DANMARKS OG GRØNLANDS GEOLOGISKE UNDERSØGELSE RAPPORT 2003/85

Heavy mineral exploration in Vorslunde, Denmark 1998 - 2002

Data Report

Jan Bernth Sørensen

GEOLOGICAL SURVEY OF DENMARK AND GREENLAND
MINISTRY OF THE ENVIRONMENT

G E U S

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Content

1 Introduction

This report presents the results of the field- and laboratory work in the Vorslunde area (fig. 1) conducted by GEUS for DuPont in the period January 1st 1998 to December 31st 2002.

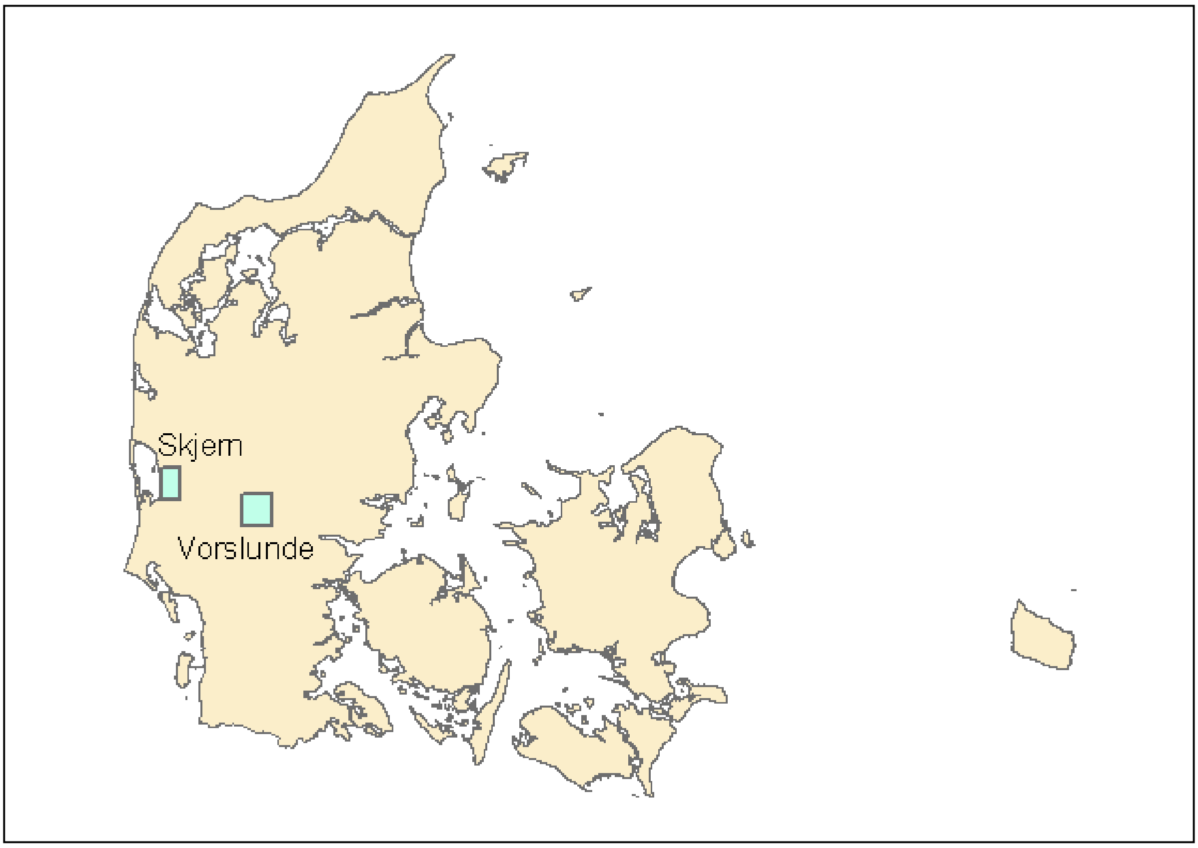


Fig. 1: Map of Denmark showing the two major study areas Skjern and Vorslunde.

Further background on the project can be found in:

Abildtrup, C., Appel, C., Andersen, G., Jørgensen, T.G. and Knudsen, C. 2000: Heavy mineral exploration in Denmark: Fauctual report January to October 2000, Danmarks og Grønlands Geologiske Undersøgelse, GEUS report 2000/80, 22 pp + app.

Fischer, Torben 2003: Georadar investigations and sedimentology of Miocene heavy mineral deposits, Central Jylland. Unpubl. Master thesis. Geological Institute, University of Copenhagen, Volume 1: Text, 98 pp. and Volume 2: Figures and appendices, 80 pp.

Knudsen, C. 1998: Heavy Mineral exploration in Miocene sediments, Jylland. Danmarks og Grønlands Geologiske Undersøgelse, GEUS report 1998/45, 44 pp.

Knudsen, C and Appel, C. 2000: Heavy mineral exploration in Denmark 1999, Danmarks og Grønlands Geologiske Undersøgelse, GEUS report 2000/6, 31 pp.

Stendal, H., Knudsen, C., Appel, C., Jørgensen, T. Fischer, T., Abildtrup, C., and Rasmussen, T. 2001: Heavy mineral exploration in 2000, Summary report, Danmarks og Grønlands Geologiske Undersøgelse, GEUS report 2001/26, 69 pp. + app.

Sørensen, J.B. 2003: Heavy mineral exploration in Denmark, reconnaissance 1998 – 2000, Data report, Danmarks og Grønlands Geologiske Undersøgelse, GEUS report 2003/83.

Sørensen, J.B. 2003: Heavy mineral exploration in Skjern, Denmark 1998 – 2002, Data report, Danmarks og Grønlands Geologiske Undersøgelse, GEUS report 2003/84.

DRILLBORNO	YUTM	XUTM	UTMZONE	ELEVATION	DRILSTDATE	DRILENDATE	LOCATION	COMMENTS	DRILLER	BORHTOWNNO	DRILLEDFOR	PURPOSE	DATUM	LOCATSOURC	LOCATMETHO	ELEVAMETHO	USE	STATUS
V1	6190313	508061	32	54.0	25-03-99	25-03-99	Vorslunde	Plastic tube installed: yes, no x-met values, only visual values of HM,	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V2	6190759	508548	32	50.0	25-03-99	25-03-99	Vorslunde	Plastic tube installed: yes, no x-met values only visual values of HM, drilling vehiehe got stuck	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V3	6190401	508100	32	53.0	07-06-99	07-06-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V4	6190201	508027	32	54.5	07-06-99	07-06-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V5	6190113	507998	32	55.5	08-06-99	08-06-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V6	6190148	508013	32	55.0	08-06-99	08-06-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V7	6190260	508043	32	54.2	08-06-99	08-06-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V8	6190219	507914	32	55.5	08-06-99	08-06-99	Vorslunde	Damage: tracks in crops	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V9	6190259	507926	32	55.1	09-06-99	09-06-99	Vorslunde	Damage: resolved	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V10	6190300	507937	32	54.9	09-06-99	09-06-99	Vorslunde	Damage	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V11	6190393	507963	32	54.0	09-06-99	09-06-99	Vorslunde	Damage: resolved	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V12	6190435	507985	32	53.5	10-06-99	10-06-99	Vorslunde	Damage: resolved	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V13	6190346	507954	32	54.9	09-06-99	09-06-99	Vorslunde	Damage: resolved	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V14	6190253	507859	32	56.5	10-06-99	10-06-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V15	6190417	507872	32	55.0	10-06-99	10-06-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V16	6190417	507590	32	57.0	14-06-99	14-06-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V17	6190605	507587	32	53.8	14-06-99	14-06-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V18	6190081	508295	32	54.0	14-06-99	14-06-99	Vorslunde	There is interference from clay on X-Met TiO2	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V19	6190058	508093	32	55.5	13-09-99	13-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V20	6190124	508123	32	55.0	14-09-99	14-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V21	6190167	508140	32	54.7	14-09-99	14-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V22	6190211	508160	32	54.4	14-09-99	14-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V23	6190468	507764	32	54.9	14-09-99	14-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V24	6190556	507783	32	54.2	15-09-99	15-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V25	6190644	507802	32	53.8	15-09-99	15-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V26	6190674	507817	32	53.3	15-09-99	15-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V27	6190754	507835	32	53.1	15-09-99	15-09-99	Vorslunde	Drilling stops at 20 m because of tecnical problems	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V28	6190455	507417	32	54.5	16-09-99	16-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V29	6190496	507431	32	54.1	16-09-99	16-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V30	6190543	507444	32	53.8	16-09-99	16-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V31	6190590	507458	32	53.5	16-09-99	16-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V32	6190636	507468	32	53.1	16-09-99	16-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V33	6190683	507493	32	52.8	17-09-99	17-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V34	6190731	507516	32	52.6	17-09-99	17-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V35	6190390	507743	32	56.5	17-09-99	17-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V36	6190337	507739	32	57.0	17-09-99	17-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V37	6190285	507729	32	58.0	20-09-99	20-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V38	6190238	507710	32	58.5	20-09-99	20-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V39	6190198	507703	32	57.5	20-09-99	20-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V40	6190146	507691	32	57.0	21-09-99	21-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V41	6190099	507680	32	57.0	21-09-99	21-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V42	6190049	507666	32	57.5	21-09-99	21-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V43	6189941	507675	32	58.5	22-09-99	22-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V44	6189817	507663	32	64.0	22-09-99	22-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V45	6189635	507588	32	67.0	22-09-99	22-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V46	6189934	507898	32	57.0	23-09-99	23-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V47	6191527	507955	32	49.0	23-09-99	23-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V48	6191269	509129	32	55.0	23-09-99	23-09-99	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V49	6190113	507880	32	56	06-03-00	06-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V50	6190020	507845	32	57	06-03-00	06-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V51	6189949	507799	32	57	07-03-00	07-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V52	6189696	508139	32	58	07-03-00	07-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V53	6189785	508184	32	57	07-03-00	07-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V54	6189878	508225	32	56	07-03-00	07-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V55	6189549	508147	32	62	08-03-00	08-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V56	6189438	508104	32	68	08-03-00	08-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V57	6189289	508042	32	72	08-03-00	08-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V58	6188894	507997	32	71	09-03-00	09-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V59	6188791	507984	32	71	09-03-00	09-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V60	6188681	507961	32	71	09-03-00	09-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V61	6188553	507971	32	67	09-03-00	09-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V62	6189322	508429	32	59	13-03-00	13-03-00	Vorslunde	Xmet data are available measured on dry samples 191000.	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V63	6189229	508390	32	61	13-03-00	13-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V64	6189073	508351	32	66	13-03-00	13-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V65	6188894	508285	32	72	14-03-00	14-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V66	6188734	508243	32	73	14-03-00	14-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V67	6188572	508176	32	73	14-03-00	14-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V68	6189342	508571	32	57	15-03-00	15-03-00	Vorslunde	no log, sheet 10 m clay.	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V69	6189434	508516	32	57	15-03-00	15-03-00	Vorslunde	no log, sheet 10 m clay.	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V70	6189528	508462	32	57	15-03-00	15-03-00	Vorslunde	Has never been drilled.	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V71	6189645	508440	32	57	16-03-00	16-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V72	6189665	508577	32	56	16-03-00	16-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V73	6189770	508570	32	56	16-03-00	16-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V74	6189875	508563	32	55	16-03-00	16-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V75	6189995	508568	32	55	20-03-00	20-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V76	6190125	508588	32	54	20-03-00	20-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V77	6190261	508625	32	53	20-03-00	20-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V78	6189283	508732	32	56	21-03-00	21-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V79	6189122	508695	32	57	21-03-00	21-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z

DRILLBORNO	YUTM	XUTM	UTMZONE	ELEVATION	DRILSTDATE	DRILENDATE	LOCATION	COMMENTS	DRILLER	BORHTOWNNO	DRILLEDFOR	PURPOSE	DATUM	LOCATSOURC	LOCATMETHO	ELEVAMETHO	USE	STATUS
V80	6189489	508785	32	56	21-03-00	21-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V81	6188917	508667	32	59	21-03-00	21-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V82	6188758	508615	32	67	21-03-00	21-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V83	6188766	509012	32	58	22-03-00	22-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V84	6188669	508909	32	60	23-03-00	23-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V85	6188564	508866	32	62	27-03-00	27-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V86	6188468	509325	32	61	27-03-00	27-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V87	6188655	509567	32	57	27-03-00	27-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V88	6189782	507510	32	66	27-03-00	27-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V89	6189875	507528	32	65	27-03-00	27-03-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V90L	6190003	507657	32	58	08-06-00	08-06-00	Vorslunde	160 mm drillhole fitted with 125 mm PEH pipe	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V91L	6189338	508410	32	59	08-06-00	08-06-00	Vorslunde	160 mm drillhole fitted with 125 mm PEH pipe	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V92	6189282	507080	32	65	26-06-00	26-06-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V93	6189495	507113	32	65	26-06-00	26-06-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V94	6189610	507133	32	66	27-06-00	27-06-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V95	6189721	507146	32	63	27-06-00	27-06-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V96	6189157	507062	32	62	28-06-00	28-06-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V97	6189049	507042	32	62	28-06-00	28-06-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V98	6189826	507169	32	61	29-06-00	29-06-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V99	6190053	507169	32	62	29-06-00	29-06-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V100	6189814	507829	32	59	29-06-00	29-06-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V101	6189717	507833	32	62	30-06-00	30-06-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V102	6188961	507018	32	61	30-10-00	30-10-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V103	6188901	506994	32	60	30-10-00	30-10-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V104	6188784	506975	32	57.5	31-10-00	31-10-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V105	6188347	507661	32	62.5	31-10-00	31-10-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V106	6188470	507688	32	61.5	01-11-00	01-11-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V107	6188556	507947	32	67.5	01-11-00	01-11-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V108	6188417	509059	32	62	01-11-00	01-11-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V109	6187118	507562	32	67	01-11-00	01-11-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V110	6186977	507540	32	61	02-11-00	02-11-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V111	6186930	507989	32	61	02-11-00	02-11-00	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V112	6187793	507600	32	71	17-04-01	17-04-01	Vorslunde	sample 12 contaminated with drilling material (rust)	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V113	6187491	507621	32	69	18-04-01	18-04-01	Vorslunde	plastic tubes for logging drill got stuck in bottom (>1 hour to withdraw)	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V114	6188522	506913	32	62	18-04-01	18-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V115	6188170	506838	32	66	18-04-01	18-04-01	Vorslunde	drillstring stuck at 17 m depth	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V116	6185183	508954	32	60	19-04-01	19-04-01	Vorslunde	leased by Ove Sand	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V117	6186416	507572	32	60	19-04-01	19-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V118	6185529	508347	32	67	19-04-01	19-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V119	6185115	509350	32	61	19-04-01	19-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V120	6185375	509390	32	68	20-04-01	20-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V121	6185706	509428	32	70	23-04-01	23-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V122	6186007	509130	32	68	20-04-01	20-04-01	Vorslunde	no. 10 + 11 missing	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V123	6186160	508662	32	64	23-04-01	23-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V124	6185947	508211	32	73	23-04-01	23-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V125	6186789	508354	32	61	24-04-01	24-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V126	6189362	509645	32	57	24-04-01	24-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V127	6189299	509256	32	55	24-04-01	24-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V128	6189884	509162	32	53	25-04-01	25-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V129	6189731	509490	32	55	25-04-01	25-04-01	Vorslunde	plastic tubes for logging	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V130	6187345	508428	32	72	24-04-01	24-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V131	6187686	508984	32	68	30-04-01	30-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V132	6189536	509469	32	55	25-04-01	25-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V133	6189034	509154	32	56	26-04-01	26-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V134	6189435	508939	32	56	01-05-01	01-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V135 (-)	6189634	508762	32	56			Vorslunde	Site inaccesible thick trees and brush.	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V136	6189752	509807	32	58	26-04-01	26-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V137	6188912	509644	32	57	26-04-01	26-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V138 (-)	6188682	509384	32	57			Vorslunde	Drilling postponed, 10 cm water at the site due to heavy rain	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V139	6189873	509450	32	54	25-04-01	25-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V140	6189647	509522	32	55	25-04-01	25-04-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V141	6190481	508261	32	53	01-05-01	01-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V142	6190226	508387	32	53	01-05-01	01-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V143	6190364	508441	32	53	01-05-01	01-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V144	6191618	507724	32	49	02-05-01	02-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V145	6191742	507701	32	49	02-05-01	02-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V146	6191844	507686	32	49	02-05-01	02-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V147	6191455	508719	32	52	02-05-01	02-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V148	6191585	508739	32	52	02-05-01	02-05-01	Vorslunde	good HM	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V149	6191738	508758	32	52	02-05-01	02-05-01	Vorslunde	good HM	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V150	6191232	508679	32	51	03-05-01	03-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V151	6191345	508699	32	52	03-05-01	03-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V152	6191645	508953	32	53	03-05-01	03-05-01	Vorslunde	good HM	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V153	6191482	508959	32	53	03-05-01	03-05-01	Vorslunde	good HM	pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V154	6191728	508516	32	51	14-05-01	14-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V155	6191573	508522	32	51	14-05-01	14-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V156	6191725	508211	32	50	14-05-01	14-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V157	6191624	508191	32	51	14-05-01	14-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V158	6191531	508163	32	50	15-05-01	15-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z

DRILLBORNO	YUTM	XUTM	UTMZONE	ELEVATION	DRILSTDATE	DRILENDATE	LOCATION	COMMENTS	DRILLER	BORHTOWNNO	DRILLEDFOR	PURPOSE	DATUM	LOCATSOURC	LOCATMETHO	ELEVAMETHO	USE	STATUS
V159	6191831	508789	32	52	15-05-01	15-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V160	6191977	508844	32	53	15-05-01	15-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V161	6192116	508888	32	55	15-05-01	15-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V162	6192294	508920	32	58	15-05-01	15-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V163	6192053	508268	32	51	16-05-01	16-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V164	6192197	508639	32	52	16-05-01	16-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V165	6192004	508582	32	51	16-05-01	16-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V166	6192256	509328	32	55	22-05-01	22-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V167	6192119	509241	32	54	23-05-01	23-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V168	6191967	509155	32	53	23-05-01	23-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V169	6191246	509288	32	53	21-05-01	21-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V170	6191126	509233	32	52	17-05-01	17-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V171	6190984	509126	32	52	17-05-01	17-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V172	6190822	508970	32	51	23-05-01	23-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V173	6190966	509576	32	54	16-05-01	16-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V174	6191080	509618	32	54	16-05-01	16-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V175	6191180	509651	32	54	16-05-01	16-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V176	6190965	508823	32	51	23-05-01	23-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V177	6191157	508979	32	51	23-05-01	23-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V178	6190864	509087	32	52	23-05-01	23-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V179	6193075	508151	32	52	23-05-01	23-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V180	6193211	508320	32	52	23-05-01	23-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V181	6193370	508425	32	53	23-05-01	23-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V182	6192926	508086	32	52	26-05-01	26-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V183	6192732	508017	32	51	26-05-01	26-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V184	6192330	507820	32	50	23-05-01	23-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V185	6192129	507723	32	50	23-05-01	23-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V186	6191996	507652	32	49	28-05-01	28-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V187	6190621	509466	32	54	30-05-01	30-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V188	6190508	509436	32	54	29-05-01	29-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V189	6190923	509921	32	56	29-05-01	29-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V190	6190753	509845	32	55	29-05-01	29-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V191	6190556	509755	32	55	29-05-01	29-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V192	6190365	509664	32	54	29-05-01	29-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V193	6190410	509951	32	55	28-05-01	28-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V194	6190268	509916	32	55	28-05-01	28-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V195	6192062	508242	32	53	31-05-01	31-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V196	6192203	508267	32	52	31-05-01	31-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V197	6192397	508374	32	52	31-05-01	31-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V198	6192174	508579	32	52	30-05-01	30-05-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V199	6191421	509509	32	57	05-06-01	05-06-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V200	6192514	509374	32	57	05-06-01	05-06-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V201	6192879	509533	32	56	05-06-01	05-06-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V202	6191677	509182	32	53	08-06-01	08-06-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V203	6191434	509144	32	54	08-06-01	08-06-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V204	6191615	509540	32	54	06-06-01	06-06-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V205	6191536	509730	32	54	07-06-01	07-06-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V206	6191168	509467	32	54	07-06-01	07-06-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V207	6191275	509698	32	55	07-06-01	07-06-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V208	6191423	510001	32	55	07-06-01	07-06-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V209	6191084	509922	32	55	08-06-01	08-06-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V210	6192457	508510	32	55	08-06-01	08-06-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V211	6192604	508608	32	54	08-06-01	08-06-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V212	6191075	508797	32	51	18-06-01	18-06-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z
V213	6191475	508502	32	51	08-06-01	08-06-01	Vorslunde		pc højslev	611	GEUS for DuPont	R	WGS84	D	K	M	S	Z

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V1	0	1	1	0.35		75									lbo	kva		ds	Rock symbol was not included in the 1999 descriptions
V1	1	2	2	0.35		100									ga	mio		ks	
V1	2	3	3	0.45		75									ga	mio		ks	
V1	3	4	4	0.35		100									ga	mio		ks	
V1	4	5	5	0.35		100									ga	mio		ks	
V1	5	6	6	0.35		100									ga	mio		ks	
V1	6	7	7	0.35		100									ga	mio		ks	
V1	7	8	8	0.35		100									ga	mio		ks	
V1	8	9	9	0.35		100									ga	mio		ks	5% clay layers + lignite
V1	9	10	10	0.5		100									ga	mio		ks	5% clay layers
V1	10	11	11	2		100									dbo	mio		ks	lignite
V1	11	12	12	0.45		100									lbo	mio		ks	lignite
V1	12	13	13	0.3		100									lyebo	mio		ks	
V1	13	14	14	0.5		100									lyebo	mio		ks	
V1	14	15	15	0.5		100									lyebo	mio		ks	
V1	15	16	16	0.4		100									lyebo	mio		ks	
V1	16	17	17	0.4		100									lyebo	mio		ks	
V1	17	18	18	0.35		100									lyebo	mio		ks	
V1	18	19	19	0.35		100									lyebo	mio		ks	
V1	19	20	20	0.35		100									lyebo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V2	1	2	2	0.45		50									lbo	kva		ds	cont. Gravel
V2	2	3	3	1		50									lbo	kva		ds	cont. Gravel
V2	3	4	4	0.5		50									lbo	kva		ds	
V2	4	5	5	1		50									lbo	kva		ds	cont.gravel
V2	5	6	6	1		75									buga	kva		ds	
V2	6	7	7	0.5		100									ga	mio		ks	
V2	7	8	8	0.4		100									yebo	mio		ks	cont. Gravel
V2	8	9	9	0.4		100									yebo	mio		ks	well sorted
V2	9	10	10	0.35		100									yebo	mio		ks	
V2	10	11	11	0.35		100									yebo	mio		ks	
V2	11	12	12	0.35		100									yebo	mio		ks	
V2	12	13	13	0.5		100									yebo	mio		ks	
V2	13	14	14	0.35		100									bo	mio		ks	
V2	14	15	15	0.5		100									bo	mio		ks	
V2	15	16	16	0.03		100									dbo	mio		gi	mica silt with lignite
V2	16	17	17	0.03		100									dbo	mio		gi	
V2	17	18	18	0.03		100									dbo	mio		gi	
V2	18	19	19	0.5		100									dbo	mio		ks	
V2	19	20	20	0.35		100									dbo	mio		ks	sand with lignite

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V3	1	2	2	0.45		25	0.100				0.100				yebo	kva		ds	
V3	2	3	3	0.35		50	0.000				0.000				yebo	kva		ds	
V3	3	4	4	0.4		75	0.040				0.040				yebo	kva		ds	
V3	4	5	5	0.4		75	0.100				0.100				yebo	kva		ds	
V3	5	6	6	0.35		100	0.060				0.060				yebo	kva		ds	
V3	6	7	7	0.35		100	0.080				0.080				yebo	kva		ds	
V3	7	8	8	0.5		100	0.180				0.180				yebo	kva		ds	cont. gravel
V3	8	9	9	2		100									bo	mio		ks	
V3	9	10	10	0.001		100									bo	mio		gl	brown clay, silty
V3	10	11	11	0.001		100									bo	mio		gl	brown clay, silty
V3	11	12	12	0.001		100									bo	mio		gl	brown clay, silty
V3	12	13	13	0.001		100	0.550				0.550				bo	mio		gl	brown clay, silty
V3	13	14	14	0.001		100									bo	mio		gl	brown clay, silty
V3	14	15	15	0.06		100									bo	mio		gi	brown silt

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V4	1	2	2	0.35		50	0.110				0.110				yebo	mio		ks	
V4	2	3	3	0.2		75	0.110				0.110				yega	mio		ks	
V4	3	4	4	0.3		75	0.340				0.340				yega	mio		ks	
V4	4	5	5	0.25		75	0.000				0.000				yega	mio		ks	
V4	5	6	6	0.3		100	0.020				0.020				yega	mio		ks	
V4	6	7	7	0.3		100	0.080				0.080				yega	mio		ks	
V4	7	8	8	0.25		100	0.000				0.000				yega	mio		ks	
V4	8	9	9	0.35		100	0.000				0.000				bo	mio		ks	cont. Lignite
V4	9	10	10	0.001		75	0.410				0.410				dbo	mio		gl	cont. Clay + lignite
V4	10	11	11	0.35		100	0.400				0.400				ga	mio		ks	
V4	11	12	12	0.35		100	0.140			0.275	0.275				ga	mio		ks	few clay seams
V4	12	13	13	0.35		100	0.180			0.601	0.601				ga	mio		ks	
V4	13	14	14	0.35		100	4.980	**4.407**	4.873	6.415	6.415	2478	**2478**		boba	mio		ks	
V4	14	15	15	0.3		100	7.400	**7.736**	9.483	12.132	12.132	4589	**4589**		boba	mio		ks	
V4	15	16	16	0.45		100	0.230			0.496	0.496				bo	mio		ks	cont. Gravel
V4	16	17	17	0.35		100	0.660	**0.377**	0.616		0.836	465	**465**		bo	mio		ks	cont. Gravel

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V5	1	2	2	0.35		25	0.000				0.000				lbo	kva		ds	cont. Gravel (chert)
V5	2	3	3	0.35		75	0.000				0.000				lbo	kva		ds	
V5	3	4	4	0.35		75	0.000				0.000				lbo	kva		ds	
V5	4	5	5	0.35		100	0.000				0.000				lbo	kva		ds	
V5	5	6	6	0.35		100	0.030				0.030				lbo	kva		ds	cont. gravel (chert and granite fragments)
V5	6	7	7	0.4		100	0.000				0.000				lbo	mio		ks	few lignite fragments
V5	7	8	8	0.35		100	0.000				0.000				ga	mio		ks	
V5	8	9	9	0.35		100	0.000				0.000				ga	mio		ks	
V5	9	10	10	0.35		100	0.000				0.000				boye	mio		ks	
V5	10	11	11	0.04		100	0.000				0.000				dbo	mio		gi	lignite and clay, cont. Med. Sand
V5	11	12	12	0.35		100	0.000				0.000				bo	mio		ks	clay seams, slightly silty
V5	12	13	13	0.35		100	0.000				0.000				ga	mio		ks	
V5	13	14	14	0.35		100	0.000				0.000				bo	mio		ks	cont. Lignite
V5	14	15	15	0.4		100	0.290				0.290				bo	mio		ks	
V5	15	16	16	0.35		100	0.140				0.140				bo	mio		ks	
V5	16	17	17	0.6		100	0.080				0.080				bo	mio		ks	cont. Gravel

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V6	1	2	2	0.35		50	0.000				0.000				lbo	kva		ds	
V6	2	3	3	0.35		100	0.000				0.000				yebo	kva		ds	
V6	3	4	4	0.3		100	0.000				0.000				lyebo	kva		ds	
V6	4	5	5	0.3	3	100	0.000				0.000				lyebo	kva		ds	cont. Gravel
V6	5	6	6	0.5		100	0.000				0.000				lyebo	kva		ds	cont. Gravel
V6	6	7	7	0.25		100	0.000				0.000				ga	mio		ks	
V6	7	8	8	0.35		100	0.000				0.000				ga	mio		ks	
V6	8	9	9	0.35		100	0.000				0.000				ga	mio		ks	
V6	9	10	10	0.35		100	0.000				0.000				ga	mio		ks	
V6	10	11	11	0.001		100	0.100				0.100				bo	mio		gl	cont. Med. Sand
V6	11	12	12	0.35		100	0.000				0.000				bo	mio		ks	small clay seams
V6	12	13	13	0.35		100	0.000				0.000				bo	mio		ks	minor clay lamina
V6	13	14	14	0.35		100	2.310	**2.211**	2.891		2.971	1602	**1602**		ga	mio		ks	
V6	14	15	15	0.4		100	0.000				0.000				bo	mio		ks	
V6	15	16	16	0.5		100	0.000				0.000				bo	mio		ks	
V6	16	17	17	0.5		100	0.000				0.000				bo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V7	1	2	2	0.35		75	0.000				0.000				lbo	mio		ks	
V7	2	3	3	0.35		100	0.000				0.000				lbo	mio		ks	
V7	3	4	4	0.35		100	0.000				0.000				ga	mio		ks	
V7	4	5	5	0.35		100	0.110				0.110				ga	mio		ks	
V7	5	6	6	0.35		100	0.080				0.080				ga	mio		ks	
V7	6	7	7	0.35		100	0.000				0.000				ga	mio		ks	
V7	7	8	8	0.4		100	0.180				0.180				ga	mio		ks	
V7	8	9	9	0.5		100	0.170				0.170				bo	mio		ks	cont. Lignite
V7	9	10	10	0.001		100	0.000				0.000				bo	mio		gl	80% lignite
V7	10	11	11	0.35		100	0.290				0.290				ga	mio		ks	slightly silty
V7	11	12	12	0.35		100	0.550	**0.891**			1.316	507	**507**		ga	mio		ks	
V7	12	13	13	0.35		100	0.280				0.280				ga	mio		ks	
V7	13	14	14	0.5		100	0.040				0.040				ga	mio		ks	3% lignite
V7	14	15	15	0.5		100	0.100				0.100				bo	mio		ks	
V7	15	16	16	0.5		100	0.000				0.000				bo	mio		ks	
V7	16	17	17	0.5		100	0.000				0.000				bo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V8	1	2	2	0.3		100	0.070				0.070					kva		ds	
V8	2	3	3	0.3	5	100	0.220				0.220					kva		ds	
V8	3	4	4	0.3	2	100	0.140				0.140					kva		ds	chert
V8	4	5	5	0.35		100	0.370				0.370				ga	mio		ks	
V8	5	6	6	0.3		100	0.030				0.030				ga	mio		ks	
V8	6	7	7	0.35		100	0.060				0.060				ga	mio		ks	
V8	7	8	8	0.35		100	0.120				0.120				ga	mio		ks	
V8	8	9	9	0.4		100	0.000				0.000				ga	mio		ks	5% lignite
V8	9	10	10	0.001		100	0.170				0.170				bo	mio		gl	80% lignite
V8	10	11	11	0.35		100	0.280				0.280				boga	mio		ks	5% clay
V8	11	12	12	0.35		100	0.000				0.000				ga	mio		ks	
V8	12	13	13	0.35		100	0.300				0.300				ga	mio		ks	
V8	13	14	14	0.45		100	0.000				0.000				bo	mio		ks	
V8	14	15	15	0.5		100	0.120				0.120				bo	mio		ks	
V8	15	16	16	0.5		100	0.100				0.100				bo	mio		ks	
V8	16	17	17	0.5		100	0.090				0.090				bo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V9	1	2	2	0.35		100	0.510				0.510					mio		ks	
V9	2	3	3	0.35		100	0.490				0.490					mio		ks	
V9	3	4	4	0.35		100	0.220				0.220					mio		ks	
V9	4	5	5	0.35		100	0.000				0.000					mio		ks	
V9	5	6	6	0.35		100	0.070				0.070					mio		ks	
V9	6	7	7	0.35		100	0.100				0.100					mio		ks	
V9	7	8	8	0.35		100	0.040				0.040					mio		ks	20% lignite
V9	8	9	9	0.35		100	0.100				0.100					mio		ks	cont. Lignite
V9	9	10	10	0.35		100	0.290				0.290					mio		ks	clay seams
V9	10	11	11	0.4		100	0.210				0.210					mio		ks	
V9	11	12	12	0.35		100	0.120				0.120					mio		ks	
V9	12	13	13	0.35		100	2.000	**1.440**	2.354		2.467	1175	**1175**			mio		ks	
V9	13	14	14	0.3		100	1.370	**2.006**			2.559	855	**855**			mio		ks	
V9	14	15	15	0.35		100	2.050	**1.939**	2.573		2.673	1219	**1219**			mio		ks	
V9	15	16	16	0.5		100	0.200				0.200					mio		ks	
V9	16	17	17	0.5		100	0.100				0.100					mio		ks	
V9	17	18	18	0.45		100	0.350				0.350					mio		ks	
V9	18	19	19	0.35		100	0.320				0.320					mio		ks	
V9	19	20	20	0.35		100	0.020				0.020					mio		gs	mica
V9	20	21	21	0.35		100	0.140				0.140					mio		gs	mica
V9	21	22	22	0.35		100	0.150				0.150					mio		gs	mica
V9	22	23	23	0.35		100	0.000				0.000					mio		gs	cont. Clay (brown)
V9	23	24	24	0.35		100	0.090				0.090					mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V10	1	2	2	0.35		100	0.000				0.000					mio		ks	
V10	2	3	3	0.4		100	0.110				0.110					mio		ks	
V10	3	4	4	0.45		100	0.240				0.240					mio		ks	
V10	4	5	5	0.35		100	0.000				0.000					mio		ks	
V10	5	6	6	0.35		100	0.000				0.000					mio		ks	
V10	6	7	7	0.35		100	0.050				0.050					mio		ks	
V10	7	8	8	0.35		100	0.260				0.260					mio		ks	
V10	8	9	9	0.35		100	0.000				0.000					mio		ks	
V10	9	10	10	0.35		100	0.170				0.170					mio		ks	40% lignite, slightly silty
V10	10	11	11	0.35		100	0.360				0.360					mio		ks	20% lignite, slightly silty
V10	11	12	12	0.35		100	0.020				0.020					mio		ks	
V10	12	13	13	0.35		100	0.070				0.070					mio		ks	
V10	13	14	14	0.35		100	0.010				0.010					mio		ks	
V10	14	15	15	0.35		100	0.070				0.070					mio		ks	
V10	15	16	16	0.6		100	0.000				0.000					mio		ks	
V10	16	17	17	0.5		100	0.160				0.160					mio		ks	
V10	17	18	18	0.35		100	0.280				0.280					mio		ks	
V10	18	19	19	0.35		100	0.120				0.120					mio		ks	
V10	19	20	20	0.35		100	0.160				0.160					mio		ks	
V10	20	21	21	0.35		100	0.200				0.200					mio		ks	
V10	21	22	22	0.35		100	0.110				0.110					mio		ks	
V10	22	23	23	0.35		100	0.210				0.210					mio		ks	
V10	23	24	24	0.35		100										mio		ks	
V10	24	25	25	0.35		100										mio		ks	
V10	25	26	26	0.35		100										mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V11	1	2	2	0.3		75	0.110				0.110					mio		ks	
V11	2	3	3	0.3		100	0.010				0.010					mio		ks	
V11	3	4	4	0.35		100	0.000				0.000					mio		ks	
V11	4	5	5	0.35		100		**0.001**	0.310	0.310	0.310	275	**275**			mio		ks	
V11	5	6	6	0.35		100	0.000				0.000					mio		ks	
V11	6	7	7	0.35		100	0.000				0.000					mio		ks	
V11	7	8	8	0.35		100	0.050				0.050					mio		ks	
V11	8	9	9	0.35		100	0.000				0.000					mio		ks	20% lignite, slightly silty
V11	9	10	10	0.35		100	0.440				0.440					mio		ks	40% lignite, slightly silty
V11	10	11	11	0.35		100	0.100				0.100					mio		ks	
V11	11	12	12	0.3		100	0.670	**0.128**			0.466	146	**146**			mio		ks	
V11	12	13	13	0.35		100	0.030				0.030					mio		ks	
V11	13	14	14	0.4		100	0.130				0.130					mio		ks	
V11	14	15	15	0.5		100	0.280				0.280					mio		ks	
V11	15	16	16	0.5		100	0.000				0.000					mio		ks	
V11	16	17	17	0.45		100	0.000				0.000					mio		ks	
V11	17	18	18	0.35		100	0.100				0.100					mio		ks	
V11	18	19	19	0.35		100	0.010				0.010					mio		ks	
V11	19	20	20	0.35		100	0.210				0.210					mio		ks	
V11	20	21	21	0.35		100	0.110				0.110					mio		ks	
V11	21	22	22	0.35		100	0.110				0.110					mio		gs	mica
V11	22	23	23	0.35		100	0.210				0.210					mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V12	1	2	2	0.35		75	0.170				0.170				yebo	mio		ks	
V12	2	3	3	0.35		100	0.090				0.090				lyebo	mio		ks	
V12	3	4	4	0.35		100	0.000				0.000				ga	mio		ks	
V12	4	5	5	0.35		100	0.000				0.000				ga	mio		ks	
V12	5	6	6	0.35		100	0.050				0.050				ga	mio		ks	
V12	6	7	7	0.35		100	0.000				0.000				lyebo	mio		ks	
V12	7	8	8	0.35		100	0.170				0.170				lyebo	mio		ks	1% lignite
V12	8	9	9	0.5		100	0.000				0.000				lyebo	mio			40% lignite
V12	9	10	10	0.001		100	0.300				0.300				lyebo	mio		gl	50% clay, 50% med. Sand
V12	10	11	11	0.35		100	0.480				0.480				ga	mio		ks	2% clay
V12	11	12	12	0.35		100	0.450				0.450				ga	mio		ks	
V12	12	13	13	0.35		100	0.200				0.200				ga	mio		ks	
V12	13	14	14	0.35		100	0.060				0.060				lbo	mio		ks	
V12	14	15	15	0.5		100	0.000				0.000				bo	mio		ks	
V12	15	16	16	0.1		100	0.110				0.110				bo	mio		ks	
V12	16	17	17	0.1		100	0.190				0.190				bo	mio		ks	1% lignite
V12	17	18	18	0.4		100	0.080				0.080				bo	mio		ks	
V12	18	19	19	0.3		100	0.130				0.130				bo	mio		ks	
V12	19	20	20	0.35		100	0.000				0.000				bo	mio		ks	
V12	20	21	21	0.35		100	0.000				0.000				bo	mio		ks	
V12	21	22	22	0.35		100	0.070				0.070				bo	mio		ks	
V12	22	23	23	0.5		100	0.050				0.050				bo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V13	1	2	2	0.35		50	0.000				0.000				lbo	mio		ks	
V13	2	3	3	0.35		75	0.000				0.000				ga	mio		ks	
V13	3	4	4	0.35		100	0.000				0.000				ga	mio		ks	
V13	4	5	5	0.35		100	0.000				0.000				ga	mio		ks	
V13	5	6	6	0.35		100	0.000				0.000				ga	mio		ks	
V13	6	7	7	0.35		100	0.000				0.000				ga	mio		ks	
V13	7	8	8	0.35		100	0.090				0.090				ga	mio		ks	
V13	8	9	9	0.35		100	0.270				0.270				lyebo	mio		ks	
V13	9	10	10	0.5		100	0.240				0.240				yebo	mio		ks	
V13	10	11	11	0.001		100	0.170				0.170				dbo	mio		gl	cont. Lignite
V13	11	12	12	0.001		100	0.180				0.180				bo	mio		gl	
V13	12	13	13	0.35		100	0.330				0.330				ga	mio		ks	
V13	13	14	14	0.5		100	0.000				0.000				ga	mio		ks	
V13	14	15	15	1		100	0.000				0.000				bo	mio		ks	
V13	15	16	16	0.7		100	0.000				0.000				bo	mio		ks	
V13	16	17	17	1		100	0.210				0.210				bo	mio		ks	
V13	17	18	18	0.5		100	0.060				0.060				bo	mio		ks	
V13	18	19	19	0.5		100	0.110				0.110				bo	mio		ks	2% lignite
V13	19	20	20	0.35		100	0.240				0.240				bo	mio		ks	
V13	20	21	21	0.35		100	0.080				0.080				bo	mio		ks	
V13	21	22	22	0.35		100	0.020				0.020				bo	mio		ks	
V13	22	23	23	0.35		100	0.130				0.130				bo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V14	2	3	3	0.35		100	1.630	**1.957**	2.483		2.589	1769	**1769**		lbo	mio		ks	
V14	3	4	4	0.35		100	0.320				0.320				ga	mio		ks	
V14	4	5	5	0.35		100	0.270				0.270				ga	mio		ks	
V14	5	6	6	0.35		100	0.060				0.060				ga	mio		ks	
V14	6	7	7	0.35		100	0.050				0.050				ga	mio		ks	
V14	7	8	8	0.35		100	0.500				0.500				ga	mio		ks	
V14	8	9	9	0.35		100	0.030				0.030				ga	mio		ks	
V14	9	10	10	0.35		100	0.190				0.190				bo	mio		ks	30% clay
V14	10	11	11	0.001		100	0.430				0.430				boye	mio		gl	20% clay
V14	11	12	12	0.35		100	0.190				0.190				lyebo	mio		ks	
V14	12	13	13	0.35		100	0.860	**0.792**			1.205	523	**523**		lyebo	mio		ks	
V14	13	14	14	0.35		100	1.000	**2.935**			3.594	955	**955**		bo	mio		ks	
V14	14	15	15	0.5		100	0.320				0.320				bo	mio		ks	
V14	15	16	16	0.6		100	0.200				0.200				bo	mio		ks	
V14	16	17	17	0.5		100	0.130				0.130				bo	mio		ks	
V14	17	18	18	0.4		100	0.230				0.230				bo	mio		ks	
V14	18	19	19	0.35		100	0.130				0.130				bo	mio		ks	
V14	19	20	20	0.35		100	0.000				0.000				bo	mio		ks	
V14	20	21	21	0.35		100	0.110				0.110				bo	mio		ks	
V14	21	22	22	0.35		100	0.060				0.060				bo	mio		ks	
V14	22	23	23	0.35		100	0.130				0.130				bo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V15	1	2	2	0.35		50	0.060				0.060				bo	kva		ds	cont. Gravel
V15	2	3	3	0.35		100	0.200				0.200				bo	mio		ks	
V15	3	4	4	0.35		100	0.610	**0.688**			1.090	802	**802**		ga	mio		ks	
V15	4	5	5	0.35		100	0.250				0.250				ga	mio		ks	
V15	5	6	6	0.35		100	0.060				0.060				ga	mio		ks	
V15	6	7	7	0.35		100	0.080				0.080				ga	mio		ks	
V15	7	8	8	0.35		100	0.030				0.030				ga	mio		ks	
V15	8	9	9	0.35		100	0.310				0.310				ga	mio		ks	
V15	9	10	10	0.35		100	0.050				0.050				ga	mio		ks	
V15	10	11	11	0.35		100	0.190				0.190				bo	mio		ks	cont. Lignite, slightly silty
V15	11	12	12	0.35		100	0.310				0.310				lbo	mio		ks	
V15	12	13	13	0.35		100	0.650	**0.221**			0.570	371	**371**		lbo	mio		ks	
V15	13	14	14	0.45		100	0.170				0.170				ye	mio		ks	
V15	14	15	15	0.5		100	0.450				0.450				ga	mio		ks	
V15	15	16	16	0.5		100	0.370				0.370				bo	mio		ks	
V15	16	17	17	0.6	5	100	0.100				0.100				bo	mio		ks	
V15	17	18	18	0.35		100	0.020				0.020				bo	mio		ks	
V15	18	19	19	0.35		100	0.050				0.050				bo	mio		ks	
V15	19	20	20	0.35		100	0.040				0.040				bo	mio		ks	
V15	20	21	21	0.35		100	0.200				0.200				bo	mio		ks	
V15	21	22	22	0.35		100	0.000				0.000				bo	mio		ks	0.5 cm silt lamina
V15	22	23	23	0.35		100	0.000				0.000				bo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V16	1	2	2	0.35		25	0.310				0.310				lbo	kva		ds	
V16	2	3	3	0.5		50	0.220				0.220				lyebo	kva		ds	
V16	3	4	4	0.45		100	1.100	**0.385**			0.752	787	**787**		ye	kva		ds	cont. Gravel (chert)
V16	4	5	5	0.35		100	0.940	**0.345**			0.708	656	**656**		ye	kva		ds	
V16	5	6	6	0.35		100	0.220				0.220				ye	kva		ds	
V16	6	7	7	0.3		100	0.300				0.300				ye	mio		ks	
V16	7	8	8	0.35		100	0.340				0.340				ye	mio		ks	
V16	8	9	9	0.35		100	0.650	**0.225**			0.574	413	**413**		ga	mio		ks	
V16	9	10	10	0.4		100	0.140				0.140				ga	mio		ks	
V16	10	11	11	0.001		100	0.000				0.000				bo	mio		gl	
V16	11	12	12	0.001		100	1.040				1.040				bo	mio		gl	
V16	12	13	13	0.35		100	1.470	**0.650**			1.047	342	**342**		ga	mio		ks	
V16	13	14	14	0.35		100	0.320				0.320				ga	mio		ks	
V16	14	15	15	0.5		100	0.000				0.000				ga	mio		ks	
V16	15	16	16	0.5		100	0.130				0.130				ga	mio		ks	
V16	16	17	17	1.5		100	0.020				0.020				bo	mio		ks	
V16	17	18	18	0.4		100	0.170				0.170				bo	mio		ks	
V16	18	19	19	0.35		100	0.180				0.180				bo	mio		ks	
V16	19	20	20	0.35		100	0.110				0.110				bo	mio		ks	
V16	20	21	21			100	0.270				0.270				bo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V17	1	2	2	0.35		25	0.420				0.420				lbo	mio		ks	
V17	2	3	3	0.35		100	0.120				0.120				lbo	mio		ks	
V17	3	4	4	0.35		50	0.370				0.370				lbo	mio		ks	
V17	4	5	5	0.35		75	0.080				0.080				lbo	mio		ks	
V17	5	6	6	0.35		50	0.730	**0.348**			0.710	307	**307**		lbo	mio		ks	
V17	6	7	7	0.35		100	0.470				0.470				lbo	mio		ks	
V17	7	8	8	0.35		100	0.370				0.370				lbo	mio		ks	
V17	8	9	9	0.35		100	0.120				0.120				ga	mio		ks	cont. Lignite
V17	9	10	10	0.35		100	0.010				0.010				dga	mio		ks	cont. Clay
V17	10	11	11	0.001		100	0.360				0.360				dbo	mio		gl	
V17	11	12	12	0.001		100	0.290				0.290				dbo	mio		gl	cont. Mica
V17	12	13	13	0.001		100	0.080				0.080				dbo	mio		gl	cont. Mica
V17	13	14	14	0.35		100	0.300				0.300				ga	mio		ks	
V17	14	15	15	0.5		100	0.220				0.220				ga	mio		ks	
V17	15	16	16	0.35		100	0.350				0.350				ga	mio		ks	
V17	16	17	17	0.35		100	0.420				0.420				ga	mio		ks	
V17	17	18	18	0.35		100	0.220				0.220				ga	mio		ks	
V17	18	19	19	0.35		100	0.060				0.060				ga	mio		ks	
V17	19	20	20	0.35		100	0.110				0.110				ga	mio		ks	
V17	20	21	21	0.35		100	0.210				0.210				ga	mio		ks	
V17	21	22	22	0.35		100	0.040				0.040				ga	mio		ks	cont. Gravel
V17	22	23	23	0.35		100	0.050				0.050				ga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V18	1	2	2	0.35		100	0.020				0.020				bo	kva		ds	
V18	2	3	3	0.35		100	0.000				0.000				ye	kva		ds	
V18	3	4	4	0.35		100	0.000				0.000				ye	kva		ds	
V18	4	5	5	0.35		100	0.000				0.000				ye	kva		ds	
V18	5	6	6	0.35		100	0.050				0.050				ye	kva		ds	
V18	6	7	7	0.5		100	0.030				0.030				gabo	mio		ks	cont. Gravel
V18	7	8	8	0.001		100	0.440				0.440				gabo	mio		gl	
V18	8	9	9	0.001		100	0.280				0.280				gabo	mio		gl	
V18	9	10	10	0.001		100	0.520				0.520				gabo	mio		gl	
V18	10	11	11	0.001		100	0.600				0.600				gabo	mio		gl	
V18	11	12	12	0.001		100	0.320				0.320				gabo	mio		gl	cont. Lignite
V18	12	13	13	0.001		100	0.420				0.420				gabo	mio		gl	cont. Lignite
V18	13	14	14	0.001		100	0.530				0.530				gabo	mio		gl	
V18	14	15	15	0.001		100	0.430				0.430				gabo	mio		gl	
V18	15	16	16	0.45		100	0.210				0.210				gabo	mio		ks	clay
V18	16	17	17	0.35		100	0.130				0.130				gabo	mio		ks	
V18	17	18	18	0.35		100	0.270				0.270				gabo	mio		ks	
V18	18	19	19	0.35		100	0.110				0.110				gabo	mio		ks	
V18	19	20	20	0.35		100	0.090				0.090				gabo	mio		ks	
V18	20	21	21	0.35		100	0.330				0.330				gabo	mio		ks	
V18	21	22	22	0.35		100	0.130				0.130				gabo	mio		ks	
V18	22	23	23	0.35		100	0.140				0.140				gabo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V19	1	2	2	0.5		100	0.010				0.010				yebo	kva		ds	2 cm top soil
V19	2	3	3	0.35		25	0.000				0.000				yebo	kva		ds	well rounded and well sorted
V19	3	4	4	0.35		25	0.000				0.000				yebo	kva		ds	well rounded, redeposited miocene
V19	4	5	5	0.35		100	0.010				0.010				yebo	kva		ds	well rounded
V19	5	6	6	0.35		100	0.090				0.090				yebo	kva		ds	well rounded
V19	6	7	7	0.35		40	0.010				0.010				yebo	kva		ds	well rounded
V19	7	8	8	0.35		50	0.030				0.030				ga	mio		ks	
V19	8	9	9	0.5		40	0.020				0.020				ga	mio		ks	
V19	9	10	10	0.35		100	0.020				0.020				ga	mio		ks	
V19	10	11	11	0.35		100	0.050				0.050				ga	mio		ks	20% lignite
V19	11	12	12	0.04		100									ba	mio		gi	20% lignite, mica
V19	12	13	13	0.04		100									dbo	mio		gi	mica
V19	13	14	14	0.35		100	0.270				0.270				ga	mio		ks	
V19	14	15	15	0.35		100	1.030	**1.199**			1.659		**648**		ga	mio		ks	
V19	15	16	16	1		100	0.950	**0.000**			0.950		**352**		lbo	mio		ks	
V19	16	17	17	1		100	0.030				0.030				lbo	mio		ks	
V19	17	18	18	1		100	0.030				0.030				lbo	mio		ks	
V19	18	19	19	0.5		100	0.230				0.230				lbo	mio		ks	
V19	19	20	20	0.35		100	0.060				0.060				lbo	mio		gs	
V19	20	21	21	0.35		100	0.210				0.210				lbo	mio		gs	
V19	21	22	22	0.35		100	0.510				0.510				lbo	mio		gs	
V19	22	23	23	0.4		100	0.310				0.310				lbo	mio		gs	
V19	23	24	24	5		100	0.250				0.250				lbo	mio		gs	
V19	24	25	25	1		100	0.140				0.140				lbo	mio		gs	
V19	25	26	26	1		100	0.000				0.000				lbo	mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V20	1	2	2	0.35		20	0.010				0.010				lbo	kva		ds	
V20	2	3	3	0.35		60	0.000				0.000				lbo	kva		ds	
V20	3	4	4	0.35		100	0.000				0.000				lbo	kva		ds	
V20	4	5	5	0.35		100	0.010				0.010				lbo	kva		ds	
V20	5	6	6	0.35	1	75	0.090				0.090				lbo	kva		ds	
V20	6	7	7	0.35	2	50	0.010				0.010				lbo	kva		ds	
V20	7	8	8	0.35	5	90	0.030				0.030				ga	kva		ds	well sorted
V20	8	9	9	0.35	5	90	0.020				0.020				ga	mio		ks	
V20	9	10	10	0.35	10	90	0.020				0.020				ga	mio		ks	
V20	10	11	11	0.001		100	0.050				0.050				bo	mio		gl	lignite
V20	11	12	12	0.35		50									bo	mio		ks	HM
V20	12	13	13	0.35		100									ga	mio		ks	some lignite, HM
V20	13	14	14	0.35		100	0.270				0.270				ga	mio		ks	
V20	14	15	15	0.5		50	1.030	**0.099**			0.433		**156**		ga	mio		ks	
V20	15	16	16	0.35		50	0.950	**0.665**			1.064		**343**		ga	mio		ks	HM
V20	16	17	17	0.6		100	0.030				0.030				lbo	mio		ks	
V20	17	18	18	1		50	0.030				0.030				lbo	mio		ks	
V20	18	19	19	0.5		60	0.230				0.230				lbo	mio		ks	
V20	19	20	20	0.35		100	0.060				0.060				lbo	mio		ks	
V20	20	21	21	0.5		50	0.210				0.210				lbo	mio		ks	
V20	21	22	22	0.35		60	0.510				0.510				lbo	mio		ks	
V20	22	23	23	0.35		100	0.310				0.310				lbo	mio		ks	
V20	23	24	24	0.35		50	0.250				0.250				lbo	mio		ks	clay seam, HM
V20	24	25	25	0.35		100	0.140				0.140				lbo	mio		gs	mica
V20	25	26	26	0.35		90	0.000				0.000				lbo	mio		gs	
V20	26	27	27	1		50									lbo	mio		gs	
V20	27	28	28	0.5		50									lbo	mio		gs	
V20	28	29	29	0.35		100									lbo	mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V21	1	2	2	0.35		20	0.170				0.170				lbo	kva		ds	
V21	2	3	3	0.35		25	0.070				0.070				lyebo	kva		ds	
V21	3	4	4	0.35		100	0.110				0.110				lyebo	kva		ds	
V21	4	5	5	0.5		100	0.240				0.240				lgaye	kva		ds	
V21	5	6	6	0.35		75	0.320				0.320				lgaye	kva		ds	
V21	6	7	7	0.35		75	0.130				0.130				lgaye	kva		ds	
V21	7	8	8	0.35		100	0.000				0.000				lgaye	mio		ks	
V21	8	9	9	0.35		75	0.190				0.190				lgaye	mio		ks	
V21	9	10	10	0.35		10	0.280				0.280				bo	mio		ks	10% lignite, HM
V21	10	11	11	0.02		75									bo	mio		gi	10% lignite and clay
V21	11	12	12	0.5		75	0.200				0.200				ga	mio		ks	
V21	12	13	13	0.5		100	0.990	**0.984**			1.420		**783**		ga	mio		ks	clay seam, HM
V21	13	14	14	0.5		100	0.440				0.440				lbo	mio		ks	HM
V21	14	15	15	0.7		100	0.860	**0.712**			1.117		**658**		lbo	mio		ks	
V21	15	16	16	1		100	0.050				0.050				lbo	mio		ks	
V21	16	17	17	2		100	0.030				0.030				lbo	mio		ks	
V21	17	18	18	1.7		100	0.290				0.290				lbo	mio		ks	
V21	18	19	19	1		100	0.180				0.180				lbo	mio		ks	
V21	19	20	20	0.4		100	0.160				0.160				lbo	mio		ks	
V21	20	21	21	0.4		100	0.340				0.340				lbo	mio		ks	
V21	21	22	22	0.35		100	0.160				0.160				lbo	mio		ks	
V21	22	23	23	0.35		100	0.050				0.050				lbo	mio		ks	
V21	23	24	24	0.35		100	0.350				0.350				lbo	mio		ks	
V21	24	25	25	0.35		100	0.020				0.020				lbo	mio		ks	
V21	25	26	26	0.35		100	0.040				0.040				lbo	mio		ks	
V21	26	27	27	0.35		100	0.280				0.280				lbo	mio		gs	mica
V21	27	28	28	0.25		100	0.500				0.500				lbo	mio		gs	mica
V21	28	29	29	0.2		100	0.730	**0.744**			1.152		**1009**		lbo	mio		gs	mica, HM

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V22	1	2	2	0.35		20	0.070				0.070				lbo	kva		ds	
V22	2	3	3	0.35		100	0.030				0.030				yebo	kva		ds	
V22	3	4	4	0.5		75	0.100				0.100				yebo	kva		ds	
V22	4	5	5	1	5	100	0.090				0.090				lyebo	kva		ds	
V22	5	6	6	1	7	75	0.170				0.170				lyebo	kva		ds	
V22	6	7	7	1	10	50	0.240				0.240				lyebo	kva		ds	
V22	7	8	8	1	20	100	0.210				0.210				lyebo	kva		ds	
V22	8	9	9	0.5		75	0.910	**0.268**			0.622		**351**		ga	mio		ks	20% lignite
V22	9	10	10	0.02		75									ga	mio		gi	clay and lignite
V22	10	11	11	0.35		100	0.350				0.350				ga	mio		ks	
V22	11	12	12	0.4		100	0.600	**0.054**			0.383		**271**		ga	mio		ks	
V22	12	13	13	0.35		100	0.770	**0.565**			0.952		**405**		ga	mio		ks	
V22	13	14	14	0.4		100	1.000	**1.461**	1.821		1.967		**770**		bo	mio		ks	HM
V22	14	15	15	0.35		100	1.930	**2.631**	3.294	3.137	3.137		**1274**		bo	mio		ks	HM
V22	15	16	16	0.35		100		**0.053**	0.364	0.328	0.328		**314**		bo	mio		ks	HM
V22	16	17	17	0.4		100	0.930	**0.077**	0.275		0.517		**114**		bo	mio		ks	
V22	17	18	18	0.35		100	0.490				0.490				bo	mio		ks	HM
V22	18	19	19	0.35		100	0.790	**0.213**	0.425		0.657		**377**		bo	mio		ks	
V22	19	20	20	0.4		100	0.340				0.340				bo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V23	1	2	2	0.4		50	0.790	**0.372**			0.738		**311**		lbo	mio		ks	
V23	2	3	3	0.4		75	0.280				0.280				lbo	mio		ks	
V23	3	4	4	0.4		75	0.310				0.310				yebo	mio		ks	
V23	4	5	5	0.4		100	0.430				0.430				lyebo	mio		ks	
V23	5	6	6	0.35		60	0.390				0.390				lyebo	mio		ks	5% lignite
V23	6	7	7	0.35		60	0.240				0.240				lyebo	mio		ks	5% lignite
V23	7	8	8	0.35		60	0.180				0.180				lbo	mio		ks	5% lignite
V23	8	9	9	0.35		75	0.720	**0.392**			0.760		**486**		lbo	mio		ks	10% lignite
V23	9	10	10	0.02		60									bo	mio		gi	clay
V23	10	11	11	0.35		100	1.260	**0.411**			0.781		**312**		ga	mio		ks	20% lignite, 5% HM
V23	11	12	12	0.35		25	0.670	**0.441**			0.815		**394**		ga	mio		ks	5% HM
V23	12	13	13	0.35		30	0.110				0.110				ga	mio		ks	5% HM
V23	13	14	14	0.35		100	0.150				0.150				ga	mio		ks	5% HM
V23	14	15	15	1		50	0.500				0.500				lbo	mio		ks	
V23	15	16	16	1		75	0.340				0.340				lbo	mio		ks	
V23	16	17	17	0.5		100	0.320				0.320				lbo	mio		ks	
V23	17	18	18	1		50	0.300				0.300				lbo	mio		ks	
V23	18	19	19	0.35		50	0.260				0.260				lbo	mio		gs	mica, 1% lignite
V23	19	20	20	0.35		75	0.130				0.130				lbo	mio		gs	mica
V23	20	21	21	0.35		50	0.180				0.180				lbo	mio		gs	mica
V23	21	22	22	0.35		50	0.150				0.150				lbo	mio		gs	mica
V23	22	23	23	0.35		100	0.120				0.120				lbo	mio		gs	mica

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V24	1	2	2	0.4		50	0.100				0.100				ye	kva		ds	
V24	2	3	3	0.4		75	0.020				0.020				ye	kva		ds	
V24	3	4	4	0.4		75	0.050				0.050				ye	kva		ds	
V24	4	5	5	0.4		75	0.210				0.210				ye	kva		ds	
V24	5	6	6	0.4		100	0.310				0.310				ye	kva		ds	
V24	6	7	7	0.4		75	0.100				0.100				ye	kva		ds	
V24	7	8	8	0.02		75	0.400				0.400				wi	mio		gi	lignite, layered clay
V24	8	9	9	0.2		100	1.020	**1.045**			1.487		**633**		ba	mio		ks	
V24	9	10	10	0.4		75	0.350				0.350				wi	mio		ks	
V24	10	11	11	0.4		75	0.510				0.510				wi	mio		ks	
V24	11	12	12	0.4		75	2.590	**1.323**	2.297	2.065	2.065		**833**		wi	mio		ks	HM
V24	12	13	13	0.4		100	0.470				0.470				wi	mio		ks	
V24	13	14	14	0.5		100	0.190				0.190				wi	mio		ks	
V24	14	15	15	2		100	0.120				0.120				wi	mio		ks	pebbly
V24	15	16	16	0.4		100	0.190				0.190				wi	mio		ks	
V24	16	17	17	0.4		75	0.050				0.050				bo	mio		gs	
V24	17	18	18	0.4		100	0.450				0.450				bo	mio		gs	
V24	18	19	19	0.4		100	0.160				0.160				bo	mio		gs	
V24	19	20	20	0.4		100	0.330				0.330				bo	mio		gs	
V24	20	21	21	0.4		100	0.670	**0.584**			0.973		**723**		bo	mio		gs	
V24	21	22	22	0.4		75	0.020				0.020				bo	mio		gs	
V24	22	23	23	0.4		75	0.090				0.090				bo	mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V25	1	2	2	0.4		50	0.050				0.050				ye	kva		ds	
V25	2	3	3	0.4		75	0.050				0.050				ye	kva		ds	
V25	3	4	4	0.4		100	0.040				0.040				wi	mio		ks	
V25	4	5	5	0.4		100	0.260				0.260				wi	mio		ks	
V25	5	6	6	0.4		75	0.270				0.270				wi	mio		ks	
V25	6	7	7	0.02		100	0.270				0.270				wi	mio		gi	cont. Lignite
V25	7	8	8	1		100									wi	mio		ks	cont. Lignite, clay
V25	8	9	9	0.4		100									wi	mio		ks	
V25	9	10	10	0.4		100	0.970	**0.060**			0.390		**226**		wi	mio		ks	
V25	10	11	11	0.4		100	0.280				0.280				wi	mio		ks	
V25	11	12	12	0.4		100	0.060				0.060				wi	mio		ks	
V25	12	13	13	0.4		75	0.220				0.220				wi	mio		ks	
V25	13	14	14	1		100	0.990	**0.000**			0.990		**108**		wi	mio		ks	
V25	14	15	15	1		100	0.010				0.010				wi	mio		ks	
V25	15	16	16	2		100	0.700	**0.005**			0.328		**150**		bo	mio		gs	gravelly
V25	16	17	17	0.2		100	0.030				0.030				bo	mio		gs	
V25	17	18	18	0.4		100	0.320				0.320				bo	mio		gs	
V25	18	19	19	0.4		100	0.800				0.800				bo	mio		gs	
V25	19	20	20	0.4		100	0.140				0.140				bo	mio		gs	
V25	20	21	21	0.2		100	0.660	**0.297**			0.654		**524**		bo	mio		gs	clayey/silty sand
V25	21	22	22	0.2		100	0.150				0.150				bo	mio		gs	lignite
V25	22	23	23	0.2		100	0.090				0.090				bo	mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V26	1	2	2	0.2		50	0.110				0.110				ye	kva		ds	
V26	2	3	3	0.2		50	0.150				0.150				ye	kva		ds	
V26	3	4	4	0.2		50	0.050				0.050				ye	kva		ds	
V26	4	5	5	0.4		50	0.070				0.070				ye	kva		ds	
V26	5	6	6	0.4		20	0.290				0.290				ye	kva		ds	
V26	6	7	7	2		50	0.070				0.070				ye	kva		ds	pebbly
V26	7	8	8	2		50	0.010				0.010				wi	mio		ks	pebbly
V26	8	9	9	0.4		100	0.070				0.070				wi	mio		ks	few pebbles
V26	9	10	10	0.4		100	0.380				0.380				wi	mio		ks	well sorted
V26	10	11	11	0.4		100	0.160				0.160				wi	mio		ks	
V26	11	12	12	0.02		100	0.530				0.530				wi	mio		ks	cont. lignite
V26	12	13	13	0.02		100									wi	mio		ks	cont. lignite
V26	13	14	14	1		100									wi	mio		ks	cont. lignite
V26	14	15	15	0.4		100	0.150				0.150				wi	mio		ks	cont. lignite
V26	15	16	16	0.4		100	0.180				0.180				wi	mio		ks	
V26	16	17	17	0.4		100	0.340				0.340				wi	mio		ks	
V26	17	18	18	0.4		100	2.660	**1.421**	1.667		1.822		**1663**		wi	mio		ks	HM
V26	18	19	19	0.4		100	0.230				0.230				bo	mio		ks	
V26	19	20	20	0.4		100	0.240				0.240				bo	mio		ks	
V26	20	21	21	0.2		50	0.150				0.150				bo	mio		ks	clayey
V26	21	22	22	0.6		50	0.190				0.190				bo	mio		ks	pebbly
V26	22	23	23	1		100	0.130				0.130				bo	mio		ks	clay layers

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V27	1	2	2	0.4		100	0.080				0.080				ye	kva		ds	
V27	2	3	3	0.4		100	0.010				0.010				ye	kva		ds	
V27	3	4	4	0.4		25	0.010				0.010				ye	kva		ds	
V27	4	5	5	0.06		25	0.010				0.010				ye	kva		ds	silty/clayey
V27	5	6	6	0.06		75	0.170				0.170				ye	kva		ds	silty/clayey
V27	6	7	7	0.4		75	0.140				0.140				ye	kva		ds	gravelly
V27	7	8	8	2		100	0.280				0.280				ye	kva		ds	
V27	8	9	9	0.4		25	1.160	**0.663**			1.062		**523**		wi	mio		ks	gravelly
V27	9	10	10	0.4		75	0.050				0.050				wi	mio		ks	gravelly
V27	10	11	11	0.4		100	0.050				0.050				wi	mio		ks	
V27	11	12	12	0.2		100									wi	mio		ks	
V27	12	13	13	1		100									wi	mio		ks	
V27	13	14	14	1		100									wi	mio		ks	
V27	14	15	15	0.2		75	0.060				0.060				wi	mio		ks	
V27	15	16	16	0.2		25	0.700	**0.630**			1.025		**398**		wi	mio		ks	
V27	16	17	17	0.4		100	0.520				0.520				wi	mio		ks	
V27	17	18	18	0.4		100	0.940	**0.536**			0.920		**793**		ga	mio		gs	
V27	18	19	19	0.4		100	0.260				0.260				ga	mio		gs	
V27	19	20	20	0.4		100	0.320				0.320				ga	mio		gs	
V27	20	21	21	0.4		100	0.610	**0.448**			0.823		**581**		ga	mio		gs	
V27	21	22	22	0.2		75	0.000				0.000				ga	mio		gs	
V27	22	23	23			100	0.000				0.000				ga	mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V28	1	2	2	0.4		25	0.170				0.170				ye	kva		ds	
V28	2	3	3			50	0.170				0.170				ye	kva		ml	till
V28	3	4	4			50	0.230				0.230				ye	kva		ml	till
V28	4	5	5			75									ye	kva		ml	till
V28	5	6	6			75									ye	kva		ml	till
V28	6	7	7			75	0.300				0.300				ye	kva		ml	till
V28	7	8	8			100									ye	kva		ml	till, more sandy
V28	8	9	9	0.02		75	0.400				0.400				wi	mio		gi	lignite, silty clay
V28	9	10	10	0.2		100	0.150				0.150				wi	mio		ks	cont. lignite
V28	10	11	11	0.4		100		**0.000**	0.193		0.439		**117**		wi	mio		ks	
V28	11	12	12	0.4		75	0.340				0.340				wi	mio		ks	
V28	12	13	13	0.4		100	0.230				0.230				wi	mio		ks	pebbly
V28	13	14	14	0.2		100	0.430				0.430				wi	mio		ks	
V28	14	15	15	0.2		50	0.350				0.350				bo	mio		ks	
V28	15	16	16	0.4		100	0.300				0.300				bo	mio		ks	
V28	16	17	17	0.4		100	0.080				0.080				bo	mio		ks	
V28	17	18	18	0.4		50	0.340				0.340				bo	mio		ks	
V28	18	19	19	0.4		100	0.290				0.290				bo	mio		ks	
V28	19	20	20	0.4		100	0.270				0.270				bo	mio		ks	
V28	20	21	21	0.2		50	0.090				0.090				bo	mio		ks	clay layers
V28	21	22	22	0.2		25									bo	mio		ks	pebbly
V28	22	23	23	0.4		100									bo	mio		ks	few clay layers

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V29	1	2	2	0.4		50									wi	kva		ks	
V29	2	3	3	0.4		25	0.060				0.060				wi	kva		ks	gravelly
V29	3	4	4	0.4		100	0.060				0.060				wi	kva		ks	gravelly
V29	4	5	5	0.15		75	0.090				0.090				wi	mio		ks	cont. lignite
V29	5	6	6	0.02		75	0.550	**0.568**			0.956		**534**		boba	mio		gi	cont. lignite
V29	6	7	7			75	0.620	**0.565**			0.953		**375**		wi	mio		ks	cont. lignite
V29	7	8	8	0.2		100	0.270				0.270				wi	mio		ks	clay stringer
V29	8	9	9	0.2		75	1.580	**1.412**			1.896		**1343**		wi	mio		ks	
V29	9	10	10	0.4		25	0.180				0.180				wi	mio		ks	clay stringer
V29	10	11	11	0.4		100	0.140				0.140				wi	mio		ks	few pebbles
V29	11	12	12	0.5		50	0.380				0.380				wi	mio		ks	pebbly sand
V29	12	13	13	0.4		75	0.150				0.150				wi	mio		ks	
V29	13	14	14	0.4		100	0.190				0.190				wi	mio		ks	
V29	14	15	15	0.4		25	1.080	**0.513**			0.895		**716**		boga	mio		ks	
V29	15	16	16	0.4		75	0.080				0.080				boga	mio		ks	
V29	16	17	17	0.4		100	0.190				0.190				boga	mio		ks	
V29	17	18	18	0.4		50	0.340				0.340				boga	mio		ks	
V29	18	19	19	0.4		50	0.270				0.270				boga	mio		ks	
V29	19	20	20	0.4		100	0.230				0.230				boga	mio		ks	
V29	20	21	21	0.4		75	0.170				0.170				boga	mio		ks	pebbly
V29	21	22	22	0.4		75	0.100				0.100				boga	mio		ks	
V29	22	23	23	0.4		100	0.020				0.020				boga	mio		ks	pebbly

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V30	1	2	2	0.4		50	0.220				0.220				ye	kva		ds	root fragments
V30	2	3	3	0.4		50	0.220				0.220				ye	kva		ds	
V30	3	4	4	0.4		50	0.170				0.170				ye	kva		ds	pebbly
V30	4	5	5	0.4		100	0.460				0.460				wi	mio		ks	
V30	5	6	6	0.4		75	0.930	**0.394**			0.762		**502**		wi	mio		ks	
V30	6	7	7	0.4		75	0.060				0.060				wi	mio		ks	organic rich
V30	7	8	8	0.4		100	0.800	**0.014**			0.339		**142**		wi	mio		ks	
V30	8	9	9	0.4		75	0.520				0.520				wi	mio		ks	cont. lignite
V30	9	10	10	0.4		75	0.210				0.210				wi	mio		ks	cont. Lignite
V30	10	11	11	0.001		75	0.490				0.490				wi	mio		gl	cont. Lignite, silty clay
V30	11	12	12	0.001		75	0.270				0.270				wi	mio		gl	cont. lignite
V30	12	13	13	0.25		50	0.640	**0.221**			0.569		**229**		ga	mio		ks	cont. lignite
V30	13	14	14	0.2		100	0.200				0.200				ga	mio		ks	cont. lignite
V30	14	15	15	0.4		75	0.480				0.480				ga	mio		ks	
V30	15	16	16	0.4		75	0.500				0.500				ga	mio		ks	some lignite, pebbly sand
V30	16	17	17	0.4		100	0.220				0.220				boga	mio		ks	
V30	17	18	18	0.4		50	0.130				0.130				boga	mio		ks	
V30	18	19	19	0.4		75	0.090				0.090				boga	mio		ks	pebbly, some lignite
V30	19	20	20	0.4		100	0.660	**0.065**			0.395		**227**		boga	mio		ks	pebbly, clay stringer
V30	20	21	21	1		50	1.020	**0.152**			0.492		**235**		boga	mio		ks	clay stringer
V30	21	22	22	1		75									boga	mio		ks	
V30	22	23	23	0.2		75									boga	mio		ks	silty clay stringer

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V31	1	2	2	0.2		50									ye	kva		ds	
V31	2	3	3	0.4		50									ye	kva		ds	gravelly
V31	3	4	4	0.2		50	0.170				0.170				ye	kva		ds	
V31	4	5	5	0.4		75	0.510				0.510				ga	kva		ds	pebbles/gravel
V31	5	6	6	0.4		50	0.630	**0.590**			0.981		**689**		ga	kva		ds	gravelly
V31	6	7	7	0.4		75	0.100				0.100				ga	kva		ds	pebbly
V31	7	8	8	0.2		100	0.340				0.340				bo	mio		ks	cont. lignite
V31	8	9	9	0.2		75	0.000				0.000				bo	mio		ks	cont. lignite
V31	9	10	10	0.02		75									bo	mio		gi	cont. lignite
V31	10	11	11	0.02		75									bo	mio		gi	cont. lignite
V31	11	12	12	0.4		75	0.210				0.210				ga	mio		ks	cont. lignite
V31	12	13	13	0.2		100	0.200				0.200				ga	mio		ks	silt stringer
V31	13	14	14	0.4		100	0.220				0.220				ga	mio		ks	cont. lignite
V31	14	15	15	0.4		75	0.690	**0.624**			1.019		**539**		ga	mio		ks	
V31	15	16	16	0.4		100	1.360	**0.926**			1.355		**1672**		ga	mio		ks	
V31	16	17	17	0.4		100	0.190				0.190				bo	mio		ks	silt stringer, pebbly
V31	17	18	18	0.2		50	0.240				0.240				bo	mio		gs	clay stringer
V31	18	19	19	0.2		75	0.440				0.440				bo	mio		gs	clay stringer
V31	19	20	20	0.2		75	0.680	**0.389**			0.757		**794**		bo	mio		gs	clay stringer
V31	20	21	21	0.2		50	0.480				0.480				bo	mio		gs	
V31	21	22	22	0.1		50	0.950	**2.688**			3.319		**2971**		bo	mio		gs	
V31	22	23	23	0.05		100	0.380				0.380				bo	mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V32	1	2	2	0.2		25	0.200				0.200				ye	kva		ds	
V32	2	3	3	0.2		50	0.040				0.040				ye	kva		ds	
V32	3	4	4	0.2		25	0.190				0.190				ye	kva		ds	
V32	4	5	5	0.2		50	0.000				0.000				ye	kva		ds	
V32	5	6	6	0.2		25	0.160				0.160				ye	kva		ds	clay stringer
V32	6	7	7	0.001		50	0.170				0.170				ga	kva		dl	
V32	7	8	8	0.001		50									ga	kva		dl	
V32	8	9	9	0.001		50									ga	kva		dl	
V32	9	10	10	0.001		50									ga	kva		dl	
V32	10	11	11	0.4		50									ga	mio		ks	
V32	11	12	12	0.2		100	0.190				0.190				ga	mio		ks	
V32	12	13	13	0.2		100	0.160				0.160				ga	mio		ks	
V32	13	14	14	0.2		100	0.140				0.140				ga	mio		ks	clay stringer
V32	14	15	15	0.2		75	0.400				0.400				ga	mio		ks	
V32	15	16	16	0.2		100	0.200				0.200				ga	mio		ks	
V32	16	17	17	0.4		100	0.190				0.190				ga	mio		ks	
V32	17	18	18	0.4		50	0.230				0.230				ga	mio		ks	
V32	18	19	19	0.4		75	0.090				0.090				ga	mio		ks	
V32	19	20	20	0.2		100	0.040				0.040				ga	mio		ks	silt stringer
V32	20	21	21	0.4		75	0.190				0.190				ga	mio		ks	
V32	21	22	22	0.2		75	0.590	**1.916**			2.458		**1841**		ga	mio		gs	mica
V32	22	23	23	0.2		100	0.990	**1.583**			2.087		**1669**		ga	mio		gs	
V32	23	24	24	0.2		50	0.510				0.510				ga	mio		gs	
V32	24	25	25	0.2		75	0.650				0.650				ga	mio		gs	
V32	25	26	26	0.2		75	0.540				0.540				ga	mio		gs	
V32	26	27	27	1		100									ga	mio		gs	
V32	27	28	28	1		100									ga	mio		gs	
V32	28	29	29	1		100									ga	mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V33	1	2	2				0.140				0.140				yebo	kva		x	
V33	2	3	3				0.120				0.120				yebo	kva		x	
V33	3	4	4				0.130				0.130				yebo	kva		x	
V33	4	5	5				0.060				0.060				yebo	kva		x	
V33	5	6	6												dbo	kva		x	
V33	6	7	7												dbo	kva		x	cont. Micas
V33	7	8	8												dbo	kva		x	cont. Micas
V33	8	9	9												dbo	kva		x	cont. Micas
V33	9	10	10												dbo	kva		x	cont. Micas
V33	10	11	11												dbo	kva		x	cont. Micas
V33	11	12	12												dbo	kva		x	cont. Micas
V33	12	13	13												dbo	kva		x	cont. Micas
V33	13	14	14												dbo	kva		x	cont. Micas
V33	14	15	15												dbo	kva		x	cont. Micas
V33	15	16	16												dbo	kva		x	cont. Micas
V33	16	17	17												dbo	kva		x	cont. Micas
V33	17	18	18												dbo	kva		x	cont. Micas
V33	18	19	19												dbo	kva		x	cont. Micas
V33	19	20	20												dbo	kva		x	cont. Micas
V33	20	21	21				0.590	**0.172**			0.515		**247**		gabo	mio		x	cont. Micas
V33	21	22	22				0.380				0.380				gabo	mio		x	cont. Micas
V33	22	23	23				0.340				0.340				dbo	mio		x	cont. Micas; sl. organic

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V34	1	2	2				0.180				0.180				yebo	kva		x	
V34	2	3	3				0.070				0.070				yebo	kva		x	
V34	3	4	4				0.060				0.060				yebo	kva		x	
V34	4	5	5				0.360				0.360				yebo	kva		x	
V34	5	6	6				0.080				0.080				dbo	kva		x	
V34	6	7	7				0.050				0.050				dbo	kva		x	very pebbly
V34	7	8	8				0.270				0.270				dbo	kva		x	
V34	8	9	9				0.850				0.850				dbo	kva		x	cont. Micas
V34	9	10	10				0.760				0.760				dbo	kva		x	cont. Micas
V34	10	11	11				0.720				0.720				dbo	kva		x	cont. Micas
V34	11	12	12				0.730				0.730				dbo	kva		x	cont. Micas
V34	12	13	13				0.890				0.890				dbo	kva		x	cont. Micas
V34	13	14	14				0.780				0.780				dbo	kva		x	cont. Micas
V34	14	15	15				0.590				0.590				dbo	kva		x	cont. Micas
V34	15	16	16				0.570				0.570				dbo	kva		x	cont. Micas
V34	16	17	17				0.940				0.940				dbo	kva		x	cont. Micas
V34	17	18	18				0.670				0.670				dbo	kva		x	cont. Micas
V34	18	19	19				0.680				0.680				dbo	kva		x	cont. Micas
V34	19	20	20				0.720				0.720				dbo	kva		x	cont. Micas
V34	20	21	21				0.760				0.760				dbo	kva		x	cont. Micas
V34	21	22	22				0.750				0.750				dbo	kva		x	cont. Micas
V34	22	23	23				0.540				0.540				dbo	kva		x	cont. Micas

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V35	1	2	2	0.35		25	0.270				0.270				lbo	kva		ds	
V35	2	3	3	0.4		25	0.090				0.090				lbo	kva		ds	
V35	3	4	4	0.4		50	0.070				0.070				lbo	mio		ks	
V35	4	5	5	0.35		75	0.650	**0.282**			0.638		**281**		lyebo	mio		ks	HM
V35	5	6	6	0.35		100	1.360	**0.745**			1.154		**756**		lyebo	mio		ks	HM
V35	6	7	7	0.35		75	0.120				0.120				lyebo	mio		ks	
V35	7	8	8	0.5		75	0.130				0.130				lyebo	mio		ks	
V35	8	9	9	0.35		80	0.590	**0.332**			0.693		**540**		lyebo	mio		ks	HM
V35	9	10	10	0.35		75	0.220				0.220				lyebo	mio		ks	
V35	10	11	11	0.35		75									bo	mio		c	50% lignite
V35	11	12	12	0.04		75									babo	mio		gi	mica, silt
V35	12	13	13	0.35		50	0.750	**0.305**			0.663		**226**		ga	mio		ks	HM
V35	13	14	14	0.35		100	2.420	**1.698**			2.215		**1591**		ga	mio		ks	HM
V35	14	15	15	0.4		75	0.560	**0.042**			0.369		**204**		ga	mio		ks	
V35	15	16	16	1		100	0.490				0.490				bo	mio		gs	lignite
V35	16	17	17	0.5		25	0.220				0.220				bo	mio		gs	lignite
V35	17	18	18	0.5		50	0.280				0.280				bo	mio		gs	lignite
V35	18	19	19	0.4		50	0.310				0.310				bo	mio		gs	lignite
V35	19	20	20	0.35		75	0.360				0.360				bo	mio		gs	mica
V35	20	21	21	0.35		75	0.260				0.260				bo	mio		gs	mica
V35	21	22	22	0.3		75	0.290				0.290				bo	mio		gs	mica
V35	22	23	23	0.3		75	0.210				0.210				bo	mio		gs	mica

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V36	1	2	2	0.35		75	0.210				0.210				ga	mio		ks	
V36	2	3	3	0.35		75	0.650	**0.486**			0.865		**640**		lbo	mio		ks	HM
V36	3	4	4	0.35		75	0.970	**0.182**			0.525		**339**		lyebo	mio		ks	HM
V36	4	5	5	0.35		75	1.000	**0.859**			1.280		**919**		lyebo	mio		ks	HM
V36	5	6	6	0.35		75	1.930	**1.273**			1.741		**1531**		lyebo	mio		ks	HM
V36	6	7	7	0.35		25	0.380				0.380				lyebo	mio		ks	
V36	7	8	8	0.4		75	0.310				0.310				lyebo	mio		ks	HM
V36	8	9	9	0.5		85	0.580	**0.192**			0.537		**479**		lyebo	mio		ks	HM
V36	9	10	10	0.5		100	0.260				0.260				lyebo	mio		ks	
V36	10	11	11	0.5		100	0.340				0.340				lyebo	mio		ks	
V36	11	12	12	0.02		100									babo	mio		gi	
V36	12	13	13	0.02		100									babo	mio		gi	
V36	13	14	14	0.35		100	0.240				0.240				ga	mio		ks	
V36	14	15	15	0.35		100	0.390				0.390				ga	mio		ks	
V36	15	16	16	0.45		100	0.000				0.000				ga	mio		ks	
V36	16	17	17	1		100	0.020				0.020				lbo	mio		ks	
V36	17	18	18	0.6		100	0.420				0.420				lbo	mio		ks	
V36	18	19	19	0.35		100	0.240				0.240				bo	mio		ks	
V36	19	20	20	0.35		100	0.210				0.210				bo	mio		ks	
V36	20	21	21	0.35		100	0.240				0.240				bo	mio		ks	
V36	21	22	22	0.3		100	0.230				0.230				bo	mio		ks	
V36	22	23	23	0.25		100	0.190				0.190				bo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V37	1	2	2	0.35	5	50	0.620	**0.293**			0.649		**391**		lbo	kva		ds	
V37	2	3	3	0.35		50	0.520				0.520				lbo	kva		ds	HM
V37	3	4	4	0.35		75	0.150				0.150				lbo	mio		ks	
V37	4	5	5	0.35		100	1.700	**0.982**	1.547		1.710		**1519**		lbo	mio		ks	HM
V37	5	6	6	0.35		25	1.110	**1.281**			1.751		**1548**		lbo	mio		ks	HM
V37	6	7	7	0.35		75	0.980	**0.443**			0.817		**507**		lyebo	mio		ks	HM
V37	7	8	8	0.35		75	0.710	**0.399**			0.768		**590**		yebo	mio		ks	HM
V37	8	9	9	0.35		50	0.410				0.410				yebo	mio		ks	
V37	9	10	10	0.35		50	0.180				0.180				yebo	mio		ks	
V37	10	11	11	0.35		100	0.210				0.210				ga	mio		ks	
V37	11	12	12	0.35		50	1.290	**0.492**			0.871		**971**		ga	mio		ks	HM
V37	12	13	13	0.35		50	0.400				0.400				lyebo	mio		ks	
V37	13	14	14	0.02		100									babo	mio		gi	
V37	14	15	15	0.35		50	0.870	**0.693**			1.095		**445**		ga	mio		ks	HM
V37	15	16	16	0.35		50	2.460	**0.485**	0.800		1.009		**513**		ga	mio		ks	HM
V37	16	17	17	0.35		50	0.800	**0.730**			1.136		**536**		ga	mio		ks	HM
V37	17	18	18	0.4		50	0.480				0.480				ga	mio		ks	
V37	18	19	19	0.5		75	0.300				0.300				bo	mio		ks	
V37	19	20	20	0.5		100	0.260				0.260				bo	mio		ks	
V37	20	21	21	0.4		100	0.630	**0.474**			0.851		**418**		bo	mio		ks	
V37	21	22	22	0.35		100	0.530				0.530				bo	mio		ks	
V37	22	23	23	0.35		100	0.450				0.450				bo	mio		ks	HM

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V38	1	2	2	0.35		50	0.630	**0.356**			0.720		**532**		lbo	mio		ks	HM
V38	2	3	3	0.35		75	0.760	**0.472**			0.849		**318**		rebo	mio		ks	
V38	3	4	4	0.35		50	1.450	**1.426**			1.912		**1122**		yebo	mio		ks	HM
V38	4	5	5	0.35		100	0.600	**0.286**			0.642		**244**		lyebo	mio		ks	HM
V38	5	6	6	0.35		50	0.510				0.510				lyebo	mio		ks	HM
V38	6	7	7	0.35		50	0.570	**0.277**			0.632		**311**		lyebo	mio		ks	HM
V38	7	8	8	0.35		100	0.590	**0.242**			0.593		**330**		ga	mio		ks	HM
V38	8	9	9	0.35		75	0.480				0.480				ga	mio		ks	HM
V38	9	10	10	0.35		50	0.200				0.200				ga	mio		ks	HM
V38	10	11	11	0.35		75									babo	mio		c	50% lignite
V38	11	12	12	0.03		75									babo	mio		gi	silt, mica
V38	12	13	13																
V38	13	14	14																
V38	14	15	15																
V38	15	16	16	0.45		25	0.210				0.210				ga	mio		ks	
V38	16	17	17	1		100	0.140				0.140				ga	mio		ks	
V38	17	18	18	0.8		100	0.200				0.200				bo	mio		ks	
V38	18	19	19	0.5		100	0.100				0.100				bo	mio		ks	
V38	19	20	20	0.35		50	0.430				0.430				bo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V39	1	2	2	0.35	5	75	0.100				0.100				yebo	kva		ds	
V39	2	3	3	0.35		75	0.130				0.130				lyebo	mio		ks	
V39	3	4	4	0.35		50	0.060				0.060				lyebo	mio		ks	
V39	4	5	5	0.35		100	0.550				0.550				lyebo	mio		ks	
V39	5	6	6	0.35		75	1.170				1.170				lyebo	mio		ks	HM
V39	6	7	7	0.35		75	0.020				0.020				ga	mio		ks	
V39	7	8	8	0.35		100	0.150				0.150				ga	mio		ks	
V39	8	9	9	0.35		100	0.520				0.520				ga	mio		ks	HM
V39	9	10	10	0.35		100	0.270				0.270				ga	mio		ks	HM
V39	10	11	11	0.35		100	0.810				0.810				ga	mio		ks	HM
V39	11	12	12	0.35		100	1.500				1.500				lbo	mio		ks	HM
V39	12	13	13	0.35		100	0.530				0.530				babo	mio		ks	
V39	13	14	14	0.002		100									babo	mio		gl	silty
V39	14	15	15	0.001		80									ga	mio		gl	lignite
V39	15	16	16	0.35		80	0.630				0.630				bo	mio		ks	lignite, HM
V39	16	17	17			60	0.240				0.240				bo	mio		ks	
V39	17	18	18			80	0.770				0.770				bo	mio		ks	
V39	18	19	19			100	0.120				0.120				bo	mio		ks	
V39	19	20	20			80	0.390				0.390				bo	mio		ks	
V39	20	21	21			80	0.440				0.440				bo	mio		ks	
V39	21	22	22				0.350				0.350				bo	mio		ks	
V39	22	23	23				0.290				0.290				bo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V40	1	2	2	0.35		75	0.130				0.130				rebo	kva		ds	
V40	2	3	3	0.35		75	0.160				0.160				yebo	kva		ds	
V40	3	4	4	0.35		80	0.160				0.160				yebo	kva		ds	
V40	4	5	5	0.35		100	0.600	**0.145**			0.484		**289**		lyebo	mio		ks	
V40	5	6	6	0.35		50	0.500				0.500				lyebo	mio		ks	
V40	6	7	7	0.35		100	0.760	**0.208**			0.555		**261**		ga	mio		ks	
V40	7	8	8	0.35		100	0.480				0.480				ga	mio		ks	
V40	8	9	9	0.35		75	1.300	**1.024**			1.464		**1055**		ga	mio		ks	
V40	9	10	10	0.35		75	0.700	**0.145**			0.485		**262**		ga	mio		ks	
V40	10	11	11	0.35		100	0.110				0.110				ga	mio		ks	
V40	11	12	12	0.35		100	0.200				0.200				ga	mio		ks	
V40	12	13	13	0.35		100	0.010				0.010				gabo	mio		ks	10% lignite
V40	13	14	14	0.001		75									babo	mio		gl	
V40	14	15	15	0.35		75	0.070				0.070				ga	mio		ks	
V40	15	16	16	0.35		100	0.030				0.030				ga	mio		ks	
V40	16	17	17	0.8		100	0.150				0.150				lgabo	mio		ks	
V40	17	18	18	0.6		100	0.240				0.240				bo	mio		ks	
V40	18	19	19	0.35		100	0.120				0.120				bo	mio		gs	mica
V40	19	20	20	0.35		100	0.190				0.190				bo	mio		gs	
V40	20	21	21	0.35		100	0.140				0.140				bo	mio		gs	
V40	21	22	22	0.35		100	0.350				0.350				bo	mio		gs	
V40	22	23	23	0.35		100	0.340				0.340				bo	mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V41	1	2	2	0.35		25	0.000				0.000				bo	kva		ds	
V41	2	3	3	0.35		50	0.060				0.060				rebo	kva		ds	
V41	3	4	4	0.35		75	0.360				0.360				yebo	kva		ds	rock fragments (granite)
V41	4	5	5	0.35		50	0.450				0.450				ga	mio		ks	
V41	5	6	6	0.35		100	0.640	**0.112**			0.447		**328**		ga	mio		ks	
V41	6	7	7	0.35		100	0.320				0.320				ga	mio		ks	5% lignite
V41	7	8	8	0.35		100	0.440				0.440				ga	mio		ks	HM
V41	8	9	9	0.35		100	1.030	**0.645**			1.042		**763**		ga	mio		ks	HM
V41	9	10	10	0.35		100	0.070				0.070				lyebo	mio		ks	
V41	10	11	11	0.02		100									babo	mio		gi	
V41	11	12	12	0.35		75	1.070	**0.913**			1.341		**820**		ga	mio		ks	HM
V41	12	13	13	0.35		100	3.040	**1.728**			2.249		**1058**		ga	mio		ks	HM
V41	13	14	14	0.35		100	0.830	**0.515**			0.897		**346**		ga	mio		ks	HM
V41	14	15	15	0.35		100	3.700	**1.849**		2.401	2.401		**1407**		ga	mio		ks	HM
V41	15	16	16	0.35		75	0.350				0.350				ga	mio		ks	
V41	16	17	17	0.8		100	0.140				0.140				lbo	mio		ks	
V41	17	18	18	0.5		100	0.310				0.310				lbo	mio		ks	
V41	18	19	19	0.35		100	0.170				0.170				bo	mio		gs	mica
V41	19	20	20	0.35		100	0.200				0.200				bo	mio		gs	
V41	20	21	21	0.35		100	0.240				0.240				bo	mio		gs	
V41	21	22	22	0.35		100	0.140				0.140				bo	mio		gs	
V41	22	23	23	0.35		100	0.110				0.110				bo	mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V42	1	2	2	0.35		50	0.640	**0.204**			0.550		**542**		yebo	kva		ds	Xmet data are available measured on dry samples 191000.
V42	2	3	3	0.35		75	1.770	**0.231**		0.439	0.439		**266**		boye	mio		ks	
V42	3	4	4	0.35		75	1.110	**0.547**		1.096	1.096		**1375**		lbo	mio		ks	HM
V42	4	5	5	0.35		100	0.220			0.232	0.232				ga	mio		ks	
V42	5	6	6	0.35		75	0.620	**0.512**		0.836	0.836		**542**		ga	mio		ks	HM
V42	6	7	7	0.35		100	0.530			0.500	0.500				ga	mio		ks	HM
V42	7	8	8	0.35		100	0.370			0.414	0.414				ga	mio		ks	HM
V42	8	9	9	0.35		25	0.260			0.350	0.350				ga	mio		ks	
V42	9	10	10	0.35		65	0.200			0.266	0.266				ga	mio		ks	
V42	10	11	11	0.35		100	0.660	**0.247**		0.581	0.581		**390**		ga	mio		ks	5% lignite
V42	11	12	12			75									ba	mio		c	lignite
V42	12	13	13	0.02		100									boba	mio		gi	clay
V42	13	14	14	0.35		100	4.450	**2.819**		4.113	4.113		**1548**		dga	mio		ks	HM
V42	14	15	15	0.35		100	3.880	**3.792**		4.562	4.562		**2327**		dga	mio		ks	HM
V42	15	16	16	0.35		75		**0.000**		0.377	0.377				ga	mio		ks	
V42	16	17	17	1		100	0.540			0.233	0.233				lbo	mio		ks	
V42	17	18	18	1		100	0.690	**0.065**		0.285	0.285		**248**		bo	mio		ks	
V42	18	19	19	0.35		100	0.570			0.454	0.454				bo	mio		ks	
V42	19	20	20	0.35		100	0.430			0.445	0.445				bo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V43	1	2	2	0.35		30	0.180				0.180				lbo	kva		ds	
V43	2	3	3	0.35		40	0.030				0.030				yebo	kva		ds	
V43	3	4	4	0.35		75	0.040				0.040				ga	mio		ks	
V43	4	5	5	0.35		50	0.360				0.360				ga	mio		ks	HM
V43	5	6	6	0.35		75	0.420				0.420				ga	mio		ks	HM
V43	6	7	7	0.35		75	0.210				0.210				ga	mio		ks	
V43	7	8	8	0.35		100	0.070				0.070				ga	mio		ks	
V43	8	9	9	0.35		100	0.230				0.230				ga	mio		ks	
V43	9	10	10	0.35		75	0.180				0.180				ga	mio		ks	
V43	10	11	11	0.35		100	0.000				0.000				ga	mio		ks	
V43	11	12	12	0.35		100	0.240				0.240				ga	mio		ks	
V43	12	13	13	0.35		75	0.090				0.090				ga	mio		ks	
V43	13	14	14	0.35		100	0.400				0.400				lbo	mio		ks	5 cm clay seam
V43	14	15	15	0.35		75	0.080				0.080				bo	mio		c	50% lignite
V43	15	16	16	0.03		75	0.360				0.360				ba	mio		gi	organic rich clay
V43	16	17	17	0.35		75	0.600	**0.692**			1.095		**450**		ga	mio		ks	clay seam, HM
V43	17	18	18	0.4		50	0.020				0.020				ga	mio		ks	clay seam
V43	18	19	19	0.4		100	0.020				0.020				bo	mio		ks	
V43	19	20	20	0.8		100	0.000				0.000				bo	mio		ks	
V43	20	21	21	0.35		75	0.130				0.130				bo	mio		ks	
V43	21	22	22	0.35		100	0.220				0.220				bo	mio		ks	
V43	22	23	23	0.35		100	0.190				0.190				bo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V44	1	2	2	0.35		30	0.210				0.210				bo	kva		ds	10% clay seam
V44	2	3	3	0.35	1	100	0.150				0.150				ga	kva		ds	
V44	3	4	4	0.35		35	0.070				0.070				ga	kva		ds	
V44	4	5	5	0.35		100	0.670	**0.473**			0.850		**360**		ga	mio		ks	
V44	5	6	6	0.35		100	0.860	**0.515**			0.897		**509**		ga	mio		ks	
V44	6	7	7	0.35		100	0.110				0.110				ga	mio		ks	
V44	7	8	8	0.35		100	0.470				0.470				ga	mio		ks	
V44	8	9	9	0.35		75	0.530				0.530				ga	mio		ks	
V44	9	10	10	0.35		50	0.940	**1.227**			1.690		**1138**		ga	mio		ks	
V44	10	11	11	0.35		100	0.570	**0.364**			0.729		**618**		ga	mio		ks	
V44	11	12	12	0.35		100	0.890	**0.730**			1.137		**594**		ga	mio		ks	
V44	12	13	13	0.35		50	1.090	**1.520**			2.017		**1187**		ga	mio		ks	
V44	13	14	14	0.35		75	0.330				0.330				ga	mio		ks	
V44	14	15	15	0.35		75	0.540				0.540				ga	mio		ks	
V44	15	16	16	0.35		75	0.270				0.270				ga	mio		ks	
V44	16	17	17	0.35		75	0.170				0.170				ga	mio		ks	
V44	17	18	18	0.35		75	0.160				0.160				ga	mio		ks	
V44	18	19	19	0.35		75	0.100				0.100				ga	mio		ks	
V44	19	20	20	0.04		100	0.050				0.050				babo	mio		gi	clay and lignite
V44	20	21	21	0.04		100									dbo	mio		gi	clay and lignite
V44	21	22	22	0.35		100									lbo	mio		ks	10% clay seam
V44	22	23	23	0.35		100	0.740	**0.763**			1.173		**479**		ga	mio		ks	20% lignite
V44	23	24	24	0.35		100	0.230				0.230				ga	mio		ks	
V44	24	25	25	0.35		75	0.210				0.210				ga	mio		ks	
V44	25	26	26												bo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V45	1	2	2	0.35		40	0.060				0.060				lbo	kva		ds	
V45	2	3	3	0.35	5	40	0.050				0.050				lbo	kva		ds	
V45	3	4	4	0.35	5	50	0.160				0.160				lbo	kva		ds	
V45	4	5	5	0.35		75	0.420				0.420				lbo	kva		ds	
V45	5	6	6	0.35	10	75	0.040				0.040				lbo	kva		ds	
V45	6	7	7	1	10	75	0.230				0.230				lbo	kva		ds	
V45	7	8	8	0.8	10	75	0.150				0.150				lbo	kva		ds	
V45	8	9	9	0.35		100	0.040				0.040				ga	mio		ks	(HM)
V45	9	10	10	0.35		45	0.120				0.120				ga	mio		ks	(HM)
V45	10	11	11	0.35		100	0.300				0.300				ga	mio		ks	(HM)
V45	11	12	12	0.35		100	0.130				0.130				ga	mio		ks	(HM)
V45	12	13	13	0.35		100	0.060				0.060				ga	mio		ks	(HM)
V45	13	14	14	1		100	0.220				0.220				boga	mio		ks	(HM)
V45	14	15	15	0.35		100	0.040				0.040				ga	mio		ks	(HM)
V45	15	16	16	0.35		100	0.010				0.010				ga	mio		ks	(HM)
V45	16	17	17	0.35		100	0.140				0.140				ga	mio		ks	(HM)
V45	17	18	18	1		40	0.080				0.080				yega	mio		ks	(HM)
V45	18	19	19	0.5		100	0.570	**0.000**			0.570		**175**		dgabo	mio		ks	10% lignite (very hard)
V45	19	20	20	0.7		30	0.880	**0.051**			0.379		**204**		dgabo	mio		ks	40% lignite (very hard)

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V46	1	2	2	0.5		75	0.210				0.210				yebo	kva		ds	cont. gravel
V46	2	3	3	0.5		75	0.050				0.050				yebo	kva		ds	cont. gravel
V46	3	4	4	0.5		75	0.030				0.030				yebo	kva		ds	cont. gravel
V46	4	5	5	0.5		100	0.130				0.130				yebo	kva		ds	cont. gravel
V46	5	6	6	0.5		75	0.160				0.160				yebo	kva		ds	cont. gravel
V46	6	7	7	0.5		100	0.100				0.100				yebo	kva		ds	cont. gravel
V46	7	8	8	0.5		100	0.150				0.150				lga	mio		ks	
V46	8	9	9	0.5		100	0.330				0.330				lga	mio		ks	
V46	9	10	10	0.5		100	0.200				0.200				lga	mio		ks	
V46	10	11	11	0.5		100	0.530				0.530				lga	mio		ks	
V46	11	12	12	0.35		50	0.060				0.060				gabo	mio		c	40% lignite
V46	12	13	13	1		75	0.190				0.190				gabo	mio		c	40% lignite & clay
V46	13	14	14	0.35		100	0.460				0.460				gabo	mio		c	50% lignite & clay
V46	14	15	15	0.35		100	0.790	**0.577**			0.966		**539**		lga	mio		ks	
V46	15	16	16	0.35		100	0.590	**0.703**			1.106		**595**		lga	mio		ks	
V46	16	17	17	1		100	0.040				0.040				dbo	mio		ks	
V46	17	18	18	1		75	0.160				0.160				dbo	mio		ks	
V46	18	19	19	1		75	0.130				0.130				dbo	mio		ks	
V46	19	20	20	1		75	0.280				0.280				dbo	mio		ks	
V46	20	21	21	1		50	0.190				0.190				dbo	mio		ks	
V46	21	22	22	1		50	0.140				0.140				dbo	mio		ks	< 5% clay
V46	22	23	23	1		100	0.240				0.240				dbo	mio		ks	< 5% clay

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V47	1	2	2	0.35		100	0.140				0.140				yebo	kva		ds	cont. gravel
V47	2	3	3	0.5		100	0.000				0.000				bo	kva		ds	cont. gravel
V47	3	4	4	0.4		50	0.000				0.000				boga	kva		ds	cont. gravel
V47	4	5	5	0.35		50	0.000				0.000				yebo	kva		ds	cont. gravel
V47	5	6	6	0.35		50	0.040				0.040				yebo	kva		ds	cont. gravel
V47	6	7	7	0.5		75	0.230				0.230				lga	kva		ks	
V47	7	8	8	1		100	0.180				0.180				lga	mio		ks	
V47	8	9	9	1		75	0.050				0.050				lga	mio		ks	
V47	9	10	10	0.35		75	0.300				0.300				lga	mio		ks	
V47	10	11	11	0.35		100	0.370				0.370				lga	mio		ks	
V47	11	12	12	0.35		50	0.200				0.200				lga	mio		ks	
V47	12	13	13	0.35		50	0.110				0.110				lga	mio		ks	
V47	13	14	14	0.35		100	0.200				0.200				lga	mio		ks	
V47	14	15	15	0.35		50	0.000				0.000				lga	mio		ks	
V47	15	16	16	0.35		100	0.080				0.080				lga	mio		ks	5% lignite
V47	16	17	17	0.5		100	0.150				0.150				lga	mio		ks	< 5% lignite & clay
V47	17	18	18	0.35		100	0.040				0.040				ga	mio		ks	
V47	18	19	19	0.2		100	0.700	**0.975**			1.409		**1150**		dboga	mio		gs	cont. mica
V47	19	20	20	0.2		100	0.550	**1.025**			1.466		**1336**		dboga	mio		gs	cont. mica
V47	20	21	21	0.2		60	0.400				0.400				dboga	mio		gs	cont. mica
V47	21	22	22	0.2		60	0.460				0.460				dboga	mio		gs	cont. mica
V47	22	23	23	0.2		100	0.130				0.130				dboga	mio		gs	cont. mica

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V48	1	2	2	0.35		25	0.540				0.540				boga	mio		ks	
V48	2	3	3	0.35		100	0.300				0.300				yebo	mio		ks	5% lignite
V48	3	4	4	0.35		100	0.080				0.080				ga	mio		ks	< 5% lignite
V48	4	5	5	0.35		85	0.550				0.550				dga	mio		ks	20% lignite
V48	5	6	6	0.35		50	0.000				0.000				lga	mio		ks	
V48	6	7	7	0.35		100	0.000				0.000				lga	mio		ks	
V48	7	8	8	0.35		100	0.000				0.000				lga	mio		ks	
V48	8	9	9	0.35		65	0.490				0.490				yebo	mio		ks	
V48	9	10	10	0.35		100	0.560	**0.322**			0.682		**285**		ga	mio		ks	
V48	10	11	11	0.35		100	0.470				0.470				ga	mio		ks	
V48	11	12	12	0.35		100	0.120				0.120				lga	mio		ks	
V48	12	13	13	0.35		100	0.080				0.080				lga	mio		ks	
V48	13	14	14	0.35		100	0.270				0.270				lga	mio		ks	
V48	14	15	15	0.35		100	0.380				0.380				lga	mio		ks	
V48	15	16	16	0.35		100	0.090				0.090				lga	mio		ks	
V48	16	17	17	0.35		100	0.180				0.180				ga	mio		ks	5% lignite
V48	17	18	18	0.02		75	0.560				0.560				dbo	mio		c	50% lignite
V48	18	19	19	0.35		100	0.060				0.060				ga	mio		ks	15% lignite
V48	19	20	20	0.35		100	0.740	**0.764**			1.175		**628**		bo	mio		ks	10% lignite
V48	20	21	21	0.35		25	0.020				0.020				bo	mio		ks	
V48	21	22	22	0.35		25	0.050				0.050				bo	mio		ks	
V48	22	23	23	0.35		100	0.170				0.170				bo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V49	0	1	1	0.3		25							1		bo	kva		ds	
V49	1	2	2	0.35		60									lyebo	kva		ds	
V49	2	3	3	0.4		100									yebo	kva		ds	
V49	3	4	4	0.35		100									yebo	kva		ds	
V49	4	5	5	0.35		100									yebo	kva		ds	
V49	5	6	6	0.4		100	0.100				0.100				lyebo	mio	odf	ks	(HM)
V49	6	7	7	0.45		50	0.047				0.047				gaye	mio	odf	ks	
V49	7	8	8	0.45		80	0.125				0.125				lgaye	mio	odf	ks	
V49	8	9	9	0.45		100	0.103				0.103				lgaye	mio	odf	ks	HM
V49	9	10	10	0.45		100	0.105				0.105				lgaye	mio	odf	ks	(HM)
V49	10	11	11	0.45		100	0.043				0.043				lgabo	mio	odf	ks	
V49	11	12	12	0.03		100	0.095				0.095				babo	mio	odf	gi	30% lignite, silt dominates clastics
V49	12	13	13	0.01		100									dbo	mio	odf	gi	mica-clay-silt
V49	13	14	14	0.3		100	0.409				0.409				lgabo	mio	odf	ks	HM
V49	14	15	15	0.4		100	0.402				0.402				lgabo	mio	odf	ks	HM
V49	15	16	16	0.45		100	0.170				0.170				lbo	mio	odf	ks	5% lign.
V49	16	17	17	0.6		100	0.058				0.058				lbo	mio	odf	ks	HM
V49	17	18	18	0.45		100	0.071				0.071				lbo	mio	odf	ks	(HM)
V49	18	19	19	0.45		100	0.072				0.072				lbo	mio	odf	ks	
V49	19	20	20	0.4		100	0.189				0.189				lbo	mio	odf	ks	
V49	20	21	21	0.4		100	0.230				0.230				lbo	mio	odf	ks	
V49	21	22	22	0.4		100	0.115				0.115				lbo	mio	odf	ks	5 % clay lam.
V49	22	23	23	0.4		100	0.024				0.024				lbo	mio	odf	ks	mica
V49	23	24	24	0.4		100	0.127				0.127				lbo	mio	odf	ks	mica
V49	24	25	25	0.4		100	0.123				0.123				lbo	mio	odf	ks	mica
V49	25	26	26	0.3		100	0.158				0.158				lgabo	mio	odf	ks	5 cm clay/silt layer

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V50	0	1	1	0.35		30									lbo	kva		ds	Have´nt yet been measured with x-met 120700
V50	1	2	2	0.4		50									lyebo	kva		ds	
V50	2	3	3	0.35		70									lrebo	kva		ds	
V50	3	4	4	0.35		100									lrebo	kva		ds	
V50	4	5	5	0.35		100									lrebo	kva		ds	
V50	5	6	6	0.4	5	60									lrebo	kva		ds	
V50	6	7	7	0.45		65	0.067				0.067				yega	mio	odf	ks	
V50	7	8	8	0.45		100	0.106				0.106				ga	mio	odf	ks	
V50	8	9	9	0.45		70	0.110				0.110				ga	mio	odf	ks	(HM)
V50	9	10	10	0.45		70	0.188				0.188				ga	mio	odf	ks	
V50	10	11	11	0.45		100	0.095				0.095				boga	mio	odf	ks	(HM)
V50	11	12	12	0.35		100	0.000				0.000				gabo	mio	odf	ks	lignite 30%, HM
V50	12	13	13	0.01		90	0.238				0.238				boba	mio	odf	ks	HM
V50	13	14	14	0.4		90	0.445				0.445				gabo	mio	odf	ks	10% lign, HM
V50	14	15	15	0.4		75	0.420				0.420				ga	mio	odf	ks	HM
V50	15	16	16	0.55	5	75	0.161				0.161				lgabo	mio	odf	ks	
V50	16	17	17	0.5		100	0.266				0.266				gabo	mio	odf	ks	
V50	17	18	18	0.45		100	0.193				0.193				gabo	mio	odf	ks	
V50	18	19	19	0.4		100	0.126				0.126				gabo	mio	odf	ks	
V50	19	20	20	0.45		100	0.167				0.167				gabo	mio	odf	ks	
V50	20	21	21	0.5		100	0.278				0.278				gabo	mio	odf	ks	
V50	21	22	22	0.5		100	0.182				0.182				gabo	mio	odf	ks	organic rich clay lam.
V50	22	23	23	0.5		100	0.118				0.118				gabo	mio	odf	ks	
V50	23	24	24	0.5		100	0.139				0.139				gabo	mio	odf	ks	lignite 2%
V50	24	25	25	0.5		100	0.316				0.316				gabo	mio	odf	ks	lignite 2%
V50	25	26	26	0.5		100	0.057				0.057				lgabo	mio	odf	ks	5 cm mica silt

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V51	0	1	1	0.35		10									bo	kva		ds	Have´nt yet been measured with x-met 120700
V51	1	2	2	0.35		25									lbo	kva		ds	
V51	2	3	3	0.35		70									lbore	kva		ds	
V51	3	4	4	0.4		50									lbore	kva		ds	
V51	4	5	5	0.5	2	60									lbore	kva		ds	wind polished rocks
V51	5	6	6	0.5	3	40									lboye	kva		ds	chert
V51	6	7	7	0.45		40	0.102				0.102				lboga	mio	odf	ks	(HM)
V51	7	8	8	0.45		100	0.135				0.135				ga	mio	odf	ks	(HM)
V51	8	9	9	0.45		75	0.050				0.050				ga	mio	odf	ks	
V51	9	10	10	0.45		100	0.073				0.073				ga	mio	odf	ks	
V51	10	11	11	0.45		100	0.154				0.154				ga	mio	odf	ks	(HM)
V51	11	12	12	0.5		70	0.130				0.130				ga	mio	odf	ks	
V51	12	13	13	0.45		70	0.104				0.104				ga	mio	odf	ks	
V51	13	14	14	0.45		100	0.131				0.131				lboga	mio	odf	ks	3% lignite, HM
V51	14	15	15	0.02		100									babo	mio	odf	gi	50% lignite
V51	15	16	16	0.02		100									dbo	mio	odf	gi	HM, clay.
V51	16	17	17	0.4		70	0.105				0.105				lvga	mio	odf	ks	HM
V51	17	18	18	0.4		60	0.171				0.171				lvga	mio	odf	ks	
V51	18	19	19	0.55		60	0.063				0.063				lbo	mio	odf	ks	
V51	19	20	20	0.6		100	0.113				0.113				lbo	mio	odf	ks	
V51	20	21	21	0.4		75	0.187				0.187				lbo	mio	odf	ks	mica
V51	21	22	22	0.4		100	0.230				0.230				lbo	mio	odf	ks	mica
V51	22	23	23	0.4		100	0.213				0.213				lbo	mio	odf	ks	mica
V51	23	24	24	0.4		75	0.264				0.264				lbo	mio	odf	ks	mica
V51	24	25	25	0.4		75	0.160				0.160				lbo	mio	odf	ks	mica silt laminae
V51	25	26	26	0.4		100	0.111				0.111				lbo	mio	odf	ks	mica silt laminae

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V52	0	1	1	0.15	5	65									lyebo	kva		ds	Haven't yet been measured with x-met 120700
V52	1	2	2	0.15	5	65									lyebo	kva		ds	
V52	2	3	3	0.15	3	100									lgabo	kva		ds	
V52	3	4	4	0.15	3	100									lgabo	kva		ds	
V52	4	5	5	0.15		100									lgaye	kva		ds	
V52	5	6	6	0.15		100									lgaye	kva		ds	(HM)
V52	6	7	7	0.15		100									lgaye	kva		ds	HM
V52	7	8	8	0.15		100	0.213				0.213				lgaye	mio		ks	HM
V52	8	9	9	0.15		100	0.096				0.096				ga	mio		ks	HM
V52	9	10	10	0.15		65	0.416				0.416				ga	mio		ks	
V52	10	11	11	0.25		40	0.161				0.161				ga	mio		ks	HM
V52	11	12	12	0.25		20	0.078				0.078				lbo	mio		ks	(HM)
V52	12	13	13	0.002		40	0.241				0.241				lbo	mio		gl	si/ lignite
V52	13	14	14	0.002		65	0.117				0.117				lbo	mio		gl	clay/ lignite ½ m clay
V52	14	15	15	0.25		100	0.373				0.373				lbo	mio		ks	20% lignite
V52	15	16	16	0.4		70									babo	mio		ks	bituminous
V52	16	17	17	0.4		70	0.432				0.432				ga	mio		ks	5% silt lamina, HM
V52	17	18	18	0.4		70	0.245				0.245				lbo	mio		ks	HM
V52	18	19	19	0.55		75	0.215				0.215				lbo	mio		ks	3% lignite, (HM), pebbly gravelly
V52	19	20	20	0.25		100	0.079				0.079				lbo	mio		ks	
V52	20	21	21	0.15		100	0.227				0.227				lgabo	mio		ks	(HM)
V52	21	22	22	0.2		65	0.228				0.228				lgabo	mio		ks	
V52	22	23	23	0.25		65	0.129				0.129				lgabo	mio		ks	
V52	23	24	24	0.2		65	0.175				0.175				lgabo	mio		ks	(HM)
V52	24	25	25	0.15		65	0.178				0.178				lgabo	mio		ks	sand/silt
V52	25	26	26	0.15		65	0.178				0.178				lgabo	mio		ks	clayey sand

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V53	0	1	1	0.15	3	60	0.060				0.060				rebo	kva		ds	few pebbles
V53	1	2	2	0.15	1	80	0.100				0.100				lyebo	kva		ds	
V53	2	3	3	0.15	5	60	0.240				0.240				lboga	kva		ds	
V53	3	4	4	0.15		85	0.170				0.170				bo	kva		ds	
V53	4	5	5	0.2	5	85	0.530				0.530				yebo	kva		ds	mostly sand with a large portion of coarse grained material
V53	5	6	6	0.2	2	60	1.100	**0.455**			0.830		**752**		ga	kva		ds	
V53	6	7	7	0.15		60	0.770	**0.199**			0.545		**365**		ga	kva		ds	
V53	7	8	8	0.15		100	0.340				0.340				ga	kva		ds	
V53	8	9	9	0.2		40	1.410	**1.329**			1.804		**1105**		ga	kva		ds	Few gravel size clasts, some chert
V53	9	10	10				.				.				ga	kva		ds	poorly sorted, chert coarse sand and organic matter.
V53	10	11	11	0.25		60	0.380				0.380				ga	kva		ds	lignite poorly, sorted
V53	11	12	12	0.2		100	0.770	**0.660**			1.059		**618**		boga	mio		ks	laminated lignite and sand
V53	12	13	13	0.2		100	0.660	**0.456**			0.831		**418**		boga	mio		ks	
V53	13	14	14	0.2		100	1.950	**0.686**		1.296	1.296		**407**		ga	mio		ks	
V53	14	15	15	0.2		70	8.780	**4.426**		5.131	5.131		**1852**		dga	mio		ks	HM redeposited org. Matter
V53	15	16	16	0.25		100	1.530	**0.346**			0.709		**623**		boga	mio		ks	
V53	16	17	17	0.5	5	100	0.960	**0.000**			0.960		**192**		ga	mio		ks	
V53	17	18	18	0.5	20	100	1.920	**0.358**			0.722		**760**		ga	mio		ks	pebbles
V53	18	19	19	0.25	2	100	0.250				0.250				lboga	mio		ks	
V53	19	20	20	0.25		100	0.470				0.470				lboga	mio		ks	
V53	20	21	21	0.25		100	0.600	**0.114**			0.450		**413**		lboga	mio		gs	micaceous
V53	21	22	22	0.2		100	0.490				0.490				lboga	mio		gs	organic matter
V53	22	23	23	0.15		35	0.540				0.540				ga	mio		gs	organic matter

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V54	0	1	1	0.4	3	25	0.310				0.310				gabo	kva		ds	
V54	1	2	2	0.4		40	0.250				0.250				lyega	kva		ds	
V54	2	3	3	0.35		60	0.100				0.100				lyega	kva		ds	
V54	3	4	4	0.4	2	100	0.060				0.060				lyega	kva		ds	
V54	4	5	5	0.4		100	0.170				0.170				lyega	kva		ds	
V54	5	6	6	0.4		100	0.260				0.260				lyebo	kva		ds	
V54	6	7	7	0.45	5	70	0.730	**0.400**			0.769		**741**		lyebo	kva/mio		ks	(HM), windpolished rocks
V54	7	8	8	0.4		100	0.460				0.460				gabo	mio	odf	ks	HM
V54	8	9	9	0.35		70	0.350				0.350				gabo	mio	odf	ks	
V54	9	10	10	0.4		40	0.320				0.320				gabo	mio	odf	ks	
V54	10	11	11	0.3		30	0.230				0.230				gabo	mio	odf	ks	
V54	11	12	12	0.35		70									babo	mio	odf	ks	lignite 50%
V54	12	13	13	0.01		100									boba	mio	odf	gi	lignite 50%
V54	13	14	14	0.01		100									babo	mio	odf	gi	
V54	14	15	15	0.35		100	0.400				0.400				ga	mio	odf	ks	HM
V54	15	16	16	0.4		100	2.500	**1.381**	1.601		1.761		**852**		gabo	mio	odf	ks	HM + 5% lignite
V54	16	17	17	0.5		100	0.570	**0.331**			0.692		**484**		gabo	mio	odf	ks	(HM) + 1% lignite
V54	17	18	18	0.8	3	100	0.130				0.130				lgabo	mio	odf	ks	
V54	18	19	19	0.35	5	70	0.120				0.120				lgabo	mio	odf	ks	
V54	19	20	20	0.35		100	0.520				0.520				ga	mio	odf	ks	
V54	20	21	21	0.35		100	0.460				0.460				ga	mio	odf	ks	
V54	21	22	22	0.35		70	0.080				0.080				ga	mio	odf	ks	
V54	22	23	23	0.35		100	0.210				0.210				ga	mio	odf	ks	(HM)
V54	23	24	24	0.35		100	0.260				0.260				ga	mio	odf	ks	(HM)
V54	24	25	25	0.35		100	0.580	**0.080**			0.412		**217**		lgabo	mio	odf	ks	(HM)
V54	25	26	26	0.35		100	0.220				0.220				lgabo	mio	odf	ks	black mica silt laminae

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V55	0	1	1	0.4	5	25	0.250				0.250				lrebo	kva		ds	1/2 m clay till, kvartz gravel
V55	1	2	2	0.4		40	0.280				0.280				lyebo	mio	odf	ks	
V55	2	3	3	0.4		50	0.400				0.400				lgabo	mio	kva	ks	
V55	3	4	4	0.4		100	0.410				0.410				lgabo	mio	odf	ks	
V55	4	5	5	0.35		100	0.840	**0.409**			0.779		**566**		lga	mio	odf	ks	
V55	5	6	6	0.35		100	0.890	**0.434**			0.807		**533**		lgabo	mio	odf	ks	
V55	6	7	7	0.35		100	0.360				0.360				lga	mio	odf	ks	
V55	7	8	8	0.35		75	0.770	**0.344**			0.706		**455**		lga	mio	odf	ks	
V55	8	9	9	0.45		100	0.260				0.260				lga	mio	odf	ks	
V55	9	10	10	0.4		100	0.300				0.300				lgabo	mio	odf	ks	
V55	10	11	11	0.45		100	0.440				0.440				lgabo	mio	odf	ks	
V55	11	12	12	0.35		70	0.620	**0.164**			0.506		**305**		lgabo	mio	odf	ks	
V55	12	13	13	0.35		100	0.970	**0.349**			0.712		**469**		lga	mio	odf	ks	
V55	13	14	14	0.35		100	1.170	**0.065**			0.396		**152**		lga	mio	odf	ks	
V55	14	15	15	0.4		40	0.330				0.330				lga	mio	odf	ks	
V55	15	16	16	0.4		50	0.410				0.410				lga	mio	odf	ks	10% lignite
V55	16	17	17	0.03		100	0.460				0.460				boba	mio	odf	gi	bitumi silt (½m) sample contains some medium sand too.
V55	17	18	18	0.03		40	0.650	**0.546**			0.932		**624**		lga	mio	odf	gi	
V55	18	19	19	0.35		100	2.030	**0.879**	1.403		1.575		**711**		ga	mio	odf	ks	HM
V55	19	20	20	0.35		100	1.310	**0.838**			1.257		**655**		lgabo	mio	odf	ks	HM
V55	20	21	21	0.35		100	1.850	**2.487**	2.976		3.051		**1343**		lgabo	mio	odf	ks	
V55	21	22	22	0.35		100	0.020				0.020				lgabo	mio	odf	ks	
V55	22	23	23	0.35		100	0.770	**0.395**			0.764		**434**		lgabo	mio	odf	ks	
V55	23	24	24	0.45		100	1.850	**0.455**	0.943		1.144		**870**		lgabo	mio	odf	ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V56	0	1	1	1.9		20	0.290				0.290				lrebo	kva		ds	
V56	1	2	2	1.25		20	0.150				0.150				yebo	kva		ds	
V56	2	3	3	2		50	0.270				0.270				lyebo	kva		ds	
V56	3	4	4	0.25		25	0.400				0.400				gabo	kva		ds	
V56	4	5	5	0.4		50	0.350				0.350				lyebo	kva		ds	
V56	5	6	6	0.35		75	0.160				0.160				ga	mio		ks	
V56	6	7	7	0.4		100	0.490				0.490				ga	mio		ks	HM
V56	7	8	8	0.3		100	1.070	**0.601**			0.993		**816**		ga	mio		ks	HM
V56	8	9	9	0.25		100	0.520				0.520				ga	mio		ks	HM
V56	9	10	10	0.3		60	0.250				0.250				ga	mio		ks	
V56	10	11	11	0.35		70	0.420				0.420				ga	mio		ks	HM
V56	11	12	12	0.35		70	0.460				0.460				lrebo	mio		ks	
V56	12	13	13	0.4		70	0.450				0.450				ga	mio		ks	
V56	13	14	14	0.3		70	0.410				0.410				ga	mio		ks	HM
V56	14	15	15	0.25		70	0.390				0.390				ga	mio		ks	HM
V56	15	16	16	0.4		70	0.520				0.520				ga	mio		ks	HM
V56	16	17	17	0.4		70	0.730	**0.356**			0.720		**569**		ga	mio		ks	HM
V56	17	18	18	0.3		70	0.420				0.420				ga	mio		ks	HM
V56	18	19	19	0.25		40	0.350				0.350				ga	mio		ks	
V56	19	20	20	0.02		40	0.000				0.000				dbo	mio		gi	lignite
V56	20	21	21	0.02		40	0.410				0.410				boba	mio		gi	lignite
V56	21	22	22	0.35		70	0.900	**1.324**			1.799		**676**		gabo	mio		ks	clay layers
V56	22	23	23	0.45		70	0.020				0.020				lbo	mio		ks	
V56	23	24	24	0.7		30	0.030				0.030				lbo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V57	0	1	1	0.35			0.000				0.000				lyebo	kva		ds	
V57	1	2	2	0.5			0.030				0.030				lyebo	kva		ds	
V57	2	3	3	0.9			0.000				0.000				lyebo	kva		ds	
V57	3	4	4	0.9			0.030				0.030				lyebo	kva		ds	
V57	4	5	5	0.35			0.080				0.080				lyebo	kva		ds	
V57	5	6	6	0.8			0.090				0.090				lyebo	kva		ds	
V57	6	7	7	0.35			0.180				0.180				lyebo	kva		ds	
V57	7	8	8	0.35			0.120				0.120				lyebo	kva		ds	
V57	8	9	9	0.35			0.090				0.090				lyebo	kva		ds	
V57	9	10	10	0.4			0.090				0.090				lyebo	kva		ds	
V57	10	11	11	0.45			0.160				0.160				lyebo	kva		ds	
V57	11	12	12	0.35			0.130				0.130				lyebo	kva		ds	
V57	12	13	13	0.6			0.100				0.100				lyebo	kva		ds	
V57	13	14	14	0.7			0.210				0.210				lyebo	kva		ds	
V57	14	15	15	0.9			0.100				0.100				lyebo	kva		ds	
V57	15	16	16	0.9			0.100				0.100				lyebo	kva		ds	
V57	16	17	17	0.25			0.080				0.080				lyebo	kva		ds	driling stopped on a stone

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V58	0	1	1	0.5		70	0.160				0.160				yega	kva		ds	yellowish gray, pebbly
V58	1	2	2	0.4		70	0.190				0.190				yega	kva		ds	yellowish gray, pebbly
V58	2	3	3	0.5		70	0.160				0.160				ye	kva		ds	yellowish white, pebbly
V58	3	4	4	0.4		70	0.160				0.160				ye	kva		ds	yellowish white
V58	4	5	5	0.3		70	0.270				0.270				ye	kva		ds	yellowish white, boulder
V58	5	6	6	0.35		70	0.210				0.210				ye	kva		ds	yellowish white
V58	6	7	7	0.35		70	0.140				0.140				ye	kva		ds	yellowish white, rock fragm/boulder
V58	7	8	8	0.35		70	0.110				0.110				ye	kva		ds	yellowish white
V58	8	9	9	0.4		40	0.090				0.090				ye	kva		ds	yellowish white
V58	9	10	10	0.45		100	0.110				0.110				ye	kva		ds	yellowish white
V58	10	11	11	0.45		70	0.100				0.100				ye	kva		ds	yellowish white
V58	11	12	12	0.35		30	0.220				0.220				ye	kva		ds	yellowish white
V58	12	13	13	0.45		70	0.060				0.060				ye	kva		ds	yellowish white, rock fragm/boulder
V58	13	14	14	1.25		70	1.510	**0.833**	1.426		1.596		**1076**		ye	kva		ds	yellowish white, rock fragm/boulder
V58	14	15	15	0.45		100	0.480				0.480				wi	mio		ks	white, HM
V58	15	16	16	0.4		100	0.780	**0.634**			1.030		**834**		wi	mio		ks	white, rockfragm.
V58	16	17	17	0.35		15									wi	mio		ks	white, rockfragm.
V58	17	18	18			0										mio		ks	no recovery
V58	18	19	19			0	0.990				0.990					mio		ks	no recovery
V58	19	20	20	0.5		70	0.260				0.260				wiga	mio		ks	white/gray, HM
V58	20	21	21	0.5		70									wiga	mio		ks	white/gray, HM
V58	21	22	22			5										mio			no recovery
V58	22	23	23			5										mio			no recovery
V58	23	24	24	0.01		5									mbo	mio		gi	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V59	0	1	1	0.35		35									yega	kva		ds	yellowish gray
V59	1	2	2	0.35	5	65									yega	kva		ds	yellowish gray
V59	2	3	3	0.4		40									yega	kva		ds	yellowish gray
V59	3	4	4	0.4	3	65									yega	kva		ds	yellowish gray
V59	4	5	5	0.45	5	70									yega	kva		ds	yellowish gray
V59	5	6	6	1.25	10	65									yega	kva		ds	yellowish gray
V59	6	7	7	0.4	7	100									yega	kva		ds	yellowish gray
V59	7	8	8	0.4	5	70									yega	kva		ds	yellowish gray
V59	8	9	9	0.45	5	100									yega	kva		ds	yellowish gray
V59	9	10	10	2	5	40									yega	kva		ds	yellowish gray
V59	10	11	11	2	5	65									yega	kva		ds	yellowish gray
V59	11	12	12	2	15	15									yega	kva		ds	yellowish gray
V59	12	13	13	0.4		20	0.000				0.000	0		0	wi	mio		ks	white, lot of pollution
V59	13	14	14	0.4		35	0.000				0.000	0		0	wi	mio		ks	white, lot of pollution
V59	14	15	15	0.5		40	0.000				0.000	0		0	wi	mio		ks	white, lot of pollution
V59	15	16	16	0.9		65	0.000				0.000	0		0	wi	mio		ks	white, HM
V59	16	17	17	0.45		70	0.022				0.022	0		0	wi	mio		ks	white, HM
V59	17	18	18	0.5		15	0.086				0.086	59		59	wi	mio		ks	white
V59	18	19	19	0.4		20	0.112				0.112	37		37	wi	mio		ks	white
V59	19	20	20	0.4		100	0.389				0.389	343		343	wi	mio		ks	white
V59	20	21	21	0.35		65									wi	mio		ks	white

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V60	0	1	1	0.5		40	0.030				0.030				yega	kva		ds	yellowgray
V60	1	2	2	1.6		40	0.050				0.050				yega	kva		ds	yellowgray
V60	2	3	3	1.6		70	0.110				0.110				yega	kva		ds	yellowgray
V60	3	4	4	0.5		40	0.160				0.160				yega	kva		ds	yellowgray
V60	4	5	5	0.5		70	0.110				0.110				yega	kva		ds	yellowgray
V60	5	6	6	0.5		40	0.240				0.240				yega	kva		ds	yellowgray
V60	6	7	7	0.5		40	0.200				0.200				yega	kva		ds	yellowgray
V60	7	8	8	0.5		35	0.080				0.080				yega	kva		ds	yellowgray
V60	8	9	9	0.5		40	0.030				0.030				yega	kva		ds	yellowgray
V60	9	10	10	0.5		60	0.050				0.050				yega	kva		ds	yellowgray
V60	10	11	11	0.5		90	0.060				0.060				yega	kva		ds	yellowgray
V60	11	12	12	0.2		60	0.150				0.150				yega	kva		ds	yellowgray
V60	12	13	13	0.45		100	0.420				0.420				wi	mio		ks	white
V60	13	14	14	0.5		40	0.020				0.020				wi	mio		ks	white
V60	14	15	15	0.5		15	0.140				0.140				wi	mio		ks	white
V60	15	16	16	0.45		35	0.140				0.140				wi	mio		ks	white
V60	16	17	17												wi	mio		ks	white
V60	17	18	18	0.45		60	0.450				0.450				wi	mio		ks	white
V60	18	19	19	0.4		100	0.390				0.390				wi	mio		ks	white
V60	19	20	20	0.35		100	0.780	**0.311**			0.669		**480**		wi	mio		ks	white
V60	20	21	21	0.5		65	0.660	**0.091**			0.425		**414**		wi	mio		ks	white
V60	21	22	22	0.02		15	0.680	**0.308**			0.667		**486**		ba	mio		gi	black, lignite
V60	22	23	23	0.2		15	0.180				0.180				ba	mio		gi	black, lignite
V60	23	24	24	0.03			0.300				0.300				ba	mio		gi	black,lot of lignite
V60	24	25	25	0.03			0.790	**1.231**			1.695		**606**		ba	mio		gi	
V60	25	26	26	0.03			0.080				0.080				ba	mio		gi	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V61	0	1	1	0.9		35	0.050				0.050				rebo	kva		ds	redbrown, pebbly
V61	1	2	2	0.5		65	0.260				0.260				rebo	kva		ds	redbrown, pebbly
V61	2	3	3	0.4		35	0.180				0.180				yega	kva		ds	yellow/gray, pebbly, lignite
V61	3	4	4	0.4		90	0.270				0.270				yega	kva		ds	yellow/gray, pebbly
V61	4	5	5	0.4		100	0.280				0.280				yega	kva		ds	yellow/gray, pebbly
V61	5	6	6	0.4		65	0.080				0.080				yega	kva		ds	yellow/gray, pebbly
V61	6	7	7	0.35		65	0.160				0.160				yega	kva		ds	yellow/gray, pebbly
V61	7	8	8	0.4		90	0.120				0.120				yega	kva		ds	yellow/gray, pebbly
V61	8	9	9	0.4		35	0.080				0.080				yega	kva		ds	yellow/gray, pebbly
V61	9	10	10	1.25		90	0.070				0.070				yega	kva		ds	yellow/gray, pebbly, rock fragm.
V61	10	11	11	0.4		90	0.000				0.000				wi	mio		ks	white
V61	11	12	12	0.4		100	0.240				0.240				wi	mio		ks	white
V61	12	13	13	0.4		90	0.200				0.200				wi	mio		ks	white
V61	13	14	14	0.35		90	0.110				0.110				wi	mio		ks	white
V61	14	15	15	0.35		70	0.120				0.120				wi	mio		ks	white
V61	15	16	16	0.45		90	0.410				0.410				wi	mio		ks	white
V61	16	17	17	0.45		70	0.250				0.250				wi	mio		ks	white
V61	17	18	18	0.4		35	0.320				0.320				wi	mio		ks	white
V61	18	19	19	0.5		90	0.090				0.090				wi	mio		ks	white
V61	19	20	20	0.5		40	0.230				0.230				wi	mio		ks	white
V61	20	21	21	0.5		20	0.240				0.240				wi	mio		ks	white/black, clayey, lignite
V61	21	22	22	0.5		60	0.310				0.310				wi	mio		ks	white/black, clayey, lignite
V61	22	23	23	0.45		90	0.370				0.370				wi	mio		ks	white/black, clayey, lignite
V61	23	24	24	0.4		40	0.440				0.440				wiga	mio		ks	white/gray, HM
V61	24	25	25	0.45		70	0.750	**0.558**			0.945		**574**		wiga	mio		ks	white/gray, HM
V61	25	26	26	0.45		100	0.910	**0.659**			1.058		**591**		wiga	mio		ks	white/gray, HM
V61	26	27	27	0.35		70	2.920	**2.467**	3.084	2.687	2.687		**1384**		gawi	mio		ks	gray/white lot of HM

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V62	0	1	1	0.4		40	0.080			0.197	0.197				wiga	mio		ks	white/gray, HM, Xmet data are available measured on dry
V62	1	2	2	0.4		70	1.540	**0.435**		0.834	0.834		**336**		boga	mio		ks	brownishgray
V62	2	3	3	0.4		90	1.400	**0.248**		0.542	0.542		**377**		lbo	mio		ks	whitebrown
V62	3	4	4	0.4		90	0.180			0.424	0.424				wi	mio		ks	white, HM
V62	4	5	5	0.4		100	0.310			0.429	0.429				wi	mio		ks	white
V62	5	6	6	0.4		65	3.600	**1.669**		1.800	1.800		**1092**		wi	mio		ks	white, HM
V62	6	7	7	0.45		90	0.840	**0.042**		0.274	0.274		**287**		wi	mio		ks	white, org. Mat.
V62	7	8	8	0.5		40	0.290			0.504	0.504				wi	mio		ks	white, org. Mat.
V62	8	9	9	0.4		40	1.630	**0.607**		1.073	1.073		**699**		wi	mio		ks	white, HM
V62	9	10	10	0.45		90	0.230			0.378	0.378				wi	mio		ks	white
V62	10	11	11	0.9		100	0.180			0.235	0.235				wi	mio		ks	white
V62	11	12	12	0.9		90	0.950	**0.511**		0.970	0.970		**416**		wi	mio		ks	white, HM
V62	12	13	13	0.9		90	0.500			0.566	0.566				wi	mio		ks	white, lignite
V62	13	14	14	0.02		90				1.231	1.231				wi	mio		gi	white/black, lignite, clay
V62	14	15	15	0.4		65	0.910	**0.827**		1.163	1.163		**508**		wi	mio		ks	white, org. Mat., HM
V62	15	16	16	0.5		100	1.720	**0.510**		0.712	0.712		**342**		wi	mio		ks	white, HM
V62	16	17	17	0.5		70	2.940	**0.783**		1.071	1.071		**380**		wi	mio		ks	white, HM
V62	17	18	18	0.45		90	0.750	**0.745**		1.226	1.226		**752**		wi	mio		ks	white, HM
V62	18	19	19	0.5		100	0.300			0.334	0.334				lbo	mio		ks	brownish-white
V62	19	20	20	2		65	0.100			0.075	0.075				lbo	mio		ks	brownish-white
V62	20	21	21	2		15	0.010			0.123	0.123				lbo	mio		ks	brownish-white
V62	21	22	22	0.9		100	0.250			0.388	0.388				lbo	mio		ks	brownish-white
V62	22	23	23	0.4		65	0.280			0.451	0.451				lbo	mio		ks	brownish-white

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V63	0	1	1	0.45		20	0.120				0.120				yere	kva		ds	yellowish-red
V63	1	2	2	0.5		70	0.100				0.100				yere	kva		ds	yellowish-red
V63	2	3	3	0.4		100	0.480				0.480				gawi	kva/mio		ds	gray
V63	3	4	4	0.4		35	0.850	**0.509**			0.890		**685**		wiga	mio		ks	white/gray
V63	4	5	5	0.4		90	0.610	**0.155**			0.495		**316**		wiga	mio		ks	white/gray
V63	5	6	6	0.45		65	0.850	**0.513**			0.895		**650**		wiga	mio		ks	white/gray, HM
V63	6	7	7	0.45		90	1.320	**0.525**			0.908		**421**		wiga	mio		ks	white/gray, HM
V63	7	8	8	0.4		70	0.960	**0.029**			0.355		**154**		wiga	mio		ks	white/gray
V63	8	9	9			0													no recovery
V63	9	10	10	0.4		35	0.380				0.380				wiga	mio		ks	white/gray, HM
V63	10	11	11	0.4		65	0.560	**0.256**			0.608		**551**		wiga	mio		ks	white/gray, HM
V63	11	12	12	0.4		40	0.390				0.390				wiga	mio		ks	white/gray
V63	12	13	13	0.5		70	0.520				0.520				wiga	mio		ks	white/gray
V63	13	14	14	0.45		90	0.310				0.310				wiga	mio		ks	white/gray
V63	14	15	15	0.45		40	0.280				0.280				wiga	mio		ks	white/gray
V63	15	16	16	0.5		70	0.230				0.230				wi	mio		ks	white/black, lignite
V63	16	17	17	0.03		70	0.560				0.560				ba	mio		gi	black, lignite
V63	17	18	18	0.4		90	1.160	**0.176**			0.519		**125**		wiga	mio		ks	white/gray, lignite
V63	18	19	19	0.5		70	0.290				0.290				wiga	mio		ks	white/gray
V63	19	20	20	1.25		100	0.000				0.000				wiga	mio		ks	white/gray, lignite
V63	20	21	21	1.25		45	0.040				0.040				wiga	mio		ks	white/gray
V63	21	22	22	1.25		70	0.080				0.080				wiga	mio		ks	white/gray
V63	22	23	23	1.8		100	0.070				0.070				wiga	mio		ks	white/gray, pebbly
V63	23	24	24	1.6		35	0.380				0.380				wiga	mio		ks	white/gray, lignite
V63	24	25	25	0.45		100	0.360				0.360				wiga	mio		ks	white/gray
V63	25	26	26	0.35		40									wiga	mio		ks	white/gray

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V64	0	1	1	0.5		20	0.130				0.130				ba	kva		ds	black, soil
V64	1	2	2	0.4		20	0.270				0.270				gabo	kva		ds	gray/brown, brown clay layers
V64	2	3	3	0.25	10	90	0.290				0.290				ye	kva		ds	?/yellow, till
V64	3	4	4	0.25	5	65	0.310				0.310				ye	kva		ds	?/yellow, till
V64	4	5	5	0.4	5	100	0.340				0.340				lbore	kva/mio		ds	white/brown/redish, clay layers
V64	5	6	6	0.4		35	0.270				0.270				lbo	mio		ks	white/brown, clay layers
V64	6	7	7	0.4		100	0.400				0.400				wi	mio		ks	white
V64	7	8	8	0.45		100	0.400				0.400				wiye	mio		ks	white/yellowish
V64	8	9	9	0.45		70	1.360	**0.356**			0.720		**465**		wi	mio		ks	white, HM
V64	9	10	10	0.5		100	1.360	**0.377**			0.743		**458**		wi	mio		ks	white, HM
V64	10	11	11	0.35		100	0.850	**0.235**			0.585		**339**		wi	mio		ks	white
V64	11	12	12	0.35		65	1.030	**0.259**			0.612		**407**		wi	mio		ks	white, HM
V64	12	13	13	0.45		65	0.310				0.310				wi	mio		ks	white
V64	13	14	14	0.5		20	0.660	**0.295**			0.651		**626**		wi	mio		ks	white
V64	14	15	15			0										mio		ks	
V64	15	16	16	0.45		35	0.630	**0.285**			0.640		**636**		wi	mio		ks	white
V64	16	17	17	0.4		90	0.240				0.240				wi	mio		ks	white
V64	17	18	18	0.45		65	0.410				0.410				wi	mio		ks	white, HM
V64	18	19	19			0										mio		ks	
V64	19	20	20			0										mio		ks	
V64	20	21	21	0.5		35	0.970	**0.552**			0.938		**492**		wi	mio		ks	white, lignite
V64	21	22	22	1.25		35	0.340				0.340				wi	mio		ks	white, lignite
V64	22	23	23	0.6		65	0.600				0.600				wi	mio		ks	white, lignite, black clay

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V65	0	1	1	1.25		15	0.340				0.340				yega	kva		ds	yellow/gray
V65	1	2	2	1.25		20	0.380				0.380				yega	kva		ds	yellow/gray
V65	2	3	3	1.25		65	0.320				0.320				ye	kva		ds	yellow/white, pebbly
V65	3	4	4	1.25		35	0.160				0.160				ye	kva		ds	yellow/white, pebbly
V65	4	5	5	1.25		70	0.160				0.160				ye	kva		ds	yellow/white, pebbly
V65	5	6	6	1.25		40	0.130				0.130				ye	kva		ds	yellow/white, pebbly
V65	6	7	7	2		40	0.120				0.120				ye	kva		ds	yellow/white, pebbly
V65	7	8	8	2		70	0.100				0.100				ye	kva		ds	yellow/white, pebbly
V65	8	9	9	2		40	0.020				0.020				ye	kva		ds	yellow/white, pebbly
V65	9	10	10	2		70	0.030				0.030				ye	kva		ds	yellow/white, pebbly
V65	10	11	11	2		90	0.030				0.030				ye	kva		ds	yellow/white, pebbly
V65	11	12	12	2		40	0.030				0.030				yega	kva		ds	yellow/gray
V65	12	13	13	2		70	0.030				0.030				yega	kva		ds	yellow/gray
V65	13	14	14	2		70	0.020				0.020				yega	kva		ds	yellow/gray
V65	14	15	15	0.9		90	0.100				0.100				wi	kva/mio		ds	white/some yellowish boulders
V65	15	16	16	0.4		80	0.510				0.510				wi	mio		ks	white
V65	16	17	17	0.45		90	0.430				0.430				wi	mio		ks	white
V65	17	18	18	0.45		65	0.360				0.360				wi	mio		ks	white
V65	18	19	19	0.5		90	0.350				0.350				wi	mio		ks	white
V65	19	20	20	0.6		70	0.350				0.350				wi	mio		ks	white, brown clay layers, lignite
V65	20	21	21	1.25		35	0.400				0.400				wi	mio		ks	white
V65	21	22	22	0.9		40	0.340				0.340				wi	mio		ks	white
V65	22	23	23	0.9		40	0.200				0.200				wi	mio		ks	white
V65	23	24	24	0.5		70	0.360				0.360				wi	mio		ks	white, some HM
V65	24	25	25	0.45		100	0.100				0.100				wi	mio		ks	white, some HM
V65	25	26	26	1.25		20	0.080				0.080				wi	mio		ks	white, brown clay, lignite
V65	26	27	27	0.002		35									ba	mio		gi	black, lignite
V65	27	28	28	0.002		40									ba	mio		gi	black, lignite

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V66	0	1	1	1.25		35	0.310				0.310				yega	kva		ds	yellow/gray
V66	1	2	2	1.25		65	0.110				0.110				yega	kva		ds	yellow/gray
V66	2	3	3	1.25		70	0.080				0.080				gaye	kva		ds	gray/yellow, lignite
V66	3	4	4	2		40	0.090				0.090				gaye	kva		ds	gray/yellow
V66	4	5	5	1.25		70	0.030				0.030				gaye	kva		ds	gray/yellow
V66	5	6	6	1.25		35	0.110				0.110				gaye	kva		ds	gray/yellow
V66	6	7	7	1.25		65	0.140				0.140				gaye	kva		ds	gray/yellow
V66	7	8	8	1.25		70	0.240				0.240				gaye	kva		ds	gray/yellow
V66	8	9	9	1.25		20	0.010				0.010				gaye	kva		ds	gray/yellow
V66	9	10	10	1.25		35	0.100				0.100				gaye	kva		ds	gray/yellow
V66	10	11	11	1.25		70	0.140				0.140				gaye	kva		ds	gray/yellow
V66	11	12	12	2		40	0.030				0.030				gaye	kva		ds	gray/yellow
V66	12	13	13	2		35	0.170				0.170				gaye	kva		ds	gray/yellow
V66	13	14	14	2		90	0.180				0.180				gaye	kva		ds	gray/yellow
V66	14	15	15	0.4		40	0.050				0.050				wi	mio		ks	white
V66	15	16	16	0.45		90	0.750	**0.120**			0.457		**269**		wi	mio		ks	white
V66	16	17	17	0.5		100	0.750	**0.390**			0.758		**450**		wi	mio		ks	white
V66	17	18	18	0.5		65	1.690	**0.909**	1.357		1.532		**1045**		wi	mio		ks	white, HM
V66	18	19	19	0.5		100	0.420				0.420				wi	mio		ks	white
V66	19	20	20	0.5		100	0.950	**0.349**			0.712		**551**		wi	mio		ks	white
V66	20	21	21	0.5		65	0.310				0.310				wi	mio		ks	white
V66	21	22	22	0.5		100	0.260				0.260				wi	mio		ks	white
V66	22	23	23	0.5		65	0.460				0.460				wi	mio		ks	white
V66	23	24	24	0.5		40	0.330				0.330				wi	mio		ks	white

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V67	0	1	1													kva			no sample
V67	1	2	2													kva			no sample
V67	2	3	3	2	20	20	0.070				0.070					kva		ds	yellow/gray
V67	3	4	4	2	15	40	0.210				0.210					kva		ds	yellow/gray
V67	4	5	5	0.9	5	70	0.130				0.130					kva		ds	yellow/gray
V67	5	6	6	2	10	20	0.090				0.090					kva		ds	yellow/gray
V67	6	7	7	0.9	5	40	0.140				0.140					kva		ds	yellow/gray
V67	7	8	8	2	5	65	0.210				0.210					kva		ds	yellow/gray
V67	8	9	9	1.25	10	35	0.050				0.050					kva		ds	yellow/gray
V67	9	10	10	0.45	5	40	0.130				0.130					kva		ds	yellow/gray
V67	10	11	11	0.45	2	20	0.080				0.080					kva		ds	yellow/gray
V67	11	12	12	0.45	5	90	0.070				0.070					kva		ds	yellow/gray
V67	12	13	13	2	20	70	0.060				0.060					kva		ds	yellow/gray
V67	13	14	14	0.45	10	40	0.100				0.100					kva/mio		ds	white/yellow
V67	14	15	15	0.45		70	0.300				0.300					mio		ks	white
V67	15	16	16	0.5		100	0.250				0.250					mio		ks	white, HM
V67	16	17	17	0.7		65	0.300				0.300					mio		ks	white, HM
V67	17	18	18	0.45		70	0.390				0.390					mio		ks	white, HM
V67	18	19	19	0.45		100	0.530				0.530					mio		ks	white, HM
V67	19	20	20	0.45		100	0.640	**0.251**			0.603		**432**			mio		ks	white, HM
V67	20	21	21	0.5		100	0.260				0.260					mio		ks	white, HM
V67	21	22	22	0.45		70	0.540				0.540					mio		ks	white, HM
V67	22	23	23	1		65	0.650	**0.014**			0.339		**230**			mio		ks	white,lignite
V67	23	24	24	1.25		90	0.090				0.090					mio		ks	white, lignite
V67	24	25	25	1		100	0.010				0.010					mio		ks	white
V67	25	26	26	0.7		90	0.150				0.150					mio		ks	white
V67	26	27	27	1.6		40	0.040				0.040					mio		ks	white
V67	27	28	28	1.6		15	0.070				0.070					mio		ks	white, lignite

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V71	0	1	1	0.45		20	0.100				0.100				ba	kva		ds	gray/black (soil)
V71	1	2	2	2		65	0.110				0.110				yega	kva		ds	yellow/gray
V71	2	3	3	1.25		90	0.620	**0.214**			0.561		**381**		rega	kva		ds	red/gray
V71	3	4	4	1.25		40	0.390				0.390				gare	kva/mio		ds	gray/redish
V71	4	5	5	0.4		90	0.440				0.440				wi	mio		ks	white
V71	5	6	6	1.25		100	0.440				0.440				wi	mio		ks	white
V71	6	7	7	0.6		65	0.490				0.490				wi	mio		ks	white
V71	7	8	8	0.6		100	0.490				0.490				wi	mio		ks	white, HM
V71	8	9	9	0.45		100	0.220				0.220				wi	mio		ks	white, HM
V71	9	10	10	0.5		65	0.070				0.070				wi	mio		ks	white, HM
V71	10	11	11	1.6		70	0.600	**0.503**			0.883		**209**		gawi	mio		ks	white/gray, brownish clay layers
V71	11	12	12	0.8		90	0.410				0.410				wi	mio		ks	white
V71	12	13	13	0.5		70	0.190				0.190				wi	mio		ks	white/black, brown clay layers, lignite
V71	13	14	14	0.002		100									ba	mio		gi	black, lignite
V71	14	15	15	0.002		70									ba	mio		gi	black, clay, lignite
V71	15	16	16	0.9		35	0.390				0.390				wi	mio		ks	white/black
V71	16	17	17	2		90	1.560	**0.583**			0.973		**656**		wi	mio		ks	white/black, pebbly, lignite
V71	17	18	18	1.25		70	0.250				0.250				wi	mio		ks	white, lignite
V71	18	19	19	1.25		80	0.220				0.220				wi	mio		ks	white, lignite
V71	19	20	20	0.7		90	0.380				0.380				wi	mio		ks	white, clay layers
V71	20	21	21	0.4		90	0.440				0.440				wi	mio		ks	white
V71	21	22	22	0.4		100	0.340				0.340				wi	mio		ks	white
V71	22	23	23	0.3		100	0.220				0.220				wi	mio		ks	white, silty
V71	23	24	24	0.3		65	0.180				0.180				gabo	mio		ks	brown/gray, silty
V71	24	25	25	0.3		65	0.170				0.170				gabo	mio		ks	brown/gray, clay layers
V71	25	26	26	0.45		70	0.140				0.140				gabo	mio		ks	brown/gray
V71	26	27	27	0.3		90	0.080				0.080				gabo	mio		gs	brown/gray, silty
V71	27	28	28	0.3		100	0.060				0.060				gabo	mio		gs	brown/gray, silty
V71	28	29	29	0.25		65	0.050				0.050				gabo	mio		gs	brown/gray, silty
V71	29	30	30	0.25		40	0.150				0.150				gabo	mio		gs	brown/gray, silty
V71	30	31	31	0.25		70	0.120				0.120				gabo	mio		gs	brown/gray, silty
V71	31	32	32	0.25		70	0.350				0.350				gabo	mio		gs	brown/gray, silty

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V72	0	1	1	1		20	0.140				0.140				bo	kva		ds	brown
V72	1	2	2	0.5		40	0.090				0.090				yega	kva		ds	yellow/gray
V72	2	3	3	0.5		40	0.120				0.120				yega	kva		ds	yellow/gray
V72	3	4	4	0.45		100	0.720	**0.158**			0.499		**381**		ga	kva/mio		ds	gray
V72	4	5	5	0.45		100	0.530				0.530				wi	mio		ks	white
V72	5	6	6	0.45		65	0.240				0.240				wi	mio		ks	white
V72	6	7	7	0.45		70	0.840	**0.460**			0.836		**663**		wi	mio		ks	white, HM
V72	7	8	8	0.45		90	0.560	**0.121**			0.458		**138**		wi	mio		ks	white, HM
V72	8	9	9	0.5		70	1.860	**0.545**			0.930		**495**		wi	mio		ks	white, HM
V72	9	10	10	0.5		90	0.900	**0.506**			0.887		**414**		wi	mio		ks	white, HM, light gray clay layers
V72	10	11	11	0.5		65	0.330				0.330				wi	mio		ks	white, HM
V72	11	12	12	0.5		70	0.350				0.350				wi	mio		ks	white/black, lignite
V72	12	13	13	0.002		90									ba	mio		gi	black, lignite
V72	13	14	14	0.5		70	0.180				0.180				wi	mio		ks	white, lignite
V72	14	15	15	0.9		80	2.150	**1.538**		2.352	2.352		**1308**		ga	mio		ks	gray, HM
V72	15	16	16	0.9		90	0.970	**0.148**			0.488		**324**		ga	mio		ks	gray, HM
V72	16	17	17	1.25		70	0.160				0.160				wi	mio		ks	white
V72	17	18	18	1.8		100	0.660	**0.147**			0.486		**371**		wi	mio		ks	white, pebbly
V72	18	19	19	1.8		100	0.190				0.190				wi	mio		ks	white
V72	19	20	20	0.45		90	0.400				0.400				wi	mio		ks	white
V72	20	21	21	0.5		100	1.040	**0.468**			0.844		**368**		wi	mio		ks	white
V72	21	22	22	0.4		100	1.020	**0.024**			0.350		**300**		wi	mio		ks	white
V72	22	23	23	0.45		65	0.110				0.110				wi	mio		ks	white
V72	23	24	24	0.4		90	0.260				0.260				wi	mio		ks	white
V72	24	25	25	0.4		65	0.280				0.280				wi	mio		ks	white/gray/brown
V72	25	26	26	0.8		65	0.340				0.340				gabo	mio		gs	gray-brown, pebbly, clay layers
V72	26	27	27	0.5		90	0.040				0.040				gabo	mio		gs	gray-brown, black clay layers
V72	27	28	28	2		100	0.020				0.020				gabo	mio		ks	gray-brown
V72	28	29	29			70	0.230				0.230				gabo	mio		gs	gray-brown
V72	29	30	30	0.4		65									gabo	mio		gs	gray-brown, clay layers

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V73	0	1	1	1		20	0.120				0.120				yega	kva		ds	
V73	1	2	2	0.5		40	0.080				0.080				yega	kva		ds	
V73	2	3	3	0.45		90	0.020				0.020				yega	kva		ds	
V73	3	4	4	0.4		100	0.120				0.120				yega	kva		ds	
V73	4	5	5	2		20	0.110				0.110				yega	kva		ds	
V73	5	6	6	2		40	0.180				0.180				ga	kva		ds	
V73	6	7	7	0.4		70	0.050				0.050				wi	mio		ks	
V73	7	8	8	0.6		100	0.350				0.350				wi	mio		ks	HM
V73	8	9	9	1		65	1.200	**0.425**			0.797		**358**		wi	mio		ks	HM
V73	9	10	10	1.25		100	0.670	**0.208**			0.554		**350**		wi	mio		ks	HM
V73	10	11	11	0.9		90	0.830	**0.593**			0.984		**405**		gabo	mio		ks	lignite
V73	11	12	12	0.002		65	0.380				0.380				ba	mio		gi	lignite
V73	12	13	13	0.4		70	1.320	**1.228**			1.692		**782**		wiga	mio		ks	HM, lignite
V73	13	14	14	0.6		70	1.040	**0.531**			0.915		**400**		wiga	mio		ks	HM
V73	14	15	15	0.7		100	0.700	**0.399**			0.768		**336**		wiga	mio		ks	HM, clay layers
V73	15	16	16	0.9		100	0.190				0.190				wiga	mio		ks	
V73	16	17	17	1.8		100	0.250				0.250				wiga	mio		ks	pebbly
V73	17	18	18	1.8		70	0.320				0.320				wiga	mio		ks	
V73	18	19	19	0.5		100	0.320				0.320				wiga	mio		ks	
V73	19	20	20	0.5		100	0.440				0.440				wiga	mio		ks	
V73	20	21	21	0.45		70	0.250				0.250				wiga	mio		ks	
V73	21	22	22	0.5		70	0.340				0.340				wiga	mio		ks	
V73	22	23	23	0.5		100	0.120				0.120				wiga	mio		ks	
V73	23	24	24	0.45		100	0.250				0.250				boga	mio		gs	clay layers
V73	24	25	25	2		100	0.280				0.280				boga	mio		ks	pebbles
V73	25	26	26	0.9		100	0.240				0.240				boga	mio		gs	distinct clay layers

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V74	0	1	1	0.6		20	0.150				0.150				yega	kva		ds	
V74	1	2	2	0.9		65	0.100				0.100				yega	kva		ds	pebbles
V74	2	3	3	0.9		70	0.050				0.050				yega	kva		ds	
V74	3	4	4	0.9		90	0.090				0.090				yega	kva		ds	
V74	4	5	5	1.6		100	0.110				0.110				yega	kva		ds	pebbles
V74	5	6	6	2		20	0.310				0.310				yega	kva		ds	
V74	6	7	7	0.4		100	0.060				0.060				wi	mio		ks	
V74	7	8	8	0.5		100	0.420				0.420				wi	mio		ks	
V74	8	9	9	0.6		70	0.300				0.300				wi	mio		ks	HM
V74	9	10	10	0.4		70	0.020				0.020				wi	mio		ks	
V74	10	11	11	1.8		90	0.460				0.460				ga	mio		ks	HM, clay, lignite
V74	11	12	12	0.002		65									ba	mio		gi	lignite
V74	12	13	13	0.002		100									ba	mio		gi	lignite
V74	13	14	14	2		100	3.320	**1.817**	2.849	2.289	2.289		**1100**		gabo	mio		ks	lignite, clay
V74	14	15	15	2		70	1.960	**1.405**	1.858		2.002		**1124**		gabo	mio		ks	lignite, HM
V74	15	16	16	2		100	0.170				0.170				wiga	mio		ks	pebbly
V74	16	17	17	2	20	100	0.080				0.080				wiga	mio		ks	pebbly
V74	17	18	18	0.9		90	0.330				0.330				wiga	mio		ks	HM
V74	18	19	19	0.5		100	0.120				0.120				wiga	mio		ks	lignite
V74	19	20	20	1.7		100	0.270				0.270				wiga	mio		ks	pebbly
V74	20	21	21	0.5		70	0.170				0.170				wiga	mio		ks	
V74	21	22	22	0.9		70	0.110				0.110				wiga	mio		ks	pebbly, clay layers
V74	22	23	23	1.6		90	0.230				0.230				ga	mio		ks	pebbly

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V75	0	1	1	0.35		15	0.560	**0.745**			1.154		**576**		boga	kva		ds	
V75	1	2	2	0.4		20	0.070				0.070				bo	kva		ds	
V75	2	3	3	0.25		40	0.090				0.090				boga	kva		ds	
V75	3	4	4	0.35		40	0.120				0.120				boga	kva		ds	
V75	4	5	5	0.35	10	65	0.040				0.040				boga	kva		ds	
V75	5	6	6	0.35	5	15	0.110				0.110				dboga	kva		ds	
V75	6	7	7	0.35	5	90	0.940	**0.817**			1.233		**595**		lgabo	kva		ds	
V75	7	8	8	0.35	5	65	1.250	**0.799**			1.214		**514**		lgabo	kva		ds	
V75	8	9	9	0.4	5	90	0.200				0.200				lgabo	mio		ks	
V75	9	10	10	0.35		90	0.760	**1.145**			1.599		**647**		dgabo	mio		ks	lignite fragments
V75	10	11	11			100									boba	mio		c	few clay stringers
V75	11	12	12	0.35		65									dga	mio		ks	clay, lignite fragments
V75	12	13	13	0.4		70	0.390				0.390				ga	mio		ks	
V75	13	14	14	0.35		90	1.660	**0.964**	1.117		1.307		**506**		boga	mio		ks	few clay stringers, few lignite fragments
V75	14	15	15	0.4		15	1.980	**1.137**	2.465		2.572		**694**		boga	mio		ks	few clay stringers
V75	15	16	16	0.4		35	0.370				0.370				boga	mio		ks	
V75	16	17	17	1.5		100	0.320				0.320				boga	mio		ks	
V75	17	18	18	0.35		20	1.000	**0.523**			0.906		**360**		boga	mio		ks	
V75	18	19	19	0.35		100	0.200				0.200				ga	mio		ks	
V75	19	20	20	0.4		100	0.360				0.360				ga	mio		ks	
V75	20	21	21	0.4		100	0.540				0.540				ga	mio		ks	
V75	21	22	22	0.15		90	0.290				0.290				boga	mio		ks	
V75	22	23	23	0.35		90	0.490				0.490				boga	mio		ks	
V75	23	24	24	0.4		65	0.580	**0.477**			0.854		**629**		ga	mio		ks	few clay stringers
V75	24	25	25	0.4		65	0.200				0.200				boga	mio		ks	
V75	25	26	26	0.15		100	0.290				0.290				ga	mio		ks	micaceous

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V76	0	1	1	0.35		10	0.190				0.190				boga	kva		ds	
V76	1	2	2	0.35		20	0.190				0.190				yebo	kva		ds	
V76	2	3	3	0.35		100	0.210				0.210				yebo	kva		ds	
V76	3	4	4	0.4		100	0.210				0.210				boga	kva		ds	
V76	4	5	5	0.4	5	70	0.010				0.010				boga	kva		ds	
V76	5	6	6	0.4		75	0.260				0.260				ga	mio		ks	
V76	6	7	7	0.4		80	0.130				0.130				ga	mio		ks	
V76	7	8	8	0.4		100	0.010				0.010				ga	mio		ks	
V76	8	9	9	0.4		90	0.280				0.280				ga	mio		ks	
V76	9	10	10	0.4		90	0.110				0.110				ga	mio		ks	
V76	10	11	11	0.4		25	0.310				0.310				dga	mio		ks	
V76	11	12	12	0.03		100									dbo	mio		gi	
V76	12	13	13	0.03		90									boba	mio		gi	
V76	13	14	14	0.4		90	0.680	**0.404**			0.773		**343**		gabo	mio		ks	
V76	14	15	15	0.35		30	1.310	**0.741**			1.148		**303**		ga	mio		ks	
V76	15	16	16	0.4		40	0.280				0.280				lboga	mio		ks	
V76	16	17	17	0.45		90	0.100				0.100				lboga	mio		ks	
V76	17	18	18	0.3		60	0.240				0.240				lboga	mio		ks	
V76	18	19	19	0.45		65	0.110				0.110				lboga	mio		ks	
V76	19	20	20	0.35		100	0.190				0.190				lboga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V77	0	1	1	0.45		15									lboga	kva		ds	
V77	1	2	2	0.45		20									lboga	kva		ds	
V77	2	3	3	0.35		60									lboye	kva		ds	
V77	3	4	4	0.3		90									lboye	kva		ds	
V77	4	5	5	0.4	5	100									lboye	kva		ds	
V77	5	6	6	0.45	8	100									ga	kva		ds	
V77	6	7	7	0.4	3	75									ga	kva		ds	
V77	7	8	8	0.35		50									ga	kva		ds	
V77	8	9	9	0.35	5	100									ga	kva		ds	chert
V77	9	10	10	0.4		90									ga	mio	odf	ks	
V77	10	11	11	0.4		100									gabo	mio	odf	ks	
V77	11	12	12	0.03		100									dbo	mio	odf	gi	
V77	12	13	13	0.03		100									gaba	mio	odf	gi	
V77	13	14	14	0.4		100	0.220				0.220				boga	mio	odf	ks	
V77	14	15	15	0.4		100	0.150				0.150				ga	mio	odf	ks	
V77	15	16	16	0.45		85	0.420				0.420				boga	mio	odf	ks	
V77	16	17	17	0.45		90	0.070				0.070				gabo	mio	odf	ks	
V77	17	18	18	0.5		90	0.470				0.470				ga	mio	odf	ks	
V77	18	19	19	1.25	10	100	0.020				0.020				ga	mio	odf	ks	
V77	19	20	20	0.7	5	100	0.160				0.160				ga	mio	odf	ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V78	0	1	1	0.3		15	0.290				0.290				rebo	kva		ds	
V78	1	2	2	0.3		40	0.200				0.200				bore	kva		ds	
V78	2	3	3	0.3		35	0.320				0.320				lrebo	kva		ds	
V78	3	4	4	0.35		90	0.130				0.130				lyebo	kva		ds	
V78	4	5	5	0.35		65	0.260				0.260				yebo	kva		ds	
V78	5	6	6	0.35		80	0.200				0.200				lbo	kva		ds	
V78	6	7	7	0.45		80	0.220				0.220				lyega	kva		ds	
V78	7	8	8	0.4		90	0.530				0.530				lyega	mio	odf	ks	
V78	8	9	9	0.4		45	0.600	**0.309**			0.667		**368**		lyega	mio	odf	ks	
V78	9	10	10	0.45		80	0.350				0.350				ga	mio	odf	ks	
V78	10	11	11	0.45		75	0.470				0.470				lboga	mio	odf	ks	
V78	11	12	12	0.35		70	1.500	**0.974**			1.408		**876**		dgabo	mio	odf	ks	20% lignite
V78	12	13	13	0.35		40	0.960	**1.282**			1.752		**494**		dgabo	mio	odf	ks	minor clay/silt seams
V78	13	14	14	0.45		100	0.770	**0.552**			0.938		**298**		ga	mio	odf	ks	
V78	14	15	15	0.4		15	2.110	**1.852**	2.245		2.365		**1090**		ga	mio	odf	ks	
V78	15	16	16	0.45		75	0.680	**0.473**			0.850		**398**		ga	mio	odf	ks	
V78	16	17	17	0.4		100	0.640	**0.284**			0.640		**630**		ga	mio	odf	ks	
V78	17	18	18	0.4		70	0.190				0.190				lgabo	mio	odf	ks	
V78	18	19	19	0.45		75	0.070				0.070				ga	mio	odf	ks	
V78	19	20	20	0.5		80	0.030				0.030				ga	mio	odf	ks	
V78	20	21	21	0.4		90	0.380				0.380				ga	mio	odf	ks	
V78	21	22	22	0.35		100	0.310				0.310				lboga	mio	odf	ks	
V78	22	23	23	0.35		90	0.220				0.220				lboga	mio	odf	ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V79	0	1	1	0.3		20	0.240				0.240				bore	kva		ds	
V79	1	2	2	0.35		35	0.080				0.080				yebo	kva		ds	
V79	2	3	3	0.35		90	0.060				0.060				lyebo	kva		ds	
V79	3	4	4	0.35		70	0.010				0.010				lyebo	kva		ds	
V79	4	5	5	0.4		100	0.100				0.100				lyebo	kva		ds	
V79	5	6	6	0.45	5	70	0.140				0.140				lyebo	kva		ds	
V79	6	7	7	0.001		100									olga	kva		dl	
V79	7	8	8	0.001		90									olga	kva		dl	
V79	8	9	9	0.002		90									olga	kva		dl	
V79	9	10	10	0.002		90									olga	kva		dl	
V79	10	11	11	0.002		90									olga	kva		dl	
V79	11	12	12	0.002		90									olga	kva		dl	
V79	12	13	13	0.002		90									olga	kva		dl	
V79	13	14	14	0.002		90									olga	kva		dl	
V79	14	15	15	0.001		90									olbo	kva		dl	redeposited miocene clay
V79	15	16	16	0.001		90									olbo	kva		dl	redeposited miocene clay
V79	16	17	17	0.4	10	90	0.540				0.540				lboga	kva		ds	
V79	17	18	18	0.35	3	65	0.340				0.340				lboga	kva		ds	
V79	18	19	19	0.35		40	0.150				0.150				lboga	kva		ds	
V79	19	20	20	0.3		80	0.140				0.140				boga	kva		ds	
V79	20	21	21	0.35		75	0.540				0.540				boga	kva		ds	
V79	21	22	22	0.35		75	0.260				0.260				boga	kva		ds	
V79	22	23	23	0.4		75	0.380				0.380				boga	kva		ds	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V80	0	1	1	0.35		20	0.110				0.110				rebo	kva		ds	
V80	1	2	2	0.35		50	0.140				0.140				lrebo	kva		ds	
V80	2	3	3	0.4		55	0.020				0.020				lgabo	kva		ds	
V80	3	4	4	0.4		65	0.190				0.190				lgabo	kva		ds	
V80	4	5	5	0.45	10	100	0.200				0.200				lgabo	kva		ds	
V80	5	6	6	0.5	10	40	0.080				0.080				olga	kva		ds	
V80	6	7	7	0.5	10	50	0.010				0.010				boga	kva		ds	
V80	7	8	8	0.4	3	75	0.270				0.270				lyega	mio	odf	ks	
V80	8	9	9	0.35		70	1.040	**0.754**			1.163		**1050**		lyega	mio	odf	ks	
V80	9	10	10	0.35		100	0.250				0.250				lyega	mio	odf	ks	
V80	10	11	11	0.4		70	0.380				0.380				lyega	mio	odf	ks	
V80	11	12	12	0.35		100	1.820	**1.258**	1.897		2.039		**1150**		ga	mio	odf	ks	
V80	12	13	13	0.4		100	0.600	**0.201**			0.547		**259**		ga	mio	odf	ks	
V80	13	14	14	0.35		90	1.420	**2.017**			2.571		**591**		boga	mio	odf	ks	
V80	14	15	15	0.002		100									boba	mio	odf	gi	lignite
V80	15	16	16	0.35		70	0.450				0.450				dga	mio	odf	ks	
V80	16	17	17	0.35		70	1.270	**1.125**			1.577		**382**		boga	mio	odf	ks	
V80	17	18	18	0.4		60	1.780	**1.355**	1.889		2.031		**736**		boga	mio	odf	ks	
V80	18	19	19	0.4		75	0.430				0.430				boga	mio	odf	ks	
V80	19	20	20	0.4		75	0.550	**0.231**			0.581		**401**		ga	mio	odf	ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V81	0	1	1	0.4		35	0.040				0.040				gabo	kva		ds	
V81	1	2	2	0.3		60	0.110				0.110				yebo	kva		ds	
V81	2	3	3	0.3		90	0.020				0.020				yebo	kva		ds	
V81	3	4	4	0.3		90	0.110				0.110				yebo	kva		ds	
V81	4	5	5	0.5	5	90	0.190				0.190				lyebo	kva		ds	
V81	5	6	6	0.45	3	90	0.360				0.360				lyebo	kva		ds	
V81	6	7	7	0.35	2	90	0.220				0.220				lyebo	kva		ds	15 % clay
V81	7	8	8	0.35		90									lyebo	kva		ds	25% clay (miocene)
V81	8	9	9	0.35		50	1.120	**0.691**			1.093		**491**		ga	mio		ks	HM
V81	9	10	10	0.35		70	0.380				0.380				ga	mio		ks	
V81	10	11	11	0.4		100	0.360				0.360				lbo	mio		ks	
V81	11	12	12	0.4		100	0.920	**0.635**			1.031		**317**		lbo	mio		ks	HM
V81	12	13	13	0.35		100	0.790	**0.290**			0.646		**351**		lbo	mio		ks	2% lignite
V81	13	14	14	0.4		100	0.280				0.280				bo	mio		ks	
V81	14	15	15	0.35		100	1.840	**1.693**	2.309		2.425		**1088**		bo	mio		ks	5% lignite, HM
V81	15	16	16	0.35		100	1.250	**1.090**			1.538		**513**		gabo	mio		ks	5% clay layers, HM
V81	16	17	17	0.4		100	0.460				0.460				gabo	mio		ks	5% clay layers, HM
V81	17	18	18	0.35		100	0.700	**0.394**			0.762		**542**		ga	mio		ks	HM
V81	18	19	19	0.35		100	0.150				0.150				ga	mio		ks	
V81	19	20	20	0.4		100	0.440				0.440				ga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V82	0	1	1	0.03		15	0.250				0.250				lrebo	kva		ml	
V82	1	2	2	0.5	5	50	0.010				0.010				lyebo	kva		ds	few miocene sed.
V82	2	3	3	0.5	5	100	0.060				0.060				ga	kva		ds	chert
V82	3	4	4	0.5		100	0.020				0.020				ga	kva		ds	
V82	4	5	5	0.35		100	0.190				0.190				ga	mio		ks	
V82	5	6	6	0.35		100	0.380				0.380				ga	mio		ks	
V82	6	7	7	0.45		100	0.030				0.030				ga	mio		ks	
V82	7	8	8	0.5		100	0.040				0.040				ga	mio		ks	
V82	8	9	9	0.6		100	0.150				0.150				lyebo	mio		ks	
V82	9	10	10	0.35		100	0.250				0.250				boga	mio		ks	lignite
V82	10	11	11	0.45		100	0.160				0.160				lbo	mio		ks	
V82	11	12	12	0.45	3	100	0.190				0.190				lbo	mio		ks	
V82	12	13	13	0.35		100	0.250				0.250				lgabo	mio		ks	
V82	13	14	14	0.35		100	0.320				0.320				lgabo	mio		ks	
V82	14	15	15	0.35		100	1.650	**0.783**	1.310		1.488		**1120**		ga	mio		ks	HM
V82	15	16	16	0.35		100	0.350				0.350				ga	mio		ks	(HM)
V82	16	17	17	0.35		100	0.470				0.470				ga	mio		ks	
V82	17	18	18	0.35		100	0.240				0.240				ga	mio		ks	
V82	18	19	19	0.35		100	0.170				0.170				ga	mio		ks	
V82	19	20	20	0.35		100	0.230				0.230				ga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V83	0	1	1	0.35		15	0.070				0.070				yebo	kva		ds	
V83	1	2	2	0.35		100	0.070				0.070				yebo	kva		ds	
V83	2	3	3	0.35		100	0.040				0.040				yebo	kva		ds	
V83	3	4	4	0.35		100	0.070				0.070				yebo	kva		ds	
V83	4	5	5	0.35		100	0.240				0.240				lyebo	kva		ds	chert, lignite
V83	5	6	6	0.35		100	0.530				0.530				lboga	kva		ds	
V83	6	7	7	0.35	5	100	0.310				0.310				ga	kva		ds	
V83	7	8	8	0.35	5	100	0.280				0.280				ga	kva		ds	chert
V83	8	9	9	0.35		100	0.550	**0.409**			0.779		**423**		ga	mio		ks	(HM)
V83	9	10	10	0.35		100	0.680	**0.528**			0.911		**464**		ga	mio		ks	(HM)
V83	10	11	11	0.35		100	0.640	**0.106**			0.441		**202**		ga	mio		ks	HM
V83	11	12	12	0.35		100	1.310	**0.728**			1.134		**790**		ga	mio		ks	HM
V83	12	13	13	0.35		100	1.840	**0.124**	0.374		0.610		**351**		lgabo	mio		ks	
V83	13	14	14	0.35		100	1.240	**0.686**			1.088		**396**		lgabo	mio		ks	(HM)
V83	14	15	15	0.03		100	0.270	**1.103**			1.552		**595**		babo	mio		gi	
V83	15	16	16	0.3		100	0.990	**1.103**			1.552		**595**		ga	mio		ks	(HM)
V83	16	17	17	0.35		100	1.370	**1.439**			1.927		**384**		ga	mio		ks	(HM)
V83	17	18	18	0.35		100	1.580	**0.578**	1.182		1.367		**407**		ga	mio		ks	(HM)
V83	18	19	19	0.35		100	0.450				0.450				lgabo	mio		ks	(HM)
V83	19	20	20	0.45		100	0.780	**0.270**			0.623		**280**		lbo	mio		ks	
V83	20	21	21	0.45		100	4.320	**2.377**	3.298	3.530	3.530		**2055**		lbo	mio		ks	HM
V83	21	22	22	0.45		100	0.740	**0.178**			0.522		**161**		lbo	mio		ks	
V83	22	23	23	0.45		100	0.700	**0.459**			0.835		**638**		lbo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V84	0	1	1	0.35		30	0.200				0.200				lbo	kva		ds	
V84	1	2	2	0.35		100	0.130				0.130				yebo	kva		ds	
V84	2	3	3	0.35		100	0.010				0.010				lyebo	kva		ds	
V84	3	4	4	0.35		100	0.210				0.210				lyebo	kva		ds	redeposited lignite
V84	4	5	5	0.35		10	0.440				0.440				bo	mio	odf	gi	
V84	5	6	6	0.35		90	0.200				0.200				ga	mio	odf	ks	pyrite, relict wood
V84	6	7	7	0.35		60	0.060				0.060				ga	mio	odf	ks	
V84	7	8	8	0.35		90	0.220				0.220				ga	mio	odf	ks	
V84	8	9	9	0.35		90	0.860	**0.373**			0.739		**489**		ga	mio	odf	ks	(HM)
V84	9	10	10	0.35		60	0.130				0.130				ga	mio	odf	ks	
V84	10	11	11	0.35		100	0.340				0.340				ga	mio	odf	ks	
V84	11	12	12	0.35		40	0.940	**0.995**			1.432		**1004**		ga	mio	odf	ks	HM
V84	12	13	13	0.35		40	0.200				0.200				ga	mio	odf	ks	(HM)
V84	13	14	14	0.35		40	0.680	**0.462**			0.837		**715**		ga	mio	odf	ks	lignite (10%) (HM)
V84	14	15	15	0.03		15	0.740	**0.746**			1.155		**1008**		dbo	mio	odf	gi	
V84	15	16	16	0.35		25	0.360				0.360				ga	mio	odf	ks	(HM)
V84	16	17	17	0.35		100	0.340				0.340				ga	mio	odf	ks	
V84	17	18	18	0.35		100	0.530				0.530				ga	mio	odf	ks	
V84	18	19	19	0.35		100	0.280				0.280				lgabo	mio	odf	ks	
V84	19	20	20	0.03		100	0.400				0.400				bo	mio	odf	gi	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V85	0	1	1	0.15		15	0.030				0.030				yebo	kva		ds	
V85	1	2	2	0.4	2	35	0.050				0.050				yebo	kva		ds	
V85	2	3	3	1.25	10	90	0.180				0.180				lyebo	kva		ds	few pebbles
V85	3	4	4	0.35	10	65	0.020				0.020				lyebo	kva		ds	
V85	4	5	5	0.001		65									lboga	kva		dl	slightly silty
V85	5	6	6	0.001		65									ga	kva		dl	
V85	6	7	7	0.001		100									ga	kva		dl	
V85	7	8	8	0.001		65									dga	kva		dl	pieces of mica clay
V85	8	9	9	0.001		65	0.410				0.410				boga	kva		dl	sandy
V85	9	10	10	0.001	10	65	0.620	**0.387**			0.754		**328**		boga	kva		ml	pebbles
V85	10	11	11	0.001	5	65	0.640	**0.278**			0.632		**310**		boga	kva		ml	sand stringers
V85	11	12	12	0.4	5	35	0.180				0.180				dgabo	kva		ds	many pieces of clay
V85	12	13	13	0.4	5	65	0.110				0.110				dgabo	kva		ds	few pieces of clay, pebbles
V85	13	14	14	0.001	5	40	0.260				0.260				dgabo	kva		ml	many sand stringers
V85	14	15	15	0.001	5	65	0.250				0.250				dgabo	kva		ml	many sand stringers
V85	15	16	16	0.4	5	65	0.150				0.150				dgabo	kva		ds	pieces of clay
V85	16	17	17	0.4	5	15	0.260				0.260				dgabo	kva		ds	pieces of clay
V85	17	18	18	0.001		65	0.280				0.280				dgabo	kva		ml	pebbly
V85	18	19	19	0.35		40	0.230				0.230				lgabo	kva		ds	
V85	19	20	20	0.35		35	0.060				0.060				lyega	mio		ks	many lignite fragments, clay stringers
V85	20	21	21	0.4		65	0.280				0.280				gabo	mio		ks	
V85	21	22	22	0.4		65	0.560	**0.886**			1.311		**586**		boba	mio		ks	clay stringers, many rounded lignite fragments
V85	22	23	23	0.35		35	0.120				0.120				gabo	mio		ks	
V85	23	24	24	0.35		100	0.200				0.200				gabo	mio		ks	few lignite fragments
V85	24	25	25	0.4		100	0.420				0.420				gabo	mio		ks	clay stringers
V85	25	26	26	0.4		60	0.300				0.300				gabo	mio		ks	
V85	26	27	27	0.4			0.210				0.210				bo	mio		ks	
V85	27	28	28	0.35			0.080				0.080				bo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V86	0	1	1	0.4	2	10	0.170				0.170				bo	kva		ds	
V86	1	2	2	0.35	5	65	0.130				0.130				lbo	kva		ds	small pebbles
V86	2	3	3	0.35		60	0.140				0.140				gabo	kva		ds	chert, small pebbles
V86	3	4	4	0.35	2	65	0.100				0.100				gabo	kva		ds	chert
V86	4	5	5	0.3		70	0.170				0.170				lgabo	kva/mio		ks	few lignite fragments
V86	5	6	6	0.25		50	0.020				0.020				gawi	mio		ks	lignite fragments, few clay stringers (10-15%)
V86	6	7	7	0.25		65	0.090				0.090				lga	mio		ks	2-5% lignite fragments, clay stringers
V86	7	8	8	0.35		100	0.280				0.280				lgabo	mio		ks	lignite fragments
V86	8	9	9	0.4		65	0.460				0.460				gabo	mio		ks	few lignite fragments
V86	9	10	10	0.4		80	0.560	**0.120**			0.457		**372**		gabo	mio		ks	
V86	10	11	11	0.4		90	0.930	**0.263**			0.616		**282**		boba	mio		ks	
V86	11	12	12	0.35		50	0.500				0.500				dbo	mio		ks	
V86	12	13	13	0.35		50	0.480				0.480				dbo	mio		ks	
V86	13	14	14	0.35		65	0.280				0.280				boga	mio		ks	
V86	14	15	15	0.4		65	0.460				0.460				dbo	mio		ks	
V86	15	16	16	0.3		70	0.240				0.240				bo	mio		ks	
V86	16	17	17	0.35		90	0.190				0.190				lgabo	mio		ks	
V86	17	18	18	0.45		60	0.400				0.400				lgabo	mio		ks	
V86	18	19	19	0.35		100	0.280				0.280				lboye	mio		ks	
V86	19	20	20	0.35		90	0.210				0.210				ga	mio		ks	lignite fragments
V86	20	21	21	0.35		50	0.250				0.250				dga	mio		ks	lignite fragments, 5-10% clay stringers
V86	21	22	22	0.35		100	0.100				0.100				boga	mio		ks	pieces of mica clay
V86	22	23	23	0.35		90	0.980	**0.735**			1.142		**440**		ga	mio		ks	pieces of mica clay
V86	23	24	24	0.35		50	1.870	**1.546**	1.893		2.034		**505**		dga	mio		ks	HM
V86	24	25	25	0.35		75	0.960	**0.846**			1.265		**309**		boga	mio		ks	lignite fragments, clay stringers
V86	25	26	26	0.35		65	0.740	**0.582**			0.971		**308**		boga	mio		ks	few mica clay stringers

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V87	0	1	1	0.35	5	65	1.970	**1.219**	1.757		1.907		**1123**		boga	kva		ds	
V87	1	2	2	0.35	2	65	0.270				0.270				lbo	kva		ds	
V87	2	3	3	0.2		90	0.000				0.000				lboga	kva		ds	
V87	3	4	4	0.35	10	100	0.240				0.240				lboga	kva		ds	
V87	4	5	5	0.4	10	100	0.070				0.070				lboga	kva		ds	
V87	5	6	6	0.001		65	0.250				0.250				ga	kva		dl	sand stringers, gravely
V87	6	7	7	0.001		65									dga	kva		dl	
V87	7	8	8	0.35		90	0.390				0.390				boga	kva/mio		ds	few pieces of clay
V87	8	9	9	0.35		90	0.350				0.350				dga	mio		ks	pieces of clay
V87	9	10	10	0.3		100	0.020				0.020				lga	mio		ks	few pieces of clay
V87	10	11	11	0.3		100	0.240				0.240				boga	mio		ks	lignite fragments
V87	11	12	12	0.4		100	0.180				0.180				boga	mio		ks	
V87	12	13	13	0.4		100	1.140	**0.593**			0.983		**559**		gabo	mio		ks	
V87	13	14	14	0.45		100	0.160				0.160				gabo	mio		ks	
V87	14	15	15	0.4		70	0.120				0.120				lgabo	mio		ks	
V87	15	16	16	0.3		70	0.430				0.430				lgabo	mio		ks	
V87	16	17	17	0.3		90	0.590	**0.246**			0.597		**336**		ga	mio		ks	
V87	17	18	18	0.3		100	0.610	**0.213**			0.561		**472**		ga	mio		ks	
V87	18	19	19	0.3		100	0.340				0.340				ga	mio		ks	
V87	19	20	20	0.3		100	0.170				0.170				lga	mio		ks	
V87	20	21	21	0.3		70	0.290				0.290				lga	mio		ks	
V87	21	22	22	0.45		100	0.460				0.460				gabo	mio		ks	
V87	22	23	23	0.4		100	0.400				0.400				gabo	mio		ks	lignite fragments
V87	23	24	24	0.3		90	0.030				0.030				boga	mio		ks	clay stringers
V87	24	25	25	0.001		100	0.210				0.210				boba	mio		ks	many sand stringers
V87	25	26	26	0.4		90	0.150				0.150				lgabo	mio		ks	pieces of clay

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V88	0	1	1	1.25	50	60	0.020				0.020				lbo	kva		dg	pebbles
V88	1	2	2	1.25	50	90	0.110				0.110				lbo	kva		dg	pebbles
V88	2	3	3	0.001		100	0.160				0.160				lyebo	kva		dl	coar sand stringers
V88	3	4	4	0.001		70									yebo	kva		dl	
V88	4	5	5	0.001		90	0.280				0.280				lbo	kva		dl	
V88	5	6	6	1.25	15	80	0.280				0.280				lboga	kva		ds	pebbles
V88	6	7	7	0.35	2	60	0.480				0.480				lboga	kva		ds	
V88	7	8	8	0.35		65	0.770	**0.380**			0.747		**413**		lboga	mio		ks	
V88	8	9	9	0.35		90	0.840	**0.454**			0.829		**603**		lboga	mio		ks	
V88	9	10	10	0.35		90	0.250				0.250				lboga	mio		ks	
V88	10	11	11	0.35		90	1.380	**1.221**			1.684		**917**		ga	mio		ks	HM
V88	11	12	12	0.35		90	0.560	**0.312**			0.670		**482**		ga	mio		ks	HM
V88	12	13	13	0.35		100	0.180				0.180				ga	mio		ks	
V88	13	14	14	0.35		100	0.050				0.050				lga	mio		ks	
V88	14	15	15	0.35		100	0.030				0.030				lga	mio		ks	
V88	15	16	16	0.35		65	0.040				0.040				lga	mio		ks	
V88	16	17	17	0.35		100	0.580	**0.446**			0.820		**508**		lga	mio		ks	
V88	17	18	18	0.35		65	0.460				0.460				lga	mio		ks	
V88	18	19	19	0.35		70	0.640	**0.140**			0.479		**353**		lga	mio		ks	HM
V88	19	20	20	0.35		70	0.610	**0.382**			0.748		**435**		lga	mio		ks	HM
V88	20	21	21	0.35		60	0.240				0.240				boga	mio		ks	lignite
V88	21	22	22	0.001		90									dbo	mio		gl	lot of lignite
V88	22	23	23	0.001		90									boba	mio		gl	micaceous
V88	23	24	24	0.3		60	0.340				0.340				lboga	mio		ks	clay stringers, lignite
V88	24	25	25	0.3		40	0.780	**0.347**			0.709		**329**		boga	mio		ks	clay stringers, lignite
V88	25	26	26	0.4		90	1.120	**0.596**			0.988		**442**		ga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V89	0	1	1	0.35	5	15	0.350				0.350				lyebo	kva		ds	pieces of silt/clay
V89	1	2	2	0.35	10	25	0.230				0.230				yebo	kva		ds	
V89	2	3	3	0.35	2	35	0.320				0.320				lyebo	kva		ds	
V89	3	4	4	0.35		30	0.210				0.210				lgabo	kva		ds	HM
V89	4	5	5	0.35		30	0.840	**0.416**			0.787		**449**		ga	mio		ks	HM
V89	5	6	6	0.35		30	2.400	**1.197**	1.725		1.878		**765**		ga	mio		ks	HM
V89	6	7	7	0.3		30	0.510				0.510				ga	mio		ks	HM
V89	7	8	8	0.3		45	0.970	**0.754**			1.164		**450**		ga	mio		ks	HM
V89	8	9	9	0.3		45	0.810	**0.336**			0.698		**624**		ga	mio		ks	HM
V89	9	10	10	0.3		50	0.460				0.460				ga	mio		ks	HM
V89	10	11	11	0.35		50	0.350				0.350				ga	mio		ks	HM
V89	11	12	12	0.35		30	0.250				0.250				ga	mio		ks	HM
V89	12	13	13	0.35		65	0.100				0.100				ga	mio		ks	HM
V89	13	14	14	0.4		70	0.630	**0.393**			0.761		**430**		ga	mio		ks	HM
V89	14	15	15	0.25		45	0.190				0.190				ga	mio		ks	HM
V89	15	16	16	0.3		60	0.240				0.240				ga	mio		ks	HM
V89	16	17	17	0.35		75	0.420				0.420				ga	mio		ks	HM
V89	17	18	18	0.3		50	0.590	**0.448**			0.822		**347**		ga	mio		ks	lot of lignite fragments, (HM)
V89	18	19	19	0.001		65									boba	mio		gl	mica clay, (lignite)
V89	19	20	20	0.001		65									boba	mio		gl	mica clay, (lignite)
V89	20	21	21	0.4		35	0.420				0.420				ga	mio		ks	many lignite fragments
V89	21	22	22	0.35		75	0.300				0.300				lboga	mio		ks	few clay stringers (+org. Mat.), few lignite fragments
V89	22	23	23	0.5	10	70	0.020				0.020				lboga	mio		ks	
V89	23	24	24	0.4	5	65	0.370				0.370				boga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V92	0	1	1	0.4		5									dbo	kva		m	topsoil
V92	1	2	2	0.5	5	75	0.112				0.112				lyebo	kva		ds	
V92	2	3	3	0.5	10	75	0.078				0.078				lyebo	kva		ds	
V92	3	4	4	0.6	5	75	0.126				0.126				lyebo	kva		ds	
V92	4	5	5	0.6	25	75	0.051				0.051				lyebo	kva		ds	pebbles
V92	5	6	6	0.4	10	75	0.187				0.187				lga	kva		ds	age uncertain, some downhole contam.
V92	6	7	7	0.5		75	0.438				0.438				lga	kva		ds	age uncertain, some downhole contam.
V92	7	8	8	0.5		75	0.334				0.334				lga	mio		ks	
V92	8	9	9	0.45		75	0.422				0.422				lga	mio		ks	
V92	9	10	10	0.45		75	0.366				0.366				lga	mio		ks	
V92	10	11	11	0.45		75	0.307				0.307				lga	mio		ks	
V92	11	12	12	0.45		75	0.239				0.239				lga	mio		ks	
V92	12	13	13	0.45		75	0.270				0.270				lyebo	mio		ks	some clay
V92	13	14	14	0.01		75									lyebo	mio		ks	some dark brown clay (orange marker)
V92	14	15	15	0.01		75									dbo	mio		gi	
V92	15	16	16	0.01		75									dbo	mio		gi	lignite
V92	16	17	17	0.35		75	0.662	**0.930**			1.359		**542**		lyega	mio		ks	HM
V92	17	18	18	0.4		75	1.153	**1.101**			1.550		**735**		lga	mio		ks	
V92	18	19	19	0.45		75	0.324				0.324				lga	mio		ks	
V92	19	20	20	0.8		75	0.081				0.081				lga	mio		ks	
V92	20	21	21	0.45		75	0.174				0.174				lga	mio		ks	
V92	21	22	22	0.4		75	0.228				0.228				lga	mio		ks	
V92	22	23	23	0.35		75	0.260				0.260				lga	mio		ks	
V92	23	24	24	0.45		70	0.154				0.154				lga	mio		ks	some coarse sand
V92	24	25	25	0.35		70	0.208				0.208				lga	mio		ks	
V92	25	26	26	0.3		65	0.173				0.173				lga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V93	0	1	1	0.35		65									lyebo	kva		ds	+ topsoil
V93	1	2	2	0.35		75	0.258				0.258				lyebo	kva		ds	
V93	2	3	3	0.35		75	0.080				0.080				lyebo	kva		ds	
V93	3	4	4	0.5	15	75	0.111				0.111				lyebo	kva		ds	
V93	4	5	5	0.5	5	75	0.126				0.126				lyebo	kva		ds	pebbles
V93	5	6	6	0.7	30	75	0.050				0.050				lyebo	kva		ds	pebbles
V93	6	7	7	0.6		75	0.184				0.184				lga	kva		ds	pebbles
V93	7	8	8	0.4		75	0.321				0.321				lga	kva		ds	pebbles
V93	8	9	9	0.4		75	0.533				0.533				lga	kva		ds	could be miocene ks dowmhole contam.
V93	9	10	10	0.4		75	0.342				0.342				lga	mio		ks	could be miocene ks dowmhole contam.
V93	10	11	11	0.4		75	0.185				0.185				lga	mio		ks	
V93	11	12	12	0.4		75	0.101				0.101				lga	mio		ks	
V93	12	13	13	0.4		75									yebo	mio		ks	
V93	13	14	14	0.002		75									dbo	mio		gl	orange marker, some grey + clay lignite
V93	14	15	15	0.35		75									dga	mio		ks	silty, sand layers
V93	15	16	16	0.3		75	0.112				0.112				dga	mio		ks	+ gl + c
V93	16	17	17	0.3		75	0.523				0.523				yebo	mio		ks	HM
V93	17	18	18	0.3		75	0.026				0.026				ga	mio		ks	some grey, HM
V93	18	19	19	0.35		75	0.060				0.060				ga	mio		ks	
V93	19	20	20	0.4		75	0.529				0.529				ga	mio		ks	
V93	20	21	21	0.5		70	0.139				0.139				ga	mio		ks	
V93	21	22	22	0.45		75	0.235				0.235				ga	mio		ks	
V93	22	23	23	0.35		75	0.302				0.302				ga	mio		ks	
V93	23	24	24	0.3		75	0.555	**0.393**			0.761		**577**		ga	mio		ks	lumps of cream coloured clay
V93	24	25	25	0.3		75	0.217				0.217				ga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V94	0	1	1	0.3		50	0.003				0.003				boga	kva		ds	
V94	1	2	2	0.35		50	0.195				0.195				boga	kva		ds	
V94	2	3	3	0.35		50	0.145				0.145				boga	kva		ds	
V94	3	4	4	0.35		50	0.181				0.181				boga	kva		ds	
V94	4	5	5	0.4	10	50	0.147				0.147				boga	kva		ds	
V94	5	6	6	0.5	15	55	0.079				0.079				boga	kva		ds	pebbles rocks
V94	6	7	7	0.5	5	60	0.034				0.034				boga	kva		ds	pebbles rocks
V94	7	8	8	0.4	10	65	0.064				0.064				boga	kva		ds	pebbles rocks
V94	8	9	9	0.45	5	60	0.075				0.075				yebo	kva		ds	
V94	9	10	10	0.4	5	55	0.388				0.388				yebo	mio		ks	
V94	10	11	11	0.4		70	0.285				0.285				lyebo	mio		ks	
V94	11	12	12	0.4		65	0.314				0.314				lyebo	mio		ks	
V94	12	13	13	0.4		60	0.558	**0.416**			0.787		**525**		lyebo	mio		ks	
V94	13	14	14	0.4		75	0.364				0.364				lga	mio		ks	
V94	14	15	15	0.4		75	0.171				0.171				lga	mio		ks	
V94	15	16	16	0.4		65									dbo	mio		ks	lignite clay
V94	16	17	17	0.02		75									dbo	mio		gi	sand layers
V94	17	18	18	0.02		60									dbo	mio		gi	
V94	18	19	19			0										mio			no sample
V94	19	20	20			0										mio			no sample
V94	20	21	21	0.35		50	1.264	**1.525**			2.023		**874**		gabo	mio		ks	
V94	21	22	22	0.35		60	0.132				0.132				lga	mio		ks	
V94	22	23	23	0.4		60	0.161				0.161				lga	mio		ks	
V94	23	24	24	0.4	10	70	0.247				0.247				lga	mio		ks	
V94	24	25	25	0.4		55	0.413				0.413				lga	mio		ks	
V94	25	26	26	0.4		50	0.196				0.196				lga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V95	0	1	1	0.35		50									bo	kva		ds	chert
V95	1	2	2	0.35		70									lyega	kva		ds	chert
V95	2	3	3	0.35	5	70									lyega	kva		ds	chert
V95	3	4	4	0.35		70									lyega	kva		ds	chert, few pebbles
V95	4	5	5	1.8	40	70									lyega	kva		ds	chert, many pebbles
V95	5	6	6	0.5	15	70									yega	kva		ds	chert, few large pebbles
V95	6	7	7	0.35		50									yega	kva		ds	chert
V95	7	8	8	0.35		75	0.070				0.070				yega	mio		ks	
V95	8	9	9	0.35		50	0.016				0.016				yega	mio		ks	
V95	9	10	10	0.35		75	0.058				0.058				yega	mio		ks	
V95	10	11	11	0.35		75	0.065				0.065				reye	mio		ks	
V95	11	12	12	0.35		50	0.169				0.169				reye	mio		ks	
V95	12	13	13	0.35		75	0.125				0.125				yega	mio		ks	
V95	13	14	14	0.35		75	0.188				0.188				lyega	mio		ks	
V95	14	15	15	0.35		50	0.246				0.246				lga	mio		ks	
V95	15	16	16	0.35		40	0.093				0.093				lga	mio		ks	
V95	16	17	17	0.02		70									yebo	mio		gi	
V95	17	18	18	0.02		20									yebo	mio		gi	lignite, brown coal
V95	18	19	19	0.35		25	0.202				0.202				lga	mio		ks	lignite, brown coal
V95	19	20	20	0.35		80	0.065				0.065				lga	mio		ks	
V95	20	21	21	0.35		80	0.032				0.032				lga	mio		ks	
V95	21	22	22	0.35		80	0.181				0.181				lga	mio		ks	
V95	22	23	23	0.35	15	80	0.118				0.118				lga	mio		ks	
V95	23	24	24	0.35		80	0.208				0.208				lga	mio		ks	
V95	24	25	25	0.35		80	0.028				0.028				lga	mio		ks	
V95	25	26	26	0.35		80	0.028				0.028				lga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V96	0	1	1	0.5	10	50									gabo	kva		ds	
V96	1	2	2	0.5	15	60									gabo	kva		ds	
V96	2	3	3	0.5	10	65									gabo	kva		ds	
V96	3	4	4	0.45		70									reye	mio		ks	
V96	4	5	5	0.4		70	0.742				0.742	187		187	lyebo	mio		ks	
V96	5	6	6	0.4		70	0.554				0.554	91		91	lyebo	mio		ks	
V96	6	7	7	0.4		70	0.106				0.106	68		68	reye	mio		ks	
V96	7	8	8	0.4		70	0.680				0.680	380		380	reye	mio		ks	
V96	8	9	9	0.4		70	1.190				1.190	501		501	reye	mio		ks	
V96	9	10	10	0.4		70	0.000				0.000	0		0	reye	mio		ks	
V96	10	11	11	0.35		70	0.000				0.000	0		0	reye	mio		ks	
V96	11	12	12	0.35		70	0.447				0.447	188		188	reye	mio		ks	
V96	12	13	13	0.02		35									dbo	mio		gi	silty, sand and mica in sample
V96	13	14	14	0.35		65	0.848				0.848	388		388	boye	mio		ks	
V96	14	15	15	0.35		65	2.283				2.283	902		902	lga	mio		ks	
V96	15	16	16	0.35		65	0.194				0.194	6		6	lga	mio		ks	
V96	16	17	17	0.35		65	0.474				0.474	2		2	lga	mio		ks	
V96	17	18	18	0.35		65	0.697				0.697	307		307	lga	mio		ks	
V96	18	19	19	0.35		65	0.000				0.000	0		0	lga	mio		ks	
V96	19	20	20	0.35		65	0.000				0.000	82		82	lga	mio		ks	
V96	20	21	21	0.35		65	0.187				0.187	128		128	lga	mio		ks	
V96	21	22	22	0.35		65	0.000				0.000	50		50	lga	mio		ks	
V96	22	23	23	0.35		65	0.083				0.083	233		233	lga	mio		ks	
V96	23	24	24	0.3		65	0.354				0.354	326		326	lga	mio		ks	
V96	24	25	25	0.4		65	0.000				0.000	0		0	lga	mio		ks	
V96	25	26	26	0.4		50	0.019				0.019	119		119	lga	mio		ks	mica low

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V97	0	1	1	0.5		25									dgabo	kva		ds	x-met out of order
V97	1	2	2	0.5		65									gabo	kva		ds	
V97	2	3	3	0.5		65									gabo	kva		ds	
V97	3	4	4	0.45		60									gabo	kva		ds	
V97	4	5	5	0.45		65									reye	kva		ds	some miocene
V97	5	6	6	0.4		75	0.370				0.370				lyebo	mio		ks	
V97	6	7	7	0.4		75	0.107				0.107				lyebo	mio		ks	
V97	7	8	8	0.4		75	0.155				0.155				lyebo	mio		ks	
V97	8	9	9	0.4		75	0.092				0.092				lyebo	mio		ks	
V97	9	10	10	0.4		75	0.106				0.106				lga	mio		ks	
V97	10	11	11	0.4		75	0.119				0.119				reye	mio		ks	
V97	11	12	12	0.4		75	0.077				0.077				ga	mio		ks	
V97	12	13	13	0.002		75									dbo	mio		gl	
V97	13	14	14	0.4		75	0.171				0.171				ga	mio		ks	
V97	14	15	15	0.4		55	0.117				0.117				ga	mio		ks	
V97	15	16	16	0.45		75	0.012				0.012				lga	mio		ks	
V97	16	17	17	0.45		75	0.041				0.041				lga	mio		ks	
V97	17	18	18	0.5		75	0.071				0.071				gabo	mio		ks	
V97	18	19	19	1	30	75	0.068				0.068				lgabo	mio		ks	coarse gravel and pebbles
V97	19	20	20	0.35		75	0.087				0.087				ga	mio		ks	
V97	20	21	21	0.35		75	0.204				0.204				ga	mio		ks	
V97	21	22	22	0.35		75	0.114				0.114				ga	mio		ks	mica
V97	22	23	23	0.35		75	0.143				0.143				ga	mio		ks	mica trace
V97	23	24	24	0.4		85	0.110				0.110				lgabo	mio		ks	mica trace
V97	24	25	25	0.4		75	0.166				0.166				lgabo	mio		ks	mica trace
V97	25	26	26	0.4		75	0.238				0.238				lgabo	mio		ks	mica trace

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V98	0	1	1	0.35		35	0.089				0.089				lbo	kva		ds	chert
V98	1	2	2	0.5	20	35	0.152				0.152				rebo	kva		ds	chert, many pebbles
V98	2	3	3	0.35	5	60	0.107				0.107				yega	kva		ds	chert, few pebbles
V98	3	4	4	0.35	5	60	0.000				0.000				lyega	kva		ds	chert, few pebbles
V98	4	5	5	0.35		60	0.212				0.212				lyega	mio		ks	
V98	5	6	6	0.35		60	0.371				0.371				lyega	mio		ks	
V98	6	7	7	0.35		70	0.256				0.256				yega	mio		ks	
V98	7	8	8	0.35		70	0.847	**0.465**			0.841		**447**		yega	mio		ks	
V98	8	9	9	0.35		70	0.487				0.487				yega	mio		ks	
V98	9	10	10	0.35		70	0.319				0.319				lyega	mio		ks	
V98	10	11	11	0.35		70	0.208				0.208				lyega	mio		ks	
V98	11	12	12	0.001		35									boba	mio		gl	
V98	12	13	13	0.001		70									boba	mio		gl	
V98	13	14	14	0.001		10									boba	mio		gl	
V98	14	15	15	0.35		25	1.297	**0.880**			1.304		**710**		lga	mio		ks	HM
V98	15	16	16	0.35		30	0.651	**0.651**			1.049		**474**		lga	mio		ks	
V98	16	17	17	0.35		30	1.201	**0.926**			1.355		**598**		lga	mio		ks	
V98	17	18	18	0.4		60	0.175				0.175				lga	mio		ks	
V98	18	19	19	0.4		65	0.178				0.178				lga	mio		ks	
V98	19	20	20	0.4		70	0.099				0.099				lga	mio		ks	drilling stop, problems !

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V99	0	1	1	0.8	30	75									reye	kva		ds	chert, clay layers
V99	1	2	2	0.5	15	75									yega	kva		ds	chert
V99	2	3	3	0.001		75									yebo	kva		ml	chert pebbles
V99	3	4	4	0.001		75									yebo	kva		ml	chert pebbles
V99	4	5	5	0.001		75									yebo	kva		ml	chert pebbles
V99	5	6	6	0.5	5	75									reye	kva		ds	
V99	6	7	7	0.5		75	0.037				0.037				reye	mio		ks	
V99	7	8	8	0.4		75	0.000				0.000				lyega	mio		ks	
V99	8	9	9	0.4		75	2.415				2.415				lyega	mio		ks	
V99	9	10	10	0.4		70	0.000				0.000				lyega	mio		ks	
V99	10	11	11	0.4		70	0.000				0.000				lyega	mio		ks	
V99	11	12	12	0.4		70	0.000				0.000				lyega	mio		ks	
V99	12	13	13	0.4		70	0.000				0.000				lyega	mio		ks	
V99	13	14	14	0.4		70	0.000				0.000				lyega	mio		ks	
V99	14	15	15	0.4		70	0.000				0.000				lyega	mio		ks	
V99	15	16	16	0.001		75									boba	mio		gl	silty
V99	16	17	17	0.001		55									boba	mio		gl	silty
V99	17	18	18	0.6		55	0.000				0.000				lyega	mio		ks	+ gl
V99	18	19	19	0.6		50	0.000				0.000				lyega	mio		ks	
V99	19	20	20	0.6		25	0.000				0.000				ga	mio		ks	
V99	20	21	21	0.6		30	0.000				0.000				lga	mio		ks	
V99	21	22	22	0.6		65	0.000				0.000				lga	mio		ks	
V99	22	23	23	0.45		65	0.102				0.102				lyega	mio		ks	
V99	23	24	24	0.3		50	0.004				0.004				lyega	mio		ks	
V99	24	25	25	0.3		50	0.002				0.002				lyega	mio		ks	
V99	25	26	26	0.3		50	0.000				0.000				lyega	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V100	0	1	1	0.35		65	0.634	**0.608**			1.001		**364**		boga	mio		ks	no clear indicators of Quaternary
V100	1	2	2	0.35		75	0.670	**0.792**			1.206		**805**		lyega	mio		ks	
V100	2	3	3	0.35		75	0.295				0.295				lyega	mio		ks	
V100	3	4	4	0.35		75	0.119				0.119				lyega	mio		ks	
V100	4	5	5	0.35		75	0.238				0.238				lyega	mio		ks	
V100	5	6	6	0.35		75	0.086				0.086				lyega	mio		ks	
V100	6	7	7	0.35		70	0.073				0.073				lyega	mio		ks	
V100	7	8	8	0.35		75	0.036				0.036				lyega	mio		ks	
V100	8	9	9	0.35		25	0.228				0.228				lyega	mio		ks	
V100	9	10	10	0.5		40	0.056				0.056				lyega	mio		ks	
V100	10	11	11	0.5		65	0.123				0.123				lyega	mio		ks	clay stringers
V100	11	12	12	0.35		50	0.100				0.100				lyega	mio		ks	
V100	12	13	13	0.35		60	0.101				0.101				lyega	mio		ks	
V100	13	14	14	0.35		70	0.304				0.304				ga	mio		ks	
V100	14	15	15	0.001		50									boba	mio		c	lignite + clay
V100	15	16	16	0.001		40									boba	mio		gl	few lignite
V100	16	17	17	0.45		70	0.399				0.399				dga	mio		ks	+ gl
V100	17	18	18	0.35		70	0.358				0.358				lboga	mio		ks	
V100	18	19	19	0.45		70	0.066				0.066				lboga	mio		ks	
V100	19	20	20	0.45		70	0.128				0.128				boga	mio		ks	
V100	20	21	21	0.45		70	0.064				0.064				boga	mio		ks	
V100	21	22	22	0.45		70	0.047				0.047				boga	mio		ks	
V100	22	23	23	0.45		70	0.073				0.073				boga	mio		ks	
V100	23	24	24	0.35		70	0.193				0.193				boga	mio		ks	
V100	24	25	25	0.35		50	0.100				0.100				boga	mio		ks	
V100	25	26	26	0.35		70	0.034				0.034				boga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V101	0	1	1	0.3		30									gabo	kva		ds	
V101	1	2	2	0.4		70									gabo	kva		ds	pebbles
V101	2	3	3	0.45		70	0.072				0.072				lgabo	mio		ks	
V101	3	4	4	0.4		70	0.289				0.289				lgabo	mio		ks	
V101	4	5	5	0.4		70	0.228				0.228				ga	mio		ks	
V101	5	6	6	0.4		70	0.555	**0.458**			0.834		**575**		ga	mio		ks	
V101	6	7	7	0.4		70	0.192				0.192				ga	mio		ks	
V101	7	8	8	0.4		70	0.314				0.314				ga	mio		ks	
V101	8	9	9	0.4		70	0.361				0.361				ga	mio		ks	
V101	9	10	10	0.4		70	0.014				0.014				ga	mio		ks	
V101	10	11	11	0.4		70	0.089				0.089				ga	mio		ks	
V101	11	12	12	0.4		70	0.162				0.162				ga	mio		ks	
V101	12	13	13	0.4		70	0.120				0.120				ga	mio		ks	
V101	13	14	14	0.4		70	0.198				0.198				ga	mio		ks	clay stringers, lignite
V101	14	15	15	0.4		70	0.584	**1.351**			1.829		**1572**		ga	mio		ks	HM
V101	15	16	16	0.4		70	0.498				0.498				ga	mio		ks	HM
V101	16	17	17	0.4		70	0.278				0.278				gabo	mio		ks	HM
V101	17	18	18	0.4		70									dbo	mio		ks	lignite + gl
V101	18	19	19	0.002		70									boba	mio		gl	
V101	19	20	20	0.002		70									boba	mio		gl	
V101	20	21	21	0.4		70	2.539	**2.836**	4.091	4.196	4.196		**2407**		dga	mio		ks	HM +++
V101	21	22	22	0.4		70	0.058				0.058				gabo	mio		ks	
V101	22	23	23	0.45		70	0.073				0.073				gabo	mio		ks	
V101	23	24	24	0.45		70	0.112				0.112				gabo	mio		ks	
V101	24	25	25	0.45		70	0.178				0.178				gabo	mio		ks	
V101	25	26	26	0.45		70	0.364				0.364				gabo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V102	0	1	1	0.35	5	20									dbo	kv		m	sandy
V102	1	2	2	0.35	5	25									lyebo	kv		ds	crystalline rock fragm.
V102	2	3	3	0.35	2	80									yebo	kv		ds	
V102	3	4	4	0.35		80									lyebo	kv		ds	HM?
V102	4	5	5	0.35		80									lyebo	kv		ds	HM?
V102	5	6	6	0.35		80									lyebo	kv		ds	HM? Chert
V102	6	7	7	0.4		80		0.000				0		0	boye	mio		ks	HM?
V102	7	8	8	0.5		80		0.000				0		0	boye	mio		ks	HM?
V102	8	9	9	0.2		80		0.313			0.672	74		74	lyebo	mio		ks	
V102	9	10	10	0.2		80									ga	mio		ks	25% lignite
V102	10	11	11	0.01		80									dga	mio		gi	lignite and sand
V102	11	12	12	0.35		80		1.137			1.591	478		478	ga	mio		ks	15 % lignite
V102	12	13	13	0.35		80		2.952			3.613	1001		1001	ga	mio		ks	5% lignite
V102	13	14	14	0.35		80		0.061			0.391	189		189	ga	mio		ks	HM
V102	14	15	15	0.35		80		0.688			1.090	1039		1039	ga	mio		ks	HM
V102	15	16	16	0.35		80		0.000				0		0	ga	mio		ks	HM
V102	16	17	17	0.6		80		0.000				0		0	ga	mio		ks	
V102	17	18	18	0.35		80		0.000				0		0	lga	mio		ks	
V102	18	19	19	0.35		80		0.000				0		0	lga	mio		ks	
V102	19	20	20	0.35		80		0.000				0		0	lga	mio		ks	
V102	20	21	21	0.35		80		0.000				0		0	lga	mio		ks	
V102	21	22	22	0.35		80		0.028			0.354	36		36	lga	mio		ks	
V102	22	23	23	0.35		80		0.000				0		0	lga	mio		ks	
V102	23	24	24	0.35		80		0.000				0		0	lga	mio		ks	
V102	24	25	25	0.35		80		0.267			0.620	127		127	lga	mio		ks	
V102	25	26	26	0.35		80		0.294			0.651	113		113	lga	mio		ks	Some siltstringers

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V103	0	1	1	0.35	i										dbo	kv		m	sandy
V103	1	2	2	0.35											yebo	kv		ds	rocks and pebbles
V103	2	3	3	0.25											lyebo	kv		ds	rocks and pebbles
V103	3	4	4	0.25											lyebo	kv		ds	
V103	4	5	5	0.35				0.000				0		0	lyebo	mio		ks	age transition uncertain
V103	5	6	6	0.35				0.000				0		0	lboye	mio		ks	
V103	6	7	7	0.35				0.000				0		0	boye	mio		ks	
V103	7	8	8	0.003				0.000				45		45	lga	mio		ks	
V103	8	9	9	0.001											ba	mio		c	50% lignite 50% sand
V103	9	10	10	0.02											dbo	mio		gi	lignite and sand
V103	10	11	11	0.35				0.192			0.537	216		216	lga	mio		ks	10% lignite
V103	11	12	12	0.35				0.382			0.749	268		268	lgabo	mio		ks	
V103	12	13	13	0.35				0.149			0.489	186		186	lgabo	mio		ks	
V103	13	14	14	0.45				0.000				0		0	lgabo	mio		ks	
V103	14	15	15	0.45	10			0.317			0.676	518		518	lgabo	mio		ks	HM or lignite
V103	15	16	16	1	10			0.000				0		0	lgabo	mio		ks	
V103	16	17	17	1.2				0.000				0		0	lgabo	mio		ks	
V103	17	18	18	0.35				0.067			0.398	245		245	lgabo	mio		ks	
V103	18	19	19	0.35				0.000			0.323	59		59	lgabo	mio		ks	
V103	19	20	20	0.35				0.000				0		0	lgabo	mio		ks	
V103	20	21	21	0.35				0.000				25		25	lgabo	mio		ks	
V103	21	22	22	0.35				0.268			0.622	269		269	lgabo	mio		ks	
V103	22	23	23	0.35				0.052			0.380	219		219	lgabo	mio		ks	
V103	23	24	24	0.35	5			0.004			0.327	19		19	lgabo	mio		ks	
V103	24	25	25	0.35				0.000				0		0	lgabo	mio		ks	
V103	25	26	26	0.35				0.000				0		0	lgabo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V104	0	1	1	0.35		20									ba	kv		m	
V104	1	2	2	0.35		10									bo	kv		ds	
V104	2	3	3	0.35		80									gabo	kv		ds	
V104	3	4	4	0.35		80		0.000				0		0	lga	mio		ks	
V104	4	5	5	0.35		80		0.005			0.328	387		387	lga	mio		ks	lignite
V104	5	6	6	0.03		70		0.007			0.330	30		30	dbo	mio		gi	micaceous silt
V104	6	7	7	0.35		70		0.000				25		25	lga	mio		ks	
V104	7	8	8	0.35		80		0.000				0		0	lga	mio		ks	
V104	8	9	9	0.35		80		0.000				0		0	lga	mio		ks	
V104	9	10	10	0.35		80		0.391			0.759	103		103	lga	mio		ks	
V104	10	11	11	0.35		80		0.752			1.161	200		200	lga	mio		ks	
V104	11	12	12	0.35		80		0.217			0.564	241		241	lgabo	mio		ks	
V104	12	13	13	0.35		80		0.000				0		0	lgabo	mio		ks	
V104	13	14	14	0.06	5	80		0.000				0		0	lgabo	mio		ks	
V104	14	15	15	0.35		80		0.000				0		0	lgabo	mio		ks	
V104	15	16	16	0.35		80		0.000				0		0	lgabo	mio		ks	
V104	16	17	17	0.35		80		0.000				0		0	lyebo	mio		ks	
V104	17	18	18	0.35		80		0.067			0.398	152		152	lyebo	mio		ks	
V104	18	19	19	0.35		80		0.012			0.337	10		10	lyebo	mio		ks	
V104	19	20	20	0.35		80		0.019			0.344	144		144	lga	mio		ks	
V104	20	21	21	0.35		80		0.000				0		0	lga	mio		ks	
V104	21	22	22	0.35		80		0.311			0.669	235		235	lga	mio		ks	
V104	22	23	23	0.1		80		0.263			0.616	373		373	lgabo	mio	Arn	gs	mica
V104	23	24	24	0.1		80		0.124			0.461	279		279	lgabo	mio	Arn	gs	
V104	24	25	25	0.1		80		0.208			0.555	304		304	lgabo	mio	Arn	gs	
V104	25	26	26	0.1		80		0.554			0.940	853		853	lgabo	mio	Arn	gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V105	0	1	1	0.35		20									dbo	kv		ds	
V105	1	2	2	0.4	5										bo	kv		ds	
V105	2	3	3	0.6	15	10									bo	kv		ds	
V105	3	4	4	1.5	30	40									bo	kv		dg	stones and pebbles
V105	4	5	5	0.35		80									lga	mio		ks	
V105	5	6	6	0.35		80		0.000				0		0	lga	mio		ks	
V105	6	7	7	0.35		80		0.000				15		15	lga	mio		ks	
V105	7	8	8	0.35		80		0.000				0		0	lga	mio		ks	
V105	8	9	9	0.35		80		0.150			0.490	26		26	lga	mio		ks	
V105	9	10	10	0.35		80		0.013			0.337	0		0	lga	mio		ks	
V105	10	11	11	0.35		80		0.000				0		0	lga	mio		ks	
V105	11	12	12	0.35		80		0.000				17		17	lga	mio		ks	
V105	12	13	13	0.03		80									dbo	mio		gl	sand, silt and lignite
V105	13	14	14	0.35		80		0.801			1.215	363		363	lga	mio		ks	
V105	14	15	15	0.35		80		0.000				35		35	lga	mio		ks	
V105	15	16	16	0.35		80		0.000				0		0	lga	mio		ks	
V105	16	17	17	0.35		80		0.000				0		0	lga	mio		ks	
V105	17	18	18	0.35		80		0.000				35		35	lga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V106	0	1	1	0.4		50									gabo	kva		ds	
V106	1	2	2	0.4	5	70									bo	kva		ds	
V106	2	3	3	0.4		80									lyebo	kva		ds	
V106	3	4	4	0.4	2	80									lyebo	kva		ds	
V106	4	5	5	0.35	2	80									lyebo	kva		ds	
V106	5	6	6	0.35		80		0.000				0		0	lga	mio		ks	
V106	6	7	7	0.35		80		0.000				0		0	lga	mio		ks	
V106	7	8	8	0.35		80		0.000				0		0	lga	mio		ks	
V106	8	9	9	0.35		80		0.000				24		24	lga	mio		ks	
V106	9	10	10	0.35		80		0.000				0		0	lga	mio		ks	
V106	10	11	11	0.35		80		0.000				0		0	lga	mio		ks	
V106	11	12	12	0.01		40									dbo	mio		gi	
V106	12	13	13	0.001		40									dbo	mio		gl	
V106	13	14	14	0.001		40									dbo	mio		c	lignite with some clay silt and sand
V106	14	15	15			80										mio			no sample, lost in the drilling process. Most likely sand
V106	15	16	16	0.3		80		0.322			0.682	161		161	lga	mio		ks	
V106	16	17	17	0.3		80		0.000				59		59	lga	mio		ks	
V106	17	18	18	0.3		80		0.000				0		0	lga	mio		ks	
V106	18	19	19	0.5		80		0.000				0		0	lga	mio		ks	
V106	19	20	20	0.35		80		0.000				0		0	lga	mio		ks	
V106	20	21	21	0.35		80		0.026			0.352	17		17	lga	mio		ks	
V106	21	22	22	0.35		80		0.000				0		0	lga	mio		ks	
V106	22	23	23	0.25		80		0.000				43		43	lgabo	mio		ks	
V106	23	24	24	0.25		80		0.000				0		0	lgabo	mio		ks	
V106	24	25	25	0.25		80		0.000				0		0	lgabo	mio		ks	
V106	25	26	26	0.25		80		0.000				0		0	lgabo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V107	0	1	1	0.5	15	60									bo	kva		ds	gravel and pebbles
V107	1	2	2	0.5	15	80									lyebo	kva		ds	gravel and pebbles
V107	2	3	3	0.5	15	80									lyebo	kva		ds	gravel and pebbles
V107	3	4	4	0.5	15	80									lyebo	kva		ds	gravel and pebbles
V107	4	5	5	0.5	15	80									lyebo	kva		ds	gravel and pebbles
V107	5	6	6	0.5	15	80									lyebo	kva		ds	gravel and pebbles
V107	6	7	7	0.5	15	80									lyebo	kva		ds	gravel and pebbles
V107	7	8	8	0.5	15	80									lyebo	kva		ds	gravel and pebbles
V107	8	9	9	0.35		80									lga	mio		ks	
V107	9	10	10	0.35		80		0.000				0		0	lga	mio		ks	
V107	10	11	11	0.35		80		0.000				0		0	lga	mio		ks	
V107	11	12	12	0.35		80		0.000				0		0	lga	mio		ks	
V107	12	13	13	0.35		80		0.000				0		0	lga	mio		ks	
V107	13	14	14	0.35		80		0.000				0		0	lga	mio		ks	
V107	14	15	15	0.35		80		0.000				0		0	lga	mio		ks	
V107	15	16	16	0.35		80		0.000				0		0	lga	mio		ks	
V107	16	17	17	0.35		80		0.000				0		0	lga	mio		ks	
V107	17	18	18	0.35		80		0.000				0		0	lga	mio		ks	
V107	18	19	19	0.35		80		0.093			0.427	101		101	lga	mio		ks	some silt and clay stringers
V107	19	20	20	0.01		80									dbo	mio		gi	20% lignite
V107	20	21	21	0.01		80									dbo	mio		c	lignite
V107	21	22	22	0.3		10									ga	mio		ks	lignite trace
V107	22	23	23	0.3		10									ga	mio		ks	lignite trace

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V108	0	1	1	0.4		70									dbo	kv		m	
V108	1	2	2	0.4		75									lyebo	kv		ds	
V108	2	3	3	0.5		75									lgabo	kv		ds	
V108	3	4	4	0.4		70		0.000				0		0	lga	mio		ks	
V108	4	5	5	0.35		50		0.000				0		0	lgabo	mio		ks	
V108	5	6	6	0.35		70		0.000				0		0	lgabo	mio		ks	
V108	6	7	7	0.3		80		0.000				72		72	lgabo	mio		ks	
V108	7	8	8	0.35		80		0.000				0		0	lga	mio		ks	
V108	8	9	9	0.35		80		0.000				0		0	lga	mio		ks	
V108	9	10	10	0.35		80		0.000				8		8	lga	mio		ks	
V108	10	11	11	0.35		80		0.000				0		0	lga	mio		ks	
V108	11	12	12	0.35		80		0.000				0		0	lga	mio		ks	
V108	12	13	13	0.35		80		0.000				0		0	lga	mio		ks	
V108	13	14	14	0.35		80		0.415			0.785	190		190	lga	mio		ks	
V108	14	15	15	0.35		80		0.024			0.349	33		33	lga	mio		ks	
V108	15	16	16	0.35		80		0.000				36		36	lga	mio		ks	
V108	16	17	17	0.35		80		0.000				0		0	lga	mio		ks	
V108	17	18	18	0.35		80		0.000				0		0	lga	mio		ks	
V108	18	19	19	0.35		80		0.000				0		0	lga	mio		ks	
V108	19	20	20	0.35		80		0.000				49		49	lga	mio		ks	trace of lignite
V108	20	21	21	0.35		80		0.000				0		0	lga	mio		ks	trace of lignite
V108	21	22	22	0.35		80									lga	mio		ks	clay stringers 20%
V108	22	23	23	0.35		80		0.243			0.594	211		211	lga	mio		ks	20 % lignite
V108	23	24	24	0.35		80		0.006			0.330	10		10	lga	mio		ks	
V108	24	25	25	0.35		80		0.000				23		23	lga	mio		ks	
V108	25	26	26	0.35		80		0.000				0		0	lga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V109	0	1	1	0.4	5	75									gabo	kv		ds	
V109	1	2	2	0.35		80									lgabo	kv		ds	
V109	2	3	3	0.35		75		0.000				0		0	lga	mio		ks	
V109	3	4	4	0.35		80		0.000				0		0	lga	mio		ks	
V109	4	5	5	0.35		80		0.000				0		0	lga	mio		ks	
V109	5	6	6	0.35		80		0.000				0		0	lga	mio		ks	
V109	6	7	7	0.35		80		0.000				8		8	lga	mio		ks	
V109	7	8	8	0.35		80		0.000				0		0	lga	mio		ks	
V109	8	9	9	0.35		80		0.000				0		0	lga	mio		ks	
V109	9	10	10	0.35		80		0.000				0		0	lga	mio		ks	
V109	10	11	11	0.35		80		0.000				0		0	lga	mio		ks	
V109	11	12	12	0.35		80		0.000				22		22	lga	mio		ks	
V109	12	13	13	0.35		80		0.000				0		0	lga	mio		ks	
V109	13	14	14	0.35		80		0.021			0.347	33		33	lga	mio		ks	
V109	14	15	15	0.25		80		0.000				0		0	lga	mio		ks	
V109	15	16	16	0.35		80		0.000				0		0	lga	mio		ks	hm
V109	16	17	17	0.35		80		0.090			0.424	340		340	lga	mio		ks	clay stringer
V109	17	18	18	0.35		80		0.000				0		0	lga	mio		ks	trace of lignite laminated clay and silt
V109	18	19	19	0.35		80		0.136			0.474	251		251	lga	mio		ks	5% lignite
V109	19	20	20	0.35		80		0.000				19		19	lga	mio		ks	
V109	20	21	21	0.35		80		0.000				0		0	lga	mio		ks	
V109	21	22	22	0.35		80		0.000				2		2	lga	mio		ks	
V109	22	23	23	0.35		80		0.000				10		10	lga	mio		ks	
V109	23	24	24	0.35		80		0.057			0.387	67		67	lga	mio		ks	
V109	24	25	25	0.35		80		0.000				0		0	lga	mio		ks	
V109	25	26	26	0.35		80									lga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V110	0	1	1	0.4		80									gabo	kv		ds	
V110	1	2	2	0.35		80									gabo	kv		ds	
V110	2	3	3	0.35		80		0.000				0		0	gabo	mio		ks	
V110	3	4	4	0.35		80		0.000				0		0	lgabo	mio		ks	
V110	4	5	5	0.001		80									ba	mio		c	
V110	5	6	6	0.35		80		0.000				42		42	ga	mio		ks	
V110	6	7	7	0.35		80		0.000				0		0	ga	mio		ks	
V110	7	8	8	1	10	80		0.000				0		0	ga	mio		ks	
V110	8	9	9	0.35		80		0.000				6		6	ga	mio		ks	
V110	9	10	10	0.35		80		0.000				0		0	ga	mio		ks	
V110	10	11	11	0.25		80		0.000				0		0	ga	mio		ks	10 % lignite
V110	11	12	12	0.25		80		0.000				0		0	ga	mio		ks	
V110	12	13	13	0.25		80		0.275			0.629	112		112	ga	mio		ks	
V110	13	14	14	0.35		80		0.000				0		0	ga	mio		ks	
V110	14	15	15	0.35		80		0.000				0		0	ga	mio		ks	
V110	15	16	16	0.35		80		0.000				0		0	ga	mio		ks	
V110	16	17	17	0.35		80		0.000				0		0	ga	mio		ks	hm ?
V110	17	18	18	0.35		80		0.000				39		39	ga	mio		ks	
V110	18	19	19	0.35		80		0.154			0.495	73		73	ga	mio		ks	
V110	19	20	20	0.35		80		0.000				0		0	ga	mio		ks	
V110	20	21	21	0.35		80		0.000				0		0	ga	mio		ks	HM ?
V110	21	22	22	0.35		80		0.000				19		19	ga	mio		ks	HM ?
V110	22	23	23	0.35		80		0.000				0		0	ga	mio		ks	HM ?
V110	23	24	24	0.35		80		0.000				0		0	ga	mio		ks	HM ?
V110	24	25	25	0.35		80		0.000				0		0	ga	mio		ks	HM ?
V110	25	26	26	0.35		80		0.000				21		21	ga	mio		ks	HM ?

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V111	0	1	1	0.35	5	80									boga	kv		ds	
V111	1	2	2	0.35		80									lgabo	kv		ds	
V111	2	3	3	0.35		80		0.000				0		0	lga	mio		ks	
V111	3	4	4	0.35		80		0.084			0.416	130		130	lga	mio		ks	
V111	4	5	5	0.35		80		0.000				0		0	lga	mio		ks	
V111	5	6	6	0.35		80		0.000				0		0	lga	mio		ks	
V111	6	7	7	0.35		80		0.012			0.337	72		72	lga	mio		ks	
V111	7	8	8	0.35		80		0.000				0		0	lga	mio		ks	
V111	8	9	9	0.35		80		0.002			0.326	0		0	lga	mio		ks	
V111	9	10	10	0.35		80		0.000				0		0	lga	mio		ks	
V111	10	11	11	0.35		80		0.000				25		25	lga	mio		ks	
V111	11	12	12	0.35		80		0.000				0		0	lga	mio		ks	
V111	12	13	13	0.35		80		0.000				0		0	lgabo	mio		ks	
V111	13	14	14	0.35		80		0.000				0		0	lga	mio		ks	
V111	14	15	15	0.5		80		0.000				0		0	lga	mio		ks	
V111	15	16	16	0.45		80		0.000				0		0	lga	mio		ks	
V111	16	17	17	0.4		80		0.004			0.328	0		0	lga	mio		ks	
V111	17	18	18	0.35		80		0.000				17		17	lga	mio		ks	
V111	18	19	19	0.35		80		0.000				80		80	lga	mio		ks	
V111	19	20	20	0.35		80		0.000				0		0	lga	mio		ks	
V111	20	21	21	0.3		80		0.000				45		45	lga	mio		ks	
V111	21	22	22	0.25		80		0.097			0.431	146		146	lga	mio		ks	
V111	22	23	23	0.25		80		0.000				0		0	lga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V112	0	1	1	0.50		50									bo	kva		ds	
V112	1	2	2	0.50		75									yebo	kva		ds	
V112	2	3	3	0.35		75									yebo	kva		ds	
V112	3	4	4	0.35		75									yebo	kva		dg	
V112	4	5	5	0.50		75									yebo	kva		ds	
V112	5	6	6	0.50		75									yebo	kva		ds	
V112	6	7	7	0.50		75									yebo	kva		ds	
V112	7	8	8	0.50		75									yebo	kva		ds	
V112	8	9	9	0.50		75									yebo	kva		ds	
V112	9	10	10	2.83		75									dyebo	kva		dg	
V112	10	11	11	4.00		50									yebo	kva		dg	contaminated with rust from drillstring
V112	11	12	12	0.50		50									yebo	kva		ds	
V112	12	13	13	2.00		75									gabo	kva		ds	
V112	13	14	14	0.50		75									gabo	kva		ds	
V112	14	15	15	0.50		50									lgabo	kva		ds	
V112	15	16	16	0.50		50									yebo	kva		ds	claystringers
V112	16	17	17	0.25		50									gabo	kva		ds	reworked miocene
V112	17	18	18	0.50		75									gabo	kva		ds	gravel and miocene sand
V112	18	19	19	0.71		50									yebo	kva		ds	
V112	19	20	20	0.25		75	0.005				0.005	5		5	lgabo	mio		ks	< 1% HM
V112	20	21	21	0.00		50	0.560				0.560	291		291	boba	mio		gl	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V113	0	1	1	0.35	5	50									bo	kva		ds	pale yellow
V113	1	2	2	0.25	0	75	0.000				0.000	0		0	ga	mio		ks	some quaternary
V113	2	3	3	0.25	0	100	0.000				0.000	0		0	lga	mio		ks	<1% HM
V113	3	4	4	0.18	0	100	0.000				0.000	0		0	lga	mio		ks	<1% HM
V113	4	5	5	0.18	0	100	0.000				0.000	19		19	lga	mio		ks	<1% HM
V113	5	6	6	0.13	0	100	0.000				0.000	0		0	lga	mio		ks	<1% HM
V113	6	7	7	0.18	0	100	0.000				0.000	47		47	lga	mio		ks	<1% HM
V113	7	8	8	0.25	0	100	0.000				0.000	0		0	lyewi	mio		ks	1-2 % HM
V113	8	9	9	0.25	0	100	0.000				0.000	0		0	lga	mio		ks	<1%
V113	9	10	10	0.25	0	100	0.000				0.000	0		0	lga	mio		ks	1%
V113	10	11	11	0.25	0	100	0.140				0.140	55		55	lga	mio		ks	2-3% hm
V113	11	12	12	0.25	0	100	0.000				0.000	50		50	lga	mio		ks	hm
V113	12	13	13	0.25	0	100	0.000				0.000	42		42	lga	mio		ks	hm
V113	13	14	14	0.25	0	100	0.000				0.000	6		6	lga	mio		ks	hm
V113	14	15	15	0.25	0	100	0.000				0.000	0		0	lga	mio		ks	hm
V113	15	16	16	0.25	0	100	0.100				0.100	65		65	pye	mio		ks	lignite fragm.
V113	16	17	17	0.25	0	100	0.000				0.000	0		0	lga	mio		ks	
V113	17	18	18	0.25	0	100	0.542				0.542	218		218	lga	mio		ks	
V113	18	19	19	0.25	0	100	0.395				0.395	190		190	lga	mio		ks	
V113	19	20	20	0.18	0	100	0.117				0.117	68		68	lga	mio		ks	
V113	20	21	21	0.00	0	25									boba	mio		gl	mica
V113	21	22	22	0.25	0	25	0.227				0.227	436		436	dboga	mio		ks	50% lignite
V113	22	23	23	0.25	0	100	0.471				0.471	348		348	lga	mio		ks	
V113	23	24	24	0.25	0	100	0.463				0.463	239		239	lga	mio		ks	
V113	24	25	25	0.35	0	50	0.058				0.058	0		0	lga	mio		ks	Drill stopped at 24.5 m

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V114	0	1	1	0.50	10	75									pye	kva		ds	
V114	1	2	2	0.25	5	75									yebo	kva		ds	
V114	2	3	3	0.25	5	75									reye	kva		ds	
V114	3	4	4	0.50	10	75									yebo	kva		ds	
V114	4	5	5	0.50	5	75									lyebo	kva		ds	pebbles
V114	5	6	6	0.50	15	75									lyebo	kva		ds	
V114	6	7	7	0.50	20	75									lyebo	kva		ds	
V114	7	8	8	2.00	30	75									rebo	kva		ds	some miocene clay
V114	8	9	9	0.01	0	75									ba	mio		gl	sand + lignite
V114	9	10	10	0.25	0	75	1.153	**0.774**			1.186	711	**648**	711	vga	mio		ks	50 clay - silt in sample, HM
V114	10	11	11	0.35	0	75	0.211				0.211	34		34	ga	mio		ks	HM
V114	11	12	12	0.35	0	75	0.650				0.650	121		121	ga	mio		ks	HM
V114	12	13	13	0.35	0	75	0.000				0.000	3		3	ga	mio		ks	HM
V114	13	14	14	0.35	0	75	0.000				0.000	17		17	ga	mio		ks	HM
V114	14	15	15	0.35	0	75	0.168				0.168	6		6	wiga	mio		ks	HM
V114	15	16	16	0.50	0	75	0.063				0.063	72		72	wiga	mio		ks	HM
V114	16	17	17	0.50	5	75	0.000				0.000	0		0	wiga	mio		ks	HM
V114	17	18	18	0.35	0	75	0.000				0.000	0		0	wiga	mio		ks	HM
V114	18	19	19	0.35	0	75	0.000				0.000	0		0	wiga	mio		ks	HM
V114	19	20	20	0.25	0	75	0.000				0.000	0		0	wiga	mio		ks	
V114	20	21	21	0.25	0	75	0.002				0.002	0		0	wiga	mio		ks	silt stringers
V114	21	22	22	0.25	0	75	0.053				0.053	27		27	wiga	mio		ks	clay stringers
V114	22	23	23	0.35	5	75	0.000				0.000	4		4	yega	mio		ks	clay stringers
V114	23	24	24	0.35	0	75	0.000				0.000	0		0	yega	mio		ks	clay stringers, some HM
V114	24	25	25	0.35	0	75	0.054				0.054	112		112	dga	mio		ks	some clay + some coarse sand
V114	25	26	26	0.50	5	75	0.000				0.000	0		0	dga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V115	0	1	1	0.35	5	75									dyebo	kva		ds	
V115	1	2	2	0.35	10	75									yebo	kva		ds	
V115	2	3	3	0.35	5	75									yebo	kva		ds	
V115	3	4	4	0.35	10	75									yebo	kva		ds	
V115	4	5	5	0.35	10	75									yebo	kva		ds	
V115	5	6	6	2.00	50	75									yebo	kva		dg	pebbles
V115	6	7	7	0.25	0	75	0.000				0.000	0		0	yebo	mio		ks	some Quaternary
V115	7	8	8	0.35	0	75	0.000				0.000	0		0	lyebo	mio		ks	
V115	8	9	9	0.35	0	75	0.000				0.000	2		2	lyebo	mio		ks	HM
V115	9	10	10	0.35	0	75	0.151				0.151	53		53	lyebo	mio		ks	HM
V115	10	11	11	0.35	0	75	0.000				0.000	0		0	lyebo	mio		ks	HM
V115	11	12	12	0.35	0	75	0.000				0.000	0		0	lyebo	mio		ks	
V115	12	13	13	0.25	0	75	0.000				0.000	11		11	lyebo	mio		ks	
V115	13	14	14	0.50	0	75	0.000				0.000	13		13	lyebo	mio		ks	orange clay stringers
V115	14	15	15	0.00	0	75	0.140				0.140	212		212	vbo	mio		gl	clay orange, sand, lignite
V115	15	16	16	0.35	0	75	0.000				0.000	0		0	lyebo	mio		ks	
V115	16	17	17	0.50	0	75	0.000				0.000	0		0	lyebo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V116	0	1	1	0.35	20	50									boga	kva		ds	
V116	1	2	2	0.50	20	70									yebo	kva		ds	
V116	2	3	3	0.50	25	75									yebo	kva		ds	
V116	3	4	4	0.50	10	25									yebo	kva		ds	
V116	4	5	5	0.50	30	50									yebo	kva		ds	
V116	5	6	6	0.50	25	70									yebo	kva		ds	
V116	6	7	7	0.50	15	70									yebo	kva		ds	
V116	7	8	8	0.35	10	75									ga	kva		ds	some miocene
V116	8	9	9	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V116	9	10	10	0.35		75	0.068				0.068	0		0	dga	mio		ks	HM
V116	10	11	11	0.35		75	0.000				0.000	0		0	dga	mio		ks	HM
V116	11	12	12	0.35		75	0.868	**0.690**			1.092	0	**327**	0	dga	mio		ks	HM
V116	12	13	13	0.35		75	0.322				0.322	0		0	dga	mio		ks	HM
V116	13	14	14	0.50		75	0.000				0.000	0		0	dgabo	mio		ks	
V116	14	15	15	0.50		75	0.000				0.000	0		0	dgabo	mio		ks	
V116	15	16	16	1.00		75	0.000				0.000	0		0	dgabo	mio		ks	
V116	16	17	17	0.35		75	0.000				0.000	0		0	dgabo	mio		ks	
V116	17	18	18	0.35		75	0.000				0.000	0		0	dgabo	mio		ks	
V116	18	19	19	0.35		75	0.060				0.060	110		110	dgabo	mio		ks	
V116	19	20	20	0.35		75	0.000				0.000	0		0	gabo	mio		ks	
V116	20	21	21	0.35		75	0.361				0.361	81		81	gabo	mio		ks	
V116	21	22	22	0.35		75	0.000				0.000	0		0	gabo	mio		ks	
V116	22	23	23	0.35		75	0.081				0.081	29		29	gabo	mio		ks	clay stringers (dark gray)
V116	23	24	24	0.35		75	0.138				0.138	158		158	gabo	mio		ks	
V116	24	25	25	0.35		75	0.000				0.000	0		0	ga	mio		ks	
V116	25	26	26	0.35		75	0.000				0.000	0		0	dga	mio		ks	
V116	26	27	27	0.35		75	0.000				0.000	0		0	ga	mio		ks	
V116	27	28	28	0.50		75	0.000				0.000	0		0	ga	mio		ks	
V116	28	29	29	0.13		75	0.059				0.059	165		165	ga	mio		gs	Arnum?

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V117	0	1	1	0.35	5	50									lga	kva		ds	clay lumps
V117	1	2	2	0.35	5	100									boye	kva		ds	clay till
V117	2	3	3	0.35	5	100									dga	kva		ml	possibly dl
V117	3	4	4	0.35	5	100									dga	kva		dv	mix of sand and clay
V117	4	5	5	0.35	5	75									dga	kva		ms	sandy till
V117	5	6	6	1.00	5	75	0.000				0.000	0		0	lga	mio		ks	
V117	6	7	7	0.50	10	75	0.000				0.000	0		0	lyebo	mio		ks	
V117	7	8	8	0.35		75	0.000				0.000	0		0	yebo	mio		ks	
V117	8	9	9	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V117	9	10	10	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V117	10	11	11	0.35		75	0.009				0.009	0		0	lga	mio		ks	
V117	11	12	12	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V117	12	13	13	0.35		75	0.010				0.010	0		0	lga	mio		ks	
V117	13	14	14	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V117	14	15	15	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V117	15	16	16	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V117	16	17	17	0.35		75	0.132				0.132	0		0	lga	mio		ks	HM
V117	17	18	18	0.35		75	0.000				0.000	0		0	lga	mio		ks	HM
V117	18	19	19	0.35		75	0.000				0.000	0		0	lga	mio		ks	HM
V117	19	20	20	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V117	20	21	21	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V117	21	22	22	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V117	22	23	23	0.35		75	0.000				0.000	0		0	lga	mio		ks	HM
V117	23	24	24	0.35		75	0.059				0.059	0		0	lyebo	mio		ks	
V117	24	25	25	0.35		75	0.117				0.117	0		0	lga	mio		ks	
V117	25	26	26	0.35		50	0.000				0.000	0		0	lga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V118	0	1	1	0.50	10	25									bo	kva		ds	
V118	1	2	2	0.50	50	50									yebo	kva		ds	
V118	2	3	3	0.50	20	50									yebo	kva		ds	
V118	3	4	4	0.50	50	50									yega	kva		ds	
V118	4	5	5	0.35		50	0.020				0.020	0		0	yega	kva		ds	clay lumps/stringers (redeposited)
V118	5	6	6			0													no sample
V118	6	7	7	1.00	10	25	0.000				0.000	0		0	yega	mio		ks	
V118	7	8	8	0.35	5	75	0.000				0.000	0		0	lga	mio		ks	
V118	8	9	9	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V118	9	10	10	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V118	10	11	11	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V118	11	12	12	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V118	12	13	13	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V118	13	14	14	0.35		75									boye	mio		ks	clay (orange marker)
V118	14	15	15	0.25		100	1.992	**2.679**	3.241		3.300	905	**2212**	905	dyebo	mio		ks	HM
V118	15	16	16	0.35		100	0.020				0.020	0		0	ga	mio		ks	HM
V118	16	17	17	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V118	17	18	18	0.35		100	0.000				0.000	45		45	lga	mio		ks	
V118	18	19	19	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V118	19	20	20	0.35		100	0.000				0.000	0		0	ga	mio		ks	
V118	20	21	21	0.35		100	0.000				0.000	6		6	ga	mio		ks	
V118	21	22	22	0.35		100	0.000				0.000	0		0	ga	mio		ks	
V118	22	23	23	0.35		100	0.032				0.032	63		63	ga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V119	0	1	1	0.50	20	100									rebo	kva		ds	pebbles
V119	1	2	2	0.50	10	75									lyebo	kva		ds	few pebbles
V119	2	3	3	0.50	30	100									lyebo	kva		ds	pebbles
V119	3	4	4	0.50	40	75									boga	kva		ds	pebbles
V119	4	5	5	0.50	40	100									boga	kva		ds	pebbles
V119	5	6	6	0.50	30	100									boga	kva		ds	pebbles
V119	6	7	7	0.50	40	75									boga	kva		ds	pebbles + dl clay clasts + unsorted
V119	7	8	8	0.35	20	100									boga	kva		ds	pebbles + dl clay clasts + unsorted
V119	8	9	9	0.35	30	50									boga	kva		ds	pebbles + dl clay clasts + unsorted
V119	9	10	10	0.50	30	75									lrebo	kva		ds	pebbles + dl clay clasts + unsorted
V119	10	11	11	0.50	30	100									lrebo	kva		ds	pebbles + dl clay clasts + unsorted
V119	11	12	12	0.35		100	0.000				0.000	0		0	gabo	mio		ks	some reworked Qua.
V119	12	13	13	0.35		100	0.179				0.179	0		0	bo	mio		ks	HM
V119	13	14	14	0.35		100	0.214				0.214	0		0	bo	mio		ks	HM
V119	14	15	15	0.35		100	0.000				0.000	0		0	bo	mio		ks	HM
V119	15	16	16	0.35		100	0.000				0.000	0		0	bo	mio		ks	HM
V119	16	17	17	0.35		100	0.000				0.000	0		0	bo	mio		ks	HM
V119	17	18	18	0.35		75	0.000				0.000	0		0	bo	mio		ks	
V119	18	19	19	0.71		100	0.000				0.000	0		0	dga	mio		ks	
V119	19	20	20	0.50	5	100	0.039				0.039	0		0	dga	mio		ks	
V119	20	21	21	0.50	10	100	0.000				0.000	0		0	dga	mio		ks	
V119	21	22	22	0.50	10	100	0.000				0.000	0		0	lga	mio		ks	
V119	22	23	23	0.35	5	100	0.000				0.000	0		0	gabo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V120	0	1	1	0.35	2	75									lyebo	kva		ds	few pebbles (redeposited)
V120	1	2	2	0.35	2	100									gabo	kva		ds	
V120	2	3	3	0.35		100									lga	kva		ds	
V120	3	4	4	0.35		100									lyebo	kva		ds	
V120	4	5	5	0.50		100									gabo	kva		ds	
V120	5	6	6	0.35		100									ga	kva		ds	
V120	6	7	7	0.35		100									ga	kva		ds	
V120	7	8	8	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V120	8	9	9	0.50		100	0.000				0.000	0		0	lga	mio		ks	
V120	9	10	10	0.50		100	0.000				0.000	0		0	ga	mio		ks	
V120	10	11	11	0.50		100	0.000				0.000	0		0	ga	mio		ks	
V120	11	12	12	0.50		75	0.054				0.054	67		67	ga	mio		ks	
V120	12	13	13	0.50		75	0.000				0.000	0		0	ga	mio		ks	unsorted
V120	13	14	14	0.50		100	0.000				0.000	0		0	ga	mio		ks	unsorted
V120	14	15	15	0.35		75	0.016				0.016	0		0	ga	mio		ks	
V120	15	16	16	0.35		100	0.000				0.000	0		0	boga	mio		ks	
V120	16	17	17	0.50		100	0.000				0.000	0		0	boga	mio		ks	unsorted
V120	17	18	18	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V120	18	19	19	0.35		75	0.001				0.001	0		0	lga	mio		ks	
V120	19	20	20	0.35		100	0.084				0.084	0		0	boba	mio		ks	lignite
V120	20	21	21	0.35		100	0.000				0.000	0		0	boga	mio		ks	HM
V120	21	22	22	0.35		75	0.513				0.513	105		105	bo	mio		ks	HM
V120	22	23	23	0.35		100	0.045				0.045	0		0	bo	mio		ks	HM
V120	23	24	24	0.35		75	0.247				0.247	71		71	bo	mio		ks	HM
V120	24	25	25	0.50		75	0.000				0.000	0		0	bo	mio		ks	HM
V120	25	26	26	0.50		75	0.000				0.000	0		0	bo	mio		ks	HM

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V121	0	1	1	0.50	10	50									dyebo	kva		ds	pebbly
V121	1	2	2	0.00		75									yega	kva		ml	possibly dl + some sand
V121	2	3	3	0.00		100									rebo	kva		dl	
V121	3	4	4	0.00		75									rebo	kva		dl	
V121	4	5	5	0.00		100									rebo	kva		dv	mix of sand and clay + some pebbles
V121	5	6	6	0.00		100									bo	kva		dv	mix of sand and clay + some pebbles
V121	6	7	7	0.35		75									bo	kva		ds	clay stringers
V121	7	8	8	0.35		100									bo	kva		dv	stones + pebbles + mix of sand and clay
V121	8	9	9	0.35	2	100									bo	kva		dv	stones + pebbles + mix of sand and clay
V121	9	10	10	0.35	10	100									bo	kva		dv	stones + pebbles + mix of sand and clay
V121	10	11	11	0.50	50	100									gabo	kva		ds	pebbly
V121	11	12	12	0.50	30	75									gabo	kva		ds	clay stringers
V121	12	13	13	0.50	15	75									boga	kva		ds	pebbly
V121	13	14	14	0.50	15	100									ga	kva		ds	pebbly
V121	14	15	15	0.50		75	0.000				0.000	0		0	lga	mio		ks	
V121	15	16	16	0.50		100	0.000				0.000	0		0	lga	mio		ks	
V121	16	17	17	0.50		100	0.000				0.000	0		0	lga	mio		ks	
V121	17	18	18	0.50		100	0.000				0.000	0		0	lga	mio		ks	
V121	18	19	19	0.50		100	0.000				0.000	0		0	lga	mio		ks	
V121	19	20	20	0.50		100	0.000				0.000	0		0	lga	mio		ks	
V121	20	21	21	0.50		100	0.076				0.076	18		18	boga	mio		ks	
V121	21	22	22	0.50		75	0.151				0.151	38		38	lga	mio		ks	
V121	22	23	23	0.35		100	0.000				0.000	0		0	lga	mio		ks	few lignite fragm.
V121	23	24	24	0.35		100	0.000				0.000	0		0	lga	mio		ks	few lignite fragm.
V121	24	25	25	0.35		100	0.000				0.000	0		0	lga	mio		ks	few lignite fragm.
V121	25	26	26	0.35		75	0.000				0.000	0		0	lga	mio		ks	few lignite fragm.

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V122	0	1	1	0.00	10	75									bo	kva		ml	
V122	1	2	2	0.00	10	100									ga	kva		ml	
V122	2	3	3	0.00	2	100									ga	kva		dl	
V122	3	4	4	0.00		100									dboga	kva		dl	
V122	4	5	5	0.50	30	100									boga	kva		ds	clay stringers + pebbly
V122	5	6	6	0.35	10	100									bo	kva		ds	mix of sand and clay/silt
V122	6	7	7	0.35		50									bo	kva		ds	mix of sand and silt
V122	7	8	8	0.35	5	50									lboga	kva		ds	clay stringers + pebbly
V122	8	9	9	0.35	5	75									yebo	kva		ds	few pebbles
V122	9	10	10	1.00															no sample
V122	10	11	11	1.00															no sample
V122	11	12	12	0.35		50	0.000				0.000	13		13	ga	mio		ks	HM
V122	12	13	13	0.35		50	0.000				0.000	32		32	yebo	mio		ks	HM
V122	13	14	14	0.35		75	0.050				0.050	41		41	ga	mio		ks	HM
V122	14	15	15	0.35		100	0.000				0.000	0		0	dga	mio		ks	
V122	15	16	16	0.35		100	0.000				0.000	6		6	ga	mio		ks	
V122	16	17	17	0.35		100	0.000				0.000	0		0	ga	mio		ks	
V122	17	18	18	0.35		100	0.000				0.000	0		0	ga	mio		ks	
V122	18	19	19	0.50		100	0.000				0.000	6		6	ga	mio		ks	
V122	19	20	20	0.50		100	0.000				0.000	0		0	boga	mio		ks	
V122	20	21	21	0.35		100	0.049				0.049	97		97	boga	mio		ks	HM
V122	21	22	22	0.35		75	0.000				0.000	0		0	boga	mio		ks	HM

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V123	0	1	1	0.35	2	75									rebo	kva		ds/dl	mix of sand and clay
V123	1	2	2	0.00		50									yebo	kva		dl	silty+sand stringers
V123	2	3	3	0.35		75									yebo	kva		ds/dl	mix of sand and clay
V123	3	4	4	0.50		50									lyebo	kva		ds	
V123	4	5	5	0.35		100									lboga	kva		ds	cont. Org. Mat. + redeposited ks (miocene)
V123	5	6	6	0.35		100									lboga	kva		ds	cont. Org. Mat. + redeposited ks (miocene)
V123	6	7	7	0.35		75	0.000				0.000	0		0	dboga	kva		ds	redeposited ks (miocene)
V123	7	8	8	0.35		100	0.000				0.000	0		0	lboga	mio		ks	cont. Org. Mat. + redeposited ks (miocene)
V123	8	9	9	0.35		75	0.000				0.000	0		0	lboga	mio		ks	
V123	9	10	10	0.35		75	0.000				0.000	0		0	lboga	mio		ks	
V123	10	11	11	0.35		100	0.000				0.000	0		0	lboga	mio		ks	
V123	11	12	12	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V123	12	13	13	0.35		75	0.060				0.060	60		60	lga	mio		ks	HM
V123	13	14	14	0.35		100	0.040				0.040	31		31	lga	mio		ks	HM
V123	14	15	15	0.35		100	0.055				0.055	22		22	gabo	mio		ks	cont. Org. Mat. + HM
V123	15	16	16	0.35		75	0.000				0.000	0		0	bo	mio		ks	cont. Org. Mat.
V123	16	17	17	0.35		100	0.022				0.022	13		13	gabo	mio		ks	lignite fragm.
V123	17	18	18	0.35		75	0.191				0.191	119		119	vbo	mio		ks	clay stringers + lignite
V123	18	19	19	0.35		100	0.789	**0.852**			1.273	283	**610**	283	boga	mio		ks	HM
V123	19	20	20	0.35		100	0.025				0.025	0		0	boga	mio		ks	HM
V123	20	21	21	0.35		100	0.000				0.000	0		0	boga	mio		ks	
V123	21	22	22	0.35		75	0.000				0.000	0		0	boga	mio		ks	HM
V123	22	23	23	0.35		100	0.000				0.000	0		0	boga	mio		ks	HM

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V124	0	1	1	0.35	5	50									bo	kva		ds	stones
V124	1	2	2	0.35	5	50									lbo	kva		ds	
V124	2	3	3	0.35	5	100									boga	kva		ds	
V124	3	4	4	0.35	20	75									lbo	kva		ds	some clay from below
V124	4	5	5	0.00		100									dga	kva		dl	sand from above
V124	5	6	6	0.00		75									dga	kva		dl	
V124	6	7	7	0.00		100									dga	kva		dl	
V124	7	8	8	0.00		100									dga	kva		dl	some pebbles+ sand from below
V124	8	9	9	0.00	5	100									vbo	kva		dl/ds	mix of sand and clay + silty
V124	9	10	10	0.00	5	100									vbo	kva		dl/ds	mix of sand and clay + silty
V124	10	11	11	0.00	5	100									vbo	kva		dl/ds	mix of sand and clay + silty
V124	11	12	12	0.35		100									boga	kva		ds	few stones
V124	12	13	13	0.35		75	0.035				0.035	69		69	lboga	mio		ks	
V124	13	14	14	0.35		100	0.000				0.000	0		0	lga	mio		ks	HM
V124	14	15	15	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V124	15	16	16	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V124	16	17	17	1.00		50	0.101				0.101	463		463	vga	mio		ks	lignite+ org. Mat. + some sand from above
V124	17	18	18	0.35	5	50	0.000				0.000	0		0	vga	mio		ks	lignite+ org. Mat.
V124	18	19	19	0.50	10	100	0.000				0.000	0		0	lga	mio		ks	HM
V124	19	20	20	0.71	40	100	0.000				0.000	0		0	lga	mio		ks	HM
V124	20	21	21	0.50	5	100	0.000				0.000	0		0	ga	mio		ks	HM
V124	21	22	22	0.35		75	0.000				0.000	0		0	ga	mio		ks	
V124	22	23	23	0.35		100	0.000				0.000	0		0	ga	mio		ks	HM
V124	23	24	24	0.35		100	0.000				0.000	18		18	ga	mio		ks	
V124	24	25	25	0.35		75	0.000				0.000	4		4	ga	mio		ks	
V124	25	26	26	0.35		100	0.000				0.000	0		0	ga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V125	0	1	1	0.35		25									boba	kva			top soil
V125	1	2	2	0.00		100									boba	kva		dl/ds	mix of sand and clay + stones
V125	2	3	3	0.00		100									yebo	kva		dl/ds	silty + pebbles
V125	3	4	4	0.00		75									vbo	kva		dl/ds	mix of sand and clay
V125	4	5	5	0.35		100									yebo	kva		dl/ds	
V125	5	6	6	0.35		100	0.000				0.000	0		0	lbo	mio		ks	
V125	6	7	7	0.35		100	0.000				0.000	18		18	lbo	mio		ks	
V125	7	8	8	0.35		100	0.000				0.000	0		0	lyebo	mio		ks	
V125	8	9	9	0.35		75	0.000				0.000	40		40	boga	mio		ks	
V125	9	10	10	0.35		75	0.006				0.006	0		0	boga	mio		ks	
V125	10	11	11	0.35		100	0.000				0.000	0		0	pye	mio		ks	
V125	11	12	12	0.35		100	0.000				0.000	0		0	pye	mio		ks	
V125	12	13	13	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V125	13	14	14	0.35		100	0.000				0.000	0		0	lboga	mio		ks	
V125	14	15	15	0.35		75	0.018				0.018	49		49	boba	mio		ks	lignite + cont. Sand
V125	15	16	16	0.35		75	0.000				0.000	26		26	lboga	mio		ks	lignite fragments
V125	16	17	17	0.35		100	0.034				0.034	47		47	lboga	mio		ks	lignite fragments
V125	17	18	18	0.35		100	0.031				0.031	23		23	lboga	mio		ks	lignite fragments
V125	18	19	19	0.35		75	0.000				0.000	68		68	lboga	mio		ks	
V125	19	20	20	0.35		100	0.213				0.213	56		56	gabo	mio		ks	
V125	20	21	21	0.35		75	0.000				0.000	0		0	bo	mio		ks	
V125	21	22	22	0.35		75	0.000				0.000	0		0	bo	mio		ks	
V125	22	23	23	0.35		100	0.109				0.109	0		0	bo	mio		ks	
V125	23	24	24	0.35		100	0.000				0.000	0		0	bo	mio		ks	
V125	24	25	25	0.35		100	0.000				0.000	0		0	bo	mio		ks	
V125	25	26	26	0.50		100	0.000				0.000	0		0	bo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V126	0	1	1	0.35		75									rebo	kva		ds	reworked ks (miocene)
V126	1	2	2	0.00		100									ba	kva		dl	reworked gl (miocene)
V126	2	3	3	0.50	10	100	0.000				0.000	0		0	lboga	mio		ks	clay stringers
V126	3	4	4	0.35	10	100	0.006				0.006	0		0	lboga	mio		ks	HM
V126	4	5	5	0.35	10	100	0.000				0.000	0		0	lboga	mio		ks	cont. Org. Mat. + HM
V126	5	6	6	0.35	10	100	0.000				0.000	0		0	lboga	mio		ks	cont. Org. Mat. + HM
V126	6	7	7	0.50	20	75	0.000				0.000	0		0	yega	mio		ks	
V126	7	8	8	0.35	5	100	0.000				0.000	0		0	yega	mio		ks	
V126	8	9	9	0.35	5	100	0.000				0.000	0		0	ga	mio		ks	
V126	9	10	10	0.50	10	100	0.000				0.000	0		0	yega	mio		ks	cont. Lignite from below
V126	10	11	11	0.00		100									ba	mio		gl	mica clay + lignite
V126	11	12	12	0.00		100									ba	mio		gl	mica clay + lignite
V126	12	13	13	0.35		100	0.026				0.026	0		0	lboga	mio		ks	clay + lignite from above + HM
V126	13	14	14	0.35		100	0.000				0.000	0		0	lboga	mio		ks	clay + lignite from above + HM
V126	14	15	15	0.35		100	0.020				0.020	0		0	boga	mio		ks	clay + lignite
V126	15	16	16	0.35		100	0.006				0.006	2		2	vbo	mio		ks	
V126	16	17	17	0.35		100	0.000				0.000	0		0	boga	mio		ks	
V126	17	18	18	0.35		100	0.005				0.005	0		0	ga	mio		ks	HM
V126	18	19	19	0.35		100	0.000				0.000	0		0	ga	mio		ks	HM
V126	19	20	20	0.35		100									ga	mio		ks	HM, not measured
V126	20	21	21	0.35		100	0.296				0.296	0		0	ga	mio		ks	HM
V126	21	22	22	0.50		100	0.000				0.000	0		0	ga	mio		ks	HM
V126	22	23	23	0.50		100	0.000				0.000	0		0	ga	mio		ks	
V126	23	24	24	1.00		100	0.000				0.000	0		0	ga	mio		ks	
V126	24	25	25	1.41		75	0.000				0.000	0		0	ga	mio		ks	
V126	25	26	26	0.00		100									ba	mio		gl	sand from above

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V127	0	1	1	0.35	40	100									gega	kva		ds	pebbly
V127	1	2	2	0.35	10	75									yebo	kva		ds	pebbly
V127	2	3	3	0.50	5	50									rebo	kva		ds	cont. Org. Mat.
V127	3	4	4	0.35	10	100									vbo	kva		ds	pebbles
V127	4	5	5	0.35		100									boga	kva		ds	redeposited miocene sand (ks) + HM
V127	5	6	6	0.35		100	1.903	**0.827**	1.311		1.489	260	**548**	260	ga	mio		ks	HM
V127	6	7	7	0.35		100	0.000				0.000	0		0	lga	mio		ks	HM
V127	7	8	8	0.35		100	0.386				0.386	170		170	lga	mio		ks	HM
V127	8	9	9	0.35		100	0.000				0.000	0		0	lga	mio		ks	HM
V127	9	10	10	0.35		75	0.215				0.215	37		37	lga	mio		ks	HM
V127	10	11	11	0.35		100	0.228				0.228	53		53	lga	mio		ks	HM
V127	11	12	12	0.35		100	0.028				0.028	0		0	lga	mio		ks	
V127	12	13	13	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V127	13	14	14	0.00		100	0.107				0.107	243		243	boba	mio		gl	lignite+mica clay+ sand from above (mix)
V127	14	15	15	0.00		100									boba	mio		gl	lignite+mica clay+ sand from above (mix)
V127	15	16	16	0.00		100	0.603				0.603	253		253	boba	mio		gl	lignite+mica clay+ sand from above (mix)
V127	16	17	17	0.35		100	0.757	**0.335**			0.696	148	**294**	148	boga	mio		ks	lignite fragments + HM clay stringers
V127	17	18	18	0.50		100	0.000				0.000	0		0	lbo	mio		ks	lignite fragments + clay stringers
V127	18	19	19	0.50		100	0.117				0.117	0		0	lbo	mio		ks	HM
V127	19	20	20	0.50		100	0.508				0.508	179		179	lbo	mio		ks	HM
V127	20	21	21	0.35		100	0.026				0.026	6		6	lbo	mio		ks	HM
V127	21	22	22	0.50		100	0.019				0.019	0		0	lboga	mio		ks	HM
V127	22	23	23	0.50		100	0.259				0.259	44		44	lboga	mio		ks	HM + lignite fragm.
V127	23	24	24	0.35		75	0.216				0.216	98		98	lboga	mio		ks	HM
V127	24	25	25	0.35		100	0.079				0.079	62		62	vbo	mio		ks	
V127	25	26	26	0.35		75	0.069				0.069	27		27	vbo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V128	0	1	1	0.50	10	50									gabo	kva		ds	
V128	1	2	2	0.35		50									ol	mio		ks	
V128	2	3	3	0.00		100									dga	mio		gl	cont. Sand (ks)
V128	3	4	4	0.35		75	0.002				0.002	2		2	boga	mio		ks	lignite fragm. + clay stringers
V128	4	5	5	0.35		100	0.139				0.139	59		59	boga	mio		ks	lignite fragm. + clay stringers
V128	5	6	6	0.35		100	0.411				0.411	376		376	boga	mio		ks	lignite fragm. + clay stringers
V128	6	7	7	0.50		75	0.000				0.000	11		11	vbo	mio		ks	
V128	7	8	8	0.35		100	0.300				0.300	166		166	lboga	mio		ks	
V128	8	9	9	0.50		100	0.001				0.001	19		19	lboga	mio		ks	
V128	9	10	10	0.35		100	0.553				0.553	340		340	lboga	mio		ks	HM
V128	10	11	11	0.35		100	0.188				0.188	67		67	lboga	mio		ks	HM
V128	11	12	12	0.35		75	0.000				0.000	10		10	lboga	mio		ks	HM
V128	12	13	13	0.50		100	0.000				0.000	79		79	lboga	mio		ks	HM
V128	13	14	14	0.35		100	0.657				0.657	264		264	lboga	mio		ks	HM
V128	14	15	15	0.50		100	0.026				0.026	82		82	lboga	mio		ks	HM
V128	15	16	16	0.50		100	0.000				0.000	0		0	lboga	mio		ks	HM
V128	16	17	17	0.50		100	0.000				0.000	0		0	lboga	mio		ks	
V128	17	18	18	0.50		100	0.000				0.000	0		0	lboga	mio		ks	
V128	18	19	19	0.00		100									lboga	mio		gl	
V128	19	20	20	0.00		100									ba	mio		gl	
V128	20	21	21	0.00	100	100									ba	mio		gl	
V128	21	22	22	0.50	10	100	0.000				0.000	0		0	lboga	mio		ks	
V128	22	23	23	0.50		100	0.000				0.000	21		21	lboga	mio		kg	
V128	23	24	24	2.00		100	0.000				0.000	0		0	lboga	mio		ks	
V128	24	25	25	1.41		100	0.000				0.000	15		15	lboga	mio		ks	
V128	25	26	26	0.50		100	0.001				0.001	54		54	lboga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V129	0	1	1	1.00														ds	
V129	1	2	2	1.00														ds	
V129	2	3	3	1.00			0.000				0.000	0		0				ks	
V129	3	4	4	1.00			0.000				0.000	0		0				ks	
V129	4	5	5	1.00			0.000				0.000	0		0				ks	
V129	5	6	6	1.00			0.000				0.000	0		0				ks	
V129	6	7	7	1.00			0.000				0.000	0		0				ks	
V129	7	8	8	1.00			0.000				0.000	0		0				ks	
V129	8	9	9	1.00			0.092				0.092	27		27				ks	
V129	9	10	10	1.00														gl	
V129	10	11	11	1.00			0.101				0.101	47		47				ks	
V129	11	12	12	1.00			0.000				0.000	0		0				ks	
V129	12	13	13	1.00			0.258				0.258	12		12				ks	
V129	13	14	14	1.00			0.000				0.000	4		4				ks	
V129	14	15	15	1.00			0.000				0.000	0		0				ks	
V129	15	16	16	1.00			0.000				0.000	0		0				ks	
V129	16	17	17	1.00			0.000				0.000	0		0				ks	
V129	17	18	18	1.00			0.000				0.000	0		0				ks	
V129	18	19	19	1.00			0.000				0.000	0		0				ks	
V129	19	20	20	1.00			0.000				0.000	0		0				ks	
V129	20	21	21	1.00			0.000				0.000	0		0				ks	
V129	21	22	22	1.00			0.000				0.000	0		0				ks	
V129	22	23	23	1.00			0.000				0.000	0		0				ks	
V129	23	24	24	1.00			0.000				0.000	37		37				ks	
V129	24	25	25	1.00														gl	
V129	25	26	26	1.00														gl	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V130	0	1	1			50									boba	kva			top soil
V130	1	2	2	0.35		50									dyebo	kva		ds	clay stringers
V130	2	3	3	0.35	10	100									dyebo	kva		ds	
V130	3	4	4	0.35	30	75									yebo	kva		ds	cont. Gravel
V130	4	5	5	0.50	5	75									lyebo	kva		ds	pebbly
V130	5	6	6	0.50	10	100									lyebo	kva		ds	pebbly
V130	6	7	7	0.50	5	75									lyebo	kva		ds	pebbly
V130	7	8	8	0.50	5	100									lyebo	kva		ds	pebbly
V130	8	9	9	0.35	10	75									lyebo	kva		ds	pebbly
V130	9	10	10	0.35	20	75									lyebo	kva		ds	pebbly
V130	10	11	11	0.50	20	100									lyebo	kva		ds	pebbly
V130	11	12	12	0.50	20	25									lrebo	kva		ds	pebbly, clay stringers
V130	12	13	13	0.50	40	25									lyebo	kva		ds	pebbly, clay stringers
V130	13	14	14	0.50	20	25									ga	kva		ds	pebbly
V130	14	15	15																
V130	15	16	16																
V130	16	17	17																
V130	17	18	18	0.35	0	100	0.319				0.319	9		9	ga	mio		ks	HM
V130	18	19	19	0.35	0	100	0.080				0.080	37		37	boga	mio		ks	HM
V130	19	20	20	0.35	0	100	0.540				0.540	176		176	lyebo	mio		ks	HM
V130	20	21	21	0.35	0	100	0.000				0.000	0		0	ga	mio		ks	
V130	21	22	22	0.35	0	100	0.058				0.058	75		75	ga	mio		ks	
V130	22	23	23	0.18	0	100	0.000				0.000	0		0	ga	mio		ks	HM

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V131	0	1	1	0.35	5	50									vbo			ds	
V131	1	2	2	0.50	5	75									lyebo			ds	
V131	2	3	3	0.50	5	75									lgabo			ds	
V131	3	4	4	0.50	10	75									lgabo			ds	
V131	4	5	5	0.50	15	75									lgabo			ds	
V131	5	6	6	1.00	20	75									lga			ds	
V131	6	7	7	0.50	10	75									lga			ds	
V131	7	8	8	1.00	15	75									lga			ds	
V131	8	9	9	0.50	15	50									lga			ds	
V131	9	10	10	0.35	5	75									lga			ds	
V131	10	11	11	0.71	15	75									lga			ds	
V131	11	12	12	0.71	20	75									lga			ds	
V131	12	13	13	0.01	50	50									lga			dg	
V131	13	14	14	0.35	50	50									dyebo			ml	
V131	14	15	15	0.25	50	5									dyebo			ds	
V131	15	16	16	0.35	50	5									dyebo			ds	
V131	16	17	17	0.50	5	75									dyebo			ds	
V131	17	18	18	0.35		50	0.053				0.053	68		68	lgabo			ks	
V131	18	19	19	0.35		75	0.000				0.000	0		0	lga			ks	
V131	19	20	20	0.35		75	0.009				0.009	0		0	ga			ks	
V131	20	21	21			0												x	
V131	21	22	22			0												x	
V131	22	23	23	0.35		75	0.000				0.000	26		26	lga			ks	
V131	23	24	24	0.35		75	0.000				0.000	0		0	lga			ks	
V131	24	25	25	0.35		50	0.000				0.000	0		0	lga			ks	
V131	25	26	26	0.35		75	0.000				0.000	0		0	vga			ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V132	0	1	1	0.35	0	75									rebo	mio		ds	redeposited ks/miocene
V132	1	2	2	0.35	0	75									bo	mio		ds	redeposited ks/miocene
V132	2	3	3	0.35	0	100									bo	mio		ds	redeposited ks/miocene
V132	3	4	4	0.71	10	100									ga	mio		ds	redeposited ks/miocene
V132	4	5	5	1.41	70	100									yebo	mio		dg	redeposited ks/miocene ks gravel
V132	5	6	6	0.71	10	100									yebo	mio		ds	redeposited ks/miocene pebbles(dl clay)
V132	6	7	7	0.00	0	100									ba	mio		gl	mica clay (cont gravel)
V132	7	8	8	0.00	0	100									ba	mio		gl	mica clay (cont sand)
V132	8	9	9	0.35	0	100	0.134				0.134	53		53	lboga	mio		ks	HM
V132	9	10	10	0.35	0	100	0.301				0.301	190		190	boga	mio		ks	HM clay stringers + lignite fragments
V132	10	11	11	0.35	0	100	0.064				0.064	118		118	rebo	mio		ks	HM lignite fragments
V132	11	12	12	0.35	0	100	0.198				0.198	16		16	boga	mio		ks	
V132	12	13	13	0.35	0	100	0.001				0.001	30		30	ga	mio		ks	HM
V132	13	14	14	0.35	0	100	0.113				0.113	85		85	ga	mio		ks	HM
V132	14	15	15	0.50	0	100	0.035				0.035	29		29	ga	mio		ks	HM
V132	15	16	16	0.50	0	100	0.002				0.002	0		0	ga	mio		ks	HM
V132	16	17	17	0.50	0	100	0.013				0.013	72		72	ga	mio		ks	HM
V132	17	18	18	0.35	0	75	0.023				0.023	43		43	ga	mio		ks	HM
V132	18	19	19	0.50	0	75	0.000				0.000	0		0	ga	mio		ks	HM
V132	19	20	20	0.50	0	100	0.000				0.000	0		0	ga	mio		ks	HM
V132	20	21	21	0.00	0	100									ba	mio		gl	
V132	21	22	22	0.00	0	75									ba	mio		gl	
V132	22	23	23	0.35	0	100	0.186				0.186	218		218	vga	mio		ks	HM clay clasts
V132	23	24	24	0.35	0	100	0.162				0.162	188		188	boga	mio		ks	HM
V132	24	25	25	0.35	0	100	0.865	**0.981**			1.416	400	**595**	400	bo	mio		ks	HM
V132	25	26	26	0.50	0	100	0.030				0.030	43		43	bo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V133	0	1	1	0.35		75									ba	kva		ds	
V133	1	2	2	0.50		100									vbo	kva		ds	
V133	2	3	3	0.35		100									lbo	kva		ds	
V133	3	4	4	0.35		100									lbo	kva		ds	pebbly
V133	4	5	5	2.00		100									boga	kva		dg	Granule (4mm) pebbly
V133	5	6	6	2.00		100									boga	kva		dg	Granule (4mm) pebbly
V133	6	7	7	0.35		50	2.142	**1.984**	2.989		3.063	741	**1278**	741	boga	mio		ks	field log reads kg as gravel !! Grain size is sand
V133	7	8	8	0.35		100	0.787	**0.300**	0.690	0.654	0.654	340	**583**	340	boga	mio		ks	HM !!!!!
V133	8	9	9	0.35		75	1.145	**0.499**	0.846		1.053	244	**647**	244	boga	mio		ks	HM !!!
V133	9	10	10	0.35		100	0.043				0.043	47		47	boga	mio		ks	HM !!
V133	10	11	11	0.35		100	0.054				0.054	16		16	boga	mio		ks	HM
V133	11	12	12	0.35		75	0.100				0.100	51		51	boga	mio		ks	HM !!
V133	12	13	13	0.35		100									ba	mio		ks	lignite
V133	13	14	14	0.35		100									dboga	mio		ks	HM and lignite
V133	14	15	15	0.35		100	0.918	**0.745**	0.999		1.196	584	**743**	584	dboga	mio		ks	HM and lignite
V133	15	16	16	0.35		100	0.671				0.671	296		296	dboga	mio		ks	HM and lignite
V133	16	17	17	0.50		100	0.401				0.401	126		126	dboga	mio		ks	HM
V133	17	18	18	0.71		100	0.113				0.113	33		33	bo	mio		ks	
V133	18	19	19	1.00		100	0.000				0.000	50		50	bo	mio		ks	
V133	19	20	20	1.00	2	100	0.000				0.000	0		0	bo	mio		ks	
V133	20	21	21	1.00	2	100	0.032				0.032	66		66	bo	mio		ks	
V133	21	22	22	0.50	2	100	0.095				0.095	99		99	bo	mio		ks	
V133	22	23	23	0.50	2	100	0.293				0.293	228		228	bo	mio		ks	
V133	23	24	24	0.35		75	0.004				0.004	28		28	bo	mio		ks	
V133	24	25	25	0.35		75	0.000				0.000	23		23	boga	mio		ks	
V133	25	26	26	0.35		100	0.098				0.098	49		49	boga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V134	0	1	1	0.35		5									lyebo	kva		ds	possilbly eolian vell sorted or freshwater sand.
V134	1	2	2	0.35		50									lyebo	kva		ds	possilbly eolian vell sorted or freshwater sand.
V134	2	3	3	0.35		70									ga	kva		ds	possilbly eolian vell sorted or freshwater sand.
V134	3	4	4	0.50	10	50									ga	kva		ds	
V134	4	5	5	0.50	20	75									ga	kva		ds	
V134	5	6	6	0.35		75									ga	kva		ds	
V134	6	7	7	0.25		100	0.000				0.000	0		0	lga	mio		ks	
V134	7	8	8	0.25		100	0.000				0.000	12		12	lga	mio		ks	
V134	8	9	9	0.25		50	0.081				0.081	38		38	lga	mio		ks	
V134	9	10	10	0.35		70	0.000				0.000	0		0	lga	mio		ks	
V134	10	11	11	0.25		75	0.000				0.000	12		12	lga	mio		ks	
V134	11	12	12	0.25		70	0.001				0.001	0		0	lga	mio		ks	
V134	12	13	13	0.25		100	0.000				0.000	0		0	lga	mio		ks	
V134	13	14	14	0.35		100	0.000				0.000	7		7	lga	mio		ks	
V134	14	15	15	0.35		50	0.000				0.000	0		0	lga	mio		ks	
V134	15	16	16	0.35		80	0.017				0.017	9		9	dga	mio		ks	
V134	16	17	17	0.00		100									ba	mio		gl	
V134	17	18	18	0.35		60	0.176				0.176	9		9	dga	mio		ks	some clay stringers 10 % lignite
V134	18	19	19	0.35		50	0.002				0.002	0		0	dga	mio		ks	some clay stringers, lignite
V134	19	20	20	0.50		100	0.000				0.000	0		0	dga	mio		ks	lignite
V134	20	21	21	0.50	10	80	0.000				0.000	0		0	lga	mio		ks	lignite
V134	21	22	22	0.35		100	0.000				0.000	0		0	lga	mio		ks	lignite
V134	22	23	23	0.35		80	0.060				0.060	11		11	lga	mio		ks	
V134	23	24	24	0.25		75	0.031				0.031	46		46	lga	mio		ks	
V134	24	25	25	0.25		70	0.000				0.000	0		0	lga	mio		ks	
V134	25	26	26	0.25		75	0.000				0.000	12		12	lga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V136	0	1	1	0.00		75									yebo	kva		dl	mix of clay and sand. Could be Miocene
V136	1	2	2	0.00		100									boba	kva		dl	gl propably weathered gl
V136	2	3	3	0.00		100									ba	mio		gl	
V136	3	4	4	0.00		100									ba	mio		gl	
V136	4	5	5	0.50		100	0.023				0.023	54		54	vga	mio		ks	clay from above
V136	5	6	6	0.50		100	0.000				0.000	20		20	ga	mio		ks	
V136	6	7	7	0.50		100	0.007				0.007	10		10	lboga	mio		ks	
V136	7	8	8	0.50		0.75	0.244				0.244	47		47	ga	mio		ks	
V136	8	9	9	0.50		100	0.000				0.000	41		41	lboga	mio		ks	
V136	9	10	10	1.00		100	0.000				0.000	7		7	yega	mio		kg	mica
V136	10	11	11	1.00	10	100	0.000				0.000	8		8	ga	mio		kg	
V136	11	12	12	0.50		100	0.000				0.000	39		39	ga	mio		kg	mica + HM
V136	12	13	13	0.50	10	100	0.000				0.000	7		7	ga	mio		ks	
V136	13	14	14	0.71	15	100	0.000				0.000	0		0	ga	mio		kg	
V136	14	15	15	1.00	20	100	0.000				0.000	0		0	ga	mio		kg	
V136	15	16	16	0.50	20	100	0.000				0.000	2		2	ga	mio		ks	
V136	16	17	17	0.50	5	100	0.000				0.000	46		46	yega	mio		ks	
V136	17	18	18	0.50		100	0.286				0.286	30		30	ga	mio		ks	lignite HM
V136	18	19	19	0.35		50	0.302				0.302	0		0	ga	mio		ks	HM !
V136	19	20	20	0.35		100	0.267				0.267	351		351	ga	mio		ks	HM
V136	20	21	21	0.50		100	0.000				0.000	0		0	ga	mio		ks	HM !
V136	21	22	22	0.50		100	0.000				0.000	27		27	ga	mio		ks	HM !
V136	22	23	23	0.50		100	0.128				0.128	98		98	ga	mio		ks	HM !!
V136	23	24	24	0.50		100	0.375				0.375	59		59	ga	mio		ks	HM !!
V136	24	25	25	0.50		75	0.002				0.002	0		0	ga	mio		ks	
V136	25	26	26	0.50		100	0.000				0.000	0		0	ga	mio		ks	contains gl

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V137	0	1	1	0.35	20	100									boga	kva		ds	redeposited miocene ks
V137	1	2	2	0.00	30	100									ol	kva		ds	redeposited miocene ks + lignite
V137	2	3	3	1.00		100									gega	kva		dg	redeposited miocene ks + Pebbles
V137	3	4	4	1.00		100									dga	kva		dg	redeposited miocene ks+ pebbles
V137	4	5	5	1.00		100									lga	kva		dg	redeposited miocene ks
V137	5	6	6	0.71		75	0.012				0.012	0		0	lga	ds		ks	redeposited miocene ks
V137	6	7	7	0.71		100	0.028				0.028	24		24	ga	mio		ks	lignite clay
V137	7	8	8	0.00		100									ba	mio		gl	
V137	8	9	9	0.50		100									pol	mio		ks	lignite
V137	9	10	10	0.50		75	0.000				0.000	21		21	pol	mio			lignite and clay
V137	10	11	11	0.50		100	0.535				0.535	217		217	pol	mio		ks	lignite and clay
V137	11	12	12	0.50		100	0.013				0.013	46		46	vbo	mio		ks	tabular pyrite concretions
V137	12	13	13	0.71		100	0.000				0.000	0		0	dboga	mio		ks	
V137	13	14	14	0.35		100	0.566				0.566	75		75	dboga	mio		ks	HM !!
V137	14	15	15	0.35		100	0.000				0.000	114		114	pol	mio		ks	HM
V137	15	16	16	0.35		75	0.045				0.045	7		7	pol	mio		ks	HM !
V137	16	17	17	0.35		100	0.025				0.025	10		10	pol	mio		ks	HM !!
V137	17	18	18	0.35		100	0.366				0.366	136		136	pol	mio		ks	HM !!
V137	18	19	19	0.35		100	0.258				0.258	56		56	pol	mio		ks	HM !!
V137	19	20	20	0.35		100	0.000				0.000	0		0	pol	mio		ks	HM !!
V137	20	21	21	0.50		100	0.000				0.000	0		0	pol	mio		ks	HM
V137	21	22	22	0.50		100									pol	mio		ks	HM + clay stringers
V137	22	23	23	0.50		100									vga	mio		gl	ks + HM and clay stringers
V137	23	24	24	0.00		75									ba	mio		gl	
V137	24	25	25	0.50		100									vga	mio		ks	cont. clay + lignite
V137	25	26	26	0.50		100	0.333				0.333	67		67	boga	mio		ks	HM !

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V139	0	1	1	0.35	20	50									vga	kva		ds	
V139	1	2	2	0.50	30	50									boga	kva		ds	redeposited miocene ks
V139	2	3	3	0.35	5	75									boga	kva		ds	few lignite fragm.
V139	3	4	4	0.35	15	100									boga	kva		ds	org matter redeposited ks
V139	4	5	5	0.35	30	100									boga	kva		ds	org matter redeposited ks
V139	5	6	6	0.50	10	50									yega	kva		ds	org matter redeposited ks
V139	6	7	7	0.35	2	100									vga	mio		ks	clay stringers
V139	7	8	8	0.00		100									boba	mio		gl	mix of sand and clay
V139	8	9	9	0.00		100									vga	mio		gl	some sand
V139	9	10	10	0.50		100	0.000				0.000	0		0	boga	mio		ks	clay stringers
V139	10	11	11	0.50		100	0.000				0.000	0		0	boga	mio		ks	clay stringers
V139	11	12	12	0.50		100	0.000				0.000	0		0	boga	mio		ks	lignite
V139	12	13	13	0.50		100	0.000				0.000	0		0	boga	mio		ks	
V139	13	14	14	0.35		100	0.000				0.000	0		0	boga	mio		ks	
V139	14	15	15	0.35		100	0.006				0.006	18		18	boga	mio		ks	HM
V139	15	16	16	0.50		100	0.000				0.000	41		41	boga	mio		ks	HM
V139	16	17	17	0.50		100	0.066				0.066	0		0	boga	mio		ks	HM
V139	17	18	18	0.50		100	0.000				0.000	0		0	boga	mio		ks	HM
V139	18	19	19	0.50		100	0.700	**0.377**			0.743	22	**221**	22	boga	mio		ks	HM
V139	19	20	20	0.50		100	0.000				0.000	0		0	boga	mio		ks	
V139	20	21	21	0.50		100	0.000				0.000	0		0	boga	mio		ks	
V139	21	22	22	0.71		100	0.000				0.000	0		0	boga	mio		ks	
V139	22	23	23	2.00		100									boga	mio		ks	clay stringers
V139	23	24	24	0.00		100									ba	mio		gl	
V139	24	25	25	0.00		100									vga	mio		gl	mix of sand and clay
V139	25	26	26	0.00		100									vga	mio		gl	mix of sand and clay

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V140	0	1	1	0.50	30	75									dga	kva		ds	redeposited ks
V140	1	2	2	0.35		100	0.006				0.006	9		9	bo	mio		ks	
V140	2	3	3	0.35		100	0.000				0.000	0		0	lbo	mio		ks	lignite
V140	3	4	4	0.35	40	75	0.000				0.000	0		0	boga	mio		ks	
V140	4	5	5	2.83		100	0.000				0.000	0		0	boga	mio		kg	granule 4mm
V140	5	6	6	2.83		100	0.000				0.000	0		0	boga	mio		kg	granule 4mm
V140	6	7	7	2.83		100	0.000				0.000	0		0	boga	mio		kg	granule 4mm
V140	7	8	8	2.83		10	0.000				0.000	4		4	yebo	mio		kg	clay and lignite
V140	8	9	9	0.00		100									ba	mio		gl	lignite
V140	9	10	10	0.00		100									ba	mio		gl	coarse sand and lignite
V140	10	11	11			100	0.000				0.000	0		0	ba	mio			lignite sand and clay stringers
V140	11	12	12	0.50		75	0.513				0.513	190		190	vbo	mio		ks	lignite clay
V140	12	13	13	0.50		100	0.342				0.342	209		209	vbo	mio		ks	
V140	13	14	14	0.50		100	0.000				0.000	0		0	lboga	mio		ks	
V140	14	15	15	0.35		100	0.000				0.000	0		0	lboga	mio		ks	HM
V140	15	16	16	0.35		100	0.000				0.000	0		0	lboga	mio		ks	HM
V140	16	17	17	0.35		100	0.000				0.000	0		0	lboga	mio		ks	HM
V140	17	18	18	0.50		100	0.000				0.000	0		0	lboga	mio		ks	coarse sand 5%
V140	18	19	19	0.50		75	0.000				0.000	0		0	lboga	mio		ks	coarse sand 10%
V140	19	20	20	0.35		100	0.005				0.005	0		0	lboga	mio		ks	HM
V140	20	21	21	0.50		100	0.024				0.024	0		0	lboga	mio		ks	
V140	21	22	22	0.50		100	0.000				0.000	0		0	lboga	mio		ks	
V140	22	23	23	0.00		100									vga	mio		gl	sand and lignite
V140	23	24	24	0.00		100									ba	mio		gl	sand and lignite
V140	24	25	25	0.00		100									ba	mio		gl	
V140	25	26	26	0.50		100	0.782	**1.120**			1.571	423	**791**	423	boga	mio		ks	HM !!

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V141	0	1	1	1.00											yebo	kva		ds	
V141	1	2	2	1.00											lyebo	kva		ds	
V141	2	3	3	1.00											lyebo	kva		ds	
V141	3	4	4	1.00											lyebo	kva		ds	
V141	4	5	5	1.00											lyebo	kva		ds	
V141	5	6	6	1.00											lyebo	kva		ds	
V141	6	7	7	1.00											dga	kva		dl	
V141	7	8	8	1.00											dga	kva		dl	
V141	8	9	9	1.00											dga	kva		dl	
V141	9	10	10	1.00											dga	kva		dl	
V141	10	11	11	1.00											dga	kva		dl	
V141	11	12	12	1.00											dga	kva		dl	
V141	12	13	13	1.00											ga	kva		dl	
V141	13	14	14	1.00			0.071				0.071	0		0	lgabo	mio		ks	
V141	14	15	15	1.00			0.000				0.000	0		0	gabo	mio		ks	
V141	15	16	16	1.00			0.421				0.421	138		138	gabo	mio		ks	
V141	16	17	17	1.00			0.099				0.099	0		0	gabo	mio		ks	
V141	17	18	18	1.00			0.000				0.000	38		38	gabo	mio		ks	
V141	18	19	19	1.00			0.681				0.681	546		546	gabo	mio		ks	
V141	19	20	20	1.00			0.216				0.216	165		165	gabo	mio		ks	
V141	20	21	21	1.00			0.122				0.122	142		142	gabo	mio		ks	
V141	21	22	22	1.00			0.000				0.000	0		0	gabo	mio		ks	
V141	22	23	23	1.00			0.009				0.009	3		3	gabo	mio		ks	
V141	23	24	24	1.00			0.003				0.003	94		94	gabo	mio		ks	
V141	24	25	25	1.00			0.048				0.048	22		22	gabo	mio		ks	
V141	25	26	26	1.00			0.002				0.002	0		0	gabo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V142	0	1	1	0.35		75									dyebo	kva		ds	
V142	1	2	2	0.35		75									dyebo	kva		ds	
V142	2	3	3	0.35		75									yebo	kva		ds	
V142	3	4	4	0.35		75									pol	kva		ds	
V142	4	5	5	0.35		75									pol	kva		ds	
V142	5	6	6	0.50	5	75									pol	kva		ds	
V142	6	7	7	0.50	20	75									pol	kva		ds	stones and pebbles
V142	7	8	8	0.35		80	0.000				0.000	2		2	ga	mio		ks	
V142	8	9	9	0.50		75	0.000				0.000	100		100	dga	mio		ks	lignite
V142	9	10	10	0.01		100									ba	mio		gl	lignite
V142	10	11	11	0.35		80	0.013				0.013	15		15	dga	mio		ks	clay and lignite
V142	11	12	12	0.35		100	0.058				0.058	107		107	ga	mio		ks	lignite
V142	12	13	13	0.35		100	0.000				0.000	24		24	ga	mio		ks	
V142	13	14	14	0.50		100	0.767	**0.597**			0.988	276	**538**	276	ga	mio		ks	
V142	14	15	15	0.50		100	0.000				0.000	8		8	gabo	mio		ks	
V142	15	16	16	0.35		100	0.038				0.038	0		0	gabo	mio		ks	
V142	16	17	17	0.35		100	0.000				0.000	72		72	gabo	mio		ks	
V142	17	18	18	0.35		100	0.000				0.000	0		0	gabo	mio		ks	
V142	18	19	19	0.25		100	0.000				0.000	1		1	gabo	mio		ks	
V142	19	20	20	0.35		100	0.000				0.000	121		121	gabo	mio		ks	
V142	20	21	21	0.35		100	0.000				0.000	79		79	gabo	mio		ks	
V142	21	22	22	0.35		100	0.160				0.160	170		170	gabo	mio		ks	
V142	22	23	23	0.35		100	0.119				0.119	110		110	gabo	mio		ks	
V142	23	24	24	0.35		100	0.001				0.001	46		46	gabo	mio		ks	
V142	24	25	25	0.50		100	0.011				0.011	18		18	gabo	mio		ks	
V142	25	26	26	0.35		100	0.000				0.000	28		28	gabo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V143	0	1	1	0.35		30									yebo	kva		ds	mostly redeposited miocene
V143	1	2	2	0.35		75									yebo	kva		ds	mostly redeposited miocene
V143	2	3	3	0.35		75									pol	kva		ds	mostly redeposited miocene
V143	3	4	4	0.35		75									pol	kva		ds	mostly redeposited miocene
V143	4	5	5	0.35		75									pol	kva		ds	mostly redeposited miocene
V143	5	6	6	0.35	10	75									pol	kva		ds	mostly redeposited miocene
V143	6	7	7	0.35		70	0.000				0.000	3		3	lga	mio		ks	
V143	7	8	8	0.35		60	0.000				0.000	27		27	lga	mio		ks	
V143	8	9	9	0.35		75	0.000				0.000	62		62	lga	mio		ks	
V143	9	10	10	0.50		70	0.000				0.000	40		40	ga	mio		ks	
V143	10	11	11	0.01		100	0.284				0.284	212		212	ba	mio		gl	
V143	11	12	12	0.01		100	0.492				0.492	398		398	ba	mio		gl	some ks
V143	12	13	13	0.03		75	0.609				0.609	302		302	dga	mio		ks	HM
V143	13	14	14	0.35		80	0.885	**1.040**			1.482	374	**555**	374	ga	mio		ks	HM
V143	14	15	15	0.50		50	1.027	**0.326**			0.686	293	**481**	293	gabo	mio		ks	HM
V143	15	16	16	0.50	20	75	0.034				0.034	0		0	gabo	mio		ks	
V143	16	17	17	1.00	30	50	0.000				0.000	0		0	gabo	mio		ks	HM
V143	17	18	18	1.00		80	0.000				0.000	60		60	gabo	mio		ks	
V143	18	19	19	0.71		80	0.000				0.000	5		5	gabo	mio		ks	
V143	19	20	20	0.50		80	0.000				0.000	85		85	gabo	mio		ks	
V143	20	21	21	0.35		80	0.151				0.151	95		95	gabo	mio		ks	
V143	21	22	22	0.35		80	0.000				0.000	0		0	gabo	mio		ks	
V143	22	23	23	0.35		80	0.096				0.096	29		29	gabo	mio		ks	
V143	23	24	24	0.35		80	0.121				0.121	78		78	gabo	mio		ks	
V143	24	25	25	0.35		80	0.276				0.276	120		120	pol	mio		ks	
V143	25	26	26	0.35		80	0.190				0.190	182		182	pol	mio		ks	Clay stringers

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V144	0	1	1	0.35		50									vbo	kva		ds	
V144	1	2	2	0.35	5	60									dboga	kva		ds	
V144	2	3	3	0.35	5	75									lyebo	kva		ds	
V144	3	4	4	0.50	20	75									lgabo	kva		ds	
V144	4	5	5	0.35	5	40									ga	kva		ds	redeposited ks + lignite
V144	5	6	6	0.35	5	75	1.753	**1.504**	2.209		2.331	0	**796**	0	ga	mio		ks	HM
V144	6	7	7	0.71	5	75	0.324				0.324	0		0	ga	mio		ks	
V144	7	8	8	0.71	5	75	0.260				0.260	0		0	ga	mio		ks	
V144	8	9	9	0.50	5	75	0.495				0.495	0		0	ga	mio		ks	
V144	9	10	10	0.35	5	75	0.288				0.288	0		0	ga	mio		ks	
V144	10	11	11	0.25	5	75	0.320				0.320	0		0	ga	mio		ks	
V144	11	12	12	0.25	5	70	0.415				0.415	0		0	ga	mio		ks	
V144	12	13	13	0.25	5	75	0.471				0.471	0		0	lgabo	mio		ks	HM?
V144	13	14	14	0.25	5	75	0.377				0.377	0		0	lgabo	mio		ks	HM?
V144	14	15	15	0.25	5	75	0.448				0.448	0		0	lgabo	mio		ks	HM?
V144	15	16	16	0.00	5	70									vbo	mio		gl	30% ks
V144	16	17	17	0.35		75									gabo	mio		ks	30% gl in sample
V144	17	18	18	0.35		75	0.595				0.595	0		0	gabo	mio		ks	HM?
V144	18	19	19	0.18		40	0.854	**0.565**			0.953	0	**660**	0	dga	mio		gs	mica
V144	19	20	20	0.18		40	0.890	**0.746**			1.155	0	**764**	0	dga	mio		gs	
V144	20	21	21	0.13		50	0.683				0.683	0		0	dga	mio		gs	
V144	21	22	22	0.13		50	0.602				0.602	0		0	dga	mio		gs	
V144	22	23	23	0.13		50	0.834	**0.460**			0.835	0	**608**	0	dga	mio		gs	
V144	23	24	24	0.13		50	0.726	**0.514**			0.895	0	**550**	0	dga	mio		gs	
V144	24	25	25	0.13		60									gabo	mio		gs	gl in sample
V144	25	26	26	0.01		60										mio		gi	lignite

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V145	0	1	1	0.25	0	50									boba	kva		m	topsoil
V145	1	2	2	0.35	0	30	0.180				0.180	194		194	ga	mio		ks	HM
V145	2	3	3	0.35	0	40	0.669				0.669	640		640	ga	mio		ks	
V145	3	4	4	0.35		20	0.564				0.564	385		385	lga	mio		ks	
V145	4	5	5	0.35		75	0.446				0.446	394		394	lga	mio		ks	
V145	5	6	6	0.35		70	0.253				0.253	139		139	lga	mio		ks	
V145	6	7	7	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V145	7	8	8	0.35	10	75	0.000				0.000	4		4	lga	mio		ks	
V145	8	9	9	0.35		75	0.000				0.000	11		11	lga	mio		ks	
V145	9	10	10	0.35		75	0.017				0.017	9		9	lga	mio		ks	
V145	10	11	11	0.35		75	0.027				0.027	66		66	lga	mio		ks	
V145	11	12	12	0.35		75	0.038				0.038	177		177	lga	mio		ks	
V145	12	13	13	0.35		75	0.000				0.000	13		13	lga	mio		ks	
V145	13	14	14	0.25		75	0.000				0.000	73		73	lga	mio		ks	few mica grains
V145	14	15	15	0.25		75	0.029				0.029	46		46	ga	mio		ks	
V145	15	16	16	0.35		75	0.000				0.000	0		0	ga	mio		ks	
V145	16	17	17	0.35		75	0.000				0.000	20		20	ga	mio		ks	
V145	17	18	18	0.35		75	0.000				0.000	30		30	ga	mio		ks	mica
V145	18	19	19	0.25		30	0.777	**0.572**			0.960	531	**572**	531	dga	mio		gs	mica
V145	19	20	20	0.25		40	0.200				0.200	136		136	dga	mio		gs	
V145	20	21	21	0.25		30	0.248				0.248	287		287	dga	mio		gs	
V145	21	22	22	0.25		40	1.037	**0.696**			1.099	893	**1019**	893	dga	mio		gs	
V145	22	23	23	0.25		50	0.493				0.493	640		640	dga	mio		gs	
V145	23	24	24	0.25		30	0.540				0.540	620		620	dga	mio		gs	
V145	24	25	25	0.00		20	0.807	**0.680**			1.081	915	**923**	915	gaba	mio		gl	
V145	25	26	26	0.00		50	0.976	**0.910**			1.337	606	**803**	606	gaba	mio		gl	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V146	0	1	1	0.25	5	70									lyebo	kva		ds	
V146	1	2	2	0.25		20									lyebo	kva		ds	
V146	2	3	3	0.35	5	70									lyebo	kva		ds	
V146	3	4	4	0.35	10	50									ga	kva		ds	lignite or peat
V146	4	5	5	0.35		70	0.230				0.230	156		156	lga	mio		ks	HM
V146	5	6	6	0.35		70	0.022				0.022	0		0	lga	mio		ks	HM
V146	6	7	7	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V146	7	8	8	0.50	5	75	0.000				0.000	0		0	lga	mio		ks	
V146	8	9	9	1.00	10	80	0.000				0.000	23		23	lga	mio		ks	few pebbles
V146	9	10	10	0.35		80	0.000				0.000	0		0	lga	mio		ks	HM
V146	10	11	11	0.25		80	0.000				0.000	0		0	lga	mio		ks	
V146	11	12	12	0.35		80	0.007				0.007	92		92	lga	mio		ks	
V146	12	13	13	0.35		80	0.000				0.000	37		37	lga	mio		ks	HM
V146	13	14	14	0.35		80	0.000				0.000	0		0	lga	mio		ks	(HM)
V146	14	15	15	0.35		80	0.000				0.000	0		0	ga	mio		ks	HM
V146	15	16	16	0.35		50	0.833	0.350			0.713	556	10	556	ga	mio		ks	HM
V146	16	17	17	0.25		50	1.244	0.450			0.824	1046	10	1046	dga	mio		gs	
V146	17	18	18	0.25		50	0.337				0.337	211		211	dga	mio		gs	
V146	18	19	19	0.13		50	0.446				0.446	362		362	dga	mio		gs	
V146	19	20	20	0.13		50	0.680				0.680	660		660	dga	mio		gs	clay stringers
V146	20	21	21	0.13		50	0.649				0.649	665		665	dga	mio		gs	
V146	21	22	22	0.13		50	0.734	0.450			0.824	805	10	805	dga	mio		gs	
V146	22	23	23	0.13		50	1.031	0.500			0.880	1151	10	1151	dga	mio		gs	
V146	23	24	24	0.25		50	1.178	0.500			0.880	1196	10	1196	dga	mio		gs	
V146	24	25	25	0.01		50	0.801	0.450			0.824	476	10	476	dgabo	mio		gi	silt, clay, five small laminae
V146	25	26	26	0.01		90	1.039	0.450			0.824	534	10	534	dgabo	mio		gi	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V147	0	1	1	0.35		50									lga	kva		ds	
V147	1	2	2	0.25		70									dyebo	kva		ds	
V147	2	3	3	0.25	10	70									dyebo	kva		ds	pebbles
V147	3	4	4	0.35	10	70									dga	kva		ds	
V147	4	5	5	0.35	15	90	0.292				0.292	0		0	ga	mio		ks	some quaternary pebbles
V147	5	6	6	0.35		50	0.276				0.276	0		0	ga	mio		ks	
V147	6	7	7	0.35		75	0.212				0.212	0		0	ga	mio		ks	
V147	7	8	8	0.35		80									dyebo	mio		ks	clay stringers + lignite
V147	8	9	9	0.01		70									ba	mio		gl	lignite
V147	9	10	10	0.35		70									dga	mio		ks	lignite + clay
V147	10	11	11	0.35		90									dga	mio		ks	lignite HM
V147	11	12	12	0.35		60	0.346				0.346	0		0	gabo	mio		ks	
V147	12	13	13	0.50		60	0.317				0.317	0		0	gabo	mio		ks	
V147	13	14	14	0.50		80	0.207				0.207	0		0	lga	mio		ks	
V147	14	15	15	0.71		60	0.346				0.346	0		0	lga	mio		ks	
V147	15	16	16	0.71		70	0.206				0.206	0		0	lga	mio		ks	
V147	16	17	17	0.35		75	0.478				0.478	0		0	lga	mio		ks	HM
V147	17	18	18	0.35		75	0.301				0.301	0		0	lga	mio		ks	mica-traces
V147	18	19	19	0.35		70	0.446				0.446	0		0	lga	mio		ks	
V147	19	20	20	0.25		70	0.409				0.409	0		0	lga	mio		ks	
V147	20	21	21	0.25		70	0.240				0.240	0		0	lga	mio		ks	
V147	21	22	22	0.25		80	0.306				0.306	0		0	lga	mio		ks	
V147	22	23	23	0.35		90	0.325				0.325	0		0	lga	mio		ks	
V147	23	24	24	0.35		70	0.227				0.227	0		0	ga	mio		ks	
V147	24	25	25	0.35		80									ga	mio		gs	mica + clay stringers
V147	25	26	26	0.35		90	0.253				0.253	0		0	ga	mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V148	0	1	1	0.50												kva		ft	
V148	1	2	2	0.35	5	50									yebo	kva		ds	
V148	2	3	3	0.35	15	70									lga	kva		ds	
V148	3	4	4	0.50	30	75									lga	kva		dg	
V148	4	5	5	0.35		75									lga	kva		ds	some miocene
V148	5	6	6	0.35		75	0.326				0.326	0		0	lga	mio		ks	
V148	6	7	7	0.35		80	0.258				0.258	0		0	lga	mio		ks	
V148	7	8	8	0.35		80									dga	mio		ks	clay top
V148	8	9	9	0.00		100									ba	mio		gl	sandy
V148	9	10	10	0.35		90									boga	mio		ks	clay stringers
V148	10	11	11	0.35		100	0.665				0.665	0		0	ga	mio		ks	HM
V148	11	12	12	0.35		70	1.365	**0.534**	0.956		1.155	0	**586**	0	pye	mio		ks	HM
V148	12	13	13	0.35		70	1.915	**1.145**	1.677		1.833	0	**533**	0	lgabo	mio		ks	HM
V148	13	14	14	0.50		80	2.909	**0.471**	0.709		0.924	0	**632**	0	ga	mio		ks	HM
V148	14	15	15	0.35		60	1.579	**0.382**	0.764		0.976	0	**389**	0	ga	mio		ks	HM
V148	15	16	16	0.50	5	70	0.303				0.303	0		0	yebo	mio		ks	
V148	16	17	17	0.50	10	80	0.592				0.592	0		0	yebo	mio		ks	
V148	17	18	18	0.35	10	80	0.606				0.606	0		0	yebo	mio		ks	
V148	18	19	19	0.35		70	1.039	**0.232**	0.589		0.811	0	**362**	0	yebo	mio		ks	HM
V148	19	20	20	0.35		100	0.909	**0.202**	0.463		0.693	0	**301**	0	yebo	mio		ks	HM
V148	20	21	21	0.35		90	0.796	**0.171**	0.416		0.649	0	**324**	0	yebo	mio		ks	
V148	21	22	22	0.35		80	0.607				0.607	0		0	yebo	mio		ks	mica
V148	22	23	23	0.35		80	0.523				0.523	0		0	yebo	mio		ks	
V148	23	24	24	0.00		50									gabo	mio		gl	ks-silt layers alternating
V148	24	25	25	0.13		50									dga	mio	arn	gs	Arnum
V148	25	26	26	0.13		40	0.980	**0.677**	0.979		1.178	0	**739**	0	dga	mio	arn	gs	Arnum

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V149	0	1	1	0.35	10	20									yebo	kva		ds	
V149	1	2	2	2.00	20	30									yebo	kva		ds	
V149	2	3	3	2.00	50	70									ga	kva		dg	medium sand / gravel
V149	3	4	4	2.00	50	50									ga	kva		dg	medium sand / gravel
V149	4	5	5	2.00	50	60									lga	kva		dg	medium sand / gravel
V149	5	6	6	2.00	30	40									ga	kva		ds	medium sand / gravel
V149	6	7	7	0.35		50									lga	kva		ds	medium sand / gravel
V149	7	8	8	0.35	0	100	0.000	0.000		0.058	0.058	0		0	lga	mio		ks	
V149	8	9	9	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V149	9	10	10	0.00		75									ba	mio		gl	lignite
V149	10	11	11	0.35		100	0.133				0.133	0		0	vbo	mio		ks	lignite + clay stringers
V149	11	12	12	0.35		75	0.268	1.747		2.115	2.115	0		0	ga	mio		ks	HM
V149	12	13	13	0.35		75	0.621	1.340		1.969	1.969	0		0	lgabo	mio		ks	HM 5% Ti (XMET)
V149	13	14	14	0.35		80	0.125	5.486		5.802	5.802	0		0	dga	mio		ks	HM Black from HM 13% Ti (XMET) (+ 7 and 9%)
V149	14	15	15	1.00	15	70	0.000	0.422		0.729	0.729	0		0	lga	mio		ks	
V149	15	16	16	1.00	10	75	0.000	0.000		0.148	0.148	0		0	pye	mio		ks	
V149	16	17	17	1.00		80	0.000	0.093		0.456	0.456	0		0	yega	mio		ks	
V149	17	18	18	0.35		75	0.000	0.248		0.579	0.579	0		0	yega	mio		ks	
V149	18	19	19	0.35		80	0.000	0.000		0.247	0.247	0		0	yega	mio		ks	
V149	19	20	20	0.25		75	0.036	0.288		0.467	0.467	0		0	dga	mio	arn	gs	Trace of mica
V149	20	21	21	0.25		60	0.039	0.251		0.397	0.397	0		0	dga	mio	arn	gs	
V149	21	22	22	0.25		75	0.000	0.095		0.207	0.207	0		0	dga	mio	arn	gs	mica
V149	22	23	23	0.25		70	0.042				0.042	0		0	dga	mio	arn	gs	clay stringers mica
V149	23	24	24	0.13		30	1.016	**1.217**		1.448	1.448	390	**1231**	390	dga	mio	arn	gs	
V149	24	25	25	0.13		50	0.726	**0.982**		1.196	1.196	208	**1054**	208	dga	mio	arn	gs	
V149	25	26	26	0.13		50	0.487	0.407		0.628	0.628	0		0	dga	mio	arn	gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V150	0	1	1	0.35		30									vbo	kva		ds	top soil
V150	1	2	2	0.35	5	50									dgabo	kva		ds	redeposited ks
V150	2	3	3	0.18		70									lol	kva		ds	redeposited ks
V150	3	4	4	0.25		75									lga	kva		ds	redeposited ks
V150	4	5	5	0.35		75		0.310			0.669				lga	mio		ks	possibly redeposited
V150	5	6	6	0.25		75		0.372			0.738				lga	mio		ks	
V150	6	7	7	0.35		75		0.719			1.125				lga	mio		ks	pebbles
V150	7	8	8	0.35		70	0.216	0.245			0.596	0		0	lga	mio		ks	
V150	8	9	9	0.35		80		0.275			0.629				lga	mio		ks	
V150	9	10	10	0.35		80		0.306			0.664				lga	mio		ks	
V150	10	11	11	0.35		80		0.319			0.678				lga	mio		ks	
V150	11	12	12	0.01		80						0		0	ba	mio		gl	lignite
V150	12	13	13	0.01		80						0		0	ba	mio		gl	lignite
V150	13	14	14	0.35		80	9.927	**0.586**	1.027		1.222	0	**420**	0	ba	mio		ks	clay + ks + lignite
V150	14	15	15	0.50		80	1.843	**0.386**	0.499		0.727	0	**406**	0	gabo	mio		ks	
V150	15	16	16	0.50		80	0.571				0.571	0		0	gabo	mio		ks	
V150	16	17	17	0.50		80	0.582				0.582	0		0	gabo	mio		ks	
V150	17	18	18	0.50		90	0.934	**0.395**	0.727		0.941	0	**410**	0	gabo	mio		ks	
V150	18	19	19	0.50		90	0.553				0.553	0		0	gabo	mio		ks	
V150	19	20	20	0.35		90	0.907	**0.085**	0.329		0.567	0	**194**	0	gabo	mio		ks	
V150	20	21	21	0.25		90	0.883	**0.145**	0.478		0.707	0	**282**	0	gabo	mio		ks	
V150	21	22	22	0.25		90	0.434				0.434	0		0	gabo	mio		ks	
V150	22	23	23	0.25		90									gabo	mio		ks	
V150	23	24	24	0.25		90	2.017	**0.017**	0.482		0.711	0	**225**	0	gabo	mio		ks	
V150	24	25	25	0.25		90	1.402	**0.208**	0.508		0.735	0	**255**	0	gabo	mio		ks	mica trace
V150	25	26	26	0.25		90	0.854	**0.000**	0.314		0.554	0	**203**	0	gabo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V151	0	1	1	0.35		50									vbo	kva		ds	
V151	1	2	2	0.35		80									vbo	kva		ds	
V151	2	3	3	0.35		80									dyebo	kva		ds	
V151	3	4	4	0.35		80									yebo	kva		ds	
V151	4	5	5	0.35		80									yebo	kva		ds	
V151	5	6	6	0.35		70									lgabo	kva		ds	
V151	6	7	7	0.35		50									lgabo	kva		ds	
V151	7	8	8	0.00		75									lgabo	kva		dl	postglacial clay sand
V151	8	9	9	0.00		80									ba	mio		gl	lignite
V151	9	10	10	0.00		70									ba	mio		gl	
V151	10	11	11	0.35		80	0.068				0.068	56		56	dga	mio		ks	lignite 15%
V151	11	12	12	0.35		80	0.000				0.000	18		18	gabo	mio		ks	
V151	12	13	13	0.35		80	0.000				0.000	10		10	gabo	mio		ks	
V151	13	14	14	0.35		80	0.000				0.000	25		25	gabo	mio		ks	
V151	14	15	15	0.35		80	0.000				0.000	0		0	ga	mio		ks	
V151	15	16	16	0.50		80	0.000				0.000	0		0	ga	mio		ks	
V151	16	17	17	0.71	10	80	0.000				0.000	0		0	ga	mio		ks	
V151	17	18	18	0.50		100	0.053				0.053	20		20	ga	mio		ks	
V151	18	19	19	0.35		100	0.050				0.050	3		3	ga	mio		ks	
V151	19	20	20	0.35		100	0.058				0.058	49		49	ga	mio		ks	
V151	20	21	21	0.25		100	0.110				0.110	122		122	gabo	mio		ks	
V151	21	22	22	0.35		100	0.090				0.090	111		111	gabo	mio		ks	
V151	22	23	23	0.35		100	0.000				0.000	0		0	gabo	mio		ks	
V151	23	24	24	0.35		100	0.000				0.000	61		61	gabo	mio		ks	
V151	24	25	25	0.35		100	0.000				0.000	51		51	gabo	mio		ks	
V151	25	26	26	0.35		100	0.000				0.000	24		24	gabo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V152	0	1	1	0.35		30										kva		ds	
V152	1	2	2	0.35		50										kva		ds	
V152	2	3	3	0.35	30	100										kva		ds	
V152	3	4	4	0.50	50	75										kva		dg	
V152	4	5	5	0.50	50	80										kva		dg	
V152	5	6	6	0.35		80	0.000				0.000	0		0		mio		ks	
V152	6	7	7	0.35		90	0.000				0.000	0		0		mio		ks	
V152	7	8	8	0.35		95	0.000				0.000	0		0		mio		ks	
V152	8	9	9	0.35		100	0.000				0.000	0		0		mio		ks	
V152	9	10	10	0.00		100	0.709	**0.867**			1.289	488	**812**	488		mio		gl	
V152	10	11	11	0.35		100	0.034				0.034	110		110		mio		ks	HM
V152	11	12	12	0.35		100	0.704	**0.790**			1.204	307	**630**	307		mio		ks	HM
V152	12	13	13	0.35		70	1.505	**1.325**	2.009		2.144	808	**1021**	808		mio		ks	HM
V152	13	14	14	0.35		80	1.428	**2.748**			3.386	631	**1224**	631		mio		ks	HM
V152	14	15	15	0.35		75	0.220				0.220	1		1		mio		ks	HM
V152	15	16	16	0.35		80	0.876	**2.885**			3.539	360	**1244**	360		mio		ks	HM
V152	16	17	17	0.35		70	0.356				0.356	37		37		mio		ks	HM
V152	17	18	18	1.00	5	80	0.000				0.000	0		0		mio		ks	HM
V152	18	19	19	0.35	5	80	0.000				0.000	0		0		mio		ks	
V152	19	20	20	0.35	5	80	0.000				0.000	20		20		mio		ks	
V152	20	21	21	0.25		80	0.318				0.318	4630		4630		mio		ks	
V152	21	22	22	0.35		75	0.428				0.428	274		274		mio		ks	
V152	22	23	23	0.35		75	0.116				0.116	90		90		mio		ks	
V152	23	24	24	0.35		75	0.297				0.297	119		119		mio		ks	
V152	24	25	25	0.35		75	0.104				0.104	114		114		mio		ks	
V152	25	26	26	0.35		75	0.000				0.000	14		14		mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V153	0	1	1	0.35		50									vbo	kva		ds	
V153	1	2	2	0.25		60									lyebo	kva		ds	
V153	2	3	3	0.35	10	100									gabo	kva		ds	pebbles
V153	3	4	4	0.35		70									gabo	kva		ds	
V153	4	5	5	0.35		75									gabo	kva		ds	
V153	5	6	6	0.35		100	0.037				0.037	40		40	gabo	mio		ks	
V153	6	7	7	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V153	7	8	8	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V153	8	9	9	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V153	9	10	10	0.35		100	0.000				0.000	0		0	lga	mio		ks	clay stringers
V153	10	11	11	0.00		100						345		345	ba	mio		gl	
V153	11	12	12	0.35		100	0.258				0.258	193		193	vga	mio		ks	clay 50 %
V153	12	13	13	0.35		100	0.310				0.310	106		106	dga	mio		ks	hm
V153	13	14	14	0.35		100	0.265				0.265	213		213	ga	mio		ks	HM
V153	14	15	15	0.35		100	1.507	**1.538**	2.284		2.402	538	**654**	538	ga	mio		ks	HM
V153	15	16	16	0.35		100	0.458				0.458	35		35	ga	mio		ks	HM
V153	16	17	17	0.50	5	100	0.000				0.000	0		0	ga	mio		ks	
V153	17	18	18	0.50	10	100	0.000				0.000	5		5	lga	mio		ks	
V153	18	19	19	0.50	5	100	0.000				0.000	0		0	lga	mio		ks	
V153	19	20	20	0.50	15	100	0.000				0.000	3		3	lga	mio		ks	
V153	20	21	21	0.35		100	0.222				0.222	113		113	lga	mio		ks	
V153	21	22	22	0.35		100	0.303				0.303	31		31	lgabo	mio		ks	
V153	22	23	23	0.35		100	0.226				0.226	135		135	lga	mio		ks	HM
V153	23	24	24	0.35		100	0.045				0.045	31		31	lga	mio		ks	(hm)
V153	24	25	25	0.35		100	0.000				0.000	0		0	ga	mio		ks	
V153	25	26	26	0.35		100	0.000				0.000	22		22	dga	mio		ks	clay stringers

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V154	0	1	1	0.25		50									bo	kva		fs	
V154	1	2	2	0.25	5	75									lyebo	kva		fs	peat
V154	2	3	3	0.50	15	75									gabo	kva		ds	pebbles
V154	3	4	4	0.71	30	75									ga	kva		ds	pebbles
V154	4	5	5	0.71	25	75									ga	kva		ds	chert
V154	5	6	6	0.50	15	75									ga	kva		ds	chert + crystalline
V154	6	7	7	0.71	35	75									ga	kva		ds	miocene + kva + lignite
V154	7	8	8	0.71	25	75									dga	kva		ds	
V154	8	9	9	0.35		75	0.000				0.000	1		1	lga	mio		ks	HM
V154	9	10	10	0.35		75	0.000				0.000	0		0	lga	mio		ks	HM
V154	10	11	11	0.35		75	1.365	**4.280**	5.649		5.559	612	**3280**	612	dga	mio		ks	HM 10 % TiO
V154	11	12	12	0.35		75	0.551				0.551	291		291	dga	mio		ks	HM +++
V154	12	13	13	0.35		75	0.000				0.000	14		14	lga	mio		ks	HM ++
V154	13	14	14	0.50		75	0.000				0.000	18		18	lgabo	mio		ks	HM
V154	14	15	15	0.50		75	0.000				0.000	42		42	lgabo	mio		ks	HM
V154	15	16	16	0.35		75	0.160				0.160	52		52	lga	mio		ks	HM +
V154	16	17	17	0.35		75	0.000				0.000	0		0	lgabo	mio		ks	HM
V154	17	18	18	0.35		75	0.000				0.000	3		3	lgabo	mio		ks	HM
V154	18	19	19	0.35		75	0.167				0.167	5		5	lga	mio		ks	HM
V154	19	20	20	0.35		75	0.054				0.054	59		59	ga	mio		ks	
V154	20	21	21	0.35		75	0.926	**0.621**	0.997		1.194	465	**535**	465	ga	mio		gs	lignite mica and clay stringers
V154	21	22	22	0.25		50	1.839	**1.368**	1.921		2.061	1404	**1473**	1404	dga	mio		gs	mica
V154	22	23	23	0.25		50	0.281				0.281	387		387	dga	mio		gs	mica thin clay
V154	23	24	24	0.25		50	0.748	**0.820**	1.316		1.494	432	**689**	432	dga	mio		gs	mica
V154	24	25	25	0.25		50	0.334				0.334	214		214	dga	mio		gs	mica + thin silt
V154	25	26	26	0.25		50	0.432				0.432	315		315	dga	mio		gs	mica + thin silt

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V155	0	1	1	0.25		75									vbo	kva		fs	
V155	1	2	2	0.25		100									lyebo	kva		fs	thin gyttja/ OM
V155	2	3	3	0.25	5	100									lyebo	kva		ds	
V155	3	4	4	0.50	20	100									pye	kva		ds	
V155	4	5	5	0.50	5	100									pye	kva		ds	
V155	5	6	6	0.50		100									lga	kva		ds	
V155	6	7	7	0.50		100									lga	kva		ds	chert
V155	7	8	8	0.50		100	0.266				0.266	211		211	lga	mio		ks	lignite
V155	8	9	9	0.00		75									ba	mio		gl	lignite
V155	9	10	10	0.35		50	0.172				0.172	121		121	dga	mio		ks	lignite clay
V155	10	11	11	0.35		75	0.435				0.435	99		99	ga	mio		ks	lignite + HM ++
V155	11	12	12	0.35		100	0.454				0.454	169		169	lga	mio		ks	HM
V155	12	13	13	0.35		100	0.811	**0.000**			0.811	293	**166**	293	lga	mio		ks	HM
V155	13	14	14	0.35		100	0.246				0.246	118		118	gabo	mio		ks	Hm
V155	14	15	15	0.35		100	0.000				0.000	0		0	lgabo	mio		ks	HM
V155	15	16	16	0.35		100	0.014				0.014	0		0	lga	mio		ks	
V155	16	17	17	0.35		100	0.000				0.000	23		23	lga	mio		ks	
V155	17	18	18	0.35		100	0.074				0.074	0		0	lga	mio		ks	
V155	18	19	19	0.35		100	0.030				0.030	0		0	lga	mio		ks	
V155	19	20	20	0.35		100	0.034				0.034	61		61	lga	mio		ks	
V155	20	21	21	0.35		100	0.204				0.204	111		111	lgabo	mio		ks	
V155	21	22	22	0.35		75	0.353				0.353	107		107	lgabo	mio		ks	
V155	22	23	23	0.35		75	0.114				0.114	54		54	lgabo	mio		ks	
V155	23	24	24	0.35		75	0.065				0.065	21		21	lgabo	mio		ks	
V155	24	25	25	0.25		50	1.320	**0.356**			0.719	1133	**394**	1133	dga	mio		gs	mica
V155	25	26	26	0.25		50	0.374				0.374	324		324	dga	mio		gs	mica

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V156	0	1	1	0.35															
V156	1	2	2	0.35	10	50									gabo	kva		fs	gyttja stringers
V156	2	3	3	0.35	10	75									dyebo	kva		fs	pebbles
V156	3	4	4	0.50	10	100									yebo	kva		fs	
V156	4	5	5	2.00	60	100									gabo	kva		fs	
V156	5	6	6	1.00	20	100									lgabo	kva		fg	
V156	6	7	7	0.50	5	100	0.780	**0.294**			0.651	199	**192**	199	gabo	kva		fs	stones, peat, gyttja
V156	7	8	8	0.35		100	0.134				0.134	0		0	lga	mio		ks	
V156	8	9	9	0.35		100	0.478				0.478	106		106	lga	mio		ks	lignite
V156	9	10	10	0.35		100	1.691	**1.515**	1.802		1.949	771	**1836**	771	lga	mio		ks	HM
V156	10	11	11	0.71	5	100	0.000				0.000	0		0	lga	mio		ks	HM
V156	11	12	12	0.71	10	100	0.000				0.000	0		0	lga	mio		ks	HM
V156	12	13	13	0.71		100	0.126				0.126	39		39	lga	mio		ks	(HM)
V156	13	14	14	0.35		100	0.622				0.622	65		65	lga	mio		ks	
V156	14	15	15	0.35		100	0.000				0.000	0		0	lga	mio		ks	HM
V156	15	16	16	0.25		100	0.111				0.111	95		95	lga	mio		ks	
V156	16	17	17	0.25		100	0.131				0.131	129		129	lga	mio		ks	
V156	17	18	18	0.25		100	0.038				0.038	46		46	lga	mio		ks	
V156	18	19	19	0.25		75	0.039				0.039	33		33	dga	mio		gs	
V156	19	20	20	0.25		75	0.383				0.383	180		180	dga	mio		gs	clay- silt stringers
V156	20	21	21	0.18		75	1.602	**1.319**	2.269		2.388	1148	**1321**	1148	dga	mio		gs	
V156	21	22	22	0.18		75	0.672				0.672	719		719	dga	mio		gs	
V156	22	23	23	0.18		75	0.810	**0.639**			1.035	851	**904**	851	dga	mio		gs	
V156	23	24	24	0.18		50	0.540				0.540	437		437	dga	mio		gs	
V156	24	25	25	0.18		25	0.438				0.438	422		422	dga	mio		gs	
V156	25	26	26	0.18		25	0.482				0.482	557		557	dga	mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V157	0	1	1	0.35	5	50									vbo	kva		ds	Could be freshwater sand post glacial
V157	1	2	2	0.35	10	75									lyebo	kva		ds	
V157	2	3	3	0.35	10	100									lyebo	kva		ds	
V157	3	4	4	0.50	50	75									ga	kva		dg	
V157	4	5	5	0.35	75	75									ga	kva		ds	redeposited lignite
V157	5	6	6	0.35	25	75									ga	kva		ds	chert and lignite
V157	6	7	7	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V157	7	8	8	0.35		75	0.052				0.052	0		0	lga	mio		ks	(HM)
V157	8	9	9	0.35		75	0.001				0.001	0		0	lga	mio		ks	(HM)
V157	9	10	10	0.35		75	0.000				0.000	0		0	lga	mio		ks	(HM)
V157	10	11	11	0.35		75	0.000				0.000	0		0	lga	mio		ks	(HM)
V157	11	12	12	0.50		75	0.000				0.000	0		0	lga	mio		ks	
V157	12	13	13	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V157	13	14	14	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V157	14	15	15	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V157	15	16	16	0.35		75	0.010				0.010	0		0	lga	mio		ks	
V157	16	17	17	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V157	17	18	18	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V157	18	19	19	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V157	19	20	20	0.35		75	0.000				0.000	0		0	gabo	mio		ks	lignite
V157	20	21	21	0.35		75	0.497				0.497	286		286	dga	mio		ks	lignite
V157	21	22	22	0.25		50	0.778	**0.795**			1.209	577	**643**	577	dga	mio		gs	
V157	22	23	23	0.13		75	1.208	**1.064**			1.508	1301	**1379**	1301	dga	mio		gs	
V157	23	24	24	0.13		50	0.716	**0.445**			0.819	527	**606**	527	dga	mio		gs	
V157	24	25	25	0.13		50	0.442				0.442	446		446	dga	mio		gs	
V157	25	26	26	0.13		50	0.421				0.421	441		441	dga	mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V158	0	1	1	0.35	5	75									vbo	kva		fs	peat
V158	1	2	2	0.35	10	100									dyebo	kva		ds	
V158	2	3	3	0.35	15	100									dyebo	kva		ds	
V158	3	4	4	0.50		100									gabo	kva		ds	pebbles
V158	4	5	5	0.35		100									gabo	kva		ds	redeposited miocene
V158	5	6	6	0.35		75	0.429				0.429	230		230	dga	mio		ks	clay stringers + lignite
V158	6	7	7	0.35		100	0.170				0.170	81		81	lgabo	mio		ks	
V158	7	8	8	0.35		100	0.384				0.384	110		110	lgabo	mio		ks	(HM)
V158	8	9	9	0.00		100	0.000				0.000	0		0	lga	mio		ks	(HM)
V158	9	10	10	0.50	5	100	0.000				0.000	0		0	lga	mio		ks	(HM)
V158	10	11	11	0.71		100	0.000				0.000	0		0	lga	mio		ks	
V158	11	12	12	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V158	12	13	13	0.35		100	0.119				0.119	94		94	lga	mio		ks	
V158	13	14	14	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V158	14	15	15	0.35		100	0.035				0.035	39		39	lga	mio		ks	
V158	15	16	16	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V158	16	17	17	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V158	17	18	18	0.35		100	0.040				0.040	0		0	lga	mio		ks	
V158	18	19	19	0.35		100	0.000				0.000	2		2	lgabo	mio		ks	
V158	19	20	20	0.35		100	0.000				0.000	22		22	lgabo	mio		ks	
V158	20	21	21	0.25		75	0.094				0.094	18		18	ga	mio		ks	
V158	21	22	22	0.25		50	0.394				0.394	346		346	ga	mio		gs	
V158	22	23	23	0.25		50	0.700	**0.614**			1.008	610	**690**	610	ga	mio		gs	
V158	23	24	24	0.25		50	0.666				0.666	755		755	ga	mio		gs	
V158	24	25	25	0.25		50	0.637				0.637	350		350	ga	mio		gs	
V158	25	26	26	0.25		50	0.359				0.359	360		360	ga	mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V159	0	1	1	0.06		50									yebo	kva		fs	silt stringers
V159	1	2	2	0.71	5	75									gabo	kva		fs	
V159	2	3	3	2.00	70	75									gabo	kva		dg	pebbles
V159	3	4	4	1.00	25	50									gabo	kva		ds	
V159	4	5	5	1.00	25	75									gabo	kva		ds	pebbles
V159	5	6	6	2.00	50	75									gabo	kva		ds	pebbles
V159	6	7	7	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V159	7	8	8	0.25		100	0.406				0.406	167		167	dga	mio		ks	
V159	8	9	9	0.35		75	0.274				0.274	32		32	gabo	mio		ks	
V159	9	10	10	0.35		75	0.052				0.052	12		12	gabo	mio		ks	HM
V159	10	11	11	0.35		100	0.515				0.515	211		211	gabo	mio		ks	HM
V159	11	12	12	0.35		100	0.509				0.509	140		140	gabo	mio		ks	HM
V159	12	13	13	0.35		100	0.304				0.304	0		0	gabo	mio		ks	HM
V159	13	14	14	0.50		100	0.000				0.000	5		5	gabo	mio		ks	
V159	14	15	15	0.50		100	0.008				0.008	0		0	gabo	mio		ks	
V159	15	16	16	0.50		100	0.000				0.000	0		0	gabo	mio		ks	
V159	16	17	17	0.50		100	0.045				0.045	79		79	gabo	mio		ks	
V159	17	18	18	0.50		100	0.000				0.000	37		37	gabo	mio		ks	
V159	18	19	19	0.35		100	0.043				0.043	101		101	ga	mio		ks	
V159	19	20	20	0.35		100	0.195				0.195	142		142	ga	mio		ks	
V159	20	21	21	0.35		100	0.112				0.112	95		95	ga	mio		gs	mica some HM
V159	21	22	22	0.25		50	0.760	**0.960**			1.393	600	**723**	600	ga	mio		gs	mica some HM
V159	22	23	23	0.25		50	1.087	**0.866**			1.288	870	**1021**	870	ga	mio		gs	mica some HM
V159	23	24	24	0.25		25	0.373				0.373	338		338	ga	mio		gs	mica some HM
V159	24	25	25	0.25		25	0.784	**0.881**			1.305	621	**949**	621	ga	mio		gs	mica some HM
V159	25	26	26	0.25		25	1.273	**0.808**			1.223	925	**1120**	925	ga	mio		gs	mica some HM

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V160	0	1	1	0.35		50									lyebo	kva		fs	
V160	1	2	2	0.35		50									dgabo	kva		fs	
V160	2	3	3	0.35	5	75									dgabo	kva		ds	
V160	3	4	4	2.00	50	50									ga	kva		dg	
V160	4	5	5	1.00	30	100									lga	kva		ds	dg
V160	5	6	6	0.35		100	0.000				0.000	0		0	lga	kva		ks	
V160	6	7	7	0.35		100	0.000				0.000	0		0	lga	mio		gl	
V160	7	8	8	0.00		100						163		163	ba	mio		gl	lignite, silty
V160	8	9	9	0.35		100	0.053				0.053	32		32	ga	mio		ks	lignite + clay
V160	9	10	10	0.35		100	0.000				0.000	46		46	ga	mio		ks	lignite + clay
V160	10	11	11	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V160	11	12	12	0.35		100	0.000				0.000	11		11	lga	mio		ks	
V160	12	13	13	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V160	13	14	14	0.50		100	0.025				0.025	41		41	lyebo	mio		ks	
V160	14	15	15	0.50		100	0.000				0.000	0		0	lyebo	mio		ks	
V160	15	16	16	0.35		100	0.000				0.000	52		52	lga	mio		ks	
V160	16	17	17	0.35		100	0.000				0.000	21		21	lga	mio		ks	
V160	17	18	18	0.35		100	0.000				0.000	0		0	lyebo	mio		ks	
V160	18	19	19	0.35		75	0.160				0.160	131		131	gabo	mio		ks	
V160	19	20	20	0.35		100	0.000				0.000	44		44	yebo	mio		ks	
V160	20	21	21	0.35		100	0.000				0.000	0		0	yebo	mio		ks	
V160	21	22	22	0.35		100	0.035				0.035	0		0	yebo	mio		ks	
V160	22	23	23	0.18		50	1.111	**1.017**			1.456	891	**874**	891	dga	mio		gs	
V160	23	24	24	0.18		50	0.616				0.616	432		432	dga	mio		gs	
V160	24	25	25	0.18		50	0.468				0.468	572		572	dga	mio		gs	
V160	25	26	26	0.18		50	0.655				0.655	559		559	dga	mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V161	0	1	1	0.35		25									yebo	kva		ds	
V161	1	2	2	0.35		75									lyebo	kva		ds	
V161	2	3	3	0.35		100									lgu	kva		ds	
V161	3	4	4	0.35		50									gabo	kva		ds	
V161	4	5	5	0.35		25									gabo	kva		ds	
V161	5	6	6																no sample
V161	6	7	7	0.25		5	0.393				0.393	179		179	lga	mio		ks	om/lignite + mica
V161	7	8	8	0.35		15	0.032				0.032	18		18	gabo	mio		ks	om/lignite + mica
V161	8	9	9	0.35		100	0.267				0.267	436		436	lga	mio		ks	
V161	9	10	10	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V161	10	11	11	0.35		100	0.000				0.000	0		0	lga	mio		ks	(HM)
V161	11	12	12	0.35		100	0.000				0.000	0		0	lga	mio		ks	(HM)
V161	12	13	13	0.35		75	0.000				0.000	0		0	lga	mio		ks	(HM)
V161	13	14	14	0.35		100	0.090				0.090	191		191	dga	mio		ks	om/lignite + silt/clay
V161	14	15	15	0.35		100	0.000				0.000	0		0	dga	mio		ks	om/lignite + silt/clay
V161	15	16	16	0.35		75	0.119				0.119	26		26	lga	mio		ks	
V161	16	17	17	0.35		100	0.020				0.020	0		0	lga	mio		ks	
V161	17	18	18	0.50		100	0.000				0.000	0		0	lga	mio		ks	
V161	18	19	19	0.71	5	100	0.000				0.000	0		0	lga	mio		ks	
V161	19	20	20	0.71	5	100	0.000				0.000	0		0	lga	mio		ks	
V161	20	21	21	0.35	5	75	0.000				0.000	0		0	lgabo	mio		ks	(HM)
V161	21	22	22	0.35	5	75	0.000				0.000	0		0	lga	mio		ks	(HM)
V161	22	23	23	0.35		75	0.000				0.000	1		1	lga	mio		ks	(HM)
V161	23	24	24	0.35		75	0.087				0.087	149		149	lga	mio		ks	(HM) + clay stringers
V161	24	25	25	0.35		50	0.000				0.000	0		0	lga	mio		ks	
V161	25	26	26	0.35		50	0.065				0.065	70		70	lga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V162	0	1	1	0.35		25									dgabo	kva		s	clay till
V162	1	2	2	0.00		25									boye	kva		ml	
V162	2	3	3	0.00		75									boye	kva		ml	
V162	3	4	4	0.00		75									boye	kva		ml	
V162	4	5	5	0.00		75									yebo	kva		ml	
V162	5	6	6	0.00		75									yebo	kva		ml	
V162	6	7	7	0.50		100									yebo	kva		v	alternating layers
V162	7	8	8	0.50		100									yebo	kva		v	
V162	8	9	9	0.50		100									rebo	kva		ds	
V162	9	10	10	0.50		100									rebo	kva		ds	
V162	10	11	11	0.50	10	100									rebo	kva		v	sand + clay + gravel
V162	11	12	12	0.02		100									rebo	kva		dl	with sand
V162	12	13	13	0.02	20	100									rebo	kva		dl	with gravel
V162	13	14	14	0.02	30	100									rebo	kva		dl	
V162	14	15	15	0.02	30	100									gabo	kva		dl	30% gravel mixed sample
V162	15	16	16	0.35	10	100									gabo	kva		ds	clay stringers
V162	16	17	17	0.35		100	0.077				0.077	47		47	lga	mio		ks	trace of HM
V162	17	18	18	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V162	18	19	19	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V162	19	20	20	0.50		100	0.000				0.000	0		0	lyebo	mio		ks	
V162	20	21	21	0.35		100	0.000				0.000	0		0	yebo	mio		ks	
V162	21	22	22	0.50		100	0.000				0.000	0		0	lga	mio		ks	
V162	22	23	23	0.35		100	0.000				0.000	10		10	lga	mio		ks	
V162	23	24	24	0.35		100	0.005				0.005	11		11	lga	mio		ks	
V162	24	25	25	0.35		100	0.007				0.007	18		18	lga	mio		ks	
V162	25	26	26	0.35		100	0.000				0.000	0		0	lga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V163	0	1	1	0.35		75									vbo	kva		ds	
V163	1	2	2	0.25		75									lyebo	kva		ds	
V163	2	3	3	0.35	15	75									lyebo	kva		ds	
V163	3	4	4	0.18	25	50									lyebo	kva		ds	pebbles
V163	4	5	5	2.00	60	75									lyebo	kva		dg	pebbles (many)
V163	5	6	6	0.35		100	0.174				0.174	175		175	vga	mio		ks	20% lignite
V163	6	7	7	0.01		75	0.683				0.683	419		419	vga	mio		c	50% lignite + 50% ks
V163	7	8	8	0.35		100	1.073	**0.798**			1.212	449	**885**	449	gabo	mio		ks	HM
V163	8	9	9	0.50		75	0.000				0.000	27		27	lga	mio		ks	
V163	9	10	10	0.71	15	100	0.000				0.000	22		22	lga	mio		ks	
V163	10	11	11	0.71	10	100	0.047				0.047	65		65	lga	mio		ks	
V163	11	12	12	0.50		100	0.268				0.268	141		141	lga	mio		ks	HM
V163	12	13	13	0.50		100	0.126				0.126	246		246	lga	mio		ks	HM
V163	13	14	14	0.35		100	0.934	**0.441**			0.814	323	**509**	323	lga	mio		ks	HM
V163	14	15	15	0.35		100	0.343				0.343	253		253	lga	mio		ks	HM
V163	15	16	16	0.35		100	0.539				0.539	218		218	lga	mio		ks	HM
V163	16	17	17	0.35		100	0.005				0.005	138		138	lga	mio		ks	HM
V163	17	18	18	0.35		75	0.422				0.422	354		354	lyebo	mio		ks	
V163	18	19	19	0.25		75	1.635	**1.476**	2.128		2.255	1475	**2053**	1475	lboga	mio		gs	new facies, mica + (HM)
V163	19	20	20	0.25		75	0.925	**0.761**			1.171	863	**806**	863	lboga	mio		gs	fine grained + HM
V163	20	21	21	0.25		75	1.305	**1.075**			1.521	1493	**1347**	1493	lboga	mio		gs	HM
V163	21	22	22	0.25		50	0.616				0.616	569		569	lboga	mio		gs	HM
V163	22	23	23	0.25		50	0.235				0.235	437		437	lboga	mio		gs	(HM)
V163	23	24	24	0.13		50	0.377				0.377	456		456	dga	mio		gs	
V163	24	25	25	0.13		75	0.478				0.478	586		586	dga	mio		gs	
V163	25	26	26	0.13		75	0.428				0.428	757		757	dga	mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V164	0	1	1	0.35		75									rebo	kva		ds	
V164	1	2	2	0.35		75									yebo	kva		ds	
V164	2	3	3	0.35	30	100									yebo	kva		ds	
V164	3	4	4	1.00		100									ga	kva		ks	some kva in sample
V164	4	5	5	0.35		100	0.783	**0.668**	1.102	0.748	0.748	146	**433**	146	lga	mio		ks	
V164	5	6	6	0.35		100	0.114				0.114	6		6	lga	mio		ks	HM
V164	6	7	7	0.35		100	10.027	**8.971**	12.054	9.842	9.842	3382	**5604**	3382	dga	mio		ks	HM
V164	7	8	8	0.35		100	6.700	**4.165**	5.568	4.739	4.739	1870	**3273**	1870	dga	mio		ks	HM
V164	8	9	9	0.35		100	1.454	**0.000**			1.454	32	**210**	32	lga	mio		ks	HM
V164	9	10	10	0.35		100	0.417				0.417	11		11	ga	mio		ks	HM
V164	10	11	11	0.71		100	0.882	**0.000**			0.882	0	**173**	0	lyebo	mio		ks	
V164	11	12	12	0.71		75	0.732	**0.000**			0.732	0	**118**	0	yebo	mio		ks	
V164	12	13	13	0.35		100	0.195				0.195	0		0	lyebo	mio		ks	
V164	13	14	14	0.35		100	0.553				0.553	0		0	lyebo	mio		ks	
V164	14	15	15	0.35		100	0.443				0.443	0		0	lga	mio		ks	
V164	15	16	16	0.35		100	0.430				0.430	0		0	lrebo	mio		ks	
V164	16	17	17	0.35		100	0.429				0.429	10		10	lyebo	mio		ks	
V164	17	18	18	0.35		75	0.428				0.428	13		13	lyebo	mio		ks	
V164	18	19	19	0.35		75	0.339				0.339	0		0	lyebo	mio		ks	
V164	19	20	20	0.25		75	1.127	**0.925**			1.354	585	**1038**	585	dga	mio		gs	
V164	20	21	21	0.25		50	0.535				0.535	277		277	dga	mio		gs	lignite + clay
V164	21	22	22	0.13		50	0.631				0.631	89		89	dga	mio		gs	
V164	22	23	23	0.13		50	0.923	**0.661**			1.060	521	**799**	521	dga	mio		gs	
V164	23	24	24	0.13		50	0.681				0.681	122		122	dga	mio		gs	
V164	24	25	25	0.13		50	0.689				0.689	162		162	dga	mio		gs	
V164	25	26	26	0.13		50	0.875	**0.410**			0.780	373	**566**	373	dga	mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V165	0	1	1	0.35		50									yebo	kva		ds	
V165	1	2	2	0.25		75									yebo	kva		ds	
V165	2	3	3	0.71	25	100									gabo	kva		ds	
V165	3	4	4	2.00	50	50									gabo	kva		dg	
V165	4	5	5	0.71		50									gabo	kva		ds	gl in sample
V165	5	6	6	0.35		50	0.507				0.507	205		205	vga	mio		ks	lignite + ks + c
V165	6	7	7	0.35		50	0.000				0.000	24		24	lga	mio		ks	15% lignite + clay
V165	7	8	8	0.35		100	0.101				0.101	0		0	ga	mio		ks	HM
V165	8	9	9	0.50		100	0.000				0.000	0		0	ga	mio		ks	HM
V165	9	10	10	1.00	5	100	0.000				0.000	0		0	lgabo	mio		ks	
V165	10	11	11	1.00	5	100	0.000				0.000	0		0	yebo	mio		ks	
V165	11	12	12	0.50		100	0.000				0.000	0		0	yebo	mio		ks	
V165	12	13	13	0.35		100	0.000				0.000	0		0	ga	mio		ks	
V165	13	14	14	0.35		100	0.005				0.005	14		14	lyebo	mio		ks	
V165	14	15	15	0.35		100	0.052				0.052	37		37	lyebo	mio		ks	
V165	15	16	16	0.35		100	0.238				0.238	182		182	lyebo	mio		ks	
V165	16	17	17	0.35		100	0.000				0.000	1		1	dga	mio		ks	
V165	17	18	18	0.35		50	0.031				0.031	105		105	dga	mio		ks	
V165	18	19	19	0.25		50	1.257	**1.276**			1.745	874	**940**	874	dga	mio		gs	mica
V165	19	20	20	0.13		50	1.299	**1.108**			1.558	1151	**1167**	1151	dga	mio		gs	
V165	20	21	21	0.13		50	1.198	**1.015**			1.454	739	**793**	739	dga	mio		gs	
V165	21	22	22	0.13		50	0.713	**0.614**			1.007	887	**929**	887	dga	mio		gs	
V165	22	23	23	0.13		50	0.298				0.298	294		294	dga	mio		gs	
V165	23	24	24	0.13		50	0.444				0.444	330		330	dga	mio		gs	lignite
V165	24	25	25	0.13		50	0.808	**0.633**			1.029	926	**931**	926	dga	mio		gs	
V165	25	26	26	0.13		50	0.664				0.664	447		447	dga	mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V166	0	1	1	0.50		50									dyebo	kva		ds	
V166	1	2	2	0.50		50									yebo	kva		ds	
V166	2	3	3	1.00		100									yebo	kva		ds	
V166	3	4	4	0.71		100									yega	kva		ds	clay stringers (glaciofluvial)
V166	4	5	5	0.50		100						45		45	ga	mio		ks	
V166	5	6	6	0.50		100	0.018				0.018	37		37	ga	mio		ks	
V166	6	7	7	0.35		75	0.007				0.007	29		29	ga	mio		ks	
V166	7	8	8	0.50		75	0.000				0.000	161		161	gabo	mio		ks	
V166	8	9	9	0.71		75	0.343				0.343	0		0	ga	mio		ks	clay stringers
V166	9	10	10	0.35	5	100	0.000	**0.000**			0.000	0	**65**	0	ga	mio		ks	
V166	10	11	11	0.35		100	0.000	**0.000**	0.092		0.344	2233	**225**	2233	ga	mio		ks	
V166	11	12	12	0.35		100	2.928				2.928	5579		5579	ga	mio		ks	HM
V166	12	13	13	0.35		75	6.408				6.408	280		280	dga	mio		ks	HM few lignite fragments
V166	13	14	14	0.25		75	0.398				0.398	114		114	dga	mio		ks	hm lignite fragm.
V166	14	15	15	0.35		100	0.048				0.048	2		2	bo	mio		ks	hm
V166	15	16	16	0.25		100	0.000				0.000	0		0	gabo	mio		ks	
V166	16	17	17	0.50		100	0.000				0.000	0		0	ga	mio		ks	
V166	17	18	18	0.25		100	0.000				0.000	0		0	ga	mio		ks	
V166	18	19	19	0.35		100	0.000				0.000	85		85	ga	mio		ks	
V166	19	20	20	0.35		75	0.229				0.229	43		43	vbo	mio		ks	clay and lignite
V166	20	21	21	0.35		75	0.058				0.058	156		156	vga	mio		ks	lignite, clay stringers
V166	21	22	22	0.35		75	0.698				0.698	0		0	dga	mio		ks	lignite
V166	22	23	23	0.50		75	0.026				0.026	3		3	dga	mio		ks	lignite
V166	23	24	24	0.50		75	0.008				0.008	0		0	ga	mio		ks	
V166	24	25	25	0.71		75	0.003				0.003	0		0	ga	mio		ks	
V166	25	26	26	0.71		75	0.000				0.000				ga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V167	0	1	1	0.35		50									bo	kva		ds	
V167	1	2	2	0.35		75									yebo	kva		ds	
V167	2	3	3	0.35	10	100									yebo	kva		ds	
V167	3	4	4	0.71	30	100									yebo	kva		ds	
V167	4	5	5	0.50	20	100									yega	kva		ds	
V167	5	6	6	0.35		100									ga	kva		ds	
V167	6	7	7	0.50		75									ga	kva		ds	
V167	7	8	8	0.25		75	0.621				0.621	2175		2175	boga	mio		ks	50 % of sample lignite
V167	8	9	9	0.25		75	0.057				0.057	14		14	ga	mio		ks	hm 0,5 %
V167	9	10	10	0.35		100	0.000				0.000	0		0	ga	mio		ks	
V167	10	11	11	0.25		100	0.000				0.000	0		0	lga	mio		ks	
V167	11	12	12	0.25		100	0.000				0.000	0		0	lga	mio		ks	
V167	12	13	13	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V167	13	14	14	0.35		75	0.000				0.000	1		1	lga	mio		ks	
V167	14	15	15	0.25		75	0.206				0.206	124		124	dga	mio		ks	clay stringers
V167	15	16	16	0.35		75	0.000				0.000	0		0	ga	mio		ks	hm 1%
V167	16	17	17	0.50		75	0.000				0.000	0		0	ga	mio		ks	
V167	17	18	18	0.35		75	0.000				0.000	0		0	ga	mio		ks	
V167	18	19	19	1.00		50	0.000				0.000	0		0	ga	mio		ks	
V167	19	20	20	0.50		75	0.000				0.000	0		0	yega	mio		ks	
V167	20	21	21	1.00		75	0.000				0.000	0		0	yega	mio		ks	
V167	21	22	22	0.71		75	0.000				0.000	0		0	yega	mio		ks	
V167	22	23	23	0.25		75	0.000				0.000	0		0	ga	mio		ks	
V167	23	24	24	0.25		75	0.000				0.000	0		0	ga	mio		ks	
V167	24	25	25	0.25		75	0.000				0.000	0		0	ga	mio		ks	
V167	25	26	26	0.25		75	0.000				0.000	0		0	yega	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V168	0	1	1	0.35		50									bo	kva		ds	
V168	1	2	2	0.35		50									yebo	kva		ds	
V168	2	3	3	4.00	50	75									ga	kva		dg	
V168	3	4	4	1.00	20	75									ga	kva		ds	
V168	4	5	5	1.00	20	75									ga	kva		ds	
V168	5	6	6	4.00	50	75									ga	kva		dg	lignite
V168	6	7	7	0.35		75	0.127				0.127	152		152	dga	kva		ds	
V168	7	8	8	0.35		75	0.000				0.000	56		56	lga	mio		ks	
V168	8	9	9	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V168	9	10	10	0.35		100	0.000				0.000	3		3	lga	mio		ks	
V168	10	11	11	0.35		100	0.000				0.000	5		5	lga	mio		ks	
V168	11	12	12	0.35		100	0.000				0.000	24		24	lga	mio		ks	
V168	12	13	13	0.35		100	0.023				0.023	16		16	ga	mio		ks	
V168	13	14	14	0.35		50	0.337				0.337	184		184	dga	mio		ks	lignite
V168	14	15	15	0.35		50	0.118				0.118	371		371	dga	mio		ks	lignite
V168	15	16	16	0.35		75	0.097				0.097	33		33	ga	mio		ks	hm~2
V168	16	17	17	0.35		75	0.028				0.028	18		18	ga	mio		ks	hm~0,5
V168	17	18	18	0.50		100	0.000				0.000	0		0	ga	mio		ks	
V168	18	19	19	0.50		100	0.000				0.000	13		13	ga	mio		ks	hm~1
V168	19	20	20	0.25		100	0.119				0.119	19		19	lga	mio		ks	
V168	20	21	21	0.25		75	0.113				0.113	115		115	lga	mio		ks	
V168	21	22	22	0.25		100	0.169				0.169	104		104	yega	mio		ks	
V168	22	23	23	0.25		100	0.244				0.244	244		244	yega	mio		ks	
V168	23	24	24	0.35		50	0.129				0.129	86		86	ga	mio		ks	
V168	24	25	25	0.50		50	0.000				0.000	28		28	ga	mio		ks	
V168	25	26	26	0.35			0.240				0.240	147		147	dga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V169	0	1	1	0.35	5	50									yebo	kva		ds	
V169	1	2	2	0.35	10	75									yebo	kva		ds	
V169	2	3	3	0.35		75									yebo	kva		ds	
V169	3	4	4	0.50	5	50	0.007				0.007	8		8	ga	mio		ks	
V169	4	5	5	0.25	10	75	0.000				0.000	0		0	lga	mio		ks	
V169	5	6	6	0.13		75	0.027				0.027	33		33	dga	mio		ks	clay stringers
V169	6	7	7	0.09		75	0.000				0.000	0		0	hi	mio		ks	well sorted
V169	7	8	8	0.50		75	0.030				0.030	0		0	hi	mio		ks	
V169	8	9	9	0.18		75	0.022				0.022	65		65	gawi	mio		ks	hm 1-1,5 well sorted
V169	9	10	10	0.35		75	0.000				0.000	50		50	hi	mio		ks	lignite fragm. Well sorted
V169	10	11	11	0.35		75	0.003				0.003	170		170	yebo	mio		ks	
V169	11	12	12	0.35		75	0.056				0.056	99		99	gabo	mio		ks	pyrite concretions
V169	12	13	13	0.35		75	0.057				0.057	47		47	yega	mio		ks	hm ~1%
V169	13	14	14	0.35		75	0.000				0.000	0		0	ga	mio		ks	hm~0,5 %
V169	14	15	15	0.25		75	0.000				0.000	0		0	ga	mio		ks	
V169	15	16	16	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V169	16	17	17	0.50		75	0.000				0.000	0		0	lga	mio		ks	
V169	17	18	18	0.00		75	0.135				0.135	185		185	lga	mio		gi	
V169	18	19	19	0.00		75									boba	mio		gi	mica
V169	19	20	20	0.00		75	0.059				0.059	96		96	vga	mio		gi	silty sand
V169	20	21	21	0.50		75	0.121				0.121	55		55	boba	mio		ks	lignite
V169	21	22	22	0.50		75	0.068				0.068	0		0	dga	mio		ks	
V169	22	23	23	0.50		75	0.000				0.000	0		0	lga	mio		ks	lignite fragm.
V169	23	24	24	1.00		75	0.000				0.000	0		0	boba	mio		ks	
V169	24	25	25	1.00		75	0.000				0.000	0		0	boba	mio		ks	
V169	25	26	26	1.00		75	0.000				0.000	0		0	boba	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V170	0	1	1	1.00												kva		ds	could be fs
V170	1	2	2	1.00												kva		ds	
V170	2	3	3	1.00												kva		ds	clay stringer
V170	3	4	4	1.00												kva		ds	smell of sewer
V170	4	5	5	1.00												kva		ds	
V170	5	6	6	1.00												kva		ds	clay stringer
V170	6	7	7	1.00												kva		ds	
V170	7	8	8	0.35			0.771	**0.966**	1.946		2.084	59	**226**	59	gabo	mio		ks	lignite +HM
V170	8	9	9	0.35			0.523				0.523	560		560	gabo	mio		ks	hm
V170	9	10	10	0.35			0.139				0.139	17		17	vbo	mio		ks	clay stringer
V170	10	11	11	0.35			0.220				0.220	7		7	vbo	mio		ks	hm ?
V170	11	12	12	0.35			0.492				0.492	42		42	ga	mio		ks	(hm)
V170	12	13	13	0.35			0.085				0.085	15		15	ga	mio		ks	hm
V170	13	14	14	0.35			0.077				0.077	42		42	ga	mio		ks	
V170	14	15	15	0.35			0.085				0.085	0		0	lga	mio		ks	
V170	15	16	16	0.35			0.000				0.000	1		1	lga	mio		ks	
V170	16	17	17	0.35			0.038				0.038	16		16	dga	mio		ks	
V170	17	18	18	0.00			0.502				0.502	431		431	ba	mio		gl	
V170	18	19	19	0.00			0.518				0.518	389		389	ba	mio		gl	
V170	19	20	20	0.00			0.377				0.377	127		127	ba	mio		gl	sand in sample
V170	20	21	21	0.35			1.707	**1.345**	1.973		2.110	566	**775**	566	vga	mio		ks	HM
V170	21	22	22	0.35			2.033	**1.817**	2.617		2.714	864	**1179**	864	ga	mio		ks	HM
V170	22	23	23	0.50			0.173				0.173	49		49	ga	mio		ks	
V170	23	24	24	1.00	15		0.021				0.021	14		14	vbo	mio		ks	
V170	24	25	25	1.00	10		0.050				0.050	0		0	vbo	mio		ks	
V170	25	26	26	0.35			0.337				0.337	217		217	vbo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V171	0	1	1	0.35		50									boye	kva		fs	
V171	1	2	2	0.25		100									yebo	kva		fs	
V171	2	3	3	0.35	5	100									dga	kva		ds	
V171	3	4	4	0.35	10	100									dga	kva		ds	
V171	4	5	5	0.35		100	0.388				0.388	81		81	ga	mio		ks	
V171	5	6	6	0.35		75	0.194				0.194	131		131	ga	mio		ds	
V171	6	7	7	0.00		100	0.480				0.480	290		290	ba	mio		gl	
V171	7	8	8	0.35		100	0.580				0.580	215		215	vga	mio		ks	
V171	8	9	9	0.35		100	0.192				0.192	3		3	lga	mio		ks	
V171	9	10	10	0.35		100		**0.856**	2.980		3.055	51	**177**	51	ga	mio		ks	
V171	10	11	11	0.35		100	1.350	**0.417**	0.895		1.098	860	**746**	860	dgabo	mio		ks	
V171	11	12	12	0.35		100	0.000				0.000	12		12	vbo	mio		ks	
V171	12	13	13	0.35		100	0.476				0.476	25		25	gabo	mio		ks	
V171	13	14	14	0.35		100	0.638				0.638	159		159	lga	mio		ks	
V171	14	15	15	0.35		100	0.298				0.298	62		62	lga	mio		ks	
V171	15	16	16	0.35		100	0.186				0.186	25		25	lga	mio		ks	
V171	16	17	17	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V171	17	18	18	0.35		75	0.056				0.056	21		21	lga	mio		ks	
V171	18	19	19	0.35		100	0.246				0.246	14		14	dyebo	mio		ks	
V171	19	20	20	0.00		100	1.268	**0.908**	1.515		1.680	462	**816**	462	ba	mio		gl	
V171	20	21	21	0.00		100	0.676				0.676	259		259	ba	mio		gl	
V171	21	22	22	0.35		100	0.756	**0.632**	1.050		1.244	277	**414**	277	vga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V172	0	1	1	0.35		10									yega	kva		ds	
V172	1	2	2	0.35		25									yega	kva		ds	
V172	2	3	3	0.35	20	75									ga	kva		ds	
V172	3	4	4	0.35	5	75									ga	kva		ds	
V172	4	5	5	0.35	5	50									ga	kva		ds	clay stringers
V172	5	6	6	0.35	20	50									ga	kva		ds	
V172	6	7	7	0.50	5	75									gabo	kva		ds	
V172	7	8	8	0.35		75									gabo	kva		ds	
V172	8	9	9	0.35		100	0.000				0.000	0		0	ga	mio		ks	hm
V172	9	10	10	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V172	10	11	11	0.35		100	0.000				0.000	0		0	lga	mio		ks	hm
V172	11	12	12	0.35		100	0.000				0.000	0		0	lga	mio		ks	hm
V172	12	13	13	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V172	13	14	14	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V172	14	15	15	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V172	15	16	16	0.00		50									ba	mio		gl	
V172	16	17	17	0.50		50									ba	mio		gl	
V172	17	18	18	0.00		100									ga	mio		gl	
V172	18	19	19	0.35		100	0.021				0.021	28		28	ga	mio		ks	hm~1
V172	19	20	20	0.35		100	1.090	**0.913**	1.197		1.382	361	**503**	361	ga	mio		ks	hm~1
V172	20	21	21	0.35		100	0.000				0.000	0		0	ga	mio		ks	
V172	21	22	22	0.71		100	0.000				0.000	0		0	ga	mio		ks	
V172	22	23	23	1.00		100	0.000				0.000	0		0	ga	mio		ks	
V172	23	24	24	0.50		100	0.000				0.000	12		12	ga	mio		ks	
V172	24	25	25	0.25		75	0.096				0.096	21		21	ga	mio		ks	
V172	25	26	26	0.35		100	0.000				0.000	20		20	yega	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V173	0	1	1	0.35	5	25									dboga	kva		ds	
V173	1	2	2	0.50	5	50									lyebo	kva		ds	
V173	2	3	3	2.00	50	50									lgabo	kva		dg	pebbles granules
V173	3	4	4	0.71	30	75									lgabo	kva		ds	pebbles granules
V173	4	5	5	0.50		100									lgabo	kva		ds	clay layers
V173	5	6	6	0.50		75									lga	mio		ks	clay layers
V173	6	7	7	0.50	10	50	0.000				0.000	0		0	lga	mio		ks	k
V173	7	8	8	0.35	5	100	0.000				0.000	0		0	lga	mio		ks	
V173	8	9	9	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V173	9	10	10	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V173	10	11	11	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V173	11	12	12	0.71	10	75	0.000				0.000	0		0	lga	mio		ks	
V173	12	13	13	0.35		75	0.078				0.078	18		18	lga	mio		ks	lignite
V173	13	14	14	0.35		75	0.000				0.000	0		0	lga	mio		ks	lignite
V173	14	15	15	0.35		75	0.281				0.281	0		0	lga	mio		ks	
V173	15	16	16	0.35		75	0.486				0.486	89		89	vga	mio		ks	
V173	16	17	17	0.35		50	0.000				0.000	0		0	vbo	mio		ks	
V173	17	18	18	0.35		75	0.012				0.012	0		0	vbo	mio		ks	(hm)
V173	18	19	19	0.35		75	0.227				0.227	62		62	ga	mio		ks	HM
V173	19	20	20	0.35		75	0.000				0.000	0		0	lyebo	mio		ks	HM
V173	20	21	21	0.35		75	0.000				0.000	0		0	lyebo	mio		ks	HM
V173	21	22	22	0.35		75	0.000				0.000	0		0	lyebo	mio		ks	
V173	22	23	23	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V173	23	24	24	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V173	24	25	25	0.35		50	0.000				0.000	0		0	lga	mio		ks	
V173	25	26	26	0.35		50	0.000				0.000	0		0	gabo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V174	0	1	1	0.35		75										kva		ds	
V174	1	2	2	0.35		50										kva		dg	
V174	2	3	3	0.35		50										kva		ds	
V174	3	4	4	0.35		100										kva		dv	
V174	4	5	5	0.35		100	0.000				0.000	11		11		mio		ks	
V174	5	6	6	0.35		100	0.000				0.000	0		0		mio		ks	
V174	6	7	7	0.35		100	0.000				0.000	0		0		mio		ks	
V174	7	8	8	0.35		100	0.077				0.077	28		28		mio		ks	
V174	8	9	9	0.35		100	0.063				0.063	0		0		mio		ks	
V174	9	10	10	0.35		100	0.013				0.013	116		116		mio		ks	
V174	10	11	11	0.35		100	0.000				0.000	0		0		mio		ks	
V174	11	12	12	0.35		100	0.044				0.044	36		36		mio		ks	lignite
V174	12	13	13	0.35		75	0.000				0.000	0		0	hi	mio		ks	lignite
V174	13	14	14	0.35		75	0.000				0.000	0		0	hi	mio		ks	eolian?
V174	14	15	15	0.35		100	5.512	**1.976**	3.493	3.443	3.443	699	**571**	699	dga	mio		ks	eolian?
V174	15	16	16	0.35		100	1.555	**2.837**	3.320	3.200	3.200	969	**2199**	969	bo	mio		ks	HM
V174	16	17	17	0.35		100	0.164				0.164	43		43		mio		ks	HM
V174	17	18	18	0.35		100	1.418	**0.701**	1.075		1.268	481	**597**	481		mio		ks	HM
V174	18	19	19	0.35		100	0.035				0.035	12		12		mio		ks	HM
V174	19	20	20	0.35		100	0.728	**0.743**	1.132	1.124	1.124	64	**574**	64		mio		ks	HM
V174	20	21	21	0.35		100	0.250				0.250	0		0		mio		ks	
V174	21	22	22	0.35		100	0.225				0.225	47		47		mio		ks	
V174	22	23	23	0.35		100	0.003				0.003	29		29		mio		gl	
V174	23	24	24	0.35		100										mio		gl	
V174	24	25	25	0.35		100										mio		ks	
V174	25	26	26	0.35		100	0.018				0.018	17		17		mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V175	0	1	1	0.35		75										kva		ds	
V175	1	2	2	0.35		100										kva		ds	
V175	2	3	3	0.35		100										kva		ds	
V175	3	4	4	0.35		100										kva		ds	
V175	4	5	5	0.35		100										kva		ds	
V175	5	6	6	0.35		100	0.029				0.029	35		35		mio		ks	
V175	6	7	7	0.35		100	0.158				0.158	22		22		mio		ks	
V175	7	8	8	0.35		100	0.106				0.106	89		89		mio		ks	
V175	8	9	9	0.35		100	0.131				0.131	34		34		mio		ks	
V175	9	10	10	0.35		100	0.066				0.066	7		7		mio		ks	
V175	10	11	11	0.35		100	0.164				0.164	95		95		mio		ks	
V175	11	12	12	0.35		100	0.007				0.007	23		23		mio		ks	
V175	12	13	13	1.00		50	0.016				0.016	32		32		mio		ks	lignite
V175	13	14	14	0.35		100	0.383				0.383	399		399		mio		ks	
V175	14	15	15	0.35		100	0.000				0.000	0		0		mio		ks	
V175	15	16	16	0.35		100	0.000				0.000	0		0		mio		ks	HM
V175	16	17	17	0.35		100	0.523				0.523	383		383		mio		ks	
V175	17	18	18	0.35		100	1.083	**0.521**			0.903	303	**498**	303		mio		ks	
V175	18	19	19	0.35		100	0.394				0.394	57		57		mio		ks	
V175	19	20	20	0.35		100	0.706	**0.352**			0.715	278	**381**	278		mio		ks	
V175	20	21	21	0.35		100	0.158				0.158	30		30		mio		ks	
V175	21	22	22	0.35		75	0.000				0.000	0		0		mio		ks	
V175	22	23	23	0.35		100	0.220				0.220	13		13		mio		ks	
V175	23	24	24	0.35		100	0.100				0.100	0		0		mio		ks	
V175	24	25	25	0.35		75	0.056				0.056	0		0		mio		ks	
V175	25	26	26	0.00		100										mio		gl	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V176	0	1	1	0.35		500									yega	kva		ds	redeposited miocene
V176	1	2	2	0.35	2	100									yebo	kva		ds	redeposited miocene
V176	2	3	3	0.35	5	100									ga	kva		ds	
V176	3	4	4	0.35	5	50									ga	kva		ds	
V176	4	5	5	0.35	5	100									ga	kva		ds	
V176	5	6	6	0.35		50									ga	kva		ds	clay stringers
V176	6	7	7	0.35		75									bo	kva		ds	
V176	7	8	8	0.35		100	0.029				0.029	0		0	boga	mio		ks	possibly redeposited miocene
V176	8	9	9	0.35		100	0.000				0.000	5		5	ga	mio		ks	HM
V176	9	10	10	0.35		100	0.000				0.000	6		6	boga	mio		ks	HM
V176	10	11	11	0.35		100	0.000				0.000	0		0	ga	mio		ks	
V176	11	12	12	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V176	12	13	13	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V176	13	14	14	0.50		100	0.000				0.000	0		0	lga	mio		ks	
V176	14	15	15	0.50		100	0.000				0.000	0		0	ga	mio		ks	
V176	15	16	16	0.00		75									ba	mio		ks	
V176	16	17	17	0.00		75									ba	mio		ks	
V176	17	18	18	0.00		75									ba	mio		ks	
V176	18	19	19	0.35		75	0.034				0.034	45		45	ga	mio		ks	lignite + clay
V176	19	20	20	0.50		75	0.197				0.197	286		286	dga	mio		ks	lignite HM
V176	20	21	21	0.35		100	0.401				0.401	387		387	ga	mio		ks	HM
V176	21	22	22	0.71		100	0.000				0.000	0		0	ga	mio		ks	HM
V176	22	23	23	0.35		100	0.000				0.000	0		0	ga	mio		ks	HM
V176	23	24	24	0.35		75	0.000				0.000	0		0	gabo	mio		ks	
V176	24	25	25	0.35		100	0.022				0.022	0		0	gabo	mio		ks	
V176	25	26	26	0.35		100	0.005				0.005	0		0	gabo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V177	0	1	1	0.35	5	25									yebo	kva		ds	
V177	1	2	2	0.35		50									lyebo	kva		ds	
V177	2	3	3	0.35	50	75									yega	kva		ds	
V177	3	4	4	0.35	25	75									yega	kva		ds	
V177	4	5	5	0.35		75	0.000				0.000	56		56	gabo	mio		ks	HM?
V177	5	6	6	0.35		75	0.000				0.000	0		0	bo	mio		ks	
V177	6	7	7	0.35		75	0.000				0.000	0		0	ga	mio		ks	
V177	7	8	8	0.35		75	0.000				0.000	0		0	lga	mio		ks	HM?
V177	8	9	9	0.35		100	0.000				0.000	0		0	lga	mio		ks	HM?
V177	9	10	10	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V177	10	11	11	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V177	11	12	12	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V177	12	13	13	0.35		75	0.000				0.000	0		0	ga	mio		ks	HM? Lignite
V177	13	14	14	0.00		75									lga	mio		ks	clay stringers + lignite
V177	14	15	15	0.35		75	0.250				0.250	119		119	lga	mio		ks	
V177	15	16	16	0.35		100	0.000				0.000	0		0	ga	mio		ks	HM
V177	16	17	17	0.35		100	0.014				0.014	9		9	ga	mio		ks	HM
V177	17	18	18	0.35		100	0.042				0.042	14		14	ga	mio		ks	HM
V177	18	19	19	0.35		75	0.071				0.071	20		20	gabo	mio		ks	HM
V177	19	20	20	0.71		75	0.000				0.000	0		0	gabo	mio		ks	HM
V177	20	21	21	0.71		75	0.000				0.000	0		0	gabo	mio		ks	
V177	21	22	22	0.50		75	0.000				0.000	0		0	gabo	mio		ks	
V177	22	23	23	0.35		75	0.000				0.000	50		50	gabo	mio		ks	
V177	23	24	24	0.35		75	0.000				0.000	0		0	gabo	mio		ks	
V177	24	25	25	0.25		75	0.119				0.119	94		94	gabo	mio		ks	
V177	25	26	26	0.25		75	0.000				0.000	0		0	gabo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V178	0	1	1	0.35		25									yega	kva		ds	
V178	1	2	2	0.35		50									yebo	kva		ds	
V178	2	3	3	0.35	5	75									yebo	kva		ds	
V178	3	4	4	0.35	5	50									yebo	kva		ds	
V178	4	5	5	0.50	10	75									lga	kva		ds	
V178	5	6	6	0.50	20	50									dga	kva		ds	
V178	6	7	7	0.02		25	0.144				0.144	185		185	dga	mio		gs	possibly redeposited
V178	7	8	8	0.00		75									dga	mio		gl	possibly redeposited
V178	8	9	9	0.35		75	0.000				0.000	28		28	lga	mio		ks	lignite
V178	9	10	10	0.50		75	1.429	**1.776**			2.303	61	**220**	61	lga	mio		ks	
V178	10	11	11	0.50		75	0.999	**1.332**			1.808	232	**502**	232	lga	mio		ks	HM lignite
V178	11	12	12	0.35		75	0.116				0.116	94		94	dga	mio		ks	HM
V178	12	13	13	0.50		75	0.551				0.551	260		260	bo	mio		ks	
V178	13	14	14	0.50		75	0.083				0.083	21		21	bo	mio		ks	
V178	14	15	15	0.50		75	0.673				0.673	164		164	yega	mio		ks	
V178	15	16	16	0.50		75	0.000				0.000	69		69	yega	mio		ks	
V178	16	17	17	0.50		75	0.574				0.574	45		45	yega	mio		ks	
V178	17	18	18	0.35		100	0.051				0.051	59		59	lga	mio		ks	
V178	18	19	19	0.35		100	0.009				0.009	0		0	lga	mio		ks	
V178	19	20	20	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V178	20	21	21	0.35		100	0.000				0.000	13		13	yega	mio		ks	
V178	21	22	22	0.35		100	0.001				0.001	52		52	yega	mio		ks	
V178	22	23	23	0.35		75	0.143				0.143	123		123	dga	mio		ks	
V178	23	24	24	0.00		75									ba	mio		gl	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V179	0	1	1	0.35		50									ga	kva		ds	
V179	1	2	2	0.50		75	0.000				0.000	0		0	lga	mio	odd	ks	
V179	2	3	3	0.50		75	0.000				0.000	0		0	lga	mio	odd	ks	
V179	3	4	4	0.71		75	0.000				0.000	0		0	ga	mio	odd	ks	
V179	4	5	5	0.35		75	0.000				0.000	0		0	ga	mio	odd	ks	
V179	5	6	6	0.25		75	0.000				0.000	3		3	lgabo	mio	odd	ks	
V179	6	7	7	0.25		75	0.032				0.032	0		0	lgabo	mio	odd	ks	
V179	7	8	8	0.25		75	0.024				0.024	47		47	lgabo	mio	odd	ks	
V179	8	9	9	0.25		75	0.000				0.000	0		0	lgabo	mio	odd	ks	
V179	9	10	10	0.25		75	0.000				0.000	13		13	gabo	mio	odd	ks	clay stringers
V179	10	11	11	0.25		75	0.000				0.000	0		0	gabo	mio	odd	ks	
V179	11	12	12	0.25		100	0.000				0.000	28		28	gabo	mio	arn	gs	mica
V179	12	13	13	0.18		75	0.051				0.051	210		210	gabo	mio	arn	gs	
V179	13	14	14	0.18		75	0.522				0.522	1254		1254	gabo	mio	arn	gs	HM
V179	14	15	15	0.13		75	0.305				0.305	443		443	gabo	mio	arn	gs	HM
V179	15	16	16	0.13		75	0.376				0.376	304		304	gabo	mio	arn	gs	
V179	16	17	17	0.13		75	0.290				0.290	462		462	gabo	mio	arn	gs	HM
V179	17	18	18	0.13		75	0.340				0.340	184		184	gabo	mio	arn	gs	
V179	18	19	19	0.13		50	0.333				0.333	328		328	gabo	mio	arn	gs	HM
V179	19	20	20	0.13		75	0.848	**0.758**			1.167	683	**1027**	683	gabo	mio	arn	gs	HM
V179	20	21	21	0.13		75	0.334				0.334	471		471	gabo	mio	arn	gs	HM
V179	21	22	22	0.13		50	0.375				0.375	222		222	gabo	mio	arn	gs	HM
V179	22	23	23	0.13		50	0.616				0.616	754		754	gabo	mio	arn	gs	HM
V179	23	24	24	0.13		50	0.544				0.544	614		614	gabo	mio	arn	gs	M clay stringers
V179	24	25	25	0.06		50									gabo	mio	arn	gs	
V179	25	26	26	0.02		75									gabo	mio	arn	gi	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V180	0	1	1	0.35		50									yega	kva		ds	
V180	1	2	2	0.35		75									yebo	kva		ds	
V180	2	3	3	0.25	30	100									yebo	kva		ds	
V180	3	4	4	0.50	30	100									yebo	kva		ds	
V180	4	5	5	0.35	5	100									dyebo	kva		ds	
V180	5	6	6	1.00		100									boga	mio		ks	
V180	6	7	7	1.00		100	0.000				0.000	29		29	boga	mio		ks	
V180	7	8	8	0.35		100	0.153				0.153	48		48	boga	mio		ks	
V180	8	9	9	0.35		100	0.112				0.112	43		43	boga	mio		ks	
V180	9	10	10	0.35		100	0.099				0.099	1		1	boga	mio		ks	
V180	10	11	11	0.35		100	0.142				0.142	28		28	boga	mio		ks	
V180	11	12	12	0.35		100	0.134				0.134	53		53	boga	mio		ks	
V180	12	13	13	0.35		100	0.016				0.016	7		7	boga	mio		ks	
V180	13	14	14	0.25		100	0.652				0.652	674		674	boga	mio		ks	
V180	14	15	15	0.25		100	1.101	**0.766**			1.177	940	**1020**	940	boga	mio		ks	HM
V180	15	16	16	0.25		50	0.642				0.642	351		351	boga	mio		ks	HM
V180	16	17	17	0.25		75	0.501				0.501	414		414	boga	mio		ks	HM
V180	17	18	18	0.25		75	0.562				0.562	557		557	boga	mio		ks	HM
V180	18	19	19	0.25		75	0.466				0.466	360		360	boga	mio		ks	HM
V180	19	20	20	0.25		75	0.615				0.615	510		510	boga	mio		ks	HM
V180	20	21	21	0.00		75	1.034	**0.722**			1.127	1166	**1005**	1166	boga	mio		ks	HM
V180	21	22	22	0.18		50	0.524				0.524	518		518	boga	mio		gs	HM
V180	22	23	23	0.18		50	0.613				0.613	481		481	boga	mio		gs	HM
V180	23	24	24	0.18		50	0.627				0.627	766		766	boga	mio		gs	HM
V180	24	25	25	0.18		50	1.237	**1.013**			1.452	1685	**1438**	1685	boga	mio		gs	HM
V180	25	26	26	0.18		50	0.960	**0.782**			1.195	1175	**998**	1175	boga	mio		gs	HM

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V181	0	1	1	0.35		100									boye	kva		ds	
V181	1	2	2	0.35		100									boye	kva		ds	
V181	2	3	3	0.35		100									boye	kva		ds	
V181	3	4	4	0.35		75									boye	kva		ds	
V181	4	5	5	0.35	5	100									boye	kva		ds	
V181	5	6	6	0.35	20	100									yega	kva		ds	
V181	6	7	7	0.35	20	50									ga	kva	odd	ks	
V181	7	8	8	0.71	5	75	0.716	**0.539**			0.923	298	**415**	298	boga	mio	odd	ks	HM
V181	8	9	9	0.35		100	0.391				0.391	108		108	boga	mio	odd	ks	HM
V181	9	10	10	0.35		100	0.389				0.389	215		215	boga	mio	odd	ks	HM
V181	10	11	11	0.35		100	0.243				0.243	99		99	boga	mio	odd	ks	
V181	11	12	12	0.35		100	0.148				0.148	130		130	boga	mio	odd	ks	
V181	12	13	13	0.35		100	0.000				0.000	57		57	boga	mio	odd	ks	
V181	13	14	14	0.50		100	0.062				0.062	14		14	boga	mio	odd	ks	clay stringers
V181	14	15	15	0.35		100	0.425				0.425	459		459	boga	mio	odd	ks	
V181	15	16	16	0.35		100	0.495				0.495	759		759	boga	mio	odd	ks	HM
V181	16	17	17	0.25		100	0.299				0.299	343		343	boga	mio	odd	ks	HM
V181	17	18	18	0.18		100	0.422				0.422	407		407	boga	mio	odd	ks	HM +
V181	18	19	19	0.18		100	0.417				0.417	489		489	boga	mio	arn	gs	HM, mica
V181	19	20	20	0.18		100	0.504				0.504	562		562	boga	mio	arn	gs	HM
V181	20	21	21	0.18		100	0.788	**0.524**			0.907	865	**898**	865	boga	mio	arn	gs	HM
V181	21	22	22	0.18		100	0.646	**0.905**			1.332	781	**1445**	781	boga	mio	arn	gs	HM
V181	22	23	23	0.18		100	0.471				0.471	578		578	boga	mio	arn	gs	HM
V181	23	24	24	0.18		100	0.335				0.335	474		474	boga	mio	arn	gs	HM, clay stringers
V181	24	25	25	0.18		100	0.523				0.523	760		760	boga	mio	arn	gs	HM
V181	25	26	26	0.18		100	0.885				0.885	1434		1434	boga	mio	arn	gs	HM +

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V182	0	1	1	0.35		50									rebo	kva		ds	
V182	1	2	2	0.25	5	50									yebo	kva		ds	
V182	2	3	3	0.35	5	75									yebo	kva		ds	
V182	3	4	4	0.35	20	50									lyebo	kva		ds	
V182	4	5	5	0.35		75									yega	kva		ds	redeposited miocene
V182	5	6	6	0.35	5	75	0.154				0.154	0		0	lga	kva		ds	redeposited miocene
V182	6	7	7	0.35		75	0.000				0.000	0		0	lga	mio	odd	ks	
V182	7	8	8	0.35		75	0.000				0.000	0		0	lga	mio	odd	ks	
V182	8	9	9	0.35		100	0.000				0.000	0		0	lboga	mio	odd	ks	
V182	9	10	10	0.35		75	0.000				0.000	0		0	boga	mio	odd	ks	
V182	10	11	11	0.50		75	0.000				0.000	0		0	boga	mio	odd	ks	
V182	11	12	12	0.25		75	0.194				0.194	27		27	boga	mio	arn	gs	HM, micas
V182	12	13	13	0.25		50	0.251				0.251	28		28	boga	mio	arn	gs	HM, micas
V182	13	14	14	0.25		75	1.183	**2.069**			2.629	2574	**2819**	2574	boga	mio	arn	gs	
V182	14	15	15	0.25		75	0.861	**1.878**			2.416	1967	**2477**	1967	boga	mio	arn	gs	HM
V182	15	16	16	0.25		50	0.700	**1.364**			1.843	1160	**1517**	1160	boga	mio	arn	gs	HM
V182	16	17	17	0.25		50	0.241				0.241	132		132	boga	mio	arn	gs	HM
V182	17	18	18	0.25		50	0.646				0.646	366		366	boga	mio	arn	gs	HM
V182	18	19	19	0.25		50	0.286				0.286	434		434	boga	mio	arn	gs	HM
V182	19	20	20	0.25		50	0.287				0.287	81		81	boga	mio	arn	gs	HM
V182	20	21	21	0.18		50	0.394				0.394	461		461	boga	mio	arn	gs	HM
V182	21	22	22	0.18		50	0.237				0.237	214		214	boga	mio	arn	gs	HM
V182	22	23	23	0.18		50	0.359				0.359	110		110	boga	mio	arn	gs	HM
V182	23	24	24	0.06		50	0.693				0.693	932		932	dboga	mio	arn	gs	HM, clay stringers
V182	24	25	25	0.02		75									dga	mio	arn	gs	
V182	25	26	26	0.00		75									dga	mio	arn	gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V183	0	1	1	0.35		50									yebo	kva		ds	
V183	1	2	2	0.35		75									yebo	kva		ds	
V183	2	3	3	0.35		75	0.000				0.000	0		0	ga	mio	odd	ks	possibly redeposited miocene
V183	3	4	4	0.35		75	0.000				0.000	69		69	ga	mio	odd	ks	possibly redeposited miocene
V183	4	5	5	0.35		75	0.000				0.000	61		61	ga	mio	odd	ks	possibly redeposited miocene
V183	5	6	6	0.35		75									ga	mio	odd	ks	possibly redeposited miocene, clay stringers
V183	6	7	7	0.35		75	0.000				0.000	0		0	ga	mio	odd	ks	
V183	7	8	8	0.35		75	0.000				0.000	13		13	yega	mio	odd	ks	
V183	8	9	9	0.35		75	0.000				0.000	4		4	ga	mio	odd	ks	
V183	9	10	10	0.35		75	0.000				0.000	0		0	ga	mio	odd	ks	
V183	10	11	11	0.35		75	0.000				0.000	0		0	yega	mio	odd	ks	
V183	11	12	12	0.35		50	0.037				0.037	260		260	boga	mio	arn	gs	clay stringers, mica
V183	12	13	13	0.35		50	0.345				0.345	317		317	boga	mio	arn	gs	HM
V183	13	14	14	0.35		50	0.476				0.476	511		511	boga	mio	arn	gs	HM
V183	14	15	15	0.35		50	1.592	**2.260**	3.073		3.142	2657	**3648**	2657	boga	mio	arn	gs	HM
V183	15	16	16	0.35		25	1.471	**2.320**			2.909	2422	**3451**	2422	boga	mio	arn	gs	HM
V183	16	17	17	0.35		50	0.567				0.567	579		579	boga	mio	arn	gs	HM
V183	17	18	18	0.35		50	0.674				0.674	1155		1155	boga	mio	arn	gs	HM
V183	18	19	19	0.35		50	0.624				0.624	692		692	boga	mio	arn	gs	HM
V183	19	20	20	0.35		50	0.588				0.588	663		663	boga	mio	arn	gs	HM
V183	20	21	21	0.35		25	0.556				0.556	518		518	boga	mio	arn	gs	HM
V183	21	22	22	0.35		25	0.607				0.607	701		701	boga	mio	arn	gs	clay stringers
V183	22	23	23	0.35		25	0.684				0.684	596		596	dboga	mio	arn	gs	clay stringers
V183	23	24	24	0.35		50									dboga	mio	arn	gi	
V183	24	25	25	0.35		50									dboga	mio	arn	gi	
V183	25	26	26	0.35		50									dboga	mio	arn	gi	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V184	0	1	1	0.35		50									yebo	kva		ds	
V184	1	2	2	0.35		100	0.000				0.000	0		0	lga	mio	odd	ks	
V184	2	3	3	0.50	5	100	0.000				0.000	0		0	lga	mio	odd	ks	
V184	3	4	4	0.71	5	100	0.000				0.000	0		0	lga	mio	odd	ks	
V184	4	5	5	0.35	5	100	0.000				0.000	0		0	lga	mio	odd	ks	
V184	5	6	6	0.35		100	0.071				0.071	0		0	lga	mio	odd	ks	HM
V184	6	7	7	0.35		100	0.287				0.287	0		0	lga	mio	odd	ks	HM
V184	7	8	8	0.35		100	0.231				0.231	0		0	lgabo	mio	odd	ks	
V184	8	9	9	0.35		100	0.150				0.150	0		0	lgabo	mio	odd	ks	
V184	9	10	10	0.35		75	0.000				0.000	0		0	lgabo	mio	odd	ks	
V184	10	11	11	0.35		100	0.000				0.000	0		0	lgabo	mio	odd	ks	
V184	11	12	12	0.35		100	0.000				0.000	0		0	lgabo	mio	odd	ks	clay stringers
V184	12	13	13	0.35		50	0.179				0.179	247		247	lgabo	mio	odd	ks	some mica
V184	13	14	14	0.25		100	0.951	**0.655**			1.053	830	**715**	830	lgabo	mio	arn	gs	mica
V184	14	15	15	0.25		75	0.871	**1.212**			1.673	1577	**1682**	1577	lgabo	mio	arn	gs	
V184	15	16	16	0.18		50	0.552				0.552	767		767	ga	mio	arn	gs	HM
V184	16	17	17	0.18		100	0.527				0.527	713		713	ga	mio	arn	gs	
V184	17	18	18	0.18		50	0.980	**1.123**			1.575	1384	**1485**	1384	ga	mio	arn	gs	
V184	18	19	19	0.18		50	0.748	**0.998**			1.435	1260	**1408**	1260	ga	mio	arn	gs	
V184	19	20	20	0.18		100	0.261				0.261	564		564	ga	mio	arn	gs	
V184	20	21	21	0.18		100	0.459				0.459	701		701	ga	mio	arn	gs	HM fine grained
V184	21	22	22	0.18		25	0.381				0.381	477		477	ga	mio	arn	gs	
V184	22	23	23	0.13		50	0.598				0.598	466		466	ga	mio	arn	gs	clay stringers
V184	23	24	24	0.03		50									dgabo	mio	arn	gi	clayey
V184	24	25	25	0.01		25									dgabo	mio	arn	gl	silty
V184	25	26	26	0.00		100									dgabo	mio	arn	gl	silty

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V185	0	1	1	0.35		100									lyebo	kva		ds	
V185	1	2	2	0.35		100									lyebo	kva		ds	HM?
V185	2	3	3	0.35		100	0.917	**1.212**			1.674	147	**765**	147	lga	mio	odd	ks	HM
V185	3	4	4	0.35		100	0.003				0.003	0		0	lga	mio	odd	ks	
V185	4	5	5	0.35		100	0.000				0.000	0		0	lga	mio	odd	ks	
V185	5	6	6	0.71	10	100	0.000				0.000	10		10	lga	mio	odd	ks	
V185	6	7	7	0.50	5	100	0.392				0.392	144		144	lgabo	mio	odd	ks	
V185	7	8	8	0.35		100	0.171				0.171	0		0	lgabo	mio	odd	ks	
V185	8	9	9	0.35		100	0.202				0.202	162		162	lgabo	mio	odd	ks	
V185	9	10	10	0.35		100	0.082				0.082	35		35	lgabo	mio	odd	ks	
V185	10	11	11	0.35		100	0.116				0.116	173		173	lgabo	mio	arn	ks	
V185	11	12	12	0.35		100	0.224				0.224	86		86	ga	mio	arn	ks	clay stringers, lignite
V185	12	13	13	0.35		100	0.418				0.418	167		167	ga	mio	arn	ks	
V185	13	14	14	0.25		100	0.452				0.452	252		252	ga	mio	arn	gs	mica
V185	14	15	15	0.25		100	0.607				0.607	421		421	ga	mio	arn	gs	
V185	15	16	16	0.25		50	0.461				0.461	451		451	ga	mio	arn	gs	
V185	16	17	17	0.25		100	1.177	**0.567**			0.955	999	**971**	999	ga	mio	arn	gs	
V185	17	18	18	0.25		100	1.609				1.609	1689		1689	ga	mio	arn	gs	
V185	18	19	19	0.25		50	0.904	**0.490**			0.869	676	**672**	676	ga	mio	arn	gs	
V185	19	20	20	0.25		100	0.836	**0.887**			1.311	871	**976**	871	ga	mio	arn	gs	
V185	20	21	21	0.18		100	1.043	**0.789**			1.203	1392	**1252**	1392	ga	mio	arn	gs	
V185	21	22	22	0.18		50	0.796	**0.669**			1.069	962	**963**	962	ga	mio	arn	gs	
V185	22	23	23	0.18		75	0.888	**0.757**			1.167	951	**1063**	951	ga	mio	arn	gs	
V185	23	24	24	0.13		75									dgabo	mio	arn	gs	silt and clay stringers
V185	24	25	25	0.01		75									dgabo	mio	arn	gi	clayey sand lamina
V185	25	26	26	0.00		100									dgabo	mio	arn	gi	clayey

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V186	0	1	1	0.35		75									dyebo	mio	kva	fs	
V186	1	2	2	0.25		100									yebo	mio	kva	fs	
V186	2	3	3	0.25		75									yebo	mio	kva	fs	
V186	3	4	4	0.35	20	75									lyebo	mio	kva	ds	gravelly
V186	4	5	5	0.35		100	0.232				0.232	0		0	lyebo	mio	odd	ks	
V186	5	6	6	0.35		75	0.688				0.688	135		135	lga	mio	odd	ks	
V186	6	7	7	0.71	15	75	0.028				0.028	0		0	lga	mio	odd	ks	
V186	7	8	8	0.50		75	0.000				0.000	0		0	lga	mio	odd	ks	
V186	8	9	9	0.35		75	0.431				0.431	203		203	lga	mio	odd	ks	HM
V186	9	10	10	0.35		75	0.115				0.115	118		118	lga	mio	odd	ks	HM
V186	10	11	11	0.35		75	0.290				0.290	131		131	yebo	mio	odd	ks	HM
V186	11	12	12	0.35		75	0.000				0.000	40		40	ga	mio	odd	ks	
V186	12	13	13	0.35		50	0.000				0.000	102		102	ga	mio	odd	ks	
V186	13	14	14	0.35		100	0.026				0.026	3		3	ga	mio	odd	ks	
V186	14	15	15	0.00		50	0.183				0.183	12		12	dgabo	mio	odd	gi	silt+sand+clay+mica
V186	15	16	16	0.25		50	0.270				0.270	83		83	dga	mio	arn	gs	
V186	16	17	17	0.25		50	0.374				0.374	2		2	dga	mio	arn	gs	
V186	17	18	18	0.25		75	0.563				0.563	297		297	dga	mio	arn	gs	
V186	18	19	19	0.25		50	0.580				0.580	337		337	dga	mio	arn	gs	
V186	19	20	20	0.25		50	0.483				0.483	399		399	dga	mio	arn	gs	HM "stauning type"
V186	20	21	21	0.25		50	0.623				0.623	472		472	dga	mio	arn	gs	HM "stauning type"
V186	21	22	22	0.25		50	0.587				0.587	321		321	dga	mio	arn	gs	HM
V186	22	23	23	0.25		50	0.444				0.444	148		148	dga	mio	arn	gs	HM
V186	23	24	24	0.25		50	0.614				0.614	652		652	dga	mio	arn	gs	
V186	24	25	25	0.00		25	0.680				0.680	769		769	dgabo	mio	arn	gi	clayey
V186	25	26	26	0.00		50									dgabo	mio	arn	gl	silty

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V187	0	1	1	0.35		50									bo	kva		ds	
V187	1	2	2	0.35		100									gabo	kva		ds	
V187	2	3	3	0.50	20	100									gabo	kva		ds	
V187	3	4	4	0.71	30	75									dga	kva		ds	clay stringers
V187	4	5	5	0.50		75									dga	kva		du	several clay stringers
V187	5	6	6	0.50		100	0.008				0.008	22		22	lga	mio		ks	
V187	6	7	7	0.50		100	0.000				0.000	0		0	lga	mio		ks	
V187	7	8	8	0.50		100	0.000				0.000	15		15	lga	mio		ks	
V187	8	9	9	0.71	10	100	0.017				0.017	90		90	lga	mio		ks	clay stringers
V187	9	10	10	0.71	10	100	0.000				0.000	21		21	lga	mio		ks	
V187	10	11	11	0.50		75	0.000				0.000	49		49	lga	mio		ks	clay stringers
V187	11	12	12	0.35		100	0.675				0.675	368		368	vga	mio		ks	clay+lignite
V187	12	13	13	0.35		100	0.038				0.038	0		0	lga	mio		ks	
V187	13	14	14	0.35		100	0.096				0.096	0		0	lga	mio		ks	HM
V187	14	15	15	0.35		100	0.000				0.000	34		34	ga	mio		ks	HM
V187	15	16	16	0.35		100	0.702	**0.350**			0.713	657	**816**	657	vbo	mio		ks	concretions
V187	16	17	17	0.35		100	0.040				0.040	173		173	vbo	mio		ks	
V187	17	18	18	0.35		100	0.466				0.466	180		180	lga	mio		ks	HM
V187	18	19	19	0.35		75	0.722	**0.420**			0.791	399	**562**	399	lga	mio		ks	HM
V187	19	20	20	0.35		100	0.149				0.149	31		31	lga	mio		ks	
V187	20	21	21	0.35		100	0.053				0.053	55		55	lga	mio		ks	
V187	21	22	22	0.35		100	0.545				0.545	55		55	lga	mio		ks	
V187	22	23	23	0.35		100	0.097				0.097	28		28	lga	mio		ks	
V187	23	24	24	0.35		100	0.013				0.013	0		0	lga	mio		ks	
V187	24	25	25	0.35		100	0.012				0.012	22		22	lga	mio		ks	
V187	25	26	26	0.00		100									ba	mio		gl	SAND

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V188	0	1	1	0.35		50									dyebo	kva		ds	
V188	1	2	2	0.35	10	75									yebo	kva		ds	stones
V188	2	3	3	0.50	20	75									ga	kva		ds	chert stones
V188	3	4	4	0.50	20	75									lyebo	kva		ds	crystalline
V188	4	5	5	0.35		75	0.000				0.000	1		1	ga	mio		ks	
V188	5	6	6	0.50		75	0.000				0.000	18		18	ga	mio		ks	
V188	6	7	7	0.00		75	0.056				0.056	33		33	vga	mio		gl	sand in sample 30%
V188	7	8	8	0.00		75	0.999	**0.885**			1.309	490	**531**	490	ga	mio		gl	50% sand + lignite
V188	8	9	9	0.35		75	0.334				0.334	113		113	gawi	mio		ks	
V188	9	10	10	0.35		100	0.013				0.013	0		0	ga	mio		ks	lignite
V188	10	11	11	0.35		100	0.000				0.000	45		45	vbo	mio		ks	
V188	11	12	12	0.35		100	1.168	**1.029**			1.469	591	**895**	591	lga	mio		ks	
V188	12	13	13	0.35		100	0.063				0.063	18		18	lga	mio		ks	
V188	13	14	14	0.35		100	0.718	**0.604**			0.996	527	**653**	527	lga	mio		ks	HM
V188	14	15	15	0.35		100	0.476				0.476	346		346	lga	mio		ks	HM
V188	15	16	16	0.35		100	0.066				0.066	81		81	lga	mio		ks	HM
V188	16	17	17	0.35		100	0.142				0.142	26		26	lga	mio		ks	
V188	17	18	18	0.35		100	0.176				0.176	84		84	lga	mio		ks	
V188	18	19	19	0.25		100	0.226				0.226	96		96	lga	mio		ks	
V188	19	20	20	0.35		100	0.185				0.185	102		102	lga	mio		ks	
V188	20	21	21	0.00		100									ba	mio		gl	
V188	21	22	22	0.00		100									ba	mio		gl	
V188	22	23	23	0.00		?									ba	mio		gl	30% sand hi
V188	23	24	24	0.35		?	0.479				0.479	178		178	lga	mio		ks	
V188	24	25	25	0.35		?	0.747	**0.292**			0.648	223	**336**	223	lga	mio		ks	
V188	25	26	26	0.35		?	0.075				0.075	46		46	lga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V189	0	1	1	0.71	10	50									dgabo	kva		ds	
V189	1	2	2	0.71	15	50									lyebo	kva		ds	stones
V189	2	3	3	0.50		75									yebo	kva		ds	mixed sample, stones
V189	3	4	4	0.00		100									ba	mio		gl	
V189	4	5	5	0.00		100									ba	mio		gl	
V189	5	6	6	0.00		100									ba	mio		gl	
V189	6	7	7	0.00		100									ba	mio		gl	
V189	7	8	8	0.00		100									ba	mio		gl	
V189	8	9	9	0.00		100									ba	mio		gl	
V189	9	10	10	0.25		100	0.047				0.047	91		91	lgabo	mio		ks	lignite
V189	10	11	11	0.00		100									gabo	mio		ks	silt + sand stringers
V189	11	12	12	0.35		100	0.000				0.000	0		0	ga	mio		ks	
V189	12	13	13	0.35		100	0.000				0.000	34		34	ga	mio		ks	
V189	13	14	14	0.35		100	0.000				0.000	0		0	ga	mio		ks	
V189	14	15	15	0.35		100	0.000				0.000	0		0	ga	mio		ks	
V189	15	16	16	0.35		75	0.000				0.000	0		0	ga	mio		ks	
V189	16	17	17	0.35		100	0.026				0.026	7		7	ga	mio		ks	
V189	17	18	18	0.35		100	0.000				0.000	0		0	ga	mio		ks	
V189	18	19	19	0.35		100	0.000				0.000	32		32	ga	mio		ks	
V189	19	20	20	0.50		100	0.000				0.000	0		0	ga	mio		ks	
V189	20	21	21	0.35		100	0.038				0.038	252		252	vga	mio		ks	clay + lignite
V189	21	22	22	0.35		75	0.000				0.000	11		11	vga	mio		ks	clay + lignite
V189	22	23	23	0.35		100	0.000				0.000	0		0	wiga	mio		ks	
V189	23	24	24	0.35		100	0.000				0.000	5		5	wiga	mio		ks	
V189	24	25	25	0.35		75	0.202				0.202	213		213	dga	mio		ks	
V189	25	26	26	0.35		100	0.551				0.551	343		343	ga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V190	0	1	1	0.35	10	100									rebo	kva		ds	
V190	1	2	2	0.35	20	100									dyebo	kva		ds	
V190	2	3	3	0.35	30	100									yebo	kva		ds	
V190	3	4	4	0.00		50									yebo	mio		gl	
V190	4	5	5	0.00		100									ba	mio		gl	clay stringers
V190	5	6	6	0.35		100	0.020				0.020	59		59	vga	mio		ks	clay stringers
V190	6	7	7	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V190	7	8	8	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V190	8	9	9	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V190	9	10	10	0.50		100	0.000				0.000	0		0	yebo	mio		ks	
V190	10	11	11	0.50		100	0.000				0.000	0		0	yebo	mio		ks	
V190	11	12	12	0.50		100	0.000				0.000	0		0	lyebo	mio		ks	
V190	12	13	13	0.50		100	0.000				0.000	8		8	lyebo	mio		ks	
V190	13	14	14	0.50		100	0.000				0.000	74		74	lyebo	mio		ks	
V190	14	15	15	0.50		100	0.000				0.000	11		11	lyebo	mio		ks	
V190	15	16	16	0.71	10	100	0.000				0.000	0		0	lyebo	mio		ks	
V190	16	17	17	0.00		100	0.246				0.246	429		429	dgabo	mio		gl	sand layers
V190	17	18	18	0.25		50	0.000				0.000	10		10	vga	mio		ks	lignite + clay
V190	18	19	19	0.35		75	0.000				0.000	21		21	lga	mio		ks	
V190	19	20	20	0.35		100	0.190				0.190	145		145	lga	mio		ks	
V190	20	21	21	0.35		50	0.309				0.309	139		139	dgabo	mio		ks	HM
V190	21	22	22	0.35		75	0.000				0.000	0		0	dgabo	mio		ks	HM
V190	22	23	23	0.35		75	0.040				0.040	52		52	dga	mio		ks	HM
V190	23	24	24	0.35		75	0.000				0.000	0		0	yebo	mio		ks	
V190	24	25	25	0.35		100	0.000				0.000	28		28	yebo	mio		ks	
V190	25	26	26	0.35		75	0.000				0.000	0		0	yebo	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V191	0	1	1	0.35		75									rebo	kva		ds	
V191	1	2	2	0.35		100									yebo	kva		ds	
V191	2	3	3	0.35		100									lyebo	kva		ds	
V191	3	4	4	0.35	20	100									lyebo	kva		ds	
V191	4	5	5	0.00		100									dga	kva		dl	sand layers
V191	5	6	6	0.35		100	0.000				0.000	130		130	lga	mio		ks	clay
V191	6	7	7	0.71		100	0.035				0.035	161		161	lga	mio		ks	
V191	7	8	8	0.25		100	0.041				0.041	304		304	lga	mio		ks	mica
V191	8	9	9	0.25		100	0.030				0.030	160		160	lga	mio		ks	mica
V191	9	10	10	0.35		100	0.158				0.158	328		328	lga	mio		ks	
V191	10	11	11	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V191	11	12	12	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V191	12	13	13	0.50		100	0.000				0.000	0		0	lga	mio		ks	
V191	13	14	14	0.00		100									vga	mio		gl	sand + lignite
V191	14	15	15	0.00		100									ba	mio		gl	clay sand lignite
V191	15	16	16	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V191	16	17	17	0.35		100	0.000				0.000	18		18	vga	mio		ks	lignite
V191	17	18	18	0.35		100	0.000				0.000	0		0	ga	mio		ks	
V191	18	19	19	0.35		100	0.459				0.459	358		358	bo	mio		ks	
V191	19	20	20	0.35		100	0.003				0.003	33		33	lboga	mio		ks	
V191	20	21	21	0.35		100	0.463				0.463	56		56	lga	mio		ks	(HM)
V191	21	22	22	0.35		100	0.580				0.580	543		543	lga	mio		ks	(HM)
V191	22	23	23	0.35		100	0.000				0.000	44		44	lga	mio		ks	
V191	23	24	24	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V191	24	25	25	0.35		100	0.000				0.000	0		0	lga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V192	0	1	1	0.35		50									dyebo	mio		fs	
V192	1	2	2	0.35		75									dyebo	mio		ds	
V192	2	3	3	0.35	10	75									ga	mio		ds	
V192	3	4	4	0.35	30	75									ga	mio		ds	pebbles dg
V192	4	5	5	0.35	30	75									ga	mio		ds	dg
V192	5	6	6	0.35		75	0.000				0.000	70		70	lga	mio		ks	
V192	6	7	7	0.35		75	0.019				0.019	100		100	lga	mio		ks	
V192	7	8	8	0.35		100	0.030				0.030	108		108	lga	mio		ks	
V192	8	9	9	0.35		100									lga	mio		gl	sand 20% lignite
V192	9	10	10	0.35		75									vga	mio		gl	sand 10% lignite
V192	10	11	11	0.35		100									vga	mio		gl	sand 10% lignite
V192	11	12	12	0.35		100									vga	mio		gl	
V192	12	13	13	0.35		75	0.000				0.000	41		41	gawi	mio		ks	
V192	13	14	14	0.35		50	0.000				0.000	1		1	lga	mio		ks	
V192	14	15	15	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V192	15	16	16	0.35		100	0.267				0.267	360		360	bo	mio		ks	
V192	16	17	17	0.35		75	0.143				0.143	48		48	lga	mio		ks	
V192	17	18	18	0.35		100	0.701	**0.588**			0.979	97	**325**	97	lga	mio		ks	HM
V192	18	19	19	0.35		75	0.158				0.158	13		13	lga	mio		ks	HM
V192	19	20	20	0.35		100	0.000				0.000	23		23	gawi	mio		ks	
V192	20	21	21	0.35		100	0.000				0.000	0		0	gawi	mio		ks	
V192	21	22	22	0.35		100	0.000				0.000	0		0	gawi	mio		ks	
V192	22	23	23	0.35		100	0.000				0.000	10		10	gawi	mio		ks	
V192	23	24	24	0.35		100									ba	mio		gl	
V192	24	25	25	0.35		100									ba	mio		gl	
V192	25	26	26	0.35		100									vga	mio		gl	sand and clay

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V193	0	1	1	0.35		50									dyebo	kva		ds	possibly eolian
V193	1	2	2	0.35	5	75									lyebo	kva		ds	
V193	2	3	3	0.35	10	75									lgabo	kva		ds	
V193	3	4	4	0.35	10	50									ba	kva		ds	
V193	4	5	5	0.00		100									ba	mio		gl	some kva in sample
V193	5	6	6	0.00		100									lga	mio		gl	lignite
V193	6	7	7	0.35	5	100	0.079				0.079	7		7	lga	mio		ks	lignite + clay stringers
V193	7	8	8	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V193	8	9	9	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V193	9	10	10	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V193	10	11	11	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V193	11	12	12	0.50	5	100	0.000				0.000	0		0	lga	mio		ks	
V193	12	13	13	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V193	13	14	14	0.35		100	0.009				0.009	0		0	lga	mio		ks	
V193	14	15	15	0.35		100	0.000				0.000	1		1	lga	mio		ks	
V193	15	16	16	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V193	16	17	17	0.01		100									vga	mio		gi	with sand stringers + lignite
V193	17	18	18	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V193	18	19	19	0.35		100	0.000				0.000	0		0	vga	mio		ks	lignite 40% vol
V193	19	20	20	0.25		100	0.026				0.026	0		0	gabo	mio		ks	
V193	20	21	21	0.35		100	0.199				0.199	78		78	lga	mio		ks	
V193	21	22	22	0.35		100	0.000				0.000	0		0	lga	mio		ks	lignite 5% concretions
V193	22	23	23	0.35		100	0.111				0.111	3		3	lga	mio		ks	
V193	23	24	24	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V193	24	25	25	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V193	25	26	26	0.35		100	0.000				0.000	0		0	lga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V194	0	1	1	0.35		75									rebo	kva		ds	
V194	1	2	2	0.35		75									rebo	kva		ds	
V194	2	3	3	0.35		100									rebo	kva		ds	
V194	3	4	4	0.35		50									dgabo	kva		ds	gravelly
V194	4	5	5	0.50	15	100									ba	mio		gl	
V194	5	6	6	0.35		100	0.257				0.257	81		81	lga	mio		ks	
V194	6	7	7	0.35		100	0.007				0.007	0		0	lga	mio		ks	
V194	7	8	8	0.35		100	0.299				0.299	119		119	lga	mio		ks	
V194	8	9	9	0.35		100	0.312				0.312	255		255	lga	mio		ks	
V194	9	10	10	0.25		50	0.218				0.218	130		130	lga	mio		ks	
V194	10	11	11	0.35		100	0.071				0.071	0		0	lga	mio		ks	
V194	11	12	12	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V194	12	13	13	0.35		50	0.130				0.130	163		163	vga	mio		ks	lignite
V194	13	14	14	0.35		50	0.091				0.091	338		338	vga	mio		ks	lignite +clay
V194	14	15	15	0.35		75	0.103				0.103	47		47	vga	mio		ks	lignite +clay
V194	15	16	16	0.35		100	0.038				0.038	0		0	ga	mio		ks	
V194	16	17	17	0.35		100	0.000				0.000	0		0	ga	mio		ks	
V194	17	18	18	0.35		100	0.000				0.000	19		19	ga	mio		ks	HM
V194	18	19	19	0.35		75	2.270	**2.981**	3.977		3.991	1579	**2741**	1579	lgabo	mio		ks	HM
V194	19	20	20	0.35		75	2.266				2.266	291		291	lgabo	mio		ks	HM
V194	20	21	21	0.35		75	0.712				0.712	83		83	lgabo	mio		ks	
V194	21	22	22	0.35		75	0.558				0.558	111		111	lyebo	mio		ks	HM
V194	22	23	23	0.35		75	0.337				0.337	0		0	lga	mio		ks	
V194	23	24	24	0.35		100	0.024				0.024	0		0	lga	mio		ks	
V194	24	25	25	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V194	25	26	26	0.35		100	0.000				0.000	0		0	lga	mio		ks	HM

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V195	0	1	1	1.00	10	10									dyebo	kva			
V195	1	2	2	1.00		0													no sample
V195	2	3	3	1.00		100	0.400				0.400	304		304	lga	mio	odd	ks	HM
V195	3	4	4	1.00		25	0.000				0.000	64		64	lga	mio	odd	ks	
V195	4	5	5	1.00		100	0.000				0.000	50		50	lga	mio	odd	ks	
V195	5	6	6	1.00		100	0.000				0.000	8		8	lyebo	mio	odd	ks	
V195	6	7	7	1.00	10	100	0.000				0.000	0		0	lyebo	mio	odd	ks	
V195	7	8	8	1.00	10	100	0.000				0.000	20		20	lyebo	mio	odd	ks	
V195	8	9	9	1.00		100	0.042				0.042	95		95	lga	mio	odd	ks	
V195	9	10	10	1.00		100	0.178				0.178	148		148	lga	mio	odd	ks	
V195	10	11	11	1.00		100	0.318				0.318	140		140	lgabo	mio	odd	ks	
V195	11	12	12	1.00		100	0.231				0.231	271		271	lgabo	mio	odd	ks	clay stringers
V195	12	13	13	1.00		100	0.077				0.077	67		67	lgabo	mio	odd	ks	clay stringers
V195	13	14	14	1.00		100	0.000				0.000	74		74	lgabo	mio	odd	ks	clay stringers
V195	14	15	15	1.00		100	0.013				0.013	149		149	lyebo	mio	odd	ks	clay stringers
V195	15	16	16	1.00		50	0.839	**0.645**			1.042	861	**884**	861	dga	mio	arn	gs	clay stringers
V195	16	17	17	1.00		50	0.179				0.179	356		356	dga	mio	arn	gs	clay stringers
V195	17	18	18	1.00		50	0.233				0.233	404		404	dga	mio	arn	gs	clay stringers
V195	18	19	19	1.00		50	0.182				0.182	389		389	dga	mio	arn	gs	clay stringers
V195	19	20	20	1.00		50	0.382				0.382	668		668	dga	mio	arn	gs	clay stringers
V195	20	21	21	1.00		25	0.470				0.470	653		653	dga	mio	arn	gs	clay stringers
V195	21	22	22	1.00		25	0.413				0.413	767		767	dga	mio	arn	gs	clay stringers
V195	22	23	23	1.00		50	0.309				0.309	583		583	dga	mio	arn	gs	clay stringers
V195	23	24	24	1.00		50	0.458				0.458	683		683	dga	mio	arn	gs	clay stringers
V195	24	25	25	1.00		50	0.303				0.303	551		551	dga	mio	arn	gs	clay stringers
V195	25	26	26	1.00		100									vga	mio	arn	gl	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V196	0	1	1	0.50		100									yega	kva		fs	
V196	1	2	2	0.25		100									lyebo	kva		fs	
V196	2	3	3	0.25		100									lyebo	kva		fs	
V196	3	4	4	0.35		100									ga	mio		ks	HM
V196	4	5	5	0.35		100	0.000				0.000	14		14	ga	mio		ks	
V196	5	6	6	0.50		100	0.000				0.000	0		0	lyebo	mio		ks	
V196	6	7	7	0.71		100	0.000				0.000	0		0	lyebo	mio		ks	
V196	7	8	8	0.50		100	0.000				0.000	39		39	lga	mio		ks	
V196	8	9	9	0.50		100	0.015				0.015	48		48	lga	mio		ks	
V196	9	10	10	0.35		100	0.000				0.000	12		12	lga	mio		ks	
V196	10	11	11	0.35		100	0.019				0.019	111		111	lga	mio		ks	
V196	11	12	12	0.35		100	0.101				0.101	165		165	lyebo	mio		ks	
V196	12	13	13	0.35		75	0.008				0.008	105		105	lyebo	mio		ks	clay stringers
V196	13	14	14	0.35		100	0.223				0.223	297		297	lyebo	mio		ks	clay stringers
V196	14	15	15	0.35		100	0.000				0.000	47		47	lyebo	mio		ks	
V196	15	16	16	0.35		100	0.000				0.000	33		33	lyebo	mio		ks	
V196	16	17	17	0.25		100	0.048				0.048	148		148	lga	mio		gs	
V196	17	18	18	0.25		75	0.335				0.335	421		421	ga	mio		gs	
V196	18	19	19	0.25		50	0.213				0.213	342		342	dga	mio		gs	
V196	19	20	20	0.13		50	0.499				0.499	726		726	dga	mio		gs	
V196	20	21	21	0.13		50	0.341				0.341	584		584	dga	mio		gs	
V196	21	22	22	0.13		50	0.238				0.238	536		536	dga	mio		gs	
V196	22	23	23	0.13		50	0.266				0.266	503		503	dga	mio		gs	
V196	23	24	24	0.13		50	0.423				0.423	917		917	dga	mio		gs	clay stringers
V196	24	25	25	0.13		50	0.484				0.484	923		923	dga	mio		gs	clay stringers
V196	25	26	26	0.13		50	0.521				0.521	892		892	dga	mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V197	0	1	1	0.35		100									yebo	kva		ds	
V197	1	2	2	0.35		25									yebo	kva		ds	clay
V197	2	3	3	0.35		75	0.481				0.481	1357		1357	ga	mio	odd	ks	clay stringers
V197	3	4	4	0.35		100	3.819	**3.782**	4.706		4.675	1322	**2027**	1322	gabo	mio	odd	ks	HM
V197	4	5	5	0.35		100	0.701	**0.603**	0.994		1.191	350	**627**	350	lyebo	mio	odd	ks	HM
V197	5	6	6	0.35		100	0.016				0.016	3		3	lgabo	mio	odd	ks	HM
V197	6	7	7	0.35		100	0.224				0.224	85		85	lga	mio	odd	ks	
V197	7	8	8	0.50		100	0.000				0.000	0		0	lga	mio	odd	ks	
V197	8	9	9	0.50		100	0.012				0.012	0		0	lga	mio	odd	ks	
V197	9	10	10	0.35		100	0.041				0.041	74		74	lga	mio	odd	ks	
V197	10	11	11	0.35		100	0.111				0.111	132		132	lga	mio	odd	ks	
V197	11	12	12	0.35		100	0.154				0.154	166		166	lga	mio	odd	ks	
V197	12	13	13	0.35		100	0.073				0.073	110		110	lga	mio	odd	ks	
V197	13	14	14	0.35		100	0.142				0.142	172		172	lga	mio	odd	ks	
V197	14	15	15	0.00	40	100									dga	mio	odd	gl	40% quartz gravel rest is clay-silt
V197	15	16	16	0.18		50	0.338				0.338	352		352	dga	mio	arn	gs	
V197	16	17	17	0.18		50	0.208				0.208	256		256	dga	mio	arn	gs	
V197	17	18	18	0.18		50	0.467				0.467	773		773	dga	mio	arn	gs	
V197	18	19	19	0.18		50	0.330				0.330	591		591	dga	mio	arn	gs	
V197	19	20	20	0.18		50	0.888	**0.862**	1.330		1.507	1253	**1311**	1253	dga	mio	arn	gs	
V197	20	21	21	0.18		25	0.609				0.609	1143		1143	dga	mio	arn	gs	
V197	21	22	22	0.18		50	0.526				0.526	633		633	dga	mio	arn	gs	
V197	22	23	23	0.18		25	0.687				0.687	880		880	dga	mio	arn	gs	
V197	23	24	24	0.18		25	0.252				0.252	408		408	dga	mio	arn	gs	
V197	24	25	25	0.18		25	0.550				0.550	899		899	dga	mio	arn	gs	
V197	25	26	26	0.18		50	0.226				0.226	645		645	dga	mio	arn	gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V198	0	1	1	0.35		75									dyebo	kva		ds	
V198	1	2	2	0.35		50									lyebo	kva		ds	
V198	2	3	3	0.35		75									dyebo	kva		ds	
V198	3	4	4	0.35		100									yebo	kva		ds	
V198	4	5	5	0.71	15	100									dgabo	kva		dl	could be miocene
V198	5	6	6	0.71	15	100									gabo	kva		ks	
V198	6	7	7	0.00		100									lgabo	kva		ks	
V198	7	8	8	0.35		100	0.181				0.181	68		68	lga	mio		ks	
V198	8	9	9	0.35		100	0.478				0.478	31		31	lgabo	mio		ks	(HM)
V198	9	10	10	0.35		100	0.000				0.000	0		0	lgabo	mio		ks	(HM)
V198	10	11	11	0.35		100	0.000				0.000	12		12	lgabo	mio		ks	(HM)
V198	11	12	12	0.50	5	100	0.000				0.000	37		37	lgabo	mio		ks	
V198	12	13	13	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V198	13	14	14	0.35		100	0.033				0.033	16		16	lga	mio		ks	
V198	14	15	15	0.35		100	0.157				0.157	169		169	lga	mio		ks	
V198	15	16	16	0.35		75	0.068				0.068	109		109	lga	mio		ks	
V198	16	17	17	0.35		75	0.111				0.111	111		111	lga	mio		ks	
V198	17	18	18	0.35		75	0.000				0.000	57		57	lyebo	mio		ks	
V198	18	19	19	0.35		75	0.000				0.000	75		75	lga	mio		ks	
V198	19	20	20	0.35		75	0.002				0.002	3		3	lga	mio		ks	
V198	20	21	21	0.35		75	0.519				0.519	602		602	lga	mio		ks	clay stringers gray
V198	21	22	22	0.50		50	0.226				0.226	497		497	lyebo	mio		ks	mica traces
V198	22	23	23	0.25		50	0.103				0.103	317		317	lga	mio		gs	doesn't look like "ordinary" gs (too light)
V198	23	24	24	0.25		50	0.123				0.123	278		278	lga	mio		gs	doesn't look like "ordinary" gs (too light)
V198	24	25	25	0.25		50	0.399				0.399	609		609	lga	mio		gs	doesn't look like "ordinary" gs (too light)
V198	25	26	26	0.25		50	0.336				0.336	743		743	lga	mio		gs	doesn't look like "ordinary" gs (too light)

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V199	0	1	1	0.50	25										yebo	kva		ds	
V199	1	2	2	0.50	50										yebo	kva		ds	
V199	2	3	3	0.50	5										yebo	kva		ds	
V199	3	4	4	0.02	5										vbo	kva		dl	
V199	4	5	5	0.02	10										dga	kva		dl	
V199	5	6	6	0.35			0.109				0.109	57		57	ga	mio		ks	
V199	6	7	7	0.50			0.017				0.017	0		0	lga	mio		ks	
V199	7	8	8	0.50			0.105				0.105	0		0	lga	mio		ks	
V199	8	9	9	0.50			0.047				0.047	4		4	lga	mio		ks	
V199	9	10	10	0.35			0.068				0.068	141		141	lga	mio		ks	blueish clay stringers
V199	10	11	11	0.25			0.048				0.048	60		60	lga	mio		ks	
V199	11	12	12	0.50			0.043				0.043	51		51	lga	mio		ks	
V199	12	13	13	0.35			0.005				0.005	0		0	lga	mio		ks	
V199	13	14	14	0.50			0.210				0.210	193		193	ga	mio		ks	lignite
V199	14	15	15	0.25			0.000				0.000	4		4	lga	mio		ks	
V199	15	16	16	0.25			0.000				0.000	2		2	lga	mio		ks	
V199	16	17	17	0.25			0.024				0.024	0		0	lga	mio		ks	
V199	17	18	18	0.25			0.084				0.084	67		67	ga	mio		ks	
V199	18	19	19	0.35			0.816	**0.349**			0.712	1150	**631**	1150	dga	mio		ks	lignite
V199	19	20	20	0.35			0.111				0.111	105		105	dga	mio		ks	
V199	20	21	21	0.35			0.000				0.000	0		0	lga	mio		ks	
V199	21	22	22	0.35			0.000				0.000	0		0	lga	mio		ks	
V199	22	23	23	0.35			0.000				0.000	0		0	lga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V200	0	1	1	0.50											yebo	kva		ds	
V200	1	2	2	0.50											yebo	kva		ds	
V200	2	3	3	0.35											yebo	kva		ds	
V200	3	4	4	0.35											lyebo	kva		ds	
V200	4	5	5	0.35											lyebo	kva		ds	
V200	5	6	6	0.35											lyebo	kva		ds	
V200	6	7	7	0.03											dyebo	kva		dl	
V200	7	8	8	4.00											lyebo	kva		dg	
V200	8	9	9	0.35											lyebo	kva		ds	
V200	9	10	10	0.35											lyebo	kva		ds	
V200	10	11	11	0.35											lyebo	kva		ds	
V200	11	12	12	0.35											lyebo	kva		ds	
V200	12	13	13	0.35											lyebo	kva		ds	
V200	13	14	14	0.35											yebo	kva		ds	
V200	14	15	15	0.35											lyebo	kva		ds	lignite
V200	15	16	16	0.35											lyebo	kva		ds	
V200	16	17	17	0.35											lyebo	kva		ds	
V200	17	18	18	0.35											lyebo	kva		ds	
V200	18	19	19	0.00											gabo	kva		dl	
V200	19	20	20	0.06											yebo	kva		dl	
V200	20	21	21	0.02											gabo	kva		dl	
V200	21	22	22	0.00											gabo	kva		dl	
V200	22	23	23	0.00											gabo	kva		dl	
V200	23	24	24	0.00											gabo	kva		dl	
V200	24	25	25	0.03											gabo	kva		dl	
V200	25	26	26	0.13											yega	kva		ds	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V201	0	1	1	0.35		100									yega	kva		ds	
V201	1	2	2	0.35		100									yebo	kva		ds	
V201	2	3	3	0.35		100									yega	kva		ds	
V201	3	4	4	0.35		100									ga	kva		ds	
V201	4	5	5	0.35		100									ga	kva		ds	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V202	0	1	1	0.35											yebo	kva		ds	
V202	1	2	2	0.35	5										lyebo	kva		ds	
V202	2	3	3	0.35	30										lyebo	kva		ds	
V202	3	4	4	0.35	30										lyebo	kva		ds	
V202	4	5	5	0.35	30										lyebo	kva		ds	
V202	5	6	6	0.35			0.653				0.653	0		0	lga	mio		ks	(HM, reworked ore?)
V202	6	7	7	0.35			2.684	**1.213**	1.974		2.111	651	**877**	651	ga	mio		ks	HM
V202	7	8	8	0.25			0.255				0.255	7		7	lga	mio		ks	HM
V202	8	9	9	0.35			1.424	**0.636**	1.356		1.531	251	**509**	251	lboga	mio		ks	lignite
V202	9	10	10	0.35			0.000				0.000	0		0	boga	mio		ks	HM
V202	10	11	11	0.25			0.000				0.000	0		0	wiga	mio		ks	
V202	11	12	12	0.35			0.000				0.000	0		0	wiga	mio		ks	
V202	12	13	13	0.35			0.000				0.000	0		0	wiga	mio		ks	
V202	13	14	14	0.35			0.000				0.000	0		0	wiga	mio		ks	
V202	14	15	15	0.35			0.531				0.531	240		240	lga	mio		ks	lignite
V202	15	16	16	0.00											ba	mio		gl	
V202	16	17	17	0.35			0.051				0.051	31		31	dboga	mio		ks	clay stringers + lignite
V202	17	18	18	0.35			0.000				0.000	50		50	lboga	mio		ks	lignite
V202	18	19	19	0.35			0.443				0.443	49		49	boga	mio		ks	
V202	19	20	20	0.35			0.021				0.021	0		0	ga	mio		ks	
V202	20	21	21	0.35			4.478	**3.743**	5.334		5.264	1432	**2112**	1432	ga	mio		ks	HM
V202	21	22	22	0.35			2.057	**1.415**	1.690		1.845	614	**1372**	614	ga	mio		ks	HM
V202	22	23	23	0.50			0.053				0.053	0		0	ga	mio		ks	
V202	23	24	24	0.50			0.230				0.230	66		66	ga	mio		ks	
V202	24	25	25	0.50			1.241	**0.079**	0.250		0.493	133	**254**	133	ga	mio		ks	
V202	25	26	26	0.35			1.312	**0.165**	0.418		0.651	103	**236**	103	ga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V203	0	1	1	0.35		75									rebo	kva		ds	
V203	1	2	2	0.35		75									rebo	kva		ds	
V203	2	3	3	0.50	20	75									lga	kva		ds	redeposited miocene
V203	3	4	4	0.35		75	0.000				0.000	0		0	lga	mio		ks	
V203	4	5	5	0.50		75	0.000				0.000	0		0	lga	mio		ks	
V203	5	6	6	0.25		100	0.000				0.000	0		0	wiga	mio		ks	eolian?
V203	6	7	7	0.25		75	0.000				0.000	0		0	wiga	mio		ks	eolian?
V203	7	8	8	0.25		100	0.254				0.254	69		69	lga	mio		ks	eolian?
V203	8	9	9	0.35		100	0.072				0.072	79		79	ga	mio		ks	lignite
V203	9	10	10	0.35		100	0.039				0.039	23		23	ga	mio		ks	
V203	10	11	11	0.35		100	0.000				0.000	26		26	ga	mio		ks	
V203	11	12	12	0.35		100	0.043				0.043	0		0	lga	mio		ks	
V203	12	13	13	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V203	13	14	14	0.35		100	0.000				0.000	2		2	lga	mio		ks	
V203	14	15	15	0.00		100									ba	mio		ks	
V203	15	16	16	0.35		100	0.037				0.037	29		29	boga	mio		ks	clay stringers
V203	16	17	17	0.35		100	0.137				0.137	40		40	lga	mio		ks	
V203	17	18	18	0.35		100	0.476				0.476	91		91	ga	mio		ks	HM
V203	18	19	19	0.35		75	0.321				0.321	50		50	ga	mio		ks	
V203	19	20	20	0.35		100	2.600	**1.538**	1.937		2.076	599	**649**	599	ga	mio		ks	HM
V203	20	21	21	0.35		100	0.148				0.148	106		106	ga	mio		ks	
V203	21	22	22	0.35		100	0.279				0.279	66		66	lga	mio		ks	
V203	22	23	23	0.50		100	0.000				0.000	9		9	lga	mio		ks	
V203	23	24	24	0.50		100	0.055				0.055	28		28	lga	mio		ks	
V203	24	25	25	0.35		100	0.250				0.250	110		110	lga	mio		ks	
V203	25	26	26	0.50		100	0.176				0.176	56		56	lga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V204	0	1	1	0.35		50									råbo	kva		ds	
V204	1	2	2	0.35	10	75									gabo	kva		ds	
V204	2	3	3	0.50	30	100									yega	kva		ds	
V204	3	4	4	0.00	5	75									lgabo	kva		dl	
V204	4	5	5	0.35		100	0.100				0.100	35		35	lga	mio		ks	blueish clay stringers. Few micas
V204	5	6	6	0.35		100	0.017				0.017	18		18	lga	mio		ks	few micas
V204	6	7	7	0.50		100	0.030				0.030	99		99	lga	mio		ks	HM
V204	7	8	8	0.50		100	0.000				0.000	0		0	lga	mio		ks	
V204	8	9	9	0.50		100	0.000				0.000	0		0	lga	mio		ks	
V204	9	10	10	0.50		75	0.000				0.000	0		0	lga	mio		ks	
V204	10	11	11	0.71		100	0.000				0.000	32		32	lga	mio		ks	
V204	11	12	12	0.50		100	0.000				0.000	0		0	lga	mio		ks	clay stringers
V204	12	13	13	0.00		75									vga	mio		gl	lignite + sand
V204	13	14	14	0.35		100	0.145				0.145	43		43	lga	mio		ks	HM
V204	14	15	15	0.35		100	0.056				0.056	0		0	lga	mio		ks	HM
V204	15	16	16	0.35		100	0.000				0.000	50		50	lga	mio		ks	HM
V204	16	17	17	0.35		100	0.208				0.208	174		174	ga	mio		ks	HM
V204	17	18	18	0.35		100	0.000				0.000	21		21	ga	mio		ks	
V204	18	19	19	0.35		100	0.000				0.000	38		38	pye	mio		ks	
V204	19	20	20	0.35		100	0.000				0.000	2		2	pye	mio		ks	
V204	20	21	21	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V204	21	22	22	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V204	22	23	23	0.50		100	0.013				0.013	5		5	ga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V205	0	1	1	0.35		50									drebo	kva		ds	
V205	1	2	2	0.35	10	75									dyebo	kva		ds	
V205	2	3	3	0.35	10	75									dyebo	kva		ds	
V205	3	4	4	0.00		75									ba	mio		gl	
V205	4	5	5	0.00		75									ba	mio		gl	
V205	5	6	6	0.50		75									ba	mio		gl	
V205	6	7	7	0.50		100	0.000				0.000	0		0	ga	mio		ks	clay stringers
V205	7	8	8	0.50		100	0.000				0.000	0		0	ga	mio		ks	
V205	8	9	9	0.35		100	0.000				0.000	0		0	ga	mio		ks	clay stringers
V205	9	10	10	0.35		100	0.000				0.000	0		0	yega	mio		ks	
V205	10	11	11	0.35		100	0.003				0.003	22		22	pye	mio		ks	
V205	11	12	12	0.35		100	0.000				0.000	6		6	ga	mio		ks	
V205	12	13	13	0.35		100	0.003				0.003	0		0	ga	mio		ks	micas
V205	13	14	14	0.35		100	0.013				0.013	5		5	ga	mio		ks	micas
V205	14	15	15	0.50		100	0.000				0.000	58		58	ga	mio		ks	
V205	15	16	16	0.35		75	0.004				0.004	52		52	ga	mio		ks	
V205	16	17	17	0.02		75									boba	mio		gl	
V205	17	18	18	0.25		100	0.000				0.000	60		60	ga	mio		ks	
V205	18	19	19	0.25		75	0.000				0.000	24		24	wiga	mio		ks	eolian?
V205	19	20	20	0.18		100	0.000				0.000	0		0	wiga	mio		ks	eolian?
V205	20	21	21	0.35		100	0.000				0.000	9		9	ga	mio		ks	lignite
V205	21	22	22	0.35		100	0.274				0.274	11		11	ga	mio		ks	lignite, HM
V205	22	23	23	0.35		100	0.179				0.179	89		89	dga	mio		ks	lignite
V205	23	24	24	0.35		100	0.000				0.000	0		0	boga	mio		ks	
V205	24	25	25	0.35		100	0.000				0.000	0		0	ga	mio		ks	
V205	25	26	26	0.35		100	0.000				0.000	0		0	ga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V206	0	1	1	0.35		25									yebo	kva		ds	
V206	1	2	2	0.35	5	75									yebo	kva		ds	
V206	2	3	3	0.35	20	100									lyebo	kva		ds	
V206	3	4	4	0.35	20	75									lga	kva		ds	
V206	4	5	5	0.50		100	0.169				0.169	0		0	lga	mio		ks	
V206	5	6	6	0.35		100	0.028				0.028	0		0	lga	mio		ks	
V206	6	7	7	0.35		100	0.022				0.022	13		13	lga	mio		ks	
V206	7	8	8	0.35		100	0.160				0.160	67		67	lga	mio		ks	
V206	8	9	9	0.35		100	0.000				0.000	31		31	lga	mio		ks	
V206	9	10	10	0.02	5	75	0.258				0.258	235		235	vga	mio		gs	with quartz gravel
V206	10	11	11	0.25		100	0.000				0.000	30		30	lga	mio		ks	eolian?, lignite
V206	11	12	12	0.25		100	0.112				0.112	57		57	lga	mio		ks	eolian?
V206	12	13	13	0.25		50	0.215				0.215	72		72	lga	mio		ks	eolian?
V206	13	14	14	0.25		75	0.991				0.991	174		174	boga	mio		ks	eolian?, lignite
V206	14	15	15	0.35		75	1.581				1.581	881		881	boga	mio		ks	lignite
V206	15	16	16	0.35		100	0.447				0.447	71		71	boga	mio		ks	
V206	16	17	17	0.35		100	0.183				0.183	44		44	lga	mio		ks	
V206	17	18	18	0.35		100	0.000				0.000	17		17	lga	mio		ks	
V206	18	19	19	0.35		100	0.015				0.015	10		10	lga	mio		ks	
V206	19	20	20	0.35		100	0.030				0.030	20		20	ga	mio		ks	
V206	20	21	21	0.35		100	0.057				0.057	0		0	ga	mio		ks	
V206	21	22	22	0.35		75	0.610				0.610	5		5	ba	mio		ks	
V206	22	23	23	0.00		75									lga	mio		gl	
V206	23	24	24	0.35		75	0.013				0.013	0		0	lga	mio		ks	clay stringers
V206	24	25	25	0.35		75	0.000				0.000	0		0	lga	mio		ks	lignite
V206	25	26	26	0.50		75	1.761				1.761	147		147	lga	mio		ks	lignite

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V207	0	1	1	0.50	30.00	50									drebo	kva		ds	
V207	1	2	2	0.50	30.00	100									rebo	kva		ds	
V207	2	3	3	0.71	30.00	100									yebo	kva		ds	
V207	3	4	4	0.00		75									ba	mio		gl	
V207	4	5	5	0.50		75									ba	mio		gl	
V207	5	6	6	0.00		75									ba	mio		gl	
V207	6	7	7	0.35		100	0.029				0.029	69		69	ga	mio		ks	clay stringers
V207	7	8	8	0.35		100	0.599				0.599	202		202	lga	mio		ks	clay stringers
V207	8	9	9	0.35		100	0.035				0.035	2		2	lga	mio		ks	clay stringers
V207	9	10	10	0.35		100	0.000				0.000	10		10	lga	mio		ks	
V207	10	11	11	0.35		100	0.000				0.000	36		36	lga	mio		ks	
V207	11	12	12	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V207	12	13	13	0.35		100	0.000				0.000	52		52	lga	mio		ks	
V207	13	14	14	0.35		100	0.000				0.000	3		3	lga	mio		ks	
V207	14	15	15	0.50		100	0.000				0.000	13		13	lga	mio		ks	
V207	15	16	16	0.35		100	0.000				0.000	0		0	lga	mio		ks	
V207	16	17	17	0.50		100	0.000				0.000	0		0	lga	mio		ks	
V207	17	18	18	0.35		100	0.027				0.027	113		113	dga	mio		ks	clay stringers + lignite
V207	18	19	19	0.35		100	0.000				0.000	2		2	ga	mio		ks	HM
V207	19	20	20	0.35		100	0.000				0.000	26		26	lga	mio		ks	
V207	20	21	21	0.35		100	0.834	**0.689**			1.091	71	**286**	71	ga	mio		ks	HM
V207	21	22	22	0.35		100	1.277	**0.892**			1.317	91	**84**	91	ga	mio		ks	HM
V207	22	23	23	0.35		100	0.122				0.122	74		74	boga	mio		ks	lignite
V207	23	24	24	0.35		100	0.068				0.068	0		0	lga	mio		ks	
V207	24	25	25	0.35		100	0.011				0.011	0		0	lga	mio		ks	
V207	25	26	26	0.35		100	0.000				0.000	2		2	lga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V208	0	1	1	0.35		75									rebo	kva		ds	
V208	1	2	2	0.35		100									rebo	kva		ds	
V208	2	3	3	0.50	25	75									ga	kva		ds	
V208	3	4	4	0.50	20	75									lyebo	kva		ds	
V208	4	5	5	0.71	20	50									lyebo	kva		ds	
V208	5	6	6	0.71	40	25									lyebo	kva		ds	
V208	6	7	7	0.01		25									boba	kva		dl	
V208	7	8	8	0.01		10									boba	kva		dl	
V208	8	9	9	0.18		20	0.698				0.698	574		574	dboga	mio		gs	mica
V208	9	10	10	0.18		25	0.377				0.377	714		714	dboga	mio		gs	
V208	10	11	11	0.18		25	0.378				0.378	715		715	dboga	mio		gs	
V208	11	12	12	0.25		25	0.372				0.372	467		467	dboga	mio		gs	HM
V208	12	13	13	0.18		25	0.361				0.361	673		673	dboga	mio		gs	HM
V208	13	14	14	0.18		25	0.391				0.391	662		662	dboga	mio		gs	HM
V208	14	15	15	0.18		25	0.389				0.389	772		772	dboga	mio		gs	HM
V208	15	16	16	0.25		25	0.359				0.359	534		534	dboga	mio		gs	HM
V208	16	17	17	0.00		25									dboga	mio		gl	
V208	17	18	18	0.00		25									dboga	mio		gl	
V208	18	19	19	0.18		25	0.345				0.345	592		592	dboga	mio		gs	
V208	19	20	20	0.18		25	0.465				0.465	508		508	dboga	mio		gs	
V208	20	21	21	0.00		25									dboga	mio		gl	lignite
V208	21	22	22	0.06		25	0.722	**0.832**			1.251	707	**621**	707	dboga	mio		gs	
V208	22	23	23	0.13		25	0.444				0.444	633		633	dboga	mio		gs	
V208	23	24	24	0.13		25	0.444				0.444	730		730	dboga	mio		gs	
V208	24	25	25	0.03		25	0.677				0.677	654		654	dboga	mio		gi	
V208	25	26	26	0.06		25	0.655				0.655	744		744	dboga	mio		gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V209	0	1	1	0.35		25									dboga	kva		ds	
V209	1	2	2	0.35	25	75									boga	kva		ds	
V209	2	3	3	0.02		100									boba	kva		dl	
V209	3	4	4	0.00		100									ba	mio		gl	
V209	4	5	5	0.00		100									ba	mio		gl	
V209	5	6	6	0.00		75									ba	mio		gl	
V209	6	7	7	0.00		75									ba	mio		gl	
V209	7	8	8	0.00		75									ba	mio		gl	
V209	8	9	9	0.02		100									vga	mio		gl	
V209	9	10	10	0.03		100									dga	mio		gl	clay/sand
V209	10	11	11	0.50		100	0.000				0.000	0		0	pye	mio		ks	redeposited?
V209	11	12	12	0.50		100	0.000				0.000	35		35	pye	mio		ks	redeposited?
V209	12	13	13	0.50		100	0.000				0.000	0		0	pye	mio		ks	redeposited?
V209	13	14	14	0.50		100	0.000				0.000	0		0	pye	mio		ks	redeposited?
V209	14	15	15	0.35		100	0.000				0.000	0		0	pye	mio		ks	redeposited?
V209	15	16	16	0.35		100	0.000				0.000	4		4	pye	mio		ks	redeposited?
V209	16	17	17	0.35		100	0.000				0.000	0		0	pye	mio		ks	redeposited?
V209	17	18	18	0.35		100	0.000				0.000	4		4	pye	mio		ks	redeposited?
V209	18	19	19	0.35		100	0.000				0.000	0		0	pye	mio		ks	redeposited?
V209	19	20	20	0.35		100	0.000				0.000	59		59	dboga	mio		ks	lignite + clay stringers
V209	20	21	21	0.35		100	0.052				0.052	112		112	dboga	mio		ks	lignite + clay stringers
V209	21	22	22	0.25		100	0.000				0.000	4		4	lga	mio		ks	
V209	22	23	23	0.35		100	0.000				0.000	8		8	lga	mio		ks	
V209	23	24	24	0.35		100	0.570				0.570	382		382	dga	mio		ks	lignite
V209	24	25	25	0.35		100	0.000				0.000	36		36	bo	mio		ks	
V209	25	26	26	0.35		100	0.112				0.112	88		88	ga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V210	0	1	1	0.00		25									yebo	kva		dl	
V210	1	2	2	0.35		50									lyebo	kva		ds	clay stringers
V210	2	3	3	0.35		75									lyebo	kva		ds	
V210	3	4	4	0.35		25									lyebo	kva		ds	clay stringers
V210	4	5	5	0.35	5	25									lyebo	kva		ds	clay stringers
V210	5	6	6	0.35	10	75									lyebo	kva		ds	
V210	6	7	7	0.35		50									lyebo	kva		ds	
V210	7	8	8	0.35	20	75									lyebo	kva		ds	clay stringers
V210	8	9	9	1.00	30	100									lyebo	kva		ds	
V210	9	10	10	0.71	15	100									lyebo	kva		ds	
V210	10	11	11	0.71	10	100									lyebo	kva		ds	
V210	11	12	12	0.35		100	0.114				0.114	37		37	lga	mio		ks	
V210	12	13	13	0.35		100	0.026				0.026	86		86	lga	mio		ks	
V210	13	14	14	0.35		100	0.023				0.023	21		21	lga	mio		ks	
V210	14	15	15	0.35		100	0.162				0.162	122		122	lga	mio		ks	
V210	15	16	16	0.35		100	0.401				0.401	211		211	lga	mio		ks	
V210	16	17	17	0.35		100	0.202				0.202	309		309	lga	mio		ks	
V210	17	18	18	0.35		100	0.047				0.047	62		62	lga	mio		ks	
V210	18	19	19	0.50		100	0.000				0.000	22		22	lga	mio		ks	
V210	19	20	20	0.25		100	0.105				0.105	235		235	ga	mio		ks	
V210	20	21	21	0.25		75	0.097				0.097	169		169	dga	mio		gs	micas
V210	21	22	22	0.25		75	0.242				0.242	246		246	dga	mio		gs	micas
V210	22	23	23	0.25		75	0.582				0.582	875		875	dga	mio		gs	micas
V210	23	24	24	0.25		50	0.579				0.579	903		903	dga	mio		gs	micas
V210	24	25	25	0.25		50	0.259				0.259	500		500	dga	mio		gs	micas
V210	25	26	26	0.25		50	0.684				0.684	987		987	dga	mio		gs	micas

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V211	0	1	1	0.35		25									bo	kva		ds	
V211	1	2	2	0.35		25									boga	kva		ds	
V211	2	3	3	0.35		100	0.083				0.083	63		63	lyebo	mio	odd	ks	
V211	3	4	4	0.35		100	0.000				0.000	0		0	pye	mio	odd	ks	
V211	4	5	5	0.35		100	0.000				0.000	0		0	pye	mio	odd	ks	
V211	5	6	6	0.35		100	0.190				0.190	29		29	pye	mio	odd	ks	clay stringers
V211	6	7	7	0.35		100	0.216				0.216	4		4	dboga	mio	odd	ks	lignite
V211	7	8	8	0.35		100	0.522				0.522	60		60	lboga	mio	odd	ks	
V211	8	9	9	0.35		100	0.471				0.471	26		26	lga	mio	odd	ks	
V211	9	10	10	0.50		100	0.000				0.000	0		0	lga	mio	odd	ks	
V211	10	11	11	0.50		100	0.000				0.000	6		6	lga	mio	odd	ks	
V211	11	12	12	0.50		100	0.000				0.000	15		15	lga	mio	odd	ks	
V211	12	13	13	0.50		100	0.000				0.000	0		0	lga	mio	odd	ks	
V211	13	14	14	0.35		100	0.108				0.108	0		0	lga	mio	odd	ks	
V211	14	15	15	0.35		100	0.258				0.258	77		77	lga	mio	odd	ks	
V211	15	16	16	0.35		100	0.067				0.067	0		0	lga	mio	odd	ks	
V211	16	17	17	0.35		100	0.128				0.128	8		8	lga	mio	odd	ks	
V211	17	18	18	0.35		100	0.019				0.019	2		2	dboga	mio	odd	ks	few lignite fragments
V211	18	19	19	0.35		100	0.000				0.000	0		0	boga	mio	odd	ks	
V211	19	20	20	0.35		100	0.000				0.000	0		0	boga	mio	odd	ks	
V211	20	21	21	0.35		100	0.288				0.288	142		142	boga	mio	odd	ks	
V211	21	22	22	0.35		75	0.112				0.112	81		81	boga	mio	odd	ks	
V211	22	23	23	0.35		75	0.000				0.000	0		0	boga	mio	odd	ks	
V211	23	24	24	0.50		75	0.188				0.188	104		104	boga	mio	odd	ks	
V211	24	25	25	0.25		50	0.914	**0.946**			1.378	1164	**1352**	1164	dboga	mio	arn	gs	clay stringers
V211	25	26	26	0.25		50	0.966	**1.040**			1.482	1403	**1252**	1403	dboga	mio	arn	gs	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V212	0	1	1	0.35											yega	kva		ds	
V212	1	2	2	0.35			0.000				0.000	33		33	yebo	mio		ds	
V212	2	3	3	0.35			0.002				0.002	104		104	lga	mio		ds	
V212	3	4	4	0.35			0.000				0.000	65		65	ga	mio		ds	
V212	4	5	5	0.35			0.435				0.435	124		124	ga	mio		ds	
V212	5	6	6	0.35			0.000				0.000	11		11	yega	mio		ds	
V212	6	7	7	0.35			0.000				0.000	0		0	ga	mio		ds	
V212	7	8	8	0.35			0.000				0.000	6		6	lga	mio		ds	
V212	8	9	9	0.35			0.000				0.000	0		0	lga	mio		ds	
V212	9	10	10	0.35			0.000				0.000	0		0	lga	mio		ds	
V212	10	11	11	0.35			0.000				0.000	0		0	ga	mio		gl	
V212	11	12	12	0.35											ba	mio		ks	
V212	12	13	13	0.35			0.000				0.000	28		28	dga	mio		ks	
V212	13	14	14	0.35			0.538				0.538	157		157	lga	mio		ks	
V212	14	15	15	0.35			0.822	**0.997**			1.435	388	**539**	388	lga	mio		ks	
V212	15	16	16	0.35			0.048				0.048	22		22	boga	mio		ks	
V212	16	17	17	0.35			0.360				0.360	198		198	dboga	mio		ks	
V212	17	18	18	0.35			0.000				0.000	10		10	dboga	mio		ks	
V212	18	19	19	0.35			0.000				0.000	0		0	dboga	mio		ks	
V212	19	20	20	0.35			0.000				0.000	0		0	dboga	mio		ks	
V212	20	21	21	0.35			0.000				0.000	2		2	dboga	mio		ks	
V212	21	22	22	0.35			0.048				0.048	118		118	dboga	mio		ks	
V212	22	23	23	0.35			0.010				0.010	44		44	dboga	mio		ks	
V212	23	24	24	0.35			0.013				0.013	12		12	dboga	mio		ks	
V212	24	25	25	0.35			0.000				0.000	24		24	dboga	mio		ks	
V212	25	26	26	0.35			0.000				0.000	7		7	dboga	mio		ks	

BOREHOLENO	TOP	BOTTOM	BAGNO	GRAINSIZE	GRAVELPCT	RECOVERY	TiO2 (XMET) field	XMET powder	TiO2 XRF pellets	TiO2 fusion XRF	TiO2 calibrated	Zr (ppm) calibrated	Zr (ppm) powder	Zirkon (ppm) raw sand	COLOR	AGE	FORMATION	ROCKSYMBOL	REMARKS
V213	0	1	1	0.35		50									yebo	kva		ds	
V213	1	2	2	0.35		25									yega	kva		ds	
V213	2	3	3	0.35	50	75									olga	kva		ds	
V213	3	4	4	0.35		75									pol	kva		ds	
V213	4	5	5	0.35		75									ga	kva		ds	
V213	5	6	6	0.35		75									ga	kva		ds	
V213	6	7	7	0.35		75									ga	kva		ds	
V213	7	8	8	0.35		75	0.148				0.148	59		59	ga	mio		ks	
V213	8	9	9	0.50		100	0.000				0.000	112		112	gabo	mio		ks	clay stringers
V213	9	10	10	0.00		50									ba	mio		gl	
V213	10	11	11	0.35		75	0.190				0.190	102		102	boba	mio		ks	lignite + clay
V213	11	12	12	0.35		100	0.487				0.487	166		166	ga	mio		ks	HM
V213	12	13	13	0.35		100	0.000				0.000	4		4	ga	mio		ks	HM
V213	13	14	14	0.35		100	0.000				0.000	0		0	ga	mio		ks	
V213	14	15	15	0.50		100	0.000				0.000	0		0	ga	mio		ks	
V213	15	16	16	0.35		100	0.064				0.064	5		5	ga	mio		ks	
V213	16	17	17	0.35		100	0.087				0.087	60		60	ga	mio		ks	
V213	17	18	18	0.35		100	0.016				0.016	15		15	lga	mio		ks	
V213	18	19	19	0.35		100	0.059				0.059	76		76	lga	mio		ks	
V213	19	20	20	0.35		100	0.178				0.178	271		271	lga	mio		ks	
V213	20	21	21	0.35		100	0.000				0.000	71		71	lga	mio		ks	
V213	21	22	22	0.35		100	0.062				0.062	136		136	lga	mio		ks	
V213	22	23	23	0.50		100	0.008				0.008	13		13	lga	mio		ks	
V213	23	24	24	0.50		100	0.054				0.054	9		9	lga	mio		ks	
V213	24	25	25	0.50		100									lga	mio		ks	not measured
V213	25	26	26	0.35		100	0.142				0.142	66		66	ga	mio		ks	

3 CCSEM

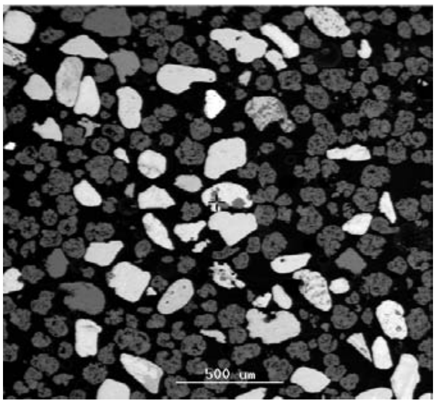
Geological Survey of Denmark and Greenland
Thoravej 8, DK-2400 Copenhagen NV
Ph: +45 38142000, Fax.: 38142050

Sample Name:	V1 6
Date:	05-08-99
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	50x
Guard region	155 µm
Sieve	200 μm^2

Number of frames: 40

Number of valuable particles analyzed: 472

Heavy minerals in raw sand (%): 3,2



Average content	Category							
	ilmenite	leucoxene	rutile	silicate	other Ti-ox.	unclassified	zircon	staurolite
TiO_2 w/w	58,1	74,7	94,2	0,8	29,5	7,4	0,4	0,4
Fe_2O_3 w/w	32,9	11,3	1,1	9,6	54,1	9,0	0,5	25,5
MnO w/w	2,7	2,2	0,1	1,9	3,3	0,7	0,1	2,1
Cr_2O_3 w/w	0,1	0,2	0,0	0,1	0,0	1,8	0,1	0,3
SiO_2 w/w	1,4	4,5	1,1	41,0	2,1	21,0	29,3	38,9
Al_2O_3 w/w	1,0	2,7	0,6	34,7	3,0	9,7	0,2	20,2
MgO w /w	0,4	0,3	0,1	2,0	0,4	2,1	0,1	3,9
CaO w/w	0,3	0,3	0,1	6,4	0,6	1,4	0,2	3,8
ZrO_2 w/w	0,5	0,6	0,5	0,4	0,0	40,9	65,2	1,1
Total	97,5	96,7	97,9	97,0	92,8	94,0	96,1	96,1

Normalised average contents of the valuable Ti-containing minerals:

Average content	Category			
	ilmenite	leucoxene	rutile	other Ti-ox.
TiO_2 w/w	59,6	77,2	96,2	31,8
Fe_2O_3 w/w	33,7	11,7	1,1	58,2
MnO w/w	2,8	2,3	0,1	3,6
Cr_2O_3 w/w	0,1	0,2	0,0	0,0
SiO_2 w/w	1,5	4,7	1,1	2,2
Al_2O_3 w/w	1,1	2,8	0,6	3,2
MgO w/w	0,4	0,3	0,1	0,4
CaO w/w	0,3	0,3	0,1	0,6
ZrO_2 w/w	0,5	0,6	0,5	0,0
Total	100,0	100,0	100,0	100,0

Average TiO_2 content of all the TiO_2 minerals: 61,8

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 60,1

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	78,72
leucoxene	3,08
pyrite	0,00
rutile	4,21
silicate	6,05
sphene	0,00
otherTi-ox.	0,41
unclassified	1,95
zircon	5,36
almandine	0,00
phosphate	0,00
sillimanite	0,00
staurolite	0,22
Y-phosphate	0,00
Total	100,00

the raw sand

Category	w/w
ilmenite	2,52
leucoxene	0,10
pyrite	0,00
rutile	0,13
silicate	96,99
sphene	0,00
otherTi-ox.	0,01
unclassified	0,06
zircon	0,17
almandine	0,00
phosphate	0,00
sillimanite	0,00
staurolite	0,01
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

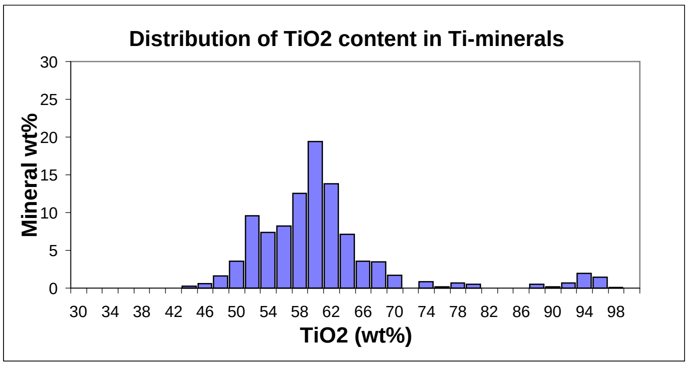
Category	w/w
ilmenite	85,77
leucoxene	3,35
rutile	4,59
otherTi-ox.	0,45
zircon	5,84
almandine	0,00
sillimanite	0,00
Total	100,00

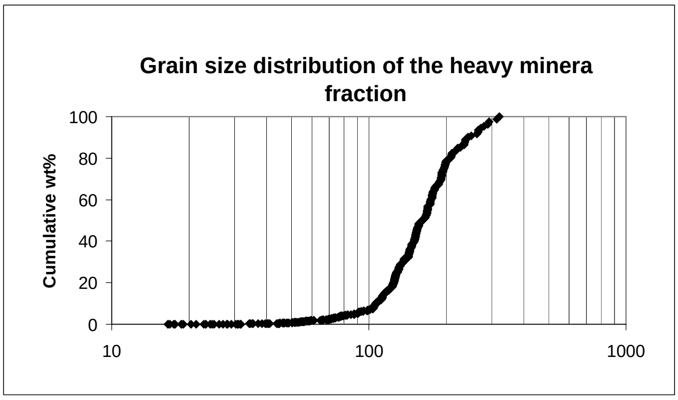
Valuable heavy minerals in raw sand: 2,94

Geological Survey of Denmark and Greenland
Thoravej 8, DK-2400 Copenhagen NV
Ph: +45 38142000, Fax.: 38142050

Sample Name: V1 6 Date: 05-08-99

Submitter: Dupont
Analyzed by: CCA
Acc. Voltage 17kV





Average grain parameters	Category							
	ilmenite	leucoxene	rutile	silicate	other Ti-ox.	unclassified	zircon	staurolite
Aspect ratio	1,6	1,6	1,6	1,8	1,6	2,3	1,6	2,8
Circularity	1,8	2,1	2,0	2,8	2,1	2,9	2,3	2,6
Perimeter (μm)	539,7	645,6	491,2	473,7	375,8	707,5	628,8	514,5
Length (μm)	201,8	256,7	191,2	204,6	159,8	303,0	250,4	220,6

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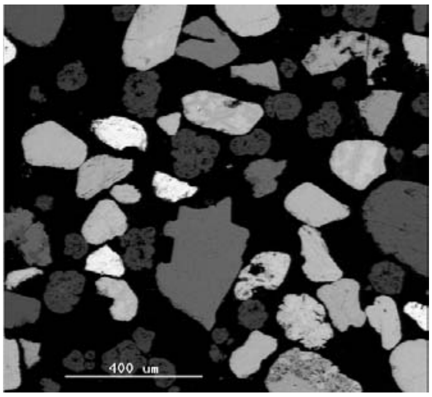


Sample Name:	V1 2-13
Date:	09-08-99
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	80x
Guard region	155 µm
Sieve	200 µm^2

Number of frames: 54

Number of valuable particles analyzed: 267

Heavy minerals in raw sand (%): 1,60

Average content	ilmenite	leucoxene	rutile	silicate	sillimanite	unclassified	zircon	pyrite	staurolite
	Category								
TiO_2 w/w	57,9	75,1	94,7	1,4	0,6	1,5	0,8	0,1	0,5
Fe_2O_3 w/w	35,4	16,3	1,5	6,8	0,7	20,3	0,5	31,4	29,1
MnO w/w	2,9	1,3	0,3	1,0	0,1	3,7	0,2	0,2	3,4
Cr_2O_3 w/w	0,1	0,1	0,1	0,1	0,1	9,2	0,1	0,1	0,1
SiO_2 w/w	1,0	2,4	0,8	49,2	43,1	27,9	29,3	0,8	36,8
Al_2O_3 w/w	0,8	2,0	0,7	31,3	53,4	6,6	0,2	0,5	18,7
MgO w /w	0,2	0,2	0,1	1,3	0,0	1,3	0,1	0,1	2,0
CaO w/w	0,2	0,4	0,2	6,2	0,3	1,0	0,3	0,1	7,7
ZrO_2 w/w	0,2	0,5	0,2	0,2	0,1	26,1	64,8	0,4	0,3
Total	98,7	98,4	98,6	97,5	98,5	97,6	96,3	33,5	98,5

Normalised average contents of the valuable Ti-containing minerals:

Average content	ilmenite	leucoxene	rutile	other Ti-ox.
	Category			
TiO_2 w/w	58,6	76,4	96,1	0,0
Fe_2O_3 w/w	35,8	16,5	1,5	0,0
MnO w/w	2,9	1,3	0,3	0,0
Cr_2O_3 w/w	0,1	0,2	0,1	0,0
SiO_2 w/w	1,0	2,5	0,8	0,0
Al_2O_3 w/w	0,9	2,1	0,7	0,0
MgO w/w	0,3	0,2	0,1	0,0
CaO w/w	0,2	0,4	0,2	0,0
ZrO_2 w/w	0,2	0,5	0,2	0,0
Total	100,0	100,0	100,0	0,0

Average TiO_2 content of all the TiO_2 minerals: 62,8

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 61,7

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	67,48
leucoxene	13,86
pyrite	0,64
rutile	2,72
silicate	8,32
sphene	0,00
otherTi-ox.	0,00
unclassified	0,48
zircon	5,67
almandine	0,00
phosphate	0,00
sillimanite	0,30
staurolite	0,54
Y-phosphate	0,00
Total	100,00

the raw sand

Category	w/w
ilmenite	1,08
leucoxene	0,22
pyrite	0,01
rutile	0,04
silicate	98,53
sphene	0,00
otherTi-ox.	0,00
unclassified	0,01
zircon	0,09
almandine	0,00
phosphate	0,00
sillimanite	0,00
staurolite	0,01
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

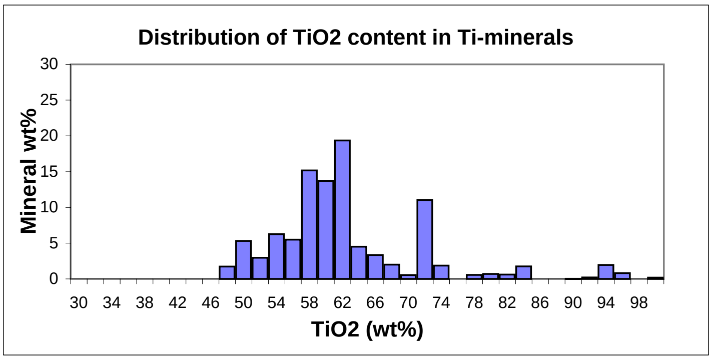
Category	w/w
ilmenite	74,95
leucoxene	15,39
rutile	3,02
otherTi-ox.	0,00
zircon	6,30
almandine	0,00
sillimanite	0,33
Total	100,00

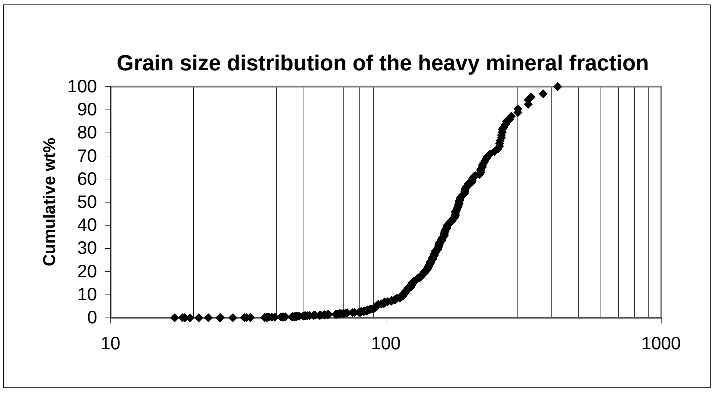
Valuable heavy minerals in raw sand: 1,44

Geological Survey of Denmark and Greenland
Thoravej 8, DK-2400 Copenhagen NV
Ph: +45 38142000, Fax.: 38142050

Sample Name: V1 2-13 Date: 09-08-99

Submitter: Dupont
Analyzed by: CCA
Acc. Voltage 17kV





Average grain parameters	Category								
	ilmenite	leucoxene	rutile	silicate	sillimanite	unclassified	zircon	pyrite	staurolite
Aspect ratio	1,58	1,53	1,58	1,66	1,86	1,56	1,61	1,70	2,53
Circularity	1,92	2,63	2,23	3,54	3,82	2,28	2,05	2,14	3,55
Perimeter (µm)	607,26	1045,26	493,08	669,71	416,91	381,87	555,01	378,77	381,82
Length (µm)	235,01	441,86	202,11	300,79	188,74	154,14	223,10	157,35	153,54

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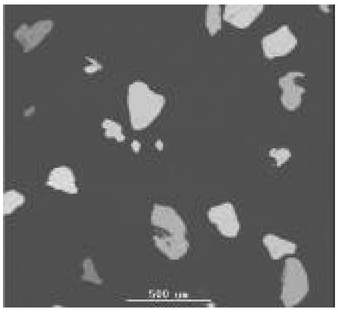
Sample Name:	V22 11-20
Date:	3/10/00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	50x
Guard region	200 µm
Sieve	100 μm^2

Number of frames: 46

Number of valuable particles analyzed: 399

Heavy minerals in raw sand (%): 2.10



Average content	Category									
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox.	unclassified	zircon	garnet	sillimanite	staurolite
TiO_2 w/w	57.2	72.6	0.4	93.4	0.6	37.4	17.0	0.4	0.5	0.2	0.4
Fe_2O_3 w/w	34.9	16.8	29.5	2.3	5.0	34.3	15.7	0.5	30.1	0.8	14.6
MnO w/w	2.3	1.9	0.0	0.3	0.9	1.2	1.3	0.2	3.0	0.1	0.3
Cr_2O_3 w/w	0.2	0.3	0.0	0.1	0.2	0.0	7.0	0.2	0.1	0.2	0.2
SiO_2 w/w	1.6	1.9	4.0	1.0	60.9	15.3	23.1	29.4	36.6	42.3	33.6
Al_2O_3 w/w	0.7	2.2	0.6	0.6	23.6	1.5	12.8	0.1	19.5	53.6	46.9
MgO w /w	0.3	0.2	0.2	0.1	0.9	0.0	1.7	0.1	3.5	0.1	1.8
CaO w/w	0.2	0.5	0.1	0.2	2.1	0.2	1.0	0.2	4.1	0.2	0.0
ZrO_2 w/w	0.3	0.2	0.5	0.2	0.4	0.0	6.0	64.3	0.3	0.1	0.1
Total	97.7	96.6	35.2	98.2	94.5	90.0	85.7	95.3	97.8	97.7	98.1

Normalised average contents of the valuable Ti-containing minerals:

Average content	Category			
	ilmenite	leucoxene	rutile	other Ti-ox.
TiO_2 w/w	58.5	75.2	95.1	41.6
Fe_2O_3 w/w	35.7	17.4	2.4	38.1
MnO w/w	2.4	2.0	0.3	1.4
Cr_2O_3 w/w	0.2	0.3	0.1	0.0
SiO_2 w/w	1.7	2.0	1.0	17.0
Al_2O_3 w/w	0.8	2.2	0.6	1.7
MgO w/w	0.3	0.3	0.1	0.0
CaO w/w	0.2	0.5	0.2	0.2
ZrO_2 w/w	0.3	0.3	0.2	0.0
Total	100.0	100.0	100.0	100.0

Average TiO_2 content of all the TiO_2 minerals: 61.8

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 58.9

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	60.01
leucoxene	3.47
pyrite	0.13
rutile	5.72
silicate	10.92
sphene	0.00
otherTi-ox.	1.88
unclassified	3.14
zircon	7.02
garnet	4.29
monazite	0.00
phosphate	0.00
sillimanite	0.22
staurolite	3.19
Y-phosphate	0.00
Total	100.00

the raw sand

Category	w/w
ilmenite	1.26
leucoxene	0.07
pyrite	0.00
rutile	0.12
silicate	98.13
sphene	0.00
otherTi-ox.	0.04
unclassified	0.07
zircon	0.15
garnet	0.09
monazite	0.00
phosphate	0.00
sillimanite	0.00
staurolite	0.07
Y-phosphate	0.00
Total	100.00

the valuable heavy minerals

Category	w/w
ilmenite	72.64
leucoxene	4.20
rutile	6.93
otherTi-ox.	2.28
zircon	8.50
garnet	5.19
sillimanite	0.27
Total	100.00

Valuable heavy minerals in raw sand: 1.73

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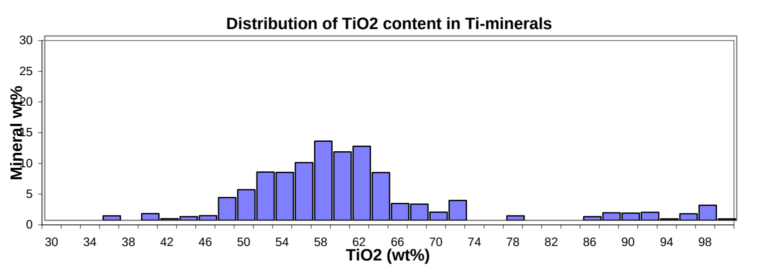
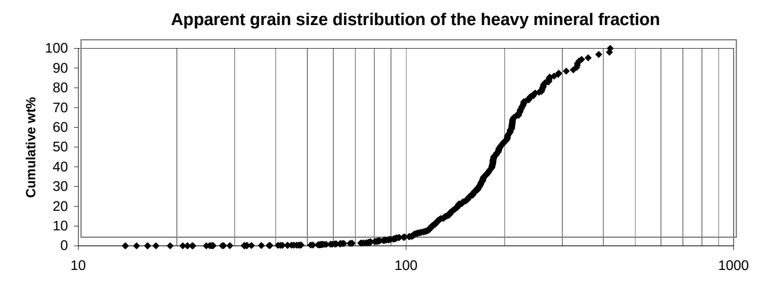
Sample Name:	V22 11-20	Date:	3/10/00
Submitter:	Dupont		
Analyzed by:	CCA		
Acc. Voltage	17kV		





Average grain parameters	Category										
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox.	unclassified	zircon	garnet	sillimanite	staurolite
Aspect ratio	1.47	1.48	1.56	1.49	1.66	1.35	1.44	1.42	1.48	1.78	1.65
Circularity	1.70	1.70	1.84	1.71	1.98	2.04	2.08	1.89	1.90	1.98	2.21
Perimeter (µm)	602.04	614.16	444.70	627.64	578.26	764.90	632.89	696.77	560.28	329.37	1177.98
Length (µm)	225.57	231.88	172.73	235.14	231.68	295.95	269.18	272.86	222.78	127.15	485.96
Total grains	222	12	1	18	70	5	19	19	23	5	5

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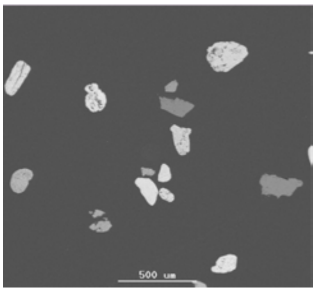

Sample Name:	V23 1-9
Date:	10-03-00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	50x
Guard region	200 µm
Sieve	100 μm^2

Number of frames: 81

Number of valuable particles analyzed: 550

Heavy minerals in raw sand (%): 2,30

Average content	Category											
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-oxide	unclassified	zircon	garnet	monazite	sillimanite	staurolite
TiO_2 w/w	58,6	73,5	0,1	93,0	2,2	11,4	15,8	0,1	0,2	0,0	0,1	0,6
Fe_2O_3 w/w	34,5	17,0	32,5	2,3	8,6	74,7	10,5	0,6	31,1	0,0	0,6	14,1
MnO w/w	2,2	1,3	0,1	0,2	0,5	1,6	2,3	0,2	2,1	0,0	0,2	0,3
Cr_2O_3 w/w	0,2	0,2	0,1	0,2	0,2	0,1	6,0	0,1	0,2	0,0	0,2	0,1
SiO_2 w/w	1,1	2,4	0,3	1,1	52,2	3,4	17,8	29,2	36,9	0,4	42,2	33,8
Al_2O_3 w/w	0,9	2,4	0,1	0,7	22,3	1,3	11,4	0,1	19,6	0,0	54,1	47,8
MgO w /w	0,3	0,2	0,1	0,1	1,3	0,2	2,2	0,1	3,8	0,0	0,0	1,5
CaO w/w	0,2	0,3	0,1	0,2	9,1	0,1	3,6	0,2	3,6	1,0	0,0	0,0
ZrO_2 w/w	0,3	0,2	0,3	0,3	0,3	0,9	3,3	64,4	0,3	3,1	0,2	0,2
Total	98,1	97,5	33,7	97,9	96,7	93,7	72,9	95,1	97,7	4,5	97,6	98,4

Normalised average contents of the valuable Ti-containing minerals:

Average content	Category			
	ilmenite	leucoxene	rutile	other Ti-ox.
TiO_2 w/w	59,7	75,4	94,9	12,1
Fe_2O_3 w/w	35,1	17,4	2,3	79,8
MnO w/w	2,2	1,3	0,2	1,7
Cr_2O_3 w/w	0,2	0,2	0,2	0,1
SiO_2 w/w	1,1	2,4	1,1	3,6
Al_2O_3 w/w	0,9	2,4	0,7	1,4
MgO w/w	0,3	0,2	0,1	0,3
CaO w/w	0,2	0,3	0,2	0,1
ZrO_2 w/w	0,3	0,2	0,3	1,0
Total	100,0	100,0	100,0	100,0

Average TiO_2 content of all the TiO_2 minerals: 62,8

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 61,0

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	63,59
leucoxene	7,57
pyrite	0,36
rutile	4,15
silicate	12,45
sphene	0,00
otherTi-ox.	0,58
unclassified	2,23
zircon	3,68
garnet	1,73
monazite	0,32
phosphate	0,00
sillimanite	0,80
staurolite	2,55
Y-phosphate	0,00
Total	100,00

the raw sand

Category	w/w
ilmenite	1,46
leucoxene	0,17
pyrite	0,01
rutile	0,10
silicate	97,99
sphene	0,00
otherTi-ox.	0,01
unclassified	0,05
zircon	0,08
garnet	0,04
monazite	0,01
phosphate	0,00
sillimanite	0,02
staurolite	0,06
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

Category	w/w
ilmenite	77,46
leucoxene	9,22
rutile	5,06
otherTi-ox.	0,70
zircon	4,48
garnet	2,10
sillimanite	0,97
Total	100,00

Valuable heavy minerals in raw sand: 1,89

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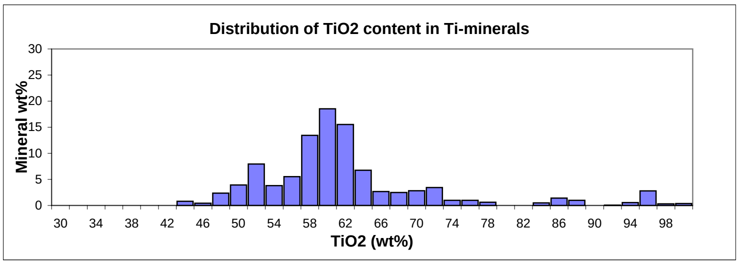
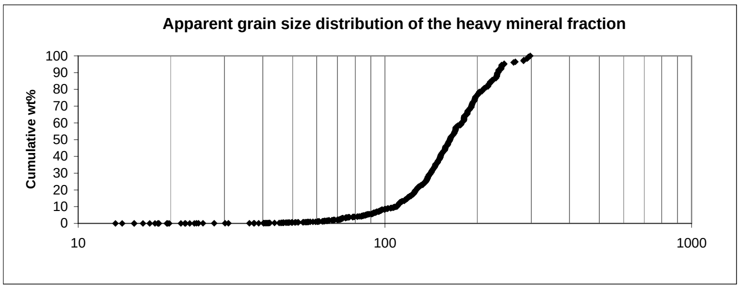
Sample Name: V23 1-9   Date: 10-03-00

Submitter: Dupont
Analyzed by: CCA
Acc. Voltage 17kV





Average grain parameters	Category											
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox.	unclassified	zircon	garnet	monazite	sillimanite	staurolite
Aspect ratio	1,54	1,41	1,62	1,35	1,50	1,63	1,49	1,40	1,63	1,06	1,52	1,57
Circularity	1,72	1,72	2,54	1,66	1,87	1,65	1,42	1,71	2,05	1,30	1,74	1,90
Perimeter (µm)	550,85	561,86	496,60	506,86	597,84	306,72	321,35	446,46	416,98	591,46	434,19	729,29
Length (µm)	206,81	209,78	208,62	187,29	237,02	116,17	124,86	167,09	166,64	169,66	164,09	287,24
Total grains	306	34	3	21	87	8	28	26	18	1	9	9

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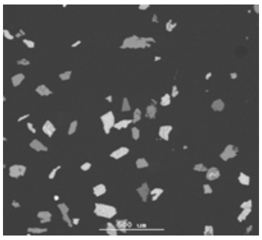
Sample Name:	V31 12-23
Date:	15-03-00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	50x
Guard region	200 µm
Sieve	100 μm^2



Number of frames: 21

Number of valuable particles analyzed: 880

Heavy minerals in raw sand (%): 2,80

Average content	Category													
	ilmenite	leucoxene	pyrite	rutile	silicate	sphene	other Ti-ox	unclassified	zircon	garnet	Monazite	phosphate	sillimanite	staurolite
TiO_2 w/w	53,30	76,18	0,21	92,15	0,88	34,59	41,81	10,08	0,39	0,34	0,00	0,27	0,24	0,69
Fe_2O_3 w/w	37,14	7,45	30,81	1,87	10,55	1,83	39,78	9,43	0,54	28,14	0,95	0,00	0,92	14,03
MnO w/w	2,34	0,74	0,02	0,19	0,50	0,04	2,21	0,85	0,15	3,00	0,00	0,00	0,25	0,26
Cr_2O_3 w/w	0,22	0,34	0,10	0,34	0,23	0,45	0,23	1,92	0,21	0,26	0,00	0,00	0,19	0,10
SiO_2 w/w	2,29	5,99	2,47	1,72	41,09	29,58	7,25	21,16	29,30	37,83	6,94	0,14	42,62	34,12
Al_2O_3 w/w	1,20	3,79	1,44	0,81	22,74	2,78	2,70	10,53	0,34	20,00	7,15	0,00	53,94	46,40
MgO w /w	0,26	0,29	0,08	0,09	0,56	0,14	0,28	1,23	0,13	3,11	1,43	0,06	0,01	1,42
CaO w/w	0,20	0,46	0,05	0,17	19,16	28,08	0,85	5,89	0,28	3,41	0,63	56,14	0,12	0,24
ZrO_2 w/w	0,35	0,70	0,25	0,30	0,29	0,05	0,42	10,30	63,50	0,47	2,48	1,92	0,01	0,29
Total	97,3	95,9	35,4	97,6	96,0	97,5	95,5	71,4	94,8	96,6	19,6	58,5	98,3	97,5

Normalised average contents of the valuable Ti-containing minerals:

Average content	Category			
	ilmenite	leucoxene	rutile	other Ti-ox.
TiO_2 w/w	54,8	79,4	94,4	43,8
Fe_2O_3 w/w	38,2	7,8	1,9	41,6
MnO w/w	2,4	0,8	0,2	2,3
Cr_2O_3 w/w	0,2	0,4	0,4	0,2
SiO_2 w/w	2,4	6,2	1,8	7,6
Al_2O_3 w/w	1,2	3,9	0,8	2,8
MgO w/w	0,3	0,3	0,1	0,3
CaO w/w	0,2	0,5	0,2	0,9
ZrO_2 w/w	0,4	0,7	0,3	0,4
Total	100,0	100,0	100,0	100,0

Average TiO_2 content of all the TiO_2 minerals: 58,9

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 56,0

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	40,87
leucoxene	5,60
pyrite	0,46
rutile	4,44
silicate	26,90
sphene	0,25
otherTi-ox.	6,70
unclassified	1,98
zircon	7,24
garnet	3,27
monazite	0,11
phosphate	0,22
sillimanite	0,26
staurolite	1,70
Y-phosphate	0,00
Total	100,00

the raw sand

Category	w/w
ilmenite	1,14
leucoxene	0,16
pyrite	0,01
rutile	0,12
silicate	97,95
sphene	0,01
otherTi-ox.	0,19
unclassified	0,06
zircon	0,20
garnet	0,09
monazite	0,00
phosphate	0,01
sillimanite	0,01
staurolite	0,05
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

Category	w/w
ilmenite	59,77
leucoxene	8,19
rutile	6,49
otherTi-ox.	9,79
zircon	10,59
garnet	4,78
sillimanite	0,38
Total	100,00

Valuable heavy minerals in raw sand: 1,91

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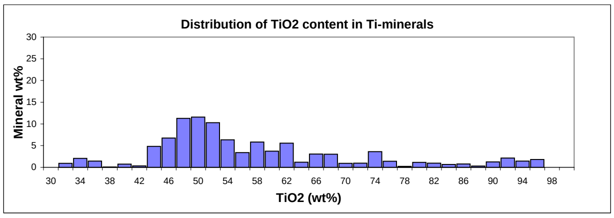
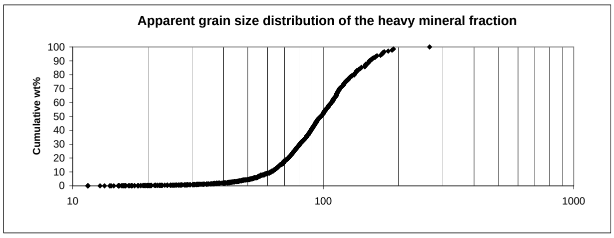
Sample Name:	V31 12-23	Date:	15-03-00
Submitter:	Dupont		
Analyzed by:	CCA		
Acc. Voltage	17kV		





Average grain	Category													
parameters	ilmenite	leucoxene	pyrite	rutile	silicate	sphene	Ti magnetite	unclassified	zircon	garnet	Monazite	phosphate	sillimanite	staurolite
Aspect ratio	1,65	1,49	1,43	1,52	1,59	1,88	1,45	1,45	1,41	1,92	1,40	1,32	1,63	2,08
Circularity	1,76	1,74	1,56	1,72	1,83	1,76	1,90	1,37	1,52	1,99	1,38	2,13	1,81	2,60
Perimeter (μm)	333,46	325,46	183,87	315,04	294,84	246,20	331,73	164,16	308,05	361,77	168,19	438,02	301,98	584,67
Length (μm)	126,40	127,52	65,83	119,12	116,01	96,27	131,40	65,29	106,70	145,63	55,94	178,85	115,25	246,99
Total grains	261	32	8	27	379	4	44	46	45	22	2	1	3	6

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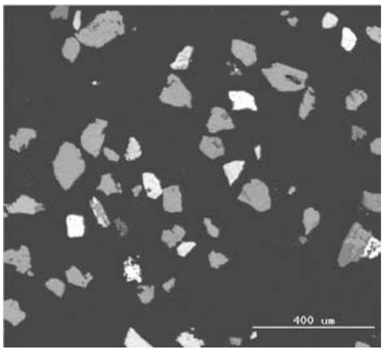

Sample Name:	V32 22-27
Date:	14-03-00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	80x
Guard region	150 μm
Sieve	100 μm^2

Number of frames: 39

Number of valuable particles analyzed: 921

Heavy minerals in raw sand (%): 5,20

Average content	Category											
	ilmenite	leucoxene	pyrite	rutile	silicate	sphene	other Ti-ox	unclassified	zircon	garnet	staurolite	Y-phos.
TiO_2 w/w	52,3	76,1	1,9	93,7	0,6	36,9	41,5	13,3	0,2	0,3	0,5	0,3
Fe_2O_3 w/w	38,6	7,0	30,1	1,9	10,5	1,4	39,1	16,5	0,8	26,4	11,0	1,4
MnO w/w	1,9	0,4	0,2	0,1	0,4	0,2	1,8	0,8	0,2	3,6	0,7	0,0
Cr_2O_3 w/w	0,2	0,2	0,1	0,2	0,2	0,2	0,2	4,0	0,2	0,2	0,1	0,0
SiO_2 w/w	2,6	5,9	3,9	1,2	42,8	29,1	9,9	23,8	29,3	38,2	32,5	0,0
Al_2O_3 w/w	1,1	4,6	0,9	0,7	22,1	1,6	2,5	7,3	0,2	20,0	49,4	2,6
MgO w /w	0,3	0,3	0,1	0,1	0,5	0,1	0,3	0,9	0,1	3,8	0,9	0,0
CaO w/w	0,2	0,7	0,1	0,1	19,9	28,0	0,3	6,5	0,2	4,0	0,0	0,2
ZrO_2 w/w	0,3	0,6	0,2	0,2	0,2	0,3	0,2	8,0	64,0	0,2	0,7	0,0
Total	97,6	95,9	37,5	98,2	97,1	97,8	95,9	81,1	95,1	96,7	95,8	4,5

Normalised average contents of the valuable Ti-containing minerals:

Average content	Category			
	ilmenite	leucoxene	rutile	other Ti-ox.
TiO_2 w/w	53,6	79,4	95,4	43,3
Fe_2O_3 w/w	39,6	7,3	1,9	40,8
MnO w/w	1,9	0,4	0,1	1,9
Cr_2O_3 w/w	0,2	0,2	0,2	0,2
SiO_2 w/w	2,7	6,2	1,2	10,4
Al_2O_3 w/w	1,2	4,8	0,7	2,6
MgO w/w	0,3	0,3	0,1	0,3
CaO w/w	0,2	0,7	0,1	0,3
ZrO_2 w/w	0,3	0,6	0,2	0,3
Total	100,0	100,0	100,0	100,0

Average TiO_2 content of all the TiO_2 minerals: 61,6

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 57,5

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	23,69
leucoxene	6,66
pyrite	3,44
rutile	4,13
silicate	47,66
sphene	1,29
otherTi-ox.	3,70
unclassified	1,79
zircon	3,61
garnet	3,66
monazite	0,00
phosphate	0,00
sillimanite	0,00
staurolite	0,15
Y-phosphate	0,22
Total	100,00

the raw sand

Category	w/w
ilmenite	1,23
leucoxene	0,35
pyrite	0,18
rutile	0,21
silicate	97,28
sphene	0,07
otherTi-ox.	0,19
unclassified	0,09
zircon	0,19
garnet	0,19
monazite	0,00
phosphate	0,00
sillimanite	0,00
staurolite	0,01
Y-phosphate	0,01
Total	100,00

the valuable heavy minerals

Category	w/w
ilmenite	52,12
leucoxene	14,64
rutile	9,09
otherTi-ox.	8,14
zircon	7,95
garnet	8,05
sillimanite	0,00
Total	100,00

Valuable heavy minerals in raw sand: 2,36

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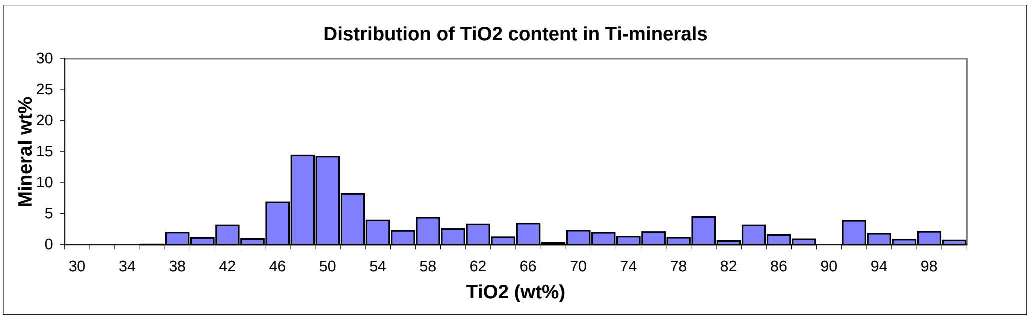
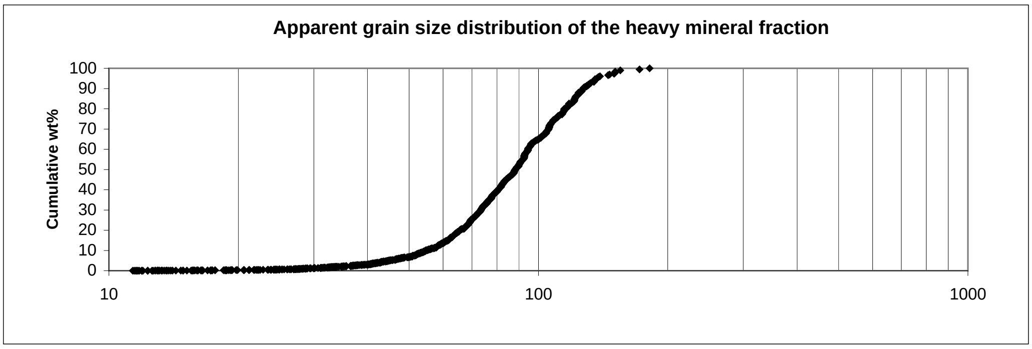
Sample Name: V32 22-27 Date: 14-03-00

Submitter: Dupont
Analyzed by: CCA
Acc. Voltage 17kV





Average grain parameters	Category ilmenite	leucoxene	pyrite	rutile	silicate	sphene
Aspect ratio	1,76	1,57	1,52	1,50	1,65	1,46
Circularity	1,91	1,90	2,12	1,81	1,99	1,62
Perimeter (μm)	275,83	295,96	285,66	323,71	302,21	269,83
Length (μm)	107,17	117,84	115,10	124,16	121,12	97,84
Total grains	188	42	23	21	532	11

parameters	other Ti-ox	unclassified	zircon	garnet	staurolite	Y-phos.
Aspect ratio	1,68	1,45	1,56	2,13	2,03	1,96
Circularity	2,03	2,12	1,62	2,81	2,28	2,36
Perimeter (μm)	281,08	297,52	245,17	410,37	384,08	406,87
Length (μm)	113,51	125,17	90,41	175,09	159,74	170,78
Total grains	29	21	30	22	1	1

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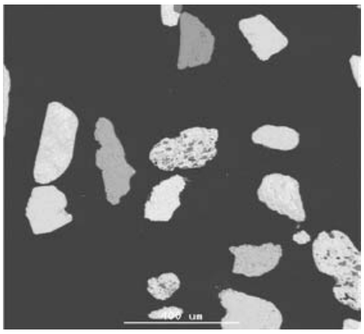

Sample Name:	V36 1-11
Date:	08-03-00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	80x
Guard region	150 µm
Sieve	100 μm^2

Number of frames: 43

Number of valuable particles analyzed: 220

Heavy minerals in raw sand (%): 1,50

Average content	ilmenite	leucoxene	rutile	silicate	other Ti-ox.	unclassified	zircon	garnet	sillimanite	staurolite
TiO_2 w/w	58,2	76,1	93,2	0,6	34,6	5,3	0,2	0,3	0,1	0,5
Fe_2O_3 w/w	35,3	10,5	2,4	9,8	40,7	29,9	0,3	31,0	0,7	15,8
MnO w/w	2,1	0,9	0,2	1,3	1,2	1,3	0,1	4,6	0,2	0,0
Cr_2O_3 w/w	0,1	0,1	0,3	0,2	0,2	12,5	0,1	0,1	0,1	0,2
SiO_2 w/w	1,3	5,6	1,0	43,8	14,2	15,1	29,8	36,3	42,4	31,7
Al_2O_3 w/w	0,8	2,7	0,8	30,6	5,5	9,6	0,1	19,2	53,5	48,7
MgO w /w	0,2	0,2	0,1	1,7	0,5	2,7	0,1	3,1	0,0	1,7
CaO w/w	0,1	0,3	0,2	8,6	0,2	1,9	0,1	3,1	0,1	0,1
ZrO_2 w/w	0,3	0,6	0,2	0,2	0,2	14,1	64,6	0,4	0,3	0,3
Total	98,4	97,0	98,4	97,0	97,2	92,3	95,4	98,2	97,4	99,0

Normalised average contents of the valuable Ti-containing minerals:

Average content	ilmenite	leucoxene	rutile	other Ti-ox.
TiO_2 w/w	59,1	78,4	94,7	35,7
Fe_2O_3 w/w	35,9	10,8	2,4	41,9
MnO w/w	2,2	0,9	0,2	1,2
Cr_2O_3 w/w	0,1	0,1	0,3	0,2
SiO_2 w/w	1,3	5,8	1,1	14,6
Al_2O_3 w/w	0,8	2,8	0,8	5,7
MgO w/w	0,2	0,2	0,1	0,5
CaO w/w	0,1	0,3	0,2	0,2
ZrO_2 w/w	0,3	0,6	0,2	0,2
Total	100,0	100,0	100,0	100,0

Average TiO_2 content of all the TiO_2 minerals: 59,4

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 57,4

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	62,93
leucoxene	3,65
pyrite	0,00
rutile	4,25
silicate	5,05
sphene	0,00
otherTi-ox.	8,49
unclassified	1,85
zircon	7,81
garnet	1,23
monazite	0,00
phosphate	0,00
sillimanite	2,36
staurolite	2,39
Y-phosphate	0,00
Total	100,00

the raw sand

Category	w/w
ilmenite	0,94
leucoxene	0,05
pyrite	0,00
rutile	0,06
silicate	98,58
sphene	0,00
otherTi-ox.	0,13
unclassified	0,03
zircon	0,12
garnet	0,02
monazite	0,00
phosphate	0,00
sillimanite	0,04
staurolite	0,04
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

Category	w/w
ilmenite	69,37
leucoxene	4,02
rutile	4,68
otherTi-ox.	9,36
zircon	8,61
garnet	1,35
sillimanite	2,60
Total	100,00

Valuable heavy minerals in raw sand: 1,36

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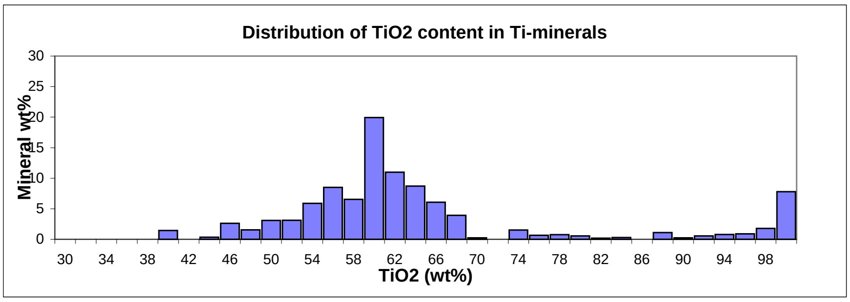
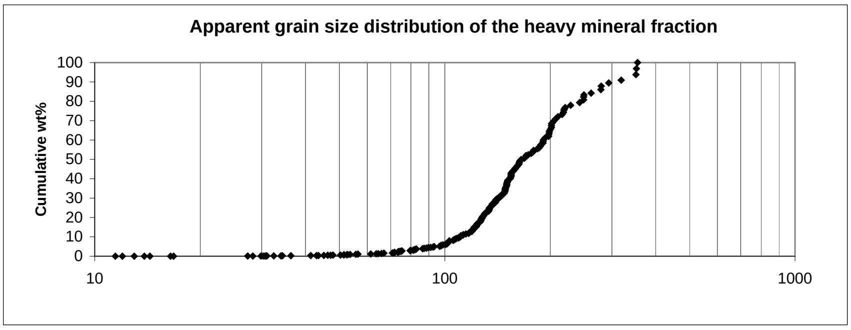
Sample Name:	V36 1-11	Date:	08-03-00
Submitter:	Dupont		
Analyzed by:	CCA		
Acc. Voltage	17kV		





Average grain parameters	ilmenite	leucoxene	rutile	silicate	other Ti-ox.	unclassified	zircon	garnet	sillimanite	staurolite
Aspect ratio	1,58	1,47	1,43	1,54	1,58	1,71	1,48	1,96	1,93	1,21
Circularity	1,86	1,92	1,80	2,14	2,47	2,07	1,65	2,13	2,63	1,82
Perimeter (μm)	560,81	548,95	526,49	573,58	1064,35	515,66	505,47	296,04	833,83	1004,98
Length (μm)	218,20	211,74	202,37	235,58	456,12	218,20	185,99	115,97	359,22	381,27
Total grains	136	9	9	19	6	6	18	10	5	2

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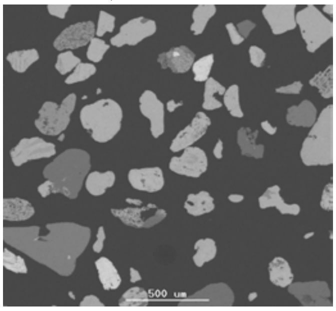

Sample Name:	V37 1-12
Date:	12-03-00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	50x
Guard region	200 µm
Sieve	100 μm^2

Number of frames: 33

Number of valuable particles analyzed: 643

Heavy minerals in raw sand (%): 1,30

Average content	Category										
	ilmenite	leucoxene	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	monazite	sillimanite	staurolite
TiO_2 w/w	58,7	74,8	93,2	1,7	32,2	12,9	0,2	0,4	11,3	0,2	0,7
Fe_2O_3 w/w	33,6	13,4	1,8	7,8	41,5	13,3	0,7	24,1	6,0	1,0	13,8
MnO w/w	2,2	0,9	0,2	0,6	1,1	1,1	0,2	8,8	0,0	0,1	0,3
Cr_2O_3 w/w	0,2	0,2	0,2	0,2	0,2	8,9	0,1	0,1	0,0	0,2	0,2
SiO_2 w/w	1,7	5,1	1,5	44,9	11,3	16,9	29,6	37,3	1,5	42,7	33,4
Al_2O_3 w/w	1,1	2,5	0,8	33,8	6,5	20,5	0,2	19,6	0,8	53,6	47,9
MgO w /w	0,3	0,2	0,1	0,9	0,7	2,2	0,1	3,6	0,3	0,0	1,6
CaO w/w	0,1	0,2	0,1	7,6	1,1	1,6	0,1	4,0	1,5	0,1	0,1
ZrO_2 w/w	0,4	0,4	0,2	0,3	2,4	8,9	64,5	0,2	2,5	0,3	0,1
Total	98,1	97,7	98,0	97,7	97,0	86,2	95,7	98,1	24,0	98,2	98,1

Normalised average contents of the valuable Ti-containing minerals:

Average content	Category			
	ilmenite	leucoxene	rutile	other Ti-ox.
TiO_2 w/w	59,8	76,6	95,0	33,2
Fe_2O_3 w/w	34,2	13,7	1,8	42,8
MnO w/w	2,2	0,9	0,2	1,1
Cr_2O_3 w/w	0,2	0,2	0,2	0,2
SiO_2 w/w	1,7	5,2	1,5	11,6
Al_2O_3 w/w	1,1	2,5	0,9	6,7
MgO w/w	0,3	0,2	0,1	0,8
CaO w/w	0,1	0,2	0,1	1,1
ZrO_2 w/w	0,4	0,4	0,2	2,5
Total	100,0	100,0	100,0	100,0

Average TiO_2 content of all the TiO_2 minerals: 62,2

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 60,8

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	66,15
leucoxene	8,62
pyrite	0,00
rutile	3,33
silicate	7,35
sphene	0,00
otherTi-ox.	2,53
unclassified	2,39
zircon	3,14
garnet	1,50
monazite	0,27
phosphate	0,00
sillimanite	1,31
staurolite	3,40
Y-phosphate	0,00
Total	100,00

the raw sand

Category	w/w
ilmenite	0,86
leucoxene	0,11
pyrite	0,00
rutile	0,04
silicate	98,80
sphene	0,00
otherTi-ox.	0,03
unclassified	0,03
zircon	0,04
garnet	0,02
monazite	0,00
phosphate	0,00
sillimanite	0,02
staurolite	0,04
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

Category	w/w
ilmenite	76,40
leucoxene	9,96
rutile	3,85
otherTi-ox.	2,93
zircon	3,62
garnet	1,73
sillimanite	1,51
Total	100,00

Valuable heavy minerals in raw sand: 1,13

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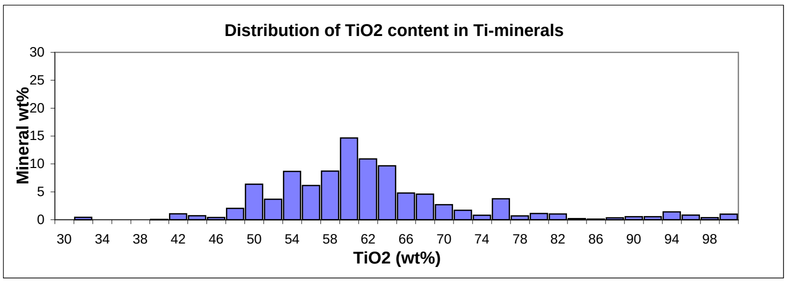
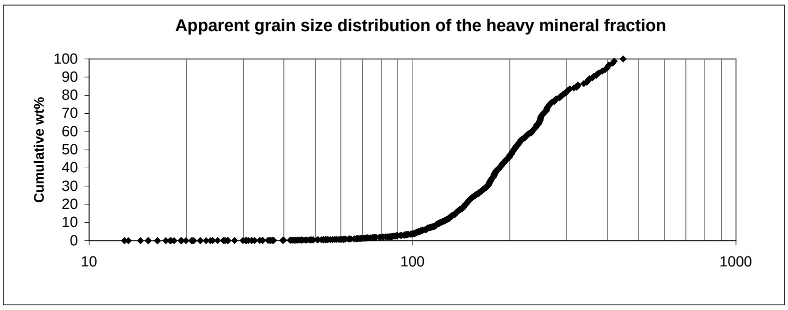
Sample Name: V37 1-12 Date: 12-03-00

Submitter: Dupont
Analyzed by: CCA
Acc. Voltage 17kV





Average grain parameters	Category										
	ilmenite	leucoxene	rutile	silicate	other Ti-ox.	unclassified	zircon	garnet	monazite	sillimanite	staurolite
Aspect ratio	1,53	1,51	1,45	1,62	1,52	1,44	1,43	1,53	1,51	1,74	1,58
Circularity	1,87	2,44	1,89	2,15	2,44	2,20	1,67	2,02	1,94	1,94	2,12
Perimeter (μm)	648,39	1064,62	603,25	686,71	883,87	738,00	477,69	565,92	620,09	646,22	864,33
Length (μm)	254,98	452,28	235,89	282,64	388,55	311,97	178,20	230,22	242,55	254,58	350,92
Total grains	415	27	23	70	9	23	31	14	2	13	16

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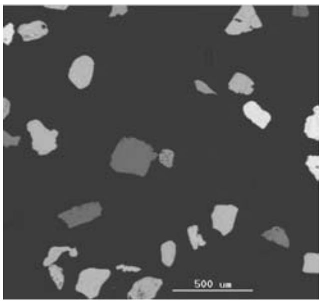
Sample Name:	V41 12-23
Date:	15-03-00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	50x
Guard region	200 μm
Sieve	100 μm^2

Number of frames: 51

Number of valuable particles analyzed: 425

Heavy minerals in raw sand (%): 1,70



Average content	Category										
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	sillimanite	staurolite
TiO_2 w/w	58,7	76,4	0,2	93,7	0,2	35,5	19,5	0,2	0,3	0,2	0,6
Fe_2O_3 w/w	34,0	12,5	30,3	1,4	6,1	31,7	12,2	0,4	24,0	0,2	13,9
MnO w/w	2,2	1,2	0,2	0,2	0,3	0,2	1,0	0,1	7,2	0,4	0,2
Cr_2O_3 w/w	0,2	0,2	0,1	0,2	0,2	0,3	12,8	0,1	0,3	0,0	0,1
SiO_2 w/w	1,4	3,3	1,0	0,7	46,9	14,4	17,9	29,7	37,0	41,3	33,3
Al_2O_3 w/w	0,5	2,4	0,5	0,7	39,1	0,3	9,5	0,1	19,8	53,7	47,3
MgO w /w	0,3	0,1	0,0	0,1	1,6	0,0	3,1	0,1	3,1	0,1	1,6
CaO w/w	0,1	0,4	0,2	0,1	1,9	0,0	5,7	0,2	5,7	0,0	0,1
ZrO_2 w/w	0,3	0,6	0,4	0,3	0,3	0,8	9,7	64,6	0,7	0,9	0,6
Total	97,6	97,1	32,7	97,6	96,6	83,3	91,3	95,5	98,1	96,9	97,8

Normalised average contents of the valuable Ti-containing minerals:

Average content	Category			
	ilmenite	leucoxene	rutile	other Ti-ox.
TiO_2 w/w	60,1	78,7	96,1	42,6
Fe_2O_3 w/w	34,8	12,9	1,5	38,0
MnO w/w	2,2	1,3	0,2	0,3
Cr_2O_3 w/w	0,2	0,2	0,2	0,4
SiO_2 w/w	1,4	3,4	0,7	17,3
Al_2O_3 w/w	0,5	2,4	0,7	0,4
MgO w/w	0,3	0,1	0,1	0,0
CaO w/w	0,1	0,4	0,1	0,0
ZrO_2 w/w	0,3	0,6	0,3	1,0
Total	100,0	100,0	100,0	100,0

Average TiO_2 content of all the TiO_2 minerals: 66,0

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 62,5

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	59,93
leucoxene	9,45
pyrite	0,88
rutile	8,08
silicate	7,46
sphene	0,00
otherTi-ox.	0,35
unclassified	4,45
zircon	4,12
garnet	0,96
monazite	0,00
phosphate	0,00
sillimanite	0,12
staurolite	4,20
Y-phosphate	0,00
Total	100,00

the raw sand

Category	w/w
ilmenite	1,02
leucoxene	0,16
pyrite	0,01
rutile	0,14
silicate	98,43
sphene	0,00
otherTi-ox.	0,01
unclassified	0,08
zircon	0,07
garnet	0,02
monazite	0,00
phosphate	0,00
sillimanite	0,00
staurolite	0,07
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

Category	w/w
ilmenite	72,19
leucoxene	11,38
rutile	9,74
otherTi-ox.	0,42
zircon	4,96
garnet	1,15
sillimanite	0,15
Total	100,00

Valuable heavy minerals in raw sand: 1,41

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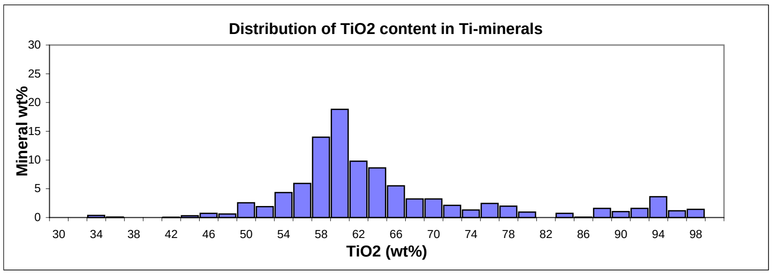
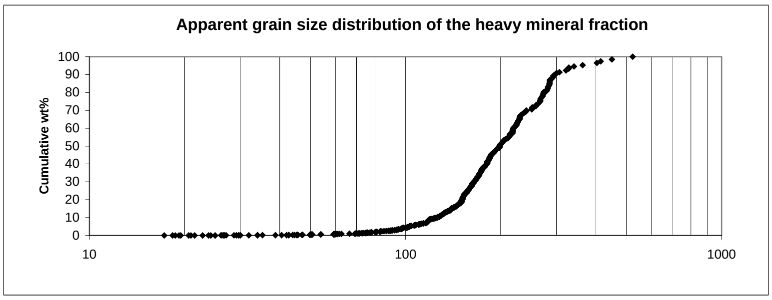
Sample Name: V41 12-23   Date: 15-03-00

Submitter: Dupont
Analyzed by: CCA
Acc. Voltage 17kV





Average grain parameters	Category									
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	sillimanite	staurolite
Aspect ratio	1,55	1,51	1,21	1,40	1,63	1,42	1,42	1,59	1,62	1,44	1,82
Circularity	1,79	1,98	1,94	1,80	2,08	1,70	2,00	1,65	1,87	2,32	2,29
Perimeter (μm)	607,28	723,75	495,24	675,56	835,56	529,05	896,69	538,59	478,80	658,63	1061,47
Length (μm)	231,94	291,10	198,33	264,25	343,43	200,90	369,89	195,33	188,20	275,23	439,64
Total grains	267	33	6	25	34	2	16	23	9	1	9

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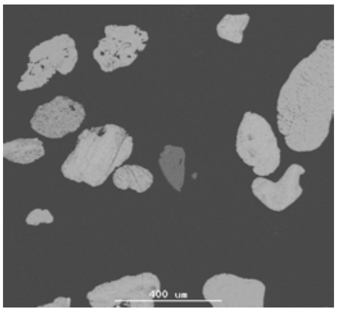

Sample Name:	V42 14-20
Date:	12-03-00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	80x
Guard region	150 µm
Sieve	100 μm^2

Number of frames: 81

Number of valuable particles analyzed: 325

Heavy minerals in raw sand (%): 4,30

Average content	Category										
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox.	unclassified	zircon	garnet	sillimanite	staurolite
TiO_2 w/w	57,5	74,6	0,2	94,6	0,9	40,9	0,0	0,2	0,2	0,2	0,5
Fe_2O_3 w/w	36,4	18,0	31,3	1,1	2,3	25,0	26,9	0,5	27,2	0,7	14,5
MnO w/w	2,0	2,0	0,3	0,2	0,1	2,2	1,0	0,1	8,5	0,2	0,5
Cr_2O_3 w/w	0,2	0,2	0,1	0,2	0,1	0,0	0,1	0,2	0,1	0,2	0,1
SiO_2 w/w	0,9	1,7	1,8	0,4	68,6	4,0	17,1	29,4	36,9	42,3	33,5
Al_2O_3 w/w	0,5	1,2	1,0	0,5	23,3	25,7	8,1	0,1	19,3	53,4	47,5
MgO w /w	0,4	0,2	0,1	0,1	1,5	0,0	1,1	0,1	2,5	0,0	1,6
CaO w/w	0,1	0,3	0,4	0,1	0,3	0,1	3,2	0,3	3,5	0,0	0,1
ZrO_2 w/w	0,3	0,2	0,3	0,5	0,2	0,6	0,3	64,0	0,3	0,3	0,3
Total	98,3	98,3	35,5	97,7	97,4	98,5	57,7	94,9	98,5	97,4	98,6

Normalised average contents of the valuable Ti-containing minerals:

Average content	Category			
	ilmenite	leucoxene	rutile	other Ti-ox.
TiO_2 w/w	58,5	75,9	96,9	41,5
Fe_2O_3 w/w	37,0	18,3	1,1	25,3
MnO w/w	2,1	2,0	0,2	2,2
Cr_2O_3 w/w	0,2	0,2	0,2	0,0
SiO_2 w/w	0,9	1,7	0,4	4,1
Al_2O_3 w/w	0,5	1,2	0,5	26,1
MgO w/w	0,4	0,2	0,1	0,0
CaO w/w	0,1	0,3	0,1	0,1
ZrO_2 w/w	0,3	0,2	0,5	0,6
Total	100,0	100,0	100,0	100,0

Average TiO_2 content of all the TiO_2 minerals: 61,6

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 59,9

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	73,62
leucoxene	6,54
pyrite	0,46
rutile	3,77
silicate	1,11
sphene	0,00
otherTi-ox.	0,21
unclassified	0,00
zircon	9,37
garnet	1,85
monazite	0,00
phosphate	0,00
sillimanite	2,09
staurolite	0,98
Y-phosphate	0,00
Total	100,00

the raw sand

Category	w/w
ilmenite	3,17
leucoxene	0,28
pyrite	0,02
rutile	0,16
silicate	95,75
sphene	0,00
otherTi-ox.	0,01
unclassified	0,00
zircon	0,40
garnet	0,08
monazite	0,00
phosphate	0,00
sillimanite	0,09
staurolite	0,04
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

Category	w/w
ilmenite	75,55
leucoxene	6,71
rutile	3,87
otherTi-ox.	0,22
zircon	9,61
garnet	1,89
sillimanite	2,15
Total	100,00

Valuable heavy minerals in raw sand: 4,19

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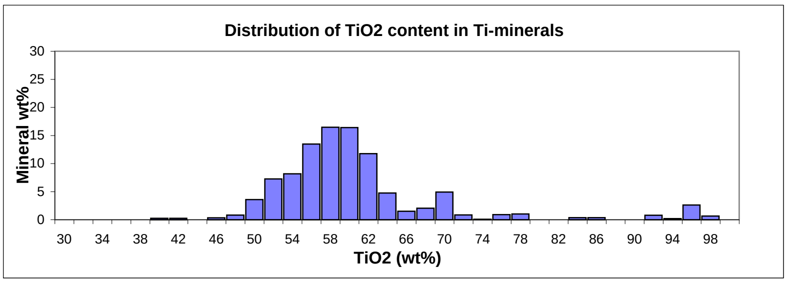
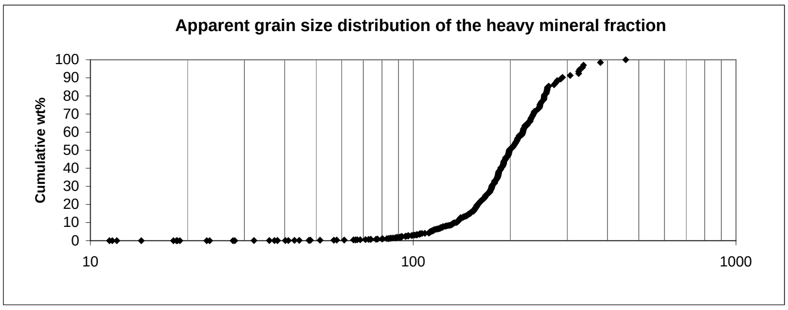
Sample Name: V42 14-20 Date: 12-03-00

Submitter: Dupont
Analyzed by: CCA
Acc. Voltage 17kV





Average grain parameters	Category										
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox.	unclassified	zircon	garnet	sillimanite	staurolite
Aspect ratio	1,55	1,48	1,69	1,47	1,64	1,14	1,39	1,34	1,84	1,56	1,35
Circularity	1,88	2,05	3,19	1,79	1,78	1,45	1,56	1,81	2,06	2,03	2,12
Perimeter (µm)	698,84	872,95	538,86	626,78	397,42	527,69	56,39	699,39	705,86	1275,30	679,55
Length (µm)	271,94	349,85	242,94	235,55	157,09	178,22	20,12	266,31	283,95	519,08	279,48
Total grains	238	14	4	12	13	1	1	28	7	3	4

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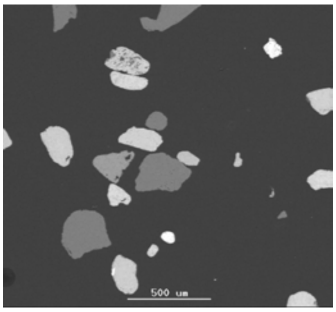

Sample Name:	V42 3-11
Date:	15-03-00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	50x
Guard region	200 µm
Sieve	100 µm^2

Number of frames: 30

Number of valuable particles analyzed: 358

Heavy minerals in raw sand (%): 1,30

Average content	Category										
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	sillimanite	staurolite
TiO_2 w/w	58,48	75,54	0,16	93,86	0,67	12,90	9,28	0,39	0,58	0,15	0,55
Fe_2O_3 w/w	33,34	11,37	36,41	1,37	7,70	39,63	12,32	0,71	21,82	1,40	13,79
MnO w/w	2,20	0,92	0,00	0,07	0,42	0,53	0,79	0,20	13,35	0,22	0,32
Cr_2O_3 w/w	0,21	0,16	0,00	0,27	0,14	0,00	3,83	0,20	0,07	0,00	0,34
SiO_2 w/w	1,90	5,23	0,76	0,99	57,13	13,67	29,90	29,53	36,44	42,87	33,08
Al_2O_3 w/w	0,95	2,65	0,38	0,77	18,68	0,90	8,98	0,28	18,97	54,32	47,70
MgO w /w	0,29	0,10	0,24	0,09	1,11	0,40	0,57	0,10	1,29	0,00	1,76
CaO w/w	0,13	0,39	0,27	0,14	10,56	1,03	2,75	0,20	5,00	0,00	0,03
ZrO_2 w/w	0,34	0,56	0,00	0,38	0,33	0,41	16,60	63,87	0,34	0,00	0,17
Total	97,85	96,93	38,21	97,93	96,75	69,46	85,02	95,49	97,85	98,95	97,75

Normalised average contents of the valuable Ti-containing minerals:

Average content	Category			
	ilmenite	leucoxene	rutile	other Ti-ox.
TiO_2 w/w	59,8	77,9	95,8	18,6
Fe_2O_3 w/w	34,1	11,7	1,4	57,0
MnO w/w	2,3	1,0	0,1	0,8
Cr_2O_3 w/w	0,2	0,2	0,3	0,0
SiO_2 w/w	1,9	5,4	1,0	19,7
Al_2O_3 w/w	1,0	2,7	0,8	1,3
MgO w/w	0,3	0,1	0,1	0,6
CaO w/w	0,1	0,4	0,1	1,5
ZrO_2 w/w	0,3	0,6	0,4	0,6
Total	100,0	100,0	100,0	100,0

Average TiO_2 content of all the TiO_2 minerals: 62,9

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 60,6

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	65,13
leucoxene	3,51
pyrite	1,36
rutile	4,75
silicate	13,08
sphene	0,00
otherTi-ox.	0,12
unclassified	2,80
zircon	5,37
garnet	1,20
monazite	0,00
phosphate	0,00
sillimanite	1,39
staurolite	1,29
Y-phosphate	0,00
Total	100,00

the raw sand

Category	w/w
ilmenite	0,85
leucoxene	0,05
pyrite	0,02
rutile	0,06
silicate	98,87
sphene	0,00
otherTi-ox.	0,00
unclassified	0,04
zircon	0,07
garnet	0,02
monazite	0,00
phosphate	0,00
sillimanite	0,02
staurolite	0,02
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

Category	w/w
ilmenite	79,95
leucoxene	4,30
rutile	5,83
otherTi-ox.	0,14
zircon	6,59
garnet	1,47
sillimanite	1,71
Total	100,00

Valuable heavy minerals in raw sand: 1,06

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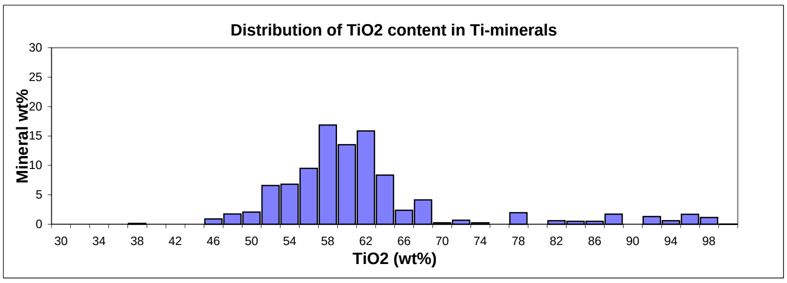
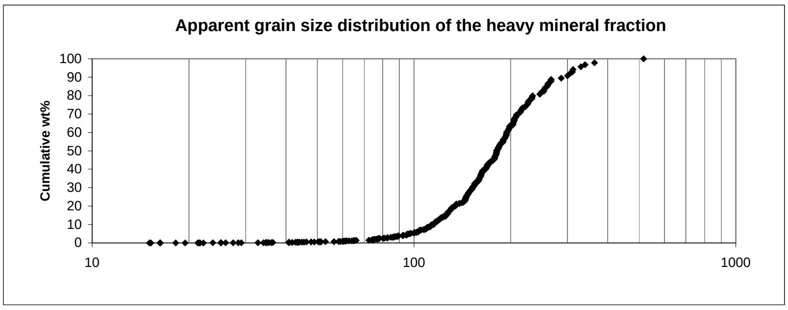
Sample Name: V42 3-11 Date: 15-03-00

Submitter: Dupont
Analyzed by: CCA
Acc. Voltage 17kV





Average grain parameters	Category										
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	sillimanite	staurolite
Aspect ratio	1,53	1,37	4,03	1,69	1,50	1,23	1,34	1,40	1,60	3,09	1,50
Circularity	1,74	1,98	11,16	1,71	2,05	1,41	1,77	1,73	1,79	2,82	1,72
Perimeter (μm)	582,78	611,08	3147,75	644,25	651,27	167,83	557,62	486,71	432,62	1353,86	369,53
Length (μm)	220,45	243,65	1527,64	243,67	262,64	62,30	230,57	181,45	168,55	592,83	141,04
Total grains	213	12	1	12	59	3	14	25	7	2	10

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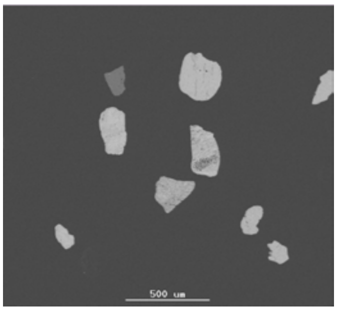
Sample Name:	V44 22-26
Date:	12-03-00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	50x
Guard region	200 µm
Sieve	100 µm^2

Number of frames: 63

Number of valuable particles analyzed: 474

Heavy minerals in raw sand (%): 1,90



Average content	Category										
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox.	unclassified	zircon	garnet	sillimanite	staurolite
TiO_2 w/w	58,3	75,6	0,2	94,5	0,4	27,2	7,1	0,1	0,4	0,2	0,7
Fe_2O_3 w/w	35,4	17,6	30,5	2,2	11,8	44,6	19,2	0,3	28,4	0,8	14,7
MnO w/w	2,2	1,4	0,1	0,2	1,6	1,5	2,9	0,2	6,1	0,2	0,3
Cr_2O_3 w/w	0,2	0,2	0,0	0,2	0,1	0,3	13,4	0,2	0,1	0,3	0,1
SiO_2 w/w	0,8	0,7	2,5	0,5	47,6	2,2	7,6	29,7	37,1	42,9	33,5
Al_2O_3 w/w	0,5	1,2	0,8	0,3	27,8	1,5	15,1	0,0	19,5	53,4	47,1
MgO w /w	0,3	0,1	0,1	0,1	2,0	0,7	3,5	0,1	2,8	0,0	1,7
CaO w/w	0,1	0,3	0,2	0,1	2,8	0,7	1,2	0,1	3,6	0,1	0,2
ZrO_2 w/w	0,2	0,6	0,2	0,2	0,3	2,7	2,2	65,2	0,2	0,1	0,3
Total	98,0	97,8	34,5	98,3	94,5	81,5	72,3	95,9	98,3	97,9	98,6

Normalised average contents of the valuable Ti-containing minerals:

Average content	Category			
	ilmenite	leucoxene	rutile	other Ti-ox.
TiO_2 w/w	59,5	77,3	96,1	33,4
Fe_2O_3 w/w	36,2	18,0	2,2	54,8
MnO w/w	2,2	1,5	0,2	1,8
Cr_2O_3 w/w	0,2	0,2	0,2	0,4
SiO_2 w/w	0,8	0,7	0,5	2,7
Al_2O_3 w/w	0,5	1,2	0,3	1,9
MgO w/w	0,3	0,1	0,1	0,9
CaO w/w	0,1	0,3	0,1	0,9
ZrO_2 w/w	0,2	0,6	0,2	3,3
Total	100,0	100,0	100,0	100,0

Average TiO_2 content of all the TiO_2 minerals: 62,0

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 60,9

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	63,24
leucoxene	7,25
pyrite	1,81
rutile	2,43
silicate	6,59
sphene	0,00
otherTi-ox.	1,12
unclassified	0,18
zircon	5,15
garnet	6,13
monazite	0,00
phosphate	0,00
sillimanite	1,59
staurolite	4,51
Y-phosphate	0,00
Total	100,00

the raw sand

Category	w/w
ilmenite	1,20
leucoxene	0,14
pyrite	0,03
rutile	0,05
silicate	98,23
sphene	0,00
otherTi-ox.	0,02
unclassified	0,00
zircon	0,10
garnet	0,12
monazite	0,00
phosphate	0,00
sillimanite	0,03
staurolite	0,09
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

Category	w/w
ilmenite	72,76
leucoxene	8,35
rutile	2,79
otherTi-ox.	1,29
zircon	5,93
garnet	7,06
sillimanite	1,83
Total	100,00

Valuable heavy minerals in raw sand: 1,65

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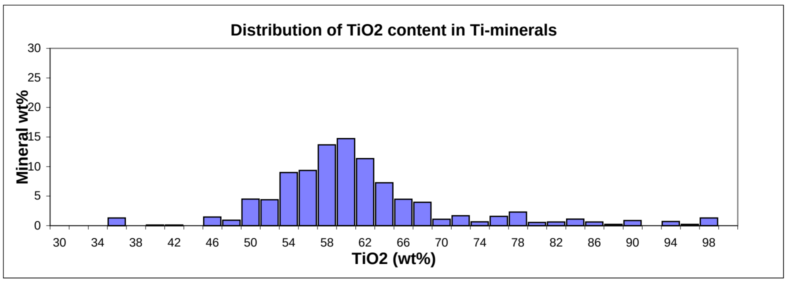
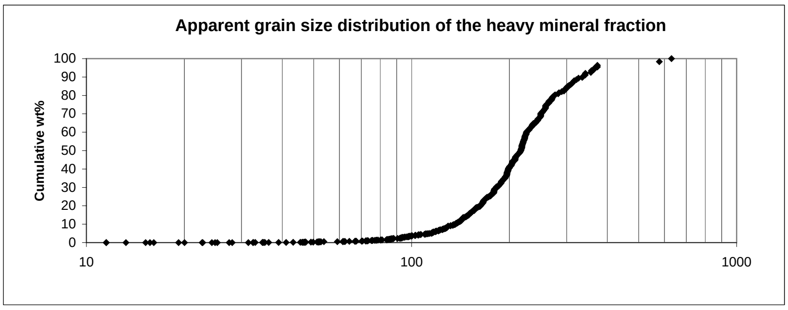
Sample Name: V44 22-26 Date: 12-03-00

Submitter: Dupont
Analyzed by: CCA
Acc. Voltage 17kV





Average grain parameters	Category										
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox.	unclassified	zircon	garnet	sillimanite	staurolite
Aspect ratio	1,51	1,40	1,64	1,60	1,58	1,41	1,53	1,47	1,76	2,02	1,69
Circularity	1,79	1,84	2,42	1,77	2,03	1,78	1,37	1,86	2,19	2,26	2,21
Perimeter (μm)	661,01	825,82	680,73	708,36	794,66	520,79	214,77	774,91	854,25	834,78	998,83
Length (μm)	251,27	312,42	289,39	269,83	328,63	220,99	84,01	301,48	350,40	345,66	408,79
Total grains	316	24	10	10	35	6	8	20	25	8	12

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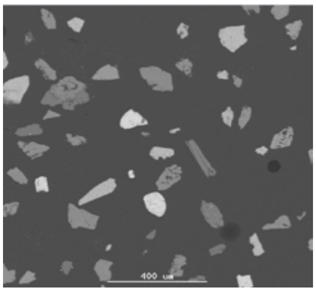

Sample Name:	V47 19-23
Date:	11-03-00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	80x
Guard region	150 μm
Sieve	$100\ \mu m^2$

Number of frames: 42

Number of valuable particles analyzed: 1051

Heavy minerals in raw sand (%): 4,20

Average content	Category											
	ilmenite	leucoxene	pyrite	rutile	silicate	sphene	other Ti-ox.	unclassified	zircon	garnet	sillimanite	staurolite
TiO_2 w/w	53,7	74,8	0,1	91,8	1,0	35,6	40,9	19,1	0,3	0,4	0,4	2,5
Fe_2O_3 w/w	36,9	8,4	31,0	1,8	9,8	1,2	42,8	11,0	0,7	25,3	0,8	12,9
MnO w/w	2,3	0,7	0,2	0,3	0,3	0,3	3,1	0,9	0,3	2,5	0,2	0,1
Cr_2O_3 w/w	0,2	0,4	0,1	0,3	0,2	0,1	0,3	0,5	0,2	0,2	0,1	0,2
SiO_2 w/w	2,3	5,9	2,4	1,9	44,5	29,3	4,6	28,2	29,3	39,4	42,6	31,5
Al_2O_3 w/w	1,4	4,4	1,0	0,9	21,4	2,1	2,2	17,0	0,1	20,9	54,1	49,4
MgO w /w	0,3	0,3	0,2	0,1	1,5	0,1	0,4	1,3	0,2	3,3	0,0	1,8
CaO w/w	0,3	1,0	0,1	0,2	17,6	28,0	0,4	7,6	0,2	3,5	0,2	0,0
ZrO_2 w/w	0,3	0,7	0,2	0,3	0,2	0,5	0,3	6,8	64,2	0,2	0,5	0,2
Total	97,7	96,6	35,3	97,4	96,6	97,3	94,8	92,3	95,5	95,6	99,0	98,6

Normalised average contents of the valuable Ti-containing minerals:

Average content	Category			
	ilmenite	leucoxene	rutile	other Ti-ox.
TiO_2 w/w	55,0	77,5	94,2	43,1
Fe_2O_3 w/w	37,8	8,7	1,8	45,1
MnO w/w	2,3	0,8	0,3	3,3
Cr_2O_3 w/w	0,2	0,4	0,3	0,3
SiO_2 w/w	2,4	6,1	1,9	4,8
Al_2O_3 w/w	1,4	4,6	0,9	2,3
MgO w/w	0,3	0,3	0,1	0,4
CaO w/w	0,3	1,1	0,2	0,4
ZrO_2 w/w	0,3	0,7	0,3	0,3
Total	100,0	100,0	100,0	100,0

Average TiO_2 content of all the TiO_2 minerals: 63,4

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 60,3

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	22,03
leucoxene	8,47
pyrite	2,75
rutile	3,21
silicate	52,64
sphene	0,52
otherTi-ox.	1,61
unclassified	2,74
zircon	1,79
garnet	3,46
monazite	0,00
phosphate	0,00
sillimanite	0,35
staurolite	0,43
Y-phosphate	0,00
Total	100,00

the raw sand

Category	w/w
ilmenite	0,93
leucoxene	0,36
pyrite	0,12
rutile	0,13
silicate	98,01
sphene	0,02
otherTi-ox.	0,07
unclassified	0,12
zircon	0,08
garnet	0,15
monazite	0,00
phosphate	0,00
sillimanite	0,01
staurolite	0,02
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

Category	w/w
ilmenite	53,83
leucoxene	20,69
rutile	7,85
otherTi-ox.	3,94
zircon	4,38
garnet	8,45
sillimanite	0,86
Total	100,00

Valuable heavy minerals in raw sand: 1,72

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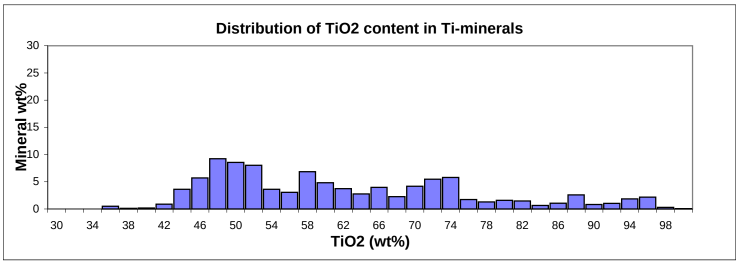
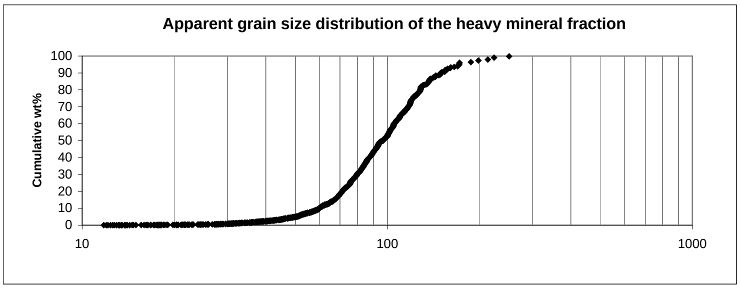
Sample Name: V47 19-23 Date: 11-03-00

Submitter: Dupont
Analyzed by: CCA
Acc. Voltage 17kV





Average grain parameters	Category											
	ilmenite	leucoxene	pyrite	rutile	silicate	sphene	other Ti-ox.	unclassified	zircon	garnet	sillimanite	staurolite
Aspect ratio	1,69	1,69	1,62	1,81	1,77	1,71	1,81	1,69	1,45	1,96	1,87	2,91
Circularity	1,96	2,25	2,25	1,95	2,13	1,71	2,03	2,50	1,60	2,34	2,21	2,71
Perimeter (μm)	319,54	399,38	443,87	287,13	339,52	233,73	263,89	380,82	275,70	336,60	406,49	559,09
Length (μm)	126,57	165,16	192,80	112,19	138,83	89,04	105,87	164,83	99,39	138,67	167,67	240,20
Total grains	179	50	10	27	671	9	19	32	17	32	3	2

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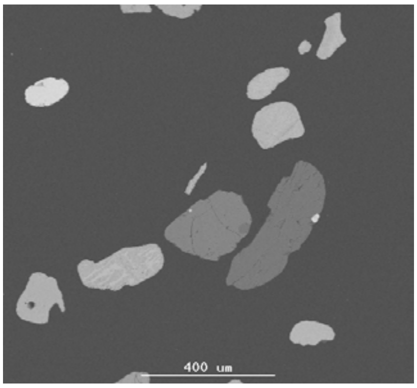
Sample Name:	V53 6-11 m
Date:	06-07-00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	80x
Guard region	100 µm
Sieve	100 μm^2

Number of frames: 81

Number of valuable particles analyzed: 574

Heavy minerals in raw sand (%): 1,45



Average content	Category									
	ilmenite	leucoxene	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	sillimanite	staurolite
TiO_2 w/w	58,4	75,2	94,6	0,4	29,9	23,6	0,2	0,4	0,1	0,9
Fe_2O_3 w/w	33,5	14,2	0,9	6,6	48,4	15,5	0,2	25,9	0,8	14,0
MnO w/w	2,2	1,2	0,2	0,3	2,7	2,5	0,2	5,7	0,1	0,3
Cr_2O_3 w/w	0,1	0,3	0,1	0,2	0,7	7,2	0,2	0,2	0,1	0,2
SiO_2 w/w	2,0	3,2	1,0	45,9	9,5	12,8	29,7	38,0	42,4	32,8
Al_2O_3 w/w	1,0	2,1	0,7	30,5	1,8	23,5	0,1	19,7	53,9	47,8
MgO w /w	0,3	0,2	0,1	0,8	0,7	3,4	0,2	4,2	0,1	1,6
CaO w/w	0,1	0,3	0,0	12,5	0,2	0,1	0,1	4,3	0,1	0,1
ZrO_2 w/w	0,3	0,4	0,3	0,2	1,2	0,6	64,0	0,0	0,2	0,3
Total	98,0	97,0	97,8	97,3	95,0	89,1	94,9	98,3	97,9	97,9

Normalised average contents of the valuable Ti-containing minerals:

Average content	Category			
	ilmenite	leucoxene	rutile	other Ti-ox.
TiO_2 w/w	59,6	77,5	96,6	31,5
Fe_2O_3 w/w	34,2	14,6	0,9	51,0
MnO w/w	2,2	1,2	0,2	2,8
Cr_2O_3 w/w	0,1	0,3	0,1	0,7
SiO_2 w/w	2,0	3,3	1,0	10,0
Al_2O_3 w/w	1,0	2,2	0,7	1,9
MgO w/w	0,3	0,2	0,1	0,7
CaO w/w	0,1	0,3	0,0	0,2
ZrO_2 w/w	0,3	0,4	0,3	1,2
Total	100,0	100,0	100,0	100,0

Average TiO_2 content of all the TiO_2 minerals: 62,4

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 60,0

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	67,21
leucoxene	3,05
pyrite	0,00
rutile	4,97
silicate	11,73
sphene	0,00
otherTi-ox.	1,02
unclassified	0,84
zircon	4,70
garnet	0,97
monazite	0,00
phosphate	0,00
sillimanite	3,07
staurolite	2,43
Y-phosphate	0,00
Total	100,00

the raw sand

Category	w/w
ilmenite	0,97
leucoxene	0,04
pyrite	0,00
rutile	0,07
silicate	98,72
sphene	0,00
otherTi-ox.	0,01
unclassified	0,01
zircon	0,07
garnet	0,01
monazite	0,00
phosphate	0,00
sillimanite	0,04
staurolite	0,04
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

Category	w/w
ilmenite	79,08
leucoxene	3,58
rutile	5,85
otherTi-ox.	1,21
zircon	5,53
garnet	1,15
sillimanite	3,61
Total	100,00

Valuable heavy minerals in raw sand: 1,23

Geological Survey of Denmark and Greenland
Thoravej 8, DK-2400 Copenhagen NV
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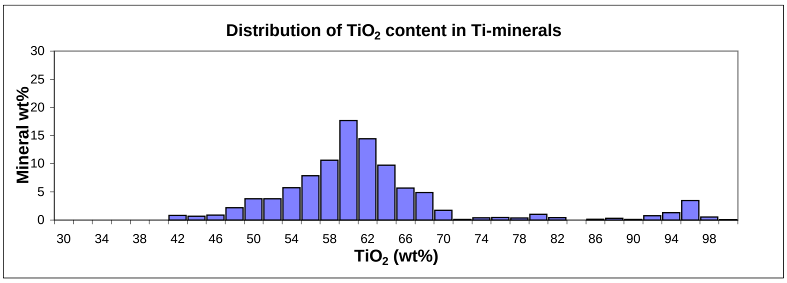
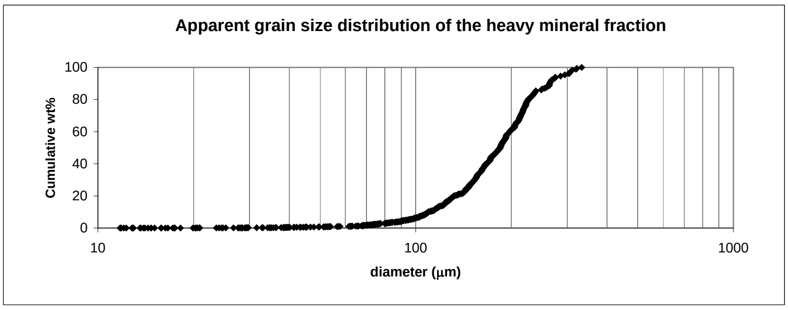
Sample Name: V53 6-11 m   Date: 06-07-00

Submitter: Dupont
Analyzed by: CCA
Acc. Voltage 17kV





Average grain parameters	Category									
	ilmenite	leucoxene	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	sillimanite	staurolite
Aspect ratio	1,52	1,51	1,57	1,63	1,50	1,35	1,46	1,40	1,83	1,66
Circularity	1,88	1,89	1,99	2,06	1,63	1,65	1,70	2,44	2,12	2,27
Perimeter (μm)	569,46	481,27	524,04	591,30	349,71	476,27	497,04	523,76	736,86	872,74
Length (μm)	220,38	188,27	210,30	239,23	134,58	185,55	185,50	214,07	299,95	358,32
Total grains	350	21	29	94	10	8	30	7	17	8

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Thoravej 8, DK-2400 Copenhagen NV
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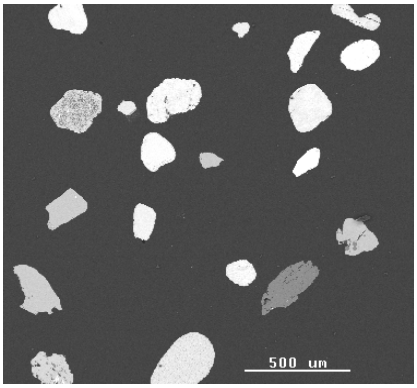
Sample Name:	V53 12-23
Date:	12-07-00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	50x
Guard region	250 µm
Sieve	100 μm^2

Number of frames: 49

Number of valuable particles analyzed: 305

Heavy minerals in raw sand (%): 2,76



Average content	Category									
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	sillimanite	staurolite
TiO_2 w/w	57,0	73,1	0,1	93,5	1,5	39,5	8,7	0,2	0,6	0,1	0,5
Fe_2O_3 w/w	35,7	16,8	30,2	1,2	6,0	41,9	11,0	0,3	26,2	0,4	14,4
MnO w/w	2,3	2,0	0,3	0,1	2,0	1,0	0,8	0,3	8,8	0,2	0,5
Cr_2O_3 w/w	0,2	0,1	0,1	0,2	0,2	0,2	2,6	0,2	0,2	0,1	0,0
SiO_2 w/w	0,7	0,9	1,8	1,2	45,2	0,3	19,3	29,7	37,2	42,2	32,3
Al_2O_3 w/w	0,5	2,1	0,6	0,4	38,3	0,2	7,1	0,0	19,4	54,0	48,3
MgO w /w	0,2	0,2	0,1	0,1	0,4	0,6	1,1	0,1	2,4	0,0	1,4
CaO w/w	0,1	0,3	0,1	0,2	3,2	0,2	1,6	0,1	2,8	0,0	0,0
ZrO_2 w/w	0,4	0,6	0,4	0,4	0,5	1,7	16,3	63,6	0,2	0,2	0,3
Total	97,1	96,2	33,6	97,3	97,3	85,6	68,6	94,6	97,6	97,2	97,7

Normalised average contents of the valuable Ti-containing minerals:

Average content	Category			
	ilmenite	leucoxene	rutile	other Ti-ox.
TiO_2 w/w	58,7	75,9	96,1	46,1
Fe_2O_3 w/w	36,8	17,5	1,2	48,9
MnO w/w	2,3	2,1	0,1	1,1
Cr_2O_3 w/w	0,2	0,1	0,2	0,2
SiO_2 w/w	0,7	0,9	1,2	0,3
Al_2O_3 w/w	0,5	2,2	0,4	0,2
MgO w/w	0,3	0,3	0,1	0,7
CaO w/w	0,1	0,3	0,2	0,3
ZrO_2 w/w	0,4	0,6	0,5	2,0
Total	100,0	100,0	100,0	100,0

Average TiO_2 content of all the TiO_2 minerals: 60,6

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 59,3

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	67,16
leucoxene	3,11
pyrite	2,02
rutile	2,61
silicate	5,62
sphene	0,00
otherTi-ox.	0,96
unclassified	2,35
zircon	8,06
garnet	3,08
monazite	0,00
phosphate	0,00
sillimanite	4,97
staurolite	0,05
Y-phosphate	0,00
Total	100,00

the raw sand

Category	w/w
ilmenite	1,85
leucoxene	0,09
pyrite	0,06
rutile	0,07
silicate	97,40
sphene	0,00
otherTi-ox.	0,03
unclassified	0,06
zircon	0,22
garnet	0,09
monazite	0,00
phosphate	0,00
sillimanite	0,14
staurolite	0,00
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

Category	w/w
ilmenite	74,66
leucoxene	3,46
rutile	2,90
otherTi-ox.	1,06
zircon	8,96
garnet	3,43
sillimanite	5,52
Total	100,00

Valuable heavy minerals in raw sand: 2,48

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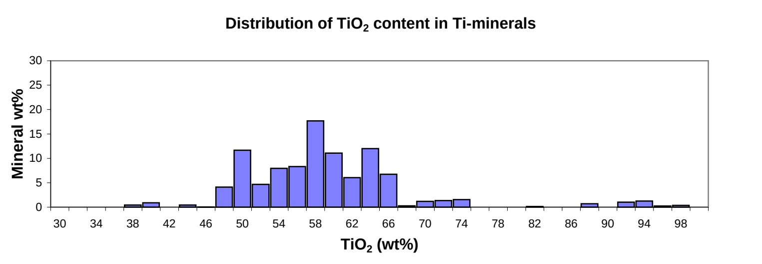
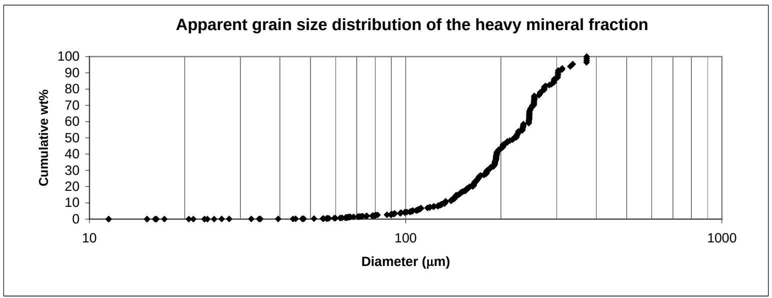
Sample Name: V53 12-23 Date: 12-07-00

Submitter: Dupont
Analyzed by: CCA
Acc. Voltage 17kV

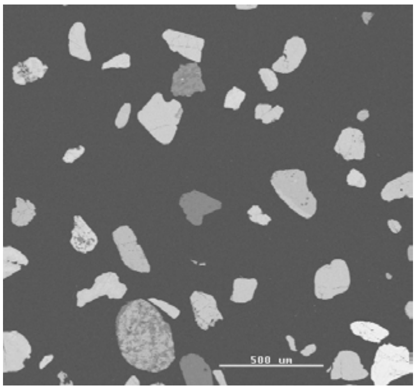




Average grain parameters	Category										
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	sillimanite	staurolite
Aspect ratio	1,54	1,48	1,45	1,41	1,93	1,95	1,48	1,64	1,56	1,30	1,51
Circularity	1,72	1,81	1,81	1,70	2,27	1,79	1,66	1,73	2,63	1,52	1,47
Perimeter (µm)	669,19	607,39	369,06	553,00	806,40	523,74	490,61	638,62	890,36	1082,78	190,20
Length (µm)	249,49	233,15	143,85	208,52	330,23	191,43	203,08	242,93	374,42	354,86	65,07
Total grains	185	10	18	9	22	4	15	25	9	6	2

Geological Survey of Denmark and Greenland
Thoravej 8, DK-2400 Copenhagen NV
Ph: +45 38142000, Fax.: 38142050

Sample Name:	V62 1-13
Date:	13-07-00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	50x
Guard region	250 µm
Sieve	100 µm^2



Number of frames: 30

Number of valuable particles analyzed: 533

Heavy minerals in raw sand (%): 1,82

Average content	Category									
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	sillimanite	staurolite
TiO_2 w/w	59,1	75,5	0,0	92,5	2,2	32,2	13,8	0,4	0,2	0,2	0,6
Fe_2O_3 w/w	33,1	11,5	27,7	1,2	6,5	50,4	13,1	0,3	24,2	0,8	12,0
MnO w/w	2,1	0,8	0,0	0,2	0,5	0,7	0,6	0,2	10,2	0,3	0,2
Cr_2O_3 w/w	0,1	0,2	0,1	0,2	0,1	0,9	10,2	0,2	0,2	0,1	0,2
SiO_2 w/w	1,5	4,7	14,9	1,8	48,0	4,5	14,3	29,5	37,0	43,0	33,9
Al_2O_3 w/w	0,9	2,6	0,0	0,7	31,8	0,6	2,4	0,1	19,4	53,9	46,6
MgO w /w	0,3	0,2	0,0	0,1	1,3	0,1	0,9	0,1	2,1	0,0	1,4
CaO w/w	0,1	0,2	0,6	0,2	6,3	0,0	1,7	0,2	4,8	0,1	0,0
ZrO_2 w/w	0,3	0,5	0,0	0,4	0,4	5,8	16,3	63,3	0,2	0,2	1,1
Total	97,6	96,2	43,3	97,3	97,3	95,2	73,2	94,4	98,3	98,5	96,1

Normalised average contents of the valuable Ti-containing minerals:

Average content	Category			
	ilmenite	leucoxene	rutile	other Ti-ox.
TiO_2 w/w	60,6	78,5	95,1	33,8
Fe_2O_3 w/w	33,9	11,9	1,2	52,9
MnO w/w	2,1	0,8	0,2	0,7
Cr_2O_3 w/w	0,1	0,2	0,2	0,9
SiO_2 w/w	1,6	4,9	1,9	4,7
Al_2O_3 w/w	0,9	2,7	0,7	0,7
MgO w/w	0,3	0,2	0,1	0,1
CaO w/w	0,1	0,2	0,2	0,0
ZrO_2 w/w	0,3	0,6	0,4	6,0
Total	100,0	100,0	100,0	100,0

Average TiO_2 content of all the TiO_2 minerals: 62,6

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 61,3

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	72,74
leucoxene	3,95
pyrite	0,02
rutile	3,15
silicate	6,34
sphene	0,00
otherTi-ox.	0,46
unclassified	0,58
zircon	6,49
garnet	2,18
monazite	0,00
phosphate	0,00
sillimanite	3,19
staurolite	0,91
Y-phosphate	0,00
Total	100,00

the raw sand

Category	w/w
ilmenite	1,32
leucoxene	0,07
pyrite	0,00
rutile	0,06
silicate	98,30
sphene	0,00
otherTi-ox.	0,01
unclassified	0,01
zircon	0,12
garnet	0,04
monazite	0,00
phosphate	0,00
sillimanite	0,06
staurolite	0,02
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

Category	w/w
ilmenite	78,93
leucoxene	4,29
rutile	3,42
otherTi-ox.	0,49
zircon	7,04
garnet	2,37
sillimanite	3,46
Total	100,00

Valuable heavy minerals in raw sand: 1,68

Geological Survey of Denmark and Greenland
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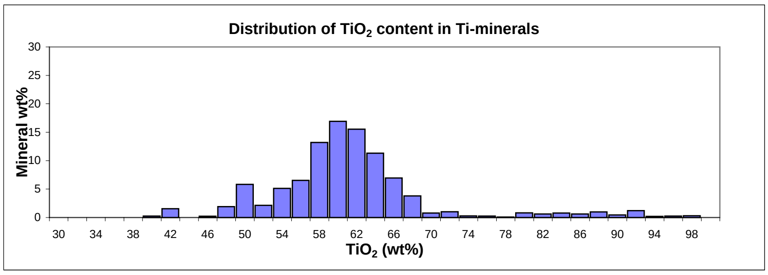
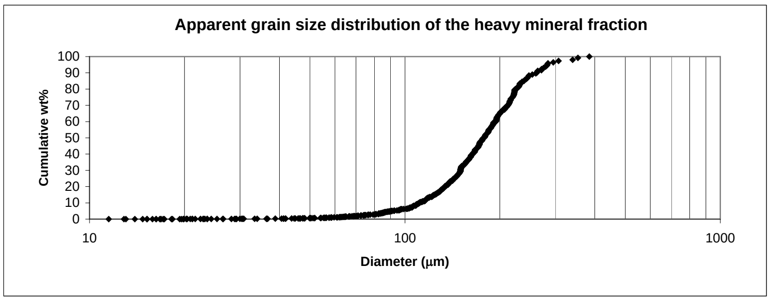
Sample Name: V62 1-13

Date: 13-07-00

Submitter: Dupont
Analyzed by: CCA
Acc. Voltage 17kV





Average grain parameters	Category										
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	sillimanite	staurolite
Aspect ratio	1,56	1,57	1,31	1,49	1,60	1,35	1,40	1,40	1,46	1,94	1,32
Circularity	1,76	1,57	1,35	1,63	2,09	1,74	1,36	1,62	1,95	2,21	1,49
Perimeter (µm)	565,36	472,31	148,26	359,36	591,76	414,35	263,45	509,91	671,84	936,46	555,42
Length (µm)	214,45	171,61	45,91	138,40	239,47	165,65	102,59	182,51	264,34	388,69	212,65
Total grains	357	21	1	27	49	4	12	37	10	11	4

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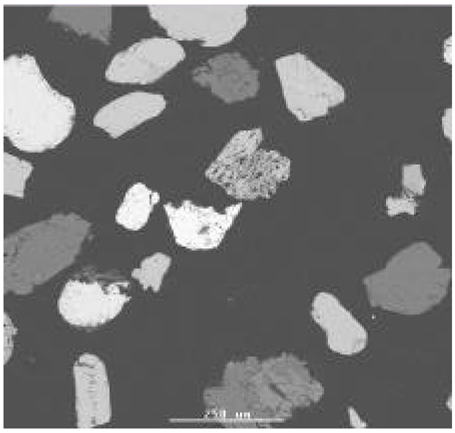

Sample Name:	V62 6m
Date:	11/16/00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	100x
Guard region	120 µm
Sieve	100 μm^2

No. of analysed frames:	81
No. analysed of particles	464
Heavy minerals in raw sand (%):	4.27
comments:	

	Average content									
Category	TiO_2 wt%	Fe_2O_3 wt%	MnO wt%	Cr_2O_3 wt%	SiO_2 wt%	Al_2O_3 wt%	MgO wt%	CaO wt%	ZrO_2 wt%	Total
Ilmenite	61.5	32.1	2.0	0.1	1.0	0.7	0.2	0.1	0.3	98.0
Leucoxene	76.6	15.9	1.5	0.2	1.9	1.1	0.1	0.1	0.3	97.8
Rutile	93.6	1.5	0.1	0.1	1.2	0.9	0.1	0.1	0.2	97.7
Ti magnetite	39.2	29.8	1.4	0.5	18.3	0.7	1.5	0.0	1.3	92.8
Magnetite	0.1	73.4	0.0	0.4	0.5	0.8	0.2	0.0	0.0	75.5
Chromite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pyrite	0.1	31.6	0.1	0.1	2.3	0.4	0.0	0.0	0.2	34.9
Phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monazite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Y-phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sphene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Garnet	0.9	19.5	1.2	0.1	35.0	19.0	1.4	1.7	0.2	79.0
Sillimanite	0.6	0.5	0.3	0.2	42.4	53.4	0.0	0.1	0.5	98.1
Staurolite	0.7	13.7	0.2	0.2	34.1	47.1	1.4	0.1	0.4	97.9
Zircon	0.3	0.5	0.3	0.1	29.7	0.3	0.1	0.1	63.6	94.9
Silicate	2.7	3.3	0.4	0.1	55.3	31.8	0.8	0.6	0.3	95.4
Unclassified	11.9	14.8	0.4	0.2	28.4	10.9	1.7	0.2	7.2	75.7

Valuable heavy minerals								
Category	Ilmenite	Leucoxene	Rutile	Ti magnetite	Garnet	Zircon	Sillimanite	Total
wt %	70.4	14.4	8.2	0.0	0.5	4.5	2.0	100.0

Normalised average contents of the valuable Ti-containing minerals:				
Average content	Category			
	Ilmenite	Leucoxene	Rutile	Ti magnetite
TiO_2 wt%	62.7	78.3	95.8	42.3
Fe_2O_3 wt%	32.7	16.3	1.5	32.1
MnO wt%	2.0	1.6	0.1	1.5
Cr_2O_3 wt%	0.1	0.2	0.1	0.6
SiO_2 wt%	1.0	1.9	1.3	19.7
Al_2O_3 wt%	0.7	1.1	0.9	0.8
MgO wt%	0.2	0.1	0.1	1.6
CaO wt%	0.1	0.1	0.1	0.0
ZrO_2 wt%	0.3	0.3	0.2	1.4
Total	100.0	100.0	100.0	100.0

Average TiO_2 content of all the TiO_2 minerals:	68.1
Average TiO_2 content of all the TiO_2 minerals excl. rutile:	65.4
Valuable heavy minerals in raw sand:	3.43

Weight percent on a mineral basis:		
Category	Heavy mineral concentrate wt %	Raw sand wt %
Ilmenite	56.6	2.4
Leucoxene	11.6	0.5
Rutile	6.6	0.3
Ti magnetite	0.0	0.0
Magnetite	0.0	0.0
Chromite	0.0	0.0
Pyrite	6.9	0.3
Phosphate	0.0	0.0
Monazite	0.0	0.0
Y-phosphate	0.0	0.0
Sphene	0.0	0.0
Garnet	0.4	0.0
Sillimanite	1.6	0.1
Staurolite	1.4	0.1
Zircon	3.6	0.2
Silicate	10.5	96.2
Unclassified	0.8	0.0
Total	100.0	100.0

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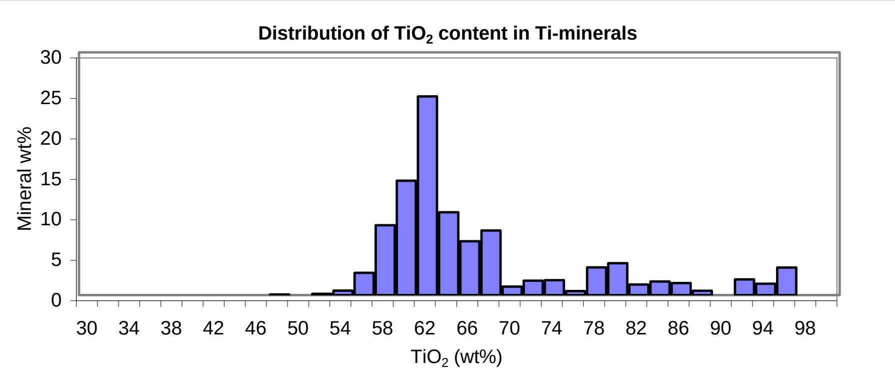
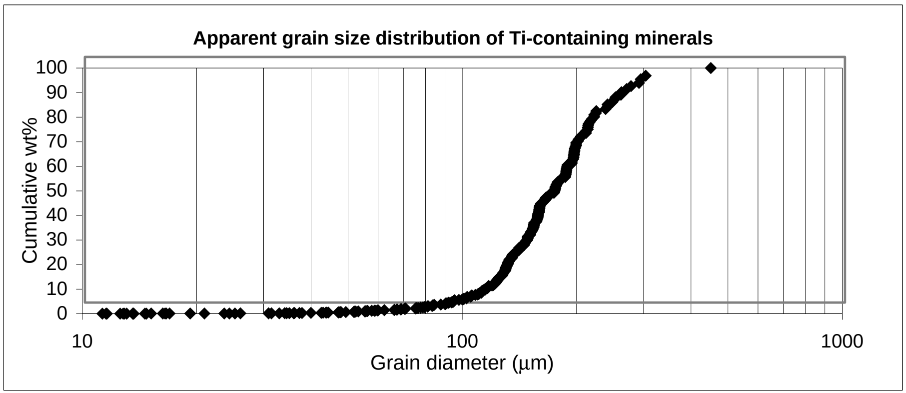
Sample Name:	V62 6m	Analyzed by:	CCA
Submitter:	Dupont	Acc. Voltage	17kV
Date:	11/16/00		





Average grain parameters					
Category	Aspect ratio	Circularity	Perimeter (µm)	Length (µm)	Total grains
Ilmenite	1.6	2.0	554	221	263
Leucoxene	1.4	2.4	848	353	29
Rutile	1.6	2.4	685	290	22
Ti magnetite	1.4	1.2	60	20	2
Magnetite	1.3	1.5	113	39	1
Chromite	0.0	0.0	0	0	0
Pyrite	1.4	2.1	462	187	40
Phosphate	0.0	0.0	0	0	0
Monazite	0.0	0.0	0	0	0
Y-phosphate	0.0	0.0	0	0	0
Sphene	0.0	0.0	0	0	0
Garnet	1.5	1.5	319	126	3
Sillimanite	1.6	2.8	927	403	5
Staurolite	1.7	2.4	549	232	9
Zircon	1.5	1.9	429	165	24
Silicate	1.7	2.6	677	292	58
Unclassified	1.3	2.9	580	258	8

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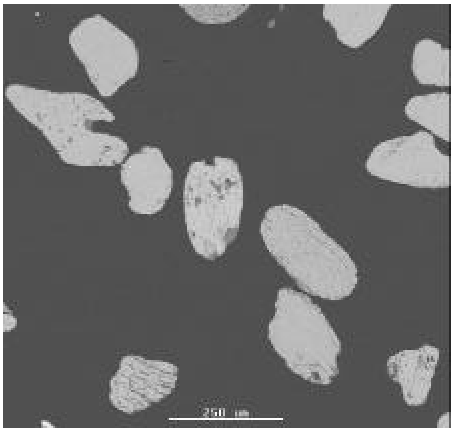

Sample Name:	V62 14m a
Date:	11/27/00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	100x
Guard region	120 µm
Sieve	100 µm^2

No. of analysed frames:	121
No. analysed of particles	537
Heavy minerals in raw sand (%):	2.08
comments:	

	Average content									
Category	TiO_2 wt%	Fe_2O_3 wt%	MnO wt%	Cr_2O_3 wt%	SiO_2 wt%	Al_2O_3 wt%	MgO wt%	CaO wt%	ZrO_2 wt%	Total
Ilmenite	60.1	33.0	1.9	0.1	1.3	0.9	0.3	0.1	0.3	98.0
Leucoxene	75.5	14.9	0.6	0.2	2.5	1.9	0.2	0.1	0.4	96.3
Rutile	95.3	0.8	0.1	0.2	0.9	0.4	0.1	0.0	0.3	98.2
Ti magnetite	31.8	23.5	0.0	0.1	42.1	0.3	0.1	0.0	0.3	98.2
Magnetite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chromite	0.0	18.7	0.7	50.9	0.8	20.2	8.1	0.0	0.0	99.4
Pyrite	0.5	26.7	1.0	0.1	5.2	1.7	0.0	0.2	0.8	36.2
Phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monazite	0.0	0.5	0.0	0.0	1.7	0.0	0.4	1.6	4.2	8.4
Y-phosphate	0.2	0.3	0.1	0.3	0.4	1.1	0.0	0.3	2.1	4.9
Sphene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Garnet	0.2	23.3	13.7	0.1	36.6	19.0	2.8	2.0	0.2	97.8
Sillimanite	0.2	0.7	0.1	0.1	42.7	54.0	0.0	0.0	0.4	98.2
Staurolite	0.7	13.9	0.2	0.1	33.1	47.5	1.5	0.1	0.3	97.3
Zircon	0.2	0.4	0.2	0.2	29.7	0.2	0.1	0.1	64.8	95.9
Silicate	0.5	3.9	0.9	0.1	47.6	40.7	1.1	2.0	0.3	97.1
Unclassified	17.0	11.5	0.5	0.0	21.4	22.7	1.0	11.1	6.3	91.6

Valuable heavy minerals								
Category	Ilmenite	Leucoxene	Rutile	Ti magnetite	Garnet	Zircon	Sillimanite	Total
wt %	80.2	5.5	5.0	0.1	0.6	4.4	4.1	100.0

Normalised average contents of the valuable Ti-containing minerals:				
Average content	Category			
	Ilmenite	Leucoxene	Rutile	Ti magnetite
TiO_2 wt%	61.3	78.4	97.1	32.4
Fe_2O_3 wt%	33.7	15.5	0.8	24.0
MnO wt%	1.9	0.6	0.1	0.0
Cr_2O_3 wt%	0.1	0.2	0.2	0.1
SiO_2 wt%	1.3	2.5	0.9	42.8
Al_2O_3 wt%	1.0	2.0	0.4	0.3
MgO wt%	0.3	0.2	0.1	0.1
CaO wt%	0.1	0.1	0.0	0.0
ZrO_2 wt%	0.3	0.4	0.3	0.3
Total	100.0	100.0	100.0	100.0

Average TiO_2 content of all the TiO_2 minerals:	64.3
Average TiO_2 content of all the TiO_2 minerals excl. rutile:	62.4
Valuable heavy minerals in raw sand:	1.92

Weight percent on a mineral basis:		
Category	Heavy mineral concentrate wt %	Raw sand wt %
Ilmenite	73.9	1.5
Leucoxene	5.1	0.1
Rutile	4.6	0.1
Ti magnetite	0.1	0.0
Magnetite	0.0	0.0
Chromite	0.2	0.0
Pyrite	0.0	0.0
Phosphate	0.0	0.0
Monazite	0.2	0.0
Y-phosphate	0.4	0.0
Sphene	0.0	0.0
Garnet	0.6	0.0
Sillimanite	3.8	0.1
Staurolite	0.6	0.0
Zircon	4.1	0.1
Silicate	6.1	98.0
Unclassified	0.4	0.0
Total	100.0	100.0

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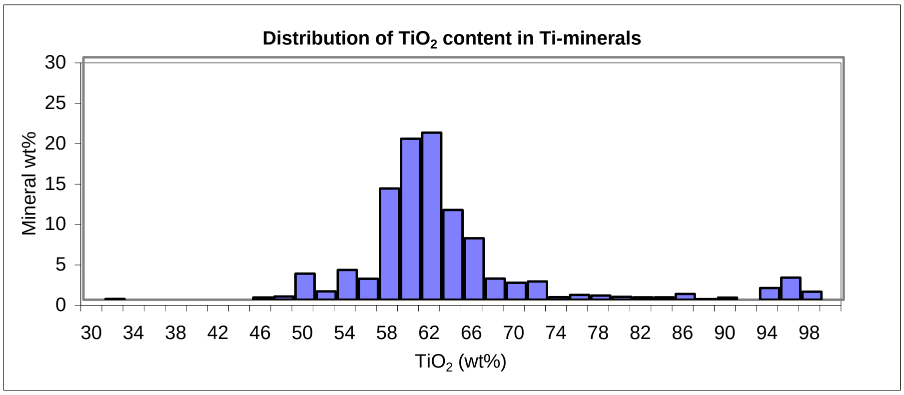
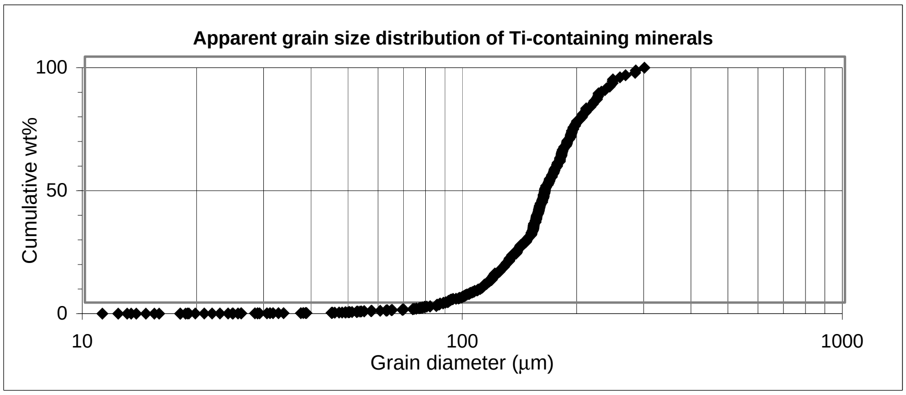
Sample Name:	V62 14m a	Analyzed by:	CCA
Submitter:	Dupont	Acc. Voltage	17kV
Date:	11/27/00		





Category	Aspect ratio	Circularity	Perimeter (µm)	Length (µm)	Area (µm^2)	Total grains
			Average grain parameters			
Ilmenite	1.6	1.9	556	219	15162	381
Leucoxene	1.6	2.0	658	256	19008	21
Rutile	1.6	2.1	621	255	15511	21
Ti magnetite	1.3	2.0	379	152	5733	1
Magnetite	0.0	0.0	0	0	0	0
Chromite	1.6	1.9	569	222	13857	1
Pyrite	1.1	1.1	41	14	121	1
Phosphate	0.0	0.0	0	0	0	0
Monazite	1.3	1.5	528	187	14395	1
Y-phosphate	1.9	2.2	587	241	12660	2
Sphene	0.0	0.0	0	0	0	0
Garnet	1.6	2.1	435	177	10150	5
Sillimanite	1.8	3.5	1103	491	31719	13
Staurolite	1.6	2.4	467	200	8290	7
Zircon	1.5	2.1	475	189	10312	30
Silicate	1.7	2.7	677	297	16889	48
Unclassified	1.5	2.0	367	162	9439	5

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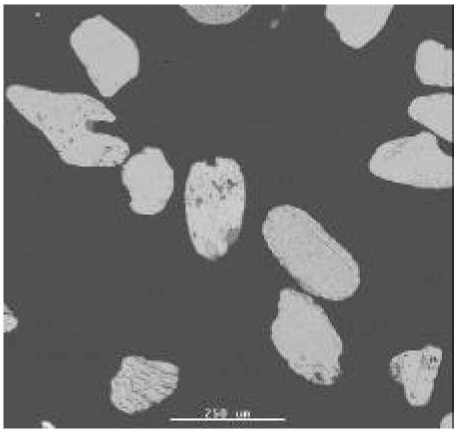
GEUS

Sample Name:	V62 14m
Date:	11/16/00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	100x
Guard region	120 µm
Sieve	100 µm^2

No. of analysed frames:	81
No. analysed of particles	357
Heavy minerals in raw sand (%):	2.06
comments:	



Category	Average content									
Category	TiO_2 wt%	Fe_2O_3 wt%	MnO wt%	Cr_2O_3 wt%	SiO_2 wt%	Al_2O_3 wt%	MgO wt%	CaO wt%	ZrO_2 wt%	Total
Ilmenite	60.3	32.4	2.1	0.1	1.6	1.0	0.2	0.1	0.3	98.2
Leucoxene	76.3	13.1	1.0	0.1	3.4	1.9	0.1	0.2	0.5	96.5
Rutile	94.4	1.2	0.3	0.1	1.3	0.5	0.1	0.1	0.3	98.3
Ti magnetite	38.0	22.9	1.4	0.0	36.3	0.8	0.1	0.0	0.4	99.8
Magnetite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chromite	0.3	33.2	1.0	50.8	1.1	7.2	5.3	0.0	0.0	99.1
Pyrite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monazite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Y-phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sphene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Garnet	0.3	25.0	2.2	0.2	38.2	19.8	8.0	2.0	0.0	95.9
Sillimanite	0.3	0.8	0.1	0.1	43.2	53.3	0.1	0.2	0.5	98.5
Staurolite	0.8	14.0	0.2	0.1	34.2	46.1	1.5	0.1	0.5	97.6
Zircon	0.3	0.3	0.1	0.1	29.9	0.0	0.1	0.1	64.7	95.6
Silicate	1.0	3.7	0.1	0.1	47.9	43.4	0.9	0.2	0.2	97.4
Unclassified	31.1	15.1	0.6	0.2	35.5	0.4	0.1	0.0	14.3	97.3

Valuable heavy minerals								
Category	Ilmenite	Leucoxene	Rutile	Ti magnetite	Garnet	Zircon	Sillimanite	Total
wt %	78.8	6.4	6.4	0.1	0.0	7.3	1.1	100.0

Normalised average contents of the valuable Ti-containing minerals:				
Average content	Category			
	Ilmenite	Leucoxene	Rutile	Ti magnetite
TiO_2 wt%	61.4	79.0	96.0	38.1
Fe_2O_3 wt%	33.0	13.5	1.2	22.9
MnO wt%	2.1	1.1	0.3	1.4
Cr_2O_3 wt%	0.1	0.1	0.1	0.0
SiO_2 wt%	1.7	3.5	1.4	36.4
Al_2O_3 wt%	1.0	1.9	0.5	0.8
MgO wt%	0.2	0.1	0.1	0.1
CaO wt%	0.1	0.2	0.1	0.0
ZrO_2 wt%	0.3	0.5	0.3	0.4
Total	100.0	100.0	100.0	100.0

Average TiO_2 content of all the TiO_2 minerals:	65.1
Average TiO_2 content of all the TiO_2 minerals excl. rutile:	62.7
Valuable heavy minerals in raw sand:	1.83

Weight percent on a mineral basis:		
Category	Heavy mineral concentrate wt %	Raw sand wt %
Ilmenite	69.9	1.4
Leucoxene	5.6	0.1
Rutile	5.7	0.1
Ti magnetite	0.1	0.0
Magnetite	0.0	0.0
Chromite	0.3	0.0
Pyrite	0.0	0.0
Phosphate	0.0	0.0
Monazite	0.0	0.0
Y-phosphate	0.0	0.0
Sphene	0.0	0.0
Garnet	0.0	0.0
Sillimanite	0.9	0.0
Staurolite	1.9	0.0
Zircon	6.4	0.1
Silicate	8.3	98.1
Unclassified	0.8	0.0
Total	100.0	100.0

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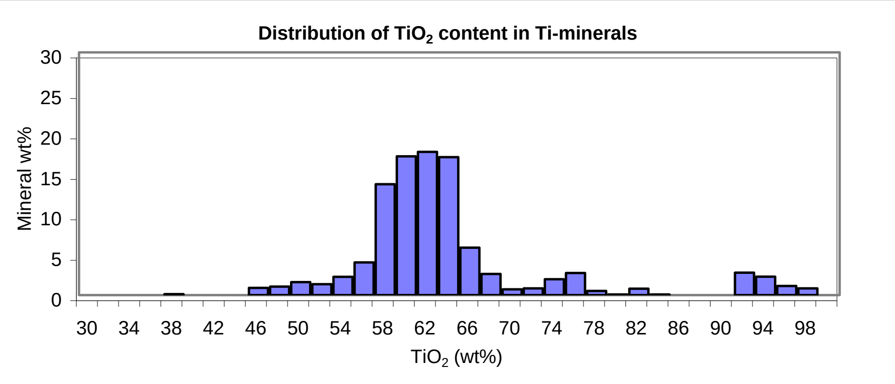
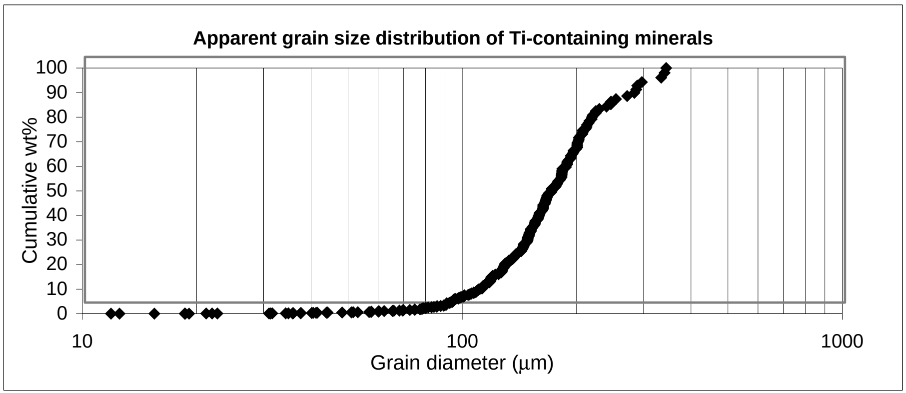
Sample Name:	V62 14m	Analyzed by:	CCA
Submitter:	Dupont	Acc. Voltage	17kV
Date:	11/16/00		





Average grain parameters					
Category	Aspect ratio	Circularity	Perimeter (µm)	Length (µm)	Total grains
Ilmenite	1.6	1.9	589	232	249
Leucoxene	1.5	2.0	641	254	14
Rutile	1.7	1.9	537	205	18
Ti magnetite	1.8	2.3	391	164	1
Magnetite	0.0	0.0	0	0	0
Chromite	1.7	2.0	414	166	2
Pyrite	0.0	0.0	0	0	0
Phosphate	0.0	0.0	0	0	0
Monazite	0.0	0.0	0	0	0
Y-phosphate	0.0	0.0	0	0	0
Sphene	0.0	0.0	0	0	0
Garnet	2.4	2.0	89	36	1
Sillimanite	1.6	1.9	777	307	3
Staurolite	2.1	2.8	704	309	8
Zircon	1.4	2.0	490	197	33
Silicate	1.8	2.4	931	390	26
Unclassified	1.5	2.9	1181	515	2

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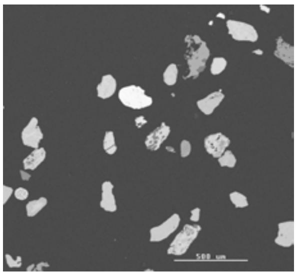

Sample Name:	V62 15-23
Date:	12-07-00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	50x
Guard region	250 µm
Sieve	100 µm^2

Number of frames: 64

Number of valuable particles analyzed: 997

Heavy minerals in raw sand (%): 1,01

Average content	Category											
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	Monazite	sillimanite	staurolite
TiO_2 w/w	57,6	76,1	0,6	93,9	1,1	36,4	9,6	0,4	0,5	0,0	0,1	0,6
Fe_2O_3 w/w	34,4	11,3	30,6	1,4	8,1	40,4	9,4	0,4	27,4	1,3	0,5	12,3
MnO w/w	2,3	1,1	0,2	0,2	1,0	1,7	0,6	0,1	4,6	0,0	0,2	0,3
Cr_2O_3 w/w	0,2	0,1	0,2	0,2	0,2	1,8	5,5	0,2	0,2	0,0	0,2	0,3
SiO_2 w/w	1,2	5,8	1,5	0,8	47,6	11,5	20,2	29,5	37,3	0,1	42,1	34,1
Al_2O_3 w/w	0,7	1,6	0,4	0,6	34,1	1,5	11,3	0,2	19,6	0,2	54,2	47,2
MgO w /w	0,3	0,2	0,0	0,1	1,3	0,2	1,5	0,1	3,2	0,1	0,0	1,5
CaO w/w	0,2	0,3	0,2	0,1	2,5	0,4	7,0	0,3	4,1	0,3	0,2	0,1
ZrO_2 w/w	0,3	0,5	0,3	0,4	0,5	0,7	12,4	63,1	0,3	4,1	0,2	0,4
Total	97,3	97,0	34,0	97,7	96,4	94,4	77,6	94,3	97,3	6,1	97,7	96,7

Normalised average contents of the valuable Ti-containing minerals:

Average content	Category			
	ilmenite	leucoxene	rutile	other Ti-ox.
TiO_2 w/w	59,2	78,4	96,1	38,5
Fe_2O_3 w/w	35,4	11,7	1,5	42,8
MnO w/w	2,4	1,1	0,2	1,8
Cr_2O_3 w/w	0,2	0,1	0,2	1,9
SiO_2 w/w	1,3	5,9	0,8	12,2
Al_2O_3 w/w	0,8	1,6	0,6	1,5
MgO w/w	0,4	0,2	0,1	0,2
CaO w/w	0,2	0,3	0,2	0,4
ZrO_2 w/w	0,3	0,5	0,4	0,7
Total	100,0	100,0	100,0	100,0

Average TiO_2 content of all the TiO_2 minerals: 63,1

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 61,2

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	62,09
leucoxene	8,15
pyrite	1,11
rutile	4,12
silicate	10,03
sphene	0,00
otherTi-ox.	0,83
unclassified	0,81
zircon	3,99
garnet	4,08
monazite	0,12
phosphate	0,00
sillimanite	2,05
staurolite	2,62
Y-phosphate	0,00
Total	100,00

the raw sand

Category	w/w
ilmenite	0,63
leucoxene	0,08
pyrite	0,01
rutile	0,04
silicate	99,09
sphene	0,00
otherTi-ox.	0,01
unclassified	0,01
zircon	0,04
garnet	0,04
monazite	0,00
phosphate	0,00
sillimanite	0,02
staurolite	0,03
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

Category	w/w
ilmenite	72,79
leucoxene	9,55
rutile	4,83
otherTi-ox.	0,97
zircon	4,68
garnet	4,78
sillimanite	2,40
Total	100,00

Valuable heavy minerals in raw sand: 0,86

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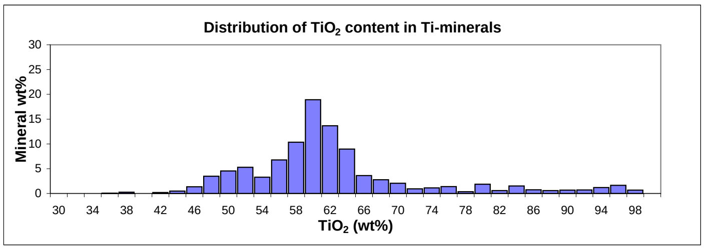
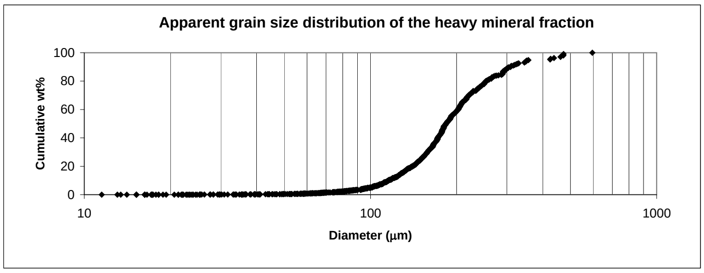
Sample Name: V62 15-23 Date: 12-07-00

Submitter: Dupont
Analyzed by: CCA
Acc. Voltage 17kV





Average grain parameters	Category											
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	Monazite	sillimanite	staurolite
Aspect ratio	1,59	1,49	1,48	1,57	1,52	1,58	1,46	1,52	1,61	1,87	1,58	1,40
Circularity	1,79	1,95	1,85	1,77	2,00	2,36	1,74	1,72	2,05	1,99	2,09	1,93
Perimeter (µm)	595,44	718,91	391,91	588,26	680,60	653,13	323,52	520,74	600,81	490,45	781,77	721,29
Length (µm)	226,30	283,97	153,24	222,74	277,83	274,76	132,50	191,90	242,48	196,34	317,60	294,75
Total grains	589	59	21	35	121	8	33	45	48	2	18	18

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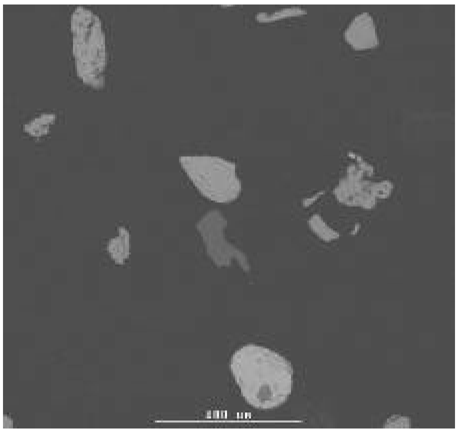

Sample Name:	V 62 23m
Date:	11/13/00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	80x
Guard region	150 µm
Sieve	100 μm^2

No. of analysed frames:	100
No. analysed of particles	404
Heavy minerals in raw sand (%):	0.77
comments:	

	Average content									
Category	TiO_2 wt%	Fe_2O_3 wt%	MnO wt%	Cr_2O_3 wt%	SiO_2 wt%	Al_2O_3 wt%	MgO wt%	CaO wt%	ZrO_2 wt%	Total
Ilmenite	54.5	36.8	2.5	0.1	1.8	1.0	0.3	0.1	0.2	97.5
Leucoxene	77.2	10.7	0.7	0.2	4.7	2.2	0.3	0.3	0.6	96.8
Rutile	94.4	0.8	0.3	0.2	1.2	0.7	0.1	0.1	0.2	98.0
Ti magnetite	35.2	33.4	2.8	0.6	4.3	1.4	0.8	0.3	0.6	79.5
Magnetite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chromite	0.0	12.7	1.6	54.6	1.4	15.8	12.0	0.6	0.4	99.1
Pyrite	0.3	29.9	0.2	0.3	3.5	2.4	0.1	0.3	0.6	37.7
Phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monazite	0.0	0.0	0.0	0.0	2.9	1.1	0.5	0.6	1.7	6.8
Y-phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sphene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Garnet	0.4	28.1	5.4	0.1	37.0	19.7	2.7	3.8	0.2	97.4
Sillimanite	0.1	0.7	0.2	0.3	42.6	54.0	0.0	0.0	0.3	98.2
Staurolite	1.1	16.3	0.1	0.1	30.1	48.3	1.6	0.1	0.3	98.1
Zircon	0.1	0.5	0.3	0.2	29.1	0.3	0.2	0.3	64.0	95.1
Silicate	1.1	9.8	1.5	0.3	48.0	27.2	1.3	5.2	0.4	94.8
Unclassified	6.5	14.2	1.9	1.8	20.9	10.6	2.9	1.9	11.5	72.1

Valuable heavy minerals								
Category	Ilmenite	Leucoxene	Rutile	Ti magnetite	Garnet	Zircon	Sillimanite	Total
wt %	68.0	13.5	4.0	2.4	7.2	2.1	2.8	100.0

Normalised average contents of the valuable Ti-containing minerals:				
Average content	Category: Ilmenite	Leucoxene	Rutile	Ti magnetite
TiO_2 wt%	56.0	79.8	96.3	44.3
Fe_2O_3 wt%	37.8	11.0	0.8	42.0
MnO wt%	2.6	0.7	0.3	3.5
Cr_2O_3 wt%	0.1	0.3	0.2	0.8
SiO_2 wt%	1.8	4.8	1.3	5.5
Al_2O_3 wt%	1.0	2.2	0.7	1.8
MgO wt%	0.3	0.3	0.1	1.0
CaO wt%	0.1	0.3	0.1	0.4
ZrO_2 wt%	0.2	0.6	0.2	0.8
Total	100.0	100.0	100.0	100.0

Average TiO_2 content of all the TiO_2 minerals:	61.1
Average TiO_2 content of all the TiO_2 minerals excl. rutile:	59.5
Valuable heavy minerals in raw sand:	0.62

Weight percent on a mineral basis:		
Category	Heavy mineral concentrate wt %	Raw sand wt %
Ilmenite	55.2	0.4
Leucoxene	11.0	0.1
Rutile	3.2	0.0
Ti magnetite	1.9	0.0
Magnetite	0.0	0.0
Chromite	0.7	0.0
Pyrite	0.6	0.0
Phosphate	0.0	0.0
Monazite	0.1	0.0
Y-phosphate	0.0	0.0
Sphene	0.0	0.0
Garnet	5.9	0.0
Sillimanite	2.3	0.0
Staurolite	1.1	0.0
Zircon	1.7	0.0
Silicate	14.5	99.3
Unclassified	1.9	0.0
Total	100.0	100.0

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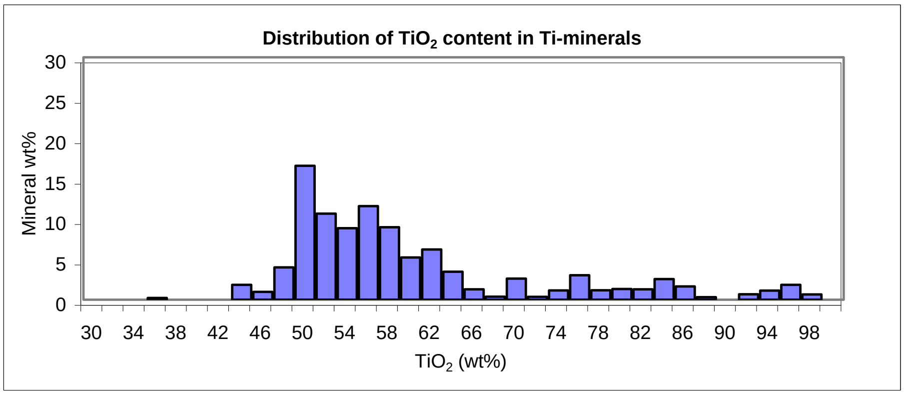
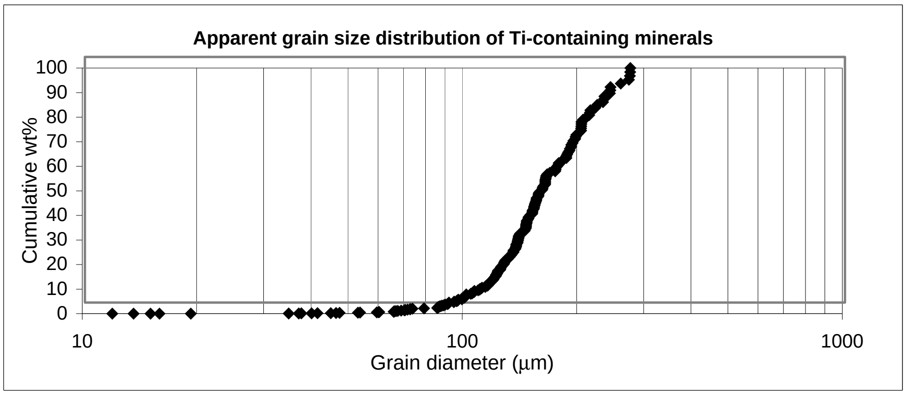
GEUS

Sample Name:	V 62 23m	Analyzed by:	CCA
Submitter:	Dupont	Acc. Voltage	17kV
Date:	11/13/00		





Average grain parameters					
Category	Aspect ratio	Circularity	Perimeter (µm)	Length (µm)	Total grains
Ilmenite	1.6	2.0	589	233	185
Leucoxene	1.7	2.0	730	291	23
Rutile	1.4	1.9	522	207	13
Ti magnetite	1.5	2.0	488	203	8
Magnetite	0.0	0.0	0	0	0
Chromite	1.2	1.7	838	315	1
Pyrite	1.4	2.0	310	134	5
Phosphate	0.0	0.0	0	0	0
Monazite	3.4	1.8	296	115	1
Y-phosphate	0.0	0.0	0	0	0
Sphene	0.0	0.0	0	0	0
Garnet	1.6	2.2	462	191	34
Sillimanite	1.6	2.1	784	321	7
Staurolite	1.8	2.5	570	237	6
Zircon	1.4	1.6	326	121	13
Silicate	1.5	2.0	524	217	83
Unclassified	1.4	1.4	245	100	25

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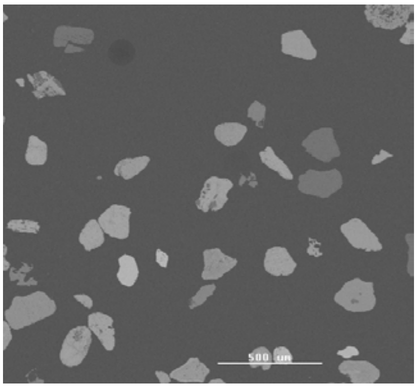
Sample Name:	V83 9-14
Date:	14-07-00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	50x
Guard region	250 µm
Sieve	100 μm^2



Number of frames: 35

Number of valuable particles analyzed: 696

Heavy minerals in raw sand (%): 1,67

Average content	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	sillimanite	staurolite
	Category										
TiO_2 w/w	57,9	75,9	0,0	93,1	0,9	32,0	16,9	0,3	0,3	0,1	0,6
Fe_2O_3 w/w	34,2	11,4	32,2	1,4	8,7	40,9	9,3	0,4	27,3	0,8	14,0
MnO w/w	2,3	0,9	0,0	0,2	0,8	1,3	1,5	0,2	3,9	0,2	0,2
Cr_2O_3 w/w	0,1	0,1	0,1	0,2	0,2	0,1	0,8	0,1	0,2	0,1	0,1
SiO_2 w/w	1,8	5,0	0,4	1,7	42,8	13,5	21,6	29,5	37,9	43,0	34,5
Al_2O_3 w/w	1,0	3,4	0,2	0,8	31,7	4,9	7,4	0,2	19,9	53,8	46,6
MgO w /w	0,3	0,2	0,2	0,1	1,0	0,5	0,8	0,2	3,4	0,0	1,5
CaO w/w	0,1	0,3	0,0	0,1	11,1	2,3	3,3	0,2	4,4	0,1	0,2
ZrO_2 w/w	0,3	0,3	0,0	0,2	0,3	2,1	19,4	63,5	0,4	0,3	0,0
Total	97,94	97,47	33,00	97,79	97,46	97,74	81,05	94,66	97,68	98,27	97,82

Normalised average contents of the valuable Ti-containing minerals:

Average content	ilmenite	leucoxene	rutile	other Ti-ox.
	Category			
TiO_2 w/w	59,1	77,8	95,2	32,7
Fe_2O_3 w/w	34,9	11,7	1,4	41,9
MnO w/w	2,3	1,0	0,2	1,3
Cr_2O_3 w/w	0,1	0,1	0,2	0,1
SiO_2 w/w	1,8	5,1	1,8	13,9
Al_2O_3 w/w	1,0	3,5	0,8	5,1
MgO w/w	0,3	0,2	0,1	0,6
CaO w/w	0,1	0,3	0,1	2,4
ZrO_2 w/w	0,3	0,3	0,2	2,1
Total	100,0	100,0	100,0	100,0

Average TiO_2 content of all the TiO_2 minerals: 61,6

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 59,6

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	63,70
leucoxene	6,09
pyrite	0,08
rutile	4,19
silicate	10,18
sphene	0,00
otherTi-ox.	2,90
unclassified	2,57
zircon	5,20
garnet	3,16
monazite	0,00
phosphate	0,00
sillimanite	1,37
staurolite	0,57
Y-phosphate	0,00
Total	100,00

the raw sand

Category	w/w
ilmenite	1,06
leucoxene	0,10
pyrite	0,00
rutile	0,07
silicate	98,50
sphene	0,00
otherTi-ox.	0,05
unclassified	0,04
zircon	0,09
garnet	0,05
monazite	0,00
phosphate	0,00
sillimanite	0,02
staurolite	0,01
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

Category	w/w
ilmenite	73,55
leucoxene	7,03
rutile	4,84
otherTi-ox.	3,35
zircon	6,01
garnet	3,65
sillimanite	1,58
Total	100,00

Valuable heavy minerals in raw sand: 1,45

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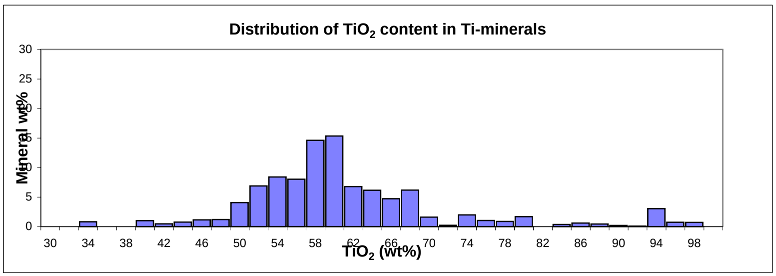
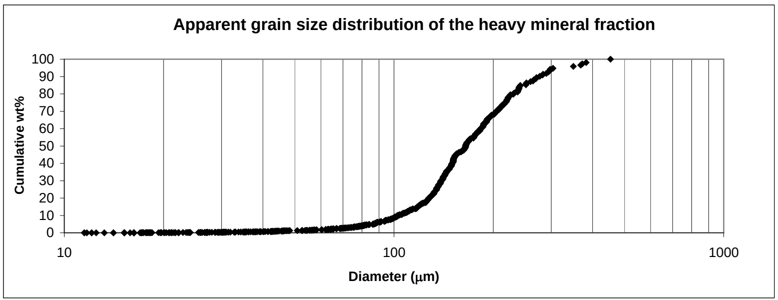
Sample Name: V83 9-14 Date: 14-07-00

Submitter: Dupont
Analyzed by: CCA
Acc. Voltage 17kV





Average grain	Category									
parameters	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	sillimanite	staurolite
Aspect ratio	1,56	1,49	1,33	1,43	1,60	1,65	1,59	1,56	1,66	1,56	1,51
Circularity	1,71	1,99	1,39	1,58	1,94	2,63	1,86	1,53	2,04	1,83	1,66
Perimeter (μm)	488,23	645,36	319,03	521,71	462,79	856,15	450,23	357,58	458,00	561,16	572,72
Length (μm)	183,37	259,55	102,84	187,03	188,44	367,44	190,16	126,90	182,65	219,99	216,87
Total grains	399	26	1	20	116	10	29	50	31	10	3

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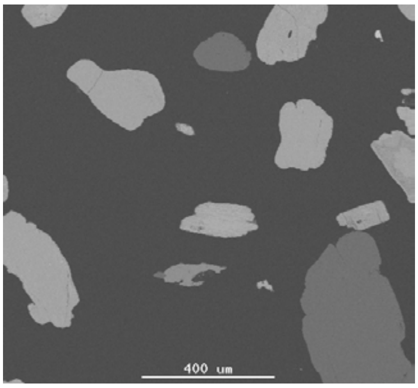

Sample Name:	V83 16-23
Date:	10-07-00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	80x
Guard region	100 µm
Sieve	100

Number of frames: 66

Number of valuable particles analyzed: 378

Heavy minerals in raw sand (%): 1,64

Average content	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	sillimanite	staurolite
	Category										
TiO_2 w/w	59,0	74,2	0,9	93,5	1,0	38,6	21,0	0,2	0,2	0,2	0,5
Fe_2O_3 w/w	34,9	18,0	30,4	1,8	8,5	27,2	9,8	0,2	27,4	0,6	14,6
MnO w/w	2,1	1,0	0,1	0,4	0,9	0,5	0,6	0,1	4,8	0,1	0,3
Cr_2O_3 w/w	0,1	0,0	0,1	0,1	0,1	0,2	0,2	0,1	0,2	0,2	0,1
SiO_2 w/w	1,0	3,1	1,1	0,7	47,8	30,3	46,5	29,5	37,8	42,9	33,2
Al_2O_3 w/w	0,2	0,1	0,0	0,2	3,2	0,2	0,9	0,1	2,5	0,0	1,8
MgO w /w	0,5	1,0	0,3	0,5	33,0	1,3	8,3	0,0	19,5	53,7	47,5
CaO w/w	0,1	0,2	0,1	0,1	2,0	0,0	0,8	0,1	4,9	0,1	0,1
ZrO_2 w/w	0,2	0,3	0,4	0,3	0,3	0,1	8,3	65,0	0,3	0,3	0,3
Total	98,2	98,0	33,6	97,7	96,7	98,4	96,4	95,3	97,6	98,1	98,4

Normalised average contents of the valuable Ti-containing minerals:

Average content	ilmenite	leucoxene	rutile	other Ti-ox.
	Category			
TiO_2 w/w	60,1	75,7	95,8	39,3
Fe_2O_3 w/w	35,5	18,4	1,9	27,6
MnO w/w	2,1	1,1	0,4	0,5
Cr_2O_3 w/w	0,1	0,0	0,1	0,2
SiO_2 w/w	1,1	3,1	0,8	30,8
Al_2O_3 w/w	0,2	0,1	0,2	0,2
MgO w/w	0,5	1,1	0,5	1,3
CaO w/w	0,1	0,2	0,1	0,0
ZrO_2 w/w	0,2	0,3	0,3	0,1
Total	100,0	100,0	100,0	100,0

Average TiO_2 content of all the TiO_2 minerals: 63,7

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 60,5

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	59,95
leucoxene	2,58
pyrite	3,09
rutile	6,38
silicate	10,34
sphene	0,00
otherTi-ox.	0,77
unclassified	1,25
zircon	4,32
garnet	6,21
monazite	0,00
phosphate	0,00
sillimanite	3,11
staurolite	2,00
Y-phosphate	0,00
Total	100,00

the raw sand

Category	w/w
ilmenite	0,98
leucoxene	0,04
pyrite	0,05
rutile	0,10
silicate	98,53
sphene	0,00
otherTi-ox.	0,01
unclassified	0,02
zircon	0,07
garnet	0,10
monazite	0,00
phosphate	0,00
sillimanite	0,05
staurolite	0,03
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

Category	w/w
ilmenite	71,95
leucoxene	3,10
rutile	7,66
otherTi-ox.	0,92
zircon	5,18
garnet	7,45
sillimanite	3,73
Total	100,00

Valuable heavy minerals in raw sand: 1,37

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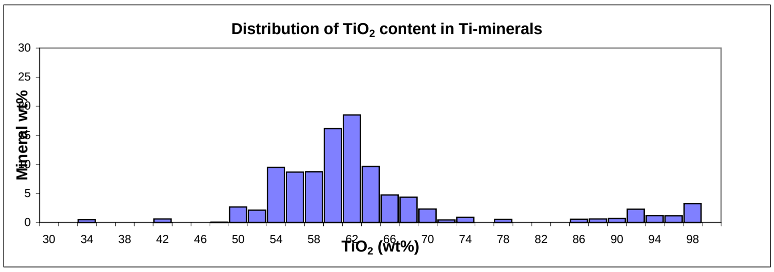
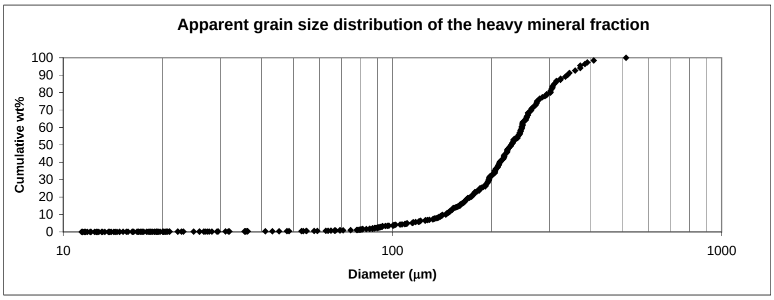
Sample Name: V83 16-23 Date: 10-07-00

Submitter: Dupont
Analyzed by: CCA
Acc. Voltage 17kV





Average grain parameters	Category										
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	sillimanite	staurolite
Aspect ratio	1,57	1,78	1,48	1,64	1,52	2,23	1,35	1,70	1,56	1,55	1,49
Circularity	1,96	2,20	2,61	2,00	2,07	2,42	1,76	2,00	2,21	2,25	2,70
Perimeter (µm)	666,25	693,33	784,57	700,39	470,73	901,56	654,60	643,02	602,42	892,88	679,28
Length (µm)	261,57	287,00	335,68	283,49	199,76	376,64	276,64	257,06	248,83	364,07	288,44
Total grains	193	9	8	19	83	2	5	16	24	9	10

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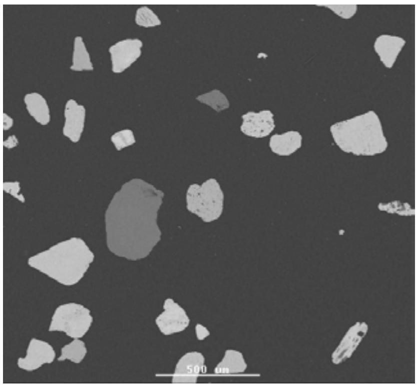

Sample Name:	V89 5-18
Date:	11-07-00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	50x
Guard region	250µm
Sieve	100 μm^2

Number of frames: 34

Number of valuable particles analyzed: 549

Heavy minerals in raw sand (%): 1,22

Average content	Category										
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	sillimanite	staurolite
TiO_2 w/w	58,9	76,4	0,3	92,6	0,5	36,0	11,7	0,2	0,4	0,2	0,8
Fe_2O_3 w/w	32,9	12,5	31,0	1,2	5,9	37,8	12,0	0,4	23,0	0,8	13,3
MnO w/w	1,9	0,6	0,1	0,1	1,1	1,9	1,5	0,1	10,0	0,2	0,6
Cr_2O_3 w/w	0,2	0,4	0,4	0,1	0,2	0,8	6,4	0,2	0,3	0,2	0,3
SiO_2 w/w	1,9	4,7	0,7	2,7	45,8	8,9	24,0	29,7	36,9	41,9	32,5
Al_2O_3 w/w	1,1	2,4	0,3	0,7	37,1	4,0	7,5	0,4	19,4	53,9	47,9
MgO w /w	0,3	0,1	0,0	0,1	1,4	0,8	1,9	0,2	3,2	0,0	1,6
CaO w/w	0,1	0,1	0,0	0,0	4,5	0,4	0,3	0,1	4,3	0,2	0,1
ZrO_2 w/w	0,4	0,5	0,2	0,4	0,4	1,1	14,6	62,7	0,1	0,3	0,4
Total	97,7	97,7	33,2	98,0	96,8	91,8	80,0	94,0	97,6	97,6	97,3

Normalised average contents of the valuable Ti-containing minerals:

Average content	Category			
	ilmenite	leucoxene	rutile	other Ti-ox.
TiO_2 w/w	60,3	78,2	94,5	39,2
Fe_2O_3 w/w	33,7	12,8	1,2	41,2
MnO w/w	1,9	0,6	0,1	2,1
Cr_2O_3 w/w	0,2	0,4	0,1	0,9
SiO_2 w/w	1,9	4,8	2,8	9,7
Al_2O_3 w/w	1,2	2,4	0,7	4,4
MgO w/w	0,4	0,1	0,1	0,9
CaO w/w	0,1	0,1	0,0	0,5
ZrO_2 w/w	0,4	0,6	0,4	1,2
Total	100,0	100,0	100,0	100,0

Average TiO_2 content of all the TiO_2 minerals: 64,0

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 61,5

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	63,50
leucoxene	6,53
pyrite	0,42
rutile	5,70
silicate	12,76
sphene	0,00
otherTi-ox.	1,36
unclassified	2,71
zircon	1,96
garnet	0,86
monazite	0,00
phosphate	0,00
sillimanite	2,37
staurolite	1,83
Y-phosphate	0,00
Total	100,00

the raw sand

Category	w/w
ilmenite	0,77
leucoxene	0,08
pyrite	0,01
rutile	0,07
silicate	98,94
sphene	0,00
otherTi-ox.	0,02
unclassified	0,03
zircon	0,02
garnet	0,01
monazite	0,00
phosphate	0,00
sillimanite	0,03
staurolite	0,02
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

Category	w/w
ilmenite	77,17
leucoxene	7,93
rutile	6,93
otherTi-ox.	1,66
zircon	2,38
garnet	1,04
sillimanite	2,88
Total	100,00

Valuable heavy minerals in raw sand: 1,00

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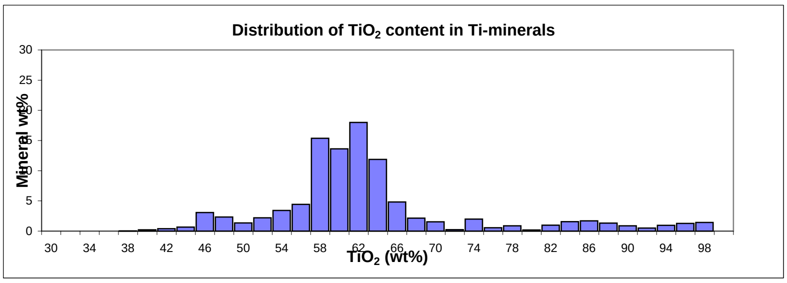
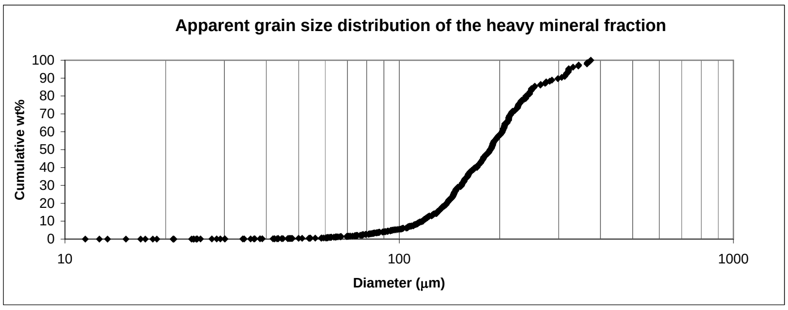
Sample Name: V89 5-18 Date: 11-07-00

Submitter: Dupont
Analyzed by: CCA
Acc. Voltage 17kV





Average grain parameters	Category										
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	sillimanite	staurolite
Aspect ratio	1,57	1,68	1,71	1,45	1,44	1,44	1,55	1,51	1,76	1,80	1,54
Circularity	1,76	1,91	1,80	1,75	1,87	1,58	2,09	1,79	2,37	1,99	1,83
Perimeter (μm)	577,28	696,27	415,35	616,94	753,59	369,30	731,77	498,38	414,78	744,87	559,76
Length (μm)	216,99	270,21	168,41	232,81	294,69	135,79	307,10	190,89	173,75	291,88	215,87
Total grains	344	26	4	26	64	14	18	14	12	13	14

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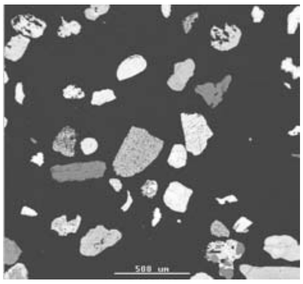
Sample Name:	V89 21-22
Date:	12-07-00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	50x
Guard region	250
Sieve	100 μm^2



Number of frames: 24

Number of valuable particles analyzed: 511

Heavy minerals in raw sand (%): 0,96

Average content	Category											
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	sillimanite	staurolite	Y-phosphate
TiO_2 w/w	59,0	75,3	0,3	92,9	2,4	39,6	11,8	0,4	0,5	0,2	1,0	0,0
Fe_2O_3 w/w	34,0	14,7	29,9	1,6	5,6	23,8	14,1	0,4	24,7	0,9	14,6	0,0
MnO w/w	2,2	1,6	0,3	0,2	1,7	2,0	3,6	0,2	9,4	0,2	0,2	0,0
Cr_2O_3 w/w	0,1	0,1	0,2	0,2	0,1	0,2	3,0	0,3	0,1	0,1	0,2	0,0
SiO_2 w/w	1,2	3,0	1,6	1,2	52,0	31,7	16,4	29,0	37,6	42,5	33,2	2,6
Al_2O_3 w/w	0,7	1,3	0,1	0,7	31,9	0,4	12,4	0,1	19,7	53,9	46,9	0,4
MgO w /w	0,3	0,3	0,1	0,1	1,7	0,0	2,3	0,1	2,3	0,0	1,7	0,5
CaO w/w	0,1	0,3	0,2	0,1	1,1	0,3	0,4	0,2	3,6	0,0	0,1	2,5
ZrO_2 w/w	0,3	0,4	0,8	0,3	0,4	0,4	12,8	63,7	0,2	0,2	0,3	4,3
Total	97,8	96,9	33,4	97,3	96,9	98,4	76,9	94,4	98,0	98,1	98,2	10,3

Normalised average contents of the valuable Ti-containing minerals:

Average content	Category			
	ilmenite	leucoxene	rutile	other Ti-ox.
TiO_2 w/w	60,3	77,7	95,5	40,3
Fe_2O_3 w/w	34,7	15,1	1,7	24,2
MnO w/w	2,2	1,6	0,2	2,0
Cr_2O_3 w/w	0,1	0,1	0,2	0,2
SiO_2 w/w	1,2	3,1	1,3	32,2
Al_2O_3 w/w	0,7	1,3	0,7	0,4
MgO w/w	0,3	0,3	0,1	0,0
CaO w/w	0,1	0,3	0,1	0,3
ZrO_2 w/w	0,3	0,4	0,3	0,4
Total	100,0	100,0	100,0	100,0

Average TiO_2 content of all the TiO_2 minerals: 66,7

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 62,7

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	47,88
leucoxene	8,29
pyrite	11,81
rutile	7,72
silicate	11,58
sphene	0,00
otherTi-ox.	0,36
unclassified	1,66
zircon	3,12
garnet	1,98
monazite	0,00
phosphate	0,00
sillimanite	3,64
staurolite	1,94
Y-phosphate	0,03
Total	100,00

the raw sand

Category	w/w
ilmenite	0,46
leucoxene	0,08
pyrite	0,11
rutile	0,07
silicate	99,15
sphene	0,00
otherTi-ox.	0,00
unclassified	0,02
zircon	0,03
garnet	0,02
monazite	0,00
phosphate	0,00
sillimanite	0,03
staurolite	0,02
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

Category	w/w
ilmenite	65,60
leucoxene	11,36
rutile	10,58
otherTi-ox.	0,49
zircon	4,28
garnet	2,71
sillimanite	4,99
Total	100,00

Valuable heavy minerals in raw sand: 0,70

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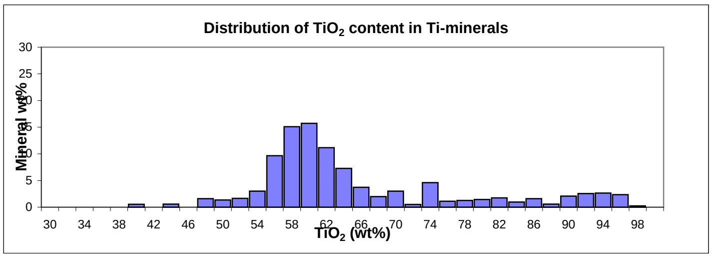
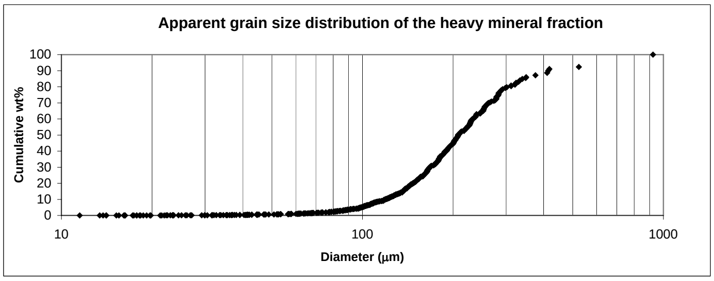
Sample Name: V89 21-22 Date: 12-07-00

Submitter: Dupont
Analyzed by: CCA
Acc. Voltage 17kV





Average grain parameters	Category											
	ilmenite	leucoxene	pyrite	rutile	silicate	other Ti-ox	unclassified	zircon	garnet	sillimanite	staurolite	Y-phosphate
Aspect ratio	1,51	1,51	1,70	1,50	1,67	1,45	1,36	1,42	1,78	2,06	1,76	1,52
Circularity	1,84	1,94	2,01	2,06	2,20	2,04	1,63	1,57	1,95	2,56	1,92	1,76
Perimeter (µm)	225,57	283,64	263,07	273,35	334,37	212,09	161,72	166,69	187,03	535,40	253,48	84,84
Length (µm)	582,61	717,00	620,30	678,25	807,33	525,12	386,68	462,73	471,95	1263,61	637,74	222,46
Total grains	266	32	29	32	63	3	23	23	20	9	10	1

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Thoravej 8, DK-2400 Copenhagen NV
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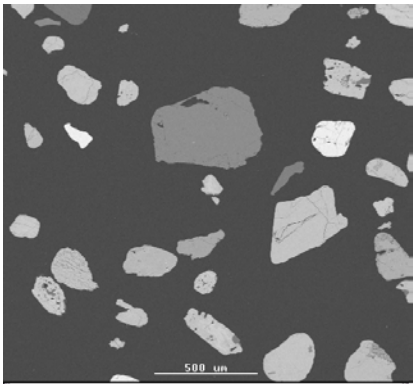
Sample Name:	V89 23-24
Date:	11-07-00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	50x
Guard region	250 µm
Sieve	100µm^2



Number of frames: 25

Number of valuable particles analyzed: 410

Heavy minerals in raw sand (%): 0,63

Average content	Category									
	ilmenite	leucoxene	pyrite	rutile	silicate	unclassified	zircon	garnet	sillimanite	staurolite
TiO_2 w/w	59,1	75,8	0,1	93,4	0,7	5,9	0,2	0,8	0,2	0,7
Fe_2O_3 w/w	33,7	14,1	30,9	1,5	4,4	9,6	0,2	26,6	0,7	13,5
MnO w/w	2,2	1,6	0,1	0,1	1,1	1,2	0,2	6,5	0,1	0,2
Cr_2O_3 w/w	0,1	0,2	0,1	0,2	0,1	5,1	0,1	0,0	0,4	0,2
SiO_2 w/w	1,4	4,2	0,6	1,4	53,6	15,0	29,6	37,5	42,8	31,5
Al_2O_3 w/w	0,5	0,9	0,1	0,5	34,9	24,7	0,0	19,5	54,2	48,5
MgO w /w	0,3	0,2	0,1	0,2	0,7	1,2	0,1	3,0	0,1	1,8
CaO w/w	0,1	0,1	0,1	0,1	1,5	1,9	0,1	4,1	0,1	0,1
ZrO_2 w/w	0,3	0,7	0,2	0,3	0,2	8,9	64,7	0,5	0,1	0,4
Total	97,8	97,7	32,2	97,6	97,3	73,6	95,2	98,4	98,6	97,0

Normalised average contents of the valuable Ti-containing minerals:

Average content	Category			
	ilmenite	leucoxene	rutile	other Ti-ox.
TiO_2 w/w	60,5	77,6	95,7	0,0
Fe_2O_3 w/w	34,5	14,4	1,6	0,0
MnO w/w	2,2	1,6	0,1	0,0
Cr_2O_3 w/w	0,1	0,2	0,2	0,0
SiO_2 w/w	1,4	4,3	1,4	0,0
Al_2O_3 w/w	0,5	0,9	0,5	0,0
MgO w/w	0,3	0,2	0,2	0,0
CaO w/w	0,1	0,1	0,1	0,0
ZrO_2 w/w	0,3	0,7	0,3	0,0
Total	100,0	100,0	100,0	0,0

Average TiO_2 content of all the TiO_2 minerals: 66,3

Average TiO_2 content of all the TiO_2 minerals excl. rutile: 62,9

Weight percent on a mineral basis:

the heavy mineral concentrate

Category	w/w
ilmenite	59,90
leucoxene	9,84
pyrite	0,83
rutile	8,13
silicate	13,07
sphene	0,00
otherTi-ox.	0,00
unclassified	0,86
zircon	3,53
garnet	1,07
monazite	0,00
phosphate	0,00
sillimanite	0,71
staurolite	2,05
Y-phosphate	0,00
Total	100,00

the raw sand

Category	w/w
ilmenite	0,38
leucoxene	0,06
pyrite	0,01
rutile	0,05
silicate	99,45
sphene	0,00
otherTi-ox.	0,00
unclassified	0,01
zircon	0,02
garnet	0,01
monazite	0,00
phosphate	0,00
sillimanite	0,00
staurolite	0,01
Y-phosphate	0,00
Total	100,00

the valuable heavy minerals

Category	w/w
ilmenite	72,00
leucoxene	11,83
rutile	9,78
otherTi-ox.	0,00
zircon	4,25
garnet	1,29
sillimanite	0,85
Total	100,00

Valuable heavy minerals in raw sand: 0,52

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Thoravej 8, DK-2400 Copenhagen NV
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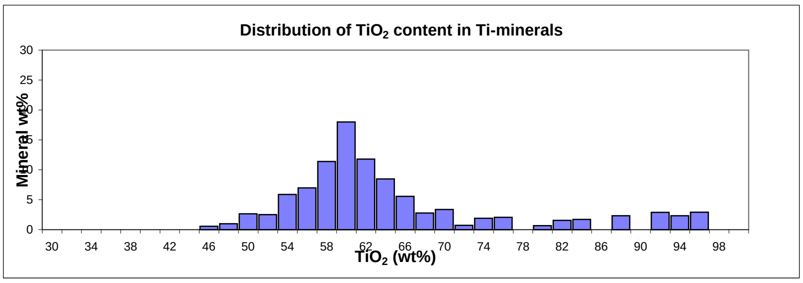
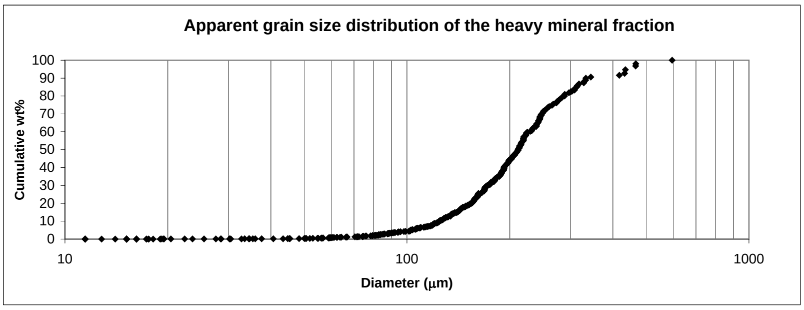
Sample Name: V89 23-24 Date: 11-07-00

Submitter: Dupont
Analyzed by: CCA
Acc. Voltage 17kV





Average grain parameters	Category									
	ilmenite	leucoxene	pyrite	rutile	silicate	unclassified	zircon	garnet	sillimanite	staurolite
Aspect ratio	1,51	1,39	1,52	1,49	1,55	1,38	1,38	1,88	1,23	1,57
Circularity	1,81	1,91	1,86	1,84	1,95	1,59	1,69	2,14	1,57	1,95
Perimeter (µm)	600,54	845,90	467,92	852,46	753,99	394,89	508,77	503,97	531,33	551,53
Length (µm)	230,85	329,29	180,75	329,71	307,56	172,70	189,49	205,44	196,20	221,65
Total grains	258	24	6	16	54	10	19	8	4	11

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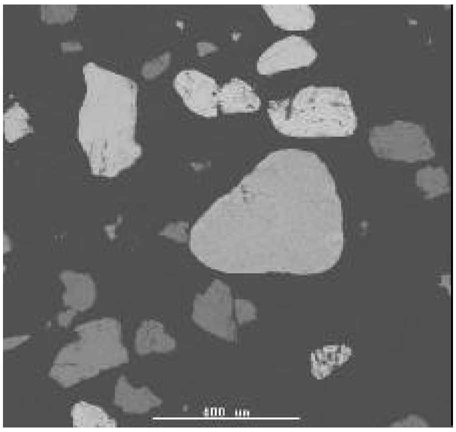
GEUS

Sample Name:	V92 8-13m
Date:	11/13/00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	80x
Guard region	150 µm
Sieve	100 μm^2

No. of analysed frames:	81
No. analysed of particles	708
Heavy minerals in raw sand (%):	0.80
comments:	



	Average content									
Category	TiO_2 wt%	Fe_2O_3 wt%	MnO wt%	Cr_2O_3 wt%	SiO_2 wt%	Al_2O_3 wt%	MgO wt%	CaO wt%	ZrO_2 wt%	Total
Ilmenite	58.4	33.8	2.4	0.1	1.9	0.8	0.3	0.1	0.3	98.2
Leucoxene	75.7	13.9	0.4	0.2	3.3	2.9	0.3	0.4	0.6	97.6
Rutile	93.2	1.0	0.1	0.1	2.7	0.5	0.1	0.0	0.3	97.9
Ti magnetite	40.9	35.5	1.0	0.0	18.9	1.3	0.4	0.1	0.2	98.2
Magnetite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chromite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pyrite	0.4	34.7	0.2	0.0	2.2	0.9	0.6	0.1	0.8	39.9
Phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monazite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Y-phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sphene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Garnet	0.5	0.9	0.0	0.0	34.9	18.4	0.0	0.8	38.3	93.8
Sillimanite	0.0	1.2	0.0	0.3	41.9	53.8	0.0	0.0	0.3	97.5
Staurolite	0.7	13.4	0.1	0.4	35.5	45.7	1.3	0.5	0.2	97.8
Zircon	0.3	0.4	0.2	0.1	30.1	0.1	0.1	0.1	63.1	94.4
Silicate	0.5	2.2	0.3	0.1	82.3	7.8	0.3	2.0	0.4	95.8
Unclassified	6.1	3.9	6.6	0.1	51.4	13.6	0.4	8.4	3.0	93.6

Valuable heavy minerals								
Category	Ilmenite	Leucoxene	Rutile	Ti magnetite	Garnet	Zircon	Sillimanite	Total
wt %	80.2	9.4	3.9	2.3	0.3	3.1	0.7	100.0

Normalised average contents of the valuable Ti-containing minerals:				
Average content	Category: Ilmenite	Leucoxene	Rutile	Ti magnetite
TiO_2 wt%	59.5	77.5	95.1	41.6
Fe_2O_3 wt%	34.4	14.2	1.0	36.1
MnO wt%	2.5	0.4	0.1	1.1
Cr_2O_3 wt%	0.1	0.2	0.1	0.0
SiO_2 wt%	1.9	3.4	2.7	19.2
Al_2O_3 wt%	0.8	3.0	0.6	1.3
MgO wt%	0.3	0.3	0.1	0.4
CaO wt%	0.1	0.4	0.0	0.1
ZrO_2 wt%	0.3	0.7	0.3	0.2
Total	100.0	100.0	100.0	100.0

Average TiO_2 content of all the TiO_2 minerals:	62.2
Average TiO_2 content of all the TiO_2 minerals excl. rutile:	60.9
Valuable heavy minerals in raw sand:	0.52

Weight percent on a mineral basis:		
Category	Heavy mineral concentrate wt %	Raw sand wt %
Ilmenite	52.3	0.4
Leucoxene	6.1	0.0
Rutile	2.5	0.0
Ti magnetite	1.5	0.0
Magnetite	0.0	0.0
Chromite	0.0	0.0
Pyrite	0.2	0.0
Phosphate	0.0	0.0
Monazite	0.0	0.0
Y-phosphate	0.0	0.0
Sphene	0.0	0.0
Garnet	0.2	0.0
Sillimanite	0.5	0.0
Staurolite	1.9	0.0
Zircon	2.0	0.0
Silicate	31.4	99.5
Unclassified	1.4	0.0
Total	100.0	100.0

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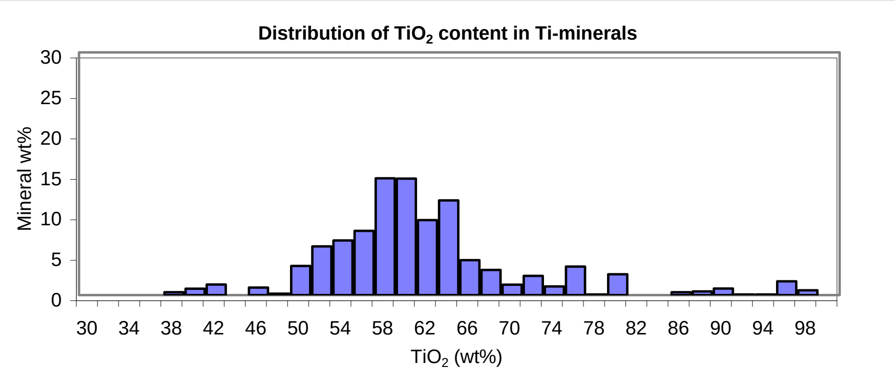
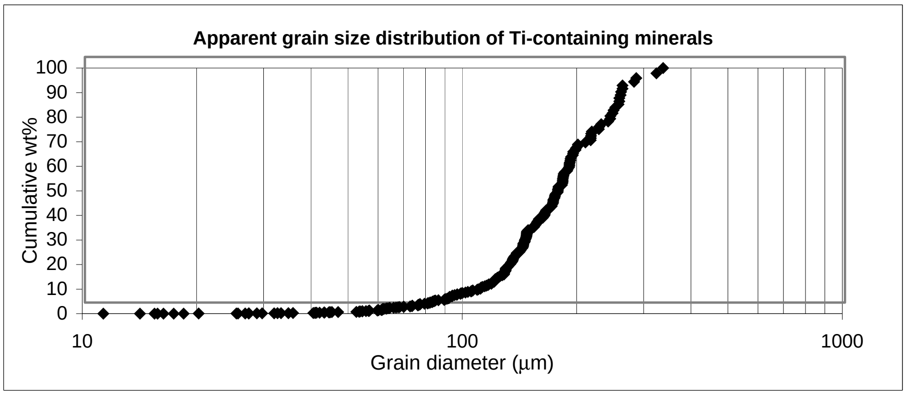
GEUS

Sample Name:	V92 8-13m	Analyzed by:	CCA
Submitter:	Dupont	Acc. Voltage	17kV
Date:	11/13/00		





Average grain parameters					
Category	Aspect ratio	Circularity	Perimeter (μm)	Length (μm)	Total grains
Ilmenite	1.6	1.8	539	209	227
Leucoxene	1.5	2.0	655	264	19
Rutile	1.5	1.9	457	177	14
Ti magnetite	1.4	2.1	632	248	6
Magnetite	0.0	0.0	0	0	0
Chromite	0.0	0.0	0	0	0
Pyrite	1.3	1.7	369	136	2
Phosphate	0.0	0.0	0	0	0
Monazite	0.0	0.0	0	0	0
Y-phosphate	0.0	0.0	0	0	0
Sphene	0.0	0.0	0	0	0
Garnet	2.1	3.6	765	345	1
Sillimanite	1.6	2.2	775	317	2
Staurolite	1.5	2.3	743	305	7
Zircon	1.6	1.7	383	142	15
Silicate	1.6	2.2	416	172	402
Unclassified	1.5	1.7	401	162	13

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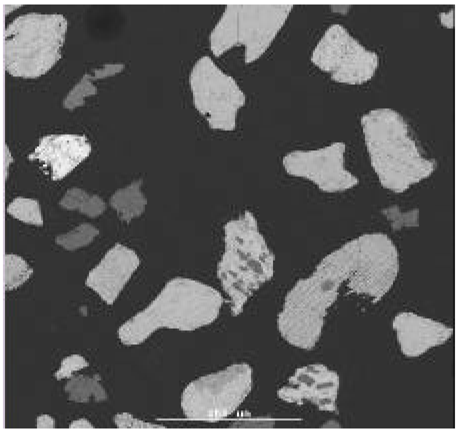
GEUS

Sample Name:	V92 17-26m
Date:	11/13/00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	80x
Guard region	150 µm
Sieve	100 μm^2

No. of analysed frames:	81
No. analysed of particles	539
Heavy minerals in raw sand (%):	1.14
comments:	



	Average content									
Category	TiO_2 wt%	Fe_2O_3 wt%	MnO wt%	Cr_2O_3 wt%	SiO_2 wt%	Al_2O_3 wt%	MgO wt%	CaO wt%	ZrO_2 wt%	Total
Ilmenite	57.4	35.5	2.1	0.2	1.6	0.7	0.2	0.1	0.3	98.2
Leucoxene	74.6	12.7	0.5	0.4	5.1	2.8	0.2	0.3	0.3	96.8
Rutile	93.7	1.5	0.2	0.2	1.1	0.2	0.1	0.1	0.3	97.5
Ti magnetite	40.7	37.2	4.8	1.0	2.2	1.1	0.7	1.0	2.7	91.5
Magnetite	0.7	60.9	0.2	0.0	21.2	9.5	1.2	0.1	0.0	93.9
Chromite	0.8	18.3	0.0	61.7	2.8	9.9	4.4	0.3	0.0	98.2
Pyrite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monazite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Y-phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sphene	39.1	0.7	0.2	0.0	26.6	1.8	0.0	28.1	0.0	96.4
Garnet	1.3	12.6	14.5	0.0	39.6	21.3	0.9	2.5	0.1	92.8
Sillimanite	0.2	1.0	0.1	0.1	42.7	53.7	0.0	0.1	0.3	98.2
Staurolite	1.0	15.2	0.3	0.2	32.4	46.7	1.5	0.0	0.4	97.7
Zircon	0.3	0.3	0.2	0.2	29.9	0.2	0.1	0.1	64.2	95.4
Silicate	0.6	1.5	0.3	0.2	83.7	7.7	0.4	1.0	0.5	95.8
Unclassified	14.8	6.9	0.4	0.3	32.9	23.9	0.4	0.9	4.9	85.2

Valuable heavy minerals								
Category	Ilmenite	Leucoxene	Rutile	Ti magnetite	Garnet	Zircon	Sillimanite	Total
wt %	80.3	5.0	3.7	0.1	0.6	7.0	3.3	100.0

Normalised average contents of the valuable Ti-containing minerals:				
Average content	Category: Ilmenite	Leucoxene	Rutile	Ti magnetite
TiO_2 wt%	58.5	77.1	96.2	44.5
Fe_2O_3 wt%	36.2	13.1	1.5	40.7
MnO wt%	2.2	0.5	0.2	5.3
Cr_2O_3 wt%	0.2	0.4	0.2	1.1
SiO_2 wt%	1.7	5.3	1.1	2.4
Al_2O_3 wt%	0.8	2.9	0.2	1.3
MgO wt%	0.2	0.2	0.1	0.8
CaO wt%	0.1	0.3	0.1	1.0
ZrO_2 wt%	0.3	0.3	0.3	2.9
Total	100.0	100.0	100.0	100.0

Average TiO_2 content of all the TiO_2 minerals:	61.1
Average TiO_2 content of all the TiO_2 minerals excl. rutile:	59.6
Valuable heavy minerals in raw sand:	0.91

Weight percent on a mineral basis:		
Category	Heavy mineral concentrate wt %	Raw sand wt %
Ilmenite	64.0	0.7
Leucoxene	4.0	0.0
Rutile	3.0	0.0
Ti magnetite	0.1	0.0
Magnetite	1.8	0.0
Chromite	0.1	0.0
Pyrite	0.0	0.0
Phosphate	0.0	0.0
Monazite	0.0	0.0
Y-phosphate	0.0	0.0
Sphene	0.0	0.0
Garnet	0.5	0.0
Sillimanite	2.6	0.0
Staurolite	2.3	0.0
Zircon	5.6	0.1
Silicate	15.5	99.0
Unclassified	0.7	0.0
Total	100.0	100.0

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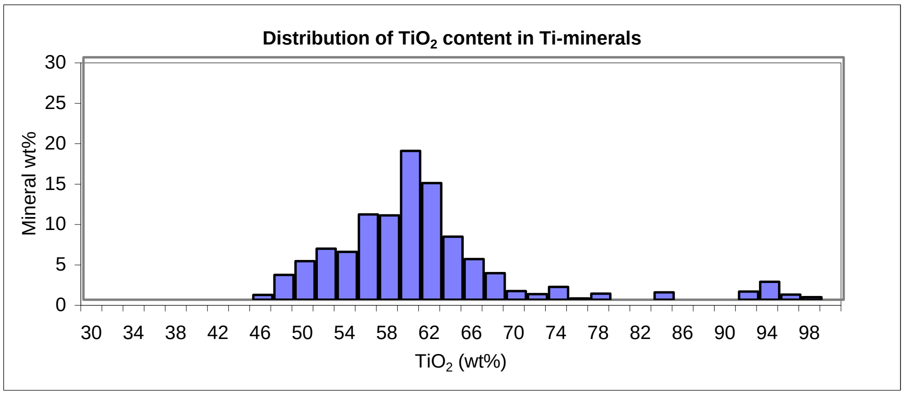
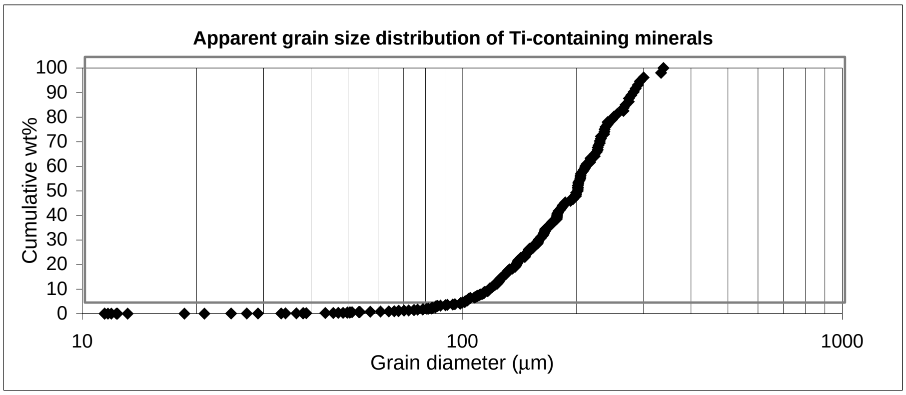
Sample Name:	V92 17-26m	Analyzed by:	CCA
Submitter:	Dupont	Acc. Voltage	17kV
Date:	11/13/00		





Average grain parameters					
Category	Aspect ratio	Circularity	Perimeter (µm)	Length (µm)	Total grains
Ilmenite	1.6	1.9	617	237	208
Leucoxene	1.5	1.9	513	199	17
Rutile	1.4	1.8	649	249	8
Ti magnetite	1.4	1.1	85	32	5
Magnetite	1.5	3.6	2149	971	1
Chromite	2.3	2.0	191	77	2
Pyrite	0.0	0.0	0	0	0
Phosphate	0.0	0.0	0	0	0
Monazite	0.0	0.0	0	0	0
Y-phosphate	0.0	0.0	0	0	0
Sphene	1.5	1.3	63	18	1
Garnet	2.1	2.5	527	221	3
Sillimanite	1.7	2.6	836	364	9
Staurolite	1.7	2.3	732	303	7
Zircon	1.5	2.0	603	243	21
Silicate	1.6	2.0	358	145	242
Unclassified	1.4	1.7	273	112	15

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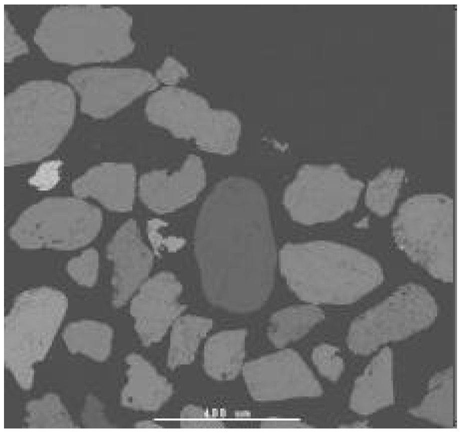
GEUS

Sample Name:	V 101 21-26m
Date:	11/9/00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	80x
Guard region	170 µm
Sieve	100 μm^2

No. of analysed frames:	100
No. analysed of particles	559
Heavy minerals in raw sand (%):	2.35
comments: Grains are very close to each other and may not be separated. Low resolution and 9 filter passes were used.	



	Average content									
Category	TiO_2 wt%	Fe_2O_3 wt%	MnO wt%	Cr_2O_3 wt%	SiO_2 wt%	Al_2O_3 wt%	MgO wt%	CaO wt%	ZrO_2 wt%	Total
Ilmenite	57.6	35.4	2.3	0.1	1.1	0.5	0.3	0.1	0.4	97.8
Leucoxene	75.7	16.5	1.5	0.1	3.0	0.7	0.1	0.1	0.3	98.1
Rutile	94.3	1.4	0.1	0.1	1.2	0.3	0.2	0.0	0.3	97.9
Ti magnetite	39.2	32.4	0.5	0.1	15.0	8.3	0.5	0.3	0.3	96.5
Magnetite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chromite	0.5	17.8	1.8	51.7	0.7	16.1	9.7	0.0	0.6	99.0
Pyrite	0.4	32.0	0.2	0.1	0.5	0.3	0.1	0.0	0.5	34.0
Phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monazite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Y-phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sphene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Garnet	1.0	28.4	6.3	0.2	36.3	19.2	3.3	3.1	0.3	98.0
Sillimanite	0.5	0.6	0.1	0.2	42.4	53.5	0.0	0.0	0.3	97.8
Staurolite	1.1	15.0	0.1	0.4	32.2	45.3	2.0	0.0	1.6	97.6
Zircon	0.4	0.4	0.1	0.2	29.6	0.1	0.1	0.1	64.6	95.7
Silicate	2.5	8.7	1.9	0.1	46.5	32.4	1.9	2.5	0.4	96.9
Unclassified	13.7	13.1	0.8	0.1	35.5	15.8	1.1	1.0	16.8	97.9

Valuable heavy minerals								
Category	Ilmenite	Leucoxene	Rutile	Ti magnetite	Garnet	Zircon	Sillimanite	Total
wt %	75.5	7.2	4.2	0.9	4.8	6.1	1.2	100.0

Normalised average contents of the valuable Ti-containing minerals:				
Average content	Category			
	Ilmenite	Leucoxene	Rutile	Ti magnetite
TiO_2 wt%	59.0	77.2	96.3	40.6
Fe_2O_3 wt%	36.2	16.9	1.4	33.5
MnO wt%	2.3	1.5	0.1	0.6
Cr_2O_3 wt%	0.1	0.1	0.1	0.1
SiO_2 wt%	1.1	3.1	1.2	15.5
Al_2O_3 wt%	0.5	0.8	0.3	8.6
MgO wt%	0.3	0.1	0.2	0.6
CaO wt%	0.1	0.1	0.0	0.3
ZrO_2 wt%	0.4	0.3	0.3	0.3
Total	100.0	100.0	100.0	100.0

Average TiO_2 content of all the TiO_2 minerals:	62.1
Average TiO_2 content of all the TiO_2 minerals excl. rutile:	60.3
Valuable heavy minerals in raw sand:	2.24

Weight percent on a mineral basis:		
Category	Heavy mineral concentrate wt %	Raw sand wt %
Ilmenite	71.9	1.7
Leucoxene	6.9	0.2
Rutile	4.0	0.1
Ti magnetite	0.9	0.0
Magnetite	0.0	0.0
Chromite	0.1	0.0
Pyrite	0.2	0.0
Phosphate	0.0	0.0
Monazite	0.0	0.0
Y-phosphate	0.0	0.0
Sphene	0.0	0.0
Garnet	4.6	0.1
Sillimanite	1.1	0.0
Staurolite	0.0	0.0
Zircon	5.8	0.1
Silicate	3.4	97.7
Unclassified	1.0	0.0
Total	100.0	100.0

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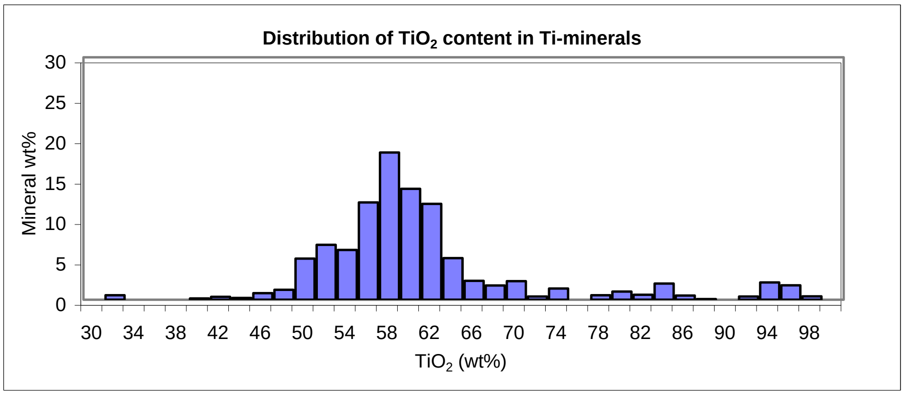
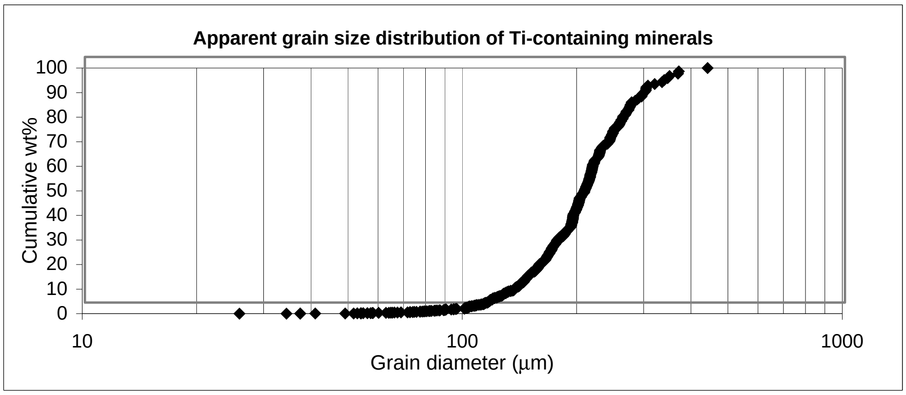
GEUS

Sample Name:	V 101 21-26m	Analyzed by:	CCA
Submitter:	Dupont	Acc. Voltage	17kV
Date:	11/9/00		





Average grain parameters					
Category	Aspect ratio	Circularity	Perimeter (µm)	Length (µm)	Total grains
Ilmenite	1.4	1.7	703	264	389
Leucoxene	1.4	1.9	883	351	27
Rutile	1.5	1.6	717	267	18
Ti magnetite	1.6	2.2	773	310	4
Magnetite	0.0	0.0	0	0	0
Chromite	1.6	1.7	437	162	1
Pyrite	1.3	1.5	341	117	4
Phosphate	0.0	0.0	0	0	0
Monazite	0.0	0.0	0	0	0
Y-phosphate	0.0	0.0	0	0	0
Sphene	0.0	0.0	0	0	0
Garnet	1.4	1.7	607	224	34
Sillimanite	1.5	1.7	648	248	10
Staurolite	1.4	1.3	279	75	1
Zircon	1.3	1.6	651	238	32
Silicate	1.4	1.7	654	246	34
Unclassified	1.3	2.0	986	406	5

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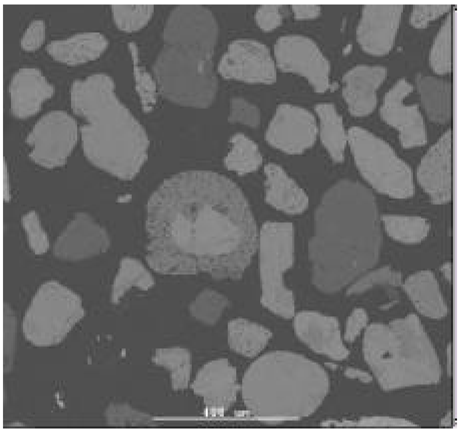
GEUS

Sample Name:	V101 3-17 m
Date:	11/9/00
Submitter:	Dupont
Analyzed by:	CCA
Acc. Voltage	17 kV
Magnification	80x
Guard region	170 µm
Sieve	100 μm^2

No. of analysed frames:	100
No. analysed of particles	350
Heavy minerals in raw sand (%):	1.13
comments:	Low resolution and 9 filter passes vere used.



	Average content									
Category	TiO_2 wt%	Fe_2O_3 wt%	MnO wt%	Cr_2O_3 wt%	SiO_2 wt%	Al_2O_3 wt%	MgO wt%	CaO wt%	ZrO_2 wt%	Total
Ilmenite	59.1	33.0	2.1	0.1	2.1	1.0	0.3	0.1	0.3	98.0
Leucoxene	75.8	11.3	0.7	0.1	6.9	2.0	0.2	0.1	0.4	97.5
Rutile	94.1	1.3	0.2	0.2	1.1	0.6	0.1	0.1	0.2	97.9
Ti magnetite	42.3	33.8	2.3	0.1	17.7	1.4	0.0	0.0	0.4	97.9
Magnetite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chromite	0.4	33.5	0.8	20.9	2.4	33.3	7.8	0.0	0.2	99.2
Pyrite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monazite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Y-phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sphene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Garnet	3.5	23.0	5.1	0.1	39.0	21.3	2.7	2.5	0.4	97.6
Sillimanite	0.5	0.5	0.4	0.2	42.5	53.3	0.1	0.0	0.1	97.5
Staurolite	0.8	15.1	0.5	0.2	32.1	47.3	1.7	0.1	0.3	98.1
Zircon	0.7	0.7	0.2	0.2	29.7	0.1	0.1	0.2	63.9	95.7
Silicate	1.0	2.9	0.2	0.2	69.7	19.5	1.2	2.5	0.3	97.5
Unclassified	37.6	9.3	0.4	0.1	34.4	3.7	0.3	0.2	0.8	86.8

Valuable heavy minerals								
Category	Ilmenite	Leucoxene	Rutile	Ti magnetite	Garnet	Zircon	Sillimanite	Total
wt %	72.5	10.3	6.0	0.3	2.9	6.8	1.3	100.0

Normalised average contents of the valuable Ti-containing minerals:				
Average content	Category			
	Ilmenite	Leucoxene	Rutile	Ti magnetite
TiO_2 wt%	60.3	77.7	96.1	43.2
Fe_2O_3 wt%	33.6	11.6	1.4	34.5
MnO wt%	2.1	0.7	0.2	2.3
Cr_2O_3 wt%	0.1	0.1	0.2	0.1
SiO_2 wt%	2.1	7.1	1.1	18.1
Al_2O_3 wt%	1.1	2.1	0.7	1.4
MgO wt%	0.3	0.2	0.1	0.0
CaO wt%	0.1	0.1	0.1	0.0
ZrO_2 wt%	0.4	0.4	0.2	0.4
Total	100.0	100.0	100.0	100.0

Average TiO_2 content of all the TiO_2 minerals:	64.6
Average TiO_2 content of all the TiO_2 minerals excl. rutile:	62.4
Valuable heavy minerals in raw sand:	0.95

Weight percent on a mineral basis:		
Category	Heavy mineral concentrate wt %	Raw sand wt %
Ilmenite	60.8	0.7
Leucoxene	8.6	0.1
Rutile	5.0	0.1
Ti magnetite	0.3	0.0
Magnetite	0.0	0.0
Chromite	0.4	0.0
Pyrite	0.0	0.0
Phosphate	0.0	0.0
Monazite	0.0	0.0
Y-phosphate	0.0	0.0
Sphene	0.0	0.0
Garnet	2.4	0.0
Sillimanite	1.1	0.0
Staurolite	4.3	0.0
Zircon	5.7	0.1
Silicate	9.7	99.0
Unclassified	1.7	0.0
Total	100.0	100.0

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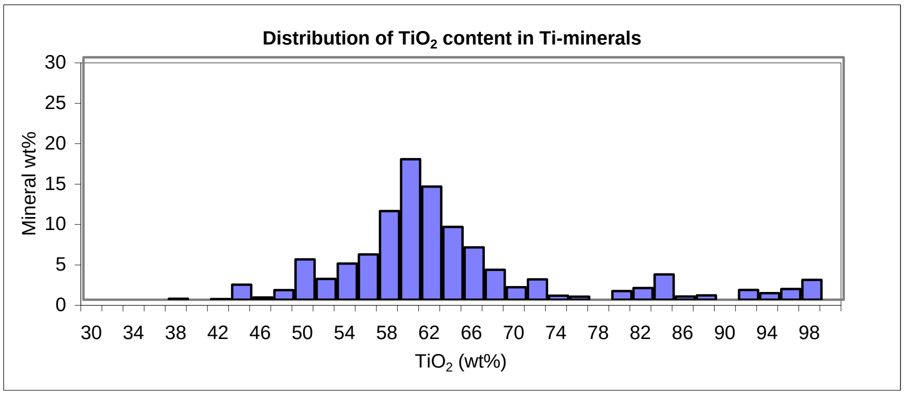
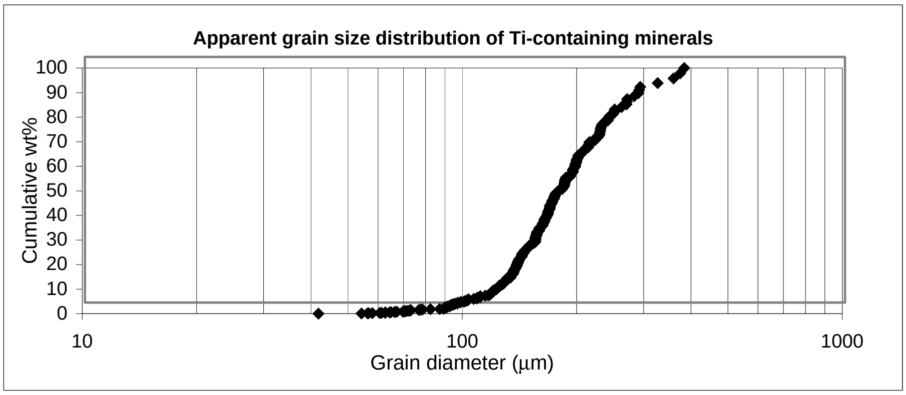
GEUS

Sample Name:	V101 3-17 m	Analyzed by:	CCA
Submitter:	Dupont	Acc. Voltage	17kV
Date:	11/9/00		





Average grain parameters					
Category	Aspect ratio	Circularity	Perimeter (µm)	Length (µm)	Total grains
Ilmenite	1.4	1.7	621	233	221
Leucoxene	1.4	1.7	755	282	21
Rutile	1.5	1.7	665	246	15
Ti magnetite	1.5	1.6	414	149	2
Magnetite	0.0	0.0	0	0	0
Chromite	1.8	1.9	729	286	1
Pyrite	0.0	0.0	0	0	0
Phosphate	0.0	0.0	0	0	0
Monazite	0.0	0.0	0	0	0
Y-phosphate	0.0	0.0	0	0	0
Sphene	0.0	0.0	0	0	0
Garnet	1.5	2.3	1344	560	3
Sillimanite	1.5	1.9	614	238	6
Staurolite	1.5	1.9	1000	390	8
Zircon	1.5	1.6	607	218	20
Silicate	1.4	1.8	690	270	49
Unclassified	1.5	2.0	1133	460	4

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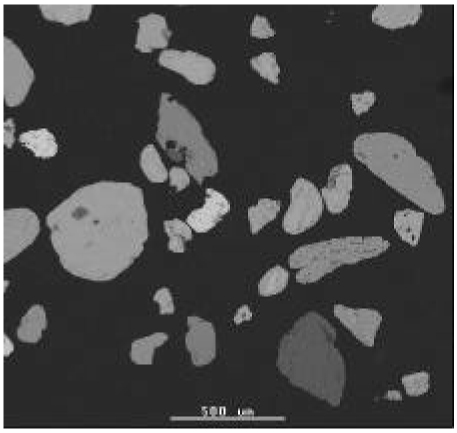

Sample Name:	V118 15-16m	No. of analysed frames:	81
Lab. Name:	V118	No. of analysed particles:	773
Date:	11/5/01	Heavy minerals in raw sand (%):	3.61
Submitter:	DuPont/GEUS		
Country:	Denmark	Comments:	
Analyzed by:	BV		
Acc. Voltage/Magnification: 17kV/50x			
Guard region:	350 µm		
Sieve:	100 μm^2		

	Average content									
Category	TiO_2 wt%	Fe_2O_3 wt%	MnO wt%	Cr_2O_3 wt%	SiO_2 wt%	Al_2O_3 wt%	MgO wt%	CaO wt%	ZrO_2 wt%	Total
Ilmenite	58.5	35.1	2.1	0.1	1.0	0.8	0.3	0.1	0.3	98.3
Leucoxene	74.4	15.0	0.8	0.2	4.4	1.8	0.1	0.1	0.3	97.2
Rutile	93.7	1.7	0.1	0.2	1.9	0.5	0.0	0.1	0.2	98.4
Ti magnetite	33.3	30.5	1.7	0.3	24.9	6.3	0.3	0.4	0.2	97.8
Magnetite	12.4	81.0	0.5	0.1	1.2	2.2	0.4	0.0	0.6	98.3
Chromite	0.2	19.4	1.2	48.5	0.0	20.9	9.2	0.2	0.0	99.6
Pyrite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monazite	0.0	0.0	0.0	0.0	2.2	0.5	0.3	2.6	2.5	8.1
Y-phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sphene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Garnet	0.2	28.7	5.4	0.1	36.8	19.5	3.2	4.0	0.2	98.2
Kya/Sill	0.4	0.8	0.0	0.2	42.6	54.1	0.0	0.1	0.1	98.3
Staurolite	0.7	14.6	0.2	0.1	34.1	46.5	1.6	0.1	0.2	98.0
Zircon	0.3	0.4	0.2	0.1	29.7	0.1	0.1	0.2	64.6	95.8
Silicate	3.3	4.7	1.0	0.1	54.8	31.6	1.8	0.5	0.3	98.0
Unclassified	11.9	11.1	1.7	1.2	9.1	5.6	2.5	16.2	11.0	70.4

Valuable heavy minerals									
Category	Ilmenite	Leucoxene	Rutile	Ti magnetite	Garnet	Zircon	Kya/Sill	Staurolite	Total
wt %	70.3	3.6	7.6	0.7	7.3	5.9	1.9	2.7	100.0

Normalised average contents of the valuable Ti-containing minerals:				
Average content	Category			
	Ilmenite	Leucoxene	Rutile	Ti magnetite
TiO_2 wt%	59.6	76.6	95.2	34.0
Fe_2O_3 wt%	35.8	15.4	1.7	31.1
MnO wt%	2.1	0.8	0.1	1.8
Cr_2O_3 wt%	0.1	0.2	0.2	0.3
SiO_2 wt%	1.0	4.5	1.9	25.4
Al_2O_3 wt%	0.8	1.9	0.5	6.5
MgO wt%	0.3	0.1	0.0	0.3
CaO wt%	0.1	0.1	0.1	0.4
ZrO_2 wt%	0.3	0.4	0.3	0.2
Total	100.0	100.0	100.0	100.0

Average TiO_2 content of all the TiO_2 minerals:	63.4
Average TiO_2 content of all the TiO_2 minerals excl. rutile:	60.1
Valuable heavy minerals in raw sand:	3.21

Weight percent on a mineral basis:		
Category	Heavy mineral concentrate wt %	Raw sand wt %
Ilmenite	62.5	2.3
Leucoxene	3.2	0.1
Rutile	6.7	0.2
Ti magnetite	0.7	0.0
Magnetite	0.0	0.0
Chromite	0.1	0.0
Pyrite	0.0	0.0
Phosphate	0.0	0.0
Monazite	0.2	0.0
Y-phosphate	0.0	0.0
Sphene	0.0	0.0
Garnet	6.5	0.2
Kya/Sill	1.7	0.1
Staurolite	2.4	0.1
Zircon	5.2	0.2
Silicate	10.1	96.8
Unclassified	0.6	0.0
Total	100.0	100.0

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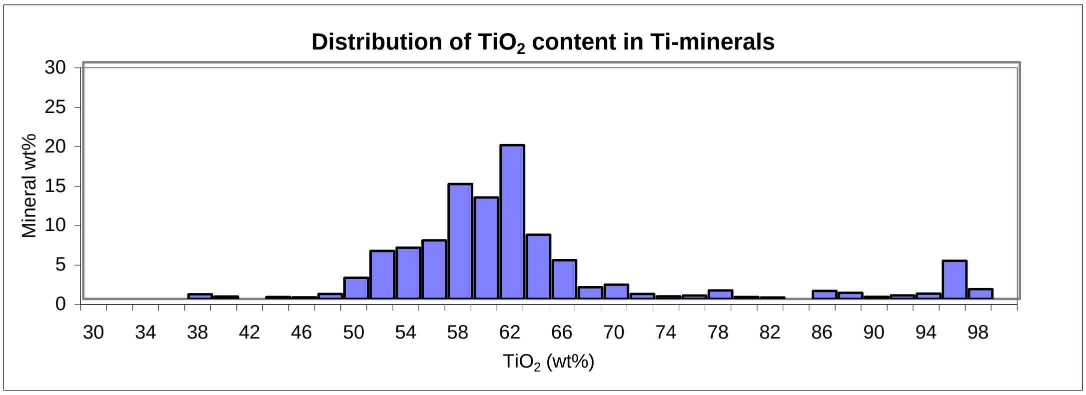
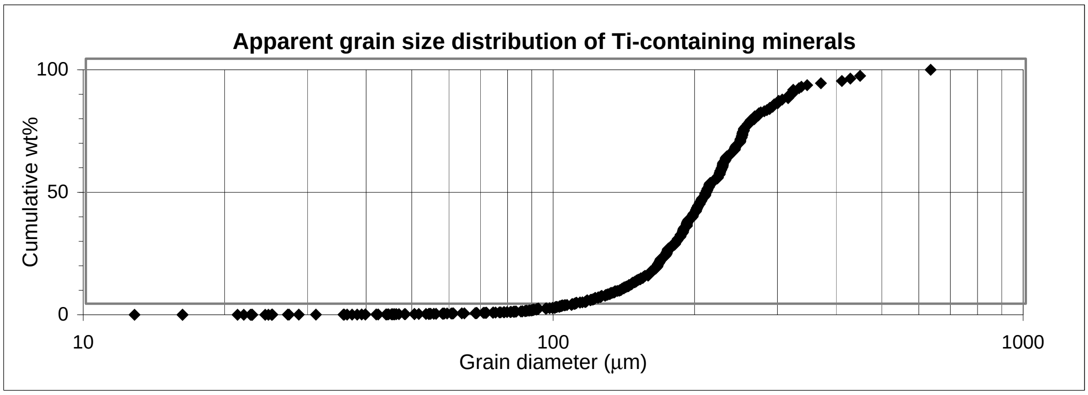
Lab. Name:	V118	Analyzed by:	BV
Submitter:	DuPont/GEUS	Acc. Voltage	17kV
Date:	11/5/01		





	Average grain parameters					
Category	Aspect ratio	Circularity	Perimeter (µm)	Length (µm)	Area (µm^2)	Total grains
Ilmenite	1.5	1.7	672	252	24583	500
Leucoxene	1.5	1.8	752	285	31234	20
Rutile	1.6	1.9	739	287	29020	41
Ti magnetite	2.0	1.9	789	317	30352	4
Magnetite	1.7	1.7	252	96	2916	2
Chromite	1.0	1.5	603	207	19589	1
Pyrite	0.0	0.0	0	0	0	0
Phosphate	0.0	0.0	0	0	0	0
Monazite	1.3	1.6	781	285	30147	1
Y-phosphate	0.0	0.0	0	0	0	0
Sphene	0.0	0.0	0	0	0	0
Garnet	1.5	2.2	775	320	26684	54
Kya/Sill	1.4	1.9	1255	493	77994	6
Staurolite	1.6	2.2	966	395	36939	15
Zircon	1.5	1.8	631	243	20740	48
Silicate	1.6	2.2	1092	454	55308	61
Unclassified	1.4	1.3	294	110	10241	20

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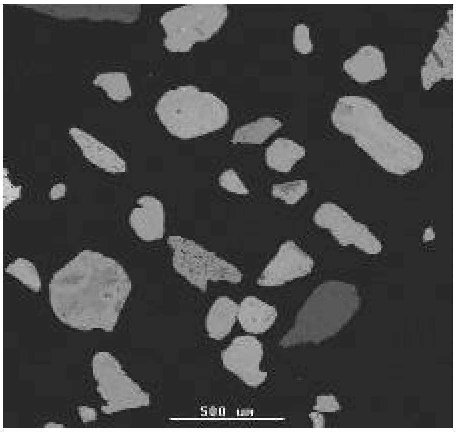
Sample Name:	V148 11-15 m	No. of analysed frames:	89
Lab. Name:	V148	No. of analysed particles:	992
Date:	11/6/01	Heavy minerals in raw sand (%):	2.70
Submitter:	DuPont/GEUS		
Country:	Denmark	Comments:	
Analyzed by:	BV		
Acc. Voltage/Magnification: 17kV/50x			
Guard region:	300 µm		
Sieve:	100 μm^2		



	Average content									
Category	TiO_2 wt%	Fe_2O_3 wt%	MnO wt%	Cr_2O_3 wt%	SiO_2 wt%	Al_2O_3 wt%	MgO wt%	CaO wt%	ZrO_2 wt%	Total
Ilmenite	56.8	36.9	2.1	0.1	1.0	0.7	0.3	0.1	0.3	98.4
Leucoxene	77.1	13.9	0.9	0.1	3.8	1.5	0.1	0.1	0.4	97.9
Rutile	94.2	1.3	0.1	0.2	1.0	0.7	0.1	0.1	0.3	97.9
Ti magnetite	40.3	36.1	1.2	0.2	9.9	5.4	0.7	0.1	1.0	95.0
Magnetite	1.3	62.7	0.1	0.9	9.3	22.4	0.6	0.0	0.4	97.7
Chromite	1.9	38.4	1.1	46.7	0.8	7.3	1.5	0.1	0.2	97.8
Pyrite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monazite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Y-phosphate	0.5	0.6	0.0	0.1	0.0	1.6	0.0	0.4	2.0	5.3
Sphene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Garnet	0.3	23.0	14.6	0.2	35.6	19.0	2.2	3.0	0.1	98.0
Kya/Sill	0.2	0.8	0.1	0.1	42.8	53.8	0.0	0.1	0.2	98.2
Staurolite	0.7	15.5	0.3	0.1	31.6	48.6	1.6	0.1	0.1	98.5
Zircon	0.3	0.4	0.2	0.1	29.5	0.1	0.1	0.2	64.6	95.4
Silicate	1.4	4.8	1.6	0.1	50.2	37.9	0.7	0.6	0.3	97.7
Unclassified	13.3	13.3	4.2	0.7	20.8	6.2	0.4	0.4	18.2	77.4

Valuable heavy minerals									
Category	Ilmenite	Leucoxene	Rutile	Ti magnetite	Garnet	Zircon	Kya/Sill	Staurolite	Total
wt %	75.8	5.3	7.4	1.0	1.2	3.7	4.0	1.6	100.0

Normalised average contents of the valuable Ti-containing minerals:				
Average content	Category: Ilmenite	Leucoxene	Rutile	Ti magnetite
TiO_2 wt%	57.8	78.7	96.2	42.4
Fe_2O_3 wt%	37.6	14.2	1.4	38.0
MnO wt%	2.2	0.9	0.1	1.2
Cr_2O_3 wt%	0.1	0.1	0.2	0.2
SiO_2 wt%	1.0	3.8	1.0	10.4
Al_2O_3 wt%	0.7	1.5	0.7	5.7
MgO wt%	0.3	0.1	0.1	0.8
CaO wt%	0.1	0.1	0.1	0.1
ZrO_2 wt%	0.3	0.4	0.3	1.1
Total	100.0	100.0	100.0	100.0

Average TiO_2 content of all the TiO_2 minerals:	62.0
Average TiO_2 content of all the TiO_2 minerals excl. rutile:	58.9
Valuable heavy minerals in raw sand:	2.51

Weight percent on a mineral basis:		
Category	Heavy mineral concentrate wt %	Raw sand wt %
Ilmenite	70.5	1.9
Leucoxene	4.9	0.1
Rutile	6.9	0.2
Ti magnetite	0.9	0.0
Magnetite	0.0	0.0
Chromite	0.3	0.0
Pyrite	0.0	0.0
Phosphate	0.0	0.0
Monazite	0.0	0.0
Y-phosphate	0.2	0.0
Sphene	0.0	0.0
Garnet	1.1	0.0
Kya/Sill	3.7	0.1
Staurolite	1.5	0.0
Zircon	3.4	0.1
Silicate	6.1	97.5
Unclassified	0.5	0.0
Total	100.0	100.0

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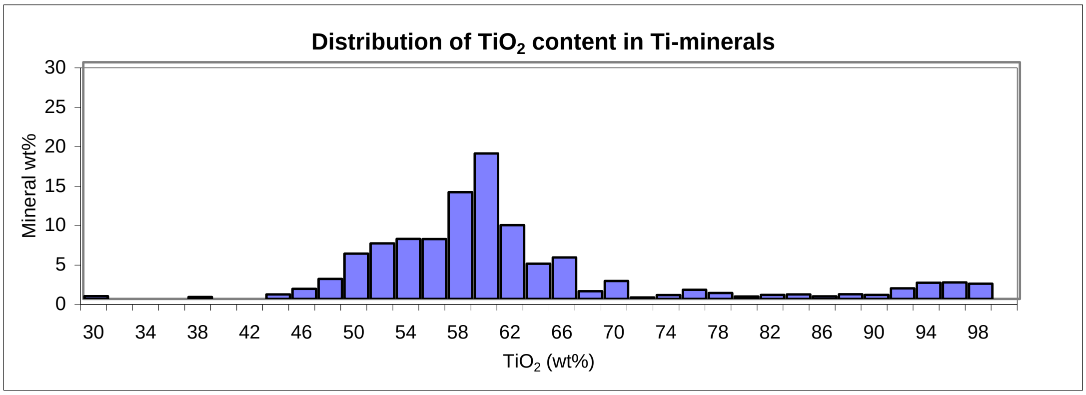
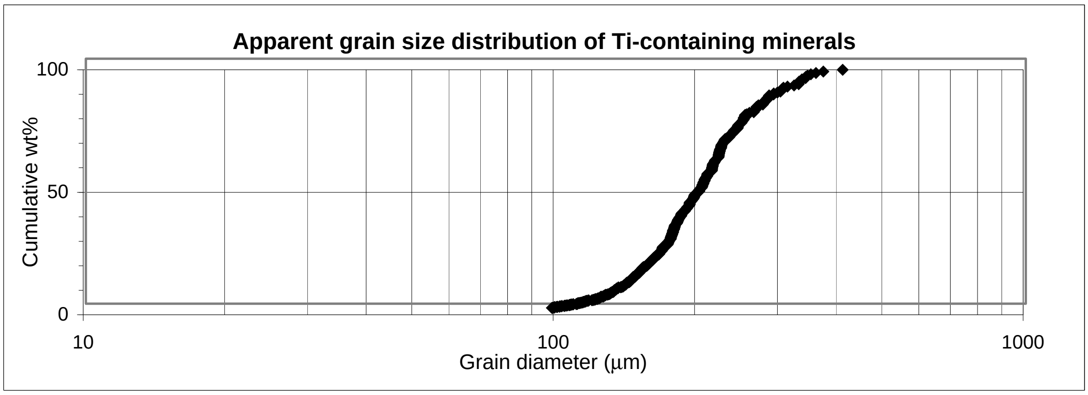
GEUS

Lab. Name:	V148	Analyzed by:	BV
Submitter:	DuPont/GEUS	Acc. Voltage	17kV
Date:	11/6/01		





Average grain parameters						
Category	Aspect ratio	Circularity	Perimeter (µm)	Length (µm)	Area (μm^2)	Total grains
Ilmenite	1.6	1.8	671	254	22942	691
Leucoxene	1.5	2.1	888	354	34354	32
Rutile	1.5	1.8	728	283	26934	52
Ti magnetite	1.3	2.1	735	318	24924	8
Magnetite	1.2	0.9	45	18	167	1
Chromite	1.6	1.9	559	216	13097	4
Pyrite	0.0	0.0	0	0	0	0
Phosphate	0.0	0.0	0	0	0	0
Monazite	0.0	0.0	0	0	0	0
Y-phosphate	1.5	1.9	603	235	15589	2
Sphene	0.0	0.0	0	0	0	0
Garnet	1.5	1.7	503	197	15942	17
Kya/Sill	1.7	2.2	998	408	46046	25
Staurolite	1.7	2.2	718	297	22241	18
Zircon	1.4	1.7	554	204	16575	45
Silicate	1.6	2.0	721	291	28272	82
Unclassified	1.4	1.4	382	156	13583	15

GEUS

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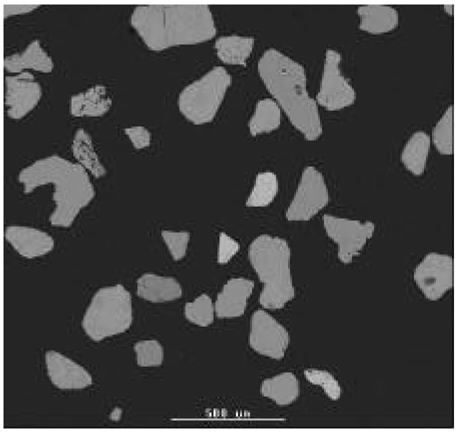

Sample Name:	V164 6-10 m	No. of analysed frames:	121
Lab. Name:	V164	No. of analysed particles:	1319
Date:	11/6/01	Heavy minerals in raw sand (%):	7.08
Submitter:	DuPont/GEUS		
Country:	Denmark	Comments:	
Analyzed by:	BV		
Acc. Voltage/Magnification: 17kV/50x			
Guard region:	320 μm		
Sieve:	100 μm^2		

	Average content									
Category	TiO_2 wt%	Fe_2O_3 wt%	MnO wt%	Cr_2O_3 wt%	SiO_2 wt%	Al_2O_3 wt%	MgO wt%	CaO wt%	ZrO_2 wt%	Total
Ilmenite	56.8	36.5	2.3	0.1	1.2	0.9	0.2	0.1	0.3	98.4
Leucoxene	75.6	14.7	1.3	0.2	3.0	2.0	0.2	0.2	1.0	98.0
Rutile	95.1	1.5	0.2	0.1	0.6	0.5	0.1	0.1	0.2	98.4
Ti magnetite	42.5	37.2	3.4	0.1	11.3	2.6	0.2	0.1	0.4	97.8
Magnetite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chromite	0.2	24.9	1.6	50.9	0.4	11.3	8.5	0.1	0.0	98.0
Pyrite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Phosphate	0.8	6.3	0.0	0.0	9.0	36.5	0.5	4.2	0.0	57.4
Monazite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Y-phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sphene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Garnet	0.3	19.7	12.1	0.2	38.2	20.0	3.5	2.9	0.2	97.0
Kya/Sill	0.3	0.9	0.1	0.1	42.6	53.7	0.0	0.1	0.4	98.1
Staurolite	0.6	14.1	0.3	0.1	35.1	46.6	1.8	0.1	0.1	98.6
Zircon	0.3	0.3	0.1	0.1	29.8	0.2	0.1	0.1	64.8	95.9
Silicate	0.7	6.2	0.7	0.1	53.9	30.6	1.7	3.3	0.2	97.4
Unclassified	18.3	11.5	2.3	3.5	21.6	7.5	1.9	0.5	26.6	93.6

Valuable heavy minerals									
Category	Ilmenite	Leucoxene	Rutile	Ti magnetite	Garnet	Zircon	Kya/Sill	Staurolite	Total
wt %	79.5	5.3	3.6	0.7	0.9	6.8	1.7	1.3	100.0

Normalised average contents of the valuable Ti-containing minerals:				
Average content	Category: Ilmenite	Leucoxene	Rutile	Ti magnetite
TiO_2 wt%	57.7	77.1	96.6	43.4
Fe_2O_3 wt%	37.1	15.0	1.6	38.1
MnO wt%	2.3	1.3	0.2	3.4
Cr_2O_3 wt%	0.1	0.2	0.1	0.1
SiO_2 wt%	1.2	3.1	0.7	11.6
Al_2O_3 wt%	0.9	2.1	0.5	2.7
MgO wt%	0.2	0.2	0.1	0.2
CaO wt%	0.1	0.2	0.1	0.1
ZrO_2 wt%	0.3	1.0	0.2	0.4
Total	100.0	100.0	100.0	100.0

Weight percent on a mineral basis:		
Category	Heavy mineral concentrate wt %	Raw sand wt %
Ilmenite	73.7	5.2
Leucoxene	5.0	0.4
Rutile	3.4	0.2
Ti magnetite	0.6	0.0
Magnetite	0.0	0.0
Chromite	0.2	0.0
Pyrite	0.0	0.0
Phosphate	0.6	0.0
Monazite	0.0	0.0
Y-phosphate	0.0	0.0
Sphene	0.0	0.0
Garnet	0.8	0.1
Kya/Sill	1.6	0.1
Staurolite	1.3	0.1
Zircon	6.3	0.4
Silicate	5.4	93.3
Unclassified	1.1	0.1
Total	100.0	100.0

Average TiO_2 content of all the TiO_2 minerals:	60.4
Average TiO_2 content of all the TiO_2 minerals excl. rutile:	58.8
Valuable heavy minerals in raw sand:	6.56

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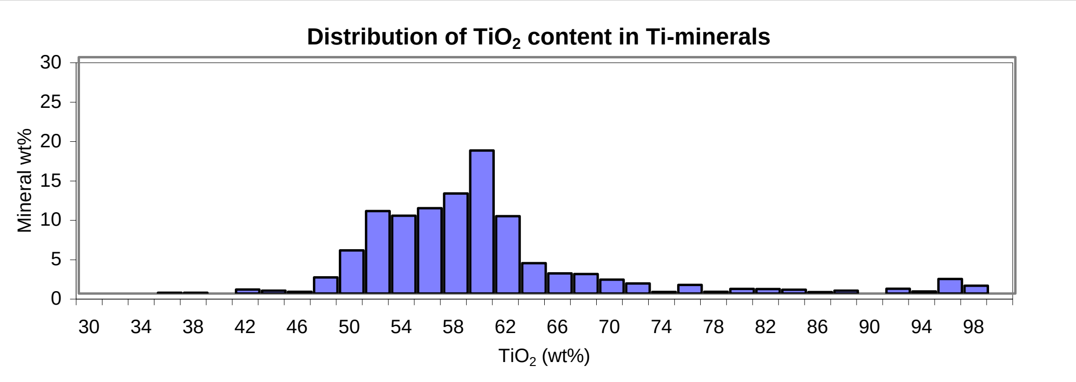
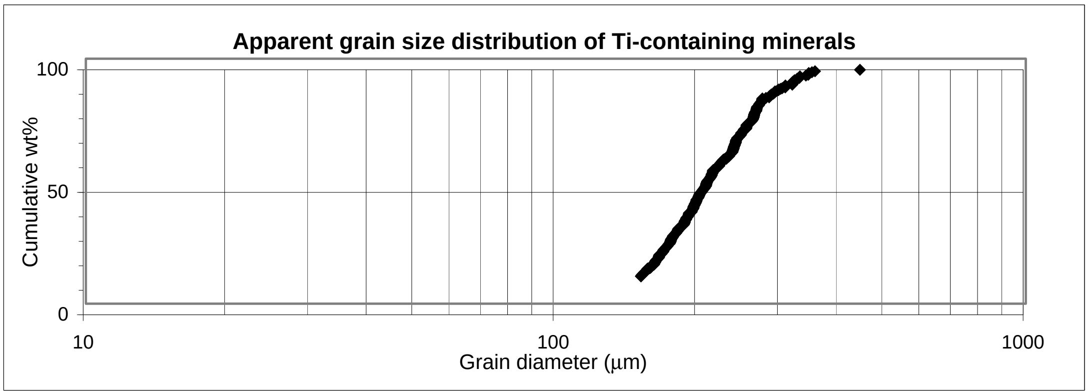
Lab. Name:	V164	Analyzed by:	BV
Submitter:	DuPont/GEUS	Acc. Voltage	17kV
Date:	11/6/01		





Category	Aspect ratio	Circularity	Perimeter (µm)	Length (µm)	Area (µm^2)	Total grains
	Average grain parameters					
Ilmenite	1.5	1.8	714	274	25181	974
Leucoxene	1.5	2.0	801	317	27904	59
Rutile	1.4	1.7	690	258	24538	41
Ti magnetite	1.5	1.9	692	274	21516	9
Magnetite	0.0	0.0	0	0	0	0
Chromite	1.6	1.6	722	260	26490	2
Pyrite	0.0	0.0	0	0	0	0
Phosphate	2.0	2.3	1578	658	86353	2
Monazite	0.0	0.0	0	0	0	0
Y-phosphate	0.0	0.0	0	0	0	0
Sphene	0.0	0.0	0	0	0	0
Garnet	1.4	2.4	773	320	22313	14
Kya/Sill	2.0	2.3	1077	448	49455	15
Staurolite	1.5	2.5	1213	502	49285	10
Zircon	1.6	1.9	696	269	22922	89
Silicate	1.7	2.1	865	355	35070	87
Unclassified	1.6	2.5	993	426	36680	17

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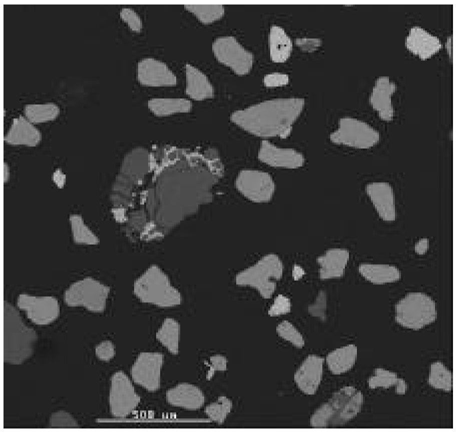
GEUS



Sample Name:	V166 12-13 m	No. of analysed frames:	60
Lab. Name:	V166	No. of analysed particles:	1061
Date:	11/7/01	Heavy minerals in raw sand (%):	9.31
Submitter:	DuPont/GEUS		
Country:	Denmark	Comments:	
Analyzed by:	BV		
Acc. Voltage/Magnification: 17kV/50x			
Guard region:	300 µm		
Sieve:	100 μm^2		

	Average content									
Category	TiO_2 wt%	Fe_2O_3 wt%	MnO wt%	Cr_2O_3 wt%	SiO_2 wt%	Al_2O_3 wt%	MgO wt%	CaO wt%	ZrO_2 wt%	Total
Ilmenite	64.3	29.9	1.7	0.1	0.9	0.4	0.3	0.1	0.3	97.9
Leucoxene	74.4	19.3	1.4	0.1	1.3	0.7	0.2	0.1	0.3	97.9
Rutile	94.4	1.4	0.2	0.1	0.8	0.4	0.1	0.1	0.3	97.8
Ti magnetite	35.8	25.2	1.7	0.0	5.6	5.2	0.2	0.2	9.5	83.5
Magnetite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chromite	1.1	29.0	0.4	47.9	0.3	14.4	5.1	0.2	0.1	98.5
Pyrite	1.6	30.8	0.1	0.2	0.2	0.2	0.1	0.1	0.4	33.6
Phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monazite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Y-phosphate	0.9	0.3	0.5	0.0	0.0	0.9	0.2	0.0	1.0	3.7
Sphene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Garnet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kya/Sill	0.2	1.2	0.1	0.1	42.4	53.4	0.0	0.1	0.2	97.9
Staurolite	0.8	14.2	0.2	0.2	34.4	46.5	1.3	0.1	0.3	98.0
Zircon	0.4	0.3	0.1	0.1	29.5	0.1	0.1	0.2	64.7	95.6
Silicate	1.1	2.9	0.1	0.2	46.9	44.4	1.3	0.2	0.3	97.3
Unclassified	10.8	9.4	1.1	1.7	13.5	4.7	1.3	2.2	18.5	63.2

Valuable heavy minerals									
Category	Ilmenite	Leucoxene	Rutile	Ti magnetite	Garnet	Zircon	Kya/Sill	Staurolite	Total
wt %	63.7	12.2	6.0	0.9	0.0	15.0	1.0	1.3	100.0

Normalised average contents of the valuable Ti-containing minerals:				
Average content	Category			
	Ilmenite	Leucoxene	Rutile	Ti magnetite
TiO_2 wt%	65.6	76.0	96.6	42.9
Fe_2O_3 wt%	30.5	19.8	1.4	30.1
MnO wt%	1.7	1.5	0.2	2.1
Cr_2O_3 wt%	0.1	0.1	0.1	0.0
SiO_2 wt%	0.9	1.3	0.8	6.7
Al_2O_3 wt%	0.4	0.8	0.4	6.3
MgO wt%	0.3	0.2	0.1	0.2
CaO wt%	0.1	0.1	0.1	0.2
ZrO_2 wt%	0.3	0.3	0.3	11.4
Total	100.0	100.0	100.0	100.0

Weight percent on a mineral basis:		
Category	Heavy mineral concentrate wt %	Raw sand wt %
Ilmenite	59.0	5.5
Leucoxene	11.3	1.0
Rutile	5.6	0.5
Ti magnetite	0.8	0.1
Magnetite	0.0	0.0
Chromite	0.7	0.1
Pyrite	0.3	0.0
Phosphate	0.0	0.0
Monazite	0.0	0.0
Y-phosphate	0.1	0.0
Sphene	0.0	0.0
Garnet	0.0	0.0
Kya/Sill	0.9	0.1
Staurolite	1.2	0.1
Zircon	13.9	1.3
Silicate	4.5	91.1
Unclassified	1.9	0.2
Total	100.0	100.0

Average TiO_2 content of all the TiO_2 minerals:	69.2
Average TiO_2 content of all the TiO_2 minerals excl. rutile:	67.0
Valuable heavy minerals in raw sand:	8.62

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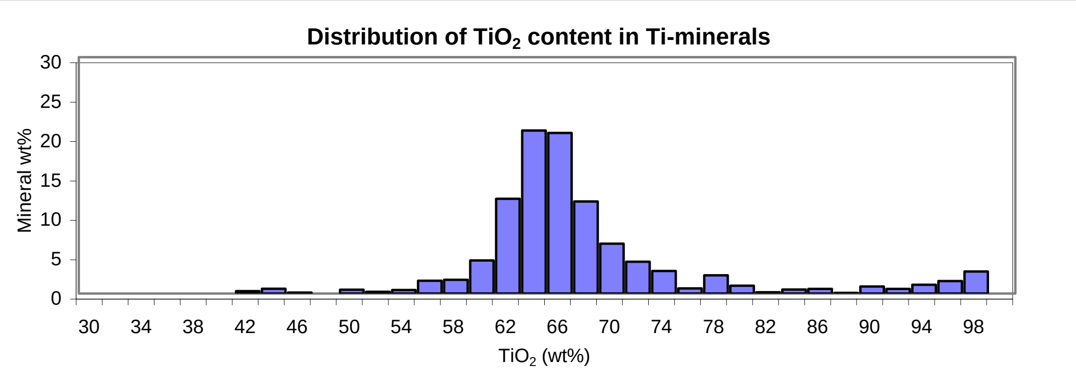
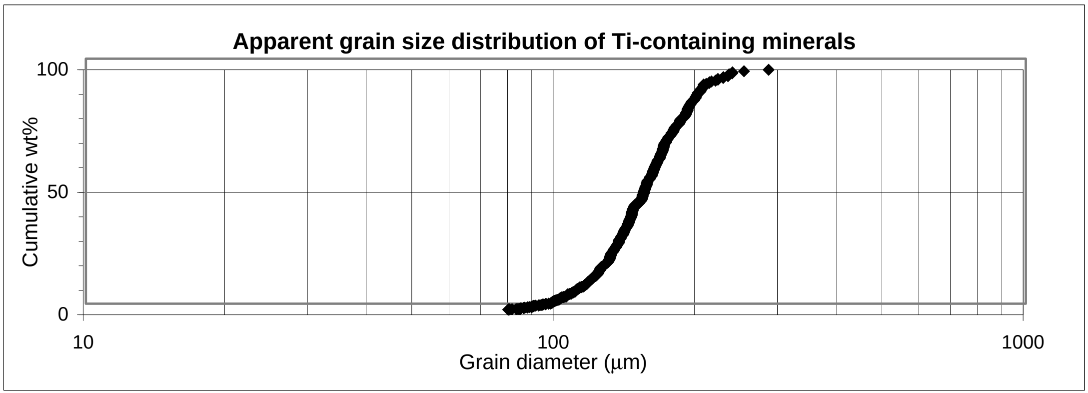
GEUS

Lab. Name:	V166	Analyzed by:	BV
Submitter:	DuPont/GEUS	Acc. Voltage	17kV
Date:	11/7/01		





Category	Aspect ratio	Circularity	Perimeter (µm)	Length (µm)	Area (µm^2)	Total grains
	Average grain parameters					
Ilmenite	1.5	1.7	550	205	15246	572
Leucoxene	1.5	1.7	579	218	17738	94
Rutile	1.5	1.8	483	186	11209	66
Ti magnetite	1.5	2.2	610	262	16039	7
Magnetite	0.0	0.0	0	0	0	0
Chromite	1.4	1.7	597	225	17006	5
Pyrite	1.4	1.6	263	97	3958	10
Phosphate	0.0	0.0	0	0	0	0
Monazite	0.0	0.0	0	0	0	0
Y-phosphate	1.5	1.5	383	133	7781	2
Sphene	0.0	0.0	0	0	0	0
Garnet	0.0	0.0	0	0	0	0
Kya/Sill	1.7	2.2	610	249	15300	12
Staurolite	1.4	1.9	573	225	14932	14
Zircon	1.4	1.6	440	157	10657	186
Silicate	1.6	2.0	646	265	19539	58
Unclassified	1.5	1.8	491	198	13038	35

GEUS
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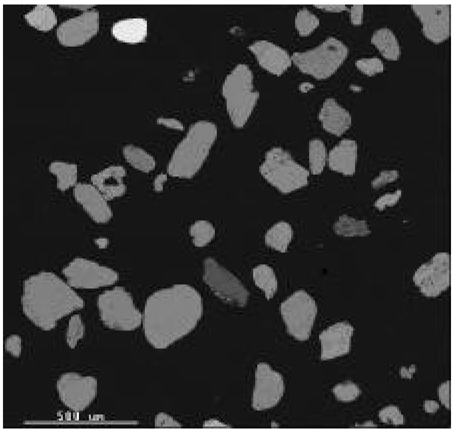
Sample Name:	V194 18-22 m	No. of analysed frames:	81
Lab. Name:	V194	No. of analysed particles:	1215
Date:	11/7/01	Heavy minerals in raw sand (%):	2.81
Submitter:	DuPont/GEUS		
Country:	Denmark	Comments:	
Analyzed by:	BV		
Acc. Voltage/Magnification: 17kV/50x			
Guard region:	350 µm		
Sieve:	100 µm^2		



	Average content									
Category	TiO_2 wt%	Fe_2O_3 wt%	MnO wt%	Cr_2O_3 wt%	SiO_2 wt%	Al_2O_3 wt%	MgO wt%	CaO wt%	ZrO_2 wt%	Total
Ilmenite	57.9	34.7	1.8	0.1	1.8	1.0	0.3	0.1	0.4	98.1
Leucoxene	76.2	13.7	0.8	0.2	3.9	1.5	0.1	0.3	0.4	97.1
Rutile	93.5	2.0	0.1	0.1	1.4	0.7	0.1	0.1	0.3	98.3
Ti magnetite	36.5	44.6	1.0	0.5	5.7	3.9	0.4	0.7	0.3	93.6
Magnetite	2.5	68.2	0.3	0.5	8.7	7.9	0.1	0.3	3.8	92.3
Chromite	0.3	23.3	0.1	42.0	0.5	20.8	11.2	0.1	0.3	98.4
Pyrite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monazite	0.0	0.0	0.0	0.0	1.5	0.6	0.0	1.6	1.2	4.9
Y-phosphate	0.0	1.6	0.0	0.3	0.5	0.3	0.1	1.9	1.2	6.0
Sphene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Garnet	1.1	17.7	18.2	0.1	36.3	19.1	2.6	3.3	0.3	98.6
Kya/Sill	0.2	1.2	0.1	0.2	42.7	53.6	0.0	0.0	0.1	98.1
Staurolite	0.9	15.6	0.3	0.1	32.5	46.8	1.4	0.1	0.3	97.9
Zircon	0.3	1.4	0.2	0.2	29.2	0.1	0.1	0.1	63.6	95.2
Silicate	1.1	4.1	0.3	0.2	48.0	41.3	1.2	1.3	0.2	97.7
Unclassified	10.6	14.5	2.0	0.8	19.1	7.6	0.2	0.9	22.8	78.6

Valuable heavy minerals									
Category	Ilmenite	Leucoxene	Rutile	Ti magnetite	Garnet	Zircon	Kya/Sill	Staurolite	Total
wt %	73.7	4.7	7.5	0.2	1.0	6.7	2.5	3.6	100.0

Normalised average contents of the valuable Ti-containing minerals:

Average content	Ilmenite	Leucoxene	Rutile	Ti magnetite
TiO_2 wt%	59.1	78.6	95.2	39.0
Fe_2O_3 wt%	35.4	14.1	2.0	47.6
MnO wt%	1.8	0.8	0.1	1.0
Cr_2O_3 wt%	0.1	0.2	0.2	0.5
SiO_2 wt%	1.8	4.0	1.4	6.1
Al_2O_3 wt%	1.0	1.5	0.7	4.1
MgO wt%	0.3	0.1	0.1	0.5
CaO wt%	0.1	0.3	0.1	0.8
ZrO_2 wt%	0.4	0.4	0.3	0.3
Total	100.0	100.0	100.0	100.0

Average TiO_2 content of all the TiO_2 minerals:	63.2
Average TiO_2 content of all the TiO_2 minerals excl. rutile:	60.2
Valuable heavy minerals in raw sand:	2.48

Weight percent on a mineral basis:

Category	Heavy mineral concentrate wt %	Raw sand wt %
Ilmenite	65.1	1.8
Leucoxene	4.2	0.1
Rutile	6.6	0.2
Ti magnetite	0.2	0.0
Magnetite	0.1	0.0
Chromite	0.9	0.0
Pyrite	0.0	0.0
Phosphate	0.0	0.0
Monazite	0.0	0.0
Y-phosphate	0.2	0.0
Sphene	0.0	0.0
Garnet	0.9	0.0
Kya/Sill	2.2	0.1
Staurolite	3.2	0.1
Zircon	5.9	0.2
Silicate	10.0	97.5
Unclassified	0.5	0.0
Total	100.0	100.0

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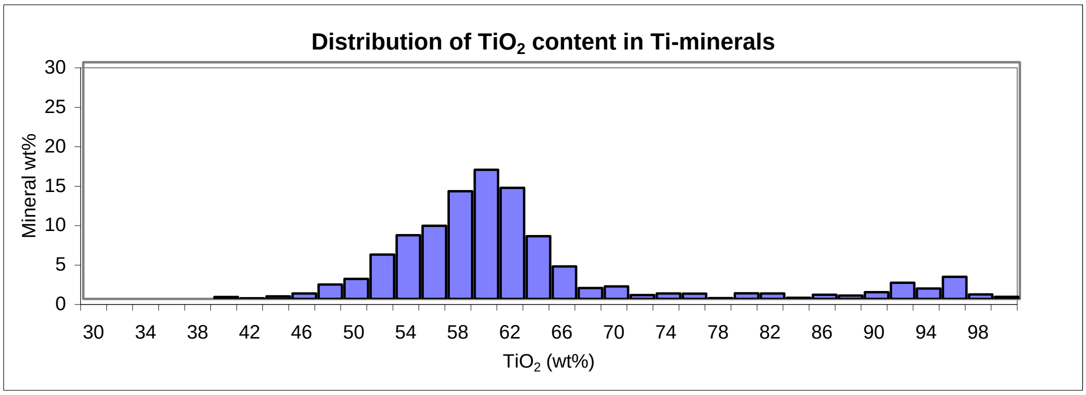
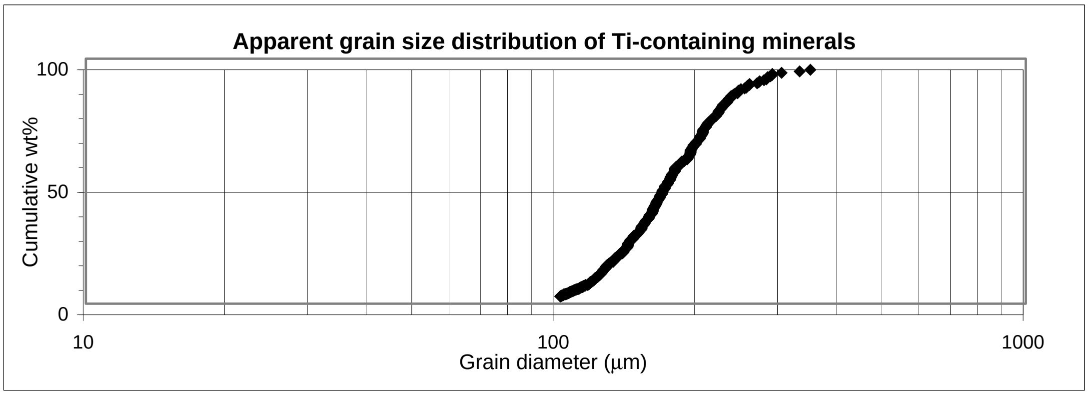
GEUS

Lab. Name:	V194	Analyzed by:	BV
Submitter:	DuPont/GEUS	Acc. Voltage	17kV
Date:	11/7/01		





Category	Aspect ratio	Circularity	Perimeter (µm)	Length (µm)	Area (µm^2)	Total grains
	Average grain parameters					
Ilmenite	1.5	1.7	555	206	16634	784
Leucoxene	1.5	1.7	531	199	16073	52
Rutile	1.5	1.7	586	217	18049	66
Ti magnetite	1.6	1.6	239	93	5143	8
Magnetite	1.5	1.4	203	73	3806	4
Chromite	1.2	1.6	836	294	37793	4
Pyrite	0.0	0.0	0	0	0	0
Phosphate	0.0	0.0	0	0	0	0
Monazite	1.5	1.7	363	135	6236	1
Y-phosphate	1.7	1.5	516	176	14772	3
Sphene	0.0	0.0	0	0	0	0
Garnet	1.6	2.0	625	247	17933	11
Kya/Sill	1.6	2.0	868	350	33822	18
Staurolite	1.6	2.0	779	313	30541	25
Zircon	1.5	1.7	530	197	14085	81
Silicate	1.6	2.1	732	295	25625	133
Unclassified	1.3	1.4	260	106	6453	25

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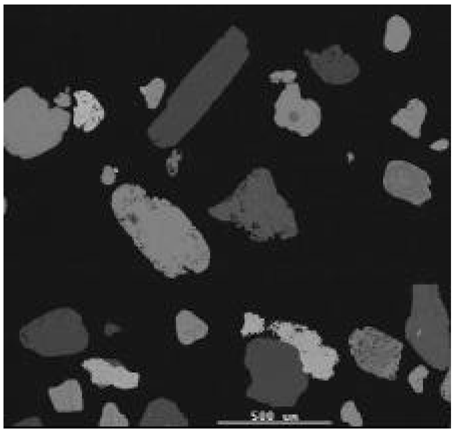
GEUS

Sample Name:	V202 6-9 m	No. of analysed frames:	100
Lab. Name:	V202_6_9	No. of analysed particles:	760
Date:	11/7/01	Heavy minerals in raw sand (%):	2.01
Submitter:	DuPont/GEUS		
Country:	Denmark	Comments:	
Analyzed by:	BV		
Acc. Voltage/Magnification: 17kV/50x			
Guard region:	350 µm		
Sieve:	100 µm^2		



	Average content									
Category	TiO_2 wt%	Fe_2O_3 wt%	MnO wt%	Cr_2O_3 wt%	SiO_2 wt%	Al_2O_3 wt%	MgO wt%	CaO wt%	ZrO_2 wt%	Total
Ilmenite	64.5	29.1	1.7	0.1	1.0	0.6	0.3	0.2	0.3	97.8
Leucoxene	75.9	17.7	1.3	0.1	1.1	1.0	0.3	0.3	0.3	97.9
Rutile	93.9	1.8	0.1	0.2	0.4	0.5	0.1	0.2	0.2	97.4
Ti magnetite	37.7	20.5	0.9	0.1	23.6	14.1	0.6	0.3	0.3	98.0
Magnetite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chromite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pyrite	0.5	32.0	0.1	0.1	2.4	0.6	0.0	0.1	0.2	36.0
Phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monazite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Y-phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sphene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Garnet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kya/Sill	0.2	0.6	0.2	0.2	42.7	53.6	0.0	0.1	0.3	97.9
Staurolite	0.8	14.6	0.3	0.2	33.5	46.8	1.6	0.1	0.3	98.1
Zircon	0.3	0.3	0.2	0.1	29.5	0.1	0.1	0.3	64.7	95.7
Silicate	1.1	3.6	0.2	0.2	51.4	39.5	1.0	0.4	0.2	97.6
Unclassified	27.9	8.8	1.6	0.4	31.8	2.0	1.2	0.5	12.2	86.4

Valuable heavy minerals									
Category	Ilmenite	Leucoxene	Rutile	Ti magnetite	Garnet	Zircon	Kya/Sill	Staurolite	Total
wt %	47.3	17.6	8.3	2.6	0.0	4.6	3.6	16.1	100.0

Normalised average contents of the valuable Ti-containing minerals:				
Average content	Category			
	Ilmenite	Leucoxene	Rutile	Ti magnetite
TiO_2 wt%	66.0	77.5	96.4	38.4
Fe_2O_3 wt%	29.8	18.1	1.9	20.9
MnO wt%	1.7	1.4	0.1	0.9
Cr_2O_3 wt%	0.1	0.1	0.2	0.1
SiO_2 wt%	1.0	1.1	0.5	24.1
Al_2O_3 wt%	0.6	1.0	0.5	14.4
MgO wt%	0.3	0.3	0.1	0.6
CaO wt%	0.2	0.3	0.2	0.3
ZrO_2 wt%	0.3	0.3	0.2	0.3
Total	100.0	100.0	100.0	100.0

Average TiO_2 content of all the TiO_2 minerals:	71.1
Average TiO_2 content of all the TiO_2 minerals excl. rutile:	67.9
Valuable heavy minerals in raw sand:	1.59

Weight percent on a mineral basis:		
Category	Heavy mineral concentrate wt %	Raw sand wt %
Ilmenite	37.3	0.7
Leucoxene	13.9	0.3
Rutile	6.5	0.1
Ti magnetite	2.0	0.0
Magnetite	0.0	0.0
Chromite	0.0	0.0
Pyrite	1.9	0.0
Phosphate	0.0	0.0
Monazite	0.0	0.0
Y-phosphate	0.0	0.0
Sphene	0.0	0.0
Garnet	0.0	0.0
Kya/Sill	2.8	0.1
Staurolite	12.7	0.3
Zircon	3.6	0.1
Silicate	16.3	98.3
Unclassified	2.9	0.1
Total	100.0	100.0

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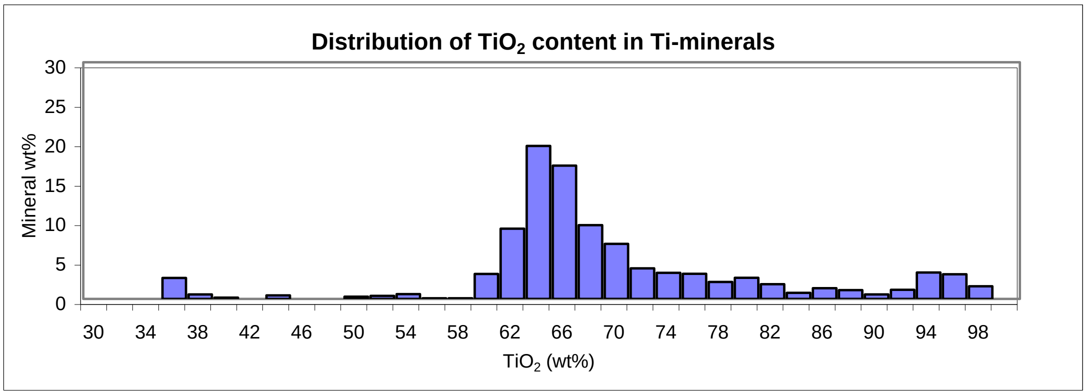
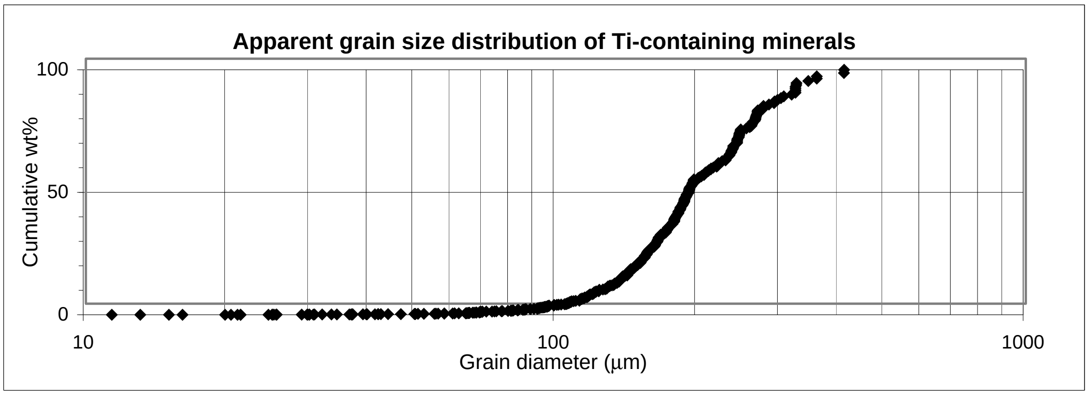
Lab. Name:	V202_6_9	Analyzed by:	BV
Submitter:	DuPont/GEUS	Acc. Voltage	17kV
Date:	11/7/01		





Category	Aspect ratio	Circularity	Perimeter (µm)	Length (µm)	Area (µm^2)	Total grains
	Average grain parameters					
Ilmenite	1.6	1.7	604	225	19825	343
Leucoxene	1.5	1.7	694	261	26993	94
Rutile	1.5	2.0	648	257	19863	54
Ti magnetite	1.7	2.9	1691	741	86446	4
Magnetite	0.0	0.0	0	0	0	0
Chromite	0.0	0.0	0	0	0	0
Pyrite	1.5	1.9	529	213	15298	20
Phosphate	0.0	0.0	0	0	0	0
Monazite	0.0	0.0	0	0	0	0
Y-phosphate	0.0	0.0	0	0	0	0
Sphene	0.0	0.0	0	0	0	0
Garnet	0.0	0.0	0	0	0	0
Kya/Sill	2.1	2.3	901	377	32634	22
Staurolite	1.5	2.4	1231	517	60836	45
Zircon	1.5	1.7	578	218	16924	38
Silicate	1.7	2.2	980	404	42168	120
Unclassified	1.5	2.6	1101	487	43549	20

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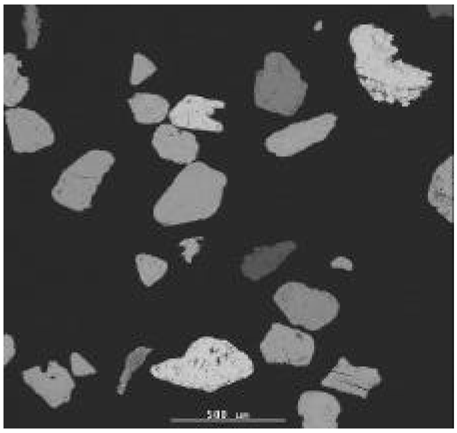

Sample Name:	V202 21-22 m	No. of analysed frames:	100
Lab. Name:	V202_21_22	No. of analysed particles:	730
Date:	11/12/01	Heavy minerals in raw sand (%):	5.14
Submitter:	DuPont/GEUS		
Country:	Denmark	Comments:	
Analyzed by:	BV		
Acc. Voltage/Magnification: 17kV/50x			
Guard region:	325 µm		
Sieve:	100 μm^2		

	Average content									
Category	TiO_2 wt%	Fe_2O_3 wt%	MnO wt%	Cr_2O_3 wt%	SiO_2 wt%	Al_2O_3 wt%	MgO wt%	CaO wt%	ZrO_2 wt%	Total
Ilmenite	57.0	36.7	2.6	0.1	0.8	0.6	0.2	0.1	0.3	98.4
Leucoxene	75.2	14.4	1.1	0.2	4.9	1.4	0.2	0.2	0.3	97.8
Rutile	94.7	1.5	0.1	0.2	0.6	0.6	0.1	0.1	0.3	98.1
Ti magnetite	42.8	33.3	6.5	1.1	2.4	2.1	0.1	0.2	2.4	90.8
Magnetite	0.2	80.2	1.6	0.4	1.9	0.4	0.1	11.7	0.5	96.8
Chromite	0.7	28.8	1.3	51.6	0.0	11.9	3.6	0.2	0.0	98.0
Pyrite	1.0	32.7	0.0	0.0	0.4	0.1	0.1	0.1	0.2	34.4
Phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monazite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Y-phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sphene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Garnet	0.4	29.0	6.3	0.2	36.5	19.1	2.4	4.0	0.3	98.2
Kya/Sill	0.3	0.9	0.1	0.1	42.9	53.5	0.1	0.0	0.0	97.9
Staurolite	0.7	15.5	0.6	0.0	32.4	47.3	1.7	0.0	0.2	98.4
Zircon	0.4	0.4	0.1	0.2	29.8	0.1	0.1	0.1	64.7	95.7
Silicate	0.3	5.9	2.2	0.1	51.1	34.5	0.5	3.1	0.2	97.9
Unclassified	12.9	9.7	2.2	0.5	23.0	22.0	0.8	1.4	17.1	89.6

Valuable heavy minerals									
Category	Ilmenite	Leucoxene	Rutile	Ti magnetite	Garnet	Zircon	Kya/Sill	Staurolite	Total
wt %	79.5	5.5	2.1	0.0	3.9	7.7	0.4	0.8	100.0

Normalised average contents of the valuable Ti-containing minerals:				
Average content	Category			
	Ilmenite	Leucoxene	Rutile	Ti magnetite
TiO_2 wt%	58.0	76.9	96.5	47.1
Fe_2O_3 wt%	37.3	14.7	1.5	36.7
MnO wt%	2.6	1.1	0.1	7.2
Cr_2O_3 wt%	0.1	0.2	0.2	1.2
SiO_2 wt%	0.8	5.0	0.7	2.6
Al_2O_3 wt%	0.6	1.5	0.6	2.4
MgO wt%	0.2	0.2	0.1	0.1
CaO wt%	0.1	0.2	0.1	0.3
ZrO_2 wt%	0.3	0.3	0.3	2.6
Total	100.0	100.0	100.0	100.0

Average TiO_2 content of all the TiO_2 minerals:	60.1
Average TiO_2 content of all the TiO_2 minerals excl. rutile:	59.2
Valuable heavy minerals in raw sand:	4.89

Weight percent on a mineral basis:		
Category	Heavy mineral concentrate wt %	Raw sand wt %
Ilmenite	75.7	3.9
Leucoxene	5.3	0.3
Rutile	2.0	0.1
Ti magnetite	0.0	0.0
Magnetite	0.1	0.0
Chromite	0.2	0.0
Pyrite	0.0	0.0
Phosphate	0.0	0.0
Monazite	0.0	0.0
Y-phosphate	0.0	0.0
Sphene	0.0	0.0
Garnet	3.7	0.2
Kya/Sill	0.4	0.0
Staurolite	0.7	0.0
Zircon	7.3	0.4
Silicate	3.0	95.0
Unclassified	1.6	0.1
Total	100.0	100.0

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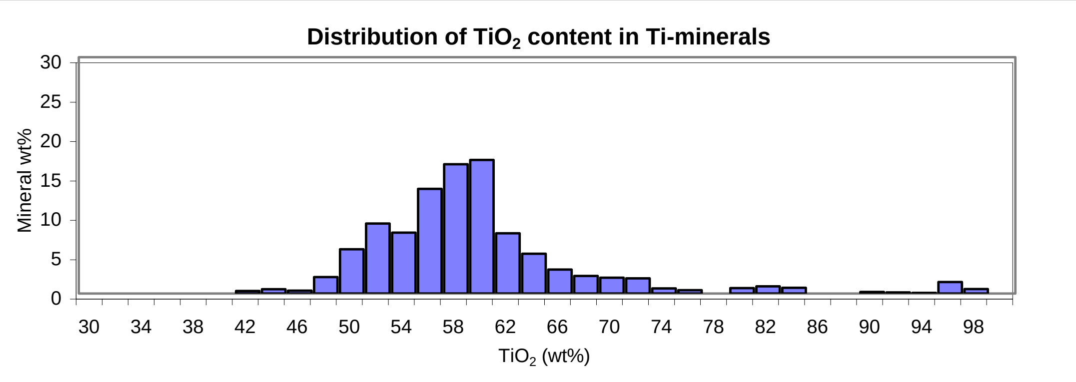
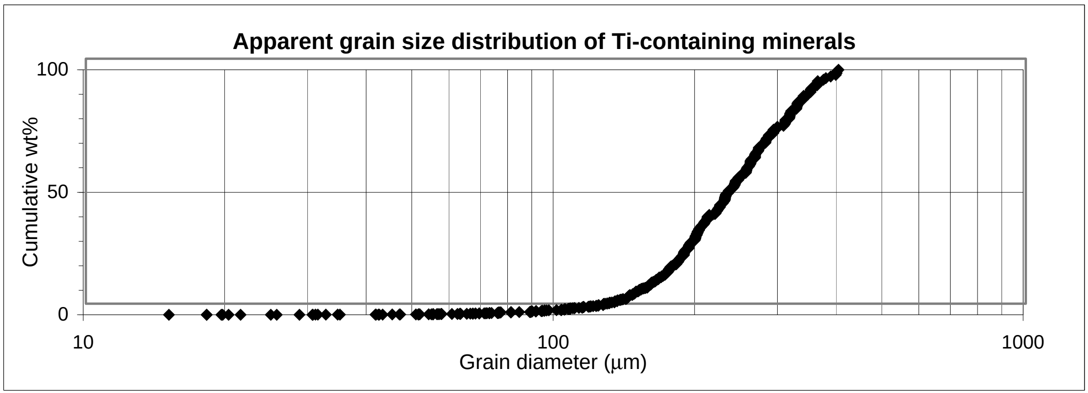
G E U S

Lab. Name:	V202_21_22	Analyzed by:	BV
Submitter:	DuPont/GEUS	Acc. Voltage	17kV
Date:	11/12/01		





Average grain parameters						
Category	Aspect ratio	Circularity	Perimeter (µm)	Length (µm)	Area (μm^2)	Total grains
Ilmenite	1.5	1.9	796	307	31055	538
Leucoxene	1.5	2.0	1033	402	52713	22
Rutile	1.5	2.0	605	241	18325	22
Ti magnetite	1.6	1.7	248	101	3124	3
Magnetite	1.4	1.8	358	145	6572	2
Chromite	1.3	1.3	724	213	31776	1
Pyrite	1.5	1.5	230	80	2799	2
Phosphate	0.0	0.0	0	0	0	0
Monazite	0.0	0.0	0	0	0	0
Y-phosphate	0.0	0.0	0	0	0	0
Sphene	0.0	0.0	0	0	0	0
Garnet	1.6	2.2	783	320	27107	34
Kya/Sill	2.0	2.1	737	299	31613	4
Staurolite	1.5	2.3	1256	529	62415	3
Zircon	1.4	2.0	805	320	31242	50
Silicate	1.6	2.0	785	313	32938	34
Unclassified	1.3	2.0	879	384	39724	15

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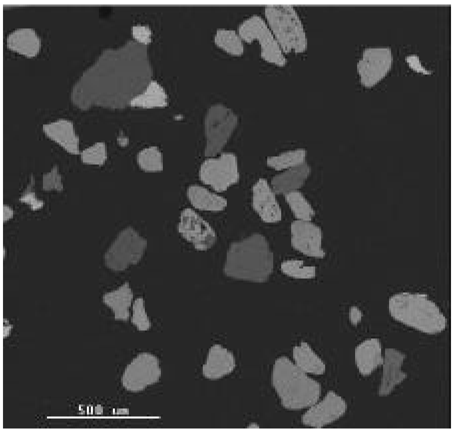
GEUS



Sample Name:	V207 21-22 m	No. of analysed frames:	97
Lab. Name:	V207	No. of analysed particles:	1497
Date:	11/12/01	Heavy minerals in raw sand (%):	2.29
Submitter:	DuPont/GEUS		
Country:	Denmark	Comments: Magnetite and Ti-magnetite have low total %. Due to few grains and high content of among others S, Na and Nb, which are not calculated in average content.	
Analyzed by:	BV		
Acc. Voltage/Magnification: 17kV/50x			
Guard region:	300 µm		
Sieve:	100 μm^2		

	Average content									
Category	TiO_2 wt%	Fe_2O_3 wt%	MnO wt%	Cr_2O_3 wt%	SiO_2 wt%	Al_2O_3 wt%	MgO wt%	CaO wt%	ZrO_2 wt%	Total
Ilmenite	64.0	28.9	1.8	0.1	1.4	0.6	0.3	0.2	0.4	97.7
Leucoxene	76.8	16.7	1.0	0.1	1.7	0.9	0.2	0.3	0.3	97.9
Rutile	92.2	3.3	0.2	0.1	0.7	0.6	0.1	0.2	0.3	97.6
Ti magnetite	36.5	26.7	0.8	0.1	8.8	7.0	1.3	0.0	0.3	81.6
Magnetite	0.0	55.6	0.0	0.0	8.3	0.4	4.6	8.5	0.0	77.5
Chromite	5.7	36.1	0.1	49.8	0.0	5.1	0.5	0.1	0.1	97.5
Pyrite	0.7	30.9	0.1	0.0	4.5	0.2	0.1	0.1	0.2	36.9
Phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monazite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Y-phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sphene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Garnet	0.2	17.9	2.0	0.2	38.7	20.4	3.0	3.0	12.1	97.5
Kya/Sill	0.3	0.9	0.2	0.2	42.5	53.8	0.0	0.1	0.2	98.1
Staurolite	1.2	14.3	0.3	0.1	31.9	48.3	1.6	0.1	0.3	97.9
Zircon	0.9	0.6	0.2	0.1	29.2	0.1	0.1	0.2	64.0	95.4
Silicate	1.4	3.6	0.2	0.1	64.0	24.8	1.0	0.2	0.3	95.7
Unclassified	8.7	13.7	0.9	0.7	16.5	21.4	1.0	2.0	7.8	72.7

Valuable heavy minerals									
Category	Ilmenite	Leucoxene	Rutile	Ti magnetite	Garnet	Zircon	Kya/Sill	Staurolite	Total
wt %	61.2	26.0	7.9	0.3	0.2	1.8	1.3	1.3	100.0

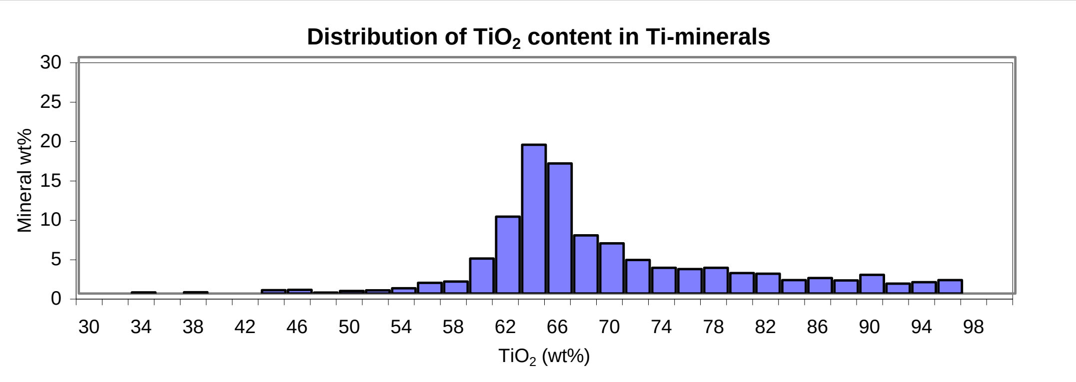
Normalised average contents of the valuable Ti-containing minerals:				
Average content	Category: Ilmenite	Leucoxene	Rutile	Ti magnetite
TiO_2 wt%	65.5	78.4	94.4	44.7
Fe_2O_3 wt%	29.6	17.0	3.3	32.8
MnO wt%	1.9	1.0	0.2	1.0
Cr_2O_3 wt%	0.1	0.1	0.1	0.1
SiO_2 wt%	1.4	1.7	0.7	10.7
Al_2O_3 wt%	0.6	0.9	0.7	8.6
MgO wt%	0.3	0.2	0.1	1.6
CaO wt%	0.2	0.3	0.2	0.1
ZrO_2 wt%	0.4	0.3	0.3	0.4
Total	100.0	100.0	100.0	100.0

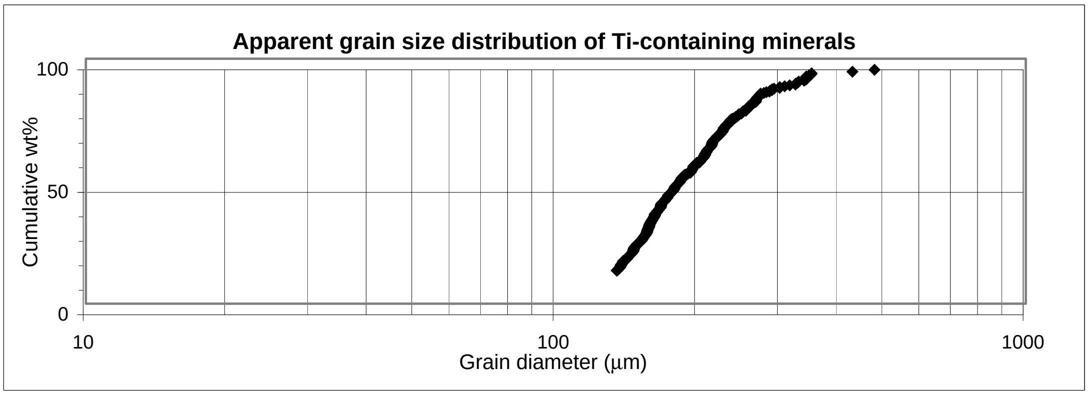
Average TiO_2 content of all the TiO_2 minerals:	71.4
Average TiO_2 content of all the TiO_2 minerals excl. rutile:	69.3
Valuable heavy minerals in raw sand:	1.86

Weight percent on a mineral basis:		
Category	Heavy mineral concentrate wt %	Raw sand wt %
Ilmenite	49.6	1.1
Leucoxene	21.1	0.5
Rutile	6.4	0.1
Ti magnetite	0.2	0.0
Magnetite	0.0	0.0
Chromite	0.2	0.0
Pyrite	3.8	0.1
Phosphate	0.0	0.0
Monazite	0.0	0.0
Y-phosphate	0.0	0.0
Sphene	0.0	0.0
Garnet	0.2	0.0
Kya/Sill	1.1	0.0
Staurolite	1.0	0.0
Zircon	1.5	0.0
Silicate	12.7	98.0
Unclassified	2.2	0.0
Total	100.0	100.0

Geological Survey of Denmark and Greenland
Thoravej 8, DK-2400 Copenhagen NV
Ph.: +45 38142000, Fax: +45 38142050

Lab. Name:	V207	Analyzed by:	BV
Submitter:	DuPont/GEUS	Acc. Voltage	17kV
Date:	11/12/01		

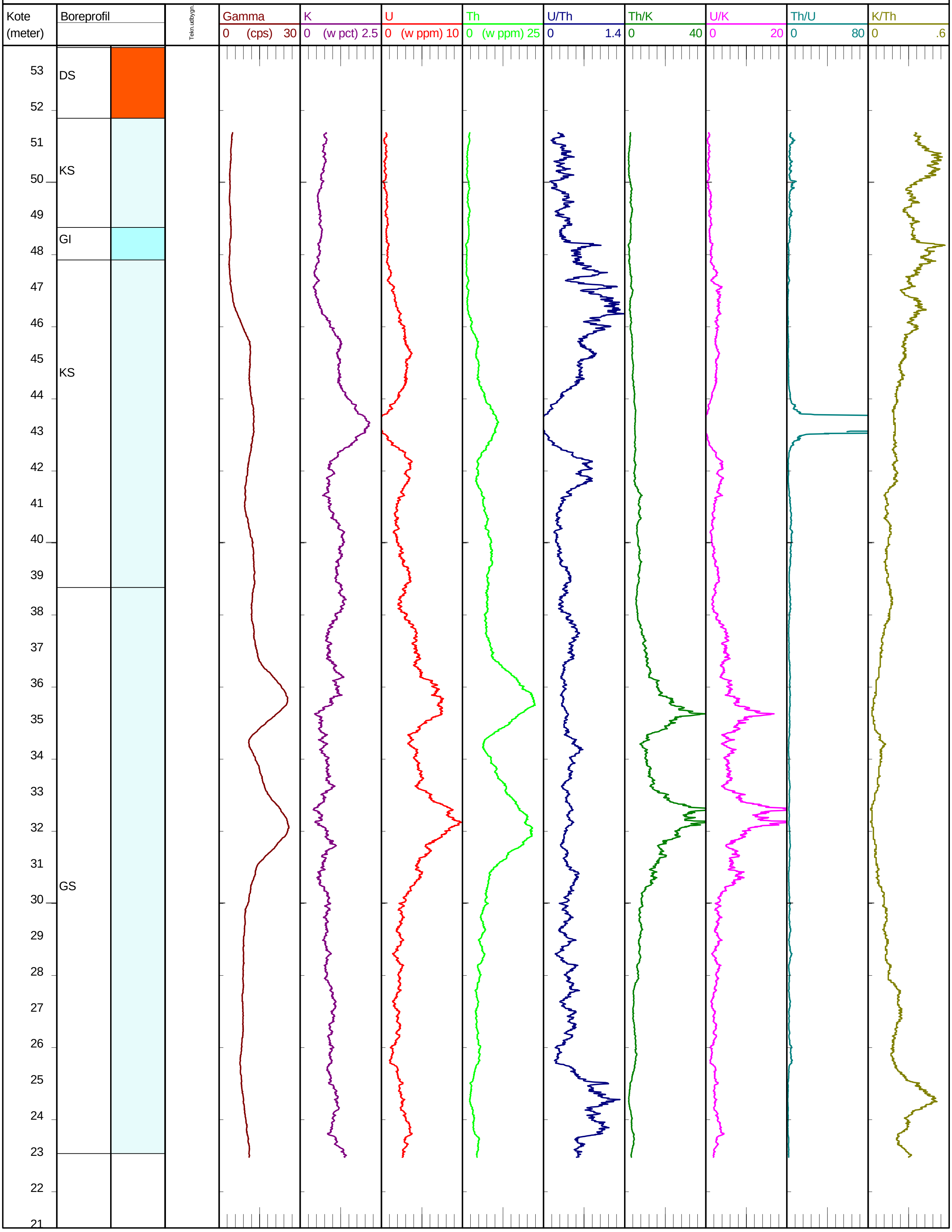




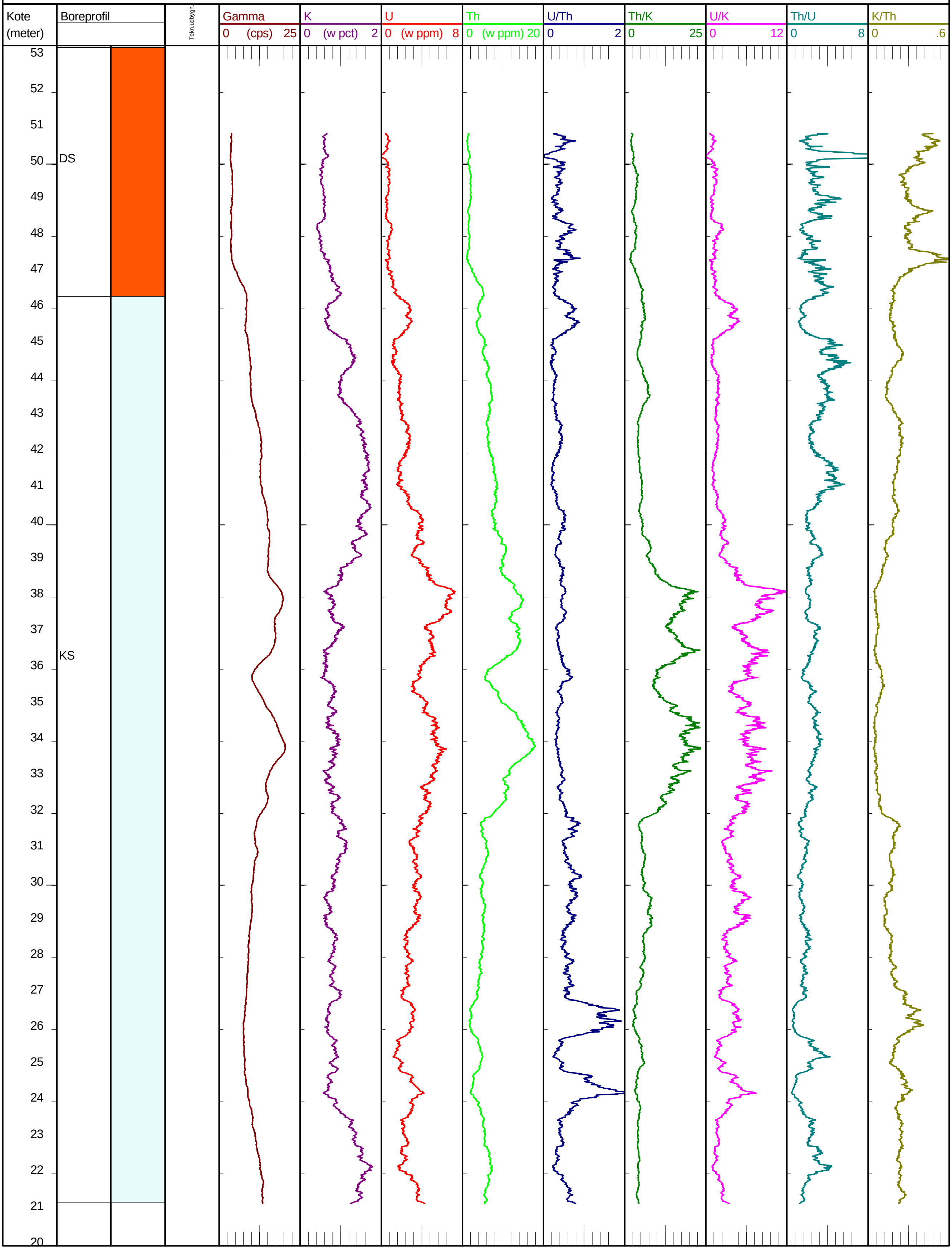
Average grain parameters						
Category	Aspect ratio	Circularity	Perimeter (µm)	Length (µm)	Area (µm^2)	Total grains
Ilmenite	1.5	1.9	636	252	18117	799
Leucoxene	1.5	2.1	726	293	22189	277
Rutile	1.5	1.8	606	234	18109	93
Ti magnetite	1.8	2.7	1020	437	31301	2
Magnetite	1.1	1.2	89	29	538	1
Chromite	1.3	2.1	678	273	17723	3
Pyrite	1.5	1.9	599	240	20529	49
Phosphate	0.0	0.0	0	0	0	0
Monazite	0.0	0.0	0	0	0	0
Y-phosphate	0.0	0.0	0	0	0	0
Sphene	0.0	0.0	0	0	0	0
Garnet	1.4	1.8	557	233	21093	3
Kya/Sill	1.7	2.0	625	250	18003	24
Staurolite	1.6	2.3	711	298	19977	18
Zircon	1.4	1.7	532	202	14515	29
Silicate	1.6	2.1	865	358	42385	148
Unclassified	1.3	2.0	616	264	20784	51

4 Geophysical logs

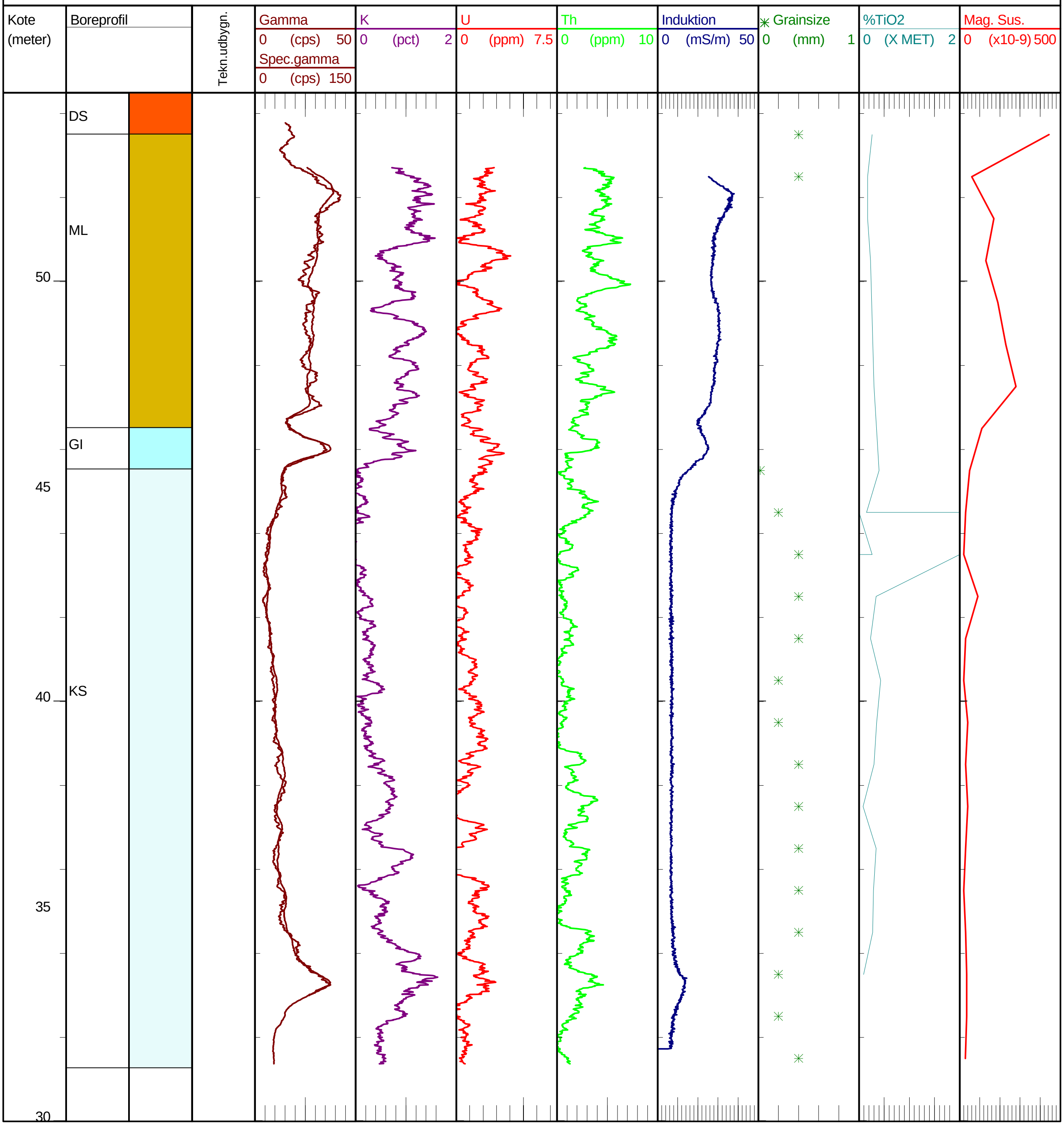
Well Name: 104.2426
Location: Vorslunde, V25
Elevation: 53.8 Reference: Terræn



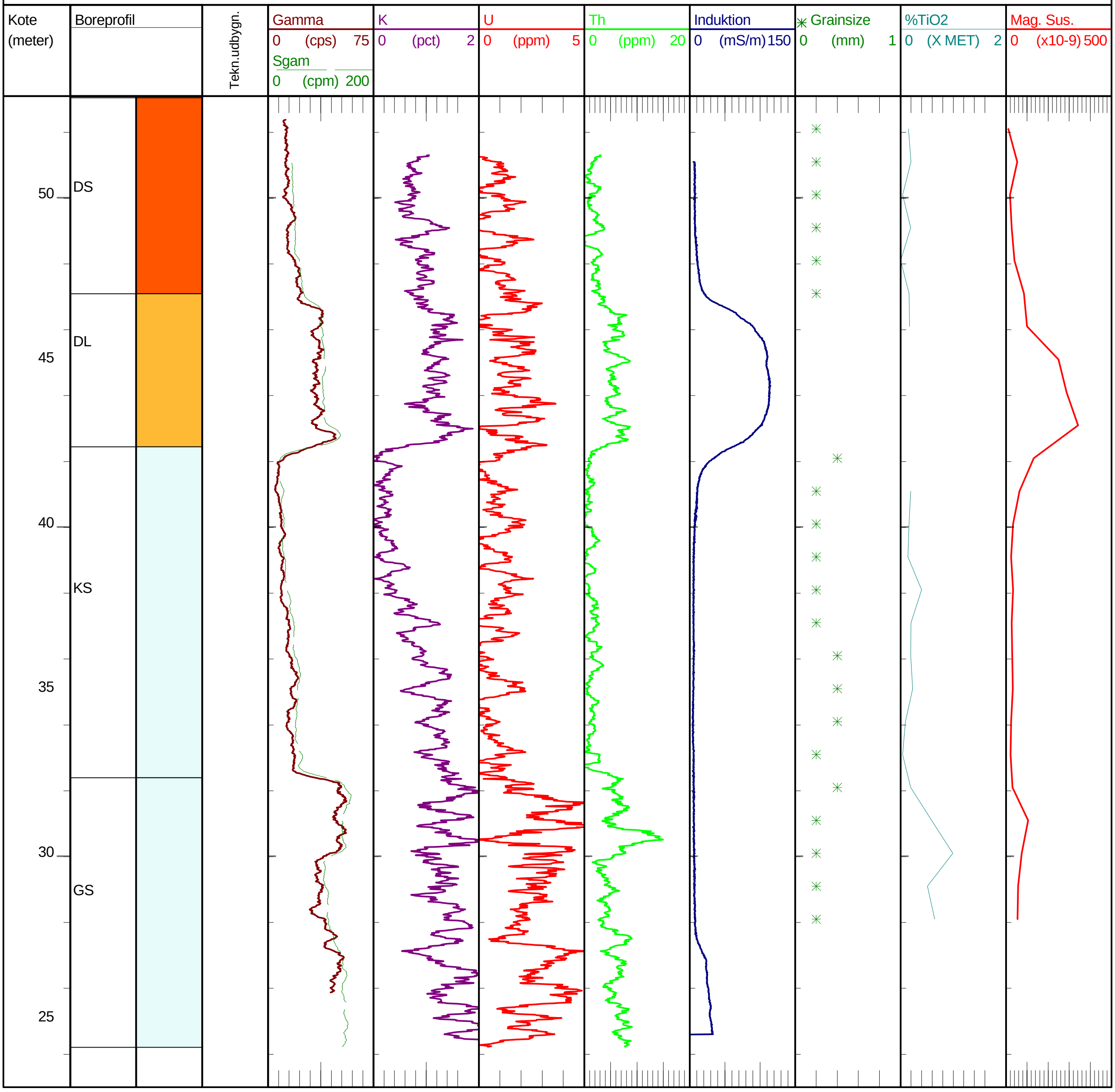
Well Name: 104.2427
Location: Vorslunde, V26
Elevation: 53.3 Reference: Terræn



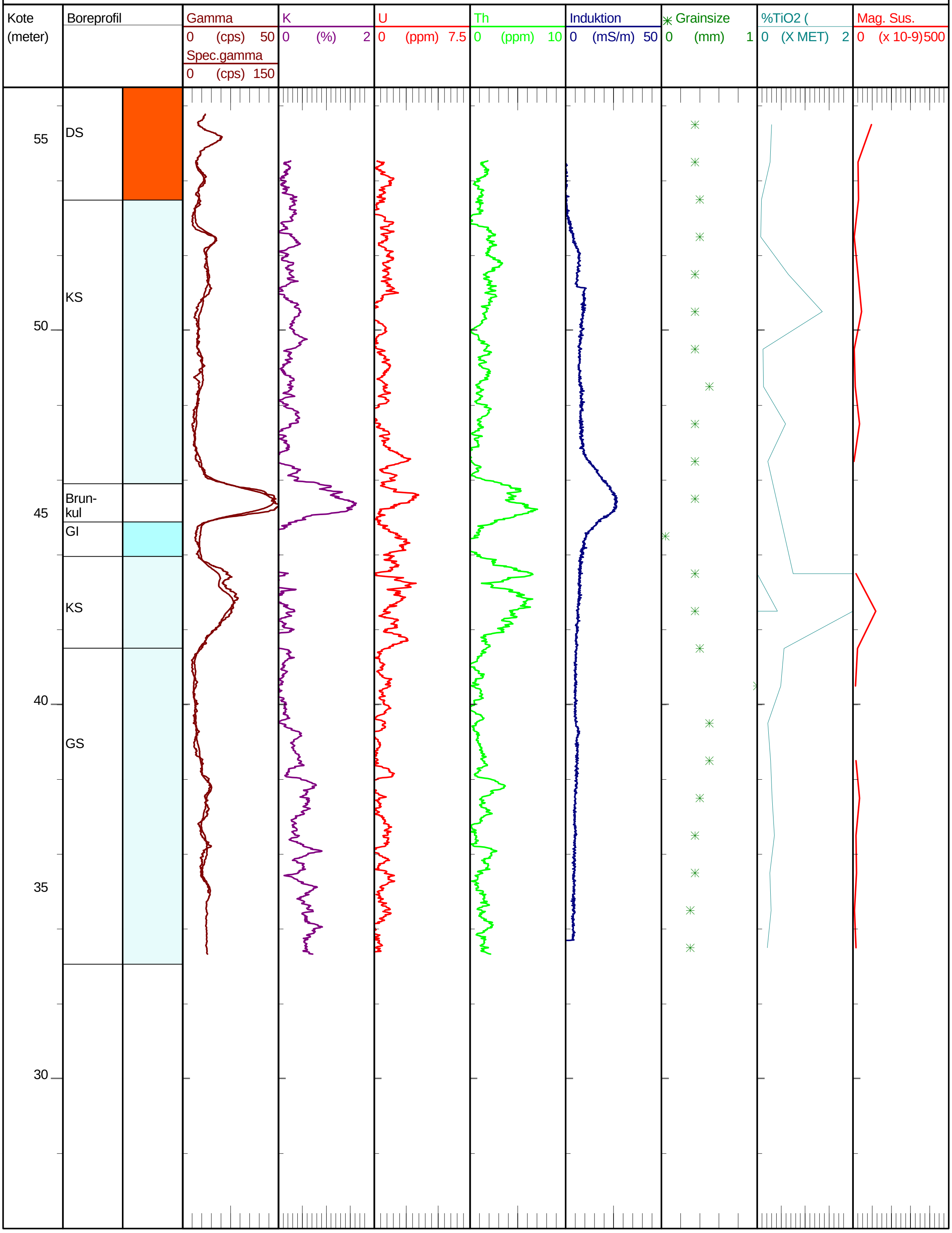
Well Name: 104.2429
Location: Vorslunde, V28
Elevation: 54.5 Reference: Terræn



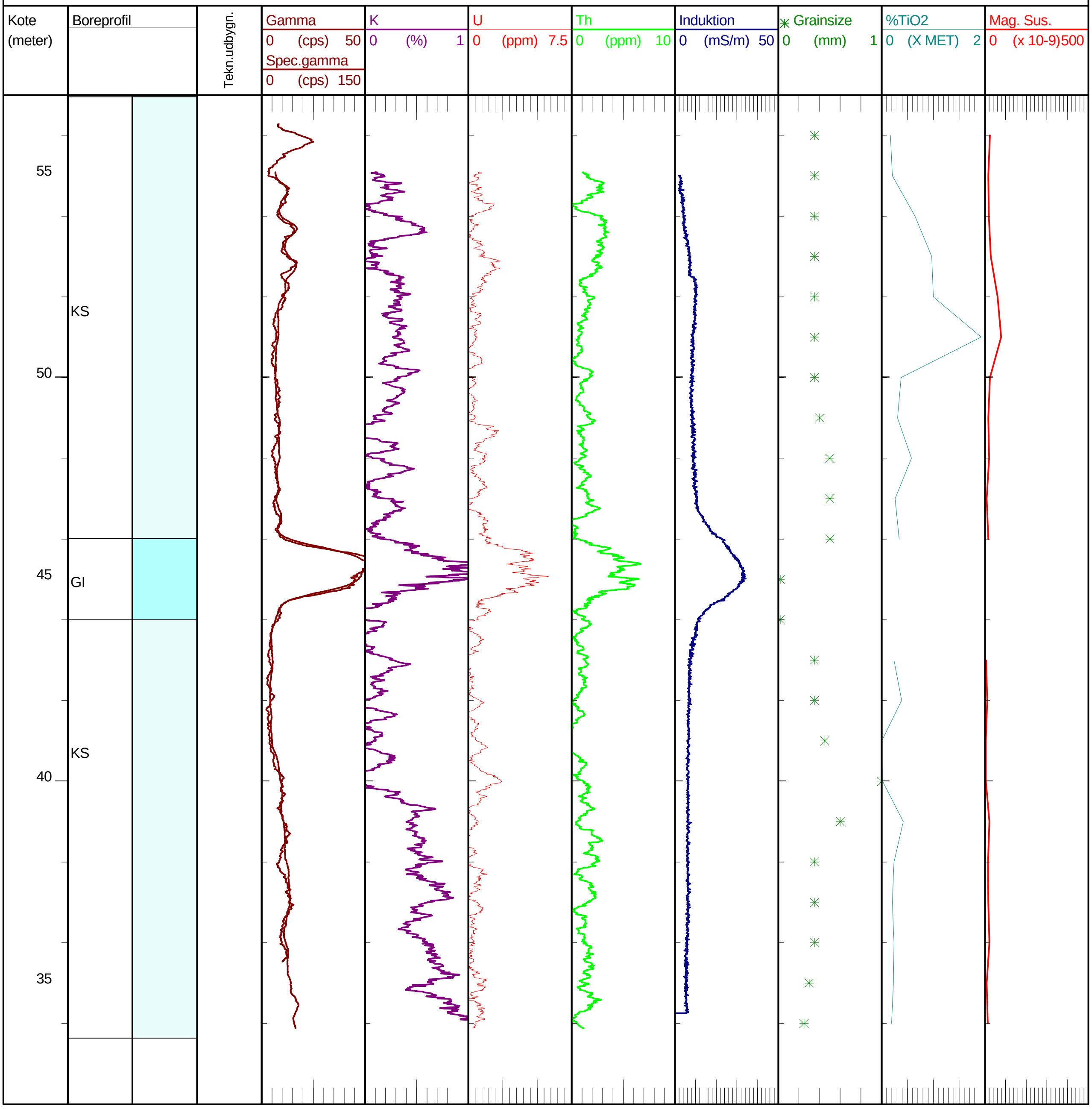
Well Name: 104.2433
Location: Vorslunde, V32
Elevation: 53.1 Reference: Terræn



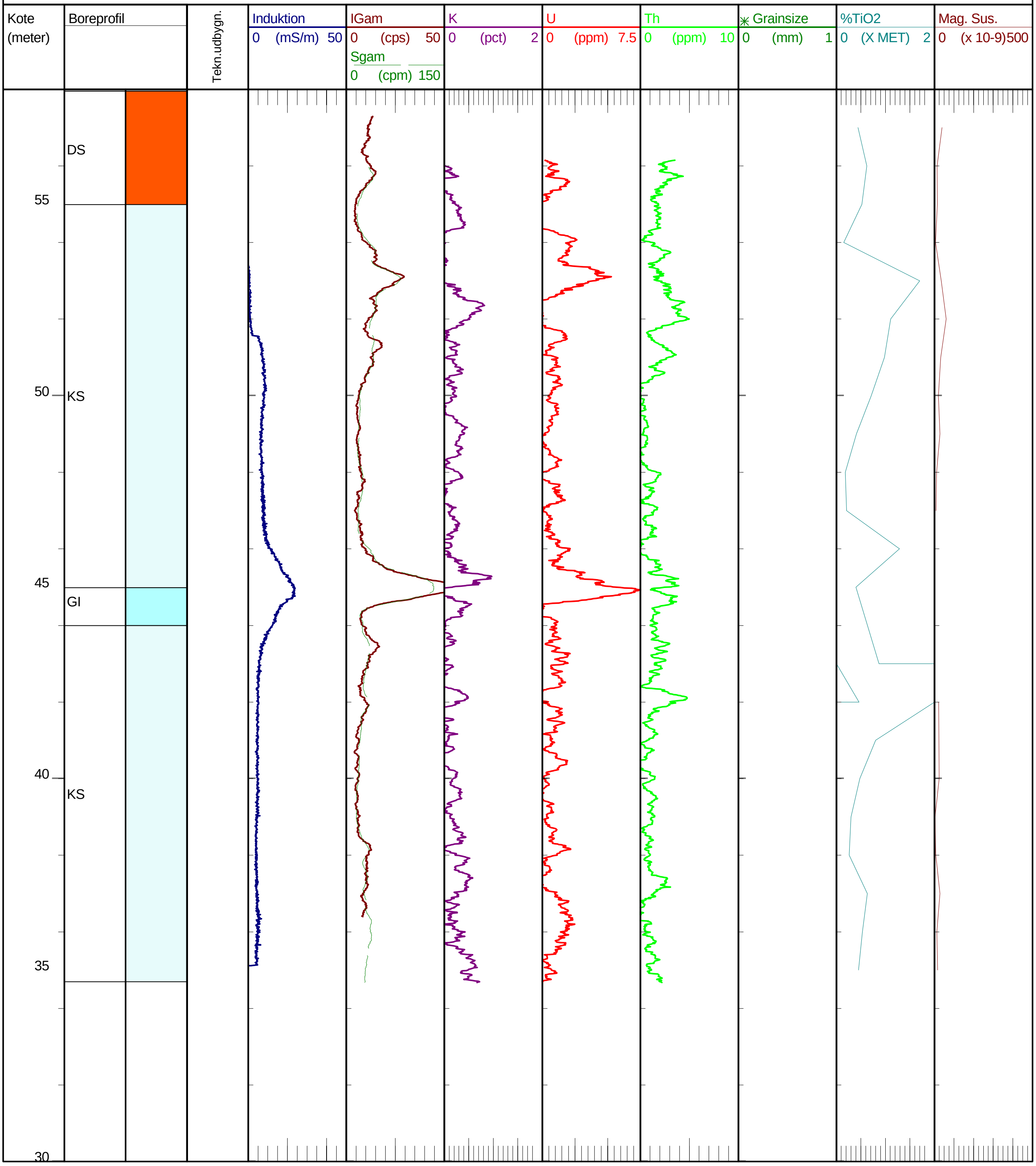
Well Name: 104.2436
Location: Vorslunde, V35
Elevation: 56.5 Reference: Terræn



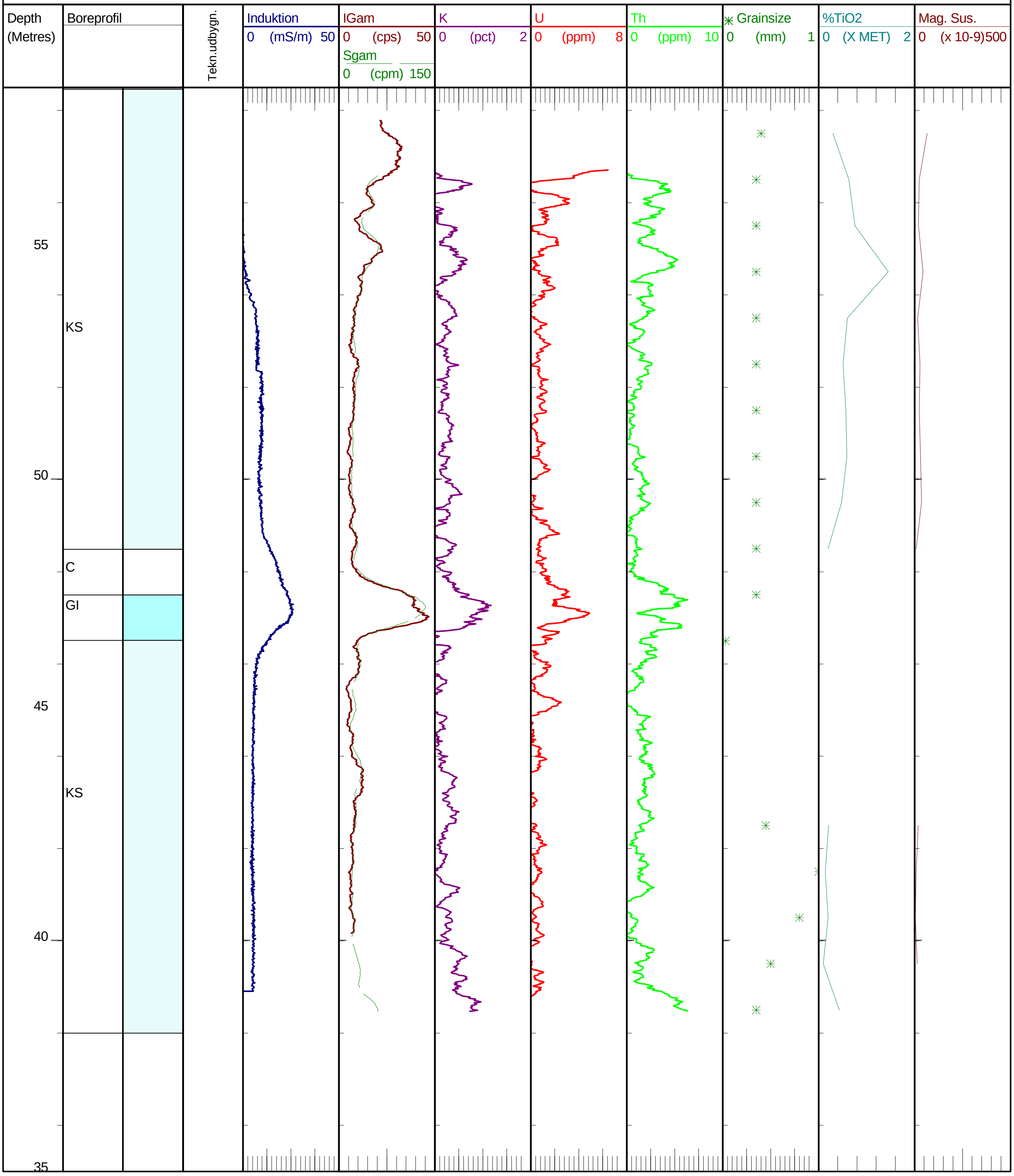
Well Name: 104.2437
Location: Vorslunde, V36
Elevation: 57 Reference: Terræn



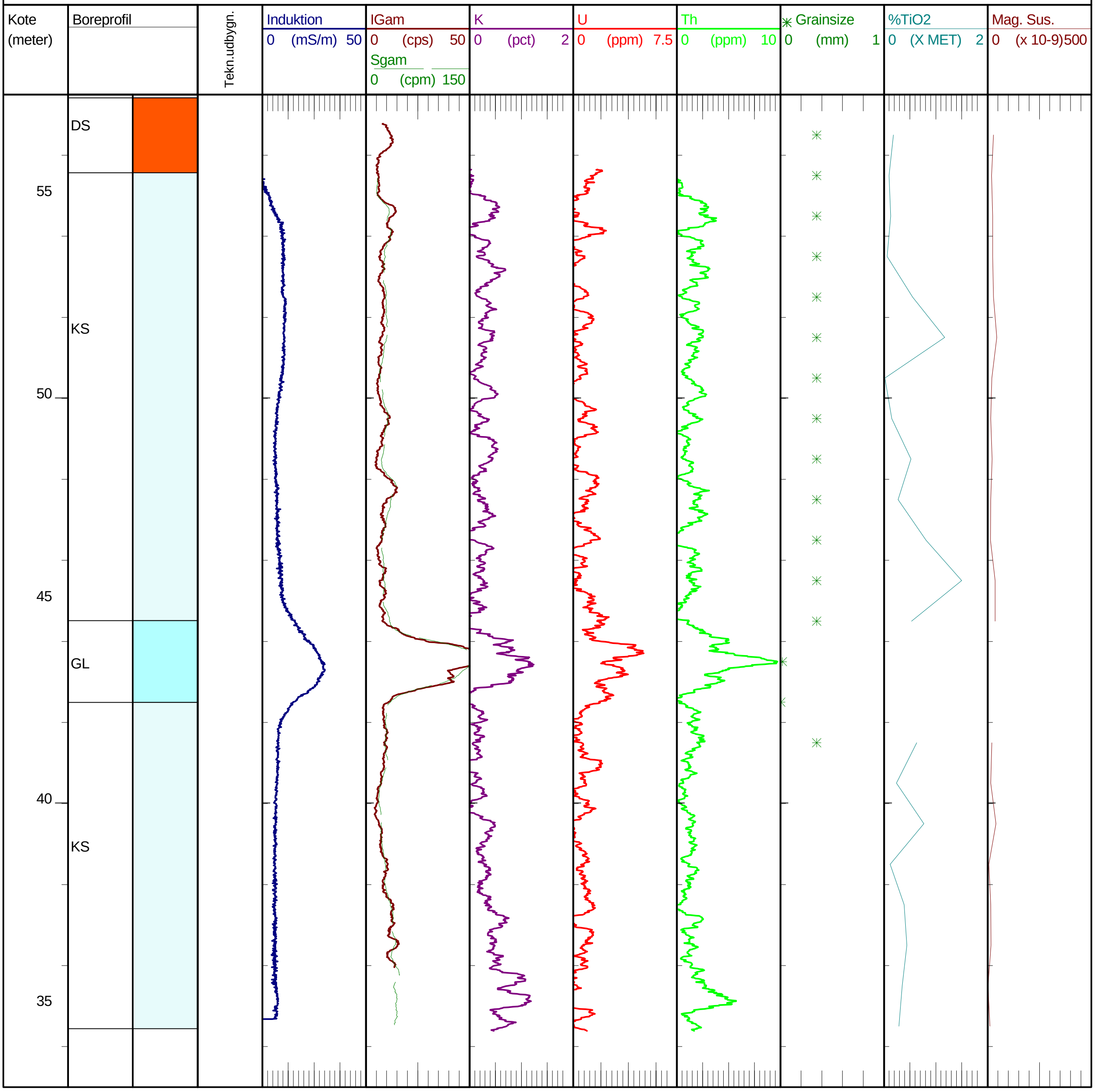
Well Name: 104.2438
Location: Vorslunde, V 37
Elevation: 58 Reference: Terræn



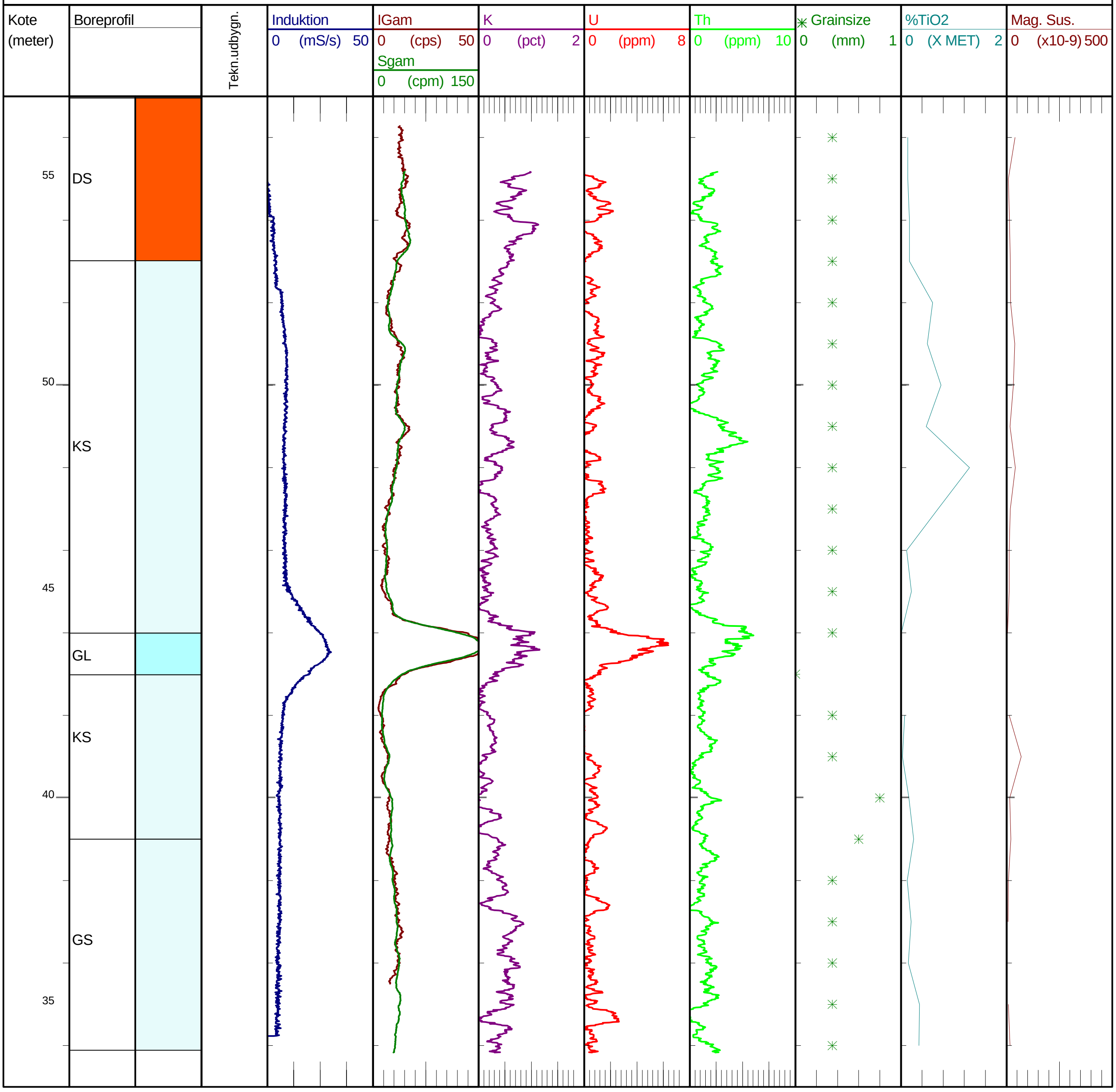
Well Name: 104.2439
Location: Vorslunde, V 38
Elevation: 58.5 Reference: Terræn



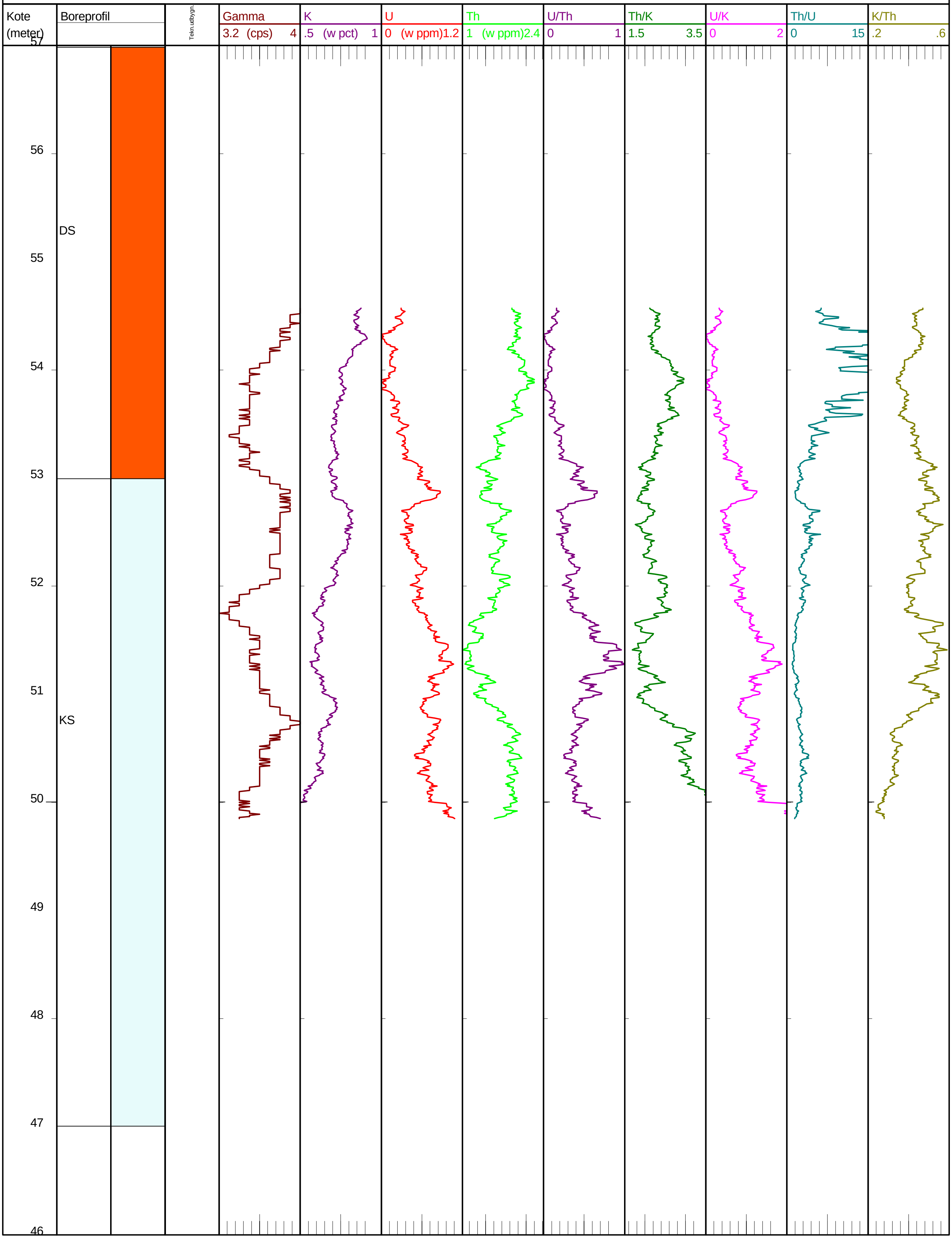
Well Name: 104.2440
Location: Vorslunde, V39
Elevation: 57.5 Reference: Terræn



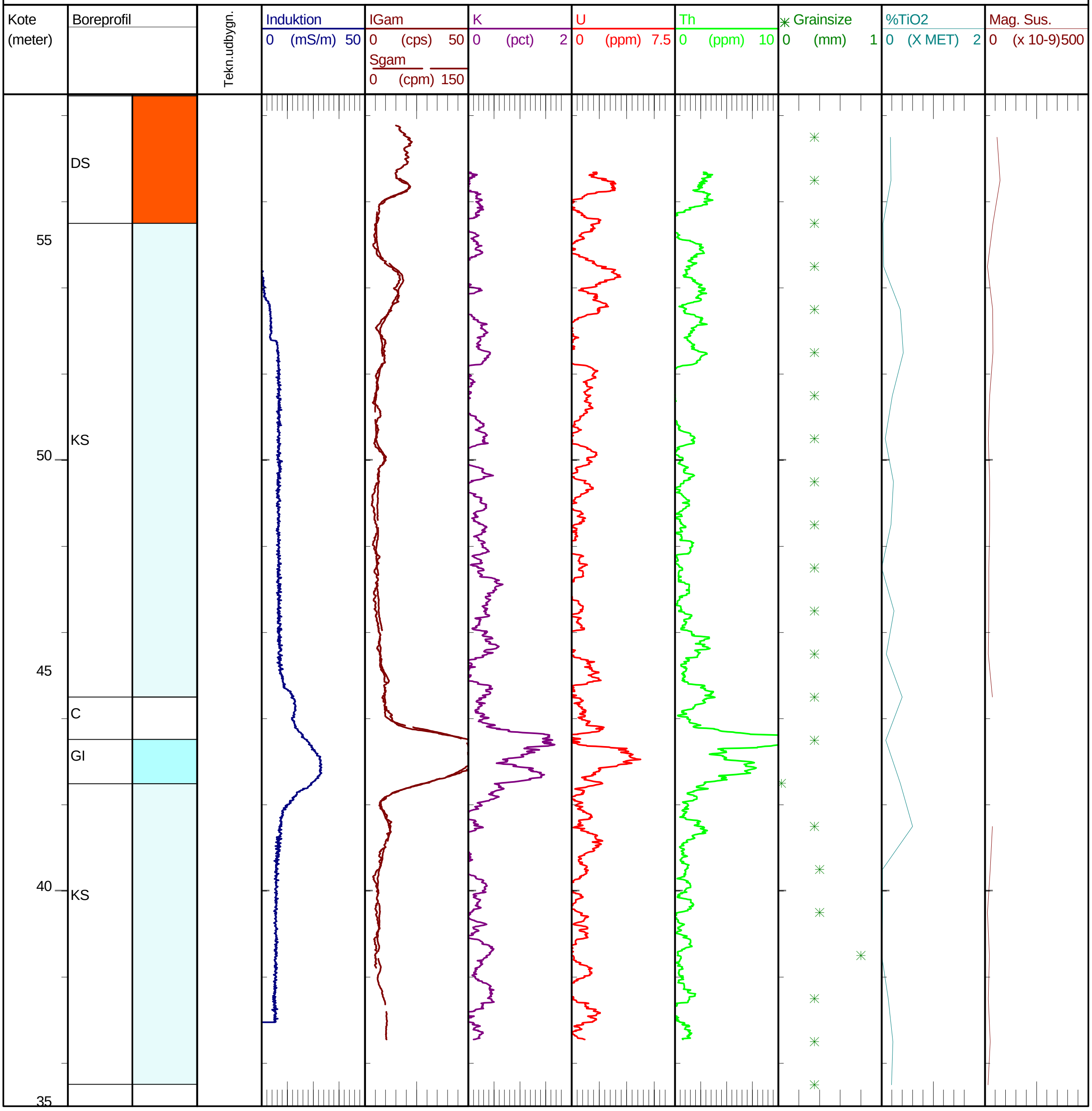
Well Name: 104.2441
Location: Vorslunde, V40
Elevation: 57 Reference: Terræn



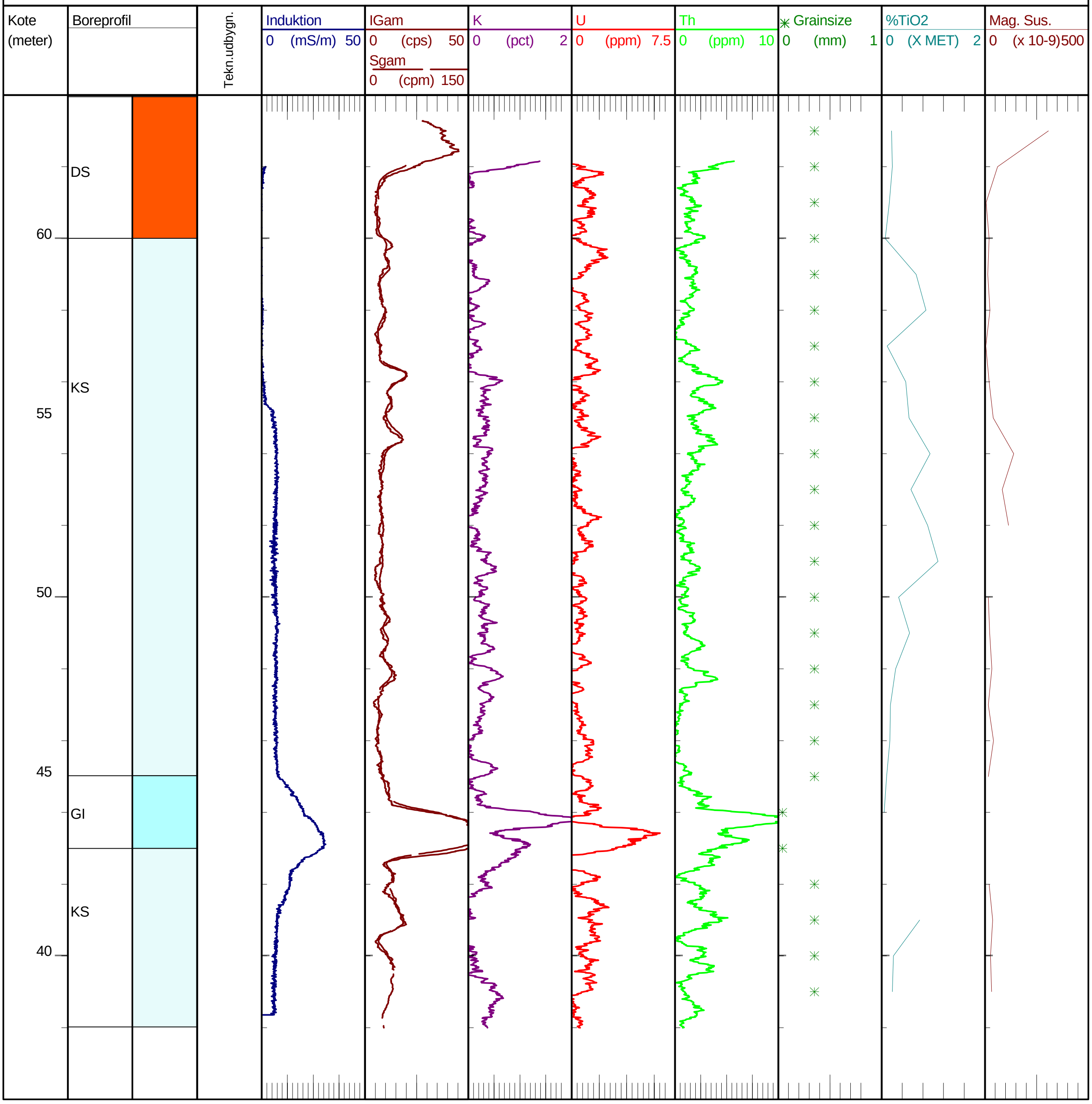
Well Name: 104.2442
Location: Vorslunde, V41
Elevation: 57 Reference: Terræn



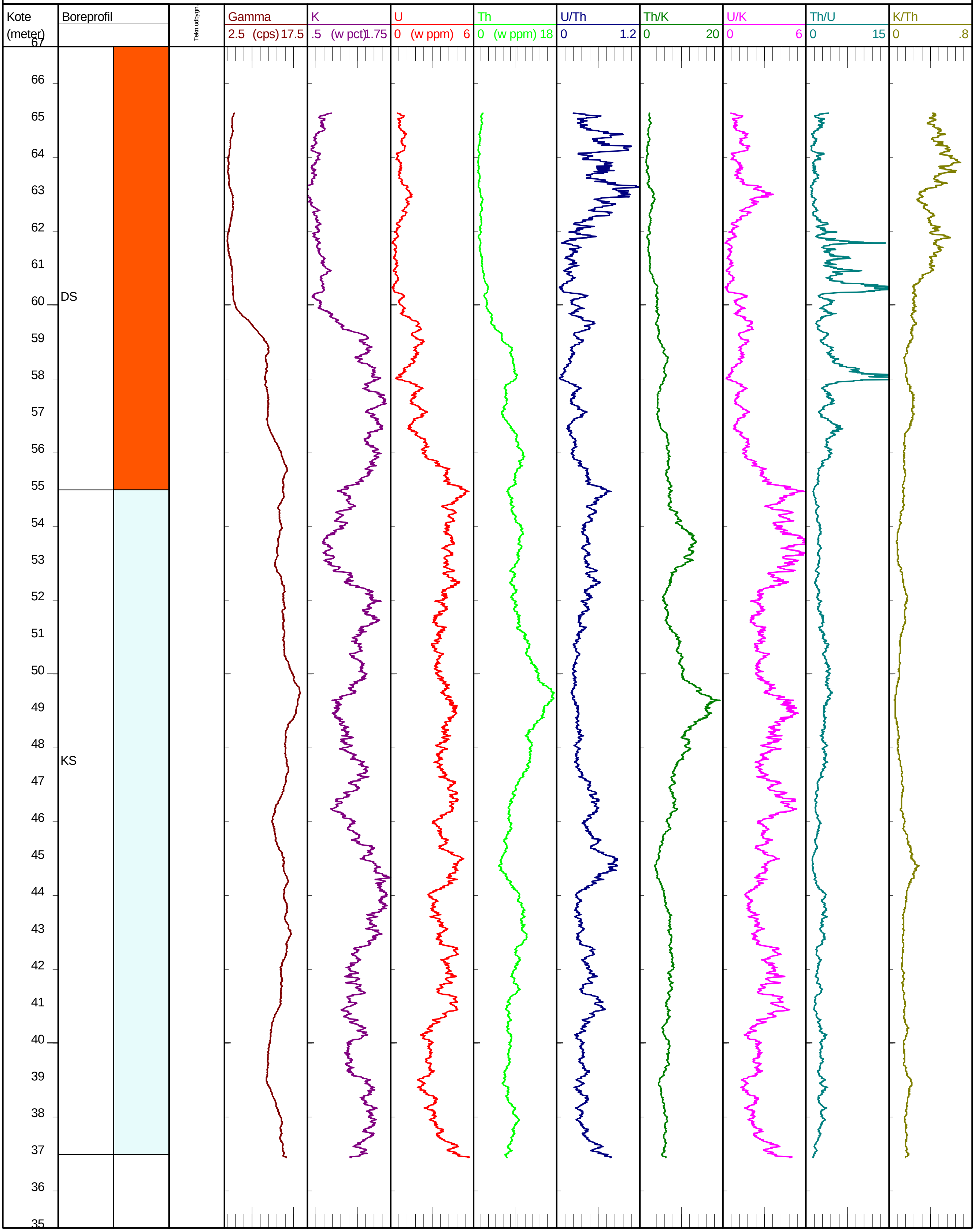
Well Name: 104.2444
Location: Vorslunde, V 43
Elevation: 58.5 Reference: Terræn



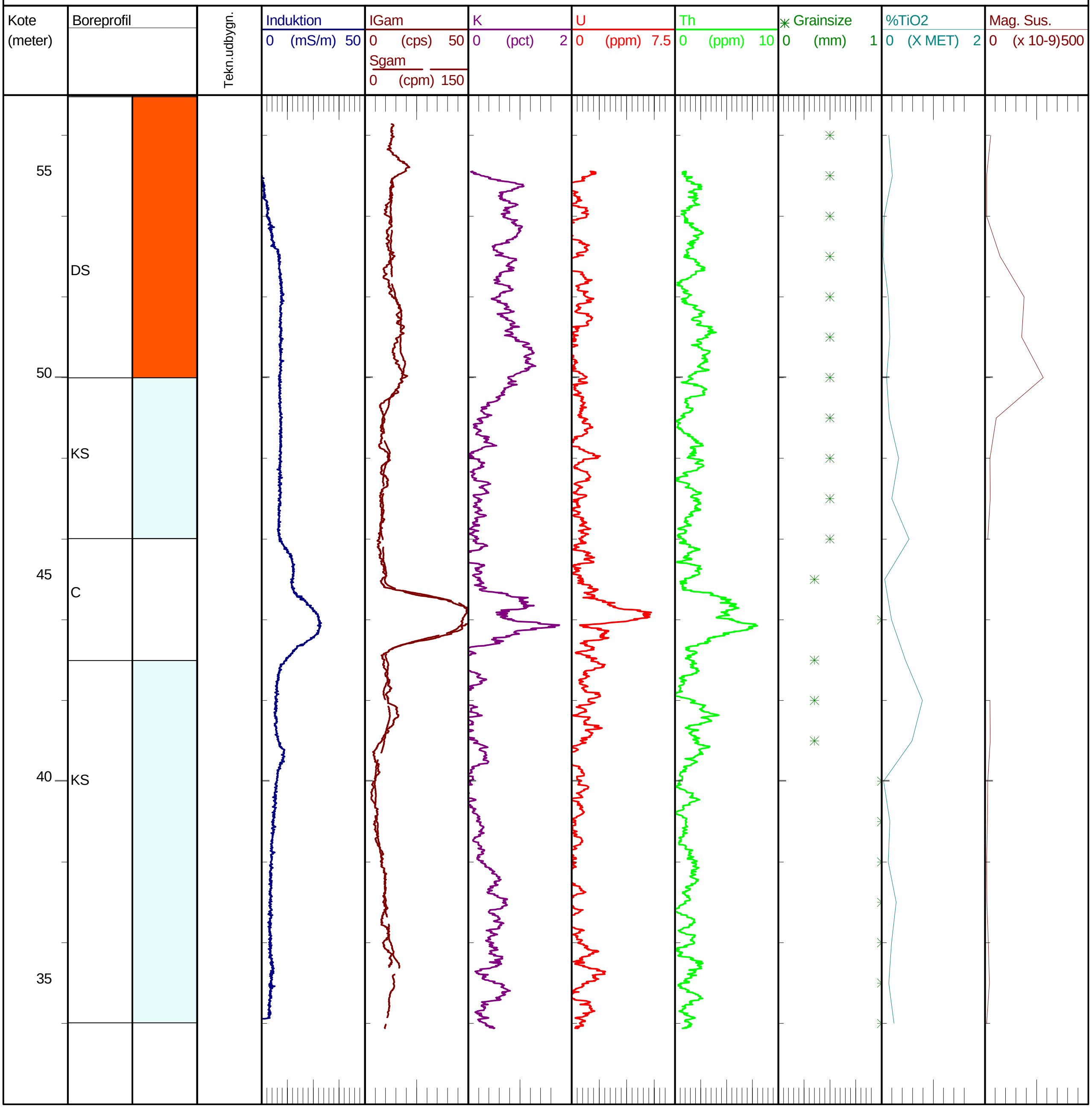
Well Name: 104.2445
Location: Vorslunde, V 44
Elevation: 64 Reference: Terræn



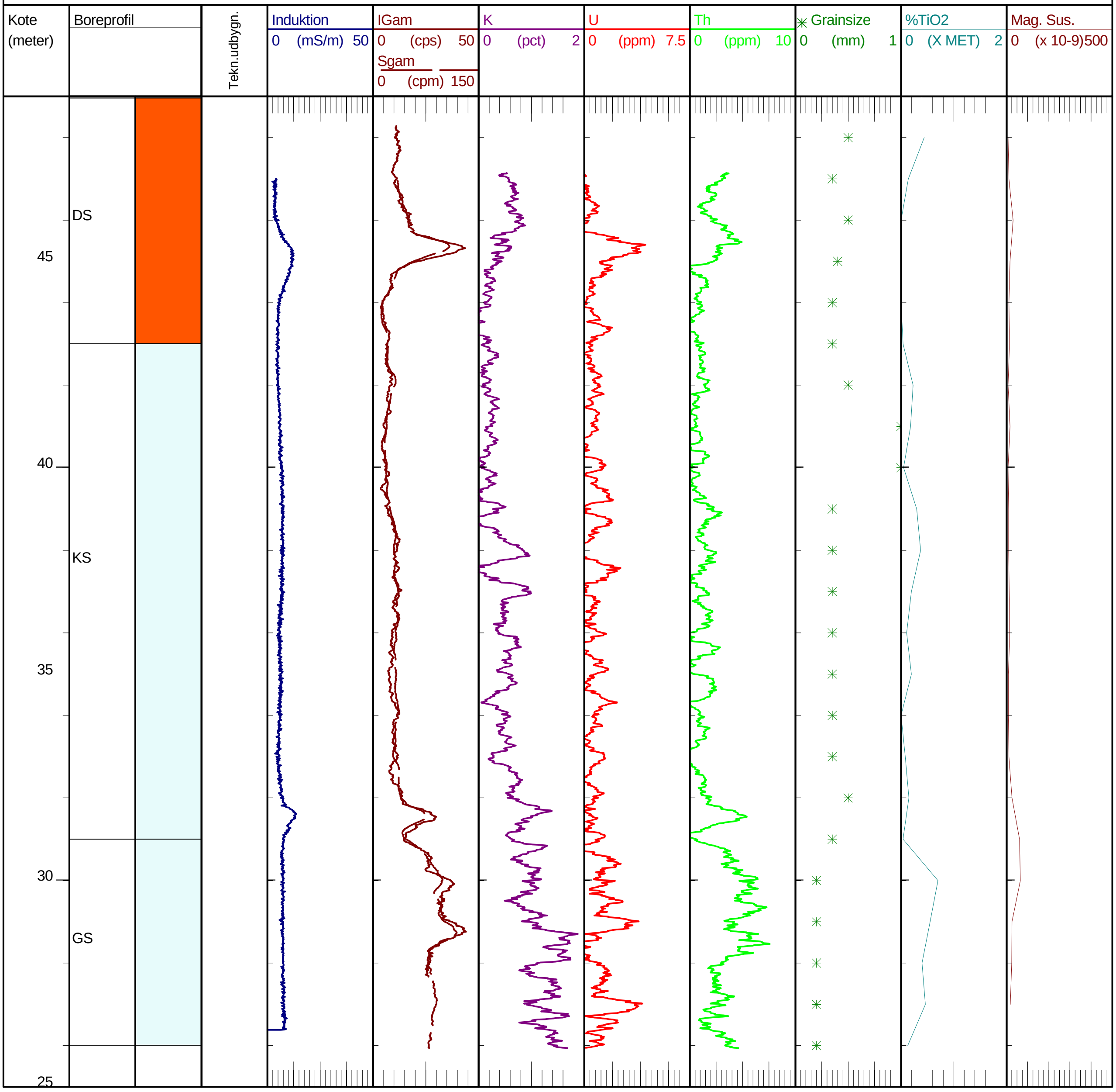
Well Name: 104.2446
Location: Skjern, S45
Elevation: 67 Reference: Terræn



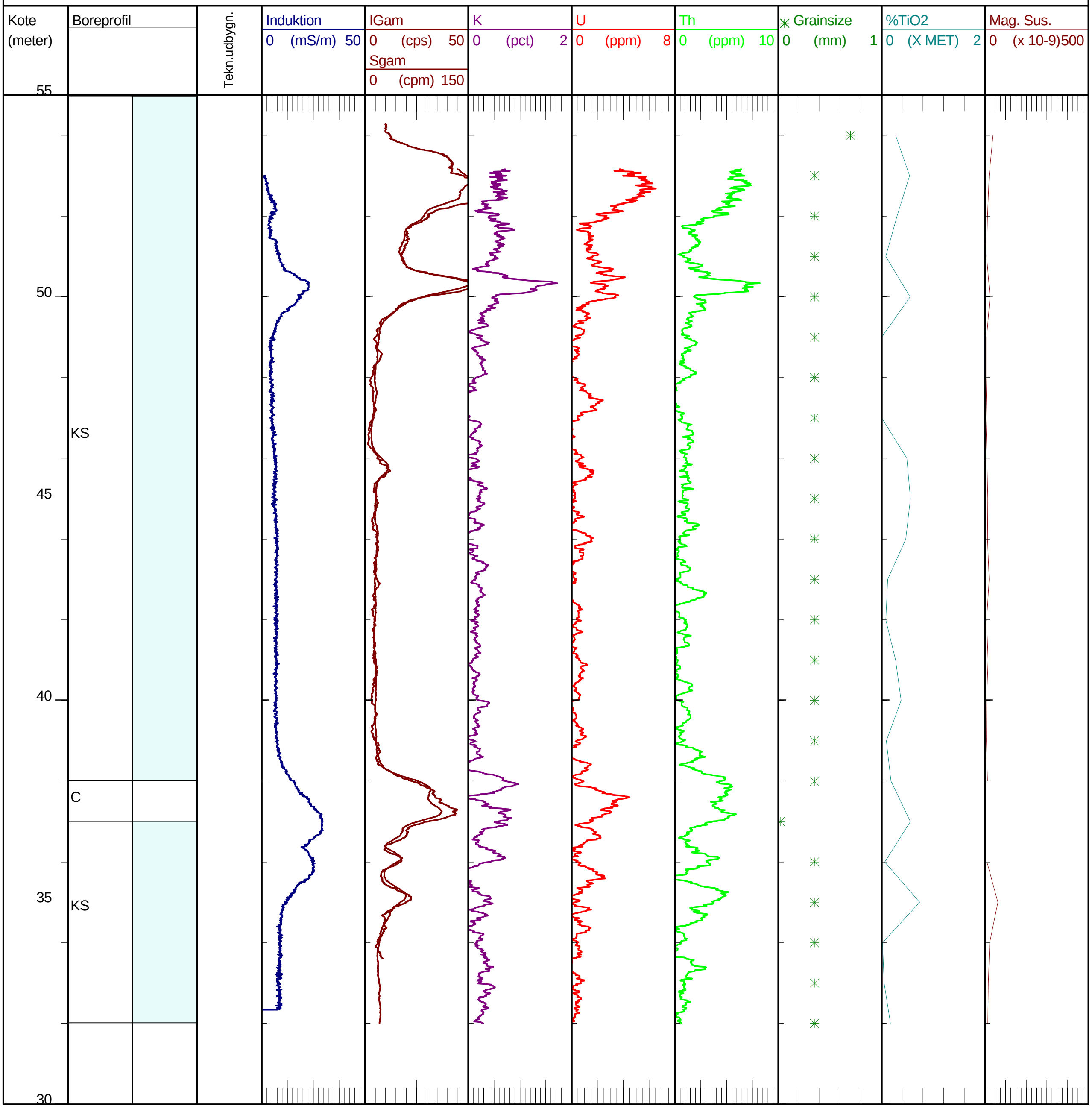
Well Name: 104.2447
Location: Vorslunde, V 46
Elevation: 57 Reference: Terræn



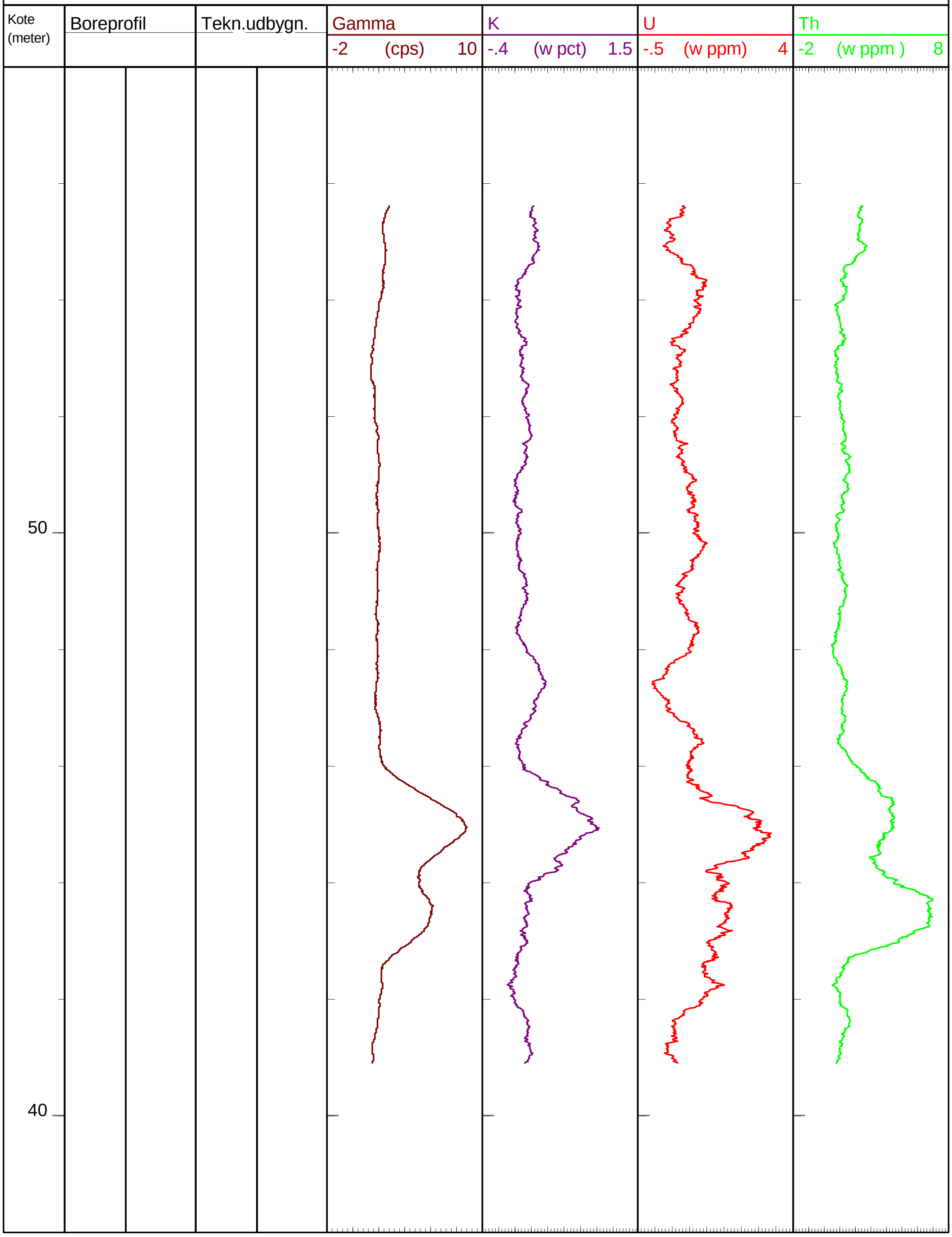
Well Name: 104.2448
Location: Vorslunde, V 47
Elevation: 49 Reference: Terræn

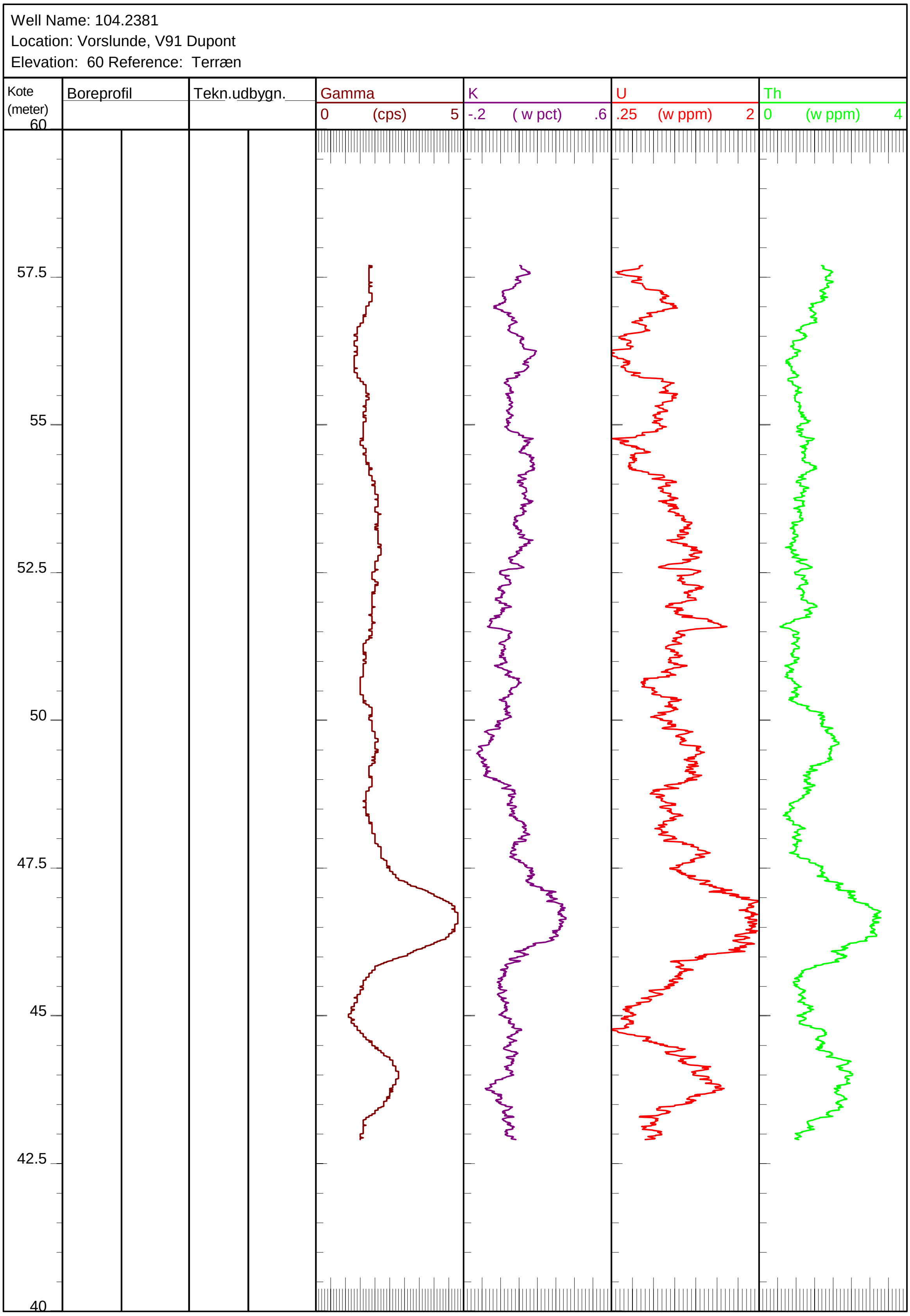


Well Name: 104.2449
Location: Vorslunde, V 48
Elevation: 55 Reference: Terræn

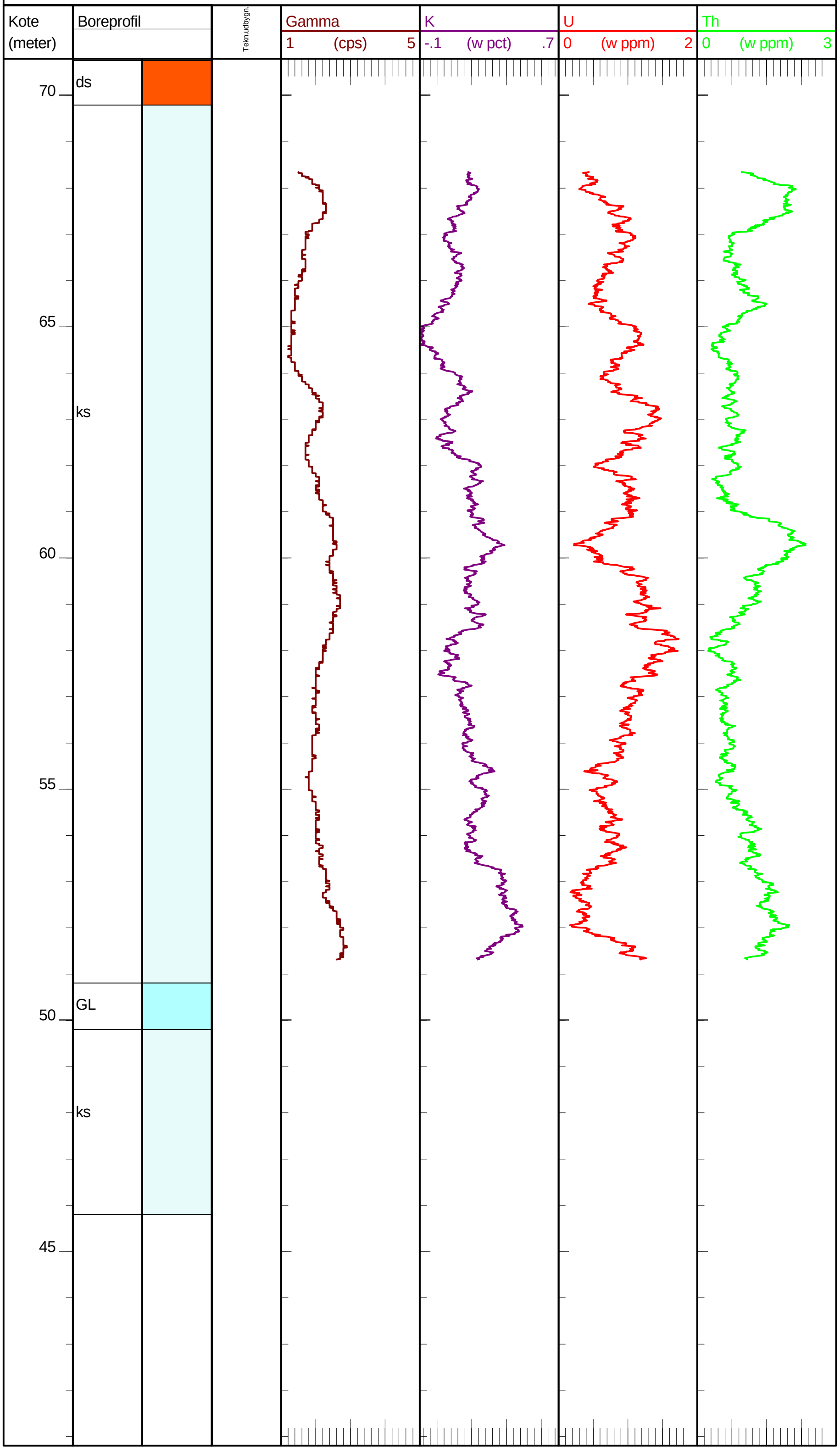


Well Name: 104.2380
Location: Vorslunde, V90 Dupont
Elevation: 58 Reference: Terræn

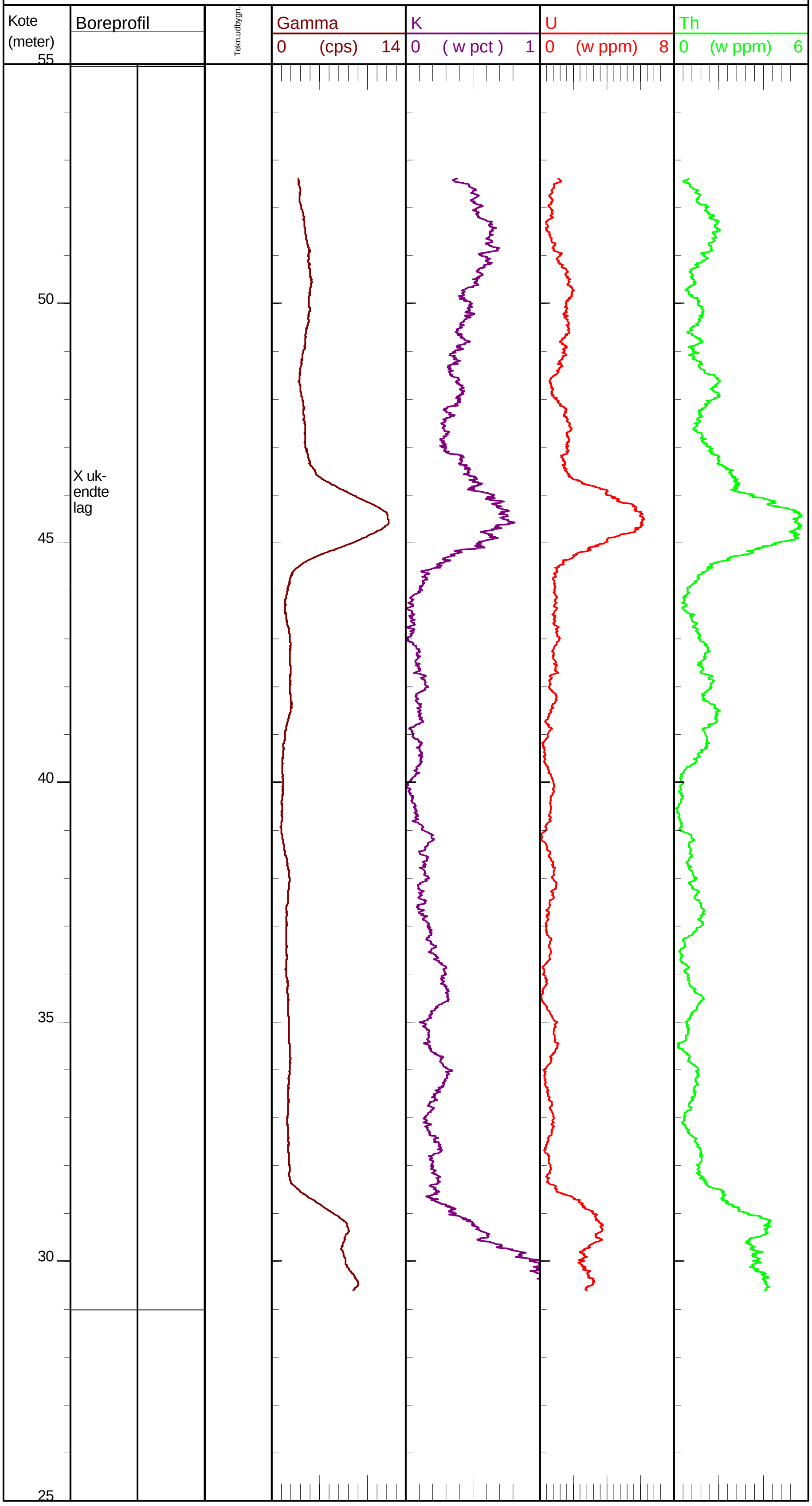



Well Name: 104.2381
Location: Vorslunde, V91 Dupont
Elevation: 60 Reference: Terræn
Kote
(meter)
Boreprofil
Tekn.udbygn.
Gamma
0
(cps)
5
K
-.2
(w pct)
.6
U
.25
(w ppm)
2
Th
0
(w ppm)
4
60
57.5
55
52.5
50
47.5
45
42.5
40

Well Name: 104.2510
File Name: M:\Vlogdata\DGU\DGU104\1042510\Witt113.HDR
Location: Ulkind, V 113, Dupont
Elevation: 70.8 Reference: Terræn



Well Name: 104.2526
File Name: M:\Vlogdata\DGU\DGU104\1042526\Witt129.HDR
Location: Vorslunde, V129 Dupont
Elevation: 55 Terræn



Well Name: 104.2540
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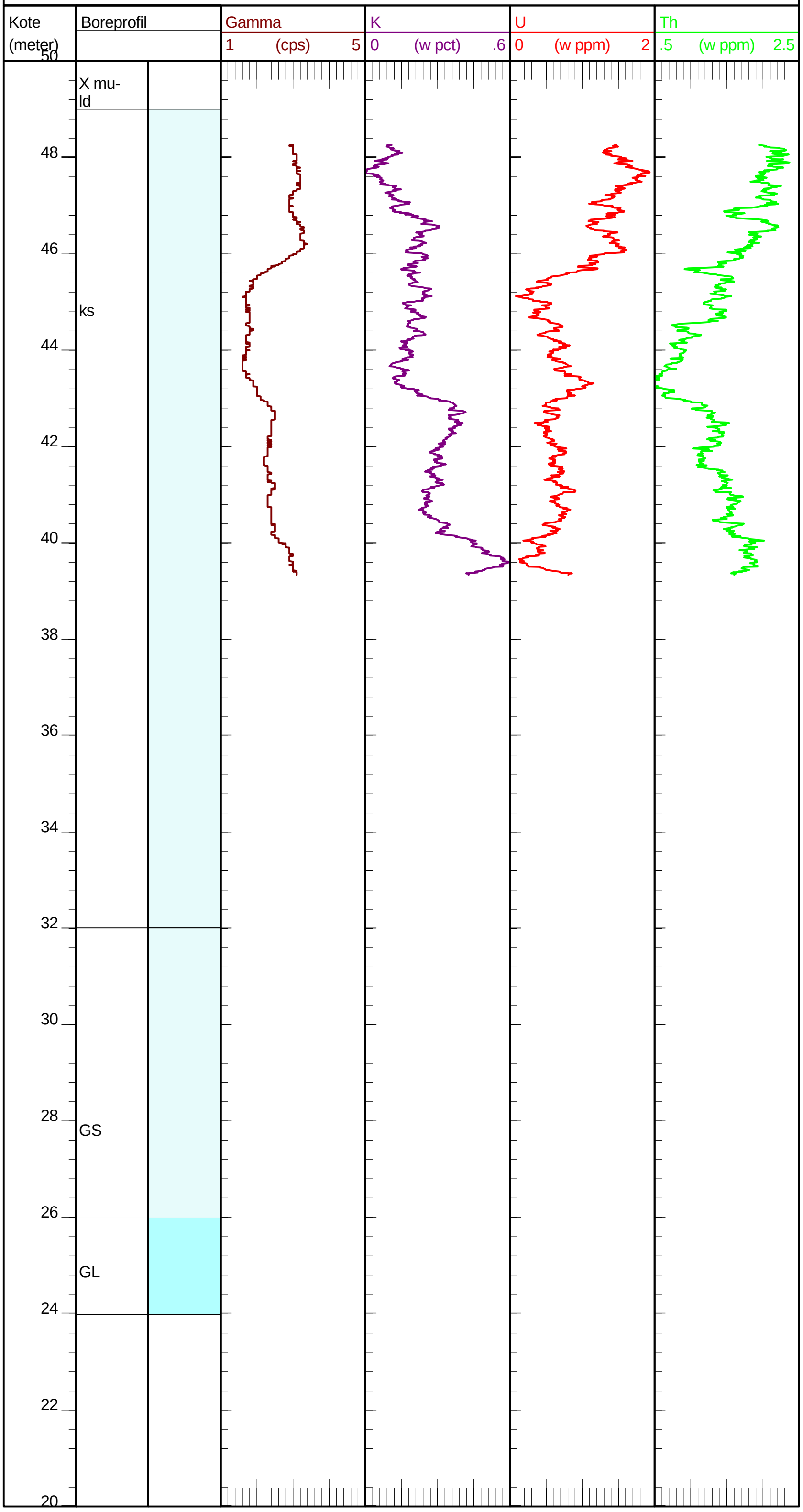
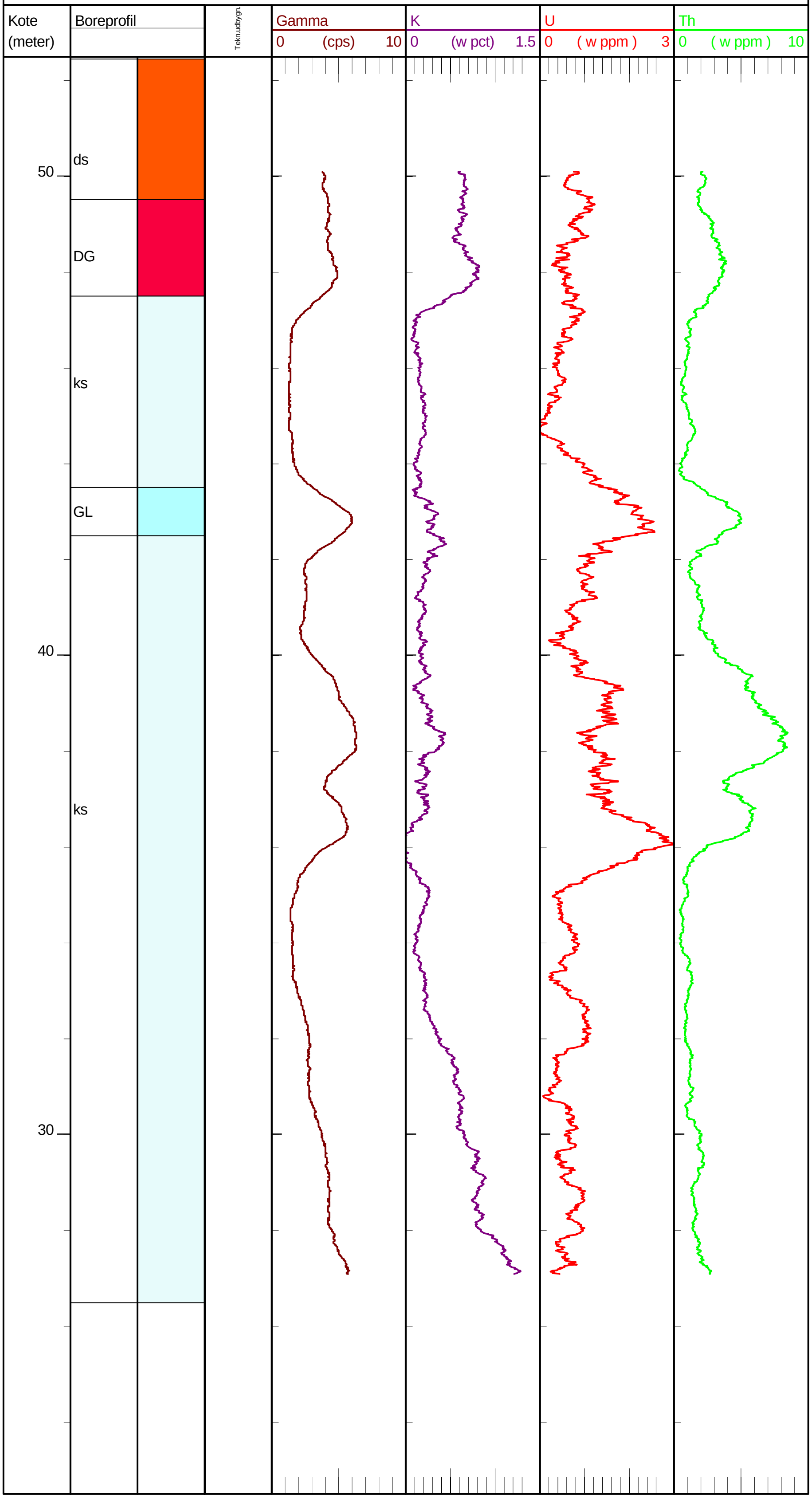
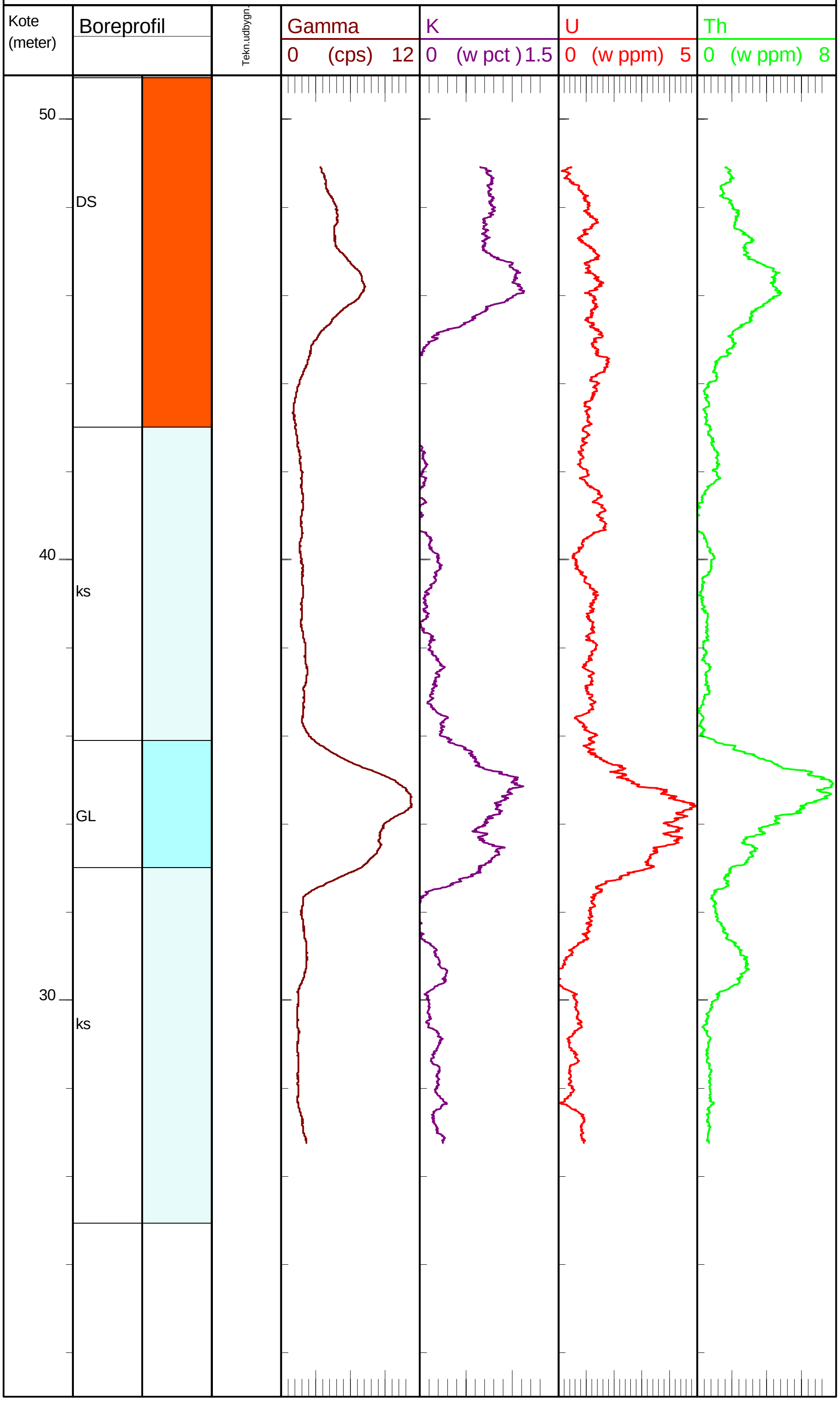
Location: Krogbo, V145 Vorslunde
Elevation: 50 Reference: Terræn



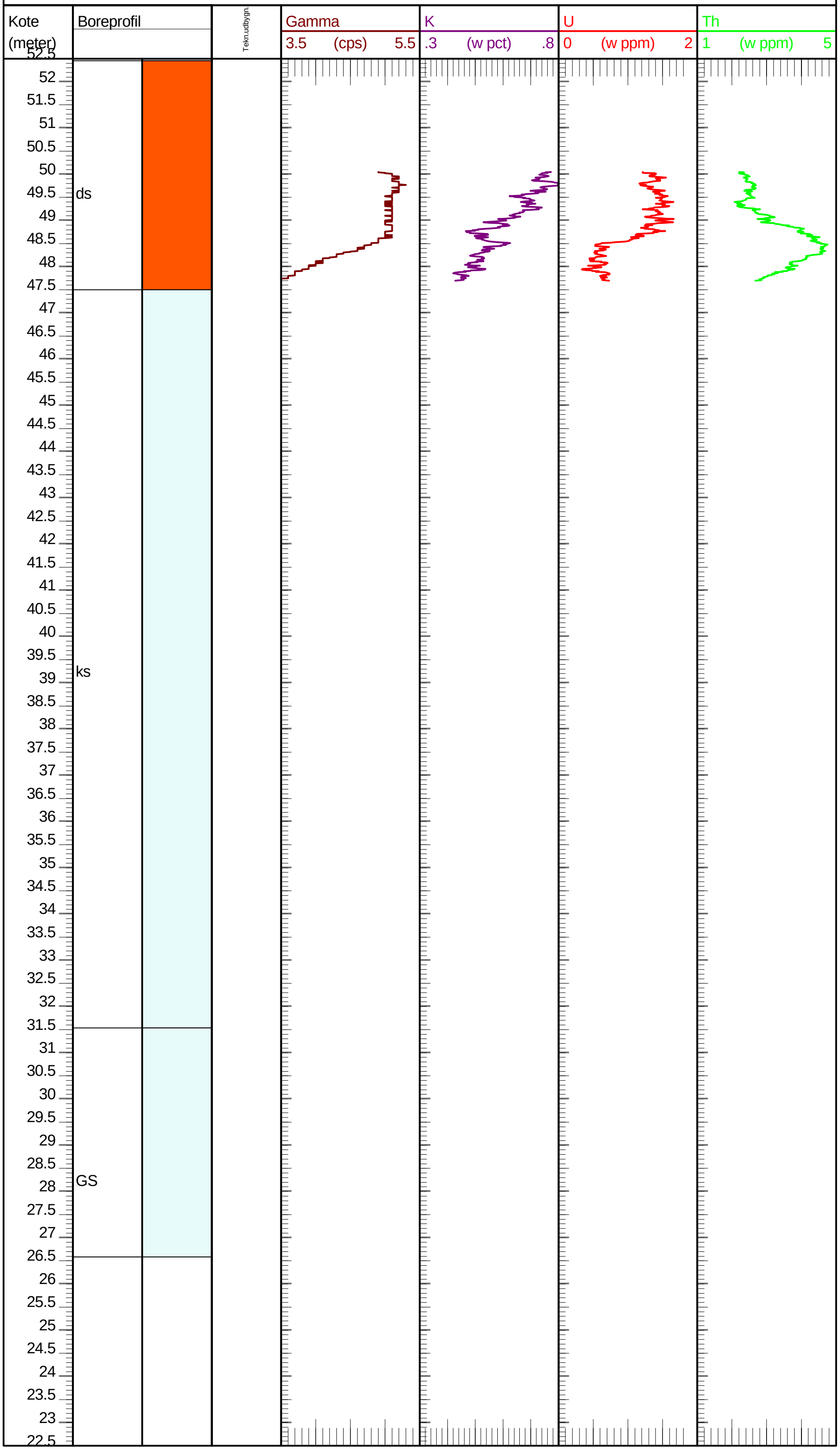
Well Name: 104.2547
File Name: M:\Vlogdata\DGU\DGU104\1042547\Witt152.HDR
Location: Hestlund, Møllebjerg, V152 Dupont
Elevation: 52.5 Reference: Terræn



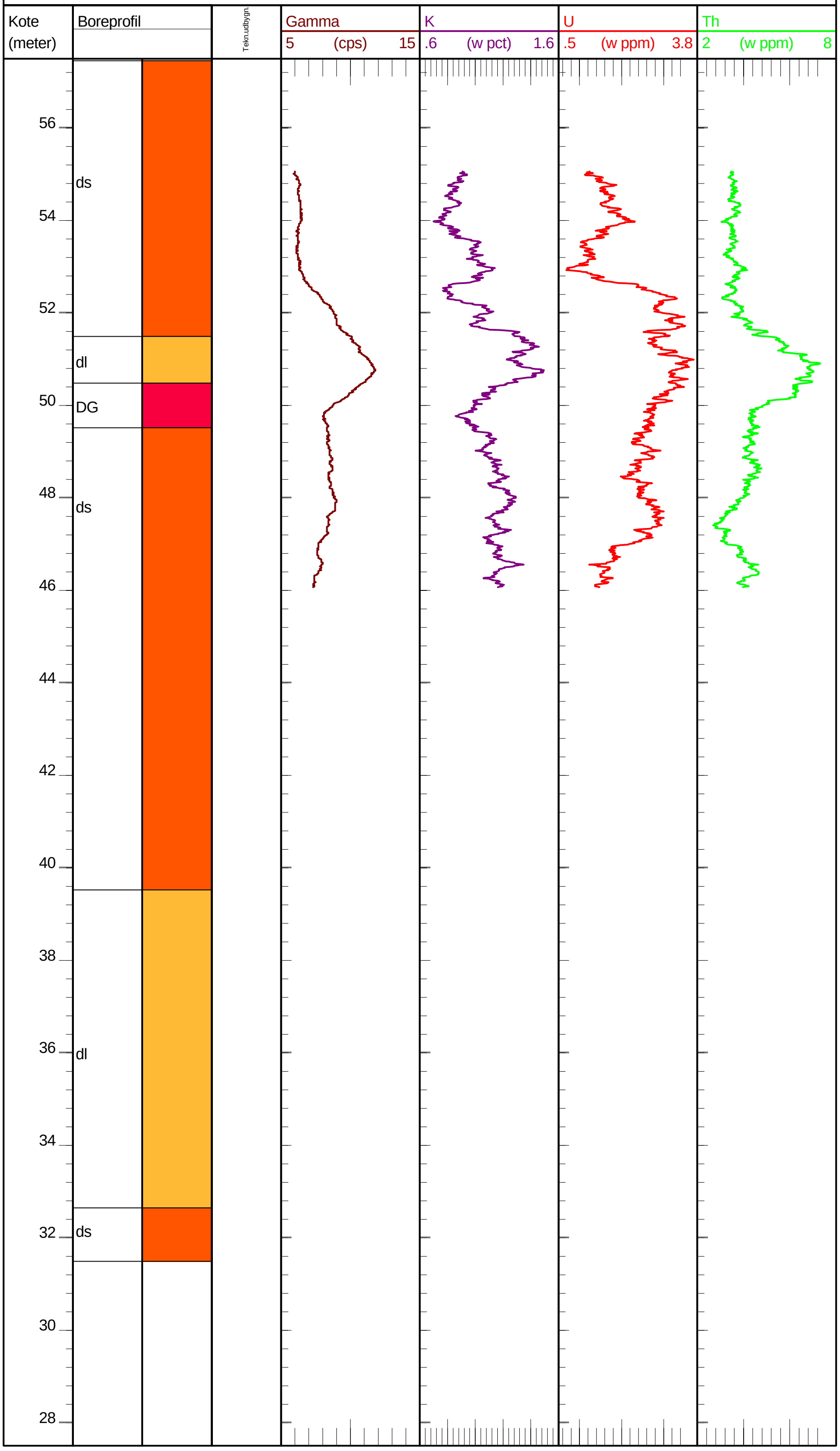
Well Name: 104.2567
Location: Møllebæk, V172, Dupont
Elevation: 51 Reference: Terræn



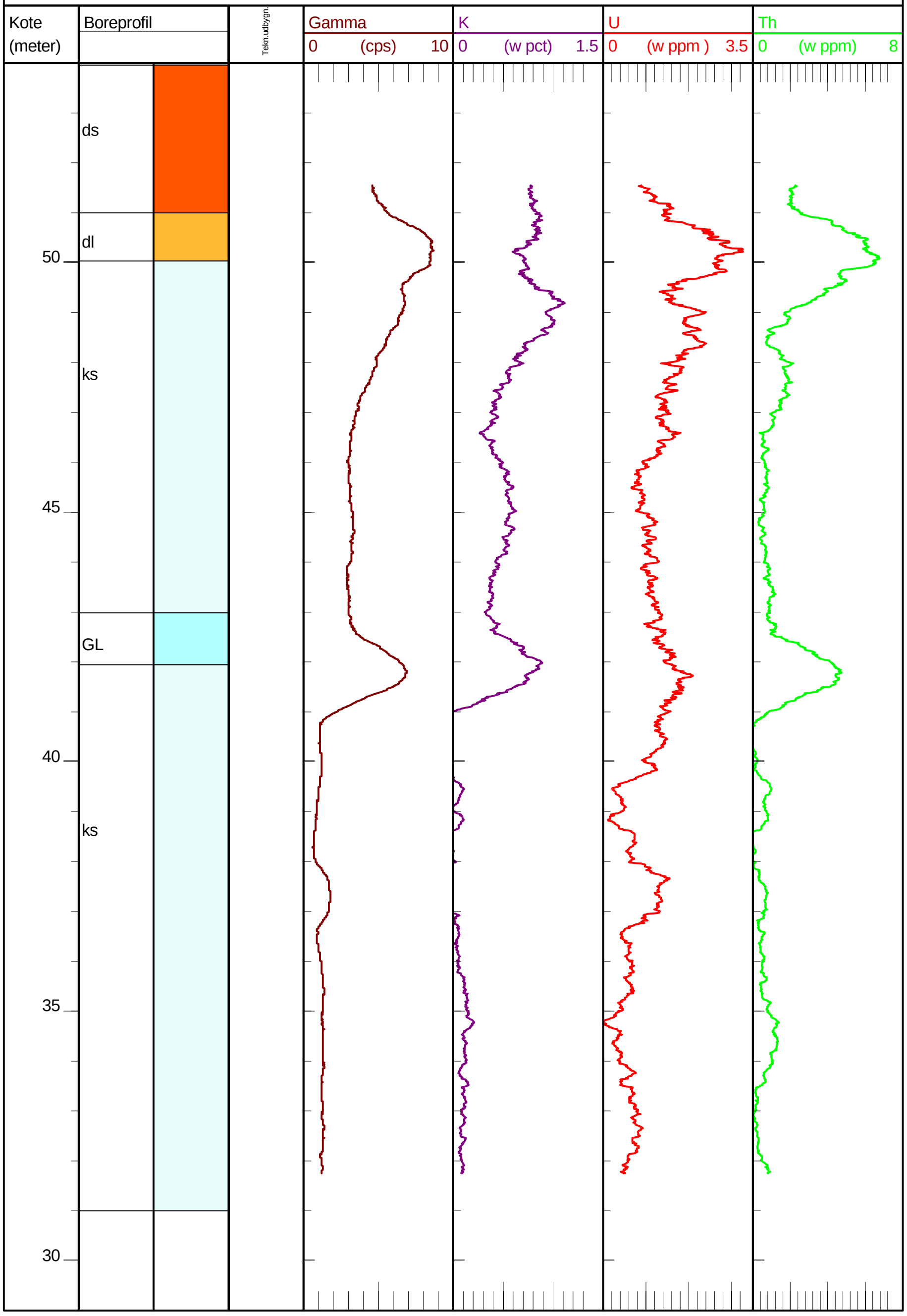
Well Name: 104.2575
File Name: M:\Vlogdata\DGU\DGU104\1042575\Witt180.HDR
Location: Risbjerg, V180 Dupont
Elevation: 52.5 Reference: Terræn



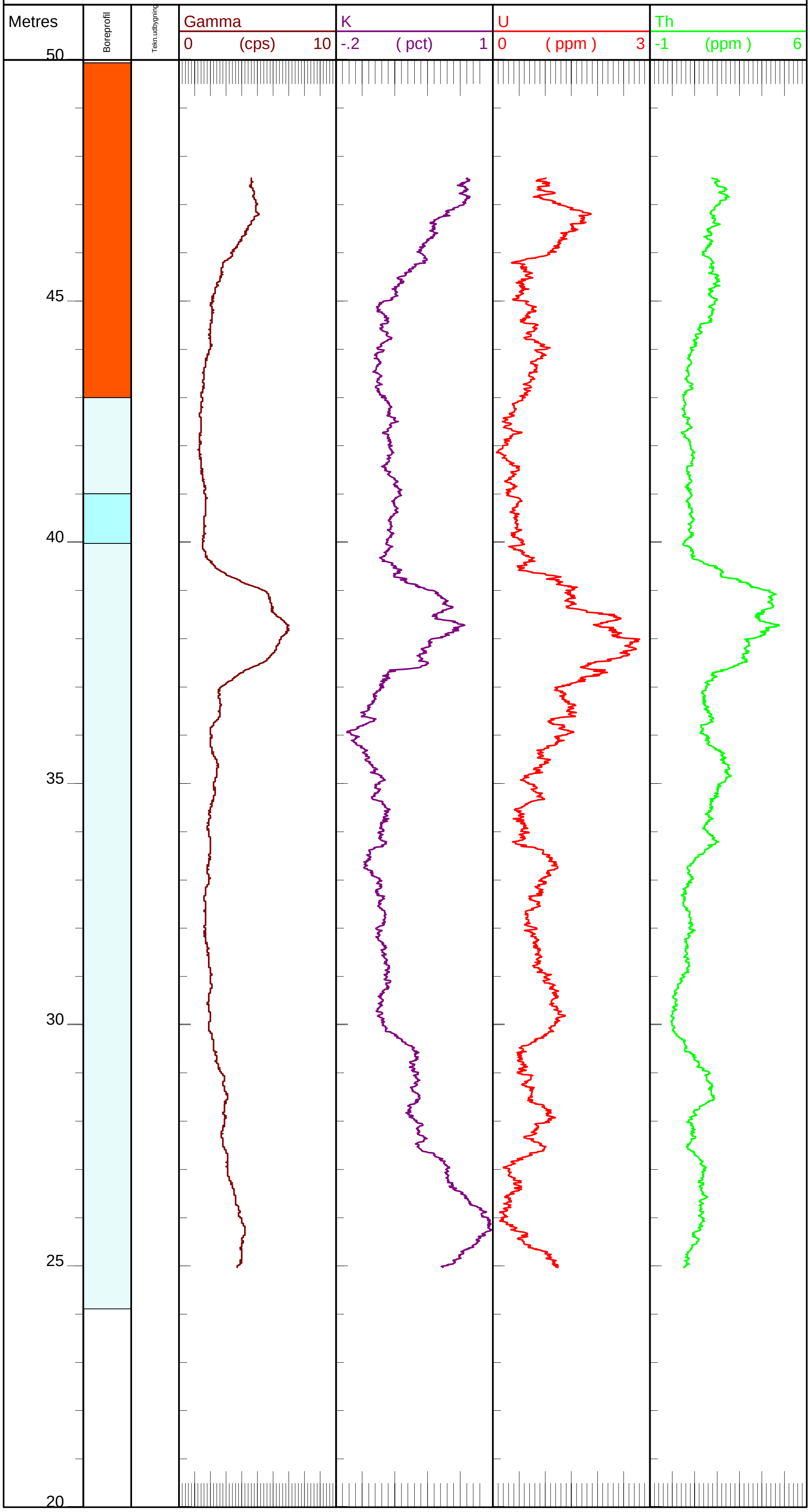
Well Name: 104.2595
File Name: M:\Vlogdata\DGU\DGU104\1042595\Witt200.HDR
Location: Hestlund   V 200   Jylland
Elevation: 57.5 Reference: Terræn



Well Name: 104.2599
Location: Hetlund, Møllebjerg, V204
Elevation: 54 Reference: Terræn



Well Name: 104.2608
Location: Møllebæk   V 213   Vorslunde
Elevation: 50 Reference: terræn



5 Fusion XRF

Fusion XRF major elements

Sample_ID	Date	SiO2 wt%	TiO2 wt%	Al2O3 wt%	Fe2O3 wt%	FeO wt%	MnO wt%	MgO wt%	CaO wt%	Na2O wt%	K2O wt%	P2O5 wt%	Volat wt%	Sum major wt%	Sum minor ppm	Total
V4-12	12-aug-99	98,42	0,28	0,00	0,18	0,00	0,01	0,02	0,00	0,04	0,02	0,01	0,08	99,05	301	99,080
V4-13	12-aug-99	97,65	0,60	0,00	0,31	0,00	0,02	0,00	0,01	0,05	0,03	0,01	0,10	98,76	582	98,822
V4-14	12-aug-99	85,90	6,42	0,79	4,51	0,00	0,27	0,07	0,09	0,03	0,06	0,03	0,25	98,41	4282	98,840
V4-15	12-aug-99	74,33	12,13	1,36	8,45	0,00	0,52	0,19	0,14	0,02	0,07	0,03	0,23	97,46	9722	98,436
V4-16	12-aug-99	97,74	0,50	0,23	0,28	0,00	0,02	0,02	0,01	0,03	0,12	0,01	0,13	99,09	284	99,120
V11-5	23-apr-02	97,88	0,31	0,73	0,12	0,00	0,01	0,03	0,00	0,00	0,25	0,01	0,14	99,48	356	99,519
V22-15	23-apr-02	91,53	3,14	1,24	2,11	0,00	0,15	0,08	0,01	0,00	0,15	0,01	0,54	98,96	2114	99,166
V22-16	23-apr-02	96,79	0,33	0,79	0,17	0,00	0,02	0,02	0,00	0,00	0,32	0,00	0,37	98,80	995	98,895
V24-12	23-apr-02	95,24	2,07	0,58	1,17	0,00	0,07	0,04	0,00	0,00	0,02	0,01	0,40	99,60	2046	99,802
V41-15	23-apr-02	94,61	2,40	0,71	1,31	0,00	0,08	0,03	0,00	0,00	0,04	0,01	0,15	99,33	1746	99,501
V42-3	24-aug-00	96,87	0,44	0,74	0,22	0,00	0,01	0,04	0,04	0,13	0,25	0,02	0,23	98,98	569	99,039
V42-4	24-aug-00	95,77	1,10	0,35	0,52	0,00	0,03	0,02	0,00	0,03	0,18	0,01	0,09	98,10	1590	98,263
V42-5	24-aug-00	97,69	0,23	0,28	0,08	0,00	0,01	0,02	0,00	0,02	0,23	0,01	0,06	98,63	388	98,672
V42-6	24-aug-00	96,63	0,84	0,28	0,35	0,00	0,03	0,02	0,00	0,01	0,16	0,01	0,03	98,36	1079	98,469
V42-7	24-aug-00	97,26	0,50	0,38	0,23	0,00	0,02	0,01	0,01	0,03	0,25	0,01	0,05	98,73	659	98,800
V42-8	24-aug-00	97,70	0,41	0,25	0,13	0,00	0,01	0,01	0,00	0,02	0,16	0,01	0,06	98,77	467	98,821
V42-9	24-aug-00	97,15	0,35	0,36	0,18	0,00	0,01	0,02	0,00	0,02	0,26	0,00	0,09	98,44	652	98,507
V42-10	24-aug-00	97,82	0,27	0,29	0,13	0,00	0,01	0,02	0,00	0,02	0,21	0,01	0,06	98,84	439	98,882
V42-11	24-aug-00	96,90	0,58	0,29	0,34	0,00	0,02	0,02	0,00	0,01	0,16	0,01	0,33	98,66	642	98,728
V42-14	24-aug-00	87,65	4,11	1,19	2,62	0,00	0,13	0,09	0,03	0,02	0,18	0,02	2,16	98,20	2811	98,481
V42-15	24-aug-00	90,35	4,56	0,34	2,56	0,00	0,15	0,05	0,00	0,00	0,04	0,01	0,16	98,23	3540	98,581
V42-16	24-aug-00	97,22	0,38	0,08	0,22	0,00	0,01	0,03	0,00	0,00	0,06	0,00	0,12	98,12	364	98,155
V42-17	24-aug-00	98,14	0,23	0,01	0,10	0,00	0,01	0,02	0,00	0,00	0,05	0,01	0,13	98,69	384	98,727
V42-18	24-aug-00	97,99	0,29	0,05	0,16	0,00	0,01	0,03	0,00	0,01	0,07	0,01	0,19	98,80	421	98,839
V42-19	24-aug-00	96,71	0,45	0,55	0,25	0,00	0,02	0,02	0,00	0,02	0,37	0,01	0,22	98,61	547	98,666
V42-20	24-aug-00	96,86	0,45	0,56	0,27	0,00	0,02	0,04	0,00	0,03	0,39	0,01	0,23	98,84	550	98,894
V53-14	23-apr-02	96,48	1,30	0,54	0,75	0,00	0,05	0,04	0,00	0,00	0,06	0,01	0,20	99,41	1362	99,546
V53-15	23-apr-02	88,30	5,13	1,03	3,52	0,00	0,22	0,14	0,00	0,00	0,09	0,01	0,29	98,73	4582	99,191
V61-27	23-apr-02	93,11	2,69	1,00	1,64	0,00	0,13	0,05	0,00	0,00	0,14	0,01	0,37	99,15	2553	99,402
V62-1M	24-aug-00	98,28	0,20	0,00	0,05	0,00	0,00	0,03	0,00	0,01	0,01	0,01	0,09	98,69	231	98,708
V62-2M	24-aug-00	96,55	0,83	0,17	0,28	0,00	0,02	0,03	0,00	0,02	0,03	0,01	0,23	98,17	515	98,216
V62-3M	24-aug-00	97,40	0,54	0,09	0,19	0,00	0,01	0,02	0,00	0,00	0,03	0,01	0,09	98,39	462	98,438
V62-4M	24-aug-00	97,53	0,42	0,15	0,14	0,00	0,01	0,03	0,00	0,00	0,06	0,01	0,11	98,46	459	98,503
V62-5M	24-aug-00	96,86	0,43	0,14	0,11	0,00	0,01	0,01	0,00	0,00	0,07	0,01	0,09	97,72	266	97,745

Fusion XRF major elements

Sample_ID	Date	SiO2 wt%	TiO2 wt%	Al2O3 wt%	Fe2O3 wt%	FeO wt%	MnO wt%	MgO wt%	CaO wt%	Na2O wt%	K2O wt%	P2O5 wt%	Volat wt%	Sum major wt%	Sum minor ppm	Total
V62-6M	24-aug-00	94,56	1,80	0,40	0,78	0,00	0,05	0,03	0,00	0,00	0,11	0,01	0,15	97,89	1241	98,013
V62-7M	24-aug-00	97,20	0,27	0,38	0,10	0,00	0,01	0,01	0,00	0,01	0,26	0,01	0,13	98,38	413	98,419
V62-8M	24-aug-00	96,72	0,50	0,32	0,17	0,00	0,01	0,02	0,00	0,00	0,21	0,00	0,08	98,04	442	98,087
V62-9M	24-aug-00	95,94	1,07	0,39	0,46	0,00	0,03	0,04	0,00	0,01	0,17	0,01	0,08	98,19	914	98,278
V62-10M	24-aug-00	97,36	0,38	0,31	0,12	0,00	0,01	0,02	0,00	0,01	0,22	0,01	0,05	98,49	359	98,522
V62-11M	24-aug-00	97,57	0,24	0,26	0,06	0,00	0,00	0,01	0,00	0,01	0,20	0,01	0,03	98,38	243	98,404
V62-12M	24-aug-00	96,48	0,97	0,34	0,40	0,00	0,03	0,01	0,01	0,01	0,17	0,01	0,11	98,54	733	98,611
V62-13M	24-aug-00	89,71	0,57	0,45	1,13	0,00	0,02	0,04	0,05	0,01	0,16	0,01	6,44	98,57	476	98,615
V62-14M	24-aug-00	85,47	1,23	2,61	1,26	0,00	0,03	0,14	0,08	0,03	0,39	0,01	7,52	98,77	1159	98,881
V62-15M	24-aug-00	95,92	1,16	0,20	0,52	0,00	0,03	0,04	0,00	0,00	0,02	0,01	0,38	98,28	875	98,370
V62-16M	24-aug-00	96,08	0,71	0,22	0,82	0,00	0,03	0,05	0,01	0,02	0,04	0,01	0,47	98,46	581	98,513
V62-17M	24-aug-00	95,82	1,07	0,27	0,59	0,00	0,04	0,03	0,00	0,02	0,05	0,01	0,20	98,10	626	98,159
V62-18M	24-aug-00	96,10	1,23	0,25	0,66	0,00	0,05	0,06	0,01	0,03	0,04	0,00	0,02	98,44	911	98,526
V62-19M	24-aug-00	97,58	0,33	0,16	0,19	0,00	0,01	0,02	0,00	0,01	0,11	0,01	0,11	98,53	360	98,565
V62-20M	24-aug-00	98,26	0,08	0,05	0,03	0,00	0,00	0,01	0,00	0,00	0,09	0,01	0,05	98,57	206	98,589
V62-21M	24-aug-00	97,39	0,12	0,19	0,07	0,00	0,00	0,01	0,00	0,00	0,17	0,00	0,15	98,11	371	98,146
V62-22M	24-aug-00	96,35	0,39	0,40	0,09	0,00	0,01	0,03	0,00	0,00	0,30	0,01	0,16	97,73	186	97,748
V62-23M	24-aug-00	96,20	0,45	0,72	0,21	0,00	0,02	0,02	0,00	0,02	0,49	0,01	0,30	98,44	481	98,487
V72-15	23-apr-02	94,33	2,35	0,72	1,43	0,00	0,11	0,05	0,00	0,00	0,06	0,01	0,47	99,52	2141	99,730
V74-14	23-apr-02	93,25	2,29	0,71	1,47	0,00	0,09	0,04	0,00	0,00	0,10	0,01	0,57	98,54	1971	98,733
V83-21	23-apr-02	91,36	3,53	0,73	2,27	0,00	0,15	0,10	0,00	0,00	0,07	0,01	0,29	98,51	3460	98,858
V101-21	23-apr-02	90,64	4,20	0,69	2,65	0,00	0,16	0,08	0,00	0,00	0,06	0,01	0,21	98,70	5175	99,217
V133-8	23-apr-02	97,53	0,65	0,66	0,28	0,00	0,02	0,02	0,00	0,00	0,18	0,01	0,12	99,48	587	99,535
V164-5	23-apr-02	92,81	0,75	1,05	0,50	0,00	0,02	0,09	0,03	0,00	0,21	0,02	1,84	97,31	1161	97,429
V164-7	23-apr-02	79,15	9,84	1,05	6,36	0,00	0,38	0,12	0,00	0,00	0,08	0,03	0,15	97,15	9818	98,134
V164-8	23-apr-02	89,70	4,74	0,96	2,83	0,00	0,18	0,05	0,00	0,00	0,14	0,00	0,16	98,76	4200	99,177
V174-15	23-apr-02	92,26	3,44	0,80	1,90	0,00	0,07	0,08	0,00	0,00	0,01	0,02	0,62	99,20	1606	99,361
V174-16	23-apr-02	92,54	3,20	0,76	1,48	0,00	0,08	0,04	0,00	0,00	0,02	0,02	0,82	98,96	3218	99,282
V174-20	23-apr-02	96,59	1,12	0,70	0,73	0,00	0,05	0,07	0,00	0,00	0,12	0,01	0,16	99,55	1165	99,669
V149-8	01-feb-02	99,08	0,06	0,47	0,10	0,00	0,00	0,01	0,00	0,00	0,13	0,01	0,03	99,89	371	99,923
V149-12	01-feb-02	94,18	2,12	1,02	1,29	0,00	0,09	0,08	0,02	0,00	0,12	0,02	0,36	99,30	1046	99,406
V149-13	01-feb-02	95,43	1,97	1,06	1,21	0,00	0,09	0,05	0,00	0,00	0,10	0,01	0,15	100,08	1191	100,195
V149-14	01-feb-02	87,72	5,80	1,11	3,60	0,00	0,24	0,10	0,01	0,00	0,15	0,02	0,18	98,93	4583	99,391
V149-15	01-feb-02	96,44	0,73	0,57	0,43	0,00	0,03	0,02	0,00	0,00	0,16	0,01	0,10	98,49	698	98,558

Fusion XRF major elements

Sample_ID	Date	SiO2 wt%	TiO2 wt%	Al2O3 wt%	Fe2O3 wt%	FeO wt%	MnO wt%	MgO wt%	CaO wt%	Na2O wt%	K2O wt%	P2O5 wt%	Volat wt%	Sum major wt%	Sum minor ppm	Total
V149-16	01-feb-02	94,55	0,15	0,52	0,13	0,00	0,01	0,02	0,00	0,00	0,16	0,01	0,10	95,65	391	95,691
V149-17	01-feb-02	97,83	0,46	0,59	0,28	0,00	0,01	0,03	0,00	0,00	0,19	0,01	0,11	99,50	443	99,548
V149-18	01-feb-02	97,06	0,58	0,83	0,41	0,00	0,02	0,03	0,00	0,00	0,34	0,01	0,13	99,42	612	99,479
V149-19	01-feb-02	97,54	0,25	0,85	0,16	0,00	0,00	0,03	0,00	0,00	0,40	0,01	0,13	99,37	377	99,411
V149-20	01-feb-02	96,78	0,47	1,09	0,35	0,00	0,02	0,04	0,00	0,00	0,52	0,00	0,23	99,50	648	99,566
V149-21	01-feb-02	95,19	0,40	1,32	0,41	0,00	0,02	0,03	0,00	0,00	0,66	0,02	0,27	98,31	483	98,357
V149-22	01-feb-02	95,42	0,21	1,82	0,32	0,00	0,01	0,03	0,00	0,00	1,08	0,01	0,35	99,25	462	99,297
V149-24	01-feb-02	90,54	1,45	3,34	1,53	0,00	0,06	0,13	0,78	0,00	1,12	0,02	0,77	99,73	1695	99,903
V149-25	01-feb-02	90,72	1,20	3,30	1,30	0,00	0,05	0,13	0,55	0,00	1,33	0,02	0,50	99,09	1650	99,255
V149-26	01-feb-02	91,66	0,63	3,47	0,78	0,00	0,02	0,13	0,41	0,00	1,49	0,02	0,60	99,20	1060	99,310

Fusion XRF minor elements

Sample_ID	Date	V ppm	Cr ppm	Ni ppm	Cu ppm	Zn ppm	Rb ppm	Sr ppm	Y ppm	Zr ppm	Nb ppm	Mo ppm	Sn ppm	Ba ppm	La ppm	Ce ppm	Sum minor ppm	Sum major wt%	Total
V4-12	12-aug-99	20	41	0	1	77	0	36	0	0	0	0	0	34	92	0	301	99,05	99,080
V4-13	12-aug-99	23	51	0	3	78	0	34	0	157	0	0	0	0	121	115	582	98,76	98,822
V4-14	12-aug-99	88	173	0	7	149	0	52	0	3541	13	0	0	82	177	0	4282	98,41	98,840
V4-15	12-aug-99	133	275	0	7	38	13	65	71	8395	259	0	0	374	31	61	9722	97,46	98,436
V4-16	12-aug-99	13	27	0	3	0	0	18	0	187	0	0	0	5	31	0	284	99,09	99,120
V11-5	23-apr-02	17	33	0	0	10	0	20	0	0	0	0	0	157	31	88	356	99,48	99,519
V22-15	23-apr-02	57	67	0	0	47	0	72	0	1468	0	0	0	24	0	379	2114	98,96	99,166
V22-16	23-apr-02	29	0	0	0	25	0	66	0	156	0	0	0	151	81	487	995	98,80	98,895
V24-12	23-apr-02	39	56	0	0	35	0	66	0	1332	0	0	0	202	50	266	2046	99,60	99,802
V41-15	23-apr-02	40	63	0	0	37	0	68	0	1214	0	0	0	94	43	187	1746	99,33	99,501
V42-3	24-aug-00	11	26	0	2	7	0	70	0	293	0	0	0	42	67	51	569	98,98	99,039
V42-4	24-aug-00	9	56	0	2	9	0	61	0	1393	0	0	0	10	43	7	1590	98,10	98,263
V42-5	24-aug-00	10	22	0	1	18	0	67	0	155	0	0	0	3	56	56	388	98,63	98,672
V42-6	24-aug-00	19	38	0	2	6	0	62	0	763	0	0	0	20	67	102	1079	98,36	98,469
V42-7	24-aug-00	7	23	0	2	3	0	71	0	399	0	0	0	90	47	17	659	98,73	98,800
V42-8	24-aug-00	7	28	0	1	4	0	67	0	280	0	0	0	0	11	69	467	98,77	98,821
V42-9	24-aug-00	7	27	0	1	3	0	64	0	291	0	0	0	90	78	91	652	98,44	98,507
V42-10	24-aug-00	10	25	0	1	9	0	70	0	176	0	0	0	45	103	0	439	98,84	98,882
V42-11	24-aug-00	11	23	0	2	8	0	66	0	395	0	0	0	46	47	44	642	98,66	98,728
V42-14	24-aug-00	46	92	0	4	26	0	80	9	2310	73	0	0	119	52	0	2811	98,20	98,481
V42-15	24-aug-00	46	96	0	4	29	0	83	18	3040	77	0	0	79	38	30	3540	98,23	98,581
V42-16	24-aug-00	10	15	0	3	1	0	57	0	160	0	0	0	0	77	41	364	98,12	98,155
V42-17	24-aug-00	10	12	0	3	4	0	60	0	156	0	0	0	0	41	98	384	98,69	98,727
V42-18	24-aug-00	10	18	0	2	2	0	64	0	187	0	0	0	21	48	69	421	98,80	98,839
V42-19	24-aug-00	16	22	0	2	8	0	71	0	311	0	0	0	39	50	28	547	98,61	98,666
V42-20	24-aug-00	7	25	0	2	8	0	73	0	303	0	0	0	79	31	22	550	98,84	98,894
V53-14	23-apr-02	34	30	0	0	27	0	64	0	729	0	0	0	53	35	390	1362	99,41	99,546
V53-15	23-apr-02	76	116	0	0	48	6	86	15	3717	37	0	0	208	93	180	4582	98,73	99,191
V61-27	23-apr-02	61	67	0	0	34	0	76	0	1690	0	0	0	135	95	395	2553	99,15	99,402
V62-1M	24-aug-00	3	19	0	3	8	0	54	0	91	0	0	0	0	53	0	231	98,69	98,708
V62-2M	24-aug-00	3	27	0	2	0	0	54	0	407	0	0	0	1	21	0	515	98,17	98,216
V62-3M	24-aug-00	9	18	0	0	5	0	60	0	298	0	0	0	33	39	0	462	98,39	98,438
V62-4M	24-aug-00	19	28	0	0	8	0	62	0	181	0	0	0	0	98	63	459	98,46	98,503
V62-5M	24-aug-00	6	16	0	1	5	0	52	0	138	0	0	0	0	48	0	266	97,72	97,745
V62-6M	24-aug-00	16	68	0	1	14	0	65	0	978	5	0	0	55	39	0	1241	97,89	98,013

Fusion XRF minor elements

Sample_ID	Date	V ppm	Cr ppm	Ni ppm	Cu ppm	Zn ppm	Rb ppm	Sr ppm	Y ppm	Zr ppm	Nb ppm	Mo ppm	Sn ppm	Ba ppm	La ppm	Ce ppm	Sum minor ppm	Sum major wt%	Total
V62-7M	24-aug-00	7	23	0	0	7	0	66	0	178	0	0	0	53	58	21	413	98,38	98,419
V62-8M	24-aug-00	4	27	0	1	2	0	62	0	278	0	0	0	24	44	0	442	98,04	98,087
V62-9M	24-aug-00	12	38	0	0	6	0	58	0	658	0	0	0	99	43	0	914	98,19	98,278
V62-10M	24-aug-00	9	22	0	0	0	0	62	0	191	0	0	0	32	43	0	359	98,49	98,522
V62-11M	24-aug-00	7	19	0	2	0	0	59	0	75	0	0	0	14	36	31	243	98,38	98,404
V62-12M	24-aug-00	17	47	0	1	12	0	68	0	457	0	0	0	53	56	22	733	98,54	98,611
V62-13M	24-aug-00	12	22	0	1	6	0	63	0	279	0	0	0	38	55	0	476	98,57	98,615
V62-14M	24-aug-00	28	74	0	4	19	0	75	0	780	0	0	0	110	69	0	1159	98,77	98,881
V62-15M	24-aug-00	16	37	0	1	4	0	57	0	622	0	0	0	44	55	39	875	98,28	98,370
V62-16M	24-aug-00	14	25	0	1	11	0	63	0	287	0	0	0	46	77	57	581	98,46	98,513
V62-17M	24-aug-00	11	19	0	0	7	0	59	0	408	0	0	0	11	40	71	626	98,10	98,159
V62-18M	24-aug-00	14	36	0	3	16	0	63	0	651	0	0	0	58	8	62	911	98,44	98,526
V62-19M	24-aug-00	9	18	0	2	4	0	61	0	182	0	0	0	40	11	33	360	98,53	98,565
V62-20M	24-aug-00	8	17	0	2	1	0	62	0	48	0	0	0	0	21	47	206	98,57	98,589
V62-21M	24-aug-00	7	22	0	1	11	0	59	0	78	0	0	0	0	52	141	371	98,11	98,146
V62-22M	24-aug-00	0	10	0	1	0	0	42	0	85	0	0	0	24	24	0	186	97,73	97,748
V62-23M	24-aug-00	5	28	0	2	1	0	65	0	241	0	0	0	100	39	0	481	98,44	98,487
V72-15	23-apr-02	56	163	0	0	29	0	75	0	1453	0	0	0	38	91	236	2141	99,52	99,730
V74-14	23-apr-02	47	40	0	0	35	0	42	0	1367	0	0	0	66	85	289	1971	98,54	98,733
V83-21	23-apr-02	57	85	0	0	34	0	57	0	2560	1	0	0	220	46	400	3460	98,51	98,858
V101-21	23-apr-02	74	141	0	0	46	0	76	3	4198	21	0	0	154	140	322	5175	98,70	99,217
V133-8	23-apr-02	17	33	0	0	15	0	22	0	296	0	0	0	116	43	45	587	99,48	99,535
V164-5	23-apr-02	36	36	0	0	28	0	62	0	461	0	0	0	143	91	304	1161	97,31	97,429
V164-7	23-apr-02	133	249	3	0	69	5	89	61	8698	148	0	0	0	33	330	9818	97,15	98,134
V164-8	23-apr-02	87	114	0	0	47	0	79	0	3303	32	0	0	107	115	316	4200	98,76	99,177
V174-15	23-apr-02	59	68	0	0	35	0	67	0	959	0	0	0	80	84	254	1606	99,20	99,361
V174-16	23-apr-02	76	90	0	0	35	0	78	0	2637	0	0	0	8	24	270	3218	98,96	99,282
V174-20	23-apr-02	34	43	0	0	31	0	66	0	456	0	0	0	58	62	415	1165	99,55	99,669
V149-8	01-feb-02	12	32	0	0	28	0	9	0	0	0	0	0	184	54	52	371	99,89	99,923
V149-12	01-feb-02	31	50	0	0	38	0	15	0	714	0	0	0	196	2	0	1046	99,30	99,406
V149-13	01-feb-02	40	45	0	0	41	0	21	0	856	0	0	0	144	44	0	1191	100,08	100,195
V149-14	01-feb-02	89	135	0	0	61	0	51	0	3903	106	0	0	175	9	54	4583	98,93	99,391
V149-15	01-feb-02	24	32	0	0	42	0	10	0	360	0	0	0	127	50	53	698	98,49	98,558
V149-16	01-feb-02	16	30	0	0	33	0	11	0	0	0	0	0	205	45	51	391	95,65	95,691
V149-17	01-feb-02	12	36	0	0	24	0	0	0	107	0	0	0	199	0	65	443	99,50	99,548

Fusion XRF minor elements

Sample_ID	Date	V ppm	Cr ppm	Ni ppm	Cu ppm	Zn ppm	Rb ppm	Sr ppm	Y ppm	Zr ppm	Nb ppm	Mo ppm	Sn ppm	Ba ppm	La ppm	Ce ppm	Sum minor ppm	Sum major wt%	Total
V149-18	01-feb-02	19	31	0	0	27	0	13	0	164	0	0	0	252	47	59	612	99,42	99,479
V149-19	01-feb-02	13	30	0	0	22	0	9	0	0	0	0	0	267	36	0	377	99,37	99,411
V149-20	01-feb-02	17	38	0	0	24	0	23	0	181	0	0	0	307	3	55	648	99,50	99,566
V149-21	01-feb-02	18	37	0	0	28	0	28	0	83	0	0	0	241	46	2	483	98,31	98,357
V149-22	01-feb-02	14	30	0	0	22	0	33	0	0	0	0	0	336	0	27	462	99,25	99,297
V149-24	01-feb-02	46	54	0	0	43	0	107	0	981	0	0	0	384	44	36	1695	99,73	99,903
V149-25	01-feb-02	39	67	0	0	39	0	98	0	989	0	0	0	379	39	0	1650	99,09	99,255
V149-26	01-feb-02	27	40	0	0	35	0	87	0	321	0	0	0	509	14	27	1060	99,20	99,310

6 XRF on pellets

Sample	TiO2 wt%	MgO wt%	Na2O wt%	P2O5 wt%	K2O wt%	CaO wt%	MnO wt%	SiO2 wt%	Al2O3 wt%
V4-14	4,46	0,06	-0,02	0,00	0,08	0,19	0,11	91,13	0,80
V4-15	8,66	-0,04	-0,02	-0,01	0,09	0,25	0,23	87,37	1,01
V4-17	0,58	0,00	-0,02	-0,01	0,22	0,16	0,02	95,17	0,65
V6-14	2,65	-0,10	-0,05	0,00	0,04	0,14	0,07	94,08	0,43
V9-13	2,16	0,02	-0,04	0,00	0,05	0,12	0,05	93,90	0,53
V9-15	2,36	0,03	-0,04	-0,01	0,07	0,17	0,06	90,83	0,57
V11-5	0,30	0,07	0,03	0,00	0,27	0,11	0,01	99,63	0,71
V14-3	2,28	-0,13	0,00	0,00	0,21	0,16	0,08	96,08	0,75
V22-14	1,68	0,03	0,03	-0,01	0,14	0,19	0,04	91,97	0,96
V22-15	3,02	0,03	-0,01	0,00	0,21	0,20	0,10	93,95	1,17
V22-16	0,35	0,00	0,02	-0,01	0,39	0,16	0,01	96,22	0,93
V22-17	0,27	-0,04	-0,04	0,00	0,36	0,13	0,01	94,95	0,93
V22-19	0,40	0,09	0,05	0,00	0,52	0,22	0,02	90,79	1,25
V24-12	2,11	-0,03	0,05	0,00	0,02	0,11	0,03	90,02	0,40
V26-18	1,54	0,06	-0,07	0,00	0,19	0,14	0,05	93,47	0,82
V28-11	0,19	0,02	-0,09	0,00	0,11	0,17	0,02	99,42	0,43
V37-16	0,75	-0,02	0,05	0,00	0,04	0,12	0,02	96,80	0,39
V37-5	1,43	0,01	0,03	0,00	0,11	0,12	0,04	99,42	0,56
V54-16	1,48	0,13	-0,10	0,00	0,14	0,24	0,04	91,38	0,86
V55-19	1,30	0,01	0,05	-0,01	0,03	0,11	0,03	98,19	0,36
V55-21	2,73	0,00	-0,08	0,00	0,09	0,13	0,04	90,71	0,54
V55-24	0,88	0,00	0,01	-0,01	0,13	0,12	0,01	93,41	0,45
V58-14	1,32	-0,01	0,15	0,00	0,23	0,14	0,04	97,40	0,87
V61-27	2,83	0,04	0,12	-0,01	0,18	0,14	0,08	92,99	0,81
V66-18	1,25	-0,05	-0,21	0,00	0,08	0,11	0,03	98,64	0,47
V74-14	2,61	0,01	-0,04	0,00	0,12	0,15	0,04	89,00	0,62
V74-15	1,71	-0,03	0,03	0,00	0,23	0,17	0,02	91,75	1,07

Sample	TiO2 wt%	MgO wt%	Na2O wt%	P2O5 wt%	K2O wt%	CaO wt%	MnO wt%	SiO2 wt%	Al2O3 wt%
V75-14	1,03	0,07	0,00	-0,01	0,09	0,12	0,03	92,66	0,49
V75-15	2,26	-0,03	-0,01	0,00	0,09	0,12	0,02	89,61	0,63
V78-15	2,06	0,09	0,04	0,00	0,14	0,15	0,04	90,75	0,76
V80-12	1,75	-0,07	-0,02	0,00	0,17	0,13	0,05	97,48	0,74
V80-18	1,74	-0,05	-0,03	0,00	0,18	0,15	0,03	90,63	0,69
V81-15	2,12	0,10	0,02	0,01	0,29	0,27	0,05	89,67	1,27
V82-15	1,21	-0,04	0,01	0,00	0,05	0,12	0,04	99,24	0,39
V83-13	0,36	0,04	0,04	-0,01	0,22	0,11	0,02	94,34	0,71
V83-18	1,09	-0,03	0,04	0,00	0,10	0,11	0,01	91,77	0,49
V83-21	3,02	-0,08	-0,01	0,00	0,08	0,14	0,09	95,25	0,50
V86-24	1,74	0,07	-0,03	-0,01	0,05	0,11	0,03	92,35	0,58
V87-1	1,62	0,13	0,42	0,00	0,51	0,21	0,04	91,92	1,84
V89-6	1,59	-0,06	0,00	0,00	0,04	0,10	0,03	98,21	0,50
V101-21	3,75	-0,01	-0,09	-0,01	0,05	0,12	0,06	88,33	0,42
V118-15	2,97	0,01	-0,04	-0,01	0,13	0,13	0,07	93,72	0,80
V127-6	1,21	-0,01	-0,03	0,00	0,03	0,12	0,03	99,74	0,56
V133-15	0,93	0,40	0,02	0,00	0,05	0,46	0,02	87,88	0,46
V133-7	2,74	-0,09	0,03	-0,01	0,17	0,13	0,07	96,93	0,75
V133-8	0,65	0,05	0,00	0,00	0,20	0,12	0,03	100,22	0,62
V133-9	0,79	-0,05	-0,02	0,00	0,30	0,13	0,02	97,47	0,82
V144-6	2,03	0,00	0,01	0,00	0,06	0,13	0,04	93,83	0,57
V148-12	0,89	-0,01	0,06	0,00	0,17	0,11	0,03	97,51	0,63
V148-13	1,55	0,09	0,02	0,00	0,22	0,12	0,04	92,88	0,84
V148-14	0,66	-0,02	0,02	0,00	0,20	0,12	0,02	98,97	0,58
V148-15	0,71	0,02	-0,01	0,00	0,20	0,11	0,02	99,63	0,61
V148-19	0,55	0,07	0,08	0,00	0,29	0,12	0,03	98,62	0,78
V148-20	0,44	0,00	0,00	0,00	0,43	0,13	0,02	98,97	0,98

Sample	TiO2 wt%	MgO wt%	Na2O wt%	P2O5 wt%	K2O wt%	CaO wt%	MnO wt%	SiO2 wt%	Al2O3 wt%
V148-21	0,40	0,06	0,13	0,00	0,80	0,13	0,01	93,08	1,59
V148-26	0,91	0,27	0,37	0,00	1,67	0,43	0,02	86,67	4,79
V150-12	1,37	0,54	-0,03	0,00	1,45	1,23	0,05	67,65	9,82
V150-13	0,87	1,05	0,05	0,00	1,62	1,12	0,07	61,58	9,93
V150-14	0,95	0,44	-0,01	0,00	0,50	1,09	0,04	79,06	2,52
V150-15	0,47	0,02	0,00	0,00	0,12	0,12	0,02	90,99	0,55
V150-18	0,68	-0,01	0,08	0,00	0,25	0,16	0,02	96,15	0,68
V150-20	0,32	0,08	0,08	0,00	0,51	0,13	0,01	96,61	1,13
V150-21	0,45	0,00	0,02	0,00	0,50	0,16	0,00	91,93	1,29
V150-24	0,46	0,13	0,16	0,00	0,90	0,21	0,00	87,29	2,90
V150-25	0,48	0,30	0,21	0,00	1,40	0,22	0,00	85,27	3,58
V150-26	0,30	0,03	0,25	0,00	1,30	0,20	0,01	87,94	2,83
V152-13	1,85	-0,02	-0,04	0,00	0,06	0,12	0,03	93,00	0,49
V153-15	2,10	-0,07	-0,08	0,00	0,11	0,18	0,06	93,16	0,63
V154-11	5,16	-0,08	-0,07	-0,01	0,16	0,14	0,13	93,48	0,86
V154-21	0,93	0,16	0,18	0,00	1,07	0,36	0,01	88,77	3,05
V154-22	1,77	0,45	0,39	0,00	1,24	0,65	0,02	82,75	3,98
V154-24	1,22	0,37	0,45	0,00	1,62	0,59	0,03	84,26	4,74
V156-10	1,66	-0,08	0,09	-0,01	0,17	0,12	0,04	96,55	0,60
V156-21	2,08	0,17	0,28	-0,01	1,28	0,67	0,04	83,63	3,89
V163-19	1,96	0,11	0,25	0,00	1,24	0,41	0,06	90,60	2,94
V164-5	1,02	0,19	0,15	0,00	0,32	0,33	0,01	88,83	1,70
V164-7	11,00	-0,12	-0,04	-0,01	0,09	0,13	0,23	87,80	0,86
V164-8	5,09	-0,07	-0,01	-0,01	0,16	0,15	0,12	94,06	0,78
V166-11	0,10	0,08	-0,04	0,00	0,02	0,12	0,01	100,66	0,19
V170-21	1,81	0,00	0,00	0,00	0,02	0,11	0,03	93,22	0,45
V170-22	2,40	0,06	-0,01	0,00	0,04	0,13	0,05	93,31	0,50

Sample	TiO2 wt%	MgO wt%	Na2O wt%	P2O5 wt%	K2O wt%	CaO wt%	MnO wt%	SiO2 wt%	Al2O3 wt%
V170-8	1,79	0,10	0,00	0,00	0,08	0,16	0,01	90,95	0,73
V171-10	2,73	0,01	-0,07	0,00	0,02	0,12	0,02	87,17	0,43
V171-11	0,83	0,02	-0,01	0,00	0,01	0,29	0,02	93,30	0,49
V171-20	1,40	0,35	0,03	0,00	1,06	0,55	0,06	78,79	6,85
V171-22	0,97	0,53	0,08	0,00	0,71	0,63	0,04	70,80	4,70
V172-20	1,11	-0,04	0,02	0,00	0,04	0,14	0,01	90,01	0,48
V174-15	3,20	0,04	-0,07	0,00	0,01	0,17	0,02	89,12	0,42
V174-16	3,04	-0,05	-0,08	0,00	0,02	0,20	0,03	90,67	0,49
V174-18	1,00	-0,01	0,03	0,00	0,08	0,12	0,03	97,80	0,51
V174-20	1,05	0,01	-0,04	0,00	0,12	0,11	0,03	98,04	0,59
V183-15	2,82	0,38	0,34	0,00	1,61	0,87	0,06	85,70	4,94
V194-19	3,64	-0,04	0,00	-0,01	0,02	0,12	0,05	94,49	0,65
V197-20	1,23	0,27	0,39	-0,01	1,58	0,46	0,03	88,03	4,10
V197-4	4,31	-0,03	-0,09	0,00	0,14	0,13	0,10	90,39	0,72
V197-5	0,92	-0,02	0,04	-0,01	0,20	0,12	0,03	97,75	0,63
V202-21	4,88	-0,08	0,03	0,00	0,23	0,18	0,09	90,11	0,87
V202-22	1,56	0,01	0,04	-0,01	0,21	0,14	0,05	95,88	0,60
V202-25	0,24	-0,02	0,06	0,00	0,23	0,12	0,01	99,70	0,58
V202-26	0,40	-0,11	0,07	0,00	0,49	0,16	0,02	94,59	1,08
V202-7	1,82	0,08	-0,05	0,00	0,01	0,37	0,03	88,73	0,38
V202-9	1,25	0,06	0,02	0,00	0,01	0,17	0,00	89,11	0,30
V203-20	1,78	-0,03	-0,05	0,00	0,06	0,15	0,04	92,80	0,60

Sample	V ppm	Cr ppm	Ce ppm	Nd ppm	La ppm	Sc ppm	Co ppm	Ba ppm	Nb ppm	Zr ppm	Y ppm	Sr ppm	Rb ppm	Zn ppm	Ni ppm	Cu ppm	Th ppm	Pb ppm	Ga ppm
V4-14	34	80	21	8	6	4	22	-5	100	1947	26	5	2	32	4	2	5	8	3
V4-15	78	213	21	12	7	9	34	-23	199	4948	49	5	2	53	5	-1	12	14	4
V4-17	9	27	8	4	3	1	83	54	12	269	4	6	5	10	4	5	3	2	0
V6-14	23	44	2	-1	2	3	47	10	52	1036	10	3	1	18	4	2	2	1	0
V9-13	24	52	12	6	4	2	49	12	43	924	12	3	1	12	4	2	3	5	0
V9-15	28	42	11	3	4	3	19	22	46	912	10	4	2	27	4	6	2	5	2
V11-5	6	12	2	0	1	0	122	70	6	86	2	8	7	-3	6	2	0	1	-2
V14-3	27	51	7	3	4	2	121	25	43	1290	12	8	5	16	5	5	3	5	1
V22-14	18	47	8	5	3	2	42	34	33	415	8	5	3	17	6	9	2	4	2
V22-15	33	81	11	5	5	4	54	41	68	1104	21	6	4	32	6	6	3	6	2
V22-16	7	9	4	2	2	1	81	78	6	145	3	9	9	3	5	3	0	2	0
V22-17	5	9	1	2	1	1	52	84	6	123	3	8	8	8	5	3	2	3	0
V22-19	7	16	4	2	2	1	38	108	6	157	7	12	12	5	4	5	3	3	0
V24-12	20	71	9	4	1	3	27	2	36	809	8	2	1	9	3	2	2	3	0
V26-18	17	35	22	9	8	2	59	52	45	1159	10	6	5	16	4	3	3	3	1
V28-11	5	9	-3	-2	2	1	106	33	5	91	2	5	3	2	4	0	1	0	-1
V37-16	10	27	3	2	4	1	39	12	13	266	5	3	1	3	2	2	2	2	-1
V37-5	14	37	7	3	3	1	77	20	25	927	10	5	4	9	4	2	1	3	0
V54-16	16	38	10	4	3	2	23	30	30	652	8	6	4	8	3	0	3	3	-1
V55-19	12	26	6	2	4	1	69	9	25	496	7	3	1	5	4	6	2	4	1
V55-21	23	36	11	3	2	3	28	24	45	1214	16	4	3	14	3	9	4	6	1
V55-24	9	54	6	3	1	1	45	29	17	555	7	4	4	6	2	5	2	1	1
V58-14	17	30	10	6	3	1	41	59	20	783	9	10	7	6	4	1	2	3	-1
V61-27	24	62	13	6	3	2	46	19	51	1107	13	6	4	8	3	3	4	2	1
V66-18	15	38	9	3	1	1	40	23	22	810	7	4	3	6	4	1	1	3	0
V74-14	21	64	8	4	2	3	17	6	46	897	10	5	3	14	4	8	2	4	1
V74-15	19	40	9	3	3	2	25	39	32	920	12	6	5	9	4	4	3	5	1

Sample	V ppm	Cr ppm	Ce ppm	Nd ppm	La ppm	Sc ppm	Co ppm	Ba ppm	Nb ppm	Zr ppm	Y ppm	Sr ppm	Rb ppm	Zn ppm	Ni ppm	Cu ppm	Th ppm	Pb ppm	Ga ppm
V75-14	12	22	5	3	2	2	44	20	20	278	5	3	2	10	4	5	2	2	1
V75-15	18	59	10	4	3	3	9	7	31	618	11	4	2	0	2	1	2	3	-1
V78-15	20	36	10	4	4	2	18	33	28	793	10	7	4	9	3	4	2	2	1
V80-12	20	47	9	5	3	2	55	41	27	733	6	7	4	12	5	3	3	5	1
V80-18	17	43	4	1	2	3	31	40	33	610	9	6	4	5	3	4	4	3	0
V81-15	25	67	7	3	1	2	17	60	23	760	8	8	5	25	3	4	3	3	0
V82-15	14	36	7	3	2	1	90	11	20	821	7	3	2	7	3	0	3	2	-1
V83-13	5	9	5	1	4	1	27	59	4	113	2	6	6	-3	3	3	2	1	-1
V83-18	13	43	3	1	1	1	25	30	21	681	5	5	3	7	3	2	2	1	0
V83-21	24	55	14	5	1	3	36	-6	73	1721	17	4	2	21	2	5	4	4	1
V86-24	16	36	9	3	1	1	43	4	48	403	5	3	2	3	4	1	1	2	-1
V87-1	20	47	3	2	3	2	17	87	28	703	7	22	16	10	4	2	2	4	1
V89-6	15	35	7	3	1	1	77	8	29	578	8	3	1	6	5	-1	2	3	0
V101-21	29	88	17	5	5	3	10	-17	54	1715	15	3	1	10	3	4	3	3	1
V118-15	33	78	16	5	5	3	35	2	60	1727	18	5	4	13	3	3	6	5	1
V127-6	15	16	3	2	2	1	62	16	19	308	4	4	1	-2	3	-3	2	2	0
V133-15	12	24	5	2	2	1	21	19	12	437	5	6	1	9	3	0	1	2	0
V133-7	31	45	8	5	2	3	29	31	48	1083	11	7	5	14	3	2	2	5	2
V133-8	9	13	3	1	1	1	79	42	12	338	4	7	6	5	4	-1	1	1	-1
V133-9	11	25	3	1	3	0	76	69	16	408	4	12	8	2	4	3	2	2	0
V144-6	23	25	11	6	3	2	38	15	38	702	8	4	2	20	5	6	2	4	1
V148-12	10	22	6	3	2	1	67	39	17	421	7	6	4	8	5	1	2	3	0
V148-13	19	80	4	1	2	2	39	43	27	453	7	7	5	12	5	4	2	3	1
V148-14	9	26	4	2	3	1	101	46	15	421	5	7	5	9	4	4	1	1	0
V148-15	10	15	5	3	3	1	84	50	16	262	5	6	5	6	4	2	2	4	-1
V148-19	11	18	5	2	1	1	61	75	14	212	4	10	7	5	3	2	1	4	-1
V148-20	10	10	3	3	1	1	54	100	8	182	4	12	10	0	3	1	3	5	-1

Sample	V ppm	Cr ppm	Ce ppm	Nd ppm	La ppm	Sc ppm	Co ppm	Ba ppm	Nb ppm	Zr ppm	Y ppm	Sr ppm	Rb ppm	Zn ppm	Ni ppm	Cu ppm	Th ppm	Pb ppm	Ga ppm
V148-21	9	20	4	2	3	1	19	182	6	186	3	19	18	0	2	2	2	3	0
V148-26	31	28	22	10	9	5	15	377	14	537	12	69	42	10	7	5	3	7	3
V150-12	56	68	35	17	18	8	18	259	22	516	24	50	44	42	16	6	8	11	8
V150-13	61	83	32	15	18	9	46	239	13	208	14	48	52	56	30	9	6	8	9
V150-14	24	29	9	5	5	3	11	81	12	264	8	14	8	11	5	5	3	3	0
V150-15	6	24	3	1	1	1	23	38	9	143	3	5	4	0	4	4	2	1	-1
V150-18	9	12	2	2	1	1	30	60	12	318	4	7	7	5	3	4	2	3	-1
V150-20	6	14	4	2	2	1	36	107	4	137	3	13	13	-2	3	2	1	1	0
V150-21	9	23	5	1	1	1	13	117	6	291	5	17	15	10	3	6	2	3	1
V150-24	17	30	6	3	3	2	6	185	5	139	3	25	25	3	5	3	1	4	1
V150-25	14	21	7	4	3	2	8	268	7	211	4	36	38	4	5	5	2	7	1
V150-26	10	18	5	3	3	2	7	282	4	122	3	40	39	12	4	6	1	5	1
V152-13	15	40	5	3	2	1	35	15	36	921	8	4	1	13	3	3	2	3	1
V153-15	22	37	8	5	1	3	26	27	40	662	9	6	3	17	4	6	3	5	1
V154-11	55	85	21	9	5	5	29	21	114	2675	25	7	4	38	6	9	5	9	3
V154-21	23	24	16	9	9	4	16	217	9	415	9	47	26	12	6	6	3	5	2
V154-22	34	48	24	12	13	7	31	244	20	1001	19	84	30	25	9	5	4	7	3
V154-24	30	35	20	9	9	6	23	307	15	565	13	84	40	10	8	2	3	7	3
V156-10	18	32	7	4	3	1	83	46	48	1262	10	7	5	9	5	2	3	4	0
V156-21	44	51	30	15	12	8	8	268	22	961	20	97	34	20	8	4	5	8	4
V163-19	31	77	34	15	14	6	25	271	26	1476	22	70	32	13	3	2	6	8	2
V164-5	32	37	27	12	12	2	47	55	15	339	8	12	7	17	15	3	2	1	0
V164-7	69	307	54	20	13	8	37	-77	199	6047	58	5	2	47	4	0	13	14	3
V164-8	37	116	24	10	9	5	38	-10	102	2891	27	9	4	31	4	4	6	9	3
V166-11	4	8	2	1	1	0	111	8	2	39	1	2	1	6	4	3	1	0	0
V170-21	18	28	7	4	1	2	23	5	33	733	8	2	1	12	4	4	2	2	1
V170-22	23	46	9	4	2	1	53	12	40	952	11	3	1	10	4	1	4	2	0

Sample	V ppm	Cr ppm	Ce ppm	Nd ppm	La ppm	Sc ppm	Co ppm	Ba ppm	Nb ppm	Zr ppm	Y ppm	Sr ppm	Rb ppm	Zn ppm	Ni ppm	Cu ppm	Th ppm	Pb ppm	Ga ppm
V170-8	14	20	2	2	0	2	23	7	17	169	3	4	2	1	4	1	1	2	-1
V171-10	21	26	1	1	2	2	6	1	25	134	2	3	0	8	3	3	2	4	0
V171-11	11	50	5	3	0	0	16	12	11	605	4	2	0	7	3	-1	2	1	0
V171-20	48	79	31	14	16	8	28	201	22	576	17	27	26	32	15	2	4	6	4
V171-22	38	132	14	7	8	5	16	96	12	373	6	13	13	22	13	3	3	3	2
V172-20	9	21	4	2	1	1	17	4	22	331	4	3	1	1	4	0	3	2	-2
V174-15	23	29	3	2	1	3	12	-8	40	544	5	3	0	11	3	5	2	5	0
V174-16	20	52	7	4	3	2	12	0	43	1567	12	3	0	13	3	5	1	3	1
V174-18	13	16	5	3	2	1	21	18	16	462	5	4	2	9	3	2	1	3	1
V174-20	11	25	5	1	2	1	29	30	19	440	5	5	4	5	3	0	0	1	0
V183-15	58	83	59	25	23	8	61	281	33	3046	43	100	37	26	13	1	9	8	4
V194-19	35	71	13	5	1	3	17	-22	61	2227	20	4	1	16	2	2	4	6	0
V197-20	27	39	26	10	12	5	33	313	17	983	19	75	38	20	6	7	4	7	4
V197-4	37	119	20	8	6	4	36	-11	81	1793	21	6	4	19	3	1	5	9	1
V197-5	13	18	9	3	2	1	58	43	17	402	6	7	5	-1	4	-2	3	3	-1
V202-21	34	57	15	6	3	5	44	16	88	1786	18	7	4	31	3	5	5	8	3
V202-22	17	38	12	6	2	1	39	38	36	936	9	7	6	11	3	2	3	3	1
V202-25	5	10	3	2	1	1	62	58	5	157	3	8	7	0	3	2	1	0	-2
V202-26	8	22	7	4	2	1	75	118	6	157	3	15	13	6	3	4	1	2	0
V202-7	15	54	3	1	1	1	24	2	31	640	5	3	0	10	3	3	2	3	1
V202-9	15	50	3	1	0	1	9	1	17	435	4	2	0	9	3	4	1	3	1
V203-20	18	17	8	4	2	3	15	20	34	489	8	4	2	16	3	6	2	2	1

7 DTU Uffe Korsbech

Department of Automation
Technical University of Denmark

BHR-92

CONFIDENTIAL **Version 1**

Capture gamma logs and SNG-logs from Skjern and Vorslunde

- and Ti minerals exploration

by

Uffe Korsbech

November 2000

Preface

This report describes some evaluations of Spectral Natural Gamma-ray logs (SNG-logs) and (neutron) capture gamma logs run in four shallow boreholes in the western part of Jylland in June 2000. The logs were run by Geofyzika (Brno) (SNG and capture), the Technical University of Denmark (DTU) (SNG), and the Geological Survey of Denmark and Greenland (GEUS) (SNG and other logs).

The evaluations described in this report have been performed by the author (UK at DTU) who carries the full responsibility for the quality of the evaluations and the conclusions. This report is not based on any contract between DTU and other partners. Data in this report are confident at present and cannot be distributed without agreement of both GEUS and DTU.

There have been several goals for the evaluations.

a. GEUS has been interested in carrying out an "inter-calibration" of the SNG-probes. There have earlier been some problems with the GEUS SNG-probe. It was expected that a new calibration - carried out some months before the logging in western Jylland - would remedy this problem. Having SNG-logs with three different probes run in the same boreholes within a few days would form the ideal basis for an "inter-calibration".

b. Since 1990 DTU has many times observed deposits of heavy minerals sand at 50 m to 200 m depths when performing SNG-logging in boreholes in thesouthern part of Jylland. But a careful examination of the identified deposits has never been carried out and, therefore, it has not been possible to evaluate correlations between Th + U and the mineralogy or presence of "major" elements in the heavy minerals sand. The logging in western Jylland opened for this possibility.

c. Long time ago (20-22 years) DTU worked with (neutron) capture gamma borehole probes. The work was terminated mainly due to two reasons:

1. There was no obvious need for a capture probe in Denmark.
2. The stability of detector and analyser was at that time not sufficient for a reliable interpretation of the "low intensity" capture signals in typical Danish boreholes.

Today the situation is different with respect to system stability; furthermore, new data processing methods for gamma spectra have evolved. But even today the need for at capture probe in Denmark is low; and DTU have no plan for a resumption of the earlier work on capture gamma probes.

d. In 1997 a new technique for processing large sets of gamma spectra was presented by a Ph.D. student at DTU. Since then this technique has been used within several fields of gamma spectrum processing. Examles are airborne Th, U, and K mapping by gamma-ray spectrometry, SNG borehole logging and mapping of low level contamination. In principle the processing of capture gamma spectra also will benefit from the method. By including the method in the processing the (statistical) noise of a log will be very much reduced without introducing smoothing of the signals. Furthermore one will/may also be able to observe borehole geometry variations and spectrum drift is quanitfied i.e. it also functions as a quality control of the whole set of spectra.

It was planned (by DTU) to carry out a processing with the new method of the capture gamma spectra recorded by Geofyzika. However, due to the present data format of the spectra and the limited number of spectra from each borehole the task would be significant larger that was originally anticipated.

Tentative conclusions

Some tentative conclusions from the evaluations (SNG and capture gamma) are:

I. Due to a varying borehole geometry (outside the casing) the SNG-logs based on "multi window processing" or "unit spectra decomposition" will not give accurate results for concentrations of Th, U, and K.

II. The three windows method used by DTU for the SNG-logging interpration is less influenced by (minor) borehole geometry variations. It is assumed that the calculated Th and K concentrations are close to the "true values". It may also be the case for U; but radon leakage sometimes introduces errors. The calculated U concentrations for the heavy minerals sand layers may be OK also. Radon leakage from heavy minerals in general is minor - and stagnant water outside the casing also reduces the radon problem[1].

III. The Geofyzika neutron capture probe seems to be able to measure Ti at concentrations from ½% and upwards - and perhaps also at lower concentrations. This conclusion is based on an examination of the measured spectra that - when at least ½% Ti is present - contain significant "fingerprints" of Ti. Furthermore, for the boreholes measured there have not been observed other elements that seriously could blurr the Ti signal. Finally the measurements indicate a rather stable energy calibration of the probe. However, a far from ideal borehole geometry seemingly has introduced uncertainties/errors in the interpretation of the measured spectra. (The borehole diameter outside the casing probably has varied with depth.) Logging in an open borehole with a side-wall capture probe may give results less dependent on borehole geometry.

IV. In one borehole (SK25) there is close correlation between the Th concentration of the SNG-log (DTU) and the Ti concentration of samples measured by GEUS. (10 ppm Th equivalent to 1% Ti.) In other boreholes (V90L and V91L) the correlation is less obvious. This may be due to the non-existence of a correlation between Th and Ti in the heavy minerals at Vorslunde - or it may be due to too few samples, and/or to some depth misalignment. For the fourth borehole (SK26) no sample measurements results have been available for a comparison. By comparing with sample measurements from a nearby borehole (some 10 m distance) - and performing a depth alignment - there is a (less clear) correlation with 8 ppm Th corresponding to 1% Ti

V. Therefore, for the Skjern area a calibrated SNG-probe probably is able to "measure" the Ti concentrations. This conclusion is based on the observed relation between Ti and Th concentrations namlely that within the heavy minerals sand deposits there may be a fixed relation with 1% Ti corresponding to 8-10 ppm Th. The heavy minerals sand deposits are easily identified from the Th/K ratio curve of the SNG-log. A laboratory measurement (at DTU or elsewhere) of the Th contents of samples that have been examined for Ti content will tell if there is a constant relation between Th and Ti. (This has not yet been carried out.)

VI. At present the SNG probes of GEUS and Geofyzika seemingly give less reliable SNG-logs. An interpretation of SNG-spectra based on a "multi windows me-

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[1] The SNG-probe used by DTU was built in 1982 and has worked without problems since. The calibration is stable; on several occasions samples from the borehole have been measured in the laboratorium (4 samples in 2000). Agreement has in general been found within a factor 0.9 to 1.1 for Th and K whereas the agreement for U is not as good - probably due to a different radon leakage in borehole and laboratorium.

thod" or a "unit spectra method" may be unreliable in a varying, partly unknown borehole geometry. The "three windows method" used for the DTU SNG-probe is less influenced by (minor) borehole geometry variations. (Photons of energy below 1.3 MeV are not included in the spectrum interpretation.)

This report is a draft edition report on the logging results from the boreholes SK25L, SK26L, V90L and V91L. It is expected that further data processing will be carried out. In some other boreholes the fourth window of the DTU SNG-probe has been included in the data processing aiming at extracting some information on borehole geometry variations. It may perhaps be possible to perform similar calculations for the SKxx boreholes. The low count rates of the Vxx logs prevent the use of the method there.

A NASVD processing of the capture gamma-spectra may be attempted. However, a major "first time investment" probably is needed for the data format conversion and for selecting the best method for using the few spectra available for each borehole.

Feedback and comments "from the outside" on the topics discussed in the present edition will be taken into account in a revised edition.

1. Andrupengvej SK25L at Skjern

The SNG-log for SK25L run by DTU is shown in Figure B.1 of Appendix B. (The figure originates from Ref. 1.) The SNG-log indicates "clean" Quarz Sand, Clay , and Sand with varying concentrations of Heavy Minerals. In the same borehole Geofyzika has run a capture-gamma log, and it has been of interest to compare the two logs[2]. (Readers not familiar with capture gamma spectra should at first read Appendix A of this report. In Appendix D the "volume of measurement" is discussed.)

GEUS has analysed (X-met) a number of samples from a "neighbour borehole" (SK15 very close to SK25L). The results from the sample measurements have been "interpreted" in two different ways. Only the results for calibration Mod 3 is discussed here.

In Figure 1.1 are shown:

Titanium capture gamma log run by Geofyzika in SK25L. (Units % Ti)

Sample measurements performed by GEUS (samples from SK15) (Units % Ti)

Th-curve from the SNG-log run by DTU in SK25L. (Units "10 ppm Th")

The SNG-log of Figure 1.1 is the second log run by DTU in SK25L. It was run in order to demonstrate the reproducibility of the log results. The first log - run 1-2 hours earlier - covers the whole borehole from the surface to 31 m

Figure B.1 tells that the logs show very similar distributions of Th, U and K.
The depth scale for the Geofyzika log seemingly differs almost 1 m from the depth scale for the DTU log. (The DTU SNG-log has it zero level when the center of the detector crystal is at the surface of the ground.)

One notices that all three measurements show peaks of concentrations at 17-19 m and at 21-23 m. The peak values the Geofyzika capture log fit very well with the GEUS sample measurements. Above and below the peaks the capture log indicate Ti concentrations that are about 3 times lower than the GEUS samples.

The Th concentrations of the DTU SNG-log (from Figure B.1) has been scaled down a factor 10 in order to obtain an easier comparison with the Ti results. It is seen - somewhat surprising - that the (reduced) Th kurve fits very well with the-GEUS sample measurements; both at the peaks and above and below the peaks.

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[2] Geofyzika has also run a Spectral Natural Gamma-ray log in the SK25 borehole. The concentrations of Th, U, and K for this log differ from those obtained by the DTU logging.

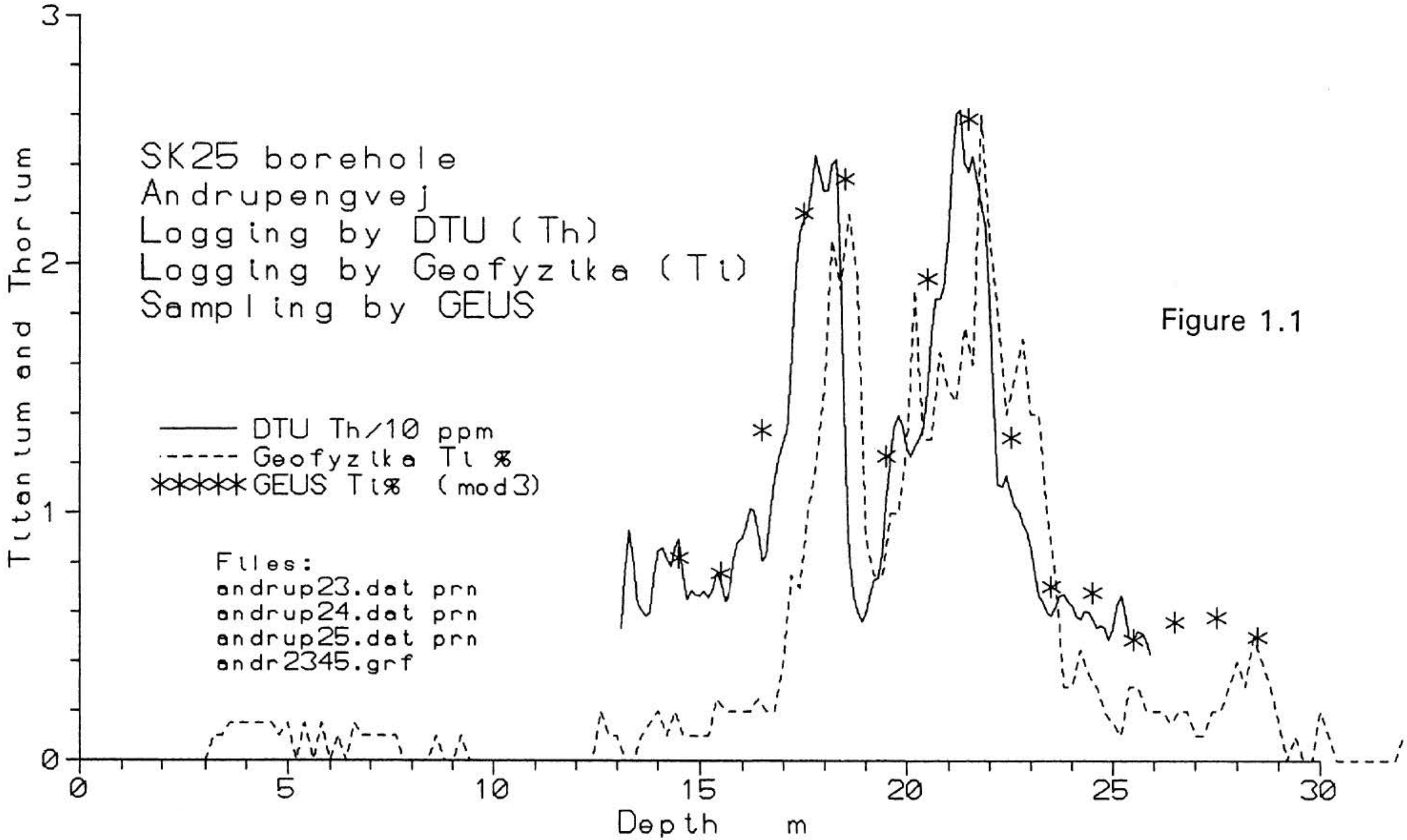

SK25 borehole
Andrupengvej
Logging by DTU (Th)
Logging by Geofyzika (Ti)
Sampling by GEUS
DTU Th/10 ppm
Geofyzika Ti %
GEUS Ti% (mod3)
Files:
andrup23.dat prn
andrup24.dat prn
andrup25.dat prn
andr2345.grf
Titanium and Thorium
Depth m
0
5
10
15
20
25
30
1
2
3

Figure 1.1

[The author of this report is not able to explain the differences between the GEUS sample results and the capture log results outside the peaks. But from basic measuring priciples the following possibilities could be put forth:

The calibration of the capture gamma probe may be in error. The zero level or a stripping factor may be too large. This would influence low level concentrations of Ti more than the higher concentrations.

Above and below the peaks the borehole diameter outside the casing may be larger than assumed. This would influence the range of the neutron flux and therefore also the capture intensity. The Th signal of the SNG-probe is not strongly influenced by 2-4 cm additional water outside the casing. (Four cm of water attenuates the Th-signal 20-25%.)

The calibration of the GEUS measurements may be in error. Assume for example that the element XX influences (positively) the titanium result. Further assume that element XX is strongly correlated with thorium. This could explain the correlation between the Th curve and the GEUS sample results.

It is of course also possible that there is a true correlation between Ti and Th. Laboratory measurements of samples for Th and Ti may answer the question.]

2. Ganer SK26L and SK5 at Skjern.

The SNG-log (DTU) of borehole SK25L can be seen in Figure B.2. It shows (from the surface and downwards) Sand, Sand with Gravel, Heavy Minerals Sand (14.5 m to 21 m) and Sand. (A log based on the SNG-probe used for this borehole cannot discern between sand with gravel and clayey sand. Additional information, therefore, has been included.)

Figure 2.1 shows the Geofyzika capture Ti-log together with the GEUS sample Ti measurements from the neighbouring SK5 borehole (at 10 m distance from SK26L). Furthermore, a "scaled Th log" for the DTU SNG-probe is shown. (The "unit" is 10 ppm Th.) Probably there is a 0.5 m depth misalignment between the Geofyzika log and the DTU log (also observed for the other boreholes). After a depth adjustment the two logs - Ti and reduced Th - are very alike within the heavy minerals sand from 14.5 m to 21 m. Outside (below and above) the heavy minerals sand the Ti signal of the Geofyzika log is close to zero whereas the reduced Th log shows some signal here. At the upper part of the borehole the levels of both Ti and Th are low.

Knowing that there is sand with gravel at 6 m to 14 m one might conclude that this deposit contains no Ti - whereas it contains some Thorium (as does Danish gravel in general). However, the samples from the nearby borehole SK5 tell that some Ti is measured by GEUS in a sample from 8-9 m depth i.e. above the heavy minerals sand. There is also a "disagreement" below the heavy minerals sand. At 25 m to 29 m the samples (from SK5) contains about 1% Ti whereas the capture gamma log indicates some 0.2% Ti.

A core scanning for borehole SK5 (DGU Report 1998/45) indicates that the Th- and U-bearing heavy minerals are found between 15 m and 24 m here. Yet the samples from 26-29 m also contain 1% Ti.

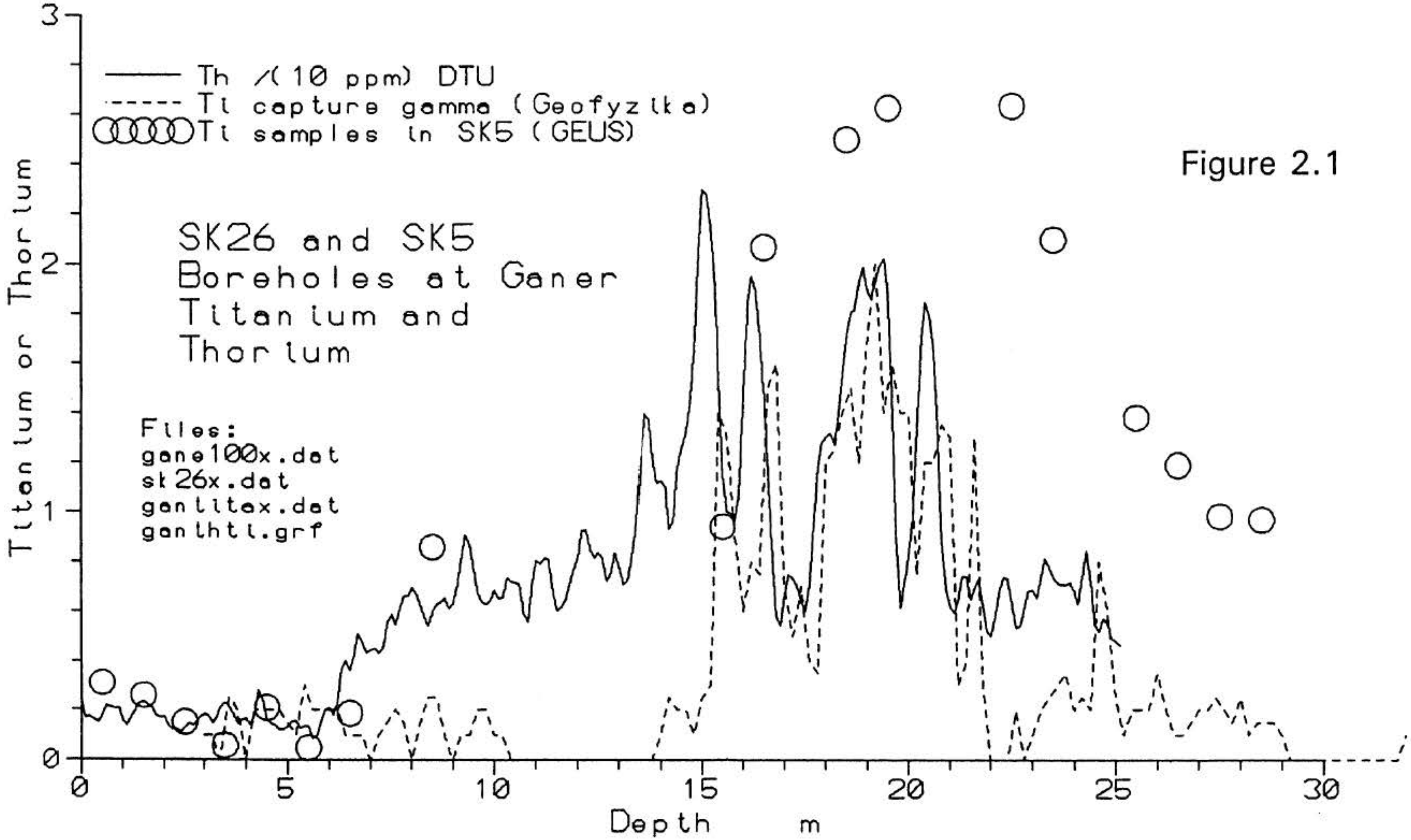

Th /(10 ppm) DTU
Ti capture gamma (Geofyzika)
Ti samples in SK5 (GEUS)
SK26 and SK5
Boreholes at Ganer
Titanium and
Thorium
Files:
gane100x.dat
sk26x.dat
gantitax.dat
ganthti.grf
Titanium or Thorium
Depth m
0
1
2
3
0
5
10
15
20
25
30

Figure 2.1

3. Vorslunde V90L borehole.

The whole SNG-log run by DTU is shown in Figur B.3 of Appendix B. (Copied from Ref. 1). The interpretation gives a layer of sand with some K down to 4 m; then follows very clean quarz sand (very low levels of both Th, U and K) to 12 m. Next follows a layer of clay, and below that is seen a layer with enhanced levels of heavy minerals. Below this layer is observed clean quarz sand.

The potassium curve (K-log) of the DTU SNG-log is shown in Figure 3.1 together with the Geofyzika K-log. The logs show almost the same K-peak (at the clay - layer) - but elsewhere the Geofyzika log in general indicate no K whereas the DTU log just indicate a low level (0.15% - 0.2%) below 2 m. The reason for showing the two K-curves is that it is easy to extract K information from a log and, therefore, the K-logs can be used for a depth adjustment of the DTU log with the Geofyzika logs. One notices that the DTU log is displaced some 0.6 m upwards compared to the Geofyzika log. (The zero level for the DTU logging corresponds to having the detector centre at the surface of the surrounding terrain whereas Geofyzika defines the zero at the upper part of the casing.)

Figure 3.2 shows (for the same borehole) the DTU Th-log together with the Th-log and the Ti-log run by Geofyzika. Also shown are some sample Ti determinations performed by GEUS.

The concentrations of the Th-logs of Geofyzika and DTU differ significantly. The interpretation of the results from the DTU probe is based on the simple three windows method that is rather robust against (minor) variations in the borehole geometry. The processing used for the Geofyzika log is the unit spectra method that often is more sensitive to variations in borehole geometry especially if the "decomposition" into unit spectra includes the low energy part of the spectra. This may be the cause for getting no Th (less than 0.2 ppm) for a large depth interval.

Both the Geofyzika Th-log and the DTU Th-log show two significant peaks at about 13 m and 15 m. (There is a difference between the depths similar to that for the K-logs.) The upper Th-peak is due to clay (indicated by the K-log) whereas the lower peak is due to heavy minerals.

There is some correlation between the Ti-log and the Th-log. However, it is far from perfect. The correlation between the GEUS sample measurements and the logs is neither not ideal. Is it possible to combine the results in some way?

GEUS samples and DTU Th-log:

> There are only two samples from the enhanced heavy minerals layer at 13 m to 15 m. This makes any comparison uncertain. However, if one assumes that there is a constant Ti/Th ratio for the V90L borehole outside the clay (12-13 m) then a ratio with 2 ppm Th corresponding 1% Ti would give an acceptable-agreement between the measurements of GEUS and DTU.

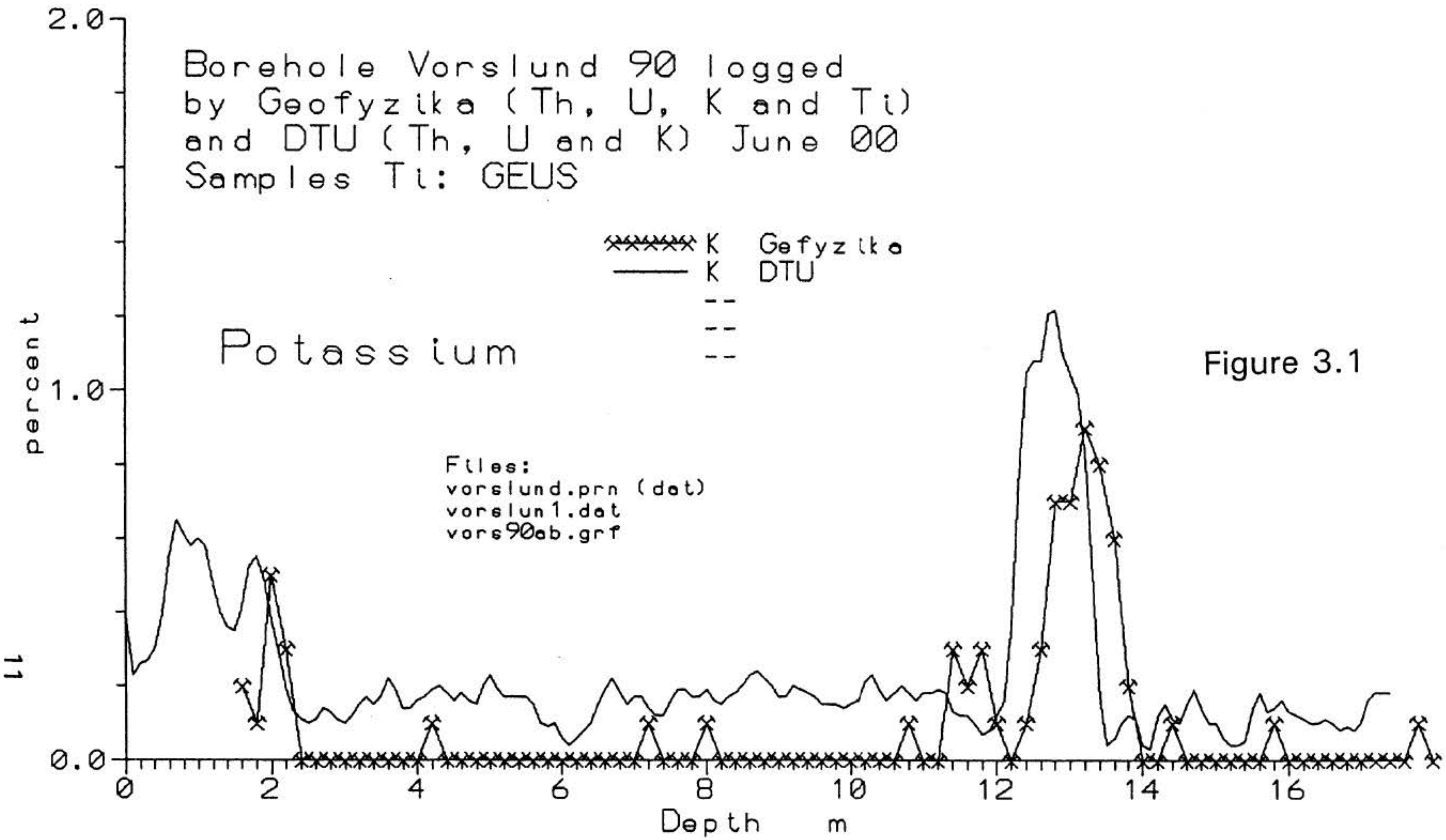
GEUS samples and Geofyzika Ti-log.

> At the Ti-peak (at 14-15 m) an adjustment of the Ti-log a factor 1.5 or 2.0 upwards would give an agreement here. But a similar adjustment between 7 m and 12 m would increase the difference there. Therefore, the differences may partly be caused by borehole diameter variation outside the casing.

Geofyzika Th-log and DTU Th-log (+ K-logs).

> Both logs indicate the precence of a layer of clay and a layer with enhanced concentrations of heavy minerals. The scaling, however, is an order of magnitude different. A borehole diameter significant larger than that assumed for the log calculations may be part of an explanation. The three windows method

used by DTU probably is influences less by diameter variations than is a "unit spectra method" or similar. But it is difficult to understand that "formation excavation" during borehole drilling should be similar in size (diameter) for a layer of clay and for a layer of heavy minerals sand. Therefore, no obvious explanation is at hand.



Borehole Vorslund 90 logged
by Geofyzika (Th, U, K and Ti)
and DTU (Th, U and K) June 00
Samples Ti: GEUS
K Gefyzika
K DTU
Potassium
Files:
vorslund.prn (dat)
vorslun1.dat
vors90ab.grf
percent
2.0
1.0
0.0
0
2
4
6
8
10
12
14
16
Depth m

Figure 3.1

11

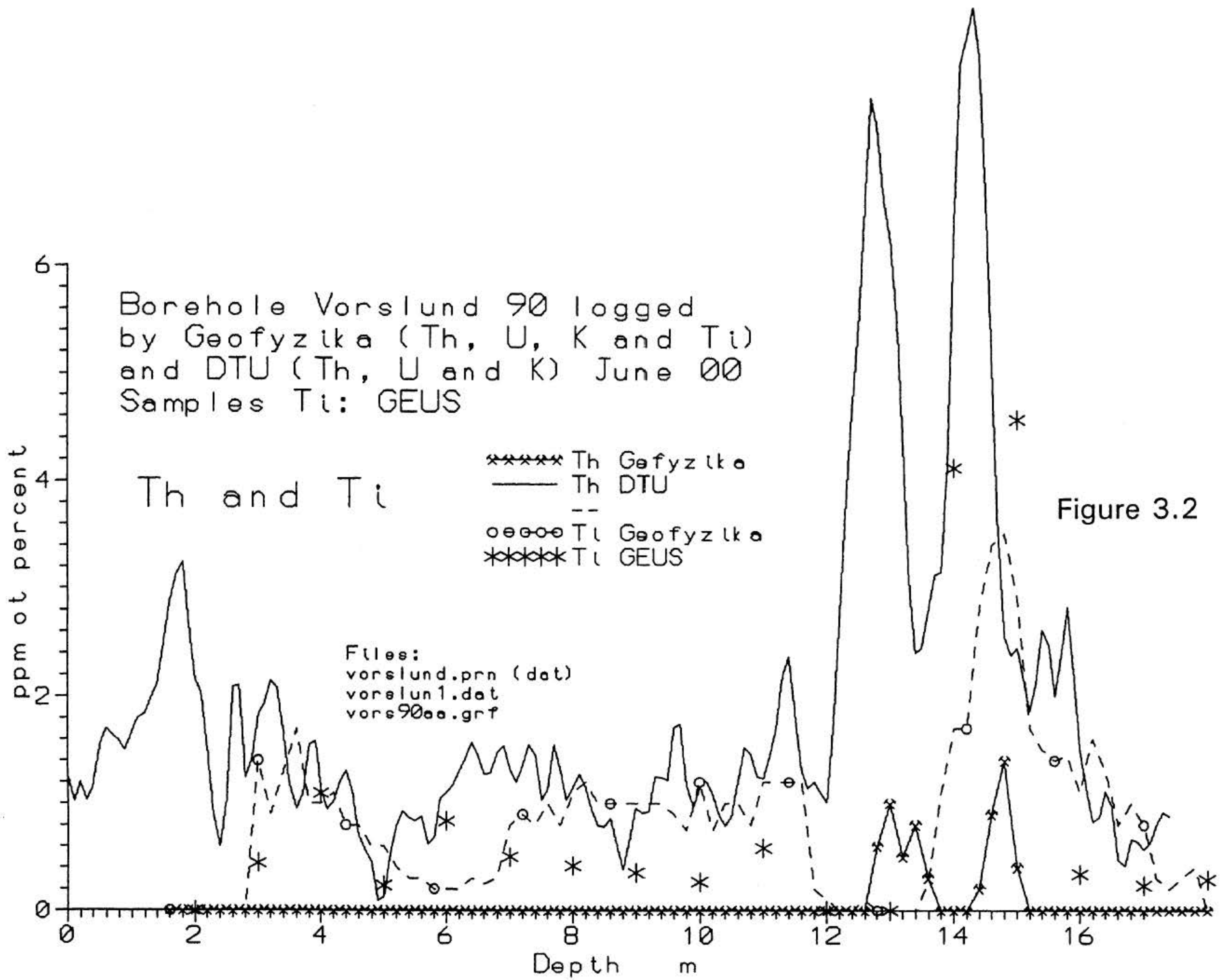

Borehole Vorslund 90 logged
by Geofyzika (Th, U, K and Ti)
and DTU (Th, U and K) June 00
Samples Ti: GEUS
Th and Ti
Th Gefyzika
Th DTU
Ti Geofyzika
Ti GEUS
Files:
vorslund.prn (dat)
vorslun1.dat
vors90aa.grf
ppm of percent
Depth m
0
2
4
6
8
10
12
14
16
0
2
4
6

Figure 3.2

4. Vorslunde V91L borehole.

The SNG-log (DTU) of borehole V91L is shown in Figure B.4. Most of the logged interval shows pure quarz sand with a low concentration of both Th, U, and K. At 13-14 m a layer of clay is seen. Here the potassium concentration "peaks" at 0.7% whereas the "neighbouring" borehole V90L reaches 1.0% K in the clay. Also the Th and U concentrations are lower in the clay at V91L than at V90L. There may be a real difference between the clay compositions (a lower content of clay minerals) but an unnoticed larger borehole diameter in the clay layer of V91L may also be the cause. Below the clay (from 13.8 m of the SNG-log) is observed heavy minerals. The concentrations of Th and U peak at 15.8 m. The peak values for Th (3.5 ppm) and U (1.1 ppm) are, however, very low compared to Th and U concentrations in other Danish deposits of heavy minerals sand. There may also be a layer with a somewhat enhanced concentration of heavy minerals just above the sand - indicated by both Th/K and U/K ratios.

Figure 4.1 shows the K-logs for the borehole - DTU and Geofyzika. One observes that the K-peaks of the clay are displaces some 0.6 m indicating a different zero-depth for the two logs. The figure also show the Ti distribution based on the capture gamma-log from Geofyzika. One notices that there is no Ti in the clay layer (as expected). The Ti-log indicate that som Ti is present at all depths from 3 m - except in the clay. The peak concentration (2.7%) is found at 16.2 m.

In Figure 4.2 are shown the logs for Th (Geofyzika and DTU) together with the Ti-log. The Th-log of Geofyzika has a "tiny" peak at 13.6 m i.e. in the clay layer. Outside the clay no Th is recorded. The Th-log of DTU indicate a low level of Th everywhere with peaks in the clay and at the Ti peak of the Geofyzika log (0.6 m depth scale difference should be taken into account). The Th-peaks of the DTU log and the Geofyzika log differ an order of magnitude - just as observed in V90L borehole.

Another Th peak (exceeding the statistical noise) is seen at 10.0 m to 10.4 m. The K-log (Figure 4.1 or B.4) indicates no clay here. Therefore, the peak is due to heavy minerals. Just above and just below the clay similar peaks are seen. However, they just exceed a little the statistical noise level.

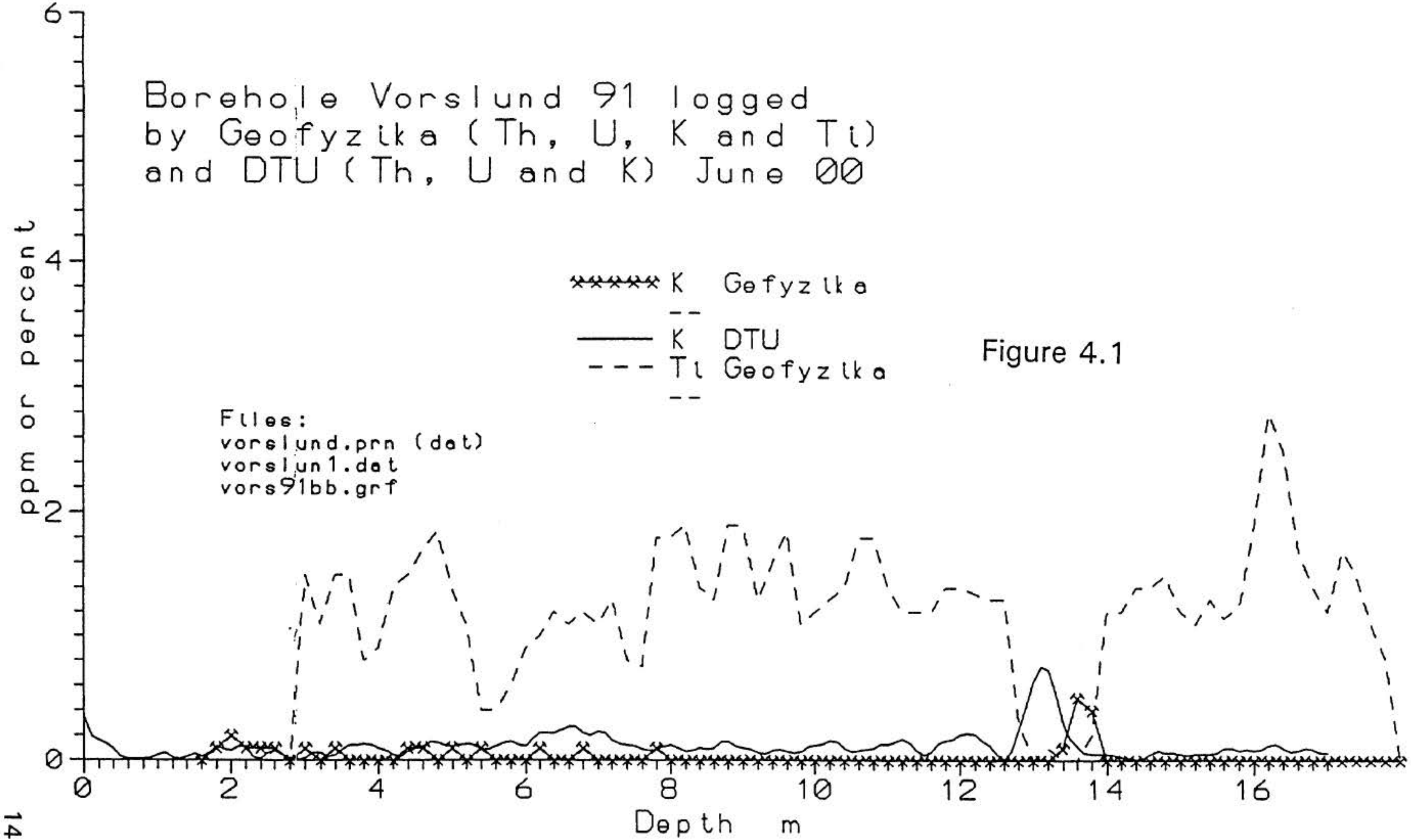

Borehole Vorslund 91 logged
by Geofyzika (Th, U, K and Tl)
and DTU (Th, U and K) June 00
K Gefyzika
K DTU
Tl Geofyzika
Files:
vorslund.prn (dat)
vorslun1.dat
vors91bb.grf
ppm or percent
Depth m
0
2
4
6
8
10
12
14
16

Figure 4.1

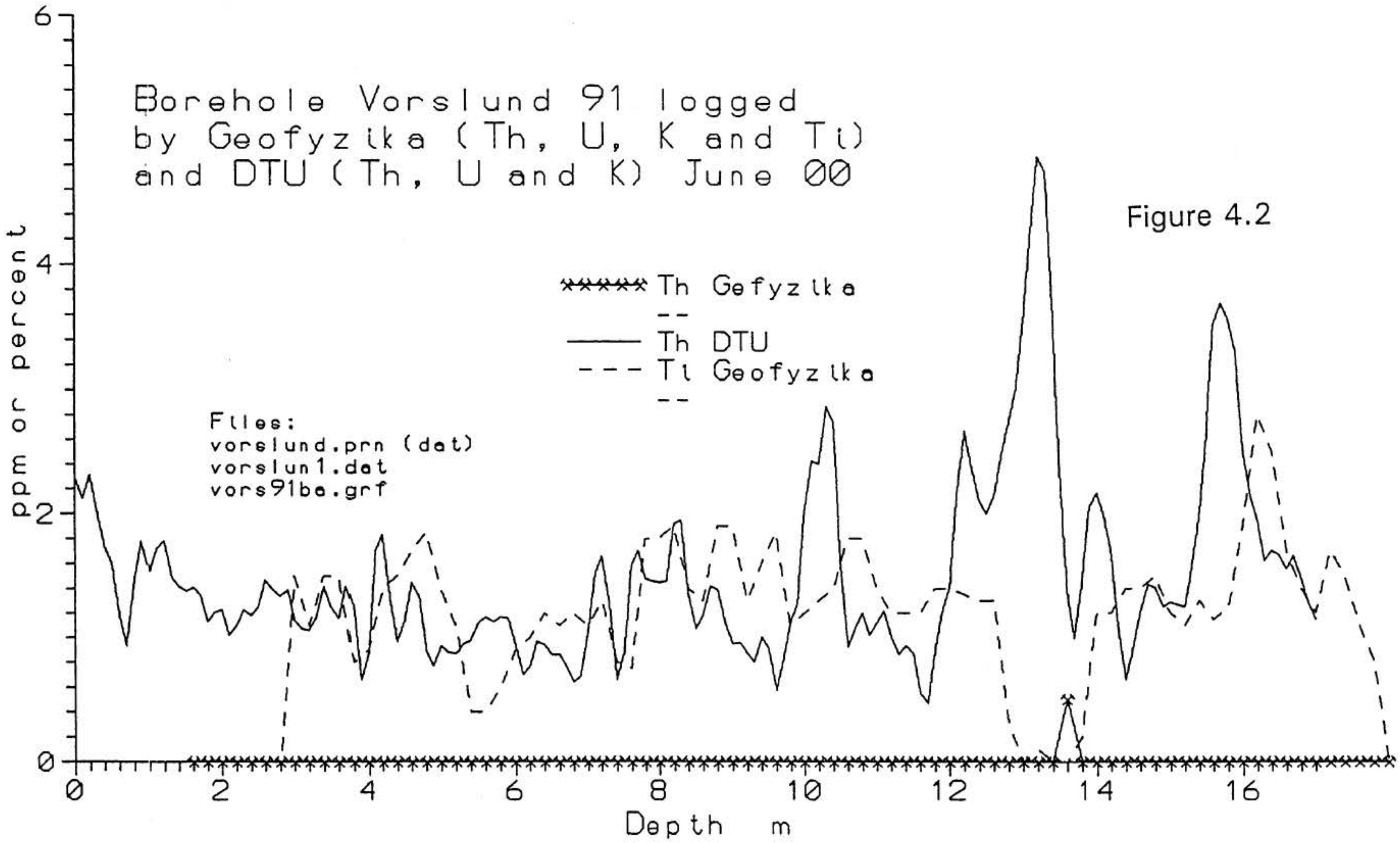

Borehole Vorslund 91 logged
by Geofyzika (Th, U, K and Ti)
and DTU (Th, U and K) June 00
Th Gefyzika
Th DTU
Ti Geofyzika
Files:
vorslund.prn (dat)
vorslun1.dat
vors91ba.grf
ppm or percent
Depth m
0
2
4
6
8
10
12
14
16

Figure 4.2

5. NASVD on capture spectra. Transfer of a spectrum processing method from airborne gamma-ray spectrometry to borehole spectra. (Not carried out yet.)

This section has been included in the report in order to point out that capture gamma spectra may be processes (and recorded) in a way that ensures faster and better results than obtained in the SK- and V-boreholes.

In 1997 a new powerful method for processing a set of many gamma spectra was introduced by Hovgaard (Ref. 2 and 3). Originally it was developed for processing airborne gamma-ray spectrometry data. Here one often has several thousand "low quality" spectra from a survey from which one has to extract information on the radioactive nuclides in and on the overflown ground. The method - Noise Adjusted Singular Value Decomposition (NASVD) - first extracts from the whole set of spectra a number (3-10) of basic spectra termed spectral components which - by suitable linear combinations - can be used for a "reconstruction" of the measured spectra. The reconstructed spectra, however, in general contain much less (statistical) noise than the measured spectra.

A short and simplified explanation of the method is that the large set of spectra in reality contains a limited amount of spectral information - there is a lot of similarities between the spectra. Those similarities are extracted as parts of the spectral components. By being based on a large number of spectra the spectral components only contain minor amounts of statistical noise. The reconstruction is some - suitable least squares fit of linear combinations of the spectral components to the measured spectra. By having only a little statistical noise in the spectral components, the reconstructed spectra also contain minor amounts of statistical noise.

The method can be used for all gamma-ray spectra. Minthy (Ref. 4) has used it for an improvement of uranium mapping; DTU has used it for SNG-logging in boreholes (Ref. 5 & 6) and for carborne gamma-ray spectrometry (Ref. 7). One also may extract information on spectra from specific nuclides (Ref. 8). The method can be used without having on beforehand any information on detector type, nuclides present and the measuring geometry. The NASVD method in its basic form simply replaces the noisy measured spectra with low-noise reconstructed spectra.

When the spectra have been reconstructed they are processed with standard methods - for example a three or four windows method. Taken together in just one step, the NASVD + the simple windows method is called the "short-cut method". Compared with a "unit spectra decomposition" (with known unit spectra) the short-cut method also uses all spectral information but it avoids the errors due to a varying measuring geometry that influences the low energy part of the spectra in a different way than the high energy part. The short-cut metod also is more robust towards spectrum drift than is the standard unit spectra method.

It is obvious that the NASVD method (or the short-cut method) would be very useful for a post processing of capture gamma spectra similar to those recorded at Skjern and Vorslunde. The present capture gamma spectra recorded by Geofyzika at Skjern and Vorslunde, however, are stored in a format that cannot be handled by the existing software. (A reformatting is possible but may be complicated/time consuming.) Furthermore, each of the logs include too few single spectra - especially the Vorslunde logs. (A winch driven log with recording of 10 s spectra would-be much better for NASVD processing and a faster logging.)

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9. Reactor Handbook. Vol. III. Part B. Chapter 8. Sources of Neutrons and Gamma Rays. Everitt P. Blizard and Lorraine S. Abbott. Interscience Publishers. 1962.

a:sng1capt.ure

Appendix A:
Typical capture (gamma) spectra. Basic theory and examples

When a neutron source is placed in a water filled borehole the fast neutrons emitted by the source is quickly slowed down to thermal energies - mainly due to collisions with the hydrogen nuclei of the water in the borehole and in the formation water. (Hydrogen bound in organic matters also contribute to the slowing down of the fast neutrons.) The "dry matter" of the formation (SiO_2, $CaCO_3$, Al_2O_3 etc.) only contribute a little to the slowing down - but the "dry matter" contributes to the "keeping the neutrons close to the source" and, therefore, also is of some importance for the intensity (flux/fluence rate) of the thermal neutrons close to the source. However, water is far the most important factor influencing the fluence rate of thermal neutrons close to the source-detector couple.

When the neutrons have been slowed down to thermal energies they "diffuse" around for some milliseconds before they are captured by the atomic nuclei. Different nuclides have different "power" (capture cross sections) for absorption of thermal neutrons. Hydrogen has a "medium size" capture cross section (0.3 barn); but due to the presence of many hydrogen atoms, a large fraction of the thermal neutrons are captured in hydrogen nuclei.

In a "geological environment" a lot of SiO_2 often also is present. Oxygen hardly absorbs any thermal neutrons but Si does. Iron absorbs (per atom) better than Si, and Ti and especially Mn are even better absorbers. A few other elements also - contribute to the absorption of thermal neutrons in a general "geological envionment".

When an atomic nucleus - for example a hydrogen nucleus - has absorbed a neutron, the new nucleus is in an unstable condition; it has a surplus of energy that immediately is emitted as one or several gamma photons. Those "capture gamma photons" have energies that are characteristic for the absorber. Hydrogen, for example, emits photon of just 2.23 MeV energy. Titanium emits a mixture of gamma photons with different energies; most have energies at 6.41 MeV and 6.76 MeV - and at 1.38 MeV. Therefore, if one measures (with a suitable gamma detector) the energies of the gamma-ray photon fluence in a borehole one gets "fingerprints" of the atoms present in and around the borehole. If the detector + source (a capture gamma probe) is calibrated for the actual borehole geometry one gets information on the amount (concentration) of the neutron absorbing elements in the surrounding formation. Therefore, a capture gamma probe can be used for measuring the concentration of for example Ti in deposits of heavy minerals; and this is what has been done by Geofyzika in boreholes at Skjern and Vorslunde.

Figure A.1 shows "typical" capture spectra measured with the Geofyzika capture probe. (From different depths of the SK25 borehole.) The spectra (processed by DTU) have been taken from depths where the SNG-log indicates Sand, Clay, and Heavy Minerals Sand respectively. About channel 90-92 (corresponding to 3.1 MeV) there is a shift of curve level. This is an "artifact" introduced when the data have been stored. The counts of all channels lower than channel 90 should be multiplied by 16 if quantitative count rate information should be extracted from the lower channel numbers[1]. (The "switch over" channel number may vary a little from spectrum to spectrum.)

The curves of Figure A.1 have a number of "peaks" indicating the presence of

---

[1] This information has been deduced from the data files themselves; the information does not come from Geofyzika that has not been asked on that.

atoms that emit strong capture gamma signals. In Figure A.2 similar spectra are shown. Here they are selected in order to get "extreme" spectra that point out the characteristics of Quarz Sand, Clay (from SK25) and Heavy Minerals Sand. In addition a spectrum termed "Water?" has been included. It originates from a depth (12 m) in or below a layer of clay where there may be a caving into the borehole-wall (some material may have been lost). Therefore, a rather large amount of water exists outside the casing (as well as inside the casing).

The "peaks" of the spectra are due to (see Figure A.3 and A.4 that are expanded versions of Figure A.2):

Fe: At channel 227 is seen a peak of varying intensity in all spectra. It is caused-by Fe in the surrounding formation - and probably also by some Fe in the construction material for the probe itself. (One generaly avoids using Fe as a material-for a capture gamma probe; but often minor amounts of Fe cannot be avoided.) The capture gamma photons from Fe have the energies (and yields) listed in Appendix C.

The Fe peak just mentioned corresponds to all photon energy being absorbed in the detector (BGO), and it is termed a "full energy peak". Capture gamma photons also cause "single escape peaks", and in principle double escape peaks too. But double escape peaks can hardly be observed with the detector used. Single escape peaks are for all capture photons found at 0.511 MeV (= 15 channels) below the full energy peaks - i.e. for Fe the single escape peak is found at channel 212.

Ti: Here capture gamma photons of energies from 6.41 MeV to 6.75 MeV are emitted. One notices that the Heavy Minerals spectrum exhibit a group of peaks between channel No. 175 and channel No. 200 just corresponding to the energies for Ti plus the single escape peaks. The spectrum for "Water?" has no Ti signal and the Clay spectrum neither not. The Quarz Sand may have a tiny amount of Ti signal corresponding to minor amounts of heavy minerals found together with the quarz sand.

Si: Silicon has several capture gamma photon energies *inter alia* two "strong" lines at 3.54 MeV and 4.93 MeV. Besides that there are low yield photons of several other energies. The strong Si lines are observed at the channels Nos. 104 and 146 with a single escape peak at channel No. 131. (The single escape peak to be found at channel No. 90 cannot be observed due to the switch-over of the count scale just at channel No. 90.) One notices - as expected - that the Si signal is strongest in the Quarz Sand, and it is easily recognised in the heavy minerals sand, whereas Clay and "Water?" have much weaker peaks.

H: (see Figure A.3) : The presence of water (and organic matter) is seen from the full energy peak of hydrogen at channel 65 (2.23 MeV) and the somewhat smaller single escape peak at channel 50 (1.72 MeV). One notices that the curve for "Water?" has the highest H-signal (although the peak "rests" on the lowest spectrum background level). The Heavy Minerals sand exhibit the smallest H-peak - although this peak rests on the higest spectrum background. There is the same amount of water inside the borehole for all spectra; and the porosity of the heavy minerals sand don't differ much from the porosity of the quarz sand. The "deficit" in H-signals in the heavy minerals sand therefore is due to the strong absorption of neutrons in some of the elements of the heavy minerals for example Ti, Mn and Fe.

In Figure A.5 are shown "pure" capture spectra for Si, Fe and Ti. They are based on a detector different from that used by Geofyzika. Therefore the single escape peaks are not observed. They originate from Ref. 9

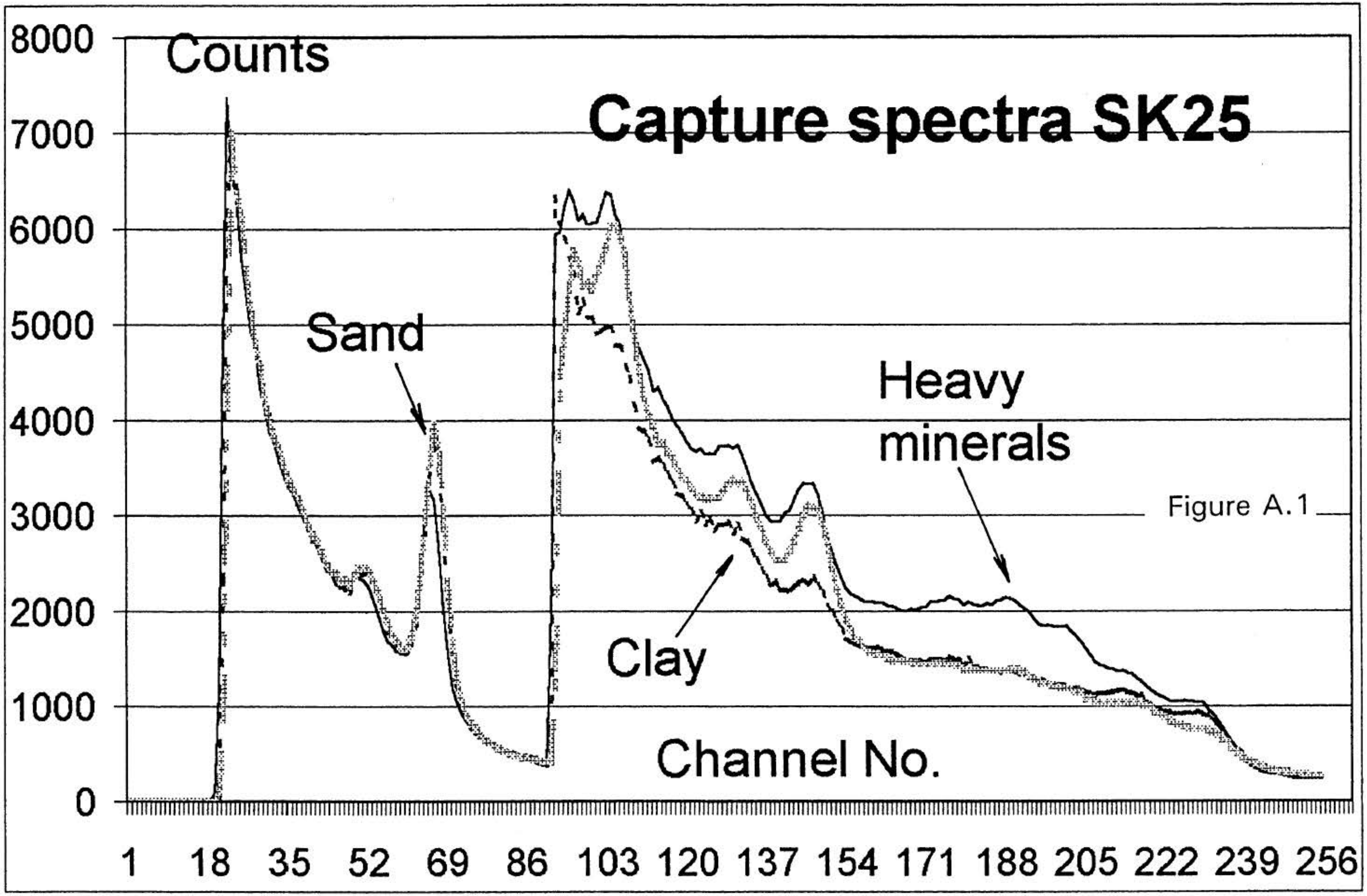
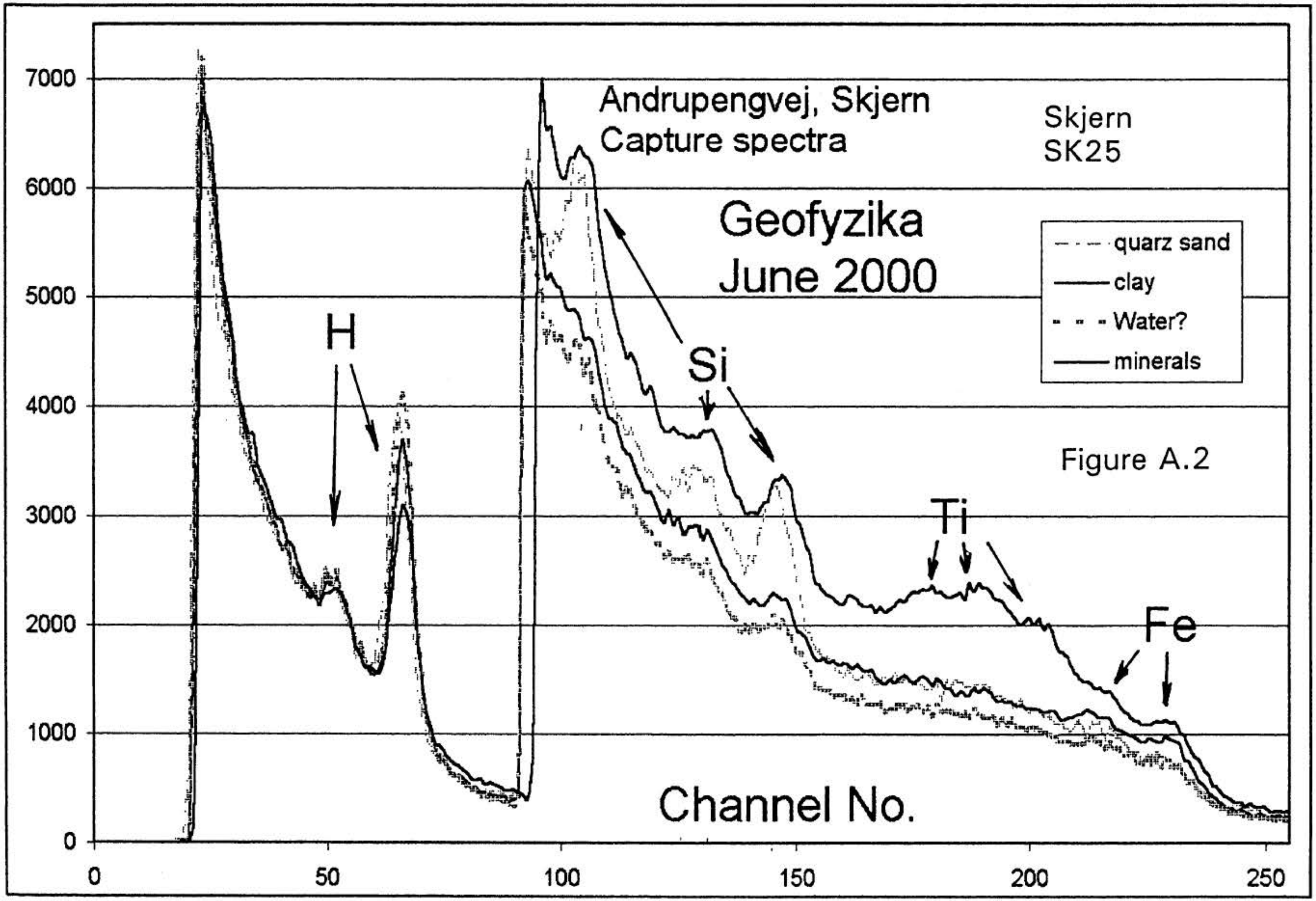

Counts
Capture spectra SK25
Sand
Heavy minerals
Clay
Channel No.
8000
7000
6000
5000
4000
3000
2000
1000
0
1 18 35 52 69 86 103 120 137 154 171 188 205 222 239 256

Figure A.1


Andrupengvej, Skjern
Capture spectra
Skjern
SK25
Geofyzika
June 2000
quarz sand
clay
Water?
minerals
H
Si
Ti
Fe
Figure A.2
Channel No.
7000
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250

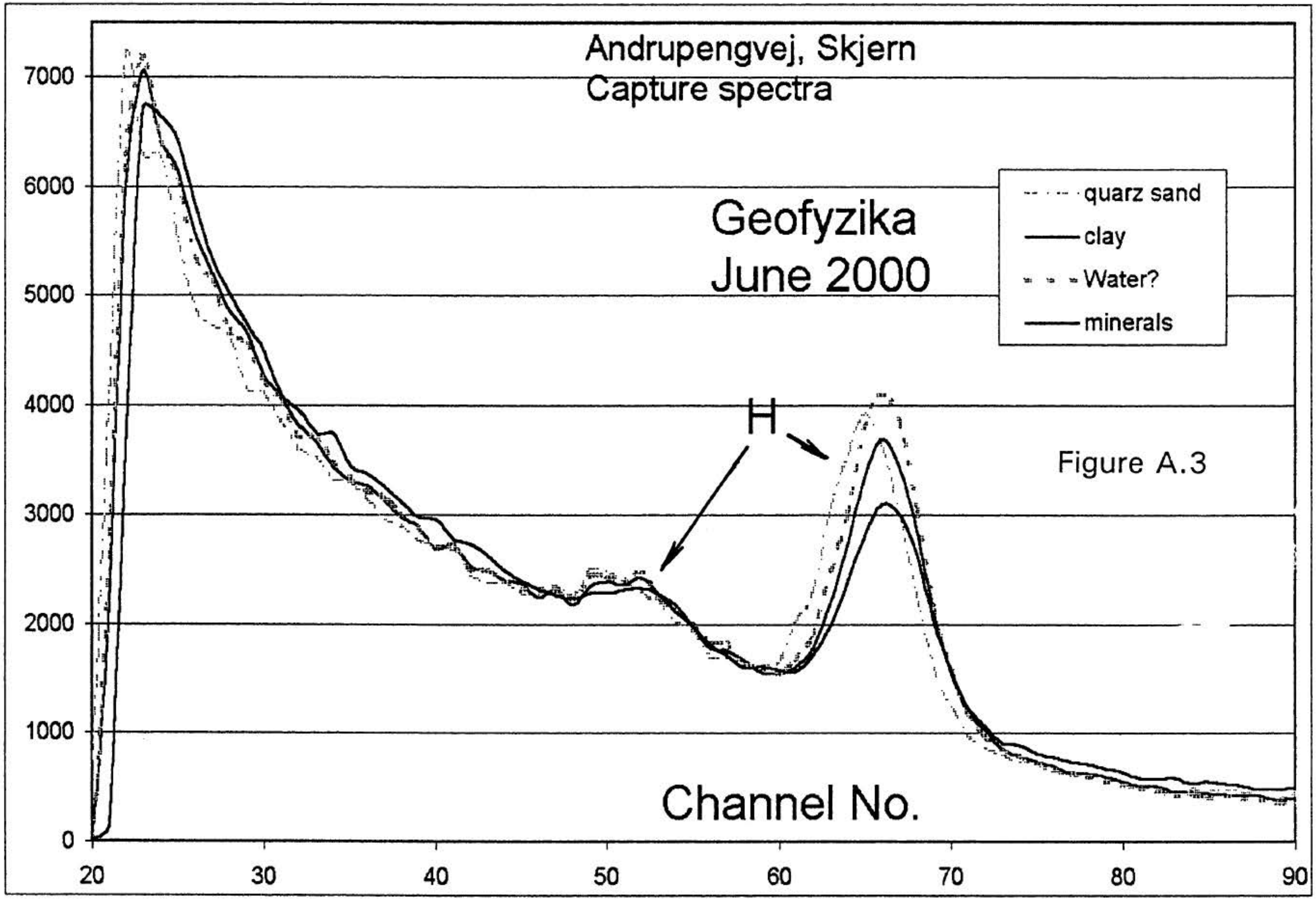

Andrupengvej, Skjern
Capture spectra
Geofyzika
June 2000
quarz sand
clay
Water?
minerals
H
7000
6000
5000
4000
3000
2000
1000
0
20
30
40
50
60
70
80
90
Channel No.

Figure A.3

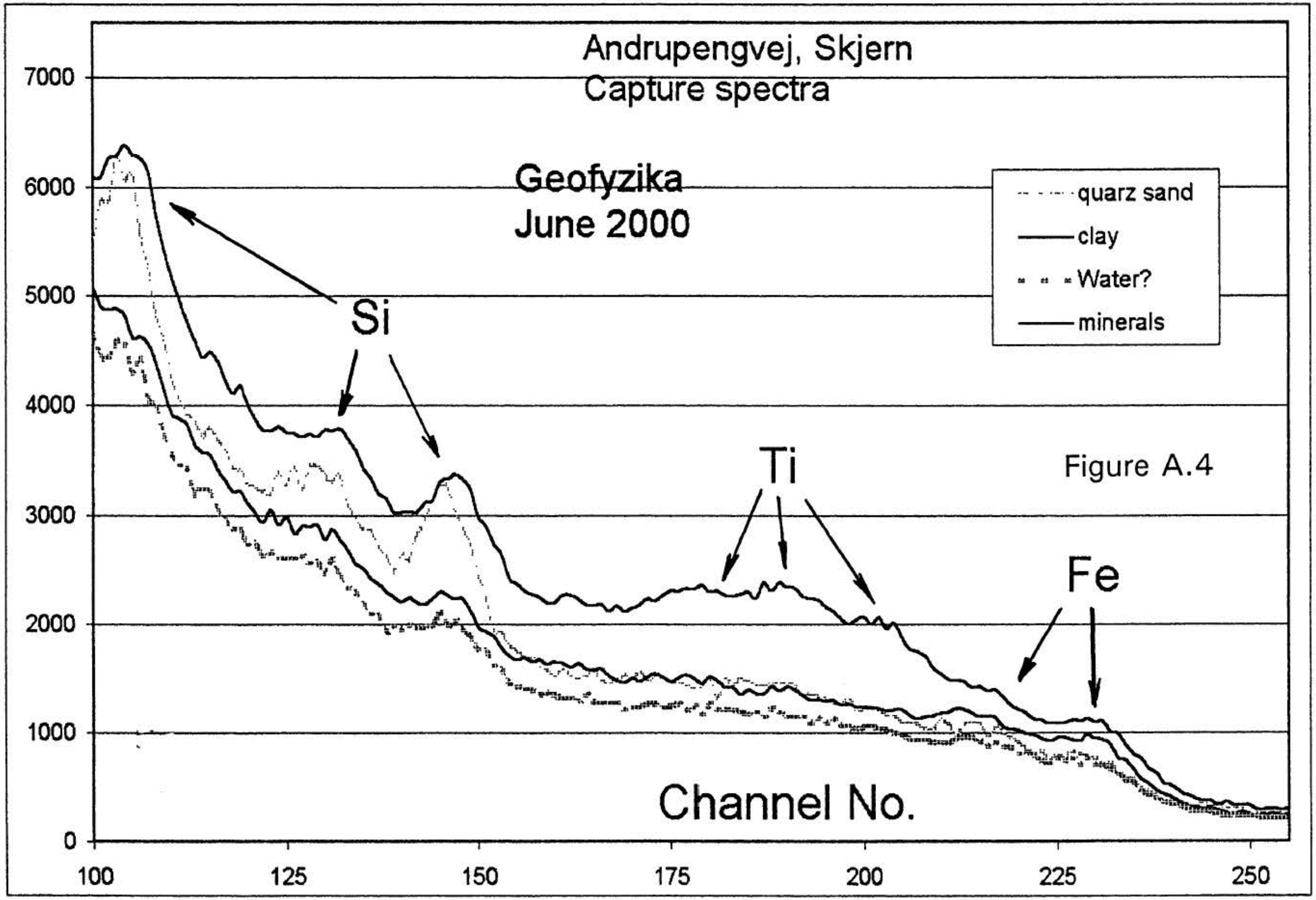

Andrupengvej, Skjern
Capture spectra
Geofyzika
June 2000
quarz sand
clay
Water?
minerals
Si
Ti
Fe
Channel No.
7000
6000
5000
4000
3000
2000
1000
0
100
125
150
175
200
225
250

Figure A.4

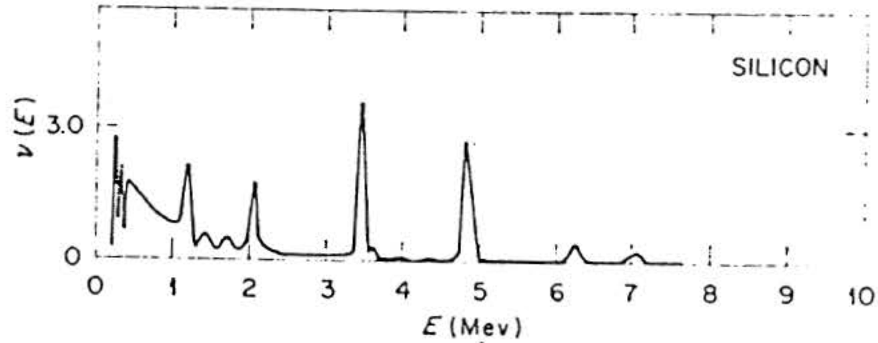


Fig. 8B.2. Capture-gamma-ray spectrum, ν(E) vs. E, for silicon.

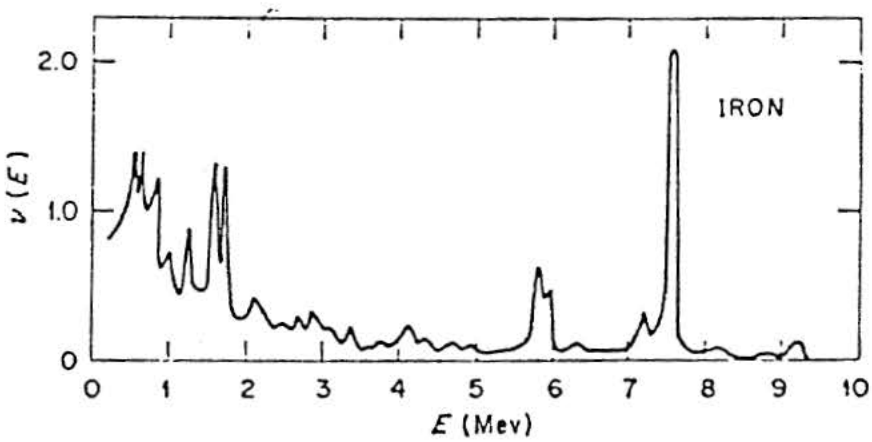


Fig. 8B.11. Capture-gamma-ray spectrum, ν(E) vs. E, for iron.

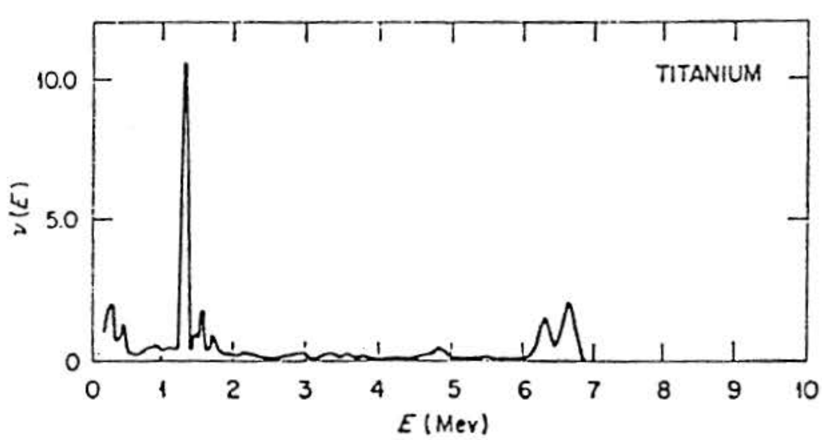
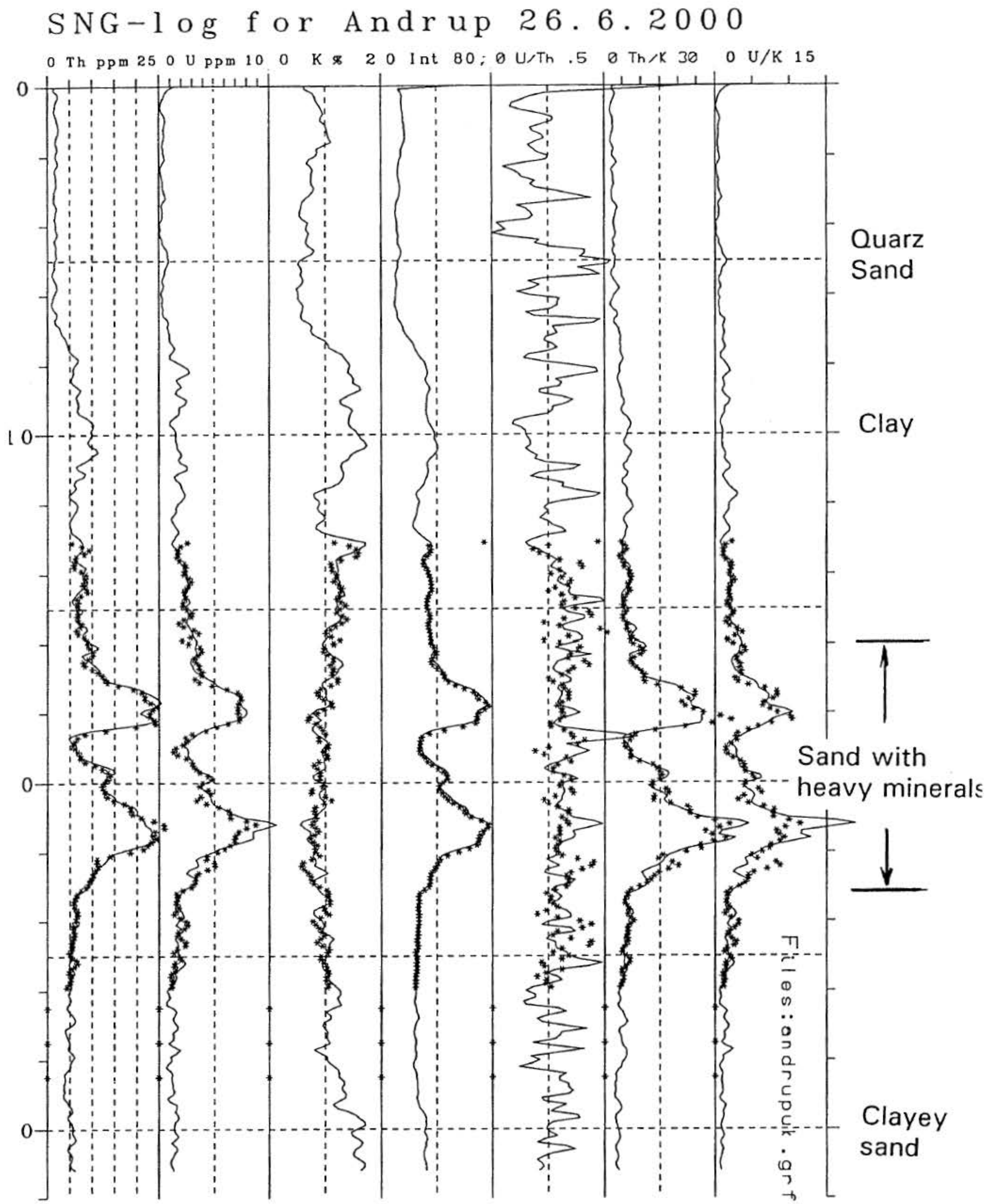


Fig. 8B.7. Capture-gamma-ray spectrum, ν(E) vs. E, for titanium.

Figure A.5



Skjern
SK25

Figure B.1

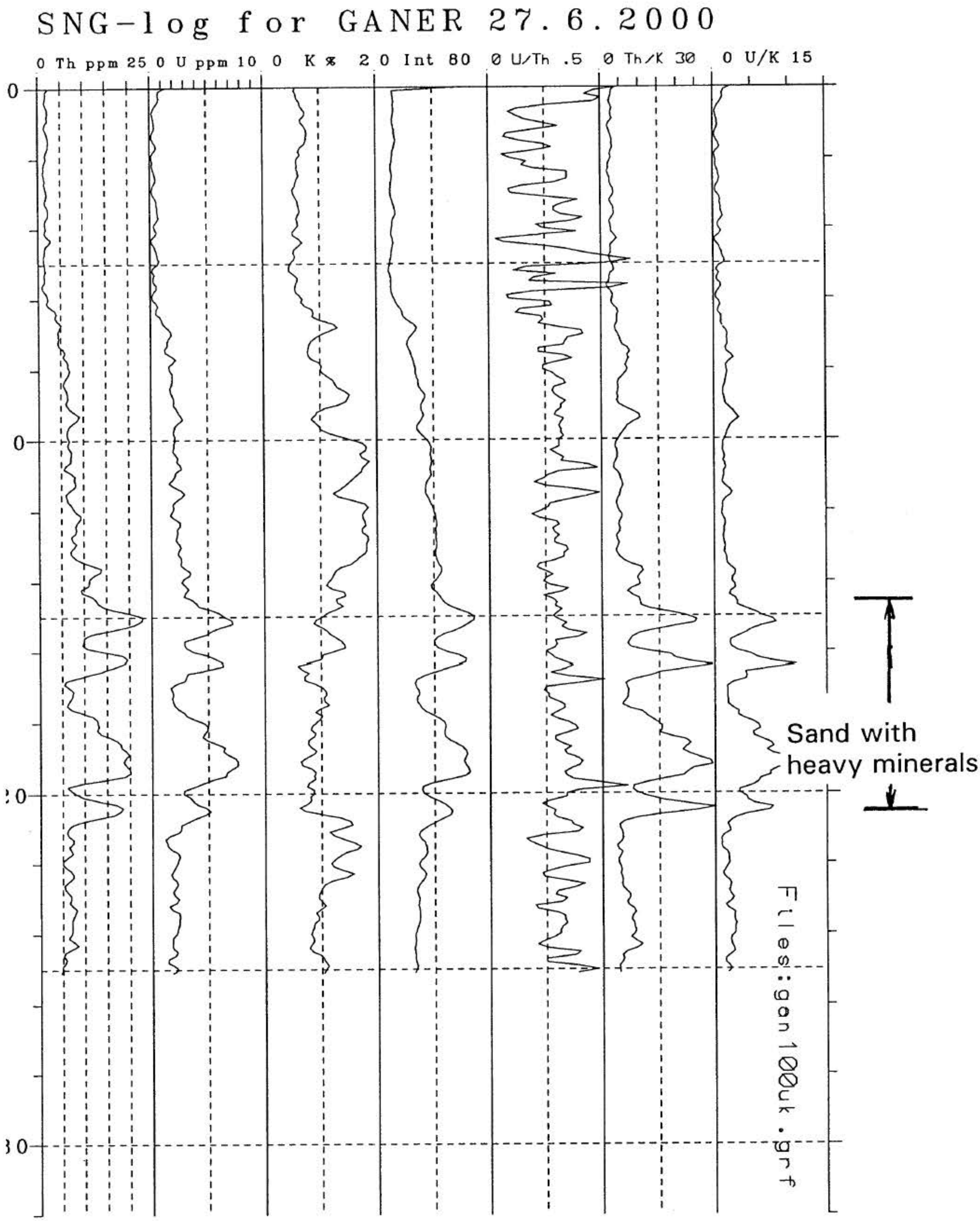
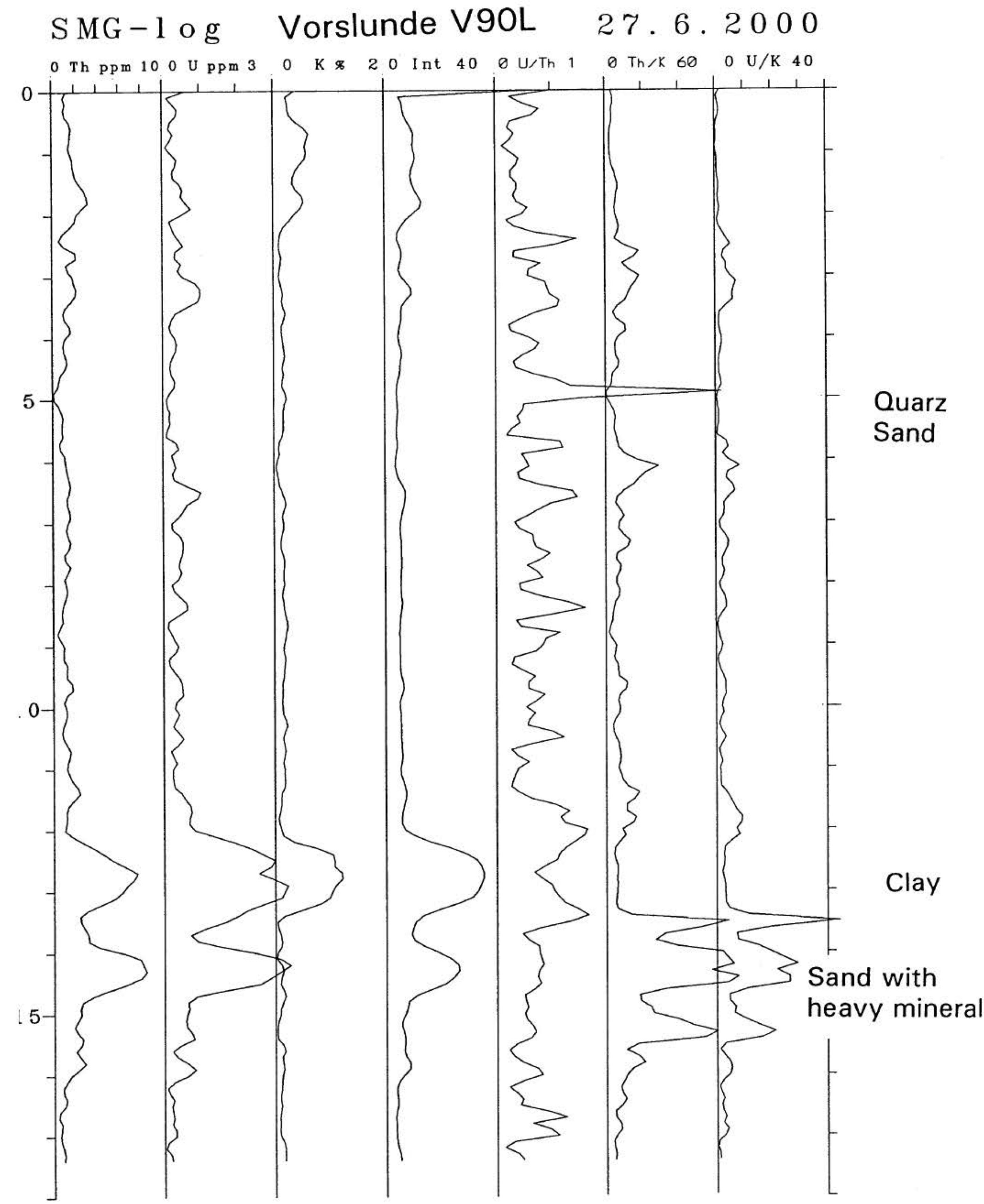

SNG-log for GANER 27.6.2000
0 Th ppm 25
0 U ppm 10
0 K % 2
0 Int 80
0 U/Th .5
0 Th/K 30
0 U/K 15
0
0
20
30
Sand with heavy minerals
File s:gan100uk.grf

Figure B.2



Vorslunde
V90L

Figure B.3

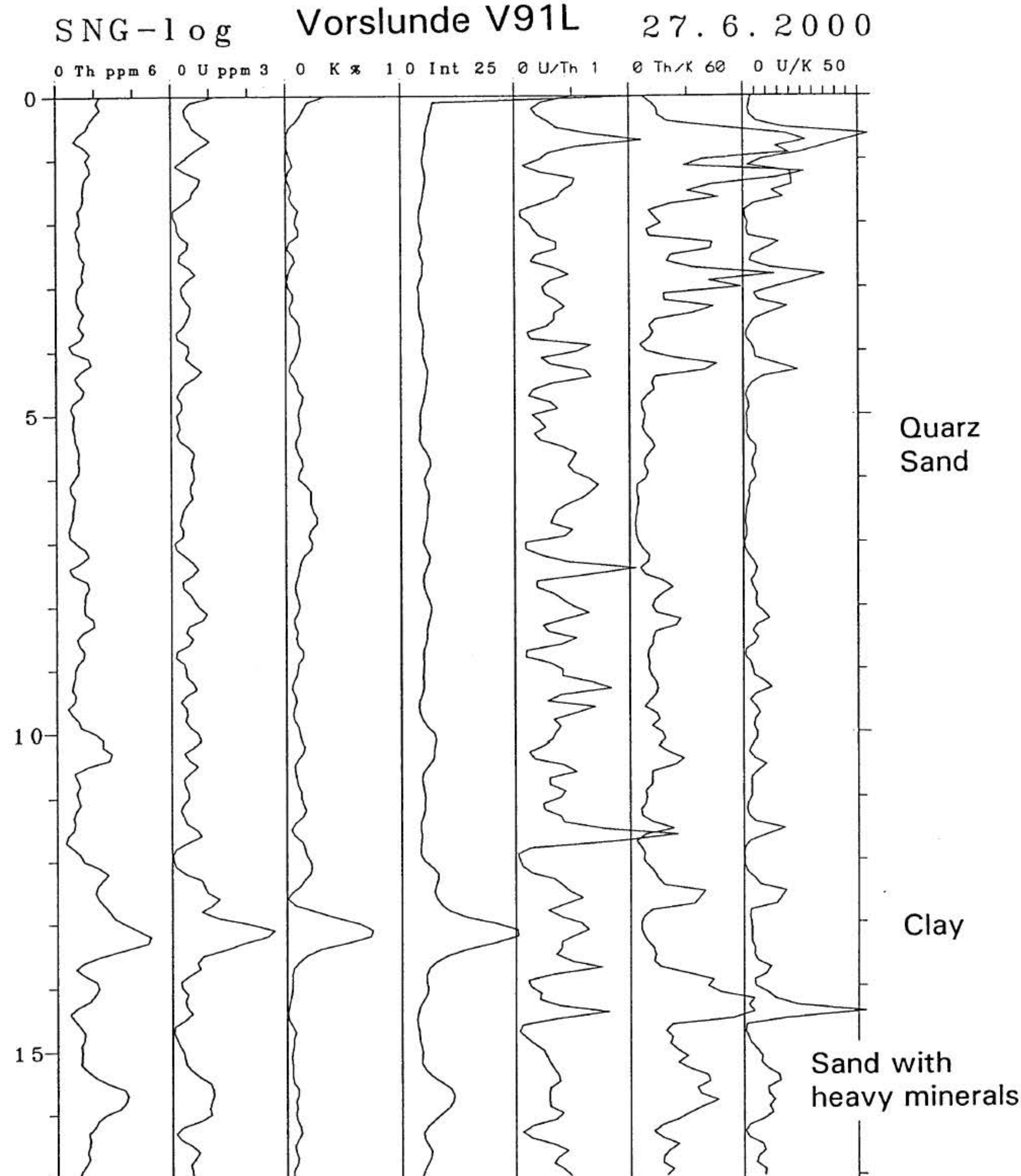

SNG-log
Vorslunde V91L
27.6.2000
0 Th ppm 6
0 U ppm 3
0 K %
1 0 Int 25
0 U/Th 1
0 Th/K 60
0 U/K 50
0
5
10
15
Quarz Sand
Clay
Sand with heavy minerals

Figure B.4

Appendix C.
Capture energies and energy calibration

In the table below are listed the energies of the capture photons together with the yield (probability for emission after absorption of a neutron). Also shown are the channel numbers (from Geofyzika spectra) corresponding to the photon energies.

Element	Energy (MeV)	Yield	Channel No.
Hydrogen	2.23	1.00	65
Silicon	1.28	0.16	
	2.65	0.11	
	2.10	0.13	
	3.54	0.60	104
	4.20	0.10	
	4.93	0.75	146
	6.40	0.11	
Iron	c. 1.68	0.16	From 1.53 MeV to 1.80 MeV
	c. 5.96	0.12	5.91 and 6.02 MeV
	7.64	0.29	227
Nickel	9.00	0.26	
	8.53	0.11	
Titanium	1.38	0.87	
	6.41	0.29	190
	6.55	0.06	
	6.75	0.41	200

The difference between a full energy peak and its associated single escape peak is 511 keV corresponding to 15 channels.

Figure C.1 shows the energy calibration for the Geofyzika capture probe used at Skjern and Vorslunde.

E

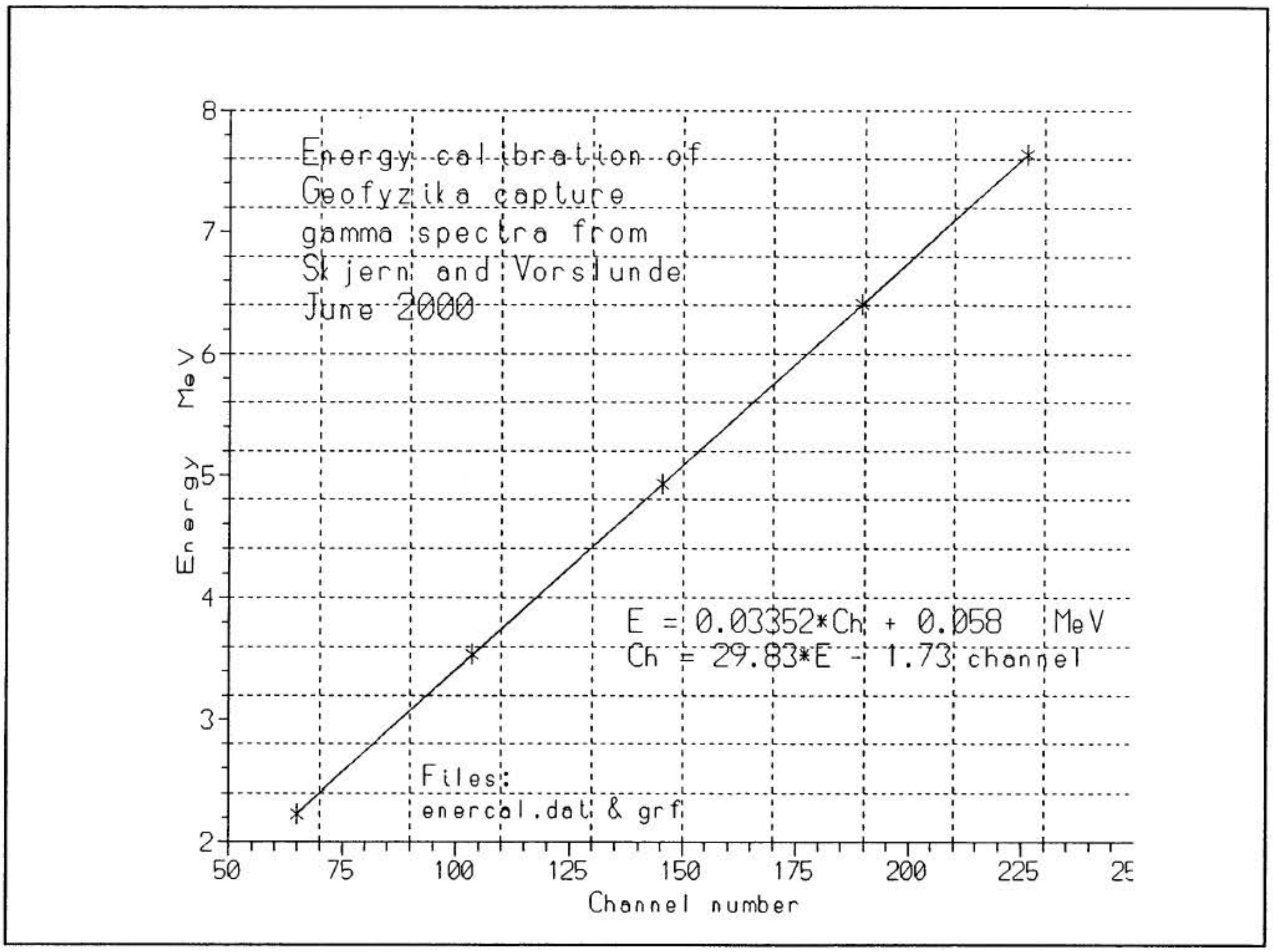

Energy calibration of
Geofyzika capture
gamma spectra from
Skjern and Vorslunde
June 2000
E = 0.03352*Ch + 0.058 MeV
Ch = 29.83*E - 1.73 channel
Files:
enercal.dat & grf
Energy MeV
Channel number
8
7
6
5
4
3
2
50
75
100
125
150
175
200
225

Figure C.1

Appendix D: Volume of measurement and centre of probe for SNG-probes and capture gamma probes

In principle a SNG-probe measures the gamma signal from a very large volume-around the detector. A photon emitted by an atom 1 m from the detector may be measured; but the probability for this to happen is extremely small. Therefore, one often defines a "volume of measurement" by calculations - under ideal circumstances - the sperical volume from where 90% (or 95%) of the detector signal in alarge homogeneous formation will originate. For Th measurements based solely on the 2615 keV gamma photons this sphere has a radius of 25-30 cm (or 30 to 35cm). For U (with 1765 keV) and K (with 1462 keV) the radii are some 5 cm smaller. The numbers given here are for "normal formations" with densities around 2.0 to 2.2 g/cm^3 including formation water. The only parameter of significant importance is the mass attenuation coefficient for the formation in question.

The material close to the detector has far the greatest importance. For a "30 cm sphere" as described above the innermost 15 cm (radius) material contributes with some 70% of the total signal.

SNG probes utilising the whole gamma (detector) spectrum in the calculations has a smaller "volume of measurement" for the low energy part of the spectrum. (The mean free path for gamma photons of lower energy is smaller than for higher gamma energies.) The "full spectrum probes" also detect photons farther away than the 25 cm to 35 cm mentioned above for the three windows probes. But this additional signal is due to photons that have Compton scattered (and have lost some energy) during their path from source to detector. The information "contained" in those photons don't discern between Th, U and K. The only information is on the total level of gamma-ray intensity.

The "measuring volume" for a capture gamma probe depends both on the slowing down length for the fast neutrons and on the energy of the capture photons. The capture photons - with energies from 4 MeV to 6 MeV - have ranges that are at least twice as long as those for natural gamma rays. But the slowing down of neutrons occurs over a much smaller volume and, therefore, the volume of measurement for a capture probe is not much different from that of a SNG-probe. The volume is not a sphere for the capture probe - even not in the ideal case with a narrow borehole and a homogeneous formation. The volume is an "elongated sphere" (an oval as the vertical cross section) covering both source and detector.

The centre of a SNG-probe is the centre of the detector. For a capture gamma probe the centre is "midway" between neutron source and detector.

8 GF Instruments

GF Instruments, s.r.o.
Ječná 29a, 621 00 Brno, Czech Republic

Report on borehole measurements of Ti, K, U, Th concentrations using spectral analysis of the gamma-ray from neutron capture and from natural radioisotopes.

Skjern and Vorslunde Areas, Denmark.

Client: **Geological Survey of Denmark and Greenland, Christian Knudsen**
Thoravej 8, DK-2400 Copenhagen NV

Authors: **Vít Gregor** ....
Bohumil Pícha ....

Brno, 17/07/00

1. Introduction

Borehole logging was performed according to the order of Geological Survey of Denmark and Greenland and under scientific and technical conduction by Christian Knudsen and Christian Abildtrup. The objective of borehole logging was as follows:

- to measure the titanium concentration in prepared boreholes using the method of the spectral analysis of the gamma-ray coming from neutron capture in titanium atoms nuclei
- to measure the concentrations of the natural radioactive elements K, U, Th with the help of gamma-ray spectrometry

The measured results should serve for the comparison with the laboratory analysis of drill core samples and finally be used for the precise evaluation of the thickness and Ti enrichment of the layers.

The measurements in the boreholes No. SK 00.25, SK 00.26, V 90L and V 91L were performed between June 26 and July 1, 2000.

Processing, interpretation and reporting was finished on July 14, 2000.

2. Techniques

2.1. Ti Analyzer

The determination of the Ti content was performed using the LSCA-1 borehole gamma spectrometer by GF Instruments, Ltd.. This instrument is equipped with BGO scintillation unit of the 2x2" size and with fast pulse analyzer for the spectral analysis of high energy gamma-rays coming from the neutron capture.

The CF^{252} neutron source with the activity of 71 MBq was used for irradiation of the rock under study. The measuring time of one point was 3 minutes. The measurement was begun starting the 3 m depth in which the wells were already filled with water.

The effective range of investigation of the probe is about 0.5 m from the probe axis.

The method of the evaluation of the spectra is based on a long experience of GF Instruments, Ltd. with the direct measurement of the concentrations of S, Si, Ti, Fe, Cl and other chemical elements in natural materials. The measured values were matched to the results from high volume Ti standards of GF Instruments, Ltd.

2.2. Natural Gamma – ray Spectrometer

The concentrations of K, U, Th were determined with the help of the new multipurpose geophysical Gamma-ray spectrometer GRS-2000 by GF Instruments, Ltd.. This instrument was used in borehole assembly using the NaI(Tl) scintillation unit of the 2x2" size.
The measuring time of one point was 3 minutes
The used method of the spectral analysis is based on the statistic principle of the evaluation - fitting from the unit spectra of the analysed elements.
The instrument calibration was done on the Czech K, U, Th standards.

For more details see the instrument leaflets enclosed as appendices.

3. Results

3.1. Borehole Location and Technical Parameters

The location of the measured boreholes is shown on the map (fig.1).
Their coordinates are given in the following table:

Boreholes location				
Borehole	Co-ordinates UTM			
	X [m]	Y [m]	Z ground [m]	Top of casing above ground [m]
SK 00.25L	6203914	461648	5	0.2
SK 00.26L	6200174	466042	3	0.2
V 90L	6190006	507656	58	0.2
V 91L	6199339	508417	59	0.3

UTM is zone 32, wgs is 84.

Borehole technical parameters:

Drillhole	160 mm drill bit diameter
Casing	125 mm outer diameter
Casing thickness	5 mm
Casing material	high density polyethylene (PEH)

3.2. Result Tables and Logs

Reached results are described for each borehole separately.

Each table contains the following columns:

Depth [m]– the depth of the measurement in metres measured from the top end of the casing tube (the height of the top end of the casing tube above the surrounding surface for each borehole is shown in the above introduced table)

Total – the total dose rate measured in nano grays per hour

K [%]– the concentration of potassium in %

eU [ppm]– the concentration of the uranium equivalent in ppm

eTh [ppm]– the concentration of the thorium equivalent in ppm

Th/K – the ratio of Th and K concentrations in 10^4 units

Th/U – the ratio of Th and U concentrations

Ti[%] – the concentration of titanium in weight %

$Si_{Qualitative}$ – the approximate measure of the occurence of the silicon given in three levels

1 – low (below 5%), 2 – medium (about 10%), 3 – high (above 20%)

$Fe_{Qualitative}$ – the approximate measure of the occurence of the iron given in three levels

1 – low (below 1%), 2 – medium (about 5%), 3 – high (above 10%)

Each graph contains logs for Ti concentrations, Si and Fe estimates and K, eU and eTh concentrations (their ratios).

Borehole SK 00.25 (fig. 2, table1)

We can distinguish following depth intervals having different Ti concentration and different geology:

a) The main anomaly of Ti concentration (0.3% to 2.6%) is found in the depth interval from 17.0 to 24.6 m. High Ti content is accompanied with high concentrations of U, Th. The content of Si is medium or high. Fe content is medium or high as well. The layer is enriched with heavy minerals with titanium. It is possible to see a good correlation of Ti concentration and U, Th ones in the part C of the figure but the concentrations of U, Th (and especially the ratios Th/K and Th/U) are near the zero level at the positions around 19.4 m while the concentrations of Ti remain still significant there.
b) The small Ti concentration anomaly (0.3% to 0.5%) is in the depth from 27.8 to 28.8 m.
c) Very low Ti concentrations (< 0,1%) accompanied with expressive decreasing of Si content were found from the depth from 9.4 to 12.4 m. The Quartz sand is probably substituted with organic mass (with high C content) there.
d) The increase of K, U, Th contents starting the depth of 8.0 m and deeper is caused by crossing from relatively pure Si sands to layers containing clay minerals (probably an indication of the Quaternary and Miocene sediments contact). The K concentration is practically steady in this depth interval and does not follow the U and Th increase in the Ti anomaly.

Borehole SK 00.26 (fig. 3, table2)

Watching the results from SK 00.26 in figure 3 we can see the very similar situation to the above desribed borehole.

There are again three specific anomalies along the borehole:

a) Fair Ti concentration anomaly (0.3% to 2.0%) is in the depth from 15.4 to 21.8 m. This anomaly is coupled again with anomalies of U, Th concentrations and Th/K, T/U ratios as well but the course of their correlation with the Ti contents is only approximate. The concentration of Si is high there. This layer is enriched with heavy minerals having significant Ti concentration. Qualitative Fe concentration is on the medium and high level there.
b) Subtle Ti anomaly (0.6% to 0.8%) lays in the depth interval 24.6 up to 24.8 m. There are high Si contents and low Fe contents there.

c) Very low Ti concentration (< 0.1%) is in the depth from 10.4 to 13.8 m. There is decreased Si content and medium Fe content there. The presence of organic mass is estimated in this depth interval.
e) The increase of K, U, Th contents starting the depth 8.0 m could indicate the contact of Quaternary and Miocene sediments.

Borehole V 90L (fig. 4, table3)

Following depth intervals were distinguished:

a) The layer rich for Ti (0.3% to 1.7 %) was found near the surface already - in the depths from 3.0 m to 5.4 m. The concentration of Si is high. Fe content is low. Concentration of K, U, Th is extremely low so ratios Th/K and T/U was not possible to calculate. These features show to the presence of pure quartz sand with ilmenite and other Ti minerals. Content of Fe minerals is low.
b) Another wide Ti anomaly (0.3 to 1.2) lies in the depth interval from 6.6 to 11.6 m. The matrix and accompanying conditions are close to the previous item.
c) The highest Ti concentration (0.3% to 3.5 %) is in the depth from 13.8 to 17.0 m. This anomaly is accompanied with an U and Th concentration increase only in a negligible measure. The content of Si is high and the content of Fe is low or medium similarly to the above described two layers.
d) The layer between 11.8 m and 13.6 m indicates a very significant decrease of Si content showing the presence of organic mass (C occurrence). Some small presence of clay minerals according to the increase of U and Th concentrations there is estimated as well.

Borehole V 91L (fig. 5, table 4)

a) Ti high concentration (0.4% to 1.9 %) starts near the surface and continues up to the depth 12.8 m. Other accompanying features are: high Si concentration, low or medium Fe and extremely low K, U, Th. All these facts mean fair enrichment of the pure quartz sand with ilmenite and others Ti minerals with low Fe content.
b) The highest Ti concentration is found from the depth 14.0 m to the end of the borehole. Accompanying features are the same as above but Fe concentration is very small.

c) The layer practically without Ti and only with medium Si content lies in the depth interval from 12.8 m to 13.8 m. This situation shows the presence of organic mass containing C with some clay minerals.

Conclusions

Four prepared boreholes at Skjern and Vorslunde areas were explored using the borehole gamma-spectrometry to determine the Ti concentrations and accompanying conditions.

The enclosed logs show the distribution of the Ti concentration and K, U, Th concentrations (and their ratios respectively). Those curves are matched with the semi-qualitative information about Si and Fe presence. The detailed commentary of the results is given in the chapter 3.

Both two boreholes at the Skjern area shows very close geological conditions and chemical composition. Two boreholes situated near Vorslunde are very similar to each other as well. The mutual differences of both groups of boreholes are very significant:

- The Ti concentration at Vorslunde is significant practically along all the borehole except the depth interval 11.8 – 13.6 m (V 90L) and 12.8 – 13.8 m (V 91L) while the Skjern boreholes show only one significant anomaly between 17.0 and 24.6 m (S 25.00) and between 15.1 and 24.8 m (S 26.00).
- The correlation of Ti concentration with U, Th concentrations at Vorslunde was found to be negligible. This correlation was found to be important (but not quite reliable) at Skejrn.
- An extremely high Ti concentration of 3.5% was measured in V 90L borehole at the depth of 14.8 m.
- The rock matrix at Vorslunde consists of pure quartz sand mostly while the presence of clay minerals in the rock matrix at Skjern is typical starting the 8 m depths.
- The Ti layer at Skjern contains significantly higher content of Fe than Ti layer at Vorslunde.
- According to the found high U, Th concentration the Ti layer at Skjern shows more complicated mineralogical composition and probably a higher content of additional chemical elements than at Vorslunde.

- A zone with low contents of Ti and Si of about 2 m thickness was found in each explored borehole which shows an important change of the matrix composition (the presence of the organic mass).

All the above introduced findings are based only on the interpretations of our borehole measurements. No other geological description was available at this stage.

The testing measurement was performed with the use of portable instrument assembly. In the case of routine investigations the winch accessory will be used. Similarly the calculation of the Ti concentrations will be included directly in the measuring software to have the results already on the measuring place.

In the case of a need it is possible to evaluate the Si (and Fe possibly) concentration as well - similarly to Ti. For accurate evaluation of Fe content we recommend to use the magnetic borehole logging (magnetic susceptibility measurement).

Alternatively to the measurement in the water-filled boreholes the measurement of the Ti concentrations in dry boreholes is possible as well. If a borehole is dry only partially the depths around the water level have to be omitted in the range of about ± 40 cm.

Borehole SK 00.25

Depth [m]	Total [nGy	K [%]	eU [ppm]	eTh [ppm]	Th/K*10E4	Th/U	Ti [%]	$Si_{Qualitative}$	$Fe_{Qualitative}$
1,6	14,1	0,4	0,0	0,0	0,0				
1,8	11,5	0,6	0,0	0,0	0,0				
2,0	20,1	0,4	0,0	0,0	0,0				
2,2	14,0	0,3	0,1	0,0	0,0				
2,4	18,2	0,5	0,0	0,0	0,0				
2,6	16,7	0,4	0,0	0,0	0,0				
2,8	0,0	0,3	0,0	0,0	0,0				
3,0	11,1	0,3	0,0	0,0	0,0		0	3	1
3,2	8,1	0,3	0,0	0,0	0,0		0,1	3	1
3,4	6,9	0,3	0,0	0,0	0,0		0,1	3	1
3,6	1,5	0,3	0,0	0,0	0,0		0,15	3	1
3,8	0,0	0,3	0,0	0,0	0,0		0,15	3	2
4,0	3,4	0,3	0,0	0,0	0,0		0,15	3	2
4,2	1,7	0,2	0,0	0,0	0,0		0,15	3	2
4,4	19,9	0,3	0,0	0,0	0,0		0,15	3	2
4,6	2,1	0,3	0,0	0,0	0,0		0,15	3	2
4,8	12,5	0,2	0,0	0,0	0,0		0,1	3	2
5,0	7,0	0,3	0,0	0,0	0,0		0,15	3	2
5,2	10,6	0,4	0,1	0,0	0,0		0	3	2
5,4	10,5	0,3	0,0	0,0	0,0		0,15	3	2
5,6	9,4	0,3	0,0	0,0	0,0		0	3	1
5,8	8,7	0,2	0,0	0,0	0,0		0,15	3	1
6,0	11,4	0,2	0,0	0,0	0,0		0	3	2
6,2	2,6	0,3	0,1	0,0	0,0		0,1	3	1
6,4	2,4	0,3	0,0	0,0	0,0		0	3	2
6,6	5,7	0,2	0,0	0,0	0,0		0,15	3	2
6,8	3,2	0,3	0,0	0,0	0,0		0,1	3	1
7,0	0,0	0,3	0,0	0,0	0,0		0,1	3	2
7,2	13,7	0,5	0,0	0,0	0,0		0,1	3	1
7,4	9,5	0,3	0,6	0,0	0,0	0,00	0,1	3	2
7,6	20,5	0,4	0,5	0,0	0,0	0,00	0,1	3	2
7,8	25,5	0,6	0,4	0,1	0,2	0,25	0	2	2
8,0	36,1	0,7	0,7	0,8	1,1	1,14	0	2	2
8,2	30,9	0,8	1,5	0,5	0,6	0,33	0	2	3
8,4	46,4	1,0	0,9	0,6	0,6	0,67	0	2	3
8,6	48,3	0,9	1,4	0,5	0,6	0,36	0,1	2	2
8,8	45,8	0,7	1,1	0,8	1,1	0,73	0	2	2
9,0	46,7	1,1	0,5	1,2	1,1	2,40	0	2	2
9,2	49,3	1,1	1,3	0,5	0,5	0,38	0,1	2	2
9,4	43,3	0,8	1,9	0,3	0,4	0,16	0	2	3
9,6	48,3	0,9	1,9	0,7	0,8	0,37	0	1	2
9,8	41,9	0,9	0,9	1,0	1,1	1,11	0	1	2
10,0	40,5	0,9	1,8	0,9	1,0	0,50	0	1	2
10,2	48,7	0,9	2,8	0,7	0,8	0,25	0	1	2
10,4	57,7	1,1	1,1	2,3	2,1	2,09	0	1	2
10,6	59,1	1,0	1,4	2,1	2,1	1,50	0	1	2
10,8	57,2	0,8	2,4	1,4	1,8	0,58	0	1	2
11,0	51,1	0,9	1,2	2,4	2,7	2,00	0	1	2
11,2	39,2	0,8	2,1	0,6	0,8	0,29	0	1	2
11,4	46,9	0,8	2,1	0,6	0,8	0,29	0	1	2
11,6	36,4	0,7	1,6	1,0	1,4	0,63	0	1	2
11,8	50,6	0,7	2,1	0,5	0,7	0,24	0	1	1
12,0	40,4	0,5	1,0	0,9	1,8	0,90	0	1	1

Borehole SK 00.25

Depth [m]	Total [nGy	K [%]	eU [ppm]	eTh [ppm]	Th/K*10E4	Th/U	Ti [%]	$Si_{Qualitative}$	$Fe_{Qualitative}$
12,2	30,8	0,4	1,3	0,3	0,8	0,23	0	1	2
12,4	29,8	0,5	2,1	0,0	0,0	0,00	0	2	2
12,6	39,4	0,3	2,2	0,0	0,0	0,00	0,2	2	2
12,8	27,0	0,5	1,2	0,5	1,0	0,42	0,1	3	2
13,0	30,8	0,6	0,8	0,2	0,3	0,25	0,1	3	2
13,2	31,1	0,6	1,0	0,2	0,3	0,20	0	2	2
13,4	39,0	0,7	1,5	0,9	1,3	0,60	0	2	2
13,6	47,7	0,6	2,9	0,4	0,7	0,14	0,1	3	2
13,8	46,6	1,0	2,9	0,5	0,5	0,17	0,15	2	2
14,0	30,0	0,6	1,8	0,4	0,7	0,22	0,2	2	2
14,2	39,7	0,8	1,8	0,3	0,4	0,17	0,1	2	2
14,4	57,2	0,9	2,3	0,9	1,0	0,39	0,2	2	2
14,6	51,0	0,5	2,9	1,5	3,0	0,52	0,1	2	2
14,8	55,8	0,8	3,0	1,5	1,9	0,50	0,1	2	2
15,0	45,0	0,8	2,0	1,5	1,9	0,75	0,1	3	2
15,2	47,7	0,8	1,7	0,8	1,0	0,47	0,1	3	2
15,4	50,7	0,6	3,1	0,5	0,8	0,16	0,25	3	2
15,6	47,4	0,6	2,1	1,5	2,5	0,71	0,2	3	2
15,8	44,1	0,8	1,5	1,0	1,3	0,67	0,2	3	1
16,0	47,9	0,8	2,6	0,7	0,9	0,27	0,2	3	2
16,2	51,7	0,5	2,4	1,7	3,4	0,71	0,2	3	1
16,4	55,0	0,6	3,2	1,7	2,8	0,53	0,25	3	2
16,6	55,8	0,6	3,8	0,8	1,3	0,21	0,2	3	2
16,8	47,6	0,7	3,0	1,0	1,4	0,33	0,2	3	2
17,0	57,0	0,7	3,0	2,4	3,4	0,80	0,4	2	2
17,2	61,8	0,6	4,0	2,9	4,8	0,73	0,75	2	2
17,4	64,5	0,8	4,0	3,3	4,1	0,83	0,7	2	2
17,6	80,9	0,7	5,0	4,3	6,1	0,86	1	2	2
17,8	117,1	0,2	9,5	6,3	31,5	0,66	1,2	3	3
18,0	124,1	0,5	8,8	7,6	15,2	0,86	1,5	2	3
18,2	134,9	0,7	7,9	10,8	15,4	1,37	2,1	2	2
18,4	117,4	0,7	6,7	11,2	16,0	1,67	1,9	2	2
18,6	119,3	0,5	9,0	7,1	14,2	0,79	2,2	2	3
18,8	107,4	0,4	8,6	7,7	19,3	0,90	1,95	2	2
19,0	54,1	0,5	3,9	1,3	2,6	0,33	0,9	3	2
19,2	45,1	0,5	2,7	0,0	0,0	0,00	0,75	3	2
19,4	42,8	0,5	2,2	0,5	1,0	0,23	0,75	3	2
19,6	31,5	0,6	1,3	1,0	1,7	0,77	1	3	2
19,8	43,8	0,4	2,3	0,9	2,3	0,39	1	3	3
20,0	64,7	0,5	3,6	2,7	5,4	0,75	1,25	3	2
20,2	74,1	0,5	5,5	3,7	7,4	0,67	1,9	2	3
20,4	78,1	0,6	5,6	2,9	4,8	0,52	1,3	2	2
20,6	59,2	0,5	4,4	2,6	5,2	0,59	1,3	2	3
20,8	69,2	0,6	4,0	3,3	5,5	0,83	1,65	3	3
21,0	83,2	0,5	6,3	3,8	7,6	0,60	1,5	2	2
21,2	106,7	0,7	5,3	7,6	10,9	1,43	1,45	3	2
21,4	113,6	0,6	7,1	8,3	13,8	1,17	1,75	2	2
21,6	133,2	0,2	10,6	9,7	48,5	0,92	1,6	3	2
21,8	129,1	0,5	7,4	11,0	22,0	1,49	2,6	3	3
22,0	123,9	0,5	8,1	9,3	18,6	1,15	2,1	2	3
22,2	130,8	0,5	8,3	11,7	23,4	1,41	1,8	3	2
22,4	96,6	0,3	7,5	5,8	19,3	0,77	1,4	3	3
22,6	67,2	0,5	3,8	3,5	7,0	0,92	1,55	3	3

Borehole SK 00.25

Depth [m]	Total [nGy	K [%]	eU [ppm]	eTh [ppm]	Th/K*10E4	Th/U	Ti [%]	$Si_{Qualitative}$	$Fe_{Qualitative}$
22,8	66,5	0,3	5,4	2,8	9,3	0,52	1,7	3	3
23,0	63,1	0,5	2,7	2,2	4,4	0,81	1,4	3	2
23,2	63,3	0,6	2,5	2,4	4,0	0,96	1,4	3	2
23,4	54,2	0,5	3,1	0,7	1,4	0,23	1	2	3
23,6	46,4	0,5	2,4	1,2	2,4	0,50	0,75	3	2
23,8	33,5	0,7	1,3	0,0	0,0	0,00	0,3	3	2
24,0	28,3	0,6	1,5	0,2	0,3	0,13	0,3	3	2
24,2	36,5	0,6	1,8	0,6	1,0	0,33	0,45	3	2
24,4	36,2	0,5	2,0	0,0	0,0	0,00	0,35	3	2
24,6	29,7	0,5	1,6	0,4	0,8	0,25	0,3	3	2
24,8	33,8	0,6	1,6	0,2	0,3	0,13	0,2	3	2
25,0	25,5	0,6	0,9	0,3	0,5	0,33	0,15	3	2
25,2	36,8	0,6	1,4	0,1	0,2	0,07	0,1	3	2
25,4	32,8	0,5	1,2	0,4	0,8	0,33	0,3	3	2
25,6	32,5	0,5	1,2	0,4	0,8	0,33	0,3	3	3
25,8	25,0	0,6	0,8	0,2	0,3	0,25	0,2	3	3
26,0	36,9	0,8	0,7	0,1	0,1	0,14	0,2	3	1
26,2	29,5	0,6	1,3	0,0	0,0	0,00	0,2	3	2
26,4	35,6	0,6	1,2	0,0	0,0	0,00	0,15	3	2
26,6	29,4	0,8	0,3	0,2	0,3	0,67	0,2	3	1
26,8	28,4	0,6	0,8	0,0	0,0	0,00	0,2	3	2
27,0	27,7	0,5	1,1	0,1	0,2	0,09	0,1	3	2
27,2	32,4	0,6	0,9	0,1	0,2	0,11	0,1	3	1
27,4	30,3	0,7	0,8	0,0	0,0	0,00	0,2	3	2
27,6	28,2	0,5	1,3	0,2	0,4	0,15	0,2	3	1
27,8	26,8	0,5	0,8	0,3	0,6	0,38	0,3	3	2
28,0	23,5	0,5	1,4	0,2	0,4	0,14	0,4	3	2
28,2	34,2	0,5	0,7	0,7	1,4	1,00	0,3	3	2
28,4	34,0	0,5	1,4	0,6	1,2	0,43	0,5	3	2
28,6	34,1	0,5	1,1	0,0	0,0	0,00	0,4	3	2
28,8	34,9	0,7	1,3	0,0	0,0	0,00	0,3	3	2
29,0	34,2	0,9	0,9	0,0	0,0	0,00	0,15	3	1
29,2	36,4	0,8	0,8	0,0	0,0	0,00	0	3	2
29,4	36,5	0,7	1,2	0,0	0,0	0,00	0,1	3	2
29,6	40,7	0,8	0,9	0,0	0,0	0,00	0	3	2
29,8	37,7	0,8	0,5	0,2	0,3	0,40	0	3	2
30,0	35,4	0,8	1,2	0,3	0,4	0,25	0,2	3	1
30,2	43,3	1,0	1,4	0,0	0,0	0,00	0,1	3	2
30,4	44,6	0,9	1,2	0,2	0,2	0,17	0	3	2
30,6	43,0	1,1	0,8	0,7	0,6	0,88	0	3	1
30,8	43,9	0,8	1,7	0,5	0,6	0,29	0	2	2
31,0	46,7	0,9	1,9	0,0	0,0	0,00	0	3	1
31,2	48,9	0,9	1,5	0,0	0,0	0,00	0	3	1
31,4	42,1	0,9	1,1	0,0	0,0	0,00	0	3	1
31,6	44,8	0,7	1,5	0,3	0,4	0,20	0	3	1
31,8	37,3	1,0	0,6	0,7	0,7	1,17	0	2	1
32,0	51,9	1,0	2,1	0,5	0,5	0,24	0,1	3	1

Borehole SK 00.26									
Depth [m]	Total [nGy/	K [%]	eU [ppm]	eTh [ppm]	Th/K*10E^{4}	Th/U	Ti [%]	Si Qualitative	Fe Qualitative
1,6	0,0	0,6	0,0	0,0	0				
1,8	3,4	0,5	0,2	0,0	0				
2,0	10,0	0,4	0,0	0,0	0				
2,2	8,2	0,4	0,0	0,0	0				
2,4	15,3	0,4	0,0	0,0	0				
2,6	10,9	0,3	0,0	0,0	0				
2,8	11,4	0,2	0,0	0,0	0				
3,0	14,1	0,4	0,0	0,0	0		0,1	3	1
3,2	7,8	0,3	0,0	0,0	0		0,1	3	1
3,4	15,6	0,4	0,0	0,0	0		0	3	1
3,6	17,0	0,3	0,1	0,0	0	0,00	0,25	3	1
3,8	21,5	0,4	0,3	0,0	0	0,00	0,2	3	2
4,0	15,7	0,3	0,0	0,0	0		0	3	1
4,2	8,7	0,4	0,0	0,0	0		0,2	3	2
4,4	12,3	0,4	0,0	0,0	0		0,2	3	1
4,6	8,0	0,3	0,0	0,0	0		0,2	3	2
4,8	9,2	0,3	0,2	0,0	0	0,00	0,2	3	1
5,0	7,5	0,3	0,0	0,0	0		0,15	3	1
5,2	12,2	0,2	0,1	0,0	0	0,00	0,1	3	2
5,4	7,3	0,2	0,0	0,0	0		0,3	3	1
5,6	6,6	0,3	0,0	0,0	0		0,2	3	1
5,8	11,6	0,3	0,0	0,0	0		0,2	3	2
6,0	10,8	0,3	0,0	0,0	0		0,2	3	1
6,2	6,2	0,3	0,0	0,0	0		0,2	3	1
6,4	11,0	0,3	0,0	0,0	0		0,1	3	2
6,6	14,3	0,5	0,2	0,0	0	0,00	0,1	3	2
6,8	22,8	0,4	0,5	0,0	0	0,00	0,1	3	1
7,0	35,8	0,9	0,8	0,1	0,111111	0,13	0	3	2
7,2	40,5	0,9	1,4	0,0	0	0,00	0,1	2	2
7,4	37,5	0,7	0,9	0,4	0,571429	0,44	0,15	3	1
7,6	29,0	0,3	2,2	0,0	0	0,00	0,2	3	1
7,8	26,6	0,4	1,6	0,0	0	0,00	0,15	3	2
8,0	35,7	0,4	2,4	0,0	0	0,00	0	3	2
8,2	35,5	0,7	1,6	0,4	0,571429	0,25	0,15	3	2
8,4	35,5	0,7	1,3	0,7	1	0,54	0,25	3	2
8,6	38,6	0,7	1,9	0,6	0,857143	0,32	0,25	3	1
8,8	44,5	0,8	1,4	0,7	0,875	0,50	0,1	2	2
9,0	48,4	1,0	1,1	0,8	0,8	0,73	0	2	1
9,2	52,9	1,0	1,6	1,5	1,5	0,94	0,1	2	1
9,4	48,4	0,9	2,3	0,6	0,666667	0,26	0,1	3	1
9,6	46,6	0,6	2,6	1,2	2	0,46	0,2	3	2
9,8	48,2	0,5	2,9	1,0	2	0,34	0,2	2	2
10,0	44,4	0,5	2,4	0,8	1,6	0,33	0,1	3	1
10,2	42,6	0,6	1,9	0,8	1,333333	0,42	0,1	2	1
10,4	49,5	0,9	1,9	0,5	0,555556	0,26	0	2	1
10,6	62,1	1,2	3,0	0,9	0,75	0,30	0	2	2
10,8	60,3	1,3	1,1	1,5	1,153846	1,36	0	2	1
11,0	64,8	1,1	1,9	0,8	0,727273	0,42	0	2	2
11,2	60,7	1,1	2,4	0,8	0,727273	0,33	0	2	2
11,4	56,4	1,1	2,2	0,7	0,636364	0,32	0	2	1
11,6	53,2	0,8	3,0	0,8	1	0,27	0	2	1
11,8	50,5	0,9	1,7	1,6	1,777778	0,94	0	2	2
12,0	60,3	0,8	2,3	1,0	1,25	0,43	0	2	1

Borehole SK 00.26									
Depth [m]	Total [nGy/	K [%]	eU [ppm]	eTh [ppm]	Th/K*10E4	Th/U	Ti [%]	Si Qualitative	Fe Qualitative
12,2	56,5	1,1	2,1	0,9	0,818182	0,43	0	2	1
12,4	62,9	1,1	2,7	0,7	0,636364	0,26	0	2	1
12,6	62,5	1,1	2,6	1,6	1,454545	0,62	0	2	2
12,8	62,6	1,1	1,8	1,6	1,454545	0,89	0	2	2
13,0	63,7	1,2	2,0	1,2	1	0,60	0	2	1
13,2	59,3	1,2	2,0	1,4	1,166667	0,70	0	2	2
13,4	65,1	1,2	1,8	1,1	0,916667	0,61	0	2	2
13,6	57,4	1,3	2,6	1,4	1,076923	0,54	0	2	1
13,8	71,8	0,9	3,1	1,8	2	0,58	0	2	2
14,0	70,3	0,9	3,4	3,0	3,333333	0,88	0,1	2	2
14,2	77,1	0,7	4,9	3,3	4,714286	0,67	0,25	2	2
14,4	65,7	0,9	3,2	3,4	3,777778	1,06	0,2	3	2
14,6	61,7	0,8	2,9	1,6	2	0,55	0,2	3	1
14,8	69,2	0,9	3,5	1,5	1,666667	0,43	0,1	2	2
15,0	72,3	0,8	3,3	3,2	4	0,97	0,25	2	1
15,2	78,8	0,9	3,7	5,7	6,333333	1,54	0,3	3	2
15,4	125,9	0,6	6,0	10,6	17,66667	1,77	1,4	3	3
15,6	119,7	0,3	7,4	9,9	33	1,34	1,3	3	1
15,8	102,6	0,7	7,0	3,8	5,428571	0,54	0,9	3	2
16,0	66,4	0,8	4,5	1,9	2,375	0,42	0,6	3	3
16,2	62,9	0,9	2,0	2,6	2,888889	1,30	0,8	3	2
16,4	70,9	0,7	3,5	2,2	3,142857	0,63	0,75	2	3
16,6	101,3	0,6	7,2	6,9	11,5	0,96	1,5	3	2
16,8	103,6	0,5	7,1	8,2	16,4	1,15	1,6	2	2
17,0	61,9	0,6	4,2	2,9	4,833333	0,69	0,7	3	1
17,2	46,5	0,4	3,5	0,1	0,25	0,03	0,5	3	2
17,4	39,7	0,5	1,8	0,9	1,8	0,50	0,7	3	1
17,6	46,4	0,8	1,3	1,0	1,25	0,77	0,4	3	2
17,8	41,4	0,7	1,6	1,0	1,428571	0,63	0,35	3	2
18,0	54,2	0,6	2,0	0,3	0,5	0,15	1,2	3	2
18,2	61,8	0,6	3,3	1,2	2	0,36	1,25	2	2
18,4	65,7	0,6	4,4	3,2	5,333333	0,73	1,4	2	3
18,6	87,7	0,8	3,6	4,7	5,875	1,31	1,5	3	2
18,8	77,2	0,5	4,2	3,6	7,2	0,86	1,2	3	3
19,0	87,4	0,5	7,8	3,2	6,4	0,41	1,7	3	2
19,2	101,5	0,8	5,5	6,5	8,125	1,18	2	2	3
19,4	105,0	0,4	7,4	7,2	18	0,97	1,4	2	3
19,6	94,9	0,5	6,3	8,8	17,6	1,40	1,6	3	3
19,8	106,1	0,6	7,2	9,4	15,66667	1,31	1,4	2	2
20,0	113,8	0,6	6,6	8,2	13,66667	1,24	1,4	3	2
20,2	51,5	0,4	3,5	1,8	4,5	0,51	0,75	3	2
20,4	55,3	0,4	3,8	0,2	0,5	0,05	1,2	3	3
20,6	62,9	0,5	4,1	1,5	3	0,37	1,2	3	2
20,8	.79,2	0,4	4,6	5,5	13,75	1,20	1,35	3	2
21,0	94,9	0,5	4,9	6,9	13,8	1,41	1,3	3	2
21,2	79,9	0,9	5,1	2,4	2,666667	0,47	0,3	2	2
21,4	61,6	0,9	2,6	0,8	0,888889	0,31	0,4	2	3
21,6	38,6	0,6	2,3	0,0	0	0,00	1,3	3	1
21,8	43,3	0,8	1,3	0,8	1	0,62	0,3	2	2
22,0	53,7	1,0	1,3	1,8	1,8	1,38	0	3	2
22,2	55,3	1,1	1,9	1,4	1,272727	0,74	0	2	1
22,4	46,6	0,9	1,5	0,1	0,111111	0,07	0	2	2
22,6	49,7	0,8	1,4	0,7	0,875	0,50	0,2	2	2

Borehole SK 00.26									
Depth [m]	Total [nGy/	K [%]	eU [ppm]	eTh [ppm]	Th/K*10E⁴	Th/U	Ti [%]	Si Qualitative	Fe Qualitative
22,8	52,3	1,0	1,5	0,9	0,9	0,60	0	2	2
23,0	39,5	1,0	1,0	0,8	0,8	0,80	0,1	3	2
23,2	39,4	0,7	1,3	0,7	1	0,54	0,2	3	1
23,4	40,3	0,5	2,5	0,2	0,4	0,08	0,25	3	2
23,6	33,6	0,6	1,9	0,8	1,333333	0,42	0,3	3	2
23,8	38,0	0,4	2,2	1,1	2,75	0,50	0,35	3	1
24,0	51,5	0,6	2,2	0,6	1	0,27	0,2	3	1
24,2	46,4	0,6	2,2	0,4	0,666667	0,18	0,25	3	1
24,4	32,6	0,4	2,5	0,6	1,5	0,24	0,2	3	2
24,6	36,9	0,6	1,4	0,4	0,666667	0,29	0,8	3	1
24,8	38,3	0,5	1,2	1,0	2	0,83	0,6	3	2
25,0	40,9	0,6	1,1	0,3	0,5	0,27	0,25	3	2
25,2	36,8	0,5	0,8	0,0	0	0,00	0,1	3	1
25,4	39,8	0,6	1,0	0,4	0,666667	0,40	0,2	2	2
25,6	34,1	0,7	1,1	0,1	0,142857	0,09	0,2	3	2
25,8	37,7	0,6	1,4	0,0	0	0,00	0,2	2	2
26,0	31,3	0,7	0,5	0,0	0	0,00	0,35	3	2
26,2	27,2	0,7	0,5	0,0	0	0,00	0,2	3	1
26,4	37,0	0,7	1,0	0,0	0	0,00	0,1	2	1
26,6	34,6	0,8	0,6	0,0	0	0,00	0,1	3	2
26,8	37,1	0,7	0,3	0,0	0	0,00	0,15	2	2
27,0	27,1	0,7	1,2	0,0	0	0,00	0,2	2	1
27,2	33,8	0,8	0,8	0,1	0,125	0,13	0,2	3	2
27,4	31,1	0,6	0,6	0,0	0	0,00	0,25	2	2
27,6	35,8	0,6	1,5	0,0	0	0,00	0,2	2	1
27,8	25,9	0,5	0,2	0,0	0	0,00	0,15	3	2
28,0	24,7	0,5	0,4	0,0	0	0,00	0,25	3	2
28,2	31,0	0,7	0,1	0,0	0	0,00	0,1	3	1
28,4	22,8	0,7	0,1	0,0	0	0,00	0,15	3	1
28,6	35,6	0,8	0,4	0,0	0	0,00	0,15	3	2
28,8	31,1	0,7	0,6	0,0	0	0,00	0,15	3	2
29,0	36,0	0,7	1,0	0,0	0	0,00	0,1	2	1
29,2	43,9	0,5	2,2	0,0	0	0,00	0	3	2
29,4	45,4	0,9	0,9	0,2	0,222222	0,22	0	2	1
29,6	43,0	1,0	1,3	0,7	0,7	0,54	0	2	2
29,8	40,3	0,9	1,4	0,0	0	0,00	0	2	2
30,0	44,2	1,0	0,7	0,1	0,1	0,14	0	3	1
30,2	41,4	1,0	0,2	0,8	0,8	4,00	0	2	1
30,4	51,5	1,0	0,9	0,4	0,4	0,44	0	2	2
30,6	44,4	1,1	0,8	0,7	0,636364	0,88	0	2	2
30,8	48,0	1,1	1,8	0,6	0,545455	0,33	0	2	1
31,0	57,7	1,0	2,0	0,2	0,2	0,10	0	2	2
31,2	53,6	0,8	2,5	0,5	0,625	0,20	0	2	2
31,4	53,8	1,1	1,2	1,2	1,090909	1,00	0	2	2
31,6	53,0	1,3	1,4	0,6	0,461538	0,43	0	2	2
31,8	56,1	1,1	2,1	0,8	0,727273	0,38	0	2	2
32,0	55,3	1,2	2,2	1,0	0,833333	0,45	0,1	2	2

V 90L									
Depth [m]	Total [nGy/h	K [%]	eU [ppm]	eTh [ppm]	Th/K*10^4	Th/U	Ti [%]	Si Qualitative	Fe Qualitative
1,6	8	0,2	0,2	0	0	0			
1,8	0	0,1	0,6	0	0	0			
2	13,9	0,5	0	0	0				
2,2	15,3	0,3	0,1	0	0	0			
2,4	0	0	0,2	0		0			
2,6	5,9	0	0	0					
2,8	5,3	0	0	0					
3	0	0	0	0			1,4	3	2
3,2	10,3	0	0	0			0,9	3	1
3,4	0	0	0,3	0		0	1,3	3	1
3,6	12,3	0	0,4	0		0	1,7	3	1
3,8	0,4	0	0	0			1	3	1
4	4,9	0	0	0			1	3	1
4,2	0	0,1	0	0			1,1	3	1
4,4	0	0	0	0			0,8	3	1
4,6	0	0	0	0			0,8	3	2
4,8	6	0	0	0			0,6	3	2
5	0	0	0	0			0,6	3	1
5,2	0	0	0	0			0,4	3	2
5,4	0	0	0	0			0,3	3	2
5,6	0,6	0	0	0			0,3	3	1
5,8	0	0	0	0			0,2	3	1
6	0	0	0	0			0,2	3	1
6,2	0	0	0	0			0,2	3	2
6,4	1,5	0	0	0			0,3	3	2
6,6	0	0	0	0			0,25	3	2
6,8	0,9	0	0,1	0		0	0,3	3	1
7	2	0	0	0			0,8	3	1
7,2	0	0,1	0	0			0,9	3	1
7,4	0	0	0	0			0,8	3	1
7,6	0	0	0	0			1	3	2
7,8	0,7	0	0	0			0,8	3	2
8	5,7	0,1	0	0			1,1	3	1
8,2	1,6	0	0	0			1,2	3	2
8,4	0	0	0	0			1	3	1
8,6	0	0	0	0			1	3	2
8,8	2,9	0	0	0			1	3	2
9	5,1	0	0	0			1	3	2
9,2	0	0	0	0			1	3	1
9,4	0	0	0	0			1	3	2
9,6	0	0	0	0			0,9	3	2
9,8	5,2	0	0	0			0,75	3	1
10	3,1	0	0	0			1,2	3	2
10,2	0	0	0	0			0,75	3	1
10,4	0	0	0	0			1	3	1
10,6	0	0	0	0			1	3	2
10,8	0	0,1	0	0			0,8	3	2
11	3,1	0	0	0			1,2	3	2
11,2	0	0	0	0			1,2	3	2
11,4	17,9	0,3	1,6	0		0	1,2	3	1
11,6	8,8	0,2	1,3	0		0	1,2	3	1
11,8	13,8	0,3	1,5	0		0	0,2	2	2
12	7,4	0,1	1,4	0		0	0,1	2	1

V 90L									
Depth [m]	Total [nGy/h	K [%]	eU [ppm]	eTh [ppm]	Th/K*10^4	Th/U	Ti [%]	Si $_{Qualitative}$	Fe $_{Qualitative}$
12,2	11,9	0	1,2	0		0	0	2	1
12,4	5,8	0,1	0,9	0		0	0	2	1
12,6	17,2	0,3	1,1	0		0	0,1	2	2
12,8	43,5	0,7	3,4	0,6			0	2	1
13	54,7	0,7	3,4	1			0	2	2
13,2	63,2	0,9	3,6	0,5			0	2	1
13,4	53,4	0,8	3,4	0,8			0	2	2
13,6	46,1	0,6	2,9	0,3			0,25	3	2
13,8	28,6	0,2	1,9	0		0	1,1	3	2
14	13,7	0	0,9	0		0	1,7	3	2
14,2	10,2	0	0,9	0		0	1,7	3	2
14,4	19,3	0,1	1,4	0,2		0,142857	2,8	3	2
14,6	37,5	0	5,1	0,9		0,176471	3,4	3	2
14,8	36,4	0	3,2	1,4		0,4375	3,5	3	2
15	25,3	0	2,3	0,4		0,173913	2,9	3	2
15,2	6,8	0	0,4	0		0	1,7	3	1
15,4	0	0	0,3	0		0	1,5	3	2
15,6	3,6	0	0,1	0		0	1,4	3	2
15,8	5,7	0,1	0	0			1,45	3	1
16	1,8	0	0,1	0		0	1,1	3	2
16,2	0,6	0	0,2	0		0	1,6	3	1
16,4	0	0	0	0			1,3	3	2
16,6	0	0	0	0			0,8	3	2
16,8	6,3	0	0	0			1	3	1
17	2,4	0	0	0			0,8	3	2
17,2	0	0	0	0			0,3	3	2
17,4	6	0	0	0			0,2	3	2
17,6	0	0	0	0			0,3	3	2
17,8	0	0,1	0	0			0,4	3	1
18	4,3	0	0	0					

V 91L							
Depth [m]	Total [nGy/h	K [%]	eU [ppm]	eTh [ppm]	Ti [%]	Si concentratio	Fe concentratior
1,6	7	0	1,7	0			
1,8	8,4	0,1	1,7	0			
2	0	0,2	1,2	0			
2,2	0	0,1	0,9	0			
2,4	2,3	0,1	1,2	0			
2,6	7,9	0,1	0,7	0			
2,8	8	0	1	0			
3	8	0,1	0,6	0	1,5	3	2
3,2	12,1	0	0,6	0	1,1	3	2
3,4	8,1	0,1	0	0	1,5	3	2
3,6	7,4	0	0,3	0	1,5	3	2
3,8	0	0	0,1	0	0,8	3	1
4	5,3	0	0,2	0	0,9	3	1
4,2	1,3	0	0,2	0	1,4	3	1
4,4	0,1	0,1	0	0	1,5	3	2
4,6	4,2	0,1	0,1	0	1,7	3	1
4,8	6,3	0	0,3	0	1,85	3	2
5	11	0,1	0	0	1,4	3	2
5,2	3,3	0	0,1	0	1,1	3	1
5,4	0	0,1	0	0	0,4	3	2
5,6	7,9	0	0	0	0,4	3	2
5,8	2,7	0	0	0	0,6	3	1
6	1,4	0	0,1	0	0,9	3	2
6,2	3,8	0,1	0	0	1	3	1
6,4	0,7	0	0	0	1,2	3	1
6,6	0	0	0	0	1,1	3	1
6,8	7,9	0,1	0	0	1,2	3	1
7	1,8	0	0	0	1,1	3	2
7,2	4,6	0	0	0	1,3	3	1
7,4	0,9	0	0	0	0,8	3	2
7,6	9	0	0	0	0,75	3	2
7,8	0,3	0,1	0	0	1,8	3	1
8	0	0	0	0	1,8	3	2
8,2	0	0	0	0	1,9	3	2
8,4	3,5	0	0,5	0	1,4	3	1
8,6	4,7	0	0,2	0	1,3	3	1
8,8	4	0	0,3	0	1,9	3	2
9	0	0	0	0	1,9	3	2
9,2	0	0	0	0	1,3	3	2
9,4	5,9	0	0	0	1,6	3	2
9,6	0,7	0	0	0	1,85	3	2
9,8	1,3	0	0	0	1,1	3	2
10	0	0	0	0	1,2	3	1
10,2	4,9	0	0	0	1,3	3	2
10,4	0	0	0,3	0	1,4	3	2
10,6	1,5	0	0	0	1,8	3	1
10,8	0	0	0	0	1,8	3	2
11	8,4	0	0,1	0	1,4	3	1
11,2	8,4	0	0,1	0	1,2	3	2
11,4	0	0	0	0	1,2	3	2
11,6	0	0	0	0	1,2	3	1
11,8	0	0	0	0	1,4	3	1
12	0	0	0	0	1,4	3	1

V 91L							
Depth [m]	Total [nGy/h	K [%]	eU [ppm]	eTh [ppm]	Ti [%]	Si concentration	Fe concentration
12,2	0	0	0	0	1,35	3	2
12,4	0	0	0	0	1,3	3	1
12,6	0	0	0	0	1,3	3	2
12,8	16,4	0	0,3	0	0,3	2	1
13	0	0	0,5	0	0	2	1
13,2	11	0	0,2	0	0,1	2	2
13,4	13,1	0,1	0,3	0	0	2	1
13,6	35,1	0,5	1	0,5	0	2	2
13,8	40,9	0,4	2,5	0	0,2	2	2
14	12	0	1,2	0	1,2	3	1
14,2	0,5	0	0,2	0	1,2	3	1
14,4					1,4	3	2
14,6					1,4	3	1
14,8					1,5	3	2
15					1,2	3	1
15,2					1,1	3	1
15,4					1,3	3	1
15,6					1,15	3	1
15,8					1,25	3	1
16					1,9	3	1
16,2					2,8	3	1
16,4					2,5	3	1
16,6					1,7	3	1
16,8					1,4	3	2
17					1,2	3	2
17,2	0	0	0	0	1,7	3	1
17,4	0	0	0	0	1,5	3	2
17,6	3,7	0	0,2	0	1,1	3	2
17,8	0	0	0	0	0,8	3	2

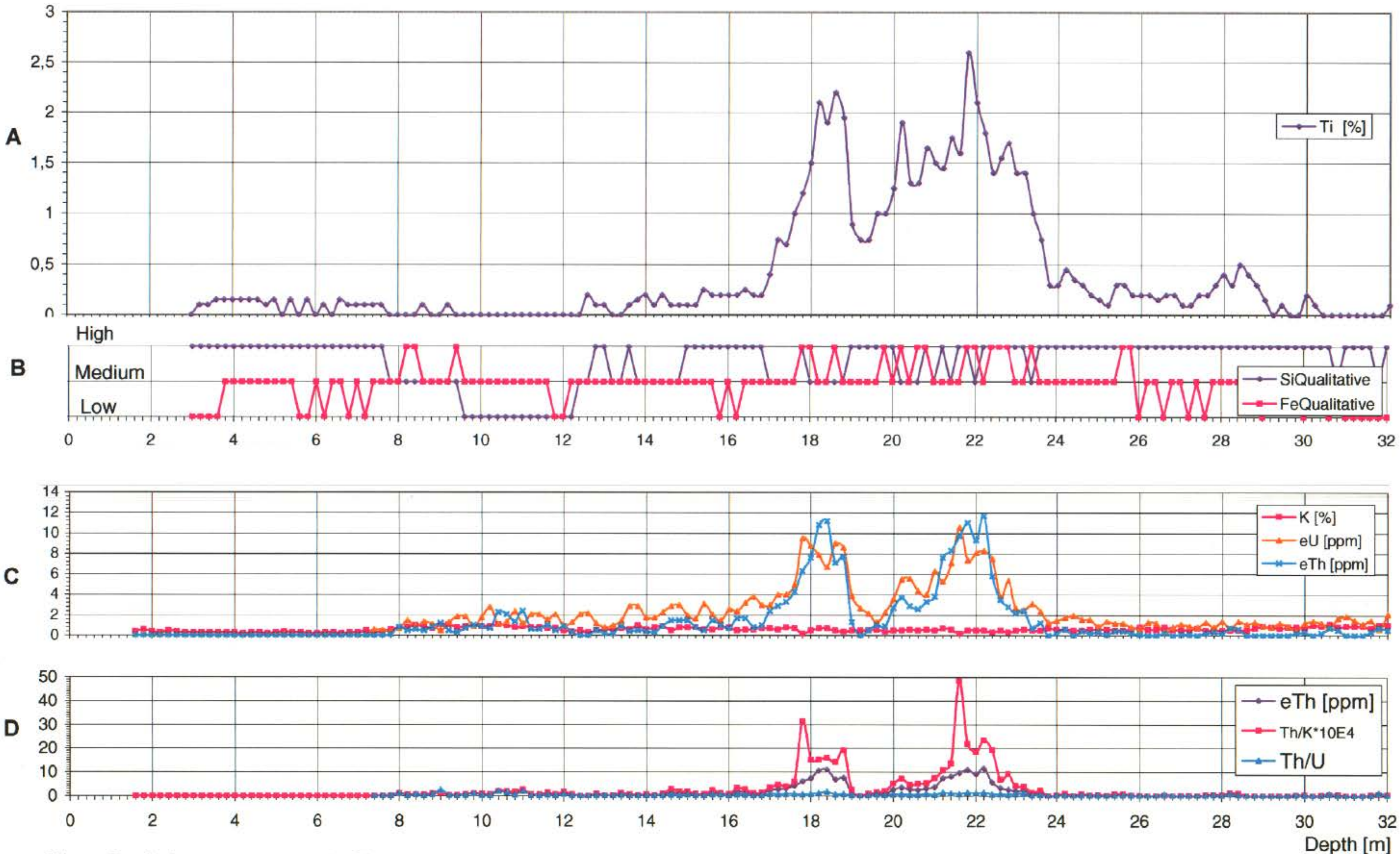


Fig. 2. Borehole measurements in SK 00.25.

A - Log of Ti concentration measured with LSCA -1 and neutron source.

B - Log of Fe, Si qualitative concentrations.

C - Log of K, U, Th concentrations measured with GRS-2000.

D - Log of Th/K Th/U ratios.

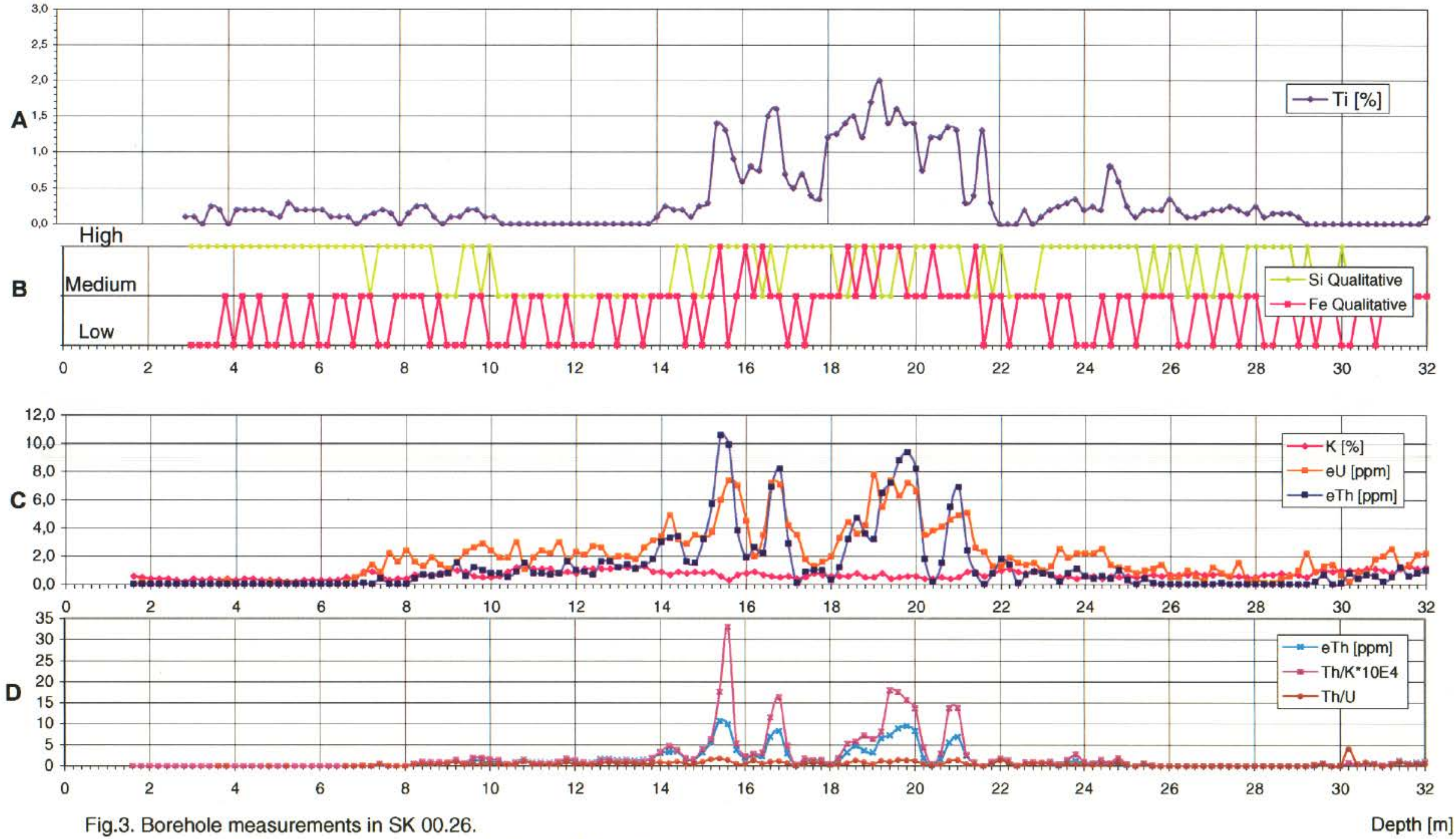


Fig.3. Borehole measurements in SK 00.26.

A - Log of Ti concentration measured with LSCA-1 and neutron source.

B - Log of Fe, Si qualitative concentrations.

C - Log of K, U, Th concentrations measured with GRS-2000.

D - Log of Th/K, Th/U ratios

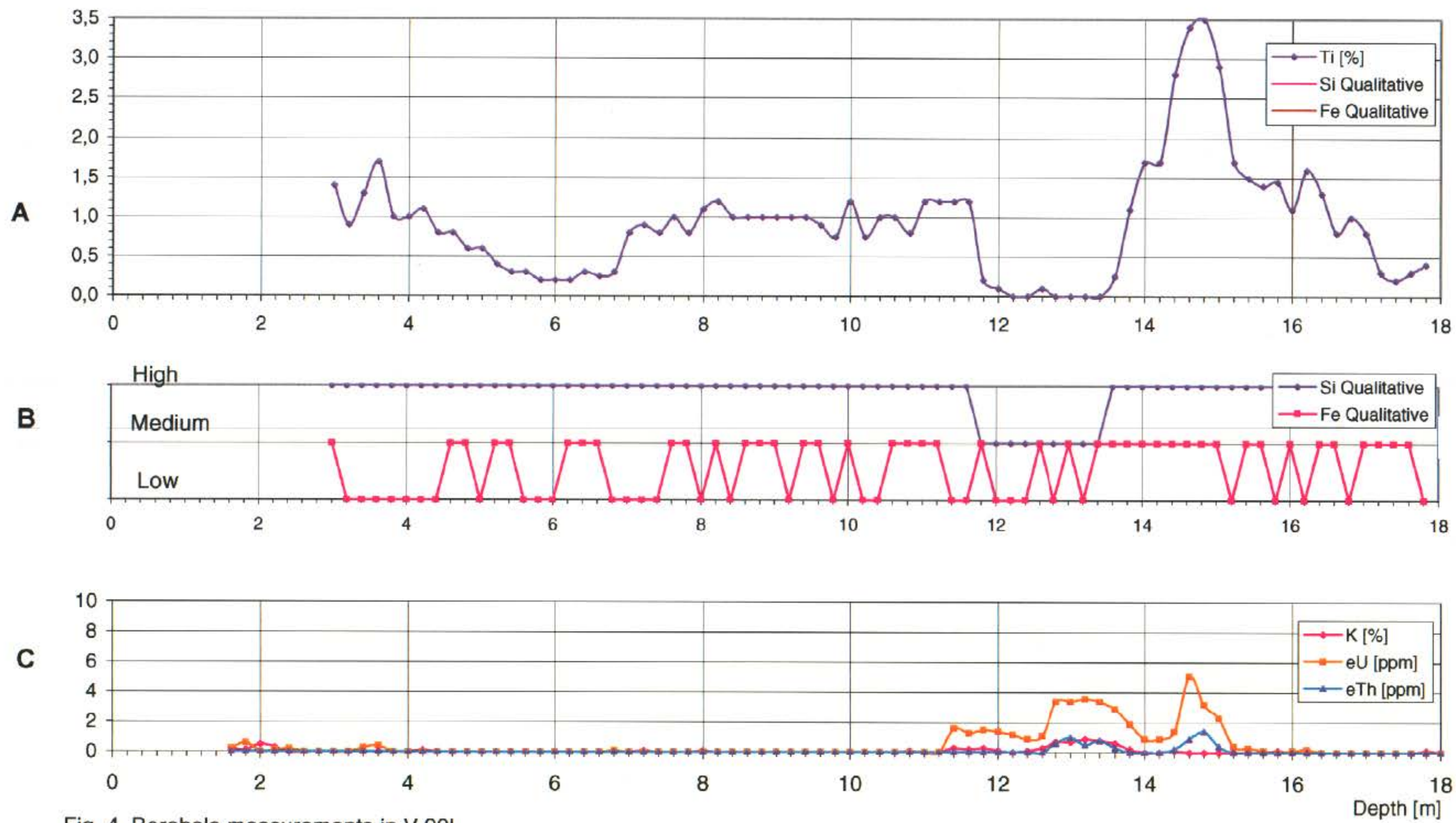


Fig. 4. Borehole measurements in V 90L.

A - Log of Ti concentration measured with LSCA-1 and neutron source.

B - Log of Fe, Si qualitative concentrations.

C - Log of K, U, Th concentrations measured with GRS-2000. U, Th content are extremly low because of the pure quartz sand.

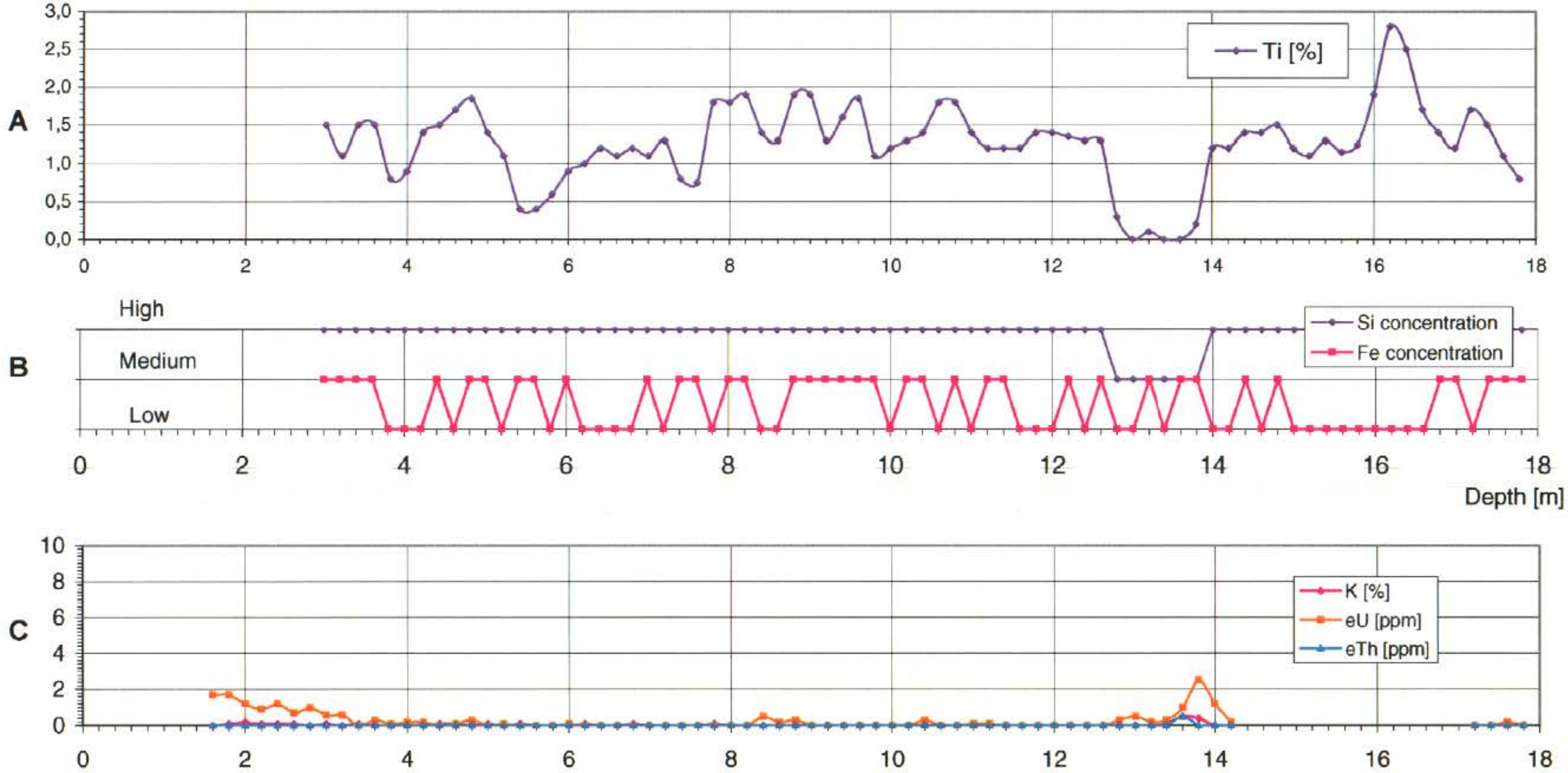


Fig.5. Borehole measurements in V 91L.

A - Log of Ti concentration measured with LSCA -1 and neutron source.

B - Log of Fe, Si qualitative concentrations.

C - Log of K, U, Th concentrations measured with GRS-2000.