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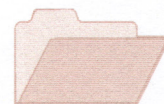
Cooperative Research Centre for
Landscape Evolution & Mineral Exploration



CSIRO
EXPLORATION
AND MINING



Australian Mineral Industries Research Association Limited ACN 004 448 266



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SERIES**

GEOCHEMICAL EXPLORATION IN COMPLEX LATERITIC ENVIRONMENTS OF THE YILGARN CRATON, WESTERN AUSTRALIA

P240A Final Report Volume 3 - Appendices

*R.R. Anand, R.E. Smith, C. Phang, J.E. Wildman,
I.D.M. Robertson and T.J. Munday*

CRC LEME OPEN FILE REPORT 58

November 1998

(CSIRO Division of Exploration Geoscience Report 442R, December 1993.
Second impression 1998)

CRC LEME is an unincorporated joint venture between The Australian National University, University of Canberra, Australian Geological Survey Organisation and CSIRO Exploration and Mining, established and supported under the Australian Government's Cooperative Research Centres Program.



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RESEARCH ARISING FROM CSIRO/AMIRA REGOLITH GEOCHEMISTRY PROJECTS 1987-1993

In 1987, CSIRO commenced a series of multi-client research projects in regolith geology and geochemistry which were sponsored by companies in the Australian mining industry, through the Australian Mineral Industries Research Association Limited (AMIRA). The initial research program, "Exploration for concealed gold deposits, Yilgarn Block, Western Australia" (1987-1993) had the aim of developing improved geological, geochemical and geophysical methods for mineral exploration that would facilitate the location of blind, buried or deeply weathered gold deposits. The program included the following projects:

P240: Laterite geochemistry for detecting concealed mineral deposits (1987-1991). Leader: Dr R.E. Smith.
Its scope was development of methods for sampling and interpretation of multi-element laterite geochemistry data and application of multi-element techniques to gold and polymetallic mineral exploration in weathered terrain. The project emphasised viewing laterite geochemical dispersion patterns in their regolith-landform context at local and district scales. It was supported by 30 companies.

P241: Gold and associated elements in the regolith - dispersion processes and implications for exploration (1987-1991). Leader: Dr C.R.M. Butt.

The project investigated the distribution of ore and indicator elements in the regolith. It included studies of the mineralogical and geochemical characteristics of weathered ore deposits and wall rocks, and the chemical controls on element dispersion and concentration during regolith evolution. This was to increase the effectiveness of geochemical exploration in weathered terrain through improved understanding of weathering processes. It was supported by 26 companies.

These projects represented "an opportunity for the mineral industry to participate in a multi-disciplinary program of geoscience research aimed at developing new geological, geochemical and geophysical methods for exploration in deeply weathered Archaean terrains". This initiative recognised the unique opportunities, created by exploration and open-cut mining, to conduct detailed studies of the weathered zone, with particular emphasis on the near-surface expression of gold mineralisation. The skills of existing and specially recruited research staff from the Floreat Park and North Ryde laboratories (of the then Divisions of Minerals and Geochemistry, and Mineral Physics and Mineralogy, subsequently Exploration Geoscience and later Exploration and Mining) were integrated to form a task force with expertise in geology, mineralogy, geochemistry and geophysics. Several staff participated in more than one project. Following completion of the original projects, two continuation projects were developed.

P240A: Geochemical exploration in complex lateritic environments of the Yilgarn Craton, Western Australia (1991-1993). Leaders: Drs R.E. Smith and R.R. Anand.

The approach of viewing geochemical dispersion within a well-controlled and well-understood regolith-landform and bedrock framework at detailed and district scales continued. In this extension, focus was particularly on areas of transported cover and on more complex lateritic environments typified by the Kalgoorlie regional study. This was supported by 17 companies.

P241A: Gold and associated elements in the regolith - dispersion processes and implications for exploration. Leader: Dr. C.R.M. Butt.

The significance of gold mobilisation under present-day conditions, particularly the important relationship with pedogenic carbonate, was investigated further. In addition, attention was focussed on the recognition of primary lithologies from their weathered equivalents. This project was supported by 14 companies.

Although the confidentiality periods of the research reports have expired, the last in December 1994, they have not been made public until now. Publishing the reports through the CRC LEME Report Series is seen as an appropriate means of doing this. By making available the results of the research and the authors' interpretations, it is hoped that the reports will provide source data for future research and be useful for teaching. CRC LEME acknowledges the Australian Mineral Industries Research Association and CSIRO Division of Exploration and Mining for authorisation to publish these reports. It is intended that publication of the reports will be a substantial additional factor in transferring technology to aid the Australian Mineral Industry.

This report (CRC LEME Open File Report 58) is a First revision (second printing) of CSIRO, Division of Exploration Geoscience Restricted Report 442R, first issued in 1993, which formed part of the CSIRO/AMIRA Project P240A.

Copies of this publication can be obtained from:

The Publication Officer, c/- CRC LEME, CSIRO Exploration and Mining, PMB, Wembley, WA 6014, Australia. Information on other publications in this series may be obtained from the above or from <http://leme.anu.edu.au/>

Cataloguing-in-Publication:

Geochemical exploration in complex lateritic environments of the Yilgarn Craton, Western Australia. Final Report.

ISBN 0 642 28237 4 v1, v2: 0 642 28264 1 v3: 0 642 28271 4 v4: 0 642 28276 5 set: 0 642 28282 X

1. Geochemical prospecting 2. Laterite 3. Gold - Western Australia 4. Geochemistry.

I. Anand, R.R. II. Title

CRC LEME Open File Report 58.

ISSN 1329-4768

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PREFACE TO THE SECOND IMPRESSION

R. E. Smith and R.R. Anand, 1st October 1998.

This final report is one of two companion volumes (CRC LEME Open File Reports 50 and 58) which bring together the results of the CSIRO-AMIRA projects 'Laterite Geochemistry' and its extension 'Yilgarn Lateritic Environments' which, in total, ran from July 1987 to December 1993.

These summary and final reports synthesise 25 reports and three field guides which cover the project components, including multidisciplinary studies of several 'type' districts, across the Yilgarn Craton of Western Australia and many geochemical dispersion studies about concealed gold deposits.

Although the main focus of the project concentrated on gold exploration, the knowledge, regolith mapping methods, regolith stratigraphy, models and evolution are applicable to exploration for a wide range of commodities (including base metals, rare metals and diamonds) and the geochemical data are comprehensively multi-element.

In this second impression (second printing), the senior authors made the decision to produce the two reports as they were except for the correction of a small number of typographical errors, minor omissions and some additional acknowledgments.

We direct readers' attention to the following correlation of terms used for regolith-landform regimes developed in later work:

This Report

Residual regime

As defined in Section 2.4.3,
page 12, Open File Report 50

equivalent to:

Terminology used in 1994 onwards

Relict regime

Anand and Smith (1993)

Comment on use of regolith-landform regimes

The first step is to make an objective map of the regolith-landform units present in an area, with little or no genetic bias. Such a factual map forms the basis of derivative or interpretative maps based on genetic grouping of the regolith and associated geomorphic features. It should also be pointed out that ferruginous materials have formed both in *in-situ* and transported materials. Laterite residuum, formed by residual enrichment in the weathering of parent rocks, is included with the relict regime. Iron cemented sands and gravels (ferricretes) are different because there is no direct genetic relationship between these ferricretes and the underlying bedrocks. Therefore, they are included with the depositional regime.

Although focus of the research presented here is on the Yilgarn Craton of Western Australia and its periphery, the research findings have wider application. Sponsors have used the research findings in other parts of Australia (Northern Territory and Queensland) and in appropriate terrain overseas, including western Africa, southern Asia and South America. However, having said this, we stress the importance of carrying out systematic research, including orientation studies, in each of these more distant areas.

We hope the approaches we have found helpful in the Yilgarn, translated generically, will be a guide to approaches that can be used in other lateritic terrains around the world.

Reference:

Anand, R.R. and Smith, R.E. (1993). Regolith distribution, stratigraphy and evolution of the Yilgarn Craton. In: P.R. Williams and J. A. Haldane (Compilers), An International Conference on Crustal Evolution, Metallogeny and Exploration of the Eastern Goldfields. Kalgoorlie 1993. Australian Geological Survey Record 1993/54. pp187-193.

PROJECT LEADERS' PREFACE

R.E. Smith and R.R. Anand

This project, AMIRA P240A, with a shortened title *Yilgarn Lateritic Environments* was a two year extension of its precursor, AMIRA P240 (*Laterite Geochemistry*). The research was carried out from July 1991 to June 1993, and the results were summarised and synthesised in the final report entitled 'Geochemical exploration in complex lateritic environments of the Yilgarn Craton' by Anand *et al.* Volume I, 1993 (CSIRO Division of Exploration and Mining Restricted Report 442R Volume I, December 1993). Volumes II and III contain all the data generated by the project. A floppy disk of the geochemical data together with sample type and location is included in standard format to enable users to have easy access and readily manipulate the data for their required purposes. Volumes I, II and III of report 442R should be considered together.

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CSIRO/AMIRA REPORT 442R

APPENDIX X

Wombola Dam Data

APPENDIX X Wombola Data

Sample Number	Sample Type	Box Field	Local Coordinates		depth-m.	SiO2 %wt	Al2O3 %wt	Fe2O3 %wt	MgO %wt	CaO %wt	Na2O %wt	K2O %wt	TiO2 %wt	LOI %wt	TOTAL %
			easting	northing											
07-1551	LG203	LG200	8950	10900	0	16.9	14.9	58.6	0.08	0.13	0.02	<0.05	1.24	6.95	98.7
07-1546	LG203	LG200	9000	10900	0	20.6	17.6	51.9	0.07	0.11	0.02	<0.05	1.15	7.47	98.8
07-1540	LG203	LG200	9050	10900	0	23.3	16.9	48.6	0.19	1.09	0.03	0.05	1.25	7.29	98.7
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07-1556	LG203	LG200	8800	11050	0	17.1	15.3	51.2	0.83	2.41	0.05	0.09	1.4	8.24	96.6
07-1562	LG203	LG200	8850	11050	0	19.3	16.5	52.5	0.43	1.44	0.03	0.05	1.59	7.29	99.1
07-1567	LG203	LG200	8900	11050	0	17.3	11.7	55.6	0.44	2.94	0.03	0.07	1.28	6.95	96.3
07-1571	LG203	LG200	8950	11050	0	27.2	11.1	52.2	0.24	0.67	0.03	0.09	1.21	4.82	97.6
07-1576	LG203	LG200	9000	11050	0	25.2	13.1	49.2	0.3	1.95	0.04	0.09	1.09	6.58	97.6
07-1582	LG203	LG200	9050	11050	0	28.7	11.3	50.9	0.22	0.41	0.03	0.08	1.13	4.58	97.4
07-1587	LG203	LG200	9100	11050	0	38.8	10.2	44.5	0.21	0.33	0.03	0.08	0.91	4.07	99.1
07-1594	LG203	LG200	9150	11050	0	33.2	9.77	48.9	0.15	0.2	0.03	0.08	1.06	4.76	98.2
07-1599	LG203	LG200	9200	11050	0	25.9	12.3	51.2	0.12	0.12	0.02	<0.05	1.16	5.05	95.8
07-1603	LG203	LG200	9300	11050	0	30.2	10.4	51.6	0.24	0.51	0.03	0.07	1.23	3.83	98.1
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07-1538	LT102	LT100	9050	10900	3.5	25.5	19.5	40.5	0.1	0.06	0.03	0.05	1.1	12.9	99.7
07-1533	LT102	LT100	9150	10900	3.5	29.1	23.6	30.9	0.05	0.03	0.03	<0.05	0.78	14.2	98.6
07-1553	LT102	LT100	8800	11050	2.5	19.6	18.7	44.9	0.1	0.15	0.03	<0.05	0.98	15.1	99.5
07-1570	LT102	LT100	8950	11050	7.5	21.5	13.5	45.9	0.08	0.11	0.04	<0.05	0.84	14	95.9
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07-1579	LT102	LT100	9050	11050	5.5	25.5	19.4	40.2	0.05	0.16	0.02	<0.05	1.36	12.8	99.4
07-1591	LT102	LT100	9150	11050	5.5	25.1	17.9	42	0.05	0.03	0.02	0.07	0.55	11.8	97.5
07-1548	MZ101	MZ100	8950	10900	2.5	32.2	19.5	32.2	0.57	0.22	0.36	0.1	1.38	12.8	99.3
07-1544	MZ101	MZ100	9000	10900	4.5	21.5	15.9	48.6	0.13	0.08	0.11	0.08	1.04	10.4	97.8
07-1539	MZ101	MZ100	9050	10900	5.5	30.5	16.9	38.9	0.11	0.15	0.05	0.13	1.29	11.3	99.3
07-1534	MZ101	MZ100	9150	10900	5.5	46.3	14.3	27	0.23	0.03	0.07	0.4	0.7	10.2	99.2
07-1529	MZ101	MZ100	9200	10900	5.5	36.7	25.5	20	0.08	0.03	0.06	<0.05	1.05	12.5	95.8
07-1554	MZ101	MZ100	8800	11050	5.5	53.9	13.7	20.4	0.22	0.25	0.11	0.11	1.12	9.79	99.6
07-1560	MZ101	MZ100	8850	11050	7.5	27.5	13.8	43.5	0.23	0.35	0.05	<0.05	0.98	12.3	98.6
07-1566	MZ101	MZ100	8900	11050	9.5	39	11.8	38.3	0.05	0.15	0.02	<0.05	0.8	9.49	99.5
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07-1586	MZ101	MZ100	9100	11050	9.5	46	13.9	24.6	0.22	0.1	0.07	0.19	0.99	9.81	95.9
07-1592	MZ101	MZ100	9150	11050	6.5	57.6	17.5	13.6	0.19	0.03	0.1	0.72	0.66	8.94	99.3
07-1597	MZ101	MZ100	9200	11050	5.5	64.9	19.3	4.05	0.31	0.03	0.17	1.29	0.54	9.01	99.6
07-1602	MZ101	MZ100	9300	11050	4.5	56.2	16.8	14.7	0.23	0.08	0.15	0.27	1.32	9.4	99.2
07-1606	MZ101	MZ100	9350	11050	4.5	59.2	16.9	12.5	0.08	0.06	0.09	0.06	1.55	8.79	99.2

APPENDIX X Wombola Data

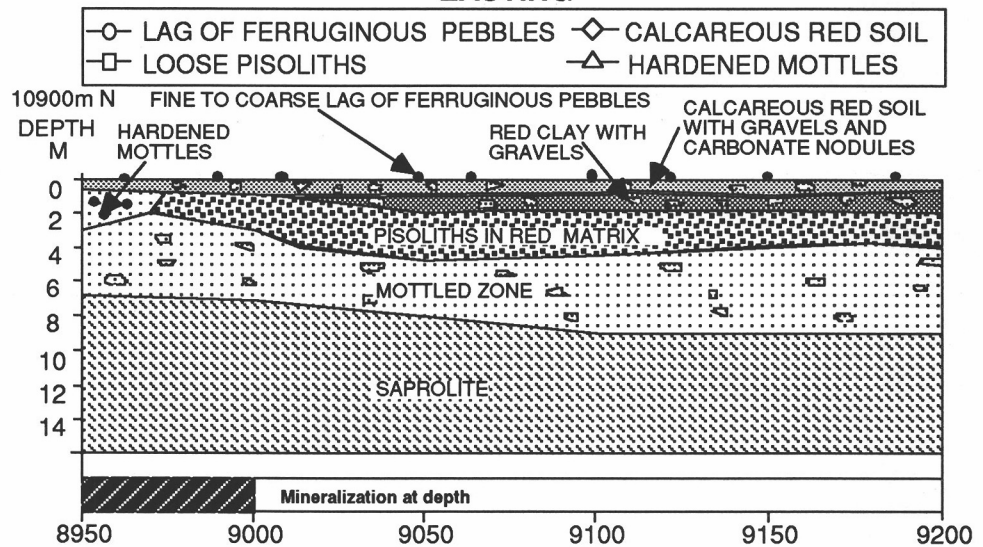
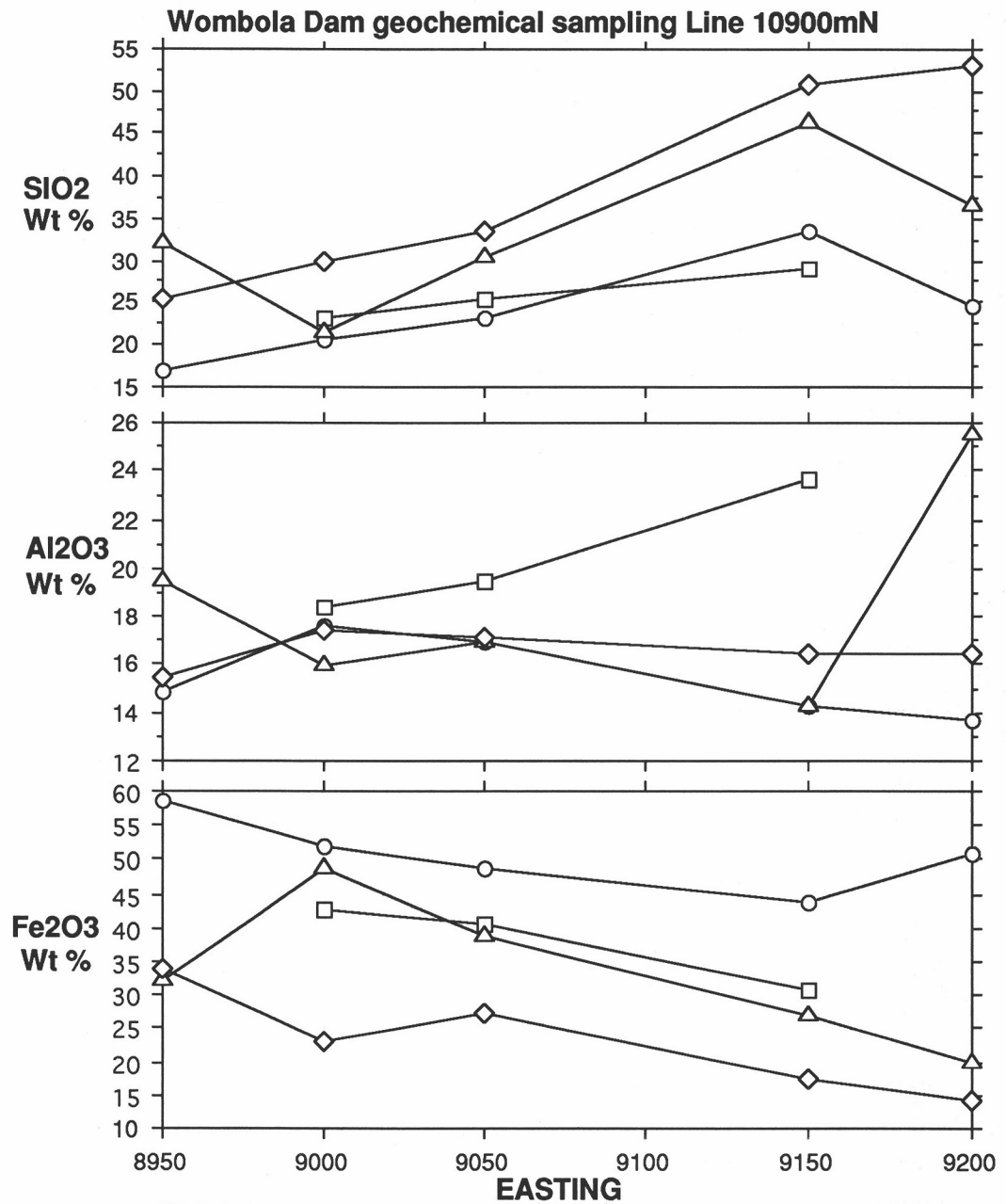
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07-1537	SU302	SU300	9050	10900	0.5	33.5	17.15	27.11	1.61	3.13	0.41	0.34	0.97	12.52	96.7
07-1532	SU302	SU300	9150	10900	0.5	50.7	16.44	17.22	0.85	1.4	0.27	0.65	1.06	11.2	99.8
07-1527	SU302	SU300	9200	10900	0.5	53.1	16.44	14.39	0.87	0.82	0.3	0.76	0.96	11.9	99.5
07-1552	SU302	SU300	8800	11050	0.5	20.2	18.68	25.83	4.18	7.18	0.33	0.24	0.76	18.14	95.5
07-1557	SU302	SU300	8850	11050	0.5	27.6	14.83	30.05	3.9	6.23	0.42	0.34	0.96	15.4	99.7
07-1563	SU302	SU300	8900	11050	0.5	36.2	12.1	36.59	0.96	2.43	0.19	0.37	1.03	9.63	99.5
07-1568	SU302	SU300	8950	11050	0.5	43.6	10.46	16.98	1.65	9.15	0.35	0.76	0.84	16	99.8
07-1572	SU302	SU300	9000	11050	0.5	29.8	10.53	21.98	5.87	10.46	0.29	0.48	0.78	19.38	99.6
07-1577	SU302	SU300	9050	11050	0.5	48.7	13.79	21.32	1.05	2.27	0.49	0.7	1.02	10.36	99.7
07-1583	SU302	SU300	9100	11050	0.5	43.9	14.4	19.09	2.3	4.03	0.31	0.66	0.86	12.92	98.5
07-1589	SU302	SU300	9150	11050	0.5	54.1	16.46	12.31	1.05	1.38	0.31	0.81	0.95	12.05	99.4
07-1595	SU302	SU300	9200	11050	0.5	54.3	16.08	13.1	1.14	1.28	0.41	0.91	0.97	11.6	99.8
07-1600	SU302	SU300	9300	11050	0.5	40	14.34	31.29	1.03	1.2	0.33	0.47	1.12	9.92	99.7
07-1604	SU302	SU300	9350	11050	0.5	43.3	19.39	18.63	2.29	2.77	0.38	0.73	0.99	13.3	101.8

APPENDIX X Wombola Data

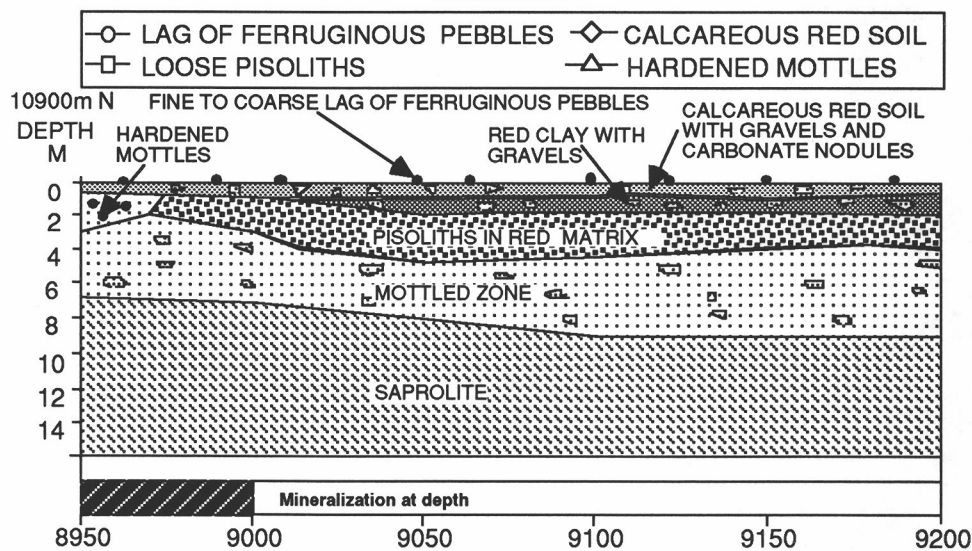
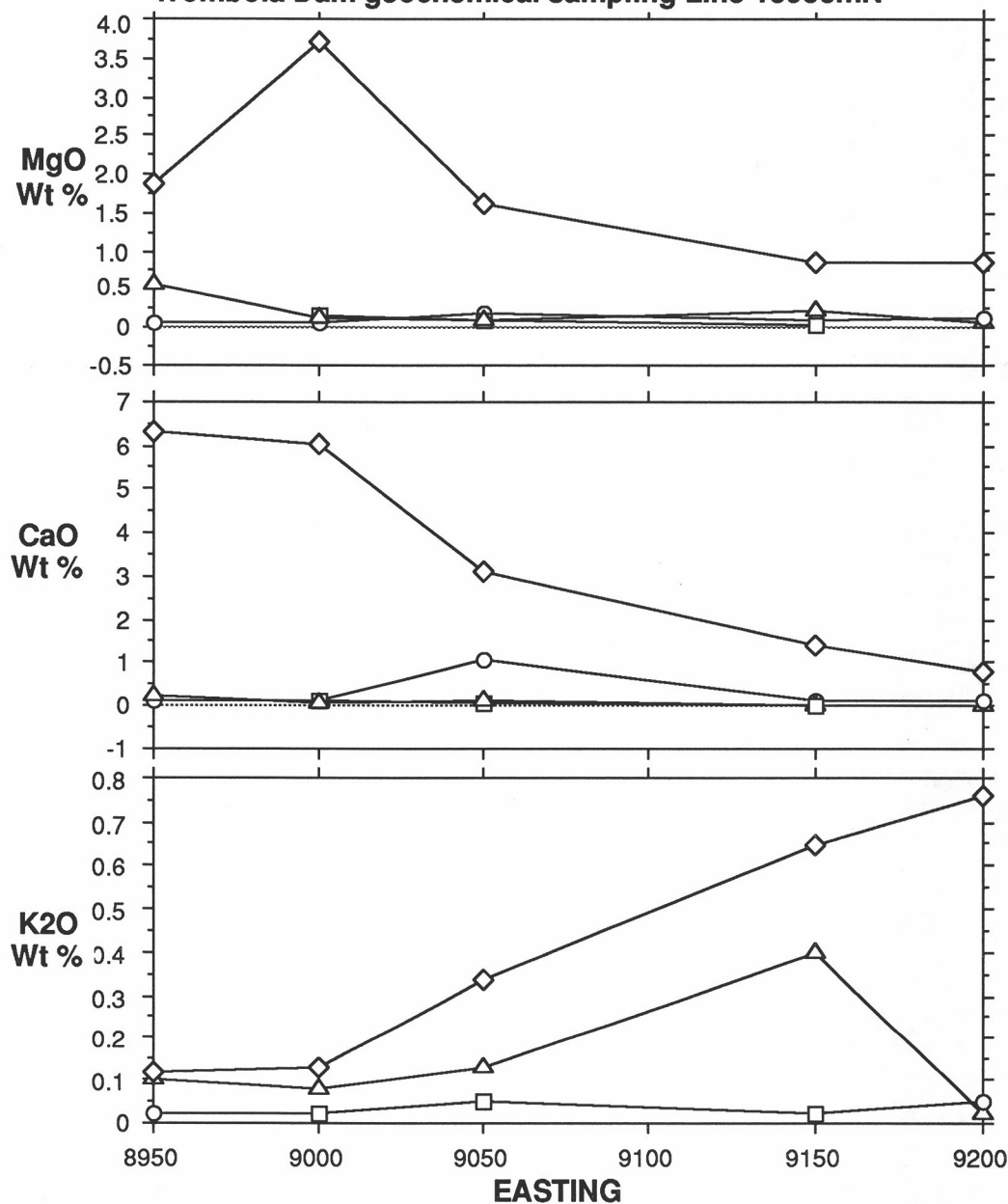
Sample Number	Mn ppm	Cr ppm	V ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	As ppm	Sb ppm	Bi ppm	Mo ppm	Ag ppm	Sn ppm	Ge ppm	Ga ppm	W ppm	Ba ppm	Zr ppm	Nb ppm	Se ppm	Au ppb
07-1551	410	288	866	116	16	22	47	10	13	<2	<2	<2	<2	<2	<2	29	7	49	100	5	3	476
07-1546	307	314	925	116	14	19	71	11	22	<2	2	<2	<2	2	<2	41	10	43	126	4	4	430
07-1540	906	371	1050	138	20	21	93	17	14	<2	2	<2	<2	<2	<2	39	8	106	129	4	3	235
07-1536	625	315	1020	117	19	31	69	12	9	<2	8	<2	<2	4	<2	31	6	64	104	4	3	135
07-1531	898	352	1040	122	15	32	85	16	17	<2	4	<2	<2	<2	<2	36	8	72	124	<3	<3	791
07-1556	1550	609	1130	111	18	26	111	17	24	<2	3	<2	<2	2	<2	41	5	132	181	7	<3	20
07-1562	1030	539	1240	116	19	24	103	15	18	<2	3	<2	<2	<2	<2	44	12	88	175	4	4	36
07-1567	1920	494	1200	118	22	28	115	18	20	<2	2	<2	<2	2	<2	39	9	124	134	6	4	33
07-1571	2540	383	1150	123	26	31	116	22	10	<2	2	<2	<2	3	<2	31	8	185	120	4	<3	<8
07-1576	1690	404	1070	116	18	26	91	17	20	<2	2	<2	<2	<2	<2	30	11	128	123	4	<3	10
07-1582	2240	389	1110	117	22	28	112	23	18	3	2	<2	<2	2	<2	34	8	167	117	4	<3	17
07-1587	2110	360	1020	102	19	29	102	19	5	2	5	<2	<2	<2	<2	27	9	148	109	4	4	<8
07-1594	1910	345	1030	88	15	37	103	17	15	2	2	<2	<2	3	<2	29	7	151	104	4	<3	182
07-1599	1230	457	1230	101	18	39	68	17	15	<2	5	<2	<2	2	<2	34	7	110	114	5	3	35
07-1603	2360	550	1330	101	19	36	103	22	20	<2	4	<2	<2	4	<2	32	10	188	120	7	3	<8
07-1608	2500	585	1380	120	24	49	111	24	15	<2	7	<2	<2	3	<2	34	11	176	121	<3	4	22
07-1543	203	221	799	174	8	24	25	10	<5	<2	2	<2	<2	2	<2	38	3	75	105	<3	6	805
07-1538	218	237	755	146	<5	12	11	6	<5	<2	3	<2	<2	2	<2	39	3	39	82	3	6	22
07-1533	67	216	376	146	<5	17	98	23	8	2	3	<2	<2	2	2	30	4	31	116	6	5	14
07-1553	157	530	724	201	<5	49	45	18	16	2	2	<2	<2	<2	<2	36	7	43	84	3	9	446
07-1570	179	252	1420	175	<5	18	20	10	<5	<2	<2	<2	<2	<2	<2	29	7	39	82	<3	<3	<8
07-1574	103	405	1100	77	10	10	65	18	9	<2	3	<2	<2	2	<2	52	<3	8	138	6	<3	<8
07-1579	180	416	956	139	12	50	76	30	19	<2	<2	<2	<2	3	<2	41	5	17	132	5	6	<8
07-1591	77	410	718	112	11	9	55	13	26	<2	<2	<2	<2	2	<2	32	<3	24	110	<3	3	<8
07-1548	335	187	871	160	<5	35	25	8	<5	<2	3	<2	<2	<2	<2	34	<3	47	103	4	4	10
07-1544	241	161	596	133	<5	24	21	7	<5	<2	2	<2	<2	2	<2	32	<3	23	69	4	10	98
07-1539	520	233	907	155	<5	39	55	15	7	<2	3	<2	<2	3	<2	32	<3	63	94	<3	3	43
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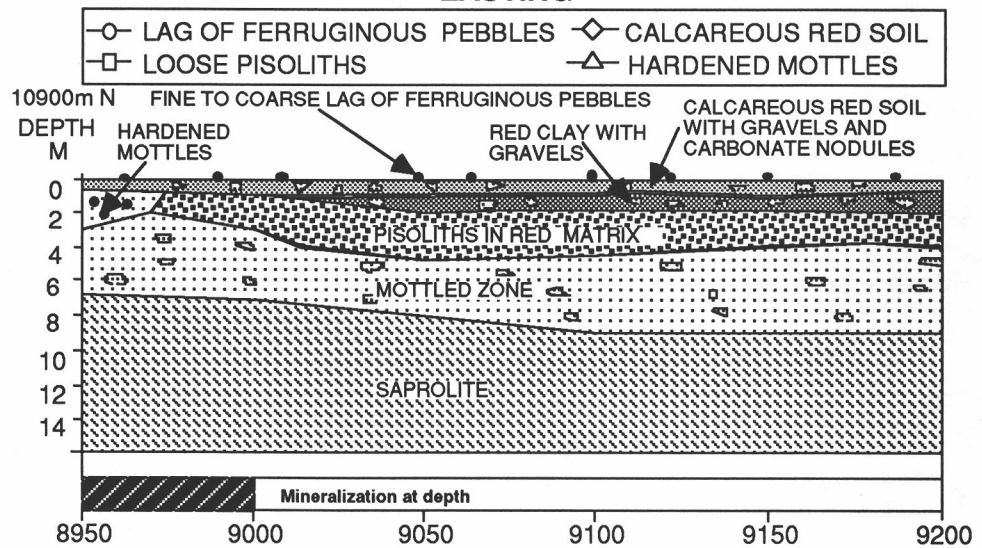
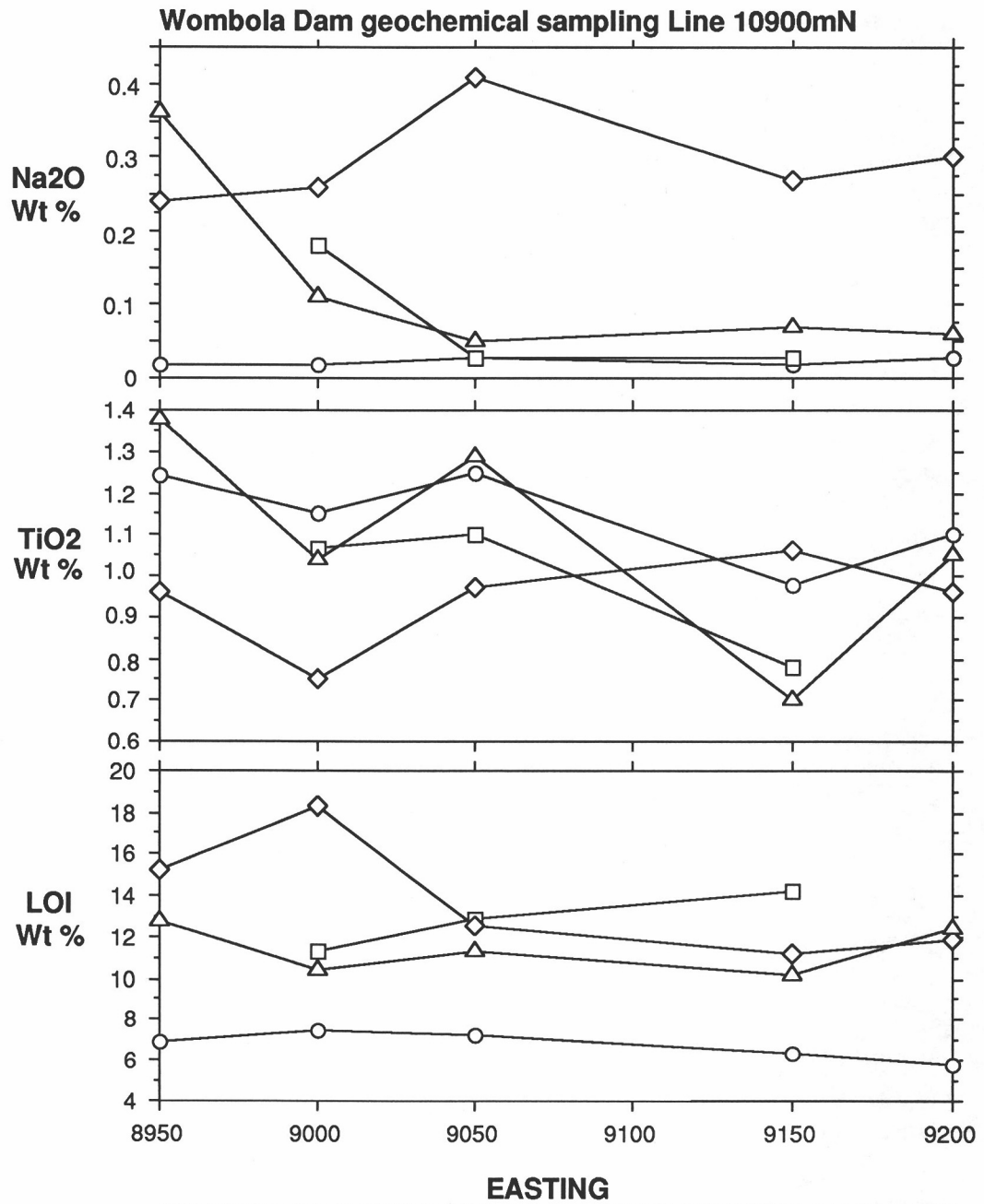
APPENDIX X Wombola Data

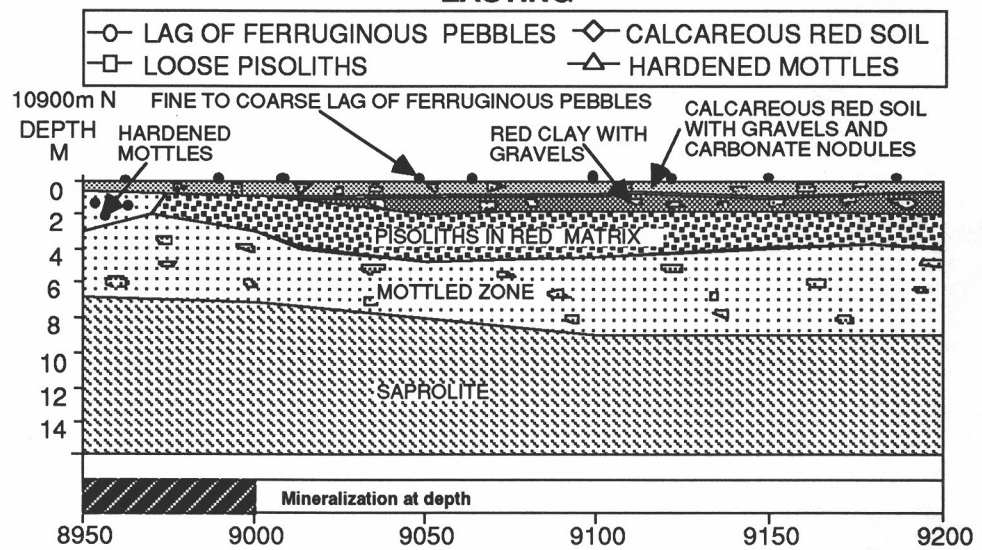
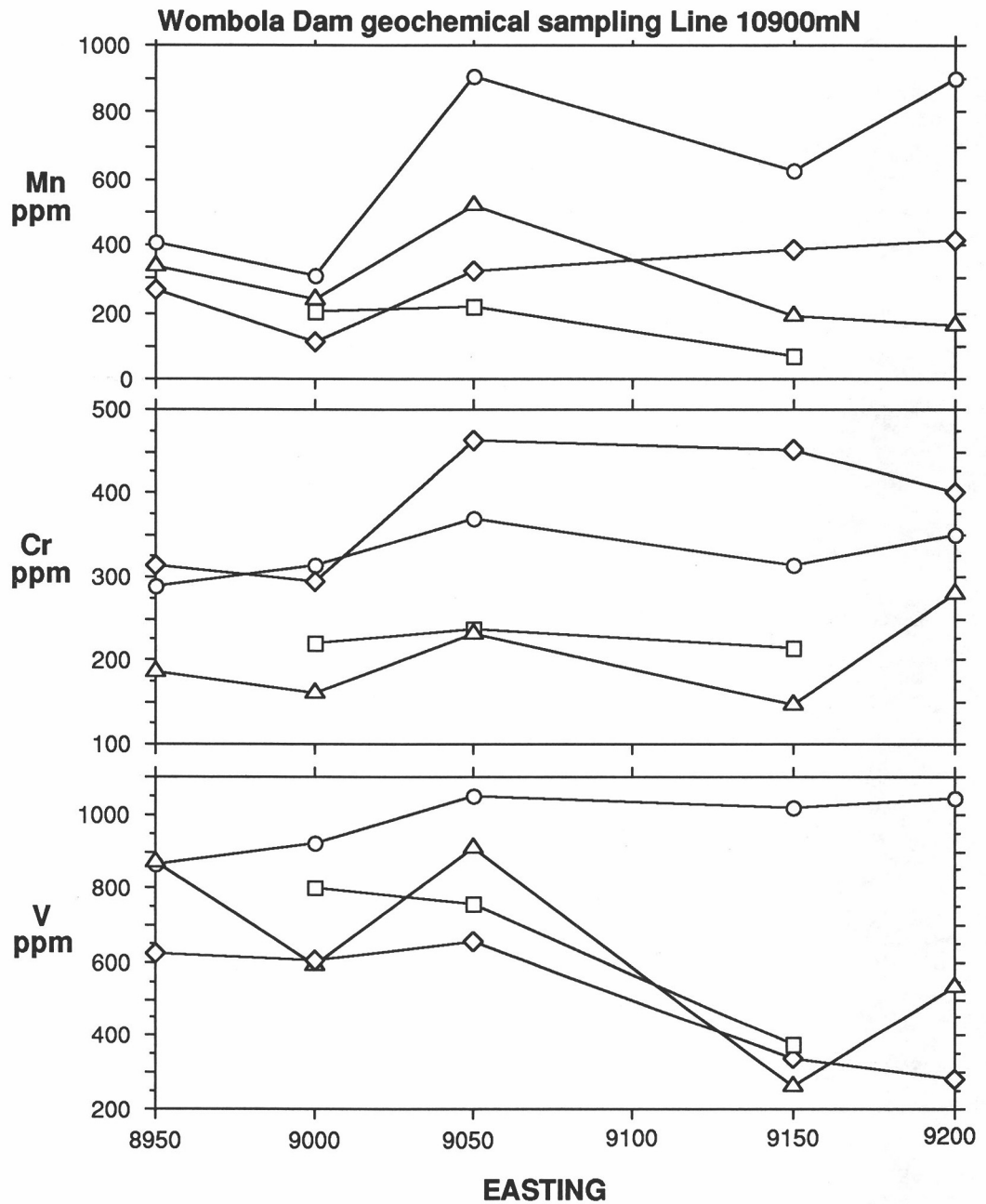
Sample Number	Mn ppm	Cr ppm	V ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	As ppm	Sb ppm	Bi ppm	Mo ppm	Ag ppm	Sn ppm	Ge ppm	Ga ppm	W ppm	Ba ppm	Zr ppm	Nb ppm	Se ppm	Au ppb
07-1547	271	313	622	122	11	21	38	12	11	<2	<2	<2	<2	2	<2	30	3	184	104	3	5	460
07-1542	110	293	603	87	8	10	54	11	<5	2	<2	<2	<2	2	<2	32	<3	165	122	3	<3	1230
07-1537	325	463	656	64	11	24	76	17	12	<2	<2	<2	<2	<2	<2	27	<3	351	149	5	8	82
07-1532	387	451	342	69	16	50	93	15	<5	<2	<2	3	<2	<2	<2	26	5	247	162	7	3	130
07-1527	415	401	284	68	14	60	109	22	5	<2	<2	2	<2	<2	<2	23	6	239	170	9	<3	77
07-1552	237	358	565	72	16	13	78	19	10	<2	<2	<2	<2	2	<2	29	<3	229	135	3	<3	340
07-1557	313	551	696	55	15	21	66	15	16	<2	<2	<2	<2	<2	<2	27	<3	463	140	3	7	180
07-1563	554	570	874	73	17	36	75	17	17	<2	<2	<2	<2	3	<2	30	4	228	140	3	9	140
07-1568	792	439	340	65	14	50	108	19	9	<2	<2	<2	<2	2	<2	17	<3	294	138	5	3	140
07-1572	800	381	495	70	18	27	102	22	7	<2	2	<2	<2	2	<2	21	<3	230	117	4	<3	440
07-1577	581	500	434	63	19	49	104	16	11	<2	<2	2	<2	<2	<2	23	6	242	167	10	4	57
07-1583	687	393	423	67	<5	69	112	29	9	<2	<2	<2	<2	<2	<2	19	3	383	137	5	4	190
07-1589	382	404	249	63	15	64	102	17	8	2	<2	<2	<2	<2	<2	21	<3	253	174	9	<3	67
07-1595	475	417	267	63	16	58	116	23	12	3	<2	<2	<2	2	<2	20	4	272	174	10	<3	82
07-1600	593	499	672	68	18	43	96	23	13	<2	2	<2	<2	<2	<2	26	6	355	152	7	10	59
07-1604	649	464	377	62	21	49	124	36	7	2	<2	<2	<2	<2	<2	21	6	265	150	8	5	84

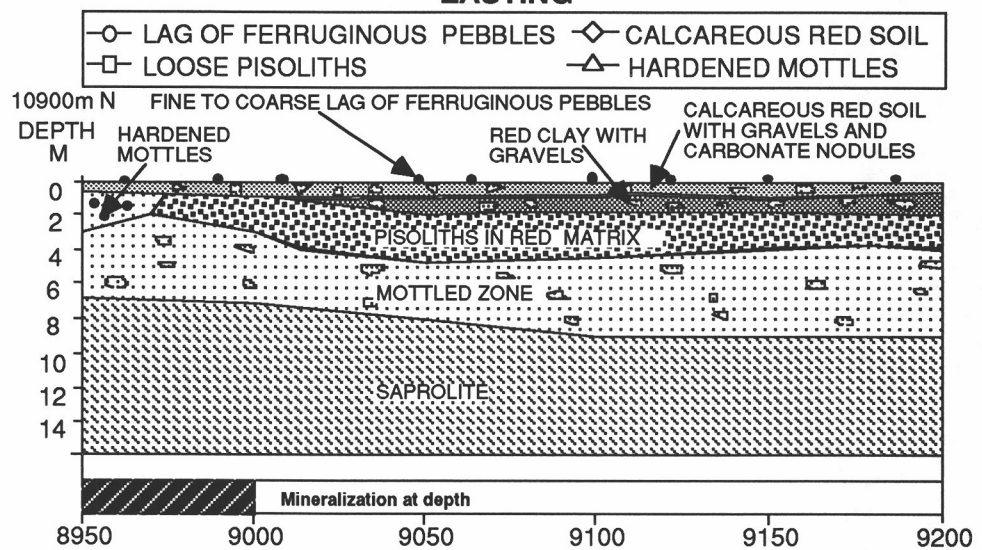
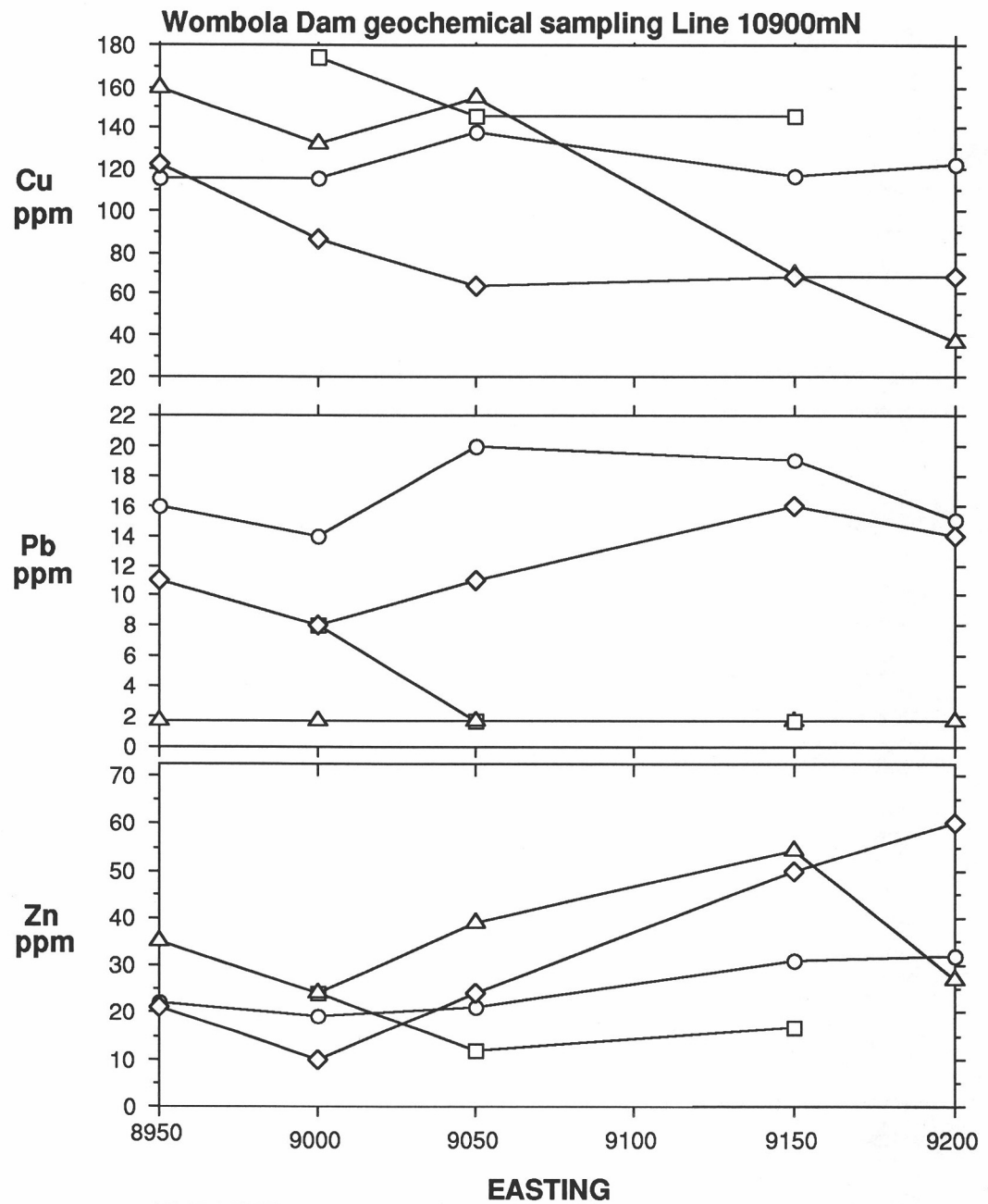


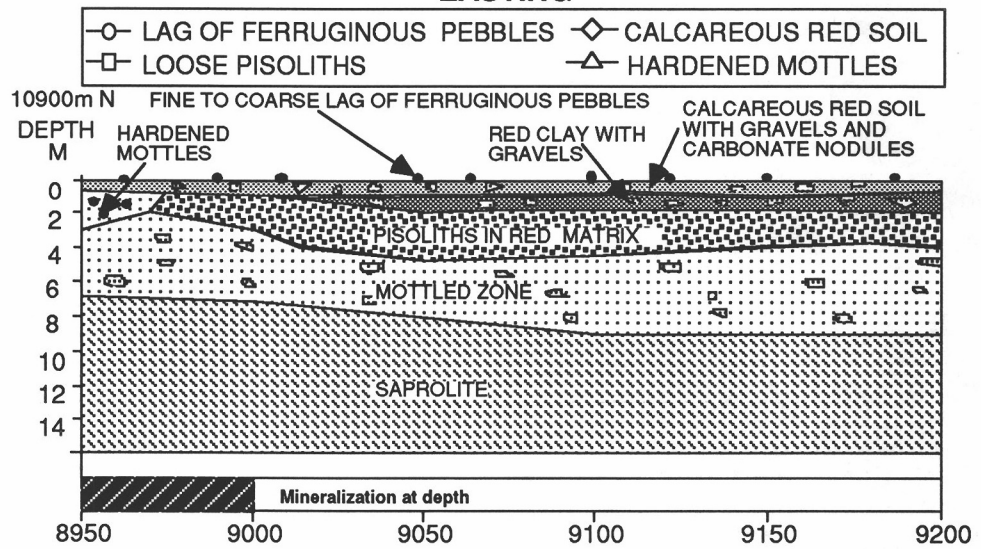
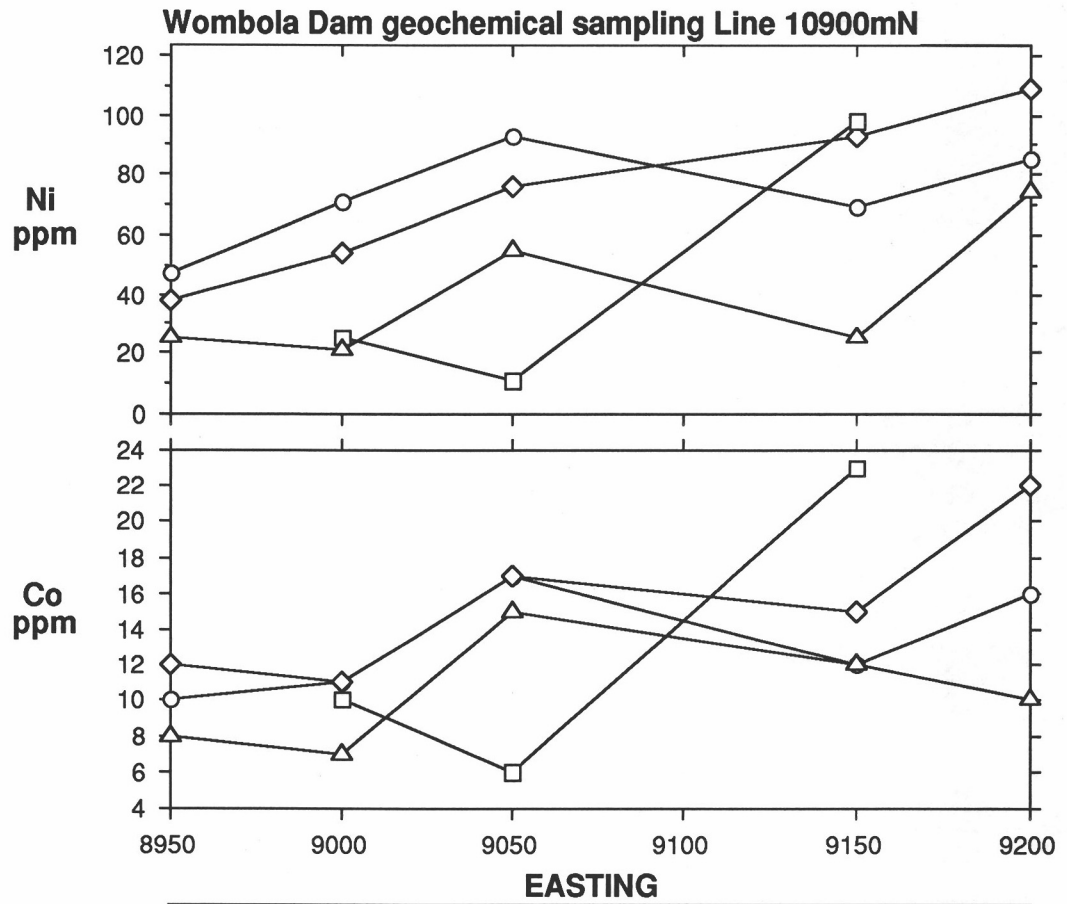
Wombola Dam geochemical sampling Line 10900mN

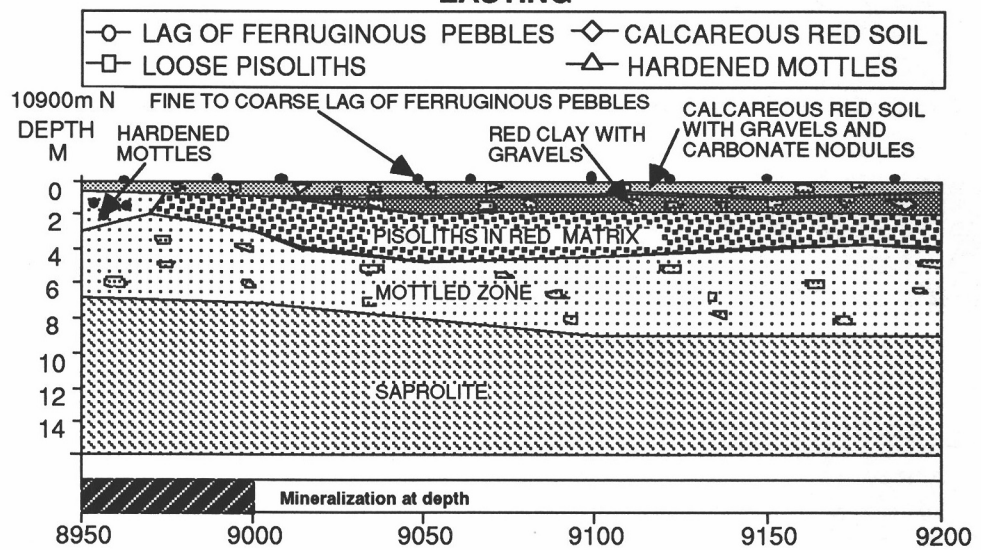
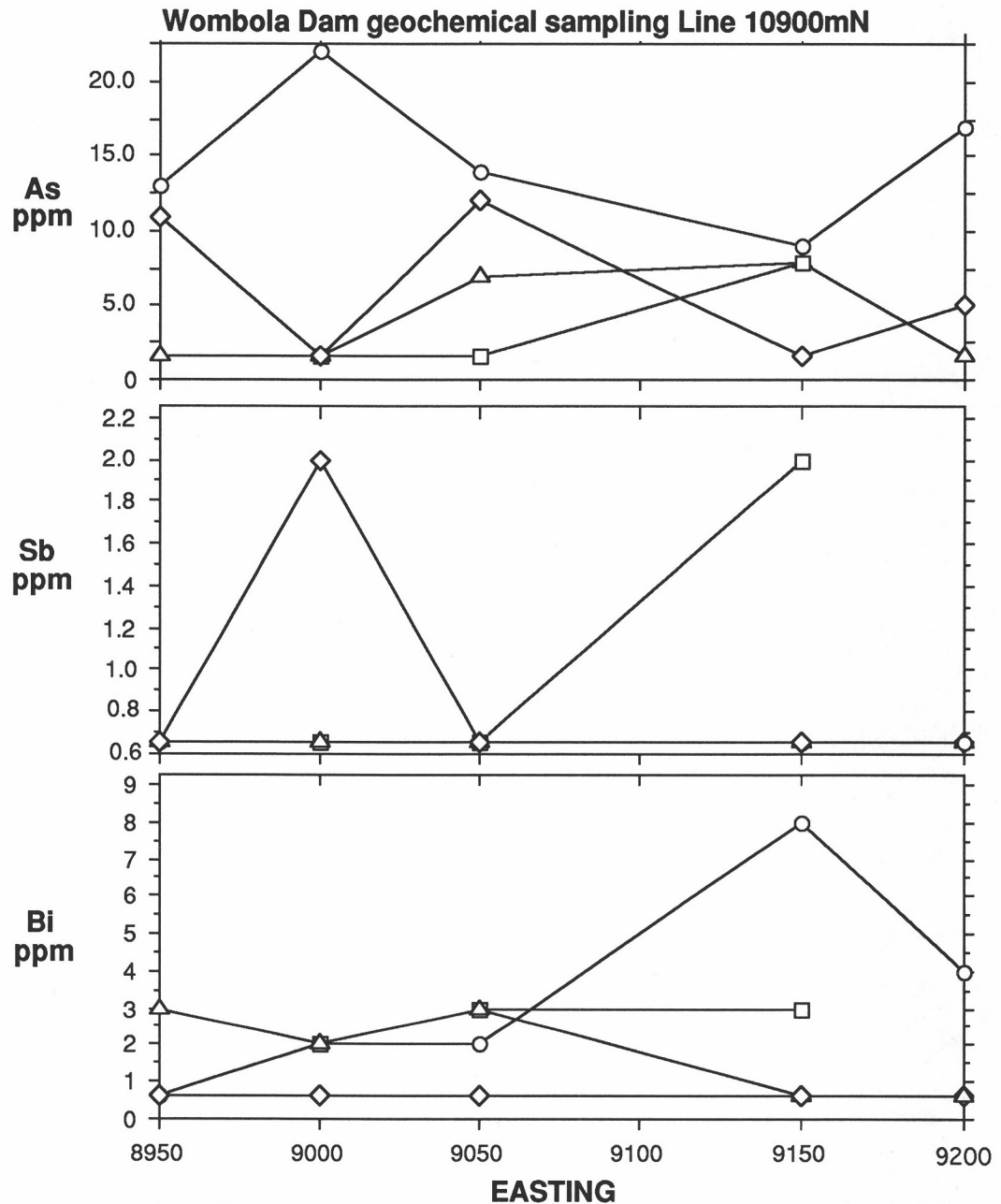




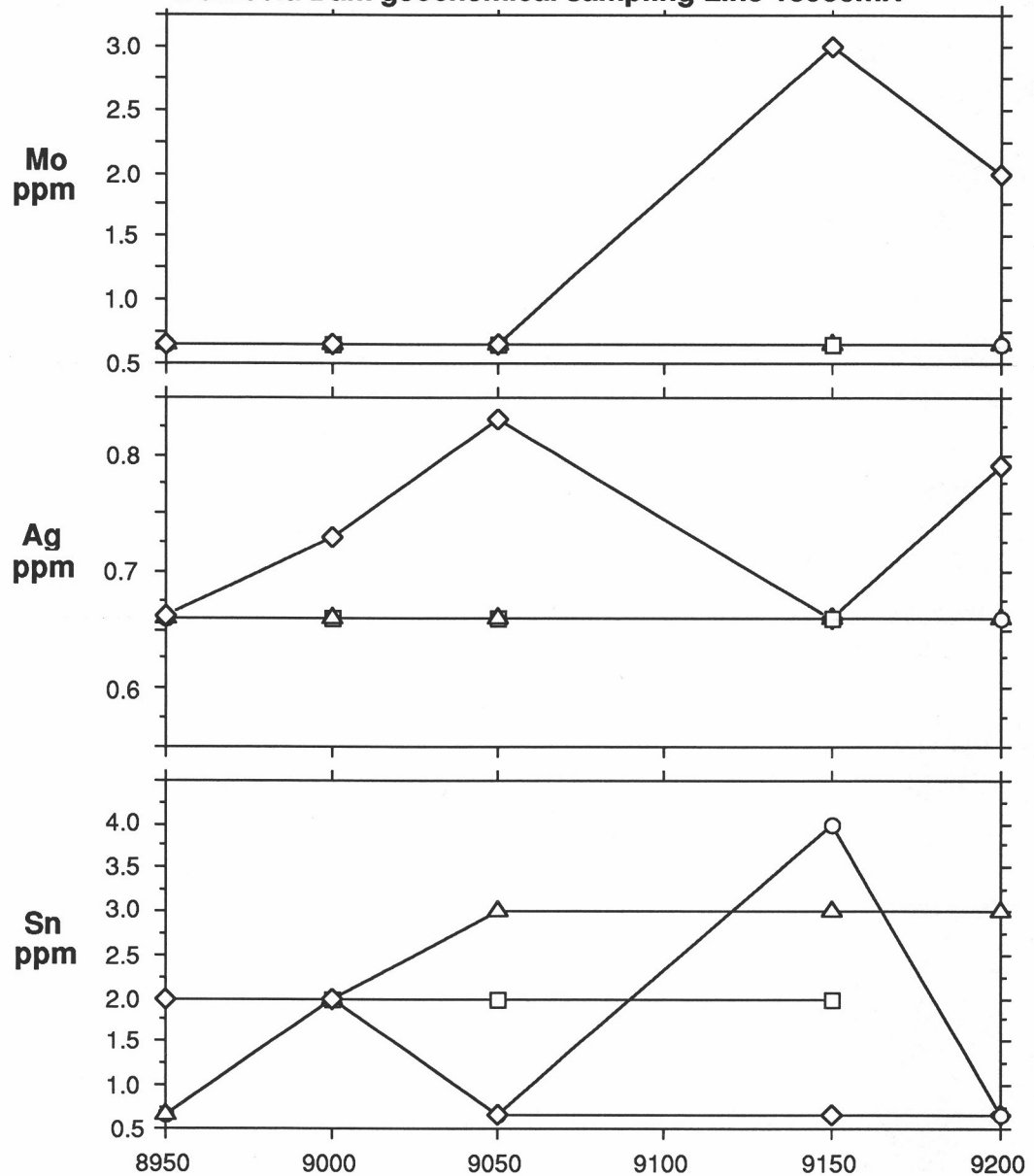




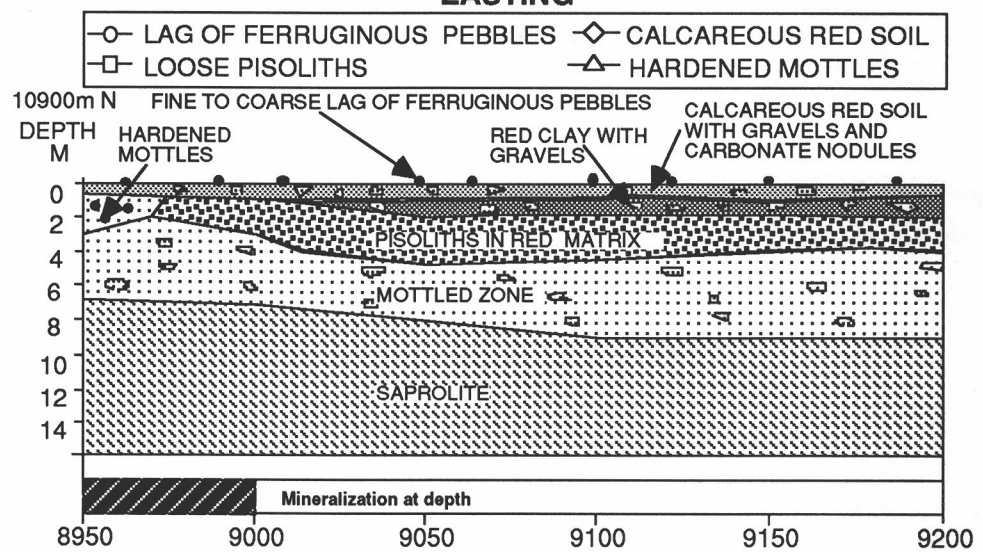


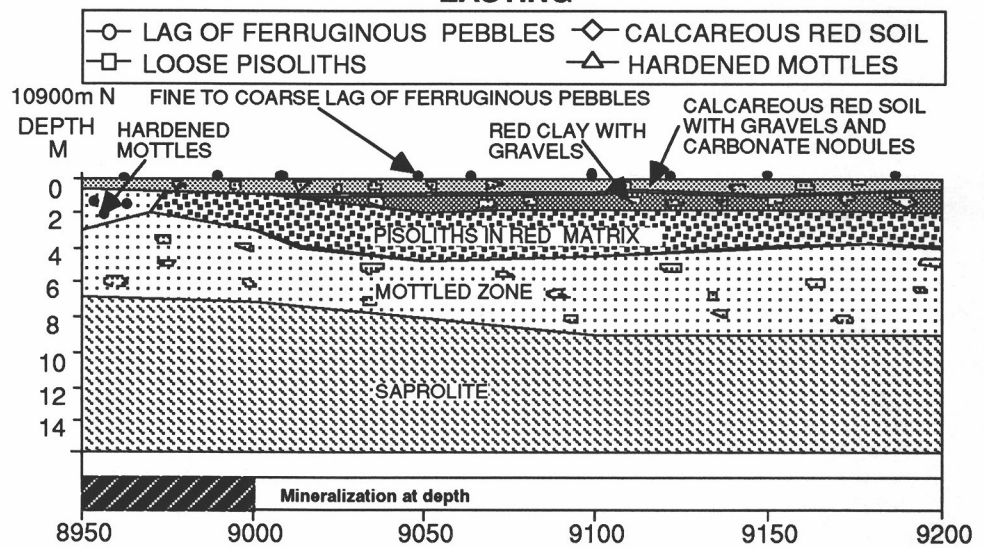
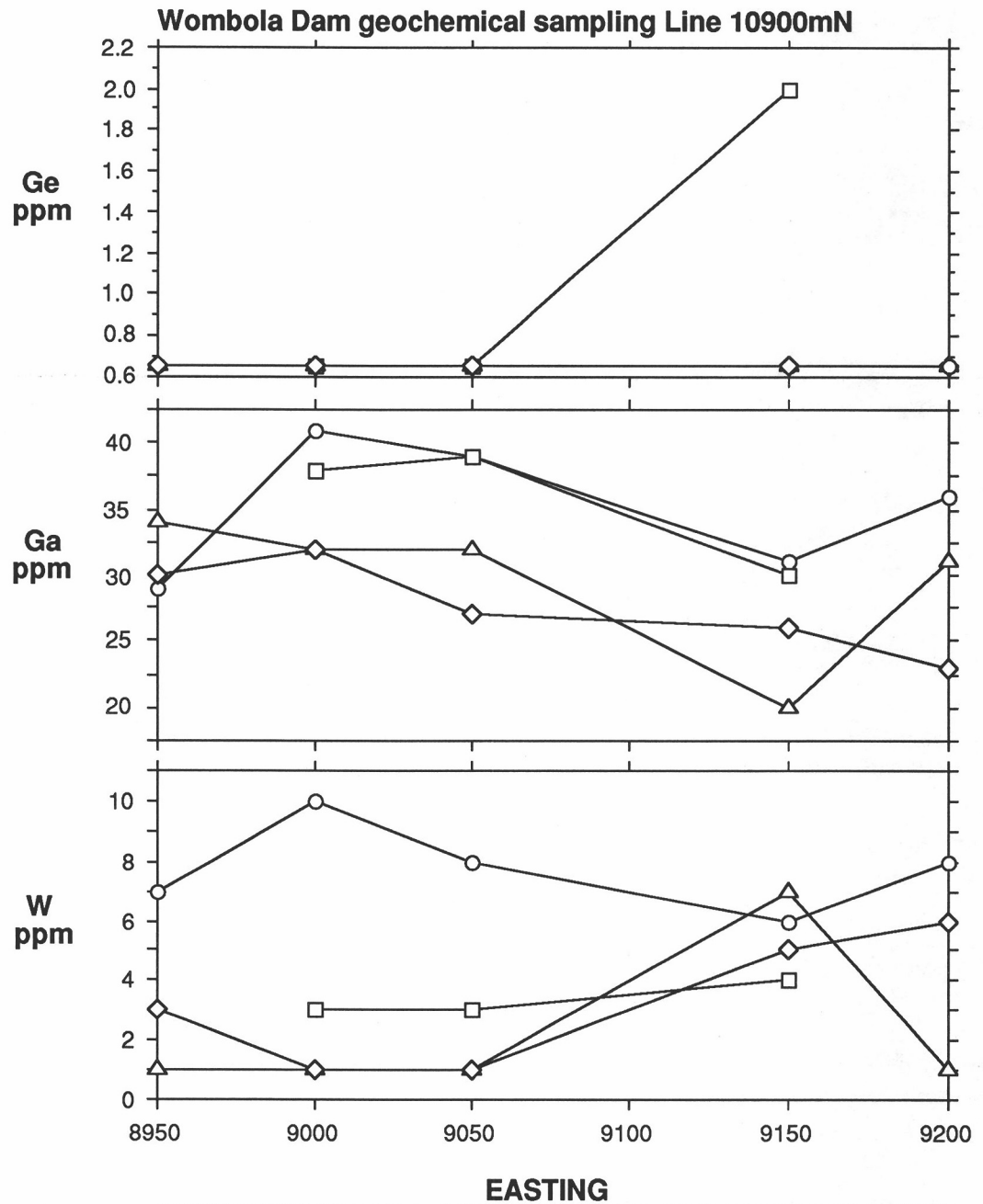


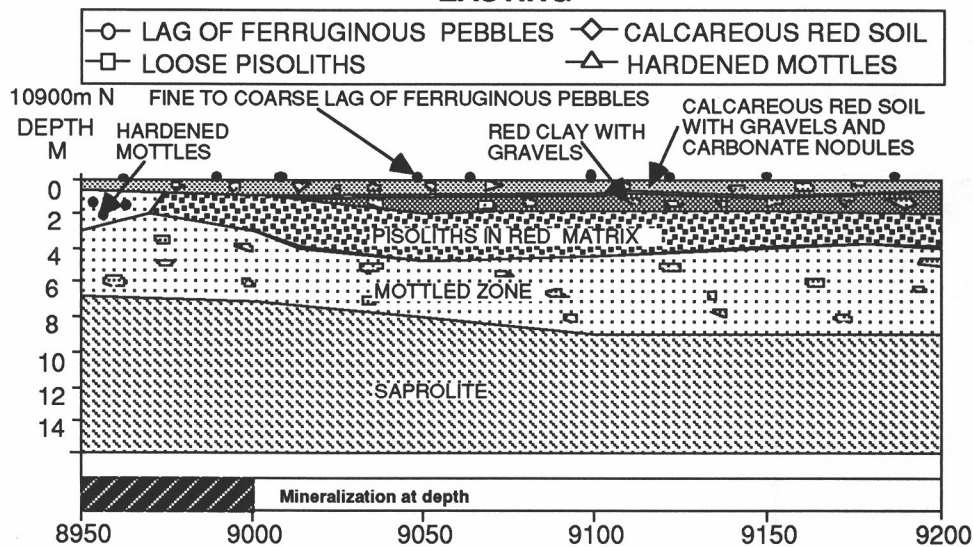
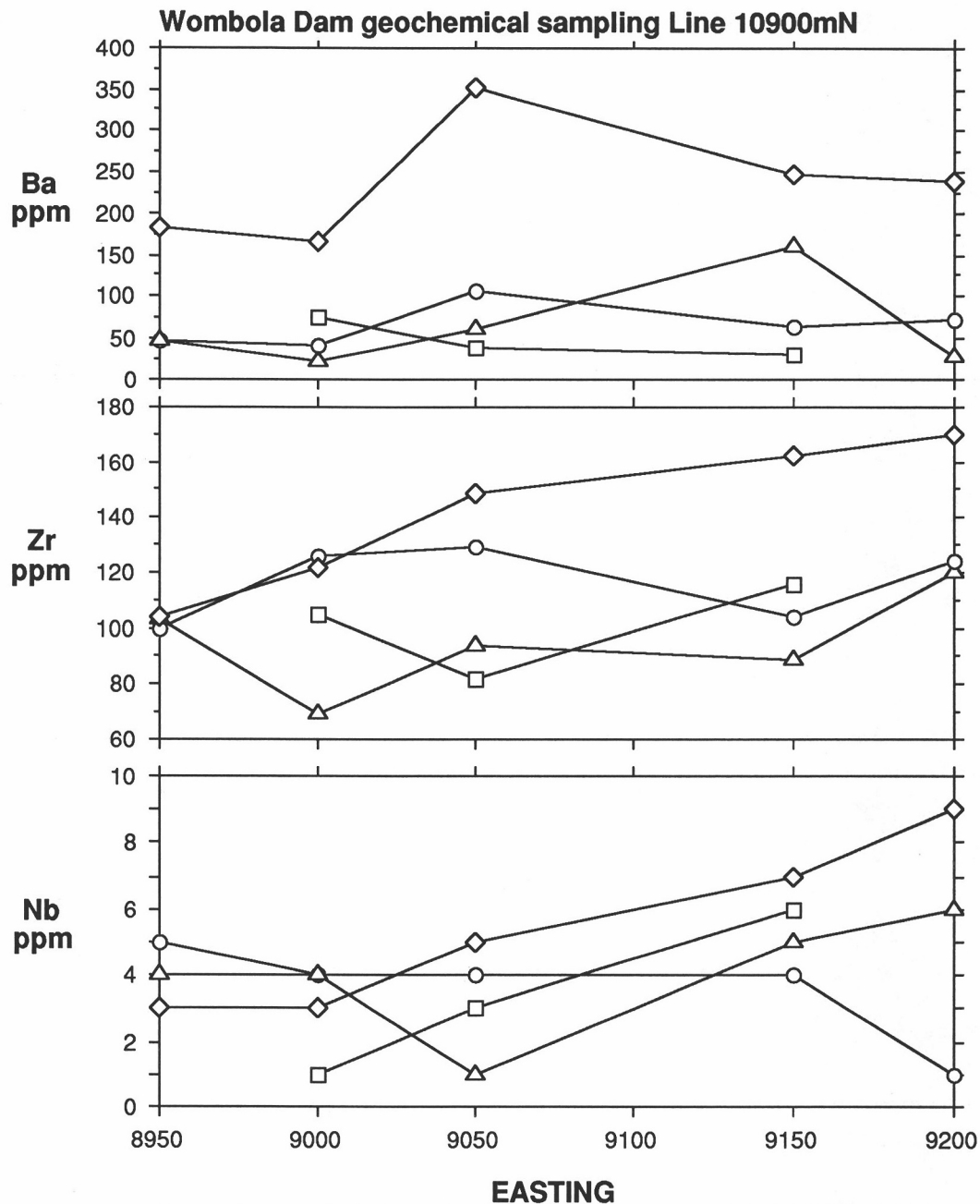
Wombola Dam geochemical sampling Line 10900mN



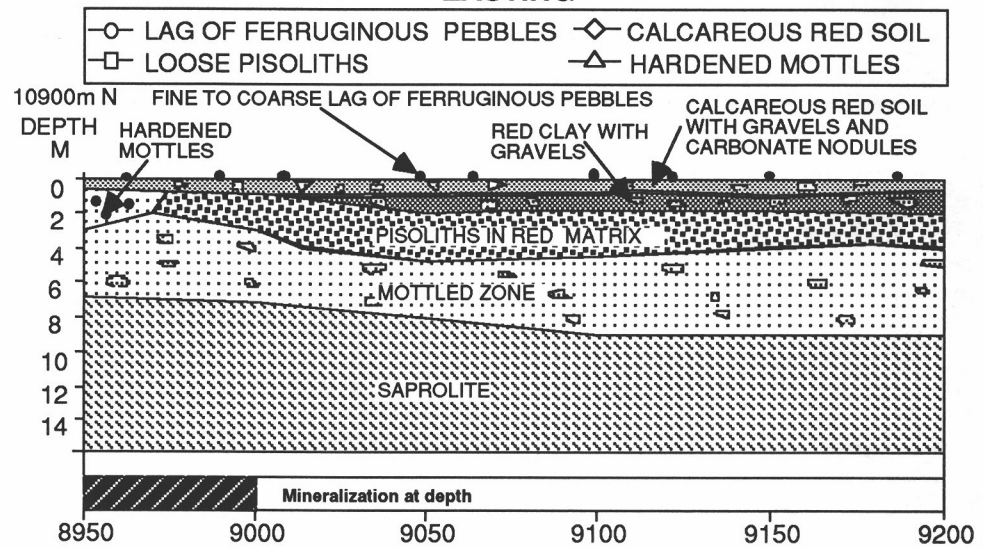
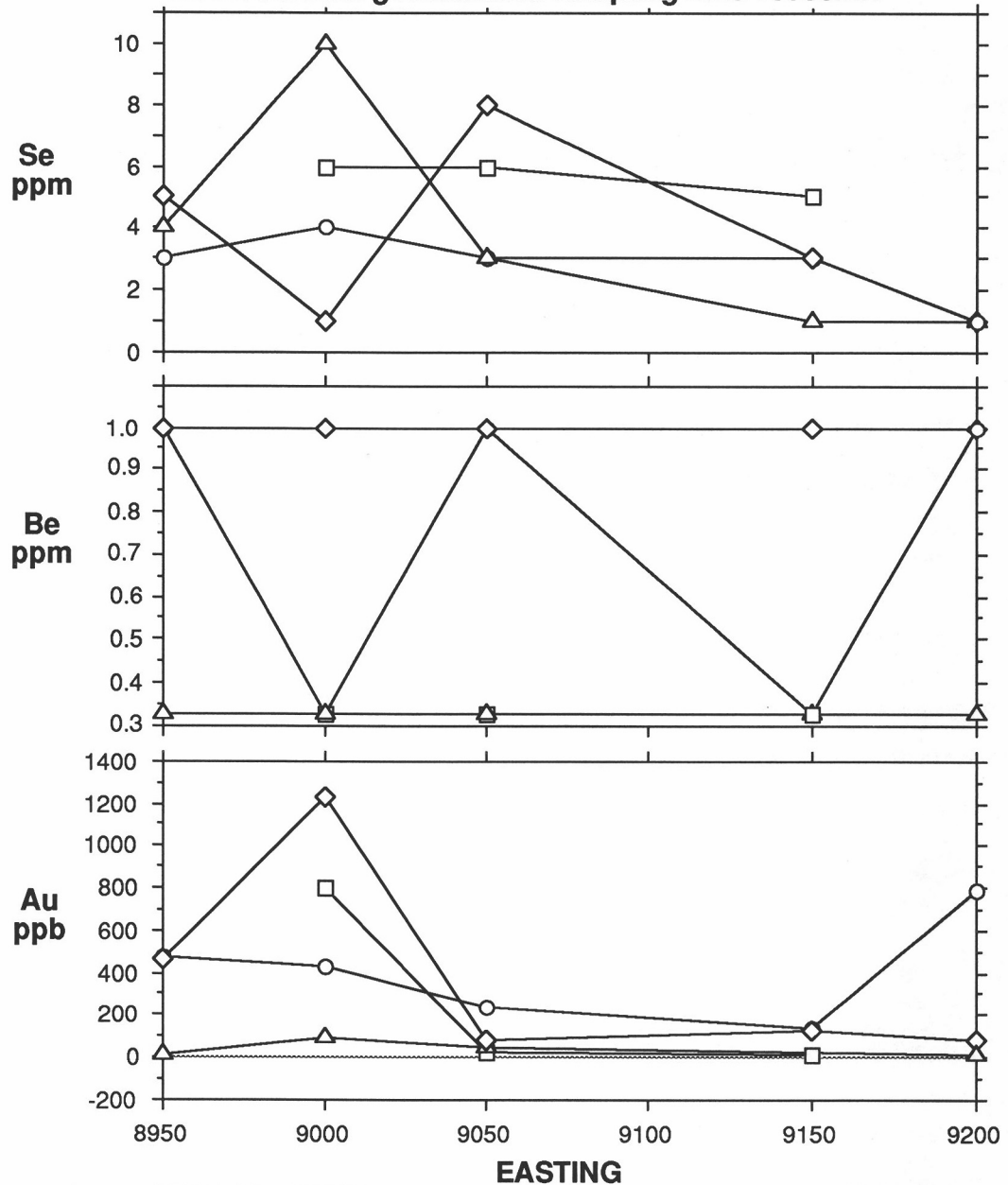
EASTING

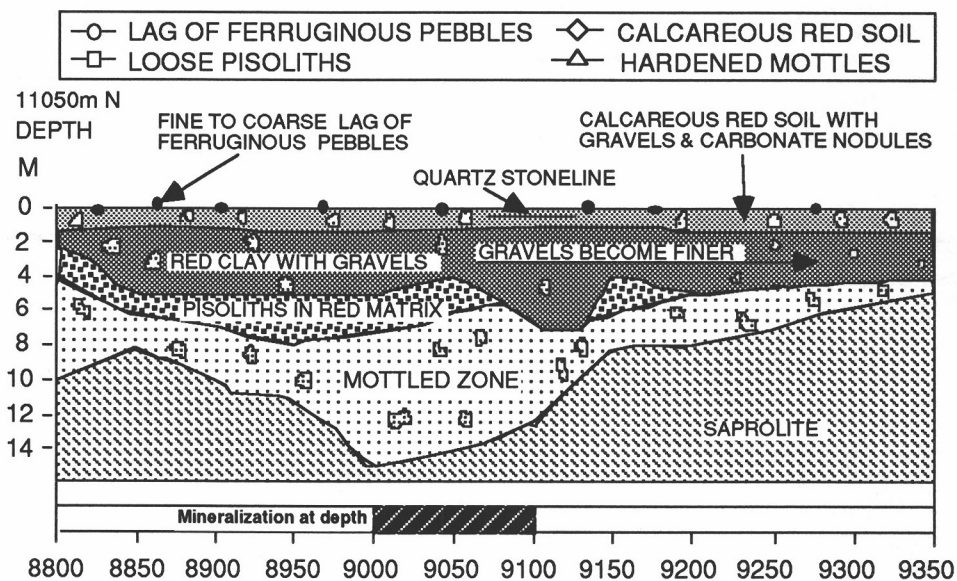
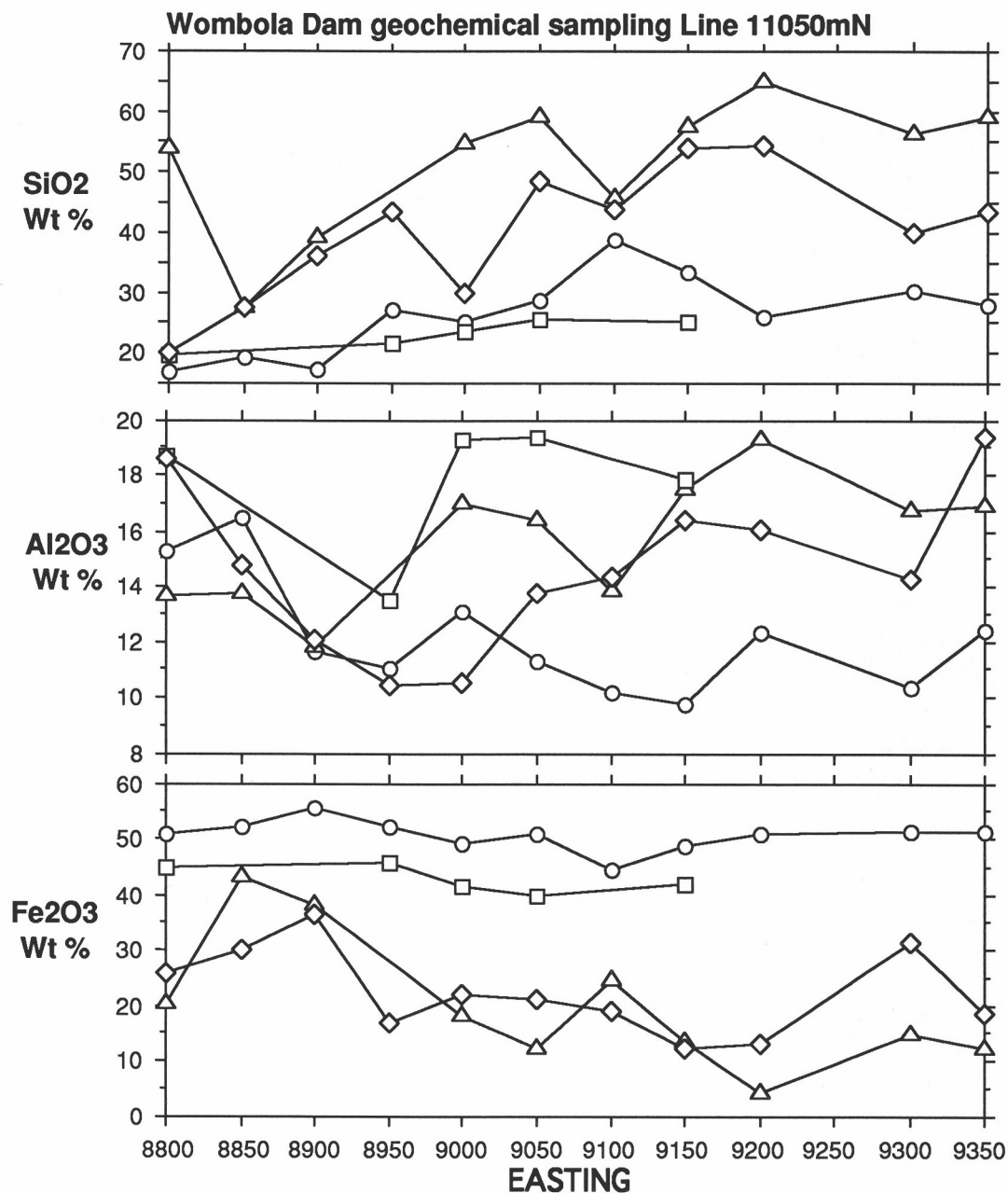


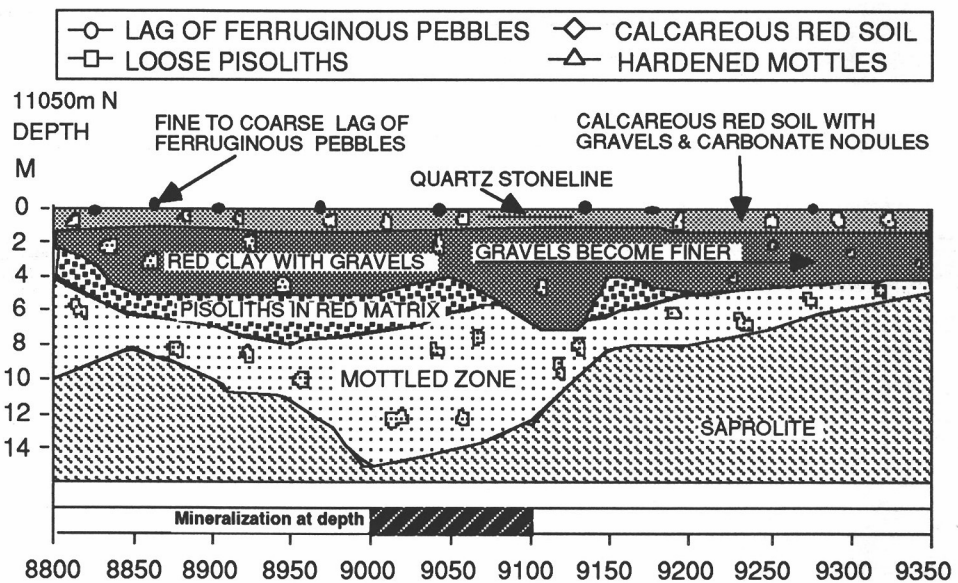
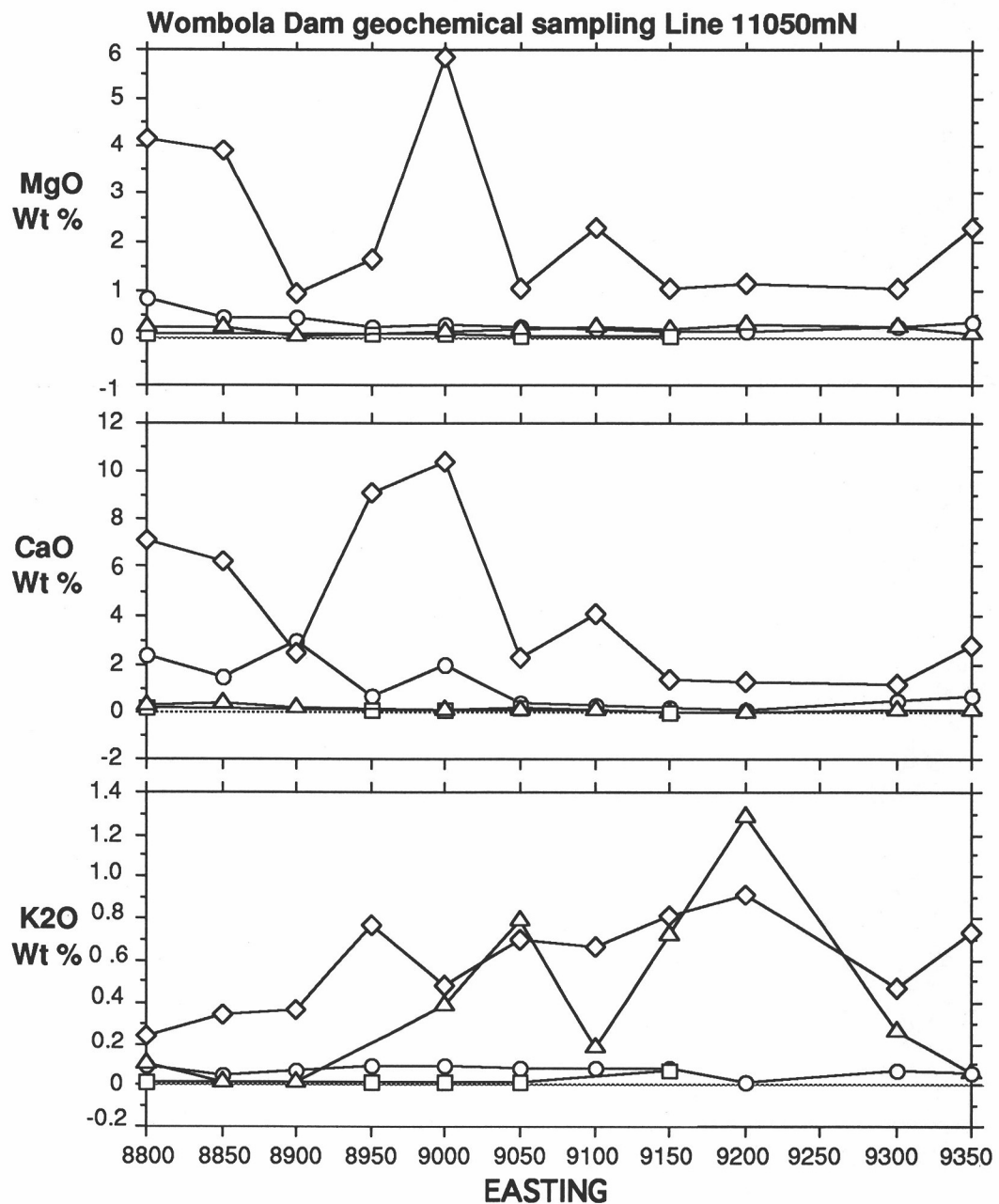


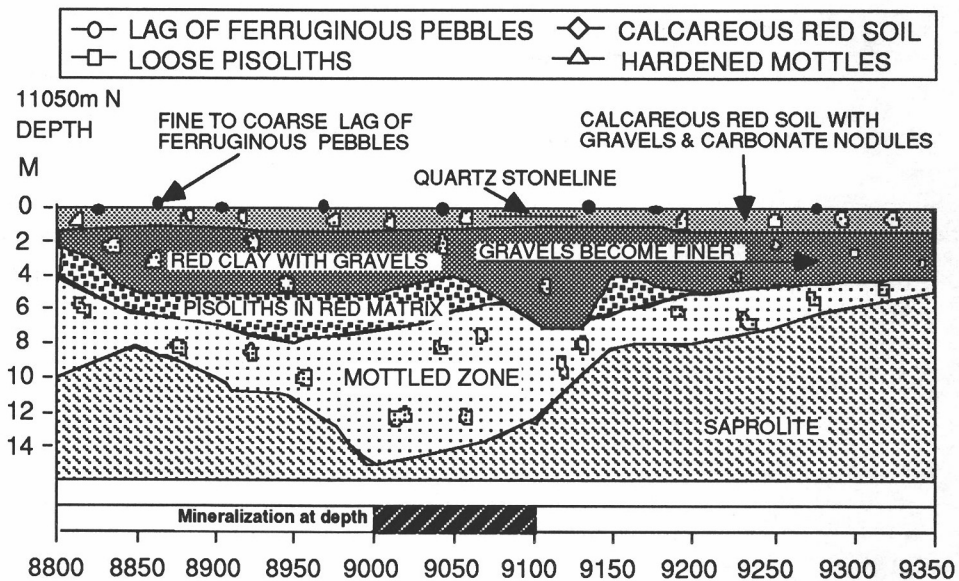
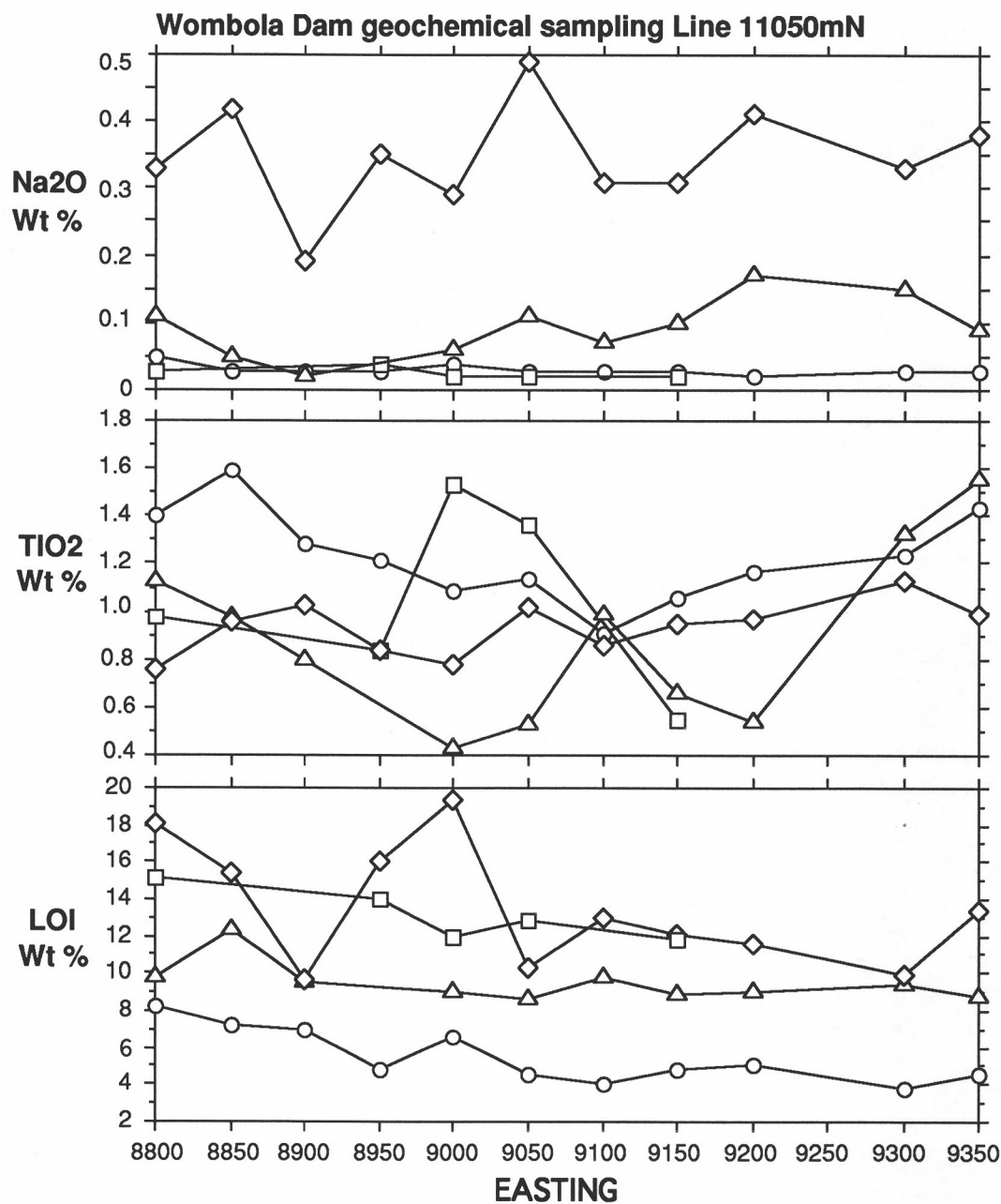


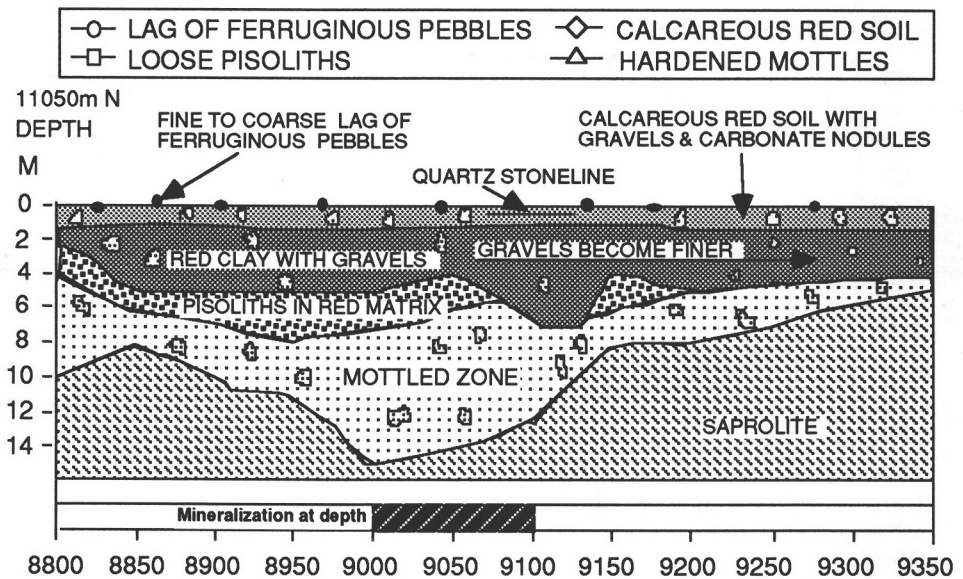
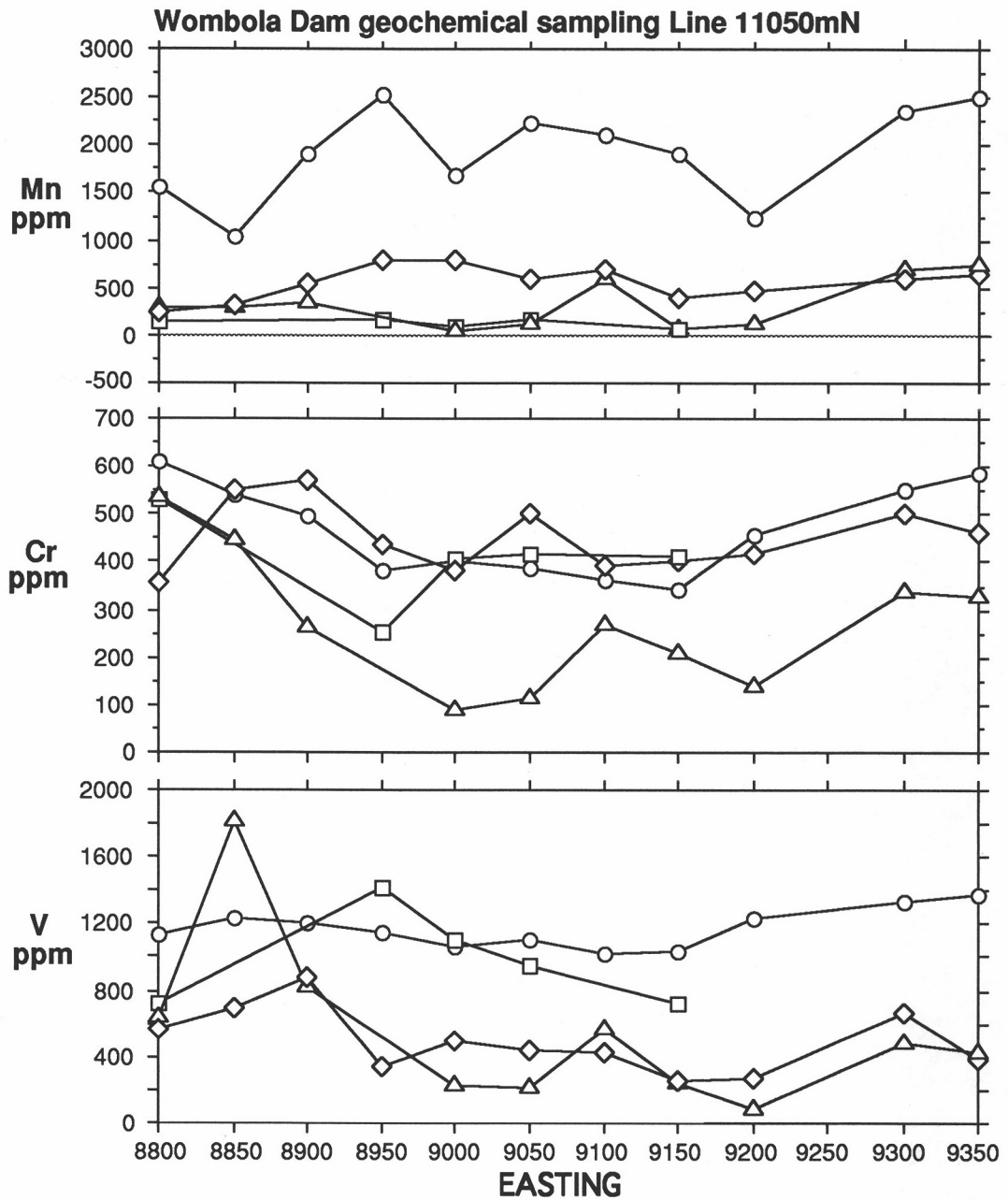
Wombola Dam geochemical sampling Line 10900mN

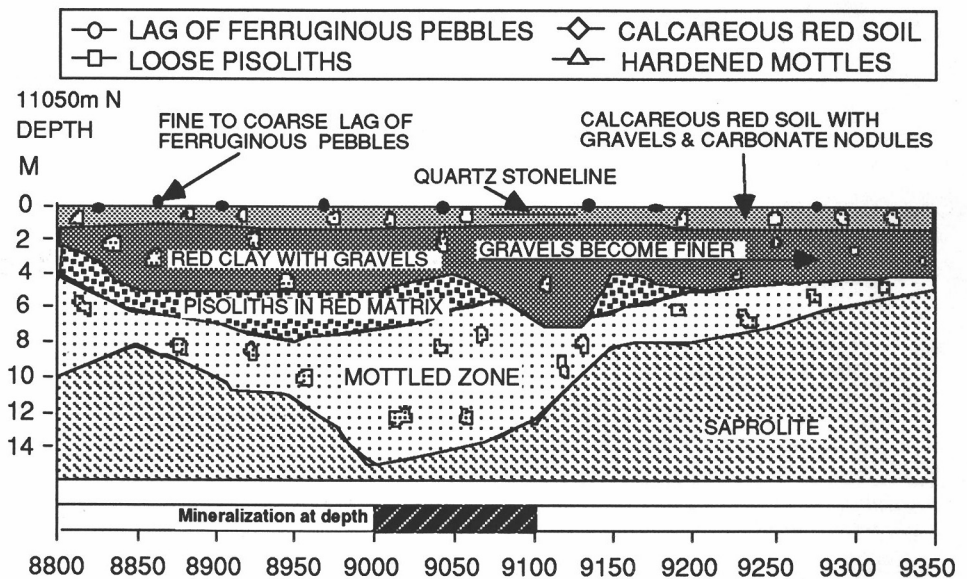
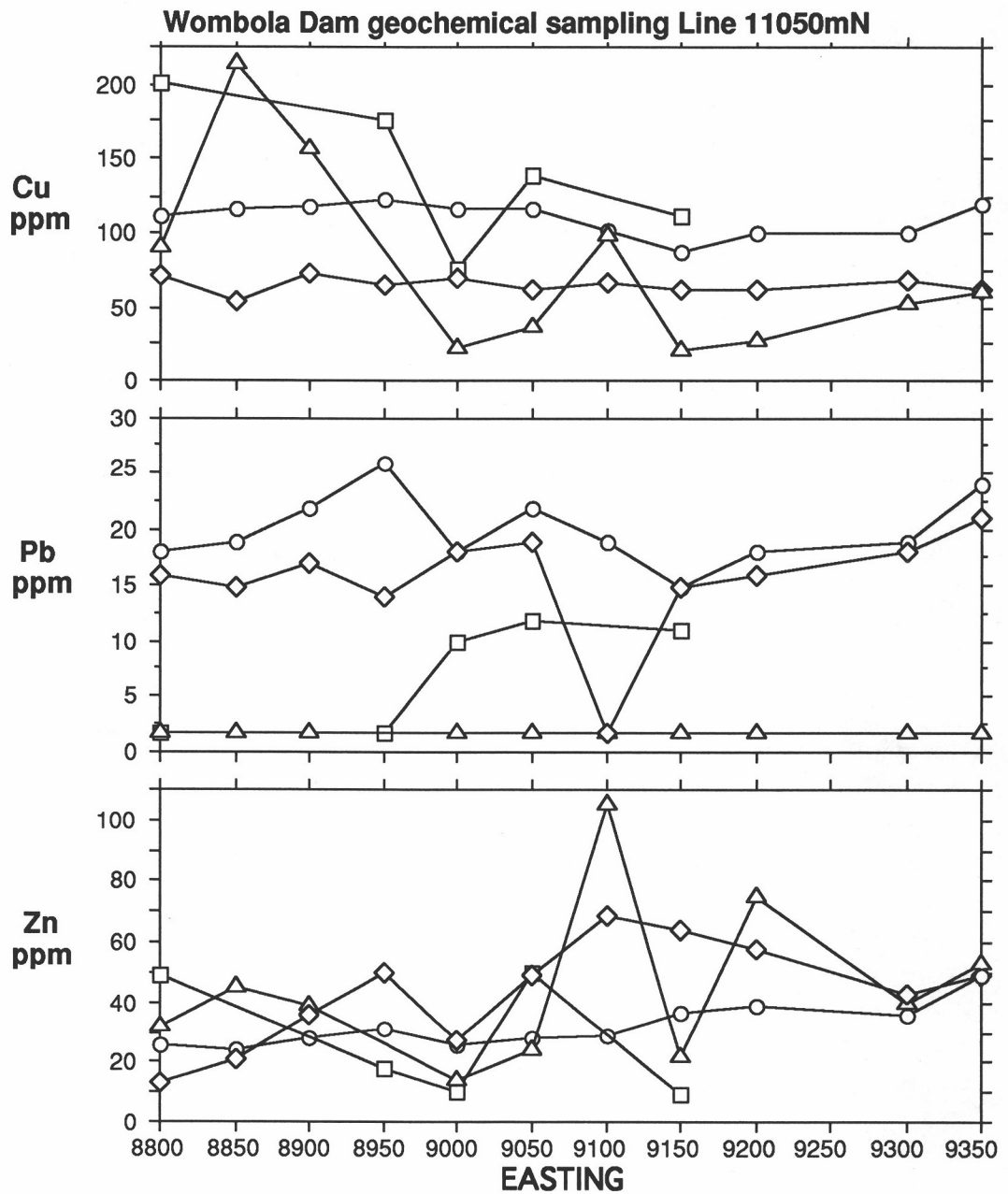


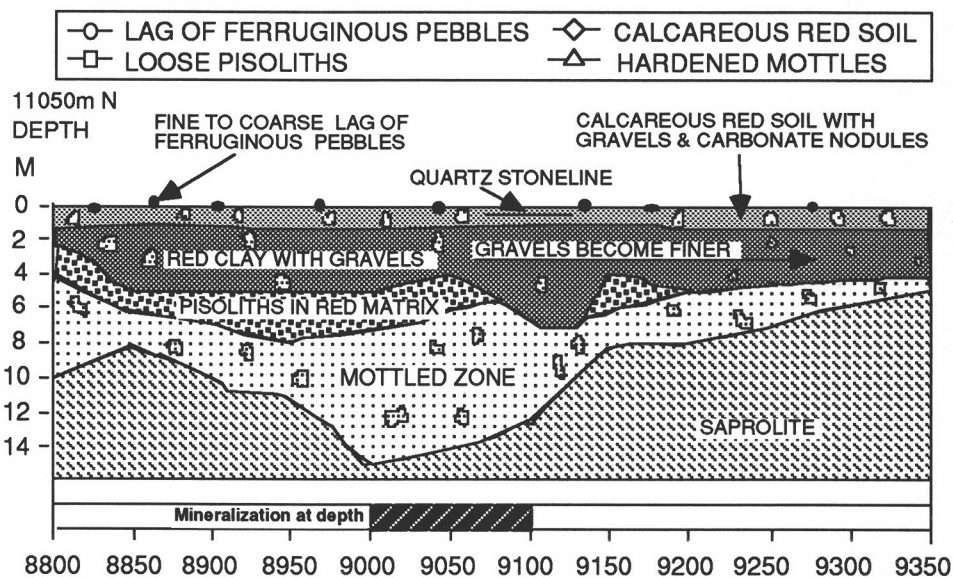
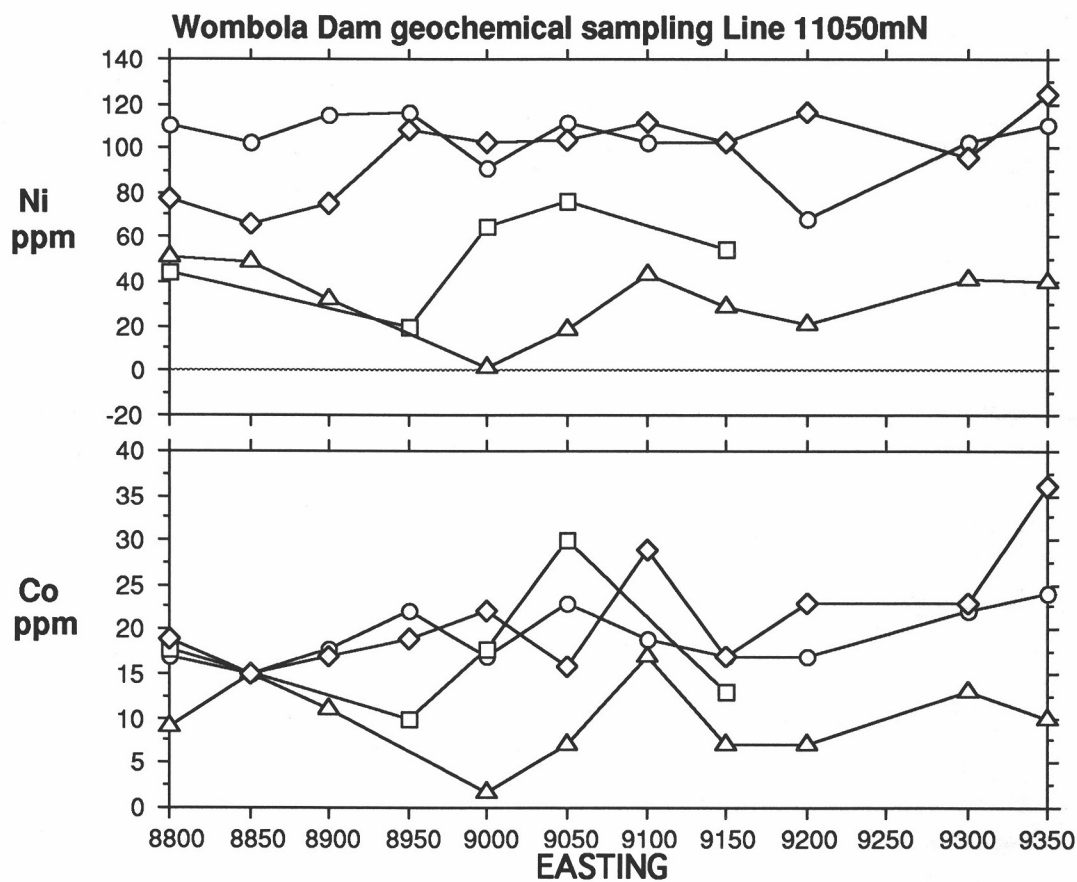




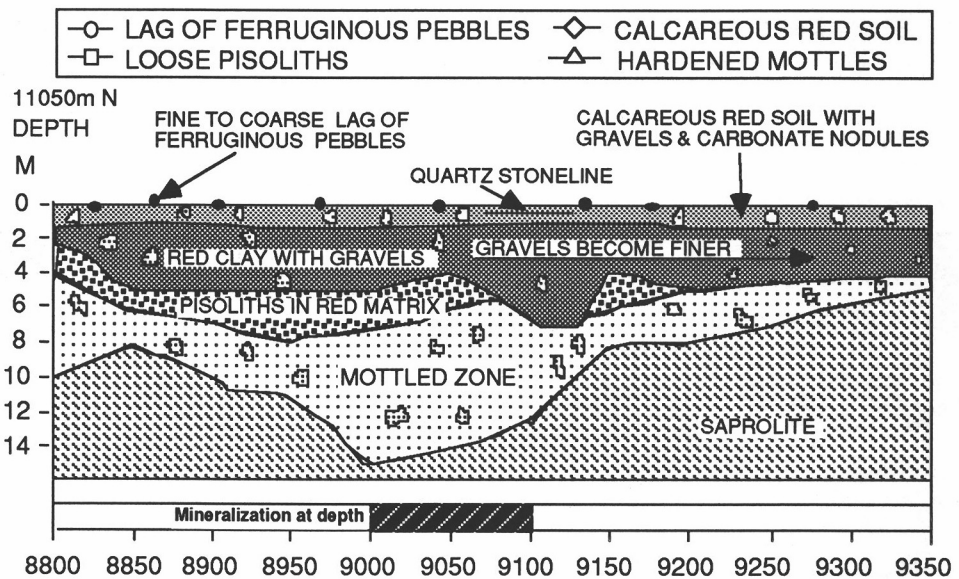
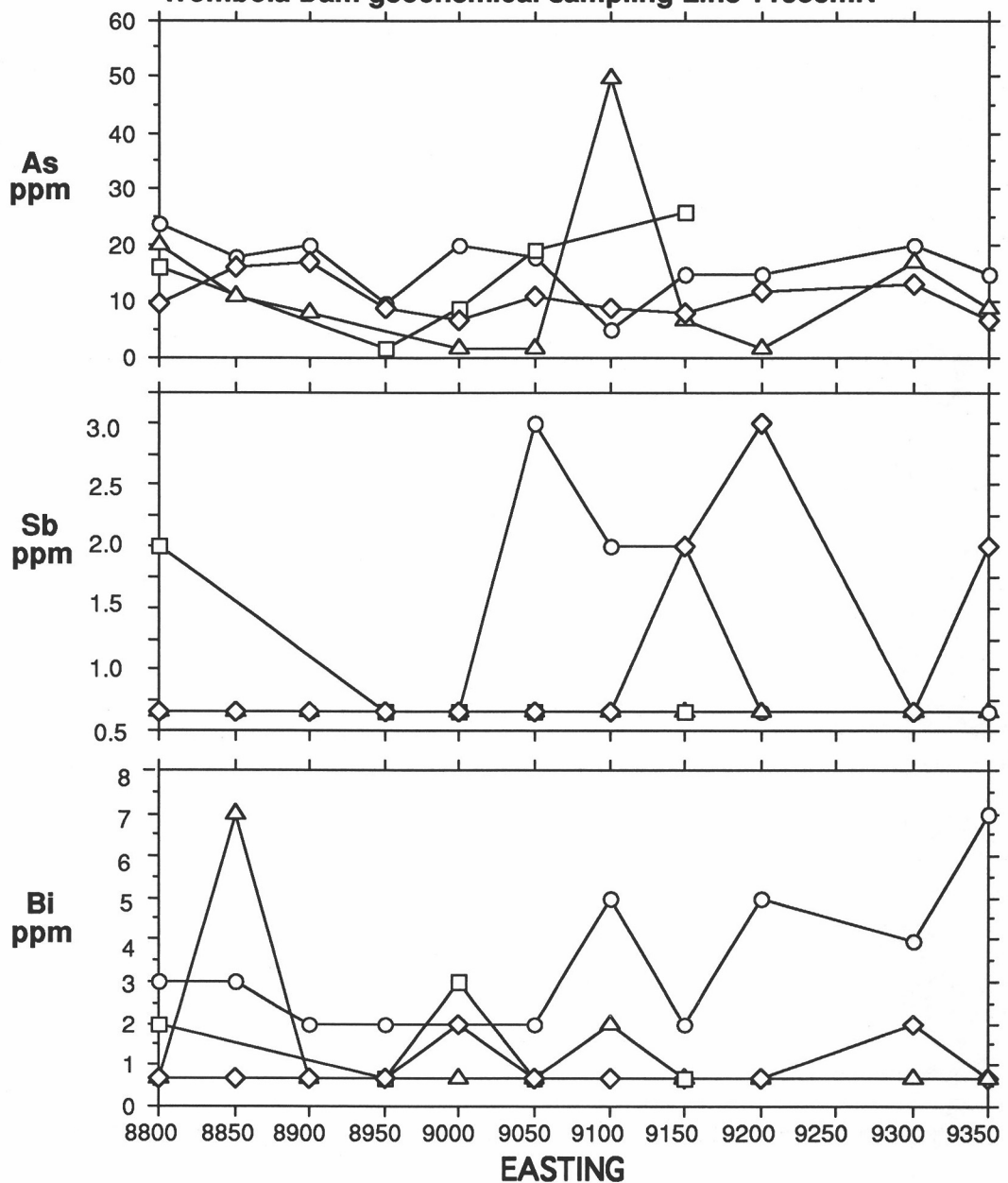


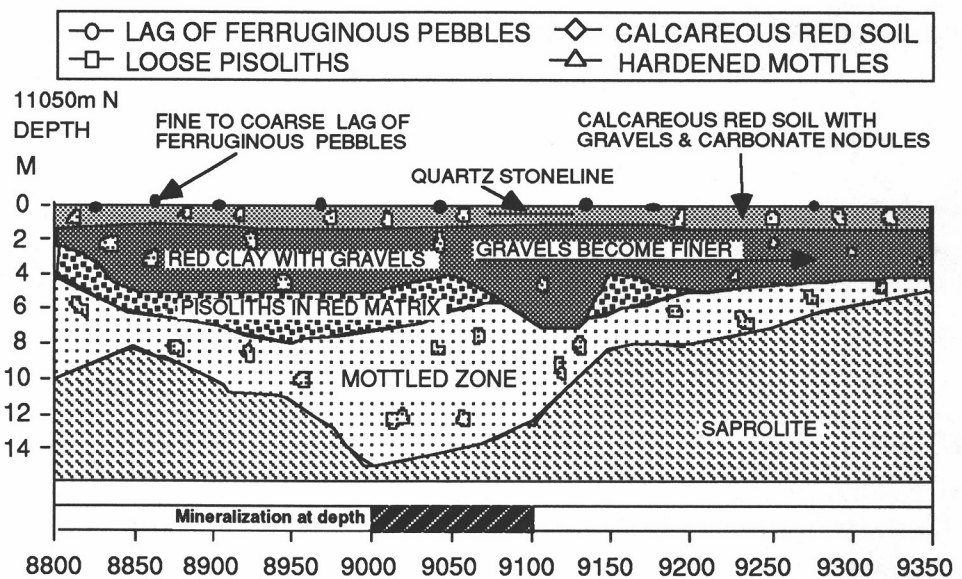
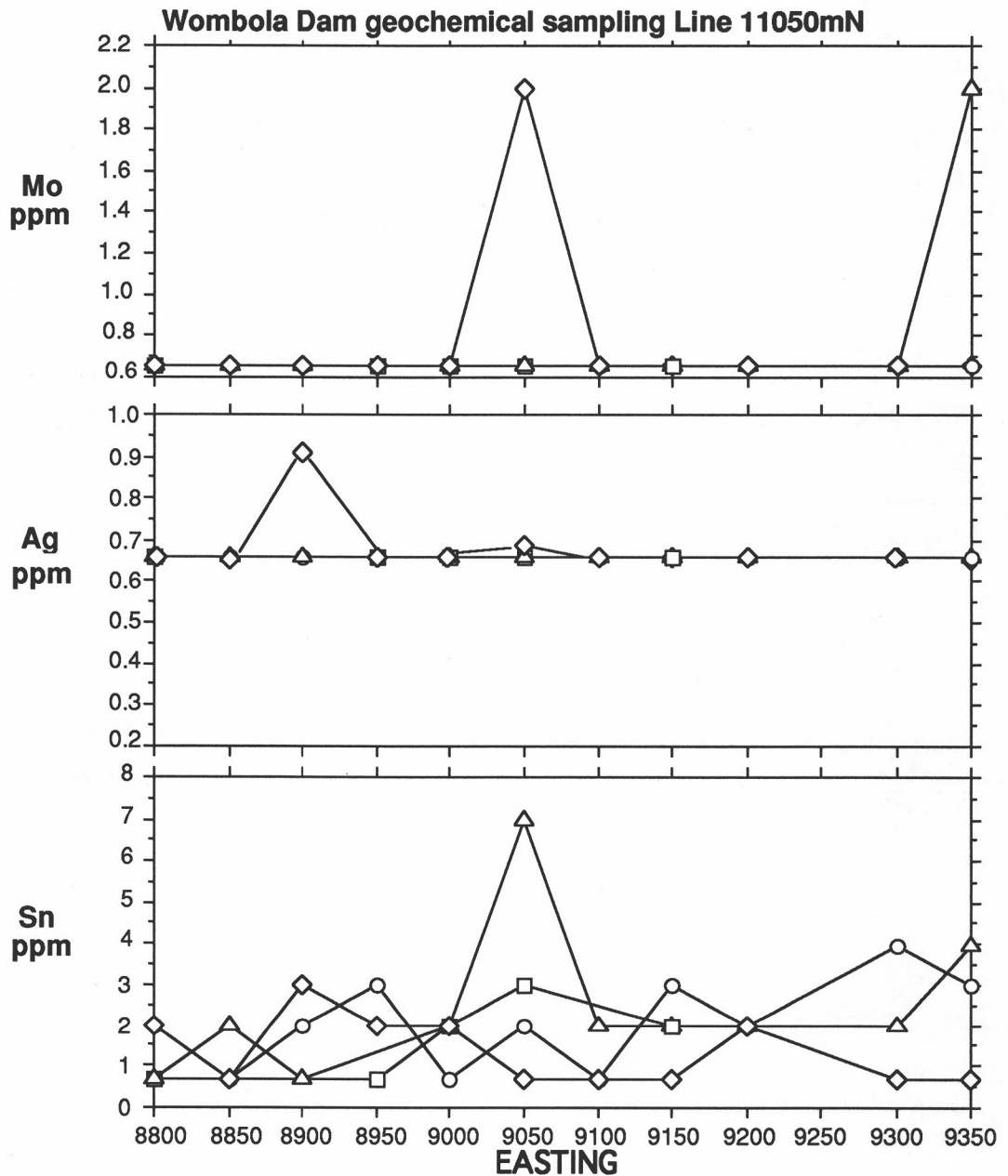


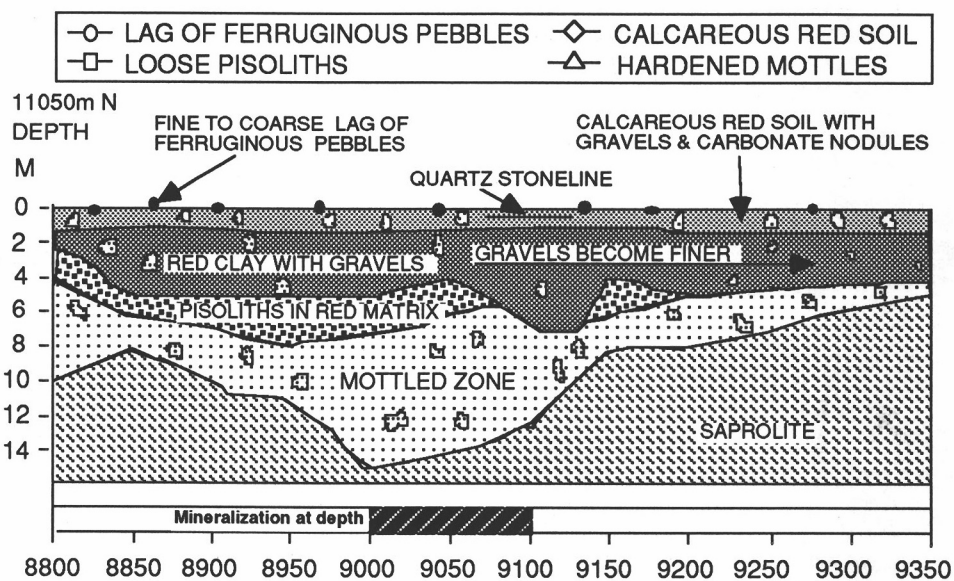
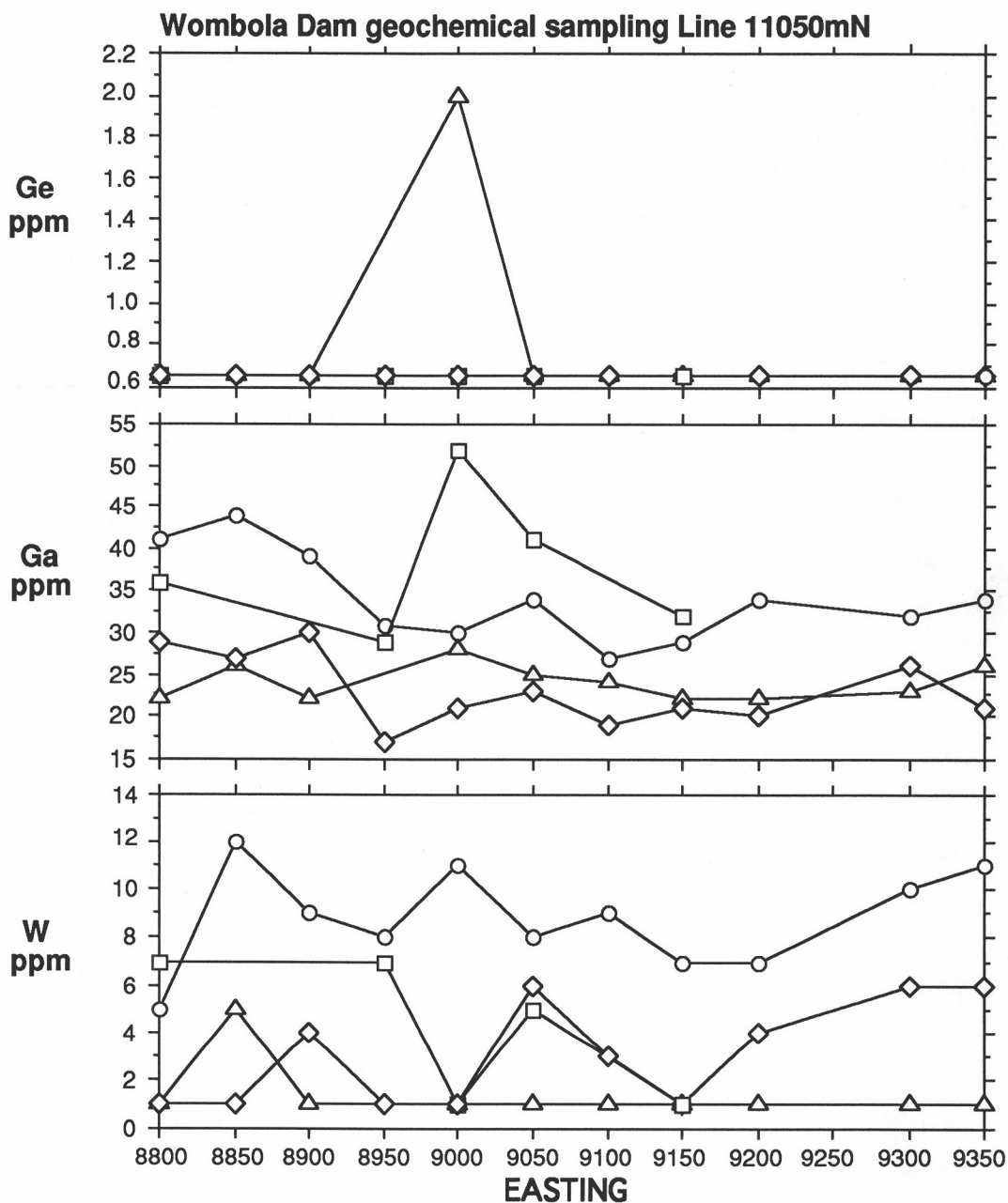




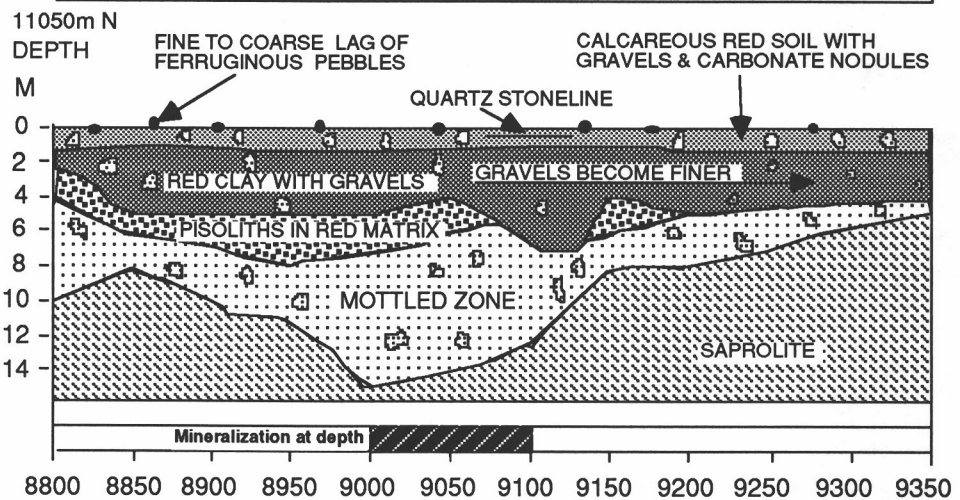
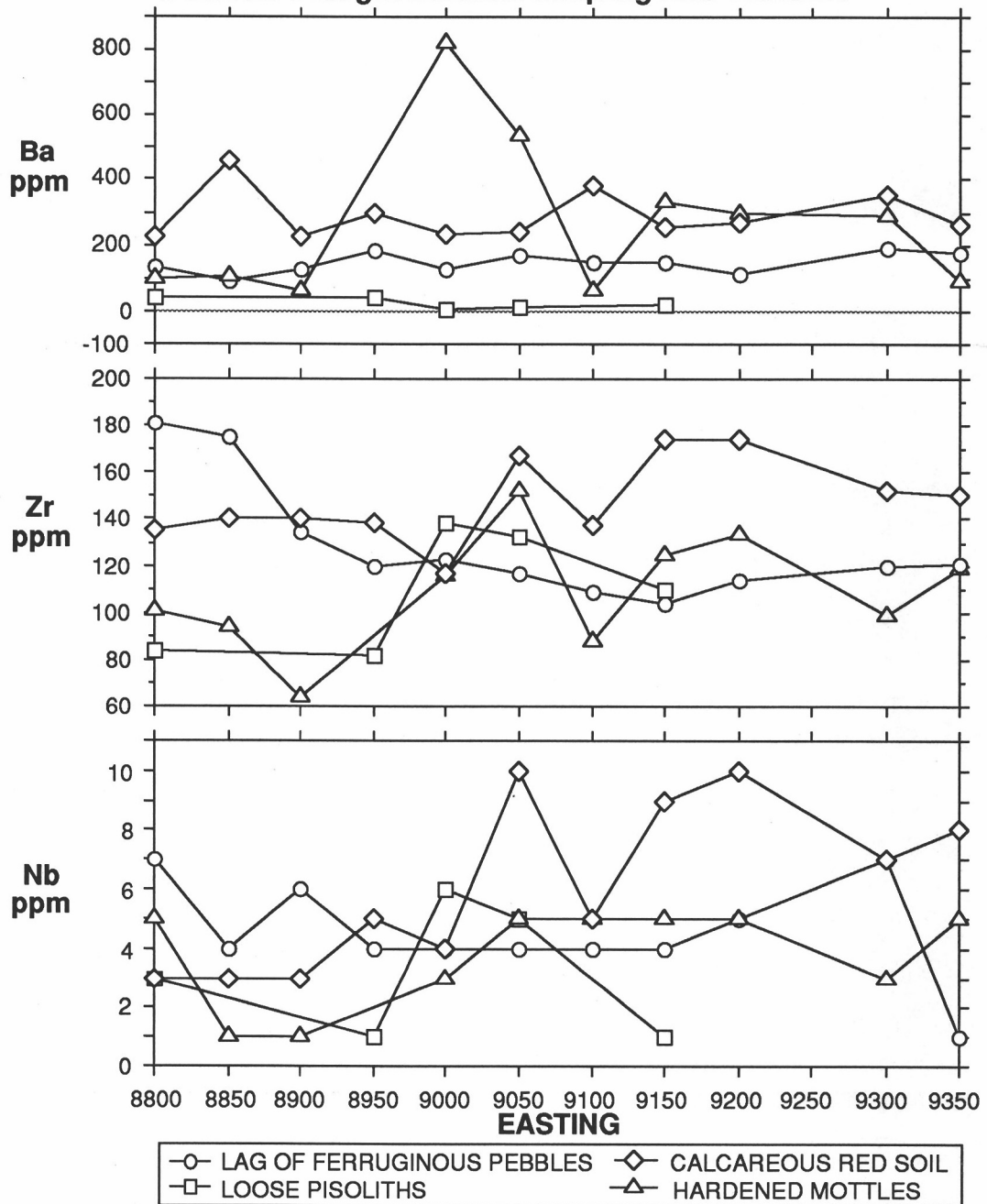
Wombola Dam geochemical sampling Line 11050mN



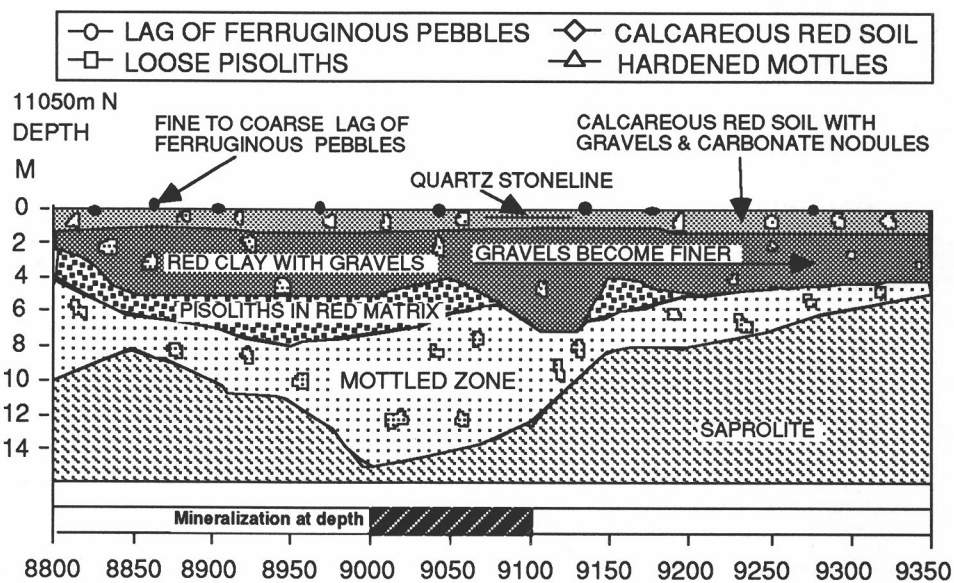
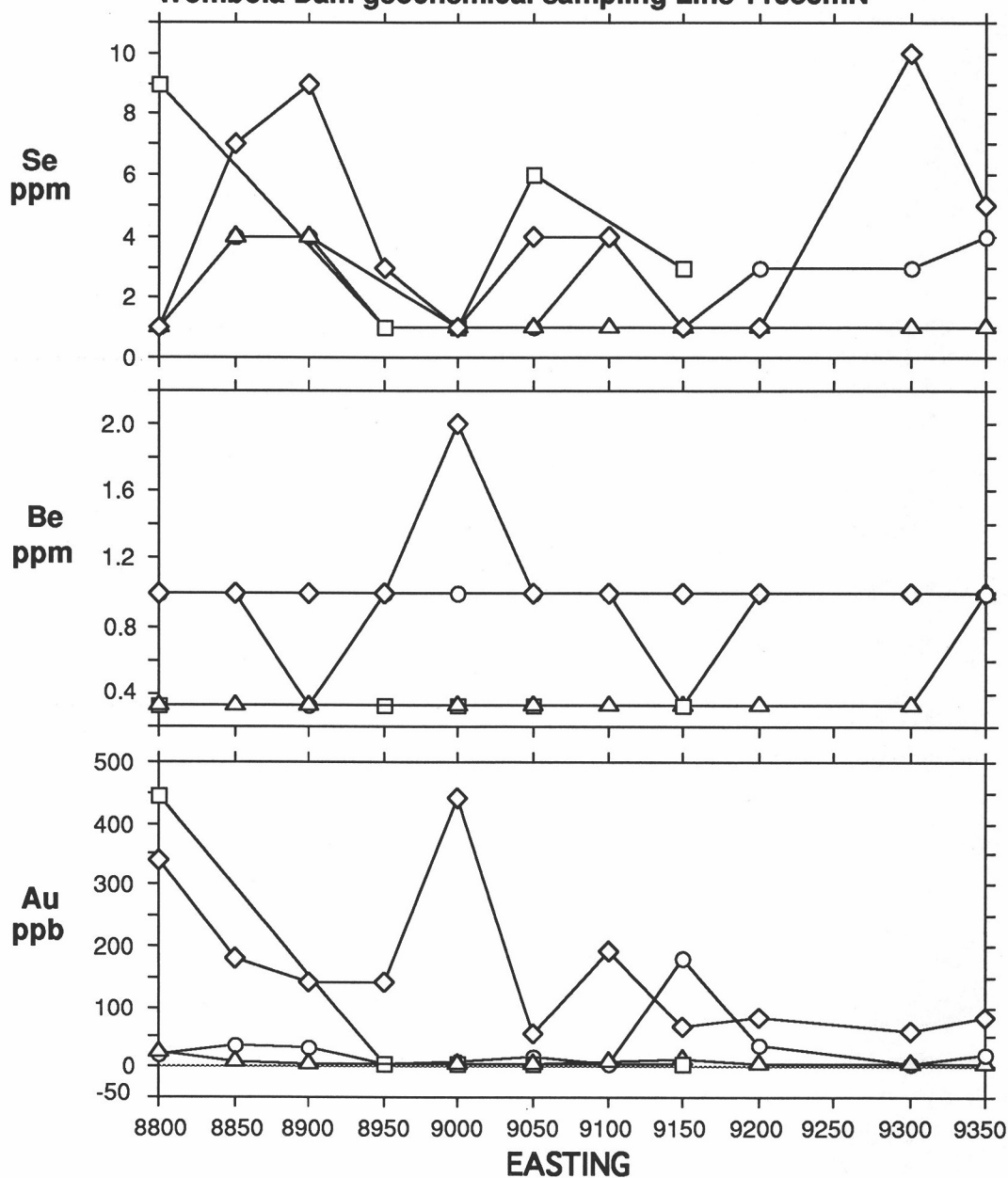


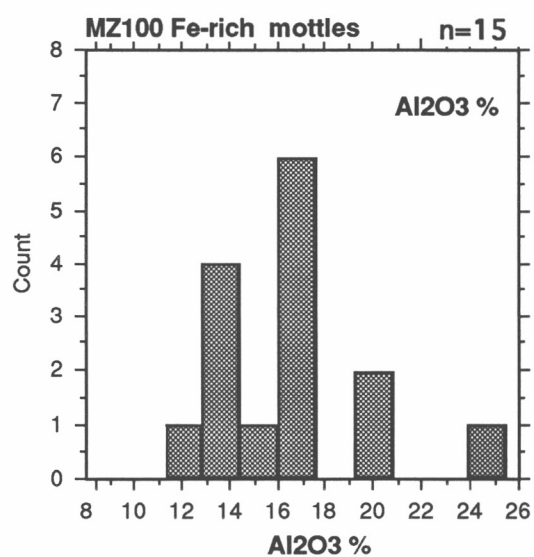
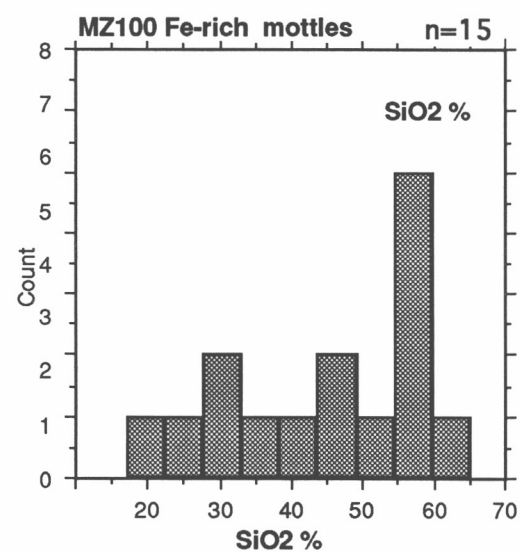
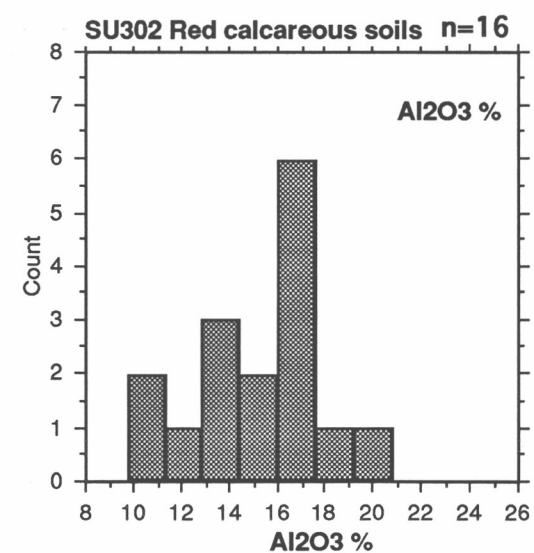
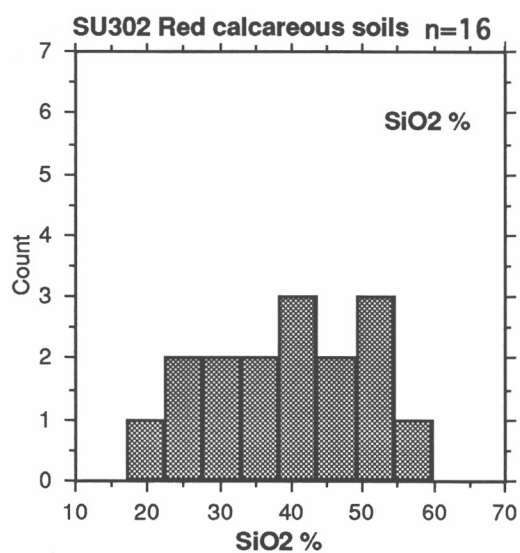
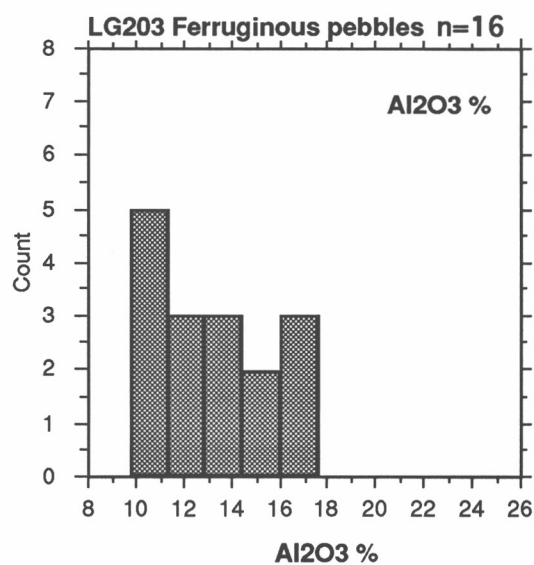
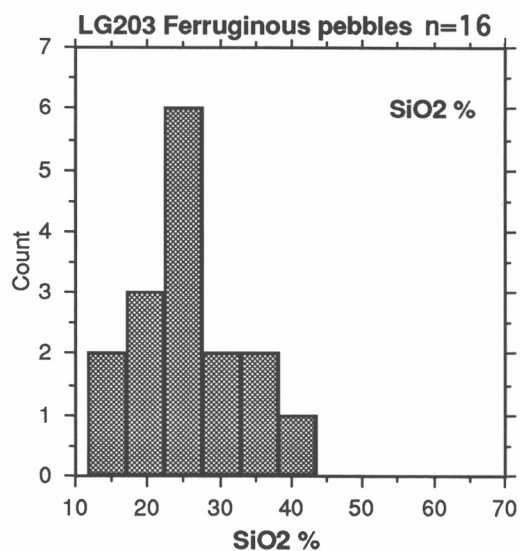


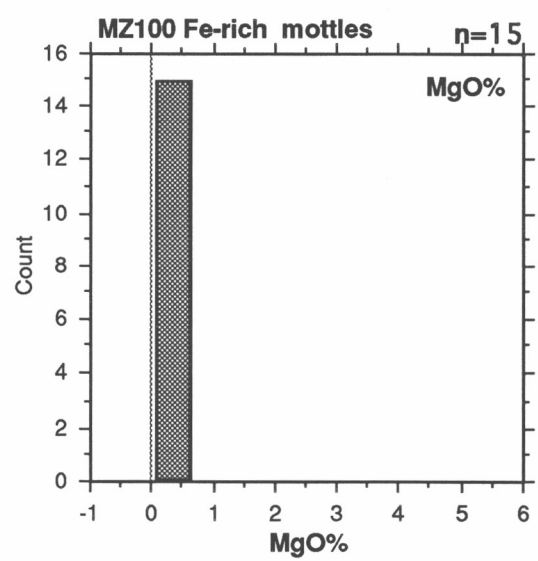
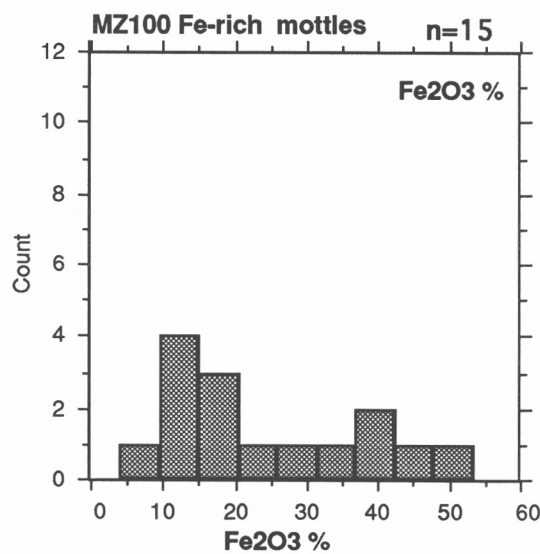
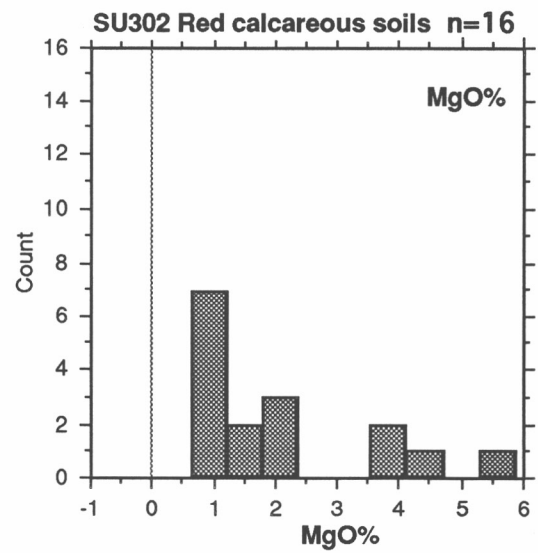
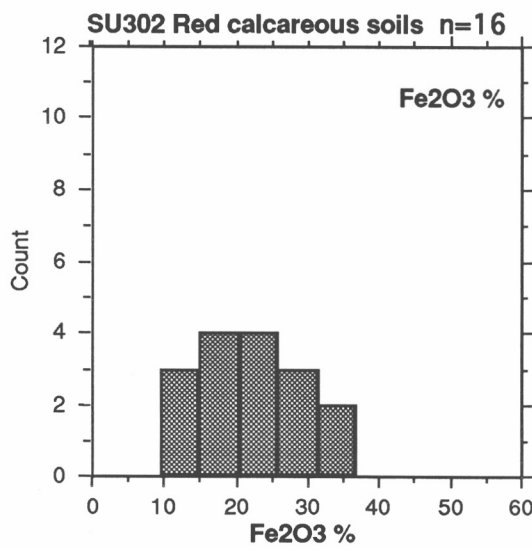
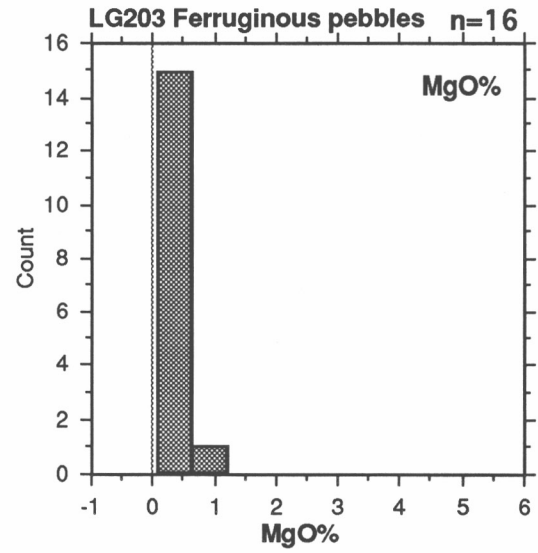
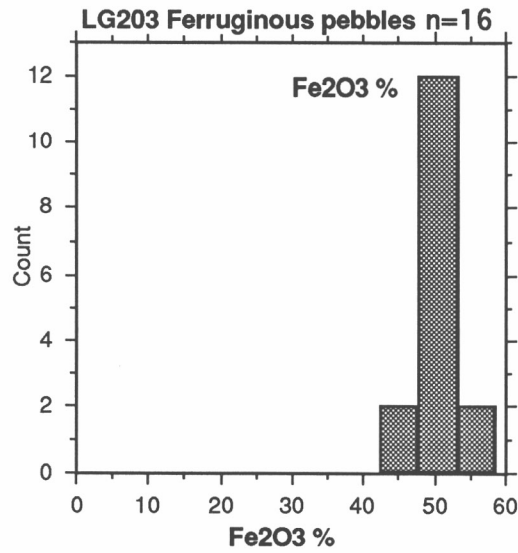
Wombola Dam geochemical sampling Line 11050mN

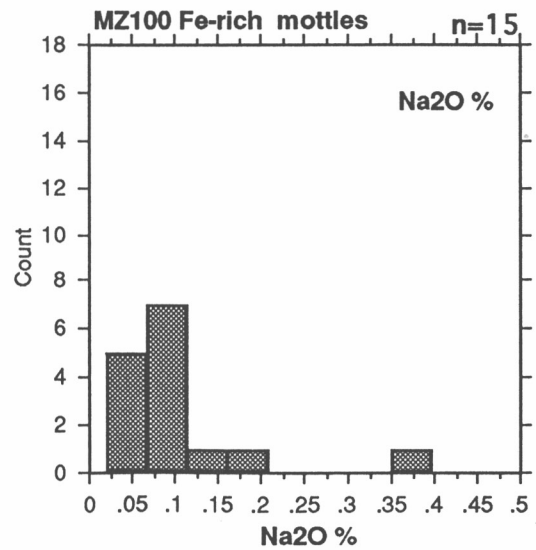
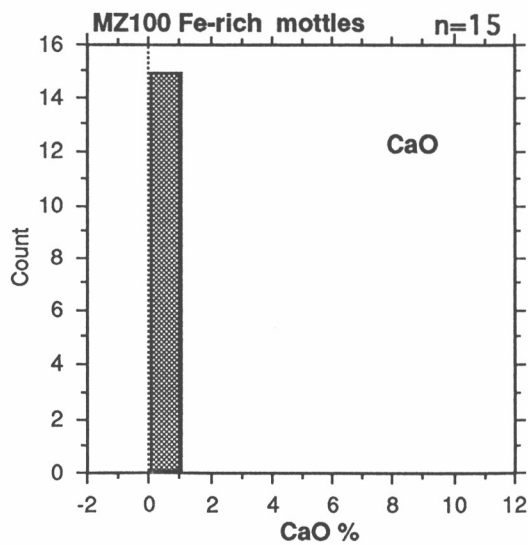
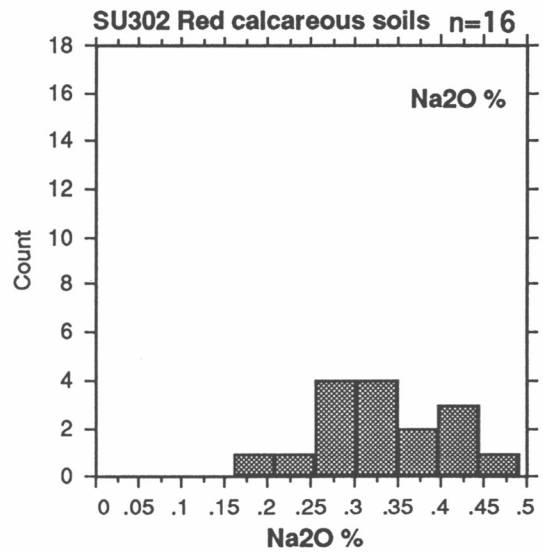
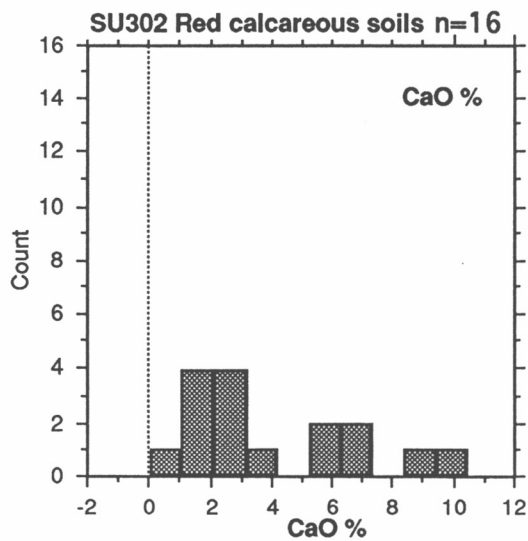
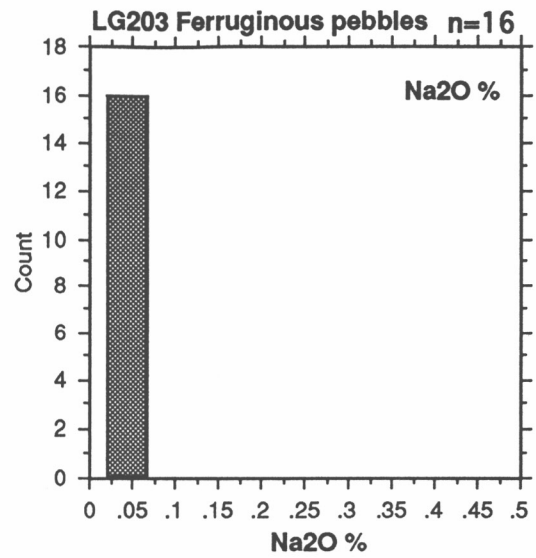
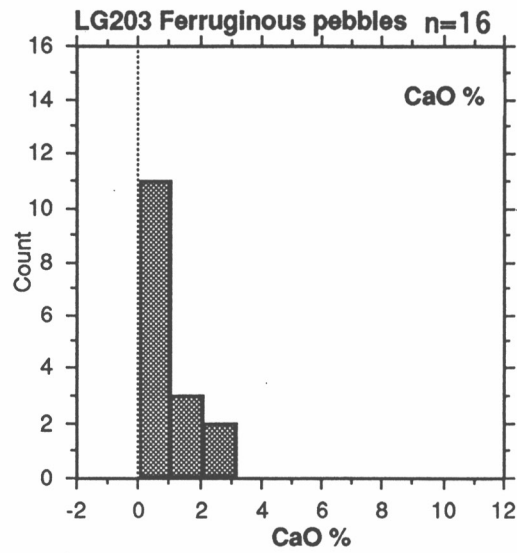


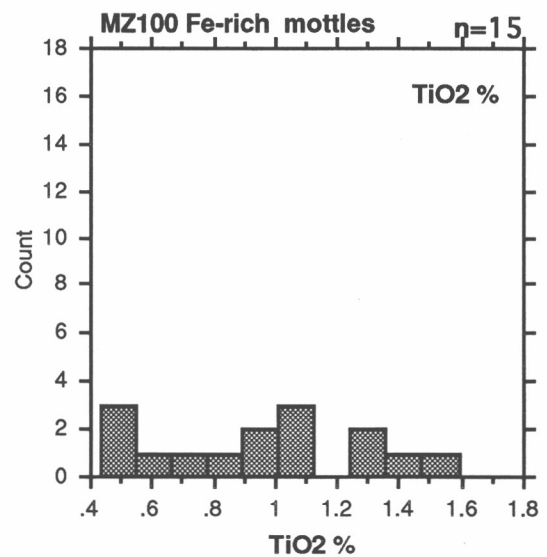
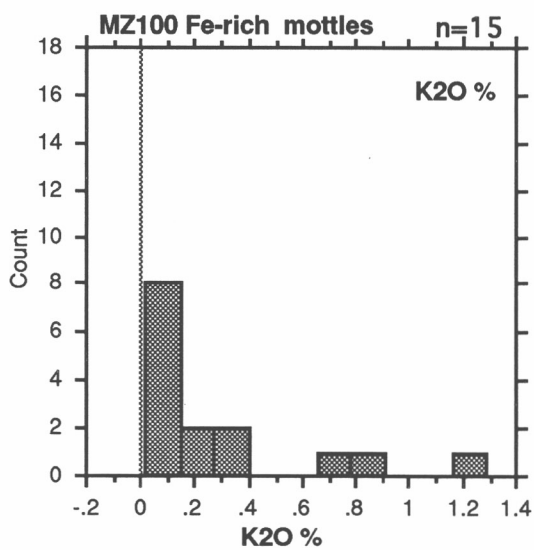
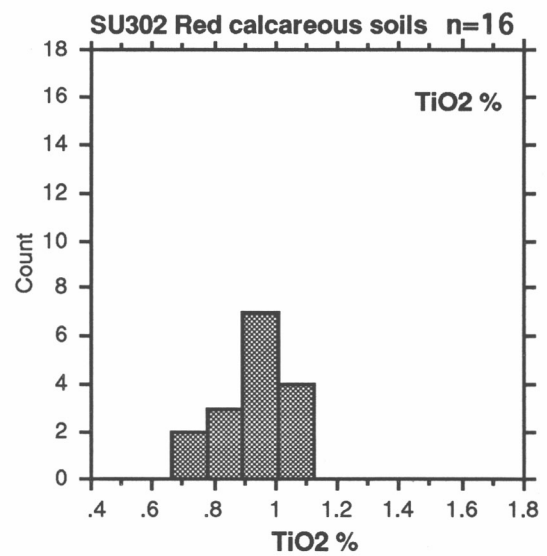
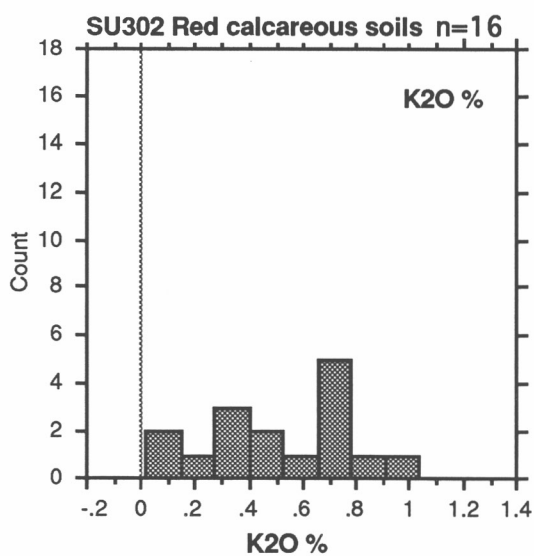
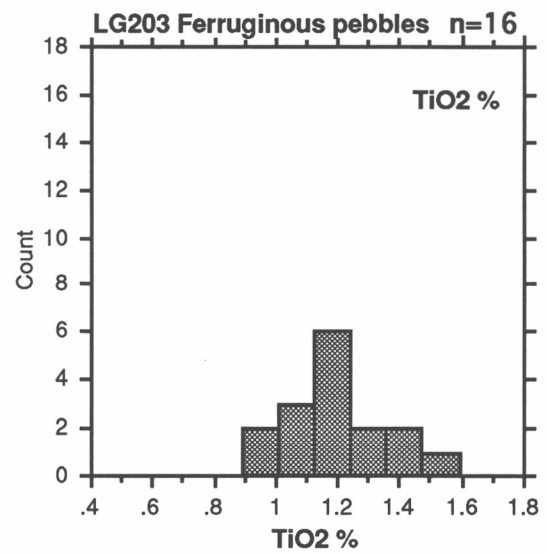
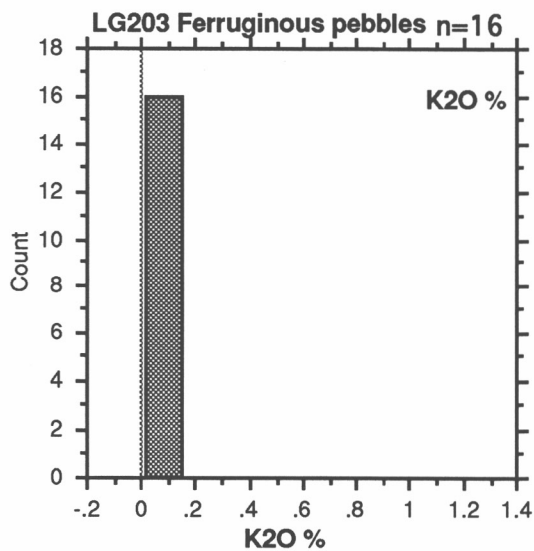
Wombola Dam geochemical sampling Line 11050mN

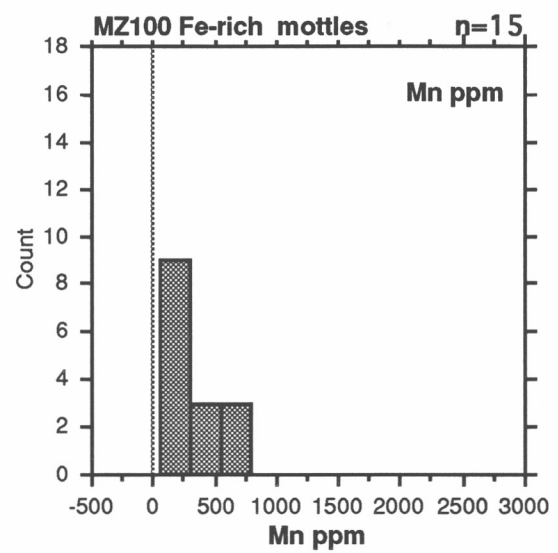
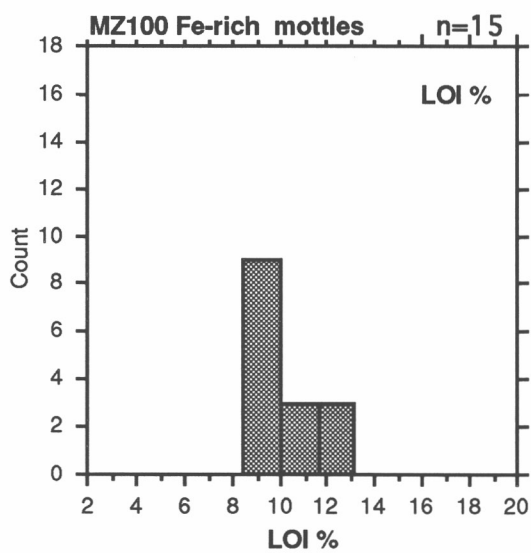
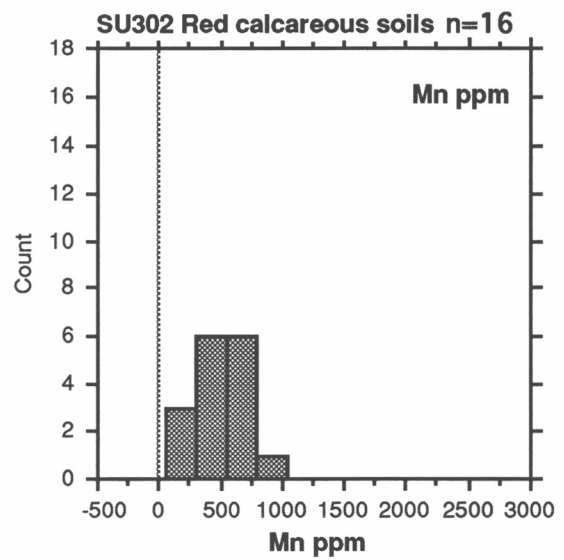
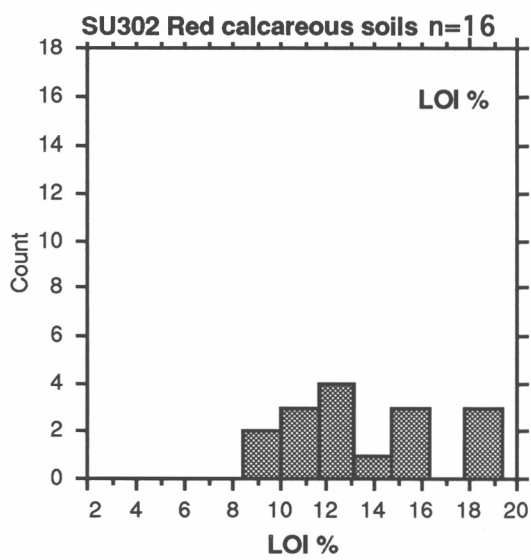
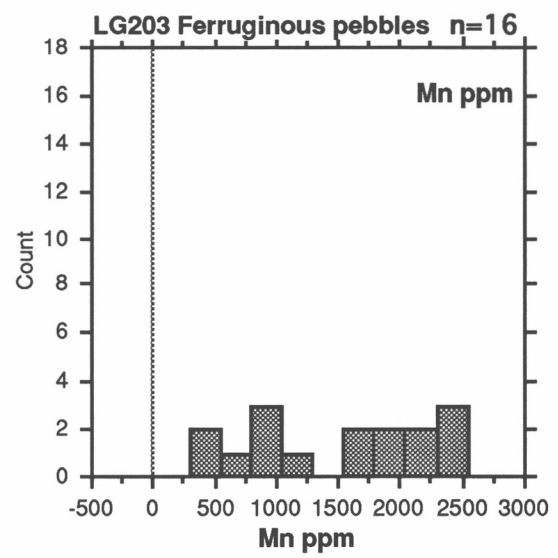
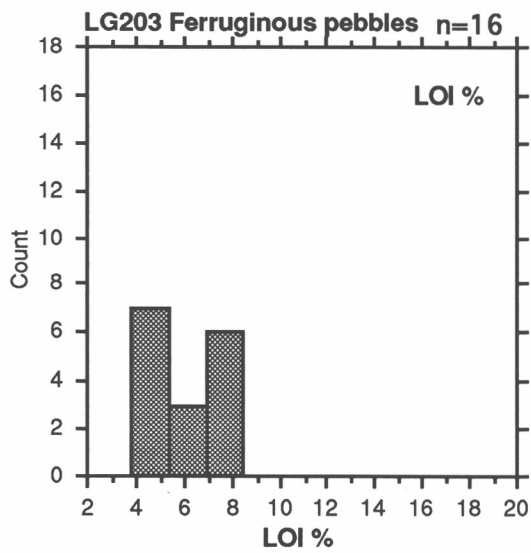


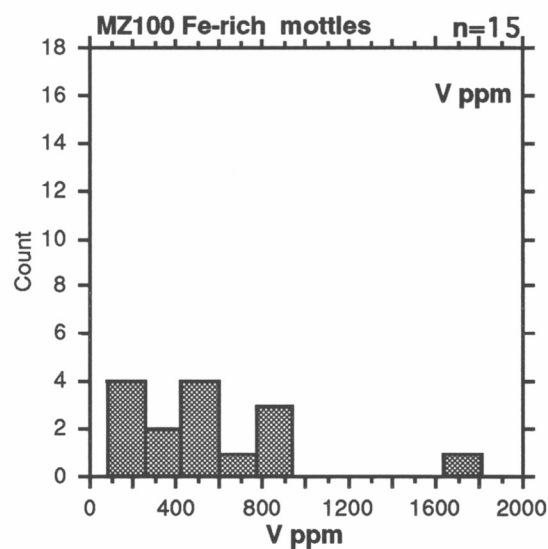
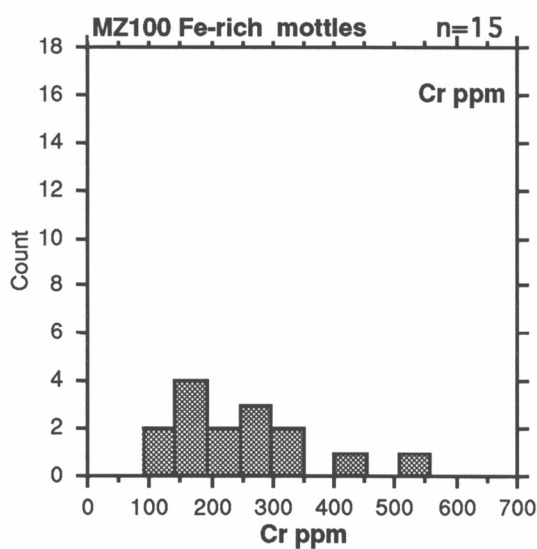
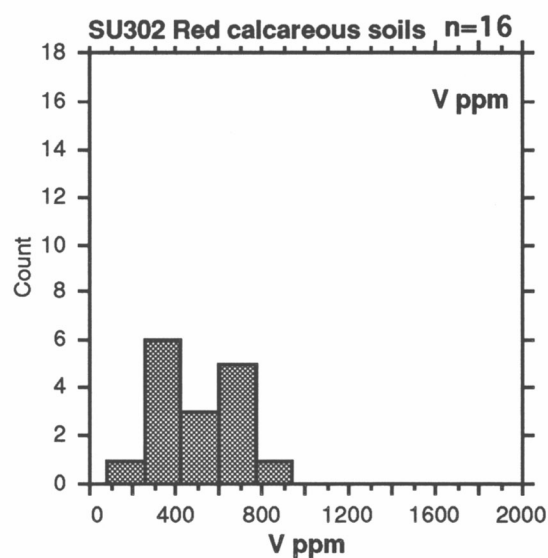
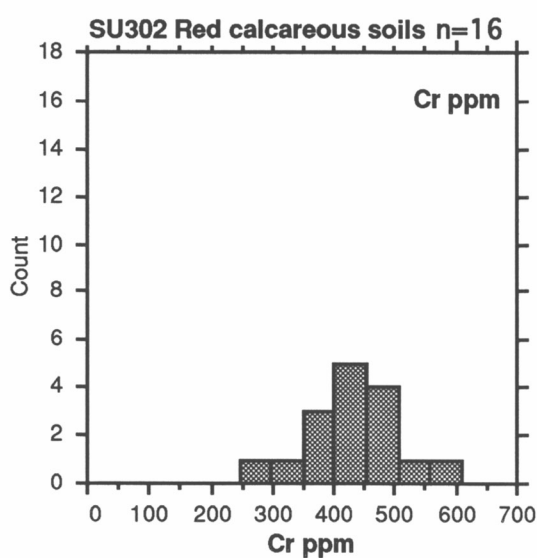
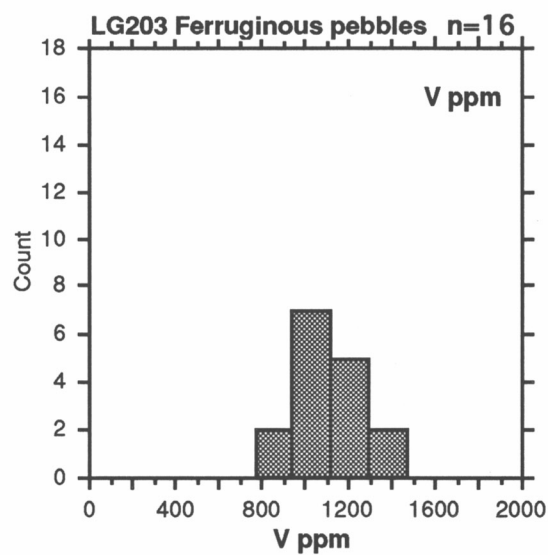
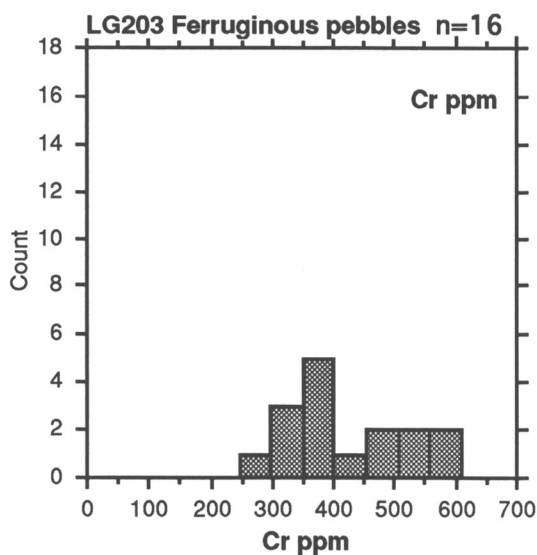


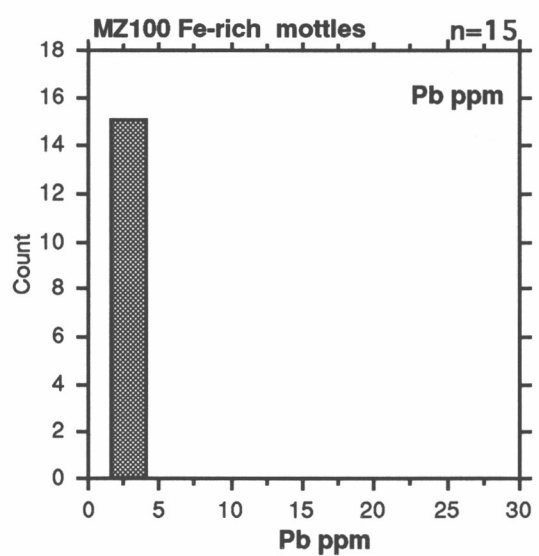
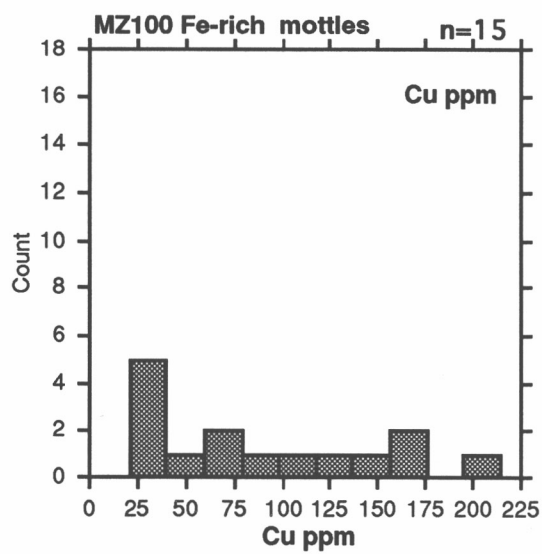
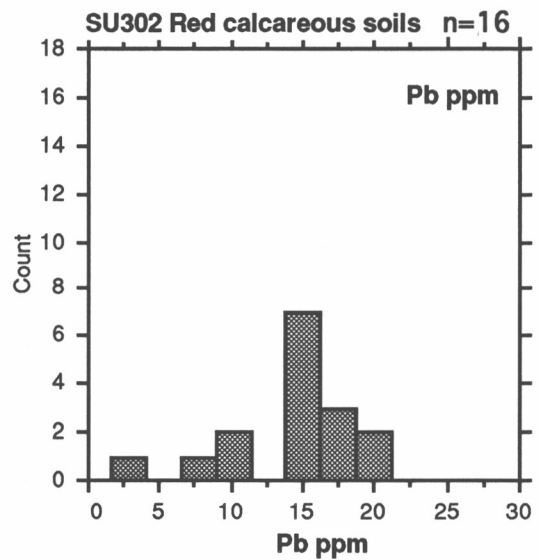
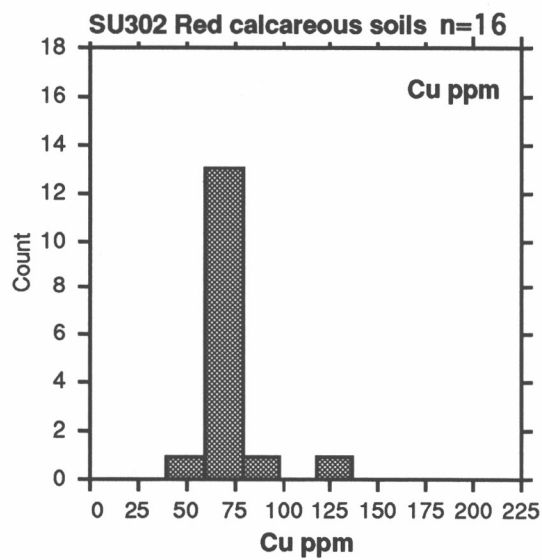
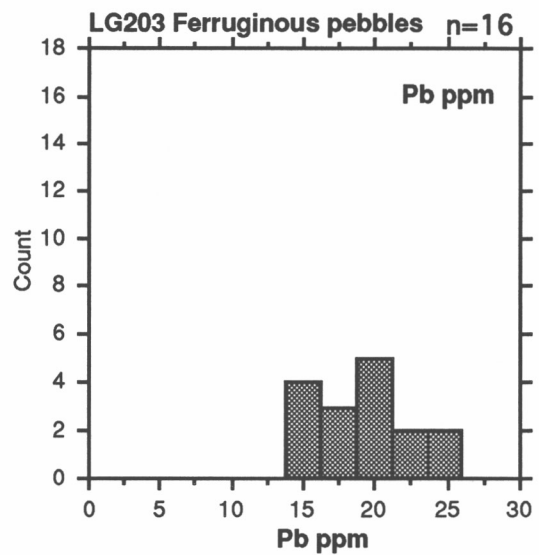
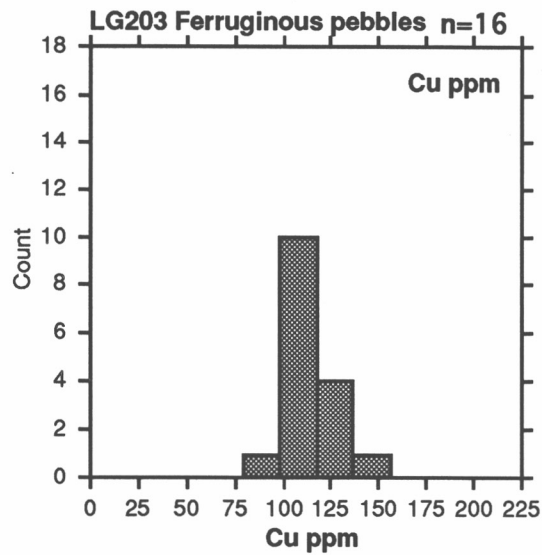


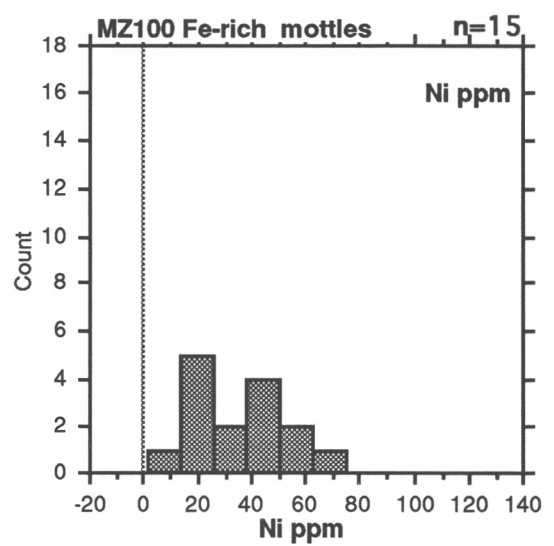
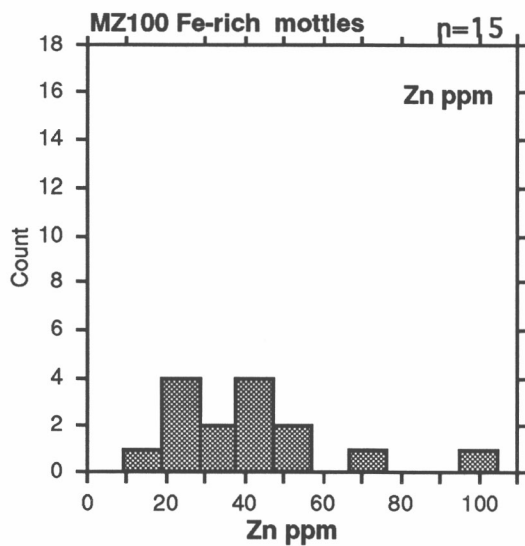
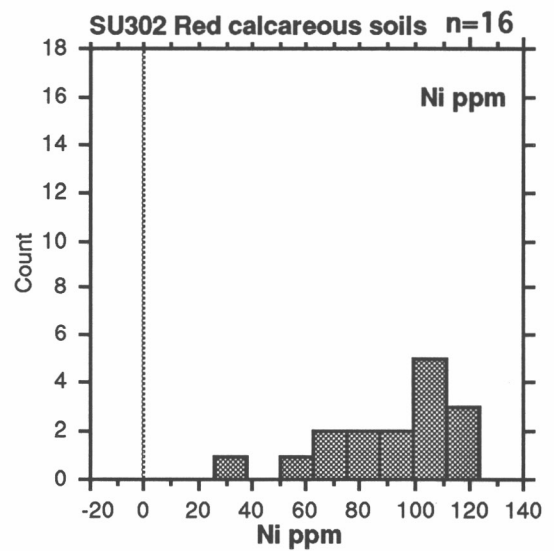
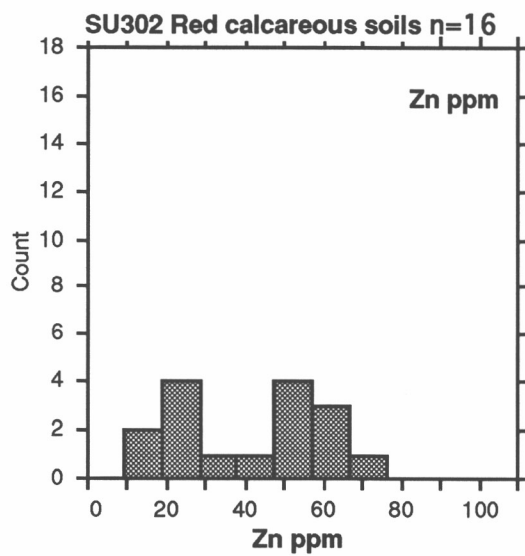
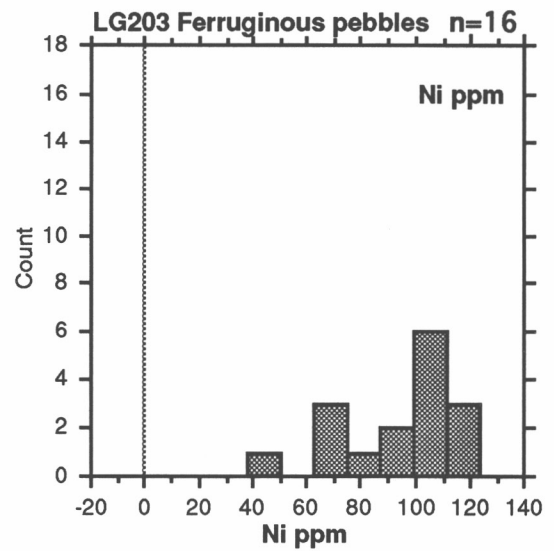
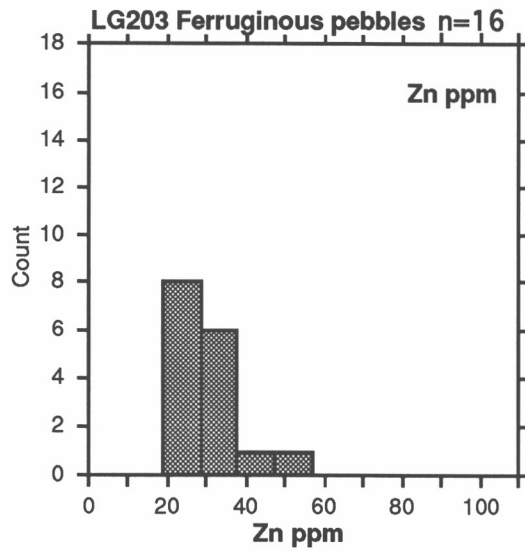


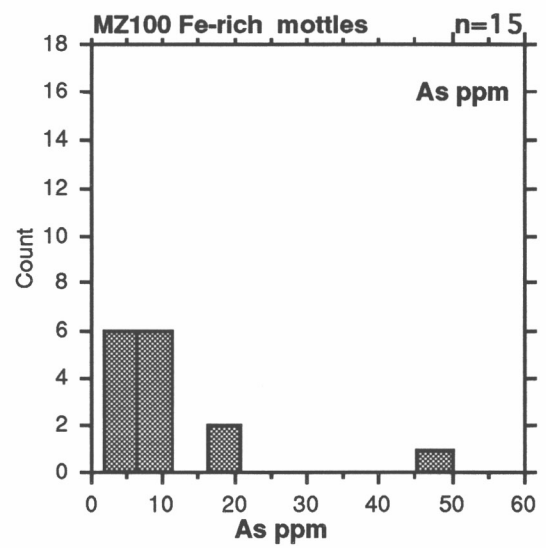
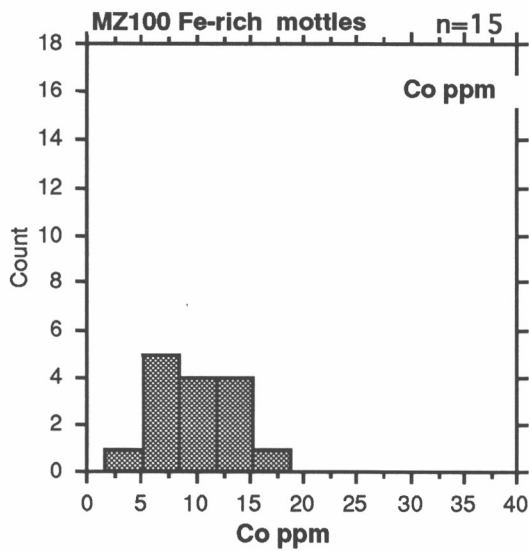
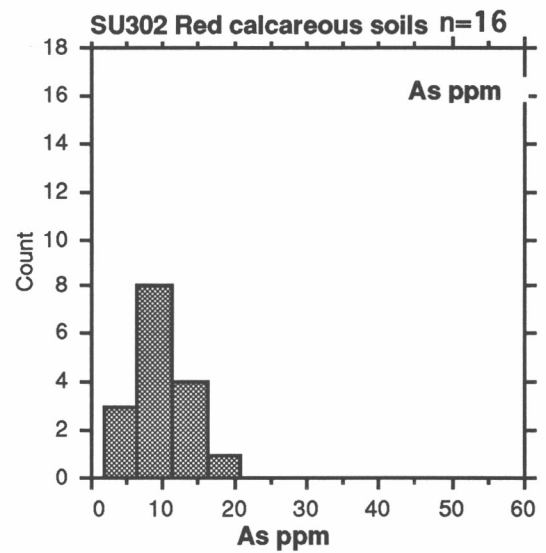
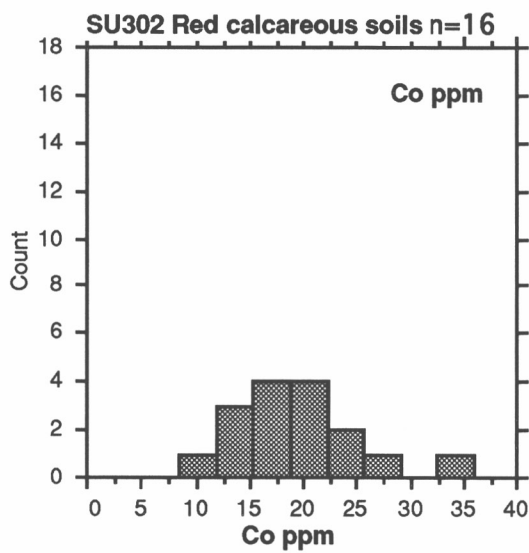
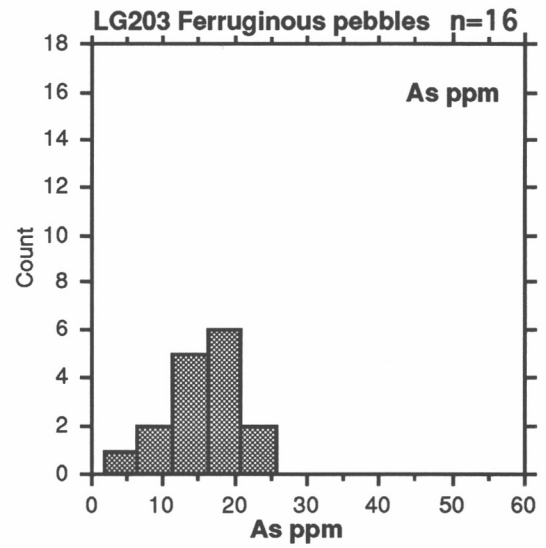
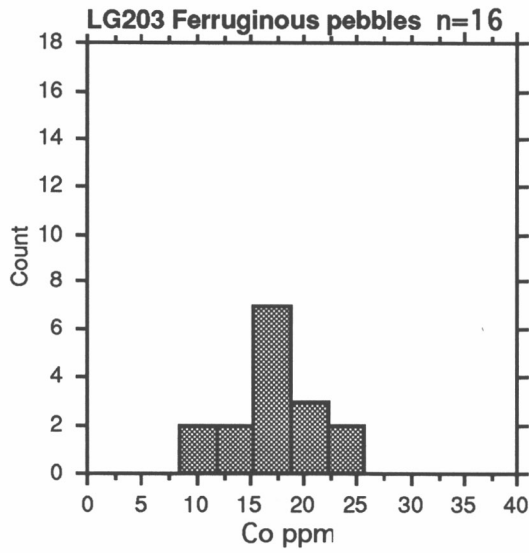


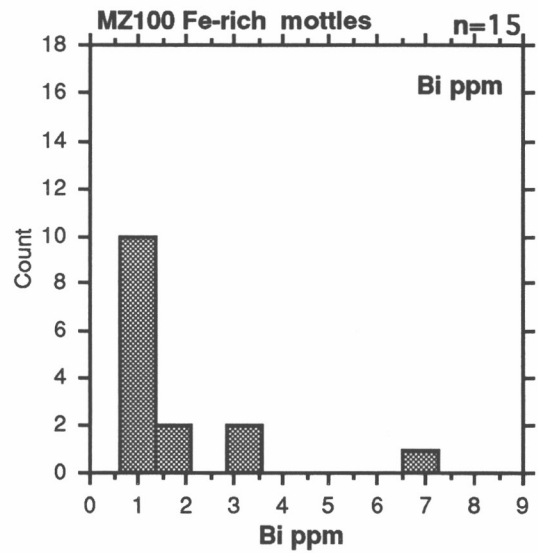
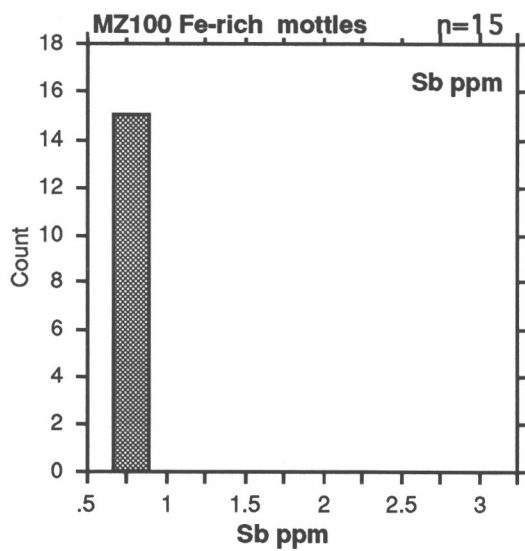
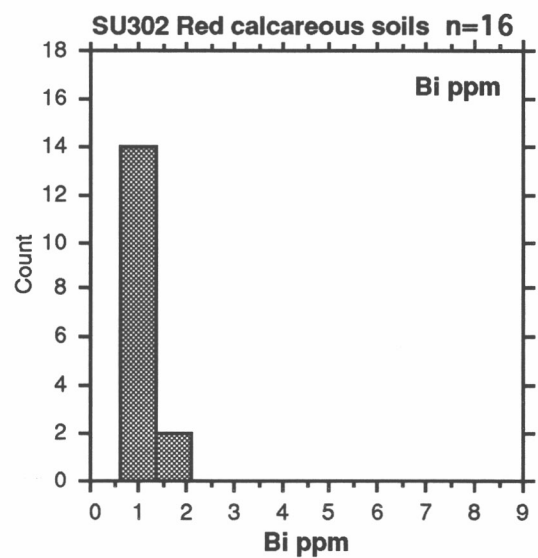
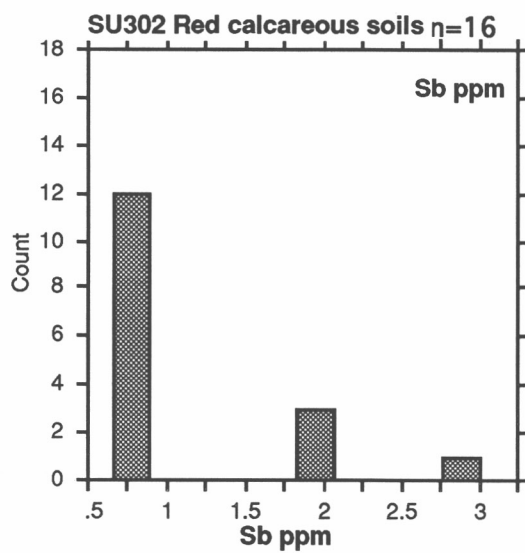
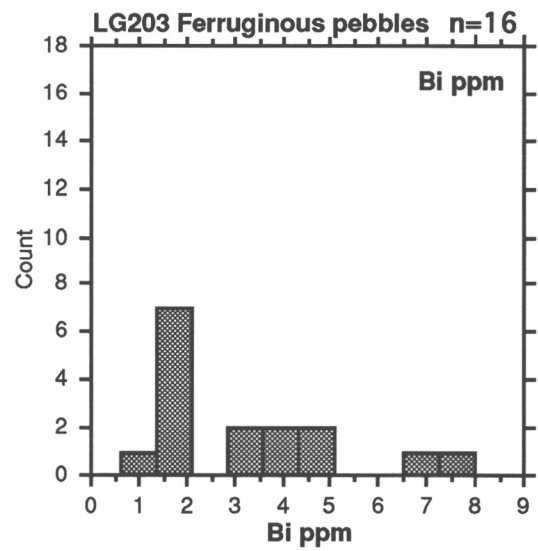
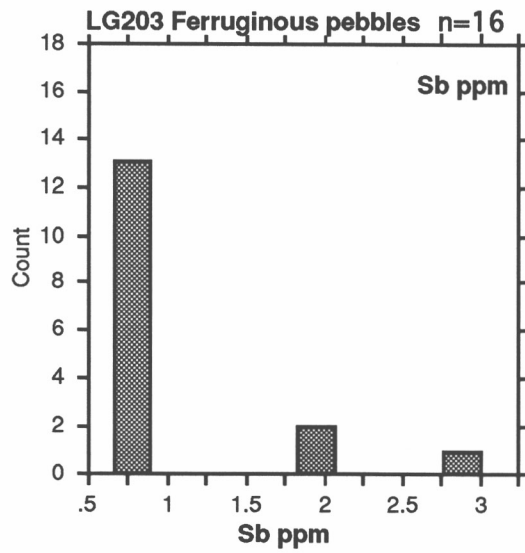


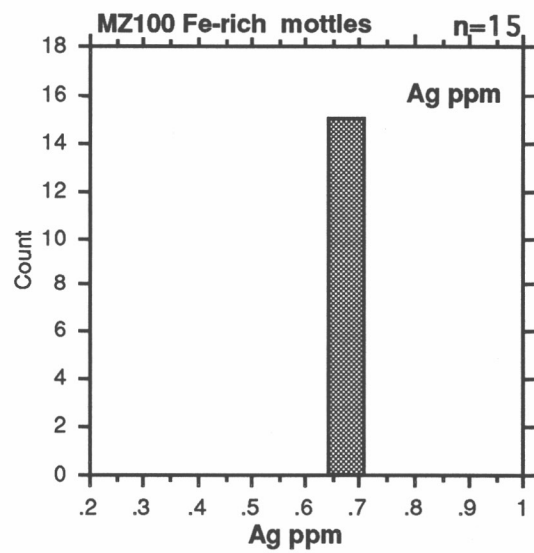
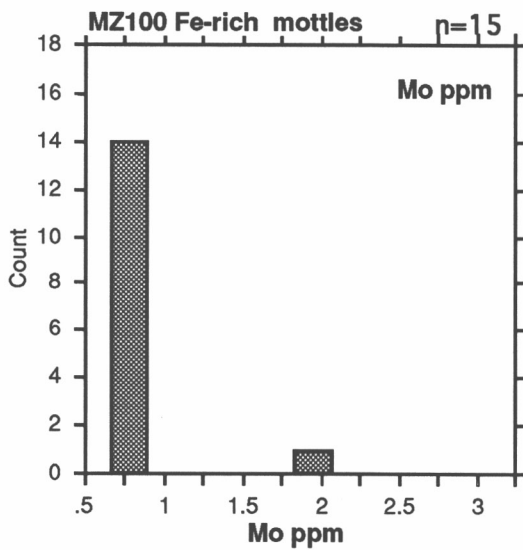
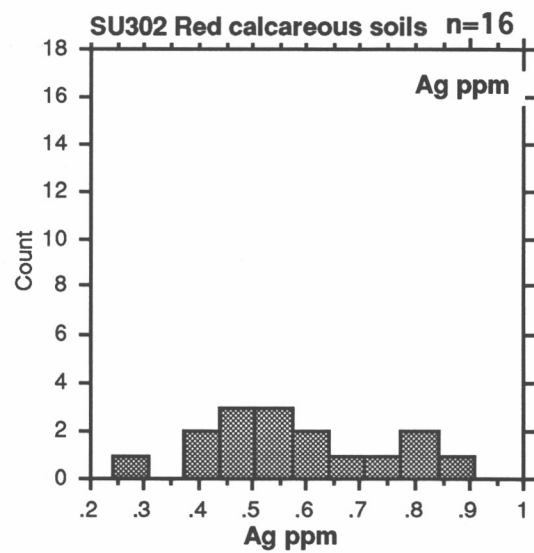
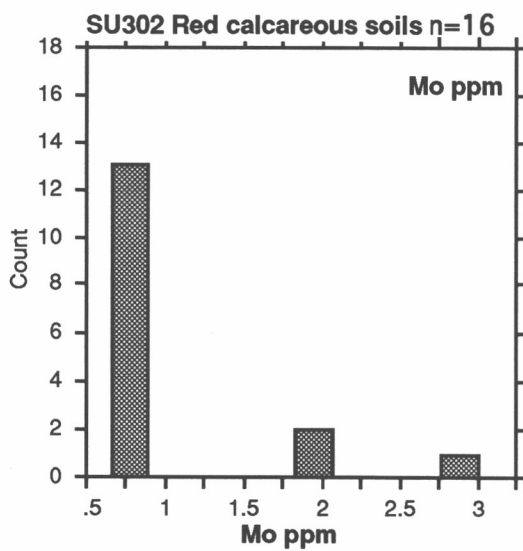
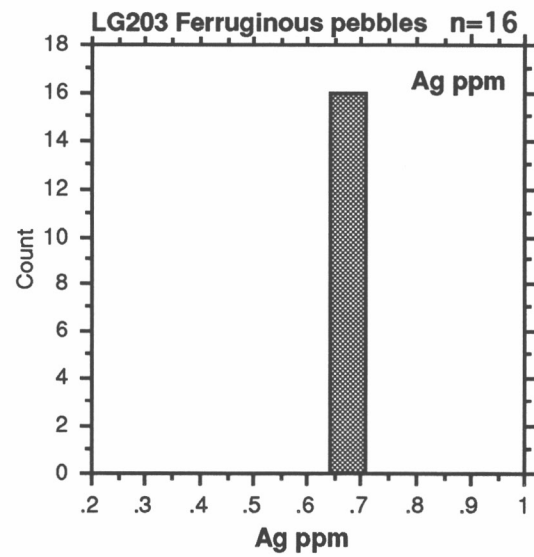
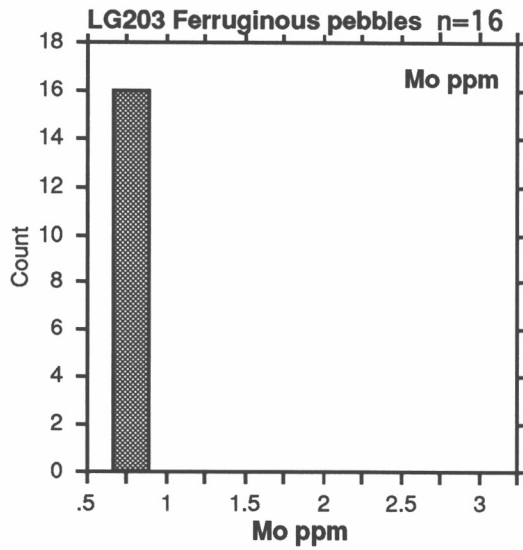


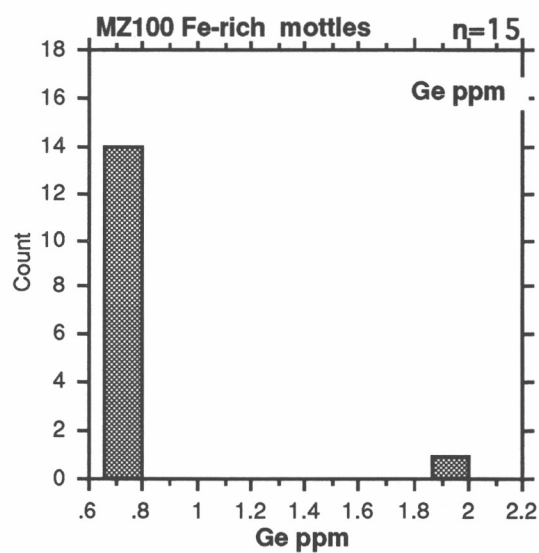
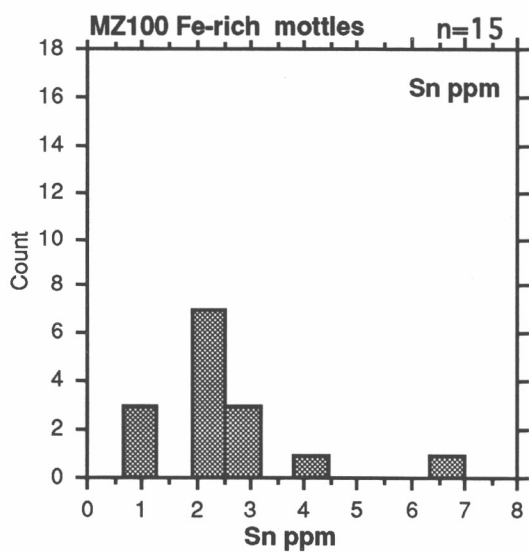
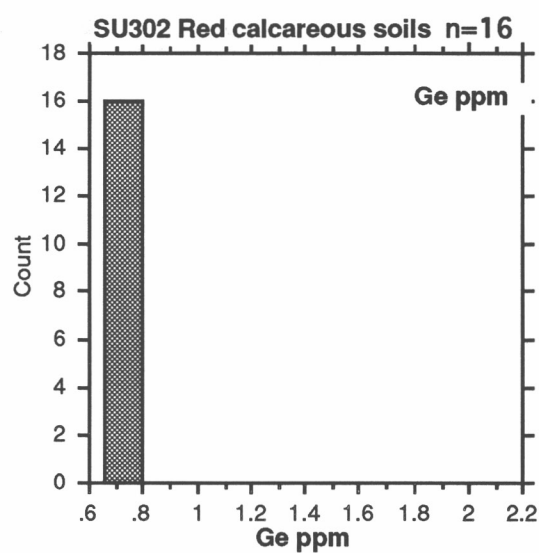
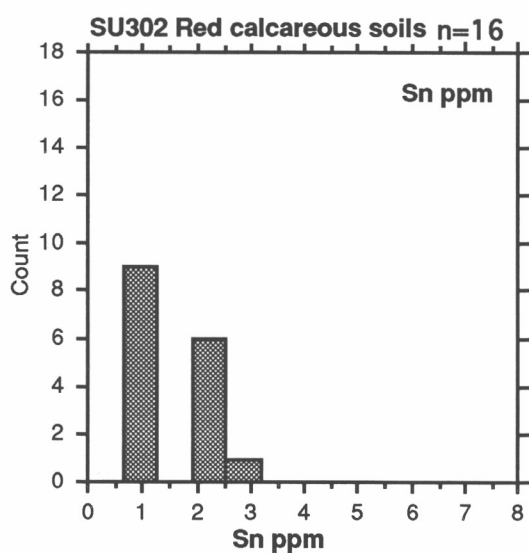
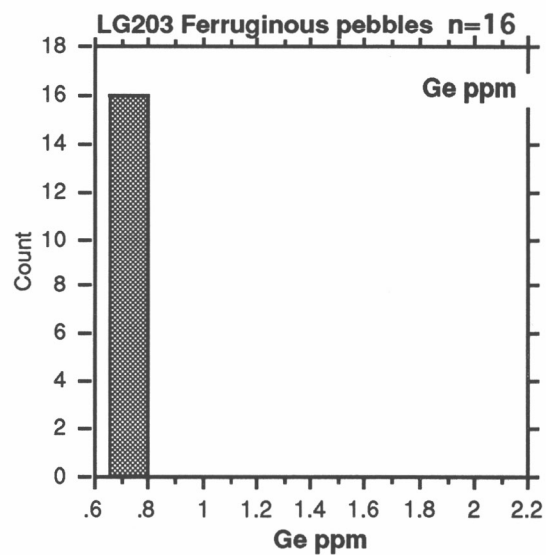
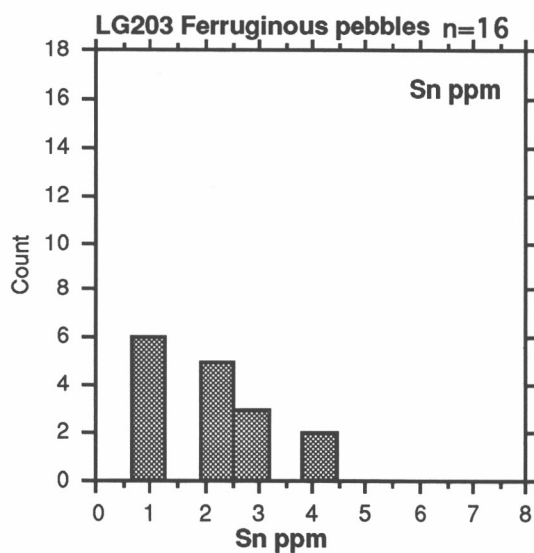


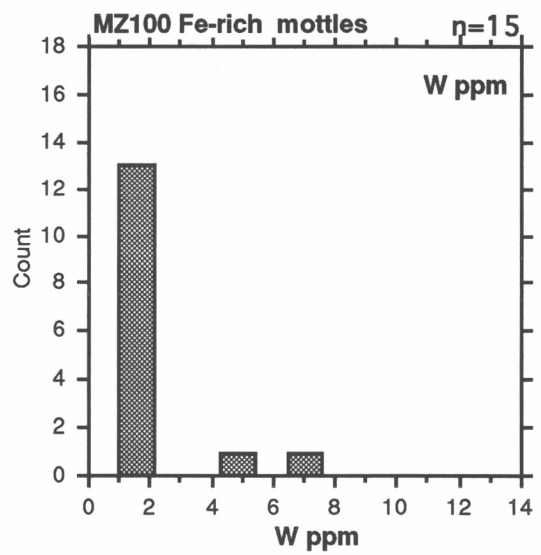
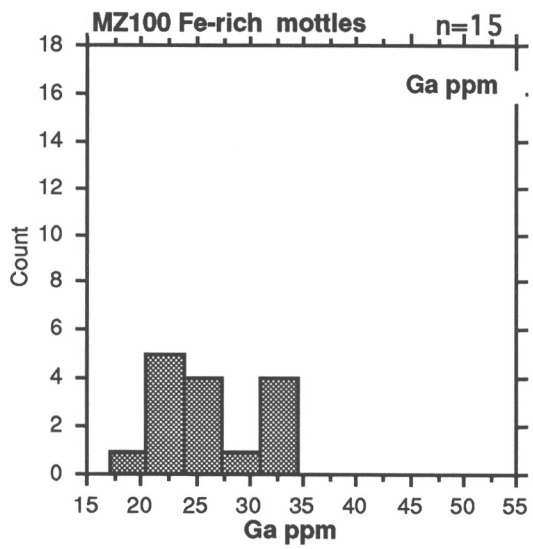
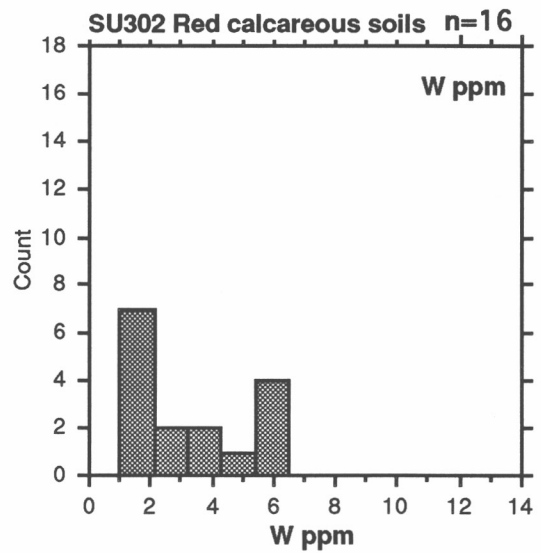
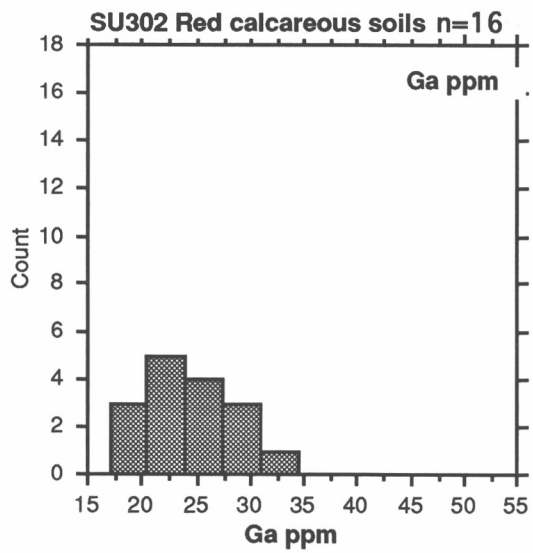
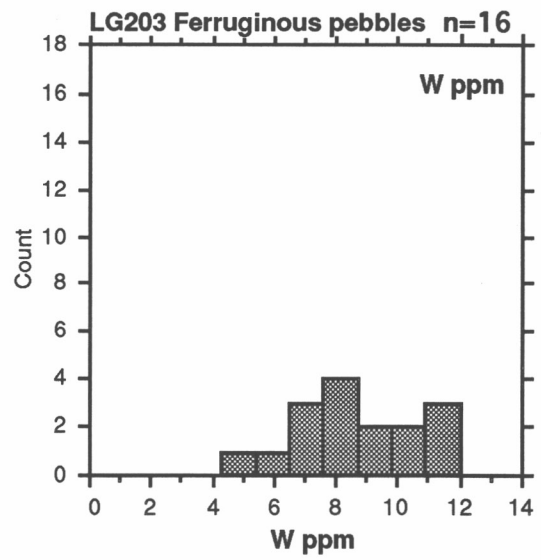
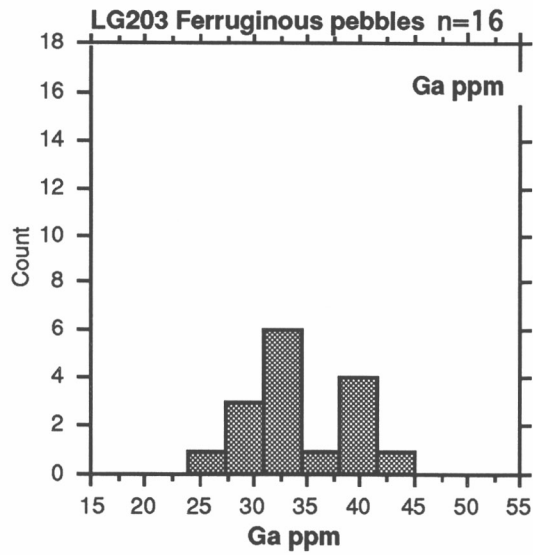


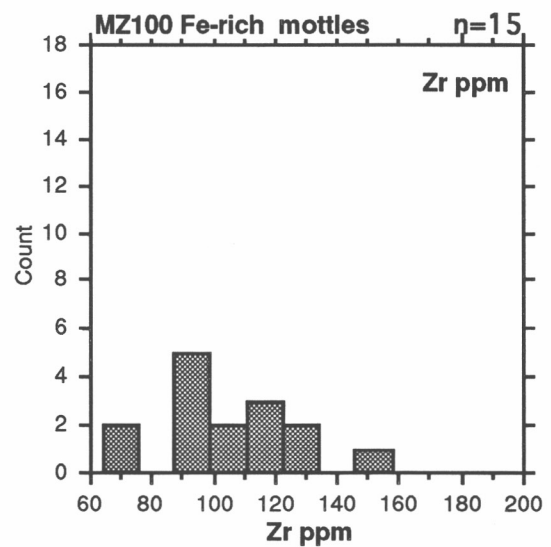
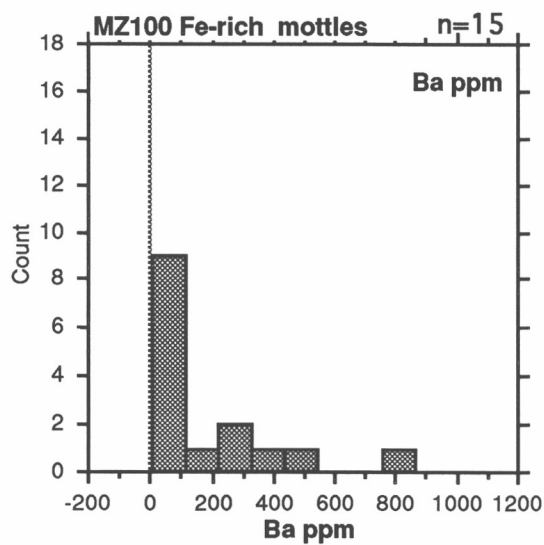
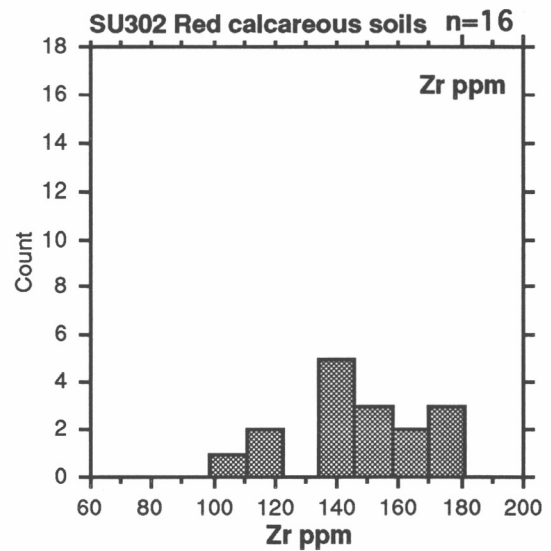
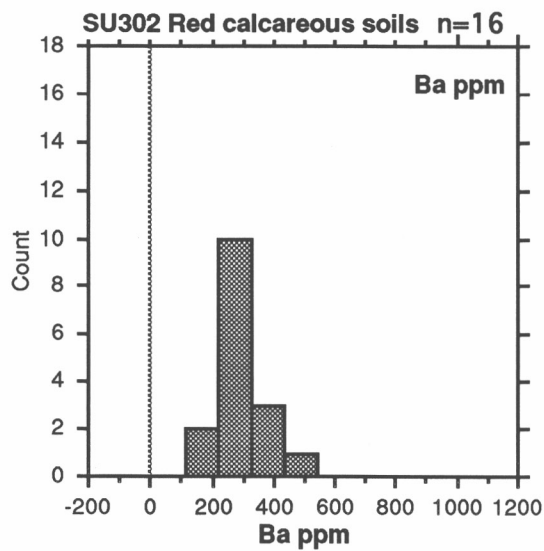
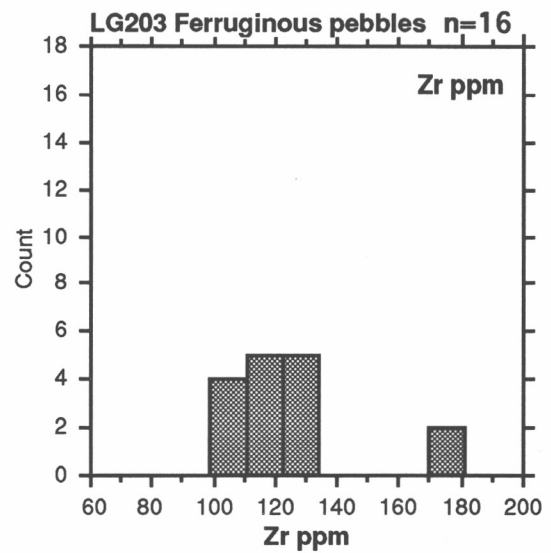
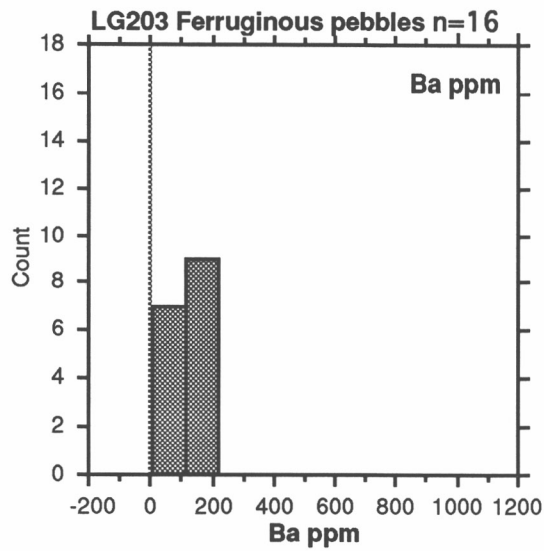


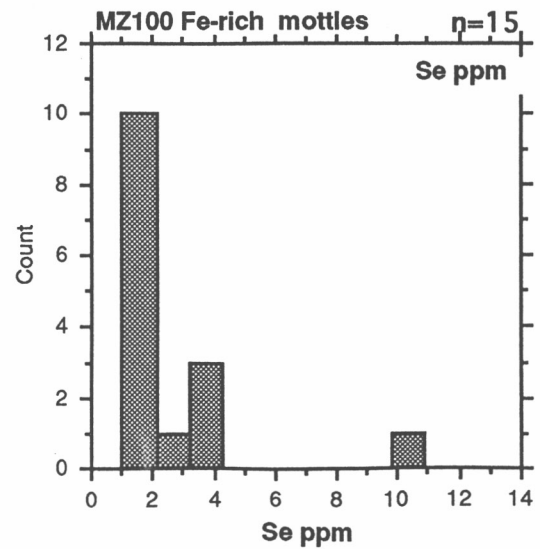
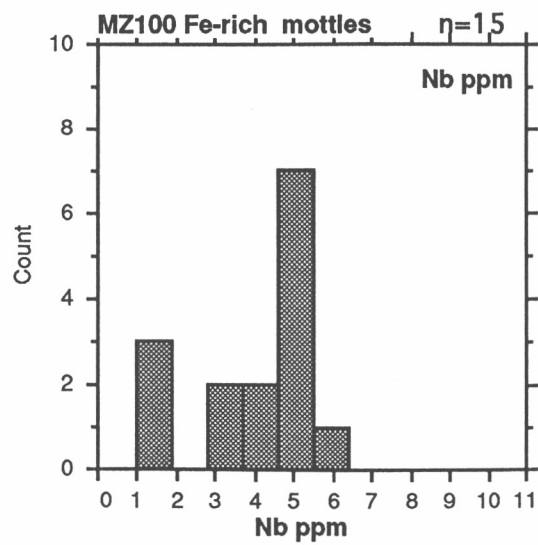
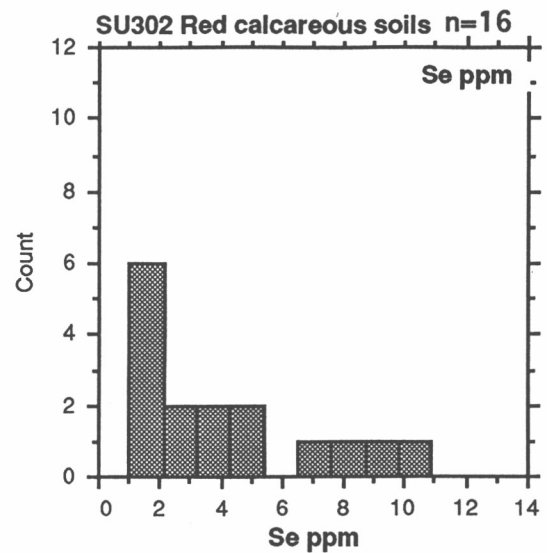
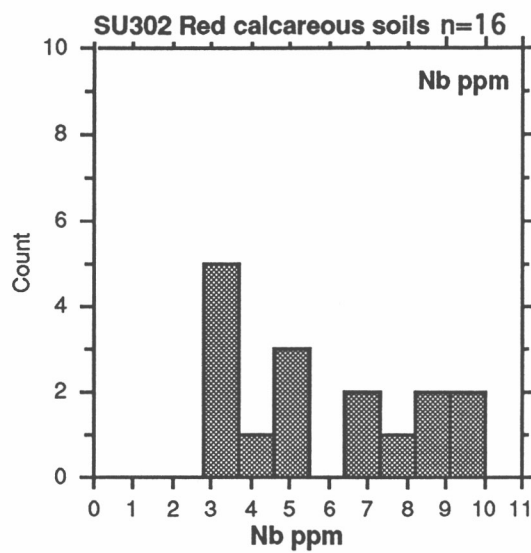
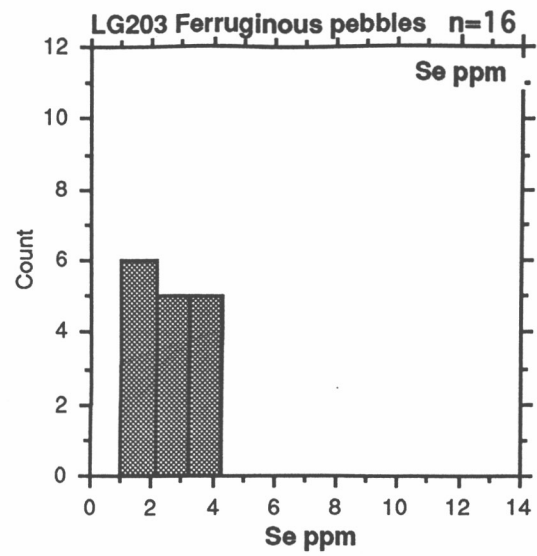
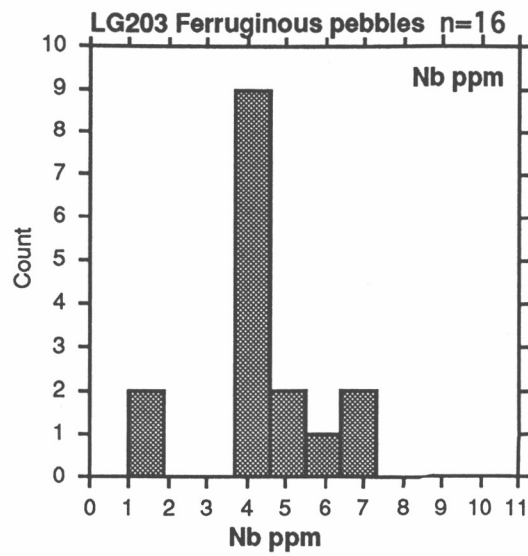


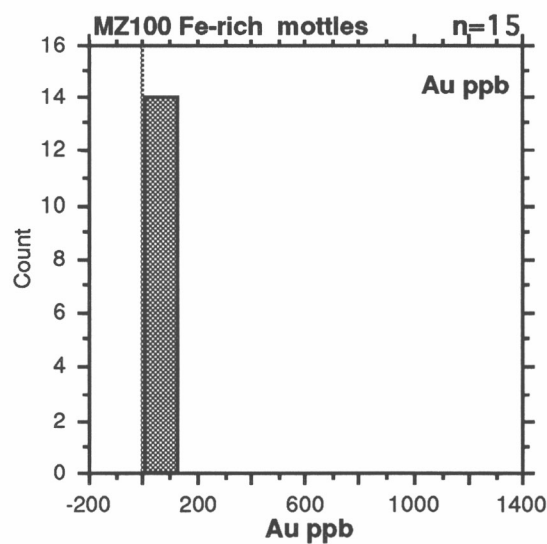
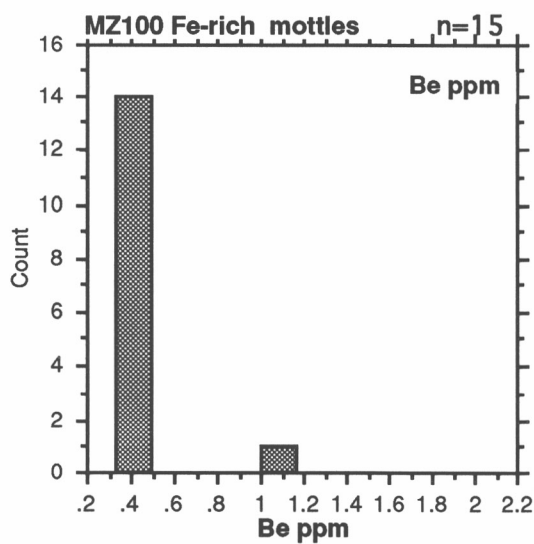
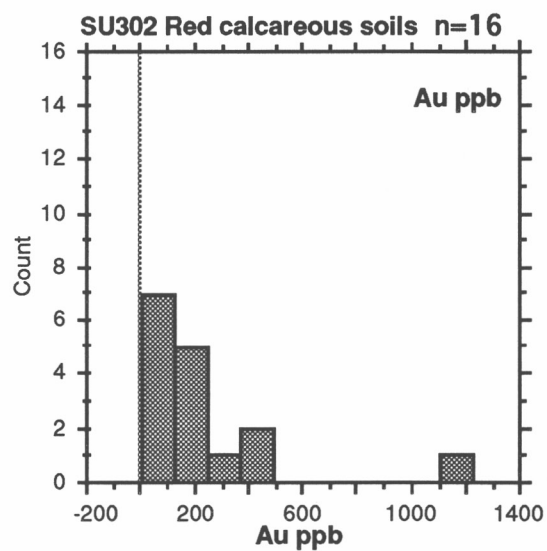
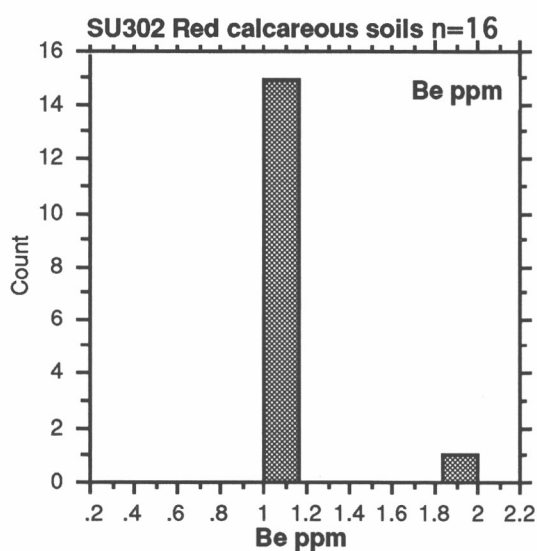
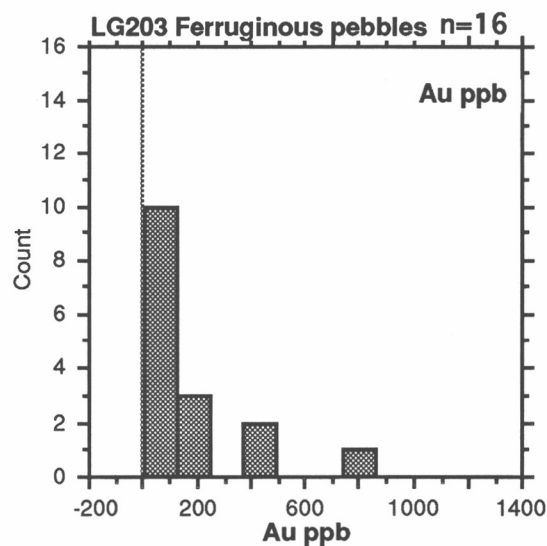
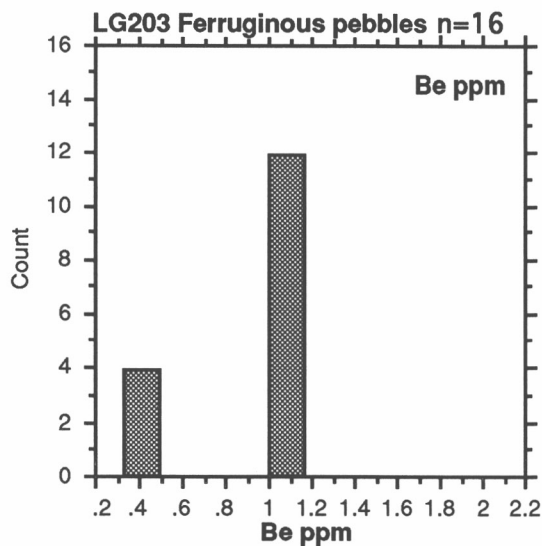


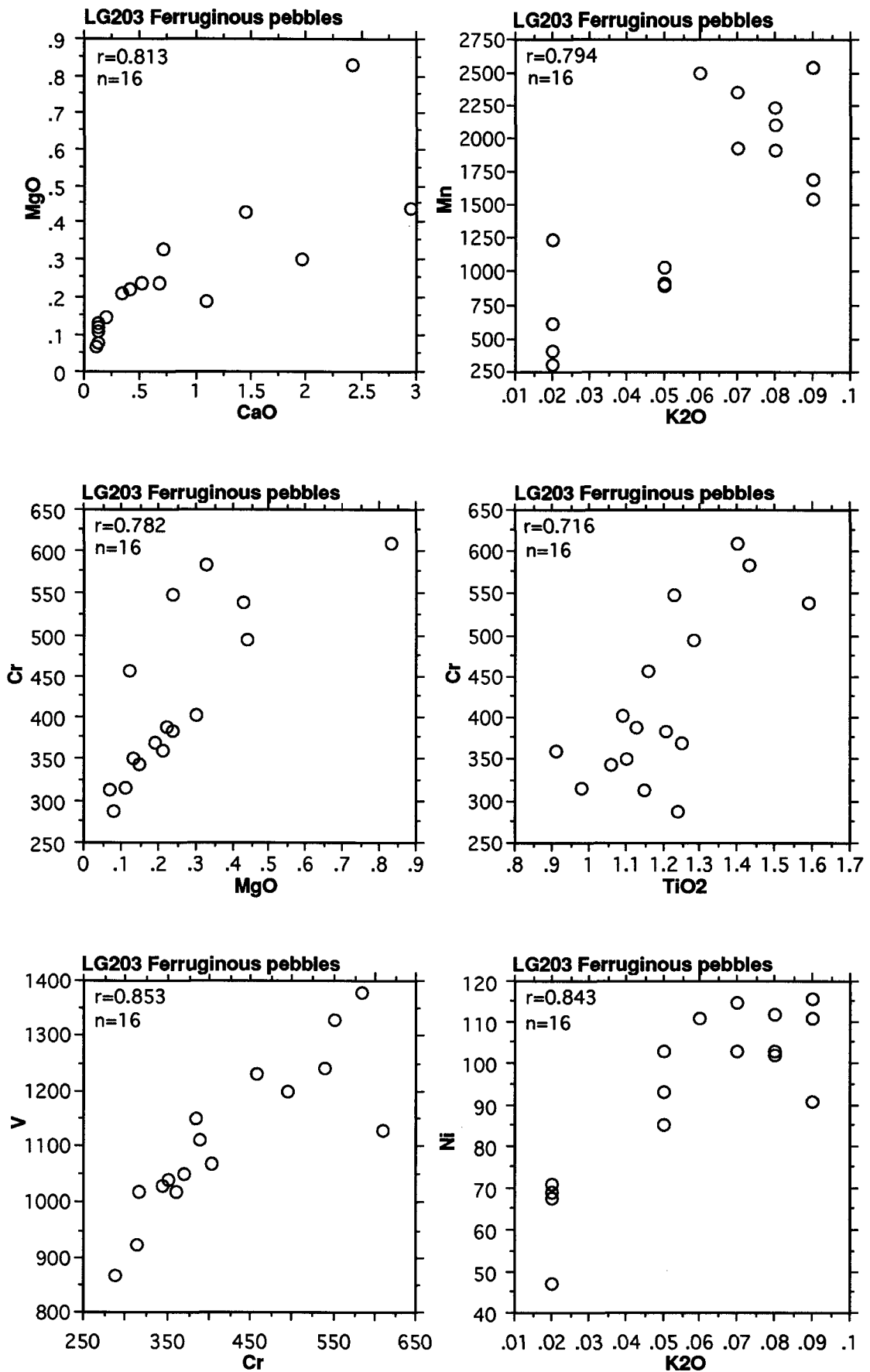


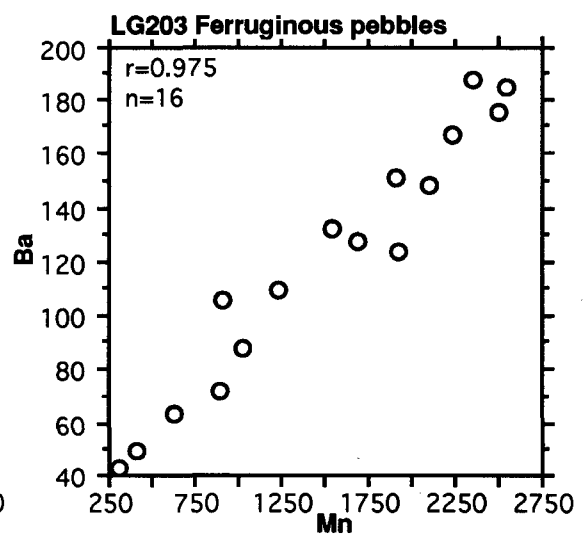
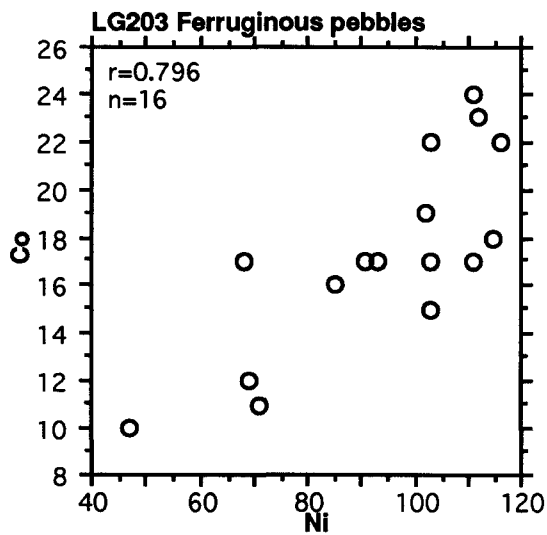
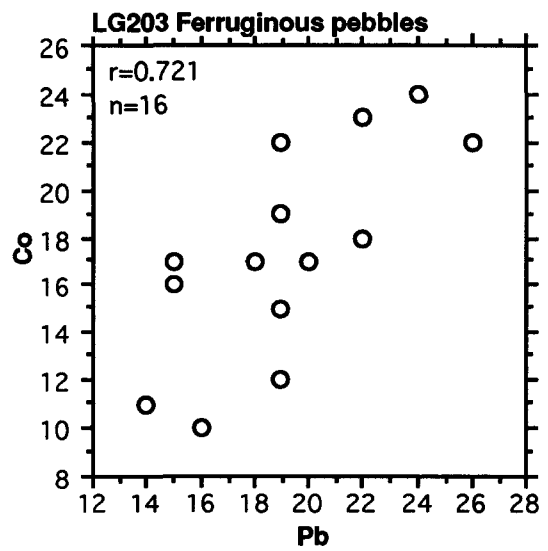
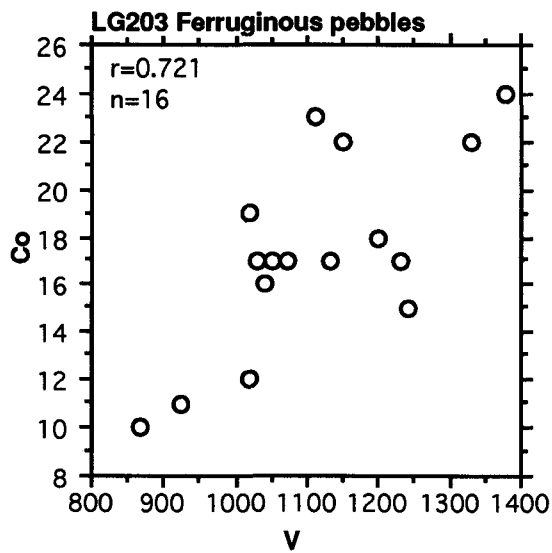
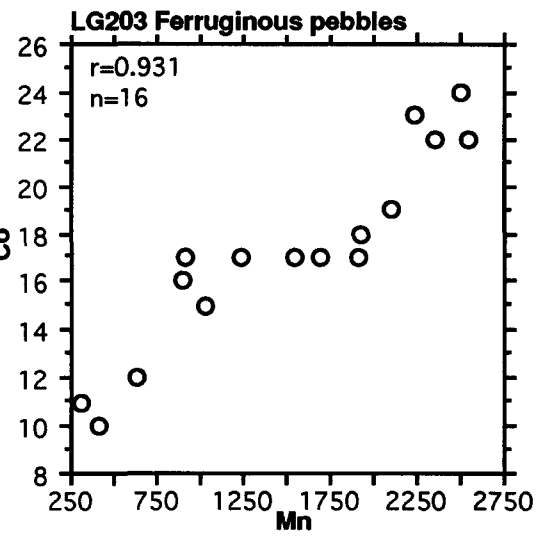
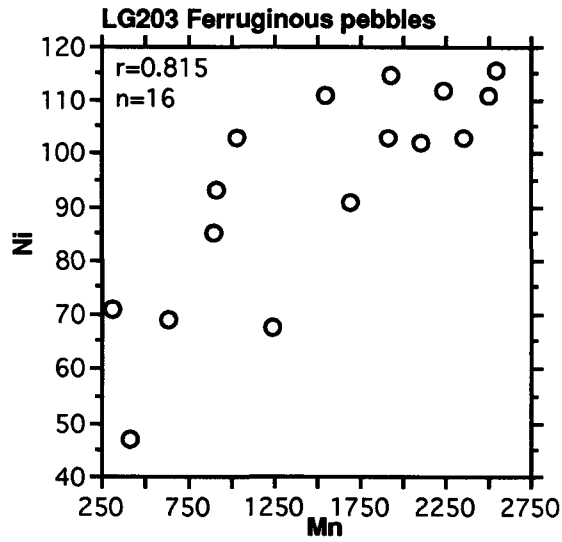


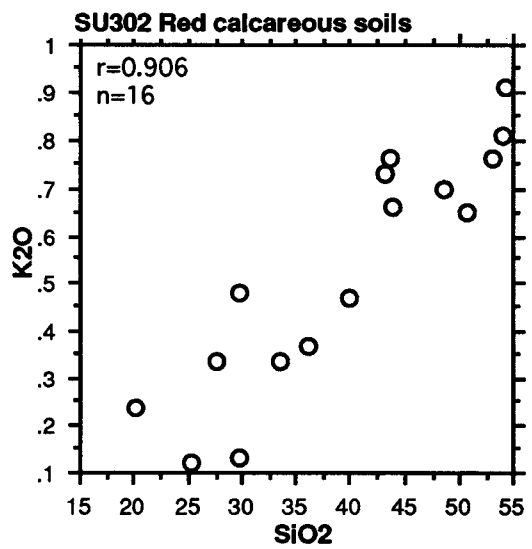
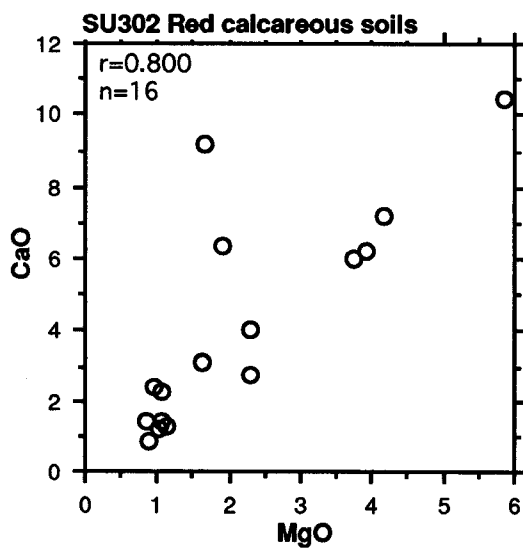
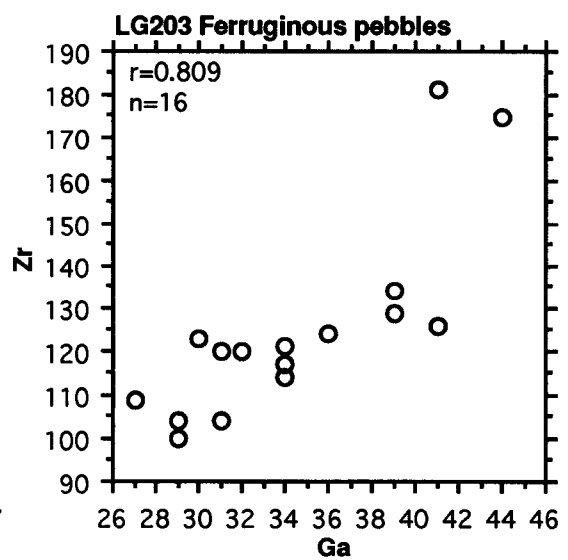
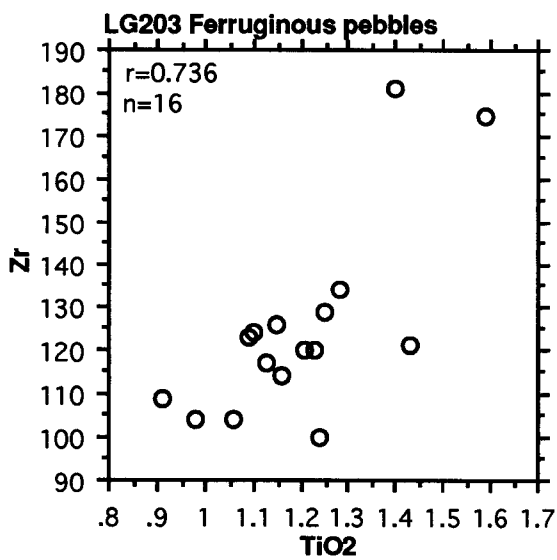
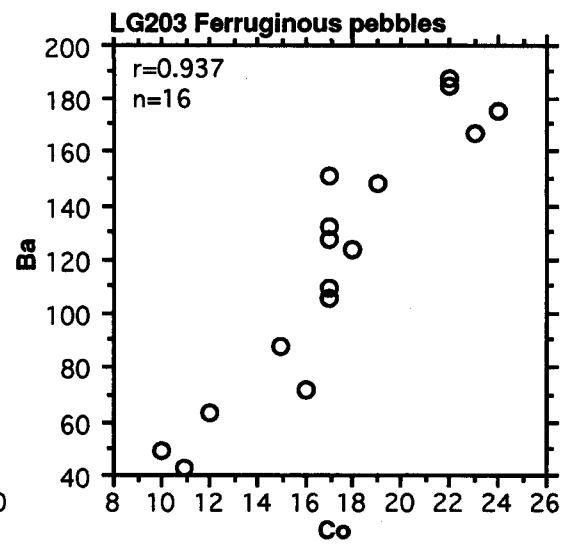
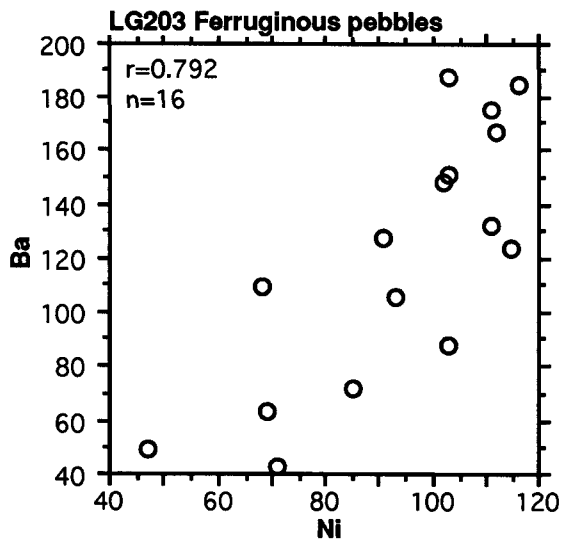


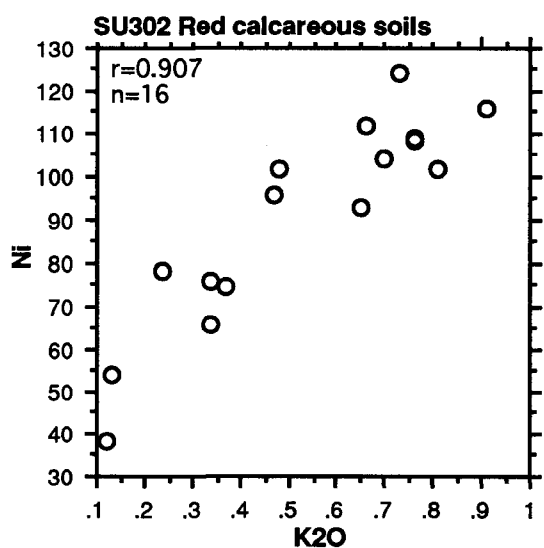
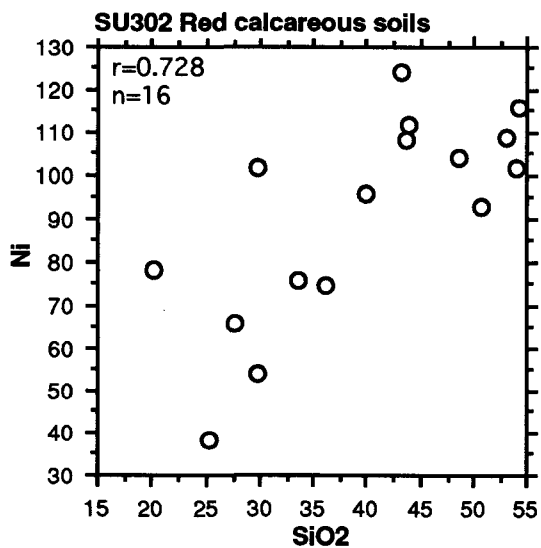
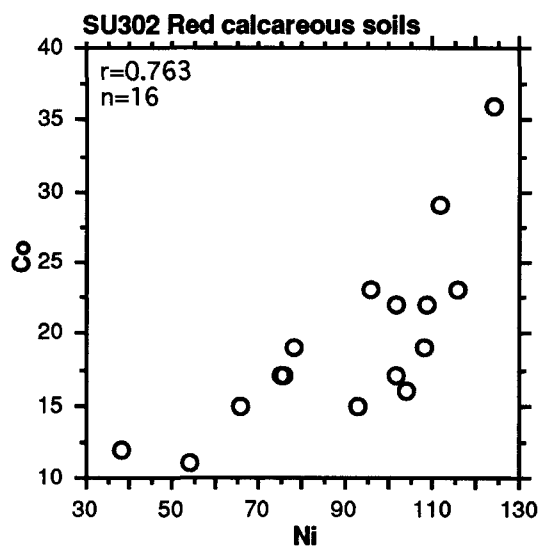
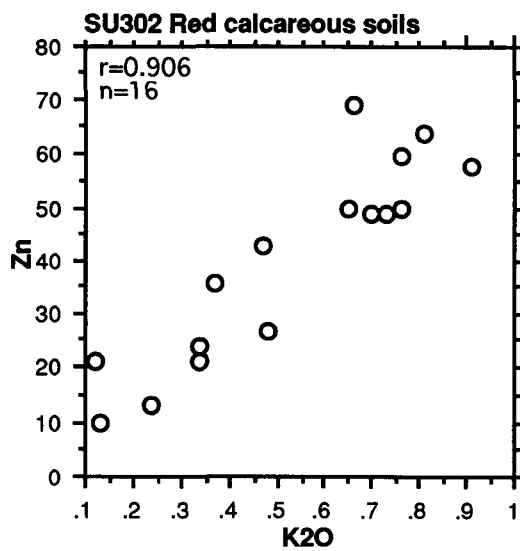
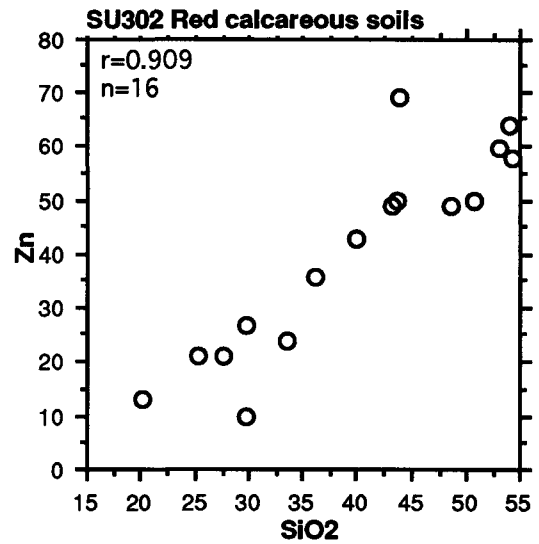
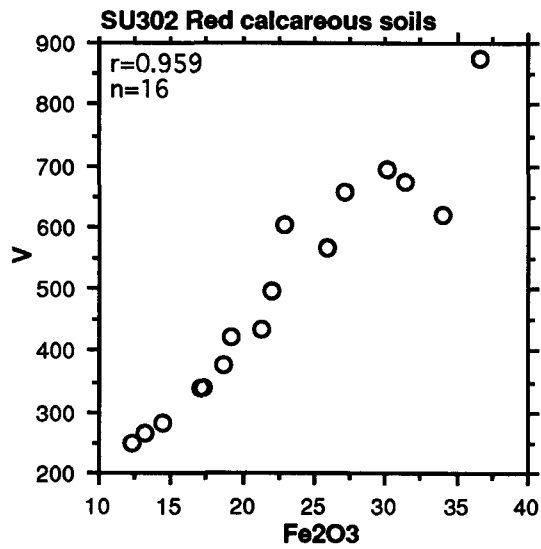


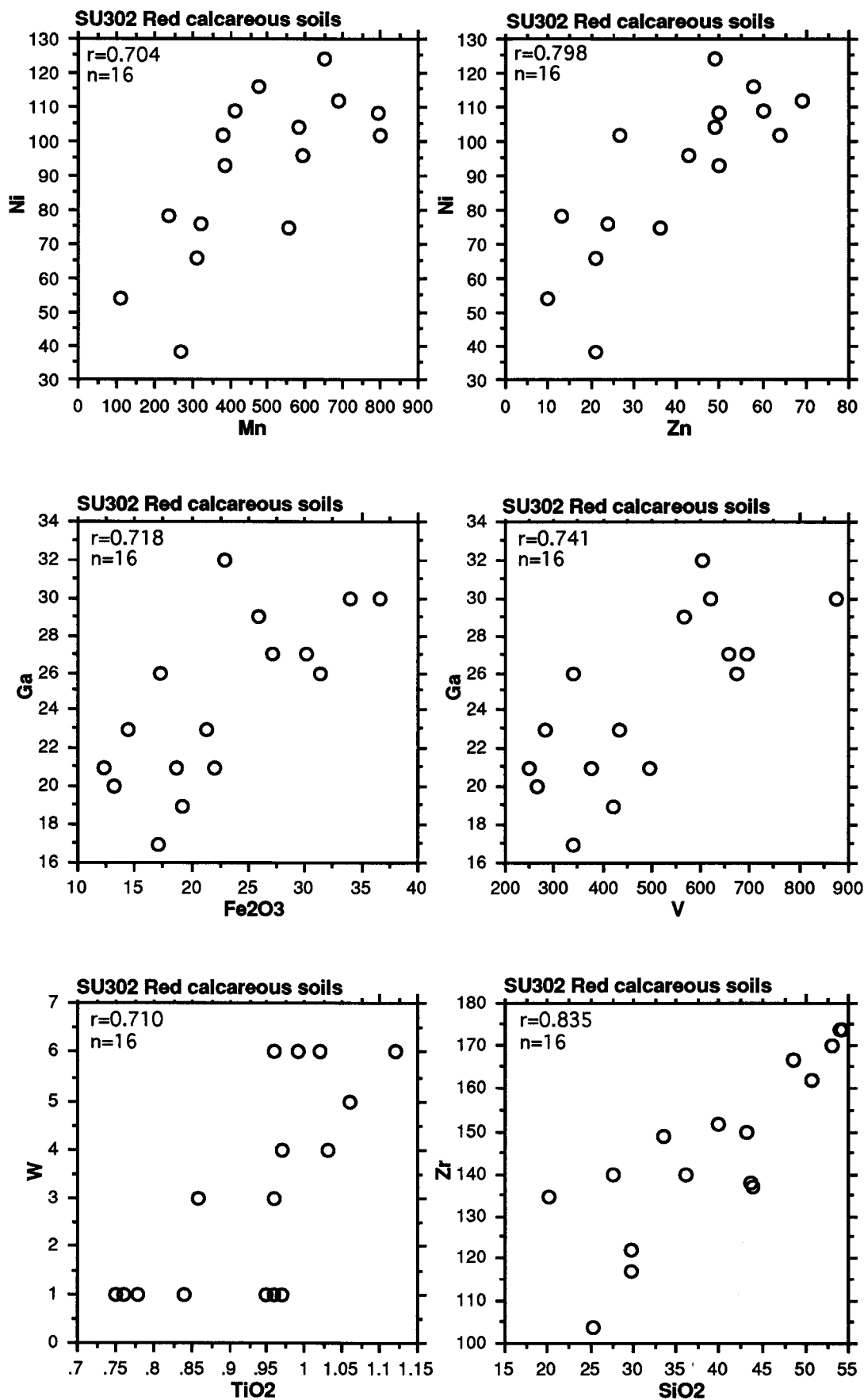


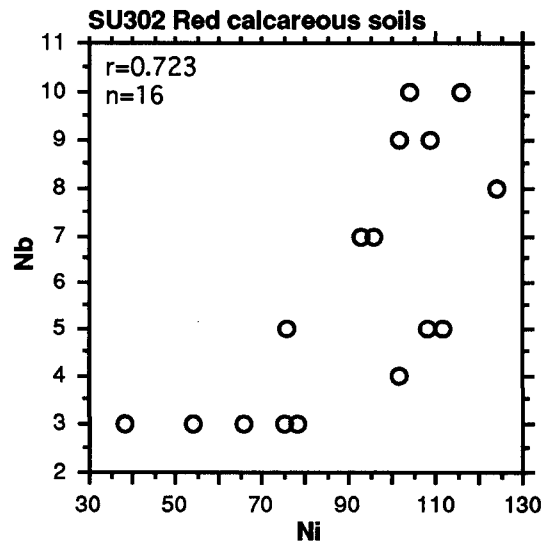
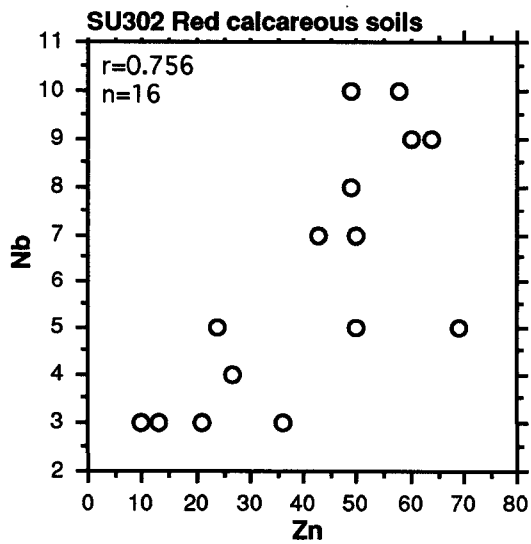
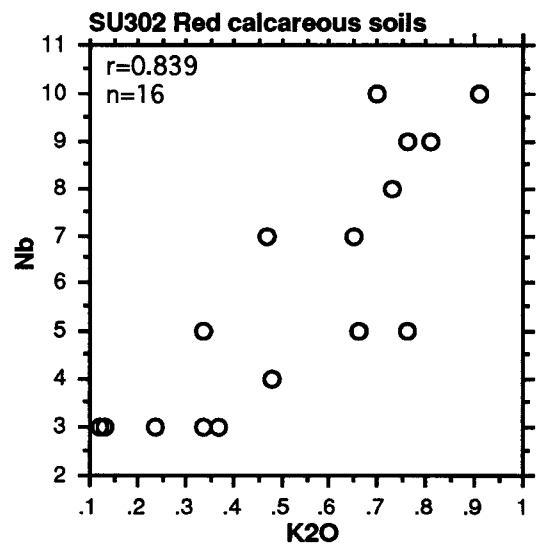
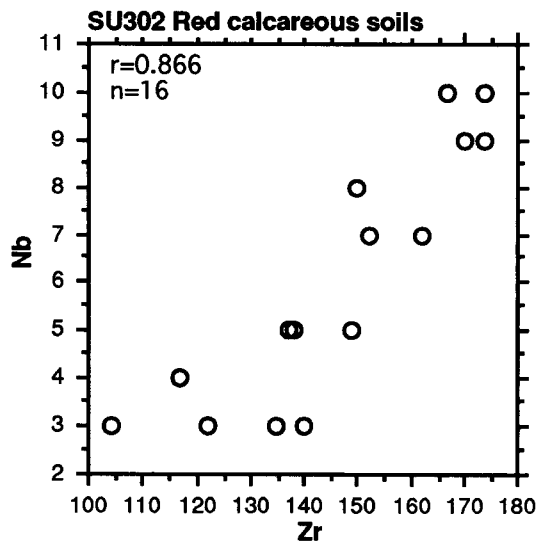
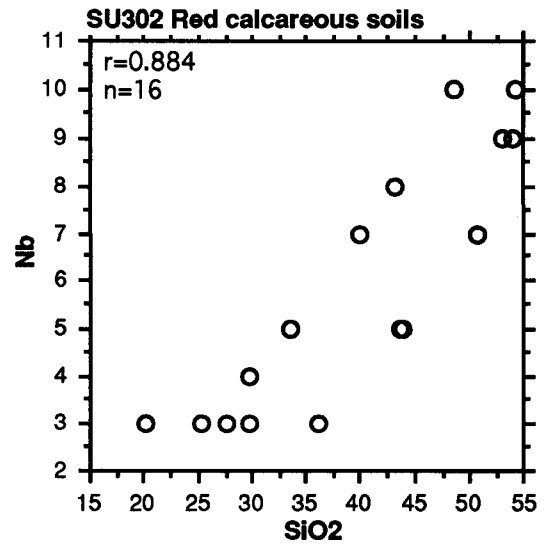
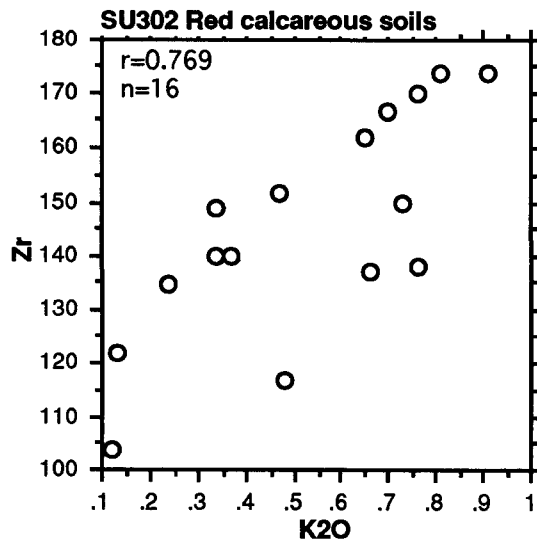


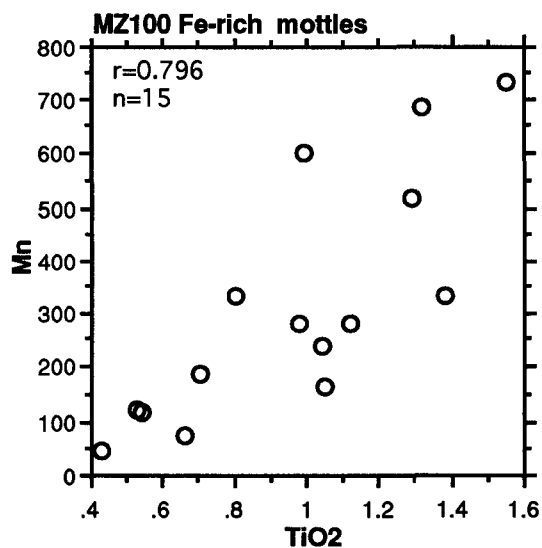
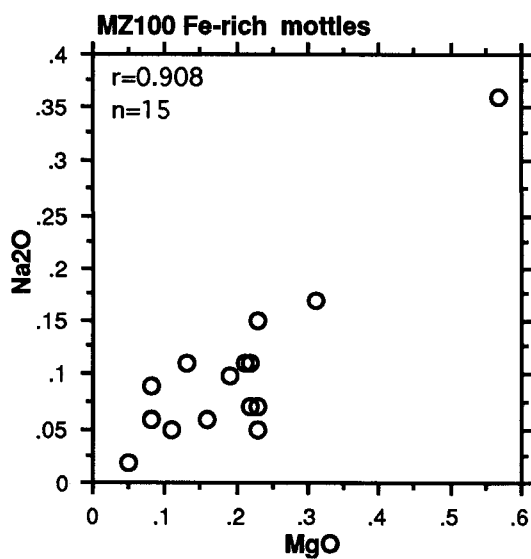
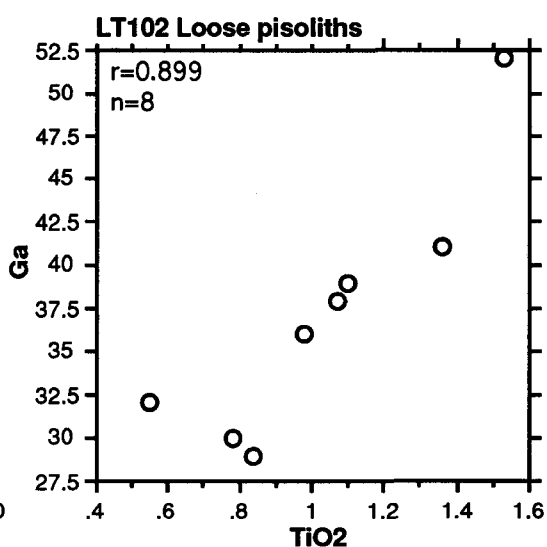
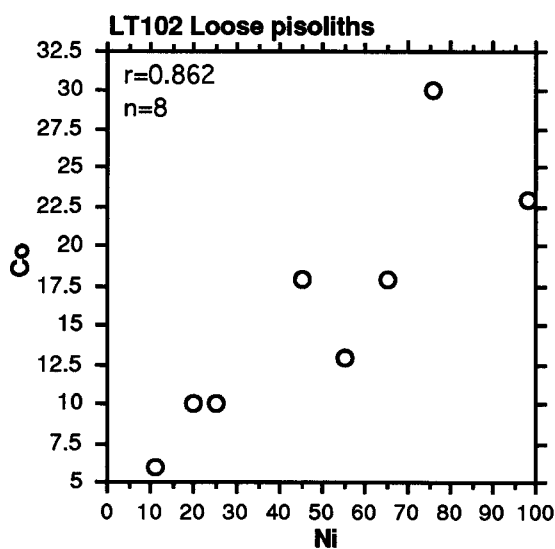
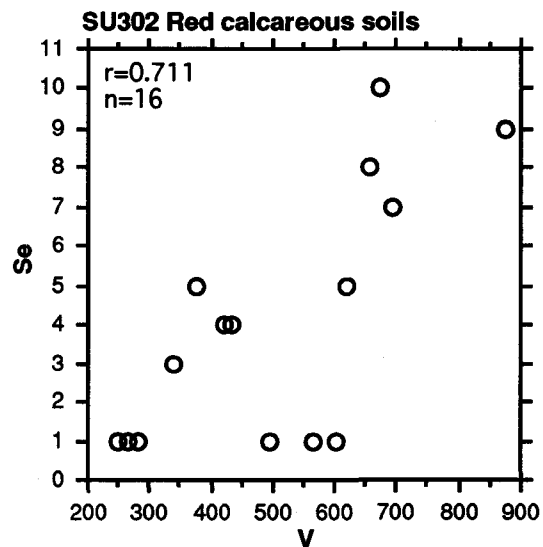
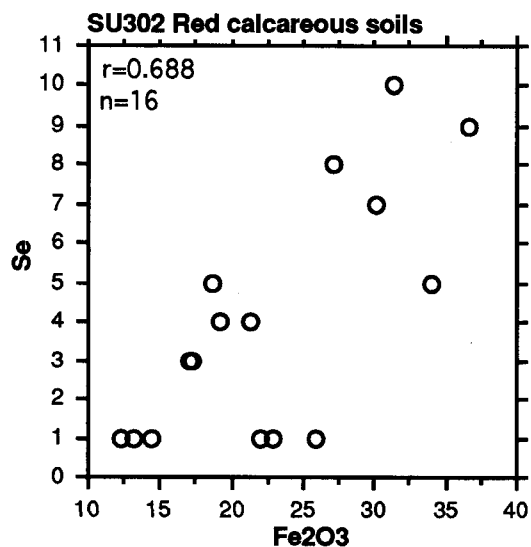


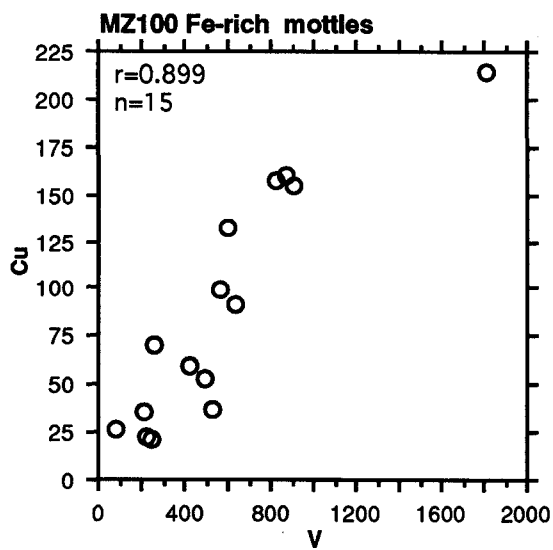
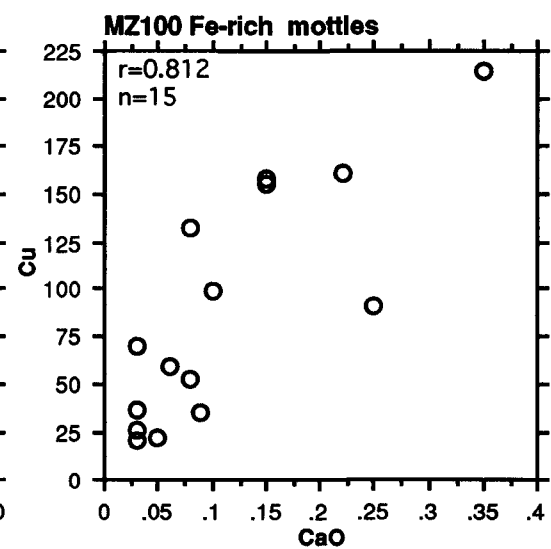
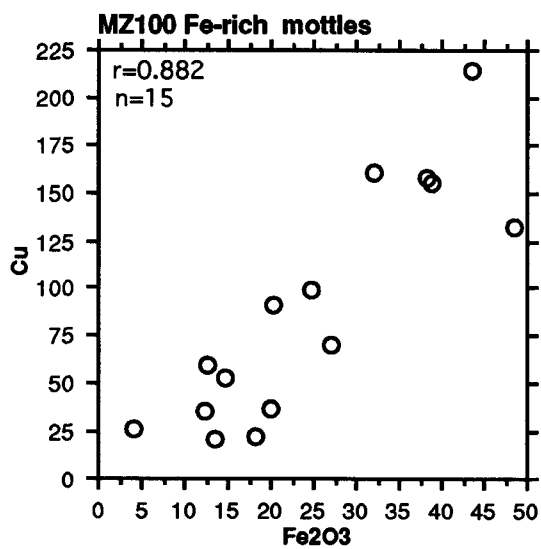
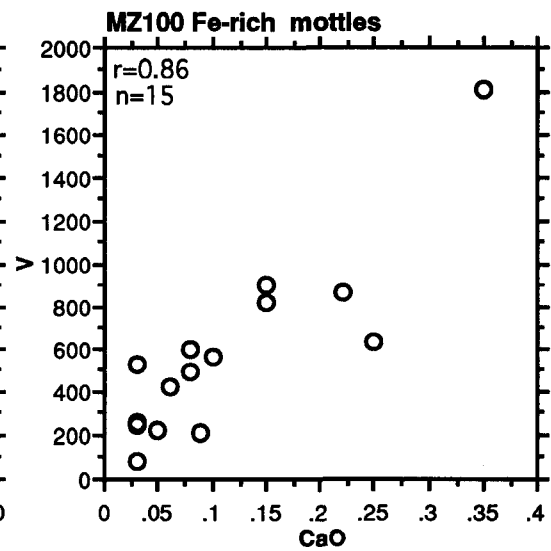
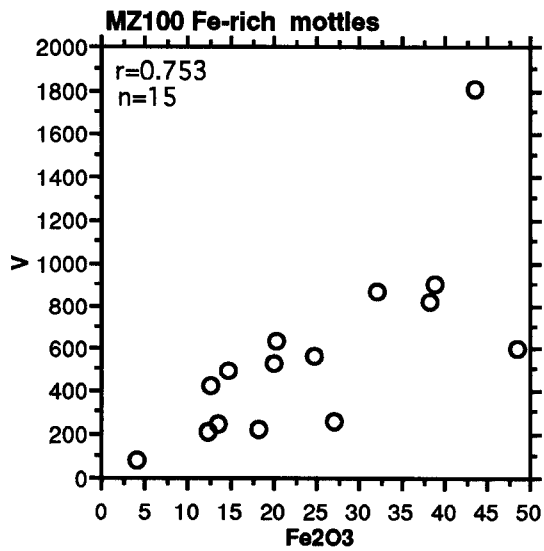












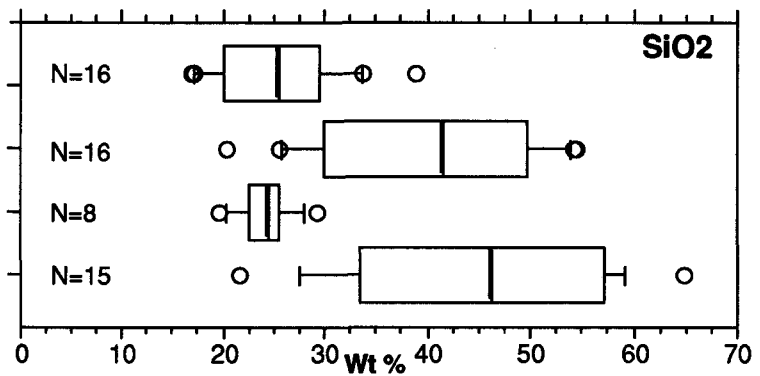
Regolith Type

LG203 Ferruginous pebbles

SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles

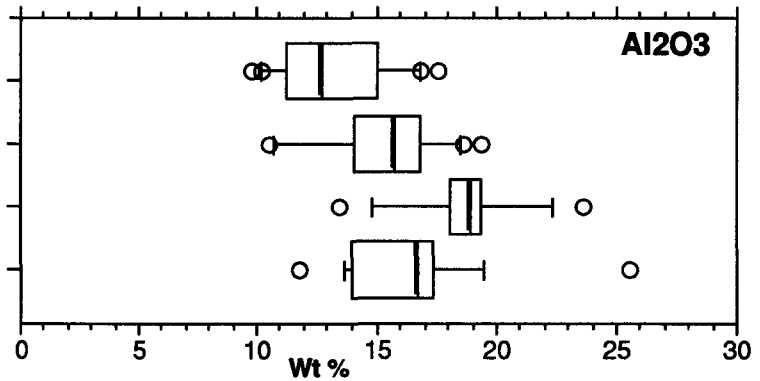


LG203 Ferruginous pebbles

SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles

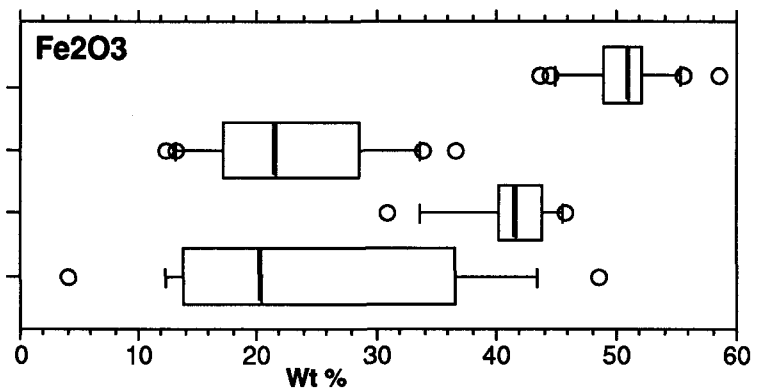


LG203 Ferruginous pebbles

SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles

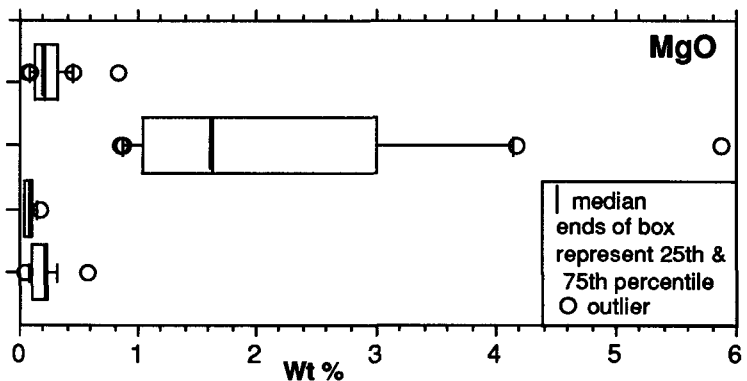


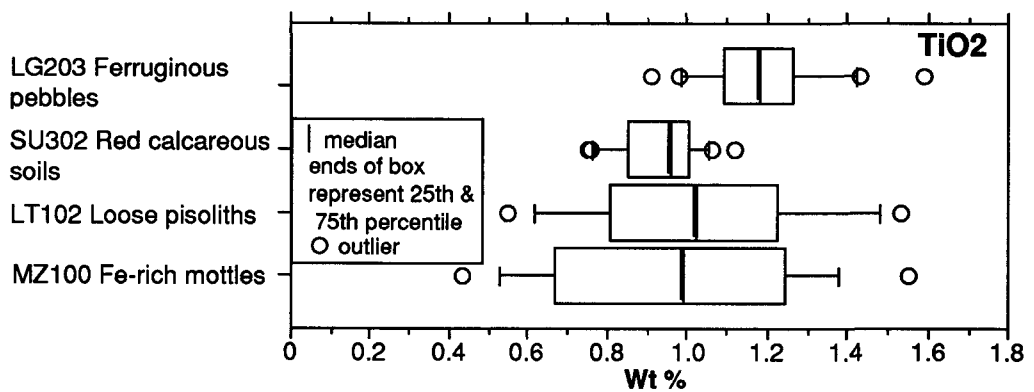
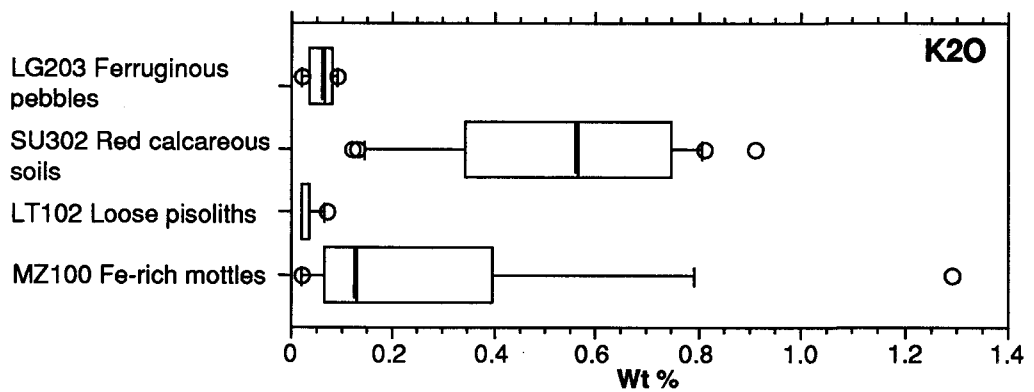
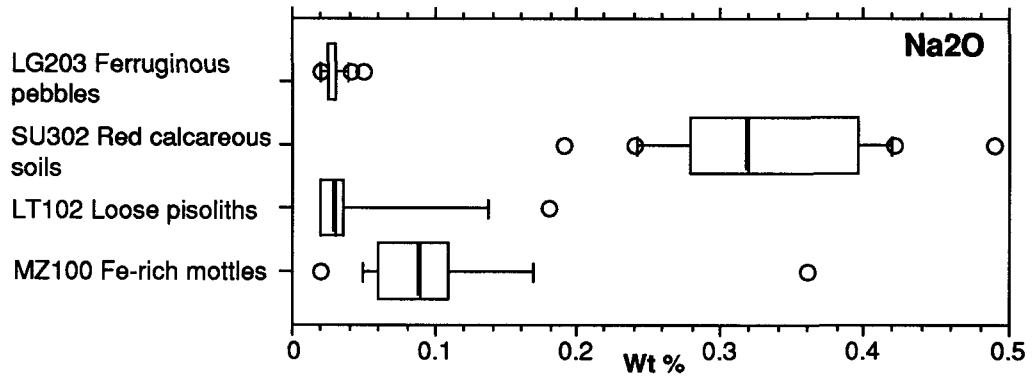
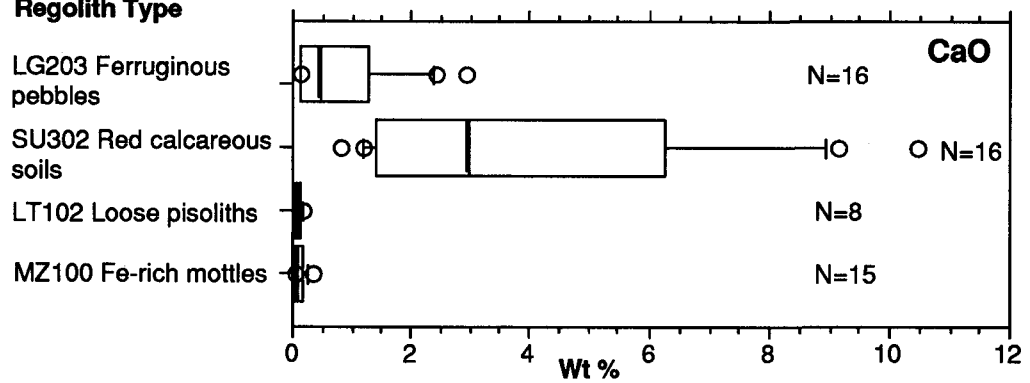
LG203 Ferruginous pebbles

SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles



Regolith Type

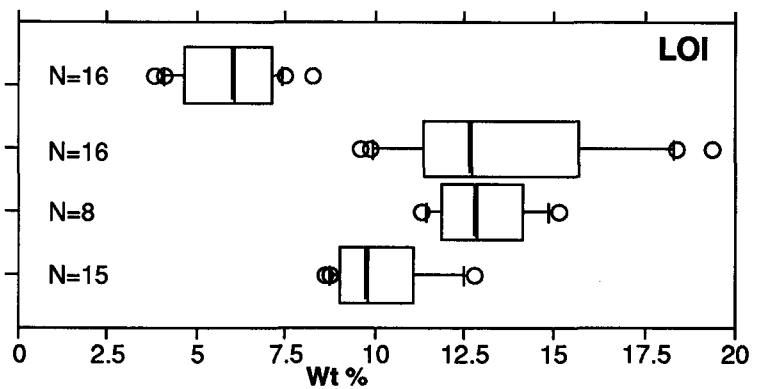
Regolith Type

LG203 Ferruginous pebbles

SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles

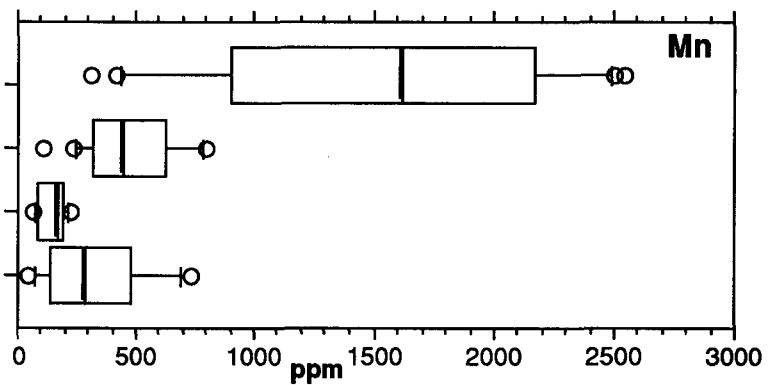


LG203 Ferruginous pebbles

SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles

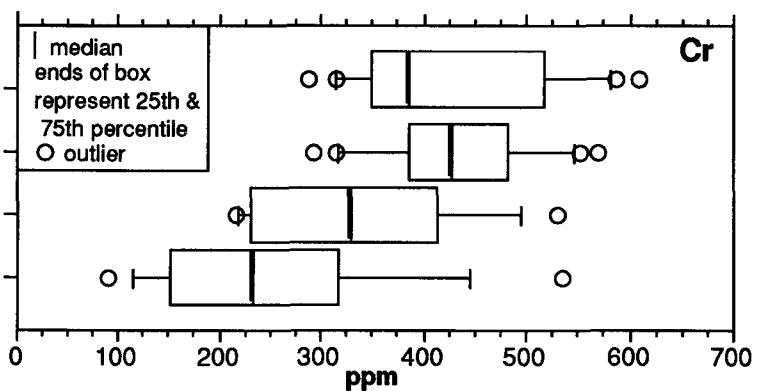


LG203 Ferruginous pebbles

SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles

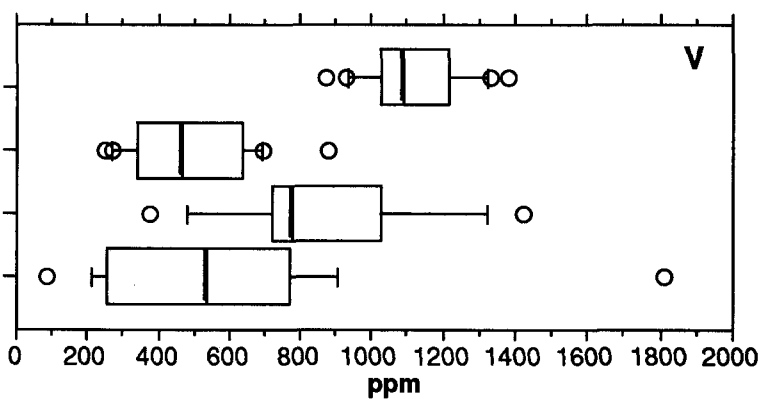


LG203 Ferruginous pebbles

SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles



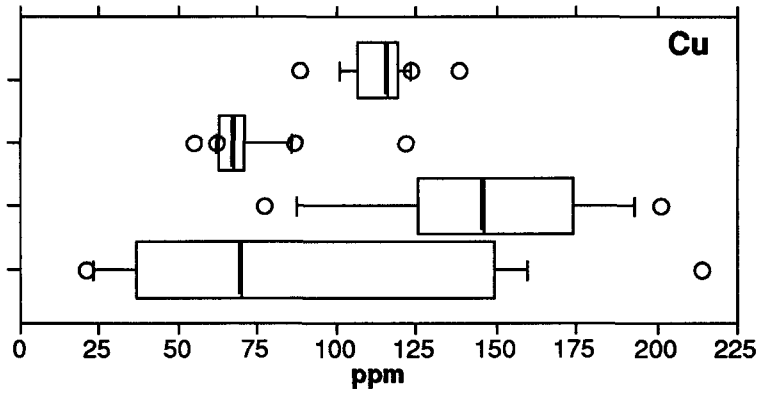
Regolith Type

LG203 Ferruginous pebbles

SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles

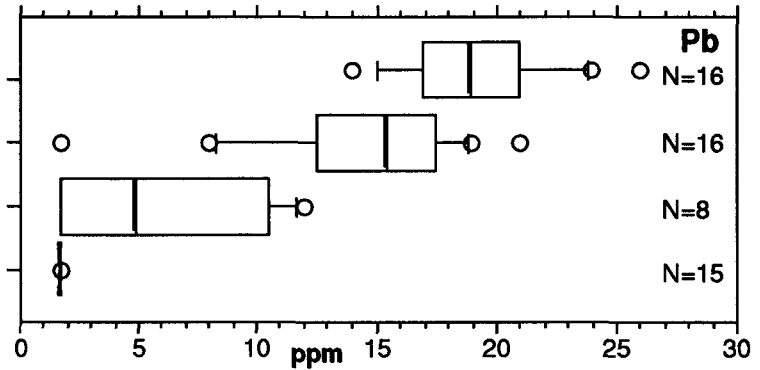


LG203 Ferruginous pebbles

SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles

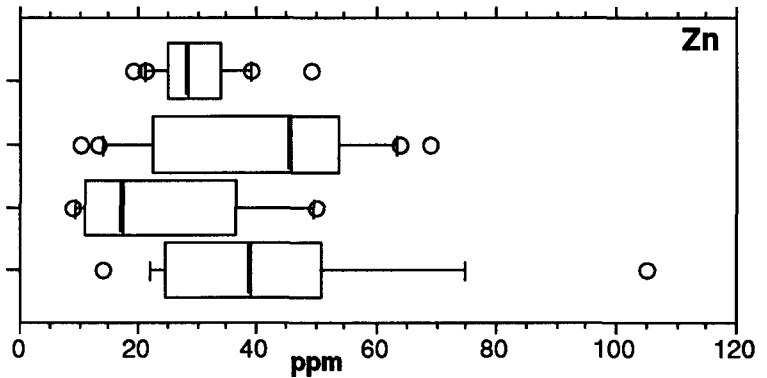


LG203 Ferruginous pebbles

SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles

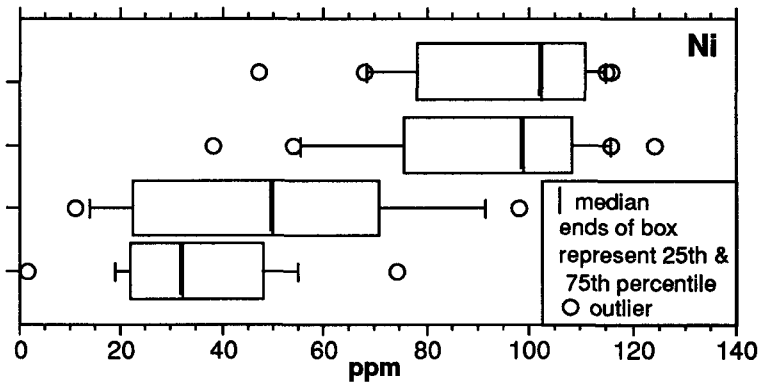


LG203 Ferruginous pebbles

SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles



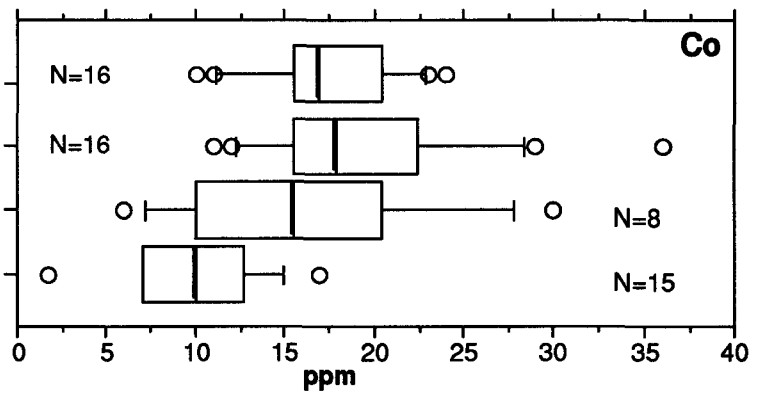
Regolith Type

LG203 Ferruginous pebbles

SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles

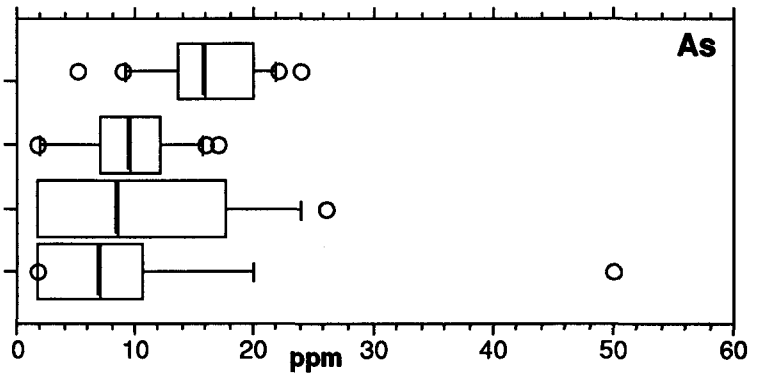


LG203 Ferruginous pebbles

SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles

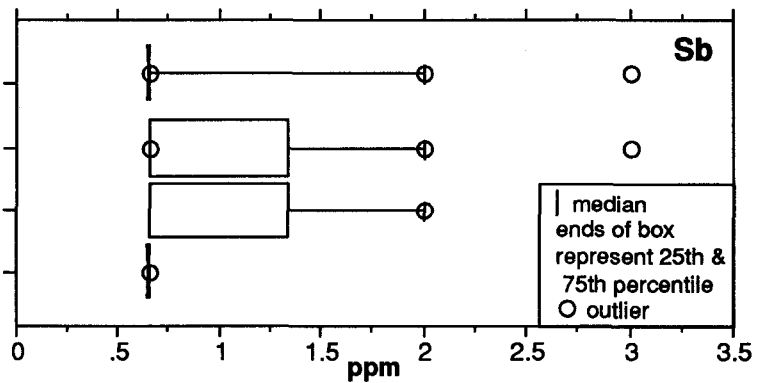


LG203 Ferruginous pebbles

SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles

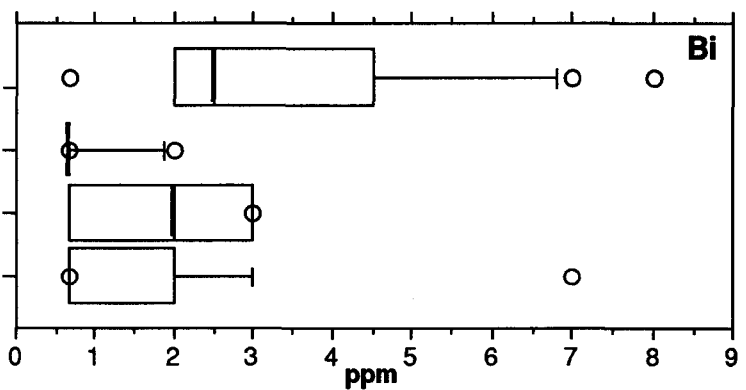


LG203 Ferruginous pebbles

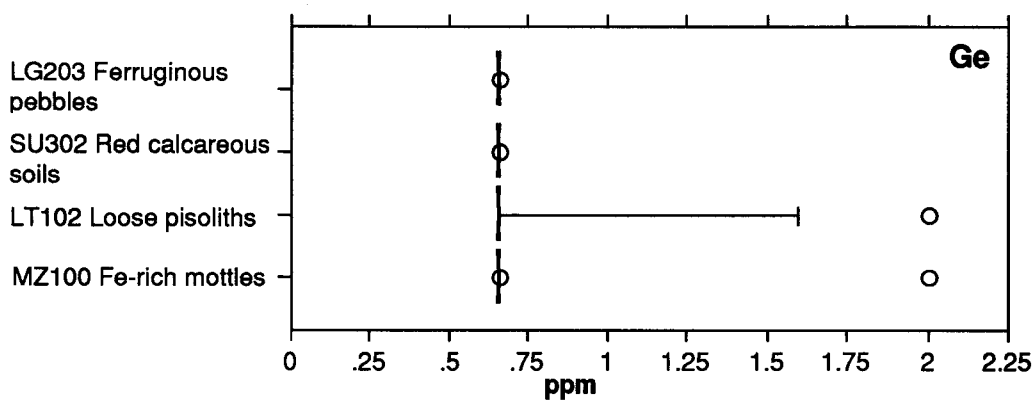
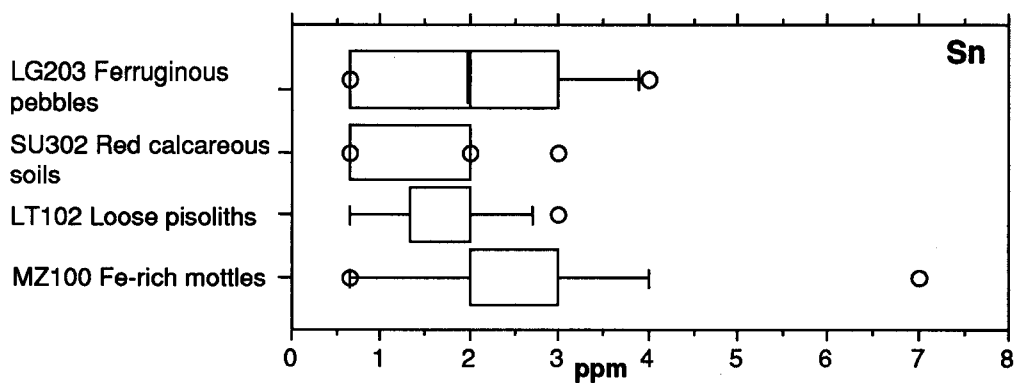
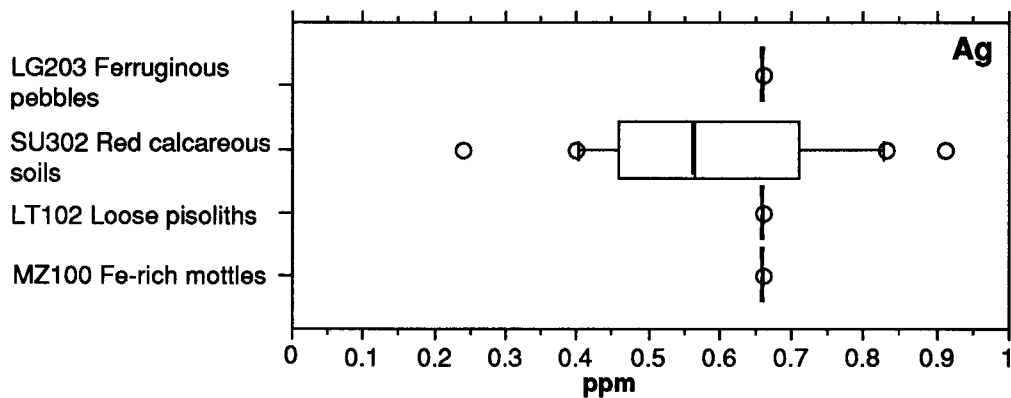
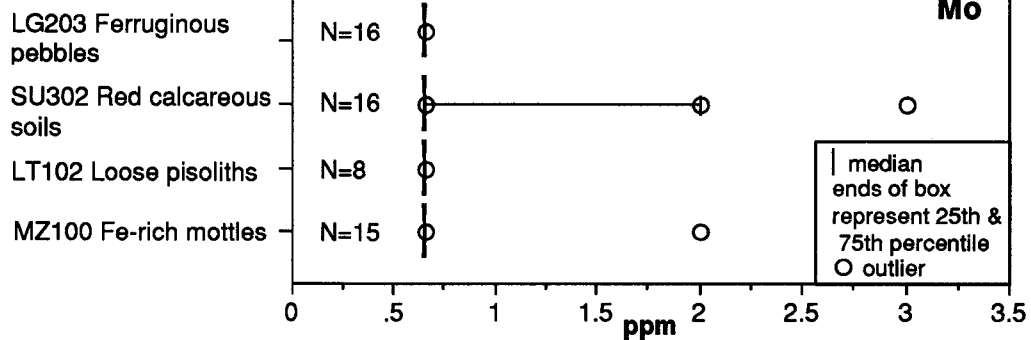
SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles



Regolith Type



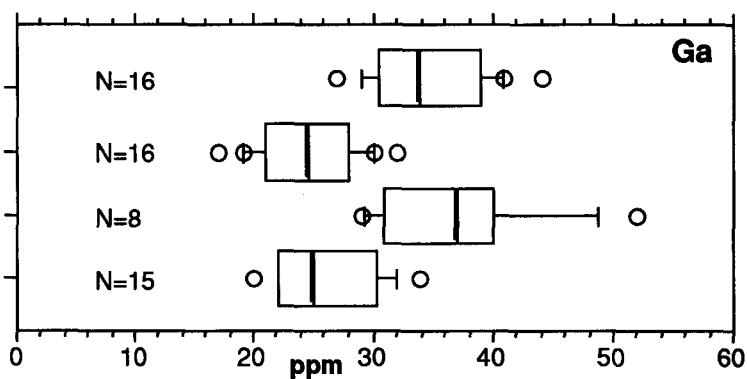
Regolith Type

LG203 Ferruginous pebbles

SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles

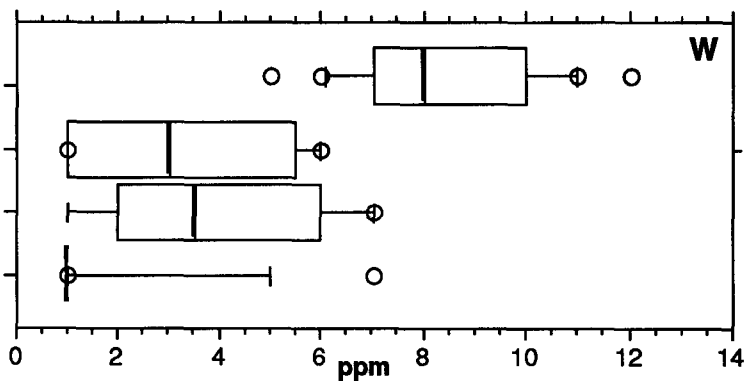


LG203 Ferruginous pebbles

SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles

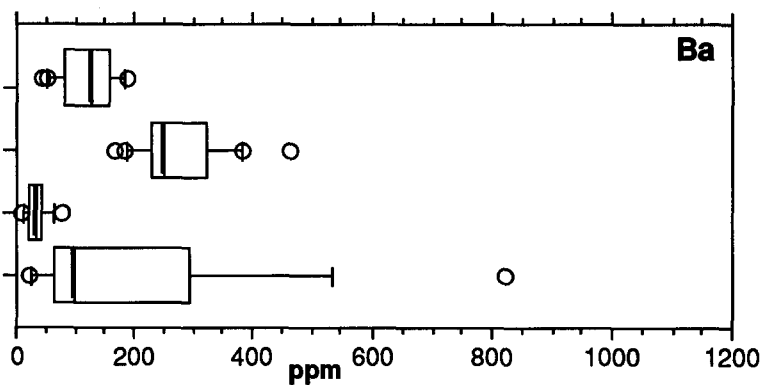


LG203 Ferruginous pebbles

SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles

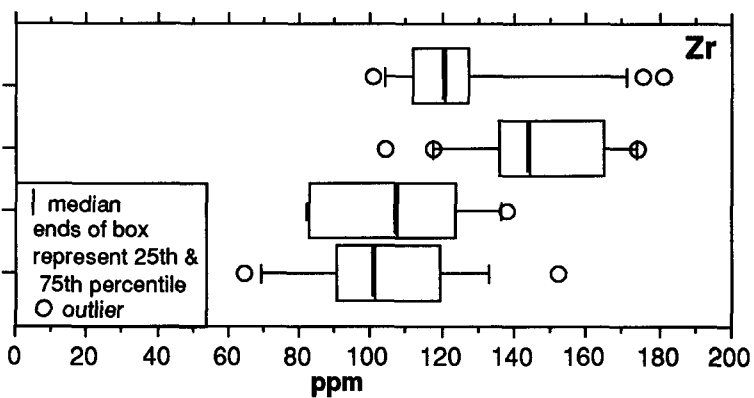


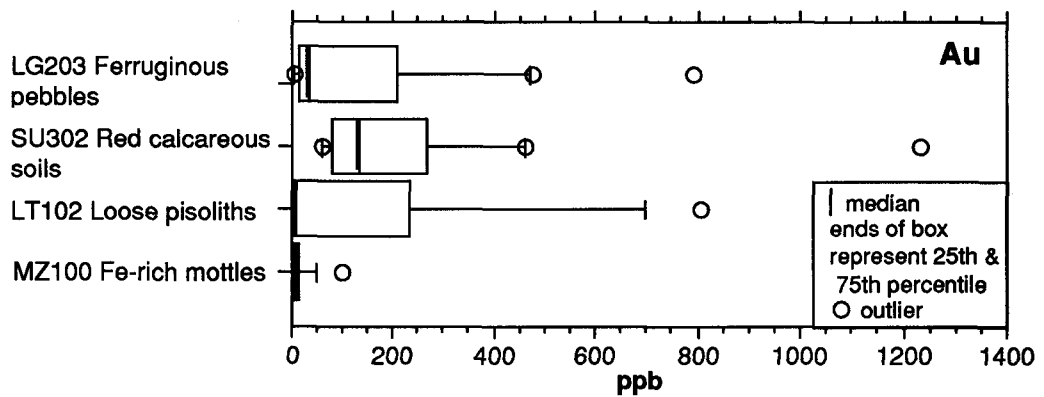
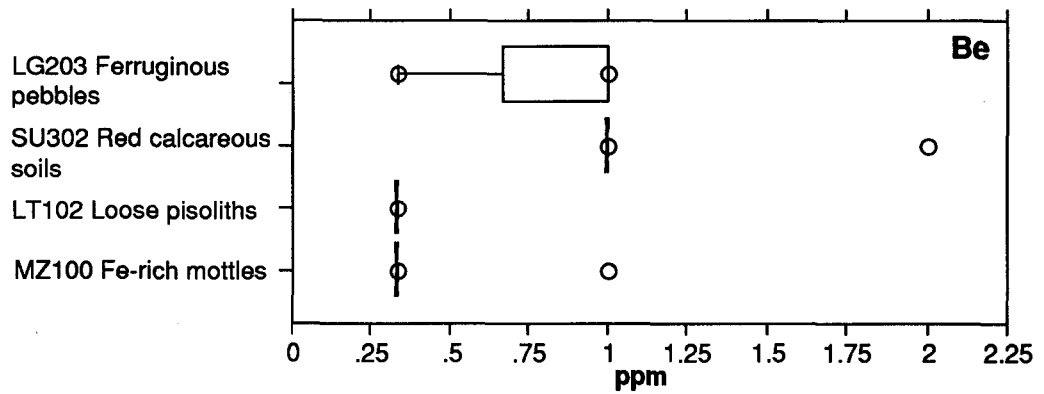
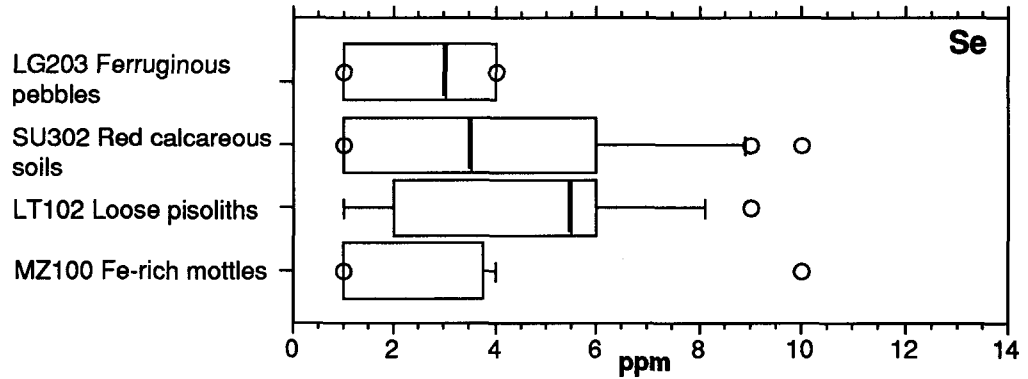
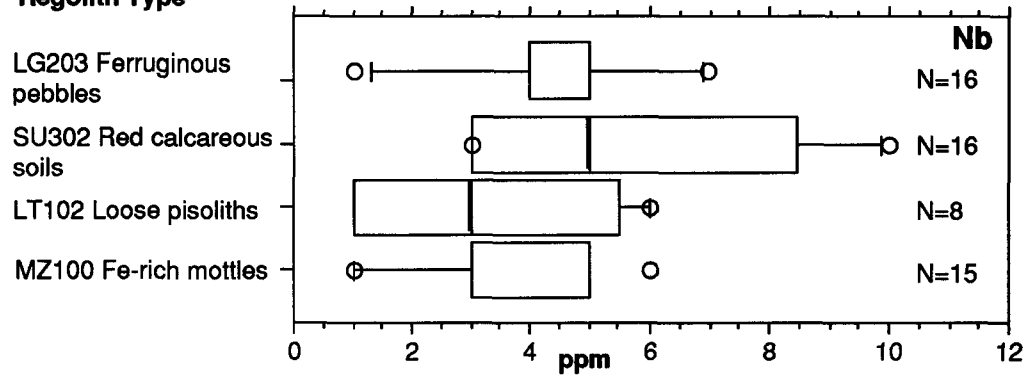
LG203 Ferruginous pebbles

SU302 Red calcareous soils

LT102 Loose pisoliths

MZ100 Fe-rich mottles



Regolith Type

CSIRO/AMIRA REPORT 442R

APPENDIX X

Mt. McClure Data

APPENDIX X Mt.McCLURE DATA

sampno	samptype	box	easting	northing	depth	SiO2	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	LOI	TOTAL
					m	%	%	%	%	%	%	%	%	%	%
07-1894	br		12260	51225	103-104	28.7	6.43	35.1	6.73	1.8	0.97	0.89	0.297	16.7	97.6
07-1895	br		12260	51225	104-106.4	23.2	1.63	40.6	0.76	0.36	0.24	0.12	0.092	23.7	90.7
07-1896	br		12260	51225	108-109	46.9	10.8	19.4	4.46	4.35	1.08	0.25	0.682	7.11	95
07-1897	br		12260	51225	121-122	41.3	11.9	19	4.49	10.83	0.92	0.25	0.753	6.14	95.6
07-1898	SU	SU	12270	51225	0-1	72.7	8.21	12.30	0.080	0.060	0.030	0.520	0.482	4.5	98.9
07-1899	CV203HP	CV200	12270	51225	2-3	63.6	14.90	9.65	0.450	0.150	0.150	0.730	0.776	8.1	98.5
07-1900	CV104HP	CV100	12270	51225	5-6	44.4	19.00	24.30	0.330	0.130	0.180	0.300	1.210	9.3	99.1
07-1902	LT103	LT100	12270	51225	18-19	22.3	19.00	40.90	0.300	0.150	0.130	<0.05	1.970	13.9	98.7
07-1903	MZ	MZ	12270	51225	22-23	11.8	11.10	60.20	0.200	0.110	0.070	<0.05	1.460	13.2	98.1
07-1904	CV203HP	CV200	12280	51225	3-4	66.8	14.90	7.40	0.350	0.180	0.130	0.830	0.658	7.6	98.9
07-1905	CV104HP	CV100	12280	51225	8-9	42.9	20.50	22.80	0.350	0.460	0.200	0.280	1.300	9.9	98.6
07-1906	LT103	LT100	12280	51225	21-22	9.2	11.80	64.10	0.170	0.110	0.070	<0.05	3.470	9.1	98.0
07-1907	MZ	MZ	12280	51225	25-26	14.1	12.40	56.60	0.200	0.110	0.070	<0.05	1.270	13.2	97.9
07-1910	SU	SU	12290	51225	0-1	67.4	10.70	11.50	0.270	0.210	0.070	0.670	0.505	6.5	97.8
07-1911	CV203HP	CV200	12290	51225	1-2	69.2	12.60	8.01	0.360	0.360	0.110	0.770	0.810	7.2	99.2
07-1913	CV104HP	CV100	12290	51225	9-10	28.3	18.60	40.90	0.300	0.130	0.160	0.080	1.810	8.4	98.7
07-1915	LT103	LT100	12290	51225	17-18	5.6	10.90	72.50	0.120	0.100	0.050	<0.05	3.260	5.4	98.0
07-1917	MZ	MZ	12290	51225	19-20	4.8	10.60	66.80	0.180	0.100	0.050	<0.05	2.740	12.4	97.7
07-1923	SU	SU	12300	51225	0-1	77.7	7.34	8.25	0.080	0.030	0.040	0.690	0.447	3.8	98.4
07-1924	CV203HP	CV200	12300	51225	2-3	63.9	15.40	7.37	0.430	0.210	0.130	0.860	0.645	9.5	98.5
07-1925	CV104HP	CV100	12300	51225	6-7	43.1	19.20	22.00	0.460	0.210	0.240	0.340	1.110	12.3	99.0
07-1927	LT103	LT100	12300	51225	19-20	6.0	14.80	67.80	0.150	0.130	0.070	<0.05	2.630	5.9	97.5
07-1928	LT103	LT100	12300	51225	20-21	3.6	9.98	76.70	0.080	0.070	0.040	<0.05	2.460	4.6	97.5
07-1936	SU	SU	12313	51225	0-1	74.0	9.18	10.30	0.080	0.060	0.040	0.670	0.521	4.2	99.0
07-1937	CV203HP	CV200	12313	51225	2-3	64.6	14.90	8.38	0.450	0.170	0.220	0.880	0.697	7.9	98.2
07-1938	CV104HP	CV100	12313	51225	5-6	45.3	18.10	23.80	0.610	0.240	0.240	0.430	0.853	9.9	99.5
07-1940	LT103	LT100	12313	51225	18-19	7.9	20.30	59.50	0.170	0.130	0.070	<0.05	1.910	8.6	98.6
07-1942	MZ	MZ	12313	51225	20-21	2.5	8.77	78.60	0.100	0.060	0.040	<0.05	1.760	5.8	97.6
07-1945	CV203HP	CV200	12320	51225	2-3	64.9	15.20	8.19	0.400	0.220	0.180	0.880	0.693	8.0	98.6
07-1946	CV104HP	CV100	12320	51225	6-7	41.9	16.40	28.60	0.500	0.210	0.190	0.260	0.903	10.0	98.9
07-1947	LT103	LT100	12320	51225	16-17	14.7	23.00	48.90	0.270	0.210	0.120	<0.05	1.710	9.4	98.3
07-1949	MZ	MZ	12320	51225	20-21	1.9	4.38	84.10	0.070	0.060	0.030	<0.05	3.040	4.8	98.4
07-1952	CV203HP	CV200	12330	51225	2-3	62.8	15.80	7.32	0.600	0.310	0.200	0.880	0.586	9.7	98.2
07-1953	CV104HP	CV100	12330	51225	6-7	43.9	21.00	20.40	0.700	0.220	0.230	0.350	0.961	11.3	99.1
07-1954	LT103	LT100	12330	51225	16-17	10.7	23.00	52.40	0.200	0.180	0.090	<0.05	1.620	10.0	98.2
07-1956	MZ	MZ	12330	51225	19-20	5.9	18.80	53.90	0.220	0.110	0.050	<0.05	1.350	16.6	96.9
07-1958	CV203HP	CV200	12340	51225	1-2	61.8	15.80	8.36	0.580	0.280	0.150	0.860	0.594	9.6	98.1
07-1959	CV104HP	CV100	12340	51225	7-8	40.7	23.50	21.10	0.430	0.210	0.180	0.250	1.110	10.8	98.3
07-1961	LT103	LT100	12340	51225	14-15	10.8	27.90	48.50	0.200	0.180	0.090	<0.05	1.300	9.7	98.7
07-1963	MZ	MZ	12340	51225	18-19	11.2	30.40	33.40	0.220	0.110	0.050	<0.05	0.790	20.5	96.6
07-1965	CV203HP	CV200	12350	51225	3-4	58.7	17.20	9.47	0.450	0.170	0.190	0.790	0.778	11.0	98.7
07-1966	CV104HP	CV100	12350	51225	8-9	35.1	21.50	27.70	0.360	0.180	0.190	0.170	1.240	11.9	98.4
07-1969	LT103	LT100	12350	51225	14-15m	11.2	27.70	46.90	0.130	0.150	0.080	<0.05	1.280	10.1	97.5
07-1971	MZ	MZ	12350	51225	17-18m	11.6	22.40	46.60	0.250	0.110	0.080	<0.05	0.924	16.9	98.9
07-1973	SU	SU	12360	51225	0-1m	73.9	8.26	10.50	0.080	0.030	0.030	0.590	0.481	4.6	98.5
07-1974	CV203HP	CV200	12360	51225	3-4m	61.7	16.00	10.80	0.360	0.150	0.180	0.770	0.768	8.4	99.1

APPENDIX X Mt.McCLURE DATA

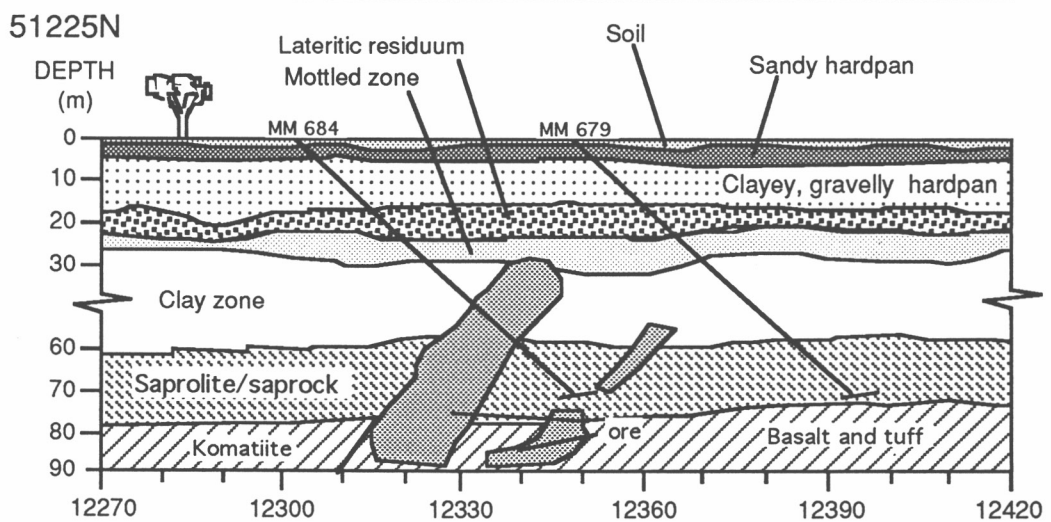
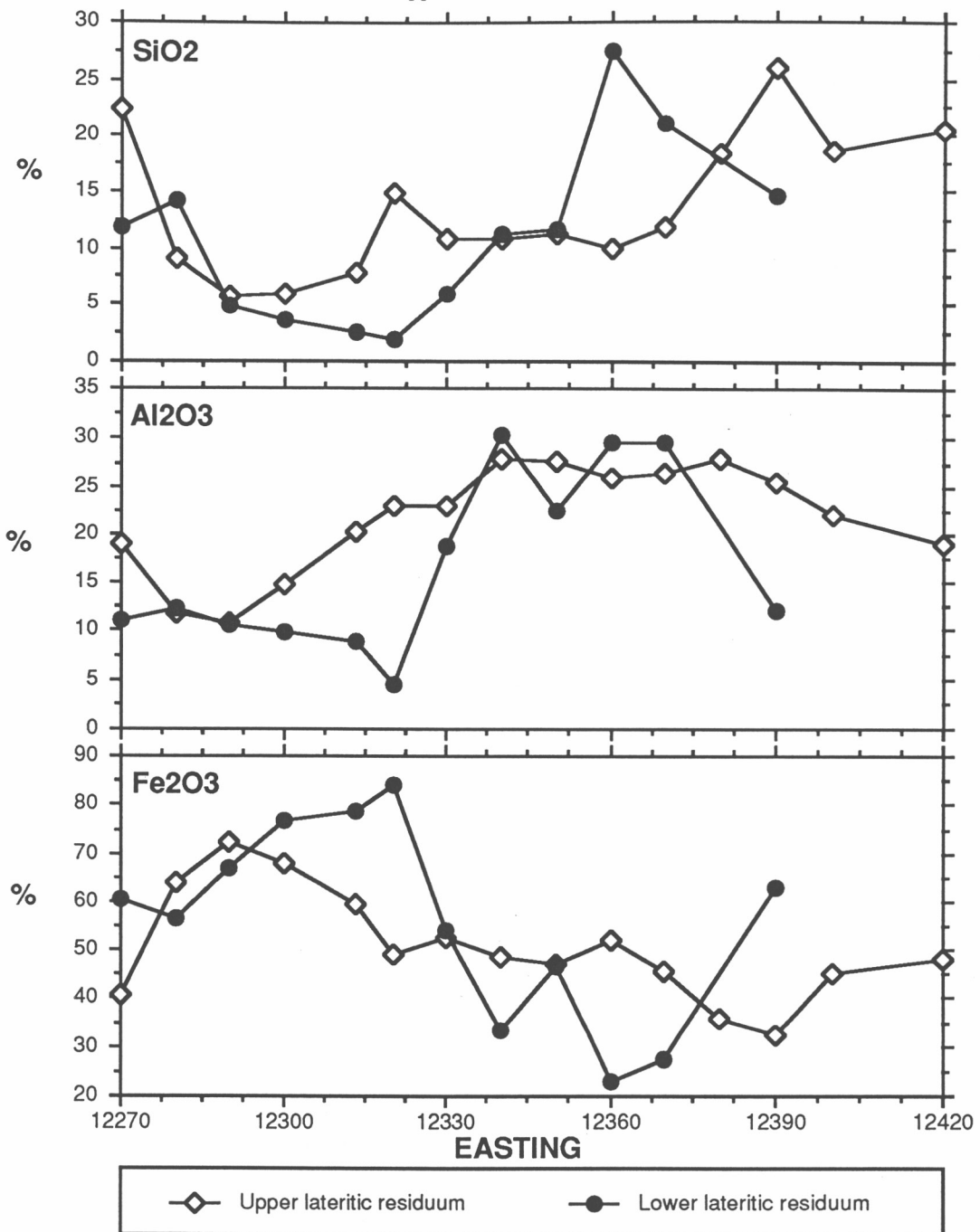
sampno	samptype	box	easting	northing	depth	SiO2	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	LOI	TOTAL
					m	%	%	%	%	%	%	%	%	%	%
07-1975	CV104HP	CV100	12360	51225	10-11m	30.5	21.30	34.80	0.350	0.150	0.200	0.100	1.640	9.3	98.4
07-1976	LT103	LT100	12360	51225	12-13m	10.0	26.00	52.20	0.130	0.130	0.080	<0.05	1.040	9.1	98.7
07-1978	MZ	MZ	12360	51225	15-16m	27.4	29.60	22.80	0.250	0.110	0.150	<0.05	1.710	16.2	98.2
07-1980	SU	SU	12370	51225	0-1m	71.9	8.35	12.10	0.070	0.030	0.040	0.590	0.488	4.5	98.1
07-1981	CV203HP	CV200	12370	51225	2-3m	64.4	15.00	8.08	0.410	0.280	0.220	0.920	0.695	8.4	98.4
07-1982	CV104HP	CV100	12370	51225	6-7m	37.8	17.00	32.00	0.460	0.180	0.190	0.260	0.987	9.7	98.6
07-1984	LT103	LT100	12370	51225	13-14m	11.9	26.30	45.50	0.150	0.110	0.080	<0.05	1.230	13.5	98.8
07-1985	MZ	MZ	12370	51225	15-16m	21.1	29.70	27.50	0.220	0.110	0.110	<0.05	1.100	18.0	97.9
07-1987	SU	SU	12380	51225	0-1m	75.1	7.94	10.60	0.070	0.030	0.030	0.610	0.459	3.9	98.7
07-1988	CV203HP	CV200	12380	51225	2-3m	65.2	15.30	7.93	0.480	0.270	0.180	0.930	0.642	8.3	99.3
07-1989	CV104HP	CV100	12380	51225	8-9m	37.2	21.50	25.30	0.450	0.210	0.190	0.230	1.370	13.2	99.6
07-1991	MZ	MZ	12380	51225	13-14m	18.4	27.80	35.90	0.170	0.110	0.110	<0.05	1.170	15.6	99.3
07-1993	SU	SU	12390	51225	0-1m	73.8	9.47	9.14	0.070	0.040	0.040	0.650	0.463	4.6	98.3
07-1994	CV203HP	CV200	12390	51225	3-4m	59.7	17.30	9.67	0.450	0.710	0.160	0.830	0.769	9.2	98.8
07-1995	CV104HP	CV100	12390	51225	7-8m	40.7	20.30	25.60	0.430	0.290	0.230	0.240	1.260	10.5	99.5
07-1997	LT103	LT100	12390	51225	13-14m	25.9	25.30	32.10	0.120	0.080	0.130	<0.05	1.040	14.0	98.7
07-1999	MZ	MZ	12390	51225	17-18m	14.6	12.10	63.00	0.080	0.080	0.070	<0.05	0.628	8.9	99.4
07-2001	CV203HP	CV200	12400	51225	3-4m	59.0	16.60	11.60	0.400	0.140	0.160	0.810	0.734	9.4	98.9
07-2002	CV104HP	CV100	12400	51225	7-8m	38.4	20.30	23.90	0.510	0.810	0.240	0.250	1.140	11.6	97.1
07-2004	MZ	MZ	12400	51225	13-14m	18.6	22.00	45.10	0.120	0.100	0.110	<0.05	0.672	12.5	99.2
07-2006	CV203HP	CV200	12420	51225	2-3m	64.9	14.40	7.97	0.450	0.670	0.160	0.900	0.622	8.2	98.3
07-2007	CV104HP	CV100	12420	51225	6-7m	41.7	18.70	23.90	0.730	0.210	0.230	0.330	0.879	11.6	98.3
07-2009	MZ	MZ	12420	51225	14-15m	20.5	19.10	48.00	0.080	0.080	0.110	<0.05	0.539	10.6	99.0

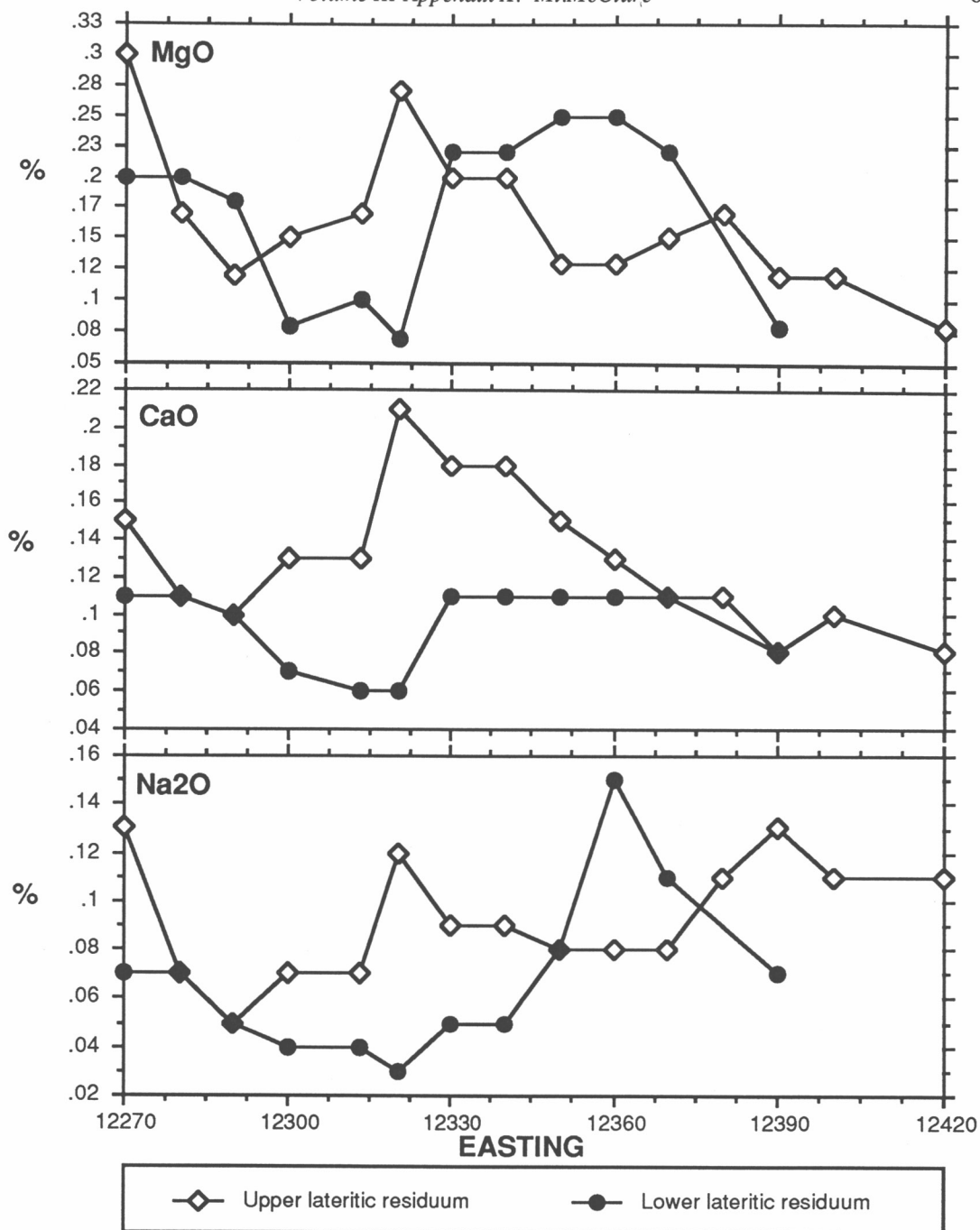
APPENDIX X Mt.McCLURE DATA

Sample No.	Mn	Cr	V	Cu	Pb	Zn	Ni	Co	As	Sb	Bi	Mo	Ag	Sn	Ge	Ga	W	Ba	Zr	Nb	Se	Be	Au
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb
07-1894	2870	1030	126	37	0	201	247	29	32	0.66	9	0.66	0.27	4	2	10	8	153	10	1	1	0.66	0.84
07-1895	835	21	18	2990	4	340	130	103	2	2	48	3	1.68	4	2	6	1	38	11	1	46	0.66	2.28
07-1896	3550	153	203	404	10	241	76	44	7	2	96	3	0.68	5	3	15	1	55	39	1	8	0.66	18
07-1897	3480	162	221	367	1	152	129	93	3	0.66	28	0.66	0.25	3	4	14	5	32	41	1	7	0.66	3.4
07-1898	317	338	225	59	30	21	31	10	7	<2	<2	<2	0.35	4	<2	15	4	145	157	7	1	1	8
07-1899	344	251	173	41	18	38	41	11	1	2	<2	2	0.16	3	<2	25	4	191	230	12	1	1	7
07-1900	579	555	463	86	12	60	64	19	24	2	<2	<2	0.18	3	<2	33	3	108	197	13	3	1	10
07-1902	321	2650	734	99	23	22	404	77	146	4	<2	3	0.53	2	2	48	7	89	200	13	1	1	13
07-1903	137	4690	1110	117	3	42	189	52	351	4	4	5	0.13	3	<2	49	3	188	130	8	4	1	24
07-1904	197	161	129	30	13	33	34	10	3	<2	<2	3	0.35	2	<2	22	3	236	199	14	1	1	8
07-1905	731	610	473	79	13	49	70	16	31	2	<2	<2	0.23	4	<2	37	1	181	206	10	1	1	10
07-1906	342	4930	1170	46	22	29	212	53	129	5	8	5	0.22	10	<2	98	20	65	246	18	3	1	14
07-1907	181	7320	1520	138	6	77	207	58	265	4	4	4	0.23	4	<2	45	7	133	126	4	6	<1	16
07-1910	1580	198	180	76	42	34	55	34	6	<2	<2	2	0.27	<2	<2	16	1	1120	175	9	1	2	5
07-1911	383	182	142	43	20	32	34	12	7	<2	<2	2	0.21	2	<2	20	5	248	188	10	1	1	5
07-1913	148	2390	956	79	20	27	90	10	44	<2	<2	<2	0.79	3	2	55	6	112	210	9	1	1	580
07-1915	241	6880	1230	41	21	15	104	21	88	5	8	5	0.52	10	<2	105	17	25	231	12	1	1	11
07-1917	204	5310	1250	32	1	24	53	15	187	<2	14	5	0.3	9	<2	98	11	16	186	9	3	1	21
07-1923	139	264	146	23	11	20	23	5	2	<2	<2	2	0.28	2	<2	13	1	156	180	9	1	1	55
07-1924	529	155	134	33	13	37	41	18	3	<2	<2	<2	0.2	4	<2	22	6	313	203	12	1	1	13
07-1925	571	505	428	91	11	54	63	19	14	2	<2	<2	0.1	5	2	35	1	330	169	13	1	1	9
07-1927	261	6310	1020	36	13	23	113	20	57	3	14	3	0.28	10	3	90	17	49	206	11	4	1	100
07-1928	234	7420	1110	18	2	23	57	16	63	3	16	6	0.51	7	2	102	16	63	173	11	3	<1	73
07-1936	264	311	174	27	13	24	25	8	4	2	<2	2	0.2	4	<2	13	3	161	183	7	1	1	6
07-1937	216	177	135	40	15	45	42	12	7	<2	2	3	0.29	4	<2	22	5	343	214	12	1	1	28
07-1938	520	396	378	96	na	64	64	22	na	na	na	na	0.31	na	na	na	na	486	na	na	na	1	10
07-1940	157	4690	845	48	24	42	146	23	73	<2	14	4	0.46	5	3	72	15	101	177	9	1	1	190
07-1942	115	5970	1060	27	3	34	44	10	85	<2	23	6	0.4	10	2	83	18	30	139	12	1	1	75
07-1945	383	163	146	33	14	41	40	18	6	<2	<2	3	0.21	3	<2	23	7	305	213	13	1	2	4
07-1946	309	571	464	122	8	67	67	24	25	<2	<2	2	0.26	3	<2	31	5	678	123	8	1	1	23
07-1947	147	4070	755	58	32	37	168	26	66	3	14	5	0.64	7	4	67	14	62	184	8	1	1	1060
07-1949	212	2990	1730	31	0	53	25	6	137	6	36	8	0.64	15	3	66	20	15	159	9	4	<1	250
07-1952	314	195	119	35	12	43	44	12	2	<2	<2	<2	0.33	4	<2	25	3	416	171	10	1	1	11
07-1953	317	515	401	97	8	60	70	21	20	<2	2	<2	0.19	<2	<2	36	3	166	153	6	1	1	16
07-1954	135	3690	886	55	33	39	171	25	55	3	18	4	0.7	8	4	72	12	44	169	7	1	1	1320
07-1956	75	9610	444	81	3	53	94	26	80	3	13	3	0.42	2	<2	28	12	19	205	5	9	1	550
07-1958	525	304	132	38	13	44	55	17	6	<2	<2	<2	0.34	5	<2	23	3	824	172	12	1	1	14
07-1959	365	710	439	83	8	45	76	16	24	<2	<2	2	0.27	4	<2	36	1	129	182	8	1	1	42
07-1961	154	2970	699	43	44	37	123	16	79	3	14	3	0.7	6	4	66	10	73	162	5	1	2	2180
07-1963	43	2820	282	339	4	40	118	19	62	<2	32	5	0.66	9	4	35	13	17	161	3	12	1	1100
07-1965	361	207	162	41	14	42	41	12	6	<2	<2	3	0.46	3	<2	27	5	341	230	15	1	1	7
07-1966	311	965	595	86	16	40	73	15	26	4	<2	<2	0.4	4	2	44	1	338	181	10	1	1	210
07-1969	146	3930	947	36	38	40	103	17	75	<2	11	2	0.53	7	2	66	11	120	156	6	4	1	3490
07-1971	75	1460	232	1100	24	40	105	20	24	<2	43	6	1.48	26	4	33	18	19	136	6	31	1	1040
07-1973	271	304	182	31	15	23	26	9	8	<2	<2	2	0.24	3	<2	13	4	162	170	10	1	1	16
07-1974	389	216	190	42	17	40	41	16	4	<2	<2	2	0.55	7	<2	24	3	264	214	13	1	1	11

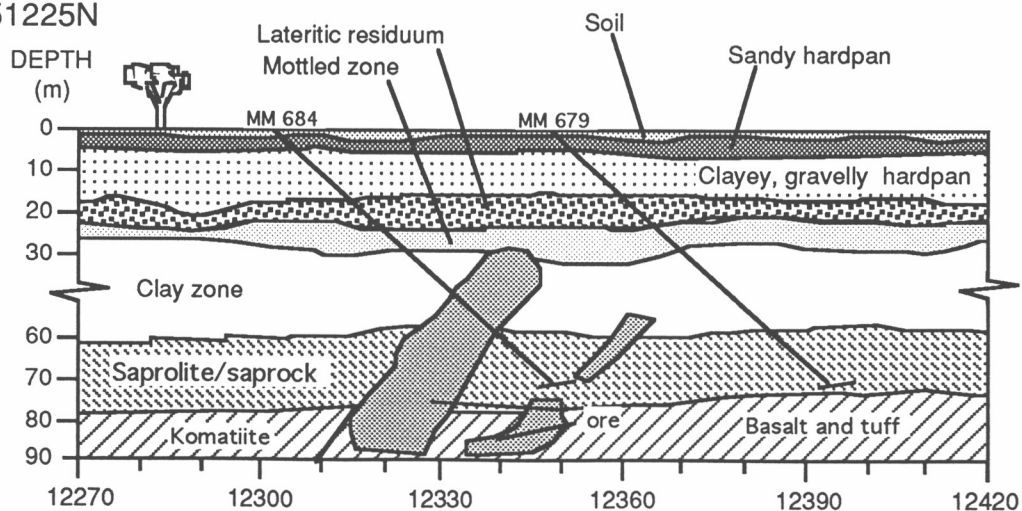
APPENDIX X Mt.McCLURE DATA

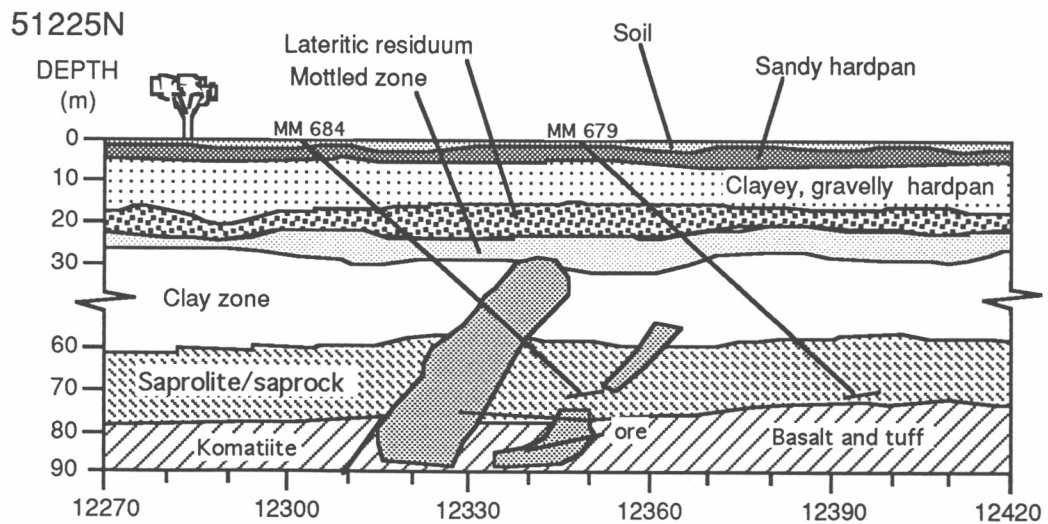
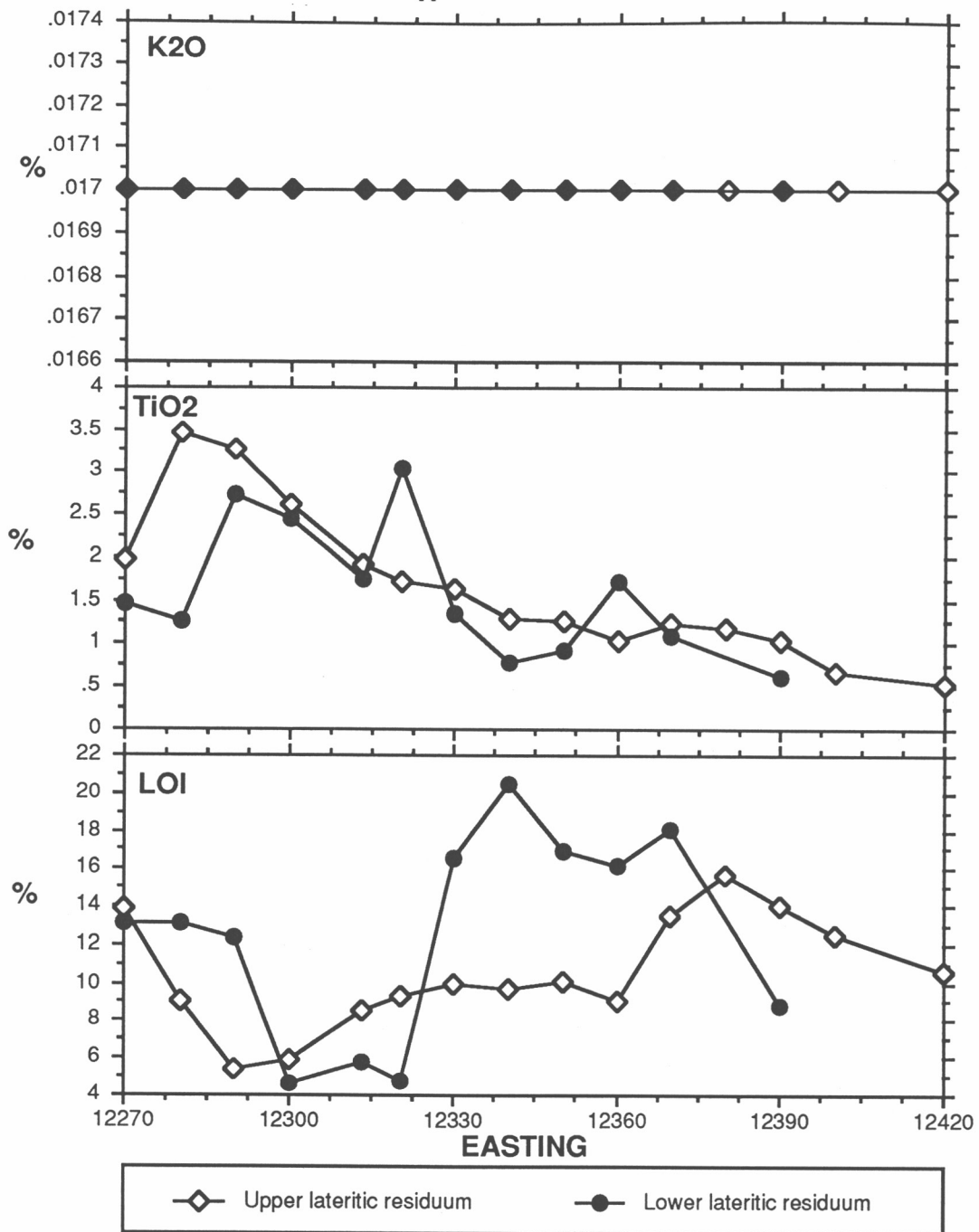
Sample No.	Mn	Cr	V	Cu	Pb	Zn	Ni	Co	As	Sb	Bi	Mo	Ag	Sn	Ge	Ga	W	Ba	Zr	Nb	Se	Be	Au
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb
07-1975	162	2160	790	71	20	29	87	12	51	2	<2	<2	0.39	2	<2	51	4	95	209	11	1	1	510
07-1976	151	2890	742	43	45	37	93	12	100	<2	10	<2	0.86	6	2	59	12	266	152	5	1	2	960
07-1978	135	951	514	96	11	40	201	45	38	2	11	2	0.39	6	3	33	21	20	162	6	4	1	6600
07-1980	231	296	196	31	14	25	27	8	10	2	<2	3	0.24	4	<2	15	4	148	169	6	1	1	27
07-1981	209	160	140	35	14	41	39	13	5	<2	<2	<2	0.22	3	<2	22	6	372	211	12	1	1	4
07-1982	408	602	563	105	11	70	61	24	27	3	<2	3	0.25	2	2	34	1	401	128	9	3	1	31
07-1984	170	1580	584	93	31	50	104	25	65	<2	9	<2	0.4	3	4	48	9	229	134	5	6	1	580
07-1985	276	601	330	126	6	47	139	24	24	3	10	<2	0.23	3	4	24	10	42	121	5	4	1	2620
07-1987	203	298	203	20	11	17	21	6	8	2	<2	3	0.41	3	<2	13	6	151	166	9	3	1	7
07-1988	335	158	143	27	13	38	42	13	2	<2	<2	2	0.37	2	<2	23	1	606	208	13	1	1	9
07-1989	211	950	651	68	12	45	77	12	25	3	<2	<2	0.53	3	2	40	4	186	202	9	1	1	100
07-1991	245	848	492	86	15	58	152	24	45	<2	8	<2	0.77	4	4	34	8	112	129	5	6	1	1380
07-1993	236	240	168	23	11	20	21	6	5	2	<2	2	0.38	2	<2	13	1	163	181	8	1	1	6
07-1994	684	187	189	31	15	40	43	17	0	2	<2	4	0.66	2	<2	26	5	395	230	14	1	1	12
07-1995	179	917	663	67	11	42	66	10	25	<2	<2	<2	0.62	3	<2	40	1	183	158	9	1	1	180
07-1997	130	998	703	59	16	25	134	23	65	<2	11	<2	0.52	3	2	39	7	108	149	4	6	1	6860
07-1999	440	421	375	91	26	117	127	15	13	2	4	<2	0.57	5	8	14	1	84	40	1	6	1	740
07-2001	495	200	203	33	17	43	43	17	5	<2	<2	3	0.52	3	<2	25	4	317	221	13	1	1	7
07-2002	320	738	566	68	12	47	70	14	25	2	<2	2	0.5	3	<2	42	1	372	169	10	1	1	150
07-2004	126	919	396	51	27	22	103	8	60	3	8	4	0.46	5	3	24	4	190	111	4	7	1	2300
07-2006	438	173	153	28	13	35	39	14	3	<2	<2	2	0.2	2	<2	22	5	286	218	12	1	1	5
07-2007	279	559	485	78	7	61	69	20	18	2	<2	<2	0.21	5	2	34	1	221	125	8	3	1	15
07-2009	96	670	627	77	45	36	113	8	40	4	9	2	0.38	4	4	25	1	224	133	5	12	1	5570

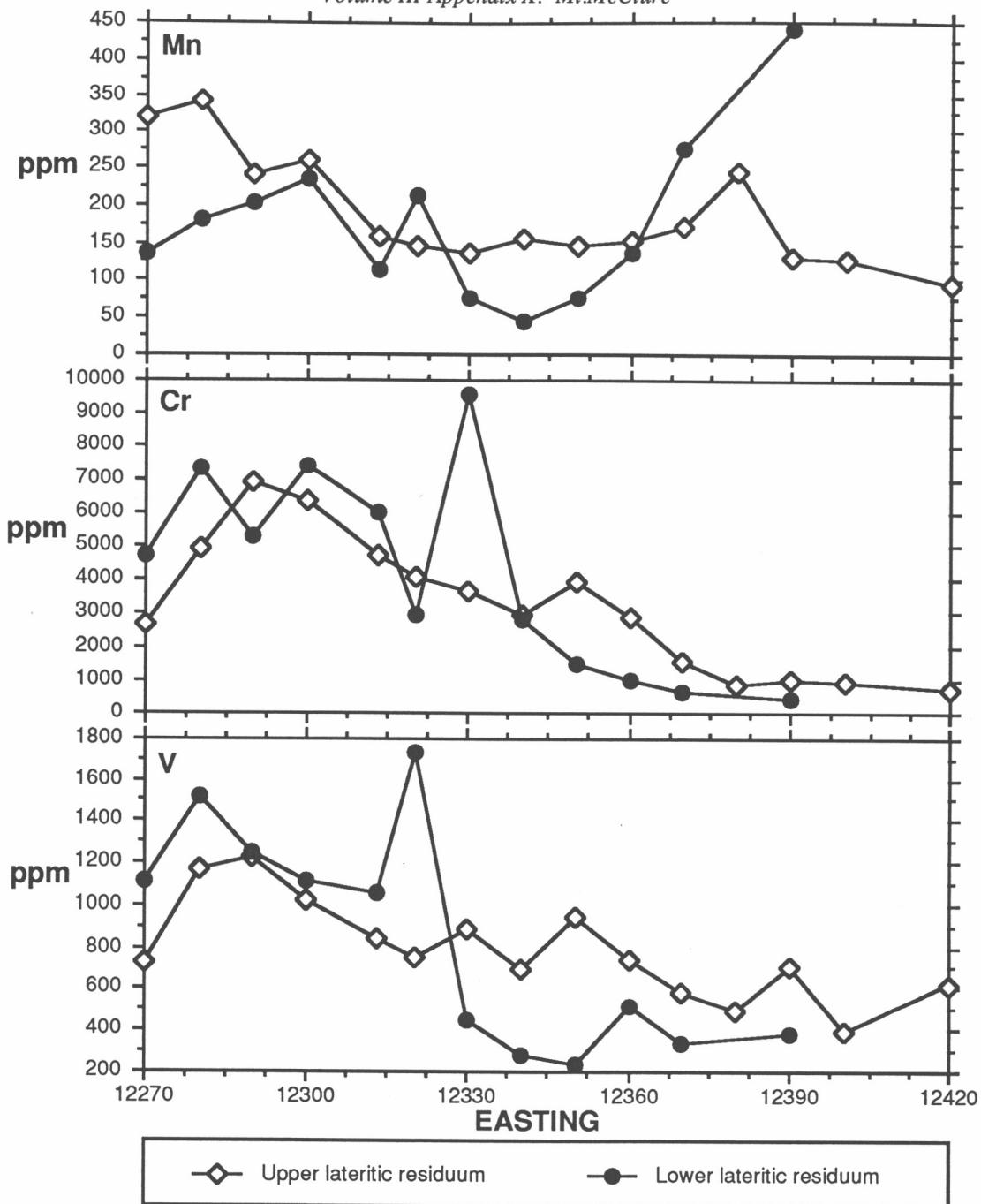




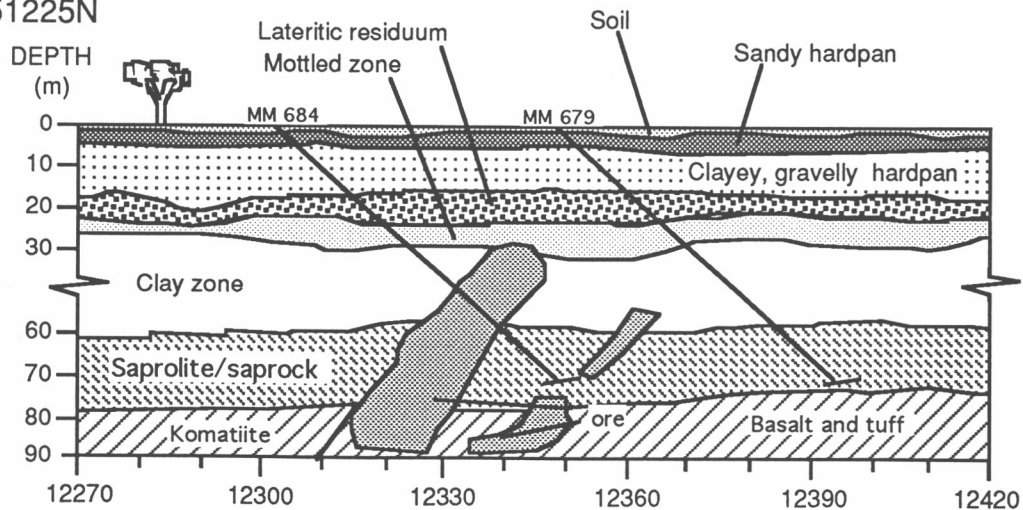
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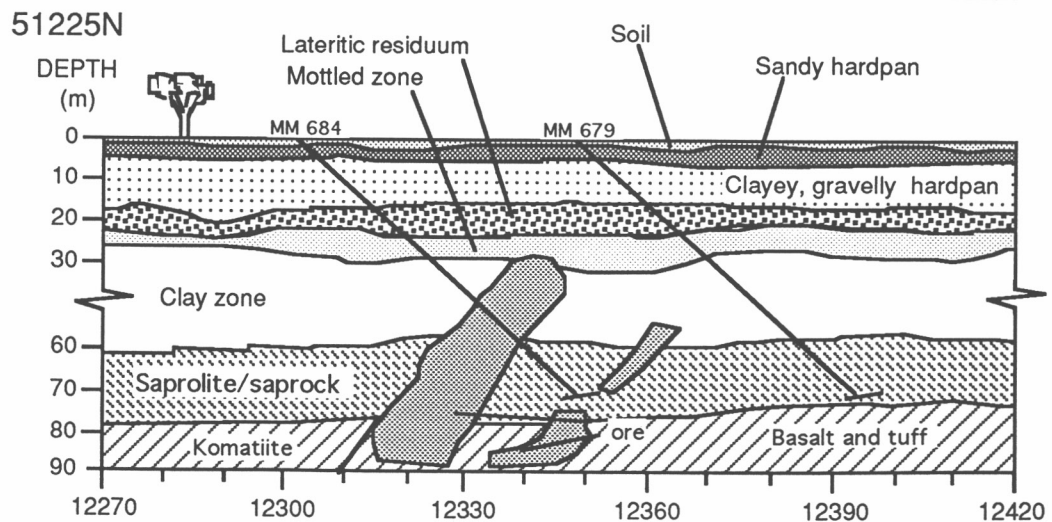
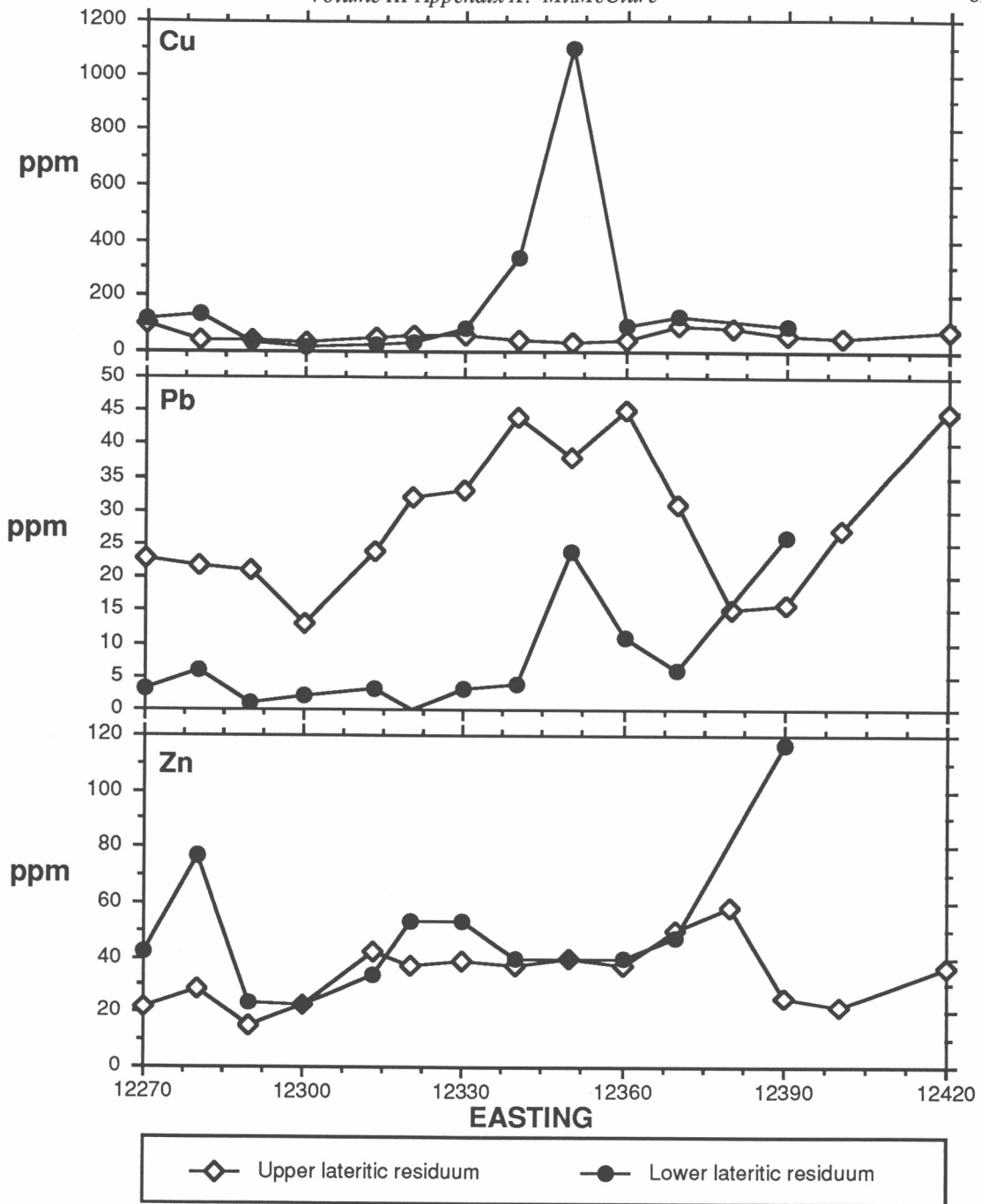


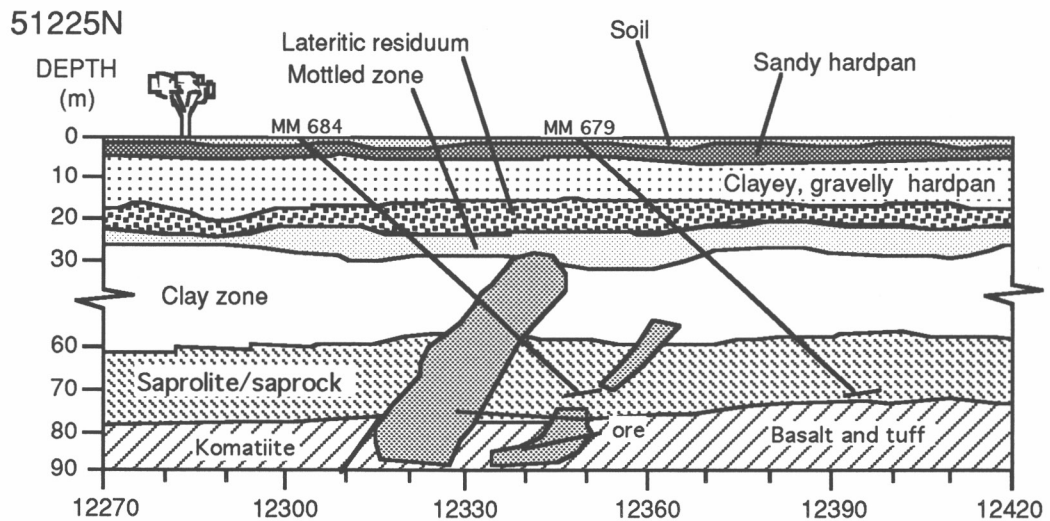
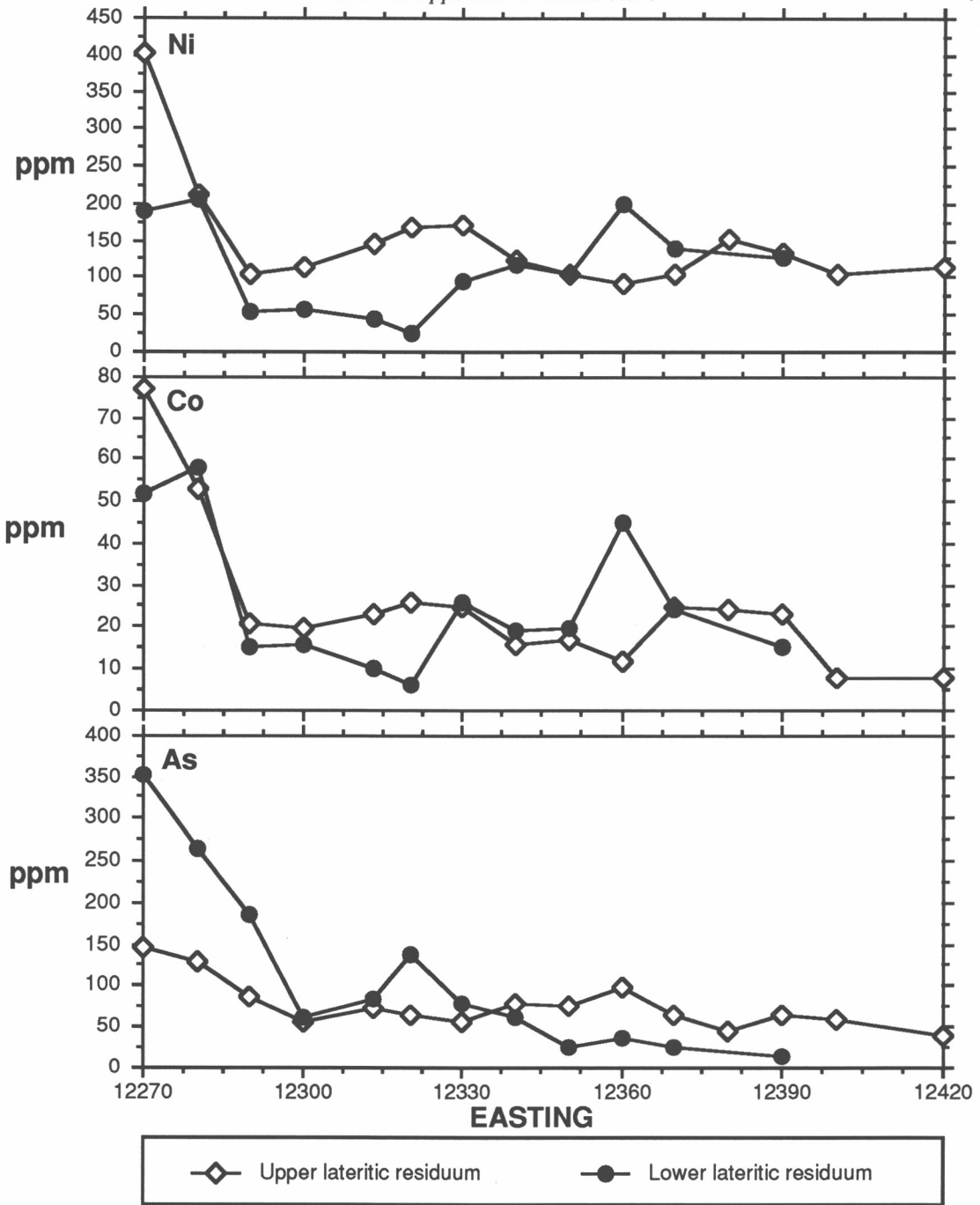


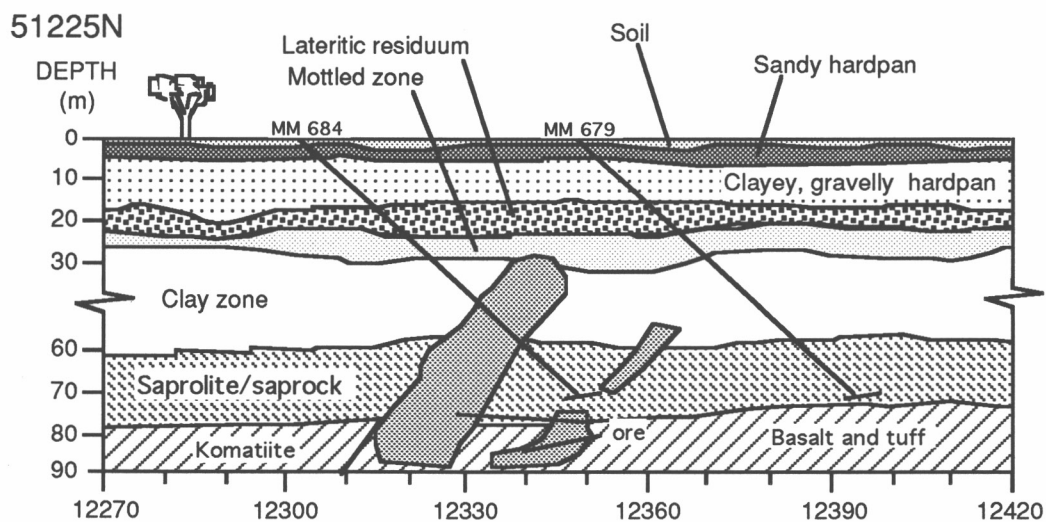
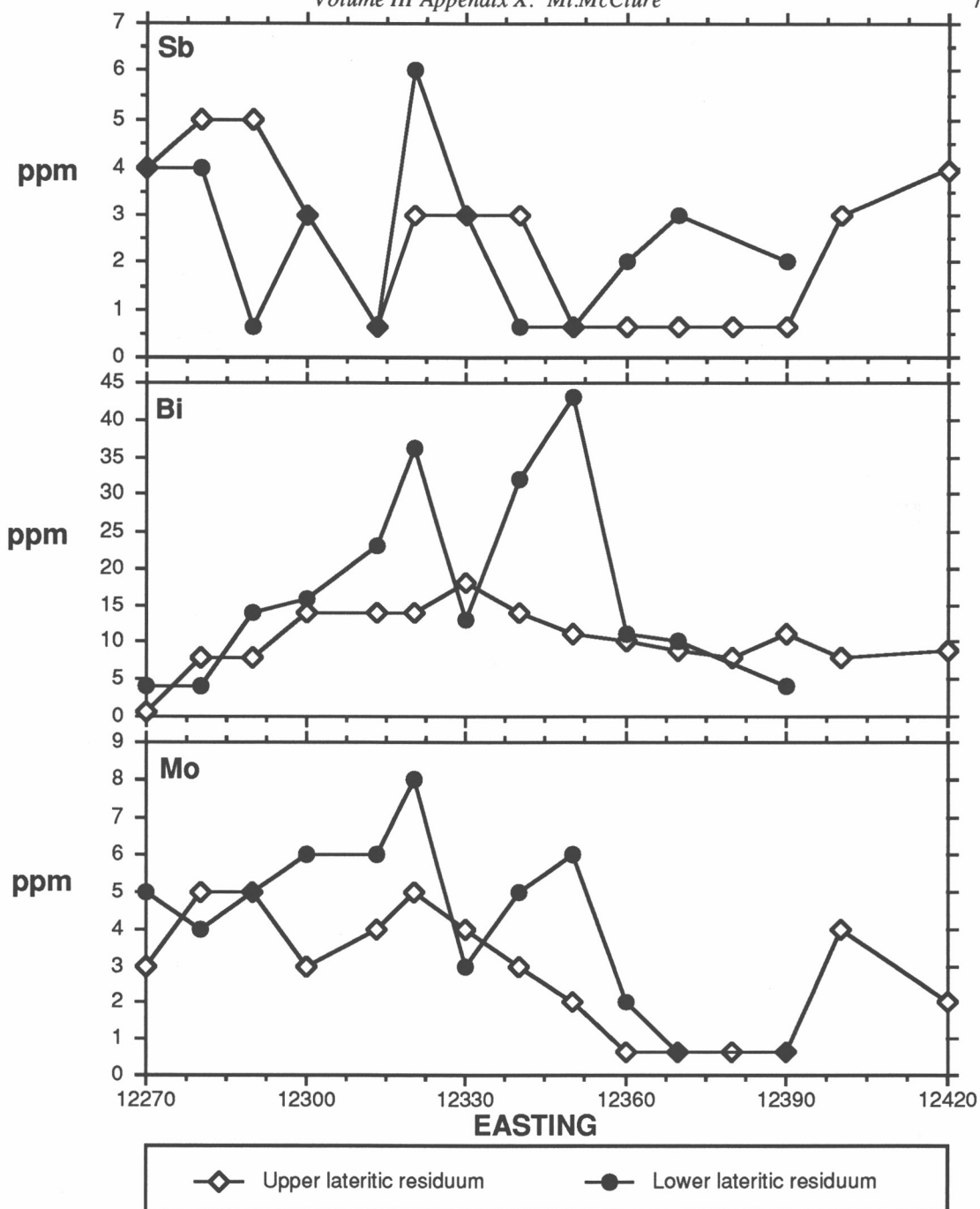


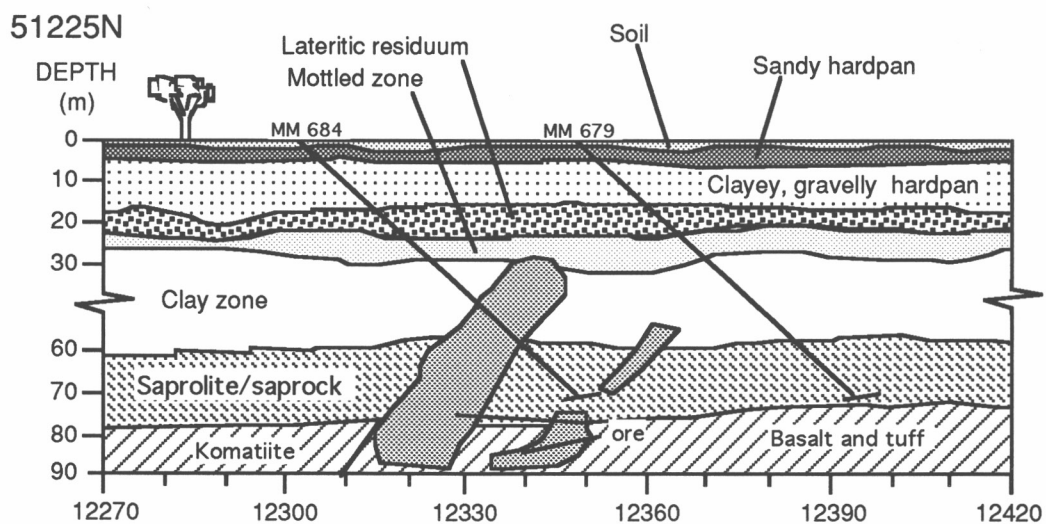
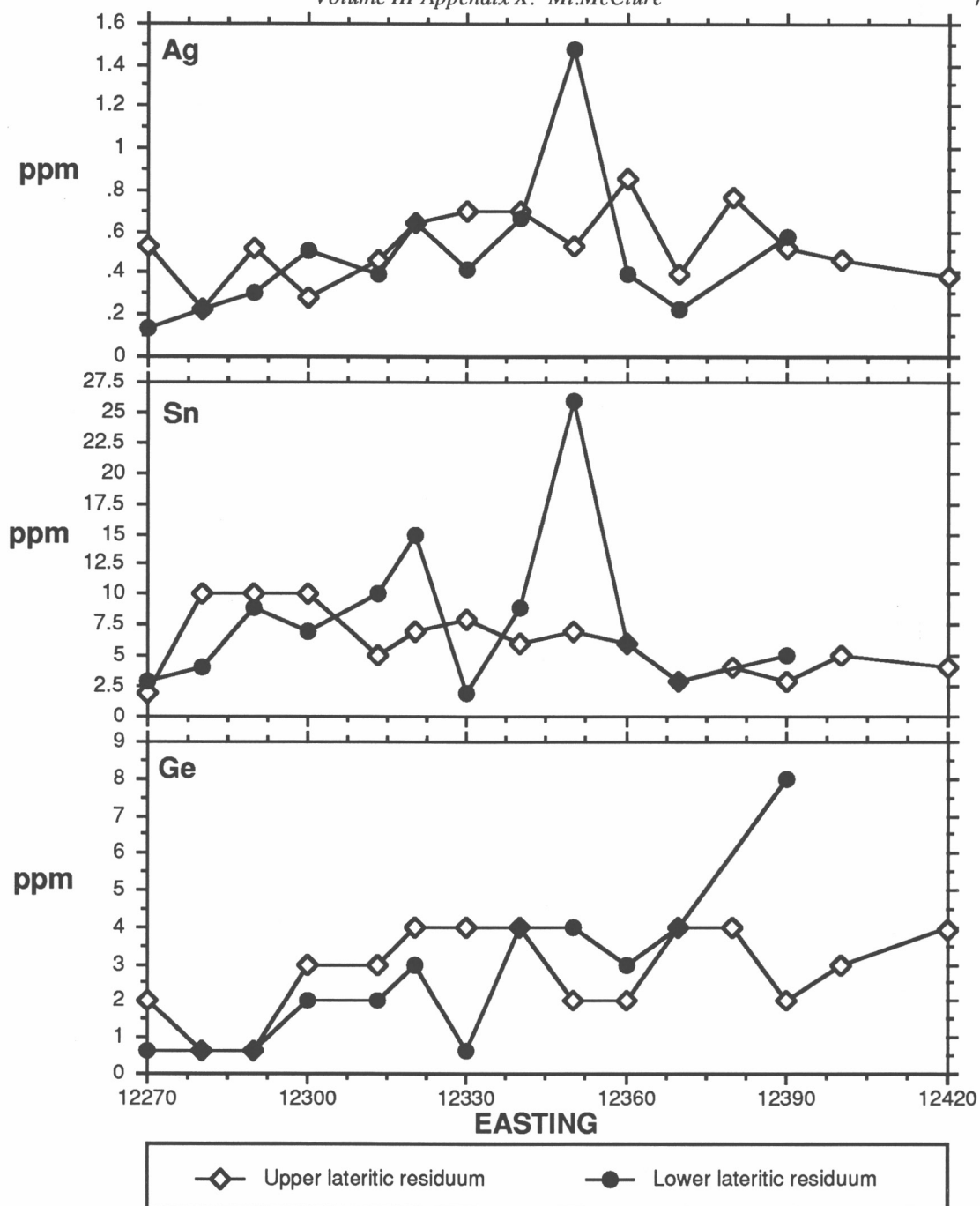
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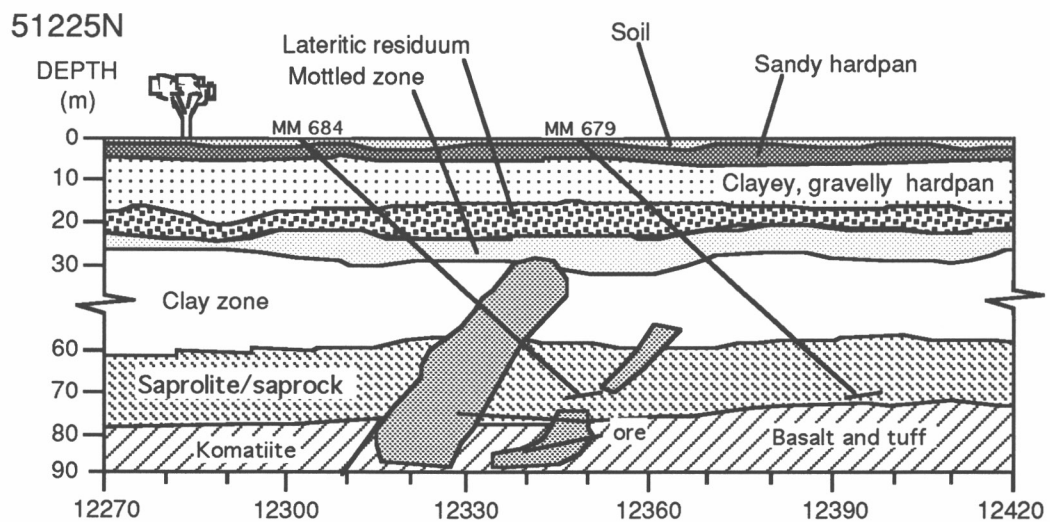
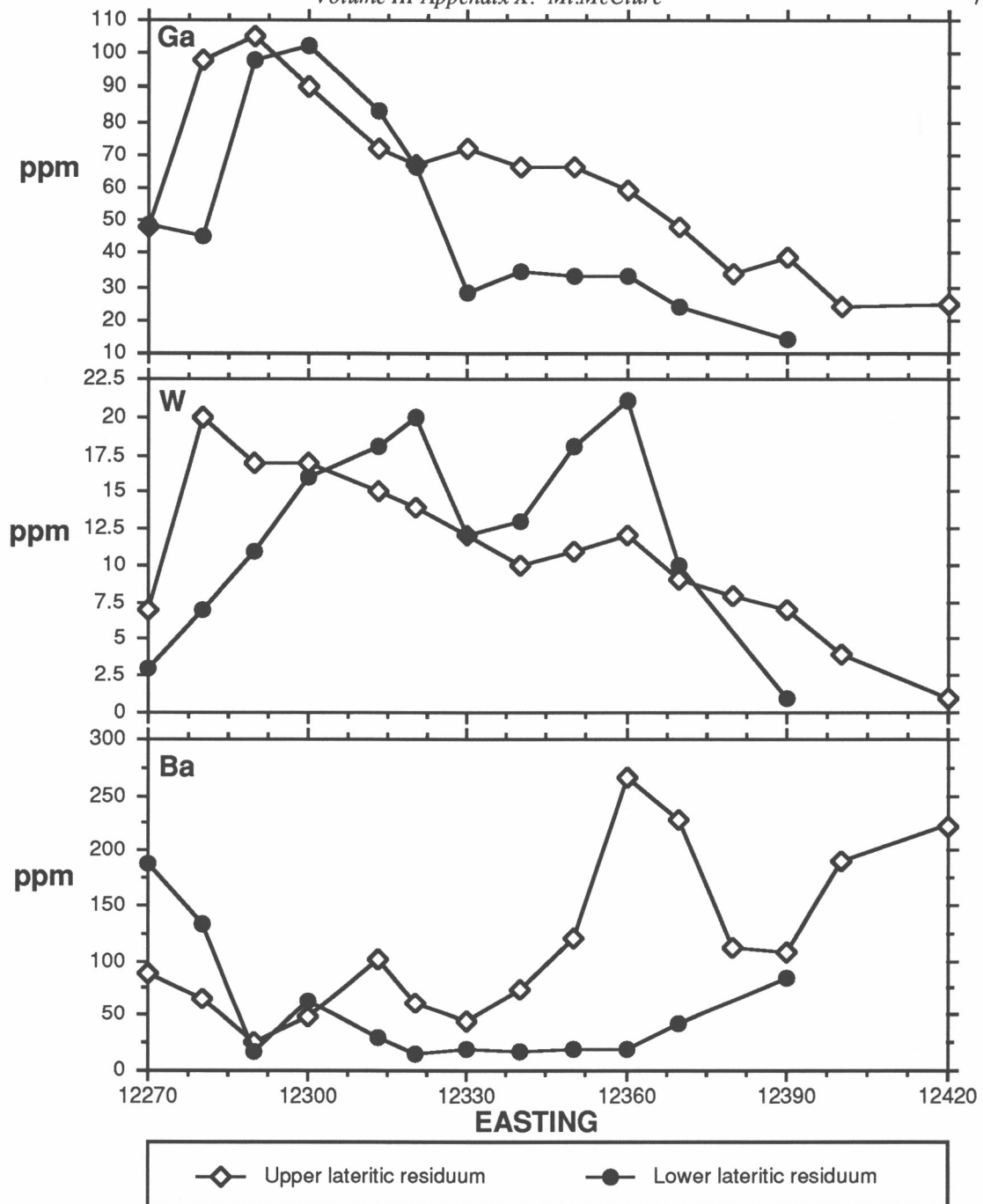


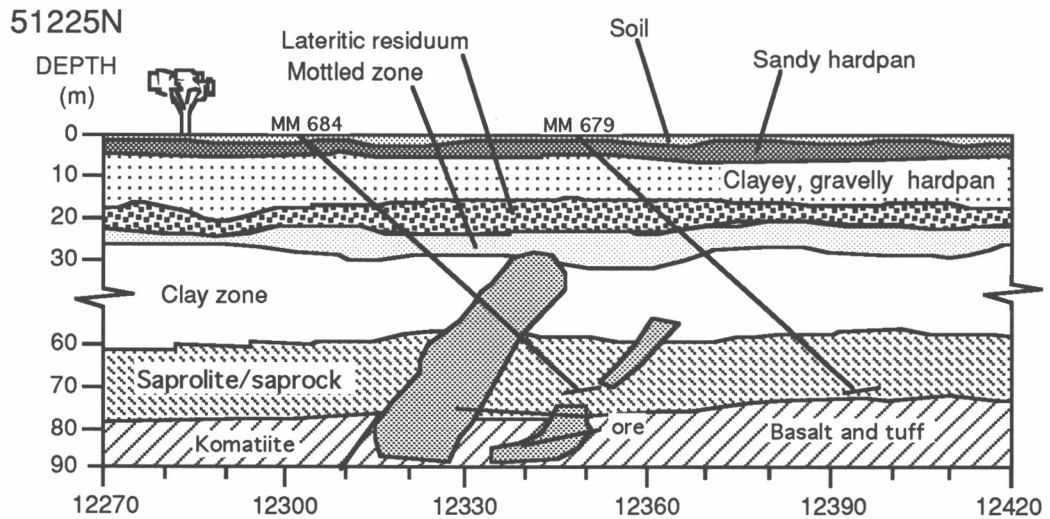
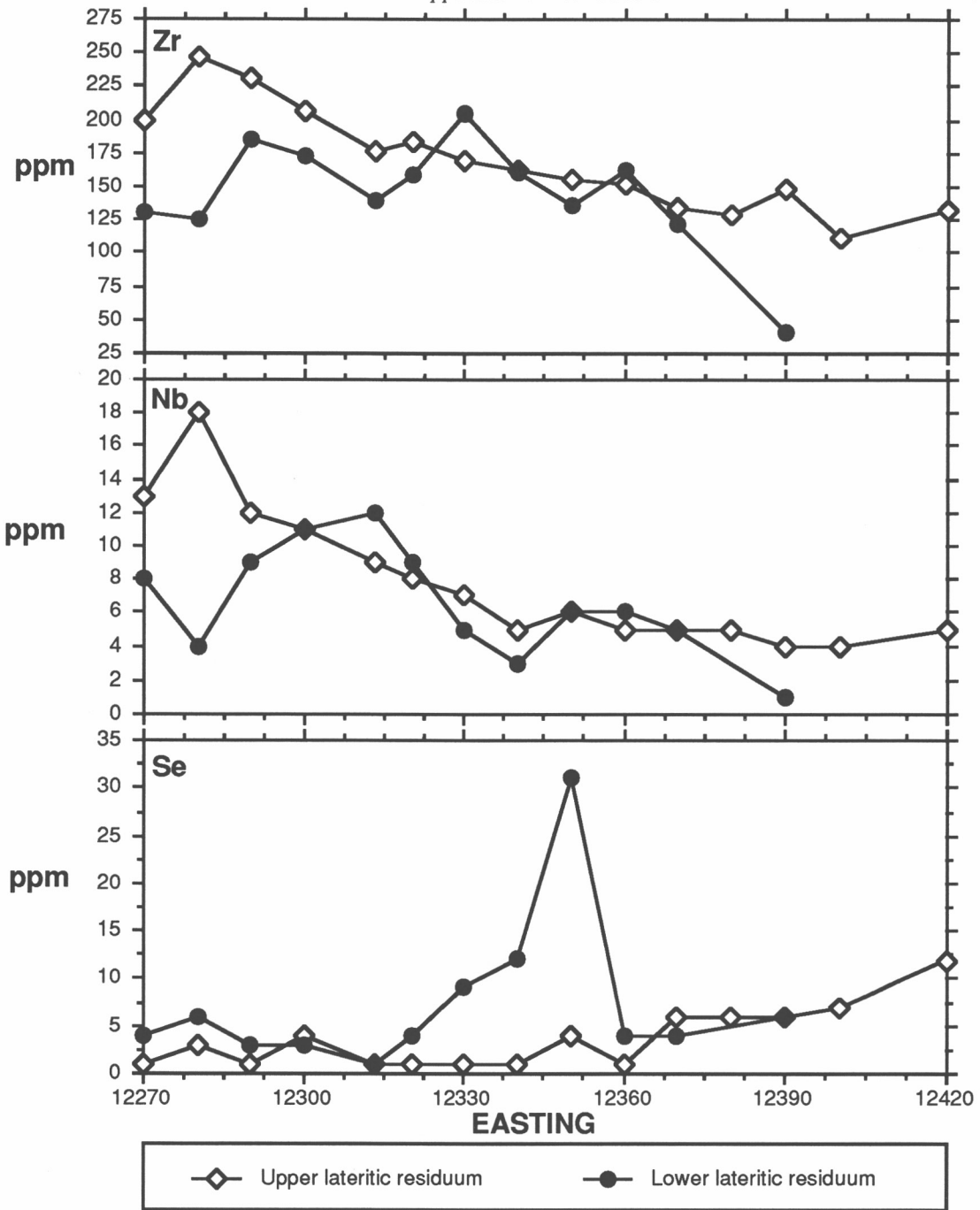


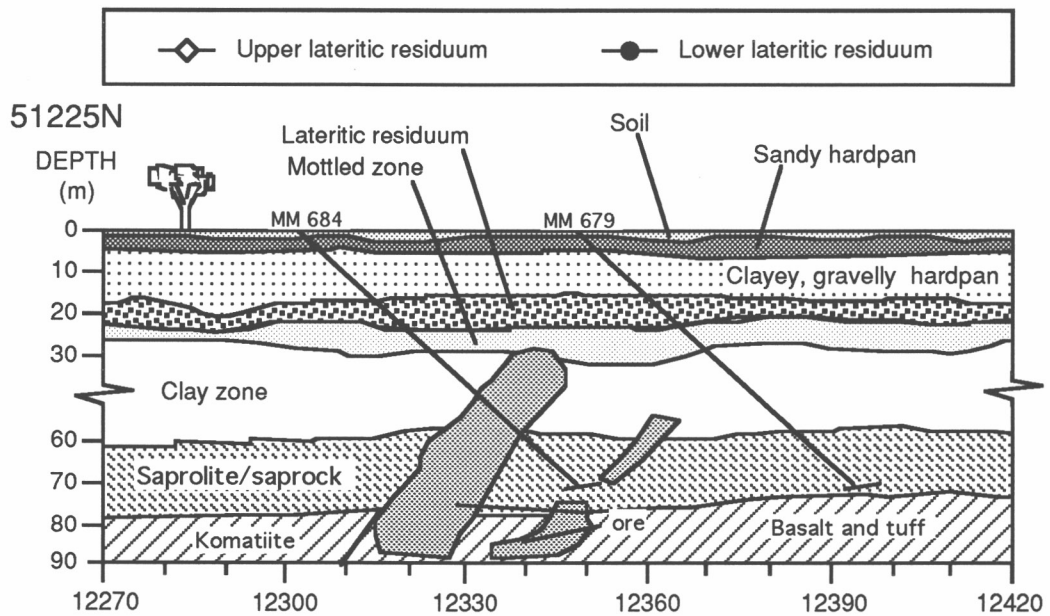
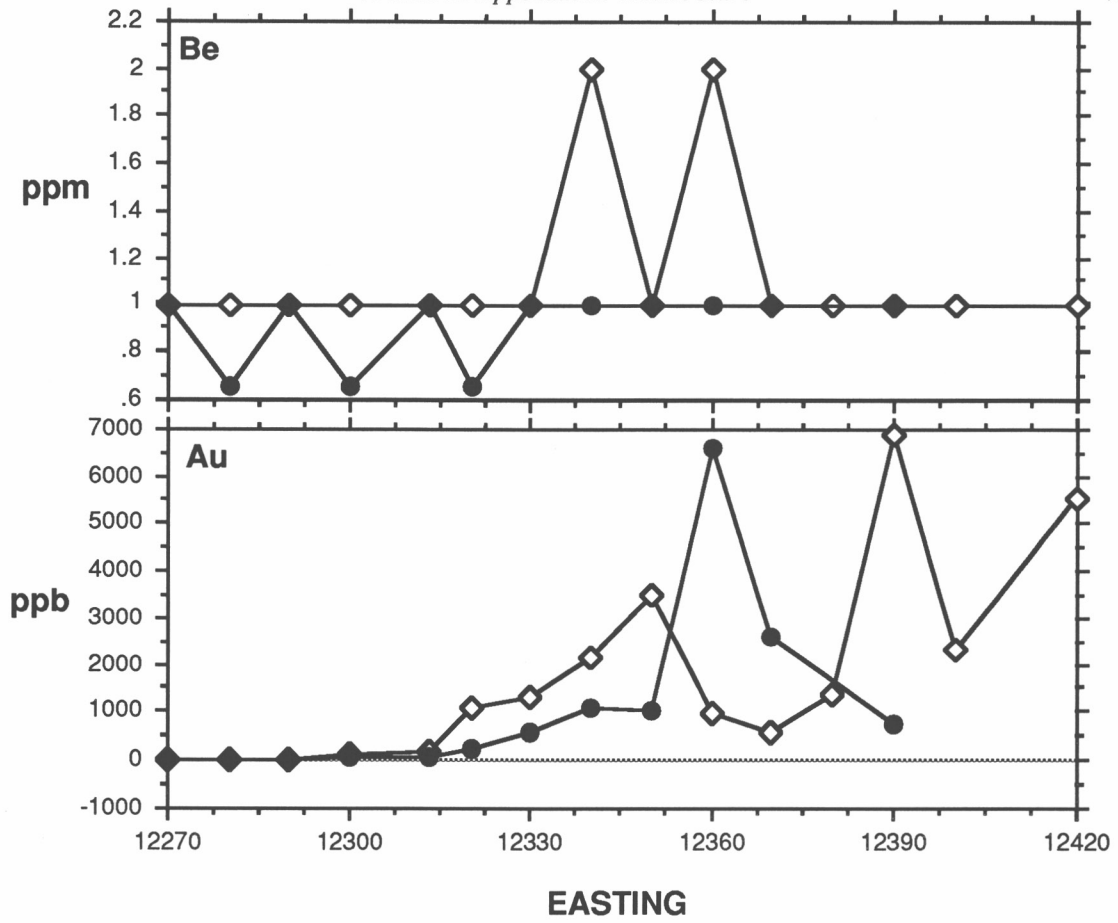


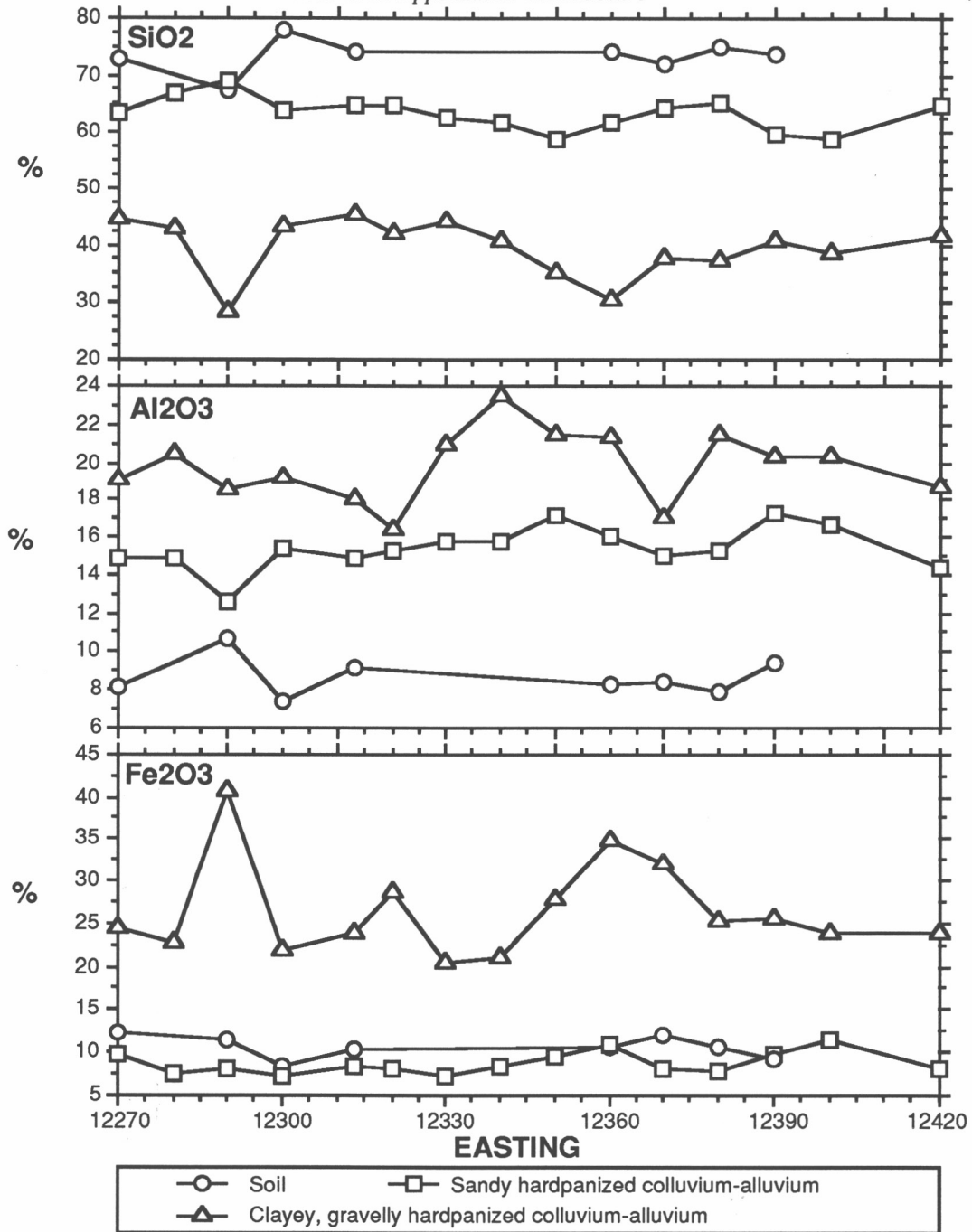




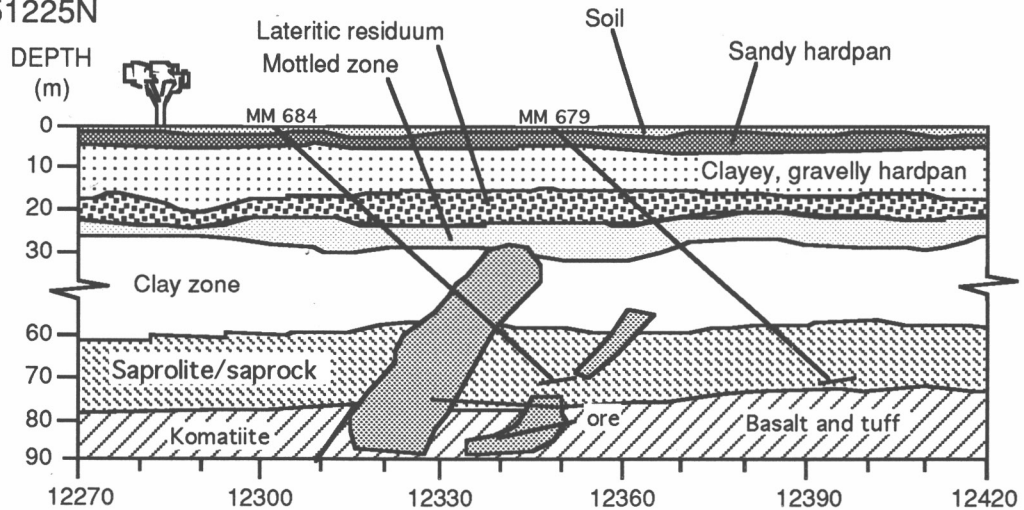


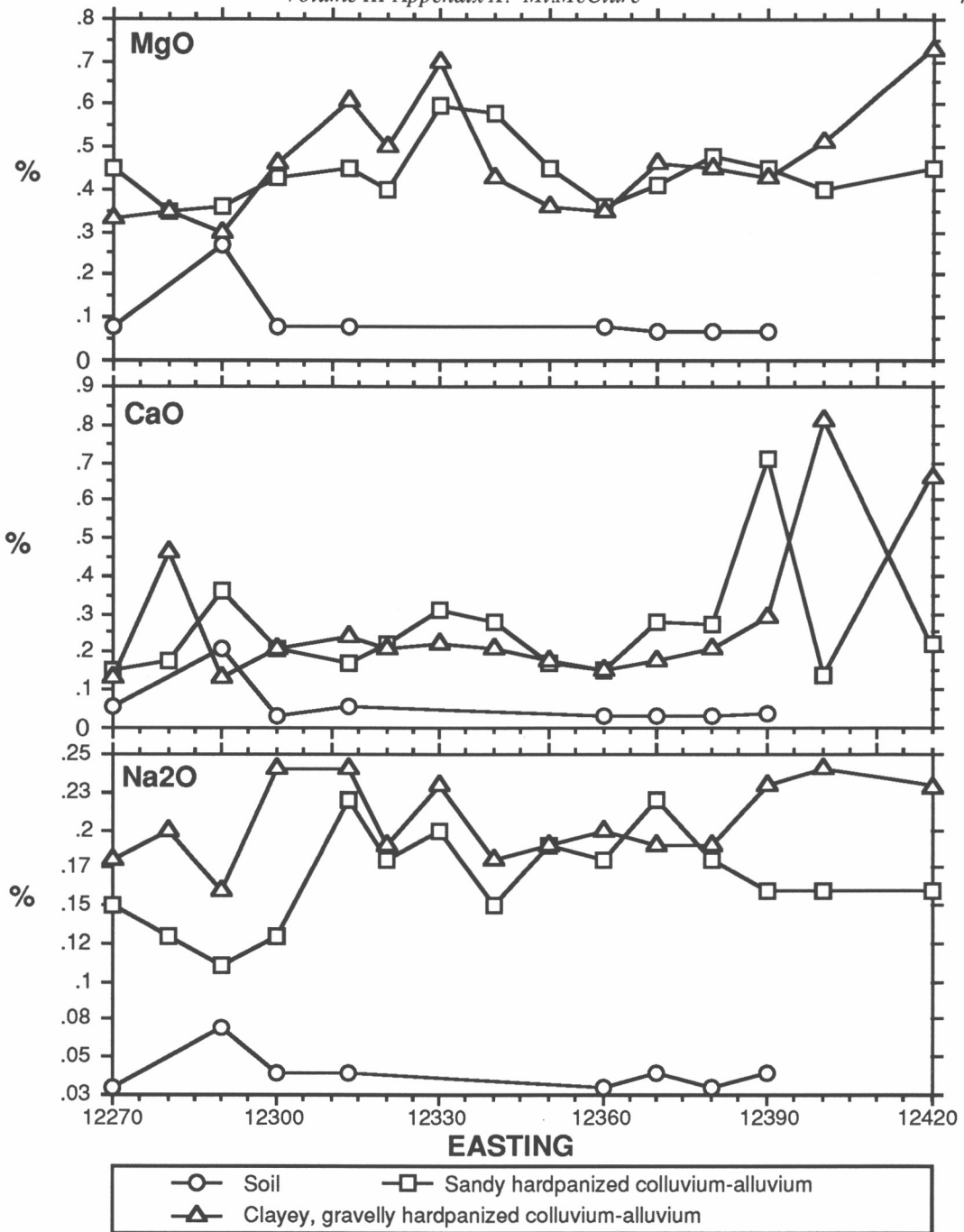




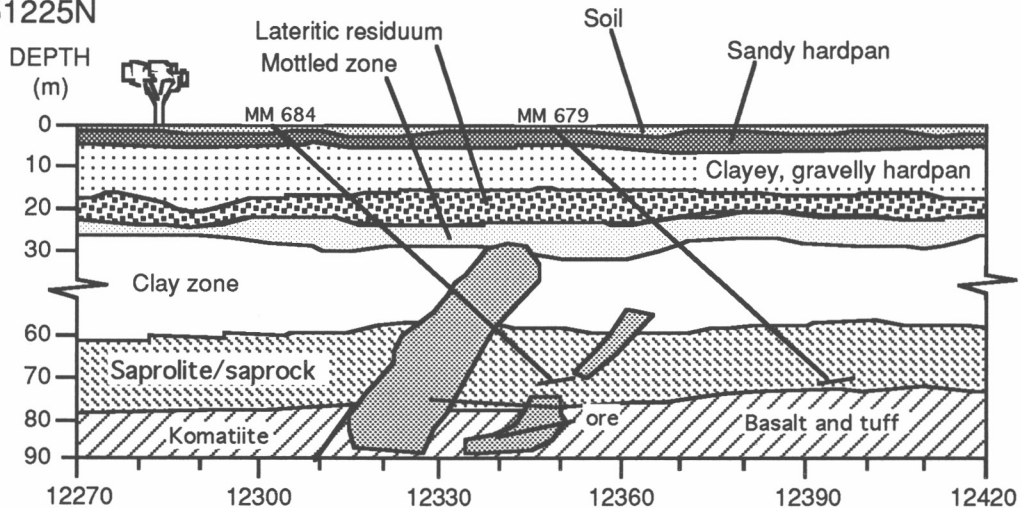


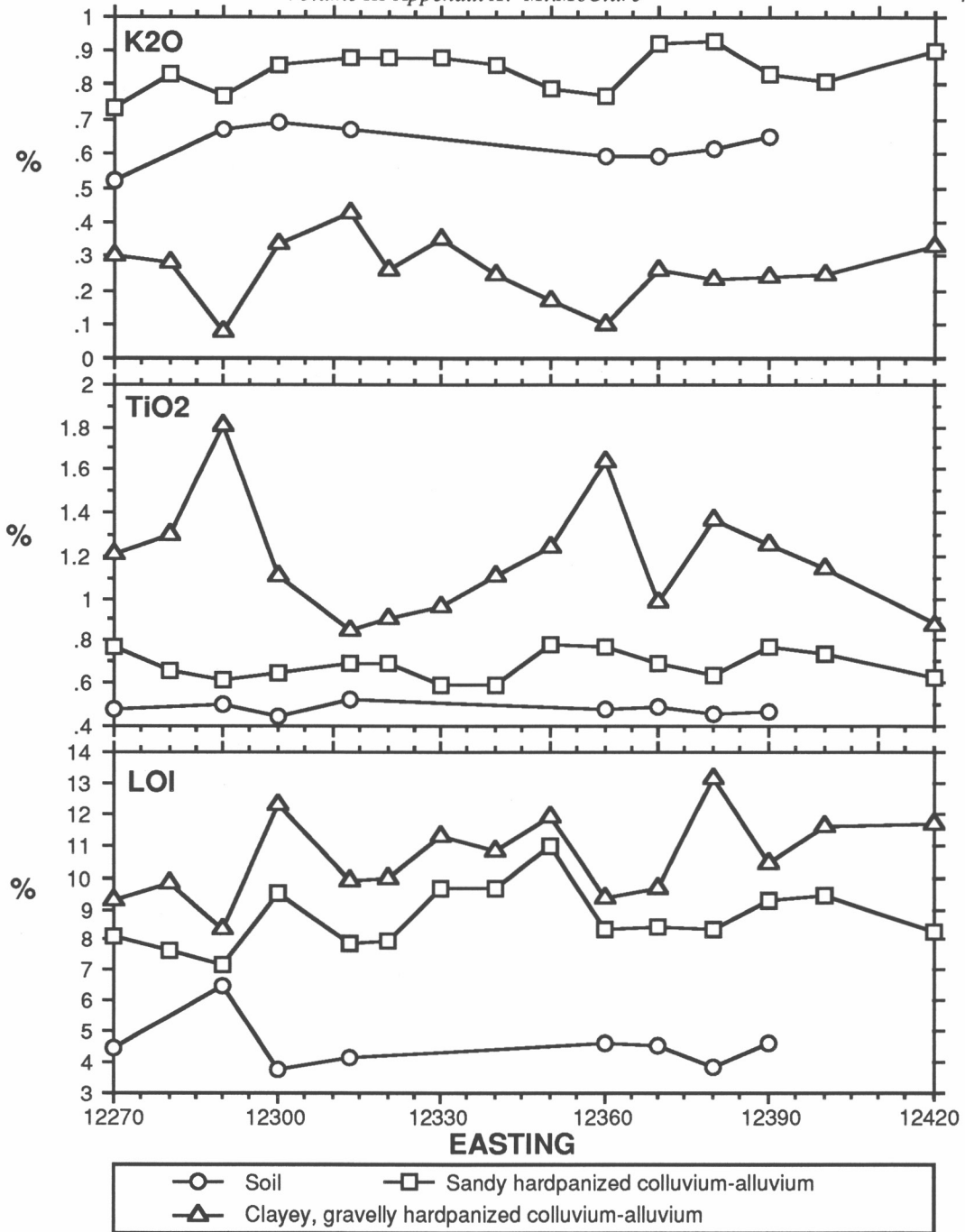
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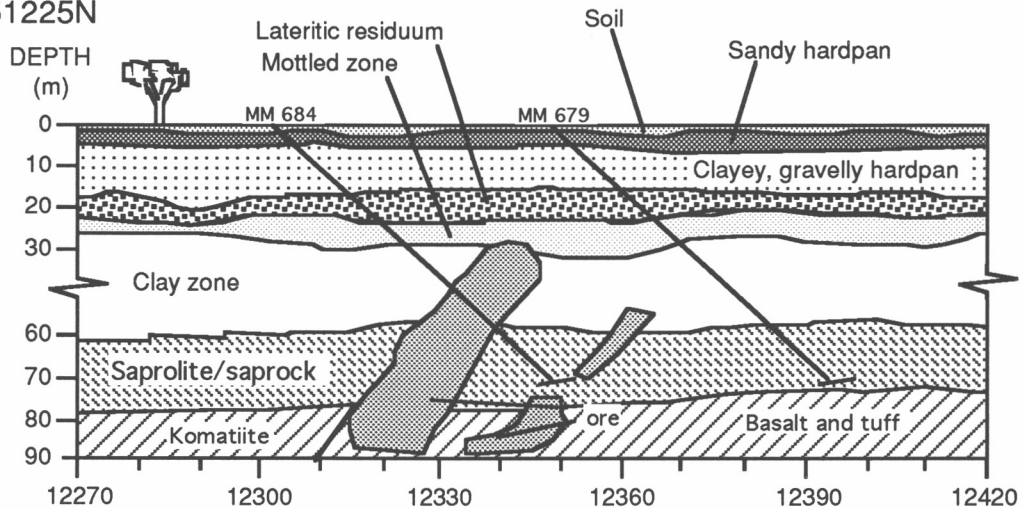


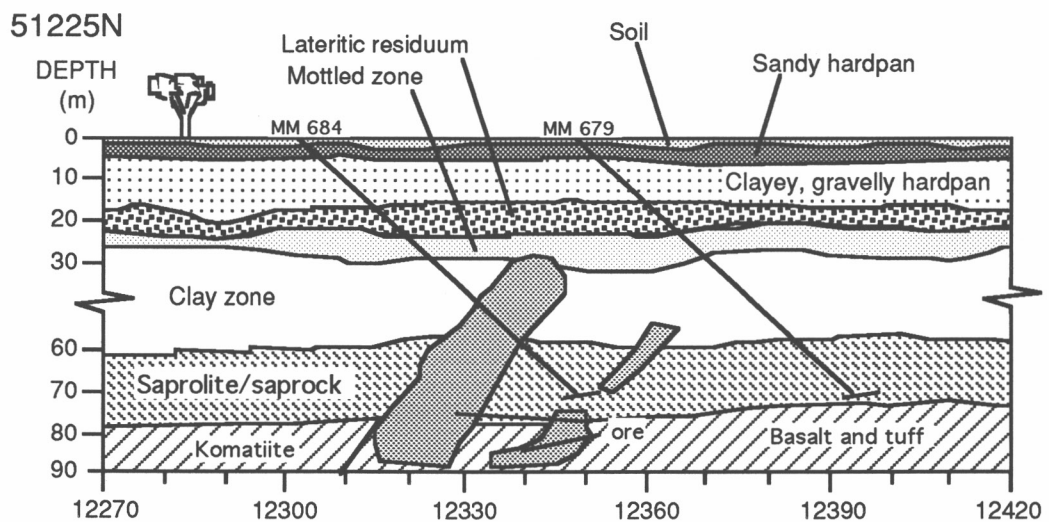
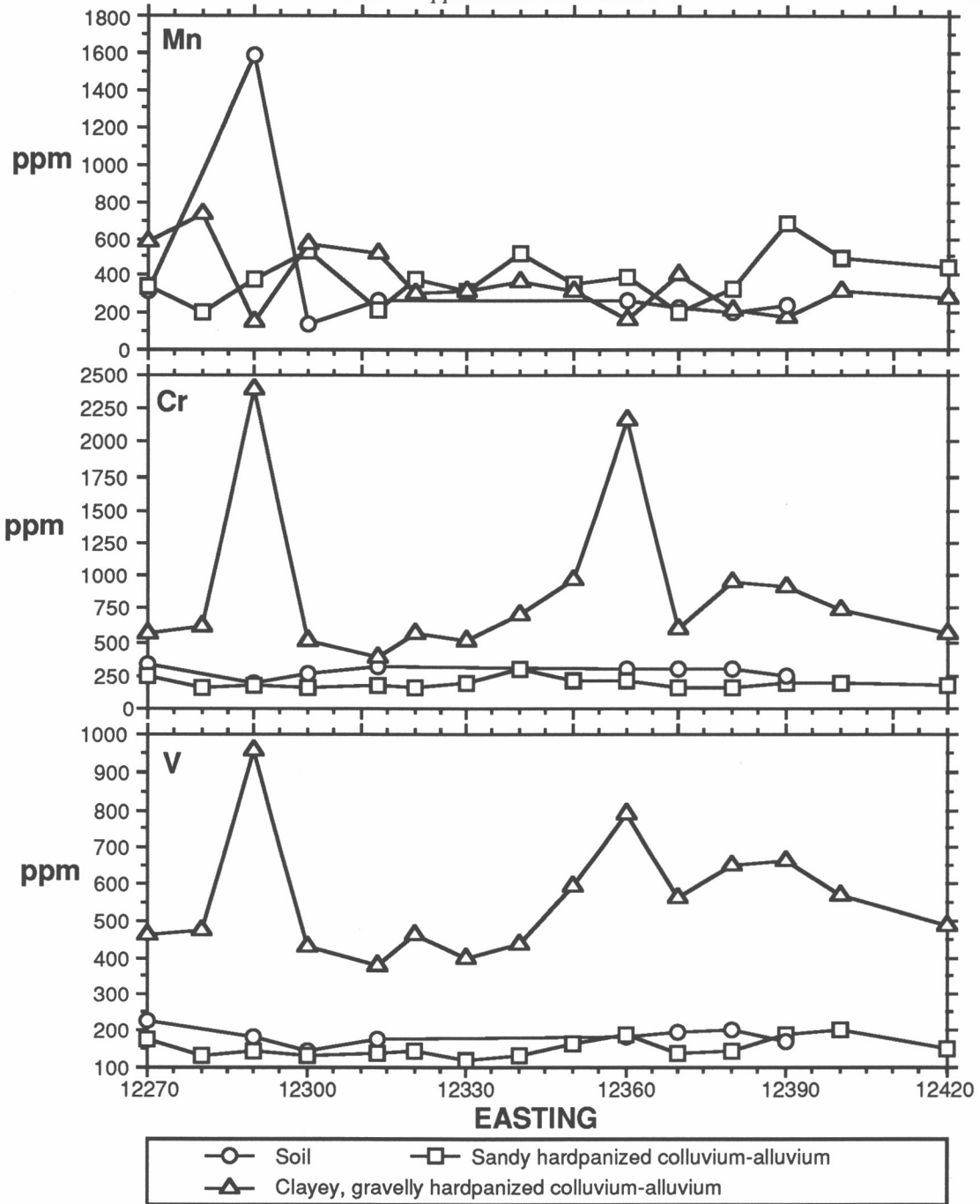
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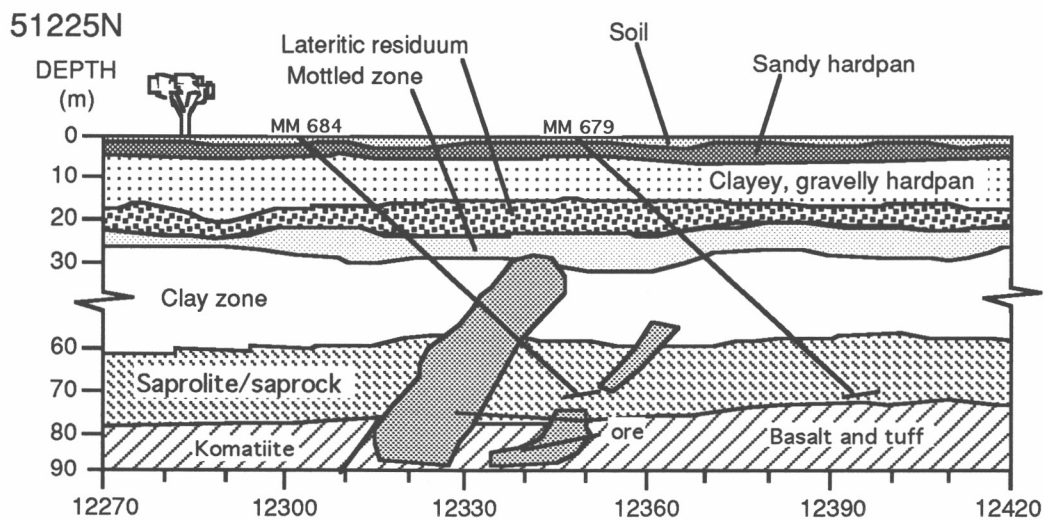
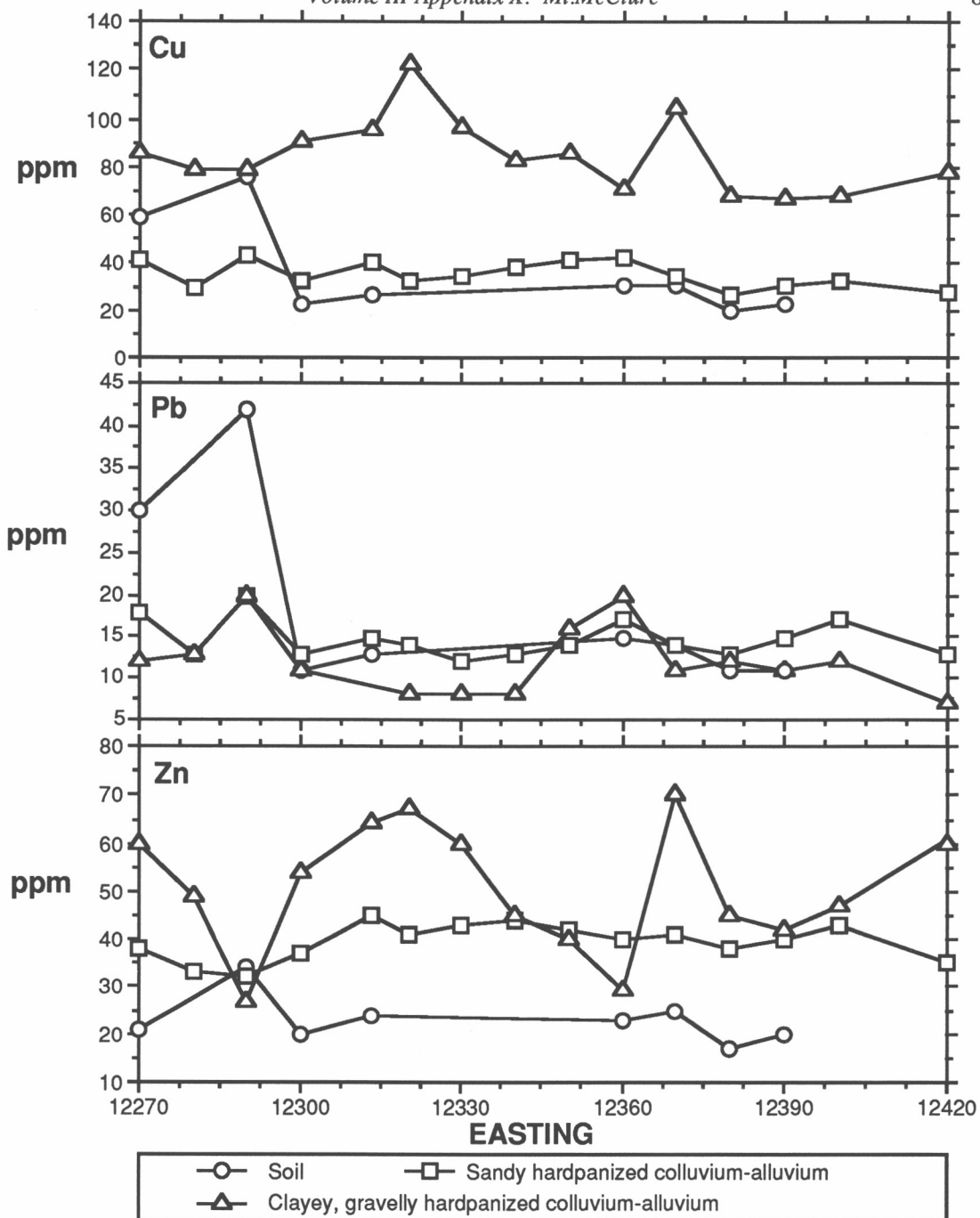


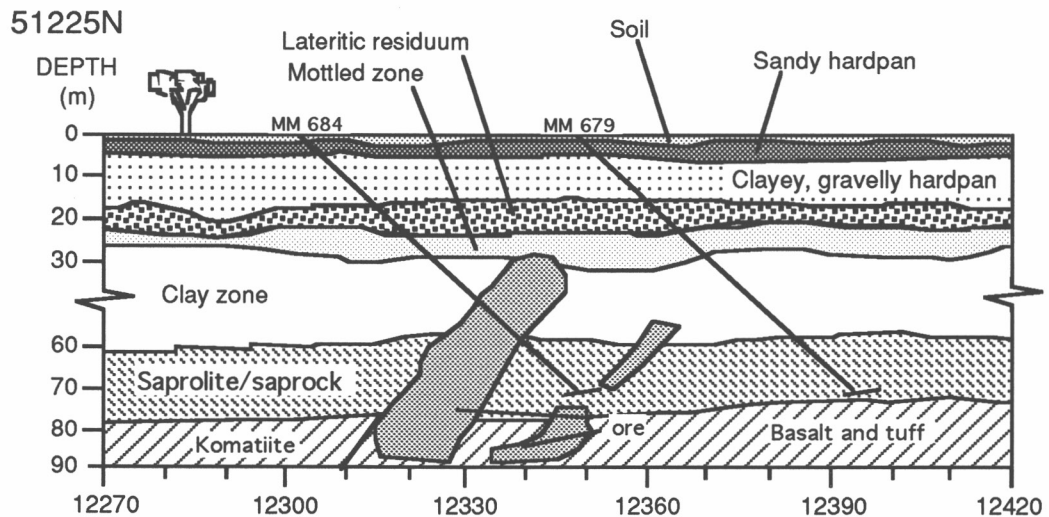
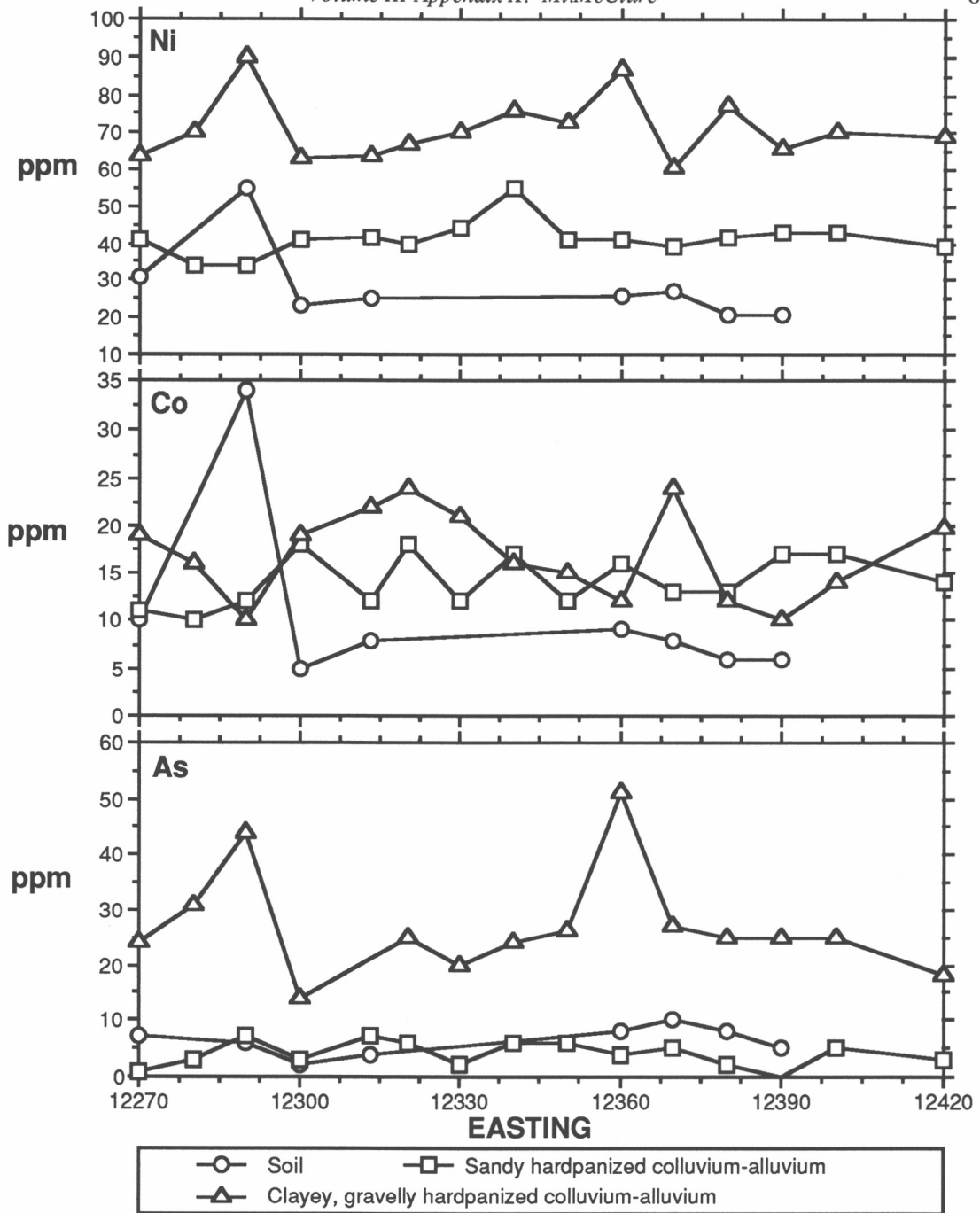


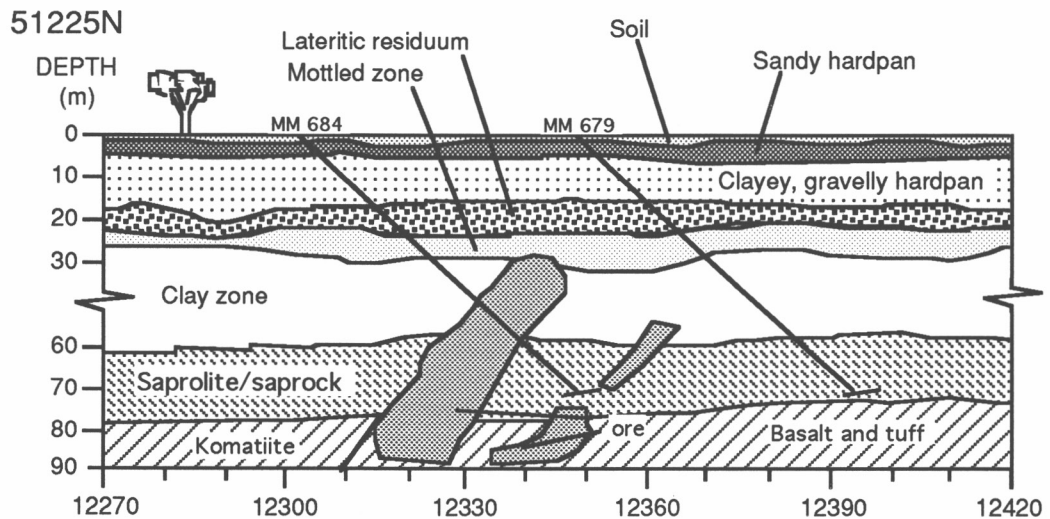
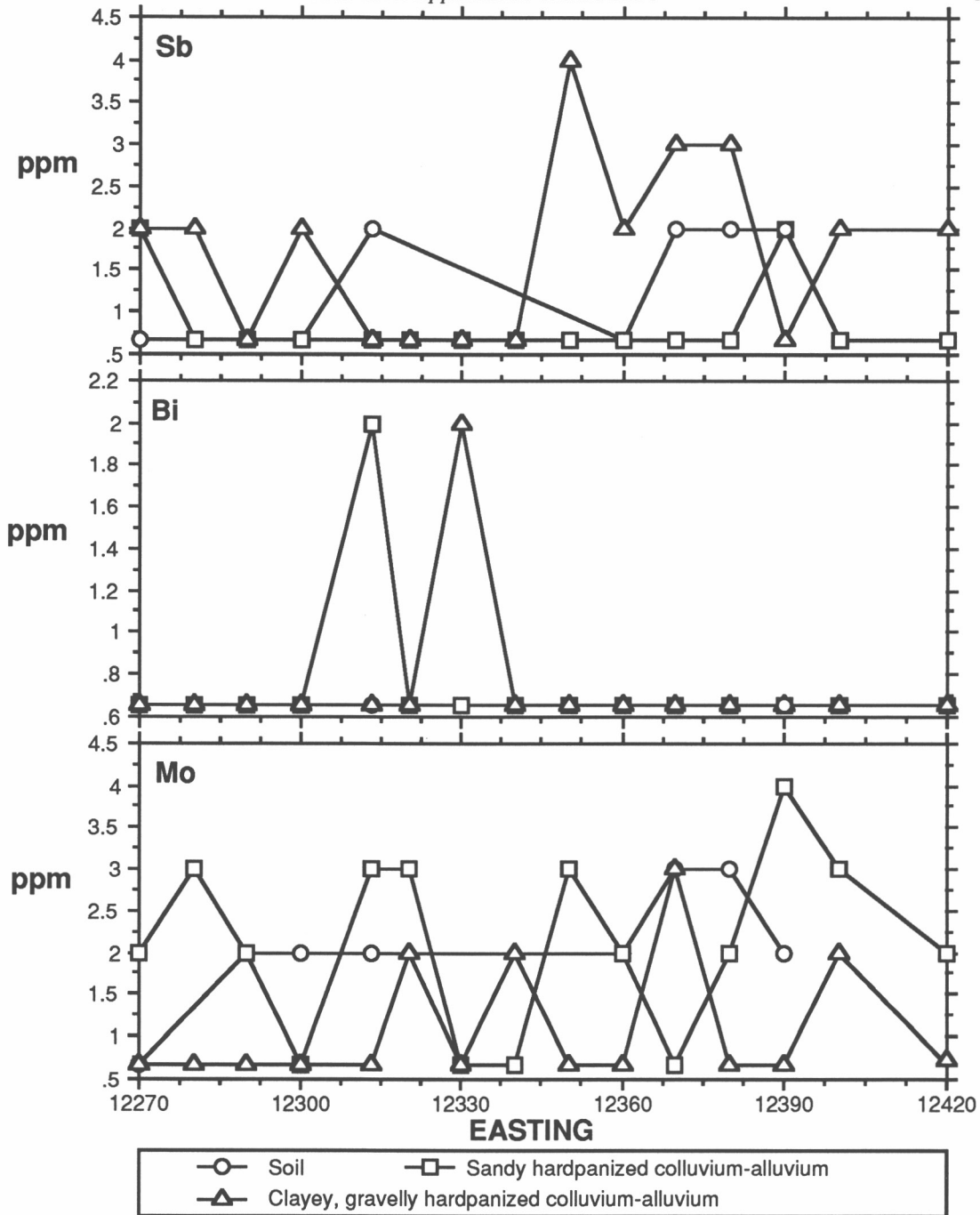
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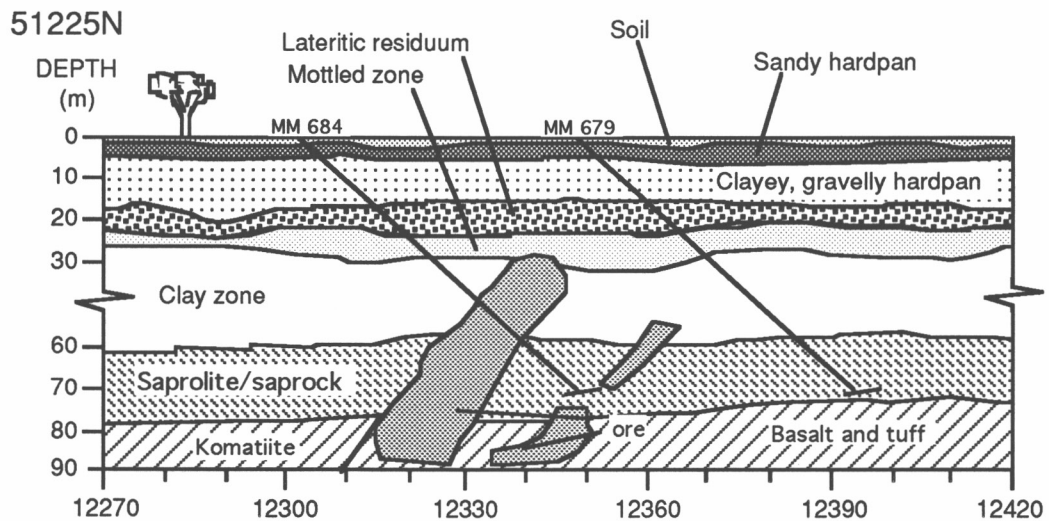
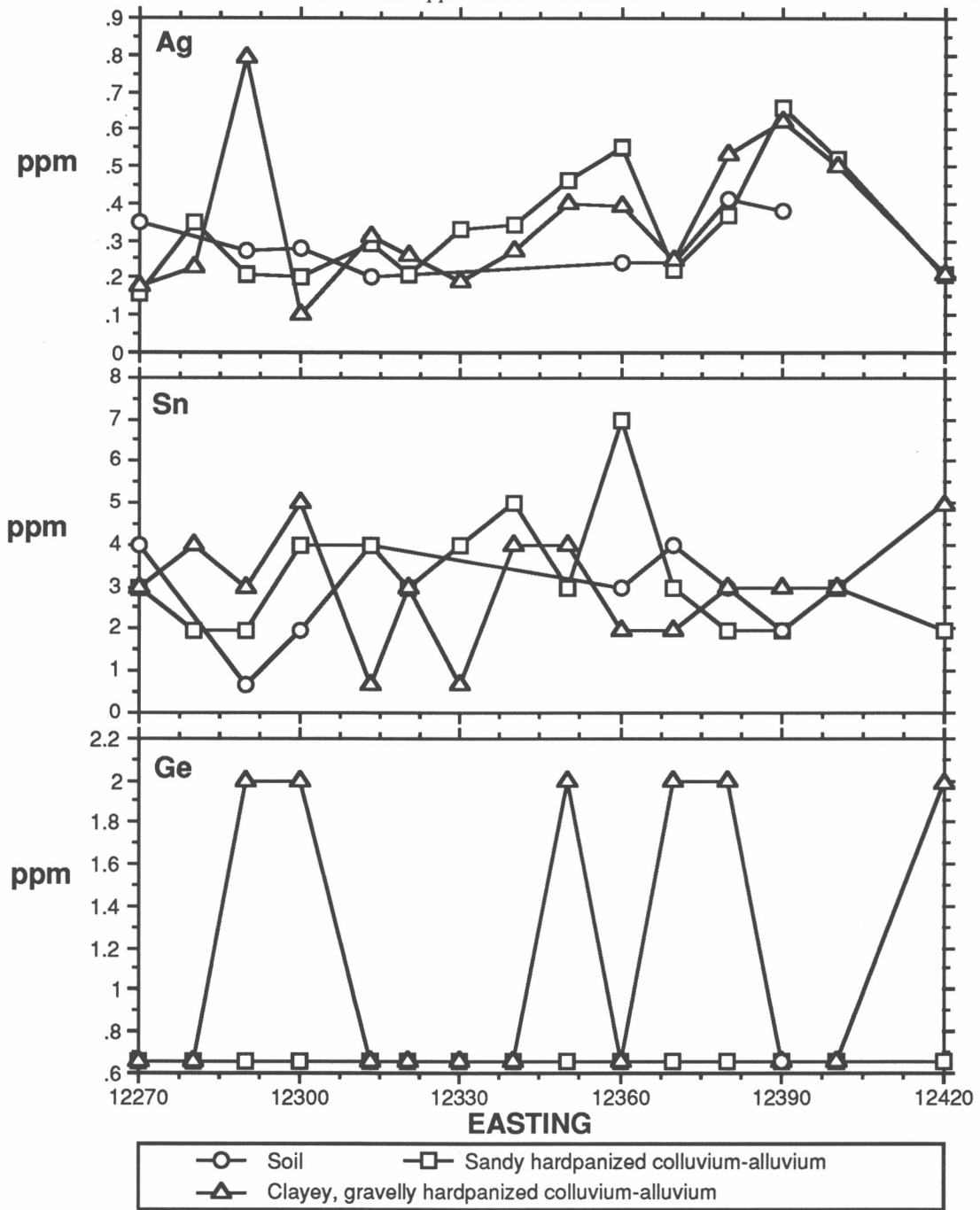


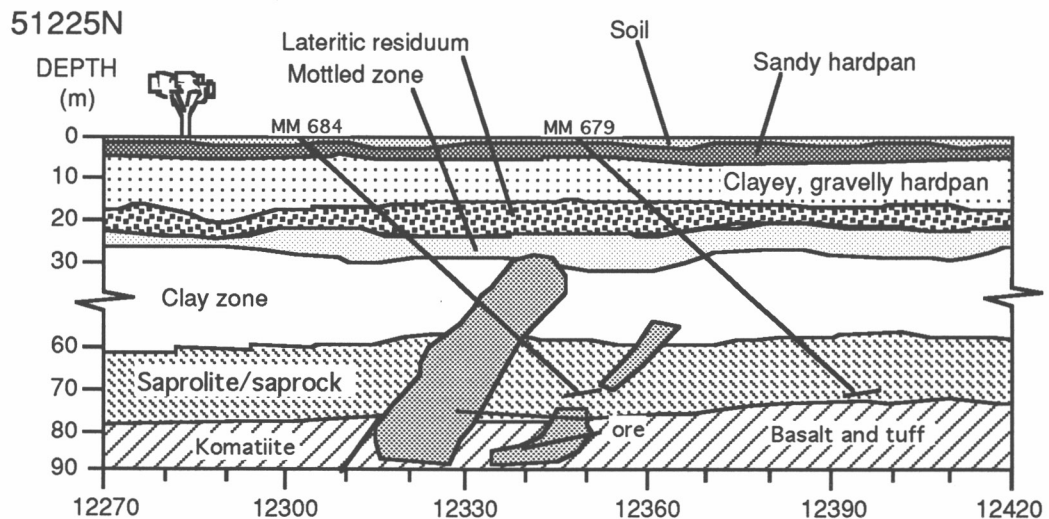
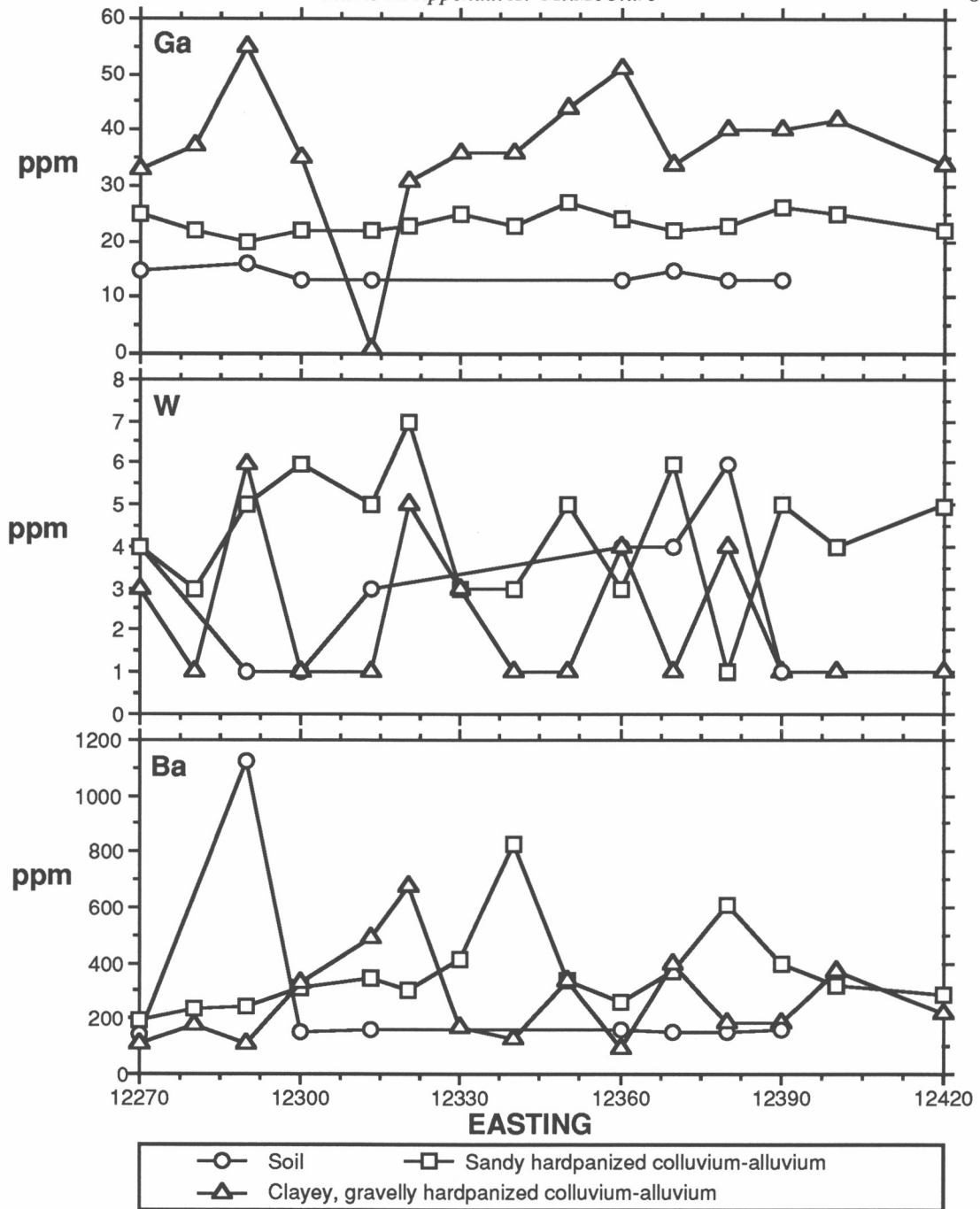


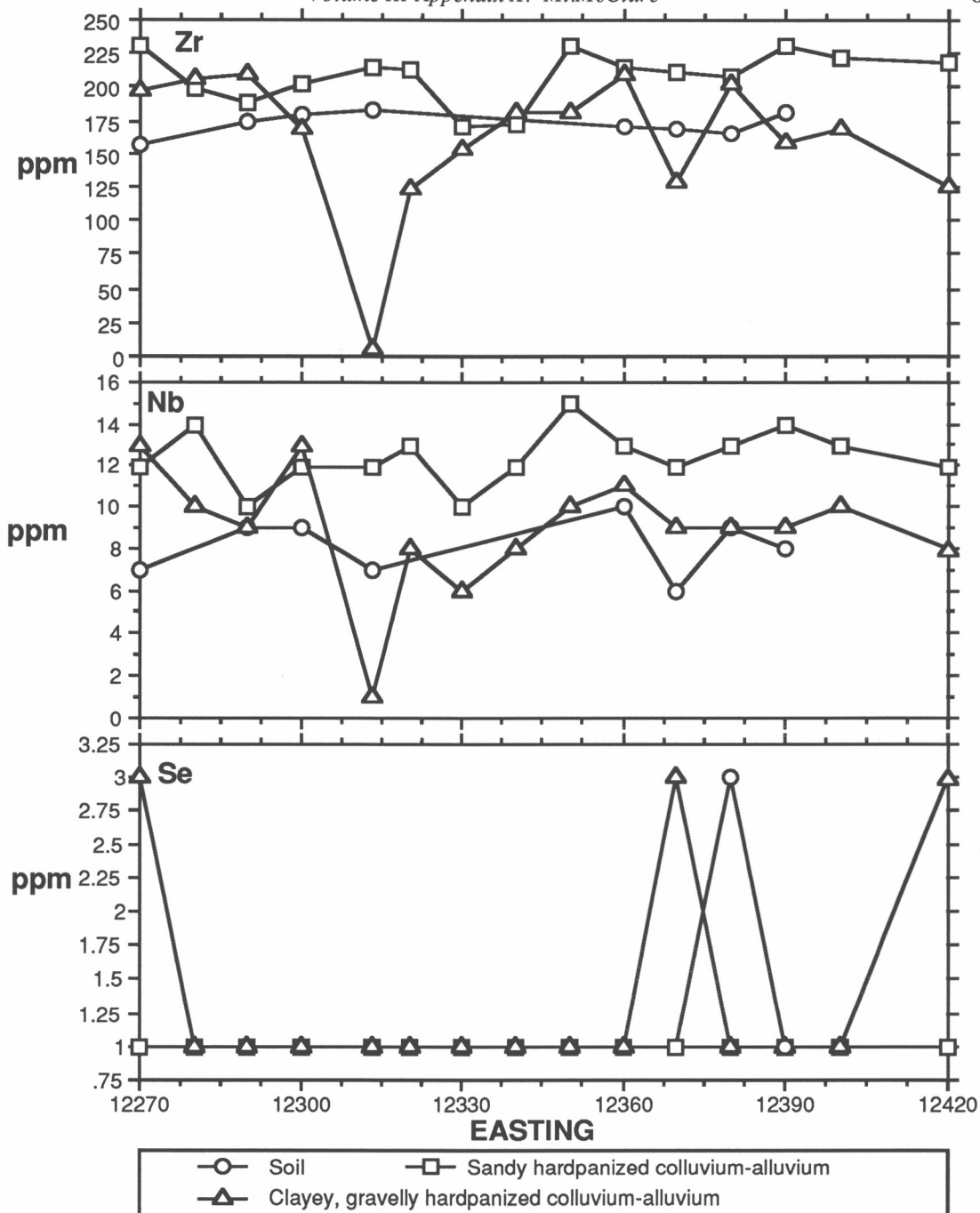




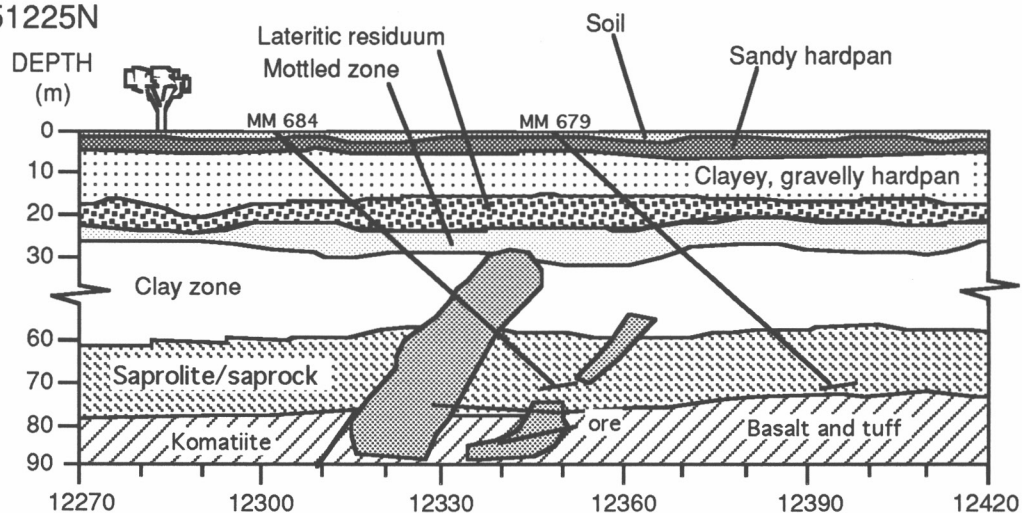


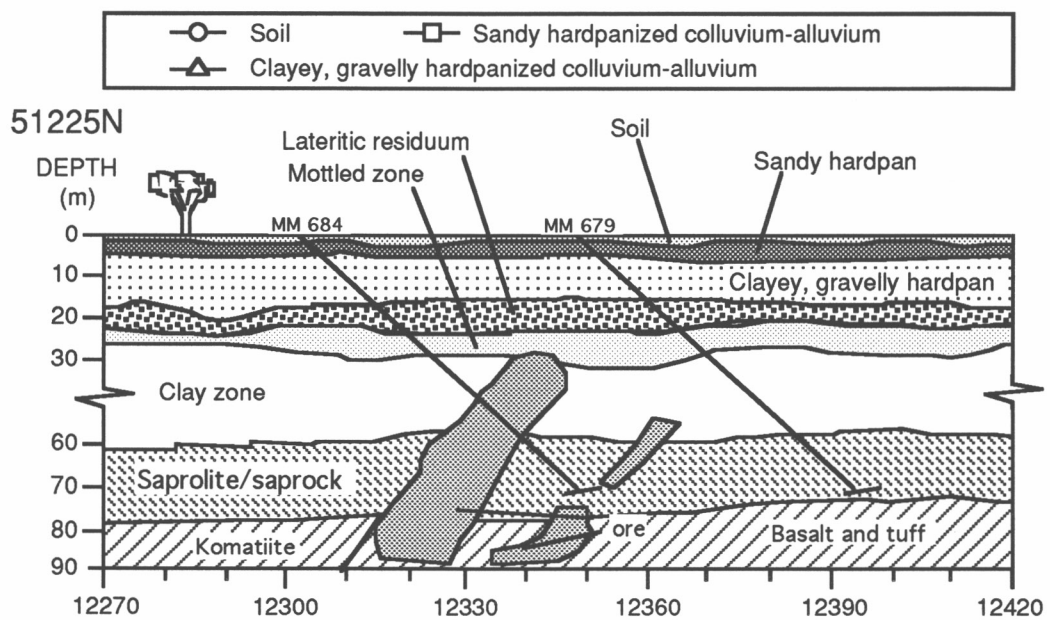
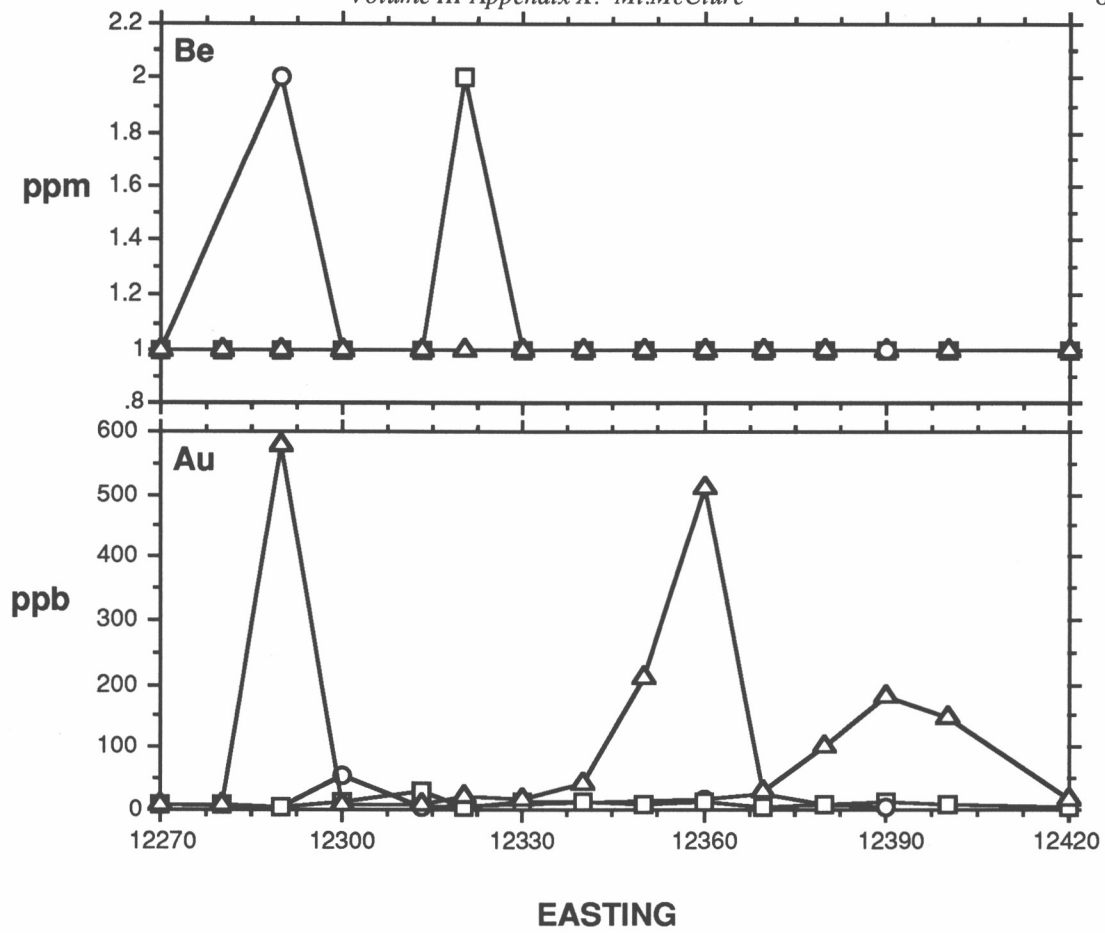


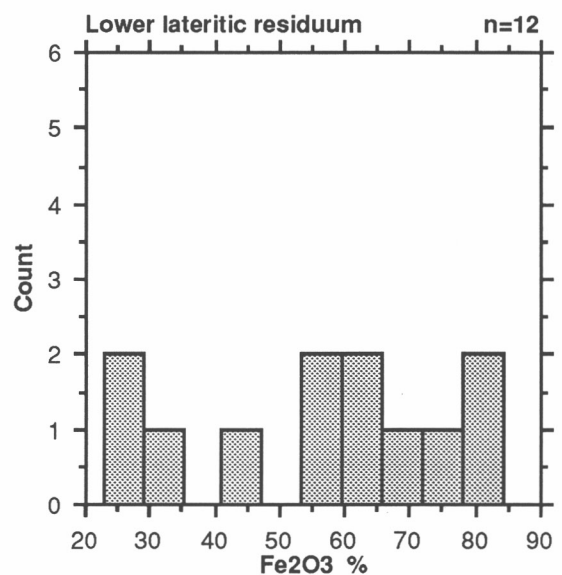
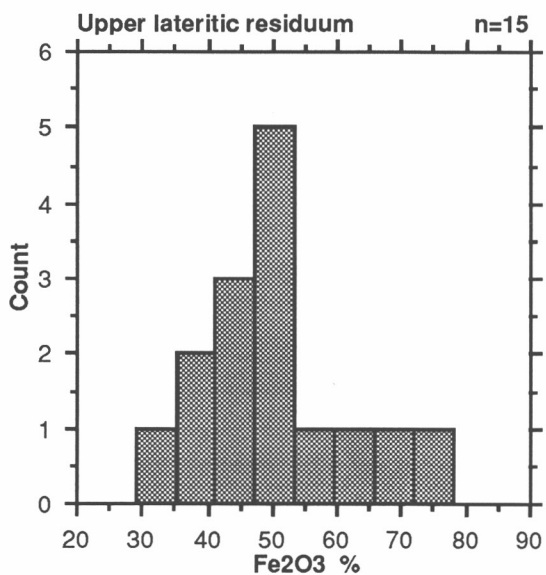
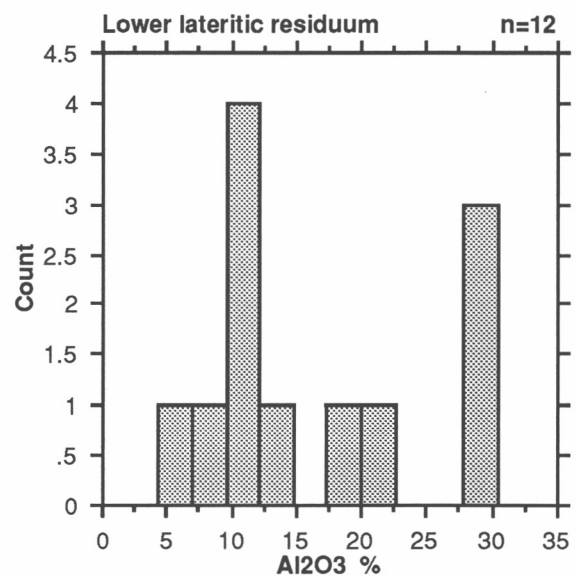
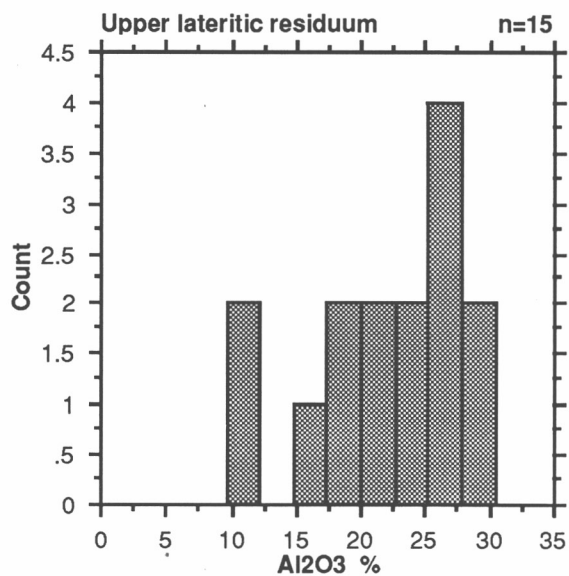
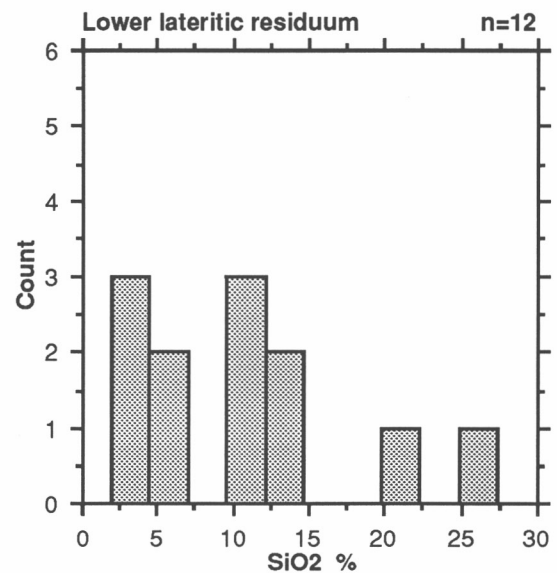
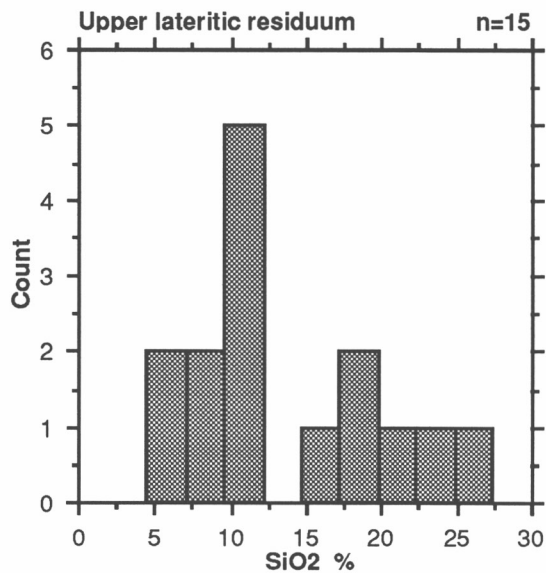


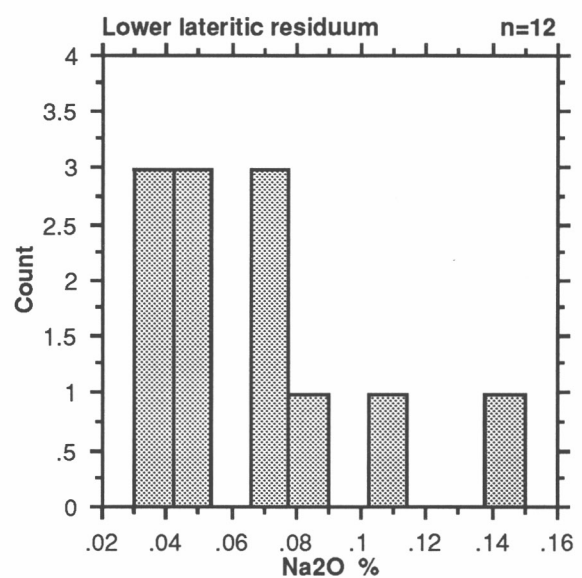
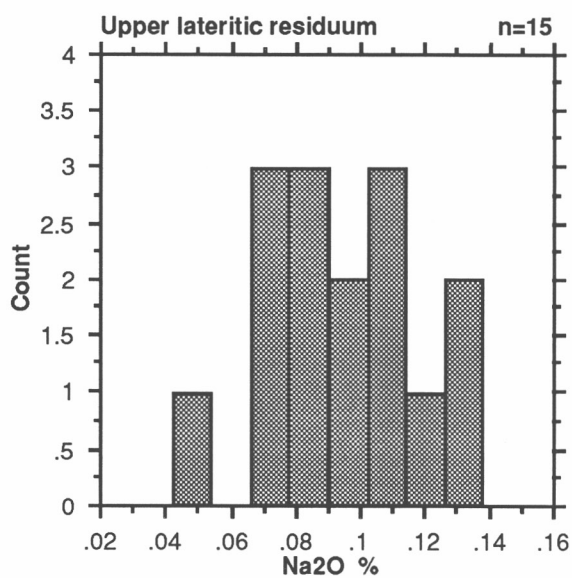
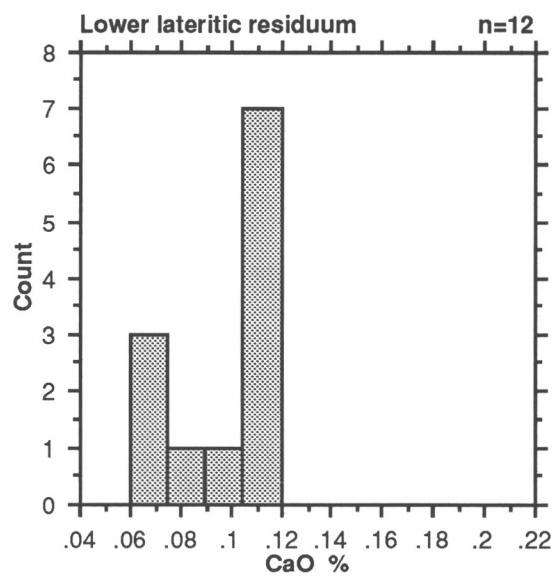
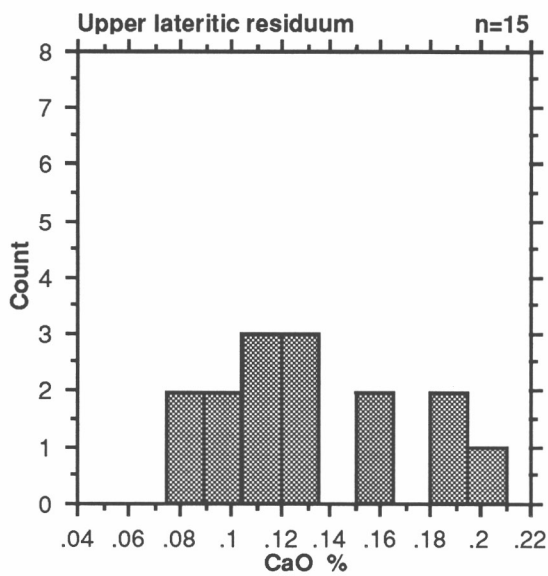
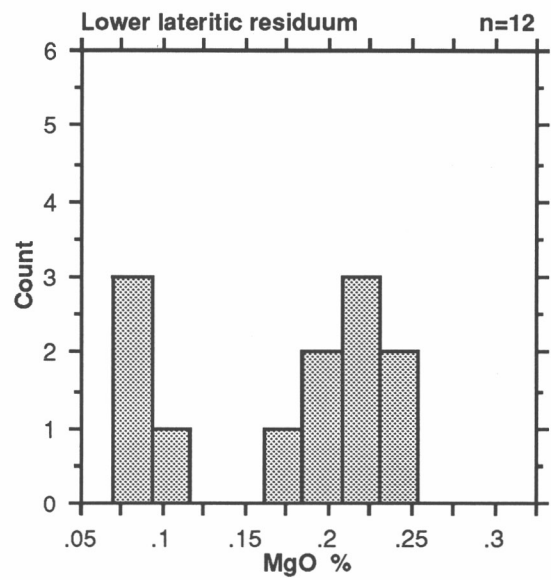
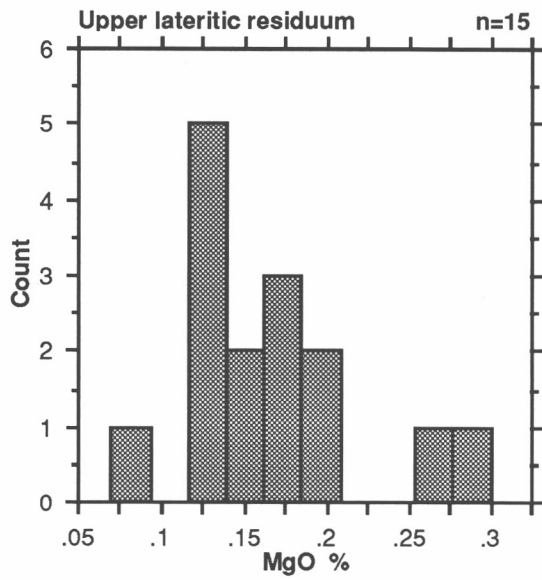


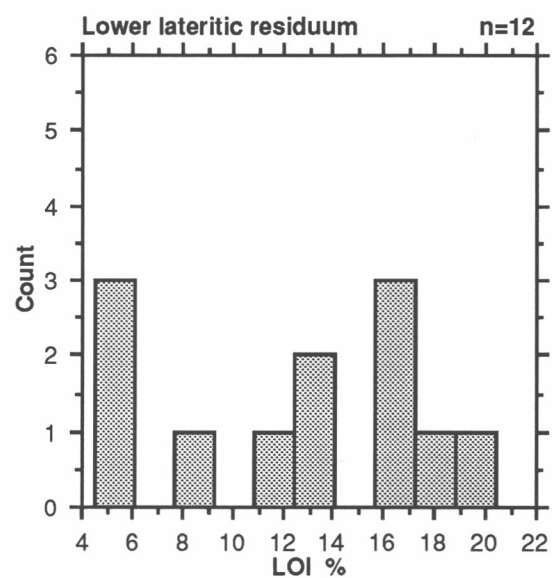
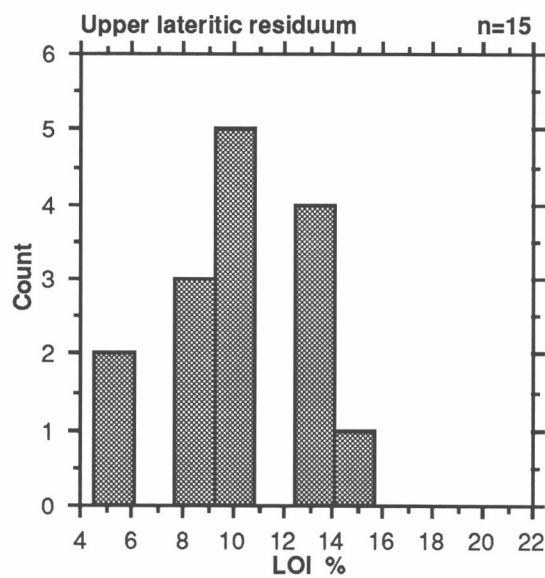
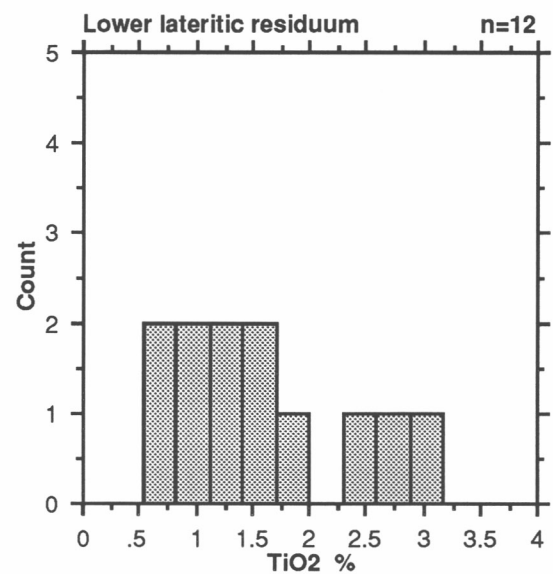
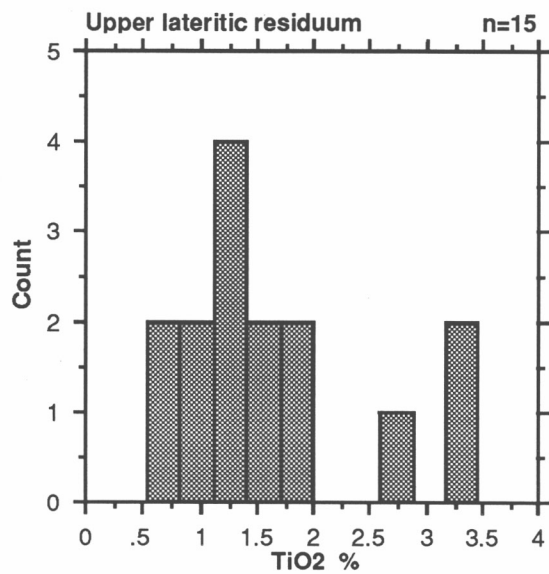
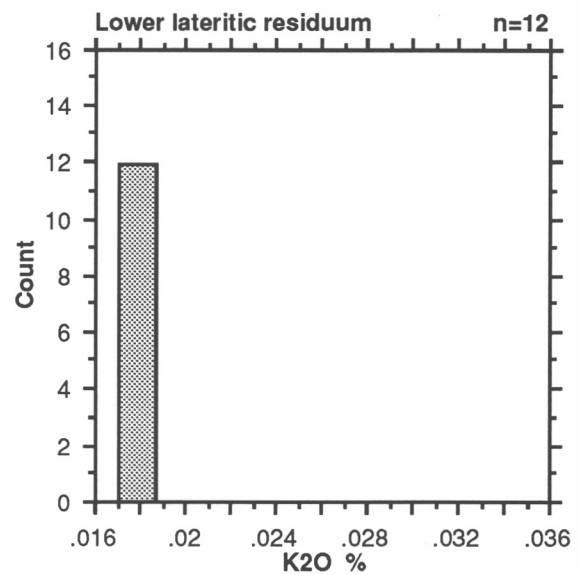
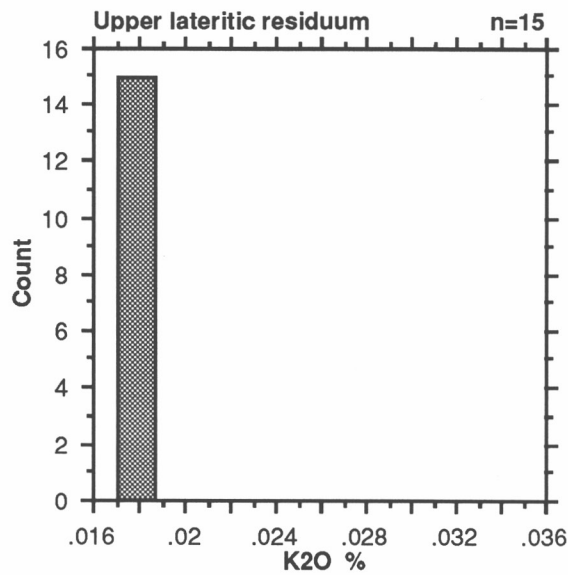
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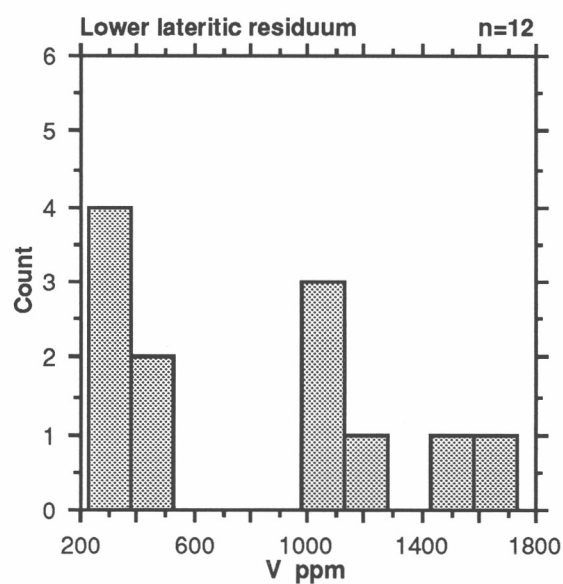
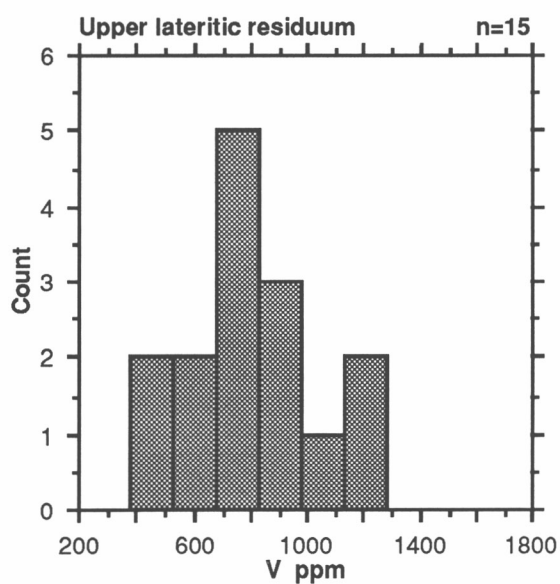
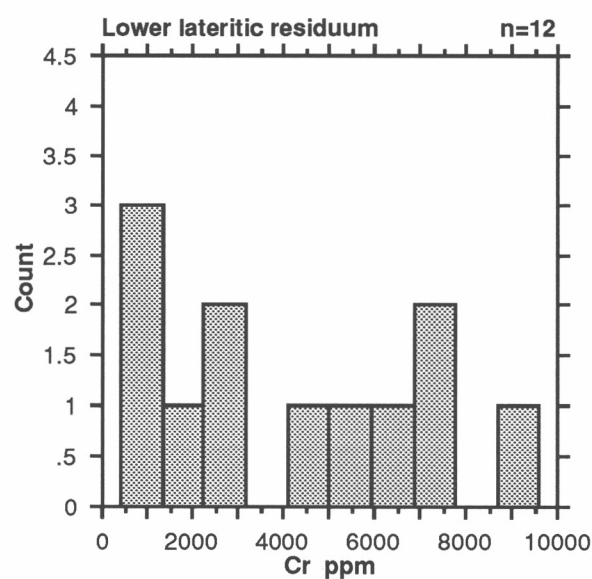
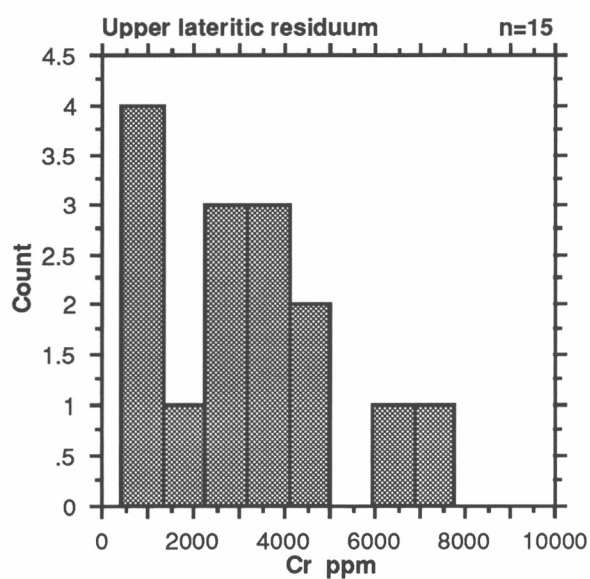
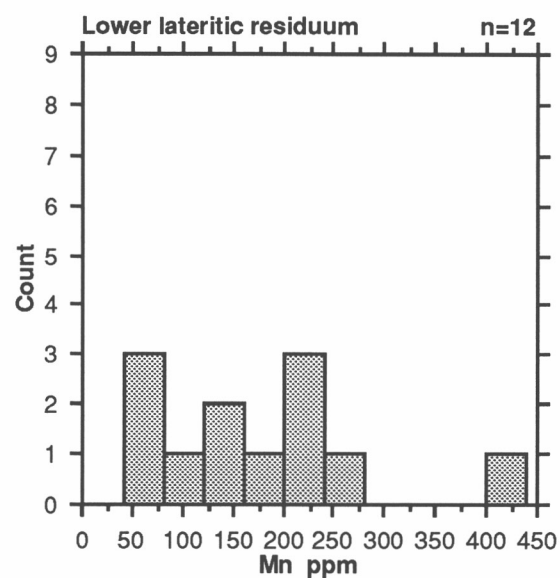
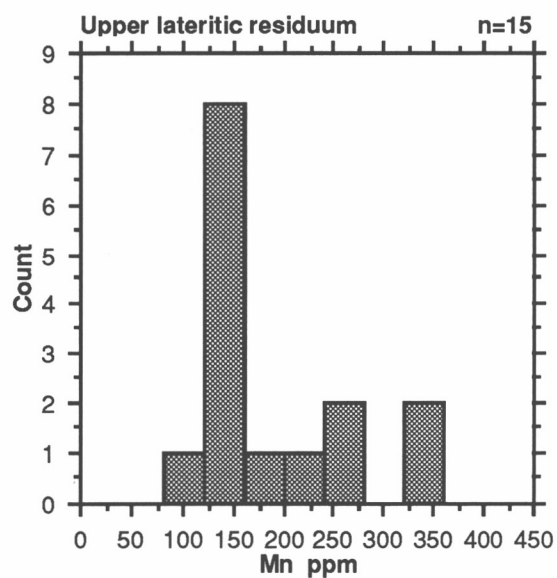


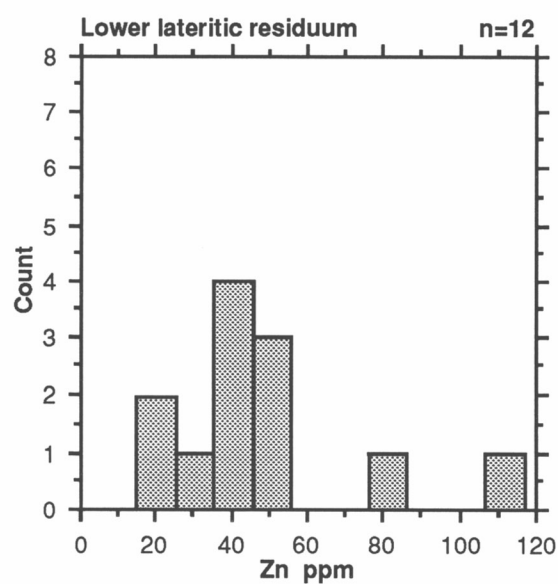
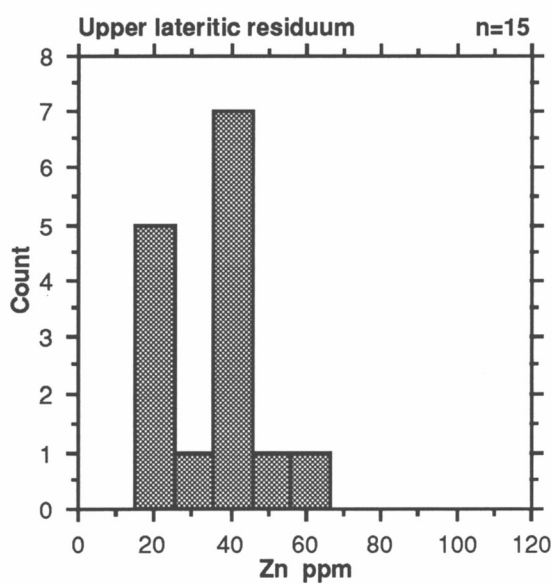
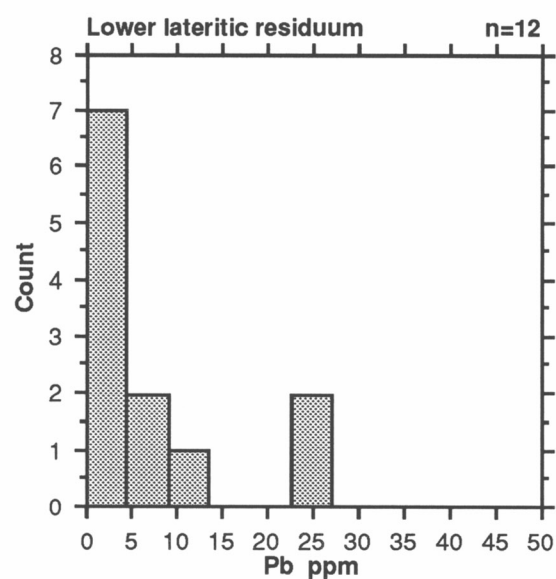
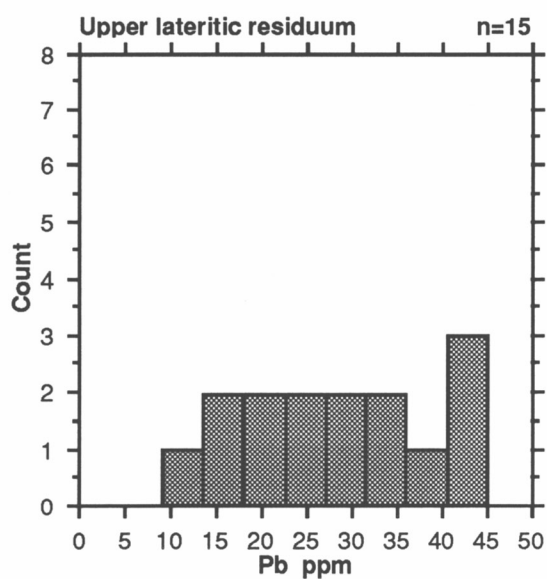
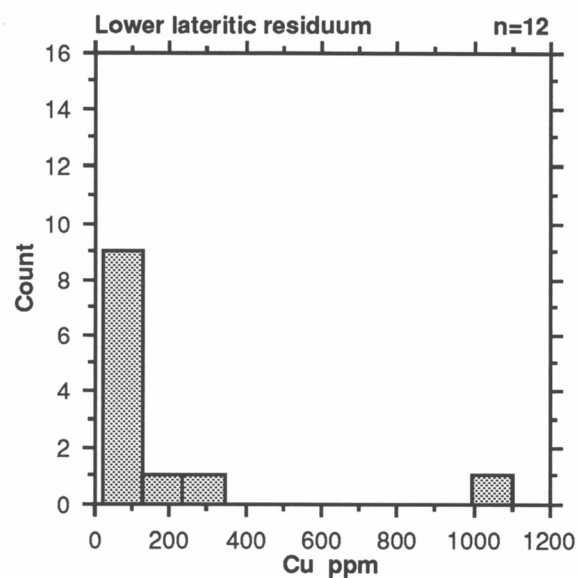
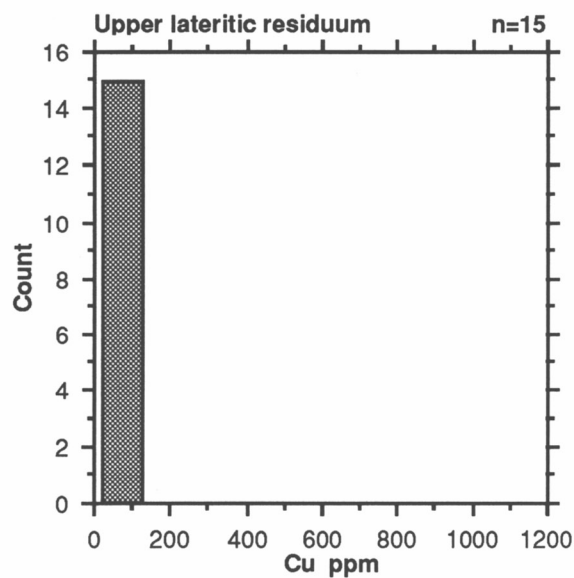


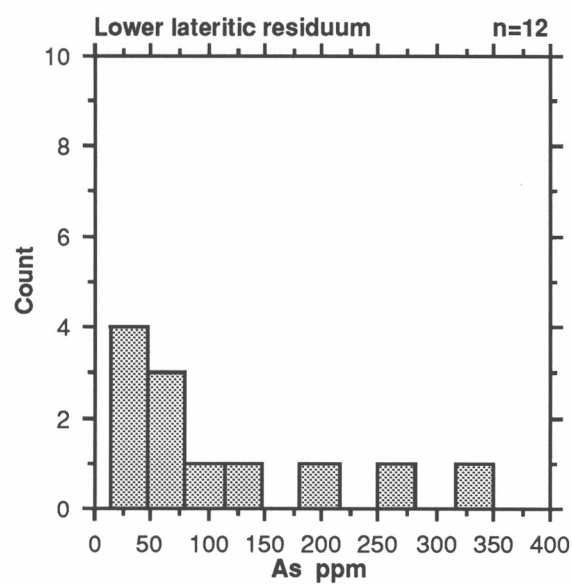
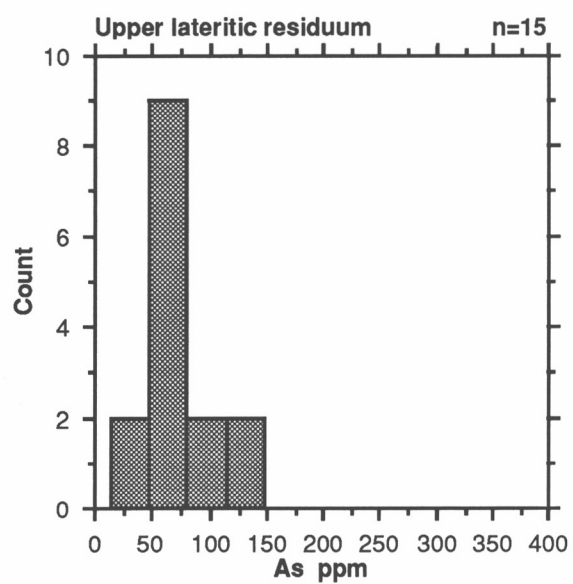
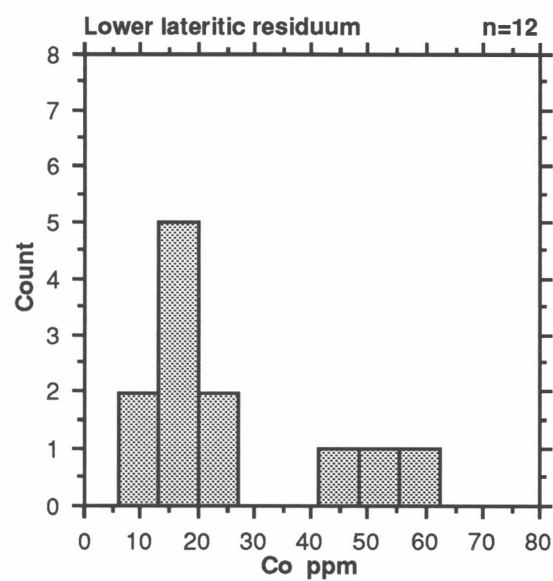
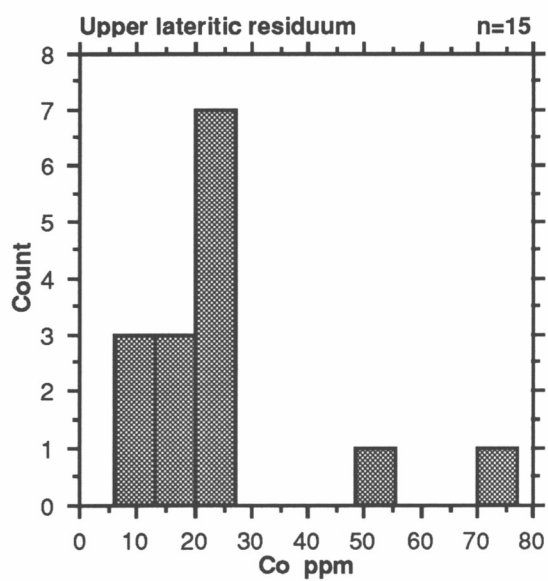
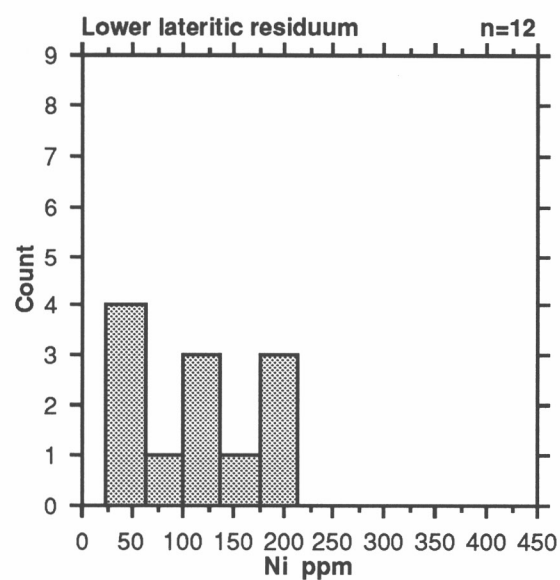
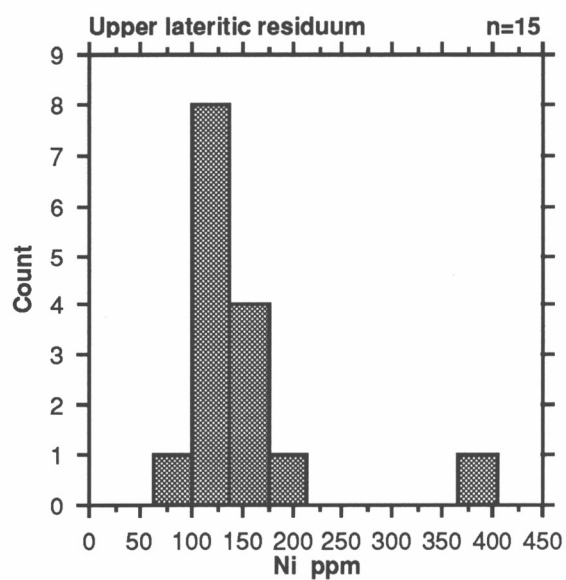


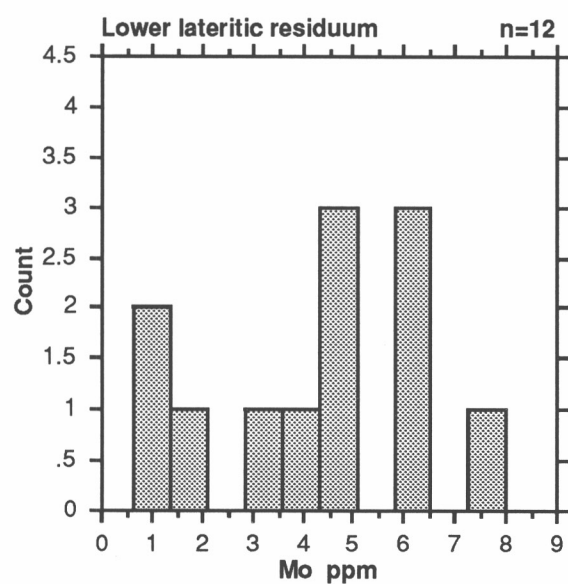
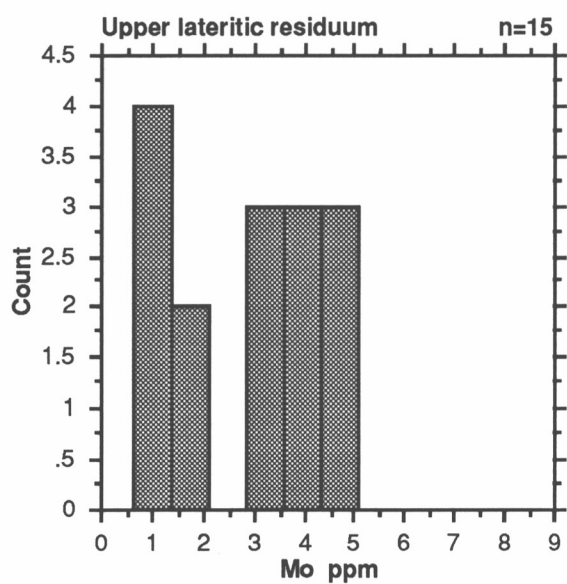
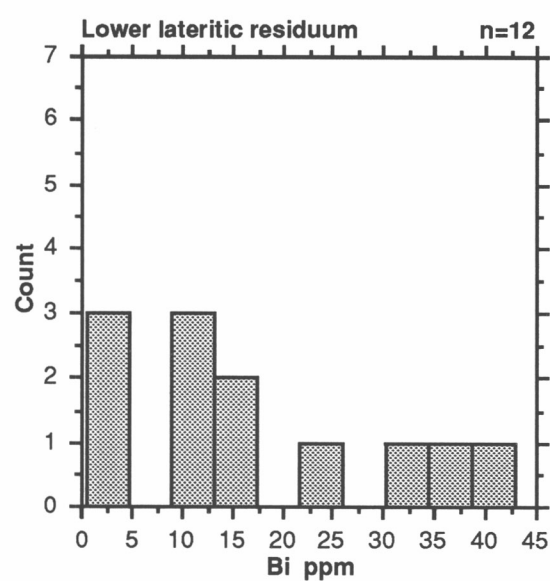
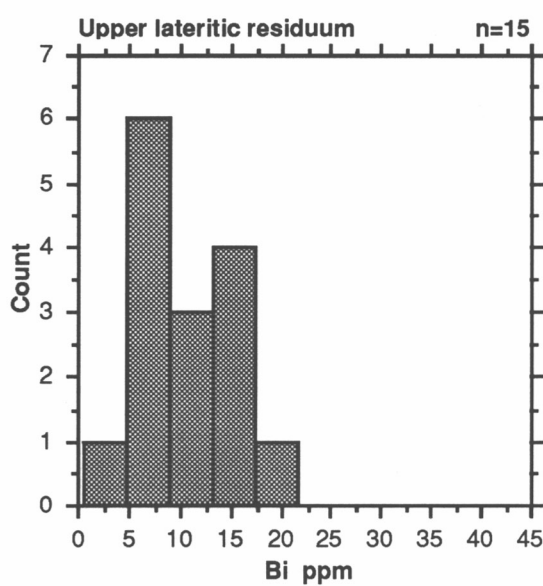
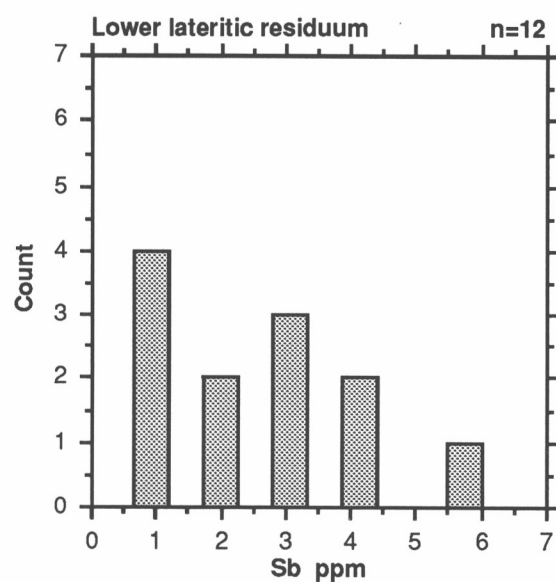
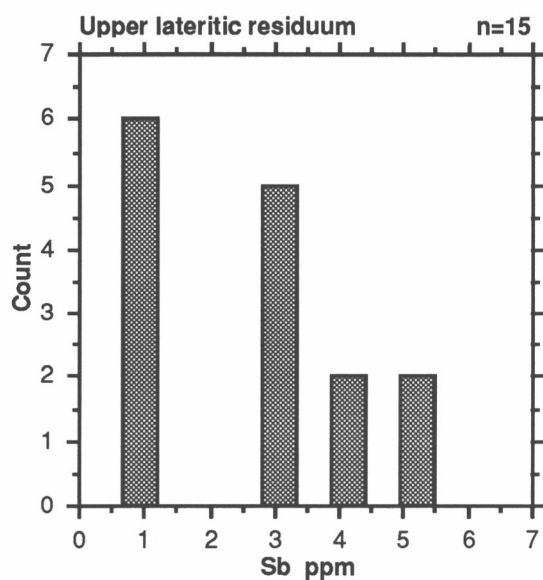


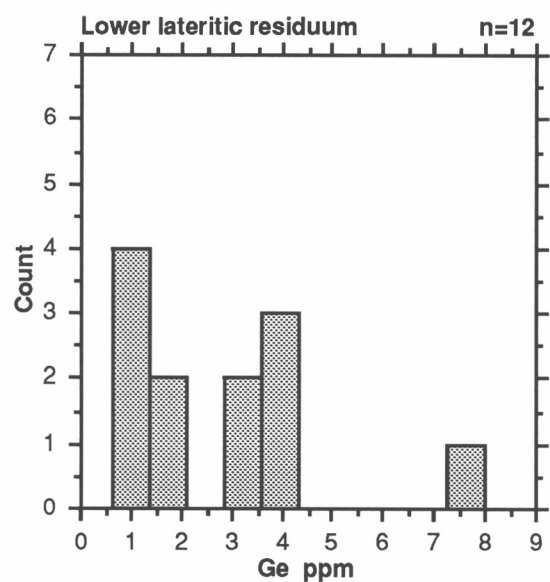
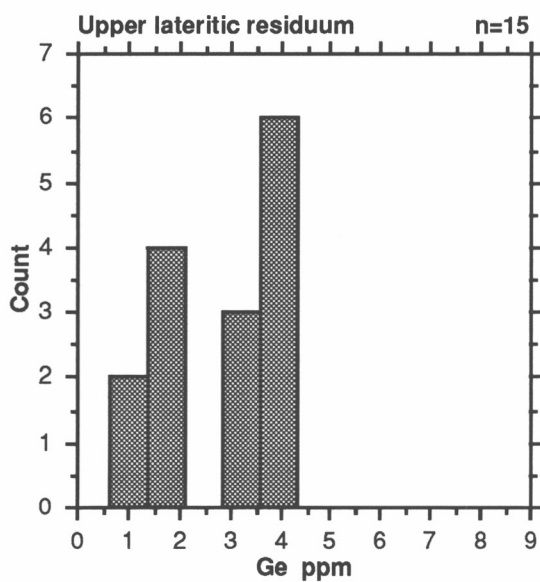
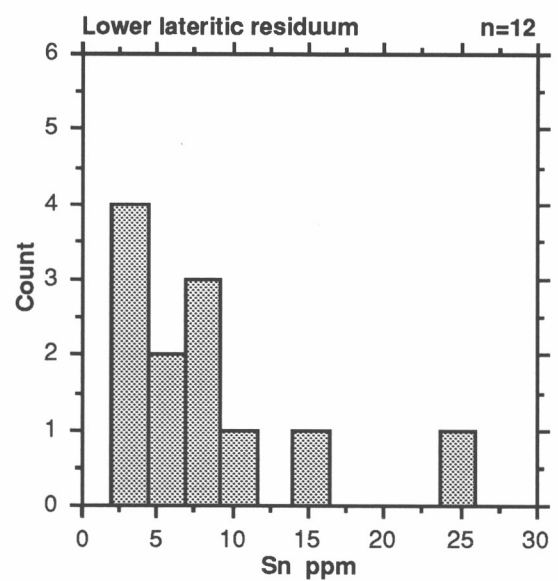
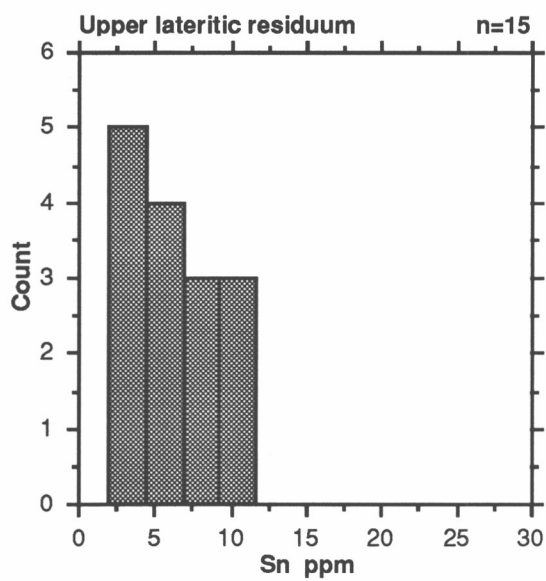
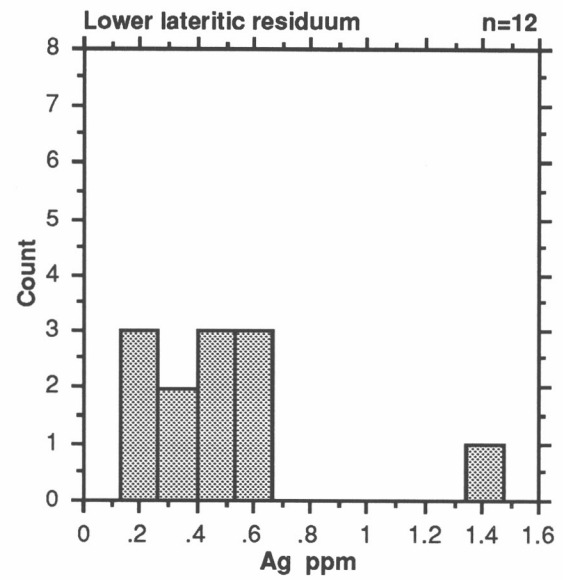
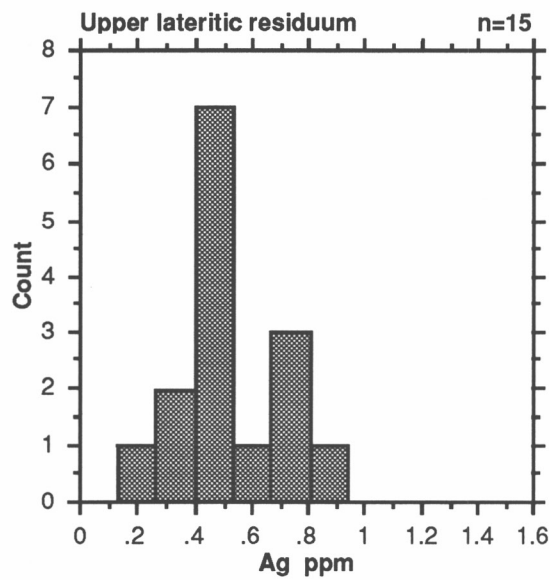


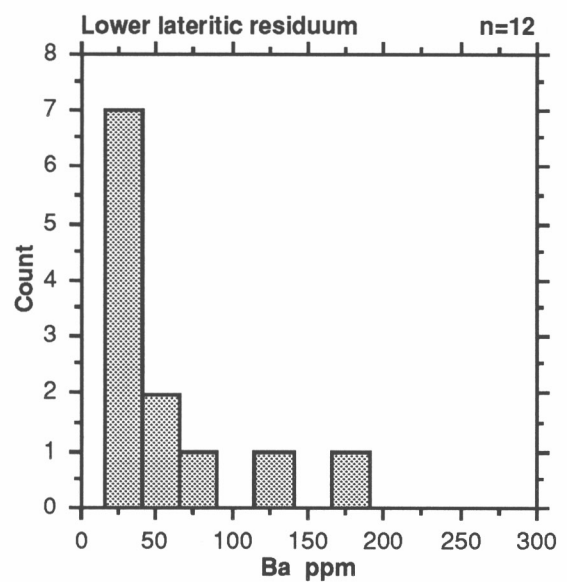
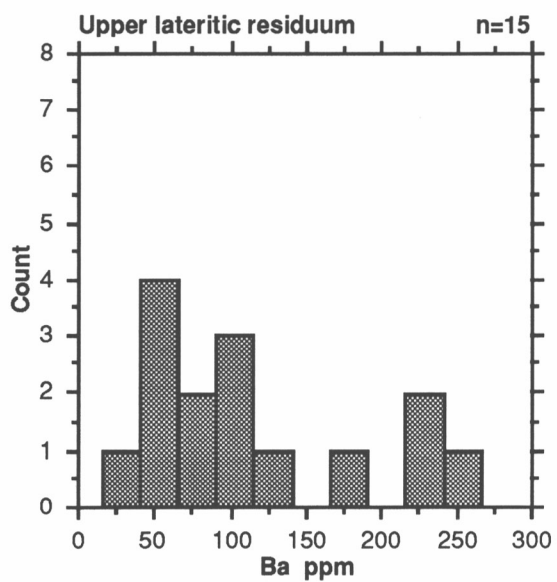
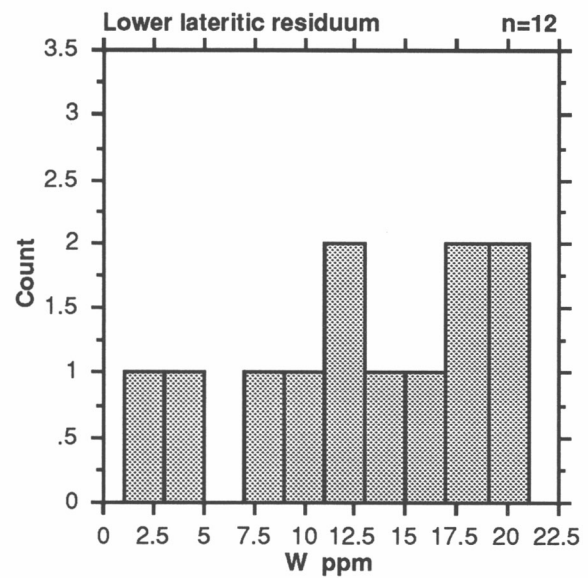
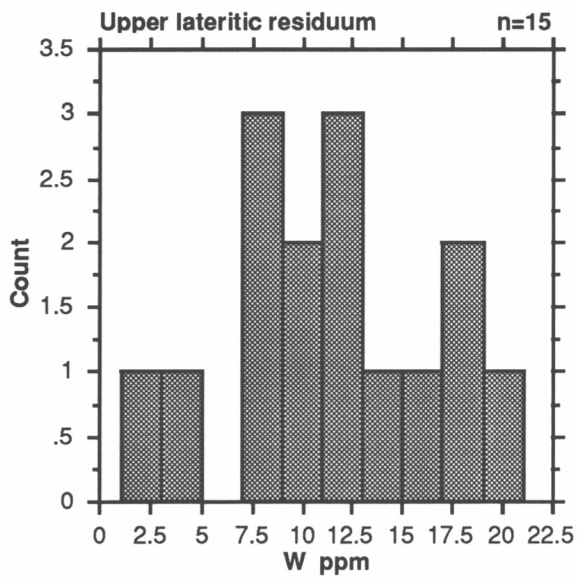
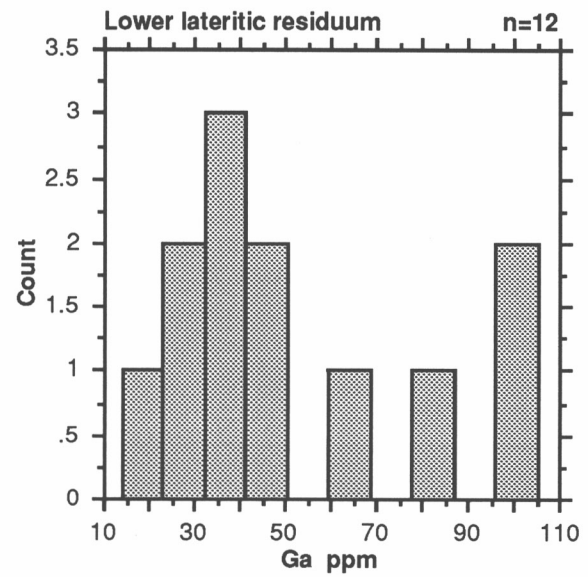
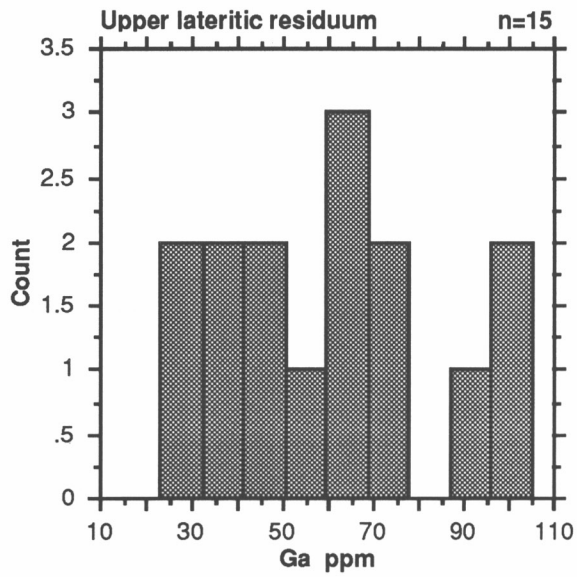


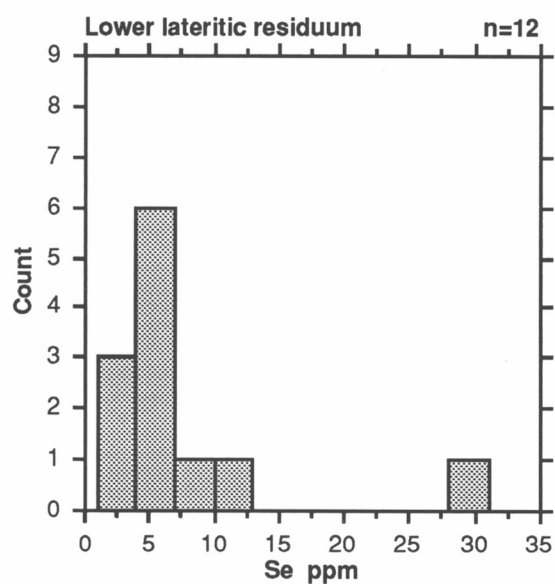
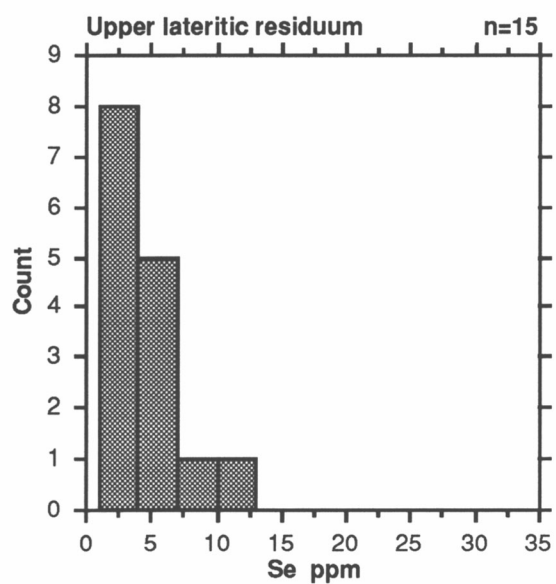
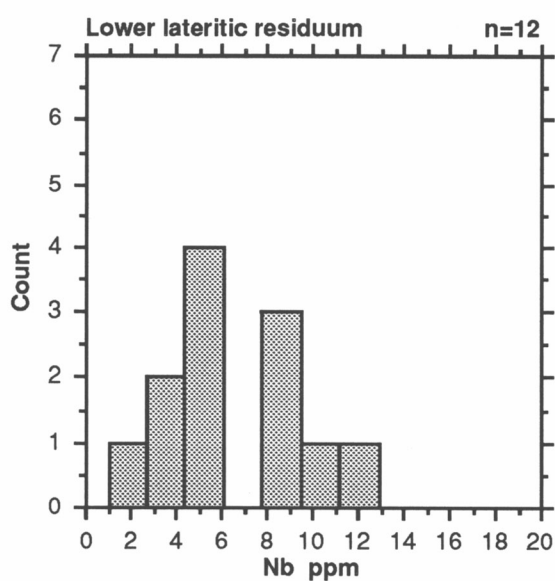
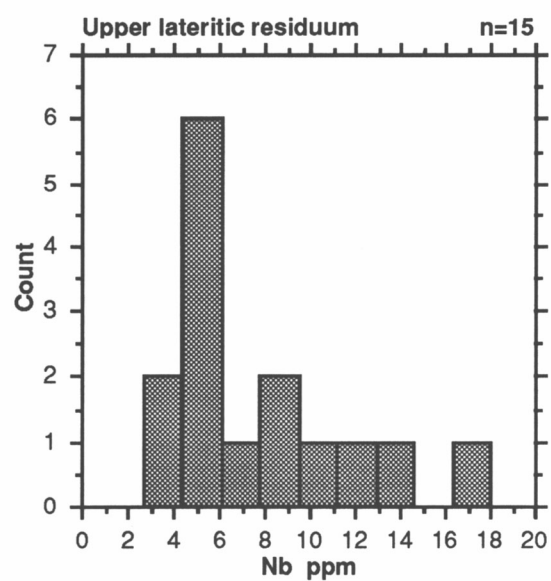
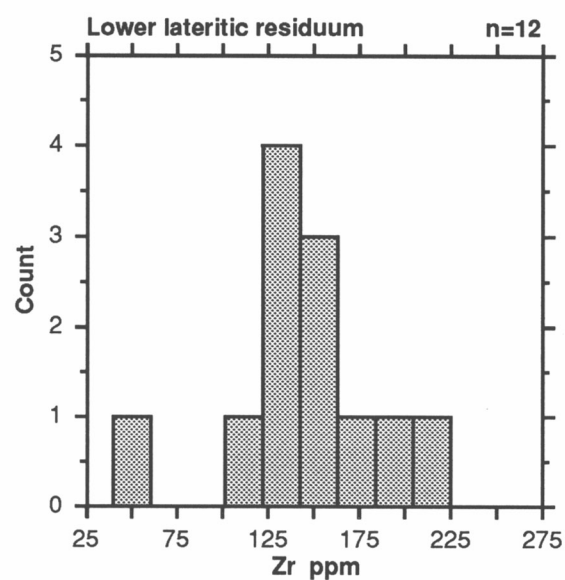
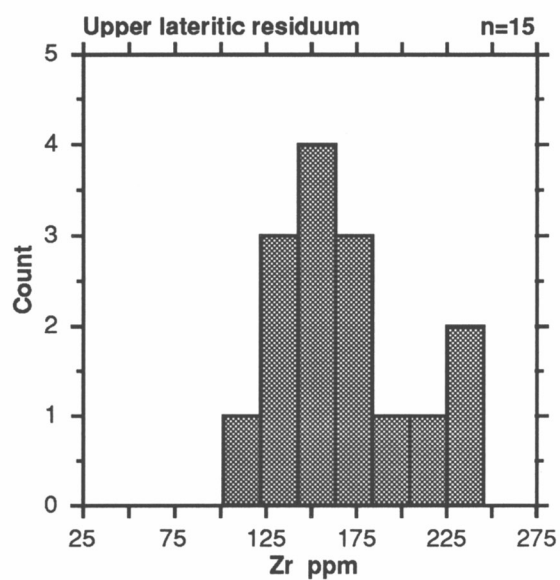


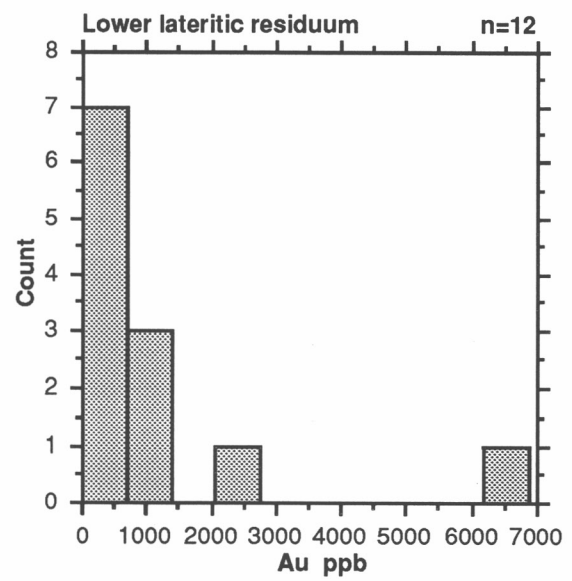
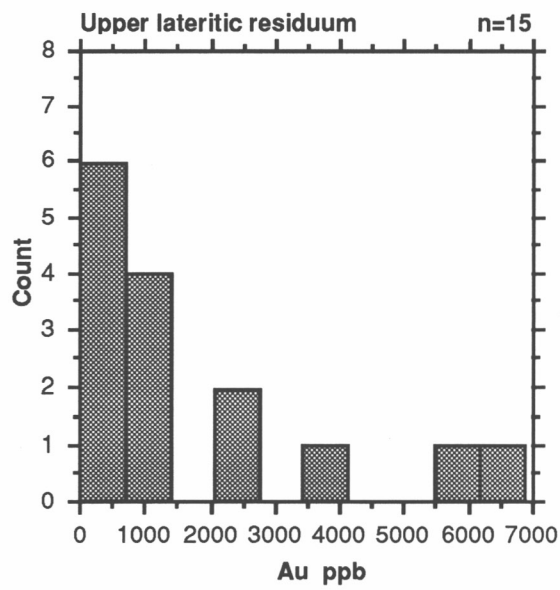
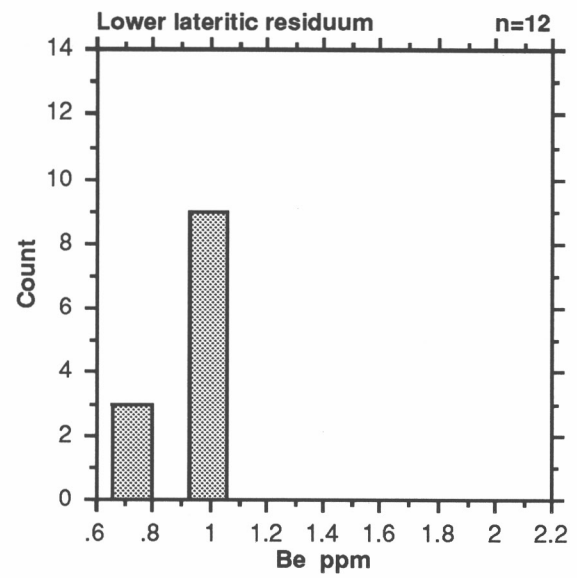
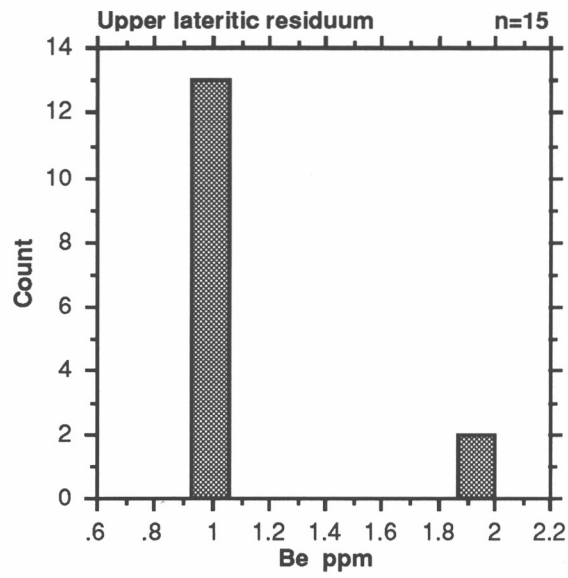


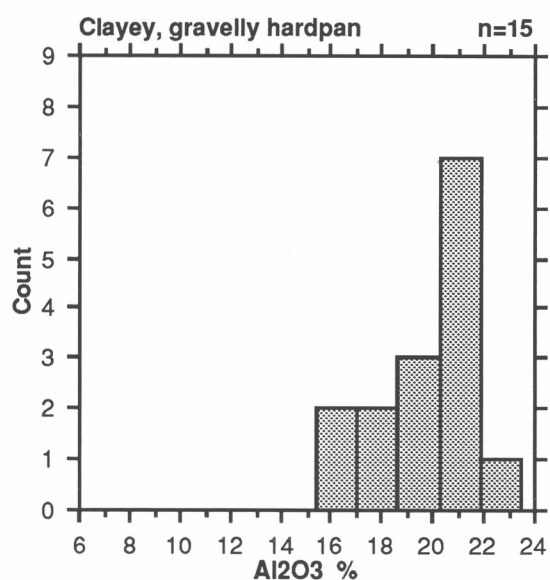
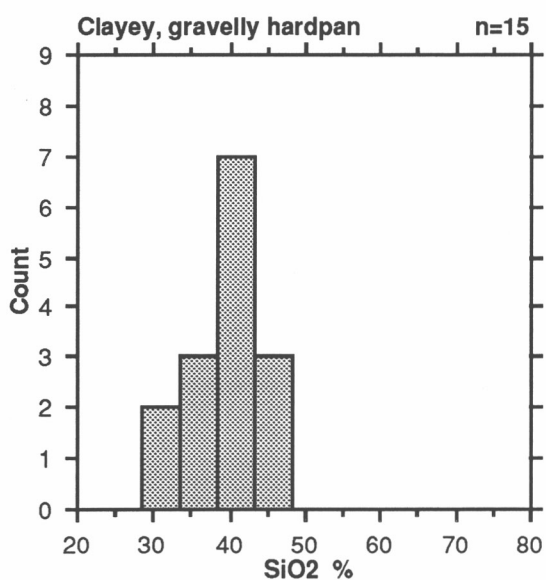
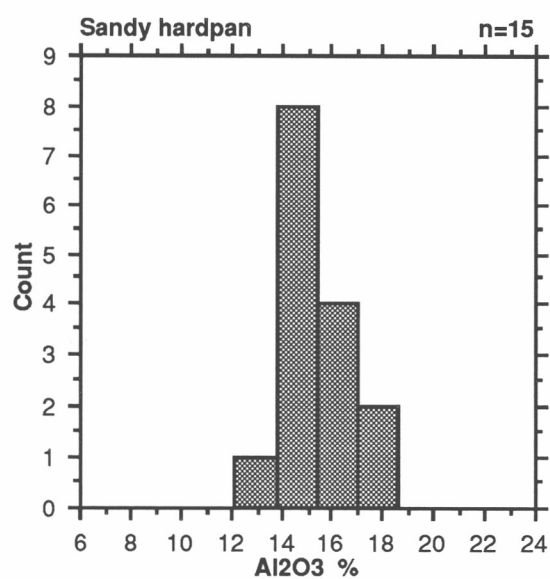
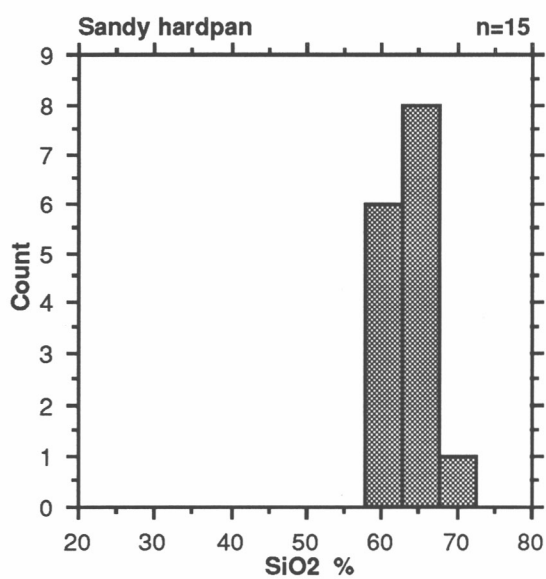
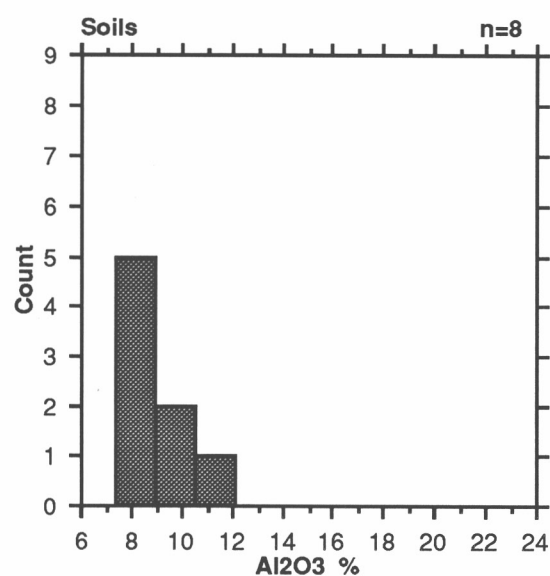
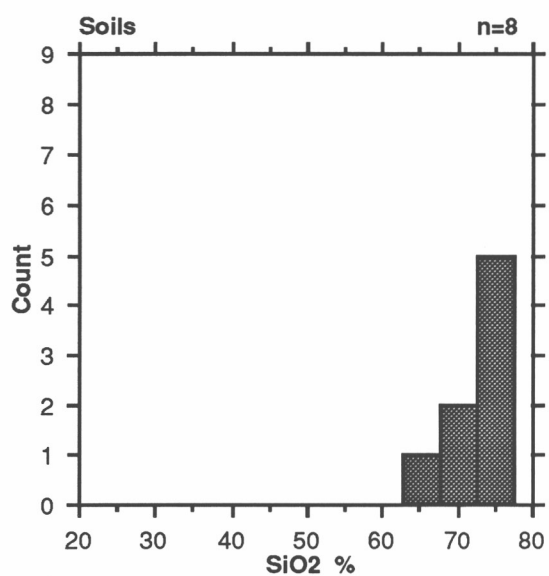


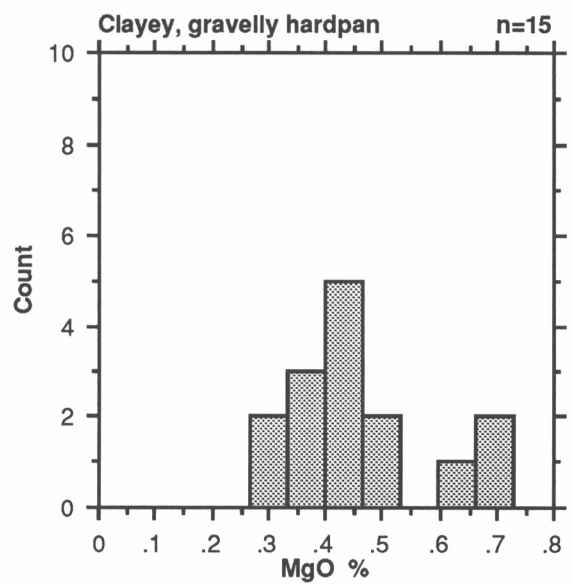
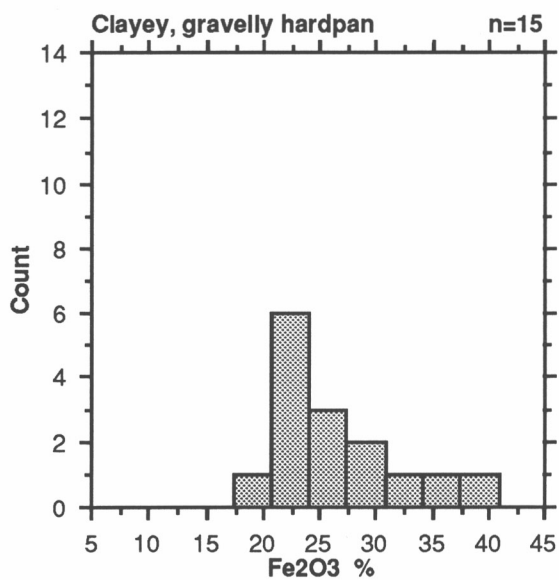
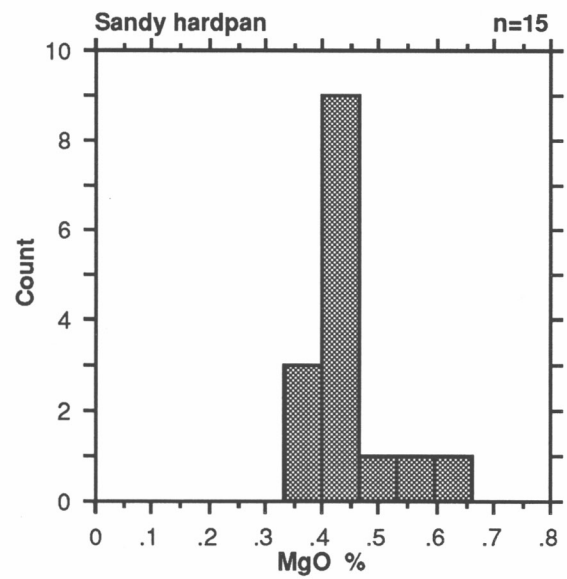
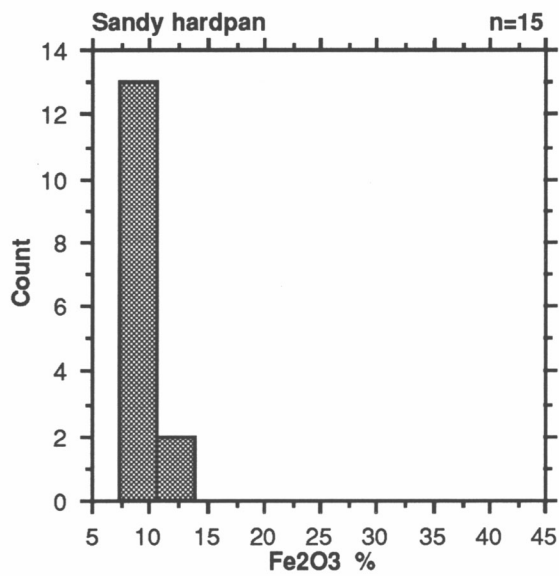
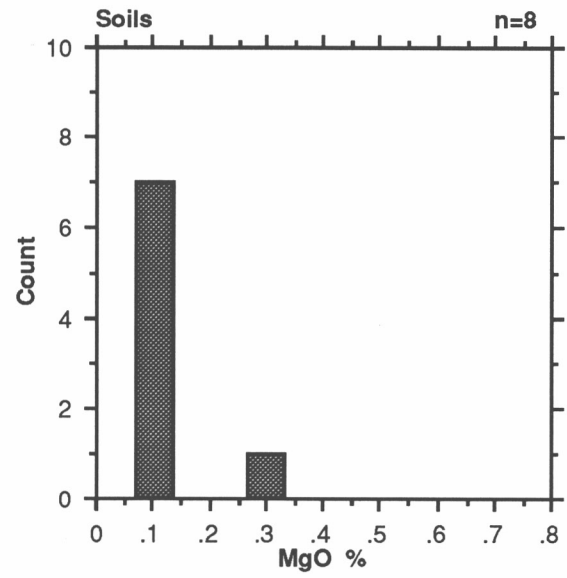
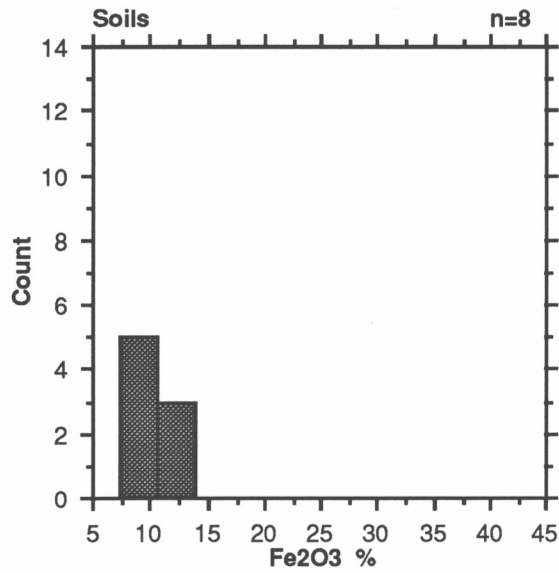


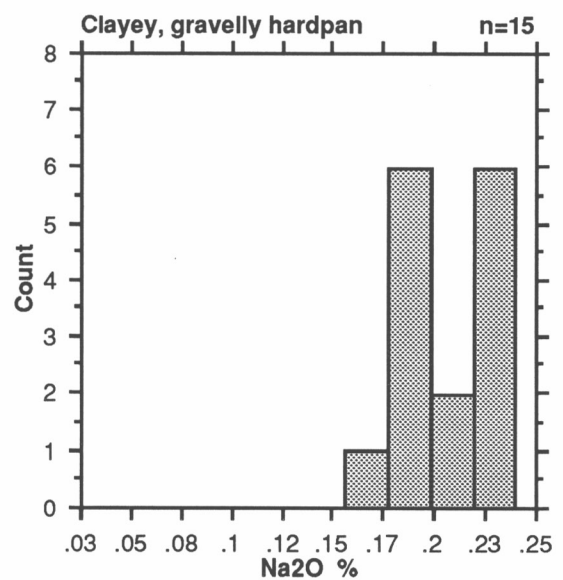
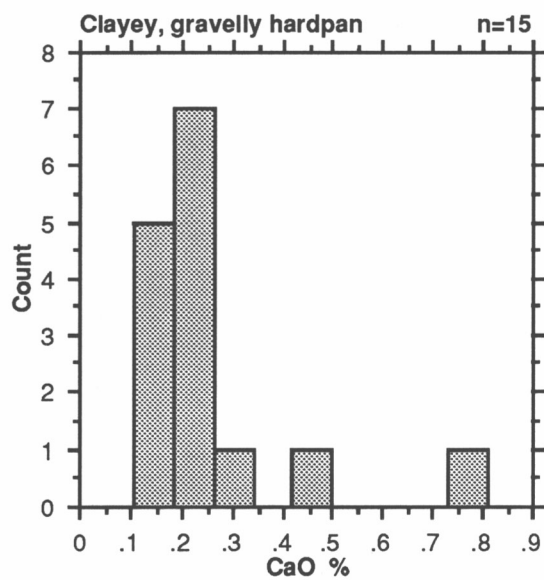
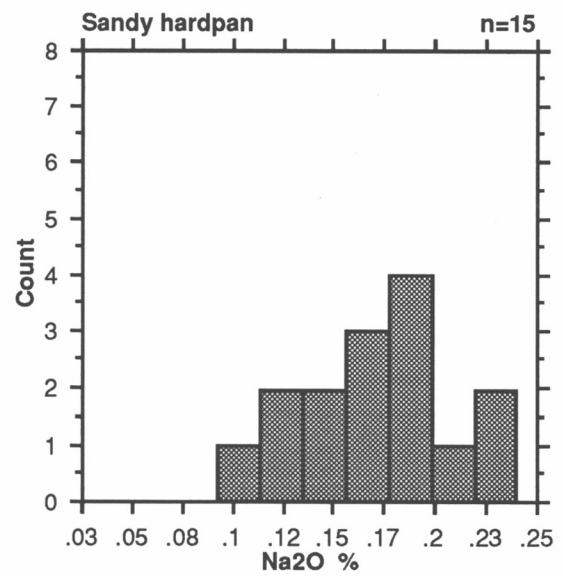
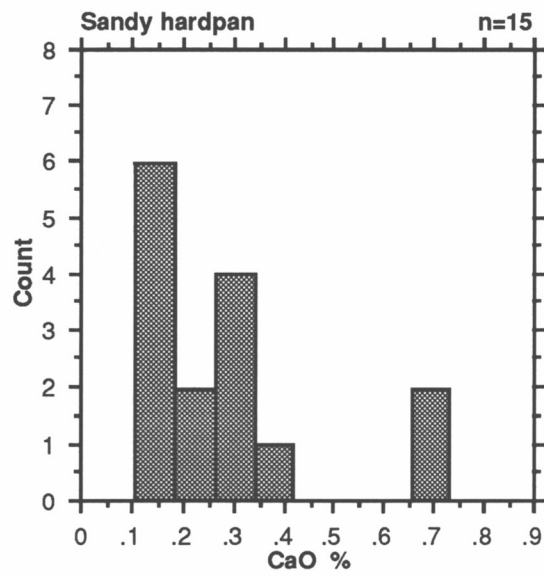
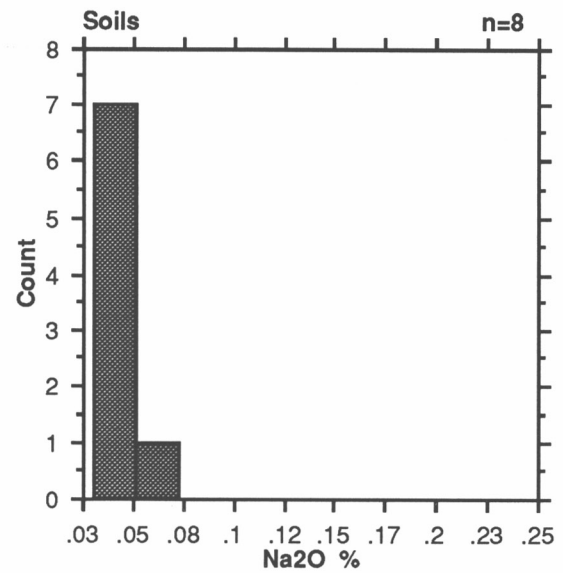
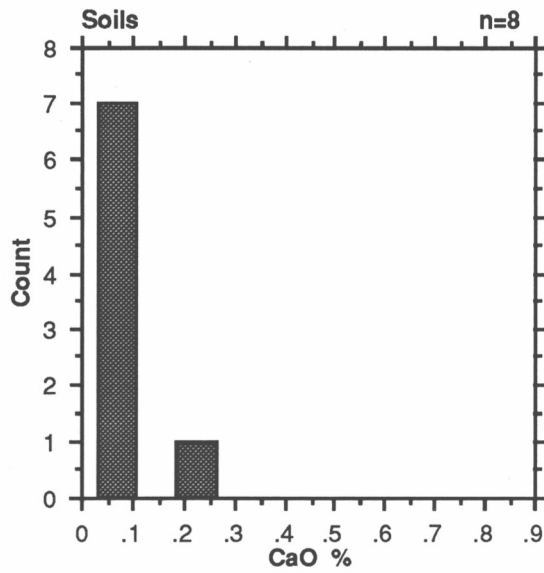


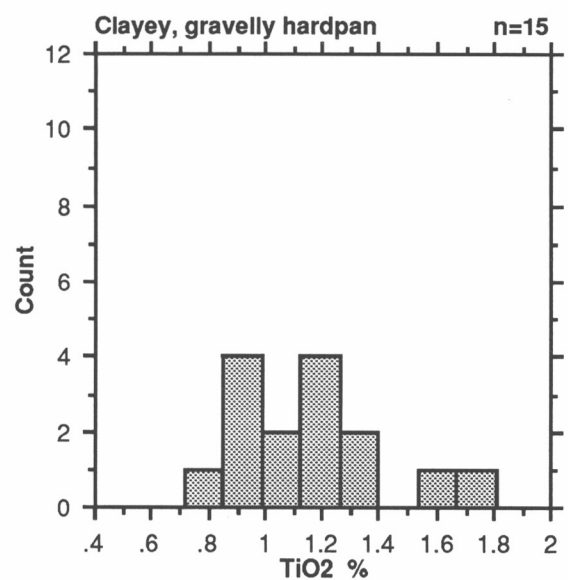
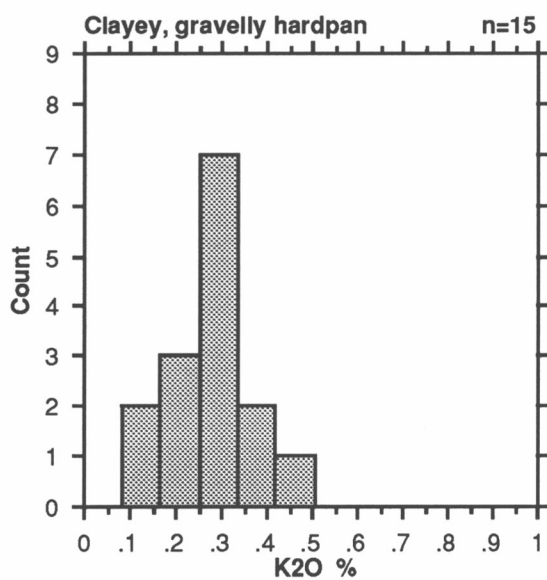
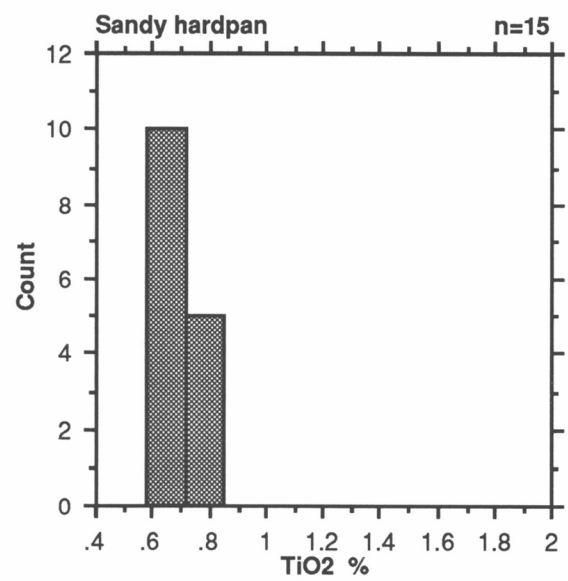
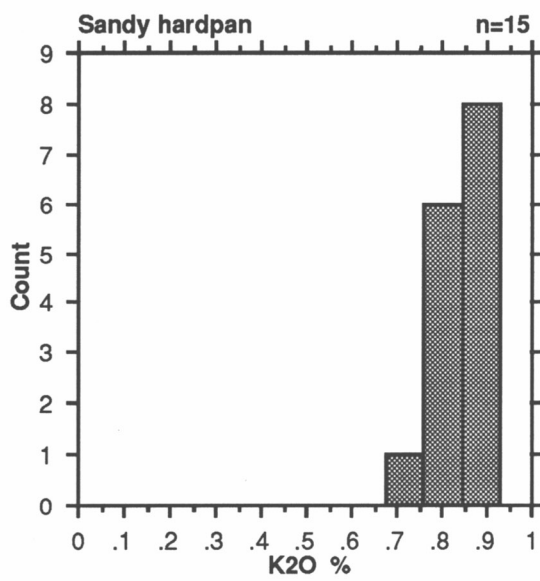
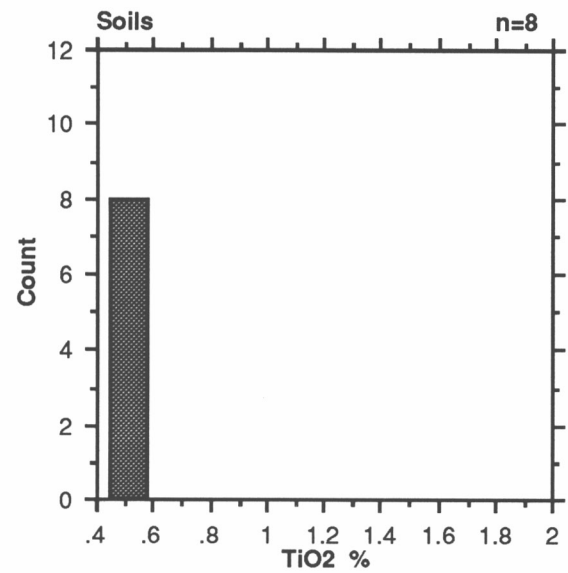
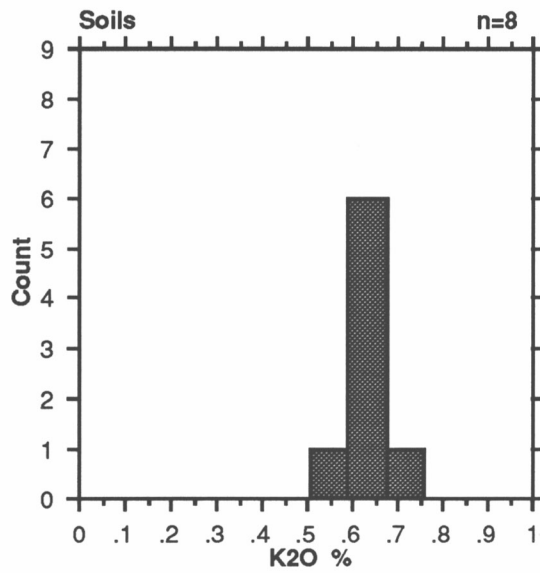


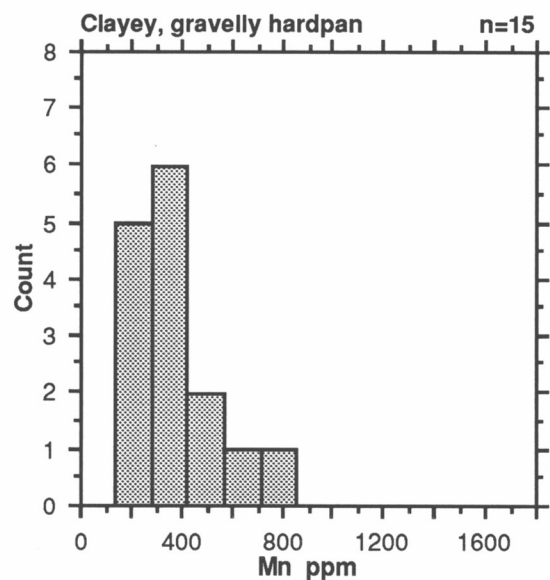
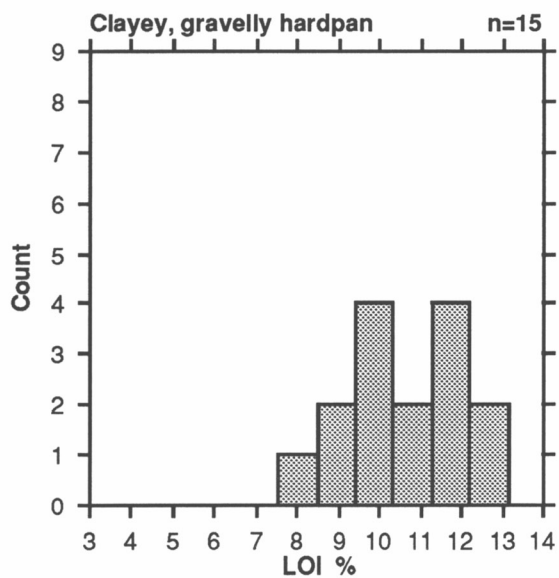
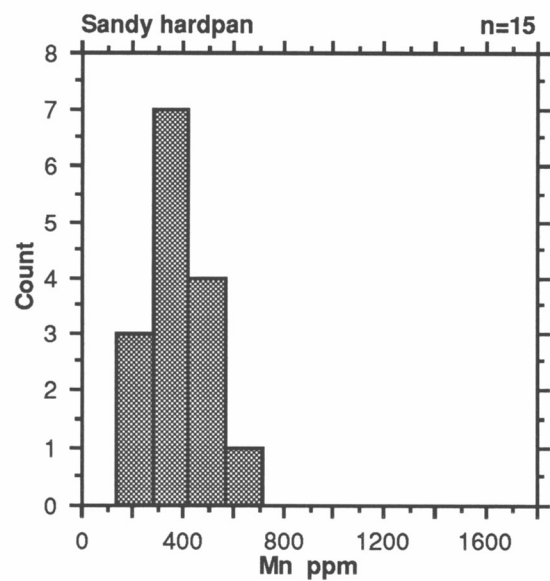
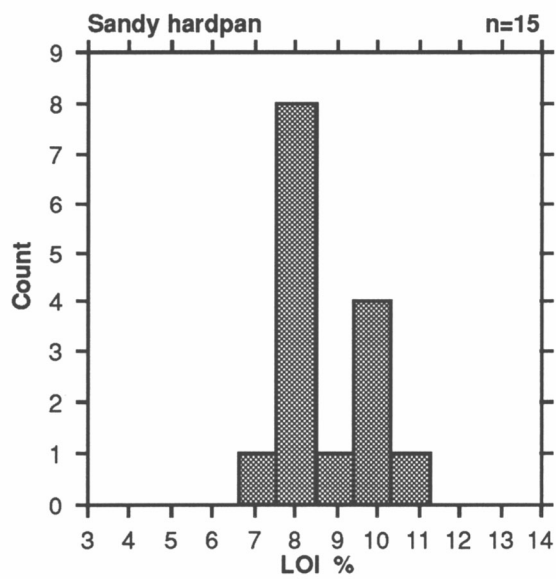
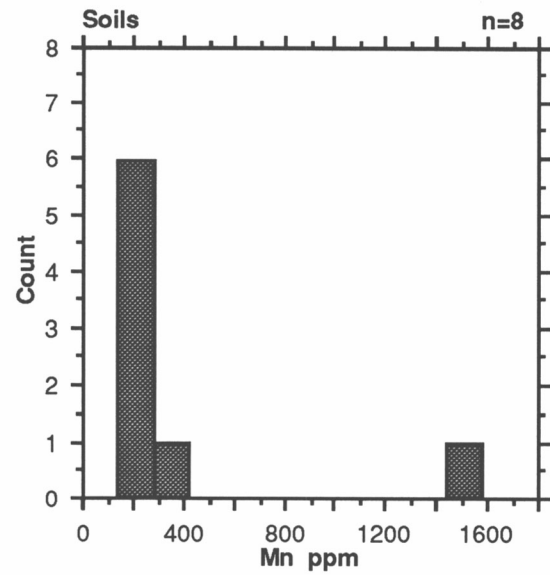
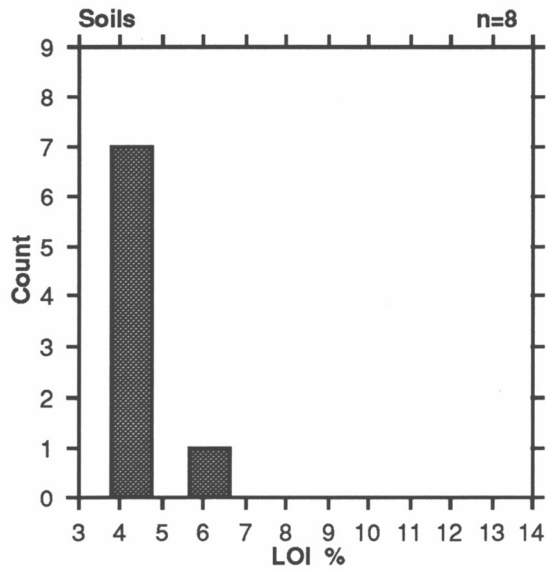


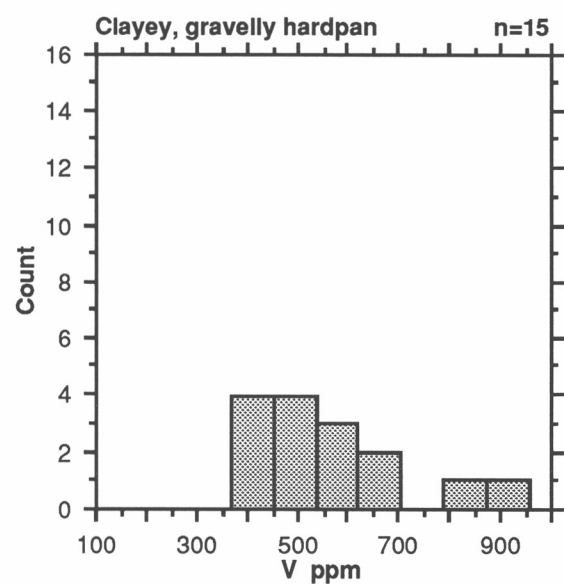
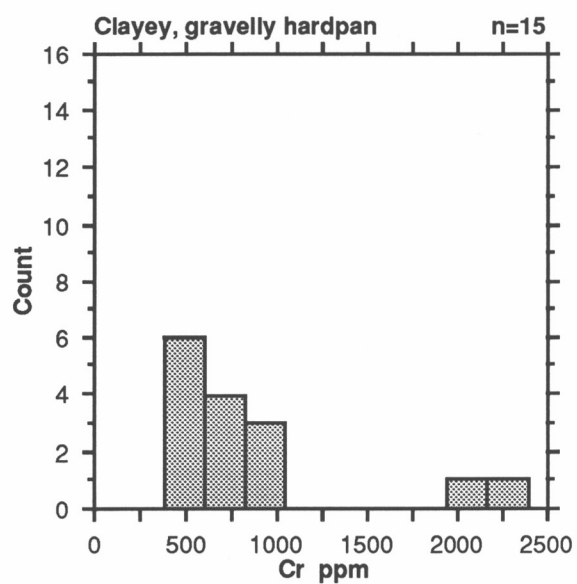
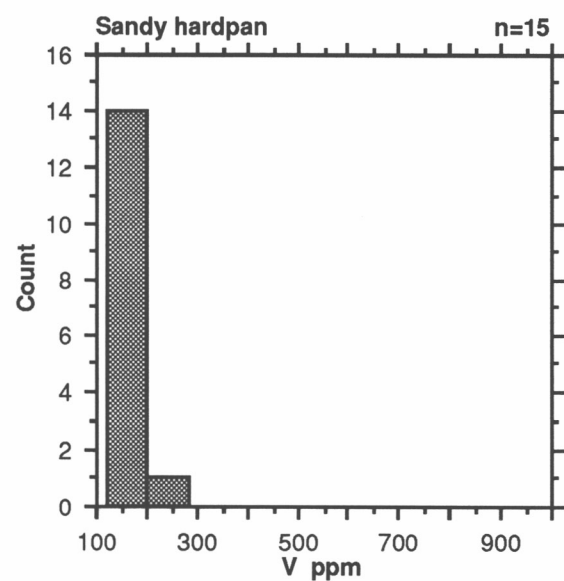
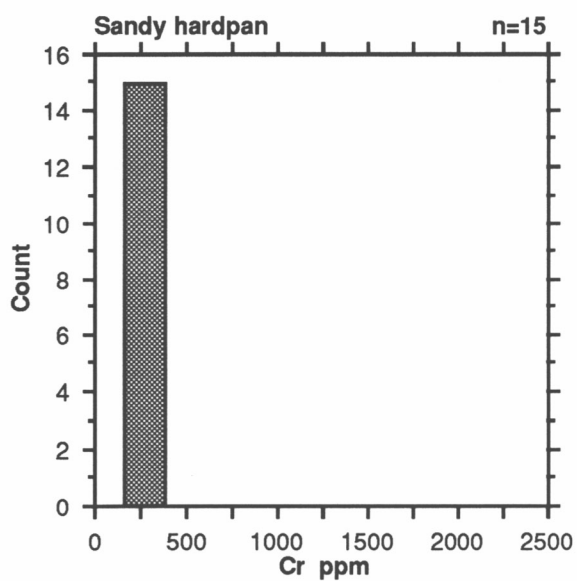
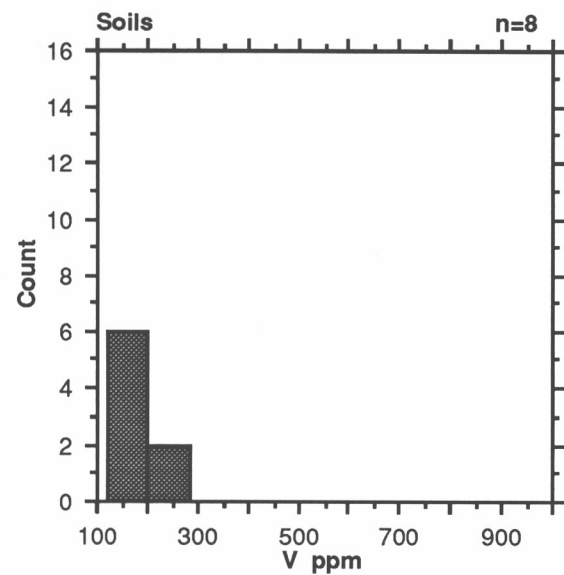
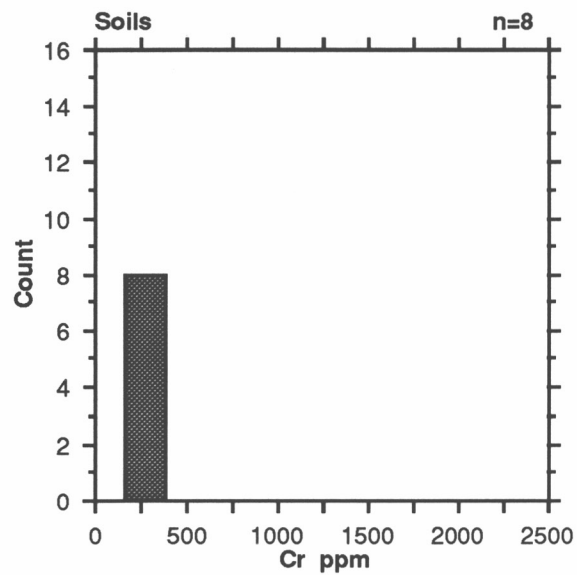


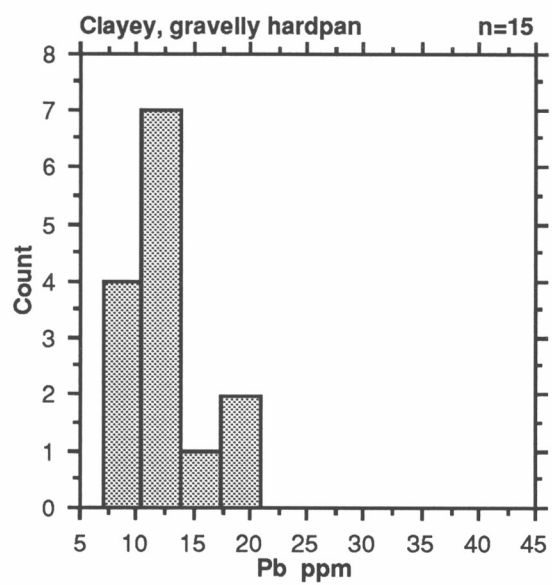
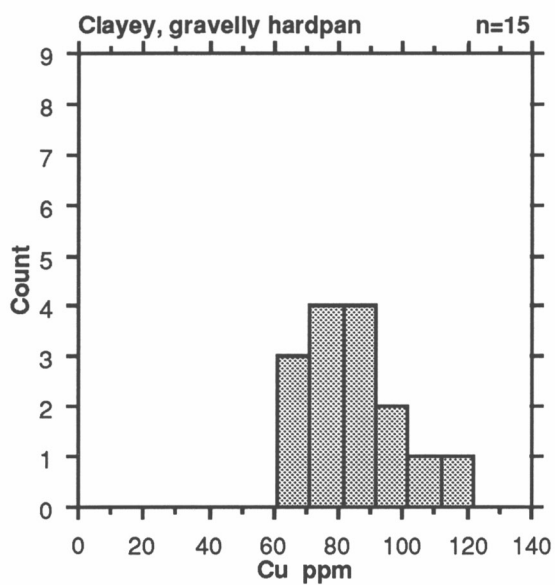
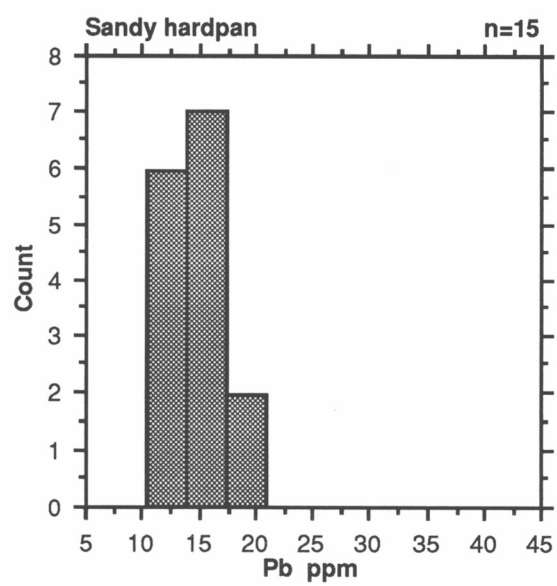
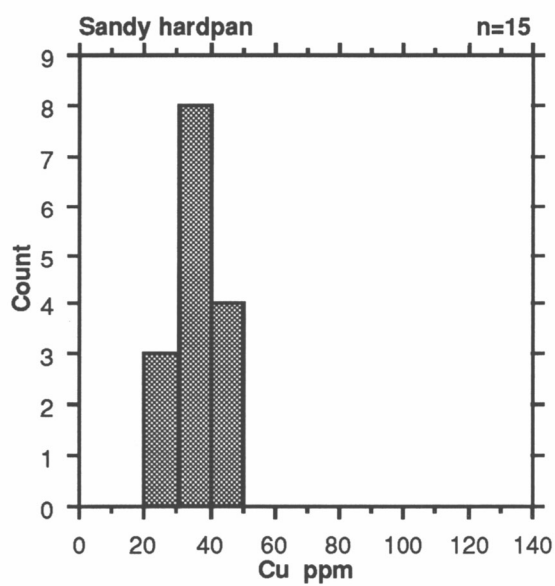
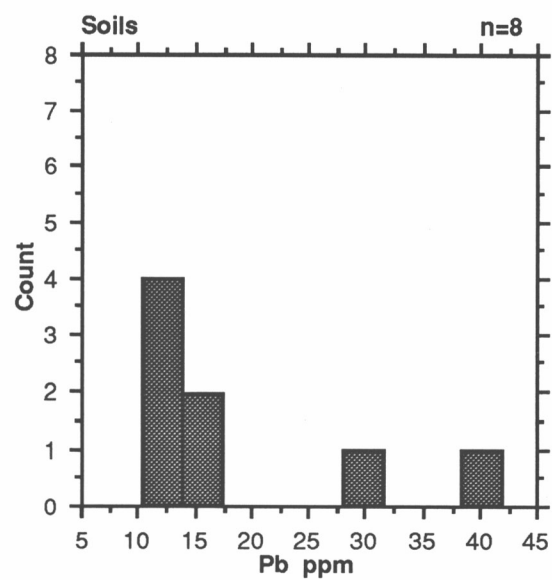
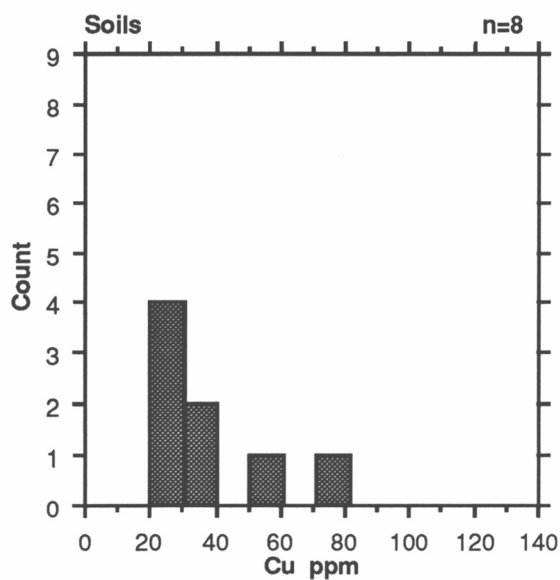


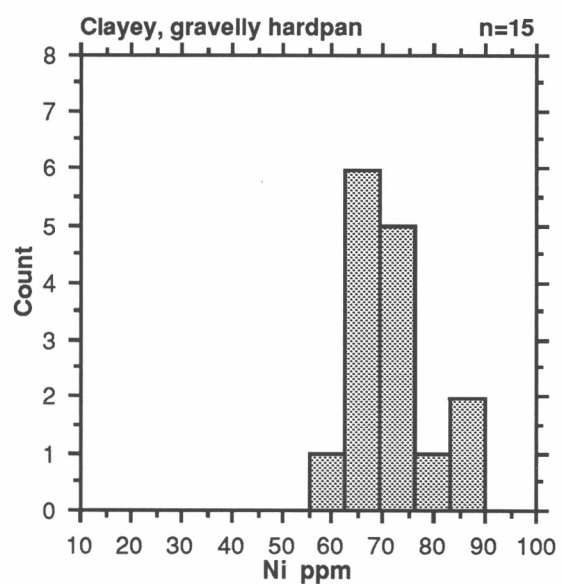
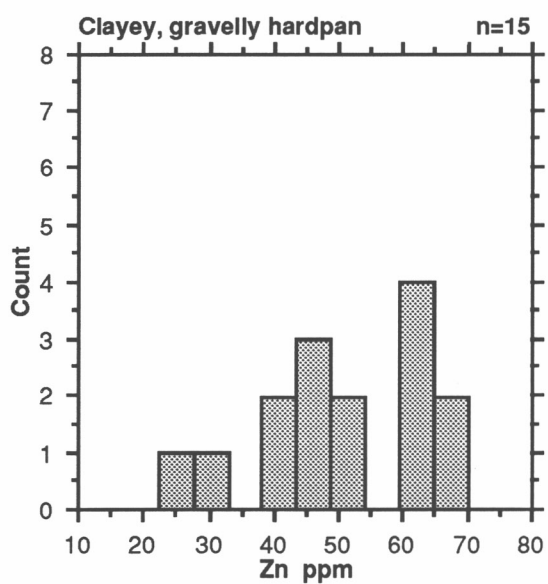
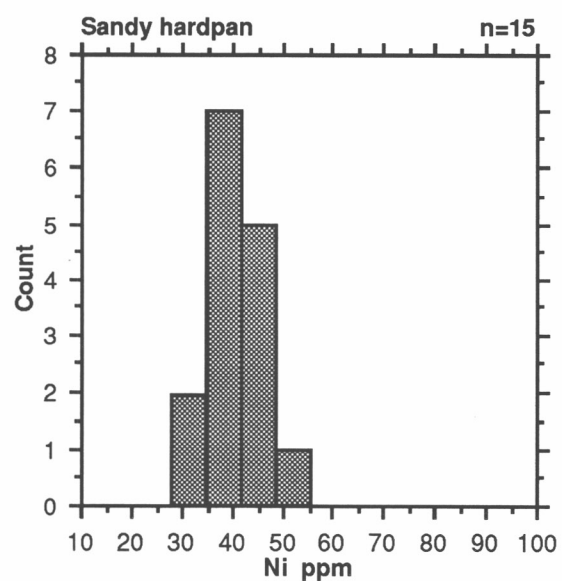
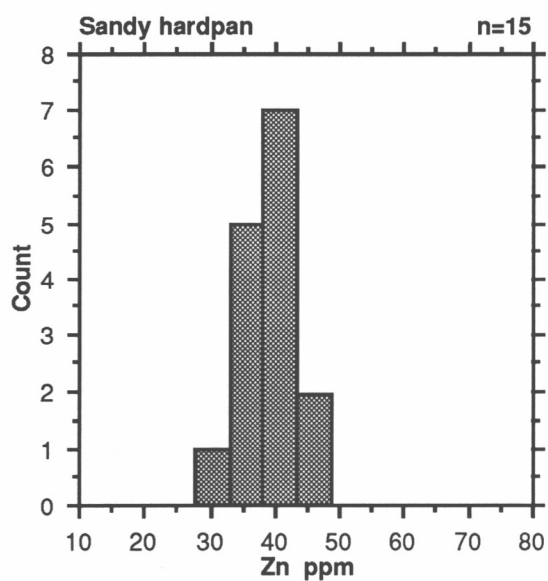
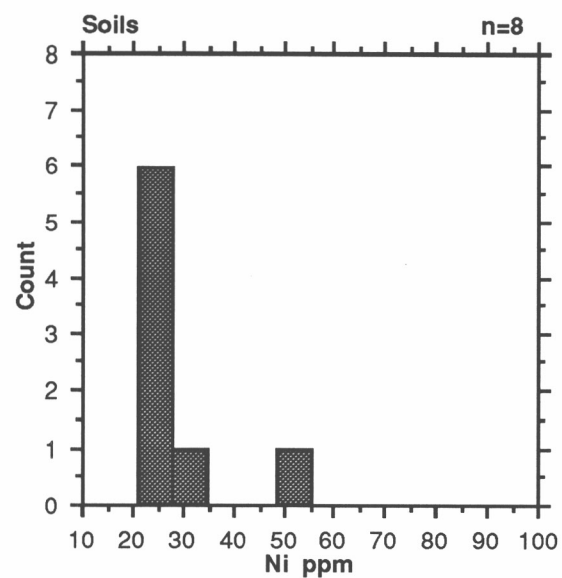
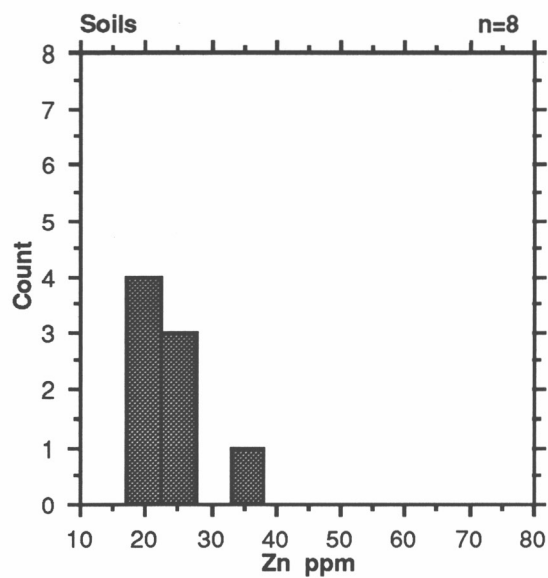


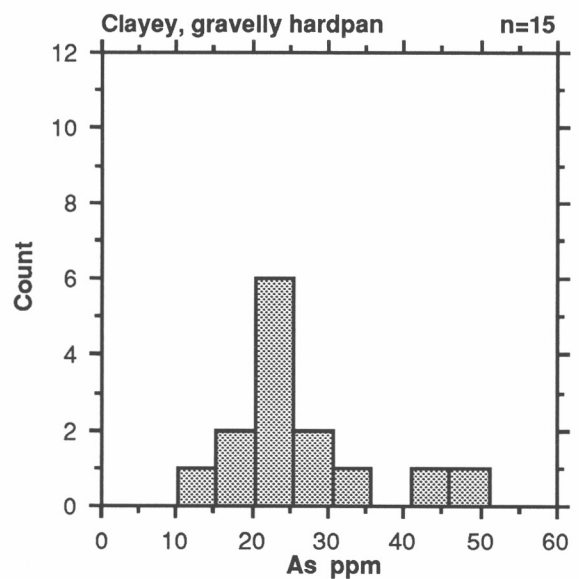
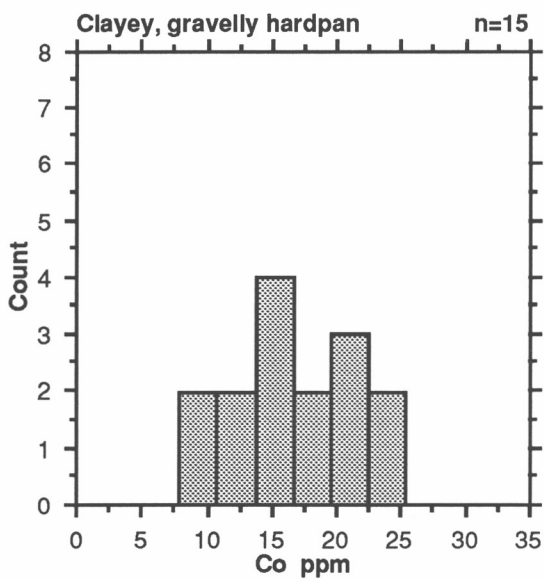
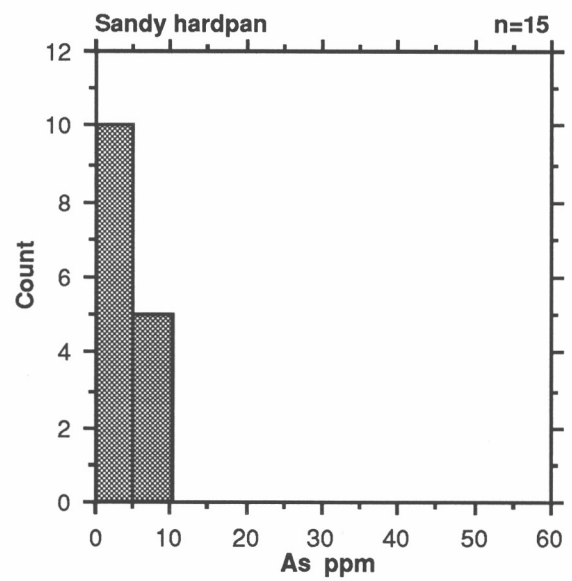
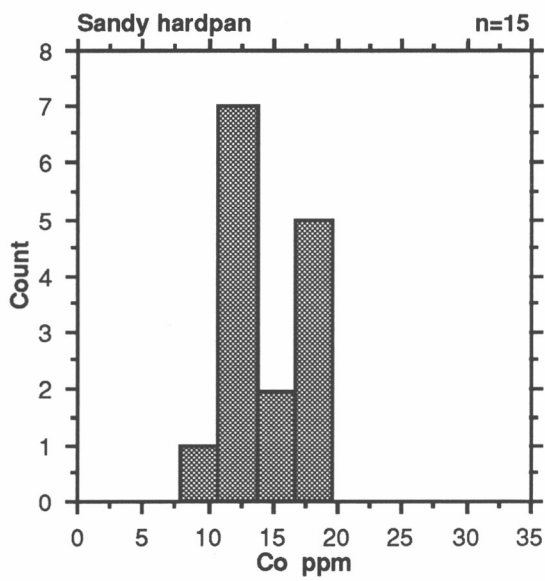
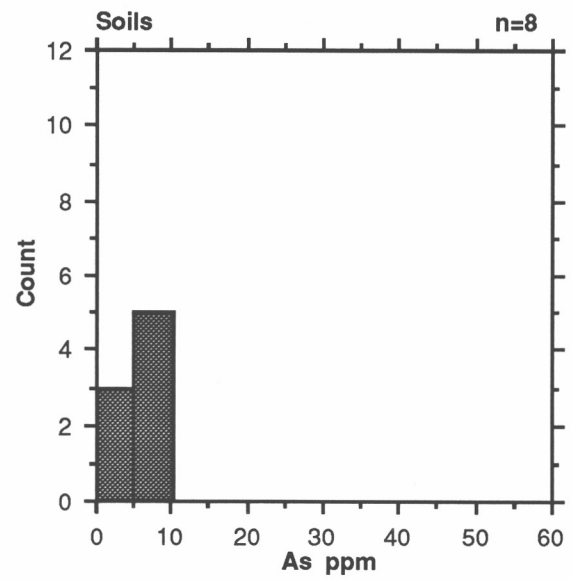
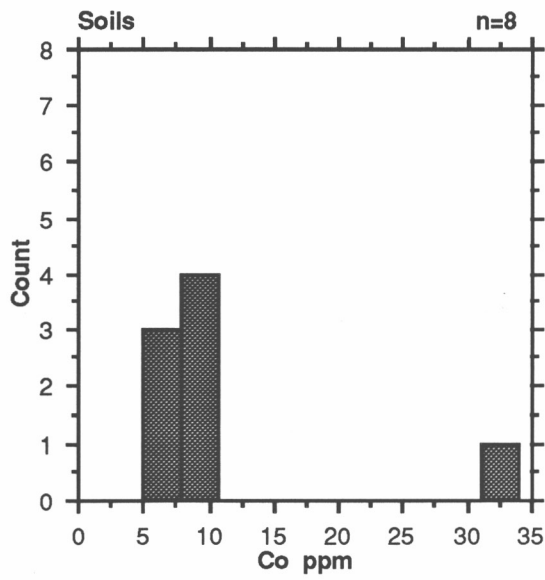


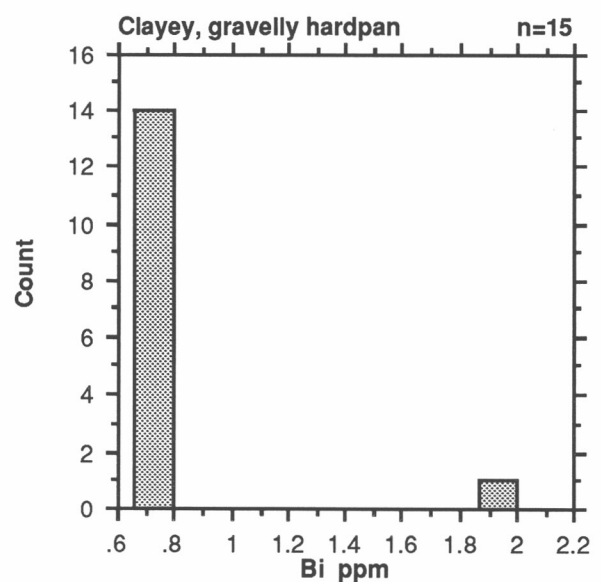
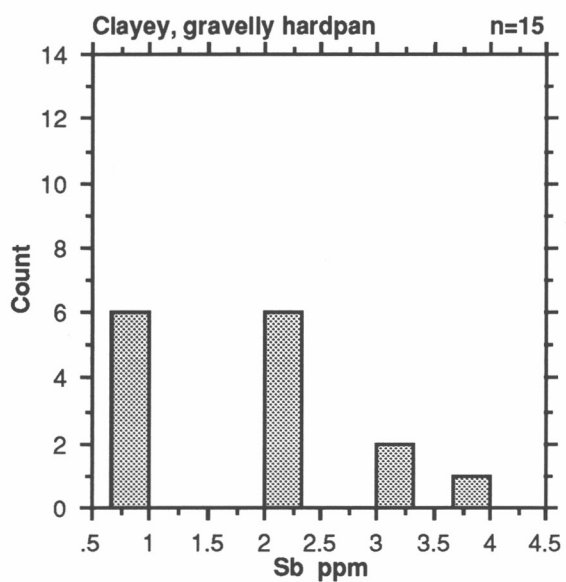
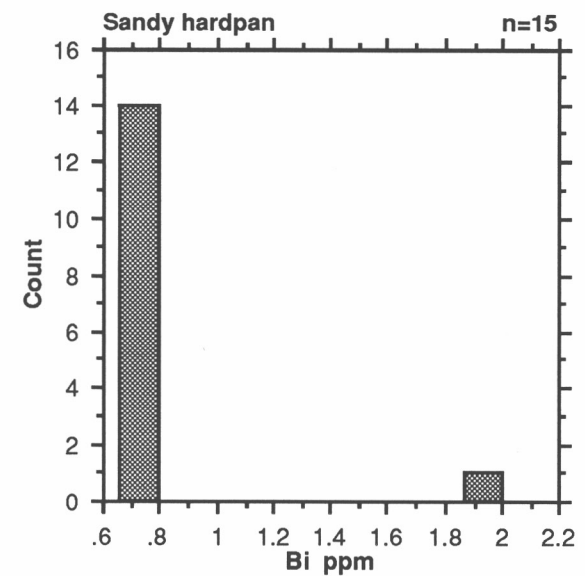
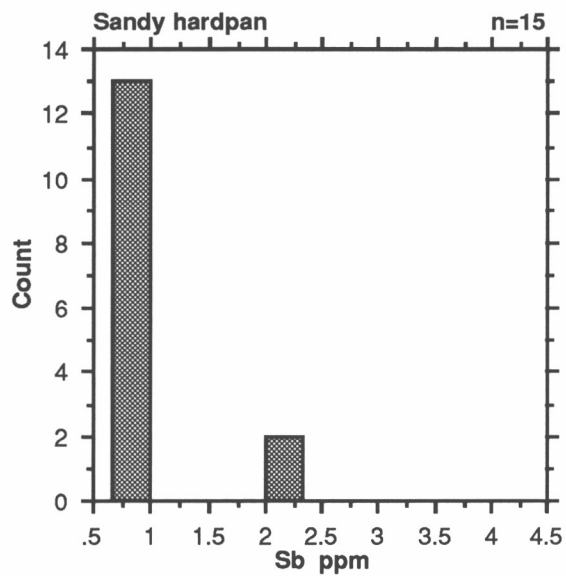
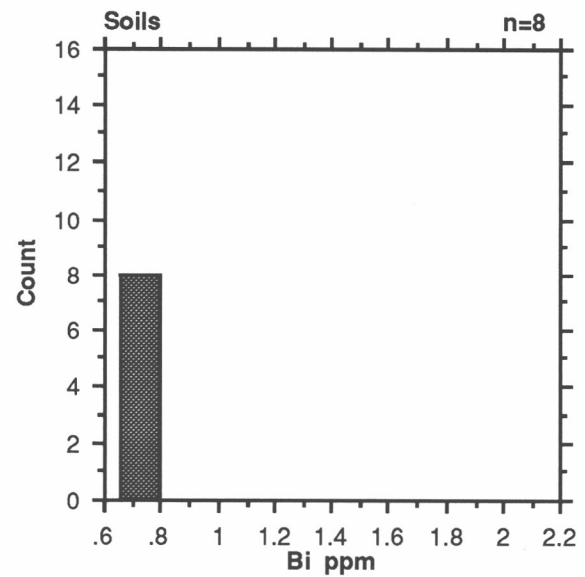
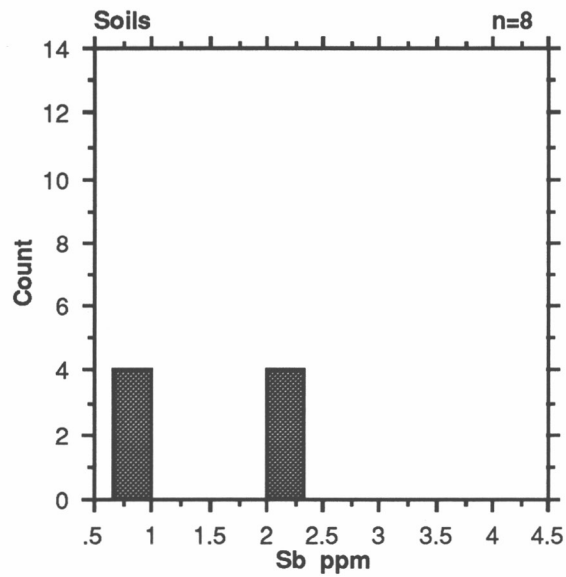


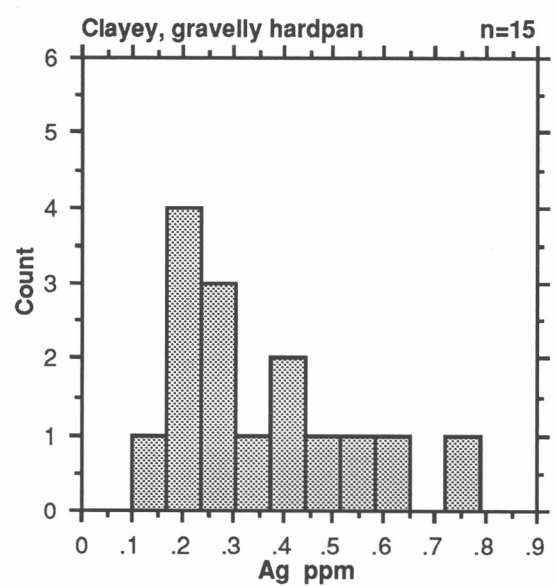
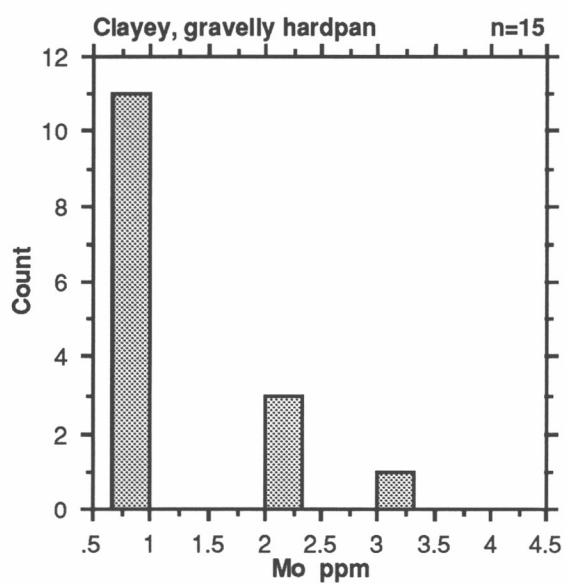
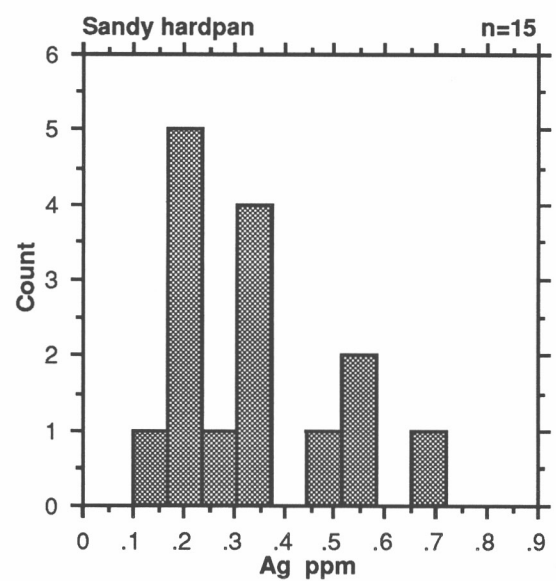
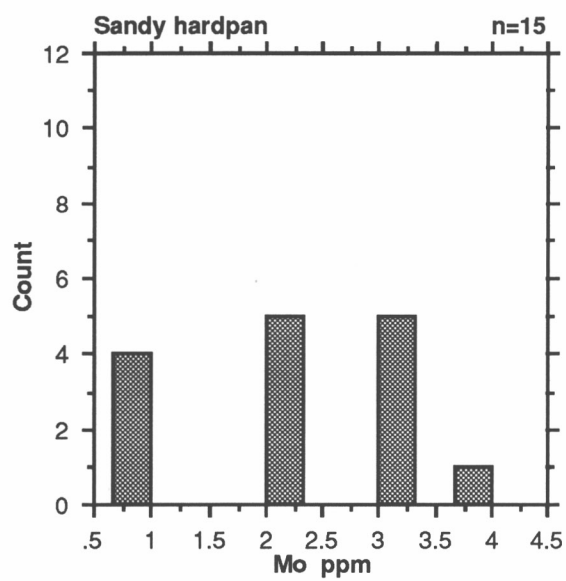
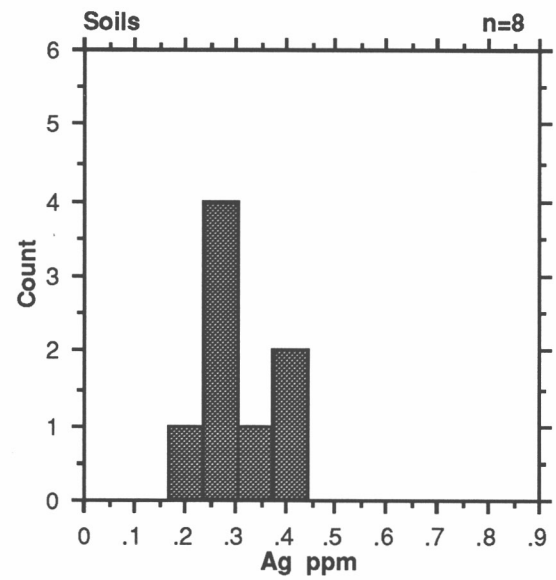
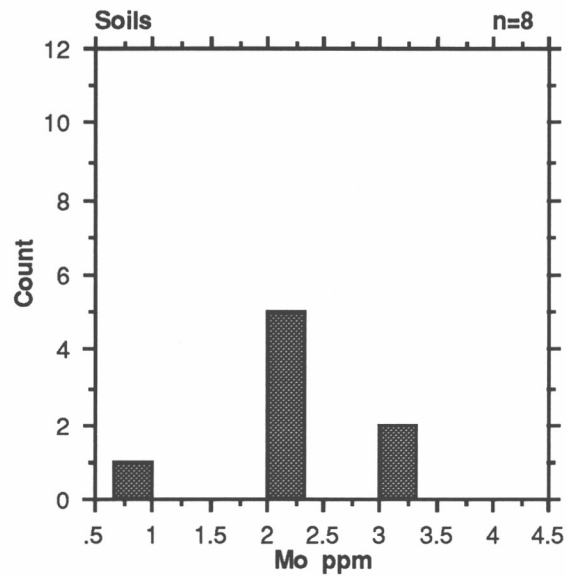


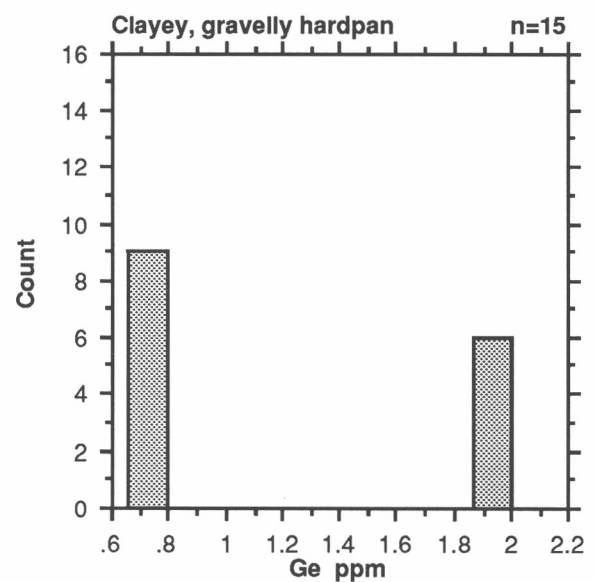
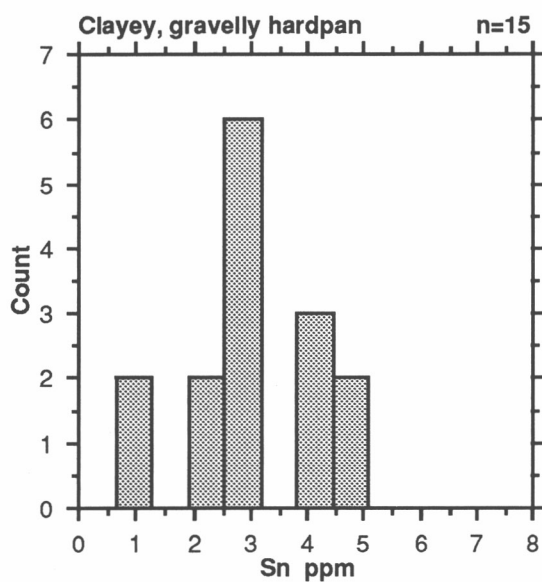
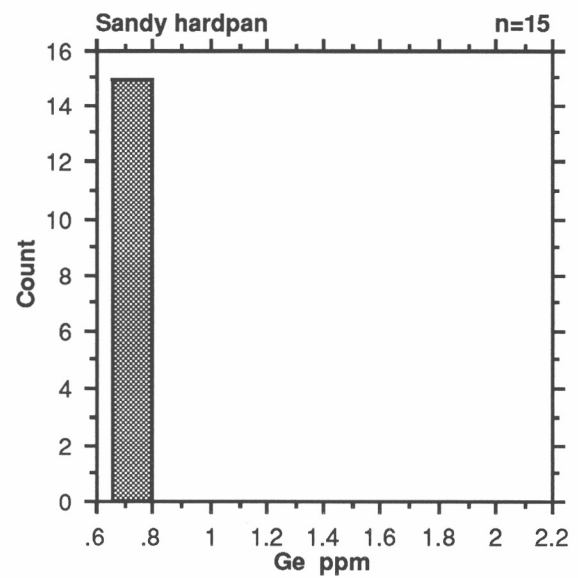
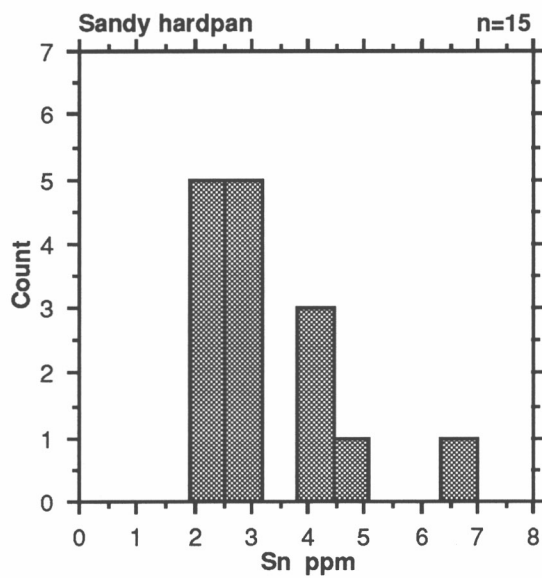
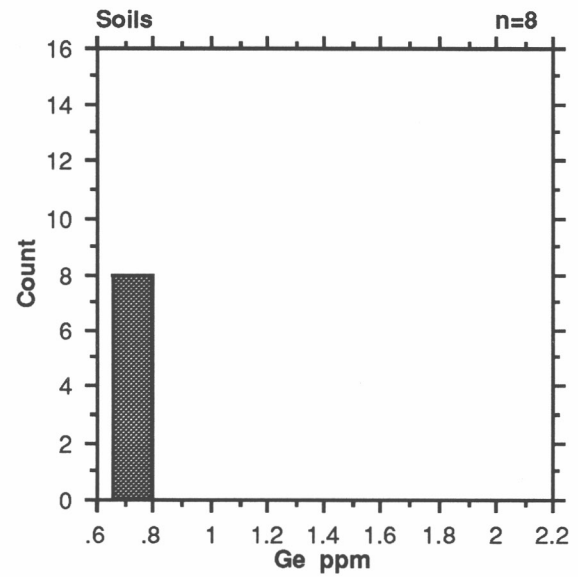
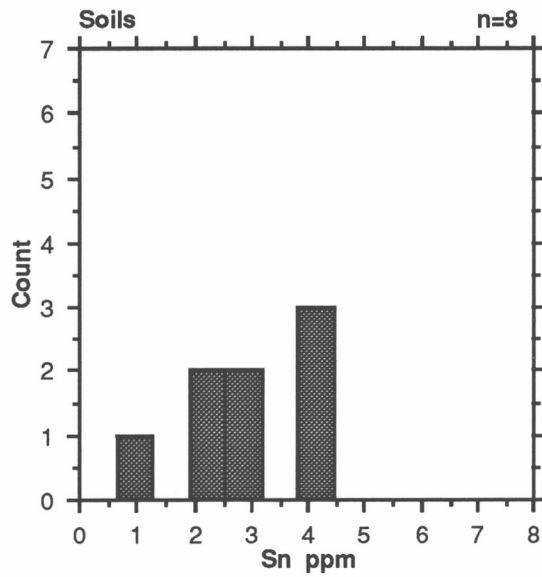


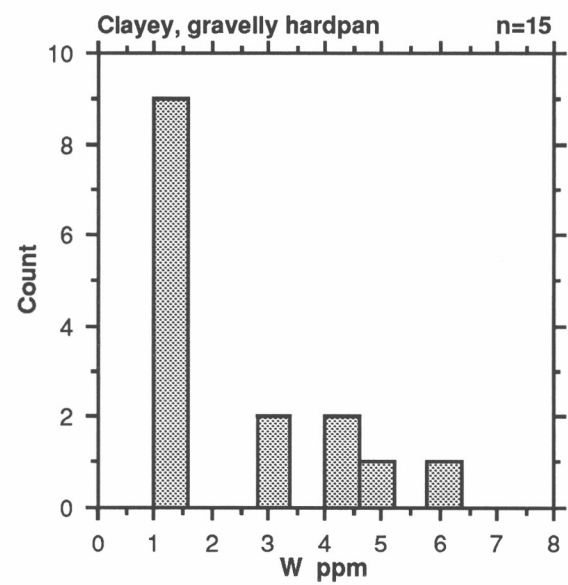
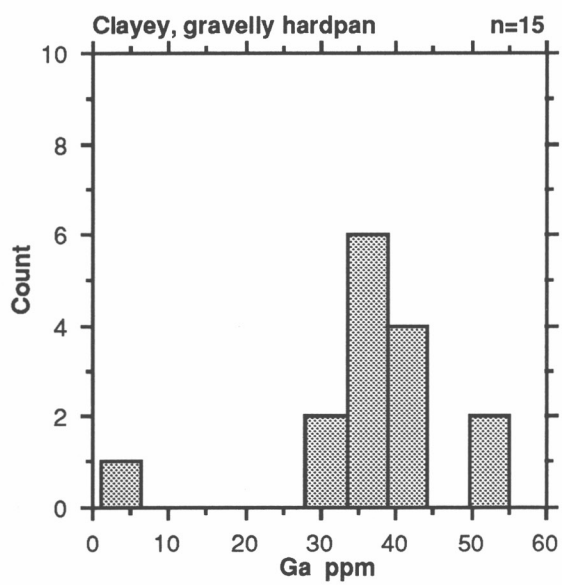
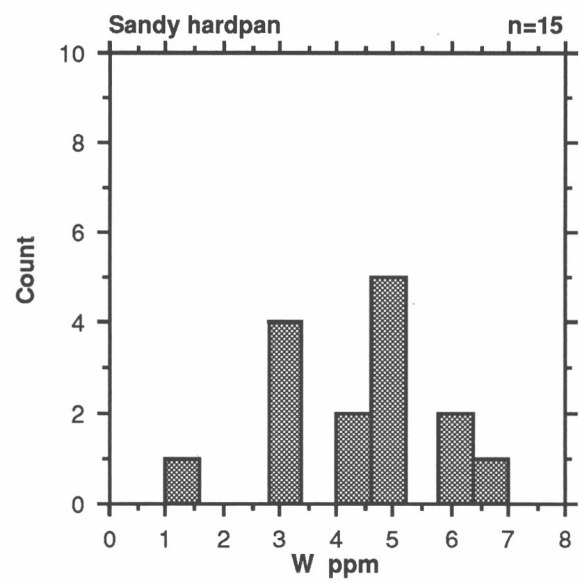
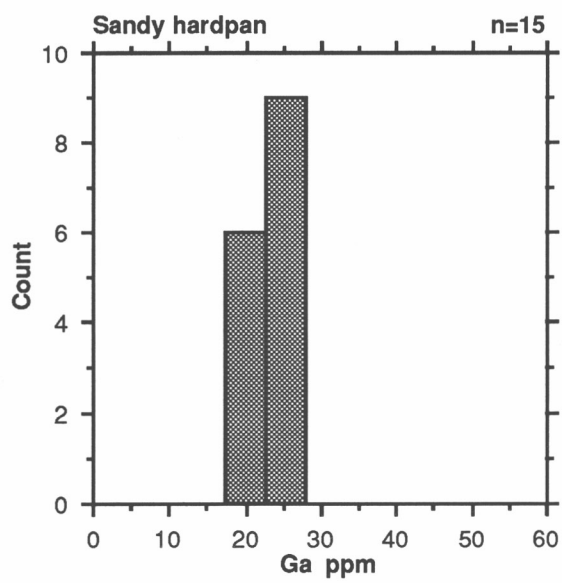
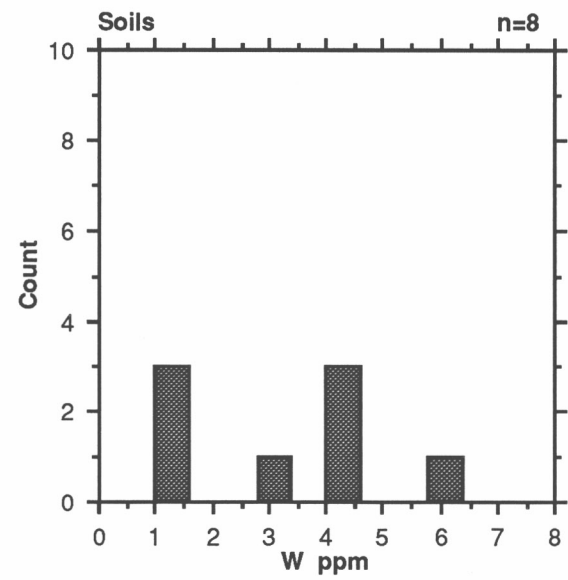
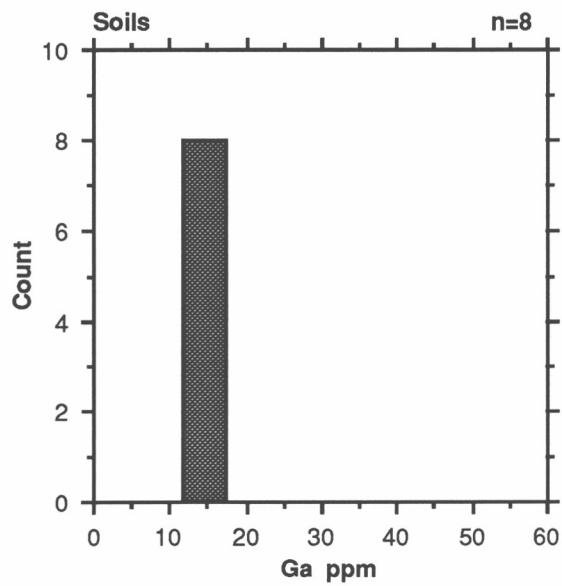


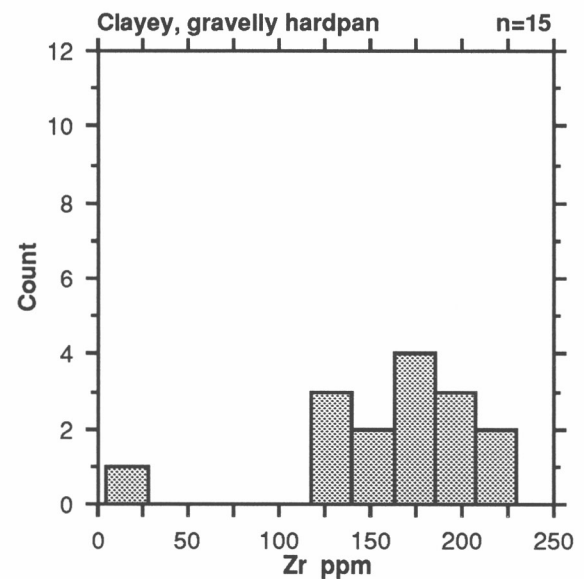
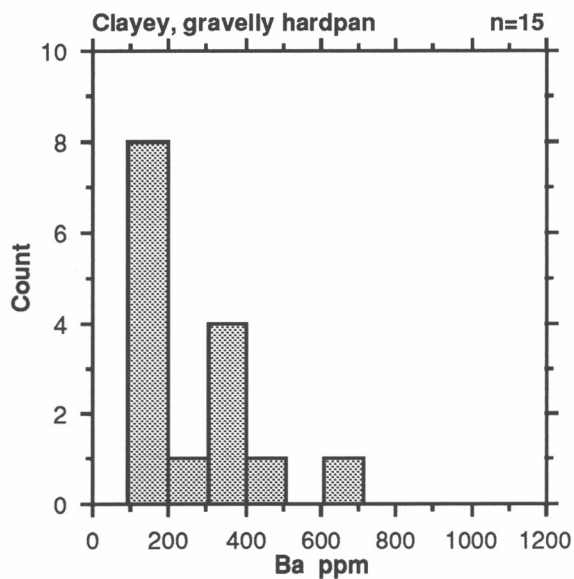
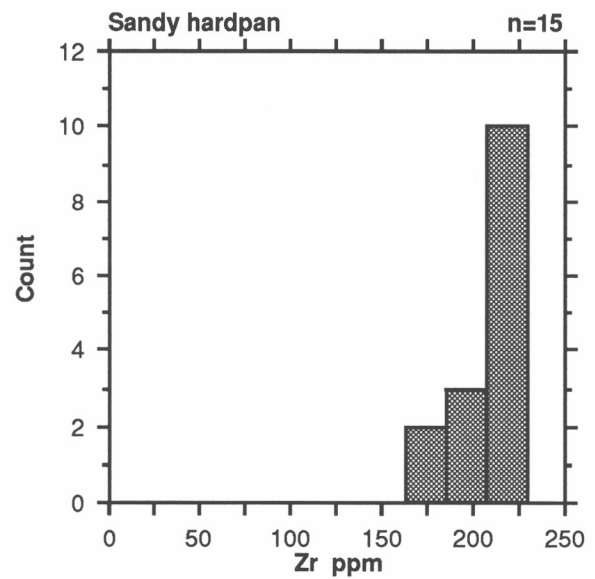
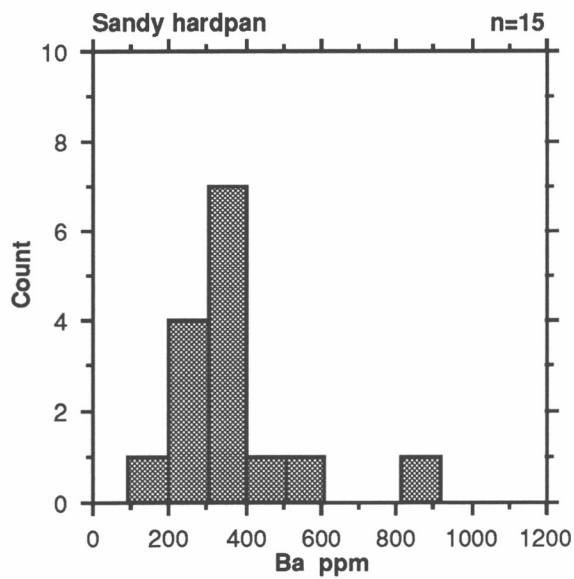
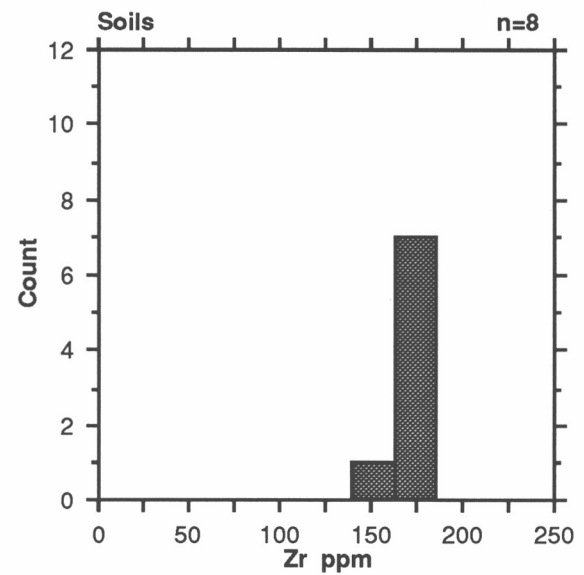
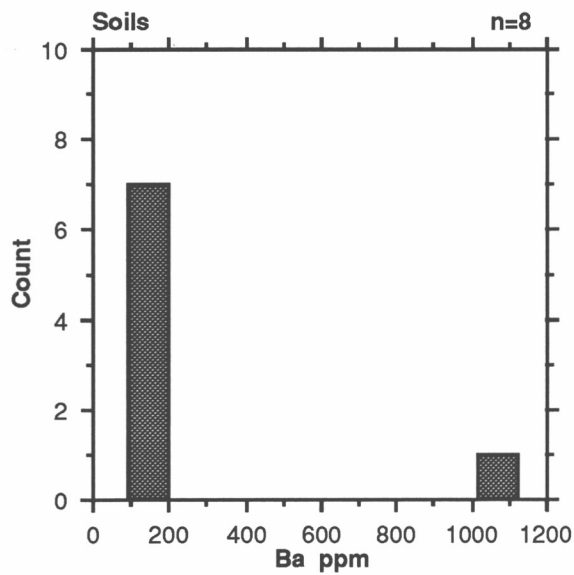


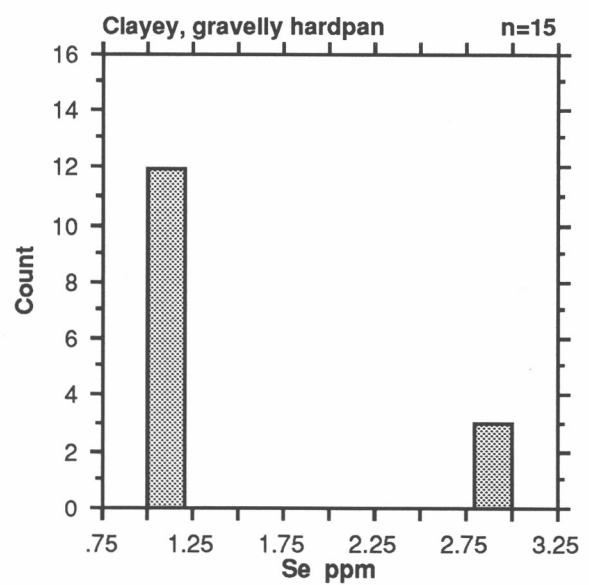
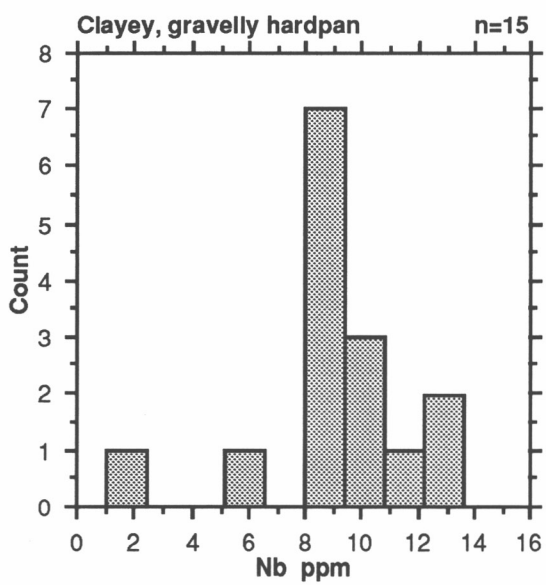
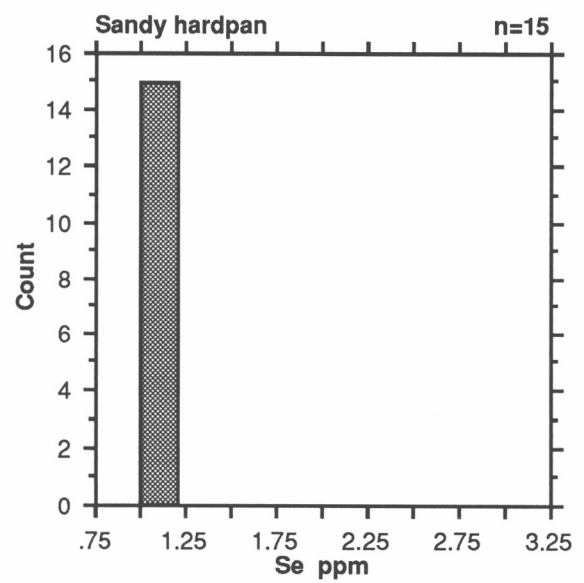
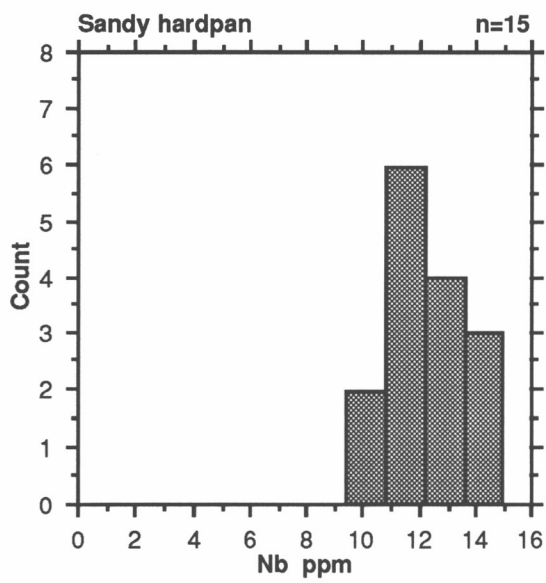
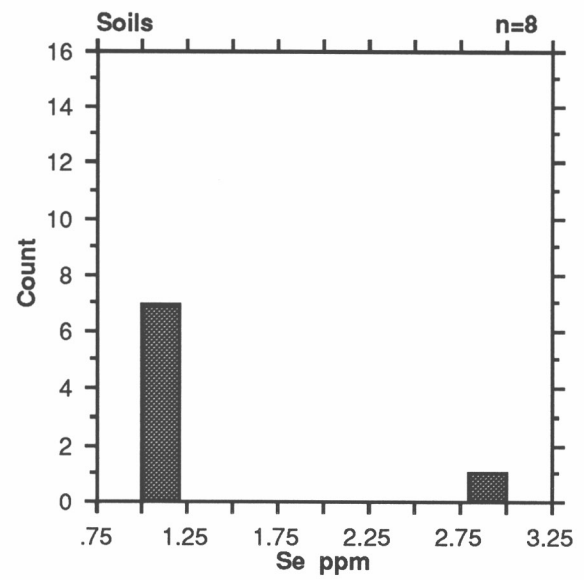
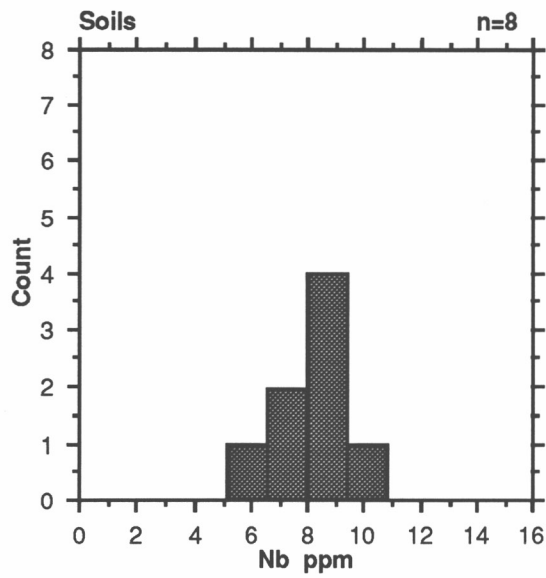


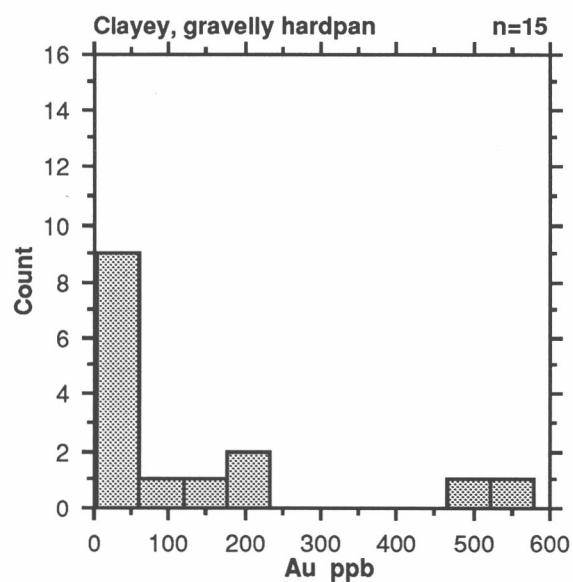
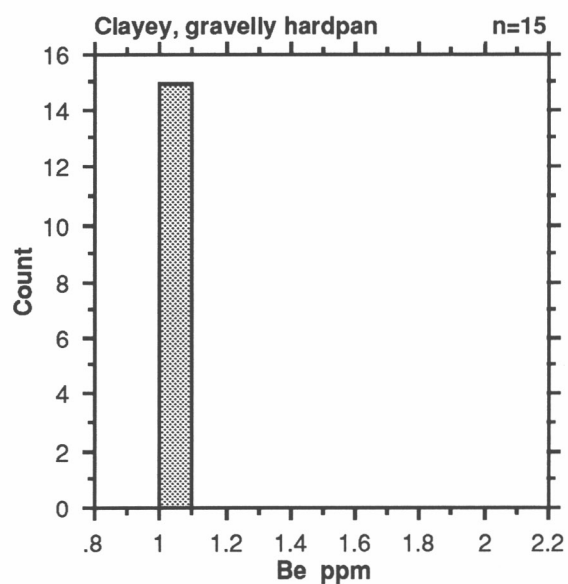
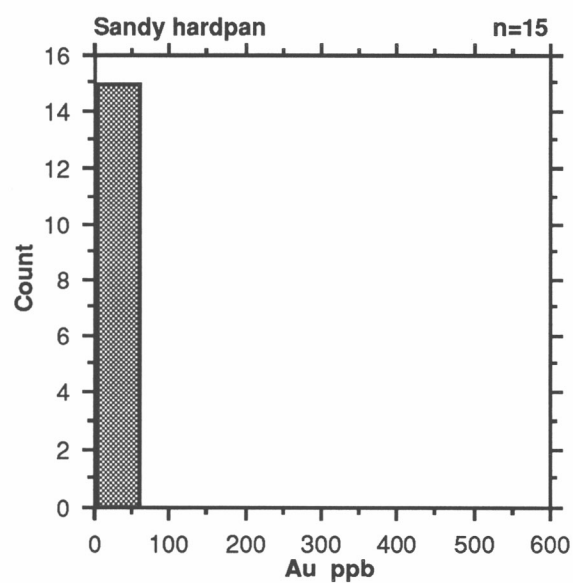
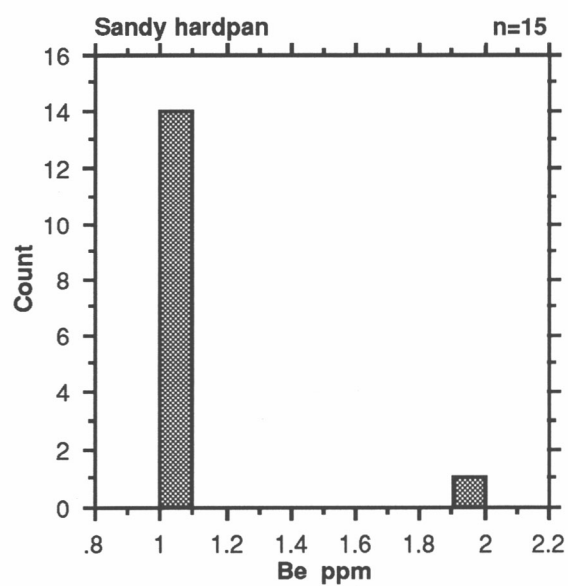
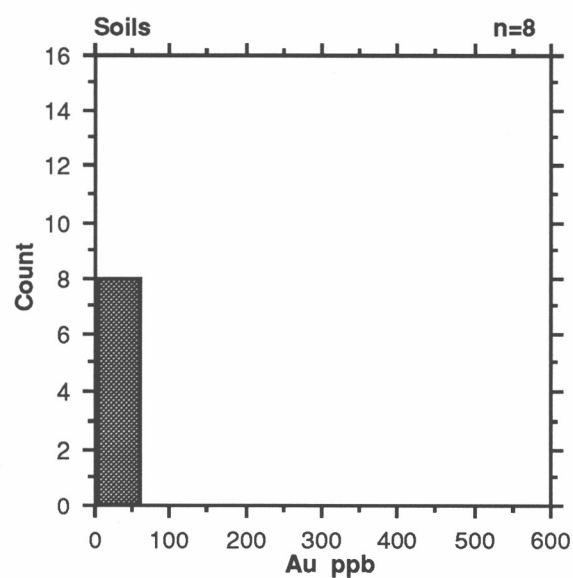
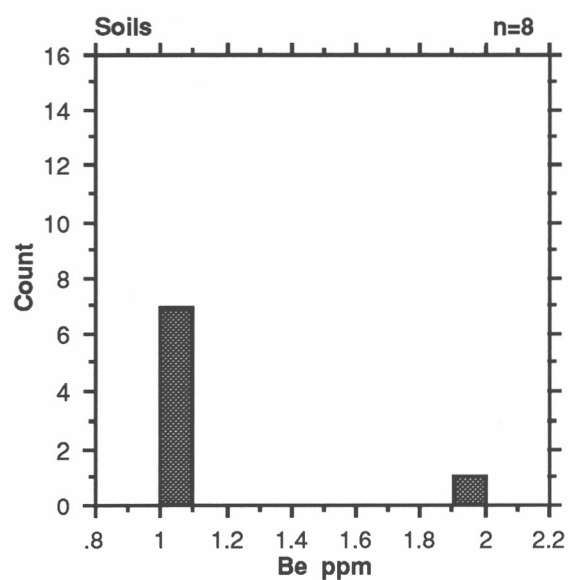


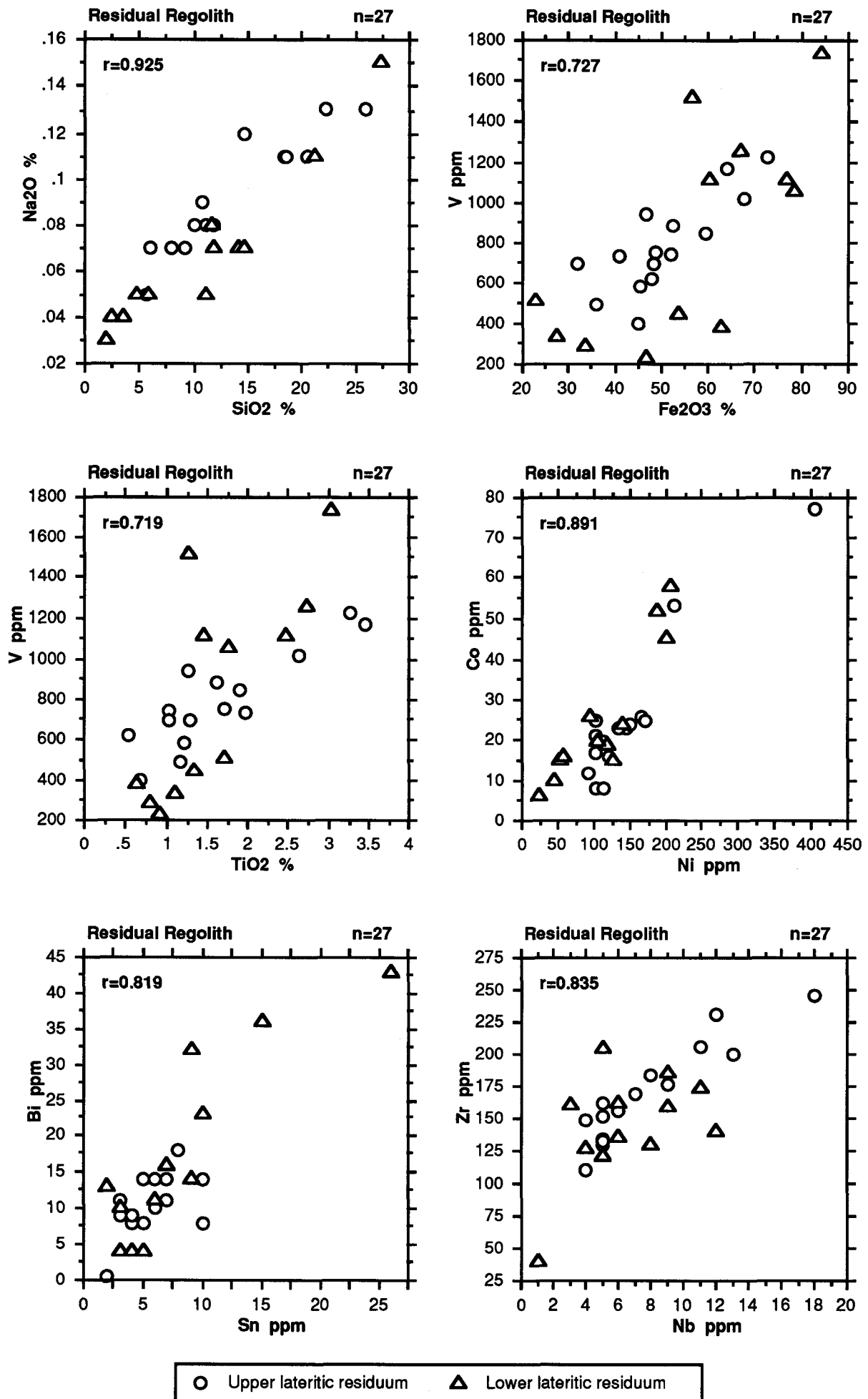


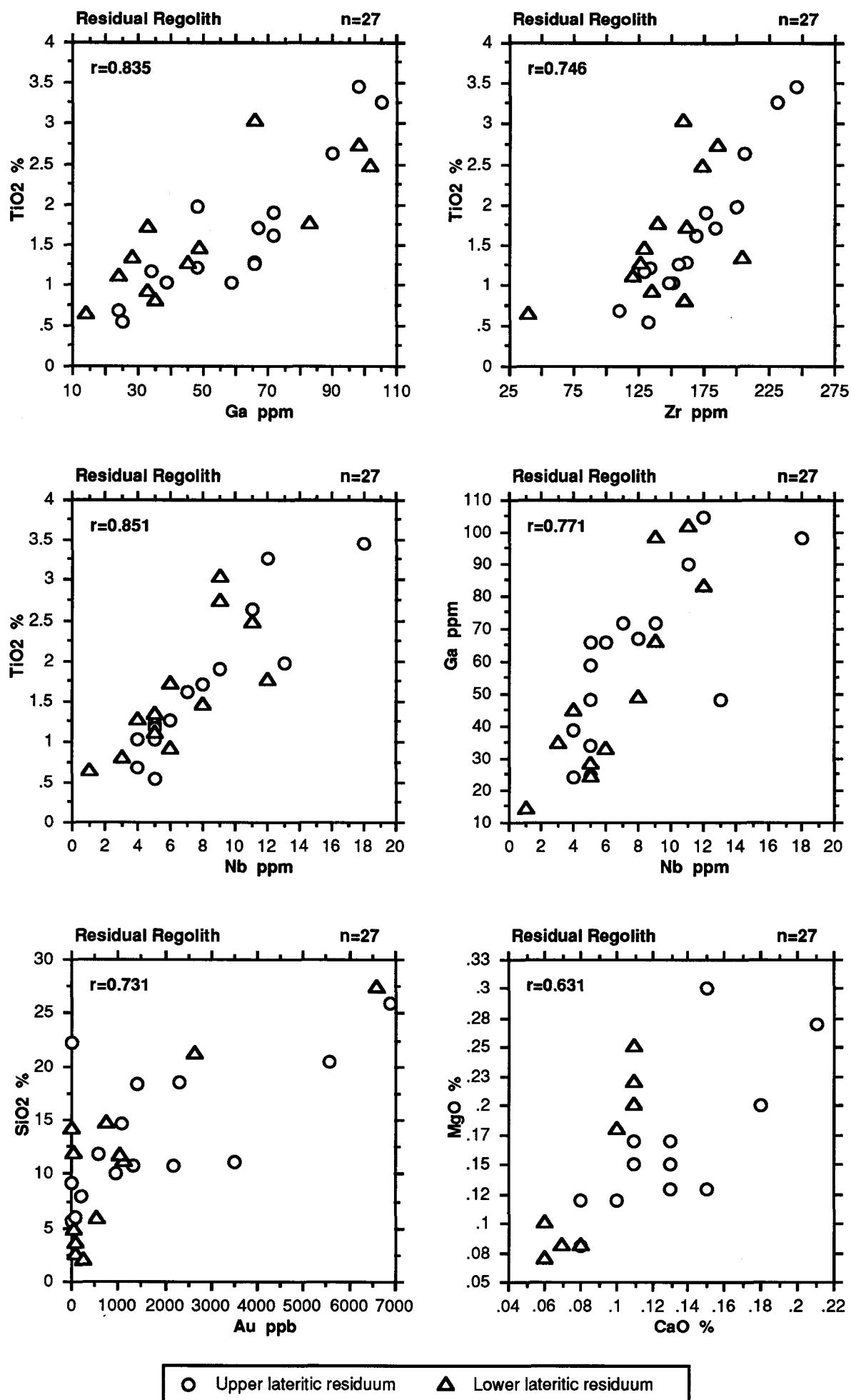


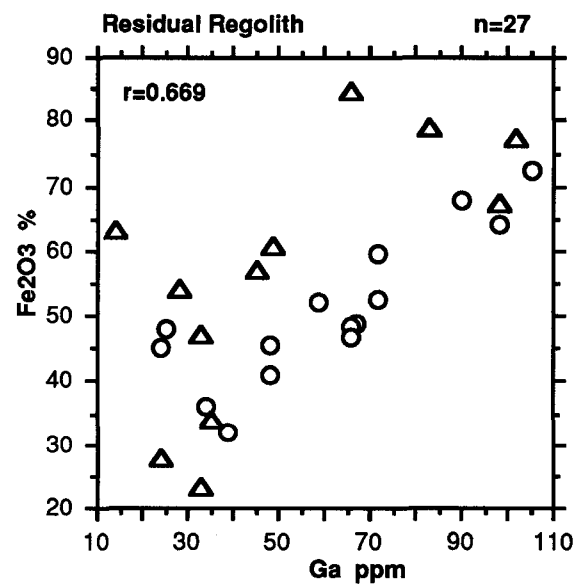
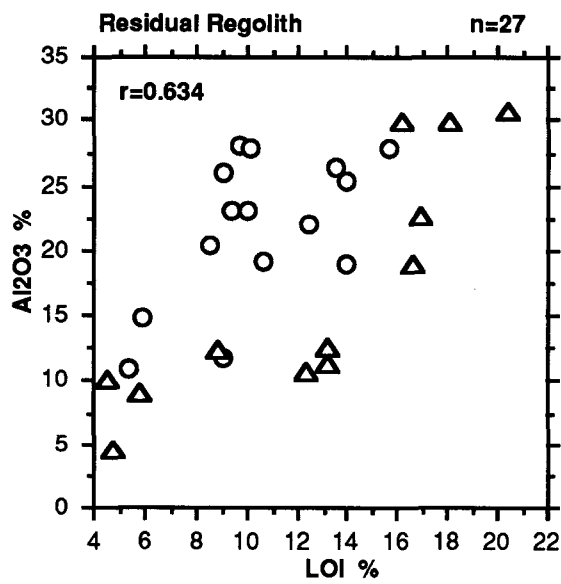
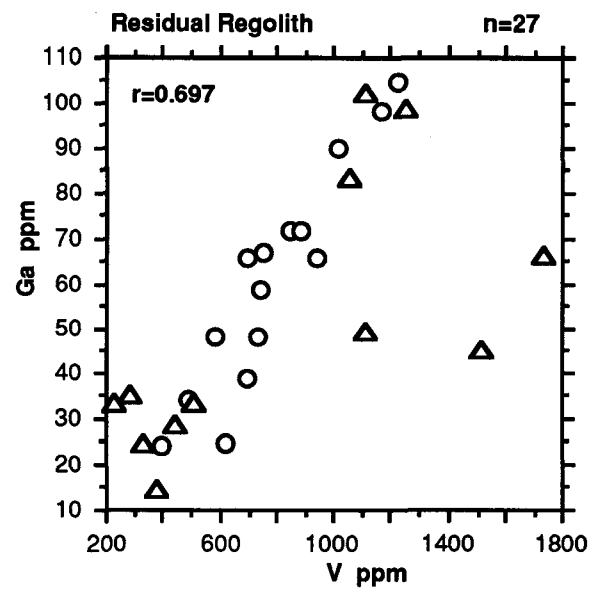
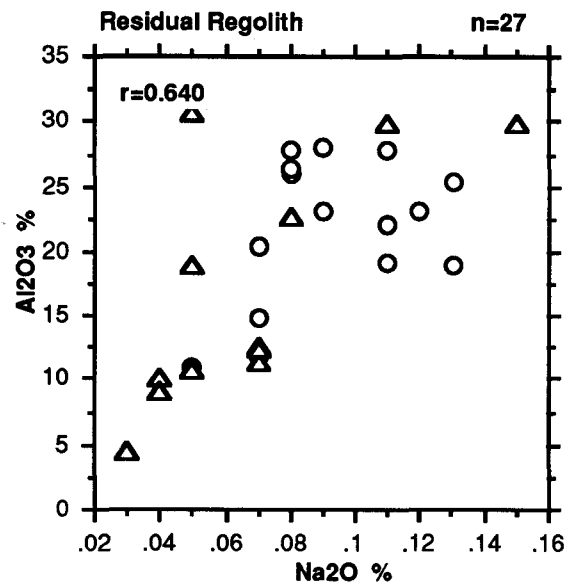




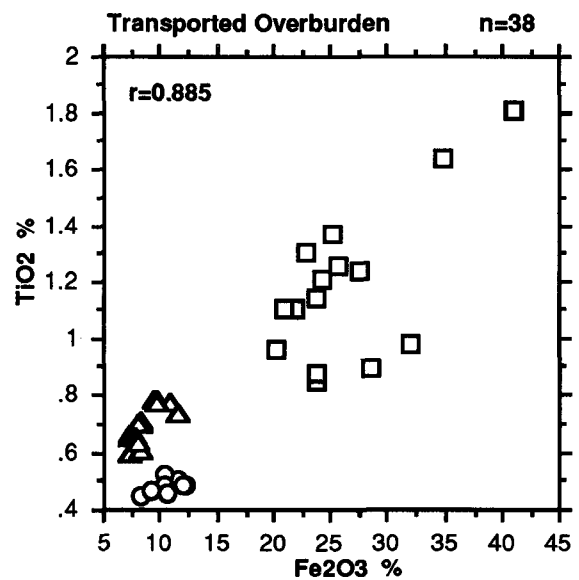
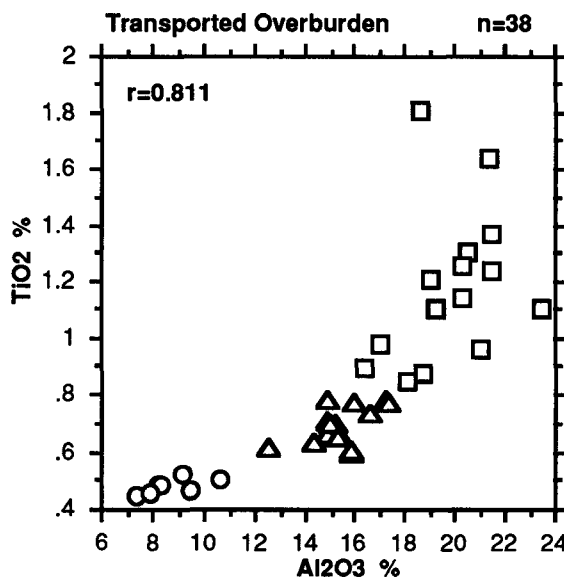
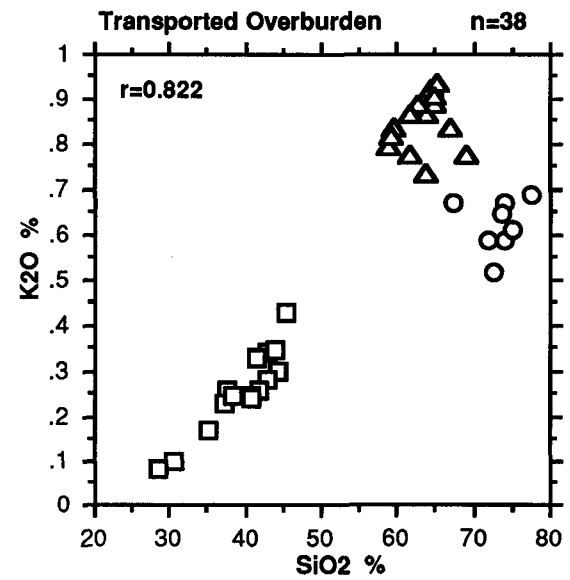
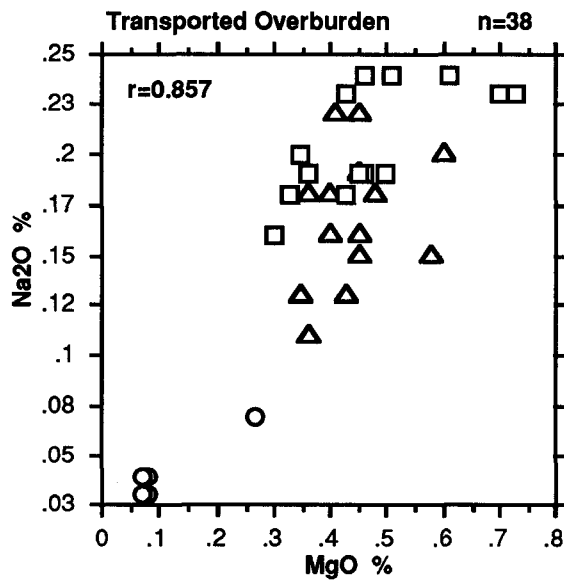
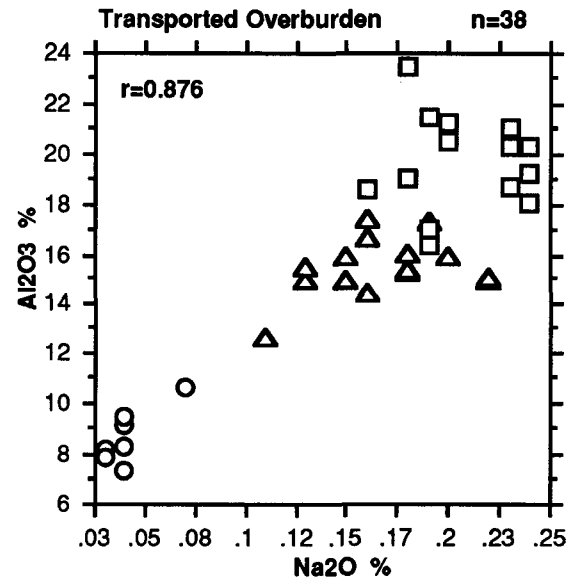
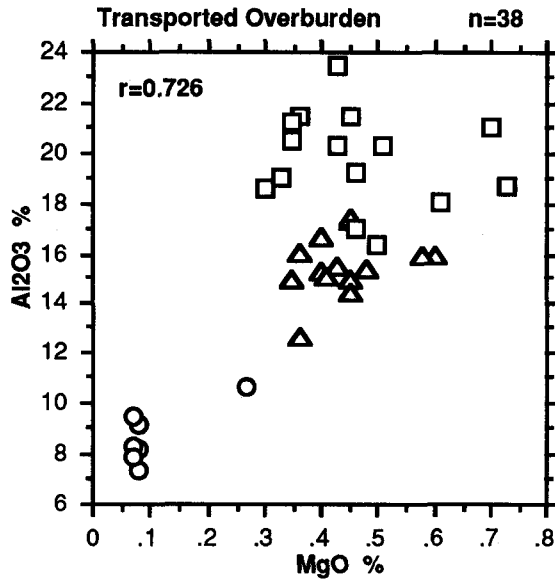




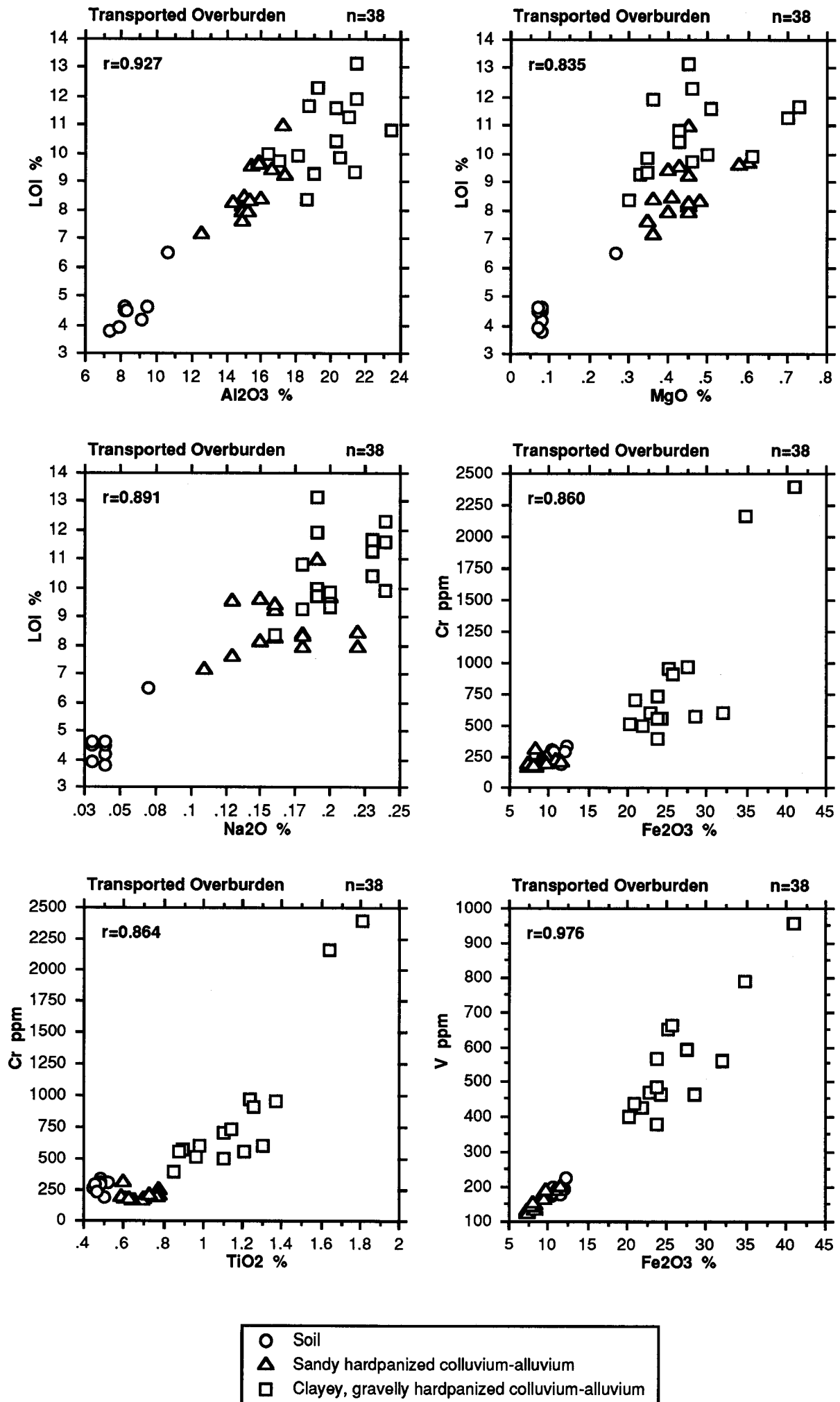


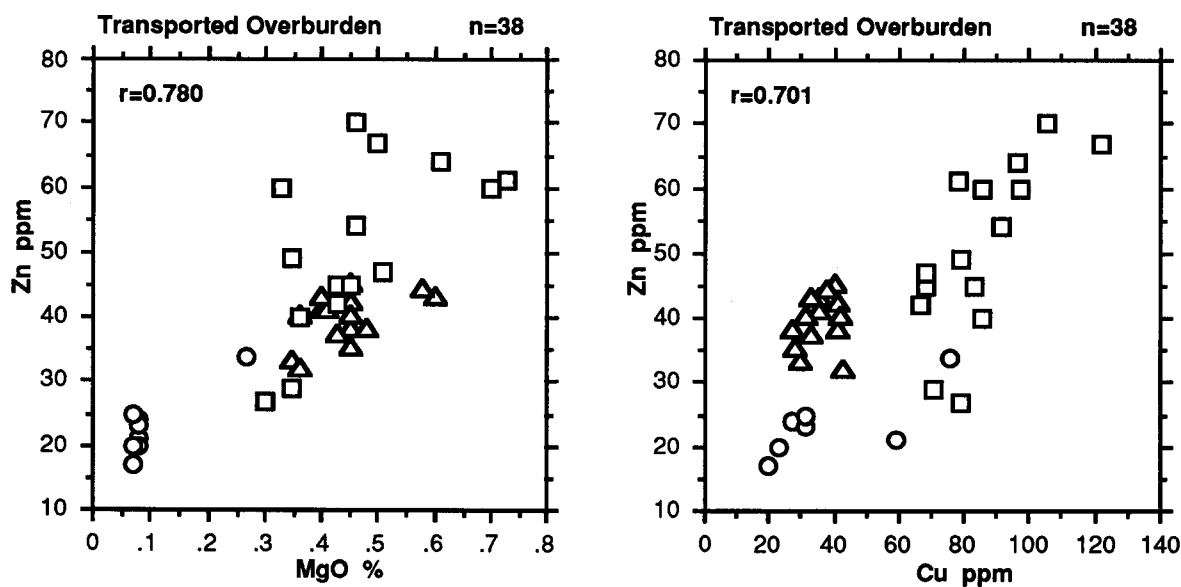
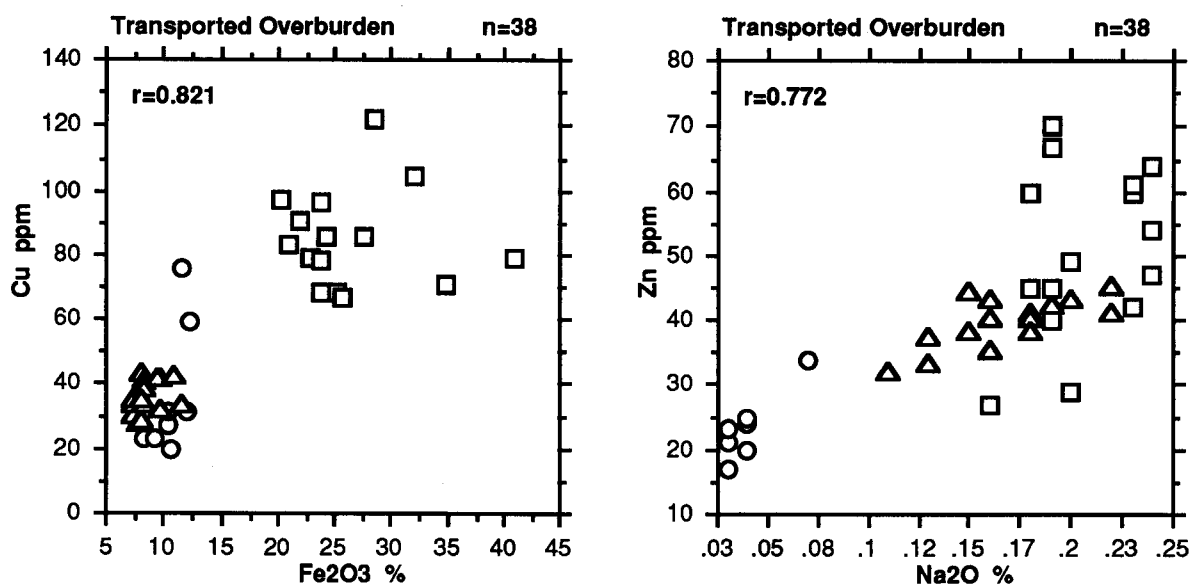
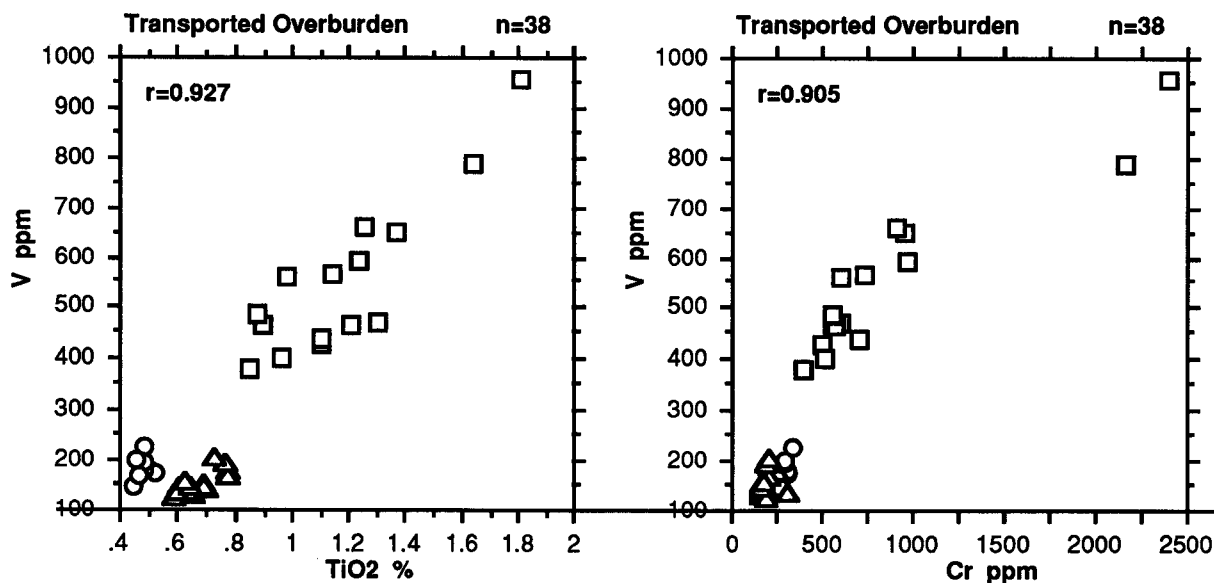


○ Upper lateritic residuum △ Lower lateritic residuum



- Soil
- △ Sandy hardpanized colluvium-alluvium
- Clayey, gravelly hardpanized colluvium-alluvium





- Soil
- △ Sandy hardpanized colluvium-alluvium
- Clayey, gravelly hardpanized colluvium-alluvium

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APPENDIX X

Golden Grove Data

APPENDIX X GOLDEN GROVE

sampno method units	samptype	box	northing	easting	SiO2 ICP %	Al2O3 ICP %	Fe2O3 ICP %	Fe2O3 XRF %	Fe2O3 naa %	MgO ICP %	CaO ICP %	Na2O naa %	K2O naa %	K2O ICP %	TiO2 XRF %	P2O5 XRF %	LOI %	TOTAL %
02-1079	gos3	gos	18245	5025	14.5	0.7	80.9	74.9	78.9	0.033	0.11	<0.013	<0.24	0.06	0.04	0.511	1.5	92.4
02-1080	gos3	gos	18245	5030	37.6	2.5	57.3	55.6	56.3	0.066	0.07	<0.013	<0.24	<0.06	0.06	0.06	1.9	97.8
02-1081	gos3	gos	18230	5040	21.4	1.4	73.2	70.8	69.1	0.066	<0.07	<0.013	<0.24	0.06	0.06	0.25	1.9	95.9
02-1082	gos3	gos	18225	5030	34.9	2.7	60.5	57.3	57.9	0.066	<0.07	<0.013	<0.24	0.06	0.12	0.021	1.7	96.8
02-1083	gos3	gos	18220	5025	45.6	0.4	51.8	43.5	53.2	0.033	<0.07	<0.013	<0.24	<0.06	0.03	0.089	0.9	90.6
02-1084	gos3	gos	18225	5020	53.9	0.5	42.5	39.2	42.5	0.05	0.08	<0.013	<0.24	<0.06	0.06	0.069	1.2	95.1
02-1095	gos3	gos	18245	5023	32.3	2.9	61.6	59	58.8	0.017	<0.07	<0.013	<0.24	0.07	0.07	0.147	2.3	96.7
02-1086	gos3	gos	18255	5030	7.7	0.5	86.8	84.9	85.6	0.033	0.11	<0.013	<0.24	0.07	0.08	0.344	1.9	95.6
02-1087	gos3	gos	18270	5030	9.6	1.4	84.8	84.9	82.2	0.132	<0.07	<0.013	<0.24	0.06	0.07	1.253	1.6	99
02-1088	gos3	gos	18270	5035	10.1	0.9	69.3	84.2	81.9	0.149	0.13	<0.013	<0.24	<0.06	<0.006	0.158	1.8	97.5
02-1089	gos3	gos	18272	5023	47.7	0.7	46.7	48.2	47.6	0.066	0.07	<0.013	<0.24	<0.06	0.01	0.064	3	99.8
02-1090	gos3	gos	18300	5030	31.9	1.9	58.1	61.9	62.2	0.149	<0.07	<0.013	<0.24	<0.06	0.06	0.087	1.6	97.6
02-1091	gos3	gos	18300	5035	15.8	3.6	71.4	75.1	75.2	0.231	<0.07	<0.013	<0.24	<0.06	0.09	0.025	2.5	97.3
02-1092	gos3	gos	18300	5040	22	1.6	58.7	68.5	63.3	0.083	0.25	<0.013	<0.24	<0.06	0.04	0.174	4.3	97.1
02-1093	gos3	gos	18325	5030	6.8	2.5	79.3	89.1	82.4	0.132	0.08	<0.013	<0.24	<0.06	0.09	0.032	2.4	101.1
02-1094	gos3	gos	18345	5030	6.4	2.3	75.2	88.4	84.1	0.231	<0.07	<0.013	<0.24	<0.06	0.04	0.355	2.2	100
02-1095	gos3	gos	18345	5025	11.3	0.9	84.9	85.1	84.5	0.165	<0.07	<0.013	<0.24	0.07	0.05	0.117	1.2	98.9
02-1096	gos3	gos	18345	5035	11.3	2.8	78.5	81.8	82.1	0.116	0.15	<0.013	<0.24	<0.06	0.03	0.041	2.3	98.6
02-1097	gos3	gos	18345	5035	9.8	1.5	67.1	81.8	82.2	0.083	0.17	<0.013	<0.24	<0.06	0.01	0.032	2	95.4
02-1098	gos3	gos	18365	5030	28.7	7.4	54.2	54.2	56.6	0.165	<0.07	0.027	<0.24	<0.06	0.05	0.021	4.5	95.2
02-1099	gos3	gos	18365	5025	8.3	2.9	83.4	81.3	77.9	0.116	0.15	0.027	<0.24	0.10	0.11	0.062	3.2	96.2
02-1100	gos3	gos	18365	5035	25	1	66	65.8	66.8	0.05	0.14	<0.013	<0.24	<0.06	0.02	0.135	6	98.2
02-1101	gos3	gos	18380	5035	9	2.3	84.6	80.6	83.6	0.033	<0.07	<0.013	<0.24	0.06	0.13	0.08	2.2	94.4
02-1102	gos3	gos	18380	5040	31.2	2	57.6	61.9	55.2	0.017	0.08	<0.013	<0.24	<0.06	0.04	0.935	8.1	104.3
02-1103	gos6	gos	18245	5050	12.6	0.9	79.5	80.5	80.5	0.099	0.13	0.027	<0.24	<0.06	0.05	0.121	3.1	97.5
02-1104	gos6	gos	18245	5055	7.5	0.8	85.1	87.8	85.9	0.05	0.15	0.013	<0.24	<0.06	0.07	0.06	2.5	99
02-1105	gos6	gos	18240	5050	20.3	1.8	71.8	75.1	71.8	0.05	<0.07	<0.013	<0.24	<0.06	0.06	0.085	5.2	102.6
02-1106	gos6	gos	18230	5050	38.5	3.1	51.6	53.6	53	0.033	<0.07	<0.013	<0.24	<0.06	0.17	0.158	6.1	101.7
02-1107	gos3	gos	18205	5045	12.2	0.5	82.4	83.8	79.3	0.116	<0.07	<0.013	<0.24	0.07	0.04	0.03	3.1	99.9
02-1108	gos6	gos	18205	5050	28.9	5.4	58.6	58.3	55	0.099	0.10	0.027	<0.24	<0.06	0.09	0.06	5.1	98.1
02-1109	gos3	gos	18280	5055	6.8	0.6	84.6	88.5	87.9	0.017	0.13	<0.013	<0.24	<0.06	<0.006	0.073	1.5	97.6
02-1110	gos6	gos	18260	5060	12.6	3.9	73	77.2	71.1	0.033	0.10	0.013	<0.24	<0.06	0.22	0.041	9.9	104
02-1111	gos6	gos	18320	5050	15.4	3.9	71.8	76.1	70.5	0.017	0.10	0.013	<0.24	<0.06	0.11	0.096	8.1	103.9
02-1112	gos6	gos	18345	5060	26.5	2.1	62.7	65.8	60.8	0.017	<0.07	0.013	<0.24	<0.06	0.05	0.08	8.3	102.9
02-1113	gos6	gos	18318	5052	6.6	4.1	77.6	81.9	76.3	0.017	0.13	0.027	0.37	<0.06	0.28	0.261	9.9	103.2
02-1114	gos2	gos	18160	5000	8.8	2.2	77.5	83.8	76.3	0.033	0.13	<0.013	<0.24	<0.06	0.04	0.713	10.1	105.9
02-1115	gos2	gos	18160	4990	4.7	1.7	78.4	84.8	75.8	0.017	0.08	<0.013	<0.24	<0.06	0.19	1.714	12.7	105.9
02-1116	gos2	gos	18160	5015	22.9	1.1	64.6	66.6	63	<0.003	<0.07	<0.013	<0.24	0.06	0.23	0.126	9.8	100.8
02-1117	gos2	gos	18150	4998	7.5	0.7	75.6	85.1	76.8	<0.003	0.15	<0.013	<0.24	<0.06	0.01	0.197	9.8	103.4
02-1118	gos2	gos	18140	5002	21.8	0.6	67.8	66.9	62	<0.003	0.17	0.013	<0.24	<0.06	0.03	0.105	7.9	97.6
02-1119	gos2	gos	18140	4992	29.7	1.6	57.1	63.8	54.8	0.017	0.15	0.013	<0.24	<0.06	0.03	0.268	9.9	105.5
02-1120	gos2	gos	18140	4988	9.6	0.7	80.4	82.2	75.6	<0.003	<0.07	<0.013	<0.24	<0.06	<0.006	0.076	8.3	100.9
02-1122	gos3	gos	18095	5105	57.5	1.7	35.4	36.7	36.9	0.05	0.14	0.013	<0.24	<0.06	0.24	0.099	5.4	101.9
02-1123	gos3	gos	18145	5120	3.2	1.3	85.2	92.8	88.9	0.017	<0.07	<0.013	<0.24	<0.06	0.13	0.119	4.2	101.8
02-1124	gos3	gos	18147	5115	13.7	2.4	79.6	78.6	76.8	<0.003	<0.07	0.013	<0.24	<0.06	0.11	0.037	3.2	98.1
02-1125	gos3	gos	18150	5110	16.7	3.7	69.6	71.6	70.3	0.017	0.14	<0.013	<0.24	<0.06	0.14	0.016	3.4	95.7
02-1126	gos3	gos	18130	5112	28.7	1.1	64.1	68.3	63.6	<0.003	0.10	<0.013	<0.24	<0.06	0.06	0.027	5.1	103.4
02-1127	gos4	gos	17950	5040	9.8	0.7	78.2	84.4	80.8	<0.003	0.17	<0.013	<0.24	<0.06	0.10	0.202	5.6	101

APPENDIX X GOLDEN GROVE

sampno	samptype	box	northing	easting	SiO2	Al2O3	Fe2O3	Fe2O3	Fe2O3	MgO	CaO	Na2O	K2O	K2O	TiO2	P2O5	LOI	TOTAL
method					ICP	ICP	ICP	XRF	naa	ICP	ICP	naa	naa	ICP	XRF	XRF	%	%
units					%	%	%	%	%	%	%	%	%	%	%	%	%	%
02-1128	gos3	gos	17970	5045	14.3	2.3	69.6	77.3	75.2	<0.003	0.13	<0.013	<0.24	<0.06	0.08	0.105	4.8	99
02-1129	gos6	gos	17985	5050	13.3	3.7	74.9	77.8	72.9	<0.003	0.08	<0.013	<0.24	<0.06	0.41	0.126	7.2	102.6
02-1130	gos6	gos	17950	5040	11.8	3.7	78.7	80.2	77.1	<0.003	0.11	<0.013	<0.24	<0.06	0.11	0.076	4.5	100.5
02-1131	gos6	gos	18035	4950	46.4	5.2	37.9	40.5	33.9	0.017	0.13	0.027	1.98	0.16	0.16	0.087	9.1	101.9
02-1132	gos6	gos	18035	4945	50.9	4.2	34.1	36.9	31.2	0.017	<0.07	0.027	1.83	0.08	0.14	0.115	8.8	101.2
02-1134	gos2	gos	18040	4970	43.6	2.2	47.8	45.8	48.9	0.017	0.07	<0.013	<0.24	<0.06	0.08	0.135	5.2	97.1
02-1135	gos2	gos	18065	4967	28.7	2.4	58.1	59.5	58.5	0.033	0.31	0.027	<0.24	0.15	0.16	0.094	8.7	100.1
02-1136	gos2	gos	18080	4965	35.7	0.9	50.4	56.3	54.9	0.033	<0.07	0.013	<0.24	<0.06	0.05	0.082	9.4	102.5
02-1137	gos2	gos	18080	4962	64	1.8	28.4	28.7	28.7	0.099	0.15	0.013	<0.24	0.13	0.31	0.126	4.5	99.9
02-1138	gos2	gos	18080	4962	52	3.4	37.1	37.9	40	0.05	<0.07	0.027	<0.24	<0.06	0.20	0.087	5.9	99.6
02-1139	gos7	gos	18270	4870	4.5	3.2	83.2	88.5	81.1	<0.003	0.13	<0.013	<0.24	<0.06	0.63	0.133	7.3	104.4
02-1140	gos7	gos	18270	4875	13.7	1.8	69.6	76.5	71.8	<0.003	0.11	<0.013	<0.24	<0.06	0.41	0.076	8.7	101.3
02-1141	gos7	gos	18272	4872	2.4	1.4	77.4	92.2	82.1	0.017	0.10	<0.013	<0.24	<0.06	0.06	0.103	7.2	103.5
02-1142	gos9	gos	18280	4877	47.5	2.2	44.1	44.3	44.3	0.017	0.14	<0.013	<0.24	<0.06	0.22	0.044	5.1	99.5
02-1143	gos7	gos	18282	4865	3	1.5	75.5	90.5	78.3	0.017	0.08	<0.013	<0.24	<0.06	0.06	0.438	10.4	106
02-1144	gos7	gos	18290	4860	3	1.2	80.6	90.1	79.5	<0.003	0.11	<0.013	<0.24	<0.06	0.04	0.302	9.6	104.4
02-1146	gos2	gos	18300	4900	10.1	1.6	72.7	81.3	75.8	0.033	0.21	0.04	<0.24	<0.06	0.17	0.037	8.4	101.9
02-1147	gos2	gos	18300	4910	15.4	1.6	67.7	78.8	72.5	0.033	0.15	<0.013	<0.24	<0.06	0.71	0.064	14.3	111.1
02-1148	gos2	gos	18300	4920	4.7	1.3	82.5	88.5	78.9	0.017	<0.07	<0.013	<0.24	<0.06	0.01	0.023	10.2	104.9
02-1149	gos2	gos	18280	4900	4.7	3	74	87.2	80.3	0.017	0.13	<0.013	<0.24	<0.06	0.06	0.16	9	104.3
02-1150	gos2	gos	18290	4900	16.5	1.6	52.7	68.9	64.9	0.017	0.08	0.013	<0.24	<0.06	0.02	0.137	9	96.4
02-1151	gos2	gos	18285	4910	25.5	1.4	50.2	61	57.6	0.017	0.07	0.027	<0.24	<0.06	0.01	0.08	9.4	97.5
02-1152	gos8	gos	18580	5010	2.6	1.2	78.1	89.6	78.9	<0.003	0.08	<0.013	<0.24	<0.06	<0.006	0.231	13	106.8
02-1153	gos8	gos	18580	5030	4.3	3.2	66.7	84.6	75.2	<0.003	0.07	<0.013	<0.24	<0.06	0.05	0.291	12.6	105.1
02-1154	gos3	gos	18580	5050	16	5.1	74.5	74.2	73.9	0.149	0.13	0.013	<0.24	<0.06	0.09	0.03	3.8	99.5
02-1156	gos6	gos	18580	5080	59.3	2.1	27.9	29.9	31	0.05	0.25	0.027	<0.24	<0.06	0.09	0.263	6.5	98.5
02-1157	gos6	gos	18575	5080	62.5	2.7	27.7	30.3	30.2	0.05	0.21	0.013	<0.24	0.12	0.06	0.165	6.2	102.3
02-1158	gos6	gos	18560	5080	54.1	0.4	43.6	43.9	47.5	0.033	0.07	<0.013	<0.24	<0.06	0.02	0.037	1	99.7
02-1159	gos6	gos	18560	5080	13.3	1.8	78.3	81.5	78.8	0.033	0.10	<0.013	<0.24	<0.06	0.17	0.181	4.6	101.7
02-1160	gos6	gos	18540	5070	31.4	3	57.8	59.3	58.2	0.083	0.25	<0.013	<0.24	<0.06	0.06	0.153	6.6	100.9
02-1161	gos6	gos	18545	5070	89	2	6.2	6	6	0.05	0.11	0.027	<0.24	0.13	0.02	0.073	1.9	99.2
02-1162	gos6	gos	18545	5067	72.9	1.3	22.4	20.9	23.6	0.066	0.18	<0.013	<0.24	0.25	0.07	0.071	3.6	100.8
02-1163	gos3	gos	18540	5085	3.42	0.43	96.01	93.8	93.5	0.01	0.01	<0.013	<0.24	0.28	0.17	0.15	1.8	102.3
02-1164	gos6	gos	18540	5080	7.5	1.9	79.2	86.4	81.1	0.066	0.07	0.013	<0.24	0.17	0.13	0.694	5.8	102.8
02-1165	gos8	gos	18530	5085	10.3	4.3	67.3	76.6	71.3	0.05	0.08	<0.013	<0.24	0.18	0.22	0.211	10.3	102.3
02-1166	gos8	gos	18530	5082	15.8	1	75.6	77.1	79.9	0.066	0.34	0.013	<0.24	0.23	0.05	0.048	1.8	96.4
02-1167	gos9	gos	18515	5085	45.3	2.7	42.8	46.3	42.9	0.066	0.15	0.013	<0.24	0.24	0.18	0.089	8.4	103.4
02-1168	gos3	gos	18505	5055	24.8	2.1	68.5	68.8	68.2	0.182	0.22	0.027	<0.24	0.22	0.02	0.03	3.6	100
02-1169	gos3	gos	18510	5055	6.8	3	81.4	86.5	87.9	0.132	0.14	<0.013	<0.24	0.17	0.08	0.041	2.5	99.4
02-1170	gos3	gos	18560	5050	18.6	1.5	72.7	75.6	74.5	0.066	0.07	0.027	<0.24	0.13	0.11	0.055	3	99.2
02-1171	gos6	gos	18625	5085	12.2	1.9	82.6	81.8	84.8	0.05	<0.07	<0.013	<0.24	<0.06	0.09	0.032	1.6	97.7
02-1172	gos6	gos	18620	5085	66.7	1.6	25.3	26.7	26	0.083	0.14	0.013	<0.24	<0.06	0.07	0.044	5.8	101.2
02-1173	gos5	gos	18910	5000	46.2	5.5	42.9	41.6	42	0.017	<0.07	0.054	<0.24	<0.06	0.08	0.071	4.3	97.9
02-1174	gos9	gos	18905	4990	76.8	11.1	4.3	4.1	4.1	0.033	<0.07	0.431	1.80	2.10	0.37	0.039	2.8	97.8
02-1175	gos9	gos	18912	4985	64.8	6.4	22.4	23.2	22.6	<0.003	<0.07	0.216	0.68	0.49	0.28	0.044	4.8	100.3
02-1176	gos9	gos	18915	4987	70.4	3.5	20.6	20.2	20.7	<0.003	<0.07	0.054	<0.24	<0.06	0.05	0.066	3.9	98.2
02-1177	gos9	gos	18950	5002	80	3.4	11	12	11.5	0.033	0.13	0.054	<0.24	<0.06	0.15	0.055	2.9	98.8
02-1178	gos9	gos	18955	5000	71.9	14.2	10	8.7	8.7	0.05	0.10	0.445	2.45	2.78	0.31	0.034	3.9	102.4

APPENDIX X GOLDEN GROVE

sampno	samptype	box	northing	easting	SiO2	Al2O3	Fe2O3	Fe2O3	Fe2O3	MgO	CaO	Na2O	K2O	K2O	TiO2	P2O5	LOI	TOTAL
method					ICP	ICP	ICP	XRF	naa	ICP	ICP	naa	naa	ICP	XRF	XRF	%	%
units					%	%	%	%	%	%	%	%	%	%	%	%	%	%
02-1179	gos9	gos	19180	5150	29.5	11.2	52.2	49.9	51.6	0.116	<0.07	0.229	2.63	2.80	0.52	0.092	5.2	99.6
02-1180	gos9	gos	19182	5152	65.7	7.8	19.7	18.9	20.4	0.083	<0.07	0.202	2.27	2.07	0.32	0.023	2.7	97.8
02-1181	gos9	gos	19170	5145	72.9	3.6	19.9	20.2	20.3	0.033	<0.07	<0.013	<0.24	<0.06	0.18	0.108	2.5	99.6
02-1182	gos9	gos	19160	5145	61.8	1	30.6	30.5	32.9	0.017	<0.07	0.013	<0.24	<0.06	0.33	0.105	4.7	98.5
02-1183	gos9	gos	19150	5135	66.5	3.6	25.4	26.2	26	0.033	<0.07	0.027	<0.24	<0.06	0.37	0.027	3.5	100.3
02-1184	gos3	gos	19240	5125	16	2.6	77.8	77.8	77.8	0.033	0.08	0.013	<0.24	<0.06	0.25	0.076	2.8	99.6
02-1185	gos9	gos	19250	5130	75.3	3.3	17.4	15.7	16.4	0.083	0.08	0.013	<0.24	<0.06	0.31	0.032	2.9	97.8
02-1189	LT264	LT2	18461	5000	51.1	11.7	30.7	29.2	30.9	0.066	<0.07	0.013	<0.24	<0.06	0.31	0.039	5.8	98.3
02-1191	LT264	LT2	18461	5040	15.6	6.6	72.6	70.9	75.5	0.05	<0.07	<0.013	<0.24	<0.06	0.21	0.032	3.8	97.2
02-1192	LT264	LT2	18461	5060	22.5	9.1	61.9	55.7	64.5	0.116	<0.07	<0.013	<0.24	<0.06	0.27	0.055	5.1	92.8
02-1193	LT203	LT2	18461	4960	34	11.4	46	45.2	48	0.066	<0.07	0.013	<0.24	<0.06	0.46	0.055	6.2	97.5
02-1194	LT203	LT2	18461	4920	6.8	6.9	80.6	80.1	80.9	0.033	<0.07	<0.013	<0.24	<0.06	0.68	0.048	4.5	99.2
02-1195	LT203	LT2	18461	4880	15.8	8.8	67.2	66.6	68.6	0.017	<0.07	0.013	<0.24	<0.06	1.00	0.034	6.3	98.6
02-1200	LT000	LT0	18461	4680	24	7.4	62.3	60.1	63.2	0.017	<0.07	0.04	<0.24	0.07	0.52	0.053	4.8	97
02-1201	LT000	LT0	18461	4640	25.7	8.4	60	57.4	61	0.033	<0.07	0.027	<0.24	0.06	0.62	0.055	4.8	97.1
02-1204	LT000	LT0	18343	4760	30.8	11.6	49.9	51.6	53.2	0.017	<0.07	0.04	0.29	0.10	0.66	0.076	6.1	101
02-1205	LT000	LT0	18343	4700	37.9	11.1	42.9	42.5	44.9	0.033	<0.07	0.108	0.64	0.57	0.66	0.08	6.1	99.1
02-1207	LT000	LT0	18343	4620	38.3	10.8	44.5	43.6	47.3	0.05	<0.07	0.04	<0.24	0.22	0.59	0.057	4.8	98.4
02-1209	LT000	LT0	18343	4460	23.7	10.1	60	60.4	62.5	0.083	0.18	0.027	<0.24	<0.06	0.55	0.055	4.1	99.2
02-1210	LT000	LT0	18343	4360	31.4	10.2	52.3	52.2	55.6	0.05	<0.07	0.027	<0.24	0.08	0.66	0.057	4.3	99
02-1211	LT000	LT0	18343	4280	64.2	7.5	23.3	22.9	25	0.05	0.07	0.067	<0.24	0.28	1.32	0.05	2.9	99.3
02-1218	LT000	LT0	17680	5000	41.5	11	40.2	40.9	42.6	0.05	<0.07	0.04	0.52	0.27	0.74	0.076	5.7	100.3
02-1219	LT000	LT0	17680	4920	47.9	9.3	36.7	36.6	39.3	0.05	<0.07	0.054	0.30	0.21	0.38	0.055	4.4	98.9
02-1223	LT000	LT0	18835	5205	51.5	11	31.2	33.7	34.2	0.033	<0.07	0.027	<0.24	0.08	0.60	0.057	5	102.1
02-1224	LT000	LT0	18100	5600	47.1	7.7	40.6	40.6	40.5	0.05	<0.07	0.04	0.47	0.31	0.63	0.073	3.3	99.8
02-1225	LT000	LT0	18100	5600	22	14.9	48.8	53.7	45.9	0.05	<0.07	0.013	<0.24	<0.06	1.84	0.048	11.7	104.3
02-1226	LT000	LT0	18100	5600	19.9	7	57.6	63.1	54.6	0.116	0.15	0.135	<0.24	<0.06	0.90	0.057	13.1	104.5
02-1267	LT103	LT1	22880	6860	25	14	49	52	46.2	0.033	<0.07	0.04	0.24	0.24	0.61	0.039	9.3	101.3
02-1270	LT103	LT1	17320	6750	25	16.1	47.2	49.5	45.9	0.033	<0.07	0.027	<0.24	<0.06	1.04	0.032	10	101.8
02-1271	LT103	LT1	17230	6580	42.1	11.8	37.3	36.9	36.9	0.033	<0.07	<0.013	<0.24	<0.06	1.48	0.05	6.5	98.9
02-1272	LT103	LT1	17310	6620	16.5	12.3	60.2	63.3	56.3	0.017	<0.07	<0.013	<0.24	<0.06	1.51	0.039	8.7	102.4
02-1273	LT103	LT1	17320	6750	29.5	20.8	34.9	34.9	32.5	0.033	0.07	<0.013	<0.24	<0.06	0.72	0.041	12.6	98.7
02-1274	LT103	LT1	17320	6750	34.7	20.6	31.6	32.7	31.2	0.033	<0.07	<0.013	<0.24	<0.06	0.66	0.03	11.8	100.6
02-1276	LT103	LT1	17220	6720	31.2	13.2	46.6	45.7	44.6	0.033	<0.07	0.013	<0.24	<0.06	1.24	0.057	6.7	98.2
02-1277	LT103	LT1	17220	6720	24.8	12.1	55	56.3	53.9	0.033	0.07	0.013	<0.24	<0.06	1.09	0.053	5.3	99.8
02-1282	LT103	LT1	18280	5220	19.5	9.8	62.5	66.8	62.8	0.033	0.11	0.054	<0.24	0.21	0.68	0.046	5.6	102.9
02-1283	LT103	LT1	18340	5480	34.7	12.4	44.2	44.5	43	0.033	<0.07	0.04	0.30	0.22	0.53	0.076	6.7	99.2
02-1284	LT103	LT1	18340	5480	32.1	6.1	57.8	61.2	58.8	0.033	0.07	0.027	0.31	0.17	0.57	0.103	2.8	103.2
02-1285	LT103	LT1	18340	5480	49	8.8	36.2	37.6	37.9	0.05	0.08	0.04	0.48	0.31	0.46	0.064	3.8	100.2
02-1286	LT103	LT1	18340	5480	33.4	9.3	52.5	53.5	52.6	0.05	<0.07	0.04	0.30	0.31	0.46	0.078	3.8	101
02-1287	LT103	LT1	18340	5480	32.5	9.2	53.1	56.8	54.8	0.05	<0.07	0.04	0.31	0.23	0.49	0.08	3.8	103.3
02-1288	LT103	LT1	18340	5480	53.9	6.8	34.6	36.9	36.2	0.033	<0.07	0.027	<0.24	0.12	0.39	0.055	2.9	101.2
02-1289	LT103	LT1	18340	5480	38.3	8.4	46.9	45.7	45.6	0.05	<0.07	0.054	0.34	0.36	0.42	0.069	3.8	97.2
02-1290	LT103	LT1	18340	5480	60.1	8.4	26	25.7	25.7	0.066	<0.07	0.067	0.46	0.41	0.44	0.066	3.9	99.2
02-1291	LT103	LT1	18340	5480	50.9	8.2	35.9	37.6	35.9	0.05	0.07	0.04	0.29	0.30	0.38	0.108	3.4	101
02-1292	LT103	LT1	18340	5480	30.2	6.3	58.2	60	54.6	0.05	<0.07	0.027	0.39	0.28	0.31	0.099	2.5	99.8
02-1293	LT103	LT1	17960	5760	44.3	6.9	44.6	46.4	44.7	0.05	<0.07	0.04	0.41	0.31	0.44	0.121	2.7	101.2
02-1294	LT103	LT1	17960	5960	54.1	5.9	34.9	35.2	34.9	0.083	0.08	0.054	0.35	0.41	0.42	0.112	2.5	98.9

APPENDIX X GOLDEN GROVE

sampno	samptype	box	northing	easting	SiO2	Al2O3	Fe2O3	Fe2O3	Fe2O3	MgO	CaO	Na2O	K2O	K2O	TiO2	P2O5	LOI	TOTAL
method					ICP	ICP	ICP	XRF	naa	ICP	ICP	naa	naa	ICP	XRF	XRF	%	%
units					%	%	%	%	%	%	%	%	%	%	%	%	%	%
02-1295	LT103	LT1	17960	6360	36.6	8.4	48.9	50	47.5	0.116	0.08	0.054	0.36	0.21	0.51	0.117	3.8	99.9
02-1296	LT103	LT1	17960	7160	19.5	6.7	65.2	68.1	61.3	0.083	0.11	0.027	<0.24	<0.06	0.70	0.131	5.5	100.9
02-1297	LT103	LT1	18461	4640	24	9.7	58.3	59.9	57	0.05	<0.07	0.04	0.28	0.08	0.60	0.05	5.6	100
02-1300	LT103	LT1	18343	4360	38.7	10.6	43.2	42.7	43.3	0.083	<0.07	0.04	<0.24	0.15	0.54	0.05	5	97.8
02-1301	LT103	LT1	18343	4320	41.1	15	33.9	32.1	32.3	0.116	<0.07	0.067	0.33	0.24	0.55	0.023	7.8	96.9
02-1302	LT103	LT1	18343	4440	27	8.8	57.3	58.5	55.8	0.116	0.18	0.054	<0.24	0.11	0.31	0.032	4.3	99.4
02-1303	LT103	LT1	18343	4500	27.8	9.7	55.5	53.2	53.2	0.05	<0.07	0.04	0.41	0.23	0.56	0.057	4.3	96
02-1316	LT103	LT1	17260	4800	72.3	12	5.5	6.9	6.2	0.083	<0.07	0.054	0.78	0.65	0.84	0.094	6.6	99.6
02-1317	LT103	LT1	17982	4840	21.8	15.1	50	49	52.9	0.017	<0.07	0.027	<0.24	0.07	0.60	0.156	9.8	96.6
02-1690	LT000	LTO	16640	5040	60.3	12.9	14.2	15.8	15.4	0.677	0.36	0.148	0.94	0.74	0.75	0.015	8.7	100.4
02-1692	LT000	LTO	16640	4720	51.8	5.7	37.7	36.3	36	0.066	<0.07	0.04	0.35	0.36	0.49	0.035	2.8	97.6
02-1702	LT000	LTO	16960	4880	59.9	12.5	17.3	17.2	16.7	0.198	<0.07	0.108	1.01	0.87	0.46	0.026	7	98.3
02-1710	LT000	LTO	17280	5360	50.7	13.9	24	24.5	24	0.149	0.14	0.094	0.43	0.47	0.59	0.03	8.7	99.3
02-1714	LT000	LTO	17280	4720	41.1	10.4	42.5	44.7	47	0.083	0.20	0.108	0.36	0.31	0.70	0.019	4.7	102.3
02-1739	LT000	LTO	18700	4720	21.8	11.6	60.1	65.3	62.3	<0.003	0.07	0.013	<0.24	<0.06	0.54	0.022	5.1	104.5
02-1751	LT000	LTO	18700	5360	55.4	9.1	30.3	29.3	31.3	0.033	0.07	0.04	0.36	0.24	0.39	0.034	4	98.6
02-1759	LT000	LTO	19193	5680	42.4	19.7	25.9	25.6	24.4	0.05	0.07	0.027	<0.24	0.21	0.68	0.026	10.7	99.4
02-1761	LT000	LTO	19193	5240	37.4	12.3	38.2	38.6	37	0.017	0.13	0.04	0.39	0.31	0.30	0.019	10.9	100
02-1762	LT000	LTO	19193	4920	21.8	15.2	53.9	57.4	55	0.033	0.11	0.027	0.34	0.25	0.62	0.026	7.3	102.8
02-1765	LT000	LTO	19600	5480	40.2	21.9	23.3	23.7	22.4	0.017	0.08	0.027	<0.24	0.12	0.66	0.016	12.6	99.3
02-1767	LT000	LTO	19600	5140	40.4	20.7	25.4	25.7	25.4	0.05	0.08	0.04	0.25	0.18	0.57	0.018	11.8	99.5
02-1769	LT000	LTO	19600	4800	44.7	16.4	28.3	27.5	27	0.05	0.11	0.04	0.30	0.17	0.68	0.022	9	98.6
02-1785	LT000	LTO	20320	5000	51.5	12.7	27.7	28	28	0.066	0.13	0.067	<0.24	0.23	0.63	0.027	6.3	99.6
02-1786	LT000	LTO	20320	5120	53.5	14.8	22.6	23.3	22.4	0.132	0.11	0.094	0.25	0.35	0.57	0.022	7.6	100.5
02-1788	LT000	LTO	20320	5440	44.7	18.4	25.2	25.2	25	0.083	0.08	0.081	0.36	0.23	0.53	0.017	10.4	99.7
02-1790	LT000	LTO	20320	5760	46.6	11	34.5	36.5	36.2	0.05	0.08	0.027	<0.24	0.15	0.75	0.021	5.2	100.3
02-1792	LT000	LTO	20320	6080	38.5	17.4	34.3	35.1	34.5	0.05	<0.07	0.027	0.36	0.11	0.73	0.025	8.1	100.1
02-1795	LT000	LTO	20640	5640	51.5	15.4	24.3	28.3	27.3	0.066	0.10	0.04	0.35	0.22	0.71	0.028	7.5	103.9
02-1797	LT000	LTO	20640	5320	46	13.8	30.5	33	34.7	0.132	0.13	0.081	0.46	0.23	0.60	0.03	6.9	100.9
02-1799	LT000	LTO	20640	5000	42.1	12.3	36.9	39.1	40.7	0.05	0.07	0.054	<0.24	0.18	0.80	0.035	5.7	100.4
02-1801	LT000	LTO	20960	5160	42.1	14.5	32.9	35.4	35.2	0.116	0.15	0.094	0.57	0.29	28.00	0.029	7.5	128.1
02-1803	LT000	LTO	20960	5480	44.5	17.3	28.5	30.8	30.9	0.05	<0.07	0.027	<0.24	0.10	0.80	0.023	8.5	102.1
02-1805	LT000	LTO	20960	5800	41.7	21.1	23.4	24.9	24.2	0.033	<0.07	0.027	<0.24	0.11	0.63	0.021	11.2	99.7
02-1807	LT000	LTO	20960	6120	44.5	18.5	25	26.5	26.3	0.066	0.08	0.027	<0.24	0.18	0.69	0.023	10.4	100.9
02-1812	LT000	LTO	21280	6080	44.7	15.8	31.2	31.7	32	0.033	0.08	0.027	<0.24	0.21	0.62	0.025	7.2	100.4
02-1814	LT000	LTO	21280	5800	35.5	21	32	36	36	0.05	0.08	0.027	0.57	0.13	1.17	0.016	9.8	103.8
02-1815	LT000	LTO	21280	5640	25.9	18.9	43.5	46.6	41	0.033	0.07	0.027	0.20	<0.06	1.64	0.021	9.4	102.6
02-1816	LT000	LTO	21280	5480	11.3	16.2	62	63.7	54.6	0.033	0.11	0.04	<0.24	<0.06	2.93	0.01	6.9	101.2
02-1817	LT000	LTO	21280	6200	43	18.7	26.9	28.1	28.2	0.05	0.08	0.04	<0.24	0.23	0.60	0.021	9	99.9
02-1819	LT000	LTO	21280	6480	54.1	13.3	24	25.3	24.7	0.05	0.08	0.067	0.65	0.59	0.46	0.021	6.1	100.1
02-1821	LT000	LTO	21600	5800	34.7	21.5	30.5	32.1	31	0.033	0.08	0.013	<0.24	0.08	0.86	0.017	11.5	100.9
02-1822	LT000	LTO	21600	5640	21.6	16.1	50.9	53.6	45.9	0.033	0.07	0.04	0.20	<0.06	1.97	0.01	9.4	102.8
02-1823	LT000	LTO	21600	5520	42.1	13.5	35	37.4	36.7	0.099	0.15	0.067	0.39	0.24	0.70	0.026	7	101.3
02-1824	LT000	LTO	21600	6000	38.7	21.7	26.9	29.2	27.7	0.066	<0.07	0.027	0.27	0.19	0.67	0.021	10.9	101.5
02-1825	LT000	LTO	21600	6120	45.6	19.4	22.3	26.6	25.6	0.099	0.08	0.094	0.33	0.28	0.66	0.02	10	102.8
02-1826	LT000	LTO	21600	6280	55	13	23.7	24.9	25.3	0.116	0.08	0.094	1.01	0.76	0.45	0.024	5.8	100.2
02-1827	LT000	LTO	21600	6400	55	11	26.3	28.4	27.3	0.083	0.07	0.054	0.45	0.36	0.56	0.024	5.3	100.9
02-1828	LT000	LTO	21600	6560	54.5	11.5	26.6	27.3	26.6	0.083	0.08	0.054	<0.24	0.35	0.54	0.023	5.6	100

APPENDIX X GOLDEN GROVE

sampno	samptype	box	northing	easting	SiO2	Al2O3	Fe2O3	Fe2O3	Fe2O3	MgO	CaO	Na2O	K2O	K2O	TiO2	P2O5	LOI	TOTAL
method					ICP	ICP	ICP	XRF	naa	ICP	ICP	naa	naa	ICP	XRF	XRF	%	%
units					%	%	%	%	%	%	%	%	%	%	%	%	%	%
02-1830	LT000	LT0	21600	6880	58	10.1	25.9	26.2	27.5	0.066	0.08	0.067	0.61	0.59	0.32	0.04	4.1	99.6
02-1833	LT000	LT0	21920	6640	38.1	21.8	26.2	27.8	27.6	0.083	0.07	0.027	0.33	0.27	0.46	0.013	11.3	100
02-1834	LT000	LT0	21920	6480	39.6	19.8	30.2	32.2	32.5	0.083	<0.07	0.027	0.31	0.21	0.61	0.025	9.4	101.9
02-1836	LT000	LT0	21920	6160	44.5	18.2	26.7	26.9	27	0.083	<0.07	0.027	0.30	0.31	0.49	0.022	9.1	99.7
02-1837	LT000	LT0	21920	6000	43.8	13.6	34.7	35.9	36.6	0.066	<0.07	0.04	0.30	0.25	0.58	0.03	6.3	100.6
02-1840	LT000	LT0	21920	5520	39.8	13.4	36.2	37	37.5	0.099	0.08	0.04	0.25	0.16	0.96	0.023	7.4	99
02-1841	LT000	LT0	22240	5600	34.9	17.3	34.9	36	35.5	0.132	0.10	0.094	0.37	0.34	0.74	0.021	10.2	99.9
02-1842	LT000	LT0	22240	5760	32.1	13.5	45.8	47.8	47.2	0.083	0.11	0.094	0.40	0.33	0.85	0.034	6.3	101.3
02-1846	LT000	LT0	22240	6440	42.4	6.7	45.5	46.5	47.3	0.083	0.07	0.027	0.34	0.23	0.41	0.046	4	100.5
02-1850	LT000	LT0	22560	6520	41.5	12.2	36	35.5	35.2	0.083	<0.07	0.04	0.40	0.31	0.54	0.025	8.1	98.3
02-1852	LT000	LT0	22560	6200	58.8	8.4	23.4	21.7	21.9	0.083	<0.07	0.027	<0.24	0.08	2.13	0.022	5.2	96.4
02-1853	LT000	LT0	22560	6040	34.2	14.9	40.3	40.5	39.9	0.083	0.10	0.04	<0.24	0.17	0.70	0.022	7.7	98.4
02-1855	LT000	LT0	22880	6760	34.2	13	42.7	44.2	43.5	0.066	<0.07	0.027	<0.24	0.12	1.19	0.025	7.9	100.8
02-1857	LT000	LT0	22880	6440	32.3	25	27.7	27.2	26.7	0.083	<0.07	0.027	<0.24	0.08	0.67	0.018	13	98.4
02-1858	LT000	LT0	22880	6280	36.8	18.8	31.7	30.8	30.7	0.066	<0.07	<0.013	<0.24	0.06	0.75	0.02	10.5	97.8
02-1860	LT000	LT0	22880	6000	27.8	17.6	40.2	38.1	37.7	0.05	<0.07	0.027	<0.24	0.11	0.68	0.022	11	95.4
02-1861	LT000	LT0	23200	6520	29.1	19.9	36.4	35.9	35.9	0.05	0.07	<0.013	<0.24	<0.06	0.66	0.018	12.3	98
02-1862	LT000	LT0	23200	6680	44.3	15.4	28.7	27.7	27.6	0.083	<0.07	0.054	0.31	0.36	0.63	0.019	9.5	98
02-1863	LT000	LT0	23200	6740	19.3	9.5	60.7	60.9	57.3	0.05	<0.07	0.04	<0.24	0.25	0.58	0.029	8.3	99
02-1866	LT000	LT0	23520	6760	27.6	13.7	46.3	44.6	45.8	0.083	<0.07	0.04	0.42	0.45	0.55	0.032	7.6	94.6
02-1867	LT000	LT0	23520	6600	37.2	14.6	38.2	39.6	40.2	0.099	0.10	0.04	0.30	0.25	0.63	0.03	7.8	100.3
02-2150	LT100	LT1	22500	5800	24.4	9.9	58	60.3	56.6	0.083	0.15	0.121	0.72	0.55	1.00	0.11	3.6	100.2
02-2151	LT100	LT1	22500	5850	24.4	12.1	56.6	57.8	54.6	0.083	0.07	0.067	0.25	0.23	1.13	0.103	4.8	100.8
02-2152	LT100	LT1	22500	5900	31.4	12.8	47.6	46.7	47	0.083	<0.07	0.067	0.42	0.40	0.67	0.082	5.6	97.9
02-2153	LT100	LT1	22500	5900	33.6	11.9	45.9	48.2	48.9	0.099	0.41	0.162	0.92	0.72	0.89	0.069	4.1	100.2
02-2154	LT100	LT1	22500	6000	28.7	12.3	48.6	50	50.5	0.083	<0.07	0.094	0.53	0.31	0.89	0.082	4.7	97.1
02-2155	LT100	LT1	22500	6100	22.9	10.1	60.9	62.8	59	0.066	<0.07	0.04	0.27	0.13	1.14	0.076	3.8	101.1
02-2156	LT100	LT1	22500	6150	33.8	9.8	48.9	47.8	48.2	0.083	<0.07	0.013	<0.24	0.07	1.59	0.096	4.8	98.1
02-2157	LT100	LT1	22500	6200	49	7.7	36	34.5	35.5	0.083	<0.07	0.04	<0.24	<0.06	1.56	0.096	4	97.1
02-2158	LT100	LT1	22500	6250	34.7	12.2	45.6	48.1	48.3	0.116	0.10	0.04	<0.24	0.13	0.51	0.082	5.4	101.4
02-2159	LT100	LT1	22500	6300	42.6	10	40.3	45.3	43.3	0.116	0.10	0.121	<0.24	0.24	0.51	0.089	4.3	103.3
02-2160	LT100	LT1	22500	6350	39.8	9.1	43.9	50.8	51.9	0.083	<0.07	0.013	<0.24	0.10	0.68	0.11	3.9	104.6
02-2161	LT100	LT1	22500	6400	29.7	9.7	51	56.7	56.9	0.083	<0.07	0.081	0.69	0.23	0.77	0.092	4	101.4
02-2162	LT100	LT1	22500	6450	34.2	10.1	48.7	47	46.9	0.083	<0.07	0.04	0.27	0.27	0.60	0.096	4.3	96.7
02-2163	LT100	LT1	22500	6500	25.9	9.5	59.2	61.2	58.3	0.083	<0.07	0.04	<0.24	0.19	0.76	0.105	3.5	101.3
02-2164	LT100	LT1	22500	6550	31.4	10.2	52.6	50.6	51.8	0.099	0.15	0.027	<0.24	0.17	0.66	0.071	3.7	97.1
02-2165	LT100	LT1	22500	6600	35.1	8.1	50.3	49.1	50.6	0.066	<0.07	0.027	<0.24	0.17	0.78	0.082	3.3	96.8
02-2166	LT100	LT1	22500	6650	34.9	9	49.9	47.4	49	0.099	0.32	0.027	0.34	0.12	0.76	0.087	3.8	96.5
02-2167	LT100	LT1	22500	6700	26.3	9.6	56.9	60.3	57.5	0.066	<0.07	0.027	0.35	0.17	1.22	0.078	4.3	102.1
02-2168	LT100	LT1	22500	6750	25	11.8	53.2	55.7	54.8	0.083	<0.07	0.04	<0.24	0.21	0.73	0.064	7.5	101.1
02-2169	LT200	LT2	22500	6750	44.3	6.1	43	48.2	50.5	0.066	0.10	0.094	<0.24	0.11	0.33	0.071	3.4	102.8
02-2170	LT100	LT1	22500	6800	42.1	11.2	36.9	38.5	37.7	0.083	<0.07	0.054	<0.24	0.25	0.46	0.062	7.9	100.7
02-2171	LT100	LT1	22500	6850	31.4	13.4	43.2	42.5	41.9	0.099	0.08	0.04	0.51	0.37	0.35	0.05	9.7	98
02-2172	LT100	LT1	22500	6900	40.6	6	43	41.9	41.6	0.083	<0.07	0.04	0.37	0.29	0.32	0.076	8.4	97.7
02-2173	LT100	LT1	22500	7000	31.4	11.9	44.7	44	43.3	0.083	<0.07	0.04	<0.24	0.28	0.43	0.046	10	98.2
02-2174	LT100	LT1	22500	7050	32.7	11.7	44.7	42.7	42.6	0.083	0.08	0.027	0.55	0.19	0.44	0.06	9.1	97
02-2175	LT100	LT1	22500	7100	35.3	11.9	42.9	40.9	41	0.083	<0.07	0.027	0.34	0.34	0.42	0.062	8	97.1
02-2176	LT100	LT1	22500	7150	26.1	9.4	52.5	55.2	53.6	0.083	<0.07	0.027	0.41	0.34	0.30	0.119	9.6	101.2

APPENDIX X GOLDEN GROVE

sampno	samptype	box	northing	easting	SiO2	Al2O3	Fe2O3	Fe2O3	Fe2O3	MgO	CaO	Na2O	K2O	K2O	TiO2	P2O5	LOI	TOTAL
method					ICP	ICP	ICP	XRF	naa	ICP	ICP	naa	naa	ICP	XRF	XRF	%	%
units					%	%	%	%	%	%	%	%	%	%	%	%	%	%
02-2177	LT100	LT1	22500	7200	8.6	4.2	72.2	78.6	67.3	0.066	0.10	<0.013	<0.24	<0.06	0.05	0.144	13.3	105.1
02-2178	LT100	LT1	22500	7250	9.6	6.2	70.6	75.9	65.9	0.066	0.13	<0.013	0.31	<0.06	0.06	0.14	12.9	105
02-2179	LT100	LT1	22500	7300	58.4	5.2	30.2	31.9	31.7	0.033	0.11	0.013	<0.24	<0.06	0.78	0.08	4.7	101.2
02-2180	LT100	LT1	22500	7350	74	6.7	13.3	13.8	13.4	<0.003	0.10	0.027	<0.24	<0.06	1.04	0.05	3.3	99
02-2181	LT100	LT1	22500	7400	61.8	7.2	24.6	24.9	24.9	0.017	0.11	0.027	<0.24	0.06	0.92	0.046	5	100.1
02-2182	LT100	LT1	22500	7450	9.2	4.2	72.5	76.6	68.5	0.017	0.10	<0.013	<0.24	<0.06	0.11	0.064	13	103.3
02-2183	LT100	LT1	22500	7500	58	6.8	29.5	27.7	27.6	0.017	<0.07	0.027	<0.24	0.08	1.03	0.087	4	97.7
02-2184	LT100	LT1	22320	7100	37.4	8.9	48.5	51.2	50.6	0.033	0.13	0.027	<0.24	0.28	0.36	0.144	4.1	102.6
02-2288	SP000	SP	22500	5200	64.6	13.3	12.8	13.5	11.8	0.05	0.10	0.148	0.94	0.86	1.00	0.034	6.7	100.3
02-2289	LT100	LT1	22500	5300	18.2	13.4	54.9	62.5	53.2	0.017	0.11	0.027	0.53	0.34	0.83	0.048	12	107.5
02-2290	SP000	SP	22500	5320	70.8	15.1	4.5	5.3	4.3	0.198	0.14	0.256	0.76	0.83	0.62	0.018	6.3	99.6
02-2291	LT200	LT2	22500	5400	20.7	15.1	52.2	59.8	53.5	<0.003	0.10	0.067	<0.24	0.25	1.13	0.044	10.8	108
02-2293	SP000	SP	22500	5500	72.9	12.4	5.1	5.9	5.1	0.033	0.17	0.391	2.13	2.08	0.45	0.009	4.2	98.5
02-2294	LT100	LT1	22500	5500	34.4	15	38.9	43.6	39.7	0.017	0.10	0.081	0.40	0.43	0.81	0.046	9.4	103.9
02-2295	SP000	SP	22500	5650	67.4	16.6	3.6	4.6	4.1	0.297	<0.07	0.108	2.78	2.96	0.52	0.009	6.3	98.7
02-2296	LT102	LT1	22500	5650	33.2	14.3	41.6	46.7	42.7	0.017	<0.07	0.04	0.40	0.21	0.71	0.057	8.4	103.6
02-2297	SP000	SP	22500	5750	65	19.8	3.6	4.1	3.4	0.38	<0.07	0.054	2.22	2.60	0.48	0.027	6.6	99
02-2298	LT103	LT1	22500	5900	41.3	11.9	37	37.2	35.9	0.033	<0.07	0.04	<0.24	0.27	0.77	0.057	7	98.6
02-2299	SP000	SP	22500	5900	60.3	13.5	8.9	10.1	8.6	1.899	0.32	1.577	2.19	2.37	0.69	0.073	8.5	99.3
02-2300	SP000	SP	22500	6000	62.9	14	3.9	4.9	3.8	1.601	0.49	1.227	<0.24	0.17	0.43	0.005	13.8	99.5
02-2301	SP000	SP	22500	6000	63.5	13.8	7.5	9.2	7.5	1.024	0.45	3.1	<0.24	0.64	0.55	0.057	8	100.3
02-2302	SP000	SP	22500	6200	61.8	22	4.1	4.7	4	0.248	<0.07	0.216	0.55	0.90	0.54	0.037	9.5	100
02-2303	SP000	SP	22500	6200	64.8	15.4	3.6	4.9	3.8	1.337	0.29	3.747	1.16	1.49	0.50	0.057	6.8	99.4
02-2304	SP000	SP	22500	6400	64.2	16.7	7.1	7.4	6.5	0.297	0.18	0.189	1.30	1.61	0.53	0.014	8.2	99.3
02-2305	SP000	SP	22500	6400	60.5	24.2	3.2	3.8	2.9	0.198	0.08	0.081	0.78	1.08	0.90	0.009	9.2	100.1
02-2306	SP000	SP	22560	6600	71	14.6	5.2	5.5	4.9	0.165	0.13	0.135	1.94	2.67	0.44	0.016	4.9	99.6
02-2307	SP000	SP	22560	6600	71.4	14.6	4.3	5.7	4.8	0.165	<0.07	0.162	2.41	2.81	0.54	0.023	4.5	99.9
02-2308	SP000	SP	22560	6650	63.3	15.3	11.5	13.2	11.2	0.099	<0.07	0.04	0.36	0.74	0.80	0.009	6.6	100.1
02-2309	SP000	SP	22560	6675	55.8	12.5	23.3	22.6	22.9	0.05	0.07	0.027	<0.24	0.06	0.79	0.03	6.7	98.6
02-2310	SP000	SP	22560	6750	74	11.3	7.3	7.7	6.8	0.347	0.11	0.202	0.98	1.48	0.22	0.078	3.8	99.2
02-2311	LT000	LT0	22560	6800	61.2	12.1	17.3	17.1	16	0.099	<0.07	0.108	<0.24	0.46	0.25	0.069	7.4	98.9
02-2312	LT102	LT1	22560	6725	23.7	8.6	59.8	65.9	56.9	0.033	0.08	0.013	<0.24	0.08	1.56	0.039	5.6	105.7
02-2313	SP000	SP	22560	6725	72.1	12.1	9.8	10.2	9	0.099	0.22	0.202	0.65	1.12	0.26	0.025	4.1	100.4
02-2314	SP000	SP	22560	6725	59.3	16.1	14.1	13.7	12.6	0.182	0.11	0.903	1.71	2.16	0.40	0.105	5.6	98.5
02-2315	SP000	SP	22560	6880	61	14.8	13.9	15.2	13.5	0.132	<0.07	0.121	1.41	1.72	0.37	0.034	7.4	100.8
02-2316	LT000	LT0	22560	6880	34.2	9.4	46.9	44.8	40.7	0.083	<0.07	0.054	0.39	0.49	0.47	0.153	7	96.7
02-2317	LT000	LT0	22500	7100	37	9.7	41.3	43.7	40.7	0.083	<0.07	0.027	<0.24	0.35	0.33	0.037	9.8	101.1
02-2318	SP000	SP	22500	7100	78.3	9.8	5.7	6.4	5.6	0.132	0.10	0.067	0.82	1.01	0.37	0.082	4.3	100.6
02-2319	SP000	SP	22500	7100	74.7	9.2	7.6	9	8.1	1.205	0.10	0.094	1.10	1.24	0.39	0.069	4.5	100.5
02-2320	CV203	CV	22560	7350	91.3	2.1	1.9	2.3	1.9	0.066	<0.07	0.027	<0.24	<0.06	0.72	0.016	1.4	97.9
02-2321	SP000	SP	22500	4900	76.1	12.8	4.1	4.6	4.1	0.116	<0.07	0.256	0.48	0.83	0.92	0.032	3.1	98.8
02-2322	bif	BIF	22500	4900	92.8	0.6	2	2.6	2.4	0.066	<0.07	<0.013	<0.24	<0.06	0.16	0.016	0.6	96.8
02-2336	SP000	SP	17980	4900	64.4	20.9	0.7	0.8	0.7	0.116	0.13	1.712	2.49	3.70	0.71	0.041	6.1	98.6
02-2343	gos7	gos	18050	4960	41.3	2.1	48	48.8	48.3	0.05	0.11	<0.013	<0.24	<0.06	0.02	0.062	7	99.5
02-2344	LT264	LT2	18050	4960	28.9	7.8	53.5	54.6	51.8	0.066	0.07	0.054	<0.24	0.11	1.12	0.133	8.4	101.3
02-2345	LT202	LT2	18000	2800	21	13.8	51.8	56	49.6	0.099	0.11	0.216	<0.24	0.41	0.88	0.044	11.3	103.9
02-2346	LT202	LT2	18000	3000	25	19.9	41.3	42.2	38.9	0.099	<0.07	0.04	0.17	0.16	1.06	0.037	12.9	101.4
02-2347	LT202	LT2	18000	3200	36.8	10.2	45.8	49	45.8	0.099	<0.07	0.067	<0.24	0.12	0.83	0.05	4.7	101.9

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sampno method units	samptype	box	northing	easting	SiO2 ICP %	Al2O3 ICP %	Fe2O3 ICP %	Fe2O3 XRF %	Fe2O3 naa %	MgO ICP %	CaO ICP %	Na2O naa %	K2O naa %	K2O ICP %	TiO2 XRF %	P2O5 XRF %	LOI %	TOTAL %
02-2350	LT202	LT2	18000	3500	62.2	9.2	22	22.5	22	0.149	0.11	0.054	0.58	0.35	0.57	0.055	4.6	99.8
02-2354	SP000	SP	18100	4500	66.7	18.5	0.9	0.9	0.7	0.561	0.77	0.121	0.82	0.89	0.90	0.005	9.2	98.6
02-2405	LT202	LT2	22880	5200	24	14.3	49	53.9	49.9	0.083	<0.07	0.04	<0.24	0.13	0.73	0.06	10.7	103.9
02-2406	LT000	LT0	23370	6180	10.7	9.4	65.3	73.2	59.8	0.099	<0.07	<0.013	0.51	0.10	0.29	0.05	12.9	106.8
02-2410	LT103	LT1	17980	4890	29.1	17	41.5	40.8	42.9	0.099	0.07	0.566	1.24	1.21	0.57	0.017	9.2	98.6
02-2411	LT103	LT1	17980	4890	35.5	14.3	38.3	36.5	38.7	0.099	<0.07	0.377	1.36	1.14	0.47	0.017	8.3	96.7
02-2412	LT103	LT1	17980	4890	44.1	13.5	31.7	29.7	33	0.116	0.13	0.337	0.71	1.08	0.43	0.016	7.1	96.6
02-2413	LT103	LT1	17980	4890	46.2	12.4	32.6	29.9	32.9	0.116	<0.07	0.27	1.14	1.02	0.40	0.017	6.7	97.1
02-2416	LT103	LT1	17980	4890	58.2	10.3	23.4	18.5	20.6	0.116	<0.07	0.148	0.78	1.28	0.34	0.018	5	94
02-2417	LT103	LT1	17980	4890	56	12.7	22.7	16.8	19.3	0.116	<0.07	0.175	0.88	1.39	0.33	0.016	4.7	92.2
02-2418	LT103	LT1	17980	4890	62.7	11.2	19.2	17.7	19.4	0.132	<0.07	0.175	1.01	1.47	0.32	0.016	4.6	98.3
02-2419	LT103	LT1	17980	4890	58.2	10.8	23	19.5	21.3	0.132	0.08	0.162	0.54	1.17	0.36	0.018	5	95.4
02-2420	LT103	LT1	17980	4890	57.5	9.9	24.6	21.4	22.9	0.149	0.11	0.135	1.28	0.93	0.32	0.025	4.9	95.4
02-2421	LT103	LT1	17980	4890	59.5	10.6	22	19.1	23.3	0.132	0.07	0.135	0.86	0.99	0.33	0.017	4.7	95.7
02-2422	LT103	LT1	17980	4890	58.2	10	24	20.6	23.4	0.132	<0.07	0.121	0.71	0.78	0.35	0.02	4.7	95
02-2423	LT103	LT1	17980	4890	59	10.8	23.2	19.7	22.2	0.132	<0.07	0.135	1.10	1.01	0.34	0.019	4.7	95.9
02-2424	LT103	LT1	17980	4890	62.5	10.7	19.2	17.8	20	0.132	<0.07	0.162	0.77	1.10	0.33	0.019	4.5	97.3
02-2425	LT103	LT1	17980	4890	53.9	15	21.5	18.6	20.3	0.116	<0.07	0.256	1.04	1.14	0.43	0.016	6.8	96.2
02-2426	LT103	LT1	17980	4890	53	17.3	19	19.2	19.9	0.132	<0.07	0.256	1.02	0.92	0.46	0.017	8.1	99.4
02-2427	LT103	LT1	17980	4890	43.8	17.6	25.6	21.7	23.2	0.116	<0.07	0.364	0.88	1.00	0.52	0.016	9.8	95
02-2428	LT103	LT1	17980	4890	51.5	15.3	23.7	21.3	22.4	0.132	0.10	0.256	1.22	1.10	0.41	0.018	6.8	96.9
02-2429	LT103	LT1	17980	4890	53.3	13.2	22.9	20.8	22.7	0.116	<0.07	0.31	1.39	1.08	0.40	0.014	7.1	96.3
02-2590	gos6	gos	18245	5055	19	2.2	66.3	70.6	66.6	0.116	<0.07	<0.013	<0.24	0.07	0.00	0.022	11.5	103.5
02-2591	LT103	LT1	18461	5040	30.6	10.7	49.2	46.2	49.8	0.132	<0.07	0.013	<0.24	<0.06	0.02	0.029	7.2	94.9
02-2592	LT103	LT1	18461	4980	28.7	14.7	45.6	43.6	46.5	0.149	<0.07	0.027	<0.24	<0.06	0.03	0.025	8.5	95.7
02-2593	LT103	LT1	18470	4910	32.1	4.5	54.8	52.6	56.2	0.099	0.10	0.013	<0.24	<0.06	0.12	0.011	5.2	94.8
02-2595	LT103	LT1	18000	4820	24	11	54.9	55.5	53.9	0.116	0.08	0.054	0.59	<0.06	0.04	0.014	7.6	98.4
02-2601	LT103	LT1	22880	6100	29.5	21.2	34.9	38.7	36.2	0.116	0.07	<0.013	<0.24	<0.06	0.04	0.014	13.4	103.1
02-2602	LT103	LT1	22880	6100	31.4	19.5	34.3	30.5	32.5	0.132	<0.07	0.013	<0.24	<0.06	0.71	0.019	12.8	95.1
02-2603	LT103	LT1	22880	6100	30.6	18.8	35.9	30.7	33	0.116	<0.07	<0.013	<0.24	0.06	0.71	0.018	12.9	94
02-2604	LT103	LT1	22880	6100	30.2	18.5	34.7	29.7	30	0.132	<0.07	<0.013	<0.24	0.06	0.74	0.013	13.2	92.5
02-2605	LT103	LT1	22880	6100	30.8	22	31.7	30.5	32.7	0.132	0.07	0.013	<0.24	0.07	0.71	0.017	13	97.4
02-2606	LT103	LT1	22880	6100	32.3	18.8	33.6	31.4	32	0.116	<0.07	<0.013	<0.24	0.06	0.66	0.017	13.1	96.5
02-2607	LT103	LT1	22880	6100	36.1	19.4	30	27.2	29.2	0.116	<0.07	0.013	<0.24	<0.06	0.75	0.015	12.5	96.1
02-2608	LT103	LT1	22880	6100	32.5	18.9	33.6	27.8	30	0.116	<0.07	0.013	<0.24	<0.06	0.72	0.016	12.8	92.9
02-2609	LT103	LT1	22880	6100	30.8	19.6	34.9	29.1	30.3	0.116	<0.07	<0.013	<0.24	<0.06	0.74	0.013	13.2	93.6
02-2610	LT103	LT1	22880	6100	31	20.2	33.3	29.3	30.7	0.116	<0.07	<0.013	<0.24	<0.06	0.73	0.016	13	94.4
02-2611	LT103	LT1	22880	6100	31.4	18.4	34.5	30.3	32.6	0.132	<0.07	0.013	<0.24	<0.06	0.75	0.018	13.2	94.2
02-2632	LG	LG	22000	6487	40	18.1	30.5	31.6	30.6	0.132	0.10	0.027	0.48	0.33	0.03	0.023	9.4	99.7
02-2633	LG102	LG	22000	6487	42.8	18.6	25.2	26.6	24.3	0.149	<0.07	0.027	<0.24	0.42	0.03	0.016	10.8	99.5
02-2634	LG102	LG	22000	6487	40.6	24.2	22	24.7	22.4	0.033	<0.07	0.04	0.58	0.52	0.03	0.014	11.7	101.8
02-2635A	LT103	LT1	22000	6487	41.5	21.6	25.4	28.6	26.3	0.033	<0.07	0.027	0.49	0.41	0.03	0.023	10.1	102.4
02-2635B	LT103	LT1	22000	6487	64.8	16.3	9.1	9.6	8.8	0.05	<0.07	0.04	0.46	0.54	0.05	0.026	7.6	99.1
02-2636	LT103	LT1	22000	6487	40.2	25.2	21.2	24.6	22.2	0.05	0.13	0.027	0.42	0.43	0.03	0.012	11.9	102.6
02-2637	LT104	LT1	22000	6487	44.1	21.8	20.3	23.7	21.2	0.033	<0.07	0.04	<0.24	0.36	0.03	0.014	11.4	101.5
02-2638	LT104	LT1	22000	6487	46.4	21.6	18.8	21	19.2	0.05	0.11	0.04	<0.24	0.48	0.03	0.015	10.7	100.5
02-2639	MZ104	MZ	22000	6487	56	20	11.6	12.3	11.2	0.05	<0.07	0.04	0.51	0.58	0.04	0.012	9.5	98.5
02-2640	MZ104	MZ	22000	6487	61	21.6	6.7	6.9	6	0.05	0.07	0.054	0.66	0.66	0.05	0.006	8.8	99.2

APPENDIX X GOLDEN GROVE

sampno	Mn	Cr	Cr	V	Cu	Pb	Zn	Zn	Ni	Co	Co	As	As	Sb	Sb	Sb	Bi	Bi	Bi	Cd	In	Mo	Mo	Mo	Ag	Ag	Ag
method	XRF	naa	XRF	XRF	XRF	XRF	xrf	naa	xrf	xrf	naa	xrf	naa	xrf	naa	ICPms	xrf	oes	ICPms	xrf	xrf	xrf	naa	ICPms	oes	naa	ICPms
units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
02-1079	<10	6.4	<10	<10	79	16	25	<100	<10	<5	37.7	54	14.4	60	9.3	na	8	10	na	<1	<1	<2	<5	na	0.7	<5	na
02-1080	<10	8.6	<10	<10	3.3	7	9	<100	<10	<5	28.6	15	5.2	18	7.2	na	5	<1	na	<1	<1	<2	<5	na	0.3	<5	na
02-1081	<10	<5	<10	<10	64	1.6	25	<100	<10	<5	33.8	38	16.6	43	23.6	na	4	<1	na	<1	<1	<2	<5	na	0.4	<5	na
02-1082	<10	7.4	<10	<10	28	8	9	<100	<10	<5	13.4	7	7.7	34	19	na	2	3	na	<1	<1	<2	<5	na	0.5	<5	na
02-1083	<10	<5	<10	<10	3.3	9	8	<100	<10	<5	21	10	12.5	73	22.1	na	6	3	na	<1	1	<2	<5	na	0.4	<5	na
02-1084	31	17.2	<10	<10	84	11	15	<100	<10	<5	14.5	18	25	63	10.6	na	13	15	na	<1	<1	<2	<5	na	0.3	<5	na
02-1095	<10	<5	<10	<10	3.3	12	7	<100	<10	<5	10.5	1.6	4.9	16	6.5	na	3	3	na	<1	2	<2	<5	na	0.3	<5	na
02-1086	<10	10.1	<10	<10	169	32	8	<100	<10	<5	13.4	85	44.2	31	15.3	na	63	100	na	<1	3	<2	<5	na	0.4	<5	na
02-1087	<10	6.4	<10	<10	3.3	6	14	<100	<10	<5	38.7	14	7.2	42	22.7	na	3	<1	na	<1	<1	<2	<5	na	0.2	<5	na
02-1088	25	5.1	<10	<10	230	19	30	<100	<10	<5	42.8	2	5.9	36	17.9	na	3	<1	na	1	1	<2	<5	na	0.5	<5	na
02-1089	73	12.6	<10	<10	2266	14	7	<100	<10	<5	101	31	18.9	58	39.1	na	12	5	na	<1	3	<2	<5	na	0.6	<5	na
02-1090	<10	8.4	<10	<10	348	12	10	<100	<10	<5	27.4	15	4.2	14	5.5	na	3	<1	na	<1	<1	3	<5	na	0.3	<5	na
02-1091	<10	6.2	<10	<10	135	19	10	<100	<10	<5	35	23	8.5	46	27.8	na	1	<1	na	2	<1	<2	<5	na	0.5	<5	na
02-1092	65	<5	<10	58	272	13	113	<100	<10	<5	41.8	12	9.5	39	22.6	na	2	<1	na	<1	<1	2	<5	na	0.3	<5	na
02-1093	<10	11.9	<10	<10	287	7	1.6	<100	15	<5	41.9	21	17.6	36	16.1	na	<1	<1	na	<1	1	4	<5	na	0.2	<5	na
02-1094	<10	9	<10	<10	29	10	116	<100	<10	<5	28.7	1.6	17.2	43	20	na	8	<1	na	<1	<1	3	<5	na	0.1	<5	na
02-1095	<10	13.8	<10	<10	28	13	24	<100	<10	<5	34.7	3	8.1	43	21.8	na	2	<1	na	<1	2	<2	<5	na	<0.1	<5	na
02-1096	<10	9.7	<10	<10	54	21	10	<100	<10	<5	41.9	166	88.1	29	14.4	na	131	100	na	<1	<1	<2	<5	na	<0.1	<5	na
02-1097	15	7.2	<10	<10	79	21	9	<100	<10	<5	45.5	203	110	38	22.2	na	173	100	na	<1	1	<2	<5	na	<0.1	<5	na
02-1098	<10	7.6	<10	<10	94	15	9	<100	<10	<5	22.8	14	20.6	27	17	na	2	<1	na	<1	<1	<2	<5	na	0.2	<5	na
02-1099	33	5.3	<10	<10	145	15	33	<100	<10	<5	34	36	15	36	17.7	na	5	<1	na	<1	2	7	<5	na	0.1	<5	na
02-1100	10	15.8	<10	22	107	39	95	<100	<10	<5	18.8	382	191	17	7.1	na	3	1	na	<1	<1	32	49.6	na	0.2	<5	na
02-1101	<10	28.2	19	13	17	30	16	<100	<10	<5	10	123	60.9	19	6.6	na	9	3	na	1	<1	14	30	na	0.1	<5	na
02-1102	<10	15.4	<10	15	1665	122	44	<100	<10	<5	7.9	389	209	29	13.8	na	98	100	na	<1	<1	292	370	na	0.6	<5	na
02-1103	47	5.6	<10	<10	571	17	39	<100	<10	<5	27.1	60	29.4	104	71.7	na	9	3	na	<1	1	<2	<5	na	0.4	<5	na
02-1104	25	9.6	<10	<10	665	26	19	<100	<10	<5	11.6	120	71.1	39	19.7	na	4	<1	na	<1	2	<2	<5	na	0.7	<5	na
02-1105	15	7.3	<10	<10	1185	34	19	<100	<10	<5	5.3	1240	653	130	75.9	na	10	20	na	<1	6	6	<5	na	0.4	<5	na
02-1106	24	28.1	22	16	536	14	54	<100	10	<5	9.2	172	90.3	28	12.3	na	19	3	na	<1	<1	<2	<5	na	0.2	<5	na
02-1107	<10	<5	<10	<10	65	17	18	<100	<10	<5	4.1	22	19.5	104	63.5	na	<1	<1	na	<1	3	<2	<5	na	0.4	<5	na
02-1108	30	12.2	<10	38	152	39	7	<100	<10	<5	4.6	439	235	25	11.3	na	<1	<1	na	<1	2	<2	<5	na	15	<5	na
02-1109	<10	6.3	<10	<10	3.3	28	29	<100	<10	<5	9.5	61	34.8	59	33.1	na	1	<1	na	<1	<1	44	67.2	na	0.4	<5	na
02-1110	14	23.6	12	24	2178	23	7	<100	<10	<5	3.3	515	273	27	10.3	na	81	100	na	<1	3	<2	<5	na	0.5	<5	na
02-1111	<10	19.6	<10	25	1906	63	19	<100	<10	<5	1.7	634	319	45	19	na	163	200	na	<1	2	84	135	na	8	<5	na
02-1112	<10	21.5	<10	<10	1079	35	76	<100	<10	<5	2.6	246	140	22	7.9	na	114	100	na	<1	1	107	143	na	0.6	<5	na
02-1113	<10	12.3	<10	64	2414	73	39	<100	<10	<5	2.2	555	298	29	10.8	na	89	100	na	<1	2	18	11.7	na	4	<5	na
02-1114	327	10.9	<10	21	1183	52	172	127	<10	<5	4	303	151	32	12.8	na	115	100	na	<1	5	<2	8.2	na	0.6	<5	na
02-1115	97	21.1	18	58	1633	38	151	<100	<10	<5	2.6	144	87.2	21	6.8	na	63	100	na	<1	8	<2	<5	na	0.8	<5	na
02-1116	40	21.7	<10	65	2605	48	16	<100	<10	<5	4.4	116	69.4	23	11.7	na	168	100	na	<1	7	<2	<5	na	0.3	<5	na
02-1117	353	7.5	<10	<10	678	75	221	169	<10	<5	2.3	1556	798	36	17.1	na	557	300	na	<1	4	<2	8.7	na	0.2	<5	na
02-1118	305	10.7	<10	25	908	71	182	143	<10	<5	7	1688	886	70	9.1	na	137	70	na	<1	8	10	9.5	na	4	<5	na
02-1119	220	14.3	<10	<10	1431	31	74	<100	10	<5	3.3	266	141	90	24.7	na	23	20	na	<1	3	5	<5	na	0.2	<5	na
02-1120	<10	<5	<10	<10	953	149	141	<100	<10	<5	21.4	3471	1810	22	4.5	na	13	50	na	<1	12	<2	<5	na	3	<5	na
02-1122	20	12.4	<10	11	572	32	250	249	<10	<5	5.2	46	22.8	53	3.7	na	2	<1	na	<1	1	2	<5	na	0.1	<5	na
02-1123	<10	21.7	11	<10	345	34	266	205	<10	<5	0.3	13	16.3	37	16.2	na	<1	<1	na	<1	66	<2	<5	na	3	<5	na
02-1124	<10	7.1	<10	<10	3.3	15	344	267	<10	<5	0.3	24	11	29	12.1	na	1	<1	na	<1	8	<2	<5	na	0.3</		

APPENDIX X GOLDEN GROVE

sampno	Mn	Cr	Cr	V	Cu	Pb	Zn	Zn	Ni	Co	Co	As	As	Sb	Sb	Sb	Bi	Bi	Bi	Cd	In	Mo	Mo	Mo	Ag	Ag	Ag
method	XRF	naa	XRF	XRF	XRF	XRF	xrf	naa	xrf	xrf	naa	xrf	naa	xrf	naa	ICPms	xrf	oes	ICPms	xrf	xrf	xrf	naa	ICPms	oes	naa	ICPms
units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
02-1128	45	11.3	<10	<10	49	24	595	499	<10	<5	2.7	1.6	6.6	28	11.9	na	2	<1	na	<1	<1	3	<5	na	<0.1	<5	na
02-1129	47	21.9	<10	<10	330	61	902	983	<10	<5	2.5	34	28.9	16	4.6	na	1	<1	na	<1	<1	<2	<5	na	0.3	<5	na
02-1130	130	11.9	<10	15	225	39	1352	1190	<10	<5	3.8	1.6	6	14	2.2	na	3	<1	na	<1	13	<2	<5	na	0.3	<5	na
02-1131	17	53	41	31	1535	1698	866	788	<10	9	6.5	7678	3840	1267	816	na	40	100	na	<1	23	17	<5	na	2	<5	na
02-1132	20	37.2	33	34	1110	493	710	641	<10	18	17.8	5303	2690	890	553	na	119	300	na	<1	24	10	6.7	na	10	<5	na
02-1134	24	30.5	20	16	757	105	142	131	<10	<5	15.9	110	61	18	6.1	na	4	2	na	<1	<1	<2	8.7	na	10	<5	na
02-1135	47	64.6	65	39	1679	112	578	565	<10	<5	5.4	217	125	19	4.8	na	4	2	na	<1	33	<2	5.2	na	0.7	<5	na
02-1136	<10	35.2	28	<10	1877	23	146	111	<10	<5	6.4	57	32.9	14	2.7	na	7	1	na	<1	8	<2	<5	na	0.4	<5	na
02-1137	19	47.7	44	33	460	53	238	267	<10	17	12.9	106	64.9	59	7.5	na	33	20	na	<1	10	3	5	na	1	<5	na
02-1138	23	76.5	68	11	1232	50	187	182	<10	<5	7.2	184	105	19	5.8	na	19	10	na	<1	5	<2	15	na	0.7	<5	na
02-1139	24	29.7	<10	44	745	207	212	161	<10	15	1.9	151	75.5	15	1.4	na	<1	<1	na	<1	14	<2	<5	na	0.6	<5	na
02-1140	33	15.1	<10	<10	2081	57	83	<100	<10	<5	3.9	172	90.5	26	11.6	na	19	10	na	<1	12	<2	<5	na	2	<5	na
02-1141	<10	28.9	<10	36	1536	125	80	<100	<10	14	2.1	471	226	30	10.2	na	338	200	na	<1	7	<2	<5	na	3	<5	na
02-1142	16	56.7	54	43	1126	69	69	<100	<10	<5	11	504	277	28	16.3	na	141	200	na	<1	5	6	9.6	na	2	<5	na
02-1143	64	11.7	<10	34	1663	107	1424	1320	<10	17	43.7	445	226	25	7.2	na	17	10	na	<1	2	<2	<5	na	0.6	<5	na
02-1144	266	10.6	<10	28	1406	53	497	427	<10	6	17.2	117	60.1	24	7.4	na	86	80	na	<1	2	<2	<5	na	1	<5	na
02-1146	67	7.5	<10	<10	2062	57	140	<100	<10	<5	11.5	215	113	24	6.3	na	70	80	na	<1	1	<2	5	na	0.8	<5	na
02-1147	67	22.2	<10	<10	1623	86	180	124	<10	<5	4.3	309	167	23	6.2	na	69	80	na	<1	4	<2	6.5	na	2	<5	na
02-1148	59	8.8	<10	<10	2519	57	158	114	<10	<5	7.7	576	311	31	10.1	na	150	100	na	<1	2	<2	<5	na	2	<5	na
02-1149	117	22.7	<10	<10	1801	121	269	225	<10	<5	9.2	368	195	40	14.5	na	125	100	na	<1	4	<2	<5	na	0.7	<5	na
02-1150	25	13.3	<10	22	3060	74	172	132	<10	<5	9.3	501	260	45	23.7	na	23	50	na	<1	26	<2	8.3	na	0.7	<5	na
02-1151	23	15.9	<10	<10	1789	67	332	291	<10	<5	5.8	177	99.1	11	2.4	na	<1	<1	na	<1	<1	<2	<5	na	0.3	<5	na
02-1152	<10	18.4	<10	11	10253	21	216	171	<10	<5	5	39	26.7	21	6.5	na	<1	<1	na	<1	2	<2	6.3	na	<0.1	<5	na
02-1153	<10	52.7	50	30	6269	27	71	<100	<10	<5	2.4	87	51.9	69	29.9	na	1	<1	na	<1	1	<2	6.5	na	1.5	<5	na
02-1154	76	29.5	21	<10	180	20	1.6	<100	<10	<5	20.5	32	21.1	64	38.8	na	5	2	na	<1	3	5	18.1	na	<0.1	<5	na
02-1156	39	114	117	372	1518	49	54	<100	15	<5	21.2	1821	1010	99	34.9	na	351	300	na	<1	22	17	36.7	na	0.2	<5	na
02-1157	13	147	148	195	1921	17	62	<100	<10	<5	37.2	530	283	19	10.4	na	265	200	na	<1	23	35	64.3	na	0.2	<5	na
02-1158	<10	15	<10	<10	73	53	19	<100	<10	<5	25.2	282	150	66	15	na	204	100	na	<1	1	13	24.1	na	<0.1	<5	na
02-1159	<10	24.9	10	12	416	64	21	<100	<10	<5	11.4	990	488	26	10.2	na	427	300	na	<1	<1	17	29.3	na	0.8	<5	na
02-1160	84	34.4	23	23	633	83	64	<100	11	<5	11.5	1097	556	38	20.3	na	665	300	na	<1	2	11	25	na	<0.1	<5	na
02-1161	20	22	30	<10	138	5	93	113	<10	44	35	1.6	9.8	50	0.9	na	1	1	na	<1	<1	3	5.6	na	0.2	<5	na
02-1162	<10	28.2	16	<10	1088	11	22	<100	<10	<5	20.6	204	129	50	1.2	na	15	30	na	<1	5	50	53.9	na	0.2	<5	na
02-1163	<10	14	<10	22	65	25	9	<100	<10	<5	8.4	196	105	34	12	na	7	7	na	<1	2	<2	<5	na	2	<5	na
02-1164	34	19.2	<10	21	471	30	27	<100	<10	<5	5.5	477	247	30	14.4	na	148	200	na	<1	<1	<2	<5	na	0.2	<5	na
02-1165	<10	73.1	85	66	1876	28	49	<100	<10	<5	1.8	97	58.5	21	7	na	19	20	na	<1	3	<2	5.3	na	0.7	<5	na
02-1166	48	13.1	<10	14	321	32	14	<100	<10	<5	25.7	58	30.3	19	7.4	na	6	3	na	<1	<1	4	<5	na	0.2	<5	na
02-1167	<10	33.6	<10	<10	3536	28	62	<100	<10	<5	38.8	2907	1520	19	5	na	256	150	na	<1	15	2	12.3	na	0.3	<5	na
02-1168	42	14.6	<10	53	191	27	1.6	<100	<10	<5	19.9	28	16.7	42	25	na	6	<1	na	<1	5	13	23.4	na	<0.1	<5	na
02-1169	40	16.8	<10	12	155	12	1.6	<100	<10	<5	28.5	10	10.5	29	11.1	na	4	<1	na	<1	1	<2	6.9	na	<0.1	<5	na
02-1170	10	105	128	43	363	23	15	<100	<10	27	19.3	10	407	63	35	na	16	20	na	<1	<1	2	<5	na	0.2	<5	na
02-1171	<10	7.6	<10	<10	57	16	14	<100	<10	<5	27.4	771	10	60	35.2	na	<1	<1	na	<1	<1	10	10.8	na	<0.1	<5	na
02-1172	15	157	164	47	2196	10	13	<100	<10	5	14.8	21	267	41	25.4	na	33	15	na	<1	6	<2	8.4	na	<0.1	<5	na
02-1173	<10	40.6	32	82	299	89	12	<100	15	<5	7.7	466	100	15	4.6	na	<1	<1	na	<1	3	<2	5.5	na	10	<5	na
02-1174	<10	12.9	<10	27	58	40	1.6	<100	<10	14	11.3	172	6.7	4	1.1	na	1	<1	na	<1	<1	<2	<5	na	0.2	<5	na
02-1175	<10	31	26	219	990	34	94	143	<10	<5	12.4	3	7.7	8	3.1	na	<1	<1	na	<1	2	<2	8.4	na	0.3	<5	na
02-1176	14	27.1	21	19	750	22	35	<100	<10	<5	19	1.6	17.6	6	2.1	na	<1	<1	na	<1	8	<2	6.3	na	0.6	<5	na
02-1177	17	35.2	32	29	276	19	18	<100	<10	<5	16.3	13	11.6	49	1.1	na	<1	<1	na	<1	1	<2	<5	na	0.1	<5	na
02-1178	20	100	106	88	316	21	8	<100	<10	9	6.6	21	17.8	7	1.2	na	<1	<1	na	<1	<1	<2	<5	na	0.1	<5	na

APPENDIX X GOLDEN GROVE

sampno	Mn	Cr	Cr	V	Cu	Pb	Zn	Zn	Ni	Co	Co	As	As	Sb	Sb	Sb	Bi	Bi	Bi	Cd	In	Mo	Mo	Mo	Ag	Ag	Ag
method	XRF	naa	XRF	XRF	XRF	XRF	xrf	naa	xrf	xrf	naa	xrf	naa	xrf	naa	ICPms	xrf	oes	ICPms	xrf	xrf	xrf	naa	ICPms	oes	naa	ICPms
units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
02-1179	<10	34	22	107	561	50	8	<100	<10	14	2	75	45.5	17	4.8	na	3	<1	na	<1	1	<2	8.6	na	7	<5	na
02-1180	<10	76.7	70	127	86	29	9	<100	<10	<5	8.8	935	512	49	1.9	na	<1	2	na	<1	<1	2	9.3	na	0.7	<5	na
02-1181	<10	13.7	10	<10	176	11	1.6	<100	<10	15	11.8	12	6.6	8	0.7	na	<1	<1	na	<1	<1	<2	<5	na	0.6	<5	na
02-1182	19	61.2	55	17	1371	14	10	<100	<10	<5	10.3	335	200	56	4.9	na	46	100	na	<1	2	19	22.6	na	0.2	<5	na
02-1183	<10	53.7	45	<10	302	14	11	<100	<10	12	8.2	101	60.3	9	2	na	28	20	na	<1	<1	<2	<5	na	0.2	<5	na
02-1184	11	10.9	<10	35	3.3	19	1.6	<100	<10	<5	19.1	31	28.3	31	16.3	na	6	<1	na	<1	2	<2	<5	na	0.4	<5	na
02-1185	20	40	34	<10	397	22	11	<100	<10	13	14.4	78	47.1	58	6.1	na	35	100	na	<1	<1	7	20.5	na	0.6	<5	na
02-1189	29	156	185	149	102	24	1.6	<100	<10	14	7.9	24	29.2	5	4.5	2.88	15	9	6.58	<1	1	6	9.4	8.79	0.1	<5	0.77
02-1191	<10	106	128	101	265	62	1.6	<100	<10	67	31.2	25	27.5	10	8.1	5.72	50	10	8.08	<1	<1	<2	<5	9.18	<0.1	<5	0.94
02-1192	24	115	168	114	185	30	8	<100	<10	32	25.4	28	31.3	17	13.9	10.6	30	12	7.27	2	<1	4	7.8	10.2	0.1	<5	0.5
02-1193	68	292	385	261	229	47	26	<100	<10	<5	24	42	51	36	30.3	21.9	10	8	8.11	1	4	36	53.1	48.3	0.1	<5	0.77
02-1194	17	56.3	60	88	20	32	1.6	<100	<10	14	6.2	26	29.2	25	17.2	11.8	8	7	4.27	<1	2	<2	6	9.31	0.2	<5	0.86
02-1195	16	97.6	130	165	49	32	9	<100	<10	23	5.7	17	23.3	32	26.4	19.8	10	9	6.64	<1	3	<2	<5	7.69	0.3	<5	0.96
02-1200	34	200	265	349	79	39	22	<100	<10	12	4.3	38	45.3	15	11.9	8.55	30	11	9.18	<1	4	<2	7.7	7.98	0.1	<5	0.57
02-1201	74	190	267	270	116	40	12	<100	<10	<5	8.5	34	38	12	9.8	7.65	80	14	12.1	<1	1	<2	9.8	8.28	0.2	<5	0.9
02-1204	37	373	480	477	258	69	46	<100	<10	8	2.7	173	190	9	7.4	5.45	150	72	61.4	<1	7	<2	10.9	4.78	2	<5	1.17
02-1205	56	464	568	496	264	70	32	<100	<10	<5	2.7	212	252	14	11.1	7.47	150	61	54.6	<1	38	<2	<5	3.53	0.4	<5	0.94
02-1207	80	386	460	361	70	45	19	<100	<10	23	4.5	47	56	4	4.3	2.63	10	10	7.69	1	<1	<2	<5	5.52	0.1	<5	0.61
02-1209	143	396	540	382	121	56	22	<100	<10	12	5.8	90	88.3	11	8.8	6.35	100	33	29	<1	4	<2	5.9	6.98	0.4	<5	0.85
02-1210	94	530	677	459	60	59	19	<100	<10	11	4.8	76	89.9	8	7.4	5.61	80	22	19.2	<1	5	<2	8.1	8.41	0.4	<5	1.03
02-1211	47	375	400	324	37	31	11	<100	<10	11	5.6	38	39.6	5	3.9	2.4	30	6	6.12	2	2	<2	11.5	5.63	0.3	<5	0.39
02-1218	248	472	600	643	44	51	35	<100	<10	5	2.7	33	36	4	3.2	1.71	<1	3	0.76	1	1	<2	<5	3.83	0.1	<5	0.39
02-1219	91	372	451	369	24	52	24	<100	<10	7	3.7	52	59	5	4.8	3.08	<1	2	1.42	<1	<1	<2	<5	5.15	0.2	<5	0.29
02-1223	59	676	830	814	99	39	10	<100	<10	22	4.1	42	44.5	4	3.1	2.39	20	8	7.33	<1	<1	4	11.6	7.55	0.2	<5	0.55
02-1224	145	492	660	448	17	44	15	<100	<10	24	3.8	36	41.3	6	4.9	3.5	20	6	4.33	<1	1	2	<5	7.69	0.2	<5	0.44
02-1225	260	191	283	543	61	22	15	129	<10	<5	2.5	1.6	4.6	<2	<0.2	0.34	<1	1	0.03	<1	<1	<2	<5	0.85	0.1	<5	0.32
02-1226	136	130	209	488	123	21	13	<100	<10	<5	2.7	1.6	2.9	<2	<0.2	0.43	<1	<1	0.03	<1	1	<2	<5	0.6	0.1	<5	0.58
02-1267	24	295	398	335	15	63	15	<100	<10	<5	1.7	58	251	33	18.9	15.4	2	4	3.28	<1	1	4	8.3	8.23	0.5	<5	0.65
02-1270	37	771	1010	972	3.3	26	1.6	<100	49	<5	2.7	13	14	4	1	0.52	<1	<1	0.41	<1	<1	2	8.8	5.04	0.3	<5	0.52
02-1271	32	1160	1408	1282	3.3	36	1.6	<100	54	8	5.5	38	44	4	2.1	1.37	<1	<1	0.54	<1	<1	4	7.9	7.27	0.4	<5	0.42
02-1272	16	1130	1635	1421	3.3	32	1.6	<100	32	<5	2.6	11	13	5	1.1	0.87	<1	1	0.31	<1	<1	<2	7.2	5.06	0.2	<5	0.73
02-1273	14	778	925	844	3.3	23	1.6	<100	34	<5	3.2	16	20.3	3	1.3	0.96	<1	2	0.41	<1	<1	5	10	5.27	0.1	<5	0.03
02-1274	31	694	818	741	11	24	1.6	<100	43	<5	5.3	15	19.5	3	1.1	0.89	<1	<1	0.37	1	<1	3	<5	4.89	0.4	<5	0.42
02-1276	189	1400	1754	1110	3.3	42	10	<100	36	<5	5	35	40.6	5	2.1	1.6	<1	2	0.86	<1	<1	3	11.1	7.55	0.2	<5	0.58
02-1277	141	1480	1945	1261	3.3	39	7	<100	31	9	3.7	34	37	3	2	1.88	<1	1	0.68	<1	<1	<2	<5	6.74	0.2	<5	0.99
02-1282	36	118	162	331	3.3	32	1.6	<100	<10	<5	0.3	50	51.4	16	7.8	5.36	10	13	8.26	<1	<1	8	<5	13.9	0.7	<5	0.54
02-1283	76	517	638	534	18	32	10	<100	<10	<5	1.7	67	70.4	6	4.9	3.58	7	8	5.46	<1	2	3	<5	8.95	0.4	<5	0.57
02-1284	198	488	649	555	43	47	13	<100	<10	<5	2.1	66	67.1	12	7.6	5.57	5	9	4.94	<1	3	5	<5	9.33	0.6	<5	0.42
02-1285	82	403	471	393	29	32	18	<100	10	<5	3.1	40	49.7	6	3.7	2.65	5	6	4.15	<1	1	5	<5	7.04	0.5	<5	0.32
02-1286	100	515	632	521	26	38	12	<100	<10	<5	2	64	67.7	7	5	3.72	7	10	7.43	<1	<1	4	<5	9.6	0.5	<5	0.43
02-1287	119	548	693	597	33	40	10	<100	13	<5	2.7	68	72.1	11	5.4	3.95	7	11	8.04	1	1	4	<5	9.79	0.5	<5	0.34
02-1288	98	334	391	342	24	29	10	<100	<10	<5	4.8	31	34.7	5	2.8	1.99	3	4	2.85	<1	3	3	<5	5.5	0.4	<5	0.03
02-1289	110	598	715	507	12	36	1.6	<100	<10	<5	3.1	57	64.3	7	4.5	3.69	5	9	6.79	<1	2	4	<5	9.87	0.4	<5	0.67
02-1290	102	457	518	344	14	28	10	<100	<10	8	3.4	36	37.7	4	2.6	1.46	3	3	2.09	<1	1	4	<5	5.11	0.2	<5	0.19
02-1291	90	496	596	455	17	35	14	<100	<10	<5	3.2	45	48.6	4	3.4	2.72	2	4	3.42	<1	1	6	9.6	7.07	0.6	<5	0.11
02-1292	186	449	607	463	3.3	38	25	<100	<10	<5	3.4	41	43.8	6	5	4.01	3	6	4.56	<1	1	4	11.1	6.88	0.2	<5	0.28
02-1293	214	742	920	725	3.3	42	12	<100	<10	13	3.2	46	54.8	7	4.3	3.04	3	5	3.4	<1	<1	5	10.2	8.63	0.4	<5	0.13
02-1294	222	472	554	464	14	41	20	<100	<10	<5	5.3	35	37.8	12	9.4	6.6	3	3	2.57	<1	1	3	<5	4.47	0.1	<5	0.36

APPENDIX X GOLDEN GROVE

sampno	Mn	Cr	Cr	V	Cu	Pb	Zn	Zn	Ni	Co	Co	As	As	Sb	Sb	Sb	Bi	Bi	Bi	Cd	In	Mo	Mo	Mo	Ag	Ag	Ag
method	XRF	naa	XRF	XRF	XRF	XRF	xrf	naa	xrf	xrf	naa	xrf	naa	xrf	naa	ICPms	xrf	oes	ICPms	xrf	xrf	xrf	naa	ICPms	oes	naa	ICPms
units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
02-1295	197	784	1014	828	24	50	34	<100	28	8	7.2	41	47.6	18	12.8	9.75	1	2	2.33	<1	2	2	<5	6.6	0.4	<5	0.03
02-1296	730	1020	1457	1528	45	82	87	<100	513	83	88.8	8	10.1	3	0.4	0.36	5	3	0.57	<1	5	<2	<5	3.93	0.2	<5	0.03
02-1297	74	223	291	305	179	30	25	<100	<10	<5	10.2	47	47.5	18	13.6	10.8	<1	12	12.2	<1	1	7	7.9	10.1	0.5	<5	0.53
02-1300	78	401	492	357	89	44	22	<100	25	<5	5.8	85	90.8	13	7.9	5.89	5	23	23	<1	3	4	16.1	5.52	0.6	<5	0.89
02-1301	65	267	312	229	68	27	17	<100	34	11	7.3	37	41.9	6	3.6	1.72	5	8	6.04	<1	2	3	<5	3.22	0.1	<5	0.35
02-1302	127	199	276	268	66	40	22	<100	10	14	10.6	57	60.4	18	13.5	8.48	10	17	12.8	<1	2	8	11	12	0.1	<5	0.52
02-1303	80	455	565	391	102	50	19	<100	<10	<5	3	109	119	13	7.7	5.27	10	34	27.4	2	5	4	9.7	5.01	0.1	<5	0.77
02-1316	149	220	210	100	32	15	31	<100	19	<5	3.7	5	7.5	3	0.9	0.58	1	<1	0.18	2	1	<2	<5	1.94	0.7	<5	0.33
02-1317	12	297	327	247	43	185	10	<100	<10	<5	0.3	393	417	215	112	79.5	15	24	21.1	2	17	2	8.4	6.26	1	<5	0.79
02-1690	399	200	205	258	43	17	35	<100	36	<5	8.2	9	9.9	<2	1.1	0.84	<1	<1	0.44	<1	<1	<2	<5	2.83	0.5	<5	0.24
02-1692	130	429	504	507	13	29	5	<100	10	<5	3.6	16	20.2	5	1.7	1.52	<1	<1	0.89	<1	<1	<2	<5	4.34	0.5	<5	0.03
02-1702	1447	275	282	256	35	40	25	<100	24	24	19.3	16	20.4	3	1.2	0.98	<1	<1	0.6	<1	<1	<2	<5	3.5	0.4	<5	0.14
02-1710	1770	487	530	505	58	53	35	<100	30	23	21	28	33.2	4	1.8	0.7	<1	<1	0.57	<1	<1	<2	<5	4.73	0.3	<5	0.21
02-1714	119	306	351	383	3.3	29	15	<100	18	11	5.3	30	37.5	3	3.7	2.64	6	5	5.18	<1	<1	4	6	10.5	0.5	<5	0.55
02-1739	82	511	680	355	78	40	12	<100	<10	<5	4.4	53	58.9	17	9.6	7.5	16	5	11.8	<1	<1	2	5.7	11.2	0.6	<5	0.64
02-1751	169	425	449	291	89	42	14	<100	13	<5	7	87	98.6	9	6	4.44	30	20	28.3	<1	<1	22	26.9	30.3	0.6	<5	1
02-1759	132	899	998	598	24	36	12	<100	38	<5	6.2	50	55.2	4	2.7	1.87	<1	1	0.76	<1	<1	2	<5	6.13	0.5	<5	0.25
02-1761	11	262	321	271	180	19	1.6	<100	<10	<5	7.7	34	35.4	4	1.1	0.86	4	1	2.4	<1	<1	3	13.4	9.73	0.3	<5	0.03
02-1762	94	557	724	751	44	77	32	<100	<10	<5	2.8	60	61.5	13	7.5	5.45	4	3	2.68	<1	<1	<2	<5	5.22	0.8	<5	0.62
02-1765	23	629	699	561	3.3	24	1.6	<100	25	<5	4.6	34	36.5	9	2.4	1.4	<1	<1	0.67	<1	1	6	<5	8.66	0.5	<5	0.21
02-1767	46	643	732	526	38	37	1.6	<100	43	<5	6.1	43	44.1	7	2.4	1.75	2	1	1.42	<1	<1	3	<5	7.33	0.5	<5	0.27
02-1769	87	984	1080	651	34	49	7	<100	28	<5	7.1	57	60.4	3	2.8	2.27	2	3	2.36	<1	1	4	<5	9.07	0.5	<5	0.36
02-1785	266	573	648	670	40	29	6	<100	15	<5	10.1	25	45.9	3	3.4	2.55	<1	1	0.52	<1	<1	3	<5	3.71	0.1	<5	0.5
02-1786	687	574	633	573	17	43	10	<100	36	<5	11.1	39	44.4	4	2.4	1.76	<1	1	0.91	<1	<1	<2	<5	5.88	0.4	<5	0.28
02-1788	102	542	611	618	39	37	6	<100	48	<5	6.9	40	43.3	3	2	1.64	<1	<1	0.66	<1	<1	4	8.8	6.81	0.2	<5	0.38
02-1790	139	483	581	803	22	32	13	<100	24	<5	7.8	24	26.9	5	1.9	1.58	<1	1	0.95	<1	<1	<2	6.7	6.36	0.7	<5	0.4
02-1792	55	793	939	850	10	28	6	<100	30	12	5.8	49	51.5	5	2.4	1.68	<1	1	0.75	<1	1	2	7.8	7.01	0.3	<5	0.39
02-1795	326	701	786	653	31	41	16	<100	26	25	7.7	51	54.2	2	2.4	1.46	<1	<1	0.8	<1	<1	3	11.2	6.05	0.5	<5	0.44
02-1797	479	621	689	711	24	48	16	<100	24	18	8.7	48	52.3	6	3.2	2.62	<1	1	1	<1	<1	<2	6	6.43	0.3	<5	0.53
02-1799	231	926	1044	925	40	42	12	<100	18	<5	5.6	89	97.1	16	8.8	6.17	2	<1	1.71	<1	<1	3	8.3	7.24	0.5	<5	0.56
02-1801	<10	739	<10	847	786	42	35	<100	16	44	12.3	99	104	10	8.5	5.64	<1	1	1.32	<1	<1	3	<5	6	0.3	<5	0.62
02-1803	75	1200	1325	700	26	37	1.6	<100	35	8	6.2	51	53.3	4	3.4	2.37	<1	1	1.18	<1	<1	3	<5	6.75	0.5	<5	0.95
02-1805	54	840	933	630	3.3	25	1.6	<100	35	13	6.5	52	55.6	4	2.8	2.18	2	1	0.86	<1	<1	4	8.5	8.67	0.2	<5	0.82
02-1807	202	661	718	614	24	37	14	<100	26	<5	6.4	49	54.9	3	2.4	1.57	<1	<1	0.84	<1	<1	2	<5	6.8	0.5	<5	0.53
02-1812	80	1120	1286	811	25	31	1.6	<100	14	15	5.7	44	77.6	5	3.6	2.65	<1	<1	1.2	<1	<1	5	8.1	9.36	0.2	<5	0.97
02-1814	51	1420	1679	789	28	27	1.6	<100	29	5	8.2	20	37.7	4	2.6	1.99	<1	<1	0.63	<1	<1	3	<5	6.53	0.3	<5	0.88
02-1815	299	2230	2900	891	123	33	22	272	169	13	23.4	29	31	6	2	1.76	<1	<1	0.55	<1	<1	<2	<5	3.93	0.7	<5	0.85
02-1816	113	2670	3940	1397	85	18	1.6	145	59	<5	14.4	12	22.4	6	3.2	2.87	2	<1	0.28	<1	<1	2	<5	3.2	0.4	<5	0.69
02-1817	151	906	987	762	10	38	9	<100	24	<5	4.9	59	62	6	3	2.29	<1	1	1.09	<1	<1	3	5.5	8.29	0.5	<5	0.75
02-1819	70	606	668	635	15	32	10	<100	27	<5	3.9	40	44.3	<2	2.3	1.76	<1	1	1.11	<1	<1	3	<5	5.99	0.3	<5	0.69
02-1821	<10	825	977	927	11	24	1.6	<100	<10	<5	4.2	40	65.8	6	3.6	2.58	<1	<1	0.9	<1	2	5	10.6	8.71	0.2	<5	0.64
02-1822	721	1950	2620	1153	341	40	13	335	97	5	24	23	28.2	8	3.1	2.56	2	<1	0.23	<1	<1	<2	<5	2.61	0.7	<5	0.85
02-1823	336	748	917	821	34	29	1.6	<100	16	8	11.1	54	87.6	7	6	4.21	<1	<1	1.39	<1	<1	4	<5	6.21	0.2	<5	0.64
02-1824	57	927	1052	770	14	30	5	<100	33	<5	3.2	59	57.9	6	2.6	1.29	<1	1	0.68	<1	<1	5	<5	8.09	0.3	<5	0.34
02-1825	183	799	898	639	21	26	9	<100	29	<5	5.1	29	48.7	4	2.6	2.36	<1	<1	1.13	<1	1	4	<5	8.18	0.1	<5	0.67
02-1826	491	674	724	596	15	35	7	<100	21	<5	9.3	41	45.5	4	2.2	1.63	<1	1	0.98	<1	<1	2	<5	5.52	0.1	<5	0.23
02-1827	568	718	852	664	23	35	7	<100	15	5	8.5	32	51.6	2	2.4	1.9	<1	<1	1.09	<1	1	4	<5	7.03	0.1	<5	0.4
02-1828	1496	650	725	673	3.3	39	12	<100	24	18	14.8	50	51.3	4	2.2	1.62	<1	1	1.16	<1	<1	2	<5	5.9	0.3	<5	0.55

APPENDIX X GOLDEN GROVE

sampno	Mn	Cr	Cr	V	Cu	Pb	Zn	Zn	Ni	Co	Co	As	As	Sb	Sb	Sb	Bi	Bi	Bi	Cd	In	Mo	Mo	Mo	Ag	Ag	Ag
method	XRF	naa	XRF	XRF	XRF	XRF	xrf	naa	xrf	xrf	naa	xrf	naa	xrf	naa	ICPms	xrf	oes	ICPms	xrf	xrf	xrf	naa	ICPms	oes	naa	ICPms
units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
02-1830	90	643	680	458	3.3	30	13	<100	20	13	4.3	47	54.5	3	2.1	1.64	2	<1	1.16	<1	<1	4	7.9	7.17	0.1	<5	0.92
02-1833	42	473	537	680	3.3	34	9	<100	16	<5	4.2	62	67.6	5	3.2	2.48	<1	1	0.98	<1	<1	3	8.9	6.13	0.1	<5	1.05
02-1834	65	951	1046	777	3.3	37	8	<100	<10	<5	3.7	61	70.1	6	3.5	2.62	11	1	1.21	<1	<1	4	<5	7.85	0.1	<5	0.76
02-1836	26	718	773	610	12	30	1.6	<100	25	<5	2.3	57	57.8	6	2.6	1.84	<1	1	0.89	<1	<1	3	<5	6.27	0.1	<5	0.45
02-1837	87	1000	1160	850	40	29	1.6	<100	14	18	5.3	50	85.5	5	4.8	2.95	<1	<1	0.86	<1	1	4	10.7	8.12	0.1	<5	0.44
02-1840	268	500	597	1230	32	38	12	<100	19	<5	5.9	91	95.2	18	11.1	8.96	<1	<1	0.57	<1	<1	<2	<5	5.64	0.5	<5	0.74
02-1841	1738	454	530	1077	39	40	9	<100	18	14	29.6	41	68.6	9	7.8	5.32	<1	<1	0.35	<1	<1	<2	<5	4.15	0.2	<5	0.74
02-1842	625	698	886	1446	26	59	18	<100	14	14	6.2	107	109	22	13.4	8.61	<1	<1	0.6	<1	<1	<2	<5	4.18	0.4	<5	0.41
02-1846	132	667	839	1011	17	42	13	<100	<10	5	4.4	51	57.9	5	3.5	2.56	6	<1	3.45	<1	<1	3	<5	7.52	0.3	<5	0.77
02-1850	150	660	756	502	19	34	14	<100	26	<5	3.4	53	58.4	6	3.7	2.72	2	<1	1.32	<1	<1	2	6.8	5.55	0.2	<5	0.79
02-1852	786	487	514	808	3.3	31	5	<100	19	<5	9.8	39	44.1	16	10.5	7.28	<1	<1	0.52	<1	<1	4	<5	6.83	0.6	<5	0.92
02-1853	52	681	826	865	39	20	1.6	<100	29	<5	6.7	64	101	15	12.5	8.26	<1	<1	0.55	<1	1	2	<5	4.66	0.1	<5	0.59
02-1855	25	289	347	393	42	38	19	<100	<10	<5	2.1	127	127	23	12.6	7.98	3	<1	2.16	<1	<1	3	<5	8.76	0.5	<5	0.99
02-1857	77	729	806	761	3.3	32	7	<100	34	5	6.4	53	56	9	3.9	2.89	<1	<1	0.79	<1	<1	4	<5	6.93	0.2	<5	0.6
02-1858	30	737	837	866	3.3	32	1.6	<100	15	<5	3.8	63	68.5	8	6.1	3.93	<1	<1	0.9	<1	<1	6	10	9.45	0.2	<5	0.34
02-1860	36	637	744	1053	3.3	28	1.6	<100	26	<5	5.2	71	73.7	26	16.5	10.8	<1	<1	0.52	<1	<1	4	<5	6.84	0.2	<5	0.11
02-1861	45	444	507	743	120	24	28	<100	11	7	5.1	73	79	9	3.5	2.14	2	<1	0.43	<1	<1	<2	<5	4.03	0.4	<5	0.71
02-1862	84	449	496	412	3.3	23	1.6	<100	11	<5	3.7	29	52.7	3	2.7	1.97	<1	<1	0.6	<1	<1	2	<5	3.81	0.1	<5	0.41
02-1863	79	252	326	510	20	36	22	<100	<10	<5	1.6	30	34.6	5	2.2	1.65	2	<1	0.48	<1	<1	<2	<5	3.16	0.6	<5	0.8
02-1866	44	649	753	777	3.3	38	8	<100	12	11	2.4	58	61.3	8	3.5	2.55	<1	1	1.04	<1	<1	<2	<5	7.53	0.1	<5	0.84
02-1867	76	976	1151	878	22	28	1.6	<100	<10	<5	3.5	43	72.8	5	4.5	3.34	<1	<1	1.16	<1	<1	5	5.3	8.63	0.1	<5	0.41
02-2150	175	1110	1607	2040	28	75	13	<100	<10	22	4.2	159	159	35	24.6	19	4	<1	0.91	1	<1	4	<5	5.48	<0.1	<5	0.55
02-2151	139	1150	1594	1790	20	58	16	<100	<10	95	3.5	153	163	46	32.7	22.5	1	<1	1.07	<1	2	2	<5	6.27	<0.1	<5	0.2
02-2152	144	957	1199	1607	24	56	10	<100	<10	11	4.1	171	189	40	29.1	16.4	<1	<1	0.9	<1	<1	3	<5	5.49	<0.1	<5	0.54
02-2153	79	1180	1426	1215	26	51	9	<100	<10	<5	3.3	181	197	34	25.8	20.1	<1	<1	1	<1	<1	3	<5	6.86	<0.1	<5	0.42
02-2154	67	1040	1301	1146	26	47	1.6	<100	<10	13	4.8	159	173	35	25.8	17.8	1	1	1.12	<1	1	4	6.9	6.56	<0.1	<5	0.37
02-2155	116	1240	1813	1757	31	57	12	<100	<10	37	4	205	199	50	32.8	24.5	1	<1	0.88	<1	<1	4	7	8.41	<0.1	<5	0.14
02-2156	89	1040	1303	1142	61	51	10	<100	<10	<5	7.8	77	86.8	11	8.7	6.36	1	<1	1.09	<1	<1	6	6.5	8.91	<0.1	<5	0.67
02-2157	71	823	1002	1124	31	44	10	<100	<10	<5	7.4	63	69.3	8	6.1	4.17	2	<1	0.58	<1	<1	5	<5	7.3	0.1	<5	0.6
02-2158	71	1390	1789	996	29	54	11	<100	43	29	4.8	91	101	10	7.8	6.43	5	1	2.18	<1	<1	4	<5	9.38	<0.1	<5	0.35
02-2159	103	1030	1322	1004	21	58	9	<100	10	<5	4.9	110	110	12	8.7	6.93	2	<1	2.06	1	<1	4	10.2	8.72	<0.1	<5	0.16
02-2160	59	1430	1785	1210	12	61	15	<100	<10	36	4.9	124	139	15	10.5	7.63	5	4	2.87	<1	<1	7	8.9	13.5	<0.1	<5	1.16
02-2161	351	1440	1863	1130	24	66	17	<100	25	<5	4.7	106	119	12	8.6	6.43	7	1	2.83	<1	<1	6	<5	10.4	<0.1	<5	0.37
02-2162	100	1190	1529	842	17	49	12	<100	<10	32	4.6	88	94.2	10	6.8	4.93	3	1	2.42	<1	<1	4	6.6	9.84	<0.1	<5	0.46
02-2163	175	1400	2009	1024	19	54	16	<100	<10	9	3.5	93	97.2	10	6.8	5.35	2	<1	3.67	1	2	3	<5	8.75	<0.1	<5	0.51
02-2164	84	973	1291	824	19	51	16	<100	<10	49	4.7	91	93.3	7	5.8	4.35	4	2	3.36	1	1	4	<5	8.56	<0.1	<5	0.38
02-2165	60	877	1090	732	30	51	12	<100	<10	21	5.8	78	81.6	7	5.4	3.98	8	6	5.21	<1	<1	4	5.3	8.39	<0.1	<5	0.31
02-2166	83	577	702	542	47	42	20	<100	<10	15	2.6	65	71.7	8	5.2	3.9	4	6	3.49	<1	1	2	<5	5.69	<0.1	<5	0.36
02-2167	75	435	599	854	29	51	8	<100	<10	57	2.9	60	58.9	7	5	4.35	8	2	7.07	<1	1	5	<5	10	<0.1	<5	0.38
02-2168	89	355	458	740	77	46	18	<100	15	37	2.5	46	49	2	3.2	2.57	7	<1	4.47	<1	1	2	<5	5.92	<0.1	<5	0.25
02-2169	45	128	146	136	48	63	10	<100	<10	<5	9	42	51.1	2	1.2	1.08	11	6	8	<1	<1	2	8.2	5	<0.1	<5	0.03
02-2170	33	236	284	469	44	42	16	<100	12	54	3.1	65	68	6	4.4	3.55	10	3	8.85	<1	1	2	<5	5.07	<0.1	<5	0.56
02-2171	13	213	254	347	14	34	8	105	<10	14	1.7	42	46.6	3	2.9	2.2	12	15	8.9	1	<1	2	<5	4.33	0.1	<5	0.21
02-2172	27	129	154	239	88	25	16	<100	<10	13	2.9	21	25.6	2	0.9	0.57	5	2	3.18	<1	1	4	<5	7.86	<0.1	<5	0.21
02-2173	10	170	198	343	15	27	8	<100	<10	<5	3.5	27	28.9	3	1.1	1.01	6	<1	3.53	<1	<1	<2	<5	5.06	<0.1	<5	0.59
02-2174	19	206	242	357	22	32	9	<100	<10	<5	3.5	42	45.7	2	1.3	1.02	6	6	4.66	<1	1	4	<5	9.2	<0.1	<5	0.51
02-2175	49	181	208	244	16	34	17	<100	<10	16	3.7	29	27.6	3	1.5	1.06	3	2	2.04	<1	<1	2	<5	4.91	<0.1	<5	0.44
02-2176	130	228	291	399	18	31	12	<100	<10	28	4.2	31	36.3	2	1.1	1.13	3	2	1.85	<1	<1	<2	<5	4.89	0.1	3.3	0.26

APPENDIX X GOLDEN GROVE

sampno	Mn	Cr	Cr	V	Cu	Pb	Zn	Zn	Ni	Co	Co	As	As	Sb	Sb	Sb	Bi	Bi	Bi	Cd	In	Mo	Mo	Mo	Ag	Ag	Ag
method	XRF	naa	XRF	XRF	XRF	XRF	xrf	naa	xrf	xrf	naa	xrf	naa	xrf	naa	ICPms	xrf	oes	ICPms	xrf	xrf	xrf	naa	ICPms	oes	naa	ICPms
units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
02-2177	202	174	250	319	176	26	35	<100	<10	6	4.7	1.6	6	<2	<0.2	0.3	1	<1	0.03	<1	1	<2	<5	3.71	0.8	<5	0.03
02-2178	98	305	467	461	19	28	44	<100	<10	96	10.3	20	23.9	<2	<0.2	0.38	<1	<1	0.13	<1	1	<2	6.4	4.42	<0.1	3.3	0.18
02-2179	66	279	318	283	3.3	25	9	<100	<10	32	6.9	31	33.2	<2	1	0.75	<1	<1	0.25	<1	<1	<2	<5	3.48	<0.1	<5	0.1
02-2180	70	366	405	345	3.3	21	1.6	<100	<10	<5	6.8	21	25.4	2	1.7	1.13	1	<1	0.41	<1	<1	3	<5	4.43	0.1	<5	0.18
02-2181	25	295	326	276	3.3	20	1.6	<100	<10	<5	6.2	33	37	2	1.5	0.79	1	<1	0.21	<1	1	2	8.1	4.15	<0.1	<5	0.24
02-2182	68	77	99	258	3.3	24	103	<100	<10	9	9.9	200	194	<2	<0.2	0.35	<1	<1	0.03	<1	1	3	<5	9.16	<0.1	<5	0.11
02-2183	82	557	627	571	10	36	14	<100	<10	18	5.4	59	65.7	3	2.3	1.6	3	<1	0.75	<1	<1	4	7.8	7.65	<0.1	<5	0.35
02-2184	193	327	396	390	25	43	25	<100	<10	<5	4.6	25	31.7	3	1.3	0.97	2	<1	3	<1	<1	3	<5	4.26	<0.1	<5	0.46
02-2288	60	71.3	74	364	76	59	9	<100	36	21	7.7	1.6	24.5	2	4.8	3.56	1	<1	0.17	<1	<1	<2	<5	0.8	0.6	<5	0.03
02-2289	18	109	140	1559	192	14	16	<100	<10	8	8	14	83.3	2	5.3	3.72	2	<1	0.13	<1	<1	<2	10.7	2.59	0.3	3.3	0.56
02-2290	26	214	248	201	29	15	15	<100	33	<5	6.8	1.6	3.5	<2	2.9	1.93	5	<1	0.03	<1	<1	<2	<5	0.48	0.6	<5	0.17
02-2291	<10	467	624	1979	83	13	1.6	<100	<10	<5	0.3	1.6	97.9	9	12.3	8.12	2	<1	0.22	2	<1	<2	<5	2.86	0.1	3.3	0.35
02-2293	14	70.1	74	159	3.3	15	1.6	<100	24	6	3.8	6	9.2	<2	2.7	1.88	4	<1	0.03	<1	<1	<2	<5	0.55	<0.1	<5	0.31
02-2294	32	487	611	1627	3.3	11	10	<100	13	<5	3.4	8	79.3	13	14.4	9.8	1	<1	0.43	<1	<1	2	6.3	5.14	0.3	<5	0.28
02-2295	71	78.8	82	125	3.3	14	10	<100	<10	5	4	61	8.4	<2	1.1	0.81	3	<1	0.03	<1	<1	<2	<5	0.93	2	<5	0.21
02-2296	88	828	1060	1412	17	17	1.6	<100	22	<5	2.6	16	144	14	17.5	12.5	1	<1	0.72	<1	2	2	<5	5.96	0.3	<5	0.16
02-2297	44	41.5	45	110	23	6	11	<100	16	<5	5.6	1.6	2.1	<2	0.7	1.04	<1	<1	0.2	<1	1	<2	<5	1.22	0.6	<5	0.73
02-2298	104	739	893	972	18	17	7	<100	20	<5	4.1	1.6	110	15	15.7	10.9	2	<1	0.85	<1	<1	<2	10.5	5.52	2	<5	0.47
02-2299	262	69.6	71	99	31	1.6	61	<100	44	8	16.5	10	3.4	<2	0.7	0.48	2	<1	0.03	<1	<1	<2	<5	0.45	2	<5	0.46
02-2300	137	88.8	104	97	28	7	28	<100	54	18	16.3	3	1.3	<2	0.6	0.62	2	<1	0.03	<1	<1	<2	<5	0.46	3	<5	0.18
02-2301	114	96	104	109	55	6	43	<100	45	11	15.5	2	3.8	<2	0.7	0.57	1	<1	0.03	<1	<1	<2	<5	0.66	2	<5	0.14
02-2302	32	58.2	62	82	18	14	17	<100	34	18	6.4	15	2.9	<2	0.8	0.62	1	<1	0.03	1	<1	<2	<5	1.24	3	<5	0.22
02-2303	240	40.9	46	81	10	30	76	<100	41	19	25.7	47	0.3	<2	0.2	0.34	2	<1	0.03	<1	<1	<2	<5	0.52	2	<5	0.34
02-2304	350	157	171	140	14	23	14	<100	31	7	12	1.6	11.5	<2	1	0.99	3	<1	0.32	<1	2	<2	<5	1.76	0.6	<5	0.25
02-2305	22	84.4	91	131	102	10	57	<100	48	6	7.4	5	2.6	<2	1.1	0.78	1	<1	0.03	<1	<1	<2	<5	0.28	1	<5	0.41
02-2306	13	72.7	73	67	3.3	5	1.6	<100	<10	<5	1.9	24	8.4	<2	0.7	0.73	2	<1	0.34	<1	<1	<2	<5	1.67	1	<5	0.35
02-2307	159	54.6	55	78	134	26	89	107	10	<5	4.7	76	9.8	<2	1.2	1.1	6	<1	0.26	<1	<1	<2	<5	2.39	1	<5	0.97
02-2308	249	53.4	49	242	202	5	49	105	34	12	6.6	3	6.3	<2	1.2	1.04	1	<1	0.18	<1	<1	<2	<5	1.17	2	<5	0.92
02-2309	1036	48.6	41	194	1059	29	226	233	<10	15	23.4	102	70.2	<2	2	1.42	3	<1	0.52	1	1	2	<5	3.19	3	<5	0.69
02-2310	259	12.7	<10	11	271	1.6	149	146	11	11	5.6	4	6.1	<2	0.4	0.35	<1	<1	0.19	<1	<1	<2	<5	1.07	0.3	<5	0.25
02-2311	50	80.9	84	37	103	26	23	<100	<10	14	9.3	81	39.6	<2	2.2	1.7	8	<1	0.42	<1	<1	2	<5	3.92	1	<5	0.67
02-2312	11	203	272	501	34	6	1.6	<100	<10	7	1.8	8	55.5	<2	6.1	4.61	<1	10	9.29	<1	<1	2	6.1	9.09	1	<5	0.84
02-2313	98	24.4	16	23	138	39	21	<100	<10	7	2.5	136	7.8	<2	0.5	0.46	<1	<1	0.3	<1	<1	<2	<5	1.76	0.6	<5	0.24
02-2314	778	84.8	86	153	488	1.6	250	273	40	73	77.9	2	11.4	<2	0.8	0.46	<1	<1	0.15	<1	<1	<2	<5	1.62	0.3	<5	0.22
02-2315	18	114	125	74	20	29	8	<100	31	9	3.4	106	11.9	<2	1	0.81	1	1	1.04	<1	<1	<2	<5	0.95	0.6	<5	0.24
02-2316	123	171	205	291	58	12	32	<100	36	<5	3.3	4	28.3	<2	1.4	1.31	1	<1	3.23	<1	<1	<2	<5	1.06	0.6	<5	0.03
02-2317	69	178	208	187	30	1.6	8	<100	<10	12	3.3	1.6	24.8	<2	0.8	0.7	1	<1	1.29	<1	<1	<2	<5	3.11	0.3	<5	0.16
02-2318	57	47.2	43	248	25	7	30	<100	14	12	7	8	9.9	<2	0.5	0.45	<1	<1	0.19	<1	<1	<2	<5	1.06	0.1	<5	0.48
02-2319	269	7.8	<10	19	12	16	258	263	15	<5	22.5	4	1.1	<2	<0.2	0.28	<1	<1	0.39	<1	<1	<2	<5	0.39	2	<5	0.55
02-2320	<10	36.8	32	36	3.3	6	1.6	<100	<10	22	17.7	10	3.4	<2	0.5	0.33	2	<1	0.1	<1	<1	<2	<5	0.68	6	<5	0.03
02-2321	11	88.4	90	303	3.3	19	1.6	<100	11	<5	11.1	6	27.4	5	8.3	5.22	3	<1	0.16	<1	<1	<2	<5	0.63	4	<5	0.03
02-2322	56	10.6	<10	<10	3.3	31	1.6	<100	<10	15	24.4	3	8.8	4	8.1	6.14	<1	<1	0.03	<1	<1	<2	<5	1.1	3	<5	0.47
02-2336	<10	40.3	38	86	33	12	9	<100	<10	<5	0.3	1.6	7.9	2	5.6	4.39	2	<1	1.39	<1	2	<2	<5	0.4	1	<5	0.71
02-2343	24	18.6	<10	<10	2172	5	741	731	<10	<5	10.8	1.6	269	8	10.6	6.39	<1	<1	0.48	<1	1	<2	<5	1.48	2	<5	0.94
02-2344	15	152	178	163	794	8	127	101	<10	<5	2.1	23	425	42	43.1	29.5	<1	20	252	<1	9	<2	<5	2.09	1	<5	0.99
02-2345	16	144	166	1263	98	1.6	1.6	<100	14	<5	3.2	2	32.6	4	5.5	3.59	<1	<1	0.45	<1	<1	<2	<5	1.59	0.3	<5	0.63
02-2346	19	231	273	1209	68	26	5	106	21	8	6.1	229	24.9	4	4.7	3.07	<1	<1	0.24	<1	<1	<2	<5	2.15	10	3.3	0.85
02-2347	123	414	540	807	26	1.6	1.6	<100	17	17	5.8	7	53.8	9	10.7	6.62	1	<1	0.4	<1	<1	<2	<5	2.68	1	<5	0.38

APPENDIX X GOLDEN GROVE

sampno	Mn	Cr	Cr	V	Cu	Pb	Zn	Zn	Ni	Co	Co	As	As	Sb	Sb	Sb	Bi	Bi	Bi	Cd	In	Mo	Mo	Mo	Ag	Ag	Ag
method	XRF	naa	XRF	XRF	XRF	XRF	xrf	naa	xrf	xrf	naa	xrf	naa	xrf	naa	ICPms	xrf	oes	ICPms	xrf	xrf	xrf	naa	ICPms	oes	naa	ICPms
units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
02-2350	167	432	467	351	24	5	23	<100	31	<5	11.4	3	34.3	5	6.9	4.37	<1	<1	0.46	<1	<1	<2	<5	2.67	1	<5	0.47
02-2354	21	291	336	152	45	28	88	146	199	21	10.2	267	0.3	<2	0.5	0.58	1	<1	0.03	<1	1	<2	<5	0.03	3	<5	0.87
02-2405	32	735	949	1741	61	5	15	<100	21	5	3.1	35	381	21	24.1	14.8	<1	<1	0.55	1	2	<2	<5	4.13	2	<5	0.51
02-2406	62	299	456	539	265	12	80	116	35	<5	18.4	62	64.3	4	6.1	5.36	3	<1	0.03	<1	1	<2	<5	3.64	1	3.3	0.54
02-2410	10	261	284	238	154	133	7	<100	10	12	1.2	358	364	37	44.3	29	11	<1	8.68	<1	2	<2	<5	2.04	<0.1	<5	0.3
02-2411	16	268	288	225	150	120	20	<100	10	<5	3	296	301	36	43.1	3.7	11	<1	0.03	<1	5	<2	<5	2.8	<0.1	<5	0.5
02-2412	33	282	287	203	126	120	19	<100	20	1	3.2	248	259	36	44.7	29	10	<1	7.88	<1	4	<2	<5	2.78	<0.1	<5	0.48
02-2413	34	247	255	219	125	126	28	<100	19	6	2.6	286	295	39	47	31.4	13	<1	10.4	<1	4	<2	<5	2.66	<0.1	<5	0.8
02-2416	37	240	240	175	81	122	22	<100	22	1	3.4	272	287	49	61	41.6	13	<1	12.7	<1	2	<2	<5	3.09	<0.1	<5	0.91
02-2417	39	291	295	162	74	115	23	<100	39	3	4.6	269	292	52	64.4	42.6	11	<1	8.89	<1	1	<2	<5	3.16	<0.1	<5	0.83
02-2418	39	237	218	165	75	127	23	<100	1	9	3.8	294	304	43	55	37.7	10	<1	10.1	<1	2	<2	<5	2.97	<0.1	<5	0.77
02-2419	46	243	228	173	87	136	26	<100	11	1	4	278	291	42	50.9	35.1	10	<1	9.09	<1	<1	<2	<5	2.85	<0.1	<5	0.31
02-2420	50	275	284	159	97	151	34	<100	25	2	4.4	285	306	44	53.5	37.9	11	<1	10.9	<1	<1	<2	<5	3.29	<0.1	<5	0.54
02-2421	47	261	248	159	93	175	26	<100	11	2	3.6	275	313	47	58.8	41.4	14	<1	15.8	<1	1	<2	<5	3.17	<0.1	<5	0.92
02-2422	58	243	234	157	103	167	45	<100	15	3	4.6	244	263	31	38	29	11	<1	11.3	<1	<1	<2	<5	3.03	<0.1	<5	0.4
02-2423	58	257	242	165	95	160	40	<100	5	4	3.8	274	289	46	54.1	38.2	11	<1	10.4	<1	<1	<2	<5	3.26	<0.1	<5	0.51
02-2424	42	232	219	164	74	157	28	<100	8	13	4.4	270	282	43	53.8	38.2	12	<1	10.3	<1	<1	<2	<5	2.71	<0.1	<5	0.43
02-2425	42	283	269	194	89	120	27	<100	10	1	2.7	310	319	47	58.3	40.5	11	<1	10.4	<1	3	<2	<5	3.52	<0.1	<5	0.38
02-2426	45	280	282	183	111	97	22	<100	9	1	3.6	290	295	33	40.9	28	10	<1	9.99	<1	1	<2	<5	3.13	<0.1	<5	0.27
02-2427	23	331	326	219	107	101	19	<100	15	8	2	376	388	41	52.7	38.4	12	<1	10.9	<1	3	<2	<5	3.95	<0.1	<5	0.5
02-2428	38	290	282	204	107	125	29	<100	7	9	3.3	374	388	50	60.1	44	12	<1	10.1	<1	3	<2	<5	3.19	<0.1	<5	0.75
02-2429	29	289	280	207	110	118	22	<100	5	3	2.1	374	388	47	58.1	40.5	12	<1	11.6	<1	1	<2	<5	4.08	<0.1	<5	0.44
02-2590	32	12.9	0	0	1598	16	45	<100	0	13	3.1	78	93.8	13	16.2	12	7	<1	5.72	<1	1	<2	<5	0.85	<0.1	<5	0.91
02-2591	56	257	14	8	254	27	29	<100	34	7	10.6	85	99.3	7	11.5	8.54	47	<1	44.9	1	3	40	22.2	50.4	<0.1	<5	0.5
02-2592	56	315	17	11	256	25	14	<100	36	3	6.6	44	57.1	4	9	6.36	10	<1	9.99	<1	<1	5	12.9	9.75	<0.1	<5	0.79
02-2593	17	75	3	12	38	9	0	<100	45	2	1.3	14	16.6	5	10.6	7.49	8	<1	10.1	<1	<1	13	8	20.9	<0.1	<5	0.89
02-2595	0.2	125	6	7	95	117	8	<100	19	22	1.7	209	232	70	92.3	70	36	<1	39.5	<1	15	3	<5	7.3	<0.1	<5	0.91
02-2601	0.2	598	31	23	83	19	5	<100	34	1	7.5	33	38.3	3	4.1	2.4	1	<1	0.21	<1	2	1	5.7	5.53	<0.1	<5	0.62
02-2602	28	781	815	679	52	20	6	<100	33	6	8.3	40	48.2	2	5.6	4.31	2	<1	0.65	<1	<1	<2	<5	7.78	<0.1	<5	0.95
02-2603	30	813	841	707	49	25	4	<100	34	1	6.7	43	49.1	3	5.6	4.19	<1	<1	0.52	<1	6	7	7.5	7.29	<0.1	<5	0.76
02-2604	37	756	817	682	46	25	6	<100	37	19	7.3	45	46.4	3	5.2	3.93	<1	<1	0.57	<1	1	1	11.1	7.75	<0.1	<5	0.64
02-2605	31	807	843	712	50	22	9	<100	35	1	7.6	46	51.5	3	6	4.4	1	<1	0.63	<1	<1	<2	18.7	7.21	<0.1	<5	0.67
02-2606	14	772	777	655	50	21	7	<100	43	11	7.5	43	45.9	1	5.7	3.98	3	<1	0.49	<1	<1	<2	13.6	7.27	<0.1	<5	0.41
02-2607	23	706	718	600	53	22	6	<100	44	19	8.7	35	42	1	4.3	2.93	<1	<1	0.44	<1	<1	<2	<5	6.17	<0.1	<5	0.36
02-2608	22	723	732	619	42	21	6	<100	38	8	8	40	48.1	3	5	3.97	<1	<1	0.59	<1	<1	5	<5	7.28	<0.1	<5	0.32
02-2609	19	757	792	658	48	24	4	<100	40	1	8.9	39	44.5	3	5.1	3.38	1	<1	0.64	<1	<1	6	14.2	7.56	<0.1	<5	0.31
02-2610	22	757	784	655	51	22	8	<100	42	24	7.7	44	48.7	3	5.8	4.35	1	<1	0.65	<1	<1	<2	10.7	7.7	<0.1	<5	0.44
02-2611	20	778	802	664	42	22	10	<100	61	8	7.7	43	48.3	3	5.7	3.98	1	<1	0.63	<1	<1	<2	7.6	7.43	<0.1	<5	0.55
02-2632	31	706	38	29	14	24	7	<100	25	5	2.1	54	61.6	1	3.2	2.72	<1	<1	0.6	<1	2	4	<5	8.02	<0.1	<5	0.83
02-2633	9	566	31	23	14	23	7	<100	27	12	1.9	42	48.4	1	2	1.69	1	<1	0.81	<1	1	2	10.2	6.89	<0.1	<5	0.32
02-2634	8	489	28	23	18	21	1	<100	32	8	2.5	36	43.7	1	1.8	1.41	1	<1	0.73	<1	1	1	<5	5.75	<0.1	<5	0.42
02-2635A	22	646	37	26	20	23	2	<100	28	1	1.9	51	56.5	1	2.7	2.14	1	<1	1.1	<1	1	1	<5	6.9	<0.1	<5	0.18
02-2635B	64	251	20	11	17	10	11	<100	18	5	2.5	12	16.3	1	1.1	0.87	<1	<1	0.54	<1	<1	<2	<5	2.66	<0.1	<5	0.24
02-2636	5	446	25	21	18	21	1	<100	24	7	2.1	33	43	2	2	1.37	1	<1	0.88	<1	2	1	<5	5.27	<0.1	<5	0.25
02-2637	3	394	22	20	15	20	4	<100	30	3	2.4	39	42.5	2	1.7	1.41	1	<1	0.75	<1	1	1	7.1	4.33	<0.1	<5	0.49
02-2638	0.2	357	21	18	19	17	1	<100	28	1	2	36	39	1	1.8	1.38	<1	<1	0.64	<1	2	1	<5	4.31	<0.1	<5	0.61
02-2639	34	248	17	13	14	12	6	<100	21	6	2.1	20	23.3	<1	1	0.71	1	<1	0.41	<1	3	<2	<5	2.51	<0.1	<5	0.62
02-2640	13	156	15	9	8	7	2	<100	17	1	1.8	13	13.7	1	0.7	0.57	<1	<1	0.25	<1	1	<2	<5	2.08	<0.1	<5	0.1

APPENDIX X GOLDEN GROVE

sampno	Sn	Sn	Ge	Ga	W	W	Ba	Ba	Se	Se	Au	Ce	Ce	Nb	Ta	Ta	Zr	Sr	Br	Cs	Eu	Hf	Ir	La	Lu	Rb	Sm	Sc	Th	U	Yb
method	oes	xrf	oes	oes	xrf	naa	xrf	naa	xrf	naa	naa	xrf	naa	xrf	naa	xrf	xrf	xrf	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa
units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
02-1079	70	13	10.3	15	62	45.8	40	<100	5	<5	<5	<10	<2	<1	5	<1	24	0	<2	1.2	<0.5	0.9	<20	2	<0.2	6.6	0.6	3.12	2.97	<2	0.9
02-1080	40	27	2	7	82	76.5	64	<100	2	<5	<5	32	<2	7	<1	<1	49	3	<2	<1	<0.5	1.5	<20	0.9	<0.2	6.6	0.41	2.42	2.11	<2	1
02-1081	10	23	4	10	70	64.8	69	<100	0.7	<5	<5	<10	5.1	<1	16	1.8	43	43	<2	<1	<0.5	1.6	<20	3.3	<0.2	24.8	0.66	3.86	1.99	<2	0.8
02-1082	3	8	3	3	54	38.4	12	<100	0.7	<5	<5	<10	<2	7	1	<1	57	8	<2	1.1	<0.5	1.6	<20	1.3	0.3	6.6	0.58	7.26	2.01	<2	1.9
02-1083	3	9	3	2	99	89.6	41	<100	3	<5	<5	<10	<2	3	<1	1	25	5	<2	<1	<0.5	1.1	<20	0.9	<0.2	20.8	0.53	3.49	2.03	<2	1.2
02-1084	3	8	2	5	104	103	44	<100	6	<5	8	<10	<2	1	<1	1.3	49	4	<2	<1	<0.5	1.6	<20	1.4	0.2	6.6	0.58	2.95	3.32	<2	1.5
02-1095	10	9	2	7	60	52.2	46	<100	2	<5	<5	<10	<2	<1	1	<1	58	0	<2	<1	<0.5	1.3	<20	0.6	<0.2	6.6	0.32	3.35	3.17	<2	0.8
02-1086	30	27	3	20	53	40.6	64	<100	14	8.8	<5	<10	<2	9	3	<1	43	10	<2	<1	<0.5	1.2	<20	0.7	<0.2	35	0.45	3.32	4.89	<2	1
02-1087	50	74	3	15	34	25.9	69	<100	3	<5	<5	<10	<2	<1	<1	1.5	35	30	<2	<1	<0.5	1.1	<20	1.9	<0.2	40.7	0.47	4.44	2.73	<2	0.7
02-1088	40	31	2	5	39	29.1	68	<100	3	<5	<5	4	<2	<1	<1	<1	3	24	<2	1.3	<0.5	0.2	<20	2.2	<0.2	21.5	0.69	3.3	1.3	<2	0.6
02-1089	40	58	2	2	37	51.7	42	<100	15	10.4	21.9	<10	<2	3	<1	<1	7	4	<2	<1	<0.5	0.8	<20	1.1	<0.2	24.8	0.49	7.58	5.14	<2	<0.5
02-1090	10	12	5	10	42	32.4	39	<100	3	<5	<5	<10	<2	1	1	<1	54	13	<2	<1	<0.5	1.6	<20	1.4	<0.2	24.4	0.49	4	2.59	<2	0.8
02-1091	30	50	3	20	43	30.9	135	<100	0.7	<5	<5	1	<2	1	2	1.1	67	0	<2	<1	<0.5	1.6	<20	0.9	<0.2	23	0.46	5.52	1.93	<2	1.3
02-1092	10	19	3	10	28	26.2	35	<100	3	<5	<5	<10	4.9	3	<1	<1	30	5	4.9	<1	4.2	0.8	<20	2.4	0.3	6.6	1.79	10.1	2	<2	2.4
02-1093	50	106	3	20	25	21	39	<100	4	<5	58.9	<10	<2	<1	<1	<1	58	9	<2	<1	<0.5	1.5	<20	1.4	<0.2	60.9	0.54	3.8	2.97	<2	1.1
02-1094	40	38	2	20	27	23.6	51	<100	0.7	<5	<5	<10	<2	<1	3	<1	36	37	<2	<1	<0.5	1.1	<20	1.8	<0.2	6.6	0.45	3.11	3.57	<2	0.9
02-1095	10	21	3	30	38	27.4	62	<100	0.7	<5	<5	<10	<2	3	<1	<1	33	0	<2	1.1	<0.5	0.9	<20	1.3	<0.2	6.6	0.54	3.76	3.62	<2	1.1
02-1096	100	210	3	20	47	34.7	172	164	8	10.1	<5	<10	<2	<1	<1	<1	19	11	2	<1	<0.5	0.9	<20	1	<0.2	29.2	0.56	2.84	2.86	<2	0.5
02-1097	70	189	3	20	74	52.7	163	160	8	<5	6.9	<10	<2	6	4	1.2	5	11	4.9	<1	<0.5	0.7	<20	1.1	<0.2	24.4	0.57	2.76	2.13	<2	<0.5
02-1098	50	113	2	15	44	30.2	458	236	5	<5	<5	<10	<2	9	<1	<1	48	13	<2	<1	<0.5	1.4	<20	1.2	<0.2	30	0.3	3.9	2.19	<2	0.5
02-1099	50	64	10.3	30	45	21.8	128	<100	3	<5	<5	<10	2.3	<1	4	<1	40	55	6	<1	<0.5	1.1	<20	2.7	<0.2	6.6	0.5	5.85	1.42	<2	1
02-1100	60	110	3	30	59	43	172	178	12	9.6	233	<10	<2	<1	<1	<1	27	0	2.7	<1	0.6	0.9	<20	1.7	<0.2	6.6	0.68	6.24	4.52	<2	<0.5
02-1101	20	18	3	20	44	33.4	184	185	15	13.8	<5	<10	<2	1	<1	<1	76	5	<2	<1	<0.5	2.3	<20	0.8	<0.2	6.6	0.44	5.7	4.53	<2	0.5
02-1102	20	38	1	5	40	39.2	50	<100	140	62.1	229	29	39	<1	<1	<1	55	12	2.7	<1	1	1.8	<20	23.7	0.2	6.6	2.96	20.1	3.12	<2	1.7
02-1103	60	72	2	20	35	30.8	43	<100	5	<5	<5	<10	<2	<1	<1	<1	29	4	4.1	<1	<0.5	0.9	<20	1.5	<0.2	36.4	0.58	4.53	3.79	<2	0.9
02-1104	30	19	2	20	25	28.8	25	<100	9	<5	10.1	<10	<2	5	1	<1	26	7	2.9	1.6	<0.5	1.2	<20	0.8	<0.2	6.6	0.51	3.39	2.76	<2	1
02-1105	20	28	1	3	23	17.7	38	<100	11	<5	19.3	<10	3.3	<1	<1	<1	37	5	3.5	<1	1	1	<20	1.5	0.2	6.6	0.84	12.3	2.63	<2	1.7
02-1106	20	29	1	2	34	27.3	27	<100	5	<5	14.9	<10	4.5	2	11	<1	68	2	<2	<1	<0.5	1.7	<20	2.9	<0.2	6.6	0.69	20.7	5.56	2.4	0.8
02-1107	40	35	1	7	20	26.6	25	<100	5	<5	11.4	<10	<2	1	<1	<1	25	2	<2	<1	<0.5	0.8	<20	0.9	<0.2	6.6	0.41	3.29	2.5	<2	0.7
02-1108	20	5	2	15	20	18.5	169	174	15	10.9	<5	<10	4	3	<1	<1	56	21	4.3	1.6	<0.5	1.4	<20	2.1	<0.2	6.6	0.49	7.04	3.06	<2	1.2
02-1109	70	77	3	15	38	33.8	93	<100	4	<5	14.5	<10	<2	<1	<1	<1	0	17	<2	1.4	<0.5	0.2	<20	1.5	<0.2	6.6	0.31	2.64	1.19	<2	<0.5
02-1110	30	22	1	7	1.6	8.3	629	512	66	41.4	38.8	<10	<2	2	<1	<1	108	4	2.1	1.2	<0.5	3.1	<20	1.5	<0.2	32.4	0.5	7.66	6.19	<2	1.2
02-1111	20	13	1	20	9	14.8	39	<100	300	192	38.5	<10	<2	<1	<1	<1	34	5	2.3	<1	<0.5	1.5	<20	1.7	<0.2	22.3	0.25	8.3	4.51	<2	<0.5
02-1112	30	53	1	2	10	18.1	47	<100	130	70	673	<10	5.7	<1	<1	<1	52	3	3	<1	<0.5	1.3	<20	3.1	<0.2	6.6	0.83	12.3	7.03	<2	<0.5
02-1113	20	19	1	7	13	14.8	99	<100	220	114	378	<10	2.9	<1	6	<1	50	7	2.6	<1	<0.5	1.3	<20	2.8	<0.2	22.1	0.83	25.7	2.96	<2	0.9
02-1114	20	16	1	3	1.6	7.4	113	<100	8	<5	784	<10	<2	6	6	<1	10	13	2.4	<1	<0.5	0.2	<20	1.9	<0.2	41.3	0.45	4.1	3.31	<2	<0.5
02-1115	10	11	1	10	18	17.3	68	<100	12	6.5	1600	<10	3.2	<1	<1	<1	36	24	<2	<1	<0.5	0.8	<20	2.8	<0.2	24.9	0.69	6.89	3.7	<2	0.6
02-1116	10	15	1	10	38	26.3	25	<100	8	<5	2760	<10	<2	4	<1	<1	62	3	<2	<1	<0.5	2	<20	1.5	<0.2	6.6	0.59	7.31	5.45	<2	0.8
02-1117	40	42	1	2	25	20.7	48	<100	25	15.6	1370	<10	<2	<1	<1	<1	2	2	4.4	<1	0.5	0.2	<20	1.4	<0.2	6.6	0.76	4.36	2.09	<2	<0.5
02-1118	3	15	1	1	20	22.8	155	<100	26	9.8	2950	<10	2.9	2	11	<1	13	7	3.7	1.3	<0.5	0.6	<20	2	<0.2	6.6	0.79	2.88	1.61	<2	<0.5
02-1119	70	99	1	1	30	23.4	23	<100	19	10.3	464	<10	<2	3	<1	<1	8	4	<2	<1	<0.5	0.2	<20	1.5	<0.2	6.6	0.53	4.36	3.98	<2	<0.5
02-1120	<1	<1	1	1	10	9.3	50	<100	21	10	149	<10	<2	<1	<1	<1	0	1	6.2	<1	<0.5	0.2	<20	1	<0.2	22.2	0.45	1.77	3.02	<2	<0.5
02-1122	2	7	1	1	59	53.2	175	120	2	<5	7.8	19	21	2	<1	<1	132	13	2.8	1.1	0.7	3.5	<20	11.2	0.5	6.6	1.71	9.63	5.96	<2	3
02-1123	20	15	1	15	14	14.5	71	<100	13	<5	133	<10	<2	2	<1	<1	60	3	<2	<1	<0.5	1.9	<20	0.6	<0.2	6.6	0.54	6.87	7.36	<2	1.5
02-1124	20	17	2	5	27	11.9	126	147	0.7	<5	<5	<10	<2																		

APPENDIX X GOLDEN GROVE

sampno	Sn	Sn	Ge	Ga	W	W	Ba	Ba	Se	Se	Au	Ce	Ce	Nb	Ta	Ta	Zr	Sr	Br	Cs	Eu	Hf	Ir	La	Lu	Rb	Sm	Sc	Th	U	Yb
method	oes	xrf	oes	oes	xrf	naa	xrf	naa	xrf	naa	naa	xrf	naa	xrf	xrf	naa	xrf	xrf	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa
units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
02-1128	20	11	1	5	19	18	97	107	2	<5	40.8	<10	4.7	<1	<1	<1	47	5	<2	<1	1	1.4	<20	2.1	0.3	28.9	1.2	7.17	3.37	<2	2.6
02-1129	50	84	2	7	26	20	26	<100	20	16	380	<10	8.8	9	<1	1.2	194	6	<2	<1	1.6	5.4	<20	4.4	0.8	24.3	2.4	18.3	7.39	2.9	5.9
02-1130	30	27	1	7	32	18.9	59	<100	2	<5	152	<10	4.7	3	14	<1	52	5	<2	<1	0.7	1.7	<20	2.7	0.3	28.9	1.06	9.79	3.39	<2	2.8
02-1131	300	518	20.3	20	35	25	43	66	13	45.7	4140	<10	6.5	6	<1	<1	68	0	3.3	<1	<0.5	0.2	<20	3.7	<0.2	6.6	0.6	9.34	14.3	1.3	<0.5
02-1132	300	263	30.3	15	56	42.9	27	226	44	45.4	2860	12	3.5	3	4	<1	61	62	3.3	<1	<0.5	0.2	<20	4	<0.2	6.6	0.71	9.52	8.23	<2	<0.5
02-1134	10	10	1	5	52	52.6	33	<100	14	8	464	<10	2.4	1	9	<1	16	2	<2	<1	<0.5	1	<20	1.7	<0.2	33.5	0.5	5.89	5.51	<2	<0.5
02-1135	100	115	2	20	49	44	81	182	11	<5	291	<10	3	4	<1	<1	98	8	5.4	<1	<0.5	2.7	<20	1.9	0.3	6.6	0.96	5.4	4.67	<2	1.8
02-1136	2	3	1	1	48	60.2	23	<100	23	16.5	143	<10	<2	<1	<1	<1	12	4	<2	<1	<0.5	0.2	<20	1.3	<0.2	6.6	0.44	2.72	0.99	<2	<0.5
02-1137	6	15	1	7	125	134	45	<100	10	5.3	843	11	5	2	<1	<1	42	8	<2	<1	0.5	1.4	<20	3.7	0.2	6.6	0.98	6.05	4.58	<2	1.6
02-1138	5	9	1	2	79	81.1	42	<100	65	42.2	626	<10	5	<1	<1	<1	42	6	<2	1.2	<0.5	1.6	<20	2.6	<0.2	6.6	0.55	5.87	7.24	<2	<0.5
02-1139	10	18	1	10	42	15.2	27	<100	6	<5	181	<10	4.4	18	<1	1.1	377	5	<2	1.4	1.7	10.7	<20	1	1.9	6.6	1.95	17.6	13.3	<2	13.3
02-1140	20	28	1	5	40	27.5	291	224	11	<5	267	<10	<2	14	<1	1.2	239	10	2	1.4	1.1	7.1	<20	1.1	0.9	25.3	0.96	16.5	10.9	<2	6.3
02-1141	20	27	1	3	8	14.5	26	<100	19	6.6	4050	<10	<2	<1	2	<1	13	2	<2	<1	<0.5	0.2	<20	0.5	<0.2	25.2	0.23	6.62	5.04	<2	<0.5
02-1142	20	19	1	7	103	90.5	26	<100	27	14.3	1250	<10	2.6	1	1	<1	81	0	2.1	<1	<0.5	2.5	<20	1	<0.2	6.6	0.47	10.3	10.3	<2	1.1
02-1143	7	28	1	2	28	18.9	68	<100	13	6.3	544	<10	3.8	1	4	<1	13	5	<2	<1	0.8	0.5	<20	2.4	<0.2	6.6	1.03	5.59	2.84	<2	0.7
02-1144	3	12	1	2	23	12.7	376	248	9	<5	258	<10	6.1	<1	<1	<1	3	7	<2	<1	1.6	0.2	<20	2.5	<0.2	38.3	1.4	4.89	1.51	<2	0.6
02-1146	3	15	1	1	22	16.2	97	<100	19	16.6	84.7	<10	9.5	6	<1	<1	107	13	4	<1	0.8	3.2	<20	2.6	0.4	6.6	1.44	10.6	3.15	<2	3.5
02-1147	3	20	1	1	26	22.1	63	<100	42	20.4	426	<10	6	4	<1	<1	156	5	<2	<1	0.7	4.6	<20	1.4	0.7	6.6	0.9	9.11	9.36	<2	4.8
02-1148	10	18	1	3	22	4.9	129	120	24	17	1230	<10	<2	<1	<1	<1	15	3	2	<1	<0.5	0.2	<20	0.9	<0.2	6.6	0.44	2.39	3.49	<2	0.6
02-1149	10	33	1	2	1.6	7.4	61	<100	27	19.5	271	<10	4	<1	<1	<1	15	4	<2	1.7	<0.5	0.2	<20	1.7	<0.2	37	0.51	4.71	4.51	<2	<0.5
02-1150	600	646	2	10	12	19.3	80	<100	23	16.4	164	<10	4.1	6	<1	<1	12	15	3.3	<1	<0.5	0.2	<20	2	<0.2	21.3	0.28	5.91	2.62	<2	<0.5
02-1151	2000	3811	1	2	33	29.8	168	183	5	<5	164	<10	3.2	47	2	<1	9	9	2.3	<1	<0.5	0.7	<20	1.4	<0.2	30.1	0.41	4.56	5.63	<2	<0.5
02-1152	2	<1	1	3	9	11.6	29	117	5	<5	67.6	<10	13	2	73	<1	10	2	<2	1.2	1.2	0.2	<20	5	<0.2	46.1	3.43	5.85	1.66	<2	1.4
02-1153	2	1	1	7	11	12.5	40	<100	11	<5	146	<10	13	<1	<1	<1	31	4	2	<1	0.9	1	<20	4	<0.2	29.3	2.58	14.6	5.55	<2	1.2
02-1154	70	131	5	20	1.6	14.1	788	525	7	5.1	<5	<10	4.5	9	8	<1	79	7	<2	<1	<0.5	2.2	<20	1.3	0.2	41.5	0.73	5.7	4.07	<2	1.9
02-1156	30	37	1	30	118	120	147	107	27	28.5	710	<10	9.8	<1	<1	<1	91	8	6.5	<1	0.8	2.1	<20	4.7	<0.2	6.6	1.22	9.76	11.1	<2	0.9
02-1157	50	108	1	20	131	130	140	125	55	41.2	904	<10	10	2	1	<1	88	5	2.5	<1	<0.5	2.5	<20	4.8	<0.2	6.6	1.4	9.12	8.77	<2	<0.5
02-1158	30	11	3	30	102	102	21	<100	11	6.1	836	<10	2.7	1	3	<1	16	6	<2	<1	<0.5	0.8	<20	2.3	<0.2	6.6	0.51	2.09	3.87	<2	<0.5
02-1159	70	68	2	20	58	43.9	84	<100	24	15.6	5130	13	9.2	2	<1	<1	102	9	2.6	<1	0.7	2.7	<20	4.6	<0.2	32.6	1.01	7.41	8.29	3.8	1.2
02-1160	20	31	1	20	85	64.4	137	165	50	40.3	358	<10	2.2	<1	2	<1	67	10	6.9	<1	<0.5	1.9	<20	2.2	<0.2	20.1	0.61	6.22	7.72	<2	<0.5
02-1161	40	69	1	1	282	280	24	<100	3	<5	131	<10	<2	1	3	<1	24	3	<2	<1	<0.5	0.7	<20	1.2	<0.2	6.6	0.31	1.52	4.3	<2	<0.5
02-1162	10	14	1	20	129	148	20	<100	80	68.6	98.3	<10	7.4	<1	<1	1.2	94	3	<2	<1	0.6	2.8	<20	5.2	0.3	6.6	0.85	5.2	9.44	<2	1.8
02-1163	20	27	3	7	43	34.2	27	<100	3	<5	<5	<10	<2	<1	5	<1	49	6	<2	<1	<0.5	1.9	<20	1	<0.2	22.6	0.44	5.5	4.52	<2	0.9
02-1164	60	87	3	7	19	24.1	86	<100	9	<5	33.3	<10	4.4	1	<1	<1	47	14	<2	<1	<0.5	1.3	<20	1.7	<0.2	38.4	0.74	11.3	4.4	<2	1.3
02-1165	30	28	1	7	38	21.2	52	101	21	11.7	308	<10	3.9	<1	<1	<1	139	6	<2	<1	<0.5	4.2	<20	1.6	0.2	33	0.77	14.9	26.3	5.4	2
02-1166	20	13	5	50	70	76	134	<100	7	8.1	36.2	<10	2.4	4	4	<1	18	5	4.8	<1	<0.5	0.2	<20	1.5	<0.2	27.2	0.57	3.02	2.48	<2	<0.5
02-1167	10	54	1	5	75	61.7	44	<100	12	<5	1080	11	12	6	<1	1.1	200	5	4.9	<1	1.8	5.3	<20	5.4	1.1	6.6	2.28	9.35	12	<2	7
02-1168	80	93	5	20	54	45.7	193	<100	13	8.5	<5	<10	6.2	<1	2	<1	26	10	3.6	1.1	<0.5	0.6	<20	2.1	<0.2	21.9	0.73	6.54	2.55	<2	<0.5
02-1169	150	94	1	15	31	28.2	115	<100	10	14.3	18.5	<10	3.8	<1	2	1.1	58	7	<2	<1	<0.5	2.1	<20	1.1	<0.2	46.7	0.7	6.73	5.59	<2	0.8
02-1170	20	28	2	7	39	32.2	303	273	10	<5	12	<10	6.1	<1	<1	<1	43	7	4.3	1.5	<0.5	1.1	<20	2	<0.2	22.9	0.76	6.42	6.09	<2	1.3
02-1171	5	13	3	20	19	15.5	10	<100	0.7	<5	<5	<10	<2	1	3	<1	51	1	<2	<1	<0.5	1.5	<20	0.2	<0.2	6.6	0.46	3.42	3.18	<2	1.3
02-1172	5	38	1	20	125	114	468	535	7	7.9	58.5	<10	3	<1	<1	<1	103	7	4.9	<1	<0.5	2.4	<20	1.5	<0.2	6.6	0.51	3.96	10.6	<2	0.8
02-1173	2	5	1	5	76	62.7	339	284	23	17	251	<10	11	2	7	<1	77	12	<2	<1	<0.5	2.3	<20	6	0.3	6.6	1.05	14	5.03	<2	2.4
02-1174	<1	<1	1	10	111	99.4	368	339	0.7	<5	<5	64	73	9	1	1.6	267	37	<2	<1	1.7	6	<20	32.8	0.5	52.6	6.79	13.4	7.1	<2	3.7
02-1175	<1	<1	1	3	120	112	364	506	4	<5	15	<10	<2	<1	5	<1	56	22	2	<1	&										

APPENDIX X GOLDEN GROVE

sampno	Sn	Sn	Ge	Ga	W	W	Ba	Ba	Se	Se	Au	Ce	Ce	Nb	Ta	Ta	Zr	Sr	Br	Cs	Eu	Hf	Ir	La	Lu	Rb	Sm	Sc	Th	U	Yb
method	oes	xrf	oes	oes	xrf	naa	xrf	naa	xrf	naa	naa	xrf	naa	xrf	naa	xrf	naa	xrf	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa
units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
02-1179	2	<1	1	10	23	19.3	836	632	14	<5	<5	<10	7.1	6	5	<1	226	28	2.3	2.3	1.2	6.2	<20	2.2	0.7	57.9	1.48	38.8	7.45	<2	5.9
02-1180	<1	<1	1	7	70	72.3	473	581	23	10.9	15.5	59	5.2	<1	1	<1	37	19	<2	<1	<0.5	1.6	<20	1.8	0.3	56.3	0.71	34.3	1.34	<2	2.2
02-1181	4	5	1	3	89	88.8	35	<100	3	<5	8.9	<10	7.6	3	5	<1	108	5	<2	1	<0.5	2.9	<20	3.1	0.3	6.6	0.91	11.7	5.96	<2	2.3
02-1182	7	11	1	20	79	83.9	87	<100	22	15.5	9.8	<10	7	1	<1	<1	84	10	<2	<1	<0.5	2.4	<20	3.5	<0.2	6.6	0.84	13.8	6.44	3.1	1.5
02-1183	5	9	1	7	62	60	47	<100	11	6.4	6.9	<10	9.7	4	<1	<1	109	5	3.3	1.6	0.8	2.8	<20	5	0.4	6.6	1.15	14	7.82	<2	2.7
02-1184	10	25	2	5	65	49.4	97	<100	0.7	<5	<5	<10	3.4	<1	11	<1	28	14	<2	<1	<0.5	1	<20	1	<0.2	25.2	0.55	9.04	1.77	<2	0.9
02-1185	10	12	1	7	114	115	91	158	5	<5	21.3	<10	9.6	3	<1	<1	99	6	<2	<1	<0.5	3	<20	4.7	0.2	6.6	0.76	10.7	4.38	<2	1.6
02-1189	1	3	<1	40	58	41.7	3.3	<100	5	<5	<5	<10	5.9	0	0	1.3	186	0	<2	<1	<0.5	5.6	<20	2.5	0.5	6.6	1	12.2	17.4	2.5	3.7
02-1191	50	36	3	40	37	28.7	3.3	<100	2	<5	10.2	12	2.8	0	0	<1	48	0	<2	1.3	<0.5	1.5	<20	1.5	<0.2	20	0.61	7.64	8.53	<2	1.2
02-1192	5	12	3	20	20	14	3.3	<100	5	<5	<5	6	3.8	0	0	1.1	103	0	<2	1.1	<0.5	3	<20	2	<0.2	20.2	0.7	8.3	11.5	<2	1.4
02-1193	30	35	<1	20	27	23.1	3.3	<100	30	21.4	14.5	4	13	0	0	<1	170	0	3.3	<1	0.8	5.3	<20	4.9	0.4	6.6	1.52	13.3	23.7	3.1	3.2
02-1194	20	41	3	30	30	19.9	3.3	<100	6	<5	8.9	<10	4.3	0	0	1.1	257	0	<2	2.1	0.6	7.9	<20	1.4	0.5	6.6	0.95	7.26	11.9	<2	4
02-1195	20	46	<1	30	33	19.8	3.3	317	4	<5	89.7	4	3.7	0	0	<1	277	0	3.8	<1	0.5	8.2	<20	1.7	0.4	27.1	0.92	10.4	11.8	<2	3.4
02-1200	7	15	<1	20	25	17.5	3.3	<100	9	<5	12.3	<10	6.4	0	0	<1	247	0	2.1	<1	<0.5	7.3	<20	3.2	0.4	47.4	1.31	12.3	23.3	<2	3
02-1201	150	62	<1	30	37	19.1	3.3	110	6	<5	<5	15	11	0	0	<1	252	0	2.4	1.3	<0.5	7.8	<20	4.4	0.4	6.6	1.57	13.8	22.1	<2	3.5
02-1204	4	14	<1	15	14	13.1	3.3	<100	12	9.3	529	8	7.9	0	0	<1	237	0	2.2	<1	0.6	7.3	<20	3.7	0.5	6.6	1.38	16.7	24.2	<2	3.6
02-1205	3	4	<1	20	25	10.3	3.3	<100	9	<5	453	16	14	0	0	<1	217	0	3.4	2.1	<0.5	6.4	<20	7.5	0.3	6.6	1.49	12.9	18.5	<2	2
02-1207	1	4	<1	15	41	16.7	3.3	<100	6	<5	10.3	19	15	0	0	<1	277	0	2.1	1.1	0.6	8.6	<20	5.9	0.5	6.6	1.74	16.2	31.1	3.7	4.1
02-1209	150	82	<1	20	27	17.6	3.3	247	4	<5	46	7	11	0	0	1.4	275	0	<2	<1	0.6	8.3	<20	4.8	0.4	24.7	1.47	22.4	42.7	<2	3.4
02-1210	3	12	<1	30	26	14.9	3.3	<100	5	<5	10.9	10	13	0	0	<1	303	0	4	<1	<0.5	10.1	<20	5.4	0.5	32.8	1.61	21.1	45.9	<2	3.8
02-1211	2	3	<1	30	54	40.7	3.3	<100	2	<5	<5	11	9.3	0	0	2.8	376	0	3.5	<1	<0.5	10.6	<20	4.3	0.3	20.5	1.15	12.9	29.2	<2	2.3
02-1218	<1	<1	<1	20	34	9.6	3.3	<100	4	<5	<5	27	16	0	0	<1	220	0	3.7	<1	<0.5	6.8	<20	8.4	0.3	36.2	1.91	27.3	29.5	<2	2.2
02-1219	<1	<1	<1	30	45	23.8	3.3	<100	3	<5	<5	11	11	0	0	1.6	225	0	2.1	<1	<0.5	6.7	<20	5.1	0.4	6.6	1.47	20.1	36.1	<2	3.2
02-1223	<1	<1	<1	20	19	17	3.3	<100	5	<5	<5	<10	13	0	0	<1	163	0	2.3	<1	<0.5	4.6	<20	5	<0.2	6.6	1.26	22	22.4	<2	1.7
02-1224	3	1	<1	30	33	19.5	3.3	<100	4	<5	<5	13	17	0	0	<1	350	0	2.7	<1	0.6	9.4	<20	7	0.5	31.4	1.8	15	33.5	2.5	3.5
02-1225	<1	<1	1	10	1.6	0.7	3.3	203	2	<5	<5	10	8.7	0	0	<1	45	0	3.8	<1	<0.5	1.2	<20	7.1	<0.2	6.6	2	90	6.59	<2	>0.5
02-1226	<1	<1	<1	3	14	0.7	3.3	1000	3	<5	<5	4	7.3	0	0	<1	18	0	11.8	<1	<0.5	0.8	<20	4.4	<0.2	29.4	1.13	63.6	1.82	<2	>0.5
02-1267	<1	5	<1	30	1.6	0.7	60	163	12	<5	26.4	13	10	7	1	<1	311	3	<2	<1	<0.5	8.9	<20	2.9	0.6	23.7	1.19	44.7	28.9	<2	4.2
02-1270	<1	6	2	50	7	5.5	571	445	10	<5	<5	14	3.9	9	5	<1	192	6	2.4	<1	<0.5	6	<20	2.2	<0.2	6.6	0.55	20.8	24.1	<2	0.7
02-1271	<1	5	<1	60	1.6	11.7	49	<100	12	<5	<5	24	17	14	5	1.1	437	3	<2	<1	<0.5	11.5	<20	1.7	<0.2	6.6	0.63	26.8	51.5	2.5	1.3
02-1272	<1	1	<1	60	18	3.8	147	<100	9	<5	<5	13	4.7	8	19	1.2	237	1	<2	1.7	<0.5	6.7	<20	1.3	<0.2	6.6	0.51	23.6	23.5	<2	0.8
02-1273	<1	12	<1	20	8	0.7	23	<100	16	6.3	<5	<10	6.9	9	5	<1	213	3	2.8	<1	<0.5	5.8	<20	2.4	<0.2	25.3	0.66	38.9	35.9	<2	1
02-1274	<1	14	<1	30	1.6	4	14	<100	12	6.8	<5	<12	7.2	7	11	<1	226	4	2.2	1.2	<0.5	6.3	<20	3.5	<0.2	6.6	0.75	32.5	31	2.2	0.8
02-1276	<1	3	<1	50	10	7.6	37	<100	9	<5	<5	21	9.8	12	1	<1	363	3	2.7	<1	<0.5	10	<20	4.5	<0.2	6.6	1.26	32.5	60.4	2.8	1.4
02-1277	<1	<1	<1	50	8	10.6	52	<100	11	<5	<5	25	8.9	12	39	2	337	3	2.8	<1	<0.5	10.5	<20	3.7	<0.2	20.9	1.1	37.4	65.9	3.7	1.5
02-1282	7	3	2	30	15	7.7	257	211	9	<5	<5	16	8.1	11	1	<1	277	12	3	<1	<0.5	9	<20	4	0.5	29.2	1.27	17.1	25.9	<2	3.9
02-1283	7	4	<1	60	11	6.1	123	112	15	5.1	<5	<10	8.1	6	4	<1	344	7	<2	1.4	<0.5	9.9	<20	3.9	0.4	24.6	1.1	19	42.3	2.2	2.6
02-1284	15	8	<1	80	10	10.6	342	244	14	<5	<5	17	10	3	14	<1	281	5	<2	1.1	<0.5	9.2	<20	6.6	0.4	25.3	1.44	19.5	51.2	<2	2.9
02-1285	<1	2	<1	50	27	20.8	102	<100	12	<5	<5	<10	14	7	8	<1	255	9	<2	1.4	0.5	7.5	<20	5.2	0.4	25.5	1.43	14.4	29.7	2.5	3.1
02-1286	3	2	1	50	29	12.4	114	<100	12	<5	<5	<10	11	9	8	<1	297	8	<2	<1	<0.5	10.1	<20	4.3	0.5	6.6	1.4	18.6	42.4	3.3	3.5
02-1287	<1	<1	<1	50	16	13.3	91	<100	12	<5	<5	<10	8.3	9	5	<1	327	3	<2	<1	<0.5	11.1	<20	3.3	0.4	6.6	1.34	20.9	48.6	<2	3.1
02-1288	<1	2	<1	40	23	35.5	53	<100	7	<5	<5	16	12	8	5	<1	268	4	<2	<1	<0.5	8	<20	4.3	0.4	6.6	1.37	15.6	30.8	<2	3.1
02-1289	<1	3	<1	60	18	17.1	114	<100	11	<5	<5	17	15	4	11	<1	296	5	2.6	1.3	<0.5	9.6	<20	5.6	0.4	32.6	1.73	17.9	42.9	2.4	3.2
02-1290	<1	8	<1	40	16	18.3	113	181	8	<5	<5	18	18	8	1	<1	247	11	2.6	<1	0.5	7.2	<20	7.7	0.4	20.6	1.81	12.6	27.2	<2	2.7
02-1291	<1	4	<1	20	32	19.1	90	<100	9	<5	<5	17	12	6	14	<1	214	5	<2	<1	<0.5	6.8	<20	5.4	0.4	24.2	1.48	12.3	29.1	<2	

APPENDIX X GOLDEN GROVE

sampno	Sn	Sn	Ge	Ga	W	W	Ba	Ba	Se	Se	Au	Ce	Ce	Nb	Ta	Ta	Zr	Sr	Br	Cs	Eu	Hf	Ir	La	Lu	Rb	Sm	Sc	Th	U	Yb
method	oes	xrf	oes	oes	xrf	naa	xrf	naa	xrf	naa	naa	xrf	naa	xrf	xrf	naa	xrf	xrf	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa
units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
02-1295	<1	1	<1	70	32	21.2	3118	2520	6	<5	<5	33	15	5	8	<1	182	52	2.7	<1	<0.5	6.2	<20	8.4	0.2	20.5	1.62	32.1	53.1	<2	1.8
02-1296	60	<1	3	70	18	11	3247	2360	4	<5	<5	46	18	5	11	<1	150	62	3.1	1.4	0.7	5.1	<20	10.3	0.3	6.6	2.31	27.7	30.1	<2	2.2
02-1297	<1	29	<1	15	26	14.5	243	158	9	<5	14.7	23	10	7	1	1.5	239	7	<2	<1	0.6	7.6	<20	3.8	0.5	26.5	1.39	13.4	23.1	<2	3.8
02-1300	10	19	<1	30	17	15.7	68	118	6	<5	21.5	17	17	0	0	1	0	0	<2	1.9	0.6	8.2	<20	6.5	0.5	6.6	1.64	18.9	37.5	<2	3.2
02-1301	8	10	<1	60	16	7.6	1348	1130	3	<5	12.9	29	19	8	1	1.2	240	41	<2	1.6	<0.5	7.4	<20	9.8	0.3	33.2	1.78	16.6	28.1	<2	2.3
02-1302	60	27	2	60	27	13.3	551	466	6	<5	12.7	<10	13	4	17	<1	163	21	<2	<1	<0.5	5.4	<20	5.7	0.3	35.5	1.44	15.7	24.5	<2	2.2
02-1303	40	22	<1	60	23	10.3	75	<100	8	<5	11.3	11	12	4	1	<1	239	6	<2	<1	0.5	8.2	<20	6.4	0.4	24.1	1.53	20.1	41.4	2.1	2.9
02-1316	2	10	<1	40	1.6	0.7	211	200	2	<5	11.2	34	33	15	1	1.2	592	23	<2	2.4	<0.5	15.4	<20	17.7	0.4	39.4	2.28	10.1	18.3	2.3	2.6
02-1317	70	68	2	60	11	6.8	34	<100	16	12.5	2130	15	13	11	23	1.3	320	2	4.2	1.4	0.6	10.8	<20	3.5	0.6	37.3	1.61	20.3	35.2	<2	4
02-1690	<1	10	<1	25	11	2.7	392	401	4	<5	<5	50	42	11	2	<1	237	51	<2	2	1	6.3	<20	24.9	0.4	6.6	4.46	17.3	14.6	2	3
02-1692	<1	3	<1	40	17	12.2	134	146	4	<5	<5	16	17	5	8	<1	224	4	<2	<1	<0.5	6.5	<20	8	0.3	20.9	2.06	21.6	28	<2	2.7
02-1702	<1	8	<1	30	13	3.6	343	299	10	<5	<5	74	59	11	1	<1	243	21	2.8	1.3	0.7	6.8	<20	14.8	0.4	41.7	2.92	14.1	21	3.8	3.4
02-1710	<1	11	<1	30	1.6	5.9	292	284	10	<5	<5	96	91	11	1	1.4	251	19	<2	1.4	0.6	7.2	<20	18.2	0.4	37.5	3.77	24.3	33	3.6	3.2
02-1714	3	2	<1	50	8	6.4	789	661	6	<5	<5	22	15	7	1	<1	324	37	2.6	1.5	0.6	9.5	<20	9.4	0.5	20	2.25	19.8	24.8	<2	3.5
02-1739	20	15	<1	40	20	9.3	67	<100	12	<5	11.4	21	9.5	0	0	<1	0	0	2.7	1	<0.5	9.2	<20	3.5	0.3	22.3	1.26	20.2	45.4	3.7	2.8
02-1751	8	11	<1	30	8	11.5	107	<100	22	12.5	<5	34	17	7	1	<1	223	11	3.8	1.2	0.9	6.6	<20	7.7	0.5	6.6	2.62	12.3	28.6	2.9	3.9
02-1759	<1	15	<1	40	15	4.3	152	174	13	6.2	<5	28	20	13	11	1.4	280	11	4.7	2.5	<0.5	7.9	<20	9.9	0.3	40	1.92	22.4	45.3	5.2	2
02-1761	<1	11	<1	10	1.6	3.4	104	<100	14	<5	15.8	18	6.7	5	11	<1	185	5	3.1	<1	<0.5	5.3	<20	4.1	<0.2	6.6	0.96	25.2	17.8	3.4	1.6
02-1762	<1	2	<1	50	1.6	0.7	106	<100	13	<5	7.6	<10	9.6	7	17	<1	269	7	3.2	1.2	<0.5	8.2	<20	5.1	0.3	30.4	1.35	28	44.6	5.2	2.5
02-1765	<1	17	<1	50	1.6	3	32	<100	11	<5	<5	26	14	12	1	<1	240	4	4.1	<1	<0.5	6.7	<20	6.2	0.2	6.6	1.33	30.4	52.1	<2	1.6
02-1767	<1	18	<1	40	1.6	0.7	223	264	12	<5	<5	23	15	11	11	1.1	227	13	6.1	2.5	<0.5	6.6	<20	9.2	0.2	21.8	1.65	21.7	42.3	3	1.6
02-1769	<1	14	<1	50	6	3.8	349	374	15	<5	<5	27	20	12	11	1.3	265	17	4.7	1.6	0.6	7.3	<20	10.3	0.2	32.8	2.18	23.5	50	5.6	2
02-1785	<1	<1	<1	30	35	37.1	239	235	8	<5	<5	24	19	8	1	<1	210	15	2.7	1.6	<0.5	6.2	<20	9.7	0.2	6.6	1.96	22.1	39.6	2.9	1.8
02-1786	<1	11	<1	50	10	6	418	284	10	<5	<5	65	53	8	9	<1	251	23	2.5	1.6	0.7	6.7	<20	16	0.3	41.8	3.2	19.6	40.8	2.8	2.4
02-1788	<1	13	<1	30	13	4.2	448	474	10	6.8	<5	23	16	7	2	<1	247	18	3.4	1.4	<0.5	6.9	<20	12.1	0.3	22.6	2.24	23.1	38.5	2.1	1.9
02-1790	<1	4	<1	25	17	8.6	319	240	8	<5	<5	21	18	5	1	<1	179	12	<2	1.9	<0.5	5.3	<20	9.9	0.2	6.6	2.23	29.9	30.4	2.2	1.7
02-1792	<1	8	<1	30	7	4.9	245	205	9	<5	<5	22	11	9	1	<1	315	11	3.2	<1	<0.5	9	<20	5.3	0.2	6.6	1.43	37.6	59.8	4.3	1.7
02-1795	<1	10	<1	40	1.6	5.3	122	133	10	5.1	<5	15	23	9	1	1.3	269	11	2.9	<1	<0.5	7.3	<20	9.8	0.3	6.6	2.21	19.1	44.7	2.1	2
02-1797	<1	9	<1	40	9	7.1	284	229	8	<5	<5	32	29	7	1	1.2	260	15	<2	<1	<0.5	7.6	<20	11.2	0.3	6.6	2.6	25.2	49.4	<2	2
02-1799	<1	8	<1	50	5	7.6	216	121	9	<5	<5	26	17	8	7	1.3	256	8	<2	2.1	<0.5	7.5	<20	8.1	0.2	6.6	2.03	26.8	55.9	3.1	1.9
02-1801	<1	6	<1	30	8	7.7	3.3	645	7	<5	<5	746	43	4	3	<1	221	26	<2	<1	0.8	6.3	<20	14.4	0.3	6.6	2.91	29.4	40.5	4.1	1.9
02-1803	<1	15	<1	30	8	4.9	50	<100	11	<5	<5	21	13	6	1	<1	265	6	3.6	1.5	<0.5	7.7	<20	6.8	<0.2	25.3	1.65	46.1	58.1	<2	1.5
02-1805	<1	17	<1	50	1.6	0.7	47	<100	11	<5	<5	17	12	0	0	<1	0	0	2.8	1.8	<0.5	7	<20	5.2	0.2	6.6	1.31	26.6	53.1	3.1	1.5
02-1807	<1	14	<1	40	9	0.7	186	188	13	6.1	<5	18	20	13	1	<1	282	12	3	2	<0.5	8.3	<20	9.1	0.2	27.3	1.74	18.1	42	3.8	1.9
02-1812	<1	<1	<1	60	40	29.8	210	276	12	<5	<5	15	13	11	1	1.2	274	6	3.4	1.9	<0.5	8.1	<20	5.9	0.3	20.6	1.51	20.2	65	2.9	1.9
02-1814	<1	<1	<1	40	14	11.5	71	100	10	<5	<5	19	12	9	5	<1	233	5	2.4	<1	<0.5	7.5	<20	6.1	<0.2	6.6	1.39	39	38	4.6	1.4
02-1815	<1	2	2	30	12	1.7	109	99	6	<5	13.6	44	14	7	1	1.8	234	5	5	<1	<0.5	7.6	<20	5.2	<0.2	6.6	1.71	176	49.1	1.3	1.4
02-1816	<1	<1	2	40	44	24.9	215	<100	4	<5	<5	34	17	9	1	1.2	161	14	<2	<1	<0.5	5.6	<20	6.4	<0.2	6.6	1.98	100	11.3	<2	1.2
02-1817	<1	16	1	50	12	5.8	134	213	10	<5	<5	21	14	11	1	<1	274	8	2.5	2	<0.5	7.8	<20	6.3	0.3	6.6	1.49	23.7	63.7	3.5	1.8
02-1819	<1	11	<1	40	11	9	294	283	10	<5	<5	27	12	9	5	1.3	249	11	3.9	1.3	<0.5	6.6	<20	6.1	0.3	31.5	1.36	15.7	40.6	3.2	2
02-1821	<1	<1	<1	50	14	6.4	542	466	14	6	<5	21	8.4	8	1	1.1	255	5	3.6	1	<0.5	6.8	<20	4.1	<0.2	6.6	1.01	21.5	42.1	2.2	1
02-1822	<1	<1	2	30	14	1.7	327	99	4	<5	3.3	46	29	8	1	2	177	11	7	0.7	<0.5	6.1	<20	4.8	<0.2	6.6	1.76	202	17.3	1.3	1.1
02-1823	<1	<1	<1	30	24	24.2	208	114	9	<5	<5	28	22	7	1	1.8	210	11	<2	1.5	<0.5	6.3	<20	7.4	0.2	34.7	1.65	27.1	37.6	2.6	1.7
02-1824	2	15	<1	50	15	2.3	68	<100	11	<5	<5	28	13	11	3	1.2	268	6	2.2	1.4	<0.5	7.7	<20	6	<0.2	20.9	1.17	26.4	63	4.1	1.5
02-1825	<1	<1	<1	50	27	14.8	309	271	8	<5	<5	21	18	9	6	<1	281	17	3.2	2	<0.5	7.6	<20	9.7	0.3	31.9	1.93	24.5	58.6	2.2	1.9
02-1826	2	10	<1	40	1																										

APPENDIX X GOLDEN GROVE

sampno	Sn	Ge	Ga	W	W	Ba	Ba	Se	Se	Au	Ce	Ce	Nb	Ta	Ta	Zr	Sr	Br	Cs	Eu	Hf	Ir	La	Lu	Rb	Sm	Sc	Th	U	Yb	
method	oes	xrf	oes	xrf	naa	xrf	naa	xrf	naa	xrf	naa	xrf	xrf	naa	xrf	xrf	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	
units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
02-1830	<1	11	<1	20	17	14.2	358	295	11	<5	<5	22	16	9	7	<1	234	9	<2	<1	0.6	6.7	<20	7	0.5	6.6	1.88	13.3	35.7	<2	3.6
02-1833	<1	17	<1	30	6	0.7	87	<100	15	7.7	<5	24	13	9	1	<1	261	3	3.9	1	<0.5	6.9	<20	5.4	0.3	22.7	1.45	15.4	30.1	<2	2.3
02-1834	<1	13	<1	30	6	4	77	<100	14	8.1	<5	17	13	9	3	<1	277	6	2.2	<1	<0.5	7.9	<20	6	0.2	25	1.46	18.5	54.9	<2	1.8
02-1836	<1	14	<1	30	10	4.2	109	<100	13	6.7	<5	17	7.8	11	1	<1	242	7	2.2	1.3	<0.5	7.1	<20	3.8	0.2	6.6	0.99	14.5	39.4	2.2	1.8
02-1837	<1	<1	<1	40	33	28.6	134	168	9	<5	8.8	18	13	6	1	<1	268	7	2.3	1.7	<0.5	7.6	<20	4.9	0.3	24.9	1.46	22.4	66.4	2.1	2.1
02-1840	<1	8	<1	30	18	10.5	339	276	7	<5	<5	30	22	8	11	<1	216	13	2.4	<1	<0.5	5.8	<20	7.9	<0.2	33.7	1.57	33.2	31	2.1	1.4
02-1841	<1	<1	<1	40	16	11.5	835	727	9	<5	<5	66	54	6	3	<1	223	21	3.6	1.1	<0.5	6	<20	10.1	<0.2	29.5	1.89	38.4	26.9	<2	1.3
02-1842	<1	3	<1	30	9	5.4	266	125	8	<5	<5	42	25	5	2	<1	208	12	<2	<1	<0.5	6.4	<20	8.1	<0.2	39.1	1.68	41.5	37.7	<2	1.4
02-1846	<1	<1	<1	30	10	9.4	157	<100	6	<5	<5	17	11	7	2	<1	240	4	<2	1	<0.5	7	<20	4.3	0.4	6.6	1.68	20.9	46.8	<2	2.8
02-1850	<1	8	<1	40	1.6	5.5	204	203	13	6.2	<5	22	14	8	1	<1	269	9	3.5	<1	<0.5	7.6	<20	6.1	0.3	6.6	1.37	25.7	41.9	2.7	2
02-1852	<1	8	<1	30	13	15.6	198	161	5	<5	<5	71	41	14	1	1.5	307	7	<2	<1	<0.5	8.1	<20	6.3	0.3	6.6	1.41	20.1	35.2	<2	1.6
02-1853	<1	<1	<1	40	27	19.4	73	<100	7	<5	<5	<10	9.8	7	1	1	217	8	2.9	2.2	<0.5	6.1	<20	4.2	<0.2	36.8	1.13	36.9	37.9	<2	1
02-1855	3	12	<1	30	22	6	44	<100	9	<5	<5	14	4.6	21	16	1.9	332	2	<2	<1	<0.5	9.3	<20	2.4	0.7	22.1	1.25	30.5	28.6	<2	4.7
02-1857	<1	18	<1	30	7	0.7	56	210	11	<5	<5	19	13	6	4	<1	270	6	5.1	1.9	<0.5	7.4	<20	6.9	0.3	6.6	1.47	32.4	66	2.3	1.9
02-1858	<1	14	<1	30	9	4.6	29	<100	7	<5	<5	20	11	8	6	1.4	271	4	3	1.3	<0.5	7.6	<20	4.5	<0.2	6.6	1.09	24.8	54.4	2.8	1.3
02-1860	<1	13	<1	30	10	4.4	86	<100	9	<5	<5	<10	8.3	6	1	<1	238	5	3.1	<1	<0.5	6.6	<20	3.6	<0.2	6.6	1	36.4	46	<2	1
02-1861	<1	15	<1	20	20	8.5	36	<100	10	<5	<5	19	11	7	8	<1	274	3	<2	<1	<0.5	7.1	<20	4.1	<0.2	21.8	1.13	36.5	31.3	<2	1.5
02-1862	<1	<1	<1	25	10	10.9	105	<100	12	9.6	<5	22	18	9	2	1.1	300	5	3.2	3.1	<0.5	8.4	<20	7.9	0.3	32.3	1.64	18.2	28.5	2.1	2.5
02-1863	<1	2	<1	30	10	7.6	58	<100	8	<5	<5	18	3.4	6	41	<1	215	2	<2	<1	<0.5	6.2	<20	3.2	0.3	23	1.19	32.7	23	<2	2.6
02-1866	<1	7	<1	40	8	9.2	104	142	11	<5	<5	14	4.9	9	2	1.2	287	7	2.4	2.1	<0.5	8.8	<20	3.1	0.3	25.8	1.04	31	51.6	2.9	2.4
02-1867	<1	<1	<1	50	16	12.1	116	<100	12	<5	<5	14	8.8	4	4	1.4	295	7	2.6	1.6	<0.5	8.1	<20	5.4	0.2	30.4	1.36	23.6	58.4	2.2	1.7
02-2150	<1	<1	<1	25	45	31.6	155	148	5	<5	<5	10	9.4	4	1	<1	201	12	2.5	1.4	<0.5	6.2	<20	5.3	<0.2	56.4	1.32	49	60.9	<2	1.3
02-2151	<1	<1	<1	60	33	23.6	115	116	5	<5	<5	<10	9.6	3	3	<1	229	6	2.6	<1	<0.5	6.8	<20	3.5	<0.2	37.5	1.14	40.4	62.1	<2	1.3
02-2152	<1	<1	<1	15	23	23.7	114	155	7	<5	<5	11	7.7	4	23	<1	178	11	<2	1.3	<0.5	5.6	<20	3.5	<0.2	27.7	1.08	35.9	48.1	<2	0.9
02-2153	<1	<1	<1	25	13	17.8	139	222	6	<5	<5	<10	6.3	3	1	2.1	195	18	<2	<1	<0.5	6.2	<20	4.1	<0.2	30.5	1.34	40.5	61.2	<2	1.4
02-2154	1	<1	<1	60	31	28.5	85	<100	6	<5	<5	<10	4.7	4	12	1.5	204	9	<2	<1	<0.5	6.1	<20	3.9	<0.2	54	1.17	50.2	59.2	<2	1.3
02-2155	<1	<1	<1	30	41	26.5	88	126	8	<5	<5	19	4.7	4	12	<1	208	4	<2	1.7	<0.5	6.1	<20	3.5	<0.2	24.8	1.06	35.3	55.7	<2	1.2
02-2156	<1	1	<1	10	27	33.3	45	<100	6	<5	6.1	12	7.2	9	2	1.3	287	2	<2	1.8	<0.5	8.2	<20	3.5	<0.2	6.6	1.17	27.4	69.6	2.9	1.5
02-2157	<1	1	<1	40	51	39.1	30	<100	4	<5	<5	16	8	9	5	1.3	284	6	3.5	<1	<0.5	8.2	<20	3.4	<0.2	6.6	1.16	20.6	56.3	<2	1.3
02-2158	<1	<1	<1	30	29	25.1	56	<100	7	<5	<5	<10	7.3	6	1	<1	276	6	4.1	<1	<0.5	9	<20	4.2	0.3	29	1.45	27.6	78.9	2.8	2.1
02-2159	<1	<1	<1	40	44	29.8	86	102	5	<5	<5	<10	15	6	1	<1	268	9	9.1	<1	<0.5	8	<20	4.9	0.3	6.6	1.48	28.2	83.8	<2	2.5
02-2160	1	2	<1	60	38	35.1	78	161	6	<5	<5	<10	5.6	6	1	<1	311	5	2.6	1	<0.5	9.7	<20	4.4	0.3	6.6	1.35	24.8	89.2	2.6	2.1
02-2161	<1	1	<1	30	43	26.7	273	<100	5	<5	<5	14	11	6	17	1.8	319	8	2.4	<1	<0.5	10.5	<20	3.8	0.3	40.4	1.37	42.7	84.9	<2	2.6
02-2162	<1	1	<1	60	34	28.8	180	166	5	<5	<5	<10	8.5	7	4	<1	293	7	<2	<1	<0.5	9.8	<20	3.6	0.4	27.4	1.35	33.2	68.4	<2	2.8
02-2163	<1	1	<1	20	45	24.8	97	<100	7	<5	<5	<10	6.4	4	3	1.3	299	3	3.3	1.2	<0.5	10.2	<20	2.7	0.4	6.6	1.36	41	75.4	<2	2.9
02-2164	<1	1	<1	40	33	26.2	65	104	7	<5	<5	<10	3	7	8	1.8	251	5	<2	1.2	<0.5	8.8	<20	2.4	0.4	6.6	1.35	44.5	70.9	<2	2.6
02-2165	<1	1	<1	40	44	40.5	72	<100	6	<5	<5	<10	4.9	11	1	1.4	253	5	2.1	1.7	<0.5	8.3	<20	2.5	0.4	6.6	1.15	34.7	53.4	2.2	2.8
02-2166	<1	1	<1	60	42	30.1	64	<100	5	<5	<5	<10	5.7	7	1	1	240	3	<2	<1	<0.5	8.1	<20	2.7	0.5	21.9	1.34	30.2	45.5	<2	3.5
02-2167	<1	1	<1	20	16	18.4	79	<100	7	<5	9.8	12	5.8	12	17	1.6	229	1	<2	1.5	<0.5	8.1	<20	2.6	0.5	20.3	1.24	27.5	26.3	2.3	3.7
02-2168	<1	<1	<1	8	18	10.3	97	<100	6	<5	<5	<10	4.4	4	31	<1	126	4	<2	1.3	<0.5	4.3	<20	2.7	0.2	28.3	1.04	40.4	16.8	<2	2.2
02-2169	<1	<1	<1	10	47	36.9	49	<100	17	<5	<5	<10	<2	5	11	<1	140	9	<2	<1	<0.5	4.7	<20	1.2	0.7	21.1	1.37	30.3	16.1	<2	5.6
02-2170	<1	<1	<1	10	23	15.8	83	<100	6	<5	<5	<10	7	4	1	<1	174	6	<2	<1	<0.5	5.4	<20	3.2	0.3	6.6	1.14	46.9	18.1	<2	2.7
02-2171	<1	<1	<1	40	8	7.9	99	<100	8	<5	<5	<10	6.1	6	1	<1	182	5	<2	1.6	<0.5	5.8	<20	3.1	0.4	6.6	1.14	59.3	18.3	<2	2.9
02-2172	<1	<1	<1	10	25	15	95	<100	3	<5	<5	<10	5.5	2	9	1.1	145	5	<2	<1	<0.5	4	<20	3.1	<0.2	6.6	0.82	39.4	14.8	<2	1.5
02-2173	<1	<1	<1	20	16	8.6	75	<100	8	<5	<5	<10	3.6	4	1	<1	208	6	2.5	<1	<0.5	6.5	<20	1.							

APPENDIX X GOLDEN GROVE

sampno	Sn	Sn	Ge	Ga	W	W	Ba	Ba	Se	Se	Au	Ce	Ce	Nb	Ta	Ta	Zr	Sr	Br	Cs	Eu	Hf	Ir	La	Lu	Rb	Sm	Sc	Th	U	Yb
method	oes	xrf	oes	oes	xrf	naa	xrf	naa	xrf	naa	naa	xrf	naa	xrf	naa	xrf	naa	xrf	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa
units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm
02-2177	<1	<1	<1	0	12	8	31	<100	0.7	<5	<5	15	14	3	11	<1	171	1	2.5	1.5	0.7	3.2	<20	6.2	0.3	28.1	3.04	31.9	7.07	<2	2.4
02-2178	<1	<1	<1	0	10	7.9	53	256	0.7	<5	<5	16	20	1	21	<1	224	6	2.5	<1	1.1	4.2	<20	7.4	0.4	6.6	4.52	62.8	11.3	<2	3.4
02-2179	<1	2	<1	15	33	41	90	<100	4	<5	<5	<10	8.5	11	5	<1	302	3	<2	<1	<0.5	7.8	<20	3.5	0.3	6.6	1.45	22.2	24.9	<2	2.2
02-2180	<1	2	<1	30	51	54.5	55	108	5	<5	<5	11	5.6	16	1	1.4	317	3	<2	<1	<0.5	7.8	<20	1.7	0.3	6.6	0.69	11.3	29.4	2.5	1.8
02-2181	<1	2	<1	20	49	43.2	46	<100	5	<5	8.8	<10	4.6	17	15	1.1	369	2	<2	<1	<0.5	9.7	<20	1.3	0.5	6.6	0.77	14.8	19.5	<2	2.9
02-2182	<1	<1	<1	0	28	13.3	194	110	0.7	<5	<5	43	33	1	5	<1	172	1	2.3	<1	1	3.8	<20	11.5	0.4	6.6	4.42	27	36.9	<2	3.1
02-2183	<1	1	<1	30	40	37.9	45	<100	9	5.3	<5	<10	6.8	19	4	1.5	393	8	<2	<1	<0.5	10.7	<20	2.7	0.5	6.6	1.07	13.4	42	2.5	3
02-2184	<1	<1	<1	6	38	19.1	106	<100	5	<5	<5	10	9.9	2	1	<1	228	6	<2	1.4	<0.5	6.2	<20	3.6	0.4	22.9	1.58	31.7	31	<2	2.6
02-2288	<1	1	<1	30	20	12.6	1074	1100	0.7	<5	<5	14	13	4	1	<1	114	28	<2	1.1	0.5	2.9	<20	9.5	<0.2	26.2	1.36	36.8	4.87	<2	1.2
02-2289	<1	2	<1	30	6	0.7	266	235	0.7	<5	<5	13	11	2	7	<1	127	8	<2	2	<0.5	3.8	<20	5.7	<0.2	37.6	0.97	61.9	13.9	<2	0.8
02-2290	<1	1	<1	20	30	25.6	457	554	0.7	<5	<5	<10	9.5	4	1	<1	94	28	<2	1.3	<0.5	2.4	<20	3.8	<0.2	6.6	0.89	26.8	2.49	<2	1.1
02-2291	<1	2	<1	40	25	8	204	<100	0.7	<5	6.9	<10	5.5	2	13	1.2	156	6	<2	<1	<0.5	4.5	<20	3.6	<0.2	6.6	0.94	74.1	18.6	<2	1
02-2293	<1	3	<1	20	28	22.6	578	559	0.7	<5	<5	<10	5.1	8	1	<1	146	63	<2	2	<0.5	3.3	<20	2.4	<0.2	56	0.75	12.3	4.94	<2	0.8
02-2294	<1	3	<1	40	15	9.8	590	524	0.7	<5	<5	11	4.9	4	1	<1	154	13	2.7	<1	<0.5	4.3	<20	2.7	<0.2	41.1	0.7	28.1	18	<2	1.1
02-2295	<1	2	<1	20	5	4.9	630	646	0.7	<5	<5	<10	9.1	5	1	<1	167	15	2.2	2.4	<0.5	3.9	<20	3.8	<0.2	69.2	0.91	12.4	5.75	<2	0.7
02-2296	<1	4	<1	4	12	11.3	198	231	0.7	<5	<5	18	8.8	9	7	<1	197	7	<2	<1	<0.5	5.7	<20	4.5	<0.2	23.1	1.19	33	45.5	<2	0.9
02-2297	<1	1	<1	20	1.6	5.3	514	503	0.7	<5	<5	10	5.1	9	1	<1	161	9	<2	1.4	<0.5	3.5	<20	2.4	<0.2	41.9	0.76	10.7	4.62	<2	0.9
02-2298	<1	3	<1	4	18	19.8	199	279	0.7	<5	<5	<10	12	8	1	<1	222	9	2.2	1.6	<0.5	6.4	<20	5.7	<0.2	6.6	1.2	26.8	44.6	2.6	1.1
02-2299	<1	2	<1	3	1.6	6.3	541	553	0.7	<5	<5	48	46	11	1	<1	160	74	<2	3.9	1	3.7	<20	27.1	<0.2	48.2	3.84	14.4	4.3	<2	1.4
02-2300	<1	2	<1	20	9	3.5	927	1260	0.7	<5	<5	24	29	4	1	<1	150	59	<2	<1	<0.5	2.8	<20	6.1	<0.2	6.6	1.26	22.9	3.3	<2	1.1
02-2301	<1	1	<1	20	12	6.3	188	173	0.7	<5	<5	28	23	6	1	1.5	154	52	<2	<1	0.8	3.2	<20	22.5	0.2	6.6	2.98	18.2	5.01	<2	1.8
02-2302	<1	1	<1	30	8	5	236	279	0.7	<5	<5	13	3.4	9	1	<1	190	16	12.2	<1	<0.5	4.3	<20	2.5	<0.2	21.2	0.59	7.64	6.49	<2	0.6
02-2303	<1	2	<1	20	1.6	5.7	348	315	0.7	<5	<5	50	42	7	1	<1	164	93	19.4	1.2	1	3.8	<20	21.1	<0.2	40.9	3.21	9.88	5.86	<2	0.8
02-2304	<1	3	<1	30	10	13.1	1637	1780	0.7	<5	<5	40	35	8	1	<1	212	56	<2	1.4	0.6	4.3	<20	14.6	0.3	43.3	2.25	12.5	10.6	<2	1.8
02-2305	<1	2	<1	3	1.6	3.3	420	334	0.7	<5	<5	94	109	14	1	<1	218	6	<2	<1	2	4.5	<20	43.8	0.4	24.1	7.76	17	5.93	<2	2.4
02-2306	<1	3	<1	20	8	8.5	500	570	0.7	<5	<5	17	14	11	1	1.2	295	18	<2	<1	<0.5	6.8	<20	5.3	0.6	52.2	1.33	12.1	8.32	<2	4.5
02-2307	<1	3	<1	30	16	4.7	392	459	6	<5	<5	71	84	16	1	<1	316	19	<2	<1	1.2	7.6	<20	31.1	1	69.7	6.57	17.3	10	<2	7
02-2308	<1	1	<1	30	18	4.9	208	111	0.7	<5	58.9	55	53	8	2	<1	119	4	<2	<1	0.7	3.1	<20	8.7	0.6	6.6	2.94	38.4	2.6	<2	4.2
02-2309	<1	4	<1	20	17	17	83	<100	7	<5	39.6	54	54	3	1	<1	113	15	<2	<1	1.7	3.1	<20	28	0.7	6.6	6.84	18.8	2.71	<2	4.9
02-2310	<1	3	<1	20	12	8.5	197	172	0.7	<5	<5	47	65	11	1	<1	291	19	<2	<1	1.8	6.9	<20	26.2	1.3	6.6	6.74	8.38	6.51	<2	8.7
02-2311	<1	<1	<1	20	25	16.8	154	139	8	<5	<5	15	14	3	1	<1	160	11	<2	<1	<0.5	3.7	<20	6.4	0.5	6.6	1.73	31.8	5.56	<2	3.7
02-2312	<1	5	<1	80	18	18.7	50	<100	0.7	<5	<5	<10	6.3	14	1	2	313	3	2.1	<1	0.7	9.1	<20	2.7	0.8	30.7	1.7	24.3	16	<2	5.9
02-2313	<1	2	<1	3	11	6.7	131	143	8	<5	<5	56	73	14	1	1.3	318	16	<2	<1	1.5	7.5	<20	16.4	1.3	21.3	5.7	9.88	7.46	<2	9.2
02-2314	<1	<1	<1	30	7	0.7	451	470	0.7	<5	<5	31	45	6	1	<1	94	111	<2	1.1	1.6	2.6	<20	27.4	0.4	37.3	5.98	24.9	4.21	<2	2.7
02-2315	<1	3	<1	20	10	11.5	373	452	7	<5	<5	23	16	6	1	<1	176	17	3	<1	0.6	4.5	<20	6.6	0.4	34.2	1.61	27.5	6.92	<2	3.3
02-2316	<1	4	<1	30	6	7.3	180	164	0.7	<5	10	<10	11	2	12	<1	119	8	<2	<1	0.5	3.3	<20	7	0.3	6.6	1.83	48.4	11.9	<2	2.2
02-2317	<1	3	<1	30	16	10.2	113	<100	0.7	<5	<5	15	14	4	1	1.1	190	6	2.8	<1	<0.5	5.1	<20	6.2	0.3	6.6	1.46	38.7	17.7	2	2.9
02-2318	<1	2	<1	20	15	11.2	259	346	0.7	<5	<5	36	34	9	1	<1	298	15	<2	<1	0.7	5.7	<20	19.1	0.8	6.6	3.12	29.5	5.29	<2	5.4
02-2319	<1	2	<1	30	29	24.5	276	220	0.7	<5	16.8	35	47	9	1	<1	214	16	<2	<1	1.6	5.5	<20	27.2	1	25.8	5.82	20.2	5.18	<2	6.8
02-2320	<1	3	<1	10	162	144	111	125	0.7	<5	9.9	<10	3.8	16	1	1.7	203	7	<2	<1	<0.5	5	<20	1.6	0.3	6.6	0.49	3.78	6.01	<2	1.7
02-2321	1	2	<1	30	87	76.4	624	675	0.7	<5	<5	21	16	4	1	<1	121	42	<2	<1	0.7	2.8	<20	10	0.3	23	1.54	20.4	4.07	<2	2.1
02-2322	<1	1	<1	3	206	208	86	107	0.7	<5	330	11	<2	2	1	<1	26	3	<2	<1	<0.5	0.9	<20	1.2	<0.2	6.6	0.23	0.92	1.53	<2	<0.5
02-2336	1	2	<1	0	14	9.3	2483	2840	0.7	<5	17.7	36	36	12	1	1.4	307	272	<2	<1	0.6	6.5	<20	19.5	0.2	71.9	2.24	15.3	7.34	<2	1.5
02-2343	<1	135	<1	0	31	33	23	<100	0.7	24	286	<10	<2	1	15	<1	5	1	<2	<1	<0.5	0.2	<20	0.8	<0.2	6.6	0.53	5.47	4.25	<2	<0.5
02-2344	<1	16	<1	0	28	34.4	65	<100	0.7	17.2	152	<10	14	3	26	<1	151	7	3.5	<1	0.7	5	<20	7.7	0.3	6.6	1.2				

APPENDIX X GOLDEN GROVE

sampno	Sn	Sn	Ge	Ga	W	W	Ba	Ba	Se	Se	Au	Ce	Ce	Nb	Ta	Ta	Zr	Sr	Br	Cs	Eu	Hf	Ir	La	Lu	Rb	Sm	Sc	Th	U	Yb
method	oes	xrf	oes	oes	xrf	naa	xrf	naa	xrf	naa	naa	xrf	naa	xrf	xrf	naa	xrf	xrf	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa	naa
units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
02-2350	<1	2	<1	20	26	27.1	128	163	0.7	<5	7.5	30	28	23	1	<1	200	21	2.4	1.2	0.6	4.8	<20	12.1	0.2	20.7	2.25	16.9	19.4	<2	1.7
02-2354	<1	2	<1	15	6	8	847	910	7	<5	7.4	10	5.1	3	1	<1	100	59	<2	<1	<0.5	3	<20	1.3	<0.2	6.6	0.31	33.7	1.27	<2	0.7
02-2405	<1	3	<1	20	16	8.2	173	<100	0.7	8.2	52	13	9.8	5	1	1.1	197	4	3.5	<1	<0.5	6.2	<20	4.5	<0.2	6.6	1.21	41.9	34.7	<2	0.7
02-2406	<1	5	<1	15	8	1.5	85	127	5	<5	<5	<10	6.3	2	1	<1	114	1	2.5	<1	<0.5	2.8	<20	2.7	<0.2	6.6	1.17	59.2	13.6	3.7	0.8
02-2410	8	<1	<1	30	9	0.7	189	240	16	5.5	675	16	11	6	0	<1	383	51	5.9	1.3	0.6	10.7	<20	5.2	0.5	6.6	1.42	15.9	20.7	<2	3.2
02-2411	15	<1	<1	50	11	10.3	134	149	14	9.2	836	23	14	9	0	<1	305	37	5.5	1.2	<0.5	9.5	<20	6.4	0.4	51.5	1.42	13.7	19.3	<2	2.9
02-2412	20	<1	<1	50	22	15.4	120	168	12	6.4	416	16	14	9	1	<1	281	28	5.1	1.9	0.5	7.4	<20	7.1	0.4	32	1.46	12.8	19.3	3	2.7
02-2413	40	<1	<1	40	14	15.2	99	<100	11	8.4	686	17	15	8	1	<1	253	22	4.1	<1	<0.5	6.8	<20	7.7	0.4	34.1	1.57	11.6	17.4	<2	2.5
02-2416	31	<1	<1	15	31	28.8	106	172	10	<5	22.6	14	18	6	5	<1	223	11	4.1	<1	0.5	5.9	<20	8.4	0.5	25	1.7	10.8	17.5	2.4	3.2
02-2417	29	<1	<1	20	40	30	112	<100	9	<5	53.4	19	19	7	1	<1	204	9	4.9	1.1	0.6	5.9	<20	9.2	0.4	47.5	1.82	10.6	16.3	3.6	3.1
02-2418	31	<1	<1	30	23	22.2	108	158	11	<5	27.9	19	19	6	0	<1	215	11	4.6	<1	0.6	5.6	<20	10.2	0.4	39.9	2.01	10.8	16.9	<2	3.1
02-2419	25	<1	<1	25	23	20.3	100	155	10	<5	60.3	18	18	11	3	<1	223	14	4.2	1.3	0.6	6	<20	9	0.4	27.4	1.73	10.6	17.1	2.4	3.1
02-2420	41	<1	<1	20	27	27.8	64	<100	10	<5	83.5	13	17	5	0	<1	207	12	4.7	1.4	0.7	5.6	<20	8.8	0.4	31.9	1.78	10.2	17.3	<2	3
02-2421	44	<1	<1	25	23	20.4	87	141	10	<5	38.8	18	17	7	0	<1	193	12	4.7	<1	0.6	5.8	<20	8.6	0.4	32.3	1.71	10.5	17.8	2	3.1
02-2422	32	<1	<1	20	27	26.4	66	141	11	<5	48.3	15	17	6	0	1	186	14	4.2	<1	0.5	5.3	<20	8.5	0.4	36.2	1.58	9.69	16.7	<2	2.7
02-2423	26	<1	<1	15	22	24.4	90	109	10	<5	30.3	17	18	7	0	<1	210	7	4.5	<1	0.7	5.7	<20	9.2	0.4	31.7	1.85	10.3	17.7	<2	3
02-2424	18	<1	<1	20	29	30.9	95	188	10	<5	30.6	17	19	8	0	<1	208	14	4.4	<1	0.7	5.4	<20	9.5	0.5	20.1	1.89	10.3	16.8	<2	3.2
02-2425	24	<1	<1	20	6	12.9	102	<100	12	<5	37.9	20	17	7	7	<1	257	21	5.3	1.7	<0.5	7.3	<20	9	0.4	27.8	1.66	11.9	18.9	<2	3
02-2426	16	<1	<1	15	13	12.7	78	<100	13	<5	51.3	12	14	6	2	1.3	298	25	6.7	1.4	0.6	8.1	<20	6.7	0.5	31	1.47	12.8	20.4	2.6	3.3
02-2427	21	<1	<1	25	7	6.8	103	169	16	7.7	230	13	13	6	1	<1	344	33	6.4	<1	<0.5	9.7	<20	6.5	0.5	38.1	1.44	14.7	23.5	2.8	3.3
02-2428	25	<1	<1	20	20	15	102	<100	13	<5	106	20	17	11	0	<1	273	22	5.7	<1	<0.5	7.3	<20	7.9	0.4	51	1.61	12.3	21.3	<2	3.1
02-2429	21	<1	<1	30	9	10.8	104	121	12	<5	250	16	16	6	4	<1	267	27	5.5	1.1	<0.5	7.3	<20	7.7	0.4	6.6	1.62	12.8	20.6	<2	3.2
02-2590	11	<1	<1	0	0	0.7	0	<100	15	<5	23.6	0	3.5	0	1	<1	14	2	<2	<1	<0.5	1.4	<20	1.4	<0.2	6.6	0.69	14.7	3.9	<2	1
02-2591	16	<1	<1	0	4	0.7	1	<100	17	10.9	18.4	0	9	6	6	<1	92	2	<2	<1	<0.5	5.3	<20	5.9	<0.2	31.2	1.24	17.7	23.1	<2	1.4
02-2592	11	<1	<1	0	5	0.7	1	<100	11	<5	40.3	0	11	3	0	1.2	118	4	3.4	<1	<0.5	6.7	<20	4.4	0.4	24.8	1.23	17.3	28.9	<2	2.7
02-2593	70	<1	<1	0	17	13.9	6	<100	1	<5	8	1	6.8	34	0	3	216	1	<2	<1	0.8	14.1	<20	1.8	1.1	6.6	1.45	8.16	8.39	<2	8
02-2595	81	<1	<1	0	11	8.9	7	<100	7	<5	278	1	11	15	0	1.5	161	4	12.5	<1	0.7	10.4	<20	2.5	0.7	6.6	1.44	14.4	19.8	<2	5
02-2601	2	<1	<1	0	2	0.7	0	<100	8	<5	<5	0	9.4	8	0	<1	153	1	2.3	<1	<0.5	7.2	<20	3.7	<0.2	24.4	0.96	34.5	35.3	3.3	1
02-2602	<1	<1	<1	30	3	0.7	0	<100	7	<5	<5	16	11	7	8	<1	263	4	<2	<1	<0.5	7.4	<20	4.9	<0.2	6.6	1.18	31.9	44.5	<2	1.2
02-2603	<1	<1	<1	25	0	0.7	0	<100	8	<5	<5	21	8.9	6	0	1.1	263	8	3.2	<1	<0.5	7.1	<20	5	<0.2	6.6	1.17	33.7	44.7	2.6	1.2
02-2604	<1	<1	<1	25	2	0.7	0	<100	7	<5	<5	20	13	10	0	<1	280	5	3.2	1	<0.5	7.3	<20	4.7	<0.2	6.6	1.16	30.9	43.8	<2	1.2
02-2605	1	<1	<1	30	4	0.7	0	<100	8	<5	<5	3	13	7	2	<1	250	5	2.3	1	<0.5	6.7	<20	5.5	<0.2	42.3	1.25	32.9	43.2	<2	1.1
02-2606	2	<1	<1	25	0	6.8	0	<100	8	<5	<5	16	12	5	0	<1	271	4	2.9	1.7	<0.5	7	<20	4.9	<0.2	6.6	1.18	34	45.8	<2	1.2
02-2607	<1	<1	<1	25	4	6	0	<100	8	<5	<5	16	8.5	5	1	1.2	267	2	<2	1.1	<0.5	7.2	<20	3.8	<0.2	6.6	1	28.1	37.6	3.8	1.3
02-2608	<1	<1	<1	15	8	1.3	0	<100	8	<5	<5	17	10	10	1	1	270	1	2.5	1.5	<0.5	7.3	<20	4.3	<0.2	6.6	1.18	29.3	40.9	2.3	1.3
02-2609	<1	<1	<1	25	5	0.7	0	<100	9	6.3	<5	18	13	9	0	1.9	278	0	2.7	1.5	<0.5	7	<20	4.8	<0.2	6.6	1.09	28.8	40.1	3.3	1.3
02-2610	<1	<1	<1	25	5	0.7	0	<100	8	<5	<5	13	10	9	0	<1	272	0	3	2.1	<0.5	7.5	<20	4.7	<0.2	6.6	1.07	30.9	42.8	3.5	1.3
02-2611	1	<1	<1	25	8	1.5	0	<100	7	<5	<5	18	11	9	17	<1	254	0	2.8	<1	<0.5	7.3	<20	4.9	<0.2	6.6	1.15	33.3	45.2	2.7	1.3
02-2632	2	<1	<1	0	0	0.7	4	<100	11	<5	<5	0	4.7	6	6	<1	158	3	<2	1.3	<0.5	7	<20	2.5	0.2	21.2	0.84	14.5	48.8	<2	1.7
02-2633	2	<1	<1	0	1	0.7	5	206	11	6.5	<5	0	7.5	9	3	<1	176	3	2.7	<1	<0.5	6.4	<20	3	<0.2	28.8	0.88	14.2	36.2	<2	1.8
02-2634	2	<1	<1	0	0	0.7	7	117	11	<5	<5	0	6.3	7	5	<1	187	2	2.3	1.1	<0.5	6.6	<20	2.8	0.2	20.2	0.88	12.7	32.6	2.5	1.7
02-2635A	1	<1	<1	0	0	0.7	5	<100	10	6.6	<5	0	6.1	7	2	1	167	4	3.1	2.1	<0.5	6.6	<20	3	0.2	6.6	0.9	13.5	38.6	<2	1.8
02-2635B	2	<1	<1	0	0	0.7	11	117	3	<5	<5	1	14	8	4	<1	351	13	3.2	1.1	<0.5	7.8	<20	7.7	0.2	25.8	1.28	9.66	16.3	<2	1.8
02-2636	2	<1	<1	0	1	0.7	6	<100	10	8	<5	0	6.8	7	13	<1	190	4	4	<1	<0.5	6.7	<20	3.5	0.3	28.3	0.98	12.9	30.9	<2	1.8
02-2637	4	<1	<1	0	0	0.7	13	281	10	<5	<5	0	7.8	8	6	1.5	201	4	3.2	1.5	<0.5	6.8	<20	3.9	0.2	6.6	1	11.8	25.8	<2	1.7
02-2638	<1	<1	<1	0	1	0.7	78	171																							