

The Borehole Markup Language

BoreholeML

Version 3.0.3

Reference document

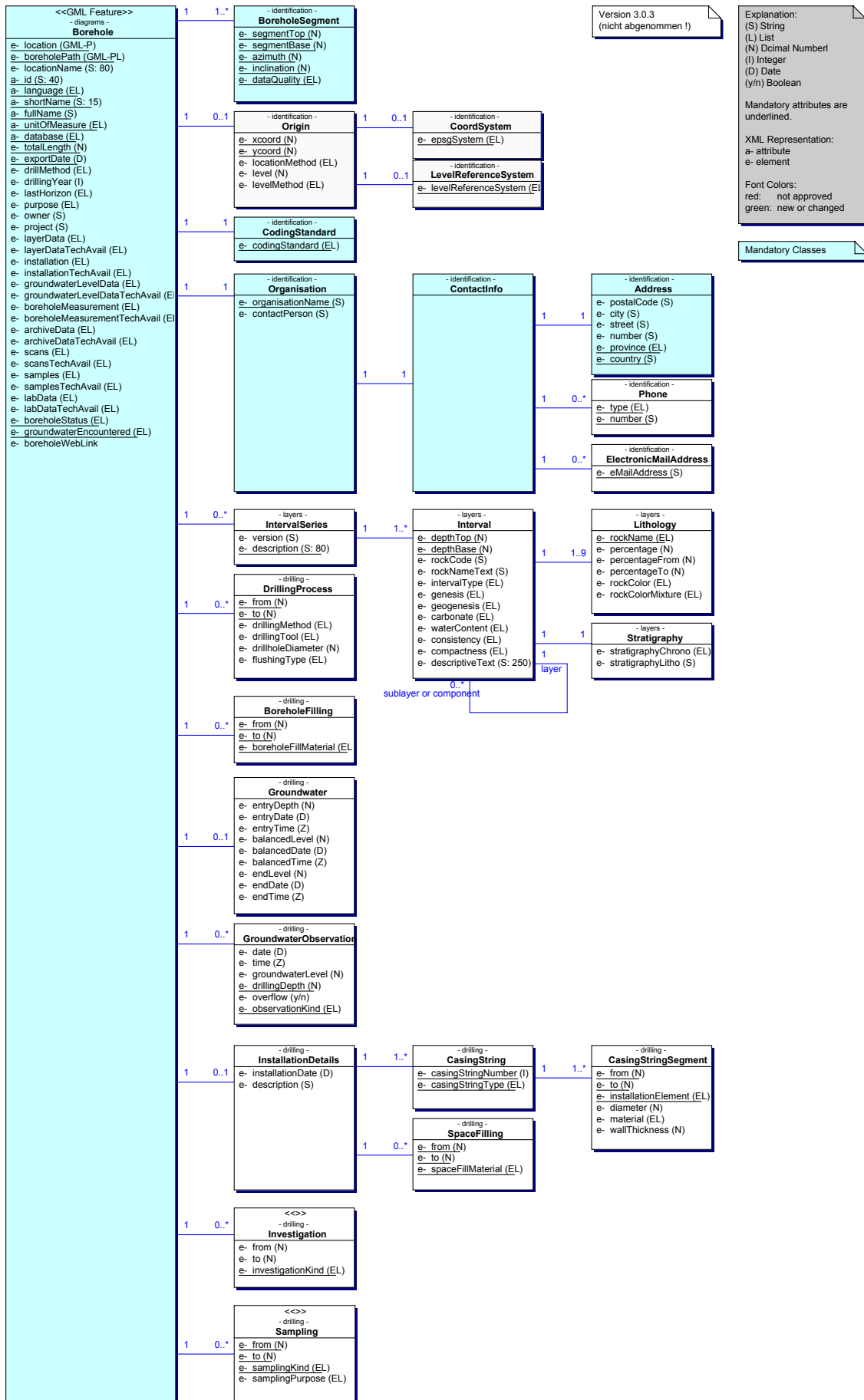
Description of the UML model

State Geological Surveys of Germany and Federal Institute for
Geosciences and Natural Resources

- Information Systems Steering Group -

March 2010

Model diagram



Model Elements

Attribute group: **Sampling**

English title: sampling

German title: Beprobung

Mandatory:

Description: Beprobungsintervalle im Bohrloch oder im Bohrgut.

Sampling intervals in the borehole or rock material.

Notes:

Attributes:

Name:	from	Approved:	X
-------	-------------	-----------	---

Data type:	N: Decimal Number	Mandatory:	X	Conditional:
------------	-------------------	------------	---	--------------

English title:	from	German title:	to
----------------	------	---------------	----

Length:	Min.:	0	Max.:	99999
---------	-------	---	-------	-------

Decimals: 2

XML representation: Element

Description: Oberkante des Beprobungsintervalls relativ zum Bohransatzpunkt in Meter.
Intervalle werden entlang des Bohrungspfades gemessen.

Top of the sampling intervall relative to given height level at starting point in meters. Intervals are measured along the drillhole path.

List URL:

Constraints:

Notes:

Name:	to	Approved:	X
-------	-----------	-----------	---

Data type:	N: Decimal Number	Mandatory:	X	Conditional:
------------	-------------------	------------	---	--------------

English title:	to	German title:	bis
----------------	----	---------------	-----

Length:	Min.:	0	Max.:	99999
---------	-------	---	-------	-------

Decimals: 2

XML representation: Element

Description: Unterkante des Beprobungsintervalls relativ zum Bohransatzpunkt in Meter.
Intervalle werden entlang des Bohrungspfades gemessen.

Bottom of the sampling intervall relative to given height level at starting point in meters. Intervals are measured along the drillhole path.

List URL:

Constraints: > from

Notes:

Name:	samplingKind	Approved:	X
-------	---------------------	-----------	---

Data type:	EL: External List	Mandatory:	X	Conditional:
------------	-------------------	------------	---	--------------

English title:	kind of sampling	German title:	Probennahmeart
----------------	------------------	---------------	----------------

Length:	Min.:	Max.:
---------	-------	-------

Decimals:

XML representation: Element

Description: Art der Probenahme aus der genannten Bohrstrecke.

Kind of sampling in given interval.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/>

List items:

Constraints:

Notes:

Name:	samplingPurpose	Approved:	X
-------	------------------------	-----------	---

Data type:	EL: External List	Mandatory:	Conditional:
English title:	sampling purpose	German title:	Beprobungszweck
Length:		Min.:	Max.:
Decimals:			
XML representation:		Element	

Description: Beprobungszweck.
Purpose of sampling.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/>

List items:

Constraints:

Notes:

Attribute group: Investigation

English title:	investigation	German title:	Untersuchung
----------------	---------------	---------------	--------------

Mandatory:

Description: Allgemeine Hinweise zu Untersuchungen am Bohrloch optional mit Teufenbezug.
General remarks concerning investigations in the borehole with optional depth information.

Notes:

Attributes:

Name:	from	Approved:	X
-------	-------------	-----------	---

Data type:	N: Decimal Number	Mandatory:	Conditional:		
English title:	from	German title:	von		
Length:		Min.:	0	Max.:	99999
Decimals:	2				
XML representation:		Element			

Description: Oberkante des Untersuchungsintervalls relativ zum Bohransatzpunkt in Meter.
Intervalle werden entlang des Bohrungspfades gemessen.

Top of the investigation intervall relative to given height level at starting point in meters. Intervals are measured along the drillhole path.

List URL:

Constraints:

Notes:

Name:	to	Approved:	X
-------	-----------	-----------	---

Data type:	N: Decimal Number	Mandatory:	Conditional:		
English title:	to	German title:	bis		
Length:		Min.:	0	Max.:	99999
Decimals:	2				
XML representation:		Element			

Description: Unterkante des Untersuchungsintervalls relativ zum Bohransatzpunkt in Meter.
Intervalle werden entlang des Bohrungspfades gemessen.

Bottom of the investigation intervall relative to given height level at starting point in meters. Intervals are measured along the drillhole path.

List URL:

Constraints: > 'from'

Notes:

Name:	investigationKind	Approved:	X
--------------	--------------------------	------------------	---

Data type:	EL: External List	Mandatory:	X	Conditional:	
-------------------	-------------------	-------------------	---	---------------------	--

English title:	kind of investigation	German title:	Art der Untersuchung
-----------------------	-----------------------	----------------------	----------------------

Length:	Min.:	Max.:
----------------	--------------	--------------

Decimals:

XML representation:	Element
----------------------------	---------

Description: Art einer im Bohrloch durchgeführten Untersuchung.

Kind of an investigation in the borehole.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/>

List items:

Constraints:

Notes:

Attribute group: Address

English title:	address	German title:	Adresse
-----------------------	---------	----------------------	---------

Mandatory:	X
-------------------	---

Description: Postadresse der Daten abgebenden Organisation.

Address of data submitting organisation.

Notes:

Attributes:

Name:	postalCode	Approved:	X
--------------	-------------------	------------------	---

Data type:	S: String	Mandatory:		Conditional:	
-------------------	-----------	-------------------	--	---------------------	--

English title:	postal code	German title:	Postleitzahl
-----------------------	-------------	----------------------	--------------

Length:	Min.:	Max.:
----------------	--------------	--------------

Decimals:

XML representation:	Element
----------------------------	---------

Description: Postleitzahl der Daten abgebenden Organisation.

Postal code of the data submitting organisation.

List URL:

Constraints:

Notes:

Name:	city	Approved:	X
--------------	-------------	------------------	---

Data type:	S: String	Mandatory:		Conditional:	
-------------------	-----------	-------------------	--	---------------------	--

English title:	city	German title:	Stadt
-----------------------	------	----------------------	-------

Length:	Min.:	Max.:
----------------	--------------	--------------

Decimals:

XML representation:	Element
----------------------------	---------

Description: Stadt der Daten abgebenden Organisation.

Town of the data submitting organisation.

List URL:

Constraints:

Notes:

Name:	street	Approved:	X
--------------	---------------	------------------	----------

<i>Data type:</i>	S: String	<i>Mandatory:</i>	<i>Conditional:</i>
-------------------	-----------	-------------------	---------------------

<i>English title:</i>	street	<i>German title:</i>	Straße
-----------------------	--------	----------------------	--------

<i>Length:</i>		<i>Min.:</i>	<i>Max.:</i>
----------------	--	--------------	--------------

Decimals:

<i>XML representation:</i>	Element
----------------------------	---------

Description: Straße der Daten abgebenden Organisation.

Street of data submitting organisation.

List URL:

Constraints:

Notes:

Name:	number	Approved:	X
--------------	---------------	------------------	----------

<i>Data type:</i>	S: String	<i>Mandatory:</i>	<i>Conditional:</i>
-------------------	-----------	-------------------	---------------------

<i>English title:</i>	street number	<i>German title:</i>	Hausnummer
-----------------------	---------------	----------------------	------------

<i>Length:</i>		<i>Min.:</i>	1	<i>Max.:</i>
----------------	--	--------------	---	--------------

Decimals:

<i>XML representation:</i>	Element
----------------------------	---------

Description: Hausnummer oder Postfach der Daten abgebenden Organisation.

Street number or post office box (POB) of data submitting organisation.

List URL:

Constraints:

Notes:

Name:	province	Approved:	X
--------------	-----------------	------------------	----------

<i>Data type:</i>	EL: External List	<i>Mandatory:</i>	X	<i>Conditional:</i>
-------------------	-------------------	-------------------	---	---------------------

<i>English title:</i>	province	<i>German title:</i>	Bundesland
-----------------------	----------	----------------------	------------

<i>Length:</i>		<i>Min.:</i>		<i>Max.:</i>
----------------	--	--------------	--	--------------

Decimals:

<i>XML representation:</i>	Element
----------------------------	---------

Description: Bundesland der Daten abgebenden Organisation.

Province or federal state of data submitting organisation.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd>

List items:

Constraints:

Notes:

Name:	country	Approved:	X
--------------	----------------	------------------	----------

<i>Data type:</i>	S: String	<i>Mandatory:</i>	X	<i>Conditional:</i>
-------------------	-----------	-------------------	---	---------------------

<i>English title:</i>	country	<i>German title:</i>	Land
-----------------------	---------	----------------------	------

<i>Length:</i>		<i>Min.:</i>		<i>Max.:</i>
----------------	--	--------------	--	--------------

Decimals:

XML representation: Element

Description: Land der Daten abgebenden Organisation.

Country of data submitting organisation.

List URL:

Constraints:

Notes: Default: Germany

Attribute group: BoreholeSegment

English title: borehole segment

German title: Bohrlochsegment

Mandatory: X

Description: Rohdaten des geometrischen Verlaufs der Bohrung (Bohrpfad) in Bohrabschnitten entlang des Bohrlochverlaufs soweit bekannt.
Eine nicht abgelenkte Bohrung bzw. eine Bohrung ohne spezielle Angaben in der Datenquelle enthält entspricht genau einem Segment.

Raw data for the geometric borehole path along the borehole described in discrete segments. Non?inclined boreholes or boreholes without specific information in the data source equals exactly one segment.

Notes:

Attributes:

Name:	segmentTop	Approved:	X
-------	------------	-----------	---

Data type: N: Decimal Number

Mandatory: X

Conditional:

English title: segment top

German title:

Obergrenze

Length:

Min.: 0

Max.: 99999

Decimals: 2

XML representation: Element

Description: Obergrenze des geometrischen Segments relativ zum Bohransatzpunkt in Meter.
Intervalle werden entlang des Bohrungspfades gemessen.

Top of geometric segment relative to given height level at starting point in meters. Intervals are measured along the drillhole path.

List URL:

Constraints:

Notes:

Name:	segmentBase	Approved:	X
-------	-------------	-----------	---

Data type: N: Decimal Number

Mandatory: X

Conditional:

English title: segment base

German title:

Untergrenze

Length:

Min.: 0

Max.: 99999

Decimals: 2

XML representation: Element

Description: Untergrenze des geometrischen Segments relativ zum Bohransatzpunkt in Meter.
Intervalle werden entlang des Bohrungspfades gemessen.

Bottom of geometric segment relative to given height level at starting point in meters. Intervals are measured along the drillhole path.

List URL:

Constraints: > segmentTop

Notes:

Name:	azimuth	Approved:	X
-------	---------	-----------	---

Data type: N: Decimal Number **Mandatory:** X **Conditional:**

English title: azimuth of borehole segment **German title:** Azimuth des Bohrlochsegmentes

Length: **Min.:** 0 **Max.:** 360

Decimals: 1

XML representation: Element

Description: Azimuth des Bohrlochsegmentes in Altgrad (0 - 360°, bezogen auf geographisch Nord, im Uhrzeigersinn).
Azimuth of the borehole segment in degrees (0 - 360°, starting from geographic North, clockwise).

List URL:

Constraints:

Notes:

Name:	inclination	Approved: X
--------------	--------------------	--------------------

Data type: N: Decimal Number **Mandatory:** X **Conditional:**

English title: inclination of borehole segment **German title:** Inklinatation des Bohrlochsegmentes

Length: **Min.:** 0 **Max.:** 180

Decimals: 1

XML representation: Element

Description: Inklinatation des Bohrlochsegmentes in Altgrad (0 - 180°, bezogen auf die Lotrechte).
Inclination of the borehole segment in degrees (0 - 180°, relative to the vertical).

List URL:

Constraints:

Notes:

Name:	dataQuality	Approved: X
--------------	--------------------	--------------------

Data type: EL: External List **Mandatory:** X **Conditional:**

English title: data quality **German title:** Datenqualität

Length: **Min.:** **Max.:**

Decimals:

XML representation: Element

Description: Qualitative Einstufung der Angaben zu Azimuth und Inklinatation des Bohrlochsegments
Qualitative classification of the information on azimuth and inclination of the borehole segment.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/>

List items:

Constraints:

Notes:

Attribute group: CodingStandard

English title: **German title:**

Mandatory: X

Description: Kodiersystem, mit dem die Schichtdaten in der Quelldatenbank verschlüsselt sind.
Standard used in the source data base for coding the boreholes interval data.

Notes:

Attributes:

Name:	codingStandard	Approved: X
--------------	-----------------------	--------------------

Data type: EL: External List *Mandatory:* X *Conditional:*
English title: coding standard *German title:* Kodiersystem
Length: *Min.:* *Max.:*
Decimals:
XML representation: Element
Description: Kürzel des Standards, nach welchem die Daten der Quelldatenbank kodiert sind.
Short name of the coding standard used in the source database
List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd>
List items:
Constraints:
Notes:

Attribute group: ContactInfo

English title: contact info *German title:* Kontaktinformation

Mandatory: X

Description: Kontaktinformationen der Daten abgebenden Organisation. Über die Attributsgruppe "ContactInfo" werden die Adressdaten, E-Mail und Telefonnummern mit der Organisation verknüpft.

Contact info of the data submitting organisation. The attribute group "ContactInfo" connects the organisation with the address data, telephone numbers and E-mail-address data.

Notes:

Attributes:

<i>Name:</i>	InkAddress	<i>Approved:</i>
--------------	-------------------	------------------

Data type: *Mandatory:* *Conditional:*

English title: *German title:*

Length: *Min.:* *Max.:*

Decimals:

XML representation:

Description:

List URL:

Constraints:

Notes:

<i>Name:</i>	InkPhone	<i>Approved:</i>
--------------	-----------------	------------------

Data type: *Mandatory:* *Conditional:*

English title: *German title:*

Length: *Min.:* *Max.:*

Decimals:

XML representation:

Description:

List URL:

Constraints:

Notes:

<i>Name:</i>	InkElectronicMailAddress	<i>Approved:</i>
--------------	---------------------------------	------------------

Data type: *Mandatory:* *Conditional:*

English title: *German title:*

Length: Min.: Max.:

Decimals:

XML representation:

Description:

List URL:

Constraints:

Notes:

Attribute group: Organisation

English title: organisation German title: Organisation

Mandatory: X

Description: Die Daten abgebenden Organisation

Data submitting organisation.

Notes:

Attributes:

Name:	organisationName	Approved:	X
-------	------------------	-----------	---

Data type:	S: String	Mandatory:	X	Conditional:
------------	-----------	------------	---	--------------

English title:	organisation name	German title:	Name der Organisation
----------------	-------------------	---------------	-----------------------

Length:	Min.:	Max.:
---------	-------	-------

Decimals:

XML representation: Element

Description: Name der Daten abgebenden Organisation.

Name of data submitting organisation.

List URL:

Constraints:

Notes:

Name:	contactPerson	Approved:	X
-------	---------------	-----------	---

Data type:	S: String	Mandatory:		Conditional:
------------	-----------	------------	--	--------------

English title:	contact person name	German title:	Kontaktperson
----------------	---------------------	---------------	---------------

Length:	Min.:	Max.:
---------	-------	-------

Decimals:

XML representation: Element

Description: Ansprechpartner für den Bezug der Daten.

Contact person for data delivery.

List URL:

Constraints:

Notes:

Name:	InkContactInfo	Approved:
-------	----------------	-----------

Data type:		Mandatory:		Conditional:
------------	--	------------	--	--------------

English title:		German title:	
----------------	--	---------------	--

Length:	Min.:	Max.:
---------	-------	-------

Decimals:

XML representation:

Description:

List URL:

Constraints:

Notes:

Attribute group: Phone

English title: phone

German title: Telefon

Mandatory:

Description: Bei den Kontaktdaten der Daten abgebenden Organisation können mehrere Nummern vorgehalten werden.
Several phone numbers can be used.

Notes:

Attributes:

Name:	type			Approved:	X
Data type:	EL: External List	Mandatory:	X	Conditional:	
English title:	phone type	German title:		Anschlussstyp	
Length:		Min.:		Max.:	
Decimals:					
XML representation:	Element				
Description:	Typ der Kommunikationsverbindung.				
	Type of phone number				
List URL:	http://www.infogeo.de/infogeo/borehole/schemas/geology/				
List items:	Telefon Fax				

Constraints:

Notes:

Name:	number			Approved:	X
Data type:	S: String	Mandatory:	X	Conditional:	
English title:	number	German title:		Nummer	
Length:		Min.:		Max.:	
Decimals:					
XML representation:	Element				
Description:	Nummer der Kommunikationsverbindung.				
	Phone number.				

List URL:

Constraints:

Notes:

Attribute group: ElectronicMailAddress

English title: electronic mail address

German title: E-Mail Adresse

Mandatory:

Description: E-Mail Adresse des Kontaktes / Ansprechpartners. Bei den Kontaktdaten der Daten abgebenden Organisation können mehrere E-Mail-Adressen vorgehalten werden.

E-Mail Address of contact. Several electronic mail addresses could be used.

Notes:

Attributes:

Name:	eMailAddress			Approved:	X
Data type:	S: String	Mandatory:	X	Conditional:	
English title:	e mail address	German title:		E-Mail Adresse	
Length:		Min.:		Max.:	
Decimals:					
XML representation:	Element				
Pattern:	([a-zA-Z0-9])+([\a-zA-Z0-9_-]*)@([a-zA-Z0-9_-])+([\a-zA-Z0-9_-]+)				
Description:	E-Mail Adresse der Kontaktperson oder der Daten abgebenden Stelle. E-Mail-address of contact person or of the data submitting organisation.				

List URL:

Constraints:

Notes:

Attribute group: CoordSystem

English title: coordinate system German title: Koordinatensystem

Mandatory:

Description: Verwendetes Koordinatensystem nach European Petroleum Surveyor Group (EPSG - www.epsg.org)
European Petroleum Surveyor Group coordinate System (EPSG - www.epsg.org).

Notes:

Attributes:

Name:	epsgSystem			Approved:	X
Data type:	EL: External List	Mandatory:	X	Conditional:	
English title:	epsg code	German title:		EPSG Code	
Length:		Min.:		Max.:	
Decimals:					
XML representation:	Element				
Description:	Kürzel für das verwendete Koordinatensystem. Code of the used coordinate system.				
List URL:	http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd				

List items:

Constraints:

Notes:

Attribute group: LevelReferenceSystem

English title: level reference system German title: Höhenreferenzsystem

Mandatory:

Description: Verwendetes Höhenreferenzsystem.
Level reference system.

Notes:

Attributes:

Name:	levelReferenceSystem			Approved:	X
Data type:	EL: External List	Mandatory:	X	Conditional:	
English title:	level reference code	German title:	Höhenreferenz-System		
Length:		Min.:		Max.:	
Decimals:					
XML representation:	Element				
Description:	Kürzel für das verwendete Höhenreferenz-System. Code of the used level reference system.				
List URL:	http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd				
List items:					
Constraints:					
Notes:					

Attribute group: Origin

English title:	origin	German title:	Original-Lokation
Mandatory:			
Description:	Angaben zu den (Original)-Koordinaten des Bohransatzpunktes. Coordinates of the borehole location.		
Notes:			

Attributes:

Name:	xcoord			Approved:	X				
Data type:	N: Decimal Number	Mandatory:	X	Conditional:					
English title:	x coordinate	German title:	Rechtswert						
Length:		Min.:		Max.:					
Decimals:	2								
XML representation:	Element								
Description:	Rechtswert des Bohransatzpunktes. X coordinate of the borehole location (start surface).								
List URL:									
Constraints:									
Notes:									

Name:	ycoord			Approved:	X				
Data type:	N: Decimal Number	Mandatory:	X	Conditional:					
English title:	y coordinate	German title:	Hochwert						
Length:		Min.:		Max.:					
Decimals:	2								
XML representation:	Element								
Description:	Hochwert des Bohransatzpunktes. Y coordinate of the borehole location (start surface).								
List URL:									
Constraints:									
Notes:									

Name:	locationMethod			Approved:	X
Data type:	EL: External List	Mandatory:	Conditional:		
English title:	location measurement method	German title:	Art Koordinatenmessung		
Length:		Min.:	Max.:		
Decimals:					
XML representation:	Element				
Description:	Art der Positionsbestimmung, Type of location measurement.				
List URL:	http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd				
List items:					
Constraints:					
Notes:					

Name:	level			Approved:	X
Data type:	N: Decimal Number	Mandatory:	Conditional:		
English title:	heigth level	German title:	Höhe		
Length:		Min.:	Max.:		
Decimals:	2				
XML representation:	Element				
Description:	Höhe des Bohrungsansatzpunktes im verwendeten Höhenreferenzsystem. Alle Höhenangaben sind auf das Bezugsniveau GOK umzurechnen. Level of drilling point according to the applied level reference system.				
List URL:					
Constraints:					
Notes:					

Name:	levelMethod			Approved:	X
Data type:	EL: External List	Mandatory:	Conditional:		
English title:	level measurement method	German title:	Art Höhenbestimmung		
Length:		Min.:	Max.:		
Decimals:					
XML representation:	Element				
Description:	Art der Höhenbestimmung. Kind of height level measurement.				
List URL:	http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd				
List items:					
Constraints:					
Notes:					

Name:	InkCoordSystem			Approved:	
Data type:		Mandatory:	Conditional:		
English title:		German title:			
Length:		Min.:	Max.:		
Decimals:					
XML representation:					
Description:					

List URL:

Constraints:

Notes:

Name:	InkLevelReferenceSystem	Approved:
-------	-------------------------	-----------

Data type:	Mandatory:	Conditional:
------------	------------	--------------

English title:	German title:
----------------	---------------

Length:	Min.:	Max.:
---------	-------	-------

Decimals:

XML representation:

Description:

List URL:

Constraints:

Notes:

Attribute group: Borehole

English title:	borehole	German title:	Bohrung
----------------	----------	---------------	---------

Mandatory:	X
------------	---

Description: Enthält die Angaben zur Bohrungslokation und die Stammdaten der Bohrung.

Contains the location and the identification info of the borehole.

Notes:

Attributes:

Name:	location	Approved:	X
-------	----------	-----------	---

Data type:	GML-P: GML Point	Mandatory:	X	Conditional:
------------	------------------	------------	---	--------------

English title:	location	German title:	Location
----------------	----------	---------------	----------

Length:	Min.:	Max.:
---------	-------	-------

Decimals:

XML representation: Element

Description: WGS-84-Position des Bohrloch-Ansatzpunktes. Der Datentyp enthält eine dreidimensionale Koordinate, wie im GML-Datentyp "GML Point" definiert. Der Z-Wert wird aus der Angabe in level entnommen.
WGS-84 position of the borehole-location. The data type contains a three-dimensional coordinate as defined in the GML-data type "GML Point". For height reference see value in level.

WGS-84 position of the borehole-location. The data type contains a three-dimensional coordinate as defined in the GML-data type "GML Point". For height reference see value in level.

List URL:

Constraints:

Notes:

Name:	boreholePath	Approved:	X
-------	--------------	-----------	---

Data type:	GML-PL: GML Polyline	Mandatory:	X	Conditional:
------------	----------------------	------------	---	--------------

English title:	borehole path	German title:	Bohrlochverlauf
----------------	---------------	---------------	-----------------

Length:	Min.:	Max.:
---------	-------	-------

Decimals:

XML representation: Element

Description: GML-Geometrie des Bohrlochverlaufs, in Koordinatentripeln bezogen auf das angegebene Koordinaten- und Höhensystem.
Generiert aus den Rohdaten des Bohrlochverlaufs in BoreholeSegment.

GML-geometry of the borehole path in coordinate triples related to the given coordinate- and level reference system.
Generated from the raw data of the borehole path in BoreholeSegment.

List URL:

Constraints:

Notes:

Name:	locationName	Approved:	X
--------------	---------------------	------------------	----------

Data type:	S: String	Mandatory:	Conditional:
English title:	location name	German title:	Ortsbezeichnung
Length:	80	Min.:	Max.:

Decimals:

XML representation: Element

Description: Bezeichnung der Bohrungslokation.
Name or description of the borehole location.

List URL:

Constraints:

Notes:

Name:	id	Approved:	X
--------------	-----------	------------------	----------

Data type:	S: String	Mandatory:	Conditional:
English title:	ID	German title:	ID
Length:	40	Min.:	Max.:

Decimals:

XML representation: Attribute

Description: Fachlicher Identifikator (ID) der Bohrung, wie in der Quelldatenbank angegeben. Das Kürzel dient als Teilschlüssel (neben dem Kurznamen der Quelldatenbank) zur eindeutigen Bezeichnung einer Bohrung.

Identifier (ID) of the borehole, code is taken from the source database. Combined with the database short name code, the borehole ID is used as a compound key which allows the unique identification of the borehole.

List URL:

Constraints:

Notes:

Name:	language	Approved:	X
--------------	-----------------	------------------	----------

Data type:	EL: External List	Mandatory:	Conditional:
English title:	language	German title:	Sprache
Length:		Min.:	Max.:

Decimals:

XML representation: Attribute

Description: Sprache der Datenquelle nach ISO.
ISO language code of the data source.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/iso19115/sgd-Profil.xsd>

List items:

Constraints:

Notes:

Name:	shortName	Approved:	X
--------------	------------------	------------------	----------

Data type: S: String *Mandatory:* X *Conditional:*
English title: short name *German title:* Kurzname
Length: 15 *Min.:* *Max.:*

Decimals:

XML representation: Attribute

Description: Kurzname der Bohrung.
Short name of the borehole.

List URL:

Constraints:

Notes:

Name:	fullName	Approved:	X
--------------	-----------------	------------------	---

Data type: S: String *Mandatory:* X *Conditional:*
English title: full name *German title:* Langname
Length: *Min.:* *Max.:*

Decimals:

XML representation: Attribute

Description: Voller Name der Bohrung.
Complete or full name of the borehole.

List URL:

Constraints:

Notes:

Name:	unitOfMeasure	Approved:	X
--------------	----------------------	------------------	---

Data type: EL: External List *Mandatory:* X *Conditional:*
English title: unit of measure *German title:* Maßeinheit
Length: *Min.:* *Max.:*

Decimals:

XML representation: Attribute

Description: Maßeinheit nach ISO 19115.
In Deutschland: Meter.
Unit of measure according to ISO 19115.
In Germany: meter.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/iso19115/sgd-Profil.xsd>

List items:

Constraints:

Notes:

Name:	database	Approved:	X
--------------	-----------------	------------------	---

Data type: EL: External List *Mandatory:* X *Conditional:*
English title: database name *German title:* Datenbank
Length: *Min.:* *Max.:*

Decimals:

XML representation: Attribute

Description: Kurzname der Quelldatenbank. Das Kürzel dient als Teilschlüssel (neben ID) zur eindeutigen Bezeichnung einer Bohrung.

Short name of the source database. Combined with the ID, the database short name code is used as a compound key which allows the unique identification of the borehole.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd>

List items:

Constraints:

Notes:

Name:	totalLength	Approved:	X
--------------	--------------------	------------------	---

Data type: N: Decimal Number **Mandatory:** X **Conditional:**

English title: total length **German title:** **Endteufe**

Length: **Min.:** 0 **Max.:**

Decimals: 2

XML representation: Element

Description: Die Aufschlusslänge der Bohrung. Abstand des Endpunktes der Bohrung vom Ansatzpunkt, entlang des Bohrfades gemessen. Angabe in Meter.

Length in meter from the start surface to the base, along the borehole.

List URL:

Constraints:

Notes:

Name:	exportDate	Approved:	X
--------------	-------------------	------------------	---

Data type: D: Date **Mandatory:** X **Conditional:**

English title: export date **German title:** Exportdatum

Length: **Min.:** **Max.:**

Decimals:

XML representation: Element

Description: Datum des Auszuges aus der Quelldatenbank.

Export date of the borehole data from the source database.

List URL:

Constraints:

Notes:

Name:	drillMethod	Approved:	X
--------------	--------------------	------------------	---

Data type: EL: External List **Mandatory:** **Conditional:**

English title: drilling method **German title:** Bohrverfahren

Length: **Min.:** **Max.:**

Decimals:

XML representation: Element

Description: Bei der Bohrung verwendetes Bohrverfahren. Bei mehreren Bohrverfahren in einer Bohrung wird ein entsprechendes Kombiboehrverfahren aus der Begriffsliste verwendet.

Type of drilling method. In case of more than one drilling methods applied, a combined drilling method is used.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd>

List items:

Constraints:

Notes:

Name:	drillingYear	Approved:	X
--------------	---------------------	------------------	---

Data type: I: Integer *Mandatory:* *Conditional:*
English title: drilling year *German title:* Bohrungsjahr
Length: *Min.:* *Max.:* 9999
Decimals:
XML representation: Element
Description: Bohrungsjahr (jahresgenau).
Year of drilling.
List URL:
Constraints: 4-stellig
Notes:

Name:	lastHorizon	Approved:	X
--------------	--------------------	------------------	---

Data type: EL: External List *Mandatory:* *Conditional:*
English title: last horizon *German title:* Endhorizont
Length: *Min.:* *Max.:*
Decimals:
XML representation: Element
Description: Stratigraphie der letzten bei der Bohrung erschlossenen Schicht.
List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/lastHorizonTypeList.xsd>
List items:
Constraints:
Notes:

Name:	purpose	Approved:	X
--------------	----------------	------------------	---

Data type: EL: External List *Mandatory:* *Conditional:*
English title: drill purpose *German title:* Bohrzweck
Length: *Min.:* *Max.:*
Decimals:
XML representation: Element
Description: Fachgebiet, für welches die Bohrung abgeteuft worden ist.
Purpose for sinking the borehole.
List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd>
List items:
Constraints:
Notes:

Name:	owner	Approved:	X
--------------	--------------	------------------	---

Data type: S: String *Mandatory:* *Conditional:*
English title: owner *German title:* Eigentümer
Length: *Min.:* *Max.:*
Decimals:
XML representation: Element
Description: Eigentümer der Bohrung.
Owner of the borehole.
List URL:
Constraints:

Notes:

Name:	project				Approved:	X
Data type:	S: String	Mandatory:	Conditional:			
English title:	project	German title:	Projekt			
Length:		Min.:	Max.:			
Decimals:						
XML representation:	Element					
Description:	Name des Projektes, in welchem die Bohrung abgeteuft worden ist.					
	Name of the project for which the borehole was made.					

List URL:

Constraints:

Notes:

Name:	layerData				Approved:	X
Data type:	EL: External List	Mandatory:	Conditional:			
English title:	layer data	German title:	Schichtdaten			
Length:		Min.:	Max.:			
Decimals:						
XML representation:	Element					
Description:	Rechtliche Verfügbarkeit von digitalen Schichtdaten. Legal availability of digital interval series data.					

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd>

List items:

Constraints:

Notes:

Name:	layerDataTechAvail			Approved:	X		
Data type:	EL: External List	Mandatory:	Conditional:				
English title:	layer data (technical availability)	German title:	Schichtdaten (technische Verfügbarkeit)				
Length:		Min.:	Max.:				
Decimals:							
XML representation:	Element						
Description:	Technische Verfügbarkeit von digitalen Schichtdaten.						

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/>

List items:

Constraints:

Notes:

Name:	installation			<i>Approved:</i>	X
<i>Data type:</i>	EL: External List	<i>Mandatory:</i>	<i>Conditional:</i>		
<i>English title:</i>	installation data	German title:	Bohrungsausbau		
<i>Length:</i>		<i>Min.:</i>	<i>Max.:</i>		
<i>Decimals:</i>					
<i>XML representation:</i>	Element				

Description: Rechtliche Verfügbarkeit von Ausbaudaten.

Legal availability of borehole installation data.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd>

List items:

Constraints:

Notes:

Name:	installationTechAvail	Approved:	X
--------------	------------------------------	------------------	---

<i>Data type:</i>	EL: External List	<i>Mandatory:</i>	<i>Conditional:</i>
-------------------	-------------------	-------------------	---------------------

<i>English title:</i>	installation data (technical availability)	<i>German title:</i>	Bohrungsausbau (technische Verfügbarkeit)
-----------------------	--	----------------------	---

<i>Length:</i>	<i>Min.:</i>	<i>Max.:</i>
----------------	--------------	--------------

Decimals:

XML representation: Element

Description: Technische Verfügbarkeit von Ausbaudaten.

Technical availability of borehole installation data.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/>

List items:

Constraints:

Notes:

Name:	groundwaterLevelData	Approved:	X
--------------	-----------------------------	------------------	---

<i>Data type:</i>	EL: External List	<i>Mandatory:</i>	<i>Conditional:</i>
-------------------	-------------------	-------------------	---------------------

<i>English title:</i>	groundwater data	<i>German title:</i>	Grundwasserdaten
-----------------------	------------------	----------------------	------------------

<i>Length:</i>	<i>Min.:</i>	<i>Max.:</i>
----------------	--------------	--------------

Decimals:

XML representation: Element

Description: Rechtliche Verfügbarkeit von Grundwasserstandsangaben.

Legal availability of ground-water level data.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd>

List items:

Constraints:

Notes:

Name:	groundwaterLevelDataTechAvail	Approved:	X
--------------	--------------------------------------	------------------	---

<i>Data type:</i>	EL: External List	<i>Mandatory:</i>	<i>Conditional:</i>
-------------------	-------------------	-------------------	---------------------

<i>English title:</i>	groundwater data (technical availability)	<i>German title:</i>	Grundwasserdaten (technische Verfügbarkeit)
-----------------------	---	----------------------	---

<i>Length:</i>	<i>Min.:</i>	<i>Max.:</i>
----------------	--------------	--------------

Decimals:

XML representation: Element

Description: Technische Verfügbarkeit von Grundwasserstandsangaben.

Technical availability of digital ground-water level data.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/>

List items:

Constraints:

Notes:

Name:	boreholeMeasurement			Approved:	X
Data type:	EL: External List	Mandatory:	Conditional:		
English title:	borehole measurement	German title:	Bohrlochmessungen		
Length:		Min.:	Max.:		
Decimals:					
XML representation:	Element				
Description:	Rechtliche Verfügbarkeit von Bohrungsmessdaten. Legal availability of digital borehole measurements / logging data.				
List URL:	http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd				
List items:					
Constraints:					
Notes:					
Name:	boreholeMeasurementTechAvail			Approved:	X
Data type:	EL: External List	Mandatory:	Conditional:		
English title:	borehole measurement (technical availability)	German title:	Bohrlochmessungen (technische Verfügbarkeit)		
Length:		Min.:	Max.:		
Decimals:					
XML representation:	Element				
Description:	Technische Verfügbarkeit von Bohrungsmessdaten. Technical availability of digital borehole measurements / logging data.				
List URL:	http://www.infogeo.de/infogeo/borehole/schemas/geology/				
List items:					
Constraints:					
Notes:					
Name:	archiveData			Approved:	X
Data type:	EL: External List	Mandatory:	Conditional:		
English title:	archive data	German title:	Archivdaten		
Length:		Min.:	Max.:		
Decimals:					
XML representation:	Element				
Description:	Rechtliche Verfügbarkeit von analogen Archivdaten. Legal availability of analog data: archived documents.				
List URL:	http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd				
List items:					
Constraints:					
Notes:					
Name:	archiveDataTechAvail			Approved:	X
Data type:	EL: External List	Mandatory:	Conditional:		
English title:	archive data (technical availability)	German title:	Archivdaten (technische Verfügbarkeit)		
Length:		Min.:	Max.:		
Decimals:					
XML representation:	Element				

Description: Technische Verfügbarkeit von analogen Archivdaten.
 Technical availability of analog data: archived documents.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/>

List items:

Constraints:

Notes:

Name:	scans	Approved:	X
--------------	--------------	------------------	---

Data type: EL: External List *Mandatory:* *Conditional:*

English title: image data *German title:* Bilddaten

Length: *Min.:* *Max.:*

Decimals:

XML representation: Element

Description: Rechtliche Verfügbarkeit von gescannten Dokumenten.
 Legal availability of scanned documents or images.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd>

List items:

Constraints:

Notes:

Name:	scansTechAvail	Approved:	X
--------------	-----------------------	------------------	---

Data type: EL: External List *Mandatory:* *Conditional:*

English title: image data (technical availability) *German title:* Bilddaten (technische Verfügbarkeit)

Length: *Min.:* *Max.:*

Decimals:

XML representation: Element

Description: Technische Verfügbarkeit von gescannten Dokumenten.
 Technical availability of scanned documents or images.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/>

List items:

Constraints:

Notes:

Name:	samples	Approved:	X
--------------	----------------	------------------	---

Data type: EL: External List *Mandatory:* *Conditional:*

English title: sample data *German title:* Probandaten

Length: *Min.:* *Max.:*

Decimals:

XML representation: Element

Description: Rechtliche Verfügbarkeit von Probandaten.
 Legal availability of sample data.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd>

List items:

Constraints:

Notes:

Name:	samplesTechAvail	Approved:	X
--------------	-------------------------	------------------	---

XML representation:	Element
<code><id></code>	<code><id id=</code>
<code></id></code>	<code>></code>
<code><name></code>	<code><name name=</code>
<code></name></code>	<code>></code>
<code><age></code>	<code><age age=</code>
<code></age></code>	<code>></code>
<code><sex></code>	<code><sex sex=</code>
<code></sex></code>	<code>></code>
<code><weight></code>	<code><weight weight=</code>
<code></weight></code>	<code>></code>
<code><height></code>	<code><height height=</code>
<code></height></code>	<code>></code>
<code><bloodPressure></code>	<code><bloodPressure bloodPressure=</code>
<code></bloodPressure></code>	<code>></code>
<code><heartRate></code>	<code><heartRate heartRate=</code>
<code></heartRate></code>	<code>></code>
<code><temperature></code>	<code><temperature temperature=</code>
<code></temperature></code>	<code>></code>
<code></person></code>	<code></person></code>

Description: Aktueller Status der Bohrung.

Current status of the borehole.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/>

List items:

Constraints:

Notes:

Name:	groundwaterEncountered	Approved:	X
--------------	-------------------------------	------------------	---

<i>Data type:</i>	EL: External List	<i>Mandatory:</i>	X	<i>Conditional:</i>	
-------------------	-------------------	-------------------	---	---------------------	--

<i>English title:</i>	groundwater encountered	<i>German title:</i>	Grundwasser angetroffen
-----------------------	-------------------------	----------------------	-------------------------

<i>Length:</i>		<i>Min.:</i>		<i>Max.:</i>	
----------------	--	--------------	--	--------------	--

Decimals:

XML representation: Element

Description: Information, ob Grundwasser angetroffen worden ist oder nicht.

Information whether groundwater was encountered or not.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/>

List items:

Constraints:

Notes:

Name:	InkOrganisation	Approved:	
--------------	------------------------	------------------	--

<i>Data type:</i>		<i>Mandatory:</i>		<i>Conditional:</i>	
-------------------	--	-------------------	--	---------------------	--

<i>English title:</i>		<i>German title:</i>	
-----------------------	--	----------------------	--

<i>Length:</i>		<i>Min.:</i>		<i>Max.:</i>	
----------------	--	--------------	--	--------------	--

Decimals:

XML representation:

Description:

List URL:

Constraints:

Notes:

Name:	InkCodingStandard	Approved:	
--------------	--------------------------	------------------	--

<i>Data type:</i>		<i>Mandatory:</i>		<i>Conditional:</i>	
-------------------	--	-------------------	--	---------------------	--

<i>English title:</i>		<i>German title:</i>	
-----------------------	--	----------------------	--

<i>Length:</i>		<i>Min.:</i>		<i>Max.:</i>	
----------------	--	--------------	--	--------------	--

Decimals:

XML representation:

Description:

List URL:

Constraints:

Notes:

Name:	InkBoreholeSegment	Approved:	
--------------	---------------------------	------------------	--

<i>Data type:</i>		<i>Mandatory:</i>		<i>Conditional:</i>	
-------------------	--	-------------------	--	---------------------	--

<i>English title:</i>		<i>German title:</i>	
-----------------------	--	----------------------	--

<i>Length:</i>		<i>Min.:</i>		<i>Max.:</i>	
----------------	--	--------------	--	--------------	--

Decimals:

XML representation:

Description:

List URL:

Constraints:

Notes:

Name:	InkOrigin	Approved:
-------	------------------	-----------

Data type:	Mandatory:	Conditional:
------------	------------	--------------

English title:	German title:
----------------	---------------

Length:	Min.:	Max.:
---------	-------	-------

Decimals:

XML representation:

Description:

List URL:

Constraints:

Notes:

Name:	InkIntervalSeries	Approved:
-------	--------------------------	-----------

Data type:	Mandatory:	Conditional:
------------	------------	--------------

English title:	German title:
----------------	---------------

Length:	Min.:	Max.:
---------	-------	-------

Decimals:

XML representation:

Description:

List URL:

Constraints:

Notes:

Name:	InkDrillingProcess	Approved:
-------	---------------------------	-----------

Data type:	Mandatory:	Conditional:
------------	------------	--------------

English title:	German title:
----------------	---------------

Length:	Min.:	Max.:
---------	-------	-------

Decimals:

XML representation:

Description:

List URL:

Constraints:

Notes:

Name:	InkBoreholeFilling	Approved:
-------	---------------------------	-----------

Data type:	Mandatory:	Conditional:
------------	------------	--------------

English title:	German title:
----------------	---------------

Length:	Min.:	Max.:
---------	-------	-------

Decimals:

XML representation:

Description:

List URL:

Constraints:

Notes:

Name:	InkGroundwater			Approved:
<i>Data type:</i>		<i>Mandatory:</i>	<i>Conditional:</i>	
<i>English title:</i>		<i>German title:</i>		
<i>Length:</i>		<i>Min.:</i>	<i>Max.:</i>	
<i>Decimals:</i>				
<i>XML representation:</i>				
<i>Description:</i>				
<i>List URL:</i>				
<i>Constraints:</i>				
<i>Notes:</i>				
Name:	InkGroundwaterObservation			Approved:
<i>Data type:</i>		<i>Mandatory:</i>	<i>Conditional:</i>	
<i>English title:</i>		<i>German title:</i>		
<i>Length:</i>		<i>Min.:</i>	<i>Max.:</i>	
<i>Decimals:</i>				
<i>XML representation:</i>				
<i>Description:</i>				
<i>List URL:</i>				
<i>Constraints:</i>				
<i>Notes:</i>				
Name:	InkInstallationDetails			Approved:
<i>Data type:</i>		<i>Mandatory:</i>	<i>Conditional:</i>	
<i>English title:</i>		<i>German title:</i>		
<i>Length:</i>		<i>Min.:</i>	<i>Max.:</i>	
<i>Decimals:</i>				
<i>XML representation:</i>				
<i>Description:</i>				
<i>List URL:</i>				
<i>Constraints:</i>				
<i>Notes:</i>				
Name:	InkInvestigation			Approved:
<i>Data type:</i>		<i>Mandatory:</i>	<i>Conditional:</i>	
<i>English title:</i>		<i>German title:</i>		
<i>Length:</i>		<i>Min.:</i>	<i>Max.:</i>	
<i>Decimals:</i>				
<i>XML representation:</i>				
<i>Description:</i>				
<i>List URL:</i>				
<i>Constraints:</i>				
<i>Notes:</i>				
Name:	InkSampling			Approved:
<i>Data type:</i>		<i>Mandatory:</i>	<i>Conditional:</i>	
<i>English title:</i>		<i>German title:</i>		
<i>Length:</i>		<i>Min.:</i>	<i>Max.:</i>	

Decimals:

XML representation:

Description:

List URL:

Constraints:

Notes:

Name:	boreholeWebLink	Approved:	X
-------	------------------------	-----------	---

Data type:	URL: Hyperlink	Mandatory:	Conditional:
------------	----------------	------------	--------------

English title:	borehole web link	German title:	Link auf Internetseite
----------------	-------------------	---------------	------------------------

Length:	Min.:	Max.:
---------	-------	-------

Decimals:

XML representation: Element

Description: Adresse einer Internet-Seite mit zusätzlichen Informationen zur Bohrung. Die Seite kann Dokumente, Bilder u.ä. enthalten oder auf weitere Seiten verweisen.

address of a web page (URL) pointing to additional data of the borehole. The page may also contain documents, pictures, references to other sites etc.

List URL:

Constraints:

Notes:

Attribute group: IntervalSeries

English title:	interval series	German title:	Schichtenverzeichnis
----------------	-----------------	---------------	----------------------

Mandatory:

Description: Das abzugebende Schichtenverzeichnis. Das Schichtenverzeichnis besteht aus der Abfolge einzeln abgrenzbaren Schichten, deren Merkmale jeweils in der Attributgruppe "Interval" beschrieben werden. Ein Schichtenverzeichnis verfügt über mindestens eine Schicht. Es können mehrere Schichtenverzeichnis-Versionen für die Bohrung gespeichert werden.

The submitted interval series for the borehole. The interval series consists of single layers Intervals - whose attributes are stored in the attribute group "Interval". An interval series must have at least one interval. It is possible to store several versions of interval series for the borehole.

Notes:

Attributes:

Name:	version	Approved:	X
-------	----------------	-----------	---

Data type:	S: String	Mandatory:	Conditional:
------------	-----------	------------	--------------

English title:	version	German title:	Version
----------------	---------	---------------	---------

Length:	Min.:	Max.:
---------	-------	-------

Decimals:

XML representation: Element

Description: Versionsnummer oder -name des Schichtenverzeichnisses.

Version number or version name of the interval series.

List URL:

Constraints:

Notes:

Name:	description	Approved:	X
-------	--------------------	-----------	---

Data type:	S: String	Mandatory: X	Conditional:
------------	-----------	--------------	--------------

English title:	description	German title:	Beschreibung
----------------	-------------	---------------	--------------

Length: 80 Min.: Max.:
 Decimals:
 XML representation: Element
 Description: Art des Schichtenverzeichnisses. Defaultwert: Master-Schichtenverzeichnis.
 Type of interval series. (Default value: master interval series)

List URL:

Constraints:

Notes:

Name:	InkInterval	Approved:
-------	-------------	-----------

Data type: Mandatory: Conditional:

English title: German title:

Length: Min.: Max.:

Decimals:

XML representation:

Description:

List URL:

Constraints:

Notes:

Attribute group: Interval

English title: interval German title: Schicht

Mandatory:

Description: Die Schichtbeschreibung, d.h. die Daten einer abgrenzbaren Schicht.
 Jeder Schicht muss mindestens Gesteinstyp zugeordnet werden, dessen Merkmale in der Attributgruppe "Lithology" beschrieben werden. Es können bis maximal 9 verschiedene Gesteinstypen zugeordnet werden.
 Jeder Schicht muss eine stratigraphische Bezeichnung zugeordnet sein.
 The interval data.
 Each interval must be associated with at least one rock type, whose attributes are stored in the attribute group "Lithology". Each interval can be associated with up to nine different rock types.
 Each interval must be associated with a stratigraphical term.

Notes:

Attributes:

Name:	depthTop	Approved:	X
-------	----------	-----------	---

Data type: N: Decimal Number Mandatory: X Conditional:

English title: depth top German title: Obergrenze

Length: Min.: 0.00 Max.:

Decimals: 2

XML representation: Element

Description: Abstand der Schichtobergrenze vom Ansatzpunkt der Bohrung entlang des Bohrpfad es gemessen. Angabe in Meter.
 Length in meters from the start surface of the borehole to the top of the interval, along the borehole.

List URL:

Constraints: depthTop < depthBase

Notes:

Name:	depthBase	Approved:	X
-------	-----------	-----------	---

Data type: N: Decimal Number Mandatory: X Conditional:

English title: depth base **German title:** Endteufe
Length: **Min.:** 0.00 **Max.:**
Decimals: 2
XML representation: Element
Description: Abstand der Schichtuntergrenze vom Ansatzpunkt der Bohrung entlang des Bohrpfades gemessen. Angabe in Meter.
 Length in meters from the start surface of the borehole to the base of the interval, along the borehole.
List URL:
Constraints: depthTop < depthBase
Notes:

Name:	rockCode	Approved:	X
--------------	-----------------	------------------	---

Data type: S: String **Mandatory:** **Conditional:**
English title: rock code **German title:** Gesteinskodierung
Length: **Min.:** **Max.:**
Decimals:
XML representation: Element

Description: Lithologiekodierung der Schicht nach länderspezifischem Standard. Die Kodierung wird ohne Änderungen aus der Quelldatenbank übernommen.
 Original rock code of the interval, taken from the source database.
List URL:
Constraints:
Notes:

Name:	rockNameText	Approved:	X
--------------	---------------------	------------------	---

Data type: S: String **Mandatory:** **Conditional:**
English title: rock name text **German title:** Gesteinsbezeichnung
Length: **Min.:** **Max.:**
Decimals:
XML representation: Element

Description: Prägnante, klartextliche Gesteinsbezeichnung für die gesamte Schicht entsprechend der Informationen aus der Quelldatenbank.
 Identifying textual description of the intervals rock types according to the information in the source database.
List URL:
Constraints:
Notes:

Name:	intervalType	Approved:	X
--------------	---------------------	------------------	---

Data type: EL: External List **Mandatory:** **Conditional:**
English title: interval type **German title:** Schichtart
Length: **Min.:** **Max.:**
Decimals:
XML representation: Element

Description: Angabe, ob sich die Schicht aus einem Gesteinstyp (Einzelschicht) oder aus einer nicht weiter aufgelösten Wechsellagerung verschiedener Gesteinstypen (Gesteinswechsel) besteht bzw. ob die Schicht bedingt durch die Art der Probenahme mehrere Gesteinstypen (Mischprobe) enthält.
 By using this attribute it is possible to distinguish between intervals consisting of a single rock type, intervals with intercalated rock types or intervals with mixed rock types due to mixing at drill sampling.
List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/intervaltypeTypeList.xsd>
List items:

Constraints:

Notes:

Name:	InkLithology	Approved:
--------------	---------------------	------------------

Data type:	Mandatory:	Conditional:
-------------------	-------------------	---------------------

English title:	German title:
-----------------------	----------------------

Length:	Min.:	Max.:
----------------	--------------	--------------

Decimals:

XML representation:

Description:

List URL:

Constraints:

Notes:

Name:	InkStratigraphy	Approved:
--------------	------------------------	------------------

Data type:	Mandatory:	Conditional:
-------------------	-------------------	---------------------

English title:	German title:
-----------------------	----------------------

Length:	Min.:	Max.:
----------------	--------------	--------------

Decimals:

XML representation:

Description:

List URL:

Constraints:

Notes:

Name:	InkInterval	Approved:
--------------	--------------------	------------------

Data type:	Mandatory:	Conditional:
-------------------	-------------------	---------------------

English title:	German title:
-----------------------	----------------------

Length:	Min.:	Max.:
----------------	--------------	--------------

Decimals:

XML representation:

Description: Untergeordnete Ebene kann nicht übergeordnete Ebene einer weiteren untergeordneten Ebene sein (maximal zwei Ebenen insgesamt bzw. maximal eine untergeordnete Ebene).

Sublevel cannot be master of another sublevel (maximum two levels altogether, or maximum one sublevel respectively).

List URL:

Constraints:

Notes:

Name:	genesis	Approved:	X
--------------	----------------	------------------	---

Data type:	EL: External List	Mandatory:	Conditional:
-------------------	-------------------	-------------------	---------------------

English title:	genesis	German title:	Genese
-----------------------	---------	----------------------	--------

Length:	Min.:	Max.:
----------------	--------------	--------------

Decimals:

XML representation:	Element
----------------------------	---------

Description: Genese der Schicht.

Genesis of the interval.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/genesisTypeList.xsd>

List items:

Constraints:

Notes:

Name:	geogenesis	Approved:	X
--------------	-------------------	------------------	----------

Data type:	EL: External List	Mandatory:	Conditional:
-------------------	-------------------	-------------------	---------------------

English title:	geogenesis	German title:	Geogenese
-----------------------	------------	----------------------	-----------

Length:	Min.:	Max.:
----------------	--------------	--------------

Decimals:

XML representation:	Element
----------------------------	---------

Description: Petrogenetische Bezeichnung der Schicht.

Petrogenesis of the interval.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/geoGenesisTypeList.xsd>

List items:

Constraints:

Notes:

Name:	carbonate	Approved:	X
--------------	------------------	------------------	----------

Data type:	EL: External List	Mandatory:	Conditional:
-------------------	-------------------	-------------------	---------------------

English title:	carbonate content	German title:	Karbonatgehalt
-----------------------	-------------------	----------------------	----------------

Length:	Min.:	Max.:
----------------	--------------	--------------

Decimals:

XML representation:	Element
----------------------------	---------

Description: Karbonatgehalt der Schicht.

Carbonate content of the interval.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd>

List items:

Constraints:

Notes:

Name:	waterContent	Approved:	X
--------------	---------------------	------------------	----------

Data type:	EL: External List	Mandatory:	Conditional:
-------------------	-------------------	-------------------	---------------------

English title:	water content	German title:	Gesteinsfeuchte
-----------------------	---------------	----------------------	-----------------

Length:	Min.:	Max.:
----------------	--------------	--------------

Decimals:

XML representation:	Element
----------------------------	---------

Description: Feuchtezustand der Schicht.

Water content of the interval.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd>

List items:

Constraints:

Notes:

Name:	consistency	Approved:	X
--------------	--------------------	------------------	----------

Data type:	EL: External List	Mandatory:	Conditional:
-------------------	-------------------	-------------------	---------------------

English title:	consistency	German title:	Konsistenz
-----------------------	-------------	----------------------	------------

Length:	Min.:	Max.:
----------------	--------------	--------------

Decimals:

XML representation: Element

Description: Konsistenz der Schicht.

Consistency of the interval.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd>

List items:

Constraints:

Notes:

Name:	compactness	Approved:	X
-------	--------------------	-----------	---

Data type: EL: External List

Mandatory:

Conditional:

English title: compactness

German title:

Lagerungsdichte

Length:

Min.:

Max.:

Decimals:

XML representation: Element

Description: Lagerungsdichte der Schicht.

Compactness of the interval.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd>

List items:

Constraints:

Notes:

Name:	descriptiveText	Approved:	X
-------	------------------------	-----------	---

Data type: S: String

Mandatory:

Conditional:

English title: descriptive text

German title:

beschreibender Text

Length: 250

Min.:

Max.:

Decimals:

XML representation: Element

Description: Ergänzend, beschreibender Text zu einer Schicht. Kann vom Datenprovider beliebig gefüllt werden.

Supplemental, descriptive text for an interval. The data provider can fill this attribute arbitrarily.

List URL:

Constraints:

Notes:

Attribute group: Lithology

English title: lithology

German title:

Lithologie

Mandatory:

Description: Die Merkmale von bis zu neun verschiedenen, einer Schicht zugeordneten Gesteinstypen.

The attributes of up to nine different rock types assigned to the interval.

Notes:

Attributes:

Name:	rockName	Approved:	X
-------	-----------------	-----------	---

Data type: EL: External List

Mandatory: X

Conditional:

English title: rock name

German title:

Gesteinsname

Length:

Min.:

Max.:

Decimals:

XML representation:

Element

Description: Name des Gesteins. Kann auch Haupt- und Nebenbestandteil umfassen (?)
Rock name, It could also comprise main constituent and secondary constituent (?)

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/rocknameTypeList.xsd>

List items:

Constraints:

Notes:

Name:	percentage	Approved:	X
--------------	-------------------	------------------	---

Data type:	N: Decimal Number	Mandatory:	Conditional:
English title:	percentage	German title:	Prozentualer Anteil
Length:		Min.: 0.1	Max.: 100.0
Decimals:	1		

XML representation:

Element

Description: Prozentualer Anteil des Gesteins.
Percentage of the specified rock type

List URL:

Constraints:

Notes:

Name:	percentageFrom	Approved:	X
--------------	-----------------------	------------------	---

Data type:	N: Decimal Number	Mandatory:	Conditional: X
English title:	percentage lower limit	German title:	Prozentualer Anteil - Untergrenze
Length:		Min.: 0.1	Max.: 100.0
Decimals:	1		

XML representation:

Element

Description: Untergrenze des prozentualen Anteils des Gesteins.
Lower limit of the percentage of the specified rock type

List URL:

Constraints: Wenn percentageFrom ausgefüllt ist, muss auch percentageTo ausgefüllt sein.
Wenn percentageFrom ausgefüllt ist, darf percentage nicht ausgefüllt sein.

When percentageFrom is filled, percentageTo must be filled as well.
When percentageFrom is filled, percentage must not be filled.

Notes:

Name:	percentageTo	Approved:	X
--------------	---------------------	------------------	---

Data type:	N: Decimal Number	Mandatory:	Conditional: X
English title:	percentage upper limit	German title:	Prozentualer Anteil - Obergrenze
Length:		Min.: 0.1	Max.: 100.0
Decimals:	1		

XML representation:

Element

Description: Untergrenze des prozentualen Anteils des Gesteins.
Lower limit of the percentage of the specified rock type

List URL:

Constraints: Wenn percentageTo ausgefüllt ist, muss auch percentageFrom ausgefüllt sein.
 Wenn percentageTo ausgefüllt ist, darf percentage nicht ausgefüllt sein.
 When percentageTo is filled, percentageFrom must be filled as well.
 When percentageTo is filled, percentage must not be filled.

Notes:

Name:	rockColor			Approved:	X
Data type:	EL: External List	Mandatory:	Conditional:		
English title:	rock color	German title:	Gesteinsfarbe		
Length:		Min.:	Max.:		
Decimals:					
XML representation:	Element				
Description:	Die Farbe des Gesteinstyps. Color of the specified rock type.				
List URL:	http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd				

List items:

Constraints:

Notes:

Name:	rockColorMixture			Approved:	X
Data type:	EL: External List	Mandatory:	Conditional:		
English title:	rock color mixture	German title:	Farbverteilung		
Length:		Min.:	Max.:		
Decimals:					
XML representation:	Element				
Description:	Verteilung der Farbe innerhalb des Gesteinstyps. Colour distribution within the specified rock type.				
List URL:	http://www.infogeo.de/infogeo/borehole/schemas/geology/smallKeyTypeLists.xsd				

List items:

Constraints:

Notes:

Attribute group: Stratigraphy

English title: **German title:**

Mandatory:

Description: Jeder Schicht wird eine stratigraphische Angabe zugeordnet, dabei kann entweder Chrono- oder Lithostratigraphie bzw. es können beide Chronostratigraphie und Lithostratigraphie angegeben werden.
 Stratigraphical data is connected to each interval. Either chrono stratigraphy or litho stratigraphy must be used, both of them could be used.

Notes:

Attributes:

Name:	stratigraphyChrono			Approved:	X
Data type:	EL: External List	Mandatory:	Conditional:	X	
English title:	chrono stratigraphy	German title:	Chronostratigraphie		
Length:		Min.:	Max.:		
Decimals:					

XML representation: Element

Description: Chronostratigraphie. Wenn keine Chronostratigraphie verwendet wird, muss jedenfalls beim Attribut Lithostratigraphie eine Angabe vorhanden sein.

Chrono stratigraphy: If there is no chrono stratigraphy term given, the attribute ?litho stratigraphy? has to be used.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/stratigraphyChronoTypeList.xsd>

List items:

Constraints: Es muss entweder Chrono- oder Lithostratigraphie angegeben werden.

Notes:

Name:	stratigraphyLitho	Approved:	X
-------	--------------------------	-----------	---

Data type:	S: String	Mandatory:	Conditional: X
------------	-----------	------------	----------------

English title:	lithostratigraphy	German title:	Lithostratigraphie
----------------	-------------------	---------------	--------------------

Length:	Min.:	Max.:
---------	-------	-------

Decimals:

XML representation: Element

Description: Länderspezifische Lithostratigraphie als Text. Kann zwei stratigraphische Angaben enthalten, die fachlich mit "und", "oder" bzw. "bis" verbunden sein können. Wenn keine Lithostratigraphie verwendet wird, muss jedenfalls beim Attribut Chronostratigraphie eine Angabe vorhanden sein.

SGD-standard litho stratigraphy (text string): Two litho stratigraphical terms could be combined by "and", "or", "to". If there is no litho stratigraphy-term given, the attribute "chrono stratigraphy" has to be used.

List URL:

Constraints: Es muss entweder Chrono- oder Lithostratigraphie angegeben werden.

Notes:

Attribute group: DrillingProcess

English title:	drilling process	German title:	Bohrverlauf
----------------	------------------	---------------	-------------

Mandatory:

Description: Teufenbezogene Beschreibung des technischen Bohrprozesses.

Depth-related description of the technical drilling process.

Notes: Es muss mindestens eines der Attribute drillingMethod, drillingTool, drillholeDiameter und flushingType ausgefüllt sein.

At least one of the attributes drillingMethod, drillingTool, drillholeDiameter, flushingType has to be filled.

Attributes:

Name:	from	Approved:	X
-------	-------------	-----------	---

Data type:	N: Decimal Number	Mandatory: X	Conditional:
------------	-------------------	--------------	--------------

English title:	from	German title:	von
----------------	------	---------------	-----

Length:	Min.:	0	Max.:	99999
---------	-------	---	-------	-------

Decimals:	2
-----------	---

XML representation: Element

Description: Startpunkt des spezifischen Bohrabschnittes, der durch einen Bohrprozess gekennzeichnet ist, relativ zum Bohransatzpunkt in Meter. Intervalle werden entlang des Bohrungspfades gemessen.

Start level of a particular drilling process relative to given height level at starting point in meters. Intervals are measured along the drillhole path.

List URL:

Constraints:

Notes:

Name:	to	Approved:	X
-------	-----------	-----------	---

Data type: N: Decimal Number *Mandatory:* X *Conditional:*
English title: to *German title:* bis
Length: *Min.:* 0 *Max.:* 99999
Decimals: 2
XML representation: Element
Description: Endpunkt des spezifischen Bohrabschnittes, der durch einen Bohrprozess gekennzeichnet ist, relativ zum Bohransatzpunkt in Meter. Intervalle werden entlang des Bohrungspfades gemessen.
 End level of a particular drilling process relative to given height level at starting point in meters. Intervals are measured along the drillhole path.

List URL:

Constraints: > 'from'

Notes:

Name:	drillingMethod	Approved:	X
--------------	-----------------------	------------------	---

Data type: EL: External List *Mandatory:* *Conditional:* X

English title: drilling method *German title:* Bohrverfahren

Length: *Min.:* *Max.:*

Decimals:

XML representation: Element

Description: Spezifisches Bohrverfahren für die genannte Bohrstrecke.

Specific method of drilling used for given depth interval.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/>

List items:

Constraints: Es muss mindestens eines der Attribute drillingMethod, drillingTool, drillholeDiameter und flushingType ausgefüllt sein.

At least one of the attributes drillingMethod, drillingTool, drillholeDiameter, flushingType has to be filled.

Notes:

Name:	drillingTool	Approved:	X
--------------	---------------------	------------------	---

Data type: EL: External List *Mandatory:* *Conditional:* X

English title: drilling tool *German title:* Bohrwerkzeug

Length: *Min.:* *Max.:*

Decimals:

XML representation: Element

Description: Bohrwerkzeug, verwendet für die genannte Bohrstrecke.

Drilling tool used in given depth interval.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/>

List items:

Constraints: Es muss mindestens eines der Attribute drillingMethod, drillingTool, drillholeDiameter und flushingType ausgefüllt sein.

At least one of the attributes drillingMethod, drillingTool, drillholeDiameter, flushingType has to be filled.

Notes:

Name:	drillholeDiameter	Approved:	X
--------------	--------------------------	------------------	---

Data type: N: Decimal Number *Mandatory:* *Conditional:* X

English title: drillhole diameter *German title:* Bohrlochdurchmesser

Length: *Min.:* 1 *Max.:* 99999

Decimals: 0

XML representation: Element

Description: Bohrlochdurchmesser des genannten Bohrabschnittes in Millimeter.

Diameter of drillhole in given depth interval in millimeters.

List URL:

Constraints: Es muss mindestens eines der Attribute drillingMethod, drillingTool, drillholeDiameter und flushingType ausgefüllt sein.

At least one of the attributes drillingMethod, drillingTool, drillholeDiameter, flushingType has to be filled.

Notes:

Name:	flushingType	Approved:	X
--------------	---------------------	------------------	---

Data type:	EL: External List	Mandatory:	Conditional:	X
-------------------	-------------------	-------------------	---------------------	---

English title:	flushing type	German title:	Spülungsart
-----------------------	---------------	----------------------	-------------

Length:	Min.:	Max.:
----------------	--------------	--------------

Decimals:

XML representation:	Element
----------------------------	---------

Description: Art der Spülung im genannten Bohrabschnitt.

Type of flushing in the specified drilling interval.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/>

List items:

Constraints: Es muss mindestens eines der Attribute drillingMethod, drillingTool, drillholeDiameter und flushingType ausgefüllt sein.

At least one of the attributes drillingMethod, drillingTool, drillholeDiameter, flushingType has to be filled.

Notes:

Attribute group: BoreholeFilling

English title:	German title:
-----------------------	----------------------

Mandatory:

Description: Füllung des Bohrloches.

Drillhole filling.

Notes:

Attributes:

Name:	from	Approved:	X
--------------	-------------	------------------	---

Data type:	N: Decimal Number	Mandatory:	X	Conditional:
-------------------	-------------------	-------------------	---	---------------------

English title:	from	German title:	von
-----------------------	------	----------------------	-----

Length:	Min.:	0	Max.:	99999
----------------	--------------	---	--------------	-------

Decimals:	2
------------------	---

XML representation:	Element
----------------------------	---------

Description: Oberkante des Verfüllungsabschnittes relativ zum Bohransatzpunkt in Meter.
Intervalle werden entlang des Bohrungspfades gemessen.

Top of filling interval relative to given height level at starting point in meters. Intervals are measured along the drillhole path.

List URL:

Constraints:

Notes:

Name:	to	Approved:	X
--------------	-----------	------------------	---

Data type:	N: Decimal Number	Mandatory:	X	Conditional:
-------------------	-------------------	-------------------	---	---------------------

English title:	to	German title:	bis
-----------------------	----	----------------------	-----

Length: Min.: 0 Max.: 99999

Decimals: 2

XML representation: Element

Description: Unterkante des Verfüllungsabschnittes relativ zum Bohransatzpunkt in Meter. Intervalle werden entlang des Bohrungspfades gemessen.

Bottom of filling interval relative to given height level at starting point in meters. Intervals are measured along the drillhole path.

List URL:

Constraints: > 'from'

Notes:

Name:	boreholeFillMaterial	Approved:	X
-------	-----------------------------	-----------	---

Data type: EL: External List Mandatory: X Conditional:

English title: space fill material German title: Ringraumverfüllung

Length: Min.: Max.:

Decimals:

XML representation: Element

Description: Verfüllungsmaterial des Bohrlochs im angegebenen Bohrintervall.

fill material of borehole.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/>

List items:

Constraints:

Notes:

Attribute group: Groundwater

English title: groundwater data German title: Grundwasserdaten

Mandatory:

Description: Zusammenfassende Grundwasserbeobachtungen bezogen auf den Bohrvorgang nach DIN4022. Enthält die Grundwasserbeobachtungen beim ersten Antreffen des Grundwassers sowie nach Beendigung der Bohrarbeiten.

Information about groundwater levels during the drilling process according DIN4022. Contains the observations at first groundwater encounter and observations after drillhole completion.

Notes: Es muss mindestens eines der Attribute entryDepth, balancedLevel und endLevel ausgefüllt sein.

At least one of the attributes entryDepth, balancedLevel, endLevel has to be filled.

Attributes:

Name:	entryDepth	Approved:	X
-------	-------------------	-----------	---

Data type: N: Decimal Number Mandatory: Conditional: X

English title: entry depth German title: Grundwasseranschnitt

Length: Min.: 0 Max.: 9999

Decimals: 2

XML representation: Element

Description: Bohrmeter, bei dem erstmals Grundwasser angetroffen wurde, in Meter relativ zum Bohransatzpunkt. Bohrmeter werden entlang des Bohrungspfades gemessen.

Distance from the starting point of the borehole to the point of first contact with groundwater in meters. Distances are measured along the drillhole path.

List URL:

Constraints: Es muss mindestens eines der Attribute entryDepth, balancedLevel und endLevel ausgefüllt sein.

At least one of the attributes entryDepth, balancedLevel, endLevel has to be filled.

Notes:

Name:	entryDate			Approved:	X
Data type:	D: Date	Mandatory:	Conditional:		
English title:	entry date	German title:	Datum Grundwasseranschnitt		
Length:		Min.:	Max.:		
Decimals:					
XML representation:	Element				
Description:	Datum des Antreffens des Grundwassers.				
	Date of first encountering groundwater.				
List URL:					
Constraints:	Jahres-, Monats- oder Tagesscharf				

Notes:

Name:	entryTime			Approved:	X
Data type:	T: Time	Mandatory:	Conditional:		
English title:	entry time	German title:	Uhrzeit Grundwasseranschnitt		
Length:		Min.:	Max.:		
Decimals:					
XML representation:	Element				
Description:	Uhrzeit des Antreffens des Grundwassers.				
	Time of first encountering groundwater.				
List URL:					
Constraints:					

Notes:

Name:	balancedLevel				Approved:	X
Data type:	N: Decimal Number	Mandatory:	Conditional: X			
English title:	balanced level	German title:	eingestellter Grundwasserstand			
Length:		Min.:	-100	Max.:	9999	
Decimals:	2					
XML representation:	Element					
Description:	Eingestellter Grundwasserstand im Bohrloch nach dem ersten Antreffen von Grundwasser. Der Grundwasserstand wird entlang des Bohrungspfades gemessen.					
	Balanced groundwater level in the borehole after the first encounter of groundwater, measured after a rest period. Distances are measured along the drillhole path.					
List URL:						
Constraints:	Es muss mindestens eines der Attribute entryDepth, balancedLevel und endLevel ausgefüllt sein.					
	At least one of the attributes entryDepth, balancedLevel, endLevel has to be filled.					

Notes:

<i>Name:</i>	balancedDate			<i>Approved:</i>	X
<i>Data type:</i>	D: Date	<i>Mandatory:</i>	<i>Conditional:</i>		
<i>English title:</i>	balanced date	German title:	Datum eingestellter Grundwasserstand		
<i>Length:</i>		<i>Min.:</i>	<i>Max.:</i>		
<i>Decimals:</i>					

XML representation:

Element

Description: Datum der Messung des eingestellten Grundwasserstands nach dem ersten Antreffen von Grundwasser.

Date of measure of balanced groundwater level in the borehole after the first encounter of groundwater, measured after a rest period.

List URL:

Constraints: Jahres-, Monats- oder Tagesscharf

Notes:

Name:	balancedTime	Approved:	X
--------------	---------------------	------------------	---

Data type:	T: Time	Mandatory:	Conditional:
-------------------	---------	-------------------	---------------------

English title:	balanced time	German title:	Uhrzeit eingestellter Grundwasserstand
-----------------------	---------------	----------------------	--

Length:	Min.:	Max.:
----------------	--------------	--------------

Decimals:

XML representation:

Element

Description: Uhrzeit der Messung des eingestellten Grundwasserstands nach dem ersten Antreffen von Grundwasser.

Time of measure of balanced groundwater level in the borehole after the first encounter of groundwater, measured after a rest period.

List URL:

Constraints:

Notes:

Name:	endLevel	Approved:	X
--------------	-----------------	------------------	---

Data type:	N: Decimal Number	Mandatory:	Conditional:	X
-------------------	-------------------	-------------------	---------------------	---

English title:	end level	German title:	Endgrundwasserstand
-----------------------	-----------	----------------------	---------------------

Length:	Min.:	0	Max.:	9999
----------------	--------------	---	--------------	------

Decimals: 2

XML representation:

Element

Description: Grundwasserstand im Bohrloch nach Beendigung der Bohrarbeiten.
Der Grundwasserstand wird entlang des Bohrungspfades gemessen.

Groundwater level in the borehole after finishing the drilling process.
Distances are measured along the drillhole path.

List URL:

Constraints: Es muss mindestens eines der Attribute entryDepth, balancedLevel und endLevel ausgefüllt sein.

At least one of the attributes entryDepth, balancedLevel, endLevel has to be filled.

Notes:

Name:	endDate	Approved:	X
--------------	----------------	------------------	---

Data type:	D: Date	Mandatory:	Conditional:
-------------------	---------	-------------------	---------------------

English title:	end level date	German title:	Datum Endgrundwasserstand
-----------------------	----------------	----------------------	---------------------------

Length:	Min.:	Max.:
----------------	--------------	--------------

Decimals:

XML representation:

Element

Description: Datum der Messung des Grundwasserstandes im Bohrloch nach Beendigung der Bohrarbeiten.

Date of measure of groundwater level in the borehole after finishing the drilling process.

List URL:

Constraints: Jahres-, Monats- oder Tagesscharf

Notes:

Name:	endTime	Approved:	X
Data type:	T: Time	Mandatory:	Conditional:
English title:	end level time	German title:	Uhrzeit Endgrundwasserstand
Length:		Min.:	Max.:
Decimals:			
XML representation:	Element		
Description:	Uhrzeit der Messung des Grundwasserstands nach dem Abschluß der Bohrarbeiten. Time of measure of groundwater level in the borehole after finishing the drilling process.		
List URL:			
Constraints:			
Notes:			

Attribute group: GroundwaterObservation

English title: groundwater observation **German title:** Grundwasserbeobachtung

Mandatory:

Description: Grundwasserbeobachtungen nach DIN4022 während des Bohrprozesses. Dient der ausführlichen Dokumentation der Grundwasserbeobachtungen.

Groundwater observations during drilling process according to DIN4022 Standard. Serves the comprehensive documentation of groundwater observations.

Notes:

Attributes:

Name:	date	Approved:	X
Data type:	D: Date	Mandatory:	Conditional:
English title:	date of observation	German title:	Datum der Messung
Length:		Min.:	Max.:
Decimals:			
XML representation:	Element		
Description:	Datum der Grundwasserbeobachtung oder Grundwassermessung. Date of groundwater observation or measurement.		
List URL:			
Constraints:	Jahres-, Monats- oder Tagesscharf		
Notes:			

Name:	time	Approved:	X
Data type:	T: Time	Mandatory:	Conditional:
English title:	time of observation	German title:	Zeit der Messung
Length:		Min.:	Max.:
Decimals:			
XML representation:	Element		
Description:	Uhrzeit der Grundwasserbeobachtung oder Grundwassermessung. Time of groundwater observation or measurement.		
List URL:			
Constraints:			
Notes:			

Name:	groundwaterLevel	Approved:	X
--------------	-------------------------	------------------	---

Data type: N: Decimal Number *Mandatory:* *Conditional:*
English title: groundwater level *German title:* Grundwasserpegel
Length: *Min.:* -100 *Max.:* 99999
Decimals: 2
XML representation: Element
Description: Grundwasserstand im Bohrloch in Meter bezogen auf den Bohransatzpunkt.
Der Grundwasserstand wird entlang des Bohrungspfades gemessen.
Groundwater level in the borehole in meters relative to the starting point.
Distances are measured along the drillhole path.

List URL:

Constraints:

Notes:

Name:	drillingDepth	Approved:	X
--------------	----------------------	------------------	----------

Data type: N: Decimal Number *Mandatory:* X *Conditional:*
English title: drilling depth during observation *German title:* Bohrtiefe während der Messung
Length: *Min.:* 0 *Max.:* 99999
Decimals: 2
XML representation: Element
Description: Bohrtiefe während der Beobachtung, in Meter relativ zum Bohransatzpunkt.
Bohrmeter werden entlang des Bohrungspfades gemessen.
Distance from the starting point of the borehole during the observation in meters.
Distances are measured along the drillhole path.

List URL:

Constraints:

Notes:

Name:	overflow	Approved:	X
--------------	-----------------	------------------	----------

Data type: B: Boolean *Mandatory:* *Conditional:*
English title: groundwater overflow *German title:* Grundwasser Überlauf
Length: *Min.:* *Max.:*
Decimals:
XML representation: Element
Description: Information, ob artesische Verhältnisse vorliegen oder nicht.
Information about artesian conditions.

List URL:

Constraints:

Notes:

Name:	observationKind	Approved:	X
--------------	------------------------	------------------	----------

Data type: EL: External List *Mandatory:* X *Conditional:*
English title: kind of observation *German title:* Art der Beobachtungen
Length: *Min.:* *Max.:*
Decimals:
XML representation: Element
Description: Art der Grundwasserbeobachtung.
Kind of groundwater observation.
List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/>

List items:

Constraints:

Notes:

Attribute group: InstallationDetails

English title: installation details

German title: Ausbaubeschreibung

Mandatory:

Description: Ausbaudaten.

Most recent installation.

Notes:

Attributes:

Name:	installationDate	Approved:	X
-------	------------------	-----------	---

Data type:	D: Date	Mandatory:	Conditional:
------------	---------	------------	--------------

English title:	installation date	German title:	Ausbaudatum
----------------	-------------------	---------------	-------------

Length:	Min.:	Max.:
---------	-------	-------

Decimals:

XML representation:	Element
---------------------	---------

Description: Datum des Ausbaus.

Date of casing installation.

List URL:

Constraints: Jahres-, Monats- oder Tagesscharf

Notes:

Name:	description	Approved:	X
-------	-------------	-----------	---

Data type:	S: String	Mandatory:	Conditional:
------------	-----------	------------	--------------

English title:	description of the installation	German title:	Beschreibung des Ausbaus
----------------	---------------------------------	---------------	--------------------------

Length:	Min.:	Max.:
---------	-------	-------

Decimals:

XML representation:	Element
---------------------	---------

Description: Ausführliche Beschreibung des Ausbaus und seiner Besonderheiten.

Verbose description of the casing installation, its characteristics and peculiarities

List URL:

Constraints:

Notes:

Name:	InkCasingString	Approved:
-------	-----------------	-----------

Data type:	Mandatory:	Conditional:
------------	------------	--------------

English title:	German title:
----------------	---------------

Length:	Min.:	Max.:
---------	-------	-------

Decimals:

XML representation:

Description:

List URL:

Constraints:

Notes:

Name:	InkSpaceFilling	Approved:
--------------	------------------------	------------------

Data type: *Mandatory:* *Conditional:*

English title: *German title:*

Length: *Min.:* *Max.:*

Decimals:

XML representation:

Description:

List URL:

Constraints:

Notes:

Attribute group: CasingString

English title: casing string *German title:* Rohrtour

Mandatory:

Description: Ausbau (Rohrtour) als Teil des Gesamtausbaus eines Bohrlochs.

Casing string as a part of the casing of the borehole.

Notes:

Attributes:

Name:	casingStringNumber	Approved:	X
--------------	---------------------------	------------------	---

Data type: I: Integer *Mandatory:* X *Conditional:*

English title: casing string number *German title:* Rohrtour-Nummer

Length: *Min.:* 1 *Max.:* 9

Decimals:

XML representation: Element

Description: Nummer oder Index der Rohrtour im Bohrloch.

Number or index of casing string in the borehole.

List URL:

Constraints:

Notes:

Name:	casingStringType	Approved:	X
--------------	-------------------------	------------------	---

Data type: EL: External List *Mandatory:* X *Conditional:*

English title: casing string type *German title:* Rohrtourart

Length: *Min.:* *Max.:*

Decimals:

XML representation: Element

Description: Rohrtourtyp.

Type of casing string.

List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/>

List items:

Constraints:

Notes:

Name:	InkCasingStringSegment	Approved:
--------------	-------------------------------	------------------

Data type: *Mandatory:* *Conditional:*
English title: *German title:*
Length: *Min.:* *Max.:*
Decimals:
XML representation:
Description:
List URL:
Constraints:
Notes:

Attribute group: SpaceFilling

English title: space filling *German title:* Ringraumverfüllung

Mandatory:

Description: Verfüllung des Ringraumes zwischen der Aussenseite des Ausbaus und der Bohrlochwand.
 Filling of the annular space between the outside of the installation and the borehole.

Notes:

Attributes:

Name:	from	Approved:	X
--------------	-------------	------------------	---

Data type: N: Decimal Number *Mandatory:* X *Conditional:*
English title: from *German title:* von
Length: *Min.:* -100 *Max.:* 99999
Decimals: 2
XML representation: Element

Description: Oberkante des Ringraumverfüllungsintervalls relativ zum Bohransatzpunkt in Meter.
 Intervalle werden entlang des Bohrungspfades gemessen.
 Top of the space filling intervall relative to given height level at starting point in meters. Intervals are measured along the drillhole path.

List URL:

Constraints:

Notes:

Name:	to	Approved:	X
--------------	-----------	------------------	---

Data type: N: Decimal Number *Mandatory:* X *Conditional:*
English title: to *German title:* bis
Length: *Min.:* -100 *Max.:* 99999
Decimals: 2
XML representation: Element

Description: Unterkante des Ringraumverfüllungsintervalls relativ zum Bohransatzpunkt in Meter.
 Intervalle werden entlang des Bohrungspfades gemessen.
 Bottom of the space filling interval relative to given height level at starting point in meters. Intervals are measured along the drillhole path.

List URL:

Constraints: > 'from'

Notes:

Name:	spaceFillMaterial	Approved:	X
--------------	--------------------------	------------------	---

Data type: EL: External List *Mandatory:* X *Conditional:*

English title: space fill material **German title:** Ringraumverfüllung
Length: **Min.:** **Max.:**
Decimals:
XML representation: Element
Description: Material der Verfüllung des Ringraumes zwischen der Aussenseite des Ausbaus und der Bohrlochwand.
Material of the filling of the annular space between the outside of the installation and the borehole.
List URL: <http://www.infogeo.de/infogeo/borehole/schemas/geology/>
List items:
Constraints:
Notes:

Attribute group: CasingStringSegment

English title: casing string segment **German title:** Rohrtourabschnitt

Mandatory:
Description: Rohrtourabschnitt.
Casing string segment.
Notes:

Attributes:

Name:	from	Approved:	X
--------------	-------------	------------------	---

Data type: N: Decimal Number **Mandatory:** X **Conditional:**
English title: from **German title:** von
Length: **Min.:** -100 **Max.:** 99999
Decimals: 2
XML representation: Element

Description: Oberkante des Rohrtourabschnittes relativ zum Bohransatzpunkt in Meter.
Intervalle werden entlang des Bohrungspfades gemessen.
Top of casing string segment relative to given height level at starting point in meters. Intervals are measured along the drillhole path.

List URL:

Constraints:

Notes:

Name:	to	Approved:	X
--------------	-----------	------------------	---

Data type: N: Decimal Number **Mandatory:** X **Conditional:**
English title: to **German title:** bis
Length: **Min.:** -100 **Max.:** 99999
Decimals: 2
XML representation: Element

Description: Unterkante des Rohrtourabschnittes relativ zum Bohransatzpunkt in Meter.
Intervalle werden entlang des Bohrungspfades gemessen.
Bottom of casing string segment relative to given height level at starting point in meters. Intervals are measured along the drillhole path.

List URL:

Constraints: > 'from'

Notes:

Name:	installationElement			Approved:	X
Data type:	EL: External List	Mandatory:	X	Conditional:	
English title:	installation element	German title:		Ausbauelement	
Length:		Min.:		Max.:	
Decimals:					
XML representation:	Element				
Description:	Art des Rohres bzw. des Ausbauelements. Type of the casing tube or the installation element.				
List URL:	http://www.infogeo.de/infogeo/borehole/schemas/geology/				
List items:					
Constraints:					
Notes:					

Name:	diameter			Approved:	X
Data type:	N: Decimal Number	Mandatory:		Conditional:	
English title:	diameter	German title:		Durchmesser	
Length:		Min.:	0	Max.:	9999
Decimals:	0				
XML representation:	Element				
Description:	Außendurchmesser der Verrohrung oder des Ausbauelements in Milimeter. Outer diameter of the casing tube or the installation element in milimeters.				
List URL:					
Constraints:					
Notes:					

Name:	material			Approved:	X
Data type:	EL: External List	Mandatory:		Conditional:	
English title:	casing material	German title:		Ausbaumaterial	
Length:		Min.:		Max.:	
Decimals:					
XML representation:	Element				
Description:	Material der Verrohrung oder des Ausbauelements. Material of the casing tube or the installation element.				
List URL:	http://www.infogeo.de/infogeo/borehole/schemas/geology/				
List items:					
Constraints:					
Notes:					

Name:	wallThickness			Approved:	X
Data type:	N: Decimal Number	Mandatory:		Conditional:	
English title:	wall thickness	German title:		Wandstärke	
Length:		Min.:	0	Max.:	999
Decimals:	0				
XML representation:	Element				
Description:	Wandstärke der Verrohrung oder des Ausbauelements in Milimeter. Wall thickness of the casing tube or the installation element in milimeters.				

List URL:

Constraints:

Notes: