# **NL OIL AND GAS PORTAL – NLOG**



# There are also various links:

- ThermoGIS, geothermal information system
- Geosites, containing geological places of interest
- Soil data. Alterra's soil information system
- Minerals Online
- Telemetry of current groundwater levels in North Brabant

NLOG

NLOG is the Dutch Ministry of Economic

Affairs' information portal for oil and gas

access to information on legislation and

regulations, production figures, licences

Besides oil and gas data, information will

be provided on salt mining, natural gas

resources. In the process of extracting

oil, gas and salt, mining companies (and

Under the Dutch Mining Act, exploratory

data collected after 1 January 2003

(reports and logs, seismic signal data)

are released into the public domain after

five years. Data from before that date are

released after ten years. A different set

of rules applies to mining information in

terms of confidentiality and subscription

forms. So follow the link to the NLOG.NL

website, which is especially designed for

NLOG is fairly accessible. Many borehole

be downloaded for free. Data that have

the reproduction costs. Digital seismic

2D seismics are provided for a fee to cover

data are supplied on USB, DVD or via FTP

server, for a marginal fee. To order mining

data, you only need to supply us with your

name and address or company name and

VAT number, as the case may be. There

not yet been scanned and analogue

mining issues.

ACCESS TO NLOG

measurements can already

oil companies) use exploratory drilling and seismics to study the deep subsurface.

and CO<sub>2</sub> storage, and geothermal

and production plans, and data on the

subsurface of the Netherlands.

**OIL, GAS AND SALT** 

exploration and production. It provides

- Telemetry of current groundwater levels in Friesland
- Telemetry of current groundwater levels in Utrecht
- Wateratlas Gelderland.

#### WANT TO LEARN MORE?

More and more users are finding their way to DINOLoket. Still, only a small portion of the parties who could benefit from such a database are actually using the website. This is a huge missed opportunity, given that the added value is so great and there are no costs.

The Geological Survey of the Netherlands, TNO also hosts an open house once a year, where users can gather to exchange ideas about DINOLoket. The government has decided to the Dutch Key Register of the Subsurface, BRO. The BRO is a continuation of the existing registers DINO and the Soil Information System of Alterra Wageningen University & Research Centre.

#### **ACCESS TO DINOLOKET**

Everyone using the data may apply for a free subscription.No charge is made for the data itself. Send an email with your name and address to dinoloket@tno.nl. You will be sent a username and password as soon as possible by email.

#### DINO SERVICE DESK

E info@dinoloket.nl T +31 88 866 44 81

Visit our website: dinoloket.nl



Q

For more information, please contact the DINO service desk: E nlog-portal@tno.nl T +31 88 866 45 23

Visit our website: nlog.nl

TNO.NL

# TNO GEOLOGICAL SURVEY OF THE NETHERLANDS

Geological Survey of the Netherlands TNO is the central geoscience insititute in the Netherlands for information and research to promote the sustainable management and use of the subsurface and its natural resources.

TNO Geological Survey of the Netherlands Princetonlaan 6 P.o. Box 80015 3508 TA Utrecht The Netherlands

T +31 88 866 4690 E info@dinoloket.nl

) DATA AND INFORMATION OF THE DUTCH SUBSURFACE

# DINOLOKET



# **TNO** innovation for life

With increasing pressure on space above ground, more and more sectors are literally coming into contact with the subsurface. So it is essential for there to a central location in the Netherlands where the subsurface data is efficiently and permanently stored, updated and disseminated. By establishing many cooperative links with other parties, DINO has become the largest database of the Dutch subsurface. DINO can be accessed via the DINOLoket portal. DINO is on route to the Key **Register of the Subsurface** (BRO).

DINOLoket is the central point of access for Data and Information of the Dutch Subsurface and contributes to the sustainable management and use of the subsurface and its natural resources. The databank is updated on a daily basis. DINOLoket is not a commercial venture but is based on improving the availability and on increasing the (re)use of data of the Dutch subsurface. The user groups include government (national, provincial and local), industry and individuals.



DINOLoket has four portals:

- DINOInfo Information about DINO and DINOLoket
- DINOData Information about the data in the DINO database
- DINOMap Information about the interpretations of data/maps in the DINO database
- DINOServices Access to the services that use DINO database data.

# DINODATA

The following data are available via DINOLoket:

- Drillings
- Borehole measurements
- Grain sizes
- Cone penetration tests
- Groundwater quantity/quality
- Geoelectric measurements

# DRILLINGS

DINOLoket contains hundreds of thousands of quality controlled drillings of up to 300 meters below the surface. This database is updated daily. Frequent use ensures that these data are constantly assessed and their quality improved.



# **CONE PRENETRATION TESTS**

DINOLoket contains the data of ten thousand cone penetration tests of the Dutch subsurface.

These cone penetration tests provide information on the stratification and bearing capacity of the subsurface.



# **GROUNDWATER LEVELS / GROUNDWATER QUALITY**

DINOLoket contains the data of tens of millions of groundwater levels and data about the groundwater composition. These data are also constantly updated and their quality controlled.



# The Digital Geological Model (DGM) is

DINOMAP

a large-scale nationwide strata model in which the geometry of geological entities (formations) is shown at a depth of up to around 500 meters.

Approximately 16,500 drillings in the DINO drilling database, which contain a lithostratigraphic interpretation, enabled the strata surfaces of the undersides of these formations to be constructed.

The depth location of the base of the geological entities forms the framework of the DGM. Through thickness and depth grids, the DGM provides information about the Quaternary and Upper-Tertiary series of strata and makes clear the spatial coherence of the entities in map images and profiles.

000

Boringen Metadata

NITG-Numm

OLGA-Numm

Coördinaten (RD, x,y in m)

Coördinaat

Provincie

Kaartblad

Maaiveld (m -N.A.P.)

Datum boring

Einddiepte

ligenaar

Uitvoerder

Beschriiver l

Organisatie be

Nat/Droog

Datum laagbes

Boormethode

Bepaling maaiveld

Bepaling locatie

B30F0454



) DATA AND INFORMATION OF THE DUTCH SUBSURFACE

# **DINO IS THE DATABASE OF** THE DUTCH SUBSURFACE, WHERE JUST ONE CLICK OF THE MOUSE TAKES YOU DEEP DOWN!

### The Regional Geohydrological Information System REGIS-II is a set

of digital files containing geohydrological information. REGIS-II gives the user online access to a geohydrological model of the Netherlands. REGIS-II is thus the basis for compiling regional groundwater models. Supplemented with local (drilling) information REGIS-II is also a basis for local groundwater models.

REGIS-II details layers of good and poor permeability within the geological entities distinguished in the DGM. The depth location of the top and underside as well as the thickness of each geohydrological entity are recorded in grid units of  $100 \times 100$  metres. In addition to these geometric data, the geohydrological model contains the hydraulic characteristics for each entity.



# DINOSERVICES

		0
*	🕨 🚺 • Google 🔍	3
		-
en		ĥ
ilc	01.1-Holocene afzettingen - Holoceer	
xz1	02.2-Form. van Boxtel - Boxtel z1	
xk1	02.4-Form. van Boxtel - Boxtel k1	
xz2	02.5-Form. van Boxtel - Boxtel z2	
ixk2	02.6-Form. van Boxtel - Boxtel k2	
xz3	02.7-Form. van Boxtel - Boxtel z3	
orz2	04.2-Form. van Kreftenheye - Kreft. 2	
irk1	04.3-Form. van Kreftenheye - Kreft. k	
az3	04.4-Form. van Kreftenheye - Kreft. 2	
rz4	04.5-Form. van Kreftenheye - Kreft. a	
azuk1	04.6-Form. van Kreftenheye – Kreft. 2	
arz5	04.7-Form. van Kreftenheye - Kreft. 2	
ortwk1	04.8-Form. van Kreftenheye - Kreft. 1	
az6	04.9-Form. van Kreftenheye - Kreft. 2	
vbv1	05.2-Form. van Eem-Woudenberg - V	
ezl	05.3-Form. van Eem-Woudenberg - E	
ek1	05.4-Form. van Eem-Woudenberg - E	
ezz	US.S-Form. van Eem-Woudenberg - E	
IEK2	05.6-Form. van Eem-Woudenberg - E	
sezs	05.1-Form. van Eem-Woudenberg - E	
F∠1 Anuil:1	05.3 Form Jon Drente - Drente Liter	
ara2	05.2 Form yon Dronto Dronto 22	
inaik1	06.4-Form yon Dronte - Dronte Cistr	
irgikt Irg2	OS E Form von Dronte Dronte 32	
ttr.	07 1-Cestingle of settingen - complex	
are 1	09 1-Earm y lirk h Earm y Paola	
irk1	09.2-Form v lirk b Form v Peelo	
172	093-Form v Urk b Form v Peelo	
r23	09.5-Form v. Urk. b. Form v. Peelo	
174	11 1-Form van lirk onder Form Pee	
irz5	11.3-Form, van Urk, onder Form. Pee	
121	12.1-Form, van Sterksel - Sterksel z1	
tk1	12.2-Form, van Sterksel - Sterksel k1	
tz2	12.2-Form. van Sterksel - Sterksel z2	
ipz1	13.1-Form. van Appelscha - Appelsch	
yk1	14.2-Form. van Stramproy - Strampro	
yz2	14.3-Form. van Stramproy - Strampro	
yz3	14.5-Form. van Stramproy - Strampro	
yz4	14.7-Form. van Stramproy - Strampro	¥
	)+	-1

A web service can be described as an interface of an application component that is accessible via standard web protocols. Communication is effected via XML between two applications, one at the user end and one at the DINO end. A web service enables a service to be requested remotely to a server, for instance to make a calculation, supply data or perform a task.

# WHY WEB SERVICES?

Using web services has several advantages. For instance, web services can be modified to a large number of platforms using a whole range of programming languages. This is because web service specifications are developed separate from a specific platform or technology.

Given that web services are independent of platform and technology and use standards like XML and HTTP, it is much more simple to reuse the services and integrate applications.

### **DINOLOKET, THE BRO AND WEB** SERVICES

DINOLoket is on route to the BRO where all subsurface data – collected through government funding - will be available for everyone from 2015 onwards, with the data being supplied and requested via web services.

## WHAT IS ALREADY AVAILABLE?

Currently several elements are available via services:

- WMS services: some 200 maps as services, for instance for use in ArcGIS.
- 3D model data: an add-in has been developed for MS Excel to have permanent model data to hand.