


United States Nuclear Regulatory Commission Official Hearing Exhibit	
In the Matter of:	POWERTECH USA, INC. (Dewey-Burdock In Situ Uranium Recovery Facility)
	ASLBP #: 10-898-02-MLA-BD01
	Docket #: 04009075
	Exhibit #: NRC-084-D-00-BD01
	Admitted: 8/19/2014
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Other:	Identified: 8/19/2014 Withdrawn: Stricken:

NRC-084-D

B-3

APPENDIX B

STREAM SEDIMENT

LIST OF TABLES

<u>No.</u>	<u>Title</u>	<u>Page</u>
B-1	Statistical Summary for Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-9
B-2	Correlation Matrix for Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-10
B-3	Partial Data Listing for Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-64

LIST OF FIGURES

<u>No.</u>	<u>Title</u>	<u>Page</u>
B-1a	Probability, Frequency, and Percentile Plots for Soluble Uranium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-12
B-1b	Geochemical Distribution of Soluble Uranium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-13
B-2a	Probability, Frequency, and Percentile Plots for Uranium by Neutron Activation in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-14
B-2b	Geochemical Distribution of Uranium by Neutron Activation in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-15
B-3a	Probability, Frequency, and Percentile Plots for Uranium Fluorometric/Uranium Neutron Activation in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-16

LIST OF FIGURES, Continued

<u>No.</u>	<u>Title</u>	<u>Page</u>
B-3b	Geochemical Distribution of Uranium Fluorometric/ Uranium Neutron Activation in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-17
B-4a	Probability, Frequency, and Percentile Plots for Thorium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-18
B-4b	Geochemical Distribution of Thorium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-19
B-5a	Probability, Frequency, and Percentile Plots for Aluminum (%) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-20
B-5b	Geochemical Distribution of Aluminum (%) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-21
B-6a	Probability, Frequency, and Percentile Plots for Arsenic (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-22
B-6b	Geochemical Distribution of Arsenic (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-23
B-7a	Probability, Frequency, and Percentile Plots for Calcium (%) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-24
B-7b	Geochemical Distribution of Calcium (%) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-25
B-8a	Probability, Frequency, and Percentile Plots for Cerium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-26

LIST OF FIGURES, Continued

<u>No.</u>	<u>Title</u>	<u>Page</u>
B-8b	Geochemical Distribution of Cerium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-27
B-9a	Probability, Frequency, and Percentile Plots for Cobalt (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-28
B-9b	Geochemical Distribution of Cobalt (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-29
B-10a	Probability, Frequency, and Percentile Plots for Chromium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-30
B-10b	Geochemical Distribution of Chromium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-31
B-11a	Probability, Frequency, and Percentile Plots for Copper (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-32
B-11b	Geochemical Distribution of Copper (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-33
B-12a	Probability, Frequency, and Percentile Plots for Iron (%) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-34
B-12b	Geochemical Distribution of Iron (%) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-35
B-13a	Probability, Frequency, and Percentile Plots for Potassium (%) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-36
B-13b	Geochemical Distribution of Potassium (%) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-37

LIST OF FIGURES, Continued

No.	Title	Page
B-14a	Probability, Frequency, and Percentile Plots for Lithium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-38
B-14b	Geochemical Distribution of Lithium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-39
B-15a	Probability, Frequency, and Percentile Plots for Manganese (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-40
B-15b	Geochemical Distribution of Manganese (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-41
B-16a	Probability, Frequency, and Percentile Plots for Molybdenum (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-42
B-16b	Geochemical Distribution of Molybdenum (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-43
B-17a	Probability, Frequency, and Percentile Plots for Niobium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-44
B-17b	Geochemical Distribution of Niobium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-45
B-18a	Probability, Frequency, and Percentile Plots for Nickel (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-46
B-18b	Geochemical Distribution of Nickel (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-47
B-19a	Probability, Frequency, and Percentile Plots for Phosphorus (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-48

LIST OF FIGURES, Continued

<u>No.</u>	<u>Title</u>	<u>Page</u>
B-19b	Geochemical Distribution of Phosphorus (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-49
B-20a	Probability, Frequency, and Percentile Plots for Scandium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-50
B-20b	Geochemical Distribution of Scandium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-51
B-21a	Probability, Frequency, and Percentile Plots for Selenium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-52
B-21b	Geochemical Distribution of Selenium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-53
B-22a	Probability, Frequency, and Percentile Plots for Titanium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-54
B-22b	Geochemical Distribution of Titanium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-55
B-23a	Probability, Frequency, and Percentile Plots for Vanadium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-56
B-23b	Geochemical Distribution of Vanadium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-57
B-24a	Probability, Frequency, and Percentile Plots for Yttrium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-58
B-24b	Geochemical Distribution of Yttrium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-59

LIST OF FIGURES, Continued

<u>No.</u>	<u>Title</u>	<u>Page</u>
B-25a	Probability, Frequency, and Percentile Plots for Zinc (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-60
B-25b	Geochemical Distribution of Zinc (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-61
B-26a	Probability, Frequency, and Percentile Plots for Zirconium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming	B-62
B-26b	Geochemical Distribution of Zirconium (ppm) in Stream Sediment of the Edgemont Detailed Geochemical Survey, South Dakota; Wyoming . . .	B-63

Table B-1

STATISTICAL SUMMARY FOR STREAM SEDIMENT OF THE EDMONT DETAILED GEOCHEMICAL SURVEY, SOUTH DAKOTA; WYOMING

DATA SAMPLES ANALYZED		BELOW		MEASURABLE DETECTION		DETECTION		MINIMUM		MAXIMUM		MEAN		MEDIAN		MODE		STANDARD		COEFFICIENT		UN TRANSFORMATION		ROBUST	
ELEMENT	VALUES	LIMIT	LIMIT	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	DEVIATION	OF	MEAN	S. D.	MEAN	S. D.	MEAN	S. D.
U-FL	419			0.70	230.70	6.38	2.75	1.98	18.767	2.940	1.18	0.81	1.10	0.78											
U-NT	419			1.00	251.30	6.80	3.30	2.06	18.662	2.744	1.34	0.74	1.25	0.67											
TH	393	26	<2	<2	53	6	6	5	5.3	0.8	1.74	0.53	1.70	0.52											
U/TU	419			0.06	1.55	0.93	0.89	0.84	0.402	0.433	-0.14	0.38	-0.12	0.24											
TH/U	419			0.03	18.52	1.75	1.60	1.80	1.450	0.827	0.29	0.84	0.36	0.80											
AG	7	412	<2	<2	9	5	<2	<2	3.5	0.6	1.52	0.77													
AL	419			1.31	10.68	4.10	3.98	5.16	1.517	0.370	1.34	0.40	1.35	0.42											
AS	418			0.8	88.2	4.6	3.5	3.2	6.27	1.36	1.31	0.56	1.29	0.54											
B	406	13	<10	<10	87	32	28	25	15.2	0.5	3.36	0.49	3.33	0.53											
BA	419			146	2649	391	372	355	172.1	0.4	5.91	0.33	5.91	0.33											
BE	399	20	<1	<1	3	1	<1	<1	0.5	0.4	0.23	0.34													
CA	419			0.06	14.96	2.09	0.83	0.35	2.459	1.177	0.02	1.26	0.02	1.19											
CE	419			11	112	47	47	44	14.5	0.3	3.81	0.33	3.82	0.32											
CO	364	55	<4	<4	30	7	6	6	3.2	0.4	1.90	0.37	1.80	0.43											
CR	419			9	90	31	30	20	13.5	0.4	3.36	0.45	3.37	0.45											
CU	419			4	36	14	13	11	6.1	0.4	2.55	0.44	2.56	0.45											
FE	419			0.46	19.19	1.89	1.70	1.50	1.250	0.662	0.51	0.49	0.52	0.50											
K	419			0.34	2.11	1.11	1.15	1.25	0.348	0.314	0.04	0.36	0.06	0.37											
LI	419			8	175	29	27	17	15.8	0.5	3.24	0.52	3.25	0.53											
MG	419			0.12	3.38	0.84	0.58	0.36	0.721	0.854	-0.47	0.76	-0.48	0.77											
MN	419			39	4849	334	292	279	313.4	0.9	5.61	0.63	5.61	0.60											
MO	40	379	<4	<4	66	12	<4	<4	14.7	1.2	2.11	0.78													
NA	407	12	<0.05	<0.05	2.10	0.31	0.28	0.17	0.211	0.673	-1.37	0.69	-1.40	0.75											
NB	318	101	<4	<4	24	5	5	6	2.5	0.4	1.71	0.30													
NI	419			2	73	14	14	12	8.2	0.6	2.54	0.58	2.55	0.55											
P	419			61	1313	493	465	375	250.3	0.3	6.04	0.63	6.07	0.68											
SC	419			2	17	5	5	5	2.2	0.4	1.61	0.42	1.62	0.43											
SE	400	18	<0.1	<0.1	86.8	1.5	0.6	0.4	6.03	4.10	-0.45	0.97	-0.58	1.08											
SR	419			25	1154	158	105	60	158.0	1.0	4.75	0.75	4.73	0.78											
TI	419			459	4435	1793	1807	1830	538.0	0.3	7.44	0.32	7.46	0.32											
V	419			17	470	65	55	46	48.8	0.7	4.03	0.52	4.01	0.49											
Y	419			4	31	12	12	13	3.7	0.3	2.50	0.29	2.50	0.28											
ZN	419			11	168	52	47	48	25.2	0.5	3.83	0.52	3.85	0.53											
ZR	419			19	111	64	65	67	14.5	0.2	4.15	0.24	4.16	0.25											

NOTE: Refer to Table 1, Page 25 and Table C-1, Page C-4 for concentration units and symbol definitions.

Table B-2

CORRELATION MATRIX FOR STREAM SEDIMENT
OF THE EDMONT DETAILED GEOCHEMICAL SURVEY, SOUTH DAKOTA; WYOMING

[illegible]

[illegible]

B-12

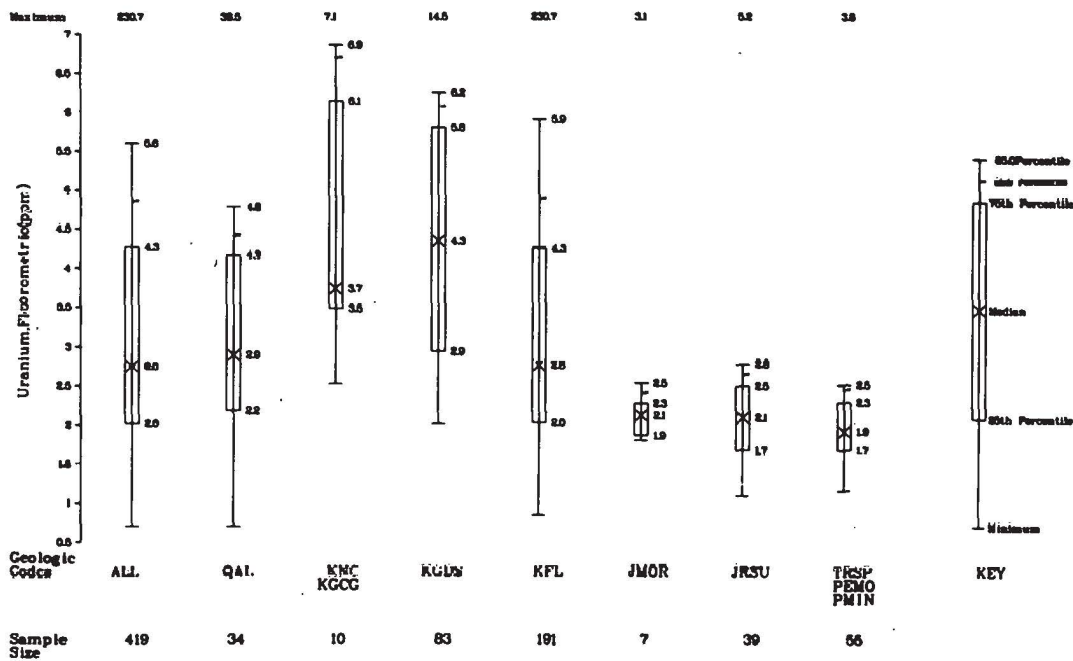
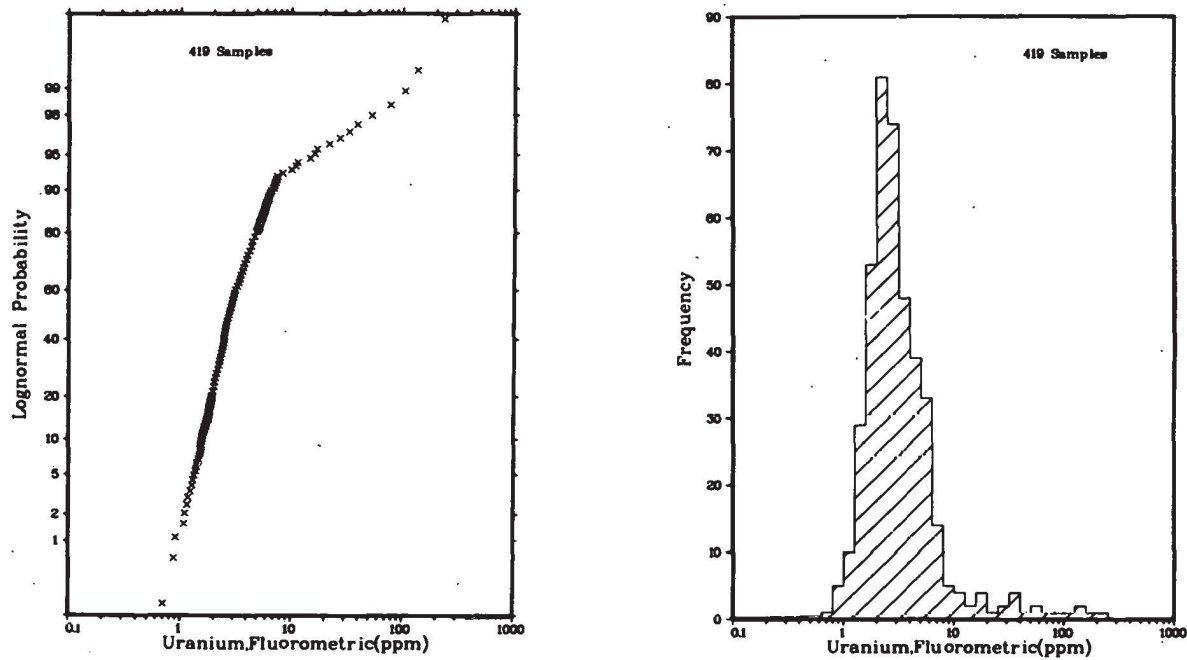
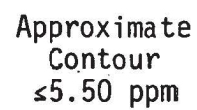


Figure B-1a

PROBABILITY, FREQUENCY, AND PERCENTILE PLOTS FOR SOLUBLE URANIUM (PPM)
IN STREAM SEDIMENT OF THE EDMONT DETAILED GEOCHEMICAL SURVEY, SOUTH DAKOTA; WYOMING



GEOCHEMICAL DISTRIBUTION OF SOLUBLE URANIUM (PPM) IN STREAM SEDIMENT
OF THE EDMONT DETAILED GEOCHEMICAL SURVEY, SOUTH DAKOTA; WYOMING

B-14

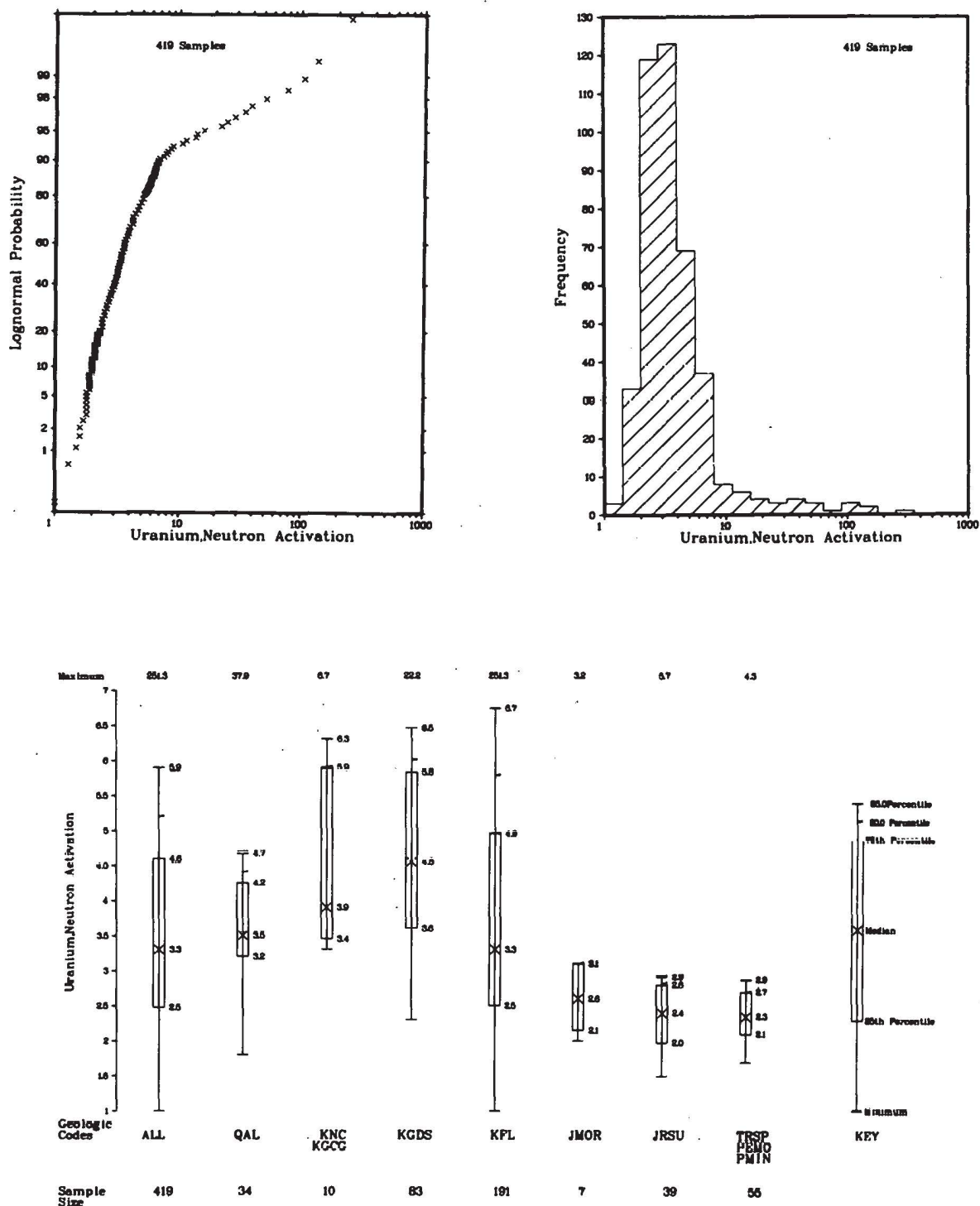
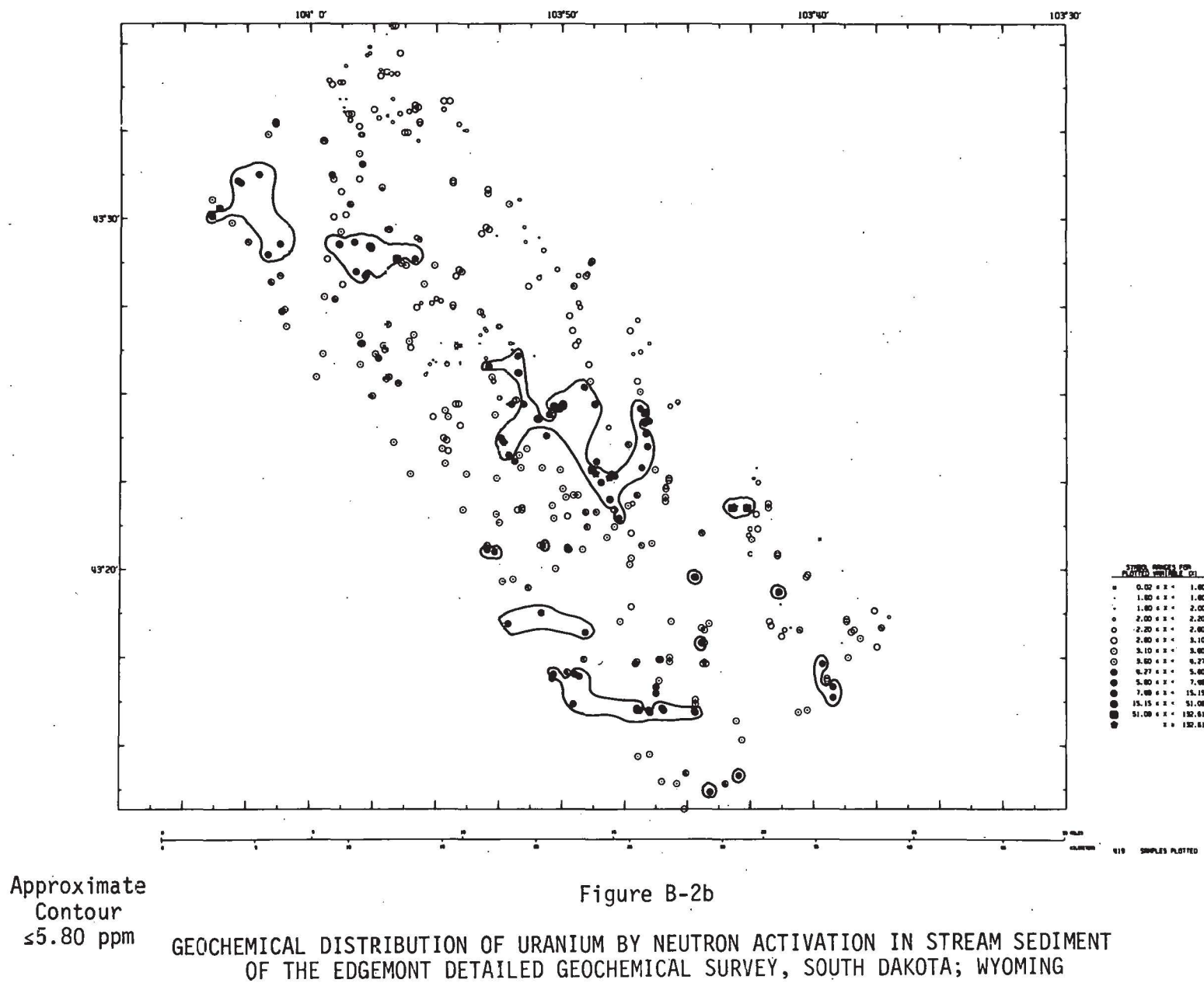


Figure B-2a

PROBABILITY, FREQUENCY, AND PERCENTILE PLOTS FOR URANIUM BY NEUTRON ACTIVATION
IN STREAM SEDIMENT OF THE EDMONT DETAILED GEOCHEMICAL SURVEY, SOUTH DAKOTA; WYOMING



B-16

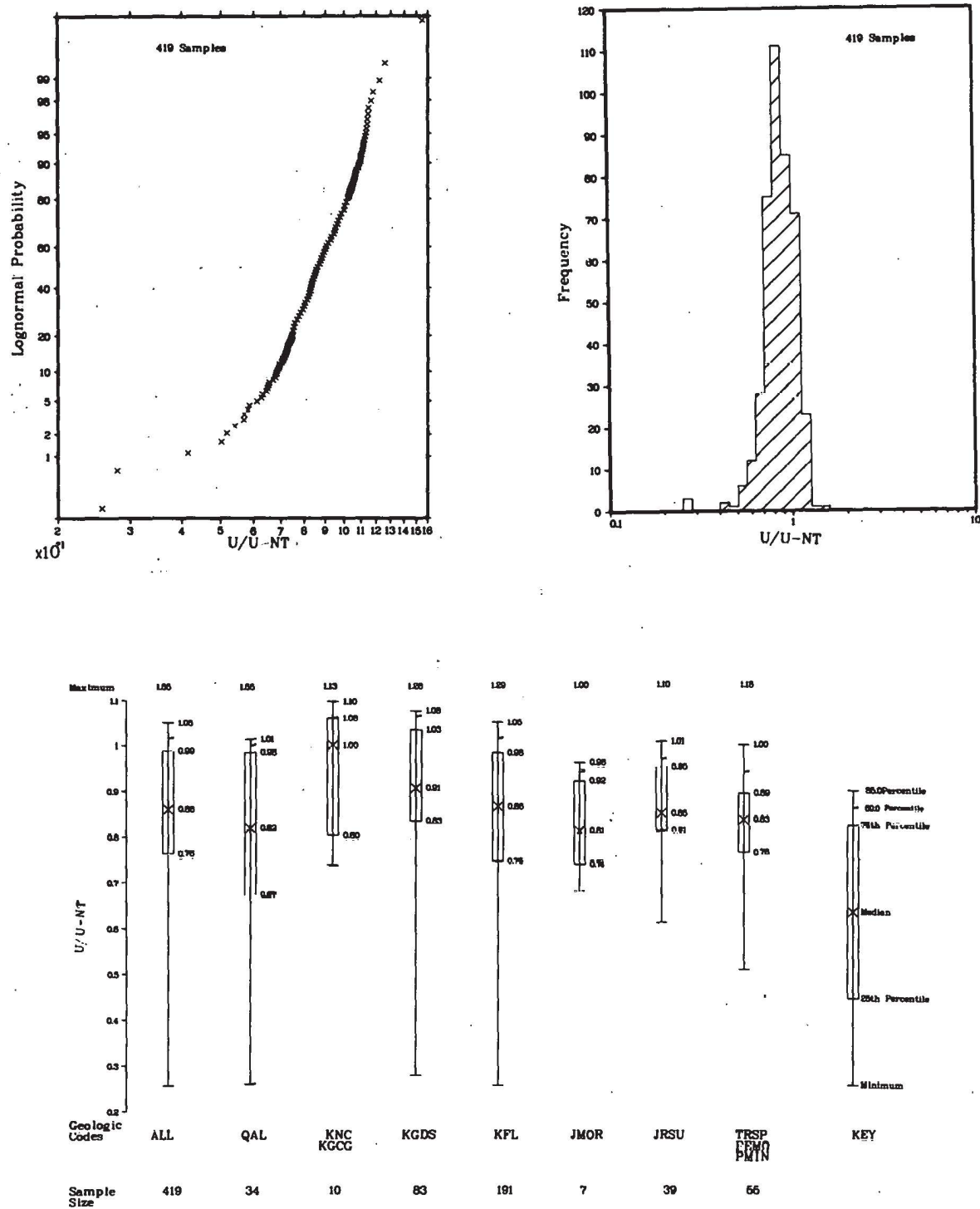
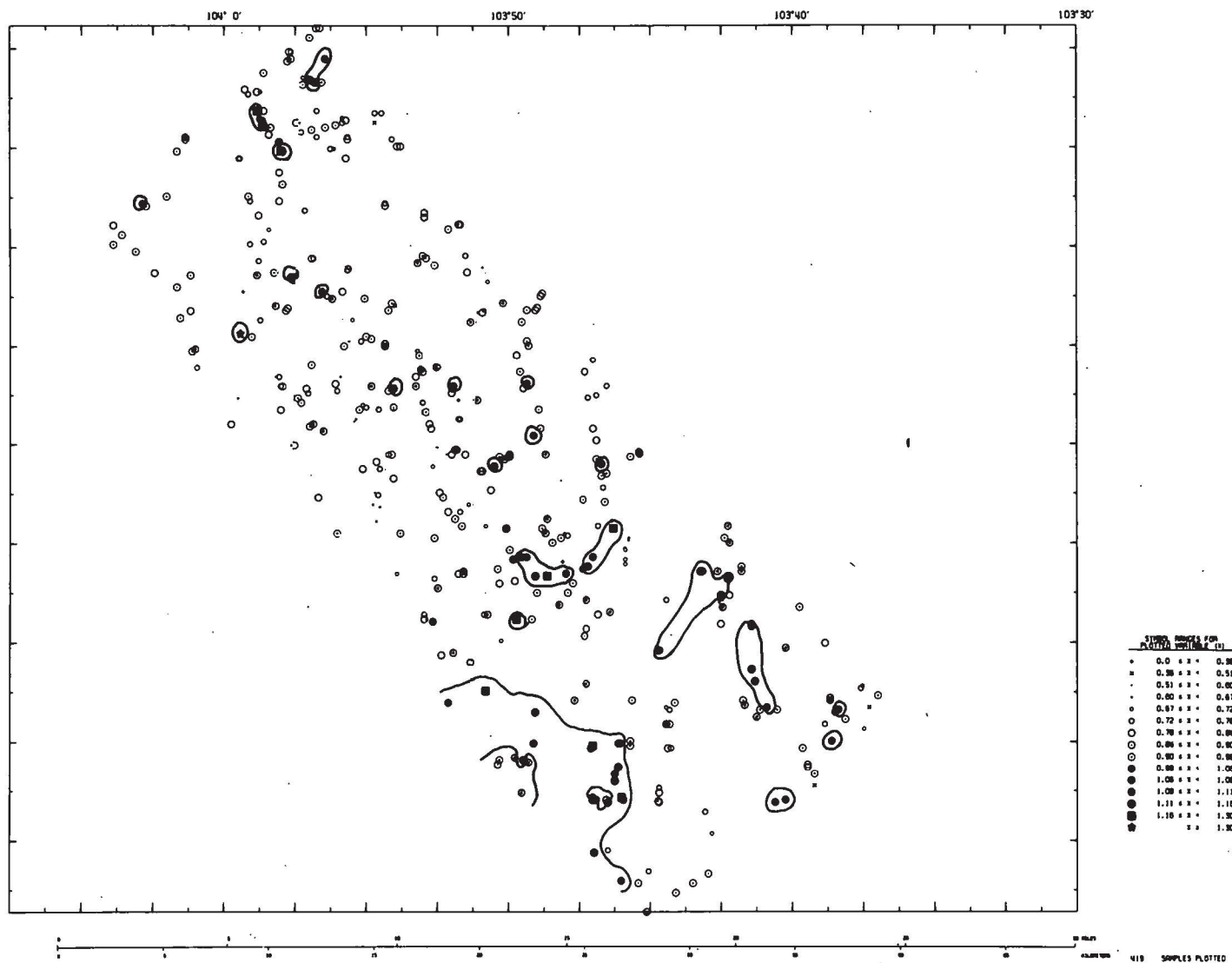


Figure B-3a

PROBABILITY, FREQUENCY, AND PERCENTILE PLOTS FOR URANIUM FLUOROMETRIC/
URANIUM NEUTRON ACTIVATION IN STREAM SEDIMENT
OF THE EDMONT DETAILED GEOCHEMICAL SURVEY, SOUTH DAKOTA; WYOMING



B-18

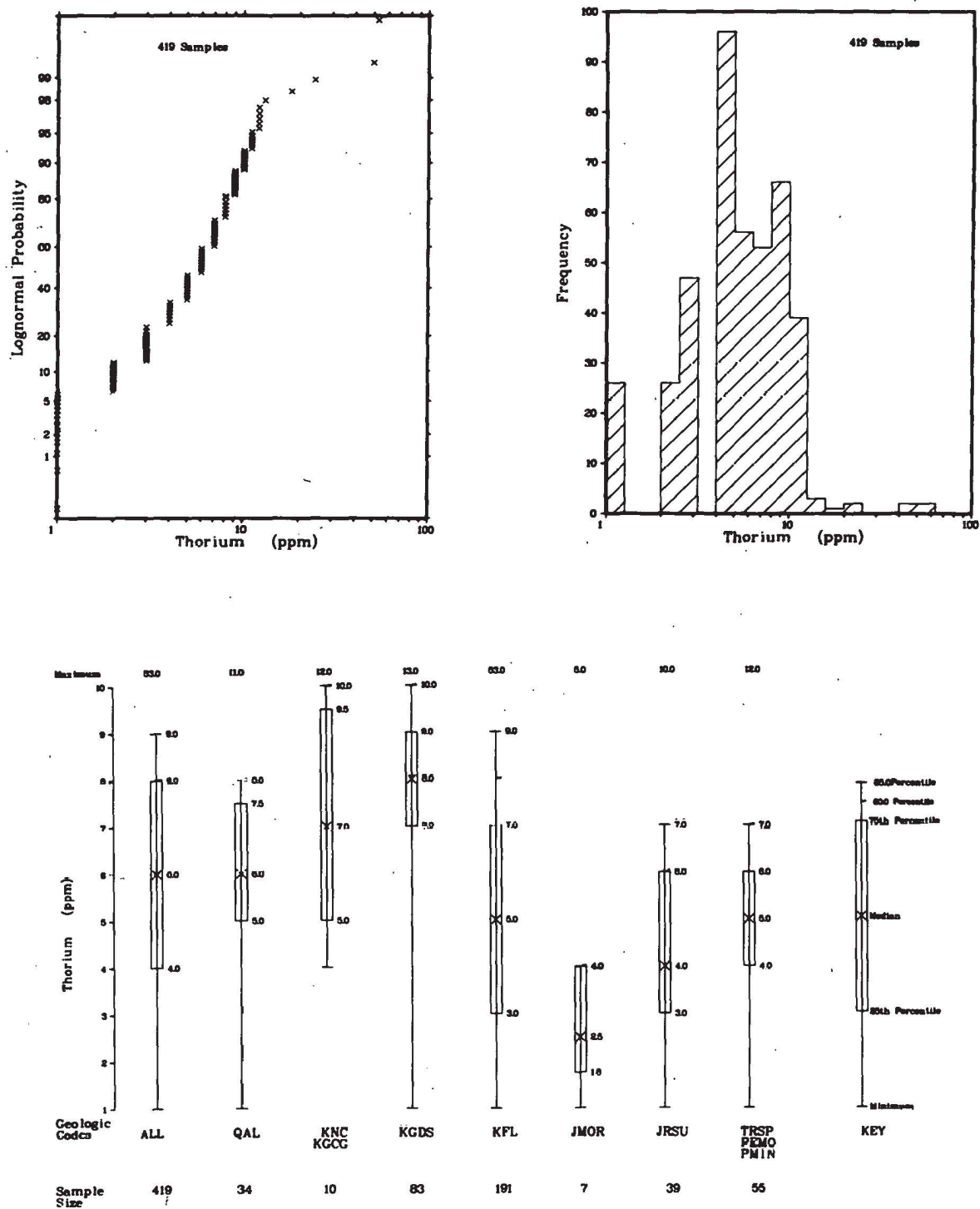
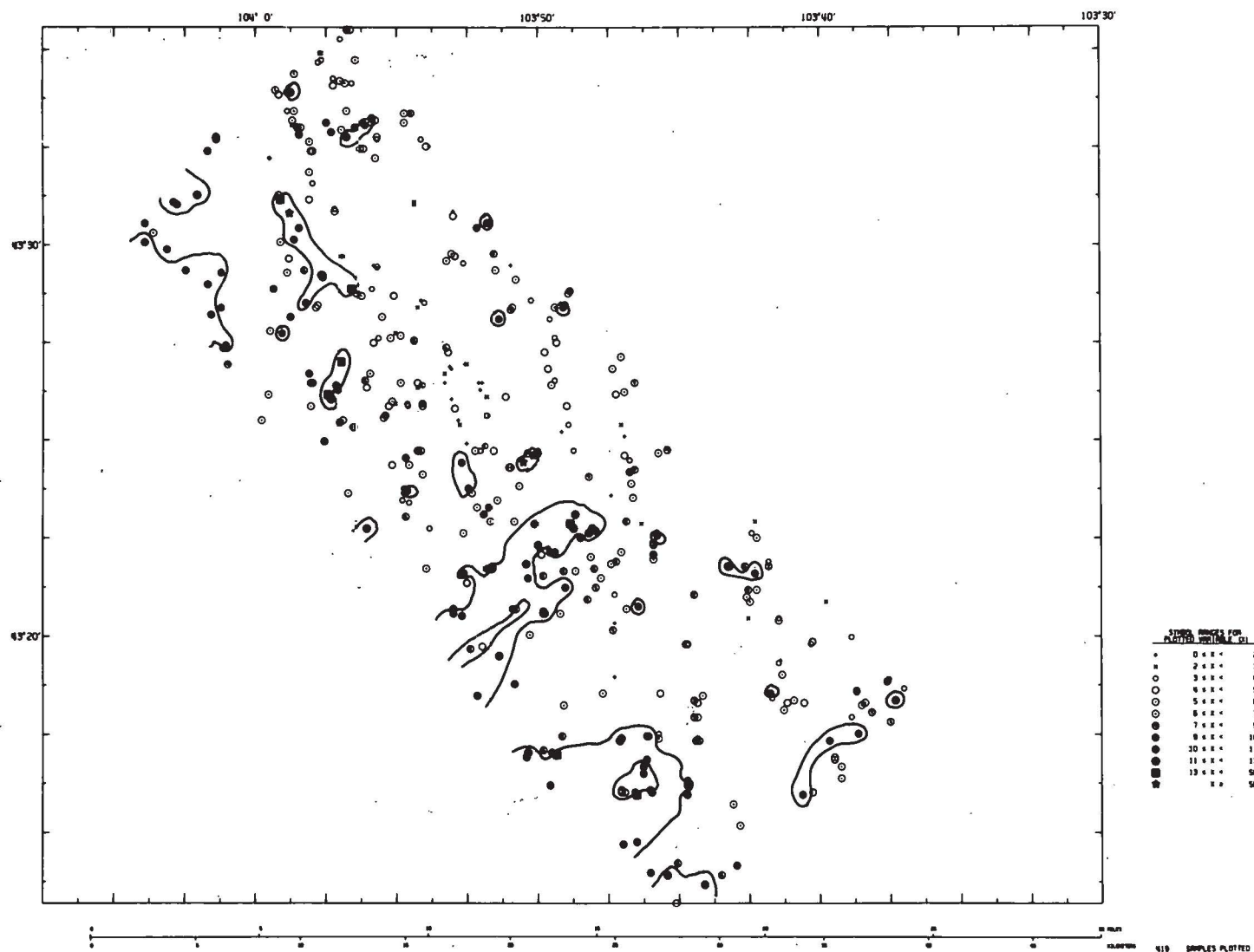


Figure B-4a

PROBABILITY, FREQUENCY, AND PERCENTILE PLOTS FOR THORIUM (PPM)
IN STREAM SEDIMENT OF THE EDMONT DETAILED GEOCHEMICAL SURVEY, SOUTH DAKOTA; WYOMING



B-20

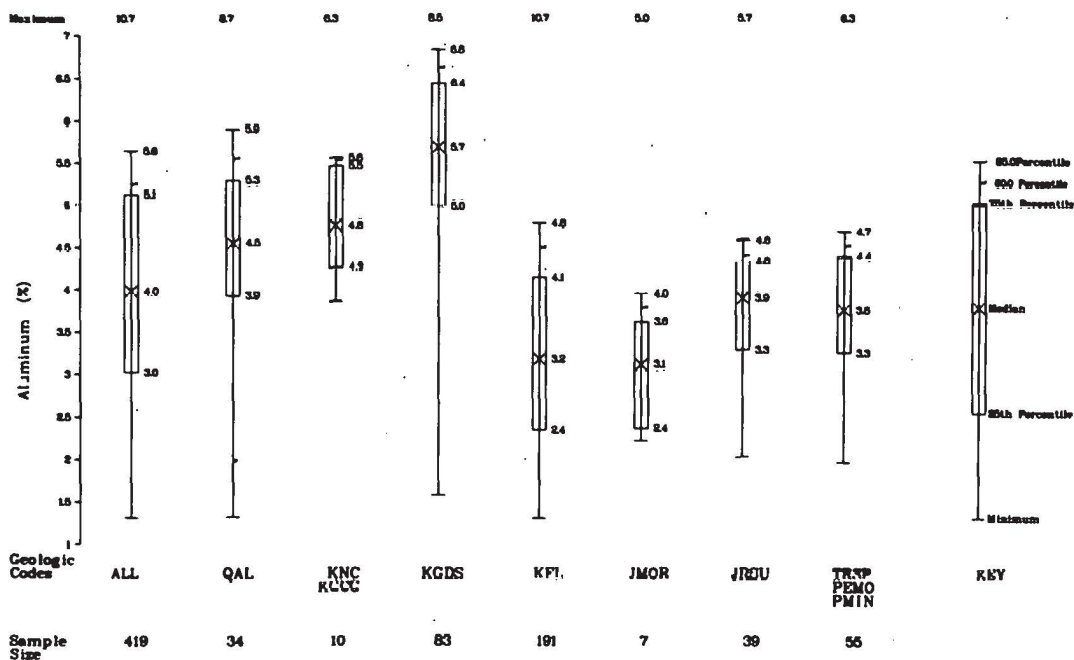
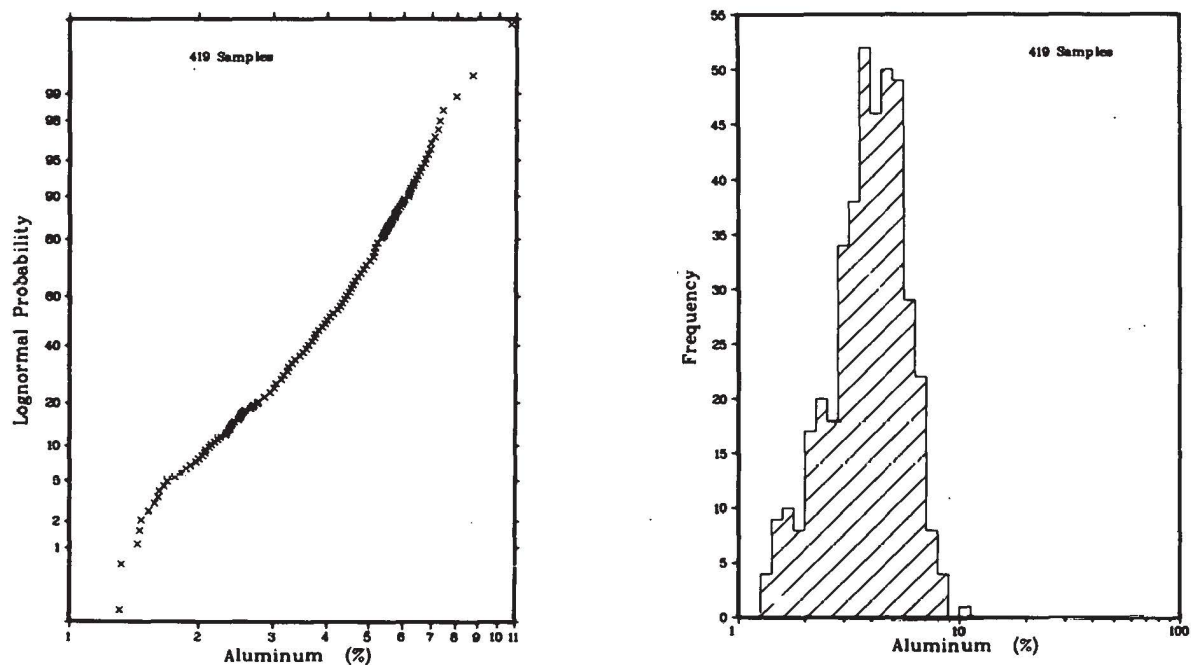
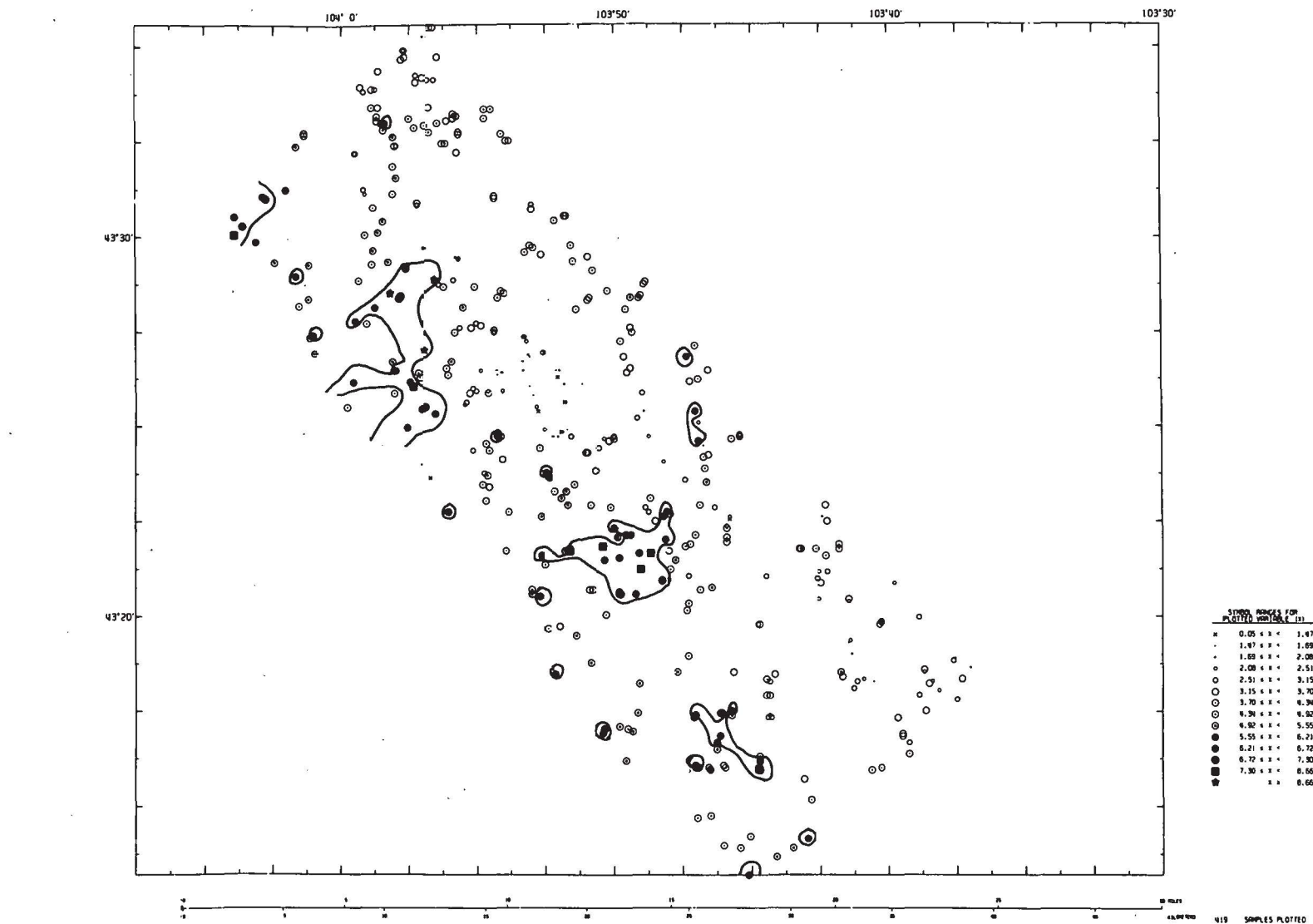


Figure B-5a

PROBABILITY, FREQUENCY, AND PERCENTILE PLOTS FOR ALUMINUM (%)
IN STREAM SEDIMENT OF THE EDMONT DETAILED GEOCHEMICAL SURVEY, SOUTH DAKOTA; WYOMING



B-22

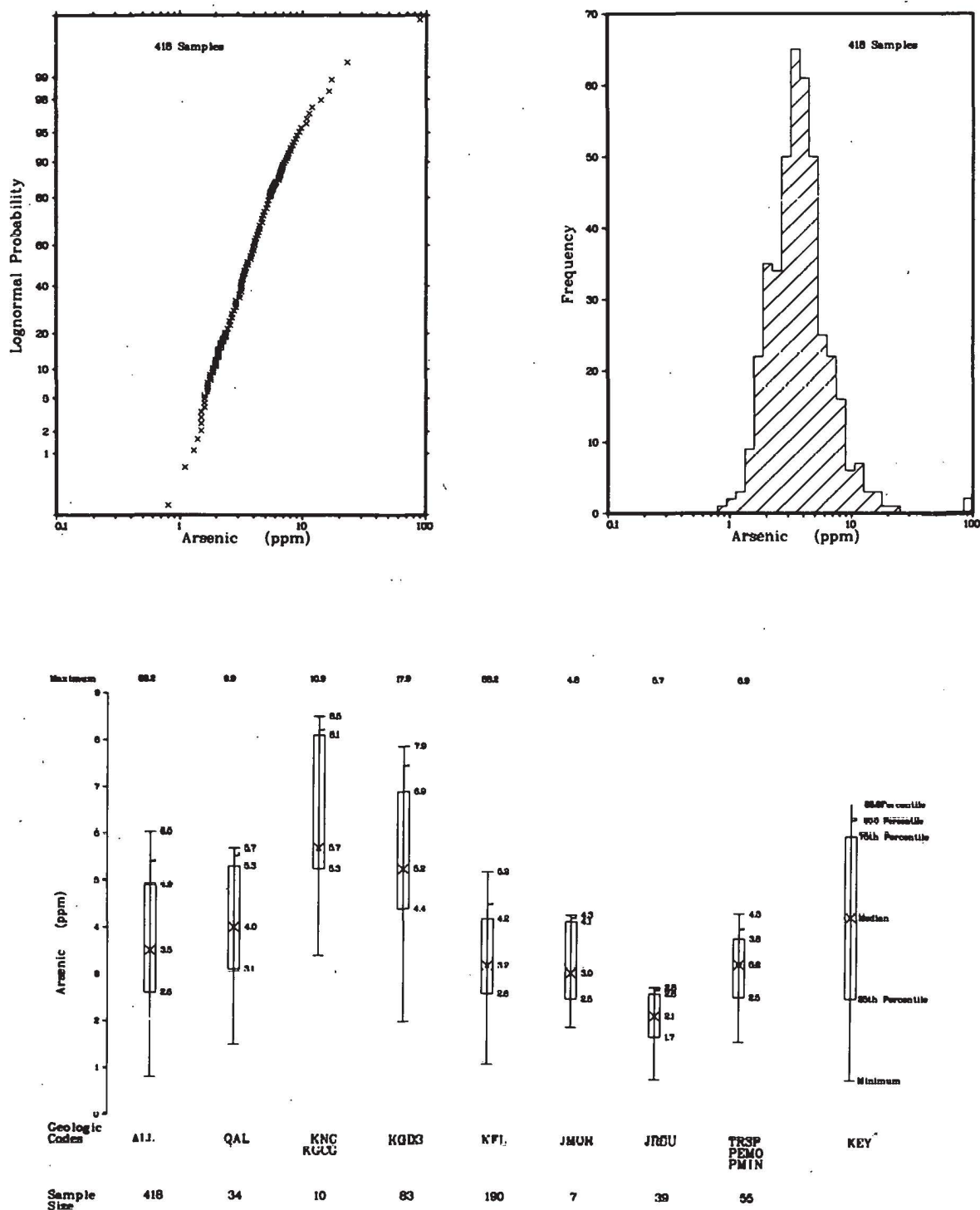


Figure B-6a

PROBABILITY, FREQUENCY, AND PERCENTILE PLOTS FOR ARSENIC (PPM)
IN STREAM SEDIMENT OF THE EDMONT DETAILED GEOCHEMICAL SURVEY, SOUTH DAKOTA; WYOMING

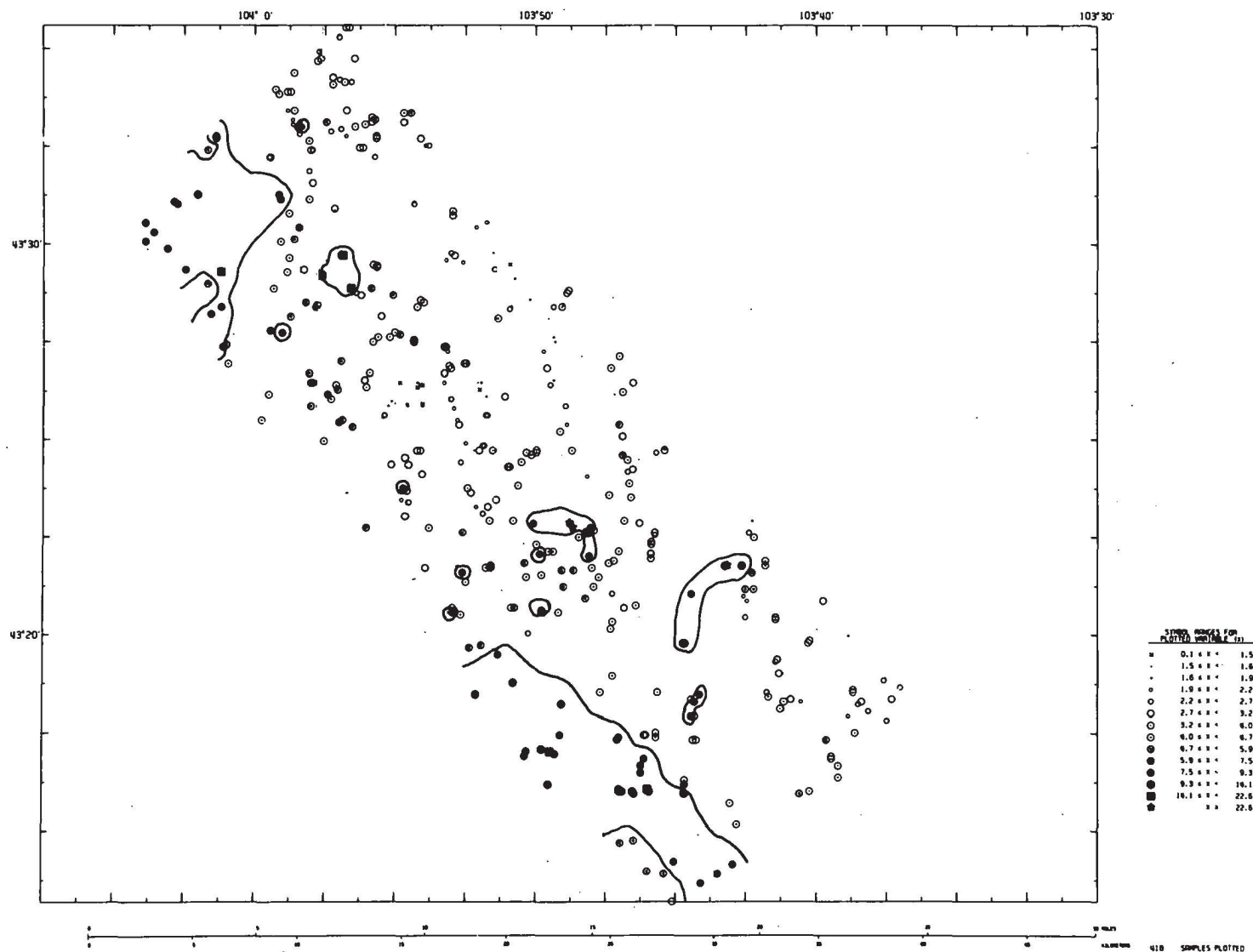


Figure B-6b

GEOCHEMICAL DISTRIBUTION OF ARSENIC (PPM) IN STREAM SEDIMENT
OF THE EDMONT DETAILED GEOCHEMICAL SURVEY, SOUTH DAKOTA; WYOMING

B-24

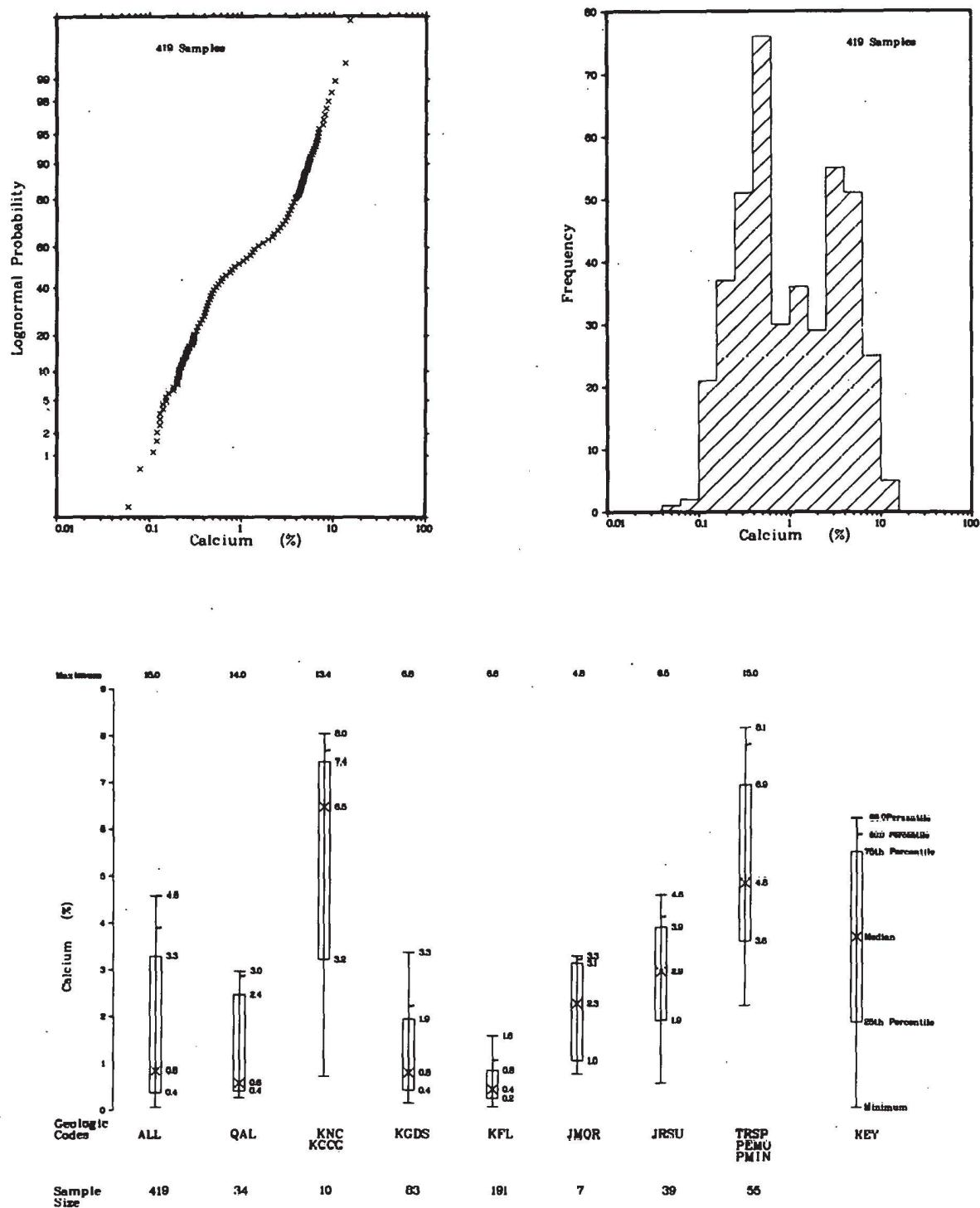
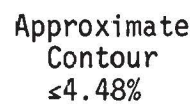


Figure B-7a

PROBABILITY, FREQUENCY, AND PERCENTILE PLOTS FOR CALCIUM (%)
IN STREAM SEDIMENT OF THE EDMONT DETAILED GEOCHEMICAL SURVEY, SOUTH DAKOTA; WYOMING



GEOCHEMICAL DISTRIBUTION OF CALCIUM (%) IN STREAM SEDIMENT
OF THE EDMONT DETAILED GEOCHEMICAL SURVEY, SOUTH DAKOTA; WYOMING

B-26

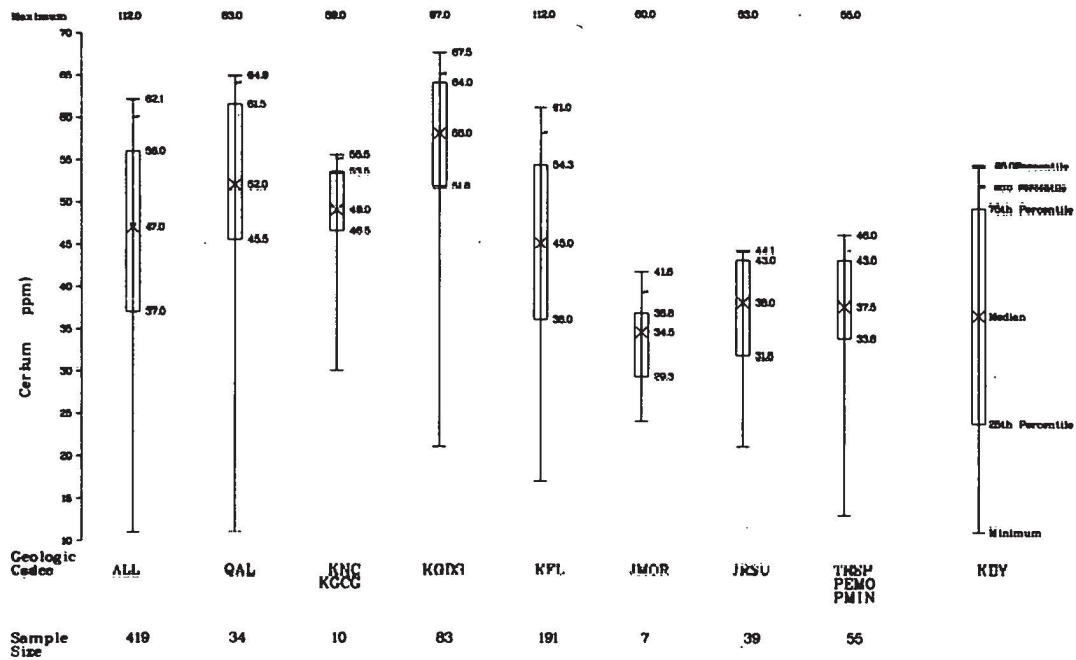
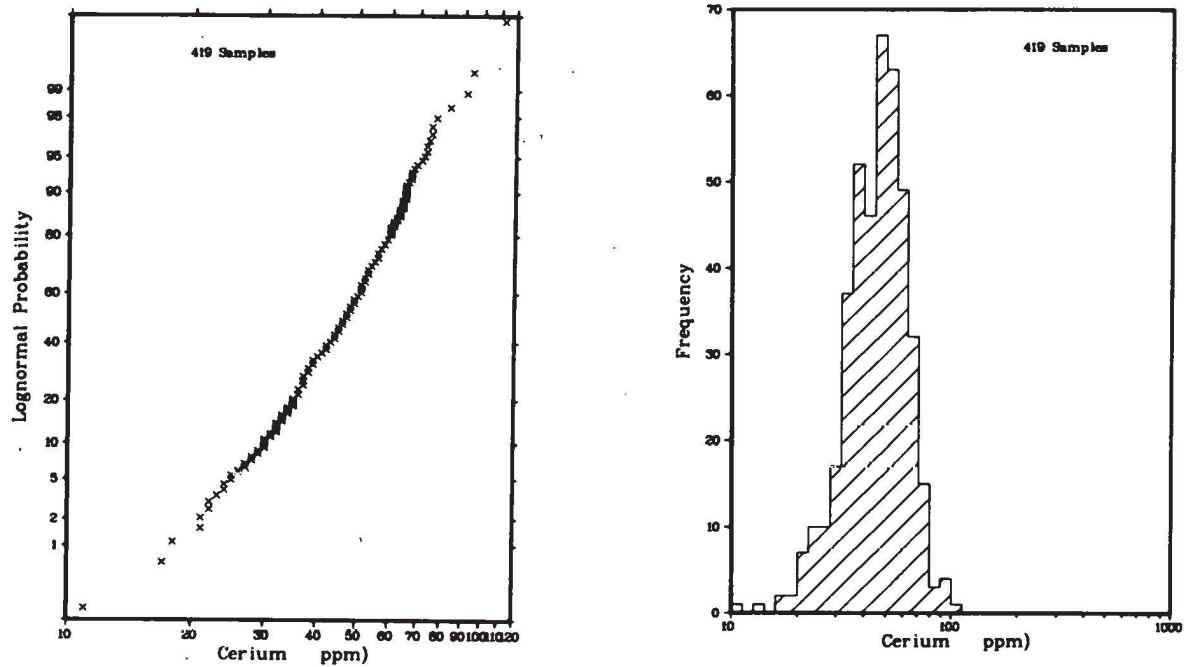
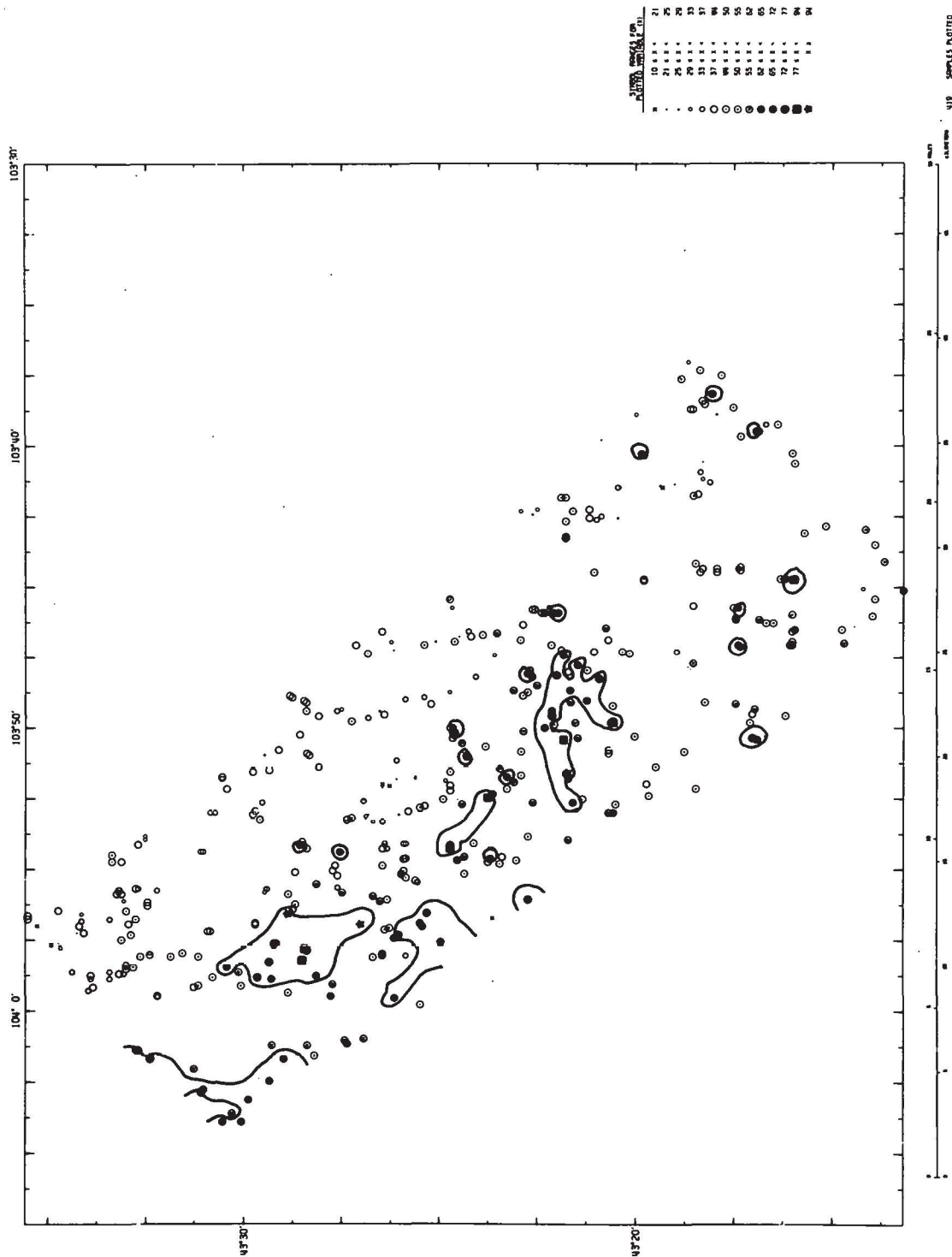


Figure B-8a

PROBABILITY, FREQUENCY, AND PERCENTILE PLOTS FOR CERIUM (PPM)
IN STREAM SEDIMENT OF THE EDMONT DETAILED GEOCHEMICAL SURVEY, SOUTH DAKOTA; WYOMING



Approximate
Contour
≤62 ppm

Figure B-8b

GEOCHEMICAL DISTRIBUTION OF CERIUM (PPM) IN STREAM SEDIMENT
OF THE EDMONTON DETAILED GEOCHEMICAL SURVEY, SOUTH DAKOTA; WYOMING

B-28

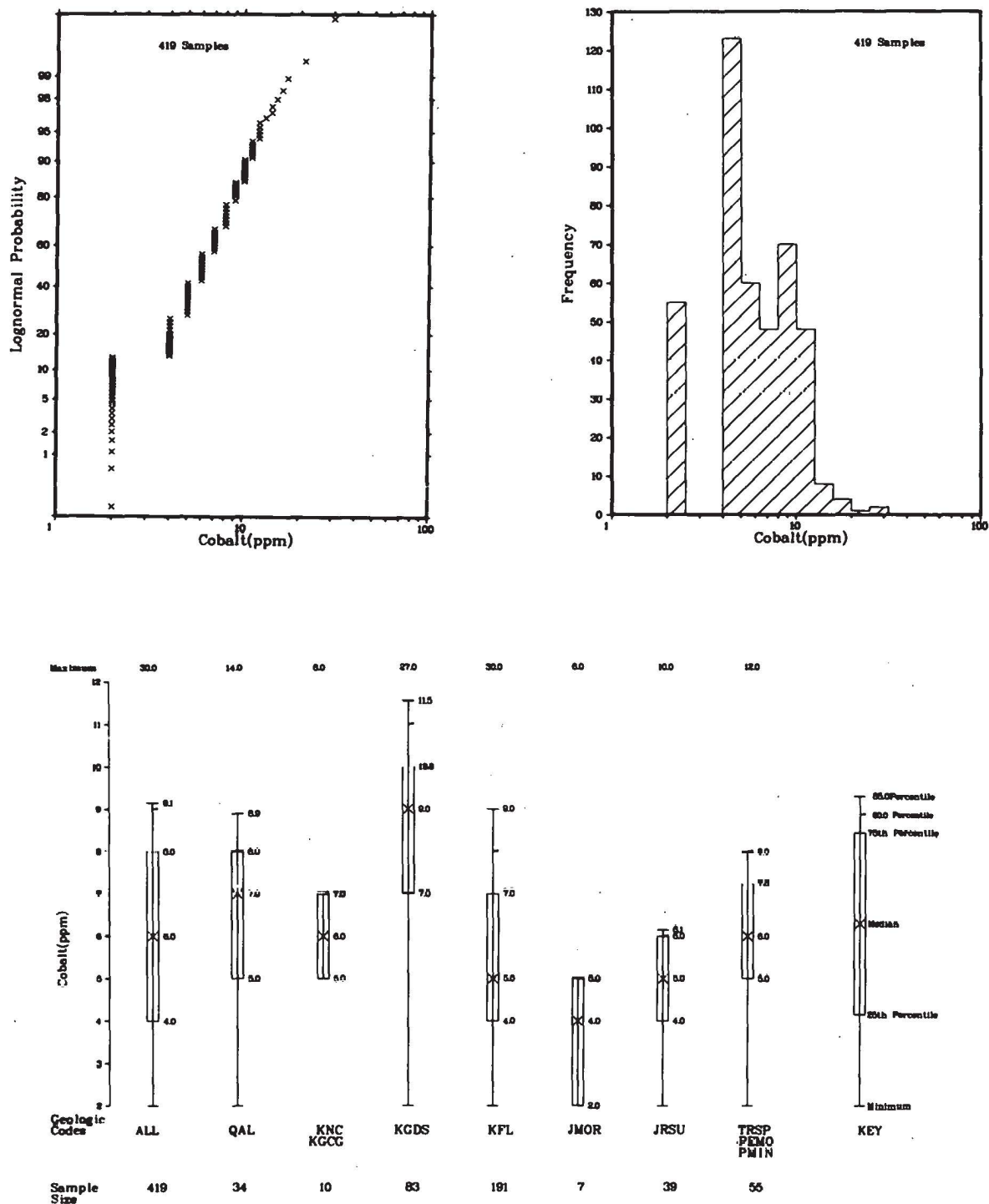
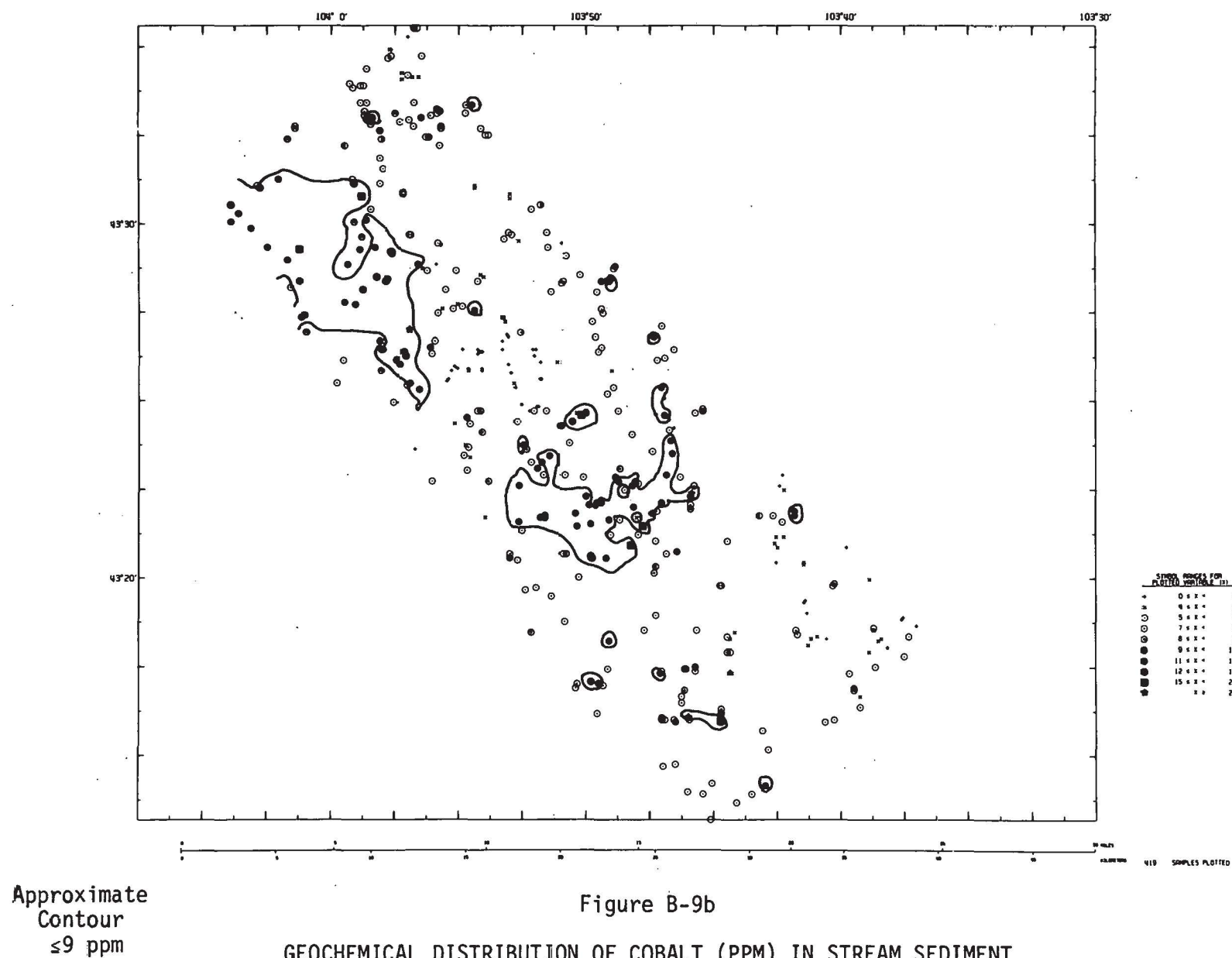


Figure B-9a

PROBABILITY, FREQUENCY, AND PERCENTILE PLOTS FOR COBALT (PPM)
IN STREAM SEDIMENT OF THE EDMONTON DETAILED GEOCHEMICAL SURVEY, SOUTH DAKOTA; WYOMING



B-30

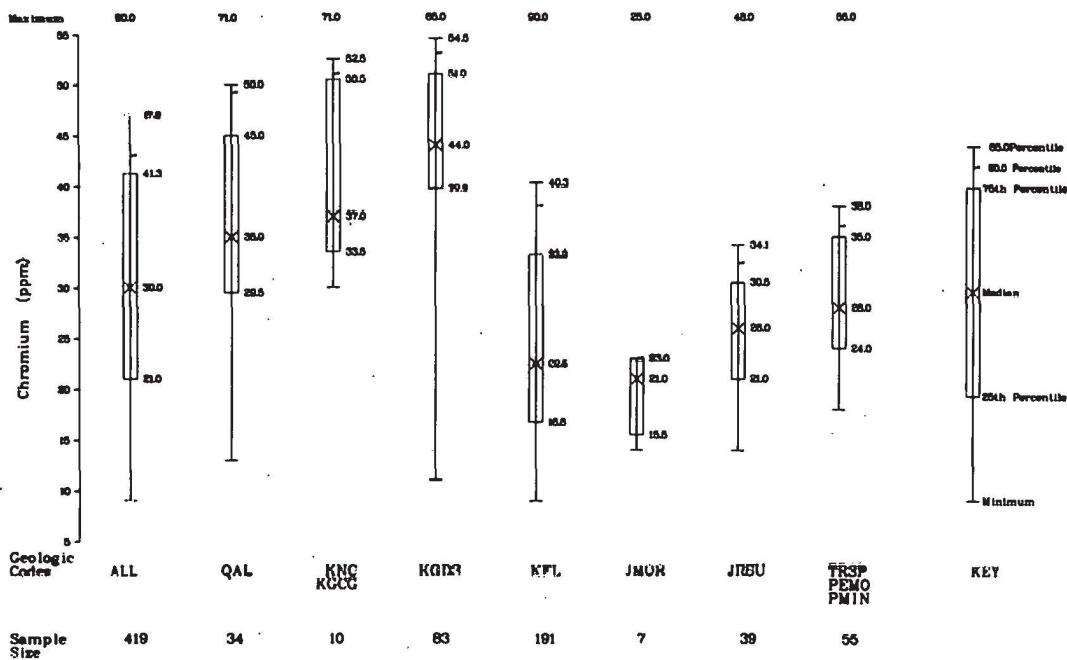
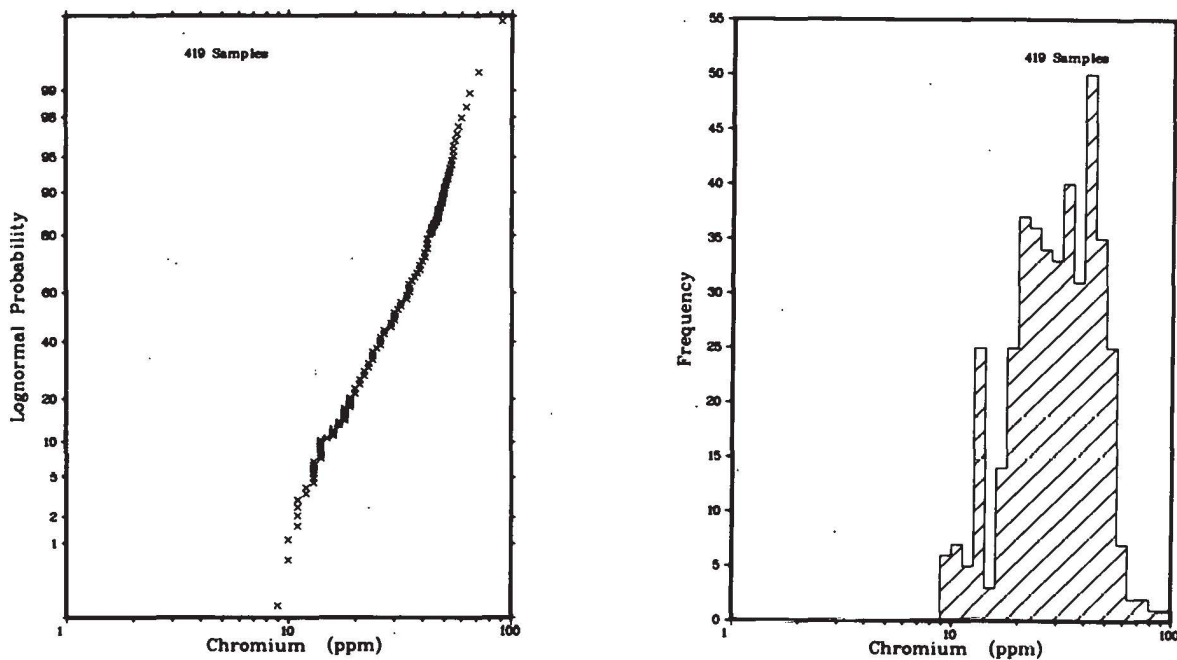
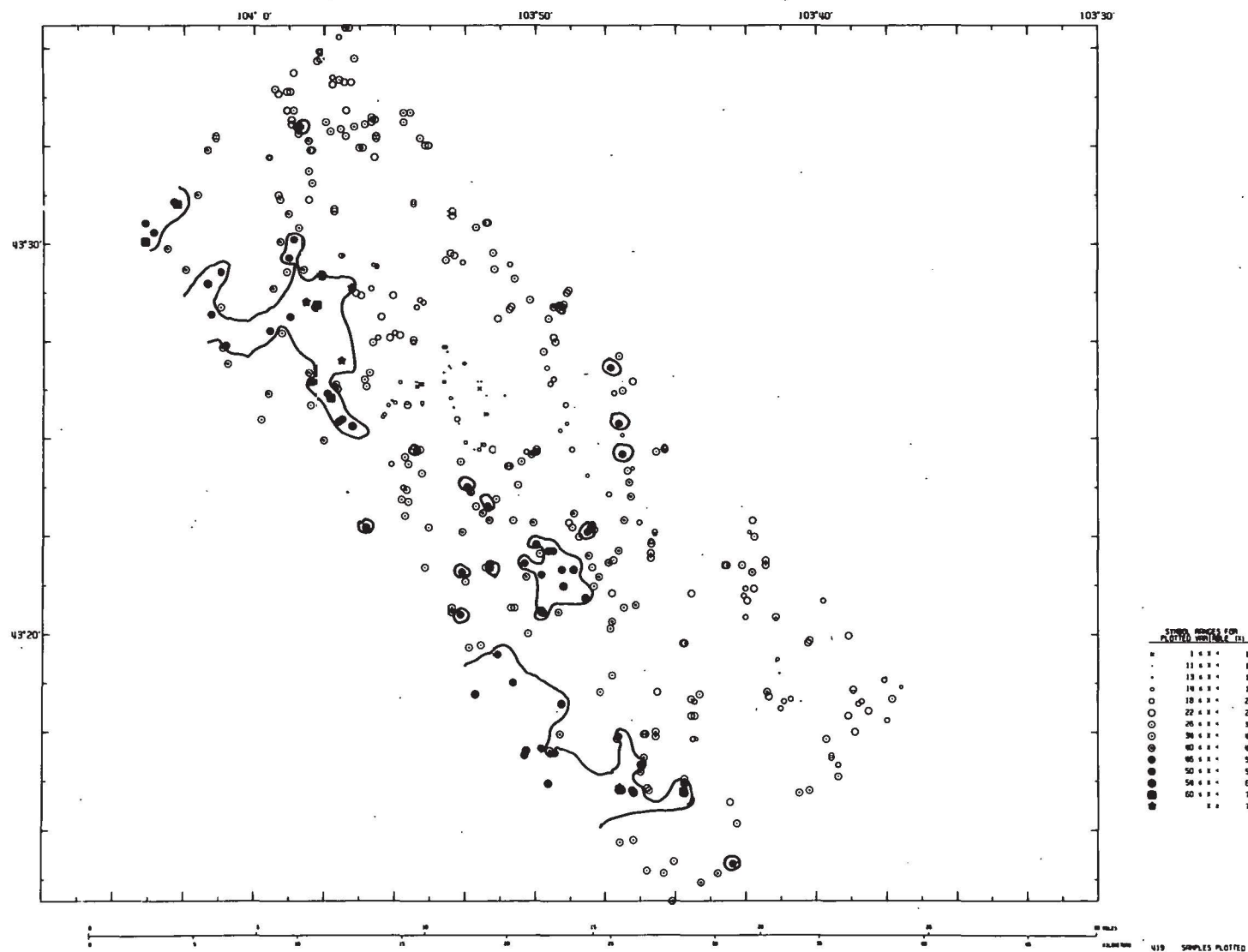


Figure B-10a

PROBABILITY, FREQUENCY, AND PERCENTILE PLOTS FOR CHROMIUM (PPM)
IN STREAM SEDIMENT OF THE EDMONT DETAILED GEOCHEMICAL SURVEY, SOUTH DAKOTA; WYOMING



B-32

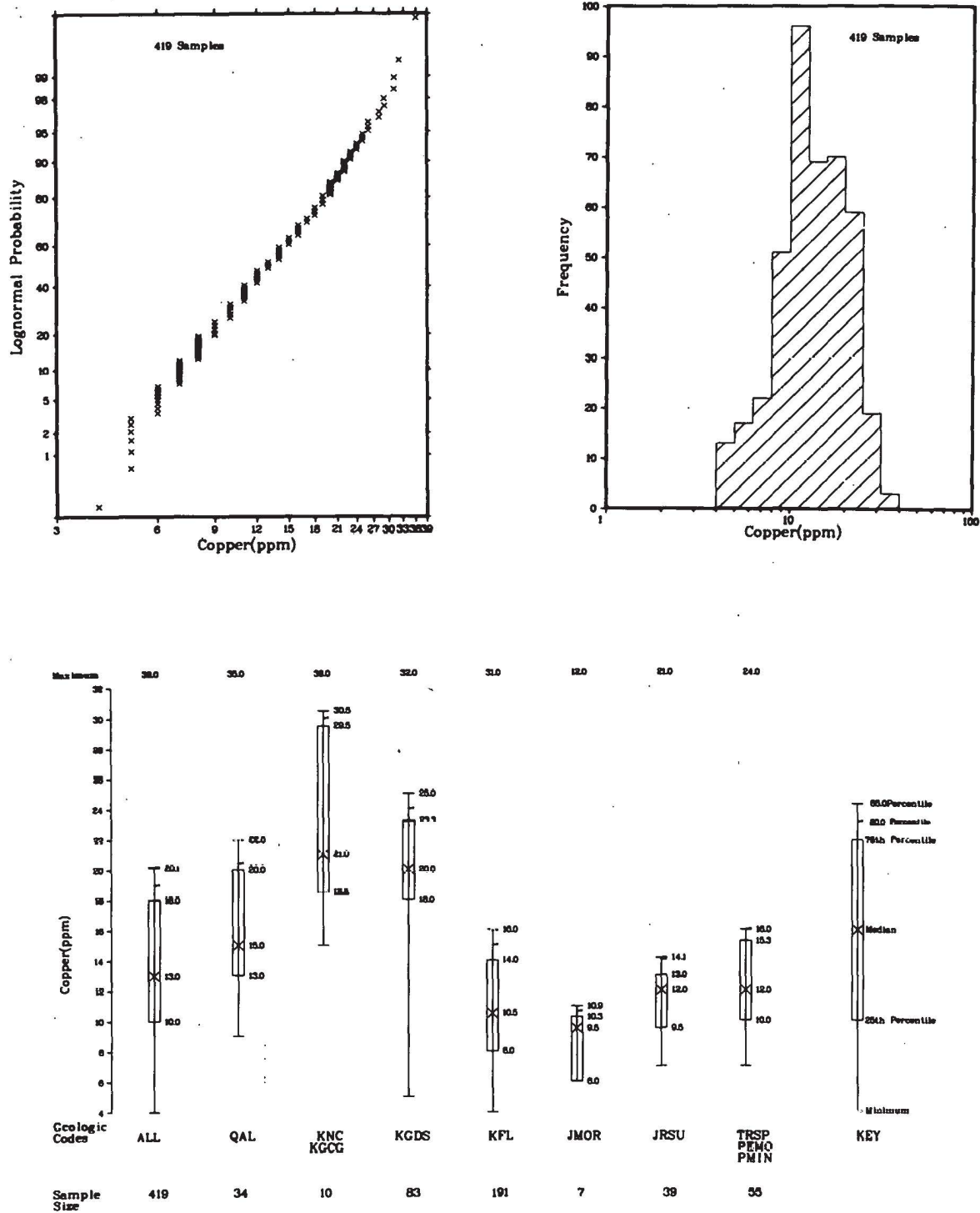


Figure B-11a

PROBABILITY, FREQUENCY, AND PERCENTILE PLOTS FOR COPPER (PPM)
IN STREAM SEDIMENT OF THE EDMONT DETAILED GEOCHEMICAL SURVEY, SOUTH DAKOTA; WYOMING