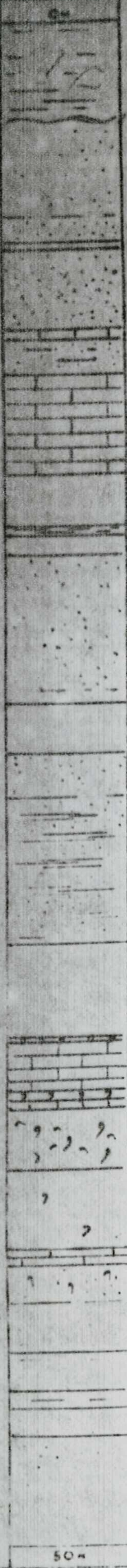
PROJECT SUNNYSIDE

6 BH1

BOREHOLE No [illegible]
COLLAR CO-ORDS [illegible]
COLLAR ELEV
BEARING 180°
DIP 45°



LITHOLOGY	METRAGE	REMARKS
	DIP 46°	
	0M	DRIFT TO APPROXIMATELY 3M
	3M	UNCORED PRESUMABLY SANDSTONE
	6.4	SANDSTONE WHITE-BROWN COARSE GRAINED MICACEOUS
	7.2	MUDSTONE
	7.4	SANDSTONE BIOTURBATED
	10	LIMESTONE SANDY WITH FOSSIL FRAGMENTS
	10.3	SANDSTONE FINE GRAINED SILTY BANDED
UPPER FELLTOP LIMESTONE	11.5	LIMESTONE RUBBLY IMPURE WITH MUDSTONE BANDS & CRINOID FRAGMENTS
	14.8	MUDSTONE
	16.5	SILTSTONE
	16.8	MUDSTONE
	17.4	SANDSTONE WHITE MEDIUM GRAINED FERRUGINOUS WEATHERED & FRIABLE AT CASE
	22.3	MUDSTONE
	24	SANDSTONE MEDIUM TO FINE GRAINED CURRENT BEDDED
	25.5	SANDSTONE GREY FINE GRAINED INTERBEDDED WITH BANDS OF BLACK SILTSTONE MICACEOUS
	30.25	MUDSTONE
	33.3	MUDSTONE CALCAREOUS & SHELLY
	33.4	LIMESTONE LIGHT GREY BIOCLASTIC WITH CRINOID FRAGMENTS
	35	MUDSTONE SHELLY
	35.25	LIMESTONE MUDDY COMPACT & HARD
	35.5	MUDSTONE SHELLY
	37.6	MUDSTONE CALCAREOUS WITH SOME CRINOID FRAGMENTS
	40.2	LIMESTONE LIGHT GREY HARD CRINOIDAL
	40.7	SANDSTONE GREY BIOTURBATED
	41.9	SANDSTONE LIGHT GREY CURRENT BEDDED
	43.55	SILTSTONE / SANDSTONE ALTERNATING LAMINAE GRADING TO —
	44.8	MUDSTONE / SILTSTONE ALTERNATING LAMINAE GRADING TO —
	45.4	MUDSTONE
	46.3	SANDSTONE WHITE MICACEOUS IRON STAINED ROOTY
	DIP 45°	
	50M	

SAMUK

PROJECT SUNNY SIDE

BOREHOLE Nº 1 SUN
COLLAR CO-ORDS +25195535000
COLLAR ELEV
BEARING 135°
DIP 45°

LITHOLOGY	SECTION	METRAGE	REMARKS
	50m		
			SANDSTONE
		51	SANDSTONE/SILTSTONE INTERBEDDED
		52	
			SANDSTONE LIGHT GREY HARD COMPACT
		59	SANDSTONE SILTY & LAMINATED GREY GRADING TO
		60.5	
			SILTSTONE - FINE GRAINED SANDSTONE BLACK MICACEOUS CURRENT BEDDED
		70.2	
			MUDSTONE SILTY BLACK SLIGHTLY FISSILE GRADING TO:-
		80.3	
			MUDSTONE
		83.7	MUDSTONE CALCAREOUS WITH SPARSE FOSSIL FRAGMENTS
		83.8	SANDSTONE FINE GRAINED BIOTURBATED
		84.3	
			MUDSTONE
BARNCLOUGH COAL		87.6	COAL
		87.8	
			MUDSTONE
	100m		

SAMUK

PROJECT SUNNYSIDE

BOREHOLE No [illegible]
COLLAR CO-ORD [illegible] 9565 35000
COLLAR ELEV
BEARING 120°
DIP 45°

GEOLOGY	SECTION	METRAGE	REMARKS
	100m		
		100.6	MUDSTONE SILTY BEDDING 88° TO CORELENGTH. FOSSIL
		104.5	MUDSTONE GREY & CLAYEY
		105.5	MUDSTONE WITH TINY CLASTIC PARTICLES
		106.1	MUDSTONE
		107.6	SANDSTONE CALCAREOUS SMALL PLATES OF CALCITE LIGHT GREY MEDIUM GRAINED
		109.8	SILTSTONE BANDED
		110.6	SANDSTONE? CALCAREOUS BIOCLASTIC
		111.2	SILTSTONE / SANDSTONE INTERBEDDED
		111.7	SILTSTONE BANDED GRADING TO
		115.8	MUDSTONE SILTY
		116.9	SILTSTONE BIOTURBATED & SHELLY 0.3M FOLLOWED BY SANDSTONE CALCARIOUS / SHELLY
		120	SILTSTONE SHELLY
		120.3	SILTSTONE GRADING TO
		120.8	MUDSTONE SILTY
		121.8	SANDSTONE WHITE MASSIVE MEDIUM-COARSE GRAINED
		130.8	MUDSTONE SILTY GRADING TO
		133.75	SILTSTONE CALCAREOUS
		135.4	LIMESTONE IMPURE SILTY
		135.7	MUDSTONE CALCAREOUS SHELLY
		135.9	MUDSTONE
		138.1	SANDSTONE MICACEOUS FINE GRAINED GREY FOSSILIFEROUS
		138.4	SANDSTONE SILTY BIOTURBATED
		139.4	SANDSTONE FOSSILIFEROUS
		139.8	SILTSTONE BIOTURBATED CONTAINING NUMEROUS FOSSIL BANDS 1-2CM THICK
		141.9	MUDSTONE BLACK
		147.2	MUDSTONE CALCAREOUS WITH SOME FOSSIL DEBRIS
		147.4	MUDSTONE WITH SHELLY BANDS
		148	LIMESTONE [illegible] FRAGMENTS
		148.75	[illegible]
	150m	DIP 51°	

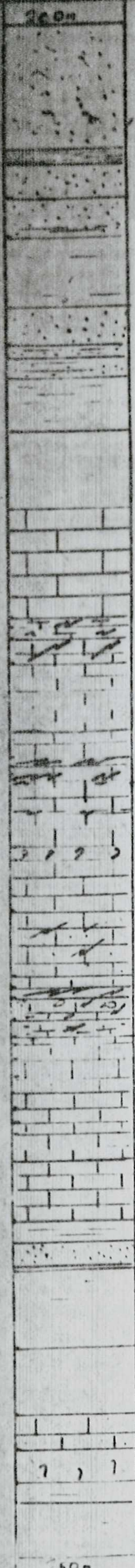
PROJECT SUNNYSIDE

COLLAR CO-ORDS [illegible]
COLLAR ELEV [illegible]
BEARING 180°
DIP 45°

GEOLOGY	SECTION	METRAGE	REMARKS
	150m		MUDSTONE
CRAG LIMESTONE		160·7	LIMESTONE HARD LIGHT GREY CRINOIDAL (BRIZOA LIKE? FOSSILS TO BASE
		153·2	SILTSTONE BLACK
		153·5	SANDSTONE SILTY BIOTURBATED MINOR QUARTZ VEIN 1CM AT 153.7 GRADING TO -
FIRESTONE SILL			SANDSTONE GREY HARD COMPACT MEDIUM - FINE GRAINED WITH MICACEOUS SILTY BANDS.
		160·8	SANDSTONE FINE-MEDIUM GRAINED WHITE CURRENT BEDDED
		162·35	SANDSTONE FINE GRAINED & SILTY BECOMING SILTSTONE
		164·75	SILTSTONE GREY CONTAINING SMALL SHELLS
		165	MUDSTONE SILTY WITH CALCAREOUS BANDS
		170·3	MUDSTONE SILTY
		170·7	SANDSTONE SILTY CURRENT BEDDED MEDIUM - FINE GRAINED
		174·3	SANDSTONE HARD WHITE MICACEOUS MEDIUM GRAINED
		175·2	SILTSTONE BLACK
		182·2	SILTSTONE BLACK WITH SPORADIC CRINOID & SHELL FRAGMENTS
		186·7	LIMESTONE IMPURE MUDDY, FOSSILIFEROUS CALCAREOUS MUDSTONE TO BASE
		187·5	LIMESTONE SANDY LIGHT GREY
		188·7	SANDSTONE CALCAREOUS GRADING TO MICACEOUS SANDSTONE
		192·75	SANDSTONE BANDED MICACEOUS WITH SILTY BANDS
		195	SANDSTONE MEDIUM GRAINED GRAY BIOTURBATED
		196·6	SANDSTONE GRAY MEDIUM GRAINED SILICEOUS
		199	SANDSTONE BANDED & SILTY GRADING TO
	200m		

PROJECT SUNNYSIDE

BOREHOLE [illegible]
COLLAR CO-ORDS [illegible]
COLLAR ELEV
BEARING 189
DIP 45°

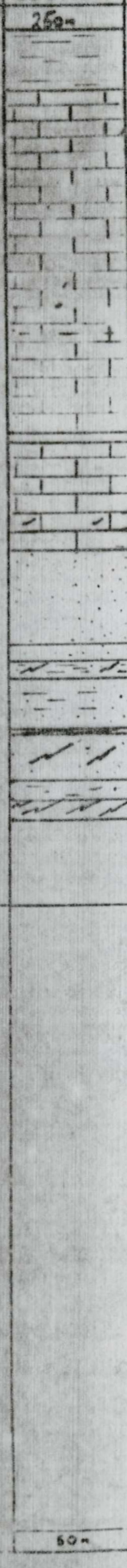


GEOLOGY	METRAGE	REMARKS
		SANDSTONE SIMILAR TO ABOVE BUT SLUMPED
	204.15	COAL
	204.85	SANDSTONE ROOTY ?
	205.6	SANDSTONE GRAY SILTY TO BASE
	206.9	MUDSTONE SILTY
	209.3	SANDSTONE MICACEOUS MEDIUM GRAINED WHITE
	210.4	SANDSTONE SILTY & BANDED (LINDSEY)
	210.85	SANDSTONE WITH SILTY BANDS
	211.45	SILTSTONE BLACK STRIPED GRADING TO SILTY MUDSTONE
	213 3	MUDSTONE
	215 8	LIMESTONE DARK GREY WITH CRINOIDAL BANDS
GREAT LIMESTONE	219.3	SILTSTONE CALCAREOUS WITH CALCITE & ZINC STRINGS
	219.6	SILTSTONE CALCAREOUS WITH CALCITE VEINLETS
	220	LIMESTONE CALCITE VEINED UP TO 6CM THICK
	220.8	LIMESTONE HARD COMPACT LIGHT GREY
	222 35	QUARTZ VEINLET
	223.8	QUARTZ WITH PATCHES OF ZINC & FLUORSPAR
	224 1	
	224 6	QUARTZ WITH PATCHES OF ZINC & FLUORSPAR
	225 7	
	226 8	FOSSILIFEROUS BAND
	227 2	LIMESTONE LIGHT GREY HARD COMPACT
	228 95	LIMESTONE BLACK & SILTY MINERALIZED WITH MINOR LEAD, ZINC & QUARTZ.
	231	LIMESTONE SOME QUARTZ
	231 4	QUARTZ WIT SOME LIMESTONE
	231 7	LIMESTONE ALTERED VESICULAR IN APPEARANCE WITH QUARTZ & ZINC
	232 4	CALCAREOUS SILTSTONE HARD MINERALIZED
	232.9	LIMESTONE CRINOIDAL.
	233 2	LIMESTONE BLACK & MUDDY WITH FOSSIL FRAGMENTS WITH SPECKS OF ANKERITE, LEAD & QUARTZ TO BASE
	234.7	LIMESTONE GREY MINERALIZED IN PLACES WITH CALCITE & QUARTZ.
	236 1	
	237	CALCITE VEIN 3 CM
		LIMESTONE BLUE GREY HARD COMPACT.
	238.8	MUDSTONE SILTY
	239.5	SANDSTONE MICACEOUS & CALCAREOUS
	240 4	MUDSTONE SILTY CAPPED BY 0.1M OF SEATEARTH MUDSTONE
	243	MUDSTONE BLACK.
	245 2	LIMESTONE SANDY WITH CRINOID FRAGMENTS
	246 2	SANDSTONE BIOTURBATED
	247 2	SILTSTONE BANDED
	248	MUDSTONE SILTY BANDED

PROJECT SUNNYSIDE

BOREHOLE N° J. SUN
COLLAR CO-ORDS 40519.55.35000
COLLAR ELEV
BEARING 180
DIP 45°

GEOLOGY | SECTION



METRAGE	REMARKS
	MUDSTONE BANDED SILTY
252	LIMESTONE MUDDY AT TOP GRADING TO CRINOIDAL LIMESTONE HARD & COMPACT
	LIMESTONE HARD LIGHT GREY WITH FOSSIL FRAGMENTS
263.3	LIMESTONE BROKEN HARD BLACK WITH QUARTZ & GALENA FRAGMENTS
263.6	LIMESTONE VERY HARD GREY SLIGHT SILICIFICATION
266	LIMESTONE BLACK,HARD SOME CC VEINLETS
266.5	LIMESTONE HARD COMPACT
267	SANDSTONE DARK GREY
270.5	SANDSTONE HARD SILICEOUS
271	SILTSTONE QUARTZ VEINED
271.45	SANDSTONE HARD DARK GREY SILTY QUARTZ VEIN 273.3 - 273.4
273.3	SANDSTONE FINE GRAINED DARK GREY QUARTZ VEINED
275	SANDSTONE SILTY & BANDED WITH MINOR QUARTZ & ANKERITE.
275.5	VEIN MATERIAL BROKEN SILICIFIED SILTSTONE WITH QUARTZ & SPHALERI
276.05	MUDSTONE SILTY - TOP 45cm. BECOMING SOFT BLACK & CLAYEY
279.05	

ERZFORSCHUNGS-LABOR ... [illegible]

Stream Sediment Results.

SAMUK SUNNYSIDE.

Blatt (1)

Ankunft	Betrifft:	Auftrag No.
22.10.80	MAINLY RELATE TO MAP C	1940-80
Projekt No 0353	149 Geochemische Bodenproben	197
Herkunft England Dr. Vlasek	Mahlen, Trocknen, Tabletten	Signatur

Probenummer FCAL 718 E /		Probebezeichnung des Auftraggebers			F ppm			Pb PPM	Zn PPM	
E	2857-80	AREA 1	A	1	15,0			43	155	1
E	2858-80	"	A	2	14,6			42	140	2
E	2859-80	"	A	3	[illegible]		24,1	38	144	3
E	2860-80	"	A	4	[illegible]			46	129	4
E	2861-80	"	A	5	[illegible]			42	116	5
E	2862-80	"	A	6	10,5			37	116	6
E	2863-80	"	A	7	[illegible]			37	116	7
E	2864-80	"	A	8	[illegible]		11,5	37	124	8
E	2865-80	"	A	9	[illegible]			39	106	9
E	2866-80	"	A	10	[illegible]			38	110	10
E	2867-80	"	A	11	[illegible]			37	115	11
E	2868-80	"	A	12	[illegible]			48	114	12
E	2869-80	"	A	13	[illegible]		[illegible]	38	110	13
E	2870-80	"	A	14	[illegible]			39	108	14
E	2871-80	"	A	15	[illegible]			37	110	15
E	2872-80	"	A	16	[illegible]			39	112	16
E	2873-80	"	A	17	[illegible]			37	110	17
E	2874-80	"	A	18	[illegible]		14,5	37	116	18
E	2875-80	"	A	19	[illegible]			47		19
E	2876-80	"	A	20	[illegible]					20
E	2877-80	"	A	21	[illegible]		11,4			21
E	2878-80	"	A	22	23.0					22
E	2879-80	"	A	24	[illegible]					23
E	2880-80	"	A	25	[illegible]					24
E	2881-80	"	A	26	[illegible]					25
E	2882-80	"	A	27	[illegible]					26
E	2883-80	"	A	28	[illegible]					27
E	2884-80	"	A	29	[illegible]					28
E	2885-80	"	A	30	[illegible]					29
E	2886-80	"	A	31	[illegible]		[illegible]			30

Bemerkungen:

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All present ~~on~~ on Map C

21.11.80

[illegible]

Blatt

Ankunft	Betrifft:	Auftrag No.
22.10.80	149 Geochemische Bodenproben	1940-80
Projekt No 0353		197
Herkunft England Dr. Vlasek	Mahlen. Trocknen, Tabletten	Signatur

Probenummer FCAL 718 E /		Probebezeichnung des Auftraggebers		F ppm					
E	2887-80	AREA 1	A 32 ✓	[illegible]					1
E	2888-80	"	AA 1	[illegible]					2
E	2889-80	"	AA 2	5,3					3
E	2890-80	"	AA 3	4,6					4
E	2891-80	"	AA 4	4,1					5
E	2892-80	"	AB 1	[illegible]					6
E	2893-80	"	AC 1	[illegible]		3,4			7
E	2894-80	"	B 1	[illegible]					8
E	2895-80	"	C 1 ✓	[illegible]					9
E	2896-80	"	C 2 ✓	[illegible]					10
E	2897-80	"	C 3 ✓	[illegible]		[illegible]			11
E	2898-80	"	C 4 ✓	[illegible]					12
E	2899-80	"	C 5	[illegible]					13
E	2900-80	"	C 6	[illegible]					14
E	2901-80	"	C 7	[illegible]					15
E	2902-80	"	C 9	[illegible]					16
E	2903-80	"	E 1	[illegible]					17
E	2904-80	"	E 2	[illegible]					18
E	2905-80	"	E 3	[illegible]					19
E	2906-80	"	E 4	[illegible]					20
E	2907-80	"	E 5	[illegible]		[illegible]			21
E	2908-80	"	E 6	[illegible]					22
E	2909-80	"	E 7	[illegible]					23
E	2910-80	"	E 8	[illegible]					24
E	2911-80	"	E 9	[illegible]					25
E	2912-80	*	E 10	[illegible]					26
E	2913-80	"	E 11	[illegible]					27
E	2914-80	"	E 12	[illegible]		66,2			28
E	2915-80	"	F 2	[illegible]					29
E	2916-80	"	F 3	[illegible]					30

Bemerkungen:

21. 11. 80

Blatt

Ankunft	Betrifft:	Auftrag No.
22.10.80	149 Geochemische Bodenproben	1940-80
Projekt No 0353		197
Herkunft England Dr. Vlasek	Mahlen, Trocknen, Tabletten	Signatur

Probenummer FCAL 718 E /	Probebezeichnung des Auftraggebers	F ppm					
E 2917-80	AREA 1 F 4	5,4					1
E 2918-80	" F 5	3,5					2
E 2919-80	" F 6	3,6		3,7			3
E 2920-80	" F 7	[illegible]					4
E 2921-80	" F 8	4,0					5
E 2922-80	" F 9	[illegible]					6
E 2923-80	" F 10	[illegible]					7
E 2924-80	" F 12	[illegible]					8
E 2925-80	" F 13	[illegible]					9
E 2926-80	" F 14	[illegible]					10
E 2927-80	" G 11	[illegible]					11
E 2928-80	" G 12	[illegible]					12
E 2929-80	" G 13	[illegible]					13
E 2930-80	" G 14	[illegible]					14
E 2931-80	" G 15	[illegible]		19,5			15
E 2932-80	" G 16	[illegible]					16
E 2933-80	" G 17	31,9					17
E 2934-80	" H 4 ✓	[illegible]		31,3			18
E 2935-80	" H 5 ✓	[illegible]					19
E 2936-80	" H 6 ✓	[illegible]					20
E 2937-80	" H 7 ✓	[illegible]					21
E 2938-80	" H 8 ✓	7,1					22
E 2939-80	" H 9 ✓	[illegible]					23
E 2940-80	" H 10 ✓	[illegible]					24
E 2941-80	" H 11 ✓	10,3					25
E 2942-80	" H 12 ✓	5,1					26
E 2943-80	" H 13 ✓	4,0					27
E 2944-80	" H 14 ✓	2,7		2,9			28
E 2945-80	" H 15 ✓	2,6					29
E 2946-80	" H 16 ✓	[illegible]					30

Bemerkungen:

21. 11. 80

[illegible]

ERZFORSCHUNGS-LABOR-BF NEUHAUSEN

Blatt

Ankunft 22.10.80	Betrifft:	Auftrag No. 1940-80
Projekt No 0353	149 Geochemische Bodenproben	197
Herkunft England Dr. Vlasek	Mahlen, Trocknen, Tabletten	Signatur

Probenummer FCAL 718 E /	Probebezeichnung des Auftraggebers	F ppm					
E 2947-80	AREA 1 H 17	1.7					1
E 2948-80	" H 18	[illegible]					2
E 2949-80	" H 19	[illegible]					3
E 2950-80	" H 20	[illegible]					4
E 2951-80	" H 21	[illegible]					5
E 2952-80	" H 22	1,6		1,7			6
E 2953-80	" H 23	1,8					7
E 2954-80	" H 24	[illegible]		1,7			8
E 2955-80	" H 25	2,9					9
E 2956-80	" H 26	[illegible]					10
E 2957-80	" H 27	[illegible]					11
E 2958-80	" H 28	[illegible]					12
E 2959-80	" HH 26	[illegible]					13
E 2960-80	" HH 27	[illegible]					14
E 2961-80	" HH 28	[illegible]					15
E 2962-80	" HH 29	[illegible]		8.9			16
E 2963-80	" HH 30	[illegible]					17
E 2964-80	" J 1	[illegible]					18
E 2965-80	" J 2	[illegible]					19
E 2966-80	" J 3	5,1		5.0			20
E 2967-80	" J 4	6,4					21
E 2968-80	" JA 1	[illegible]					22
E 2969-80	" JA 2	[illegible]					23
E 2970-80	" JA 3	[illegible]		[illegible]			24
E 2971-80	JA 4	[illegible]					25
E 2972-80	" K 1	[illegible]					26
E 2973-80	" K 2	5,4					27
E 2974-80	" K 3	3,5		3.6			28
E 2975-80	" K 4	4,5					29
E 2976-80	" K 5	[illegible]					30

Bemerkungen:

X

21.11.80

[illegible]

Ankunft 22.10.80	Betrifft:	Blatt Auftrag No. 1940-80
Projekt No 0353	149 Geochemische Bodenproben	197
Herkunft England Dr. Vlasek	Mahlen, Trocknen, Tabletten	Signatur

Probenummer FCAL 718 E /		Probebezeichnung, des Auftraggebers		F ppm					
E	2977-80	AREA 1	K 6	3,2					1
E	2978-80	"	K 7	2,1		1,9			2
E	2979-80	"	K 8	3,8					3
E	2980-80	"	K 9	2,7					4
E	2981-80	"	K 10	2,9					5
E	2982-80	"	K 11	3,0					6
E	2983-80	"	K 12	2,4		1,9			7
E	2984-80	"	K 13	4,3		4,0			8
E	2985-80	"	K 14	[illegible]					9
E	2986-80	"	K 15	3,4					10
E	2987-80	"	K 16	2,6					11
E	2988-80	"	K 17 [illegible]	2,5					12
E	2989-80	"	K 18	2,8					13
E	2990-80	"	K 19	4,5					14
E	2991-80	"	K 20	3,0		1,7			15
E	2992-80	"	KA 1	3,3					16
E	2993-80	"	KB 1	5,0					17
E	2994-80	"	KC 1	1,2					18
E	2995-80	"	KD 1	1,2					19
E	2996-80	"	KD 2	1,4					20
E	2997-80	"	KD 3	[illegible]					21
E	2998-80	"	KD 4	1,3					22
E	2999-80	"	KD 5	1,4					23
E	3000-80	"	KD 6	1,3					24
E	3001-80	"	KD 7	[illegible]					25
E	3002-80	"	KE 1	[illegible]					26
E	3003-80	"	KE 2	1,8					27
E	3004-80	"	KE 3	[illegible]					28
E	3005-80	"	KF 1	[illegible]					29
E									30

Bemerkungen:

X

21. 11. 80

/
200

2/

CHEMISCHE ANALYTIK FCAL-7120 8.8.1980

ALUSUISSE

ANALYSENERGEBNISSE Auftrag Nr. 867b-80

Auftraggeber : P.Woodfield, DB

Probematerial : Erdproben aus England

Gew. Analysen : F (0,5g in 50 ml H_2O 5 Min. gerührt)

93 F in soil?

Pb/Zn on Sheet 4.

Probe	LNr.	F ppm	Probe	LNr.	F ppm
EB 5	1134	16	EK 1	1175	52
6	1135	18	EM 1	1176	13
EC 9	1136	7 / 4	2	1177	11
11	1137	21	3	1178	13
12	1138	18 / 17	4	1179	6
13	1139	18	5	1180	7
14	1140	11	6	1181	8
15	1141	12	7	1182	7
16	1142	10	8	1183	10
17	1143	8	9	1184	9
18	1144	6	E 1	1185	8
20	1145	31	2	1186	13
EE 3	1146	40 / 31	3	1187	15
4	1147	11	G 1	1188	8
5	1148	26	2	1189	14
6	1149	14	3	1190	6
7	1150	27	3	1191	13
8	1151	12	4	1192	13 / 12
9	1152	14	5	1193	12
10	1153	14	6	1194	17
11	1154	20	7	1195	14
12	1155	11	8	1196	12 / 11
13	1156	16/15	9	1197	13
14	1157	7	10	1198	12
15	1158	11	GA 1	1199	17
16	1159	8	2	1200	14
17	1160	15	3	1201	11
18	1161	8	4	1202	7
19	1162	62	5	1203	11
20	1163	17	6	1204	11
EH 1	1164	213/204/180/202	7	1205	7 / 7
2	1165	12	K 1	1206	10
3	1166	8	2	1207	4
4	1167	7	3	1208	10
EJ 1	1168	3 / 4	4	1209	14
2	1169	7	5	1210	7
3	1170	8	SEB 1	1211	13
4	1171	32	2	1212	20
5	1172	7	3	1213	38 / 35
6	1173	7	4	1214	11
7	1174	69 / 78	7	1215	17
			8	1216	34

Pb/Zn on sheet 4

Pb/Zn on sheet 4 + sheet 5

Pb/Zn sheet 5

Also on sheet 5

./.

Probe		LNr.	F ppm
SEC	1	1217	31
	3	1218	31
	4	1219	19
	5	1220	7
	6	1221	9
	7	1222	7
	8	1223	14 / 13
	8	1224	4
	9	1225	12
	10	1226	9

FCAL
F. Roost

14.08.80 [illegible] F. Roost

ERZFORSCHUNGS-LABOR-DF NEUHAUSEN

ALUSUISSE

(3)

3/

Blatt 6

Ankunft	Betrifft:	Auftrag No
6.1.81	239 Soil Samples.	15 a
Projekt No		197
0331	385 Geochem. Pulverproben	
Herkunft		Signatur
Dr. Vlasek	Mahlen, F- Bestimmung	

Probenummer FCAL 718 E /		Probebezeichnung des Auftraggebers			F ppm		F total ppm	
E	186-81	AREA 2	BB 1		< 20			
E	187-81	"	BB 2		< 20			
E	188-81	"	BC 1		< 20			
E	189-81	"	BC 2		< 20			
E	190-81	"	BCC 1		< 20			
E	191-81	"	BCB 1		< 20			
E	192-81	W	W 1		40			
E	193-81	"	13 A		44			
E	194-81	"	12 A		28			
E	195-81	"	11 A		< [illegible]			
E	196-81	"	10 A		< [illegible]		108	
E	197-81	"	9 A		< 2[illegible]			
E	198-81	"	8 A		< [illegible]			
E	199-81	"	7 A		< [illegible]			
E	200-81	"	6 A		< [illegible]			
E	201-81	"	5 A		< [illegible]			
E	202-81	"	4 A		< [illegible]			
E	203-81	"	3 A		< [illegible]			
E	204-81	"	2 A		< [illegible]			
E	205-81	"	1 A		< [illegible]			
E	206-81	"	1 AA		4[illegible]			
E	207-81	AREA 3	1 A		< [illegible]			
E	208-81	"	2 A		< [illegible]			
E	209-81	"	3 A		< 20			
E	210-81	"	4 A		42			
E	211-81	"	5 A		< [illegible]			
E	212-81	"	6 A		[illegible]			
E	213-81	"	7 A		[illegible]1			
E	214-81	"	8 A		[illegible]			
E	215-81	"	1 AB 1		< 20			

Bemerkungen:

14.4.81

i. Hainbhaus[illegible]

ERZFORSCHUNGS-LABOR-DF NEUHAUSEN

Blatt 7

Ankunft	Betrifft:	Auftrag No
6.1.81	385 Geochem. Pulverproben	15 a
Projekt No 0331		197
Herkunft Dr. Vlasek	Mahlen, F- Bestimmung	Signatur

Probenummer FCAL 718 E /	Probebezeichnung des Auftraggebers		F ppm		F total ppm	
E 216-81	AREA 3 1 AB		< 20			
E 217-81	" 2 AB		73		60	
E 218-81	" 3 AB		38			
E 219-81	" 1 AC		24			
E 220-81	" B 1 A		< 20			
E 221-81	" B 1 AA		< 20			
E 222-81	" B 1 AB		< 20		164	
E 223-81	" B 1 B		< 20			
E 224-81	" B 1 C		< 20			
E 225-81	" C 1 A		58			
E 226-81	" C 1 B		< 20			
E 227-81	" D 1 A		< 20			
E 228-81	" D 1 B		< 20			
E 229-81	" E 1 A		20			
E 230-81	" E 1 B		< 20			
E 231-81	" E 1 C		30		108	
E 232-81	" E 1 CA		< 20			
E 233-81	" E 1 D		< 20			
E 234-81	" E 1 E		< 20			
E 235-81	" E 1 EA		< 20			
E 236-81	" E 1 F		< 20			
E 237-81	" E 1G		< 20			
E 238-81	" F 1 A		< 20			
E 239-81	" G 1 A		33			
E 240-81	" H 1 A		< 20			
E 241-81	" H 1 B		33			
E 242-81	" H 1 AA		< 20			
E 243-81	" J 1 A		< 20			
E 244-81	" K 1 A		27			
E 245-81	" L 1 A		< 20			

Bemerkungen:

14. 4. 1981

u. Fleischhauer

ERZFORSCHUNGS-LABOR-DF NEUHAUSEN

Blatt 8

Ankunft	Betrifft:	Auftrag No
6.1.81		15 a
Projekt No	385 Geochem. Pulverproben	197
0331		
Herkunft		Signatur
Dr. Vlasek	Mahlen, F- Bestimmung	

Probenummer FCAL 718 E /	Probebezeichnung des Auftraggebers		F ppm		F total ppm	
E 246-81	AREA 3 M 1 A		<20			
E 247-81	" M 1 B		<20			
E 248-81	" N 1 A		22			
E 249-81	" N 1 B		<20			
E 250-81	" N 1 C		<20			
E 251-81	" N 1 D		<20			
E 252-81	" N 1 E		<20			
E 253-81	" P 1 A		<20			
E 254-81	" Y 1		<20			
E 255-81	" X 1		<20			
E 256-81	" Z 1		<20			
E 257-81	" Z 2		77			
E 258-81	" WDAA 1		58			
E 259-81	" WDBA 1		72			
E 260-81	" WR 1		<20			
E 261-81	" WQ 1		[illegible]			
E 262-81	" WP 1		<20			
E 263-81	" WP 2		<20			
E 264-81	" WN 1		26			
E 265-81	" WM 1		26			
E 266-81	" WL 1		<20			
E 267-81	" WR 1		[illegible]			
E 268-81	" WJ 1		<20			
E 269-81	" WH 1		23			
E 270-81	" WG 1		<20		32	
E 271-81	" WF 1		<20			
E 272-81	" WE 1		<20			
E 273-81	" WE 2		30			
E 274-81	" WDB 2		<20			
E 275-81	" WDB 1		<20			

Bemerkungen:

14.4.1981

G. Fleischhauer

Ankunft 6.1.81	Betrifft:	Auftrag No 15 a
Projekt No 0331	385 Geochme. Pulverproben	197
Herkunft Dr. Vlasek	Mahlen. F- Bestimmung	Signatur

Probenummer FCAL 718 E /	Probebezeichnung des Auftraggebers		F ppm		F total ppm	
E 276-81	AREA 3 WDA 2		26			
E 277-81	" WDA 1		23			
E 278-81	" WD 1		< 20			
E 279-81	" WC 1		< 20			
E 280-81	" WB 2		26			
E 281-81	" WB 1		< 20			
E 282-81	" WA 1		< 20			
E 283-81	" W 1		< 20			
E 284-81	" W 2		< 20			
E 285-81	" W 3		< 20			
E 286-81	" W 4		< 20			
E 287-81	" W 5		< 20			
E 288-81	" W 6		< 20		68	
E 289-81	" W 7		< 20			
E 290-81	" W 8		< 20			
E 291-81	" W 9		< 20			
E 292-81	" W 10		< 20			
E 293-81	" W 11		< 20			
E 294-81	" WAB 1		< 20			
E 295-81	" HA 1		< 20			
E 296-81	" HA 2		25			
E 297-81	" H 1		< 20			
E 298-81	" H 2		< 20			
E 299-81	" H 3		< 20			
E 300-81	" H 4		< 20			
E 301-81	" H 5		< 20			
E 302-81	" BA 1		75		312	
E 303-81	" BB 1		24			
E 304-81	" B 1		20			
E 305-81	" B 2		20			

Bemerkungen:

14.4.1981

Flachhauer

ERZFORSCHUNGS-LABOR-DF NEUHAUSEN

Blatt 10

Ankunft 6.1.81	**Betrifft:**	**Auftrag No** 15 a
Projekt No 0331	385 Geochem. Pulverproben	197
Herkunft Dr. Vlasek	Mahlen, F- Bestimmung	**Signatur**

Probenummer FCAL 718 E /	Probebezeichnung des Auftraggebers		F ppm		F total ppm	
E 306-81	AREA 3 B 3		33			
E 307-81	" B 4		41			
E 308-81	" C 1		< 20			
E 309-81	" D 1		28			
E 310-81	" E 1		< 20			
E 311-81	" E 2		< 20			
E 312-81	" F 1		< 20			
E 313-81	" G 1		21			
E 314-81	" K 1		32			
E 315-81	" L 1		< 20			
E 316-81	" M 1		< 20			
E 317-81	" N 1		< 20			
E 318-81	" T 1		31			
E 319-81	" T 2		< 20			
E 320-81	" P 1		34			
E 321-81	" P 2		40			
E 322-81	" R 2		42			
E 323-81	" R 1		< 20			
E 324-81	" S 1		< 20			
E 325-81	" S 2		30			
E 326-81	" S 3		21			
E 327-81	" AB 1 A		5600		45800	
E 328-81	" A 1 A		1680			
E 329-81	" A 1 C		2560		14280	
E 330-81	" AC 1 A		76			
E 331-81	" AC 1 B		36			
E 332-81	" AC 1 C		72			
E 333-81	" AC 1 D		22			
E 334-81	" AC 1 E		< 20			
E 335-81	" AC 1 F		44			

Bemerkungen:

14.4.1981

[illegible]

Blatt 11

Ankunft	Betrifft:	Auftrag No
6.1.81		15 a
Projekt No		197
0331	385 Geochem. Pulverproben	
Herkunft		Signatur
Dr. Vlasek	Mahlen, F- Bestimmung	

Probenummer FCAL 718 E /	Probebezeichnung des Auftraggebers		F ppm		F total ppm	
E 336-81	AREA 3 AA 1 A		27			
E 337-81	" AA 1 B		27			
E 338-81	" AA 1 C		26		90	
E 339-81	" AA 1 D		<20			
E 340-81	" AA 1 E		168			
E 341-81	" AA 1 F		31			
E 342-81	" JA 1		<20			
E 343-81	" JA 2		<20			
E 344-81	" JA 3		<20			
E 345-81	" J 1		<20			
E 346-81	" J 2		<20			
E 347-81	" JAB 1		55			
E 348-81	" JAB 2		29			
E 349-81	" JAC 1		25			
E 350-81	" JAC 2		32			
E 351-81	" JAD 1		21			
E 352-81	" JAE 1		33			
E 353-81	" AE 1		44			
E 354-81	" AE 2		38			
E 355-81	" AE 3		39			
E 356-81	" AE 4		<20			
E 357-81	" AE 5		68			
E 358-81	" AEA 1		<20			
E 359-81	" AEB 1		68		128	
E 360-81	" AF 1		23			
E 361-81	" AF 2		<20			
E 362-81	" AF 3		<20			
E 363-81	" AF 4		<20			
E 364-81	" AF 5		<20			
E 365-81	" AF 6		<20			

Bemerkungen:

14.4.1981

u. Fleischhauer

Blatt 12

Ankunft	Betrifft:	Auftrag No
6.1.81		15 a
Projekt No	385 Geochem. Pulverproben	197
0331		
Herkunft	Mahlen. F- Bestimmung	Signatur
Dr. Vlasek		

Probenummer FCAL 718 E /	Probebezeichnung des Auftraggebers		F ppm		F total ppm	
E 366-81	AREA 3 AF 7		< 20			
E 367-81	" AFB 1		< 20			
E 368-81	" AG 1		28			
E 369-81	" AG 2		59			
E 370-81	" AG 3		296			
E 371-81	" AG 4		< 20			
E 372-81	" AG 5		49			
E 373-81	" AH 1		33			
E 374-81	" AH 2		< 20			
E 375-81	" AHA 1		< 20			
E 376-81	" AA 1		105		364	
E 377-81	" AA 2		33			
E 378-81	" AA 3		< 20			
E 379-81	" AA 4		57			
E 380-81	" AB 1		50			
E 381-81	" AB 2		23			
E 382-81	" AB 3		75			
E 383-81	" AB 4		44			
E 384-81	" AB 5		26			
E 385-81	" AB 6		71			
E 386-81	" AB 7		< 20			
E 387-81	" ABA 1		< 20			
E 388-81	" ABB 1		30			
E 389-81	" ABB 2		< 20			
E 390-81	" ABBA 1		25			
E 391-81	" ABC 1		40			
E 392-81	" ABD 1		< 20			
E 393-81	" AC 1		50			
E 394-81	" AC 2		32			
E 395-81	" AC 3		23			

Bemerkungen:

14.4.1981

[illegible]

Blatt 13

Ankunft	Betrifft:	Auftrag No
6.1.81		15 a
Projekt No 0331	385 Geochem. Pulverproben	197
Herkunft Dr. Vlasek	Mahlen, F- Bestimmung	Signatur

Probenummer FCAL 718 E /	Probebezeichnung des Auftraggebers		F ppm		F total ppm	
E 396-81	AREA 3 AC 4		54			
E 397-81	" ACA 1		25			
E 398-81	" AD 1		< 20			
E 399-81	" AD 2		24			
E 400-81	" AD 3		106			
E 401-81	" AD 4		88			
E 402-81	" ADA 1		22			
E 403-81	" A 1		28			
E 404-81	" A 2		22			
E 405-81	" A 3		208		372	
E 406-81	" A 4		153			
E 407-81	" A 5		140			
E 408-81	" A 6		< 20			
E 409-81	" A 7		31			
E 410-81	" A 8		< 20			
E 411-81	" A 9		33			
E 412-81	" A 10		26			
E 413-81	" A 11		48			
E 414-81	" A 13		24			
E 415-81	" A 14		< 20			
E 416-81	" A 15		24			
E 417-81	" A 16		< 20			
E 418-81	" A 17		< 20			
E 419-81	" A 18		128			
E 420-81	" A 19		100			
E 421-81	AREA 2 A 14		42			
E 422-81	" P 2		79			
E 423-81	AREA 3 A 1 (B)		10900		147200	
E 423-81 A	AREA 2 A 2 A 1		172			
E						

Bemerkungen:

239 samples.

14.4.1981

G. Fleischhauer

4/

E.ZFORSCHUNGS-LABOR-DF NEUHAUSEN

(4)

Blatt

Ankunft 13.5.80	Betrifft: Some more Pb/Zn. -results Stream Sediments	Auftrag No 867-80
Projekt No 0353	93 Proben RELATE TO MAP D	197
Herkunft Bergbau DB	je 1 Tablette	Signatur

Probenummer FCAL 718 E /	Probebezeichnung des Auftraggebers	Pb XRF ppm		Zn XRF ppm	F chem. ppm	F XRF %
E 1134-80	EB 5	48		92		<1%
E 1135-80	EB 6	52		103		
E 1136-80	EC 9	48		59		
E 1137-80	EC 11	40		82		
E 1138-80	EC 12	27		87	17	
E 1139-80	EC 13	56		120		
E 1140-80	EC 14	33		101		
E 1141-80	EC 15	52		87		
E 1142-80	EC 16	40		139		
E 1143-80	EC 17	40		89		
E 1144-80	EC 18	72		59		
E 1145-80	EC 20	87		87		
E 1146-80	EE 3	48		195		
E 1147-80	EE 4	68		265	28	
E 1148-80	EE 5	37		223		
E 1149-80	EE 6	70		239		
E 1150-80	EE 7	29		111		
E 1151-80	EE 8	70		213		
E 1152-80	EE 9	44		213		
E 1153-80	EE 10	56		279		
E 1154-80	EE 11	60		344		
E 1155-80	EE 12	70		213		
E 1156-80	EE 13	60/69		358/349		
E 1157-80	EE 14	107		303		
E 1158-80	EE 15	91		400		
E 1159-80	EE 16	68		121		
E 1160-80	EE 17	83		531		
E 1161-80	EE 18	268/252		602/170		
E 1162-80	EE 19	1.2%		190	86	
E 1163-80	EE 20	33		73		

Bemerkungen:

Als on shee

Blatt

Ankunft /	Betrifft :	Auftrag No
13.5.80		867-80
Projekt No	[illegible] Proben	197
0353		
Herkunft	je 1 Tablette	Signatur
Bergbau DB		

Probenummer FCAL 718 E /		Probebezeichnung des Auftraggebers	Pb XRF ppm		Zn XRF ppm	F chem. ppm	F XRF <1%
E	1164-80	EH 1	32/64		1024 1059		<1%
E	1165-80	EH 2	33		3093		
E	1166-80	EH 3	25		2999	29	
E	1167-80	EH 4	29		2952		
E	1168-80	EJ 1	25		143		
E	1169-80	EJ 2	29		129		
E	1170-80	EJ 3	29		134		
E	1171-80	EJ 4	25		125		
E	1172-80	EJ 5	40/40		265/265	20	
E	1173-80	EJ 6	37		218		
E	1174-80	EJ 7	138		344		
E	1175-80	EK 1	zu wenig Material für Tablette				
E	1176-80	EM 1	52		1492		
E	1177-80	EM 2	37		541		
E	1178-80	EM 3	56		316		
E	1179-80	EM 4	52/64		442/435		
E	1180-80	EM 5	44/48		1270 1340		
E	1181-80	EM 6	33		329		
E	1182-80	EM 7	37		218		
E	1183-80	EM 8	32/44		344 335		
E	1184-80	EM 9	44		466		
E	1185-80	E[illegible]	107		92		
E	1186-80	E[illegible] 2	20/22		120/135		
E	1187-80	E[illegible] 4	95		931		
E	1188-80	E[illegible] 1	44		363		
E	1189-80	E[illegible] 2	33/44		354/335		
E	1190-80	E[illegible]	40		181		
E	1191-80	[illegible]	21/21		325/344		
E	1192-80	[illegible] 4	40		237		
E	1193-80	[illegible] 5	103/95		126/185		

Bemerkungen :

E[illegible]FORSCHUNGS-LABOR-DF NEUHAUSEN

Ankunft	Betrifft:	Blatt
13.5.80		Auftrag No 867-80
Projekt No 0353	33 Proben	197
Herkunft Bergbau DB	je 1 Tablette	Signatur

Probenummer FCAL 718 E /		Probebezeichnung des Auftraggebers	Pb XRF ppm		Zn XRF ppm	F chem. ppm	F XRF %
E	1194-80	G 6	48		185		< 1%
E	1195-80	G 7	60		157		
E	1196-80	G 8	60/72		152/153		
E	1197-80	G 9	44		185		
E	1198-80	G 10	46/37		134/120	35	
E	1199-80	GA 1	123		297		
E	1200-80	GA 2	80		251		
E	1201-80	GA 3	56		185		
E	1202-80	GA 4	33/31		115/96	40	
E	1203-80	GA 5	44		139		
E	1204-80	GA 6	48		153		
E	1205-80	GA 7	60		139		
E	1206-80	EK 1	33		896		
E	1207-80	EK 2	40/33		606/602	19	
E	1208-80	EK 3	52		2088		
E	1209-80	EK 4	83		1690		
E	1210-80	EK 5	224		1153		
E	1211-80	SEB 1 SEB	60		82		
E	1212-80	SEB 2	64/48		101/92		
E	1213-80	SEB 3	40/48		64/111		
E	1214-80	SEB 4	29/21		68/36	10	
E	1215-80	SEB 7	25		134		
E	1216-80	SEB [illegible]	29		115		
E	1217-80	SEC 1 SEC	87		121		
E	1218-80	SEC 3 Map D	32		148		
E	1219-80	SEC 4	150/120		92/111		
E	1220-80	SEC 5	33/33		106/101		
E	1221-80	SEC [illegible]	46		101		
E	1222-80	SEC 7	25/25		64/36	9	
E	1223-80	SEC 8	87		167		

Bemerkungen:

ERZFORSCHUNGS-LABOR-DF NEUHAUSEN

Blatt

Ankunft 13.5.80	Betrifft: 23 Proben je 1 Tablette	Auftrag No 867-80
Projekt No 0353		197
Herkunft Bergbau DB		Signatur

Probenummer FCAL 718 E /	Probebezeichnung des Auftraggebers	Pb ppm		Zn ppm		F %
E 1224-80	SEC 8	21/25		68/78		<1%
E 1225-80	SEC 9	56/56		92/100		|
E 1226-80	SEC 10	44		129		|
E						
E						
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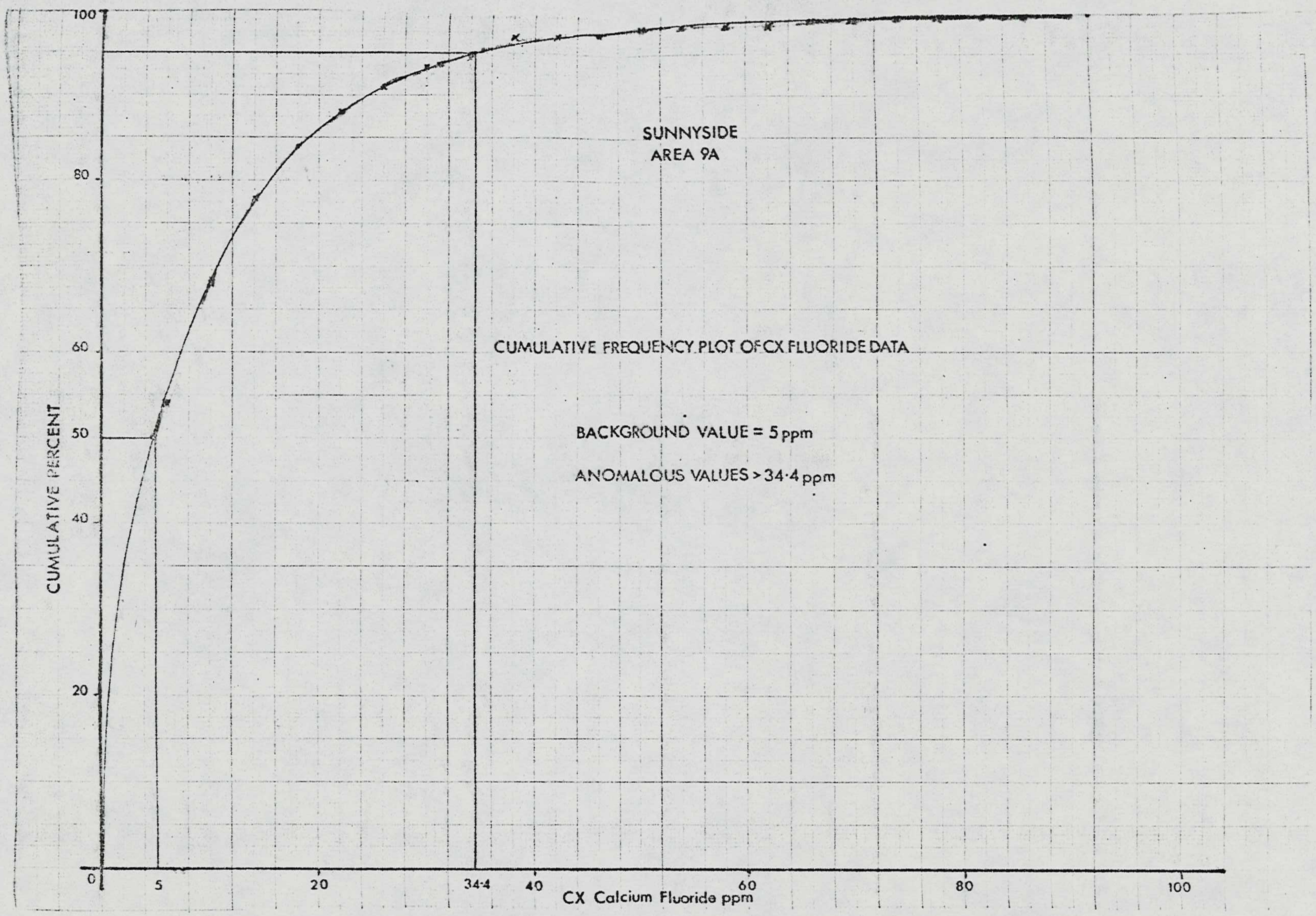
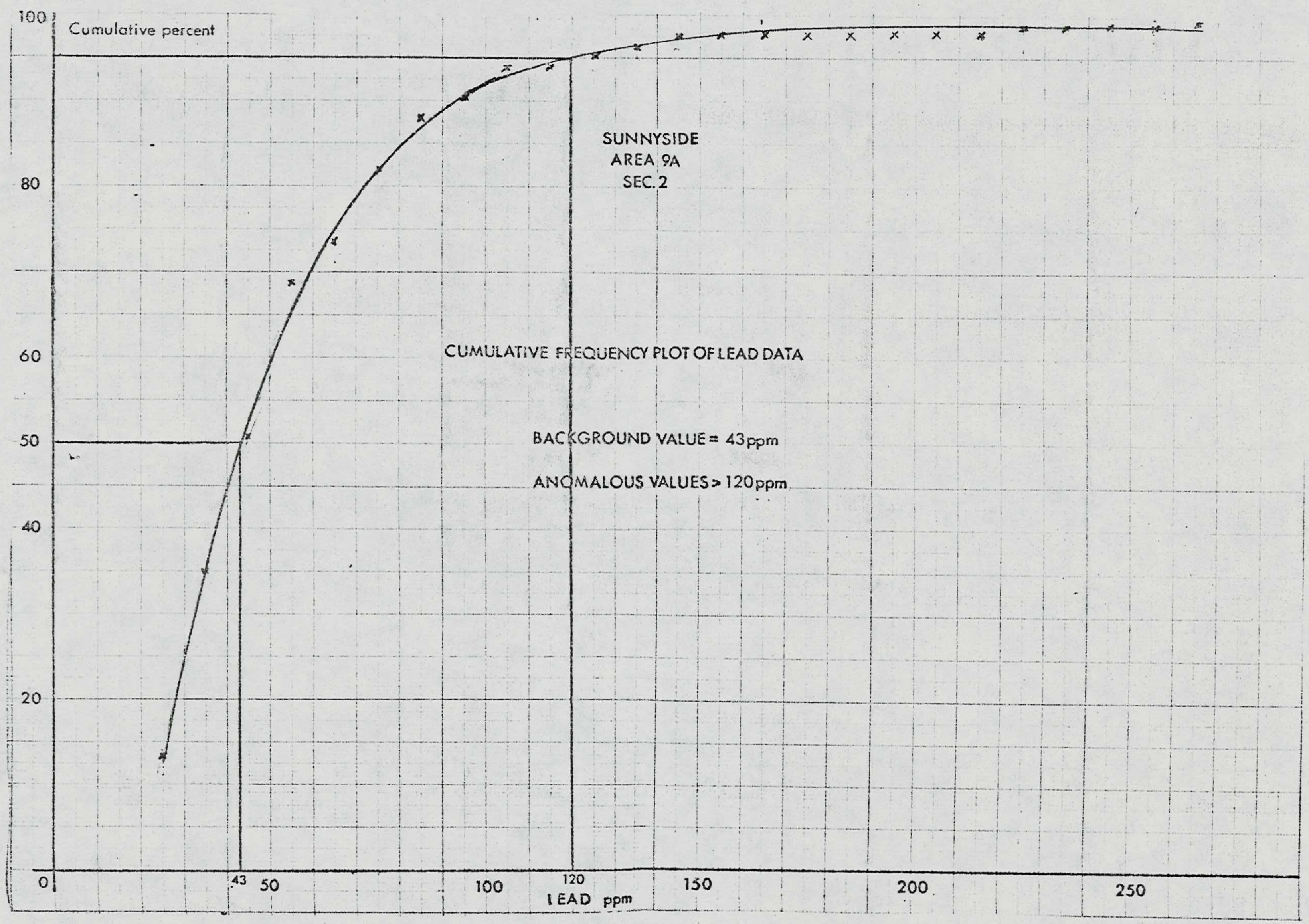
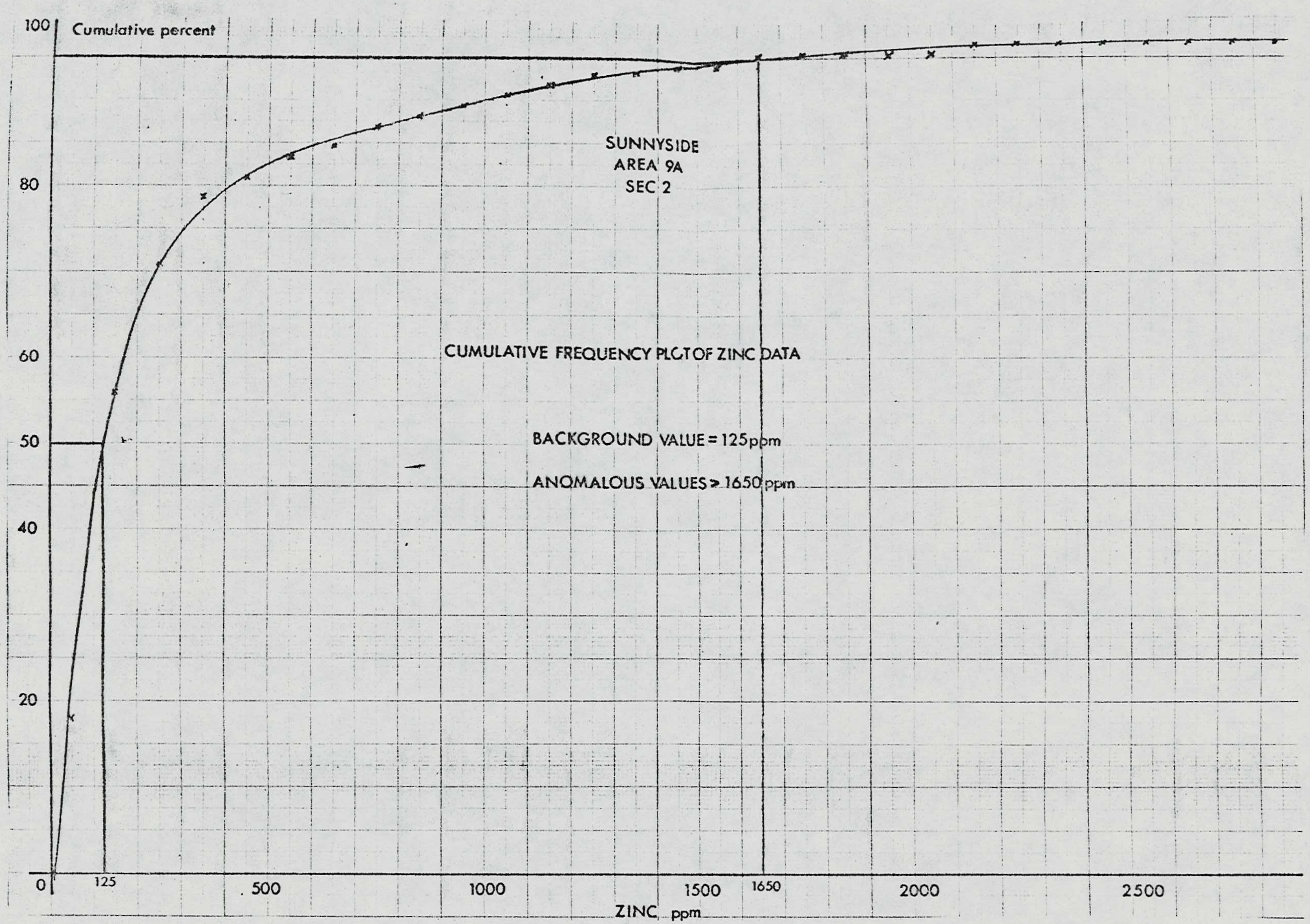
g. K. 15.06.80

Bemerkungen:


SUNNYSIDE
AREA 9A
CUMULATIVE FREQUENCY PLOT OF CX FLUORIDE DATA
BACKGROUND VALUE = 5 ppm
ANOMALOUS VALUES > 34·4 ppm
CUMULATIVE PERCENT
100
80
60
50
40
20
0
5
20
34·4
40
60
80
100
CX Calcium Fluoride ppm



100
Cumulative percent
80
60
50
40
20
0
43
50
100
120
150
200
250
LEAD ppm
SUNNYSIDE
AREA 9A
SEC. 2
CUMULATIVE FREQUENCY PLOT OF LEAD DATA
BACKGROUND VALUE = 43ppm
ANOMALOUS VALUES > 120ppm



Cumulative percent
100
80
60
50
40
20
0
125
500
1000
1500
1650
2000
2500
ZINC ppm
SUNNYSIDE
AREA 9A
SEC 2
CUMULATIVE FREQUENCY PLOT OF ZINC DATA
BACKGROUND VALUE = 125ppm
ANOMALOUS VALUES > 1650 ppm

8

Sennybridge Geochemical Survey.

Analysis of Data - Lead

No of Samples 84. 85 used 1200 ppm. disc

Sample interval (k) = 10 log 84 = 19.24 = 19

Highest value Sample 268 $\frac{268}{19} \simeq 14$. Say 10

Class Interval	mid pt of Interval	class freq	Rel. freq	Cumulative freq.	Cumulative freq %.
0 - 10	5	0	0.0	0	0
10 - 20	15	0	0.0	0	0
20 - 30	25	11 + 2	0.133	11	13.3
30 - 40	35	18 + 2	0.217	29	35
40 - 50	45	13 + 2	0.157	42	50.7
50 - 60	55	15	0.181	57	68.8
60 - 70	65	4	0.048	61	73.6
70 - 80	75	7	0.087	68	82.0
80 - 90	85	5	0.060	73	88.0
90 - 100	95	2	0.024	75	90.4
100 - 110	105	3	0.036	78	94.0
110 - 120	115	0	0.0	78	94
120 - 130	125	1	0.012	79	95.2
130 - 140	135	1	0.012	80	96.4
140 - 150	145	1	0.012	81	97.6
150 - 160	155	0	0.0	81	97.6
160 - 170	165	0	..	81	97.6
170 - 180	175	0	..	81	..
180 - 190	185	0	..	81	..
190 - 200	195	0	..	81	..
200 - 210	205	0	..	81	..
210 - 220	215	0	..	81	..
220 - 230	225	1		82	98.8
230 - 240	235	0	0.0	82	98.8
240 - 250	245	0	..	82	..
250 - 260	255	0	..	82	..
260 - 270	265	1	0.012	83	100.00
		83 + 6			

Longside Pb data

Mean, S.D.

Class	Class val. x_i	x_i^2	frequency f_i	$x_i f_i$	$x_i^2 f_i$
1	5	25	0	0	0
2	15	225	0	0	0
3	25	625	11+2	275	6875
4	35	1225	18+2	630	22050
5	45	2025	13+2	585	26325
6	55	3025	15	825	45375
7	65	4225	4	260	17020
8	75	5625	7	525	39375
9	85	7225	5	425	36125
10	95	9025	2	190	18050
11	105	11025	3	315	33075
12	115	13225	0	0	0
13	125	15625	1	125	15625
14	135	18225	1	135	18225
15	145	21025	1	145	21025
16	155	24025	0	0	0
17	165	27225	0	0	0
18	175	30625	0	0	0
19	185	34225	0	0	0
20	195	38025	0	0	0
21	205	42025	0	0	0
22	215	46225	0	0	0
23	225	50625	1	225	50625
24	235	55225	0	0	0
25	245	60025	0	0	0
26	255	65025	0	0	0
27.	265	70225.	1	265	70225
			83+6	4925. 210 5135	419995

$\bar{x} = \frac{4925}{83} = 59.34$

$S^2 = \frac{1}{82}\left(419995 - \frac{4925^2}{83}\right)$

$S^2 = \frac{1}{82}(419995 - 292236.45)$

$S^2 = 1558.03$

$S = 39.47$

[illegible] scale Geochemical Survey.

Analysis of Data Zn

No. of Samples = 84 + 6

Sample interval (n) = 10 log 84 = 19.24 = 19.

Highest value of sample = 3043 = $\frac{3093}{19} \simeq 163.$

~~16~~ $\underline{100}$

class interval	Mid-point of interval	class freq	Rel freq	Cumulative freq	cum freq %
0 – 100	50	15	0.179	15	17.9
100	150	32 + 3	0.381	47	56
200	250	12	0.143	59	70.7
300	350	7 + 3	0.083	66	78.6
400	450	2	0.024	68	81.0
5	550	2	0.024	70	83.4
6	650	1	0.012	71	84.6
7	750	2	0.024	73	87.0
8	850	1	0.012	74	88.2
9	950	1	0.012	75	89.4
10	1050	1	0.012	76	90.6
11	1150	1	0.012	77	91.8
12	1250	1	0.012	78	93.0
13	1350	0	0.000	78	93.0
14	1450	1	0.012	79	94.2
15	1550	0	0.0	79	94.2
16	1650	1	0.012	80	95.4
7	1750	0	0	80	95.4
8	1850	0	0	80	95.4
9	1950	0	0	80	95.4
2000	2050	1	0.012	81	96.6
2100	2150	0	0	81	96.6
2200	2250	0	0	81	96.6
2300	2350	0	0	81	96.6
4	2450	0	0	81	96.6
5	2550	0	0	81	96.6
6	2650	0	0	81	96.6
7	2750	0	0	81	96.6
8	2850	0	0	81	96.6
9	2950	2	0.024	83	99.0
3000 – 3100.	3050.	1	0.012	84	100.0

for classified data

$\bar{x} = 415.66$

$S = 585.$

for unclassified

$\bar{x} = 419.96$

$S = 625.7.$

Sunnyside Zn Soli

Mean & Sd

Class	Class mid. x_i	x_i^2	frequency f_i	$x_i f_i$	$x_i^2 f_i$
1	50	2500	15	750	37500
2	150	22500	32	4800 +450	720000
3	250	62500	12	3000	750000
4	350	122500	7	2450 +1050	857500
5	450	202500	2	900	405000
6	550	302500	2	1100	605000
7	650	422500	1	650	422500
8	750	562500	2	1500	1125000
9	850	722500	1	850	722500
10	950	902500	1	950	902500
11	1050	1102500	1	1050	1102500
12	1150	1322500	1	1150	1322500
13	1250	1562500	1	1250	1562500
14	1350	x	0	0	
15	1450	2102500	1	1450	2102500
16	1650	x	0	0	
17	1650	2722500	1	1650	2722500
18	1750	x	0	0	
19	1850	x	0	0	
20	1950	x	0	0	
21	2050	4202500	1	2050	420500
22	2150	x	0	0	
23	2250	x	0	0	
24	2350	x	0	0	
25	2450	x	0	0	
26	2550	x	0	0	
27	2650	x	0	0	
28	2750	x	0	0	
29	2850	x	0	0	
30	2950	8702500	2	5900	17405000
31	3050	9302500	1	3050	9302500

$\bar{x}$ $\frac{34600}{83} = 415.66$ $\underline{84}$ $\frac{34600.0}{1380}$ $\underline{4248000}$

$S^2 \cdot \frac{1}{83}(4248000 - 14,169,643)$

$\frac{1}{83}(28318357)$

$S^2 = 341185$

$S = 584$

[illegible] Geochemical Survey.

Analysis of Data. Cx [illegible].

1. No of Samples - 241 1 Sample excluded

Sample interval (k) - 10 log 242 = 23.82 = ~~24~~ 23

2. Highest value Sample = 91 $\frac{91}{23}$ = 3.96.
Class width = 4

Class Interval	Midpoint of interval	Class frequency	Relative frequency	Cumulative frequency	Cumulative frequency %
0 - 4	2	73 + 1	0.31	74	31
4.1 - 8	6	55 + 1	0.23	130	54
8.1 - 12	10	33 + 1	0.14	164	68
12.1 - 16	14	24 + 1	0.10	189	78
16.1 - 20	18	14 + 1	0.06	204	84
20.1 - 24	22	10	0.04	214	88
24.1 - 28	26	7	0.03	221	91
28.1 - 32	30	5	0.025	226	93.5
32.1 - 36	34	3	0.01	229	94.5
36.1 - 40	38	5	0.025	234	97
40.1 - 44	42	0	0.00	234	97
44.1 - 48	46	1	0.004	235	97.4
48.1 - 52	50	2	0.01	237	98.4
52.1 - 56	54	0	0.00	237	98.4
56.1 - 60	58	0	0.00	237	98.4
60.1 - 64	62	1	0.004	238	98.8
64.1 - 68	66	1	0.004	239	99.2
68.1 - 72	70	1	0.004	240	99.6
72.1 - 76	74	0	0.00	240	99.6
76.1 - 80	78	0	0.00	240	99.6
80.1 - 84	82	0	0.00	240	99.6
84.1 - 88	86	0	0.00	240	99.6
88.1 - 92	90	1	0.004	241	100.0
		241	1.00		

$$S^2 = \frac{1}{n-1}\left[\sum_{i=1}^{k} x_i^2 f_i - \frac{\left(\sum x_i f_i\right)^2}{n}\right]$$

$$= \frac{1}{240}\left(61328 - 30745.92\right)$$

$$= \frac{1}{240}\left(30582.08\right)$$

$$S^2 = 127.43$$

$$S = 11.29$$

Background 5 ppm
Anomalies > 34.4 ppm

Mean : $\underline{11.29}$
Standard deviation : $\underline{\underline{11.29}}$

Sunnyside α flow. de coli
Mean & Sd. ch.

class	class mid. x_i'	x_i^2	frequency f_i	$x_i' f_i$	$x'^2 f_i$
1	2	4	74	148	296
2	6	36	56	336	2016
3	10	100	34	340	3400
4	14	196	25	350	4900
5	18	324	15	270	4860
6	22	484	10	220	4840
7	26	676	7	182	4732
8	30	900	5	150	4500
9	34	1156	3	102	3468
10	38	1444	5	190	0
11	42	1764	0	0	0
12	46	2116	1	46	2116
13	50	2500	2	100	5000
14	54	2916	0	0	0
15	58	3364	0	0	0
16	62	3844	1	62	3844
17	66	4356	1	66	4356
18	70	4900	1	70	4900
19	74		0	0	0
20	78		0	0	0
21	82		0	0	0
22	86		0	0	0
23.	90	8100	1	90	8100
			241	2722.	61,328

$$\bar{x} = \frac{2722}{241} = \underline{11.29}$$

$$S^2 = \frac{1}{n-1}\left(\sum_{i=1}^{n} x'^2 f_i - n\bar{x}^2\right)$$

$$= \frac{1}{240}\left(61,328 - 30718.85\right)$$

68548.00

$$= \frac{1}{240}\left(30609\ 15\right)$$

$$S^2 = 127\ 54.$$

$$S = = \underline{11.29}$$

PROJECT NAME SUNNYSIDE (5) NAME P.L.ENTWISTLE 5
AREA SUNNYSIDE EDGE S OF FROSTERLEY DATE 2/10/79
SAMPLE TYPE (Sed, H_2O) SED. RELATE TO MAP D STREAM SEDS? or stream bank?
1979 Ineligible for grant

SAMPLE Nº	LOCATION AND COMMENTS ETC.	GRID REF.	ANALYSES		
			CaF_2	Pb	Zn
			ppm	ppm	ppm
EE3	FIRST SAMPLE TAKEN BETWEEN FORD & GARDEN WALL.	405308, 535848	40	48	195
EE4	102M AT WALL	405224, 535799	~~28~~11	68	265
EE5	202M	405198, 535795	26	37	233
EE6	302M.	405105, 535699	14	76	239
EE7	406M	405042, 535638	27	29	111
EE8	506M	404978, 535589	12	70	213
EE9	606M	404892, 535528	14	44	213
EE10	706M	404842, 535504	14	56	279
EE11	811M	404785, 535474	20	60	344
EE12	910M	404698, 535439	11	76	213
EE13	1010 M	404629, 535398	16	60/64	354/349
EE14	1110M	404541, 535389	7	107	363
EE15	1210M	404469, 535352	11	91	400
EE16	1310M	404369, 535310	8	68	171
EE17	1410M. 50M PAST E BIGGINS COTTAGE.	404318, 535252	15	83	531
EE18	1810M	404249, 535192	8	268/252	162/176
EE19	1613M	404148, 535162	8662	1.2%	190
EE20	1663 M. AT WALL.	404102, 535150.	17	33	73
EM1		404537, 534678	13	52	1492
EM2	100	404587, 534752	11	37	541
EM3	210	404588, 534849	13	56	316
EM4	310	404609, 534932	6	52/64	447/475
EM5	410 BOTTOM OF WATER FALL	404650, 535014	7	44/48	1270/1340
EM6	500	404665, 535081	8	33	779
EM7	600	404705, 535122	7	37	718
EM8	700	404756, 535192	10	33/44	344/335
EM9	800 AT CONFLUENCE	404812, 535225	9	44	466

27

PROJECT NAME SUNNYSIDE
AREA SUNNYSIDE EDGE S OF FROSTERLEY
SAMPLE TYPE (Sed, H_2O) SED.

NAME
DATE

SAMPLE Nº	LOCATION AND COMMENTS ETC.	GRID REF.	ANALYSES			
			CaF_2			
93	where stream follows wall after marsh.	404042, 535748	6			
94		404116, 535799	12			
95		404198, 535831	12			
96		404189, 535959	17			
97		404198, 536034	14			
98		404180 536121	12			
99		404183 536205	13			
910		404248 536279	12			

8

PROJECT NAME
AREA 1, NZ03NW.
SAMPLE TYPE (Sed, H_2O)

NAME
DATE

SAMPLE Nº	LOCATION AND COMMENTS ETC.	GRID REF.	ANALYSES			
			CaF_2			
G11	Junction of streams	404335, 536315	3.6			
G12	Crosses fence for second time	404425, 536345	4.1			
G13	After stream crosses wall.	404460, 536355	4.4			
G14	15m before stream leaves field.	404510, 536430	5.6			
G15	By gate into field	404570, 536515	18.6			
G16	Opposite barn.	404630, 536655	24.9			
G17	At gate near railway track.	404635, 536725	31.3			
F1	No sample possible	405070, 536775				
F2	50m up from F1	405085, 536710				
F3		405085, 536655				
F4		405005, 536630	5.4			
F5	Stream crosses fence	404920, 536625	3.3			
F6		404900, 536560	3.6			
F7	Stream crosses fence	404885, 536465	4.2			
F8		404845, 536380	4.0			
F9		404795, 536315	3.0			
F10		404745, 536240	3.9			
F11	No sample possible	404680, 536185	—			
F12		404630, 536105	3.0			
F13		404620, 536025	2.4			
F14	5m past gate	404550, 535475	3.6			

PROJECT NAME
AREA 1, NZ03SW.
SAMPLE TYPE (Sed, H_2O)

NAME
DATE

SAMPLE Nº	LOCATION AND COMMENTS ETC.	GRID REF.	ANALYSES			
			CaF_2			
H_4	First sample of H. 50m above junction with burn	403285, 536035 ~~[illegible]~~ ~~[illegible]~~	32.7			
H_5	50m above bridge near old house.	403330, 535985	12.5			
H_6	100m above H_5	403365, 535919	9.7			
H_7	20m down from large waterfall.	403364, 535846	8.8			
H_8	3m up from small waterfall.	403341, 535772	7.4			
H_9	2m above fence crossing stream.	403295, 535698	8.3			
H_{10}	100m below H_{11}, fence on ~~right~~ left approaching river.	403305, 535634	6.3			
H_{11}	8m up from fallen holly tree	403300, 535549	10.3			
H_{12}	100m below H_{13}	403269, 535461	5.4			
H_{13}	30m below burn on right.	403255, 535344	4.0			
H_{14}	Below small waterfall stream on right.	403335, 535278	2.7			
H_{15}.	Under bridge	403395, 535228	2.6.			

PROJECT NAME
AREA I
SAMPLE TYPE (Sed, H_2O)

NAME
DATE

SAMPLE Nº	LOCATION AND COMMENTS ETC.	GRID REF.	ANALYSES			
	All samples taken upstream from Sample pt. H15.		CaF_2			
H - 16	100m upstream from bridge	403389, 535192	3.0			
H - 17	At junction between stream and pond.	403399, 535105	1.7			
H - 18	At junction between pond and stream running out of other end of pond.	403379, 535014	3.8			
H - 19	At gate crossing stream.	403408, 534988	2.9			
H - 20	At marshy area where tiny stream joins main stream	403485, 534914	2.3			
H - 21	Where gate crosses stream	403520, 534890	2.8			
H - 22	30m past small stone bridge	403506, 534837	1.6			
H - 23	At second small stone bridge	403544, 534768	1.8			
H - 24	100 m upstream from H - 23.	403540, 534712	1.7			
H - 25	Between wall which crosses stream and third small stone bridge.	403498, 534655	2.0			
~~H - 26~~	Rt fork of stream.					
H - 26	70 m from where the river separates.	403508, 534541	2.3			
H - 27	25 m downstream from second wooden crossing point.	403429, 534480	2.4			
H - 28	75 m upstream from second wooden crossing point	403381, 534394	2.2			
	Stream goes underground					
H - 29	Taken from open guttering just over the wall and in the next field.	403305, 534229	—			
	Stream now appears to be completely underground.					

PROJECT NAME
AREA /
SAMPLE TYPE (Sed, H_2O)

NAME
DATE

AMPLE Nº	LOCATION AND COMMENTS ETC.	GRID REF.	ANALYSES			
			CaF_2			
HH 26	50m from fork in stream	403505, 534565	2.2			
HH 27	20m upstream from first water crossing pt.	403495, 534495	2.4			
HH 28		403505, 534410	1.7			
HH 29		403520, 534390	9.0			
HH 30	At fence crossing stream.	403505, 534275.	2.7.			

PROJECT NAME
AREA |
SAMPLE TYPE (Sed, H_2O)

NAME
DATE

SAMPLE Nº	LOCATION AND COMMENTS ETC.	GRID REF.	ANALYSES			
			CaF_2			
J1	Just below bridge, 20m up from burn.	403146, 536009	3.3			
J2	140m up from J1, where stream disappears opposite fence corner.	403103, 535832	3.7			
J3	100m up from J2, opposite fence crossing adjoining field (stream disappeared so began again at opposite end with sample J7).	403099, 535702	5.1			
J7	Harehope farm.	403078, 535479	6.4			
JA1	At junction with J	403081, 535779	22.3			
JA2	100m from JA1	403015, 535749	18.7			
JA3	JA crosses fence.	402961, 535729	18.5			
JA4	Opposite where wall intersects fence.	402882, 535695	12.5			

OJECT NAME SUNNYSIDE.
EA SUNNYSIDE EDGE S of FROSTERLEY.
MPLE .TYPE (Sed, H_2O) STREAM SEDIMENT.

NAME
DATE

RELATE TO MAP D

PLE Nº	LOCATION AND COMMENTS ETC.	GRID REF.	ANALYSES			
			CaF_2	Pb	Zn	
H1	confluence of main stream 39m fr fence	405460, 535628	213	92/64	1024/1069	
H2	102 m from confluence beginning of copse	405490, 535556	12	33	3093	✓
H3	194m from confluence in copse at fence	405524, 535470	29	25	2999	
14	264m in opencut where drain emerges. (old lead level)	405525, 535430	7	29	2952	
J1	at rise 24m north of derelict building in marshy ground, evidence of working.	405595, 535163	3	25	143	
			7			
T2.	75m downstream N side of wall.	405550, 535222	7	29	129	
T3	175m from rise	405520, 535~~[illegible]~~ 288	8	29	134	✓
T4	285m 70m beyond gate & track	405487, 535372	32	25	125	
5	395m near confluence at 320m.	405455, 535465	720	40/40	265/265	
T6	485m 3m S of where fence crosses beck	405411, 535527	7	37	218	
T7	517m at confluence of main stream.	405393, 535574	69	138	344	
? K 1	20m fr confluence of main stream.	[illegible] ~~[illegible]~~, 536536	13	60	82	
2		405323, 536412	20	64/48	101/92	
3		405241, 536403	38	46/48	64/111	✓
4		405223, 536395	10	29/21	68/36	
5		405167, 536305	16	48	92	
6		405080, 536210	18	52	103	
7		4050[illegible], 536228	17	25	134	
			34			
? L 1	30m from confluence of main stream	[illegible]	31			
2		312				
3		[illegible] 306	31			
4		[illegible]	19			
5		[illegible]-145	7			
6		[illegible]	9			
7		[illegible] 071, [illegible]	7			
8		[illegible]	14			
? 9		[illegible]	7	48	59	
M 10	90m up tributary between EC5 & EC6	[illegible]	9			
1	240m from confluence of main stream	[illegible]	8	107	92	
2	140 m		13	76/72	120/120	✓
3	60 m	[illegible]	15	95	921	

AREA 1
SAMPLE TYPE (Sed, H_2O)

DATE

SAMPLE Nº	LOCATION AND COMMENTS ETC.	GRID REF.	ANALYSES			
			CaF_2			
K1	Junction with bollihope burn	404190, ~~535~~ 535380.	7.6			
K2	30m past fence crossing river	404225, 535300	5.4			
K3	10m past small waterfall	404255, 535235	3.5			
K4	1m past fork with burn on right.	404300, 535145	4.5			
K5	20m past marshy area.	404370, 535035	3.0			
K6		404420, 534895	3.2			
K7	10m down from small waterfall	404435, 534825	2.1			
K8.		404430, 534745	3.9			
K9		404405, 534635 ~~404450, 534515~~	2.7			
K10		404450, 534515	2.9			
K11	Just past ford.	404425, 534440	3.0			
K12	Between junctions of KE and KF.	404495, 534320	2.2			
K13	10m up from where fence meets wall	404470, 534230	4.3			
K14.	50m up from K13 past intersection of walls.	404455, 534185	2.9			
K15		404410, 534095	2.4			
K16	Opposite wall junction.	404365, 534015	2.6			
K17	Opposite where fence turns left	404335, 533945	2.9			
K18	20m past junction with fence	404315, 533875	2.9			
K19		404285, 533805	4.5			
K20		404200, 533665	2.0			
KA1	100m from junction with K (Disappears after further 50m)	404260, 535125	3.3			
~~KA2~~ KB1	100m from junction with K. No further samples possible	404285, 535070	5.8			
KC1	60m from junction. Stream disappears.	404380, 534585	1.8			

OJECT NAME
EA 1
MPLE TYPE (Sed, H_2O)

NAME
DATE

PLE Nº	LOCATION AND COMMENTS ETC.	GRID REF.	ANALYSES			
			CaF_2			
KD1	50m up from junction with K.	404505, 534365	1.2			
KD2		404570, 534355	1.4			
KD3		404665, 534 350	2.4			
KD4	Just past wall crossing stream.	404735, 534320	1.3			
KD5		404 755, 534270	1.4			
KD6		404 795, 534[illegible]95	1.3			
KD7	Stream divides then becomes marshland.	404 845, 534 095	1.8			
KE1	50m from K.	404 505, 534 305	1.4			
KE2	Just past wall crossing stream.	404 580, 534245	1.6			
KE3		404655, 534 [illegible]60	1.6			
KF1	20-30m from junction with K. No further samples possible	404450, 534315	3.2.			

ROJECT NAME
REA 1, NZ 03 NE
AMPLE TYPE (Sed, H_2O)

NAME
DATE

PLE Nº	LOCATION AND COMMENTS ETC.	GRID REF.	ANALYSES		
			CaF_2	Pb	Zn.
A1	2m up from stream/rail junction.	406889; 536848	15.0	43	155
A2		406912; 536769	14.6	42	140
A3	On weir.	406873; 536705.	25.9	38	144
A4	6m down from fallen tree	406886, 536614.	24.5	46	129
A5	At foot of rapid.	406872; 536509.	18.8	42	116.
A6	40m from up from road crossing. Opposite barn on right.	406890; 536424.	10.5	37	116
A7		406856; 536213.	11.4	37	116
8		406838; 536194	11.7	37	124
A9		406830; 536188.	8.4	39	106
A10	2m down from s-bend.	406821, 536149.	6.7	38	110
A11	First junction of stream.	406808; 536120.	7.9	37	115
A12	2m up from junction with farm road.	406738, 536100	7.8	48	114.
A13		406687, 536020	5.9	38	110
A14		406658, 535963.	5.2	39	108
A15.		406649, 535863	5.8	37	110.

GEOCHEMICAL SURVEY

PROJECT NAME
AREA 1, NZ03NE
SAMPLE TYPE (Sed, H_2O)

NAME
DATE

SAMPLE Nº	LOCATION AND COMMENTS ETC.	GRID REF.	ANALYSES CaF_2		
A16	6m. down from dam	406606, 535869	6.3		
A17	4m down from junction with farm road by small bridge	406528, ~~535768~~ 535878	12.4		
A18		406475, 535880	16.2		
A19	Crossing of stream by wire fence	406423, 535879	9.0		
A20		406351, 535839	1.6		
A21		406323, 535777	37.5		
A22		406298 535679	23.0		
A23	No possible sample	406210, 535615	—		
A24	200m up from A22	406239, 535587	4.4		
A25	6m up from crossing by wire fence	406234, 535545	6.0		
A26		406242, 535499	7.0		
A27	Near stone wall with small waterfall	406250, 535454	0.6		
A28	10m up from stone wall	406079, 535331	2.0		
A29		406022, 535313	2.8		
A30		405997, 535308	1.3		
A31		405962, 535293	1.6		
A32	4m up from wire fence	405824, 535305	7.5.		
~~A33~~					

PROJECT NAME
AREA 1, NZ03NE.
SAMPLE TYPE (Sed, H_2O)

NAME
DATE

SAMPLE Nº	LOCATION AND COMMENTS ETC.	GRID REF.	ANALYSES		
			CaF_2		
A-1.	At junction with stream A.	406813,536104	2·6		
A-2.	100m upstream from AA1.	406868,536006	5 3		
A-3.	100m upstream from AA2 & 20m down from fork.	406978,535895	4·6		
A-4	50m up on right fork	406996,535824	4·1		
B-1	At junction with stream A Stream ended 30m further on.	407045,535854	4·0		
C-1	200m up from wall Crossing stream A. Stream ended 80m further on.	406470,535769	2·6		

OJECT NAME
EA 1, NZ03NE.
MPLE TYPE (Sed, H_2O)

NAME
DATE

PLE Nº	LOCATION AND COMMENTS ETC.	GRID REF.	ANALYSES			
			CaF_2			
? B 1	Gate next to railway line	406430, 536875	43.4			
2	On curve of stream 100m from gate	406365, 536825	5.2			
3	~~Just before right~~ Junction of two branches of stream	406405, 536805	91.0			
4	Just before left-hand bend.	406385, 536855	3.2			
5	Pool just up from holly bush 60-70m from last sample	406370, 536585	10.5			
6		406335, 536515	8.7			
7	Just before gate on bridge	406305, 536470	5.3			
8	No sample possible	406275, 536445	–			
9	15m below stream crossing fence.	406185, 536405	11.4			
3 1		406615 536835				

GEOCHEMICAL SURVEY

:OJECT NAME
:EA I ; NZ03NE.
AMPLE TYPE (Sed, H_2O)

NAME
DATE

Stream C?

PLE Nº	LOCATION AND COMMENTS ETC.	GRID REF.	ANALYSES			
			CaF_2			
	Next to bridge	405812, 536822	26.3			
	100 m up	405765, 536748	24.8			
3	100 m up	405671, 536718	38.3			
	Just past bridge	405536, 536714	44.8			
5	At black gate across river	405394, 536582	33.3			
	Just past ford	405465, 536424	47.2			
	100m up from ford	405474, 536292	38.3			
	10m past fallen tree across river	405531, 536229	49.2			
1	Old stone bridge post	405534, 536188	22.8			
0	Opp. old water level with tree growing above entrance	405472, 536199	44.3			
11	Approx. 100 m up stream	405489, 535998	41.4			
2	Next to small footbridge near Sunniside farm.	405473, 535894.	66.4.			

PROJECT NAME SUNNYSIDE
AREA SUNNYSIDE EDGE S OF FROSTERLEY
SAMPLE TYPE (Sed, H_2O) STREAM SEDIMENT.

NAME
DATE

MAINLY RELATE TO MAP D.

SAMPLE Nº	LOCATION AND COMMENTS ETC.	GRID REF.	ANALYSES CaF_2	Pb	Zn
G1	40m from Confluence.	405530,535925		44	363.
G2	110m ..	405575,535630		33/44	354/335
G3	210m ..	405635,535555		40	181
K1	90m from Confluence.	405040,535295	52	33	846
K2		405075,535225	19	40/33	606/662
K3		405070,535160		52	2088
K4		405075,535086		83	1690
K5		405078,534982		224	1153
C11	200m up [illegible] EC5 & EC6	405169,535989	21	40	82
C12	100m from EC9 & 50m [illegible]	405000,536000	14	27	87
C13		404919,535965	18	56	120
C14	2m before confluence [illegible] Sike road	404848,535915	11	33	101
C15	12m up confluence of [illegible]	404834,535886	12	52	87
C16	100m up main [illegible] EC14	404752,535864	10	40	139
C17	[illegible] confluence	404689,535842	8	40	89
C18	50m up [illegible]	404693,535778 ~~404612,535788~~ 404612,535788	6	72	69
C19		~~404568,535743~~			
C20		404568,535743	31	84	84
A1	[illegible]	404389,535790	17	123	297
A2		404384,535824	14	80	251
A3		404348,535914	11	56	185
A4		404362,536014	~~10~~ 7	33/31	115/96
A5		404349,536102	11	44	139
A6		404342,536199	11	48	153
A7		404322,536289.	7	60	139


SUNNYSIDE MINES
WASHINGTON
STANLEY
CONSETT
CHESTER-LE-STREET
HOUGHTON-LE-SPRING
SEAHAM
DURHAM
PETERLEE
HARTLEPOOL
BRANDON
CROOK
WILLINGTON
SPENNYMOOR
BISHOP AUCKLAND
SHILDON
NEWTON AYCLIFFE
TEESSIDE
Middlesbrough
Stockton-on-Tees
DARLINGTON
BARNARD CASTLE
APPLEBY
RICHMOND
NORTHALLERTON
Wolsingham
Stanhope
Alston
Middleton in Teesdale
Kirkby Stephen
Sedbergh
Hawes
Leyburn
Catterick
Hamsterley Forest
Stainmore Forest
Lune Forest
Tow Law
Sunniside
Frosterley