16667 |
| 0.16667 | 0.16667 | 0.16667 | 0.16667 | 0.16667 | 0.16667 | 0.16667 | 0.16667 | 0.16667 |

DATE 11/29/84

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## FREQUENCY TABLE FOR VARIABLE 3 (S-FEZ )

| LOG LIMITS |            | OBS  |      | CUM  |      | PERCENT |       | PERCENT  |          | THEOR FREQ<br>(NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |  |
|------------|------------|------|------|------|------|---------|-------|----------|----------|-----------------------------|---------------------------------------|--|
| LOWER      | UPPER      | FREQ | FREQ | FREQ | FREQ | FREQ    | FREQ  | CUM FREQ | CUM FREQ |                             |                                       |  |
| N          |            | 0    | 0    | 0    | 0    | 0.00    | 0.00  | 0.00     | 0.00     | 0.67                        |                                       |  |
| L          |            | 0    | 0    | 0    | 0    | 0.00    | 0.00  | 0.00     | 0.00     | 6.19                        |                                       |  |
| T          |            | 5    | 5    | 5    | 5    | 14.71   | 14.71 | 14.71    | 14.71    | 1.73                        |                                       |  |
| -4.170E-01 | -2.503E-01 | 0    | 5    | 5    | 5    | 0.00    | 0.00  | 14.71    | 14.71    | 4.00                        |                                       |  |
| -2.503E-01 | -8.367E-02 | 0    | 10   | 15   | 15   | 29.41   | 29.41 | 44.12    | 44.12    | 6.62                        |                                       |  |
| -8.367E-02 | 8.300E-02  | 3    | 18   | 33   | 33   | 8.82    | 8.82  | 52.94    | 52.94    | 7.85                        |                                       |  |
| 8.300E-02  | 2.497E-01  | 3    | 36   | 69   | 69   | 23.53   | 23.53 | 78.47    | 78.47    | 0.27                        |                                       |  |
| 2.497E-01  | 4.163E-01  | 6    | 75   | 105  | 105  | 17.65   | 17.65 | 94.12    | 94.12    | 0.96                        |                                       |  |
| 4.163E-01  | 5.830E-01  | 2    | 34   | 139  | 139  | 5.88    | 5.88  | 100.00   | 100.00   | 2.44                        |                                       |  |
| 5.830E-01  | 7.497E-01  | 0    | 34   | 139  | 139  | 0.00    | 0.00  | 100.00   | 100.00   | 0.67                        |                                       |  |
| G          |            | 0    | 34   | 34   | 34   | 0.00    | 0.00  | 100.00   | 100.00   | 0.67                        |                                       |  |
| H          |            | 0    | 34   | 34   | 34   | 0.00    | 0.00  | 100.00   | 100.00   | 0.67                        |                                       |  |
| B          |            | 0    | 34   | 34   | 34   | 0.00    | 0.00  | 100.00   | 100.00   | 0.67                        |                                       |  |

TOTALS LESS H AND B

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HISTOGRAM FOR VARIABLE 3 (S-FEZ )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

4.638E-01 XXXXXXXXXXXXXXXX  
 6.808E-01  
 9.992E-01 XXXXXXXXXXXXXXXXXXXXXXXX  
 1.467E+00 XXXXXXXX  
 2.153E+00 XXXXXXXXXXXXXXXXXXXXXXXX  
 3.160E+00 XXXXXXXXXXXXXXXXXXXXXXXX  
 4.638E+00 XXXXXXXX

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 5.00000E-01  
 MAXIMUM ANTILOG = 5.00000E+00  
 GEOMETRIC MEAN = 1.47032E+00  
 GEOMETRIC DEVIATION = 1.92297E+00  
 VARIANCE OF LOGS = 8.06406E-02

PERCENT TABLE FOR VARIABLE 3 (S-FEZ ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
 IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
 THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE    | ANTI LOG OF VALUE |
|------------------------|---------------|-------------------|
| 25.00                  | -1.336661E-01 | 7.350788E-01      |
| 50.00                  | 1.941123E-01  | 1.563552E+00      |
| 75.00                  | 4.059183E-01  | 2.546351E+00      |
| 90.00                  | 5.441130E-01  | 3.500363E+00      |
| 95.00                  | 1.000000E+35  | 1.000000E+35      |



98.00  
99.00

1.000000E+35  
1.000000E+35

1.000000E+35  
1.000000E+35

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FREQUENCY TABLE FOR VARIABLE 4 (S-MGZ )

| LOG LIMITS |            | OBS  |      | CUM  |       | PERCENT  |          | THEOR FREQ    |                                       |
|------------|------------|------|------|------|-------|----------|----------|---------------|---------------------------------------|
| LOWER      | UPPER      | FREQ | FREQ | FREQ | FREQ  | CUM FREQ | CUM FREQ | (NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
| N          |            | 0    | 0    | 0    | 0.00  | 0.00     | 0.00     |               |                                       |
| L          |            | 0    | 0    | 0    | 0.00  | 0.00     | 0.00     |               |                                       |
| T          |            | 0    | 0    | 0    | 0.00  | 0.00     | 0.00     |               |                                       |
| -7.500E-01 | -5.833E-01 | 7    | 7    | 8    | 20.59 | 23.53    | 23.53    | 0.62          | 0.62                                  |
| -5.833E-01 | -4.167E-01 | 10   | 10   | 16   | 29.41 | 32.94    | 32.94    | 1.87          | 0.41                                  |
| -4.167E-01 | -2.500E-01 | 5    | 5    | 23   | 14.71 | 67.65    | 67.65    | 4.59          | 1.27                                  |
| -2.500E-01 | -8.333E-02 | 5    | 5    | 28   | 14.71 | 82.35    | 82.35    | 7.57          | 0.76                                  |
| -8.333E-02 | 8.333E-02  | 5    | 5    | 33   | 14.71 | 97.60    | 97.60    | 8.43          | 1.39                                  |
| 8.333E-02  | 2.500E-01  | 1    | 1    | 34   | 2.94  | 100.00   | 100.00   | 6.32          | 0.28                                  |
| 2.500E-01  | 4.167E-01  | 0    | 0    | 34   | 0.00  | 100.00   | 100.00   | 3.20          | 1.01                                  |
| G          |            | 0    | 0    | 34   | 0.00  | 100.00   | 100.00   | 1.38          | 0.11                                  |
| H          |            | 0    | 0    | 34   | 0.00  | 100.00   | 100.00   | 0.62          | 0.62                                  |
| B          |            | 0    | 0    | 34   | 0.00  | 100.00   | 100.00   |               |                                       |

TOTALS LESS H AND B 34

HISTOGRAM FOR VARIABLE 4 (S-MGZ )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

2.154E-01 XXX  
3.162E-01 XXXXXXXXXXXXXXXXXXXXXXXX  
4.642E-01 XXXXXXXXXXXXXXXXXXXXXXXX  
6.813E-01 XXXXXXXXXXXXXXXXXXXXXXXX  
1.000E+00 XXXXXXXXXXXXXXXXXXXXXXXX  
1.468E+00 XXXXXXXXXXXXXXXXXXXXXXXX  
2.154E+00 XXX

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 2.00000E-01  
MAXIMUM ANTILOG = 2.00000E+00  
GEOMETRIC MEAN = 6.24054E-01  
GEOMETRIC DEVIATION = 1.82401E+00  
VARIANCE OF LOGS = 0.81347E-02

PERCENT TABLE FOR VARIABLE 4 (S-MGZ ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE    | ANTI LOG OF VALUE |
|------------------------|---------------|-------------------|
| 25.00                  | -4.083326E-01 | 3.905416E-01      |
| 50.00                  | -2.866657E-01 | 5.411707E-01      |
| 75.00                  | 1.497683E-06  | 1.000003E+00      |
| 90.00                  | 1.700018E-01  | 1.479115E+00      |
| 95.00                  | 2.266686E-01  | 1.685267E+00      |

98.00  
99.00

1.000000E+35  
1.000000E+35

1.000000E+35  
1.000000E+35

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FREQUENCY TABLE FOR VARIABLE 5 (S-CAZ )

| LOG LIMITS |              | OBS  |      | CUM  |      | PERCENT |       | PERCENT  |          | THEOR FREQ    |                                       | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |  |
|------------|--------------|------|------|------|------|---------|-------|----------|----------|---------------|---------------------------------------|---------------------------------------|--|
| LOWER      | UPPER        | FREQ | FREQ | FREQ | FREQ | FREQ    | FREQ  | CUM FREQ | CUM FREQ | (NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |                                       |  |
| N          |              |      |      |      |      | 0.00    | 0.00  | 0.00     | 0.00     |               |                                       |                                       |  |
| L          |              |      |      |      |      | 0.00    | 0.00  | 0.00     | 0.00     |               |                                       |                                       |  |
| 2.500E-01  | 4.167E-01    | 2    | 2    | 2    | 2    | 5.88    | 5.88  | 11.76    | 0.16     |               |                                       |                                       |  |
| 4.167E-01  | 5.833E-01    | 2    | 2    | 4    | 4    | 5.88    | 5.88  | 11.76    | 0.16     |               |                                       |                                       |  |
| 5.833E-01  | 7.500E-01    | 6    | 6    | 10   | 10   | 17.65   | 17.65 | 29.41    | 2.92     |               |                                       |                                       |  |
| 7.500E-01  | 9.167E-01    | 8    | 8    | 18   | 18   | 23.53   | 23.53 | 52.94    | 6.57     |               |                                       |                                       |  |
| 9.167E-01  | 1.083E+00    | 10   | 10   | 28   | 28   | 29.41   | 29.41 | 82.35    | 9.21     |               |                                       |                                       |  |
| 1.083E+00  | 1.250E+00    | 6    | 6    | 34   | 34   | 17.65   | 17.65 | 100.00   | 8.06     |               |                                       |                                       |  |
| G          |              |      |      |      |      | 0.00    | 0.00  | 100.00   | 6.27     |               |                                       |                                       |  |
| H          |              |      |      |      |      | 0.00    | 0.00  | 100.00   | 0.16     |               |                                       |                                       |  |
| B          |              |      |      |      |      | 0.00    | 0.00  | 100.00   | 0.16     |               |                                       |                                       |  |
| TOTALS     | LESS H AND B |      |      | 34   |      |         |       |          |          |               |                                       |                                       |  |

HISTOGRAM FOR VARIABLE 5 (S-CAZ )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

2.154E+00 XXXXXX  
3.162E+00 XXXXXX  
4.642E+00 XXXXXXXXXXXXXXXXXXXX  
6.813E+00 XXXXXXXXXXXXXXXXXXXXXXXX  
1.000E+01 XXXXXXXXXXXXXXXXXXXXXXXX  
1.460E+01 XXXXXXXXXXXXXXXXXXXXXXXX

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 2.00000E+00  
MAXIMUM ANTILOG = 1.50000E+01  
GEOMETRIC MEAN = 7.40681E+00  
GEOMETRIC DEVIATION = 1.72944E+00  
VARIANCE OF LOGS = 5.65993E-02

PERCENT TABLE FOR VARIABLE 5 (S-CAZ ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|---------------------|--------------|-------------------|
| 25.00               | 7.063343E-01 | 5.108981E+00      |
| 50.00               | 8.958346E-01 | 7.867461E+00      |
| 75.00               | 1.041668E+00 | 1.100698E+01      |
| 90.00               | 1.000000E+35 | 1.000000E+35      |
| 95.00               | 1.000000E+35 | 1.000000E+35      |
| 98.00               | 1.000000E+35 | 1.000000E+35      |
| 99.00               | 1.000000E+35 | 1.000000E+35      |

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|       | LOG LIMITS |      | OBS  | CUM  | PERCENT | PERCENT | THEOR FREQ    |                                       |
|-------|------------|------|------|------|---------|---------|---------------|---------------------------------------|
| LOWER | UPPER      | FREQ | FREQ | FREQ | FREQ    | FREQ    | (NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |

[illegible]

TOTALS LESS H AND B 34

HISTOGRAM FOR VARIABLE 6 (S-TIX )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

```

9.985E-02  XXX
1.466E-01
2.151E-01
3.157E-01
4.634E-01
6.802E-01  XXXXX
9.985E-01  XXXXXXXXXXXXXXXXXXXXXXXX
1.466E+00  XXX
2.151E+00  XXXXXXXXXXXXXXXXXXXXXXXX

```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

```
MINIMUM ANTILOG = 1.0000E+01
MAXIMUM ANTILOG = 2.0000E+00
GEOMETRIC MEAN = 1.1300E+00
GEOMETRIC DEVIATION = 1.8825E+00
VARIANCE OF LOGS = 7.5469E-02
```

PERCENT TABLE OR VARIABLE 6 (S-TIX ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999997E 50

| SELECTED<br>PERCENTILE | DATA VALUE | ANTI LOG OF VALUE |
|------------------------|------------|-------------------|
|------------------------|------------|-------------------|

25.CG -7.608968E-03 9.826323E-01

50.00  
75.00  
90.00  
95.00  
98.00  
99.00

2.701694E-01  
1.000000E+35  
1.000000E+35  
1.000000E+35  
1.000000E+35  
1.000000E+35

1.862813E+00  
1.000000E+35  
1.000000E+35  
1.000000E+35  
1.000000E+35  
1.000000E+35

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FREQUENCY TABLE FOR VARIABLE 7 (S-MN )

| LOG LIMITS          |           | OBS FREQ |    | 7 (S-MN ) |    | PERCENT |        | THEOR FREQ    |                                       |
|---------------------|-----------|----------|----|-----------|----|---------|--------|---------------|---------------------------------------|
| LOWER               | UPPER     |          |    |           |    |         |        | (NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
| N                   |           | 0        | 0  | 0         | 0  | 0.00    | 0.00   | 0.69          | 0.69                                  |
| L                   |           | 0        | 0  | 0         | 0  | 0.00    | 0.00   | 1.89          | 1.89                                  |
| T                   |           | 0        | 0  | 0         | 0  | 0.00    | 0.00   | 4.44          | 4.44                                  |
| 2.083E+00           | 2.425E+00 | 2        | 2  | 2         | 2  | 5.88    | 5.88   | 7.23          | 7.23                                  |
| 2.250E+00           | 2.410E+00 | 6        | 6  | 6         | 6  | 17.65   | 23.53  | 8.17          | 8.17                                  |
| 2.410E+00           | 2.583E+00 | 4        | 12 | 12        | 12 | 11.76   | 35.29  | 6.40          | 6.40                                  |
| 2.583E+00           | 2.750E+00 | 14       | 26 | 26        | 26 | 41.18   | 70.47  | 3.47          | 3.47                                  |
| 2.750E+00           | 2.910E+00 | 4        | 30 | 30        | 30 | 11.76   | 88.24  | 0.07          | 0.07                                  |
| 2.910E+00           | 3.083E+00 | 2        | 32 | 32        | 32 | 5.88    | 94.12  | 0.84          | 0.84                                  |
| 3.083E+00           | 3.250E+00 | 1        | 33 | 33        | 33 | 2.94    | 97.06  | 0.69          | 0.69                                  |
| 3.250E+00           | 3.410E+00 | 1        | 34 | 34        | 34 | 0.00    | 100.00 |               |                                       |
| G                   |           | 0        | 0  | 0         | 0  | 0.00    | 100.00 |               |                                       |
| H                   |           | 0        | 0  | 0         | 0  | 0.00    | 100.00 |               |                                       |
| B                   |           | 0        | 0  | 0         | 0  | 0.00    | 100.00 |               |                                       |
| TOTALS LESS H AND B |           |          |    | 34        |    |         |        |               |                                       |

HISTOGRAM FOR VARIABLE 7 (S-MN )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

```

1.467E+02 XXXXX
2.153E+02 XXXXXXXXXXXXXXXX
3.160E+02 XXXXXXXXXXXXXXXX
4.638E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
6.808E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
9.992E+02 XXXXXXXX
1.467E+03 XXX
2.153E+03 XXX
    
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

```

MINIMUM ANTILOG = 1.50000E+02
MAXIMUM ANTILOG = 2.00000E+03
GEOMETRIC MEAN = 4.35038E+02
GEOMETRIC DEVIATION = 1.86706E+00
VARIANCE OF LOGS = 7.35264E-02
    
```

PERCENT TABLE FOR VARIABLE 7 (S-MN ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|---------------------|--------------|-------------------|
| 25.00               | 2.437167E+00 | 2.736332E+02      |
| 50.00               | 2.642925E+00 | 4.390611E+02      |
| 75.00               | 2.743716E+00 | 5.542626E+02      |

8h

9C.00  
95.00  
98.00  
99.00

2.966335E+00  
5.13302E+00  
1.000000E+35  
1.000000E+35

9.254120E+02  
1.358320E+05  
1.000000E+35  
1.000000E+35



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FREQUENCY TABLE FOR VARIABLE 8 (S-AG )

| LOG LIMITS  |           | OBS FREQ |  | CUM FREQ |  | PERCENT FREQ |  | PERCENT CUM FREQ |  | THEOR FREQ (NORMAL DIST) |  | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |  |
|-------------|-----------|----------|--|----------|--|--------------|--|------------------|--|--------------------------|--|---------------------------------------|--|
| LOWER       | UPPER     | FREQ     |  | FREQ     |  | FREQ         |  | FREQ             |  | FREQ                     |  |                                       |  |
| N           |           | 36       |  | 36       |  | 68.24        |  | 68.24            |  |                          |  |                                       |  |
| L           |           | 1        |  | 31       |  | 2.94         |  | 91.18            |  | 33.77                    |  | 33.77                                 |  |
| T           |           | 2        |  | 31       |  | 0.00         |  | 91.18            |  | 0.16                     |  | 21.85                                 |  |
| 1.250E+00 - | 1.417E+00 | 2        |  | 33       |  | 5.88         |  | 97.06            |  | 0.06                     |  | 0.06                                  |  |
| 1.417E+00 - | 1.583E+00 | 0        |  | 33       |  | 0.00         |  | 97.06            |  | 0.02                     |  | 0.02                                  |  |
| 1.583E+00 - | 1.750E+00 | 0        |  | 33       |  | 0.00         |  | 97.06            |  | 0.00                     |  | 0.00                                  |  |
| 1.750E+00 - | 1.917E+00 | 0        |  | 33       |  | 0.00         |  | 97.06            |  | 0.00                     |  | 0.00                                  |  |
| 1.917E+00 - | 2.083E+00 | 1        |  | 34       |  | 2.94         |  | 100.00           |  | 0.00                     |  | 704.82                                |  |
| G           |           | 0        |  | 34       |  | 0.00         |  | 100.00           |  | 0.00                     |  | 0.00                                  |  |
| H           |           | 0        |  | 34       |  | 0.00         |  | 100.00           |  | 0.00                     |  | 0.00                                  |  |
| B           |           | 0        |  | 34       |  | 0.00         |  | 100.00           |  | 0.00                     |  | 0.00                                  |  |

TOTALS LESS H AND B 34

HISTOGRAM FOR VARIABLE 8 (S-AG )

MIDPOINTS ARE EXPRESSED AS ANTILOGS

2.154E+01 XXXXX  
3.162E+01  
4.642E+01  
6.813E+01  
1.000E+02 XXX

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNEQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 2.00000E+01  
MAXIMUM ANTILOG = 1.00000E+02  
GEOMETRIC MEAN = 3.41995E+01  
GEOMETRIC DEVIATION = 2.53251E+00  
VARIANCE OF LOGS = 1.62853E-01

PERCENT TABLE FOR VARIABLE 8 (S-AG ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|---------------------|--------------|-------------------|
| 25.00               | 1.000000E+35 | 1.000000E+35      |
| 50.00               | 1.000000E+35 | 1.000000E+35      |
| 75.00               | 1.000000E+35 | 1.000000E+35      |
| 90.00               | 1.000000E+35 | 1.000000E+35      |
| 95.00               | 1.000000E+35 | 1.000000E+35      |
| 98.00               | 1.000000E+35 | 1.000000E+35      |
| 99.00               | 1.000000E+35 | 1.000000E+35      |

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HISTOGRAM FOR VARIABLE 11 (S-B )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

|           |                   |
|-----------|-------------------|
| 2-154E+01 | XXXXXXXX          |
| 3-162E+01 | XXXXXXXXXX        |
| 4-642E+01 | XXXXXXXXXXXXXXX   |
| 6-817E+01 | XXXXXXXXXXXXXXXXX |
| 1-00UE+02 | XXXXXXXXXXXXXXX   |
| 1-40SE+02 | XXXXXXXXXXXXXXX   |
| -154E+02  | XXXXXXXXXXXXXXX   |

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

```

MINIMUM ANTILOG = 2.0000E+01
MAXIMUM ANTILOG = 2.0000E+02
GEOMETRIC MEAN = 5.82685E+01
GEOMETRIC DEVIATION = 1.84559E+00
VARIANCE OF LOGS = 7.08277E-02

```

PERCENT TABLE FOR VARIABLE 11 (S-B ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.99999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|------------------------|--------------|-------------------|
| 25.00                  | 1.604167E+00 | 4.019457E+01      |
| 50.00                  | 1.675001E+00 | 4.731582E+01      |
| 75.00                  | 1.745834E+00 | 5.569732E+01      |
| 90.00                  | 1.000000E+35 | 1.000000E+35      |
| 95.00                  | 1.000000E+35 | 1.000000E+35      |

98.00  
99.00

1.000000E+35  
1.000000E+35

1.000000E+35  
1.000000E+35

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FREQUENCY TABLE FOR VARIABLE 12 (S-BA )

| LOG LIMITS   |            | OBS  |          | PERCENT |          | THEOR FREQ    |                                       |
|--------------|------------|------|----------|---------|----------|---------------|---------------------------------------|
| LOWER        | UPPER      | FREQ | CUM FREQ | FREQ    | CUM FREQ | (NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
| N            |            | 0    | 0        | 0.00    | 0.00     | 0.09          | 0.09                                  |
| L            |            | 0    | 0        | 0.00    | 0.00     | 0.62          | 0.23                                  |
| 1            |            | 0    | 0        | 0.00    | 0.00     | 2.69          | 1.99                                  |
| 3.25E+00 -   | 3.417E+00  | 1    | 1        | 2.94    | 2.94     | 6.75          | 1.12                                  |
| 3.417E+00 -  | 3.583E+00  | 5    | 6        | 14.71   | 17.65    | 9.86          | 9.86                                  |
| 3.583E+00 -  | 3.750E+00  | 4    | 10       | 11.76   | 29.41    | 13.99         | 5.78                                  |
| 3.750E+00 -  | 3.917E+00  | 0    | 10       | 0.00    | 44.12    | 0.09          | 3956.45                               |
| 3.917E+00 -  | 4.083E+00  | 5    | 15       | 14.71   | 100.00   |               |                                       |
| 4.083E+00 -  | 4.250E+00  | 19   | 34       | 55.86   |          |               |                                       |
| 4.250E+00 -  | 4.417E+00  | 0    | 34       |         |          |               |                                       |
| 4.417E+00 -  | 4.583E+00  | 0    | 34       |         |          |               |                                       |
| 4.583E+00 -  | 4.750E+00  | 0    | 34       |         |          |               |                                       |
| 4.750E+00 -  | 4.917E+00  | 0    | 34       |         |          |               |                                       |
| 4.917E+00 -  | 5.083E+00  | 0    | 34       |         |          |               |                                       |
| 5.083E+00 -  | 5.250E+00  | 0    | 34       |         |          |               |                                       |
| 5.250E+00 -  | 5.417E+00  | 0    | 34       |         |          |               |                                       |
| 5.417E+00 -  | 5.583E+00  | 0    | 34       |         |          |               |                                       |
| 5.583E+00 -  | 5.750E+00  | 0    | 34       |         |          |               |                                       |
| 5.750E+00 -  | 5.917E+00  | 0    | 34       |         |          |               |                                       |
| 5.917E+00 -  | 6.083E+00  | 0    | 34       |         |          |               |                                       |
| 6.083E+00 -  | 6.250E+00  | 0    | 34       |         |          |               |                                       |
| 6.250E+00 -  | 6.417E+00  | 0    | 34       |         |          |               |                                       |
| 6.417E+00 -  | 6.583E+00  | 0    | 34       |         |          |               |                                       |
| 6.583E+00 -  | 6.750E+00  | 0    | 34       |         |          |               |                                       |
| 6.750E+00 -  | 6.917E+00  | 0    | 34       |         |          |               |                                       |
| 6.917E+00 -  | 7.083E+00  | 0    | 34       |         |          |               |                                       |
| 7.083E+00 -  | 7.250E+00  | 0    | 34       |         |          |               |                                       |
| 7.250E+00 -  | 7.417E+00  | 0    | 34       |         |          |               |                                       |
| 7.417E+00 -  | 7.583E+00  | 0    | 34       |         |          |               |                                       |
| 7.583E+00 -  | 7.750E+00  | 0    | 34       |         |          |               |                                       |
| 7.750E+00 -  | 7.917E+00  | 0    | 34       |         |          |               |                                       |
| 7.917E+00 -  | 8.083E+00  | 0    | 34       |         |          |               |                                       |
| 8.083E+00 -  | 8.250E+00  | 0    | 34       |         |          |               |                                       |
| 8.250E+00 -  | 8.417E+00  | 0    | 34       |         |          |               |                                       |
| 8.417E+00 -  | 8.583E+00  | 0    | 34       |         |          |               |                                       |
| 8.583E+00 -  | 8.750E+00  | 0    | 34       |         |          |               |                                       |
| 8.750E+00 -  | 8.917E+00  | 0    | 34       |         |          |               |                                       |
| 8.917E+00 -  | 9.083E+00  | 0    | 34       |         |          |               |                                       |
| 9.083E+00 -  | 9.250E+00  | 0    | 34       |         |          |               |                                       |
| 9.250E+00 -  | 9.417E+00  | 0    | 34       |         |          |               |                                       |
| 9.417E+00 -  | 9.583E+00  | 0    | 34       |         |          |               |                                       |
| 9.583E+00 -  | 9.750E+00  | 0    | 34       |         |          |               |                                       |
| 9.750E+00 -  | 9.917E+00  | 0    | 34       |         |          |               |                                       |
| 9.917E+00 -  | 10.083E+00 | 0    | 34       |         |          |               |                                       |
| 10.083E+00 - | 10.250E+00 | 0    | 34       |         |          |               |                                       |
| 10.250E+00 - | 10.417E+00 | 0    | 34       |         |          |               |                                       |
| 10.417E+00 - | 10.583E+00 | 0    | 34       |         |          |               |                                       |
| 10.583E+00 - | 10.750E+00 | 0    | 34       |         |          |               |                                       |
| 10.750E+00 - | 10.917E+00 | 0    | 34       |         |          |               |                                       |
| 10.917E+00 - | 11.083E+00 | 0    | 34       |         |          |               |                                       |
| 11.083E+00 - | 11.250E+00 | 0    | 34       |         |          |               |                                       |
| 11.250E+00 - | 11.417E+00 | 0    | 34       |         |          |               |                                       |
| 11.417E+00 - | 11.583E+00 | 0    | 34       |         |          |               |                                       |
| 11.583E+00 - | 11.750E+00 | 0    | 34       |         |          |               |                                       |
| 11.750E+00 - | 11.917E+00 | 0    | 34       |         |          |               |                                       |
| 11.917E+00 - | 12.083E+00 | 0    | 34       |         |          |               |                                       |
| 12.083E+00 - | 12.250E+00 | 0    | 34       |         |          |               |                                       |
| 12.250E+00 - | 12.417E+00 | 0    | 34       |         |          |               |                                       |
| 12.417E+00 - | 12.583E+00 | 0    | 34       |         |          |               |                                       |
| 12.583E+00 - | 12.750E+00 | 0    | 34       |         |          |               |                                       |
| 12.750E+00 - | 12.917E+00 | 0    | 34       |         |          |               |                                       |
| 12.917E+00 - | 13.083E+00 | 0    | 34       |         |          |               |                                       |
| 13.083E+00 - | 13.250E+00 | 0    | 34       |         |          |               |                                       |
| 13.250E+00 - | 13.417E+00 | 0    | 34       |         |          |               |                                       |
| 13.417E+00 - | 13.583E+00 | 0    | 34       |         |          |               |                                       |
| 13.583E+00 - | 13.750E+00 | 0    | 34       |         |          |               |                                       |
| 13.750E+00 - | 13.917E+00 | 0    | 34       |         |          |               |                                       |
| 13.917E+00 - | 14.083E+00 | 0    | 34       |         |          |               |                                       |
| 14.083E+00 - | 14.250E+00 | 0    | 34       |         |          |               |                                       |
| 14.250E+00 - | 14.417E+00 | 0    | 34       |         |          |               |                                       |
| 14.417E+00 - | 14.583E+00 | 0    | 34       |         |          |               |                                       |
| 14.583E+00 - | 14.750E+00 | 0    | 34       |         |          |               |                                       |
| 14.750E+00 - | 14.917E+00 | 0    | 34       |         |          |               |                                       |
| 14.917E+00 - | 15.083E+00 | 0    | 34       |         |          |               |                                       |
| 15.083E+00 - | 15.250E+00 | 0    | 34       |         |          |               |                                       |
| 15.250E+00 - | 15.417E+00 | 0    | 34       |         |          |               |                                       |
| 15.417E+00 - | 15.583E+00 | 0    | 34       |         |          |               |                                       |
| 15.583E+00 - | 15.750E+00 | 0    | 34       |         |          |               |                                       |
| 15.750E+00 - | 15.917E+00 | 0    | 34       |         |          |               |                                       |
| 15.917E+00 - | 16.083E+00 | 0    | 34       |         |          |               |                                       |
| 16.083E+00 - | 16.250E+00 | 0    | 34       |         |          |               |                                       |
| 16.250E+00 - | 16.417E+00 | 0    | 34       |         |          |               |                                       |
| 16.417E+00 - | 16.583E+00 | 0    | 34       |         |          |               |                                       |
| 16.583E+00 - | 16.750E+00 | 0    | 34       |         |          |               |                                       |
| 16.750E+00 - | 16.917E+00 | 0    | 34       |         |          |               |                                       |
| 16.917E+00 - | 17.083E+00 | 0    | 34       |         |          |               |                                       |
| 17.083E+00 - | 17.250E+00 | 0    | 34       |         |          |               |                                       |
| 17.250E+00 - | 17.417E+00 | 0    | 34       |         |          |               |                                       |
| 17.417E+00 - | 17.583E+00 | 0    | 34       |         |          |               |                                       |
| 17.583E+00 - | 17.750E+00 | 0    | 34       |         |          |               |                                       |
| 17.750E+00 - | 17.917E+00 | 0    | 34       |         |          |               |                                       |
| 17.917E+00 - | 18.083E+00 | 0    | 34       |         |          |               |                                       |
| 18.083E+00 - | 18.250E+00 | 0    | 34       |         |          |               |                                       |
| 18.250E+00 - | 18.417E+00 | 0    | 34       |         |          |               |                                       |
| 18.417E+00 - | 18.583E+00 | 0    | 34       |         |          |               |                                       |
| 18.583E+00 - | 18.750E+00 | 0    | 34       |         |          |               |                                       |
| 18.750E+00 - | 18.917E+00 | 0    | 34       |         |          |               |                                       |
| 18.917E+00 - | 19.083E+00 | 0    | 34       |         |          |               |                                       |
| 19.083E+00 - | 19.250E+00 | 0    | 34       |         |          |               |                                       |
| 19.250E+00 - | 19.417E+00 | 0    | 34       |         |          |               |                                       |
| 19.417E+00 - | 19.583E+00 | 0    | 34       |         |          |               |                                       |
| 19.583E+00 - | 19.750E+00 | 0    | 34       |         |          |               |                                       |
| 19.750E+00 - | 19.917E+00 | 0    | 34       |         |          |               |                                       |
| 19.917E+00 - | 20.083E+00 | 0    | 34       |         |          |               |                                       |
| 20.083E+00 - | 20.250E+00 | 0    | 34       |         |          |               |                                       |
| 20.250E+00 - | 20.417E+00 | 0    | 34       |         |          |               |                                       |
| 20.417E+00 - | 20.583E+00 | 0    | 34       |         |          |               |                                       |
| 20.583E+00 - | 20.750E+00 | 0    | 34       |         |          |               |                                       |
| 20.750E+00 - | 20.917E+00 | 0    | 34       |         |          |               |                                       |
| 20.917E+00 - | 21.083E+00 | 0    | 34       |         |          |               |                                       |
| 21.083E+00 - | 21.250E+00 | 0    | 34       |         |          |               |                                       |
| 21.250E+00 - | 21.417E+00 | 0    | 34       |         |          |               |                                       |
| 21.417E+00 - | 21.583E+00 | 0    | 34       |         |          |               |                                       |
| 21.583E+00 - | 21.750E+00 | 0    | 34       |         |          |               |                                       |
| 21.750E+00 - | 21.917E+00 | 0    | 34       |         |          |               |                                       |
| 21.917E+00 - | 22.083E+00 | 0    | 34       |         |          |               |                                       |
| 22.083E+00 - | 22.250E+00 | 0    | 34       |         |          |               |                                       |
| 22.250E+00 - | 22.417E+00 | 0    | 34       |         |          |               |                                       |
| 22.417E+00 - | 22.583E+00 | 0    | 34       |         |          |               |                                       |
| 22.583E+00 - | 22.750E+00 | 0    | 34       |         |          |               |                                       |
| 22.750E+00 - | 22.917E+00 | 0    | 34       |         |          |               |                                       |
| 22.917E+00 - | 23.083E+00 | 0    | 34       |         |          |               |                                       |
| 23.083E+00 - | 23.250E+00 | 0    | 34       |         |          |               |                                       |
| 23.250E+00 - | 23.417E+00 | 0    | 34       |         |          |               |                                       |
| 23.417E+00 - | 23.583E+00 | 0    | 34       |         |          |               |                                       |
| 23.583E+00 - | 23.750E+00 | 0    | 34       |         |          |               |                                       |
| 23.750E+00 - | 23.917E+00 | 0    | 34       |         |          |               |                                       |
| 23.917E+00 - | 24.083E+00 | 0    | 34       |         |          |               |                                       |
| 24.083E+00 - | 24.250E+00 | 0    | 34       |         |          |               |                                       |
| 24.250E+00 - | 24.417E+00 | 0    | 34       |         |          |               |                                       |
| 24.417E+00 - | 24.583E+00 | 0    | 34       |         |          |               |                                       |
| 24.583E+00 - | 24.750E+00 | 0    | 34       |         |          |               |                                       |
| 24.750E+00 - | 24.917E+00 | 0    | 34       |         |          |               |                                       |
| 24.917E+00 - | 25.083E+00 | 0    | 34       |         |          |               |                                       |
| 25.083E+00 - | 25.250E+00 | 0    | 34       |         |          |               |                                       |
| 25.250E+00 - | 25.417E+00 | 0    | 34       |         |          |               |                                       |
| 25.417E+00 - | 25.583E+00 | 0    | 34       |         |          |               |                                       |
| 25.583E+00 - | 25.750E+00 | 0    | 34       |         |          |               |                                       |
| 25.750E+00 - | 25.917E+00 | 0    | 34       |         |          |               |                                       |
| 25.917E+00 - | 26.083E+00 | 0    | 34       |         |          |               |                                       |
| 26.083E+00 - | 26.250E+00 | 0    | 34       |         |          |               |                                       |
| 26.250E+00 - | 26.417E+00 | 0    | 34       |         |          |               |                                       |
| 26.417E+00 - | 26.583E+00 | 0    | 34       |         |          |               |                                       |
| 26.583E+00 - | 26.750E+00 | 0    | 34       |         |          |               |                                       |
| 26.750E+00 - | 26.917E+00 | 0    | 34       |         |          |               |                                       |
| 26.917E+00 - | 27.083E+00 | 0    | 34       |         |          |               |                                       |
| 27.083E+00 - | 27.250E+00 | 0    | 34       |         |          |               |                                       |
| 27.250E+00 - | 27.417E+00 | 0    | 34       |         |          |               |                                       |
| 27.417E+00 - | 27.583E+00 | 0    | 34       |         |          |               |                                       |
| 27.583E+00 - | 27.750E+00 | 0    | 34       |         |          |               |                                       |
| 27.750E+00 - | 27.917E+00 | 0    | 34       |         |          |               |                                       |
| 27.917E+00 - | 28.083E+00 | 0    | 34       |         |          |               |                                       |
| 28.083E+00 - | 28.250E+00 | 0    | 34       |         |          |               |                                       |
| 28.250E+00 - | 28.417E+00 | 0    | 34       |         |          |               |                                       |
| 28.417E+00 - | 28.583E+00 | 0    | 34       |         |          |               |                                       |
| 28.583E+00 - | 28.750E+00 | 0    | 34       |         |          |               |                                       |
| 28.750E+00 - | 28.917E+00 | 0    | 34       |         |          |               |                                       |
| 28.917E+00 - | 29.083E+00 | 0    | 34       |         |          |               |                                       |
| 29.083E+00 - | 29.250E+00 | 0    | 34       |         |          |               |                                       |
| 29.250E+00 - | 29.417E+00 | 0    | 34       |         |          |               |                                       |
| 29.417E+00 - | 29.583E+00 | 0    | 34       |         |          |               |                                       |
| 29.583E+00 - | 29.750E+00 | 0    | 34       |         |          |               |                                       |
| 29.750E+00 - | 29.917E+00 | 0    | 34       |         |          |               |                                       |
| 29.917E+00 - | 30.083E+00 | 0    | 34       |         |          |               |                                       |
| 30.083E+00 - | 30.250E+00 | 0    | 34       |         |          |               |                                       |
| 30.250E+00 - | 30.417E+00 | 0    | 34       |         |          |               |                                       |
| 30.417E+00 - | 30.583E+00 | 0    | 34       |         |          |               |                                       |
| 30.583E+00 - | 30.750E+00 | 0    | 34       |         |          |               |                                       |
| 30.750E+00 - | 30.917E+00 | 0    | 34       |         |          |               |                                       |
| 30.917E+00 - | 31.083E+00 | 0    | 34       |         |          |               |                                       |
| 31.083E+00 - | 31.250E+00 | 0    | 34       |         |          |               |                                       |
| 31.250E+00 - | 31.417E+00 | 0    | 34       |         |          |               |                                       |
| 31.417E+00 - | 31.583E+00 | 0    | 34       |         |          |               |                                       |
| 31.583E+00 - | 31.750E+00 | 0    | 34       |         |          |               |                                       |
| 31.750E+00 - | 31.917E+00 | 0    | 34       |         |          |               |                                       |
| 31.917E+00 - | 32.083E+00 | 0    | 34       |         |          |               |                                       |
| 32.083E+00 - | 32.250E+00 | 0    | 34       |         |          |               |                                       |
| 32.250E+00 - | 32.417E+00 | 0    | 34       |         |          |               |                                       |
| 32.417E+00 - | 32.583E+00 | 0    | 34       |         |          |               |                                       |
| 32.583E+00 - | 32.750E+00 | 0    | 34       |         |          |               |                                       |
| 32.750E+00 - | 32.917E+00 | 0    | 34       |         |          |               |                                       |

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## FREQUENCY TABLE FOR VARIABLE 17 (S-CR )

| LOG LIMITS          |       | OBS  |          | PERCENT |          | THEOR FREQ    |                                       |
|---------------------|-------|------|----------|---------|----------|---------------|---------------------------------------|
| LOWER               | UPPER | FREQ | CUM FREQ | FREQ    | CUM FREQ | (NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
| N                   |       |      |          |         |          |               |                                       |
|                     |       | 0    | 0        | 0.00    | 0.00     |               |                                       |
| L                   |       |      |          |         |          |               |                                       |
|                     |       | 4    | 4        | 11.76   | 11.76    | 4.79          | 4.79                                  |
| T                   |       |      |          |         |          |               |                                       |
|                     |       | 0    | 4        | 0.00    | 11.76    |               |                                       |
|                     |       | 12   | 12       | 23.53   | 35.29    | 4.82          | 2.09                                  |
|                     |       | 1    | 13       | 2.94    | 38.24    | 6.39          | 4.55                                  |
|                     |       | 9    | 22       | 26.47   | 64.71    | 6.63          | 0.85                                  |
|                     |       | 5    | 27       | 14.71   | 79.41    | 5.37          | 0.03                                  |
|                     |       | 5    | 32       | 14.71   | 94.12    | 3.40          | 0.75                                  |
|                     |       | 2    | 34       | 5.88    | 100.00   | 2.59          | 0.13                                  |
|                     |       | 0    | 34       | 0.00    | 100.00   | 0.00          | 0.00                                  |
| G                   |       |      |          |         |          |               |                                       |
|                     |       | 0    | 34       | 0.00    | 100.00   |               |                                       |
| H                   |       |      |          |         |          |               |                                       |
|                     |       | 0    | 34       |         |          |               |                                       |
| B                   |       |      |          |         |          |               |                                       |
|                     |       | 0    | 34       |         |          |               |                                       |
| TOTALS LESS H AND B |       |      |          |         |          |               |                                       |
|                     |       |      | 34       |         |          |               |                                       |

HISTOGRAM FOR VARIABLE 17 (S-CR )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

4.638E+01 XXXXXXXXXXXXXXXXXXXXXXXX  
 6.808E+01 XX  
 9.992E+01 XXXXXXXXXXXXXXXXXXXXXXXX  
 1.467E+02 XXXXXXXXXXXXXXXXXX  
 2.153E+02 XXXXXXXXXXXXXXXXXX  
 3.160E+02 XXXXXXXX

## THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNCUALIFIED VALUES ONLY

MINIMUM ANTILOG = 5.00000E+01  
 MAXIMUM ANTILOG = 3.00000E+02  
 GEOMETRIC MEAN = 1.06143E+02  
 GEOMETRIC DEVIATION = 1.77256E+00  
 VARIANCE OF LOGS = 0.18021E-02

PERCENT TABLE FOR VARIABLE 17 (S-CR ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
 IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
 THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE  | ANTI LOG OF VALUE |
|------------------------|-------------|-------------------|
| 25.00                  | 1.00000E+35 | 1.00000E+35       |
| 50.00                  | 1.99040E+00 | 9.78156E+01       |
| 75.00                  | 2.19966E+00 | 1.58368E+02       |
| 90.00                  | 2.36966E+00 | 2.34243E+02       |
| 95.00                  | 1.00000E+35 | 1.00000E+35       |
| 98.00                  | 1.00000E+35 | 1.00000E+35       |
| 99.00                  | 1.00000E+35 | 1.00000E+35       |

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FREQUENCY TABLE FOR VARIABLE 18 (S-CU )

| LOG LIMITS          |           | OBS  |          | PERCENT |          | THEOR FREQ    |                                       |
|---------------------|-----------|------|----------|---------|----------|---------------|---------------------------------------|
| LOWER               | UPPER     | FREQ | CUM FREQ | FREQ    | CUM FREQ | (NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
| N                   |           | 0    | 0        | 0.00    | 0.00     |               |                                       |
| L                   |           | 4    | 4        | 11.76   | 11.76    | 5.15          | 5.15                                  |
| T                   |           | 0    | 4        | 0.00    | 11.76    | 7.85          | 10.67                                 |
| 9.160E+01           | 1.083E+00 | 17   | 21       | 50.00   | 61.76    | 9.68          | 6.09                                  |
| 1.083E+00           | 1.249E+00 | 2    | 23       | 5.88    | 67.65    | 7.16          | 0.01                                  |
| 1.249E+00           | 1.410E+00 | 6    | 29       | 17.65   | 85.29    | 3.18          | 0.03                                  |
| 1.410E+00           | 1.583E+00 | 3    | 32       | 8.82    | 94.12    | 0.84          |                                       |
| 1.583E+00           | 1.749E+00 | 1    | 33       | 2.94    | 97.06    | 0.15          |                                       |
| 1.749E+00           | 1.910E+00 | 1    | 34       | 2.94    | 100.00   | 0.00          |                                       |
| G                   |           | U    | 34       | 0.00    | 100.00   |               |                                       |
| H                   |           | C    | 34       |         |          |               |                                       |
| B                   |           | U    | 34       |         |          |               |                                       |
| TOTALS LESS H AND B |           |      | 34       |         |          |               |                                       |

HISTOGRAM FOR VARIABLE 18 (S-CU )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

5.585E+00 XX  
 1.466E+01 XXXXX  
 2.151E+01 XXXXXXXXXXXXXXXXXXXXXXXX  
 3.157E+01 XXXXXXXX  
 4.634E+01 XXX  
 6.802E+01 XXX

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 1.00000E+01  
 MAXIMUM ANTILOG = 7.00000E+01  
 GEOMETRIC MEAN = 1.48295E+01  
 GEOMETRIC DEVIATION = 1.72120E+00  
 VARIANCE OF LOGS = 5.56167E-02

PERCENT TABLE FOR VARIABLE 18 (S-CU ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
 IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
 THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE  | ANTI LOG OF VALUE |
|------------------------|-------------|-------------------|
| 25.00                  | 1.00000E+35 | 1.00000E+35       |
| 50.00                  | 1.00000E+35 | 1.00000E+35       |
| 75.00                  | 1.31877E+00 | 2.08342E+01       |
| 90.00                  | 1.50489E+00 | 3.19808E+01       |
| 95.00                  | 1.63260E+00 | 4.29208E+01       |
| 98.00                  | 1.00000E+35 | 1.00000E+35       |
| 99.00                  | 1.00000E+35 | 1.00000E+35       |

cedar min conc

FREQUENCY TABLE FOR VARIABLE 19 (S-LA )

| LOG LIMITS          |           | OBS FREQ |    | CUM FREQ |  | PERCENT FREQ |  | CUM PERCENT |  | THEOR FREQ    |  | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |  |
|---------------------|-----------|----------|----|----------|--|--------------|--|-------------|--|---------------|--|---------------------------------------|--|
| LOWER               | UPPER     |          |    |          |  |              |  |             |  | (NORMAL DIST) |  |                                       |  |
| N                   |           |          |    |          |  |              |  |             |  |               |  |                                       |  |
|                     |           | 1        | 1  |          |  | 2.94         |  | 2.94        |  | 3.36          |  | 3.36                                  |  |
| L                   |           |          |    |          |  |              |  |             |  |               |  |                                       |  |
|                     |           | 0        | 1  |          |  | 0.00         |  | 2.94        |  | 4.61          |  | 0.42                                  |  |
| T                   |           |          |    |          |  |              |  |             |  |               |  |                                       |  |
|                     |           | 0        | 1  |          |  | 0.00         |  | 2.94        |  | 6.85          |  | 2.74                                  |  |
| 2.250E+00           | 2.417E+00 | 6        | 13 |          |  | 17.65        |  | 20.59       |  | 7.48          |  | 0.66                                  |  |
| 2.417E+00           | 2.563E+00 | 12       | 25 |          |  | 35.29        |  | 38.424      |  | 5.99          |  | 0.06                                  |  |
| 2.563E+00           | 2.750E+00 | 4        | 29 |          |  | 11.76        |  | 65.29       |  | 3.53          |  | 1.53                                  |  |
| 2.750E+00           | 2.917E+00 | 4        | 33 |          |  | 11.76        |  | 97.06       |  | 1.53          |  | 0.23                                  |  |
| 2.917E+00           | 3.083E+00 | 0        | 33 |          |  | 0.00         |  | 97.06       |  | 0.62          |  | 0.00                                  |  |
| 3.083E+00           | 3.250E+00 | 1        | 34 |          |  | 2.94         |  | 100.00      |  |               |  |                                       |  |
| 3.250E+00           | 3.417E+00 | 0        | 34 |          |  | 0.00         |  | 100.00      |  |               |  |                                       |  |
| G                   |           |          |    |          |  |              |  |             |  |               |  |                                       |  |
|                     |           | 0        | 34 |          |  | 0.00         |  | 100.00      |  |               |  |                                       |  |
| H                   |           |          |    |          |  |              |  |             |  |               |  |                                       |  |
|                     |           | 0        | 34 |          |  | 0.00         |  | 100.00      |  |               |  |                                       |  |
| B                   |           |          |    |          |  |              |  |             |  |               |  |                                       |  |
|                     |           | 0        | 34 |          |  | 0.00         |  | 100.00      |  |               |  |                                       |  |
| TOTALS LESS H AND B |           |          |    |          |  |              |  |             |  |               |  |                                       |  |
|                     |           |          | 34 |          |  |              |  |             |  |               |  |                                       |  |

HISTOGRAM FOR VARIABLE 19 (S-LA )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

2.154E+02 XXXXXXXXXXXXXXXX  
 3.162E+02 XXXXXXXXXXXXXXXX  
 4.642E+02 XXXXXXXXXXXXXXXX  
 6.813E+02 XXXXXXXXXXXXXXXX  
 1.000E+03 XXXXXXXXXXXXXXXX  
 1.468E+03  
 2.154E+03 XXX

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNEQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 2.0000E+02  
 MAXIMUM ANTILOG = 2.0000E+03  
 GEOMETRIC MEAN = 4.35750E+02  
 GEOMETRIC DEVIATION = 1.77868E+00  
 VARIANCE OF LOGS = 6.25736E-02

PERCENT TABLE FOR VARIABLE 19 (S-LA ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
 IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
 THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|---------------------|--------------|-------------------|
| 25.00               | 2.458334E+00 | 2.872988E+02      |
| 50.00               | 2.638890E+00 | 4.354012E+02      |
| 75.00               | 2.770834E+00 | 5.899761E+02      |
| 90.00               | 2.983335E+00 | 9.623539E+02      |
| 95.00               | 3.054168E+00 | 1.132839E+03      |

98.00  
99.00

1.00000E+35  
1.00000E+35

1.00000E+35  
1.00000E+35



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FREQUENCY TABLE FOR VARIABLE 21 (S-NB )

| LOG LIMITS          |           | OBS FREQ |    | CUM FREQ |    | PERCENT FREQ |        | CUM PERCENT |        | THEOR FREQ    |       | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |  |
|---------------------|-----------|----------|----|----------|----|--------------|--------|-------------|--------|---------------|-------|---------------------------------------|--|
| LOWER               | UPPER     |          |    |          |    |              |        |             |        | (NORMAL DIST) |       |                                       |  |
| N                   |           | 0        | U  | 0        | U  | 0.00         | U      | 0.00        | U      | 5.20          | 5.20  |                                       |  |
| L                   |           | 24       | 24 | 24       | 24 | 70.59        | 70.59  | 70.59       | 70.59  | 10.31         | 2.73  |                                       |  |
| T                   |           | 0        | 24 | 0        | 24 | 0.00         | 0.00   | 0.00        | 0.00   | 11.32         | 11.32 |                                       |  |
| 1.583E+00           | 1.750E+00 | 5        | 29 | 5        | 29 | 14.71        | 85.29  | 85.29       | 85.29  | 5.71          | 2.41  |                                       |  |
| 1.750E+00           | 1.916E+00 | 0        | 29 | 0        | 29 | 0.00         | 0.00   | 0.00        | 0.00   | 1.32          | 1.32  |                                       |  |
| 1.916E+00           | 2.083E+00 | 2        | 31 | 2        | 31 | 5.83         | 91.18  | 91.18       | 91.18  | 0.14          | 0.00  |                                       |  |
| 2.083E+00           | 2.250E+00 | 0        | 31 | 0        | 31 | 0.00         | 0.00   | 0.00        | 0.00   | 0.00          | 0.00  |                                       |  |
| 2.250E+00           | 2.416E+00 | 3        | 34 | 3        | 34 | 8.82         | 100.00 | 100.00      | 100.00 | 0.00          | 0.00  |                                       |  |
|                     |           | 6        | 34 | 6        | 34 | 0.00         | 0.00   | 0.00        | 0.00   | 0.00          | 0.00  |                                       |  |
|                     |           | H        | 34 | 0        | 34 | 0.00         | 0.00   | 0.00        | 0.00   | 0.00          | 0.00  |                                       |  |
|                     |           | B        | 34 | 0        | 34 | 0.00         | 0.00   | 0.00        | 0.00   | 0.00          | 0.00  |                                       |  |
| TOTALS LESS H AND B |           |          |    | 34       |    |              |        |             |        |               |       |                                       |  |

HISTOGRAM FOR VARIABLE 21 (S-NB )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

4.630E+01 XXXXXXXXXXXXXXXX  
6.808E+01  
9.992E+01 XXXXX  
1.407E+02  
2.153E+02 XXXXXXXXX

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 5.00000E+01  
MAXIMUM ANTILOG = 2.00000E+02  
GEOMETRIC MEAN = 8.70551E+01  
GEOMETRIC DEVIATION = 1.89072E+00  
VARIANCE OF LOGS = 7.05222E-02

PERCENT TABLE FOR VARIABLE 21 (S-NB ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|---------------------|--------------|-------------------|
| 25.00               | 1.000000E+35 | 1.000000E+35      |
| 50.00               | 1.000000E+35 | 1.000000E+35      |
| 75.00               | 1.000000E+35 | 1.000000E+35      |
| 90.00               | 2.016334E+00 | 1.036327E+02      |
| 95.00               | 1.000000E+35 | 1.000000E+35      |
| 98.00               | 1.000000E+35 | 1.000000E+35      |
| 99.00               | 1.000000E+35 | 1.000000E+35      |

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FREQUENCY TABLE FOR VARIABLE 22 (S-NI )

| LOG LIMITS          |           | OBS  |      | CUM  |      | PERCENT |        | PERCENT |      | THEOR FREQ    |  | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |  |
|---------------------|-----------|------|------|------|------|---------|--------|---------|------|---------------|--|---------------------------------------|--|
| LOWER               | UPPER     | FREQ | FREQ | FREQ | FREQ | FREQ    | FREQ   | FREQ    | FREQ | (NORMAL DIST) |  |                                       |  |
| N                   |           | 9    | 9    |      |      | 20.47   | 20.47  |         |      |               |  |                                       |  |
| L                   |           | 13   | 22   |      |      | 38.24   | 64.71  |         |      | 4.01          |  |                                       |  |
| T                   |           | 0    | 22   |      |      | 0.00    | 64.71  |         |      | 17.70         |  |                                       |  |
| 9.16E-01            | 1.083E+00 | 7    | 29   |      |      | 20.59   | 85.29  |         |      | 11.30         |  |                                       |  |
| 1.083E+00           | 1.249E+00 | 0    | 29   |      |      | 0.00    | 85.29  |         |      | 0.99          |  |                                       |  |
| 1.249E+00           | 1.416E+00 | 5    | 34   |      |      | 14.71   | 100.00 |         |      | 0.00          |  |                                       |  |
| G                   |           | 0    | 34   |      |      | 0.00    | 100.00 |         |      |               |  |                                       |  |
| H                   |           | 0    | 34   |      |      | 0.00    |        |         |      |               |  |                                       |  |
| a                   |           | 0    | 34   |      |      | 0.00    |        |         |      |               |  |                                       |  |
| TOTALS LESS H AND B |           |      | 34   |      |      |         |        |         |      |               |  |                                       |  |

HISTOGRAM FOR VARIABLE 22 (S-NI )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

9.985E+00 XXXXXXXXXXXXXXXXXXXX  
1.466E+01  
2.151E+01 XXXXXXXXXXXXXXXXXXXX

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNEQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 1.00000E+01  
MAXIMUM ANTILOG = 2.00000E+01  
GEOMETRIC MEAN = 1.33684E+01  
GEOMETRIC DEVIATION = 1.42892E+00  
VARIANCE OF LOGS = 2.40278E-02

PERCENT TABLE FOR VARIABLE 22 (S-NI ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE  | ANTI LOG OF VALUE |
|------------------------|-------------|-------------------|
| 25.00                  | 1.00000E+35 | 1.00000E+35       |
| 50.00                  | 1.00000E+35 | 1.00000E+35       |
| 75.00                  | 1.00000E+35 | 1.00000E+35       |
| 90.00                  | 1.00000E+35 | 1.00000E+35       |
| 95.00                  | 1.00000E+35 | 1.00000E+35       |
| 98.00                  | 1.00000E+35 | 1.00000E+35       |
| 99.00                  | 1.00000E+35 | 1.00000E+35       |

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FREQUENCY TABLE FOR VARIABLE 23 (S-PB )

| LOG LIMITS  |              | OBS  |          | PERCENT |          | PERCENT       |  | THEOR FREQ |  | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |  |
|-------------|--------------|------|----------|---------|----------|---------------|--|------------|--|---------------------------------------|--|
| LOWER       | UPPER        | FREQ | CUM FREQ | FREQ    | CUM FREQ | (NORMAL DIST) |  |            |  |                                       |  |
| N           |              | 5    | 5        | 14.71   | 14.71    |               |  |            |  |                                       |  |
| L           |              | 14   | 19       | 41.18   | 55.88    |               |  | 7.40       |  |                                       |  |
| T           |              | 0    | 19       | 0.00    | 55.88    |               |  | 9.28       |  |                                       |  |
| 1.250E+00 - | 1.417E+00    | 6    | 25       | 17.65   | 73.53    |               |  | 9.44       |  |                                       |  |
| 1.417E+00 - | 1.583E+00    | 1    | 26       | 2.94    | 76.47    |               |  | 5.56       |  |                                       |  |
| 1.583E+00 - | 1.750E+00    | 5    | 31       | 14.71   | 91.18    |               |  | 1.90       |  |                                       |  |
| 1.750E+00 - | 1.917E+00    | 1    | 32       | 2.94    | 94.12    |               |  | 0.42       |  |                                       |  |
| 1.917E+00 - | 2.083E+00    | 2    | 34       | 5.88    | 100.00   |               |  | 5.98       |  |                                       |  |
| G           |              | 0    | 34       | 0.00    | 100.00   |               |  | 0.00       |  |                                       |  |
| H           |              | 0    | 34       | 0.00    | 100.00   |               |  | 0.00       |  |                                       |  |
| B           |              | 0    | 34       | 0.00    | 100.00   |               |  | 0.00       |  |                                       |  |
| TOTALS      | LESS H AND B |      | 34       |         |          |               |  |            |  |                                       |  |

HISTOGRAM FOR VARIABLE 23 (S-PB )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

2.154E+01 XXXXXXXXXXXXXXXXX  
3.162E+01 XXX  
4.642E+01 XXXXXXXXXXXXXXXXX  
6.813E+01 XXX  
1.000E+02 XXXXX

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNEQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 2.00000E+01  
MAXIMUM ANTILOG = 1.00000E+02  
GEOMETRIC MEAN = 3.75736E+01  
GEOMETRIC DEVIATION = 1.83381E+00  
VARIANCE OF LOGS = 0.93559E-02

PERCENT TABLE FOR VARIABLE 23 (S-PB ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|------------------------|--------------|-------------------|
| 25.00                  | 1.000000E+35 | 1.000000E+35      |
| 50.00                  | 1.000000E+35 | 1.000000E+35      |
| 75.00                  | 1.500001E+00 | 3.162281E+01      |
| 90.00                  | 1.75668E+00  | 5.453404E+01      |
| 95.00                  | 1.000000E+35 | 1.000000E+35      |
| 98.00                  | 1.000000E+35 | 1.000000E+35      |
| 99.00                  | 1.000000E+35 | 1.000000E+35      |

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## FREQUENCY TABLE FOR VARIABLE 25 (S-SC )

| LOG LIMITS          |           | OBS  |          | PERCENT |          | PERCENT |          | THEOR FREQ    |  | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |  |
|---------------------|-----------|------|----------|---------|----------|---------|----------|---------------|--|---------------------------------------|--|
| LOWER               | UPPER     | FREQ | CUM FREQ | FREQ    | CUM FREQ | FREQ    | CUM FREQ | (NORMAL DIST) |  |                                       |  |
| N                   |           |      |          |         |          |         |          |               |  |                                       |  |
|                     |           | 6    | 0        | 0.00    | 0.00     |         |          |               |  |                                       |  |
| L                   |           |      |          |         |          |         |          |               |  |                                       |  |
|                     |           | 30   | 30       | 88.24   | 88.24    |         |          | 6.45          |  | 6.45                                  |  |
| T                   |           |      |          |         |          |         |          |               |  |                                       |  |
|                     |           | 0    | 30       | 0.00    | 88.24    |         |          | 15.99         |  | 12.24                                 |  |
| 9.160E+01           | 1.083E+00 | 2    | 32       | 5.88    | 94.12    |         |          | 10.06         |  | 0.14                                  |  |
| 1.083E+00           | 1.249E+00 | 0    | 32       | 0.00    | 94.12    |         |          | 0.00          |  | 0.00                                  |  |
| 1.249E+00           | 1.416E+00 | 1    | 33       | 2.94    | 97.06    |         |          | 0.05          |  | 0.00                                  |  |
| 1.416E+00           | 1.583E+00 | 0    | 33       | 0.00    | 97.06    |         |          | 0.00          |  | 0.00                                  |  |
| 1.583E+00           | 1.749E+00 | 1    | 34       | 2.94    | 100.00   |         |          | 19.49         |  | 0.00                                  |  |
|                     |           | 0    | 34       | 0.00    | 100.00   |         |          | 0.00          |  |                                       |  |
| G                   |           |      |          |         |          |         |          |               |  |                                       |  |
|                     |           | 0    | 34       | 0.00    |          |         |          |               |  |                                       |  |
| H                   |           |      |          |         |          |         |          |               |  |                                       |  |
|                     |           | 0    | 34       | 0.00    |          |         |          |               |  |                                       |  |
| B                   |           |      |          |         |          |         |          |               |  |                                       |  |
|                     |           | 0    | 34       | 0.00    |          |         |          |               |  |                                       |  |
| TOTALS LESS H AND B |           |      |          |         |          |         |          |               |  |                                       |  |
|                     |           |      | 34       |         |          |         |          |               |  |                                       |  |

HISTOGRAM FOR VARIABLE 25 (S-SC )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

9.985E+00 XXXXX  
 1.600E+01  
 2.151E+01 XXX  
 3.157E+01  
 4.634E+01 XXX

## THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 1.00000E+01  
 MAXIMUM ANTILOG = 5.00000E+01  
 GEOMETRIC MEAN = 1.77828E+01  
 GEOMETRIC DEVIATION = 2.14412E+00  
 VARIANCE OF LOGS = 1.09726E-01

PERCENT TABLE FOR VARIABLE 25 (S-SC ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
 IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
 THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999997E 50

| SELECTED PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|---------------------|--------------|-------------------|
| 25.00               | 1.00000E+35  | 1.00000E+35       |
| 50.00               | 1.00000E+35  | 1.00000E+35       |
| 75.00               | 1.00000E+35  | 1.00000E+35       |
| 90.00               | 1.00000E+35  | 1.00000E+35       |
| 95.00               | 1.182667E+00 | 1.522885E+01      |
| 98.00               | 1.00000E+35  | 1.00000E+35       |
| 99.00               | 1.00000E+35  | 1.00000E+35       |

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FREQUENCY TABLE FOR VARIABLE 26 (S-SN )

| LOG LIMITS          |           | OBS  |          | PERCENT |          | THEOR FREQ    |                                       |
|---------------------|-----------|------|----------|---------|----------|---------------|---------------------------------------|
| LOWER               | UPPER     | FREQ | CUM FREQ | FREQ    | CUM FREQ | (NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
| N                   |           | 14   | 14       | 41.18   | 41.18    |               |                                       |
| L                   |           | 0    | 14       | 0.00    | 41.18    | 9.17          | 9.17                                  |
| T                   |           | 0    | 14       | 0.00    | 41.18    | 4.26          | 2.49                                  |
| 1.410E+00           | 1.583E+00 | 1    | 15       | 2.94    | 44.12    | 4.66          | 0.38                                  |
| 1.583E+00           | 1.749E+00 | 6    | 21       | 17.65   | 61.76    | 4.54          | 0.05                                  |
| 1.749E+00           | 1.910E+00 | 5    | 26       | 14.71   | 76.47    | 3.92          | 0.21                                  |
| 1.910E+00           | 2.083E+00 | 3    | 29       | 8.82    | 85.29    | 3.00          | 3.00                                  |
| 2.083E+00           | 2.249E+00 | 0    | 29       | 0.00    | 85.29    | 2.04          | 0.45                                  |
| 2.249E+00           | 2.410E+00 | 3    | 32       | 8.82    | 94.12    | 1.23          | 1.23                                  |
| 2.410E+00           | 2.583E+00 | 0    | 32       | 0.00    | 94.12    | 0.66          | 0.66                                  |
| 2.583E+00           | 2.749E+00 | 1    | 33       | 2.94    | 97.06    | 0.31          | 1.50                                  |
| 2.749E+00           | 2.910E+00 | 0    | 33       | 0.00    | 97.06    | 0.13          | 0.13                                  |
| 2.910E+00           | 3.083E+00 | 0    | 33       | 0.00    | 97.06    | 0.05          | 0.05                                  |
| 3.083E+00           | 3.249E+00 | 1    | 34       | 2.94    | 100.00   | 0.02          | 41.53                                 |
| 3.249E+00           | 3.410E+00 | 0    | 34       | 0.00    | 100.00   | 0.00          | 0.00                                  |
| G                   |           | 0    | 34       |         |          |               |                                       |
| H                   |           | 0    | 34       |         |          |               |                                       |
| B                   |           | 0    | 34       |         |          |               |                                       |
| TOTALS LESS H AND B |           | 34   |          |         |          |               |                                       |

HISTOGRAM FOR VARIABLE 26 (S-SN )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

```

3.157E+01 XXX
4.634E+01 XXXXXXXXXXXXXXXXXXXX
6.802E+01 XXXXXXXXXXXXXXXXXXXX
9.985E+01 XXXXXXXXXXXX
1.466E+02
2.151E+02 XXXXXXXXXXXX
3.157E+02
4.634E+02
6.802E+02 XXX
9.985E+02
1.466E+03
2.151E+03 XXX
    
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNEQUALLED VALUES ONLY

```

MINIMUM ANTILOG = 3.00000E+01
MAXIMUM ANTILOG = 2.00000E+03
GEOMETRIC MEAN = 9.93762E+01
GEOMETRIC DEVIATION = 2.73044E+00
VARIANCE OF LOGS = 1.90299E-01
    
```

PERCENT TABLE FOR VARIABLE 26 (S-SN ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,

THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED<br>PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|------------------------|--------------|-------------------|
| 25.00                  | 1.000000E+35 | 1.000000E+35      |
| 50.00                  | 1.638223E+00 | 4.347331E+01      |
| 75.00                  | 1.899334E+00 | 7.931116E+01      |
| 90.00                  | 2.260446E+00 | 1.821571E+02      |
| 95.00                  | 2.566002E+00 | 3.681309E+02      |
| 96.00                  | 1.000000E+35 | 1.000000E+35      |
| 99.00                  | 1.000000E+35 | 1.000000E+35      |

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FREQUENCY TABLE FOR VARIABLE 27 (S-SR )

| LOG LIMITS |              | OBS FREQ |    | CUM FREQ |    | PERCENT FREQ |       | PERCENT CUM FREQ |      | THEOR FREQ (NORMAL DIST) |      | THEOR FREQ - OBS FREQ**2/THEOR FREQ |      |
|------------|--------------|----------|----|----------|----|--------------|-------|------------------|------|--------------------------|------|-------------------------------------|------|
| LOWER      | UPPER        |          |    |          |    |              |       |                  |      |                          |      |                                     |      |
| N          |              | 0        | 0  | 0        | 0  | 0.00         | 0.00  | 0.00             | 0.00 | 1.97                     | 1.97 | 0.00                                | 0.00 |
| L          |              | 0        | 0  | 0        | 0  | 0.00         | 0.00  | 0.00             | 0.00 | 2.33                     | 2.33 | 0.19                                | 0.19 |
| T          |              | 0        | 0  | 0        | 0  | 0.00         | 0.00  | 0.00             | 0.00 | 3.78                     | 3.78 | 2.74                                | 2.74 |
| 2.583E+00  | 2.750E+00    | 3        | 3  | 3        | 3  | 0.82         | 29.41 | 52.94            | 5.11 | 5.11                     | 1.63 | 2.40                                | 2.40 |
| 2.750E+00  | 2.916E+00    | 7        | 10 | 10       | 10 | 20.59        | 58.62 | 70.59            | 5.42 | 5.42                     | 0.37 | 0.37                                | 0.37 |
| 2.916E+00  | 3.083E+00    | 8        | 18 | 18       | 18 | 23.53        | 62.35 | 76.18            | 4.25 | 4.25                     | 0.02 | 0.02                                | 0.02 |
| 3.083E+00  | 3.250E+00    | 2        | 20 | 20       | 20 | 5.88         | 91.16 | 94.12            | 2.78 | 2.78                     | 1.52 | 1.52                                | 1.52 |
| 3.250E+00  | 3.416E+00    | 4        | 24 | 24       | 24 | 11.76        | 94.12 | 100.00           | 1.97 | 1.97                     | 0.00 | 0.00                                | 0.00 |
| 3.416E+00  | 3.583E+00    | 4        | 26 | 26       | 26 | 11.76        | 94.12 | 100.00           | 1.97 | 1.97                     | 0.00 | 0.00                                | 0.00 |
| 3.583E+00  | 3.750E+00    | 3        | 31 | 31       | 31 | 8.82         | 94.12 | 100.00           | 1.97 | 1.97                     | 0.00 | 0.00                                | 0.00 |
| 3.750E+00  | 3.916E+00    | 0        | 32 | 32       | 32 | 0.00         | 94.12 | 100.00           | 1.97 | 1.97                     | 0.00 | 0.00                                | 0.00 |
| 3.916E+00  | 4.083E+00    | 1        | 33 | 33       | 33 | 2.94         | 94.12 | 100.00           | 1.97 | 1.97                     | 0.00 | 0.00                                | 0.00 |
| G          |              | 2        | 34 | 34       | 34 | 5.88         | 94.12 | 100.00           | 1.97 | 1.97                     | 0.00 | 0.00                                | 0.00 |
| H          |              | 0        | 34 | 34       | 34 | 5.88         | 94.12 | 100.00           | 1.97 | 1.97                     | 0.00 | 0.00                                | 0.00 |
| TOTALS     | LESS H AND B |          | 34 |          |    |              |       |                  |      |                          |      |                                     |      |

HISTOGRAM FOR VARIABLE 27 (S-SR )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

```

4.636E+02 XXXXXXXXX
6.806E+02 XXXXXXXXXXXXXXXXXXXXXXXX
9.992E+02 XXXXXXXXXXXXXXXXXXXXXXXX
1.467E+03 XXXXX
2.153E+03 XXXXXXXXXXXXXXXX
3.106E+03 XXXXXXXXXXXXXXXX
4.638E+03 XXXXXXXXX
6.808E+03 XXXXXXXXX
9.992E+03 XXX
    
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNGRAFFED VALUES ONLY

```

MINIMUM ANTILOG = 5.00000E+02
MAXIMUM ANTILOG = 1.00000E+06
GEOMETRIC MEAN = 1.38978E+03
GEOMETRIC DEVIATION = 2.18850E+00
VARIANCE OF LOGS = 1.15699E-01
    
```

PERCENT TABLE FOR VARIABLE 27 (S-SR ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|---------------------|--------------|-------------------|
| 25.00               | 2.880620E+00 | 7.596607E+02      |

5C.00  
75.00  
90.00  
95.00  
98.00  
99.00

3.062166E+00  
3.47835E+00  
3.727447E+00  
1.000000E+35  
1.000000E+35  
1.000000E+35

1.153699E+03  
3.011862E+03  
5.338638E+03  
1.000000E+35  
1.000000E+35  
1.000000E+35



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## FREQUENCY TABLE FOR VARIABLE 28 (S-V )

| LOG LIMITS            | OBS FREQ | CUM FREQ | PERCENT FREQ | PERCENT CUM FREQ | THEOR FREQ (NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
|-----------------------|----------|----------|--------------|------------------|--------------------------|---------------------------------------|
| LOWER -               | UPPER    |          |              |                  |                          |                                       |
| N                     | 0        | 0        | 0.00         | 0.00             | 0.02                     | 0.02                                  |
| L                     | 0        | 0        | 0.00         | 0.00             | 0.43                     | 0.76                                  |
| T                     | 0        | 0        | 0.00         | 0.00             | 3.40                     | 0.58                                  |
| 1.583E+00 - 1.750E+00 | 1        | 1        | 2.94         | 2.94             | 3.40                     | 0.61                                  |
| 1.750E+00 - 1.916E+00 | 2        | 3        | 5.88         | 8.82             | 10.48                    | 2.46                                  |
| 1.916E+00 - 2.083E+00 | 13       | 16       | 36.24        | 47.06            | 12.59                    | 2.17                                  |
| 2.083E+00 - 2.250E+00 | 7        | 23       | 20.59        | 67.65            | 7.08                     | 0.02                                  |
| 2.250E+00 - 2.416E+00 | 11       | 34       | 32.35        | 100.00           |                          |                                       |
| G                     | 0        | 34       | 0.00         | 100.00           |                          |                                       |
| H                     | 0        | 34       |              |                  |                          |                                       |
| B                     | 0        | 34       |              |                  |                          |                                       |
| TOTALS LESS H AND B   |          | 34       |              |                  |                          |                                       |

HISTOGRAM FOR VARIABLE 26 (S-V )  
MIDPOINTS ARE EXPRESSED AS ANTILOGS

4.638E+01 XX  
 6.800E+01 XXXXX  
 9.592E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 1.467E+02 XXXXXXXXXXXXXXXXXXXXXXXX  
 2.153E+02 XXXXXXXXXXXXXXXXXXXXXXXX

## THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNEQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 5.0000E+01  
 MAXIMUM ANTILOG = 2.0000E+02  
 GEOMETRIC MEAN = 1.30521E+02  
 GEOMETRIC DEVIATION = 1.46169E+00  
 VARIANCE OF LOGS = 2.71964E-02

PERCENT TABLE FOR VARIABLE 26 (S-V ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
 IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
 THE DATA VALUE ON THE TABLE IS GIVEN AS 0.999991E 50

| SELECTED PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|---------------------|--------------|-------------------|
| 25.00               | 1.986847E+00 | 9.701680E+01      |
| 50.00               | 2.106811E+00 | 1.278823E+02      |
| 75.00               | 1.000000E+35 | 1.000000E+35      |
| 90.00               | 1.000000E+35 | 1.000000E+35      |
| 95.00               | 1.000000E+35 | 1.000000E+35      |
| 98.00               | 1.000000E+35 | 1.000000E+35      |
| 99.00               | 1.000000E+35 | 1.000000E+35      |

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FREQUENCY TABLE FOR VARIABLE 30 (S-Y )

| LOG LIMITS |              | OBS  |          | PERCENT |          | THEOR FREQ    |                                       |
|------------|--------------|------|----------|---------|----------|---------------|---------------------------------------|
| LOWER      | UPPER        | FREQ | CUM FREQ | FREQ    | CUM FREQ | (NORMAL DIST) | (THEOR FREQ - OBS FREQ)**2/THEOR FREQ |
| N          |              | 1    | 1        | 2.94    | 2.94     |               |                                       |
| L          |              | 0    | 1        | 0.00    | 2.94     |               |                                       |
| T          |              | 0    | 1        | 0.00    | 2.94     |               |                                       |
| 2.583E+00  | 2.750E+00    | 8    | 9        | 23.53   | 26.47    | 6.98          | 6.98                                  |
| 2.750E+00  | 2.916E+00    | 14   | 23       | 41.18   | 67.65    | 0.02          | 0.65                                  |
| 2.916E+00  | 3.083E+00    | 6    | 29       | 17.65   | 85.29    | 7.02          | 6.95                                  |
| 3.083E+00  | 3.250E+00    | 4    | 33       | 11.76   | 97.06    | 6.26          | 0.01                                  |
| 3.250E+00  | 3.416E+00    | 1    | 34       | 2.94    | 100.00   | 4.27          | 0.02                                  |
| G          |              | 0    | 34       | 0.00    | 100.00   | 3.46          | 1.75                                  |
| H          |              | 0    | 34       | 0.00    | 100.00   | 0.00          | 0.00                                  |
| TOTALS     | LESS H AND G |      | 34       |         |          |               |                                       |

HISTOGRAM FOR VARIABLE 30 (S-Y )

MIDPOINTS ARE EXPRESSED AS ANTILOGS

```

4.638E+02 XXXXXXXXXXXXXXXXXXXXXXXX
6.806E+02 XXXXXXXXXXXXXXXXXXXXXXXX
5.792E+02 XXXXXXXXXXXXXXXXXXXXXXXX
1.467E+03 XXXXXXXXXXXXXXXXXX
2.153E+03 XXX
    
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 5.00000E+02  
 MAXIMUM ANTILOG = 2.00000E+03  
 GEOMETRIC MEAN = 7.79424E+02  
 GEOMETRIC DEVIATION = 1.46783E+00  
 VARIANCE OF LOGS = 2.77613E-02

PERCENT TABLE FOR VARIABLE 30 (S-Y ) BY LINEAR INTERPOLATION FROM FREQUENCY TABLE  
 IF SELECTED PERCENTILES FALL WITHIN DATA EITHER ABOVE OR BELOW THE LIMITS OF DETECTION,  
 THE DATA VALUE ON THE TABLE IS GIVEN AS 0.9999991E 50

| SELECTED PERCENTILE | DATA VALUE   | ANTI LOG OF VALUE |
|---------------------|--------------|-------------------|
| 25.00               | 1.000000E+35 | 1.000000E+35      |
| 50.00               | 2.844905E+00 | 6.996894E+02      |
| 75.00               | 2.985779E+00 | 9.677844E+02      |
| 90.00               | 3.149666E+00 | 1.411457E+03      |
| 95.00               | 3.220501E+00 | 1.601504E+03      |
| 98.00               | 1.000000E+35 | 1.000000E+35      |
| 99.00               | 1.000000E+35 | 1.000000E+35      |

| TITLE                    | INPUT ID   | N  | M  | ***** OPTIONS ***** | OUTPUT ID  | N  | M  |
|--------------------------|------------|----|----|---------------------|------------|----|----|
| cedar mountain sediments | -cdr_seds- | 34 | 36 | 1 0 1 1 0 0 0 0 0 0 | -cdr_seds- | 34 | 34 |

NUMBER OF SELECTED COLUMNS 34

SELECTED COLUMN INDICES

|    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| 33 | 34 | 35 | 36 |    |    |    |    |    |    |

SELECTED COLUMN IDENTIFIERS

|       |         |         |         |      |      |      |      |      |      |
|-------|---------|---------|---------|------|------|------|------|------|------|
| S-FEZ | S-MGN   | S-CAZ   | S-TIX   | S-MN | S-AG | S-AS | S-AU | S-B  | S-BA |
| S-GE  | S-BI    | S-CD    | S-CO    | S-CR | S-CU | S-LA | S-MO | S-NB | S-NI |
| S-PE  | S-SB    | S-SC    | S-SN    | S-SR | S-V  | S-W  | S-Y  | S-ZN | S-ZR |
| S-TH  | AA-AS-P | AA-ZN-P | AA-SB-P |      |      |      |      |      |      |

NUMBER OF SELECTED ROW PAIRS 1

SELECTED ROW PAIRS

1- 34

P H A S E T W O R E S U L T S

\*\*\*\*\* THE RESULTS FROM THIS PHASE "SHOULD NOT" BE ENTERED INTO DUC96-FACTOR ANALYSIS.  
 THE CORRELATION MATRIX FROM THIS PHASE DOES NOT HAVE THE GRAMIAN PROPERTIES  
 WHICH ARE REQUIRED FOR FACTOR ANALYSIS.

DC101 CORRELATION ANALYSIS - USGS STATPAC (01/15/82)

DATE 11/29/84

ARRAY OF MEANS -

|            | 3       | 4       | 5       | 6       | 7       | 8       | 9       | 10      | 11      | 12      |
|------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|            | S-FEX   | S-MGX   | S-CAX   | S-TIX   | S-MN    | S-AG    | S-AS    | S-AU    | S-B     | S-BA    |
| 1 S-FEX    | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  |
| 2 S-MGX    | -0.0473 | -0.0473 | -0.0473 | -0.0473 | -0.0473 | -0.0473 | -0.0473 | -0.0473 | -0.0473 | -0.0473 |
| 3 S-CAX    | 0.3551  | 0.3551  | 0.3551  | 0.3551  | 0.3551  | 0.3551  | 0.3551  | 0.3551  | 0.3551  | 0.3551  |
| 4 S-TIX    | -0.5369 | -0.5369 | -0.5369 | -0.5369 | -0.5369 | -0.5369 | -0.5369 | -0.5369 | -0.5369 | -0.5369 |
| 5 S-MN     | 2.7608  | 2.7608  | 2.7608  | 2.7608  | 2.7608  | 2.7608  | 2.7608  | 2.7608  | 2.7608  | 2.7608  |
| 6 S-AG     | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  |
| 7 S-AS     | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  |
| 8 S-AU     | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  | 0.3865  |
| 9 S-B      | 1.7055  | 1.7055  | 1.7055  | 1.7055  | 1.7055  | 1.7055  | 1.7055  | 1.7055  | 1.7055  | 1.7055  |
| 10 S-BA    | 2.8017  | 2.8017  | 2.8017  | 2.8017  | 2.8017  | 2.8017  | 2.8017  | 2.8017  | 2.8017  | 2.8017  |
| 11 S-B     | 0.2959  | 0.2959  | 0.2959  | 0.2959  | 0.2959  | 0.2959  | 0.2959  | 0.2959  | 0.2959  | 0.2959  |
| 12 S-BI    | 0.2959  | 0.2959  | 0.2959  | 0.2959  | 0.2959  | 0.2959  | 0.2959  | 0.2959  | 0.2959  | 0.2959  |
| 13 S-CO    | 0.9624  | 0.9624  | 0.9624  | 0.9624  | 0.9624  | 0.9624  | 0.9624  | 0.9624  | 0.9624  | 0.9624  |
| 14 S-CO    | 1.5393  | 1.5393  | 1.5393  | 1.5393  | 1.5393  | 1.5393  | 1.5393  | 1.5393  | 1.5393  | 1.5393  |
| 15 S-CR    | 1.2703  | 1.2703  | 1.2703  | 1.2703  | 1.2703  | 1.2703  | 1.2703  | 1.2703  | 1.2703  | 1.2703  |
| 16 S-CU    | 1.8825  | 1.8825  | 1.8825  | 1.8825  | 1.8825  | 1.8825  | 1.8825  | 1.8825  | 1.8825  | 1.8825  |
| 17 S-LA    | 1.8825  | 1.8825  | 1.8825  | 1.8825  | 1.8825  | 1.8825  | 1.8825  | 1.8825  | 1.8825  | 1.8825  |
| 18 S-KO    | 1.8825  | 1.8825  | 1.8825  | 1.8825  | 1.8825  | 1.8825  | 1.8825  | 1.8825  | 1.8825  | 1.8825  |
| 19 S-AB    | 1.1086  | 1.1086  | 1.1086  | 1.1086  | 1.1086  | 1.1086  | 1.1086  | 1.1086  | 1.1086  | 1.1086  |
| 20 S-NI    | 1.1812  | 1.1812  | 1.1812  | 1.1812  | 1.1812  | 1.1812  | 1.1812  | 1.1812  | 1.1812  | 1.1812  |
| 21 S-PB    | 0.9600  | 0.9600  | 0.9600  | 0.9600  | 0.9600  | 0.9600  | 0.9600  | 0.9600  | 0.9600  | 0.9600  |
| 22 S-SB    | 2.4430  | 2.4430  | 2.4430  | 2.4430  | 2.4430  | 2.4430  | 2.4430  | 2.4430  | 2.4430  | 2.4430  |
| 23 S-SC    | 1.9497  | 1.9497  | 1.9497  | 1.9497  | 1.9497  | 1.9497  | 1.9497  | 1.9497  | 1.9497  | 1.9497  |
| 24 S-SN    | 2.4430  | 2.4430  | 2.4430  | 2.4430  | 2.4430  | 2.4430  | 2.4430  | 2.4430  | 2.4430  | 2.4430  |
| 25 S-SR    | 1.3201  | 1.3201  | 1.3201  | 1.3201  | 1.3201  | 1.3201  | 1.3201  | 1.3201  | 1.3201  | 1.3201  |
| 26 S-V     | 2.5365  | 2.5365  | 2.5365  | 2.5365  | 2.5365  | 2.5365  | 2.5365  | 2.5365  | 2.5365  | 2.5365  |
| 27 S-W     | 2.2873  | 2.2873  | 2.2873  | 2.2873  | 2.2873  | 2.2873  | 2.2873  | 2.2873  | 2.2873  | 2.2873  |
| 28 S-Y     | 1.3201  | 1.3201  | 1.3201  | 1.3201  | 1.3201  | 1.3201  | 1.3201  | 1.3201  | 1.3201  | 1.3201  |
| 29 S-ZN    | 2.5365  | 2.5365  | 2.5365  | 2.5365  | 2.5365  | 2.5365  | 2.5365  | 2.5365  | 2.5365  | 2.5365  |
| 30 S-ZR    | 2.2873  | 2.2873  | 2.2873  | 2.2873  | 2.2873  | 2.2873  | 2.2873  | 2.2873  | 2.2873  | 2.2873  |
| 31 S-TH    | 0.9280  | 0.9280  | 0.9280  | 0.9280  | 0.9280  | 0.9280  | 0.9280  | 0.9280  | 0.9280  | 0.9280  |
| 32 AA-AS-P | 1.7128  | 1.7128  | 1.7128  | 1.7128  | 1.7128  | 1.7128  | 1.7128  | 1.7128  | 1.7128  | 1.7128  |
| 33 AA-ZN-P | 0.3010  | 0.3010  | 0.3010  | 0.3010  | 0.3010  | 0.3010  | 0.3010  | 0.3010  | 0.3010  | 0.3010  |
| 34 AA-SB-P | 0.3010  | 0.3010  | 0.3010  | 0.3010  | 0.3010  | 0.3010  | 0.3010  | 0.3010  | 0.3010  | 0.3010  |

## ARRAY OF MEANS - CONT.

|            | S-BE<br>13 | S-BI<br>14 | S-CD<br>15 | S-CO<br>16 | S-CR<br>17 | S-CU<br>18 | S-LA<br>19 | S-MO<br>20 | S-NB<br>21 | S-NI<br>22 |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 1 S-FEA    | 0.3865     | *****      | *****      | 0.3865     | 0.3865     | 0.3865     | 0.3865     | *****      | *****      | 0.3865     |
| 2 S-MGA    | -0.0473    | *****      | *****      | -0.0473    | -0.0293    | -0.0473    | -0.0473    | *****      | *****      | -0.0473    |
| 3 S-CAZ    | 0.3551     | *****      | *****      | 0.3551     | 0.3587     | 0.3551     | 0.3551     | *****      | *****      | 0.3551     |
| 4 S-TIK    | -0.5369    | *****      | *****      | -0.5369    | -0.5335    | -0.5369    | -0.5369    | *****      | *****      | -0.5369    |
| 5 S-MN     | 2.7608     | *****      | *****      | 2.7608     | 2.7652     | 2.7608     | 2.7608     | *****      | *****      | 2.7608     |
| 6 S-AG     | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      |
| 7 S-AS     | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      |
| 8 S-AU     | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      |
| 9 S-E      | 1.7055     | *****      | *****      | 1.7055     | 1.7014     | 1.7055     | 1.7055     | *****      | *****      | 1.7055     |
| 10 S-BA    | 2.8017     | *****      | *****      | 2.8017     | 2.8011     | 2.8017     | 2.8017     | *****      | *****      | 2.8017     |
| 11 S-BE    | 0.2959     | *****      | *****      | 0.2959     | 0.2937     | 0.2959     | 0.2959     | *****      | *****      | 0.2959     |
| 12 S-BI    | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      |
| 13 S-CD    | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      |
| 14 S-CO    | 0.9624     | *****      | *****      | 0.9624     | 0.9685     | 0.9624     | 0.9624     | *****      | *****      | 0.9624     |
| 15 S-CR    | 1.5393     | *****      | *****      | 1.5393     | 1.5393     | 1.5393     | 1.5393     | *****      | *****      | 1.5393     |
| 16 S-CU    | 1.2703     | *****      | *****      | 1.2703     | 1.2794     | 1.2703     | 1.2703     | *****      | *****      | 1.2703     |
| 17 S-LA    | 1.8825     | *****      | *****      | 1.8825     | 1.8858     | 1.8825     | 1.8825     | *****      | *****      | 1.8825     |
| 18 S-MO    | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      |
| 19 S-NB    | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      |
| 20 S-NI    | 1.1086     | *****      | *****      | 1.1086     | 1.1288     | 1.1086     | 1.1086     | *****      | *****      | 1.1086     |
| 21 S-PA    | 1.1612     | *****      | *****      | 1.1612     | 1.1730     | 1.1612     | 1.1612     | *****      | *****      | 1.1612     |
| 22 S-SB    | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      |
| 23 S-SC    | 0.9600     | *****      | *****      | 0.9600     | 0.9659     | 0.9600     | 0.9600     | *****      | *****      | 0.9600     |
| 24 S-SN    | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      |
| 25 S-SR    | 2.4430     | *****      | *****      | 2.4430     | 2.4532     | 2.4430     | 2.4430     | *****      | *****      | 2.4430     |
| 26 S-V     | 1.9497     | *****      | *****      | 1.9497     | 1.9674     | 1.9497     | 1.9497     | *****      | *****      | 1.9497     |
| 27 S-W     | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      |
| 28 S-Y     | 1.3201     | *****      | *****      | 1.3201     | 1.3060     | 1.3201     | 1.3201     | *****      | *****      | 1.3201     |
| 29 S-ZN    | 2.5365     | *****      | *****      | 2.5365     | 2.5365     | 2.5365     | 2.5365     | *****      | *****      | 2.5365     |
| 30 S-ZR    | 2.2873     | *****      | *****      | 2.2873     | 2.2766     | 2.2873     | 2.2873     | *****      | *****      | 2.2873     |
| 31 S-TH    | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      | *****      |
| 32 AA-AS-P | 0.9280     | *****      | *****      | 0.9280     | 0.9256     | 0.9280     | 0.9280     | *****      | *****      | 0.9280     |
| 33 AA-ZN-P | 1.7128     | *****      | *****      | 1.7128     | 1.7448     | 1.7128     | 1.7128     | *****      | *****      | 1.7128     |
| 34 AA-SO-P | 0.3010     | *****      | *****      | 0.3010     | 0.3010     | 0.3010     | 0.3010     | *****      | *****      | 0.3010     |

ARRAY OF MEANS - CONT.

|            | 23      | 24    | 25      | 26    | 27      | 28      | 29    | 30      | 31      | 32      |
|------------|---------|-------|---------|-------|---------|---------|-------|---------|---------|---------|
|            | S-PB    | S-SB  | S-SC    | S-SN  | S-SR    | S-V     | S-W   | S-Y     | S-ZN    | S-ZR    |
| 1 S-FEZ    | 0.4126  | ***** | 0.3865  | ***** | 0.3983  | 0.3865  | ***** | 0.3865  | 0.4773  | 0.3865  |
| 2 S-MGZ    | -0.0473 | ***** | -0.0473 | ***** | -0.0275 | -0.0473 | ***** | -0.0473 | -0.0387 | -0.0473 |
| 3 S-CAZ    | 0.3644  | ***** | 0.3551  | ***** | 0.3606  | 0.3551  | ***** | 0.3551  | 0.2073  | 0.3551  |
| 4 S-TIX    | -0.5269 | ***** | -0.5369 | ***** | -0.5320 | -0.5369 | ***** | -0.5369 | -0.3010 | -0.5369 |
| 5 S-MN     | 2.7808  | ***** | 2.7008  | ***** | 2.7748  | 2.7608  | ***** | 2.7608  | 3.0493  | 2.7608  |
| 6 S-AG     | *****   | ***** | *****   | ***** | *****   | *****   | ***** | *****   | *****   | *****   |
| 7 S-AS     | *****   | ***** | *****   | ***** | *****   | *****   | ***** | *****   | *****   | *****   |
| 8 S-AU     | *****   | ***** | *****   | ***** | *****   | *****   | ***** | *****   | *****   | *****   |
| 9 S-B      | 1.6967  | ***** | 1.7055  | ***** | 1.7013  | 1.7055  | ***** | 1.7055  | 1.4445  | 1.7055  |
| 10 S-BA    | 2.8198  | ***** | 2.8017  | ***** | 2.8169  | 2.8017  | ***** | 2.8017  | 2.6990  | 2.8017  |
| 11 S-BE    | 0.3071  | ***** | 0.2959  | ***** | 0.3048  | 0.2959  | ***** | 0.2959  | 0.2258  | 0.2959  |
| 12 S-DI    | *****   | ***** | *****   | ***** | *****   | *****   | ***** | *****   | *****   | *****   |
| 13 S-CD    | *****   | ***** | *****   | ***** | *****   | *****   | ***** | *****   | *****   | *****   |
| 14 S-CO    | 0.9679  | ***** | 0.9624  | ***** | 0.9704  | 0.9624  | ***** | 0.9624  | 1.1193  | 0.9624  |
| 15 S-CR    | 1.5357  | ***** | 1.5393  | ***** | 1.5393  | 1.5393  | ***** | 1.5393  | 1.6435  | 1.5393  |
| 16 S-CU    | 1.2905  | ***** | 1.2703  | ***** | 1.2876  | 1.2703  | ***** | 1.2703  | 1.0880  | 1.2703  |
| 17 S-LA    | 1.9002  | ***** | 1.8625  | ***** | 1.8880  | 1.8825  | ***** | 1.8825  | 2.3935  | 1.8825  |
| 18 S-MO    | *****   | ***** | *****   | ***** | *****   | *****   | ***** | *****   | *****   | *****   |
| 19 S-NB    | *****   | ***** | *****   | ***** | *****   | *****   | ***** | *****   | *****   | *****   |
| 20 S-NI    | 1.1231  | ***** | 1.1086  | ***** | 1.1210  | 1.1086  | ***** | 1.1086  | 1.1193  | 1.1086  |
| 21 S-PB    | 1.1612  | ***** | 1.1812  | ***** | 1.1812  | 1.1812  | ***** | 1.1812  | 1.1945  | 1.1812  |
| 22 S-SB    | *****   | ***** | *****   | ***** | *****   | *****   | ***** | *****   | *****   | *****   |
| 23 S-SC    | 0.9756  | ***** | 0.9600  | ***** | 0.9679  | 0.9600  | ***** | 0.9600  | 1.1505  | 0.9600  |
| 24 S-SN    | *****   | ***** | *****   | ***** | *****   | *****   | ***** | *****   | *****   | *****   |
| 25 S-SR    | 2.4522  | ***** | 2.4430  | ***** | 2.4430  | 2.4430  | ***** | 2.4430  | 2.4771  | 2.4430  |
| 26 S-V     | 1.9774  | ***** | 1.9497  | ***** | 1.9694  | 1.9497  | ***** | 1.9497  | 2.4005  | 1.9497  |
| 27 S-W     | *****   | ***** | *****   | ***** | *****   | *****   | ***** | *****   | *****   | *****   |
| 28 S-Y     | 1.3317  | ***** | 1.3201  | ***** | 1.3296  | 1.3201  | ***** | 1.3201  | 1.4331  | 1.3201  |
| 29 S-ZN    | 2.5365  | ***** | 2.5365  | ***** | 2.5365  | 2.5365  | ***** | 2.5365  | 2.5365  | 2.5365  |
| 30 S-ZR    | 2.2900  | ***** | 2.2873  | ***** | 2.2816  | 2.2873  | ***** | 2.2873  | 2.4886  | 2.2873  |
| 31 S-TI    | *****   | ***** | *****   | ***** | *****   | *****   | ***** | *****   | *****   | *****   |
| 32 AA-AS-P | 0.9230  | ***** | 0.9280  | ***** | 0.9280  | 0.9280  | ***** | 0.9280  | 0.7742  | 0.9280  |
| 33 AA-ZN-P | 1.7307  | ***** | 1.7128  | ***** | 1.7344  | 1.7128  | ***** | 1.7128  | 2.1901  | 1.7128  |
| 34 AA-SB-P | 0.3010  | ***** | 0.3010  | ***** | 0.3010  | 0.3010  | ***** | 0.3010  | 0.3010  | 0.3010  |

ARRAY OF MEANS - CONT.

|            | 33    | 34      | 35      | 36      |
|------------|-------|---------|---------|---------|
|            | S-TI  | AA-AS-P | AA-ZN-P | AA-SR-P |
| 1 S-FE2    | ***** | 0.3917  | 0.3865  | 0.6990  |
| 2 S-MG2    | ***** | -0.0350 | -0.0473 | -0.1549 |
| 3 S-CAX    | ***** | 0.3362  | 0.3551  | 0.1761  |
| 4 S-TIX    | ***** | -0.5269 | -0.5369 | -0.3010 |
| 5 S-MN     | ***** | 2.7652  | 2.7608  | 2.8451  |
| 6 S-AG     | ***** | *****   | *****   | *****   |
| 7 S-AS     | ***** | *****   | *****   | *****   |
| 8 S-AU     | ***** | *****   | *****   | *****   |
| 9 S-B      | ***** | 1.7014  | 1.7055  | 1.4771  |
| 10 S-BA    | ***** | 2.8051  | 2.8017  | 2.6990  |
| 11 S-BE    | ***** | 0.2866  | 0.2959  | 0.3010  |
| 12 S-BI    | ***** | *****   | *****   | *****   |
| 13 S-CD    | ***** | *****   | *****   | *****   |
| 14 S-CO    | ***** | 0.9685  | 0.9624  | 1.0000  |
| 15 S-CR    | ***** | 1.5339  | 1.5393  | 1.4771  |
| 16 S-CU    | ***** | 1.2754  | 1.2703  | 1.0000  |
| 17 S-LA    | ***** | 1.8955  | 1.8625  | 2.0000  |
| 18 S-MO    | ***** | *****   | *****   | *****   |
| 19 S-NB    | ***** | *****   | *****   | *****   |
| 20 S-NI    | ***** | 1.1231  | 1.1086  | 1.0000  |
| 21 S-PB    | ***** | 1.1592  | 1.1812  | 1.3010  |
| 22 S-SB    | ***** | 0.9659  | 0.9600  | 1.0000  |
| 23 S-SC    | ***** | 2.4522  | 2.4430  | 2.4771  |
| 24 S-SN    | ***** | 1.9724  | 1.9497  | 2.3010  |
| 25 S-SR    | ***** | *****   | *****   | *****   |
| 26 S-V     | ***** | *****   | *****   | *****   |
| 27 S-W     | ***** | *****   | *****   | *****   |
| 28 S-Y     | ***** | 1.3188  | 1.3201  | 1.3010  |
| 29 S-ZN    | ***** | 2.5365  | 2.5365  | 2.3010  |
| 30 S-ZN    | ***** | 2.2997  | 2.2873  | 2.3010  |
| 31 S-TI    | ***** | *****   | *****   | *****   |
| 32 AA-AS-P | ***** | 0.9260  | 0.9280  | 0.0990  |
| 33 AA-ZN-P | ***** | 1.7448  | 1.7126  | 2.0792  |
| 34 AA-SO-P | ***** | 0.3010  | 0.3010  | 0.3010  |

17

5-15%

[illegible]



DC101 CORRELATION ANALYSIS - USGS STATPAC (01/15/82)

DATE 11/29/84

ARRAY OF VARIANCES - CONT.

|            | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| S-PE       | S-BI  | S-CD  | S-CO  | S-CR  | S-CU  | S-LA  | S-MO  | S-NB  | S-NI  |       |
| 1 S-FEX    | 0.057 | ***** | ***** | 0.057 | 0.055 | 0.057 | 0.057 | ***** | ***** | 0.057 |
| 2 S-MGX    | 0.019 | ***** | ***** | 0.019 | 0.006 | 0.019 | 0.019 | ***** | ***** | 0.019 |
| 3 S-CAZ    | 0.053 | ***** | ***** | 0.053 | 0.057 | 0.053 | 0.053 | ***** | ***** | 0.053 |
| 4 S-TIZ    | 0.016 | ***** | ***** | 0.016 | 0.016 | 0.016 | 0.016 | ***** | ***** | 0.016 |
| 5 S-MN     | 0.058 | ***** | ***** | 0.058 | 0.033 | 0.038 | 0.038 | ***** | ***** | 0.038 |
| 6 S-AG     | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 7 S-AS     | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 8 S-AU     | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 9 S-B      | 0.019 | ***** | ***** | 0.019 | 0.020 | 0.019 | 0.019 | ***** | ***** | 0.019 |
| 10 S-BA    | 0.024 | ***** | ***** | 0.024 | 0.016 | 0.024 | 0.024 | ***** | ***** | 0.024 |
| 11 S-BE    | 0.015 | ***** | ***** | 0.015 | 0.011 | 0.015 | 0.015 | ***** | ***** | 0.015 |
| 12 S-BI    | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 13 S-CD    | 0.029 | ***** | ***** | 0.029 | 0.029 | 0.029 | 0.029 | ***** | ***** | 0.029 |
| 14 S-CD    | 0.048 | ***** | ***** | 0.048 | 0.048 | 0.048 | 0.048 | ***** | ***** | 0.048 |
| 15 S-CR    | 0.037 | ***** | ***** | 0.037 | 0.027 | 0.037 | 0.037 | ***** | ***** | 0.037 |
| 16 S-CU    | 0.066 | ***** | ***** | 0.066 | 0.070 | 0.066 | 0.066 | ***** | ***** | 0.066 |
| 17 S-LA    | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 18 S-MO    | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 19 S-NB    | 0.027 | ***** | ***** | 0.027 | 0.022 | 0.027 | 0.027 | ***** | ***** | 0.027 |
| 20 S-NI    | 0.029 | ***** | ***** | 0.029 | 0.030 | 0.029 | 0.029 | ***** | ***** | 0.029 |
| 21 S-PA    | 0.021 | ***** | ***** | 0.021 | 0.021 | 0.021 | 0.021 | ***** | ***** | 0.021 |
| 22 S-SA    | 0.017 | ***** | ***** | 0.017 | 0.016 | 0.017 | 0.017 | ***** | ***** | 0.017 |
| 23 S-SC    | 0.049 | ***** | ***** | 0.049 | 0.040 | 0.049 | 0.049 | ***** | ***** | 0.049 |
| 24 S-SN    | 0.026 | ***** | ***** | 0.026 | 0.015 | 0.026 | 0.026 | ***** | ***** | 0.026 |
| 25 S-SR    | 0.078 | ***** | ***** | 0.078 | 0.078 | 0.078 | 0.078 | ***** | ***** | 0.078 |
| 26 S-V     | 0.066 | ***** | ***** | 0.066 | 0.070 | 0.066 | 0.066 | ***** | ***** | 0.066 |
| 27 S-W     | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 28 S-Y     | 0.032 | ***** | ***** | 0.032 | 0.033 | 0.032 | 0.032 | ***** | ***** | 0.032 |
| 29 S-ZN    | 0.058 | ***** | ***** | 0.058 | 0.044 | 0.058 | 0.058 | ***** | ***** | 0.058 |
| 30 S-ZR    | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 31 S-TH    | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 32 AA-AS-P | 0.032 | ***** | ***** | 0.032 | 0.033 | 0.032 | 0.032 | ***** | ***** | 0.032 |
| 33 AA-ZN-P | 0.058 | ***** | ***** | 0.058 | 0.044 | 0.058 | 0.058 | ***** | ***** | 0.058 |
| 34 AA-SB-P | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |

## ARRAY OF VARIANCES - CONT.

|            | S-PB | 23    | S-SB | 24 | S-SC  | 25 | S-SN | 26 | S-SR  | 27 | S-V   | 28 | S-W | 29 | S-Y   | 30 | S-ZN  | 31 | S-ZR  | 32 |
|------------|------|-------|------|----|-------|----|------|----|-------|----|-------|----|-----|----|-------|----|-------|----|-------|----|
| 1 S-FEX    |      | U.055 |      |    | U.057 |    |      |    | 0.054 |    | 0.057 |    |     |    | 0.057 |    | 0.015 |    | 0.057 |    |
| 2 S-MGZ    |      | U.005 |      |    | U.019 |    |      |    | 0.005 |    | 0.019 |    |     |    | 0.019 |    | 0.006 |    | 0.019 |    |
| 3 S-CAZ    |      | U.057 |      |    | U.053 |    |      |    | 0.054 |    | 0.053 |    |     |    | 0.053 |    | 0.004 |    | 0.053 |    |
| 4 S-TIA    |      | U.015 |      |    | U.016 |    |      |    | 0.015 |    | 0.016 |    |     |    | 0.016 |    | 0.000 |    | 0.016 |    |
| 5 S-MN     |      | U.031 |      |    | U.038 |    |      |    | 0.032 |    | 0.038 |    |     |    | 0.038 |    | 0.025 |    | 0.038 |    |
| 6 S-AG     |      |       |      |    |       |    |      |    |       |    |       |    |     |    |       |    |       |    |       |    |
| 7 S-AS     |      |       |      |    |       |    |      |    |       |    |       |    |     |    |       |    |       |    |       |    |
| 8 S-AU     |      |       |      |    |       |    |      |    |       |    |       |    |     |    |       |    |       |    |       |    |
| 9 S-B      |      | U.020 |      |    | U.019 |    |      |    | 0.019 |    | 0.019 |    |     |    | 0.019 |    | 0.036 |    | 0.019 |    |
| 10 S-BA    |      | U.018 |      |    | U.024 |    |      |    | 0.017 |    | 0.024 |    |     |    | 0.024 |    | 0.000 |    | 0.024 |    |
| 11 S-BE    |      | U.013 |      |    | U.015 |    |      |    | 0.013 |    | 0.015 |    |     |    | 0.015 |    | 0.023 |    | 0.015 |    |
| 12 S-BI    |      |       |      |    |       |    |      |    |       |    |       |    |     |    |       |    |       |    |       |    |
| 13 S-CD    |      |       |      |    |       |    |      |    |       |    |       |    |     |    |       |    |       |    |       |    |
| 14 S-CE    |      | U.024 |      |    | U.029 |    |      |    | 0.027 |    | 0.029 |    |     |    | 0.029 |    | 0.022 |    | 0.029 |    |
| 15 S-CO    |      | U.047 |      |    | U.048 |    |      |    | 0.048 |    | 0.048 |    |     |    | 0.048 |    | 0.012 |    | 0.048 |    |
| 16 S-CR    |      | U.027 |      |    | U.037 |    |      |    | 0.028 |    | 0.037 |    |     |    | 0.037 |    | 0.010 |    | 0.037 |    |
| 17 S-LA    |      | U.066 |      |    | U.066 |    |      |    | 0.067 |    | 0.066 |    |     |    | 0.066 |    | 0.130 |    | 0.066 |    |
| 18 S-MO    |      |       |      |    |       |    |      |    |       |    |       |    |     |    |       |    |       |    |       |    |
| 19 S-NB    |      |       |      |    |       |    |      |    |       |    |       |    |     |    |       |    |       |    |       |    |
| 20 S-NI    |      | U.023 |      |    | U.027 |    |      |    | 0.022 |    | 0.027 |    |     |    | 0.027 |    | 0.022 |    | 0.027 |    |
| 21 S-FB    |      | U.029 |      |    | U.029 |    |      |    | 0.029 |    | 0.029 |    |     |    | 0.029 |    | 0.020 |    | 0.029 |    |
| 22 S-SB    |      |       |      |    |       |    |      |    |       |    |       |    |     |    |       |    |       |    |       |    |
| 23 S-SC    |      | U.016 |      |    | U.021 |    |      |    | 0.020 |    | 0.021 |    |     |    | 0.021 |    | 0.030 |    | 0.021 |    |
| 24 S-SN    |      | U.016 |      |    | U.017 |    |      |    | 0.017 |    | 0.017 |    |     |    | 0.017 |    | 0.000 |    | 0.017 |    |
| 25 S-SR    |      | U.039 |      |    | U.049 |    |      |    | 0.037 |    | 0.049 |    |     |    | 0.049 |    | 0.040 |    | 0.049 |    |
| 26 S-V     |      |       |      |    |       |    |      |    |       |    |       |    |     |    |       |    |       |    |       |    |
| 27 S-W     |      |       |      |    |       |    |      |    |       |    |       |    |     |    |       |    |       |    |       |    |
| 28 S-Y     |      | U.025 |      |    | U.026 |    |      |    | 0.023 |    | 0.026 |    |     |    | 0.026 |    | 0.008 |    | 0.026 |    |
| 29 S-ZN    |      | U.078 |      |    | U.078 |    |      |    | 0.078 |    | 0.078 |    |     |    | 0.078 |    | 0.027 |    | 0.078 |    |
| 30 S-ZR    |      | U.066 |      |    | U.066 |    |      |    | 0.067 |    | 0.066 |    |     |    | 0.066 |    | 0.027 |    | 0.066 |    |
| 31 S-TN    |      |       |      |    |       |    |      |    |       |    |       |    |     |    |       |    |       |    |       |    |
| 32 AA-AS-P |      | U.034 |      |    | U.032 |    |      |    | 0.032 |    | 0.032 |    |     |    | 0.032 |    | 0.023 |    | 0.032 |    |
| 33 AA-ZN-P |      | U.046 |      |    | U.058 |    |      |    | 0.043 |    | 0.058 |    |     |    | 0.058 |    | 0.016 |    | 0.058 |    |
| 34 AA-SB-P |      |       |      |    |       |    |      |    |       |    |       |    |     |    |       |    |       |    |       |    |

ARRAY OF VARIANCES - CONT.

|                     | 33    | 34      | 35      | 36      |
|---------------------|-------|---------|---------|---------|
|                     | S-TH  | AA-AS-P | AA-ZN-P | AA-SB-P |
| 1 S-FE <sub>2</sub> | ***** | 0.055   | 0.057   | *****   |
| 2 S-PG <sub>2</sub> | ***** | 0.004   | 0.019   | *****   |
| 3 S-CAL             | ***** | 0.043   | 0.053   | *****   |
| 4 S-TIX             | ***** | 0.015   | 0.016   | *****   |
| 5 S-MN              | ***** | 0.033   | 0.038   | *****   |
| 6 S-AG              | ***** | *****   | *****   | *****   |
| 7 S-AS              | ***** | *****   | *****   | *****   |
| 8 S-AU              | ***** | *****   | *****   | *****   |
| 9 S-B               | ***** | 0.020   | 0.019   | *****   |
| 10 S-BA             | ***** | 0.016   | 0.024   | *****   |
| 11 S-BE             | ***** | 0.007   | 0.015   | *****   |
| 12 S-BI             | ***** | *****   | *****   | *****   |
| 13 S-CD             | ***** | 0.029   | 0.029   | *****   |
| 14 S-CG             | ***** | 0.049   | 0.048   | *****   |
| 15 S-CR             | ***** | 0.027   | 0.037   | *****   |
| 16 S-CU             | ***** | 0.070   | 0.066   | *****   |
| 17 S-LA             | ***** | *****   | *****   | *****   |
| 18 S-MO             | ***** | *****   | *****   | *****   |
| 19 S-NB             | ***** | 0.023   | 0.027   | *****   |
| 20 S-NI             | ***** | 0.020   | 0.029   | *****   |
| 21 S-PB             | ***** | 0.021   | *****   | *****   |
| 22 S-SB             | ***** | 0.016   | 0.017   | *****   |
| 23 S-SC             | ***** | 0.039   | 0.049   | *****   |
| 24 S-SN             | ***** | 0.020   | 0.026   | *****   |
| 25 S-SR             | ***** | 0.078   | 0.078   | *****   |
| 26 S-V              | ***** | 0.059   | 0.066   | *****   |
| 27 S-W              | ***** | 0.032   | 0.032   | *****   |
| 28 S-Y              | ***** | 0.044   | 0.058   | *****   |
| 29 S-ZN             | ***** | *****   | *****   | *****   |
| 30 S-ZR             | ***** | *****   | *****   | *****   |
| 31 S-TH             | ***** | *****   | *****   | *****   |
| 32 AA-AS-P          | ***** | *****   | *****   | *****   |
| 33 AA-ZN-P          | ***** | *****   | *****   | *****   |
| 34 AA-SB-P          | ***** | *****   | *****   | *****   |

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| COLUMN    | VERSUS | COLUMN       | CORRELATION COEFFICIENT | NO. OF PAIRS |
|-----------|--------|--------------|-------------------------|--------------|
| 1 (S-FEX) | )      | 2 (S-MGX)    | 0.3378                  | 34           |
| 1 (S-FEX) | )      | 3 (S-CAX)    | -0.2044                 | 34           |
| 1 (S-FEX) | )      | 4 (S-TIX)    | 0.7035                  | 34           |
| 1 (S-FEX) | )      | 5 (S-MN)     | 0.8057                  | 34           |
| 1 (S-FEX) | )      | 6 (S-AG)     | *****                   | 0            |
| 1 (S-FEX) | )      | 7 (S-AS)     | *****                   | 0            |
| 1 (S-FEX) | )      | 8 (S-AU)     | *****                   | 0            |
| 1 (S-FEX) | )      | 9 (S-B)      | -0.6005                 | 34           |
| 1 (S-FEX) | )      | 10 (S-BA)    | 0.0898                  | 34           |
| 1 (S-FEX) | )      | 11 (S-PE)    | -0.0104                 | 34           |
| 1 (S-FEX) | )      | 12 (S-BI)    | *****                   | 0            |
| 1 (S-FEX) | )      | 13 (S-CD)    | *****                   | 0            |
| 1 (S-FEX) | )      | 14 (S-CO)    | 0.5960                  | 34           |
| 1 (S-FEX) | )      | 15 (S-CR)    | 0.3760                  | 31           |
| 1 (S-FEX) | )      | 16 (S-CU)    | -0.0171                 | 34           |
| 1 (S-FEX) | )      | 17 (S-LA)    | 0.0631                  | 34           |
| 1 (S-FEX) | )      | 18 (S-MO)    | *****                   | 0            |
| 1 (S-FEX) | )      | 19 (S-MB)    | *****                   | 0            |
| 1 (S-FEX) | )      | 20 (S-MI)    | 0.3139                  | 34           |
| 1 (S-FEX) | )      | 21 (S-PB)    | 0.1480                  | 31           |
| 1 (S-FEX) | )      | 22 (S-SB)    | *****                   | 0            |
| 1 (S-FEX) | )      | 23 (S-SC)    | 0.0837                  | 34           |
| 1 (S-FEX) | )      | 24 (S-SH)    | *****                   | 0            |
| 1 (S-FEX) | )      | 25 (S-SK)    | -0.0183                 | 33           |
| 1 (S-FEX) | )      | 26 (S-V)     | 0.8311                  | 34           |
| 1 (S-FEX) | )      | 27 (S-W)     | *****                   | 0            |
| 1 (S-FEX) | )      | 28 (S-Y)     | 0.5140                  | 34           |
| 1 (S-FEX) | )      | 29 (S-ZN)    | 0.8008                  | 4            |
| 1 (S-FEX) | )      | 30 (S-ZR)    | 0.4133                  | 34           |
| 1 (S-FEX) | )      | 31 (S-TH)    | *****                   | 0            |
| 1 (S-FEX) | )      | 32 (AA-AS-P) | -0.2748                 | 31           |
| 1 (S-FEX) | )      | 33 (AA-ZN-P) | 0.6797                  | 34           |
| 1 (S-FEX) | )      | 34 (AA-SB-P) | *****                   | 1            |
| 2 (S-MGX) | )      | 3 (S-CA)     | 0.2612                  | 34           |
| 2 (S-MGX) | )      | 4 (S-TIX)    | 0.1594                  | 34           |
| 2 (S-MGX) | )      | 5 (S-MN)     | 0.5258                  | 34           |
| 2 (S-MGX) | )      | 6 (S-AG)     | *****                   | 0            |
| 2 (S-MGX) | )      | 7 (S-AS)     | *****                   | 0            |
| 2 (S-MGX) | )      | 8 (S-AU)     | *****                   | 0            |
| 2 (S-MGX) | )      | 9 (S-B)      | -0.0370                 | 34           |
| 2 (S-MGX) | )      | 10 (S-BA)    | 0.5694                  | 34           |
| 2 (S-MGX) | )      | 11 (S-PE)    | 0.5303                  | 34           |
| 2 (S-MGX) | )      | 12 (S-BI)    | *****                   | 0            |
| 2 (S-MGX) | )      | 13 (S-CD)    | *****                   | 0            |
| 2 (S-MGX) | )      | 14 (S-CO)    | 0.3190                  | 34           |
| 2 (S-MGX) | )      | 15 (S-CR)    | 0.6153                  | 31           |
| 2 (S-MGX) | )      | 16 (S-CU)    | 0.6243                  | 34           |
| 2 (S-MGX) | )      | 17 (S-LA)    | 0.0943                  | 34           |
| 2 (S-MGX) | )      | 18 (S-MO)    | *****                   | 0            |
| 2 (S-MGX) | )      | 19 (S-MB)    | *****                   | 0            |

| COLUMN    | VERSUS | COLUMN       | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|-----------|--------|--------------|----------------------------|-----------------|
| 2 (S-MG)  | )      | 20 (S-NI)    | 0.6324                     | 34              |
| 2 (S-MG)  | )      | 21 (S-PB)    | 0.4523                     | 31              |
| 2 (S-MG)  | )      | 22 (S-SB)    | *****                      | 0               |
| 2 (S-MG)  | )      | 23 (S-SC)    | 0.3674                     | 34              |
| 2 (S-MG)  | )      | 24 (S-SR)    | *****                      | 0               |
| 2 (S-MG)  | )      | 25 (S-SR)    | -0.0243                    | 33              |
| 2 (S-MG)  | )      | 26 (S-V)     | 0.4531                     | 34              |
| 2 (S-MG)  | )      | 27 (S-W)     | *****                      | 0               |
| 2 (S-MG)  | )      | 28 (S-Y)     | 0.3963                     | 34              |
| 2 (S-MG)  | )      | 29 (S-ZN)    | 0.5639                     | 4               |
| 2 (S-MG)  | )      | 30 (S-ZR)    | -0.2951                    | 34              |
| 2 (S-MG)  | )      | 31 (S-TH)    | *****                      | 0               |
| 2 (S-MG)  | )      | 32 (AA-AS-F) | 0.1752                     | 31              |
| 2 (S-MG)  | )      | 33 (AA-ZN-F) | 0.4343                     | 34              |
| 2 (S-MG)  | )      | 34 (AA-SB-P) | *****                      | 1               |
| 3 (S-CA)  | )      | 4 (S-TIX)    | -0.4043                    | 34              |
| 3 (S-CA)  | )      | 5 (S-MN)     | 0.0499                     | 34              |
| 3 (S-CA)  | )      | 6 (S-AG)     | *****                      | 0               |
| 3 (S-CA)  | )      | 7 (S-AS)     | *****                      | 0               |
| 3 (S-CA)  | )      | 8 (S-AU)     | *****                      | 0               |
| 3 (S-CA)  | )      | 9 (S-B)      | 0.1991                     | 34              |
| 3 (S-CA)  | )      | 10 (S-BA)    | 0.5539                     | 34              |
| 3 (S-CA)  | )      | 11 (S-BE)    | 0.4653                     | 34              |
| 3 (S-CA)  | )      | 12 (S-PI)    | *****                      | 0               |
| 3 (S-CA)  | )      | 13 (S-CD)    | *****                      | 0               |
| 3 (S-CA)  | )      | 14 (S-CU)    | -0.0744                    | 34              |
| 3 (S-CA)  | )      | 15 (S-CR)    | 0.2166                     | 31              |
| 3 (S-CA)  | )      | 16 (S-LA)    | -0.1767                    | 34              |
| 3 (S-CA)  | )      | 17 (S-MC)    | *****                      | 0               |
| 3 (S-CA)  | )      | 18 (S-MC)    | *****                      | 0               |
| 3 (S-CA)  | )      | 19 (S-MC)    | *****                      | 0               |
| 3 (S-CA)  | )      | 20 (S-NI)    | 0.1593                     | 34              |
| 3 (S-CA)  | )      | 21 (S-PB)    | 0.3363                     | 31              |
| 3 (S-CA)  | )      | 22 (S-SB)    | *****                      | 0               |
| 3 (S-CA)  | )      | 23 (S-SC)    | -0.1774                    | 34              |
| 3 (S-CA)  | )      | 24 (S-SN)    | *****                      | 0               |
| 3 (S-CA)  | )      | 25 (S-SR)    | 0.4700                     | 33              |
| 3 (S-CA)  | )      | 26 (S-V)     | -0.1830                    | 34              |
| 3 (S-CA)  | )      | 27 (S-W)     | *****                      | 0               |
| 3 (S-CA)  | )      | 28 (S-Y)     | 0.0986                     | 34              |
| 3 (S-CA)  | )      | 29 (S-ZN)    | 0.3890                     | 4               |
| 3 (S-CA)  | )      | 30 (S-ZR)    | -0.4280                    | 34              |
| 3 (S-CA)  | )      | 31 (S-TH)    | *****                      | 0               |
| 3 (S-CA)  | )      | 32 (AA-AS-P) | 0.4631                     | 31              |
| 3 (S-CA)  | )      | 33 (AA-ZN-P) | -0.3420                    | 34              |
| 3 (S-CA)  | )      | 34 (AA-SB-P) | *****                      | 1               |
| 4 (S-TIX) | )      | 5 (S-MN)     | 0.6380                     | 34              |
| 4 (S-TIX) | )      | 6 (S-AG)     | *****                      | 0               |
| 4 (S-TIX) | )      | 7 (S-AS)     | *****                      | 0               |
| 4 (S-TIX) | )      | 8 (S-AU)     | *****                      | 0               |

| COLUMN     | VERSUS        | COLUMN  | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|------------|---------------|---------|----------------------------|-----------------|
| 4 (S-TIX ) | 9 (S-B )      | -0.5258 | 34                         |                 |
| 4 (S-TIX ) | 10 (S-BA )    | -0.0043 | 34                         |                 |
| 4 (S-TIX ) | 11 (S-BE )    | -0.1883 | 34                         |                 |
| 4 (S-TIX ) | 12 (S-BI )    | *****   | 0                          |                 |
| 4 (S-TIX ) | 13 (S-CD )    | *****   | 0                          |                 |
| 4 (S-TIX ) | 14 (S-CK )    | U.4076  | 34                         |                 |
| 4 (S-TIX ) | 15 (S-CR )    | U.2063  | 31                         |                 |
| 4 (S-TIX ) | 16 (S-CU )    | -0.1792 | 34                         |                 |
| 4 (S-TIX ) | 17 (S-LA )    | U.6530  | 34                         |                 |
| 4 (S-TIX ) | 18 (S-MO )    | *****   | 0                          |                 |
| 4 (S-TIX ) | 19 (S-NB )    | *****   | 0                          |                 |
| 4 (S-TIX ) | 20 (S-NI )    | U.2524  | 34                         |                 |
| 4 (S-TIX ) | 21 (S-PA )    | -0.0812 | 31                         |                 |
| 4 (S-TIX ) | 22 (S-SB )    | *****   | 0                          |                 |
| 4 (S-TIX ) | 23 (S-SC )    | U.7663  | 34                         |                 |
| 4 (S-TIX ) | 24 (S-SH )    | *****   | 0                          |                 |
| 4 (S-TIX ) | 25 (S-SR )    | U.0248  | 33                         |                 |
| 4 (S-TIX ) | 26 (S-V )     | U.7528  | 34                         |                 |
| 4 (S-TIX ) | 27 (S-W )     | *****   | 0                          |                 |
| 4 (S-TIX ) | 28 (S-Y )     | U.3614  | 34                         |                 |
| 4 (S-TIX ) | 29 (S-ZA )    | *****   | 4                          |                 |
| 4 (S-TIX ) | 30 (S-ZR )    | U.4213  | 34                         |                 |
| 4 (S-TIX ) | 31 (S-TI )    | *****   | 0                          |                 |
| 4 (S-TIX ) | 32 (AA-AS-P ) | -0.4943 | 31                         |                 |
| 4 (S-TIX ) | 33 (AA-ZN-P ) | U.0710  | 34                         |                 |
| 4 (S-TIX ) | 34 (AA-SB-P ) | *****   | 1                          |                 |
| 5 (S-MN )  | 6 (S-A6 )     | *****   | 0                          |                 |
| 5 (S-MN )  | 7 (S-A5 )     | *****   | 0                          |                 |
| 5 (S-MN )  | 8 (S-AU )     | *****   | 0                          |                 |
| 5 (S-MN )  | 9 (S-B )      | -0.4963 | 34                         |                 |
| 5 (S-MN )  | 10 (S-BA )    | U.2437  | 34                         |                 |
| 5 (S-MN )  | 11 (S-BE )    | U.1460  | 34                         |                 |
| 5 (S-MN )  | 12 (S-BI )    | *****   | 0                          |                 |
| 5 (S-MN )  | 13 (S-CD )    | *****   | 0                          |                 |
| 5 (S-MN )  | 14 (S-CO )    | C.5475  | 34                         |                 |
| 5 (S-MN )  | 15 (S-CR )    | U.5674  | 31                         |                 |
| 5 (S-MN )  | 16 (S-CU )    | U.1969  | 34                         |                 |
| 5 (S-MN )  | 17 (S-LA )    | U.5650  | 34                         |                 |
| 5 (S-MN )  | 18 (S-MO )    | *****   | 0                          |                 |
| 5 (S-MN )  | 19 (S-NB )    | *****   | 0                          |                 |
| 5 (S-MN )  | 20 (S-NI )    | U.3953  | 34                         |                 |
| 5 (S-MN )  | 21 (S-PA )    | U.1604  | 31                         |                 |
| 5 (S-MN )  | 22 (S-SB )    | *****   | 0                          |                 |
| 5 (S-MN )  | 23 (S-SC )    | U.8113  | 34                         |                 |
| 5 (S-MN )  | 24 (S-SH )    | *****   | 0                          |                 |
| 5 (S-MN )  | 25 (S-SR )    | U.1584  | 33                         |                 |
| 5 (S-MN )  | 26 (S-V )     | U.7543  | 34                         |                 |
| 5 (S-MN )  | 27 (S-W )     | *****   | 0                          |                 |
| 5 (S-MN )  | 28 (S-Y )     | U.5515  | 34                         |                 |
| 5 (S-MN )  | 29 (S-ZA )    | U.8967  | 4                          |                 |

| COLUMN   | VERSUS | COLUMN       | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|----------|--------|--------------|----------------------------|-----------------|
| 5 (S-MN) | )      | 30 (S-ZR)    | U.2603                     | 34              |
| 5 (S-MN) | )      | 31 (S-TH)    | *****                      | 0               |
| 5 (S-MN) | )      | 32 (AA-AS-P) | -0.2079                    | 31              |
| 5 (S-MN) | )      | 33 (AA-ZN-P) | U.6179                     | 34              |
| 5 (S-MN) | )      | 34 (AA-SB-F) | *****                      | 1               |
| 6 (S-AG) | )      | 7 (S-AS)     | *****                      | 0               |
| 6 (S-AG) | )      | 8 (S-AU)     | *****                      | 0               |
| 6 (S-AG) | )      | 9 (S-B)      | *****                      | 0               |
| 6 (S-AG) | )      | 10 (S-BA)    | *****                      | 0               |
| 6 (S-AG) | )      | 11 (S-BE)    | *****                      | 0               |
| 6 (S-AG) | )      | 12 (S-BI)    | *****                      | 0               |
| 6 (S-AG) | )      | 13 (S-CD)    | *****                      | 0               |
| 6 (S-AG) | )      | 14 (S-CO)    | *****                      | 0               |
| 6 (S-AG) | )      | 15 (S-CR)    | *****                      | 0               |
| 6 (S-AG) | )      | 16 (S-CU)    | *****                      | 0               |
| 6 (S-AG) | )      | 17 (S-LA)    | *****                      | 0               |
| 6 (S-AG) | )      | 18 (S-MO)    | *****                      | 0               |
| 6 (S-AG) | )      | 19 (S-NB)    | *****                      | 0               |
| 6 (S-AG) | )      | 20 (S-NI)    | *****                      | 0               |
| 6 (S-AG) | )      | 21 (S-PB)    | *****                      | 0               |
| 6 (S-AG) | )      | 22 (S-SB)    | *****                      | 0               |
| 6 (S-AG) | )      | 23 (S-SC)    | *****                      | 0               |
| 6 (S-AG) | )      | 24 (S-SN)    | *****                      | 0               |
| 6 (S-AG) | )      | 25 (S-SR)    | *****                      | 0               |
| 6 (S-AG) | )      | 26 (S-V)     | *****                      | 0               |
| 6 (S-AG) | )      | 27 (S-W)     | *****                      | 0               |
| 6 (S-AG) | )      | 28 (S-Y)     | *****                      | 0               |
| 6 (S-AG) | )      | 29 (S-ZN)    | *****                      | 0               |
| 6 (S-AG) | )      | 30 (S-ZR)    | *****                      | 0               |
| 6 (S-AG) | )      | 31 (S-TH)    | *****                      | 0               |
| 6 (S-AG) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 6 (S-AG) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 6 (S-AG) | )      | 34 (AA-SB-F) | *****                      | 0               |
| 7 (S-AS) | )      | 8 (S-AU)     | *****                      | 0               |
| 7 (S-AS) | )      | 9 (S-B)      | *****                      | 0               |
| 7 (S-AS) | )      | 10 (S-BA)    | *****                      | 0               |
| 7 (S-AS) | )      | 11 (S-BE)    | *****                      | 0               |
| 7 (S-AS) | )      | 12 (S-BI)    | *****                      | 0               |
| 7 (S-AS) | )      | 13 (S-CD)    | *****                      | 0               |
| 7 (S-AS) | )      | 14 (S-CO)    | *****                      | 0               |
| 7 (S-AS) | )      | 15 (S-CR)    | *****                      | 0               |
| 7 (S-AS) | )      | 16 (S-CU)    | *****                      | 0               |
| 7 (S-AS) | )      | 17 (S-LA)    | *****                      | 0               |
| 7 (S-AS) | )      | 18 (S-MO)    | *****                      | 0               |
| 7 (S-AS) | )      | 19 (S-NB)    | *****                      | 0               |
| 7 (S-AS) | )      | 20 (S-NI)    | *****                      | 0               |
| 7 (S-AS) | )      | 21 (S-PB)    | *****                      | 0               |
| 7 (S-AS) | )      | 22 (S-SB)    | *****                      | 0               |
| 7 (S-AS) | )      | 23 (S-SC)    | *****                      | 0               |
| 7 (S-AS) | )      | 24 (S-SN)    | *****                      | 0               |

| COLUMN   | VERSUS | COLUMN       | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|----------|--------|--------------|----------------------------|-----------------|
| 7 (S-AS) | )      | 25 (S-SR)    | *****                      | 0               |
| 7 (S-AS) | )      | 26 (S-V)     | *****                      | 0               |
| 7 (S-AS) | )      | 27 (S-W)     | *****                      | 0               |
| 7 (S-AS) | )      | 28 (S-Y)     | *****                      | 0               |
| 7 (S-AS) | )      | 29 (S-ZN)    | *****                      | 0               |
| 7 (S-AS) | )      | 30 (S-ZR)    | *****                      | 0               |
| 7 (S-AS) | )      | 31 (S-TH)    | *****                      | 0               |
| 7 (S-AS) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 7 (S-AS) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 7 (S-AS) | )      | 34 (AA-SB-F) | *****                      | 0               |
| 6 (S-AU) | )      | 9 (S-B)      | *****                      | 0               |
| 8 (S-AU) | )      | 10 (S-BA)    | *****                      | 0               |
| 8 (S-AU) | )      | 11 (S-BE)    | *****                      | 0               |
| 8 (S-AU) | )      | 12 (S-BI)    | *****                      | 0               |
| 8 (S-AU) | )      | 13 (S-CD)    | *****                      | 0               |
| 8 (S-AU) | )      | 14 (S-CU)    | *****                      | 0               |
| 8 (S-AU) | )      | 15 (S-CR)    | *****                      | 0               |
| 8 (S-AU) | )      | 16 (S-LA)    | *****                      | 0               |
| 8 (S-AU) | )      | 17 (S-MU)    | *****                      | 0               |
| 8 (S-AU) | )      | 18 (S-NI)    | *****                      | 0               |
| 8 (S-AU) | )      | 19 (S-NI)    | *****                      | 0               |
| 8 (S-AU) | )      | 20 (S-NI)    | *****                      | 0               |
| 8 (S-AU) | )      | 21 (S-PB)    | *****                      | 0               |
| 8 (S-AU) | )      | 22 (S-SB)    | *****                      | 0               |
| 8 (S-AU) | )      | 23 (S-SC)    | *****                      | 0               |
| 8 (S-AU) | )      | 24 (S-SN)    | *****                      | 0               |
| 8 (S-AU) | )      | 25 (S-SR)    | *****                      | 0               |
| 8 (S-AU) | )      | 26 (S-V)     | *****                      | 0               |
| 8 (S-AU) | )      | 27 (S-W)     | *****                      | 0               |
| 8 (S-AU) | )      | 28 (S-Y)     | *****                      | 0               |
| 8 (S-AU) | )      | 29 (S-ZN)    | *****                      | 0               |
| 8 (S-AU) | )      | 30 (S-ZR)    | *****                      | 0               |
| 8 (S-AU) | )      | 31 (S-TH)    | *****                      | 0               |
| 8 (S-AU) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 8 (S-AU) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 8 (S-AU) | )      | 34 (AA-SB-P) | *****                      | 0               |
| 9 (S-B)  | )      | 10 (S-BA)    | 0.1601                     | 34              |
| 9 (S-B)  | )      | 11 (S-BE)    | 0.6398                     | 34              |
| 9 (S-B)  | )      | 12 (S-BI)    | *****                      | 0               |
| 9 (S-B)  | )      | 13 (S-CD)    | *****                      | 0               |
| 9 (S-B)  | )      | 14 (S-CU)    | -0.1021                    | 34              |
| 9 (S-B)  | )      | 15 (S-CR)    | 0.1412                     | 31              |
| 9 (S-B)  | )      | 16 (S-LA)    | 0.4070                     | 34              |
| 9 (S-B)  | )      | 17 (S-MU)    | -0.7011                    | 34              |
| 9 (S-B)  | )      | 18 (S-NI)    | *****                      | 0               |
| 9 (S-B)  | )      | 19 (S-NI)    | *****                      | 0               |
| 9 (S-B)  | )      | 20 (S-NI)    | 0.2700                     | 34              |
| 9 (S-B)  | )      | 21 (S-PB)    | 0.0136                     | 31              |
| 9 (S-B)  | )      | 22 (S-SB)    | *****                      | 0               |
| 9 (S-B)  | )      | 23 (S-SC)    | -0.5495                    | 34              |



| COLUMN   | VERSUS | COLUMN      | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|----------|--------|-------------|----------------------------|-----------------|
| 9 (S-B   | )      | 24 (S-SN    | *****                      | 0               |
| 9 (S-E   | )      | 25 (S-SR    | -0.0248                    | 33              |
| 9 (S-E   | )      | 26 (S-V     | -0.6731                    | 34              |
| 9 (S-E   | )      | 27 (S-W     | *****                      | 0               |
| 9 (S-E   | )      | 28 (S-Y     | -0.1912                    | 34              |
| 9 (S-E   | )      | 29 (S-ZN    | -0.8571                    | 4               |
| 9 (S-B   | )      | 30 (S-ZR    | -0.4061                    | 34              |
| 9 (S-B   | )      | 31 (S-TH    | *****                      | 0               |
| 9 (S-B   | )      | 32 (AA-AS-P | 0.4965                     | 31              |
| 9 (S-B   | )      | 33 (AA-ZN-P | -0.6285                    | 34              |
| 9 (S-B   | )      | 34 (AA-SB-P | *****                      | 1               |
| 10 (S-BA | )      | 11 (S-de    | 0.4605                     | 34              |
| 10 (S-BA | )      | 12 (S-BI    | *****                      | 0               |
| 10 (S-BA | )      | 13 (S-CL    | *****                      | 0               |
| 10 (S-BA | )      | 14 (S-CU    | 0.2421                     | 34              |
| 10 (S-BA | )      | 15 (S-CK    | 0.1797                     | 31              |
| 10 (S-BA | )      | 16 (S-CU    | 0.6667                     | 34              |
| 10 (S-BA | )      | 17 (S-LA    | -0.0543                    | 34              |
| 10 (S-BA | )      | 18 (S-RU    | *****                      | 0               |
| 10 (S-BA | )      | 19 (S-NB    | *****                      | 0               |
| 10 (S-BA | )      | 20 (S-NI    | 0.4176                     | 34              |
| 10 (S-BA | )      | 21 (S-Pb    | 0.4183                     | 31              |
| 10 (S-BA | )      | 22 (S-SH    | *****                      | 0               |
| 10 (S-BA | )      | 23 (S-SC    | 0.0960                     | 34              |
| 10 (S-BA | )      | 24 (S-SN    | *****                      | 0               |
| 10 (S-BA | )      | 25 (S-SR    | 0.1469                     | 33              |
| 10 (S-BA | )      | 26 (S-V     | 0.1107                     | 34              |
| 10 (S-BA | )      | 27 (S-W     | *****                      | 0               |
| 10 (S-BA | )      | 28 (S-Y     | 0.4280                     | 34              |
| 10 (S-BA | )      | 29 (S-ZN    | *****                      | 4               |
| 10 (S-BA | )      | 30 (S-ZR    | -0.2570                    | 34              |
| 10 (S-BA | )      | 31 (S-TH    | *****                      | 0               |
| 10 (S-BA | )      | 32 (AA-AS-P | 0.2989                     | 31              |
| 10 (S-BA | )      | 33 (AA-ZN-P | -0.0566                    | 34              |
| 10 (S-BA | )      | 34 (AA-SB-P | *****                      | 1               |
| 11 (S-EE | )      | 12 (S-BI    | *****                      | 0               |
| 11 (S-EE | )      | 13 (S-CL    | *****                      | 0               |
| 11 (S-EE | )      | 14 (S-CO    | -0.0642                    | 34              |
| 11 (S-EE | )      | 15 (S-CR    | 0.0643                     | 31              |
| 11 (S-EE | )      | 16 (S-CU    | 0.3862                     | 34              |
| 11 (S-EE | )      | 17 (S-LA    | -0.2202                    | 34              |
| 11 (S-EE | )      | 18 (S-MO    | *****                      | 0               |
| 11 (S-EE | )      | 19 (S-NB    | *****                      | 0               |
| 11 (S-EE | )      | 20 (S-NI    | 0.0687                     | 34              |
| 11 (S-EE | )      | 21 (S-Pb    | 0.4295                     | 31              |
| 11 (S-EE | )      | 22 (S-SH    | *****                      | 0               |
| 11 (S-EE | )      | 23 (S-SC    | -0.0383                    | 34              |
| 11 (S-EE | )      | 24 (S-SN    | *****                      | 0               |
| 11 (S-EE | )      | 25 (S-SR    | -0.1328                    | 33              |
| 11 (S-EE | )      | 26 (S-V     | -0.0659                    | 34              |

DC101 CORRELATION ANALYSIS - USGS STAPAC (G1/15/82)

DATE 11/29/84

| COLUMN    | VERSUS | COLUMN       | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|-----------|--------|--------------|----------------------------|-----------------|
| 11 (S-BE) | )      | 27 (S-W)     | *****                      | 0               |
| 11 (S-BE) | )      | 28 (S-Y)     | 0.2790                     | 34              |
| 11 (S-BE) | )      | 29 (S-ZN)    | -0.7389                    | 4               |
| 11 (S-BE) | )      | 30 (S-ZR)    | -0.3902                    | 34              |
| 11 (S-BE) | )      | 31 (S-TN)    | *****                      | 0               |
| 11 (S-BE) | )      | 32 (AA-AS-P) | 0.1305                     | 31              |
| 11 (S-BE) | )      | 33 (AA-ZN-P) | -0.1090                    | 34              |
| 11 (S-BE) | )      | 34 (AA-SB-P) | *****                      | 1               |
| 12 (S-BI) | )      | 13 (S-CU)    | *****                      | 0               |
| 12 (S-BI) | )      | 14 (S-CU)    | *****                      | 0               |
| 12 (S-BI) | )      | 15 (S-CR)    | *****                      | 0               |
| 12 (S-BI) | )      | 16 (S-CU)    | *****                      | 0               |
| 12 (S-BI) | )      | 17 (S-LA)    | *****                      | 0               |
| 12 (S-BI) | )      | 18 (S-MO)    | *****                      | 0               |
| 12 (S-BI) | )      | 19 (S-NB)    | *****                      | 0               |
| 12 (S-BI) | )      | 20 (S-NI)    | *****                      | 0               |
| 12 (S-BI) | )      | 21 (S-PB)    | *****                      | 0               |
| 12 (S-BI) | )      | 22 (S-SB)    | *****                      | 0               |
| 12 (S-BI) | )      | 23 (S-SC)    | *****                      | 0               |
| 12 (S-BI) | )      | 24 (S-SH)    | *****                      | 0               |
| 12 (S-BI) | )      | 25 (S-SR)    | *****                      | 0               |
| 12 (S-BI) | )      | 26 (S-V)     | *****                      | 0               |
| 12 (S-BI) | )      | 27 (S-W)     | *****                      | 0               |
| 12 (S-BI) | )      | 28 (S-Y)     | *****                      | 0               |
| 12 (S-BI) | )      | 29 (S-ZN)    | *****                      | 0               |
| 12 (S-BI) | )      | 30 (S-ZR)    | *****                      | 0               |
| 12 (S-BI) | )      | 31 (S-TN)    | *****                      | 0               |
| 12 (S-BI) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 12 (S-BI) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 12 (S-BI) | )      | 34 (AA-SB-P) | *****                      | 0               |
| 13 (S-CD) | )      | 14 (S-CO)    | *****                      | 0               |
| 13 (S-CD) | )      | 15 (S-CR)    | *****                      | 0               |
| 13 (S-CD) | )      | 16 (S-CU)    | *****                      | 0               |
| 13 (S-CD) | )      | 17 (S-LA)    | *****                      | 0               |
| 13 (S-CD) | )      | 18 (S-MO)    | *****                      | 0               |
| 13 (S-CD) | )      | 19 (S-NB)    | *****                      | 0               |
| 13 (S-CD) | )      | 20 (S-NI)    | *****                      | 0               |
| 13 (S-CD) | )      | 21 (S-PB)    | *****                      | 0               |
| 13 (S-CD) | )      | 22 (S-SB)    | *****                      | 0               |
| 13 (S-CD) | )      | 23 (S-SC)    | *****                      | 0               |
| 13 (S-CD) | )      | 24 (S-SH)    | *****                      | 0               |
| 13 (S-CD) | )      | 25 (S-SR)    | *****                      | 0               |
| 13 (S-CD) | )      | 26 (S-V)     | *****                      | 0               |
| 13 (S-CD) | )      | 27 (S-W)     | *****                      | 0               |
| 13 (S-CD) | )      | 28 (S-Y)     | *****                      | 0               |
| 13 (S-CD) | )      | 29 (S-ZN)    | *****                      | 0               |
| 13 (S-CD) | )      | 30 (S-ZR)    | *****                      | 0               |
| 13 (S-CD) | )      | 31 (S-TN)    | *****                      | 0               |
| 13 (S-CD) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 13 (S-CD) | )      | 33 (AA-ZN-P) | *****                      | 0               |

| COLUMN    | VERSUS | COLUMN       | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|-----------|--------|--------------|----------------------------|-----------------|
| 13 (S-CO) | )      | 34 (AA-SB-P) | *****                      | 0               |
| 14 (S-CO) | )      | 15 (S-CR)    | 0.4743                     | 31              |
| 14 (S-CO) | )      | 16 (S-CU)    | 0.4537                     | 34              |
| 14 (S-CO) | )      | 17 (S-LA)    | 0.4382                     | 34              |
| 14 (S-CO) | )      | 18 (S-MO)    | *****                      | 0               |
| 14 (S-CO) | )      | 19 (S-NE)    | *****                      | 0               |
| 14 (S-CO) | )      | 20 (S-NI)    | 0.4670                     | 34              |
| 14 (S-CO) | )      | 21 (S-PB)    | 0.1252                     | 31              |
| 14 (S-CO) | )      | 22 (S-SC)    | *****                      | 0               |
| 14 (S-CO) | )      | 23 (S-SC)    | 0.5519                     | 34              |
| 14 (S-CO) | )      | 24 (S-SN)    | *****                      | 0               |
| 14 (S-CO) | )      | 25 (S-SR)    | 0.0156                     | 33              |
| 14 (S-CO) | )      | 26 (S-V)     | 0.5324                     | 34              |
| 14 (S-CO) | )      | 27 (S-W)     | *****                      | 0               |
| 14 (S-CO) | )      | 28 (S-Y)     | 0.3045                     | 34              |
| 14 (S-CO) | )      | 29 (S-ZN)    | 0.4192                     | 4               |
| 14 (S-CO) | )      | 30 (S-ZR)    | 0.2296                     | 34              |
| 14 (S-CO) | )      | 31 (S-TH)    | *****                      | 0               |
| 14 (S-CO) | )      | 32 (AA-AS-P) | -0.1755                    | 31              |
| 14 (S-CO) | )      | 33 (AA-ZN-P) | 0.4349                     | 34              |
| 14 (S-CO) | )      | 34 (AA-SB-P) | *****                      | 1               |
| 15 (S-CR) | )      | 16 (S-CU)    | 0.3164                     | 31              |
| 15 (S-CR) | )      | 17 (S-LA)    | 0.0660                     | 31              |
| 15 (S-CR) | )      | 18 (S-HO)    | *****                      | 0               |
| 15 (S-CR) | )      | 19 (S-NE)    | *****                      | 0               |
| 15 (S-CR) | )      | 20 (S-NI)    | 0.7770                     | 31              |
| 15 (S-CR) | )      | 21 (S-PB)    | 0.1155                     | 29              |
| 15 (S-CR) | )      | 22 (S-SB)    | *****                      | 0               |
| 15 (S-CR) | )      | 23 (S-SC)    | 0.3576                     | 31              |
| 15 (S-CR) | )      | 24 (S-SN)    | *****                      | 0               |
| 15 (S-CR) | )      | 25 (S-SR)    | 0.2356                     | 31              |
| 15 (S-CR) | )      | 26 (S-V)     | 0.3038                     | 31              |
| 15 (S-CR) | )      | 27 (S-W)     | *****                      | 0               |
| 15 (S-CR) | )      | 28 (S-Y)     | 0.3859                     | 31              |
| 15 (S-CR) | )      | 29 (S-ZN)    | 0.5639                     | 4               |
| 15 (S-CR) | )      | 30 (S-ZR)    | -0.1124                    | 31              |
| 15 (S-CR) | )      | 31 (S-TH)    | *****                      | 0               |
| 15 (S-CR) | )      | 32 (AA-AS-P) | 0.2894                     | 30              |
| 15 (S-CR) | )      | 33 (AA-ZN-P) | 0.2222                     | 31              |
| 15 (S-CR) | )      | 34 (AA-SB-P) | *****                      | 1               |
| 16 (S-CU) | )      | 17 (S-LA)    | -0.1772                    | 34              |
| 16 (S-CU) | )      | 18 (S-MO)    | *****                      | 0               |
| 16 (S-CU) | )      | 19 (S-NE)    | *****                      | 0               |
| 16 (S-CU) | )      | 20 (S-NI)    | 0.4413                     | 34              |
| 16 (S-CU) | )      | 21 (S-PB)    | 0.2990                     | 31              |
| 16 (S-CU) | )      | 22 (S-SC)    | *****                      | 0               |
| 16 (S-CU) | )      | 23 (S-SC)    | 0.0737                     | 34              |
| 16 (S-CU) | )      | 24 (S-SN)    | *****                      | 0               |
| 16 (S-CU) | )      | 25 (S-SR)    | 0.0242                     | 33              |
| 16 (S-CU) | )      | 26 (S-V)     | -0.0352                    | 34              |

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00101 CORRELATION ANALYSIS - USGS STATPAC (01/15/82)

DATE 11/29/84

| COLUMN    | VERSUS | COLUMN       | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|-----------|--------|--------------|----------------------------|-----------------|
| 16 (S-CU) | )      | 27 (S-W)     | *****                      | 0               |
| 16 (S-CU) | )      | 26 (S-Y)     | U.3505                     | 34              |
| 16 (S-CU) | )      | 29 (S-ZN)    | U.1515                     | 4               |
| 16 (S-CU) | )      | 30 (S-ZR)    | -0.4094                    | 34              |
| 16 (S-CU) | )      | 31 (S-TH)    | *****                      | 0               |
| 16 (S-CU) | )      | 32 (AA-AS-F) | U.1051                     | 31              |
| 16 (S-CU) | )      | 33 (AA-ZN-P) | -0.1123                    | 34              |
| 16 (S-CU) | )      | 34 (AA-SB-P) | *****                      | 1               |
| 17 (S-LA) | )      | 18 (S-MO)    | *****                      | 0               |
| 17 (S-LA) | )      | 19 (S-Nb)    | *****                      | 0               |
| 17 (S-LA) | )      | 20 (S-NI)    | -U.0410                    | 34              |
| 17 (S-LA) | )      | 21 (S-Pb)    | U.0251                     | 31              |
| 17 (S-LA) | )      | 22 (S-Sb)    | *****                      | 0               |
| 17 (S-LA) | )      | 23 (S-SC)    | U.0022                     | 34              |
| 17 (S-LA) | )      | 24 (S-SN)    | U.0325                     | 33              |
| 17 (S-LA) | )      | 25 (S-SR)    | U.0325                     | 34              |
| 17 (S-LA) | )      | 26 (S-V)     | U.7426                     | 34              |
| 17 (S-LA) | )      | 27 (S-W)     | *****                      | 0               |
| 17 (S-LA) | )      | 28 (S-Y)     | U.4414                     | 34              |
| 17 (S-LA) | )      | 29 (S-ZN)    | U.9571                     | 4               |
| 17 (S-LA) | )      | 30 (S-ZR)    | 0.4940                     | 34              |
| 17 (S-LA) | )      | 31 (S-TH)    | *****                      | 0               |
| 17 (S-LA) | )      | 32 (AA-AS-F) | -U.3717                    | 31              |
| 17 (S-LA) | )      | 33 (AA-ZN-P) | U.6275                     | 34              |
| 17 (S-LA) | )      | 34 (AA-SB-P) | *****                      | 1               |
| 18 (S-KO) | )      | 19 (S-Nb)    | *****                      | 0               |
| 18 (S-KO) | )      | 20 (S-NI)    | *****                      | 0               |
| 18 (S-KO) | )      | 21 (S-Pb)    | *****                      | 0               |
| 18 (S-KO) | )      | 22 (S-Sb)    | *****                      | 0               |
| 18 (S-KO) | )      | 23 (S-SC)    | *****                      | 0               |
| 18 (S-KO) | )      | 24 (S-SN)    | *****                      | 0               |
| 18 (S-KO) | )      | 25 (S-SR)    | *****                      | 0               |
| 18 (S-KO) | )      | 26 (S-V)     | *****                      | 0               |
| 18 (S-KO) | )      | 27 (S-W)     | *****                      | 0               |
| 18 (S-KO) | )      | 28 (S-Y)     | *****                      | 0               |
| 18 (S-KO) | )      | 29 (S-ZN)    | *****                      | 0               |
| 18 (S-KO) | )      | 30 (S-ZR)    | *****                      | 0               |
| 18 (S-KO) | )      | 31 (S-TH)    | *****                      | 0               |
| 18 (S-KO) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 18 (S-KO) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 18 (S-KO) | )      | 34 (AA-SB-P) | *****                      | 0               |
| 19 (S-Nb) | )      | 20 (S-NI)    | *****                      | 0               |
| 19 (S-Nb) | )      | 21 (S-Pb)    | *****                      | 0               |
| 19 (S-Nb) | )      | 22 (S-Sb)    | *****                      | 0               |
| 19 (S-Nb) | )      | 23 (S-SC)    | *****                      | 0               |
| 19 (S-Nb) | )      | 24 (S-SN)    | *****                      | 0               |
| 19 (S-Nb) | )      | 25 (S-SR)    | *****                      | 0               |
| 19 (S-Nb) | )      | 26 (S-V)     | *****                      | 0               |
| 19 (S-Nb) | )      | 27 (S-W)     | *****                      | 0               |
| 19 (S-Nb) | )      | 28 (S-Y)     | *****                      | 0               |

| COLUMN    | VERSUS | COLUMN       | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|-----------|--------|--------------|----------------------------|-----------------|
| 19 (S-NB) | )      | 29 (S-ZN)    | *****                      | 0               |
| 19 (S-NB) | )      | 30 (S-ZR)    | *****                      | 0               |
| 19 (S-NB) | )      | 31 (S-TH)    | *****                      | 0               |
| 19 (S-NB) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 19 (S-NB) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 19 (S-NB) | )      | 34 (AA-SB-P) | *****                      | 0               |
| 20 (S-NI) | )      | 21 (S-PB)    | U.1170                     | 31              |
| 20 (S-NI) | )      | 22 (S-SB)    | *****                      | 0               |
| 20 (S-NI) | )      | 23 (S-SC)    | U.3055                     | 34              |
| 20 (S-NI) | )      | 24 (S-SN)    | *****                      | 0               |
| 20 (S-NI) | )      | 25 (S-SK)    | U.2000                     | 33              |
| 20 (S-NI) | )      | 26 (S-V)     | U.3402                     | 34              |
| 20 (S-NI) | )      | 27 (S-W)     | *****                      | 0               |
| 20 (S-NI) | )      | 28 (S-Y)     | U.2615                     | 34              |
| 20 (S-NI) | )      | 29 (S-ZH)    | -U.1350                    | 4               |
| 20 (S-NI) | )      | 30 (S-ZR)    | -U.2098                    | 34              |
| 20 (S-NI) | )      | 31 (S-TH)    | *****                      | 0               |
| 20 (S-NI) | )      | 32 (AA-AS-P) | U.3205                     | 31              |
| 20 (S-NI) | )      | 33 (AA-ZN-P) | U.2854                     | 34              |
| 20 (S-NI) | )      | 34 (AA-SB-P) | *****                      | 1               |
| 21 (S-PB) | )      | 22 (S-SB)    | *****                      | 0               |
| 21 (S-PB) | )      | 23 (S-SC)    | U.0545                     | 31              |
| 21 (S-PB) | )      | 24 (S-SN)    | *****                      | 0               |
| 21 (S-PB) | )      | 25 (S-SK)    | -U.0742                    | 31              |
| 21 (S-PB) | )      | 26 (S-V)     | U.0111                     | 31              |
| 21 (S-PB) | )      | 27 (S-W)     | *****                      | 0               |
| 21 (S-PB) | )      | 28 (S-Y)     | U.1869                     | 31              |
| 21 (S-PB) | )      | 29 (S-ZH)    | -U.1637                    | 4               |
| 21 (S-PB) | )      | 30 (S-ZR)    | -U.3415                    | 31              |
| 21 (S-PB) | )      | 31 (S-TH)    | *****                      | 0               |
| 21 (S-PB) | )      | 32 (AA-AS-P) | U.0617                     | 29              |
| 21 (S-PB) | )      | 33 (AA-ZN-P) | -U.1979                    | 31              |
| 21 (S-PB) | )      | 34 (AA-SB-P) | *****                      | 1               |
| 22 (S-SB) | )      | 23 (S-SC)    | *****                      | 0               |
| 22 (S-SB) | )      | 24 (S-SN)    | *****                      | 0               |
| 22 (S-SB) | )      | 25 (S-SK)    | *****                      | 0               |
| 22 (S-SB) | )      | 26 (S-V)     | *****                      | 0               |
| 22 (S-SB) | )      | 27 (S-W)     | *****                      | 0               |
| 22 (S-SB) | )      | 28 (S-Y)     | *****                      | 0               |
| 22 (S-SB) | )      | 29 (S-ZH)    | *****                      | 0               |
| 22 (S-SB) | )      | 30 (S-ZR)    | *****                      | 0               |
| 22 (S-SB) | )      | 31 (S-TH)    | *****                      | 0               |
| 22 (S-SB) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 22 (S-SB) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 22 (S-SB) | )      | 34 (AA-SB-P) | *****                      | 0               |
| 23 (S-SC) | )      | 24 (S-SN)    | *****                      | 0               |
| 23 (S-SC) | )      | 25 (S-SK)    | U.0292                     | 33              |
| 23 (S-SC) | )      | 26 (S-V)     | U.6589                     | 34              |
| 23 (S-SC) | )      | 27 (S-W)     | *****                      | 0               |
| 23 (S-SC) | )      | 28 (S-Y)     | U.3714                     | 34              |

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| COLUMN    | VERSUS | COLUMN       | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|-----------|--------|--------------|----------------------------|-----------------|
| 23 (S-SC) | )      | 29 (S-ZN)    | 0.9768                     | 4               |
| 23 (S-SC) | )      | 30 (S-ZR)    | 0.3038                     | 34              |
| 23 (S-SC) | )      | 31 (S-TH)    | *****                      | 0               |
| 23 (S-SC) | )      | 32 (AA-AS-P) | -0.4509                    | 31              |
| 23 (S-SC) | )      | 33 (AA-ZN-P) | 0.6204                     | 34              |
| 23 (S-SC) | )      | 34 (AA-SB-P) | *****                      | 1               |
| 24 (S-SN) | )      | 25 (S-SR)    | *****                      | 0               |
| 24 (S-SN) | )      | 26 (S-V)     | *****                      | 0               |
| 24 (S-SN) | )      | 27 (S-W)     | *****                      | 0               |
| 24 (S-SN) | )      | 28 (S-Y)     | *****                      | 0               |
| 24 (S-SN) | )      | 29 (S-ZN)    | *****                      | 0               |
| 24 (S-SN) | )      | 30 (S-ZR)    | *****                      | 0               |
| 24 (S-SN) | )      | 31 (S-TH)    | *****                      | 0               |
| 24 (S-SN) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 24 (S-SN) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 24 (S-SN) | )      | 34 (AA-SB-P) | *****                      | 0               |
| 25 (S-SR) | )      | 26 (S-V)     | 0.0044                     | 33              |
| 25 (S-SR) | )      | 27 (S-W)     | *****                      | 0               |
| 25 (S-SR) | )      | 28 (S-Y)     | *****                      | 0               |
| 25 (S-SR) | )      | 29 (S-ZN)    | -0.1085                    | 33              |
| 25 (S-SR) | )      | 30 (S-ZR)    | *****                      | 4               |
| 25 (S-SR) | )      | 31 (S-TH)    | -0.1281                    | 33              |
| 25 (S-SR) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 25 (S-SR) | )      | 33 (AA-ZN-P) | -0.0039                    | 31              |
| 25 (S-SR) | )      | 34 (AA-SB-P) | -0.1907                    | 33              |
| 26 (S-V)  | )      | 27 (S-W)     | *****                      | 1               |
| 26 (S-V)  | )      | 28 (S-Y)     | 0.4734                     | 34              |
| 26 (S-V)  | )      | 29 (S-ZN)    | 0.7389                     | 4               |
| 26 (S-V)  | )      | 30 (S-ZR)    | 0.3635                     | 34              |
| 26 (S-V)  | )      | 31 (S-TH)    | *****                      | 0               |
| 26 (S-V)  | )      | 32 (AA-AS-P) | -0.2661                    | 31              |
| 26 (S-V)  | )      | 33 (AA-ZN-P) | 0.8755                     | 34              |
| 26 (S-V)  | )      | 34 (AA-SB-P) | *****                      | 1               |
| 27 (S-W)  | )      | 28 (S-Y)     | *****                      | 0               |
| 27 (S-W)  | )      | 29 (S-ZN)    | *****                      | 0               |
| 27 (S-W)  | )      | 30 (S-ZR)    | *****                      | 0               |
| 27 (S-W)  | )      | 31 (S-TH)    | *****                      | 0               |
| 27 (S-W)  | )      | 32 (AA-AS-P) | *****                      | 0               |
| 27 (S-W)  | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 27 (S-W)  | )      | 34 (AA-SB-P) | *****                      | 0               |
| 28 (S-Y)  | )      | 29 (S-ZN)    | 0.5639                     | 4               |
| 28 (S-Y)  | )      | 30 (S-ZR)    | 0.1048                     | 34              |
| 28 (S-Y)  | )      | 31 (S-TH)    | *****                      | 0               |
| 28 (S-Y)  | )      | 32 (AA-AS-P) | -0.0377                    | 31              |
| 28 (S-Y)  | )      | 33 (AA-ZN-P) | 0.2230                     | 34              |
| 28 (S-Y)  | )      | 34 (AA-SB-P) | *****                      | 1               |
| 29 (S-ZN) | )      | 31 (S-TH)    | 0.5693                     | 4               |
| 29 (S-ZN) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 29 (S-ZN) | )      | 33 (AA-ZN-P) | -0.5639                    | 4               |
| 29 (S-ZN) | )      | 34 (AA-SB-P) | 0.9768                     | 4               |

DC101 CORRELATION ANALYSIS - USGS STATPAC (01/15/82)

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| COLUMN        | VERSUS | COLUMN        | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|---------------|--------|---------------|----------------------------|-----------------|
| 29 (S-ZN )    |        | 34 (AA-SB-P ) | *****                      | 1               |
| 30 (S-ZR )    |        | 31 (S-TH )    | *****                      | 0               |
| 30 (S-ZR )    |        | 32 (AA-AS-P ) | -0.1773                    | 31              |
| 30 (S-ZR )    |        | 33 (AA-ZN-P ) | 0.3134                     | 34              |
| 30 (S-ZR )    |        | 34 (AA-SB-P ) | *****                      | 1               |
| 31 (S-TH )    |        | 32 (AA-AS-P ) | *****                      | 0               |
| 31 (S-TH )    |        | 33 (AA-ZN-P ) | *****                      | 0               |
| 31 (S-TH )    |        | 34 (AA-SB-P ) | *****                      | 0               |
| 32 (AA-AS-P ) |        | 33 (AA-ZN-P ) | -0.2365                    | 31              |
| 32 (AA-AS-P ) |        | 34 (AA-SB-P ) | *****                      | 1               |
| 33 (AA-ZN-P ) |        | 34 (AA-SB-P ) | *****                      | 1               |

DC101 CORRELATION ANALYSIS - USGS STATPAC (01/15/82)

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TITLE INPUT ID N M \*\*\*\*\* OPTIONS \*\*\*\*\* OUTPUT ID N M  
cedar mountain concentrates -cdf-conc- 34 36 1 0 1 1 0 0 0 0 0 -cdf-conc- 34 34

NUMBER OF SELECTED COLUMNS 34

SELECTED COLUMN INDICES

|    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| 33 | 34 | 35 | 36 |    |    |    |    |    |    |

SELECTED COLUMN IDENTIFIERS

|       |         |         |         |      |      |      |      |      |      |
|-------|---------|---------|---------|------|------|------|------|------|------|
| S-FEZ | S-MGX   | S-CAZ   | S-TIX   | S-MN | S-AG | S-AS | S-AU | S-B  | S-BA |
| S-BE  | S-BI    | S-CD    | S-CO    | S-CR | S-CU | S-LA | S-MO | S-NB | S-NI |
| S-Pb  | S-SB    | S-SC    | S-SN    | S-SR | S-V  | S-W  | S-Y  | S-ZN | S-ZR |
| S-TH  | AA-AS-P | AA-ZN-P | AA-SB-P |      |      |      |      |      |      |

NUMBER OF SELECTED ROW PAIRS 1

SELECTED ROW PAIRS

1- 34

PHASE TWO RESULTS

WARNING \*\* THE RESULTS FROM THIS PHASE "SHOULD NOT" BE ENTERED INTO DOUG96-FACTOR ANALYSIS.  
THE CORRELATION MATRIX FROM THIS PHASE DOES NOT HAVE THE GRAMIAN PROPERTIES  
WHICH ARE REQUIRED FOR FACTOR ANALYSIS.



D0101 CORRELATION ANALYSIS - USGS STATPAC (01/15/82)

DATE 11/29/84

ARRAY OF MEANS -

|          | 3       | 4       | 5       | 6       | 7       | 8       | 9       | 10      | 11      | 12 |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----|
| S-FEX    | S-MGX   | S-CAZ   | S-TLZ   | S-MN    | S-AG    | S-AS    | S-AU    | S-B     | S-BA    |    |
| 1 S-FEX  | 0.1674  | 0.1674  | 0.1674  | 0.2383  | 0.1674  | 0.3333  | 0.2746  | 0.1725  | 0.2893  |    |
| 2 S-MGX  | -0.2048 | -0.2048 | -0.2048 | -0.2851 | -0.2048 | -0.2746 | -0.1951 | -0.1279 | -0.1279 |    |
| 3 S-CAZ  | 0.8696  | 0.8696  | 0.8696  | 0.8427  | 0.8696  | 1.0058  | 0.8869  | 0.8346  | 0.8346  |    |
| 4 S-TLZ  | 0.0531  | 0.0531  | 0.0531  | 0.0531  | 0.0531  | 0.0487  | 0.0989  | 0.1528  | 0.1528  |    |
| 5 S-MN   | 2.6385  | 2.6385  | 2.6385  | 2.5955  | 2.6385  | 2.7993  | 2.6525  | 2.7278  | 2.7278  |    |
| 6 S-AG   | 1.5340  | 1.5340  | 1.5340  | 1.5340  | 1.5340  | 1.5340  | 1.5340  | 2.0000  | 2.0000  |    |
| 7 S-AS   | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   |    |
| 8 S-AU   | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   |    |
| 9 S-B    | 1.7654  | 1.7654  | 1.7654  | 1.6514  | 1.7654  | 1.6990  | 1.7511  | 1.7511  | 1.7511  |    |
| 10 S-BA  | 3.6988  | 3.6988  | 3.6988  | 3.6167  | 3.6988  | 3.4771  | 3.6988  | 3.6988  | 3.6988  |    |
| 11 S-CAZ | 0.3010  | 0.3010  | 0.3010  | 0.3010  | 0.3010  | 0.3010  | 0.3010  | 0.3010  | 0.3010  |    |
| 12 S-TLZ | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   |    |
| 13 S-MN  | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   |    |
| 14 S-AG  | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   |    |
| 15 S-AS  | 2.0259  | 2.0259  | 2.0259  | 1.9108  | 2.0259  | 2.0000  | 2.0252  | 2.0252  | 2.0252  |    |
| 16 S-AU  | 1.1711  | 1.1711  | 1.1711  | 1.0604  | 1.1711  | 1.1590  | 1.1197  | 1.1197  | 1.1197  |    |
| 17 S-BA  | 2.6587  | 2.6587  | 2.6587  | 2.6044  | 2.6587  | 2.7993  | 2.6587  | 2.6587  | 2.6587  |    |
| 18 S-CAZ | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   |    |
| 19 S-TLZ | 1.9398  | 1.9398  | 1.9398  | 1.7592  | 1.9398  | 1.1003  | 1.9398  | 1.9398  | 1.9398  |    |
| 20 S-MN  | 1.1254  | 1.1254  | 1.1254  | 1.1204  | 1.1254  | 1.1003  | 1.1254  | 1.1254  | 1.1254  |    |
| 21 S-AG  | 1.5749  | 1.5749  | 1.5749  | 1.5751  | 1.5749  | 1.1003  | 1.5660  | 1.5660  | 1.5660  |    |
| 22 S-AS  | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   |    |
| 23 S-AU  | 1.2500  | 1.2500  | 1.2500  | 1.9013  | 1.2500  | 1.8495  | 1.2500  | 1.2500  | 1.2500  |    |
| 24 S-BA  | 1.9973  | 1.9973  | 1.9973  | 3.0670  | 1.9973  | 3.0558  | 1.9973  | 2.0883  | 2.0883  |    |
| 25 S-CAZ | 3.1429  | 3.1429  | 3.1429  | 3.0670  | 3.1429  | 3.0558  | 3.1378  | 2.9601  | 2.9601  |    |
| 26 S-TLZ | 2.1157  | 2.1157  | 2.1157  | 2.0409  | 2.1157  | 2.2177  | 2.1283  | 2.1072  | 2.1072  |    |
| 27 S-MN  | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   |    |
| 28 S-AG  | 2.8918  | 2.8918  | 2.8918  | 2.8365  | 2.8918  | 2.9554  | 2.8918  | 2.9111  | 2.9111  |    |
| 29 S-AS  | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   |    |
| 30 S-AU  | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   |    |
| 31 S-BA  | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   |    |
| 32 S-CAZ | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   |    |
| 33 S-TLZ | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   |    |
| 34 S-MN  | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   | *****   |    |

## ARRAY CF MEANS - CONT.

|            | 13      | 14    | 15    | 16    | 17      | 18      | 19      | 20    | 21      | 22      |
|------------|---------|-------|-------|-------|---------|---------|---------|-------|---------|---------|
|            | S-BE    | S-BI  | S-CD  | S-CD  | S-CR    | S-CU    | S-LA    | S-MO  | S-NB    | S-NI    |
| 1 S-FEZ    | 0.2170  | ***** | ***** | ***** | 0.1839  | 0.1939  | 0.1725  | ***** | -0.0551 | 0.3655  |
| 2 S-MGX    | -0.1439 | ***** | ***** | ***** | -0.1698 | -0.1713 | -0.1951 | ***** | -0.1819 | -0.1087 |
| 3 S-CAX    | 0.9238  | ***** | ***** | ***** | 0.8807  | 0.8900  | 0.8869  | ***** | 0.9375  | 0.9942  |
| 4 S-TIT    | 0.1137  | ***** | ***** | ***** | 0.1064  | 0.0487  | 0.0989  | ***** | 0.0894  | 0.1350  |
| 5 S-WN     | 2.7053  | ***** | ***** | ***** | 2.6818  | 2.6637  | 2.6525  | ***** | 2.5963  | 2.8571  |
| 6 S-AG     | 1.5340  | ***** | ***** | ***** | 1.5340  | 1.5340  | 1.5340  | ***** | *****   | 1.5340  |
| 7 S-AS     | *****   | ***** | ***** | ***** | *****   | *****   | *****   | ***** | *****   | *****   |
| 8 S-AU     | *****   | ***** | ***** | ***** | *****   | *****   | *****   | ***** | *****   | *****   |
| 9 S-B      | 1.7752  | ***** | ***** | ***** | 1.7853  | 1.8036  | 1.7654  | ***** | 1.7799  | 1.7826  |
| 10 S-BA    | 3.6968  | ***** | ***** | ***** | 3.6773  | 3.6525  | 3.6988  | ***** | *****   | 3.7216  |
| 11 S-BE    | 0.3010  | ***** | ***** | ***** | 0.3010  | 0.3010  | 0.3010  | ***** | 0.3010  | 0.3010  |
| 12 S-BI    | *****   | ***** | ***** | ***** | *****   | *****   | *****   | ***** | *****   | *****   |
| 13 S-CD    | *****   | ***** | ***** | ***** | *****   | *****   | *****   | ***** | *****   | *****   |
| 14 S-CD    | *****   | ***** | ***** | ***** | *****   | *****   | *****   | ***** | *****   | *****   |
| 15 S-CR    | 2.0399  | ***** | ***** | ***** | 2.0259  | 2.0399  | 2.0259  | ***** | 2.1313  | 2.0666  |
| 16 S-CU    | 1.1943  | ***** | ***** | ***** | 1.1901  | 1.1711  | 1.1770  | ***** | 1.2405  | 1.2009  |
| 17 S-LA    | 2.6756  | ***** | ***** | ***** | 2.6680  | 2.6883  | 2.6587  | ***** | 2.5819  | 2.7439  |
| 18 S-MO    | *****   | ***** | ***** | ***** | *****   | *****   | *****   | ***** | *****   | *****   |
| 19 S-NB    | 2.0000  | ***** | ***** | ***** | 1.9666  | 2.0000  | 1.9398  | ***** | 1.9398  | 2.0000  |
| 20 S-NI    | 1.1254  | ***** | ***** | ***** | 1.1254  | 1.1095  | 1.1254  | ***** | 1.0000  | 1.1254  |
| 21 S-PB    | 1.5729  | ***** | ***** | ***** | 1.5955  | 1.5749  | 1.5660  | ***** | 1.4758  | 1.5365  |
| 22 S-SB    | *****   | ***** | ***** | ***** | *****   | *****   | *****   | ***** | *****   | *****   |
| 23 S-SC    | 1.2500  | ***** | ***** | ***** | 1.2500  | 1.2500  | 1.2500  | ***** | *****   | 1.3495  |
| 24 S-SN    | 2.0130  | ***** | ***** | ***** | 2.0130  | 1.9315  | 1.9973  | ***** | 2.0147  | 2.0432  |
| 25 S-SR    | 3.1068  | ***** | ***** | ***** | 3.1054  | 3.1028  | 3.1378  | ***** | 3.4190  | 3.0628  |
| 26 S-Y     | 2.1453  | ***** | ***** | ***** | 2.1515  | 2.1311  | 2.1283  | ***** | 2.1952  | 2.1737  |
| 27 S-W     | *****   | ***** | ***** | ***** | *****   | *****   | *****   | ***** | *****   | *****   |
| 28 S-Y     | 2.9060  | ***** | ***** | ***** | 2.9010  | 2.9029  | 2.8918  | ***** | 2.8808  | 2.9164  |
| 29 S-ZN    | *****   | ***** | ***** | ***** | *****   | *****   | *****   | ***** | *****   | *****   |
| 30 S-ZR    | *****   | ***** | ***** | ***** | *****   | *****   | *****   | ***** | *****   | *****   |
| 31 S-TI    | *****   | ***** | ***** | ***** | *****   | *****   | *****   | ***** | *****   | *****   |
| 32 AA-AS-P | *****   | ***** | ***** | ***** | *****   | *****   | *****   | ***** | *****   | *****   |
| 33 AA-ZN-P | *****   | ***** | ***** | ***** | *****   | *****   | *****   | ***** | *****   | *****   |
| 34 AA-SB-P | *****   | ***** | ***** | ***** | *****   | *****   | *****   | ***** | *****   | *****   |

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ARRAY OF MEANS - CONT.

|            | 23      | 24    | 25     | 26      | 27      | 28      | 29    | 30      | 31    | 32    |
|------------|---------|-------|--------|---------|---------|---------|-------|---------|-------|-------|
|            | S-PB    | S-SB  | S-SC   | S-SN    | S-SR    | S-V     | S-W   | S-Y     | S-ZN  | S-ZR  |
| 1 S-FEZ    | 0.1856  | ***** | 0.2188 | 0.2130  | 0.1967  | 0.1674  | ***** | 0.1725  | ***** | ***** |
| 2 S-MGZ    | -0.1522 | ***** | 0.0440 | -0.1028 | -0.1794 | -0.2048 | ***** | -0.1951 | ***** | ***** |
| 3 S-CAZ    | 0.8740  | ***** | 0.9225 | 0.9402  | 0.8872  | 0.8696  | ***** | 0.8869  | ***** | ***** |
| 4 S-11Z    | -0.0753 | ***** | *****  | 0.0874  | 0.0579  | 0.0531  | ***** | 0.0989  | ***** | ***** |
| 5 S-MN     | 2.6346  | ***** | 2.8693 | 2.7551  | 2.6635  | 2.6385  | ***** | 2.6525  | ***** | ***** |
| 6 S-AG     | *****   | ***** | *****  | 1.3010  | 1.5340  | 1.5340  | ***** | 1.5340  | ***** | ***** |
| 7 S-AS     | *****   | ***** | *****  | *****   | *****   | *****   | ***** | *****   | ***** | ***** |
| 8 S-AU     | *****   | ***** | *****  | *****   | *****   | *****   | ***** | *****   | ***** | ***** |
| 9 S-B      | 1.7852  | ***** | 1.9133 | 1.8294  | 1.7897  | 1.7654  | ***** | 1.7654  | ***** | ***** |
| 10 S-BA    | 3.7963  | ***** | 3.9247 | 3.7500  | 3.6988  | 3.6988  | ***** | 3.6988  | ***** | ***** |
| 11 S-BE    | 0.3010  | ***** | 0.3010 | 0.3010  | 0.3010  | 0.3010  | ***** | 0.3010  | ***** | ***** |
| 12 S-BI    | *****   | ***** | *****  | *****   | *****   | *****   | ***** | *****   | ***** | ***** |
| 13 S-BO    | *****   | ***** | *****  | *****   | *****   | *****   | ***** | *****   | ***** | ***** |
| 14 S-BO    | *****   | ***** | *****  | *****   | *****   | *****   | ***** | *****   | ***** | ***** |
| 15 S-CR    | 2.0507  | ***** | 2.3138 | 2.0649  | 2.0385  | 2.0259  | ***** | 2.0259  | ***** | ***** |
| 16 S-CU    | 1.2120  | ***** | 1.3451 | 1.1990  | 1.1711  | 1.1711  | ***** | 1.1770  | ***** | ***** |
| 17 S-LA    | 2.6910  | ***** | 2.8495 | 2.6848  | 2.6818  | 2.6587  | ***** | 2.6587  | ***** | ***** |
| 18 S-MO    | *****   | ***** | *****  | *****   | *****   | *****   | ***** | *****   | ***** | ***** |
| 19 S-MD    | 2.0000  | ***** | *****  | 2.1003  | 2.0000  | 1.9398  | ***** | 1.9398  | ***** | ***** |
| 20 S-NI    | 1.0733  | ***** | 1.1505 | 1.1358  | 1.1254  | 1.1254  | ***** | 1.1254  | ***** | ***** |
| 21 S-PD    | 1.5749  | ***** | 1.5365 | 1.6021  | 1.5749  | 1.5749  | ***** | 1.5660  | ***** | ***** |
| 22 S-SB    | *****   | ***** | *****  | *****   | *****   | *****   | ***** | *****   | ***** | ***** |
| 23 S-SC    | 1.2500  | ***** | 1.2500 | 1.3333  | 1.2500  | 1.2500  | ***** | 1.2500  | ***** | ***** |
| 24 S-SN    | 1.8963  | ***** | 2.0071 | 1.9973  | 1.9973  | 1.9973  | ***** | 1.9973  | ***** | ***** |
| 25 S-SR    | 3.2746  | ***** | 3.1870 | 3.1261  | 3.1429  | 3.1429  | ***** | 3.1378  | ***** | ***** |
| 26 S-V     | 2.0914  | ***** | 2.2898 | 2.1629  | 2.1229  | 2.1157  | ***** | 2.1283  | ***** | ***** |
| 27 S-A     | *****   | ***** | *****  | *****   | *****   | *****   | ***** | *****   | ***** | ***** |
| 28 S-Y     | 2.8927  | ***** | 3.0440 | 2.9111  | 2.9042  | 2.8918  | ***** | 2.8918  | ***** | ***** |
| 29 S-ZN    | *****   | ***** | *****  | *****   | *****   | *****   | ***** | *****   | ***** | ***** |
| 30 S-ZR    | *****   | ***** | *****  | *****   | *****   | *****   | ***** | *****   | ***** | ***** |
| 31 S-TH    | *****   | ***** | *****  | *****   | *****   | *****   | ***** | *****   | ***** | ***** |
| 32 AA-AS-P | *****   | ***** | *****  | *****   | *****   | *****   | ***** | *****   | ***** | ***** |
| 33 AA-ZN-P | *****   | ***** | *****  | *****   | *****   | *****   | ***** | *****   | ***** | ***** |
| 34 AA-SB-P | *****   | ***** | *****  | *****   | *****   | *****   | ***** | *****   | ***** | ***** |

ARRAY CF MEANS - CONT.

|            | 33    | 34      | 35      | 36      |
|------------|-------|---------|---------|---------|
|            | S-TH  | AA-AS-P | AA-ZN-P | AA-SB-P |
| 1 S-FEZ    | ***** | *****   | *****   | *****   |
| 2 S-MGZ    | ***** | *****   | *****   | *****   |
| 3 S-CAZ    | ***** | *****   | *****   | *****   |
| 4 S-TIZ    | ***** | *****   | *****   | *****   |
| 5 S-MN     | ***** | *****   | *****   | *****   |
| 6 S-AG     | ***** | *****   | *****   | *****   |
| 7 S-AS     | ***** | *****   | *****   | *****   |
| 8 S-AU     | ***** | *****   | *****   | *****   |
| 9 S-B      | ***** | *****   | *****   | *****   |
| 10 S-BA    | ***** | *****   | *****   | *****   |
| 11 S-BE    | ***** | *****   | *****   | *****   |
| 12 S-BI    | ***** | *****   | *****   | *****   |
| 13 S-CD    | ***** | *****   | *****   | *****   |
| 14 S-CO    | ***** | *****   | *****   | *****   |
| 15 S-CR    | ***** | *****   | *****   | *****   |
| 16 S-CU    | ***** | *****   | *****   | *****   |
| 17 S-LA    | ***** | *****   | *****   | *****   |
| 18 S-MO    | ***** | *****   | *****   | *****   |
| 19 S-NB    | ***** | *****   | *****   | *****   |
| 20 S-NI    | ***** | *****   | *****   | *****   |
| 21 S-PB    | ***** | *****   | *****   | *****   |
| 22 S-SB    | ***** | *****   | *****   | *****   |
| 23 S-SC    | ***** | *****   | *****   | *****   |
| 24 S-SN    | ***** | *****   | *****   | *****   |
| 25 S-SR    | ***** | *****   | *****   | *****   |
| 26 S-V     | ***** | *****   | *****   | *****   |
| 27 S-W     | ***** | *****   | *****   | *****   |
| 28 S-Y     | ***** | *****   | *****   | *****   |
| 29 S-ZN    | ***** | *****   | *****   | *****   |
| 30 S-ZR    | ***** | *****   | *****   | *****   |
| 31 S-TH    | ***** | *****   | *****   | *****   |
| 32 AA-AS-P | ***** | *****   | *****   | *****   |
| 33 AA-ZN-P | ***** | *****   | *****   | *****   |
| 34 AA-SB-P | ***** | *****   | *****   | *****   |

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## ARRAY OF VARIANCES -

|          | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12    |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|          | S-FEZ | S-MGZ | S-CAZ | S-TIZ | S-MN  | S-AG  | S-AS  | S-AU  | S-B   | S-BA  |
| 1 S-FEZ  | 0.081 | 0.081 | 0.081 | 0.063 | 0.081 | 0.123 | ***** | ***** | 0.082 | 0.056 |
| 2 S-MGZ  | 0.006 | 0.068 | 0.068 | 0.046 | 0.068 | 0.069 | ***** | ***** | 0.067 | 0.044 |
| 3 S-CAZ  | 0.057 | 0.057 | 0.057 | 0.054 | 0.057 | 0.037 | ***** | ***** | 0.048 | 0.028 |
| 4 S-TIZ  | 0.075 | 0.075 | 0.075 | 0.075 | 0.075 | 0.054 | ***** | ***** | 0.026 | 0.023 |
| 5 S-MN   | 0.074 | 0.074 | 0.074 | 0.059 | 0.074 | 0.030 | ***** | ***** | 0.069 | 0.080 |
| 6 S-AG   | 0.163 | 0.163 | 0.163 | 0.163 | 0.163 | 0.163 | ***** | ***** | 0.163 | 0.080 |
| 7 S-AS   | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 8 S-AU   | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 9 S-B    | 0.071 | 0.071 | 0.071 | 0.017 | 0.071 | 0.000 | ***** | ***** | 0.071 | 0.048 |
| 10 S-BA  | 0.061 | 0.061 | 0.061 | 0.051 | 0.061 | 0.000 | ***** | ***** | 0.061 | 0.061 |
| 11 S-FEZ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | ***** | ***** | 0.000 | 0.000 |
| 12 S-MGZ | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 13 S-CAZ | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 14 S-TIZ | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 15 S-MN  | 0.062 | 0.062 | 0.062 | 0.042 | 0.062 | 0.091 | ***** | ***** | 0.062 | 0.068 |
| 16 S-AG  | 0.056 | 0.056 | 0.056 | 0.025 | 0.056 | 0.076 | ***** | ***** | 0.057 | 0.029 |
| 17 S-AS  | 0.063 | 0.063 | 0.063 | 0.042 | 0.063 | 0.030 | ***** | ***** | 0.063 | 0.041 |
| 18 S-AU  | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 19 S-B   | 0.077 | 0.077 | 0.077 | 0.018 | 0.077 | 0.000 | ***** | ***** | 0.077 | 0.041 |
| 20 S-BA  | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 | 0.030 | ***** | ***** | 0.024 | 0.022 |
| 21 S-FEZ | 0.009 | 0.009 | 0.009 | 0.000 | 0.009 | 0.000 | ***** | ***** | 0.073 | 0.057 |
| 22 S-MGZ | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 23 S-CAZ | 0.110 | 0.110 | 0.110 | 0.054 | 0.110 | 0.045 | ***** | ***** | 0.110 | 0.110 |
| 24 S-TIZ | 0.190 | 0.190 | 0.190 | 0.116 | 0.190 | 0.133 | ***** | ***** | 0.190 | 0.170 |
| 25 S-MN  | 0.116 | 0.116 | 0.116 | 0.115 | 0.116 | 0.105 | ***** | ***** | 0.119 | 0.048 |
| 26 S-AG  | 0.027 | 0.027 | 0.027 | 0.022 | 0.027 | 0.005 | ***** | ***** | 0.022 | 0.016 |
| 27 S-AS  | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 28 S-AU  | 0.028 | 0.028 | 0.028 | 0.020 | 0.028 | 0.037 | ***** | ***** | 0.028 | 0.021 |
| 29 S-B   | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 30 S-BA  | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 31 S-FEZ | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 32 S-MGZ | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 33 S-CAZ | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 34 S-TIZ | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |

|    |      |
|----|------|
| 13 | S-BE |
| 14 | S-BI |
| 15 | S-CD |
| 16 | S-CO |
| 17 | S-CR |
| 18 | S-CU |
| 19 | S-LA |
| 20 | S-MO |
| 21 | S-MB |
| 22 | S-NI |

|    |         |       |       |       |       |       |       |
|----|---------|-------|-------|-------|-------|-------|-------|
| 1  | S-FEX   | 0.074 | 0.089 | 0.072 | 0.082 | 0.086 | 0.066 |
| 2  | S-MGZ   | 0.053 | 0.065 | 0.064 | 0.067 | 0.109 | 0.072 |
| 3  | S-CAZ   | 0.053 | 0.058 | 0.058 | 0.048 | 0.022 | 0.022 |
| 4  | S-T1X   | 0.029 | 0.024 | 0.088 | 0.026 | 0.041 | 0.035 |
| 5  | S-MN    | 0.055 | 0.066 | 0.069 | 0.069 | 0.053 | 0.053 |
| 6  | S-AG    | 0.163 | 0.163 | 0.163 | 0.163 | 0.059 | 0.059 |
| 7  | S-AS    |       |       |       |       |       |       |
| 8  | S-AU    |       |       |       |       |       |       |
| 9  | S-B     | 0.060 | 0.070 | 0.066 | 0.071 | 0.142 | 0.052 |
| 10 | S-DA    | 0.061 | 0.058 | 0.054 | 0.061 | 0.046 | 0.046 |
| 11 | S-DE    | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 12 | S-BT    |       |       |       |       |       |       |
| 13 | S-CO    |       |       |       |       |       |       |
| 14 | S-CC    |       |       |       |       |       |       |
| 15 | S-CR    | 0.065 | 0.062 | 0.065 | 0.062 | 0.047 | 0.047 |
| 16 | S-CU    | 0.049 | 0.058 | 0.056 | 0.057 | 0.094 | 0.045 |
| 17 | S-LA    | 0.061 | 0.064 | 0.060 | 0.063 | 0.044 | 0.044 |
| 18 | S-PO    |       |       |       |       |       |       |
| 19 | S-NB    | 0.078 | 0.078 | 0.078 | 0.077 | 0.077 | 0.077 |
| 20 | S-NI    | 0.024 | 0.024 | 0.023 | 0.024 | 0.024 | 0.024 |
| 21 | S-PB    | 0.079 | 0.079 | 0.069 | 0.073 | 0.122 | 0.078 |
| 22 | S-SB    |       |       |       |       |       |       |
| 23 | S-SC    | 0.110 | 0.110 | 0.110 | 0.110 | 0.244 | 0.244 |
| 24 | S-SN    | 0.196 | 0.196 | 0.195 | 0.190 | 0.402 | 0.402 |
| 25 | S-SR    | 0.111 | 0.096 | 0.117 | 0.119 | 0.147 | 0.094 |
| 26 | S-V     | 0.021 | 0.018 | 0.029 | 0.022 | 0.031 | 0.014 |
| 27 | S-W     |       |       |       |       |       |       |
| 28 | S-Y     | 0.027 | 0.028 | 0.028 | 0.028 | 0.046 | 0.030 |
| 29 | S-ZN    |       |       |       |       |       |       |
| 30 | S-ZR    |       |       |       |       |       |       |
| 31 | S-TH    |       |       |       |       |       |       |
| 32 | AA-AP   |       |       |       |       |       |       |
| 33 | AA-ZN-P |       |       |       |       |       |       |
| 34 | AA-ZB-P |       |       |       |       |       |       |

## ARRAY OF VARIANCES - CONT.

|            | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32    |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|            | S-PB  | S-SB  | S-SC  | S-SN  | S-SR  | S-V   | S-W   | S-Y   | S-ZN  | S-ZR  |
| 1 S-TEX    | 0.063 | ***** | 0.109 | 0.099 | 0.071 | 0.081 | ***** | 0.082 | ***** | ***** |
| 2 S-MGZ    | 0.069 | ***** | 0.068 | 0.068 | 0.061 | 0.068 | ***** | 0.067 | ***** | ***** |
| 3 S-CAX    | 0.045 | ***** | 0.008 | 0.033 | 0.054 | 0.057 | ***** | 0.048 | ***** | ***** |
| 4 S-11Z    | 0.137 | ***** | ***** | 0.027 | 0.082 | 0.075 | ***** | 0.026 | ***** | ***** |
| 5 S-MN     | 0.109 | ***** | 0.211 | 0.051 | 0.067 | 0.074 | ***** | 0.069 | ***** | ***** |
| 6 S-AG     | ***** | ***** | ***** | 0.000 | 0.163 | 0.163 | ***** | 0.163 | ***** | ***** |
| 7 S-AS     | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 8 S-ZU     | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 9 S-B      | 0.063 | ***** | 0.152 | 0.071 | 0.065 | 0.071 | ***** | 0.071 | ***** | ***** |
| 10 S-BA    | 0.042 | ***** | 0.023 | 0.043 | 0.061 | 0.061 | ***** | 0.061 | ***** | ***** |
| 11 S-GE    | 0.000 | ***** | 0.000 | 0.000 | 0.000 | 0.000 | ***** | 0.000 | ***** | ***** |
| 12 S-BI    | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 13 S-CD    | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 14 S-CO    | ***** | ***** | 0.015 | 0.070 | 0.062 | 0.062 | ***** | 0.062 | ***** | ***** |
| 15 S-CR    | 0.109 | ***** | 0.008 | 0.061 | 0.056 | 0.056 | ***** | 0.057 | ***** | ***** |
| 16 S-CU    | 0.063 | ***** | 0.030 | 0.071 | 0.058 | 0.063 | ***** | 0.063 | ***** | ***** |
| 17 S-LA    | 0.079 | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 18 S-MO    | ***** | ***** | ***** | 0.060 | 0.078 | 0.077 | ***** | 0.077 | ***** | ***** |
| 19 S-NB    | 0.060 | ***** | 0.045 | 0.025 | 0.024 | 0.024 | ***** | 0.024 | ***** | ***** |
| 20 S-NI    | 0.023 | ***** | 0.078 | 0.060 | 0.069 | 0.069 | ***** | 0.073 | ***** | ***** |
| 21 S-PD    | 0.069 | ***** | ***** | 0.060 | 0.069 | 0.069 | ***** | 0.073 | ***** | ***** |
| 22 S-SB    | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 23 S-SC    | 0.110 | ***** | 0.110 | 0.123 | 0.110 | 0.110 | ***** | 0.110 | ***** | ***** |
| 24 S-SN    | 0.161 | ***** | 0.539 | 0.190 | 0.190 | 0.190 | ***** | 0.190 | ***** | ***** |
| 25 S-SR    | 0.131 | ***** | 0.052 | 0.113 | 0.116 | 0.116 | ***** | 0.119 | ***** | ***** |
| 26 S-V     | 0.042 | ***** | 0.004 | 0.023 | 0.028 | 0.027 | ***** | 0.022 | ***** | ***** |
| 27 S-W     | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 28 S-Y     | 0.034 | ***** | 0.008 | 0.030 | 0.027 | 0.028 | ***** | 0.028 | ***** | ***** |
| 29 S-ZN    | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 30 S-ZR    | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 31 S-TH    | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 32 AA-AS-P | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 33 AA-ZN-P | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| 34 AA-SB-P | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** |

ARRAY OF VARIANCES - CONT.

|            | 33    | 34      | 35      | 36      |
|------------|-------|---------|---------|---------|
|            | S-TH  | AA-AS-P | AA-ZN-P | AA-SB-P |
| 1 S-FEX    | ***** | *****   | *****   | *****   |
| 2 S-MGX    | ***** | *****   | *****   | *****   |
| 3 S-CAZ    | ***** | *****   | *****   | *****   |
| 4 S-TIX    | ***** | *****   | *****   | *****   |
| 5 S-MN     | ***** | *****   | *****   | *****   |
| 6 S-AG     | ***** | *****   | *****   | *****   |
| 7 S-AS     | ***** | *****   | *****   | *****   |
| 8 S-AU     | ***** | *****   | *****   | *****   |
| 9 S-B      | ***** | *****   | *****   | *****   |
| 10 S-BA    | ***** | *****   | *****   | *****   |
| 11 S-BE    | ***** | *****   | *****   | *****   |
| 12 S-BI    | ***** | *****   | *****   | *****   |
| 13 S-CD    | ***** | *****   | *****   | *****   |
| 14 S-CO    | ***** | *****   | *****   | *****   |
| 15 S-CR    | ***** | *****   | *****   | *****   |
| 16 S-CU    | ***** | *****   | *****   | *****   |
| 17 S-LA    | ***** | *****   | *****   | *****   |
| 18 S-NO    | ***** | *****   | *****   | *****   |
| 19 S-NB    | ***** | *****   | *****   | *****   |
| 20 S-NI    | ***** | *****   | *****   | *****   |
| 21 S-PB    | ***** | *****   | *****   | *****   |
| 22 S-SB    | ***** | *****   | *****   | *****   |
| 23 S-SC    | ***** | *****   | *****   | *****   |
| 24 S-SN    | ***** | *****   | *****   | *****   |
| 25 S-SR    | ***** | *****   | *****   | *****   |
| 26 S-V     | ***** | *****   | *****   | *****   |
| 27 S-W     | ***** | *****   | *****   | *****   |
| 28 S-Y     | ***** | *****   | *****   | *****   |
| 29 S-ZN    | ***** | *****   | *****   | *****   |
| 30 S-ZR    | ***** | *****   | *****   | *****   |
| 31 S-TH    | ***** | *****   | *****   | *****   |
| 32 AA-AS-P | ***** | *****   | *****   | *****   |
| 33 AA-ZN-P | ***** | *****   | *****   | *****   |
| 34 AA-SB-P | ***** | *****   | *****   | *****   |



| COLUMN    | VERSUS | COLUMN       | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|-----------|--------|--------------|----------------------------|-----------------|
| 1 (S-FEZ) | )      | 2 (S-MGZ)    | 0.2452                     | 34              |
| 1 (S-FEZ) | )      | 3 (S-CAZ)    | -0.0476                    | 34              |
| 1 (S-FEZ) | )      | 4 (S-TIZ)    | 0.2001                     | 24              |
| 1 (S-FEZ) | )      | 5 (S-MN)     | 0.4723                     | 34              |
| 1 (S-FEZ) | )      | 6 (S-AG)     | -0.8234                    | 3               |
| 1 (S-FEZ) | )      | 7 (S-AS)     | *****                      | 0               |
| 1 (S-FEZ) | )      | 8 (S-AU)     | *****                      | 0               |
| 1 (S-FEZ) | )      | 9 (S-B)      | -0.0579                    | 33              |
| 1 (S-FEZ) | )      | 10 (S-BA)    | -0.3008                    | 15              |
| 1 (S-FEZ) | )      | 11 (S-BE)    | *****                      | 29              |
| 1 (S-FEZ) | )      | 12 (S-BI)    | *****                      | 0               |
| 1 (S-FEZ) | )      | 13 (S-CD)    | *****                      | 0               |
| 1 (S-FEZ) | )      | 14 (S-CO)    | *****                      | 0               |
| 1 (S-FEZ) | )      | 15 (S-CR)    | -0.3120                    | 30              |
| 1 (S-FEZ) | )      | 16 (S-CU)    | -0.0008                    | 30              |
| 1 (S-FEZ) | )      | 17 (S-LA)    | 0.0321                     | 33              |
| 1 (S-FEZ) | )      | 18 (S-MO)    | *****                      | 0               |
| 1 (S-FEZ) | )      | 19 (S-NB)    | -0.3667                    | 10              |
| 1 (S-FEZ) | )      | 20 (S-NI)    | 0.2452                     | 12              |
| 1 (S-FEZ) | )      | 21 (S-PA)    | -0.2838                    | 15              |
| 1 (S-FEZ) | )      | 22 (S-SB)    | *****                      | 4               |
| 1 (S-FEZ) | )      | 23 (S-SC)    | 0.9822                     | 20              |
| 1 (S-FEZ) | )      | 24 (S-SN)    | 0.1096                     | 32              |
| 1 (S-FEZ) | )      | 25 (S-SR)    | -0.3450                    | 34              |
| 1 (S-FEZ) | )      | 26 (S-SV)    | -0.0327                    | 34              |
| 1 (S-FEZ) | )      | 27 (S-W)     | *****                      | 0               |
| 1 (S-FEZ) | )      | 28 (S-Y)     | -0.1718                    | 33              |
| 1 (S-FEZ) | )      | 29 (S-ZN)    | *****                      | 0               |
| 1 (S-FEZ) | )      | 30 (S-ZR)    | *****                      | 0               |
| 1 (S-FEZ) | )      | 31 (S-TH)    | *****                      | 0               |
| 1 (S-FEZ) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 1 (S-FEZ) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 1 (S-FEZ) | )      | 34 (AA-SB-P) | *****                      | 0               |
| 2 (S-MGZ) | )      | 3 (S-CAZ)    | 0.3459                     | 34              |
| 2 (S-MGZ) | )      | 4 (S-TIZ)    | 0.3906                     | 24              |
| 2 (S-MGZ) | )      | 5 (S-MN)     | 0.7774                     | 34              |
| 2 (S-MGZ) | )      | 6 (S-AG)     | -0.0871                    | 3               |
| 2 (S-MGZ) | )      | 7 (S-AS)     | *****                      | 0               |
| 2 (S-MGZ) | )      | 8 (S-AU)     | *****                      | 0               |
| 2 (S-MGZ) | )      | 9 (S-B)      | 0.5178                     | 33              |
| 2 (S-MGZ) | )      | 10 (S-BA)    | 0.1512                     | 15              |
| 2 (S-MGZ) | )      | 11 (S-BE)    | *****                      | 29              |
| 2 (S-MGZ) | )      | 12 (S-BI)    | *****                      | 0               |
| 2 (S-MGZ) | )      | 13 (S-CD)    | *****                      | 0               |
| 2 (S-MGZ) | )      | 14 (S-CO)    | *****                      | 0               |
| 2 (S-MGZ) | )      | 15 (S-CR)    | 0.3952                     | 30              |
| 2 (S-MGZ) | )      | 16 (S-CU)    | 0.2707                     | 30              |
| 2 (S-MGZ) | )      | 17 (S-LA)    | 0.1356                     | 33              |
| 2 (S-MGZ) | )      | 18 (S-MO)    | *****                      | 0               |
| 2 (S-MGZ) | )      | 19 (S-NB)    | 0.8502                     | 10              |

| COLUMN     | VERSUS | COLUMN        | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|------------|--------|---------------|----------------------------|-----------------|
| 2 (S-MGX ) | )      | 20 (S-NI )    | -0.0886                    | 12              |
| 2 (S-MGX ) | )      | 21 (S-PH )    | 0.0264                     | 15              |
| 2 (S-MGX ) | )      | 22 (S-SB )    | *****                      | 0               |
| 2 (S-MGX ) | )      | 23 (S-SC )    | 0.6413                     | 4               |
| 2 (S-MGX ) | )      | 24 (S-SN )    | 0.2416                     | 20              |
| 2 (S-MGX ) | )      | 25 (S-SR )    | -0.2197                    | 32              |
| 2 (S-MGX ) | )      | 26 (S-V )     | 0.6036                     | 34              |
| 2 (S-MGX ) | )      | 27 (S-W )     | *****                      | 0               |
| 2 (S-MGX ) | )      | 28 (S-Y )     | 0.1496                     | 33              |
| 2 (S-MGX ) | )      | 29 (S-ZN )    | *****                      | 0               |
| 2 (S-MGX ) | )      | 30 (S-ZR )    | *****                      | 0               |
| 2 (S-MGX ) | )      | 31 (S-TH )    | *****                      | 0               |
| 2 (S-MGX ) | )      | 32 (AA-AS-P ) | *****                      | 0               |
| 2 (S-MGX ) | )      | 33 (AA-ZN-P ) | *****                      | 0               |
| 2 (S-MGX ) | )      | 34 (AA-SB-P ) | *****                      | 0               |
| 3 (S-CAZ ) | )      | 4 (S-TIX )    | 0.3941                     | 24              |
| 3 (S-CAZ ) | )      | 5 (S-MN )     | 0.2433                     | 34              |
| 3 (S-CAZ ) | )      | 6 (S-AG )     | 0.5000                     | 3               |
| 3 (S-CAZ ) | )      | 7 (S-AS )     | *****                      | 0               |
| 3 (S-CAZ ) | )      | 8 (S-AU )     | *****                      | 0               |
| 3 (S-CAZ ) | )      | 9 (S-B )      | 0.0724                     | 33              |
| 3 (S-CAZ ) | )      | 10 (S-BA )    | 0.3033                     | 15              |
| 3 (S-CAZ ) | )      | 11 (S-BE )    | *****                      | 29              |
| 3 (S-CAZ ) | )      | 12 (S-BI )    | *****                      | 0               |
| 3 (S-CAZ ) | )      | 13 (S-CU )    | *****                      | 0               |
| 3 (S-CAZ ) | )      | 14 (S-CO )    | *****                      | 0               |
| 3 (S-CAZ ) | )      | 15 (S-CR )    | 0.4387                     | 30              |
| 3 (S-CAZ ) | )      | 16 (S-CU )    | -0.0849                    | 33              |
| 3 (S-CAZ ) | )      | 17 (S-LA )    | 0.3274                     | 33              |
| 3 (S-CAZ ) | )      | 18 (S-MO )    | *****                      | 0               |
| 3 (S-CAZ ) | )      | 19 (S-MD )    | 0.5947                     | 10              |
| 3 (S-CAZ ) | )      | 20 (S-NI )    | 0.0850                     | 12              |
| 3 (S-CAZ ) | )      | 21 (S-PB )    | -0.0374                    | 15              |
| 3 (S-CAZ ) | )      | 22 (S-SB )    | *****                      | 0               |
| 3 (S-CAZ ) | )      | 23 (S-SC )    | 0.3468                     | 4               |
| 3 (S-CAZ ) | )      | 24 (S-SN )    | -0.0945                    | 20              |
| 3 (S-CAZ ) | )      | 25 (S-SR )    | 0.0866                     | 32              |
| 3 (S-CAZ ) | )      | 26 (S-V )     | 0.4460                     | 34              |
| 3 (S-CAZ ) | )      | 27 (S-W )     | *****                      | 0               |
| 3 (S-CAZ ) | )      | 28 (S-Y )     | 0.3806                     | 33              |
| 3 (S-CAZ ) | )      | 29 (S-ZN )    | *****                      | 0               |
| 3 (S-CAZ ) | )      | 30 (S-ZR )    | *****                      | 0               |
| 3 (S-CAZ ) | )      | 31 (S-TH )    | *****                      | 0               |
| 3 (S-CAZ ) | )      | 32 (AA-AS-P ) | *****                      | 0               |
| 3 (S-CAZ ) | )      | 33 (AA-ZN-P ) | *****                      | 0               |
| 3 (S-CAZ ) | )      | 34 (AA-SB-P ) | *****                      | 0               |
| 4 (S-TIX ) | )      | 2 (S-MN )     | 0.4491                     | 24              |
| 4 (S-TIX ) | )      | 6 (S-AG )     | 0.9425                     | 3               |
| 4 (S-TIX ) | )      | 7 (S-AS )     | *****                      | 0               |
| 4 (S-TIX ) | )      | 8 (S-AU )     | *****                      | 0               |

| COLUMN   | VERSUS | COLUMN       | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|----------|--------|--------------|----------------------------|-----------------|
| 4 (S-TX) | )      | 9 (S-B)      | 0.4530                     | 23              |
| 4 (S-TX) | )      | 10 (S-BA)    | -0.0307                    | 11              |
| 4 (S-TX) | )      | 11 (S-BE)    | *****                      | 20              |
| 4 (S-TX) | )      | 12 (S-BI)    | *****                      | 0               |
| 4 (S-TX) | )      | 13 (S-CD)    | *****                      | 0               |
| 4 (S-TX) | )      | 14 (S-CO)    | *****                      | 0               |
| 4 (S-TX) | )      | 15 (S-CR)    | 0.4606                     | 20              |
| 4 (S-TX) | )      | 16 (S-CU)    | 0.2340                     | 20              |
| 4 (S-TX) | )      | 17 (S-LA)    | 0.5031                     | 23              |
| 4 (S-TX) | )      | 18 (S-MO)    | *****                      | 0               |
| 4 (S-TX) | )      | 19 (S-NB)    | 0.5820                     | 5               |
| 4 (S-TX) | )      | 20 (S-NI)    | -0.2842                    | 10              |
| 4 (S-TX) | )      | 21 (S-PB)    | -0.2937                    | 9               |
| 4 (S-TX) | )      | 22 (S-SA)    | *****                      | 0               |
| 4 (S-TX) | )      | 23 (S-SC)    | *****                      | 0               |
| 4 (S-TX) | )      | 24 (S-SN)    | 0.0968                     | 12              |
| 4 (S-TX) | )      | 25 (S-SR)    | -0.3686                    | 22              |
| 4 (S-TX) | )      | 26 (S-V)     | 0.6693                     | 24              |
| 4 (S-TX) | )      | 27 (S-W)     | *****                      | 0               |
| 4 (S-TX) | )      | 28 (S-Y)     | 0.4909                     | 23              |
| 4 (S-TX) | )      | 29 (S-ZR)    | *****                      | 0               |
| 4 (S-TX) | )      | 30 (S-ZR)    | *****                      | 0               |
| 4 (S-TX) | )      | 31 (S-TH)    | *****                      | 0               |
| 4 (S-TX) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 4 (S-TX) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 4 (S-TX) | )      | 34 (AA-Sb-P) | *****                      | 0               |
| 5 (S-MN) | )      | 6 (S-AG)     | -0.5000                    | 3               |
| 5 (S-MN) | )      | 7 (S-AS)     | *****                      | 0               |
| 5 (S-MN) | )      | 8 (S-AU)     | *****                      | 0               |
| 5 (S-MN) | )      | 9 (S-B)      | 0.3934                     | 33              |
| 5 (S-MN) | )      | 10 (S-BA)    | 0.1114                     | 15              |
| 5 (S-MN) | )      | 11 (S-DE)    | *****                      | 29              |
| 5 (S-MN) | )      | 12 (S-DI)    | *****                      | 0               |
| 5 (S-MN) | )      | 13 (S-CD)    | *****                      | 0               |
| 5 (S-MN) | )      | 14 (S-CO)    | *****                      | 0               |
| 5 (S-MN) | )      | 15 (S-CR)    | 0.2822                     | 30              |
| 5 (S-MN) | )      | 16 (S-CU)    | 0.2202                     | 30              |
| 5 (S-MN) | )      | 17 (S-LA)    | 0.3345                     | 33              |
| 5 (S-MN) | )      | 18 (S-MO)    | *****                      | 0               |
| 5 (S-MN) | )      | 19 (S-NB)    | 0.0291                     | 10              |
| 5 (S-MN) | )      | 20 (S-NI)    | -0.0676                    | 12              |
| 5 (S-MN) | )      | 21 (S-PB)    | 0.2142                     | 15              |
| 5 (S-MN) | )      | 22 (S-SA)    | *****                      | 0               |
| 5 (S-MN) | )      | 23 (S-SC)    | 0.3576                     | 4               |
| 5 (S-MN) | )      | 24 (S-SN)    | 0.1678                     | 20              |
| 5 (S-MN) | )      | 25 (S-SR)    | -0.2389                    | 32              |
| 5 (S-MN) | )      | 26 (S-V)     | 0.5907                     | 34              |
| 5 (S-MN) | )      | 27 (S-W)     | *****                      | 0               |
| 5 (S-MN) | )      | 28 (S-Y)     | 0.2848                     | 33              |
| 5 (S-MN) | )      | 29 (S-ZN)    | *****                      | 0               |

| COLUMN  |   | VERSUS      | COLUMN | CORRELATION NO. OF |       |
|---------|---|-------------|--------|--------------------|-------|
|         |   |             |        | COEFFICIENT        | PAIRS |
| 5 (S-MN | ) | 30 (S-ZR    | )      | *****              | 0     |
| 5 (S-MN | ) | 31 (S-TH    | )      | *****              | 0     |
| 5 (S-MN | ) | 32 (AA-AS-P | )      | *****              | 0     |
| 5 (S-MN | ) | 33 (AA-ZN-P | )      | *****              | 0     |
| 5 (S-MN | ) | 34 (AA-SB-P | )      | *****              | 0     |
| 6 (S-AS | ) | 7 (S-AS     | )      | *****              | 0     |
| 6 (S-AS | ) | 8 (S-AU     | )      | *****              | 0     |
| 6 (S-AS | ) | 9 (S-B      | )      | *****              | 3     |
| 6 (S-AS | ) | 10 (S-BA    | )      | *****              | 1     |
| 6 (S-AS | ) | 11 (S-BE    | )      | *****              | 3     |
| 6 (S-AS | ) | 12 (S-BI    | )      | *****              | 0     |
| 6 (S-AS | ) | 13 (S-CD    | )      | *****              | 0     |
| 6 (S-AS | ) | 14 (S-CO    | )      | *****              | 0     |
| 6 (S-AS | ) | 15 (S-CR    | )      | 0.8000             | 3     |
| 6 (S-AS | ) | 16 (S-CU    | )      | -0.5000            | 3     |
| 6 (S-AS | ) | 17 (S-LA    | )      | 1.0000             | 3     |
| 6 (S-AS | ) | 18 (S-MO    | )      | *****              | 0     |
| 6 (S-AS | ) | 19 (S-NU    | )      | *****              | 0     |
| 6 (S-AS | ) | 20 (S-NI    | )      | -0.5000            | 3     |
| 6 (S-AS | ) | 21 (S-PB    | )      | *****              | 0     |
| 6 (S-AS | ) | 22 (S-SB    | )      | *****              | 0     |
| 6 (S-AS | ) | 23 (S-SC    | )      | *****              | 0     |
| 6 (S-AS | ) | 24 (S-SN    | )      | *****              | 2     |
| 6 (S-AS | ) | 25 (S-SR    | )      | -0.5000            | 3     |
| 6 (S-AS | ) | 26 (S-V     | )      | -0.5000            | 3     |
| 6 (S-AS | ) | 27 (S-W     | )      | *****              | 0     |
| 6 (S-AS | ) | 28 (S-Y     | )      | 1.0000             | 3     |
| 6 (S-AS | ) | 29 (S-Zn    | )      | *****              | 0     |
| 6 (S-AS | ) | 30 (S-ZR    | )      | *****              | 0     |
| 6 (S-AS | ) | 31 (S-TH    | )      | *****              | 0     |
| 6 (S-AS | ) | 32 (AA-AS-P | )      | *****              | 0     |
| 6 (S-AS | ) | 33 (AA-ZN-P | )      | *****              | 0     |
| 6 (S-AS | ) | 34 (AA-SB-P | )      | *****              | 0     |
| 7 (S-AS | ) | 8 (S-AU     | )      | *****              | 0     |
| 7 (S-AS | ) | 9 (S-B      | )      | *****              | 0     |
| 7 (S-AS | ) | 10 (S-BA    | )      | *****              | 0     |
| 7 (S-AS | ) | 11 (S-BE    | )      | *****              | 0     |
| 7 (S-AS | ) | 12 (S-BI    | )      | *****              | 0     |
| 7 (S-AS | ) | 13 (S-CD    | )      | *****              | 0     |
| 7 (S-AS | ) | 14 (S-CO    | )      | *****              | 0     |
| 7 (S-AS | ) | 15 (S-CR    | )      | *****              | 0     |
| 7 (S-AS | ) | 16 (S-CU    | )      | *****              | 0     |
| 7 (S-AS | ) | 17 (S-LA    | )      | *****              | 0     |
| 7 (S-AS | ) | 18 (S-MO    | )      | *****              | 0     |
| 7 (S-AS | ) | 19 (S-NU    | )      | *****              | 0     |
| 7 (S-AS | ) | 20 (S-NI    | )      | *****              | 0     |
| 7 (S-AS | ) | 21 (S-PB    | )      | *****              | 0     |
| 7 (S-AS | ) | 22 (S-SB    | )      | *****              | 0     |
| 7 (S-AS | ) | 23 (S-SC    | )      | *****              | 0     |
| 7 (S-AS | ) | 24 (S-SN    | )      | *****              | 0     |

| COLUMN    | VERSUS | COLUMN        | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|-----------|--------|---------------|----------------------------|-----------------|
| 7 (S-AS ) | )      | 25 (S-SR )    | *****                      | 0               |
| 7 (S-AS ) | )      | 26 (S-V )     | *****                      | 0               |
| 7 (S-AS ) | )      | 27 (S-W )     | *****                      | 0               |
| 7 (S-AS ) | )      | 28 (S-Y )     | *****                      | 0               |
| 7 (S-AS ) | )      | 29 (S-ZN )    | *****                      | 0               |
| 7 (S-AS ) | )      | 30 (S-ZR )    | *****                      | 0               |
| 7 (S-AS ) | )      | 31 (S-Tn )    | *****                      | 0               |
| 7 (S-AS ) | )      | 32 (AA-AS-P ) | *****                      | 0               |
| 7 (S-AS ) | )      | 33 (AA-ZN-P ) | *****                      | 0               |
| 7 (S-AS ) | )      | 34 (AA-SB-P ) | *****                      | 0               |
| 8 (S-AU ) | )      | 9 (S-B )      | *****                      | 0               |
| 8 (S-AU ) | )      | 10 (S-BA )    | *****                      | 0               |
| 8 (S-AU ) | )      | 11 (S-BE )    | *****                      | 0               |
| 8 (S-AU ) | )      | 12 (S-BI )    | *****                      | 0               |
| 8 (S-AU ) | )      | 13 (S-CD )    | *****                      | 0               |
| 8 (S-AU ) | )      | 14 (S-CO )    | *****                      | 0               |
| 8 (S-AU ) | )      | 15 (S-CR )    | *****                      | 0               |
| 8 (S-AU ) | )      | 16 (S-CU )    | *****                      | 0               |
| 8 (S-AU ) | )      | 17 (S-LA )    | *****                      | 0               |
| 8 (S-AU ) | )      | 18 (S-NO )    | *****                      | 0               |
| 8 (S-AU ) | )      | 19 (S-NE )    | *****                      | 0               |
| 8 (S-AU ) | )      | 20 (S-NI )    | *****                      | 0               |
| 8 (S-AU ) | )      | 21 (S-PB )    | *****                      | 0               |
| 8 (S-AU ) | )      | 22 (S-SB )    | *****                      | 0               |
| 8 (S-AU ) | )      | 23 (S-SC )    | *****                      | 0               |
| 8 (S-AU ) | )      | 24 (S-SN )    | *****                      | 0               |
| 8 (S-AU ) | )      | 25 (S-SR )    | *****                      | 0               |
| 8 (S-AU ) | )      | 26 (S-V )     | *****                      | 0               |
| 8 (S-AU ) | )      | 27 (S-W )     | *****                      | 0               |
| 8 (S-AU ) | )      | 29 (S-ZN )    | *****                      | 0               |
| 8 (S-AU ) | )      | 30 (S-ZR )    | *****                      | 0               |
| 8 (S-AU ) | )      | 31 (S-Tn )    | *****                      | 0               |
| 8 (S-AU ) | )      | 32 (AA-AS-F ) | *****                      | 0               |
| 8 (S-AU ) | )      | 33 (AA-ZN-P ) | *****                      | 0               |
| 8 (S-AU ) | )      | 34 (AA-SB-P ) | *****                      | 0               |
| 9 (S-B )  | )      | 10 (S-BA )    | 0.0134                     | 15              |
| 9 (S-B )  | )      | 11 (S-BE )    | *****                      | 29              |
| 9 (S-B )  | )      | 12 (S-BI )    | *****                      | 0               |
| 9 (S-B )  | )      | 13 (S-CD )    | *****                      | 0               |
| 9 (S-B )  | )      | 14 (S-CO )    | *****                      | 0               |
| 9 (S-B )  | )      | 15 (S-CR )    | 0.5063                     | 30              |
| 9 (S-B )  | )      | 16 (S-CU )    | 0.5530                     | 29              |
| 9 (S-B )  | )      | 17 (S-LA )    | 0.4361                     | 33              |
| 9 (S-B )  | )      | 18 (S-MO )    | *****                      | 0               |
| 9 (S-B )  | )      | 19 (S-NB )    | 0.4662                     | 10              |
| 9 (S-B )  | )      | 20 (S-NI )    | -0.0292                    | 12              |
| 9 (S-B )  | )      | 21 (S-PB )    | -0.0459                    | 14              |
| 9 (S-B )  | )      | 22 (S-SC )    | *****                      | 0               |
| 9 (S-B )  | )      | 23 (S-SR )    | 0.3608                     | 4               |

| COLUMN   | VERSUS | COLUMN      | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|----------|--------|-------------|----------------------------|-----------------|
| 9 (S-B   | )      | 24 (S-SN    | )                          | 20              |
| 9 (S-B   | )      | 25 (S-SR    | )                          | 31              |
| 9 (S-B   | )      | 26 (S-V     | )                          | 33              |
| 9 (S-B   | )      | 27 (S-W     | )                          | 0               |
| 9 (S-B   | )      | 28 (S-Y     | )                          | 33              |
| 9 (S-B   | )      | 29 (S-ZN    | )                          | 0               |
| 9 (S-B   | )      | 30 (S-ZR    | )                          | 0               |
| 9 (S-B   | )      | 31 (S-TN    | )                          | 0               |
| 9 (S-B   | )      | 32 (AA-AS-P | )                          | 0               |
| 9 (S-B   | )      | 33 (AA-ZN-P | )                          | 0               |
| 9 (S-B   | )      | 34 (AA-SB-P | )                          | 0               |
| 10 (S-BA | )      | 11 (S-DE    | )                          | 15              |
| 10 (S-BA | )      | 12 (S-BI    | )                          | 0               |
| 10 (S-BA | )      | 13 (S-CU    | )                          | 0               |
| 10 (S-BA | )      | 14 (S-CU    | )                          | 0               |
| 10 (S-BA | )      | 15 (S-CR    | )                          | 14              |
| 10 (S-BA | )      | 16 (S-CU    | )                          | 13              |
| 10 (S-BA | )      | 17 (S-LA    | )                          | 15              |
| 10 (S-BA | )      | 18 (S-MO    | )                          | 0               |
| 10 (S-BA | )      | 19 (S-NB    | )                          | 0               |
| 10 (S-BA | )      | 20 (S-NI    | )                          | 7               |
| 10 (S-BA | )      | 21 (S-PR    | )                          | 7               |
| 10 (S-BA | )      | 22 (S-SB    | )                          | 0               |
| 10 (S-BA | )      | 23 (S-SG    | )                          | 4               |
| 10 (S-BA | )      | 24 (S-SN    | )                          | 9               |
| 10 (S-BA | )      | 25 (S-SR    | )                          | 15              |
| 10 (S-BA | )      | 26 (S-V     | )                          | 15              |
| 10 (S-BA | )      | 27 (S-Y     | )                          | 15              |
| 10 (S-BA | )      | 28 (S-ZN    | )                          | 15              |
| 10 (S-BA | )      | 29 (S-ZR    | )                          | 0               |
| 10 (S-BA | )      | 30 (S-TN    | )                          | 0               |
| 10 (S-BA | )      | 31 (S-TH    | )                          | 0               |
| 10 (S-BA | )      | 32 (AA-AS-P | )                          | 0               |
| 10 (S-BA | )      | 33 (AA-ZN-P | )                          | 0               |
| 10 (S-BA | )      | 34 (AA-SB-P | )                          | 0               |
| 11 (S-BE | )      | 12 (S-BI    | )                          | 0               |
| 11 (S-BE | )      | 13 (S-CO    | )                          | 0               |
| 11 (S-BE | )      | 14 (S-CU    | )                          | 0               |
| 11 (S-BE | )      | 15 (S-CR    | )                          | 27              |
| 11 (S-BE | )      | 16 (S-CU    | )                          | 27              |
| 11 (S-BE | )      | 17 (S-LA    | )                          | 29              |
| 11 (S-BE | )      | 18 (S-MO    | )                          | 0               |
| 11 (S-BE | )      | 19 (S-NB    | )                          | 8               |
| 11 (S-BE | )      | 20 (S-NI    | )                          | 12              |
| 11 (S-BE | )      | 21 (S-PR    | )                          | 13              |
| 11 (S-BE | )      | 22 (S-SB    | )                          | 0               |
| 11 (S-BE | )      | 23 (S-SG    | )                          | 4               |
| 11 (S-BE | )      | 24 (S-SN    | )                          | 19              |
| 11 (S-BE | )      | 25 (S-SR    | )                          | 29              |
| 11 (S-BE | )      | 26 (S-V     | )                          | 29              |
| 11 (S-BE | )      | 27 (S-Y     | )                          | 29              |

| COLUMN    | VERSUS | COLUMN       | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|-----------|--------|--------------|----------------------------|-----------------|
| 11 (S-BE) | )      | 27 (S-M)     | *****                      | 0               |
| 11 (S-BE) | )      | 28 (S-Y)     | *****                      | 29              |
| 11 (S-BE) | )      | 29 (S-ZN)    | *****                      | 0               |
| 11 (S-BE) | )      | 30 (S-ZR)    | *****                      | 0               |
| 11 (S-BE) | )      | 31 (S-TH)    | *****                      | 0               |
| 11 (S-BE) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 11 (S-BE) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 11 (S-BE) | )      | 34 (AA-SB-P) | *****                      | 0               |
| 12 (S-BI) | )      | 13 (S-CO)    | *****                      | 0               |
| 12 (S-BI) | )      | 14 (S-CO)    | *****                      | 0               |
| 12 (S-BI) | )      | 15 (S-CO)    | *****                      | 0               |
| 12 (S-BI) | )      | 16 (S-CU)    | *****                      | 0               |
| 12 (S-BI) | )      | 17 (S-LA)    | *****                      | 0               |
| 12 (S-BI) | )      | 18 (S-MO)    | *****                      | 0               |
| 12 (S-BI) | )      | 19 (S-MO)    | *****                      | 0               |
| 12 (S-BI) | )      | 20 (S-NI)    | *****                      | 0               |
| 12 (S-BI) | )      | 21 (S-PB)    | *****                      | 0               |
| 12 (S-BI) | )      | 22 (S-SB)    | *****                      | 0               |
| 12 (S-BI) | )      | 23 (S-SC)    | *****                      | 0               |
| 12 (S-BI) | )      | 24 (S-SN)    | *****                      | 0               |
| 12 (S-BI) | )      | 25 (S-SR)    | *****                      | 0               |
| 12 (S-BI) | )      | 26 (S-V)     | *****                      | 0               |
| 12 (S-BI) | )      | 27 (S-W)     | *****                      | 0               |
| 12 (S-BI) | )      | 28 (S-Y)     | *****                      | 0               |
| 12 (S-BI) | )      | 29 (S-ZN)    | *****                      | 0               |
| 12 (S-BI) | )      | 30 (S-ZR)    | *****                      | 0               |
| 12 (S-BI) | )      | 31 (S-TH)    | *****                      | 0               |
| 12 (S-BI) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 12 (S-BI) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 12 (S-BI) | )      | 34 (AA-SB-P) | *****                      | 0               |
| 13 (S-CO) | )      | 14 (S-CO)    | *****                      | 0               |
| 13 (S-CO) | )      | 15 (S-CR)    | *****                      | 0               |
| 13 (S-CO) | )      | 16 (S-CU)    | *****                      | 0               |
| 13 (S-CO) | )      | 17 (S-LA)    | *****                      | 0               |
| 13 (S-CO) | )      | 18 (S-MO)    | *****                      | 0               |
| 13 (S-CO) | )      | 19 (S-MO)    | *****                      | 0               |
| 13 (S-CO) | )      | 20 (S-NI)    | *****                      | 0               |
| 13 (S-CO) | )      | 21 (S-PB)    | *****                      | 0               |
| 13 (S-CO) | )      | 22 (S-SB)    | *****                      | 0               |
| 13 (S-CO) | )      | 23 (S-SC)    | *****                      | 0               |
| 13 (S-CO) | )      | 24 (S-SN)    | *****                      | 0               |
| 13 (S-CO) | )      | 25 (S-SR)    | *****                      | 0               |
| 13 (S-CO) | )      | 26 (S-V)     | *****                      | 0               |
| 13 (S-CO) | )      | 27 (S-W)     | *****                      | 0               |
| 13 (S-CO) | )      | 28 (S-Y)     | *****                      | 0               |
| 13 (S-CO) | )      | 29 (S-ZN)    | *****                      | 0               |
| 13 (S-CO) | )      | 30 (S-ZR)    | *****                      | 0               |
| 13 (S-CO) | )      | 31 (S-TH)    | *****                      | 0               |
| 13 (S-CO) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 13 (S-CO) | )      | 33 (AA-ZN-P) | *****                      | 0               |

| COLUMN    | VERSUS | COLUMN       | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|-----------|--------|--------------|----------------------------|-----------------|
| 13 (S-CO) | )      | 34 (AA-SB-P) | *****                      | 0               |
| 14 (S-CO) | )      | 15 (S-CR)    | *****                      | 0               |
| 14 (S-CO) | )      | 16 (S-CU)    | *****                      | 0               |
| 14 (S-CO) | )      | 17 (S-LA)    | *****                      | 0               |
| 14 (S-CO) | )      | 18 (S-MO)    | *****                      | 0               |
| 14 (S-CO) | )      | 19 (S-NB)    | *****                      | 0               |
| 14 (S-CO) | )      | 20 (S-NI)    | *****                      | 0               |
| 14 (S-CO) | )      | 21 (S-PB)    | *****                      | 0               |
| 14 (S-CO) | )      | 22 (S-SB)    | *****                      | 0               |
| 14 (S-CO) | )      | 23 (S-SC)    | *****                      | 0               |
| 14 (S-CO) | )      | 24 (S-SN)    | *****                      | 0               |
| 14 (S-CO) | )      | 25 (S-SK)    | *****                      | 0               |
| 14 (S-CO) | )      | 26 (S-V)     | *****                      | 0               |
| 14 (S-CO) | )      | 27 (S-W)     | *****                      | 0               |
| 14 (S-CO) | )      | 28 (S-Y)     | *****                      | 0               |
| 14 (S-CO) | )      | 29 (S-ZN)    | *****                      | 0               |
| 14 (S-CO) | )      | 30 (S-ZR)    | *****                      | 0               |
| 14 (S-CO) | )      | 31 (S-TH)    | *****                      | 0               |
| 14 (S-CO) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 14 (S-CO) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 14 (S-CO) | )      | 34 (AA-SG-P) | *****                      | 0               |
| 15 (S-CR) | )      | 16 (S-CU)    | U.4902                     | 27              |
| 15 (S-CR) | )      | 17 (S-LA)    | U.4974                     | 30              |
| 15 (S-CR) | )      | 18 (S-MO)    | *****                      | 0               |
| 15 (S-CR) | )      | 19 (S-NB)    | 0.5637                     | 9               |
| 15 (S-CR) | )      | 20 (S-NI)    | -0.0077                    | 12              |
| 15 (S-CR) | )      | 21 (S-PB)    | -0.3265                    | 12              |
| 15 (S-CR) | )      | 22 (S-SB)    | *****                      | 0               |
| 15 (S-CR) | )      | 23 (S-SC)    | U.5909                     | 4               |
| 15 (S-CR) | )      | 24 (S-SN)    | -0.0204                    | 19              |
| 15 (S-CR) | )      | 25 (S-SK)    | U.3803                     | 28              |
| 15 (S-CR) | )      | 26 (S-V)     | 0.7211                     | 30              |
| 15 (S-CR) | )      | 27 (S-W)     | *****                      | 0               |
| 15 (S-CR) | )      | 28 (S-Y)     | U.5778                     | 30              |
| 15 (S-CR) | )      | 29 (S-ZN)    | *****                      | 0               |
| 15 (S-CR) | )      | 30 (S-ZR)    | *****                      | 0               |
| 15 (S-CR) | )      | 31 (S-TH)    | *****                      | 0               |
| 15 (S-CR) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 15 (S-CR) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 15 (S-CR) | )      | 34 (AA-SG-P) | *****                      | 0               |
| 16 (S-CU) | )      | 17 (S-LA)    | 0.4197                     | 29              |
| 16 (S-CU) | )      | 18 (S-MO)    | *****                      | 0               |
| 16 (S-CU) | )      | 19 (S-NB)    | -0.0000                    | 8               |
| 16 (S-CU) | )      | 20 (S-NI)    | U.4215                     | 11              |
| 16 (S-CU) | )      | 21 (S-PB)    | -0.2730                    | 15              |
| 16 (S-CU) | )      | 22 (S-SB)    | *****                      | 0               |
| 16 (S-CU) | )      | 23 (S-SC)    | U.9036                     | 4               |
| 16 (S-CU) | )      | 24 (S-SN)    | -0.1574                    | 19              |
| 16 (S-CU) | )      | 25 (S-SK)    | U.3507                     | 30              |
| 16 (S-CU) | )      | 26 (S-V)     | U.5464                     | 30              |



| COLUMN    | VERSUS | COLUMN       | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|-----------|--------|--------------|----------------------------|-----------------|
| 16 (S-CU) | )      | 27 (S-M)     | *****                      | 0               |
| 16 (S-CU) | )      | 28 (S-Y)     | 0.3118                     | 29              |
| 16 (S-CU) | )      | 29 (S-ZN)    | *****                      | 0               |
| 16 (S-CU) | )      | 30 (S-ZR)    | *****                      | 0               |
| 16 (S-CU) | )      | 31 (S-TH)    | *****                      | 0               |
| 16 (S-CU) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 16 (S-CU) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 16 (S-CU) | )      | 34 (AA-SB-P) | *****                      | 0               |
| 17 (S-LA) | )      | 18 (S-MO)    | *****                      | 0               |
| 17 (S-LA) | )      | 19 (S-NB)    | 0.1616                     | 10              |
| 17 (S-LA) | )      | 20 (S-NI)    | 0.1509                     | 12              |
| 17 (S-LA) | )      | 21 (S-PB)    | 0.2143                     | 14              |
| 17 (S-LA) | )      | 22 (S-SB)    | *****                      | 0               |
| 17 (S-LA) | )      | 23 (S-SC)    | 0.3468                     | 4               |
| 17 (S-LA) | )      | 24 (S-SN)    | -0.2141                    | 20              |
| 17 (S-LA) | )      | 25 (S-SR)    | 0.1428                     | 31              |
| 17 (S-LA) | )      | 26 (S-V)     | 0.4275                     | 33              |
| 17 (S-LA) | )      | 27 (S-W)     | *****                      | 0               |
| 17 (S-LA) | )      | 28 (S-Y)     | 0.8093                     | 33              |
| 17 (S-LA) | )      | 29 (S-ZN)    | *****                      | 0               |
| 17 (S-LA) | )      | 30 (S-ZR)    | *****                      | 0               |
| 17 (S-LA) | )      | 31 (S-TH)    | *****                      | 0               |
| 17 (S-LA) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 17 (S-LA) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 17 (S-LA) | )      | 34 (AA-SB-P) | *****                      | 0               |
| 18 (S-MO) | )      | 19 (S-NB)    | *****                      | 0               |
| 18 (S-MO) | )      | 20 (S-NI)    | *****                      | 0               |
| 18 (S-MO) | )      | 21 (S-PB)    | *****                      | 0               |
| 18 (S-MO) | )      | 22 (S-SC)    | *****                      | 0               |
| 18 (S-MO) | )      | 23 (S-SN)    | *****                      | 0               |
| 18 (S-MO) | )      | 24 (S-SR)    | *****                      | 0               |
| 18 (S-MO) | )      | 25 (S-V)     | *****                      | 0               |
| 18 (S-MO) | )      | 26 (S-W)     | *****                      | 0               |
| 18 (S-MO) | )      | 27 (S-Y)     | *****                      | 0               |
| 18 (S-MO) | )      | 28 (S-ZN)    | *****                      | 0               |
| 18 (S-MO) | )      | 29 (S-ZR)    | *****                      | 0               |
| 18 (S-MO) | )      | 30 (S-TH)    | *****                      | 0               |
| 18 (S-MO) | )      | 31 (S-TH)    | *****                      | 0               |
| 18 (S-MO) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 18 (S-MO) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 18 (S-MO) | )      | 34 (AA-SB-P) | *****                      | 0               |
| 19 (S-NB) | )      | 20 (S-NI)    | 0.8165                     | 1               |
| 19 (S-NB) | )      | 21 (S-PB)    | *****                      | 4               |
| 19 (S-NB) | )      | 22 (S-SC)    | *****                      | 0               |
| 19 (S-NB) | )      | 23 (S-SN)    | 0.3749                     | 6               |
| 19 (S-NB) | )      | 24 (S-SR)    | -0.3134                    | 8               |
| 19 (S-NB) | )      | 25 (S-V)     | 0.5832                     | 10              |
| 19 (S-NB) | )      | 26 (S-W)     | *****                      | 0               |
| 19 (S-NB) | )      | 27 (S-Y)     | 0.2705                     | 10              |
| 19 (S-NB) | )      | 28 (S-ZN)    | *****                      | 0               |
| 19 (S-NB) | )      | 29 (S-ZR)    | *****                      | 0               |
| 19 (S-NB) | )      | 30 (S-TH)    | *****                      | 0               |
| 19 (S-NB) | )      | 31 (S-TH)    | *****                      | 0               |
| 19 (S-NB) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 19 (S-NB) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 19 (S-NB) | )      | 34 (AA-SB-P) | *****                      | 0               |
| 19 (S-NB) | )      | 20 (S-NI)    | 0.8165                     | 1               |
| 19 (S-NB) | )      | 21 (S-PB)    | *****                      | 4               |
| 19 (S-NB) | )      | 22 (S-SC)    | *****                      | 0               |
| 19 (S-NB) | )      | 23 (S-SN)    | 0.3749                     | 6               |
| 19 (S-NB) | )      | 24 (S-SR)    | -0.3134                    | 8               |
| 19 (S-NB) | )      | 25 (S-V)     | 0.5832                     | 10              |
| 19 (S-NB) | )      | 26 (S-W)     | *****                      | 0               |
| 19 (S-NB) | )      | 27 (S-Y)     | 0.2705                     | 10              |
| 19 (S-NB) | )      | 28 (S-ZN)    | *****                      | 0               |
| 19 (S-NB) | )      | 29 (S-ZR)    | *****                      | 0               |
| 19 (S-NB) | )      | 30 (S-TH)    | *****                      | 0               |
| 19 (S-NB) | )      | 31 (S-TH)    | *****                      | 0               |
| 19 (S-NB) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 19 (S-NB) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 19 (S-NB) | )      | 34 (AA-SB-P) | *****                      | 0               |

| COLUMN    | VERSUS | COLUMN       | CORRELATION COEFFICIENT | NO. OF PAIRS |
|-----------|--------|--------------|-------------------------|--------------|
| 19 (S-NB) | )      | 29 (S-ZN)    | *****                   | 0            |
| 19 (S-NB) | )      | 30 (S-ZR)    | *****                   | 0            |
| 19 (S-NB) | )      | 31 (S-TH)    | *****                   | 0            |
| 19 (S-NB) | )      | 32 (AA-AS-P) | *****                   | 0            |
| 19 (S-NB) | )      | 33 (AA-ZN-P) | *****                   | 0            |
| 19 (S-NB) | )      | 34 (AA-SB-P) | *****                   | 0            |
| 20 (S-NI) | )      | 21 (S-PB)    | -0.5639                 | 4            |
| 20 (S-NI) | )      | 22 (S-SB)    | *****                   | 0            |
| 20 (S-NI) | )      | 23 (S-SC)    | 1.0000                  | 2            |
| 20 (S-NI) | )      | 24 (S-SN)    | 0.6024                  | 9            |
| 20 (S-NI) | )      | 25 (S-SR)    | -0.4360                 | 12           |
| 20 (S-NI) | )      | 26 (S-SV)    | -0.1343                 | 12           |
| 20 (S-NI) | )      | 27 (S-SW)    | *****                   | 0            |
| 20 (S-NI) | )      | 28 (S-Y)     | 0.3093                  | 12           |
| 20 (S-NI) | )      | 29 (S-ZN)    | *****                   | 0            |
| 20 (S-NI) | )      | 30 (S-ZR)    | *****                   | 0            |
| 20 (S-NI) | )      | 31 (S-TH)    | *****                   | 0            |
| 20 (S-NI) | )      | 32 (AA-AS-P) | *****                   | 0            |
| 20 (S-NI) | )      | 33 (AA-ZN-P) | *****                   | 0            |
| 20 (S-NI) | )      | 34 (AA-SB-P) | *****                   | 0            |
| 21 (S-PB) | )      | 22 (S-SB)    | *****                   | 0            |
| 21 (S-PB) | )      | 23 (S-SC)    | -0.4182                 | 4            |
| 21 (S-PB) | )      | 24 (S-SN)    | -0.2990                 | 10           |
| 21 (S-PB) | )      | 25 (S-SR)    | -0.1518                 | 15           |
| 21 (S-PB) | )      | 26 (S-SV)    | -0.1037                 | 15           |
| 21 (S-PB) | )      | 27 (S-SW)    | *****                   | 0            |
| 21 (S-PB) | )      | 28 (S-Y)     | 0.2466                  | 14           |
| 21 (S-PB) | )      | 29 (S-ZN)    | *****                   | 0            |
| 21 (S-PB) | )      | 30 (S-ZR)    | *****                   | 0            |
| 21 (S-PB) | )      | 31 (S-TH)    | *****                   | 0            |
| 21 (S-PB) | )      | 32 (AA-AS-P) | *****                   | 0            |
| 21 (S-PB) | )      | 33 (AA-ZN-P) | *****                   | 0            |
| 21 (S-PB) | )      | 34 (AA-SB-P) | *****                   | 0            |
| 22 (S-SB) | )      | 23 (S-SC)    | *****                   | 0            |
| 22 (S-SB) | )      | 24 (S-SN)    | *****                   | 0            |
| 22 (S-SB) | )      | 25 (S-SR)    | *****                   | 0            |
| 22 (S-SB) | )      | 26 (S-SV)    | *****                   | 0            |
| 22 (S-SB) | )      | 27 (S-SW)    | *****                   | 0            |
| 22 (S-SB) | )      | 28 (S-Y)     | *****                   | 0            |
| 22 (S-SB) | )      | 29 (S-ZN)    | *****                   | 0            |
| 22 (S-SB) | )      | 30 (S-ZR)    | *****                   | 0            |
| 22 (S-SB) | )      | 31 (S-TH)    | *****                   | 0            |
| 22 (S-SB) | )      | 32 (AA-AS-P) | *****                   | 0            |
| 22 (S-SB) | )      | 33 (AA-ZN-P) | *****                   | 0            |
| 22 (S-SB) | )      | 34 (AA-SB-P) | *****                   | 0            |
| 23 (S-SC) | )      | 24 (S-SN)    | 0.8279                  | 3            |
| 23 (S-SC) | )      | 25 (S-SR)    | -0.9036                 | 4            |
| 23 (S-SC) | )      | 26 (S-SV)    | -0.1027                 | 4            |
| 23 (S-SC) | )      | 27 (S-SW)    | *****                   | 0            |
| 23 (S-SC) | )      | 28 (S-Y)     | 0.9036                  | 4            |

| COLUMN    | VERSUS | COLUMN       | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|-----------|--------|--------------|----------------------------|-----------------|
| 23 (S-SC) | )      | 29 (S-ZN)    | *****                      | 0               |
| 23 (S-SC) | )      | 30 (S-ZR)    | *****                      | 0               |
| 23 (S-SC) | )      | 31 (S-TI)    | *****                      | 0               |
| 23 (S-SC) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 23 (S-SC) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 23 (S-SC) | )      | 34 (AA-SB-P) | *****                      | 0               |
| 24 (S-SN) | )      | 25 (S-SK)    | -0.4800                    | 20              |
| 24 (S-SN) | )      | 26 (S-V)     | 0.0587                     | 20              |
| 24 (S-SN) | )      | 27 (S-W)     | *****                      | 0               |
| 24 (S-SN) | )      | 28 (S-Y)     | 0.0546                     | 20              |
| 24 (S-SN) | )      | 29 (S-ZN)    | *****                      | 0               |
| 24 (S-SN) | )      | 30 (S-ZR)    | *****                      | 0               |
| 24 (S-SN) | )      | 31 (S-TI)    | *****                      | 0               |
| 24 (S-SN) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 24 (S-SN) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 24 (S-SN) | )      | 34 (AA-SB-P) | *****                      | 0               |
| 25 (S-SR) | )      | 26 (S-V)     | 0.0379                     | 32              |
| 25 (S-SR) | )      | 27 (S-W)     | *****                      | 0               |
| 25 (S-SR) | )      | 28 (S-Y)     | 0.0120                     | 31              |
| 25 (S-SR) | )      | 29 (S-ZN)    | *****                      | 0               |
| 25 (S-SR) | )      | 30 (S-ZR)    | *****                      | 0               |
| 25 (S-SR) | )      | 31 (S-TI)    | *****                      | 0               |
| 25 (S-SR) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 25 (S-SR) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 25 (S-SR) | )      | 34 (AA-SB-P) | *****                      | 0               |
| 26 (S-V)  | )      | 27 (S-W)     | *****                      | 0               |
| 26 (S-V)  | )      | 28 (S-Y)     | 0.5323                     | 33              |
| 26 (S-V)  | )      | 29 (S-ZN)    | *****                      | 0               |
| 26 (S-V)  | )      | 30 (S-ZR)    | *****                      | 0               |
| 26 (S-V)  | )      | 31 (S-TI)    | *****                      | 0               |
| 26 (S-V)  | )      | 32 (AA-AS-P) | *****                      | 0               |
| 26 (S-V)  | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 26 (S-V)  | )      | 34 (AA-SB-P) | *****                      | 0               |
| 27 (S-W)  | )      | 28 (S-Y)     | *****                      | 0               |
| 27 (S-W)  | )      | 29 (S-ZN)    | *****                      | 0               |
| 27 (S-W)  | )      | 30 (S-ZR)    | *****                      | 0               |
| 27 (S-W)  | )      | 31 (S-TI)    | *****                      | 0               |
| 27 (S-W)  | )      | 32 (AA-AS-P) | *****                      | 0               |
| 27 (S-W)  | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 27 (S-W)  | )      | 34 (AA-SB-P) | *****                      | 0               |
| 28 (S-Y)  | )      | 29 (S-ZN)    | *****                      | 0               |
| 28 (S-Y)  | )      | 30 (S-ZR)    | *****                      | 0               |
| 28 (S-Y)  | )      | 31 (S-TI)    | *****                      | 0               |
| 28 (S-Y)  | )      | 32 (AA-AS-P) | *****                      | 0               |
| 28 (S-Y)  | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 28 (S-Y)  | )      | 34 (AA-SB-P) | *****                      | 0               |
| 29 (S-ZN) | )      | 30 (S-ZR)    | *****                      | 0               |
| 29 (S-ZN) | )      | 31 (S-TI)    | *****                      | 0               |
| 29 (S-ZN) | )      | 32 (AA-AS-P) | *****                      | 0               |
| 29 (S-ZN) | )      | 33 (AA-ZN-P) | *****                      | 0               |
| 29 (S-ZN) | )      | 34 (AA-SB-P) | *****                      | 0               |

DC101 CORRELATION ANALYSIS - USGS STATPAC (01/15/82)

DATE 11/29/84

| COLUMN        | VERSUS | COLUMN        | CORRELATION<br>COEFFICIENT | NO. OF<br>PAIRS |
|---------------|--------|---------------|----------------------------|-----------------|
| 29 (S-ZN )    |        | 34 (AA-SB-P ) | *****                      | 0               |
| 30 (S-ZR )    |        | 31 (S-TH )    | *****                      | 0               |
| 30 (S-ZR )    |        | 32 (AA-AS-P ) | *****                      | 0               |
| 30 (S-ZR )    |        | 33 (AA-ZN-P ) | *****                      | 0               |
| 30 (S-ZR )    |        | 34 (AA-SB-P ) | *****                      | 0               |
| 31 (S-TH )    |        | 32 (AA-AS-P ) | *****                      | 0               |
| 31 (S-TH )    |        | 33 (AA-ZN-P ) | *****                      | 0               |
| 31 (S-TH )    |        | 34 (AA-SB-P ) | *****                      | 0               |
| 32 (AA-AS-P ) |        | 33 (AA-ZN-P ) | *****                      | 0               |
| 32 (AA-AS-P ) |        | 34 (AA-SB-P ) | *****                      | 0               |
| 33 (AA-ZN-P ) |        | 34 (AA-SB-P ) | *****                      | 0               |