UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

A Geochemical Survey of Mineral Deposits and Stream Deposits in the East Pioneer Wilderness Study Area, Beaverhead County, Montana

By

Byron R. Berger, George N. Breit, David F. Siems,
Eric P. Welsch, and Wendy S. Speckman

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INTRODUCTION

The U.S. Geological Survey commenced a mineral-resource assessment of the East Pioneer Wilderness Study Area, Montana in 1978. The on-going study consists of coordinated geological, geochemical, and geophysical studies with the objective of evaluating the potential for mineral deposits in the area. The geochemical survey consists of the collection of bulk stream sediments and rock materials which are analyzed for 31 elements using wet chemical and semiquantitative emission spectrographic techniques. The purpose of this report is to present the chemical analyses of the stream sediments collected to date.

DATA

The results of the chemical analyses are given in table 1. In addition, three tables of statistical analyses of the data are included to assist the reader in using the chemical analyses. Table 2 (Fisher-K Statistics) gives the maximum and minimum values for each element and shows the number of samples for which the data are not within the normal analytical detection intervals. Table 2 also includes the mean, standard deviation, skewness, and kurtosis of the distribution for each element. Table 3 gives a graphical analysis for each element. Listed are class intervals, percent frequency of each class, cumulative frequency, and a histogram for each element. Table 4 gives the results of a linear correlation analysis of the data. The starred values represent those pairs of elements for which there was inadequate data to compute a valid correlation coefficient.

The following abbreviations are used in the tables of data and statistical analyses:

N	Not detected at the limit of detection
L	Detected, but below limit of reproducible determination for standards used
H	Interference prevented determination of value
G	Greater than value shown
B	No analysis
T	Trace (term not used in this data set)
NO	Number
UNQUAL	Unqualified (no modifiers such as N, H, L)

Table 1.-- Stream-sediment samples from the East Pioneer wilderness study area, Montana

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE
BCE6542	45 38 36	113 16 3	5.0	1.50	.30	.30	1,000	N	N	N	50	700	1.5
BCG6540	45 38 14	113 8 59	3.0	1.00	.20	.30	500	<.5	N	N	70	500	2.0
BCG6544	45 39 9	113 13 49	3.0	1.00	.30	.50	300	N	N	N	50	500	2.0
BCG6545	45 39 40	113 13 17	5.0	1.50	.50	.50	1,000	N	N	N	100	500	2.0
BCG6546	45 39 42	113 13 33	5.0	1.50	.50	.50	700	N	N	N	70	500	2.0
BCG6547	45 41 49	113 13 48	3.0	1.50	.30	.50	500	N	N	N	100	500	2.0
BCG6548	45 40 39	113 11 46	3.0	.70	.30	.20	200	N	N	N	50	300	2.0
BCG6549	45 40 59	113 10 56	7.0	1.00	1.50	.50	1,000	N	N	N	15	500	2.0
BCH3430	45 40 46	113 0 5	2.0	7.00	15.00	.10	500	1.0	N	N	20	200	<1.0
BCH3431	45 41 8	113 0 58	1.5	7.00	10.00	.15	700	N	N	N	50	150	1.0
BCH3432	45 40 17	113 1 30	3.0	1.00	1.50	.50	2,000	N	N	N	20	700	2.0
BCH3433	45 41 23	113 2 0	1.5	7.00	15.00	.15	500	<.5	N	N	30	100	<1.0
BCH3434	45 39 11	113 2 18	5.0	1.00	1.50	.70	3,000	N	N	N	20	700	2.0
BCH3435	45 39 37	113 3 38	5.0	1.00	1.50	.50	1,500	<.5	N	N	50	700	2.0
BCH3436	45 38 7	113 0 44	7.0	1.00	1.00	.30	1,000	1.5	N	N	100	700	3.0
BCH3437	45 38 22	113 1 18	7.0	1.50	1.50	.30	1,500	1.0	N	N	50	1,000	2.0
BCH3438	45 37 53	113 1 30	3.0	2.00	1.50	.30	500	<.5	N	N	100	500	1.5
BCH3439	45 38 36	113 2 16	3.0	1.50	1.00	.30	700	1.5	N	N	100	500	1.5
BCH3440	45 38 30	113 3 23	5.0	1.50	1.00	.50	1,000	.5	N	N	100	500	3.0
BCH3441	45 38 38	113 3 51	3.0	1.50	1.00	.30	700	<.5	N	N	70	500	2.0
BCH3442	45 38 3	113 4 18	2.0	1.00	.70	.30	700	.5	N	N	100	700	2.0
BCH3528	45 38 2	113 4 2	2.0	1.50	1.00	.20	700	N	N	N	100	500	1.5
BCH3529	45 37 57	113 4 9	1.5	.70	.70	.20	500	N	N	N	100	500	1.0
BCH3530	45 37 54	113 0 22	7.0	1.00	1.00	.50	1,000	.5	N	N	150	1,000	2.0
BCH6501	45 43 6	113 6 44	.3	.20	.20	.07	500	N	N	N	20	500	5.0
BCH6502	45 42 15	113 5 44	2.0	.70	1.00	.20	300	N	N	N	100	1,000	1.5
BCH6503	45 42 18	113 5 52	2.0	1.00	.30	.30	500	N	N	N	100	1,000	1.5
BCH6504	45 41 25	113 5 15	1.5	1.00	.50	.20	300	<.5	N	N	100	700	1.0
BCH6505	45 41 5	113 4 24	2.0	.70	.70	.30	500	N	N	N	100	1,000	1.0
BCI3300	45 39 31	112 53 54	1.0	7.00	15.00	.10	300	N	N	N	30	70	<1.0
BCI3301	45 38 57	112 54 20	1.5	5.00	10.00	.10	500	N	N	N	70	150	<1.0
BCI3302	45 38 23	112 54 49	1.0	5.00	10.00	.07	500	N	N	N	50	100	<1.0
BCI3303	45 38 3	112 55 24	2.0	5.00	15.00	.15	300	N	N	N	50	100	<1.0
BCI3304	45 37 50	112 56 10	2.0	2.00	7.00	.20	500	.5	N	N	70	150	1.0
BDG6506	45 34 27	113 13 47	5.0	.70	1.00	.50	1,000	N	N	N	20	700	2.0
BDG6507	45 34 13	113 13 23	5.0	.70	1.00	.50	1,000	N	N	N	20	700	1.5
BDG6508	45 34 0	113 13 16	5.0	.50	1.00	.30	1,000	N	N	N	15	700	1.5
BDG6509	45 34 3	113 12 22	5.0	.70	1.00	.50	700	N	N	N	20	700	1.5
BDG6510	45 34 8	113 12 28	1.5	.50	.50	.30	500	N	N	N	50	500	1.5
BDG6511	45 33 31	113 11 49	3.0	.70	1.50	.30	700	N	N	N	20	700	2.0
BDG6512	45 33 3	113 10 59	3.0	.70	1.00	.30	700	N	N	N	50	700	2.0
BDG6513	45 30 23	113 10 0	7.0	1.00	1.50	.70	1,500	N	N	N	20	500	2.0
BDG6514	45 30 14	113 9 40	5.0	1.00	1.50	.70	1,000	N	N	N	20	500	1.5
BDG6515	45 30 51	113 9 48	5.0	1.00	1.00	.50	1,000	N	N	N	20	300	1.0
BDG6516	45 30 26	113 12 18	3.0	.70	1.50	1.00	3,000	N	N	N	15	300	1.0

Stream-sediment samples from the East Pioneer wilderness study area, Montana

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
BCF6543	N	N	15	70	15	50	10	<20	20	20	N	10	N
BCG6540	N	N	15	70	20	30	15	<20	20	30	N	10	N
BCG6544	N	N	15	70	20	50	5	<20	20	20	N	15	N
BCG6545	N	N	15	70	30	30	7	<20	30	20	N	15	N
BCG6546	N	N	20	150	50	50	10	<20	50	20	N	15	N
BCG6547	N	N	30	100	20	70	10	<20	20	20	N	10	N
BCG6548	N	N	50	50	50	30	150	<20	15	20	N	7	N
BCG6549	N	N	15	70	20	150	15	20	10	30	N	15	N
BCH3430	N	N	10	70	50	30	30	<20	15	500	N	5	N
BCH3431	N	N	10	70	30	20	10	<20	20	200	N	5	<10
BCH3432	N	N	10	50	70	150	10	20	7	100	N	7	15
BCH3433	N	N	5	50	15	30	15	<20	15	50	N	5	N
BCH3434	N	N	10	50	50	500	5	30	7	70	N	7	<10
BCH3435	N	N	10	50	70	100	10	20	15	70	N	10	N
BCH3436	N	N	15	200	70	150	100	20	30	70	N	10	<10
BCH3437	N	N	15	70	50	100	50	20	15	100	N	10	<10
BCH3438	N	N	10	70	20	100	15	20	20	30	N	7	N
BCH3439	N	N	10	70	30	70	20	20	20	50	N	7	N
BCH3440	N	N	10	100	70	150	20	20	20	70	N	7	N
BCH3441	N	N	10	70	20	150	15	<20	20	30	N	7	N
BCH3442	N	N	10	30	20	50	7	<20	20	30	N	7	N
BCH3528	N	N	10	50	30	50	<5	<20	15	70	N	10	N
BCH3529	N	N	7	70	50	50	5	<20	15	50	N	7	N
BCH3530	N	N	20	200	70	150	150	20	30	100	N	10	<10
BCH6501	N	N	N	20	5	50	N	<20	10	30	N	5	N
BCH6502	N	N	7	50	5	30	N	<20	10	50	N	7	N
BCH6503	N	N	10	150	20	30	15	<20	50	50	N	10	N
BCH6504	N	N	7	70	10	30	N	<20	20	30	N	5	N
BCH6505	N	N	7	50	7	30	N	<20	10	70	N	7	N
BCI3300	N	N	7	50	<5	50	N	N	10	150	N	10	N
BCI3301	N	N	7	70	7	50	5	N	15	50	N	10	N
BCI3302	N	N	7	50	10	20	5	<20	10	70	N	7	N
BCI3303	N	N	10	100	15	20	5	<20	20	150	N	7	N
BCI3304	N	N	15	200	20	20	N	<20	30	50	N	10	N
BDG6506	N	N	10	50	70	100	100	<20	10	70	N	10	N
BDG6507	N	N	7	20	30	150	30	20	10	50	N	7	N
BDG6508	N	N	10	20	30	70	50	<20	7	50	N	7	N
BDG6509	N	N	10	50	30	150	50	20	10	50	N	10	N
BDG6510	N	N	7	30	5	70	N	<20	10	15	N	7	N
BDG6511	N	N	7	30	15	70	20	20	7	30	N	7	N
BDG6512	N	N	7	30	15	50	20	<20	10	20	N	7	N
BDG6513	N	N	10	30	5	200	10	30	15	50	N	10	N
BDG6514	N	N	10	30	10	150	N	20	10	100	N	10	N
BDG6515	N	N	15	50	10	30	7	<20	15	20	N	15	N
BDG6516	N	N	7	20	10	200	N	30	10	50	N	10	N

Stream-sediment samples from the East Pioneer wilderness study area, Montana

sample	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-ZN-P	AA-SR-P	CM-AS
BCF6543	100	100	N	30	N	500	N	20	N	<10
BCG6540	100	100	<50	30	N	300	N	20	N	<10
BCG6544	100	100	N	50	N	500	N	20	N	<10
BCG6545	100	100	N	30	500	300	N	440	N	<10
BCG6546	100	100	N	50	N	300	N	110	N	<10
BCG6547	100	100	N	30	N	700	N	50	N	<10
BCG6548	100	100	N	20	N	300	N	95	N	<10
BCG6549	300	150	N	30	N	150	N	60	N	<10
BCH3430	300	70	N	20	N	100	N	60	1	<10
BCH3431	200	50	N	15	N	70	N	70	1	<10
BCH3432	700	70	N	50	N	300	N	70	2	<10
BCH3433	200	50	N	15	N	70	N	45	<1	<10
BCH3434	500	70	N	100	N	700	300	50	N	<10
BCH3435	500	100	N	50	N	300	N	75	N	<10
BCH3436	300	150	50	30	N	300	N	110	2	<10
BCH3437	500	100	N	30	N	200	N	110	N	<10
BCH3438	200	70	N	20	N	200	N	95	N	<10
BCH3439	300	70	N	20	N	150	N	100	N	<10
BCH3440	300	100	N	50	N	500	N	120	N	<10
BCH3441	300	100	N	30	N	200	N	80	N	<10
BCH3442	150	50	N	20	N	200	N	90	N	<10
BCH3528	150	70	N	30	N	200	N	45	N	<10
BCH3529	100	50	N	30	N	500	N	60	<1	<10
BCH3530	300	150	50	30	N	200	N	140	3	10
BCH6501	<100	30	N	30	N	50	N	55	N	<10
BCH6502	200	70	N	30	N	200	N	20	N	<10
BCH6503	100	70	50	70	N	200	N	20	N	<10
BCH6504	100	50	N	30	N	300	N	15	N	<10
BCH6505	150	50	N	30	N	500	N	10	N	<10
BCI3300	150	50	N	20	N	20	N	30	N	<10
BCI3301	150	50	N	20	N	50	N	50	1	10
BCI3302	150	50	N	15	N	70	N	45	1	<10
BCI3303	150	70	N	20	N	70	N	40	1	10
BCI3304	200	100	N	20	N	200	N	110	1	<10
BDG6506	500	100	N	30	N	200	N	55	N	20
BDG6507	500	70	N	30	N	300	N	25	N	<10
BDG6508	500	70	N	20	N	150	N	30	N	<10
BDG6509	500	100	<50	50	N	300	N	140	N	10
BDG6510	200	50	N	30	N	500	N	35	N	10
BDG6511	500	70	N	30	N	300	N	25	N	10
BDG6512	300	50	N	20	N	300	N	30	N	<10
BDG6513	500	100	50	50	N	500	<100	45	N	<10
BDG6514	500	70	N	30	N	200	<100	55	<1	<10
BDG6515	150	150	N	30	N	300	N	50	N	<10
BDG6516	500	70	N	70	N	500	<100	30	N	20

Stream-sediment samples from the East Pioneer Wilderness study area, Montana--continued

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE
BDG6517	45 30 27	113 12 21	7.0	1.00	1.50	.50	1,500	N	N	N	15	500	1.5
BDG6518	45 30 58	113 12 27	5.0	1.00	1.00	.30	1,500	N	N	N	20	500	1.5
BDG6519	45 31 3	113 12 30	2.0	.70	.50	.30	500	N	N	N	50	150	1.0
BDG6520	45 31 26	113 11 10	5.0	1.00	1.50	.50	1,000	N	N	N	20	500	1.5
BDG6521	45 31 50	113 10 48	1.5	1.00	.30	.30	500	N	N	N	50	300	1.5
BDG6522	45 31 60	113 9 57	1.5	.30	.20	.30	150	N	N	N	70	300	1.0
BDG6523	45 32 9	113 9 44	1.5	.20	.10	.30	100	N	N	N	100	150	1.0
BDG6524	45 32 13	113 10 27	5.0	1.00	.20	.50	500	N	N	N	30	500	1.5
BDG6525	45 32 27	113 9 19	1.5	.50	.15	.30	150	N	N	N	100	200	1.0
BDG6526	45 32 44	113 8 51	1.0	.30	.15	.20	100	N	N	N	70	200	1.0
BDG6527	45 33 37	113 8 49	1.5	1.00	.20	.20	200	N	N	N	70	300	1.0
BDG6528	45 33 14	113 9 5	2.0	.70	.30	.30	700	N	N	N	50	300	2.0
BDG6529	45 33 15	113 8 33	2.0	.70	.30	.30	700	N	N	N	100	300	2.0
BDG6530	45 34 13	113 7 53	1.5	.50	.15	.20	300	N	N	N	70	300	2.0
BDG6531	45 36 51	113 13 6	2.0	.70	.30	.30	500	N	N	N	70	500	3.0
BDG6532	45 36 51	113 13 6	2.0	1.00	.20	.30	500	N	N	N	100	500	2.0
BDG6533	45 36 53	113 12 21	2.0	.70	.20	.30	700	<.5	N	N	70	500	2.0
BDG6534	45 36 39	113 11 12	2.0	.70	.20	.20	700	N	N	N	70	300	2.0
BDG6535	45 36 21	113 10 18	3.0	1.50	.30	.30	700	N	N	N	100	500	3.0
BDG6536	45 35 13	113 11 6	3.0	.70	.30	.30	700	N	N	N	50	300	1.5
BDG6537	45 35 21	113 11 7	2.0	1.00	.30	.30	300	N	N	N	70	500	1.0
BDG6538	45 36 6	113 10 20	3.0	1.00	.30	.30	1,000	N	N	N	70	300	1.5
BDG6539	45 37 18	113 10 12	5.0	1.00	.20	.50	1,000	N	N	N	70	500	1.5
BDG6541	45 35 44	113 13 1	3.0	1.00	.30	.30	700	N	N	N	30	700	2.0
BDG6542	45 35 20	113 14 39	3.0	1.00	.50	.30	1,500	1.0	N	N	30	700	1.5
BDG6550	45 31 38	113 10 13	7.0	1.00	1.50	.50	1,500	N	N	N	15	500	2.0
BDH3443	45 35 60	113 0 38	1.0	5.00	7.00	.05	200	N	N	N	30	30	<1.0
BDH3444	45 35 56	113 1 14	.5	7.00	10.00	.03	200	N	N	N	30	20	<1.0
BDH3445	45 35 45	113 1 55	1.0	5.00	10.00	.07	300	N	N	N	20	50	<1.0
BDH3446	45 35 46	113 2 52	.7	5.00	10.00	.07	200	N	N	N	50	70	<1.0
BDH3447	45 35 41	113 2 55	1.5	3.00	5.00	.15	300	.5	N	N	150	700	2.0
BDH3448	45 36 4	113 3 24	1.5	5.00	7.00	.10	200	N	N	N	100	200	<1.0
BDH3449	45 36 34	113 4 23	2.0	3.00	7.00	.20	300	N	N	N	100	300	1.0
BDH3450	45 36 59	113 5 1	2.0	5.00	7.00	.20	300	N	N	N	150	300	1.5
BDH3451	45 35 43	113 5 33	3.0	.70	1.00	.30	700	N	N	N	100	700	2.0
BDH3452	45 33 54	113 2 2	5.0	1.50	1.00	.30	2,000	1.0	N	N	50	500	1.5
BDH3453	45 34 4	113 3 20	5.0	1.00	.70	.50	1,500	.7	N	N	100	500	2.0
BDH3454	45 33 55	113 3 23	2.0	.70	.50	.30	500	.7	N	N	70	500	2.0
BDH3455	45 33 22	113 5 13	7.0	1.00	1.50	.50	2,000	N	N	N	50	1,000	1.0
BDH3458	45 33 26	113 0 6	10.0	2.00	1.50	.50	1,500	N	N	N	20	500	1.0
BDH3459	45 33 29	113 0 10	7.0	2.00	1.50	.50	1,500	N	N	N	30	700	1.0
BDH3460	45 33 17	113 0 13	10.0	2.00	1.50	.70	1,500	N	N	N	30	500	1.0
BDH3461	45 32 52	113 1 31	15.0	1.50	1.50	.50	2,000	N	N	N	10	500	1.0
BDH3462	45 32 51	113 1 40	10.0	1.50	1.50	.70	1,500	N	N	N	15	700	1.5
BDH3463	45 32 5	113 2 5	15.0	1.00	2.00	.50	2,000	N	N	N	15	700	1.0

Stream-sediment samples from the East Pioneer Wilderness study area, Montana--continued

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
BDG6517	N	N	15	50	20	150	N	20	15	50	N	10	N
BDG6518	N	N	15	50	20	30	20	<20	15	30	N	15	N
BDG6519	N	N	10	50	15	50	5	<20	15	20	N	7	N
BDG6520	N	N	10	30	10	150	N	20	10	70	N	10	N
BDG6521	N	N	30	70	50	150	7	<20	30	15	N	7	N
BDG6522	N	N	5	30	N	30	10	<20	20	10	N	5	N
BDG6523	N	N	<5	30	N	20	N	<20	10	N	N	5	N
BDG6524	N	N	20	200	200	70	50	20	50	20	N	10	N
BDG6525	N	N	5	70	5	30	N	<20	15	15	N	5	N
BDG6526	N	N	<5	50	<5	50	N	<20	10	<10	N	5	N
BDG6527	N	N	10	70	5	30	N	<20	20	10	N	7	N
BDG6528	N	N	15	50	30	70	N	<20	20	15	N	10	N
BDG6529	N	N	10	70	20	50	10	<20	30	30	N	10	N
BDG6530	N	N	10	50	15	50	N	<20	20	15	N	7	N
BDG6531	N	N	10	70	30	100	N	<20	20	20	N	10	N
BDG6532	N	N	15	70	15	30	N	<20	20	30	N	10	N
BDG6533	N	N	15	50	20	50	5	<20	30	50	N	10	N
BDG6534	N	N	15	50	20	50	N	<20	20	15	N	10	N
BDG6535	N	N	20	70	30	50	N	<20	30	20	N	10	N
BDG6536	N	N	15	50	15	50	7	<20	15	10	N	7	N
BDG6537	N	N	10	70	5	50	5	<20	20	15	N	10	N
BDG6538	N	N	15	50	15	30	7	<20	20	15	N	7	N
BDG6539	N	N	30	70	30	70	10	<20	30	20	N	15	N
BDG6541	N	N	15	100	20	50	20	<20	50	15	N	10	N
BDG6542	N	N	15	70	70	30	50	<20	20	70	N	10	N
BDG6550	N	N	15	50	10	100	15	20	10	20	N	15	N
BDH3443	N	N	N	30	<5	<20	N	N	20	30	N	<5	N
BDH3444	N	N	N	30	5	20	N	N	5	50	N	<5	N
BDH3445	N	N	5	30	5	20	N	N	15	20	N	5	N
BDH3446	N	N	5	30	<5	20	N	N	10	20	N	5	N
BDH3447	N	N	7	50	15	30	N	<20	15	30	N	7	N
BDH3448	N	N	7	70	7	20	15	<20	15	30	N	5	N
BDH3449	N	N	7	50	15	70	N	<20	10	30	N	7	N
BDH3450	N	N	10	50	10	30	N	<20	15	30	N	10	N
BDH3451	N	N	10	30	15	70	N	<20	15	30	N	10	N
BDH3452	N	N	15	70	20	70	10	<20	20	100	N	15	N
BDH3457	N	N	15	70	30	50	7	<20	30	70	N	15	N
BDH3454	N	N	10	50	30	50	5	<20	20	20	N	15	N
BDH3455	N	N	20	70	30	70	5	<20	15	70	N	20	<10
BDH3458	N	N	20	200	50	150	5	20	20	70	N	50	N
BDH3459	N	N	20	70	30	150	5	20	20	50	N	30	N
BDH3460	N	N	20	100	30	150	10	50	20	100	N	30	N
BDH3461	N	N	30	150	50	100	10	30	15	50	N	50	N
BDH3462	N	N	20	100	50	150	15	50	30	70	N	30	N
BDH3463	N	N	20	100	50	150	N	20	10	50	N	20	N

Stream-sediment samples from the East Pioneer wilderness study area, Montana--continued

sample	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-ZN-P	AA-SR-P	CM-AS
BDG6517	500	150	N	50	N	200	N	100	N	<10
BDG6518	300	150	N	70	N	200	<100	55	N	<10
BDG6519	100	100	N	50	N	300	N	45	N	<10
BDG6520	700	100	N	30	N	200	N	100	N	<10
BDG6521	100	70	N	50	N	500	N	75	N	<10
BDG6522	100	50	<50	50	N	1,000	N	15	N	<10
BDG6523	<100	50	<50	30	N	500	N	15	N	10
BDG6524	100	100	<50	70	N	700	N	120	<1	<10
BDG6525	<100	50	N	50	N	>1,000	N	10	N	<10
BDG6526	<100	50	N	30	N	1,000	N	10	N	<10
BDG6527	<100	50	N	30	N	300	N	40	N	<10
BDG6528	150	100	N	30	N	500	N	40	N	<10
BDG6529	100	100	<50	50	N	300	N	50	N	<10
BDG6530	100	70	N	30	N	300	N	20	N	10
BDG6531	150	70	N	70	N	100	N	35	N	10
BDG6532	100	70	N	30	N	300	N	60	N	10
BDG6533	100	100	N	30	N	200	N	40	N	10
BDG6534	100	70	N	20	N	150	N	50	N	<10
BDG6535	100	100	N	30	N	150	N	45	N	<10
BDG6536	100	100	N	30	N	200	N	30	N	10
BDG6537	100	70	N	50	N	300	N	25	N	10
BDG6538	100	70	N	70	N	300	N	45	N	<10
BDG6539	100	100	N	50	N	300	N	25	N	<10
BDG6541	100	70	70	30	N	200	N	35	N	<10
BDG6542	150	100	N	30	N	300	N	55	N	<10
BDG6550	300	150	N	50	N	200	N	40	N	10
BDH3443	200	20	<50	<10	N	30	N	30	N	<10
BDH3444	200	10	N	<10	N	15	N	30	N	<10
BDH3445	200	20	N	10	N	30	N	25	N	<10
BDH3446	150	20	N	10	N	70	N	25	N	<10
BDH3447	150	30	N	30	N	200	N	30	N	<10
BDH3448	150	30	N	15	N	100	N	30	N	<10
BDH3449	150	50	N	30	N	1,000	N	35	N	<10
BDH3450	200	100	N	30	N	500	N	30	N	<10
BDH3451	200	100	N	70	N	700	N	25	N	<10
BDH3452	200	100	N	50	N	200	N	65	N	20
BDH3453	100	100	N	50	N	700	N	60	N	<10
BDH3454	100	70	N	150	N	150	N	25	N	<10
BDH3455	300	150	N	70	N	500	N	50	N	<10
BDH3458	300	300	N	100	N	500	N	60	N	<10
BDH3459	200	200	N	70	N	500	N	70	N	<10
BDH3460	300	200	N	100	N	300	N	90	N	<10
BDH3461	300	500	N	150	N	500	N	60	N	<10
BDH3462	300	200	N	150	N	500	N	90	N	10
BDH3463	300	500	N	100	N	700	N	110	<1	<10

Stream-sediment samples from the East Pioneer wilderness study area, Montana--continued

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE
BDH3464	45 32 10	113 4 38	7.0	.70	1.50	.50	1,500	N	N	N	30	1,000	1.5
BDH3465	45 32 2	113 1 58	15.0	.70	1.50	.50	1,500	N	N	N	10	700	<1.0
BDH3466	45 31 40	113 0 50	20.0	1.00	1.50	.30	2,000	N	N	N	10	700	<1.0
BDH3467	45 31 35	113 0 50	15.0	.70	1.50	.50	1,500	N	N	N	10	700	1.0
BDH3468	45 31 24	113 0 27	10.0	1.50	2.00	.50	2,000	N	N	N	10	700	1.0
BDH3469	45 31 20	113 0 27	7.0	1.50	1.50	.30	1,500	N	N	N	20	1,000	1.0
BDH3470	45 31 3	113 0 12	7.0	1.00	2.00	.50	1,500	<.5	N	N	20	1,000	1.0
BDH3479	45 31 33	113 3 35	7.0	.70	1.50	.30	2,000	5.0	N	N	20	500	1.5
BDH3480	45 31 5	113 3 14	7.0	.50	1.50	.50	2,000	7.0	N	N	20	500	2.0
BDH3481	45 30 13	113 2 41	10.0	.50	1.00	.50	3,000	7.0	N	N	15	500	2.0
BDH3531	45 36 24	113 0 17	2.0	7.00	10.00	.15	700	N	N	N	70	200	<1.0
BDH3532	45 36 44	113 1 7	1.5	5.00	5.00	.20	500	1.0	N	N	100	300	1.0
BDI3305	45 37 26	112 56 40	1.0	5.00	10.00	.07	300	N	N	N	30	70	<1.0
BDI3306	45 37 3	112 57 16	5.0	7.00	15.00	.15	700	.5	N	N	70	150	<1.0
BDI3307	45 36 57	112 57 13	1.5	7.00	15.00	.07	300	1.5	N	N	70	100	<1.0
BDI3308	45 36 38	112 57 35	1.5	5.00	10.00	.15	500	<.5	N	N	50	150	<1.0
BDI3309	45 36 21	112 57 55	3.0	3.00	3.00	.30	700	.5	N	N	100	700	1.0
BDI3310	45 36 13	112 57 50	2.0	7.00	10.00	.15	700	<.5	N	N	50	300	<1.0
BDI3311	45 36 5	112 57 57	7.0	2.00	2.00	.30	1,000	<.5	N	N	50	700	1.5
BDI3312	45 35 44	112 58 5	7.0	1.50	1.50	.50	1,500	N	N	N	20	500	1.0
BDI3313	45 35 18	112 57 47	5.0	2.00	1.50	.50	2,000	1.5	N	N	70	500	1.0
BDI3314	45 35 6	112 57 38	10.0	1.50	1.50	.70	2,000	.5	N	N	20	500	1.0
BDI3315	45 35 0	112 57 44	7.0	1.50	1.50	.50	2,000	.5	N	N	20	700	1.0
BDI3316	45 34 29	112 57 33	7.0	1.50	1.50	.50	2,000	.5	N	N	20	500	1.0
BDI3317	45 34 38	112 56 2	15.0	1.00	1.50	.50	1,500	N	N	N	15	500	1.5
BDI3318	45 35 5	112 55 26	5.0	1.00	1.50	.30	1,500	N	N	N	20	500	2.0
BDI3319	45 35 28	112 54 54	7.0	1.50	2.00	.70	1,500	N	N	N	20	500	1.5
BDI3320	45 34 36	112 53 56	10.0	2.00	1.50	1.00	2,000	N	N	N	15	300	1.0
BDI3321	45 34 17	112 53 58	7.0	1.50	1.50	.50	1,500	N	N	N	15	300	1.0
BDI3322	45 34 19	112 52 58	10.0	1.50	2.00	1.00	2,000	N	N	N	15	300	1.0
BDI3323	45 33 8	112 56 52	7.0	1.00	1.50	.50	1,000	N	N	N	15	500	1.0
BDI3324	45 33 9	112 56 53	5.0	1.00	2.00	.50	1,000	N	N	N	15	700	1.0
BDI3325	45 33 10	112 56 40	7.0	1.00	1.50	.50	1,000	N	N	N	20	700	1.0
BDI3326	45 33 12	112 56 42	7.0	1.00	1.50	.50	1,000	N	N	N	15	700	1.0
BDI3327	45 33 14	112 56 34	7.0	.70	1.50	.30	1,000	N	N	N	15	500	<1.0
BDI3328	45 33 15	112 56 35	10.0	.70	1.50	.50	1,000	N	N	N	20	700	1.0
BDI3329	45 33 23	112 56 43	10.0	1.50	1.50	.50	1,000	N	N	N	10	300	1.0
BDI3330	45 33 23	112 56 44	10.0	1.00	1.50	.50	1,000	N	N	N	10	500	1.0
BDI3331	45 33 11	112 56 16	10.0	.70	1.50	.30	1,000	N	N	N	15	500	1.0
BDI3332	45 33 11	112 56 17	15.0	.70	1.50	.30	1,000	N	N	N	10	300	1.0
BDI3333	45 33 7	112 56 3	15.0	.70	1.50	.50	1,000	N	N	N	10	500	1.0
BDI3334	45 33 8	112 56 3	10.0	1.00	1.50	.50	1,000	N	N	N	15	500	1.0
BDI3335	45 33 3	112 55 50	10.0	1.00	1.50	.50	1,000	N	N	N	10	300	1.0
BDI3336	45 33 4	112 55 52	15.0	.70	1.50	.50	1,000	N	N	N	10	500	1.0
BDI3337	45 33 2	112 55 35	5.0	1.00	1.50	.50	1,000	N	N	N	15	700	1.0

Stream-sediment samples from the East Pioneer wilderness study area, Montana--continued

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
BDH3464	N	N	15	50	20	100	5	20	10	50	N	15	N
BDH3465	N	N	15	70	50	200	N	30	7	30	N	15	N
BDH3466	N	N	30	300	70	150	N	<20	10	20	N	15	N
BDH3467	N	N	15	70	30	150	N	20	5	30	N	10	N
BDH3468	N	N	15	70	30	150	N	20	10	30	N	20	N
BDH3469	N	N	15	50	70	100	10	<20	7	70	N	15	N
BDH3470	N	N	10	50	50	200	10	20	7	100	N	10	N
BDH3479	N	N	50	50	200	150	50	30	20	200	N	10	<10
BDH3480	N	N	30	50	200	200	30	50	5	200	N	10	N
BDH3491	N	N	20	70	500	200	30	70	10	300	N	10	N
BDH3531	N	N	10	70	30	70	N	<20	20	70	N	10	N
BDH3532	N	N	10	70	15	20	N	<20	20	30	N	10	N
BDI3305	N	N	7	30	10	30	N	<20	10	100	N	7	N
BDI3306	N	N	15	70	15	50	5	<20	15	100	N	10	<10
BDI3307	N	N	10	70	20	20	5	N	20	150	N	7	N
BDI3308	N	N	10	30	5	50	7	N	10	50	N	10	N
BDI3309	N	N	15	70	30	70	N	20	20	50	N	10	N
BDI3310	N	N	15	100	10	30	10	<20	15	50	N	15	<10
BDI3311	N	N	15	50	30	100	5	20	10	50	N	15	N
BDI3312	N	N	20	70	50	150	20	<20	10	100	N	30	N
BDI3313	N	N	15	70	50	70	20	<20	15	100	N	20	N
BDI3314	N	N	20	70	50	100	30	20	10	100	N	30	N
BDI3315	N	N	20	50	30	150	15	20	10	70	N	30	N
BDI3316	N	N	20	50	150	70	30	<20	10	100	N	20	N
BDI3317	N	N	20	150	70	200	10	20	10	50	N	20	N
BDI3318	N	N	20	50	15	100	20	20	7	50	N	30	N
BDI3319	N	N	20	70	20	150	10	20	15	50	N	30	N
BDI3320	N	N	30	200	50	50	5	<20	20	30	N	15	N
BDI3321	N	N	30	100	30	30	50	<20	10	100	N	20	N
BDI3322	N	N	30	150	50	50	N	20	20	30	N	20	N
BDI3323	N	N	15	70	15	150	N	20	10	50	N	20	N
BDI3324	N	N	10	50	5	100	N	20	7	70	N	20	<10
BDI3325	N	N	15	50	15	100	5	20	10	50	N	15	<10
BDI3326	N	N	15	70	20	150	7	20	10	70	N	20	10
BDI3327	N	N	15	70	20	100	N	20	10	70	N	15	10
BDI3328	N	N	15	100	30	150	N	30	10	50	N	20	N
BDI3329	N	N	30	200	70	150	N	20	10	30	N	20	N
BDI3330	N	N	20	200	70	150	N	20	10	30	N	20	N
BDI3331	N	N	20	150	50	200	N	20	10	30	N	15	N
BDI3332	N	N	30	300	70	200	N	20	10	30	N	15	N
BDI3333	N	N	30	200	50	300	N	20	10	50	N	20	N
BDI3334	N	N	20	150	30	150	5	20	10	50	N	20	N
BDI3335	N	N	20	150	50	200	N	30	10	50	N	20	N
BDI3336	N	N	20	150	50	150	5	20	15	30	N	15	N
BDI3337	N	N	20	50	20	150	10	20	10	150	N	20	N

Stream-sediment samples from the East Pioneer wilderness study area, Montana--continued

sample	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-ZN-P	AA-SR-P	CM-AS
BDH3464	300	150	N	70	N	700	N	35	N	10
BDH3465	500	500	N	150	N	1,000	200	50	N	80
BDH3466	300	700	N	70	N	1,000	<100	55	N	<10
BDH3467	500	500	N	70	N	700	N	60	N	<10
BDH3468	500	300	N	100	N	700	N	40	N	<10
BDH3469	700	150	N	30	N	300	N	100	N	<10
BDH3470	500	200	N	50	200	500	N	190	N	<10
BDH3479	500	150	50	50	500	700	N	640	5	30
BDH3480	500	150	70	70	500	700	N	900	5	40
BDH3481	300	300	100	100	1,000	1,000	N	1,600	10	40
BDH3531	100	50	N	30	N	100	N	40	N	<10
BDH3532	100	50	N	20	N	200	N	70	N	<10
BDI3305	150	50	N	15	N	70	N	40	1	<10
BDI3306	300	100	N	20	N	100	N	40	1	15
BDI3307	300	50	N	15	N	50	N	65	3	15
BDI3308	150	70	N	20	N	150	N	35	<1	10
BDI3309	200	100	N	30	N	200	N	55	<1	<10
BDI3310	300	100	N	20	N	100	N	45	N	<10
BDI3311	300	150	N	50	N	200	N	80	N	<10
BDI3312	150	200	N	50	N	300	N	70	<1	<10
BDI3313	150	150	N	30	<200	200	N	120	2	15
BDI3314	150	300	N	50	N	300	N	110	1	10
BDI3315	150	200	N	50	N	300	N	85	N	<10
BDI3316	150	200	N	50	N	150	N	130	N	10
BDI3317	300	500	50	100	N	1,000	<100	45	N	10
BDI3318	500	150	N	50	N	300	N	50	N	<10
BDI3319	300	200	N	100	N	300	N	40	N	<10
BDI3320	300	200	N	30	N	700	N	50	N	<10
BDI3321	300	200	<50	30	N	200	N	60	N	10
BDI3322	300	200	N	30	N	700	N	40	N	<10
BDI3323	500	150	N	100	N	500	N	45	<1	<10
BDI3324	500	150	N	70	N	300	N	40	<1	<10
BDI3325	500	200	N	50	N	300	N	70	<1	<10
BDI3326	500	200	N	70	N	500	N	65	<1	<10
BDI3327	500	300	N	50	N	500	N	65	<1	<10
BDI3328	500	500	N	70	N	1,000	N	55	<1	<10
BDI3329	200	700	N	100	N	>1,000	<100	55	1	<10
BDI3330	200	700	N	100	N	>1,000	N	55	1	<10
BDI3331	500	500	N	100	N	1,000	N	45	<1	<10
BDI3332	300	700	<50	100	N	>1,000	N	70	<1	<10
BDI3333	300	500	N	150	N	1,000	N	50	<1	<10
BDI3334	300	300	N	100	N	700	<100	50	1	<10
BDI3335	300	500	N	100	N	1,000	N	45	1	<10
BDI3336	300	500	N	100	N	1,000	100	50	1	<10
BDI3337	300	150	N	50	N	300	N	70	<1	<10

Stream-sediment samples from the East Pioneer wilderness study area, Montana--continued

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE
BDI3338	45 33 2	112 55 35	10.0	1.00	1.50	.50	1,000	N	N	N	10	300	1.0
BDI3339	45 33 6	112 55 32	7.0	1.50	1.50	.50	1,000	N	N	N	10	500	1.0
BDI3340	45 33 6	112 55 32	7.0	1.50	2.00	.50	1,000	N	N	N	10	500	1.5
BDI3341	45 33 3	112 55 18	7.0	1.00	1.50	.50	1,000	N	N	N	10	500	1.0
BDI3342	45 33 3	112 55 19	10.0	1.00	1.50	.50	1,000	N	N	N	10	500	1.0
BDI3343	45 33 4	112 55 7	7.0	1.00	1.50	.50	700	N	N	N	10	500	1.0
BDI3344	45 33 4	112 55 8	5.0	.70	1.50	.50	1,000	N	N	N	10	500	1.0
BDI3345	45 33 9	112 54 48	5.0	1.00	2.00	.50	1,000	N	N	N	10	500	1.0
BDI3346	45 33 9	112 54 49	7.0	1.00	1.50	.50	1,000	N	N	N	10	500	1.0
BDI3347	45 33 4	112 54 30	7.0	.70	1.50	.50	700	N	N	N	10	500	1.0
BDI3348	45 33 5	112 54 32	7.0	.70	1.50	.50	1,000	N	N	N	<10	500	1.0
BDI3349	45 33 2	112 54 12	10.0	1.00	1.50	.50	1,000	N	N	N	10	700	1.0
BDI3350	45 33 2	112 54 12	10.0	1.50	2.00	.50	1,000	N	N	N	10	500	1.5
BDI3351	45 33 42	112 54 17	7.0	1.50	2.00	.50	2,000	N	N	N	10	700	1.0
BDI3352	45 33 42	112 54 15	7.0	1.50	2.00	.50	2,000	N	N	N	15	700	1.0
BDI3353	45 32 58	112 54 7	7.0	1.00	1.50	.30	1,000	N	N	N	<10	500	1.0
BDI3354	45 32 58	112 54 7	10.0	1.00	1.50	.30	1,000	N	N	N	10	300	<1.0
BDI3355	45 33 0	112 53 57	15.0	1.00	1.50	.50	1,000	N	N	N	10	500	1.0
BDI3356	45 33 1	112 53 59	7.0	1.00	2.00	.50	1,000	N	N	N	15	700	1.0
BDI3357	45 32 56	112 53 45	10.0	1.00	1.50	.50	1,000	N	N	N	10	500	1.0
BDI3358	45 32 56	112 53 44	10.0	1.50	2.00	.50	1,000	N	N	N	10	300	1.0
BDI3359	45 32 44	112 53 29	7.0	1.50	1.50	.50	1,000	N	N	N	10	500	1.0
BDI3360	45 32 54	112 53 41	5.0	1.00	1.50	.30	1,000	N	N	N	10	500	1.5
BDI3361	45 32 42	112 53 19	10.0	1.50	2.00	.50	1,000	N	N	N	20	500	1.0
BDI3362	45 32 42	112 53 18	7.0	1.00	2.00	.50	1,000	N	N	N	15	500	1.5
BDI3363	45 32 31	112 54 47	7.0	1.00	2.00	.50	1,000	N	N	N	10	500	1.5
BDI3364	45 32 31	112 54 47	5.0	1.00	2.00	.50	1,500	N	N	N	15	500	1.0
BDI3365	45 31 34	112 56 18	10.0	1.50	1.50	.50	1,500	N	N	N	15	500	1.0
BDI3366	45 31 34	112 54 56	15.0	1.50	1.50	.70	1,500	N	N	N	10	500	1.0
BDI3367	45 31 52	112 54 13	7.0	1.50	1.50	.50	1,500	N	N	N	15	500	1.5
BDI3368	45 31 38	112 53 45	7.0	1.50	1.50	.50	1,500	N	N	N	15	500	1.0
BDI3369	45 31 57	112 52 31	7.0	1.50	2.00	.50	1,500	N	N	N	20	700	1.5
BDI3370	45 32 2	112 52 39	7.0	1.00	1.50	.30	1,000	N	N	N	20	700	2.0
BDI3371	45 31 3	112 55 55	15.0	1.00	1.50	.30	1,500	N	N	N	10	500	1.0
BDI3372	45 31 5	112 54 48	10.0	1.50	1.50	.50	1,500	N	N	N	10	500	1.0
BDI3373	45 30 48	112 54 5	7.0	1.00	1.50	.50	1,500	N	N	N	15	500	1.0
BDI3374	45 30 43	112 54 7	10.0	1.00	1.50	.50	1,500	N	N	N	10	500	1.0
BDI3375	45 30 20	112 53 3	7.0	1.00	1.50	.50	1,500	N	N	N	15	500	1.0
BDI3456	45 33 14	112 58 27	7.0	1.50	1.50	.50	1,500	N	N	N	20	500	1.5
BDI3457	45 33 28	112 59 21	10.0	1.50	1.50	.50	1,500	N	N	N	20	700	1.0
BDI3471	45 30 42	112 59 47	5.0	1.00	2.00	.30	1,500	N	N	N	20	1,000	1.5
BDI3527	45 36 45	112 52 21	3.0	5.00	7.00	.20	700	N	N	N	50	500	<1.0
BDI3535	45 37 12	112 52 12	3.0	5.00	10.00	.15	500	.7	N	N	100	200	1.0
BEH3482	45 28 49	113 1 46	10.0	.70	1.50	.50	2,000	N	N	N	15	700	2.0
BEH3484	45 26 58	113 0 31	5.0	1.00	1.00	.30	1,000	N	N	N	30	700	2.0

Stream-sediment samples from the East Pioneer wilderness study area, Montana--continued

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
BDI3338	N	N	20	150	30	200	N	20	10	50	N	20	N
BDI3339	N	N	20	100	30	150	N	20	10	50	N	30	N
BDI3340	N	N	30	70	30	150	N	20	10	50	N	30	N
BDI3341	N	N	20	100	20	200	5	20	10	50	N	20	N
BDI3342	N	N	30	200	50	150	N	30	20	50	N	20	N
BDI3343	N	N	15	70	70	150	10	20	10	70	N	20	<10
BDI3344	N	N	15	70	20	150	7	20	7	50	N	20	N
BDI3345	N	N	20	70	20	150	5	30	10	30	N	50	10
BDI3346	N	N	30	150	30	150	N	20	10	50	N	30	N
BDI3347	N	N	20	150	30	150	N	20	15	50	N	30	N
BDI3348	N	N	20	100	30	150	N	20	10	50	N	20	N
BDI3349	N	N	15	100	50	150	N	30	5	50	N	20	N
BDI3350	N	N	15	70	30	150	<5	20	10	50	N	20	N
BDI3351	N	N	20	100	20	100	10	20	10	50	N	50	N
BDI3352	N	N	20	70	30	100	10	20	10	50	N	50	N
BDI3353	N	N	15	70	20	150	N	20	10	50	N	20	10
BDI3354	N	N	20	200	30	150	7	20	15	30	N	20	N
BDI3355	N	N	30	200	50	200	N	20	15	30	N	30	N
BDI3356	N	N	20	70	30	150	5	20	10	50	N	20	N
BDI3357	N	N	30	150	50	200	10	20	10	30	N	20	N
BDI3358	N	N	20	100	30	200	15	30	7	50	N	20	10
BDI3359	N	N	15	70	15	100	10	20	7	70	N	30	10
BDI3360	N	N	15	50	15	150	10	20	10	50	N	20	N
BDI3361	N	N	20	70	30	200	15	20	10	50	N	30	10
BDI3362	N	N	20	70	30	150	10	20	10	50	N	30	N
BDI3363	N	N	15	50	50	150	15	30	7	50	N	20	10
BDI3364	N	N	15	50	20	100	10	20	10	50	N	20	10
BDI3365	N	N	20	50	7	150	5	20	7	50	N	20	N
BDI3366	N	N	20	100	30	200	N	30	7	50	N	20	N
BDI3367	N	N	15	50	30	150	N	<20	5	50	N	20	N
BDI3368	N	N	20	70	10	200	5	20	5	50	N	30	N
BDI3369	N	N	15	30	15	70	5	20	5	50	N	20	N
BDI3370	N	N	15	30	15	100	15	<20	5	50	N	20	N
BDI3371	N	N	20	70	30	200	N	<20	5	30	N	15	N
BDI3372	N	N	20	70	30	200	N	20	5	30	N	20	N
BDI3373	N	N	15	50	10	150	N	20	5	70	N	20	N
BDI3374	N	N	20	70	30	200	N	20	5	50	N	20	N
BDI3375	N	N	15	50	30	200	N	30	5	30	N	20	N
BDI3456	N	N	20	70	70	150	10	30	10	150	N	30	N
BDI3457	N	N	20	100	50	200	15	20	15	70	N	30	N
BDI3471	N	N	10	50	7	70	10	<20	10	100	N	10	N
BDI3527	N	N	7	50	10	50	N	<20	10	30	N	10	N
BDI3535	N	N	10	70	15	30	N	<20	15	30	N	10	N
BEH3482	N	N	15	50	30	300	20	50	10	50	N	10	N
BEH3484	N	N	15	70	20	150	50	20	20	100	N	15	N

Stream-sediment samples from the East Pioneer Wilderness study area, Montana--continued

sample	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-ZN-P	AA-SB-P	CM-AS
BDI3338	300	500	N	100	N	1,000	<100	60	1	<10
BDI3339	300	300	N	100	N	700	<100	40	1	<10
BDI3340	300	300	N	100	N	700	N	55	1	<10
BDI3341	300	200	N	100	N	700	N	80	<1	<10
BDI3342	300	300	N	150	N	1,000	<100	60	1	<10
BDI3343	300	150	N	100	N	500	N	55	<1	<10
BDI3344	300	150	N	70	N	500	N	55	1	<10
BDI3345	300	200	N	100	N	1,000	<100	30	<1	<10
BDI3346	300	300	N	100	N	1,000	<100	65	1	<10
BDI3347	300	300	N	100	N	1,000	N	50	<1	10
BDI3348	300	300	N	100	N	1,000	N	80	1	10
BDI3349	300	300	N	100	N	1,000	N	35	<1	10
BDI3350	300	300	N	100	N	1,000	N	50	<1	10
BDI3351	300	300	N	70	N	700	N	80	<1	<10
BDI3352	300	300	N	70	N	1,000	N	60	<1	<10
BDI3353	300	200	N	70	N	500	<100	55	<1	<10
BDI3354	300	500	<50	100	N	1,000	<100	75	<1	10
BDI3355	300	700	N	150	N	700	<100	45	<1	<10
BDI3356	500	200	N	100	N	700	<100	40	1	<10
BDI3357	300	500	N	150	N	1,000	N	45	1	<10
BDI3358	300	300	N	150	N	700	N	50	1	<10
BDI3359	300	200	N	100	N	700	N	40	<1	<10
BDI3360	300	150	N	70	N	300	N	50	1	10
BDI3361	500	200	N	100	N	700	<100	40	1	<10
BDI3362	300	200	N	100	N	700	N	40	1	<10
BDI3363	300	150	N	100	N	700	N	50	<1	<10
BDI3364	500	150	N	100	N	300	N	90	<1	10
BDI3365	500	150	N	70	N	300	N	55	N	<10
BDI3366	500	500	N	150	N	1,000	N	35	N	<10
BDI3367	500	200	N	100	N	200	N	65	N	<10
BDI3368	500	200	N	100	N	300	N	40	N	<10
BDI3369	500	150	N	50	N	200	N	45	<1	<10
BDI3370	500	150	N	50	N	200	N	40	N	<10
BDI3371	300	500	N	100	N	500	N	40	N	<10
BDI3372	300	500	N	100	N	500	N	60	N	<10
BDI3373	500	200	N	70	N	300	N	30	N	<10
BDI3374	500	500	N	100	N	700	N	40	N	<10
BDI3375	500	300	N	100	N	500	N	20	N	<10
BDI3456	300	200	N	100	N	300	N	75	N	<10
BDI3457	300	300	N	70	N	300	200	85	N	<10
BDI3471	500	100	N	30	N	150	N	60	N	<10
BDI3527	200	100	N	30	N	300	N	35	N	<10
BDI3535	150	70	N	20	N	300	N	45	1	<10
BEH3482	500	200	N	100	N	700	N	55	N	<10
BEH3484	300	100	N	30	N	150	N	100	N	<10

Stream-sediment samples from the East Pioneer wilderness study area, Montana--continued

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE
BEH3485	45 27 5	113 3 1	3.0	1.00	1.50	.30	1,000	.5	N	N	20	500	2.0
BEH3486	45 27 7	113 3 36	2.0	.70	1.00	.30	700	<.5	N	N	30	500	2.0
BEH3487	45 26 53	113 2 32	5.0	1.00	1.50	.30	2,000	N	N	N	20	500	1.5
BEH3488	45 26 55	113 3 1	7.0	1.00	1.50	.50	2,000	N	N	N	20	500	1.5
BEH3489	45 27 4	113 3 37	3.0	1.00	1.50	.30	1,500	N	N	N	20	500	2.0
BEH3490	45 26 59	113 4 12	7.0	.70	1.00	.50	1,000	.5	N	N	30	700	2.0
BEH3491	45 25 56	113 4 49	3.0	.70	1.50	.30	1,000	.5	N	N	20	700	2.0
BEH3492	45 25 45	113 5 17	3.0	.50	1.00	.30	700	N	N	N	20	700	2.0
BEH3493	45 26 9	113 1 53	3.0	.70	1.50	.50	1,000	N	N	N	15	500	1.5
BEH3494	45 26 5	113 1 50	7.0	1.00	1.50	.30	1,000	N	N	N	15	500	1.5
BEH3495	45 25 50	113 2 47	7.0	.70	1.00	.30	1,000	N	N	N	15	500	1.5
BEH3496	45 25 37	113 2 36	7.0	1.00	1.50	.30	1,500	N	N	N	15	700	1.5
BEH3497	45 25 42	113 3 9	7.0	.70	1.50	.30	1,500	N	N	N	20	700	2.0
BEH3498	45 25 46	113 3 54	7.0	.70	1.50	.30	1,000	N	N	N	20	500	1.5
BEH3499	45 25 41	113 3 49	10.0	.70	1.50	.50	1,000	N	N	N	15	300	1.0
BEH3500	45 25 26	113 4 27	7.0	1.50	1.50	.50	2,000	N	N	N	20	700	1.5
BEH3501	45 25 31	113 4 38	5.0	1.00	1.50	.50	1,000	N	N	N	20	700	2.0
BEH3502	45 24 52	113 1 54	5.0	1.50	1.50	.30	1,500	.5	N	N	20	500	2.0
BEH3503	45 24 46	113 1 58	5.0	1.50	1.50	.30	1,500	.7	N	N	20	500	2.0
BEH3504	45 24 51	113 2 20	10.0	1.50	1.50	.50	1,500	N	N	N	15	500	1.0
BEH3505	45 24 51	113 3 16	15.0	1.00	1.50	.50	1,500	N	N	N	20	500	1.0
BEH3506	45 25 4	113 3 41	7.0	1.00	2.00	.50	1,500	N	N	N	20	700	1.5
BEH3507	45 24 52	113 4 28	10.0	1.00	1.50	.30	2,000	N	N	N	10	500	1.5
BEH3508	45 24 44	113 4 31	10.0	1.50	1.50	.50	2,000	N	N	N	15	500	1.5
BEH3509	45 24 1	113 1 42	10.0	1.00	1.50	.50	1,500	5.0	N	N	20	700	2.0
BEH3510	45 23 50	113 1 39	10.0	1.00	1.50	.50	1,500	N	N	N	15	700	2.0
BEH3511	45 23 44	113 2 13	10.0	1.50	1.50	.50	1,500	N	N	N	10	500	1.5
BEH3512	45 23 34	113 2 10	7.0	1.50	1.50	.50	2,000	N	N	N	10	500	1.5
BEH3513	45 23 48	113 3 8	10.0	1.00	1.50	.50	1,000	N	N	N	10	700	1.0
BEH3514	45 23 56	113 3 15	15.0	1.00	1.50	.50	1,500	N	N	N	10	700	1.0
BEH3515	45 23 35	113 3 31	15.0	1.00	1.50	.50	1,500	N	N	N	15	700	1.0
BEH3516	45 23 27	113 3 60	10.0	1.50	1.50	.50	1,000	N	N	N	15	500	1.0
BEH3517	45 23 22	113 3 53	15.0	1.00	1.50	.50	1,500	N	N	N	10	500	1.0
BEH3518	45 23 16	113 4 37	10.0	1.00	1.50	.50	1,000	N	N	N	15	500	1.0
BEH3519	45 23 10	113 4 45	15.0	1.00	1.50	.50	1,500	N	N	N	15	500	1.0
BEH3533	45 25 53	113 1 38	5.0	.70	1.50	.30	1,000	N	N	N	20	700	2.0
BEH3534	45 25 45	113 1 15	5.0	1.00	1.50	.30	1,000	N	N	N	20	500	1.5
BEH3537	0 0 0B	0 0 0B	10.0	1.00	1.50	.50	1,500	N	N	N	10	700	1.5
BEI3376	45 29 36	112 57 32	10.0	1.00	2.00	.50	2,000	N	N	N	20	1,000	1.0
BEI3377	45 29 28	112 57 35	7.0	1.00	1.00	.50	3,000	N	N	N	70	700	2.0
BEI3378	45 29 37	112 57 12	5.0	1.00	1.50	.50	1,500	N	N	N	20	700	2.0
BEI3379	45 29 51	112 56 27	5.0	1.00	1.50	.50	1,500	N	N	N	20	700	2.0
BEI3380	45 29 46	112 55 15	3.0	.70	1.50	.30	1,000	N	N	N	20	700	2.0
BEI3381	45 29 50	112 54 46	7.0	1.00	1.50	.50	1,500	N	N	N	15	1,000	1.5
BEI3382	45 29 38	112 54 11	10.0	1.00	1.50	.50	1,500	N	N	N	10	1,000	1.5

Stream-sediment samples from the East Pioneer wilderness study area, Montana--continued

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
BEH3485	N	N	15	50	50	100	20	20	10	100	N	10	N
BEH3486	N	N	10	30	50	100	20	<20	10	150	N	7	N
BEH3487	N	N	15	100	50	70	30	20	10	150	N	7	N
BEH3488	N	N	15	300	50	70	30	20	15	100	N	10	N
BEH3489	N	N	10	50	70	150	15	20	15	100	N	7	N
BEH3490	N	N	10	70	50	150	30	30	10	100	N	10	N
BEH3491	N	N	7	50	100	150	30	20	10	150	N	7	<10
BEH3492	N	N	7	50	20	100	30	20	5	70	N	5	N
BEH3493	N	N	10	30	20	150	50	50	5	100	N	10	10
BEH3494	N	N	10	30	15	100	10	30	7	100	N	10	10
BEH3495	N	N	10	50	30	150	30	30	5	70	N	10	<10
BEH3496	N	N	15	50	30	150	20	50	10	70	N	10	N
BEH3497	N	N	15	50	50	100	20	20	5	70	N	15	N
BEH3498	N	N	15	50	50	200	30	20	10	70	N	10	N
BEH3499	N	N	20	70	50	200	N	50	5	70	N	10	N
BEH3500	N	N	20	50	70	150	100	20	20	70	N	20	N
BEH3501	N	N	10	30	30	150	50	50	5	70	N	10	<10
BEH3502	N	N	15	70	50	50	10	20	15	100	N	15	N
BEH3503	N	N	15	50	30	100	10	20	7	100	N	15	N
BEH3504	N	N	20	70	50	150	20	20	10	50	N	20	N
BEH3505	N	N	20	70	50	150	10	20	10	50	N	20	N
BEH3506	N	N	15	50	70	150	15	20	10	70	N	15	N
BEH3507	N	N	15	100	50	200	10	20	10	70	N	15	N
BEH3508	N	N	20	100	30	100	N	20	15	30	N	20	N
BEH3509	N	N	15	50	30	100	N	20	10	70	N	15	<10
BEH3510	N	N	15	70	50	150	20	20	10	70	N	15	N
BEH3511	N	N	15	70	50	200	10	30	10	70	N	20	N
BEH3512	N	N	20	50	30	150	30	30	10	70	N	30	20
BEH3513	N	N	20	70	30	150	10	30	15	70	N	20	N
BEH3514	N	N	20	150	50	200	10	50	10	50	N	20	N
BEH3515	N	N	20	150	50	300	N	30	10	50	N	20	N
BEH3516	N	N	15	70	30	200	10	50	10	70	N	20	N
BEH3517	N	N	30	200	50	150	N	20	15	50	N	20	N
BEH3518	N	N	20	100	50	200	5	30	10	50	N	20	N
BEH3519	N	N	30	150	30	200	N	30	15	30	N	20	N
BEH3533	N	N	10	10	50	100	30	20	7	70	N	10	<10
BEH3534	N	N	15	100	50	150	30	20	15	70	N	15	10
BEH3537	N	N	20	100	70	150	50	20	10	50	N	15	N
BEI3376	N	N	20	70	30	150	30	20	10	100	N	20	N
BEI3377	N	N	15	30	30	100	10	20	15	200	N	15	N
BEI3378	N	N	15	30	15	150	10	20	7	100	N	15	N
BEI3379	N	N	10	30	20	100	N	20	7	70	N	15	N
BEI3380	N	N	10	20	10	150	7	<20	7	100	N	15	N
BEI3381	N	N	10	50	15	200	N	20	5	70	N	15	N
BEI3382	N	N	15	50	30	150	N	30	7	70	N	10	N

Stream-sediment samples from the East Pioneer wilderness study area, Montana--continued

sample	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-ZN-P	AA-SB-P	CM-AS
BEH3485	500	100	N	30	N	200	N	100	N	<10
BEH3486	500	100	N	30	N	100	N	85	N	<10
BEH3487	500	150	N	30	N	200	N	130	N	10
BEH3488	500	150	50	50	N	200	N	140	N	10
BEH3489	500	100	<50	30	N	200	N	90	N	<10
BEH3490	500	150	<50	50	N	500	N	60	N	10
BEH3491	500	100	N	30	N	150	N	55	N	<10
BEH3492	500	100	N	30	N	150	N	45	N	<10
BEH3493	500	100	<50	70	N	300	<100	60	N	10
BEH3494	500	150	N	70	N	200	N	50	N	20
BEH3495	500	150	<50	70	N	500	N	60	N	<10
BEH3496	500	200	N	50	N	500	100	60	N	<10
BEH3497	500	200	<50	50	N	500	N	70	N	<10
BEH3498	500	200	<50	100	N	500	100	50	N	<10
BEH3499	500	300	N	100	N	1,000	<100	50	N	<10
BEH3500	500	200	<50	100	N	500	N	110	N	<10
BEH3501	500	150	N	100	N	300	N	60	N	10
BEH3502	500	150	50	30	N	200	N	100	N	<10
BEH3503	500	150	50	50	N	100	N	110	N	<10
BEH3504	500	300	<50	50	N	500	N	65	N	<10
BEH3505	500	300	50	100	N	500	<100	75	N	<10
BEH3506	500	200	50	70	N	500	<100	60	N	<10
BEH3507	500	300	<50	70	N	1,000	N	80	N	<10
BEH3508	500	300	N	100	N	700	N	70	N	<10
BEH3509	500	200	N	100	N	300	N	70	N	<10
BEH3510	500	200	<50	100	N	500	N	130	N	<10
BEH3511	500	300	N	150	N	700	<100	70	N	<10
BEH3512	300	200	<50	150	N	500	N	75	N	<10
BEH3513	500	200	N	150	N	700	<100	60	N	<10
BEH3514	500	300	<50	150	N	1,000	N	50	N	<10
BEH3515	500	500	N	150	N	700	100	45	N	<10
BEH3516	500	200	N	150	N	700	N	55	N	<10
BEH3517	300	500	N	150	N	1,000	N	55	N	<10
BEH3518	500	500	N	150	N	700	N	50	N	<10
BEH3519	300	500	N	150	N	1,000	N	50	N	<10
BEH3533	700	100	<50	50	N	150	N	75	N	<10
BEH3534	500	150	70	70	N	300	200	75	N	15
BEH3537	500	300	N	70	N	1,000	<100	70	N	<10
BEI3376	200	200	N	70	N	500	N	110	N	<10
BEI3377	200	150	N	50	<200	200	N	200	N	<10
BEI3378	300	150	N	50	N	300	N	90	N	<10
BEI3379	200	150	N	50	N	200	N	100	N	<10
BEI3380	200	100	N	30	N	150	N	70	N	<10
BEI3381	200	200	N	100	N	500	N	80	N	<10
BEI3382	200	500	N	70	N	700	<100	70	N	<10

Stream-sediment samples from the East Pioneer wilderness study area, Montana--continued

Sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE
BEI3383	45 28 43	112 53 45	20.0	.70	1.00	.30	1,500	N	N	N	10	500	1.0
BEI3384	45 28 35	112 53 3	20.0	.70	1.50	.30	1,500	N	N	N	10	500	1.0
BEI3389	45 28 30	112 56 9	7.0	1.00	1.50	.50	1,000	N	N	N	15	1,000	1.0
BEI3390	45 27 34	112 54 15	10.0	.50	1.00	.30	1,000	N	N	N	10	700	1.5
BEI3391	45 27 11	112 56 47	5.0	.20	1.00	.20	700	N	N	N	15	700	2.0
BEI3392	45 26 37	112 54 7	3.0	.15	1.00	.30	1,000	N	N	N	10	1,000	2.0
BEI3393	45 26 20	112 54 32	10.0	.70	1.00	.50	2,000	N	N	N	10	500	1.5
BEI3394	45 24 27	112 55 59	10.0	.20	1.50	.30	1,000	N	N	N	10	700	1.5
BEI3395	45 26 36	112 53 17	15.0	.20	1.00	.30	1,500	N	N	N	<10	700	1.0
BEI3398	45 26 32	112 58 51	7.0	1.00	1.50	.30	1,500	N	N	N	20	700	1.5
BEI3399	45 26 30	112 58 55	7.0	.70	1.50	.30	1,500	N	N	N	20	700	1.5
BEI3400	45 26 22	112 57 55	5.0	1.00	1.50	.30	1,500	<.5	N	N	30	700	1.5
BEI3401	45 25 23	112 59 20	5.0	.70	1.00	.30	1,000	N	N	N	20	700	2.0
BEI3402	45 25 23	112 58 59	7.0	1.00	1.50	.30	1,500	N	N	N	20	1,000	2.0
BEI3403	45 25 36	112 58 30	10.0	.30	1.00	.30	1,000	N	N	N	10	1,000	2.0
BEI3404	45 26 16	112 57 42	15.0	.50	1.00	.30	1,500	N	N	N	10	1,000	2.0
BEI3405	45 25 34	112 55 53	15.0	.50	1.00	.30	1,500	N	N	N	<10	500	1.0
BEI3406	45 25 33	112 54 9	20.0	.50	1.00	.50	1,500	N	N	N	<10	300	<1.0
BEI3407	45 24 13	112 58 48	10.0	1.50	2.00	.50	2,000	.5	N	N	15	1,000	1.5
BEI3408	45 23 59	112 58 54	7.0	1.50	2.00	.50	2,000	N	N	N	20	1,000	1.5
BEI3409	45 23 39	112 57 46	10.0	1.50	2.00	.30	2,000	N	N	N	10	1,000	1.0
BEI3410	45 22 48	112 57 46	15.0	.70	1.50	.30	1,500	N	N	N	10	1,000	1.0
BEI3411	45 23 50	112 58 55	7.0	1.50	2.00	.30	2,000	N	N	N	15	1,000	1.5
BEI3412	45 23 46	112 58 59	7.0	1.00	2.00	.30	1,500	.5	N	N	15	1,000	1.5
BEI3414	45 23 27	112 58 31	10.0	1.50	2.00	.50	2,000	N	N	N	15	1,000	1.0
BEI3415	45 23 23	112 58 36	10.0	1.50	2.00	.50	1,500	N	N	N	15	1,000	1.0
BEI3416	45 22 46	112 57 54	15.0	1.00	1.50	.30	1,500	N	N	N	10	700	1.0
BEI3417	45 22 58	112 58 46	20.0	.70	1.50	.30	2,000	N	N	N	10	300	<1.0
BEI3418	45 22 43	112 58 29	10.0	1.00	2.00	.50	2,000	N	N	N	10	700	1.0
BEI3420	45 22 44	112 59 45	15.0	1.00	1.50	.50	1,000	N	N	N	10	500	1.0
BEI3421	45 22 27	112 59 1	10.0	1.00	1.50	.50	1,000	N	N	N	15	500	2.0
BEI3472	45 29 55	112 59 23	10.0	1.50	1.50	.50	2,000	N	N	N	20	700	1.0
BEI3473	45 29 50	112 59 22	5.0	1.00	2.00	.30	1,000	N	N	N	20	1,000	1.0
BEI3474	45 29 2	112 59 17	7.0	1.50	2.00	.50	2,000	N	N	N	20	1,000	1.0
BEI3475	45 28 15	112 59 16	10.0	1.50	1.50	.50	3,000	N	N	N	20	1,000	1.5
BEI3476	45 28 17	112 59 1	7.0	1.00	1.50	.30	1,500	N	N	N	20	1,000	1.0
BEI3477	45 28 16	112 58 30	7.0	1.00	2.00	.30	1,000	N	N	N	30	1,000	1.5
BEI3478	45 28 13	112 58 24	7.0	1.50	2.00	.30	>5,000	N	N	N	20	1,500	1.0
BEI3520	45 29 30	112 53 30	10.0	1.50	2.00	.50	2,000	N	N	N	15	700	1.0
BEI3521	45 29 5	112 53 32	20.0	.70	1.50	.50	1,500	N	N	N	10	500	<1.0
BEI3522	45 28 36	112 52 58	10.0	1.00	2.00	.50	1,500	N	N	N	15	700	1.0
BEI3525	45 27 44	112 52 42	7.0	.50	1.50	.30	700	N	N	N	15	700	1.5
BEI3526	45 27 22	112 53 18	7.0	.50	1.50	.20	1,000	N	N	N	10	700	1.5
BEJ3385	45 28 4	112 52 25	15.0	.70	1.50	.50	2,000	N	N	N	10	500	1.0
BEJ3386	45 27 35	112 51 35	10.0	.70	1.50	.30	1,500	N	N	N	10	1,000	1.5

Stream-sediment samples from the East Pioneer wilderness study area, Montana--continued

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
BEI3383	N	N	20	100	50	200	N	30	10	50	N	10	N
BEI3384	N	N	20	70	50	200	N	20	10	30	N	10	N
BEI3389	N	N	10	30	50	200	20	30	5	70	N	10	N
BEI3390	N	N	10	50	30	200	10	30	<5	50	N	10	N
BEI3391	N	N	5	15	10	70	30	20	5	50	N	5	N
BEI3392	N	N	5	15	10	100	10	20	<5	50	N	5	N
BEI3393	N	N	15	50	30	150	7	30	5	30	N	10	N
BEI3394	N	N	7	30	20	150	15	30	<5	50	N	5	N
BEI3395	N	N	15	70	30	150	7	20	5	20	N	5	N
BEI3398	N	N	10	20	20	150	70	<20	5	70	N	10	N
BEI3399	N	N	10	30	30	100	150	<20	10	70	N	7	N
BEI3400	N	N	10	20	30	100	70	<20	5	100	N	7	N
BEI3401	N	N	10	30	50	50	50	20	15	50	N	10	N
BEI3402	N	N	15	50	70	100	50	20	10	50	N	15	N
BEI3403	N	N	15	50	70	150	30	30	15	30	N	7	N
BEI3404	N	N	15	70	70	150	20	20	5	50	N	10	N
BEI3405	N	N	30	150	50	150	10	20	10	20	N	10	N
BEI3406	N	N	30	200	70	200	N	20	10	10	N	7	N
BEI3407	N	N	20	70	50	200	20	20	10	50	N	15	10
BEI3408	N	N	20	30	20	200	20	20	7	100	N	20	10
BEI3409	N	N	20	70	30	150	15	20	5	70	N	15	N
BEI3410	N	N	15	70	30	150	N	20	7	50	N	10	N
BEI3411	N	N	15	50	20	100	20	20	7	70	N	20	10
BEI3412	N	N	15	70	30	150	30	20	7	70	N	15	N
BEI3414	N	N	20	70	20	100	20	20	10	100	N	20	10
BEI3415	N	N	20	100	50	150	15	20	10	70	N	20	N
BEI3416	N	N	30	200	50	150	N	20	10	30	N	15	N
BEI3417	N	N	30	200	50	100	<5	<20	10	15	N	10	N
BEI3418	N	N	20	70	50	150	10	30	10	50	N	15	N
BEI3420	N	N	20	150	30	100	N	20	7	50	N	20	N
BEI3421	N	N	10	50	20	150	N	30	<5	50	N	20	N
BEI3422	N	N	15	50	20	150	N	20	7	70	N	15	<10
BEI3423	N	N	7	50	10	150	N	<20	7	100	N	10	N
BEI3424	N	N	15	30	20	100	30	20	5	100	N	10	<10
BEI3425	N	N	15	50	15	100	30	20	10	70	N	15	N
BEI3426	N	N	10	20	10	150	20	20	5	70	N	10	<10
BEI3427	N	N	10	20	5	150	N	20	5	100	N	10	<10
BEI3428	N	N	20	30	50	150	150	20	7	100	N	15	N
BEI3520	N	N	15	70	30	100	N	20	7	70	N	15	N
BEI3521	N	N	30	100	50	200	N	30	10	20	N	15	N
BEI3522	N	N	15	50	20	200	N	20	5	50	N	15	N
BEI3525	N	N	10	30	70	150	10	30	<5	50	N	10	N
BEI3526	N	N	7	20	15	150	10	20	<5	50	N	10	<10
BEJ3385	N	N	20	70	30	200	N	20	7	20	N	15	N
BEJ3386	N	N	10	50	20	150	N	20	5	50	N	10	N

Stream sediment samples from the East Pioneer Wilderness Study Area, Montana--Continued

sample	S-SP	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-ZN-P	AA-SB-P	CM-AS
8EI3383	300	500	N	100	N	>1,000	N	50	N	<10
8EI3384	300	500	N	100	N	>1,000	N	40	N	<10
8EI3389	200	150	<50	100	N	700	N	85	<1	10
8EI3390	500	300	N	150	N	700	N	30	N	<10
8EI3391	500	100	<50	50	N	100	N	30	N	<10
8EI3392	500	100	N	70	N	700	N	10	N	<10
8EI3393	500	500	<50	100	N	>1,000	N	50	N	<10
8EI3394	500	300	50	70	N	700	N	20	N	<10
8EI3395	500	500	<50	70	N	1,000	N	30	N	<10
8EI3398	500	100	N	30	N	200	N	75	<1	<10
8EI3399	500	100	<50	30	N	300	N	75	<1	<10
8EI3400	500	100	N	30	N	150	N	70	<1	<10
8EI3401	500	100	50	30	N	200	N	50	N	<10
8EI3402	500	150	50	50	N	300	N	100	N	<10
8EI3403	300	300	50	50	N	1,000	N	30	N	<10
8EI3404	500	300	<50	70	N	700	N	55	N	<10
8EI3405	300	700	N	100	N	700	N	50	N	<10
8EI3406	200	1,000	<50	100	500	>1,000	N	150	N	<10
8EI3407	500	200	100	70	N	300	N	110	N	<10
8EI3408	500	150	N	70	N	200	N	110	N	10
8EI3409	500	500	N	70	N	300	N	85	N	<10
8EI3410	500	700	N	70	N	700	N	40	N	<10
8EI3411	300	150	N	70	N	700	N	150	N	<10
8EI3412	500	200	N	70	N	200	N	130	N	<10
8EI3414	500	200	N	70	200	300	N	150	N	<10
8EI3415	500	300	<50	100	N	700	N	100	N	<10
8EI3416	300	1,000	N	100	N	700	N	75	N	<10
8EI3417	200	1,000	N	100	200	700	100	80	N	<10
8EI3418	300	500	N	100	N	700	<100	70	N	<10
8EI3420	300	700	N	150	N	500	N	60	N	<10
8EI3421	500	200	N	150	N	300	N	35	N	<10
8EI3422	500	200	N	70	N	500	N	120	N	<10
8EI3423	500	150	N	30	N	150	N	45	N	<10
8EI3424	500	200	N	30	N	300	N	100	N	<10
8EI3425	500	300	N	50	N	500	N	180	N	<10
8EI3426	500	150	N	50	N	500	N	65	N	<10
8EI3427	700	150	N	50	N	200	N	55	N	<10
8EI3428	700	200	<50	70	N	500	N	140	N	10
8EI3520	200	300	N	70	N	500	N	100	N	<10
8EI3521	150	700	N	150	N	1,000	N	40	N	<10
8EI3522	200	200	N	100	N	500	N	45	N	<10
8EI3525	700	150	N	100	N	700	N	20	N	<10
8EI3526	700	150	N	70	N	300	N	30	N	<10
8EJ3385	150	700	N	100	N	1,000	N	45	N	<10
8EJ3386	500	200	N	30	N	300	N	50	N	<10

Stream-sediment samples from the East Pioneer wilderness study area, Montana--continued

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE
BEJ3387	45 27 28	112 51 21	20.0	1.00	1.50	.30	2,000	N	N	N	10	700	1.0
BEJ3388	45 27 21	112 51 18	7.0	1.00	1.50	.20	1,000	N	N	N	15	700	1.5
BEJ3396	45 26 19	112 51 32	20.0	.50	1.00	.50	1,500	N	N	N	10	700	1.0
BEJ3397	45 26 47	112 50 38	10.0	.70	1.00	.30	1,000	N	N	N	15	700	1.0
BEJ3523	45 27 7	112 50 46	20.0	.70	1.50	.30	2,000	N	N	N	10	700	1.0
BEI3419	45 22 10	112 57 49	20.0	1.00	1.00	.50	1,500	N	N	N	10	300	1.0
BEI3424	45 21 36	112 56 59	15.0	1.00	1.50	.50	1,500	N	N	N	10	500	1.5
BEI3425	45 20 59	112 56 41	10.0	1.00	1.50	.50	1,000	N	N	N	15	300	1.0
BEI3426	45 21 26	112 58 55	10.0	1.00	1.50	.30	1,000	N	N	N	15	300	2.0
BEI3427	45 21 2	112 58 11	7.0	1.50	1.50	.30	1,000	N	N	N	20	500	1.5
BEI3428	45 20 44	112 57 16	5.0	1.00	1.50	.30	700	N	N	N	20	300	1.5
BEI3429	45 20 41	112 56 43	7.0	1.50	1.50	.30	1,000	N	N	N	20	500	1.0
BEI3524	0 0 00	0 0 00	7.0	.70	1.50	.30	1,000	N	N	N	10	500	1.5

Stream-sediment samples from the East Pioneer wilderness study area, Montana--continued

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
BEJ3387	N	N	15	70	50	200	N	20	7	30	N	10	N
BEJ3388	N	N	7	30	30	200	30	20	5	50	N	10	N
BEJ3396	N	N	20	100	70	200	7	70	10	30	N	10	N
BEJ3397	N	N	10	50	30	150	15	50	5	50	N	7	N
BEJ3523	N	N	20	100	50	200	N	30	7	20	N	10	N
BEI3419	N	N	30	300	70	150	N	30	15	70	N	10	N
BEI3424	N	N	20	150	50	150	N	50	10	50	N	15	N
BEI3425	N	N	30	200	50	150	5	30	15	50	N	15	N
BEI3426	N	N	10	70	20	150	N	30	5	30	N	20	N
BEI3427	N	N	10	50	20	100	N	20	10	30	N	15	N
BEI3428	N	N	7	30	10	100	N	20	5	30	N	15	<10
BEI3429	N	N	15	100	70	100	7	20	15	100	N	15	N
BEI3524	N	N	10	50	15	150	N	20	<5	50	N	15	N

Stream-sediment samples from the East Pioneer wilderness study area, Montana--continued

sample	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-ZN-P	AA-SB-P	CM-AS
BEJ3387	500	500	N	100	N	1,000	N	55	N	<10
BEJ3388	500	150	N	30	N	500	N	45	N	<10
BEJ3396	300	500	N	150	N	>1,000	N	45	N	40
BEJ3397	500	200	N	70	N	700	N	50	N	<10
BEJ3523	500	500	N	100	N	1,000	N	45	N	<10
BFI3419	200	700	N	100	N	1,000	N	75	N	<10
BFI3424	300	700	N	150	N	1,000	N	60	N	10
BFI3425	300	500	N	100	N	700	N	60	N	15
BFI3426	300	200	N	100	N	500	<100	25	N	<10
BFI3427	300	200	N	70	N	1,000	N	25	N	<10
BFI3428	300	150	N	70	N	300	N	20	N	<10
BFI3429	300	200	N	70	N	500	N	50	N	<10
BFI3524	500	200	N	70	N	700	N	40	N	<10

Table 2.--

D0010 FISHER-K STATISTICS - U S G S STATPAC (07/15/76) DATE 4/23/79

E. Pioneer

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

NO	COLUMN	K1	SQRT(K2)	K2	K3	G1	K4	G2
		MEAN	STD DEVIATION	VARIANCE		SKEWNESS		KURTOSIS
1	LATITUDE	0.4552410d+02	0.8519234d-01	0.7257736d-02	-0.5388945d-04	-0.8715696d-01	-0.3837822d-04	-0.7285890d+00
2	LONGITUD	0.1130097d+03	0.1001169d+00	0.1002340d-01	0.6495840d-03	0.6473106d+00	-0.4423007d-04	-0.4402380d+00
3	S-FE%	0.7159011d+01	0.4514722d+01	0.2038271d+02	0.8327329d+02	0.9049254d+00	0.2723441d+03	0.6555323d+00
4	S-MG%	0.1421378d+01	0.1371807d+01	0.1881855d+01	0.7556974d+01	0.2927309d+01	0.2880183d+02	0.8132943d+01
5	S-CA%	0.2105477d+01	0.2704972d+01	0.7316876d+01	0.6689463d+02	0.3379891d+01	0.6079508d+03	0.1135578d+02
6	S-TI%	0.3924028d+00	0.1534354d+00	0.2354243d-01	0.1263044d-02	0.3496564d+00	0.8011266d-03	0.1445435d+01
7	S-MN	0.1178723d+04	0.5679060d+03	0.3225172d+06	0.8843212d+08	0.4828149d+00	0.4109577d+11	0.3950857d+00
8	S-AG	0.1387879d+01	0.1806197d+01	0.3262348d+01	0.1447038d+02	0.2455751d+01	0.5289265d+02	0.4969751d+01
9	S-AS	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35
10	S-AU	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35
11	S-B	0.3178058d+02	0.3023635d+02	0.9142369d+03	0.4770892d+05	0.1725894d+01	0.1875400d+07	0.2243761d+01
12	S-BA	0.5638163d+03	0.2350002d+03	0.5522510d+05	0.3819694d+07	0.2935522d+00	0.1703386d+10	0.5585218d+00
13	S-BE	0.1426357d+01	0.5013630d+00	0.2513649d+00	0.2495034d+00	0.1979792d+01	0.5973690d+00	0.9454389d+01
14	S-BI	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35
15	S-CD	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35
16	S-CO	0.1587410d+02	0.7019466d+01	0.4927290d+02	0.4340272d+03	0.1254887d+01	0.7721466d+04	0.3180413d+01
17	S-CR	0.7671378d+02	0.5191096d+02	0.2684375d+04	0.2733922d+06	0.1965718d+01	0.3171228d+08	0.4400894d+01
18	S-CU	0.3671480d+02	0.3863056d+02	0.1492321d+04	0.4158644d+06	0.7213708d+01	0.1726531d+09	0.7752652d+02
19	S-LA	0.1219149d+03	0.6359810d+02	0.4044719d+04	0.1844785d+06	0.7171554d+00	0.5579621d+08	0.3410578d+01
20	S-MO	0.2151111d+02	0.2586417d+02	0.6689552d+03	0.5775283d+05	0.3337934d+01	0.5726267d+07	0.1279610d+02
21	S-NB	0.2447917d+02	0.9137666d+01	0.8349695d+02	0.2023411d+04	0.2652029d+01	0.5315148d+05	0.7623847d+01
22	S-NI	0.1254710d+02	0.7432212d+01	0.5523777d+02	0.9581139d+03	0.2333793d+01	0.2481441d+05	0.8132641d+01
23	S-PB	0.6007117d+02	0.4533008d+02	0.2054816d+04	0.4390575d+06	0.4391621d+01	0.1443959d+09	0.3419862d+02
24	S-SB	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35	0.9999000d+35
25	S-SC	0.1471174d+02	0.9077670d+01	0.6524875d+02	0.9333917d+03	0.1770928d+01	0.2072162d+05	0.4867201d+01
26	S-SN	0.1083333d+02	0.2572479d+01	0.6617647d+01	0.5514705d+02	0.3239418d+01	0.4595588d+03	0.1049383d+02
27	S-SR	0.3422662d+03	0.1589209d+03	0.2525586d+05	0.3584193d+06	0.8929935d-01	-0.6719754d+09	-0.1053487d+01
28	S-V	0.2226502d+03	0.1856779d+03	0.3447628d+05	0.1089278d+08	0.1701603d+01	0.3513829d+10	0.2956240d+01
29	S-W	0.5800000d+02	0.1609184d+02	0.2589474d+03	0.8519298d+04	0.2044497d+01	0.2211889d+06	0.3298680d+01
30	S-Y	0.6768693d+02	0.3909980d+02	0.1451594d+04	0.3448748d+05	0.6235819d+00	-0.8841720d+06	-0.4196103d+00
31	S-ZN	0.4500000d+03	0.2672612d+03	0.7142857d+05	0.2285714d+08	0.1197330d+01	0.1040000d+11	0.2038400d+01
32	S-ZR	0.4670255d+03	0.2928101d+03	0.8573773d+05	0.1328571d+08	0.5292085d+00	-0.6324689d+10	-0.8603897d+00
33	S-TH	0.1555556d+03	0.7264832d+02	0.5277778d+04	0.3888889d+06	0.1014259d+01	0.5158730d+07	0.1851998d+00
34	AA-ZN-P	0.7296820d+02	0.1160155d+03	0.1345960d+05	0.1556971d+08	0.9970851d+01	0.2128622d+11	0.1174990d+03
35	AA-SB-P	0.1666667d+01	0.1756620d+01	0.3085714d+01	0.1954370d+02	0.3624012d+01	0.1411667d+03	0.1482589d+02
36	CM-AS	0.1480392d+02	0.1212274d+02	0.1469608d+03	0.6756821d+04	0.3798241d+01	0.3675382d+06	0.1701765d+02

E. Pioneer

NO	COLUMN	N	H	L	G	R	T	NO OF UNQUAL VALUES	NO OF IMPROPER QUAL VALUES	MINIMUM	MAXIMUM
1	LATITUDE	0	0	0	0	2	0	281	0	0.4534472e+02	0.4571833e+02
2	LONGITUD	0	0	0	0	2	0	281	0	0.1128439e+03	0.1132675e+03
3	S-FE%	0	0	0	0	0	0	283	0	0.3000000e+00	0.2000000e+02
4	S-MG%	0	0	0	0	0	0	283	0	0.1500000e+00	0.7000000e+01
5	S-CA%	0	0	0	0	0	0	283	0	0.1000000e+00	0.1500000e+02
6	S-TI%	0	0	0	0	0	0	283	0	0.3000000e-01	0.1000000e+01
7	S-MN	0	0	0	1	0	0	282	0	0.1000000e+03	0.3000000e+04
8	S-AG	237	0	13	0	0	0	33	0	0.5000000e+00	0.7000000e+01
9	S-AS	283	0	0	0	0	0	0	0	0.9999000e+35	-0.9999000e+35
10	S-AU	283	0	0	0	0	0	0	0	0.9999000e+35	-0.9999000e+35
11	S-B	0	0	5	0	0	0	278	0	0.1000000e+02	0.1500000e+03
12	S-BA	0	0	0	0	0	0	283	0	0.2000000e+02	0.1500000e+04
13	S-BE	0	0	25	0	0	0	258	0	0.1000000e+01	0.5000000e+01
14	S-BI	283	0	0	0	0	0	0	0	0.9999000e+35	-0.9999000e+35
15	S-CD	283	0	0	0	0	0	0	0	0.9999000e+35	-0.9999000e+35
16	S-CO	3	0	2	0	0	0	278	0	0.5000000e+01	0.5000000e+02
17	S-CR	0	0	0	0	0	0	283	0	0.1000000e+02	0.3000000e+03
18	S-CU	2	0	4	0	0	0	277	0	0.5000000e+01	0.5000000e+03
19	S-LA	0	0	1	0	0	0	282	0	0.2000000e+02	0.5000000e+03
20	S-MO	100	0	3	0	0	0	180	0	0.5000000e+01	0.1500000e+03
21	S-NB	9	0	83	0	0	0	192	0	0.2000000e+02	0.7000000e+02
22	S-NI	0	0	7	0	0	0	276	0	0.5000000e+01	0.5000000e+02
23	S-PB	1	0	1	0	0	0	281	0	0.1000000e+02	0.5000000e+03
24	S-SB	283	0	0	0	0	0	0	0	0.9999000e+35	-0.9999000e+35
25	S-SC	0	0	2	0	0	0	281	0	0.5000000e+01	0.5000000e+02
26	S-SN	242	0	23	0	0	0	18	0	0.1000000e+02	0.2000000e+02
27	S-SR	0	0	5	0	0	0	278	0	0.1000000e+03	0.7000000e+03
28	S-V	0	0	0	0	0	0	283	0	0.1000000e+02	0.1000000e+04
29	S-W	231	0	32	0	0	0	20	0	0.5000000e+02	0.1000000e+03
30	S-Y	0	0	2	0	0	0	281	0	0.1000000e+02	0.1500000e+03
31	S-ZN	273	0	2	0	0	0	8	0	0.2000000e+03	0.1000000e+04
32	S-ZR	0	0	0	9	0	0	274	0	0.1500000e+02	0.1000000e+04
33	S-TH	246	0	28	0	0	0	9	0	0.1000000e+03	0.3000000e+03
34	AA-ZN-P	0	0	0	0	0	0	283	0	0.1000000e+02	0.1600000e+04
35	AA-SB-P	210	0	37	0	0	0	36	0	0.1000000e+01	0.1000000e+02
36	CM-AS	0	0	232	0	0	0	51	0	0.1000000e+02	0.8000000e+02

Table 3.--

TITLE	INPUT ID	N	M	***** OPTIONS ****
E. Pioneer	-seds -	283	36	1 0 0 0 2 1 0 0 0 0

NUMBER OF SELECTED VARIABLES = 29

SELECTED VARIABLE INDICES

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

SELECTED VARIABLE IDENTIFIERS

S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-B	S-BA	S-BE	S-CO
S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SC	S-SN	S-SR
S-V	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-ZN-P	AA-SR-P	CM-AS	

SELECTED ROW PAIRS

1 TO 283

LOWER BOUNDARIES OF THE LOWEST CLASSES

-0.58400	-0.91700	-1.08400	-1.58400	1.91600	-0.41700	0.91600	1.25000	-0.08400	0.58300
0.91600	0.58300	1.25000	0.58300	1.25000	0.58300	0.91600	0.58300	0.91600	1.91600
0.91600	1.58300	0.91600	2.25000	1.08300	1.91600	0.91600	-0.08400	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	0.16667	0.16667	0.16667	0.16667
0.16667	0.16667	0.16667	0.16667	0.16667	0.16667	0.16667	0.16667	0.16667	

D0036 GRAPHICAL ANALYSIS - U S G S STATPAC (07/04/76) DATE 4/23/79

FREQUENCY TABLE FOR VARIABLE 3 (S-FE%)

LOG LIMITS LOWER	-	UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR 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		
-5.840e-01	-	-4.173e-01	1	1	0.35	0.35	4.943e-02	2.018e+01
-4.173e-01	-	-2.507e-01	1	2	0.35	0.71	2.845e-01	3.231e+00
-2.507e-01	-	-8.400e-02	1	3	0.35	1.06	1.275e+00	-4.906e-01
-8.400e-02	-	8.267e-02	6	9	2.12	3.18	4.451e+00	-3.104e+00
8.267e-02	-	2.493e-01	17	26	6.01	9.19	1.211e+01	-1.070e+01
2.493e-01	-	4.160e-01	22	48	7.77	16.96	2.566e+01	-2.481e+01
4.160e-01	-	5.827e-01	27	75	9.54	26.50	4.239e+01	-4.175e+01
5.827e-01	-	7.493e-01	42	117	14.84	41.34	5.456e+01	-5.379e+01
7.493e-01	-	9.160e-01	74	191	26.15	67.49	5.473e+01	-5.338e+01
9.160e-01	-	1.083e+00	58	249	20.49	87.99	4.279e+01	-4.143e+01
1.083e+00	-	1.249e+00	24	273	8.48	96.47	2.607e+01	-2.515e+01
1.249e+00	-	1.416e+00	10	283	3.53	100.00	1.863e+01	-1.809e+01
	G		0	283	0.00	100.00		
	H		0	283				
	B		0	283				
TOTALS LESS H AND B			283				2.830e+02	-2.493e+02

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

```
3.157e-01
4.634e-01
6.802e-01
9.985e-01 XX
1.466e+00 XXXXXX
2.151e+00 XXXXXXXX
3.157e+00 XXXXXXXXXX
4.634e+00 XXXXXXXXXXXXXXX
6.802e+00 XXXXXXXXXXXXXXXXXXXXXXXXXX
9.985e+00 XXXXXXXXXXXXXXXXXX
1.466e+01 XXXXXXXX
2.151e+01 XXXX
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

```
MINIMUM ANTILOG      =  3.00000e-01
MAXIMUM ANTILOG      =  2.00000e+01
GEOMETRIC MEAN       =  5.64175e+00
GEOMETRIC DEVIATION  =  2.13928e+00
VARIANCE OF LOGS     =  1.09077e-01
```

PERCENT TABLE FOR VARIABLE 3 (S-FE%) BY LINEARINTERPOLATION 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
90.00	0.112225e+01	0.132511e+02
95.00	0.122051e+01	0.166155e+02
98.00	0.100000e+36	0.100000e+36

D0036 GRAPHICAL ANALYSIS - U S G S STATPAC (07/04/76) DATE 4/23/79

FREQUENCY TABLE FOR VARIABLE 4 (S-MG%)

LOG LIMITS LOWER	- UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR 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		
-9.170e-01	-7.503e-01	1	1	0.35	0.35	5.581e-01	1.234e+00
-7.503e-01	-5.837e-01	5	6	1.77	2.12	2.888e+00	-1.156e+00
-5.837e-01	-4.170e-01	3	9	1.06	3.18	1.057e+01	-1.029e+01
-4.170e-01	-2.503e-01	14	23	4.95	8.13	2.742e+01	-2.691e+01
-2.503e-01	-8.367e-02	56	79	19.79	27.92	5.035e+01	-4.924e+01
-8.367e-02	8.300e-02	111	190	39.22	67.14	6.550e+01	-6.381e+01
8.300e-02	2.497e-01	60	250	21.20	88.34	5.037e+01	-5.937e+01
2.497e-01	4.163e-01	8	258	2.83	91.17	3.942e+01	-3.921e+01
4.163e-01	5.830e-01	3	261	1.06	92.23	1.823e+01	-1.807e+01
5.830e-01	7.497e-01	13	274	4.59	96.82	5.971e+00	-3.793e+00
7.497e-01	9.163e-01	9	283	3.18	100.00	1.640e+00	3.848e+00
G		0	283	0.00	100.00		
H		0	283				
B		0	283				
TOTALS LESS H AND B		283				2.829e+02	-2.668e+02

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

```
1.467e-01
2.153e-01 XX
3.160e-01 X
4.638e-01 XXXXX
6.808e-01 XXXXXXXXXXXXXXXXXXX
9.992e-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.467e+00 XXXXXXXXXXXXXXXXXXX
2.153e+00 XXX
3.160e+00 X
4.638e+00 XXXXX
6.808e+00 XXX
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

```
MINIMUM ANTILOG      =  1.50000e-01
MAXIMUM ANTILOG      =  7.00000e+00
GEOMETRIC MEAN       =  1.10545e+00
GEOMETRIC DEVIATION  =  1.90425e+00
VARIANCE OF LOGS     =  7.82451e-02
```

PERCENT TABLE FOR VARIABLE 4 (S-MG%) BY LINEARINTERPOLATION FROM FREQUENCY TABLE

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

SELECTED PERCENTILE	DATA VALUE	ANTI LOG OF VALUE
90.00	0.347584e+00	0.222630e+01
95.00	0.683641e+00	0.482660e+01
98.00	0.100000e+36	0.100000e+36

FREQUENCY TABLE FOR VARIABLE 5 (S-CA%)

LOG LIMITS LOWER - UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR 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		
-1.084e+00 - -9.173e-01	1	1	0.35	0.35	4.337e-01	1.872e+00
-9.173e-01 - -7.507e-01	3	4	1.06	1.41	1.562e+00	3.581e-01
-7.507e-01 - -5.840e-01	9	13	3.18	4.59	4.604e+00	-2.649e+00
-5.840e-01 - -4.173e-01	14	27	4.95	9.54	1.110e+01	-9.838e+00
-4.173e-01 - -2.507e-01	7	34	2.47	12.01	2.190e+01	-2.158e+01
-2.507e-01 - -8.400e-02	4	38	1.41	13.43	3.535e+01	-3.524e+01
-8.400e-02 - 8.267e-02	37	75	13.07	26.50	4.670e+01	-4.591e+01
8.267e-02 - 2.493e-01	146	221	51.59	78.09	5.049e+01	-4.760e+01
2.493e-01 - 4.160e-01	36	257	12.72	90.81	4.467e+01	-4.386e+01
4.160e-01 - 5.827e-01	1	258	0.35	91.17	3.234e+01	-3.231e+01
5.827e-01 - 7.493e-01	2	260	0.71	91.87	1.916e+01	-1.905e+01
7.493e-01 - 9.160e-01	6	266	2.12	93.99	9.288e+00	-8.642e+00
9.160e-01 - 1.083e+00	11	277	3.89	97.88	3.684e+00	-6.987e-01
1.083e+00 - 1.249e+00	6	283	2.12	100.00	1.597e+00	2.162e+00
G	0	283	0.00	100.00		
H	0	283				
B	0	283				
TOTALS LESS H AND B	283				2.829e+02	-2.630e+02

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

```
9.985e-02
1.466e-01 X
2.151e-01 XXX
3.157e-01 XXXXX
4.634e-01 XX
6.802e-01 X
9.985e-01 XXXXXXXXXXXX
1.466e+00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2.151e+00 XXXXXXXXXXXX
3.157e+00
4.634e+00 X
6.802e+00 XX
9.985e+00 XXXX
1.466e+01 XX
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 1.00000e-01
MAXIMUM ANTILOG = 1.50000e+01
GEOMETRIC MEAN = 1.40439e+00
GEOMETRIC DEVIATION = 2.33927e+00

PERCENT TABLE FOR VARIABLE 5 (S-CA%) BY LINEARINTERPOLATION 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
90.00	0.405352e+00	0.254303e+01
95.00	0.959182e+00	0.910295e+01
98.00	0.100000e+36	0.100000e+36

FREQUENCY TABLE FOR VARIABLE 6 (S-TI%)

LOG LIMITS LOWER	- UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR 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		
-1.584e+00	-1.417e+00	1	1	0.35	0.35	0.000e+00	0.000e+00
-1.417e+00	-1.251e+00	1	2	0.35	0.71	2.953e-02	3.383e+01
-1.251e+00	-1.084e+00	6	8	2.12	2.83	4.392e-01	1.322e+01
-1.084e+00	-9.173e-01	4	12	1.41	4.24	3.821e+00	-2.774e+00
-9.173e-01	-7.507e-01	9	21	3.18	7.42	1.879e+01	-1.831e+01
-7.507e-01	-5.840e-01	17	38	6.01	13.43	5.233e+01	-5.201e+01
-5.840e-01	-4.173e-01	101	139	35.69	49.12	8.270e+01	-8.148e+01
-4.173e-01	-2.507e-01	133	272	47.00	96.11	7.421e+01	-7.242e+01
-2.507e-01	-8.400e-02	8	280	2.83	98.94	3.780e+01	-3.759e+01
-8.400e-02	8.267e-02	3	283	1.06	100.00	1.288e+01	-1.264e+01
	G	0	283	0.00	100.00		
	H	0	283				
	B	0	283				
TOTALS LESS H AND B		283				2.830e+02	-2.302e+02

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

```
3.157e-02
4.634e-02
6.802e-02 XX
9.985e-02 X
1.466e-01 XXX
2.151e-01 XXXXXX
3.157e-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4.634e-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
6.802e-01 XXX
9.985e-01 X
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 3.00000e-02
MAXIMUM ANTILOG = 1.00000e+00
GEOMETRIC MEAN = 3.55426e-01
GEOMETRIC DEVIATION = 1.64480e+00
VARIANCE OF LOGS = 4.67045e-02

PERCENT TABLE FOR VARIABLE 6 (S-TI%) BY LINEARINTERPOLATION 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
90.00	-0.272346e+00	0.534139e+00
95.00	-0.254614e+00	0.556399e+00
98.00	-0.139416e+00	0.725410e+00

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FREQUENCY TABLE FOR VARIABLE 7 (S-MN)

LOG LIMITS LOWER	- UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR 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		
1.916e+00 -	2.083e+00	2	2	0.71	0.71	5.654e-02	2.999e+01
2.083e+00 -	2.249e+00	2	4	0.71	1.41	5.469e-01	3.110e+00
2.249e+00 -	2.416e+00	6	10	2.12	3.53	3.074e+00	-1.122e+00
2.416e+00 -	2.583e+00	13	23	4.59	8.13	1.182e+01	-1.072e+01
2.583e+00 -	2.749e+00	22	45	7.77	15.90	3.113e+01	-3.042e+01
2.749e+00 -	2.916e+00	29	74	10.25	26.15	5.615e+01	-5.563e+01
2.916e+00 -	3.083e+00	87	161	30.74	56.89	6.938e+01	-6.813e+01
3.083e+00 -	3.249e+00	77	238	27.21	84.10	5.874e+01	-5.743e+01
3.249e+00 -	3.416e+00	39	277	13.78	97.88	3.408e+01	-3.293e+01
3.416e+00 -	3.583e+00	5	282	1.77	99.65	1.801e+01	-1.773e+01
G		1	283	0.35	100.00	5.859e-03	1.687e+02
H		0	283				
B		0	283				
TOTALS LESS H AND B		283				2.830e+02	-7.234e+01

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

```
9.985e+01 X
1.466e+02 X
2.151e+02 XX
3.157e+02 XXXXX
4.634e+02 XXXXXXXX
6.802e+02 XXXXXXXXXX
9.985e+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.466e+03 XXXXXXXXXXXXXXXXXXXXXXXXX
2.151e+03 XXXXXXXXXXXXX
3.157e+03 XX
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 1.00000e+02
MAXIMUM ANTILOG = 3.00000e+03
GEOMETRIC MEAN = 1.01589e+03
GEOMETRIC DEVIATION = 1.83636e+00
VARIANCE OF LOGS = 6.96739e-02

PERCENT TABLE FOR VARIABLE 7 (S-MN) BY LINEARINTERPOLATION 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
90.00	0.332070e+01	0.209267e+04
95.00	0.338117e+01	0.240531e+04
98.00	0.342733e+01	0.267506e+04

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FREQUENCY TABLE FOR VARIABLE 8 (S-AG)

LOG LIMITS LOWER	-	UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR FREQ (NORMAL DIST)	(THEOR FREQ - OBS FREQ)**2/THEOR FREQ
	N		237	237	83.75	83.75		
	L		13	250	4.59	88.34		
	T		0	250	0.00	88.34	4.422e+01	9.577e+02
-4.170e-01	-	-2.503e-01	16	266	5.65	93.99	1.140e+02	-1.139e+02
-2.503e-01	-	-8.367e-02	4	270	1.41	95.41	9.773e+01	-9.769e+01
-8.367e-02	-	8.300e-02	5	275	1.77	97.17	2.510e+01	-2.490e+01
8.300e-02	-	2.497e-01	4	279	1.41	98.59	1.890e+00	2.260e-01
2.497e-01	-	4.163e-01	0	279	0.00	98.59	0.000e+00	0.000e+00
4.163e-01	-	5.830e-01	0	279	0.00	98.59	0.000e+00	0.000e+00
5.830e-01	-	7.497e-01	2	281	0.71	99.29	0.000e+00	0.000e+00
7.497e-01	-	9.163e-01	2	283	0.71	100.00	4.086e-02	4.890e+01
	G		0	283	0.00	100.00		
	H		0	283				
	B		0	283				
TOTALS LESS H AND B			283				2.830e+02	7.703e+02

HISTOGRAM FOR VARIABLE 8 (S-AG)
MIDPOINTS ARE EXPRESSED AS ANTILOGS

```
4.638e-01 XXXXXX
6.803e-01 X
9.992e-01 XX
1.467e+00 X
2.153e+00
3.160e+00
4.638e+00 X
6.808e+00 X
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

```
MINIMUM ANTILOG      =  5.00000e-01
MAXIMUM ANTILOG      =  7.00000e+00
GEOMETRIC MEAN       =  8.91650e-01
GEOMETRIC DEVIATION  =  2.25563e+00
VARIANCE OF LOGS     =  1.24799e-01
```

PERCENT TABLE FOR VARIABLE 8 (S-AG) BY LINEARINTERPOLATION 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

95.00	-0.131583e+00	0.738613e+00
98.00	0.180500e+00	0.151531e+01

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FREQUENCY TABLE FOR VARIABLE 11 (S-B)

LOG LIMITS LOWER	-	UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR FREQ (NORMAL DIST)	(THEOR FREQ - OBS FREQ)**2/THEOR FREQ
	N		0	0	0.00	0.00		
	L		5	5	1.77	1.77		
	T		0	5	0.00	1.77	2.722e+01	1.814e+01
9.160e-01	-	1.083e+00	67	72	23.67	25.44	3.248e+01	-3.041e+01
1.083e+00	-	1.249e+00	57	129	20.14	45.58	4.814e+01	-4.696e+01
1.249e+00	-	1.416e+00	68	197	24.03	69.61	5.584e+01	-5.462e+01
1.416e+00	-	1.583e+00	16	213	5.65	75.27	5.068e+01	-5.037e+01
1.583e+00	-	1.749e+00	21	234	7.42	82.69	3.600e+01	-3.541e+01
1.749e+00	-	1.916e+00	21	255	7.42	90.11	2.001e+01	-1.896e+01
1.916e+00	-	2.083e+00	25	280	8.83	98.94	8.699e+00	-5.825e+00
2.083e+00	-	2.249e+00	3	283	1.06	100.00	3.941e+00	-3.180e+00
	G		0	283	0.00	100.00		
	H		0	283				
	P		0	283				
TOTALS LESS H AND B			283				2.830e+02	-2.276e+02

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

```
9.985e+00 XXXXXXXXXXXXXXXXXXXXXX
1.466e+01 XXXXXXXXXXXXXXXXXXX
2.151e+01 XXXXXXXXXXXXXXXXXXXXXXXX
3.157e+01 XXXXXX
4.634e+01 XXXXXXX
6.802e+01 XXXXXXX
9.985e+01 XXXXXXXXX
1.466e+02 X
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 1.00000e+01
MAXIMUM ANTILOG = 1.50000e+02
GEOMETRIC MEAN = 2.27225e+01
GEOMETRIC DEVIATION = 2.15117e+00
VARIANCE OF LOGS = 1.10673e-01

PERCENT TABLE FOR VARIABLE 11 (S-B) BY LINEARINTERPOLATION 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

95.00	0.200833e+01	0.101937e+03
98.00	0.206493e+01	0.116127e+03

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FREQUENCY TABLE FOR VARIABLE 12 (S-BA)

LOG LIMITS LOWER	-	UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR 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	1	1	0.35	0.35	0.000e+00	0.000e+00
1.417e+00	-	1.583e+00	1	2	0.35	0.71	0.000e+00	0.000e+00
1.583e+00	-	1.750e+00	1	3	0.35	1.06	2.349e-02	4.255e+01
1.750e+00	-	1.917e+00	3	6	1.06	2.12	2.469e-01	1.190e+01
1.917e+00	-	2.083e+00	4	10	1.41	3.53	1.799e+00	4.242e-01
2.083e+00	-	2.250e+00	7	17	2.47	6.01	8.570e+00	-7.753e+00
2.250e+00	-	2.417e+00	6	23	2.12	8.13	2.671e+01	-2.648e+01
2.417e+00	-	2.583e+00	32	55	11.31	19.43	5.451e+01	-5.392e+01
2.583e+00	-	2.750e+00	115	170	40.64	60.07	7.288e+01	-7.130e+01
2.750e+00	-	2.917e+00	80	250	28.27	88.34	6.385e+01	-6.259e+01
2.917e+00	-	3.083e+00	32	282	11.31	99.65	3.665e+01	-3.577e+01
3.083e+00	-	3.250e+00	1	283	0.35	100.00	1.777e+01	-1.772e+01
	G		0	283	0.00	100.00		
	H		0	283				
	B		0	283				
TOTALS LESS H AND B			283				2.837e+02	-2.207e+02

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

```
2.154e+01
3.162e+01
4.642e+01
6.813e+01 X
1.000e+02 X
1.468e+02 XX
2.154e+02 XX
3.162e+02 XXXXXXXXXXX
4.642e+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
6.813e+02 XXXXXXXXXXXXXXXXXXXXXXXXXXX
1.000e+03 XXXXXXXXXXX
1.468e+03
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

```
MINIMUM ANTILOG      =  2.00000e+01
MAXIMUM ANTILOG      =  1.50000e+03
GEOMETRIC MEAN       =  4.98684e+02
GEOMETRIC DEVIATION  =  1.78519e+00
VARIANCE OF LOGS     =  6.33450e-02
```

PERCENT TABLE FOR VARIABLE 12 (S-BA) BY LINEARINTERPOLATION 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
90.00	0.294115e+01	0.873265e+03
95.00	0.301484e+01	0.103477e+04
98.00	0.305906e+01	0.114568e+04

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FREQUENCY TABLE FOR VARIABLE 13 (S-BE)

LOG LIMITS LOWER	-	UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR FREQ (NORMAL DIST)	(THEOR FREQ - OBS FREQ)**2/THEOR FREQ
	N		0	0	0.00	0.00		
	L		25	25	8.83	8.83		
	T		0	25	0.00	8.83	1.845e+01	2.327e+00
-8.400e-02	-	8.267e-02	118	143	41.70	50.53	9.210e+01	-9.082e+01
8.267e-02	-	2.493e-01	74	217	26.15	76.68	1.246e+02	-1.240e+02
2.493e-01	-	4.160e-01	61	278	21.55	98.23	4.388e+01	-4.249e+01
4.160e-01	-	5.827e-01	4	282	1.41	99.65	3.928e+00	-2.909e+00
5.827e-01	-	7.493e-01	1	283	0.35	100.00	8.634e-02	1.150e+01
	G		0	283	0.00	100.00		
	H		0	283				
	B		0	283				
TOTALS LESS H AND B			283				2.830e+02	-2.464e+02

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

```
 9.985e-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
 1.466e+00 XXXXXXXXXXXXXXXXXXXXXXXXX
 2.151e+00 XXXXXXXXXXXXXXXXXXXXX
 3.157e+00 X
 4.634e+00
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 1.00000e+00
MAXIMUM ANTILOG = 5.00000e+00
GEOMETRIC MEAN = 1.35452e+00
GEOMETRIC DEVIATION = 1.36715e+00
VARIANCE OF LOGS = 1.84460e-02

PERCENT TABLE FOR VARIABLE 13 (S-BE) BY LINEARINTERPOLATION 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
90.00	0.352339e+00	0.225081e+01
95.00	0.391000e+00	0.246037e+01
98.00	0.414197e+00	0.259536e+01

FREQUENCY TABLE FOR VARIABLE 16 (S-CO)

LOG LIMITS LOWER	- UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR FREQ (NORMAL DIST)	(THEOR FREQ - OBS FREQ)**2/THEOR FREQ
N		3	3	1.06	1.06		
L		2	5	0.71	1.77		
T		0	5	0.00	1.77	5.925e-01	3.279e+01
5.830e-01 -	7.497e-01	7	12	2.47	4.24	5.477e+00	-4.198e+00
7.497e-01 -	9.163e-01	24	36	8.48	12.72	2.728e+01	-2.640e+01
9.163e-01 -	1.083e+00	62	98	21.91	34.63	5.976e+01	-6.887e+01
1.083e+00 -	1.250e+00	86	184	30.39	65.02	9.178e+01	-9.085e+01
1.250e+00 -	1.416e+00	71	255	25.09	90.11	5.219e+01	-6.104e+01
1.416e+00 -	1.583e+00	26	281	9.19	99.29	2.167e+01	-2.047e+01
1.583e+00 -	1.750e+00	2	283	0.71	100.00	4.246e+00	-3.775e+00
G		0	283	0.00	100.00		
H		0	283				
B		0	283				
TOTALS LESS H AND B		283				2.830e+02	-2.428e+02

HISTOGRAM FOR VARIABLE 16 (S-CO)
MIDPOINTS ARE EXPRESSED AS ANTILOGS

```
4.638e+00 XX
6.809e+00 XXXXXXXX
9.992e+00 XXXXXXXXXXXXXXXXXXXXX
1.467e+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2.153e+01 XXXXXXXXXXXXXXXXXXXXXXXX
3.160e+01 XXXXXXXXX
4.639e+01 X
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

```
MINIMUM ANTILOG      =  5.00000e+00
MAXIMUM ANTILOG      =  5.00000e+01
GEOMETRIC MEAN       =  1.44562e+01
GEOMETRIC DEVIATION  =  1.55171e+00
VARIANCE OF LOGS     =  3.64085e-02
```

PERCENT TABLE FOR VARIABLE 16 (S-CO) BY LINEARINTERPOLATION 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
90.00	0.141563e+01	0.260393e+02
95.00	0.150512e+01	0.319975e+02

99.00	0.155954e+01	0.362693e+02

FREQUENCY TABLE FOR VARIABLE 17 (S-CR).

LOG LIMITS LOWER	-	UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR 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		
9.160e-01	-	1.083e+00	1	1	0.35	0.35	5.947e-01	1.087e+00
1.083e+00	-	1.249e+00	2	3	0.71	1.06	3.518e+00	-2.950e+00
1.249e+00	-	1.416e+00	10	13	3.53	4.59	1.381e+01	-1.309e+01
1.416e+00	-	1.583e+00	35	48	12.37	16.96	3.601e+01	-3.504e+01
1.583e+00	-	1.749e+00	79	127	27.92	44.88	5.237e+01	-6.111e+01
1.749e+00	-	1.916e+00	86	213	30.39	75.27	7.181e+01	-7.061e+01
1.916e+00	-	2.083e+00	30	243	10.60	85.87	5.495e+01	-5.441e+01
2.083e+00	-	2.249e+00	19	262	6.71	92.58	2.795e+01	-2.727e+01
2.249e+00	-	2.416e+00	17	279	6.01	98.59	9.443e+00	-7.642e+00
2.416e+00	-	2.583e+00	4	283	1.41	100.00	2.467e+00	-8.449e-01
	G		0	283	0.00	100.00		
	H		0	283				
	R		0	283				
TOTALS LESS H AND R			283				2.829e+02	-2.719e+02

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

```
9.985e+00
1.466e+01 X
2.151e+01 XXXX
3.157e+01 XXXXXXXXXXX
4.634e+01 XXXXXXXXXXXXXXXXXXXXXXXXXXX
6.802e+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
9.985e+01 XXXXXXXXXX
1.466e+02 XXXXXXX
2.151e+02 XXXXXX
3.157e+02 X
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 1.00000e+01
MAXIMUM ANTILOG = 3.00000e+02
GEOMETRIC MEAN = 6.40946e+01
GEOMETRIC DEVIATION = 1.80397e+00
VARIANCE OF LOGS = 6.56535e-02

PERCENT TABLE FOR VARIABLE 17 (S-CR) BY LINEARINTERPOLATION 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
90.00	0.218530e+01	0.153214e+03
95.00	0.231649e+01	0.207248e+03
98.00	0.239973e+01	0.251030e+03

FREQUENCY TABLE FOR VARIABLE 18 (S-CU)

LOG LIMITS LOWER	-	UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR FREQ (NORMAL DIST)	(THEOR FREQ - OBS FREQ)**2/THEOR FREQ
	N		2	2	0.71	0.71		
	L		4	6	1.41	2.12		
	T		0	6	0.00	2.12	1.638e+00	1.161e+01
5.830e-01	-	7.497e-01	12	18	4.24	6.36	4.395e+00	-1.664e+00
7.497e-01	-	9.163e-01	5	23	1.77	8.13	1.181e+01	-1.138e+01
9.163e-01	-	1.083e+00	19	42	6.71	14.84	2.488e+01	-2.412e+01
1.083e+00	-	1.250e+00	29	71	10.25	25.09	4.115e+01	-4.045e+01
1.250e+00	-	1.416e+00	44	115	15.55	40.64	5.341e+01	-5.258e+01
1.416e+00	-	1.583e+00	71	186	25.09	65.72	5.439e+01	-5.308e+01
1.583e+00	-	1.750e+00	64	250	22.61	88.34	4.346e+01	-4.199e+01
1.750e+00	-	1.916e+00	27	277	9.54	97.88	2.726e+01	-2.626e+01
1.916e+00	-	2.083e+00	1	278	0.35	98.23	1.341e+01	-1.334e+01
2.083e+00	-	2.250e+00	1	279	0.35	98.59	5.177e+00	-4.984e+00
2.250e+00	-	2.416e+00	3	282	1.06	99.65	1.568e+00	3.453e-01
2.416e+00	-	2.583e+00	0	282	0.00	99.65	3.725e-01	-3.725e-01
2.583e+00	-	2.750e+00	1	283	0.35	100.00	8.083e-02	1.229e+01
	G		0	283	0.00	100.00		
	H		0	283				
	B		0	283				
TOTALS LESS H AND B			283				2.830e+02	-2.460e+02

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

```
4.638e+00 XXXX
6.808e+00 XX
9.992e+00 XXXXXXX
1.467e+01 XXXXXXXXXX
2.153e+01 XXXXXXXXXXXXXXX
3.160e+01 XXXXXXXXXXXXXXXXXXXXXXXXX
4.638e+01 XXXXXXXXXXXXXXXXXXXXXX
6.809e+01 XXXXXXXXXX
9.992e+01
1.467e+02
2.153e+02 X
3.160e+02
4.638e+02
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

```
MINIMUM ANTILOG      =  5.00000e+00
MAXIMUM ANTILOG      =  5.00000e+02
GEOMETRIC MEAN       =  2.78393e+01
GEOMETRIC DEVIATION  =  2.09267e+00
VARIANCE OF LOGS     =  1.02850e-01
```

PERCENT TABLE FOR VARIABLE 18 (S-CU) BY LINEARINTERPOLATION 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
90.00	0.177868e+01	0.600730e+02
95.00	0.186602e+01	0.734556e+02
98.00	0.197300e+01	0.939724e+02

FREQUENCY TABLE FOR VARIABLE 19 (S-LA)

LOG LIMITS LOWER	-	UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR FREQ (NORMAL DIST)	(THEOR FREQ - OBS FREQ)**2/THEOR FREQ
	N		0	0	0.00	0.00		
	L		1	1	0.35	0.35		
	T		0	1	0.00	0.35	1.311e+00	7.363e-02
1.250e+00	-	1.417e+00	11	12	3.89	4.24	4.703e+00	-2.364e+00
1.417e+00	-	1.583e+00	23	35	8.13	12.37	1.460e+01	-1.302e+01
1.583e+00	-	1.750e+00	29	64	10.25	22.61	3.289e+01	-3.201e+01
1.750e+00	-	1.917e+00	21	85	7.42	30.04	5.379e+01	-5.340e+01
1.917e+00	-	2.083e+00	45	130	15.90	45.94	6.387e+01	-6.317e+01
2.083e+00	-	2.250e+00	103	233	36.40	82.33	5.506e+01	-5.319e+01
2.250e+00	-	2.417e+00	46	279	16.25	98.59	3.446e+01	-3.313e+01
2.417e+00	-	2.583e+00	3	282	1.06	99.65	1.566e+01	-1.547e+01
2.583e+00	-	2.750e+00	1	283	0.35	100.00	6.643e+00	-6.492e+00
	G		0	283	0.00	100.00		
	H		0	283				
	R		0	283				
TOTALS LESS H AND R			283				2.830e+02	-2.722e+02

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

```
2.154e+01 XXXX
3.162e+01 XXXXXXXX
4.642e+01 XXXXXXXXXX
6.813e+01 XXXXXXX
1.000e+02 XXXXXXXXXXXXXXXX
1.468e+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2.154e+02 XXXXXXXXXXXXXXXX
3.162e+02 X
4.642e+02
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

```
MINIMUM ANTILOG      =  2.00000e+01
MAXIMUM ANTILOG      =  5.00000e+02
GEOMETRIC MEAN       =  1.01993e+02
GEOMETRIC DEVIATION  =  1.94089e+00
VARIANCE OF LOGS     =  8.29444e-02
```

PERCENT TABLE FOR VARIABLE 19 (S-LA) BY LINEARINTERPOLATION 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	DATA VALUE	ANTI LOG OF VALUE

PERCENTILE		
90.00	0.232862e+01	0.213120e+03
95.00	0.237989e+01	0.239823e+03
98.00	0.241065e+01	0.257426e+03

FREQUENCY TABLE FOR VARIABLE 20 (S-MO)

LOG LIMITS LOWER	-	UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR FREQ (NORMAL DIST)	(THEOR FREQ - OBS FREQ)**2/THEOR FREQ
	N		100	100	35.34	35.34		
	L		3	103	1.06	36.40		
	T		0	103	0.00	36.40	3.620e+01	1.233e+02
5.830e-01	-	7.497e-01	29	132	10.25	46.64	3.462e+01	-3.378e+01
7.497e-01	-	9.163e-01	16	148	5.65	52.30	4.701e+01	-4.667e+01
9.163e-01	-	1.083e+00	46	194	16.25	68.55	5.175e+01	-5.086e+01
1.083e+00	-	1.250e+00	21	215	7.42	75.97	4.617e+01	-4.571e+01
1.250e+00	-	1.416e+00	23	238	8.13	84.10	3.338e+01	-3.269e+01
1.416e+00	-	1.583e+00	23	261	8.13	92.23	1.956e+01	-1.838e+01
1.583e+00	-	1.750e+00	13	274	4.59	96.82	9.286e+00	-7.886e+00
1.750e+00	-	1.916e+00	2	276	0.71	97.53	3.573e+00	-3.013e+00
1.916e+00	-	2.083e+00	3	279	1.06	98.59	1.114e+00	1.579e+00
2.083e+00	-	2.250e+00	4	283	1.41	100.00	3.500e-01	1.108e+01
	G		0	283	0.00	100.00		
	H		0	283				
	R		0	283				
TOTALS LESS H AND R			283				2.830e+02	-1.031e+02

HISTOGRAM FOR VARIABLE 20 (S-MO)
MIDPOINTS ARE EXPRESSED AS ANTILOGS

```
4.638e+00 XXXXXXXXXX
6.809e+00 XXXXXX
9.992e+00 XXXXXXXXXXXXXXXX
1.467e+01 XXXXXXX
2.153e+01 XXXXXXXX
3.160e+01 XXXXXXXX
4.638e+01 XXXXX
6.809e+01 X
9.992e+01 X
1.467e+02 X
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 5.00000e+00
MAXIMUM ANTILOG = 1.50000e+02
GEOMETRIC MEAN = 1.44670e+01
GEOMETRIC DEVIATION = 2.26904e+00
VARIANCE OF LOGS = 1.26624e-01

PERCENT TABLE FOR VARIABLE 20 (S-MO) BY LINEARINTERPOLATION 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
90.00	0.153735e+01	0.344626e+02
95.00	0.168364e+01	0.482660e+02
98.00	0.199078e+01	0.978990e+02

FREQUENCY TABLE FOR VARIABLE 21 (S-NB)

LOG LIMITS LOWER - UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR FREQ (NORMAL DIST)	(THEOR FREQ - OBS FREQ)**2/THEOR FREQ
N	8	8	2.83	2.83		
L	83	91	29.33	32.16		
T	0	91	0.00	32.16	5.095e+01	3.147e+01
1.250e+00 - 1.417e+00	138	229	48.76	80.92	1.603e+02	-1.594e+02
1.417e+00 - 1.583e+00	40	269	14.13	95.05	6.823e+01	-6.765e+01
1.583e+00 - 1.750e+00	12	281	4.24	99.29	3.517e+00	-1.059e-01
1.750e+00 - 1.917e+00	2	283	0.71	100.00	1.890e-02	1.058e+02
G	0	283	0.00	100.00		
H	0	283				
B	0	283				
TOTALS LESS H AND B	283				2.830e+02	-8.990e+01

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

```
2.154e+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3.162e+01 XXXXXXXXXXXXXX
4.642e+01 XXXX
6.813e+01 X
```


THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 2.00000e+01
MAXIMUM ANTILOG = 7.00000e+01
GEOMETRIC MEAN = 2.33482e+01
GEOMETRIC DEVIATION = 1.32580e+00
VARIANCE OF LOGS = 1.50005e-02

PERCENT TABLE FOR VARIABLE 21 (S-NB) BY LINEARINTERPOLATION 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
90.00	0.152375e+01	0.334003e+02
95.00	0.158271e+01	0.382568e+02
98.00	0.169917e+01	0.500227e+02

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FREQUENCY TABLE FOR VARIABLE 22 (S-NI)

LOG LIMITS LOWER	- UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR FREQ (NORMAL DIST)	(THEOR FREQ - OBS FREQ)**2/THEOR FREQ
N		0	0	0.00	0.00		
L		7	7	2.47	2.47		
T		0	7	0.00	2.47	6.037e+00	1.536e-01
5.830e-01 -	7.497e-01	37	44	13.07	15.55	2.261e+01	-2.097e+01
7.497e-01 -	9.163e-01	34	78	12.01	27.56	5.646e+01	-5.586e+01
9.163e-01 -	1.083e+00	106	184	37.46	65.02	8.213e+01	-8.084e+01
1.083e+00 -	1.250e+00	46	230	16.25	81.27	5.964e+01	-6.898e+01
1.250e+00 -	1.416e+00	38	268	13.43	94.70	3.441e+01	-3.330e+01
1.416e+00 -	1.583e+00	11	279	3.89	98.59	9.895e+00	-8.783e+00
1.583e+00 -	1.750e+00	4	283	1.41	100.00	1.823e+00	3.703e-01
G		0	283	0.00	100.00		
H		0	283				
B		0	283				
TOTALS LESS H AND B		283				2.830e+02	-2.682e+02

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

```
4.638e+00 XXXXXXXXXXXX
6.809e+00 XXXXXXXXXXX
9.992e+00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.467e+01 XXXXXXXXXXXXXXX
2.153e+01 XXXXXXXXXXXXX
3.160e+01 XXXX
4.638e+01 X
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 5.00000e+00
MAXIMUM ANTILOG = 5.00000e+01
GEOMETRIC MEAN = 1.09775e+01
GEOMETRIC DEVIATION = 1.65117e+00
VARIANCE OF LOGS = 4.74333e-02

PERCENT TABLE FOR VARIABLE 22 (S-NI) BY LINEARINTERPOLATION 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
90.00	0.135800e+01	0.228034e+02
95.00	0.142921e+01	0.268666e+02

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FREQUENCY TABLE FOR VARIABLE 23 (S-PB)

LOG LIMITS LOWER	- UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR FREQ (NORMAL DIST)	(THEOR FREQ - OBS FREQ)**2/THEOR FREQ
N		1	1	0.35	0.35		
L		1	2	0.35	0.71		
T		0	2	0.00	0.71	5.296e-01	2.983e+00
9.160e-01 -	1.083e+00	4	6	1.41	2.12	2.991e+00	-1.654e+00
1.083e+00 -	1.249e+00	10	16	3.53	5.65	1.126e+01	-1.037e+01
1.249e+00 -	1.416e+00	23	39	8.13	13.78	2.945e+01	-2.866e+01
1.416e+00 -	1.583e+00	48	87	16.96	30.74	5.356e+01	-5.266e+01
1.583e+00 -	1.749e+00	90	177	31.80	62.54	9.776e+01	-6.643e+01
1.749e+00 -	1.916e+00	57	234	20.14	82.69	5.963e+01	-5.867e+01
1.916e+00 -	2.083e+00	35	269	12.37	95.05	3.650e+01	-3.554e+01
2.083e+00 -	2.249e+00	8	277	2.83	97.88	1.554e+01	-1.502e+01
2.249e+00 -	2.416e+00	4	281	1.41	99.29	4.597e+00	-3.727e+00
2.416e+00 -	2.583e+00	1	282	0.35	99.65	9.453e-01	1.126e-01
2.583e+00 -	2.749e+00	1	283	0.35	100.00	1.493e-01	6.547e+00
G		0	283	0.00	100.00		
H		0	283				
B		0	283				
TOTALS LESS H AND B		283				2.830e+02	-2.631e+02

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

```
9.985e+00 X
1.466e+01 XXXX
2.151e+01 XXXXXXXX
3.157e+01 XXXXXXXXXXXXXXXX
4.634e+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
6.802e+01 XXXXXXXXXXXXXXXXXX
9.985e+01 XXXXXXXXXXX
1.466e+02 XXX
2.151e+02 X
3.157e+02
4.634e+02
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 1.00000e+01
MAXIMUM ANTILOG = 5.00000e+02
GEOMETRIC MEAN = 4.96093e+01
GEOMETRIC DEVIATION = 1.84910e+00
VARIANCE OF LOGS = 7.12680e-02

PERCENT TABLE FOR VARIABLE 23 (S-PB) BY LINEARINTERPOLATION FROM FREQUENCY TABLE

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

SELECTED PERCENTILE	DATA VALUE	ANTI LOG OF VALUE
90.00	0.201457e+01	0.103412e+03
95.00	0.208195e+01	0.120768e+03
98.00	0.226350e+01	0.183443e+03

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FREQUENCY TABLE FOR VARIABLE 25 (S-SC)

LOG LIMITS LOWER	-	UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR FREQ (NORMAL DIST)	(THEOR FREQ - OBS FREQ)**2/THEOR FREQ
	N		0	0	0.00	0.00		
	L		2	2	0.71	0.71		
	T		0	2	0.00	0.71	2.455e+00	8.440e-02
5.830e-01	-	7.497e-01	17	19	6.01	6.71	1.229e+01	-1.090e+01
7.497e-01	-	9.163e-01	37	56	13.07	19.79	3.959e+01	-3.865e+01
9.163e-01	-	1.083e+00	81	137	28.62	48.41	7.406e+01	-7.297e+01
1.083e+00	-	1.250e+00	58	195	20.49	68.90	8.053e+01	-7.981e+01
1.250e+00	-	1.416e+00	63	258	22.26	91.17	5.089e+01	-4.965e+01
1.416e+00	-	1.583e+00	20	278	7.07	98.23	1.868e+01	-1.761e+01
1.583e+00	-	1.750e+00	5	283	1.77	100.00	4.505e+00	-3.395e+00
	G		0	283	0.00	100.00		
	H		0	283				
	R		0	283				
TOTALS LESS H AND R			283				2.830e+02	-2.729e+02

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

```
4.638e+00 XXXXXX
6.808e+00 XXXXXXXXXXXX
9.992e+00 XXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.467e+01 XXXXXXXXXXXXXXXXXX
2.153e+01 XXXXXXXXXXXXXXXXXXXXX
3.160e+01 XXXXXXX
4.638e+01 XX
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 5.00000e+00
MAXIMUM ANTILOG = 5.00000e+01
GEOMETRIC MEAN = 1.29308e+01
GEOMETRIC DEVIATION = 1.65581e+00
VARIANCE OF LOGS = 4.79653e-02

PERCENT TABLE FOR VARIABLE 25 (S-SC) BY LINEARINTERPOLATION 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
90.00	0.140760e+01	0.255625e+02
95.00	0.150675e+01	0.321181e+02

FREQUENCY TABLE FOR VARIABLE 26 (S-SN)

LOG LIMITS LOWER	- UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR FREQ (NORMAL DIST)	(THEOR FREQ - OBS FREQ)**2/THEOR FREQ
N		242	242	85.51	85.51		
L		23	265	8.13	93.64		
T		0	265	0.00	93.64	4.923e-03	1.426e+07
9.160e-01 -	1.083e+00	16	281	5.65	99.29	2.830e+02	-2.829e+02
1.083e+00 -	1.249e+00	1	282	0.35	99.65	0.000e+00	0.000e+00
1.249e+00 -	1.416e+00	1	283	0.35	100.00	1.294e-02	7.728e+01
G		0	283	0.00	100.00		
H		0	283				
B		0	283				
TOTALS LESS H AND B		283				2.830e+02	1.426e+07

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

```
9.985e+00 XXXXXX
1.466e+01
2.151e+01
```


THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 1.00000e+01
MAXIMUM ANTILOG = 2.00000e+01
GEOMETRIC MEAN = 1.06294e+01
GEOMETRIC DEVIATION = 1.20245e+00
VARIANCE OF LOGS = 6.41061e-03

PERCENT TABLE FOR VARIABLE 26 (S-SN) BY LINEARINTERPOLATION 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
90.00	0.100000e+36	0.100000e+36
95.00	0.100000e+36	0.100000e+36
98.00	0.100000e+36	0.100000e+36

FREQUENCY TABLE FOR VARIABLE 27 (S-SR)

LOG LIMITS LOWER	-	UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR FREQ (NORMAL DIST)	(THEOR FREQ - OBS FREQ)**2/THEOR FREQ
	N		0	0	0.00	0.00		
	L		5	5	1.77	1.77		
	T		0	5	0.00	1.77	3.559e+00	5.832e-01
1.916e+00	-	2.083e+00	29	34	10.25	12.01	1.315e+01	-1.095e+01
2.083e+00	-	2.249e+00	25	59	8.83	20.85	3.639e+01	-3.570e+01
2.249e+00	-	2.416e+00	29	88	10.25	31.10	5.481e+01	-6.437e+01
2.416e+00	-	2.583e+00	82	170	28.98	60.07	7.433e+01	-7.322e+01
2.583e+00	-	2.749e+00	105	275	37.10	97.17	5.489e+01	-5.298e+01
2.749e+00	-	2.916e+00	8	283	2.83	100.00	3.587e+01	-3.565e+01
	G		0	283	0.00	100.00		
	H		0	283				
	R		0	283				
TOTALS LESS H AND R			283				2.830e+02	-2.723e+02

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

```
 9.985e+01 XXXXXXXXXX
 1.466e+02 XXXXXXXXX
 2.151e+02 XXXXXXXXXX
 3.157e+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
 4.634e+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
 6.802e+02 XXX
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 1.00000e+02
MAXIMUM ANTILOG = 7.00000e+02
GEOMETRIC MEAN = 2.99426e+02
GEOMETRIC DEVIATION = 1.73968e+00
VARIANCE OF LOGS = 5.78257e-02

PERCENT TABLE FOR VARIABLE 27 (S-SR) BY LINEARINTERPOLATION 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
90.00	0.271711e+01	0.521328e+03
95.00	0.273957e+01	0.548999e+03
99.00	0.100000e+36	0.100000e+36

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FREQUENCY TABLE FOR VARIABLE 28 (S-V)

LOG LIMITS LOWER	- UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR 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		
9.160e-01 -	1.083e+00	1	1	0.35	0.35	1.268e-01	7.763e+00
1.083e+00 -	1.249e+00	0	1	0.00	0.35	5.948e-01	-5.948e-01
1.249e+00 -	1.416e+00	3	4	1.06	1.41	2.223e+00	-8.728e-01
1.416e+00 -	1.583e+00	3	7	1.06	2.47	5.614e+00	-6.161e+00
1.583e+00 -	1.749e+00	21	28	7.42	9.89	1.568e+01	-1.434e+01
1.749e+00 -	1.916e+00	25	53	8.83	18.73	2.960e+01	-2.875e+01
1.916e+00 -	2.083e+00	49	102	17.31	36.04	4.450e+01	-4.340e+01
2.083e+00 -	2.249e+00	49	151	17.31	53.36	5.331e+01	-5.239e+01
2.249e+00 -	2.416e+00	51	202	18.02	71.38	5.087e+01	-4.987e+01
2.416e+00 -	2.583e+00	34	236	12.01	83.39	3.867e+01	-3.779e+01
2.583e+00 -	2.749e+00	32	268	11.31	94.70	2.342e+01	-2.205e+01
2.749e+00 -	2.916e+00	12	280	4.24	98.94	1.130e+01	-1.023e+01
2.916e+00 -	3.083e+00	3	283	1.06	100.00	6.065e+00	-5.570e+00
G		0	283	0.00	100.00		
H		0	283				
B		0	283				
TOTALS LESS H AND B		283				2.830e+02	-2.643e+02

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

```
9.985e+00
1.466e+01
2.151e+01 X
3.157e+01 X
4.634e+01 XXXXXXX
6.802e+01 XXXXXXXXX
9.985e+01 XXXXXXXXXXXXXXXXX
1.466e+02 XXXXXXXXXXXXXXXXX
2.151e+02 XXXXXXXXXXXXXXXXXX
3.157e+02 XXXXXXXXXXXX
4.634e+02 XXXXXXXXXXX
6.802e+02 XXXX
9.985e+02 X
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 1.00000e+01
MAXIMUM ANTILOG = 1.00000e+03
GEOMETRIC MEAN = 1.64068e+02
GEOMETRIC DEVIATION = 2.21896e+00
VARIANCE OF LOGS = 1.19820e-01

PERCENT TABLE FOR VARIABLE 28 (S-V) BY LINEARINTERPOLATION 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
90.00	0.268006e+01	0.478699e+03
95.00	0.276114e+01	0.576951e+03
98.00	0.287906e+01	0.756930e+03

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FREQUENCY TABLE FOR VARIABLE 29 (S-W)

LOG LIMITS LOWER	- UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR FREQ (NORMAL DIST)	(THEOR FREQ - OBS FREQ)**2/THEOR FREQ
N		231	231	81.63	81.63		
L		32	263	11.31	92.93		
T		0	263	0.00	92.93	5.965e-03	1.160e+07
1.583e+00 -	1.750e+00	15	278	5.30	98.23	2.678e+02	-2.677e+02
1.750e+00 -	1.916e+00	3	281	1.06	99.29	3.000e+00	0.000e+00
1.916e+00 -	2.083e+00	2	283	0.71	100.00	1.521e+01	-1.508e+01
G		0	283	0.00	100.00		
H		0	283				
P		0	283				
TOTALS LESS H AND P		283				2.830e+02	1.160e+07

HISTOGRAM FOR VARIABLE 29 (S-W)
MIDPOINTS ARE EXPRESSED AS ANTILOGS

```
 4.638e+01 XXXXX
 6.808e+01 X
 9.992e+01 X
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

```
MINIMUM ANTILOG      =  5.00000e+01
MAXIMUM ANTILOG      =  1.00000e+02
GEOMETRIC MEAN       =  5.63628e+01
GEOMETRIC DEVIATION  =  1.25982e+00
VARIANCE OF LOGS     =  1.00615e-02
```

PERCENT TABLE FOR VARIABLE 29 (S-W) BY LINEARINTERPOLATION 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
90.00	0.100000e+36	0.100000e+36
95.00	0.100000e+36	0.100000e+36
98.00	0.100000e+36	0.100000e+36

FREQUENCY TABLE FOR VARIABLE 30 (S-Y).

LOG LIMITS LOWER	-	UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR FREQ (NORMAL DIST)	(THEOR FREQ - OBS FREQ)**2/THEOR FREQ
	N		0	0	0.00	0.00		
	L		2	2	0.71	0.71		
	T		0	2	0.00	0.71	3.830e-01	6.826e+00
9.160e-01	-	1.083e+00	2	4	0.71	1.41	1.945e+00	-9.168e-01
1.083e+00	-	1.249e+00	6	10	2.12	3.53	7.880e+00	-7.119e+00
1.249e+00	-	1.416e+00	17	27	6.01	9.54	2.248e+01	-2.173e+01
1.416e+00	-	1.583e+00	62	89	21.91	31.45	4.519e+01	-4.382e+01
1.583e+00	-	1.749e+00	47	136	16.61	48.06	6.400e+01	-6.326e+01
1.749e+00	-	1.916e+00	53	189	18.73	66.78	6.387e+01	-6.304e+01
1.916e+00	-	2.083e+00	69	258	24.38	91.17	4.493e+01	-4.339e+01
2.083e+00	-	2.249e+00	25	283	8.83	100.00	3.233e+01	-3.155e+01
	G		0	283	0.00	100.00		
	H		0	283				
	B		0	283				
TOTALS LESS H AND B			283				2.830e+02	-2.680e+02

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

```
9.985e+00 X
1.466e+01 XX
2.151e+01 XXXXXX
3.157e+01 XXXXXXXXXXXXXXXXXXXX
4.634e+01 XXXXXXXXXXXXXXXX
6.802e+01 XXXXXXXXXXXXXXXXXX
9.985e+01 XXXXXXXXXXXXXXXXXXXXXXX
1.466e+02 XXXXXXXXX
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

```
MINIMUM ANTILOG      =  1.00000e+01
MAXIMUM ANTILOG      =  1.50000e+02
GEOMETRIC MEAN       =  5.67199e+01
GEOMETRIC DEVIATION  =  1.86724e+00
VARIANCE OF LOGS     =  7.35501e-02
```

PERCENT TABLE FOR VARIABLE 30 (S-Y) BY LINEARINTERPOLATION 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

90.00	0.207470e+01	0.118767e+03
95.00	0.100000e+36	0.100000e+36
99.00	0.100000e+36	0.100000e+36

FREQUENCY TABLE FOR VARIABLE 31 (S-ZN)

LOG LIMITS LOWER	- UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR FREQ (NORMAL DIST)	(THEOR FREQ - OBS FREQ)**2/THEOR FREQ
	N	273	273	96.47	96.47		
	L	2	275	0.71	97.17		
	T	0	275	0.00	97.17	4.875e+01	1.050e+03
2.250e+00 -	2.417e+00	3	278	1.06	98.23	2.222e+02	-2.221e+02
2.417e+00 -	2.583e+00	0	278	0.00	98.23	0.000e+00	0.000e+00
2.583e+00 -	2.750e+00	4	282	1.41	99.65	0.000e+00	0.000e+00
2.750e+00 -	2.917e+00	0	282	0.00	99.65	0.000e+00	0.000e+00
2.917e+00 -	3.083e+00	1	283	0.35	100.00	1.210e+01	-1.202e+01
	G	0	283	0.00	100.00		
	H	0	283				
	B	0	283				
TOTALS LESS H AND B		283				2.830e+02	8.160e+02

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

```
     2.154e+02 X
     3.162e+02
     4.642e+02 X
     6.813e+02
     1.000e+03
```

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THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

```
MINIMUM ANTILOG      =  2.00000e+02
MAXIMUM ANTILOG      =  1.00000e+03
GEOMETRIC MEAN       =  3.86697e+02
GEOMETRIC DEVIATION  =  1.81146e+00
VARIANCE OF LOGS     =  6.65791e-02
```

PERCENT TABLE FOR VARIABLE 31 (S-ZN) BY LINEARINTERPOLATION 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
90.00	0.100000e+36	0.100000e+36
95.00	0.100000e+36	0.100000e+36
98.00	0.100000e+36	0.100000e+36

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FREQUENCY TABLE FOR VARIABLE 32 (S-ZR)

LOG LIMITS LOWER	- UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR 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		
1.083e+00 -	1.250e+00	1	1	0.35	0.35	1.794e-02	5.573e+01
1.250e+00 -	1.416e+00	1	2	0.35	0.71	9.613e-02	1.031e+01
1.416e+00 -	1.583e+00	2	4	0.71	1.41	4.692e-01	3.793e+00
1.583e+00 -	1.750e+00	3	7	1.06	2.47	1.823e+00	-1.769e-01
1.750e+00 -	1.916e+00	6	13	2.12	4.59	5.636e+00	-4.571e+00
1.916e+00 -	2.083e+00	9	22	3.18	7.77	1.387e+01	-1.322e+01
2.083e+00 -	2.250e+00	16	38	5.65	13.43	2.718e+01	-2.659e+01
2.250e+00 -	2.416e+00	41	79	14.49	27.92	4.240e+01	-4.144e+01
2.416e+00 -	2.583e+00	56	135	19.79	47.70	5.267e+01	-5.160e+01
2.583e+00 -	2.750e+00	50	185	17.67	65.37	5.208e+01	-5.112e+01
2.750e+00 -	2.916e+00	50	235	17.67	83.04	4.101e+01	-3.979e+01
2.916e+00 -	3.083e+00	39	274	13.78	96.82	4.575e+01	-4.490e+01
G		9	283	3.18	100.00	-3.815e-06	-2.123e+07
H		0	283				
B		0	283				
TOTALS LESS H AND B		283				2.830e+02	-2.123e+07

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

```
1.467e+01
2.153e+01
3.160e+01 X
4.638e+01 X
6.808e+01 XX
9.992e+01 XXX
1.467e+02 XXXXXX
2.153e+02 XXXXXXXXXXXXX
3.160e+02 XXXXXXXXXXXXXXXXXXXX
4.638e+02 XXXXXXXXXXXXXXXXXX
6.808e+02 XXXXXXXXXXXXXXXXX
9.992e+02 XXXXXXXXXXXXX
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

MINIMUM ANTILOG = 1.50000e+01
MAXIMUM ANTILOG = 1.00000e+03
GEOMETRIC MEAN = 3.63813e+02
GEOMETRIC DEVIATION = 2.20056e+00
VARIANCE OF LOGS = 1.17330e-01

PERCENT TABLE FOR VARIABLE 32 (S-7R) BY LINEARINTERPOLATION 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
90.00	0.300052e+01	0.100120e+04
95.00	0.306099e+01	0.115078e+04
98.00	0.100000e+36	0.100000e+36

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FREQUENCY TABLE FOR VARIABLE 33 (S-TH)

LOG LIMITS LOWER	- UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR FREQ (NORMAL DIST)	(THEOR FREQ - OBS FREQ)**2/THEOR FREQ
N		246	246	86.93	86.93		
L		28	274	9.89	96.82		
T		0	274	0.00	96.82	4.739e+00	1.530e+04
1.916e+00 -	2.083e+00	5	279	1.77	98.59	2.694e+02	-2.694e+02
2.083e+00 -	2.249e+00	0	279	0.00	98.59	0.000e+00	0.000e+00
2.249e+00 -	2.416e+00	3	282	1.06	99.65	0.000e+00	0.000e+00
2.416e+00 -	2.583e+00	1	283	0.35	100.00	8.880e+00	-8.768e+00
G		0	283	0.00	100.00		
H		0	283				
B		0	283				
TOTALS LESS H AND B		283				2.830e+02	1.502e+04

HISTOGRAM FOR VARIABLE 33 (S-TH)
MIDPOINTS ARE EXPRESSED AS ANTILOGS

```
9.985e+01 XX
1.466e+02
2.151e+02 X
3.157e+02
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

```
MINIMUM ANTILOG      =  1.00000e+02
MAXIMUM ANTILOG      =  3.00000e+02
GEOMETRIC MEAN       =  1.42350e+02
GEOMETRIC DEVIATION  =  1.54769e+00
VARIANCE OF LOGS     =  3.59797e-02
```

PERCENT TABLE FOR VARIABLE 33 (S-TH) BY LINEARINTERPOLATION 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
90.00	0.100000e+36	0.100000e+36
95.00	0.100000e+36	0.100000e+36
98.00	0.100000e+36	0.100000e+36

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

LOG LIMITS LOWER	-	UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR 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		
9.160e-01	-	1.083e+00	4	4	1.41	1.41	1.609e+00	8.758e-01
1.083e+00	-	1.249e+00	3	7	1.06	2.47	7.152e+00	-6.733e+00
1.249e+00	-	1.416e+00	20	27	7.07	9.54	2.184e+01	-2.092e+01
1.416e+00	-	1.583e+00	27	54	9.54	19.08	4.584e+01	-4.525e+01
1.583e+00	-	1.749e+00	102	156	36.04	55.12	6.616e+01	-6.462e+01
1.749e+00	-	1.916e+00	69	225	24.38	79.51	5.568e+01	-6.463e+01
1.916e+00	-	2.083e+00	40	265	14.13	93.64	4.484e+01	-4.395e+01
2.083e+00	-	2.249e+00	11	276	3.89	97.53	2.105e+01	-2.053e+01
2.249e+00	-	2.416e+00	3	279	1.06	98.59	6.794e+00	-6.353e+00
2.416e+00	-	2.583e+00	0	279	0.00	98.59	1.507e+00	-1.507e+00
2.583e+00	-	2.749e+00	1	280	0.35	98.94	2.294e-01	4.130e+00
2.749e+00	-	2.916e+00	1	281	0.35	99.29	0.000e+00	0.000e+00
2.916e+00	-	3.083e+00	1	282	0.35	99.65	0.000e+00	0.000e+00
3.083e+00	-	3.249e+00	1	283	0.35	100.00	2.578e-02	3.876e+01
	G		0	283	0.00	100.00		
	H		0	283				
	B		0	283				
TOTALS LESS H AND B			283				2.827e+02	-2.307e+02

HISTOGRAM FOR VARIABLE 34 (AA-ZN-P)
MIDPOINTS ARE EXPRESSED AS ANTILOGS

```
9.985e+00 X
1.466e+01 X
2.151e+01 XXXXXXX
3.157e+01 XXXXXXXXXX
4.634e+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
6.802e+01 XXXXXXXXXXXXXXXXXXXXXXX
9.985e+01 XXXXXXXXXXXXX
1.466e+02 XXXX
2.151e+02 X
3.157e+02
4.634e+02
6.802e+02
9.985e+02
1.466e+03
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

```
MINIMUM ANTILOG      =  1.00000e+01
MAXIMUM ANTILOG      =  1.60000e+03
GEOMETRIC MEAN       =  5.57272e+01
GEOMETRIC DEVIATION  =  1.85382e+00
```

VARIANCE OF LOGS = 7.18603e-02

PERCENT TABLE FOR VARIABLE 34 (AA-ZN-P) BY LINEARINTERPOLATION 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
90.00	0.203975e+01	0.109585e+03
95.00	0.214100e+01	0.138357e+03
98.00	0.232378e+01	0.210755e+03

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

LOG LIMITS LOWER	-	UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR FREQ (NORMAL DIST)	(THEOR FREQ - OBS FREQ)**2/THEOR FREQ
	N		210	210	74.20	74.20		
	L		37	247	13.07	87.28		
	T		0	247	0.00	87.28	4.331e+01	9.580e+02
-8.400e-02	-	8.267e-02	28	275	9.89	97.17	1.711e+02	-1.710e+02
8.267e-02	-	2.493e-01	0	275	0.00	97.17	6.638e+01	-6.638e+01
2.493e-01	-	4.160e-01	3	278	1.06	98.23	2.183e+00	-8.086e-01
4.160e-01	-	5.827e-01	2	280	0.71	98.94	0.000e+00	0.000e+00
5.827e-01	-	7.493e-01	2	282	0.71	99.65	0.000e+00	0.000e+00
7.493e-01	-	9.160e-01	0	282	0.00	99.65	0.000e+00	0.000e+00
9.160e-01	-	1.083e+00	1	283	0.35	100.00	4.835e-03	2.068e+02
	G		0	283	0.00	100.00		
	H		0	283				
	R		0	283				
TOTALS LESS H AND R			283				2.830e+02	9.267e+02

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

```
9.985e-01 XXXXXXXXXX
1.466e+00
2.151e+00 X
3.157e+00 X
4.634e+00 X
6.802e+00
9.985e+00
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

```
MINIMUM ANTILOG      =  1.000000e+00
MAXIMUM ANTILOG      =  1.000000e+01
GEOMETRIC MEAN       =  1.331281e+00
GEOMETRIC DEVIATION  =  1.781500e+00
VARIANCE OF LOGS     =  6.289338e-02
```

PERCENT TABLE FOR VARIABLE 35 (AA-SB-P) BY LINEARINTERPOLATION 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
90.00	0.100000e+36	0.100000e+36
95.00	0.100000e+36	0.100000e+36

98.00

0.342667e+00

0.220124e+01

FREQUENCY TABLE FOR VARIABLE 36 (CM-AS)

LOG LIMITS LOWER	- UPPER	OBS FREQ	CUM FREQ	PERCENT FREQ	PERCENT CUM FREQ	THEOR FREQ (NORMAL DIST)	(THEOR FREQ - OBS FREQ)**2/THEOR FREQ
N		0	0	0.00	0.00		
L		232	232	81.98	81.98		
T		0	232	0.00	81.98	3.969e+01	9.318e+02
9.160e-01 -	1.083e+00	37	269	13.07	95.05	1.725e+02	-1.723e+02
1.083e+00 -	1.249e+00	5	274	1.77	96.82	6.868e+01	-6.861e+01
1.249e+00 -	1.416e+00	4	278	1.41	98.23	2.155e+00	-2.991e-01
1.416e+00 -	1.583e+00	1	279	0.35	98.59	0.000e+00	0.000e+00
1.583e+00 -	1.749e+00	3	282	1.06	99.65	0.000e+00	0.000e+00
1.749e+00 -	1.916e+00	1	283	0.35	100.00	4.147e-03	2.411e+02
G		0	283	0.00	100.00		
H		0	283				
B		0	283				
TOTALS LESS H AND B		283				2.830e+02	9.318e+02

HISTOGRAM FOR VARIABLE 36 (CM-AS)
MIDPOINTS ARE EXPRESSED AS ANTILOGS

```
9.985e+00 XXXXXXXXXXXX
1.466e+01 XX
2.151e+01 X
3.157e+01
4.634e+01 X
6.802e+01
```

THE FOLLOWING STATISTICS ARE COMPUTED FOR THE UNQUALIFIED VALUES ONLY

```
MINIMUM ANTILOG      =  1.00000e+01
MAXIMUM ANTILOG      =  9.00000e+01
GEOMETRIC MEAN       =  1.26868e+01
GEOMETRIC DEVIATION  =  1.60363e+00
VARIANCE OF LOGS     =  4.20679e-02
```

PERCENT TABLE FOR VARIABLE 36 (CM-AS) BY LINEARINTERPOLATION 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
90.00	0.100000e+36	0.100000e+36
95.00	0.100000e+36	0.100000e+36
98.00	0.138850e+01	0.244625e+02

740024 >pool_dir>!BBBJJKcHDzGzhX.d0036.191 740024

```
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
$                                                                 $
$  Requested 04/23/79  1116.9 mst Mon                              $
$  Output    04/23/79  1117.3 mst Mon                              $
$                                                                 $
$                                                                 $
$  printer queue 3          orta                                  $
$                                                                 $
$  53 pages                                                       $
$                                                                 $
$  1351 lines at $1.35 per 1000 lines                             $
$                                                                 $
$  Charge to WSpeckman.Rass_omr.a                           1.82  $
$                                                                 $
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
```

740024 >pool_dir>!BBBJJKcHDzGzhX.d0036.191 740024

Table 4

ARRAY OF MEANS -

		1 LATITUDE	2 LONGITUD	3 S-FE%	4 S-MG%	5 S-CA%	6 S-TI%	7 S-MN	8 S-AG	9 S-AS	10 S-AU
1	LATITUDE	45.5241	45.5241	45.5241	45.5241	45.5241	45.5241	45.5243	45.5555	**********	**********
2	LONGITUD	113.0097	113.0097	113.0097	113.0097	113.0097	113.0097	113.0099	113.0183	**********	**********
3	S-FE%	7.1495	7.1495	7.1500	7.1500	7.1500	7.1500	7.1596	5.1061	**********	**********
4	S-MG%	1.4254	1.4254	1.4214	1.4214	1.4214	1.4214	1.4211	2.0545	**********	**********
5	S-CA%	2.1098	2.1098	2.1055	2.1055	2.1055	2.1055	2.1059	3.2242	**********	**********
6	S-TI%	0.3923	0.3923	0.3924	0.3924	0.3924	0.3924	0.3927	0.3461	**********	**********
7	S-MN	1178.2143	1178.2143	1178.7234	1178.7234	1178.7234	1178.7234	1178.7234	1254.5455	**********	**********
8	S-AG	1.3879	1.3879	1.3879	1.3879	1.3879	1.3879	1.3879	1.3879	**********	**********
9	S-AS	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
10	S-AU	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
11	S-B	31.9384	31.9384	31.7806	31.7806	31.7806	31.7806	31.8231	56.8182	**********	**********
12	S-BA	563.5587	563.5587	563.8163	563.8163	563.8163	563.8163	560.4965	557.5758	**********	**********
13	S-BE	1.4258	1.4258	1.4264	1.4264	1.4264	1.4264	1.4280	1.7000	**********	**********
14	S-BI	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
15	S-CD	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
16	S-CO	15.8804	15.8804	15.8741	15.8741	15.8741	15.8741	15.8592	15.5758	**********	**********
17	S-CR	76.7260	76.7260	76.7138	76.7138	76.7138	76.7138	76.8794	75.4545	**********	**********
18	S-CU	36.6727	36.6727	36.7148	36.7148	36.7148	36.7148	36.6667	66.9697	**********	**********
19	S-LA	121.7143	121.7143	121.9149	121.9149	121.9149	121.9149	121.8149	93.3333	**********	**********
20	S-MO	21.3520	21.3520	21.5111	21.5111	21.5111	21.5111	20.7933	30.1481	**********	**********
21	S-NB	24.5263	24.5263	24.4792	24.4792	24.4792	24.4792	24.5026	25.2632	**********	**********
22	S-NI	12.5564	12.5564	12.5471	12.5471	12.5471	12.5471	12.5673	16.1818	**********	**********
23	S-PB	60.1434	60.1434	60.0712	60.0712	60.0712	60.0712	59.9286	103.9394	**********	**********
24	S-SB	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
25	S-SC	14.7097	14.7097	14.7117	14.7117	14.7117	14.7117	14.7107	12.3333	**********	**********
26	S-SN	10.8333	10.8333	10.8333	10.8333	10.8333	10.8333	10.8333	10.0000	**********	**********
27	S-SR	341.1232	341.1232	342.2662	342.2662	342.2662	342.2662	340.9747	303.0303	**********	**********
28	S-V	222.4555	222.4555	222.6502	222.6502	222.6502	222.6502	222.7305	129.0909	**********	**********
29	S-W	58.0000	58.0000	58.0000	58.0000	58.0000	58.0000	58.0000	65.0000	**********	**********
30	S-Y	67.6703	67.6703	67.6868	67.6868	67.6868	67.6868	67.6786	44.3939	**********	**********
31	S-ZN	450.0000	450.0000	450.0000	450.0000	450.0000	450.0000	450.0000	666.6667	**********	**********
32	S-ZR	464.2096	464.2096	467.0255	467.0255	467.0255	467.0255	466.9048	289.3939	**********	**********
33	S-TH	155.5556	155.5556	155.5556	155.5556	155.5556	155.5556	155.5556	**********	**********	**********
34	AA-ZN-P	73.0961	73.0961	72.9682	72.9682	72.9682	72.9682	72.7305	171.8182	**********	**********
35	AA-SR-P	1.6667	1.6667	1.6667	1.6667	1.6667	1.6667	1.6667	2.9167	**********	**********
36	CM-AS	14.8039	14.8039	14.8039	14.8039	14.8039	14.8039	14.9000	19.5455	**********	**********

D0101 CORRELATION ANALYSIS - USGS STATPAC (04/27/77) DATE 4/23/79

ARRAY OF MEANS - CONT.

		11 S-B	12 S-BA	13 S-BE	14 S-BI	15 S-CD	16 S-CO	17 S-CR	18 S-CU	19 S-LA	20 S-MO
1	LATITUDE	45.5249	45.5241	45.5179	**********	**********	45.5227	45.5241	45.5229	45.5238	45.5226
2	LONGITUD	113.0116	113.0097	113.0140	**********	**********	113.0083	113.0097	113.0084	113.0097	113.0188
3	S-FE%	7.0576	7.1590	7.3035	**********	**********	7.2723	7.1590	7.2899	7.1809	6.5306
4	S-MG%	1.4365	1.4214	1.1277	**********	**********	1.4013	1.4214	1.3879	1.4087	1.3714
5	S-CA%	2.1218	2.1055	1.4917	**********	**********	2.0806	2.1055	2.0339	2.0881	1.9772
6	S-TI%	0.3926	0.3924	0.4125	**********	**********	0.3971	0.3924	0.3972	0.3936	0.3991
7	S-MN	1176.5343	1178.7234	1222.9572	**********	**********	1196.0289	1178.7234	1200.5435	1182.2064	1240.5028
8	S-AG	1.3879	1.3879	1.4267	**********	**********	1.3879	1.3879	1.3879	1.3879	1.3926
9	S-AS	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
10	S-AU	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
11	S-B	31.7806	31.7806	31.1024	**********	**********	31.4469	31.7806	31.1949	31.7870	30.8708
12	S-BA	564.9640	563.8163	595.7364	**********	**********	570.7194	563.8163	573.0686	565.7092	601.3889
13	S-BE	1.4331	1.4264	1.4264	**********	**********	1.4157	1.4264	1.4314	1.4264	1.4892
14	S-BI	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
15	S-CD	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
16	S-CO	15.7619	15.8741	16.1020	**********	**********	15.8741	15.8741	15.9855	15.8741	15.6611
17	S-CR	75.9712	76.7138	75.8527	**********	**********	77.5180	76.7138	77.5812	76.8794	69.8889
18	S-CU	36.6544	36.7148	37.7098	**********	**********	36.9455	36.7148	36.7148	36.7148	40.8268
19	S-LA	121.2274	121.9149	126.7442	**********	**********	123.1655	121.9149	123.5018	121.9149	119.6667
20	S-MO	21.6573	21.5111	22.2663	**********	**********	21.5111	21.5111	21.5754	21.5111	21.5111
21	S-NB	24.5989	24.4792	24.4920	**********	**********	24.4792	24.4792	24.4792	24.4792	25.0400
22	S-NI	12.6125	12.5471	12.5139	**********	**********	12.5756	12.5471	12.5296	12.5200	13.3257
23	S-PB	60.6159	60.0712	58.6523	**********	**********	60.3237	60.0712	60.1805	60.1786	68.7778
24	S-SB	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
25	S-SC	14.7536	14.7117	15.1512	**********	**********	14.8165	14.7117	14.8696	14.7117	15.0056
26	S-SN	10.8824	10.8333	10.8824	**********	**********	10.8333	10.8333	10.8333	10.8333	10.9375
27	S-SR	342.6740	342.2662	353.7549	**********	**********	343.2971	342.2662	345.0730	342.7798	358.6111
28	S-V	216.9424	222.6502	222.2868	**********	**********	226.0791	222.6502	226.6065	223.3688	179.4444
29	S-W	58.0000	58.0000	58.0000	**********	**********	58.0000	58.0000	58.0000	58.0000	58.0000
30	S-Y	67.3188	67.6868	69.7868	**********	**********	68.0935	67.6868	68.4058	67.6868	63.3056
31	S-ZN	442.8571	450.0000	483.3333	**********	**********	450.0000	450.0000	450.0000	450.0000	483.3333
32	S-ZR	462.0926	467.0255	485.0800	**********	**********	469.7770	467.0255	467.7052	468.6264	420.3933
33	S-TH	155.5556	155.5556	157.1429	**********	**********	155.5556	155.5556	155.5556	155.5556	166.6667
34	AA-ZN-P	72.9676	72.9682	75.2907	**********	**********	73.7770	72.9682	74.0975	73.1206	85.9722
35	AA-SB-P	1.6857	1.6667	1.7586	**********	**********	1.6667	1.6667	1.6667	1.6667	2.0000
36	CM-AS	14.9000	14.8039	13.7500	**********	**********	14.9000	14.8039	14.9000	14.8039	14.2308

ARRAY OF MEANS - CONT.

	21 S-NB	22 S-NI	23 S-PB	24 S-SB	25 S-SC	26 S-SN	27 S-SR	28 S-V	29 S-W	30 S-Y
1 LATITUDE	45.4924	45.5261	45.5240	**********	45.5236	45.4938	45.5231	45.5241	45.4910	45.5236
2 LONGITUD	112.9807	113.0118	113.0087	**********	113.0097	112.9593	113.0073	113.0097	113.0352	113.0097
3 S-FEX	8.8504	7.1449	7.2011	**********	7.2046	6.8889	7.2669	7.1500	7.5500	7.2046
4 S-MGX	1.0544	1.4446	1.4297	**********	1.3888	1.1889	1.4390	1.4214	0.9200	1.3888
5 S-CAX	1.5219	2.1245	2.1196	**********	2.0600	1.7500	2.1405	2.1055	1.3050	2.0600
6 S-TIX	0.4464	0.3944	0.3934	**********	0.3949	0.4444	0.3956	0.3924	0.4000	0.3949
7 S-MN	1369.1100	1184.3636	1186.4286	**********	1185.7143	1361.1111	1196.2094	1178.7234	1435.0000	1185.7143
8 S-AG	1.8000	1.3879	1.3879	**********	1.3879	0.5000	1.3879	1.3879	2.8375	1.3879
9 S-AS	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
10 S-AU	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
11 S-B	19.1176	32.3063	31.3949	**********	31.7935	14.7059	31.0440	31.7806	33.2500	31.7935
12 S-BA	622.3958	560.7246	566.5836	**********	567.6512	622.2222	569.1007	563.8163	675.0000	567.6512
13 S-BE	1.3663	1.4203	1.4297	**********	1.4264	1.2941	1.4190	1.4264	1.8000	1.4264
14 S-BI	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
15 S-CD	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
16 S-CO	17.0208	16.0664	15.8741	**********	15.8741	16.1111	15.9348	15.8741	17.6000	15.8741
17 S-CR	82.3958	77.7717	76.9751	**********	77.0463	61.1111	77.2302	76.7138	93.5000	77.0463
18 S-CU	41.9073	37.0000	36.7149	**********	36.8297	28.8889	37.0620	36.7148	85.7500	36.8297
19 S-LA	151.3542	121.2000	122.5357	**********	122.2776	144.4444	123.4657	121.9149	132.5000	122.2776
20 S-MO	21.3920	21.8114	21.5111	**********	21.5111	17.9375	21.5111	21.5111	34.2500	21.5111
21 S-NB	24.4792	24.4324	24.4792	**********	24.4792	24.4444	24.4792	24.4792	26.6667	24.4792
22 S-NI	10.5405	12.5471	12.5657	**********	12.5474	8.8333	12.5387	12.5471	18.0000	12.5474
23 S-PB	62.4479	60.3285	60.0712	**********	60.2151	60.4444	60.5216	60.0712	87.7500	60.2151
24 S-SB	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
25 S-SC	16.7760	14.8139	14.7914	**********	14.7117	20.6667	14.8804	14.7117	12.1000	14.7117
26 S-SN	10.8333	10.8333	10.8333	**********	10.8333	10.8333	10.8333	10.8333	10.0000	10.8333
27 S-SR	401.5625	336.7159	342.2662	**********	343.2971	433.3333	342.2662	342.2662	410.0000	343.2971
28 S-V	227.3958	223.2246	223.8790	**********	224.1281	191.6667	225.8273	222.6502	189.5000	224.1281
29 S-W	57.7778	58.4211	58.0000	**********	58.0000	85.0000	58.0000	58.0000	58.0000	58.0000
30 S-Y	81.9792	66.9343	67.9570	**********	67.6868	85.0000	68.2971	67.6868	58.5000	67.6868
31 S-ZN	487.3333	450.0000	450.0000	**********	450.0000	200.0000	450.0000	450.0000	666.6667	450.0000
32 S-ZR	554.3478	443.9139	464.9449	**********	470.2941	483.3333	467.0926	467.0255	455.0000	470.2941
33 S-TH	162.5000	155.5556	155.5556	**********	155.5556	200.0000	155.5556	155.5556	200.0000	155.5556
34 AA-ZN-P	82.6302	74.1486	73.3986	**********	73.2740	74.1667	73.8129	72.9682	220.2500	73.2740
35 AA-SB-P	1.8400	1.6667	1.6667	**********	1.6667	1.3333	1.6667	1.6667	5.0000	1.6667
36 CM-AS	16.3636	14.8039	14.9000	**********	14.8039	13.0000	14.9000	14.8039	22.1429	14.8039

ARRAY OF MEANS - CONT.

		31	32	33	34	35	36
		S-ZN	S-ZR	S-TH	AA-ZN-P	AA-SB-P	CM-AS
1	LATITUDE	45.4907	45.5250	45.4841	45.5241	45.5824	45.5338
2	LONGITUD	113.0300	113.0121	113.0176	113.0097	112.9454	113.0308
3	S-FE%	10.7500	6.9325	11.0000	7.1590	6.4861	6.2941
4	S-MG%	0.8625	1.4432	0.9222	1.4214	2.3000	1.4216
5	S-CA%	1.3750	2.1376	1.5000	2.1055	4.3611	2.4029
6	S-TI%	0.4500	0.3918	0.4333	0.3924	0.3836	0.4122
7	S-MN	1875.0000	1176.7399	1555.5556	1178.7234	1050.0000	1190.0000
8	S-AG	6.3333	1.3879	**********	1.3879	2.2667	2.3182
9	S-AS	**********	**********	**********	**********	**********	**********
10	S-AU	**********	**********	**********	**********	**********	**********
11	S-B	28.5714	32.0926	15.5556	31.7806	34.0000	34.5000
12	S-BA	575.0000	568.4672	588.8889	563.8163	407.5000	527.4510
13	S-BE	1.5933	1.4380	1.3571	1.4264	1.2759	1.4886
14	S-BI	**********	**********	**********	**********	**********	**********
15	S-CD	**********	**********	**********	**********	**********	**********
16	S-CO	25.6250	15.6989	17.7778	15.8741	18.9167	15.9600
17	S-CR	95.0000	74.5255	102.2222	76.7138	104.4444	78.0392
18	S-CU	140.0000	36.1381	47.7778	36.7148	57.6944	50.4400
19	S-LA	147.5000	120.5128	216.6667	121.9149	122.5000	113.9216
20	S-MO	24.5000	21.6742	17.5000	21.5111	23.6250	28.6667
21	S-NB	35.0000	24.2935	27.5000	24.4792	24.8000	30.0000
22	S-NI	12.7500	12.6330	11.0000	12.5471	13.5000	12.8431
23	S-PB	118.1250	61.1213	52.7778	60.0712	94.1667	75.9000
24	S-SB	**********	**********	**********	**********	**********	**********
25	S-SC	11.5000	14.8051	14.6667	14.7117	16.3889	13.6078
26	S-SN	10.0000	10.8333	10.0000	10.8333	11.6667	10.0000
27	S-SR	350.0000	343.9889	422.2222	342.2662	293.0556	325.0000
28	S-V	387.5000	211.1679	380.0000	222.6502	235.5556	189.4118
29	S-W	73.3333	58.0000	70.0000	58.0000	64.0000	62.8571
30	S-Y	71.2500	66.6176	98.8889	67.6868	68.8889	64.8039
31	S-ZN	450.0000	442.8571	200.0000	450.0000	666.6667	666.6667
32	S-ZR	600.0000	467.0255	633.3333	467.0255	514.1176	437.4000
33	S-TH	100.0000	155.5556	155.5556	155.5556	100.0000	200.0000
34	AA-ZN-P	518.7500	73.4489	60.5556	72.9682	144.1667	122.9412
35	AA-SB-P	6.6667	1.7059	1.0000	1.6667	1.6667	2.8333
36	CM-AS	36.6667	14.3000	47.5000	14.8039	17.9167	14.8039

ARRAY OF VARIANCES -

		1 LATITUDE	2 LONGITUD	3 S-FE%	4 S-MG%	5 S-CA%	6 S-TI%	7 S-MN	8 S-AG	9 S-AS	10 S-AU
1	LATITUDE	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.008	**********	**********
2	LONGITUD	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.004	**********	**********
3	S-FE%	20.499	20.499	20.383	20.383	20.383	20.383	20.455	7.262	**********	**********
4	S-MG%	1.893	1.893	1.882	1.882	1.882	1.882	1.889	3.646	**********	**********
5	S-CA%	7.367	7.367	7.317	7.317	7.317	7.317	7.343	18.232	**********	**********
6	S-TI%	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.022	**********	**********
7	S-MN	324344.484	324344.484	322517.230	322517.230	322517.230	322517.230	322517.230	443806.820	**********	**********
8	S-AG	3.262	3.262	3.262	3.262	3.262	3.262	3.262	3.262	**********	**********
9	S-AS	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
10	S-AU	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
11	S-B	917.411	917.411	914.237	914.237	914.237	914.237	917.045	1713.778	**********	**********
12	S-BA	55538.723	55538.723	55225.100	55225.100	55225.100	55225.100	52291.569	58612.688	**********	**********
13	S-BE	0.253	0.253	0.251	0.251	0.251	0.251	0.252	0.303	**********	**********
14	S-BI	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
15	S-CD	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
16	S-CO	49.444	49.444	49.273	49.273	49.273	49.273	49.390	60.689	**********	**********
17	S-CR	2699.064	2699.064	2684.375	2684.375	2684.375	2684.375	2686.135	1756.818	**********	**********
18	S-CU	1497.447	1497.447	1492.321	1492.321	1492.321	1492.321	1497.103	8243.655	**********	**********
19	S-LA	4068.018	4068.018	4044.719	4044.719	4044.719	4044.719	4056.337	3260.417	**********	**********
20	S-MO	668.128	668.128	668.955	668.955	668.955	668.955	579.446	975.285	**********	**********
21	S-NB	84.166	84.166	83.497	83.497	83.497	83.497	83.830	170.760	**********	**********
22	S-NI	55.416	55.416	55.238	55.238	55.238	55.238	55.327	48.653	**********	**********
23	S-PB	2068.864	2068.864	2054.816	2054.816	2054.816	2054.816	2056.447	8337.121	**********	**********
24	S-SB	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
25	S-SC	65.718	65.718	65.249	65.249	65.249	65.249	65.482	34.354	**********	**********
26	S-SN	6.618	6.618	6.618	6.618	6.618	6.618	6.618	**********	**********	**********
27	S-SR	25257.280	25257.280	25255.858	25255.858	25255.858	25255.858	24882.019	24053.030	**********	**********
28	S-V	34699.306	34699.306	34476.285	34476.285	34476.285	34476.285	34597.144	4314.772	**********	**********
29	S-W	258.947	258.947	258.947	258.947	258.947	258.947	258.947	514.286	**********	**********
30	S-Y	1461.999	1461.999	1451.594	1451.594	1451.594	1451.594	1456.778	833.996	**********	**********
31	S-ZN	71428.571	71428.571	71428.571	71428.571	71428.571	71428.571	71428.571	83333.338	**********	**********
32	S-ZR	85114.040	85114.040	85737.732	85737.732	85737.732	85737.732	86048.932	44962.121	**********	**********
33	S-TH	5277.778	5277.778	5277.778	5277.778	5277.778	5277.778	5277.778	**********	**********	**********
34	AA-ZN-P	13551.809	13551.809	13459.598	13459.598	13459.598	13459.598	13491.450	95274.716	**********	**********
35	AA-SR-P	3.086	3.086	3.086	3.086	3.086	3.086	3.086	7.174	**********	**********
36	CM-AS	146.961	146.961	146.961	146.961	146.961	146.961	149.480	137.273	**********	**********

ARRAY OF VARIANCES - CONT.

		11 S-B	12 S-BA	13 S-BE	14 S-BI	15 S-CD	16 S-CO	17 S-CR	18 S-CU	19 S-LA	20 S-MO
1	LATITUDE	0.007	0.007	0.007	**********	**********	0.007	0.007	0.007	0.007	0.008
2	LONGITUD	0.009	0.009	0.010	**********	**********	0.009	0.009	0.009	0.009	0.009
3	S-FE%	19.701	20.383	17.312	**********	**********	20.018	20.383	20.013	20.320	11.283
4	S-MG%	1.902	1.882	0.498	**********	**********	1.742	1.882	1.702	1.843	1.666
5	S-CA%	7.433	7.317	1.293	**********	**********	7.095	7.317	6.514	7.257	7.303
6	S-TI%	0.024	0.024	0.019	**********	**********	0.023	0.024	0.023	0.023	0.020
7	S-MN	327001.695	322517.230	302693.563	**********	**********	311016.773	322517.230	306990.633	320235.828	310780.090
8	S-AG	3.262	3.262	3.565	**********	**********	3.262	3.262	3.262	3.262	3.398
9	S-AS	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
10	S-AU	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
11	S-B	914.237	914.237	939.491	**********	**********	907.917	914.237	904.932	917.538	722.543
12	S-BA	55858.304	55225.100	45273.581	**********	**********	52966.995	55225.100	52188.019	54403.943	52861.195
13	S-BE	0.252	0.251	0.251	**********	**********	0.203	0.251	0.252	0.251	0.193
14	S-BI	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
15	S-CD	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
16	S-CO	48.631	49.273	46.525	**********	**********	49.273	49.273	48.649	49.273	45.052
17	S-CR	2655.732	2684.375	2503.550	**********	**********	2694.359	2684.375	2705.179	2686.135	1852.222
18	S-CU	1513.747	1492.321	1570.894	**********	**********	1495.818	1492.321	1492.321	1492.321	2090.919
19	S-LA	4083.995	4044.719	3792.471	**********	**********	3999.222	4044.719	3972.113	4044.719	3852.402
20	S-MO	674.554	668.955	699.839	**********	**********	668.955	668.955	671.965	668.955	668.955
21	S-NB	95.188	93.497	85.090	**********	**********	93.497	93.497	93.497	93.497	105.845
22	S-NI	55.949	55.238	59.043	**********	**********	55.771	55.238	55.960	55.236	69.416
23	S-PB	2070.346	2054.816	1323.765	**********	**********	2070.111	2054.816	2037.105	2058.929	2705.202
24	S-SB	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
25	S-SC	65.590	65.249	67.187	**********	**********	64.923	65.249	64.957	65.249	80.263
26	S-SN	6.985	6.618	6.985	**********	**********	6.618	6.618	6.618	6.618	7.396
27	S-SR	25574.368	25255.858	25273.543	**********	**********	25291.273	25255.858	25058.052	25273.765	26168.451
28	S-V	31760.654	34476.285	28672.960	**********	**********	34426.087	34476.285	34480.471	34452.313	13803.041
29	S-W	258.947	258.947	258.947	**********	**********	258.947	258.947	258.947	258.947	258.947
30	S-Y	1466.422	1451.594	1358.028	**********	**********	1451.767	1451.594	1445.631	1451.594	1271.275
31	S-ZN	82857.143	71428.571	85666.669	**********	**********	71428.571	71428.571	71428.571	71428.571	85666.669
32	S-ZR	84670.416	85737.732	77948.798	**********	**********	84141.742	85737.732	83477.955	85348.198	66152.953
33	S-TH	5277.778	5277.778	6190.476	**********	**********	5277.778	5277.778	5277.778	5277.778	6666.667
34	AA-ZN-P	13671.216	13459.598	14645.538	**********	**********	13660.954	13459.598	13690.487	13500.904	20403.379
35	AA-SB-P	3.163	3.096	3.690	**********	**********	3.086	3.086	3.086	3.086	4.348
36	CM-AS	149.480	146.961	68.750	**********	**********	149.480	146.961	149.480	146.961	74.393

ARRAY OF VARIANCES - CONT.

		21 S-NB	22 S-NI	23 S-PB	24 S-SB	25 S-SC	26 S-SN	27 S-SR	28 S-V	29 S-W	30 S-Y
1	LATITUDE	0.006	0.007	0.007	**********	0.007	0.007	0.007	0.007	0.009	0.007
2	LONGITUD	0.005	0.009	0.009	**********	0.009	0.003	0.009	0.009	0.004	0.009
3	S-FE%	15.567	20.750	20.277	**********	20.232	4.693	20.085	20.383	11.313	20.232
4	S-MG%	0.153	1.906	1.885	**********	1.737	0.090	1.896	1.882	0.128	1.737
5	S-CA%	0.099	7.487	7.341	**********	7.059	0.066	7.379	7.317	0.204	7.059
6	S-TI%	0.015	0.024	0.024	**********	0.023	0.008	0.023	0.024	0.015	0.023
7	S-MN	229619.715	329188.922	316428.051	**********	317913.473	229575.150	310646.816	322517.230	331868.422	317913.473
8	S-AG	5.288	3.262	3.262	**********	3.262	**********	3.262	3.262	8.868	3.262
9	S-AS	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
10	S-AU	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
11	S-B	335.373	926.701	898.502	**********	920.863	13.971	885.027	914.237	1398.092	920.863
12	S-BA	39234.016	55630.017	54527.570	**********	53530.892	50065.361	54354.066	55225.100	44078.947	53530.892
13	S-BE	0.191	0.256	0.252	**********	0.251	0.096	0.203	0.251	0.168	0.251
14	S-BI	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
15	S-CD	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
16	S-CO	41.581	48.981	49.273	**********	49.273	13.399	49.072	49.273	83.095	49.273
17	S-CR	2002.921	2702.380	2693.139	**********	2687.951	422.222	2710.171	2684.375	5129.211	2687.851
18	S-CU	1865.769	1519.550	1492.321	**********	1494.076	242.810	1497.546	1492.321	12077.039	1494.076
19	S-LA	2491.351	4109.139	4017.561	**********	4021.937	1437.909	3979.250	4044.719	3272.368	4021.937
20	S-MO	533.102	684.708	668.955	**********	668.955	126.729	668.955	668.955	1211.250	668.955
21	S-NB	83.497	85.692	83.497	**********	83.497	61.438	83.497	83.497	176.471	83.497
22	S-NI	30.521	55.238	55.505	**********	55.230	5.206	55.961	55.238	170.444	55.230
23	S-PB	1246.856	2104.837	2054.816	**********	2065.961	499.673	2057.218	2054.816	4832.829	2065.961
24	S-SB	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
25	S-SC	72.258	65.874	65.035	**********	65.249	96.235	64.818	65.249	15.568	65.249
26	S-SN	6.618	6.618	6.618	**********	6.618	6.618	6.618	6.618	0.000	6.618
27	S-SR	16856.185	24471.027	25255.858	**********	25291.273	14117.647	25255.858	25255.858	18842.105	25291.273
28	S-V	33665.435	35213.201	34509.114	**********	34412.184	3285.295	34524.042	34476.295	10741.842	34412.184
29	S-W	277.124	269.591	258.947	**********	258.947	450.000	258.947	258.947	258.947	258.947
30	S-Y	1242.136	1434.706	1451.746	**********	1451.594	826.471	1455.817	1451.594	550.263	1451.594
31	S-ZN	85666.669	71428.571	71428.571	**********	71428.571	**********	71428.571	71428.571	83333.338	71428.571
32	S-ZR	78915.420	86754.268	85313.925	**********	84901.021	50882.355	85202.387	85737.732	88921.053	84901.021
33	S-TH	5535.714	5277.778	5277.778	**********	5277.778	**********	5277.778	5277.778	**********	5277.778
34	AA-ZN-P	18490.821	13743.363	13529.391	**********	13542.457	1241.912	13655.987	13459.598	154169.672	13542.457
35	AA-SB-P	4.223	3.086	3.086	**********	3.086	0.333	3.086	3.086	9.500	3.086
36	CM-AS	216.051	146.961	149.480	**********	146.961	20.000	149.480	146.961	198.810	146.961

ARRAY OF VARIANCES - CONT.

		31 S-ZN	32 S-ZR	33 S-TH	34 AA-ZN-P	35 AA-SR-P	36 CM-AS
1	LATITUDE	0.008	0.007	0.009	0.007	0.002	0.005
2	LONGITUD	0.009	0.009	0.002	0.000	0.003	0.013
3	S-FE%	35.357	18.156	29.250	20.383	12.550	16.192
4	S-MG%	0.183	1.926	0.069	1.882	4.786	2.342
5	S-CA%	0.268	7.520	0.000	7.317	23.652	13.298
6	S-TI%	0.009	0.024	0.020	0.024	0.032	0.028
7	S-MN	339285.715	324944.105	402777.770	322517.230	337428.570	449081.633
8	S-AG	1.333	3.262	**********	3.262	5.417	7.064
9	S-AS	**********	**********	**********	**********	**********	**********
10	S-AU	**********	**********	**********	**********	**********	**********
11	S-B	1005.952	911.683	21.528	914.237	1162.941	917.602
12	S-BA	76429.571	55646.724	21111.114	55225.100	44482.143	67431.370
13	S-BE	0.242	0.254	0.143	0.251	0.243	0.203
14	S-BI	**********	**********	**********	**********	**********	**********
15	S-CD	**********	**********	**********	**********	**********	**********
16	S-CO	153.125	47.965	31.944	49.273	77.564	56.325
17	S-CR	4285.714	2411.496	2019.444	2684.375	2973.683	3000.078
18	S-CU	26342.857	1516.284	44.444	1492.321	7554.790	5908.456
19	S-LA	4192.857	4024.736	14375.000	4044.719	4196.429	3308.314
20	S-MO	249.500	674.108	127.500	668.955	1165.375	1199.912
21	S-NB	430.000	74.908	107.143	83.407	134.333	218.750
22	S-NI	67.643	56.692	10.500	55.238	41.743	39.655
23	S-PB	11299.554	2084.808	494.444	2054.816	8573.571	3010.908
24	S-SB	**********	**********	**********	**********	**********	**********
25	S-SC	16.571	66.305	48.500	65.249	67.159	38.483
26	S-SN	**********	6.618	**********	6.618	8.333	0.000
27	S-SR	28571.428	25659.541	14444.446	25255.858	14736.110	23596.939
28	S-V	146250.000	29526.836	90975.000	34476.285	32059.683	21789.647
29	S-W	633.333	258.947	**********	258.947	480.000	357.143
30	S-Y	726.786	1445.529	1161.111	1451.594	1853.016	1398.961
31	S-ZN	71428.571	82857.143	**********	71428.571	83333.338	83333.338
32	S-ZR	83333.333	85737.732	67400.998	85737.732	129934.049	100591.060
33	S-TH	**********	5277.778	5277.778	5277.778	**********	0.000
34	AA-ZN-P	272555.355	13853.721	234.028	13459.598	90886.429	65451.176
35	AA-SR-P	8.333	3.244	**********	3.086	3.086	7.424
36	CM-AS	33.333	136.745	2112.500	146.961	138.447	146.961

COLUMN	VERSUS	COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
1 (LATITUDE)	2	(LONGITUD)	0.2096	281
1 (LATITUDE)	3	(S-FE%)	-0.5178	281
1 (LATITUDE)	4	(S-MG%)	0.3791	281
1 (LATITUDE)	5	(S-CA%)	0.2944	281
1 (LATITUDE)	6	(S-TI%)	-0.1953	281
1 (LATITUDE)	7	(S-MN)	-0.4236	280
1 (LATITUDE)	8	(S-AG)	-0.2914	33
1 (LATITUDE)	9	(S-AS)	********	0
1 (LATITUDE)	10	(S-AU)	********	0
1 (LATITUDE)	11	(S-B)	0.5709	276
1 (LATITUDE)	12	(S-BA)	-0.2909	281
1 (LATITUDE)	13	(S-BE)	0.1697	256
1 (LATITUDE)	14	(S-BI)	********	0
1 (LATITUDE)	15	(S-CD)	********	0
1 (LATITUDE)	16	(S-CO)	-0.1196	276
1 (LATITUDE)	17	(S-CR)	-0.0304	281
1 (LATITUDE)	18	(S-CU)	-0.1206	275
1 (LATITUDE)	19	(S-LA)	-0.4236	280
1 (LATITUDE)	20	(S-MO)	-0.0582	179
1 (LATITUDE)	21	(S-NB)	-0.1980	100
1 (LATITUDE)	22	(S-NI)	0.4229	275
1 (LATITUDE)	23	(S-PB)	-0.0240	279
1 (LATITUDE)	24	(S-SB)	********	0
1 (LATITUDE)	25	(S-SC)	-0.0704	279
1 (LATITUDE)	26	(S-SN)	-0.0337	18
1 (LATITUDE)	27	(S-SR)	-0.5275	276
1 (LATITUDE)	28	(S-V)	-0.4197	281
1 (LATITUDE)	29	(S-W)	-0.0829	20
1 (LATITUDE)	30	(S-Y)	-0.4548	279
1 (LATITUDE)	31	(S-ZN)	0.3529	8
1 (LATITUDE)	32	(S-ZR)	-0.3046	272
1 (LATITUDE)	33	(S-TH)	0.7532	9
1 (LATITUDE)	34	(AA-ZN-P)	-0.0435	281
1 (LATITUDE)	35	(AA-SB-P)	-0.2967	36
1 (LATITUDE)	36	(CM-AS)	-0.1198	51
2 (LONGITUD)	3	(S-FE%)	-0.4565	281
2 (LONGITUD)	4	(S-MG%)	-0.1251	281
2 (LONGITUD)	5	(S-CA%)	-0.2204	281
2 (LONGITUD)	6	(S-TI%)	-0.0092	281
2 (LONGITUD)	7	(S-MN)	-0.2632	280
2 (LONGITUD)	8	(S-AG)	0.1815	33
2 (LONGITUD)	9	(S-AS)	********	0
2 (LONGITUD)	10	(S-AU)	********	0
2 (LONGITUD)	11	(S-B)	0.4353	276
2 (LONGITUD)	12	(S-BA)	-0.0925	281
2 (LONGITUD)	13	(S-BE)	0.4122	256
2 (LONGITUD)	14	(S-BI)	********	0
2 (LONGITUD)	15	(S-CD)	********	0
2 (LONGITUD)	16	(S-CO)	-0.1716	276
2 (LONGITUD)	17	(S-CR)	-0.1745	281

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COLUMN	VERSUS COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
2 (LONGITUD)	18 (S-CU)	0.0001	275
2 (LONGITUD)	19 (S-LA)	-0.3727	290
2 (LONGITUD)	20 (S-MO)	0.1465	179
2 (LONGITUD)	21 (S-NB)	0.0851	190
2 (LONGITUD)	22 (S-NI)	0.4689	275
2 (LONGITUD)	23 (S-PB)	-0.1184	279
2 (LONGITUD)	24 (S-SB)	********	0
2 (LONGITUD)	25 (S-SC)	-0.3671	279
2 (LONGITUD)	26 (S-SN)	0.4701	18
2 (LONGITUD)	27 (S-SR)	-0.2119	276
2 (LONGITUD)	28 (S-V)	-0.4305	281
2 (LONGITUD)	29 (S-W)	0.0705	20
2 (LONGITUD)	30 (S-Y)	-0.3621	279
2 (LONGITUD)	31 (S-ZN)	0.2721	8
2 (LONGITUD)	32 (S-ZR)	-0.2750	272
2 (LONGITUD)	33 (S-TH)	0.1255	9
2 (LONGITUD)	34 (AA-ZN-P)	0.0471	281
2 (LONGITUD)	35 (AA-SB-P)	0.6410	36
2 (LONGITUD)	36 (CM-AS)	-0.0168	51
3 (S-FE%)	4 (S-MG%)	-0.3413	283
3 (S-FE%)	5 (S-CA%)	-0.2757	283
3 (S-FE%)	6 (S-TI%)	0.4223	283
3 (S-FE%)	7 (S-MN)	0.5486	282
3 (S-FE%)	8 (S-AG)	0.4247	33
3 (S-FE%)	9 (S-AS)	********	0
3 (S-FE%)	10 (S-AU)	********	0
3 (S-FE%)	11 (S-B)	-0.5650	278
3 (S-FE%)	12 (S-BA)	0.2257	283
3 (S-FE%)	13 (S-BE)	-0.4032	258
3 (S-FE%)	14 (S-BI)	********	0
3 (S-FE%)	15 (S-CD)	********	0
3 (S-FE%)	16 (S-CO)	0.5435	278
3 (S-FE%)	17 (S-CR)	0.5017	283
3 (S-FE%)	18 (S-CU)	0.2423	277
3 (S-FE%)	19 (S-LA)	0.6191	282
3 (S-FE%)	20 (S-MO)	-0.0439	180
3 (S-FE%)	21 (S-NB)	0.2020	192
3 (S-FE%)	22 (S-NI)	-0.3057	276
3 (S-FE%)	23 (S-PB)	-0.1281	281
3 (S-FE%)	24 (S-SB)	********	0
3 (S-FE%)	25 (S-SC)	0.3071	281
3 (S-FE%)	26 (S-SN)	-0.1935	18
3 (S-FE%)	27 (S-SR)	0.2654	278
3 (S-FE%)	28 (S-V)	0.8634	283
3 (S-FE%)	29 (S-W)	0.0895	20
3 (S-FE%)	30 (S-Y)	0.6911	281
3 (S-FE%)	31 (S-ZN)	-0.1618	8
3 (S-FE%)	32 (S-ZR)	0.6443	274
3 (S-FE%)	33 (S-TH)	-0.4772	9
3 (S-FE%)	34 (AA-ZN-P)	0.0593	283

COLUMN	VERSUS	COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
3 (S-FE%)	35	(AA-SB-P)	0.1025	36
3 (S-FE%)	36	(CM-AS)	0.4472	51
4 (S-MG%)	5	(S-CA%)	0.0304	283
4 (S-MG%)	6	(S-TI%)	-0.4245	283
4 (S-MG%)	7	(S-MN)	-0.3031	282
4 (S-MG%)	8	(S-AG)	-0.2257	33
4 (S-MG%)	9	(S-AS)	********	0
4 (S-MG%)	10	(S-AU)	********	0
4 (S-MG%)	11	(S-B)	0.2661	278
4 (S-MG%)	12	(S-BA)	-0.4665	283
4 (S-MG%)	13	(S-BE)	-0.1781	258
4 (S-MG%)	14	(S-BI)	********	0
4 (S-MG%)	15	(S-CD)	********	0
4 (S-MG%)	16	(S-CO)	-0.2122	278
4 (S-MG%)	17	(S-CR)	-0.0634	283
4 (S-MG%)	18	(S-CU)	-0.1625	277
4 (S-MG%)	19	(S-LA)	-0.3048	282
4 (S-MG%)	20	(S-MO)	-0.1282	180
4 (S-MG%)	21	(S-NB)	-0.1455	192
4 (S-MG%)	22	(S-NI)	0.1206	276
4 (S-MG%)	23	(S-PB)	0.2470	281
4 (S-MG%)	24	(S-SB)	********	0
4 (S-MG%)	25	(S-SC)	-0.0866	281
4 (S-MG%)	26	(S-SN)	0.1647	18
4 (S-MG%)	27	(S-SR)	-0.2972	278
4 (S-MG%)	28	(S-V)	-0.2693	283
4 (S-MG%)	29	(S-W)	0.0256	20
4 (S-MG%)	30	(S-Y)	-0.3375	281
4 (S-MG%)	31	(S-ZN)	-0.4565	8
4 (S-MG%)	32	(S-ZR)	-0.3762	274
4 (S-MG%)	33	(S-TH)	0.3845	0
4 (S-MG%)	34	(AA-ZN-P)	-0.0769	283
4 (S-MG%)	35	(AA-SB-P)	-0.1026	36
4 (S-MG%)	36	(CM-AS)	-0.1200	51
5 (S-CA%)	6	(S-TI%)	-0.4493	283
5 (S-CA%)	7	(S-MN)	-0.2928	282
5 (S-CA%)	8	(S-AG)	-0.1304	33
5 (S-CA%)	9	(S-AS)	********	0
5 (S-CA%)	10	(S-AU)	********	0
5 (S-CA%)	11	(S-B)	0.1428	278
5 (S-CA%)	12	(S-BA)	-0.4458	283
5 (S-CA%)	13	(S-BE)	-0.2439	258
5 (S-CA%)	14	(S-BI)	********	0
5 (S-CA%)	15	(S-CD)	********	0
5 (S-CA%)	16	(S-CO)	-0.2456	278
5 (S-CA%)	17	(S-CR)	-0.0732	283
5 (S-CA%)	18	(S-CU)	-0.1412	277
5 (S-CA%)	19	(S-LA)	-0.3130	282
5 (S-CA%)	20	(S-MO)	-0.1106	180
5 (S-CA%)	21	(S-NB)	-0.1802	192

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COLUMN	VERSUS COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
5 (S-CA%)	22 (S-NI)	-0.0042	276
5 (S-CA%)	23 (S-PB)	0.3123	281
5 (S-CA%)	24 (S-SB)	********	0
5 (S-CA%)	25 (S-SC)	-0.1487	281
5 (S-CA%)	26 (S-SN)	-0.3333	18
5 (S-CA%)	27 (S-SR)	-0.1849	278
5 (S-CA%)	28 (S-V)	-0.2056	283
5 (S-CA%)	29 (S-W)	0.0522	20
5 (S-CA%)	30 (S-Y)	-0.2928	281
5 (S-CA%)	31 (S-ZN)	-0.6197	8
5 (S-CA%)	32 (S-ZR)	-0.3088	274
5 (S-CA%)	33 (S-TH)	********	9
5 (S-CA%)	34 (AA-ZN-P)	-0.0654	283
5 (S-CA%)	35 (AA-SR-P)	-0.1594	36
5 (S-CA%)	36 (CM-AS)	-0.0571	51
6 (S-TI%)	7 (S-MN)	0.5229	282
6 (S-TI%)	8 (S-AG)	0.2300	33
6 (S-TI%)	9 (S-AS)	********	0
6 (S-TI%)	10 (S-AU)	********	0
6 (S-TI%)	11 (S-B)	-0.3906	278
6 (S-TI%)	12 (S-BA)	0.2126	283
6 (S-TI%)	13 (S-BE)	-0.2732	258
6 (S-TI%)	14 (S-BI)	********	0
6 (S-TI%)	15 (S-CD)	********	0
6 (S-TI%)	16 (S-CO)	0.3993	278
6 (S-TI%)	17 (S-CR)	0.2353	283
6 (S-TI%)	18 (S-CU)	0.1671	277
6 (S-TI%)	19 (S-LA)	0.4965	282
6 (S-TI%)	20 (S-MO)	-0.0893	180
6 (S-TI%)	21 (S-NB)	0.1716	192
6 (S-TI%)	22 (S-NI)	-0.0850	276
6 (S-TI%)	23 (S-PB)	-0.0298	281
6 (S-TI%)	24 (S-SB)	********	0
6 (S-TI%)	25 (S-SC)	0.4967	281
6 (S-TI%)	26 (S-SN)	0.2067	18
6 (S-TI%)	27 (S-SR)	0.2048	278
6 (S-TI%)	28 (S-V)	0.2995	283
6 (S-TI%)	29 (S-W)	0.2155	20
6 (S-TI%)	30 (S-Y)	0.4874	281
6 (S-TI%)	31 (S-ZN)	0.2309	8
6 (S-TI%)	32 (S-ZR)	0.3935	274
6 (S-TI%)	33 (S-TH)	0.6489	9
6 (S-TI%)	34 (AA-ZN-P)	0.1086	283
6 (S-TI%)	35 (AA-SR-P)	0.0846	36
6 (S-TI%)	36 (CM-AS)	0.1353	51
7 (S-MN)	8 (S-AG)	0.5010	33
7 (S-MN)	9 (S-AS)	********	0
7 (S-MN)	10 (S-AU)	********	0
7 (S-MN)	11 (S-B)	-0.4966	277
7 (S-MN)	12 (S-BA)	0.4207	282

COLUMN		VERSUS	COLUMN		CORRELATION COEFFICIENT	NO. OF PAIRS
7	(S-MN)	13	(S-BE)		-0.1461	257
7	(S-MN)	14	(S-BI)		********	0
7	(S-MN)	15	(S-CD)		********	0
7	(S-MN)	16	(S-CO)		0.3373	277
7	(S-MN)	17	(S-CR)		0.0997	282
7	(S-MN)	18	(S-CU)		0.3281	276
7	(S-MN)	19	(S-LA)		0.4084	281
7	(S-MN)	20	(S-MO)		0.0296	179
7	(S-MN)	21	(S-NB)		0.1194	191
7	(S-MN)	22	(S-NI)		-0.3019	275
7	(S-MN)	23	(S-PB)		0.2210	280
7	(S-MN)	24	(S-SB)		********	0
7	(S-MN)	25	(S-SC)		0.3365	280
7	(S-MN)	26	(S-SN)		0.4574	18
7	(S-MN)	27	(S-SR)		0.3390	277
7	(S-MN)	28	(S-V)		0.3847	282
7	(S-MN)	29	(S-W)		0.5360	20
7	(S-MN)	30	(S-Y)		0.3306	280
7	(S-MN)	31	(S-ZN)		0.5506	8
7	(S-MN)	32	(S-ZR)		0.2562	273
7	(S-MN)	33	(S-TH)		0.6025	9
7	(S-MN)	34	(AA-ZN-P)		0.3350	282
7	(S-MN)	35	(AA-SB-P)		0.7112	36
7	(S-MN)	36	(CM-AS)		0.3573	50
8	(S-AG)	9	(S-AS)		********	0
8	(S-AG)	10	(S-AU)		********	0
8	(S-AG)	11	(S-B)		-0.3169	33
8	(S-AG)	12	(S-BA)		-0.0677	33
8	(S-AG)	13	(S-BE)		0.1455	30
8	(S-AG)	14	(S-BI)		********	0
8	(S-AG)	15	(S-CD)		********	0
8	(S-AG)	16	(S-CO)		0.5633	33
8	(S-AG)	17	(S-CR)		-0.1436	33
8	(S-AG)	18	(S-CU)		0.7463	33
8	(S-AG)	19	(S-LA)		0.4458	33
8	(S-AG)	20	(S-MO)		0.0720	27
8	(S-AG)	21	(S-NB)		0.9042	19
8	(S-AG)	22	(S-NI)		-0.2412	33
8	(S-AG)	23	(S-PB)		0.4232	33
8	(S-AG)	24	(S-SB)		********	0
8	(S-AG)	25	(S-SC)		-0.1147	33
8	(S-AG)	26	(S-SN)		********	1
8	(S-AG)	27	(S-SR)		0.2974	33
8	(S-AG)	28	(S-V)		0.3755	33
8	(S-AG)	29	(S-W)		0.3691	8
8	(S-AG)	30	(S-Y)		0.4213	33
8	(S-AG)	31	(S-ZN)		0.5000	3
8	(S-AG)	32	(S-ZR)		0.6952	33
8	(S-AG)	33	(S-TH)		********	0
8	(S-AG)	34	(AA-ZN-P)		0.8427	33

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COLUMN		VERSUS	COLUMN		CORRELATION COEFFICIENT	NO. OF PAIRS
8	(S-AG)	35	(AA-SB-P)		0.8825	12
8	(S-AG)	36	(CM-AS)		0.9766	11
9	(S-AS)	10	(S-AU)		********	0
9	(S-AS)	11	(S-B)		********	0
9	(S-AS)	12	(S-BA)		********	0
9	(S-AS)	13	(S-BE)		********	0
9	(S-AS)	14	(S-BI)		********	0
9	(S-AS)	15	(S-CD)		********	0
9	(S-AS)	16	(S-CO)		********	0
9	(S-AS)	17	(S-CR)		********	0
9	(S-AS)	18	(S-CU)		********	0
9	(S-AS)	19	(S-LA)		********	0
9	(S-AS)	20	(S-MO)		********	0
9	(S-AS)	21	(S-NB)		********	0
9	(S-AS)	22	(S-NI)		********	0
9	(S-AS)	23	(S-PB)		********	0
9	(S-AS)	24	(S-SB)		********	0
9	(S-AS)	25	(S-SC)		********	0
9	(S-AS)	26	(S-SN)		********	0
9	(S-AS)	27	(S-SR)		********	0
9	(S-AS)	28	(S-V)		********	0
9	(S-AS)	29	(S-W)		********	0
9	(S-AS)	30	(S-Y)		********	0
9	(S-AS)	31	(S-ZN)		********	0
9	(S-AS)	32	(S-ZR)		********	0
9	(S-AS)	33	(S-TH)		********	0
9	(S-AS)	34	(AA-ZN-P)		********	0
9	(S-AS)	35	(AA-SB-P)		********	0
9	(S-AS)	36	(CM-AS)		********	0
10	(S-AU)	11	(S-B)		********	0
10	(S-AU)	12	(S-BA)		********	0
10	(S-AU)	13	(S-BE)		********	0
10	(S-AU)	14	(S-BI)		********	0
10	(S-AU)	15	(S-CD)		********	0
10	(S-AU)	16	(S-CO)		********	0
10	(S-AU)	17	(S-CR)		********	0
10	(S-AU)	18	(S-CU)		********	0
10	(S-AU)	19	(S-LA)		********	0
10	(S-AU)	20	(S-MO)		********	0
10	(S-AU)	21	(S-NB)		********	0
10	(S-AU)	22	(S-NI)		********	0
10	(S-AU)	23	(S-PB)		********	0
10	(S-AU)	24	(S-SB)		********	0
10	(S-AU)	25	(S-SC)		********	0
10	(S-AU)	26	(S-SN)		********	0
10	(S-AU)	27	(S-SR)		********	0
10	(S-AU)	28	(S-V)		********	0
10	(S-AU)	29	(S-W)		********	0
10	(S-AU)	30	(S-Y)		********	0
10	(S-AU)	31	(S-ZN)		********	0

COLUMN	VERSUS COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
10 (S-AU)	32 (S-ZR)	********	0
10 (S-AU)	33 (S-TH)	********	0
10 (S-AU)	34 (AA-ZN-P)	********	0
10 (S-AU)	35 (AA-SR-P)	********	0
10 (S-AU)	36 (CM-AS)	********	0
11 (S-B)	12 (S-BA)	-0.1840	278
11 (S-B)	13 (S-BE)	0.2660	254
11 (S-B)	14 (S-BI)	********	0
11 (S-B)	15 (S-CD)	********	0
11 (S-B)	16 (S-CO)	-0.2920	273
11 (S-B)	17 (S-CR)	-0.0902	278
11 (S-B)	18 (S-CU)	-0.1557	272
11 (S-B)	19 (S-LA)	-0.5722	277
11 (S-B)	20 (S-MO)	0.0671	179
11 (S-B)	21 (S-NB)	-0.1285	187
11 (S-B)	22 (S-NI)	0.5376	271
11 (S-B)	23 (S-PB)	-0.1177	276
11 (S-B)	24 (S-SB)	********	0
11 (S-B)	25 (S-SC)	-0.3819	276
11 (S-B)	26 (S-SN)	-0.1303	17
11 (S-B)	27 (S-SR)	-0.5426	273
11 (S-B)	28 (S-V)	-0.4842	278
11 (S-B)	29 (S-W)	-0.2117	20
11 (S-B)	30 (S-Y)	-0.5114	276
11 (S-B)	31 (S-ZN)	0.0991	7
11 (S-B)	32 (S-ZR)	-0.3422	270
11 (S-B)	33 (S-TH)	0.4532	9
11 (S-B)	34 (AA-ZN-P)	-0.0410	278
11 (S-B)	35 (AA-SR-P)	0.0529	35
11 (S-B)	36 (CM-AS)	-0.2092	50
12 (S-BA)	13 (S-BE)	0.0663	258
12 (S-BA)	14 (S-BI)	********	0
12 (S-BA)	15 (S-CD)	********	0
12 (S-BA)	16 (S-CO)	-0.0660	278
12 (S-BA)	17 (S-CR)	-0.1681	283
12 (S-BA)	18 (S-CU)	0.0356	277
12 (S-BA)	19 (S-LA)	0.2916	283
12 (S-BA)	20 (S-MO)	0.2820	180
12 (S-BA)	21 (S-NB)	-0.1107	192
12 (S-BA)	22 (S-NI)	-0.1035	276
12 (S-BA)	23 (S-PB)	0.0634	281
12 (S-BA)	24 (S-SB)	********	0
12 (S-BA)	25 (S-SC)	0.0590	281
12 (S-BA)	26 (S-SN)	-0.0852	18
12 (S-BA)	27 (S-SR)	0.4328	278
12 (S-BA)	28 (S-V)	0.0624	283
12 (S-BA)	29 (S-W)	0.0156	20
12 (S-BA)	30 (S-Y)	0.0922	281
12 (S-BA)	31 (S-ZN)	-0.4060	8
12 (S-BA)	32 (S-ZR)	0.0966	274

COLUMN	VERSUS COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
12 (S-BA)	33 (S-TH)	0.4211	9
12 (S-BA)	34 (AA-ZN-P)	0.0596	283
12 (S-BA)	35 (AA-SR-P)	0.2175	36
12 (S-BA)	36 (CM-AS)	0.0542	51
13 (S-BE)	14 (S-BI)	********	0
13 (S-BE)	15 (S-CD)	********	0
13 (S-BE)	16 (S-CO)	-0.2819	255
13 (S-BE)	17 (S-CR)	-0.2720	258
13 (S-BE)	18 (S-CU)	0.0550	255
13 (S-BE)	19 (S-LA)	-0.2019	258
13 (S-BE)	20 (S-MO)	0.2367	169
13 (S-BE)	21 (S-NB)	0.0169	197
13 (S-BE)	22 (S-NI)	0.2314	251
13 (S-BE)	23 (S-PB)	0.0560	256
13 (S-BE)	24 (S-SB)	********	0
13 (S-BE)	25 (S-SC)	-0.3500	258
13 (S-BE)	26 (S-SN)	0.4274	17
13 (S-BE)	27 (S-SR)	-0.0248	253
13 (S-BE)	28 (S-V)	-0.4252	258
13 (S-BE)	29 (S-W)	-0.0239	20
13 (S-BE)	30 (S-Y)	-0.3478	258
13 (S-BE)	31 (S-ZN)	0.7761	6
13 (S-BE)	32 (S-ZR)	-0.3985	250
13 (S-BE)	33 (S-TH)	0.6005	7
13 (S-BE)	34 (AA-ZN-P)	0.1198	258
13 (S-BE)	35 (AA-SR-P)	0.5259	29
13 (S-BE)	36 (CM-AS)	0.0739	44
14 (S-BI)	15 (S-CD)	********	0
14 (S-BI)	16 (S-CO)	********	0
14 (S-BI)	17 (S-CR)	********	0
14 (S-BI)	18 (S-CU)	********	0
14 (S-BI)	19 (S-LA)	********	0
14 (S-BI)	20 (S-MO)	********	0
14 (S-BI)	21 (S-NB)	********	0
14 (S-BI)	22 (S-NI)	********	0
14 (S-BI)	23 (S-PB)	********	0
14 (S-BI)	24 (S-SB)	********	0
14 (S-BI)	25 (S-SC)	********	0
14 (S-BI)	26 (S-SN)	********	0
14 (S-BI)	27 (S-SR)	********	0
14 (S-BI)	28 (S-V)	********	0
14 (S-BI)	29 (S-W)	********	0
14 (S-BI)	30 (S-Y)	********	0
14 (S-BI)	31 (S-ZN)	********	0
14 (S-BI)	32 (S-ZR)	********	0
14 (S-BI)	33 (S-TH)	********	0
14 (S-BI)	34 (AA-ZN-P)	********	0
14 (S-BI)	35 (AA-SR-P)	********	0
14 (S-BI)	36 (CM-AS)	********	0
15 (S-CD)	16 (S-CO)	********	0

COLUMN	VERSUS COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
15 (S-CD)	17 (S-CR)	********	0
15 (S-CD)	18 (S-CU)	********	0
15 (S-CD)	19 (S-LA)	********	0
15 (S-CD)	20 (S-MO)	********	0
15 (S-CD)	21 (S-NB)	********	0
15 (S-CD)	22 (S-NI)	********	0
15 (S-CD)	23 (S-PB)	********	0
15 (S-CD)	24 (S-SB)	********	0
15 (S-CD)	25 (S-SC)	********	0
15 (S-CD)	26 (S-SN)	********	0
15 (S-CD)	27 (S-SR)	********	0
15 (S-CD)	28 (S-V)	********	0
15 (S-CD)	29 (S-W)	********	0
15 (S-CD)	30 (S-Y)	********	0
15 (S-CD)	31 (S-ZN)	********	0
15 (S-CD)	32 (S-ZR)	********	0
15 (S-CD)	33 (S-TH)	********	0
15 (S-CD)	34 (AA-ZN-P)	********	0
15 (S-CD)	35 (AA-SB-P)	********	0
15 (S-CD)	36 (CM-AS)	********	0
16 (S-CO)	17 (S-CR)	0.5768	278
16 (S-CO)	18 (S-CU)	0.3407	275
16 (S-CO)	19 (S-LA)	0.2958	278
16 (S-CO)	20 (S-MO)	0.1356	180
16 (S-CO)	21 (S-NB)	0.0624	192
16 (S-CO)	22 (S-NI)	0.0732	271
16 (S-CO)	23 (S-PB)	-0.0486	278
16 (S-CO)	24 (S-SB)	********	0
16 (S-CO)	25 (S-SC)	0.4380	278
16 (S-CO)	26 (S-SN)	0.0521	18
16 (S-CO)	27 (S-SR)	-0.0807	276
16 (S-CO)	28 (S-V)	0.5732	278
16 (S-CO)	29 (S-W)	0.1378	20
16 (S-CO)	30 (S-Y)	0.4422	278
16 (S-CO)	31 (S-ZN)	0.0972	8
16 (S-CO)	32 (S-ZR)	0.4446	269
16 (S-CO)	33 (S-TH)	-0.5750	9
16 (S-CO)	34 (AA-ZN-P)	0.2165	278
16 (S-CO)	35 (AA-SB-P)	0.2696	36
16 (S-CO)	36 (CM-AS)	0.2413	50
17 (S-CR)	18 (S-CU)	0.2292	277
17 (S-CR)	19 (S-LA)	0.1939	282
17 (S-CR)	20 (S-MO)	-0.0161	180
17 (S-CR)	21 (S-NB)	-0.0163	192
17 (S-CR)	22 (S-NI)	0.2747	276
17 (S-CR)	23 (S-PB)	-0.1288	281
17 (S-CR)	24 (S-SB)	********	0
17 (S-CR)	25 (S-SC)	0.2547	281
17 (S-CR)	26 (S-SN)	-0.1855	18
17 (S-CR)	27 (S-SR)	-0.1933	278

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COLUMN	VERSUS	COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
17 (S-CR)	28	(S-V)	0.6074	283
17 (S-CR)	29	(S-W)	-0.1352	20
17 (S-CR)	30	(S-Y)	0.3726	281
17 (S-CR)	31	(S-ZN)	-0.1878	8
17 (S-CR)	32	(S-ZR)	0.4234	274
17 (S-CR)	33	(S-TH)	-0.4494	9
17 (S-CR)	34	(AA-ZN-P)	0.0007	283
17 (S-CR)	35	(AA-SB-P)	-0.1337	36
17 (S-CR)	36	(CM-AS)	-0.0714	51
18 (S-CU)	19	(S-LA)	0.2337	277
18 (S-CU)	20	(S-MO)	0.1889	179
18 (S-CU)	21	(S-NB)	0.3747	192
18 (S-CU)	22	(S-NI)	0.0718	270
18 (S-CU)	23	(S-PB)	0.3994	277
18 (S-CU)	24	(S-SB)	********	0
18 (S-CU)	25	(S-SC)	-0.0029	276
18 (S-CU)	26	(S-SN)	0.3179	18
18 (S-CU)	27	(S-SR)	0.0620	274
18 (S-CU)	28	(S-V)	0.2005	277
18 (S-CU)	29	(S-W)	0.5708	20
18 (S-CU)	30	(S-Y)	0.1751	276
18 (S-CU)	31	(S-ZN)	0.8892	8
18 (S-CU)	32	(S-ZR)	0.2633	268
18 (S-CU)	33	(S-TH)	0.2868	9
18 (S-CU)	34	(AA-ZN-P)	0.8081	277
18 (S-CU)	35	(AA-SB-P)	0.9516	36
18 (S-CU)	36	(CM-AS)	0.4412	50
19 (S-LA)	20	(S-MO)	-0.0088	180
19 (S-LA)	21	(S-NB)	0.2966	192
19 (S-LA)	22	(S-NI)	-0.4011	275
19 (S-LA)	23	(S-PB)	0.0145	280
19 (S-LA)	24	(S-SB)	********	0
19 (S-LA)	25	(S-SC)	0.2812	281
19 (S-LA)	26	(S-SN)	0.0503	18
19 (S-LA)	27	(S-SR)	0.4619	277
19 (S-LA)	28	(S-V)	0.5007	282
19 (S-LA)	29	(S-W)	0.3888	20
19 (S-LA)	30	(S-Y)	0.6534	281
19 (S-LA)	31	(S-ZN)	0.3219	8
19 (S-LA)	32	(S-ZR)	0.5172	273
19 (S-LA)	33	(S-TH)	0.6697	9
19 (S-LA)	34	(AA-ZN-P)	0.1144	282
19 (S-LA)	35	(AA-SB-P)	0.2435	36
19 (S-LA)	36	(CM-AS)	0.4013	51
20 (S-MO)	21	(S-NB)	-0.0410	125
20 (S-MO)	22	(S-NI)	0.0170	175
20 (S-MO)	23	(S-PB)	0.1297	180
20 (S-MO)	24	(S-SB)	********	0
20 (S-MO)	25	(S-SC)	-0.1835	180
20 (S-MO)	26	(S-SN)	0.1762	16

COLUMN	VERSUS	COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
20 (S-MO)	27	(S-SR)	0.1905	180
20 (S-MO)	28	(S-V)	-0.1365	180
20 (S-MO)	29	(S-W)	-0.1297	20
20 (S-MO)	30	(S-Y)	-0.2081	180
20 (S-MO)	31	(S-ZN)	0.3655	6
20 (S-MO)	32	(S-ZR)	-0.1411	178
20 (S-MO)	33	(S-TH)	-0.3254	6
20 (S-MO)	34	(AA-ZN-P)	0.1219	180
20 (S-MO)	35	(AA-SB-P)	0.2828	24
20 (S-MO)	36	(CM-AS)	-0.0172	39
21 (S-NB)	22	(S-NI)	-0.0301	195
21 (S-NB)	23	(S-PB)	0.2336	192
21 (S-NB)	24	(S-SB)	********	0
21 (S-NB)	25	(S-SC)	-0.0794	192
21 (S-NB)	26	(S-SN)	0.0972	18
21 (S-NB)	27	(S-SR)	0.0272	192
21 (S-NB)	28	(S-V)	0.0666	192
21 (S-NB)	29	(S-W)	0.5763	18
21 (S-NB)	30	(S-Y)	0.3739	192
21 (S-NB)	31	(S-ZN)	0.8732	6
21 (S-NB)	32	(S-ZR)	0.2609	184
21 (S-NB)	33	(S-TH)	-0.1391	8
21 (S-NB)	34	(AA-ZN-P)	0.3545	192
21 (S-NB)	35	(AA-SB-P)	0.8908	25
21 (S-NB)	36	(CM-AS)	0.4241	33
22 (S-NI)	23	(S-PB)	-0.1144	274
22 (S-NI)	24	(S-SB)	********	0
22 (S-NI)	25	(S-SC)	-0.1086	274
22 (S-NI)	26	(S-SN)	0.0251	18
22 (S-NI)	27	(S-SR)	-0.5294	271
22 (S-NI)	28	(S-V)	-0.2646	276
22 (S-NI)	29	(S-W)	-0.1244	19
22 (S-NI)	30	(S-Y)	-0.2226	274
22 (S-NI)	31	(S-ZN)	0.1300	8
22 (S-NI)	32	(S-ZR)	-0.1700	267
22 (S-NI)	33	(S-TH)	-0.2124	9
22 (S-NI)	34	(AA-ZN-P)	0.0106	276
22 (S-NI)	35	(AA-SB-P)	0.0453	36
22 (S-NI)	36	(CM-AS)	-0.1668	51
23 (S-PB)	24	(S-SB)	********	0
23 (S-PB)	25	(S-SC)	-0.0410	279
23 (S-PB)	26	(S-SN)	0.1620	18
23 (S-PB)	27	(S-SR)	0.1971	278
23 (S-PB)	28	(S-V)	-0.1839	281
23 (S-PB)	29	(S-W)	0.4310	20
23 (S-PB)	30	(S-Y)	-0.1520	279
23 (S-PB)	31	(S-ZN)	0.6675	8
23 (S-PB)	32	(S-ZR)	-0.2090	272
23 (S-PB)	33	(S-TH)	0.3568	9
23 (S-PB)	34	(AA-ZN-P)	0.4578	281

COLUMN	VERSUS COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
23 (S-PB)	35 (AA-SB-P)	0.4936	36
23 (S-PB)	36 (CM-AS)	0.2724	50
24 (S-SB)	25 (S-SC)	********	0
24 (S-SB)	26 (S-SN)	********	0
24 (S-SB)	27 (S-SR)	********	0
24 (S-SB)	28 (S-V)	********	0
24 (S-SB)	29 (S-W)	********	0
24 (S-SB)	30 (S-Y)	********	0
24 (S-SB)	31 (S-ZN)	********	0
24 (S-SB)	32 (S-ZR)	********	0
24 (S-SB)	33 (S-TH)	********	0
24 (S-SB)	34 (AA-ZN-P)	********	0
24 (S-SB)	35 (AA-SB-P)	********	0
24 (S-SB)	36 (CM-AS)	********	0
25 (S-SC)	26 (S-SN)	0.0583	18
25 (S-SC)	27 (S-SR)	0.0218	276
25 (S-SC)	28 (S-V)	0.2841	281
25 (S-SC)	29 (S-W)	0.0116	20
25 (S-SC)	30 (S-Y)	0.5003	281
25 (S-SC)	31 (S-ZN)	-0.3151	8
25 (S-SC)	32 (S-ZR)	0.2990	272
25 (S-SC)	33 (S-TH)	0.0165	9
25 (S-SC)	34 (AA-ZN-P)	-0.0265	281
25 (S-SC)	35 (AA-SB-P)	-0.3023	36
25 (S-SC)	36 (CM-AS)	-0.1061	51
26 (S-SN)	27 (S-SR)	0.0000	18
26 (S-SN)	28 (S-V)	-0.1496	18
26 (S-SN)	29 (S-W)	********	2
26 (S-SN)	30 (S-Y)	0.3778	18
26 (S-SN)	31 (S-ZN)	********	1
26 (S-SN)	32 (S-ZR)	-0.0760	18
26 (S-SN)	33 (S-TH)	********	1
26 (S-SN)	34 (AA-ZN-P)	-0.0081	18
26 (S-SN)	35 (AA-SB-P)	1.0000	3
26 (S-SN)	36 (CM-AS)	********	5
27 (S-SR)	28 (S-V)	0.0839	278
27 (S-SR)	29 (S-W)	-0.0858	20
27 (S-SR)	30 (S-Y)	0.1963	276
27 (S-SR)	31 (S-ZN)	-0.2214	8
27 (S-SR)	32 (S-ZR)	0.0987	270
27 (S-SR)	33 (S-TH)	0.2704	9
27 (S-SR)	34 (AA-ZN-P)	0.0577	278
27 (S-SR)	35 (AA-SB-P)	0.2702	36
27 (S-SR)	36 (CM-AS)	0.2513	50
28 (S-V)	29 (S-W)	0.0656	20
28 (S-V)	30 (S-Y)	0.6385	281
28 (S-V)	31 (S-ZN)	-0.1607	8
28 (S-V)	32 (S-ZR)	0.6424	274
28 (S-V)	33 (S-TH)	-0.4898	9
28 (S-V)	34 (AA-ZN-P)	0.0141	283

COLUMN	VERSUS	COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
28 (S-V)	35 (AA-SB-P)	-0.0893	36
28 (S-V)	36 (CM-AS)	0.3246	51
29 (S-W)	30 (S-Y)	0.3542	20
29 (S-W)	31 (S-ZN)	0.9177	3
29 (S-W)	32 (S-ZR)	0.1777	20
29 (S-W)	33 (S-TH)	********	1
29 (S-W)	34 (AA-ZN-P)	0.5969	20
29 (S-W)	35 (AA-SB-P)	0.9255	5
29 (S-W)	36 (CM-AS)	0.6925	7
30 (S-Y)	31 (S-ZN)	0.2478	8
30 (S-Y)	32 (S-ZR)	0.6379	272
30 (S-Y)	33 (S-TH)	-0.0224	9
30 (S-Y)	34 (AA-ZN-P)	0.0092	281
30 (S-Y)	35 (AA-SB-P)	-0.0277	36
30 (S-Y)	36 (CM-AS)	0.3793	51
31 (S-ZN)	32 (S-ZR)	0.6672	7
31 (S-ZN)	33 (S-TH)	********	1
31 (S-ZN)	34 (AA-ZN-P)	0.9025	8
31 (S-ZN)	35 (AA-SB-P)	1.0000	3
31 (S-ZN)	36 (CM-AS)	0.5000	3
32 (S-ZR)	33 (S-TH)	-0.1104	9
32 (S-ZR)	34 (AA-ZN-P)	0.0767	274
32 (S-ZR)	35 (AA-SB-P)	0.1662	34
32 (S-ZR)	36 (CM-AS)	0.3231	50
33 (S-TH)	34 (AA-ZN-P)	0.0812	9
33 (S-TH)	35 (AA-SB-P)	********	1
33 (S-TH)	36 (CM-AS)	********	2
34 (AA-ZN-P)	35 (AA-SB-P)	0.9609	36
34 (AA-ZN-P)	36 (CM-AS)	0.4277	51
35 (AA-SB-P)	36 (CM-AS)	0.8814	12

ARRAY OF MEANS -

		1 LATITUDE	2 LONGITUD	3 S-FE%	4 S-MG%	5 S-CA%	6 S-TI%	7 S-MN	8 S-AG	9 S-AS	10 S-AU
1	LATITUDE	1.6582	1.6582	1.6582	1.6582	1.6582	1.6582	1.6582	1.6585	**********	**********
2	LONGITUD	2.0531	2.0531	2.0531	2.0531	2.0531	2.0531	2.0531	2.0531	**********	**********
3	S-FE%	0.7502	0.7502	0.7514	0.7514	0.7514	0.7514	0.7511	0.6392	**********	**********
4	S-MG%	0.0444	0.0444	0.0435	0.0435	0.0435	0.0435	0.0431	0.1827	**********	**********
5	S-CA%	0.1473	0.1473	0.1475	0.1475	0.1475	0.1475	0.1469	0.2743	**********	**********
6	S-TI%	-0.4495	-0.4495	-0.4493	-0.4493	-0.4493	-0.4493	-0.4490	-0.5094	**********	**********
7	S-MN	3.0063	3.0063	3.0068	3.0068	3.0068	3.0068	3.0068	3.0287	**********	**********
8	S-AG	-0.0498	-0.0498	-0.0498	-0.0498	-0.0498	-0.0498	-0.0498	-0.0498	**********	**********
9	S-AS	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
10	S-AU	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
11	S-B	1.3590	1.3590	1.3565	1.3565	1.3565	1.3565	1.3567	1.6294	**********	**********
12	S-BA	2.6973	2.6973	2.6978	2.6978	2.6978	2.6978	2.6961	2.6916	**********	**********
13	S-BE	0.1314	0.1314	0.1318	0.1318	0.1318	0.1318	0.1323	0.2075	**********	**********
14	S-BI	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
15	S-CD	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
16	S-CO	1.1601	1.1601	1.1601	1.1601	1.1601	1.1601	1.1595	1.1557	**********	**********
17	S-CR	1.8065	1.8065	1.8068	1.8068	1.8068	1.8068	1.8080	1.8358	**********	**********
18	S-CU	1.4442	1.4442	1.4447	1.4447	1.4447	1.4447	1.4437	1.6417	**********	**********
19	S-LA	2.0074	2.0074	2.0036	2.0086	2.0086	2.0086	2.0080	1.8741	**********	**********
20	S-MO	1.1574	1.1574	1.1604	1.1604	1.1604	1.1604	1.1547	1.3170	**********	**********
21	S-NB	1.3690	1.3690	1.3683	1.3683	1.3683	1.3683	1.3686	1.3691	**********	**********
22	S-NI	1.0407	1.0407	1.0405	1.0405	1.0405	1.0405	1.0412	1.1679	**********	**********
23	S-PB	1.6955	1.6955	1.6956	1.6956	1.6956	1.6956	1.6945	1.9106	**********	**********
24	S-SB	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
25	S-SC	1.1112	1.1112	1.1116	1.1116	1.1116	1.1116	1.1114	1.0526	**********	**********
26	S-SN	1.0265	1.0265	1.0265	1.0265	1.0265	1.0265	1.0265	1.0000	**********	**********
27	S-SR	2.4747	2.4747	2.4763	2.4763	2.4763	2.4763	2.4750	2.4187	**********	**********
28	S-V	2.2138	2.2138	2.2150	2.2150	2.2150	2.2150	2.2147	2.0552	**********	**********
29	S-W	1.7510	1.7510	1.7510	1.7510	1.7510	1.7510	1.7510	1.7925	**********	**********
30	S-Y	1.7531	1.7531	1.7537	1.7537	1.7537	1.7537	1.7534	1.5775	**********	**********
31	S-ZN	2.5874	2.5874	2.5874	2.5874	2.5874	2.5874	2.5874	2.7993	**********	**********
32	S-ZR	2.5582	2.5582	2.5609	2.5609	2.5609	2.5609	2.5604	2.3724	**********	**********
33	S-TH	2.1534	2.1534	2.1534	2.1534	2.1534	2.1534	2.1534	**********	**********	**********
34	AA-ZN-P	1.7462	1.7462	1.7461	1.7461	1.7461	1.7461	1.7446	1.9888	**********	**********
35	AA-SB-P	0.1182	0.1182	0.1182	0.1182	0.1182	0.1182	0.1182	0.3295	**********	**********
36	CH-AS	1.1034	1.1034	1.1034	1.1034	1.1034	1.1034	1.1054	1.2282	**********	**********

ARRAY OF MEANS - CONT.

		11 S-B	12 S-BA	13 S-BE	14 S-BI	15 S-CD	16 S-CO	17 S-CR	18 S-CU	19 S-LA	20 S-MO
1	LATITUDE	1.6582	1.6582	1.6582	**********	**********	1.6582	1.6582	1.6582	1.6582	1.6582
2	LONGITUD	2.0531	2.0531	2.0531	**********	**********	2.0531	2.0531	2.0531	2.0531	2.0532
3	S-FE%	0.7457	0.7514	0.7815	**********	**********	0.7673	0.7514	0.7670	0.7541	0.7489
4	S-MG%	0.0496	0.0435	-0.0020	**********	**********	0.0457	0.0435	0.0427	0.0412	0.0387
5	S-CA%	0.1489	0.1475	0.0856	**********	**********	0.1526	0.1475	0.1489	0.1450	0.1324
6	S-TI%	-0.4495	-0.4493	-0.4105	**********	**********	-0.4386	-0.4493	-0.4402	-0.4462	-0.4316
7	S-MN	3.0051	3.0068	3.0324	**********	**********	3.0203	3.0068	3.0242	3.0094	3.0429
8	S-AG	-0.0498	-0.0498	-0.0506	**********	**********	-0.0498	-0.0498	-0.0498	-0.0498	-0.0476
9	S-AS	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
10	S-AU	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
11	S-B	1.3565	1.3565	1.3439	**********	**********	1.3516	1.3565	1.3484	1.3560	1.3697
12	S-BA	2.6981	2.6978	2.7455	**********	**********	2.7105	2.6978	2.7125	2.7022	2.7392
13	S-BE	0.1339	0.1318	0.1318	**********	**********	0.1306	0.1318	0.1333	0.1318	0.1538
14	S-BI	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
15	S-CD	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
16	S-CO	1.1571	1.1601	1.1703	**********	**********	1.1601	1.1601	1.1646	1.1601	1.1589
17	S-CR	1.8027	1.8068	1.8044	**********	**********	1.8126	1.8068	1.8124	1.8080	1.7776
18	S-CU	1.4425	1.4447	1.4620	**********	**********	1.4501	1.4447	1.4447	1.4447	1.4877
19	S-LA	2.0051	2.0086	2.0390	**********	**********	2.0159	2.0086	2.0178	2.0086	2.0080
20	S-MO	1.1631	1.1604	1.1767	**********	**********	1.1604	1.1604	1.1613	1.1604	1.1604
21	S-NB	1.3701	1.3683	1.3682	**********	**********	1.3683	1.3683	1.3683	1.3683	1.3740
22	S-NI	1.0424	1.0405	1.0359	**********	**********	1.0413	1.0405	1.0392	1.0396	1.0610
23	S-PB	1.7009	1.6956	1.6970	**********	**********	1.6971	1.6956	1.6986	1.6963	1.7532
24	S-SB	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
25	S-SC	1.1131	1.1116	1.1258	**********	**********	1.1161	1.1116	1.1180	1.1116	1.1134
26	S-SN	1.0281	1.0265	1.0281	**********	**********	1.0265	1.0265	1.0265	1.0265	1.0298
27	S-SR	2.4761	2.4763	2.4919	**********	**********	2.4776	2.4763	2.4809	2.4769	2.4954
28	S-V	2.2069	2.2150	2.2383	**********	**********	2.2290	2.2150	2.2291	2.2183	2.1772
29	S-W	1.7510	1.7510	1.7510	**********	**********	1.7510	1.7510	1.7510	1.7510	1.7510
30	S-Y	1.7504	1.7537	1.7789	**********	**********	1.7567	1.7537	1.7603	1.7537	1.7308
31	S-ZN	2.5714	2.5874	2.6165	**********	**********	2.5874	2.5874	2.5874	2.5874	2.6165
32	S-ZR	2.5561	2.5609	2.6057	**********	**********	2.5711	2.5609	2.5685	2.5648	2.5331
33	S-TH	2.1534	2.1534	2.1542	**********	**********	2.1534	2.1534	2.1534	2.1534	2.1799
34	AA-ZN-P	1.7451	1.7461	1.7553	**********	**********	1.7528	1.7461	1.7561	1.7470	1.8005
35	AA-SB-P	0.1216	0.1182	0.1303	**********	**********	0.1182	0.1182	0.1182	0.1182	0.1773
36	CM-AS	1.1054	1.1034	1.0913	**********	**********	1.1054	1.1034	1.1054	1.1034	1.1043

ARRAY OF MEANS - CONT.

		21 S-NB	22 S-NI	23 S-PB	24 S-SB	25 S-SC	26 S-SN	27 S-SR	28 S-V	29 S-W	30 S-Y
1	LATITUDE	1.6579	1.6583	1.6582	**********	1.6582	1.6580	1.6582	1.6582	1.6579	1.6582
2	LONGITUD	2.0530	2.0531	2.0531	**********	2.0531	2.0529	2.0531	2.0531	2.0532	2.0531
3	S-FE%	0.9062	0.7487	0.7561	**********	0.7578	0.8143	0.7649	0.7514	0.8343	0.7578
4	S-MG%	-0.0100	0.0540	0.0482	**********	0.0384	0.0611	0.0523	0.0435	-0.0803	0.0384
5	S-CA%	0.1714	0.1480	0.1550	**********	0.1420	0.2386	0.1647	0.1475	0.0747	0.1420
6	S-TI%	-0.3674	-0.4475	-0.4481	**********	-0.4424	-0.3627	-0.4444	-0.4493	-0.4157	-0.4424
7	S-MN	3.1116	3.0076	3.0140	**********	3.0119	3.1101	3.0208	3.0068	3.1229	3.0119
8	S-AG	-0.0014	-0.0496	-0.0498	**********	-0.0498	-0.3010	-0.0498	-0.0498	0.1884	-0.0498
9	S-AS	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
10	S-AU	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
11	S-B	1.2018	1.3644	1.3524	**********	1.3556	1.1537	1.3484	1.3565	1.3746	1.3556
12	S-BA	2.7732	2.6946	2.7011	**********	2.7071	2.7698	2.7033	2.6978	2.8108	2.7071
13	S-BE	0.1165	0.1296	0.1328	**********	0.1318	0.1006	0.1316	0.1318	0.2448	0.1318
14	S-BI	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
15	S-CD	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
16	S-CO	1.2002	1.1664	1.1601	**********	1.1601	1.1953	1.1623	1.1601	1.2056	1.1601
17	S-CR	1.8350	1.8145	1.8084	**********	1.8092	1.7604	1.8099	1.8068	1.8718	1.8092
18	S-CU	1.5183	1.4478	1.4447	**********	1.4474	1.4130	1.4528	1.4447	1.7322	1.4474
19	S-LA	2.1576	2.0045	2.0122	**********	2.0111	2.1452	2.0172	2.0086	2.0667	2.0111
20	S-MO	1.1858	1.1640	1.1604	**********	1.1604	1.1831	1.1604	1.1604	1.3894	1.1604
21	S-NB	1.3683	1.3670	1.3633	**********	1.3683	1.3721	1.3683	1.3683	1.3925	1.3683
22	S-NI	0.9793	1.0405	1.0408	**********	1.0408	0.9328	1.0395	1.0405	1.1713	1.0408
23	S-PB	1.7434	1.6955	1.6956	**********	1.6963	1.8190	1.7007	1.6956	1.8430	1.6963
24	S-SB	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
25	S-SC	1.1759	1.1149	1.1146	**********	1.1116	1.2729	1.1186	1.1116	1.0601	1.1116
26	S-SN	1.0265	1.0265	1.0265	**********	1.0265	1.0265	1.0265	1.0265	1.0000	1.0265
27	S-SR	2.5778	2.4695	2.4763	**********	2.4776	2.6208	2.4763	2.4763	2.5736	2.4776
28	S-V	2.3604	2.2136	2.2187	**********	2.2226	2.2369	2.2251	2.2150	2.2242	2.2226
29	S-W	1.7467	1.7537	1.7510	**********	1.7510	1.9225	1.7510	1.7510	1.7510	1.7510
30	S-Y	1.8687	1.7464	1.7557	**********	1.7537	1.9087	1.7579	1.7537	1.7325	1.7537
31	S-ZN	2.6165	2.5874	2.5874	**********	2.5874	2.3010	2.5874	2.5874	2.7993	2.5874
32	S-ZR	2.6775	2.5562	2.5588	**********	2.5700	2.6381	2.5622	2.5609	2.5673	2.5700
33	S-TH	2.1725	2.1534	2.1534	**********	2.1534	2.3010	2.1534	2.1534	2.3010	2.1534
34	AA-ZN-P	1.7991	1.7552	1.7508	**********	1.7480	1.8282	1.7540	1.7461	1.9769	1.7480
35	AA-SB-P	0.1391	0.1182	0.1182	**********	0.1182	0.1003	0.1182	0.1182	0.6352	0.1182
36	CM-AS	1.1255	1.1034	1.1054	**********	1.1034	1.0954	1.1054	1.1034	1.2653	1.1034

ARRAY OF MEANS - CONT.

		31 S-ZN	32 S-ZR	33 S-TH	34 AA-ZN-P	35 AA-SB-P	36 CM-AS
1	LATITUDE	1.6579	1.6582	1.6579	1.6582	1.6588	1.6583
2	LONGITUD	2.0532	2.0531	2.0531	2.0531	2.0529	2.0532
3	S-FE%	0.9795	0.7412	0.9908	0.7514	0.7169	0.7052
4	S-MG%	-0.1076	0.0499	-0.0493	0.0435	0.2031	0.0220
5	S-CA%	0.1037	0.1528	0.1761	0.1475	0.4229	0.1254
6	S-TI%	-0.3565	-0.4509	-0.3834	-0.4493	-0.4946	-0.4280
7	S-MN	3.2542	3.0064	3.1647	3.0068	2.9611	2.9944
8	S-AG	0.7964	-0.0498	**********	-0.0498	0.1299	0.1124
9	S-AS	**********	**********	**********	**********	**********	**********
10	S-AU	**********	**********	**********	**********	**********	**********
11	S-B	1.3222	1.3633	1.1729	1.3565	1.3567	1.4047
12	S-BA	2.7188	2.7011	2.7555	2.6978	2.5327	2.6632
13	S-BE	0.1799	0.1353	0.1185	0.1318	0.0823	0.1541
14	S-BI	**********	**********	**********	**********	**********	**********
15	S-CD	**********	**********	**********	**********	**********	**********
16	S-CO	1.3636	1.1561	1.2316	1.1601	1.2324	1.1648
17	S-CR	1.9043	1.7977	1.9550	1.8068	1.9629	1.8109
18	S-CU	1.9153	1.4380	1.6743	1.4447	1.5589	1.4844
19	S-LA	2.1072	2.0033	2.2897	2.0086	1.9800	1.9817
20	S-MO	1.2999	1.1639	1.1382	1.1604	1.1197	1.2357
21	S-NB	1.4374	1.3663	1.4168	1.3683	1.3669	1.4370
22	S-NI	1.0403	1.0423	1.0243	1.0405	1.0896	1.0617
23	S-PB	1.8195	1.7048	1.6728	1.6956	1.8525	1.7767
24	S-SB	**********	**********	**********	**********	**********	**********
25	S-SC	1.0403	1.1141	1.1279	1.1116	1.1549	1.0935
26	S-SN	1.0000	1.0265	1.0000	1.0265	1.0537	1.0000
27	S-SR	2.4844	2.4774	2.6055	2.4763	2.4339	2.4551
28	S-V	2.4239	2.2001	2.4664	2.2150	2.2442	2.1722
29	S-W	1.8480	1.7510	1.8451	1.7510	1.7884	1.7837
30	S-Y	1.8207	1.7460	1.9713	1.7537	1.7251	1.7363
31	S-ZN	2.5874	2.5714	2.3010	2.5874	2.7993	2.7993
32	S-ZR	2.7412	2.5609	2.7653	2.5609	2.5403	2.5175
33	S-TH	2.0000	2.1534	2.1534	2.1534	2.0000	2.3010
34	AA-ZN-P	2.5178	1.7481	1.7705	1.7461	1.8653	1.8255
35	AA-SB-P	0.7993	0.1252	0.0000	0.1182	0.1182	0.3044
36	CM-AS	1.5604	1.0934	1.5396	1.1034	1.1841	1.1034

ARRAY OF VARIANCES -

		1 LATITUDE	2 LONGITUD	3 S-FE%	4 S-MG%	5 S-CA%	6 S-TI%	7 S-MN	8 S-AG	9 S-AS	10 S-AU
1	LATITUDE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	**********	**********
2	LONGITUD	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	**********	**********
3	S-FE%	0.110	0.110	0.109	0.109	0.109	0.109	0.109	0.068	**********	**********
4	S-MG%	0.079	0.079	0.078	0.078	0.078	0.078	0.078	0.101	**********	**********
5	S-CA%	0.137	0.137	0.136	0.136	0.136	0.136	0.137	0.168	**********	**********
6	S-TI%	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.051	**********	**********
7	S-MN	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	**********	**********
8	S-AG	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	**********	**********
9	S-AS	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
10	S-AU	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
11	S-B	0.111	0.111	0.111	0.111	0.111	0.111	0.111	0.118	**********	**********
12	S-BA	0.064	0.064	0.063	0.063	0.063	0.063	0.063	0.061	**********	**********
13	S-BE	0.019	0.019	0.018	0.018	0.018	0.018	0.018	0.021	**********	**********
14	S-BI	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
15	S-CD	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
16	S-CO	0.037	0.037	0.036	0.036	0.036	0.036	0.036	0.029	**********	**********
17	S-CR	0.066	0.066	0.066	0.066	0.066	0.066	0.065	0.031	**********	**********
18	S-CU	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.129	**********	**********
19	S-LA	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.098	**********	**********
20	S-MO	0.126	0.126	0.127	0.127	0.127	0.127	0.122	0.145	**********	**********
21	S-NB	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.024	**********	**********
22	S-NI	0.048	0.048	0.047	0.047	0.047	0.047	0.047	0.039	**********	**********
23	S-PB	0.072	0.072	0.071	0.071	0.071	0.071	0.071	0.088	**********	**********
24	S-SB	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
25	S-SC	0.048	0.048	0.048	0.048	0.048	0.048	0.048	0.032	**********	**********
26	S-SN	0.006	0.006	0.006	0.006	0.006	0.006	0.006	**********	**********	**********
27	S-SR	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.060	**********	**********
28	S-V	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.053	**********	**********
29	S-W	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.019	**********	**********
30	S-Y	0.074	0.074	0.074	0.074	0.074	0.074	0.074	0.058	**********	**********
31	S-ZN	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.030	**********	**********
32	S-ZR	0.117	0.117	0.117	0.117	0.117	0.117	0.118	0.076	**********	**********
33	S-TH	0.036	0.036	0.036	0.036	0.036	0.036	0.036	**********	**********	**********
34	AA-ZN-P	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.140	**********	**********
35	AA-SB-P	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.119	**********	**********
36	CM-AS	0.042	0.042	0.042	0.042	0.042	0.042	0.043	0.056	**********	**********

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ARRAY OF VARIANCES - CONT.

		11 S-B	12 S-BA	13 S-BE	14 S-BI	15 S-CD	16 S-CO	17 S-CR	18 S-CU	19 S-LA	20 S-MO
1	LATITUDE	0.000	0.000	0.000	**********	**********	0.000	0.000	0.000	0.000	0.000
2	LONGITUD	-0.000	-0.000	-0.000	**********	**********	-0.000	-0.000	-0.000	-0.000	-0.000
3	S-FE%	0.109	0.109	0.085	**********	**********	0.096	0.109	0.100	0.107	0.066
4	S-MG%	0.077	0.076	0.046	**********	**********	0.071	0.078	0.070	0.077	0.072
5	S-CA%	0.138	0.136	0.090	**********	**********	0.124	0.136	0.120	0.135	0.115
6	S-TI%	0.047	0.047	0.024	**********	**********	0.039	0.047	0.042	0.044	0.034
7	S-MN	0.071	0.070	0.059	**********	**********	0.059	0.070	0.056	0.068	0.051
8	S-AG	0.125	0.125	0.134	**********	**********	0.125	0.125	0.125	0.125	0.124
9	S-AS	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
10	S-AU	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
11	S-B	0.111	0.111	0.110	**********	**********	0.110	0.111	0.109	0.111	0.091
12	S-BA	0.064	0.063	0.028	**********	**********	0.050	0.063	0.052	0.058	0.043
13	S-BE	0.018	0.018	0.018	**********	**********	0.017	0.018	0.018	0.018	0.017
14	S-BI	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
15	S-CD	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
16	S-CO.	0.036	0.036	0.033	**********	**********	0.036	0.036	0.035	0.036	0.032
17	S-CR	0.065	0.066	0.064	**********	**********	0.065	0.066	0.065	0.065	0.058
18	S-CU	0.104	0.103	0.096	**********	**********	0.100	0.103	0.103	0.103	0.098
19	S-LA	0.084	0.083	0.069	**********	**********	0.080	0.083	0.079	0.083	0.073
20	S-MO	0.127	0.127	0.126	**********	**********	0.127	0.127	0.127	0.127	0.127
21	S-NB	0.015	0.015	0.015	**********	**********	0.015	0.015	0.015	0.015	0.018
22	S-NI	0.048	0.047	0.050	**********	**********	0.048	0.047	0.048	0.047	0.052
23	S-PB	0.070	0.071	0.064	**********	**********	0.072	0.071	0.069	0.071	0.073
24	S-SB	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
25	S-SC	0.048	0.048	0.047	**********	**********	0.047	0.048	0.046	0.048	0.053
26	S-SN	0.007	0.006	0.007	**********	**********	0.006	0.006	0.006	0.006	0.007
27	S-SR	0.059	0.058	0.058	**********	**********	0.058	0.058	0.057	0.058	0.061
28	S-V	0.117	0.120	0.094	**********	**********	0.110	0.120	0.112	0.117	0.065
29	S-W	0.010	0.010	0.010	**********	**********	0.010	0.010	0.010	0.010	0.010
30	S-Y	0.074	0.074	0.060	**********	**********	0.074	0.074	0.071	0.074	0.065
31	S-ZN	0.075	0.067	0.073	**********	**********	0.067	0.067	0.067	0.067	0.073
32	S-ZR	0.117	0.117	0.076	**********	**********	0.104	0.117	0.106	0.113	0.088
33	S-TH	0.036	0.036	0.040	**********	**********	0.036	0.036	0.036	0.036	0.043
34	AA-ZN-P	0.072	0.072	0.075	**********	**********	0.069	0.072	0.068	0.072	0.078
35	AA-SB-P	0.064	0.063	0.071	**********	**********	0.063	0.063	0.063	0.063	0.085
36	CM-AS	0.043	0.042	0.033	**********	**********	0.043	0.042	0.043	0.042	0.035

ARRAY OF VARIANCES - CONT.

		21 S-NB	22 S-NI	23 S-PB	24 S-SB	25 S-SC	26 S-SN	27 S-SR	28 S-V	29 S-W	30 S-Y
1	LATITUDE	0.000	0.000	0.000	**********	0.000	0.000	0.000	0.000	0.000	0.000
2	LONGITUD	-0.000	0.000	-0.000	**********	-0.000	-0.000	-0.000	-0.000	0.000	-0.000
3	S-FE%	0.037	0.111	0.107	**********	0.104	0.024	0.099	0.109	0.044	0.104
4	S-MG%	0.033	0.074	0.076	**********	0.075	0.013	0.074	0.078	0.050	0.075
5	S-CA%	0.011	0.140	0.129	**********	0.133	0.004	0.122	0.136	0.050	0.133
6	S-TI%	0.015	0.047	0.047	**********	0.040	0.010	0.045	0.047	0.016	0.040
7	S-MN	0.022	0.071	0.063	**********	0.067	0.021	0.059	0.070	0.033	0.067
8	S-AG	0.194	0.125	0.125	**********	0.125	**********	0.125	0.125	0.280	0.125
9	S-AS	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
10	S-AU	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
11	S-B	0.043	0.111	0.109	**********	0.111	0.013	0.108	0.111	0.100	0.111
12	S-BA	0.018	0.064	0.062	**********	0.051	0.021	0.062	0.063	0.016	0.051
13	S-BE	0.016	0.019	0.018	**********	0.018	0.010	0.017	0.018	0.010	0.018
14	S-BI	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
15	S-CD	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
16	S-CO	0.028	0.035	0.036	**********	0.036	0.012	0.036	0.036	0.033	0.036
17	S-CR	0.070	0.064	0.066	**********	0.065	0.025	0.065	0.066	0.084	0.065
18	S-CU	0.083	0.103	0.103	**********	0.101	0.039	0.098	0.103	0.177	0.101
19	S-LA	0.020	0.084	0.081	**********	0.081	0.014	0.080	0.083	0.062	0.081
20	S-MO	0.111	0.130	0.127	**********	0.127	0.065	0.127	0.127	0.117	0.127
21	S-NB	0.015	0.015	0.015	**********	0.015	0.013	0.015	0.015	0.025	0.015
22	S-NI	0.035	0.047	0.048	**********	0.047	0.012	0.048	0.047	0.070	0.047
23	S-PB	0.044	0.073	0.071	**********	0.072	0.022	0.069	0.071	0.088	0.072
24	S-SB	**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
25	S-SC	0.042	0.048	0.047	**********	0.048	0.040	0.046	0.048	0.022	0.048
26	S-SN	0.006	0.006	0.006	**********	0.006	0.006	0.006	0.006	0.000	0.006
27	S-SR	0.025	0.057	0.058	**********	0.058	0.015	0.058	0.058	0.048	0.058
28	S-V	0.071	0.122	0.119	**********	0.112	0.022	0.116	0.120	0.047	0.112
29	S-W	0.011	0.010	0.010	**********	0.010	0.012	0.010	0.010	0.010	0.010
30	S-Y	0.043	0.074	0.074	**********	0.074	0.018	0.074	0.074	0.033	0.074
31	S-ZN	0.073	0.067	0.067	**********	0.067	**********	0.067	0.067	0.030	0.067
32	S-ZR	0.065	0.119	0.117	**********	0.107	0.044	0.115	0.117	0.086	0.107
33	S-TH	0.037	0.036	0.036	**********	0.036	**********	0.036	0.036	**********	0.036
34	AA-ZN-P	0.065	0.069	0.069	**********	0.072	0.038	0.068	0.072	0.259	0.072
35	AA-SB-P	0.079	0.063	0.063	**********	0.063	0.030	0.063	0.063	0.069	0.063
36	CM-AS	0.058	0.042	0.043	**********	0.042	0.019	0.043	0.042	0.082	0.042

ARRAY OF VARIANCES - CONT.

		31 S-ZN	32 S-ZR	33 S-TH	34 AA-ZN-P	35 AA-SB-P	36 CM-AS
1	LATITUDE	0.000	0.000	0.000	0.000	0.000	0.000
2	LONGITUD	0.000	-0.000	-0.000	-0.000	-0.000	0.000
3	S-FE%	0.049	0.106	0.052	0.109	0.108	0.093
4	S-MG%	0.041	0.079	0.013	0.078	0.127	0.090
5	S-CA%	0.040	0.137	-0.000	0.136	0.166	0.202
6	S-TI%	0.011	0.048	0.020	0.047	0.092	0.046
7	S-MN	0.019	0.069	0.025	0.070	0.056	0.087
8	S-AG	0.007	0.125	**********	0.125	0.199	0.229
9	S-AS	**********	**********	**********	**********	**********	**********
10	S-AU	**********	**********	**********	**********	**********	**********
11	S-B	0.101	0.109	0.019	0.111	0.143	0.109
12	S-BA	0.040	0.064	0.016	0.063	0.085	0.062
13	S-BE	0.022	0.019	0.014	0.018	0.018	0.016
14	S-BI	**********	**********	**********	**********	**********	**********
15	S-CD	**********	**********	**********	**********	**********	**********
16	S-CO	0.047	0.035	0.018	0.036	0.041	0.032
17	S-CR	0.065	0.063	0.054	0.066	0.050	0.068
18	S-CU	0.226	0.101	0.005	0.103	0.141	0.166
19	S-LA	0.082	0.083	0.041	0.083	0.132	0.081
20	S-MO	0.104	0.127	0.129	0.127	0.189	0.187
21	S-NB	0.055	0.014	0.021	0.015	0.020	0.032
22	S-NI	0.060	0.048	0.017	0.047	0.034	0.041
23	S-PB	0.331	0.070	0.059	0.071	0.089	0.099
24	S-SB	**********	**********	**********	**********	**********	**********
25	S-SC	0.019	0.048	0.036	0.048	0.058	0.035
26	S-SN	**********	0.006	**********	0.006	0.010	0.000
27	S-SR	0.069	0.059	0.022	0.058	0.029	0.056
28	S-V	0.143	0.113	0.122	0.120	0.124	0.088
29	S-W	0.023	0.010	**********	0.010	0.018	0.014
30	S-Y	0.035	0.074	0.024	0.074	0.120	0.071
31	S-ZN	0.067	0.075	**********	0.067	0.030	0.030
32	S-ZR	0.040	0.117	0.038	0.117	0.202	0.122
33	S-TH	**********	0.036	0.036	0.036	**********	0.000
34	AA-ZN-P	0.204	0.071	0.011	0.072	0.142	0.140
35	AA-SB-P	0.030	0.066	**********	0.063	0.063	0.128
36	CM-AS	0.005	0.038	0.264	0.042	0.058	0.042

COLUMN	VERSUS	COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
1 (LATITUDE)	2	(LONGITUD)	********	281
1 (LATITUDE)	3	(S-FE%)	-0.5614	281
1 (LATITUDE)	4	(S-MG%)	0.3399	281
1 (LATITUDE)	5	(S-CA%)	0.0021	281
1 (LATITUDE)	6	(S-TI%)	-0.2868	281
1 (LATITUDE)	7	(S-MN)	-0.4666	280
1 (LATITUDE)	8	(S-AG)	-0.0780	33
1 (LATITUDE)	9	(S-AS)	********	0
1 (LATITUDE)	10	(S-AU)	********	0
1 (LATITUDE)	11	(S-B)	0.5609	276
1 (LATITUDE)	12	(S-BA)	-0.3150	281
1 (LATITUDE)	13	(S-BE)	0.1081	256
1 (LATITUDE)	14	(S-BI)	********	0
1 (LATITUDE)	15	(S-CD)	********	0
1 (LATITUDE)	16	(S-CO)	-0.1603	276
1 (LATITUDE)	17	(S-CR)	0.0284	281
1 (LATITUDE)	18	(S-CU)	-0.2500	275
1 (LATITUDE)	19	(S-LA)	-0.5028	280
1 (LATITUDE)	20	(S-MO)	-0.1802	179
1 (LATITUDE)	21	(S-NB)	-0.2133	190
1 (LATITUDE)	22	(S-NI)	0.4475	275
1 (LATITUDE)	23	(S-PB)	-0.1409	279
1 (LATITUDE)	24	(S-SB)	********	0
1 (LATITUDE)	25	(S-SC)	-0.1634	279
1 (LATITUDE)	26	(S-SN)	0.0076	18
1 (LATITUDE)	27	(S-SR)	-0.5336	276
1 (LATITUDE)	28	(S-V)	-0.5125	281
1 (LATITUDE)	29	(S-W)	-0.0729	20
1 (LATITUDE)	30	(S-Y)	-0.4924	279
1 (LATITUDE)	31	(S-ZN)	0.4638	8
1 (LATITUDE)	32	(S-ZR)	-0.3440	272
1 (LATITUDE)	33	(S-TH)	0.7368	9
1 (LATITUDE)	34	(AA-ZN-P)	-0.1532	281
1 (LATITUDE)	35	(AA-SB-P)	-0.2116	36
1 (LATITUDE)	36	(CM-AS)	-0.1298	51
2 (LONGITUD)	3	(S-FE%)	********	281
2 (LONGITUD)	4	(S-MG%)	********	281
2 (LONGITUD)	5	(S-CA%)	********	281
2 (LONGITUD)	6	(S-TI%)	********	281
2 (LONGITUD)	7	(S-MN)	********	280
2 (LONGITUD)	8	(S-AG)	********	33
2 (LONGITUD)	9	(S-AS)	********	0
2 (LONGITUD)	10	(S-AU)	********	0
2 (LONGITUD)	11	(S-B)	********	276
2 (LONGITUD)	12	(S-BA)	********	231
2 (LONGITUD)	13	(S-BE)	********	256
2 (LONGITUD)	14	(S-BI)	********	0
2 (LONGITUD)	15	(S-CD)	********	0
2 (LONGITUD)	16	(S-CO)	********	276
2 (LONGITUD)	17	(S-CR)	********	281

COLUMN	VERSUS	COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
2 (LONGITUD)	18	(S-CU)	********	275
2 (LONGITUD)	19	(S-LA)	********	280
2 (LONGITUD)	20	(S-MO)	********	179
2 (LONGITUD)	21	(S-NB)	********	190
2 (LONGITUD)	22	(S-NI)	0.8414	275
2 (LONGITUD)	23	(S-PB)	********	279
2 (LONGITUD)	24	(S-SB)	********	0
2 (LONGITUD)	25	(S-SC)	********	279
2 (LONGITUD)	26	(S-SN)	********	18
2 (LONGITUD)	27	(S-SR)	********	276
2 (LONGITUD)	28	(S-V)	********	281
2 (LONGITUD)	29	(S-W)	********	20
2 (LONGITUD)	30	(S-Y)	********	279
2 (LONGITUD)	31	(S-ZN)	0.4639	8
2 (LONGITUD)	32	(S-ZR)	********	272
2 (LONGITUD)	33	(S-TH)	********	9
2 (LONGITUD)	34	(AA-ZN-P)	********	281
2 (LONGITUD)	35	(AA-SB-P)	********	36
2 (LONGITUD)	36	(CM-AS)	-0.0063	51
3 (S-FE%)	4	(S-MG%)	-0.2909	283
3 (S-FE%)	5	(S-CA%)	0.0058	283
3 (S-FE%)	6	(S-TI%)	0.6808	283
3 (S-FE%)	7	(S-MN)	0.7557	282
3 (S-FE%)	8	(S-AG)	0.2637	33
3 (S-FE%)	9	(S-AS)	********	0
3 (S-FE%)	10	(S-AU)	********	0
3 (S-FE%)	11	(S-B)	-0.7130	278
3 (S-FE%)	12	(S-BA)	0.5130	283
3 (S-FE%)	13	(S-BE)	-0.3946	258
3 (S-FE%)	14	(S-BI)	********	0
3 (S-FE%)	15	(S-CD)	********	0
3 (S-FE%)	16	(S-CO)	0.6347	278
3 (S-FE%)	17	(S-CR)	0.4232	283
3 (S-FE%)	18	(S-CU)	0.5125	277
3 (S-FE%)	19	(S-LA)	0.7566	282
3 (S-FE%)	20	(S-MO)	0.0888	180
3 (S-FE%)	21	(S-NB)	0.2077	192
3 (S-FE%)	22	(S-NI)	-0.3422	276
3 (S-FE%)	23	(S-PB)	0.0806	281
3 (S-FE%)	24	(S-SB)	********	0
3 (S-FE%)	25	(S-SC)	0.5503	281
3 (S-FE%)	26	(S-SN)	-0.2359	18
3 (S-FE%)	27	(S-SR)	0.4971	278
3 (S-FE%)	28	(S-V)	0.9083	283
3 (S-FE%)	29	(S-W)	0.0736	20
3 (S-FE%)	30	(S-Y)	0.7411	281
3 (S-FE%)	31	(S-ZN)	-0.1918	8
3 (S-FE%)	32	(S-ZR)	0.6745	274
3 (S-FE%)	33	(S-TH)	-0.4695	9
3 (S-FE%)	34	(AA-ZN-P)	0.2955	283

COLUMN	VERSUS	COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
3 (S-FE%)	35	(AA-SB-P)	0.0783	36
3 (S-FE%)	36	(CM-AS)	0.3326	51
4 (S-MG%)	5	(S-CA%)	0.7038	283
4 (S-MG%)	6	(S-TI%)	-0.3755	283
4 (S-MG%)	7	(S-MN)	-0.1683	282
4 (S-MG%)	8	(S-AG)	-0.2925	33
4 (S-MG%)	9	(S-AS)	********	0
4 (S-MG%)	10	(S-AU)	********	0
4 (S-MG%)	11	(S-B)	0.2750	278
4 (S-MG%)	12	(S-BA)	-0.4983	283
4 (S-MG%)	13	(S-BE)	-0.2157	258
4 (S-MG%)	14	(S-BI)	********	0
4 (S-MG%)	15	(S-CD)	********	0
4 (S-MG%)	16	(S-CO)	-0.0701	278
4 (S-MG%)	17	(S-CR)	0.1134	283
4 (S-MG%)	18	(S-CU)	-0.1819	277
4 (S-MG%)	19	(S-LA)	-0.3744	282
4 (S-MG%)	20	(S-MO)	-0.1741	180
4 (S-MG%)	21	(S-NB)	-0.1673	192
4 (S-MG%)	22	(S-NI)	0.2067	276
4 (S-MG%)	23	(S-PB)	0.2013	291
4 (S-MG%)	24	(S-SB)	********	0
4 (S-MG%)	25	(S-SC)	0.1376	281
4 (S-MG%)	26	(S-SN)	0.1512	18
4 (S-MG%)	27	(S-SR)	-0.2628	278
4 (S-MG%)	28	(S-V)	-0.2934	283
4 (S-MG%)	29	(S-W)	0.0045	20
4 (S-MG%)	30	(S-Y)	-0.3542	281
4 (S-MG%)	31	(S-ZN)	-0.5314	8
4 (S-MG%)	32	(S-ZR)	-0.4675	274
4 (S-MG%)	33	(S-TH)	0.4277	9
4 (S-MG%)	34	(AA-ZN-P)	0.0912	283
4 (S-MG%)	35	(AA-SB-P)	-0.3161	36
4 (S-MG%)	36	(CM-AS)	-0.1834	51
5 (S-CA%)	6	(S-TI%)	-0.3148	283
5 (S-CA%)	7	(S-MN)	0.0770	282
5 (S-CA%)	8	(S-AG)	-0.0956	33
5 (S-CA%)	9	(S-AS)	********	0
5 (S-CA%)	10	(S-AU)	********	0
5 (S-CA%)	11	(S-B)	-0.1750	278
5 (S-CA%)	12	(S-BA)	-0.3389	283
5 (S-CA%)	13	(S-BE)	-0.3172	258
5 (S-CA%)	14	(S-BI)	********	0
5 (S-CA%)	15	(S-CD)	********	0
5 (S-CA%)	16	(S-CO)	-0.1454	278
5 (S-CA%)	17	(S-CR)	-0.0130	283
5 (S-CA%)	18	(S-CU)	-0.0890	277
5 (S-CA%)	19	(S-LA)	-0.0155	282
5 (S-CA%)	20	(S-MO)	-0.0755	180
5 (S-CA%)	21	(S-NB)	-0.1317	192

COLUMN	VERSUS	COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
5 (S-CA%)	22	(S-NI)	-0.2488	276
5 (S-CA%)	23	(S-PB)	0.4228	281
5 (S-CA%)	24	(S-SB)	********	0
5 (S-CA%)	25	(S-SC)	0.1164	281
5 (S-CA%)	26	(S-SN)	-0.3407	18
5 (S-CA%)	27	(S-SR)	0.2340	278
5 (S-CA%)	28	(S-V)	-0.0166	283
5 (S-CA%)	29	(S-W)	-0.0281	20
5 (S-CA%)	30	(S-Y)	-0.1267	281
5 (S-CA%)	31	(S-ZN)	-0.6022	8
5 (S-CA%)	32	(S-ZR)	-0.2942	274
5 (S-CA%)	33	(S-TH)	********	9
5 (S-CA%)	34	(AA-ZN-P)	0.1166	283
5 (S-CA%)	35	(AA-SB-P)	-0.2476	36
5 (S-CA%)	36	(CM-AS)	0.0653	51
6 (S-TI%)	7	(S-MN)	0.6445	282
6 (S-TI%)	8	(S-AG)	0.0842	33
6 (S-TI%)	9	(S-AS)	********	0
6 (S-TI%)	10	(S-AU)	********	0
6 (S-TI%)	11	(S-B)	-0.4212	278
6 (S-TI%)	12	(S-BA)	0.5848	283
6 (S-TI%)	13	(S-BE)	-0.2872	258
6 (S-TI%)	14	(S-BI)	********	0
6 (S-TI%)	15	(S-CD)	********	0
6 (S-TI%)	16	(S-CO)	0.5201	278
6 (S-TI%)	17	(S-CR)	0.2735	283
6 (S-TI%)	18	(S-CU)	0.3747	277
6 (S-TI%)	19	(S-LA)	0.6258	282
6 (S-TI%)	20	(S-MO)	-0.0166	180
6 (S-TI%)	21	(S-NB)	0.1846	192
6 (S-TI%)	22	(S-NI)	-0.1148	276
6 (S-TI%)	23	(S-PB)	0.0638	281
6 (S-TI%)	24	(S-SB)	********	0
6 (S-TI%)	25	(S-SC)	0.5889	281
6 (S-TI%)	26	(S-SN)	0.2113	18
6 (S-TI%)	27	(S-SR)	0.2883	278
6 (S-TI%)	28	(S-V)	0.5919	283
6 (S-TI%)	29	(S-W)	0.2278	20
6 (S-TI%)	30	(S-Y)	0.6389	281
6 (S-TI%)	31	(S-ZN)	0.2090	8
6 (S-TI%)	32	(S-ZR)	0.6390	274
6 (S-TI%)	33	(S-TH)	0.5483	9
6 (S-TI%)	34	(AA-ZN-P)	0.2684	283
6 (S-TI%)	35	(AA-SB-P)	0.0728	36
6 (S-TI%)	36	(CM-AS)	0.1083	51
7 (S-MN)	8	(S-AG)	0.3111	33
7 (S-MN)	9	(S-AS)	********	0
7 (S-MN)	10	(S-AU)	********	0
7 (S-MN)	11	(S-B)	-0.5887	277
7 (S-MN)	12	(S-BA)	0.5742	282

COLUMN	VERSUS	COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
7 (S-MN)	13	(S-BE)	-0.1013	257
7 (S-MN)	14	(S-BI)	********	0
7 (S-MN)	15	(S-CD)	********	0
7 (S-MN)	16	(S-CO)	0.4816	277
7 (S-MN)	17	(S-CR)	0.1526	282
7 (S-MN)	18	(S-CU)	0.4548	276
7 (S-MN)	19	(S-LA)	0.6547	281
7 (S-MN)	20	(S-MO)	0.1397	179
7 (S-MN)	21	(S-NB)	0.0982	191
7 (S-MN)	22	(S-NI)	-0.3239	275
7 (S-MN)	23	(S-PB)	0.3457	280
7 (S-MN)	24	(S-SB)	********	0
7 (S-MN)	25	(S-SC)	0.5017	280
7 (S-MN)	26	(S-SN)	0.4622	18
7 (S-MN)	27	(S-SR)	0.5257	277
7 (S-MN)	28	(S-V)	0.6416	282
7 (S-MN)	29	(S-W)	0.3711	20
7 (S-MN)	30	(S-Y)	0.4951	280
7 (S-MN)	31	(S-ZN)	0.2425	8
7 (S-MN)	32	(S-ZR)	0.3843	273
7 (S-MN)	33	(S-TH)	0.4452	9
7 (S-MN)	34	(AA-ZN-P)	0.5150	282
7 (S-MN)	35	(AA-SB-P)	0.4807	36
7 (S-MN)	36	(CH-AS)	0.3607	50
8 (S-AG)	9	(S-AS)	********	0
8 (S-AG)	10	(S-AU)	********	0
8 (S-AG)	11	(S-B)	-0.2294	33
8 (S-AG)	12	(S-BA)	-0.0597	33
8 (S-AG)	13	(S-BE)	0.1606	30
8 (S-AG)	14	(S-BI)	********	0
8 (S-AG)	15	(S-CD)	********	0
8 (S-AG)	16	(S-CO)	0.4406	33
8 (S-AG)	17	(S-CR)	-0.1044	33
8 (S-AG)	18	(S-CU)	0.5062	33
8 (S-AG)	19	(S-LA)	0.2197	33
8 (S-AG)	20	(S-MO)	0.2129	27
8 (S-AG)	21	(S-NB)	0.7101	19
8 (S-AG)	22	(S-NI)	-0.1537	33
8 (S-AG)	23	(S-PB)	0.4331	33
8 (S-AG)	24	(S-SB)	********	0
8 (S-AG)	25	(S-SC)	-0.1107	33
8 (S-AG)	26	(S-SN)	********	1
8 (S-AG)	27	(S-SR)	0.2403	33
8 (S-AG)	28	(S-V)	0.2157	33
8 (S-AG)	29	(S-W)	0.2870	8
8 (S-AG)	30	(S-Y)	0.2965	33
8 (S-AG)	31	(S-ZN)	0.5000	3
8 (S-AG)	32	(S-ZR)	0.4152	33
8 (S-AG)	33	(S-TH)	********	0
8 (S-AG)	34	(AA-ZN-P)	0.6596	33

COLUMN	VERSUS COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
8 (S-AG)	35 (AA-SB-P)	0.8593	12
8 (S-AG)	36 (CM-AS)	0.9485	11
9 (S-AS)	10 (S-AU)	********	0
9 (S-AS)	11 (S-B)	********	0
9 (S-AS)	12 (S-BA)	********	0
9 (S-AS)	13 (S-BE)	********	0
9 (S-AS)	14 (S-BI)	********	0
9 (S-AS)	15 (S-CD)	********	0
9 (S-AS)	16 (S-CO)	********	0
9 (S-AS)	17 (S-CR)	********	0
9 (S-AS)	18 (S-CU)	********	0
9 (S-AS)	19 (S-LA)	********	0
9 (S-AS)	20 (S-MO)	********	0
9 (S-AS)	21 (S-NB)	********	0
9 (S-AS)	22 (S-NI)	********	0
9 (S-AS)	23 (S-PB)	********	0
9 (S-AS)	24 (S-SB)	********	0
9 (S-AS)	25 (S-SC)	********	0
9 (S-AS)	26 (S-SN)	********	0
9 (S-AS)	27 (S-SR)	********	0
9 (S-AS)	28 (S-V)	********	0
9 (S-AS)	29 (S-W)	********	0
9 (S-AS)	30 (S-Y)	********	0
9 (S-AS)	31 (S-ZN)	********	0
9 (S-AS)	32 (S-ZR)	********	0
9 (S-AS)	33 (S-TH)	********	0
9 (S-AS)	34 (AA-ZN-P)	********	0
9 (S-AS)	35 (AA-SB-P)	********	0
9 (S-AS)	36 (CM-AS)	********	0
10 (S-AU)	11 (S-B)	********	0
10 (S-AU)	12 (S-BA)	********	0
10 (S-AU)	13 (S-BE)	********	0
10 (S-AU)	14 (S-BI)	********	0
10 (S-AU)	15 (S-CD)	********	0
10 (S-AU)	16 (S-CO)	********	0
10 (S-AU)	17 (S-CR)	********	0
10 (S-AU)	18 (S-CU)	********	0
10 (S-AU)	19 (S-LA)	********	0
10 (S-AU)	20 (S-MO)	********	0
10 (S-AU)	21 (S-NB)	********	0
10 (S-AU)	22 (S-NI)	********	0
10 (S-AU)	23 (S-PB)	********	0
10 (S-AU)	24 (S-SB)	********	0
10 (S-AU)	25 (S-SC)	********	0
10 (S-AU)	26 (S-SN)	********	0
10 (S-AU)	27 (S-SR)	********	0
10 (S-AU)	28 (S-V)	********	0
10 (S-AU)	29 (S-W)	********	0
10 (S-AU)	30 (S-Y)	********	0
10 (S-AU)	31 (S-ZN)	********	0

COLUMN	VERSUS	COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
10 (S-AU)	32 (S-ZR)	********	0
10 (S-AU)	33 (S-TH)	********	0
10 (S-AU)	34 (AA-ZN-P)	********	0
10 (S-AU)	35 (AA-SB-P)	********	0
10 (S-AU)	36 (CM-AS)	********	0
11 (S-B)	12 (S-BA)	-0.2510	278
11 (S-B)	13 (S-BE)	0.3321	254
11 (S-B)	14 (S-BI)	********	0
11 (S-B)	15 (S-CD)	********	0
11 (S-B)	16 (S-CO)	-0.3383	273
11 (S-B)	17 (S-CR)	-0.1527	278
11 (S-B)	18 (S-CU)	-0.2968	272
11 (S-B)	19 (S-LA)	-0.6945	277
11 (S-B)	20 (S-MO)	-0.0606	178
11 (S-B)	21 (S-NB)	-0.1718	187
11 (S-B)	22 (S-NI)	0.5757	271
11 (S-B)	23 (S-PB)	-0.1673	276
11 (S-B)	24 (S-SB)	********	0
11 (S-B)	25 (S-SC)	-0.4786	276
11 (S-B)	26 (S-SN)	-0.1351	17
11 (S-B)	27 (S-SR)	-0.6077	273
11 (S-B)	28 (S-V)	-0.7162	278
11 (S-B)	29 (S-W)	-0.2096	20
11 (S-B)	30 (S-Y)	-0.6516	276
11 (S-B)	31 (S-ZN)	0.2879	7
11 (S-B)	32 (S-ZR)	-0.4451	270
11 (S-B)	33 (S-TH)	0.4076	9
11 (S-B)	34 (AA-ZN-P)	-0.1282	278
11 (S-B)	35 (AA-SB-P)	0.2114	35
11 (S-B)	36 (CM-AS)	-0.2292	50
12 (S-BA)	13 (S-BE)	0.1416	258
12 (S-BA)	14 (S-BI)	********	0
12 (S-BA)	15 (S-CD)	********	0
12 (S-BA)	16 (S-CO)	0.1459	278
12 (S-BA)	17 (S-CR)	-0.0551	283
12 (S-BA)	18 (S-CU)	0.2352	277
12 (S-BA)	19 (S-LA)	0.5184	282
12 (S-BA)	20 (S-MO)	0.3288	180
12 (S-BA)	21 (S-NB)	-0.1215	192
12 (S-BA)	22 (S-NI)	-0.2245	276
12 (S-BA)	23 (S-PB)	0.1585	281
12 (S-BA)	24 (S-SB)	********	0
12 (S-BA)	25 (S-SC)	0.2398	281
12 (S-BA)	26 (S-SN)	-0.0404	18
12 (S-BA)	27 (S-SR)	0.3953	278
12 (S-BA)	28 (S-V)	0.3924	283
12 (S-BA)	29 (S-W)	-0.0178	20
12 (S-BA)	30 (S-Y)	0.3661	281
12 (S-BA)	31 (S-ZN)	-0.3722	8
12 (S-BA)	32 (S-ZR)	0.4517	274

COLUMN	VERSUS COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
12 (S-BA)	33 (S-TH)	0.4163	9
12 (S-BA)	34 (AA-ZN-P)	0.2317	283
12 (S-BA)	35 (AA-SB-P)	0.2372	36
12 (S-BA)	36 (CM-AS)	0.0516	51
13 (S-BE)	14 (S-BI)	********	0
13 (S-BE)	15 (S-CD)	********	0
13 (S-BE)	16 (S-CO)	-0.3167	255
13 (S-BE)	17 (S-CR)	-0.3638	258
13 (S-BE)	18 (S-CU)	-0.0269	255
13 (S-BE)	19 (S-LA)	-0.1777	258
13 (S-BE)	20 (S-MO)	0.3295	169
13 (S-BE)	21 (S-NB)	0.0109	187
13 (S-BE)	22 (S-NI)	0.1996	251
13 (S-BE)	23 (S-PB)	0.0110	256
13 (S-BE)	24 (S-SB)	********	0
13 (S-BE)	25 (S-SC)	-0.3757	258
13 (S-BE)	26 (S-SN)	0.4320	17
13 (S-BE)	27 (S-SR)	-0.0644	253
13 (S-BE)	28 (S-V)	-0.4707	258
13 (S-BE)	29 (S-W)	0.0140	20
13 (S-BE)	30 (S-Y)	-0.3641	258
13 (S-BE)	31 (S-ZN)	0.8997	6
13 (S-BE)	32 (S-ZR)	-0.4611	250
13 (S-BE)	33 (S-TH)	0.4780	7
13 (S-BE)	34 (AA-ZN-P)	0.1023	258
13 (S-BE)	35 (AA-SB-P)	0.6921	29
13 (S-BE)	36 (CM-AS)	0.0554	44
14 (S-BI)	15 (S-CD)	********	0
14 (S-BI)	16 (S-CO)	********	0
14 (S-BI)	17 (S-CR)	********	0
14 (S-BI)	18 (S-CU)	********	0
14 (S-BI)	19 (S-LA)	********	0
14 (S-BI)	20 (S-MO)	********	0
14 (S-BI)	21 (S-NB)	********	0
14 (S-BI)	22 (S-NI)	********	0
14 (S-BI)	23 (S-PB)	********	0
14 (S-BI)	24 (S-SB)	********	0
14 (S-BI)	25 (S-SC)	********	0
14 (S-BI)	26 (S-SN)	********	0
14 (S-BI)	27 (S-SR)	********	0
14 (S-BI)	28 (S-V)	********	0
14 (S-BI)	29 (S-W)	********	0
14 (S-BI)	30 (S-Y)	********	0
14 (S-BI)	31 (S-ZN)	********	0
14 (S-BI)	32 (S-ZR)	********	0
14 (S-BI)	33 (S-TH)	********	0
14 (S-BI)	34 (AA-ZN-P)	********	0
14 (S-BI)	35 (AA-SB-P)	********	0
14 (S-BI)	36 (CM-AS)	********	0
15 (S-CD)	16 (S-CO)	********	0

COLUMN	VERSUS COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
15 (S-CD)	17 (S-CR)	********	0
15 (S-CD)	18 (S-CU)	********	0
15 (S-CD)	19 (S-LA)	********	0
15 (S-CD)	20 (S-MO)	********	0
15 (S-CD)	21 (S-NB)	********	0
15 (S-CD)	22 (S-NI)	********	0
15 (S-CD)	23 (S-PB)	********	0
15 (S-CD)	24 (S-SB)	********	0
15 (S-CD)	25 (S-SC)	********	0
15 (S-CD)	26 (S-SN)	********	0
15 (S-CD)	27 (S-SR)	********	0
15 (S-CD)	28 (S-V)	********	0
15 (S-CD)	29 (S-W)	********	0
15 (S-CD)	30 (S-Y)	********	0
15 (S-CD)	31 (S-ZN)	********	0
15 (S-CD)	32 (S-ZR)	********	0
15 (S-CD)	33 (S-TH)	********	0
15 (S-CD)	34 (AA-ZN-P)	********	0
15 (S-CD)	35 (AA-SB-P)	********	0
15 (S-CD)	36 (CM-AS)	********	0
16 (S-CO)	17 (S-CR)	0.6317	273
16 (S-CO)	18 (S-CU)	0.5350	275
16 (S-CO)	19 (S-LA)	0.3953	278
16 (S-CO)	20 (S-MO)	-0.0168	180
16 (S-CO)	21 (S-NB)	0.0590	192
16 (S-CO)	22 (S-NI)	0.0812	271
16 (S-CO)	23 (S-PB)	-0.0381	278
16 (S-CO)	24 (S-SB)	********	0
16 (S-CO)	25 (S-SC)	0.6138	278
16 (S-CO)	26 (S-SN)	-0.0177	18
16 (S-CO)	27 (S-SR)	0.0196	276
16 (S-CO)	28 (S-V)	0.6880	278
16 (S-CO)	29 (S-W)	0.2557	20
16 (S-CO)	30 (S-Y)	0.5179	278
16 (S-CO)	31 (S-ZN)	0.2706	8
16 (S-CO)	32 (S-ZR)	0.4943	269
16 (S-CO)	33 (S-TH)	-0.6114	9
16 (S-CO)	34 (AA-ZN-P)	0.3977	278
16 (S-CO)	35 (AA-SB-P)	0.2158	36
16 (S-CO)	36 (CM-AS)	0.2510	50
17 (S-CR)	18 (S-CU)	0.4346	277
17 (S-CR)	19 (S-LA)	0.1538	282
17 (S-CR)	20 (S-MO)	-0.1382	180
17 (S-CR)	21 (S-NB)	0.0155	192
17 (S-CR)	22 (S-NI)	0.3530	276
17 (S-CR)	23 (S-PB)	-0.1528	281
17 (S-CR)	24 (S-SB)	********	0
17 (S-CR)	25 (S-SC)	0.3770	281
17 (S-CR)	26 (S-SN)	-0.1351	18
17 (S-CR)	27 (S-SR)	-0.1730	278

COLUMN	VERSUS COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
17 (S-CR)	28 (S-V)	0.5447	283
17 (S-CR)	29 (S-W)	-0.0071	20
17 (S-CR)	30 (S-Y)	0.3642	281
17 (S-CR)	31 (S-ZN)	-0.1535	8
17 (S-CR)	32 (S-ZR)	0.3980	274
17 (S-CR)	33 (S-TH)	-0.3642	9
17 (S-CR)	34 (AA-ZN-P)	0.1646	283
17 (S-CR)	35 (AA-SB-P)	-0.2016	36
17 (S-CR)	36 (CM-AS)	-0.0356	51
18 (S-CU)	19 (S-LA)	0.4205	277
18 (S-CU)	20 (S-MO)	0.3559	179
18 (S-CU)	21 (S-NB)	0.2399	192
18 (S-CU)	22 (S-NI)	0.0727	270
18 (S-CU)	23 (S-PB)	0.2308	277
18 (S-CU)	24 (S-SB)	********	0
18 (S-CU)	25 (S-SC)	0.1931	276
18 (S-CU)	26 (S-SN)	0.3531	18
18 (S-CU)	27 (S-SR)	0.1576	274
18 (S-CU)	28 (S-V)	0.4927	277
18 (S-CU)	29 (S-W)	0.3699	20
18 (S-CU)	30 (S-Y)	0.3682	276
18 (S-CU)	31 (S-ZN)	0.7605	8
18 (S-CU)	32 (S-ZR)	0.4092	268
18 (S-CU)	33 (S-TH)	0.3032	9
18 (S-CU)	34 (AA-ZN-P)	0.5087	277
18 (S-CU)	35 (AA-SB-P)	0.7294	36
18 (S-CU)	36 (CM-AS)	0.4522	50
19 (S-LA)	20 (S-MO)	0.0971	180
19 (S-LA)	21 (S-NB)	0.3314	192
19 (S-LA)	22 (S-NI)	-0.4549	275
19 (S-LA)	23 (S-PB)	0.1818	280
19 (S-LA)	24 (S-SB)	********	0
19 (S-LA)	25 (S-SC)	0.4467	281
19 (S-LA)	26 (S-SN)	0.0930	18
19 (S-LA)	27 (S-SR)	0.5903	277
19 (S-LA)	28 (S-V)	0.6930	282
19 (S-LA)	29 (S-W)	0.2896	20
19 (S-LA)	30 (S-Y)	0.7254	281
19 (S-LA)	31 (S-ZN)	0.1285	8
19 (S-LA)	32 (S-ZR)	0.5753	273
19 (S-LA)	33 (S-TH)	0.5483	9
19 (S-LA)	34 (AA-ZN-P)	0.2678	282
19 (S-LA)	35 (AA-SB-P)	0.1661	36
19 (S-LA)	36 (CM-AS)	0.3079	51
20 (S-MO)	21 (S-NB)	-0.0048	125
20 (S-MO)	22 (S-NI)	-0.1230	175
20 (S-MO)	23 (S-PB)	0.2790	180
20 (S-MO)	24 (S-SB)	********	0
20 (S-MO)	25 (S-SC)	-0.2066	180
20 (S-MO)	26 (S-SN)	0.1736	16

COLUMN	VERSUS COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
20 (S-MO)	27 (S-SR)	0.2756	180
20 (S-MO)	28 (S-V)	-0.0664	180
20 (S-MO)	29 (S-W)	0.0191	20
20 (S-MO)	30 (S-Y)	-0.1930	180
20 (S-MO)	31 (S-ZN)	0.3950	6
20 (S-MO)	32 (S-ZR)	-0.0980	178
20 (S-MO)	33 (S-TH)	-0.2586	6
20 (S-MO)	34 (AA-ZN-P)	0.3372	180
20 (S-MO)	35 (AA-SB-P)	0.5496	24
20 (S-MO)	36 (CM-AS)	0.0442	39
21 (S-NB)	22 (S-NI)	-0.0585	185
21 (S-NB)	23 (S-PB)	0.1198	192
21 (S-NB)	24 (S-SB)	********	0
21 (S-NB)	25 (S-SC)	-0.0866	192
21 (S-NB)	26 (S-SN)	0.1228	18
21 (S-NB)	27 (S-SR)	0.0531	192
21 (S-NB)	28 (S-V)	0.1187	192
21 (S-NB)	29 (S-W)	0.5057	18
21 (S-NB)	30 (S-Y)	0.3754	192
21 (S-NB)	31 (S-ZN)	0.8034	6
21 (S-NB)	32 (S-ZR)	0.2925	184
21 (S-NB)	33 (S-TH)	-0.1173	8
21 (S-NB)	34 (AA-ZN-P)	0.0520	192
21 (S-NB)	35 (AA-SB-P)	0.7576	25
21 (S-NB)	36 (CM-AS)	0.5171	33
22 (S-NI)	23 (S-PB)	-0.2357	274
22 (S-NI)	24 (S-SB)	********	0
22 (S-NI)	25 (S-SC)	-0.1152	274
22 (S-NI)	26 (S-SN)	0.0317	18
22 (S-NI)	27 (S-SR)	-0.5955	271
22 (S-NI)	28 (S-V)	-0.3116	276
22 (S-NI)	29 (S-W)	-0.1931	19
22 (S-NI)	30 (S-Y)	-0.2801	274
22 (S-NI)	31 (S-ZN)	0.2206	8
22 (S-NI)	32 (S-ZR)	-0.1458	267
22 (S-NI)	33 (S-TH)	-0.2430	9
22 (S-NI)	34 (AA-ZN-P)	0.0038	276
22 (S-NI)	35 (AA-SB-P)	0.0862	36
22 (S-NI)	36 (CM-AS)	-0.1350	51
23 (S-PB)	24 (S-SB)	********	0
23 (S-PB)	25 (S-SC)	0.1231	279
23 (S-PB)	26 (S-SN)	0.1976	18
23 (S-PB)	27 (S-SR)	0.4231	278
23 (S-PB)	28 (S-V)	-0.0138	281
23 (S-PB)	29 (S-W)	0.2080	20
23 (S-PB)	30 (S-Y)	-0.0471	279
23 (S-PB)	31 (S-ZN)	0.2988	8
23 (S-PB)	32 (S-ZR)	-0.1909	272
23 (S-PB)	33 (S-TH)	0.3447	9
23 (S-PB)	34 (AA-ZN-P)	0.4655	281

COLUMN	VERSUS COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
23 (S-PB)	35 (AA-SB-P)	0.5952	36
23 (S-PB)	36 (CM-AS)	0.2556	50
24 (S-SB)	25 (S-SC)	********	0
24 (S-SB)	26 (S-SN)	********	0
24 (S-SB)	27 (S-SR)	********	0
24 (S-SB)	28 (S-V)	********	0
24 (S-SB)	29 (S-W)	********	0
24 (S-SB)	30 (S-Y)	********	0
24 (S-SB)	31 (S-ZN)	********	0
24 (S-SB)	32 (S-ZR)	********	0
24 (S-SB)	33 (S-TH)	********	0
24 (S-SB)	34 (AA-ZN-P)	********	0
24 (S-SB)	35 (AA-SB-P)	********	0
24 (S-SB)	36 (CM-AS)	********	0
25 (S-SC)	26 (S-SN)	-0.0511	18
25 (S-SC)	27 (S-SR)	0.1567	276
25 (S-SC)	28 (S-V)	0.5594	281
25 (S-SC)	29 (S-W)	0.0578	20
25 (S-SC)	30 (S-Y)	0.6020	281
25 (S-SC)	31 (S-ZN)	-0.3372	8
25 (S-SC)	32 (S-ZR)	0.3922	272
25 (S-SC)	33 (S-TH)	-0.0030	9
25 (S-SC)	34 (AA-ZN-P)	0.2020	281
25 (S-SC)	35 (AA-SB-P)	-0.3273	36
25 (S-SC)	36 (CM-AS)	-0.1008	51
26 (S-SN)	27 (S-SR)	-0.0225	18
26 (S-SN)	28 (S-V)	-0.2441	18
26 (S-SN)	29 (S-W)	********	2
26 (S-SN)	30 (S-Y)	0.2374	18
26 (S-SN)	31 (S-ZN)	********	1
26 (S-SN)	32 (S-ZR)	-0.0353	18
26 (S-SN)	33 (S-TH)	********	1
26 (S-SN)	34 (AA-ZN-P)	0.0648	18
26 (S-SN)	35 (AA-SB-P)	1.0000	3
26 (S-SN)	36 (CM-AS)	0.0018	5
27 (S-SR)	28 (S-V)	0.3467	278
27 (S-SR)	29 (S-W)	-0.0923	20
27 (S-SR)	30 (S-Y)	0.3219	276
27 (S-SR)	31 (S-ZN)	-0.2101	8
27 (S-SR)	32 (S-ZR)	0.2039	270
27 (S-SR)	33 (S-TH)	0.2751	9
27 (S-SR)	34 (AA-ZN-P)	0.1938	278
27 (S-SR)	35 (AA-SB-P)	0.3426	36
27 (S-SR)	36 (CM-AS)	0.2867	50
28 (S-V)	29 (S-W)	0.0717	20
28 (S-V)	30 (S-Y)	0.7637	281
28 (S-V)	31 (S-ZN)	-0.1626	8
28 (S-V)	32 (S-ZR)	0.7071	274
28 (S-V)	33 (S-TH)	-0.5871	9
28 (S-V)	34 (AA-ZN-P)	0.2277	283

COLUMN	VERSUS	COLUMN	CORRELATION COEFFICIENT	NO. OF PAIRS
28 (S-V)	35 (AA-SB-P)		-0.1025	36
28 (S-V)	36 (CM-AS)		0.2492	51
29 (S-W)	30 (S-Y)		0.3186	20
29 (S-W)	31 (S-ZN)		0.8743	3
29 (S-W)	32 (S-ZR)		0.1643	20
29 (S-W)	33 (S-TH)		********	1
29 (S-W)	34 (AA-ZN-P)		0.4678	20
29 (S-W)	35 (AA-SB-P)		0.3423	5
29 (S-W)	36 (CM-AS)		0.6812	7
30 (S-Y)	31 (S-ZN)		0.0630	8
30 (S-Y)	32 (S-ZR)		0.7120	272
30 (S-Y)	33 (S-TH)		-0.0025	9
30 (S-Y)	34 (AA-ZN-P)		0.0645	281
30 (S-Y)	35 (AA-SB-P)		-0.0648	36
30 (S-Y)	36 (CM-AS)		0.2523	51
31 (S-ZN)	32 (S-ZR)		0.4806	7
31 (S-ZN)	33 (S-TH)		********	1
31 (S-ZN)	34 (AA-ZN-P)		0.8360	8
31 (S-ZN)	35 (AA-SB-P)		1.0000	3
31 (S-ZN)	36 (CM-AS)		0.5000	3
32 (S-ZR)	33 (S-TH)		-0.2188	9
32 (S-ZR)	34 (AA-ZN-P)		0.0214	274
32 (S-ZR)	35 (AA-SB-P)		0.0683	34
32 (S-ZR)	36 (CM-AS)		0.2155	50
33 (S-TH)	34 (AA-ZN-P)		0.1483	9
33 (S-TH)	35 (AA-SB-P)		********	1
33 (S-TH)	36 (CM-AS)		********	2
34 (AA-ZN-P')	35 (AA-SB-P)		0.8996	36
34 (AA-ZN-P)	36 (CM-AS)		0.4144	51
35 (AA-SB-P)	36 (CM-AS)		0.8645	12

QUAL	Qualified
STD	Standard
SQRT	Square root
>	Greater than
<	Less than
S	Spectrographic analysis
AA	Atomic absorption analysis
CM	Colorimetric analysis
OBS	Observed
FREQ	Frequency
CUM	Cumulative
THEOR	Theoretical
DIST	Distribution
e-02	Multiply value by 10^{-2}
e+00	Multiply value by 10^{0}
e+02	Multiply value by 10^{2}

DISCUSSION

A variety of mineral deposit types occur in the vicinity of the study area. There has been recorded production for gold, silver, copper, lead, zinc, and tungsten (Geach, 1972). Although there have been a number of studies on the geology and mineralogy of the mineral deposits, none of these studies have geochemically characterized the deposits (Winchell, 1914; Shenon, 1931; Goudarzi, 1941; Karlstrom, 1948; Pattee, 1960). Geochemical characterization of the deposits is useful for building a systematic picture of the interrelationships of the deposits. Distinct elemental suites are of considerable value in gaining an understanding of the known deposits and, when utilized in conjunction with other geological factors, afford one a means of defining and assessing mineral potential throughout the study area.

The following trace elements are found in "ore" samples from mine dumps in the various mining districts:

(1) Argenta Mining District

Yellow Band Mine	Au-Ag-As-B-Mo-Sb-(Zn)*
Stinson Mine	Ag-As-Mo-Pb-Sb-Zn
Jack Mine	Ag-As-Cd-Cu-Pb-Sb-Zn
Goldfinch Mine	Au-Ag-As-Cu-Pb-V-Zn
Rena Mine	Ag-As-Cu-Mo-Pb-Zn
Mayday Mine	Au-Ag-As-Cd-Cu-Mo-Pb-Sb-V-Zn
Argenta Mine	Au-Ag-As-Cd-Cu-Mo-Pb-Sb-Sn-V-Zn
Midnight Mine	Ag-As-Cd-Cu-Mo-Pb-Sb-Sn-V-Zn
Groundhog Mine	Ag-As-Cu-Mo-Pb-Sb-Zn
Tuscarora Mine	Ag-As-Bi-Cd-Cu-Mo-Pb-Sb-Sn-Zn
Dexter Mine	Ag-Bi-Cd-Cu-Mo-Pb-Sn-(W)-Zn
Mauldin Mine	Ag-Pb-Zn
Iron Mtn. Mine	Ag-As-Cd-Cu-Pb-Sn-(W)-Zn

(2) Birch Creek Mining District

Section 21 Mine	Ag-Cu-Mo-Sn-W-Zn
Indian Queen Mine	As-Be-Cu-Mo-W-Zn
Section 15 Mine	Ag-Bi-Cu-Mo-Pb-W-Zn
Greenstone Mine	Ag-As-Bi-Cu-Cr-Mo-W-(Zn)

(3) Lost Creek Mining District

Section 23 Mine	Mo-Sn-W
Section 14 Mine	Mo-Sn-W

(4) Rock Creek Mining District

Browns Lake Mine	Ag-Bi-Cu-Mo-Pb-Sn-W-Zn

*Parentheses denote low or sporadic values.

(5) Hecla Mining District

Keokirk Mine	Ag-As-Cd-Cu-Mo-Pb-Sb-Zn
Hecla Mines	Ag-As-Bi-Cd-Cu-Mo-Pb-Sb-Zn
Cleve Mine	Ag-As-B-Cd-Cu-Mo-Pb-Sb-Zn

(6) Vipond Park Mining District

Cannivan Gulch	Ag-(Ba)-Mo-(Pb)-Sn-(Zn)
Queen of the Hills Mine	Ag-As-Ba-Bi-Cd-Cu-Pb-Sb-Zn
Old Faithful Mine	Ag-As-Bi-Cd-Cu-Pb-Sb-Zn
Gray Jockey Mine	Ag-As-Cd-Cu-Pb-Sb-Zn
Sheep Mtn. Prospect	Ag-Bi-Cd-Pb-Zn

(7) Quartz Hill Mining District

Lone Pine Mine	Ag-As-Ba-Bi-Cd-Cu-Mo-Pb-Sb-Zn
Great Western Mine	Ag-As-Ba-Bi-Cd-Cu-Mo-Pb-Sb-W-Zn
Knoby Mine	Ag-As-Ba-Bi-Cd-Cu-Mo-Pb-Sb-Zn
Daisy Vein Mine	Ag-As-Ba-Bi-Cd-Cu-Mo-Pb-Sb-Zn
Monte Cristo Mine	Ag-As-Ba-Bi-Cd-Cu-Mo-Pb-Sb-Zn

(8) Elkhorn Mining District

Elkhorn Mine	Ag-As-Au-Bi-Cd-Cu-Mo-Pb-Sb-Sn-W-Zn
Park Mine	Ag-As-Bi-Cd-Cu-Mo-Pb-Sb-Sn-W-Zn
Gar Mine	Ag-As-Au-Ba-Cd-Cu-Mo-Pb-Sb-Zn
Magna Mine	Ag-As-Ba-Cd-Cu-Mo-Pb-Sb-Zn

(9) Polaris Mining District

Polaris Mine	Ag-As-Au-Cd-Cu-Mo-Pb-Sb-Sn-W-Zn

(10) Baldy Mountain Mining District

Nick Preen Mines	Ag-Bi-Cd-Cu-Pb-Sb
Cable Mine	Ag-As-Cu-Pb-Sb-V-Zn
Old Faithful Mine	Ag-Au-As-Bi-Cu-Pb-Sb-V-Zn
Tungsten Mill	Ag-Bi-Cu-Mo-Sn-V-W
Garret Hill	Mo-Sn-W

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