

Natural resources and geothermal energy in the Netherlands

Annual review 2011



Ministry of Economic Affairs,
Agriculture and Innovation

NATURAL RESOURCES AND GEOTHERMAL ENERGY IN THE NETHERLANDS

Annual review 2011

A review of exploration and production activities and underground storage.

Preface

The annual review on 'Natural resources and geothermal energy in the Netherlands' reports on the activities and results of exploration and production of hydrocarbons, rock salt and geothermal energy in the Netherlands. Moreover the underground storage of various substances (e.g. natural gas, nitrogen, CO₂ and brackish water) is included as well. In this way all the exploration, production and storage activities in the Netherlands and the Netherlands' part of the Continental shelf, related to the realm of the Mining Act, are combined in this report.

The first section of the report deals with developments during the year 2011.

The section shows the *developments* in the exploration and production of hydrocarbons. It concerns changes in natural gas and oil resource estimates during 2011 and the way these changes affected the situation at 1 January 2012.

This section also presents a prognosis for the gas production for the next 25 years.

Subsequently, a number of tables summarise developments during 2011, with respect to licences and exploration efforts (seismic surveys and wells drilled). This section ends with a summary of the volumes of natural gas, condensate and oil that were produced in 2011. The subsequent chapters report on the exploration for and production of coal, rock salt and geothermal energy and on the underground storage of substances.

The second section comprises a large number of annexes that report on the current situation as well as on historical developments during the past decades.

Subsequently an overview of the situation as at 1 January 2012 is presented in the final part of the review.

This review has been compiled by TNO (Geological Survey of the Netherlands), at the request of the Energy Market department of the Dutch Ministry of Economic Affairs, Agriculture and Innovation. The annual review contains the data that, in accordance with the provisions of article 125 of the Mining Act, will be presented to both Chambers of Dutch Parliament on behalf of the Minister of Economic Affairs, Agriculture and Innovation.

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The Hague, June 2012.

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In this annual review, natural gas and oil volumes are stated in terms of 'standard' m³, usually abbreviated as Sm³. 'Standard' relates to the reference conditions: 15° C and 101.325 kPa.

In some cases the natural gas volumes are stated in terms of:

-Normal m³ (Nm³). "Normal" relates to the reference conditions: 0°C and 101.325 kPa.

-Groningen Gas Equivalent, which has a gross calorific value of 35.17 MJ/ m³ at 0°C and 101.325 kPa.

In such cases this is explicitly stated in the text.

KEY DATA 2011

Natural gas and oil resources

The discovered natural gas resources as at 1 January 2012 are estimated to be 1230 billion Sm³. 900 billion Sm³ of these reside in the Groningen gas field, 168 billion Sm³ in the other onshore fields and 162 billion Sm³ in the fields on the Dutch part of the North Sea Continental Shelf.

Oil resources as at 1 January 2012 add up to 40.4 million Sm³. 28.6 million Sm³ of which reside in onshore oil fields and 11.8 million Sm³ in fields on the Continental Shelf.

Licences for hydrocarbons

During 2011 there were eight applications for an exploration licence for the onshore territory. From one of the exploration licences the extend was restricted while one other licence was relinquished. Two production licences were merged and of one production licence the extend was restricted.

For the Continental Shelf, one exploration licence was applied for and twelve were awarded, eight licences were prolonged and four licences lapsed/relinquished and two were restricted in their extend. Furthermore, eight production licences have been submitted, one licence was awarded, three lapsed/relinquished, three were prolonged. For details see chapters 3 and 4 and annexes 1 and 2.

Wells

A total of 56 wells were drilled for oil and gas. That is two less than in 2010. In 2011 fourteen exploration wells were drilled. From these wells, six found gas and two wells struck both oil and gas. This results in a technical success ratio of 57%.

Furthermore 3 appraisal wells and 39 production wells (including ten injection wells) were drilled. The total number of production and injection wells is almost similar to last year. A major contribution to the number off wells drilled comes from the (re-)development of the Schoonebeek oil field. For details see chapter 7 and annex 2.

Gas production

In 2011, total production from Dutch gas fields was 78.6 billion Sm³. Onshore gas fields produced 59.0 billion Sm³ in total, 9.6 billion Sm³ of which was accounted for by the small fields and 49.4 billion Sm³ by the Groningen gas field. Offshore gas fields produced 19.6 Sm³. The overall production in 2011 was 8.6% lower than in 2010. For details see chapter 9.

Oil production

In 2011, a total of 1.27 million Sm³ of oil was produced in the Netherlands, which is 0.6% more than in 2010. The onshore fields produced 0.42 million Sm³, which means a 50.3% increase compared to 2010. This increase is mainly the result of the restart of production from the Schoonebeek field. Production from offshore oil fields decreased to 0.85 million Sm³ which is 13.6% less than in 2010. The average oil production over 2011 was about 3500 Sm³ per day. For details see chapter 9.

Underground storage

In 2011 a prolongation was applied for one storage licence (for brackish water), whilst for another storage licence an updated application was filed (for CO₂). In 2011 injection started into the first underground storage for nitrogen. In total 73 million Sm³ of nitrogen was injected. In the five existing underground storages for natural gas 6.1 billion Sm³ were injected while discharge was 3.7 billion Sm³. For details see chapter 10.

Coal

No changes in licences for have occurred in 2011. There are five production licences in force. For details see chapter 11.

Rock salt

In 2011 two new exploration licences for rock salt have been applied for. As at 1 January 2012 twelve production licences were in force. The production of rock salt in 2011 was 6.9 million tons. For details see chapter 12.

Geothermal energy

Like in 2010, many exploration licences (18) have been submitted for geothermal energy. Six exploration licences have been awarded, one was prolonged and two applications were rejected. Furthermore two production licences were submitted. In 2011 three wells for geothermal energy were drilled and completed. For details see chapter 13.

1. NATURAL GAS RESOURCE AND FUTURE GAS SUPPLY FROM WITHIN THE NETHERLANDS

INTRODUCTION

This chapter reports on the natural gas resources in the Netherlands and the Netherlands part of the Continental Shelf. First it presents estimates of the natural gas resource as at 1 January 2012 and changes compared to 1 January 2011. A brief explanation of the method used for determining the natural gas resource is given below. Subsequently, this section on the supply of natural gas in the Netherlands presents the Dutch gas production expected for the next 25 years (period 2012 - 2036).

Data

In accordance with the Mining Act (Mining decree, article 113) the operators of production licences annually report remaining reserve estimates for their developed hydrocarbon accumulations as well as the prognoses for the remaining annual production. These figures are used in the estimations of the total Dutch supply of natural gas as presented in this chapter.

Incentives

The Decree on investment deduction for marginal gas accumulations on the Continental Shelf (*Regeling investeringsaftrek marginale gasvoorkomens continentaal plat*) became in force on 16th of September 2010. This measure aims to encourage the mining industry to develop marginal gas fields on the Dutch Continental shelf which otherwise would not have been drilled. Licencees and co-licencees may charge 25% of the amount of investment for the appointed marginal fields or prospects against the result subject to legal payment of the State Profit Share under the Mining Act. The applications for marginal fields will be reviewed against the following three parameters: Technically producible volume of gas, well productivity and transport distance to a platform.

Since the Decree became in force 19 applications have been filed by eight different licencees. 13 out of 14 applications have been approved, one has been rejected. Five applications are still under consideration. The 13 approved cases expect to discover and develop 22 billion Sm³ of gas (unrisked).

At the same time and with the same purpose an agreement became into force between the Minister of Economic Affairs, Agriculture and Innovation and the mining companies active on the Continental Shelf. This covenant includes a voluntarily procedure to stimulate mining companies holding permits for gas production on the Continental shelf to either actively use the permit areas (and parts thereof) within a reasonable time for exploration and exploitation operations, or make them available to others.

The execution of the Covenant is divided in five phases:

10 January 2011	Annunciation of preliminary classification of licence areas
1 July 2011	Final classification of licence areas
1 July 2011 - 1 April 2012	Term to present activity plan by main licencee/operator
1 April 2012 - 1 July 2012	Term to present activity plan by co-licencees
From July 2012	Presentation of activity plans by third parties

The effectiveness of the Covenant will become manifest when the last phase will start on 1 July 2012. The procedure is executed based on a voluntary cooperation by the oil and gas industry.

RESOURCE

The natural gas resource is defined as the volume of natural gas that can be produced from the subsurface of the Netherlands. In this respect, we distinguish *discovered resources* and (as yet) *undiscovered resources*. The *discovered resources* are producible volumes of natural gas that are present in *proven accumulations*, i.e. proven gas fields. Many of these accumulations have been developed already (and are producing) and as a result only part of the producible gas remains. The remaining producible volumes of natural gas in the proven accumulations are defined as the *remaining reserves*.

As at 1 January 2012 there are 445 proven natural gas accumulations in the Netherlands (table 1). At present, the majority of these accumulations is developed (250), i.e. producing. Besides this four former gasfields are currently operational as gas-storage facility (a fifth storage facility is located in a salt cavern). Of the 133 accumulations that have not been developed as yet, 45 are expected to start producing within five years (between 2012 and 2016). The development of the remaining 68 accumulations is uncertain. Of all accumulations that have ever been developed, 78 have (temporarily) ceased production. Compared to January 1st 2011 the number of accumulations has increased by eight.

Table 1. Number of proven natural gas accumulations sorted by status as at 1 January 2012

Status of accumulations	Onshore Territory	Continental Shelf	Total
I. Developed			
a. producing	107	143	250
b. gas-storage facility	4	0	4
II. Undeveloped			
a. start of production 2012-2016	21	24	45
b. others	26	42	68
III. Production ceased			
closed in	11	6	17
Abandoned	25	36	61
Total	194	251	445

The accumulations with a status change from 2011 to 2012 are shown in table 2. In 2011 nine new fields came on stream while four ceased producing. Eight fields production resumed after a period of being closed in.

A complete overview of all accumulations is listed in annex 1. Accumulations are sorted by status and stating operator and licence. In accordance with the Mining Act, production plans or storage plans have been submitted for all developed accumulations.

Table 2. Gas accumulations with a status change in 2011.

Accumulation	Operator	Licence	Status 2012	Status 2011
Appelscha	NAM	Drenthe II	P	U
Bergen	TAQA	Bergen II	P	U
Oud-Beijerland Zuid	NAM	Botlek	P	U
Oude Pekela	NAM	Groningen	P	U
Oudeland	NAM	Beijerland	P	NP<5
Schermer	TAQA	Bergen II	P	U
Vinkega	Vermilion	Gorredijk	P	NP<5
Wijk en Aalburg	NPN	Andel II	P	NP<5
B13-FA	Chevron	B13a	P	NP<5
F03-FA	Centrica	F03a	P	NP<5
G16a-C	GDF Suez	G16a	P	NP<5
K05-CN	Total	K04b-K05a	P	NP<5
L02-FA	NAM	L02	P	U
L09-FE	NAM	L09b	P	U
L12a-B	GDF Suez	L12a	P	NP<5
N07-FA	NAM	N07a	P	NP<5
P15-12	TAQA	P15c	P	U
Blija-Zuid	NAM	Noord Friesland	NP<5	-
Heinenoord	NAM	Botlek	NP<5	-
Langezwaag	Vermilion	Gorredijk	NP<5	-
Metslawier-Zuid	NAM	Noord Friesland	NP<5	-
Nieuwehorne	VERM	Gorredijk	NP<5	-
Ternaard	NAM	Nood Friesland	NP<5	NP>5
Usquert	NAM	Groningen	NP<5	NP>5
K12-L	GDF Suez	K12	NP<5	-
L04-D	Total	L04a	NP<5	NP>5
P02-E	Chevron	P2	NP<5	NP>5
Q16-Maas	ONE	Q16	NP<5	-
P11b Van Ghent Oost	Dana	P11b	NP>5	-
Barendrecht	NAM	Rijswijk	U	P
Houwerzijl	NAM	Groningen	U	P
Spijkenisse-Oost	NAM	Botlek	U	P
K14-FA	NAM	K14	U	P

P: Producing

NP<5: undeveloped gas accumulation, production start expected within 5 years

NP>5: undeveloped gas accumulation, production start unknown

T: production ceased temporarily

U: production ceased

A: abandoned

RESOURCE ESTIMATES

Reserves as at 1 January 2012

As at 1 January 2012 the reserves in both the developed and undeveloped accumulations add up to 1230 billion Sm³ (table 3a).

The reserve estimates for developed accumulations are based on the information supplied by the operators in their production plans and annual reports and submitted in accordance with the Mining Act. For the non producing accumulations, of which reserves are included in production plans or annual reports, only preliminary reserve estimates are given. The approaches and reserve classifications used by individual operators may differ considerably. Therefore, the present annual report only presents a rough resource classification, related to the status of the individual accumulations. It is the Ministry's intention to uniform future reporting of reserves figures. As of next year reporting will have to comply with the Petroleum Reserves Management System (PRMS, Society for Petroleum Engineers, 2011).

Restricted to conventional gas accumulations

Although the prospectivity for unconventional gas resources such as shale gas and coal bed methane has been recognised, they have not been incorporated in this reviews resource figures. At this stage the exploration potential of these unconventional resources is considered to be too speculative. Moreover the Minister of Agriculture, Economic Affairs and Innovation has promised a study on the possible risks and consequences of exploration for and production of shale gas and coal bed methane in the Netherlands. The study will focus on safety issues for men, nature and the environment. No drilling and fracking activities related to unconventional gas will take place and no new exploration licences will be granted until the results of this study will be available.

Developed accumulations

The remaining reserves in developed accumulations are listed in the tables 3a (in billion Sm³) and 3b (in m³ Groningen equivalents, m³ Geq). The second column shows the total remaining reserves in the developed accumulations as reported in the operators' production plans and annual reports. These reserves total 1156 billion Sm³; 900 billion Sm³ for the Groningen field and 256 billion Sm³ for the other (small) fields. The remaining reserves present in the fields Norg, Grijpskerk and Alkmaar, prior to their conversion to underground gas storage facilities (together some 19 billion Sm³ or 20 m³ Geq) are separately mentioned as UGS cushion gas in table 3a. The Bergermeer accumulation had no remaining reserves at the time of conversion. This 'cushion gas' will only be produced once the fields are no longer used as storage facilities. This is not expected to happen prior to 2040.

Undeveloped accumulations

It is expected that a part of the currently undeveloped accumulations will come on stream in the period 2012-2016 (see listing of natural gas accumulations with the status *Non developed* in annex 1). The reserves in the undeveloped accumulations amount to 55 billion Sm³ (table 3a).

The reserve estimates do not take into account any limitations related to the accessibility of accumulations in connection with environmentally sensitive areas.

Table 3a. Gas resources in the Netherlands as at 1 January 2012 in billions of Sm³

Accumulations	Developed		Undeveloped	Total
		UGS*		
Groningen	900	0	0	900
Others Territory	133	19	16	168
Continental Shelf	123		39	162
Total	1156	19	55	1230

* UGS Cushion gas, for explanation see paragraph 'Developed accumulations'

For the purpose of equating volumes of natural gas of different qualities in calculations, these volumes have been converted to Groningen Gas Equivalents (Geq) on the basis of calorific value (table 3b).

The Groningen Gas Equivalents is calculated relative to the heating value of 35.17 MJ/Nm³, the calorific value of the original content of the Groningen field. However, since 2010 we use the heating value of 35.08 MJ/Nm³ for the remaining gas in the Groningen field as the gas composition of the gas presently produced from the Groningen field differs from the composition of the originally produced gas.

Table 3b. Gas resources in the Netherlands as at 1 January 2012 in billions of m³Geq

Accumulations	Developed		Undeveloped	Total
		UGS*		
Groningen	850	0	0	850
Others Territory	139	19	11	169
Continental Shelf	130		35	165
Total	1119	19	46	1184

* UGS Cushion gas, for explanation see paragraph 'Developed accumulations'

Revisions compared to 1 January 2011

The table below lists the revisions to the Dutch gas resource, resulting from:

- new discoveries;
- re-evaluations of previously proven accumulations;
- production during 2011.

The net result is a decrease of the resource by 74.5 billion Sm³ compared to 1 January 2011. A brief explanation of these figures follows below.

Table 4. Revisions of expected gas resource compared to 1 January 2011, in billion Sm³

Area	New discoveries	Re-evaluations	Production	Total
Groningen field	0	-30.8	-49.4	-80.2
Others Territory	3.6	14.0	-9.6	8.0
Continental Shelf	2.4	14.9	-19.6	-2.3
Total	6.0	-1.9	-78.6	-74.5

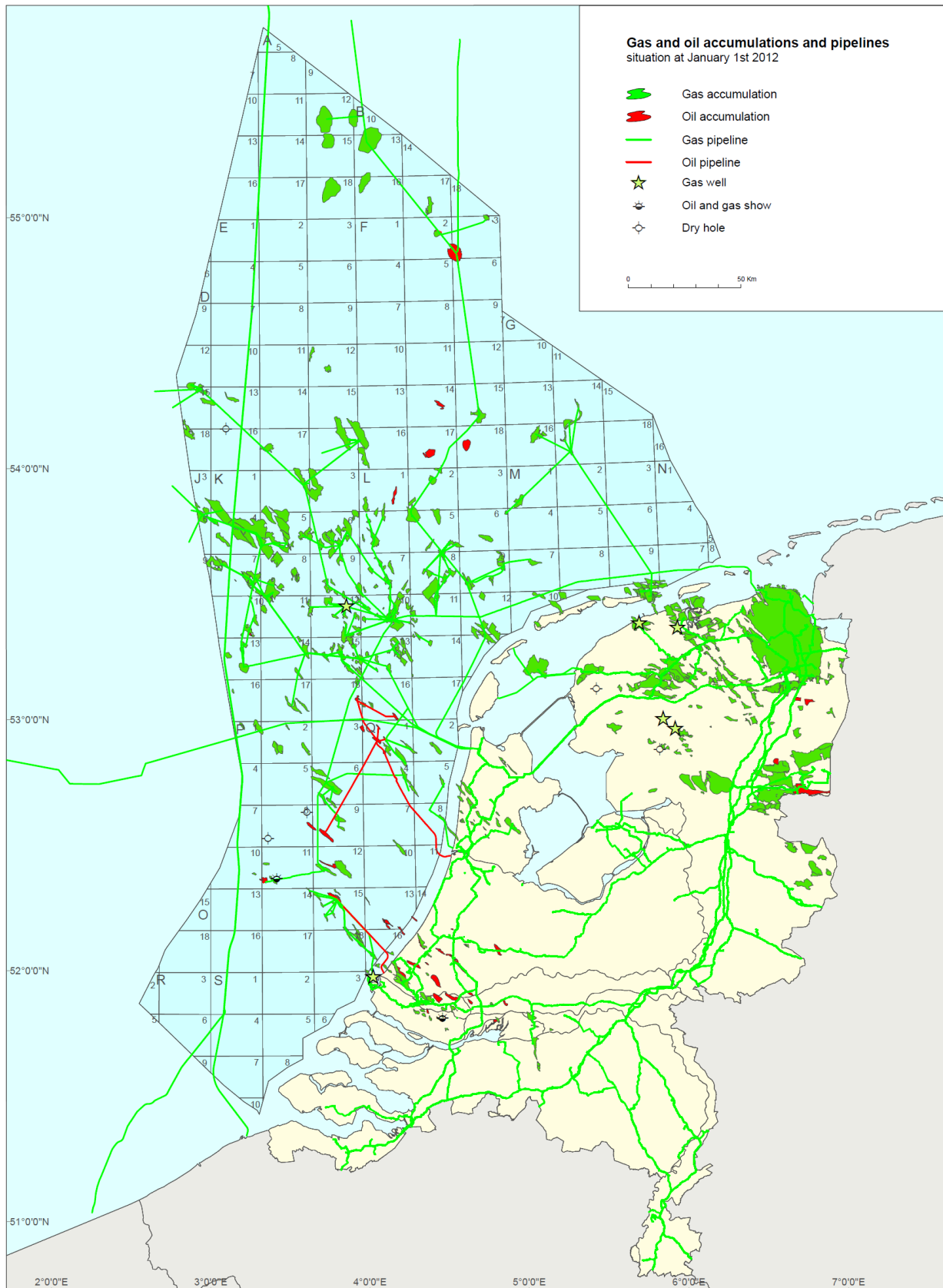


Figure 1. Outline map showing oil and gas accumulations in the Netherlands (as at 1 January 2012). New discoveries are indicated with an asterisk.

New discoveries

The table below lists the eight gas accumulations that were discovered during 2011. Their locations are indicated by asterisks in figure 1. According to preliminary estimates, these new discoveries will add approximately 6.0 billion Sm³ to the Dutch gas resources.

Table 5. Gas accumulations discovered in 2011

Name accumulation	Discovery well	Licence area	Operator
Blija Zuid	Blija-Ferwerderadeel-108	Noord-Friesland	NAM
Heinenoord	Blaaksedijk-01	Botlek	NAM
Langezwaag	Langezwaag-01	Gorredijk	Vermilion
Q16-Maas	Maasgeul-03 (-sidetrack1)*	Q16b en c	Oranje-Nassau
Nieuwehorne	Nieuwehorne-01	Gorredijk	Vermilion
Metslawier-Zuid	De Tibben-01	Noord-Friesland	NAM
K12-L	K12-18-Sidetrack1t/m4	K12	GDF-Suez
P11b Van Ghent Oost*	P11-07	P11b	Dana

* This field contains both commercial oil and gas volumes.

Revisions

Both producing and non producing gas accumulations are periodically evaluated by their operators to implement economical and technical developments. These evaluations may lead to adjustments of the reserves. In 2011 they have resulted in a downward revision of the gas reserves by 1.9 billion Sm³.

The revision of the reserves is related to adjustments based on the production performance of the fields or technical interventions. These interventions comprise the drilling of new wells, and application of new technologies to extend the production life of the field. In all cases the changes in reserves are based on proven technologies such as (extra) compression and deliquification of production wells.

EXPLORATION POTENTIAL

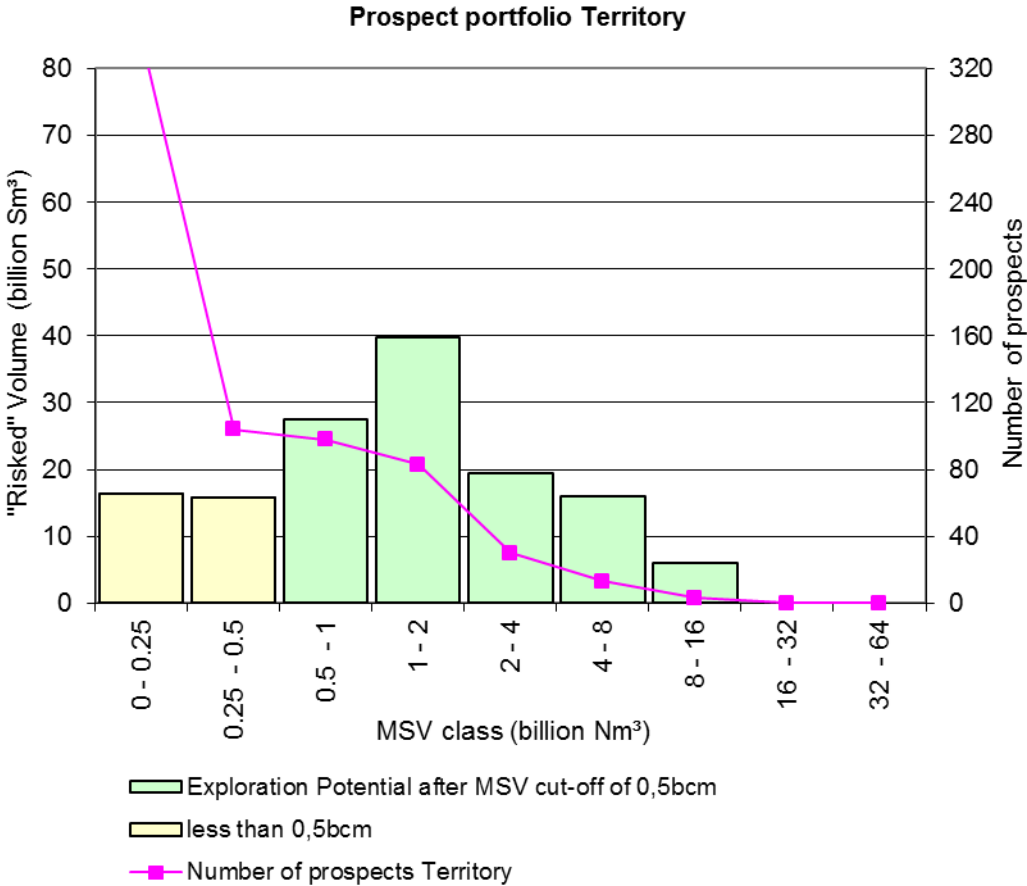
TNO updates the Dutch prospect portfolio for natural gas annually. This is, amongst others, based on the annual reports submitted by the operators for the licenced areas in accordance to the Mining Decree (article 113). For other areas TNO uses figures from its own database.

Geological units and prospects

TNO focuses on the evaluation of the so called 'proven plays'. These are geological units for which it is legitimate to assume that they meet the necessary geological conditions to enable the formation of natural gas accumulations. Within those proven plays all mapped and evaluated prospects, based on existing data, will be considered as the prospect portfolio. Hypothetical plays and prospects will not be considered due to their speculative character.

Portfolio characteristics

The prospect portfolio is characterised by the number of prospects and its associated volume of gas. The volume of a prospect can be expressed in terms of the expected recoverable volume in case of a discovery (the so called *Mean Success Volume*, MSV) or in terms of the *risked volume* (the so called *Expectation*, EXP), which is the product of the MSV and the Possibility of Success (POS).



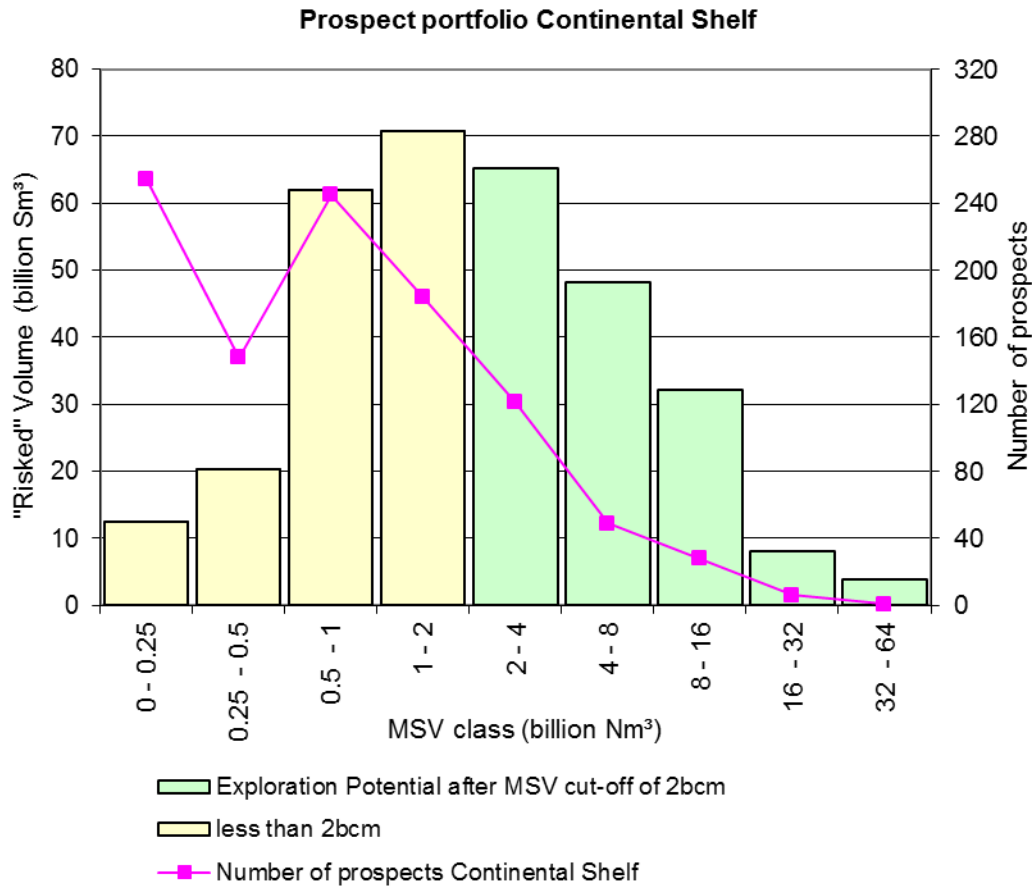


Figure 2: Prospect portfolio characteristics. The exploration potential, after applying a MSV cut-off, is represented by the green columns.

The prospect portfolio characteristics as at 1 January 2012 are presented in figure 2 for the prospects in the Territory as well as on the Continental shelf. The number of prospects and the *risky volumes* are shown per MSV volume class. The total amount of prospects in the portfolio has increased compared to 1 January 2011. In general, but in any case for the Continental shelf the *risky volumes* in the higher MSV classes have been valued more optimistically than on 1 January 2011.

Exploration potential

The exploration potential is that part of the prospect portfolio that meets certain minimum conditions. Since the first report on the exploration potential in 1992 a cut-off was defined for the expected recoverable volume in case of discovery (MSV). This cut-off was set at 0.5 billion m³ for prospects in the Territory and at 2 billion m³ for prospects on the Continental Shelf. The green columns in figure 2 represent the risky volume of the prospects that meet this MSV cut-off. This volume is called the exploration potential based on the MSV cut-off.

The estimate of the exploration potential (see Table 6) is expressed as a numerical range, to stress the inherent highly uncertain nature.

Table 6. Exploration potential for natural gas based on MSV cut-off as at 1 January 2012.

Area	MSV cut-off [billion Sm ³]	Exploration potential [billion Sm ³]
Territory	0.5	65 – 165
Continental Shelf	2	90 – 220

The consequence of a minimum MSV based cut-off is that other factors determining the commercial attractiveness of a prospect are not considered. These factors are partly related to individual prospects (possibility of success, distance to infrastructure, type of field development, gas quality, productivity etc.) and partly on generic factors such as expenses and revenues.

An alternative cut-off, for the first time presented in the annual review of 2006, is based on a positive net present value of a prospect. Per prospect the *Expected Monetary Value* (EMV) is derived from the net present value considering the exploration risk using a discounted cash flow model. This model determines the commercial attractiveness of a prospect incorporating the factors mentioned above.

As an example table 7 shows the expectation value for the exploration potential after applying an EMV cut-off (prospects with a positive EMV at an oil price scenario of 99 US\$ per barrel). Compared to the figures in table 6 the EMV > 0 cut-off results in close to the middle of the range of the exploration potential based on the MSV cut-off. This is an increase compared to 1 January 2011 which is mainly caused by the application of an higher oil price and eventually higher gas price in the model calculations.

Table 7. Exploration potential natural gas as at 1 January 2012. Commercial conditions: (EMV >0), and an oil price of 99 US\$ per barrel.

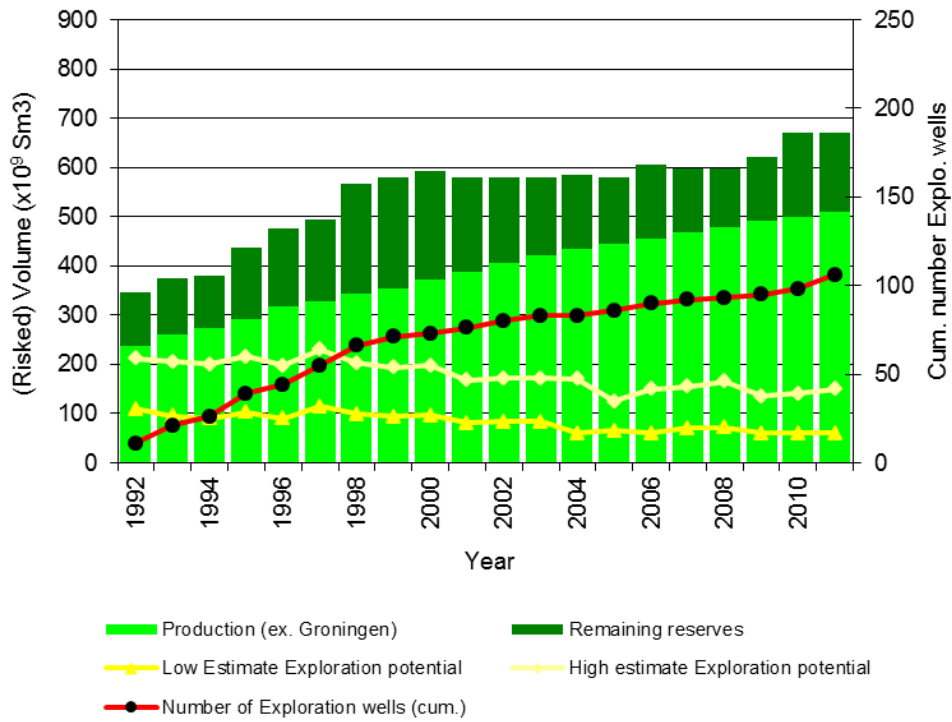
Area	Expectation Exploration Potential [Billion Sm ³]
Territory	105
Continental Shelf	195

Exploration potential trend/history

Figure 3 shows the development of the exploration potential in the Netherlands. The graph for the Dutch territory shows a gradual decline for both the high and the low estimate until present. The graph of the Continental Shelf shows an increase for the high estimate in particular to around 2004, followed by a decline to a present day level similar to that in the 90's.

In the cause of time, part of the exploration potential has successfully been drilled converting the potential volumes into actual reserves. This is expressed in the increasing length of the green columns (cumulative production and remaining reserves) in figure 3. The exploration potential of 100 billion m³ for the Territory as reported in 1992 had already been added to the reserves in 1996. The fact that nonetheless the exploration potential remains stable is due to the dynamics in the prospect portfolio on which the estimations of the exploration potential are based. Each year prospects are disposed from the portfolio by drilling exploration wells, but at the same time new prospects are added. Evaluations of prospects may also lead to changes in the values of the prospect portfolio.

Volume Trend Territory



Volume Trend Continental Shelf

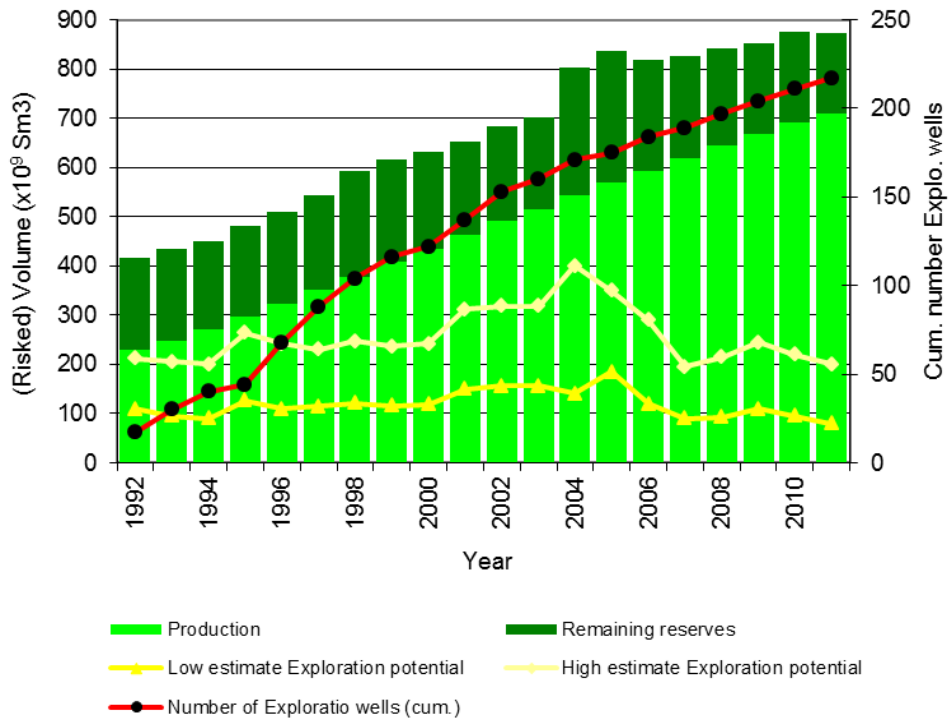


Figure 3: Reserves from 1992 to present (excluding the Groningen gas field).

GAS SUPPLY FROM WITHIN THE NETHERLANDS

This section deals with the developments in the supply of gas produced from within the Netherlands that can reasonably be expected for the next 25 years (2012 to 2036). This section of the review is based on data submitted by operators and gas boards. The reference date for the present review is 1 January 2012. All volumes in the present section are quoted in billions of m³ Groningen Gas Equivalent (heating value of 35.17 MJ/Nm³) abbreviated to m³Geq.

The estimated Dutch natural gas supply is presented in figure 4, divided into production from the Groningen field (upper part of the diagram) and production from other accumulations (small fields). The figure shows both the realised Dutch natural gas production for the period 2001 – 2011 as the production estimates for the next 25 years (2012 – 2036).

The estimated supply from the Groningen field has been derived from the maximum allowed production until 2020 and the expected production after that:

- The **maximum allowed production** from the Groningen accumulation for the period 2012 – 2020 is based on the amendment to article 55 of the Gas Act. It has been limited to 425 billion m³Geq raised with the 20.7 billion m³Geq which remains from the previous period (2006 – 2011). The purpose of setting a maximum allowance is to ensure that the Groningen accumulation can continue to fulfil its function as a swing producer to for the small fields policy for a sufficiently long period of time. The function as swing producer implies that the actual annual production of the Groningen accumulation is difficult to estimate. Therefore the supply from the Groningen accumulation until and including 2020 has been profiled as the maximum allowed production as mentioned above (425 billion m³Geq + 20.7 billion m³Geq minus the production in 2011 (46.8 m³Geq) resulting in an annual production forecast of 44.3 billion m³Geq.
- From 2020 onwards the **production profile** is derived from the Production plan of the Groningen accumulation.

The estimated supply from the small fields has been prepared based on the following data:

- the summation of the production profiles of the **producing accumulations**. These profiles have been submitted by the operators as part of their production plans and annual reports (Mining Decree, article 113).
- the summation of the production profiles of the accumulations from which **production is expected to start within the five year period from 2012 to 2016**.
- the summation of the production profiles of the **accumulations that have not been discovered as yet**. These profiles are prepared by using a simulation model; taking into account the number of wells that is expected to be drilled (10 exploration wells per year and a risked value to investment ratio (RVIR) of 0.1), the expected producible volumes of the prospects and the probability of success.

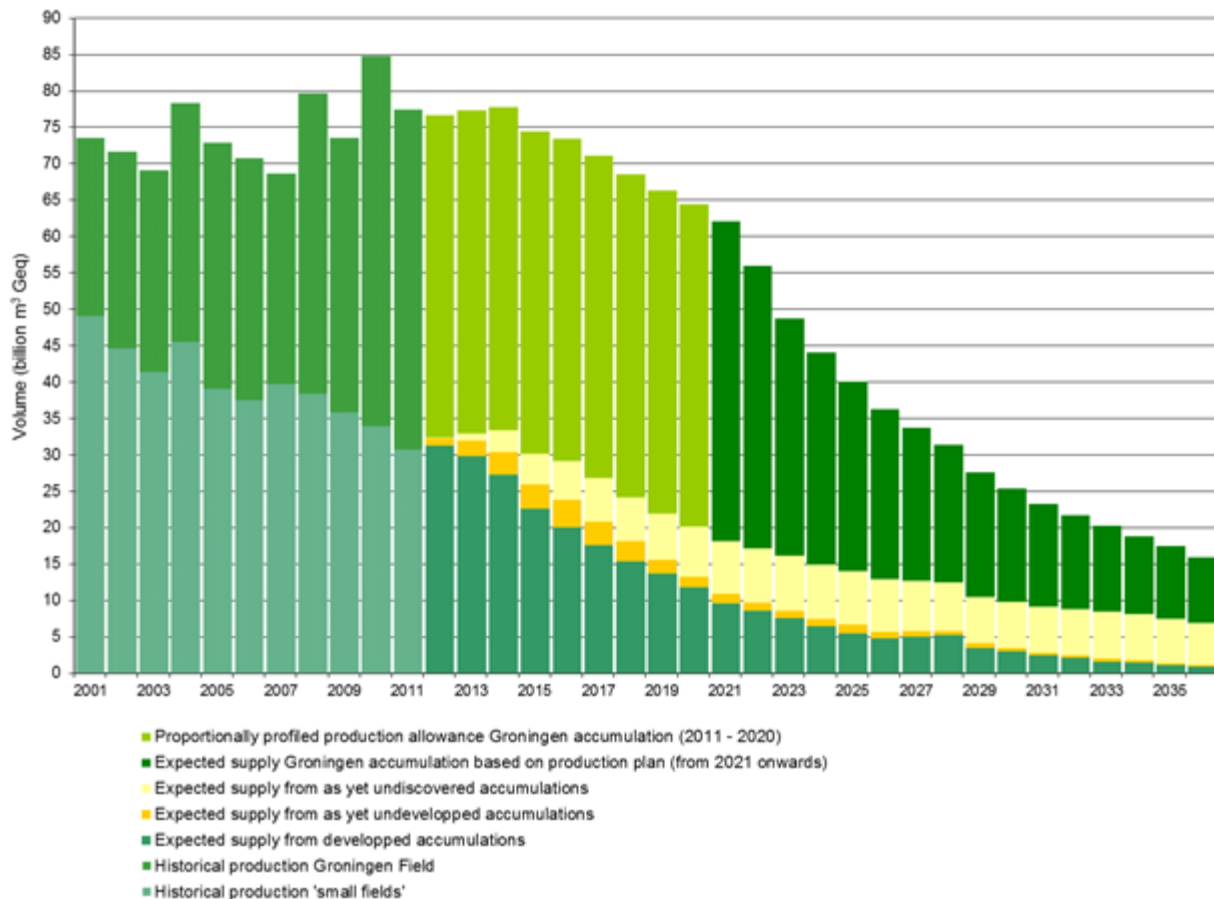


Figure 4. Actual production of natural gas in the Netherlands from 2001 - 2011 and production prognosis the period 2012 - 2036.

Groningen field

Production limits allow an annual production of 44.3 billion m³Geq until and during 2020. After 2021 production from the Groningen field is expected to gradually decline to approximately 10 billion m³ Geq in 2036.

Small fields Production from small fields was slightly below expectations in 2011. It is expected that production from the current portfolio of small fields will gradually decline to around seven billion m³Geq in 2036.

Total production from proven fields

The Dutch natural gas production for the coming 10 years will be 712 billion m³Geq at most, based on the production limits for the Groningen field (table 8). It is estimated that 269 billion m³Geq will come from production from small fields supplemented by a maximum of 443 billion m³Geq from the Groningen field.

Table 8. Gas supply from within the Netherlands for the 10 year period from 2012 - 2021 and the 25 year period 2012 - 2036, in billion m³Geq

Supply	2012 – 2021	2012 – 2036
Small fields		
Discovered - developed	199	258
Discovered - undeveloped	24	34
Still to be discovered	46	147
Subtotal Small fields	269	438
Groningen accumulation*	443	734
Total supply from within the Netherlands	712	1173

* This is the maximum quantity of gas from the Groningen accumulation based on the Gas Act (article 55).

2. OIL RESOURCES

As at 1 January 2012 there are 45 proven natural oil accumulations in the Netherlands (table 9). At present, 15 of these accumulations are producing. One new oil accumulation was discovered; P11b-Van Ghent-Oost. In 2011 the production from the Schoonebeek oil field resumed resulting in a vast increase of the onshore oil production. For economic reasons production from the Schoonenbeek field had ceased in 1996.

All accumulations are listed in annex 1, sorted by status and stating operator and licence. In accordance with the Mining Act, production plans or storage plans have been submitted for all developed accumulations.

Table 9. Number of proven oil accumulations as at 1 January 2012

Status of oil accumulations	Onshore	Continental Shelf	Total
I. Developed			
producing	4	11	15
II. Undeveloped			0
a. start of production 2012-2015	1	2	3
b. others	8	11	19
III. Production ceased			
Ceased	8	0	8
Total	21	24	45

Oil reserves as at 1 January 2012

The reserve estimates for developed accumulations are based on the figures and information given by the operators in their production plans and annual reports and submitted in accordance with the Mining Act. For the other discovered accumulations, of which reserves are not yet included in production plans or annual reports, only preliminary reserve estimates are given.

The oil reserves in both the developed and undeveloped accumulations add up to 40.4 million Sm³ (table 10).

Table 10. Dutch oil reserves in million Sm³ as at 1 January 2012

Area	Developed	Undeveloped	Total
Territory	25.0	3.6	28.6
Continental Shelf	4.1	7.7	11.8
Total	29.1	11.3	40.4

Revisions compared to 1 January 2011

Table 11 lists the revisions to the Dutch oil resource, resulting from

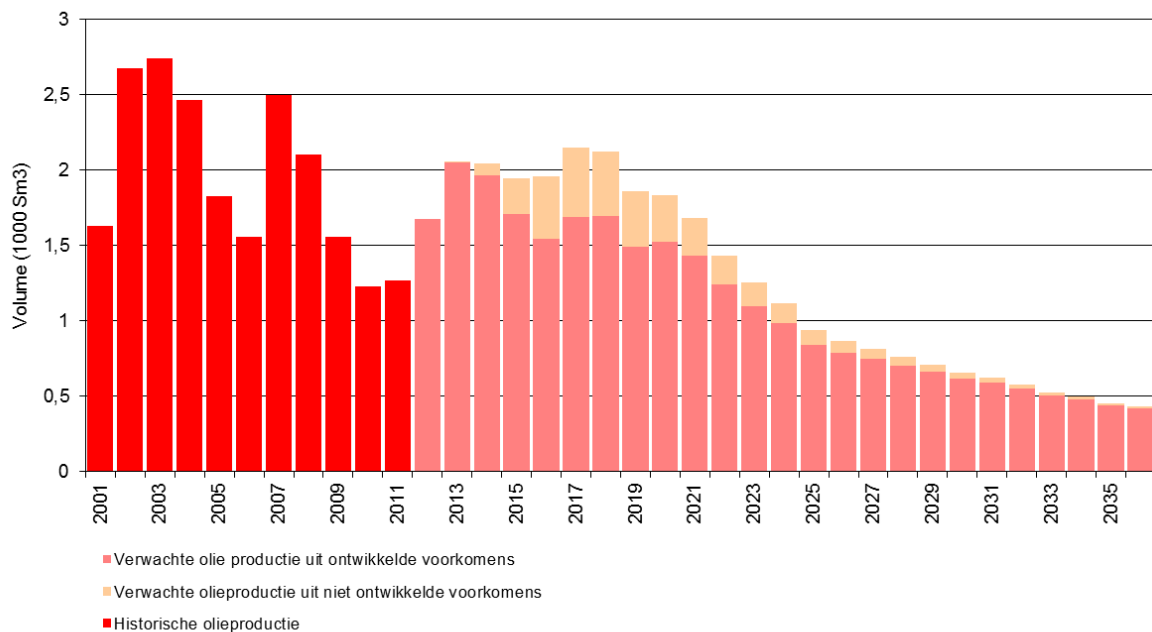
- new discoveries, re-evaluations of previously proven accumulations;
- production during 2011.

The net result is a decrease of the resource by 5.3 million Sm³ compared to 1 January 2011. The largest part of this decrease is due to the evaluation of the onshore reserves. The oil production in 2011 amounts to 1.3 million Sm³.

Table 11. Revisions of expected gas resource compared to 1 January 2011, in million Sm³

Area	Change as a result of:		
	new finds and (re-)evaluation	production	total
Territory	-4.7	-0.4	-5.1
Continental Shelf	-1.1	0.9	-0.2
Total	-5.8	-0.5	-5.3

Figure 5 shows the oil production since 2001 and the prognosed oil production for the next 25 years. This prognosis is based on the annual reports of the operators. The reopening of the Schoonebeek field has stopped the downward trend in the oil production from the last 4 years. Production is expected to remain stable at a level between 1.8 to 2 million Sm³ per year until 2020.



Figuur 5. Oil production since 2001 and prognosed oil production until 2036.

3. HYDROCARBON LICENCES, Netherlands Territory in 2011

Changes in the licences for hydrocarbon exploration and production onshore, which took place during 2011 in the onshore Territory, are listed in the tables below together with current licence applications.

Total area	Under licence
41 785 km ²	19 913 km ² (47.7 %)

EXPLORATION LICENCES, Netherlands Territory

Applied for

Licence	Publication	Date	Closing date	Applicant(s)
Schiermonnikoog-Noord*	Government Gazette 193	06-10-92		GDF
Terschelling-West**	Government Gazette 758	24-12-09	25-03-10	Schylger
Hemelum*	Government Gazette 8 245	21-05-10	20-08-10	Mac Oil SpA, Vermillion
IJsselmuiden	Official Journal C 93 Govern. Gazette 6 645	25-03-11	24-06-11	Northern, Vermillion
Terschelling-Noord	Official Journal C 115 Govern.. Gazette 8 001	13-04-11	13-07-11	Ascent
De Kempen	Official Journal C 174 Govern. Gazette 11 021	15-06-11	14-09-11	Basgas Energia, Brabant Resources
Breda-Maas	Official Journal C 178 Govern. Gazette 11 810	18-06-11	19-09-11	Brabant Resources, Gallic
Akkrum	Official Journal C 292 Govern. Gazette 19 985	05-10-11	04-01-12	Vermillion, Mac Oil SpA, Smart Energy

*Current application, formerly published in Annual Report

**Application withdrawn by 27-1-2011

Restricted

Licence holder	Licence	In force	km ²
Northern Petroleum Nederland B.V.	Utrecht	06-07-11	1,144
Total			1,144

Lapsed/relinquished

Licence holder	Licence	In force	km ²
Queensland Gas Company Limited	Oost-IJssel	15-11-11	3,662
Total			3,662

PRODUCTION LICENCES, Netherlands Territory

Applied for

Licence	Publication	Date	Closing date	Applicant(s)
Akkrum 11 *	Official Journal C 235 Government Gazette 17 691	31-08-10	30-11-10	Smart Energy

Awarded

Licence holder	Licence	In force	km ²
Smart Energy Solutions B.V.	Donkerbroek-West	16-03-11	2
Northern Petroleum Nederland B.V. cs	Utrecht-Brakel	06-07-11	8
Total			10

Merged

Licence holder	Licence	In force	km ²
- Originally			
Northern Petroleum Nederland B.V. cs	Andel III		217
Northern Petroleum Nederland B.V. cs	Utrecht-Brakel		8
- After merge			
Northern Petroleum Nederland B.V. cs	Andel V	06-07-11	225

Restricted

Licence holder	Licence	In force	km ²
Smart Energy Solutions B.V.	Marknesse	30-12-11	19
Total			19

4. HYDROCARBON LICENCES, Netherlands Continental shelf in 2011

Changes in the licences for hydrocarbon exploration and production, which took place during 2011 on the Continental Shelf, are listed in the tables below. Pending applications are also listed.

Total area	Under licence
56,814 km ²	31,605 km ² (55.6%)

EXPLORATION LICENCES, Netherlands Continental shelf

Applied for

Licence	Publication	Date	Closing date	Applicant(s)
P11a	Official Journal C 292 Govern.Gazette 19790	05-10-11	04-01-12	

Awarded

Licence holder	Licence	In force	km ²
Wintershall cs	D12b	25-02-11	41
Wintershall cs	E3 *	22-11-11	396
Wintershall cs	F1 *	22-11-11	396
Oranje-Nassau Energie Nederland B.V.	F9 *	22-11-11	400
Oranje-Nassau Energie Nederland B.V.	M2 *	22-11-11	406
GDF SUEZ E&P Nederland B.V. cs	K1c *	22-11-11	274
Centrica Production Nederland B.V.	E1 *	22-11-11	374
Centrica Production Nederland B.V.	E2 *	22-11-11	396
Centrica Production Nederland B.V.	E4 *	22-11-11	398
Centrica Production Nederland B.V.	E5 *	22-11-11	398
Oranje-Nassau Energie Nederland B.V.	T1	24-11-11	1
Oranje-Nassau Energie Nederland B.V.	P18b	24-11-11	313
Total			3,793

*Application also published in 2011.

Restricted

Licence holder	Licence	In force	km ²
Chevron Exploration and Production Netherlands B.V. cs	P1	13-07-11	137
Ascent Resources Netherlands B.V.	M10a & M11	07-09-2011	110
Total			247

Lapsed / relinquished

Licence holder	Licence	In force	km ²
Smart Energy Solutions B.V.	Q2a	20-01-11	21
Tullow Netherlands B.V. cs	D9	26-03-11	149
GDF SUEZ E&P Nederland B.V. cs	E16b	10-08-11	375
GDF SUEZ E&P Nederland B.V. cs	E13b	10-08-11	169
Total			714

Prolonged

Licence holder	Licence	In force	km ²
Sterling Resources Netherlands B.V. cs	F14-ondiep	20-5-2011	403
Sterling Resources Netherlands B.V. cs	F17a-ondiep	20-5-2011	386
Sterling Resources Netherlands B.V. cs	F18-ondiep	20-5-2011	404
Sterling Resources Netherlands B.V. cs	L1b-ondiep	20-5-2011	339
Chevron Exploration and Production Netherlands B.V. cs	P1a	13-07-2011	137
Oranje-Nassau Energie Nederland B.V. cs	Q10b	30-07-2011	367
Ascent Resources Netherlands B.V.	M10a & M11	07-09-2011	110
Tullow Netherlands B.V. cs	E13a	20-09-2011	234
Total			2,380

PRODUCTION LICENCES, Netherlands Continental shelf

Applied for

Licence	Publication	Date	Applicant(s)
A12b & B10a *	-	20-01-00	Chevron cs
B16a *	-	06-05-93	Chevron cs
B17a *	-	30-05-97	Centrica cs
Q2a **	-	26-07-06	Smart cs
B17b *	-	29-07-10	Centrica cs
D18a *	-	01-10-11	GDF cs
Q16b & Q16c-diep	-	20-12-11	Oranje-Nassau cs
T1	-	20-12-11	Oranje-Nassau

*Current application, formerly published in Annual Report

**Application withdrawn by 20-1-2011

Awarded

Licence holder	Licence	In force	km ²
Centrica Production Nederland B.V. cs	A15a	27-12-11	67
Total			67

Lapsed/relinquished

Licence holder	Licence	In force	km ²
Wintershall Noordzee B.V. cs	K10a	27-12-11	195
Wintershall Noordzee B.V. cs	K10b & K10c	27-12-11	93
Wintershall Noordzee B.V. cs	Q8	27-12-11	247
Total			535

Prolonged

Licence holder	Licence	In force	km ²
GDF SUEZ E&P Nederland B.V. cs	L10 & L11a	12-01-11	596
Total E&P Nederland B.V. cs	L1e	25-05-11	12
Nederlandse Aardolie Maatschappij B.V.	F17c	10-06-11	18
Total			626

5. HYDROCARBON LICENCES, company changes, name changes and legal mergers in 2011

The tables below list changes in chronological order which took place during 2011, as a result of mutations in consortiums of companies that participate in licences as well as name changes of participating companies or name changes as a result of legal mergers.

Company changes in exploration licences

Licence	Relinquishing company	Acquiring company	In force	Neth. Gazette
D9	Gas Plus Netherlands B.V.	-	19-02-11	3 385
L11c	-	GDF SUEZ E&P Nederland B.V.	29-03-11	5 885
P2	-	TAQA Offshore B.V.	09-04-11	6 761
P1	-	TAQA Offshore B.V.	09-04-11	7 224
Q13b-ondiep	GDF SUEZ E&P Amstel B.V.	GDF SUEZ E&P Nederland B.V.	11-05-11	8 456
Q16bc-ondiep	GDF SUEZ E&P Amstel B.V.	GDF SUEZ E&P Nederland B.V.	11-05-11	8 462
Lemsterland	-	Lundin Netherlands B.V.	11-05-11	8 484
Follega	-	Lundin Netherlands B.V.	11-05-11	8 485
D12b	EWE Aktiengesellschaft	EWE ENERGIE AG	30-07-11	14 378
Noordoostpolder	Cuadrilla Resources Ltd.	Hardenberg Resources B.V.	23-06-11	14 823
F6b	-	Smart Energy Solutions B.V.	06-08-11	17 562
P18b	-	TAQA Offshore B.V.	24-11-11	23 555
P18b	Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.	27-12-11	781
T1	Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.	27-12-11	782
M2	Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.	27-12-11	783
F9	Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.	27-12-11	784
F12	Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.	27-12-11	785
F15b & F15c	Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.	27-12-11	787
L11c	Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.	27-12-11	788
L16b	Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.	27-12-11	789
M4	Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.	27-12-11	791
Q10b	Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.	27-12-11	821
Q13b-diep	Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.	27-12-11	822
Q16b & Q16c-diep	Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.	27-12-11	837

Company changes in production licences

Licence	Relinquishing company	Acquiring company	In force	Neth. Gazette
Q13a	GDF SUEZ E&P Amstel B.V.	GDF SUEZ E&P Nederland B.V.	11-05-11	8 454
Q16a	Nederlandse Aardolie Maatschappij B.V.	Oranje-Nassau Energie Nederland B.V.	13-07-11	13 516
L8a	EWE Aktiengesellschaft	EWE ENERGIE AG	30-07-11	14 379
L10 & L11a	EWE Aktiengesellschaft	EWE ENERGIE AG	30-07-11	14 380
K12	EWE Aktiengesellschaft	EWE ENERGIE AG	30-07-11	14 381
K9c	EWE Aktiengesellschaft	EWE ENERGIE AG	30-07-11	14 382
K9a & K9b	EWE Aktiengesellschaft	EWE ENERGIE AG	30-07-11	14 383
A15a	Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.	27-12-11	746
L8a	Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.	27-12-11	823
L8b	Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.	27-12-11	826
L11b	Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.	27-12-11	830
M1a	Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.	27-12-11	834
M7	Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.	27-12-11	836
Q16a	Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.	27-12-11	

Name changes

Previous company name	New company name
Cirrus Energy Nederland B.V.	Oranje-Nassau Energie Nederland B.V.
Nuon Exploration & Production The Netherlands B.V.	Tullow Exploration & Production Netherlands B.V.
Venture Production Nederland B.V.	Centrica Production Nederland B.V.

Legal mergers

Merging companies	New company name
Oranje-Nassau Energie B.V. Oranje-Nassau Energie Nederland B.V.	Oranje-Nassau Energie B.V.
GDF SUEZ E&P Nederland B.V. GDF SUEZ E&P Amstel B.V.	GDF SUEZ E&P Nederland B.V.

6. SEISMIC ACQUISITION

In 2011 a large 3D survey has been acquired in the northern part of the Netherlands Continental shelf. This significantly enlarged the 3D seismic coverage. Furthermore, reprocessing of numerous existing 3D datasets using new technology is widespread.

All seismic acquisition surveys shot during 2011 are listed in the tables below. Historical summaries can be found in Annex 9.

NETHERLANDS TERRITORY

No 3D seismic surveys were carried out in 2011 on the Netherlands Territory.

2D seismic surveys

Area	Company	Status	Length km
Hengelo	AkzoNobel	Completed	5
Isidorushoeve	AkzoNobel	Completed	9
Total			14

CONTINENTAL SHELF

Two offshore 3D surveys have been acquired in 2011. No 2D surveys were carried out on the Dutch Continental shelf.

3D seismic surveys

Area	Company	Status	Area km ²
Q13	GDF Suez	Completed	300
DEF quadrants	Fugro	Completed	8500
Total			8800

7. OIL AND GAS WELLS, completed in 2011

The tables below list all wells drilled and ended during 2011, sorted by drilling location: either on the Territory or on the Continental Shelf. Subsequently they are sorted by exploration, appraisal or production wells. The tables list the name, licence, operator and result for each well. The last table summarizes the drilling activities of 2011.

Eight out of fourteen exploration wells encountered hydrocarbons, a success ratio of 57%. Except two wells, they all struck gas. Blaaksedijk-01 also had oil shows, while P11-7 encountered both oil and gas.

The wells Maasgeul-03 and Ameland Westgat 110 drilled an offshore target from an onshore location. Three appraisal well (one on the Territory and two on the Continental Shelf) confirmed previously discovered reservoirs. 29 production wells were drilled in 2011

The categories exploration, appraisal and production refer to the initial petroleum geological target of the well. An exploration well which later on will be completed as a producer will remain an exploration well in this overview, but its status will be labelled 'producing'. The category 'Other wells' concerns wells such as (steam) injection wells. The column showing the results gives the technical result. A well that strikes gas will be categorised as a gas well even if the gas will not be developed.

As well as in 2010 most of the wells that were drilled on the Dutch Territory targeted the Schoonebeek oilfield as a part of the redevelopment of this field.

NETHERLANDS TERRITORY

Exploration wells

	Well name	Licence	Operator	Result
1	Blija-Ferwerderadeel-108	Noord-Friesland	NAM	Gas
2	Blaaksedijk-01	Botlek	NAM	Gas (olie shows)
3	De Kom-01	Steenwijk	Vermilion	Dry
4	Langezwaag-01	Gorredijk	Vermilion	Gas
5	Maasgeul-03 (-sidetrack1*)	Q16b en c	Oranje-Nassau	Gas
6	Nieuwehorne-01	Gorredijk	Vermilion	Gas
7	De Tibben-01	Noord-Friesland	NAM	Gas
8	Wommels-01	Leeuwarden	Vermilion	Dry

**This well drilled an offshore target*

Appraisal wells

	Well name	Licence	Operator	Result
1	Ranum-01	Groningen	NAM	Gas*

Production wells

	Well name	Licence	Operator	Result
1	Ameland Westgat-110*	Noord-Friesland	NAM	Gas
2	Schoonebeek-1801	Schoonebeek	NAM	Oil
3	Schoonebeek-1802	Schoonebeek	NAM	Oil
4	Schoonebeek-1803 (-S1)	Schoonebeek	NAM	Oil
5	Schoonebeek-2001	Schoonebeek	NAM	Oil
6	Schoonebeek-2002	Schoonebeek	NAM	Oil
7	Schoonebeek-2003	Schoonebeek	NAM	Oil
8	Schoonebeek-2301	Schoonebeek	NAM	Oil
9	Schoonebeek-2302	Schoonebeek	NAM	Oil
10	Schoonebeek-2303	Schoonebeek	NAM	Oil
11	Schoonebeek-2601	Schoonebeek	NAM	Oil
12	Schoonebeek-2602	Schoonebeek	NAM	Oil
13	Schoonebeek-3001	Schoonebeek	NAM	Oil
14	Vries-08	Drenthe II	NAM	Gas

**This well drilled an offshore target*

Other wells

	Well name	Licence	Operator	Purpose
1	Schoonebeek-1851	Schoonebeek	NAM	Injection*
2	Schoonebeek-1852	Schoonebeek	NAM	Injection*
3	Schoonebeek-2051	Schoonebeek	NAM	Injection*
4	Schoonebeek-2052	Schoonebeek	NAM	Injection*
5	Schoonebeek-2351	Schoonebeek	NAM	Injection*
6	Schoonebeek-2651	Schoonebeek	NAM	Injection*
7	Schoonebeek-3051	Schoonebeek	NAM	Injection*
8	Schoonebeek-3052	Schoonebeek	NAM	Injection*
9	Schoonebeek-3091	Schoonebeek	NAM	Observation
10	Schoonebeek-3092	Schoonebeek	NAM	Observation

**Steam injection*

CONTINENTAL SHELF

Exploration wells

	Well name	Licence	Operator	Result
1	E16-05	E16a	GDF-Suez	Dry
2	F06-04 (en Sidetrack1)	F06b	Dana	Dry
3	K12-18-Sidetrack1t/m4	K12	GDF-Suez	Gas
4	P08-07	P08b	Wintershall	Dry
5	P08-08	P08c	Dana	Dry
6	P11-07	P11b	Dana	Oil and Gas

Appraisal wells

	Well name	Licence	Operator	Result
1	G16-B-03	G16a	GDF-Suez	Gas
3	Q13-12	Q13a	GDF-Suez	Oil

Production wells

	Well name	Licence	Operator	Result
1	B13-A-01 (Sidetrack-1,-2)	B10c & B13a	Chevron	Gas
2	B13-A-02	B10c & B13a	Chevron	Gas
3	B13-A-03	B10c & B13a	Chevron	Gas
4	B13-A-04(en Sidetrack 1)	B10c & B13a	Chevron	Gas
5	F03-FA-01	F03a	Centrica	Oil/Condensate
6	G16-B-02	G16a	GDF-Suez	Gas
7	K01-A-03- Sidetrack 2	K01a	Total	Gas
8	K02-A-07- Sidetrack 1	K02b	GDF-Suez	Gas
9	K05-CU-02(-Sidetrack 1)	K05b	Total	Gas
10	K05-CU-03	K05b	Total	Gas
11	K05-D-04	K04b & K05a	Total	Gas
12	K18-08- Sidetrack 1en2	K18b	Wintershall	Gas
13	L05-C-02- Sidetrack 2	L05b	Wintershall	Gas
14	L15-A-107(-Sidetrack 1)	L12b & L15b	GDF-Suez	Gas
15	P11-C-01- Sidetrack 1t/m3	P11b	Dana	Oil and gas

SUMMARY DRILLING OPERATIONS DURING 2011

	Well type	Results					Total
		Gas	Oil	Gas+Oil	Dry	Others	
Territory	Exploration	5		1	2		8
	Evaluation			1			1
	Production	2	12				14
	Others					10*	10
	Subtotal	7	12	2	2	10	33
Continental Shelf	Exploration	1		1	4		6
	Evaluation	1	1				2
	Production	13		2			15
	Others						
	Subtotal	15	1	3	4	0	23
Total		22	13	5	6	10	56

*observation (2) en (steam-)injection wells (8) of the Schoonebeek oilfield

8. PLATFORMS AND PIPELINES, Netherlands Continental Shelf

In 2011 two platforms and three sub sea completions have been installed on the Netherlands Continental Shelf. No platforms have been removed.

During 2011 all structures mentioned above have been connected to the transport grid by a pipeline. No pipelines have been abandoned or removed.

Annexes 13 and 14 present a complete list of all platforms and pipelines. Data on the pipelines is supplied by Rijkswaterstaat Directie Noordzee.

Platforms, installed in 2011

Platform	Operator	Number of legs	Gas/Oil	Function
B13-A	Chevron	4	Gas	Satellite
G16a-B	GDF Suez	4	Gas	Satellite
K18-G1	Wintershall	-	Gas	Sub sea
P11-B-Nes	Dana	-	Gas	Sub sea
P11-C-Van Ghent	Dana	-	Oil & Gas	Sub sea

Pipelines, laid in 2011

Operator	From	To	Diameter (inch)	Length (km)	Carries*
Chevron	B13-A	A12-CPP	16	22	g
GDF Suez	G16a-B	G17d-AP	14	14	g
NAM	K18-G1	K15-FA-1		10	g
Dana	P11-B-Nes	P11-B-De Ruyter	8	8	g
Dana	P11-C-Van Ghent	P11-B-De Ruyter	8	4,5	g

* g = gas, gl = glycol, ci = corrosion inhibitor

9. GAS AND OIL PRODUCTION

The tables below list the aggregated production figures for natural gas, oil and condensate for 2011. Condensate is generally considered as a by product from oil or gas production. Changes in comparison to 2010 are listed in absolute terms and in terms of percentage.

The information in the following tables is based on data supplied by the production operators. Gas volumes are reported in Standard cubic meters (Sm^3), and Normal cubic meters (Nm^3).

Total production of gas, oil and condensate in 2011 and changes compared to 2010

Gas	Production 2011		Changes compared to 2010	
	10^6 Nm^3	10^6 Sm^3	10^6 Sm^3	%
Netherlands Territory (total)	55881.6	58978.0	-4847.9	-7.6
Groningen accumulation	46779.7	49371.7	-4280.3	-8.0
Territory other fields	9101.9	9606.3	-567.6	-5.6
Continental Shelf	18551.2	19579.1	-2501.1	-11.3
Total	74432.8	78557.1	-7349.1	-8.6

Oil	Production 2011		Changes compared to 2010	
		10^3 Sm^3	10^3 Sm^3	%
Netherlands Territory		421.8	141.2	50.3
Continental Shelf		847.9	-133.8	-13.6
Total		1269.7	7.4	0.6
Average daily oil production		3480	Sm^3/dag	

Condensate	Production 2011		Changes compared to 2010	
		10^3 Sm^3	10^3 Sm^3	%
Netherlands Territory		223.5	-55.8	-20
Continental Shelf		294.5	54.1	23
Total		514.9	-1.7	0

The tables on the following pages present the monthly production figures for each production licence. Figures are presented in Standard cubic meters (Sm^3), and Normal cubic meters (Nm^3).

Annexes 15 up to and including 17 present historical gas and oil production figures.

Due to the round off of monthly production figures, slight differences in the summations per year may exist.

GAS PRODUCTION. Netherlands Territory in 2011 (in million Sm³)

The production per licence is a summation of the production of all producing wells of which the wellhead is located within the licence area. These figures have been supplied by the operating companies

Licence	Operator	Total	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Andel III	NPN	65.3	5.6	5.3	6.3	6.0	5.2	5.8	5.9	5.4	5.9	4.6	4.8	4.3
Andel V	NPN	17.5	3.9	3.3	3.0	2.6	1.6	0.4	1.0	0.5	0.9	0.3	0.0	0.0
Beijerland	NAM	68.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.7	28.1	30.5
Bergen II	TAQA	129.4	14.7	12.5	6.9	10.2	13.7	12.9	13.6	11.4	10.9	12.4	10.3	0.0
Botlek	NAM	581.2	65.5	59.0	64.0	55.9	31.5	52.9	48.4	53.4	47.1	43.9	30.8	28.8
Drenthe II	NAM	681.5	66.9	54.7	63.9	56.6	55.2	57.5	51.3	54.8	58.8	54.0	53.7	54.1
Drenthe III	NPN	47.7	3.8	3.4	3.8	3.9	4.2	3.6	3.8	4.2	4.2	4.3	4.2	4.1
Drenthe IV	NPN	40.8	6.4	4.9	5.2	3.0	3.3	2.7	2.4	2.5	2.3	2.7	2.6	2.8
Gorredijk	Vermilion	85.2	1.9	1.8	1.6	1.1	1.0	16.4	15.3	14.3	5.2	9.7	12.4	4.7
Groningen	NAM	51229.5	7337.3	6381.9	6054.0	3571.2	2763.7	2521.0	2604.4	2396.7	2422.7	3690.1	5260.5	6226.0
Hardenberg	NAM	22.9	3.2	1.4	1.6	1.5	1.5	1.5	2.5	2.6	0.2	2.2	2.0	2.5
Leeuwarden	Vermilion	69.0	8.6	7.7	7.8	7.9	5.4	5.6	6.5	5.5	2.0	1.3	4.4	6.2
Middelie	NAM	275.2	28.2	24.7	28.3	24.2	25.4	22.6	21.9	18.7	15.4	21.8	22.5	21.5
Noord-Friesland	NAM	3576.5	309.9	285.2	305.3	258.5	294.9	327.1	307.6	285.3	284.6	319.5	296.6	302.0
Oosterend	Vermilion	2.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.1	0.0	0.0	0.0
Rijswijk	NAM	634.9	88.2	72.5	68.7	32.4	33.0	28.5	29.7	56.2	50.1	56.6	58.4	60.5
Schoonebeek	NAM	830.6	118.2	63.1	70.5	66.3	67.2	66.1	65.5	65.9	56.2	60.3	63.0	68.3
Slootdorp	Vermilion	192.2	13.0	14.4	13.8	17.3	17.3	13.3	16.7	15.1	18.1	19.2	19.0	14.9
Steenwijk	Vermilion	58.9	6.8	6.1	6.5	6.8	6.3	4.0	4.3	3.9	2.4	3.3	4.7	3.8
Tietjerksteradeel	NAM	303.4	29.7	25.3	27.7	25.6	15.7	23.1	27.6	26.1	25.9	25.2	25.5	26.0
Waalwijk	NPN	26.9	2.6	2.5	2.4	1.6	1.8	1.2	2.7	2.5	1.6	2.6	2.6	2.7
Zuidwal	Vermilion	39.1	3.6	3.2	3.5	3.0	3.1	3.3	3.4	3.4	3.3	3.4	2.9	3.2
Total		58978.0	8118.4	7033.0	6745.1	4156.0	3351.3	3170.0	3235.0	3028.6	3018.1	4346.9	5908.8	6866.8

GAS PRODUCTION. Netherlands Territory in 2011 (in million Nm³)

The production per licence is a summation of the production of all producing wells of which the wellhead is located within the licence area. These figures have been supplied by the operating companies.

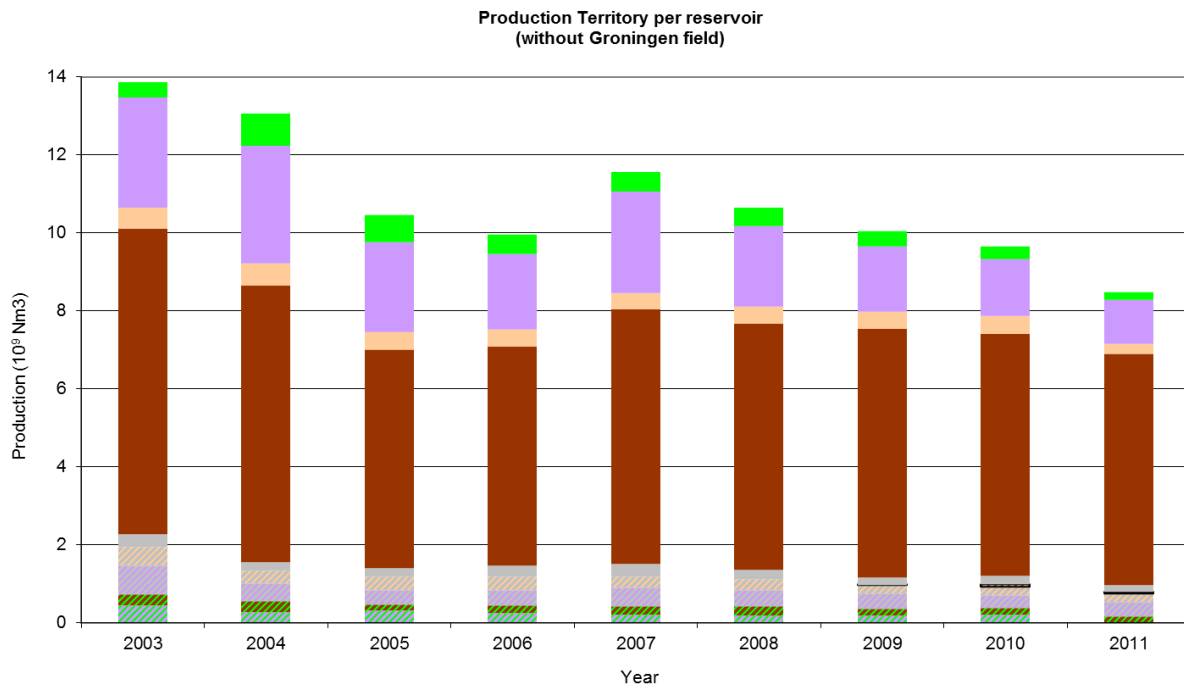
Licence	Operator	Total	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Andel III	NPN	61.8	5.4	5.0	5.9	5.7	4.9	5.5	5.6	5.1	5.6	4.4	4.5	4.1
Andel V	NPN	16.6	3.7	3.1	2.9	2.5	1.5	0.4	0.9	0.5	0.9	0.2	0.0	0.0
Beijerland	NAM	64.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	26.6	28.9
Bergen II	TAQA	122.6	13.9	11.9	6.5	9.6	13.0	12.2	12.8	10.8	10.3	11.8	9.8	0.0
Botlek	NAM	550.7	62.1	55.9	60.6	53.0	29.8	50.1	45.9	50.6	44.6	41.6	29.2	27.3
Drenthe II	NAM	645.7	63.4	51.9	60.6	53.6	52.3	54.5	48.7	51.9	55.7	51.1	50.8	51.2
Drenthe III	NPN	45.2	3.6	3.2	3.6	3.7	3.9	3.4	3.6	4.0	4.0	4.1	4.0	3.9
Drenthe IV	NPN	38.7	6.1	4.6	4.9	2.9	3.1	2.6	2.3	2.4	2.2	2.6	2.5	2.6
Gorredijk	Vermilion	80.8	1.8	1.7	1.6	1.0	0.9	15.5	14.5	13.5	4.9	9.2	11.8	4.4
Groningen	NAM	48540.0	6952.1	6046.8	5736.2	3383.7	2618.6	2388.7	2467.7	2270.9	2295.5	3496.3	4984.3	5899.1
Hardenberg	NAM	21.7	3.0	1.4	1.5	1.4	1.4	1.5	2.4	2.4	0.2	2.1	1.9	2.3
Leeuwarden	Vermilion	65.3	8.1	7.3	7.4	7.5	5.1	5.3	6.1	5.2	1.9	1.3	4.2	5.9
Middelie	NAM	260.7	26.7	23.4	26.8	22.9	24.0	21.5	20.7	17.8	14.6	20.6	21.3	20.4
Noord-Friesland	NAM	3388.7	293.7	270.3	289.2	245.0	279.4	310.0	291.5	270.3	269.7	302.7	281.0	286.1
Oosterend	Vermilion	2.0	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.1	0.0	0.0	0.0
Rijswijk	NAM	601.5	83.5	68.7	65.1	30.7	31.3	27.0	28.2	53.3	47.5	53.6	55.3	57.4
Schoonebeek	NAM	787.0	112.0	59.8	66.8	62.8	63.7	62.6	62.1	62.5	53.3	57.1	59.7	64.7
Slootdorp	Vermilion	182.1	12.4	13.6	13.1	16.4	16.4	12.6	15.9	14.3	17.2	18.2	18.0	14.1
Steenwijk	Vermilion	55.8	6.4	5.8	6.1	6.5	6.0	3.8	4.1	3.7	2.3	3.1	4.4	3.6
Tietjerksteradeel	NAM	287.4	28.2	23.9	26.2	24.3	14.9	21.9	26.2	24.7	24.5	23.9	24.1	24.6
Waalwijk	NPN	25.5	2.4	2.4	2.3	1.5	1.7	1.1	2.6	2.4	1.5	2.4	2.5	2.6
Zuidwal	Vermilion	37.1	3.4	3.0	3.3	2.9	2.9	3.1	3.2	3.2	3.1	3.2	2.7	3.0
Total		55881.6	7692.2	6663.8	6391.0	3937.8	3175.3	3003.5	3065.2	2869.6	2859.6	4118.7	5598.6	6506.3

Onshore natural gas production per stratigraphic reservoir level

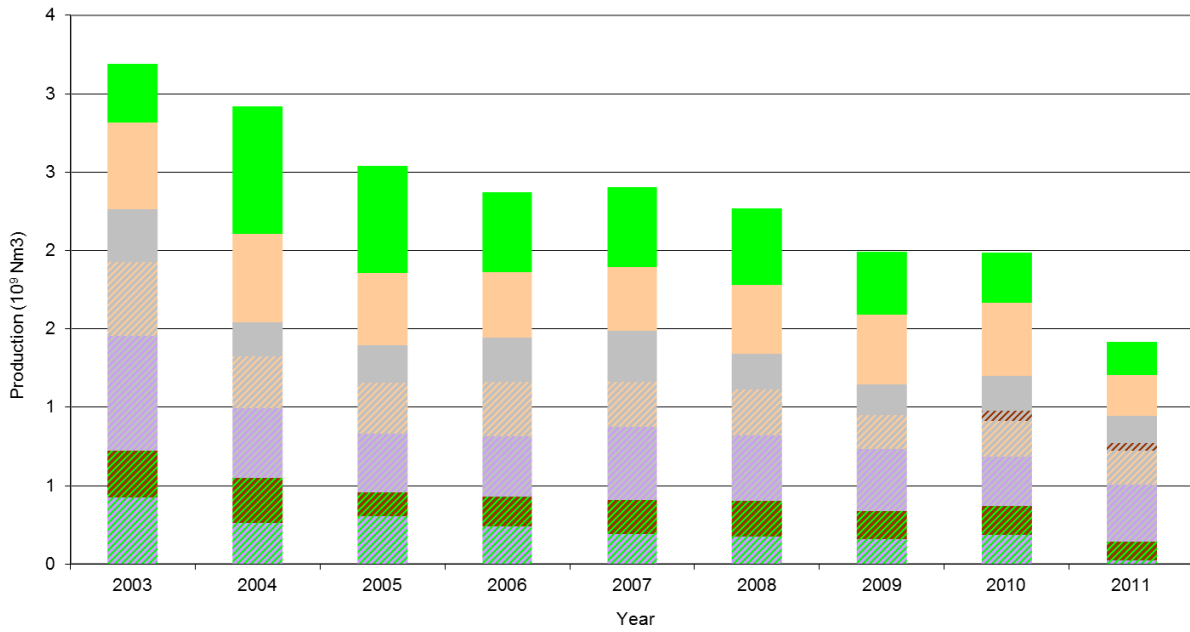
The following figures show the contribution of each stratigraphic reservoir level to the total produced volume of gas from the Territory. This is excluding the contribution of the Groningen field (Rotliegend) as it will mask the volumes of the other fields/ reservoirs. Contributions from fields with multiple reservoirs are shown in hatched colours.

The figures clearly show that the main contribution is from the Rotliegend gas fields and to a lesser extend from the Triassic. The decline during the period 2003 – 2006 (around 10% per year) since 2007 this decline decreased to rates of around 5% per year. This is due to production from fields below the Waddenzee.

In the next graph, the production from Rotliegend and Triassic reservoirs has been removed to reveal the contribution of the Cretaceous, Zechstein and Carboniferous reservoirs to the overall production. The production from these reservoirs decreased in the period 2003 – 2011 with 5% per year. There is no production from onshore Jurassic reservoirs.



Production Territory per reservoir
(without Groningen field and excluding the Triassic and Rotliegend reservoirs)



Legend

- Cretaceous
- Jurassic
- Triassic
- Zechstein
- Rotliegend
- Carboniferous
- ▨ Carboniferous/Rotliegend
- ▨ Carboniferous/Zechstein
- ▨ Carboniferous/Zechstein/Triassic
- Rotliegend/Cretaceous
- ▨ Triassic/Cretaceous

GAS PRODUCTION. Continental Shelf in 2011 (in million Sm³)

The production per licence is a summation of the production of all producing wells of which the wellhead is located within the licence area. These figures have been supplied by the operating companies.

Licence	Operator	Total	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
A12a	Chevron	873.2	81.0	66.2	73.5	75.6	77.5	63.8	79.1	70.3	60.7	59.6	84.1	82.0
B10c & B13a	Chevron	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.7
D12a	Wintershall	113.8	8.8	9.6	13.3	14.2	13.8	11.8	3.9	7.1	9.3	11.1	5.6	5.3
D15	GDF Suez	12.7	0.0	0.6	1.4	1.0	1.2	0.9	0.9	1.6	2.9	0.2	0.5	1.5
E17a & E17b	GDF Suez	900.3	85.8	72.6	84.1	78.2	77.2	73.0	48.9	77.0	72.8	77.2	75.9	77.5
E18a	Wintershall	233.0	31.1	25.8	24.7	22.1	20.5	15.7	12.8	11.6	8.6	18.0	21.5	20.6
F02a	Dana	88.6	7.9	7.4	8.3	8.1	8.0	2.2	8.2	8.0	7.5	7.5	7.5	7.9
F03a	Centrica	410.5	0.7	24.0	37.2	34.5	30.4	32.6	34.8	39.9	39.8	39.2	48.1	49.3
F03b	GDF Suez	457.5	47.8	42.5	47.5	44.9	44.7	11.4	41.7	42.6	34.4	30.9	34.1	35.1
F15a	Total	247.0	24.5	21.4	22.6	22.1	20.8	17.9	17.4	21.5	19.6	20.0	20.2	18.9
F16	Wintershall	465.6	48.7	43.8	45.8	42.9	43.8	41.1	39.5	39.9	18.6	31.4	34.3	35.9
G14 & G17b	GDF Suez	912.6	99.3	89.7	95.9	86.6	75.3	81.7	82.1	53.8	35.6	52.7	79.3	80.8
G16a	GDF Suez	518.2	55.4	50.2	52.7	45.8	39.1	50.8	35.4	39.1	26.6	37.5	29.2	56.5
G17a	GDF Suez	149.0	15.4	13.4	14.3	13.1	11.6	13.1	13.4	10.5	7.7	11.9	12.0	12.6
G17c & G17d	GDF Suez	103.4	10.3	8.7	8.8	9.2	8.2	10.0	9.8	6.8	4.3	8.8	9.0	9.5
J03a	Total	136.2	12.6	11.9	13.0	12.4	12.2	8.6	7.4	11.1	10.7	12.2	11.9	12.1
J03b & J06	Centrica	76.7	3.8	7.5	8.4	7.8	6.3	4.3	4.2	7.3	7.1	7.6	7.2	5.2
K01a	Total	475.4	47.8	44.5	44.3	28.5	40.0	28.7	20.2	43.5	41.7	46.0	44.8	45.5
K02b	GDF Suez	836.2	51.4	78.5	83.8	82.5	69.1	83.6	76.6	42.7	62.8	57.0	72.6	75.5
K04a	Total	1054.1	101.4	89.2	95.5	93.1	93.0	81.2	76.8	91.3	82.9	87.8	83.4	78.6
K04b & K05a	Total	1041.3	104.9	91.7	94.9	100.3	101.0	95.3	71.7	85.7	61.0	75.7	81.3	77.6
K05b	Total	191.0	5.6	6.5	7.1	6.8	6.4	6.4	3.5	16.2	30.0	26.2	37.6	38.6
K06 & L07	Total	802.0	77.4	72.3	71.6	71.1	69.9	65.0	64.7	52.1	50.5	74.0	64.9	68.6
K07	NAM	61.0	8.7	7.1	7.4	5.4	6.0	7.7	3.4	0.8	2.2	2.2	5.3	4.7
K08 & K11	NAM	845.1	87.7	74.2	87.6	74.6	75.7	54.7	44.7	75.1	68.3	60.4	71.8	70.3
K09a & K09b	GDF Suez	327.2	32.9	30.7	32.2	30.3	32.6	27.7	20.1	23.3	26.4	28.5	19.8	22.5
K09c	GDF Suez	61.5	14.0	12.5	13.2	8.2	1.7	1.8	1.9	1.8	1.2	1.8	1.7	1.8
K12	GDF Suez	806.4	73.8	70.8	75.7	49.7	64.8	59.6	71.8	66.4	64.6	63.5	74.1	71.6
K14	NAM	134.7	13.0	12.6	12.9	11.7	12.1	10.8	7.8	11.4	10.0	10.5	11.4	10.4
K15	NAM	1515.8	147.3	141.1	151.6	141.3	134.9	137.8	99.0	116.8	81.6	110.2	124.9	129.4
K17	NAM	146.3	13.5	11.4	13.4	12.8	13.1	11.9	9.2	13.3	15.1	13.0	9.9	9.8
L02	NAM	590.5	53.9	47.4	48.2	48.1	48.1	30.6	47.5	41.3	49.1	56.2	61.9	58.3
L04a	Total	517.8	52.6	44.7	49.3	42.1	17.4	42.8	44.2	46.0	45.2	45.8	42.6	45.1
L05a	GDF Suez	207.3	20.7	18.6	18.6	17.4	13.1	16.6	18.5	16.7	15.1	17.1	18.0	16.9
L05b	Wintershall	599.0	40.7	38.0	42.1	42.1	43.8	58.1	57.3	54.0	52.3	57.5	55.7	57.4
L06d	ATP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
L08a	Wintershall	68.2	6.3	5.2	6.0	5.4	5.6	5.9	6.1	6.1	4.9	4.1	6.5	6.1
L08b	Wintershall	168.5	17.1	15.3	15.9	10.2	14.9	14.8	13.7	14.9	14.6	13.0	11.0	13.1
L09a	NAM	772.4	96.1	91.8	107.9	80.5	80.5	22.1	38.5	43.5	37.8	32.1	59.7	82.0
L09b	NAM	32.2	15.1	1.0	3.1	1.8	1.8	0.1	0.2	0.2	0.1	0.3	4.7	3.8
L10 & L11a	GDF Suez	442.9	46.9	43.0	45.4	30.4	40.1	39.1	29.0	36.0	39.5	34.8	28.1	30.6
L11b	Cirrus	20.4	2.1	0.7	0.7	2.4	2.9	2.0	1.9	1.7	1.5	1.7	1.0	1.8
L12b & L15b	GDF Suez	138.4	17.0	16.0	3.4	15.8	3.3	12.8	8.6	6.5	11.5	7.7	8.9	26.9

Licence	Operator	Total	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
L13	NAM	269.6	29.6	24.7	26.4	24.9	24.9	23.7	15.2	27.1	21.2	21.3	17.5	13.1
M07	Cirrus	166.3	23.1	20.5	24.0	19.6	13.5	0.1	0.0	5.1	5.9	17.2	17.2	20.1
P06	Wintershall	165.0	15.8	14.6	16.1	14.7	14.7	13.1	14.2	14.8	13.8	5.1	14.1	14.1
P09a & P09b	Wintershall	65.0	6.8	6.7	6.8	6.2	5.5	5.0	5.9	5.2	4.5	2.8	5.1	4.5
P09c	Chevron	3.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2
P09c	Wintershall	3.7	1.4	0.8	0.6	0.2	0.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0
P11b	Dana	41.5	4.5	4.1	4.4	4.3	4.3	3.2	2.9	3.9	2.9	0.6	3.0	3.5
P12	Wintershall	37.9	2.2	2.0	2.3	4.3	4.3	3.3	4.7	4.4	3.2	0.4	4.0	3.0
P15a & P15b	TAQA	139.4	13.2	11.8	12.2	11.0	7.2	9.0	12.0	13.5	13.5	13.4	11.6	11.0
P15c	TAQA	0.5	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P18a	TAQA	231.9	21.0	18.5	19.8	19.0	13.4	20.3	20.3	19.9	19.8	20.1	19.7	20.2
Q01	Chevron	18.0	0.5	0.7	2.7	2.3	1.5	1.3	1.4	1.4	1.5	1.5	1.5	1.7
Q04	Wintershall	651.3	71.7	65.9	70.5	57.4	58.1	52.1	44.1	48.2	49.2	37.4	47.6	49.0
Q16a	NAM	218.5	20.8	17.7	19.4	18.9	18.9	17.1	18.0	18.1	17.7	17.8	17.0	17.1
Totaal		19579.1	1892.0	1748.6	1888.8	1714.1	1648.8	1505.1	1415.3	1517.3	1389.3	1490.6	1640.5	1728.8

GAS PRODUCTION. Continental Shelf in 2011 (in million Nm³)

The production per licence is a summation of the production of all producing wells of which the wellhead is located within the licence area. These figures have been supplied by the operating companies.

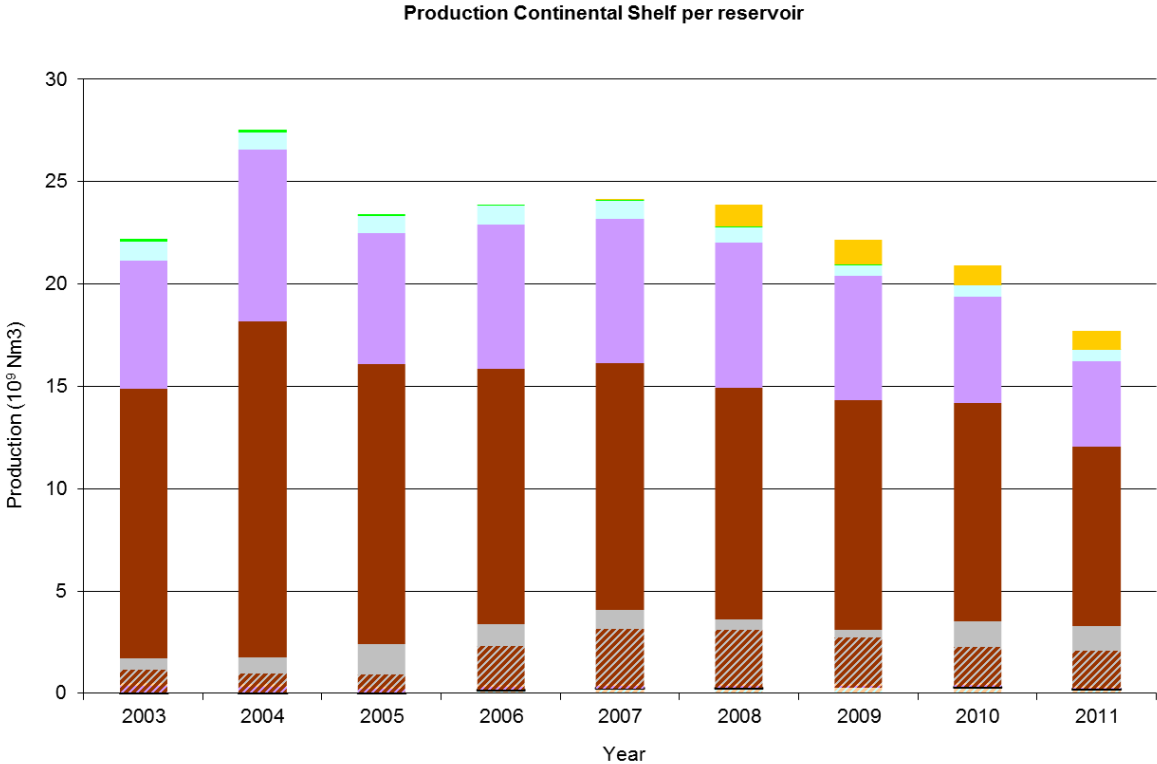
Licence	Operator	Total	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
A12a	Chevron	827.4	76.7	62.7	69.6	71.6	73.4	60.4	74.9	66.6	57.5	56.5	79.6	77.7
B10c & B13a	Chevron	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.0
D12a	Wintershall	107.8	8.3	9.1	12.6	13.4	13.0	11.2	3.7	6.7	8.8	10.5	5.3	5.0
D15	GDF Suez	12.0	0.0	0.6	1.4	1.0	1.1	0.9	0.9	1.5	2.7	0.2	0.5	1.4
E17a & E17b	GDF Suez	853.1	81.3	68.8	79.7	74.1	73.2	69.2	46.3	72.9	69.0	73.1	71.9	73.5
E18a	Wintershall	220.7	29.4	24.4	23.4	20.9	19.4	14.9	12.2	11.0	8.2	17.0	20.4	19.5
F02a	Dana	84.0	7.4	7.0	7.8	7.7	7.6	2.1	7.8	7.6	7.1	7.1	7.1	7.5
F03a	Centrica	389.0	0.6	22.7	35.3	32.7	28.8	30.9	33.0	37.8	37.7	37.1	45.6	46.7
F03b	GDF Suez	433.5	45.3	40.2	45.0	42.5	42.4	10.8	39.5	40.3	32.6	29.2	32.4	33.2
F15a	Total	234.0	23.2	20.3	21.4	20.9	19.7	17.0	16.5	20.4	18.6	19.0	19.1	17.9
F16	Wintershall	441.1	46.1	41.5	43.4	40.6	41.5	38.9	37.4	37.8	17.6	29.7	32.5	34.0
G14 & G17b	GDF Suez	864.7	94.0	85.0	90.8	82.0	71.3	77.5	77.7	50.9	33.7	49.9	75.1	76.6
G16a	GDF Suez	491.0	52.5	47.6	49.9	43.4	37.1	48.1	33.6	37.0	25.2	35.5	27.7	53.5
G17a	GDF Suez	141.1	14.6	12.7	13.6	12.4	11.0	12.4	12.7	10.0	7.3	11.3	11.3	12.0
G17c & G17d	GDF Suez	98.0	9.8	8.2	8.3	8.8	7.7	9.5	9.3	6.5	4.1	8.3	8.5	9.0
J03a	Total	129.0	12.0	11.3	12.4	11.8	11.6	8.1	7.0	10.5	10.1	11.6	11.2	11.5
J03b & J06	Centrica	72.7	3.6	7.1	7.9	7.4	6.0	4.1	4.0	7.0	6.7	7.2	6.8	4.9
K01a	Total	450.4	45.3	42.1	42.0	27.0	37.9	27.2	19.1	41.2	39.5	43.6	42.4	43.1
K02b	GDF Suez	792.3	48.7	74.3	79.4	78.2	65.4	79.2	72.6	40.5	59.5	54.0	68.8	71.5
K04a	Total	998.8	96.1	84.5	90.5	88.3	88.1	76.9	72.7	86.5	78.5	83.2	79.0	74.5
K04b & K05a	Total	986.6	99.4	86.9	90.0	95.0	95.7	90.3	67.9	81.2	57.8	71.8	77.0	73.5
K05b	Total	181.0	5.3	6.2	6.7	6.5	6.1	6.1	3.3	15.4	28.5	24.8	35.6	36.6
K06 & L07	Total	759.9	73.4	68.5	67.8	67.3	66.2	61.6	61.3	49.3	47.8	70.1	61.5	65.0
K07	NAM	57.8	8.3	6.8	7.0	5.1	5.7	7.3	3.2	0.8	2.1	2.1	5.0	4.4
K08 & K11	NAM	800.7	83.1	70.3	83.0	70.6	71.7	51.8	42.3	71.2	64.7	57.2	68.1	66.6
K09a & K09b	GDF Suez	310.0	31.2	29.1	30.5	28.7	30.9	26.3	19.1	22.1	25.0	27.0	18.7	21.3
K09c	GDF Suez	58.3	13.3	11.8	12.5	7.8	1.6	1.7	1.8	1.7	1.1	1.7	1.6	1.7
K12	GDF Suez	764.1	70.0	67.1	71.7	47.1	61.4	56.5	68.0	62.9	61.2	60.2	70.2	67.8
K14	NAM	127.6	12.3	11.9	12.3	11.1	11.5	10.3	7.4	10.8	9.5	9.9	10.8	9.8
K15	NAM	1436.2	139.6	133.7	143.6	133.9	127.8	130.6	93.8	110.7	77.3	104.4	118.4	122.6
K17	NAM	138.7	12.8	10.8	12.7	12.1	12.4	11.2	8.7	12.6	14.4	12.3	9.4	9.3
L02	NAM	559.5	51.0	44.9	45.6	45.6	45.6	29.0	45.0	39.1	46.5	53.3	58.6	55.3
L04a	Total	490.6	49.9	42.4	46.7	39.9	16.5	40.5	41.9	43.6	42.9	43.4	40.4	42.7
L05a	GDF Suez	196.4	19.6	17.6	17.7	16.5	12.4	15.7	17.5	15.8	14.3	16.2	17.0	16.1
L05b	Wintershall	567.5	38.6	36.0	39.9	39.9	41.5	55.0	54.3	51.2	49.5	54.5	52.8	54.4
L06d	ATP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
L08a	Wintershall	64.6	6.0	4.9	5.7	5.1	5.3	5.6	5.8	5.8	4.6	3.9	6.1	5.8
L08b	Wintershall	159.6	16.2	14.5	15.0	9.7	14.1	14.1	13.0	14.1	13.8	12.4	10.4	12.4
L09a	NAM	731.9	91.0	87.0	102.3	76.2	76.2	20.9	36.5	41.3	35.8	30.4	56.6	77.7
L09b	NAM	30.5	14.3	1.0	3.0	1.7	1.7	0.1	0.2	0.2	0.1	0.3	4.5	3.6
L10 & L11a	GDF Suez	419.6	44.4	40.7	43.0	28.8	38.0	37.1	27.5	34.1	37.4	33.0	26.6	29.0
L11b	Cirrus	19.3	2.0	0.7	0.7	2.2	2.7	1.9	1.8	1.6	1.4	1.6	1.0	1.7
L12b & L15b	GDF Suez	131.1	16.2	15.1	3.2	15.0	3.1	12.1	8.1	6.1	10.9	7.3	8.5	25.5

Licence	Operator	Total	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
L13	NAM	255.4	28.0	23.4	25.0	23.6	23.6	22.5	14.4	25.7	20.1	20.1	16.5	12.4
M07	Cirrus	157.6	21.9	19.5	22.7	18.6	12.8	0.1	0.0	4.8	5.6	16.3	16.3	19.1
P06	Wintershall	156.4	15.0	13.9	15.2	13.9	13.9	12.4	13.5	14.0	13.1	4.8	13.3	13.3
P09a & P09b	Wintershall	61.6	6.4	6.3	6.4	5.9	5.2	4.7	5.6	5.0	4.3	2.7	4.8	4.3
P09c	Chevron	3.0	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2
P09c	Wintershall	3.5	1.3	0.8	0.6	0.2	0.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0
P11b	Dana	39.3	4.2	3.8	4.2	4.1	4.1	3.0	2.7	3.7	2.8	0.5	2.9	3.3
P12	Wintershall	35.9	2.1	1.9	2.1	4.1	4.1	3.2	4.4	4.2	3.0	0.4	3.8	2.8
P15a & P15b	TAQA	132.1	12.5	11.2	11.5	10.4	6.8	8.6	11.4	12.8	12.8	12.7	11.0	10.4
P15c	TAQA	0.5	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P18a	TAQA	219.8	19.9	17.5	18.8	18.0	12.7	19.2	19.2	18.9	18.8	19.0	18.6	19.2
Q01	Chevron	17.0	0.4	0.6	2.6	2.2	1.4	1.2	1.4	1.3	1.4	1.5	1.4	1.6
Q04	Wintershall	617.1	67.9	62.5	66.8	54.3	55.0	49.4	41.8	45.7	46.6	35.5	45.1	46.4
Q16a	NAM	207.1	19.7	16.8	18.4	17.9	17.9	16.2	17.1	17.2	16.8	16.8	16.1	16.2
Total		18551.2	1792.6	1656.8	1789.6	1624.1	1562.2	1426.1	1341.0	1437.6	1316.4	1412.3	1554.3	1638.0

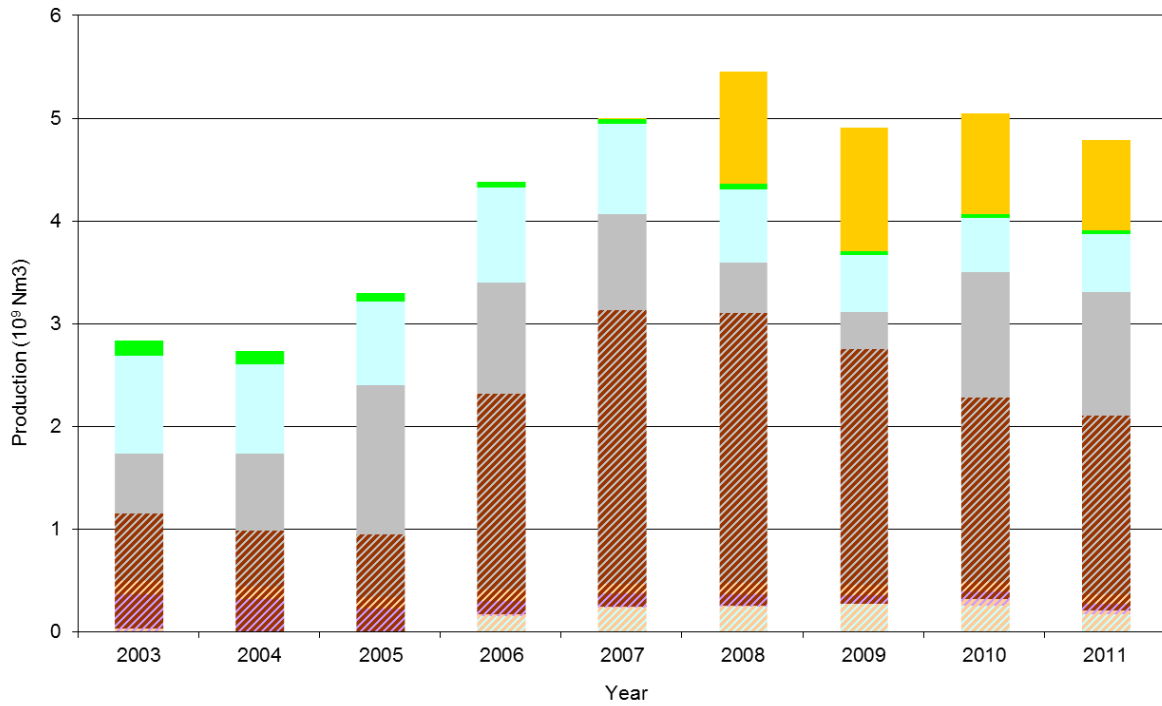
Offshore natural gas production per stratigraphic reservoir level

The graphs below present the contribution of the various reservoirs to the offshore gas production. Alike the onshore most of the produced gas from the offshore gas fields comes from Rotliegend and Triassic reservoirs. The anual offshore production was rather stable during the period 2003 – 2008, well above the 20 Nm³ per year. During the more recent years production shows a clear decline. In 2011 the annual production fell below 20 billion Nm³

In the second graph the Rotliegend and Trias production have been excluded to highlight the other reservoir productions. Since 2005 the contribution of combined Carboniferous – Rotliegend reservoirs tripled reaching a maximum in 2007. Conspicuous is the start of the production from the Tertiary (North Sea Group) shallow gas play in 2008..



Production Continental Shelf per reservoir (without Rotliegend and Triassic)



Legend

- Tertiary
- Cretaceous
- Jurassic
- Triassic
- Zechstein
- Rotliegend
- Carboniferous
- ▨ Carboniferous/Rotliegend
- ▩ Rotliegend/Zechstein/Trias.
- ▧ Rotliegend/Triassic
- Zechstein/Triassic
- Zechstein/Jurassic

OIL PRODUCTION in 2011 (x 1000 Sm³)

The production per licence is a summation of the production of all producing wells of which the wellhead is located within the licence area. These figures have been supplied by the operating companies.

Licence	Operator	Total	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Botlek	NAM	27.1	4.1	3.9	2.1	3.2	2.5	2.5	2.9	3.5	2.5	0.0	0.0	0.0
Rijswijk	NAM	250.2	20.9	17.7	18.7	20.6	20.7	22.2	22.9	22.4	20.8	19.8	22.9	20.5
Schoonebeek	NAM	144.5	0.0	10.3	4.4	7.5	8.6	14.9	15.1	15.5	12.5	19.9	17.5	18.3
F02a	Dana	237.7	23.9	21.6	24.4	23.3	22.8	7.1	19.8	19.5	16.5	18.6	16.6	23.6
F03b	GDF Suez	87.3	8.6	7.7	8.7	8.3	8.5	2.6	7.8	8.1	6.7	6.2	6.9	7.2
K18b	Wintershall	30.6	3.0	1.5	2.0	2.1	2.0	1.9	1.9	3.5	3.5	3.2	3.0	2.8
L16a	Wintershall	32.8	2.7	1.7	1.8	1.5	1.9	1.9	1.9	4.6	3.8	3.8	3.5	3.6
P09c	Chevron	32.0	3.2	2.9	2.9	2.8	2.9	2.8	2.9	2.7	1.6	2.9	2.2	2.3
P11b	Dana	240.4	24.6	23.3	23.6	24.1	23.2	18.1	21.7	21.8	18.4	7.4	17.1	17.2
P15a & P15b	TAQA	82.6	12.4	7.4	8.0	7.3	3.8	5.9	5.8	5.3	5.5	7.1	7.0	7.2
Q01	Chevron	104.5	9.1	9.5	10.3	10.5	8.2	9.3	7.8	9.6	6.8	8.2	7.4	7.8
Total		1269.7	112.5	107.4	106.9	111.2	105.1	89.1	110.5	116.6	98.6	97.2	104.0	110.6

CONDENSATE* PRODUCTION in 2011 (x 1000 Sm³)

These figures have been supplied by the operating companies.

Licence	Total	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Gas fields Territory	223.5	27.5	21.4	21.4	15.4	16.7	16.6	13.1	16.9	16.4	17.8	19.7	20.5
Gas fields Continental Shelf	294.5	21.3	24.0	28.7	25.0	23.6	23.3	21.0	24.8	23.4	24.2	25.7	29.5
Total	518.0	48.8	45.4	50.1	40.4	40.3	39.9	34.1	41.7	39.7	42.0	45.5	50.0

* Condensate is a liquid that is recovered as a by-product during the production of natural gas. This liquid is also referred to as natural gasoline or natural gas liquids (NGL).

10. UNDERGROUND STORAGE

As of 1 January 2012 a total of nine storage licences are in force; five storage licences for natural gas (Alkmaar, Bergermeer, Grijpskerk, Norg en Zuidwending), two storage licences for nitrogen (Winschoten II and Winschoten III), one for storage licence for gas oil (Twenthe-Rijn De Marssteden) and one storage licence for salt water (Zevenbergen).

Since 2011 the first underground storage for nitrogen is operational. Gasunie expects the filling of the Heiligerlee cavern will take approximately one year. The storage licence for CO₂ has been updated according to the new (European) legislation. Vitens has applied for an extension of their storage licence for brackish water in Noardburgum

The storage of nitrogen (in a salt cavern) will be used to maintain the specifications of the natural gas in the national gas grid of Gasunie. The planned storage of gas oil is part of the strategic energy reserves of the Netherlands. The storage of brackish water concerns an prolonged pilot project for the production of drinking water from brackish aquifers. The generated membrane filtrate, highly brackish water, will be stored in yet another aquifer at a depth of more than 100 m. According to the Mining act a storage licence is mandatory for storage at this depth.

Appendix 1 contains a map showing the locations of all storage licence areas as at 1 January 2012.

STORAGE LICENCES, Netherlands Territory and Continental Shelf changes in 2011

Applied for

Licence	Publication	Date	Closing date	Storage of	Applicant(s)
Waalwijk-Noord*	-	26-04-04	-	Gas	Northern cs
Noardburgum	Staatscourant 15 195	22-08-11	21-11-11	Brackish water	Vitens
P18-4	Staatscourant 10 244	14-06-11	13-09-11	CO ₂	TAQA

* Current application, formerly published in Annual Report Natural resources and geothermal energy in the Netherlands

STORAGE LICENCES, Company changes in 2011

No changes.

STORAGE OF GAS IN 2011

In 2011 both natural gas and nitrogen have been stored in underground facilities. The following tables show the monthly quantities of gas injected respectively discharged per storage facility. The information was submitted by the licence holders. The tables give the volumes in in Sm³ and Nm³.

NATURAL GAS STORAGE in 2011

	10 ⁶ Sm ³	10 ⁶ Nm ³
Injection	6127	5805
Discharge	3714	3519

INJECTION NATURAL GAS (in million Sm³)

Licence	Operator	Total	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Alkmaar	Taqa	231	0	0	0	0	0	0	119	112	1	0	0	0
Bergermeer	Taqa	1014	0	0	0	0	113	129	133	138	141	141	93	126
Grijpskerk	NAM	2473	0	0	0	354	485	445	418	403	293	76	0	0
Norg	NAM	1639	0	0	0	329	400	388	336	186	0	0	0	0
Zuidwending	Gasunie	770	102	82	24	60	81	54	53	78	59	50	66	62
Total		6127	102	82	24	744	1079	1015	1058	917	493	266	159	189

INJECTION NATURAL GAS (in million Nm³)

Licence	Operator	Total	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Alkmaar	Taqa	219	0	0	0	0	0	0	112	106	1	0	0	0
Bergermeer	Taqa	960	0	0	0	0	107	122	126	131	133	133	88	120
Grijpskerk	NAM	2344	0	0	0	336	460	422	396	382	277	72	0	0
Norg	NAM	1553	0	0	0	312	379	368	318	177	0	0	0	0
Zuidwending	Gasunie	729	96	77	23	57	77	51	50	74	56	47	62	59
Totaal		5805	97	77	23	705	1022	962	1003	869	467	252	150	179

DISCHARGE NATURAL GAS (in million Sm³)

Licence	Operator	Total	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Alkmaar	Taqa	147	64	66	0	0	0	0	0	0	0	17	0	0
Bergermee	Taqa	0	0	0	0	0	0	0	0	0	0	0	0	0
Grijpskerk	NAM	2261	859	495	319	1	0	0	0	0	0	0	43	544
Norg	NAM	713	216	124	160	0	0	0	0	0	0	17	161	35
Zuidwending	Gasunie	593	18	44	110	38	23	32	61	55	48	62	61	42
Totaal		3714	1158	728	589	39	23	32	61	55	48	96	264	621

DISCHARGE NATURAL GAS (in million Nm³)

Licence	Operator	Total	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Alkmaar	Taqa	140	61	63	0	0	0	0	0	0	0	16	0	0
Bergermeer	Taqa	0	0	0	0	0	0	0	0	0	0	0	0	0
Grijpskerk	NAM	2142	814	469	302	1	0	0	0	0	0	0	41	515
Norg	NAM	675	205	117	152	0	0	0	0	0	0	16	152	33
Zuidwending	Gasunie	562	17	42	104	36	22	31	58	52	45	59	57	40
Totaal		3519	1097	690	558	37	22	31	58	52	46	91	251	588

NITROGEN STORAGE in 2011

	10 ⁶ Sm ³	10 ⁶ Nm ³
Injectie	73	69
Productie	0	0

INJECTION NITROGEN (in million Nm³)

Licence	Operator	Total	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Winschoten II	Gasunie	69	0	0	0	0	0	3	12	10	11	11	11	12

INJECTION NITROGEN (in million Sm³)

Licence	Operator	Total	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Winschoten II	Gasunie	73	0	0	0	0	0	3	12	10	12	11	12	13

DISCHARGE NITROGEN

The nitrogen storage facility is in its first development phase. During 2011 only injection took place filling the salt cavern for the first time

11. COAL

Coal mining in the Netherlands has ceased in 1974. In total almost 570 million tons of coal have been mined over the years. Conventional mining is not expected to be profitable anymore, but recent interest to produce coal bed methane (CBM) has become evident. Although research has indicated that a large resource of CBM may be present, the feasibility of these types of projects is still very uncertain.

As at 1 January 2012 five production licences for coal were in force. Appendix 6 contains a map showing the locations of the licence areas.

PRODUCTION LICENCES, NETHERLANDS TERRITORY, on 1 January 2011

Licence holder	Licence	In force	km ²
DSM	Beatrix	27-09-1920	130
DSM	Staatsmijn Emma	26-10-1906	73
DSM	Staatsmijn Hendrik	08-08-1910	24
DSM	Staatsmijn Maurits	12-03-1915	51
DSM	Staatsmijn Wilhelmina	08-01-1903	6
		Total	284

12. ROCK SALT

In 2011 no exploration licences for rock salt have been awarded, but three production licences were applied for.

As at January 1st 2012 12 production licences were in force. The licence areas are (for geological reasons) all located in the North and East of the country. In those areas thick layers of Zechstein and Triassic aged evaporites have been deposited.

Appendix 6 contains a map showing the production licence areas.

Besides the overview for all the licences and its changes in 2011, the monthly rock salt production during 2011 is presented for each production site as well as the annual production since 2003. This date coincides with the start of the submission of monthly production figures according to the Mining act of 2003.

EXPLORATION LICENCES, Netherlands territory

No changes.

PRODUCTION LICENCES, Netherlands territory

The next tables present an overview of the licences that have been applied for or split in 2011.

Applied for

Licence	Government Gazette	Date	Closing date	Applicant(s)
Barradeel-Havenmond *	Staatscourant 249	19-12-07	24-03-08	Frisia
Barradeel-Oost *	Staatscourant 249	19-12-07	24-03-08	Frisia
Isidorushoeve Zuidoost- Enschede	Staatscourant 20 915	22-11-11	21-02-12	AKZO

*Pending application, published in previous Annual Review

ROCK SALT LICENCES, company changes, name changes and legal mergers in 2011

No changes.

PRODUCTION LICENCES, Netherlands Territory, 1 January 2012

Licence holder	Licence	In force	Date of expiry	km ²
Akzo Nobel Salt B.V.	Adolf van Nassau III	16-11-2010		28
Akzo Nobel Salt B.V.	Buurse	18-06-1918		30
Akzo Nobel Salt B.V.	Twenthe-Rijn	20-10-1933		48
Akzo Nobel Salt B.V.	Twenthe-Rijn Helmerzijde	29-10-2008	09-12-2048	1
Akzo Nobel Salt B.V.	Uitbreiding Adolf Van Nassau II	21-12-2010		1
N.V. Nederlandse Gasunie				
Gasunie Zuidwending B.V.				
Nuon Zuidwending B.V.				
Akzo Nobel Salt B.V.	Uitbreiding Adolf van Nassau III	21-12-2010		77
Akzo Nobel Salt B.V.	Uitbreiding Twenthe-Rijn	01-12-1994		9
Akzo Nobel Salt B.V.	Weerselo	13-03-1967		80
Frisia Zout B.V.	Barradeel	22-08-1998	22-08-2054	3
Frisia Zout B.V.	Barradeel II	12-06-2004	26-04-2062	17
N.V. Nederlandse Gasunie	Adolf Van Nassau II	16-11-2010		<1
Nedmag Industries B.V.	Veendam	01-08-1980		171
			Total	466

WELLS DRILLED FOR ROCK SALT, completed in 2011

Name well	Licence	Operator	Type of well
1 ISH-01	Isidorushoeve	AkzoNobel	Exploration
2 TWR-499	Twenthe-Rijn	AkzoNobel	Production
3 TWR-500	Twenthe-Rijn	AkzoNobel	Production
4 TWR-501	Twenthe-Rijn Helmerzijde	AkzoNobel	Production
5 TWR-502	Twenthe-Rijn Helmerzijde	AkzoNobel	Production
6 TWR-503	Twenthe-Rijn Helmerzijde	AkzoNobel	Production
7 TWR-507	Uitbreiding Twenthe-Rijn	AkzoNobel	Production
8 TWR-508	Uitbreiding Twenthe-Rijn	AkzoNobel	Production
9 TWR-512	Twenthe-Rijn Helmerzijde	AkzoNobel	Production
10 TWR-513	Twenthe-Rijn Helmerzijde	AkzoNobel	Production
11 TCI-09	Veendam	NEDMAG	Production

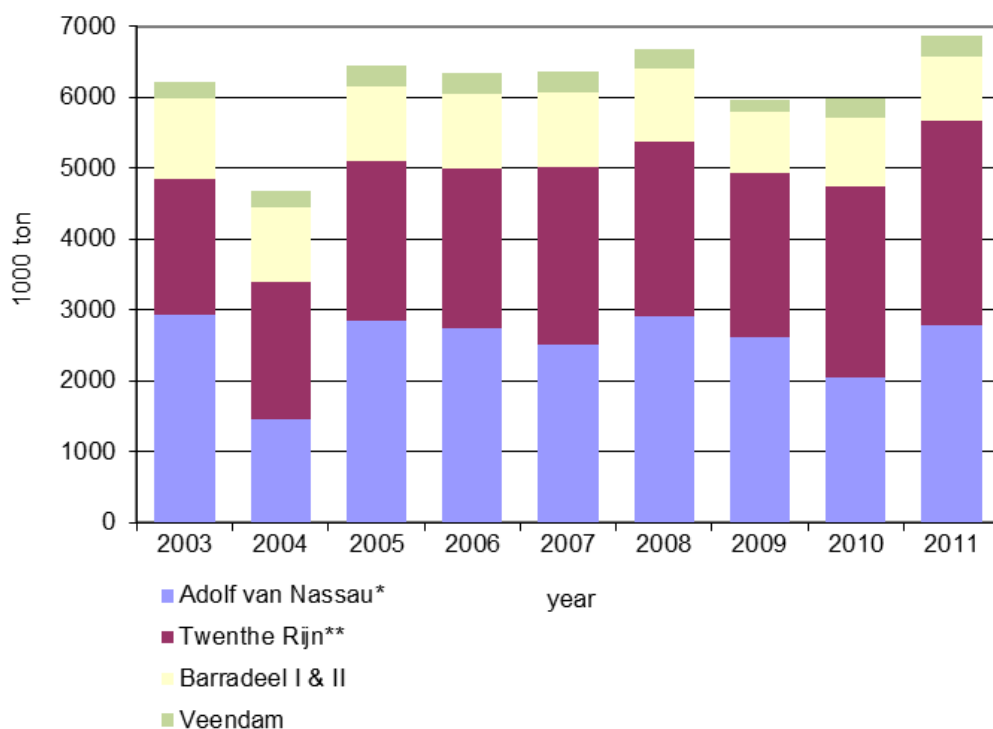
ROCK SALT PRODUCTION, 2011 (in 1000 ton)

Production	Operator	total	Jan	Feb.	Mrch	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Adolf van Nassau	AKZO	1301	129	124	127	110	112	106	110	108	106	42	111	115
Adolf van Nassau*	AKZO	1492	126	127	137	114	137	136	140	139	135	62	105	135
Barradeel	Frisia	40	6	3	0	2	7	5	9	6	0	1	0	0
Barradeel II	Frisia	850	77	69	64	78	83	71	78	79	35	63	82	70
Twenthe-Rijn	AKZO	2611	244	211	235	212	215	174	217	232	205	214	218	233
Twenthe-Rijn**	AKZO	277	18	22	23	26	26	18	20	26	24	25	23	26
Veendam	Nedmag	295	26	23	30	15	30	27	29	27	19	22	21	25
Total		6866	625	579	617	558	610	538	604	617	525	429	561	605

* *Uitbreiding Adolf van Nassau*

** *Uitbreiding Twenthe – Rijn*

ROCK SALT PRODUCTION 2003 - 2011



* *Including Uitbreiding Adolf van Nassau*

** *Including Uitbreiding Twenthe - Rijn*

OFFICIAL NAME OF MINING COMPANIES

Frisia Zout B.V.

Akzo Nobel Salt B.V.

N.V. Nederlandse Gasunie

Nedmag Industries Mining & Manufacturing B.V

13. GEOTHERMAL ENERGY

In 2011 interest in exploration for and production of geothermal energy in the Netherlands remained at a high level. The number of licence applications for geothermal energy again was significantly higher than for any other activity in the deep subsurface. In 2011 fourteen exploration licences for geothermal energy were applied for and one was prolonged. Two applications were denied. In two cases exploration resulted in an application for a production licence. Glasshouse horticulture and to a lesser extent district heating are the main applications of this type of energy

The Ministry of Economic Affairs, Agriculture and Innovation (MEAI) stimulates the use of geothermal energy with the regulation 'SEI Risico's dekken voor Aardwarmte' which aims to cover the risks the operator will be exposed to. The regulation is part of the Innovation agenda and was open for application between October 2010 until April 2011. Four applications were reviewed of which three positively. The review of one application was postponed to 2012.

In 2011 five wells have been drilled for geothermal exploration and production.

EXPLORATION LICENCES, Netherlands Territory

Applied for

Licence	Government Gazette	Date	Closing date	Applicant(s)
Deurne **	Staatscourant 80	28-04-09	28-07-09	Cooperatieve Vereniging Tuinbouwvestiging Deurne
Terschelling **	Staatscourant 12 459	20-08-09	19-11-09	Schylger Energie Maatschappij
Zuidoost-Drenthe *	Staatscourant 1 520	04-02-10	06-05-10	Geo Thermie Nederland Holding B.V.,
Haarlemmermeer 2 *	Staatscourant 2 978	26-02-10	28-05-10	Schiphol Group
's-Hertogenbosch *	Staatscourant 7 746	26-05-10	25-08-10	Gemeente 's-Hertogenbosch
Amsterdam *	Staatscourant 9 250	17-06-10	16-09-10	Gemeente Amsterdam
Wervershoof *	Staatscourant 9 259	17-06-10	16-09-10	VD Holland C.V.
Mijdrecht *	Staatscourant 12 818	18-08-10	17-11-10	SC Johnson Europlant B.V.
Lingewaard *	Staatscourant 12 820	18-08-10	17-11-10	Energiecooperatie Greenhouse Energy u.a.
Eemsmond *	Staatscourant 13 019	23-08-10	22-11-10	Holland Malt B.V.
Franekeradeel *	Staatscourant 13 167	25-08-10	24-11-10	A.C. Hartman Beheer cs
Rotterdam *	Staatscourant 14 405	20-09-10	20-12-10	Hydreco B.V.
Den Haag 2 *	Staatscourant 19 285	03-12-10	04-03-11	Eneco Solar, Bio & Hydro B.V.
Hoogeveen *	Staatscourant 19 287	03-12-10	04-03-11	gemeente Hoogeveen
's-Gravenvande *	Staatscourant 19 648	09-12-10	10-03-11	Greenlight Energy B.V.
Rotterdam 2 *	Staatscourant 20 298	17-12-10	18-03-10	Eneco Solar, Bio & Hydro B.V.
Gorinchem *	Staatscourant 21 515	31-12-10	01-04-11	gemeente Gorinchem
Baarn *	Staatscourant 21 517	31-12-10	01-04-11	Maarten A. van Dijk Beheer B.V.
Eindhoven	Staatscourant 2 045	07-02-11	09-05-11	gemeente Eindhoven
Monster 2	Staatscourant 2 440	07-02-11	09-05-11	Fa. Van den Enden Rozen
Eemsmond 2	Staatscourant 2 345	10-02-11	12-05-11	gemeente Eemsmond
Luttelegeest	Staatscourant 2 805	17-02-11	19-05-11	ECL Netwerk B.V. cs

Licence	Government Gazette	Date	Closing date	Applicant(s)
Rotterdam 3	Staatscourant 5 760	04-04-11	04-07-11	Eneco Solar, Bio & Hydro B.V.
Rotterdam 4	Staatscourant 5 761	04-04-11	04-07-11	E.ON Benelux Holding, Eneco Solar, Bio & Hydro B.V.
Rotterdam 5	Staatscourant 7 991	06-05-11	05-08-11	E.ON Benelux Holding B.V., Eneco Solar, Bio & Hydro B.V.
Werkendam	Staatscourant 7 993	06-05-11	05-08-11	Hydreco B.V.
Rotterdam- Vlaardingen	Staatscourant 15 193	22-08-11	21-11-11	Vopak, Koole Tanktransport
Lansingerland 3	Staatscourant 15 195	22-08-11	21-11-11	Vastgoed Batenburg B.V.
Rotterdam 6	Staatscourant 15 537	29-08-11	28-11-11	Eneco Solar, Bio & Hydro B.V.
Nieuwkoop	Staatscourant 15 915	06-09-11	06-12-11	Gemeente Nieuwkoop
Rozenburg	Staatscourant 20 854	21-11-11	21-02-12	

*Pending application, earlier published in annual review

**Application withdrawn

Awarded

Licence holder	Licence	In force	km ²
Provincie Drenthe cs	Emmen *	16-02-11	94
NHN Projecten B.V. cs	Texel	06-04-11	256
Coöp. Bloemenveiling FloraHolland U.A.	Aalsmeer	16-04-11	39
Gemeente Amstelveen	Amstelveen	16-04-11	40
Gemeente Groningen	Groningen 2 **	16-04-11	18
Stallingsbedrijf Glastuinbouw NL B.V.	Haarlemmermeer	11-05-11	44
Total			491

*Competing application on (part of) Zuidoost-Drenthe

**Competing application on (part of) Stad Groningen

Rejected

Applicant	Government Gazette	Licence	In force	km ²
Geo Thermie Nederland Holding B.V.	Staatscourant 2010, nr.5 492	Stad Groningen	13-06-11	125
Petrogas Minerals International B.V.	Staatscourant 2010, nr.12 952	Haren	13-06-11	30
Total				155

Prolonged

Licence holder	Licence	In force	km ²
P.N.A. van Dijk Beheer B.V.	Brielle	12-05-11	7
Total			7

PRODUCTION LICENCES, Netherlands Territory

Applied for

Licence	Government Gazette	Date	Closing date	Applicant(s)
Bleiswijk 2	-	20-06-11	-	A+G van den Bosch B.V.
Den Haag	-	20-09-11	-	Gemeente Den Haag

COMPANY CHANGES in 2011

In the tables below changes in consortia of participating companies in licences are listed.

Company changes in exploration licences

Licence	Relinquishing company	Acquiring company	In force	Government Gazette
Brielle 2	Plantenkwekerij Grootcholten B.V. R.A.N. Grootcholten Holding B.V.	Hydreco GeoMEC B.V. T4P Project B.V. GeoMEC-4P Realisatie & Exploitatie B.V.	01-10-11	18 413
Vierpolders	Plantenkwekerij Grootcholten B.V. R.A.N. Grootcholten Holding B.V.	Hydreco GeoMEC B.V. T4P Project B.V. GeoMEC-4P Realisatie & Exploitatie B.V.	01-10-11	18 416

Geothermal wells completed in 2011

#	Name well	Licence Geothermal energy	Operator
1	KKP-GT-01	Koekoekspolder II	Aardwarmtecluster 1 KKP BV
2	KKP-GT-02	Koekoekspolder II	Aardwarmtecluster 1 KKP BV
3	PNA-GT-04	Pijnacker-Nootdorp 4	Gebr. Duijvestijn B.V.

ANNEXES

NATURAL GAS AND OIL ACCUMULATIONS BY STATUS as at 1 January 2012

NATURAL GAS ACCUMULATIONS

I. DEVELOPED ACCUMULATIONS				
a) Producing Accumulation*	Company	Licence name**	Licence type***	Gas/Oil
Ameland Oost	NAM	Noord-Friesland	pl	G
Ameland Westgat	NAM	Noord-Friesland	pl	G
Anjum	NAM	Noord-Friesland	pl	G
Annerveen	NAM	Groningen	pl	G&O
Appelscha	NAM	Drenthe II	pl	G
Assen	NAM	Drenthe II	pl	G
Barendrecht-Ziedewij	NAM	Rijswijk	pl	G
Bedum	NAM	Groningen	pl	G
Bergen	TAQA	Bergen II	pl	G
Blesdijke	Vermilion	Steenwijk	pl	G
Blija-Ferwerderadeel	NAM	Noord-Friesland	pl	G
Blija-Zuidoost	NAM	Noord-Friesland	pl	G
Blijham	NAM	Groningen	pl	G
Boerakker	NAM	Groningen	pl	G
Botlek	NAM	Botlek	pl	G
Bozum	Vermilion	Oosterend	pl	G
Brakel	Northern Petroleum	Andel III	pl	O&G
Coevorden	NAM	Schoonebeek	pl	G
Collendoorn	NAM	Hardenberg	pl	G
Collendoornerveen	NAM	Schoonebeek	pl	G
Dalen	NAM	Drenthe II	pl	G
De Blesse	Vermilion	Steenwijk	pl	G
De Wijk	NAM	Schoonebeek	pl	G
Den Velde	NAM	Hardenberg	pl	G
Eleveld	NAM	Drenthe II	pl	G
Emmen	NAM	Drenthe II	pl	G
Emmen-Nieuw	NAM	Drenthe II		G
Amsterdam			pl	
Ezumazijl	NAM	Noord-Friesland	pl	G
Faan	NAM	Groningen	pl	G
Feerwerd	NAM	Groningen	pl	G
Gaag	NAM	Rijswijk	pl	G
Gasselternijveen	NAM	Drenthe II	pl	G
Geesbrug	Northern. Petroleum	Drenthe III	pl	G
Geestvaartpolder	NAM	Rijswijk	pl	G
Groet	TAQA	Bergen II	pl	G
Groet-Oost	TAQA	Middelie	pl	G
Grolloo	Northern Petroleum	Drenthe IV	pl	G
Groningen	NAM	Groningen	pl	G

Grootegast	NAM	Groningen	pl	G
Grouw	Vermilion	Leeuwarden	pl	G
Hardenberg	NAM	Schoonebeek	pl	G
Hardenberg-Oost	NAM	Hardenberg	pl	G
Harkema	NAM	Groningen	pl	G
Hekelingen	NAM	Botlek	pl	G
Kiel-Windeweer	NAM	Groningen	pl	G
Kollum	NAM	Tietjerksteradeel	pl	G
Kollumerland	NAM	Tietjerksteradeel	pl	G
Kollum-Noord	NAM	Noord-Friesland	pl	G
Kommerzijl	NAM	Groningen	pl	G
Lauwersoog	NAM	Noord-Friesland	pl	G
Leens	NAM	Groningen	pl	G
Leeuwarden en Nijega	Vermilion	Leeuwarden	pl	G
Loon op Zand	Northern Petroleum	Waalwijk	pl	G
Loon op Zand-Zuid	Northern Petroleum	Waalwijk	pl	G
Maasdijk	NAM	Rijswijk	pl	G
Middelburen	Vermilion	Leeuwarden	pl	G
Middelie	NAM	Middelie	pl	G
Middenmeer	Vermilion	Slootdorp	pl	G
Moddergat	NAM	Noord-Friesland	pl	G
Molenpolder	NAM	Groningen	pl	G
Monster	NAM	Rijswijk	pl	G
Munnekezijl	NAM	Groningen	pl	G
Nes	NAM	Noord-Friesland	pl	G
Noorderdam	NAM	Rijswijk	pl	G
Noordwolde	Vermilion	Gorredijk	pl	G
Oldelamer	Vermilion	Gorredijk	pl	G
Oosterhesselen	NAM	Drenthe II	pl	G
Oostrum	NAM	Noord Friesland	pl	G
Opeinde	Vermilion	Leeuwarden	pl	G
Opeinde-Zuid	Vermilion	Leeuwarden	pl	G
Opende-Oost	NAM	Groningen	pl	G
Oud Beijerland Zuid	NAM	Botlek	pl	G
Oudeland	NAM	Beijerland	pl	G
Oude Pekela	NAM	Groningen	pl	G
Pasop	NAM	Groningen	pl	G
Pernis	NAM	Rijswijk	pl	G&O
Pernis-West	NAM	Rijswijk	pl	G&O
Rauwerd	Vermilion	Oosterend	pl	G
Reedijk	NAM	Botlek	pl	G
Ried	Vermilion	Leeuwarden	pl	G
Rustenburg	NAM	Middelie	pl	G
Saaksum	NAM	Groningen	pl	G
Schermer	TAQA	Bergen II	pl	G
Schoonebeek Gas	NAM	Schoonebeek	pl	G
Sebaldeburen	NAM	Groningen	pl	G
's-Gravenzande	NAM	Rijswijk	pl	G
Slootdorp	Vermilion	Slootdorp	pl	G

Spijkenisse-West	NAM	Beijerland	pl	G&O
Sprang	Northern Petroleum	Waalwijk	pl	G
Suawoude	NAM	Tietjerksteradeel	pl	G
Surhuisterveen	NAM	Groningen	pl	G
Tietjerksteradeel	NAM	Tietjerksteradeel	pl	G
Ureterp	NAM	Tietjerksteradeel	pl	G
Vierhuizen	NAM	Noord-Friesland	pl	G
Vinkega	Vermilion	Gorredijk	pl	G
Vries	NAM	Drenthe II	pl	G
Waalwijk-Noord	Northern Petroleum	Waalwijk	pl	G
Wanneperveen	NAM	Schoonebeek	pl	G
Warffum	NAM	Groningen	pl	G
Warga	Vermilion	Leeuwarden	pl	G
Wartena	Vermilion	Leeuwarden	pl	G
Westbeemster	NAM	Middelie	pl	G
Wijk en Aalburg	Northern Petroleum	Andel III	pl	G
Witterdiep	NAM	Drenthe II	pl	G
Zevenhuizen	NAM	Groningen	pl	G
Zuidwal	Vermilion	Zuidwal	pl	G
Zuidwending-Oost	NAM	Groningen	pl	G
A12-FA	Chevron	A12a	pl	G
B13-FA	Chevron	B13a	pl	G
D12-A	Wintershall	D12a	pl	G
D15-A	GDF Suez	D15	pl	G
D15-A-104	GDF Suez	D15	pl	G
E17-A	GDF Suez	E17a	pl	G
E18-A	Wintershall	E18a	pl	G
F2-Hanze Pliocéen	Dana Petroleum	F02a	pl	G
F3-FA	Centrica	F03a	pl	G
F3-FB	GDF Suez	F03	pl	O&G
F15a-A	Total	F15a	pl	G
F15a-B	Total	F15a	pl	G
F16-E	Wintershall	E16	pl	G
G14-A/B	GDF Suez	G14	pl	G
G14-C	GDF Suez	G14	pl	G
G16a-A	GDF Suez	G16a	pl	G
G16a-B	GDF Suez	G16a	pl	G
G16a-C	GDF Suez	G16a	pl	G
G17a-S1	GDF Suez	G17a	pl	G
G17cd-A	GDF Suez	G17d	pl	G
Halfweg	Chevron	Q01	pl	G
J3-C Unit	Total	J03a	pl	G
K1-A Unit	Total	J03a	pl	G
K2b-A	GDF Suez	K03a	pl	G
K4-A	Total	K05a	pl	G
K4a-B	Total	K04a	pl	G
K4a-D	Total	K04a	pl	G
K4-E	Total	K04b	pl	G

K4-N	Total	K04b	pl	G
K5a-A	Total	K04b	pl	G
K5a-B	Total	K05a	pl	G
K5a-D	Total	K05a	pl	G
K5a-En	Total	K05a	pl	G
K5a-Es	Total	K05a	pl	G
K5-C Unit	Total	K05a	pl	G
K5-CN	Total	K05b	pl	G
K5-F	Total	K05a	pl	G
K5-U	Total	K05b	pl	G
K6-A	Total	K06	pl	G
K6-C	Total	K06	pl	G
K6-D	Total	K06	pl	G
K6-DN	Total	K06	pl	G
K6-G	Total	K03d	pl	G
K7-FA	NAM	K07	pl	G
K7-FB	NAM	J09	pl	G
K7-FC	NAM	K07	pl	G
K7-FD	NAM	K07	pl	G
K8-FA	NAM	K11	pl	G
K9ab-A	GDF Suez	K09b	pl	G
K9ab-B	GDF Suez	K09a	pl	G
K9ab-C	GDF Suez	K09a	pl	G
K9ab-D	GDF Suez	K09a	pl	G
K9c-A	GDF Suez	K09c	pl	G
K12-B	GDF Suez	K12	pl	G
K12-B-09	GDF Suez	K12	pl	G
K12-C	GDF Suez	K12	pl	G
K12-D	GDF Suez	K12	pl	G
K12-G	GDF Suez	K12	pl	G
K12-K	GDF Suez	K13	pl	G
K12-L	GDF Suez	K12	pl	G
K12-S2	GDF Suez	K12	pl	G
K12-S3	GDF Suez	K12	pl	G
K14-FB	NAM	K14	pl	G
K15-FA	NAM	K15	pl	G
K15-FB	NAM	K15	pl	G
K15-FC	NAM	K15	pl	G
K15-FD	NAM	K15	pl	G
K15-FE	NAM	K15	pl	G
K15-FG	NAM	K15	pl	G
K15-FJ	NAM	K15	pl	G
K15-FK	NAM	K15	pl	G
K15-FL	NAM	K15	pl	G
K15-FM	NAM	K15	pl	G
K15-FO	NAM	K15	pl	G
K15-FP	NAM	K15	pl	G
K15-FQ	NAM	K15	pl	G
K17-FA	NAM	K17	pl	G

L1-A	Total	L01a	pl	G
L2-FA	NAM	L02	pl	G
L2-FB	NAM	L02	pl	G
L4-A	Total	L04a	pl	G
L4-B	Total	L04a	pl	G
L4-F	Total	L04a	pl	G
L4-G	Total	L04a	pl	G
L4-I	Total	L04a	pl	G
L5a-A	GDF Suez	L05a	pl	G&O
L5-B	Wintershall	L05b	pl	G
L5-C	Wintershall	L05b	pl	G
L7-B	Total	L07	pl	G
L7-C	Total	L07	pl	G
L7-G	Total	L07	pl	G
L7-H	Total	L07	pl	G
L7-H South-East	Total	L07	pl	G
L7-N	Total	L07	pl	G
L8-A	Wintershall	L08a	pl	G
L8-A-West	Wintershall	L08b	pl	G
L8-D	Cirrus Energy	L08a	pl	G
L8-G	Wintershall	L08a	pl	G
L8-H	Wintershall	L08a	pl	G
L8-P	Wintershall	L08b	pl	G
L9-FA	NAM	L09a	pl	G
L9-FB	NAM	L09a	pl	G
L9-FC	NAM	L09b	pl	G
L9-FD	NAM	L09a	pl	G
L9-FE	NAM	L09a	pl	G
L9-FF	NAM	L09a	pl	G
L9-FG	NAM	L09a	pl	G
L9-FH	NAM	L09a	pl	G
L9-FI	NAM	L09a	pl	G
L9-FJ	NAM	L09b	pl	G
L9-FK	NAM	L09b	pl	G
L9-FL	NAM	L09b	pl	G
L10 Central Dev. Area	GDF Suez	L10	pl	G
L10-G	GDF Suez	L10	pl	G
L10-M	GDF Suez	L10	pl	G
L12-FC	GDF Suez	L12b	pl	G
L13-FC	NAM	L13	pl	G
L13-FD	NAM	L13	pl	G
L13-FE	NAM	L13	pl	G
L13-FF	NAM	L13	pl	G
L13-FG	NAM	L13	pl	G
L15-FA	GDF Suez	L15b	pl	G
M7-A	Cirrus Energy	M07	pl	G
Markham	Centrica	J03b	pl	G
N7-FA	NAM	N07a	pl	G
P6-D	Wintershall	P06	pl	G

P6-Main	Wintershall	P06	pl	G
P9-A	Wintershall	P09c	pl	G
P9-B	Wintershall	P09c	pl	G
P12-SW	Wintershall	P12	pl	G
P15-09	TAQA	P15a	pl	G&O
P15-11	TAQA	P15a	pl	G
P15-12	TAQA	P15a	pl	G
P15-13	TAQA	P15a	pl	G
P15-14	TAQA	P15c	pl	G
P15-15	TAQA	P15a	pl	G
P15-16	TAQA	P15a	pl	G
P15-17	TAQA	P15a	pl	G
P18-2	TAQA	P18a	pl	G
P18-4	TAQA	P18a	pl	G
P18-6	TAQA	P18a	pl	G
Q1-B	Wintershall	Q01	pl	G
Q4-A	Wintershall	Q04	pl	G
Q4-B	Wintershall	Q04	pl	G
Q16-FA	NAM	Q16a	pl	G

b) Underground Gas Storage

Alkmaar PGI	TAQA	Bergen	pl/sl	G
Bergermeer	TAQA	Bergermeer	pl/sl	G
Grijpskerk	NAM	Groningen	pl/sl	G
Norg	NAM	Drenthe	pl/sl	G

II. UNDEVELOPED ACCUMULATIONS

a) start of production expected between 2010 – 2014

Accumulation*	Company	Licence name**	Licence type***	Gas/ Oil
Blija-Zuid	NAM	Noord Friesland	pl	G
De Hoeve	Vermilion	Gorredijk	pl	G
Donkerbroek	SES	Donkerbroek	pl	G
Eesveen	Vermilion	Steenwijk	pl	G
Heinenoord	NAM	Botlek	pl	G
Hollum-Ameland	NAM	Noord-Friesland	pl	G
Langezwaag	Vermilion	Gorredijk	pl	G
Marumerlage	NAM	Groningen	pl	G
Marknesse	SES	Marknesse	pl	G
Metslawier-Zuid	NAM	Noord Friesland	pl	G
Nes-Noord	NAM	Noord-Frieslan	pl	G
Nieuwehorne	Vermilion	Gorredijk	pl	G
Oppenhuizen	Northern Petroleum	Zuid-Friesland III	pl	G
Oosterwolde	SES	Oosterwolde	pl	G
Papekop	Northern Petroleum	Papekop	pl	G
Rodewolt	NAM	Groningen	pl	G
Ternaard	NAM	Noord Friesland	pl	G
Terschelling-Noord	NAM	Noord-Friesland	pl	G

Usquert	NAM	Groningen	pl	G
Woudsend	Northern Petroleum	Zuid-Friesland III	pl	G
Zevenhuizen-West	NAM	Groningen	pl	G
A15-A	Centrica	A15a	pla	G
A18-FA	Chevron	A18a	pl	G
B17-A	Centrica	B17b	pla	G
D18-FA	GDF Suez	D18	pla	G
E13 Epidoot	Tullow	E13a	pl	O&G
F16-P	Wintershall	F16	pl	G
K4a-Z	Total	K04a	pl	G
K9c-B	GDF Suez	K09c	pl	G
K18-Golf	Wintershall	K18b	pl	G
L2-FC	NAM	L02	pl	G
L4-D	Total	L04a	pl	G
L6-B	Wintershall	L06b	pl	G
L12a-B	GDF Suez	L12a	pl	G
L13-FA	NAM	L13	pl	G
L13-FI	NAM	L13	pl	G
L13-FJ	NAM	L13	pl	G
M1-A	Cirrus Energy	M01a	pl	G
M9-FA	NAM	M09a	pl	G
P2-E	Chevron	P2	pl	G
P11b Van Ghent	Dana Petroleum	P11b	pl	G
P11b Van Nes	Dana Petroleum	P11b	pl	G
Q7-FA	SES	Q10a	el	G
Q16-Maas	Oranje Nassau	Q16b	pl	G
b) Others				
Beerta	NAM	Groningen	pl	G
Boskoop	NAM	Rijswijk	pl	G
Buma	NAM	Drenthe II	pl	G
Burum	NAM	Tietjerksteradeel	pl	G
Deurningen	NAM	Twenthe	pl	G
Egmond-Binnen	NAM	Middelie	pl	G
Exloo	NAM	Drenthe II	pl	G
Haakswold	NAM	Schoonebeek	pl	G
Heiloo	TAQA	Bergen II	pl	G
Kerkwijk	NAM	Andel III	pl	G
Kijkduin-Zee	NAM	Rijswijk	pl	G&O
Langebrug	NAM	Groningen	pl	G
Lankhorst	NAM	Schoonebeek	pl	G
Maasgeul	NAM	Botlek	pl	G
Midlaren	NAM	Groningen	pl	G&O
Molenaarsgraaf	NAM	Andel III	pl	G
Nieuweschans	NAM	Groningen	pl	G
Oude Leede	NAM	Rijswijk	pl	G
Rammelbeek	NAM	Twenthe	pl	G
Schiermonnikoog-Wad	NAM	Noord-Friesland	pl	G

Sonnega Weststellingwerf	Vermilion	Steenwijk	pl	G
Terschelling-West	NAM		open	G
Vlagtwedde	NAM	Groningen	pl	G
Wassenaar-Diep	NAM	Rijswijk	pl	G
Werkendam-Diep	NAM	Rijswijk	pl	G&O
Witten	NAM	Drenthe II	pl	G
B10-FA	Chevron	A12b&B10a	pla	G
B16-FA	Chevron	B16a	pl	G
D15-Tourmaline	GDF Suez	D15	pl	G
E12 Lelie		E12	open	G
E12 Tulp East		E12	open	G
K8-FB	NAM	K08	pl	G
K8-FD	NAM	K08	pl	G
K8-FF	NAM	K08	pl	G
K14-FC	NAM	K14	pl	G
K15-FF	NAM	K15	pl	G
K15-FH	NAM	K15	pl	G
K15-FI	NAM	K15	pl	G
K16-5		K16	open	G
K17-FB	NAM	K17	pl	G
K18-FB	Wintershall	K18b	pl	G
L5b-A	Wintershall	L05b	pl	G
L5a-D	GDF Suez	L05a	pl	G
L7-D	Total	L07	pl	G
L7-F	Total	L07	pl	G
L10-19	GDF Suez	L10	pl	G
L10-6	GDF Suez	L10	pl	G
L11-1	GDF Suez	L11a	pl	G
L11-7	GDF Suez	L11a	pl	G
L12-FA	GDF SUEZ	L12a	pl	G
L12-FD	Tullow	L12d	pl	G
L13-FK	NAM	L13	pl	G
L14-FB			open	G
L16-Alpha	Wintershall	L16a	pl	G
L16-Bravo	Wintershall	L16a	pl	G
L16-FA	Wintershall	L16a	pl	G
M9-FB	NAM	Noord-Friesland	pl	G
M10-FA	Ascent	M10	pl	
M11-FA	Ascent	M11	el	G
P1-FA	Chevron	P02	el	G
P1-FB	Chevron	P01	el	G
P2-1	Chevron	P02	el	G
P6 Northwest	Wintershall	P06	pl	G
P10b Van Brakel	Dana Petroleum	P10b	pl	G
P11b Van Ghent Oost	Dana-Petroleum	P11b	pl	G
Q2-A			open	G
Q1-D	Wintershall	Q01	pl	G
Q13-FC	Oranje Nassau	Q13b	el	G

III. PRODUCTION CEASED				
Accumulation *	Company	Licence name**	Type of licence ***	Gas/Oil
Akkrum 1	Chevron USA	Akkrum	open-a	G
Akkrum 11	Chevron USA	Akkrum	open-a	G
Akkrum 13	Chevron USA	Akkrum	open-a	G
Akkrum 3	Chevron USA	Akkrum	open-a	G
Akkrum 9	Chevron USA	Akkrum	open-a	G
Ameland Noord	NAM	Noord-Friesland	pl	G
Appelscha	NAM	Drenthe II	pl	G
Bergen	TAQA	Bergen II	pl	G
Boekel	TAQA	Bergen II	pl	G
Castricum-Zee	Wintershall	Middelie	pl	G
De Lutte	NAM	Rossum-de Lutte	pl	G
Een	NAM	Drenthe II	pl	G
Emshoern	NAM	Groningen	pl	G
Engwierum	NAM	Noord-Friesland	pl	G
Franeker	Vermilion	Leeuwarden	pl	G
Harlingen Lower	Vermilion	Leeuwarden	pl	G
Cretaceous				
Harlingen Upper	Vermilion	Leeuwarden	pl	G
Cretaceous				
Hoogenweg	NAM	Hardenberg	pl	G
Leeuwarden 101 Rot- liegend	Vermilion	Leeuwarden	pl	G
Leidschendam	NAM	Rijswijk	pl	G
Marum	NAM	Groningen	pl	G
Metselawier	NAM	Noord-Friesland	pl	G
Nijensleek	Vermilion	Drenthe	pl	G
Norg-Zuid	NAM	Drenthe II	pl	G
Oldenzaal	NAM	Rossum-de Lutte	pl	G
Oud-Beijerland Zuid	NAM	Botlek	pl	G
Oude Pekela	NAM	Groningen	pl	G
Roden	NAM	Drenthe II	pl	G
Rossum-Weerselo	NAM	Rossum-De Lutte	pl	G
Roswinkel	NAM	Drenthe II	pl	G
Sleen	NAM	Drenthe II	pl	G
Starnmeer	TAQA	Bergen II	pl	G
Tubbergen	NAM	Tubbergen	pl	G
Tubbergen-Mander	NAM	Tubbergen	pl	G
Weststellingwerf	Vermilion	Gorredijk	pl	G
Wimmenum-Egmond	NAM	Middelie	pl	G
Zuid-Schermer	TAQA	Bergen II	pl	G
			pl	G
K05-G	Total	K05a	pl	G
K06-N	Total	K06	pl	G
K06-T	Total	K06	pl	G
K07-FE	NAM	K07	pl	G

K08-FC	NAM	K08	pl	G
K10-B	Wintershall	K10a	pl	G
K10-C	Wintershall	K10a	pl	G
K10-V	Wintershall	K10b	pl	G
K11-FA	NAM	K11	pl	G
K11-FB	NAM	K11	pl	G
K11-FC	NAM	K11	pl	G
K12-A	GDF SUEZ	K12	pl	G
K12-E	GDF SUEZ	K12	pl	G
K12-S1	GDF SUEZ	K12	pl	G
K13-CF	NAM	K13	open	G
K13-DE	NAM	K13	open	G
K13-FA	NAM	K13	open	G
K13-FB	NAM	K13	open	G
K15-FN	NAM	K15	pl	G
L02-FA	NAM	L02	pl	G
L06-FA	ATP	L06d	pl	G
L07-A	Total	L07	pl	G
L09-FE	NAM	L09b		G
L10-K	GDF SUEZ	L10	pl	G
L10-S1	GDF SUEZ	L10	pl	G
L10-S2	GDF SUEZ	L10	Pl	G
L10-S3	GDF SUEZ	L10	pl	G
L10-S4	GDF SUEZ	L10	Pl	G
L11a-A	GDF SUEZ	L11a	pl	G
L11b-A	Cirrua	L11b	pl	G
L11-Lark	GDF SUEZ	L11a	pl	G
L13-FB	NAM	L13	pl	G
L13-FH	NAM	L13	pl	G
L14-S	Transcanada Int.	L14	open	G
P02-NE	Tullow	P02	el	G
P02-SE	Tullow	P02	el	G
P06 South	Wintershall	P06	pl	G
P12-C	Wintershall	P12	pl	G
P14-A	Wintershall	P14a	pl	G
P15-10	TAQA	P15c	pl	G
P15-12	TAQA	P15c	pl	G
Q05-A	Wintershall	Q05c	pl	G
Q08-A	Wintershall	Q08	pl	G
Q08-B	Wintershall	Q08	pl	G

* Name of the accumulation is according to the name used in the production licence application.

** Licence stands for the licence effective at the time the accumulation was discovered, however, an accumulation can straddle more than one licence (these are not indicated in this table).

*** el = exploration licence, pla = production licence application, pl = production licence ; open a = open area licence applied, sl = storage licence.

OIL ACCUMULATIONS

I. DEVELOPED ACCUMULATIONS				
a) Producing Accumulation*	Company	Licence name**	Licence type***	Gas/Oil
Berkel	NAM	Rijswijk	pl	O&G
Oud-Beijerland Noord	NAM	Botlek	pl	O&G
Rotterdam	NAM	Rijswijk	pl	O&G
Schoonebeek****	NAM	Schoonebeek	pl	O&G
F02a Hanze	Dana Petroleum	F02a	pl	O
F03-FB	GDF-Suez	F03	pl	O&G
Haven	Chevron	Q01	pl	O
Helder	Chevron	Q01	pl	O
Helm	Chevron	Q01	pl	O
Hoorn	Chevron	Q01	pl	O
Horizon	Chevron	P09c	pl	O
Kotter	Wintershall	K18b	pl	O
Logger	Wintershall	L16a	pl	O
P11b De Ruyter	Dana Petroleum	P11b	pl	O&G
P15-Rijn	TAQA	P15a	pl	O&G
II. UNDEVELOPED ACCUMULATIONS				
a) start of production expected between 2011 – 2015				
Accumulation*	Company	Licence name**	Licence type***	Gas/Oil
Ottoland	Northern Petroleum	Andel III	opv	O
P08-A	Grove Energy	P08a	pl	O
Q13-Amstel (FA)	GDF Suez	Q13a	pl	O
b) Others				
Alblasserdam	NAM	Rijswijk	pl	O
Gieterveen	NAM	Drenthe	pl	O
Lekkerkerk/blg	NAM	Rijswijk	pl	O
Noordwijk	NAM	Rijswijk	pl	O&G
Stadskanaal	NAM	Groningen	pl	O&G
Wassenaar-Zee	NAM	Rijswijk	pl	O
Woubrugge	NAM	Rijswijk	pl	O
Zweelo	NAM	Drenthe	pl	O
B18-FA	NAM	B18a	pl	O
F03-FC	NAM	F03	pl	O
F14-A	Sterling	F14	el	O

F17-FA	Wintershall	F17a	el	O
F17-FB	Wintershall	F17a	el	O
F18-FA	Sterling	F18	el	O
K10-B-OIL	Wintershall	K10	pl	O
L01-FB	Sterling	L01b	el	O
P12-3	Wintershall	P12	pl	O
Q01 Northwest	Chevron	Q01	pl	O
Q13-FB	GDF Suez	Q16b	el	O
III. PRODUCTION CEASED				
Accumulation*	Company	Licence name**	Licence type***	Gas/ Oil
De Lier	NAM	Rijswijk	pl	O&G
IJsselmonde	NAM	Rijswijk	pl	O&G
Moerkapelle	NAM	Rijswijk	pl	O
Pijnacker	NAM	Rijswijk	pl	O&G
Rijswijk	NAM	Rijswijk	pl	O&G
Werkendam	NAM	Rijswijk	pl	O&G
Wassenaar	NAM	Rijswijk	pl	O
Zoetermeer	NAM	Rijswijk	pl	O&G

* Name of the accumulation is conform the name used in the production licence application.

** Licence stands for the licence effective at the time the accumulation was discovered, however, an accumulation can straddle more than one licence (these are not indicated in this table).

*** el = exploration licence, pla = production licence application, pl = production licence ; sl = storage licence, open a = open area licence applied.

EXPLORATION LICENCES, Netherlands Territory as at 1 January 2012

	Licence holder	Licence	km ²	Awarded	Date of expiry	Government Gazette
1	Brabant Resources B.V.	Noord-Brabant	1929	14/10/2009	24/11/2014	16 000
2	Hardenberg Resources B.V.	NOORDOOSTPOLDER	819	15/06-2010	26/07/2015	9 431
3	Hexagon Energy B.V.	Peel	365	17/11/2009	28/12/2013	17 675
4	Northern Petroleum Nederland B.V.	Engelen	97	14/10/2009	24/11/2013	16 878
5	Northern Petroleum Nederland B.V.	Oosterwolde	127	20/04/2007	31/05/2012	83
6	Northern Petroleum Nederland B.V.	Utrecht	1152	26/04/2007	06/06/2012	85
7	Smart Energy Solutions B.V. PA Resources UK Ltd.	Schagen	355	20/06/2009	31/07/2013	118
8	Vermilion Oil & Gas Netherlands B.V. Lundin Netherlands B.V.	Follega	3	15/06/2010	26/07/2014	9 426
9	Vermilion Oil & Gas Netherlands B.V. Lundin Netherlands B.V.	Lemsterland	111	15/06/2010	26/07/2014	9 427
Total			4950	km ²		

PRODUCTION LICENCES, NETHERLANDS TERRITORY as at 1 JANUARY 2012

	Licence holder	Licence	km ²	Awarded	Date of Expiry	Government Gazette
1	Nederlandse Aardolie Maatschappij B.V.	Beijerland	140	14/02/1997	14/02/2027	243
2	Nederlandse Aardolie Maatschappij B.V.	Botlek	235	18/02/1992	18/02/2027	141
3	Nederlandse Aardolie Maatschappij B.V. ExxonMobil Producing Netherlands B.V.	De Marne	7	04/10/1994	04/10/2034	189
4	Nederlandse Aardolie Maatschappij B.V.	Drenthe II	1888	18/07/2007		140
5	Nederlandse Aardolie Maatschappij B.V.	Groningen	2970	30/05/1963		126
6	Nederlandse Aardolie Maatschappij B.V.	Hardenberg	161	22/10/1990	22/10/2035	149
7	Nederlandse Aardolie Maatschappij B.V.	Middelie	946	12/05/1969		94
8	Nederlandse Aardolie Maatschappij B.V. ExxonMobil Producing Netherlands B.V.	Noord-Friesland	1593	27/02/1969		47
9	Nederlandse Aardolie Maatschappij B.V.	Rijswijk	2090	03/01/1955		21
10	Nederlandse Aardolie Maatschappij B.V.	Rossum-De Lutte	46	12/05/1961		116
11	Nederlandse Aardolie Maatschappij B.V.	Schoonebeek	930	03/05/1948		110
12	Nederlandse Aardolie Maatschappij B.V.	Tietjerksteradeel	411	27/02/1969		47
13	Nederlandse Aardolie Maatschappij B.V.	Tubbergen	177	11/03/1953		80
14	Nederlandse Aardolie Maatschappij B.V.	Twenthe	276	01/04/1977		26
15	Northern Petroleum Nederland B.V. Dyas B.V. Nederlandse Aardolie Maatschappij B.V.	Andel III	217	18/11/2008	30/12/2038	12 480
16	Northern Petroleum Nederland B.V. Dyas B.V. Nederlandse Aardolie Maatschappij B.V.	Drenthe III	389	18/07/2007		140
17	Northern Petroleum Nederland B.V. Dyas B.V.	Drenthe IV	7	18/07/2007		140
18	Northern Petroleum Nederland B.V. Dyas B.V.	Papekop	63	08/06/2006	19/07/2031	113

	Licence holder	Licence	km²	Awarded	Date of Expiry	Government Gazette
19	Northern Petroleum Nederland B.V. Essent Energy Gas Storage B.V. Gas Storage Ltd. Overseas Gas Storage Ltd.	Waalwijk	186	17/08/1989	17/08/2024	154
20	Northern Petroleum Nederland B.V. Dana Petroleum Netherlands B.V. Dyas B.V. Total E&P Nederland B.V.	Zuid-Friesland III	105	09/03/2010	19/04/2030	4 016
21	Smart Energy Solutions B.V.	Donkerbroek	22	04/04/1995	04/04/2025	66
22	Smart Energy Solutions B.V.	Donkerbroek-West	2	16/03/2011	04/04/2025	4 902
23	Smart Energy Solutions B.V.	Marknesse	77	26/01/2010	09/03/2030	1 446
24	Smart Energy Solutions B.V.	Oosterwolde	4	07/12/2006	17/01/2017	242
25	TAQA Onshore B.V. Dana Petroleum Netherlands B.V. Dyas B.V.	Bergen II	221	23/12/2006		232
26	TAQA Onshore B.V.	Bergermeer	19	23/12/2006		232
27	TAQA Piek Gas B.V. Dana Petroleum Netherlands B.V. Dyas B.V.	Alkmaar	12	23/12/2006		232
28	Vermilion Oil & Gas Netherlands B.V. Lundin Netherlands B.V.	Gorredijk	629	29/07/1989	29/07/2024	145
29	Vermilion Oil & Gas Netherlands B.V. Lundin Netherlands B.V.	Leeuwarden	614	27/02/1969		46
30	Vermilion Oil & Gas Netherlands B.V. Lundin Netherlands B.V.	Oosterend	92	05/09/1985		84
31	Vermilion Oil & Gas Netherlands B.V. Lundin Netherlands B.V.	Slootdorp	162	01/05/1969		94
32	Vermilion Oil & Gas Netherlands B.V.	Steenwijk	99	16/09/1994	16/09/2029	177
33	Vermilion Oil & Gas Netherlands B.V. Lundin Netherlands B.V.	Zuidwal	225	07/11/1984		190
			Total	14964	km²	

STORAGE LICENCES, Netherlands Territory as at 1 January 2012

	Licence holder	Licence	km ²	Awarded	Date of expiry	Government Gazette
1	Akzo Nobel Salt B.V.	Twenthe-Rijn De Marssteden	2	02/10/2010	12/11/2040	15 650
2	Akzo Nobel Salt B.V.	Winschoten III	28	15/11/2010	13/05/2079	18 321
3	Brabant Water N.V.	Zevenbergen	1	19/12/2008	19/12/2012	2009/3
4	N.V. Nederlandse Gasunie	Winschoten III	<1	15/11/2010	13/05/2079	18 321
5	N.V. Nederlandse Gasunie Akzo Nobel Salt B.V. Gasunie Zuidwending B.V. Gasunie Underground Storage B.V. Nuon Storage B.V.	Zuidwending	1	11/04/2006	11/04/2036	77
6	Nederlandse Aardolie Maatschappij B.V.	Grijpskerk	27	01/04/2003		67
7	Nederlandse Aardolie Maatschappij B.V.	Norg	81	01/04/2003		68
8	TAQA Onshore B.V.	Bergermeer	19	08/01/2007	30/06/2050	7
9	TAQA Piek Gas B.V. Dana Petroleum Netherlands B.V. Dyas B.V.	Alkmaar	12	01/04/2003		68
Total			172	km ²		

EXPLORATION LICENCES, Netherlands Continental shelf as at january 2012

	Licence holder	Licence	km ²	Awarded	Date of expiry	Governm Gazette	Rem.
1	Ascent Resources Netherlands B.V.	M10 & M11	250	28/07/2007	10/09/2011	152	
2	Centrica Production Nederland B.V. Dana Petroleum Netherlands B.V. TAQA Offshore B.V.	B17a	80	02/06/1987		70	pla
3	Centrica Production Nederland B.V.	E01	374	22/11/2011	02/01/2016	21 395	
4	Centrica Production Nederland B.V.	E02	396	22/11/2011	02/01/2016	21 396	
5	Centrica Production Nederland B.V.	E04	398	22/11/2011	02/01/2016	21 398	
6	Centrica Production Nederland B.V.	E05	398	22/11/2011	02/01/2016	21 401	
7	Chevron Exploration and Production Netherlands B.V. Dyas B.V. TAQA Offshore B.V.	A12b & B10a	79	16/04/2005		77	pla
8	Chevron Exploration and Production Netherlands B.V. Dyas B.V. TAQA Offshore B.V.	B16a	67	11/05/1987		70	pla
9	Chevron Exploration and Production Netherlands B.V. TAQA Offshore B.V.	P01	209	28/06/2007	08/08/2013	128	
10	Chevron Exploration and Production Netherlands B.V. TAQA Offshore B.V.	P02	416	22/02/2008	03/04/2014	42	
11	Dana Petroleum Netherlands B.V. Dyas B.V. Smart Energy Solutions B.V.	F06b	390	07/04/2009	19/05/2014	70	
12	Dana Petroleum Netherlands B.V. Dyas B.V.	F13b	399	21/09/2010	01/11/2014	14 904	
13	Dana Petroleum Netherlands B.V.	P08c	210	06/01/2007	16/02/2013	7	
14	GDF SUEZ E&P Nederland B.V. Faroe Petroleum (UK) Ltd.	D18a	58	08/06/1979		103	pla

	Licence holder	Licence	km ²	Awarded	Date of expiry	Governm Gazette	Rem.
	TAQA Offshore B.V. Wintershall Noordzee B.V.						
15	GDF SUEZ E&P Nederland B.V. Lundin Netherlands B.V. Total E&P Nederland B.V.	E17c	290	22/02/2008	03/04/2012	42	
16	GDF SUEZ E&P Nederland B.V. Total E&P Nederland B.V.	K01c	274	22/11/2011	02/01/2016	21 372	
17	GDF SUEZ E&P Nederland B.V.	Q13b-ondiep	369	23/12/2008	30/04/2013	5	
18	GDF SUEZ E&P Nederland B.V.	Q16b & Q16c- ondiep	80	17/02/2009	05/08/2013	37	
19	Oranje-Nassau Energie B.V.	F09	400	22/11/2011	02/01/2016	2012-784	
20	Oranje-Nassau Energie B.V.	F12	401	17/02/2010	30/3/2014	2 606	
21	Oranje-Nassau Energie B.V.	F15b & F15c	165	17/02/2010	30/3/2014	2 593	
22	Oranje-Nassau Energie B.V. GDF SUEZ E&P Nederland B.V.	L11c	179	23/11/2010	03/01/2015	18 884	
23	Oranje-Nassau Energie B.V. Dyas B.V.	L16b	176	2/2/2006	15/3/2012	38	
24	Oranje-Nassau Energie B.V.	M02	406	22/11/2011	02/01/2016	2012-783	
25	Oranje-Nassau Energie B.V.	M04	408	21/09/2010	01/11/2014	14 900	
26	Oranje-Nassau Energie B.V. TAQA Offshore B.V.	P18b	313	24/11/2011	04/01/2015	23 555	
27	Oranje-Nassau Energie B.V. Energy06 Investments B.V.	Q10b	367	06/08/2008	08/08/2013	155	
28	Oranje-Nassau Energie B.V. Energy06 Investments B.V.	Q13b-diep	369	23/12/2008	30/04/2013	5	
29	Oranje-Nassau Energie B.V. Energy06 Investments B.V. TAQA Offshore B.V.	Q16b & Q16c- diep	80	17/02/2009		37	pla
30	Oranje-Nassau Energie B.V.	T01	1	24/11/2011		23 557	pla

	Licence holder	Licence	km²	Awarded	Date of expiry	Governm Gazette	Rem.
31	Smart Energy Solutions B.V. PA Resources UK Ltd.	Q07	419	16/01/2008	26/02/2013	13	
32	Smart Energy Solutions B.V. PA Resources UK Ltd.	Q10a	53	06/08/2008	26/02/2013	155	
33	Sterling Resources Netherlands B.V. Grove Energy Ltd.	F14-ondiep	403	30/12/2009	22/05/2011	153	
34	Sterling Resources Netherlands B.V. Grove Energy Ltd.	F17a-ondiep	386	30/12/2009	25/08/2011	154	
35	Sterling Resources Netherlands B.V. Grove Energy Ltd.	F18-ondiep	404	30/12/2009	22/05/2011	152	
36	Sterling Resources Netherlands B.V. Grove Energy Ltd.	L01b-ondiep	339	30/12/2009	22/05/2011	149	
37	Tullow Netherlands B.V. GTO Limited XTO Netherlands Ltd.	E10	401	16/01/2008	26/02/2014	13	
38	Tullow Netherlands B.V. XTO Netherlands Ltd.	E11	401	22/04/2009	03/06/2014	84	
39	Tullow Netherlands B.V. Gas Plus Netherlands B.V.	E13a	234	22/12/2007	18/09/2011	9	
40	Tullow Netherlands B.V. GTO Limited XTO Netherlands Ltd.	E14	403	15/01/2008	25/02/2014	12	
41	Tullow Netherlands B.V. Gas Plus Netherlands B.V. GTO Limited XTO Netherlands Ltd.	E15c	343	22/04/2008	02/06/2014	78	
42	Tullow Netherlands B.V. GTO Limited XTO Netherlands Ltd.	E18b	192	11/01/2008	21/02/2014	10	

	Licence holder	Licence	km²	Awarded	Date of expiry	Governm Gazette	Rem.
43	Wintershall Noordzee B.V. EWE ENERGIE AG GAZPROM Germania GmbH GDF SUEZ E&P Nederland B.V.	D12b	41	25/02/2011	07/04/2015	5 287	
44	Wintershall Noordzee B.V. Sterling Resources Netherlands B.V.	E03	396	22/11/2011	02/01/2016	21 402	
45	Wintershall Noordzee B.V. Sterling Resources Netherlands B.V.	F01	396	22/11/2011	02/01/2016	21 394	
46	Wintershall Noordzee B.V. GDF SUEZ E&P Nederland B.V. Rosewood Exploration Ltd. TAQA Offshore B.V.	F14-diep	403	30/12/2009	21/11/2013	153	
47	Wintershall Noordzee B.V. GDF SUEZ E&P Nederland B.V. Rosewood Exploration Ltd. TAQA Offshore B.V.	F17a-diep	386	30/12/2009	25/08/2013	154	
48	Wintershall Noordzee B.V. GDF SUEZ E&P Nederland B.V. Rosewood Exploration Ltd.	F18-diep	404	30/12/2009	21/11/2013	152	
49	Wintershall Noordzee B.V. GDF SUEZ E&P Nederland B.V.	K03e	258	22/04/2009	03/06/2013	80	
50	Wintershall Noordzee B.V. GDF SUEZ E&P Nederland B.V. Rosewood Exploration Ltd.	L01b-diep	339	30/12/2009	21/11/2013	149	
51	Wintershall Noordzee B.V. Dyas B.V.	P05	417	11/10/2006	21/11/2013	200	
52	Wintershall Noordzee B.V. Dyas B.V.	P08b	209	06/01/2007	16/02/2013	7	
		Total	15019	km ²			

*pla: Licence holder has filed an application for a production licence.

PRODUCTION LICENCES, Netherlands Continental shelf as at 1 January 2012

	Licence holder	Licence	km ²	Awarded	Date of expiry	Government Gazette
1	ATP Oil and Gas Netherlands B.V.	L06d	16	07/03/2003	18/04/2013	48
2	Centrica Production Nederland B.V. Dana Petroleum Netherlands B.V. Oranje-Nassau Energie B.V.	A15a	67	27/12/2011	03/02/2027	2012-746
3	Centrica Production Nederland B.V.	B18a	40	10/10/1985	10/10/2025	182
4	Centrica Production Nederland B.V.	F03a	62	13/12/2007	09/09/2022	245
5	Centrica Production Nederland B.V. Dyas B.V. Total E&P Nederland B.V.	J03b & J06	126	06/11/1992	06/11/2032	219
6	Chevron Exploration and Production Netherlands B.V. Dyas B.V. TAQA Offshore B.V.	A12a	195	01/07/2005	11/08/2025	129
7	Chevron Exploration and Production Netherlands B.V. Dyas B.V. TAQA Offshore B.V.	A12d	33	01/07/2005	11/08/2025	129
8	Chevron Exploration and Production Netherlands B.V. Dyas B.V. TAQA Offshore B.V.	A18a	229	01/07/2005	11/08/2025	129
9	Chevron Exploration and Production Netherlands B.V. Dyas B.V.	A18c	47	01/07/2005	11/08/2025	125
10	Chevron Exploration and Production Netherlands B.V. Dyas B.V. TAQA Offshore B.V.	B10c & B13a	252	01/07/2005	11/08/2025	129
11	Chevron Exploration and Production Netherlands B.V. Aceiro Energy B.V. Dyas B.V. TAQA Offshore B.V.	P09a & P09b	126	16/08/1993	16/08/2033	127

	Licence holder	Licence	km²	Awarded	Date of expiry	Government Gazette
	Wintershall Noordzee B.V.					
12	Chevron Exploration and Production Netherlands B.V. Dyas B.V. TAQA Offshore B.V. Wintershall Noordzee B.V.	P09c	267	16/08/1993	16/08/2033	126
13	Chevron Exploration and Production Netherlands B.V. TAQA Offshore B.V. Wintershall Noordzee B.V.	Q01	416	11/07/1980	11/07/2020	110
14	Chevron Exploration and Production Netherlands B.V. Dyas B.V. TAQA Offshore B.V.	Q02c	32	14/07/1994	14/07/2034	18
15	Dana Petroleum Netherlands B.V. Dyas B.V. Noble Energy (Europe) Ltd. Oranje-Nassau Energie B.V. TAQA Offshore B.V.	F02a	307	24/08/1982	24/08/2022	139
16	Dana Petroleum Netherlands B.V.	P10a	5	31/05/2005	11/07/2020	102
17	Dana Petroleum Netherlands B.V.	P10b	100	07/04/2009	19/05/2019	70
18	Dana Petroleum Netherlands B.V.	P11b	210	03/04/2004	14/05/2019	67
19	Dana Petroleum Netherlands B.V. Smart Energy Solutions B.V.	P14a	50	23/06/1992	23/06/2032	99
20	GDF SUEZ E&P Nederland B.V. Faroe Petroleum (UK) Ltd. Wintershall Noordzee B.V.	D15	247	06/09/1996	06/09/2021	138
21	GDF SUEZ E&P Nederland B.V. Lundin Netherlands B.V. Total E&P Nederland B.V.	E16a	29	29/06/2007	09/08/2021	128
22	GDF SUEZ E&P Nederland B.V. Lundin Netherlands B.V. Total E&P Nederland B.V.	E17a & E17b	114	28/06/2007	08/08/2021	128
23	GDF SUEZ E&P Nederland B.V. TAQA Offshore B.V.	F03b	335	13/12/2007	09/09/2022	245

	Licence holder	Licence	km²	Awarded	Date of expiry	Government Gazette
24	GDF SUEZ E&P Nederland B.V. Nederlandse Aardolie Maatschappij B.V. TAQA Offshore B.V.	G14 & G17b	441	15/12/2006	14/12/2019	248
25	GDF SUEZ E&P Nederland B.V.	G16a	224	06/01/1992	06/01/2032	245
26	GDF SUEZ E&P Nederland B.V.	G16b	5	11/10/2003	06/01/2032	198
27	GDF SUEZ E&P Nederland B.V.	G17a	237	19/07/2006	14/12/2019	143
28	GDF SUEZ E&P Nederland B.V. Wintershall Noordzee B.V.	G17c & G17d	130	10/11/2000	10/11/2025	188
29	GDF SUEZ E&P Nederland B.V.	K02b	110	20/01/2004	24/08/2023	16
30	GDF SUEZ E&P Nederland B.V.	K03a	83	24/08/1998	24/08/2023	122
31	GDF SUEZ E&P Nederland B.V.	K03c	32	26/11/2005	06/01/2021	233
32	GDF SUEZ E&P Nederland B.V. EWE Aktiengesellschaft Rosewood Exploration Ltd. XTO Netherlands Ltd.	K09a & K09b	211	11/08/1986	11/08/2026	129
33	GDF SUEZ E&P Nederland B.V. EWE Aktiengesellschaft Rosewood Exploration Ltd. XTO Netherlands Ltd.	K09c	199	18/12/1987	18/12/2027	229
34	GDF SUEZ E&P Nederland B.V. EWE Aktiengesellschaft Production North Sea Netherlands Ltd. Rosewood Exploration Ltd. XTO Netherlands Ltd.	K12	411	18/02/1983	18/02/2023	11
35	GDF SUEZ E&P Nederland B.V.	L04c	12	07/01/1994	07/01/2034	2
36	GDF SUEZ E&P Nederland B.V.	L05a	163	15/03/1991	15/03/2031	55
37	GDF SUEZ E&P Nederland B.V. EWE Aktiengesellschaft GDF SUEZ E&P Participation Ned. B.V. Rosewood Exploration Ltd. XTO Netherlands Ltd.	L10 & L11a	596	13/01/1971	13/01/2011	4

	Licence holder	Licence	km²	Awarded	Date of expiry	Government Gazette
38	GDF SUEZ E&P Nederland B.V. Nuon Exploration & Production The Netherlands B.V. Oranje-Nassau Energie B.V. Wintershall Noordzee B.V.	L12a	119	25/09/2008	14/03/2030	189
39	GDF SUEZ E&P Nederland B.V. Nuon Exploration & Production The Netherlands B.V. Wintershall Noordzee B.V.	L12b & L15b	92	06/08/2008	12/03/2030	155
40	GDF SUEZ E&P Nederland B.V.	L15c	4	07/09/1990	07/09/2030	172
41	GDF SUEZ E&P Nederland B.V. Rosewood Exploration Ltd. XTO Netherlands Ltd.	N07b	174	23/12/2003	10/03/2034	252
42	GDF SUEZ E&P Nederland B.V. Aceiro Energy B.V. TAQA Offshore B.V.	Q13a	30	28/11/2006	28/12/2021	231
43	Grove Energy Ltd.	P08a	26	21/10/2006	01/12/2021	214
44	Nederlandse Aardolie Maatschappij B.V.	F17c	18	04/12/1996	04/12/2011	207
45	Nederlandse Aardolie Maatschappij B.V.	K07	408	08/07/1981	08/07/2021	120
46	Nederlandse Aardolie Maatschappij B.V. Oranje-Nassau Energie B.V. Tullow Exploration & Production Netherlands B.V. Wintershall Noordzee B.V.	K08 & K11	820	26/10/1977	26/10/2017	197
47	Nederlandse Aardolie Maatschappij B.V.	K14	412	16/01/1975	16/01/2015	6
48	Nederlandse Aardolie Maatschappij B.V.	K15	412	14/10/1977	14/10/2017	197
49	Nederlandse Aardolie Maatschappij B.V.	K17	414	19/01/1989	19/01/2029	12
50	Nederlandse Aardolie	K18a	36	15/03/2007	09/05/2023	57

	Licence holder	Licence	km²	Awarded	Date of expiry	Government Gazette
	Maatschappij B.V. Wintershall Noordzee B.V.					
51	Nederlandse Aardolie Maatschappij B.V.	L02	406	15/03/1991	15/03/2031	55
52	Nederlandse Aardolie Maatschappij B.V.	L09	409	18/09/2010	09/05/2035	14 911
53	Nederlandse Aardolie Maatschappij B.V. Oranje-Nassau Energie B.V.. Tullow Exploration & Production Netherlands B.V. Wintershall Noordzee B.V.	L13	413	26/10/1977	26/10/2017	197
54	Nederlandse Aardolie Maatschappij B.V. ExxonMobil Producing Netherlands B.V.	M09a	213	10/04/1990	10/04/2030	56
55	Nederlandse Aardolie Maatschappij B.V.	N07a	141	23/12/2003	10/03/2034	252
56	Oranje-Nassau Energie B.V. Energy06 Investments B.V. TAQA Offshore B.V.	L11b	47	15/06/1984	15/06/2024	110
57	Oranje-Nassau Energie B.V. Energy06 Investments B.V.	M01a	213	28/06/2007	08/08/2022	128
58	Oranje-Nassau Energie B.V. Energy06 Investments B.V. TAQA Offshore B.V.	M07	409	22/03/2001	22/03/2021	19
59	Oranje-Nassau Energie B.V. Lundin Netherlands B.V. Total E&P Nederland B.V.	Q16a	85	29/12/1992	29/12/2032	227
60	TAQA Offshore B.V. Dana Petroleum Netherlands B.V. Dyas B.V. Oranje-Nassau Energie B.V. Van Dyke Netherlands Inc. Wintershall Noordzee B.V.	P15a & P15b	220	12/07/1984	12/07/2024	110
61	TAQA Offshore B.V. Dana Petroleum Netherlands B.V.	P15c	203	07/05/1992	07/05/2032	114

	Licence holder	Licence	km²	Awarded	Date of expiry	Government Gazette
	Dyas B.V. Oranje-Nassau Energie B.V. Wintershall Noordzee B.V.					
62	TAQA Offshore B.V.	P18a	105	30/04/1992	30/04/2032	99
63	TAQA Offshore B.V. Dana Petroleum Netherlands B.V. Dyas B.V.	P18c	6	02/06/1992	02/06/2032	99
64	Total E&P Nederland B.V. Lundin Netherlands B.V. TAQA Offshore B.V.	F06a	8	09/09/1982	09/09/2022	139
65	Total E&P Nederland B.V. Dyas B.V. First Oil Expro Ltd. Lundin Netherlands B.V.	F15a	233	06/05/1991	06/05/2031	52
66	Total E&P Nederland B.V. Dyas B.V. First Oil Expro Ltd. Lundin Netherlands B.V.	F15d	4	15/06/1992	15/06/2032	97
67	Total E&P Nederland B.V. Nederlandse Aardolie Maatschappij B.V.	J03a	72	12/01/1996	12/01/2036	22
68	Total E&P Nederland B.V. Nederlandse Aardolie Maatschappij B.V.	K01a	83	10/02/1997	10/02/2022	46
69	Total E&P Nederland B.V. Rosewood Exploration Ltd.	K01b & K02a	75	20/06/2009	31/07/2022	11 801
70	Total E&P Nederland B.V. Rosewood Exploration Ltd.	K02c	46	21/01/2004	07/11/2021	16
71	Total E&P Nederland B.V. Lundin Netherlands B.V.	K03b	7	30/01/2001	30/01/2021	19
72	Total E&P Nederland B.V. Lundin Netherlands B.V.	K03d	26	01/04/1999	01/04/2024	58
73	Total E&P Nederland B.V.	K04a	307	29/12/1993	29/12/2033	220
74	Total E&P Nederland B.V.	K04b & K05a	305	01/06/1993	01/06/2033	87

	Licence holder	Licence	km²	Awarded	Date of expiry	Government Gazette
	Dyas B.V. Lundin Netherlands B.V.					
75	Total E&P Nederland B.V. Rosewood Exploration Ltd.	K05b	204	07/11/1996	07/11/2021	207
76	Total E&P Nederland B.V. Lundin Netherlands B.V.	K06 & L07	817	20/06/1975	20/06/2015	112
77	Total E&P Nederland B.V. Van Dyke Netherlands Inc.	L01a	31	12/09/1996	12/09/2016	135
78	Total E&P Nederland B.V.	L01d	7	13/11/1996	13/11/2016	207
79	Total E&P Nederland B.V. Lundin Netherlands B.V.	L01e	12	13/11/1996	13/11/2011	207
80	Total E&P Nederland B.V. Lundin Netherlands B.V.	L01f	17	14/01/2003	14/01/2033	235
81	Total E&P Nederland B.V. Lundin Netherlands B.V.	L04a	313	30/12/1981	30/12/2021	230
82	Tullow Netherlands B.V. Tullow Exploration & Production Netherlands B.V. Wintershall Noordzee B.V.	L12c	30	06/08/2008	12/03/2030	155
83	Tullow Netherlands B.V. Oranje-Nassau Energie B.V. Tullow Exploration & Production Netherlands B.V. Wintershall Noordzee B.V.	L12d	225	25/09/2008	14/03/2030	189
84	Tullow Netherlands B.V. Tullow Exploration & Production Netherlands B.V. Wintershall Noordzee B.V.	L15d	62	06/08/2008	12/03/2030	155
85	Wintershall Noordzee B.V. GDF SUEZ E&P Participation Ned. B.V.	D12a	214	06/09/1996	06/09/2021	138
86	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V. GDF SUEZ E&P Nederland B.V. Tullow Exploration & Production Netherlands B.V.	E15a	39	04/10/2002	21/10/2032	175

	Licence holder	Licence	km²	Awarded	Date of expiry	Government Gazette
87	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V. Tullow Exploration & Production Netherlands B.V.	E15b	21	20/02/2008	01/04/2033	38
88	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V. GDF SUEZ E&P Nederland B.V. Tullow Exploration & Production Netherlands B.V.	E18a	212	04/10/2002	21/10/2032	175
89	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V. GDF SUEZ E&P Nederland B.V. Tullow Exploration & Production Netherlands B.V.	F13a	4	04/10/2002	21/10/2032	175
90	Wintershall Noordzee B.V. GDF SUEZ E&P Nederland B.V. Grove Energy Ltd. Sterling Resources Netherlands B.V.	F16	404	04/10/2002	21/10/2032	175
91	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V. Dyas B.V. Nederlandse Aardolie Maatschappij B.V.	K18b	155	15/03/2007	09/05/2023	57
92	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V.	L05b	237	28/06/2003	09/08/2038	134
93	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V.	L05c	8	03/12/1996	03/12/2016	209
94	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V.	L06a	332	24/11/2010	04/01/2031	18 910
95	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V.	L06b	60	01/07/2003	11/08/2038	134
96	Wintershall Noordzee B.V. EWE Aktiengesellschaft Oranje-Nassau Energie B.V. TAQA Offshore B.V.	L08a	213	18/08/1988	18/08/2028	146
97	Wintershall Noordzee B.V.	L08b	181	17/05/1993	17/05/2033	78

	Licence holder	Licence	km²	Awarded	Date of expiry	Government Gazette
	Dana Petroleum Netherlands B.V. Oranje-Nassau Energie B.V.					
98	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V. Dyas B.V. Nederlandse Aardolie Maatschappij B.V.	L16a	238	12/06/1984	12/06/2024	84
99	Wintershall Noordzee B.V. Dyas B.V.	P06	417	14/04/1982	14/04/2022	54
100	Wintershall Noordzee B.V. Dyas B.V. Northern Petroleum Nederland B.V.	P12	421	08/03/1990	08/03/2030	27
101	Wintershall Noordzee B.V. Dyas B.V. Tullow Exploration & Production Netherlands B.V.	Q04	417	02/12/1999	02/12/2019	228
102	Wintershall Noordzee B.V. Dyas B.V. Tullow Exploration & Production Netherlands B.V.	Q05c, d & e	146	15/02/2001	15/02/2021	19
		Total	18595	km ²		

LIST OF BLOCKS, Netherlands Continental shelf as at 1 January 2012

Block (part of block)	Open Area (km ²)	Operator	Licence (km ²)	
			Exploration	Production
A04	0			
A05	91			
A07	47			
A08	382			
A09	141			
A10	129			
A11	392			
A12a		Chevron		195
A12b		Chevron	31	
A12c	130			
A12d		Chevron		33
A13	211			
A14	393			
A15a		Centrica		67
A15b	326			
A16	293			
A17	395			
A18a		Chevron		229
A18b	119			
A18c		Chevron		47
B10a		Chevron	48	
B10b	85			
B10c		Chevron		46
B13a		Chevron		206
B13b	187			
B14	198			
B16a		Chevron	67	
B16b	327			
B17a		Centrica	80	
B17b	315			
B18a		Centrica		40
B18b	160			
D03	2			
D06	60			
D09	149			
D12a		Wintershall		214
D12b		Wintershall	41	
D15		GDF Suez		247
D18a		GDF Suez	58	
D18b	139			

Block (part of block)	Open Area (km ²)	Operator	Licence (km ²)	
			Exploration	Production
E01		Centrica	374	
E02		Centrica	396	
E03		Wintershall	396	
E04		Centrica	398	
E05		Centrica	398	
E06	398			
E07	400			
E08	400			
E09	400			
E10		Tullow	401	
E11		Tullow	401	
E12	401			
E13a		Tullow	234	
E13b	169	GDF Suez		
E14		Tullow	403	
E15a		Wintershall		39
E15b		Wintershall		21
E15c		Tullow	343	
E16a		GDF Suez		29
E16b	375			
E17a		GDF Suez		87
E17b		GDF Suez		27
E17c		GDF Suez	290	
E18a		Wintershall		212
E18b		Tullow	192	
F01		Wintershall	396	
F02a		Dana Petroleum		307
F02b	89			
F03a		Centrica		62
F03b		GDF Suez		335
F04	398			
F05	398			
F06a		Total		8
F06b		Dana Petroleum	390	
F07	400			
F08	400			
F09		Oranje-Nassau	400	
F10	401			
F11	401			
F12		Oranje-Nassau	401	
F13a		Wintershall		4
F13b		Dana Petroleum	399	
F14		Sterling / Wintershall	403	

Block (part of block)	Open Area (km ²)	Operator	Licence (km ²)	
			Exploration	Production
F15a		Total		233
F15b		Oranje-Nassau	73	
F15c		Oranje-Nassau	93	
F15d		Total		4
F16		Wintershall		404
F17a		Sterling / Wintershall	386	
F17c		NAM		18
F18		Sterling / Wintershall	404	
G07	120			
G10	397			
G11	169			
G13	403			
G14		GDF Suez		403
G15	226			
G16a		GDF Suez		224
G16b		GDF Suez		5
G16c	176			
G17a		GDF Suez		237
G17b		GDF Suez		38
G17c		GDF Suez		34
G17d		GDF Suez		96
G18	405			
H13	1			
H16	72			
J03a		Total		72
J03b		Centrica		42
J03c	30			
J06		Centrica		83
J09	18			
K01a		Total		83
K01b		Total		50
K01c		GDF Suez	274	
K02a		Total		25
K02b		GDF Suez		110
K02c		Total		46
K02d	225			
K03a		GDF Suez		83
K03b		Total		7
K03c		GDF Suez		32
K03d		Total		26
K03e		Wintershall	258	

Block (part of block)	Open Area (km ²)	Operator	Licence (km ²)	
			Exploration	Production
K04a		Total		307
K04b		Total		101
K05a		Total		204
K05b		Total		204
K06		Total		408
K07		NAM		408
K08		NAM		409
K09a		GDF Suez		150
K09b		GDF Suez		61
K09c		GDF Suez		199
K10	374			195
K11		NAM		411
K12		GDF Suez		411
K13	324			
K14		NAM		412
K15		NAM		412
K16	267			
K17		NAM		414
K18a		NAM		36
K18b		Wintershall		155
K18c	223			
L01a		Total		31
L01b		Sterling / Wintershall	339	
L01d		Total		7
L01e		Total		12
L01f		Total		17
L02		NAM		406
L03	406			
L04a		Total		313
L04b	82			
L04c		GDF Suez		12
L05a		GDF Suez		163
L05b		Wintershall		237
L05c		Wintershall		8
L06a		Wintershall		332
L06b		Wintershall		60
L06d		ATP		16
L07		Total		409
L08a		Wintershall		213
L08b		Wintershall		181
L08c	16			
L09		NAM		409
L10		GDF Suez		411
L11a		GDF Suez		185

Block (part of block)	Open Area (km ²)	Operator	Licence (km ²)	
			Exploration	Production
L11b		Oranje-Nassau		47
L11c		Oranje-Nassau	179	
L12a		GDF Suez		119
L12b		GDF Suez		37
L12c		Tullow		30
L12d		Tullow		225
L13		NAM		413
L14	413			
L15a	81			
L15b		GDF Suez		55
L15c		GDF Suez		4
L15d		Tullow		62
L16a		Wintershall		238
L16b		Oranje-Nassau	176	
L17	394			
L18	14			
M01a		Oranje-Nassau		213
M01b	193			
M02		Oranje-Nassau	406	
M03	406			
M04		Oranje-Nassau	408	
M05	408			
M06	408			
M07		Oranje-Nassau		409
M08	406			
M09a		NAM		213
M09b	158			
M10a		Ascent	82	
M10b	140			
M11		Ascent	28	
N01	217			
N04	381			
N05	14			
N07a		NAM		141
N07b		GDF Suez		174
N08	35			
O12	2			
O15	142			
O17	3			
O18	367			
P01a		Chevron	137	

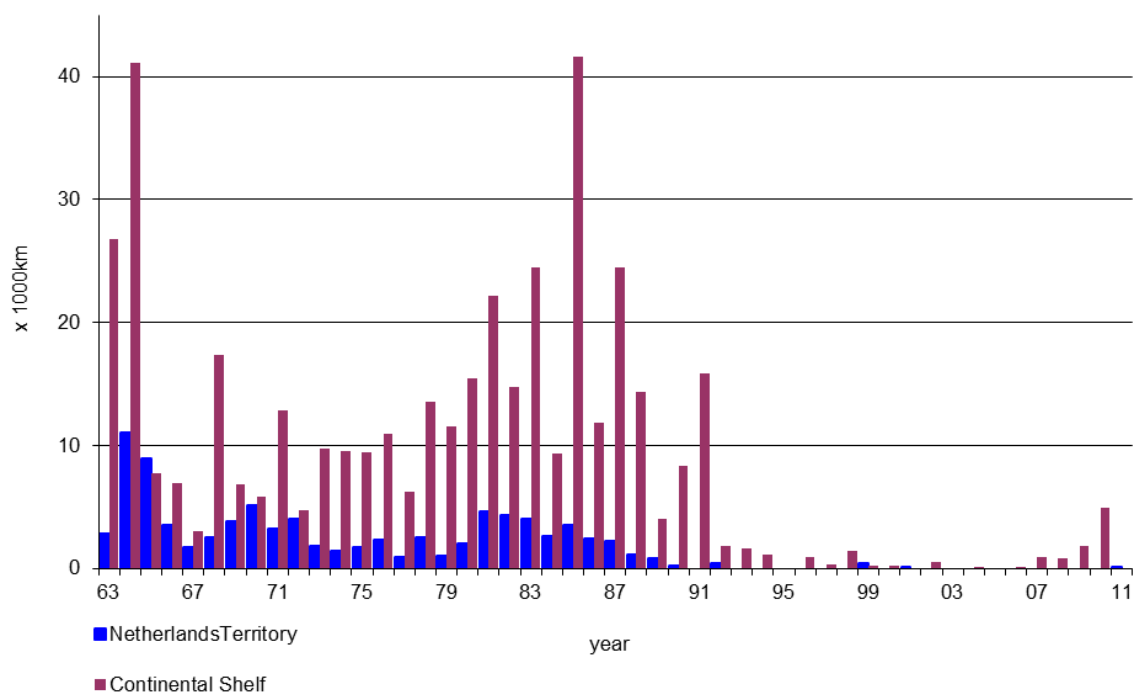
Block (part of block)	Open Area (km ²)	Operator	Licence (km ²)	
			Exploration	Production
P01b	72			
P02		Chevron	416	
P03	416			
P04	170			
P05		Wintershall	417	
P06		Wintershall		417
P07	222			
P08a		Grove		26
P08b		Wintershall	209	
P08c		Dana Petroleum	210	
P09a		Chevron		59
P09b		Chevron		67
P09c		Chevron		267
P09d	26			
P10a		Dana Petroleum		5
P10b		Dana Petroleum		100
P10c	249			
P11a	210			
P11b		Dana Petroleum		210
P12		Wintershall		421
P13	422			
P14a		Dana Petroleum		50
P14b	372			
P15a		TAQA		203
P15b		TAQA		17
P15c		TAQA		203
P16	423			
P17	424			
P18a		TAQA		105
P18b		Oranje-Nassau	313	
P18c		TAQA		6
Q01		Chevron		416
Q02a	333			
Q02c		Chevron		32
Q04		Wintershall		417
Q05a	0			
Q05b	104			
Q05c		Wintershall		98
Q05d		Wintershall		44
Q05e		Wintershall		4
Q05f	48			
Q05i	0			
Q07		SES	419	
Q08	247			

Block (part of block)	Open Area (km ²)	Operator	Licence (km ²)	
			Exploration	Production
Q10a		SES	53	
Q10b		Oranje-Nassau	367	
Q11	162			
Q13a		GDF Suez		30
Q13b		GDF Suez / Oranje-Nassau	369	
Q14	25			
Q16a		Oranje-Nassau		85
Q16b		GDF Suez / Oranje-Nassau	59	
Q16c		GDF Suez / Oranje-Nassau	21	
R02	103			
R03	425			
R05	7			
R06	311			
R09	28			
S01	425			
S02	425			
S03	340			
S04	427			
S05	378			
S06	45			
S07	360			
S08	129			
S10	36			
S11	0			
T01		Oranje-Nassau	1	
Total	25181		13037	18595

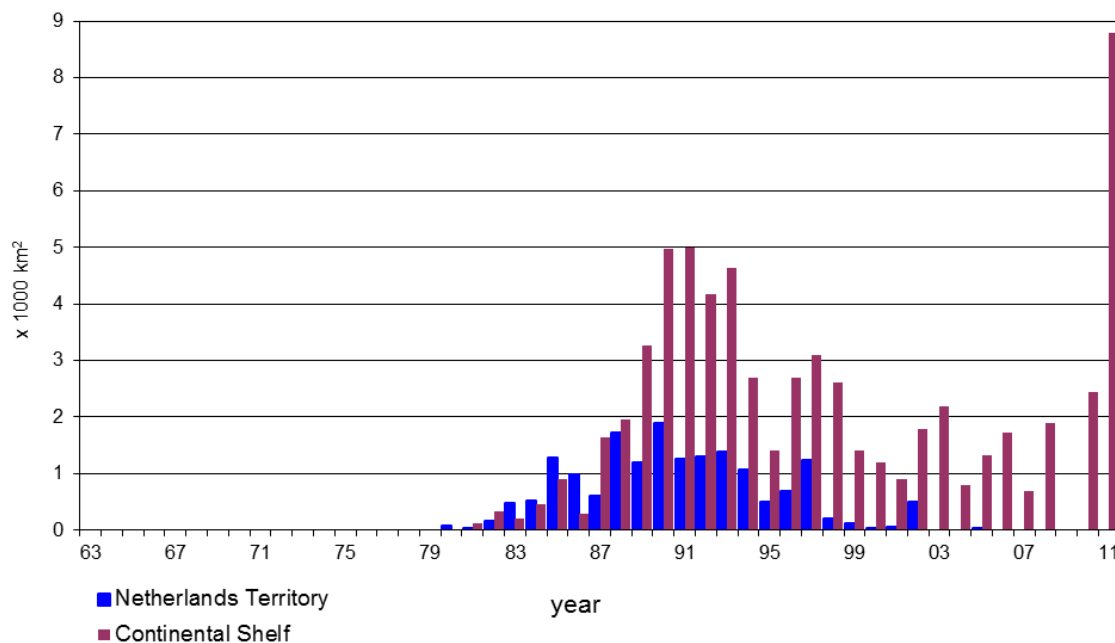
SEISMIC SURVEYS

Year	Netherlands Territory		Continental Shelf	
	2 D line km	3 D area km ²	2 D line km	3 D area km ²
63	2 860	-	26 778	-
64	10 992	-	41 136	-
1965	8 885	-	7 707	-
66	3 510	-	6 939	-
67	1 673	-	3 034	-
68	2 541	-	17 349	-
69	3 857	-	6 846	-
1970	5 113	-	5 780	-
71	3 252	-	12 849	-
72	4 034	-	4 716	-
73	1 783	-	9 708	-
74	1 422	-	9 536	-
1975	1 706	-	9 413	-
76	2 318	-	10 963	-
77	948	-	6 184	-
78	2 466	-	13 568	-
79	986	-	11 575	-
1980	2 017	76	15 497	-
81	4 627	37	22 192	110
82	4 363	170	14 791	337
83	3 980	478	24 498	208
84	2 523	512	9 314	455
1985	3 480	1 282	41 593	892
86	2 386	993	11 795	296
87	2 243	601	24 592	1 637
88	1 103	1 726	14 356	1 958
89	828	1 206	4 033	3 264
1990	160	1 889	8 288	4 972
91	-	1 268	15 853	5 002
92	388	1 307	1 799	4 173
93	-	1 382	1 591	4 637
94	-	1 074	1 089	2 694
1995	-	491	-	1 408
96	-	689	892	2 686
97	-	1 236	260	3 101
98	-	214	1 383	2 603
99	43	124	181	1 409
2000	-	33	160	1 189
01	5	47	-	898
02	-	-	495	1 778
03	-	-	-	2 185
04	-	-	34	790
2005	-	32	-	1 314
06	-	-	53	1 732
07	-	-	886	700
08	-	-	838	1 893
09	-	-	1 849	-
2010	-	-	4 898	2 431
11	14	-	-	8 800

2D Seismic surveys 1963 – 2011



3D Seismic surveys 1963 – 2011



OIL AND GAS WELLS, Number of wells Netherlands Territory

Year	Exploration					Appraisal					Production
	O	G	G&O	D	Σ	O	G	G&O	D	Σ	Σ
Up to 1967	2	26	-	61	89	-	8	-	4	12	278
68	-	3	-	4	7	-	2	-	2	4	23
69	-	2	-	11	13	-	2	-	1	3	27
1970	-	3	-	11	14	-	1	-	-	1	25
71	-	3	-	9	12	-	3	-	1	4	55
72	-	3	-	7	10	-	-	-	2	2	64
73	-	2	-	2	4	-	1	-	-	1	46
74	-	-	-	2	2	-	4	-	1	5	50
1975	-	3	-	5	8	-	-	-	2	2	48
76	-	2	-	5	7	-	12	-	-	12	37
77	-	3	-	4	7	2	10	-	1	13	14
78	-	2	-	4	6	-	20	-	-	20	36
79	-	4	-	2	6	2	11	-	2	15	42
1980	1	2	-	2	5	2	16	-	4	22	33
81	2	2	-	11	15	5	7	-	2	14	23
82	-	5	-	9	14	-	8	-	2	10	14
83	-	4	-	4	8	1	13	-	1	15	8
84	1	6	-	7	14	4	8	-	4	16	32
1985	1	5	-	9	15	2	10	-	-	12	34
86	-	2	-	10	12	-	3	-	-	3	35
87	-	1	2	6	9	-	1	-	-	1	22
88	-	5	1	2	8	1	4	-	-	5	17
89	-	2	1	6	9	2	5	-	-	7	11
1990	-	3	1	4	8	-	3	1	1	5	17
91	-	7	1	3	11	-	3	-	1	4	11
92	-	5	2	4	11	-	1	-	-	1	12
93	-	8	-	2	10	-	-	-	-	-	11
94	-	4	-	1	5	2	2	-	1	5	4
1995	-	3	-	10	13	-	3	-	-	3	14
96	-	2	-	3	5	2	3	-	2	7	30
97	-	8	-	3	11	-	6	-	-	6	12
98	-	7	-	4	11	-	7	-	-	7	8
99	-	2	-	3	5	-	3	-	-	3	7
2000	-	2	-	-	2	-	2	-	-	2	5
01	-	2	-	1	3	-	-	-	-	-	6
02	-	1	-	3	4	-	1	-	-	1	5
03	-	1	-	2	3	-	-	-	-	-	7
04	-	-	-	-	-	-	1	-	-	1	1
2005	-	2	-	1	3	-	-	-	-	-	3
06	-	3	-	1	4	-	1	-	-	1	6
07	-	2	-	-	2	-	3	-	2	5	9
08	-	1	-	-	1	-	1	-	-	1	1
09	-	1	-	1	2	-	3	-	-	3	26
2010	-	2	-	1	3	-	-	-	-	-	34
11	-	5	1	2	8	-	-	1	-	1	24
Total:	7	161	9	242	419	25	192	2	36	255	1227

D = dry
G = gas

O = oil
Σ = total

G&O = gas and oil

OIL AND GAS WELLS, Number of wells Netherlands Continental shelf

Year	Exploration					Appraisal					Production	
	O	G	G&O	D	Σ	O	G	G&O	D	Σ	Σ	
Up to 1967	-	-	-	3	3	-	-	-	-	-	-	-
68	-	2	-	5	7	-	-	-	-	-	-	-
69	-	2	-	13	15	-	-	-	1	1	-	-
1970	-	6	-	7	14	-	-	-	-	-	-	-
71	1	3	-	15	18	1	-	-	-	1	-	-
72	-	10	-	6	16	-	-	-	1	1	-	-
73	-	4	-	13	17	-	1	-	1	2	2	2
74	-	7	-	8	16	-	1	-	-	1	9	9
1975	1	6	-	9	15	-	1	-	2	3	12	12
76	-	5	-	11	16	1	2	-	-	3	14	14
77	-	3	-	20	23	1	3	-	1	5	18	18
78	-	4	-	14	18	1	2	-	2	5	14	14
79	-	7	-	9	17	-	3	-	1	4	9	9
1980	1	6	-	16	26	2	2	-	1	5	7	7
81	4	3	-	11	15	6	5	-	6	17	5	5
82	1	6	-	22	35	1	6	-	3	10	20	20
83	7	3	-	27	31	1	2	-	9	12	15	15
84	1	6	-	19	26	3	1	-	3	7	24	24
1985	1	9	-	24	36	2	4	-	1	7	35	35
86	3	9	-	14	25	2	2	-	1	5	15	15
87	2	9	1	12	22	1	2	1	1	5	13	13
88	-	12	1	8	21	-	4	-	1	5	21	21
89	-	10	-	13	23	-	4	-	1	5	17	17
1990	-	8	-	21	29	-	6	-	-	6	14	14
91	-	15	-	26	43	-	2	-	-	2	18	18
92	2	8	-	11	19	-	-	-	1	1	15	15
93	-	3	-	10	13	-	1	-	-	1	17	17
94	-	4	-	5	10	1	1	-	-	2	10	10
1995	1	2	-	3	5	-	1	1	1	3	16	16
96	-	10	1	12	24	-	5	-	-	5	6	6
97	1	7	-	13	21	1	8	-	1	10	13	13
98	1	9	-	8	17	1	1	-	1	3	13	13
99	-	7	-	5	12	-	1	-	1	2	6	6
2000	-	4	-	2	6	-	6	-	-	6	9	9
01	-	9	-	6	15	-	2	-	2	4	12	12
02	-	6	-	10	16	-	1	-	2	3	13	13
03	-	6	-	1	7	-	3	-	1	4	13	13
04	-	7	-	4	11	-	2	-	-	2	6	6
2005	-	3	-	1	4	-	1	-	-	1	8	8
06	-	3	-	6	9	1	2	-	-	3	16	16
07	-	3	-	2	5	-	2	-	-	2	12	12
08	-	4	1	3	8	-	3	-	-	3	13	13
09	-	4	-	3	7	-	3	-	-	3	11	11
2010	-	4	-	3	7	-	2	-	-	2	12	12
11	-	1	1	4	6	1	2	-	-	3	15	15
Total:	27	259	5	458	749	27	100	2	46	172	518	518

D = dry

O = oil

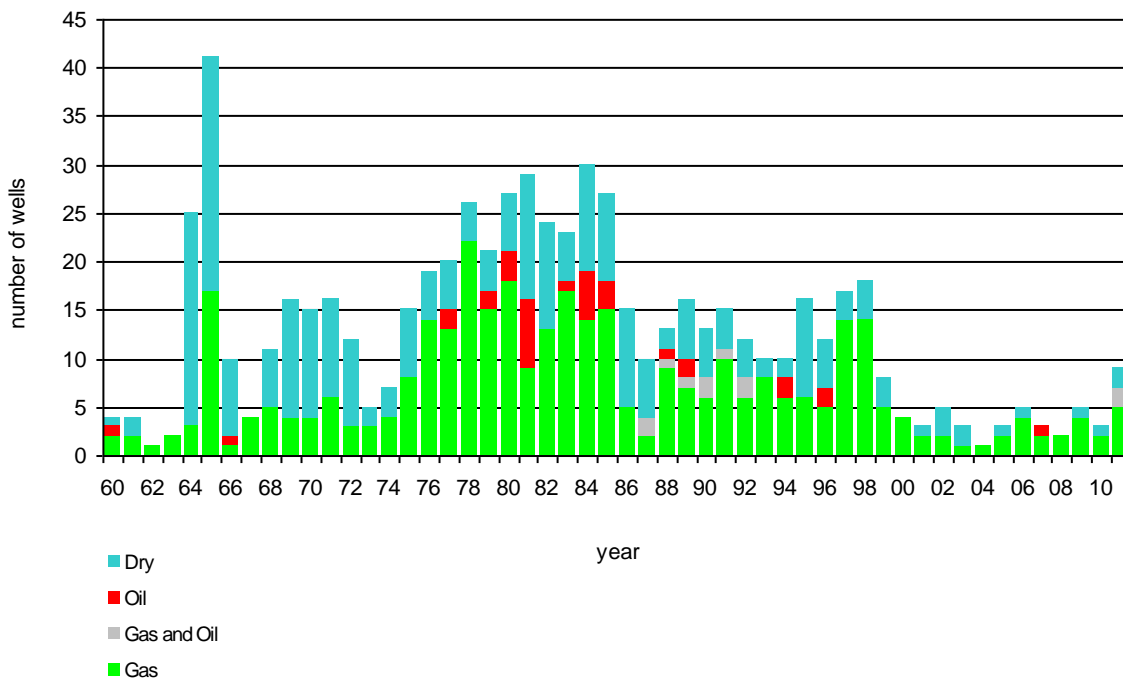
G&O = gas and oil

G = gas

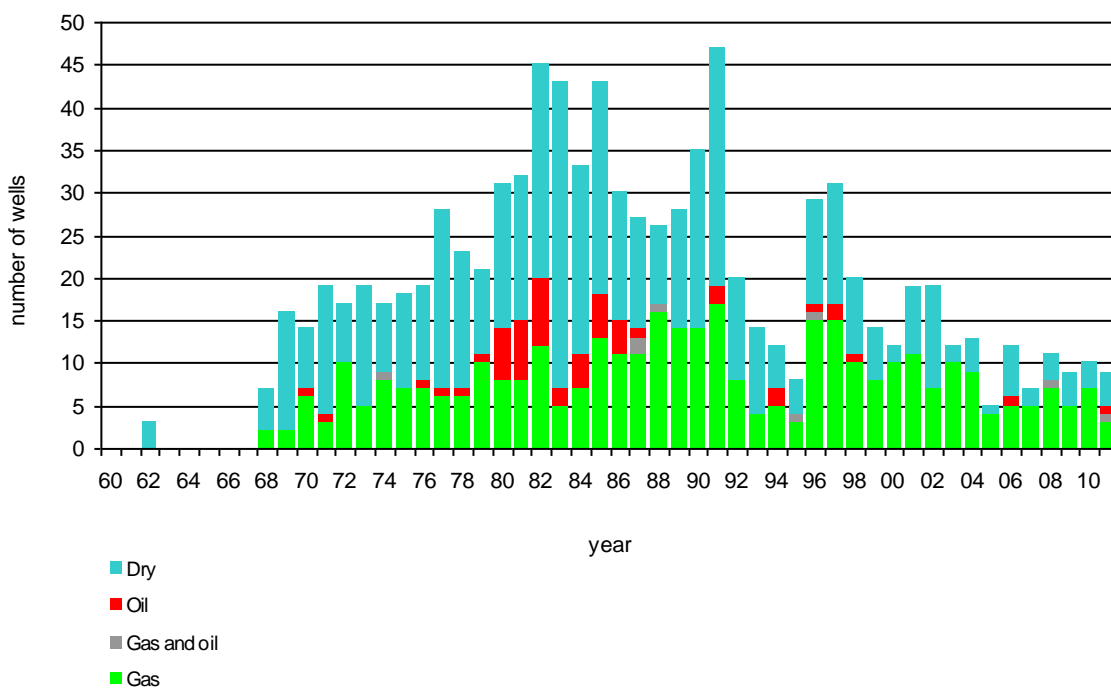
Σ = total

NUMBER OF WELLS, Netherlands Territory and Continental Shelf as of 1960

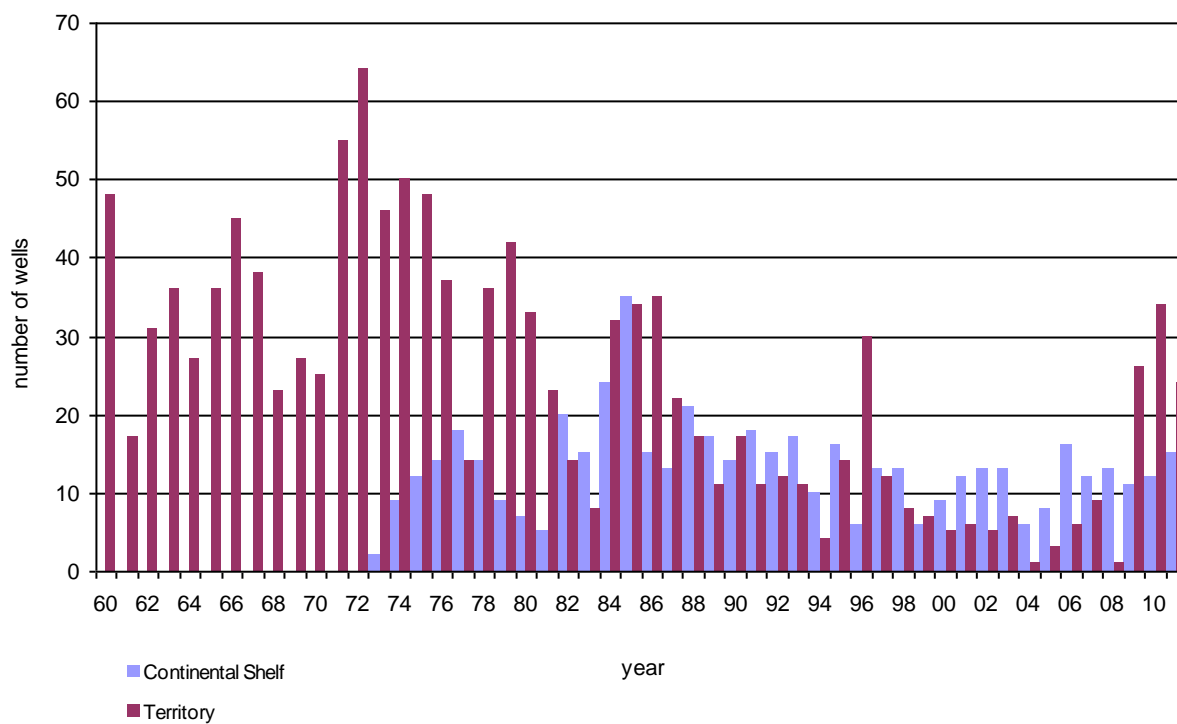
Exploration and appraisal wells, Netherlands Territory 1960 – 2011



Exploration and appraisal wells, Continental Shelf 1960 – 2011



Production wells 1960 – 2011



PLATFORMS, Netherlands Continental Shelf as at January 1st 2012

Platform	Operator	Year of installation	Number of legs	G* / O*	Function
K13-A	Wintershall	1974	8	G	production/compression
K13-A	Wintershall	1974	4	G	wellhead
L10-A	Gaz de France	1974	8	G	production
L10-A	Gaz de France	1974	10	G	wellhead/compression
L10-A	Gaz de France	1974	4	G	riser
L10-B	Gaz de France	1974	4	G	satellite
L10-C	Gaz de France	1974	4	G	satellite
K14-FA-1	NAM	1975	10	G	integrated
L7-B	Total	1975	4	G	integrated
K15-FA-1	NAM	1977	10	G	integrated
K8-FA-1	NAM	1977	10	G	integrated
K8-FA-2	NAM	1977	4	G	satellite
L10-D	Gaz de France	1977	4	G	satellite
L10-E	Gaz de France	1977	4	G	satellite
L7-C(C)	Total	1977	4	G	wellhead
L7-C(P)	Total	1977	8	G	production
L7-C(Q)	Total	1977	4	--	accommodation
K15-FB-1	NAM	1978	10	G	integrated
L7-BB	Total	1978	4	G	wellhead
K7-FA-1	NAM	1980	4	G	wellhead
L10-BB	Gaz de France	1980	3	G	wellhead
L10-F	Gaz de France	1980	4	G	satellite
K10-B	Wintershall	1981	6	G	production
K10-B	Wintershall	1981	6	G	wellhead
L4-A(PA)	Total	1981	8	G	integrated
Q1-HELM	Unocal	1981	6	O	production
Q1-HELM	Unocal	1981	4	O	wellhead
K7-FA-1	NAM	1982	6	G	production
P6-A	Wintershall	1982	8	G	integrated
Q1-HELDER-A	Unocal	1982	6	O	production
Q1-HELDER-A	Unocal	1982	4	O	wellhead
K12-A	Gaz de France	1983	4	--	jacket
L7-C(PK)	Total	1983	4	G	compression
Q1-HOORN	Unocal	1983	6	O	production
Q1-HOORN	Unocal	1983	4	O	wellhead
K12-C	Gaz de France	1984	4	G	satellite
K18-KOTTER	Wintershall	1984	8	O	production
K18-KOTTER	Wintershall	1984	6	O	wellhead
K8-FA-3	NAM	1984	6	G	satellite
L10-EE	Gaz de France	1984	3	G	wellhead
L10-G	Gaz de France	1984	4	G	satellite
L4-B	Total	1984	4	G	wellhead
L7-A	Total	1984	4	G	satellite

Platform	Operator	Year of installation	Number of legs	G* / O*	Function
AWG-1	NAM	1985	3	G	riser
AWG-1P	NAM	1985	6	G	production
AWG-1W	NAM	1985	4	G	wellhead
K12-D	Gaz de France	1985	4	G	satellite
K14-FA-1C	NAM	1985	8	G	compression
L16-LOGGER	Wintershall	1985	4	O	production
L16-LOGGER	Wintershall	1985	4	O	wellhead
P15-RIJN-A	TAQA	1985	4	O	wellhead
P15-RIJN-C	TAQA	1985	6	O	production
P6-B	Wintershall	1985	4	G	satellite
L11b-A	Unocal	1986	4	G	integrated
L13-FC-1	NAM	1986	4	G	wellhead
L13-FC-1	NAM	1986	6	G	production
Q8-A	Wintershall	1986	3	G	wellhead
K12-BD	Gaz de France	1987	4	G	wellhead
K12-BP	Gaz de France	1987	8	G	production
K9ab-A	Gaz de France	1987	4	G	integrated
K9c-A	Gaz de France	1987	4	G	integrated
L10-AC	Gaz de France	1987	4	G	compression
Zuidwal	Total	1987	8	G	wellhead
K12-CC	Gaz de France	1988	4	G	compression
L10-L	Gaz de France	1988	4	G	satellite
L10-S-1	Gaz de France	1988	-	G	subsea completion
L13-FD-1	NAM	1988	4	G	satellite
L7-N	Total	1988	4	G	satellite
L8-A	Wintershall	1988	4	G	satellite
L8-G	Wintershall	1988	6	G	integrated
L8-H	Wintershall	1988	4	G	satellite
K15-FC-1	NAM	1989	4	G	satellite
L13-FE-1	NAM	1989	4	G	satellite
L7-H	Total	1989	4	G	satellite
Q1-HAVEN-A	Unocal	1989	1	O	satellite
K15-FG-1	NAM	1990	4	G	satellite
L11a-A	Gaz de France	1990	4	--	jacket
P12-SW	Wintershall	1990	4	G	satellite
AME-2	NAM	1991	4	G	wellhead
AME-2	NAM	1991	4	G	production
K12-S1	Gaz de France	1991	-	G	subsea completion
K6-D	Total	1991	4	G	wellhead
K6-P	Total	1991	4	G	production
L2-FA-1	NAM	1991	6	G	integrated
F15-A	Total	1992	6	G	integrated
F3-FB-1P	NAM	1992	3+GBS	G+O	integrated
J6-A	ENI	1992	6	G	integrated
K6-C	Total	1992	4	G	wellhead/riser
K6-DN	Total	1992	4	G	satellite

Platform	Operator	Year of installation	Number of legs	G* / O*	Function
L5-FA-1	NAM	1992	6	G	integrated
P15-10S	TAQA	1992	-	G	subsea completion
P15-12S	TAQA	1992	-	G	subsea completion
P15-14S	TAQA	1992	-	G	subsea completion
F3-FB-AP	NAM	1993	3	G+O	accommodation
F3-OLT	NAM	1993	1	O	offshore loading tower
K6-N	Total	1993	4	G	satellite
L15-FA-1	NAM	1993	6	G	integrated
P15-D	TAQA	1993	6	G	production
P15-E	TAQA	1993	4	G	satellite
P15-F	TAQA	1993	4	G	satellite
P15-G	TAQA	1993	4	G	satellite
P18-A	TAQA	1993	4	G	satellite
P9-Horizon	Unocal	1993	4	O	integrated
P9-Seafox-1	Unocal	1993	4	O	accommodation
K5-A	Total	1994	4	G	wellhead
K5-D	Total	1994	4	G	satellite
K5-P	Total	1994	4	G	production
L8-P	Wintershall	1994	4	G	satellite
Q8-B	Wintershall	1994	4	G	satellite
K5-B	Total	1995	4	G	satellite
L13-FH-1	NAM	1995	-	G	subsea completion
Q1-Halfweg	Unocal	1995	4+GBS	G	satellite
K14-FB-1	NAM	1997	4	G	satellite
K4a-D	Total	1997	-	G	subsea completion
K5-EN/C	Total	1997	4	G	satellite
L10-S-2	Gaz de France	1997	-	G	subsea completion
L10-S-3	Gaz de France	1997	-	G	subsea completion
L10-S-4	Gaz de France	1997	-	G	subsea completion
N7-FA-SP	NAM	1997	1	G	satellite
P2-NE	Wintershall	1997	4	G	satellite
P6-S	Wintershall	1997	4	G	satellite
K4-A	Total	1998	4	G	satellite
K6-GT	Total	1998	4	G	satellite
K7-FD-1	NAM	1998	4	G	satellite
L9-FF-1P	NAM	1998	6	G	production
L9-FF-1W	NAM	1998	4	G	wellhead
Q16-FA-1	NAM	1998	-	G	subsea completion
D15-FA-1	NAM	1999	6	G	integrated
K9ab-B	Gaz de France	1999	4	G	satellite
L4-PN	Total	1999	4	G	satellite
F2-A-Hanze	PCN	2000	GBS	G+O	integrated
K4-BE	Total	2000	4	G	satellite
L10-M	Gaz de France	2000	4	G	satellite
L8-A-west	Wintershall	2000	-	G	subsea completion
L8-P4	Wintershall	2000	4	G	integrated

Platform	Operator	Year of installation	Number of legs	G* / O*	Function
Q4-A	Wintershall	2000	4	G	satellite
P6-D	Wintershall	2001	4	G	satellite
K12-G	Gaz de France	2001	4	G	satellite
G17d-A	Gaz de France	2001	4	G	jacket
K8-FA-1P	NAM	2001	4	--	accommodation
K1-A	Total	2001	4	G	satellite
G17d-A	Gaz de France	2002	4	G	satellite
K12-S2	Gaz de France	2002	-	G	subsea completion
K15-FK-1	NAM	2002	4	G	satellite
K5-PK	Total	2002	4	G	satellite
Q4-B	Wintershall	2002	4	G	satellite
K7-FB-1	NAM	2003	4	G	satellite
K12-S3	Gaz de France	2003	0	G	subsea completion
L5-B	Wintershall	2003	4	G	satellite
Q4-C	Wintershall	2003	4	G	satellite
D12-A	Wintershall	2004	4	G	satellite
Q5-A1	Wintershall	2004	-	G	subsea completion
F16-A	Wintershall	2005	6	G	integrated
G14-A	Gaz de France	2005	4	G	satellite
G16-A	Gaz de France	2005	4	G	satellite
G17a-S1	Gaz de France	2005	-	G	subsea completion
G17d-AP	Gaz de France	2005	4	G	production
K2b-A	Gaz de France	2005	4	G	satellite
K17-FA-1	NAM	2005	1	G	satellite
L4-G	Total	2005	-	G	subsea completion
L6d-2	ATP	2005	-	G	subsea completion
P11-B-DeRuyter	PCN	2006	GBS	O	integrated
J6-C	CH4	2006	4	G	riser/compressor
L5-C	Wintershall	2006	4	G	satellite
K12-K	Gaz de France	2006	4	G	wellhead
G14-B	Gaz de France	2006	4	G	wellhead
A12-CPP	Chevron	2007	4	G	Integrated
L09-FA-01	NAM	2007	1	G	wellhead
L09-FB-01	NAM	2007	1	G	wellhead
K05-F	Total	2008	-	G	subsea completion
E17-A	GDFSuez	2009	4	G	satellite
E18-A	Wintershall	2009	4	G	satellite
M7-A	Cirrus	2009	1	G	satellite
P9-A	Wintershall	2009	-	G	subsea completion
P9-B	Wintershall	2009	-	G	subsea completion
F03-FA	Centrica	2010	4	G	production/compression
K5-CU	Total	2010	4	G	satellite
B13-A	Chevron	2011	4	G	satellite
G16a-B	GDF Suez	2011	4	G	satellite
K18-G1	Wintershall	2011	-	G	subsea completion
P11-B-Nes	Dana	2011	-	G	subsea completion

Platform	Operator	Year of installation	Number of legs	G* / O*	Function
P11-C-Van Ghent	Dana	2011	-	G & O	subsea completion

G* = Gas

O* = Oil

GBS = Gravity Based Structure

PIPELINES, Netherlands Continental Shelf as at 1 January 2012

Operator	From	To	Diameter (inches)	Laid (year)	Length (km)	Carries
Gaz de France	L10-C	L10-AP	10,75 * 2,375	1974	1,1	g + m
Gaz de France	L10-B	L10-AP	10,75 * 2,375	1974	7,4	g + m
NGT	L10-AR	Uithuizen	36	1975	179,0	g
Wintershall	K13-AP	Callantsoog	36	1975	120,5	g
Gaz de France	L10-D	L10-AP	10,75 * 2,375	1977	1,1	g + m
Gaz de France	L10-E	L10-AP	10,75 * 2,375	1977	4,0	g + m
NAM	K8-FA-1	K14-FA-1P	24	1977	30,9	g
NAM	K14-FA-1P	WGT-pipe (s)	24	1977	0,1	g + co
TotalFinaElf	L7-B	L7-P	12,75,4,5,3,5	1977	7,9	g + w + g
TotalFinaElf	L7-P	L10-AR	16	1977	15,8	g
Wintershall	K13-B	K13-AP	10 * 2	1977	9,2	aband.
NAM	K11-FA-1	K8-FA-1	6,625	1978	6,0	aband.
NAM	K8-FA-1	K8-FA-2	3	1978	4,0	c
NAM	K8-FA-2	K8-FA-1	10,75	1978	3,8	g + co
NAM	K15-FA-1	WGT-pipe (s)	24	1978	0,1	co
Wintershall	K13-D	K13-C	10 * 2	1978	3,5	aband.
Wintershall	K13-C (Bypass)	K13-AP	20	1978	10,2	g
Gaz de France	L10-F	L10-AP	10,75 * 2,375	1980	4,3	g + m
TotalFinaElf	L4-A	L7-P	12,75 ,3,5	1981	22,8	g + gl
NAM	K7-FA-1P	K8-FA-1	18	1982	9,4	g + co
Unocal	Q1-Helder-AW	Q1-Helm-AP	20	1982	6,2	o
Unocal	Q1-Helm-AP	Ijmuiden	20	1982	56,7	o
Wintershall	K10-C (Bypass)	K10-B	10 * 2	1982	5,2	g + m
Wintershall	K10-B	K13-C (Bypass)	20	1982	7,4	g
Gaz de France	K12-A	L10-AP	14 * 2,375	1983	29,2	g + m
NAM	K15-FB-1	Callantsoog	24	1983	74,3	g + co
Unocal	Q1-Hoorn-AP	Q1-Helder-AW	10,75	1983	3,5	o
Wintershall	P6-A	L10-AR	20	1983	78,7	g
Gaz de France	L10-G	L10-B / L10-A (s)	10,75 * 2,375	1984	4,7	g + m
Gaz de France	L10-K	L10-B / L10-A (s)	10,75 * 2,375	1984	5,8	aband.
Gaz de France	L10-B	L10-AD	14	1984	6,8	g
Gaz de France	L10-EE	L10-B / L10-A (s)	10	1984	0,2	g
Gaz de France	K12-C	K12-A / L10-A (s)	10 * 2	1984	0,4	g + m
Wintershall	K18-Kotter-P	Q1-Helder-A	12	1984	20,2	o
TAQA	P15-C	Hoek v. Holland	10	1985	42,6	o
TAQA	P15-B	P15-C	10	1985	3,4	aband.
TAQA	P15-B	P15-C	6	1985	3,4	aband.
TAQA	P15-C	P15-B	6	1985	3,4	aband.
TAQA	P15-B	P15-C	4	1985	3,4	aband.
Gaz de France	K12-D	K12-C	10,75 * 2,375	1985	4,3	g + m
NAM	AWG-1R	NGT-pipe (s)	20	1985	7,1	g + co +ci
NAM	AME-1	AWG-1R	20	1985	4,2	g + co
TotalFinaElf	L4-B	L7-A	10,75 , 3,5	1985	10,1	g + gl
TotalFinaElf	L7-A	L7-P	10,75, 3,5	1985	10,4	g + gl

Operator	From	To	Diameter (inches)	Laid (year)	Length (km)	Carries
Wintershall	L16-Logger-P	K18-Kotter-P	8	1985	18,9	o
Wintershall	K18-Kotter-P	L16-Logger-P	6	1985	18,9	w
Wintershall	P6-B	P6-A	12 * 3	1985	3,9	g + gl
Wintershall	P6-C (toek.plf)	P6-B	12 * 3	1985	2,9	g + gl
Gaz de France	K12-A/ L10-A (s)	K12-E	2,375	1986	3,9	aband.
Gaz de France	K12-E	K12-C	10,75	1986	6,3	aband.
NAM	L13-FC-1P	K15-FA-1	18	1986	15,4	g + co
NAM	K8-FA-3	K7-FA-1P	12,75	1986	8,9	g
NGT	L11-B	NGT-pipe (s)	14	1986	6,8	g
Unocal	Q1-Helder-B	Q1-Helder-AW	8,625	1986	1,8	aband.
Wintershall	Q8-A	Wijk aan Zee	10	1986	13,7	g
NAM	K15-FA-1	K14-FA-1C	18	1987	24,2	g + co
NGT	K12-BP	L10-AR	18	1987	21,4	g
NGT	K9c-A	L10-AR	16	1987	36,6	g
NGT	K9c-A/L10-AR(s)	K9ab-A	16	1987	0,1	g
TotalFinaElf	Zuidwal	Harlingen TC	20 , 3 , 3	1987	20,3	g + gl + c
Gaz de France	K12-A	K12-CC	10,75	1988	8,3	g
Gaz de France	L10-L	L10-AP	10,75 * 2,375	1988	2,2	g + m
Gaz de France	L10-S1	L10-AP	6,625 * 2,375	1988	11,5	aband.
Gaz de France	K12-E	L10-S1	90 mm	1988	4,6	aband.
NGT	L8-G	L11b-A	14	1988	14,4	g
TotalFinaElf	L7-P	L7-N	10,75 * 3,5	1988	4,2	g + gl
Wintershall	L8-H	L8-A / L8-G(s)	8	1988	0,2	g
Wintershall	K13-C (Bypass)	K10-B / K13-A (s)	20	1988	2,5	g
Wintershall	L8-A	L8-G	8	1988	10,0	g
NAM	L13-FD-1	L13-FC-1P	10	1989	3,7	g + co
NAM	L13-FC-1P	L13-FD-1	3,6	1989	3,6	c
NAM	K8-FA-2	K8-FA-1	10,75	1989	4,0	g + co +ci
TotalFinaElf	L7-H	L7-N	10,75 * 3,5	1989	10,4	g + gl
Unocal	Q1-Haven-A	Q1-Helder-AW	8,625	1989	5,8	aband.
Gaz de France	L14-S1	L11a-A	6,625 * 2,375	1990	6,0	aband.
Gaz de France	K12-B	K12-S1	3,5	1990	4,9	c
NAM	K15-FC-1	K15-FB-1	10,75	1990	7,9	g + co
NAM	K15-FB-1	K15-FC-1	4,03	1990	7,9	c
NAM	K15-FG-1	K15-FA-1	14,3	1990	7,0	g + co
NAM	K15-FA-1	K15-FG-1	4,03	1990	7,0	c
NAM	L13-FE-1	L13-FC-1P	12,98	1990	4,3	g + co
NAM	L13-FC-1P	L13-FE-1	3,76	1990	4,3	c
NGT	L11-A	NGT-pipe (s)	10,75	1990	11,8	aband.
Wintershall	P12-C	P12-SW	8 * 3	1990	6,9	aband.
Wintershall	P12-SW	P6-A	12 * 3	1990	42,0	g + gl
Gaz de France	K12-S1	K12-BP	6,625 * 2,375	1991	4,9	aband.
NAM	AME-2	AWG-1R	13,6	1991	5,2	g + co
NAM	AWG-1R	AME-2	4,02	1991	5,2	c
NAM	F3-FB-1P	L2-FA-1	24	1991	108,1	g + co
NAM	L2-FA-1	Callantsoog	36	1991	144,2	g + co
NAM	L5-FA-1	NOGAT-pipe (s)	16	1991	0,4	g + co

Operator	From	To	Diameter (inches)	Laid (year)	Length (km)	Carries
NAM	L15-FA-1	NOGAT-pipe (s)	16	1991	0,4	g + co
NAM	F15-A	NOGAT-pipe (s)	16	1991	0,3	g + co
NGT	K6-C	K9c-A	16	1991	5,2	g
TotalFinaElf	K6-D	K6-C	10,75 * 3,5	1991	3,8	g + gl
TotalFinaElf	K6-DN	K6-C	12,75 * 3,5	1992	5,4	g + gl
Wintershall	J6-A	K13-AW	24	1992	85,8	g
TAQA	P15-D	Maasvlakte	26	1993	40,1	g
TAQA	P15-E	P15-D	10 * 2	1993	13,9	g + m
TAQA	P15-F	P15-D	12 * 3	1993	9,1	g + m
TAQA	P15-G	P15-D	12 * 3	1993	9,1	g + m
TAQA	P15-10S	P15-D	4 * 2	1993	3,9	g + m
TAQA	P15-D	P15-10S	90 mm	1993	3,9	c
TAQA	P15-12S	P15-D	4 * 2	1993	6,1	g + m
TAQA	P15-D	P15-12S	90 mm	1993	6,1	c
TAQA	P15-14S	P15-G	4 * 2	1993	3,7	g + m
TAQA	P15-D	P15-14S	90 mm	1993	8,0	c
TAQA	P18-A	P15-D	16 * 3	1993	20,8	g + m
NAM	F3-FB-1P	F3-OLT	16	1993	2,0	o
NAM	F3-FB-1P	F3-OLT	3,21	1993	2,0	c
TotalFinaElf	K6-N	K6-C	12,75 * 3,5	1993	8,5	g + gl
Unocal	P9-Horizon-A	Q1-Helder-AW	10,75	1993	4,8	o + w
Wintershall	K10-V	K10-C (Bypass)	10 * 2	1993	10,3	g + m
Wintershall	P14-A	P15-D	10 * 2	1993	12,6	aband.
Lasmo	Markham ST-I (UK)	J6-A	12 * 3	1994	5,5	g + m
TotalFinaElf	K5-D	K5-A	12,75 * 3,6	1994	10,6	g + gl
Wintershall	Q8-B	Q8-A	8 * 2	1994	8,3	g + m
Wintershall	K5-A	J6-A / K13-AW (s)	18	1994	0,3	g
Wintershall	L8-P	L8-G	8 * 2	1994	7,5	g + m
Gaz de France	K11-B	K12-C	14 * 2,375	1995	16,1	aband.
NAM	L13-FH-1	K15-FA-1	6,625	1995	9,4	g + co + m + ci
NAM	K15-FA-1	L13-FH-1	2,98	1995	9,4	c
TotalFinaElf	K5-B	K5-A	346 mm	1995	6,4	g
TotalFinaElf	K5-A	K5-B	3,5	1995	6,4	m + c
Unocal	Q1-Halfweg	Q1-Hoorn-AP	12,75 * 2,375	1995	12,4	g + co + m
Unocal	Q1-Hoorn-AP	Q1-Halfweg	70,9 mm	1995	12,4	c
Unocal	Q1-Hoorn-AP	WGT-pipe (s)	12,75	1995	17,2	g + co
Unocal	Q1-Haven-A	Q1-Helder-AW	8,625	1995	5,8	o + w
Wintershall	P2-NE	P6-A	10	1996	38,2	aband.
Wintershall	P6-S	P6-B	203 mm	1996	6,5	g
Gaz de France	L10-S2	L10-AP	6,625 * 2,375	1997	6,3	g + m
Gaz de France	L10-AP	L10-S2	84 mm	1997	7,0	c
Gaz de France	L10-S3	L10-AP	6,625 * 2,375	1997	1,9	g + gl
Gaz de France	K12-E	L10-S3	3,5	1997	4,5	c
Gaz de France	L10-S4	L10-AP	6,625 * 2,375	1997	8,3	g + m
Gaz de France	L10-AP	L10-S4	84 mm	1997	8,4	c
NAM	K14-FA-1P	K15-FB-1	16	1997	16,6	g

Operator	From	To	Diameter (inches)	Laid (year)	Length (km)	Carries
NAM	K14-FB-1	K14-FA-1P	10,75	1997	9,2	g + co
NAM	K14-FA-1P	K14-FB-1	3,65	1997	9,2	c
NAM	L9-FF-1P	NOGAT-pipe (s)	24	1997	19,3	g + co
TotalFinaElf	K4a-D	J6-A	183 mm	1997	7,3	g
TotalFinaElf	J6-A	K4a-D	2,5	1997	7,4	m + c
TotalFinaElf	K5-EN/C	K5-D	303 mm	1997	2,7	aband.
TotalFinaElf	K5-D	K5-EN/C	2,5	1997	2,7	gl
TotalFinaElf	K5-B	K5-EN/C	70 mm	1997	6,2	c
NAM	K7-FD-1	K8-FA-1	12	1998	9,4	g + co
NAM	K7-FD-1	K8-FA-1	3,4	1998	9,4	c
NAM	K8-FA-1	K14-FA-1C	24	1998	30,9	g
NAM	Q16-FA-1	P18-A	8,625	1998	10,3	g + co
NAM	P18-A	Q16-FA-1	2,375	1998	10,3	m
NAM	Q16-FA-1	P18-A	3,4	1998	10,3	c
TotalFinaElf	K4-A	K5-A	12 * 3	1998	6,9	g + gl
TotalFinaElf	K6-GT	L4-B	10 * 3	1998	10,7	g + gl
TotalFinaElf	K4-A	K5-A	2,5	1998	6,7	c
Gaz de France	K9ab-B	D15-FA-1/L10-A (s)	10	1999	0,1	g
NGT	D15-FA-1	L10-AC	36	1999	140,7	g
TotalFinaElf	L4-PN	L4-A	10	1999	11,4	aband.
TotalFinaElf	L4-A	L4-PN	4	1999	11,4	gl
Gaz de France	L10-M	L10-AP	10,75 * 2,375	2000	11,9	g + m
Petro-Canada	F2-A-Hanze	TMLS	16	2000	1,5	o
TotalFinaElf	K4-BE	K4-A	9,5	2000	8,0	aband.
TotalFinaElf	K4-A	K4-BE	2,5	2000	8,0	gl
Wintershall	Q4-A	P6-A	14	2000	35,2	g + co
Wintershall	Duitsland (A6)	F3-FB-1P	20 , 4	2000	119,0	g + co
Wintershall	L8-A-West	L8-P4	6	2000	10,2	g + co
Wintershall	L8-P4	L8-A-West	82 mm	2000	10,2	c
Wintershall	L8-P	L8-P4	12	2000	2,8	g
Wintershall	L8-P4	NGT-pipe (s)	16	2000	28,0	g + co
Gaz de France	K12-G	L10-AP	14 , 2	2001	15,6	g + m
NGT	G17d-A	NGT-pipe (s)	18	2001	64,5	g
Petro-Canada	F2-A-Hanze	A6 / B4 (s)	4	2001	0,1	g
Petro-Canada	F2-A-Hanze	A6 / B4 (s)	62,1 mm	2001	0,1	c
Petro-Canada	F2-A-Hanze	TMLS	62,1 mm	2001	1,5	c
TotalFinaElf	K5-EN/C	K5-D	10,75	2001	2,8	g
TotalFinaElf	K1-A	J6-A	14,75 * 3,5	2001	9,2	g + m
Wintershall	P6-D	P6-B	12	2001	6,8	g
Gaz de France	K12-S2	K12-C	6,625	2002	6,9	g
Gaz de France	K12-S2	K12-C	95,5 mm	2002	6,9	c
Wintershall	Q4-B	Q4-A	10,75	2002	7,3	g
Wintershall	Q4-C	Q1-Hoorn	16 * 2	2002	14,3	g + gl
Gaz de France	K12-S3	K12-BP	6	2003	3,4	g
Gaz de France	K12-BP	K12-S3	95,5 mm	2003	3,4	c
Maersk	Denemarken (Tyra WE)	F3-FB-1P	26	2003	38,0	g

Operator	From	To	Diameter (inches)	Laid (year)	Length (km)	Carries
Maersk	F3-FB-1P	subsea valve station	4	2003	0,3	c
NAM	K7-FB-1	K7-FD-1	12	2003	17,0	g
NAM	K8-FA-1	K7-FB-1	4	2003	26,0	c
NAM	K15-FK-1	K15-FB-1	10	2003	8,0	g
NAM	K15-FK-1	K15-FB-1	4	2003	8,0	c
Wintershall	L5-B	L8-P4	10 , 4	2003	6,4	g + c
Total	K4-BE	K4-A	10	2004	8,0	g
Wintershall	D12-A	D15-FA-1	10	2004	4,9	g
Wintershall	D12-A	D15-FA-1	10	2004	4,9	c
Wintershall	Q5-A1	Q8-B	8	2004	13,5	g
Wintershall	Q5-A1	Q8-B	4	2004	13,5	c
Wintershall	F16-A	NGT	24	2005	32,0	g
Gaz de France	G14-A	G17d-AP	12 + 2	2005	19,8	g + m
Gaz de France	G17a-S1	G17d-AP	6 + 92,5 mm	2005	5,67	g + c
Gaz de France	K2b-A	D15-FA-1/L10-A	12	2005	2,8	
		NGT-pipe (s)				
NAM	K17-FA-1	K14-FB-1	16 * 2	2005	14,4	g + m
Total	L4-G	L4-A	6 + 4	2005	9,6	g + c
ATP	L6d-2	G17d-AP	6 + 73 mm	2005	40,0	g + c
Petro-Canada	P11-B-Ruyter	P11-B-TMLS	16	2005	1,5	o
Petro-Canada	P11-B-Ruyter	P12-SW	8	2005	29,0	g
ATP	L6d	G17d-AP	6 * 73 mm	2006	40,0	g + c
CH4 Limited	Chiswick (UK)	J6-CT	10 * 1,5	2006	18,3	g + m
Gaz de France	G16A-A	G17d-AP	10 * 2	2006	17,8	g + m
Gaz de France	Minke (UK)	D15-FA-1	8 , 90,6 mm	2006	15,1	g + c
Grove	Grove (UK)	J6-CT	10 * 2	2006	13,4	g + m
NAM	K17-FA-1	K14-FB-1	16 * 2	2006	14,4	g + m
Petro-Canada	P11-B-Ruyter	P11-B-TMLS	16	2006	1,5	o
Petro-Canada	P11-B-Ruyter	P12-SW	8	2006	29,0	g
Total	L4G	L4-PA	6 , 92 mm	2006	10,6	g + c
Wintershall	L5-C	L8-P4	10 , 82 mm	2006	8,1	g + c
Chevron	A12 CCP	B10 NOGAT	16	2007	16,0	g
Gaz de France	G14-B	G17-D-AP	12	2007	13,4	g + m
Venture	Stamfort (UK)	J6-CT	6	2008	7,0	g
Total	L4PN	L4A	10	2008	11,4	g
NAM	L9FA	via L9FB-1» L9FF-1	16 and 2x2	2008	20,0	g + gl + gi
Total	K5-F	K6N	8	2008	10,0	g
Gaz de France	G14-B	G17-D-AP	12 + 2	2008	13,4	g + m
Gaz de France	K12-K	K12-BP	14+ 2	2008	10,3	g + m
GDFSuez	E17-A	NGT	12	2009	2	g
Wintershall	E18-A	F16-A	10 + 84mm	2009	5,4	g+c
Wintershall	P9B	P6D	8 + 70mm	2009	16,8	g+c
Wintershall	P9A	P9B – P6D	8 + 70mm	2009	-	g+c
Cirrus	M7-A	L09-FF	6 + 2	2009	12	g+c
Wintershall	D15-FA-1	D15-A	12 + 2	2010	20,6	g
Chevron	B13-A	A12-CPP	16	2011	22	g
GDF Suez	G16a-B	G17d-AP	14	2011	14	g

Operator	From	To	Diameter (inches)	Laid (year)	Length (km)	Carries
NAM	K18-G1	K15-FA-1		2011	10	g+c
Dana	P11-B-Nes	P11-B-De Ruyter	8	2011	8	g+c
Dana	P11-C-Van Ghent	P11-B-De Ruyter	8	2011	4.5	g+c

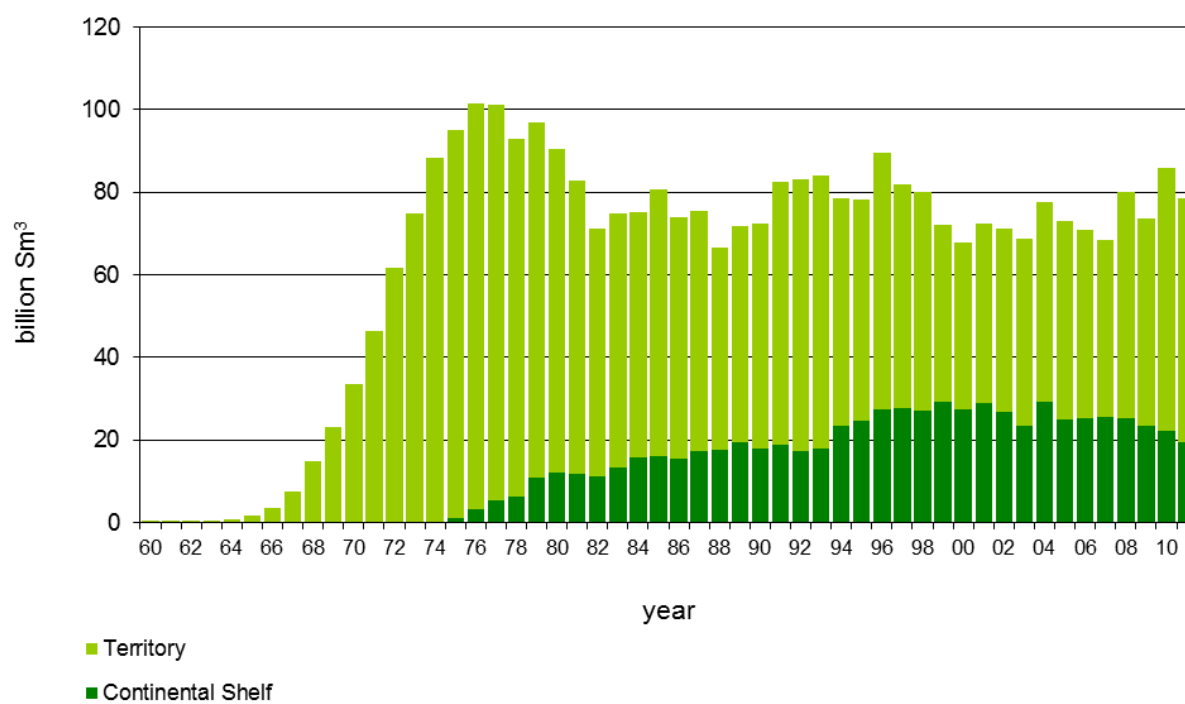
*	= multiple pipeline	gl	= glycol
+	= laid separately	m	= methanol
c	= control cable	ci	= corrosion inhibitor
o	= oil	l	= instrument air
g	= gas	(s)	= side-tap
co	= condensate	aband.	= abandoned

GAS PRODUCTION in million Sm³

Year	Territory	Continental Shelf	Total
1960	384.0	0.0	384.0
61	476.0	0.0	476.0
62	538.0	0.0	538.0
63	603.0	0.0	603.0
64	876.0	0.0	876.0
1965	1818.0	0.0	1818.0
66	3564.0	0.0	3564.0
67	7423.0	0.0	7423.0
68	14889.0	0.0	14889.0
69	23097.0	0.0	23097.0
1970	33418.0	7.9	33425.9
71	46248.0	2.4	46250.4
72	61661.0	1.4	61662.4
73	74766.0	7.8	74773.8
74	88359.0	14.6	88373.6
1975	93924.0	963.3	94887.3
76	98307.0	3092.7	101399.7
77	95603.0	5479.6	101082.6
78	86475.0	6298.5	92773.5
79	85862.0	10925.5	96787.5
1980	78209.0	12102.0	90311.0
81	70928.0	11798.3	82726.3
82	60004.0	11073.3	71077.3
83	61533.0	13172.2	74705.2
84	59352.0	15787.3	75139.3
1985	64573.0	16070.9	80643.9
86	58480.0	15549.0	74029.0
87	58089.0	17271.4	75360.4
88	49092.0	17591.2	66683.2
89	52570.0	19300.0	71870.0
1990	54585.0	17856.0	72441.0
91	63724.0	18686.3	82410.3
92	65702.0	17279.0	82981.0
93	66154.0	17851.4	84005.4
94	54863.0	23536.9	78399.9
1995	53643.0	24706.9	78349.9
96	62295.0	27350.6	89645.6
97	54261.0	27581.0	81842.0
98	52764.0	27141.0	79905.0
99	42823.0	29207.0	72030.0
2000	40320.2	27473.9	67794.1
01	43220.8	29043.1	72263.9
02	44472.4	26770.1	71242.5
03	45257.1	23508.0	68765.1
04	48422.3	29121.7	77544.0

Year	Territory	Continental Shelf	Total
2005	48019.2	25097.2	73116.4
06	45561.5	25179.9	70741.4
07	42706.6	25603.2	68309.8
08	54734.2	25224.3	79958.5
09	50339.2	23393.1	73732.3
2010	63825.9	22080.2	85906.1
11	58978.0	19579.1	78557.1
Total	2 587 792.4	709 779.2	3 297 571.6

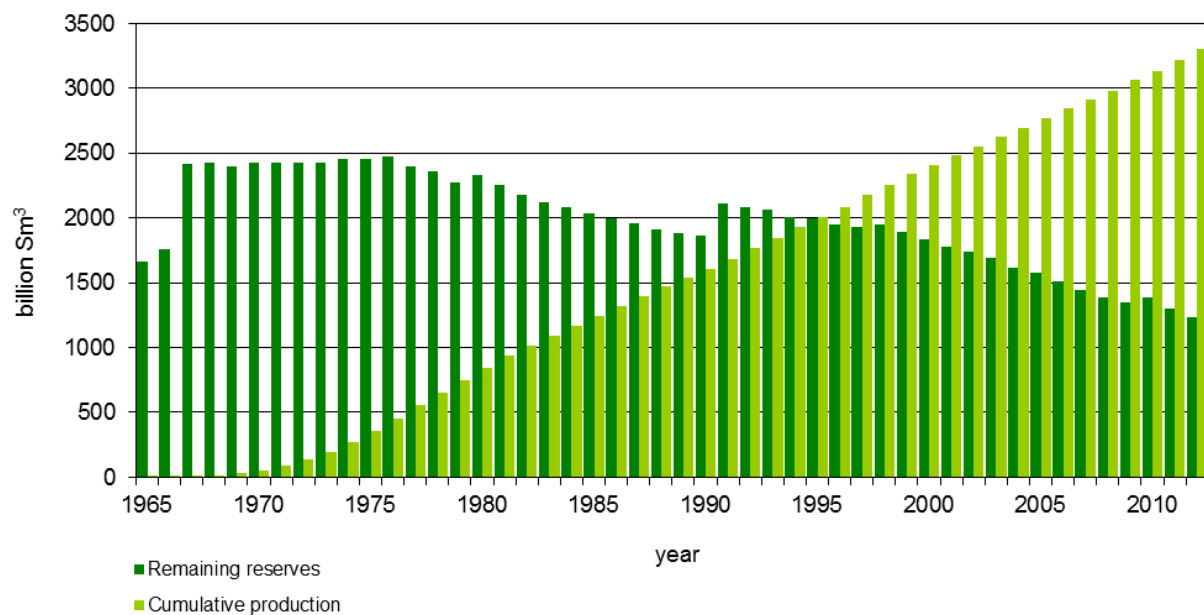
Gas production 1960-2011



GAS RESERVES AND CUMULATIVE PRODUCTION in billion Sm³

Year as at 1 January	Territory		Continental Shelf		Total	
	expected reserves	cumulative production	expected reserves	cumulative production	expected reserves	cumulative production
1974	2243	269.8	211	0.0	2454	269.8
1975		358.1		0.0	2454	358.2
76	2137	452.0	340	1.0	2477	453.0
77	2030	550.4	367	4.1	2397	554.4
78	1996	646.0	363	9.6	2359	655.5
79	1928	732.4	343	15.9	2271	748.3
1980	2023	818.3	304	26.8	2327	845.1
81	1953	896.5	298	38.9	2251	935.4
82	1899	967.4	275	50.7	2174	1018.1
83	1845	1027.4	272	61.8	2117	1089.2
84	1809	1089.0	271	74.9	2080	1163.9
1985	1754	1148.3	281	90.7	2035	1239.0
86	1704	1212.9	290	106.8	1994	1319.7
87	1655	1271.4	300	122.3	1955	1393.7
88	1607	1329.5	303	139.6	1910	1469.1
89	1557	1378.6	320	157.2	1877	1535.8
1990	1524	1431.1	341	176.5	1865	1607.6
91	1780	1485.7	333	194.4	2113	1680.1
92	1739	1549.4	347	213.1	2086	1762.5
93	1705	1615.1	356	230.3	2061	1845.5
94	1658	1681.3	352	248.2	2010	1929.5
1995	1663	1736.1	334	271.7	1997	2007.9
96	1631	1789.8	321	296.4	1952	2086.2
97	1587	1852.1	343	323.8	1930	2175.9
98	1574	1906.3	373	351.4	1947	2257.7
99	1533	1959.1	360	378.5	1893	2337.6
2000	1499	2001.9	337	407.7	1836	2409.6
01	1447	2042.3	330	435.2	1777	2477.4
02	1406	2085.5	333	464.2	1738	2549.7
03	1362	2129.9	327	491.0	1689	2620.9
04	1357	2175.2	258	514.5	1615	2689.7
2005	1305	2223.6	267	543.6	1572	2767.3
06	1285	2271.6	225	568.7	1510	2840.4
07	1233	2317.2	206	593.9	1439	2911.1
08	1192	2359.9	198	619.5	1390	2979.4
09	1162	2414.6	183	644.7	1345	3059.4
2010	1206	2465.0	184	668.1	1390	3133.1
11	1140	2528.8	164	690.2	1304	3219.0
12	1068	2587.8	162	709.8	1230	3297.6

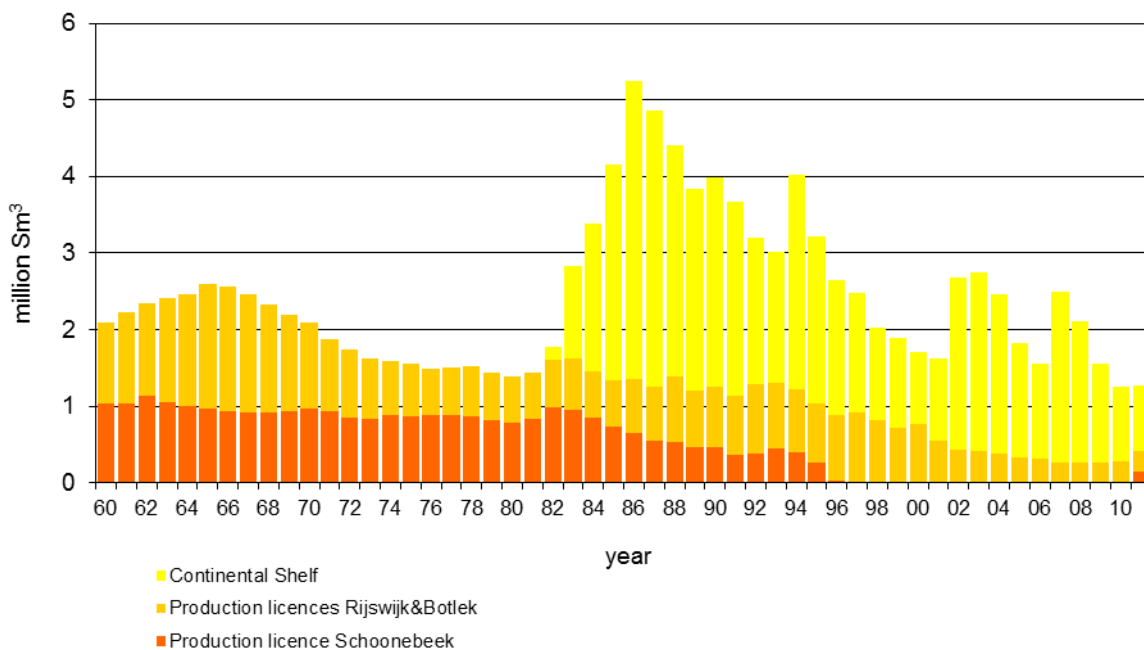
Gas reserves and cumulative production (1 January 2012), 1965 – 2012



OIL PRODUCTION in 1 000 Sm³

Year	Production licence Schoonebeek	Production licence Rijswijk & Botlek	Continental Shelf	Total
t/m 1969	21 662.0	13.776 0	--	35 438.0
1970	976.0	1 112.2	--	2 088.2
71	940.7	926.8	--	1 867.5
72	856.3	883.1	--	1 739.4
73	838.2	787.4	--	1 625.6
74	878.0	715.5	--	1 593.5
1975	877.0	671.5	--	1 548.5
76	891.9	605.2	--	1 497.1
77	890.8	617.8	--	1 508.6
78	862.3	667.8	--	1 530.1
79	820.4	615.6	--	1 436.0
1980	778.9	617.7	--	1 396.6
81	839.2	596.5	--	1 435.7
82	987.9	625.3	159.7	1 772.9
83	960.0	655.6	1 209.1	2 824.7
84	846.9	615.6	1 921.7	3 384.2
1985	734.5	602.8	2 825.4	4 162.7
86	658.9	688.8	3 889.7	5 237.4
87	556.4	692.5	3 607.8	4 856.7
88	536.0	844.9	3 032.9	4 413.8
89	464.3	731.6	2 634.5	3 830.4
1990	463.0	784.9	2 744.5	3 992.4
91	366.0	777.3	2 527.9	3 671.2
92	379.3	907.3	1 920.7	3 207.3
93	454.0	849.0	1 709.8	3 012.8
94	406.4	811.4	2 804.8	4 022.6
1995	268.3	760.9	2 182.1	3 209.3
96	23.2	856.5	1 767.2	2 647.0
97	-	917.6	1 556.8	2 474.4
98	-	810.4	1 218.9	2 029.3
99	-	714.6	1 173.2	1 887.8
2000	-	776.1	936.4	1 712.5
01	-	542.2	1 085.4	1 627.6
02	-	439.0	2 236.4	2 675.4
03	-	416.2	2 324.6	2 740.0
04	-	381.3	2 081.7	2 463.0
2005	-	335.4	1 489.7	1 825.1
06	-	322.2	1 238.3	1 560.5
07	-	264.1	2 232.9	2 497.0
08	-	261.3	1 841.1	2 102.4
09	-	260.0	1 295.7	1 559.7
2010	-	280.6	981.7	1 262.3
11	144.5	277.3	847.9	1 269.7
Total	40 361.3	40 799.8	57 478.5	138 636.9

Oil production 1960 – 2011



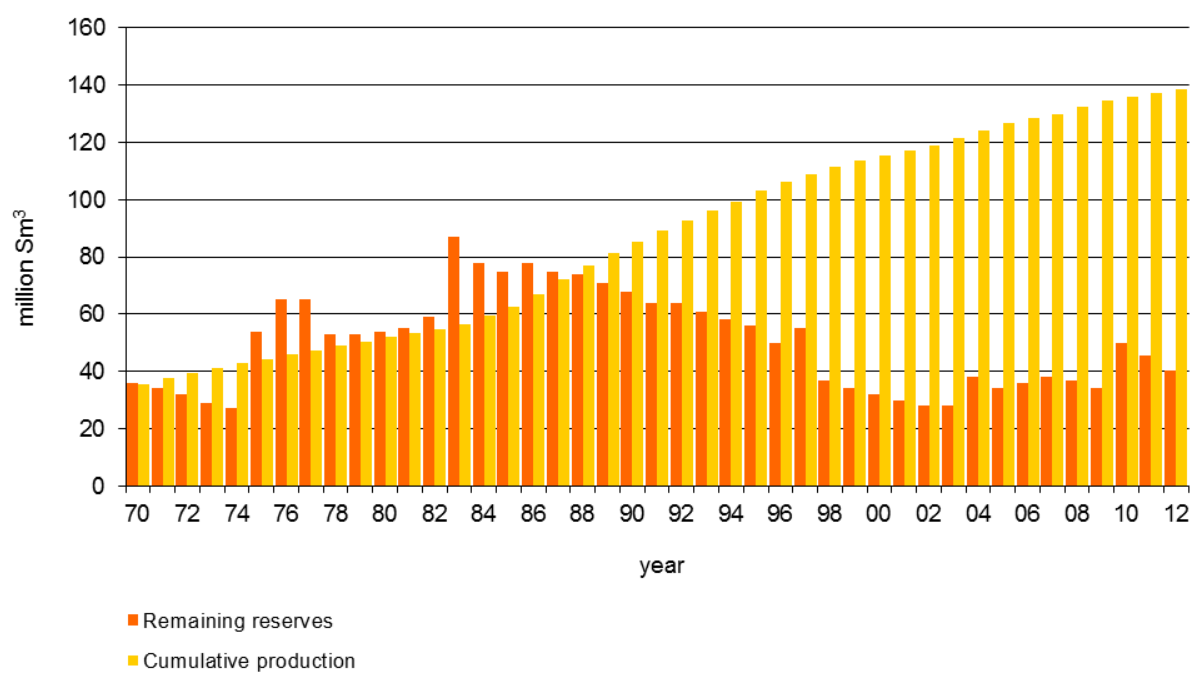
OIL RESERVES AND CUMULATIVE PRODUCTION in million Sm³

Year	Territory		Continental Shelf		Total		
	as at January 1 st	expected reserves	cumulative production	expected reserves	cumulative production	expected reserves	cumulative production
1970			35.4				35.4
71			37.5				37.5
72			39.4				39.4
73			41.1	-	-		41.1
74	27		42.8	-	-		42.8
1975	40		44.4	14	-		44.4
76	51		45.9	14	-	65	45.9
77	49		47.4	16	-	65	47.4
78	46		48.9	7	-	53	48.9
79	44		50.4	9	-	53	50.4
1980	43		51.9	11	-	54	51.9
81	41		53.3	14	-	55	53.3
82	39		54.7	20	-	59	54.7
83	38		56.3	49	0.2	87	56.5
84	37		57.9	41	1.4	78	59.3
1985	41		59.4	34	3.3	75	62.7
86	42		60.7	36	6.1	78	66.8
87	40		62.1	35	10.0	75	72.1
88	41		63.3	33	13.6	74	76.9
89	39		64.7	32	16.6	71	81.4
1990	41		65.9	27	19.3	68	85.2
91	40		67.2	24	22.0	64	89.2
92	38		68.3	26	24.6	64	92.9
93	37		69.6	24	26.5	61	96.1
94	35		70.9	23	28.2	58	99.1
1995	34		72.1	22	31.0	56	103.1
96	33		73.1	17	33.2	50	106.3
97	33		74.0	22	34.9	55	109.0
98	12		74.9	25	36.5	37	111.4
99	8		75.7	26	37.7	34	113.5
2000	7		76.5	25	38.9	32	115.3
01	6		77.2	24	39.8	30	117.1
02	5		77.8	23	40.9	28	118.7
03	5		78.2	23	43.1	28	121.4
04	21		78.6	17	45.5	38	124.1
2005	19		79.0	15	47.6	34	126.6
06	23		79.3	13	49.0	35	128.4
07	24		79.7	14	50.3	38	129.9
08	24		79.9	13	52.5	37	132.4
09	25		80.2	9	54.4	34	134.5

Year	Territory		Continental Shelf		Total		
	as at January 1 st	expected reserves	cumulative production	expected reserves	cumulative production	expected reserves	cumulative production
2010		37	80.5	13	55.6	50	136.0
2011		33.7	80.7	12	56.6	45.7	137.4
2012		28.6	81.2	11.8	57.5	40.4	138.6

This table has been corrected for a cumulative error due to the rounding off of the annual figures.

Oil reserves and cumulative production in million Sm³ 1970 – 2012



NATURAL GAS REVENUES

Year	Non-tax moneys* (10 ⁹ €)	Corporate income tax (10 ⁹ €)	Total (10 ⁹ €)
1960	0	0	0
61	0	0	0
62	0	0	0
63	0	0	0
64	0	0	0
1965	0	0	0
66	0	0.01	0.01
67	0.01	0.04	0.05
68	0.02	0.07	0.09
69	0.05	0.14	0.19
1970	0.09	0.18	0.27
71	0.14	0.27	0.41
72	0.14	0.41	0.55
73	0.23	0.54	0.77
74	0.41	0.86	1.27
1975	1.27	1.09	2.36
76	2.18	1.18	3.36
77	2.72	1.23	3.95
78	2.68	1.27	3.95
79	3.09	1.36	4.45
1980	4.36	1.91	6.27
81	6.22	2.45	8.67
82	6.35	2.45	8.8
83	6.22	2.45	8.67
84	7.40	2.54	9.94
1985	8.58	2.54	11.12
86	5.45	1.86	7.31
87	2.86	1.23	4.09
88	2.00	0.86	2.86
89	2.18	0.78	2.96
1990	2.61	0.96	3.57
91	3.72	1.17	4.89
92	3.04	1.02	4.06
93	2.83	0.95	3.78
94	2.34	0.91	3.25
1995	2.64	1.13	3.77
96	3.10	1.26	4.36
97	3.01	1.30	4.31
98	2.33	1.12	3.45
99	1.69	0.92	2.61
2000	3.02	1.47	4.49
01	4.37	1.98	6.35
02	3.67	1.58	5.25
03	4.31	1.74	6.05

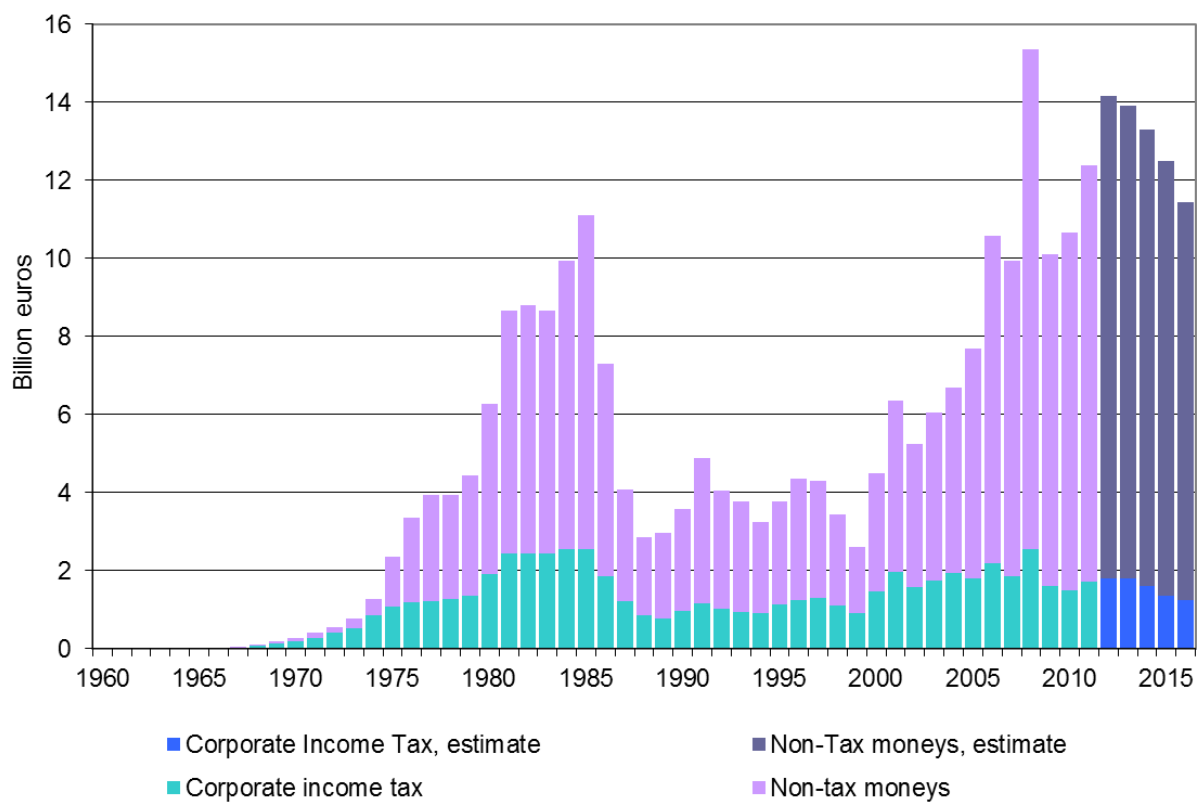
Year	Non-tax moneys* (10 ⁹ €)	Corporate income tax (10 ⁹ €)	Total (10 ⁹ €)
04	4.74	1.94	6.68
2005	5.88	1.80	7.68
06	8.40	2.18	10.58
07	8.09	1.86	9.95
08	12.83	2.54	15.37
09	8.50	1.60	10.10
2010	9.15	1.50	10.65
11	10.66	1.73	12.39
Prognosis			
12	12.35	1.80	14.15
13	12.10	1.80	13.90
14	11.70	1.60	13.30
2015	11.15	1.35	12.50
16	10.20	1.25	11.45

The natural gas revenues are presented on a so called 'trans based'. This means that the revenues are allocated in the year in which the transaction actually took place. The actual receiving of the revenues by the state (cash based) takes place with a certain delay.

Non-tax moneys consist of: bonus, surface rentals, royalties, the State profit share, the special payments to the State on production from the Groningen accumulation and the profit distributed by Energie Beheer Nederland B.V., the participant in the production on behalf of the State.

The estimation for the years 2012 up to and including 2016 are amongst others based on oil price scenarios of the Central Planning Bureau (CPB) as published in 2012. This implies an oil price of 110.8 \$ per barrel for the entire period

Natural gas revenues, 1960 – 2016



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Netherlands Oil and Gas Portal, www.nlog.nl

The Netherlands Oil and Gas Portal provides information about natural resources and geothermal energy in the Netherlands and the Dutch sector of the North Sea Continental Shelf. It aims to help users to access information furnished by the Dutch government in an easy, comprehensible fashion. The portal is produced at the request of the Dutch Ministry of Economic Affairs, Agriculture and Innovation and is being managed by TNO, *Geological Survey of the Netherlands*.

DEFINITIONS OF SELECTED TERMS

Territory or Netherlands territory:

in this review, territory and Netherlands territory denotes: the Netherlands mainland and that part of the Netherlands territorial waters located on the landward side of the line referred to in article 1, sub c, of the Mining Act.

Continental Shelf:

in this review, Continental Shelf denotes: that part of the Continental Shelf over which the Kingdom of the Netherlands has sovereign rights and which is located on the seaward side of the line referred to in article 1, sub c, of the Mining Act.

Reconnaissance licence:

a licence to carry out a reconnaissance survey on the Continental Shelf; as from the 1 January 2003 a reconnaissance survey is only required for certain areas.

Exploration licence:

a licence to carry out exploration for the mineral resources specified in the licence.

Production licence:

a licence to produce the mineral resources specified in the licence, and also to carry out exploration for these mineral resources.

Seismic surveying:

this review differentiates between 2D and 3D seismic techniques. Two-dimensional seismic surveying has a long tradition in the oil industry. This seismic technique is based on vibrations that are generated along a line on the earth's surface. These vibrations penetrate the earth's crust and are reflected by the layers within the crust. Geophones or hydrophones record the reflections. Because the vibrations do not always propagate solely in the vertical plane underneath the recording line, the representations of geological structures in 2D seismic sections only approximate the real situation. This approximation is far better for a 3D seismic survey, in which a large number of recording lines are positioned close together in a relatively small surface area. Modern electronic data processing makes it possible to correct for deviations of the wave fronts that are not in the vertical plane underneath an individual recording line, and thus permits generating an accurate model of the geological structures at any desired location.

Wells:

- exploration well (or wildcat): a well to explore a prospective underground accumulation of oil and/or gas
- appraisal well: a well drilled in order to establish the volume and extent of a reservoir after an exploration well has found hydrocarbons;
- development well: a well drilled in order to produce the reservoir;

Gas field/oil field:

a natural, isolated accumulation of gas and/or oil in a subsurface reservoir consisting of a porous rock that is capped or enclosed by an impermeable rock. In this review, the terms reservoir, field and accumulation are used as synonyms.

Reserves (categories and definitions):

In the following definitions, natural gas and oil are referred to collectively as hydrocarbons.

1 Gas/Oil Initially in Place

the total volume of hydrocarbons in a reservoir that is initially (originally) present in a reservoir. This volume is calculated on the basis of the mean values of the parameters used in the calculations.

2 Expected Initial Reserves

the total volume of hydrocarbons in a reservoir that is estimated to be ultimately recoverable. This volume is calculated on the basis of the mean values of the parameters used in the calculations.

3 Proven Initial Reserves

the volume of hydrocarbons in a reservoir that is estimated to be ultimately recoverable, with an expectation-curve probability of 90%.

4 Remaining Expected Reserves

that part of the expected initial reserves remaining after subtraction of the cumulative production, i.e. the total volume of hydrocarbons produced from the reservoir concerned by the end of the year under review.

5 Remaining Proven Reserves

the volume - based on the 90% expectation-curve value - of hydrocarbons that can still be extracted from a reservoir. This volume is calculated by subtracting the cumulative production from the Proven Initial Reserves.

6 Future reserves

Future reserves are reserves that have not yet been drilled by a well, but which have a certain possibility of success to contribute to the reserves in future times. The following datasets and definitions have been used to estimate the future reserves.

a. Prospect database

Database containing all prospective structures ("prospects") known to the Netherlands government which may potentially contain gas or oil (future reserves). Source of information to this database are the annual reports as submitted by the operating companies according to article 113 of the Mining act.

b. Prospect Portfolio

The selection of prospects from the Prospect database located within a "Proven Play" area.

c. Exploration potential

Cumulated "risky volumes" of all prospects in the prospect portfolio that meet certain selection criteria. In the series of reports on the exploration potential (published since 1992) the Prospect portfolio it was chosen to apply a threshold for the expected reserves volume per prospect. In certain reports the term "Firm Futures" has been used. This is in general synonymous to Exploration potential.

d. Potential futures in proven plays

Volume of gas expected to be present in not yet mapped structures in a proven play area.

e. Potential futures in not yet proven plays

Volume of gas expected to be present in valid, but not yet proven plays in the Netherlands.

f. Potential futures in hypothetical plays

Volume of gas in plays of which one or more of the basic play elements such as reservoir, seal and source rock are not yet known.

The term 'expected' in the definitions above should be interpreted in the statistical sense of the word. The stated figure represents the expected value. The following explanation may be useful. All data that are used for the purpose of calculating volumes have an intrinsic uncertainty. By processing these uncertainties statistically, an expectation curve can be determined for each accumulation. This is a cumulative probability distribution curve, i.e. a graph in which reserve values are plotted against the associated probabilities that these values will be achieved or exceeded. As production from a hydrocarbon reservoir progresses, several uncertainties decrease and the expected value will deviate less and less from the 50% value on the cumulative probability distribution curve. In practice, the stated reserves of a given field are the expected values. This is the most realistic estimate available of the volume of hydrocarbons actually present in a reservoir.

The recoverability of hydrocarbons from an accumulation is determined by the geological and reservoir characteristics of that accumulation, the recovery techniques available at the reporting date, and the economic conditions prevailing at that time.

Probabilistic summation of the proven reserves:

In this method, the probability distributions of the reserves of the individual fields are combined. This way, the uncertainties inherent to all reserve estimates are accounted for. The result of applying the probabilistic summation method is that the total figure obtained for the proven reserves according to the definition, now indeed represents the proven proportion of total Dutch reserves in a statistically more reliable manner. In other words, there is a 90% probability that reserves will actually exceed the value stated.

Exploratief Potentieel

The model ExploSim is used to calculate the exploration potential. A detailed description can be found in:

LUTGERT, J., MIJNLIEFF, H. & BREUNESE, J. 2005. Predicting gas production from future gas discoveries in the Netherlands: quantity, location, timing, quality. In: DORE, A. G. & VINING, B. A. (eds) Petroleum Geology: North-West Europe and Global Perspectives—Proceedings of the 6th Petroleum Geology Conference, 77–84. q Petroleum Geology Conferences Ltd. Published by the Geological Society, London.

Calculating the exploration potential using a discounted cash flow model requires a set of parameters. The most imported parameters for the economic prospect evaluation are: Oil price (99\$), Euro/dollar exchange rate (1.2), Deduction of costs based on "Unit Of Production" and the standard GasTerra depletion rules.

Important scenario parameters are: the number of exploration wells per year (10) and the incorporation of the growth and decline of the infrastructure.

Units:

Standard m³: Natural gas and oil reserves are expressed in m³ at a pressure of 101.325 kPa (or 1.01325 bar) and 15°C. This m³ is defined as Standard m³ in Standard no. 5024-1976(E) of the International Organization for Standardization (ISO), and is normally abbreviated to Sm³.

Normal m³: Natural gas and oil reserves are expressed in m³ at a pressure of 101.325 kPa (or 1.01325 bar) and 0°C. This m³ is defined as Normal m³ in Standard no. 5024-1976(E) of the International Organization for Standardization (ISO), and is normally abbreviated to Nm³.

Groningen gas equivalent: For the purpose of performing calculations with volumes of natural gas of varying qualities, these are converted to a Groningen gas equivalent. This is achieved by converting a volume of gas from an accumulation that produces a different quality of gas, to a (fictitious) volume of gas of the quality of the Groningen accumulation (35.17 Mega joules upper value per m³ of 0°C and 101.325 kPa, or 1.01325 bar). One Nm³ gas that has a calorific value of 36.5 MJ equals 36.5/35.17 m³ Groningen gas equivalent (Geq)

The term Groningen gas equivalent is also commonly used by the N.V. Nederlandse Gasunie.

Figures stated in Groningen gas equivalent can be converted simply into equivalents for other fuels, such as Tons Oil Equivalent (TOE) and Coal Equivalent (CE).

Fuel name	Expressed in	Giga Joules	Giga calories	Oil equiv. tonnes	Oil equiv. barrels	Coal equivalent tonnes	Natural Gas equivalent 1,000 m ³
Firewood (dry)	tonnes	13.51	3.23	0.32	2.36	0.46	0.43
Coal	tonnes	29.30	7.00	0.70	5.11	1.00	0.93
Lignite	tonnes	17.00	4.06	0.41	2.96	0.58	0.54
Cokes	tonnes	28.50	6.81	0.68	4.97	0.97	0.90
Cokes oven gas	1,000 m ³	17.60	4.20	0.42	3.07	0.60	0.56
Blast furnace gas	1,000 m ³	3.80	0.91	0.09	0.66	0.13	0.12
Crude oil	tonnes	42.70	10.20	1.02	7.45	1.46	1.35
Oil equivalent	tonnes	41.87	10.00	1.00	7.30	1.43	1.32
Refinery gas	1,000 m ³	46.10	11.01	1.10	8.04	1.57	1.46
LPG	1,000 m ³	45.20	10.79	1.08	7.88	1.54	1.43
Naphtha	tonnes	44.00	10.51	1.05	7.67	1.50	1.39
Jet fuel	tonnes	43.49	10.39	1.04	7.58	1.48	1.37
Gasoline	tonnes	44.00	10.51	1.05	7.67	1.50	1.39
Kerosene	tonnes	43.11	10.29	1.03	7.52	1.47	1.36
Light fuel oil	tonnes	42.70	10.20	1.02	7.45	1.46	1.35
Heavy fuel oil	tonnes	41.00	9.79	0.98	7.15	1.40	1.30
Petroleum cokes	tonnes	35.20	8.41	0.84	6.14	1.20	1.11
Natural gas	1,000 m ³	31.65	7.56	0.76	5.52	1.08	1.00
Electricity *	MWh	3.60	0.86	0.09	0.63	0.12	0.11

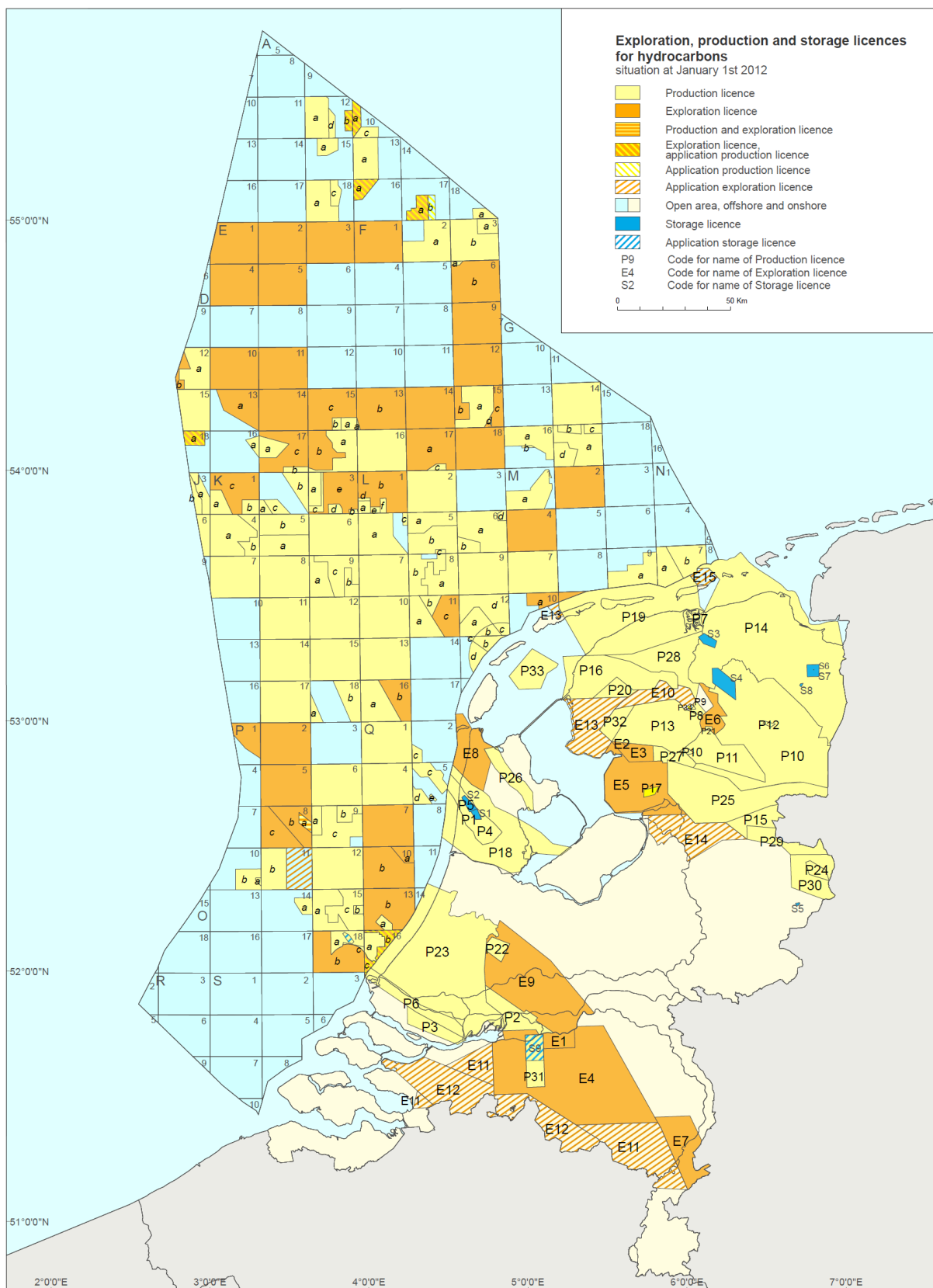
* In this energy conversion table, the energy value of a MWh electricity is to be understood as the energy content of a generated unit of electricity. In order to produce this unit of energy, more energy is necessary. The amount of energy required depends on the efficiency of the conversion.

APPENDICES

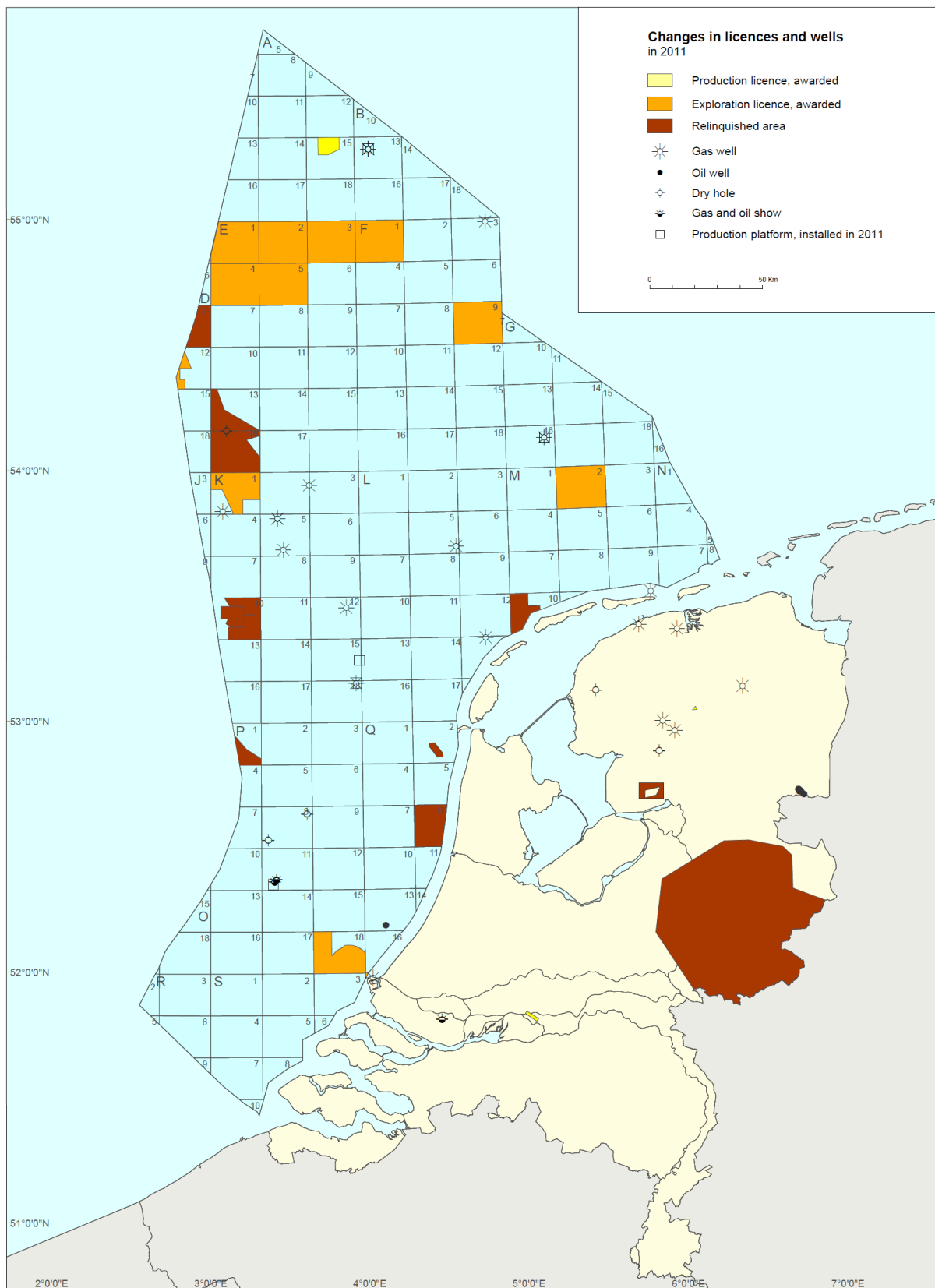
Exploration, production and storage licences as at 1 January 2012

Names of the exploration, production and storage licences, Netherlands Territory, as indicated on opposite page.

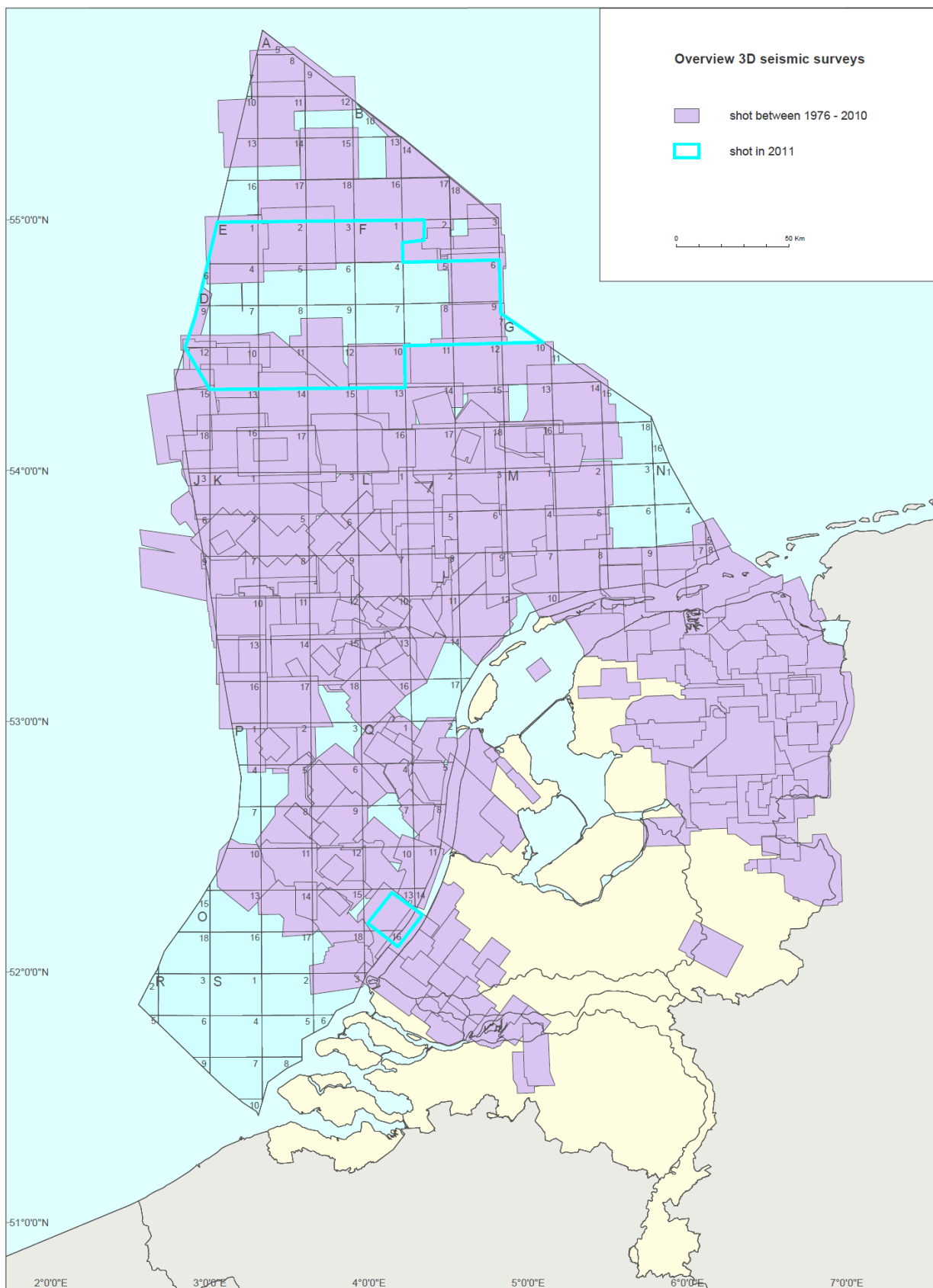
Exploration licences			
E1	Engelen	E6	Oosterwolde
E2	Follega	E8	Peel
E3	Lemsterland	E9	Schagen
E4	Noord-Brabant	E10	Utrecht
E5	Noordoostpolder		
Applications for exploration licence			
E10	Akkrum	E14	IJsselmuiden
E11	Breda-Maas	E15	Schiermonnikoog-Noord
E12	De Kempen	E16	Terschelling-Noord
E13	Hemelum		
Production licences			
P1	Alkmaar	P18	Middelie
P2	Andel V	P19	Noord-Friesland
P3	Beijerland	P20	Oosterend
P4	Bergen II	P21	Oosterwolde
P5	Bergermeer	P22	Papekop
P6	Botlek	P23	Rijswijk
P7	De Marne	P24	Rossum-De Lutte
P8	Donkerbroek	P25	Schoonebeek
P9	Donkerbroek-West	P26	Slootdorp
P10	Drenthe II	P27	Steenwijk
P11	Drenthe III	P28	Tietjerksteradeel
P12	Drenthe IV	P29	Tubbergen
P13	Gorredijk	P30	Twenthe
P14	Groningen	P31	Waalwijk
P15	Hardenberg	P32	Zuid-Friesland III
P16	Leeuwarden	P33	Zuidwal
P17	Marknesse		
Applications for production licence			
P34	Akkrum 11		
Storage licence			
S1	Alkmaar	S5	Twenthe-Rijn De Marssteden
S2	Bergermeer	S6	Winschoten II
S3	Grijpskerk	S7	Winschoten III
S4	Norg	S8	Zuidwending
Application for storage licence			
S9	Waalwijk-Noord		



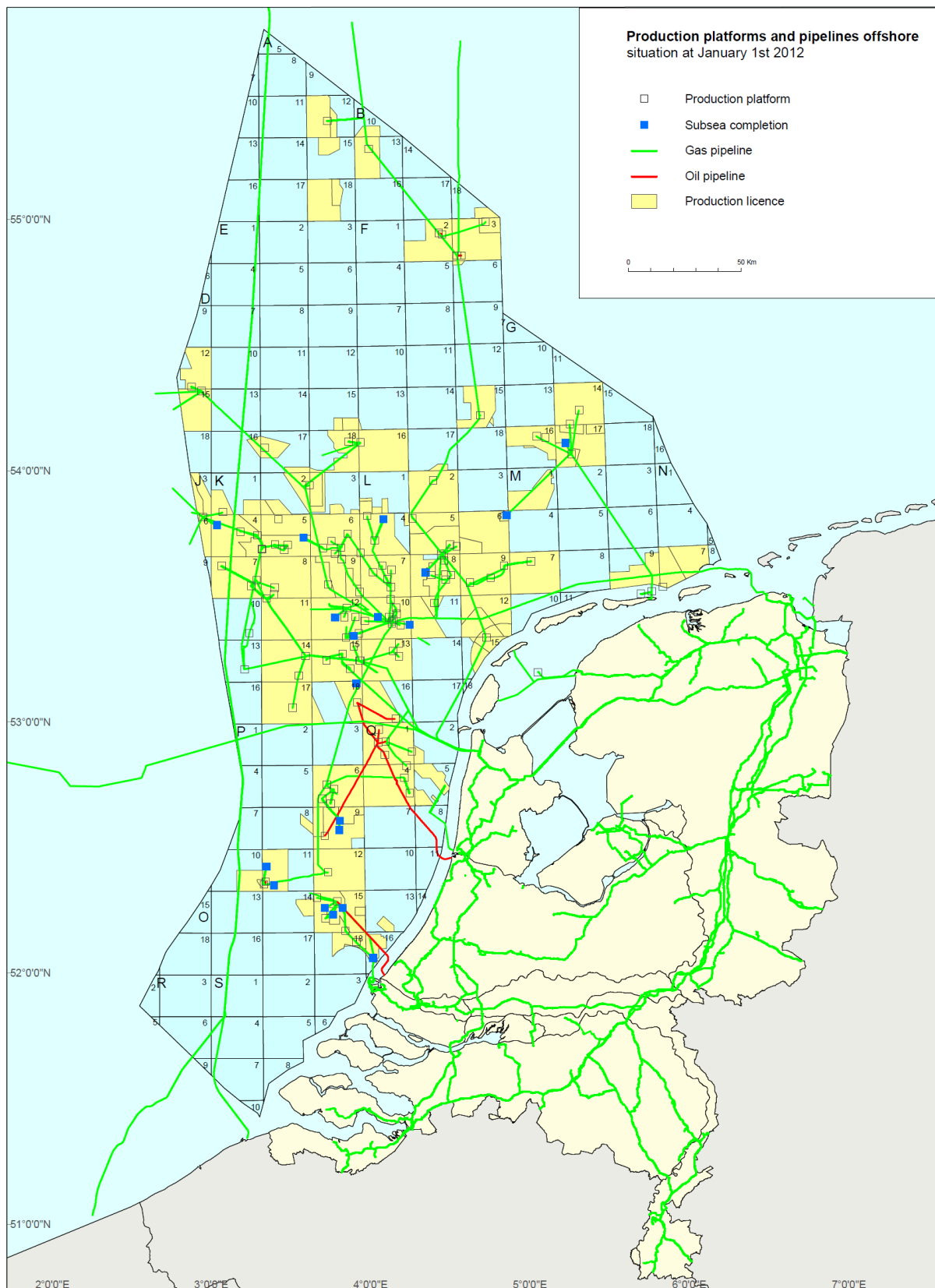
Wells and changes in licence situation in 2011



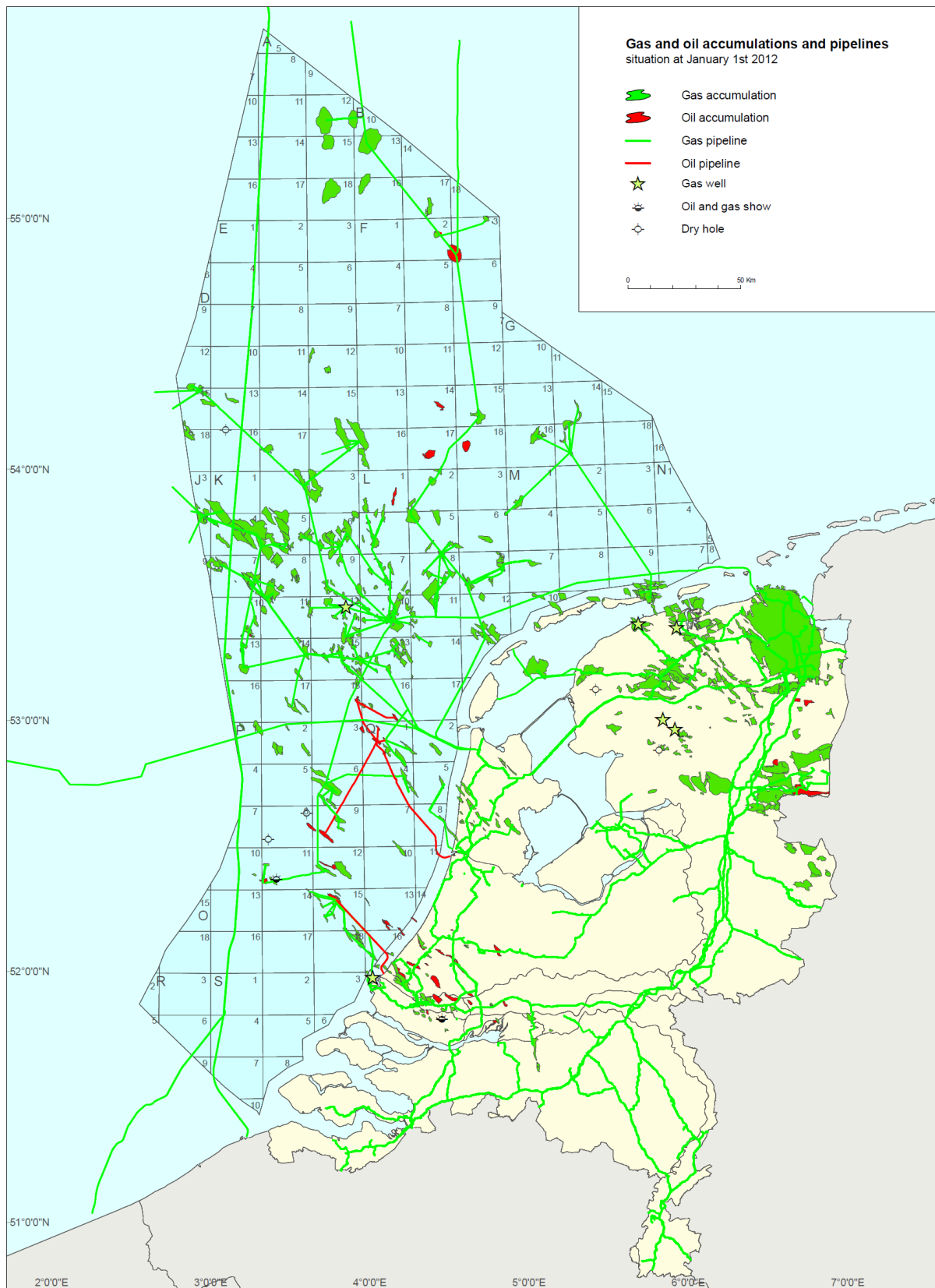
Summary of 3D seismic surveys



Production platforms and pipelines



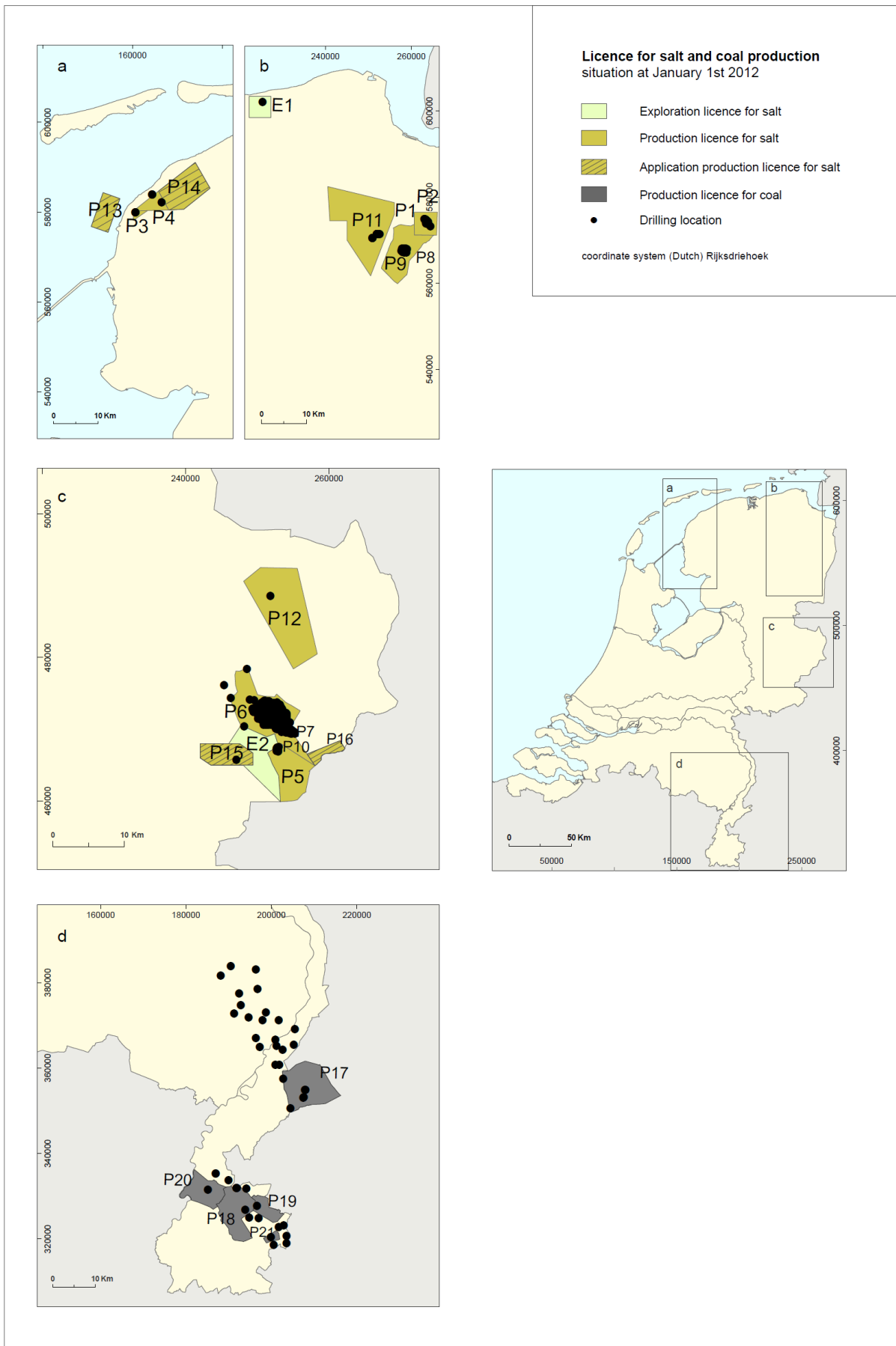
Gas and oil accumulations and pipelines as at 1 January 2012



Coal and rocksalt licences as at 1 January 2012

Onshore exploration and production licence names for rocksalt and coal, as indicated on the map on the next page:

Exploration licences for rocksalt	
E1	Pieterburen
E2	Zuidoost-Twente
Production licences for rocksalt	
P1	Adolf van Nassau II
P2	Adolf van Nassau III
P3	Barradeel
P4	Barradeel II
P5	Burse
P6	Twenthe-Rijn
P7	Twenthe-Rijn Helmerzijde
P8	Uitbreiding Adolf van Nassau II
P9	Uitbreiding Adolf van Nassau III
P10	Uitbreiding Twenthe-Rijn
P11	Veendam
P12	Weerselo
Production licence applications for rocksalt	
P13	Barradeel-Havenmond
P14	Barradeel-Oost
P15	Isidorushoeve
P16	Zuidoost-Enschede
Production licences for coal	
P17	Beatrix
P18	Staatsmijn Emma
P19	Staatsmijn Hendrik
P20	Staatsmijn Maurits
P21	Staatsmijn Wilhelmina



Geothermal energy licences as at 1 January 2012

Exploration and production licence names for geothermal energy as indicated on the map on the next page:

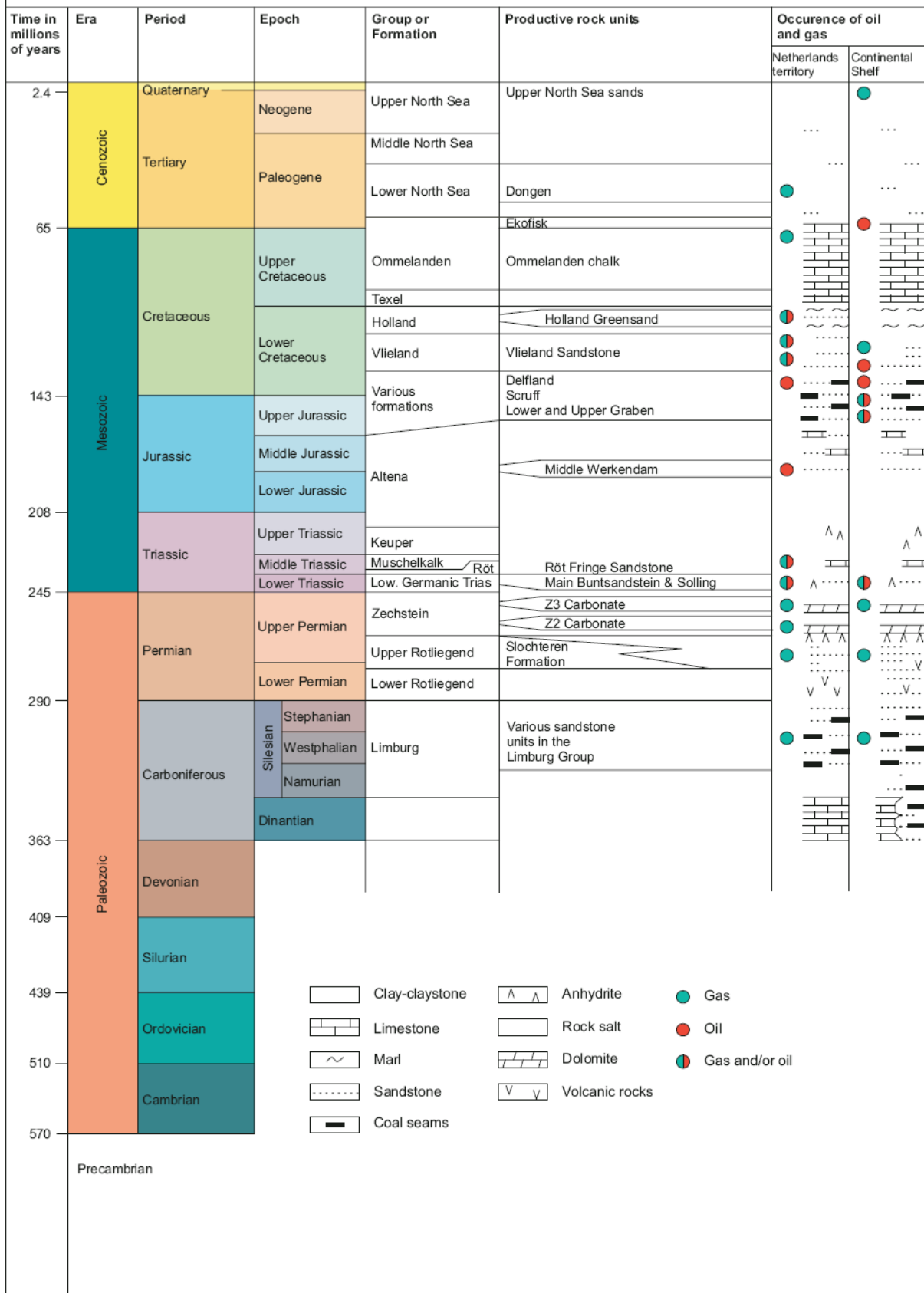
Exploration licences					
E1	Aalsmeer	E23	Dinteloord	E45	Middenmeer
E2	Amstelveen	E24	Emmen	E46	Middenmeer 2
E3	Andijk	E25	Erica	E47	Monster
E4	Asten	E26	Est	E48	Naaldwijk
E5	Berkel en Rodenrijs I	E27	Groningen 2	E49	Naaldwijk 2
E6	Berkel en Rodenrijs 2	E28	Haarlemmermeer	E50	Oostvoorne
E7	Berlikum	E29	Heemskerk	E51	Pijnacker-Nootdorp
E8	Bleiswijk	E30	Helmond	E52	Pijnacker-Nootdorp 3
E9	Bleiswijk 2	E31	Honselersdijk	E53	Pijnacker-Nootdorp 4
E10	Bleiswijk 3	E32	Honselersdijk 2	E54	Pijnacker-Nootdorp 5
E11	Bleiswijk 4	E33	Honselersdijk 3	E55	Pijnacker-Nootdorp 6
E12	Bleiswijk 5	E34	Horst	E56	Purmerend
E13	Brielle	E35	Kampen	E57	Sexbierum
E14	Brielle 2	E36	Klazienaveen	E58	Texel
E15	Californie I	E37	Koekoekspolder II	E59	Vierpolders
E16	Californie 2	E38	Lansingerland	E60	Waddinxveen
E17	De Kwakel	E39	Lasingerland 2	E61	Waddinxveen 2
E18	De Lier	E40	Maasbree	E62	Westland
E19	De Lier 3	E41	Maasdijk	E63	Zevenhuizen
E20	De Lier 4	E42	Maasland	E64	Zevenhuizen-Moerkapelle
E21	Delft IV	E43	Maasland 2		
E22	Den Haag	E44	Made		
Exploration licence applications					
E65	's-Gravenzande	E75	Haarlemmermeer 2	E85	Rotterdam 3
E66	's-Hertogenbosch	E76	Hoogeveen	E86	Rotterdam 4
E67	Amsterdam	E77	Lansingerland 3	E87	Rotterdam 5
E68	Baarn	E78	Lingewaard	E88	Rotterdam 6
E69	Den Haag 2	E79	Luttelgeest	E89	Rotterdam-Vlaardingen
E70	Eemsmond	E80	Mijdrecht	E90	Rozenburg
E71	Eemsmond 2	E81	Monster 2	E91	Werkendam
E72	Eindhoven	E82	Nieuwkoop	E92	Wervershoof
E73	Franekeradeel	E83	Rotterdam	E93	Zuidoost-Drenthe
E74	Gorinchem	E84	Rotterdam 2		
Production licences					
P1	Bleiswijk	P2	Heerlen		
Production licence applications					
P3	Bleiswijk 2	P4	Den Haag		



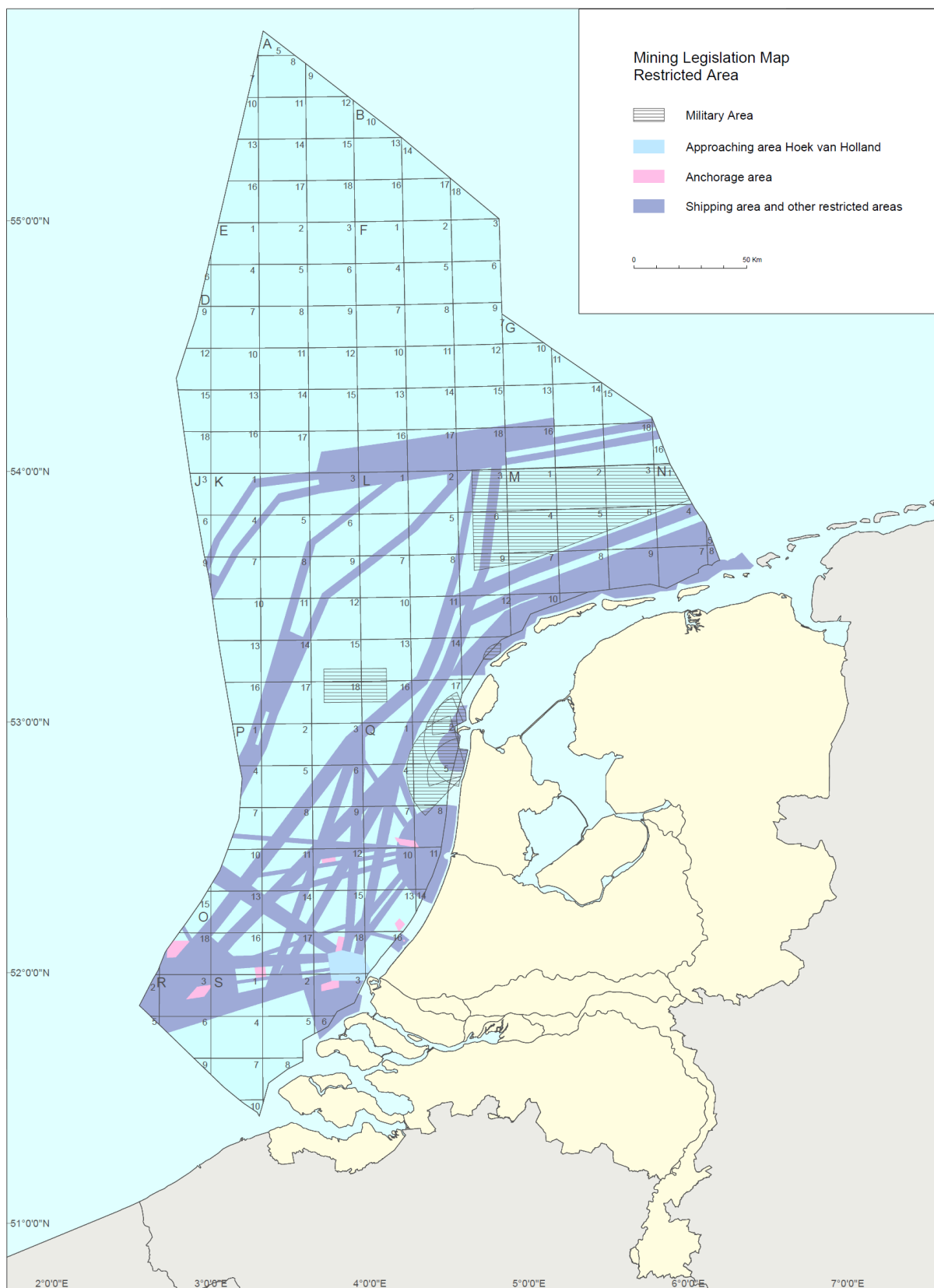
Geological time scale

Geological time scale

with composite stratigraphic column
of the Netherlands and the Continental Shelf



Mining Legislation Map





Ministry of Economic Affairs, Agriculture and Innovation
Directorate General for Energy, Telecom and Markets
May 2012



For more information:
www.nlog.nl