Airborne Gamma-Ray Spectrometer and Magnetometer Survey

MASTER

Wenatchee Quadrangle
(Washington)

Final Report

Volume II

A

prepared by

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TABLE OF CONTENTS

VOLUME II

WENATCHEE

	PAGE
GEOLOGY	1
RADIOACTIVE MINERAL OCCURRENCES IN WASHINGTON	3
GEOPHYSICAL DATA INTERPRETATION	4
REFERENCES	6
APPENDICES	
APPENDIX A - FLIGHT LINE MAP	
APPENDIX B - GEOLOGY MAP	
APPENDIX C - EXPLANATION OF GEOLOGIC LEGEND	
APPENDIX D - FLIGHT LINE/GEOLOGY MAP	
APPENDIX E - PSEUDO-CONTOUR MAPS	
APPENDIX F - STACKED PROFILES	
APPENDIX G - ANOMALY MAPS	
APPENDIX H - GEOLOGIC HISTOGRAMS	
APPENDIX I - SPEED AND ALTITUDE HISTOGRAMS	
APPENDIX J - STATISTICAL TABLES	
APPENDIX K - MAGNETIC AND ANCILLARY PROFILES	
APPENDIX L - TEST LINE DATA	

TABLES

Table 1 - Uranium Anomalies in the Wenatchee Quadrangle

FIGURES

Figure 1 - Location Map

Figure 2 - Radioactive Mineral Occurrences in Washington

Figure 3 - Uranium Anomaly Interpretation Map - Wenatchee Quadrangle

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LOCATION MAP Wenatchee

WENATCHEE QUADRANGLE

GEOLOGY

The geologic map of the Wenatchee quadrangle, which provided the geologic background for the interpretation of the radiometric data, was prepared for Bendix Field Engineering Corporation by Salisbury and Dietz Inc. The explanation of the geologic legend, Appendix C, was taken from this map.

The Wenatchee quadrangle is in two physiographic provinces: the Cascade Mountains and the Columbia Basin.

The Cascade Mountains consist of two geologically contrasting areas. South of Snoqualmie Pass, Tertiary volcanic rocks with relatively simple structures predominate. North of the pass, most of the exposed rocks are structurally complex pre-Tertiary igneous and metamorphic rocks. The Cascade Mountains have been extensively glaciated during the Pleistocene and nearly all of the valleys are typically U-shaped.

The Cascade Mountains in southern Washington are made up of a thick sequence of volcanic rocks of Eocene, Oligocene, and Miocene ages. Most of these rocks are of andesitic composition with some dacite flows and breccias also present. Locally lapping over these volcanic rocks are basalt flows of the Columbia River Group of Miocene and Pliocene ages.

The northern Cascade Mountains consist of a core of granitic rocks and metamorphosed sedimentary and volcanic rocks. This core is flanked to the east and west by less metamorphosed rocks and by younger Paleozoic, Mesozoic, and Tertiary sedimentary and volcanic rocks. Superimposed on the preexisting topography are recent volcanic rocks, which have come from volcanic vents such as Mount St. Helens, Mount Adams, Mount Rainier, Glacier Peak, and Mount Baker.

Figure 1

The Columbia Basin consists of flood basalt flows of the Columbia River Group which form a lava plain that has been modified by regional downwarping into a structural basin. As the basalt flows spread out, the existing drainage channels were dammed and lake bed sediments were locally deposited.

Tertiary continental and marine deposits crop out in the eastern half of the quadrangle. Quaternary eolian deposits, glacial deposits, and alluvial deposits occur mainly in the eastern half of the quadrangle.

Volcanic rocks are widespread throughout the quadrangle. Pre-Miocene volcanic rocks crop out in the Cascade Mountains. Miocene volcanic rocks and interbedded sedimentary rocks of the Columbia River Group crop out extensively in the eastern half of the quadrangle. Recent volcanic rocks crop out in the Cascade Mountains.

Intrusive rocks crop out in the Cascade Range and include Tertiary granitic rocks, and small Tertiary intrusive bodies of andesitic and diabasic composition.

The Columbia River Group is folded into broad east-west trending folds mainly in the southwest corner of the quadrangle. North-west trending normal faults occur mainly in the northeast corner of the quadrangle.

RADIOACTIVE MINERAL OCCURRENCES IN WASHINGTON

Huntting, 1956; and Weissenborn, 1966 documented the radioactive occurrences in Washington (Figure 2). They recorded six in the Wenatchee quadrangle: Winesap Canyon, Mackinaw, the Keller property, Kromona Lake, the Molly property, and the Rainy mine. (Figure 2).

The following types of radioactive occurrence have been found in Washington (Huntting, 1956; Weissenborn, 1966):

- 1) Secondary uranium minerals along the contact between Precambrian metamorphosed sedimentary rocks and porphyritic quartz-monzonite of Cretaceous age - Midnite mine, Stevens County.
- 2) Autunite filling fractures and open spaces in pegmatitic alaskite - Mount Spokane area, Spokane County; Lost Creek area, Pend Oreille County.
- 3) Secondary uranium minerals in interbedded tuffaceous sandstone, arkose, and carbonaceous shale - Midnite mine area, Stevens County.
- 4) Radioactivity in pegmatitic lenses in gneiss.
- 5) Strong radioactivity in soil and gravel around a radioactive spring - Bumping Lake, Yakima County.

The major uranium production from Washington state has been from the Midnite mine, Stevens County; and the Daybreak mine, Spokane County. Minor production has been reported from several other properties in the state (Weissenborn, 1966).

Radioactive Occurrences in Washington

Figure 2

Figure 3

GEOPHYSICAL DATA INTERPRETATION

Radiometric Data

A total of four (4) uranium anomalies meet the minimum statistical requirements as defined in Volume I. These anomalies are listed in Table 1 and are shown on the Uranium Anomaly Interpretation Map, Figure 3.

Potassium (%K), equivalent Uranium (ppm eU), equivalent Thorium (ppm eT), eU/eT, eU/K, eT/K, and magnetic pseudo-contour maps are presented in Appendix E. Stacked Profiles showing geologic strip maps along each flight-line, together with sensor data, and ancillary data are presented in Appendix F. All maps and profiles were prepared on a scale of 1:250,000, but have been reduced to 1:500,000 for presentation in Volume II.

Geologic unit designations given in Table 1 are those given on the Geology Map, Appendix B, and in the Explanation of the Geologic Legend, Appendix C.

TABLE I - URANIUM ANOMALIES IN THE WENATCHEE QUADRANGLE

ANOMALY #	LINE #	GEOLOGIC UNIT	TYPE	STANDARD DEVIATIONS FROM MEAN * URANIUM									
				-2	-1	0	1	2	3	4	5	6	7
1	5	Ty	U	-	-	-	9	3	1	-	-	-	-
2	6	Ty	U	-	-	-	8	6	1	-	-	-	-
3	7	Qal/Tsh	U	-	-	-	1	2	-	-	-	-	-
4	10	pJgn	U	-	-	-	2	2	1	-	-	-	-

Anomalies #1 and #2 are over areas underlain by Tertiary Yakima basalt flows (Ty).

Anomaly #3 is over an area underlain by Tertiary nonmarine shales

(Tsh) and Recent alluvium (Qal).

Anomaly #4 is over an area underlain by pre-Jurassic gneiss (pJgn).

REFERENCES

Huntting, M.T., (1956); Inventory of Washington Minerals, Part II: Metallic Minerals. Bulletin 37, Department of Natural Resources, State of Washington.

Weissenborn, A.E., (1966); Uranium IN Mineral and Water Resources of Washington. Prepared by the United States Geological Survey.

APPENDIX A - FLIGHT LINE MAP

APPENDIX B - GEOLOGY MAP

This is a detailed geological map of the Leavenworth, Kansas area. The map displays topographic features with contour lines and elevation markers. Geological formations are delineated by various patterns and labels, including Quaternary (Q), Tertiary (T), and Mesozoic (M) units. Key structural features are highlighted, such as the Lindsay Syncline, Snowshoe Butte Anticline, and Green River Syncline. The Leavenworth Fault is also indicated. The map includes a coordinate grid with latitude and longitude markings. A scale bar is present in the bottom right corner, and a north arrow is located in the bottom left corner. The map is titled "Geological Map of the Leavenworth, Kansas Area" and is dated "1960".

Compiled 1980

GEOLOGY OF THE WENATCHEE QUADRANGLE

APPENDIX C - EXPLANATION OF GEOLOGIC LEGEND

APPENDIX D - FLIGHT LINE/GEOLOGY MAP

APPENDIX E - PSEUDO-CONTOUR MAPS

WENATCHEE

Magnetic

CONTOUR INTERVAL =
REFERENCE CONTOUR - (00000) =

125.00
0.00

WENATCHEE

Total Count

CONTOUR INTERVAL =
REFERENCE CONTOUR

(00000) =

200.00
500.00

WENATCHEE

eU

CONTOUR INTERVAL =
REFERENCE CONTOUR (00000) =

.50
0.00

WENATCHEE

eTh

CONTOUR INTERVAL = 1.25
REFERENCE CONTOUR (00000) = 0.00

WENATCHEE

CONTOUR INTERVAL = .25
REFERENCE CONTOUR (00000) = 0.00

WENATCHEE

eU/eTH

CONTOUR INTERVAL = .15
REFERENCE CONTOUR (00000) = 6.00

WENATCHEE

eU/K40

CONTOUR INTERVAL = 200
REFERENCE CONTOUR = 2000
1.00

WENATCHEE

CONTOUR INTERVAL = 1.00
REFERENCE CONTOUR (00000) = 0.00

APPENDIX F - STACKED PROFILES

APPENDIX G - ANOMALY MAPS

WENATCHEE, WA

EU

0 4 8 12 16 MILES

HIGH LIFE - QEB

G-1

WENATCHEE, WA

ETH

MILES 0 4 8 12 16

HIGH LIFE. - QEB

WENATCHEE, WA

K

0 4 8 12 16 MILES

HIGH LIFE - QEB

WENATCHEE.WA

EU/ETH

0 4 8 12 16 MILES

HIGH LIFE - QEB

WENATCHEE, WA

EU/K

0 4 8 12 16 MILES

HIGH LIFE - QEB

WENATCHEE, WA

ETH/K

0 4 8 12 16 MILES

HIGH LIFE - QEB

G-6

APPENDIX H - GEOLOGIC HISTOGRAMS

UNIT QLS

UNIT QAL

UNIT QS

UNIT QL

UNIT QGY

UNIT QGT

UNIT QGO

UNIT QV

UNIT QGOL

UNIT PT

UNIT PMC

UNIT TY

UNIT TYF

UNIT TYI

UNIT MOV

UNIT MOE

UNIT MOC

UNIT MOS

UNIT MOK

UNIT DEV

UNIT EU

UNIT ER

UNIT BI

WENATCHEE, WA

UNIT EA

WENATCHEE, WA

UNIT EN

LOO-NORMAL

WENATCHEE, WA

LOO-NORMAL

LOO-NORMAL

LOO-NORMAL

LOO-NORMAL

LOO-NORMAL

UNIT ET

WENATCHEE, WA

LOO-NORMAL

LOO-NORMAL

LOO-NORMAL

UNIT ENC

UNIT TKG
WENATCHEE, WA

UNIT TCS

UNIT TSH

UNIT TS

UNIT PTV

UNIT KJU

WENATCHEE.WA

WENATCHEE.WA

UNIT KJS

UNIT KS

UNIT MZG

UNIT PJ

UNIT P.JV

UNIT PTM

UNIT PJPH

UNIT PJSC

UNIT PKC

UNIT PJGN

UNIT PCM

APPENDIX I - SPEED AND ALTITUDE HISTOGRAMS

WENATCHEE,WA

UNIT	ETH			EU			K			EU/ETH			EU/K			ETH/K		
	MEAN	ST.DEV.	EVENTS	MEAN	ST.DEV.	EVENTS	MEAN	ST.DEV.	EVENTS	MEAN	ST.DEV.	EVENTS	MEAN	ST.DEV.	EVENTS	MEAN	ST.DEV.	EVENTS
			DIS.			DIS.			DIS.			DIS.			DIS.			DIS.
BI	2.11	1.29	404 L	.79	.39	290 L	.51	.39	562 L	.40	.18	223 L	1.73	1.34	281 L	3.71	1.52	398 L
EA	1.15	.37	14 U	.37	.04	7 U	.36	.05	17 U	.38	.17	6 U	1.06	.15	7 U	3.27	1.30	14 U
EN	3.20	1.36	1328 L	.99	.44	1131 L	.85	.45	1332 L	.33	.16	1127 L	1.24	.56	1131 L	4.08	1.32	1328 L
ENC	2.65	1.20	1118 L	.98	.47	864 L	.67	.37	1142 L	.38	.16	857 L	1.50	.67	864 L	4.26	1.48	1118 L
ER	3.29	.71	273 L	1.06	.32	250 N	.85	.20	273 L	.34	.14	250 L	1.31	.48	250 L	4.05	1.15	273 L
ET	2.84	1.52	477 L	.94	.54	328 L	.71	.39	499 L	.33	.16	323 L	1.32	.61	328 L	4.14	1.39	476 L
EU	2.48	1.05	76 L	.80	.32	66 L	.63	.29	77 N	.38	.18	65 L	1.43	.52	66 N	4.20	1.59	76 L
EV	1.45	.59	476 L	.62	.21	193 L	.32	.14	568 L	.44	.19	177 L	1.73	.73	193 L	4.59	1.96	469 L
KJS	2.18	1.39	1245 L	.87	.46	694 L	.42	.27	1392 N	.39	.19	652 L	1.82	.93	683 L	5.12	1.97	1203 L
KJU	1.76	.66	102 L	.60	.15	58 L	.38	.13	107 L	.40	.19	56 L	1.69	.93	58 L	4.76	1.71	102 L
KJV	1.78	.77	88 L	.80	.34	42 L	.54	.26	97 L	.47	.22	37 N	1.50	.48	42 L	3.47	1.24	88 N
KS	2.58	1.35	3303 L	1.09	.57	2660 L	.84	.46	3495 L	.44	.20	2554 L	1.31	.59	2660 L	3.13	1.06	3303 L
LTV	2.95	1.10	509 N	1.04	.44	464 L	1.00	.34	521 N	.37	.17	453 L	1.05	.41	464 L	3.04	1.08	509 L
MOC	1.74	.61	416 L	.66	.20	262 L	.37	.13	449 L	.42	.18	242 L	1.84	.72	262 N	4.81	1.83	416 L
MOE	1.95	.83	276 L	.65	.22	154 L	.41	.17	294 L	.39	.19	140 L	1.70	.82	154 L	4.75	1.45	276 U
MOK	2.57	1.17	548 L	.94	.45	427 L	.71	.33	557 N	.37	.16	425 L	1.26	.47	427 L	3.74	1.13	548 L
MOS	1.68	.73	582 L	.66	.23	316 L	.40	.21	647 L	.41	.20	292 L	1.59	.86	313 L	4.50	1.95	574 L
MOV	3.25	2.19	6318 L	1.08	.74	4935 L	.72	.45	6423 N	.34	.16	4875 L	1.46	.61	4934 L	4.61	1.58	6318 L
MZG	4.05	2.12	6209 L	1.23	.58	5677 L	1.23	.56	6238 N	.33	.14	5656 L	1.02	.36	5672 L	3.29	.89	6206 N
OEY	2.41	1.26	672 L	1.06	.51	524 L	.54	.26	720 N	.44	.19	498 L	1.90	.83	523 L	4.60	1.75	671 N
OV	3.22	1.01	186 L	1.02	.34	173 L	.89	.24	186 L	.34	.13	173 L	1.17	.38	173 N	3.69	.88	186 N
PCM	1.22	.37	28 N	.64	.14	13 U	.36	.13	72 L	.58	.13	5 U	1.55	.45	13 U	3.36	1.26	28 U
PJ	2.29	.83	67 L	.97	.37	40 L	.64	.23	80 L	.43	.21	40 L	1.34	.47	40 N	3.44	1.83	67 U
PJE	2.01	1.06	325 L	.83	.33	227 L	.47	.22	415 L	.41	.20	186 L	1.72	.98	227 L	4.09	1.57	325 L
PJGN	3.53	1.77	4636 L	1.16	.50	4017 L	1.00	.53	4744 L	.35	.16	3967 L	1.22	.64	4013 L	3.74	1.21	4623 L
PJPH	2.08	.80	225 N	.86	.34	205 L	.61	.27	230 L	.45	.22	200 L	1.50	.65	205 L	3.59	1.29	225 L
PJSC	2.33	1.20	1424 L	.88	.36	1149 L	.62	.34	1545 L	.41	.20	1075 L	1.57	.92	1147 L	3.89	1.50	1421 L
PJV	.91	.11	7 U	.43	0.00	1 U	.22	.05	10 U	0.00	0.00	0 U	2.35	0.00	1 U	4.24	1.28	7 U
PKC	2.75	1.13	1333 L	1.06	.43	1190 L	.75	.32	1381 N	.42	.19	1155 L	1.47	.60	1189 L	3.77	1.18	1331 L
PMC	2.38	.66	32 L	.83	.22	31 L	.68	.12	32 N	.39	.17	31 N	1.24	.37	31 L	3.51	.79	32 U
PT	3.89	1.12	228 N	.93	.27	204 L	.78	.15	228 L	.25	.10	204 L	1.24	.45	204 L	5.11	1.48	228 U
PTB	1.79	.92	541 L	.75	.31	302 L	.42	.31	791 L	.41	.20	257 L	1.63	1.02	297 L	4.34	2.21	533 L
PTM	2.20	.92	692 L	.89	.33	537 L	.66	.28	730 N	.44	.22	513 L	1.38	.63	537 L	3.43	1.18	692 L
PTV	.99	.28	13 L	.42	.10	3 U	.41	.17	69 L	0.00	0.00	0 U	1.24	.20	3 U	3.27	1.21	13 U
QAL	3.65	1.60	5634 N	1.06	.46	4931 L	.86	.39	5711 N	.30	.14	4863 L	1.28	.60	4923 L	4.40	1.39	5619 L
QG	2.86	1.21	1162 L	1.00	.38	963 L	.76	.30	1168 L	.38	.17	960 L	1.38	.55	963 L	3.88	1.17	1162 L
QGO	1.86	.77	1415 L	.71	.28	850 L	.38	.16	1515 N	.41	.21	799 L	1.96	1.09	844 L	5.25	2.56	1407 L
QGOL	.99	.35	49 L	.38	.14	11 U	.15	.06	53 L	.42	.16	11 U	2.92	.97	11 U	7.08	2.73	48 U
QGT	1.73	.64	1087 L	.65	.22	549 L	.39	.15	1133 N	.41	.19	533 L	1.80	.92	548 L	4.71	1.94	1083 L
QGY	1.49	.55	1643 L	.61	.23	710 L	.32	.12	1801 N	.44	.19	648 L	1.94	.85	710 L	4.82	1.87	1628 L
QL	8.27	2.07	425 N	2.04	.59	423 N	1.48	.22	425 N	.25	.08	423 N	1.38	.36	423 N	5.57	1.05	425 N
QLS	5.83	2.08	1158 N	1.48	.62	1099 L	1.22	.42	1162 N	.26	.09	1096 N	1.22	.48	1098 L	4.87	1.88	1158 N
QS	4.64	1.86	160 L	1.19	.52	144 L	1.01	.62	160 N	.26	.09	144 L	1.28	.45	144 L	5.04	1.15	160 N
QV	3.77	1.07	37 N	1.19	.40	36 U	.82	.18	37 N	.33	.10	36 N	1.52	.52	36 L	4.61	.71	37 U
TC	2.56	.81	57 L	.75	.17	39 L	1.00	.21	57 L	.30	.09	39 L	.74	.19	39 L	2.56	.54	57 N
TCS	5.40	1.45	467 L	1.53	.55	458 L	1.50	.38	467 L	.29	.10	458 N	1.03	.29	458 N	3.63	.58	467 L
TD	2.16	.81	80 L	1.00	.36	58 U	.54	.24	82 L	.51	.24	56 U	1.77	.63	58 U	4.32	1.84	80 L
TG	3.70	2.56	4777 L	1.31	.78	4007 L	.94	.57	4887 L	.37	.17	3954 L	1.37	.60	3995 L	3.96	1.36	4748 L
TI	2.36	.62	39 L	.74	.09	10 U	.62	.08	39 L	.39	.12	10 U	1.19	.20	10 U	3.83	1.07	39 N
TKBI	1.44	.64	75 L	.65	.30	43 N	.24	.13	87 L	.47	.17	38 L	2.96	1.36	40 U	6.75	3.23	72 U
TKC	4.18	1.62	3994 N	1.27	.55	3790 L	1.15	.42	4002 N	.32	.13	3783 L	1.12	.41	3788 L	3.68	.85	3991 L
TKS	3.11	1.33	3454 L	1.03	.45	2969 L	.87	.36	3520 N	.35	.16	2925 L	1.21	.53	2969 L	3.66	1.06	3454 L
TS	3.87	1.01	177 L	1.27	.44	172 L	1.19	.29	177 N	.34	.11	172 L	1.09	.32	172 L	3.30	.66	177 N
TSH	4.96	1.28	151 L	1.48	.46	151 L	1.26	.32	151 L	.31	.11	151 L	1.19	.34	151 L	4.00	.82	151 N
TV	3.03	1.16	248 L	.93	.37	205 L	.78	.26	256 N	.32	.13	205 L	1.15	.38	205 L	3.80	.86	248 N
TY	4.74	1.65	7302 N	1.16	.49	6969 L	.90	.31	7296 N	.25	.10	6966 L	1.31	.45	6968 L	5.38	1.18	7292 L

TYF	6.18	2.13	337 L	1.41	.53	332 L	1.13	.35	337 L	.24	.09	332 N	1.27	.37	332 L	5.51	.92	337 L
TYI	3.14	.45	22 U	.93	.27	22 U	.67	.09	22 N	.30	.10	22 N	1.43	.55	22 U	4.79	1.22	22 U
WA	2.89	1.82	294 L	1.07	.44	224 L	.71	.50	315 L	.37	.22	198 L	1.53	1.14	202 L	4.42	1.81	270 L

N=NORMAL DISTRIBUTION
 L=LOG-NORMAL DISTRIBUTION
 U=UNKNOWN DISTRIBUTION

	BI	EA	EN	ENC	ER	ET	EU	EV	KJS	KJU	KJV	KS	LTV	MOC	MDE
1	0.00	0.00	3.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	1.30	0.00	3.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	2.24	0.00	3.25	0.00	0.00	4.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.19
4	0.00	0.00	0.00	2.81	3.24	2.60	2.48	0.00	0.00	0.00	0.00	0.00	4.42	1.71	0.00
5	0.00	0.00	0.00	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43	0.00
6	2.53	1.15	0.00	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.45	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.68	0.00	0.00	2.17	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.31	0.00	1.78	3.19	0.00	0.00	0.00
9	2.06	0.00	0.00	0.00	0.00	0.00	0.00	1.54	0.00	0.00	0.00	2.10	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.32	1.22	0.00	0.00	1.83	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.67	1.95	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.84	0.00	0.00	0.00	2.86	0.00	0.00
501	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.63	1.57	0.00	0.00	0.00	1.86	1.90
502	0.00	0.00	3.02	2.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
503	1.91	0.00	0.00	0.00	3.93	3.57	0.00	0.00	0.00	0.00	0.00	2.24	0.00	0.00	0.00
504	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	MOK	MOS	MOV	MZG	DEV	OV	PCM	PJ	PJE	PJGN	PJPH	PJSC	PJV	PKC	PMC
1	0.00	0.00	3.68	0.00	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.38
2	2.13	0.00	2.89	0.00	0.00	0.00	0.00	0.00	2.89	0.00	0.00	1.03	0.00	0.00	0.00
3	0.00	0.00	2.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	1.93	1.87	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	2.86	1.24	1.98	0.00	2.07	0.00	0.00	0.00	1.49	0.00	0.00	0.00	0.00	0.00	0.00
6	2.46	0.00	0.00	0.00	1.21	0.00	0.00	0.00	1.43	7.64	2.38	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	3.28	0.00	0.00	0.00	4.69	0.00	4.26	0.00	2.13	0.00
8	0.00	0.00	0.00	0.00	0.00	3.15	0.00	0.00	0.00	5.53	0.00	4.76	0.00	2.49	0.00
9	0.00	0.00	0.00	4.91	2.06	0.00	0.00	0.00	0.00	3.95	2.19	1.75	0.00	2.89	0.00
10	0.00	0.00	0.00	3.40	0.00	0.00	1.22	2.29	0.00	2.65	2.13	1.59	0.00	2.97	0.00
11	0.00	0.00	0.00	4.65	0.00	0.00	0.00	0.00	0.00	1.95	0.00	1.43	0.00	0.00	0.00
12	0.00	0.00	0.00	4.07	0.00	0.00	0.00	0.00	0.00	3.25	2.97	3.38	0.00	0.00	0.00
501	0.00	1.24	4.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
502	0.00	0.00	2.88	1.56	0.00	0.00	0.00	0.00	2.00	2.55	1.71	2.00	0.00	0.00	0.00
503	0.00	0.00	0.00	4.05	0.00	0.00	0.00	0.00	0.00	3.14	0.00	0.00	.91	3.01	0.00
504	0.00	0.00	0.00	3.49	0.00	0.00	0.00	0.00	0.00	4.81	0.00	0.00	0.00	0.00	0.00

COMPUTER LINES 1 THRU 12 REFER TO PROFILE LINES 1 THRU 12.

COMPUTER LINES 501 THRU 504 REFER TO NORTH - SOUTH TIE LINES 1 THRU 4.

GEOLOGIC UNIT AVERAGE VALUE AS A
FUNCTION OF MAP LINE FOR PPM ETH

	PT	PTB	PTM	PTV	QAL	QG	QGO	QGOL	QGT	QGY	QL	QLS	QS	QV	TC
1	0.00	0.00	0.00	0.00	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.77	0.00
2	3.75	0.00	0.00	0.00	3.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	3.25	0.00	2.92	0.00	0.00	0.00	0.00	4.26	3.85	0.00	0.00
4	0.00	0.00	0.00	0.00	3.26	0.00	2.28	0.00	2.23	0.00	11.08	4.08	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	5.32	0.00	1.60	0.00	2.07	0.00	0.00	7.17	0.00	0.00	0.00
6	2.43	1.78	0.00	.99	3.08	0.00	0.00	0.00	1.45	0.00	8.21	7.05	0.00	0.00	0.00
7	0.00	1.83	0.00	0.00	3.38	0.00	1.96	0.00	1.85	2.05	5.91	4.66	0.00	0.00	0.00
8	0.00	1.71	0.00	0.00	4.29	2.31	1.95	0.00	1.69	1.45	6.33	7.62	0.00	0.00	2.56
9	0.00	0.00	.76	0.00	4.49	2.97	0.00	.99	0.00	1.44	9.00	5.35	8.06	0.00	0.00
10	0.00	0.00	0.00	0.00	2.31	2.79	1.76	0.00	1.41	1.27	5.39	0.00	0.00	0.00	0.00
11	0.00	0.00	2.21	0.00	1.74	2.62	1.57	0.00	1.62	0.00	3.88	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	3.49	4.19	1.75	0.00	1.61	0.00	0.00	0.00	0.00	0.00	0.00
501	0.00	0.00	0.00	0.00	2.74	0.00	1.73	0.00	2.36	1.45	0.00	0.00	0.00	0.00	0.00
502	0.00	0.00	0.00	0.00	3.12	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
503	5.66	1.76	0.00	0.00	4.22	3.02	0.00	0.00	0.00	0.00	0.00	4.33	0.00	0.00	0.00
504	0.00	0.00	0.00	0.00	5.24	0.00	0.00	0.00	0.00	0.00	0.00	7.12	0.00	0.00	0.00

	TCS	TD	TG	TI	TKBI	TKC	TKS	TS	TSH	TV	TY	TYF	TYI	WA
1	0.00	0.00	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.21	5.99	0.00	0.00
2	0.00	0.00	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.79	3.78	3.14	3.24
3	0.00	0.00	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.23	8.74	0.00	1.52
4	0.00	0.00	2.16	0.00	0.00	0.00	3.83	0.00	0.00	0.00	4.92	0.00	0.00	3.62
5	0.00	0.00	2.86	0.00	0.00	4.25	3.13	0.00	0.00	0.00	7.31	0.00	0.00	2.34
6	0.00	3.33	2.51	0.00	0.00	5.50	2.96	0.00	0.00	0.00	7.43	0.00	0.00	.91
7	5.05	0.00	6.25	2.36	0.00	4.41	3.33	3.98	5.18	0.00	4.68	0.00	0.00	1.95
8	5.06	0.00	3.38	0.00	0.00	4.07	1.92	3.37	4.21	0.00	6.37	0.00	0.00	4.59
9	7.04	0.00	2.08	0.00	0.00	4.59	0.00	4.61	5.70	0.00	8.52	0.00	0.00	3.26
10	0.00	0.00	2.06	0.00	0.00	3.39	0.00	0.00	0.00	1.73	0.00	0.00	0.00	2.88
11	0.00	0.00	1.99	0.00	0.00	2.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12	0.00	2.04	3.70	0.00	1.80	2.71	0.00	0.00	0.00	3.32	0.00	0.00	0.00	1.02
501	0.00	0.00	0.00	0.00	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
502	0.00	0.00	5.95	0.00	0.00	0.00	3.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00
503	0.00	0.00	0.00	0.00	0.00	3.09	3.02	0.00	0.00	3.95	4.79	0.00	0.00	2.08
504	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.73	4.69	0.00	4.08

COMPUTER LINES 1 THRU 12 REFER TO PROFILE LINES 1 THRU 12.

COMPUTER LINES 501 THRU 504 REFER TO NORTH - SOUTH TIE LINES 1 THRU 4.

GEOLOGIC UNIT AVERAGE VALUE AS A
FUNCTION OF MAP LINE FOR PPM ETH

	BI	EA	EN	ENC	ER	ET	EU	EV	KJS	KJU	KJV	KS	LTV	MOC	MOE
1	0.00	0.00	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	.58	0.00	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	.73	0.00	.87	0.00	0.00	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.64
4	0.00	0.00	0.00	.98	1.06	.96	.80	0.00	0.00	0.00	0.00	0.00	1.47	.65	0.00
5	0.00	0.00	0.00	.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.52	0.00
6	.82	.37	0.00	.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.61	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	.96	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.84	0.00	.80	1.36	0.00	0.00	0.00
9	.81	0.00	0.00	0.00	0.00	0.00	0.00	.62	0.00	0.00	0.00	.90	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.62	.62	0.00	0.00	.86	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.62	.63	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.77	0.00	0.00	0.00	1.01	0.00	0.00
501	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.63	.55	0.00	0.00	0.00	.69	.66
502	0.00	0.00	.93	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
503	.76	0.00	0.00	0.00	1.01	.83	0.00	0.00	0.00	0.00	0.00	.86	0.00	0.00	0.00
504	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	MOK	MOS	MOV	MZG	OEV	OV	PCM	PJ	PJE	PJGN	PJPH	PJSC	PJV	PKC	PMC
1	0.00	0.00	1.32	0.00	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.83
2	.71	0.00	.96	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	.62	0.00	0.00	0.00
3	0.00	0.00	.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	.82	.68	.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	1.06	.59	.68	0.00	.73	0.00	0.00	0.00	.67	0.00	0.00	0.00	0.00	0.00	0.00
6	.81	0.00	0.00	0.00	.60	0.00	0.00	0.00	.73	2.48	1.26	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	.93	0.00	0.00	0.00	1.22	0.00	1.03	0.00	.80	0.00
8	0.00	0.00	0.00	0.00	0.00	1.14	0.00	0.00	0.00	1.39	0.00	1.31	0.00	.99	0.00
9	0.00	0.00	0.00	1.35	.80	0.00	0.00	0.00	0.00	1.21	.83	.58	0.00	1.12	0.00
10	0.00	0.00	0.00	1.21	0.00	0.00	.64	.97	0.00	1.23	.65	.71	0.00	1.22	0.00
11	0.00	0.00	0.00	1.44	0.00	0.00	0.00	0.00	0.00	.71	0.00	.59	0.00	0.00	0.00
12	0.00	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	1.05	1.24	1.08	0.00	0.00	0.00
501	0.00	.41	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
502	0.00	0.00	.92	.66	0.00	0.00	0.00	0.00	.79	.84	.73	.83	0.00	0.00	0.00
503	0.00	0.00	0.00	.80	0.00	0.00	0.00	0.00	0.00	1.19	0.00	0.00	.43	.83	0.00
504	0.00	0.00	0.00	1.04	0.00	0.00	0.00	0.00	0.00	1.45	0.00	0.00	0.00	0.00	0.00

COMPUTER LINES 1 THRU 12 REFER TO PROFILE LINES 1 THRU 12.

COMPUTER LINES 501 THRU 504 REFER TO NORTH - SOUTH TIE LINES 1 THRU 4.

GEOLOGIC UNIT AVERAGE VALUE AS A
FUNCTION OF MAP LINE FOR PPM EU

	PT	PTB	PTM	PTV	QAL	QG	QGD	QGOL	QGT	QGY	QL	QLS	QS	QV	TC
1	0.00	0.00	0.00	0.00	.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.19	0.00
2	.91	0.00	0.00	0.00	.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	.87	0.00	.82	0.00	0.00	0.00	0.00	.97	.98	0.00	0.00
4	0.00	0.00	0.00	0.00	1.13	0.00	.73	0.00	.83	0.00	2.58	1.18	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	1.53	0.00	.59	0.00	.64	0.00	0.00	1.64	0.00	0.00	0.00
6	.84	.90	0.00	.42	1.20	0.00	0.00	0.00	.64	0.00	2.27	2.31	0.00	0.00	0.00
7	0.00	.67	0.00	0.00	1.05	0.00	1.10	0.00	.65	.76	1.48	1.20	0.00	0.00	0.00
8	0.00	.71	0.00	0.00	1.42	.73	.77	0.00	.55	.57	1.56	1.46	0.00	0.00	.75
9	0.00	0.00	0.00	0.00	1.36	1.09	0.00	.38	0.00	.60	2.20	1.47	2.01	0.00	0.00
10	0.00	0.00	0.00	0.00	.88	1.15	.69	0.00	.65	.49	1.55	0.00	0.00	0.00	0.00
11	0.00	0.00	.89	0.00	.69	.92	.68	0.00	.70	0.00	.98	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	1.26	1.09	.71	0.00	.56	0.00	0.00	0.00	0.00	0.00	0.00
501	0.00	0.00	0.00	0.00	.83	0.00	.60	0.00	.61	.59	0.00	0.00	0.00	0.00	0.00
502	0.00	0.00	0.00	0.00	1.02	.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
503	1.09	.76	0.00	0.00	1.14	.90	0.00	0.00	0.00	0.00	0.00	.83	0.00	0.00	0.00
504	0.00	0.00	0.00	0.00	1.24	0.00	0.00	0.00	0.00	0.00	0.00	1.61	0.00	0.00	0.00

	TCS	TD	TG	TI	TKBI	TKC	TKS	TS	TSH	TV	TY	TYF	TYI	WA
1	0.00	0.00	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07	1.24	0.00	0.00
2	0.00	0.00	.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.91	1.09	.93	1.00
3	0.00	0.00	.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.99	1.97	0.00	1.19
4	0.00	0.00	.80	0.00	0.00	0.00	1.21	0.00	0.00	0.00	1.38	0.00	0.00	1.42
5	0.00	0.00	1.11	0.00	0.00	1.18	.98	0.00	0.00	0.00	1.63	0.00	0.00	.90
6	0.00	1.31	.99	0.00	0.00	1.78	.99	0.00	0.00	0.00	1.92	0.00	0.00	.83
7	1.39	0.00	1.02	.74	0.00	1.22	1.11	1.18	1.54	0.00	1.18	0.00	0.00	1.09
8	1.45	0.00	1.21	0.00	0.00	1.25	.77	1.03	1.18	0.00	1.41	0.00	0.00	1.50
9	2.02	0.00	.90	0.00	0.00	1.49	0.00	1.75	1.87	0.00	2.17	0.00	0.00	1.61
10	0.00	0.00	.96	0.00	0.00	1.04	0.00	0.00	0.00	.62	0.00	0.00	0.00	.96
11	0.00	0.00	.87	0.00	0.00	.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.61
12	0.00	.95	1.40	0.00	.58	.98	0.00	0.00	0.00	.98	0.00	0.00	0.00	.81
501	0.00	0.00	0.00	0.00	.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
502	0.00	0.00	1.79	0.00	0.00	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00
503	0.00	0.00	0.00	0.00	0.00	.94	.88	0.00	0.00	1.03	.90	0.00	0.00	.78
504	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10	1.15	0.00	1.27

COMPUTER LINES 1 THRU 12 REFER TO PROFILE LINES 1 THRU 12.

COMPUTER LINES 501 THRU 504 REFER TO NORTH - SOUTH TIE LINES 1 THRU 4.

GEOLOGIC UNIT AVERAGE VALUE AS A
FUNCTION OF MAP LINE FOR PPM EU

	BI	EA	EN	ENC	ER	ET	EU	EV	KJS	KJU	KJV	KS	LTV	MOC	MOE
1	0.00	0.00	.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	.26	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	.58	0.00	.75	0.00	0.00	.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.45
4	0.00	0.00	0.00	.84	.82	.64	.63	0.00	0.00	0.00	0.00	0.00	1.26	.37	0.00
5	0.00	0.00	0.00	.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.35	0.00
6	.61	.36	0.00	.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.71	0.00	0.00	.70	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.48	0.00	.54	1.08	0.00	0.00	0.00
9	.56	0.00	0.00	0.00	0.00	0.00	0.00	.33	0.00	0.00	0.00	.64	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.31	.22	0.00	0.00	.47	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.36	.41	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.44	0.00	0.00	0.00	.99	0.00	0.00
501	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.33	.36	0.00	0.00	0.00	.38	.40
502	0.00	0.00	.74	.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
503	.34	0.00	0.00	0.00	1.17	.97	0.00	0.00	0.00	0.00	0.00	.77	0.00	0.00	0.00
504	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	MOK	MOS	MOV	MZG	OEY	OV	PCM	PJ	PJE	PJGN	PJPH	PJSC	PJV	PKC	PMC
1	0.00	0.00	.80	0.00	.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.68
2	.54	0.00	.73	0.00	0.00	0.00	0.00	0.00	.64	0.00	0.00	.33	0.00	0.00	0.00
3	0.00	0.00	.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	.56	.49	.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	.79	.22	.51	0.00	.56	0.00	0.00	0.00	.38	0.00	0.00	0.00	0.00	0.00	0.00
6	.80	0.00	0.00	0.00	.25	0.00	0.00	0.00	.48	1.90	1.02	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	.91	0.00	0.00	0.00	1.35	0.00	1.13	0.00	.49	0.00
8	0.00	0.00	0.00	0.00	0.00	.86	0.00	0.00	0.00	1.59	0.00	1.33	0.00	.75	0.00
9	0.00	0.00	0.00	1.52	.68	0.00	0.00	0.00	0.00	1.24	.67	.56	0.00	.76	0.00
10	0.00	0.00	0.00	1.05	0.00	0.00	.36	.64	0.00	.73	.57	.41	0.00	.85	0.00
11	0.00	0.00	0.00	1.48	0.00	0.00	0.00	0.00	0.00	.46	0.00	.34	0.00	0.00	0.00
12	0.00	0.00	0.00	1.14	0.00	0.00	0.00	0.00	0.00	.93	.98	.92	0.00	0.00	0.00
501	0.00	.26	.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
502	0.00	0.00	.64	.53	0.00	0.00	0.00	0.00	.36	.55	.41	.55	0.00	0.00	0.00
503	0.00	0.00	0.00	.90	0.00	0.00	0.00	0.00	0.00	.88	0.00	0.00	.22	.89	0.00
504	0.00	0.00	0.00	1.17	0.00	0.00	0.00	0.00	0.00	1.59	0.00	0.00	0.00	0.00	0.00

COMPUTER LINES 1 THRU 12 REFER TO PROFILE LINES 1 THRU 12.

COMPUTER LINES 501 THRU 504 REFER TO NORTH - SOUTH TIE LINES 1 THRU 4.

GEOLOGIC UNIT AVERAGE VALUE AS A
FUNCTION OF MAP LINE FOR %K

	PT	PTB	PTM	PTV	QAL	QG	QGO	QGOL	QGT	QGY	QL	QLS	QS	QV	TC
1	0.00	0.00	0.00	0.00	.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.82	0.00
2	.73	0.00	0.00	0.00	.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	.74	0.00	.48	0.00	0.00	0.00	0.00	.77	.72	0.00	0.00
4	0.00	0.00	0.00	0.00	.84	0.00	.53	0.00	.62	0.00	1.60	.96	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	1.26	0.00	.33	0.00	.58	0.00	0.00	1.39	0.00	0.00	0.00
6	.78	.37	0.00	.41	.77	0.00	0.00	0.00	.34	0.00	1.59	1.35	0.00	0.00	0.00
7	0.00	.46	0.00	0.00	.79	0.00	.43	0.00	.41	.47	1.05	1.14	0.00	0.00	0.00
8	0.00	.44	0.00	0.00	1.15	.61	.48	0.00	.44	.32	1.30	1.65	0.00	0.00	1.00
9	0.00	0.00	.14	0.00	1.32	.79	0.00	.15	0.00	.33	1.61	1.45	2.27	0.00	0.00
10	0.00	0.00	0.00	0.00	.63	.65	.55	0.00	.35	.29	1.37	0.00	0.00	0.00	0.00
11	0.00	0.00	.68	0.00	.46	.81	.32	0.00	.37	0.00	1.20	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	.96	.98	.36	0.00	.31	0.00	0.00	0.00	0.00	0.00	0.00
501	0.00	0.00	0.00	0.00	.63	0.00	.31	0.00	.46	.30	0.00	0.00	0.00	0.00	0.00
502	0.00	0.00	0.00	0.00	.71	.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
503	1.07	.38	0.00	0.00	1.00	.70	0.00	0.00	0.00	0.00	0.00	.77	0.00	0.00	0.00
504	0.00	0.00	0.00	0.00	1.27	0.00	0.00	0.00	0.00	0.00	0.00	1.49	0.00	0.00	0.00

	TCS	TD	TG	TI	TKBI	TKC	TKS	TS	TSH	TV	TY	TYF	TYI	WA
1	0.00	0.00	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.80	1.15	0.00	0.00
2	0.00	0.00	.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.73	.74	.67	.68
3	0.00	0.00	.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.78	1.49	0.00	.42
4	0.00	0.00	.57	0.00	0.00	0.00	1.06	0.00	0.00	0.00	.96	0.00	0.00	.98
5	0.00	0.00	.79	0.00	0.00	1.17	.90	0.00	0.00	0.00	1.36	0.00	0.00	.42
6	0.00	.86	.81	0.00	0.00	1.46	.94	0.00	0.00	0.00	1.41	0.00	0.00	.27
7	1.42	0.00	1.38	.62	0.00	1.23	.90	1.16	1.21	0.00	.91	0.00	0.00	.57
8	1.41	0.00	.88	0.00	0.00	1.27	.55	1.04	1.14	0.00	1.28	0.00	0.00	1.34
9	1.93	0.00	.47	0.00	0.00	1.38	0.00	1.46	1.77	0.00	1.58	0.00	0.00	.94
10	0.00	0.00	.65	0.00	0.00	.73	0.00	0.00	0.00	.50	0.00	0.00	0.00	.68
11	0.00	0.00	.62	0.00	0.00	.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.44
12	0.00	.51	1.25	0.00	.25	.83	0.00	0.00	0.00	.84	0.00	0.00	0.00	.24
501	0.00	0.00	0.00	0.00	.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
502	0.00	0.00	1.29	0.00	0.00	0.00	.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
503	0.00	0.00	0.00	0.00	0.00	.76	.83	0.00	0.00	.99	.83	0.00	0.00	.44
504	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.92	.87	0.00	1.11

COMPUTER LINES 1 THRU 12 REFER TO PROFILE LINES 1 THRU 12.

COMPUTER LINES 501 THRU 504 REFER TO NORTH - SOUTH TIE LINES 1 THRU 4.

GEOLOGIC UNIT AVERAGE VALUE AS A
FUNCTION OF MAP LINE FOR %K

	BI	EA	EN	ENC	ER	ET	EU	EV	KJS	KJU	KJV	KS	LTV	MOC	MGE
1	0.00	0.00	.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	.42	0.00	.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	.36	0.00	.27	0.00	0.00	.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.38
4	0.00	0.00	0.00	.35	.35	.36	.38	0.00	0.00	0.00	0.00	0.00	.35	.43	0.00
5	0.00	0.00	0.00	.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.36	0.00
6	.46	.38	0.00	.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.37	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.33	0.00	0.00	.46	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.38	0.00	.47	.45	0.00	0.00	0.00
9	.39	0.00	0.00	0.00	0.00	0.00	0.00	.43	0.00	0.00	0.00	.46	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.44	.48	0.00	0.00	.50	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.43	.36	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.46	0.00	0.00	0.00	.37	0.00	0.00
501	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.43	.47	0.00	0.00	0.00	.40	.39
502	0.00	0.00	.33	.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
503	.39	0.00	0.00	0.00	.26	.27	0.00	0.00	0.00	0.00	0.00	.42	0.00	0.00	0.00
504	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	MOK	MOS	MOV	MZG	DEV	OY	PCM	PJ	PJE	PJGN	PJPH	PJSC	PJV	PKC	PMC
1	0.00	0.00	.37	0.00	.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.39
2	.33	0.00	.34	0.00	0.00	0.00	0.00	0.00	.33	0.00	0.00	.70	0.00	0.00	0.00
3	0.00	0.00	.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	.45	.40	.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	.37	.49	.38	0.00	.41	0.00	0.00	0.00	.45	0.00	0.00	0.00	0.00	0.00	0.00
6	.36	0.00	0.00	0.00	.50	0.00	0.00	0.00	.51	.33	.57	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	.30	0.00	0.00	0.00	.26	0.00	.25	0.00	.38	0.00
8	0.00	0.00	0.00	0.00	0.00	.39	0.00	0.00	0.00	.27	0.00	.29	0.00	.44	0.00
9	0.00	0.00	0.00	.29	.49	0.00	0.00	0.00	0.00	.32	.43	.40	0.00	.42	0.00
10	0.00	0.00	0.00	.39	0.00	0.00	.58	.43	0.00	.46	.30	.46	0.00	.46	0.00
11	0.00	0.00	0.00	.33	0.00	0.00	0.00	0.00	0.00	.43	0.00	.47	0.00	0.00	0.00
12	0.00	0.00	0.00	.30	0.00	0.00	0.00	0.00	0.00	.35	.46	.35	0.00	0.00	0.00
501	0.00	.35	.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
502	0.00	0.00	.35	.48	0.00	0.00	0.00	0.00	.50	.36	.49	.44	0.00	0.00	0.00
503	0.00	0.00	0.00	.24	0.00	0.00	0.00	0.00	0.00	.40	0.00	0.00	0.00	.32	0.00
504	0.00	0.00	0.00	.32	0.00	0.00	0.00	0.00	0.00	.30	0.00	0.00	0.00	0.00	0.00

COMPUTER LINES 1 THRU 12 REFER TO PROFILE LINES 1 THRU 12.

COMPUTER LINES 501 THRU 504 REFER TO NORTH - SOUTH TIE LINES 1 THRU 4.

GEOLOGIC UNIT AVERAGE VALUE AS A
FUNCTION OF MAP LINE FOR EU/ETH

	PT	PTB	PTM	PTV	QAL	QG	QGD	QGOL	QGT	QGY	QL	QLS	QS	QV	TC
1	0.00	0.00	0.00	0.00	.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.33	0.00
2	.26	0.00	0.00	0.00	.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	.28	0.00	.31	0.00	0.00	0.00	0.00	.23	.27	0.00	0.00
4	0.00	0.00	0.00	0.00	.36	0.00	.34	0.00	.34	0.00	.24	.30	0.00	0.00	0.00
5	0.80	0.00	0.00	0.00	.31	0.00	.44	0.00	.39	0.00	0.00	.23	0.00	0.00	0.00
6	.37	.48	0.00	0.00	.42	0.00	0.00	0.00	.49	0.00	.28	.31	0.00	0.00	0.00
7	0.00	.36	0.00	0.00	.32	0.00	.61	0.00	.38	.39	.25	.27	0.00	0.00	0.00
8	0.00	.41	0.00	0.00	.33	.38	.46	0.00	.34	.47	.26	.20	0.00	0.00	.30
9	0.00	0.00	0.00	0.00	.31	.40	0.00	.42	0.00	.47	.25	.29	.25	0.00	0.00
10	0.00	0.00	0.00	0.00	.40	.43	.39	0.00	.41	.42	.29	0.00	0.00	0.00	0.00
11	0.00	0.00	.44	0.00	.51	.39	.48	0.00	.45	0.00	.26	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	.37	.27	.43	0.00	.40	0.00	0.00	0.00	0.00	0.00	0.00
501	0.00	0.00	0.00	0.00	.31	0.00	.39	0.00	.27	.42	0.00	0.00	0.00	0.00	0.00
502	0.00	0.00	0.00	0.00	.36	.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
503	.19	.43	0.00	0.00	.29	.30	0.00	0.00	0.00	0.00	0.00	.21	0.00	0.00	0.00
504	0.00	0.00	0.00	0.00	.24	0.00	0.00	0.00	0.00	0.00	0.00	.23	0.00	0.00	0.00

	TCS	TD	TG	TI	TKBI	TKC	TKS	TS	TSH	TV	TY	TYF	TYI	WA
1	0.00	0.00	.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.27	.21	0.00	0.00
2	0.00	0.00	.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.25	.31	.30	.25
3	0.00	0.00	.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.24	.23	0.00	.47
4	0.00	0.00	.42	0.00	0.00	0.00	.32	0.00	0.00	0.00	.29	0.00	0.00	.37
5	0.00	0.00	.39	0.00	0.00	.29	.34	0.00	0.00	0.00	.23	0.00	0.00	.37
6	0.00	.42	.42	0.00	0.00	.33	.36	0.00	0.00	0.00	.26	0.00	0.00	1.04
7	.28	0.00	.30	.39	0.00	.28	.35	.32	.31	0.00	.26	0.00	0.00	.54
8	.30	0.00	.38	0.00	0.00	.34	.45	.33	.30	0.00	.23	0.00	0.00	.25
9	.30	0.00	.42	0.00	0.00	.34	0.00	.38	.35	0.00	.26	0.00	0.00	.29
10	0.00	0.00	.43	0.00	0.00	.33	0.00	0.00	0.00	.38	0.00	0.00	0.00	.34
11	0.00	0.00	.47	0.00	0.00	.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.36
12	0.00	.52	.40	0.00	.34	.40	0.00	0.00	0.00	.31	0.00	0.00	0.00	.48
501	0.00	0.00	0.00	0.00	.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
502	0.00	0.00	.32	0.00	0.00	0.00	.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00
503	0.00	0.00	0.00	0.00	0.00	.33	.31	0.00	0.00	.29	.19	0.00	0.00	.48
504	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.24	.25	0.00	.27

COMPUTER LINES 1 THRU 12 REFER TO PROFILE LINES 1 THRU 12.

COMPUTER LINES 501 THRU 504 REFER TO NORTH - SOUTH TIE LINES 1 THRU 4.

GEOLOGIC UNIT AVERAGE VALUE AS A

FUNCTION OF MAP LINE FOR EU/ETH

	BI	EA	EN	ENC	ER	ET	EU	EV	KJS	KJD	KJV	KS	LTV	MOC	MDE
1	0.00	0.00	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	2.05	0.00	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	1.54	0.00	1.11	0.00	0.00	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.48
4	0.00	0.00	0.00	1.16	1.34	1.35	1.43	0.00	0.00	0.00	0.00	0.00	1.22	1.86	0.00
5	0.00	0.00	0.00	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.45	0.00
6	2.29	1.06	0.00	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.67	0.00	0.00	1.35	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79	0.00	1.50	1.27	0.00	0.00	0.00
9	1.37	0.00	0.00	0.00	0.00	0.00	0.00	1.74	0.00	0.00	0.00	1.44	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70	3.06	0.00	0.00	1.88	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.91	1.64	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70	0.00	0.00	0.00	1.04	0.00	0.00
501	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90	1.80	0.00	0.00	0.00	1.85	1.77
502	0.00	0.00	1.32	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
503	1.90	0.00	0.00	0.00	.88	1.23	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	0.00
504	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	MOK	MOS	MOV	MZG	OEY	OY	PCM	PJ	PJE	PJGN	PJPH	PJSC	PJV	PKC	PMC
1	0.00	0.00	1.62	0.00	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.24
2	1.16	0.00	1.29	0.00	0.00	0.00	0.00	0.00	1.49	0.00	0.00	1.68	0.00	0.00	0.00
3	0.00	0.00	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	1.44	1.53	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	1.33	2.30	1.44	0.00	1.27	0.00	0.00	0.00	1.82	0.00	0.00	0.00	0.00	0.00	0.00
6	1.05	0.00	0.00	0.00	2.64	0.00	0.00	0.00	1.37	1.35	1.24	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	1.03	0.00	0.00	0.00	.89	0.00	.94	0.00	1.61	0.00
8	0.00	0.00	0.00	0.00	0.00	1.36	0.00	0.00	0.00	.92	0.00	1.01	0.00	1.40	0.00
9	0.00	0.00	0.00	.89	1.32	0.00	0.00	0.00	0.00	.99	1.31	1.18	0.00	1.54	0.00
10	0.00	0.00	0.00	1.17	0.00	0.00	1.55	1.34	0.00	1.57	1.13	1.78	0.00	1.39	0.00
11	0.00	0.00	0.00	.99	0.00	0.00	0.00	0.00	0.00	1.91	0.00	1.93	0.00	0.00	0.00
12	0.00	0.00	0.00	1.02	0.00	0.00	0.00	0.00	0.00	1.20	1.29	1.27	0.00	0.00	0.00
501	0.00	1.88	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
502	0.00	0.00	1.50	1.23	0.00	0.00	0.00	0.00	3.01	1.59	1.87	1.72	0.00	0.00	0.00
503	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.39	0.00	0.00	2.35	1.02	0.00
504	0.00	0.00	0.00	.91	0.00	0.00	0.00	0.00	0.00	.90	0.00	0.00	0.00	0.00	0.00

COMPUTER LINES 1 THRU 12 REFER TO PROFILE LINES 1 THRU 12.

COMPUTER LINES 501 THRU 504 REFER TO NORTH - SOUTH TIE LINES 1 THRU 4.

GEOLOGIC UNIT AVERAGE VALUE AS A
FUNCTION OF MAP LINE FOR EU/2K

	PT	PTB	PTM	PTV	QAL	QG	QGO	QGOL	QGT	QGY	QL	QLS	QS	QV	TC
1	0.00	0.00	0.00	0.00	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52	0.00
2	1.29	0.00	0.00	0.00	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	1.22	0.00	1.76	0.00	0.00	0.00	0.00	1.29	1.39	0.00	0.00
4	0.00	0.00	0.00	0.00	1.35	0.00	1.39	0.00	1.25	0.00	1.63	1.22	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	1.32	0.00	2.07	0.00	1.21	0.00	0.00	1.19	0.00	0.00	0.00
6	1.17	1.70	0.00	1.24	1.55	0.00	0.00	0.00	1.96	0.00	1.45	1.63	0.00	0.00	0.00
7	0.00	1.48	0.00	0.00	1.41	0.00	2.68	0.00	1.70	1.67	1.38	1.08	0.00	0.00	0.00
8	0.00	1.71	0.00	0.00	1.25	1.38	1.72	0.00	1.27	1.94	1.23	.98	0.00	0.00	.74
9	0.00	0.00	0.00	0.00	1.00	1.47	0.00	2.92	0.00	1.99	1.38	1.01	.89	0.00	0.00
10	0.00	0.00	0.00	0.00	1.39	1.85	1.34	0.00	1.84	2.18	1.13	0.00	0.00	0.00	0.00
11	0.00	0.00	1.38	0.00	2.38	1.15	1.92	0.00	2.01	0.00	.83	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	1.49	1.11	2.08	0.00	2.08	0.00	0.00	0.00	0.00	0.00	0.00
501	0.00	0.00	0.00	0.00	1.33	0.00	2.35	0.00	1.44	2.00	0.00	0.00	0.00	0.00	0.00
502	0.00	0.00	0.00	0.00	1.62	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
503	1.01	1.82	0.00	0.00	1.17	1.24	0.00	0.00	0.00	0.00	0.00	1.13	0.00	0.00	0.00
504	0.00	0.00	0.00	0.00	.99	0.00	0.00	0.00	0.00	0.00	0.00	1.09	0.00	0.00	0.00

	TCS	TD	TG	TI	TKBI	TKC	TKS	TS	TSH	TV	TY	TYF	TYI	WA
1	0.00	0.00	1.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.40	1.10	0.00	0.00
2	0.00	0.00	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.26	1.47	1.43	1.20
3	0.00	0.00	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.29	1.34	0.00	1.55
4	0.00	0.00	1.40	0.00	0.00	0.00	1.17	0.00	0.00	0.00	1.47	0.00	0.00	1.35
5	0.00	0.00	1.42	0.00	0.00	1.02	1.12	0.00	0.00	0.00	1.21	0.00	0.00	2.36
6	0.00	1.35	1.28	0.00	0.00	1.25	1.07	0.00	0.00	0.00	1.37	0.00	0.00	3.89
7	.97	0.00	1.39	1.19	0.00	.98	1.29	1.04	1.28	0.00	1.30	0.00	0.00	1.92
8	1.05	0.00	1.42	0.00	0.00	1.01	1.51	1.03	1.07	0.00	1.10	0.00	0.00	.79
9	1.05	0.00	1.87	0.00	0.00	1.09	0.00	1.22	1.10	0.00	1.38	0.00	0.00	1.07
10	0.00	0.00	1.38	0.00	0.00	1.47	0.00	0.00	0.00	1.16	0.00	0.00	0.00	1.42
11	0.00	0.00	1.41	0.00	0.00	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
12	0.00	1.81	1.17	0.00	2.50	1.27	0.00	0.00	0.00	1.18	0.00	0.00	0.00	1.54
501	0.00	0.00	0.00	0.00	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
502	0.00	0.00	1.44	0.00	0.00	0.00	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
503	0.00	0.00	0.00	0.00	0.00	1.29	1.08	0.00	0.00	1.07	1.11	0.00	0.00	1.72
504	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.23	1.33	0.00	.94

COMPUTER LINES 1 THRU 12 REFER TO PROFILE LINES 1 THRU 12.

COMPUTER LINES 501 THRU 504 REFER TO NORTH - SOUTH TIE LINES 1 THRU 4.

GEOLOGIC UNIT AVERAGE VALUE AS A

FUNCTION OF MAP LINE FOR EU/XX

APPENDIX J - STATISTICAL TABLES

	BI	EA	EN	ENC	ER	ET	EU	EV	KJS	KJU	KJV	KS	LTV	MOC	MDE
1	0.00	0.00	4.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	4.81	0.00	3.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	4.07	0.00	4.53	0.00	0.00	5.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.72
4	0.00	0.00	0.00	3.63	4.10	4.05	4.20	0.00	0.00	0.00	0.00	0.00	3.91	4.70	0.00
5	0.00	0.00	0.00	4.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.24	0.00
6	3.28	3.27	0.00	3.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.82	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.41	0.00	0.00	3.17	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.01	0.00	3.47	3.01	0.00	0.00	0.00
9	3.56	0.00	0.00	0.00	0.00	0.00	0.00	4.80	0.00	0.00	0.00	3.37	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.30	5.75	0.00	0.00	3.94	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.83	5.02	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.14	0.00	0.00	0.00	2.99	0.00	0.00
501	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.35	4.49	0.00	0.00	0.00	5.13	4.76
502	0.00	0.00	4.19	4.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
503	4.00	0.00	0.00	0.00	3.37	4.25	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00
504	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	MOK	MOS	MOV	MZG	OEY	OV	PCM	PJ	PJE	PJGN	PJPH	PJSC	PJV	PKC	PMC
1	0.00	0.00	4.59	0.00	4.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.51
2	4.08	0.00	4.05	0.00	0.00	0.00	0.00	0.00	4.52	0.00	0.00	2.59	0.00	0.00	0.00
3	0.00	0.00	5.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	3.58	4.04	4.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	3.76	5.80	4.07	0.00	3.73	0.00	0.00	0.00	3.78	0.00	0.00	0.00	0.00	0.00	0.00
6	3.15	0.00	0.00	0.00	5.42	0.00	0.00	0.00	2.99	4.06	2.41	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	3.67	0.00	0.00	0.00	3.56	0.00	3.78	0.00	4.37	0.00
8	0.00	0.00	0.00	0.00	0.00	3.70	0.00	0.00	0.00	3.52	0.00	3.58	0.00	3.45	0.00
9	0.00	0.00	0.00	3.19	3.06	0.00	0.00	0.00	0.00	3.25	3.29	3.15	0.00	3.90	0.00
10	0.00	0.00	0.00	3.21	0.00	0.00	3.36	3.44	0.00	3.68	3.81	4.39	0.00	3.38	0.00
11	0.00	0.00	0.00	3.16	0.00	0.00	0.00	0.00	0.00	4.51	0.00	4.29	0.00	0.00	0.00
12	0.00	0.00	0.00	3.56	0.00	0.00	0.00	0.00	0.00	3.64	3.03	3.78	0.00	0.00	0.00
501	0.00	5.27	5.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
502	0.00	0.00	4.62	2.91	0.00	0.00	0.00	0.00	5.85	4.80	4.10	3.82	0.00	0.00	0.00
503	0.00	0.00	0.00	4.49	0.00	0.00	0.00	0.00	0.00	3.60	0.00	0.00	4.24	3.22	0.00
504	0.00	0.00	0.00	3.02	0.00	0.00	0.00	0.00	0.00	3.11	0.00	0.00	0.00	0.00	0.00

COMPUTER LINES 1 THRU 12 REFER TO PROFILE LINES 1 THRU 12.

COMPUTER LINES 501 THRU 504 REFER TO NORTH - SOUTH TIE LINES 1 THRU 4.

GEOLOGIC UNIT AVERAGE VALUE AS A

FUNCTION OF MAP LINE FOR ETH/XK

	PT	PTB	PTM	PTV	QAL	QG	QGO	QGOL	QGT	QGY	QL	QLS	QS	QV	TC
1	0.00	0.00	0.00	0.00	4.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.61	0.00
2	5.27	0.00	0.00	0.00	5.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	4.44	0.00	6.72	0.00	0.00	0.00	0.00	5.63	5.38	0.00	0.00
4	0.00	0.00	0.00	0.00	3.86	0.00	4.54	0.00	3.85	0.00	6.96	4.31	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	4.34	0.00	5.04	0.00	3.63	0.00	0.00	5.19	0.00	0.00	0.00
6	3.10	4.41	0.00	3.27	3.90	0.00	0.00	0.00	4.77	0.00	5.18	5.07	0.00	0.00	0.00
7	0.00	4.46	0.00	0.00	4.55	0.00	4.77	0.00	4.72	4.66	5.68	4.14	0.00	0.00	0.00
8	0.00	4.19	0.00	0.00	3.97	3.83	4.07	0.00	3.99	4.82	4.93	4.81	0.00	0.00	2.56
9	0.00	0.00	4.87	0.00	3.40	3.85	0.00	7.08	0.00	4.53	5.63	3.71	3.56	0.00	0.00
10	0.00	0.00	0.00	0.00	3.76	4.41	3.43	0.00	4.20	4.26	3.95	0.00	0.00	0.00	0.00
11	0.00	0.00	3.41	0.00	4.27	3.31	5.00	0.00	4.64	0.00	3.26	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	4.86	4.34	5.40	0.00	5.42	0.00	0.00	0.00	0.00	0.00	0.00
501	0.00	0.00	0.00	0.00	4.55	0.00	5.91	0.00	5.17	5.05	0.00	0.00	0.00	0.00	0.00
502	0.00	0.00	0.00	0.00	4.87	4.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
503	5.30	4.08	0.00	0.00	4.31	4.39	0.00	0.00	0.00	0.00	0.00	5.68	0.00	0.00	0.00
504	0.00	0.00	0.00	0.00	4.16	0.00	0.00	0.00	0.00	0.00	0.00	4.84	0.00	0.00	0.00

	TCS	TD	TG	TI	TKBI	TKC	TKS	TS	TSH	TV	TY	TYF	TYI	WA
1	0.00	0.00	4.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.41	5.24	0.00	0.00
2	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.26	5.28	4.79	5.61
3	0.00	0.00	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.59	5.94	0.00	6.75
4	0.00	0.00	3.97	0.00	0.00	0.00	3.68	0.00	0.00	0.00	5.27	0.00	0.00	4.32
5	0.00	0.00	3.98	0.00	0.00	3.65	3.53	0.00	0.00	0.00	5.38	0.00	0.00	5.79
6	0.00	3.87	3.30	0.00	0.00	3.80	3.16	0.00	0.00	0.00	5.31	0.00	0.00	4.18
7	3.59	0.00	4.76	3.83	0.00	3.64	3.84	3.45	4.32	0.00	5.23	0.00	0.00	3.32
8	3.65	0.00	3.98	0.00	0.00	3.15	3.66	3.28	3.74	0.00	5.08	0.00	0.00	3.10
9	3.66	0.00	4.09	0.00	0.00	3.33	0.00	3.21	3.20	0.00	5.42	0.00	0.00	3.55
10	0.00	0.00	3.49	0.00	0.00	4.74	0.00	0.00	0.00	3.29	0.00	0.00	0.00	4.37
11	0.00	0.00	3.36	0.00	0.00	3.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.76
12	0.00	4.37	3.14	0.00	7.75	3.36	0.00	0.00	0.00	3.99	0.00	0.00	0.00	5.61
501	0.00	0.00	0.00	0.00	6.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
502	0.00	0.00	4.61	0.00	0.00	0.00	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
503	0.00	0.00	0.00	0.00	0.00	4.14	3.67	0.00	0.00	4.00	5.89	0.00	0.00	4.79
504	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.27	5.45	0.00	150.93

COMPUTER LINES 1 THRU 12 REFER TO PROFILE LINES 1 THRU 12.

COMPUTER LINES 501 THRU 504 REFER TO NORTH - SOUTH TIE LINES 1 THRU 4.

GEOLOGIC UNIT AVERAGE VALUE AS A
FUNCTION OF MAP LINE FOR ETH/2K

APPENDIX K - MAGNETIC AND ANCILLARY PROFILES

APPENDIX L - TEST LINE DATA

PRE-FLIGHT AND POST-FLIGHT TEST LINE DATA

WENATCHEE QUADRANGLE

	<u>8/16/80</u>	<u>8/19/80</u>	<u>8/21/80</u>	<u>8/22/80</u>	<u>8/23/80</u>
Pre TL	21.96	21.85	9.64	9.83	14.65
Post TL	21.17	20.97	9.80	10.07	13.89
Pre Bi	17.42	17.95	6.12	5.97	8.87
Post Bi	17.31	16.92	5.85	5.96	9.27
Pre K	98.70	101.33	33.83	36.46	61.64
Post K	94.37	97.64	35.14		66.82
Pre TC	996.48	1064.59	391.35	412.19	738.43
Post TC	1004.30	1027.43	409.12	416.86	749.12

NOTE: NEW TEST LINE (8/21/80)

NOTE: NEW TEST LINE (8/23/80)