Svenska Geotekniska Föreningen
Swedish Geotechnical Society

Report 3:2012E

SGF data format

Data format for transferring data between field and office system and between different office systems

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Linköping 2012

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Foreword

SGF is a versatile, all-round non-profit organization, where most professional geotechnical engineers and companies in the industry are represented, including clients of geotechnical surveys. Reports, method statements etc. have been developed in various committees with representatives of these parties and are therefore well anchored in the industry. The intention is that SGF's various documents shall e.g. provide a basis for procurement and quality management of geotechnical work.

This report is prepared by the SGF's Field Committee and has been sent to industry representatives with a request for comments, after which it has been ratified by the SGF's board.

Swedish Geotechnical Society

Linköping in December 2012

Contents

Chapter 1
Background

In the early 1990s, a format standard was developed for the transmission of field data from geotechnical field investigations to office systems. The work was performed by an extended working group within the SGF's Field Committee. The purpose of the standard was to make the data format independent of specific machines and facilitate the transfer of data between different systems, and also to make drawing and presentation programs independent of the type of equipment used during data collection.

Since it was established, the format has served its purpose well. Thus, the manufacturers of geotechnical equipment in Sweden have adapted themselves to the format and their data acquisition systems deliver geotechnical field data in SGF's format to office systems. Office systems, which may be e.g. presentation programs, databases, filing systems or evaluation programs can thus effectively manage and report the collected, method-specific data.

The format has also been adopted by Norway and Finland, which has meant streamlining for manufacturers of geotechnical field equipment and technical drawing programs to export goods and services.

It is now more than 15 years since the format was established and began to be used. SGF's format standard has had the intended effect but, in view of developments in both the methods and equipment in the area of computers, it is now time for a review and update of the standard.

Chapter 2
Introduction

The present paper presents an updated version of SGF's data format. Basically it has the same structure as previously, supplemented by the current European field standards for the area. A new feature is also that both the geotechnical field measurement methods and the geophysical field methods with a bearing on geotechnical issues have been implemented in the document.

The format standard applies to the transfer of measurement data and controls neither fieldwork nor presentation procedures. The standardised format allows data to be independent of specific machines and facilitates the transfer of data between different systems. The data format has been designed with the aim that it should take readability, including editing, into account. It should also take expansion opportunities for future methods, codes and parameters into account. Any information stored is "earmarked", i.e. identification of method etc. is performed with unique names.

SGF's data format is a description of how the data shall be named and structured, primarily in order to facilitate reporting, but also the storage of the collected data for future use. SGF's data format can be termed as a sector agreement in Sweden, which does not mean, however, that it is an international, European or Swedish standard.

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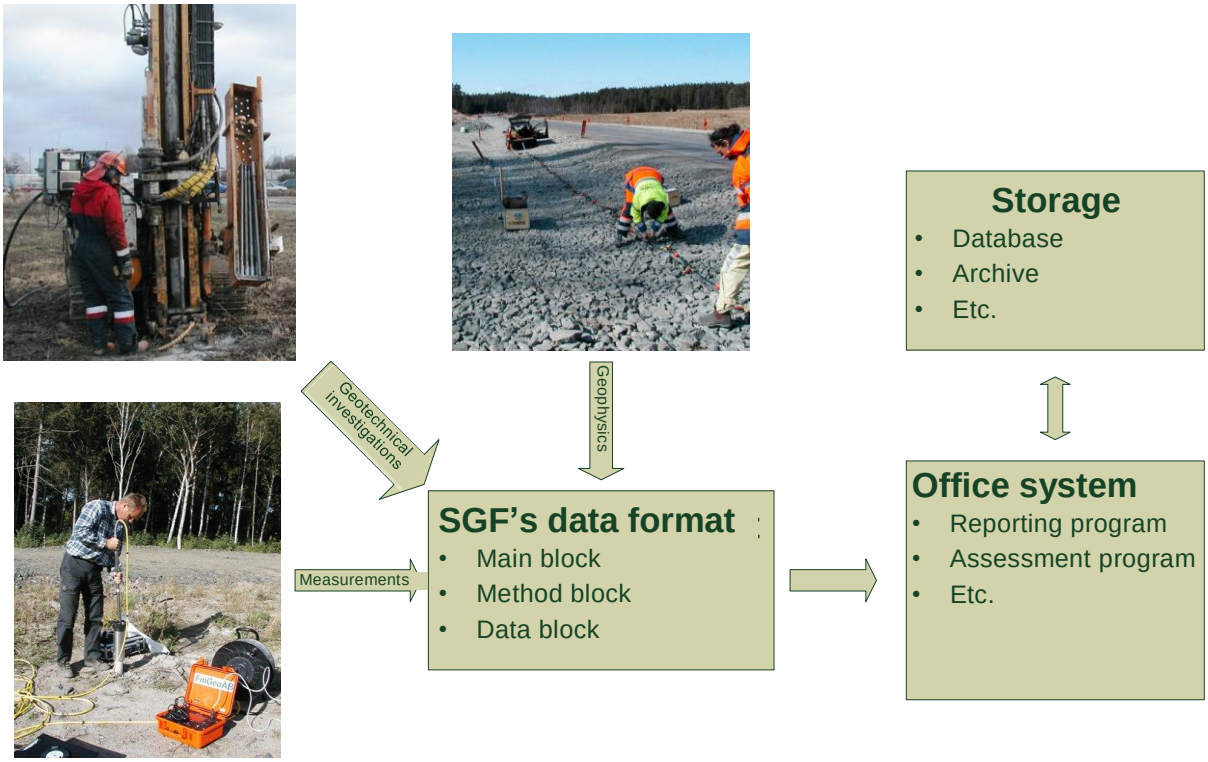

Figure 1 Principle, flow of data with SGF's data format

In the field, data is usually collected automatically using a data collection system. Data is stored in some type of memory device that can be read by an office system. Here, data can be displayed or processed, or transferred to another office system. Furthermore, the input of data can be transferred directly to an office system from a measurement system or evaluation program. Data can then be archived for future use.

Chapter 3
Definitions

Block:

Sequence of items, words or characters, which for technical or logical reasons are designed to be treated as one unit.

Data:

Representation of values, concepts or instructions in a form suitable for transmission, interpretation or processing by humans or by automatic devices.

Data recording equipment:

Equipment used to record data in the field.

Data quantity:

Quantity of data that has one or more common characteristics.

SGF's Format standard:

A description of how the data shall be named and structured, primarily in order to facilitate reporting, but also the storage of the collected data for future use. SGF's format standard can be termed as a sector agreement in Sweden, which does not mean, however, that it is an international, European or Swedish standard.

Data storage unit:

Equipment used for the storage of data in the field and from which data can be recovered.

Main block:

Block that contains general information about a survey point. Main blocks start with $ <CR><LF> in the data file.

Method block:

Block that contains method-specific information. Method blocks start with £ <CR><LF> in the data file.

Data block:

Blocks containing measurement values and other information collected at predetermined intervals, indicated by a sync-parameter. Data blocks start with # <CR><LF> in the data file.

Comments code:

Codes that are used by field and laboratory personnel for observations and assessments performed in the field.

Method code:

Codes used in the Main Block to describe which investigation method is used. Method code is indicated with HM={method number}.

Measurement parameter:

Parameters determined and saved during a test; cf. synchronisation parameters.

Office system:

Hardware and software used for processing and display of data.

Control characters:

Characters in the data file that separate the main method or data blocks from each other.

Synchronisation parameter:

The parameter that links the measurement values to e.g. depth, time or angle; cf. measurement parameter.

Format code:

Designation of parameter according to this standard.

Chapter 4
Area of application and updating

SGF's data format can be used for all geo-related investigation methods listed in this document. The "Base Units" in the standard, therefore, are methods that are comprised of a number of parameters in the main block, method block and data block. The standard is not intended to be used for individual parameters without connection to a method.

For some methods, it is not intended that they should be measured and stored according to this standard directly in the field, even though it is entirely possible. The aim is that this data should instead be transferred to SGF's data format after the data processing and then be simplified by loading into an office system. This applies mainly to the geophysical measurement methods, but also to geotechnical field measurements.

New methods can be designed, and through an application to SGF's field committee, it can be decided to include the new method in the standard. Applications must be for a complete method, with all parameters specified in the main blocks, method blocks and data blocks. The appropriate application form can be obtained via SGF's website or by contacting the chairman of the field committee.

Purchasers of geotechnical investigations must indicate in specifications and other documents that the methods included in this standard format shall be reported in accordance with this.

The present standard will be continually revised and it will always be possible to find the latest version on SGF's website, www.sgf.net.

This document completely replaces the previous document regarding the data format standard, dated 12/10/1994, decided by SGF.

Chapter 5
Methods

5.1 METHODS COVERED BY THE STANDARD

Every method included in the format standard has a specific code, the method code. This code is indicated in the main block and controls which mandatory information shall be given, what data is mandatory and which is optional. In Table 1-4 below it is indicated which methods are covered by this standard, and Appendix A contains more information about these methods.

5.2 METHODS WITH EUROPEAN FIELD STANDARD

Several of the geotechnical field methods that have traditionally been used in Sweden are now part of the European field standards (EN) or Technical Specifications (TS). The EN standards have also been adopted as Swedish Standards (SS). This means that these standards take over and all conflicting Swedish documents are no longer valid.

In this format standard, the European field methods have been replaced with new numbers on the method code (the parameter HM). 100 has been added to the previous number. For example, Cone penetration testing, which previously had HM = 7, is replaced with HM = 107A (with pore pressure measurement) or 107B (without pore pressure measurement), depending on the variant that is used.

Sampling methods have been replaced with three codes, one relating to undisturbed sampling (HM = 130), one related to disturbed sampling (HM = 131), and the third related to core sampling (HM = 132). The current sampling method is specified in the method block.

Table 1 European field methods included in SGF's format standard

Method code	Name	Reference document
101	Weight sounding test, manual	SIS-CEN ISO/TS 22476-10:2005 or "Method description for weight sounding test", SGF report 3:99[1]
102	Weight sounding test, mechanical	SIS-CEN ISO/TS 22476-10:2005 or "Method description for weight sounding", SGF report 3:99[1]
107A	Cone penetration test , CPTU (with pore pressure measurement)	SS EN ISO 22476-1
107B	Cone penetration test CPT (without pore pressure measurement)	SS EN ISO 22476-1
108A	Dynamic probing, former Swedish HfA	SS EN ISO 22476-2:2005/A1:2011
108B	Dynamic probing Light	SS EN ISO 22476-2:2005/A1:2011
108C	Dynamic probing Medium	SS EN ISO 22476-2:2005/A1:2011
108D	Dynamic probing Heavy	SS EN ISO 22476-2:2005/A1:2011
108E	Dynamic probing Super-heavy	SS EN ISO 22476-2:2005/A1:2011
114	Flat dilatometer test	SIS-CEN ISO/TS 22476-11:2005 or "Recommended standard for dilatometer testing", SGF report 1:95[1]
116	Pressuremeter test	SS EN ISO 22476-8
121A	Standard penetration test	SS EN ISO 22476-3:2005/A1:2011
121B	Standard penetration test	SS EN ISO 22476-3:2005/A1:2011
130	Undisturbed sampling	SS EN ISO 22475-1:2006
131	Disturbed sampling	SS EN ISO 22475-1:2006
132	Core sampling	SS EN ISO 22475-1:2006

[1]Since technical specification is not accepted as Swedish standard, Swedish method descriptions also apply

Earlier Swedish field methods that have now been replaced with a European standard, are not included in this new SGF data format, but can be used while this is implemented in equipment and office systems, preliminary until 31/12/2018.

5.3 OTHER FIELD METHODS

Traditional Swedish and Nordic field methods that are not covered by a European standard have been updated in this format standard. This mainly affects the general information in the main block, which is now equal to that required for the European field methods, but some new methods have also been added. Soil-rock sounding has also been revised with a new method description.

Table 2 Other field methods included in SGF's format standard

Method code	Name	Reference document
3	Pressure sounding	Field Manual, SGF Report 1:2013
10	Impact sounding	Field Manual, SGF Report 1:2013
11	Light sounding	Field Manual, SGF Report 1:2013
12	Soil-rock sounding 1	"Method description for soil-rock sounding", SGF report 4:2012
13	Field vane test	"Recommended standard for vane testing", SGF report 1:93
23	Rotary pressure sounding	Guide for performance of rotary pressure sounding. (1982, Rev. 1 1989)
24	Norwegian total sounding	Guide for the performance of total sounding. (1994)
39	Finnish HK sounding	-
41	Soil-rock sounding 2	"Method description for soil-rock sounding", SGF report 4:2012
42	Soil-rock sounding 3	"Method description for soil-rock sounding", SGF report 4:2012
43	Percussion drilling (MWD)	"Method description for soil-rock sounding", SGF report 4:2012
73	Soil-rock-Total sounding	"Method description for soil-rock sounding" SGF report 4:2012
82	Column penetration testing, measurement in rig	Swedish Deep Stabilization Research Centre, Report No. 17, Appendix C, Section 1, and with discrepancies and clarifications in the Swedish Transport Administration's TK Geo 11, Appendix B
83	Column penetration testing, measurement in tip	Swedish Deep Stabilization Research Centre, Report No. 17, Appendix C, Section 1, and with discrepancies and clarifications in the Swedish Transport Administration's TK Geo 11, Appendix B

5.4 GEOTECHNICAL FIELD MEASUREMENT METHODS

In the present format standard, geotechnical Field measurement methods have been added. Today it is common for repeated measurements over time to be performed in conjunction with the design, but mainly in the construction and management stage, such as groundwater levels. These measurements can be performed either manually or by using an automatic data collection system.

The methods have in common that there are one or more measurements that are made at different times. For several of these measurements, a reference measurement is performed (baseline measurement) and future measurements are then reported in relation to the reference measurement. For the methods inclinometer measurements and bellows hose settlement gauges at the same measurement point, measurement is also performed at multiple points at depth, and for hydrostatic profiling, measurements are performed at several points in a cross-section.

Certain measurements can have alternative sync-parameters. This applies to e.g. inclinometer measurement, where both depth and time can be sync-parameters.

Table 3 Geotechnical field measurement methods included in SGF's format standard

Method code	Name	Reference document
201	Inclinometer measurement	Field manual, SGF report 1:2013
202	Bellow hose settlement measurement	Field manual, SGF report 1:2013
203	Hydrostatic profiler	Field manual, SGF report 1:2013
204	Gauge measurement	Field manual, SGF report 1:2013
205	Magnetic settlement gauge	Field manual, SGF report 1:2013
218	Pore pressure measurement	SS EN ISO 22475-1:2006
219	GW in open tube, casing	SS EN ISO 22475-1:2006
220	GW in tube with filter tip	SS EN ISO 22475-1:2006

5.5 GEOPHYSICAL METHODS

For geophysical data, there is no standard data format (except seismic). Each instrument manufacturer usually has their own format and related display program. In some cases, data is obtained in ASCII format. Each data point, however, usually consists of the coordinates x, y, z and a measurement value.

Some of the geophysical methods' data processing in the evaluation stage is based on advanced signal processing, a field in which developments are progressing relatively quickly. This means that it sometimes occurs that older measurement data is reprocessed and improved interpretations can be performed. In this version of the SGF Data Format, focus is on enabling co-interpretation of processed geophysical data with other geotechnical information.

Table 4 Geophysical field methods included in SGF's format standard

Method code	Name	Reference document
301	Refraction seismics	SGF Method sheet Seismics 01/01/2006
302	Surface wave seismics	SGF Method sheet Surface wave seismics 01/01/2006
303	Resistivity	SGF Method sheet Resistivity 01/01/2006
304	Induced Polarisation	See the manufacturer's recommendations
305	Georadar	SGF Method sheet Georadar 01/08/2006
306	VLF	See the manufacturer's recommendations
307	Magnetometry	See the manufacturer's recommendations
308	Other EM	See the manufacturer's recommendations

Chapter 6
Structure of the data format

6.1 STRUCTURE

Data is stored in a file consisting of main blocks, method blocks and data blocks. One or more surveys can be reported in the same file. The standard is made up of method codes (HM), each with a specific content of parameters in both the main block, the method block and the data block. The various blocks in a method are separated using various control characters. If multiple surveys are stored in the same file, the surveys are separated using a control character. Each file has a terminating control character.

The following sections describe the standard's different types of format codes and how they are presented. Figure 2 shows the structure of a file according to the SGF data format.

Function	Contents
Start main block	**$**
Entries in the main block	The main block contains general information about the investigation and the investigation point.
Start method block	**€**
Information in method block	The method block contains general data for a specific method of investigation.
Start data block	**#**
Data first investigation	The data block contains measurement data and observations.
Start of new main block	**$**
Other investigations in the same file.	The above can be repeated for several investigations, which are then saved in the same file.
End of file	**EOF**

Figure 2 General structure of the data file in SGF's data format

The main block is the same for all types of surveys within each group. There are different main blocks for geotechnical field investigations, field measurements and geophysics. The main block specifies a method code (HM) that governs the parameters and data included in the method.

The **method block** contains general data for each specific method of investigation. It must be used where they are included in the standard.

The **data block** contains data and observations consisting of measurement data, comment codes and stop codes for the survey in question. The measurement interval is determined by the frequency specified for the sync-parameter.

Codes are separated by commas and after the format code, there is an equals sign followed by data. Numerical data is indicated with a point as the decimal separator.

6.2 PARAMETERS IN THE MAIN BLOCK

The main block contains general information about the survey point: identification, location, equipment, etc. Start of the main block is indicated by $ <CR><LF>. In the main block, optional characters are used for naming the current parameter. In previous previous versions of this standard, a maximum of two letters could be used, with H, I or K as the first letter, but this rule has been removed.

The main block always specifies a method code, which controls the parameters to be specified and measured for the current method.

Table 5 shows the parameters that must be included in the main block for geotechnical field investigations. For geotechnical field measurements and geophysical methods, there is a corresponding main block, with information adapted for these methods, see Table 6 and Table 7.

Table 5 Information requirements in the main block for Geotechnical field investigations

Information	Format code
Name and location for the project	KP
Work or project number	HJ
Method	HM
Date	KD
Responsible drilling operator or measurement operator	Person
Investigation point	HK
Surveying occurs in other order	InMatn
Positioning measuring in x, y, z	HX, HY, HZ
Length measurement	HH, HV, HL
Investigation on water	H2OJobb
Pre-drilling, if used	HO
Dimension casing pipe, D_y/D_i	FoderDim
Length, casing pipe	FoderDj
Type of drilling rig	Rigg
Manufacturer, model and/or number on the probe	HN

Table 6 Information requirements in the main block for Geotechnical field measurement methods

Information	Format code
Name and location for the project	KP
Work or project number	HJ
Method	HM
Date	KD
Responsible drilling operator or measurement operator	Person
Investigation point	HK
Manufacturer, model and/or number on the probe	HN
Reference measurement	RefMatn
Date Reference measurement	RefDatum

Table 7 Information requirements in the main block for geophysical measurements

Information	Format code
Name and location for the project	KP
Work or project number	HJ
Method	HM
Date	KD
Responsible drilling operator or measurement operator	Person
Investigation point	HK
Surveying occurs in other order	InMatn
Positioning measuring-in x, y, z	HX, HY, HZ
Length measurement	HH, HV, HL

Appendix B contains a list of all parameters that can be included in the main block according to SGF's format standard.

6.3 PARAMETERS IN THE METHOD BLOCK

The method block contains general information for a specific investigation method, such as type of sampler or other selected equipment. Appendix C contains all the parameters that can be included in the method block, according to SGF's format standard, cf. below. Start of the method block is indicated by € <CR><LF>. The main block uses optional characters for naming the current parameter.

Table 8 shows an example of the parameters that must be included in the method block for soil-rock sounding. There are similar method blocks for all other methods, with information adapted for each method.

Table 8 Example of information in the method block (Soil-rock sounding)

Information	Format code
Diameter drill bit	KronD
Type of drill bit	KronTyp
Rods	Rod
Flush medium	SpolM
Hammer	Hammare

6.4 PARAMETERS IN THE DATA BLOCK

The data block contains the measurement values recorded by the equipment during the probing, the sampling or measurement, and coded comments from the field and laboratory personnel. Start of the data block is indicated by # <CR><LF>. The data block uses one or more characters for a parameter. Each line begins with a synchronization parameter that represents e.g. the depth, time, or angle, followed by one or more measurement parameters in the form of a text or measurement value.

Figure 3 shows an example of part of the data block for pressure sounding (HM=3). The synchronization parameter is the depth D. The codes A, B, R and AQ are the data parameters for the current method.

```
.
.
.
D=0.94,A=15.854,B=20,R=0,AQ=0
D=0.98,A=20.65,B=17,R=0,AQ=0
D=1.02,A=23.089,B=23,R=0,AQ=0
D=1.06,A=25.691,B=20,R=0,AQ=0
D=1.1,A=24.878,B=21,R=0,AQ=0
.
.
.
```

Figure 3 Example of part of the data block for pressure sounding (HM=3).

Appendix D contains a list of all parameters that can be included in the data block.

6.5 COMMENT CODES

In the field, various events or assessments can be added to be data collection intermittently. This could for example be field determination of soil type or details of the rock quality. Codes used for these purposes can be found in a comments code list, see Appendix E. These codes can then be interpreted by the reporting program and translated into symbols or designations according to SGF's recommendations for reporting of geotechnical investigations.

Appendix E shows that comment codes are divided into the following groups:

- General codes
- Comment codes
- Assessment codes
- Hydrological determination
- Free codes

Chapter 7

Data sheet - Description of parameters for all methods

For each method covered by this standard, the format is described in detail in a data sheet, where the header contains information about reference documents, method code, date and revision date. The document also contains requirements for parameters in the method block and in the data block. Figure 4 shows an example of such a sheet for soil-rock sounding (JB2).

SGF Formatstandard	Method: Soil-rock sounding 2	Abbreviation: Jb-2	Method code: 41	Appendix F
				Page: 10(51)
	Reference document: Method description for soil-rock soundings, SGF report 4:2012		Origin date: 2013-02-27	Latest revision: 2013-02-27

Main block: See Appendix F Page 1

Method block

Information	Format code	Comments
Diameter Drill bit	KronD	
Type of drill bit	KronTyp	
Rods	Rod	
Flush medium	SpolM	
Hammers	Hammare	

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	D	Depth	m	
	B	Penetration rate	mm/s	
	C	Penetration resistance	s/0.2 m	
	A	Feed trust force	kN	
	P	Rotary pressure on rotary engine	MPa	Alternative Torque (V)
	AZ	Hydraulic Hammer pressure	MPa	
	K	Comments	See comment codes	
	R	Rotation speed	rpm	
	I	Flush medium pressure	MPa	
	J	Flushing rate	l/min	
	V	Torque	kNm	Alternatives to Pressure on rotary engine
	AP	Ramming	0=off, 1=on	Alternatives to Hammer pressure
	HG	Free water level in bh	m u my	When available

Figure 4 Example of data sheet.

Appendix F contains a data sheet for each method indicated in this document.

Attachment A.
Method codes

SGF DATA FORMAT - Method codes

Code	Method	Abbreviation	Remark
GEOTECHNICAL FIELD METHODS			
3	Pressure sounding	Tr	SGF Report 1:2013, Geotechnical Field Manual
10	Impact sounding	Slb	SGF Report 1:2013, Geotechnical Field Manual
11	Light sounding	Sti	SGF Report 1:2013, Geotechnical Field Manual
12	Soil-rock sounding 1	Jb-1	"Method description for soil-rock sounding", SGF report 4:2012
13	Field vane test	Vb	"Recommended standard for vane testing", SGF report 1:93
23	Rotary pressure sounding	Drt	Guide for performance of rotary pressure sounding. (1982, Rev. 1 1989)
24	Norwegian total sounding	Tot	Guide for the performance of total sounding. (1994)
39	Finnish HK sounding	HK	-
41	Soil-rock sounding 2	Jb-2	"Method description for soil-rock sounding", SGF report 4:2012
42	Soil-rock sounding 3	Jb-3	"Method description for soil-rock sounding", SGF report 4:2012
43	Percussion drilling (MWD)	MWD	"Method description for soil-rock sounding", SGF report 4:2012
73	Soil-rock-Total sounding	Jb-tot	"Method description for soil-rock sounding", SGF report 4:2012
82	Column penetration testing, measurement in rig	KpsT	Swedish Deep Stabilization Research Centre, Report No. 17, Appendix C, Section 1, and Swedish Transport Administration's TK Geo 11, Appendix B

83	Column penetration testing, measurement in tip	KpsS	Swedish Deep Stabilization Research Centre, Report No. 17, Appendix C, Section 1, and Swedish Transport Administration's TK Geo 11, Appendix B
101	Weight sounding test, manual	WST	SIS-CEN ISO/TS 22476-10:2005 or "Method description for weight sounding", SGF report 3:99
102	Weight sounding test, mechanical	WST	SIS-CEN ISO/TS 22476-10:2005 or "Method description for weight sounding", SGF report 3:99
107A	Cone penetration test , CPTU (with pore pressure measurement)	CPTU	SS EN ISO 22476-1
107B	Cone penetration test CPT (without pore pressure measurement)	CPT	SS EN ISO 22476-1
108A	Dynamic probing, former Swedish HfA	DPSH-A	SS EN ISO 22476-2:2005/A1:2011
108B	Dynamic probing Light	DPL	
108C	Dynamic probing Medium	DPM	SS EN ISO 22476-2:2005/A1:2011
108D	Dynamic probing Heavy	DMH	SS EN ISO 22476-2:2005/A1:2011
108E	Dynamic probing Super-heavy	DPSH-B	SS EN ISO 22476-2:2005/A1:2011
114	Flat dilatometer test	DMT	SIS-CEN ISO/TS 22476-11:2005 or "Recommended standard for dilatometer testing", SGF report 1:95
116	Pressuremeter test	PMT	SS EN ISO 22476-8
121A	Standard penetration test	SPT	SS EN ISO 22476-3:2005/A1:2011
121B	Standard penetration test	SPT(C)	SS EN ISO 22476-3:2005/A1:2011
130	Undisturbed sampling	Enter method abbreviation: e.g. KvSt1,	SS EN ISO 22475-1:2006

131	Disturbed sampling	Enter method abbreviation: e.g. Skr	SS EN ISO 22475-1:2006
132	Core sampling	Kr	SS EN ISO 22475-1:2006
Code	**Method**	**Abbreviation**	**Remark**
GEOTECHNICAL FIELD MEASUREMENT METHODS			
201	Inclinometer measurement	Inklin	SGF Report 1:2013, Geotechnical Field Manual
202	Bellow hose settlement measurement	B-hose	SGF Report 1:2013, Geotechnical Field Manual
203	Hydrostatic profiler	H-hose	SGF Report 1:2013, Geotechnical Field Manual
204	Gauge measurement	Water level gauge	SGF Report 1:2013, Geotechnical Field Manual
205	Magnetic settlement gauge	Magnet	SGF Report 1:2013, Geotechnical Field Manual
218	Pore pressure measurement	Pp	SS EN ISO 22475-1:2006
219	GW in open tube, casing	Red	SS EN ISO 22475-1:2006
220	GW in tube with filter tip	Rf	SS EN ISO 22475-1:2006
GEOPHYSICAL FIELD METHODS			
301	Refraction seismics	Refrseism	SGF Method sheet efraction R seismics 01/01/2006
302	Surface wave seismics	Ytseism	SGF Method sheet Surface wave seismics 01/01/2006
303	Resistivity	Res	SGF Method sheet Resistivity 01/01/2006
304	Induced Polarisation	IP	See the manufacturer’s recommendations
305	Georadar	Rad	SGF Method sheet Georadar 01/08/2006
306	VLF	VLF	See the manufacturer’s recommendations
307	Magnetometry	Mag	See the manufacturer’s recommendations
308	Other EM	EM	See the manufacturer’s recommendations

Attachment B.
Parameters in the main block

SGF's data format parameters in main block

Code	Parameters Main block	Unit	Format	Remark
FoderDim	Dimension casing tube (Dy/Di)	mm	Figure	
FoderDj	Length, casing tube	m	Figure	
H2OJobb	Job on pontoon		Text	Yes/No
HH	Distance to the right	m	Figure	
HJ	Work or project number		Figure	
HK	Investigation point		Figure	
HL	Section	m	Figure	
HM	Method code	figure	see Method codes	
HN	Serial number measurement probe		Figure	
HO	Pre-drilling depth	m	Figure	
HQ	Signature		Text	
HV	Distance to the left	m	Figure	
HX	X-coordinate	m	Figure	
HY	Y-coordinate	m	Figure	
HZ	Z-coordinate	m	Figure	
InMatn	Surveying in reverse order		Text	Yes/No
KD	Date		figure (YYYYMMDD)	
KP	Project name		Text	
Person	Responsible drilling operator or measurement operator		Text	
RefDatum	Date Reference measurement		figure (YYYYMMDD)	
RefMatn	Reference measurement		Text	Yes/No
Rigg	Type of drilling rig		Text	

Attachment C.
Parameters in the method block

SGF's data format parameters in method block

Code	Parameter Method block	Unit	Format	Remark
AN	Start depth	Numeral	m	(metres under pipe top)
Ant-f	Screened/unscreened			
Ant-typ	Antenna type			e.g. unshielded 50 MHz
AO	End depth	Numeral	m	
cc-givare	c/c sensor			Distance between geophones
cc-mätn	c/c measurement points			Distance between measurement points
deltaDjup	Measurement range			
DynTyp	Type of impact cushion			loose or solid
Elektrodkonfig	Electrode configuration			e.g. Wenner, dipol-dipol
Elektrodtyp	Electrode type			e.g. steel
Energi	Energy source			Dynamite, sledgehammer, ...
f	Sensor frequency			e.g. 9.8 kHz
FiLiq	Fluid in filter		Text	
FiPos	Filter location	Numeral	value 1, 2 or 3	
FiTyp	Filter type	Text		
Geof-f	Geophone type;			e.g. 10 Hz, vertical
Geof-riktn	Frequency and orientation			
Grad	Gradiometer			
Gummi	Use of damper			Yes/No
Hammare	Hammers	Text		
HI	Start time			

Code	Parameter Method block	Unit	Format	Remark
HL	Section			
HXslut	X endpoint			
HXstart	X starting point			
HYslut	Y endpoint			
HYstart	Y start point			
HZ	Level tube top			
HZslut	Z end point			
HZstart	Z start point			
IA	Main measurement direction	Numeral	degrees	
IE	Tip net area factor			
IF	Mantle net area factor			
IG	Application class	Numeral	1-4	Available in 4 different classes (1-4)
Instr	Geophysical instrument			Instrument type and manufacturer
KonTyp	Type of cone	Text		loose or solid
KQ	Constant	Numeral		
KronD	Diameter drill bit	Numeral	mm	
KronTyp	Type of drill bit	Numeral	mm	
MemTyp	Membrane type	Text		
Metod	Method	Text		
Off	Offset	Numeral		
PelMetod	Method,	Text		
Pman	Zero reading, manometer	Numeral		
PmtBorr	Drilling procedure	Text		
PmtFI	Diameter, probe	Numeral	mm	
PmtTyp	Type of Pressuremeter	Text		
Pos-typ	Method for positioning			(Hand-GPS, RTK-GPS, Totalstation…)
ProvD	The sampler’s diameter	Numeral	mm	
ProvK	Sampling category	Text		Text A, B or C

Code	Parameter Method block	Unit	Format	Remark
ProvL	The sampler's length	Numeral	mm	
ProvNed	Penetration method	Text		Static, dynamic, rotation and etc.
ProvTyp	Type of sampler*	Text		Text
Res-instr	Type of equipment/instrument			Manufacturer, model: e.g. ABEM Terrameter LS
Rod	Rods	Text		Type and diameter
RorL	Tube length	Numeral	m	
Slits	Slotted tube used	Text		Yes/No
Spets	Type of tip	Text,		Type and diameter
SpolM	Flush medium	Text		
ST	System stiffness	Numeral		
Transm	Transmitter	Text	Text	e.g. Murmansk
Transm-type	Fixed / portable	Text	Text	
Uppstick	Length above ground level			
Utvärdprog	Evaluation software			e.g. Rayfract
VC	Original volume Measurement cell			
VingD	Size of vane	Numeral	mm/mm	Diameter/Thickness
VS	Size of vane	Numeral	mm/mm	Diameter/height

Attachment D.
Parameters in the data block

SGF's Data format parameters in the data block

Code	Parameter Data block	Unit	Format	Remark
A	Feed trust force	kN	figure	
AA	Rotary angle	degrees	figure	
AB	Torque	Nm	figure	
AD	Time	seconds	figure	
AE	Contact pressure	kPa	figure	
AF	Expansion pressure	kPa	figure	
AK	Point of time	figure	(YYYY MMDD HHMM)	
AL	Equilibrium pore pressure	kPa	figure	
AN	Start depth	m	figure	
AO	End depth	m	figure	
AP	Ramming	0=off 1=on	figure	
AQ	Rotation	0=off 1=on	figure	
AR	Flushing	0=off 1=on	figure	
AS	Shear strength	ored	figure	
AZ	Hydraulic hammer pressure	MPa	figure	Envi
B	Penetration rate	mm/s	figure	
BE	Name		text	
C	Penetration resistance	s/0.2m	figure	
D	Depth	m	figure	
ED	Dilatometer module		figure	
EM	Pressurmeter module		figure	

Code	Parameter Data block	Unit	Format	Remark
FS	Friction, uncorr.	kPa	figure	Geotech
FT	Friction, corr.	kPa	figure	
G	Flush rate out	l/min	figure	
GA	Type of aquifer		figure	
GF	Filter length gw-tube	m	figure	
GS	Tip level	m	figure	
GT	Top level	m	figure	
GW	GW/pore pressure level	m	figure	
H	Turning	half revolution /0.2m	figure	
I	Flush pressure	MPa	figure	
J	Flush rate	l/min	figure	
K	Comments			see Comment codes
L	Side pressure	kPa	figure	
M	Conductivity	s/m	figure	
MS	Membrane stiffness.		figure	
N	Rod friction	kN	figure	
NA	Zero-value tip pressure	MPa	figure	Previous test
NB	Zero-value friction	kPa	figure	Previous test
NC	Zero-value pore pressure	kPa	figure	Previous test
O	Temperature	degrees	figure	
P	Pressure inrotary motor	MPa	figure	
PA	Calibration A		figure	
PB	Calibration B		figure	
PF	Creep pressure		figure	
PL	Limit pressure		figure	
PO	Hor. rest soil pressure, assumed		figure	
QC	Cone tip resistance,	MPa	figure	

Code	Parameter Data block	Unit	Format	Remark
	uncorr.			
QT	Cone tip resistance, corr.	MPa	figure	
R	Rotation speed	rpm	figure	
S	Ramming	Blow/0.2 m	figure	
SA	Ramming	Blow/10cm	figure	
SV	Sensitivity, vane test		figure	
TA	Inclination	degrees	figure	
U	Measured pore pressure	kPa	figure	
UO	Initial pore pressure	kPa	figure	
V	Torque	kNm	figure	
VA	Volume 30s		figure	
VB	Volume 60s		figure	
VC	Original volume		figure	
VF	Creep volume		figure	
VO	Zero volume		figure	
W	Load	kN	figure	
NA2	Zero value after test, tip pressure	MPa		
NB2	Zero value after test, Friction	kPa		
NB2	Zero value after test, Pore pressure	kPa		
Udelta	Excess pore pressure	kPa		
AB2	Torque, remoulded	(Nm)		
PA2	Calibration A		after test	
PB2	Calibration B		after test	
Pase	Test bag	Marking		
KolvUpp	Piston test upper sleeve	Marking		
KolvMel	Piston test mid-sleeve	Marking		
KolvNed	Piston test lower	Marking		

Code	Parameter Data block	Unit	Format	Remark
	sleeve			
N0	Ramming N0-value	(blows/0.15 m)		
Nn	Ramming Nn-value	(blows/0.15 m)		
Nn+1	Ramming Nn+1-value	(blows/0.15 m)		
ProvNr	Test No.	No.		
LutA0	Inclination A0-180	mm/m		
LutB0	Inclination B0-B180	mm/m		
LutA90	Inclination A90-270	mm/m		
LutB90	Inclination B90-B270	mm/m		
MovA0	DisplacementA0-180	Mm		
MovB0	Displacement B0-B180	Mm		
MovA90	DisplacementA90-270	Mm		
MovB90	Displacement B90-B270	Mm		
MovRes	Displacementt, Resultant	Mm		
ResRiktn	Resultant’s direction	degrees from north		
Zm	Measurement depth	(m, u.r.t)		
Zlev	Calculated level	Level		
Zdiff	Calculated settlement relative to reference measurement	Mm		
VP	Value at that specific point	m/s		
VS	Value at that specific point	m/s		
RESIST	Value at that specific point	ohm		
CH	Value at that specific point	mV/V		IP
RR	Value at that specific point	mV		
RE	Re			

Code	Parameter Data block	Unit	Format	Remark
IM	Im			
MR	Value at that specific point	T, nT		
EM	Value at that specific point			
NA3	Second zero value after test, tip pressure	MPa		
NB3	Second zero value after test, Friction	kPa		
NC3	Second zero value after test, Pore pressure	kPa		
BattVolt	Battery voltage	Volt		
DatumTid	Measured value's time indication	yyyymmddhhmmssmsmsms		
Flag	Allocated value during performance of sounding	Numeral		New code according to Geotech F=11 Tilt derivative alarm F=12 Tip resistance alarm F=13 Depth unchanged for 5 second F=14 Transmission lost F=16 Dissipation start
TCR	Total core recovery	%		Core sampling
RQD	Rock quality designation	%		Core sampling
SCR	Solid core recovery	%		Core sampling
Box	Box	Marking		Core sampling
HG	Groundwater level			When available
ID	Material index			
KD	Stress index			(same code as date)
Jut	Return Flush rate	l/min		
Avst	Measurement length			
HH	Offset right			

Code	Parameter Data block	Unit	Format	Remark
HV	Offset left			
HX	X-coordinate			
HY	Y-coordinate			
HZ	Z-coordinate			

Attachment E.
Comment codes

SGF's data format Comment codes

Code	Comments	Text	Remark
General codes			
0	Previous code error		
1	Start level following code		
2	Method replacement	2	
3	Additional information	3	
Remark codes			
10	Stop earlier test	10	
11	Extended interruption	X	
12	Without turning	Wt	
13	Self-sinking weight 0	0	
14	Self-sinking weight 0.64	0.64	
15	No registration	Nr	
16	Impact	Impact	
17	Turning	Turning	
18	Jointing	Joint	
19	Flushing	Flushing	
20	Impact begin	Impact beginning	
21	Impact end	Impact end	
Classification codes			
30	Fill	Mg	
31	Dry crust	LCldc	
32	Non-cohesive soil	Ncs	

Code	Comments	Text	Remark
33	Inorganic cohesion soil	Coh	
34	Organic soil	Org	Does not match SGF's designation system. Should be changed in the designation system 13/12/2012
36	Soil type not determined	Not determined	
37	Clay and other cohesive soils	Cl	
38	Sandy soil	Sa	
39	Gravely soil	Gr	
40	Stoney soil and blocks	Bo, Co	
41	Drilled block or stone	Bo, Co	
42	No noticeable cracks	+	
43	Fissured rock	0	
44	Very fissured rock	-	
45	Crushed rock	--	
46	No classification	Ib	
Hydrological determination			
47	Dry	Dry	
48	Flows	Flows	
49	Replace	Replace	
50	Terminated	Terminated	
51	Function control OK	OK	
52	Function control not OK	not OK	
53	Obstacle	Hindrance	
54	Flushed	Flushed	
55	Frozen	Frozen	
56	Damaged	Damaged	
Free codes (example)			
60	Curved rod		
61	Rod broken		
62	Timber or other obstruction		

Code	Comments	Text	Remark
63	Probable groundwater table		
64	Time designation		
65	Current tip depth		
66			
67			
70	Start rotation	V1	
71	Terminate rotation	V2	
72			
80	Rock level	Rock	Rock or block begins. This code can be entered multiple times. If one drills through a block, enter code 41, and when drilling in rock is completed, enter the stop code 95.
81	Ground surface	GS	
82	Silt	Si	
83	Peat	P	
84	Moraine soil	Ti	
85	Clay till	ClTi	
89			
Stop codes			
90	Interrupted without stop	Interrupted without stop	
91	Cannot drive further	Cannot drive further	
92	Stop against stone or block	Stop against stone or block	
93	Stop against stone, block or rock	Stop against stone, block or rock	
94	Stop against presumed rock	Stop against presumed rock	
95	(Soil-rock sounding) interrupted	(Soil-rock sounding) interrupted	

Code	Comments	Text	Remark
96	Predetermined depth		
97	Max. capacity		
98	Max. inclination		
99	Equipment damaged		

Attachment F.
Methods according to SGF's method standard

Table of contents

Method Code	Method	Abbreviation	Page reference Appendix F
101	Weight sounding, manual	WST	16
102	Weight sounding, mechanical	WST	17
107A	Cone penetration test (CPT) investigation with pore pressure measurement	CPTU	18-19
107B	Cone penetration test (CPT) investigation without pore pressure measurement	CPT	20
108A	Dynamic probing , former Swedish HfA	DPSH-A	21
108B	Dynamic probing, Light	DPL	22
108C	Dynamic probing, Medium	DPM	23
108D	Dynamic probing, Heavy	DMH	24
108E	Dynamic probing, Super-heavy	DPSH-B	25
114	Dilatometer tests	DMT	26
116	Pressuremeter testing	PMT	27
121A	Standard Penetration Test	SPT	28
121B	Standard Penetration Test	SPT(C)	29
130	Undisturbed sampling	Enter method abbreviation: e.g. KvSt1, KvSt2	30-31
131	Disturbed sampling	Enter method abbreviation: e.g. Skr, Sp, Pg	32
132	Core sampling	Kr	33
GEOTECHNICAL FIELD MEASUREMENT METHODS			
-	Main block, geotechnical field measurement methods		34
201	Inclinometer measurement	Inklin	35
202	Bellows settlement measurement	B-slang	36
203	Hydrostatic profiling	H-hose	37
204	Gauge measurement	Water level gauge	38

Method Code	Method	Abbreviation	Page reference Appendix F
205	Magnetic settlement gauge	Magnet	39
218	Pore pressure measurement	Pp	40
219	GW in open tube casing pipe	Red	41
220	GW in tube with filter tip	Rf	42
GEOPHYSICAL FIELD METHODS			
-	Main block geophysical methods		43
301	Refraction seismics	Refrseism	44
302	Surface wave seismics	Ytseism	45
303	Resistivity	Res	46
304	Induced Polarisation	IP	47
305	Georadar	Georadar	48
306	VLF	VLF	49
307	Magnetometry	Mag	50
308	Other EM methods	EM	51

The information below is common to all geotechnical sounding, sampling and in-situ methods (Attachment F, pages 2-33)

Main block

Information	Format code	Comments
Name and location for the project	KP	
Work or project number	HJ	
Method	HM	
Date	KD	
Responsible drilling manager or measurement manager	Person	Text
Investigation point	HK	
Measuring-in occurs in other order	InMatn	Yes/No
Positioning measuring-in x, y, z	HX, HY, HZ	Used where appropriate
Length measurement	HH, HV, HL	Used where appropriate
Job on pontoon	H2OJobb	Yes/No
Pre-drilling, if used	HO	Depth in m
Dimension casing	FoderDim	dimension i mm D_y/D_i
Length, casing pipe	FoderDj	Length in m
Type of drilling rig	Rigg	General text
Manufacturer, model and/or number on the probe	HN	Used where appropriate

In the data blocks below, the column “Sync” shows which parameter(s) that synchronise(s) the data collection. In some methods, there are two synchronisation parameters and they then control the data collection at various stages. Parameters indicated in bold indicate that they are required for the method and other parameters are optional or voluntary.

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Type of tip	Spets	Text, type and diameter
Bars	Rod	Text, type and diameter

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	m	
	A	**Feeding force**	kN	
	B	Feed rate	mm/s	
	R	Rotation speed	rpm	
	N	Rod friction	kN	
	AQ	Turning	off/on	
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Type of tip	Spets	Text, type and diameter
Bars	Rod	Text, type and diameter

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	m	
	C	**Feed time or soak time**	s/0.2 m	
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	m	
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Diameter Drill bit	KronD	
Type of drill bit	KronTyp	
Bars	Rod	
Flush medium	SpolM	
Hammers	Hammare	

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	**m**	
	C	**Feed time or soak time**	**s/0.2 m**	
	K	**Comments**	**See comment codes**	
	G	Flush flow out	l/min	
	V	Torque	kNm	
	I	Flushing medium, pressure	MPa	
	P	Pressure on the rotary engine	MPa	
	AR	Flushing	off/on	
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Appendix F Page 1

Method block

Information	Format code	Comments
Wing size	VS	

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
	AD	**time to failure**	**s**	
X	**D**	**Depth**	**m**	
	AB	**Torque**	**Nm**	
	Flag	**Numeral**	**0 or 1**	**The flag indicates undisturbed or disturbed testing**
	AB2	**Torque, remoulded**	**Nm**	
	AA	Rotary angle	gr	
	AS	Shear strength	kPa	
	SV	Sensitivity	%	
	R	Rotation speed	rpm	
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	m	
	A	**Feeding force**	kN	
	B	Feed rate	mm/s	
	V	Torque	kNm	
	R	Rotation speed	rpm	
	AP	Ramming	0=off, 1=on	
	AQ	Turning	off/on	
	HG	Free water surface in bh	m u my	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	**m**	
	B	**Feed rate**	**mm/s**	
	C	**Feed time or soak time**	**s/0.2 m**	
	A	**Feeding force**	**kN**	
	P	**Pressure on rotary engine**	**MPa**	
	AZ	**Hammer pressure**	**MPa**	
	R	**Rotation speed**	**rpm**	
	K	**Comments**	**See comment codes**	
	I	**Spray pressure**	**MPa**	
	J	Rinse flow	l/min	
	AP	**Ramming**	**0=off, 1=on**	Alternatives to Hammer pressure
	V	Torque	kNm	Alternatives to Pressure on rotary engine
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	m	
	B	Feed rate	mm/s	
	A	**Feeding force**	kN	
	V	Torque	kNm	alternatively P
	S	Ramming	impact/0.2m	
	AP	Ramming	0=off, 1=on	
	P	Pressure on rotary engine	MPa	alternatively V
	K	Comments	See comment codes	
	HG	Free water surface in bh	m u my	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Diameter Drill bit	KronD	
Type of drill bit	KronTyp	
Bars	Rod	
Flush medium	SpolM	
Hammers	Hammare	

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	**m**	
	B	**Feed rate**	**mm/s**	
	C	**Feed time or soak time**	**s/0.2 m**	
	A	**Feeding force**	**kN**	
	P	**Pressure on rotary engine**	**MPa**	Alternative Torque (V)
	AZ	**Hammer pressure**	**Mpa**	
	K	**Comments**	**See comment codes**	
	R	Rotation speed	rpm	
	I	Spray pressure	MPa	
	J	Rinse flow	l/min	
	V	Torque	kNm	Alternatives to Pressure on rotary engine
	AP	Ramming	0=off, 1=on	Alternatives to Hammer pressure
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Diameter Drill bit	KronD	
Type of drill bit	KronTyp	
Bars	Rod	
Flush medium	SpolM	
Hammers	Hammare	

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	**m**	
	B	**Feed rate**	**mm/s**	
	C	**Feed time or soak time**	**s/0.2 m**	
	A	**Feeding force**	**kN**	
	P	**Pressure on rotary engine**	**MPa**	Alternatively Torque V
	AZ	**Hammer pressure**	**MPa**	
	I	**Spray pressure**	**MPa**	
	J	**Rinse flow**	**l/min**	
	R	**Rotation speed**	**rpm**	
	K	**Comments**	**See comment codes**	
	AP	Ramming	0=off, 1=on	Alternatives to Hammer pressure
	V	Torque	kNm	Alternatives to Pressure on rotary engine
	Jut	Return flow	l/min	
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Diameter Drill bit	KronD	
Type of drill bit	KronTyp	
Bars	Rod	
Flush medium	SpolM	
Hammers	Hammers	

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	**m**	
	B	**Feed rate**	**mm/s**	
	C	**Feed time or soak time**	**s/0.2 m**	
	A	**Feeding force**	**kN**	
	P	Pressure on rotary engine	MPa	Alternatively Torque V
	AZ	Hammer pressure	MPa	
	I	Spray pressure	MPa	
	J	Rinse flow	l/min	
	R	Rotation speed	rpm	
	K	Comments	See comment codes	
	AP	Ramming	0=off, 1=on	Alternatives to Hammer pressure
	V	Torque	kNm	Alternatives to Pressure on rotary engine
	Jut	Return flow	l/min	
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Diameter Drill bit	KronD	
Type of drill bit	KronTyp	
Bars	Rod	
Flush medium	SpolM	
Hammers	Hammare	

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	**m**	
	B	**Feed rate**	**mm/s**	
	C	**Feed time or soak time**	**s/0.2 m**	
	A	**Feeding force**	**kN**	
	P	**Pressure on rotary engine**	**MPa**	
	AZ	**Hammer pressure**	**MPa**	
	R	**Rotation speed**	**rpm**	
	K	**Comments**	**See comment codes**	
	I	Spray pressure	MPa	
	J	Rinse flow	l/min	
	AP	Ramming	0=off, 1=on	Alternatives to Hammer pressure
	V	Torque	kNm	Alternatives to Pressure on rotary engine
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Method	PelMetod	Text
Size wing	VingD	Text width x thickness
Bars	Rod	Text, type and diameter

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	m	
	A	**Feeding force**	kN	
	B	**Feed rate**	**mm/s**	
	AP	Ramming	0=off, 1=on	
	N	Rod friction	kN	
	AQ	Turning	off/on	

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Method	PelMetod	Text
Size wing	VingD	Text width x thickness
Bars	Rod	Text, type and diameter

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	m	
i	**NA**	**Zero value before test, tip pressure**	**MPa**	
i	**NA2**	**Zero value after test, tip pressure**	**MPa**	
i	**NA3**	**Other zero value after test, tip pressure**	**MPa**	
	QC	**Tip pressure uncorrected**	**MPa**	
	TA	**Inclination, absolute**	**degrees**	
	B	**Feed rate**	**mm/s**	
	A	Feeding force	kN	
	AP	Ramming	0=off, 1=on	
	N	Rod friction	kN	
	AQ	Turning	off/on	

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
For this method, no method block is required		

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	m	
	H	**Turning**	half revolution / 0.2	
	W	**Load**	kN	
	C	Feed time or soak time	s/0.2 m	
	AP	Ramming	off/on	
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
For this method, no method block is required		

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	m	
	W	**Load**	kN	
	H	**Turning**	half revolution /0.20 m	
	C	Feed time or soak time	s/0.20 m	
	R	Rotation speed	rpm	
	AP	Ramming	off/on	
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Use class	IG	There are 4 different use classes (1-4) in the European standard. Enter 0 if another class is used and specify this in the diary.
Filter location	FiPos	1, 2 or 3
Start time	HI	
Home depth, probing	AN	
Filter type	FiTyp	Text
Fluid in filter	FiLiq	Text
Tip area factor	IE	If necessary
Mantel area factor	IF	If necessary

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
	NA	**Zero value before test, tip pressure**	**MPa**	
	NB	**Zero value before test, friction**	**kPa**	
	NC	**Zero value before test, Pore pressure**	**kPa**	
	NA2	**Zero value after test, tip pressure**	**MPa**	
	NB2	**Zero value after test, Friction**	**kPa**	
	NC2	**Zero value after test, Pore pressure**	**kPa**	
	NA3	**Other zero value after test, tip pressure**	**MPa**	
	NB3	**Other zero value after test, Friction**	**kPa**	
	NC3	**Other zero value after test, Pore pressure**	**kPa**	
X	**D**	**Depth**	**m**	

	QC	**Tip pressure uncorrected**	**MPa**	
	U	**General pore pressure**	**kPa**	
	FS	**Local friction, uncorrected**	**kPa**	
	TA	**Inclination, absolute**	**degrees**	
	B	**Feed rate**	**mm/s**	
	96-99	**Stop criteria**	**Numeral**	
	BattVolt	Battery voltage	Volt	
	Date Time	Measured value's time indication	yyyymmddhhmmssmsmsms	

Continued on next page

	Flag	Allocated time during performance of sounding	Numeral	**Example** F=11 Tilt derivative alarm F=12 Point resistance alarm F=13 Depth unchanged for 5 second F=14 Transmission lost F=16 Dissipation start
	QT	Tip pressure corrected	MPa	
	Udelta	U-U0	kPa	
	FT	Local friction, corrected	kPa	
	U0	Initial pore pressure	kPa	
	30-46	Type of soil		Assessment codes
	A	Feeding force	kN	
	M	Conductivity	s/m	
	L	Side pressure	kPa	
	O	Temperature	°C	
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Use class	IG	There are 4 different use classes (1-4), of which classes 2-4 are applicable to this method. Enter 0 if another class is used and specify this in the diary.
Start time	HI	
Home depth, probing	AN	

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
	NA	**Zero value before test, tip pressure**	**MPa**	
	NB	**Zero value before test, friction**	**kPa**	
	NA2	**Zero value after test, tip pressure**	**MPa**	
	NB2	**Zero value after test, Friction**	**kPa**	
	NA3	**Other zero value after test, tip pressure**	**MPa**	
	NB3	**Other zero value after test, Friction**	**kPa**	
X	**D**	**Depth**	m	
	QC	**Tip pressure uncorrected**	MPa	
	FS	**Local friction, uncorrected**	kPa	
	TA	**Inclination, absolute**	**degrees**	
	96-99	**Stop criteria**		
	B	**Feed rate**	**mm/s**	
	BattVolt	Battery voltage	Volt	
	Date Time	Measured value's time indication	yyyymmddhhmmssmsmsms	
	Flag	Allocated time during performance of sounding	Numerical	**Example** F=11 Tilt derivative alarm F=12 Point resistance alarm F=13 Depth unchanged for 5 second F=14 Transmission lost
	30-46	Type of soil		Assessment codes
	A	Feeding force	kN	
	M	Conductivity	s/m	
	L	Side pressure	kPa	
	O	Temperature	°C	
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Type of cone	KonTyp	loose or solid
Type of impact liner	DynTyp	loose or solid
Use of shim	Gummi	Yes/No

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	**m**	
	S	**Ramming**	**impact/0.2m**	
	AB	**Torque**	**Nm**	
	R	Rotation speed	rpm	
	AQ	Turning	off/on	
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Type of cone	KonTyp	loose or solid
Type of impact liner	DynTyp	loose or solid
Use of shim	Gummi	Yes/No

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	**m**	
	SA	**Ramming**	**impact/0.1m**	
	AB	**Torque**	**Nm**	
	R	Rotation speed	rpm	
	AQ	Turning	off/on	
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Type of cone	KonTyp	loose or solid
Type of impact liner	DynTyp	loose or solid
Use of shim	Gummi	Yes/No

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	**m**	
	SA	**Ramming**	**impact/0.1m**	
	AB	**Torque**	**Nm**	
	R	Rotation speed	rpm	
	AQ	Turning	off/on	
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Type of cone	KonTyp	loose or solid
Type of impact liner	DynTyp	loose or solid
Use of shim	Gummi	Yes/No

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	**m**	
	SA	**Ramming**	**impact/0.1m**	
	AB	**Torque**	**Nm**	
	R	Rotation speed	rpm	
	AQ	Turning	off/on	
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Type of cone	KonTyp	loose or solid
Type of impact liner	DynTyp	loose or solid
Use of shim	Gummi	Yes/No

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	**m**	
	S	**Ramming**	**impact/0.2m**	
	AB	**Torque**	**Nm**	
	R	Rotation speed	rpm	
	AQ	Turning	off/on	
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Zero reading, manometer	Pman	

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
	PA	**Calibration A**		before test
	PB	**Calibration B**		before test
	PA2	**Calibration A**		after test
	PB2	**Calibration B**		after test
X	**D**	**Depth**	m	
	AD	**Time**	s	
	AE	**Contact pressure**	kPa	
	AF	**Expansion pressure**	kPa	
	U	General pore pressure	kPa	
	A	Feeding force	kN	
	UO	Initial pore pressure		
	ID	Material index		
	KD	Voltage index		
	ED	Dilatometer module		
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Type of Pressuremeter	PmtTyp	
Diameter, measuring body	PmtFI	
Membrane type	MemTyp	
Slotted pipe used	Slits	Yes/No
Method piercing	PmtBorr	
System stiffness	ST	
Measurement cell original volume	VC	

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	m	
	AD	**Time**	s	
	MS	**Measurement of membrane tension**	**MPa**	
	VA	**Volume 30 s**	**cm^3**	
	VB	**Volume 60 s**	**cm^3**	
	AF	**Expansion pressure**	**kPa**	
	GW	GW/pore pressure	m	
	PO	Horizontal rest soil pressure, assumed	kPa	
	PF	Creep pressure	MPa	
	PL	Boundary pressure	MPa	
	EM	Pressuremeter module	MPa	
	VO	Zero volume	cm^3	
	VF	Creep volume	cm^3	
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
For this method, no method block is required		

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	**m**	
	N0	**Ramming N_0-value**	**slag/0,15 m**	
	Nn	**Ramming N_n-value**	**slag/0,15 m**	
	Nn+1	**Ramming N_{n+1}-value**	**slag/0,15 m**	
	Test No.	**Test No.**	**No.**	
	30-46	Type of soil		Assessment codes
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
For this method, no method block is required		

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	**m**	
	N0	**Ramming N_0-value**	**slag/0,15 m**	
	Nn	**Ramming N_0-value**	**slag/0,15 m**	
	Nn+1	**Ramming N_0-value**	**slag/0,15 m**	
	HG	Free water surface in bh	m below ground surface	When available

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Type of sampler*	ProvTyp	Text, see below
The sampler's diameter	ProvD	
The sampler's length	ProvL	
Sampling category	ProvK	Text A, B or C
Drive method	ProvNed	Text. Re. static, dynamic, rotation and etc.

**Sampler named in accordance with SS-EN ISO 22475-1:2006 or according to SGF Report 1:2009, see table below*

* ***SS EN ISO 22475-1:2006***	
OS-T/W	*Open-tube samplers thin-walled*
OS-TK/W	*Open-tube samplers thick-walled*
PS-T/W	*piston samplers thin-walled*
PS-TK/W	*piston samplers thick-walled*
LS	*Large sampler*
****SGF Report 1:2009 "Method description for sampler with standard piston sampler"***	
Kv(St-I)	*Standard piston sampler method 1*
Kv(St II)	*Standard piston sampler method 2*

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth (centre of the sample)**	m	
	BE	Soil type designation		Comments code
	Remark**	Comments		See the table below
	Pase	Test bag	Marking	
	KolvUpp	Piston test upper sleeve	Marking	
	KolvMel	Piston test mid-sleeve	Marking	
	KolvNed	Piston test lower sleeve	Marking	
	HG	Free water surface in bh	m below ground surface	When available

***Remarks for undisturbed sampling see below*

***Remarks for undisturbed sampling*	
D	*The sample is markedly disturbed and is only suitable for classification*
Es	*Edge damaged during sampling*
He	*Ramming performed in connection penetration of sampler (not applicable on undisturbed sampling in fine-grained soil)*
Kr	*The piston rod has moved during stamping (The tripping band for use of St I has slackened)*
Ky	*The sample has probably been exposed to frost*
Sb1	*Thin shutter plate used*
Sb2	*Thick shutter plate used*
Sl	*The sample is subjected to shock or impact*
Sp	*The sample taken at the bottom of auger drill hole*
Skr	*The sample taken at the end of the helical auger hole*
Ss	*Particularly large force was required for punching*
Ud	*Material filled in the sleeve base length in cm*
Öd	*Material filled in the sleeve top part length in cm*
φ	*The sample does not fill the sleeve's cross-section.*

Notes are written almost exclusively in the minutes intended for that purpose. Some use only the depth record for setting the depth which minutes are referred to.

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Type of sampler*	ProvTyp	Text
The sampler's diameter	ProvD	
The sampler's length	ProvL	
Sampling category	ProvK	Text A, B or C
Drive method	ProvNed	Text. Re. static, dynamic, rotation and etc.

**Samplers are named according to SS-EN ISO 22475-1:2006*

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**AN**	**Start depth**	m	Refers to the depth where sampling starts
	AO	**End depth**	m	Refers to the depth where sampling Ends
	BE	**Soil type designation**		COMMENTS CODE
	Pase	Test bag	Marking	
	HG	Free water surface in bh	m below ground surface	When available

Notes are written almost exclusively in the minutes intended for that purpose. Some use only the depth record for setting the depth which minutes are referred to.

Main block: See Attachment F Page 1

Method block

Information	Format code	Comments
Type of sampler*	ProvTyp	Text
The sampler's diameter	ProvD	
The sampler's length	ProvL	
Sampling category	ProvC	Text A, B or C
Drive method	ProvNed	Text. Re. static, dynamic, rotation and etc.

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**AN**	**Start depth**	m	Refers to the depth where sampling starts
	AO	**End depth**	m	Refers to the depth where sampling Ends
	TCR	**Total core recovery**	%	
	RQD	**Rock quality designation**	%	
	SCR	**Solid core recovery**	%	
	Box	**Box**	no./designation	
	HG	Free water surface in bh	m below ground surface	When available

Notes are written almost exclusively in the minutes intended for that purpose. Some use only the depth record for setting the depth which minutes are referred to.

The information below is common to all geotechnical field measurement methods. (Appendix F pages 35-42)

Main block

Information	Format code	Comments
Name and location for the project	KP	
Work or project number	HJ	
Method	HM	According to SGF's format standard
Date	KD	
Responsible drilling manager or measurement manager	Person	
Investigation point	HK	
Manufacturer, model and/or number on the probe	HN	Used where appropriate
Reference measurement	RefMatn	Yes/No
Date Reference measurement	RefDatum	

In the data blocks below, the column "Sync" shows which parameter(s) that synchronise(s) the data collection. In some methods, there are two synchronisation parameters and they then control the data collection at various stages. Parameters indicated in bold indicate that they are required for the method and other parameters are optional or voluntary.

Main block: See Attachment F Page 34

Method block

Information	Format code	Comments
Pipe length	RorL	
Constant	KQ	
Measurement range	deltaDjup	
Main measurement direction	IA	
Start depth	AN	m.u.r.t
End depth	AO	m.u.r.t

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	(m)	
X	**AK**	**Tidpunkt** (åårnmddttmmss)		
	LutA0	**Inclination A0-180**	mm/m or degrees	Measured
	LutB0	**Inclination B0-B180**	mm/m or degrees	
	LutA90	Inclination A90-270	mm/m or degrees	
	LutB90	Inclination B90-B270	mm/m or degrees	
	MovA0	Movement A0-180	mm	Calculated
	MovB0	Movement B0-B180	mm	
	MovA90	Movement A90-270	mm	
	MovB90	Movement B90-B270	mm	
	MovRes	Movement, Resultant	mm	
	ResRiktn	Resultant's direction	degrees from north	

Main block: See Attachment F Page 34

Method block

Information	Format code	Comments
Pipe length	RorL	
Level pipe top	HZ	
Protrusion	Uppstick	
Start depth	AN	m.u.r.t
Offset	Off	

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	(m)	
	Zm	**Measurement value**	**m, u.r.t**	
	Zlev	Calculated level	level	
	Zdiff	Calculated settlement relative to reference measurement	mm	

Main block: See Attachment F Page 34

Method block

Information	Format code	Comments
Pipe length	RorL	
Level pipe top	HZ	Refers to liquid level
Section	HL	
Constant	KQ	
Offset	Off	

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**Avst**	**measurement length**	m	
X	***HH***	**Offset right**	***m***	
X	***HV***	**Offset left**	***m***	
	Zm	**Measurement value**	**m**	
	Zlev	Calculated level	level	
	Zdiff	Calculated settlement relative to reference measurement	mm	

Main block: See Attachment F Page 34

Method block

Information	Format code	Comments
Method	Metod	
Instrument or other equipment	Instrm	

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**HL**	**Section**	m	
X	***HH***	**Offset right**	***m***	
X	***HV***	**Offset left**	***m***	
X	***HX***	**X-coordinate**	***m***	
X	***HY***	**Y-coordinate**	***m***	
	Zm	**Measurement value**	**m**	
	Zlev	Calculated level	level	
	Zdiff	Calculated settlement relative to reference measurement	mm	

Main block: See Attachment F Page 34

Method block

Information	Format code	Comments
Pipe length	RorL	
Level pipe top	HZ	
Protrusion	Uppstick	
Constant	KQ	
Start depth	AN	m.below pipe top
Offset	Off	

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**D**	**Depth**	m	
	Zm	**Measurement value**	**m, below pipe top**	
	Zlev	Calculated level	level	
	Zdiff	Calculated settlement relative to reference measurement	mm	

Main block: See Attachment F Page 34

Method block

Information	Format code	Comments
Method	Metod	
Instrument or other equipment	Instr	
Tip level (test level)	GS	
Level pipe top	HZ	
Filter length	GF	
Atmospheric pressure	AM	For measurement of absolute pressure
Type of aquifer	GA	

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**AK**	**Point of time**	yymmdd hhmmss	
	GW	**GW-/pore pressure level**		
	AL	**Equilibrium pore pressure**	kPa	

Main block: See Attachment F Page 34

Method block

Information	Format code	Comments
Method	Metod	
Instrument or other equipment	Instr	
Tip level (test level)	GS	
Level pipe top	HZ	
Filter length	GF	
Atmospheric pressure	AM	For measurement of absolute pressure
Type of aquifer	GA	

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**AK**	**Point of time**	yymmdd hhmmss	
	GW	**GW-/pore pressure level**		
	GA	Type of aquifer		

Main block: See Attachment F Page 34

Method block

Information	Format code	Comments
Method	Metod	
Instrument or other equipment	Instr	
Tip level (test level)	GS	
Level pipe top	HZ	
Filter length	GF	
Atmospheric pressure	AM	For measurement of absolute pressure
Type of aquifer	GA	

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
X	**AK**	**Point of time**	yymmdd hhmmss	
	GW	**GW-/pore pressure level**		
	GA	Type of aquifer		

The information below is common to all geophysical methods. (Appendix F pages 44-52)

Main block

Information	Format code	Comments
Name and location for the project	KP	
Work or project number	HJ	
Method	HM	According to SGF's format standard
Date	KD	
Responsible drilling manager or measurement manager	Person	
Investigation point	HK	
Manufacturer, model and/or number on the probe	HN	Used where appropriate
Reference measurement	RefMatn	Yes/No
Date Reference measurement	RefDatum	

In the data blocks below, the column "Sync" shows which parameter(s) that synchronise(s) the data collection. In some methods, there are two synchronisation parameters and they then control the data collection at various stages. Parameters indicated in bold indicate that they are required for the method and other parameters are optional or voluntary.

Main block: See Attachment F, Page 43

Method block

Information	Format code	Comments
Type of instrument	Instr	Manufacturer and model, e.g. Geometrics geode
Geophone type; - frequency and orientation	Geof-f Geof-riktn	E.g. 10 Hz, vertical
c/c sensor	cc-givare	Dist. between sensors/measurement points
Energy source	Energi	Dynamite, sledgehammer or similar
X starting point	HXstart	(usually measured in lines)
Y start point	HYstart	
Z start point	HZstart	
X endpoint	HXslut	(usually measured in lines)
Y endpoint	HYslut	
Z end point	HZslut	
Method for positioning	Pos-typ	(Hand-GPS, RTK-GPS, Totalstation…)
Evaluation program	Utvärdprog	E.g. Rayfract

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
	HX	Position X		
	HY	Position Y		
	HZ	Position Z		
	VP	**Value at just that point**	m/s	

Main block: See Attachment F, Page 43

Method block

Information	Format code	Comments
Type of instrument	Instr	Manufacturer and model, e.g. Geometrics geode
Geophone type; - frequency and orientation	Geof-f Geof-riktn	E.g. 10 Hz, vertical
c/c sensor	cc-givare	Dist. between sensors/measurement points
Energy source	Energi	Dynamite, sledgehammer or similar
X starting point	HXstart	(usually measured in lines)
Y start point	HYstart	
Z start point	HZstart	
X endpoint	HXslut	(usually measured in lines)
Y endpoint	HYslut	
Z end point	HZslut	
Method for positioning	Pos-typ	(Hand-GPS, RTK-GPS, Totalstation…)
Evaluation program	Utvärdprog	E.g. Surf Seis

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
	HX	Position X		
	HY	Position Y		
	HZ	Position Z		
	VS	**Value at just that point**	m/s	

Main block: See Attachment F, Page 43

Method block

Information	Format code	Comments
Type of instrument	Instr	Manufacturer and model: e.g. ABEM Terrameter LS
c/c sensor	cc-givare	Dist. between sensors/measurement points
Electrode configuration	Elektrodkonfig	E.g. Wenner, dipol-dipol
Electrode type	Elektrotyp	E.g. steel
X starting point	HXstart	(usually measured in lines)
Y start point	HYstart	
Z start point	HZstart	
X endpoint	HXslut	(usually measured in lines)
Y endpoint	HYslut	
Z end point	HZslut	
Method for positioning	Pos-typ	(Hand-GPS, RTK-GPS, Totalstation…)
Evaluation program	Utvärdprog	E.g. Res2DInv

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
	HX	Position X		
	HY	Position Y		
	HZ	Position Z		
	RESIST	**Value at just that point**	ohmm	

Main block: See Attachment F, Page 43

Method block

Information	Format code	Comments
Type of instrument	Instr	Manufacturer and model: e.g. ABEM Terrameter LS
c/c sensor	cc-givare	Dist. between sensors/measurement points
Electrode configuration	Elektrodkonfig	E.g. Wenner, dipol-dipol
Electrode type	Elektrotyp	E.g. steel
X starting point	HXstart	(usually measured in lines)
Y start point	HYstart	
Z start point	HZstart	
X endpoint	HXslut	(usually measured in lines)
Y endpoint	HYslut	
Z end point	HZslut	
Method for positioning	Pos-typ	(Hand-GPS, RTK-GPS, Totalstation…)
Evaluation program	Utvärdprog	E.g. Res2DInv

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
	HX	Position X		
	HY	Position Y		
	HZ	Position Z		
	CH	**Value at just that point**	mV/V	

Main block: See Attachment F, Page 43

Method block

Information	Format code	Comments
Type of instrument	Instr	Manufacturer and model, e.g. Malå ProEx
Antenna type - screened/unscreened - frequency	Ant-typ Ant-f	E.g. unshielded 50 MHz
X starting point	HXstart	(usually measured in lines)
Y start point	HYstart	
Z start point	HZstart	
X endpoint	HXslut	(usually measured in lines)
Y endpoint	HYslut	
Z end point	HZslut	
Method for positioning	Pos-typ	(Hand-GPS, RTK-GPS, Totalstation…)
Evaluation program	Utvärdprog	E.g. Reflexw

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
	HX	Position X		
	HY	Position Y		
	HZ	Position Z		
	RR	**Value at just that point**		

Main block: See Attachment F, Page 43

Method block

Information	Format code	Comments
Type of instrument	Instr	Manufacturer and model, e.g. ABEM WADI
c/c sensor	cc-givare	Dist. between sensors/measurement points
Transmitter - fixed/portable - which transmitter	Transm	E.g. Fast, Murmansk
Sensor frequency	f	E.g. 9.8 kHz
X starting point	HXstart	(usually measured in lines)
Y start point	HYstart	
Z start point	HZstart	
X endpoint	HXslut	(usually measured in lines)
Y endpoint	HYslut	
Z end point	HZslut	
Method for positioning	Pos-typ	(Hand-GPS, RTK-GPS, Totalstation…)
Evaluation program	Utvärdprog	

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
	HX	Position X		
	HY	Position Y		
	HZ	Position Z		
	RE	Value at just that point		
	IM	**Value at just that point**		

Main block: See Attachment F, Page 43

Method block

Information	Format code	Comments
Type of instrument	Instr	Manufacturer and model, e.g. GEM GSM-19
c/c sensor	cc-givare	Dist. between sensors/measurement points
Sensor frequency	f	
Gradiometer Y/N	Grad	Y/N
X starting point	HXstart	(usually measured in lines)
Y start point	HYstart	
Z start point	HZstart	
X endpoint	HXslut	(usually measured in lines)
Y endpoint	HYslut	
Z end point	HZslut	
Method for positioning	Pos-typ	(Hand-GPS, RTK-GPS, Totalstation…)
Evaluation program	Utvärdprog	

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
	HX	Position X		
	HY	Position Y		
	HZ	Position Z		
	MR	**Value at just that point**	T, nT	

Main block: See Attachment F, Page 43

Method block

Information	Format code	Comments
Type of instrument	Instr	Manufacturer and model, e.g. Geonics EM31
c/c sensor	cc-givare	Dist. between sensors/measurement points
Sensor frequency	f	
X starting point	HXstart	(usually measured in lines)
Y start point	HYstart	
Z start point	HZstart	
X endpoint	HXslut	(usually measured in lines)
Y endpoint	HYslut	
Z end point	HZslut	
Method for positioning	Pos-typ	(Hand-GPS, RTK-GPS, Totalstation…)
Evaluation program	Utvärdprog	E.g. Rayfract

Data block

Sync	*code*	*Parameter*	*Unit*	*Remark*
	HX	Position X		
	HY	Position Y		
	HZ	Position Z		
	EM	**Value at just that point**	mV	

SGF Report

1:93	Recommended standard for CPT-sounding.
1:93E	Recommended Standard for Cone Penetration Tests.
2:93	Recommended Standard for Field Vane Shear Test.
2:93E	Recommended Standard for Field Vane Shear Test.
1:95	Recommended Standard for Dilatometer Tests.
1:95E	Recommended Standard for Dilatometer Tests.
2:95	Some pioneer profiles in Swedish geotechnical engineering. SJ Geotechnical Commission 1914-1922.
3:95	Proceedings of the International Symposium on Cone Penetration Testing, CPT´95.
4:95	Lime and lime cement columns. Guide for Project Planning, Construction and Inspection.
4:95E	Lime and Lime Cement Columns. Guide for Project Planning, Construction and Inspection.
1:96	Geotechnical field manual. General guidelines and methodologies.
1:99	Sealing layer in soil. Guidance for clients, designers and contractors.
2:99	Method Specifications for Soil-rock sounding.
3:99	Method Specifications for Weight sounding.
1:2000	Geotechnology in Sweden 1920-1945.
2:2000	Lime and lime cement columns. Guide for Project Planning, Construction and Inspection.
1:2001	Field Manual - Environmental ground surveys (replaced by 1:2004).
1:2003	Building with waste. Environmental legal possibilities and limitations for recycling of waste for construction purposes
1:2004	Field Manual - Environmental ground surveys
2:2004	Reinforced soil and filling - Nordic guide.
3:2004	NGM 2004 - XIV Geotechnical Nordic Meeting. 19-21 May 2004.
1:2006	Method Specifications for soil-rock total sounding
2:2006	Method description for installing inclinometer pipe
1:2008	Use of waste products in the EU
1:2009	Method description for sampler with standard piston sampler - Undisturbed sampling in fine-grained soil
2:2009	Remediation by in-situ demolition Formulation and control of remediation.
1:2010	Contaminated buildings. Sampling and risk assessment.
1:2011	Stimulated reductive dechlorination. A practical guide
2:2011	Chlorinated solvents in soil and groundwater - To consider for sampling and procurement
3:2011	Handling and analysis of samples from contaminated sites - Uncertainties and error sources
1:2012	EYGEC 2012 - Setting the scene for future European geotechnical research
2:2012	Triaxial tests - a guide
3:2012	SGF’s data format
4:2012	Method description soil-rock sounding

The Swedish Geotechnical Society (SGF) was established in 1950 and consists of over 1,000 individual members, with at least two years of practical experience in geotechnical engineering. The institute also has about 30 corporate members in the form of institutions, universities, government agencies, consultancies and contractors and manufacturers within the geotechnical sector.

SGF's goal is to promote the development of the geotechnical field with foundation and environmental engineering in a national and international perspective.

SGF represents Sweden in the International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE).

The SGF's Report and Memorandum and Member Article Series publishes the institutes' method descriptions, monographs and documentation from conferences, theme days etc.

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