GEOLOGICAL SURVEY OF CANADA

OPEN FILE 2217

TILL GEOCHEMISTRY IN THE VICINITY OF THE LATE DEVONIAN GRANITES OF THE HAYESVILLE AREA, CENTRAL NEW BRUNSWICK: A TRENCHING PROJECT

M. Lamothe

1990

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INTRODUCTION

As part of the Canada-New Brunswick Mineral Development Agreement (1984-89), regional till geochemical surveys were conducted over the Miramichi Zone and its vicinity. The results of these surveys are presented in a series of open files (e.g. Lamothe, 1989). This release is the result of a trenching project that was initiated in the vicinity of the tin-bearing granites of Central New Brunswick (Ruitenberg and Fyffe, 1985). The initial objectives were to use detailed geochemistry in the vicinity of known mineral occurrences as a data base to interpret the regional surveys , in terms of geochemical response and dispersal. This open file presents: a) the raw geochemical data obtained on two different grain size fractions of the regional till sheet, b) a series of plates to assess the parameters of dispersal for the major economic elements , and c) a series of reproducibility analyses. More than 250 trenches were opened in the summer of 1986 (86LFA2000) and 25 of those were reopened in the summer of 1987 (87LFA6000).

A) LOCATION AND BEDROCK GEOLOGY OF THE STUDY AREA

The area under investigation is located in the central part of New Brunswick. The samples were collected over the Hayesville map sheet (NTS 21 J 10), bounded by latitudes 46°30'N and 46°45'N and longitudes 66°30'W and 67°00'W. There, late Devonian granites intrude metasedimentary and metavolcanic rocks of the Tetagouche Group (Poole, 1963; Fyffe, 1982; Fyffe and McLennan, 1988; Fig. 1). These rocks are in faulted contact with the Magaguadavic slates of Silurian age. A series of tin and tungsten mineral occurrences have been described from this area (Fig. 2), and lithogeochemical analyses were recently published by Fyffe and McLennan (1988). Occurrences of economic interest are commonly located at the edge or slightly within the granitic intrusives (Ruitenberg and Fyffe, 1985). Example of the former is the Burnt Hill mine where quartz-vein swarms containing wolframite, cassiterite and base metals, were mined until 1956 (Poole, 1963).

B) OBJECTIVES AND METHODS OF THE TRENCHING PROJECT

In the summer of 1986, systematic trenching of the surficial deposits was carried out in the vicinity of these granites. The objectives were to study the geochemical response of these occurrences in the overlying till sheet as well as deciphering the till lithological variability and stratigraphy. The trenches had to be dug along dirt roads due to logistical constraints. They were performed by back-hoe which could reach a maximum depth of 3.5m. The trenches were spaced at a 250m interval. The location and number of the trenches are shown on Plate 1. Samples were taken at a regular vertical depth (Plates 2 to 9).

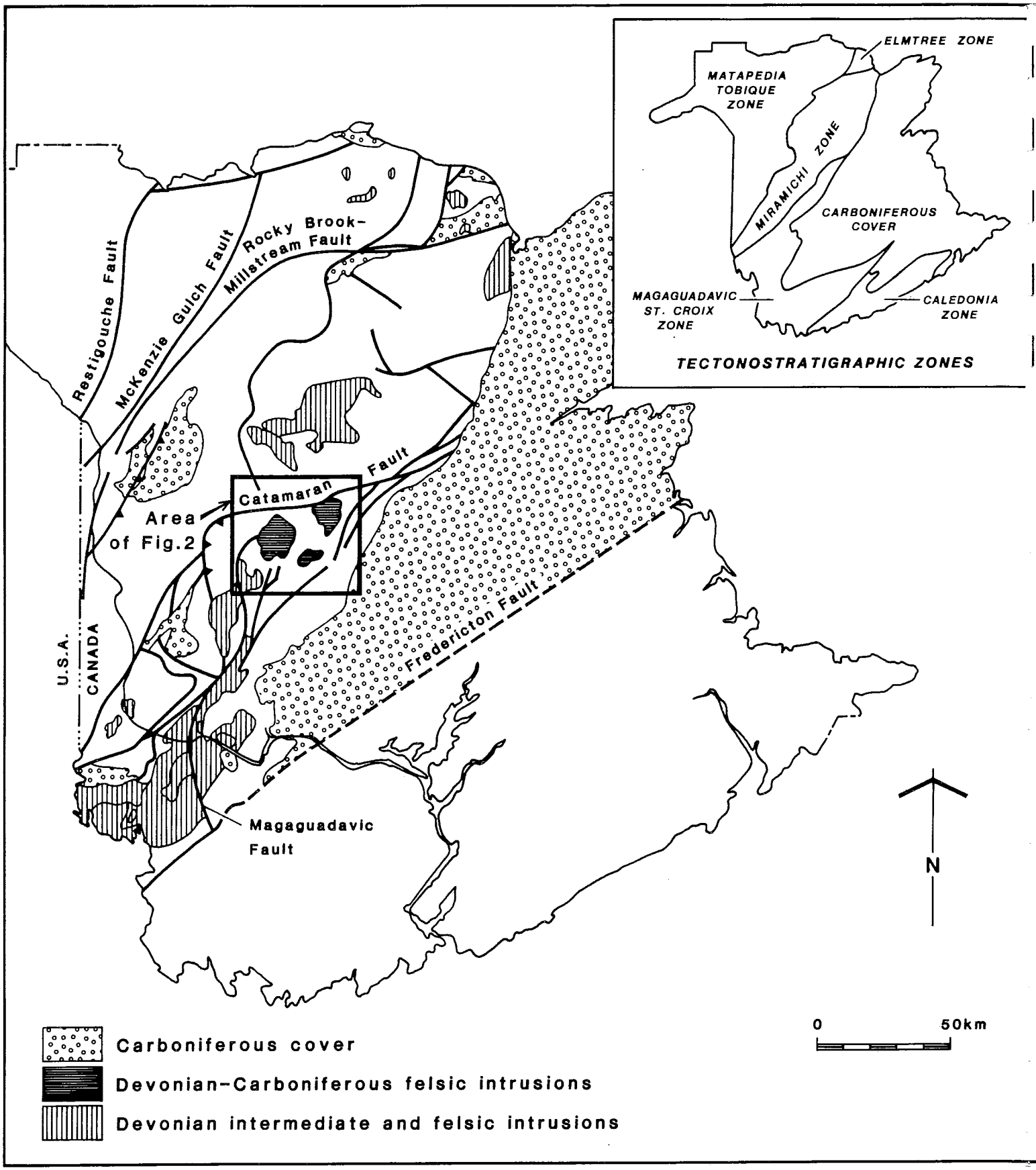

ELMTREE ZONE
MATAPEDIA
TOBIQUE
ZONE
MIRAMICHI ZONE
CARBONIFEROUS
COVER
MAGAGUADAVIC
ST. CROIX
ZONE
CALEDONIA
ZONE
TECTONOSTRATIGRAPHIC ZONES
Restigouche Fault
McKenzie Gulch Fault
Rocky Brook-
Millstream Fault
Catamaran Fault
Area
of Fig.2
U.S.A.
CANADA
Fredericton Fault
Magaguadavic
Fault
N
0
50km
Carboniferous cover
Devonian-Carboniferous felsic intrusions
Devonian intermediate and felsic intrusions

Figure 1

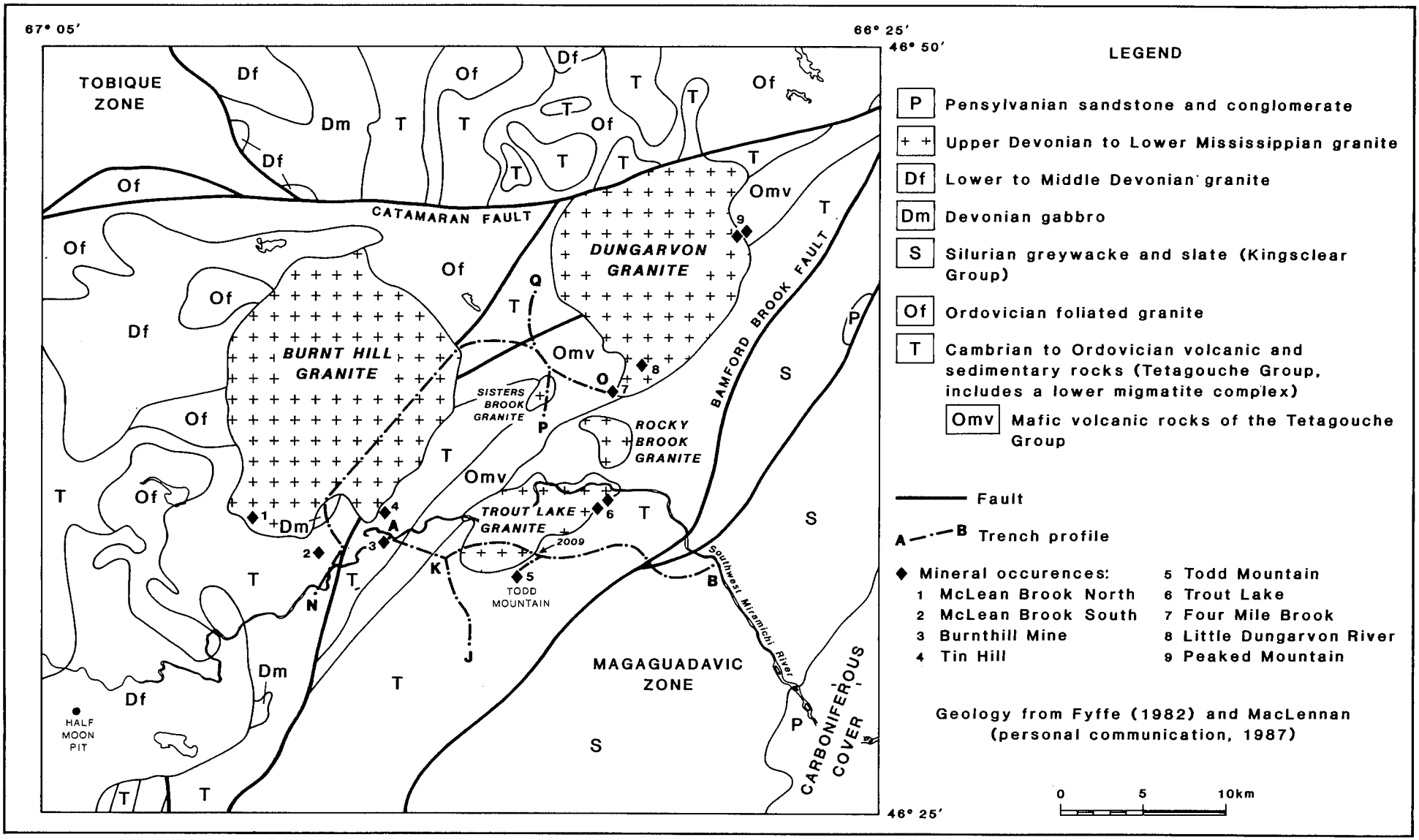

67° 05'
66° 25'
46° 50'
46° 25'
TOBIQUE ZONE
CATAMARAN FAULT
BAMFORD BROOK FAULT
DUNGARVON GRANITE
BURNT HILL GRANITE
SISTERS BROOK GRANITE
ROCKY BROOK GRANITE
TROUT LAKE GRANITE
TODD MOUNTAIN
HALF MOON PIT
MAGAGUADAVIC ZONE
Southwest Miramichi River
CARBONIFEROUS COVER
2009
LEGEND
P Pensylvanian sandstone and conglomerate
Upper Devonian to Lower Mississippian granite
Df Lower to Middle Devonian granite
Dm Devonian gabbro
S Silurian greywacke and slate (Kingsclear Group)
Of Ordovician foliated granite
T Cambrian to Ordovician volcanic and sedimentary rocks (Tetagouche Group, includes a lower migmatite complex)
Omv Mafic volcanic rocks of the Tetagouche Group
Fault
A B Trench profile
Mineral occurences:
1 McLean Brook North
2 McLean Brook South
3 Burnthill Mine
4 Tin Hill
5 Todd Mountain
6 Trout Lake
7 Four Mile Brook
8 Little Dungarvon River
9 Peaked Mountain
Geology from Fyffe (1982) and MacLennan (personal communication, 1987)
0 5 10km

Figure 2

As expected, the lateral and vertical lithological variability of the till sheet that overlies this area of the Miramichi Zone will be likely one of many factors that control till geochemistry . It can be seen from the lithological profile presented on Figure 3, that the till sheet varies over short distances in terms of texture and color, the latter reflecting probably different provenance and/or different pedogenesis. Also, a major Pleistocene stratigraphic unit was discovered as organic material was found between two members of the till sheet, in the vicinity of the Todd Mountain area (Fig. 4 and 5). It was dated at 11.5 ka BP (GSC-4277; Lamothe *et al.*, 1987). Details about the sedimentological and stratigraphical characteristics of the regional till sheet have been presented by Sacré (1989) and Plouffe (1986).

C) GEOCHEMICAL METHODS AND RESULTS

At each sampling site, approximately 1 kg of till was bagged and shipped to Bondar Clegg Co. Ltd (Ottawa) or Chemex Labs Ltd (Vancouver). The geochemical methods, and the detection limits for each elements are shown on Table I. The clay (<2μm) and clay plus silt (<63μm) size fractions were analyzed for a suite of elements, and the results are presented on Tables II and III. Since many samples have been analyzed more than once, reproducibility of the geochemical analyses and interlaboratory comparisons could be assessed. The duplicate analyses are grouped on Table IV and some results are shown graphically on Figures 6 to 18.

The top sample of the 1986 trenches (e.g. 86LFA200101) and every sample of the 1987 series were analyzed for gold. Plates 10 to 52 (in pocket) present the geochemical results expressed in percentiles extracted from the 1986 samples analyzed by Bondar Clegg Ltd (observation 1).

A multiple element geochemical map and the associated profiles (Sn, W, U, As, Zn) are presented on Plates 53 and 54. From this, it can be inferred that till is an immediate reflection of the underlying bedrock . The lengths of the dispersal trains in the till sheet are short, in the order of a few hundred meters. However, it should be noted that the orientation of the profiles drawn on Plates 53 and 54 are not necessarily parallel to the ice flow, which is mostly in an eastward to northeastward direction in this area (Rampton *et al.*, 1984).

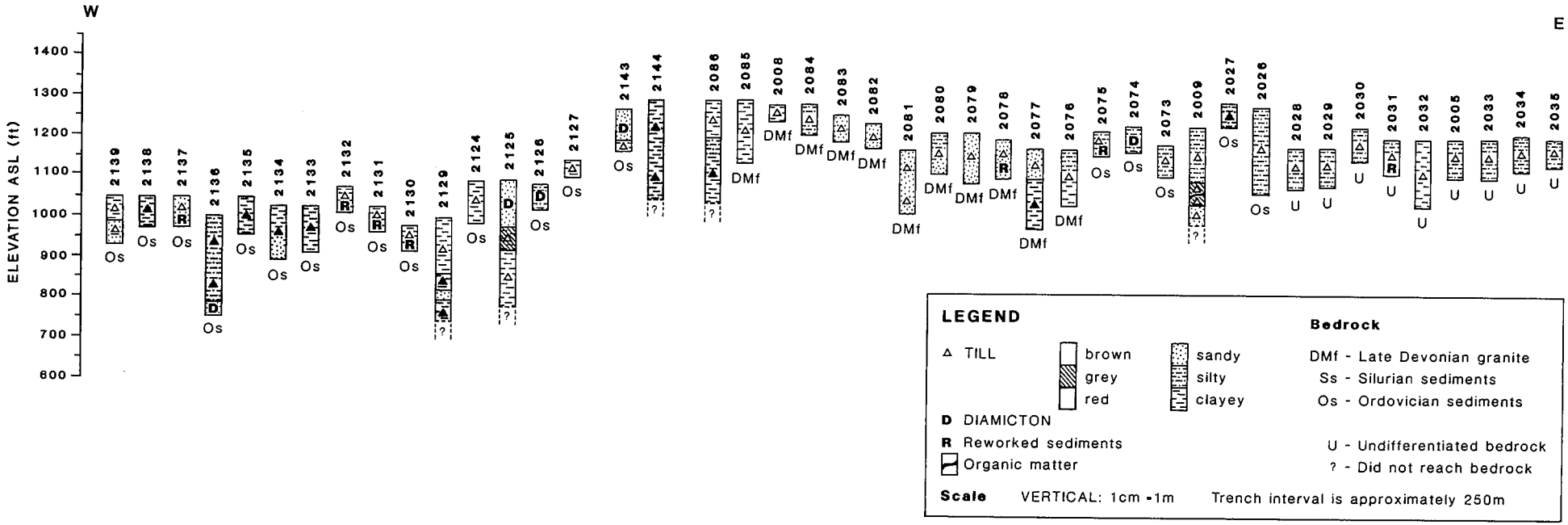

W
E
ELEVATION ASL (ft)
1400
1300
1200
1100
1000
900
800
700
600
2139
2138
2137
2136
2135
2134
2133
2132
2131
2130
2129
2124
2125
2126
2127
2143
2144
2086
2085
2008
2084
2083
2082
2081
2080
2079
2078
2077
2076
2075
2074
2073
2009
2027
2026
2028
2029
2030
2031
2032
2005
2033
2034
2035
Os
DMf
U
LEGEND
TILL
brown
grey
red
sandy
silty
clayey
D DIAMICTON
R Reworked sediments
Organic matter
Bedrock
DMf - Late Devonian granite
Ss - Silurian sediments
Os - Ordovician sediments
U - Undifferentiated bedrock
? - Did not reach bedrock
Scale VERTICAL: 1cm -1m
Trench interval is approximately 250m

Figure 3

TILL STRATIGRAPHY TODD MOUNTAIN AREA
TRENCH 2009

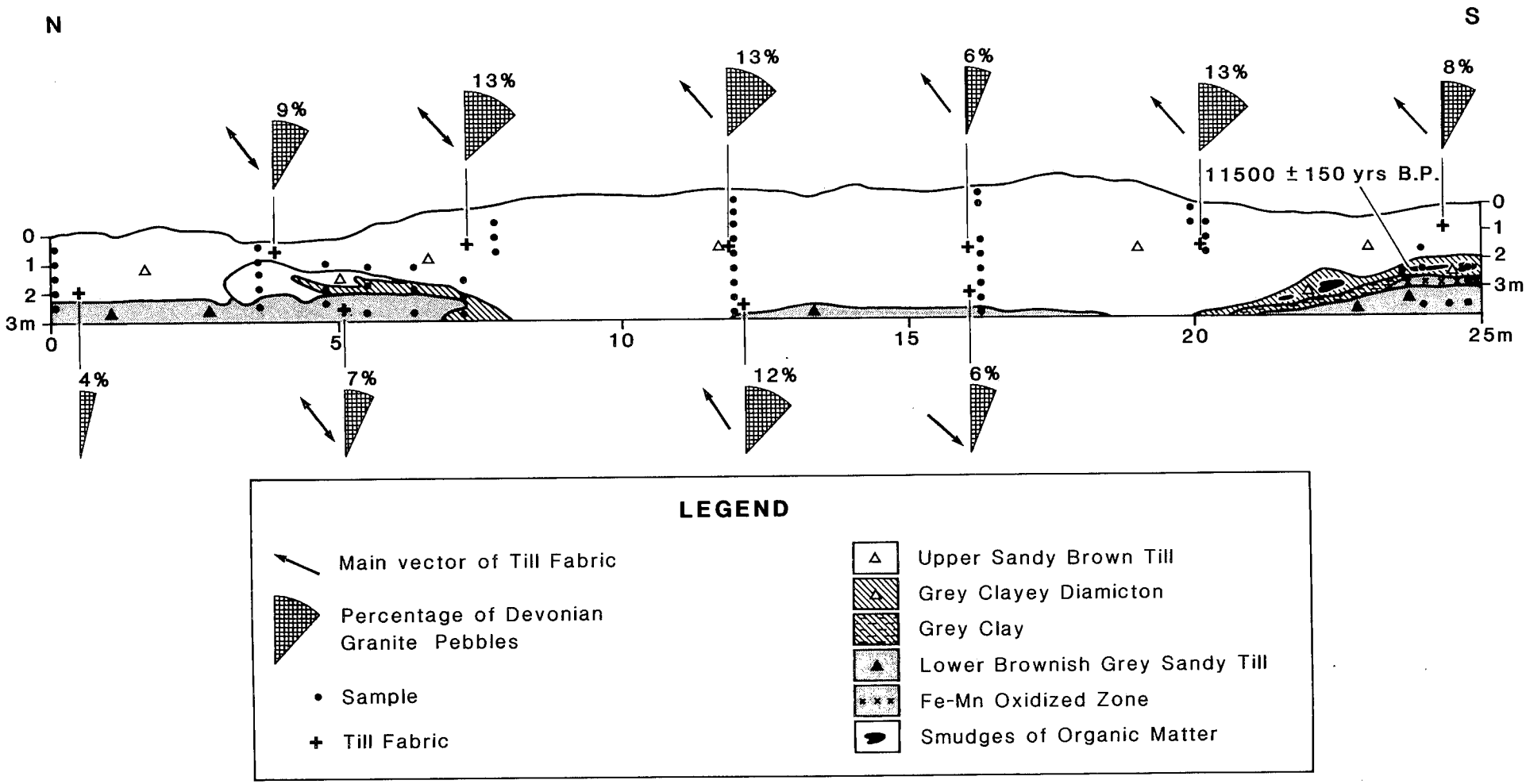


Figure 4

LOCATION OF TILL SAMPLES
TRENCH 2009

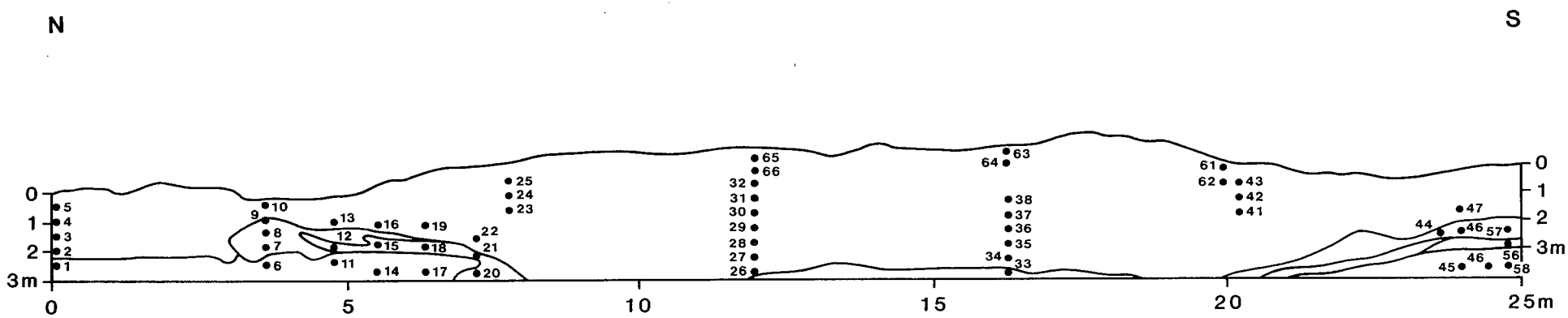


Figure 5

TABLE I

GEOCHEMICAL METHODS, DETECTION LIMITS, AND NOTES TO GEOCHEMICAL TABLES

Clay (<2 um) Fraction

As Arsenic	Colourimetric	2.0 ppm
Cd Cadmium	Atomic Absoption	0.2 ppm
Co Cobalt	Atomic Absorption	1.0 ppm
Cr Chromium	Atomic Absorption	2.0 ppm
Cu Copper	Atomic Absorption	1.0 ppm
F Fluorine	Specific Ion	20.0 ppm
Fe Iron	Atomic Absorption	0.1 pct
Hg Mercury	Atomic Absorption	5.0 ppb
Mn Manganese	Atomic Absorption	1.0 ppm
Mo Molybdenum	Atomic Absorption	1.0 ppm
Ni Nickel	Atomic Absorption	2.0 ppm
Pb Lead	Atomic Absorption	2.0 ppm
Sn Tin	Iodine Fusion	1.0 ppm
U Uranium	Fluorometric	0.1 ppm
W Tungsten	Colourimetric	2.0 ppm
Zn Zinc	Atomic Absorption	1.0 ppm

Clay plus silt (<63 um) Fraction

Element	Method	Detection Limit
As Arsenic	Atomic Absorption	1.0 ppm
Au Gold	Neutron Activation	1.0 ppm
Bi Bismuth	Atomic Absorption	0.1 ppm
Cu Copper	Atomic Absorption	1.0 ppm
Hg Mercury	Atomic Absorption	5.0 ppb
Mo Molybdenum	Atomic Absorption	1.0 ppm
Pb Lead	Atomic Absorption	1.0 ppm
Sb Antimonium	Atomic Absorption	0.2 ppm
Zn Zinc	Atomic Absorption	1.0 ppm

NOTES TABLES II TO IV

1) "blank" - not analysed
2) obs - laboratory; 1,2,3 ... Bondar Clegg and Co. Ltd
   10,11,12... Chemex Labs Ltd
3) values lower than detection limit indicated as half the detection limit
   e.g. Au - 1.0 ppb means Au <2.0 ppb
4) Sample numbering *YY LFA XXXX NN*
   YY=Year of sampling , LFA=Project leader's code
   XXXX=Code number of sample site , NN = Sample number

TABLE II GEOCHEMISTRY OF THE CLAY (<2 um) FRACTION OF TILL, HAYESVILLE TRENCHING PROJECT

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA200101	1	472	0.2	80	80	110	800	5.8	40	1100	2	104	26	23	2.8	12	249
86LFA200102	1	306	0.2	70	76	135	100	5.3	45	1550		101	23	27	3	10	208
86LFA200103	1	216	0.1	44	92	97	670	5.4	40	1100	1	102	24	15	2.6	6	192
86LFA200103	10		0.2	34	108	93		7.5		1080	1	105	18				201
86LFA200104	1	226	0.1	49	80	96	700	5	60	1600	1	98	32	9	2.8	4	188
86LFA200105	1	234	0.1	51	88	95	670	4.6	75	1800	1	126	33	15	3	8	255
86LFA200105	10		0.1	43	100	91		7.1		1460	1	120	24				273
86LFA200106	1	320	0.1	77	88	126	760	3.7	105	1980	1	85	47	18	3.7	6	222
86LFA200202	1	57	0.1	31	84	66	730	4.3	40	840		79	32	13	3.6	8	146
86LFA200202	10	70	0.1	26	90	60		6.4		850	2	83	26	2	3	7	138
86LFA200301	1	362	0.3	47	68	119	880	4.8	40	1288	2	73	28	14	2.8	8	197
86LFA200301	2	342	0.1	41	60	98	1050	3.1	65	1499	2	150	37	22	2.1	8	291
86LFA200301	10	350	0.1	44	90	97		7		1460	2	95	23	6	1.8	6	178
86LFA200302	1	344	0.5	43	72	78	1000	4.3	60	1120	4	85	23	18	3.2	10	220
86LFA200302	10	300	0.1	51	92	101		7.1		1360	6	105	27	6	2.3	7	192
86LFA200401	1	40	0.1	21	64	46	830	4	50	800		62	38	20	8.1	2	123
86LFA200401	10	25	0.1	21	74	42		5.6		810	1	64	31	3	5	8	132
86LFA200502	1	68	0.1	34	76	73	760	4.5	40	1200		80	27	7	2.4	2	183
86LFA200502	10	41	0.1	28	82	67		6.8		1240	2	81	24	2	1.8	3	164
86LFA200503	1	103	0.1	39	76	71	700	4.8	65	1180	1	80	31	12	2.6	6	171
86LFA200503	10	80	0.1	33	90	72		6.6		1320	2	83	27	2	1.9	4	186
86LFA200601	1	61	0.1	30	88	68	730	5	30	900	1	93	25	7	2.2	4	151
86LFA200601	10	46	0.1	23	94	61		6.8		840	2	90	23	1	1.6	4	154
86LFA200601	11	70	0.1	24	96	59		7.1		880	2	90	25	2	1.4	6	157
86LFA200602	1	67	0.1	32	86	69	830	5.2	40	1000		84	34	9	2.4	6	158
86LFA200602	2	69	0.1	31	84	64	880	4.9	30	1041	0.5	76	33	4	2	6	145
86LFA200602	10	50	0.1	25	88	62		6.7		940	4	84	27	1	1.6	3	142
86LFA200602	11	60	0.1	27	98	64		7.3		1020	2	92	19	2	2.4	7	153
86LFA200701	1	50	0.1	32	94	64	670	5.2	40	1180		87	34	11	2.6	18	163
86LFA200701	10	60	0.1	26	98	57		7		1120	1	89	27	1	2	18	148
86LFA200702	1	61	0.1	34	90	65	730	3.8	65	820		81	33	8	3.3	30	120
86LFA200702	10	51	0.1	28	86	59		5.6		860	3	77	27	2	2.2	27	113
86LFA200801	1	63	0.1	26	80	49	1075	4.1	70	1500	2	67	74	26	35	8	138
86LFA200801	10	70	0.1	23	82	44		7.3		1700	5	70	62	5	22	8	151
86LFA200901	1	89	0.1	29	86	74	870	4.8	40	1030		93	29	12	3	8	167
86LFA200901	10	80	0.1	26	96	66		7.2		1080	3	96	24	2	2.3	7	171
86LFA200902	1	79	0.1	32	88	73	800	4.7	40	1000		91	27	13	3.5	6	183
86LFA200902	2	66	0.1	23	88	66		5.8		960	2	92	25	15	2.9	8	216
86LFA200902	10		0.1	27	108	68		7.2		1050	1	92	21				182
86LFA200903	1	79	0.1	36	82	83	730	4.7	30	1030		93	31	6	3.1	10	160
86LFA200903	2	88	0.1	34	76	81	850	4.8	25	1114	0.5	85	32	8	2.8	8	154
86LFA200904	1	56	0.1	32	86	74	610	3.6	60	1090		110	27	11	3	10	169
86LFA200905	1	79	0.1	39	96	63	670	4.4	120	1200	2	121	36	10	1.6	12	168
86LFA200905	10	80	0.1	34	100	55		7.1		1420	3	126	28	3	1.8	9	161
86LFA200906	1	89	0.1	34	88	75	830	5.1	40	1000	2	92	27	8	4.3	10	166
86LFA200906	10	70	0.1	26	90	65		7.2		1000	2	90	21	1	2	8	156
86LFA200907	1	86	0.1	35	88	77	730	4.6	40	1000		99	25	5	3.8	6	175
86LFA200908	1	86	0.1	30	84	70	730	4.5	35	1000		87	22	12	3.8	8	173

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA200908	10	65	0.1	25	90	64		6.1		950	4	89	27	2	2.4	7	148
86LFA200908	11	70	0.1	25	84	62		6.5		940	2	90	21	1	1.8	7	149
86LFA200909	1	72	0.1	29	86	70	730	4.1	40	1000		98	28	14	3.8	8	152
86LFA200909	10	57	0.1	25	86	62		6.2		940	4	98	24	3	2.4	7	158
86LFA200909	11	65	0.1	26	90	61		6.3		960	1	104	25	2	2.2	7	148
86LFA200910	1	61	0.1	33	96	63	800	4	70	1900		121	28	11	2.3	12	163
86LFA200910	10		0.1	28	108	57		6.4		1220	1	121	22				164
86LFA200910	11	60	0.1	28	96	54		6.6		1180	1	124	26	2	1.4	9	150
86LFA200911	1	96	0.1	29	86	72	800	4.1	35	980	1	86	26	8	4.3	10	195
86LFA200911	2	95	0.1	26	80	64	960	4.9	30	975	0.5	76	29	4	2.4	8	152
86LFA200912	1	76	0.1	39	84	71	960	5	40	970		82	43	12	2.7	8	159
86LFA200913	1	83	0.1	34	88	70	960	5	40	920	2	92	32	12	3	10	120
86LFA200914	1	84	0.1	31	88	72	800	5.1	40	1100	6	89	27	9	3.8	8	174
86LFA200915	1	26	0.1	46	98	70	760	3.7	30	640	3	114	44	13	3.5	8	176
86LFA200915	10	16	0.1	37	102	57		5.1		650	4	108	35	1	2.5	9	170
86LFA200916	1	63	0.1	34	90	74	960	4.9	30	850		93	43	11	4	8	148
86LFA200916	10	43	0.1	31	96	63		7.3		830	2	98	33	2	2	9	145
86LFA200917	1	98	0.2	34	84	79	730	5.2	40	1600	1	91	27	8	2.8	10	148
86LFA200917	10		0.1	29	106	70		7.1		1600	1	89	23				162
86LFA200917	11	70	0.1	28	90	66		7.6		1620	2	91	24	1	2.4	10	151
86LFA200918	1	19	0.3	46	102	79	870	4.5	35	620	1	106	43	15	3.5	8	175
86LFA200918	10	15	0.1	38	104	65		6.1		620	2	100	34	2	2.6	10	140
86LFA200919	1	88	0.1	36	92	74	730	4.8	40	1620		92	27	9	2.5	10	169
86LFA200919	10		0.1	29	110	68		7		1720	1	96	24				160
86LFA200919	11	67	0.1	29	88	60		7		1680	3	94	25	1	2.4	8	143
86LFA200920	1	54	0.7	45	96	83	830	4.8	30	640	2	106	42	11	3.5	6	185
86LFA200920	10	39	0.3	37	100	74		7		690	4	108	33	2	2.8	7	84
86LFA200921	1	43	0.4	42	96	78	960	4.9	30	660	2	105	42	10	3.7	8	182
86LFA200922	1	48	0.1	32	88	78	660	4.2	30	720		95	43	10	2.6	8	157
86LFA200922	2	33	0.1	25	88	70		4.8		760	2	93	43	7	2.9	8	188
86LFA200922	10		0.1	28	108	70		5.5		740	1	94	33				166
86LFA200923	1	101	0.1	29	88	73	820	4.9	40	1000	1	94	31	12	2.6	10	156
86LFA200923	2	68	0.1	22	86	64		5.8		1300	2	92	29	12	3.4	8	207
86LFA200923	10		0.1	27	106	66		6.7		1100	2	92	21				160
86LFA200923	11	60	0.1	26	92	63		6.8		1080	1	94	21	4	2.1	8	158
86LFA200924	1	69	0.1	28	84	69	660	4.5	40	1000		95	32	12	2.4	10	153
86LFA200924	10	60	0.1	28	98	65		6.7		1100	2	106	24	2	2.1	9	159
86LFA200925	1	63	0.1	26	88	77	720	4.2	45	1000		119	32	12	2.2	6	148
86LFA200926	1	115	0.3	41	88	74	920	4.9	65	1500		104	34	13	3.5	8	109
86LFA200927	1	84	0.2	27	92	70	750	5.2	45	1000		65	25	9	3	8	143
86LFA200927	10	60	0.1	26	102	61		7.1		1000	2	83	23	1	2.4	8	166
86LFA200927	11	70	0.1	27	102	60		7		1060	2	88	31	3	2.4	8	164
86LFA200928	1	85	0.1	28	90	70	850	5.1	35	980		87	26	10	3	6	139
86LFA200928	2	79	0.1	31	84	65	1000	5.1	20	975	0.5	79	29	9	2.2	12	157
86LFA200928	10	70	0.1	26	94	60		6.8		900	4	81	23	2	2	8	154
86LFA200928	11	70	0.1	26	94	61		6.8		920	1	85	21	3	2.2	9	156
86LFA200929	1	74	0.3	25	82	70	750	4.8	40	900		90	23	9	2.5	10	167
86LFA200929	2	64	0.1	21	84	64		6.8		980	2	88	25	8	2.9	8	176
86LFA200929	10		0.1	24	106	65		6.8		940	1	89	20				165
86LFA200930	1	82	0.1	27	80	67	750	5	40	960		90	26	2	3	6	167

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA200930	2	56	0.2	21	88	63		5.8		940	2	93	27	7	3.5	8	210
86LFA200930	10		0.1	23	105	63		6.9		1000	1	88	21				170
86LFA200931	1	79	0.1	27	76	72	690	4.4	40	1000		103	29	13	3.2	10	140
86LFA200931	2	54	0.1	23	78	79		5.7		1100	2	104	32	14	4	8	195
86LFA200931	10		0.1	25	100	66		6		1000	2	105	24				151
86LFA200931	11	70	0.1	27	88	65		6.4		1020	2	110	26	4	2.6	9	145
86LFA200932	1	81	0.1	27	90	57	720	4.4	60	900	1	117	30	16	1.8	12	150
86LFA200933	1	114	0.3	32	84	80	690	4.8	75	1800		102	30	10	2.2	18	159
86LFA200933	10	90	0.1	32	96	69		6.8		1460	1	102	21	3	1.8	14	171
86LFA200934	1	80	0.2	31	86	70	780	4.9	40	1180		93	31	14	2.6	6	159
86LFA200934	10	70	0.1	30	100	62		7		1280	1	93	24	2	2.2	7	159
86LFA200935	1	47	0.1	32	80	66	750	5.1	40	1000	1	89	31	10	2.6	8	169
86LFA200935	10	60	0.1	26	100	60		7.1		960	2	82	24	2	1.9	6	166
86LFA200935	11	60	0.1	25	90	59		6.8		920	2	84	22	2	2.2	7	152
86LFA200936	1	66	0.2	29	80	69	690	5.1	35	970		92	31	9	3	6	172
86LFA200936	2	54	0.1	22	86	72		6.5		1000	2	89	29	10	3.3	8	189
86LFA200936	10		0.1	25	110	64		7.1		1000	2	86	22				178
86LFA200937	1	82	0.1	32	88	71	720	4.7	40	980		93	26	10	2.7	8	172
86LFA200937	2	70	0.1	23	80	75		6.8		970	2	92	29	11	2.3	8	174
86LFA200937	10		0.1	25	106	65		6.9		980	2	89	22				166
86LFA200938	1	81	0.1	34	86	71	660	4.4	40	1100		111	31	9	2.5	10	155
86LFA200938	10	70	0.1	27	90	63		6.5		1040	1	111	25	3	2.4	8	152
86LFA200941	1	71	0.1	32	84	69	635	4.8	45	1000		93	28	8	2.5	8	155
86LFA200941	10		0.1	24	110	61		6.8		980	1	91	21				166
86LFA200941	11	60	0.1	24	92	62		6.9		960	1	88	21	2	1.8	9	156
86LFA200942	1	82	0.1	31	82	74	660	4.4	40	1000		100	27	10	2.8	10	142
86LFA200942	10	60	0.1	25	86	68		6.3		1040	1	97	21	3	2	8	145
86LFA200943	1	75	0.1	30	90	68	720	4.2	40	940	1	125	31	15	2.1	8	161
86LFA200943	10	60	0.1	27	100	65		6.3		1060	2	125	26	2	1.8	9	153
86LFA200944	1	23	0.1	50	96	74	850	4.1	75	600		103	48	6	3.3	6	174
86LFA200945	1	168	0.1	47	80	82	750	4.9	30	1550	1	100	36	16	3.3	10	158
86LFA200945	10	120	0.1	41	88	75		7.1		1980	5	100	30	2	2.8	7	165
86LFA200946	1	103	0.1	37	84	75	690	4.7	55	1100		97	30	9	3.3	4	156
86LFA200947	2	80	0.1	25	82	76		6		1300	1	97	30	12	2.8	8	211
86LFA200947	10		0.1	27	104	63		7		1200	2	98	23				154
86LFA200948	1	111	0.1	22	78	63	690	7.2	45	920		71	40	5	3	6	129
86LFA200948	2	116	0.1	21	76	63	850	7.7	35	976	0.5	66	43	9	2.8	6	130
86LFA200948	10	80	0.1	22	88	61		12		930	3	72	31	3	2.3	6	137
86LFA200956	1	166	0.2	28	76	61	1050	5.7	60	9200	5	69	29	6	1.6	8	201
86LFA200957	1	32	0.4	32	88	65	1075	5	40	800	4	82	36	11	4.2	8	218
86LFA200957	10	25	0.1	41	100	62		6.9		780	4	93	33	4	2.5	6	160
86LFA200958	1	52	0.1	24	68	59	890	4.3	35	660	3	82	19	6	3.9	8	205
86LFA200961	1	66	0.1	22	80	65	920	4.8	80	940	3	83	31	7	2.9	10	191
86LFA200962	1	47	0.1	20	76	62	1000	5	40	880	3	70	26	5	2.9	12	189
86LFA200963	1	61	0.1	20	80	70	1000	5	60	880	4	87	33	6	3.8	12	173
86LFA200964	1	62	0.1	20	84	62	1075	5	50	940	3	70	25	6	3	12	179
86LFA200965	1	64	0.1	22	80	64	890	4.8	75	920	4	86	29	10	4.2	12	172
86LFA200966	1	55	0.1	21	80	66	1175	5.3	40	980	3	69	26	8	2.4	12	207
86LFA201001	1	93	0.1	33	84	64	690	4.8	35	1000		89	24	5	1.4	4	148
86LFA201001	2	62	0.1	24	86	65		6.2		1200	1	89	25	7	1.7	6	204
86LFA201001	10		0.1	26	108	58		6.9		1080	1	88	18				149

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA201001	11		0.1	24	106	57		6.6		1060	1	84	17				150
86LFA201002	1	62	0.1	44	76	63	585	4.1	40	1480		85	39	8	1.9	6	147
86LFA201201	1	326	0.1	63	76	129	660	4.5	85	1200		99	34	11	2.8	6	147
86LFA201201	10	280	0.1	50	86	119		6.7		1320	2	97	27	3	2.3	3	141
86LFA201301	1	308	0.1	90	78	158	1400	5.8	100	2250		115	40	26	2.1	14	155
86LFA201301	10	280	0.1	73	92	162		8.8		2200	1	120	31	7	1.8	17	157
86LFA201302	1	584	0.1	169	64	236	1250	6.3	40	5000		113	40	24	1.6	10	173
86LFA201401	1	358	0.1	89	74	143	1050	5	40	2380		103	35	20	2.3	12	176
86LFA201401	10	310	0.1	72	86	137		8		2300	1	106	28	6	1.6	8	184
86LFA201402	1	264	0.1	92	78	126	890	4.8	60	2000		109	37	23	1.7	10	200
86LFA201501	1	592	0.8	84	76	157	1050	5	105	1950		131	29	24	2.5	6	355
86LFA201601	1	512	0.5	52	84	99	780	5.1	40	1400		94	24	22	2	6	190
86LFA201602	1	640	0.1	78	76	146	560	5	40	1700	1	99	36	24	2.5	6	182
86LFA201701	1	110	0.1	46	84	83	420	5	30	1150		93	27	9	2.4	4	161
86LFA201701	2	90	0.1	31	82	79		6.7		1600	1	89	29	11	2.1	8	201
86LFA201701	10		0.1	32	106	78		7		1180	2	95	21				166
86LFA201701	11	110	0.1	35	90	76		7.2		1260	1	91	20	2	1.7	7	161
86LFA201702	1	145	0.1	46	84	82	460	5.3	75	1200		97	27	12	2.9	6	100
86LFA201702	2	87	0.1	35	86	75		6.6		1600	1	97	25	17	2.7	8	211
86LFA201702	10		0.1	37	104	78		7.2		1300	1	93	21				173
86LFA201703	1	109	0.2	42	80	79	610	5	40	1210		93	29	9	2.1	6	167
86LFA201703	10	100	0.1	37	94	74		7.1		1450	2	98	22	2	1.5	6	164
86LFA201704	1	87	0.2	35	76	66	750	4.9	40	1000		82	27	8	1.6	6	165
86LFA201704	10	70	0.1	27	90	61		7.1		1100	1	82	22	1	1.3	6	163
86LFA201801	1	173	0.1	37	70	71	960	5	40	1000		75	30	23	1.6	6	188
86LFA201801	2	175	0.1	35	64	72	1250	5.2	30	1144	0.5	71	31	17	1.8	6	198
86LFA201801	10	150	0.1	28	82	66		6.8		1080	1	70	24	2	1.1	6	177
86LFA201802	1	124	0.1	37	92	70	560	4	40	860		99	46	14	3.3	6	193
86LFA201802	10	80	0.1	37	98	68		5.8		950	4	94	41	2	2.2	7	197
86LFA201803	1	194	0.3	40	78	75	660	4.9	25	1180		89	38	14	3	4	163
86LFA201804	1	93	0.2	36	76	67	820	4.9	75	1180	1	86	32	12	2	6	156
86LFA201804	2	71	0.3	25	88	64		6.8		1300		82	30	12	2.1	8	212
86LFA201804	10		0.1	27	102	66		7.1		1120	2	84	24				162
86LFA201804	11	70	0.1	28	90	65		7.3		1200	1	81	23	1	1.6	5	162
86LFA201901	1	46	0.1	35	78	58	820	5.1	95	1000		80	26	14	1.8	4	170
86LFA201901	10	30	0.1	27	94	55		7.2		1020	1	81	21	3	1	5	168
86LFA201902	1	54	0.2	34	74	75	610	5.1	30	1000		83	30	13	1.9	4	163
86LFA201902	10	36	0.1	27	84	67		7.2		1080	1	78	24	1	1.2	2	151
86LFA201903	1	62	0.1	32	76	69	850	4.7	40	920		87	27	14	1.6	6	165
86LFA201904	1	59	0.4	38	76	79	560	4.9	40	1220		89	33	8	1.6	4	181
86LFA201905	1	378	0.5	89	84	126	610	3.9	45	2250		122	58	12	4.5	6	261
86LFA202001	1	160	0.8	36	76	76	920	4.8	40	1000		87	42	12	2.3	6	207
86LFA202001	2	132	0.8	25	72	70		6.2		1200		83	40	11	2.3	8	222
86LFA202001	10		0.4	26	90	68		6.6		940	1	78	34				213
86LFA202002	1	62	0.3	32	76	67	660	4.9	180	1000		81	27	11	3.5	6	154
86LFA202002	2	52	0.2	23	80	64		6.4		1200		78	28	12	2.5	8	201
86LFA202002	10		0.1	24	90	55		6.5		990	1	75	20				145
86LFA202002	11	46	0.1	26	90	64		7		1120	1	80	23	2	1.3	4	160
86LFA202003	1	87	0.1	34	80	51	585	3.9	40	780	1	77	44	13	1.5	6	151
86LFA202101	1	150	0.2	42	76	79	690	4.8	40	1400	1	94	44	14	1.6	2	208
86LFA202101	10		0.3	31	92	70		6.5		1380	1	95	35				200

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA202201	1	298	0.1	34	330	81	660	4.7	155	880		129	27	44	2.6	14	171
86LFA202201	10		0.2	26	340	82		6.1		860	1	165	22				189
86LFA202301	1	880	0.1	41	48	61	315	4.5	40	920		44	15	33	1.6	2	103
86LFA202302	1	528	0.5	72	60	79	420	5	30	1580		77	18	23	1.1	2	151
86LFA202401	1	552	0.7	60	76	969	1000	4.5	30	1670		106	27	22	1.8	4	403
86LFA202401	10		0.7	44	96	97		6.2		1580	1	110	20				442
86LFA202601	1	94	0.1	39	80	66	820	4.8	40	1000		87	24	13	2.2	4	147
86LFA202601	10		0.1	28	102	62		6.8		980	1	92	18				165
86LFA202602	1	86	0.1	40	84	61	690	4.3	40	1100		87	20	13	2.7	6	136
86LFA202603	1	139	0.1	44	88	73	850	5.2	30	1300		91	23	15	2	4	158
86LFA202603	2	126	0.1	29	98	75		7		1400	1	93	27	15	2.2	6	217
86LFA202603	10		0.1	31	102	70		6.9		1190	1	88	19				162
86LFA202604	1	155	0.1	51	84	85	750	5.3	40	1380		96	29	16	2	4	170
86LFA202604	2	151	0.1	48	86	85	960	5.3	40	1423	0.5	93	30	12	2	6	160
86LFA202604	10	120	0.1	41	98	81		7.6		1420	3	102	21	3	2	3	167
86LFA202605	1	126	0.1	48	88	66	660	4.4	30	1100		83	29	14	1.6	4	142
86LFA202701	1	108	0.1	39	80	75	850	4.8	40	1200		89	31	17	2.6	6	163
86LFA202701	2	122	0.1	34	78	73	1050	5.2	45	1111	0.5	86	33	14	3	6	152
86LFA202801	1	284	0.1	52	78	90	920	5	150	1370		94	25	19	2	6	178
86LFA202801	10	300	0.1	42	92	95		7.5		1360	3	101	19	4	1.9	4	191
86LFA202802	1	256	0.1	49	84	86	970	5.4	45	1480		96	27	19	2	6	167
86LFA202802	10	250	0.1	38	98	80		7.3		1500	1	99	22	3	1.7	4	161
86LFA202901	1	266	0.1	65	78	87	920	4.6	40	1500		94	27	16	2.4	2	187
86LFA202901	10	240	0.1	50	88	80		6.6		1580	4	100	23	3	2.6	3	195
86LFA203001	1	226	0.1	71	72	107	780	4.4	40	1450		89	40	12	2	6	188
86LFA203001	10	210	0.1	57	86	124		6.5		1560	4	94	35	1	2.4	2	195
86LFA203101	1	656	0.1	68	74	119	610	5.7	55	1490	1	70	53	24	2	10	177
86LFA203201	1	225	0.1	34	72	73	950	4.9	90	940	1	78	22	14	2.8	6	193
86LFA203201	10	210	0.1	29	84	72		7		900	2	81	22	2	2.4	3	204
86LFA203202	1	448	0.3	38	72	82	780	4.8	195	1050	1	78	30	15	2.2	6	193
86LFA203203	1	230	0.1	37	70	80	850	4.5	40	1200	1	77	31	21	1.9	6	177
86LFA203203	2	286	0.3	29	68	77		5.8		1400	1	77	32	15	1.9	8	186
86LFA203203	10		0.1	30	90	78		6.3		1180	1	78	25				180
86LFA203204	1	262	0.1	48	84	73	635	4.2	40	1100	2	88	45	13	1.2	4	181
86LFA203301	1	77	0.1	30	60	96	690	4.7	40	660	1	72	38	9	2.8	2	148
86LFA203301	10		0.1	24	72	89		6.6		660	1	77	29				136
86LFA203302	1	90	0.1	41	70	82	450	4.7	160	1100	1	76	36	11	1.4	4	146
86LFA203401	1	504	0.1	38	76	97	890	4.4	60	1000	2	78	28	22	1.9	10	183
86LFA203501	1	78	0.1	21	70	70	820	4.6	55	780	2	73	38	19	4.9	12	163
86LFA203501	2	55	0.2	25	70	71		6		950		76	40	11	4	8	219
86LFA203501	10		0.1	25	88	66		6.4		840	2	71	31				153
86LFA203501	11		0.1	25	90	67		6.5		850	1	74	31				150
86LFA203502	1	60	0.1	26	80	60	920	4.4	50	820	2	75	43	19	2.8	10	169
86LFA203502	2	49	0.2	19	84	60		6		950	2	75	40	16	2.5	8	208
86LFA203502	10		0.1	20	96	56		6.4		800	1	70	32				169
86LFA204001	1	302	0.2	30	64	73	960	4.7	35	1000	2	71	25	20	1.7	8	191
86LFA204002	1	350	0.3	31	72	81	1150	4.9	20	940	2	76	27	19	2	8	186
86LFA204002	2	296	0.2	31	68	77	1050	5.2	25	920	0.5	72	30	16	2.2	10	200
86LFA204003	1	370	0.2	35	72	81	960	4.6	20	1000	2	75	33	21	2.6	8	180
86LFA204003	2	324	0.1	23	78	84		6		1100		74	30	20	2.1	12	181
86LFA204003	10		0.1	26	88	71		6.2		1000	1	72	27				174

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA204004	2	317	0.1	25	84	87		6.3		990	2	75	38	20	1.9	8	178
86LFA204004	10		0.1	26	92	73		6.3		900	1	73	30				172
86LFA204301	1	184	0.1	34	52	87	1250	4.5	30	920	3	62	42	12	2.1	6	154
86LFA204301	2	166	0.1	22	52	92		6.2		1000	2	61	39	14	1.9	8	202
86LFA204301	10		0.1	25	72	87		6.2		940	1	63	36				156
86LFA204302	1	181	0.1	31	58	78	1050	4.3	30	840	3	66	39	17	3	6	152
86LFA204401	1	69	0.2	46	30	99	1050	6.5	30	1300	26	114	33	6	1.2	2	170
86LFA204402	1	55	0.1	41	38	90	1150	6.5	545	920	13	90	30	6	1.3	2	144
86LFA204403	1	61	0.2	44	46	86	880	6.2	65	1100	14	76	40	6	1.6	2	163
86LFA204501	1	79	0.1	31	70	69	960	4.4	620	900	2	73	34	15	1.7	4	140
86LFA204501	2	59	0.1	22	76	75		6.1		960	2	74	29	10	2.1	6	165
86LFA204501	10		0.1	26	92	69		6.2		920	1	74	29				147
86LFA204601	1	72	0.1	42	72	74	1050	4.9	210	1200	2	85	29	6	2.3	4	149
86LFA204601	2	60	0.1	29	76	78		7		1300	2	85	29	10	1.9	4	172
86LFA204601	10		0.1	30	86	71		6.6		1200	1	80	25				152
86LFA204601	11		0.1	31	90	70		6.7		1160	1	81	26				154
86LFA204602	1	81	0.1	31	68	69	880	4.8	135	1100	2	81	27	6	1.9	4	158
86LFA204602	10	60	0.1	25	82	64		6.5		1020	5	76	25	1	1.8	1	154
86LFA204602	11	60	0.1	26	80	62		6.8		1040	1	73	25	2	1.3	3	153
86LFA204701	1	77	0.1	27	66	67	1100	4.6	125	800	2	76	23	5	1.4	4	145
86LFA204701	10	60	0.1	21	80	62		6.8		760	1	73	22	1	1	2	151
86LFA204702	1	51	0.1	30	76	67	920	4.9	65	1000	1	76	22	8	0.9	2	147
86LFA204702	10	36	0.1	23	90	62		7.1		940	4	81	17	1	1.2	2	145
86LFA204702	11	43	0.1	23	90	61		6.8		980	1	77	16	1	0.7	2	143
86LFA204703	1	226	0.1	72	88	89	660	5.2	40	2100	3	101	50	10	2.3	4	150
86LFA204704	1	276	0.1	45	92	66	720	6.1	30	1400	3	71	36	7	1	6	162
86LFA204801	1	95	0.1	35	92	89	1050	5	125	1400	2	72	30	18	3	6	157
86LFA204801	2	77	0.1	23	88	96		6		1600	2	70	26	16	2.5	8	184
86LFA204801	10		0.1	26	104	82		6.8		1280	2	73	24				167
86LFA204802	1	101	0.1	37	92	85	1100	5.1	150	1500	2	71	30	16	3.5	8	168
86LFA204803	1	98	0.1	31	98	86	880	5	30	1300	3	77	27	15	2.8	6	156
86LFA204803	10	65	0.1	24	106	78		6.8		1320	4	75	23	2	2.7	4	154
86LFA204804	1	69	0.1	17	60	75	880	4.2	30	760	3	78	30	9	1.6	2	147
86LFA204804	10	43	0.1	24	78	65		6.5		760	5	77	27	1	0.8	2	148
86LFA204810	1	69	0.1	25	80	77	1100	5.1	40	1200	3	53	28	15	2.9	12	192
86LFA204810	2	70	0.1	12	92	96		5.6		1800		63	30	18	4.4	8	176
86LFA204810	10		0.1	27	96	77		6.6		1320	1	61	26				155
86LFA204901	1	102	0.1	47	70	111	920	4.9	40	1100	3	80	35	8	3.5	14	144
86LFA204901	2	74	0.1	46	68	109	960	5.3	55	1138	0.5	72	36	9	4.1	14	154
86LFA204902	1	90	0.1	41	66	95	1200	4.8	75	1100	2	70	27	14	3	10	145
86LFA204902	2	74	0.1	21	68	107		8		1600		67	30	10	2.9	12	157
86LFA204902	10		0.1	31	90	99		6.8		1140	2	74	23				160
86LFA204903	1	90	0.1	40	68	94	1100	4.8	55	1200	3	73	32	13	3.3	10	140
86LFA204903	2	65	0.1	30	74	90		6.2		1000	2	82	26	12	2.7	12	169
86LFA204903	10		0.1	32	94	95		6.9		1260	2	78	24				149
86LFA204903	11		0.1	33	96	94		6.8		1240	4	80	27				154
86LFA204904	1	67	0.1	41	72	89	880	4.6	40	1200	3	82	34	12	1.4	6	136
86LFA204904	2	58	0.1	27	72	81		6		1100	3	78	27	15	2.1	8	154
86LFA204904	10		0.1	34	94	82		6.6		1160	4	81	25				138
86LFA205001	1	113	0.1	44	88	81	520	6.4	55	1100	3	77	54	4	1.4	2	131
86LFA205101	1	66	0.1	36	68	90	850	4.2	85	1100	2	98	31	2	2.3	4	163

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA205201	1	45	0.1	29	60	62	1000	5.1	345	1002	1	63	30	8	0.8	4	142
86LFA205202	1	51	0.1	27	64	63	800	4.6	105	1045	2	73	25	6	0.6	4	138
86LFA205203	1	48	0.1	26	64	74	800	4.8	60	924	2	73	25		1.4	4	126
86LFA205203	10	29	0.1	22	84	71		6.7		880	2	79	27	1	0.8	3	139
86LFA205204	1	62	0.1	34	74	51	670	4.8	60	1295	2	77	30	4	1.4	4	167
86LFA205301	1	80	0.1	34	76	94	860	5	60	940	2	94	36	10	1.9	6	144
86LFA205302	1	38	0.1	34	70	70	800	5	100	1490	1	79	28	6	1.6	4	140
86LFA205302	10	39	0.1	30	99	67		7.2		1400	1	82	25	1	1.6	2	146
86LFA205303	1	55	0.1	31	68	73	760	4.7	40	1266	1	75	28	3	1.9	2	109
86LFA205401	1	81	0.1	29	80	58	670	5.2	60	910	2	74	31	8	1.4	4	158
86LFA205501	1	56	0.1	34	80	80	830	5.2	60	1062	1	102	31	8	2.1	4	126
86LFA205501	2	41	0.1	31	78	78	790	4.9	55	974	1	95	34	12	1.3	4	122
86LFA205601	1	38	0.1	26	60	51	800	4.7	120	1087	2	70	29	7	1.5	4	102
86LFA205701	1	59	0.1	45	84	57	700	5	55	1613	2	81	35	9	0.9	6	135
86LFA205801	1	80	0.1	47	72	234	800	5	60	842	2	99	49	11	3	4	106
86LFA205801	2	63	0.1	35	80	266		6		800	2	107	46	7	3.1	4	129
86LFA205801	10		0.1	39	102	299		6.6		800	1	107	44				122
86LFA205801	11	80	0.1	42	106	316		7.1		860	1	112	45	1	2.3	3	119
86LFA205901	1	50	0.1	42	78	70	620	5.1	95	1289	2	90	34	5	1.2	2	120
86LFA205901	10	36	0.1	34	92	64		6.5		1020	1	91	29	1	0.6	2	129
86LFA206001	1	70	0.1	65	112	158	830	6.2	80	2350	2	206	47	7	2.1	4	124
86LFA206003	1	60	0.1	64	108	144	860	6	110	1895	1	208	45	7	1.9	6	126
86LFA206003	10	36	0.1	50	142	147		8.3		1640	1	230	37	1	1.8	1	130
86LFA206101	1	44	0.1	44	102	83	800	5.6	165	2284	1	192	32	7	0.6	2	134
86LFA206102	1	55	0.1	85	164	121	800	6.9	145	4534	2	359	48	6	0.9	2	140
86LFA206102	10	45	0.1	68	220	127		10		3600	2	360	42	1	1.4	2	143
86LFA206103	1	95	0.1	53	106	107	765	5.8	70	2052	2	199	46	7	2.1	4	125
86LFA206201	1	76	0.1	42	84	79	900	5.1	140	1794	2	111	47	15	3.3	8	129
86LFA206301	1	67	0.1	71	104	151	800	6.4	100	2594	2	193	56	7	1.2	4	154
86LFA206301	10		0.1	53	144	153		8		2200	1	185	41				163
86LFA206302	1	57	0.1	77	70	188	650	5.8	100	1968	2	114	74	1	1.3	4	171
86LFA206302	10	41	0.1	61	102	210		8.1		1740	1	124	63	2	1.1	1	164
86LFA206303	1	53	0.1	53	100	112	760	5.4	185	1997	2	130	50	4	2.1	4	116
86LFA206303	10		0.1	41	134	110		7		1940	1	135	40				124
86LFA206304	1	54	0.1	45	104	69	650	5.4	150	1333	2	130	42	5	1.4	4	115
86LFA206304	10		0.1	36	136	71		6.7		1120	1	137	32				123
86LFA206401	1	51	0.1	54	72	143	800	4.9	120	1401	2	103	56	9	7	4	155
86LFA206402	1	82	0.1	46	74	165	700	5.7	110	1296	9	97	58	6	11.6	6	146
86LFA206402	10	70	0.1	40	88	189		8.6		1380	14	118	54	2	6.8	5	162
86LFA206403	1	69	0.1	43	64	118	730	5.9	150	1348	4	91	36	8	2.3	4	123
86LFA206404	1	124	0.1	39	64	85	730	5.4	75	1282	3	74	36	11	2.8	4	133
86LFA206404	2	121	0.1	38	64	89	720	5.1	65	1283	1	71	37	14	2.6	6	136
86LFA206404	10		0.1	31	92	89		6.8		1240	2	78	29				142
86LFA206501	1	107	0.1	28	66	64	860	4.2	120	851	2	64	25	18	1	6	133
86LFA2066	1	133	0.1	31	72	69	940	4.4	65	1043	3	77	46	17	1.3	10	158
86LFA206701	1	82	0.3	33	44	106	1400	4.2	25	1355	2	59	30	18	2.5	24	163
86LFA206701	10	60	0.1	28	64	122		6.5		1380	5	61	28	2	2	25	173
86LFA206701	11	60	0.1	28	74	118		6.3		1420	2	60	27	2	1.8	28	175
86LFA206702	1	164	0.1	36	60	80	730	5.1	60	1706	2	71	33	9	2.1	20	153
86LFA206702	10		0.1	31	78	81		6.6		1520	2	75	24				160
86LFA206702	11	140	0.1	34	84	85		7.1		1720	1	82	30	3	2	8	167

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA206703	1	242	0.1	39	60	95	940	5	15	1492	2	77	34	13	3	6	149
86LFA206703	10	200	0.1	34	84	106		7.2		1520	5	87	32	3	2.6	8	171
86LFA206704	1	224	0.1	26	82	69	1100	4.7	60	1029	2	87	37	14	2.3	12	154
86LFA206704	10	180	0.1	28	100	77		7		1120	2	103	33	3	1.6	19	174
86LFA206901	1	79	0.2	23	60	54	1050	4.3	35	903	3	64	41	23	5.7	8	156
86LFA207001	1	102	0.1	29	64	65	1050	3.8	75	1117	3	66	48	19	13.9	10	191
86LFA207101	1	152	0.1	17	48	130	660	8	40	963	32	43	202	5	3.2	8	123
86LFA207102	1	114	0.1	37	72	83	1000	4.1	70	1298	6	79	56	17	14.2	12	187
86LFA207102	10	70	0.1	28	78	58		5.5		1280	4	72	51	3	16	6	358
86LFA207103	1	57	0.1	27	84	66	920	4.2	60	796	2	65	35	23	6.9	6	147
86LFA207104	1	65	0.1	30	78	55	1100	4	65	773	2	67	49	20	6.7	12	140
86LFA207104	10		0.1	28	92	59		5.6		900	2	70	39				157
86LFA207201	1	504	0.1	33	84	57	880	5	50	1201	2	70	31	14	2.4	10	198
86LFA207202	1	496	0.1	32	88	73	1100	4.4	60	1391	1	77	36	12	2.2	8	186
86LFA207203	1	356	0.2	33	68	81	1050	4.3	115	1088	2	66	27	17	2.8	10	192
86LFA207203	10	330	0.1	29	78	84		6.8		1100	2	79	28	2	2.3	7	196
86LFA207203	11	320	0.1	29	82	84		6.8		1120	1	80	26	4	2	6	200
86LFA207204	1	378	0.5	34	60	86	1400	4.8	80	1130	2	68	26	23	2	10	227
86LFA207205	1	448	0.5	33	64	87	1250	5.3	30	1289	2	68	25	29	2	12	234
86LFA207206	1	480	0.2	29	62	87	1350	5.1	25	894	2	67	28	25	2.2	6	234
86LFA207206	2	492	0.6	29	54	84	1000	4.8	20	837	1	64	27	30	1.8	10	222
86LFA207206	10	470	0.1	25	76	82		6.6		860	1	68	23	4	1.4	7	230
86LFA207207	1	504	0.1	28	60	85	1350	4.8	30	768	1	67	28	29	1.6	6	218
86LFA207207	10	460	0.1	26	82	78		6.3		820	1	72	23	3	1.3	9	220
86LFA207207	11	460	0.1	24	76	83		6.5		800	1	69	23	3	1.2	8	223
86LFA207208	1	440	0.3	27	62	79	1350	4.8	20	800	1	64	30	26	1.6	6	214
86LFA207208	10		0.3	25	82	79		6.5		860	2	67	22				233
86LFA207301	1	62	0.1	34	84	61	960	4.3	75	697	1	81	38	6	2.4	6	133
86LFA207401	1	536	0.1	28	76	97	960	4.1	70	322	3	95	33	10	3.2	8	158
86LFA207501	1	52	0.1	28	78	57	1000	4.3	40	705	2	69	36	17	3	6	127
86LFA207501	10	33	0.1	22	90	54		5.7		740	2	73	26	2	3.2	9	123
86LFA207601	1	49	0.1	24	80	61	1250	4.7	30	1026	2	77	37	16	3.7	10	151
86LFA207601	10	30	0.1	23	88	62		7		1040	1	79	30	3	3.8	10	165
86LFA207602	1	45	0.1	28	76	56	1300	4.7	40	1043		76	31	7	4.8	10	169
86LFA207602	10		0.1	23	100	58		6.6		1040	2	80	23				184
86LFA207701	1	54	0.2	19	60	61	1000	4.2	40	951	3	59	34	13	11.3	6	146
86LFA207702	1	32	0.2	16	48	54	6800	3.5	50	901	5	47	45	17	24	10	140
86LFA207702	10		0.1	18	78	52		5.7		800	6	62	60				137
86LFA207703	1	25	1.3	24	72	57	950	4.2	40	674	1	81	31	8	2.5	6	176
86LFA207703	2	21	0.6	24	76	49		5.6		660		88	35	9	2.5	8	181
86LFA207703	10		0.6	25	94	52		6.6		640	1	85	31				171
86LFA207704	1	31	0.4	32	68	56	780	4.1	30	1152	1	75	29	11	2	6	178
86LFA207704	2	23	0.1	28	70	51		6.2		1300		81	35	15	1.9	6	187
86LFA207704	10		0.1	33	94	56		7.3		1300	1	84	37				173
86LFA207705	1	49	0.2	28	64	53	980	4.3	40	1011	1	73	29	7	2.9	6	187
86LFA207801	1	27	0.4	20	52	41	1000	3.3	115	1060	3	54	46	15	11.8	8	175
86LFA207801	10	23	0.1	24	74	39		5		1280	2	64	50	2	8	8	151
86LFA207901	1	56	0.1	17	64	40	950	5.5	140	829	3	57	55	10	7.6	8	130
86LFA207901	10	36	0.1	18	85	35		6.5		660	2	61	51	1	4.9	7	121
86LFA207902	1	49	0.2	20	56	55	1025	3.8	40	949	1	58	26	12	9.2	6	142
86LFA207903	1	54	0.4	16	60	51	880	3.6	30	853	1	57	29	15	6	6	167

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA208001	1	60	0.3	20	60	56	820	4.4	40	778	1	71	31	12	3.4	8	187
86LFA208002	2	20	0.1	13	32	47	1400	4.1	85	1017	1	71	27	25	20	10	200
86LFA208101	1	58	0.3	16	70	44	820	4.4	170	836	3	63	25	9	13.7	6	137
86LFA208102	1	27	0.4	15	40	45	1500	3	85	918	3	40	34	25	13.7	12	96
86LFA208103	1	22	0.1	8	39	27	1225	2.5	85	234	2	26	30	15	29	8	75
86LFA208103	10		0.1	10	70	27		4.1		250	4	39	33				84
86LFA208104	1	152	0.5	26	64	96	1425	5.6	255	1728	20	32	324	18	26	10	96
86LFA208201	1	50	0.6	25	62	61	950	3.3	65	800	2	81	32	12	5.6	8	186
86LFA208201	10		0.1	29	96	56		5.7		970	1	80	35				168
86LFA208301	1	53	0.1	18	42	46	1025	4.4	95	860	2	59	43	30	24	14	188
86LFA208301	10		0.2	13	84	23		2.6		600	2	34	24				78
86LFA208401	1	57	0.1	26	62	54	1000	3.8	135	899	3	50	41	22	10.2	14	155
86LFA208401	10	38	0.1	30	80	53		6		1090	2	74	29	2	6.8	9	165
86LFA208501	1	40	0.1	15	56	40	850	4.3	95	527	2	58	54	17	10.6	6	163
86LFA208502	1	32	0.1	19	52	52	1025	4	50	812	1	47	37	9	23	6	147
86LFA208503	1	57	0.1	17	58	60	880	5.2	50	879	1	62	28	16	4.9	6	197
86LFA208601	1	51	0.1	19	60	55	1025	4.6	30	833	1	57	23	17	4	8	174
86LFA208601	10	35	0.1	21	88	52		6		700	1	77	28	3	2.6	6	142
86LFA208602	1	72	0.1	20	60	62	1125	4.9	30	939	1	64	25	14	3.3	6	208
86LFA208603	1	27	0.1	20	56	42	1275	3.7	25	811	1	58	20	6	4.6	8	174
86LFA208603	10	24	0.1	21	86	41		6.3		670	1	73	23	2	3.4	3	132
86LFA208603	11	27	0.1	21	80	42		6.4		680	1	69	21	3	3.2	5	141
86LFA208604	1	22	0.1	23	60	41	1125	5.9	30	1121	1	67	25	17	3.4	4	155
86LFA208604	10	12	0.1	24	88	37		6.3		1040	1	72	22	2	2.2	3	138
86LFA208605	1	21	0.1	20	68	43	1125	4.4	25	1062	1	68	23	11	2.8	6	158
86LFA208606	1	17	0.1	23	66	38	1225	3.6	20	748	1	64	19	10	2.8	4	171
86LFA208606	10	11	0.1	23	92	36		6.3		1000	1	75	22	2	2.4	2	138
86LFA208701	1	112	0.1	39	72	66	1175	4.9	85	1081	2	84	27	10	3.4	12	188
86LFA208701	10	80	0.1	43	98	64		6.3		2100	2	114	27	3	2.4	7	159
86LFA208702	1	102	0.1	29	62	80	1000	5.6	30	3498	2	78	27	5	4.1	12	200
86LFA208702	10	80	0.1	34	82	73		6.1		1300	3	110	24	2	2.2	6	164
86LFA208703	1	153	0.1	66	66	86	1125	9.9	55	8586	7	76	73	13	2.6	8	181
86LFA208704	1	552	0.1	278	38	199	1075	4	85	910	2	77	24	14	2.3	10	176
86LFA208801	1	124	0.1	31	64	89	810	5.2	170	1186	4	95	48	12	13	16	155
86LFA208801	2	21	0.1	15	24	62	460	2.8	20	627	3	41	43	9	2.2	4	108
86LFA208802	1	90	0.1	26	60	76	960	5.2	50	915	2	83	23	10	4.6	12	174
86LFA208802	10		0.1	27	104	68		6.3		980	3	96	23				147
86LFA208803	1	109	0.1	21	102	67	1000	5.1	40	822	3	81	23	7	3.2	8	194
86LFA208804	1	106	0.1	25	92	72	1050	3.8	40	816	3	90	22	8	3.2	10	187
86LFA208901	1	242	0.1	25	82	28	750	7	300	1765	3	32	22	4	2	4	109
86LFA208902	1	308	0.1	51	91	94	815	3.8	75	1343	3	89	21	13	3.5	8	210
86LFA208902	10	280	0.1	47	98	92		6.5		1620	2	115	26	4	3	3	198
86LFA208903	1	346	0.1	47	83	90	720	4.5	40	1225	2	80	26	15	3	6	201
86LFA208903	10	300	0.1	44	86	88		6.6		1420	2	97	27	3	2	3	199
86LFA208903	11	320	0.1	44	88	94		7.1		1560	2	95	28	4	2	5	182
86LFA209001	1	512	0.1	26	85	67	790	6.2	145	803	3	57	31	23	1.6	8	198
86LFA209002	1	282	0.1	41	87	99	815	4	50	1026	2	68	28	18	4	10	238
86LFA209002	2	275	0.1	29	70	89		5.6		1100	2	84	34	22	2.7	8	196
86LFA209002	10		0.1	34	90	99		6.4		1080	2	86	34				207
86LFA209003	1	298	0.1	32	85	77	750	4	40	996	2	66	29	18	2.9	6	235
86LFA209003	2	245	0.1	27	62	78		6		1000	1	82	36	25	2.5	8	196

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA209003	10		0.1	30	94	80		6		1050	1	77	33				210
86LFA209003	11	240	0.1	32	82	75		6.5		1130	1	83	34	4	1.7	5	204
86LFA209101	1	244	0.1	43	89	68	960	5	125	986	2	78	31	8	2.7	4	200
86LFA209101	10		0.1	41	104	70		6.1		1200	1	84	25				204
86LFA209102	1	264	0.1	31	72	63	1050	5.2	40	976	2	61	23	12	2.9	4	194
86LFA209103	1	179	0.1	28	77	64	1050	5.3	40	1013	2	70	23	11	2.6	4	219
86LFA209103	10	150	0.1	31	92	68		7.2		1100	2	85	21	1	1.2	2	185
86LFA209104	1	270	0.1	26	83	79	880	5.9	20	711	1	68	33	19	3.2	8	258
86LFA209105	1	336	0.1	33	74	81	850	5.5	15	960	2	73	40	19	3.4	6	261
86LFA209105	10	270	0.1	34	86	82		7.1		1020	1	79	36	4	1.8	4	228
86LFA209201	1	59	0.1	29	84	70	720	5.9	30	965	2	74	26	3	2.5	8	176
86LFA209201	2	49	0.1	24	48	62	1000	3.5	40	996	5	75	66	10	1.9	6	146
86LFA209202	1	54	0.1	22	92	64	1100	4.9	40	802	2	71	27	9	2.7	4	204
86LFA209202	10	60	0.1	27	100	66		7		920	2	86	33	2	1.6	6	170
86LFA209203	1	72	0.1	21	77	60	360	5.8	35	821	1	74	36	12	2.3	4	202
86LFA209203	10	50	0.1	24	96	61		7.1		900	1	85	31	1	1.4	2	174
86LFA209203	11	46	0.1	24	90	60		7.3		920	1	75	29	3	1.2	4	116
86LFA209204	1	64	0.1	23	79	63	960	6	30	882	1	73	24	3	2	4	200
86LFA209204	10	45	0.1	26	98	63		7.5		940	2	82	28	1	1.8	2	173
86LFA209205	1	57	0.1	19	99	58	850	5.5	20	836	1	76	27	4	2.4	6	193
86LFA209205	10		0.1	23	93	58		6.6		780	1	75	22				175
86LFA209205	11	33	0.1	23	90	61		7		880	2	79	23	1	1.6	5	94
86LFA209206	1	36	0.1	32	98	51	750	5.2	30	1734	2	72	30	13	3.2	6	202
86LFA209206	10	23	0.1	33	84	52		7.3		1700	2	79	30	2	2.4	5	163
86LFA209207	1	37	0.1	33	105	53	520	6	20	2094	2	71	34	16	3.4	6	203
86LFA209301	1	108	0.1	56	109	114	850	4.2	170	1657	3	61	49	8	2.8	4	163
86LFA209401	1	53	0.1	25	109	68	750	5.2	65	824	2	82	29	7	2.3	2	148
86LFA209401	10		0.1	27	106	71		6.3		900	2	88	27				139
86LFA209501	1	60	0.1	22	80	62	960	5.3	40	875	2	77	31	10	2.6	6	173
86LFA209501	10	43	0.1	26	80	60		7		960	1	81	27	2	1.4	4	148
86LFA209502	1	61	0.1	26	92	66	1050	5.6	30	998	4	73	26	7	2.3	6	178
86LFA209502	2	48	0.1	23	80	70		6		1000	2	85	21	7	2.9	4	174
86LFA209502	10		0.1	25	90	66		7.1		960	2	78	18				151
86LFA209502	11	39	0.1	26	80	65		7.8		1040	2	83	19	1	1.2	2	146
86LFA209503	1	43	0.1	22	87	55	815	5.4	20	735	1	46	25	11	1.6	6	210
86LFA209503	10	32	0.1	23	90	55		7.3		730	1	71	24	2	1	4	167
86LFA209504	1	46	0.1	26	91	63	1100	6	25	770	2	71	25	9	2.7	4	211
86LFA209504	2	44	0.1	26	52	68	1050	2.1	40	283	4	13	24	7	2	4	88
86LFA209601	1	52	0.1	23	84	59	615	4.2	50	758	3	61	23	10	2	4	145
86LFA209701	1	74	0.1	27	110	47	640	5.6	170	1013	3	66	34	8	1.8	4	206
86LFA209801	1	65	0.1	29	99	67	920	5.4	40	956	2	76	27	3	2.7	6	175
86LFA209801	10		0.1	27	96	69		6.1		980	2	88	26				151
86LFA209801	11	46	0.1	29	86	67		6.4		1020	1	87	26	2	1.8	3	143
86LFA209802	1	64	0.1	27	101	66	1000	6.3	30	885	2	69	30	11	4.1	6	219
86LFA209802	10	48	0.1	28	104	65		7.6		890	2	91	28	1	3.6	2	175
86LFA209802	11	43	0.1	26	78	59		7.5		860	1	74	27	3	1.4	4	163
86LFA209803	1	61	0.1	29	89	61	880	5.8	25	854	1	67	35	11	3.2	4	206
86LFA209803	2	57	0.1	33	52	68	880	4.8	40	734	2	73	27	4	2.8	4	199
86LFA209803	10	46	0.1	31	104	64		7.6		900	2	88	30	1	2.9	1	173
86LFA209804	1	61	0.1	29	106	61	1000	5.5	25	1033	2	75	29	9	1.9	4	196
86LFA209804	10	39	0.1	29	102	62		7.8		1020	2	90	31	1	2.2	1	169

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA209804	11	39	0.1	27	100	58		8		1000	1	82	29	2	0.8	4	167
86LFA209805	1	53	0.1	35	103	58	850	6.5	20	1029	2	87	32	6	2.5	4	214
86LFA209805	10	33	0.1	31	96	55		7.5		1000	1	83	27	2	1	4	162
86LFA209901	1	56	0.1	25	92	64	815	5.5	50	657	3	72	43	9	2	6	204
86LFA209901	10	30	0.1	25	90	64		6.9		720	2	86	35	2	1.1	4	165
86LFA209902	1	54	0.1	23	88	66	960	5.5	60	826	2	79	24	10	2.1	6	196
86LFA209902	10	46	0.1	26	86	64		6.9		960	3	88	23	1	2.4	2	178
86LFA209903	1	53	0.1	29	84	66	690	5.5	35	865	2	65	23	10	2.1	6	202
86LFA209903	10	45	0.1	26	82	63		7.4		1040	3	92	26	1	2	3	184
86LFA209903	11	33	0.1	26	94	62		7.4		960	1	85	22	1	1.8	3	183
86LFA210001	1	95	0.1	40	81	81	1000	5.1	165	1657	3	98	54	12	2.1	6	279
86LFA210101	1	149	0.5	73	99	226	1650	4.8	175	4612	2	121	54	18	2.4	6	624
86LFA210102	1	680	0.6	6	85	67	815	5.8	20	1500	47	49	21	93	3.1	18	247
86LFA210102	10	600	0.8	7	76	62		6.4		1620	5	54	18	9	2.9	5	108
86LFA210102	11	630	0.9	8	78	64		7.2		1720	2	53	18	9	2	14	221
86LFA210201	1	832	0.3	55	58	115	1150	4.5	30	2678	3	51	40	49	1.4	22	275
86LFA210201	10	830	0.5	44	54			5.8		2400	1	58	40	4	1.6	16	228
86LFA210301	1	872	0.1	47	86	94	960	5.5	20	1179	4	63	30	22	2	6	214
86LFA210302	1	824	0.1	31	90	136	850	4.8	40	954	1	60	22	25	2.1	14	230
86LFA210302	10	900	0.1	26	82	122		6.8		1060	3	76	25	3	1.8	6	196
86LFA210401	1	110	0.1	26	91	66	1150	5.7	40	950	1	70	23	11	2.4	12	206
86LFA210401	10	90	0.1	23	84	63		6.8		860	2	77	20	3	1.3	6	189
86LFA210501	1	270	0.1	25	92	72	850	5.6	30	836	1	73	31	21	3	10	207
86LFA210601	1	124	0.1	29	76	64	960	5.4	25	881	1	62	29	18	2	6	196
86LFA210601	10	100	0.1	28	80	63		7.1		1020	1	76	26	3	1.2	7	176
86LFA210701	1	280	0.1	27	75	77	720	5.9	40	912	2	69	26	15	1.7	8	212
86LFA210701	2	254	0.3	25	40	79	1150	5.2	40	806	1	73	27	15	1.4	8	204
86LFA210701	10	200	0.1	25	78			6.7		1000	2	75	22	2	1.6	6	155
86LFA210701	11	60	0.1	24	84	55		5.9		800	2	73	32	9	1.6	8	143
86LFA210801	1	354	0.1	42	83	93	850	4.9	110	1435	2	82	38	14	2.8	6	232
86LFA210801	10	200	0.1	27	84	63		6.4		760	3	73	25	3	2	6	176
86LFA210901	1	61	0.1	24	100	56	960	4.9	40	829		65	39	17	2.4	8	161
86LFA210901	10	51	0.1	23	90	53		5.5		760	2	72	31	7	2.7	7	132
86LFA211001	1	68	0.1	17	88	56	960	4.6	30	648	1	95	30	17	2.1	6	196
86LFA211001	10	60	0.1	19	92	52		6		650	3	110	27	2	2.2	7	174
86LFA211001	11	70	0.1	20	84	52		6.2		640	1	105	27	4	1.5	7	178
86LFA211101	1	106	0.1	22	84	71	540	5.6	40	767	1	69	31	17	2.6	10	207
86LFA211101	10	90	0.1	22	80	70		6.8		740	1	77	27	4	1.6	6	167
86LFA211201	1	135	0.1	35	108	58	720	5.3	240	5392	5	53	65	6	8.5	10	121
86LFA211202	1	70	0.1	22	96	65	750	5.5	35	906	1	70	34	12	2.9	6	187
86LFA211301	1	107	0.1	25	108	44	750	5.1	105	951	1	67	34	9	1.2	8	166
86LFA211302	1	66	0.1	23	124	65	790	6	30	802	1	72	34	17	1.7	6	191
86LFA211302	10	60	0.1	23	106	65		7.2		920	2	89	32	3	1.2	6	165
86LFA211303	1	73	0.1	23	109	66	920	5.5	45	821	1	75	31	5	2.5	4	200
86LFA211303	2	75	0.1	22	54	65	1000	2.8	40	663	0.5	34	23	9	2	6	105
86LFA211304	1	64	0.1	26	97	65	850	6	45	1079	1	73	32	6	2.5	4	198
86LFA211304	10	60	0.1	27	98	66		7.5		1220	1	83	30	2	1.6	4	175
86LFA211501	1	70	0.1	27	93	67	880	5.7	45	816	2	63	39	8	2.1	6	152
86LFA211501	2	67	0.1	21	48	71	1000	1.7	55	269	4	15	25	0.5	1.4	2	86
86LFA211502	1	70	0.1	25	94	71	690	6	50	954	1	70	33	16	2.1	4	185
86LFA211503	1	73	0.1	23	112	71	670	5.1	55	906	1	59	39	4	3.5	4	180

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA211601	1	44	0.1	36	88	70	690	5.6	45	1029	2	81	32	5	1.9	4	157
86LFA211602	1	45	0.1	30	92	70	750	5.7	45	848	2	77	21	6	1.4	6	176
86LFA211603	1	40	0.1	30	70	68	830	5.8	55	890	2	84	30	7	2.5	4	169
86LFA211604	1	54	0.1	35	67	86	270	3.6	125	728	1	55	26	12	3.5	4	152
86LFA211701	1	48	0.4	13	96	32	445	4.7	325	452	3	30	26	7	2.6	2	106
86LFA211801	1	59	0.4	33	84	42	730	3.8	190	703	2	61	28	7	1.2	4	202
86LFA211901	1	43	0.1	29	76	64	760	6.1	40	2015	1	66	24	10	1.7	6	181
86LFA211901	10	35	0.1	27	84	58		6.8		1980	3	89	22	1	1.8	2	151
86LFA211901	11	33	0.1	28	90	64		7.2		2000	1	85	25	2	1.4	4	161
86LFA211902	1	31	0.1	26	77	55	920	5.5	70	1640	1	57	28	7	3.1	8	167
86LFA211902	10	29	0.1	27	90	58		7.2		1840	1	84	26	2	2.6	5	160
86LFA211903	1	34	0.1	21	75	50	960	5	55	732	1	47	34	9	2.4	6	156
86LFA211903	10	30	0.1	24	88	52		7.6		860	2	74	30	2	2	6	148
86LFA211904	1	30	0.1	25	78	52	1100	4.1	30	891		59	24	9	2.1	8	187
86LFA211904	2	23	0.1	21	76	50		6.4		1000		84	24	11	1.9	8	182
86LFA211904	10		0.1	21	92	48		6.4		860	1	77	23				166
86LFA211904	11	23	0.1	23	88	50		7.1		960	1	76	21	3	1.7	6	155
86LFA211905	1	31	0.1	24	71	46	870	5.7	25	1193	1	57	31	6	2.1	8	170
86LFA211905	10	25	0.1	25	94	45		6.7		1160	1	82	26	1	1.8	3	153
86LFA211905	11	22	0.1	25	96	45		6.8		1160	1	74	23	2	1.6	4	153
86LFA212001	1	49	0.1	21	72	58	920	4.8	45	927		81	31	6	1.4	6	177
86LFA212001	10	36	0.1	26	102	61		7.5		1100	2	94	26	1	1.5	2	155
86LFA212002	1	50	0.1	27	87	61	670	4	40	965	1	71	27	10	1.7	6	183
86LFA212002	2	56	0.1	22	92	60		6.6		1000	1	91	22	12	1.9	4	188
86LFA212002	10		0.1	22	100	55		6.9		960	1	85	22				159
86LFA212003	1	46	0.1	16	157	40	445	4.3	20	1055	2	39	20	5	4.3	4	110
86LFA212003	10	35	0.1	17	150	41		5.4		1250	1	52	15	2	3.2	2	100
86LFA212004	1	70	0.1	26	122	34	445	3.8	30	1366	1	43	24	5	6.8	4	93
86LFA212005	1	60	0.1	23	111	43	870	3.7	40	1563		51	31	7	7.6	2	99
86LFA212101	1	45	0.1	24	75	60	730	4.5	45	916	1	73	29	9	2.1	10	165
86LFA212101	2	43	0.1	22	48	56	1200	4.8	45	795	2	69	36	6	1.2	10	141
86LFA212102	1	128	0.5	36	133	60	1075	6.1	25	1364	1	90	32	16	1.9	4	253
86LFA212102	10	60	0.6	33	154	62		8.3		1560	1	112	26	6	1.5	3	233
86LFA212102	11	60	0.1	25	104	58		7.6		920	1	80	20	2	1.4	7	170
86LFA212103	1	70	0.1	24	82	60	670	6	25	801		72	19	12	1.9	6	202
86LFA212103	10	55	0.1	23	100	52		6.5		840	1	84	19	2	1.6	4	155
86LFA212201	1	60	0.1	31	96	64	800	5.2	125	1324	1	82	40	13	1.9	6	154
86LFA212301	1	138	0.1	25	108	39	700	4.5	85	885	2	72	41	11	2.1	6	166
86LFA212302	1	132	0.1	27	114	59	920	4.5	105	1022	2	84	54	9	3.3	8	153
86LFA212303	1	40	0.1	26	83	61	870	5.6	40	896	1	69	26	6	1.9	4	171
86LFA212303	10		0.1	24	90	58		6.7		950	1	77	23				155
86LFA212303	11	29	0.1	25	82	58		7		940	1	70	23	2	0.8	5	144
86LFA212304	1	29	0.1	24	86	54	920	6	30	836		70	28	8	1.7	6	195
86LFA212401	1	39	0.1	23	90	62	730	5.8	40	762	1	76	29	9	1.9	8	184
86LFA212501	1	43	0.1	41	150	84	1150	4.4	125	662	3	83	53	8	4.7	10	172
86LFA212502	1	25	0.1	25	70	41	870	4.5	20	1713		76	33	16	2.8	6	161
86LFA212502	10	19	0.1	27	92	39		6.2		1600	2	77	27	2	3.2	4	140
86LFA212503	1	75	0.1	34	90	63	920	5.6	20	621	1	81	47	8	2.8	8	218
86LFA212504	1	34	0.1	25	37	42	1100	5.3	30	2081	1	82	31	8	2.4	4	158
86LFA212504	10	24	0.1	27	86	39		6.2		1620	2	77	30	2	2.8	3	138
86LFA212505	1	35	0.1	26	70	41	670	4.9	25	1751		80	32	5	1.9	6	170

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA212505	10		0.1	26	98	35		6.2		1380	1	76	29				150
86LFA212505	11	20	0.1	28	90	41		6.7		1460	1	77	28	1	1.9	5	148
86LFA212601	1	54	0.1	23	86	43	730	4.6	105	594	2	66	46	9	2.4	12	184
86LFA212701	1	51	0.1	28	82	57	700	4.2	60	661	1	72	41	9	2	6	163
86LFA212701	2	48	0.1	24	80	57		5.2		800	2	80	33	15	2.1	8	174
86LFA212701	10		0.1	24	98	55		5.9		840	2	76	33				151
86LFA212801	1	70	0.1	26	83	61	870	4.5	45	737		67	38	10	2.2	6	158
86LFA212801	2	54	0.1	22	76	61		5.4		820		79	28	12	2.1	8	168
86LFA212801	10		0.1	24	92	60		6		860	1	75	29				146
86LFA212801	11	53	0.1	24	80	56		6		840	2	70	28	3	1.5	6	135
86LFA212901	1	62	0.1	22	87	64	1075	4.7	40	707	1	71	36	9	3.3	6	169
86LFA212901	2	56	0.1	21	46	68	1150	4.2	40	861	0.5	75	27	7	3.4	6	163
86LFA212902	1	67	0.1	25	92	63	920	5.5	30	843	1	73	45	11	4	6	206
86LFA212902	10	70	0.1	24	84	57		6.3		940	2	78	36	3	3.3	7	173
86LFA212902	11	53	0.1	25	90	60		7.1		1000	2	85	37	4	3	7	190
86LFA212903	1	63	0.1	33	95	61	730	4.9	25	820	1	68	57	14	2.6	6	201
86LFA212903	10	60	0.1	28	86	56		6.5		900	2	83	44	3	3	8	182
86LFA212903	11	45	0.1	28	90	57		6.8		920	1	80	44	3	2.8	6	187
86LFA212904	1	52	0.1	20	67	43	970	4.6	20	709		78	26	10	1.7	4	177
86LFA212904	10	27	0.1	23	80	40		6.1		780	1	75	26	3	2.7	1	143
86LFA212905	1	28	0.1	27	74	42	930	5	40	1158		66	26	9	2.4	4	167
86LFA212905	10	17	0.1	28	88	38		6.2		1180	1	77	29	2	2.2	5	151
86LFA213001	1	116	0.1	29	78	61	850	4.8	40	859	1	72	30	13	3.3	8	176
86LFA213001	10	100	0.1	28	76	57		6		1000	1	77	29	3	2.4	4	149
86LFA213101	1	103	0.1	25	114	66	410	4.9	295	721	4	106	40	10	1.8	4	199
86LFA213201	1	86	0.1	42	103	71	545	4.4	160	721	2	103	68	14	2.4	4	217
86LFA213301	1	60	0.1	23	87	61	720	5.6	40	834	1	71	26	11	2.1	10	191
86LFA213302	1	43	0.1	23	90	66	1050	5.1	40	855	1	76	29	14	3.3	8	205
86LFA213302	10	35	0.1	23	88	61		7.1		940	1	88	29	3	2.8	5	169
86LFA213401	1	38	0.1	36	76	51	820	3.6	40	1022	1	57	30	12	2.8	6	193
86LFA213401	10	29	0.1	29	66	42		5.5		1140	1	72	30	3	1.9	5	150
86LFA213402	1	39	0.1	23	65	52	850	3.6	55	817		56	26	6	2.8	6	203
86LFA213601	1	77	0.1	16	75	45	930	4.1	80	441	1	70	38	14	3.1	10	170
86LFA213602	1	72	0.1	19	76	63	930	4.4	35	682	1	64	29	13	2.1	12	187
86LFA213602	2	70	0.1	19	44	63	1050	2.3	40	735	0.5	27	24	16	2.6	14	110
86LFA213602	10	60	0.1	21	78	58		6.3		820	2	75	28	2	2.5	6	161
86LFA213603	1	68	0.1	18	84	61	1000	5.3	35	739	2	58	31	15	2.1	12	190
86LFA213603	10	70	0.1	21	82	57		6.6		860	2	75	25	2	2.4	8	166
86LFA213604	1	248	0.1	8	96	27	850	3.3	230	133	4	39	43	15	7.3	2	161
86LFA213701	1	226	1.5	62	66	188	620	4.1	65	1680	2	77	71	24	2.8	20	580
86LFA213801	1	115	0.1	18	77	67	1100	4.7	40	694	1	35	31	18	2.4	12	216
86LFA213901	1	984	0.1	26	74	120	1400	5.2	30	798	2	59	56	30	3.5	14	201
86LFA213902	1	1352	0.6	31	62	210	1300	3.9	40	621	1	70	1932	30	5.2	12	517
86LFA214001	1	1004	0.1	14	68	125	1150	7.7	310	580	4	63	107	15	2.8	22	283
86LFA214101	1	1216	0.1	77	71	310	1150	5	210	1085	8	99	105	28	6.8	26	311
86LFA214201	1	2000	0.8	153	71	478	2800	4.8	170	1133	13	184	105	26	7.7	50	689
86LFA214202	1	2000	0.5	108	68	646	3800	4.1	105	889	14	209	178	29	7	70	815
86LFA214202	10		0.7	81	92	640		7.6		1200	17	250	214				710
86LFA214203	1	2000	0.5	42	58	585	3800	4.2	85	499	9	150	320	17	7.5	80	600
86LFA214301	1	68	0.1	29	76	64	640	4.8	65	784		68	27	12	2.6	6	180
86LFA214401	1	71	0.1	40	77	67	790	4.7	50	1118	1	68	42	7	6.8	6	169

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA214402	1	54	0.1	38	82	64	850	4.8	40	993	1	65	30	8	4	8	215
86LFA214402	10	50	0.1	35	86	61		6.7		1100	4	86	30	2	3	6	170
86LFA214403	1	53	0.1	29	83	59	930	5.8	30	889	1	70	32	13	1.9	6	200
86LFA214403	10	50	0.1	27	88	57		6.9		920	2	81	31	2	2	3	176
86LFA214404	1	55	0.1	38	79	58	750	5.4	30	874		80	30	13	2.4	6	219
86LFA214405	1	58	0.1	21	88	62	850	4.5	35	887		46	36	11	2.8	4	215
86LFA214701	1	142	0.1	132	97	166	690	4.2	255	3253	24	167	44	18	6.3	16	176
86LFA214701	2	128	0.1	113	48	192	690	4.2	265	692	1	68	40	13	6.6	12	199
86LFA214701	10		0.1	108	124	188		5		3200	25	209	38				167
86LFA214801	1	362	0.6	131	101	142	450	2.4	295	9197	22	74	24	11	3.1	22	128
86LFA214901	1	234	0.3	136	112	123	250	3.2	365	9453	27	90	26	8	2	12	176
86LFA215001	1	163	0.1	35	111	101	390	3.6	85	474	7	84	30	8	5.9	20	126
86LFA215201	1	159	0.1	25	112	105	640	3.3	105	383	8	89	24	12	4.7	18	104
86LFA215202	1	288	0.1	39	135	149	720	3.5	45	642	7	93	30	11	8.2	20	159
86LFA215203	1	272	0.1	31	96	40	960	3.9	120	568	8	84	35	13	7.4	24	122
86LFA215301	1	44	0.1	17	54	41	590	5.2	215	382	2	45	37	9	2.1	2	140
86LFA215302	1	41	0.1	31	64	61	880	3.6	65	920	1	60	30	5	3.5	2	140
86LFA215302	10	29	0.1	33	88	59		6.3		1020	2	83	29	2	2.7	2	123
86LFA215303	1	20	0.1	24	52	44	1100	4	35	871		70	22	13	1.4	4	145
86LFA215304	1	23	0.1	22	56	46	1200	4.7	40	946		70	22	11	1.2	4	146
86LFA215304	10	19	0.1	25	82	41		6.2		1000	1	78	21	1	1.4	1	135
86LFA215501	1	176	0.2	32	64	192	520	7	85	1049	30	59	72	10	6.8	20	100
86LFA215504	10	23	0.1	21	70	52		6		630	2	63	23	2	5.6	4	132
86LFA215601	1	101	0.1	5	54	77	250	6	335	241	13	18	29	2	6.6	6	55
86LFA215701	1	167	0.1	10	57	117	430	3.5	160	364	14	26	30	6	20	10	53
86LFA215801	1	185	0.2	18	90	69	370	3.3	255	3008	20	171	49	8	2.8	26	157
86LFA215901	1	154	0.1	18	44	109	590	4.9	80	269	9	62	22	12	11.3	10	75
86LFA215902	1	360	0.1	13	42	118	660	4.9	30	621	19	37	43	7	8.2	2	83
86LFA215903	1	195	0.1	10	36	120	690	6.7	55	442	54	25	62	8	7	2	73
86LFA215903	2	188	0.1	11	30	125	520	9	55	374	57	27	93	3	6.4	2	74
86LFA216001	1	124	0.1	55	56	132	640	8.7	105	375	50	22	82	11	5.4	16	79
86LFA216002	1	107	0.1	29	54	121	610	4.3	85	823	8	97	32	7	8.9	26	121
86LFA216101	1	63	0.1	139	48	133	780	4.5	85	531	8	70	54	14	8.2	10	118
86LFA216501	1	107	0.3	52	96	141	730	3.4	120	1248	2	100	49	21	13.7	10	135
86LFA216502	1	129	0.4	50	88	93	670	3.2	65	1668	1	85	46	13	15.6	12	132
86LFA216503	1	89	0.4	31	76	63	830	3.6	60	934		64	36	23	10.4	8	139
86LFA216504	1	94	0.2	30	80	61	940	3.6	60	950		62	40	23	13.1	8	143
86LFA216505	1	161	0.4	55	72	93	730	3.9	65	2016		73	48	25	11	12	143
86LFA216505	10	150	0.1	47	78	97		5.7		2100	4	90	41	8	14	9	144
86LFA216601	1	125	0.6	49	78	93	760	3.4	120	1210	2	81	46	23	9.2	10	124
86LFA216601	10		0.1	47	92	100		5.5		1480	6	95	36				141
86LFA216602	1	147	0.2	51	78	96	800	3.4	115	1313	2	79	43	21	8.7	14	128
86LFA216602	10		0.1	50	90	103		5.4		1640	2	95	36				143
86LFA216603	1	149	0.6	53	76	91	760	3.7	65	1922	1	75	46	22	12.3	10	133
86LFA216604	1	171	0.6	61	92	87	730	3.7	55	1897	2	71	50	27	6.9	12	121
86LFA216701	1	172	0.4	56	74	82	650	2.8	195	2096	1	66	36	19	12.1	20	99
86LFA216702	1	218	0.7	54	72	98	650	2.9	80	2608		77	25	21	13.8	32	120
86LFA216801	1	67	1.7	39	48	60	1350	2.5	105	5287		104	41	29	15.2	18	244
86LFA216802	1	81	1.1	26	52	57	1350	2.5	250	2367		81	32	28	10.6	14	220
86LFA216901	1	117	0.9	49	84	63	940	2.9	180	3813		90	42	19	9.8	14	158
86LFA216902	1	21	0.6	22	68	40	870	4.1	30	846		64	24	9	3.2	4	124

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA216902	2	18	0.1	18	70	41		5.6		900		74	17	9	3.5	2	153
86LFA216902	10		0.1	21	86	39		6.1		900	1	70	18				133
86LFA216903	1	45	0.4	29	72	48	800	3.9	65	1676		60	31	8	4.9	6	112
86LFA217001	1	95	0.6	21	40	47	800	3.4	40	924		33	51	21	37	14	106
86LFA217001	2	113	0.4	20	40	51	570	3.3	40	1022	3	37	60	18	48	10	109
86LFA217002	1	93	0.9	14	38	28	700	3.2	35	1374		30	40	27	29	20	124
86LFA217003	1	86	0.3	13	44	28	850	3.1	20	1244		35	32	26	30	18	118
86LFA217101	1	139	1	22	56	96	1550	3.5	20	1615	1	42	89	47	24	55	135
86LFA217102	1	98	1.1	16	40	49	850	3.3	85	2054		23	58	49	28	22	137
86LFA217201	1	122	0.4	31	68	66	960	4	25	1185		52	44	30	13	18	129
86LFA217201	10		0.1	29	84	73		6.2		1380	2	73	36				152
86LFA217202	1	104	0.1	27	64	75	1050	4	40	1179		56	46	31	18.7	18	129
86LFA217202	10	130	0.1	28	70	77		6.2		1300	4	74	40	9	16	16	120
86LFA217203	1	99	0.3	23	58	60	920	3.1	45	1055		39	36	35	15.4	24	103
86LFA217204	1	133	0.3	26	56	84	1150	3.6	25	1394	1	45	54	35	25	32	132
86LFA217301	1	122	0.1	52	164	100	690	3.3	40	1368		197	28	14	10.8	14	133
86LFA217401	1	92	0.3	35	74	72	780	3.4	90	896	2	85	35	18	8.1	16	117
86LFA217401	10	80	0.1	33	64	66		5		1000	4	95	27	5	4.8	17	111
86LFA217501	1	43	0.5	14	132	40	660	2.1	130	1089		34	41	19	9.3	12	76
86LFA217502	1	219	0.9	24	56	97	1300	3.6	30	1000	1	46	89	39	24	14	176
86LFA217801	1	118	0.9	30	102	147	690	5.1	60	2636	4	100	48	12	6.7	10	199
86LFA218001	1	49	0.3	38	70	99	570	3.8	45	1277		59	55	13	7.1	55	129
86LFA218101	1	93	0.3	24	54	77	1200	4.5	125	728		49	46	13	10.2	6	149
86LFA218102	1	90	0.5	25	56	63	1050	4.6	35	748		52	39	15	9.2	6	159
86LFA218103	1	45	0.1	21	58	49	1300	4.6	25	676		54	32	13	10.6	8	145
86LFA218103	2	46	0.2	23	58	52	1025	4.4	10	714	0.5	58	33	12	9.4	6	148
86LFA218103	10	29	0.1	21	66	52		6.3		700	1	53	27	5	10	8	140
86LFA218104	1	19	0.2	26	82	41	1000	4.6	25	909	1	77	22	9	3.8	4	140
86LFA218104	10		0.1	24	106	43		7		900	1	77	19				158
86LFA218105	1	98	0.1	31	48	56	320	3.3	40	1099		23	31	19	16.4	18	69
86LFA218106	1	75	0.3	15	38	54	360	2.9	30	553		23	23	8	14.5	20	129
86LFA218201	1	39	0.1	26	60	42	830	4.6	20	1398	1	52	30	14	8.3	2	157
86LFA218202	1	37	0.1	30	60	38	1000	4.4	25	1005	1	52	39	18	7.7	8	150
86LFA218203	1	42	0.1	33	66	42	980	4.6	20	1071	1	55	36	13	9.6	6	158
86LFA218203	10		0.1	29	82	39		6.4		1100	1	67	30				161
86LFA218204	1	42	0.1	32	68	45	1050	4.5	25	1124		61	39	12	7.5	6	158
86LFA218204	10	29	0.1	30	74	41		6.7		1120	1	61	32	4	6.3	3	152
86LFA218301	1	127	0.1	34	60	66	870	4.8	20	866	2	51	29	10	5.7	8	132
86LFA218302	1	55	0.1	26	52	49	830	4.6	25	803	2	48	27	12	6.7	8	130
86LFA218303	1	29	0.1	18	48	35	980	4.4	35	702	1	39	26	18	10.4	8	151
86LFA218303	10	30	0.1	19	58	38		6.2		820	2	45	29	6	11	7	161
86LFA218304	1	52	0.1	21	54	57	830	4.6	30	759	1	48	23	12	9.4	10	132
86LFA218304	10	36	0.1	23	58	61		7		880	1	59	22	5	7	7	145
86LFA218401	1	28	0.3	18	42	38	870	3.8	40	663	2	40	40	16	11	12	126
86LFA218401	10	19	0.1	19	52	40		5.6		850	2	46	36	6	14	9	137
86LFA218402	1	29	0.1	24	50	48	900	3.9	45	833	2	50	35	14	10.2	10	134
86LFA218403	1	23	0.4	26	52	57	830	4.1	45	932	2	50	35	16	8.5	10	132
86LFA218404	2	18	0.1	23	90	44		7		980		82	19	10	4	4	182
86LFA218501	1	38	0.1	25	60	47	900	4.3	35	642	1	55	24	13	9.4	6	133
86LFA218501	10	22	0.1	22	74	44		6.6		740	1	65	21	4	5.9	4	138
86LFA218502	1	33	0.1	23	60	48	870	4.2	35	581	1	56	29	11	7.7	6	132

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA218502	10	24	0.1	22	72	45		6.2		640	1	61	26	4	6.7	3	146
86LFA218502	11	19	0.1	22	70	42		6.2		620	1	58	24	5	5.5	4	133
86LFA218503	1	36	0.3	18	60	47	760	4.1	40	499	2	56	25	15	7.7	8	125
86LFA218503	2	47	0.1	19	60	48	720	4.3	40	566	1	57	30	13	7.8	6	125
86LFA218503	10		0.1	19	78	47		6.3		530	2	67	20				144
86LFA218504	1	36	0.1	21	58	50	930	4	45	552	1	56	25	9	7.7	6	127
86LFA218505	1	42	0.1	19	52	51	870	4.1	40	639	1	53	29	12	7.8	8	129
86LFA218505	10	22	0.1	22	70	52		6.5		640	2	64	27	3	6	6	146
86LFA218601	1	38	0.1	26	60	35	730	3.4	80	945	1	49	31	12	6.1	8	125
86LFA218602	1	29	0.1	20	58	38	760	3.4	65	663	1	51	27	11	8.2	6	101
86LFA218603	1	19	0.1	24	64	40	870	3.8	65	728	1	53	37	7	9.2	6	111
86LFA218603	10	16	0.1	23	74	42		5.9		740	2	58	32	4	4.4	5	122
86LFA218604	1	23	0.1	24	62	48	900	4.5	40	734	1	58	23	12	7.4	6	135
86LFA218605	1	28	0.1	22	56	56	830	4.4	35	626	1	56	23	9	7.8	10	132
86LFA218605	10	14	0.1	22	70	56		6.7		700	1	61	23	4	4.6	8	146
86LFA218606	1	15	0.1	22	56	42	1050	4.3	30	793	1	54	24	15	9.6	6	138
86LFA218606	10	11	0.1	22	68	44		6.7		980	1	61	25	5	10	3	150
86LFA218606	11	10	0.1	19	68	40		6.3		880	1	55	21	5	5.4	6	148
86LFA218701	1	13	0.1	27	64	39	620	3.3	120	854		57	18	4	4.1	4	93
86LFA218701	10	23	0.1	28	72	37		5		900	1	58	27	3	3.6	4	95
86LFA218801	1	43	0.1	27	66	40	730	3.5	70	759	2	53	35	11	8.2	6	98
86LFA218802	1	30	0.1	25	68	45	830	3.5	85	664	2	53	34	12	8.7	8	99
86LFA218803	1	28	0.1	23	64	44	830	3.7	80	747	2	50	27	17	10.6	8	106
86LFA218901	1	23	0.1	18	58	28	980	4	40	845	1	45	29	15	10.2	14	113
86LFA218902	1	10	0.1	22	64	40	870	3.6	80	905	2	50	37	17	9	8	102
86LFA218903	1	30	0.1	18	64	29	1250	4.4	25	733	1	47	21	12	7.8	10	109
86LFA218904	1	10	0.2	19	60	28	1350	4.3	20	632	1	46	24	13	10.2	14	106
86LFA218904	10	6	0.1	20	70	29		6.6		680	1	48	18	4	6.4	7	123
86LFA219001	1	11	0.1	19	60	31	1400	4.3	40	666	1	48	23	14	7.8	12	112
86LFA219001	2	18	0.2	19	60	31	1375	4.4	20	719	1	46	27	17	8.8	8	114
86LFA219002	1	81	0.6	23	72	57	850	4.8	35	707		57	28	13	9.6	8	136
86LFA219101	1	12	0.1	26	76	41	700	3.6	80	756	1	55	45	17	9.2	8	132
86LFA219102	1	114	0.3	23	60	48	900	3.9	70	862		50	72	15	11.5	10	141
86LFA219301	1	10	0.1	30	80	55	930	4.1	45	760		61	34	13	10	10	118
86LFA219301	10	5	0.1	26	84	55		6.5		840	1	64	26	4	6.4	6	124
86LFA219302	1	46	0.5	6	18	10	570	2	35	628		8	50	4	31	8	36
86LFA219303	1	272	0.5	29	52	20	570	5.2	40	2119		18	29	17	14.4	14	97
86LFA219401	1	11	0.1	31	68	56	830	4.1	40	794		54	20	13	8.7	10	104
86LFA219401	10	7	0.1	31	76	61		6.3		960	2	68	17	4	9	7	108
86LFA219401	11	6	0.1	31	78	60		6.5		940	1	65	15	3	5.8	8	114
86LFA219501	1	7	0.4	25	82	50	870	3.7	40	643	1	54	35	12	11.3	10	110
86LFA219501	10	5	0.1	26	80	49		6		760	1	59	29	5	12	8	112
86LFA219601	1	8	0.4	26	76	45	760	3.5	55	715		51	43	12	7.8	8	108
86LFA219601	10	5	0.1	24	78	44		5.6		900	1	56	35	1	7.2	6	110
86LFA219701	1	9	0.1	24	86	42	650	3.2	100	535	1	55	34	11	8.5	6	105
86LFA219801	1	5	0.1	23	94	55	870	4.2	35	602	1	59	23	11	8	6	133
86LFA219801	2	8	0.1	20	100	58		6		640		65	15	7	8	8	168
86LFA219801	10		0.1	21	104	52		6.3		600	1	66	14				130
86LFA219801	11	4	0.1	22	100	53		6.6		640	3	61	15	5	6.6	7	137
86LFA219802	1	7	0.5	25	92	51	870	4.2	30	646	1	60	22	7	10.9	8	134
86LFA219802	2	7	0.1	22	102	52		5.8		720		66	15	11	11.4	8	164

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA219802	10		0.1	24	108	51		6.4		690	1	67	14				135
86LFA219802	11	3	0.1	25	104	53		7		780	2	62	17	3	9	8	148
86LFA219803	1	5	0.1	26	88	51	830	4.1	35	651		59	23	15	14.9	10	132
86LFA219803	10	2	0.1	18	74	38		4.9		560	1	48	13	3	6.2	9	96
86LFA219901	1	6	0.2	25	82	65	670	3.3	70	606		49	36	13	11.3	4	112
86LFA219902	1	6	0.6	25	78	71	760	3.7	40	671	1	54	29	17	11.8	4	127
86LFA219902	10	5	0.3	25	88	78		5.9		800	2	60	21	4	9.5	6	138
86LFA220001	1	7	0.4	18	64	41	650	2.8	225	551		39	43	18	9.6	6	101
86LFA220002	1	6	0.1	22	76	45	700	3.7	30	656		50	40	15	7.3	6	111
86LFA220002	2	5	0.1	21	84	48		5.2		720		58	29	12	7.2	6	146
86LFA220002	3	6	0.1	22	76	48	570	3.9	20	785	1	51	36	11	7.1	4	109
86LFA220002	10		0.1	23	92	49		5.4		720	1	59	28				116
86LFA220101	1	4	0.5	25	68	41	820	3.3	75	717		39	40	14	11.8	8	108
86LFA220101	10		0.1	25	82	43		5.4		920	2	51	30				114
86LFA220102	1	4	0.1	23	66	39	700	3.3	55	632		41	41	10	12	8	109
86LFA220102	10		0.2	14	104	25		2.8		480	2	28	17				67
86LFA220201	1	116	0.1	50	64	126	730	3.7	60	1330	3	56	68	11	6.4	32	164
86LFA220202	1	129	0.2	49	60	133	760	4.4	50	921	3	50	72	12	8.5	28	142
86LFA220202	10		0.1	46	77	143		7.4		1040	5	68	64				152
86LFA220203	1	71	0.1	42	62	246	830	3.9	40	766	5	51	50	11	8	1600	114
86LFA220301	1	66	0.4	52	58	232	900	4	100	1511	1	128	81	13	9.7	10	257
86LFA220401	1	54	0.3	31	56	83	800	3.5	155	706	1	64	63	10	4.3	4	366
86LFA220501	1	44	0.2	31	68	77	760	3.7	60	1029		63	38	16	8	6	116
86LFA220501	10	43	0.1	33	82	75		6.2		1260	1	75	30	3	6	5	129
86LFA220601	1	45	0.1	35	80	66	650	2.4	105	367	1	92	37	8	8.2	4	125
86LFA220601	10		0.1	40	102	66		3.8		480	2	106	26				129
86LFA220801	1	34	0.2	38	52	57	980	3	105	758		48	41	18	17.2	10	123
86LFA220802	1	44	0.1	40	56	62	830	3	70	697	1	48	38	19	13.2	10	121
86LFA220802	10		0.1	39	72	58		5.5		940	2	59	26				127
86LFA220901	1	9	0.1	16	40	26	870	3.4	30	814		32	37	23	34	6	120
86LFA220901	10		0.1	18	56	28		4.9		1000	1	42	26				130
86LFA221101	1	9	0.1	17	44	26	1175	3.1	50	732		29	54	26	39	6	121
86LFA221102	1	17	0.1	17	44	28	980	3.5	25	736		36	35	26	25	6	134
86LFA221102	10	12	0.1	17	56	29		5.6		940	2	42	26	13	22	4	145
86LFA221103	1	10	0.2	15	32	22	1150	3.6	15	816		27	34	26	32	6	146
86LFA221103	10	7	0.1	14	44	22		5.7		960	2	30	24	14	24	4	152
86LFA221201	1	27	0.3	27	56	34	1350	3.6	40	855		65	35	23	2.3	8	148
86LFA221201	10	17	0.1	26	66	34		5.7		1080	1	71	29	8	16	3	158
86LFA221301	1	9	0.3	19	70	29	1000	2.9	55	647	1	54	40	22	11.3	6	144
86LFA221301	2	12	0.1	21	68	27	750	3.1	30	825	1	56	42	19	11.3	6	148
86LFA221401	1	9	0.1	17	48	36	1175	3.2	65	610	1	41	37	26	19.4	8	137
86LFA221401	10	7	0.1	19	54	38		4.6		880	1	51	31	6	22	7	141
86LFA221402	1	13	0.1	22	66	61	870	2.9	100	621	1	57	44	24	17.5	12	139
86LFA221501	1	8	0.1	20	52	26	1175	3.8	40	777		40	25	25	11.8	6	126
86LFA221501	10		0.1	18	70	26		5.2		900	1	50	21				139
86LFA221501	11	5	0.1	17	62	25		5.4		900	2	43	20	7	12	3	131
86LFA221502	1	10	0.1	19	50	27	1250	3.8	30	602		41	20	22	14.5	4	135
86LFA221502	10		0.1	17	68	27		5.4		720	1	50	18				138
86LFA221502	11	4	0.1	16	62	27		5.7		760	1	42	16	7	12	4	141
86LFA221503	1	8	0.1	16	46	18	900	3.1	40	702	1	36	28	21	11.6	6	102
86LFA221503	10		0.1	17	62	19		4.1		880	1	43	21				105

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA221503	11	4	0.1	18	60	18		4.5		960	1	41	23	5	10	3	105
86LFA221601	1	6	0.1	19	56	24	1100	3.7	40	615		37	25	24	15.4	6	113
86LFA221601	10	7	0.1	19	62	29		5.2		940	1	50	26	5	14	2	130
86LFA221601	11	1	0.1	19	60	26		4.8		840	1	46	23	10	12	3	120
86LFA221602	1	6	0.3	20	54	28	1000	3.9	40	660		43	24	21	15.7	4	134
86LFA221602	10	4	0.1	18	62	29		5.2		820	1	46	21	12	12	6	142
86LFA221603	1	8	0.1	19	56	25	1100	3.6	55	537		37	25	21	16.6	6	113
86LFA221603	10	4	0.1	18	66	29		5.3		720	2	46	23	10	12	4	129
86LFA221604	1	6	0.1	19	52	29	1000	3.7	50	591		43	26	24	23	4	132
86LFA221604	10	5	0.1	18	64	31		5.6		800	1	51	23	3	18	2	140
86LFA221604	11	5	0.1	17	66	28		5.5		740	2	45	20	10	12	3	137
86LFA221701	1	7	0.1	20	42	20	940	3	40	795		33	29	23	18.7	6	103
86LFA221701	10		0.1	16	58	19		3.8		900	1	37	23				97
86LFA221702	1	9	0.1	18	50	27	1250	3.9	30	580		40	25	24	16.8	6	134
86LFA221702	10	5	0.1	17	66	29		5.7		740	1	45	21	11	13	3	148
86LFA221703	1	9	0.1	17	46	25	1250	3.8	20	639		39	26	29	25	8	138
86LFA221703	10	5	0.1	15	64	25		5.6		790	1	42	21	15	20	6	149
86LFA221801	1	21	0.1	13	44	21	1175	3	65	1491	6	29	57	37	36	28	89
86LFA222001	1	20	0.2	11	54	19	1300	3.4	100	475	10	30	71	31	43	22	95
86LFA222101	1	22	0.1	10	46	15	1250	3	100	465	5	26	45	29	43	20	94
86LFA222201	1	21	0.1	11	54	20	1175	3.9	100	350	13	32	39	25	50	22	124
86LFA222301	1	11	0.2	14	44	40	1000	2.8	80	856	2	28	49	33	36	32	109
86LFA222301	2	16	0.3	13	40	41	720	2.6	50	997	1	34	51	32	33	26	106
86LFA222601	1	16	0.2	12	46	26	870	2.4	100	2160	1	29	67	60	76	38	90
86LFA222701	1	7	0.1	12	36	16	550	1.2	40	498		19	25	29	31	18	55
86LFA222701	10	6	0.1	12	52	19		2		860	1	27	26	9	38	18	69
86LFA222801	1	15	0.2	17	46	44	915	2.1	140	589	1	39	58	26	40	32	104
86LFA222802	1	13	0.2	18	46	37	870	2.4	70	844	2	43	47	26	40	18	107
86LFA222901	1	12	0.4	6	30	35	700	1.5	60	908	2	16	45	43	37	35	79
86LFA223001	1	12	0.6	19	38	37	800	2.2	165	1946	7	20	60	44	30	60	112
86LFA223002	1	15	0.5	10	20	58	1500	3.1	35	1011	4	16	63	90	83	65	182
86LFA223002	10		0.3	11	40	62		4.5		1360	6	19	53				197
86LFA223201	1	8	0.2	14	40	33	1050	2.3	110	556	1	33	53	39	16.3	40	106
86LFA223301	1	9	0.2	13	34	38	830	2.5	165	567	2	32	79	48	25	24	151
86LFA223301	10	5	0.1	13	42	36		3.9		840	1	33	82	11	25	23	151
86LFA223501	1	8	0.1	7	34	18	830	1.9	105	515	1	19	40	37	32	32	62
86LFA223601	1	10	0.4	13	34	27	1050	2.3	100	674	1	32	65	49	25	26	169
86LFA223602	1	11	0.5	14	32	29	1400	3.3	30	732		29	54	57	25	18	155
86LFA223602	10		0.3	13	50	31		4.4		960	1	32	45				170
86LFA223602	11	5	0.3	14	48	32		4.9		1040	1	33	47	20	28	16	179
86LFA223603	1	10	0.5	14	34	31	1400	3.5	20	774		34	53	51	25	20	170
86LFA223603	10	6	0.3	14	44	36		5.2		1120	1	38	48	14	26	16	192
86LFA223603	11	5	0.2	14	50	33		5.2		1060	1	34	46	22	24	15	199
86LFA223701	1	6	0.1	6	18	32	670	1.3	70	2675	2	10	105	67	42	60	70
86LFA224601	1	12	0.1	18	54	28	760	3.1	110	507	1	44	43	20	7.1	14	115
86LFA224602	1	11	0.3	19	52	31	760	3.2	80	540		51	34	13	6.7	10	114
86LFA224701	1	14	0.4	18	40	29	760	2.2	120	1000	1	27	40	32	51	26	81
86LFA224701	2	12	0.6	16	36	33	830	2.2	165	1756	1	28	50	35	51	30	82
86LFA224801	1	13	0.3	11	46	17	410	2.9	345	453	4	29	42	17	9.3	6	118
86LFA224805	1	114	0.1	29	88	88	870	4.7	30	1689	2	63	37	20	4.8	6	163
86LFA224805	2	77	0.1	26	92	93		6.4		1600	2	68	27	13	4.4	8	199

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA224805	10		0.1	27	106	89		7.1		1520	2	65	26				168
86LFA224805	11	70	0.1	29	102	85		7.6		1600	3	65	27	10	3.4	5	175
86LFA224806	1	93	0.3	66	86	93	795	5.4	100	6276	2	109	66	7	4.7	6	145
86LFA224901	1	13	0.1	20	52	27	1000	3.3	55	1009	1	49	44	27	11.5	8	125
86LFA224901	10		0.1	19	70	30		4.4		880	2	51	34				126
86LFA225001	1	28	0.2	15	52	15	1250	3.4	40	623	15	40	41	33	17	14	121
86LFA225001	10		0.1	15	78	21		5.2		640	25	48	33				135
86LFA225002	1	34	0.4	20	52	29	1400	3.4	40	1080	6	46	45	33	26	18	130
86LFA225003	1	27	0.1	19	54	35	1250	3.9	30	974	2	52	35	31	12.1	10	157
86LFA225004	1	20	0.1	16	46	41	1525	3.7	30	975	2	45	31	41	11.5	12	150
86LFA225004	2	15	0.1	15	44	47		5.2		900	2	50	22	43	9.3	24	193
86LFA225004	10		0.1	17	68	44		5.3		1020	1	49	26				173
86LFA225101	1	11	0.9	18	54	32	980	3.4	35	1021	3	49	54	25	14.5	10	178
86LFA225201	1	21	0.4	16	48	36	940	3.5	20	1008	3	43	42	41	13.3	10	114
86LFA225201	2	17	0.1	14	44	42		5		850	4	46	34	44	8.5	24	143
86LFA225201	10		0.2	17	64	40		5		880	6	44	35				128
86LFA225201	11	14	0.1	17	60	42		5.2		920	6	43	32	9	17	17	128
86LFA225202	1	18	0.3	15	38	42	1350	3.3	35	907	3	32	50	57	26	32	119
86LFA225202	2	20	0.1	12	36	46		4		860	4	35	41	56	19	32	140
86LFA225202	10		0.2	14	56	50		4.7		920	6	39	43				134
86LFA225301	1	21	0.1	15	44	38	1450	3.3	60	1002	3	47	43	51	26	10	136
86LFA225302	1	11	0.3	15	52	35	1000	3.4	25	878	1	46	38	29	17	14	122
86LFA225303	1	15	0.1	15	54	36	1250	3.5	30	796	1	55	36	26	13.7	10	126
86LFA225401	1	16	0.1	20	56	32	1000	3.4	40	903	3	60	29	19	8	8	100
86LFA225402	1	12	0.1	24	62	37	900	3.9	20	947		70	20	14	4.3	6	116
86LFA225402	2	13	0.1	19	68	39		4.8		960		73	17	6	3.1	8	146
86LFA225402	10		0.1	21	88	36		5.8		900	1	72	20				127
86LFA225402	11	3	0.1	21	80	38		6.2		920	2	70	20	3	3.4	1	128
86LFA225403	1	14	0.1	23	68	36	1000	4	35	943		78	23	9	3	6	113
86LFA225403	2	14	0.1	19	72	36		5		800		79	15	12	2.3	4	132
86LFA225403	3	17	0.1	22	62	38	850	4.2	40	921	0.5	73	20	2	2.5	2	110
86LFA225403	10		0.1	23	98	35		6.3		840	1	84	16				125
86LFA225403	11		0.1	21	86	34		5.6		760	1	76	15				110
86LFA225404	1	16	0.1	19	56	34	975	3.6	30	1002		63	27	13	10	10	111
86LFA225404	10	11	0.1	20	76	37		5.3		940	4	69	21	4	8	3	129
86LFA225405	1	13	0.1	15	38	47	1050	3.2	40	972		36	41	53	17.5	32	149
86LFA225405	10	10	0.1	16	54	55		5.1		1100	3	42	37	13	22	27	182
86LFA225406	1	49	0.4	13	34	33	1175	3.4	30	1221		24	51	68	28	28	164
86LFA225501	1	29	0.1	19	52	27	830	3.1	60	950	3	53	39	31	14.5	14	112
86LFA225502	1	17	0.1	16	46	29	1100	3.4	35	897	2	45	45	37	17.6	10	135
86LFA225502	10	16	0.1	16	60	33		5.4		900	6	49	36	12	18	9	157
86LFA225503	1	17	0.2	18	52	39	1100	3.9	30	957	4	53	38	30	11.8	12	144
86LFA225503	10	17	0.1	17	62	40		5.9		1000	10	57	33	7	15	16	152
86LFA225503	11	16	0.1	18	66	40		6		1000	9	53	32	8	12	8	159
86LFA225504	1	24	0.4	12	54	28	650	2.3	185	636	1	44	38	21	34	12	93
86LFA225505	1	21	0.2	11	54	27	760	2.7	140	894	1	42	42	26	41	10	109
86LFA225601	1	30	0.3	18	54	36	940	3.6	35	834	1	57	31	22	9.2	18	131
86LFA225601	10	22	0.1	18	64	40		5.7		800	8	64	27	3	10	17	141
86LFA225601	11	17	0.1	18	70	38		5.7		760	6	58	26	5	8	10	140
86LFA225602	1	40	0.2	18	56	35	1050	3.7	40	711	4	47	26	30	14.9	26	127
86LFA225602	10		0.1	15	72	40		5.2		700	12	60	23				144

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
86LFA225603	1	37	0.3	19	52	38	870	3.1	55	1029	2	52	32	21	12.5	24	106
86LFA225603	10	33	0.1	21	70	43		5		1100	6	62	31	5	16	25	125
86LFA225701	1	101	0.1	20	60	33	830	2.8	120	753	3	56	39	21	7.1	45	112
86LFA225702	1	76	0.2	18	64	33	940	3.1	75	791	2	56	37	24	8	45	112
86LFA225702	10	51	0.1	22	74	43		5.2		940	5	59	31	6	6.4	35	124
86LFA225801	1	37	0.1	17	52	42	800	2.7	90	932		47	44	29	15.9	12	129
86LFA225901	1	36	0.2	20	102	37	650	2.7	200	829	4	65	49	16	6.2	10	99
86LFA226001	1	87	0.1	24	66	49	550	3.9	25	860		62	31	20	4.5	24	136
86LFA226002	1	34	0.1	19	62	38	940	3.8	20	969		70	32	20	5	8	152
86LFA226002	2	32	0.1	18	58	39	1025	4.1	20	955	1	68	34	18	4.2	8	152
86LFA226102	1	40	0.2	21	64	37	760	3.7	105	594	2	64	37	15	4.4	10	116
86LFA226103	1	47	0.1	20	60	48	720	3.9	40	921	2	60	33	17	5.5	14	120
86LFA226104	1	38	0.2	22	72	56	760	2.8	205	1154	2	69	42	13	10.4	8	98
86LFA226105	1	38	0.3	21	68	51	750	2.9	170	1058	3	70	48	10	10.4	10	100
86LFA226106	1	22	0.1	20	60	36	700	2.3	205	1919	1	65	54	9	12	4	85
86LFA226107	1	12	0.3	14	40	28	640	2.8	70	736		49	25	12	4	2	78
86LFA226202	1	77	1	27	66	50	640	3.4	100	2192	4	92	71	14	6.6	10	118
86LFA226203	1	67	0.9	26	66	49	620	3.7	55	2054	2	90	87	15	8.7	10	118
86LFA226203	10	46	0.5	23	72	45		4.9		1980	3	95	70	3	7	7	125
86LFA226204	1	56	1.1	21	54	52	790	3.9	70	1250	2	86	30	13	10.8	6	141
86LFA226205	1	69	1	24	48	55	800	3.4	55	2210	1	92	41	18	11.3	12	121
86LFA226502	1	103	0.3	28	60	81	930	3.7	90	982	4	87	58	15	9.5	16	172
86LFA226601	1	250	0.2	66	64	202	1200	4.2	80	1806	6	124	93	34	9.7	40	231
86LFA226701	1	98	0.3	51	72	102	720	3.1	165	928	3	107	85	22	4.8	14	196
86LFA226701	10		0.1	54	90	100		5.2		860	5	108	71				210
86LFA226801	1	87	0.6	30	78	54	620	3.9	185	741	2	75	83	11	4.5	18	265
86LFA227002	1	147	0.4	23	76	87	620	3.8	120	546	3	92	51	18	6.4	10	162
86LFA227801	1	262	0.1	34	80	103	890	4.1	80	1170	1	96	36	19	3	12	149
86LFA227802	1	173	0.1	34	72	93	850	4.4	45	1542	1	83	38	15	3.6	14	157
86LFA227802	2	178	0.1	35	72	93	790	4.3	30	1524	1	80	38	19	2.5	10	148
86LFA227803	1	192	0.2	27	72	87	890	5	20	943	1	79	32	19	2.6	14	159
86LFA227804	1	290	0.1	28	68	81	820	4.9	20	1254	1	72	35	17	2.3	16	181
86LFA227805	1	362	0.3	27	68	81	970	4.8	20	1081	1	69	37	23	2.5	10	189
86LFA227805	10	310	0.1	29	82	80		7.2		1160	1	79	31	3	2	8	202
86LFA227805	11	310	0.1	28	80	72		6.7		1060	2	61	25	3	1.5	4	189
87LFA600001	10	10	0.25	13	46	22	270	4.0	180	397	0.5	34	22	1	3.2	6	98
87LFA600002	10	15	0.25	21	52	30	320	4.5	70	741	0.5	41	18	1	4	7	105
87LFA600003	10	5	0.25	18	57	34	460	5.5	40	771	0.5	45	22	2	6	6	110
87LFA600004	10	10	0.25	18	61	35	660	5.9	30	763	0.5	50	18	3	6	7	128
87LFA600005	10	15	0.25	21	63	36	630	5.9	30	1060	0.5	46	30	4	6.8	6	140
87LFA600006	10	5	0.25	17	49	24	500	4.6	30	1080	0.5	36	18	4	6.8	8	111
87LFA600007	10	10	0.25	19	59	32	560	4.9	20	836	0.5	45	26	2	4.8	4	117
87LFA600007	11	15	0.25	23	64	36	670	5.3	30	924	1	51	26	2	3.6	5	127
87LFA600008	10	2.5	0.25	16	54	29	610	4.9	20	814	0.5	40	24	3	6	5	124
87LFA600009	10	15	0.25	20	50	42	390	5.5	10	1095	0.5	40	20	2	6.4	5	124
87LFA600101	10	2.5	0.25	18	53	47	340	4.2	60	536	0.5	40	26	2	2.8	6	110
87LFA600102	10	15	0.25	32	49	62	340	4.4	40	846	0.5	40	20	2	3.2	7	85
87LFA600103	10	35	0.25	29	42	69	300	4.2	40	882	0.5	39	22	1	2.8	9	86
87LFA600104	10	70	0.25	44	51	102	320	5.3	40	1355	2	48	42	1	4	19	110
87LFA600105	10	50	0.25	32	62	117	460	5.6	20	805	2	44	42	1	4.4	29	111
87LFA600105	11	60	0.25	33	64	122	570	5.9	30	836	3	51	42	1	2	18	115

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
87LFA600201	10	55	0.25	34	74	94	300	5.0	60	764	4	83	14	1	2.8	17	82
87LFA600202	10	45	0.25	30	80	80	320	5.0	60	837	3	63	14	1	3.2	18	89
87LFA600203	10	30	0.25	21	82	82	360	6.3	50	733	5	59	26	1	4	17	100
87LFA600204	10	75	0.25	26	56	95	510	6.6	80	599	10	59	32	2	12	9	77
87LFA600301	10	65	0.25	15	99	71	520	7.0	50	415	17	28	18	1	9.4	10	55
87LFA600302	10	80	0.25	25	58	95	560	7.9	40	633	18	44	38	2	14	10	67
87LFA600303	10	90	0.25	25	58	88	390	8.4	20	570	20	42	28	2	13	7	64
87LFA600304	10	120	0.25	18	43	77	280	7.6	40	440	27	34	34	1	11	8	43
87LFA600305	10	105	0.25	18	32	89	290	11.0	140	423	54	25	56	1	11	5	41
87LFA600401	10	15	0.25	9	54	15	200	3.4	240	177	2	13	16	1	6.3	3	61
87LFA600402	10	15	0.25	27	29	33	270	3.6	80	1350	3	30	26	2	20	5	60
87LFA600403	10	40	0.5	22	31	34	280	3.3	100	1545	3	27	32	12		7	75
87LFA600404	10	55	0.25	24	33	51	300	4.1	40	1100	4	38	38	2	40	12	97
87LFA600405	10	35	0.25	19	27	37	310	3.3	30	1220	5	28	30	1	33	15	88
87LFA600406	10	50	0.25	15	24	29	370	2.9	60	1595	1	25	24	1	31	27	83
87LFA600407	10	50	0.5	18	32	31	370	3.4	40	1205	3	28	30	1	30	8	89
87LFA600501	10	150	0.25	12	34	28	330	3.7	140	256	3	19	6	1	9.8	7	61
87LFA600502	10	60	0.25	21	35	66	280	3.6	120	1055	2	25	52	2	22	27	79
87LFA600503	10	120	0.25	24	38	85	710	5.3	70	1425	1	36	64	6	36	45	136
87LFA600504	10	60	0.5	17	21	81	450	3.6	40	1705	1	20	38	5	39	8	100
87LFA600505	10	70	0.25	16	25	54	370	3.8	30	1990	2	19	50	7	37	19	115
87LFA600506	10	70	0.25	19	37	45	380	4.2	30	1495	1	29	26	5	45	20	135
87LFA600601	10	10	0.25	32	93	43	390	5.6	40	687	0.5	54	18	1	12	10	96
87LFA600602	10	10	0.25	27	105	50	440	6.4	30	593	0.5	57	10	2	16	8	117
87LFA600602	11	10	0.25	25	96	47	500	6.1	40	573	0.5	58	10	1	17	8	117
87LFA600603	10	2.5	0.5	28	101	48	510	6.2	30	624	0.5	56	14	1	16	8	123
87LFA600604	10	15	0.25	27	91	46	510	5.9	30	599	0.5	55	12	1	17	7	116
87LFA600701	10	70	0.25	29	96	45	300	5.7	80	535	0.5	61	20	1	7	1	85
87LFA600702	10	35	0.25	41	92	61	320	4.3	70	516	0.5	103	24	1	9.5	1	116
87LFA600703	10	45	0.25	43	82	65	540	4.1	90	462	0.5	105	22	1	13	1	115
87LFA600704	10	25	0.25	31	66	43	630	4.0	70	473	0.5	71	20	1	13	2	102
87LFA600801	10	10	0.25	9	26	21	400	3.3	180	351	0.5	14	28	2	17	7	64
87LFA600901	10	2.5	0.25	14	38	19	500	4.2	100	393	8	31	28	1	12	14	83
87LFA600902	10	2.5	0.25	23	59	34	840	4.9	40	863	6	53	22	4	16	6	105
87LFA600903	10	2.5	0.25	24	69	32	880	5.4	30	692	0.5	66	6	1	5.8	2	106
87LFA600904	10	2.5	0.5	26	68	34	860	5.3	20	888	0.5	59	6	1	8	5	105
87LFA600905	10	5	0.25	23	61	32	730	4.9	30	699	0.5	59	8	1	9.2	3	94
87LFA600906	10	30	0.25	18	38	52	1080	4.7	60	913	2	30	32	14	34	28	159
87LFA600907	10	15	0.25	20	41	47	1140	4.9	40	1020	1	34	32	12	34	20	148
87LFA600908	10	40	0.5	17	35	33	1050	5.0	50	1475	1	23	48	18	84	17	162
87LFA601001	10	75	0.25	28	76	51	640	5.4	100	541	0.5	95	18	2	8.1	8	131
87LFA601002	10	40	0.5	26	70	52	720	5.8	40	753	0.5	70	16	3	7.9	7	142
87LFA601002	11	35	0.25	24	65	50	630	5.8	50	744	2	66	30	2	8.5	10	142
87LFA601003	10	50	0.25	26	73	53	720	6.0	50	735	0.5	74	24	3	8	10	152
87LFA601004	10	60	0.25	25	72	56	710	6.0	40	731	0.5	68	16	3	7.6	6	147
87LFA601005	10	45	0.25	18	65	50	830	5.7	30	637	0.5	61	28	2	8.6	7	128
87LFA601006	10	65	0.25	23	55	51	720	5.0	60	1120	1	58	28	2	11	7	115
87LFA601007	10	60	0.25	19	72	66	650	6.2	50	799	0.5	74	34	2	6.1	15	149
87LFA601101	10	35	0.25	22	74	65	650	6.8	50	1105	0.5	73	34	1	7.4	2	127
87LFA601102	10	40	0.25	29	68	57	680	6.2	40	1175	0.5	69	34	1	7.4	2	125
87LFA601103	10	15	0.25	23	65	37	740	5.0	30	1130	0.5	57	24	1	5	1	102

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
87LFA601104	10	35	0.25	29	76	50	770	5.8	40	1230	0.5	71	30	1	5.4	2	121
87LFA601105	10	20	0.25	24	69	41	820	5.2	40	1125	0.5	63	26	1	5	2	106
87LFA601106	10	25	0.25	24	70	42	800	5.5	30	1155	0.5	64	34	1	5.3	2	107
87LFA601201	10	110	0.25	32	77	98	510	6.5	50	1695	0.5	93	40	1	4.3	1	340
87LFA601202	10	425	0.25	41	53	167	960	5.8	30	2420	0.5	61	34	7	6.1	10	202
87LFA601301	10	15	0.25	20	78	55	640	6.0	40	778	0.5	74	20	1	4.6	4	111
87LFA601302	10	35	0.25	24	88	61	670	6.7	40	925	0.5	83	32	1	4.6	5	135
87LFA601303	10	60	0.25	20	123	55	540	6.4	20	953	0.5	77	36	1	6.6	3	127
87LFA601401	10	60	0.25	20	101	49	560	6.8	20	629	0.5	71	36	1	5.9	2	107
87LFA601402	10	45	0.25	21	103	60	630	6.4	30	846	0.5	77	24	2	5.9	5	137
87LFA601403	10	70	0.25	21	111	60	540	6.6	20	855	0.5	79	34	1	4.9	2	140
87LFA601404	10	30	0.25	24	95	62	570	6.6	30	1055	0.5	85	30	1	6.1	2	141
87LFA601405	10	75	1	28	107	60	600	6.3	20	902	0.5	80	64	2	4.8	1	171
87LFA601406	10	35	0.5	27	108	57	530	5.8	20	882	0.5	74	58	2	3.8	2	165
87LFA601406	11	45	0.5	34	109	56	200	5.8	30	911	1	76	62	2	4.6	1	175
87LFA601407	10	15	0.25	24	73	41	720	5.2	40	943	0.5	64	30	1	5.5	3	107
87LFA601501	10	35	0.25	25	63	52	380	4.5	50	780	0.5	51	26	1	7.2	1	89
87LFA601502	10	20	0.25	23	83	60	610	5.7	50	877	0.5	73	46	2	7	4	151
87LFA601503	10	50	0.25	29	83	59	530	6.2	30	725	0.5	76	42	1	4.9	5	134
87LFA601504	10	55	0.25	24	70	43	590	5.3	10	1525	0.5	64	24	1	4.1	2	107
87LFA601505	10	75	0.25	24	71	42	560	5.4	20	1540	0.5	63	28	1	4.1	1	111
87LFA601506	10	65	0.25	21	62	39	620	4.7	20	1345	0.5	57	28	1	3.8	1	97
87LFA601506	11	60	0.25	25	62	36	520	4.7	30	1405	0.5	58	30	1	4.3	1	105
87LFA601601	10	480	0.25	23	61	96	740	5.6	30	745	0.5	59	40	2	7.1	7	153
87LFA601602	10	1055	0.25	21	43	180	840	5.3	40	631	0.5	57	3800	2	7.4	5	276
87LFA601701	10	1580	0.25	4	88	97	780	8.2	480	452	4	26	82	2	4.1	17	117
87LFA601702	10	1795	0.25	76	46	317	880	5.6	100	1235	5	138	90	2		13	375
87LFA601703	10	1785	0.25	50	51	419	2800	5.9	40	933	7	164	194	2	9.4	36	390
87LFA601801	10	70	0.25	50	76	44	450	5.3	90	629	1	60	24	1	13	4	98
87LFA601802	10	20	0.25	17	57	40	710	5.0	60	791	0.5	53	20	1	20	5	100
87LFA601803	10	55	0.25	9	61	47	720	5.0	130	271	4	34	36	2	46	6	61
87LFA601901	10	25	0.25	10	44	31	770	4.0	40	822	1	37	26	3	15	5	75
87LFA601902	10	20	0.25	17	56	34	800	4.7	40	1280	0.5	45	20	3	9.8	4	99
87LFA601903	10	30	0.25	17	58	36	920	4.5	30	906	0.5	53	20	3	6.9	5	97
87LFA601904	10	20	0.25	26	56	31	730	4.5	20	714	1	62	24	1	5.1	2	104
87LFA601904	11	10	0.25	30	63	34	620	5.0	30	790	0.5	67	22	1	4.8	3	121
87LFA602001	10	195	0.25	49	67	101	730	6.1	70	2240	2	104	30	3	5.2	6	195
87LFA602002	10	195	0.25	77	59	89	610	5.2	120	2310	2	98	42	1	6.4	2	163
87LFA602003	10	125	0.25	25	59	49	600	4.9	30	1005	0.5	61	16	3	3.8	2	102
87LFA602004	10	250	0.25	40	48	74	820	5.6	20	1875	1	55	6	10	4.3	10	125
87LFA602201	10	265	0.25	25	63	58	630	5.3	20	807	2	58	12	3	4.8	6	135
87LFA602202	10	250	0.25	25	51	54	720	4.9	10	914	1	47	28	3	4.6	5	124
87LFA602203	10	190	0.25	23	47	55	670	4.7	10	874	0.5	48	22	4	4.2	9	154
87LFA602204	10	60	1.5	27	51	84	740	4.5	20	492	1	59	26	4	4.5	8	202
87LFA602205	10	365	0.5	30	62	80	800	6.0	20	773	2	65	22	3	4.8	8	200
87LFA602206	10	420	0.5	33	62	82	770	6.1	30	771	2	62	20	4	4.7	7	204
87LFA602301	10	150	0.25	39	51	76	680	6.5	110	1410	5	69	38	2	5.8	3	101
87LFA602302	10	180	0.25	47	55	110	620	8.8	280	1725	8	74	46	1	7.3	2	188
87LFA602303	10	150	0.25	45	65	110	620	9.1	320	1600	9	80	46	1	6.6	1	169
87LFA602401	10	5	0.25	22	73	39	620	5.6	60	840	2	79	20	1	2.6	1	90
87LFA602402	10	50	0.25	24	74	55	670	5.3	30	1145	2	50	16	2	6.6	5	110

sample	obs	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
87LFA602402	11	45	0.25	24	72	54	630	5.2	30	1130	3	48	10	2	6.6	5	113
87LFA602403	10	50	0.25	25	78	58	700	5.6	30	1175	2	53	14	2	6.7	2	117
87LFA602404	10	50	0.25	24	77	55	750	5.5	10	1135	1	48	24	2	6.9	5	114
87LFA602404	11	45	0.25	21	71	51	710	5.0	30	1065	1	47	20	2	7	5	111
87LFA602405	10	30	0.25	24	87	49	670	5.2	10	1080	2	51	20	3	6.7	1	112
87LFA602405	11	35	0.25	22	83	46	610	4.8	20	1005	3	46	14	2	6.8	6	110
87LFA602406	10	40	0.25	55	58	73	430	6.3	100	2820	3	83	42	1	10	1	89
87LFA602407	10	75	0.25	60	62	102	450	7.8	100	3270	3	93	44	1	11	1	102
87LFA602501	10	50	0.25	27	64	53	450	6.1	40	636	1	64	24	3	5.8	1	117
87LFA602501	11	55	0.25	26	66	55	620	6.2	40	659	1	68	30	2	5.5	4	128
87LFA602502	10	60	0.25	26	73	64	570	6.5	50	702	2	76	28	1	6.4	2	151
87LFA602503	10	10	0.25	21	62	31	680	5.1	50	656	0.5	56	30	1	6.8	1	104
87LFA602504	10	5	0.25	24	67	31	650	5.3	40	732	1	61	18	1	5.6	1	109
87LFA602505	10	10	0.25	25	66	30	630	5.2	50	819	1	62	16	1	5.8	1	106
87LFA602506	10	5	0.25	24	70	35	750	5.9	40	630	2	68	26	1	8.6	1	127

SUMMARY STATISTICS

	As	Cd	Co	Cr	Cu	F	Fe	Hg	Mn	Mo	Ni	Pb	Sn	U	W	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	pct	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Sample size	1025	1133	1133	1133	1131	737	1133	737	1133	955	1133	1133	1024	1023	1025	1133
Maximum	2000.0	1.7	278.0	340.0	969.0	6800.0	12.0	620.0	9453.0	57.0	360.0	3800.0	93.0	84.0	1600.0	815.0
Minimum	1.0	0.1	4.0	18.0	10.0	100.0	1.2	10.0	133.0	0.5	8.0	6.0	0.5	0.6	1.0	36.0
Average ($\bar{x}$)	110.2	0.2	29.5	76.4	69.4	842.4	5.2	66.1	1093.9	2.7	72.9	38.6	11.0	7.0	10.3	156.3
Stand.deviation (σ)	195.1	0.2	17.1	23.4	54.4	375.7	1.4	62.5	707.9	4.9	29.5	126.9	10.4	9.0	50.3	57.8
$\bar{x}+2\sigma$	500.4	0.5	63.7	123.2	178.3	1593.8	8.0	191.1	2509.6	12.5	131.9	292.3	31.9	25.1	111.0	271.9

Percentiles obtained from observation 1 (Plates 10 to 54)																
98th	680									22		89	49	37	40	279
95th	448									10		67	33	26	26	230
90th	280									5		54	27	16.4	18	207
75th	115									3		42	19	9.2	11	182

TABLE III GEOCHEMISTRY OF THE CLAY PLUS SILT (< 63 um) FRACTION OF TILL, HAYESVILLE TRENCHING PROJECT

Sample	Obs	As	Au	Bi	Cu	Hg	Mo	Pb	Sb	Zn
		ppm	ppb	ppm	ppm	ppb	ppm	ppm	ppm	ppm
86LFA200101	10	220	4	4.8	61	30	1	12	5.4	141
86LFA200301	10	150	5	3.5	51	30	1	18	3.6	98
86LFA200401	10	10	4	1.4	20	30	1	25	0.2	84
86LFA200601	10	23	2	0.9	31	20	1	24	1.4	92
86LFA200701	10	15	2	3.5	29	20	1	17	1.3	82
86LFA200801	10	15	1	2.8	21	30	1	27	0.2	87
86LFA200901	10	27	4	1.4	33	20	1	18	2.2	90
86LFA200901	11	29	4	1.5	35	40	1	19	2.4	93
86LFA200956	1	77	6			20	4		3.7	50
86LFA200957	1	22	6			20	3		4.4	50
86LFA200958	1	43	1			20	3		3.1	50
86LFA200961	1	44	1			20	2		3.7	50
86LFA200961	2	45	4			25	3		3.7	50
86LFA200962	1	41	1			25	4		3.7	50
86LFA200963	1	37	4			25	2		3.3	50
86LFA200964	1	39	1			20	2		3.7	50
86LFA200965	1	40	5			25	3		3.6	50
86LFA200966	1	41	11			20	3		3.8	50
86LFA201001	10	17	4	0.7	31	30	1	18	2.8	86
86LFA201301	10	170	5	1.5	84	20	1	23	1.2	82
86LFA201401	10	200	3	8.7	79	20	1	19	2.2	103
86LFA201501	10	470	5	7.7	97	20	1	21	2.2	195
86LFA201501	11	480	7	7.7	90	40	1	20	3.4	195
86LFA201601	10	280	7	5.5	63	30	1	20	3.6	121
86LFA201701	10	38	3	1.8	41	20	1	12	2.2	86
86LFA201801	10	110	2	1	42	30	1	23	2.4	112
86LFA201901	10	17	1	0.8	40	30	1	23	1.4	113
86LFA202001	10	70	1	1.2	40	30	1	31	1.2	128
86LFA202101	10	120	1	0.9	37	20	1	24	1	118
86LFA202201	10	160	1	6.1	55	20	1	18	0.7	149
86LFA202401	10	250	3	2.3	56	20	1	15	1.6	239
86LFA202601	10	30	4	1.1	33	20	1	18	2	91
86LFA202701	10	39	2	1.2	38	30	1	22	2.2	104
86LFA202801	10	150	11	4	54	20	1	19	3.6	106
86LFA202901	10	120	5	2.7	46	30	1	21	4.2	118
86LFA202901	11	150	2	2.7	46	40	1	20	4.4	129
86LFA203001	10	90	2	2.7	55	30	1	22	2.2	110
86LFA203101	10	230	7	6.2	56	70	1	23	1.6	108
86LFA203201	10	100	1	2.2	48	20	1	24	1.2	127
86LFA203301	10	17	2	0.1	48	20	1	15	1	94
86LFA203401	10	230	3	1.9	55	20	1	23	1.6	130
86LFA203501	10	14	1	0.1	34	20	1	14	0.7	89
86LFA203701	10	140	7	4	41	10	1	12	5	87
86LFA203801	10	120	2	2.1	46	20	1	17	1.6	100
86LFA203901	10	220	3	2.1	51	20	1	22	1.2	126
86LFA204001	10	170	4	1.6	44	30	1	23	1.4	121

Sample	Obs	As	Au	Bi	Cu	Hg	Mo	Pb	Sb	Zn
		ppm	ppb	ppm	ppm	ppb	ppm	ppm	ppm	ppm
86LFA204001	11	200	5	1.9	45	40	1	20	19.4	130
86LFA204101	10	45	1	0.9	26	230	1	11	1	99
86LFA204201	10	48	3	1.1	32	60	1	13	1	107
86LFA204301	10	130	4	0.8	51	30	1	31	6.8	119
86LFA204501	10	32	3	0.2	31	30	1	17	2.2	87
86LFA204601	10	30	3	0.2	45	30	1	27	2.4	106
86LFA204701	10	41	2	0.4	42	20	1	18	2.6	113
86LFA204810	1	59	5			25	4		4.4	50
86LFA204901	10	48	4	4.1	70	30	1	19	2.4	107
86LFA205301	10	33	4	1.1	62	30	1	30	2	126
86LFA205401	10	16	2	0.6	24	40	1	13	0.9	83
86LFA205501	10	27	1	0.6	51	20	1	16	2	100
86LFA205601	10	14	1	0.4	29	30	1	14	1.4	82
86LFA205701	10	15	1	0.5	25	40	1	14	1.3	92
86LFA205701	11	17	1	0.5	32	60	1	17	1.6	99
86LFA205801	10	23	1	0.5	123	30	1	24	1.3	73
86LFA206001	10	20	2	0.4	92	60	1	27	2.2	108
86LFA206201	10	23	8	1.1	33	30	1	15	1	81
86LFA206301	10	22	1	0.5	80	60	1	25	1.4	94
86LFA206401	10	15	3	0.5	70	40	1	23	1.8	113
86LFA206501	10	36	1	1	35	20	1	12	1.2	96
86LFA206601	10	60	1	2.3	52	30	1	21	1	127
86LFA206701	10	46	4	4.3	95	10	1	27	1.1	164
86LFA206901	10	22	11	3.2	35	20	1	24	0.6	108
86LFA207001	10	32	4	4	31	30	1	33	0.6	127
86LFA207101	10	23	2	5.2	40	20	1	20	1.2	102
86LFA207101	11	16	1	4.5	40	30	1	26	1.6	108
86LFA207201	10	150	1	2.3	25	60	1	11	0.9	104
86LFA207301	10	19	1	1.7	25	20	1	17	1	85
86LFA207401	10	260	7	6.4	50	40	1	15	1	102
86LFA207501	10	16	1	3.4	26	20	1	21	0.8	78
86LFA207501	11	14	1	4.3	32	40	1	18	0.6	88
86LFA207601	10	14	1	9.1	32	30	1	29	0.7	102
86LFA207801	10	5	2	5.1	13	30	1	24	0.2	82
86LFA207901	10	9	1	1.8	10	60	1	16	0.3	65
86LFA208001	10	14	1	1	20	20	1	22	0.3	80
86LFA208101	10	14	1	1.5	17	60	1	12	0.2	72
86LFA208201	10	15	1	1.6	25	30	1	21	0.4	88
86LFA208301	10	14	1	3	17	40	1	31	0.3	85
86LFA208401	10	16	1	2.1	22	30	1	28	0.3	92
86LFA208501	10	10	1	1.7	15	70	1	24	0.3	91
86LFA208601	10	11	1	0.8	24	30	1	16	0.4	83
86LFA208701	10	27	2	1.1	27	40	1	13	1.8	83
86LFA208801	10	30	2	1	31	40	1	14	1.8	73
86LFA208801	11	30	1	1.4	33	40	1	18	1.8	77
86LFA208901	10	60	1	1.3	13	130	1	11	1	64
86LFA209001	10	200	1	4.3	35	70	1	21	0.8	118
86LFA209101	10	80	2	0.9	30	60	1	16	1.2	102
86LFA209201	10	15	4	0.3	36	20	1	18	1.6	95
86LFA209301	10	15	1	0.1	38	20	1	17	0.5	75
86LFA209301	11	22	1	0.5	41	30	1	16	0.6	71

Sample	Obs	As	Au	Bi	Cu	Hg	Mo	Pb	Sb	Zn
		ppm	ppb	ppm	ppm	ppb	ppm	ppm	ppm	ppm
86LFA209401	10	12	1	0.1	30	30	1	15	0.8	78
86LFA209501	10	20	2	0.2	33	30	1	18	2.2	87
86LFA209601	10	22	2	0.8	32	30	1	16	2.2	80
86LFA209701	10	20	7	0.5	28	70	1	17	2.6	120
86LFA209801	10	16	1	0.5	32	30	1	21	2.2	89
86LFA209901	10	17	4	0.5	25	30	1	17	2.6	81
86LFA210001	10	24	2	0.6	34	70	1	25	1.8	129
86LFA210101	10	36	5	1.7	85	40	1	27	1.6	215
86LFA210201	10	570	50	1.9	92	30	1	43	2.4	204
86LFA210401	10	60	1	1.4	37	40	1	22	1.8	128
86LFA210501	10	110	11	2	38	20	1	16	1	113
86LFA210601	10	60	6	1.3	35	20	1	22	1.8	110
86LFA210701	10	80	2	0.9	36	20	1	16	2.2	103
86LFA210801	10	120	2	1.4	33	20	1	15	2.2	91
86LFA210901	10	17	1	1.4	21	30	1	15	1	77
86LFA211001	10	29	2	1.7	35	30	1	20	0.6	108
86LFA211101	10	36	1	1.9	35	30	1	20	0.4	104
86LFA211201	10	48	4	3.3	33	70	1	41	0.1	83
86LFA211401	10	32	4	0.7	43	40	1	24	3	98
86LFA211501	10	16	2	0.2	22	20	1	13	1.4	61
86LFA211601	10	14	4	0.2	31	20	1	14	1.6	75
86LFA211601	11	12	1	0.3	33	20	1	18	1.2	76
86LFA211801	10	17	2	0.4	23	80	1	16	1.6	98
86LFA211901	10	17	2	0.5	34	40	1	21	2.8	94
86LFA212001	10	22	1	0.5	36	70	1	24	1.6	97
86LFA212101	10	15	1	0.7	26	30	1	16	0.4	81
86LFA212201	10	15	1	0.6	26	40	1	15	0.8	70
86LFA212301	10	45	1	0.5	20	50	1	20	1	97
86LFA212401	10	17	1	0.7	26	30	1	19	0.4	84
86LFA212501	10	11	1	1.1	37	50	1	27	0.6	105
86LFA212601	10	12	1	0.7	15	40	1	11	0.2	80
86LFA212701	10	15	1	1	22	30	1	18	0.4	82
86LFA212801	10	20	2	0.9	26	30	1	20	0.6	72
86LFA212901	10	24	2	0.6	31	30	1	17	0.6	88
86LFA213001	10	39	2	1.6	34	30	1	24	1.6	106
86LFA213101	10	25	3	0.4	35	80	1	18	1.4	130
86LFA213101	11	33	3	0.4	37	80	2	23	1.4	133
86LFA213201	10	19	3	0.5	34	60	1	32	0.1	114
86LFA213301	10	22	3	0.9	26	30	1	19	0.2	81
86LFA213401	10	12	4	1	28	30	1	22	0.4	106
86LFA213501	10	32	1	2.3	32	20	1	26	0.5	100
86LFA213601	10	20	1	1.3	20	30	1	12	0.1	76
86LFA213701	10	60	2	1.6	65	20	1	22	0.8	236
86LFA213801	10	41	2	2	33	20	1	24	0.4	107
86LFA213901	10	310	1	4.2	45	20	1	25	0.4	100
86LFA214001	10	600	3	30	73	120	1	61	0.3	152
86LFA214101	10	540	5	56	116	50	1	46	0.4	123
86LFA214301	10	24	1	1.3	29	30	1	18	0.5	91
86LFA214301	11	17	5	1	29	30	1	16	0.2	91
86LFA214401	10	12	1	0.6	25	20	1	13	0.2	78
86LFA215001	10	60	3	2.6	44	30	1	10	0.8	71

Sample	Obs	As	Au	Bi	Cu	Hg	Mo	Pb	Sb	Zn
		ppm	ppb	ppm	ppm	ppb	ppm	ppm	ppm	ppm
86LFA215301	10	12	1	0.4	18	80	1	20	0.8	76
86LFA216101	10	19	1	1.8	91	40	1	21	0.5	210
86LFA216201	10	33	1	2.2	47	20	1	10	0.4	75
86LFA216301	10	16	1	2	30	20	1	12	0.3	64
86LFA216401	10	33	1	2.5	36	20	1	18	0.2	63
86LFA216401	11	27	1	2.6	37	30	1	18	0.3	69
86LFA216501	10	32	1	3	65	60	1	14	0.3	81
86LFA217001	10	20	1	4	27	20	1	15	0.2	72
86LFA217201	10	19	1	3	28	20	1	11	0.3	70
86LFA217301	10	16	1	3.4	52	20	1	9	0.2	76
86LFA217401	10	29	1	4	41	90	1	15	0.2	89
86LFA217401	10	6	1	1.8	17	20	1	18	0.2	71
86LFA217501	10	11	2	1.8	17	30	1	35	0.3	45
86LFA217801	10	39	2	2.6	128	20	6	24	1.8	160
86LFA218301	10	35	1	0.6	31	10	1	11	0.5	84
86LFA218501	10	10	1	0.7	24	20	1	16	0.2	81
86LFA218601	10	5	1	0.5	14	40	1	14	0.2	68
86LFA218601	11	5	1	0.5	12	20	1	13	0.1	57
86LFA218701	10	5	1	0.4	15	30	1	12	0.1	54
86LFA218801	10	7	1	0.4	13	20	1	11	0.1	53
86LFA218801	11	5	1	0.4	14	20	1	11	0.1	58
86LFA218901	10	3	1	1.7	9	10	1	10	0.1	48
86LFA219001	10	6	1	0.9	17	20	1	18	0.1	70
86LFA219101	10	4	1	1.1	20	20	1	15	0.1	81
86LFA219301	10	3	1	0.6	23	20	1	14	0.1	65
86LFA219401	10	3	1	0.7	25	20	1	8	0.1	54
86LFA219501	10	2	1	0.6	21	20	1	14	0.2	67
86LFA219601	10	1	1	0.7	18	20	1	18	0.1	64
86LFA219701	10	2	1	0.5	15	30	1	8	0.1	51
86LFA219801	10	2	1	0.5	22	20	1	11	0.2	71
86LFA219901	10	2	1	0.6	28	30	1	15	0.1	69
86LFA220001	10	2	1	0.5	33	40	1	9	0.1	68
86LFA220401	10	15	1	0.4	37	40	1	26	0.1	170
86LFA220501	10	16	1	1.1	39	40	1	24	0.2	85
86LFA220601	10	10	1	0.6	35	50	1	17	0.1	108
86LFA220801	10	6	1	0.8	22	30	1	14	0.1	63
86LFA220801	11	11	1	0.6	20	20	1	16	0.2	64
86LFA220901	10	4	1	0.6	11	10	1	17	0.1	60
86LFA221101	10	3	1	0.6	10	20	1	19	0.1	66
86LFA221201	10	5	1	0.9	19	40	1	18	0.1	89
86LFA222801	10	3	1	2.1	13	40	1	26	0.1	45
86LFA223201	10	3	1	4.2	16	50	1	32	0.1	61
86LFA223301	10	3	1	3.8	15	60	1	41	0.1	67
86LFA223801	10	2	1	2.4	7	90	1	30	0.1	42
86LFA223901	10	3	1	5.7	3	50	1	49	0.1	23
86LFA224001	10	3	1	1.2	4	30	2	20	0.1	50
86LFA224201	10	6	1	2	17	30	2	27	0.1	87
86LFA224301	10	2	1	1.4	6	40	1	41	0.1	62
86LFA224501	10	3	1	1.1	12	30	1	23	0.1	70
86LFA224601	10	3	1	0.8	9	40	1	15	0.1	54
86LFA224901	10	3	1	1.1	9	40	1	17	0.1	55

Sample	Obs	As	Au	Bi	Cu	Hg	Mo	Pb	Sb	Zn
		ppm	ppb	ppm	ppm	ppb	ppm	ppm	ppm	ppm
86LFA225101	10	3	2	1.5	11	30	1	24	0.1	68
86LFA225201	10	3	1	2.9	16	20	1	21	0.1	55
86LFA225301	10	3	5	2.9	21	30	1	27	0.1	88
86LFA225401	10	4	2	1.6	12	20	1	16	0.1	67
86LFA225501	10	5	1	2.6	12	20	1	28	0.1	61
86LFA225601	10	9	4	2.9	18	30	1	31	0.2	78
86LFA225701	10	23	1	6.6	16	50	1	27	0.1	60
86LFA225801	10	7	1	2.1	16	40	1	26	0.1	68
86LFA226101	10	11	1	2.1	17	150	1	27	0.2	83
86LFA226201	10	15	1	3.2	11	70	10	21	0.1	79
86LFA226201	11	15	1	3.1	12	50	15	20	0.6	88
86LFA226301	10	19	1	2	24	120	1	19	0.1	88
86LFA226401	10	17	3	4	13	190	3	22	0.1	74
86LFA226501	10	30	16	2.7	25	80	3	13	0.1	77
86LFA226601	10	80	13	1.7	88	40	1	31	0.1	107
86LFA226801	10	14	2	2.8	21	70	1	25	0.1	113
86LFA227001	10	22	3	1.8	8	90	1	24	0.2	65
86LFA227201	10	5	1	2.1	7	210	1	35	0.1	44
86LFA227301	10	3	1	1.4	9	120	1	29	0.1	91
86LFA227401	10	4	1	5.3	7	200	1	50	0.1	38
86LFA227501	10	17	1	3.6	7	200	6	32	0.1	57
86LFA227601	10	6	1	3.1	6	230	1	43	0.1	31
86LFA227601	11	6	1	3.2	6	180	1	39	0.2	33
86LFA227701	10	3	11	0.9	3	160	1	25	0.1	39
86LFA227801	10	100	5	4.7	57	90	1	29	5.6	96
87LFA600001	10	9	2						0.1	
87LFA600001	11	10	0.5						0.2	
87LFA600002	10	10	0.5						0.2	
87LFA600003	10	12	1						0.2	
87LFA600004	10	12	2						0.2	
87LFA600005	10	11	2						0.2	
87LFA600006	10	11	111						0.1	
87LFA600007	10	10	0.5						0.2	
87LFA600008	10	13	2						0.2	
87LFA600009	10	10	3						0.1	
87LFA600101	10	9	0.5						0.2	
87LFA600102	10	10	1						0.1	
87LFA600103	10	33	3						0.2	
87LFA600103	11	27	4						0.2	
87LFA600104	10	35	2						0.2	
87LFA600105	10	53	6						0.2	
87LFA600201	10	41	3						0.2	
87LFA600202	10	29	3						0.4	
87LFA600203	10	25	1						0.2	
87LFA600204	10	38	3						0.4	
87LFA600301	10	43	2						1.2	
87LFA600302	10	45	2						0.8	
87LFA600303	10	50	1						1.2	
87LFA600304	10	83	5						2	
87LFA600305	10	63	5						4	
87LFA600401	10	20	5						0.2	

Sample	Obs	As	Au	Bi	Cu	Hg	Mo	Pb	Sb	Zn
		ppm	ppb	ppm	ppm	ppb	ppm	ppm	ppm	ppm
87LFA600402	10	19	0.5						0.1	
87LFA600403	10	19	1						0.1	
87LFA600404	10	27	4						0.1	
87LFA600405	10	22	0.5						0.1	
87LFA600406	10	22	0.5						0.1	
87LFA600406	11	17	2						0.1	
87LFA600407	10	33	3						0.2	
87LFA600501	10	23	3						0.1	
87LFA600502	10	43	2						0.1	
87LFA600503	10	35	0.5						0.1	
87LFA600504	10	24	0.5						0.1	
87LFA600505	10	24	4						0.1	
87LFA600506	10	19	1						0.1	
87LFA600601	10	4	0.5						0.1	
87LFA600602	10	5	2						0.1	
87LFA600603	10	5	6						0.1	
87LFA600603	11	4	5						0.1	
87LFA600604	10	5	2						0.1	
87LFA600701	10	33	4						0.2	
87LFA600702	10	22	14						0.1	
87LFA600703	10	17	2						0.1	
87LFA600704	10	16	1						0.1	
87LFA600801	10	4	0.5						0.1	
87LFA600901	10	7	3						0.1	
87LFA600902	10	5	1						0.2	
87LFA600903	10	7	1						0.2	
87LFA600904	10	5	3						0.2	
87LFA600905	10	5	2						0.1	
87LFA600906	10	7	2						0.1	
87LFA600907	10	7	1						0.1	
87LFA600908	10	23	2						0.4	
87LFA601001	10	19	1						0.1	
87LFA601002	10	30	4						0.2	
87LFA601003	10	23	1						0.2	
87LFA601004	10	27	2						0.3	
87LFA601004	11	30	3						0.2	
87LFA601005	10	32	2						0.2	
87LFA601006	10	23	2						0.1	
87LFA601007	10	29	3						0.1	
87LFA601106	10	14	4						0.6	
87LFA601201	10	36	8						1	
87LFA601202	10	390	5						2.2	
87LFA601301	10	35	2						1.4	
87LFA601302	10	24	3						1	
87LFA601303	10	27	9						1.8	
87LFA601401	10	27	1						2.2	
87LFA601402	10	38	3						2.4	
87LFA601403	10	30	2						2	
87LFA601404	10	38	7						3	
87LFA601405	10	41	5						2.2	
87LFA601406	10	33	4						2.4	

Sample	Obs	As	Au	Bi	Cu	Hg	Mo	Pb	Sb	Zn
		ppm	ppb	ppm	ppm	ppb	ppm	ppm	ppm	ppm
87LFA601407	10	12	4						0.9	
87LFA601501	10	23	4						1	
87LFA601502	10	12	3						1.2	
87LFA601503	10	35	2						1	
87LFA601504	10	33	5						0.6	
87LFA601505	10	32	4						0.5	
87LFA601506	10	46	2						0.6	
87LFA601601	10	360	5						0.4	
87LFA601602	10	810	7						0.8	
87LFA601701	10	1000	6						0.3	
87LFA601702	10	1000	7						0.6	
87LFA601703	10	1300	9						1.2	
87LFA601801	10	25	1						0.4	
87LFA601802	10	7	0.5						0.4	
87LFA601803	10	30	8						0.6	
87LFA601901	10	10	1						0.6	
87LFA601902	10	11	11						0.6	
87LFA601903	10	15	2						0.8	
87LFA601904	10	6	4						0.8	
87LFA602001	10	110	6						2.2	
87LFA602002	10	150	142						4.8	
87LFA602003	10	110	7						4.4	
87LFA602003	11	95	4						3.8	
87LFA602004	10	250	8						4.2	
87LFA602201	10	200	2						1.6	
87LFA602203	10	210	4						1.4	
87LFA602204	10	73	6						1	
87LFA602205	10	270	5						1.2	
87LFA602206	10	220	10						1.2	
87LFA602301	10	130	11						3.4	
87LFA602302	10	170	6						5.4	
87LFA602303	10	160	10						6.2	
87LFA602401	10	53	6						2.8	
87LFA602402	10	48	8						3.2	
87LFA602403	10	57	3						2.6	
87LFA602404	10	61	5						3	
87LFA602405	10	39	4						3	
87LFA602406	10	12	2						1.4	
87LFA602407	10	24	8						2.4	
87LFA602501	10	22	2						0.6	
87LFA602501	11	22	0.5						0.2	
87LFA602502	10	23	3						0.8	
87LFA602503	10	9	1						0.6	
87LFA602504	10	7	7						0.6	
87LFA602505	10	6	8						0.4	

SUMMARY STATISTICS

	As	Au	Sb
	ppm	ppb	ppm
Sample size	346	346	213
Maximum	1300.0	142.0	56.0
Minimum	1.0	0.5	0.1
Average ($\bar{x}$)	61.1	3.7	2.3
Stand. deviation (σ)	135.5	10.1	4.5
$\bar{x}+2\sigma$	332.1	23.9	11.3

TABLE IV LIST OF DUPLICATE ANALYSES FOR SELECTED ELEMENTS IN CLAY FRACTION OF TILL, HAYESVILLE TRENCHING PROJECT

As 1: first analysis, Bondar Clegg and Co. Ltd
As 2: second analysis, Bondar Clegg and Co. Ltd
As 10: first analysis, Chemex Labs Ltd
As 11: second analysis, Chemex Labs Ltd

sample	As 1	As 2	As 10	As 11	Cu 1	Cu 2	Cu 10	Cu 11	Mo 1	Mo 2	Mo 10	Mo 11	Pb 1	Pb 2	Pb 10	Pb 11
	ppm				ppm				ppm				ppm			
86LFA200103	216				97		93		1		1		24		18	
86LFA200105	234				95		91		1		1		33		24	
86LFA200202	57		70		66		60				2		32		26	
86LFA200301	362	342	350		119	98	97		2	2	2		28	37	23	
86LFA200302	344		300		78		101		4		6		23		27	
86LFA200401	40		25		46		42				1		38		31	
86LFA200502	68		41		73		67				2		27		24	
86LFA200503	103		80		71		72		1		2		31		27	
86LFA200601	61		46	70	68		61	59	1		2	2	25		23	25
86LFA200602	67	69	50	60	69	64	62	64		0.5	4	2	34	33	27	19
86LFA200701	50		60		64		57				1		34		27	
86LFA200702	61		51		65		59				3		33		27	
86LFA200801	63		70		49		44		2		5		74		62	
86LFA200901	89		80		74		66				3		29		24	
86LFA200902	79	66			73	66	68			2	1		27	25	21	
86LFA200903	79	88			83	81				0.5			31	32		
86LFA200905	79		80		63		55		2		3		36		28	
86LFA200906	89		70		75		65		2		2		27		21	
86LFA200908	86		65	70	70		64	62			4	2	22		27	21
86LFA200909	72		57	65	70		62	61			4	1	28		24	25
86LFA200910	61			60	63		57	54			1	1	28		22	26
86LFA200911	96	95			72	64			1	0.5			26	29		
86LFA200915	26		16		70		57		3		4		44		35	
86LFA200916	63		43		74		63				2		43		33	
86LFA200917	98			70	79		70	66	1		1	2	27		23	24
86LFA200918	19		15		79		65		1		2		43		34	
86LFA200919	88			67	74		68	60			1	3	27		24	25
86LFA200920	54		39		83		74		2		4		42		33	
86LFA200922	48	33			78	70				2			43	43		
86LFA200922	48				78		70				1		43		33	
86LFA200923	101	68			73	64			1	2			31	29		
86LFA200923	101			60	73		66	63	1		2	1	31		21	21
86LFA200924	69		60		69		65				2		32		24	
86LFA200927	84		60	70	70		61	60			2	2	25		23	31
86LFA200928	85	79	70	70	70	65	60	61		0.5	4	1	26	29	23	21
86LFA200929	74	64			70	64	65			2	1		23	25	20	
86LFA200930	82	56			67	63	63			2	1		26	27	21	
86LFA200931	79	54		70	72	79	66	65		2	2	2	29	32	24	26
86LFA200933	114		90		80		69				1		30		21	
86LFA200934	80		70		70		62				1		31		24	
86LFA200935	47		60	60	66		60	59	1		2	2	31		24	22
86LFA200936	66	54			69	72	64			2	2		31	29	22	

sample	As 1	As 2	As 10	As 11	Cu 1	Cu 2	Cu 10	Cu 11	Mo 1	Mo 2	Mo 10	Mo 11	Pb 1	Pb 2	Pb 10	Pb 11
				ppm				ppm				ppm				ppm
86LFA200937	82	70			71	75	65			2	2		26	29	22	
86LFA200938	81		70		71		63				1		31		25	
86LFA200941	71			60	69		61	62			1	1	28		21	21
86LFA200942	82		60		74		68				1		27		21	
86LFA200943	75		60		68		65		1		2		31		26	
86LFA200945	168		120		82		75		1		5		36		30	
86LFA200948	111	116	80		63	63	61			0.5	3		40	43	31	
86LFA200957	32		25		65		62		4		4		36		33	
86LFA201001	93	62			64	65	58	57		1	1	1	24	25	18	17
86LFA201201	326		280		129		119				2		34		27	
86LFA201301	308		280		158		162				1		40		31	
86LFA201401	358		310		143		137				1		35		28	
86LFA201701	110	90		110	83	79	78	76		1	2	1	27	29	21	20
86LFA201702	145	87			82	75	78			1	1		27	25	21	
86LFA201703	109		100		79		74				2		29		22	
86LFA201704	87		70		66		61				1		27		22	
86LFA201801	173	175	150		71	72	66			0.5	1		30	31	24	
86LFA201802	124		80		70		68				4		46		41	
86LFA201804	93	71		70	67	64	66	65	1	0.5	2	1	32	30	24	23
86LFA201901	46		30		58		55				1		26		21	
86LFA201902	54		36		75		67				1		30		24	
86LFA202001	160	132			76	70	68			0.5	1		42	40	34	
86LFA202002	62	52		46	67	64	55	64		0.5	1	1	27	28	20	23
86LFA202101	150				79		70		1		1		44		35	
86LFA202201	298				81		82				1		27		22	
86LFA202401	552				969		97				1		27		20	
86LFA202601	94				66		62				1		24		18	
86LFA202603	139	126			73	75	70			1	1		23	27	19	
86LFA202604	155	151	120		85	85	81			0.5	3		29	30	21	
86LFA202701	108	122			75	73				0.5			31	33		
86LFA202801	284		300		90		95				3		25		19	
86LFA202802	256		250		86		80				1		27		22	
86LFA202901	266		240		87		80				4		27		23	
86LFA203001	226		210		107		124				4		40		35	
86LFA203201	225		210		73		72		1		2		22		22	
86LFA203203	230	286			80	77	78		1	1	1		31	32	25	
86LFA203301	77				96		89		1		1		38		29	
86LFA203501	78	55			70	71	66	67	2	0.5	2	1	38	40	31	31
86LFA203502	60	49			60	60	56		2	2	1		43	40	32	
86LFA204002	350	296			81	77			2	0.5			27	30		
86LFA204003	370	324			81	84	71		2	0.5	1		33	30	27	
86LFA204301	184	166			87	92	87		3	2	1		42	39	36	
86LFA204501	79	59			69	75	69		2	2	1		34	29	29	
86LFA204601	72	60			74	78	71	70	2	2	1	1	29	29	25	26
86LFA204602	81		60	60	69		64	62	2		5	1	27		25	25
86LFA204701	77		60		67		62		2		1		23		22	
86LFA204702	51		36	43	67		62	61	1		4	1	22		17	16
86LFA204801	95	77			89	96	82		2	2	2		30	26	24	
86LFA204803	98		65		86		78		3		4		27		23	
86LFA204804	69		43		75		65		3		5		30		27	
86LFA204810	69	70			77	96	77		3	0.5	1		28	30	26	

sample	As 1	As 2	As 10	As 11	Cu 1	Cu 2	Cu 10	Cu 11	Mo 1	Mo 2	Mo 10	Mo 11	Pb 1	Pb 2	Pb 10	Pb 11
				ppm				ppm				ppm				ppm
86LFA204901	102	74			111	109			3	0.5			35	36		
86LFA204902	90	74			95	107	99		2	0.5	2		27	30	23	
86LFA204903	90	65			94	90	95	94	3	2	2	4	32	26	24	27
86LFA204904	67	58			89	81	82		3	3	4		34	27	25	
86LFA205203	48		29		74		71		2		2		25		27	
86LFA205302	38		39		70		67		1		1		28		25	
86LFA205501	56	41			80	78			1	1			31	34		
86LFA205801	80	63		80	234	266	299	316	2	2	1	1	49	46	44	45
86LFA205901	50		36		70		64		2		1		34		29	
86LFA206003	60		36		144		147		1		1		45		37	
86LFA206102	55		45		121		127		2		2		48		42	
86LFA206301	67				151		153		2		1		56		41	
86LFA206302	57		41		188		210		2		1		74		63	
86LFA206303	53				112		110		2		1		50		40	
86LFA206304	54				69		71		2		1		42		32	
86LFA206402	82		70		165		189		9		14		58		54	
86LFA206404	124	121			85	89	89		3	1	2		36	37	29	
86LFA206701	82		60	60	106		122	118	2		5	2	30		28	27
86LFA206702	164			140	80		81	85	2		2	1	33		24	30
86LFA206703	242		200		95		106		2		5		34		32	
86LFA206704	224		180		69		77		2		2		37		33	
86LFA207102	114		70		83		58		6		4		56		51	
86LFA207104	65				55		59		2		2		49		39	
86LFA207203	356		330	320	81		84	84	2		2	1	27		28	26
86LFA207206	480	492	470		87	84	82		2	1	1		28	27	23	
86LFA207207	504		460	460	85		78	83	1		1	1	28		23	23
86LFA207208	440				79		79		1		2		30		22	
86LFA207501	52		33		57		54		2		2		36		26	
86LFA207601	49		30		61		62		2		1		37		30	
86LFA207602	45				56		58				2		31		23	
86LFA207702	32				54		52		5		6		45		60	
86LFA207703	25	21			57	49	52		1	0.5	1		31	35	31	
86LFA207704	31	23			56	51	56		1	0.5	1		29	35	37	
86LFA207801	27		23		41		39		3		2		46		50	
86LFA207901	56		36		40		35		3		2		55		51	
86LFA208103	22				27		27		2		4		30		33	
86LFA208201	50				61		56		2		1		32		35	
86LFA208301	53				46		23		2		2		43		24	
86LFA208401	57		38		54		53		3		2		41		29	
86LFA208601	51		35		55		52		1		1		23		28	
86LFA208603	27		24	27	42		41	42	1		1	1	20		23	21
86LFA208604	22		12		41		37		1		1		25		22	
86LFA208606	17		11		38		36		1		1		19		22	
86LFA208701	112		80		66		64		2		2		27		27	
86LFA208702	102		80		80		73		2		3		27		24	
86LFA208801	124	21			89	62			4	3			48	43		
86LFA208802	90				76		68		2		3		23		23	
86LFA208902	308		280		94		92		3		2		21		26	
86LFA208903	346		300	320	90		88	94	2		2	2	26		27	28
86LFA209002	282	275			99	89	99		2	2	2		28	34	34	
86LFA209003	298	245		240	77	78	80	75	2	1	1	1	29	36	33	34

sample	As 1	As 2	As 10	As 11	Cu 1	Cu 2	Cu 10	Cu 11	Mo 1	Mo 2	Mo 10	Mo 11	Pb 1	Pb 2	Pb 10	Pb 11
				ppm				ppm				ppm				ppm
86LFA212701	51	48			57	57	55		1	2	2		41	33	33	
86LFA212801	70	54		53	61	61	60	56		0.5	1	2	38	28	29	28
86LFA212901	62	56			64	68			1	0.5			36	27		
86LFA212902	67		70	53	63		57	60	1		2	2	45		36	37
86LFA212903	63		60	45	61		56	57	1		2	1	57		44	44
86LFA212904	52		27		43		40				1		26		26	
86LFA212905	28		17		42		38				1		26		29	
86LFA213001	116		100		61		57		1		1		30		29	
86LFA213302	43		35		66		61		1		1		29		29	
86LFA213401	38		29		51		42		1		1		30		30	
86LFA213602	72	70	60		63	63	58		1	0.5	2		29	24	28	
86LFA213603	68		70		61		57		2		2		31		25	
86LFA214202	2000				646		640		14		17		178		214	
86LFA214402	54		50		64		61		1		4		30		30	
86LFA214403	53		50		59		57		1		2		32		31	
86LFA214701	142	128			166	192	188		24	1	25		44	40	38	
86LFA215302	41		29		61		59		1		2		30		29	
86LFA215304	23		19		46		41				1		22		21	
86LFA215903	195	188			120	125			54	57			62	93		
86LFA216505	161		150		93		97				4		48		41	
86LFA216601	125				93		100		2		6		46		36	
86LFA216602	147				96		103		2		2		43		36	
86LFA216902	21	18			40	41	39			0.5	1		24	17	18	
86LFA217001	95	113			47	51				3			51	60		
86LFA217201	122				66		73				2		44		36	
86LFA217202	104		130		75		77				4		46		40	
86LFA217401	92		80		72		66		2		4		35		27	
86LFA218103	45	46	29		49	52	52			0.5	1		32	33	27	
86LFA218104	19				41		43		1		1		22		19	
86LFA218203	42				42		39		1		1		36		30	
86LFA218204	42		29		45		41				1		39		32	
86LFA218303	29		30		35		38		1		2		26		29	
86LFA218304	52		36		57		61		1		1		23		22	
86LFA218401	28		19		38		40		2		2		40		36	
86LFA218501	38		22		47		44		1		1		24		21	
86LFA218502	33		24	19	48		45	42	1		1	1	29		26	24
86LFA218503	36	47			47	48	47		2	1	2		25	30	20	
86LFA218505	42		22		51		52		1		2		29		27	
86LFA218603	19		16		40		42		1		2		37		32	
86LFA218605	28		14		56		56		1		1		23		23	
86LFA218606	15		11	10	42		44	40	1		1	1	24		25	21
86LFA218701	13		23		39		37				1		18		27	
86LFA218904	10		6		28		29		1		1		24		18	
86LFA219001	11	18			31	31			1	1			23	27		
86LFA219301	10		5		55		55				1		34		26	
86LFA219401	11		7	6	56		61	60			2	1	20		17	15
86LFA219501	7		5		50		49		1		1		35		29	
86LFA219601	8		5		45		44				1		43		35	
86LFA219801	5	8		4	55	58	52	53	1	0.5	1	3	23	15	14	15
86LFA219802	7	7		3	51	52	51	53	1	0.5	1	2	22	15	14	17
86LFA219803	5		2		51		38				1		23		13	

sample	As 1	As 2	As 10	As 11 ppm	Cu 1	Cu 2	Cu 10	Cu 11 ppm	Mo 1	Mo 2	Mo 10	Mo 11 ppm	Pb 1	Pb 2	Pb 10	Pb 11 ppm
86LFA219902	6		5		71		78		1		2		29		21	
86LFA220002	6	5			45	48	49			0.5	1		40	29	28	
86LFA220101	4				41		43				2		40		30	
86LFA220102	4				39		25				2		41		17	
86LFA220202	129				133		143		3		5		72		64	
86LFA220501	44		43		77		75				1		38		30	
86LFA220601	45				66		66		1		2		37		26	
86LFA220802	44				62		58		1		2		38		26	
86LFA220901	9				26		28				1		37		26	
86LFA221102	17		12		28		29				2		35		26	
86LFA221103	10		7		22		22				2		34		24	
86LFA221201	27		17		34		34				1		35		29	
86LFA221301	9	12			29	27			1	1			40	42		
86LFA221401	9		7		36		38		1		1		37		31	
86LFA221501	8			5	26		26	25			1	2	25		21	20
86LFA221502	10			4	27		27	27			1	1	20		18	16
86LFA221503	8			4	18		19	18	1		1	1	28		21	23
86LFA221601	6		7	1	24		29	26			1	1	25		26	23
86LFA221602	6		4		28		29				1		24		21	
86LFA221603	8		4		25		29				2		25		23	
86LFA221604	6		5	5	29		31	28			1	2	26		23	20
86LFA221701	7				20		19				1		29		23	
86LFA221702	9		5		27		29				1		25		21	
86LFA221703	9		5		25		25				1		26		21	
86LFA222301	11	16			40	41			2	1			49	51		
86LFA222701	7		6		16		19				1		25		26	
86LFA223002	15				58		62		4		6		63		53	
86LFA223301	9		5		38		36		2		1		79		82	
86LFA223602	11			5	29		31	32			1	1	54		45	47
86LFA223603	10		6	5	31		36	33			1	1	53		48	46
86LFA224701	14	12			29	33			1	1			40	50		
86LFA224805	114	77		70	88	93	89	85	2	2	2	3	37	27	26	27
86LFA224901	13				27		30		1		2		44		34	
86LFA225001	28				15		21		15		25		41		33	
86LFA225004	20	15			41	47	44		2	2	1		31	22	26	
86LFA225201	21	17		14	36	42	40	42	3	4	6	6	42	34	35	32
86LFA225202	18	20			42	46	50		3	4	6		50	41	43	
86LFA225402	12	13		3	37	39	36	38		0.5	1	2	20	17	20	20
86LFA225403	14	14			36	36	35	34		0.5	1	1	23	15	16	15
86LFA225404	16		11		34		37				4		27		21	
86LFA225405	13		10		47		55				3		41		37	
86LFA225502	17		16		29		33		2		6		45		36	
86LFA225503	17		17	16	39		40	40	4		10	9	38		33	32
86LFA225601	30		22	17	36		40	38	1		8	6	31		27	26
86LFA225602	40				35		40		4		12		26		23	
86LFA225603	37		33		38		43		2		6		32		31	
86LFA225702	76		51		33		43		2		5		37		31	
86LFA226002	34	32			38	39			0	1			32	34		
86LFA226203	67		46		49		45				3		87		70	
86LFA226701	98				102		100		3		5		85		71	
86LFA227802	173	178			93	93			1	1			38	38		

sample	As 1	As 2	As 10	As 11
			ppm	
86LFA227805	362		310	310
87LFA600007			10	15
87LFA600105			50	60
87LFA600602			10	10
87LFA601002			40	35
87LFA601406			35	45
87LFA601506			65	60
87LFA601904			20	10
87LFA602402			50	45
87LFA602404			50	45
87LFA602405			30	35
87LFA602501			50	55

Cu 1	Cu 2	Cu 10	Cu 11
		ppm	
81		80	72
		32	36
		117	122
		50	47
		52	50
		57	56
		39	36
		31	34
		55	54
		55	51
		49	46
		53	55

Mo 1	Mo 2	Mo 10	Mo 11
		ppm	
1		1	2
		0.5	1
		2	3
		0.5	0.5
		0.5	2
		0.5	1
		0.5	0.5
		1	0.5
		2	3
		1	1
		2	3
		1	1

Pb 1	Pb 2	Pb 10	Pb 11
		ppm	
37		31	25
		26	26
		42	42
		10	10
		16	30
		58	62
		28	30
		24	22
		16	10
		24	20
		20	14
		24	30

sample	Sn 1	Sn 2	Sn 10	Sn 11
				ppm
86LFA200103	15			
86LFA200105	15			
86LFA200202	13		2	
86LFA200301	14	22	6	
86LFA200302	18		6	
86LFA200401	20		3	
86LFA200502	7		2	
86LFA200503	12		2	
86LFA200601	7		1	2
86LFA200602	9	4	1	2
86LFA200701	11		1	
86LFA200702	8		2	
86LFA200801	26		5	
86LFA200901	12		2	
86LFA200902	13	15		
86LFA200903	6	8		
86LFA200905	10		3	
86LFA200906	8		1	
86LFA200908	12		2	1
86LFA200909	14		3	2
86LFA200910	11			2
86LFA200911	8	4		
86LFA200915	13		1	
86LFA200916	11		2	
86LFA200917	8			1
86LFA200918	15		2	
86LFA200919	9			1

U 1	U 2	U 10	U 11
			ppm
2.6			
3			
3.6		3	
2.8	2.1	1.8	
3.2		2.3	
8.1		5	
2.4		1.8	
2.6		1.9	
2.2		1.6	1.4
2.4	2	1.6	2.4
2.6		2	
3.3		2.2	
35		22	
3		2.3	
3.5	2.9		
3.1	2.8		
1.6		1.8	
4.3		2	
3.8		2.4	1.8
3.8		2.4	2.2
2.3			1.4
4.3	2.4		
3.5		2.5	
4		2	
2.8			2.4
3.5		2.6	
2.5			2.4

W 1	W 2	W 10	W 11
			ppm
6			
8			
8		7	
8	8	6	
10		7	
2		8	
2		3	
6		4	
4		4	6
6	6	3	7
18		18	
30		27	
8		8	
8		7	
6	8		
10	8		
12		9	
10		8	
8		7	7
8		7	7
12			9
10	8		
8		9	
8		9	
10			10
8		10	
10			8

Zn 1	Zn 2	Zn 10	Zn 11
			ppm
192		201	
255		273	
146		138	
197	291	178	
220		192	
123		132	
183		164	
171		186	
151		154	157
158	145	142	153
163		148	
120		113	
138		151	
167		171	
183	216	182	
160	154		
168		161	
166		156	
173		148	149
152		158	148
163		164	150
195	152		
176		170	
148		145	
148		162	151
175		140	
169		160	143

sample	Sn 1	Sn 2	Sn 10	Sn 11	U 1	U 2	U 10	U 11	W 1	W 2	W 10	W 11	Zn 1	Zn 2	Zn 10	Zn 11
	ppm							ppm				ppm				ppm
86LFA200920	11		2		3.5		2.8		6		7		185		84	
86LFA200922	10	7			2.6	2.9			8	8			157	188		
86LFA200922	10				2.6				8				157		166	
86LFA200923	12	12			2.6	3.4			10	8			156	207		
86LFA200923	12			4	2.6			2.1	10			8	156		160	158
86LFA200924	12		2		2.4		2.1		10		9		153		159	
86LFA200927	9		1	3	3		2.4	2.4	8		8	8	143		166	164
86LFA200928	10	9	2	3	3	2.2	2	2.2	6	12	8	9	139	157	154	156
86LFA200929	9	8			2.5	2.9			10	8			167	176	165	
86LFA200930	2	7			3	3.5			6	8			167	210	170	
86LFA200931	13	14		4	3.2	4		2.6	10	8		9	140	195	151	145
86LFA200933	10		3		2.2		1.8		18		14		159		171	
86LFA200934	14		2		2.6		2.2		6		7		159		159	
86LFA200935	10		2	2	2.6		1.9	2.2	8		6	7	169		166	152
86LFA200936	9	10			3	3.3			6	8			172	189	178	
86LFA200937	10	11			2.7	2.3			8	8			172	174	166	
86LFA200938	9		3		2.5		2.4		10		8		155		152	
86LFA200941	8			2	2.5			1.8	8			9	155		166	156
86LFA200942	10		3		2.8		2		10		8		142		145	
86LFA200943	15		2		2.1		1.8		8		9		161		153	
86LFA200945	16		2		3.3		2.8		10		7		158		165	
86LFA200948	5	9	3		3	2.8	2.3		6	6	6		129	130	137	
86LFA200957	11		4		4.2		2.5		8		6		218		160	
86LFA201001	5	7			1.4	1.7			4	6			148	204	149	150
86LFA201201	11		3		2.8		2.3		6		3		147		141	
86LFA201301	26		7		2.1		1.8		14		17		155		157	
86LFA201401	20		6		2.3		1.6		12		8		176		184	
86LFA201701	9	11		2	2.4	2.1		1.7	4	8		7	161	201	166	161
86LFA201702	12	17			2.9	2.7			6	8			100	211	173	
86LFA201703	9		2		2.1		1.5		6		6		167		164	
86LFA201704	8		1		1.6		1.3		6		6		165		163	
86LFA201801	23	17	2		1.6	1.8	1.1		6	6	6		188	198	177	
86LFA201802	14		2		3.3		2.2		6		7		193		197	
86LFA201804	12	12		1	2	2.1		1.6	6	8		5	156	212	162	162
86LFA201901	14		3		1.8		1		4		5		170		168	
86LFA201902	13		1		1.9		1.2		4		2		163		151	
86LFA202001	12	11			2.3	2.3			6	8			207	222	213	
86LFA202002	11	12		2	3.5	2.5		1.3	6	8		4	154	201	145	160
86LFA202101	14				1.6				2				208		200	
86LFA202201	44				2.6				14				171		189	
86LFA202401	22				1.8				4				403		442	
86LFA202601	13				2.2				4				147		165	
86LFA202603	15	15			2	2.2			4	6			158	217	162	
86LFA202604	16	12	3		2	2	2		4	6	3		170	160	167	
86LFA202701	17	14			2.6	3			6	6			163	152		
86LFA202801	19		4		2		1.9		6		4		178		191	
86LFA202802	19		3		2		1.7		6		4		167		161	
86LFA202901	16		3		2.4		2.6		2		3		187		195	
86LFA203001	12		1		2		2.4		6		2		188		195	
86LFA203201	14		2		2.8		2.4		6		3		193		204	
86LFA203203	21	15			1.9	1.9			6	8			177	186	180	

sample	Sn 1	Sn 2	Sn 10	Sn 11	U 1	U 2	U 10	U 11	W 1	W 2	W 10	W 11	Zn 1	Zn 2	Zn 10	Zn 11
	ppm				ppm				ppm				ppm			
86LFA203301	9				2.8				2				148		136	
86LFA203501	19	11			4.9	4			12	8			163	219	153	150
86LFA203502	19	16			2.8	2.5			10	8			169	208	169	
86LFA204002	19	16			2	2.2			8	10			186	200		
86LFA204003	21	20			2.6	2.1			8	12			180	181	174	
86LFA204301	12	14			2.1	1.9			6	8			154	202	156	
86LFA204501	15	10			1.7	2.1			4	6			140	165	147	
86LFA204601	6	10			2.3	1.9			4	4			149	172	152	154
86LFA204602	6		1	2	1.9		1.8	1.3	4		1	3	158		154	153
86LFA204701	5		1		1.4		1		4		2		145		151	
86LFA204702	8		1	1	0.9		1.2	0.7	2		2	2	147		145	143
86LFA204801	18	16			3	2.5			6	8			157	184	167	
86LFA204803	15		2		2.8		2.7		6		4		156		154	
86LFA204804	9		1		1.6		0.8		2		2		147		148	
86LFA204810	15	18			2.9	4.4			12	8			192	176	155	
86LFA204901	8	9			3.5	4.1			14	14			144	154		
86LFA204902	14	10			3	2.9			10	12			145	157	160	
86LFA204903	13	12			3.3	2.7			10	12			140	169	149	154
86LFA204904	12	15			1.4	2.1			6	8			136	154	138	
86LFA205203	0		1		1.4		0.8		4		3		126		139	
86LFA205302	6		1		1.6		1.6		4		2		140		146	
86LFA205501	8	12			2.1	1.3			4	4			126	122		
86LFA205801	11	7		1	3	3.1		2.3	4	4		3	106	129	122	119
86LFA205901	5		1		1.2		0.6		2		2		120		129	
86LFA206003	7		1		1.9		1.8		6		1		126		130	
86LFA206102	6		1		0.9		1.4		2		2		140		143	
86LFA206301	7				1.2				4				154		163	
86LFA206302	1		2		1.3		1.1		4		1		171		164	
86LFA206303	4				2.1				4				116		124	
86LFA206304	5				1.4				4				115		123	
86LFA206402	6		2		11.6		6.8		6		5		146		162	
86LFA206404	11	14			2.8	2.6			4	6			133	136	142	
86LFA206701	18		2	2	2.5		2	1.8	24		25	28	163		173	175
86LFA206702	9			3	2.1			2	20			8	153		160	167
86LFA206703	13		3		3		2.6		6		8		149		171	
86LFA206704	14		3		2.3		1.6		12		19		154		174	
86LFA207102	17		3		14.2		16		12		6		187		358	
86LFA207104	20				6.7				12				140		157	
86LFA207203	17		2	4	2.8		2.3	2	10		7	6	192		196	200
86LFA207206	25	30	4		2.2	1.8	1.4		6	10	7		234	222	230	
86LFA207207	29		3	3	1.6		1.3	1.2	6		9	8	218		220	223
86LFA207208	26				1.6				6				214		233	
86LFA207501	17		2		3		3.2		6		9		127		123	
86LFA207601	16		3		3.7		3.8		10		10		151		165	
86LFA207602	7				4.8				10				169		184	
86LFA207702	17				24				10				140		137	
86LFA207703	8	9			2.5	2.5			6	8			176	181	171	
86LFA207704	11	15			2	1.9			6	6			178	187	173	
86LFA207801	15		2		11.8		8		8		8		175		151	
86LFA207901	10		1		7.6		4.9		8		7		130		121	
86LFA208103	15				29				8				75		84	

sample	Sn 1	Sn 2	Sn 10	Sn 11	U 1	U 2	U 10	U 11	W 1	W 2	W 10	W 11	Zn 1	Zn 2	Zn 10	Zn 11
				ppm				ppm				ppm				ppm
86LFA208201	12				5.6				8				186		168	
86LFA208301	30				24				14				188		78	
86LFA208401	22		2		10.2		6.8		14		9		155		165	
86LFA208601	17		3		4		2.6		8		6		174		142	
86LFA208603	6		2	3	4.6		3.4	3.2	8		3	5	174		132	141
86LFA208604	17		2		3.4		2.2		4		3		155		138	
86LFA208606	10		2		2.8		2.4		4		2		171		138	
86LFA208701	10		3		3.4		2.4		12		7		188		159	
86LFA208702	5		2		4.1		2.2		12		6		200		164	
86LFA208801	12	9			13	2.2			16	4			155	108		
86LFA208802	10				4.6				12				174		147	
86LFA208902	13		4		3.5		3		8		3		210		198	
86LFA208903	15		3	4	3		2	2	6		3	5	201		199	182
86LFA209002	18	22			4	2.7			10	8			238	196	207	
86LFA209003	18	25		4	2.9	2.5		1.7	6	8		5	235	196	210	204
86LFA209101	8				2.7				4				200		204	
86LFA209103	11		1		2.6		1.2		4		2		219		185	
86LFA209105	19		4		3.4		1.8		6		4		261		228	
86LFA209201	3	10			2.5	1.9			8	6			176	146		
86LFA209202	9		2		2.7		1.6		4		6		204		170	
86LFA209203	12		1	3	2.3		1.4	1.2	4		2	4	202		174	116
86LFA209204	3		1		2		1.8		4		2		200		173	
86LFA209205	4			1	2.4			1.6	6			5	193		175	94
86LFA209206	13		2		3.2		2.4		6		5		202		163	
86LFA209401	7				2.3				2				148		139	
86LFA209501	10		2		2.6		1.4		6		4		173		148	
86LFA209502	7	7		1	2.3	2.9		1.2	6	4		2	178	174	151	146
86LFA209503	11		2		1.6		1		6		4		210		167	
86LFA209504	9	7			2.7	2			4	4			211	88		
86LFA209801	3			2	2.7			1.8	6			3	175		151	143
86LFA209802	11		1	3	4.1		3.6	1.4	6		2	4	219		175	163
86LFA209803	11	4	1		3.2	2.8	2.9		4	4	1		206	199	173	
86LFA209804	9		1	2	1.9		2.2	0.8	4		1	4	196		169	167
86LFA209805	6		2		2.5		1		4		4		214		162	
86LFA209901	9		2		2		1.1		6		4		204		165	
86LFA209902	10		1		2.1		2.4		6		2		196		178	
86LFA209903	10		1	1	2.1		2	1.8	6		3	3	202		184	183
86LFA210102	93		9	9	3.1		2.9	2	18		5	14	247		108	221
86LFA210201	49		4		1.4		1.6		22		16		275		228	
86LFA210302	25		3		2.1		1.8		14		6		230		196	
86LFA210401	11		3		2.4		1.3		12		6		206		189	
86LFA210601	18		3		2		1.2		6		7		196		176	
86LFA210701	15	15	2	9	1.7	1.4	1.6	1.6	8	8	6	8	212	204	155	143
86LFA210801	14		3		2.8		2		6		6		232		176	
86LFA210901	17		7		2.4		2.7		8		7		161		132	
86LFA211001	17		2	4	2.1		2.2	1.5	6		7	7	196		174	178
86LFA211101	17		4		2.6		1.6		10		6		207		167	
86LFA211302	17		3		1.7		1.2		6		6		191		165	
86LFA211303	5	9			2.5	2			4	6			200	105		
86LFA211304	6		2		2.5		1.6		4		4		198		175	
86LFA211501	8	0.5			2.1	1.4			6	2			152	86		

sample	Sn 1	Sn 2	Sn 10	Sn 11	U 1	U 2	U 10	U 11	W 1	W 2	W 10	W 11	Zn 1	Zn 2	Zn 10	Zn 11
				ppm				ppm				ppm				ppm
86LFA211901	10		1	2	1.7		1.8	1.4	6		2	4	181		151	161
86LFA211902	7		2		3.1		2.6		8		5		167		160	
86LFA211903	9		2		2.4		2		6		6		156		148	
86LFA211904	9	11		3	2.1	1.9		1.7	8	8		6	187	182	166	155
86LFA211905	6		1	2	2.1		1.8	1.6	8		3	4	170		153	153
86LFA212001	6		1		1.4		1.5		6		2		177		155	
86LFA212002	10	12			1.7	1.9			6	4			183	188	159	
86LFA212003	5		2		4.3		3.2		4		2		110		100	
86LFA212101	9	6			2.1	1.2			10	10			165	141		
86LFA212102	16		6	2	1.9		1.5	1.4	4		3	7	253		233	170
86LFA212103	12		2		1.9		1.6		6		4		202		155	
86LFA212303	6			2	1.9			0.8	4			5	171		155	144
86LFA212502	16		2		2.8		3.2		6		4		161		140	
86LFA212504	8		2		2.4		2.8		4		3		158		138	
86LFA212505	5			1	1.9			1.9	6			5	170		150	148
86LFA212701	9	15			2	2.1			6	8			163	174	151	
86LFA212801	10	12		3	2.2	2.1		1.5	6	8		6	158	168	146	135
86LFA212901	9	7			3.3	3.4			6	6			169	163		
86LFA212902	11		3	4	4		3.3	3	6		7	7	206		173	190
86LFA212903	14		3	3	2.6		3	2.8	6		8	6	201		182	187
86LFA212904	10		3		1.7		2.7		4		1		177		143	
86LFA212905	9		2		2.4		2.2		4		5		167		151	
86LFA213001	13		3		3.3		2.4		8		4		176		149	
86LFA213302	14		3		3.3		2.8		8		5		205		169	
86LFA213401	12		3		2.8		1.9		6		5		193		150	
86LFA213602	13	16	2		2.1	2.6	2.5		12	14	6		187	110	161	
86LFA213603	15		2		2.1		2.4		12		8		190		166	
86LFA214202	29				7				70				815		710	
86LFA214402	8		2		4		3		8		6		215		170	
86LFA214403	13		2		1.9		2		6		3		200		176	
86LFA214701	18	13			6.3	6.6			16	12			176	199	167	
86LFA215302	5		2		3.5		2.7		2		2		140		123	
86LFA215304	11		1		1.2		1.4		4		1		146		135	
86LFA215903	8	3			7	6.4			2	2			73	74		
86LFA216505	25		8		11		14		12		9		143		144	
86LFA216601	23				9.2				10				124		141	
86LFA216602	21				8.7				14				128		143	
86LFA216902	9	9			3.2	3.5			4	2			124	153	133	
86LFA217001	21	18			37	48			14	10			106	109		
86LFA217201	30				13				18				129		152	
86LFA217202	31		9		18.7		16		18		16		129		120	
86LFA217401	18		5		8.1		4.8		16		17		117		111	
86LFA218103	13	12	5		10.6	9.4	10		8	6	8		145	148	140	
86LFA218104	9				3.8				4				140		158	
86LFA218203	13				9.6				6				158		161	
86LFA218204	12		4		7.5		6.3		6		3		158		152	
86LFA218303	18		6		10.4		11		8		7		151		161	
86LFA218304	12		5		9.4		7		10		7		132		145	
86LFA218401	16		6		11		14		12		9		126		137	
86LFA218501	13		4		9.4		5.9		6		4		133		138	
86LFA218502	11		4	5	7.7		6.7	5.5	6		3	4	132		146	133

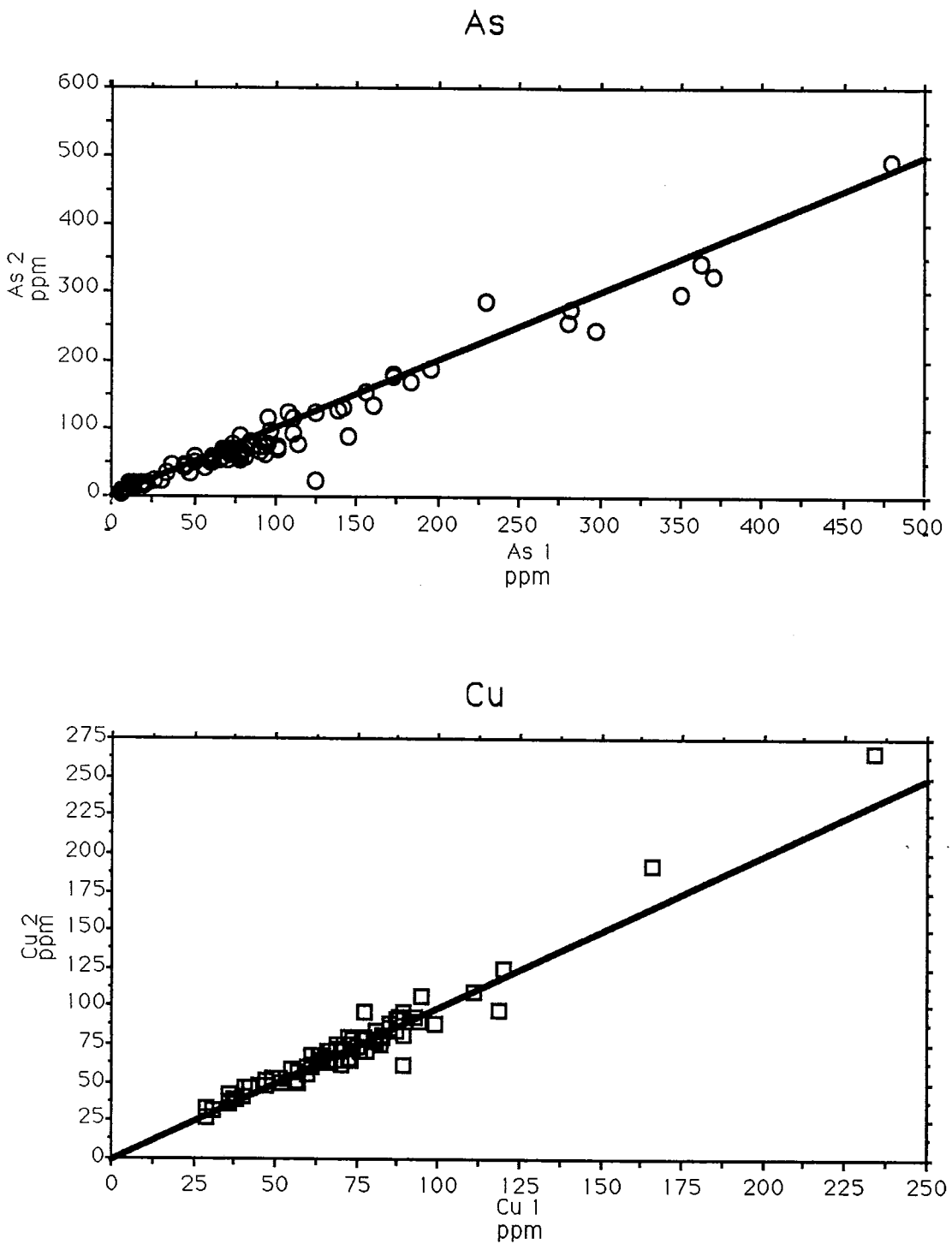
sample	Sn 1	Sn 2	Sn 10	Sn 11	U 1	U 2	U 10	U 11	W 1	W 2	W 10	W 11	Zn 1	Zn 2	Zn 10	Zn 11
				ppm				ppm				ppm				ppm
86LFA218503	15	13			7.7	7.8			8	6			125	125	144	
86LFA218505	12		3		7.8		6		8		6		129		146	
86LFA218603	7		4		9.2		4.4		6		5		111		122	
86LFA218605	9		4		7.8		4.6		10		8		132		146	
86LFA218606	15		5	5	9.6		10	5.4	6		3	6	138		150	148
86LFA218701	4		3		4.1		3.6		4		4		93		95	
86LFA218904	13		4		10.2		6.4		14		7		106		123	
86LFA219001	14	17			7.8	8.8			12	8			112	114		
86LFA219301	13		4		10		6.4		10		6		118		124	
86LFA219401	13		4	3	8.7		9	5.8	10		7	8	104		108	114
86LFA219501	12		5		11.3		12		10		8		110		112	
86LFA219601	12		1		7.8		7.2		8		6		108		110	
86LFA219801	11	7		5	8	8		6.6	6	8		7	133	168	130	137
86LFA219802	7	11		3	10.9	11.4		9	8	8		8	134	164	135	148
86LFA219803	15		3		14.9		6.2		10		9		132		96	
86LFA219902	17		4		11.8		9.5		4		6		127		138	
86LFA220002	15	12			7.3	7.2			6	6			111	146	116	
86LFA220101	14				11.8				8				108		114	
86LFA220102	10				12				8				109		67	
86LFA220202	12				8.5				28				142		152	
86LFA220501	16		3		8		6		6		5		116		129	
86LFA220601	8				8.2				4				125		129	
86LFA220802	19				13.2				10				121		127	
86LFA220901	23				34				6				120		130	
86LFA221102	26		13		25		22		6		4		134		145	
86LFA221103	26		14		32		24		6		4		146		152	
86LFA221201	23		8		2.3		16		8		3		148		158	
86LFA221301	22	19			11.3	11.3			6	6			144	148		
86LFA221401	26		6		19.4		22		8		7		137		141	
86LFA221501	25			7	11.8			12	6			3	126		139	131
86LFA221502	22			7	14.5			12	4			4	135		138	141
86LFA221503	21			5	11.6			10	6			3	102		105	105
86LFA221601	24		5	10	15.4		14	12	6		2	3	113		130	120
86LFA221602	21		12		15.7		12		4		6		134		142	
86LFA221603	21		10		16.6		12		6		4		113		129	
86LFA221604	24		3	10	23		18	12	4		2	3	132		140	137
86LFA221701	23				18.7				6				103		97	
86LFA221702	24		11		16.8		13		6		3		134		148	
86LFA221703	29		15		25		20		8		6		138		149	
86LFA222301	33	32			36	33			32	26			109	106		
86LFA222701	29		9		31		38		18		18		55		69	
86LFA223002	90				83				65				182		197	
86LFA223301	48		11		25		25		24		23		151		151	
86LFA223602	57			20	25			28	18			16	155		170	179
86LFA223603	51		14	22	25		26	24	20		16	15	170		192	199
86LFA224701	32	35			51	51			26	30			81	82		
86LFA224805	20	13		10	4.8	4.4		3.4	6	8		5	163	199	168	175
86LFA224901	27				11.5				8				125		126	
86LFA225001	33				17				14				121		135	
86LFA225004	41	43			11.5	9.3			12	24			150	193	173	
86LFA225201	41	44		9	13.3	8.5		17	10	24		17	114	143	128	128

sample	Sn 1	Sn 2	Sn 10	Sn 11	U 1	U 2	U 10	U 11	W 1	W 2	W 10	W 11	Zn 1	Zn 2	Zn 10	Zn 11
	ppm				ppm				ppm				ppm			
86LFA225202	57	56			26	19			32	32			119	140	134	
86LFA225402	14	6		3	4.3	3.1		3.4	6	8		1	116	146	127	128
86LFA225403	9	12			3	2.3			6	4			113	132	125	110
86LFA225404	13		4		10		8		10		3		111		129	
86LFA225405	53		13		17.5		22		32		27		149		182	
86LFA225502	37		12		17.6		18		10		9		135		157	
86LFA225503	30		7	8	11.8		15	12	12		16	8	144		152	159
86LFA225601	22		3	5	9.2		10	8	18		17	10	131		141	140
86LFA225602	30				14.9				26				127		144	
86LFA225603	21		5		12.5		16		24		25		106		125	
86LFA225702	24		6		8		6.4		45		35		112		124	
86LFA226002	20	18			5	4.2			8	8			152	152		
86LFA226203	15		3		8.7		7		10		7		118		125	
86LFA226701	22				4.8				14				196		210	
86LFA227802	15	19			3.6	2.5			14	10			157	148		
86LFA227805	23		3	3	2.5		2	1.5	10		8	4	189		202	189
87LFA600007			2	2			4.8	3.6			4	5			117	127
87LFA600105			1	1			4.4	2			29	18			111	115
87LFA600602			2	1			16	17			8	8			117	117
87LFA601002			3	2			7.9	8.5			7	10			142	142
87LFA601406			2	2			3.8	4.6			2	1			165	175
87LFA601506			1	1			3.8	4.3			1	1			97	105
87LFA601904			1	1			5.1	4.8			2	3			104	121
87LFA602402			2	2			6.6	6.6			5	5			110	113
87LFA602404			2	2			6.9	7			5	5			114	111
87LFA602405			3	2			6.7	6.8			1	6			112	110
87LFA602501			3	2			5.8	5.5			1	4			117	128

TABLE V LIST OF DUPLICATE ANALYSES FOR SELECTED ELEMENTS IN CLAY PLUS SILT FRACTION OF TILL, HAYESVILLE TRENCHING PROJECT

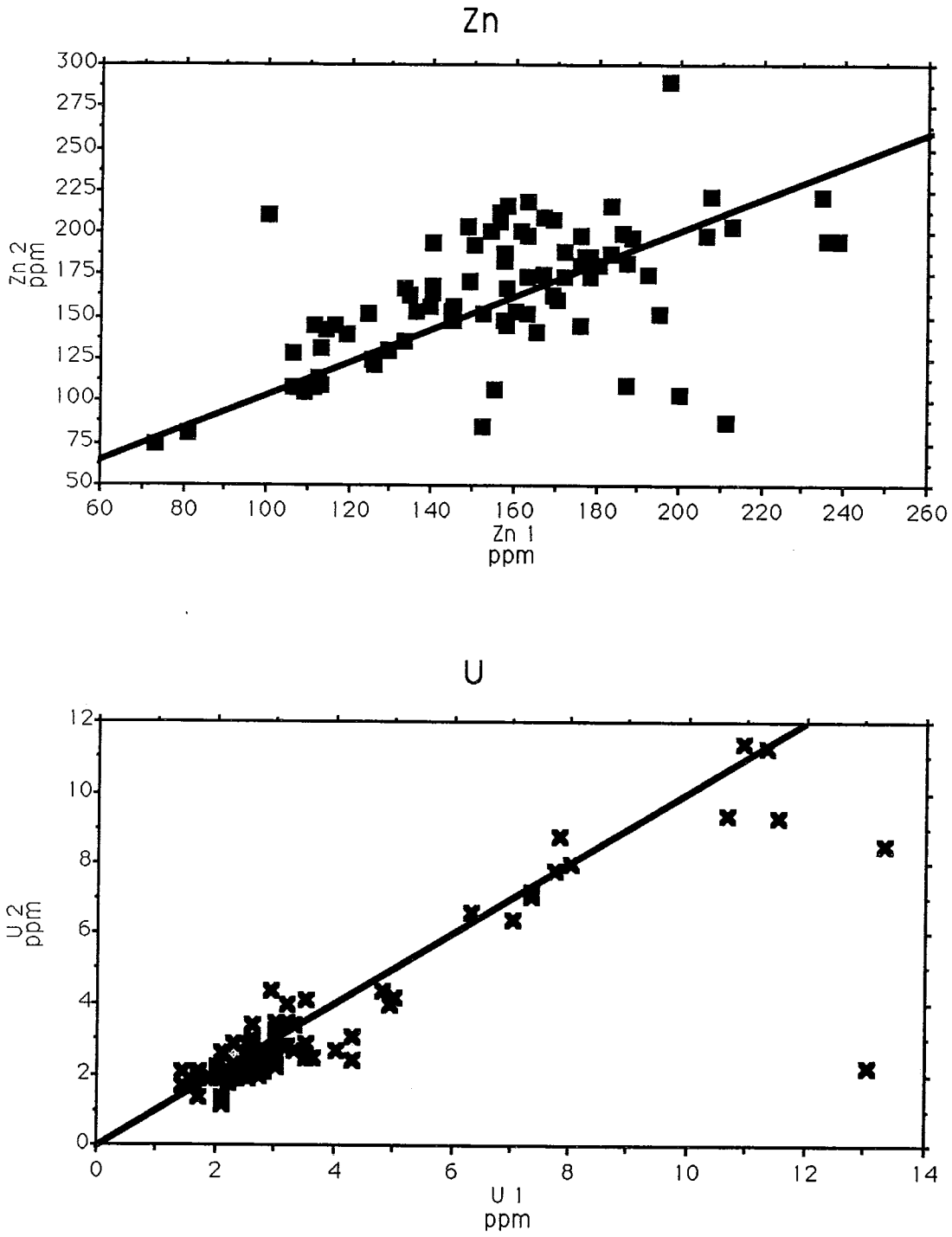
As 10: first analysis, Chemex Labs Ltd
As 11: second analysis, Chemex Labs Ltd

Sample	As 10	As 11	Au 10	Au 11	Bi 10	Bi 11	Cu 10	Cu 11	Hg 10	Hg 11	Mo 10	Mo 11	Pb 10	Pb 11	Sb 10	Sb 11	Zn 10	Zn 11
	ppm		ppb		ppm		ppm		ppb		ppm		ppm		ppm		ppm	
86LFA200901	27	29	4	4	1.4	1.5	33	35	20	40	1	1	18	19	2.2	2.4	90	93
86LFA201501	470	480	5	7	7.7	7.7	97	90	20	40	1	1	21	20	2.2	3.4	195	195
86LFA202901	120	150	5	2	2.7	2.7	46	46	30	40	1	1	21	20	4.2	4.4	118	129
86LFA204001	170	200	4	5	1.6	1.9	44	45	30	40	1	1	23	20	1.4	19.4	121	130
86LFA205701	15	17	1	1	0.5	0.5	25	32	40	60	1	1	14	17	1.3	1.6	92	99
86LFA207101	23	16	2	1	5.2	4.5	40	40	20	30	1	1	20	26	1.2	1.6	102	108
86LFA207501	16	14	1	1	3.4	4.3	26	32	20	40	1	1	21	18	0.8	0.6	78	88
86LFA208801	30	30	2	1	1	1.4	31	33	40	40	1	1	14	18	1.8	1.8	73	77
86LFA211601	14	12	4	1	0.2	0.3	31	33	20	20	1	1	14	18	1.6	1.2	75	76
86LFA213101	25	33	3	3	0.4	0.4	35	37	80	80	1	2	18	23	1.4	1.4	130	133
86LFA214301	24	17	1	5	1.3	1	29	29	30	30	1	1	18	16	0.5	0.2	91	91
86LFA216401	33	27	1	1	2.5	2.6	36	37	20	30	1	1	18	18	0.2	0.3	63	69
86LFA218601	5	5	1	1	0.5	0.5	14	12	40	20	1	1	14	13	0.2	0.1	68	57
86LFA218801	7	5	1	1	0.4	0.4	13	14	20	20	1	1	11	11	0.1	0.1	53	58
86LFA220801	6	11	1	1	0.8	0.6	22	20	30	20	1	1	14	16	0.1	0.2	63	64
86LFA226201	15	15	1	1	3.2	3.1	11	12	70	50	10	15	21	20	0.1	0.6	79	88
86LFA227601	6	6	1	1	3.1	3.2	6	6	230	180	1	1	43	39	0.1	0.2	31	33
86LFA200961	44	45	1	4					20	25	2	3			3.7	3.7	50	50
87LFA600001	9	10	2	0.5											0.1	0.2		
87LFA600103	33	27	3	4											0.2	0.2		
87LFA600406	22	17	0.5	2											0.1	0.1		
87LFA600603	5	4	6	5											0.1	0.1		
87LFA601004	27	30	2	3											0.3	0.2		
87LFA602003	110	95	7	4											4.4	3.8		
87LFA602501	22	22	2	0.5											0.6	0.2		



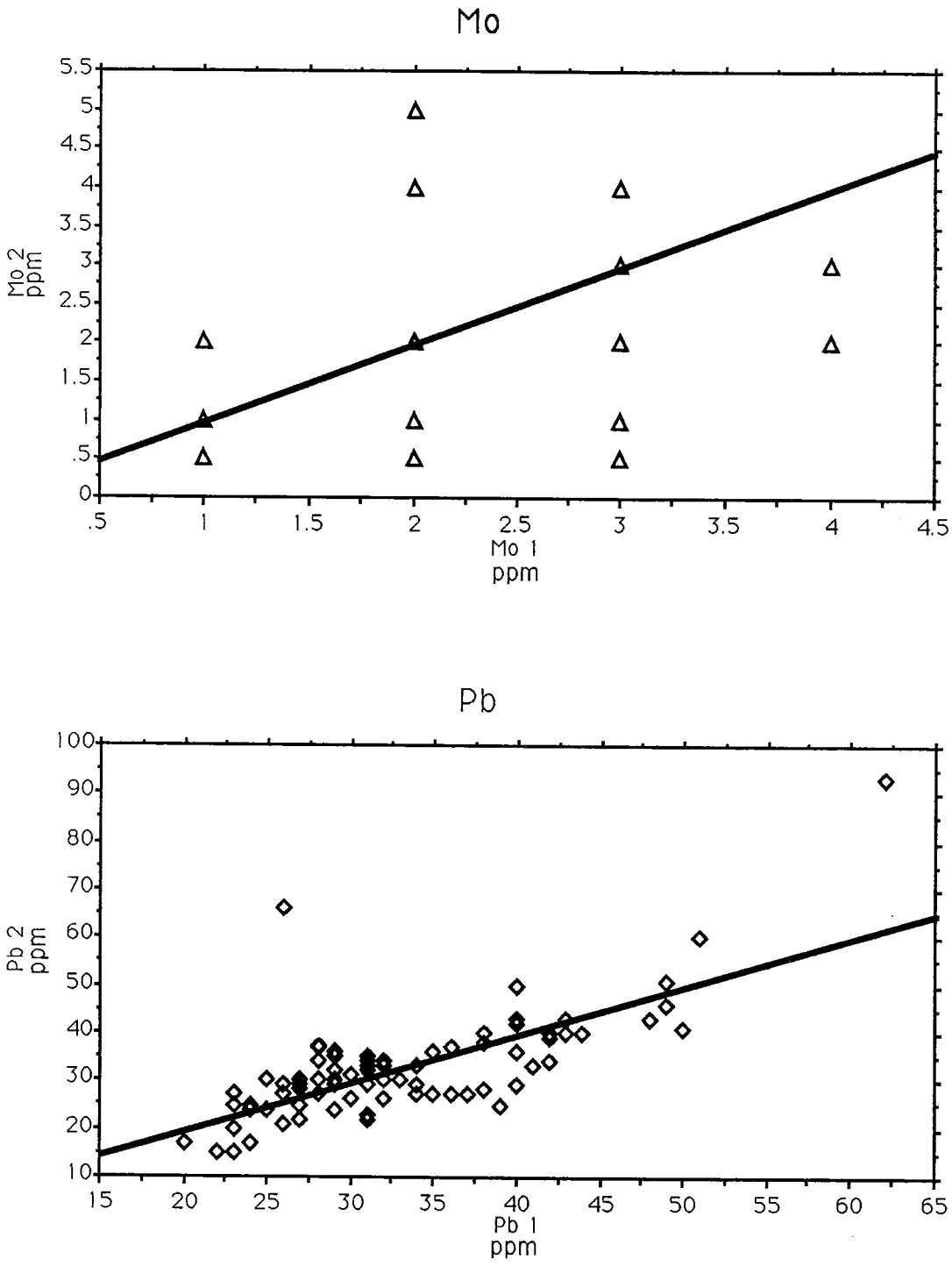
Bold line represents 1:1 coordinates ratio

Figure 6:Duplicate analyses for arsenic (As) and copper (Cu),clay fraction of till, Bondar Clegg and Co. Ltd (Obs.: 1 and 2).



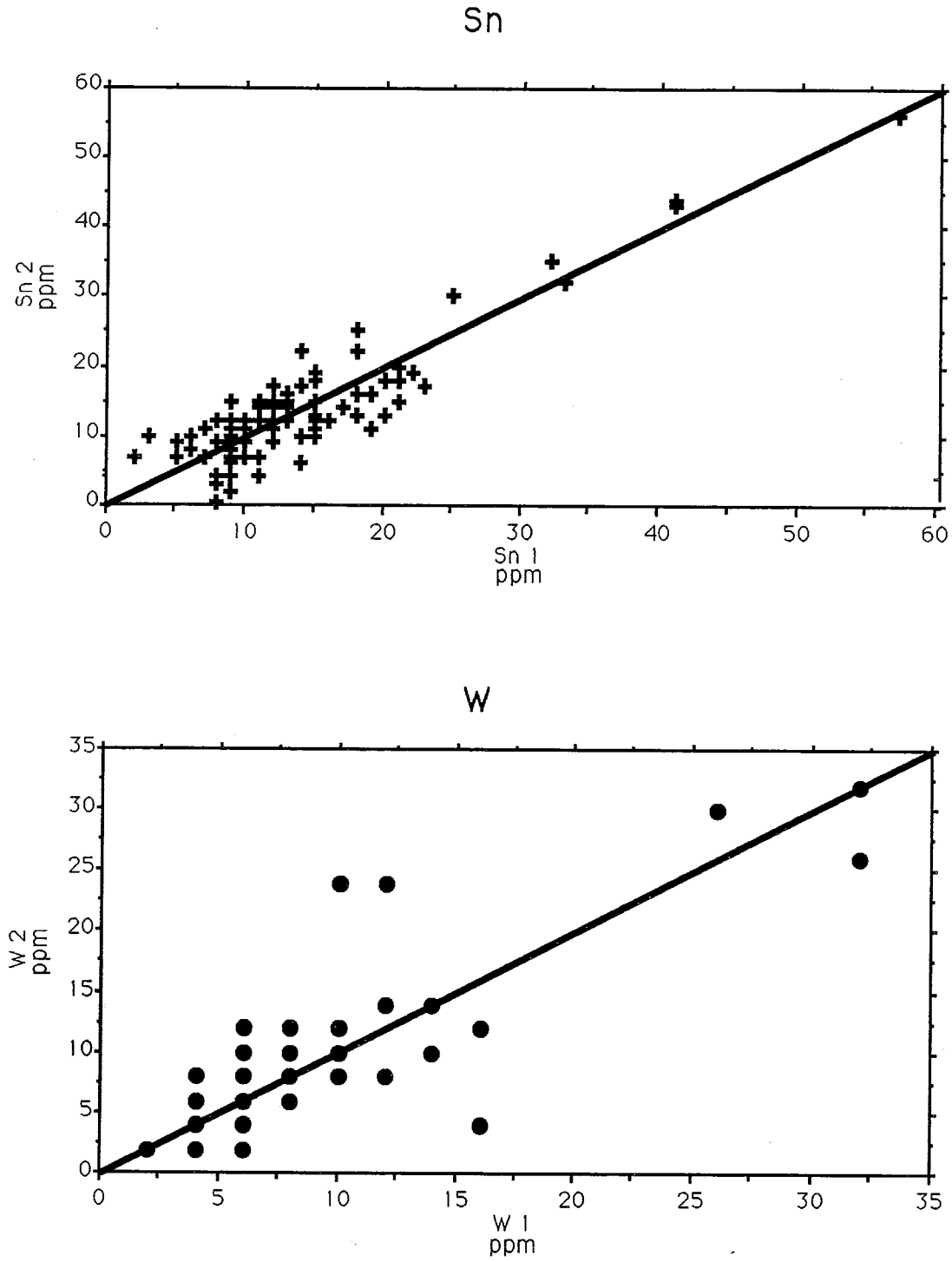
Bold line represents 1:1 coordinates ratio

Figure 7:Duplicate analyses for zinc (Zn) and uranium (U),clay fraction of till, Bondar Clegg and Co. Ltd (Obs.:1 and 2).



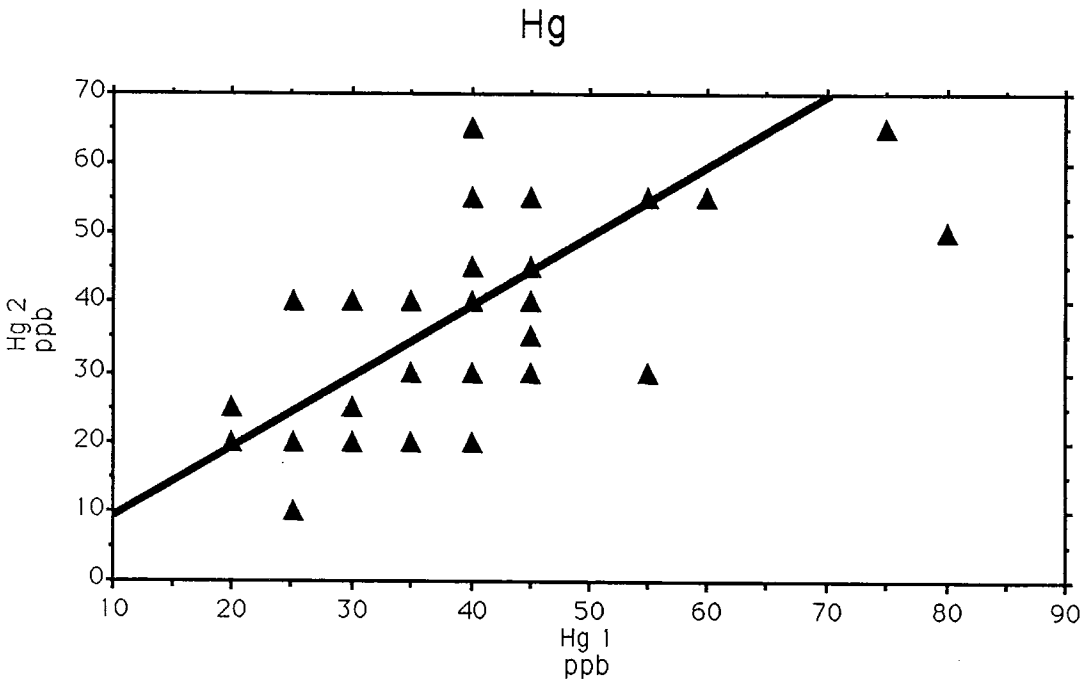
Bold line represents 1:1 coordinates ratio

Figure 8:Duplicate analyses for molydenum (Mo) and lead (Pb),clay fraction of till, Bondar Clegg and Co. Ltd (Obs.:1 and 2).



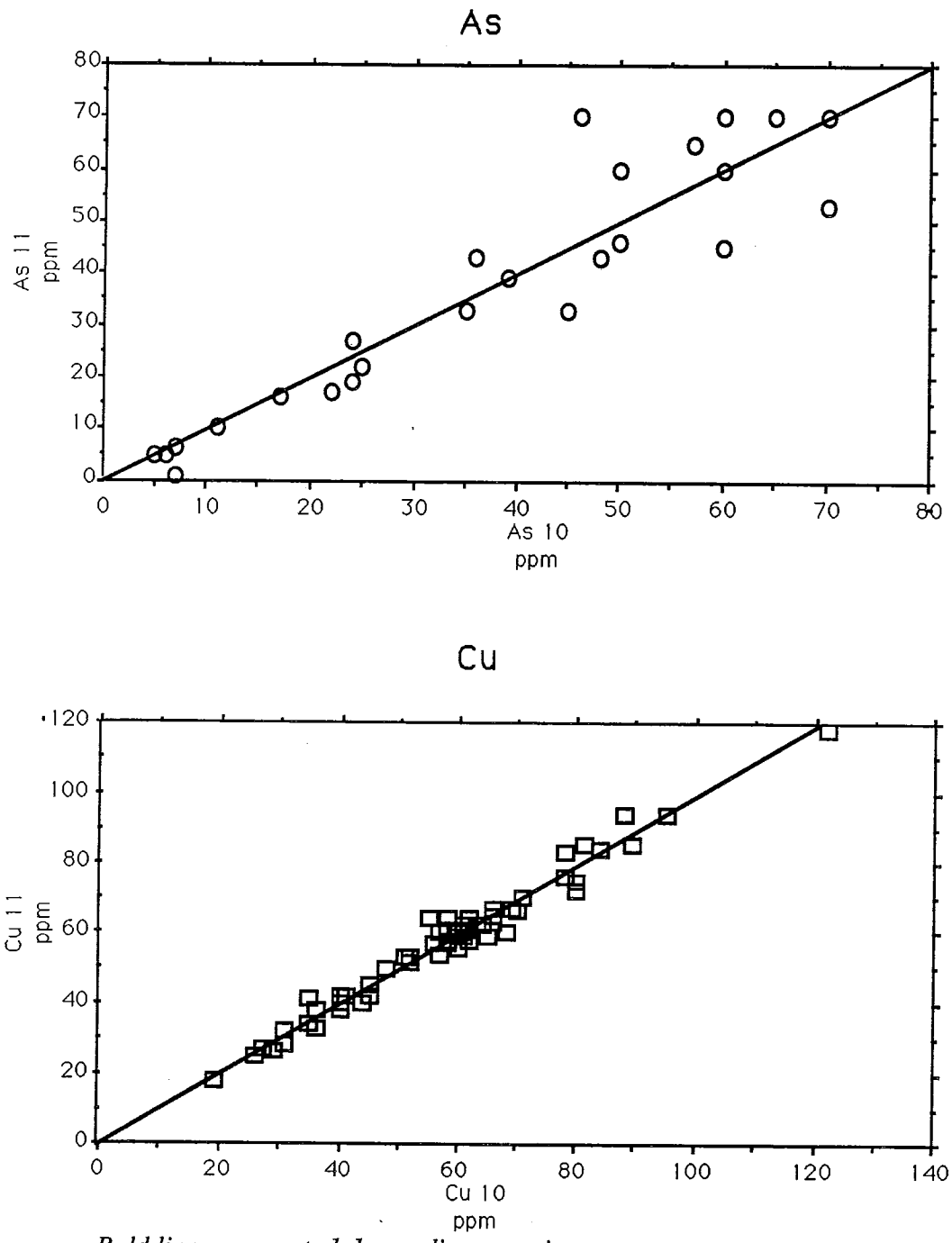
Bold line represents 1:1 coordinates ratio

Figure 9:Duplicate analyses for tin (Sn) and tungsten (W),clay fraction of till, Bondar Clegg and Co. Ltd (Obs.:1 and 2).



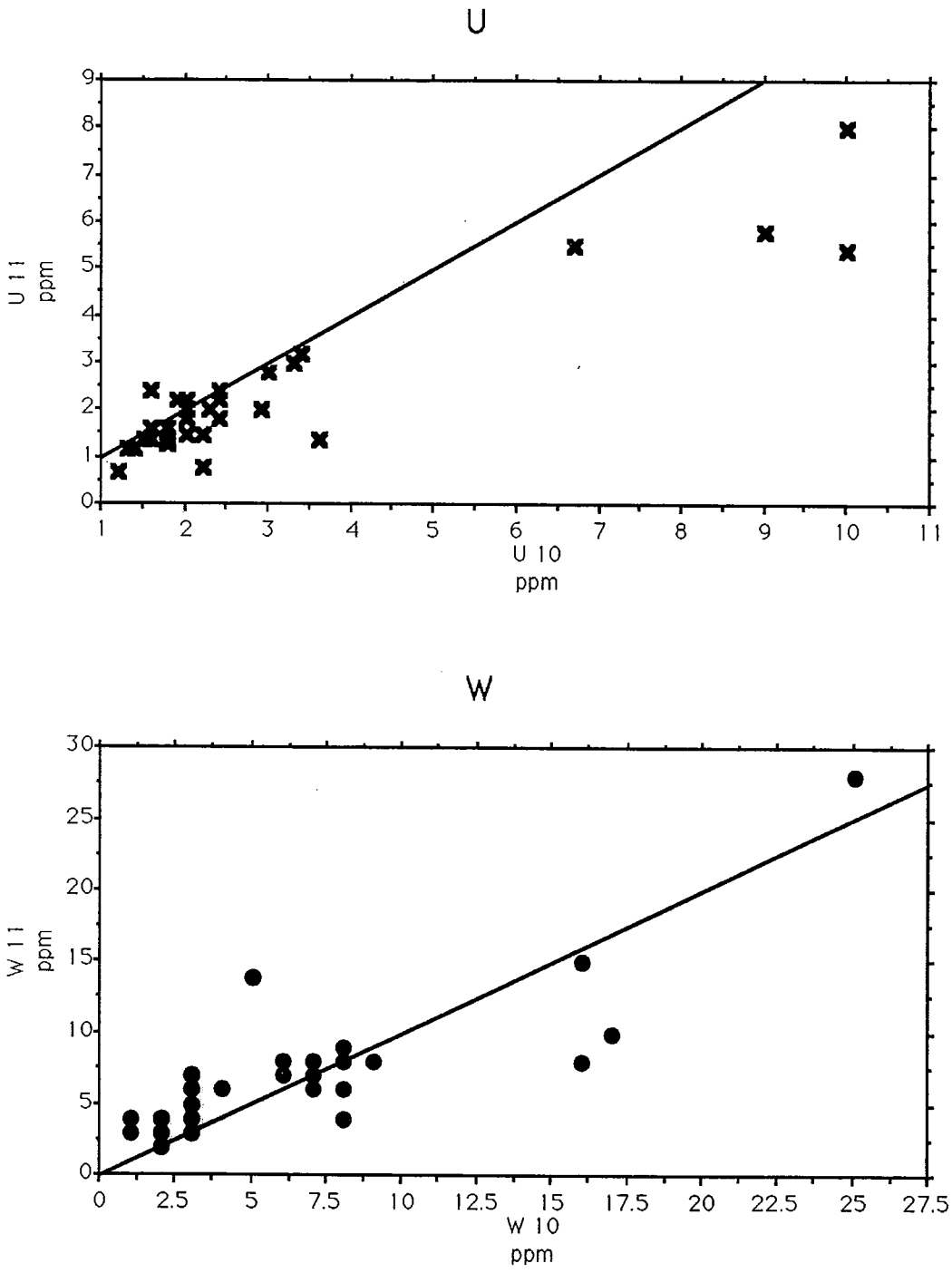
Bold line represents 1:1 coordinates ratio

Figure 10:Duplicate analyses for mercury (Hg),clay fraction of till, Bondar Clegg and Co. Ltd (Obs.: 1 and 2).



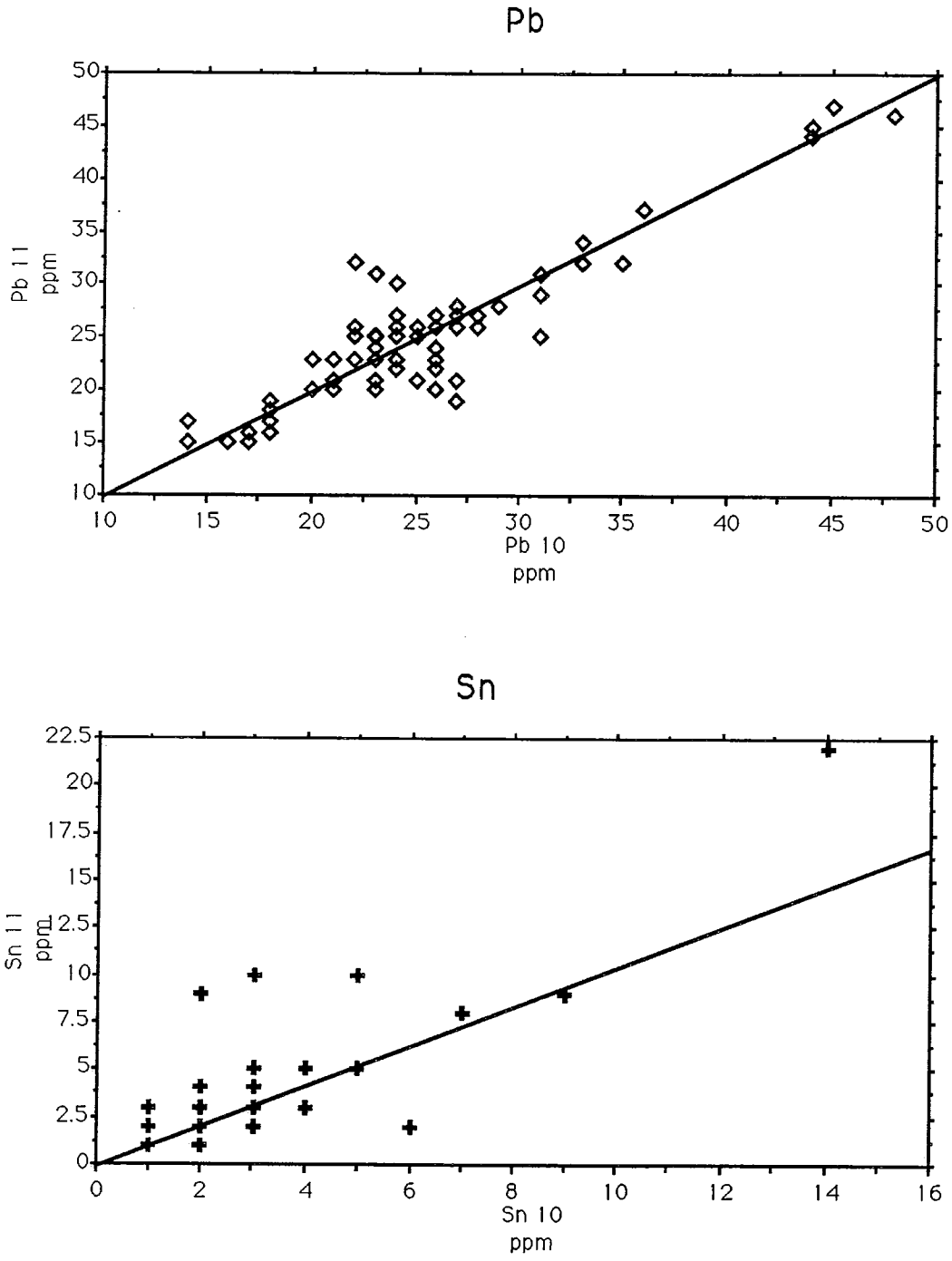
Bold line represents 1:1 coordinate sratio

Figure 11:Duplicate analyses for arsenic (As) and copper (Cu),clay fraction of till, Chemex Labs Ltd (Obs.: 10 and 11).



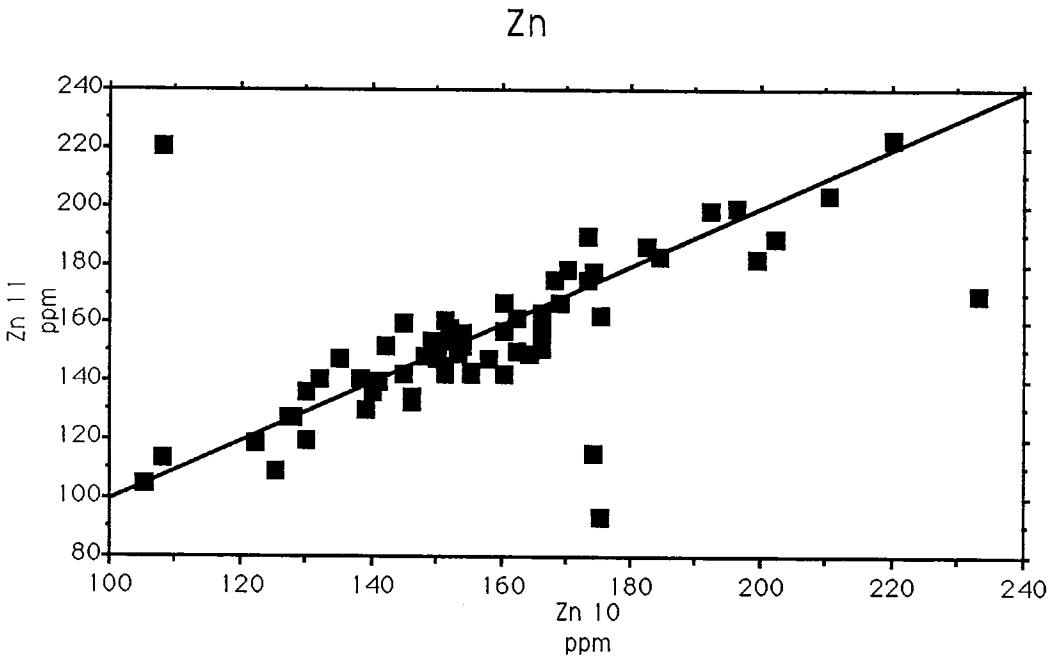
Bold line represents 1:1 coordinates ratio

Figure 12:Duplicate analyses for uranium (U) and tungsten (W),clay fraction of till, Chemex Labs Ltd (Obs.: 10 and 11).



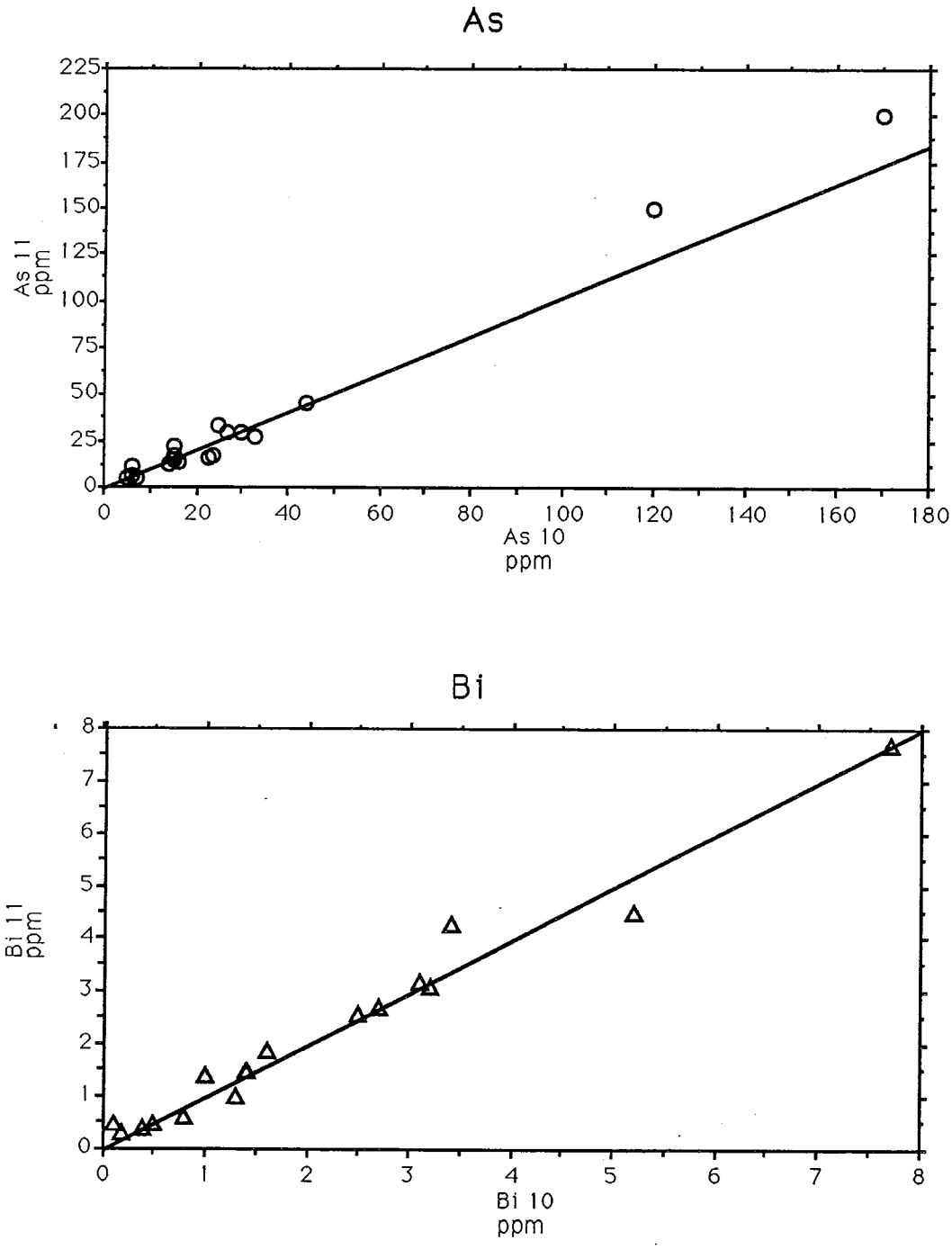
Bold line represents 1:1 coordinates ratio

Figure 13:Duplicate analyses for lead (Pb) and tin (Sn),clay fraction of till, Chemex Labs Ltd (Obs.: 10 and 11).



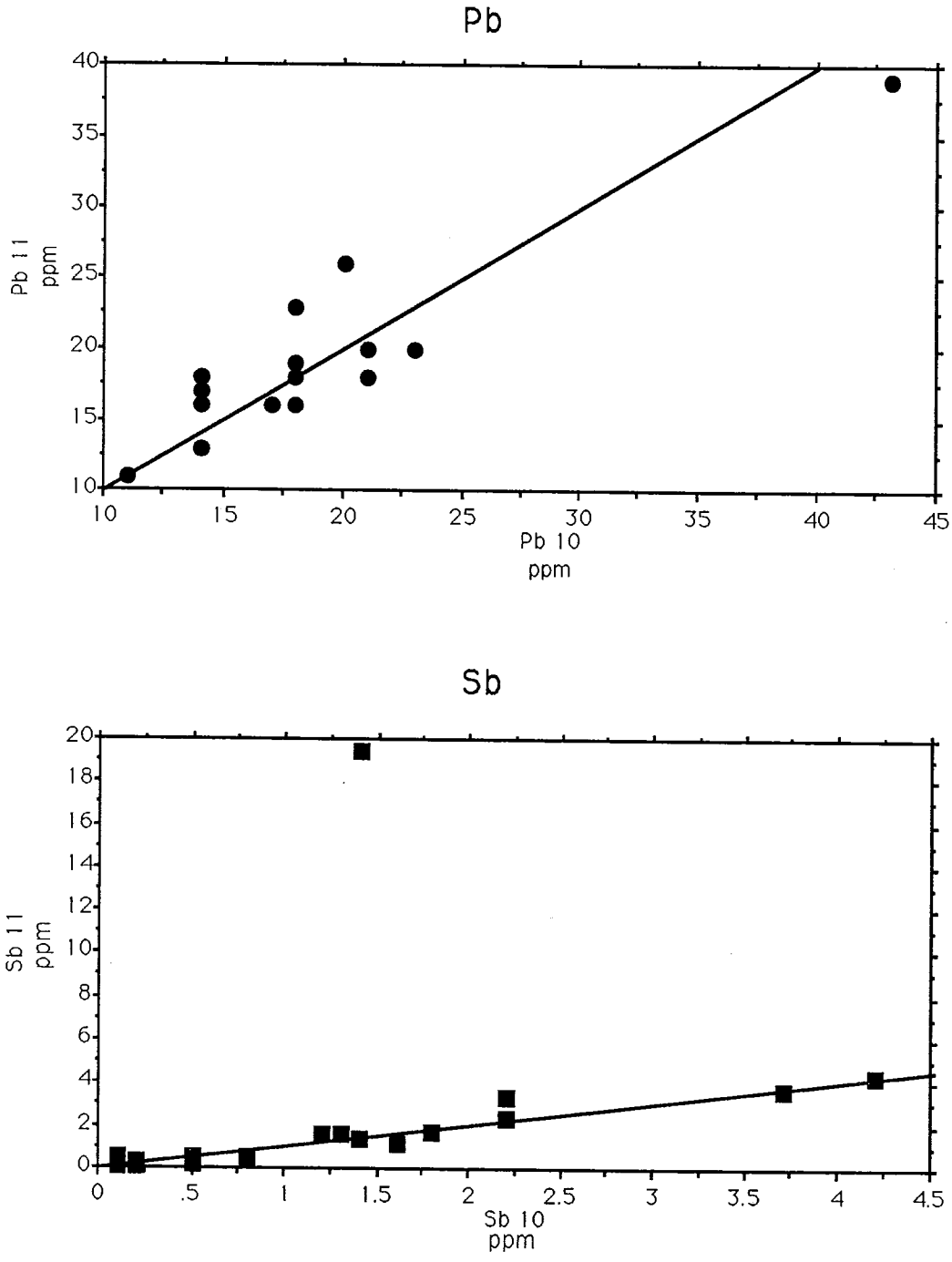
Bold line represents 1:1 coordinates ratio

Figure 14:Duplicate analyses for zinc (Zn) ,clay fraction of till, Chemex Labs Ltd (Obs.: 10 and 11).



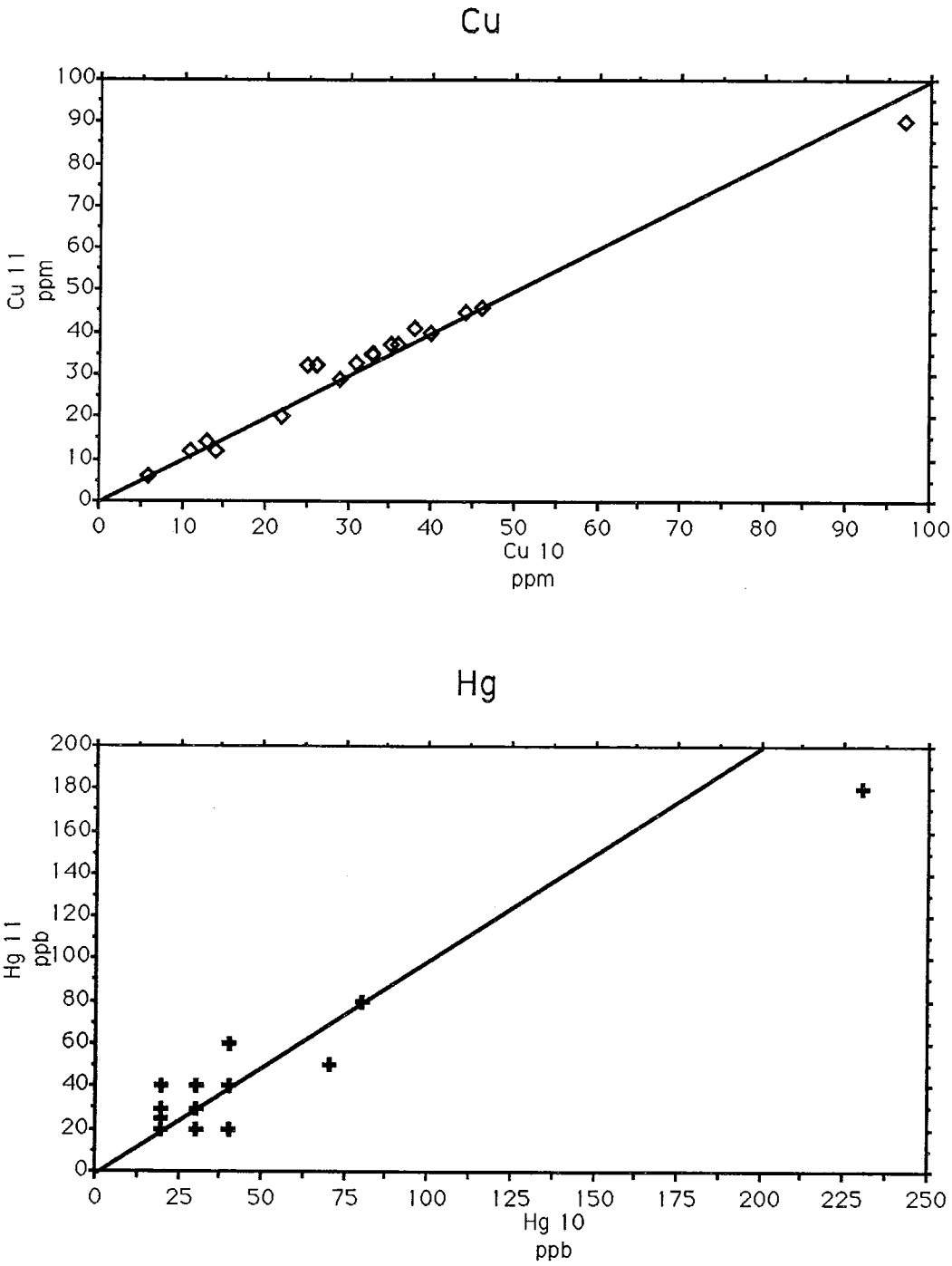
Bold line represents 1:1 coordinates ratio

Figure 15:Duplicate analyses for arsenic (As) and bismuth (Bi),clay plus silt fraction of till, Chemex Labs Ltd (Obs.: 10 and 11).



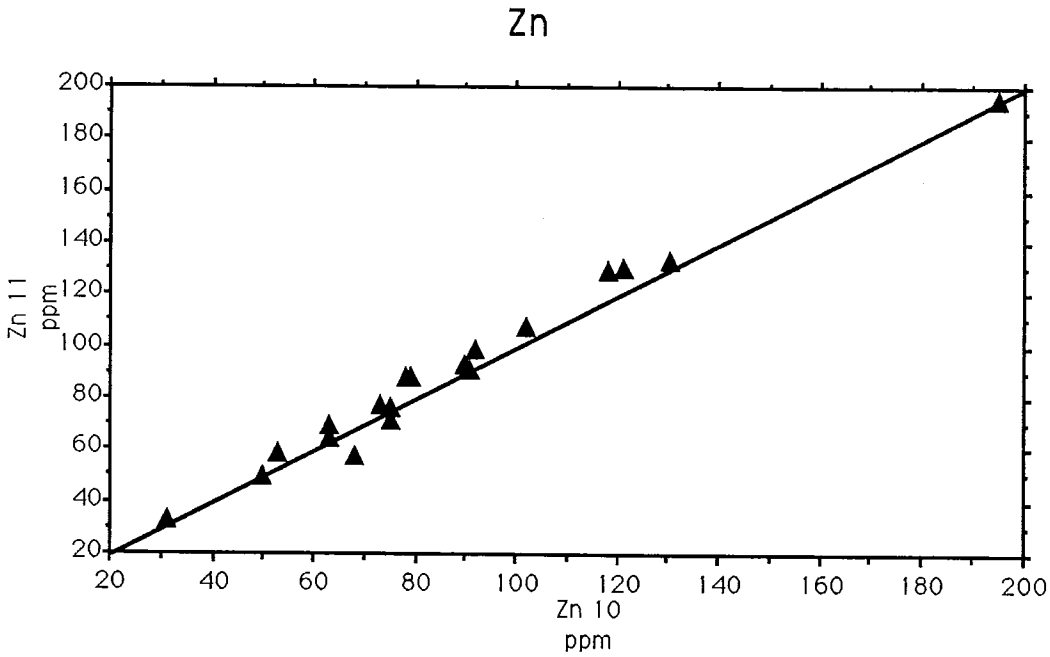
Bold line represents 1:1 coordinates ratio

Figure 16: Duplicate analyses for lead (Pb) and antimony (Sb), clay plus silt fraction of till, Chemex Labs Ltd (obs.: 10 and 11).



Bold line represents 1:1 coordinates ratio

Figure 17: Duplicate analyses for copper (Cu) and mercury (Hg) ,clay plus silt fraction of till, Chemex Labs Ltd (Obs.: 10 and 11).



Bold line represents 1:1 coordinates ratio

Figure 18:Duplicate analyses for zinc (Zn) ,clay plus silt fraction of till, Chemex Labs Ltd (Obs.: 10 and 11).

TABLE V LIST OF TRENCHES EQUIVALENCE

86 TRENCHES	87 TRENCHES
86LFA2182	87LFA6000
86LFA2202	87LFA6001
86LFA2160	87LFA6002
86LFA2159	87LFA6003
86LFA2170	87LFA6004
86LFA2171	87LFA6005
86LFA2198	87LFA6006
86LFA2206	87LFA6007
86LFA2236	87LFA6008
86LFA2254	87LFA6009
86LFA2263	87LFA6010
86LFA2114	87LFA6011
86LFA2101	87LFA6012
86LFA2120	87LFA6013
86LFA2113	87LFA6014
86LFA2125	87LFA6015
86LFA2139	87LFA6016
86LFA2142	87LFA6017
86LFA2081	87LFA6018
86LFA2077	87LFA6019
86LFA2001	87LFA6020
86LFA2072	87LFA6022
86LFA2044	87LFA6023
86LFA2048	87LFA6024
86LFA2086	87LFA6025

NOTE: SAMPLES IN THE 1987 TRENCHES WERE TAKEN AT 0.5m INTERVALS

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