

Natural resources and geothermal energy in the Netherlands

Annual review 2014



Ministry of Economic Affairs

NATURAL RESOURCES AND GEOTHERMAL ENERGY IN THE NETHERLANDS

2014 Annual review

An overview of exploration, production and underground storage

Preface

As well as reporting on the exploration and production of hydrocarbons, rock salt and geothermal energy in the Netherlands, this annual review entitled 'Natural Resources and Geothermal Energy in the Netherlands' also reports on the underground storage of natural gas, nitrogen, CO₂ and saline water. In so doing it covers all the exploration, production and storage activities in onshore Netherlands and in the Dutch part of the continental shelf that fall under the Mining Act.

The first section of this annual review deals with developments during the year 2014. The first nine chapters deal with the exploration, production and underground storage of hydrocarbons. **Chapters 1 and 2 review** the changes in the estimates of natural gas and oil resources in 2014 and the resulting situation as of 1 January 2015. These chapters also present a prognosis for the gas and oil production for the next 25 years. Due to the issues associated with the induced seismicity in Groningen, the new production plan for the Groningen field has not yet been approved by the Minister of Economic affairs. Only the maximum productivity for 2015 has been established, forthcoming production rates still have to be decided. In this review we keep to the publication of the production forecast from the small fields. The remaining volumes of natural gas and oil are reported in accordance with the Petroleum Resource Management System (PRMS).

Chapters 3 to 8 contain information on developments relating to licensing, exploration and related matters (seismic surveys, drilling activities, the placing of new platforms and the laying of pipelines). **Chapter 9** summarises the produced volumes of natural gas, condensate and oil. **Chapters 10 to 13** report on the underground storage of substances and on the exploration and production of coal, rock salt and geothermal energy.

The second part of this report comprises annexes giving an overview of the situation as at 1 January 2015, and the developments during preceding decades.

The appendices contain maps giving an overview of the situation as at 1 January 2015, and also a geological time scale.

This report has been compiled by TNO (Geological Survey of the Netherlands), at the request of the Energy Market Directorate of the Dutch Ministry of Economic Affairs. It includes data that the Minister of Economic Affairs is required to supply to both Chambers of the Dutch Parliament in accordance with article 125 of the Mining Act.

The digital version of this review can be found on the Netherlands Oil and Gas Portal: www.nlog.nl

This year the volumes of gas and oil have been expressed in accordance with article 11.3.1. of the Mining Regulations: gas in normal cubic metres and oil (a liquid) in standard cubic metres. Until 2014 the standard cubic metre was also used for liquids.

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The Hague, May 2015.

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Note:

In this annual report the natural gas volumes are given in normal cubic metres (Nm³). 'Normal' relates to the reference conditions 0°C and 101.325 kPa.

In a few instances the volumes of natural gas are given in Groningen gas equivalents (m³Geq) of 35.17 mega joules gross calorific value per m³ at 0°C and 101.325 kPa. This is explicitly indicated in the text.

Volumes of oil are given in standard cubic metres (Sm³). 'Standard' relates to the reference conditions 15°C and 101.325 kPa.

KEY FIGURES FOR 2014

Natural gas and oil resources

The natural gas resources as at 1 January 2015 are estimated at 883 billion Nm³, of which 671 billion Nm³ are in the Groningen gas field. The small fields in Netherlands Territory (i.e. onshore) contain 94 billion Nm³ natural gas; those in the Dutch sector of the continental shelf contain 118 billion Nm³ natural gas.

Oil resources at 1 January 2015 were 34.7 million Sm³, of which 27.8 million Nm³ are in onshore oilfields and 6.9 million Sm³ in fields on the continental shelf.

Hydrocarbon licences

In 2014 one exploration licence was issued for Netherlands Territory: 'Ijsselmuiden'. Seven exploration licences were extended. The requests to extend 'Peel' and 'Noord-Brabant' await finalisation of the spatial plan. In 2014 there was one application for an exploration licence and one application for a production licence. The 'Botlek' production licence was split, for the production from Q16-Maas.

Five exploration licences for the continental shelf were issued in 2014. In accordance with EU regulations, the draft decisions for three exploration licences were made known; the definitive decision will follow in 2015. There were six applications for exploration licences in 2014.

Fourteen exploration licences were extended, one application for extension was still being processed at the time of compiling this review. One exploration licence was relinquished.

In 2014 there were three applications for new production licences. One existing production licence was relinquished.

For details, see chapters 3 and 4 and annexes 2, 3, 9 and 10.

Wells

In total, 53 wells were drilled for oil and gas, 20 more than in 2013. Eighteen exploratory wells were drilled in 2014. Of these, nine found gas (these included two gas shows), one found oil and gas, one was an oil show and six were dry. The results for the remaining well had not been made public at the time of compiling this review. Thus the technical success rate was 59%. In addition, four appraisal wells, 18 production wells and 13 wells for storage and water injection were drilled (Territory plus continental shelf). Details can be found in chapter 7 and summary -table 2.

Natural gas production

In 2014 the volume of natural gas produced from Dutch fields was 66.0 billion Nm³. Onshore gas fields accounted for 50.7 billion Nm³. Of the total of 66.0 billion Nm³, 8.5 billion Nm³ came from small fields and 42.4 billion Nm³ from the Groningen gas field. The gas fields on the continental shelf produced 15.3 billion Nm³. As a result, total production in 2014 was 17.6% less than in 2013. For details, see chapter 9.

Oil production

In 2014 a total of 1.81 million Sm³ oil was produced. This is 37.7% more than in 2013. Territory (i.e. onshore) fields accounted for 0.67 million Sm³, which is 12.1% more than in 2013. Production on the continental shelf was 1.13 million Sm³, an increase of 59.5%. Average daily oil production in 2014 was 4957 Sm³. For details, see chapter 9.

Underground gas storage

In 2014 there was one new application for storage, to stabilise salt caverns in Twente. A total of 4.6 billion Nm³ of gas was injected into the five existing underground natural gas storage facilities and 3.4 billion Nm³ was withdrawn. In Winschoten II (the storage cavern near Heiligerlee) 1.3 million Nm³ nitrogen was injected and 1.4 million Nm³ nitrogen withdrawn. For details, see chapter 10.

Coal

There are no developments to report for 2014. There are still five coal production licences in force. See chapter 11.

Rock salt

One new production licence for rock salt was issued in 2014: 'Zuidoost-Enschede'. In total, 16 production licences were in force at 1 January 2015. Production of rock salt in 2014 was 6.5 million tonnes. For details, see chapter 12 and annexes 5 and 6.

Geothermal energy

In 2014 there were two new applications for exploration licences for geothermal energy and six exploration licences were issued. Two applications were rejected and two were withdrawn by the applicant. A total of 28 exploration licences were extended. Six exploration licences expired and a further two were relinquished by the licensee. In 2014 one production licence was issued: 'Kampen'.

In 2014 five wells for geothermal energy were completed. See chapter 13 and annexes 7 and 8.

1. NATURAL GAS RESOURCES AND FUTURE DOMESTIC PRODUCTION

INTRODUCTION

This chapter reports on the natural gas resources in the Netherlands and in the Dutch part of the continental shelf. First, it presents estimates of the natural gas resources as at 1 January 2015 and the changes compared with the resources as at 1 January 2014. The procedure for estimating the natural gas resources is explained briefly below. Prognoses are then given for the annual production of Dutch natural gas in the next 25 years (2015–2039).

Figures

In accordance with the Mining Act (article 13, Mining Decree), every year operators of production licences report their estimates of remaining resources, per accumulation, and their expected annual production. These data are used to estimate the domestic resources of natural gas and the future production of natural gas from domestic reserves. As of 1 January 2013, the data on the natural gas resources are required to be reported in accordance with the Petroleum Resource Management System (PRMS)¹, enabling a uniform classification of the resources.

Petroleum Resource Management System (PRMS)

The development of a gas accumulation is normally phased in a number of projects. After the initial development, further projects may be planned, such as extra wells (infill or acceleration), the installation of compression and finally the placing of velocity strings, or the injection of soap. Each of these projects represents an incremental volume of gas that is expected to be produced

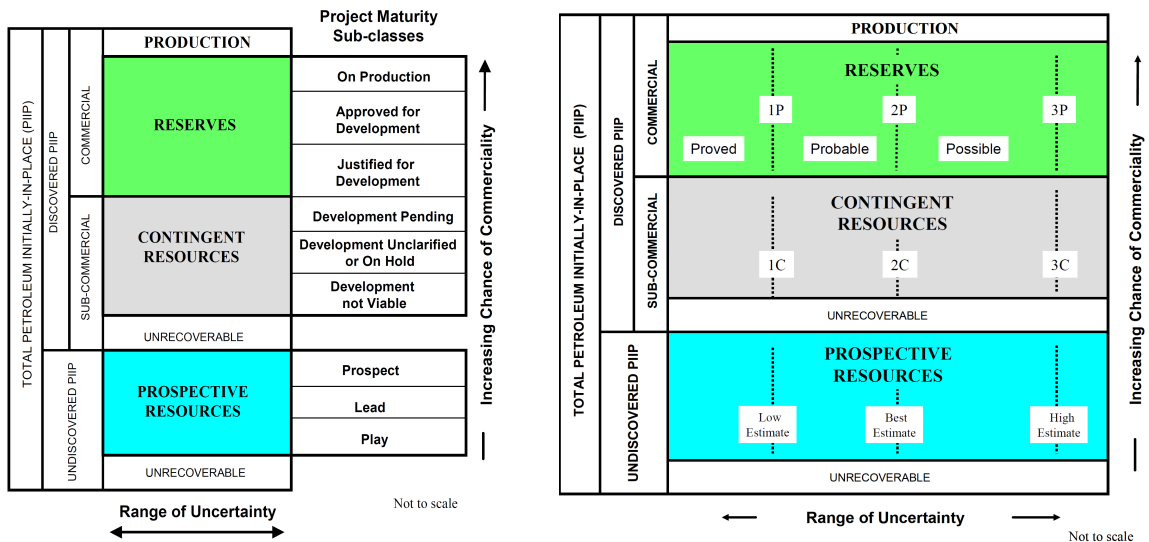


Figure 1. Schematic representation of the PRMS classification¹

Since oil and natural gas are physically located underground at great depths, hydrocarbon resources are estimated by evaluating the data on the amounts present. All resource estimates have an intrinsic uncertainty. The PRMS resource classification takes account of this uncertainty in its central framework by classifying the gas resources for each project

¹ [Guidelines for application of the PRMS](#), Society of Petroleum Engineers, 2012.

according to the likelihood of recovery. This is depicted along the horizontal axis in figure 1. The expectation is expressed in 1P (proved), 2P (probable) and 3P (possible). Similar categories exist for contingent resources: these are expressed as 1C, 2C and 3C. In turn, these volumes classified in the vertical axis, based on the probability that the project will be realised (probability of commercial viability). The natural gas resources are divided into three main classes: reserves, contingent resources and prospective resources. It is possible to subdivide the classes (figure 1).

The reported resources are a snapshot. This annual review gives the picture for 1 January 2015. The Dutch gas resources reported here comprise the total volume of expected reserves (2P) and the contingent resources (2C), insofar that these belong to the subclass 'development pending'. In this review, the contingent resources subclasses 'unclarified or on hold' and 'development not viable' have not been included in the recoverable gas resources. The paragraph on exploration potential describes how the third class, which is of undiscovered resources (or prospective resources), is determined.

Further information on the PRMS is available at www.spe.org.

RESOURCES

The natural gas resource is the volume of recoverable natural gas in proven underground accumulations of natural gas in the Netherlands. A part of the resources initially in place has been produced over the last decades. The volume of natural gas remaining in the proven accumulations that is economically viable to produce is called the remaining reserve. The term 'contingent resource' is applied to the proven resources whose commercially viable exploitation currently depends on one or more criteria.

At 1 January 2015 there were 473 proven accumulations of natural gas in the Netherlands (see table 1) and over half (255) were in production. A further four gas fields were being used to store gas (in addition to the one gas storage facility in a salt cavern). The remaining 114 accumulations were not being exploited, but it is expected that 38 of them will be brought into production in the next five years (2015–2019). It is uncertain whether the remaining 76 will be developed. 99 of the accumulations that were not being produced had been producing previously but their exploitation had been (temporarily) abandoned. There were seven more fields than on 1 January 2014 (see table 5). As compared to 1 January 2014 four new fields have been discovered.

Table 1. Proven natural gas accumulations as at 1 January 2015, classified according to their status

Status of gas accumulation	Territory	Continental shelf	Total
I. Developed			
a. Producing	107	148	255
b. Natural gas storage	5	0	5
II. Undeveloped			
a. Production to start 2015-2019	15	23	38
b. Other	32	44	76
III. Production			
a. Temporarily abandoned	15	9	24
b. Abandoned	31	44	75
Total	205	268	473

Table 2 shows fields whose status changed during 2014. One of the 8 fields that came on stream during 2014 had previously been closed in. A complete list of all fields, grouped according to status and with information on operators and licences, is presented in appendix 1 (part two of this review).

Table 2. Gas accumulations with a status change in 2014

Accumulation	Operator	Licence [Type]**	Status 2015***	Status 2014***
A15-A	Petrogas	A12a [pl] , A12d [pl] , A15a [pl]	NP<5	NP>5
Assen	NAM	Drenthe IIb [pl]	T	P
Assen-Zuid*	NAM	Drenthe IIb [pl]	NP<5	-
Barendrecht-Ziedewij	NAM	Rijswijk [pl]	T	P
Blesdijke	Vermilion	Gorredijk [pl] , Steenwijk [pl]	T	P
Burum-Oost	NAM	Tietjerksteradeel [pl]	P	NP<5
D15 Tourmaline	GDF SUEZ	D15 [pl]	NP<5	NP>5
De Blesse	Vermilion	Gorredijk [pl] , Steenwijk [pl]	T	P
De Klem	NAM	Beijerland [pl]	U	P
Diever*	Vermilion	Drenthe IIIb [pl]	NP<5	-
E11-Vincent*	Tullow	E11 [ep]	NP>5	-
F16-P	Wintershall	E18a [pl] , F16 [pl]	NP<5	NP>5
Harlingen Lower Cretaceous	Vermilion	Leeuwarden [pl]	U	A
Heinenoord	NAM	Botlek II [pl]	P	NP<5
Hoogenweg	NAM	Hardenberg [pl]	A	U
K07-FE	NAM	K07 [pl]	P	T
K15-FH	NAM	K15 [pl]	NP<5	NP>5
K15-FJ	NAM	K15 [pl]	T	P
K15-FQ	NAM	K15 [pl] , L13 [pl]	T	P
Kollumerland	NAM	Tietjerksteradeel [pl]	T	P
L07-F	Total	K06 & L07 [pl] , L08b [pl]	NP<5	NP>5
L07-H	Total	K06 & L07 [pl]	T	P

Accumulation	Operator	Licence [Type]**	Status 2015***	Status 2014***
L08-I	Wintershall	L08a [pl]	NP<5	NP>5
L09-FC	NAM	L09 [pl]	U	P
L10-19	GDF SUEZ	L10 & L11a [pl]	NP<5	NP>5
L10-O*	GDF SUEZ	K12 [pl] , L10 & L11a [pl]	P	-
L11-7	GDF SUEZ	L10 & L11a [pl]	NP<5	NP>5
L12-FA	GDF SUEZ	L12a [pl] , L12b & L15b [pl]	NP<5	NP>5
L13-FA	NAM	L13 [pl]	NP>5	NP<5
L13-FJ	NAM	L13 [pl]	NP>5	NP<5
M10-FA	Tulip	M10a & M11 [ep]	NP<5	NP>5
M11-FA	Tulip	M10a & M11 [ep] , Noord-Friesland [pl]	NP<5	NP>5
Oldelamer	Vermilion	Gorredijk [pl] , Lemsterland [ep] , Noordoostpolder [ep]	T	P
Oppenhuizen	Vermilion	Zuid-Friesland III [pl]	NP<5	NP>5
Oudendijk*	NAM	Beijerland [pl]	P	-
P10a De Ruyter Western Extension	Dana	P10a [pl]	NP<5	P
P11a-E*	Oranje Nassau	P11a [ep]	NP<5	-
P15-15	TAQA	P15a & P15b [pl]	U	P
P15-16	TAQA	P15a & P15b [pl]	U	P

* : Newly discovered accumulation

** : Licence types:

pl: Production License
ep: Exploration License

***: Status

P: Producing
NP<5: Undeveloped field, expected to come on stream within 5 years
NP>5: Undeveloped field, no known date of start of production
T: Production put on hold
U: Production terminated
A: Abandoned

RESOURCE ESTIMATES

Gas resources as at 1 January 2015

On 1 January 2015 the total gas resource in developed and undeveloped accumulations was 883 billion Nm³ (table 3a).

Restriction to conventional accumulations of gas

The estimates of resources in this review relate solely to resources that are proven plays, and thus this year too the review is limited to conventional natural gas accumulations and excludes shale gas. At the time of compiling this review, the Minister of Economic Affairs was drawing up a spatial plan and EIA (environmental impact assessment) for shale gas exploration and production, which was expected to be available by mid-2015. These reports will be used to arrive at a decision – expected to be reached by the end of the year – on any shale gas production in the Netherlands.

Reserves and contingent resources

Figures for the gas resources are given in tables 3a (in billion Nm³) and 3b (in billion m³ Groningen gas equivalents, m³Geq). According to the PRMS, a volume of gas qualifies as a reserve if it has been discovered and the gas is assumed to be commercially recoverable by means of well defined projects. Contingent resources are those resources from proven accumulations that are potentially recoverable by means of development projects but which are deemed to be commercially viable only if they meet one or more preconditions. Here, only the contingent resources that are likely to be produced ('Development pending') are presented.

On 1 January 2015 the remaining reserves totalled 818 billion Nm³: 650 billion Nm³ reserves in the Groningen field and 149 billion Nm³ in the remaining (small) fields. The reserves in the Norg, Grijpskerk, Alkmaar and Bergermeer gas buffers (some 19 billion Nm³ in total) at the moment these were converted into underground gas storage facilities are reported separately in table 3a under the heading 'UGS'. This 'cushion gas' will be produced when the storage is decommissioned (expected to be after 2040). The Bergermeer accumulation had no remaining reserves at the time of conversion.

Some of the contingent resources are in the developed accumulations, but most are in undeveloped accumulations. According to the PRMS, 21 billion Nm³ in the Groningen field belong to the contingent resources (table 3a). The small fields contain contingent resources of 20 billion Nm³ on the Territory (onshore) and 24 billion Nm³ on the Continental Shelf (offshore).

Table 3a. Netherlands natural gas resources as at 1 January 2015, in billion Nm³

Accumulations	Reserves		Contingent resources (development pending)	Total
		UGS		
Groningen	650		21	671
Other Territory	55	19	20	94
Continental shelf	94		24	118
Total	799	19	65	883

In order to be able to incorporate volumes of natural gas of different qualities in calculations, they have been converted to Groningen gas equivalents (Geq) on the basis of their calorific value (table 3b). The Groningen gas equivalent used to be calculated relative to a calorific value of 35.17 MJ/Nm³, the calorific value of the original content of the Groningen field. Since 2010, however, a calorific value of 35.08 MJ/Nm³ has been assigned to the volume of gas still to be produced from the Groningen field, to reflect a slight change in the composition of the gas produced from this field.

Table 3b. Netherlands natural gas resources as at 1 January 2015, in billion m³Geq

Accumulations	Reserves		Contingent resources (development pending)	Total
		UGS		
Groningen	648		21	669
Other Territory	61	20	22	103
Continental shelf	106		27	133
Total	814	20	70	904

Revised estimates compared to 1 January 2014

Table 4 shows the estimates for the Dutch natural gas resources after revision to account for

- New discoveries
- Re-evaluations of previously proven accumulations
- Production during 2014.

Table 4. Revised estimates of expected natural gas resources compared with 1 January 2014, in billion Nm³

Area	New discoveries	Re-evaluation,	Production	Total
Groningen field	0.0	-20.7	-42.4	-63.1
Other Territory	0.7	-30.8	-8.0	-38.2
Continental shelf	0.9	-7.6	-15.5	-7
Total	1.6	-43.9	-66.0	-108.3

The net result is a decrease of the resource by 108.3 billion Nm³ compared with 1 January 2014. A brief explanation of the figures follows below.

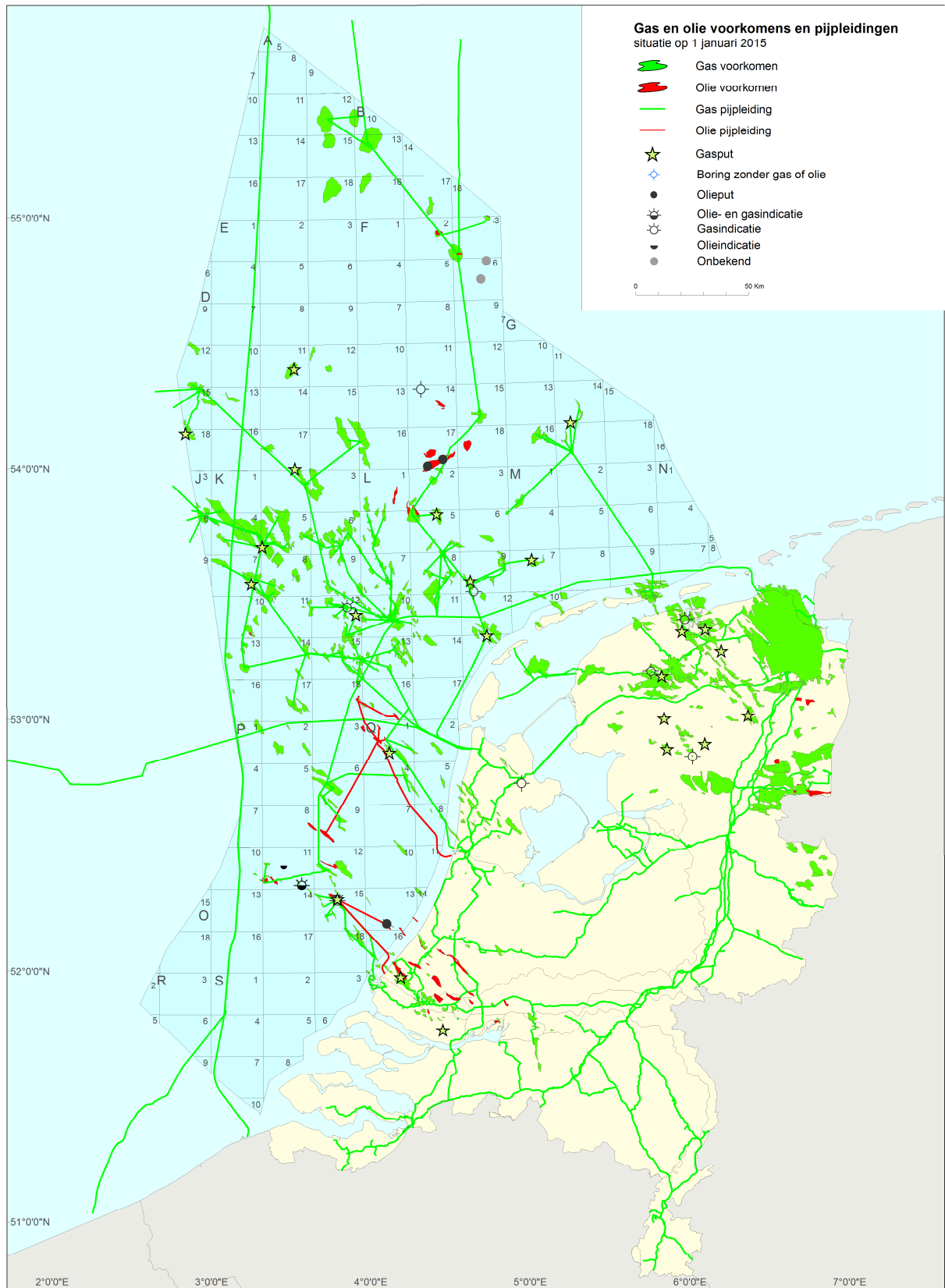


Figure 2. Map showing oil and gas accumulations in the Netherlands (as at 1 January 2015). New discoveries are indicated by asterisks

New discoveries

The four exploration wells that struck gas seem to have found commercially recoverable volumes (table 5). The locations of the new discoveries are indicated by asterisks in figure 2.

Table 5. Natural gas accumulations discovered in 2014

Name of accumulation	Discovery well	Licence [Type]	Operator
Assen-Zuid	Witten-04	Drenthe IIb [pl]	NAM
Diever	Diever-02	Drenthe IIIb [pl]	Vermilion
E11-Vincent	E11-01	E11 [ep]	Tullow
L10-O	L10-37-Sidetrack1	K12 [pl] , L10 & L11a [pl]	GdF Suez
Oudendijk	Numansdorp-03	Beijerland [pl]	NAM
P11a-E	P11-11	P11a [ep]	Oranje Nassau
P15-19A4	P15-RIJN-A-13- sidetrack4	P15a & P15b [pl]	TAQA

Licence types:

pl: Production License

ep: Exploration License

Re-evaluation

Operators periodically evaluate the gas fields in technical and economic terms. New developments and insights may lead to revised estimates of the resources. As a result of such re-evaluations of producing and non-producing fields, the estimates of resources were adjusted downwards by 43.9 billion Nm³ in 2014. The estimate for the Groningen field was adjusted downwards by 20.7 billion Nm³ (approx. 3% of the remaining reserves), due to re-evaluation of the reserves based on newly acquired data from the production and the new situation which has arisen as a consequence of the seismicity in the Groningen Field. The relatively large adjustment for small fields on the Territory (-30.8 billion Nm³) is mostly caused by a re-evaluation and subsequent downgrading of the gas resources. Part of the contingent resources is now waiting for development (on hold). Due to this re-evaluation the chance of development has decreased and as a result these projects are not taken into account for the calculation of the cumulative Netherlands gas resources. On the continental shelf the reserves have increased by 7.6 billion Nm³ due to upgrade of several projects previously classified as contingent.

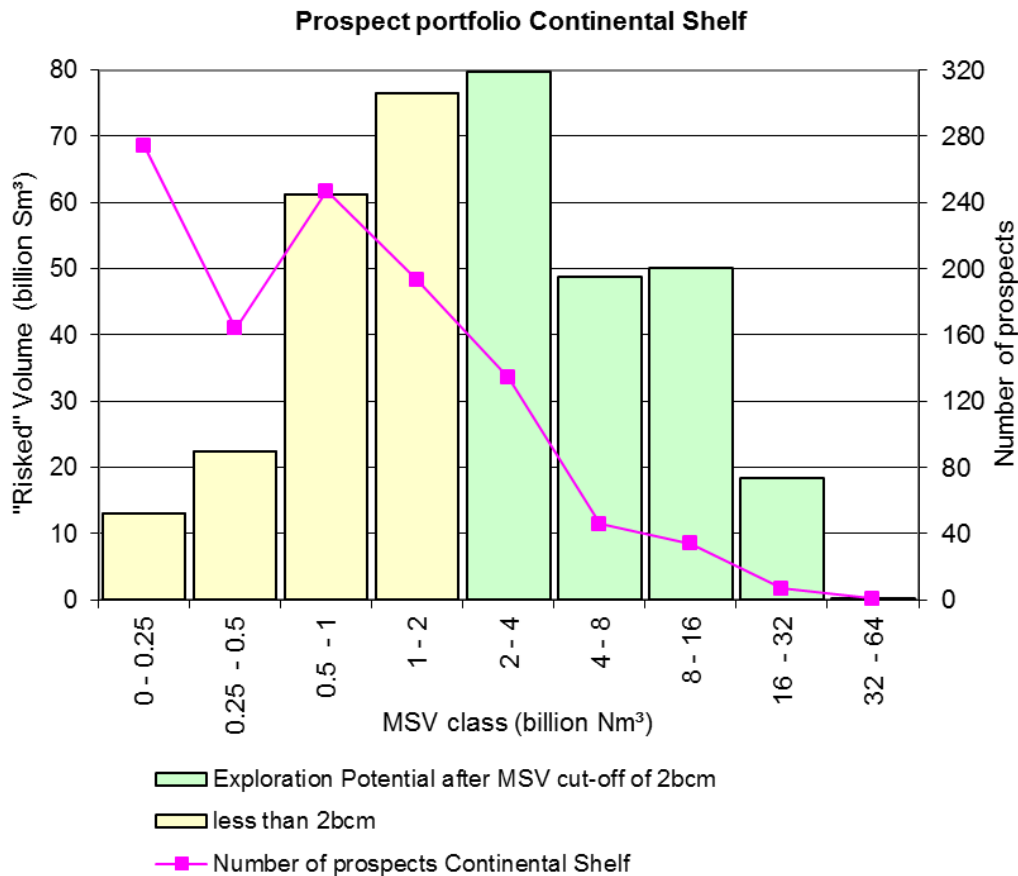
The resources have been adjusted on the basis of production performance and the implementation of technical modifications. The latter include the drilling of new wells and the application of techniques to prolong production, such as compression and the deliquification of production wells. Only these proven techniques have been included. At the moment experiments are being performed with Enhanced Gas Recovery (EGS) in the De Wijk field. Currently this technique is assumed non-proven and the associated resources are therefore not included in the overviews.

EXPLORATION POTENTIAL

TNO updates the Dutch prospect portfolio for natural gas annually and evaluates the potential for recoverable volume it contains. It does so partly on the basis of figures that operators present in their annual reports for their licensed areas in accordance with article 113 of the Mining Decree. 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 the data and discoveries justify the assumption that the necessary geological conditions for the accumulation of natural gas are met. Together, all prospective structures ('prospects') that have been mapped and evaluated on the basis of existing data form the prospect portfolio. Hypothetical plays and prospects are ignored, due to their speculative character.



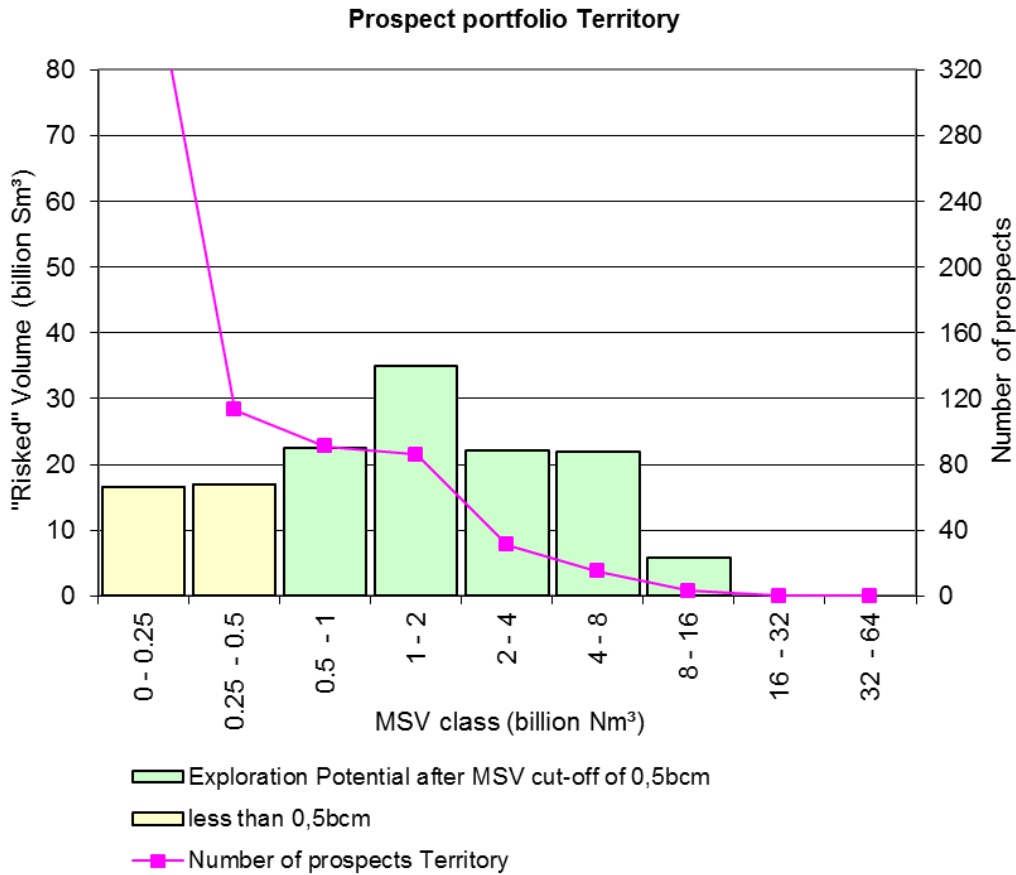


Figure 3. Prospect portfolio characteristics: Number of prospects, in volume classes. Green columns show the exploration potential after applying an MSV lower cut-off (see text for explanation)

Gas portfolio characteristics

The prospect portfolio is characterised by the number of prospects and the associated volume of gas. The volume of a prospect can be expressed in terms of the expected recoverable volume in the case of a discovery (the so-called Mean Success Volume, MSV), or as the risked volume (the so-called Expectation volume, EXP), which is the product of the MSV and the probability of finding natural gas (the Possibility of Success: POS). The prospect portfolio characteristics as of 1 January 2015 are presented in Figure 3 for Territory and continental shelf. The number of prospects and the cumulative risked volumes are shown per MSV volume class. The total number of prospects in the portfolio is larger than on 1 January 2014. The cumulative risked volume in the 2-4 BCM MSV class is remarkably higher; this can be attributed to an increase in the number of prospects.

However in the Territory the portfolio volume has decreased in all size classes, most likely due to a re-evaluation of the prospects and a resulting lower risked volume. The number of prospects in the portfolio has remained roughly stable.

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 lower cut-off (MSV) has been defined for the expected recoverable volume in the case of discovery. This cut-off is 0.5 billion m³ for Territory prospects and 2 billion m³ for continental shelf prospects. The

green columns in figure 3 represent the risked volume of the prospects with an MSV above this cut-off. This volume is called the exploration potential based on the MSV lower cut-off.

The estimate of the exploration potential (see table 6) is expressed as a range, to indicate its inherent uncertainty.

Table 6. Exploration potential for natural gas as at 1 January 2015, after applying the MSV lower cut-off to the prospect portfolio

Area	MSV cut-off [bill. Nm³]	Exploration potential [bill. Nm³]
Territory	0.5	79 – 182
Continental shelf	2	104 – 249

The consequence of a minimum MSV-based lower cut-off is that other factors determining the commercial attractiveness of prospects 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 to generic factors, in particular the anticipated costs and yields.

An alternative lower cut-off, first presented in the annual review of 2006, requires that for a prospect to be included in the exploration potential the expected net cash value of a project must be positive. A discounted cash flow model takes account of the factors determining the commercial attractiveness of prospects. Using the expected net cash value and taking account of the exploration risk, the Expected Monetary Value (EMV) is calculated for each prospect. The EMV is used to rank the prospects. The possibilities for developing individual prospects are determined using a holistic exploration simulator that takes account of the location of each prospect in relation to distance to infrastructure, probability of success and uncertainty about the volumes. In the bigger picture, the infrastructure of pipelines and the producing fields are considered, in order to realistically evaluate the new resources that are expected to be found. The EMV of each prospect is used to select the most attractive prospects (i.e. those with the highest EMV).

Table 7 shows the expected volume for the exploration potential of prospects with a positive EMV cut-off at a gas price scenario of 21.5 eurocents per m³. A comparison with the figures in table 6 reveals that setting the lower cut-off EMV > 0 results in volumes close to the middle of the range of the exploration potential based on the MSV lower cut-off. The increase in the Continental shelf volume as compared to the 1 January 2014 values is caused by the increase in the portfolio (see above), an adaption of the way gas quality is quantified in the model and a structural increase in exploration drilling intensity. However the decrease in the Territory volume is caused by a reevaluation of the portfolio.

Table 7. Exploration potential for natural gas as at 1 January 2015, assuming an economic lower cut-off of EMV = €0 and a gas price of 21.5 eurocents per m³

Area	Expected value of exploration potential [billion Nm³]
Territory	113
Continental shelf	165

Exploration potential trend/history

Figure 4 shows the trend in the exploration potential in the Netherlands. The graph for Territory shows a gradual decline from 1996 to 2009 followed by a slight increase continuing to the present, for both the high and the low estimates. Particularly striking in the graph for the continental shelf is the upward trend in the high estimate until about 2004, after which there is a downturn to the level of the 1990s.

Over the course of time, exploration wells have led to some of the exploration potential being transformed into reserves. This can be seen from the increase in cumulative production and remaining reserves (height of the green columns) in figure 4. The exploration potential of 100 billion m³ for Territory reported in 1992 had already been added to the reserves in 1996. The exploration potential has nonetheless remained stable because of the dynamics in the prospect portfolio on which the estimates are based: Every year, prospects are removed from the portfolio after the drilling of exploration wells, and new prospects are added. Re-evaluations of prospects may also lead to changes in the values of the portfolio (see the paragraph 'Portfolio characteristics').

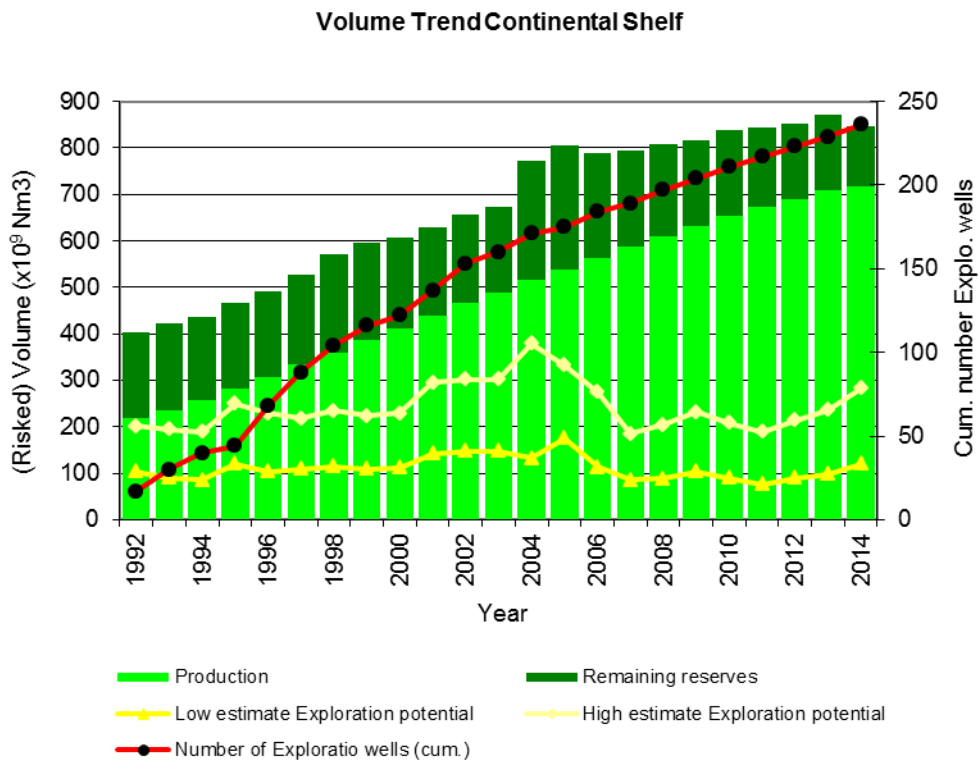
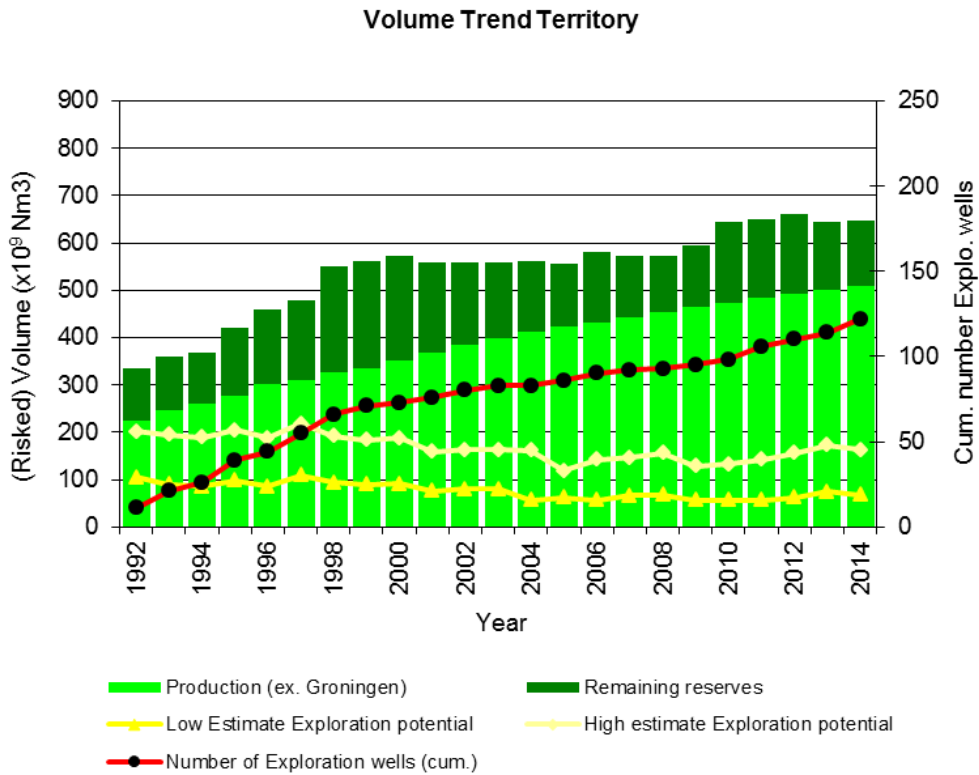


Figure 4. Trends in exploration potential, exploratory drilling, reserves and production 1992–present (excluding the Groningen field)

INCENTIVES

The Decree on investment deduction for marginal gas accumulations on the continental shelf (*Regeling investeringsaftrek marginale gasvoorkomens continentaal plat*) came into force on 16 September 2010 to stimulate the development of marginal gas fields that would otherwise not be drilled. It allows licensees and co-licensees to offset 25 % of the sum they invest in assets for exploring and exploiting a given marginal field or prospect against the result over which they are liable for profit sharing. Applications for marginal fields are reviewed against the following three parameters: technically recoverable volume of gas, initial well productivity and transport distance to a platform.

Since the Decree came into force 46 applications have been filed, of which 28 have been successful. This resulted in 14 new fields being developed in 2014.

At the same time and with the same purpose as the decree, an agreement came into force between the Minister of Economic Affairs and the mining companies active on the continental shelf. This covenant includes a voluntary procedure to stimulate companies holding licences for gas production on the continental shelf to transfer to third parties their fallow concessions (i.e. those that they neither actively exploit nor have concrete plans to bring into production, despite being given the opportunity). Since 1 July 2012, the Minister of Economic Affairs has determined which offshore production licences or parts thereof classify as fallow. The classification is updated annually and is adjusted if, in the interim, this is necessary because new data have become available. The most recent classification is published on NLOG. After a licence area has been declared fallow, the main licensee is notified by the Ministry of Economic Affairs and then has nine months to submit a plan for activities that are deemed significant under the Mining Act. If the main licensee does not make use of this opportunity, the co-licensees are allowed three months to submit their own activity plan. Finally, third parties may then submit their activity plans.

The activity plan for the fallow part of the F3b licence (licensee GDFSUEZ) submitted in 2013 by a third party was published on NLOG in 2014. One competitive application was subsequently received; at the time of compiling this review, both applications were being considered by the Ministry of Economic Affairs. At the end of 2014, third parties submitted an activity plan for the fallow part of the production licence N07b (current licensee is GDFSUEZ). This application was published on NLOG early in 2015. After publication, other operators (excluding the current licensees) have 13 weeks in which to submit a competitive activity plan.

The current status of the production licences based on the abovementioned covenant can be found at www.nlog.nl. This site also gives the activities in the production licence areas onshore, classified under article 32a of the Mining Act.

DOMESTIC SUPPLIES OF NATURAL GAS

This section of the annual review deals with the expected trend in the supply of Dutch natural gas (domestic production) in the next 25 years (2015 to 2039). Estimates are largely based on data submitted by operators. The reference date for the present review is 1 January 2015. All the volumes are given in billions of m³ Groningen gas equivalents.

NAM submitted a revised production plan for the Groningen Field to the ministry of Economic Affairs on 29 November 2013. Subsequent discussion on the gas production and related induced seismicity has resulted in postponement of the definite approval for this production plan. On 23 June 2015 parliament has decided to maximize the production over 2015 for the Groningen field to 30 billion Nm³. The underground gas storage in Norg can (for one time only) supply an additional 3 billion Nm³. Also an additional 2 billion Nm³ of Groningen gas has been designated as a buffer to maintain security of supply in case of technical issues. This buffer will only be used in case technical issues do arise. So as not to make assumptions on decisions for future policy the production prognosis for the Groningen Field is not provided after 2015 in this annual review. The estimated supply for the next 25 years (2015 to 2039) is restricted to the small fields and as yet undiscovered accumulations (exploration potential). In addition to the estimated future production figure 5 also provides the actual natural gas production in the Netherlands for the period 2005-2014. 92% of the prognosed production from the small fields for the year 2014 was actually realised.

The estimated domestic production from the small fields is based on the following:

- The summation of the profiled **reserves** and **contingent resources from the subclass** 'development pending'. These profiles have been provided by the gas producers in their annual reports (in accordance with article 113 of the Mining Decree).
- The summation of the simulated production profiles of **as yet undiscovered accumulations**. These profiles have been prepared using a simulation model that takes into account the number of wells expected to be drilled (11 exploration wells per year and a minimum risked value to investment ratio (RVIR) of 0.1), the expected recoverable volumes of the prospects, the expected productivity of the well and the possibility of success.

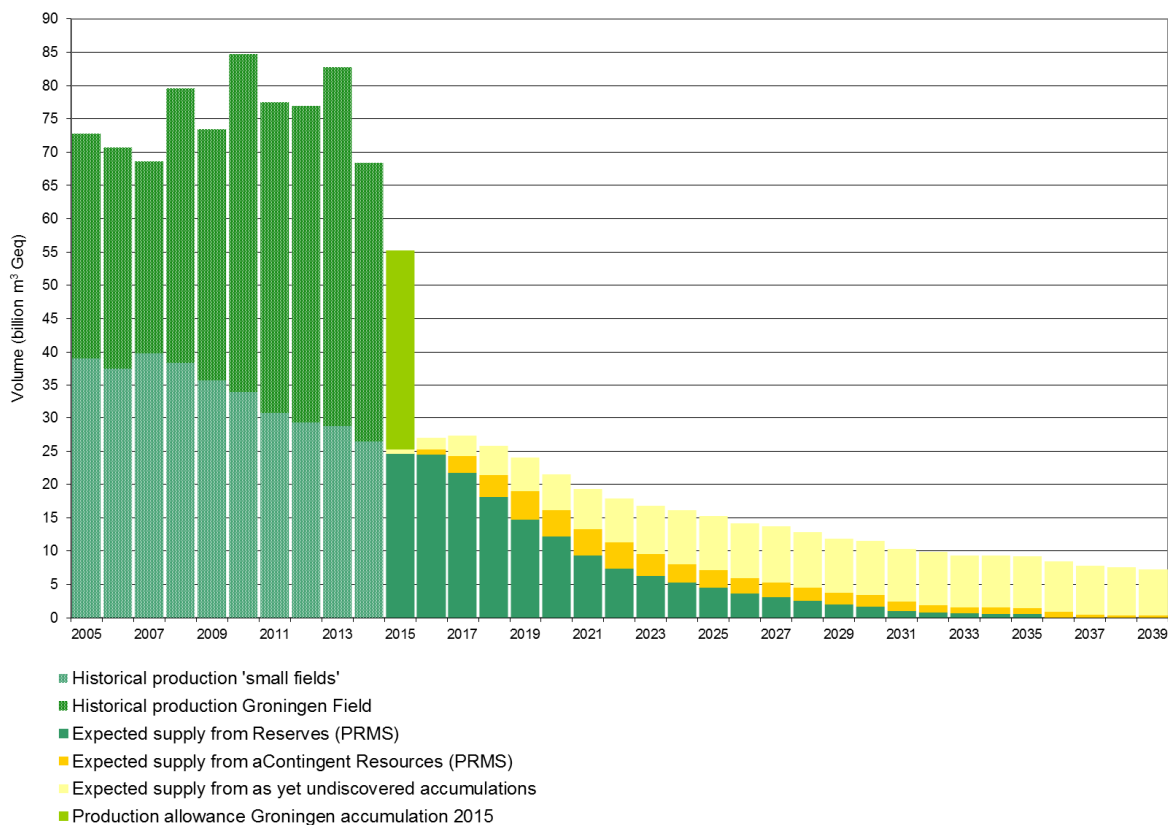


Figure 5. Actual production of natural gas in the Netherlands from 2001 - 2015 and production prognosis for the period 2015 - 2039.

Total domestic production from small fields and the exploration potential

Production from the small fields is estimated at 24 billion m³Geq for 2015, but will gradually decrease to seven billion m³Geq in 2039. The total estimated domestic production from the small fields will be 380 billion m³Geq over the next 25 years (Table 8).

Table 8. Domestic production of natural gas from small fields for the next 10 and 25 years, in billion m³Geq

Production	2015 to 2025	2015 to 2039
Small fields		
Reserves	144	166
Contingent resources (dev. pending)	29	48
As yet undiscovered	48	166
Total for small fields	221	380

2. OIL RESOURCES

On 1 January 2015 there were 48 proven oil accumulations in the Netherlands, 15 of which were producing. All oilfields are listed in summary annex 1, sorted by status and stating operator and licence.

Table 9. Number of proven oil accumulations as at 1 January 2015

Status of oil accumulation	Territory	Continental shelf	Total
I. Developed			
a. Producing	3	12	15
II. Undeveloped			
a. Production to start 2015-2019	0	4	4
b. Other	10	10	20
III. Production			
a. Ceased	0	0	0
b. Abandoned	9	0	9
Total	22	26	48

Table 10. Oil accumulations with a status change in 2014

Accumulation	Operator	Licence [Type]*	Status 2015**	Status 2014**
Berkel	NAM	Rijswijk [pl]	A	P
F17-FC	Wintershall	F17a-Diep [ep], F17c [pl] , L02 [ep]	NP<5	NP>5
IJsselmonde	NAM	Rijswijk [pl]	A	U
Ottoland	Vermilion	Andel V [pl]	NP>5	NP<5
Pijnacker	NAM	Rijswijk [pl]	A	U
Q01-Northwest	Petrogas	Q01 [pl]	NP<5	NP>5
Q13a-Amstel	GDF SUEZ	Q13a [pl]	P	NP<5

* : Licence types:

pl: Production License

ep: Exploration License

** : Status

P: Producing

NP<5: Undeveloped field, expected to come on stream within 5 years

NP>5: Undeveloped field, no known date of start of production

U: Production terminated

A: Abandoned

Oil resources as at 1 January 2015

The resource estimates for developed fields are based on the figures and information submitted by the operators in accordance with the Mining Act. Here, the reserves are reported (i.e. that part of the resources that can be produced commercially and has been qualified as such by the operators) and also the contingent resources ('production pending' – that part of the resources that may be reasonably be assumed to be commercially recoverable, but which do not yet meet all the criteria for classification as such). As the resource classification is project-based, reserves and contingent resources may both be present within one accumulation.

Table 11. Oil resources in million Sm³ as at 1 January 2015

Area	Reserves	Contingent resources (development pending)	Total
Territory	18.2	9.6	27.8
Continental shelf	4.1	2.8	6.9
Total	22.4	12.4	34.7

The total oil resources are 34.7 million Sm³: 22.4 million Sm³ oil reserves plus 12.4 million Sm³ contingent resources.

Revised estimates of the oil reserves compared with 1 January 2014

Table 12 shows the adjustments made to the Dutch oil resources as a result of:

- Re-evaluations of previously proven accumulations
- Production during 2014.

The decrease in oil resources on the continental shelf is mainly the result of depreciation of the contingent resources, caused in turn mainly by the low oil price. By downgrading these projects, they are not counted in this review. The net result is a decrease of the oil resource by 12.4 million Sm³ compared with 1 January 2014.

Finally, oil production in 2014 accounted for 1.8 million Sm³ of the decline in the resources.

Table 12. Revised estimates of oil resources compared with 1 January 2014, in million Sm³

Area	Change as a result of:		Total
	Re-evaluation	Production	
Territory	-8.2	-0.7	-8.8
Continental shelf	-2.4	-1.1	3.5
Total	-10.6	-1.8	-12.4

Figure 6 shows oil production since 2005 and the prognosis for the next 25 years. This prognosis is based on the annual reports of the operators. Compared to last year's forecast, the production has lagged behind expected production slightly. However the expected production for the next 25 years has not changed significantly. The slight increase in

production is caused mainly by the start of production in the Q13a-Amstel field. Also the expected initiation of production in several projects around 2019 is clearly visible in Figure 6, this was not reported in previous annual reviews. An example of one of these projects, barring already producing fields, is the L5-b field.

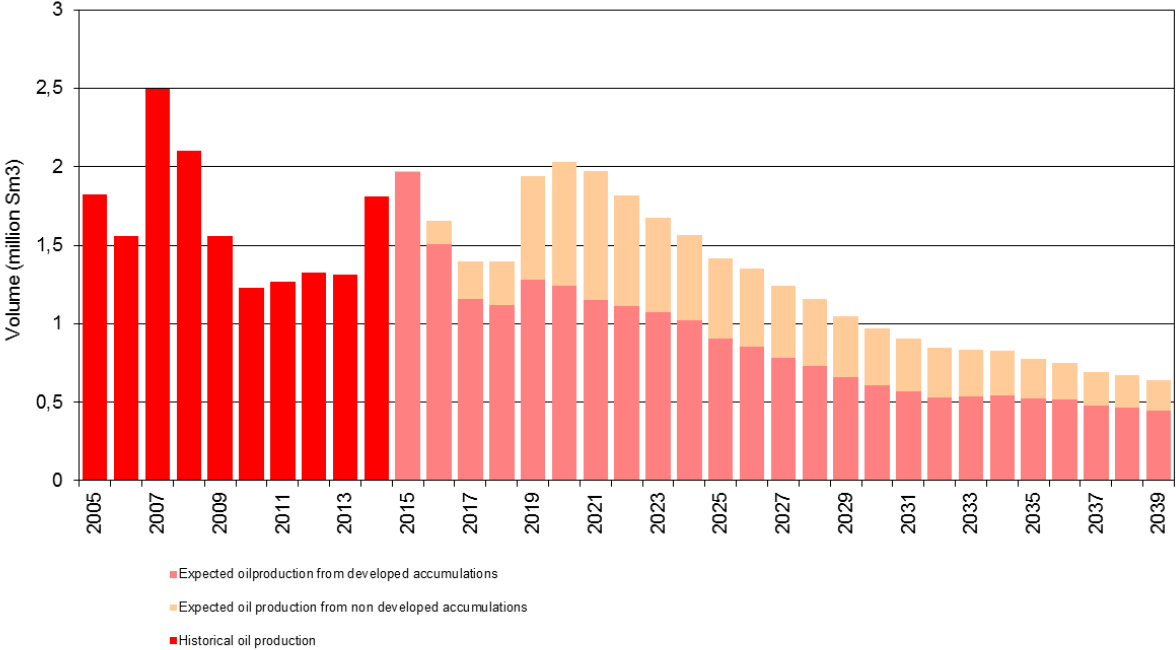


Figure 6. Historical oil production and prognosis for production until 2039

3. HYDROCARBON LICENCES, changes in 2014 Netherlands Territory

Changes which took place during 2014 and concerned licences for hydrocarbon exploration and production onshore are listed in the tables below, together with all ongoing applications for licences.

Total area	Under licence
41 785 km ²	21 337 km ² (51.06%)

EXPLORATION LICENCES, Netherlands Territory

Applied for

Licence	Publication	Date	Closing date	Applicant(s)
De Kempen *	Official Journal of the EU, C 174 Government Gazette 11 021	15-06-11	14-09-11	Basgas Energia, Brabant Resources
Breda-Maas *	Official Journal of the EU, C 178 Government Gazette 11 810	18-06-11	19-09-11	Brabant Resources, Gallic
Midden-Nederland *	Official Journal of the EU, C 79 Government Gazette 9 820	17-03-12	18-06-12	BNK
Waskemeer	Official Journal of the EU, C 84 Government Gazette 10 937	22-03-14	23-06-14	NAM

* Application ongoing, published in a previous annual review.

Awarded

Licensee	Licence area	Effective from	km ²
Northern Petroleum Nederland B.V.	'IJsselmuiden'	17-01-14	447
Total			447

Prolonged

Licensee	Licence area	Effective from	km ²
Vermillion Oil & Gas Netherlands B.V.	Engelen	15-02-14	97
Vermillion Oil & Gas Netherlands B.V.	Oosterwolde	15-02-14	127
Vermillion Oil & Gas Netherlands B.V.	Utrecht	15-02-14	1 144
Vermillion Oil & Gas Netherlands B.V.	Engelen	23-07-14	97
Vermillion Oil & Gas Netherlands B.V.	Oosterwolde	23-07-14	127
Vermillion Oil & Gas Netherlands B.V.	Utrecht	23-07-14	1 144
Vermillion Oil & Gas Netherlands B.V.	Follega	23-07-14	3
Vermillion Oil & Gas Netherlands B.V.	Hemelum	09-08-14	450
Vermillion Oil & Gas Netherlands B.V. et al.	Lemsterland	09-08-14	111
Tulip Oil Netherlands B.V. et al.	Schagen	19-08-14	355
Hexagon Energy B.V.	Peel *	17-10-14	365
Cuadrilla Brabant B.V.	Noord-Brabant *	17-10-14	1 929
Total			5 949

* Request for prolongation on hold; decision to follow completion of spatial plan

PRODUCTION LICENCES, Netherlands Territory

Applied for

Licence area	Publication	Date	Closing date	Applicant(s)
Terschelling-Noord	-	10-11-14	-	Tulip

Split

Licensee	Licence area	Effective from	km ²
- Originally			
Nederlandse Aardolie Maatschappij B.V.	Botlek		235
- After splitting			
Nederlandse Aardolie Maatschappij B.V.	Botlek II	04-03-14	232
Nederlandse Aardolie Maatschappij B.V.	Botlek-Maas	04-03-14	3

4. HYDROCARBON LICENCES, changes in 2014 Netherlands continental shelf

Changes which took place during 2014 and concerned licences for hydrocarbon exploration and production on the continental shelf are listed in the tables below, together with all ongoing applications for licences.

Total area	Under licence
56 814 km ²	30 626 km ² (53.91%)

EXPLORATION LICENCES, continental shelf

Application for

Licence area	Publication	Date	Closing date	Applicant(s)
N4 *	Official Journal of the EU, C 36 Government Gazette 5 640	07-02-14	09-05-14	Hansa
N5 *	Official Journal of the EU, C 40 Government Gazette 5 159	11-02-14	13-05-14	Hansa
N8 *	Official Journal of the EU, C 40 Government Gazette 5 177	11-02-14	13-05-14	Hansa
Q13b-diep	Official Journal of the EU, C 84 Government Gazette 11 463	22-03-14	23-06-14	GDFSUEZ
E7	Official Journal of the EU, C 354 Government Gazette 32 063	08-10-14	07-01-15	
D9	Official Journal of the EU, C 354 Government Gazette 32 065	08-10-14	07-01-15	

* Draft decision

Awarded

Licensee	Licence	Effective from	km ²
Nederlandse Aardolie Maatschappij B.V. et al.	J9	11-04-14	18
Total E&P Nederland B.V.	F12	18-11-14	402
Hansa Hydrocarbons Limited	N4 *	12-12-14	381
Hansa Hydrocarbons Limited	N5 *	12-12-14	14
Hansa Hydrocarbons Limited	N8 *	12-12-14	34
Wintershall Noordzee B.V. et al.	F10	17-12-14	401
Wintershall Noordzee B.V. et al.	F11	19-12-14	401
Wintershall Noordzee B.V. et al.	F14-shallow	19-12-14	403
Total			2 054

* Draft decision

Prolonged

Licensee	Licence	Effective from	km ²
Tullow Exploration & Production Netherlands B.V.	E10	19-02-14	401
Tullow Exploration & Production Netherlands B.V.	E11	19-02-14	401
Tullow Exploration & Production Netherlands B.V.	E14	19-02-14	403
Tullow Exploration & Production Netherlands B.V.	E18b	19-02-14	192
Tullow Exploration & Production Netherlands B.V. et al.	E15c	26-02-14	343
Tulip Oil Netherlands B.V. et al.	Q7	26-02-14	419
Tulip Oil Netherlands B.V. et al.	Q10a	26-02-14	53
Dana Petroleum Netherlands B.V. et al.	F6b	07-03-14	390
Oranje-Nassau Energie B.V. et al.	L16b	14-03-14	176
Chevron Exploration and Production Netherlands B.V.	P2a	27-03-14	193
Sterling Resources Netherlands B.V. et al.	F17a-shallow	30-04-14	386
Sterling Resources Netherlands B.V. et al.	F18-shallow	30-04-14	404
Dana Petroleum Netherlands B.V.	F13b	02-07-14	399
GDF SUEZ E&P Nederland B.V. et al.	K1c	08-07-14	274
Oranje-Nassau Energie B.V.	M4 *	02-11-14	408
Tullow Exploration & Production Netherlands B.V.	E10	22-11-14	401
Tullow Exploration & Production Netherlands B.V.	E11	22-11-14	401
Tullow Exploration & Production Netherlands B.V.	E14	22-11-14	403
Tullow Exploration & Production Netherlands B.V.	E18b	22-11-14	192
Tullow Exploration & Production Netherlands B.V. et al.	E15c	22-11-14	343
Total			6 582

* Pending

Restricted

Licensee	Licence	Effective from	km ²
Chevron Exploration and Production Netherlands B.V.	P2a	27-03-14	193
Total			193

Expired/ Relinquished

Licensee	Licence	Effective from	km ²
Oranje-Nassau Energie B.V. et al.	L16b	12-11-14	176
Total			176

PRODUCTION LICENCES, continental shelf

Applied for

Licence	Publication	Date	Closing date	Applicant(s)
A12b & B10a *	Government Gazette 22	30-12-99	-	Petrogas et al.
B16a *	Government Gazette 105	06-05-93	-	Petrogas et al.
B17a *	Government Gazette 106	30-05-97	-	Petrogas et al.
B17b *	-	29-07-10	-	Petrogas et al.
L1c	-	27-02-14	-	GDF SUEZ
P11a	-	24-11-14	-	Oranje-Nassau et al.
F17a-deep	-	16-12-14	-	Wintershall et al.

* Application ongoing, published in an earlier annual review.

Applications re fallow areas

Licence	Publication	Date	Closing date	Applicant(s)
F3b	www.nlog.nl	01-07-13	30-09-13	PA Resources UK
N7b	www.nlog.nl	13-02-14	15-05-14	Hansa

Prolonged

Licensee	Licence	Effective from	km ²
Oranje-Nassau Energie B.V.	L6d	15-02-14	16
Nederlandse Aardolie Maatschappij B.V.	K14a	23-12-14	237
Total			253

Restricted

Licensee	Licence	Effective from	km ²
Nederlandse Aardolie Maatschappij B.V.	K14a	23-12-14	237
Total			237

Expired/ Relinquished

Licensee	Licence	Effective from	km ²
Oranje-Nassau Energie B.V.	L6d	13-12-14	16
Total			16

5. HYDROCARBON LICENCES: COMPANY CHANGES, NAME CHANGES AND LEGAL MERGERS IN 2014

The tables below list in chronological order the changes which took place during 2014 as a result of mutations in consortiums of companies with licences, as well as name changes of participating companies and name changes as a result of legal mergers.

Company changes in exploration licences

Licence	Relinquishing company	Acquiring company	Effective from	Govern. Gazette
F13b	Dyas B.V.	-	04-02-14	3 528
IJsselmuiden	Northern Petroleum Nederland B.V.	Vermillion Oil & Gas Netherlands B.V.	12-02-14	4 481
Utrecht	Northern Petroleum Nederland B.V.	Vermillion Oil & Gas Netherlands B.V.	15-02-14	7 312
Oosterwolde	Northern Petroleum Nederland B.V.	Vermillion Oil & Gas Netherlands B.V.	15-02-14	7 314
Engelen	Northern Petroleum Nederland B.V.	Vermillion Oil & Gas Netherlands B.V.	15-02-14	7 315
D12b	GAZPROM Germania GmbH	GAZPROM International UK Ltd.	26-02-14	6 405
P11a	-	TAQA Offshore B.V.	07-03-14	7 295
Schiermonnikoog- Noord	-	Rosewood Exploration Ltd.	28-08-14	25 365
Q7	PA Resources UK Ltd.	-	23-12-14	247
Q10a	PA Resources UK Ltd.	-	23-12-14	248

Company changes in production licenses

Licence	Relinquishing company	Acquiring company	Effective from	Govern. Gazette
Botlek-Maas	Nederlandse Aardolie Maatschappij B.V.	Oranje-Nassau Energie B.V. Energy06 Investments B.V. TAQA Offshore B.V.	04-03-14	7 445
K5b	Rosewood Exploration Ltd.	-	22-03-14	9 082
K2c	Rosewood Exploration Ltd.	-	22-03-14	9 086
K1b & K2a	Rosewood Exploration Ltd.	-	22-03-14	9 088
Waalwijk	Northern Petroleum Nederland B.V.	Vermillion Oil & Gas Netherlands B.V.	17-04-14	12 023
Zuid-Friesland III	Northern Petroleum Nederland B.V.	Vermillion Oil & Gas Netherlands B.V.	17-04-14	12 035
Papekop	Northern Petroleum Nederland B.V.	Vermillion Oil & Gas Netherlands B.V.	17-04-14	12 038
Drenthe IV	Northern Petroleum Nederland B.V.	Vermillion Oil & Gas Netherlands B.V.	17-04-14	12 042
Drenthe IIIb	Northern Petroleum Nederland B.V.	Vermillion Oil & Gas Netherlands B.V.	17-04-14	12 043
P12	Northern Petroleum Nederland B.V.	Vermillion Oil & Gas Netherlands B.V.	17-04-14	12 046
Andel V	Northern Petroleum Nederland B.V.	Vermillion Oil & Gas Netherlands B.V.	17-04-14	12 047
Waalwijk	Essent Energy Gas Storage B.V.	-	06-06-14	16 741
P8a *	Grove Energy Ltd.	Van Dyke Energy Company	08-07-14	20 493

* Expiry date extended by six months to allow the transfer to be effectuated

Name changes

Original company name	New company
Chevron Exploration and Production Netherlands B.V	Petrogas E&P Netherlands B.V.

Legal mergers

Companies merged	New company
Northern Petroleum Nederland B.V. Vermillion Oil & Gas Netherlands B.V.	Vermillion Oil & Gas Netherlands B.V.

6. SEISMIC SURVEYS

The seismic surveys carried out in 2014 are presented in the tables below. For a long-term overview see annex 8 and the map in appendix 3.

NETHERLANDS TERRITORY

Neither 2D nor any 3D surveys were carried out onshore in 2014.

CONTINENTAL SHELF

In 2014 there were five 3D surveys on the continental shelf, but no 2D surveys.

2D seismic surveys

Area	Company	Status	Length km
None			

3D seismic surveys

Area	Company	Status	Area km ²
G18, H16, M03, N01	Hansa	completed	965
K07, K08	NAM	completed	263
L13	NAM	completed	110
K14, K15	NAM	completed	786
F17, F18	Sterling	completed	500
		Total	2624

7. OIL AND GAS WELLS COMPLETED IN 2014

The wells completed in 2014 have been grouped according to drilling location (on Netherlands Territory or on the continental shelf) and then according to whether they are exploration, appraisal, or production wells. An overview of other wells (for the injection of gas, steam or water) is also presented. The final table is an aggregated overview of the drilling activities in 2014. Eight of the 18 exploration wells encountered gas (and one of these also encountered oil). This is a success rate of 44%. The four appraisal wells (all on the continental shelf) confirmed accumulations discovered earlier. Eighteen production wells were drilled in 2014.

Ten wells were drilled to develop the Bergermeer and Norg gas storage facilities and three were drilled for the injection of steam or water.

TERRITORY

Exploration wells

	Name of well	Licence	Operator	Result
1	Anjum-06	Noord-Friesland	Nam	Gas shows
2	Diever-02	Drenthe IIIb	Vermillion	Gas
3	Hempens-01	Leeuwarden	Vermillion	Dry
4	Havelte-01	Steenwijk	Vermillion	Dry
5	Lambertschaag-02	Slootdorp	Vermillion	Dry
6	Langezwaag-02	Gorredijk	Vermillion	Gas
7	Numansdorp-03	Beijerland	NAM	Gas
8	Witten-04	Drenthe IIb	NAM	Gas

Appraisal wells

No appraisal wells were drilled in 2014.

Production wells

	Name of well	Licence	Operator	Result
1	Engwierum-03	Noord-Friesland	NAM	Gas
2	Faan-02	Groningen	NAM	Gas
3	Krabburen-05	Noord-Friesland	NAM	Gas
4	Leeuwarden-102-Sidetrack2	Leeuwarden	Vermillion	Gas
5	Monster-Zuid-01	Rijswijk	NAM	Gas
6	Sonnega Weststellingwerf-02	Steenwijk	Vermillion	Gas
7	Witten-05	Drenthe IIb	NAM	Gas

Other wells

	Name of well	Licence	Operator	Function
1	Bergermeer-10-Sidetrack2	Bergermeer	TAQA	Gas storage
2	Bergermeer-11	Bergermeer	TAQA	Gas storage
3	Bergermeer-14	Bergermeer	TAQA	Gas storage
4	Bergermeer-15	Bergermeer	TAQA	Gas storage
5	Bergermeer-16	Bergermeer	TAQA	Gas storage
6	Bergermeer-18	Bergermeer	TAQA	Gas storage
7	Bergermeer-19	Bergermeer	TAQA	Gas storage
8	Bergermeer-23	Bergermeer	TAQA	Gas storage
9	Norg-41	Norg	NAM	Gas storage
10	Norg-43	Norg	NAM	Gas storage
11	Schoonebeek-1552	Schoonebeek	NAM	Injection
12	Schoonebeek-2952-Sidetrack1	Schoonebeek	NAM	Injection

CONTINENTAL SHELF

Exploration wells

	Name of well	Licence	Operator	Result
1	E11-01	E11	Tullow	Gas
2	F06-05	F06b	Dana	Gas shows
3	F06-06-Sidetrack3	F06b	Dana	Unknown
4	F14-08	F14-diep	Wintershall	Dry
5	L09-14	L09	NAM	Dry
6	L10-37-Sidetrack1	L10 & L11a	GDF SUEZ	Gas
7	P11-10	P11b	Dana	Oil shows
8	P11-11	P11a	ONE	Oil & gas
9	P15-RIJN-A-09-Sidetrack2	P15a & P15b	TAQA	Gas
10	Q01-D-02-Sidetrack1	Q01	Wintershall	Gas

Appraisal wells

	Name of well	Licence	Operator	Result
1	E17-03	E17b/K2b	GDF SUEZ	Gas
2	F17-11	F17a-deep	Wintershall	Oil
3	F17-12	F17a-deep	Wintershall	Oil
4	M07-08	M07	ONE	Gas

Production wells

	Name of well	Licence	Operator	Result
1	D18-A-03	D18a	GDF SUEZ	Gas
2	G14-B-04-Sidetrack2	G14 & G17b	GDF SUEZ	Gas
3	K05-A-05	K05b	Total	Gas
4	K07-FD-103	K07	NAM	Gas
5	K12-C-05-Sidetrack1	K12	GDF SUEZ	Gas shows
6	L05-D-03	L05a	GDF SUEZ	Gas
7	L09-FA-106	L09	NAM	Gas
8	L15-A-108A-Sidetrack2	L15c	GDF SUEZ	Gas
9	P15-RIJN-A-13-Sidetrack4	P15a & P15b	TAQA	Oil
10	Q13-A-04	Q13a	GDF SUEZ	Oil
11	Q13-A-05-Sidetrack1	Q13a	GDF SUEZ	Oil

Other wells

	Name of well	Licence	Operator	Function
1	Q13-A-02	Q13a	GDF SUEZ	Injection

SUMMARY OF WELLS completed in in 2014

	Type	Result							Total
		Gas	Gas shows	Oil	Oil shows	Oil & Gas	Dry	Other/Unknown	
Territory	Exploration	4	1				3		8
	Appraisal								
	Production	7							7
	Other							12	12
	Subtotal		11	1				3	12
Continental shelf	Exploration	3	1		1	1	3	1	10
	Appraisal	2		2					4
	Production	7	1	3					11
	Other							1	1
	Subtotal		12	2	5	1	1	3	2
Total		23	3	5	1	1	6	14	53

8. PLATFORMS AND PIPELINES, Netherlands continental shelf

In 2014 one new platform was installed on the continental shelf and two were removed. One new pipeline was laid.

For a complete list of platforms and pipelines, see annexes 16 and 17. The pipeline data was supplied by State Supervision of Mines (*Staatstoezicht op de Mijnen*).

Platforms installed in 2014

Platform	Operator	No. legs	Gas/Oil	Function
L06-B	Wintershall	1	Gas	Wellhead

Platforms removed in 2014

Platform	Operator	No. legs	Gas/Oil	Function
K10-B	Wintershall	6	Gas	Production
K10-B	Wintershall	6	Gas	Wellhead

New pipelines in 2014

Operator	From	To	Diameter (inches)	Length (km)	Carries*
Wintershall	L6-B	L8-P4	8	19.2	g

* g = gas, c = condensate, m = methanol, o=oil

9. PRODUCTION OF GAS AND OIL

The tables below list the aggregated production figures for natural gas, oil and condensate for 2014. Condensate is considered to be a by-product of oil or gas production. Changes compared with 2013 are given in absolute figures and as percentages. The information in the tables is based on figures supplied by the operators.

The fall in gas production compared with 2013 is largely attributable to production from the Groningen field being reduced at the request of the Minister of Economic Affairs in order to reduce the risk of earthquakes in the region. The decline in production from the small gas fields reflects the gradual depletion of the producing fields, particularly those on the continental shelf. The increase in oil production is largely the result of the Q13 Amstel field coming on stream, 42 years after being discovered.

In 2014 the following fields came on stream or stopped producing.

Production start	Field	Producing	Year discovered
November 2014	P15-19A4	Gas	2014
April 2014	Burum-Oost	Gas	2013
March 2014	K07-FE	Gas	2000*
June 2014	Oudendijk	Gas	2014
April 2014	Q16-Maas	Gas	2011
April 2014	Heinenoord	Gas	2011
March 2014	Q01-D	Gas	2008
February 2014	Q13a-Amstel	Oil	1962

* production resumed

Production ceased	Field	Producing	Year discovered
December 2014	Andel-6 (Wijk & Aalburg)	Gas	1991

Overview of natural gas, oil and condensate production in 2014 and the changes compared with 2013

Gas	Production	Changes compared with 2013	
	2014		
	10 ⁶ Nm ³	10 ⁶ Nm ³	%
Territory (total)	50 696	-12.346	-19.6
<i>Groningen field</i>	42 157	-12.007	-22.2
<i>Other onshore fields</i>	8 539	-340	-3.8
Continental shelf	15 257	-1.746	-10.3
Total	65 954	-14.094	-17.6

Oil	Production	Changes compared with 2013	
	2014		
	10 ⁶ Nm ³	10 ⁶ Sm ³	%
Territory (total)	677	73	12.1
Continental shelf	1133	423	59.5
Total	1809	495	37.7
Average daily oil production		4957	Sm ³ /day

Condensate	Production	Changes compared with 2013	
	2014		
	10 ³ Sm ³	10 ³ Sm ³	%
Territory	280	23.4	9.1
Continental shelf	216	-56.6	-20.7
Total	497	-33.2	-6.3

The table below gives monthly production figures per production licence.

Annexes 18 to 20 give the historical annual figures for the production of natural gas and oil. Annual totals may differ slightly due to the rounding off of the monthly production totals.

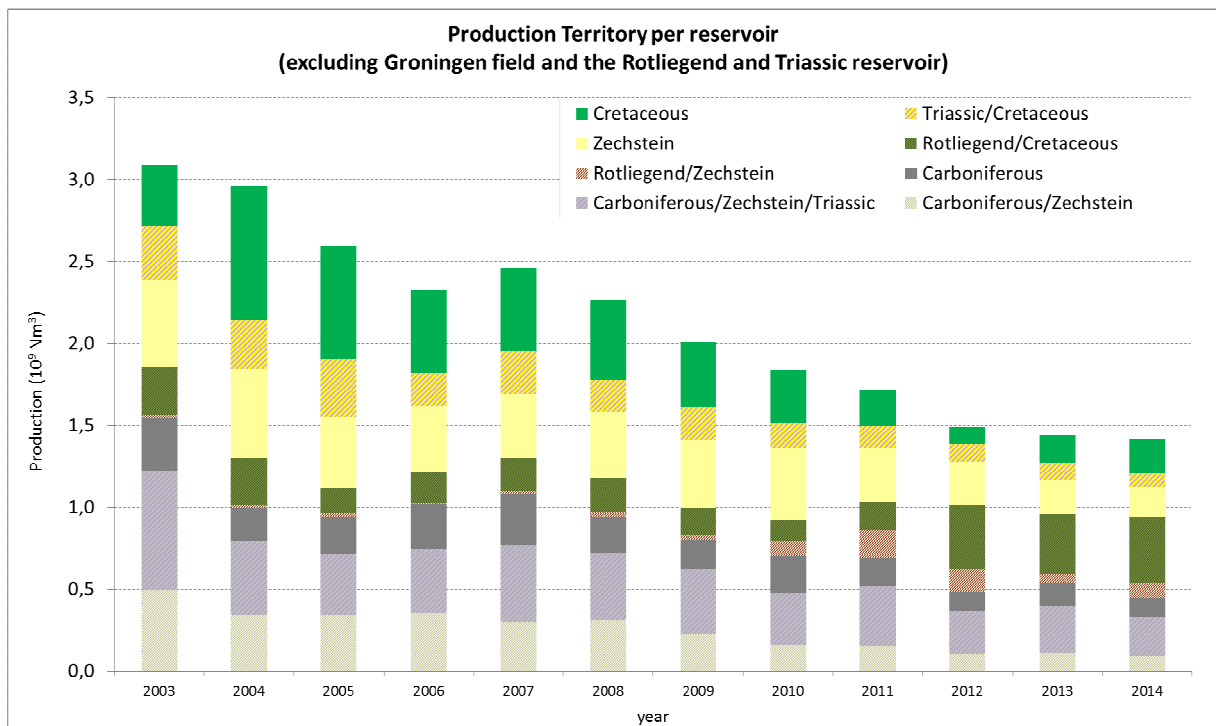
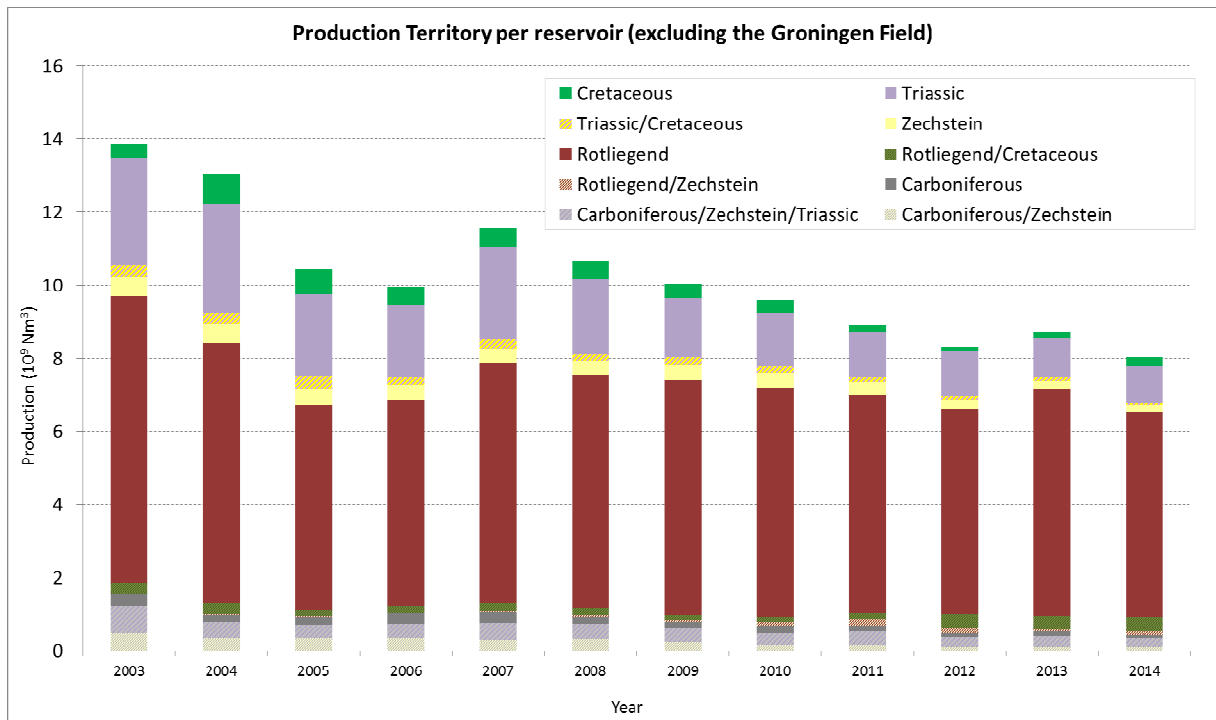
PRODUCTION OF NATURAL GAS, Netherlands Territory in 2014 (in million Nm³)

Production per licence is the total of the production from wells with a wellhead within the licence area. Data supplied by the operating companies.

Licence	Operator	Total	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Andel V	Vermillion	11.3	0.0	0.0	0.4	0.1	0.6	2.5	2.1	2.3	1.8	0.6	0.0	0.8
Beijerland	NAM	168.4	21.0	11.5	10.3	7.8	7.4	7.1	17.6	20.3	18.0	16.4	16.5	14.7
Bergen II	TAQA	93.2	10.8	10.2	10.7	8.8	9.0	8.0	7.6	6.2	7.8	3.1	5.3	5.6
Botlek	NAM	494.7	39.6	38.5	43.4	48.4	49.9	48.9	33.9	38.3	37.9	40.5	37.4	38.1
Botlek	ONE	127.6	0.0	0.0	0.0	0.1	4.1	9.2	9.4	14.3	23.1	24.2	18.6	24.7
Drenthe IIb	NAM	72.4	7.4	6.6	7.0	6.8	7.1	6.4	6.2	6.9	0.0	2.1	7.7	8.2
Drenthe IIIb	NAM	323.3	28.7	26.9	30.9	34.5	25.2	10.4	13.0	27.0	34.3	34.8	30.7	27.1
Drenthe IIIb	Vermillion	24.8	1.7	2.3	2.6	2.4	0.7	1.4	2.9	2.4	2.5	1.5	2.2	2.2
Drenthe IV	Vermillion	10.3	1.1	1.0	0.9	0.9	0.8	0.7	0.9	0.7	0.9	0.8	0.7	0.8
Gorredijk	Vermillion	435.6	41.2	38.8	40.8	40.0	38.5	38.3	35.8	38.8	30.7	32.1	32.4	28.2
Groningen	NAM	44091.8	5721.9	4668.8	4254.8	3384.7	3384.9	2463.4	2252.2	2322.6	2430.7	3340.4	4434.9	5432.5
Hardenberg	NAM	17.7	1.3	1.3	1.4	1.4	1.4	1.2	1.3	1.4	1.9	1.4	1.9	1.9
Leeuwarden	Vermillion	56.3	4.5	2.5	6.9	5.9	6.6	6.1	4.1	5.5	4.9	1.8	2.0	5.4
Middelie	NAM	341.5	30.1	27.5	31.1	29.7	29.2	27.2	27.7	26.4	25.6	27.2	28.9	30.8
Noord-Friesland	NAM	3215.9	297.1	252.4	263.1	268.4	251.7	259.3	279.1	276.2	262.0	265.5	271.2	270.0
Oosterend	Vermillion	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
Rijswijk	NAM	386.2	43.1	37.1	40.3	28.9	26.8	20.9	20.0	36.2	34.6	23.4	37.0	37.8
Schoonebeek	NAM	496.0	48.0	42.3	43.9	43.9	40.9	34.9	32.9	37.3	45.3	35.9	45.8	44.9
Slootdorp	Vermillion	97.8	11.8	8.6	8.5	6.5	8.9	9.1	8.3	7.9	7.4	7.5	7.0	6.4
Steenwijk	Vermillion	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
Tietjerksteradeel	NAM	181.7	12.5	16.6	19.1	15.7	16.2	15.8	14.8	14.7	13.7	15.7	13.3	13.6
Waalwijk	Vermillion	20.5	0.7	1.7	2.4	1.0	2.1	1.8	0.8	2.2	2.2	1.1	2.3	2.2
Zuidwal	Vermillion	29.7	3.1	2.8	2.9	0.0	2.5	2.9	3.1	2.9	2.6	2.5	2.2	2.1
Total		50696.9	6325.8	5197.4	4821.3	3935.9	3914.4	2975.7	2773.7	2890.5	2988.0	3878.3	4998.0	5998.0

Natural gas production from small fields on Netherlands Territory, per stratigraphic reservoir

The bar graphs below show the contribution of each stratigraphic reservoir level to the total gas production from the small onshore fields. Production from fields with multiple reservoir levels is depicted by hatched shading. The Groningen field (excluded from this overview) lies in the Rotliegend reservoir. The first bar graph shows that the biggest contribution to the gas production from the small fields is from the Rotliegend and Triassic reservoirs. The steep decline in production (by about 10% annually) during the period 2003 – 2006 was halted in 2007, largely thanks to gas production from under the Wadden Sea. Since then, there has been a general decline of about 5% per annum. However, in 2013 there was an upturn, largely thanks to production from Rotliegend fields. The second bar graph shows production excluding that from the Rotliegend and Triassic reservoirs. This reveals the contribution from the Cretaceous, Zechstein and Carboniferous reservoirs to the gas production. (Note that onshore there is no production from Jurassic reservoirs). Production from these reservoirs declined steadily in previous years but as a whole levelled out the last couple of years.



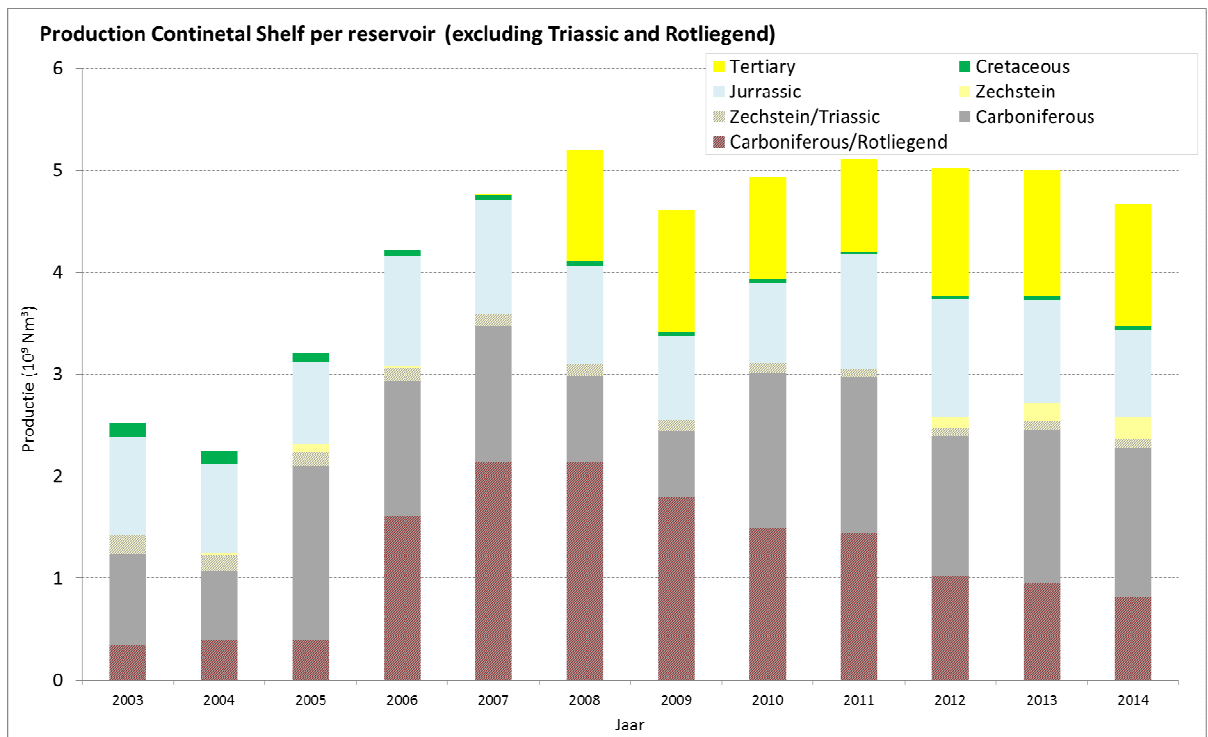
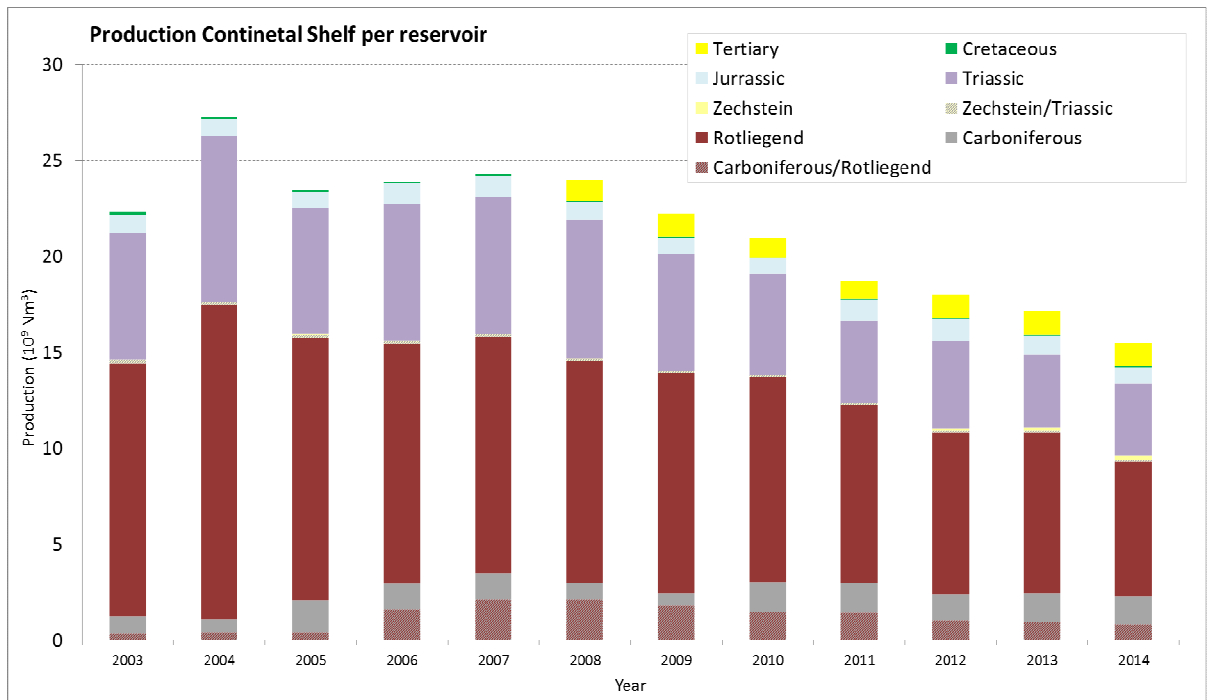
PRODUCTION OF NATURAL GAS, Continental shelf in 2014 (in million Nm³)

The production per licence is the total production of all producing wells with a wellhead within the licence area. Production data are supplied by the operating companies.

Licence	Operator	Total	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
A12a	Petrogas	372.3	34.3	30.2	34.0	29.2	28.1	15.9	36.6	37.6	31.3	33.4	30.9	30.7
B10c & B13a	Petrogas	771.8	66.4	63.6	75.4	70.2	69.5	27.7	72.8	71.1	60.0	67.4	63.5	64.0
D12a	Wintershall	1.3	0.2	0.5	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D15	GDF SUEZ	4.7	0.0	0.7	1.1	0.0	0.0	1.6	1.3	0.0	0.0	0.0	0.0	0.1
D18a	GDF SUEZ	121.2	3.4	8.9	28.9	20.9	14.7	13.8	7.2	5.3	5.0	2.3	5.4	5.4
E17a & E17b	GDF SUEZ	1025.1	92.7	84.7	93.5	89.5	88.4	89.9	77.5	88.2	70.3	85.8	84.3	80.2
E18a	Wintershall	79.2	7.3	6.3	6.7	6.2	6.3	5.7	6.3	6.0	6.6	7.9	7.3	6.7
F02a	Dana	85.9	7.1	6.7	7.4	6.7	7.7	9.0	7.4	7.3	6.3	6.9	6.6	6.7
F03a	Centrica	444.5	45.5	41.6	48.0	40.5	30.7	7.8	36.2	46.2	40.4	41.1	34.1	32.4
F03b	GDF SUEZ	216.2	22.3	20.1	21.1	20.5	12.1	18.4	19.5	18.0	4.5	19.0	21.2	19.5
F15a	Total	132.6	13.6	11.9	12.4	7.3	2.7	12.4	11.0	12.1	12.8	12.6	11.6	12.1
F16	Wintershall	192.9	19.1	15.8	18.1	16.4	17.5	14.8	16.7	15.9	15.4	15.9	15.1	12.0
G14 & G17b	GDF SUEZ	783.4	85.4	78.2	82.3	63.6	46.1	40.6	68.4	67.0	56.0	65.6	64.9	65.1
G16a	GDF SUEZ	990.8	95.1	87.2	89.3	83.8	52.9	59.0	94.6	98.4	84.2	84.7	75.3	86.2
G17c & G17d	GDF SUEZ	100.7	7.5	7.0	6.9	7.1	4.8	5.3	7.0	6.4	5.6	6.4	17.3	19.3
J03b & J06	Total	80.0	8.3	7.1	7.8	8.1	6.7	5.5	1.0	7.5	8.0	7.6	7.3	5.0
J03b & J06	Centrica	50.6	7.1	3.8	8.4	7.7	4.9	3.8	0.5	3.1	3.1	3.0	2.9	2.3
K01a	Total	272.8	24.6	25.5	28.8	25.1	25.2	13.4	4.6	26.7	26.9	25.2	25.9	21.0
K02b	GDF SUEZ	218.0	23.4	18.7	22.1	20.6	18.2	15.9	19.5	11.6	16.9	16.6	17.7	16.9
K04a	Total	849.7	93.3	78.9	88.1	82.1	79.0	45.9	22.7	79.7	67.3	75.1	68.1	69.6
K04b & K05a	Total	958.9	95.6	96.8	104.9	95.2	85.2	41.9	22.9	85.8	68.6	88.6	84.3	89.2
K05b	Total	149.7	14.3	14.7	13.4	12.7	14.0	7.5	4.6	14.4	11.1	10.0	12.2	20.8
K06 & L07	Total	479.2	44.2	39.8	42.4	38.4	40.1	37.9	34.8	42.9	44.3	26.5	41.5	46.5
K07	NAM	130.0	10.9	4.8	8.8	14.5	24.5	14.2	0.0	2.0	12.9	5.4	17.6	14.5
K08 & K11	NAM	455.4	48.9	53.5	55.2	42.3	42.8	24.1	0.0	14.9	34.4	44.7	49.1	45.6
K09a & K09b	Total	6.1	0.6	0.3	0.5	0.8	0.5	0.9	0.8	0.5	0.4	0.4	0.2	0.2
K09a & K09b	GDF SUEZ	124.1	9.6	8.4	8.0	7.4	9.1	13.4	10.6	10.6	11.5	10.5	11.3	13.7
K09c	GDF SUEZ	15.5	1.6	1.4	0.4	0.6	1.7	1.6	1.6	1.6	1.2	1.4	1.3	1.3
K12	GDF SUEZ	758.7	79.4	68.3	64.9	59.7	68.4	59.6	63.5	70.4	58.4	50.9	49.7	65.7
K14a	NAM	30.6	6.5	7.2	5.1	0.7	0.1	0.0	0.0	0.0	0.0	3.3	3.3	4.4
K15	NAM	771.5	78.5	62.9	80.9	76.6	67.1	63.8	50.8	53.9	48.5	69.2	52.6	66.7
K15	Wintershall	80.5	10.0	6.5	9.4	8.8	9.2	3.9	0.0	1.2	7.5	6.9	10.2	6.9
K17	NAM	51.6	0.0	1.5	5.9	12.6	5.3	0.0	0.0	0.0	4.9	4.0	8.5	9.0
K18b	Wintershall	267.2	30.3	22.8	27.0	35.5	31.7	20.9	0.0	3.3	23.2	14.7	32.5	25.3
L02	NAM	462.9	39.4	38.1	42.2	39.9	39.8	29.9	42.1	36.4	38.1	40.7	36.9	39.4
L04a	Total	365.9	33.3	31.2	30.9	31.1	34.8	31.4	32.5	23.2	22.3	34.0	28.6	32.7
L05a	GDF SUEZ	124.1	18.1	13.0	16.3	10.3	1.5	1.5	11.8	9.4	11.0	8.7	11.2	11.3
L05b	Wintershall	204.2	20.5	18.0	20.6	20.1	20.6	17.8	15.1	15.4	8.4	13.2	16.5	17.9
L08a	Wintershall	55.3	4.8	4.9	5.6	5.3	5.2	4.7	5.0	4.5	2.0	4.4	4.5	4.5
L08b	Wintershall	93.2	9.1	8.3	8.7	8.1	7.2	7.1	8.6	8.3	3.7	7.6	8.3	8.1
L09	NAM	391.7	40.4	28.1	37.3	40.1	42.8	18.5	20.4	39.9	32.5	16.2	37.8	37.9
L09a	NAM	70.6	0.0	0.0	1.1	7.3	8.8	10.2	10.2	8.1	6.9	1.5	8.1	8.5
L09b	NAM	65.4	11.5	8.1	9.4	7.8	7.4	2.3	2.3	5.5	3.6	1.8	3.4	2.4

Licence	Operator	Total	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
L10 & L11a	GDF SUEZ	499.4	51.1	43.9	41.0	35.5	45.5	44.1	41.3	42.2	39.9	41.6	36.6	36.8
L11b	Oranje Nassau	68.1	8.8	6.9	6.9	6.6	6.2	6.0	6.3	2.1	4.9	5.2	4.5	3.6
L12b & L15b	GDF SUEZ	299.8	30.1	22.9	27.8	25.9	28.0	24.3	18.5	21.9	13.7	16.4	29.5	40.8
L13	NAM	113.9	13.8	9.3	2.0	12.9	13.4	6.8	0.0	2.7	11.0	11.6	15.0	15.4
M07	Oranje Nassau	74.0	10.1	9.5	10.8	7.7	8.4	7.3	5.2	8.3	3.2	0.0	0.0	3.6
P06	Wintershall	136.0	10.9	11.8	12.9	9.9	10.0	13.6	13.2	11.0	7.6	11.4	11.7	12.1
P09a&P09b	Wintershall	18.9	2.1	1.7	1.7	1.6	1.5	1.8	1.1	1.9	1.1	1.6	1.4	1.3
P09c	Wintershall	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
P09c	Petrogas	2.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
P11b	Dana	316.9	26.2	26.8	29.8	28.6	23.7	29.4	27.1	29.9	15.9	28.1	26.2	25.4
P12	Wintershall	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
P15a&P15b	TAQA	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.3	1.0	1.6
P15a&P15b	TAQA	83.2	6.6	5.9	4.7	5.2	7.3	4.1	7.6	8.9	8.1	7.4	9.4	8.1
P15c	TAQA	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
P18a	TAQA	137.2	12.7	11.4	12.4	11.7	12.4	5.9	10.2	12.5	12.4	11.8	11.8	12.0
Q01	Wintershall	240.2	0.0	0.0	16.2	19.0	11.8	15.9	30.6	32.7	30.4	27.6	28.9	27.2
Q01	Petrogas	4.8	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Q04	Wintershall	203.6	31.0	31.9	21.1	17.1	25.9	18.5	11.1	10.2	6.4	11.0	9.6	9.8
Q13a	GDF SUEZ	33.8	0.0	0.6	1.6	2.9	3.9	1.8	3.5	3.7	4.1	3.5	3.9	4.2
Q16a	Oranje Nassau	115.7	10.7	9.0	10.7	10.3	10.8	5.0	9.2	10.2	10.2	10.0	9.7	9.9
Total		15257.6	1478.8	1328.2	1480.0	1376.6	1292.4	1004.7	1033.5	1259.4	1146.0	1229.3	1288.9	1339.7

Gas production, Netherlands continental shelf per stratigraphic reservoir The two bar graphs below show the contribution of the gas reservoirs to gas production from the continental shelf. From the first graph it can be seen that on the continental shelf (just as onshore) the biggest contribution to the gas production is from the Rotliegend and Triassic reservoirs. Production was fairly constant from 2003–2008, but thereafter declined steadily, with 2012 being the first year in which offshore production fell below 20 billion Sm³/year. The second graph shows production excluding that from the Rotliegend and Triassic reservoirs, in order that the contribution from reservoirs at other levels can more clearly be seen. During the period 2005–2007 the contribution from fields with combined Carboniferous–Rotliegend reservoirs almost tripled, but since 2008 production from this reservoir level has again been declining steadily. The start of production from the shallow (Tertiary) reservoirs in the northern part of the Dutch continental shelf in 2008 is striking. Production from the Tertiary reservoirs has remained fairly stable, thanks to B13-A coming on stream.



OIL PRODUCTION in 2014 (in 1000 Sm³)

The production per licence is the total production from all producing wells with a wellhead within the licence area. Production data are supplied by the operating companies.

Licence	Operator	Total	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Botlek	NAM	30.0	2.5	3.0	3.1	3.0	2.6	2.6	2.4	3.4	2.6	2.6	1.2	1.1
Rijswijk	NAM	174.1	17.0	13.0	8.9	15.9	15.2	14.5	14.3	14.8	15.6	15.4	15.4	14.1
Schoonebeek	NAM	472.7	37.7	35.2	42.6	35.4	31.2	31.9	36.8	42.3	43.7	47.2	43.3	45.5
F02A	Dana	227.6	18.2	15.5	21.7	20.3	21.3	11.5	18.8	18.9	21.0	21.3	20.4	18.7
F03B	GDF SUEZ	52.5	5.3	4.8	5.0	4.9	2.8	4.5	4.7	4.8	1.0	4.6	5.2	4.9
K18B	Wintershal	28.2	3.1	3.1	2.9	0.9	2.9	2.7	2.7	2.7	1.9	1.7	1.6	2.2
L16A	Wintershal	23.7	2.9	2.9	2.7	0.7	1.5	1.3	1.3	1.5	2.3	2.3	2.2	2.2
P09C	Petrogas	31.4	2.7	2.5	2.4	2.7	2.8	2.7	2.7	2.8	2.7	2.8	2.7	1.9
P11B	Dana	158.3	13.1	13.2	16.0	15.0	14.1	13.9	13.2	14.4	5.4	12.6	13.7	13.7
P15A & P15B	TAQA	35.1	3.7	2.9	3.5	3.1	3.0	0.0	0.0	4.2	3.7	3.8	3.8	3.5
Q01	Petrogas	110.1	9.2	7.9	8.2	7.9	10.2	9.5	9.9	10.0	9.4	9.3	9.3	9.3
Q13A	GDF SUEZ	465.7	0.0	9.1	23.8	44.1	56.7	26.8	26.8	53.3	58.2	50.6	55.4	60.8
Total		1809.5	115.4	112.9	140.9	153.8	164.4	122.0	133.6	173.0	167.5	174.2	174.0	177.8

CONDENSATE PRODUCTION* in 2014 (in 1000 Sm³)

Production data are supplied by the operating companies.

Licence	Total	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Territory gas fields	280.4	20.1	17.8	15.8	15.5	18.2	22.3	22.9	24.3	29.6	31.4	28.6	33.9
Continental shelf gas fields	216.4	22.1	19.7	21.1	19.5	18.9	11.8	12.8	19.8	17.9	17.5	18.0	17.3
Total	496.8	42.2	37.5	36.9	35.0	37.1	34.1	35.8	44.1	47.5	48.9	46.6	51.3

* Condensate is also referred to as natural gasoline or natural gas liquids (NGL).

10. UNDERGROUND STORAGE

In 2014 one storage licence has been applied for. This concerns the storage of filling material to stabilise a salt cavern. In 2014 there was one mutation in the companies holding licences.

On 1 January 2015 11 storage licences were in force: five for underground storage of natural gas (Alkmaar, Bergermeer, Grijpskerk, Norg and Zuidwending), two for nitrogen (Winschoten II and Winschoten III), one for gas oil (Twenthe - Rijn De Marssteden), two for saline water and one for storing CO₂.

A map of all storage licences as at 1 January 2015 is given in annex 1.

STORAGE LICENCES, Netherlands Territory Changes in 2014

Applied for

Licence	Publication	Date	Closing date	Storage of	Applicant(s)
Luttelgeest	Government Gazette 5 395	04-03-13	03-06-13	Saline water	Leo Hoogweg B.V.
Twenthe–Rijn Boeldershoek	-	24-01-14	-	Filler	AkzoNobel

* Application ongoing, published in an earlier annual review.

Company changes in 2014

The table below shows the single change which took place during 2014 as a result of mutations in consortiums of companies with licences. There were no name changes of participating companies, or name changes as a result of legal mergers.

Licence	Relinquishing company	Acquiring company	Effective from	Govern. Gazette
Zuidwending	Nuon Storage B.V.	-	20-06-14	19 480

GAS STORAGE in 2014

The tables below show the monthly figures for volumes of natural gas and nitrogen injected and withdrawn in 2014, per storage facility. Data supplied by licensees.

INJECTION of natural gas (in million Nm³)

Licence	Operator	Total	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Alkmaar	TAQA	95	0	0	0	0	0	93	2	0	0	0	0	0
Bergermeer	TAQA	1816	0	0	0	112	185	348	415	389	64	236	3	64
Grijpskerk	NAM	1075	0	0	0	34	279	30	250	253	217	13	0	0
Norg	NAM	940	0	0	90	397	245	208	0	0	0	0	0	0
Zuidwending	Gasunie	659	30	21	38	44	68	91	62	41	62	91	53	59
Total		4585	30	21	127	587	777	769	729	682	343	340	56	122

WITHDRAWAL of natural gas (in million Nm³)

Licence	Operator	Total	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Alkmaar	TAQA	84	55	4	2	0	0	0	0	0	0	0	22	1
Bergermeer	TAQA	242	0	0	0	0	0	0	0	0	0	0	105	137
Grijpskerk	NAM	1234	216	89	159	30	0	0	8	5	4	27	142	554
Norg	NAM	1204	439	172	10	0	0	0	0	0	0	0	0	584
Zuidwending	Gasunie	677	46	51	38	41	42	84	61	56	34	106	70	49
Total		3441	756	315	209	72	42	84	69	61	38	133	339	1324

INJECTION of nitrogen (in million Nm³)

Licence	Operator	Total	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Winschoten II	Gasunie	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.3

WITHDRAWAL of nitrogen (in million Nm³)

Licence	Operator	Total	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Winschoten II	Gasunie	6.5	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	4.7	1.4

11. COAL

No coal has been mined in the Netherlands since 1974. By then, almost 570 million tonnes of coal had been mined. Conventional mining is not expected to become profitable again in the future but interest has been shown in producing coal bed methane (CBM). Although research has indicated that a large resource of CBM may be present in the coal seams, the economic feasibility of recovering it has not yet been demonstrated.

On 1 January 2015 there were five production licences for coal in force. In 2014 there were again no mining activities in the licence areas. A map showing the location of the production licence areas is presented in appendix 6.

PRODUCTION LICENCES, Netherlands Territory, on 1 January 2015

Licensee	Licence	Effective from	km ²
DSM	Staatsmijn 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

Changes which took place during 2014 in relation to licences for the exploration and mining of salt are listed in the tables below, together with all ongoing applications for licences. In addition, monthly salt production per location is given, as well as an overview of annual production since 2003.

In 2014 one application for an exploration licence, submitted the previous year, was still ongoing and one production licence was awarded for rock salt production. In 2014 there was one change of company in one licence.

On 1 January 2015 16 production licences were in force, all for areas in the north and east of the country, which is where the salt is found (in Zechstein and Triassic deposits).

See appendix 6 for a map showing the location of the production licence areas.

EXPLORATION LICENCES, Netherlands Territory: changes in 2014

Applied for

Licence	Publication	Date	Closing date	Applicant(s)
Barradeel-Oost *	Government Gazette 249	19-12-07	24-03-08	Frisia

* Application ongoing, published in an earlier annual review.

PRODUCTION LICENCES, Netherlands Territory: changes in 2014

Awarded

Licensee	Licence	Effective from	km ²
Salzgewinnungsgesellschaft Westfalen mbH & Co KG	Zuidoost-Enschede	07-03-14	6
		Total	6

Company changes in 2014

The table below shows changes that occurred in 2014 in consortiums of companies with licences.

Company changes in production licences

Licence	Relinquishing company	Effective from	Govern. Gazette
Extension to Adolf van Nassau II	Nuon Storage B.V.	20-06-14	19 475

WELLS DRILLED FOR ROCK SALT completed in in 2014

	Name of well	Licence	Operator	Type of well
1	TWR-526	Twenthe-Rijn	AkzoNobel	Production
2	TWR-527	Twenthe-Rijn	AkzoNobel	Production
3	TWR-531	Twenthe-Rijn	AkzoNobel	Production
4	TWR-532	Twenthe-Rijn	AkzoNobel	Production
5	TWR-533	Twenthe-Rijn	AkzoNobel	Production
6	TWR-535	Twenthe-Rijn	AkzoNobel	Production
7	TWR-536	Twenthe-Rijn	AkzoNobel	Production

ROCK SALT PRODUCTION, 2014 (in 1000 tonnes)

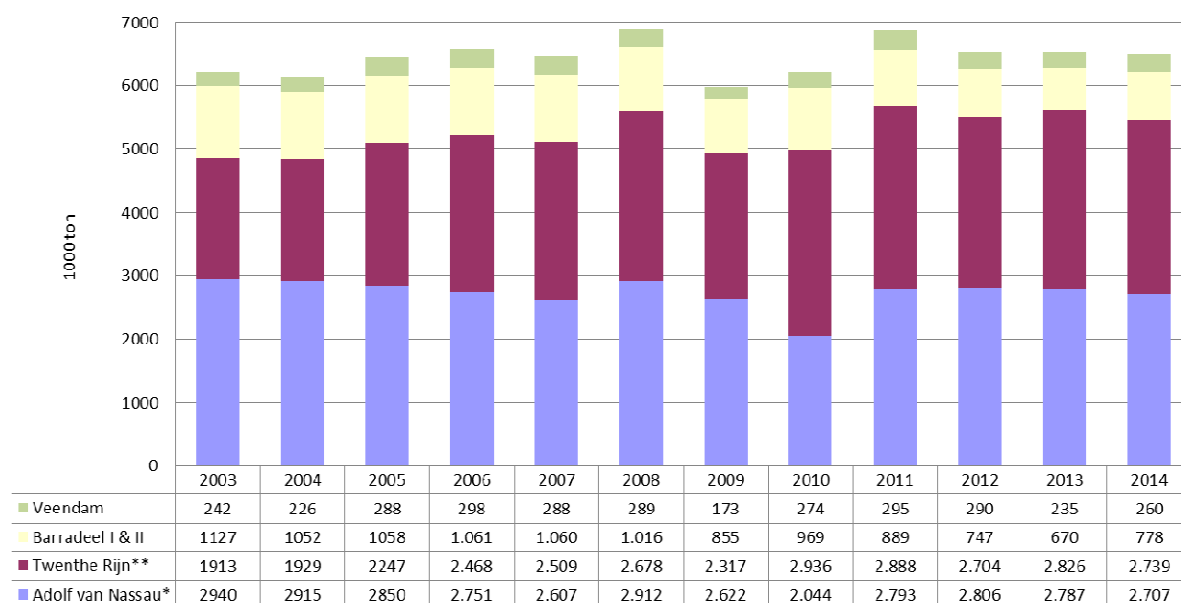
Production	Operator	Total	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Adolf van Nassau	AKZO	1240	116	103	117	112	120	116	93	123	112	60	91	76
Adolf van Nassau*	AKZO	1468	137	124	134	125	143	135	135	132	107	122	89	85
Barradeel	Frisia	2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1
Barradeel II	Frisia	777	57	65	63	35	72	72	59	70	70	71	72	71
Twenthe-Rijn	AKZO	1581	175	139	157	120	136	113	125	122	93	138	126	137
Twenthe-Rijn**	AKZO	315	32	28	32	23	29	26	21	25	22	34	23	20
Twenthe-Rijn***	AKZO	843	46	52	73	68	87	82	82	79	55	81	65	72
Veendam	Nedmag	260	24	22	24	21	24	21	23	22	19	15	23	23
Total		6485	588	534	600	504	612	566	538	572	477	521	489	485

* Extension of Adolf van Nassau

**Extension of Twenthe-Rijn Helmerzijde

*** Extension of Twenthe-Rijn

ROCK SALT PRODUCTION 2003 – 2014



* Including extension of Adolf van Nassau

** Including extension of Twenthe – Rijn

13. GEOTHERMAL ENERGY

A large number of changes in exploration licences for geothermal energy took place in 2014:

- two licence applications
- six licences were awarded
- two licences were rejected.
- two licences were split,
- one licence was merged
- three licences were restricted.
- twenty eight licences were extended
- eight licences expired, or were either withdrawn or relinquished.

In 2014 there were no new applications for production licences for geothermal energy. One geothermal energy production licence was issued. Changes which took place during 2014 in relation to licences for the exploration and production of geothermal energy are listed in the tables at the end of this chapter.

Geothermal wells and production installations

In 2014 five geothermal wells were completed (see table **Error! Reference source not found.**below). They were drilled in the licence areas Heemskerk, De Lier and Middenmeer. Realising these wells increased the geothermal production installations in the Netherlands in 2014 by three (Figure 7). These installations are named doublets as they consist of two wells. One well pumps up the warm water and after extracting the heat, the second well injects the cooled down water back into the aquifer.

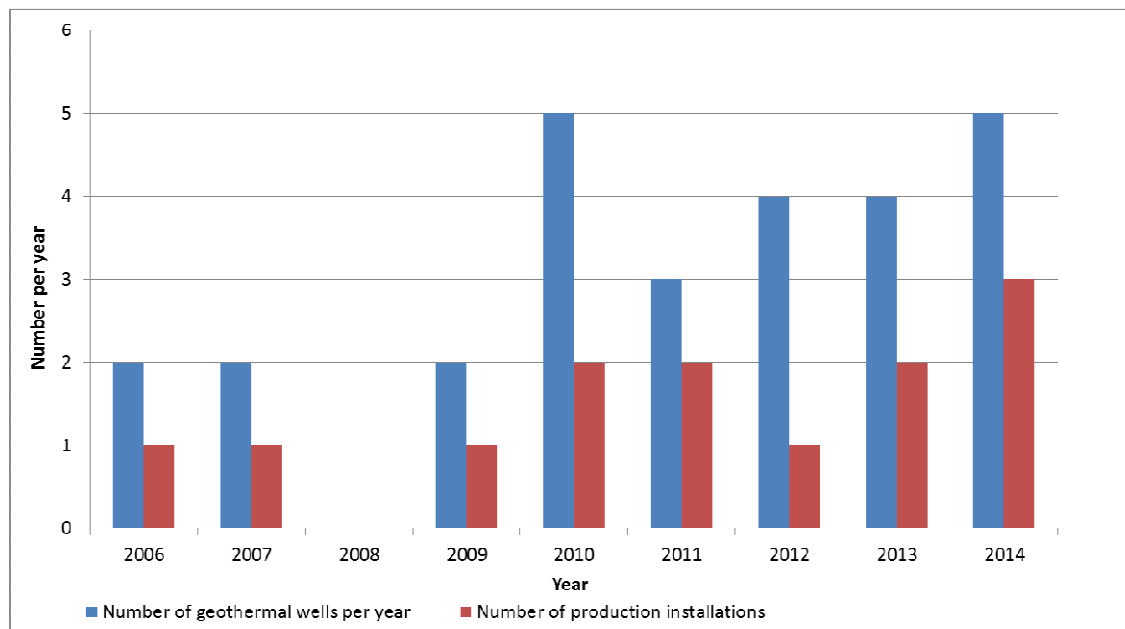


Figure 7. Number of geothermal wells completed per calendar year and number of installations completed since 2006

Table 13: Geothermal energy wells completed in 2014

	Name of well	Geothermal energy licence	Operator
1	Heemskerk-GT-02	Heemskerk	Ce-Ren Beheer B.V.
2	De Lier-GT-01	De Lier	VOF Geothermie De Lier
3	De Lier-GT-02	De Lier	VOF Geothermie De Lier
4	Middenmeer-GT-03-S1	Middenmeer	ECW Geoholding B.V.
5	Middenmeer-GT-04	Middenmeer	ECW Geoholding B.V.

Production of geothermal energy as at 1st January 2015

As at 1st January 2015 there were a total of 13 geothermal installations. Although the installation of Heerlerheide (wells 1 & 2) is classed under mining legislation as being for geothermal energy it actually is a heat/cold storage facility and as such will not be included in the following tables. Of the other 12 geothermal doublets ten were operational in 2014. Of the two remaining installations one was in the start up phase while the other was temporarily closed in.

Table 14: Geothermal installations.

Name of geothermal energy installation	Wells	Geothermal energy licence	Operational in 2014
Californie Geothermie	CAL-GT-1,2&3	Californie I	Yes
De Lier Geothermie	LIR-GT-1&2	De Lier	Yes
Honselersdijk Geothermie	HON-GT-1&2	Honselersdijk	Yes
Berkel & Rodenrijs	VDB-GT-3&4	Bleiswijk 1b	Yes
Bleiswijk	VDB-GT-1&2	Bleiswijk	Yes
Koekoekspolder Geothermie	KKP-GT-1&2	Kampen	Yes
Mijnwater energiecentrale Heerlen	HLH-G-1&2	Heerlen	Yes, heat/cold storage
Pijnacker-Nootdorp Geothermie	PNA-GT-1&2	Pijnacker-Nootdorp 4	Yes
Pijnacker-Nootdorp Zuid Geothermie	PNA-GT-3&4	Pijnacker-Nootdorp 5	Yes
-	HAG-GT-1&2	Den Haag	Closed in
-	HEK-GT-1&2	Heemskerk	No
Middenmeer Geothermie I	MDM-GT-1&2	Middenmeer	Yes
Middenmeer Geothermie II	MDM-GT-3&4	Middenmeer	Yes

Figure 8 shows the aggregate production of geothermal energy per month in tera joules (TJ) and also the number of installations contributing to the monthly total. Not all installations were operational throughout the year.

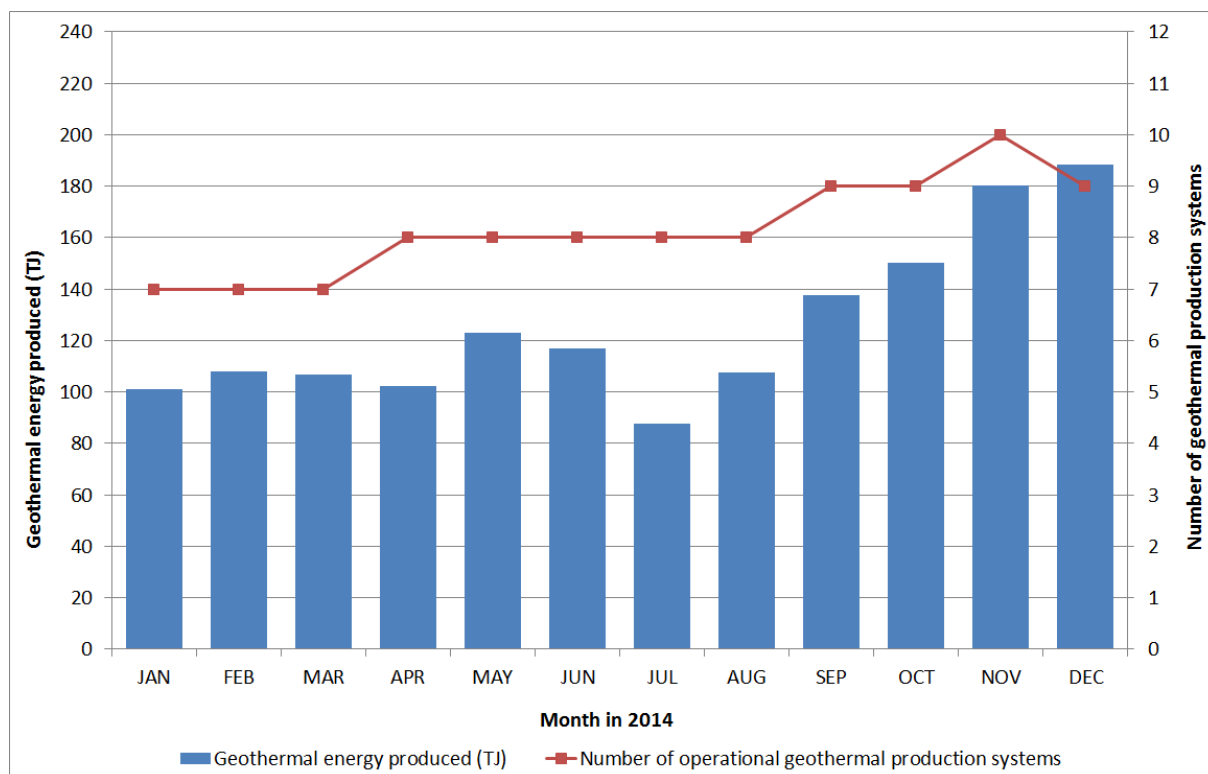


Figure 8. Monthly production of geothermal energy in Tera Joules and the number of geothermal energy production systems contributing to the reported production (excluding Heerlen mine water power station)

The cumulative reported annual production steadily grew since the beginning of 2008 to 1509 TJ in 2014 (Table 15, Figure 9). Small amounts of hydrocarbons are co-produced with the geothermal energy. In most installations the hydrocarbon is gas, but in one installation oil is produced as well. The gas is usually dissolved in the formation water and released when the pressure of the production water in the production installation falls below the ‘bubble point’. Five installations reported the volumes of gas captured (Figure 10). In the remaining installations no gas or oil was captured.

Table 15: Annual production of energy and co-produced hydrocarbons

Year	Energy produced (TJ)	Co-produced gas (x1000Nm ³)	Co-produced oil (Sm ³)
2008	96*	-	-
2009	142*	-	-
2010	318*	-	-
2011	316*	-	-
2012	495*	-	-
2013	993*	-	-
2014	1509	3267**	429

*Figure derived from: *Hernieuwbare energie in Nederland 2013*. Statistics Netherlands, The Hague/Heerlen, 2014. ISBN: 978-90-357-1857-9

** Not yet fully reported

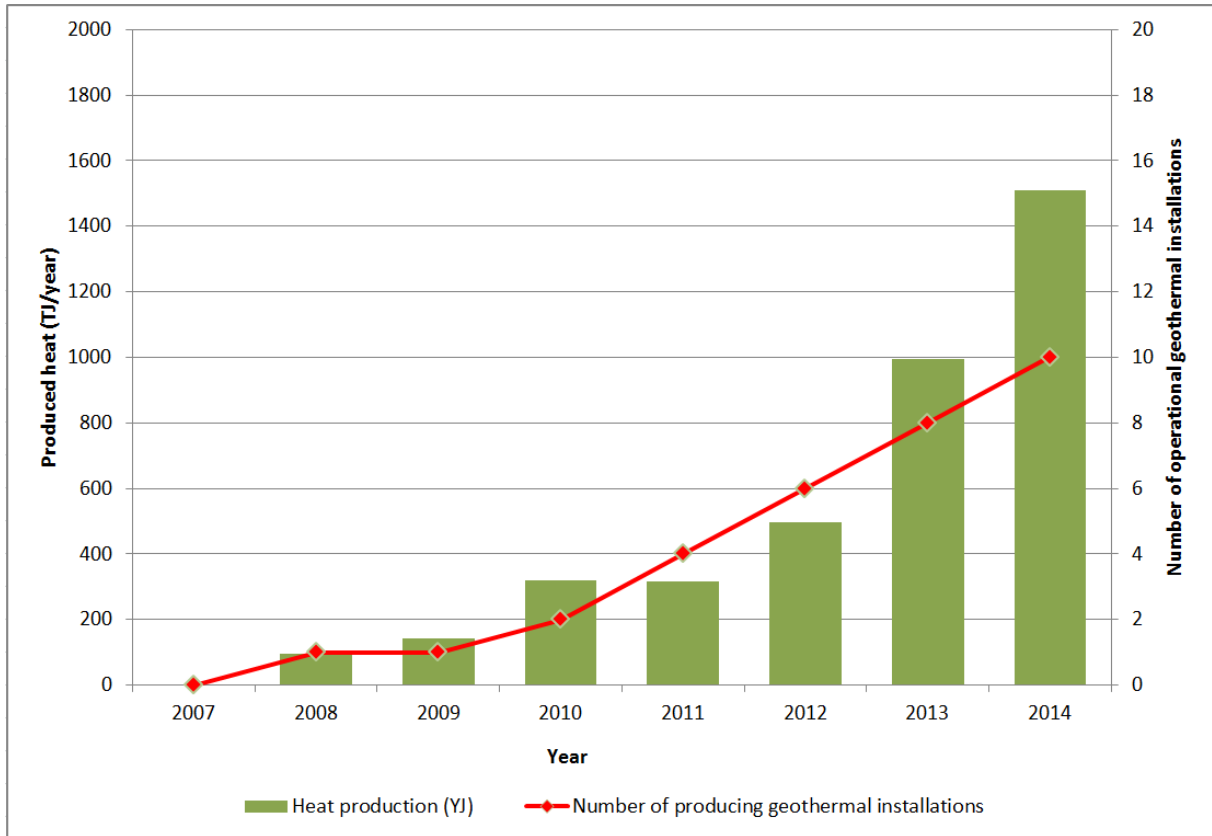


Figure 9. Annual production of geothermal energy (TJ/year)

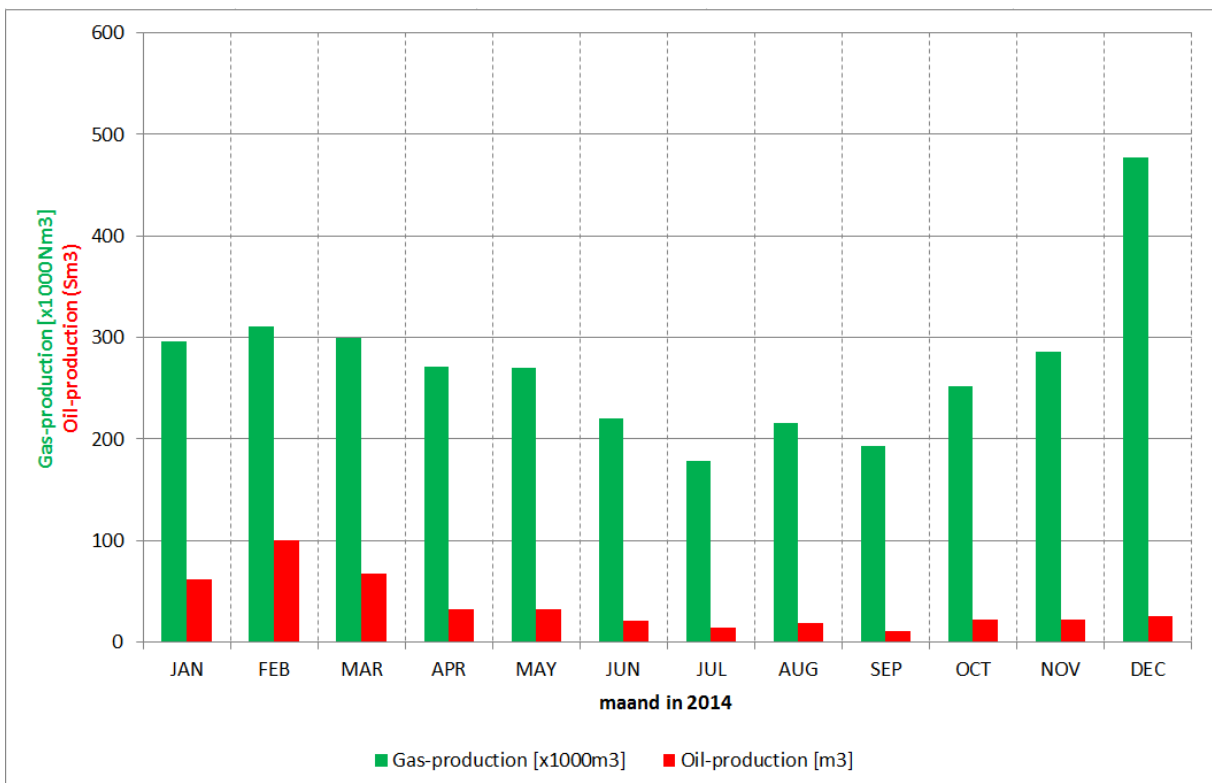


Figure 10. Volumes of hydrocarbons co-produced with geothermal energy. Gas in 1000Nm^3 and oil in Sm^3 . 1 installation has not yet reported co-produced gas over the entire year.

The heat is produced from different depth intervals. (Figure 11a) and from strata in various geological units. (Figure 11b). Most of the geothermal energy is produced from rocks in the Upper-Jurassic and Lower-Cretaceous; these installations are located in the southwest of the Netherlands. The three production installations in Noord-Holland and Overijssel produce from Rotliegend strata, whereas the installation in north Limburg produces from Lower Carboniferous strata.

The heat produced by the installations is mainly used to heat commercial greenhouses. One project also supplies heat to a utility company and an urban area. Another project intends to supply heat to a heating network in an urban area (Figure 11c).

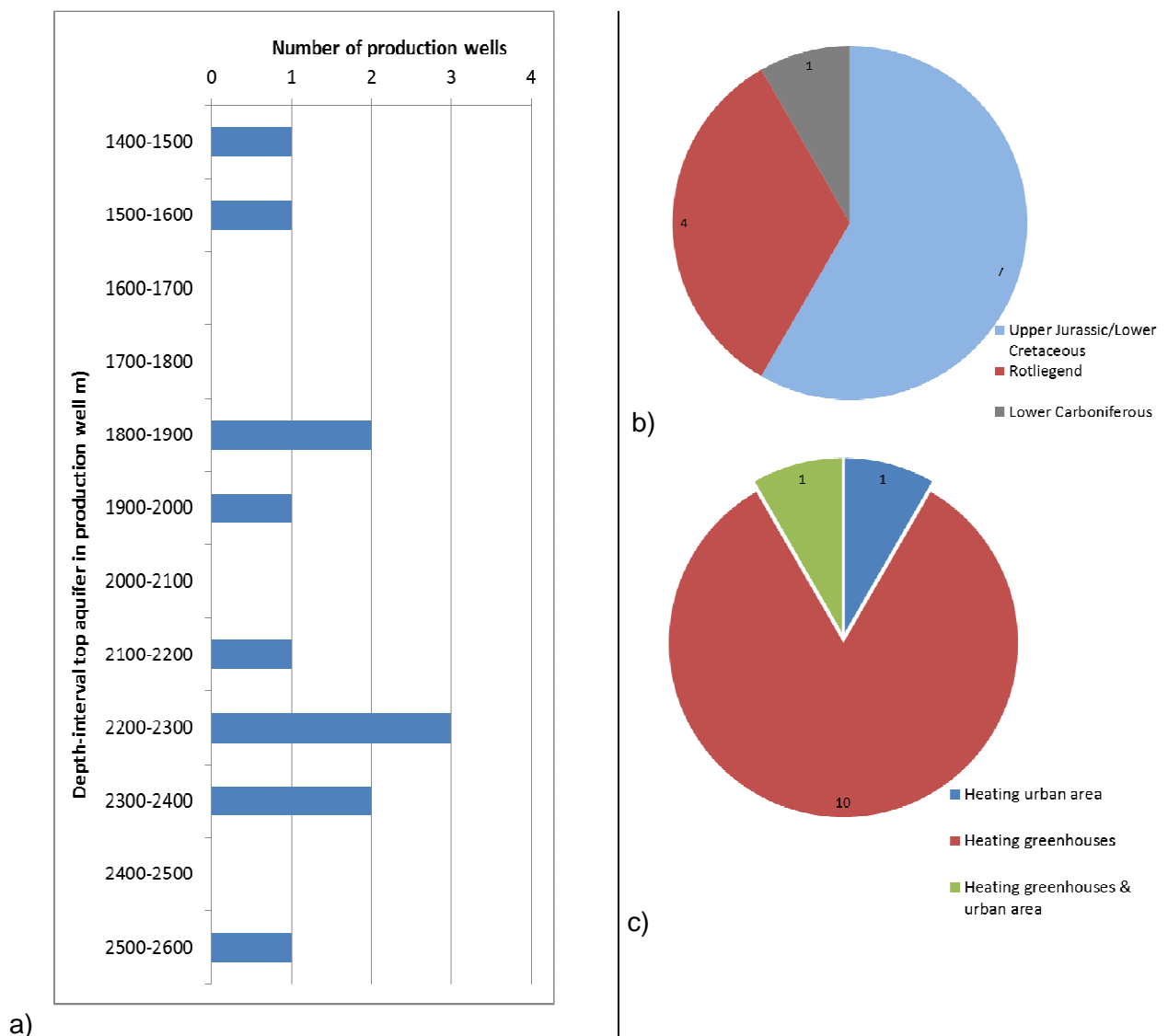


Figure 11. a) Depth to top of aquifer, b) Stratigraphy of the productive interval, c) uses of the heat produced

Production licences

Two producing installations operate under a formal production licence (excluding the Heerlerheide installation) the remaining eight geothermal installations produce as an 'extended well test'. During this test period the licensee will gather data to enable an efficient operation for future times. At the end of 2014 all but two producing operators had applied for a proper production licence and had submitted a production plan.

EXPLORATION LICENCES Netherlands Territory as at 1 January 2015

Applied for

Licence	Government Gazette	Date	Closing date	Applicant(s)
Wervershoof *	9 259	17-06-10	16-09-10	VD Holland C.V.
Lingewaard *	12 820	18-08-10	17-11-10	Energiecoöperatie Greenhouse Energy (excluded from liability)
Franekeradeel *	13 167	25-08-10	24-11-10	A.C. Hartman Beheer et al.
Hoogeveen *	19 287	03-12-10	04-03-11	Hoogeveen municipality
Monster 3	-	04-01-11	-	Opti-flor B.V.
Eindhoven *	2 045	07-02-11	09-05-11	Eindhoven municipality
Monster 2 *	2 440	07-02-11	09-05-11	Van den Ende Rozen family
Nieuwkoop **	15 915	06-09-11	06-12-11	Nieuwkoop municipality
Delfzijl ***	1 657	30-01-12	30-04-12	Akzo Nobel Salt B.V.
Helmond 2 *	23 905	22-11-12	21-02-13	Hydreco GeoMEC B.V.
Tilburg-Geertruidenberg *	23 922	22-11-12	21-02-13	Hydreco GeoMEC B.V.
Bommelerwaard *	26 056	18-12-12	19-03-13	Project bureau Herstructurering Tuinbouw Bommelerwaard
Oostland *	30 092	30-10-13	29-01-14	Solid Energie vof
Den Haag 3	7 444	18-03-14	17-06-14	The Hague municipality et al.
Leeuwarden 2	10 940	18-04-14	18-07-14	DDH Energy B.V.

* Application ongoing, published in an earlier annual review.

** Application withdrawn 17 January 2014

*** Application withdrawn 5 February 2014

Rejected

Applicant(s)	Area	Date	km ²
Van Dijk Bedrijven Holding B.V.	Harmelerwaard	15-07-14	35
Geothermie Nederland Holding B.V.	southwest Drenthe	23-07-14	961
Total			996

Awarded

Licensee	Licence	Effective from	km ²
Bernhard Plantenkwekerij B.V. et al.	Luttelgeest	08-04-14	72
A+G van den Bosch B.V.	Lansingerland 4	27-09-14	6
Zuidgeest Growers B.V.	Honselerdijk 4	03-10-14	4
A-ware Production B.V.	Heerenveen	28-10-14	46
Van Wijnen Gorredijk B.V.	Leeuwarden	28-10-14	30
Geothermie De Kievit B.V.	Peel & Maas	19-12-14	48
Total			206

Split

Licensee	Licence	Effective from	km ²
- Originally			
Overijssel Provincial Executive	Koekoekspolder II		31
Transmark Renewable Products B.V.	Friesland		781
- After splitting			
Overijssel Provincial Executive	Koekoekspolder IIa	21-03-14	28
Overijssel Provincial Executive	Koekoekspolder IIb	21-03-14	3
Transmark Renewable Products B.V.	North Friesland	19-11-14	326
Transmark Renewable Products B.V.	South Friesland	19-11-14	456

Merged

Licensee	Licence	Effective from	km ²
- Originally			
Geothermal cluster I KKP B.V.	Koekoekspolder IIb		3
Geothermal cluster I KKP B.V.	Kampen		2
- After merging			
Geothermal cluster I KKP B.V.	Kampen II	21-03-14	5

Restricted

Licensee	Licence	Effective from	km ²
Ce-Ren Beheer B.V.	Heemskerk	20-01-14	2
Transmark Renewable Products B.V.	Friesland	21-03-14	4 063
Transmark Renewable Products B.V.	Friesland	19-11-14	781
Transmark Renewable Products B.V.	Utrecht – North Brabant	19-11-14	757
Total			5 603

Prolonged

Licensee	Licence	Effective from	km²
Harting-Vollebregt Beheer B.V.	De Lier	17-01-14	23
Harting-Vollebregt Beheer B.V.	De Lier 3	17-01-14	11
Kwekerij de Westhoek B.V. et al.	Maasland	25-01-14	9
P.N.A. van Dijk Beheer B.V.	Oostvoorne	21-03-14	17
P.G.M. Tas et al.	Zevenhuizen	21-03-14	9
Directeur Facilitair Management en Vastgoed, TU Delft	Delft IV	08-04-14	40
D.J. Bac et al.	Zevenhuizen-Moerkapelle	12-04-14	13
ECW Geoholding B.V.	Andijk	12-04-14	12
Wayland Developments B.V.	Waddinxveen 2	14-04-14	7
Gietwater Berlikum B.V.	Berlikum	18-04-14	19
Grondexploitatie maatschappij Californie B.V.	Californie 2	06-06-14	71
G.J. van de Sande et al.	Pijnacker-Nootdorp 3	06-06-14	17
A.P.M. Zuidgeest et al.	Honselersdijk 2	06-06-14	4
A.P.M. Zuidgeest et al.	Maasdijk	06-06-14	6
Hollandplant Vastgoed B.V.	Lansingerland	18-06-14	7
ECW Geoholding B.V.	Middenmeer	18-06-14	24
AC Hartman Beheer B.V. et al.	Sexbierum	18-06-14	11
Hydreco GeoMEC B.V.	Pijnacker-Nootdorp 6	15-07-14	9
Kwekerij de Westhoek B.V. et al.	Maasland	03-10-14	9
Vereniging van Eigenaren Oude Campspolder	Maasland 2	03-10-14	5
Directeur Facilitair Management en Vastgoed, TU Delft	Delft IV	04-10-14	40
D.J. Bac et al.	Zevenhuizen-Moerkapelle	31-10-14	13
Cooperative Flower Auction FloraHolland	Naaldwijk 2	31-10-14	4
Wayland Nova B.V.	Maasbree	06-12-14	22
Overijssel Provincial Executive	Koekoekspolder IIa	13-12-14	28
Drenthe Province et al.	Erica	23-12-14	72
Drenthe Province et al.	Klazienaveen	23-12-14	61
A.P.M. Ammerlaan et al.	Bleiswijk 4 *	31-12-14	7
Total			570

* Pending

Expired/Relinquished/Withdrawn

Licensee	Licence	Effective from	km ²
Akzo Nobel Salt B.V.	Hengelo	05-02-14	58
Houdstermaatschappij Oosterom B.V.	Waddinxveen	01-04-14	14
Van Gog Asten B.V.	Asten	20-04-14	18
Landbouwbedrijf Van Gog B.V.	Helmond	20-04-14	24
Plantenkwekerij Leo Ammerlaan B.V.	Bleiswijk 2	01-06-14	5
Hydreco GeoMEC B.V. et al.	Rotterdam	05-07-14	23
Westland municipality	Westland	07-07-14	47
N.P. Duijvestijn et al.	Honselersdijk 3	01-11-14	7
		Total	196

PRODUCTION LICENCES, Netherlands Territory

Applied for

Licence	Publication	Date	Closing date	Applicant(s)
Bleiswijk 1b *	-	20-06-11	-	A+G van den Bosch B.V.
Den Haag *	-	21-09-11	-	Gemeente Den Haag
Honselersdijk *	-	15-01-13	-	J.P.M. Scheffers, G. Verkade B.V.
Pijnacker-Nootdorp 5 *	-	31-01-13	-	Duijvestijn Energie B.V.
Pijnacker-Nootdorp 4 *	-	06-02-13	-	Ammerlaan Real Estate B.V.
Middenmeer *	-	21-03-13	-	ECW Geoholding B.V.
Heemskerk *	-	20-11-13	-	Ce-Ren Beheer B.V.

* Application ongoing, published in an earlier annual review.

Awarded

Licensee	Licence	Effective from	km ²
Aardwarmtecluster I KKP B.V.	Kampen	27-09-14	5
		Total	5

Company changes in 2014

The table below lists in chronological order the changes which took place during 2014 as a result of mutations in consortiums of companies with licences.

Company changes in exploration licences

Licence	Relinquishing company	Acquiring company	Effective from	Staats courant
Koekoekspolder IIb	Overijssel Provincial Executive	Aardwarmtecluster I KKP B.V.	21-03-14	9 051
Andijk	Grootslag Holding B.V.	ECW Geoholding B.V.	28-03-14	9 526
De Lier 3	Harting-Vollebregt Beheer B.V.	Geothermie De Lier B.V. De Bruijn Geothermie B.V.	31-10-14	32 377
De Lier	Harting-Vollebregt Beheer B.V.	Geothermie De Lier B.V. De Bruijn Geothermie B.V.	31-10-14	32 446

ANNEXES

NATURAL GAS AND OIL ACCUMULATIONS BY STATUS as at 1 January 2015

NATURAL GAS ACCUMULATIONS

I. DEVELOPED ACCUMULATIONS

Accumulation	Company	Licence name***	Gas/Oil
a) Producing			
Ameland-Oost	NAM	Noord-Friesland (pl)	G
Ameland-Westgat	NAM	Noord-Friesland (pl)	G
Anjum	NAM	Noord-Friesland (pl)	G
Annerveen	NAM	Drenthe IIb (pl) , Groningen (pl)	G&O
Bedum	NAM	Groningen (pl)	G
Bergen	TAQA	Bergen II (pl)	G
Blija-Ferwerderadeel	NAM	Noord-Friesland (pl)	G
Blija-Zuid	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 II (pl) , Rijswijk (pl)	G
Brakel	Vermillion	Andel V (pl)	O&G
Burum-Oost	NAM	Tietjerksteradeel (pl)	G
Coevorden	NAM	Hardenberg (pl) , Schoonebeek (pl)	G
Collendoorn	NAM	Hardenberg (pl) , Schoonebeek (pl)	G
Collendoornerveen	NAM	Schoonebeek (pl)	G
Dalen	NAM	Drenthe IIb (pl) , Drenthe IIIb (pl) , Schoonebeek (pl)	G
De Hoeve	Vermillion	Gorredijk (pl)	G
De Lier	NAM	Rijswijk (pl)	O&G
De Wijk	NAM	Drenthe IIb (pl) , Schoonebeek (pl)	G
Den Velde	NAM	Hardenberg (pl) , Schoonebeek (pl)	G
Eernewoude	Vermillion	Leeuwarden (pl)	G
Eleveld	NAM	Drenthe IIb (pl)	G
Emmen	NAM	Drenthe IIb (pl) , Groningen (pl)	G
Emmen-Nieuw Amsterdam	NAM	Drenthe IIb (pl) , Schoonebeek (pl)	G
Ezumazijl	NAM	Noord-Friesland (pl)	G
Faan	NAM	Groningen (pl)	G
Feerwerd	NAM	Groningen (pl)	G
Gaag	NAM	Rijswijk (pl)	G
Gasselternijveen	NAM	Drenthe IIb (pl)	G
Geesbrug	Vermillion	Drenthe IIIb (pl)	G
Geestvaartpolder	NAM	Rijswijk (pl)	G
Groet	TAQA	Bergen II (pl) , Bergermeer (pl)	G
Groet-Oost	TAQA	Middelie (pl)	G
Grolloo	Vermillion	Drenthe IV (pl)	G

Groningen	NAM	Groningen (pl)	G
Grootegast	NAM	Groningen (pl) , Tietjerksteradeel (pl)	G
Grouw	Vermillion	Leeuwarden (pl) , Oosterend (pl)	G
Hardenberg	NAM	Hardenberg (pl) , Schoonebeek (pl)	G
Hardenberg-Oost	NAM	Hardenberg (pl) , Schoonebeek (pl)	G
Harkema	NAM	Tietjerksteradeel (pl)	G
Heinenoord	NAM	Botlek II (pl)	G
Hekelingen	NAM	Beijerland (pl) , Botlek II (pl)	G
Kiel-Windeweer	NAM	Drenthe IIb (pl) , Groningen (pl)	G
Kollum	NAM	Noord-Friesland (pl) , Tietjerksteradeel (pl)	G
Kollum-Noord	NAM	Noord-Friesland (pl) , Tietjerksteradeel (pl)	G
Kommerzijl	NAM	Groningen (pl)	G
Langezwaag	Vermillion	Gorredijk (pl)	G
Lauwersoog	NAM	Noord-Friesland (pl)	G
Leens	NAM	Groningen (pl)	G
Leeuwarden en Nijega	Vermillion	Akkrum [opv], Leeuwarden (pl) , Tietjerksteradeel (pl)	G
Loon op Zand	Vermillion	Waalwijk (pl)	G
Loon op Zand-Zuid	Vermillion	Waalwijk (pl)	G
Maasdijk	NAM	Rijswijk (pl)	G
Marum	NAM	Groningen (pl) , Tietjerksteradeel (pl)	G
Metslawier-Zuid	NAM	Noord-Friesland (pl)	G
Middelie	NAM	Middelie (pl)	G
Middenmeer	Vermillion	Slootdorp (pl)	G
Moddergat	NAM	Noord-Friesland (pl)	G
Molenpolder	NAM	Groningen (pl)	G
Monster	NAM	Rijswijk (pl)	G
Munnekezijl	NAM	De Marne (pl) , Groningen (pl) , Noord-Friesland (pl)	G
Nes	NAM	Noord-Friesland (pl)	G
Noorderdam	NAM	Rijswijk (pl)	G
Noordwolde	Vermillion	Gorredijk (pl)	G
Oosterhesselen	NAM	Drenthe IIb (pl) , Drenthe IIIb (pl)	G
Oostrum	NAM	Noord-Friesland (pl)	G
Opeinde	Vermillion	Leeuwarden (pl) , Tietjerksteradeel (pl)	G
Opeinde-Zuid	Vermillion	Akkrum [opv] , Leeuwarden (pl)	G
Opemde-Oost	NAM	Groningen (pl)	G
Oud-Beijerland Zuid	NAM	Beijerland (pl) , Botlek II (pl)	G
Oude Pekela	NAM	Groningen (pl)	G
Oudeland	NAM	Beijerland (pl)	G
Oudendijk	NAM	Beijerland (pl)	G
Pasop	NAM	Drenthe IIb (pl) , Groningen (pl)	G
Pernis	NAM	Rijswijk (pl)	G
Pernis-West	NAM	Rijswijk (pl)	G
Reedijk	NAM	Botlek II (pl)	G
Ried	Vermillion	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	Vermillion	Slootdorp (pl)	G
Spijkenisse-Oost	NAM	Botlek II (pl)	G
Spijkenisse-West	NAM	Beijerland (pl) , Botlek II (pl)	G
Sprang	Vermillion	Waalwijk (pl)	G
Suawoude	NAM	Tietjerksteradeel (pl)	G
Surhuisterveen	NAM	Groningen (pl) , Tietjerksteradeel (pl)	G
Tietjerksteradeel	NAM	Leeuwarden (pl) , Tietjerksteradeel (pl)	G
Ureterp	NAM	Tietjerksteradeel (pl)	G
Vierhuizen	NAM	De Marne (pl) , Groningen (pl) , Noord-Friesland (pl)	G
Vinkega	Vermillion	Drenthe IIa (pl) , Drenthe IIIa (pl), Gorredijk (pl)	G
Vries	NAM	Drenthe IIb (pl)	G
Waalwijk-Noord	Vermillion	Waalwijk (pl)	G
Wanneperveen	NAM	Schoonebeek (pl)	G
Warffum	NAM	Groningen (pl)	G
Warga-Wartena	Vermillion	Leeuwarden (pl) , Tietjerksteradeel (pl)	G
Westbeemster	NAM	Bergen II (pl) , Middellie (pl)	G
Wieringa	NAM	Groningen (pl) , Noord-Friesland (pl) , Tietjerksteradeel (pl)	G
Witterdiep	NAM	Drenthe IIb (pl)	G
Zevenhuizen	NAM	Groningen (pl)	G
Zuidwal	Vermillion	Zuidwal (pl)	G
Zuidwending-Oost	NAM	Groningen (pl)	G
A12-FA	Petrogas	A12a (pl) , A12d (pl)	G
B13-FA	Petrogas	B10c & B13a (pl)	G
D12-A	Wintershall	D12a (pl) , D15 (pl)	G
D15-A	GDF SUEZ	D12a (pl) , D15 (pl)	G
D18a-A	GDF SUEZ	D15 (pl) , D18a (pl)	G
E17a-A	GDF SUEZ	E16a (pl) , E17a & E17b (pl)	G
E18-A	Wintershall	E15a (pl) , E15b (pl) , E18a (pl)	G
F02-A Pliocene	Dana	F02a (pl)	G
F03-FA	Centrica	B18a (pl) , F03a (pl)	G
F03-FB	GDF SUEZ	F02a (pl) , F03b (pl) , F06a (pl)	G&O
F15a-A	Total	F15a (pl)	G
F15a-B	Total	F15a (pl)	G
F16-E	Wintershall	E15a (pl) , E18a (pl) , F13a (pl) , F16 (pl)	G
G14-A/B	GDF SUEZ	G14 & G17b (pl)	G
G14-C	GDF SUEZ	G14 & G17b (pl)	G
G16a-A	GDF SUEZ	G16a (pl)	G
G16a-B	GDF SUEZ	G16a (pl)	G
G16a-C	GDF SUEZ	G16a (pl)	G
G16a-D	GDF SUEZ	G16a (pl)	G
G17a-S1	GDF SUEZ	G17a (pl) , G17c & G17d (pl)	G
G17cd-A	GDF SUEZ	G17c & G17d (pl)	G
Halfweg	Petrogas	Q01 (pl) , Q02c (pl)	G
J03-C Unit	Total	J03a (pl) , J03b & J06 (pl) , K01a (pl) , K04a (pl)	G
K01-A Unit	Total	J03a (pl) , K01a (pl) , K04a (pl)	G
K02b-A	GDF SUEZ	E17a & E17b (pl) , E18a (pl) , K02b (pl) , K03a (pl) , K03c (pl)	G

K04-A	Total	K04a (pl) , K04b & K05a (pl) , K05b (pl)	G
K04a-B	Total	K04a (pl) , K04b & K05a (pl)	G
K04a-D	Total	J03b & J06 (pl) , K04a (pl)	G
K04a-Z	Total	K04a (pl)	G
K04-E	Total	K04a (pl) , K04b & K05a (pl)	G
K04-N	Total	K04a (pl) , K04b & K05a (pl)	G
K05a-A	Total	K04a (pl) , K04b & K05a (pl) , K08 & K11 (pl)	G
K05a-B	Total	K04b & K05a (pl) , K05b (pl)	G
K05a-D	Total	K04b & K05a (pl)	G
K05a-En	Total	K04b & K05a (pl) , K05b (pl)	G
K05-C North	Total	K01b & K02a (pl) , K05b (pl)	G
K05-C Unit	Total	K04b & K05a (pl) , K05b (pl)	G
K05-F	Total	K04b & K05a (pl) , K05b (pl) , K06 & L07 (pl)	G
K05-U	Total	K01b & K02a (pl) , K02c (pl) , K05b (pl)	G
K06-A	Total	K03b (pl) , K06 & L07 (pl)	G
K06-C	Total	K06 & L07 (pl)	G
K06-D	Total	K06 & L07 (pl) , K09c (pl)	G
K06-DN	Total	K06 & L07 (pl)	G
K06-G	Total	K06 & L07 (pl)	G
K07-FA	NAM	K07 (pl) , K08 & K11 (pl)	G
K07-FB	NAM	J09 [opv] , K07 (pl)	G
K07-FC	NAM	K07 (pl) , K08 & K11 (pl)	G
K07-FD	NAM	K07 (pl)	G
K07-FE	NAM	K07 (pl)	G
K08-FA	NAM	K08 & K11 (pl)	G
K08-FC	NAM	K08 & K11 (pl)	G
K09ab-A	GDF SUEZ	K06 & L07 (pl) , K09a & K09b (pl) , K09c (pl) , K12 (pl) , L10 & L11a (pl)	G
K09ab-B	GDF SUEZ	K09a & K09b (pl)	G
K09ab-D	GDF SUEZ	K09a & K09b (pl)	G
K09c-A	GDF SUEZ	K06 & L07 (pl) , K09c (pl)	G
K12-B	GDF SUEZ	K12 (pl) , K15 (pl)	G
K12-B9	GDF SUEZ	K12 (pl) , K15 (pl)	G
K12-D	GDF SUEZ	K12 (pl)	G
K12-G	GDF SUEZ	K12 (pl) , L10 & L11a (pl)	G
K12-L	GDF SUEZ	K09c (pl) , K12 (pl)	G
K12-M	GDF SUEZ	K12 (pl)	G
K12-S2	GDF SUEZ	K12 (pl)	G
K12-S3	GDF SUEZ	K12 (pl)	G
K14-FA	NAM	K14a (pl)	G
K14-FB	NAM	K14a (pl) , K17 (pl)	G
K15-FA	NAM	K15 (pl) , L13 (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-FK	NAM	K15 (pl)	G
K15-FL	NAM	K12 (pl) , K15 (pl)	G

K15-FM	NAM	K15 (pl)	G
K15-FN	NAM	K15 (pl)	G
K15-FO	NAM	K15 (pl)	G
K15-FP	NAM	K15 (pl)	G
K17-FA	NAM	K17 (pl)	G
K18-Golf	Wintershall	K15 (pl) , K18b (pl)	G
L01-A	Total	L01a (pl) , L01d (pl) , L04a (pl)	G
L02-FA	NAM	L02 (pl)	G
L02-FB	NAM	F17c (pl) , L02 (pl)	G
L04-A	Total	L04a (pl)	G
L04-B	Total	K06 & L07 (pl) , K09c (pl) , L04a (pl)	G
L04-D	Total	L04a (pl)	G
L04-F	Total	L01e (pl) , L04a (pl)	G
L04-G	Total	L01f (pl) , L04a (pl)	G
L04-I	Total	L04a (pl)	G
L05a-A	GDF SUEZ	L02 (pl) , L04c (pl) , L05a (pl)	G
L05-B	Wintershall	L05b (pl)	G
L05-C	Wintershall	L05b (pl) , L06b (pl)	G
L07-B	Total	K06 & L07 (pl)	G
L07-C	Total	K06 & L07 (pl)	G
L07-G	Total	K06 & L07 (pl)	G
L07-H South-East	Total	K06 & L07 (pl)	G
L07-N	Total	K06 & L07 (pl)	G
L08-A	Wintershall	L08a (pl) , L08b (pl)	G
L08-A-West	Wintershall	L08a (pl) , L08b (pl)	G
L08-D	Oranje Nassau	L08a (pl) , L08b (pl) , L11b (pl)	G
L08-G	Wintershall	L08a (pl)	G
L08-H	Wintershall	L08a (pl)	G
L08-P	Wintershall	L05c (pl) , L08b (pl)	G
L09-FA	NAM	L09 (pl)	G
L09-FB	NAM	L09 (pl)	G
L09-FD	NAM	L09 (pl)	G
L09-FE	NAM	L09 (pl)	G
L09-FF	NAM	L09 (pl)	G
L09-FG	NAM	L09 (pl)	G
L09-FH	NAM	L09 (pl)	G
L09-FJ	NAM	L09 (pl)	G
L09-FK	NAM	L09 (pl)	G
L09-FL	NAM	L09 (pl)	G
L10-CDA	GDF SUEZ	L10 & L11a (pl)	G
L10-G	GDF SUEZ	L10 & L11a (pl)	G
L10-M	GDF SUEZ	L10 & L11a (pl)	G
L10-N	GDF SUEZ	L10 & L11a (pl)	G
L10-O	GDF SUEZ	K12 (pl) , L10 & L11a (pl)	G
L12a-B	GDF SUEZ	L12a (pl) , L12b & L15b (pl) , L15c (pl)	G
L12b-C	GDF SUEZ	L12a (pl) , L12b & L15b (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
L15b-A	GDF SUEZ	L12b & L15b (pl)	G
Markham	Centrica	J03a (pl) , J03b & J06 (pl)	G
M07-A	Oranje Nassau	M07 (pl)	G
M07-B	Oranje Nassau	M07 (pl)	G
N07-FA	NAM	N07a (pl) , Noord-Friesland (pl)	G
P06-D	Wintershall	P06 (pl) , P09c (pl)	G
P06-Main	Wintershall	P06 (pl)	G
P09-A	Wintershall	P09a & P09b (pl) , P09c (pl)	G
P09-B	Wintershall	P09c (pl)	G
P11b Van Nes	Dana	P11b (pl)	G
P15-09	TAQA	P15a & P15b (pl), P18a (pl)	G
P15-11	TAQA	P15a & P15b (pl)	G
P15-13	TAQA	P15a & P15b (pl)	G
P15-14	TAQA	P15c (pl)	G
P15-17	TAQA	P15a & P15b (pl)	G
P15-19A4	TAQA	P15a & P15b (pl)	G
P18-2	TAQA	P18a (pl) , P18c (pl)	G
P18-4	TAQA	P15a & P15b (pl) , P18a (pl)	G
P18-6	TAQA	P15c (pl) , P18a (pl)	G
Q01-B	Wintershall	Q01 (pl) , Q04 (pl)	G
Q01-D	Wintershall	Q01 (pl)	G
Q04-A	Wintershall	Q04 (pl)	G
Q04-B	Wintershall	Q04 (pl) , Q05d (pl)	G
Q16-FA	Oranje Nassau	Q16a (pl)	G
Q16-Maas	Oranje Nassau	Botlek-Maas (pl) , P18d (pl) , Q16b & Q16c-Diep (pl), Q16b & Q16c-Ondiep (el) , S03a (pl) , T01 (pl)	G
b) Underground gas storage			
Alkmaar	TAQA	Alkmaar [wv/sl]	G
Bergermeer	TAQA	Bergermeer [wv/sl]	G
Grijpskerk	NAM	Grijpskerk [wv/sl]	G
Norg	NAM	Norg [wv/sl]	G
Zuidwending aardgasbuffer	Gasunie	Zuidwending [wv/sl]	G

II. UNDEVELOPED ACCUMULATIONS

Accumulation	Company	Licence name***	Gas/Oil
a) Production expected to start 2015–2019 (NP<5)			
Assen-Zuid	NAM	Drenthe IIb (pl)	G
Diever	Vermillion	Drenthe IIIb (pl)	G
Donkerbroek - Main	Tulip	Donkerbroek (pl) , Donkerbroek-West (pl)	G
Donkerbroek - West	Tulip	Donkerbroek (pl) , Donkerbroek-West (pl)	G
Eesveen	Vermillion	Drenthe IIIb (pl) , Steenwijk (pl)	G
Marknesse	Tulip	Marknesse (pl) , Noordoostpolder (el)	G
Marumerlage	NAM	Groningen (pl)	G
Nes-Noord	NAM	Noord-Friesland (pl)	G
Oppenhuizen	Vermillion	Zuid-Friesland III (pl)	G
Papekop	Vermillion	Papekop (pl)	G&O
Rodewolt	NAM	Groningen (pl)	G
Sonnega	Vermillion	Gorredijk (pl) , Steenwijk (pl)	G
Weststellingwerf			
Terschelling-Noord	Tulip	M10a & M11 (el) , Terschelling-Noord (el)	G
Usquert	NAM	Groningen (pl)	G
Woudsend	Vermillion	Zuid-Friesland III (pl)	G
A15-A	Petrogas	A12a (pl) , A12d (pl) , A15a (pl)	G
A18-FA	Petrogas	A18a (pl) , A18c (pl)	G
D15 Tourmaline	GDF SUEZ	D15 (pl)	G
F16-P	Wintershall	E18a (pl) , F16 (pl)	G
K09c-B	GDF SUEZ	K09a & K09b (pl) , K09c (pl)	G
K15-FH	NAM	K15 (pl)	G
L05a-D	GDF SUEZ	L02 (pl) , L05a (pl) , L05b (pl)	G
L06-B	Wintershall	L06a (pl)	G
L07-F	Total	K06 & L07 (pl) , L08b (pl)	G
L08-I	Wintershall	L08a (pl)	G
L10-19	GDF SUEZ	L10 & L11a (pl)	G
L11-7	GDF SUEZ	L10 & L11a (pl)	G
L12-FA	GDF SUEZ	L12a (pl) , L12b & L15b (pl)	G
L13-FI	NAM	L13 (pl)	G
M01-A	Oranje Nassau	M01a (pl)	G
M09-FA	NAM	M09a (pl) , Noord-Friesland (pl)	G
M10-FA	Tulip	M10a & M11 (el)	G
M11-FA	Tulip	M10a & M11 (el) , Noord-Friesland (pl)	G
P10a De Ruyter Western Extension	Dana	P10a (pl)	G&O
P11a-E	Oranje Nassau	P11a (el)	G
P11b Van Ghent East	Dana	P11b (pl)	G&O
P11b Witte de With	Dana	P11b (pl)	G
Q07-FA	Tulip	Q07 (el) , Q10a (el)	G

Accumulation	Company	Licence name***	Gas/Oil
b) Production to start after 2018 (NP>5)			
Beerta	NAM	Groningen (pl)	G
Boskoop	NAM	Rijswijk (pl)	G
Buma	NAM	Drenthe IIb (pl)	G
Burum	NAM	Tietjerksteradeel (pl)	G
Deurningen	NAM	Twenthe (pl)	G
Egmond-Binnen	NAM	Middelie (pl)	G
Exloo	NAM	Drenthe IIb (pl)	G
Haakswold	NAM	Schoonebeek (pl)	G
Heiloo	TAQA	Bergen II (pl)	G
Hollum-Ameland	NAM	Noord-Friesland (pl)	G
Kerkwijk	NAM	Andel V (pl), Utrecht (el)	G
Kijkduin-Zee	NAM	Rijswijk (pl)	G
Langebrug	NAM	Groningen (pl)	G
Lankhorst	NAM	Schoonebeek (pl)	G
Maasgeul	NAM	Botlek II (pl) , Q16b & Q16c-Diep (pl) , Q16b & Q16c-Ondiep (el)	G
Midlaren	NAM	Drenthe IIb (pl) , Groningen (pl)	G&O
Molenaarsgraaf	NAM	Andel V (pl) , Rijswijk (pl)	G
Nieuwehorne	Vermillion	Gorredijk (pl)	G
Nieuweschans	NAM	Groningen (pl)	G
Oosterwolde		open	G
Oude Leede	NAM	Rijswijk (pl)	G
Rammelbeek	NAM	Twenthe (pl)	G
Schiermonnikoog-Wad	NAM	Noord-Friesland (pl)	G
Ternaard	NAM	Noord-Friesland (pl)	G
Terschelling-West	NAM	open	G
Valthermond	NAM	Drenthe IIb (pl)	G
Vlagtwedde	NAM	Groningen (pl)	G
Wassenaar-Diep	NAM	Rijswijk (pl)	G
Werkendam-Diep	NAM	Rijswijk (pl)	G&O
Witten	NAM	Drenthe IIb (pl)	G
Zevenhuizen-West	NAM	Groningen (pl)	G
Zuidwijk	TAQA	Bergen II (pl) , Middelie (pl)	G
B10-FA	Petrogas	A12b & B10a (el)	G
B16-FA	Petrogas	B10c & B13a (pl) , B16a (el)	G
B17-A	Petrogas	B17a (el)	G
D12 Ilmenite	Wintershall	D12a (pl)	G
E11-Vincent	Tullow	E11 (el)	G
E12 Lelie		open	G
E12 Tulp East		open	G
E13 Epidoot		open	G
K08-FB	NAM	K08 & K11 (pl)	G
K08-FD	NAM	K04b & K05a (pl) , K08 & K11 (pl)	G
K08-FE	NAM	K08 & K11 (pl) , K09a & K09b (pl)	G
K08-FF	NAM	K08 & K11 (pl)	G
K14-FC	NAM	K08 & K11 (pl) , K14a (pl)	G

Accumulation	Company	Licence name***	Gas/Oil
K15-FF	NAM	K15 (pl)	G
K15-FI	NAM	K15 (pl)	G
K16-5		open	G
K17-FB	NAM	K17 (pl)	G
K17-Zechstein	NAM	K17 (pl)	G
K18-FB	Wintershall	K18b (pl)	G
K6-GT4	Total	K06 & L07 (pl)	G
L02-FC	NAM	L02 (pl)	G
L05b-A	Wintershall	L05b (pl)	G
L07-D	Total	K06 & L07 (pl)	G
L10-6	GDF SUEZ	L10 & L11a (pl)	G
L11-1	GDF SUEZ	L10 & L11a (pl)	G
L12-FD	Tullow	L09 (pl) , L12d (pl)	G
L13-FA	NAM	L13 (pl)	G
L13-FJ	NAM	L13 (pl)	G
L13-FK	NAM	L13 (pl)	G
L14-FB	GDF SUEZ	L13 (pl)	G
L16-Alpha	Wintershall	L16a (pl)	G
L16-Bravo	Wintershall	L16a (pl)	G
L16-FA	Wintershall	K18b (pl) , L16a (pl)	G
M09-FB	NAM	M09a (pl) , N07a (pl) , Noord-Friesland (pl)	G
P01-FA	Petrogas	P02a (el)	G
P01-FB	Petrogas	open	G
P02-Delta	Petrogas	open	G
P02-E	Petrogas	P02a (el)	G
P06-Northwest	Wintershall	P06 (pl)	G
P10b Van Brakel	Dana	P10b (pl)	G
P12-14	Wintershall	P12 (pl)	G
Q02-A		open	G
Q13-FC	Oranje Nassau	Q13b-Ondiep (el)	G
Q14-A	Oranje Nassau	Q13b-Ondiep (el)	G

III. PRODUCTION CEASED

Accumulation*	Status**	Company	Licence name***	Gas/Oil
Akkrum 1	A	Chevron USA	Akkrum (el) , Leeuwarden (pl)	G
Akkrum 13	A	Chevron USA	Akkrum (el) , Gorredijk (pl)	G
Akkrum 3	A	Chevron USA	Akkrum (el)	G
Akkrum 9	A	Chevron USA	Akkrum (el)	G
Ameland-Noord	T	NAM	M09a (pl) , Noord-Friesland (pl)	G
Appelscha	T	NAM	Drenthe IIb (pl)	G
Assen	T	NAM	Drenthe IIb (pl)	G
Barendrecht	T	NAM	Rijswijk (pl)	O&G
Barendrecht- Ziedewij	T	NAM	Rijswijk (pl)	G
Blesdijke	T	Vermillion	Gorredijk (pl) , Steenwijk (pl)	G
Boekel	U	TAQA	Bergen II (pl)	G
Bozum	U	Vermillion	Oosterend (pl)	G
Castricum-Zee	A	Wintershall	Middelie (pl)	G
De Blesse	T	Vermillion	Gorredijk (pl) , Steenwijk (pl)	G
De Klem	U	NAM	Beijerland (pl)	G
De Lutte	U	NAM	Rossum-De Lutte (pl) , Twenthe (pl)	G
Een	T	NAM	Drenthe IIb (pl) , Groningen (pl)	G
Emshoern	A	NAM	Groningen (pl)	G
Engwierum	U	NAM	Noord-Friesland (pl)	G
Franeker	U	Vermillion	Leeuwarden (pl)	G
Harlingen Lower Cretaceous	U	Vermillion	Leeuwarden (pl)	G
Harlingen Upper Cretaceous	T	Vermillion	Leeuwarden (pl)	G
Hemrik (Akkrum 11)	T	Tulip	Akkrum 11 (pl)	G
Hoogenweg	A	NAM	Hardenberg (pl)	G
Houwerzijl	T	NAM	Groningen (pl)	G
Kollumerland	T	NAM	Tietjerksteradeel (pl)	G
Leeuwarden 101 Rotliegend	U	Vermillion	Leeuwarden (pl)	G
Leidschendam	A	NAM	Rijswijk (pl)	G
Metslawier	U	NAM	Noord-Friesland (pl)	G
Middelburen	U	Vermillion	Leeuwarden (pl)	G
Nijensleek	U	Vermillion	Drenthe IIa (pl) , Steenwijk (pl)	G
Norg-Zuid	U	NAM	Drenthe IIb (pl)	G
Oldelamer	T	Vermillion	Gorredijk (pl) , Lemsterland (el) , Noordoostpolder (el)	G
Oldenzaal	U	NAM	Rossum-De Lutte (pl) , Twenthe (pl)	G
Rauwerd	T	Vermillion	Leeuwarden (pl) , Oosterend (pl)	G
Roden	T	NAM	Drenthe IIb (pl) , Groningen (pl)	G
Rossum-Weerselo	U	NAM	Rossum-De Lutte (pl) , Twenthe (pl)	G
Roswinkel	A	NAM	Drenthe IIb (pl) , Groningen (pl)	G

Accumulation*	Status**	Company	Licence name***	Gas/Oil
Sleen	A	NAM	Drenthe IIb (pl)	G
Starnmeer	U	TAQA	Bergen II (pl)	G
Tubbergen	U	NAM	Tubbergen (pl)	G
Tubbergen-Mander	U	NAM	Tubbergen (pl)	G
Weststellingwerf	U	Vermillion	Gorredijk (pl)	G
Wijk en Aalburg	U	Vermillion	Andel V (pl)	G
Wimmenum-Egmond	A	NAM	Middelie (pl)	G
Zuid-Schermer	U	TAQA	Bergen II (pl)	G
D15-A-104	U	GDF SUEZ	D15 (pl)	G
K05a-Es	U	Total	K04b & K05a (pl)	G
K05-G	U	Total	K04b & K05a (pl)	G
K06-N	U	Total	K06 & L07 (pl)	G
K06-T	U	Total	K06 & L07 (pl)	G
K09ab-C	T	GDF SUEZ	K09a & K09b (pl) , K09c (pl)	G
K10-B (gas)	A	Wintershall	open	G
K10-C	A	Wintershall	open	G
K10-V	A	Wintershall	K07 (pl)	G
K11-FA	A	NAM	K08 & K11 (pl)	G
K11-FB	A	GDF SUEZ	K08 & K11 (pl) , K12 (pl)	G
K11-FC	A	GDF SUEZ	K08 & K11 (pl)	G
K12-A	A	GDF SUEZ	K12 (pl)	G
K12-C	U	GDF SUEZ	K12 (pl)	G
K12-E	A	GDF SUEZ	K12 (pl) , L10 & L11a (pl)	G
K12-K	T	GDF SUEZ	K12 (pl)	G
K12-S1	A	GDF SUEZ	K12 (pl)	G
K13-A	A	Wintershall	open	G
K13-B	A	Wintershall	open	G
K13-CF	A	Wintershall	open	G
K13-DE	A	Wintershall	open	G
K15-FJ	T	NAM	K15 (pl)	G
K15-FQ	T	NAM	K15 (pl) , L13 (pl)	G
L06d-S1	T	Oranje Nassau	open	G
L07-A	A	Total	K06 & L07 (pl)	G
L07-H	T	Total	K06 & L07 (pl)	G
L09-FC	U	NAM	L09 (pl)	G
L09-FI	T	NAM	L09 (pl)	G
L10-K	A	GDF SUEZ	K06 & L07 (pl) , L10 & L11a (pl)	G
L10-S1	U	GDF SUEZ	L10 & L11a (pl)	G
L10-S2	U	GDF SUEZ	L10 & L11a (pl)	G
L10-S3	A	GDF SUEZ	L10 & L11a (pl)	G
L10-S4	U	GDF SUEZ	L10 & L11a (pl)	G
L11a-A	A	GDF SUEZ	L10 & L11a (pl)	G
L11b-A	U	Oranje Nassau	L11b (pl)	G
L11-Lark	A	GDF SUEZ	L10 & L11a (pl)	G
L13-FB	U	NAM	L13 (pl)	G
L13-FG	T	NAM	L13 (pl)	G

Accumulation*	Status**	Company	Licence name***	Gas/Oil
L13-FH	A	NAM	L13 (pl)	G
L14-FA	A	Transcanada Int.	L10 & L11a (pl)	G
P02-NE	A	Clyde	open	G
P02-SE	A	Clyde	P02a (el)	G
P06-South	A	Wintershall	P06 (pl) , P09c (pl)	G
P12-C	A	Wintershall	P12 (pl)	G
P12-SW	U	Wintershall	P12 (pl)	G
P14-A	A	Wintershall	P11a (el)	G
P15-10	U	TAQA	P15c (pl)	G
P15-12	T	TAQA	P15a & P15b (pl)	G
P15-15	U	TAQA	P15a & P15b (pl)	G
P15-16	U	TAQA	P15a & P15b (pl)	G
Q05-A	A	Wintershall	open	G
Q08-A	A	Wintershall	Middelie (pl)	G
Q08-B	A	Wintershall	open	G

* *In principle, the name as used in the application for the production licence*

** *T = production halted temporarily, U= production halted, A = abandoned*

*** *el = exploration licence, pl = production licence, open = open area; sl = storage licence.*

OIL ACCUMULATIONS

I. DEVELOPED ACCUMULATIONS

Accumulation	Company	Licence name***	Gas/Oil
a) Producing			
Oud-Beijerland Noord	NAM	Botlek II (pl)	O&G
Rotterdam	NAM	Rijswijk (pl)	O
Schoonebeek (olie)	NAM	Schoonebeek (pl)	O
F02a Hanze	Dana	F02a (pl)	O
Haven	Petrogas	Q01 (pl)	O
Helder	Petrogas	Q01 (pl)	O
Helm	Petrogas	Q01 (pl)	O
Hoorn	Petrogas	Q01 (pl)	O
Horizon	Petrogas	P09a & P09b (pl) , P09c (pl)	O
Kotter	Wintershall	K18b (pl)	O
Logger	Wintershall	L16a (pl) , Q01 (pl)	O
P11b De Ruyter	Dana	P10a (pl) , P11b (pl)	O
P11b Van Ghent	Dana	P11b (pl)	O&G
Q13a-Amstel	GDF SUEZ	Q13a (pl)	O
P15 Rijn	TAQA	P15a & P15b (pl)	O&G

II. UNDEVELOPED ACCUMULATIONS

Accumulation	Company	Licence name***	Gas/Oil
a) Production start expected between 2015 - 2019 (NP<5)			
F17-FC	Wintershall	F17a-Diep [el], F17c (pl) , L02 (pl)	O
L05a-E	GDF SUEZ	L02 (pl) , L04c (pl) , L05a (pl)	O
P08-A Horizon-West	Petrogas	P08a (pl) , P09a & P09b (pl)	O
Q01-Northwest	Petrogas	Q01 (pl)	O
b) Production start after 2019 (NP>5)			
Alblasserdam	NAM	Rijswijk (pl)	O
Denekamp	NAM	Tubbergen (pl)	O
Gieterveen	NAM	Drenthe IIb (pl) , Groningen (pl)	O
Lekkerkerk/blg	NAM	Rijswijk (pl)	O
Noordwijk	NAM	Rijswijk (pl)	O
Ottoland	Vermillion	Andel V (pl)	O&G
Stadskanaal	NAM	Groningen (pl)	O&G

Wassenaar-Zee	NAM	Q13b-Ondiep [el] , Rijswijk (pl)	O
Woubrugge	NAM	Rijswijk (pl)	O
Zweelo	NAM	Drenthe IIb (pl)	O
B18-FA	Centrica	B18a (pl) , F03a (pl)	O
F03-FC	Centrica	F03a (pl)	O
F14-FA		F14-Diep [opv] , F14-Ondiep [el]	O
F17-Brigantijn (F17-FB)	Sterling	F17a-Ondiep [el]	O
F17-Korvet (F17-FA)	Sterling	F17a-Ondiep [el]	O
F18-Fregat (F18-FA)	Sterling	F18-Ondiep [el]	O
K10-B (oil)	Wintershall	open	O
L01-FB		open	O
P12-3	Wintershall	P12 (pl)	O
Q13-FB	NAM	Q13b-Ondiep [el] , Q16b & Q16c-Diep (pl) , Q16b & Q16c-Ondiep [el] , Rijswijk (pl)	O

III. PRODUCTION CEASED

Accumulation*	Status*	Company	Licence name***	Gas/Oil
Berkel	A	NAM	Rijswijk (pl)	O&G
De Lier	A	NAM	Rijswijk (pl)	O&G
IJsselmonde	A	NAM	Rijswijk (pl)	O&G
Moerkapelle	A	NAM	Rijswijk (pl)	O
Pijnacker	A	NAM	Rijswijk (pl)	O
Rijswijk	A	NAM	Rijswijk (pl)	O&G
Wassenaar	A	NAM	Rijswijk (pl)	O
Werkendam	A	NAM	Rijswijk (pl)	O
Zoetermeer	A	NAM	Rijswijk (pl)	O

* *In principle, the name as used in the application for the production licence*

** T = production halted temporarily, U= production halted, A = abandoned

*** el = exploration licence, pl = production licence, open = open area; sl = storage licence.

EXPLORATION LICENCES FOR HYDROCARBONS Netherlands Territory as at 1 January 2015

	Licensee	Licence	km ²	Effective from	Expires	Govern. Gazette
1	Cuadrilla Brabant B.V.	Noord-Brabant	1929	14-10-2009		16 000
2	Cuadrilla Hardenberg B.V.	Noordoost-polder	819	15-6-2010	26-7-2015	9 431
3	GDF SUEZ E&P Nederland B.V. Rosewood Exploration Ltd.	Schiermonnikoog-Noord	62	5-6-2013	16-7-2017	16 234
4	Hexagon Energy B.V.	Peel	365	17-11-2009		17 675
5	Tulip Oil Netherlands B.V. PA Resources UK Ltd.	Schagen	355	20-6-2009	31-7-2016	118
6	Tulip Oil Netherlands B.V.	Terschelling-Noord	23	30-7-2013		22 215
7	Vermilion Oil & Gas Netherlands B.V.	Akkrum	210	14-3-2013	24-4-2017	10 461
8	Vermilion Oil & Gas Netherlands B.V.	Engelen	97	14-10-2009	23-11-2016	16 878
9	Vermilion Oil & Gas Netherlands B.V. Lundin Netherlands B.V.	Follega	3	15-6-2010	25-7-2017	9 426
10	Vermilion Oil & Gas Netherlands B.V.	Hemelum	450	17-1-2012	26-2-2017	1 490
11	Vermilion Oil & Gas Netherlands B.V.	Ijsselmuiden	447	17-1-2014	27-2-2018	1 958
12	Vermilion Oil & Gas Netherlands B.V. Lundin Netherlands B.V.	Lemsterland	111	15-6-2010	25-7-2017	9 427
13	Vermilion Oil & Gas Netherlands B.V.	Oosterwolde	127	20-4-2007	23-11-2016	83
14	Vermilion Oil & Gas Netherlands B.V.	Opmeer	229	19-12-2012	29-1-2017	205
15	Vermilion Oil & Gas Netherlands B.V.	Utrecht	1144	26-4-2007	23-11-2016	85
		Total	6372	km ²		

**PRODUCTION LICENCES FOR HYDROCARBONS
Netherlands Territory as at 1 January 2015**

	Licensee	Licence	km²	Awarded	Expires	Govern Gazette
1	Nederlandse Aardolie Maatschappij B.V.	Beijerland	140	14-2-1997	14-2-2027	243
2	Nederlandse Aardolie Maatschappij B.V.	Botlek ii	232	4-3-2014	19-7-2026	7 445
3	Nederlandse Aardolie Maatschappij B.V. ExxonMobil Producing Netherlands B.V.	De Marne	7	4-10-1994	4-10-2034	189
4	Nederlandse Aardolie Maatschappij B.V.	Drenthe IIb	1881	17-3-2012		6 883
5	Nederlandse Aardolie Maatschappij B.V.	Groningen	2970	30-5-1963		126
6	Nederlandse Aardolie Maatschappij B.V.	Hardenberg	161	22-10-1990	22-10-2035	149
7	Nederlandse Aardolie Maatschappij B.V.	Middelie	946	12-5-1969		94
8	Nederlandse Aardolie Maatschappij B.V. ExxonMobil Producing Netherlands B.V.	Noord-Friesland	1593	27-2-1969		47
9	Nederlandse Aardolie Maatschappij B.V.	Rijswijk	2090	3-1-1955		21
10	Nederlandse Aardolie Maatschappij B.V.	Rossum-de Lutte	46	12-5-1961		116
11	Nederlandse Aardolie Maatschappij B.V.	Schoonebeek	930	3-5-1948		110
12	Nederlandse Aardolie Maatschappij B.V.	Tietjerksteradeel	411	27-2-1969		47
13	Nederlandse Aardolie Maatschappij B.V.	Tubbergen	177	11-3-1953		80
14	Nederlandse Aardolie Maatschappij B.V.	Twenthe	276	1-4-1977		26
15	Oranje-Nassau Energie B.V. Energy06 Investments B.V. TAQA Offshore B.V.	Botlek-Maas	3	4-3-2014	19-7-2026	7 445
16	TAQA Onshore B.V. Dana Petroleum Netherlands B.V. Dyas B.V.	Bergen II	221	23-12-2006		232
17	TAQA Onshore B.V.	Bergermeer	19	23-12-2006		232
18	TAQA Piek Gas B.V. Dana Petroleum Netherlands B.V.	Alkmaar	12	23-12-2006		232

	Licensee	Licence	km²	Awarded	Expires	Govern Gazette
	Dyas B.V.					
19	Tulip Oil Netherlands B.V.	Akkrum 11	6	26-7-2012	4-4-2025	6 909
20	Tulip Oil Netherlands B.V.	Donkerbroek	22	4-4-1995	4-4-2025	66
21	Tulip Oil Netherlands B.V.	Donkerbroek- West	2	16-3-2011	4-4-2025	4 902
22	Tulip Oil Netherlands B.V.	Marknesse	19	26-1-2010	9-3-2030	1 446
23	Vermilion Oil & Gas Netherlands B.V. Nederlandse Aardolie Maatschappij B.V. Parkmead (E&P) Ltd.	Andel V	225	6-7-2011	30-12-2038	12 480
24	Vermilion Oil & Gas Netherlands B.V.	Drenthe IIa	7	17-3-2012		6 883
25	Vermilion Oil & Gas Netherlands B.V.	Drenthe IIIa	1	17-3-2012		6 885
26	Vermilion Oil & Gas Netherlands B.V. Nederlandse Aardolie Maatschappij B.V. Parkmead (E&P) Ltd.	Drenthe IIIb	388	17-3-2012		6 885
27	Vermilion Oil & Gas Netherlands B.V. Parkmead (E&P) Ltd.	Drenthe IV	7	18-7-2007		140
28	Vermilion Oil & Gas Netherlands B.V. Lundin Netherlands B.V.	Gorredijk	629	29-7-1989	29-7-2024	145
29	Vermilion Oil & Gas Netherlands B.V. Lundin Netherlands B.V.	Leeuwarden	614	27-2-1969		46
30	Vermilion Oil & Gas Netherlands B.V. Lundin Netherlands B.V.	Oosterend	92	5-9-1985		84
31	Vermilion Oil & Gas Netherlands B.V. Parkmead (E&P) Ltd.	Papekop	63	8-6-2006	19-7-2031	113
32	Vermilion Oil & Gas Netherlands B.V. Lundin Netherlands B.V.	Slootdorp	162	1-5-1969		94
33	Vermilion Oil & Gas Netherlands B.V.	Steenwijk	99	16-9-1994	16-9-2029	177
34	Vermilion Oil & Gas Netherlands B.V. Gas Storage Ltd. Overseas Gas Storage Ltd.	Waalwijk	186	17-8-1989	17-8-2024	154

	Licensee	Licence	km²	Awarded	Expires	Govern Gazette
35	Vermilion Oil & Gas Netherlands B.V. Dana Petroleum Netherlands B.V. Dyas B.V. Total E&P Nederland B.V.	Zuid-Friesland III	105	9-3-2010	19-4-2030	4 016
36	Vermilion Oil & Gas Netherlands B.V.	Zuidwal	225	7-11-1984		190
			Total	14966 km²		

UNDERGROUND STORAGE LICENCES Netherlands Territory as at 1 January 2015

	Licensee	Licence	km ²	Effective from	Expires	Govern. Gazette	Substance
1	Akzo Nobel Salt B.V.	Twenthe-Rijn de Marssteden	2	02-10-2010	12-11-2040	15 650	Gas oil
2	Akzo Nobel Salt B.V.	Winschoten III	28	15-11-2010	13-05-2079	18 321	Nitrogen
3	N.V. Nederlandse Gasunie	Winschoten II	<1	15-11-2010	13-05-2079	18 321	Nitrogen
4	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	Gas
5	Nederlandse Aardolie Mij. B.V.	Grijpskerk	27	01-04-2003		67	Gas
6	Nederlandse Aardolie Mij. B.V.	Norg	81	01-04-2003		68	Gas
7	Oasen N.V.	Ridderkerk	1	19-12-2012	29-01-2018	7 641	Saline water
8	TAQA Onshore B.V.	Bergermeer	19	08-01-2007	30-06-2050	7	Gas
9	TAQA Offshore B.V.	P18-4	11	01-01-2015	01-01-2023	21 233	Carbon dioxide
10	TAQA Piek Gas B.V. Dana Petroleum Netherlands B.V. Dyas B.V.	Alkmaar	12	01-04-2003		68	Gas
11	Vitens Friesland	Noardburgum	1	24-03-2012	04-05-2015	7 641	Saline water
		Total	184	km ²			

**EXPLORATION LICENCES FOR ROCK SALT
Netherlands Territory as at 1 January 2015**

	Licensee	Licence	km²	Effective from	Expires	Govern. Gazette
1	Akzo Nobel Salt B.V.	Zuidoost-Twente	30	16-03-2010	26-04-2015	4 311
		Total	30	km ²		

**PRODUCTION LICENCES FOR ROCK SALT
Netherlands Territory as at 1 January 2015**

	Licensee	Licence	km ²	Effective from	Expires	Govern. Gazette
1	Akzo Nobel Salt B.V.	Adolf van Nassau III	28	16-11-2010		18 324
2	Akzo Nobel Salt B.V. N.V. Nederlandse Gasunie Gasunie Zuidwending B.V. Gasunie Underground Storage B.V.	Uitbreiding Adolf van Nassau II	1	21-12-2009		81
3	Akzo Nobel Salt B.V.	Uitbreiding Adolf van Nassau III	77	21-12-2009		81
4	Akzo Nobel Salt B.V.	Buurse	30	18-6-1918		Staatsblad 421
5	Akzo Nobel Salt B.V.	Isidorushoeve	20	8-6-2012	19-7-2052	14 668
6	Akzo Nobel Salt B.V.	Twenthe-Rijn	48	20-10-1933		207
7	Akzo Nobel Salt B.V.	Uitbreiding Twenthe- Rijn	9	1-12-1994		249
8	Akzo Nobel Salt B.V.	Twenthe-Rijn Helmerzijde	1	29-10-2008	9-12-2048	216
9	Akzo Nobel Salt B.V.	Twenthe-Rijn Oude Maten	1	1-6-2013	12-7-2053	18 332
10	Akzo Nobel Salt B.V.	Weerselo	80	13-3-1967		76
11	Frisia Zout B.V.	Barradeel	3	22-8-1998	22-8-2054	157
12	Frisia Zout B.V.	Barradeel II	17	12-6-2004	26-4-2062	110
13	Frisia Zout B.V.	Havenmond	32	3-1-2012	13-2-2052	405
14	N.V. Nederlandse Gasunie	Adolf van Nassau II	<1	16-11-2010		18 324
15	Nedmag Industries Mining & Manufacturing B.V.	Veendam	171	1-8-1980		148
16	Salzgewinnungsgesellschaft Westfalen mbH & Co KG	Zuidoost-Enschede	6	7-3-2014	17-4-2064	7 304
			Total	526	Km ²	

EXPLORATION LICENCES FOR GEOTHERMAL ENERGY Netherlands Territory as at 1 January 2015

	Licensee	Licence	km ²	Effective from	Expires	Govern. Gazette	NB
1	A.P.M. Ammerlaan G.J.M. Kleijweg	Bleiswijk 4	7	23-6-2009		9 944	**
2	A-ware Production B.V.	Heerenveen	46	28-10-2014	8-12-2018	31 141	
3	Ammerlaan Real Estate B.V.	Pijnacker-Nootdorp	4	28-12-2009		73	pla
4	D.J. Bac G.A. Bac	Zevenhuizen- Moerkapelle	13	3-3-2010	13-10-2015	3 561	
5	Gietwater Berlikum B.V.	Berlikum	19	9-3-2010	19-4-2015	4 018	
6	Bernhard Plantenkwekerij B.V. ECL Netwerk B.V. Stichting Nieuwland	Luttelgeest	72	8-4-2014	19-5-2018	11 152	
7	A+G van den Bosch B.V.	Bleiswijk	2	26-7-2006		143	pla
8	A+G van den Bosch B.V.	Bleiswijk 3	<1	23-6-2009		9 445	pla
9	A+G van den Bosch B.V.	Lansingerland 4	6	27-9-2014	7-11-2018	28 237	
10	Grondexploitatie­maatschap pij Californie B.V.	Californie 2	71	16-3-2010	26-4-2016	4 313	
11	Ce-Ren Beheer B.V.	Heemskerk	2	9-12-2009		19 198	pla
12	Ce-Ren Beheer B.V.	Heemskerk 2	1	27-9-2013	7-11-2015	27 660	pla
13	P.N.A. van Dijk Beheer B.V.	Oostvoorne	17	9-3-2010	31-12-2015	4 013	
14	Gebroeders Duijvestijn Energie B.V.	Pijnacker-Nootdorp	4	21-4-2010		7 407	pla
15	E.ON Benelux N.V.	Rotterdam 4	20	18-12-2012	28-1-2017	208	
16	E.ON Benelux N.V.	Rotterdam 5	39	18-12-2012	28-1-2017	733	
17	ECW Geoholding B.V.	Andijk	12	5-3-2010	15-4-2016	3 831	
18	ECW Geoholding B.V.	Middenmeer	24	16-7-2009	31-5-2016	11 070	pla

	Licensee	Licence	km²	Effective from	Expires	Govern. Gazette	NB
19	ECW Geoholding B.V.	Middenmeer 2	15	13-10-2009	23-11-2015	15 999	
20	Eneco Solar, Bio & Hydro B.V.	Den Haag 2	62	6-3-2012	16-4-2016	5 165	
21	Eneco Solar, Bio & Hydro B.V.	Rotterdam 2	26	18-12-2012	28-1-2017	206	
22	Eneco Solar, Bio & Hydro B.V.	Rotterdam 3	2	18-12-2012	28-1-2017	203	
23	Eneco Solar, Bio & Hydro B.V.	Rotterdam 6-Trias	13	4-7-2012	14-8-2016	18 357	
24	Coöperatieve Bloemenveiling FloraHolland U.A.	Aalsmeer	39	16-4-2011	27-5-2015	7 136	
25	Coöperatieve Bloemenveiling FloraHolland U.A.	Naaldwijk 2	4	14-10-2009	30-6-2016	15 960	
26	Gedeputeerde Staten van Overijssel	Koekoekspolder Ila	28	21-3-2014	30-12-2016	9 051	
27	Gemeente Amstelveen	Amstelveen	40	16-4-2011	27-5-2015	7 135	
28	Gemeente Den Haag	Den Haag	10	3-4-2009		69	pla
29	Gemeente Groningen	Groningen 2	18	16-4-2011	27-5-2015	7 134	
30	GeoMEC-4P Realisatie & Exploitatie B.V. Gemeente Brielle Hydreco GeoMEC B.V. T4P Project B.V.	Brielle 2	29	13-10-2009	30-1-2015	15 990	
31	GeoMEC-4P Realisatie & Exploitatie B.V. Gemeente Brielle Hydreco GeoMEC B.V. T4P Project B.V.	Vierpolders	7	10-2-2010	30-1-2015	2 211	
32	GeoWeb B.V.	Egchel	62	26-11-2013	6-1-2018	34 027	

	Licensee	Licence	km²	Effective from	Expires	Govern. Gazette	NB
33	AC Hartman Beheer B.V. Gemeente Franekeradeel	Sexbierum	11	17-7-2009	31-5-2015	11 805	
34	Hollandplant Vastgoed B.V.	Lansingerland	7	4-12-2008	31-5-2016	240	
35	Hydreco GeoMEC B.V.	Pijnacker-Nootdorp	9	4-8-2010	30-6-2015	16 713	
36	Hydreco GeoMEC B.V.	Rozenburg	45	26-6-2012	6-8-2016	18 216	
37	Hydreco GeoMEC B.V.	Werkendam	28	19-12-2012	29-1-2017	202	
38	Jamuflor B.V.	De Kwakel	18	26-6-2009	30-1-2015	11 803	
39	SC Johnson Europlant B.V.	Mijdrecht	41	1-2-2012	13-3-2016	2 556	
40	Geothermie De Kievit B.V.	Peel en Maas	48	19-12-2014	29-1-2019	243	
41	Geothermie De Lier B.V. De Bruijn Geothermie B.V.	De Lier	23	9-12-2009	19-1-2015	19 190	
42	Geothermie De Lier B.V. De Bruijn Geothermie B.V.	De Lier 3	11	9-12-2009	19-1-2015	19 203	
43	NHN Projecten B.V. Coöperatie Texel Energie Gemeente Texel	Texel	256	6-4-2011	17-5-2015	6 649	
44	Vereniging van Eigenaren Oude Campspolder	Maasland 2	5	15-10-2010	31-12-2015	16 611	
45	Provincie Drenthe Gemeente Emmen	Emmen	94	16-2-2011	29-3-2015	3 290	
46	Provincie Drenthe Gemeente Emmen	Erica	72	27-10-2010	6-12-2016	17 250	
47	Provincie Drenthe Gemeente Emmen	Klazienaveen	61	27-10-2010	30-11-2016	17 245	
48	G.J. van de Sande P.G.H. van de Sande J.M. van de Sande Kwekerij van Schie B.V. V.E. Orchidee B.V.	Pijnacker-Nootdorp	17	14-4-2010	30-6-2015	5 950	
49	J.W.M. Scheffers	Honselersdijk	5	20-6-2009		118	pla

Licensee	Licence	km ²	Effective from	Expires	Govern. Gazette	NB
G. Verkade B.V.						
50 Stadsverwarming Purmerend B.V.	Purmerend	59	18-12-2010	28-1-2015	21 088	
51 Stallingsbedrijf Glastuinbouw Nederland B.V.	Haarlemmermeer	44	11-5-2011	21-6-2015	8 463	
52 W.G.M. Tas J.C.M. Tas-van Klink	Zevenhuizen	9	5-3-2010	15-4-2016	3 774	
53 TomSelect B.V.	Kwintsheul	5	29-3-2013	10-5-2017	9 330	
54 Transmark Renewable Products B.V.	Friesland-Noord	326	19-11-2014	21-10-2018	34 411	
55 Transmark Renewable Products B.V.	Friesland-Zuid	456	19-11-2014	21-10-2018	34 411	
56 Transmark Renewable Products B.V.	Utrecht - Noord-Brabant	757	11-9-2013	22-10-2018	26 009	
57 Directeur Facilitair Management en Vastgoed, TU Delft	Delft iv	40	4-8-2010	8-4-2015	16 713	
58 Vopak Terminal Vlaardingen B.V.	Rotterdam-Vlaardingen	13	22-11-2013	2-1-2018	33 332	
59 Wayland Developments B.V.	Waddinxveen 2	7	5-3-2010	31-12-2016	3 829	
60 Wayland Nova B.V.	Maasbree	22	13-10-2009	30-11-2015	15 975	
61 Kwekerij de Westhoek B.V. Van Geest Groep B.V.	Maasland	9	18-12-2009	31-12-2015	79	
62 Tuinbouwbedrijf Wijnen B.V.	Californie I	7	13-10-2009	23-11-2015	15 966	
63 Van Wijnen Gorredijk B.V.	Leeuwarden	30	28-10-2014	8-12-2018	31 137	
64 A.P.M. Zuidgeest L.M.M. Zuidgeest-Vijverberg M.T.M. Zuidgeest P.E.M. Zuidgeest-van den	Honselersdijk 2	4	14-10-2009	31-5-2015	15 957	

Licensee	Licence	km ²	Effective from	Expires	Govern. Gazette	NB
Berg W.M.J. Zuidgeest Y.C.M. Zuidgeest-van Kester						
65 A.P.M. Zuidgeest L.M.M. Zuidgeest-Vijverberg M.T.M. Zuidgeest P.E.M. Zuidgeest-van den Berg W.M.J. Zuidgeest Y.C.M. Zuidgeest-van Kester	Maasdijk	6	21-10-2009	31-5-2015	16 041	
66 Zuidgeest Growers B.V.	Honselersdijk 4	4	3-10-2014	31-5-2015	28 896	
	Total	3262		km ²		

* pla = production licence application filed

** extension of licence in process

**PRODUCTION LICENCES FOR GEOTHERMAL ENERGY
Netherlands Territory as at 1 January 2015**

	Licensee	Licence	km²	Effective from	Expires	Govern. Gazette
1	A+G van den Bosch B.V.	Bleiswijk	4	28-11-2008	8-1-2039	237
2	Heerlen municipality	Heerlen	41	13-10-2009	23-11-2044	15 963
3	Aardwarmtecluster I KKP B.V.	Kampen	5	27-9-2014	7-11-2044	28 239
			Total	50	km²	

EXPLORATION LICENCES FOR HYDROCARBONS Netherlands continental shelf as at 1 January 2015

	Licensee	Licence	km²	Effective from	Expires	Govern. Gazette	NB
1	Centrica Production Nederland B.V. Volantis Netherlands B.V.	E01	374	22-11-2011	2-1-2016	21 395	
2	Centrica Production Nederland B.V. Volantis Netherlands B.V.	E02	396	22-11-2011	2-1-2016	21 396	
3	Centrica Production Nederland B.V. Volantis Netherlands B.V.	E04	398	22-11-2011	2-1-2016	21 398	
4	Centrica Production Nederland B.V. Volantis Netherlands B.V.	E05	398	22-11-2011	2-1-2016	21 401	
5	Dana Petroleum Netherlands B.V. Dyas B.V. Tulip Oil Netherlands B.V.	F06b	390	7-4-2009	19-5-2015	70	
6	Dana Petroleum Netherlands B.V.	F13b	399	21-9-2010	21-9-2015	14 904	
7	GDF SUEZ E&P Nederland B.V. Lundin Netherlands B.V. Total E&P Nederland B.V.	E17c	171	22-2-2008	3-4-2015	42	
8	GDF SUEZ E&P Nederland B.V. Total E&P Nederland B.V.	K01c	274	22-11-2011	3-1-2017	21 372	
9	GDF SUEZ E&P Nederland B.V.	Q13b-ondiep	369	23-12-2008	30-4-2015	5	
10	GDF SUEZ E&P Nederland B.V.	Q16b & Q16c-ondiep	80	17-2-2009	4-8-2015	37	
11	Hansa Hydrocarbons Limited	G18	405	18-9-2012	29-10-2018	23 464	
12	Hansa Hydrocarbons Limited	H16	73	18-9-2012	29-10-2018	23 463	
13	Hansa Hydrocarbons Limited	M03	406	18-9-2012	29-10-2018	23 462	
14	Hansa Hydrocarbons Limited	N01	217	18-9-2012	29-10-2018	23 460	
15	Nederlandse Aardolie	J09	18	11-4-2014	27-5-2016	10 508	

	Licensee	Licence	km²	Effective from	Expires	Govern. Gazette	NB
	Maatschappij B.V. Oranje-Nassau Energie B.V. Tullow Exploration & Production Netherlands B.V. Wintershall Noordzee B.V.						
16	Oranje-Nassau Energie B.V.	F09	400	22-11-2011	2-1-2016	784	
17	Oranje-Nassau Energie B.V. GDF SUEZ E&P Nederland B.V.	L11c	179	23-11-2010	3-1-2015	18 884	
18	Oranje-Nassau Energie B.V.	M02	406	22-11-2011	2-1-2016	1 486	
19	Oranje-Nassau Energie B.V.	M04	408	21-9-2010		14 900	**
20	Oranje-Nassau Energie B.V. TAQA Offshore B.V.	P11a	210	22-6-2012		12 941	pla
21	Oranje-Nassau Energie B.V. TAQA Offshore B.V.	P18b	311	24-3-2012	4-1-2015	6 865	
22	Petrogas E&P Netherlands B.V. Dyas B.V. TAQA Offshore B.V.	A12b & B10a	79	16-4-2005		77	pla
23	Petrogas E&P Netherlands B.V. Dyas B.V. TAQA Offshore B.V.	B16a	67	11-5-1987		70	pla
24	Petrogas E&P Netherlands B.V. Dana Petroleum Netherlands B.V. TAQA Offshore B.V.	B17a	80	2-6-1987		70	pla
25	Petrogas E&P Netherlands B.V.	P02a	193	22-2-2008	3-4-2016	42	
26	Sterling Resources Netherlands B.V. Petro Ventures Netherlands B.V.	F17a-ondiep	386	30-12-2009	31-12-2015	154	
27	Sterling Resources Netherlands B.V. Petro Ventures Netherlands B.V.	F18-ondiep	404	30-12-2009	31-12-2015	152	
28	Total E&P Nederland B.V.	F12	402	18-11-2014	5-1-2019	33 141	
29	Tulip Oil Netherlands B.V.	M10a & M11	110	28-7-2007	30-6-2015	152	

	Licensee	Licence	km²	Effective from	Expires	Govern. Gazette	NB
30	Tulip Oil Netherlands B.V.	Q07	419	16-1-2008	25-2-2015	13	
31	Tulip Oil Netherlands B.V.	Q10a	53	6-8-2008	25-2-2015	155	
32	Tullow Exploration & Production Netherlands B.V.	E10	401	16-1-2008	31-3-2015	13	
33	Tullow Exploration & Production Netherlands B.V.	E11	401	22-4-2009	31-3-2015	84	
34	Tullow Exploration & Production Netherlands B.V.	E14	403	15-1-2008	31-3-2015	12	
35	Tullow Exploration & Production Netherlands B.V. Gas Plus Netherlands B.V.	E15c	343	22-4-2008	31-3-2015	78	
36	Tullow Exploration & Production Netherlands B.V.	E18b	192	11-1-2008	31-3-2015	10	
37	Wintershall Noordzee B.V. GAZPROM International UK Ltd. GDF SUEZ E&P Nederland B.V. Oranje-Nassau Energie B.V.	D12b	41	25-2-2011	7-4-2015	5 287	
38	Wintershall Noordzee B.V. Sterling Resources Netherlands B.V.	E03	396	22-11-2011	2-1-2016	21 402	
39	Wintershall Noordzee B.V. Sterling Resources Netherlands B.V.	F01	396	22-11-2011	2-1-2016	21 394	
40	Wintershall Noordzee B.V. GDF SUEZ E&P Nederland B.V. Rosewood Exploration Ltd. TAQA Offshore B.V.	F10	401	17-12-2014	30-1-2019	36 868	
41	Wintershall Noordzee B.V. GDF SUEZ E&P Nederland B.V. Rosewood Exploration Ltd. TAQA Offshore B.V.	F11	401	17-12-2014	30-1-2019	36 868	
42	Wintershall Noordzee B.V. GDF SUEZ E&P Nederland B.V. Rosewood Exploration Ltd.	F14-ondiep	403	17-12-2014	20-11-2015	36 868	
		Total	13478		km²		

*pla: Licensee has applied for a production licence

** : Ongoing application for extension

PRODUCTION LICENCES FOR HYDROCARBONS
Netherlands continental shelf as at 1 January 2015

	Licensee	Licence	km²	Effective from	Expires	Govern. Gazette
1	Centrica Production Nederland B.V.	B18a	40	10-10-1985	10-10-2025	182
2	Centrica Production Nederland B.V.	F03a	62	13-12-2007	9-9-2022	245
3	Centrica Production Nederland B.V. Dyas B.V. Total E&P Nederland B.V.	J03b & J06	126	6-11-1992	6-11-2032	219
4	Dana Petroleum Netherlands B.V. Dyas B.V. Oranje-Nassau Energie B.V. TAQA Offshore B.V.	F02a	307	24-8-1982	24-8-2022	139
5	Dana Petroleum Netherlands B.V.	P10a	5	31-5-2005	11-7-2020	102
6	Dana Petroleum Netherlands B.V.	P10b	100	7-4-2009	19-5-2019	70
7	Dana Petroleum Netherlands B.V.	P11b	210	3-4-2004	14-5-2019	67
8	Dana Petroleum Netherlands B.V. Tulip Oil Netherlands B.V.	P14a	50	23-6-1992	23-6-2032	99
9	GDF SUEZ E&P Nederland B.V. Faroe Petroleum (UK) Ltd. Wintershall Noordzee B.V.	D15	247	6-9-1996	6-9-2021	138
10	GDF SUEZ E&P Nederland B.V. Faroe Petroleum (UK) Ltd. Wintershall Noordzee B.V.	D18a	58	29-8-2012	9-10-2032	19 757
11	GDF SUEZ E&P Nederland B.V. Lundin Netherlands B.V. Total E&P Nederland B.V.	E16a	29	29-6-2007	9-8-2021	128
12	GDF SUEZ E&P Nederland B.V. Lundin Netherlands B.V. Total E&P Nederland B.V.	E17a & E17b	114	28-6-2007	8-8-2021	128
13	GDF SUEZ E&P Nederland B.V. TAQA Offshore B.V.	F03b	335	13-12-2007	9-9-2022	245
14	GDF SUEZ E&P Nederland B.V.	G14 & G17b	441	15-12-2006	14-12-2019	248

	Licensee	Licence	km²	Effective from	Expires	Govern. Gazette
	Nederlandse Aardolie Maatschappij B.V. TAQA Offshore B.V.					
15	GDF SUEZ E&P Nederland B.V.	G16a	224	6-1-1992	6-1-2032	245
16	GDF SUEZ E&P Nederland B.V.	G16b	5	11-10-2003	6-1-2032	198
17	GDF SUEZ E&P Nederland B.V.	G17a	237	19-7-2006	14-12-2019	143
18	GDF SUEZ E&P Nederland B.V. Wintershall Noordzee B.V.	G17c & G17d	130	10-11-2000	10-11-2025	188
19	GDF SUEZ E&P Nederland B.V.	K02b	110	20-1-2004	24-8-2023	16
20	GDF SUEZ E&P Nederland B.V.	K03a	83	24-8-1998	24-8-2023	122
21	GDF SUEZ E&P Nederland B.V.	K03c	32	26-11-2005	6-1-2021	233
22	GDF SUEZ E&P Nederland B.V. Oranje-Nassau Energie B.V. Rosewood Exploration Ltd. XTO Netherlands Ltd.	K09a & K09b	211	11-8-1986	11-8-2026	129
23	GDF SUEZ E&P Nederland B.V. Oranje-Nassau Energie B.V. Rosewood Exploration Ltd. XTO Netherlands Ltd.	K09c	199	18-12-1987	18-12-2027	229
24	GDF SUEZ E&P Nederland B.V. Oranje-Nassau Energie B.V. Production North Sea Netherlands Ltd. Rosewood Exploration Ltd. XTO Netherlands Ltd.	K12	411	18-2-1983	18-2-2023	11
25	GDF SUEZ E&P Nederland B.V.	L04c	12	7-1-1994	7-1-2034	2
26	GDF SUEZ E&P Nederland B.V.	L05a	163	15-3-1991	15-3-2031	55
27	GDF SUEZ E&P Nederland B.V. GDF SUEZ E&P Participation Ned. B.V. Oranje-Nassau Energie B.V. Rosewood Exploration Ltd. XTO Netherlands Ltd.	L10 & L11a	596	13-1-1971	1-1-2025	4
28	GDF SUEZ E&P Nederland B.V. Oranje-Nassau Energie B.V. Tullow Exploration & Production	L12a	119	25-9-2008	14-3-2030	189

	Licensee	Licence	km²	Effective from	Expires	Govern. Gazette
	Netherlands B.V. Wintershall Noordzee B.V.					
29	GDF SUEZ E&P Nederland B.V. Tullow Exploration & Production Netherlands B.V. Wintershall Noordzee B.V.	L12b & L15b	92	6-8-2008	12-3-2030	155
30	GDF SUEZ E&P Nederland B.V.	L15c	4	7-9-1990	7-9-2030	172
31	GDF SUEZ E&P Nederland B.V. Rosewood Exploration Ltd. XTO Netherlands Ltd.	N07b	174	23-12-2003	10-3-2034	252
32	GDF SUEZ E&P Nederland B.V. Aceiro Energy B.V. TAQA Offshore B.V.	Q13a	30	28-11-2006	28-12-2021	231
33	Nederlandse Aardolie Maatschappij B.V.	F17c	18	4-12-1996	4-12-2024	207
34	Nederlandse Aardolie Maatschappij B.V.	K07	408	8-7-1981	8-7-2021	120
35	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
36	Nederlandse Aardolie Maatschappij B.V.	K14a	237	16-1-1975	31-12-2030	6
37	Nederlandse Aardolie Maatschappij B.V.	K15	412	14-10-1977	14-10-2017	197
38	Nederlandse Aardolie Maatschappij B.V.	K17	414	19-1-1989	19-1-2029	12
39	Nederlandse Aardolie Maatschappij B.V. Wintershall Noordzee B.V.	K18a	36	15-3-2007	9-5-2023	57
40	Nederlandse Aardolie Maatschappij B.V.	L02	406	15-3-1991	15-3-2031	55
41	Nederlandse Aardolie Maatschappij B.V.	L09	409	18-9-2010	9-5-2035	14 911
42	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

	Licensee	Licence	km²	Effective from	Expires	Govern. Gazette
43	Nederlandse Aardolie Maatschappij B.V. ExxonMobil Producing Netherlands B.V.	M09a	213	10-4-1990	10-4-2030	56
44	Nederlandse Aardolie Maatschappij B.V.	N07a	141	23-12-2003	10-3-2034	252
45	Oranje-Nassau Energie B.V. Energy06 Investments B.V. TAQA Offshore B.V.	L11b	47	15-6-1984	15-6-2024	110
46	Oranje-Nassau Energie B.V. Energy06 Investments B.V.	M01a	213	28-6-2007	8-8-2022	128
47	Oranje-Nassau Energie B.V. Energy06 Investments B.V. TAQA Offshore B.V.	M07	409	22-3-2001	22-3-2021	19
48	Oranje-Nassau Energie B.V. Energy06 Investments B.V. TAQA Offshore B.V.	P18d	2	20-9-2012	31-10-2027	23 457
49	Oranje-Nassau Energie B.V. Lundin Netherlands B.V. Total E&P Nederland B.V.	Q16a	85	29-12-1992	29-12-2032	227
50	Oranje-Nassau Energie B.V. Energy06 Investments B.V. TAQA Offshore B.V.	Q16b & Q16c- diep	80	20-9-2012	31-10-2027	23 465
51	Oranje-Nassau Energie B.V. Energy06 Investments B.V. TAQA Offshore B.V.	S03a	2	20-9-2012	31-10-2027	23 466
52	Oranje-Nassau Energie B.V. Energy06 Investments B.V. TAQA Offshore B.V.	T01	1	20-9-2012	31-10-2027	23 467
53	Petrogas E&P Netherlands B.V. Dyas B.V. TAQA Offshore B.V.	A12a	195	1-7-2005	11-8-2025	129
54	Petrogas E&P Netherlands B.V. Dyas B.V. TAQA Offshore B.V.	A12d	33	1-7-2005	11-8-2025	129
55	Petrogas E&P Netherlands B.V. Dana Petroleum Netherlands B.V.	A15a	67	27-12-2011	3-2-2027	746

	Licensee	Licence	km²	Effective from	Expires	Govern. Gazette
	Oranje-Nassau Energie B.V.					
56	Petrogas E&P Netherlands B.V. Dyas B.V. TAQA Offshore B.V.	A18a	229	1-7-2005	11-8-2025	129
57	Petrogas E&P Netherlands B.V. Dyas B.V.	A18c	47	1-7-2005	11-8-2025	125
58	Petrogas E&P Netherlands B.V. Dyas B.V. TAQA Offshore B.V.	B10c & B13a	252	1-7-2005	11-8-2025	129
59	Petrogas E&P Netherlands B.V. Aceiro Energy B.V. Dyas B.V. TAQA Offshore B.V. Wintershall Noordzee B.V.	P09a & P09b	126	16-8-1993	16-8-2033	127
60	Petrogas E&P Netherlands B.V. Dyas B.V. TAQA Offshore B.V. Wintershall Noordzee B.V.	P09c	267	16-8-1993	16-8-2033	126
61	Petrogas E&P Netherlands B.V. TAQA Offshore B.V. Wintershall Noordzee B.V.	Q01	416	11-7-1980	11-7-2020	110
62	Petrogas E&P Netherlands B.V. Dyas B.V. TAQA Offshore B.V.	Q02c	32	14-7-1994	14-7-2034	18
63	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	12-7-1984	12-7-2024	110
64	TAQA Offshore B.V. Dana Petroleum Netherlands B.V. Dyas B.V. Oranje-Nassau Energie B.V. Wintershall Noordzee B.V.	P15c	203	7-5-1992	7-5-2032	114
65	TAQA Offshore B.V.	P18a	105	30-4-1992	30-4-2032	99

	Licensee	Licence	km²	Effective from	Expires	Govern. Gazette
66	TAQA Offshore B.V. Dana Petroleum Netherlands B.V. Dyas B.V.	P18c	6	2-6-1992	2-6-2032	99
67	Total E&P Nederland B.V. Lundin Netherlands B.V. TAQA Offshore B.V.	F06a	8	9-9-1982	9-9-2022	139
68	Total E&P Nederland B.V. Dyas B.V. First Oil Expro Ltd. Lundin Netherlands B.V.	F15a	233	6-5-1991	6-5-2031	52
69	Total E&P Nederland B.V. Dyas B.V. First Oil Expro Ltd. Lundin Netherlands B.V.	F15d	4	15-6-1992	15-6-2032	97
70	Total E&P Nederland B.V. Nederlandse Aardolie Maatschappij B.V.	J03a	72	12-1-1996	12-1-2036	22
71	Total E&P Nederland B.V. Nederlandse Aardolie Maatschappij B.V.	K01a	83	10-2-1997	10-2-2022	46
72	Total E&P Nederland B.V.	K01b & K02a	75	20-6-2009	31-7-2022	11 801
73	Total E&P Nederland B.V.	K02c	46	21-1-2004	7-11-2021	16
74	Total E&P Nederland B.V. Lundin Netherlands B.V.	K03b	7	30-1-2001	30-1-2021	19
75	Total E&P Nederland B.V. Lundin Netherlands B.V.	K03d	26	1-4-1999	1-4-2024	58
76	Total E&P Nederland B.V.	K04a	307	29-12-1993	29-12-2033	220
77	Total E&P Nederland B.V. Dyas B.V. Lundin Netherlands B.V.	K04b & K05a	305	1-6-1993	1-6-2033	87
78	Total E&P Nederland B.V.	K05b	204	7-11-1996	7-11-2021	207
79	Total E&P Nederland B.V. Lundin Netherlands B.V.	K06 & L07	817	20-6-1975	20-6-2015	112
80	Total E&P Nederland B.V. Van Dyke Netherlands Inc.	L01a	31	12-9-1996	12-9-2016	135

	Licensee	Licence	km²	Effective from	Expires	Govern. Gazette
81	Total E&P Nederland B.V.	L01d	7	13-11-1996	13-11-2016	207
82	Total E&P Nederland B.V. Lundin Netherlands B.V.	L01e	12	13-11-1996	13-11-2018	207
83	Total E&P Nederland B.V. Lundin Netherlands B.V.	L01f	17	14-1-2003	14-1-2033	235
84	Total E&P Nederland B.V. Lundin Netherlands B.V.	L04a	313	30-12-1981	30-12-2021	230
85	Tullow Netherlands B.V. Tullow Exploration & Production Netherlands B.V. Wintershall Noordzee B.V.	L12c	30	6-8-2008	12-3-2030	155
86	Tullow Netherlands B.V. Oranje-Nassau Energie B.V. Tullow Exploration & Production Netherlands B.V. Wintershall Noordzee B.V.	L12d	225	25-9-2008	14-3-2030	189
87	Tullow Netherlands B.V. Tullow Exploration & Production Netherlands B.V. Wintershall Noordzee B.V.	L15d	62	6-8-2008	12-3-2030	155
88	Van Dyke Energy Company	P08a	26	21-10-2006	1-12-2021	214
89	Wintershall Noordzee B.V. GDF SUEZ E&P Participation Ned. B.V.	D12a	214	6-9-1996	6-9-2021	138
90	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V. GDF SUEZ E&P Nederland B.V. Tullow Exploration & Production Netherlands B.V.	E15a	39	4-10-2002	21-10-2032	175
91	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V. Tullow Exploration & Production Netherlands B.V.	E15b	21	20-2-2008	1-4-2033	38
92	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V. GDF SUEZ E&P Nederland B.V.	E18a	212	4-10-2002	21-10-2032	175

	Licensee	Licence	km²	Effective from	Expires	Govern. Gazette
	Tullow Exploration & Production Netherlands B.V.					
93	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V. GDF SUEZ E&P Nederland B.V. Tullow Exploration & Production Netherlands B.V.	F13a	4	4-10-2002	21-10-2032	175
94	Wintershall Noordzee B.V. GDF SUEZ E&P Nederland B.V.	F16	404	4-10-2002	21-10-2032	175
95	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V. Dyas B.V. Nederlandse Aardolie Maatschappij B.V.	K18b	155	15-3-2007	9-5-2023	57
96	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V.	L05b	237	28-6-2003	9-8-2038	134
97	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V.	L05c	8	3-12-1996	3-12-2016	209
98	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V.	L06a	332	24-11-2010	4-1-2031	18 910
99	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V.	L06b	60	1-7-2003	11-8-2038	134
100	Wintershall Noordzee B.V. Oranje-Nassau Energie B.V. TAQA Offshore B.V.	L08a	213	18-8-1988	18-8-2028	146
101	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V. Oranje-Nassau Energie B.V.	L08b	181	17-5-1993	17-5-2033	78
102	Wintershall Noordzee B.V. Dana Petroleum Netherlands B.V. Dyas B.V. Nederlandse Aardolie Maatschappij B.V.	L16a	238	12-6-1984	12-6-2024	84
103	Wintershall Noordzee B.V. Dyas B.V. Gas-Union GmbH	P06	417	14-4-1982	14-4-2022	54
104	Wintershall Noordzee B.V.	P12	421	8-3-1990	8-3-2030	27

	Licensee	Licence	km²	Effective from	Expires	Govern. Gazette
	Dyas B.V. Vermilion Oil & Gas Netherlands B.V.					
105	Wintershall Noordzee B.V. Dyas B.V. Tullow Exploration & Production Netherlands B.V.	Q04	417	2-12-1999	2-12-2019	228
106	Wintershall Noordzee B.V. Dyas B.V. Tullow Exploration & Production Netherlands B.V.	Q05d	20	15-2-2001	15-2-2021	19
		Total	18422	km²		

BLOCKS AND OPERATORS
Netherlands continental shelf as at 1 January 2015

Block (part of)	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		Petrogas		195
A12b		Petrogas	31	
A12c	130			
A12d		Petrogas		33
A13	211			
A14	393			
A15a		Petrogas		67
A15b	326			
A16	293			
A17	395			
A18a		Petrogas		229
A18b	119			
A18c		Petrogas		47
B10a		Petrogas	48	
B10b	85			
B10c		Petrogas		46
B13a		Petrogas		206
B13b	187			
B14	198			
B16a		Petrogas	67	
B16b	327			
B17a		Petrogas	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

Block (part of)	Open area (km ²)	Operator	Licence (km ²)	
			Exploration	Production
D18b	139			
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			
E13	403			
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	171	
E17d	119			
E18a		Wintershall		212
E18b		Tullow	192	
F01		Wintershall	396	
F02a		Dana		307
F02b	89			
F03a		Centrica		62
F03b		GDF SUEZ		335
F04	398			
F05	398			
F06a		Total		8
F06b		Dana	390	
F07	400			
F08	400			
F09		Oranje-Nassau	400	
F10		Wintershall	401	
F11		Wintershall	401	
F12		Total	402	
F13a		Wintershall		4
F13b		Dana	399	

Block (part of)	Open area (km ²)	Operator	Licence (km ²)	
			Exploration	Production
F14		Wintershall/ Wintershall	403	
F15a		Total		233
F15b	73			
F15c	93			
F15d		Total		4
F16		Wintershall		404
F17a		Sterling / Wintershall	386	
F17c		NAM		18
F18		Sterling / Wintershall	404	
G07	122			
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		Hansa	405	
H13	1			
H16		Hansa	73	
J03a		Total		72
J03b		Centrica		42
J03c	30			
J06		Centrica		83
J09		NAM	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

Block (part of)	Open area (km ²)	Operator	Licence (km ²)	
			Exploration	Production
K03b		Total		7
K03c		GDF SUEZ		32
K03d		Total		26
K03e		Wintershall	30	
K03f	228			
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			
K11		NAM		411
K12		GDF SUEZ		411
K13	324			
K14a		NAM		237
K14b	175			
K15		NAM		412
K16	267			
K17		NAM		414
K18a		NAM		36
K18b		Wintershall		155
K18c	223			
L01a		Total		31
L01b	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	16			
L07		Total		409

Block (part of)	Open area (km ²)	Operator	Licence (km ²)	
			Exploration	Production
L08a		Wintershall		213
L08b		Wintershall		181
L08c	16			
L09		NAM		409
L10		GDF SUEZ		411
L11a		GDF SUEZ		185
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	176			
L17	394			
L18	14			
M01a		Oranje-Nassau		213
M01b	193			
M02		Oranje-Nassau	406	
M03		Hansa	406	
M04		Oranje-Nassau	408	
M05	408			
M06	408			
M07		Oranje-Nassau		409
M08	406			
M09a		NAM		213
M09b	158			
M10a		Tulip	82	
M10b	140			
M11		Tulip	28	
N01		Hansa	217	
N04	381			
N05	14			
N07a		NAM		141
N07b		GDF SUEZ		174
N08	35			

Block (part of)	Open area (km ²)	Operator	Licence (km ²)	
			Exploration	Production
O12	2			
O15	142			
O17	3			
O18	367			
P01	209			
P02a		Petrogas	193	
P02b	85			
P02c	138			
P03	416			
P04	170			
P05	417			
P06		Wintershall		417
P07	222			
P08a		Van Dyke		26
P08b	393			
P09a		Petrogas		59
P09b		Petrogas		67
P09c		Petrogas		267
P09d	26			
P10a		Dana		5
P10b		Dana		100
P10c	249			
P11a		Oranje-Nassau	210	
P11b		Dana		210
P12		Wintershall		421
P13	422			
P14a		Dana		50
P14b	372			
P15a		TAQA		203
P15b		TAQA		17
P15c		TAQA		203
P16	423			
P17	424			
P18a		TAQA		105
P18b		Oranje-Nassau	311	
P18c		TAQA		6
P18d		Oranje-Nassau		2
Q01		Petrogas		416
Q02a	333			
Q02c		Petrogas		32
Q04		Wintershall		417
Q05a	0			
Q05b	277			

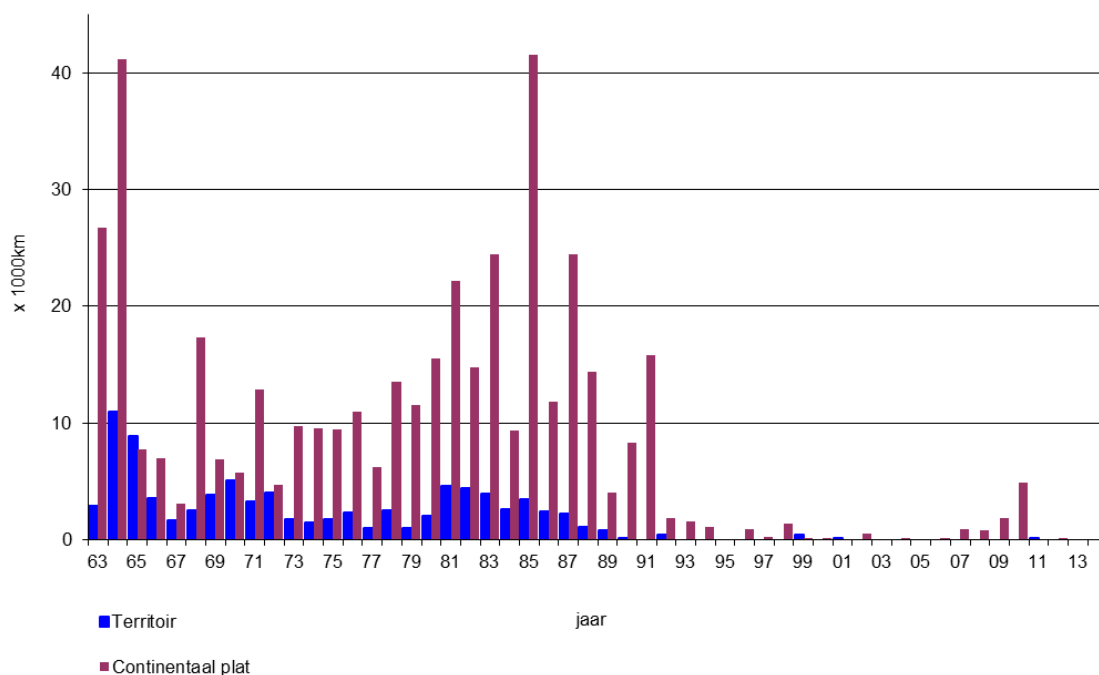
Block (part of)	Open area (km ²)	Operator	Licence (km ²)	
			Exploration	Production
Q05d		Wintershall		20
Q05i	0			
Q07		Tulip	419	
Q08	247			
Q10a		Tulip	53	
Q10b	367			
Q11	162			
Q13a		GDF SUEZ		30
Q13b		GDF SUEZ	369	
Q14	25			
Q16a		Oranje-Nassau GDF SUEZ /		85
Q16b		Oranje-Nassau GDF SUEZ /	59	59
Q16c		Oranje-Nassau	21	21
R02	103			
R03	425			
R05	7			
R06	311			
R09	28			
S01	425			
S02	425			
S03a		Oranje-Nassau		2
S03b	338			
S04	427			
S05	378			
S06	45			
S07	360			
S08	129			
S10	36			
S11	0			
T01		Oranje-Nassau		1
Total	26 165		12 285	18 420

SEISMIC SURVEYS

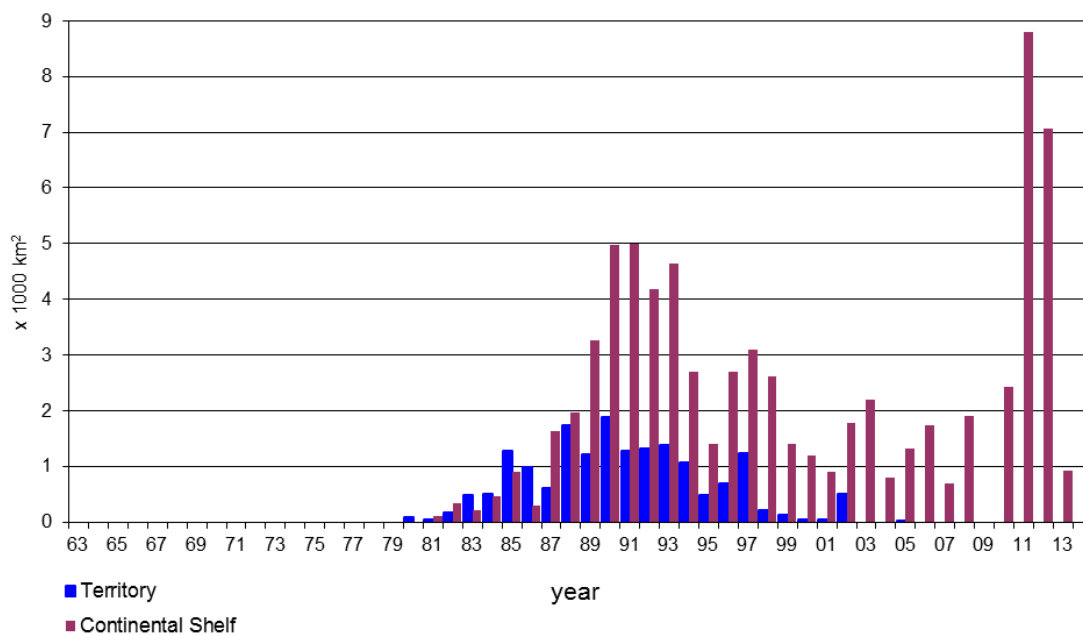
Year	Territory		Continental shelf	
	2D (km)	3D (km ²)	2D (km)	3D (km ²)
63	2 860	-	26 778	-
64	10 992	-	41 136	-
1965	8 885	-	7 707	-
66	3 510	-	6 939	-
67	1 673	-	3 034	-
68	2 541	-	17 349	-
69	3 857	-	6 846	-
1970	5 113	-	5 780	-
71	3 252	-	12 849	-
72	4 034	-	4 716	-
73	1 783	-	9 708	-
74	1 422	-	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

Year	Territory		Continental shelf	
	2 D (km)	3 D (km ²)	2 D (km)	3 D (km ²)
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	-	-	1849	-
2010	-	-	4898	2431
11	14	-	-	8 800
12	-	-	37	7 060
13	-	-	-	925
14	-	-	-	2 624

2D Seismic surveys 1963 – 2014



3D Seismic surveys 1963 – 2014



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
to1967	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

Year	Exploration					Appraisal					Production
	O	G	G&O	D	Σ	O	G	G&O	D	Σ	Σ
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
12	-	3	-	1	4	-	3	-	-	3	8
13	-	2	-	-	2	-	1	-	-	1	8
14	-	5	-	3	8	-	-	-	-	0	7
Total:	7	171	9	246	433	25	196	2	36	259	1250

O = oil

G = gas

G&O = gas & oil

D = dry

Σ = total

OIL AND GAS WELLS

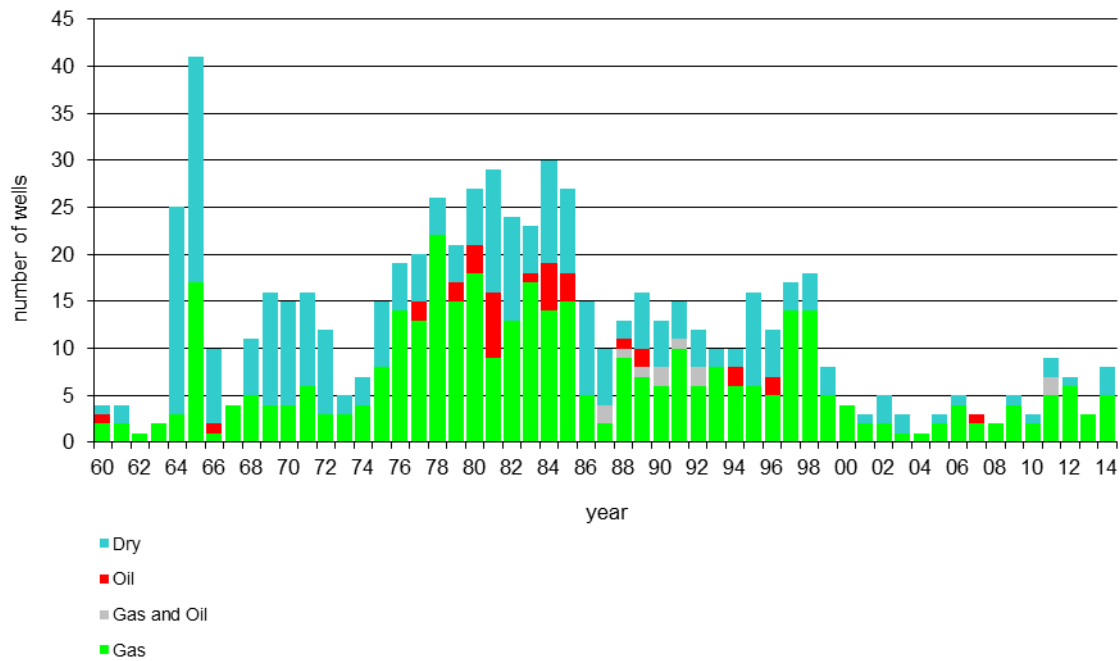
Number of wells, Netherlands continental shelf

Year	Exploration					Appraisal					Production	
	O	G	G&O	D	Σ	O	G	G&O	D	Σ	Σ	
to1967	-	-	-	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

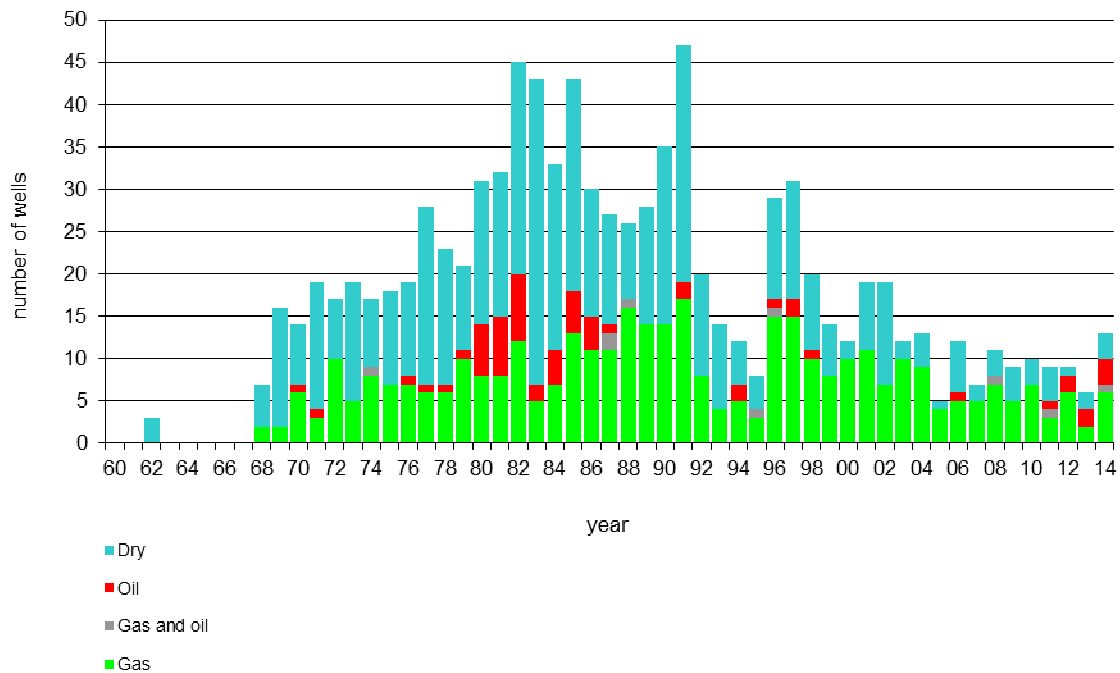
Year	Exploration					Appraisal					Production
	O	G	G&O	D	Σ	O	G	G&O	D	Σ	Σ
2000	-	4	-	2	6	-	6	-	-	6	9
01	-	9	-	6	15	-	2	-	2	4	12
02	-	6	-	10	16	-	1	-	2	3	13
03	-	6	-	1	7	-	3	-	1	4	13
04	-	7	-	4	11	-	2	-	-	2	6
2005	-	3	-	1	4	-	1	-	-	1	8
06	-	3	-	6	9	1	2	-	-	3	16
07	-	3	-	2	5	-	2	-	-	2	12
08	-	4	1	3	8	-	3	-	-	3	13
09	-	4	-	3	7	-	3	-	-	3	11
2010	-	4	-	3	7	-	2	-	-	2	12
11	-	1	1	4	6	1	2	-	-	3	15
12	1	5	-	1	7	1	1	-	-	2	11
13	-	2	-	2	4	2	-	-	-	2	10
14	1	4	1	3	9	2	2	-	-	4	11
Total:	29	270	6	464	769	32	103	2	46	183	550
O = oil	G = gas	G&O = gas & oil	D = dry	Σ = total							

NUMBER OF WELLS Netherlands Territory and continental shelf since 1960

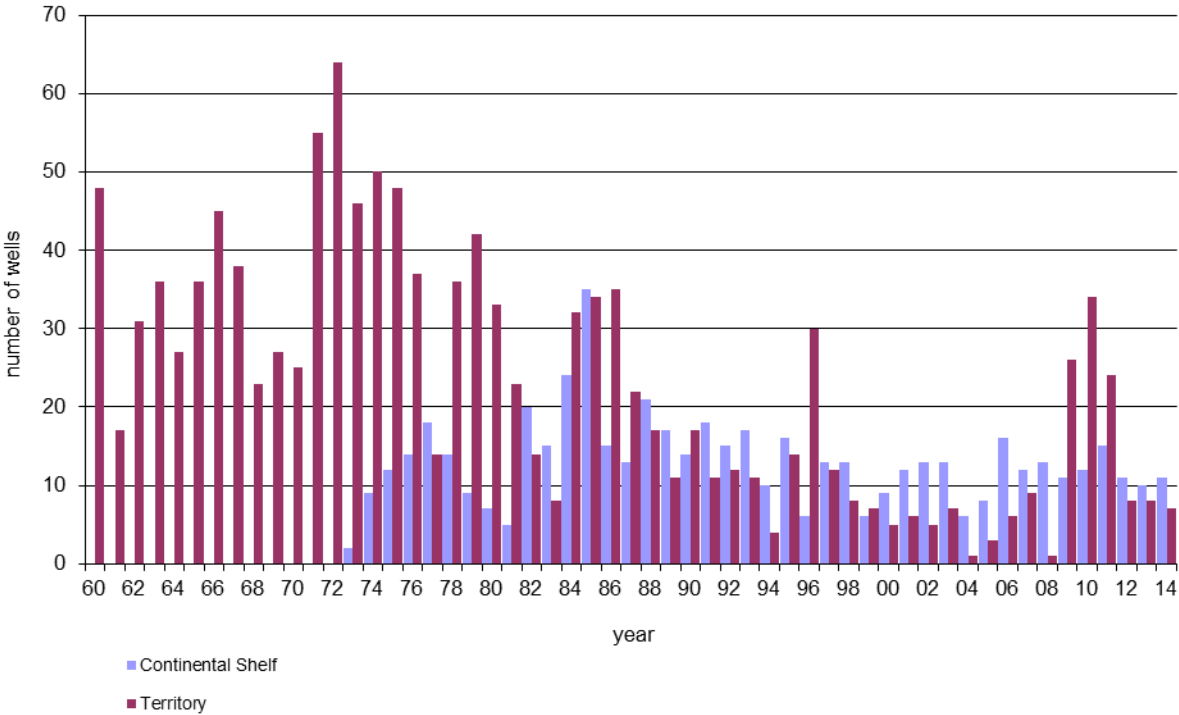
Exploration and appraisal wells. Netherlands Territory 1960 - 2014



Exploration and appraisal wells. Continental shelf 1960 – 2014



Production wells 1960 – 2014



PLATFORMS

Netherlands continental shelf as at 1 January 2015

Platform	Operator	Year installed	No. 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

Platform	Operator	Year installed	No. legs	G* / O*	Function
L7-A	Total	1984	4	G	satellite
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

Platform	Operator	Year installed	No. legs	G* / O*	Function
K6-DN	Total	1992	4	G	satellite
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

Platform	Operator	Year installed	No. legs	G* / O*	Function
L8-P4	Wintershall	2000	4	G	integrated
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	GDF SUEZ	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	2012	4	G	satellite
G16a-B	GDF SUEZ	2012	4	G	satellite
K18-G1	Wintershall	2012	-	G	subsea completion

Platform	Operator	Year installed	No. legs	G* / O*	Function
P11-B-Nes	Dana	2012	-	G	subsea completion
P11-C-Van Ghent	Dana	2012	-	O & G	subsea completion
D18a-A	GDF SUEZ	2013	4	G	wellhead
K4-Z	Total	2013	-	G	subsea completion
L5a-D	GDFSuez	2013	4	G	wellhead
Q01-D	Wintershall	2013	4	G	wellhead
Q13a-A	GDF SUEZ	2013	4	G	wellhead
L6-B	Wintershall	2014	1	G	monopile

G* = Gas

O* = Oil

GBS = Gravity Based Structure

PIPELINES**Netherlands continental shelf as at 1 January 2015**

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	Callantssoog	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	Callantssoog	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

Operator	From	To	Diameter (inches)	Laid (year)	Length (km)	Carries
TotalFinaElf	L7-A	L7-P	10.75. 3.5	1985	10.4	g + gl
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

Operator	From	To	Diameter (inches)	Laid (year)	Length (km)	Carries
NAM	L5-FA-1	NOGAT-pipe (s)	16	1991	0.4	g + co
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 ST1 (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

Operator	From	To	Diameter (inches)	Laid (year)	Length (km)	Carries
NAM	K14-FA-1P	K15-FB-1	16	1997	16.6	g
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	F3-FB-1P	26	2003	38.0	g

Operator	From	To	Diameter (inches)	Laid (year)	Length (km)	Carries
	(Tyra WE)					
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
GDF SUEZ	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	Wingate (UK)	D15-A	12 + 2	2010	20.6	g
Chevron	B13-A	A12-CPP	16	2011	22	g

Operator	From	To	Diameter (inches)	Laid (year)	Length (km)	Carries
GDF SUEZ	G16a-B	G17d-AP	14	2011	14	g
NAM	K18-G1	K15-FA-1	8	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
Wintershall	Q4C	Q8A	10	2012	8.3	g
Total	K5-B	K5-A	8	2012	13.5	g
Wintershall	K5A	J6A/K13-A	14	2012	13.5	c
GDF SUEZ	D18a-A	D15-A	8. 2	2013	21.5	g, m
Total	K4-Z	K5-A	6	2013	17	g+c
GDF SUEZ	L5a-D	L5-FA-1	8	2013		g
Wintershall	Q01-D	Q1-Hoorn-Q4C (s)	8	2013	2.5	g
GDF SUEZ	Q13a-A	P15-C	8	2013	24.5	o
Wintershall	L6-B	L8-P4	8	2014	19.2	g+c

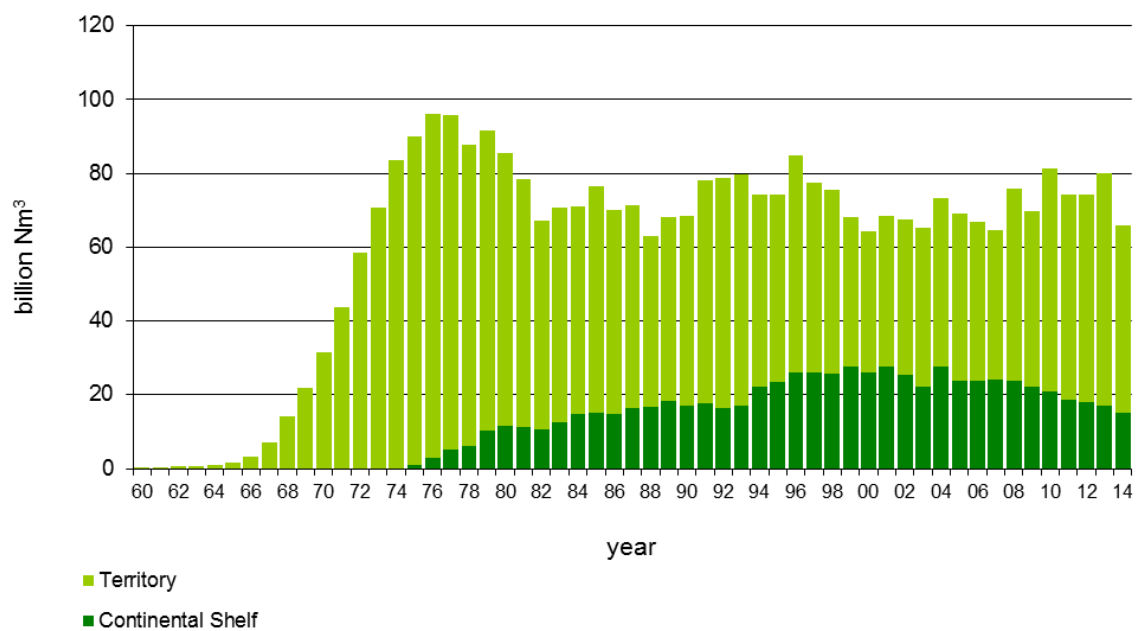
*	= multiple pipeline	gl	= glycol
,	= laid separately	m	= methanol
c	= control cable	ci	= corrosion inhibitor
o	= oil	l	= instrument air
g	= gas	(s)	= side-tap
co	= condensate	aband..	= abandoned

PRODUCTION OF NATURAL GAS (in million Nm³)

Year	Territory	Continental shelf	Total
1960	363.8	0.0	363.8
61	451.0	0.0	451.0
62	509.8	0.0	509.8
63	571.3	0.0	571.3
64	830.0	0.0	830.0
1965	1722.6	0.0	1722.6
66	3376.9	0.0	3376.9
67	7033.3	0.0	7033.3
68	14107.3	0.0	14107.3
69	21884.4	0.0	21884.4
1970	31663.6	7.5	31671.0
71	43820.0	2.3	43822.3
72	58423.8	1.3	58425.1
73	70840.8	7.4	70848.2
74	83720.2	13.8	83734.0
1975	88993.0	912.7	89905.7
76	93145.9	2930.3	96076.2
77	90583.8	5191.9	95775.8
78	81935.1	5967.8	87902.9
79	81354.2	10351.9	91706.2
1980	74103.0	11466.6	85569.7
81	67204.3	11178.9	78383.2
82	56853.8	10492.0	67345.7
83	58302.5	12480.7	70783.2
84	56236.0	14958.5	71194.5
1985	61182.9	15227.2	76410.1
86	55409.8	14732.7	70142.5
87	55039.3	16364.7	71404.0
88	46514.7	16667.7	63182.3
89	49810.1	18286.8	68096.8
1990	51719.3	16918.6	68637.8
91	60378.5	17705.3	78083.8
92	62252.6	16371.9	78624.5
93	62680.9	16914.2	79595.1
94	51982.7	22301.2	74283.9
1995	50826.7	23409.8	74236.5
96	59024.5	25914.7	84939.2
97	51412.3	26133.0	77545.3
98	49993.9	25716.1	75710.0
99	40574.8	27673.6	68248.4
2000	38203.4	26031.5	64234.9
01	40951.7	27518.3	68470.0
02	42137.6	25364.7	67502.3
03	42881.1	22273.8	65154.9

Year	Territory	Continental shelf	Total
04	45880.1	27592.8	73472.9
2005	45498.2	23779.6	69277.8
06	43169.5	23858.0	67027.5
07	40464.5	24259.0	64723.5
08	51860.7	23900.0	75760.7
09	47696.4	22165.0	69861.4
2010	60475.0	20921.0	81396.0
11	55881.7	18551.2	74432.9
12	56233.1	17899.8	74132.9
13	63043.5	17004.1	80047.5
14	50696.9	15257.6	65954.5
Total	2621906.7	722677.2	3344584.0

Production of natural gas 1960-2014



GAS RESERVES AND CUMULATIVE PRODUCTION IN BILLION Nm³

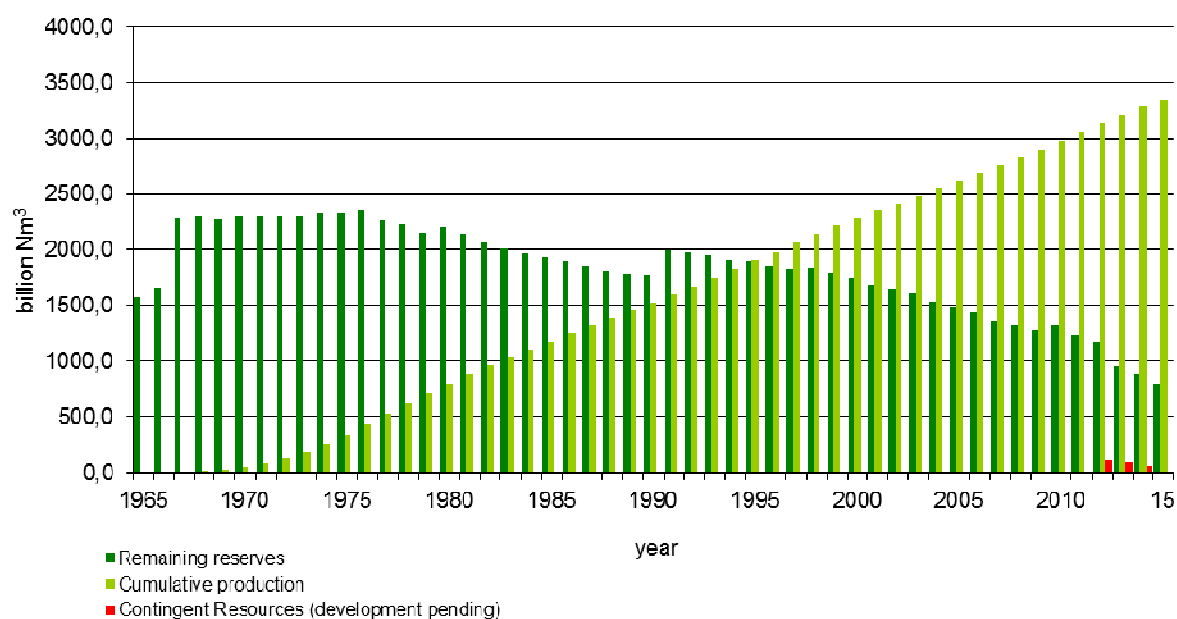
Year	Territory	Continental shelf			Total		
		as at 1 Jan.	expected reserves	cumulative production	expected reserves	cumulative production	cumulative production
1974	2243		269.8	211	0.0	2454	269.8
1975			358.1		0.0	2454	358.2
76	2137		452.0	340	1.0	2477	453.0
77	2030		550.4	367	4.1	2397	554.4
78	1996		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

From 2014 onwards the table has been modified, to take account of the introduction of PRMS

Rem Res = remaining reserves
 Cont Res = contingent resources (development pending)
 Cum Prod = cumulative production

Year	Territory			Continental shelf			Total		
As at 1 January	Rem Res	Cont Res	Cum prod	Rem Res	Cont Res	Cum prod	Rem Res	Cont Res	Cum prod
2013	850	67	2508	105	49	690	955	117	3199
2014	805	60	2571	92	32	707	897	92	3279
2015	705	41	2622	94	24	723	799	65	3345

Gas reserves and cumulative production (1 January 2015), 1965 – 2015

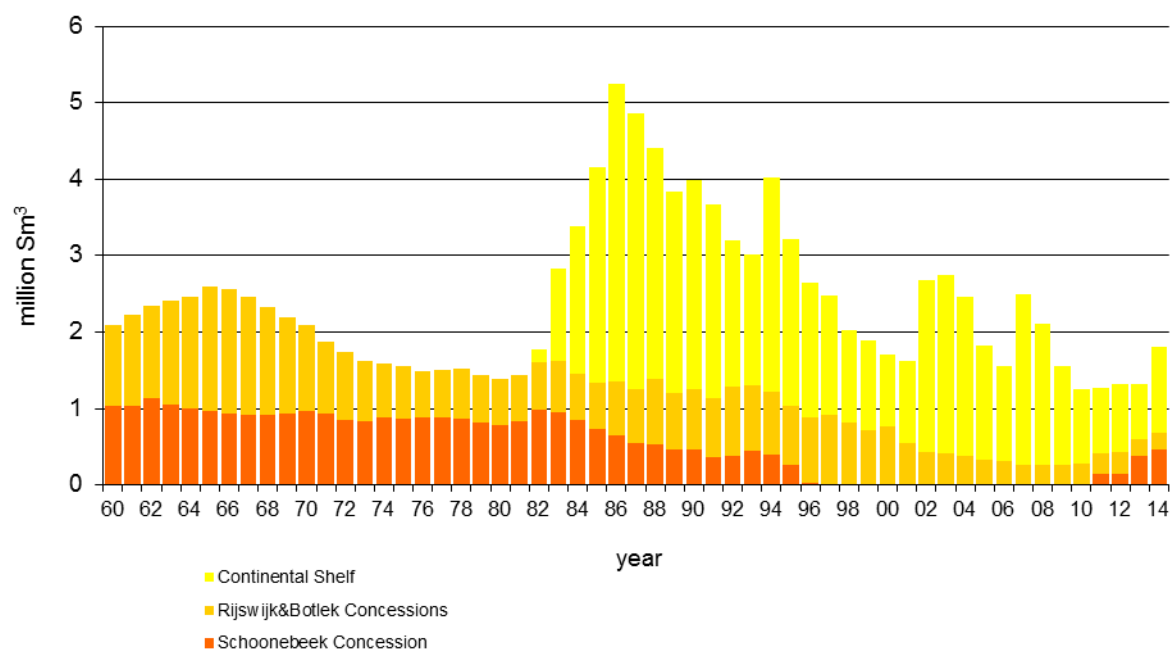


OIL PRODUCTION in 1000 Sm³

Year	Schoonebeek production licence	Rijswijk & Botlek production licence	Continental shelf	Total
to 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
12	149.4	289.5	883.9	1 322.8
13	374.3	229.8	709.6	1 313.7
14	472.7	204.1	1132.7	1809.5
Total	41357.7	41523.2	60204.7	143085.6

Oil production 1960 – 2014



OIL RESERVES AND CUMULATIVE PRODUCTION IN MILLION Sm³

Year	Territory	Continental shelf		Total		
		as at 1 Jan.	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		14	44.4	-	44.4
76	51		14	45.9	65	45.9
77	49		16	47.4	65	47.4
78	46		7	48.9	53	48.9
79	44		9	50.4	53	50.4
1980	43		11	51.9	54	51.9
81	41		14	53.3	55	53.3
82	39		20	54.7	59	54.7
83	38		49	56.3	87	56.5
84	37		41	57.9	78	59.3
1985	41		34	59.4	75	62.7
86	42		36	60.7	78	66.8
87	40		35	62.1	75	72.1
88	41		33	63.3	74	76.9
89	39		32	64.7	71	81.4
1990	41		27	65.9	68	85.2
91	40		24	67.2	64	89.2
92	38		26	68.3	64	92.9
93	37		24	69.6	61	96.1
94	35		23	70.9	58	99.1
1995	34		22	72.1	56	103.1
96	33		17	73.1	50	106.3
97	33		22	74.0	55	109.0
98	12		25	74.9	37	111.4
99	8		26	75.7	34	113.5
2000	7		25	76.5	32	115.3
01	6		24	77.2	30	117.1
02	5		23	77.8	28	118.7
03	5		23	78.2	28	121.4
04	21		17	78.6	38	124.1
2005	19		15	79.0	34	126.6
06	23		13	79.3	35	128.4
07	24		14	79.7	38	129.9
08	24		13	79.9	37	132.4
09	25		9	80.2	34	134.5

Year	Territory	Continental shelf			Total		
		expected reserves	cumulative production	expected reserves	cumulative production	expected reserves	cumulative production
as at 1 Jan.							
2010	37	80.5	13	55.6	50	136.0	
2011	34	80.7	12	56.6	46	137.4	
2012	29	81.2	11	57.5	40	138.6	

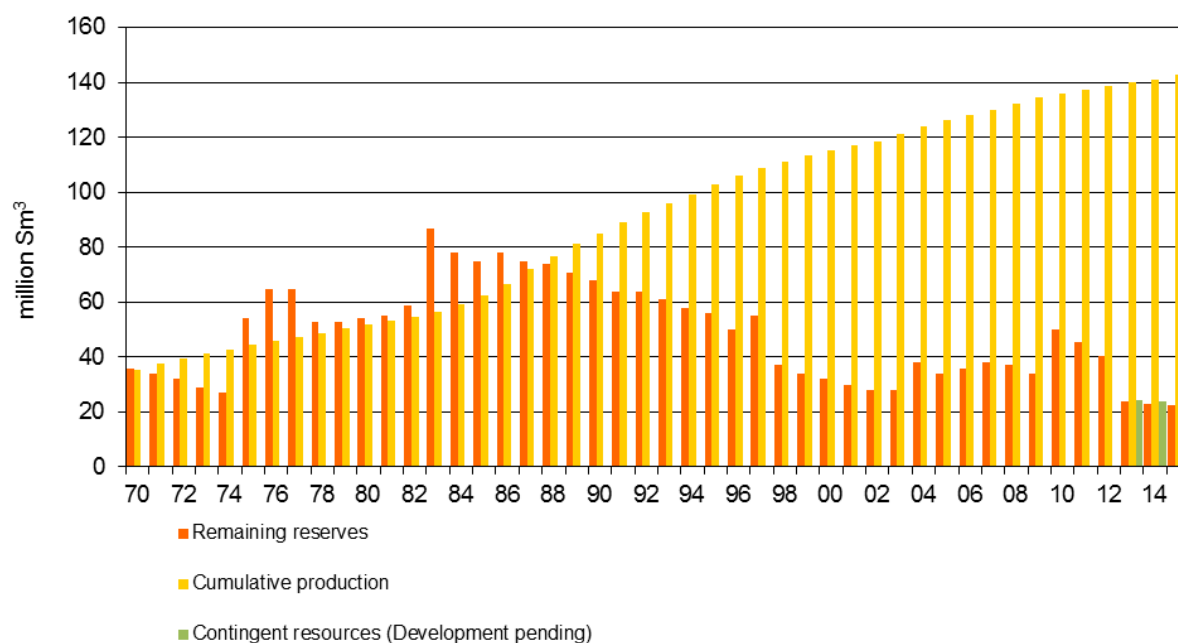
This table has been corrected to take account of the cumulative rounding-off error

From 2014 onwards the table has been modified, to take account of the introduction of PRMS

Rem Res = remaining reserves
 Cont Res = contingent resources (development pending)
 Cum Prod = cumulative production

Year	Territory			Continental shelf			Total		
	Rem Res	Cont Res	Cum prod	Rem Res	Cont Res	Cum prod	Rem Res	Cont Res	Cum prod
as at 1 Jan.									
2013	17,7	23,7	81,6	6,1	0,6	58,4	23,8	24,3	140,0
2014	18,0	18,7	82,2	5,0	5,4	59,1	23,0	24,1	141,3
2015	18,2	9,6	82,9	4,1	2,8	60,2	22,3	12,4	143,1

Oil reserves and cumulative production in million Sm³ 1970 – 2015



NATURAL GAS REVENUES

Year	Non-tax revenue (€10 ⁹)	Corporation tax (€10 ⁹)	Total (€10 ⁹)
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
04	4.74	1.94	6.68
2005	5.88	1.80	7.68
06	8.40	2.18	10.58
08	12.83	2.54	15.37

Year	Non-tax revenue (€10 ⁹)	Corporation tax (€10 ⁹)	Total (€10 ⁹)
09	8.51	1.60	10.11
2010	9.14	1.50	10.64
11	10.33	1.55	11.88
12	12.64	1.74	14.38
13	13.59	1.78	15.37
14	8.98	1.28	10.26
Prognosis			
2015	7.85	1.10	8.95
16	7.00	0.90	7.90
17	7.45	1.00	8.45
18	7.35	1.00	8.35
19	6.95	1.00	7.95

The revenues presented here are transaction-based, i.e. they have been allocated to the year in which the production that yielded the revenue took place. (By contrast, revenue recorded on a cash basis is recorded at the time the State actually receives the revenue, which is some time later than the transaction-based revenue).

Non-tax revenue comprises bonus, surface rights, royalties, the State profit shares, the special payments to the State on production from the Groningen field and the profit paid out by EBN B.V. (the State participant in the production).

Tax income for the years 2015 until the end of May 2019 is anticipated based on the expected price at gas trading hubs such as TTF. The TTF price per Sm³ gas used to calculate the estimates rises from 21 euro cents in 2015 to 23 euro cents in 2019.

Natural gas revenues 1965 – 2019



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Netherlands Oil and Gas Portal,

www.nlog.nl

The Netherlands Oil and Gas Portal provides information about mineral resources and geothermal energy in Netherlands Territory and the continental shelf with the aim of making information supplied by the Dutch government easily and clearly accessible. The portal is administered by TNO, *Geological Survey of the Netherlands* on the authority of the Ministry of Economic Affairs.

DEFINITIONS OF SELECTED TERMS

Territory/Netherlands Territory:

In this review, Territory and Netherlands Territory refer to 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 and Netherlands continental shelf refer to 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; since 1 January 2003 a reconnaissance survey has only been mandatory for certain areas.

Exploration licence: A licence to explore for the minerals stipulated therein.

Production licence:

A licence to produce the mineral resources specified in the licence, and also to explore for these mineral resources.

Seismic surveys:

This review differentiates between 2D and 3D seismic techniques. There is a long tradition of two-dimensional (2D) seismic surveying in the oil industry. Vibrations are generated along a line on the surface of the ground. They are reflected back by the layers in the earth's crust and recorded by geophones or hydrophones. As the vibrations do not always propagate solely in the vertical plane underneath the recording line, the representations of geological structures in the 2D seismic sections only approximate the real-life situation. The approximation is far superior in 3D seismic surveys, in which a large number of recording lines are positioned close together in a relatively small 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, making it possible to generate an accurate model of the geological structures at any desired location.

Wells:

- Exploration well: a well to explore a prospective underground accumulation of oil, or gas, or of both;
- Appraisal well: A well drilled to establish the volume and extent of a gas field, or an oilfield, or a combined gas/oilfield;
- Production well: A well drilled in order to produce a gas field or an oilfield.

Gas field / oilfield:

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

Resource categories and definitions:

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

- 1 **Gas/oil initially in place (GIIP/OIIP)**
the total volume of hydrocarbons initially present in a reservoir, 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 estimated to be ultimately commercially recoverable, 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 estimated to be ultimately commercially recoverable (with a 90% probability, based on an expectation curve).
- 4 **Remaining expected reserves**
that part of the expected initial reserves remaining after subtracting the cumulative production (this is the total volume of hydrocarbons produced from the reservoir concerned by the end of the year under review).
- 5 **Remaining proven reserves**
the volume of hydrocarbons with a 90% probability of still being recoverable from a reservoir. This volume is calculated by subtracting the cumulative production from the proven initial reserves.
- 6 **Contingent resources**
The volume of hydrocarbons in a reservoir estimated to have a 90% probability of being potentially recoverable, but currently not considered commercially recoverable due to one or more contingencies. In this annual review, only the contingent resources in the 'pending production' subclass are considered.
- 7 **Expected contingent resources**
The volume of hydrocarbons in a reservoir expected to be commercially viable to produce under certain conditions. It is calculated using mean values of the parameters. In this annual review, only the contingent resources in the 'pending production' subclass are considered.
- 8 **Future reserves**
The volumes of hydrocarbons not yet proven by drilling but having a certain possibility of success of contributing to reserves in the future. The following datasets and definitions have been used to estimate 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). The main

source of data for this database is the annual reports submitted by the operating companies in accordance with article 113 of the Mining Act.

b. Prospect portfolio

The selection of prospects from the prospect database located within 'proven play' areas.

c. Exploration potential

Cumulative 'risked volumes' of all prospects in the prospect portfolio that meet certain selection criteria. Since 1992 the prospect folio as reported in the exploration potential reports has contained only those prospects with an expected reserve exceeding a certain minimum value. In certain reports the term 'firm futures' has been used. It is largely synonymous with exploration potential.

d. Potential futures in proven plays

Volume of gas expected to be present in as yet unmapped structures in the 'proven play' areas.

e. Potential futures in as yet unproven plays

Volume of gas expected to be present in valid plays that have not yet been proven in the Netherlands.

f. Potential futures in hypothetical plays

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

In the definitions above, the term 'expected' is used in the statistical sense and thus the figure given represents the expected value (or expectation). The following explanation may be helpful.

All data 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 they will be achieved or exceeded. As production from a hydrocarbon reservoir progresses, various 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 of the volume of hydrocarbons 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 time of reporting 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 in order to take account of the uncertainties inherent to all reserve estimates. The result of applying the probabilistic summation method is that the total figure obtained for the proven reserves in the Netherlands is statistically more reliable. In other words, the probability that the actual reserves exceed the value stated is 90%.

Exploration potential:

The exploration potential has been calculated using the ExploSim program, which is described 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.

The most important parameters used to determine the exploration potential (i.e. to perform the economic evaluation of prospects) on the basis of the discounted cash flow model are gas price ((21.5ct/m³), 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 (11) and the incorporation of the construction and dismantling of the infrastructure.

Units:

Standard m³: natural gas and oil reserves are expressed in cubic metres at a pressure of 101.325 kPa (or 1.01325 bar) and 15°C. This m³ is defined as a standard m³ in Standard no. 5024-1976(E) of the International Organisation for Standardisation (ISO) and is usually abbreviated Sm³.

Normal m³: natural gas and oil reserves are expressed in cubic metres at a pressure of 101.325 kPa (or 1.01325 bar) and 0°C. This m³ is defined as a normal m³ in Standard no. 5024-1976(E) of the International Organisation for Standardisation (ISO) and is usually abbreviated Nm³.

Groningen gas equivalent: In order to be able to incorporate volumes of natural gas of different qualities in calculations, they have been converted to Groningen gas equivalents (Geq). This is achieved by converting the volume of gas that differs in quality from the gas in the Groningen field to a volume of gas that is hypothetically of the same quality as the gas in the Groningen field (which is 35.17 Mega joules upper value per m³ of 0°C and 101.325 kPa. or 1.01325 bar).

One Nm³ gas with a calorific value of 36.5 MJ is equivalent to 36.5/35.17 Nm³ Geq .

The Groningen gas equivalent is commonly used in the Netherlands, including by N.V. Netherlands Gasunie.

Figures given as Groningen gas equivalents can easily be converted into equivalents for other fuels, such as tonnes of oil equivalents (TOE) and coal equivalents (CE).

Fuel	Unit	Giga joule	Giga calorie	Oil equiv. tonnes	Oil equiv. barrels	Coal equiv. tonnes	Gas equiv. 1 000 m ³
Fuelwood (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
Coke	tonnes	28.50	6.81	0.68	4.97	0.97	0.90
Coke-oven gas	1000 m ³	17.60	4.20	0.42	3.07	0.60	0.56
Blast furnace gas	1000 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	1000 m ³	46.10	11.01	1.10	8.04	1.57	1.46
LPG	1000 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
Aviation fuel	tonnes	43.49	10.39	1.04	7.58	1.48	1.37
Petrol	tonnes	44.00	10.51	1.05	7.67	1.50	1.39
Paraffin	tonnes	43.11	10.29	1.03	7.52	1.47	1.36
Domestic 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 coke	tonnes	35.20	8.41	0.84	6.14	1.20	1.11
Natural gas	1000 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

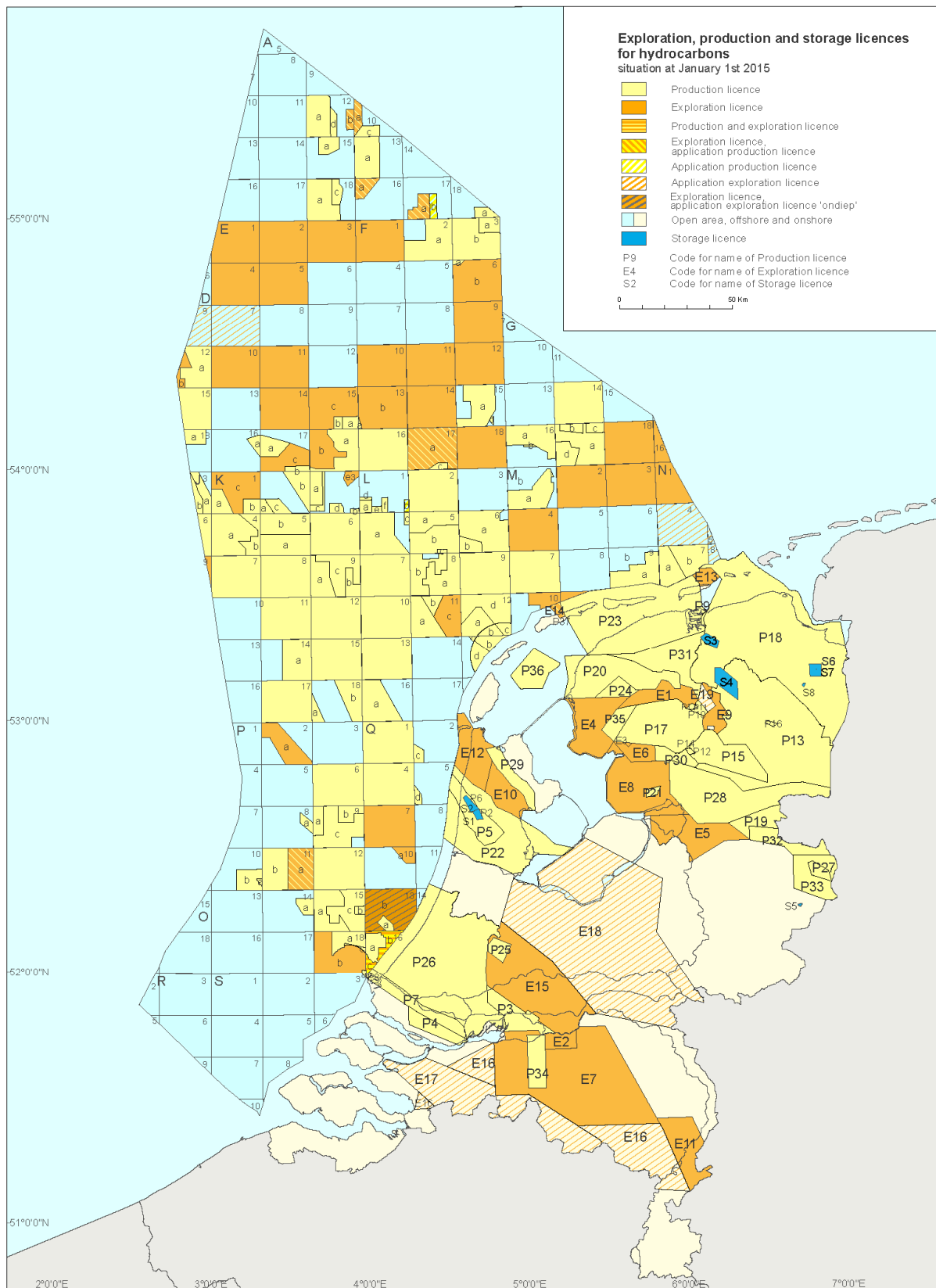
* In this energy conversion table the energy value of one MWh electricity is to be understood as the energy content of a generated unit of electricity. In order to produce this unit of energy, more energy is necessary. The amount required depends on the efficiency of the conversion.

APPENDICES

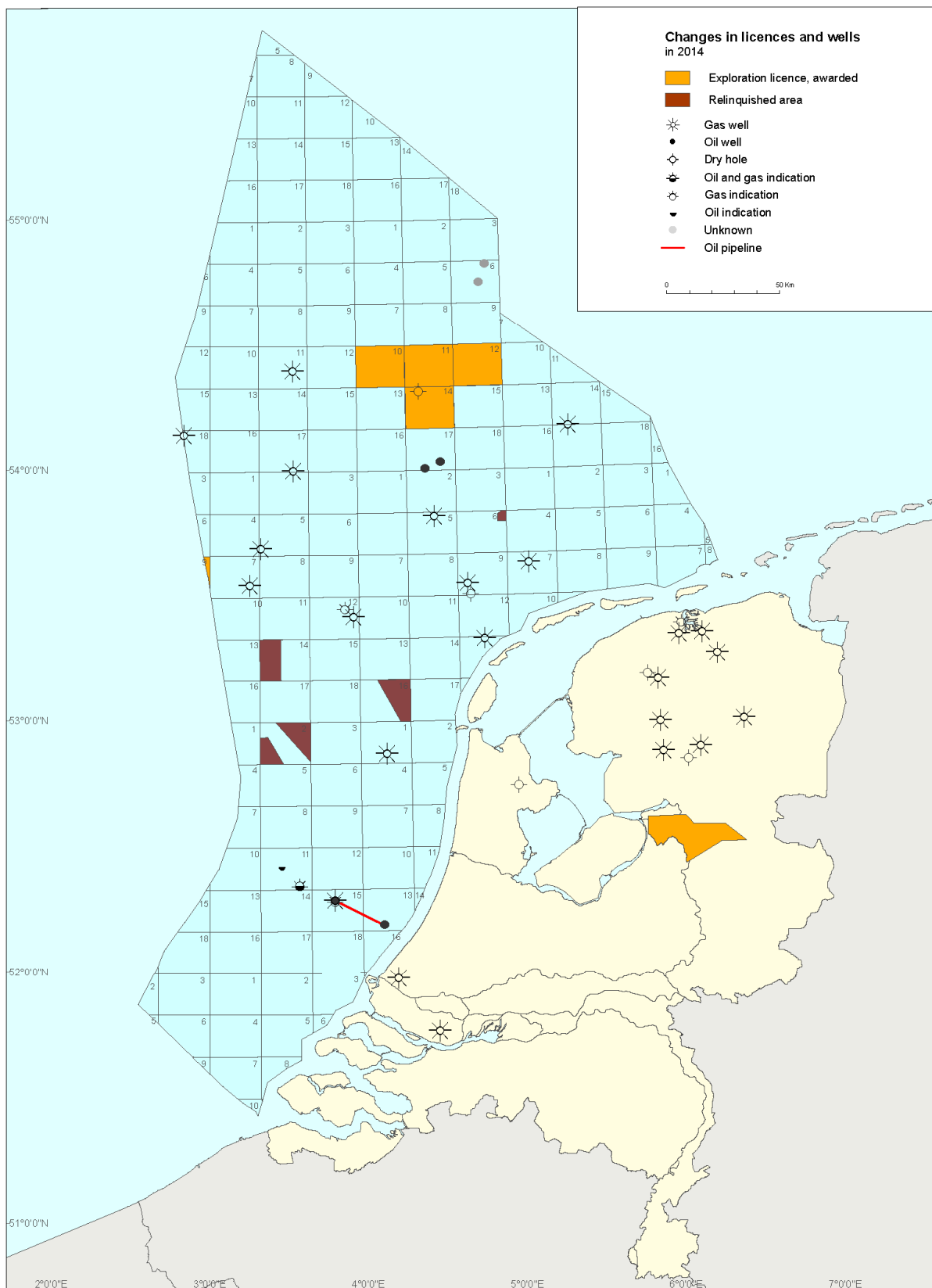
Exploration, production and storage licences as at 1 January 2015

Names of the exploration, production and storage licences, Netherlands Territory, as indicated on the map on the next page:

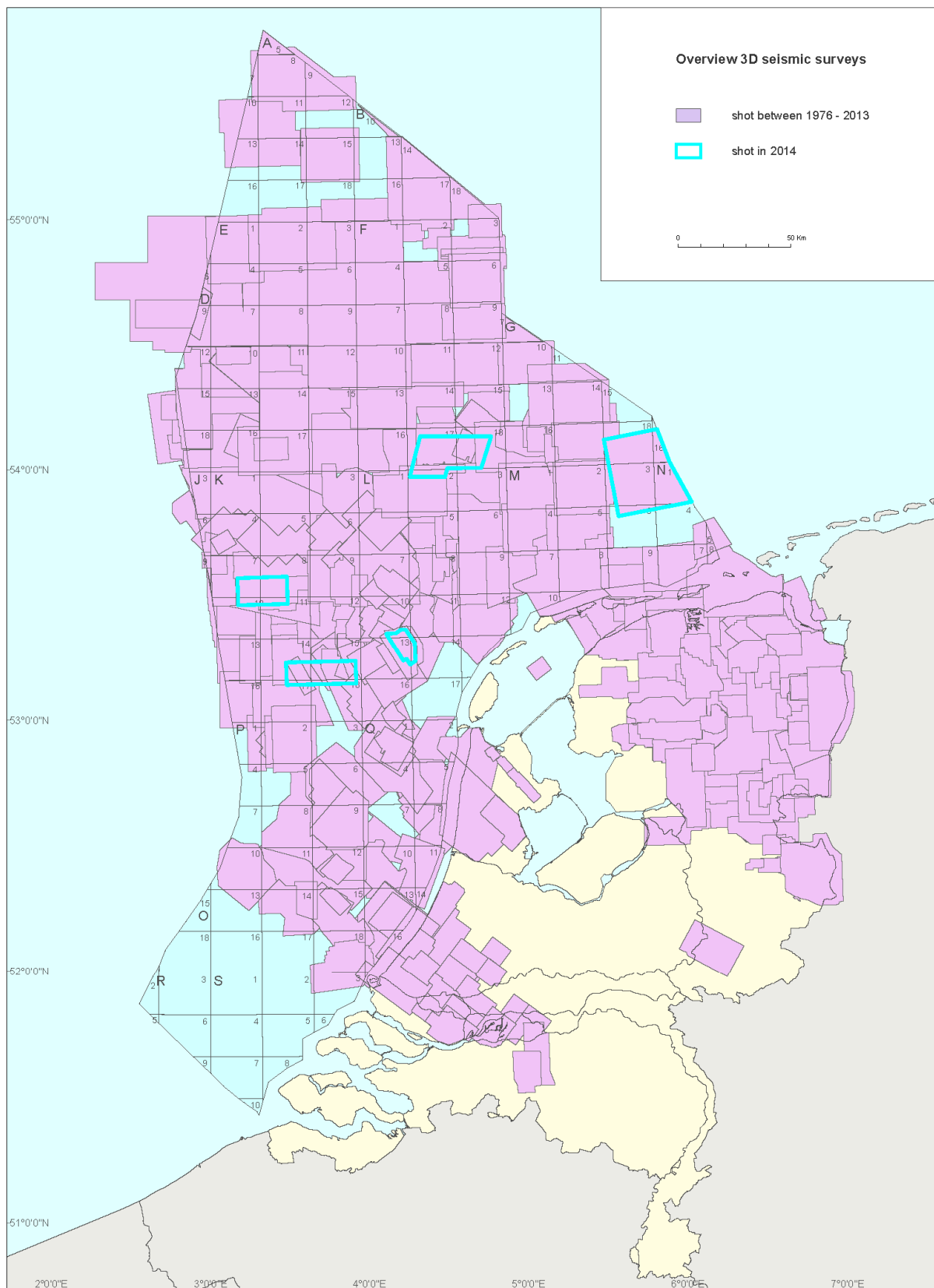
Exploration licences			
E1	Akkrum	E9	Oosterwolde
E2	Engelen	E10	Opmeer
E3	Follega	E11	Peel
E4	Hemelum	E12	Schagen
E5	IJsselmuiden	E13	Schiermonnikoog-Noord
E6	Lemsterland	E14	Terschelling-Noord
E7	Noord-Brabant	E15	Utrecht
E8	Noordoostpolder		
Applications for exploration licences			
E16	Breda-Maas	E18	Midden-Nederland
E17	De Kempen	E19	Waskemeer
Production licences			
P1	Akkrum 11	P19	Hardenberg
P2	Alkmaar	P20	Leeuwarden
P3	Andel V	P21	Marknesse
P4	Beijerland	P22	Middelie
P5	Bergen II	P23	Noord-Friesland
P6	Bergermeer	P24	Oosterend
P7	Botlek II	P25	Papekop
P8	Botlek-Maas	P26	Rijswijk
P9	De Marne	P27	Rossum-De Lutte
P10	Donkerbroek	P28	Schoonebeek
P11	Donkerbroek-West	P29	Slootdorp
P12	Drenthe IIA	P30	Steenwijk
P13	Drenthe IIB	P31	Tietjerksteradeel
P14	Drenthe IIIA	P32	Tubbergen
P15	Drenthe IIIB	P33	Twenthe
P16	Drenthe IV	P34	Waalwijk
P17	Gorredijk	P35	Zuid-Friesland III
P18	Groningen	P36	Zuidwal
Applications for production licences			
P37	Terschelling-Noord		
Storage licences			
S1	Alkmaar	S5	Twenthe-Rijn De Marssteden
S2	Bergermeer	S6	Winschoten II
S3	Grijpskerk	S7	Winschoten III
S4	Norg	S8	Zuidwending



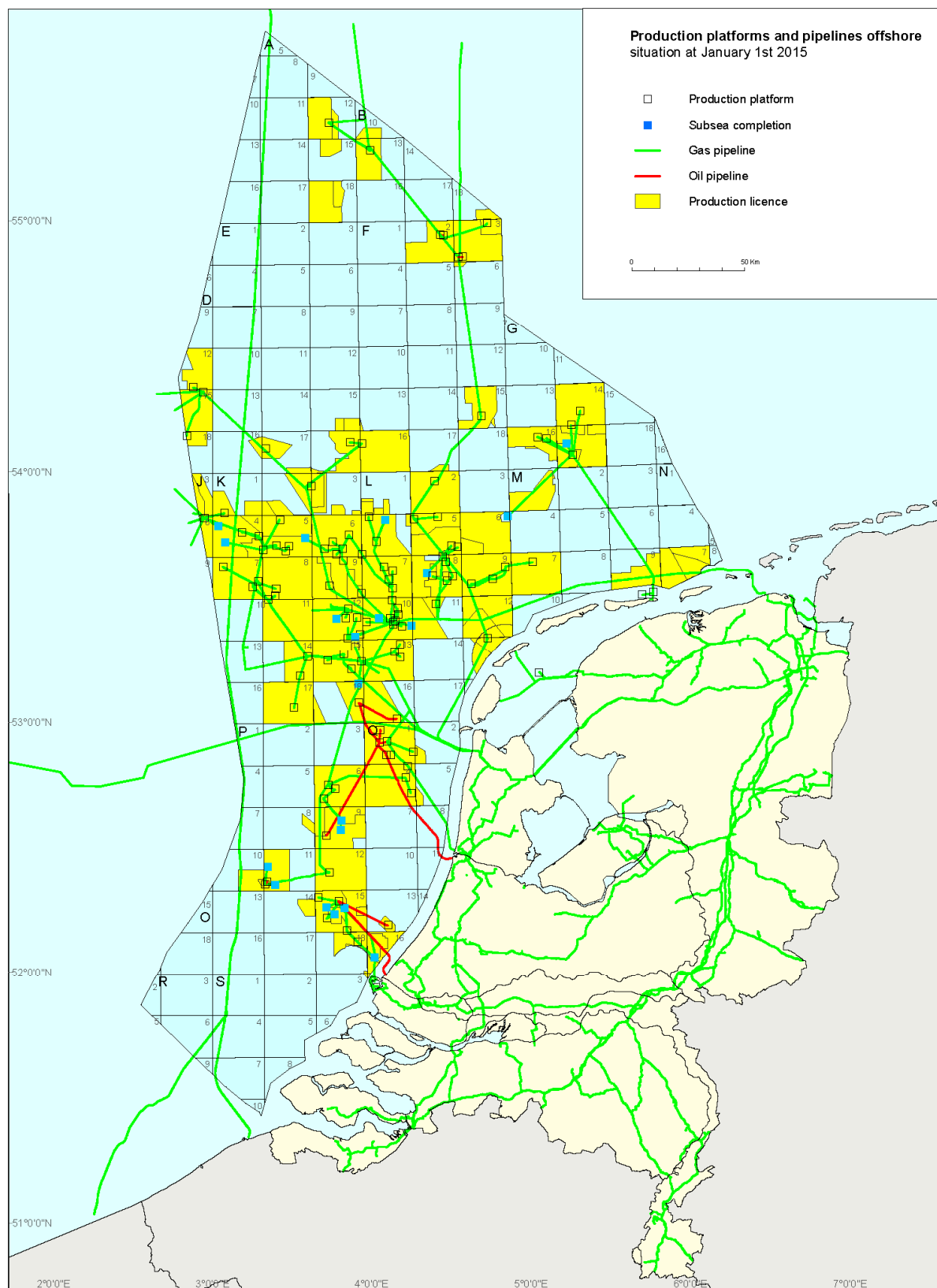
Wells and changes in licence situation as at 1 January 2015



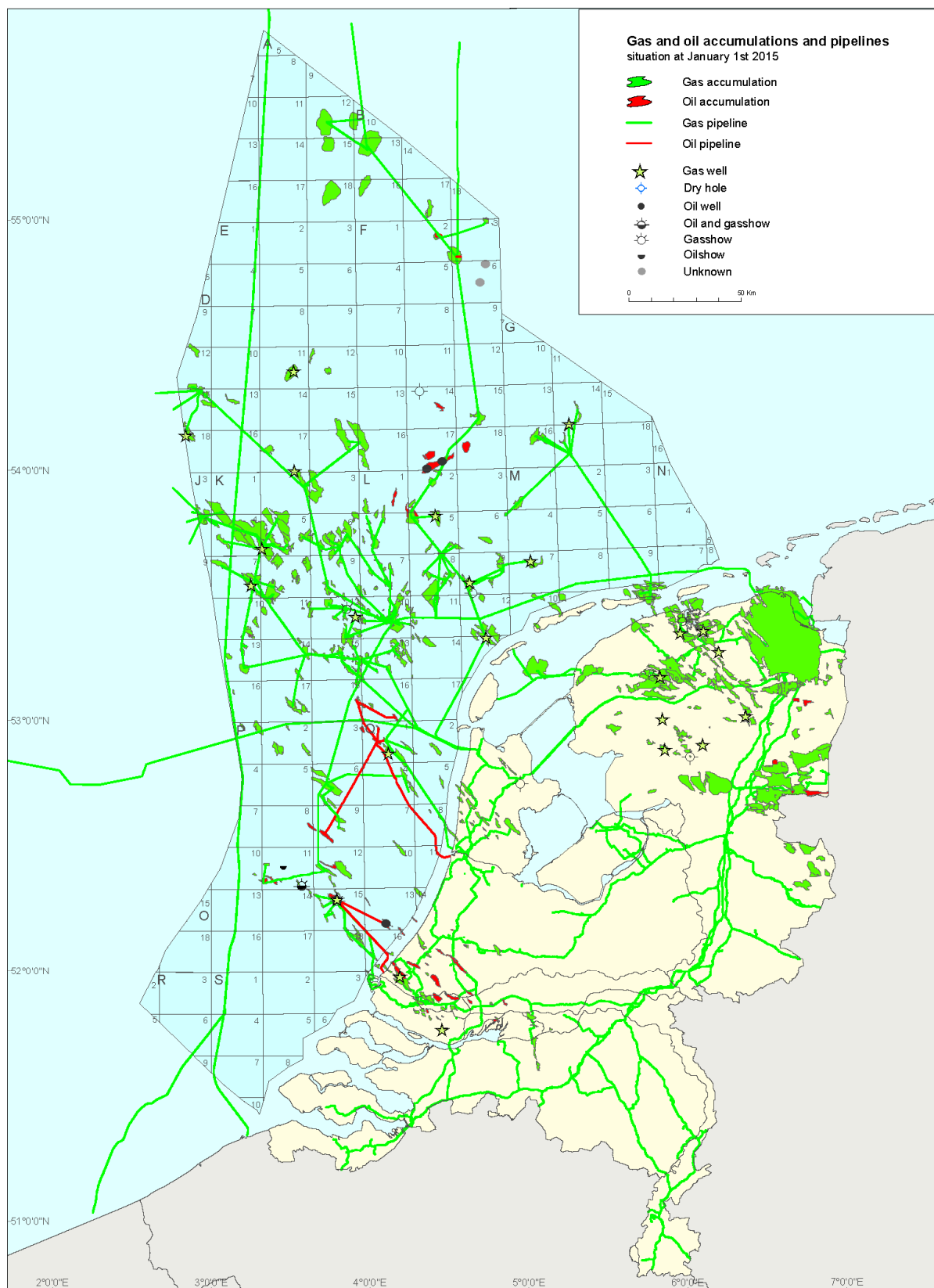
3D seismic surveys



Production platforms and pipelines



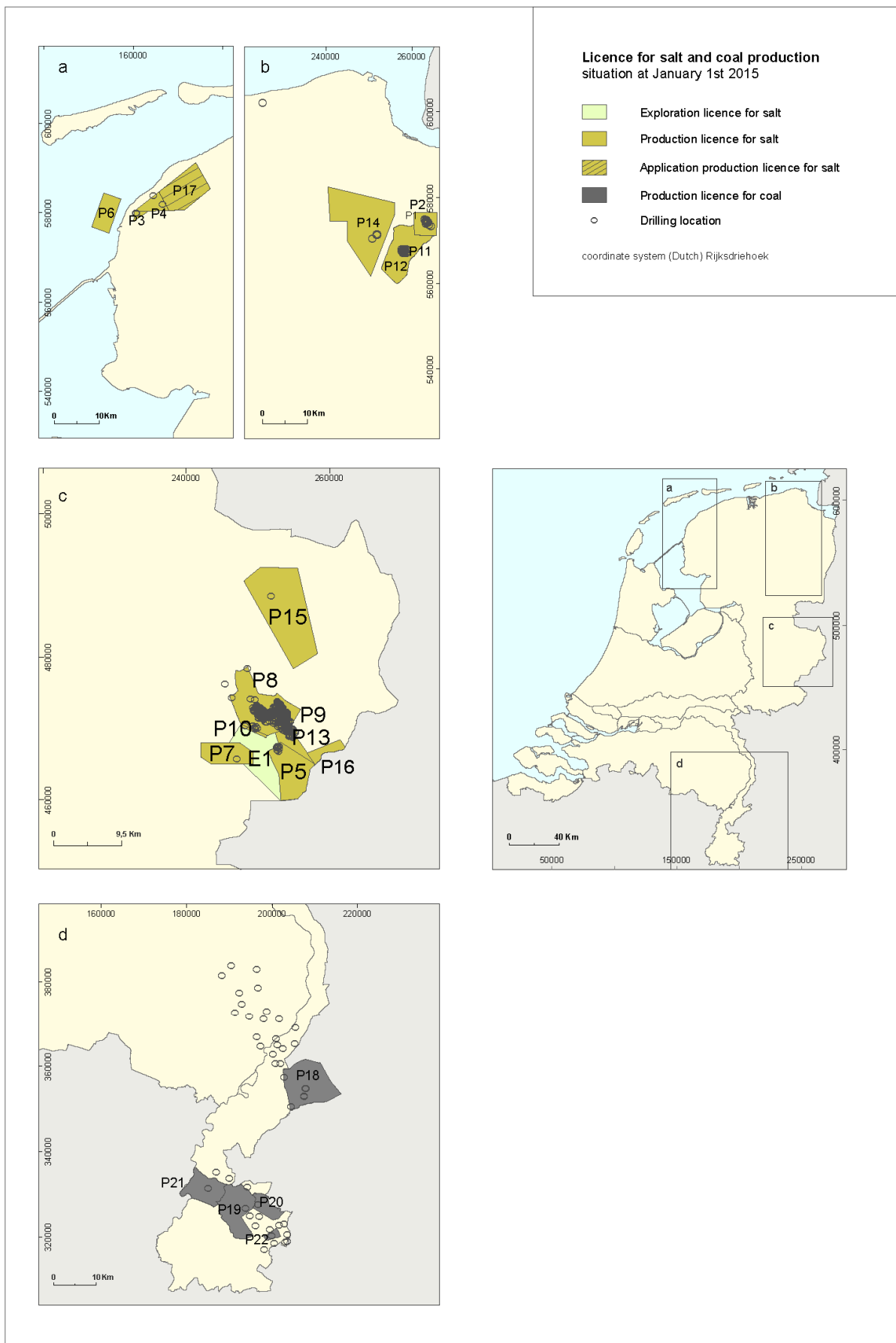
Gas and oil accumulations and pipelines as at 1 January 2015



Licences for rock salt and for coal as at 1 January 2015

Names of rock salt and coal exploration and production licences for Netherlands Territory, as indicated on the map on the next page:

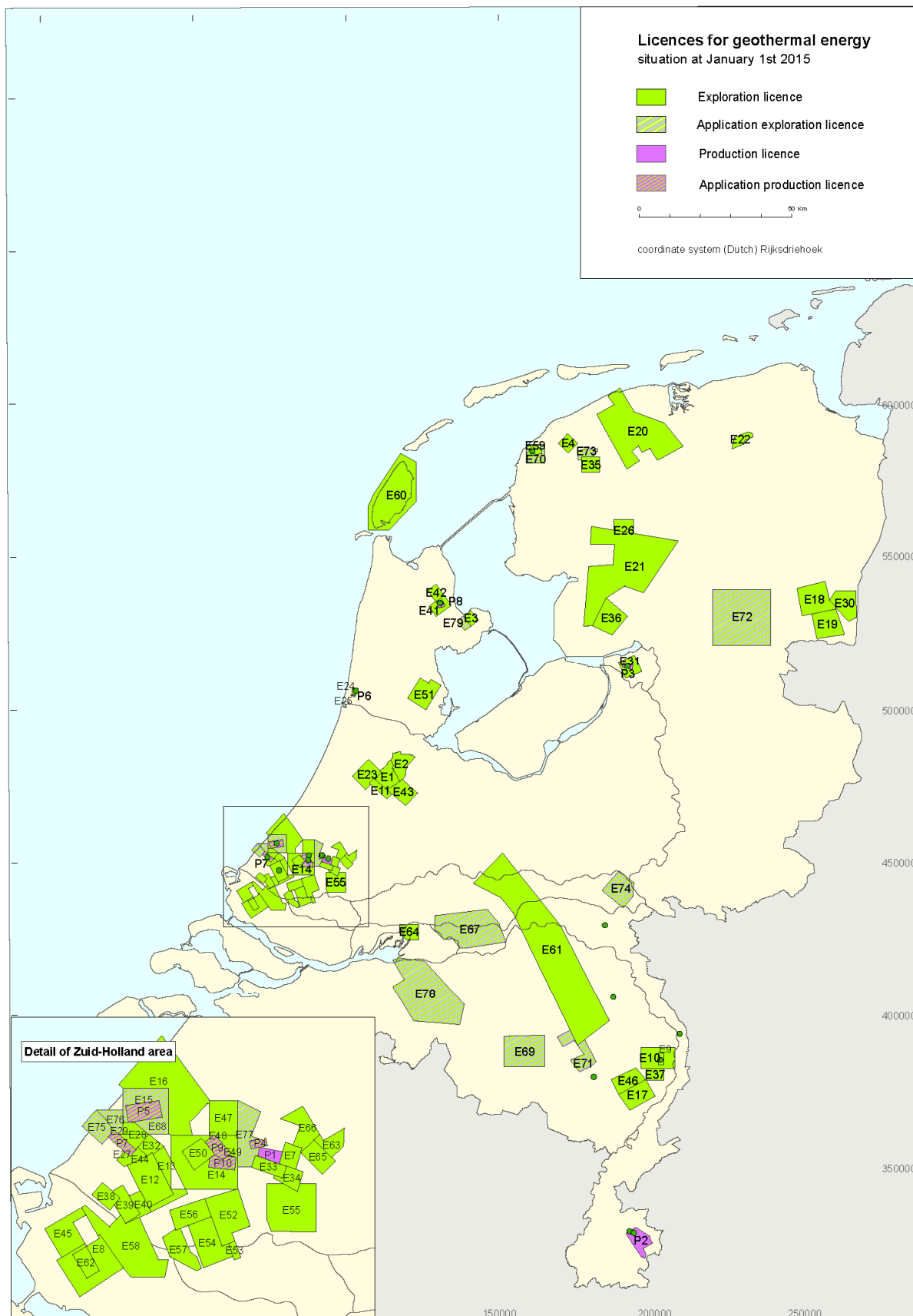
Exploration licences for rock salt	
E1	Zuidoost-Twente
Production licences for rock salt	
P1	Adolf van Nassau II
P2	Uitbreiding Adolf van Nassau II
P3	Adolf van Nassau III
P4	Uitbreiding Adolf van Nassau III
P5	Barradeel
P6	Barradeel II
P7	Buurse
P8	Havenmond
P9	Isidorushoeve
P10	Twenthe-Rijn
P11	Uitbreiding Twenthe-Rijn
P12	Twenthe-Rijn Helmerzijde
P13	Twenthe-Rijn Oude Maten
P14	Veendam
P15	Weerselo
P16	Zuidoost-Enschede
Production licence applications for rock salt	
P17	Barradeel-Oost
Production licences for coal	
P18	Staatsmijn Beatrix
P19	Staatsmijn Emma
P20	Staatsmijn Hendrik
P21	Staatsmijn Maurits
P22	Staatsmijn Wilhelmina



Geothermal energy licences as at 1 January 2015

Names of geothermal energy exploration and production licences for Netherlands Territory, as indicated on the map on the next page:

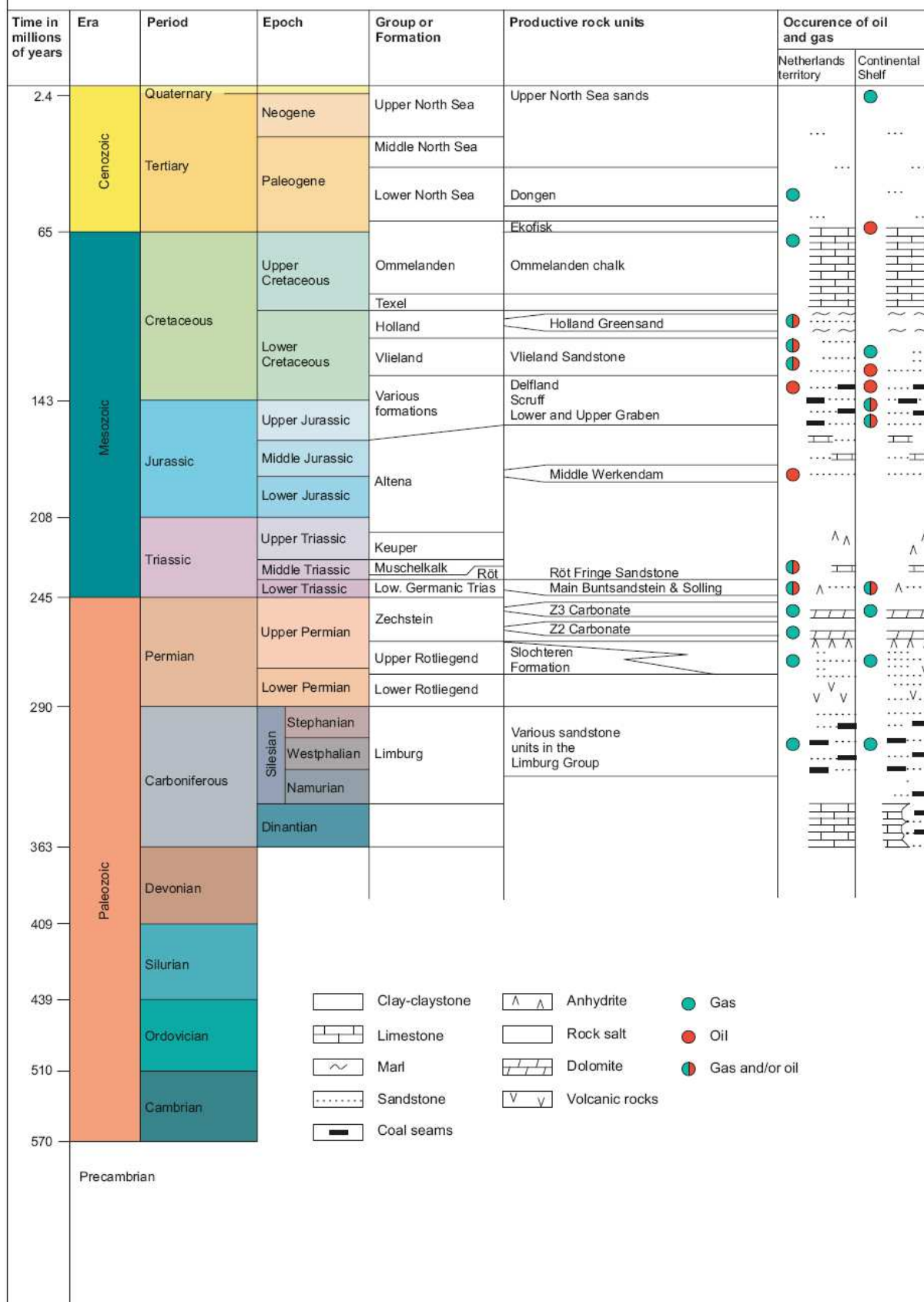
Exploration licences					
E1	Aalsmeer	E24	Heemskerk	E47	Pijnacker-Nootdorp 3
E2	Amstelveen	E25	Heemskerk 2	E48	Pijnacker-Nootdorp 4
E3	Andijk	E26	Heerenveen	E49	Pijnacker-Nootdorp 5
E4	Berlikum	E27	Honselersdijk	E50	Pijnacker-Nootdorp 6
E5	Bleiswijk	E28	Honselersdijk 2	E51	Purmerend
E6	Bleiswijk 3	E29	Honselersdijk 4	E52	Rotterdam 2
E7	Bleiswijk 4	E30	Klazienaveen	E53	Rotterdam 3
E8	Brielle 2	E31	Koekoekspolder Ila	E54	Rotterdam 4
E9	Californie I	E32	Kwintsheul	E55	Rotterdam 5
E10	Californie 2	E33	Lansingerland	E56	Rotterdam 6-Trias
E11	De Kwakel	E34	Lansingerland 4	E57	Rotterdam-Vlaardingen
E12	De Lier	E35	Leeuwarden	E58	Rozenburg
E13	De Lier 3	E36	Luttelgeest	E59	Sexbierum
E14	Delft IV	E37	Maasbree	E60	Texel
E15	Den Haag	E38	Maasdijk	E61	Utrecht-
E16	Den Haag 2	E39	Maasland		Noord-Brabant
E17	Egchel	E40	Maasland 2	E62	Vierpolders
E18	Emmen	E41	Middenmeer	E63	Waddinxveen 2
E19	Erica	E42	Middenmeer 2	E64	Werkendam
E20	Friesland-Noord	E43	Mijdrecht	E65	Zevenhuizen
E21	Friesland-Zuid	E44	Naaldwijk 2	E66	Zevenhuizen-
E22	Groningen 2	E45	Oostvoorne		Moerkapelle
E23	Haarlemmermeer	E46	Peel en Maas		
Applications for exploration licences					
E67	Bommelerwaard	E72	Hoogeveen	E77	Oostland
E68	Den Haag 3	E73	Leeuwarden 2	E78	Tilburg-
E69	Eindhoven	E74	Lingewaard		Geertruidenberg
E70	Franekeradeel	E75	Monster 2	E79	Wervershoof
E71	Helmond 2	E76	Monster 3		
Production licences					
P1	Bleiswijk	P2	Heerlen	P3	Kampen
Applications for production licences					
P4	Bleiswijk 1b	P7	Honselersdijk	P10	Pijnacker-
P5	Den Haag	P8	Middenmeer		Nootdorp 5
P6	Heemskerk	P9	Pijnacker-		
			Nootdorp 4		



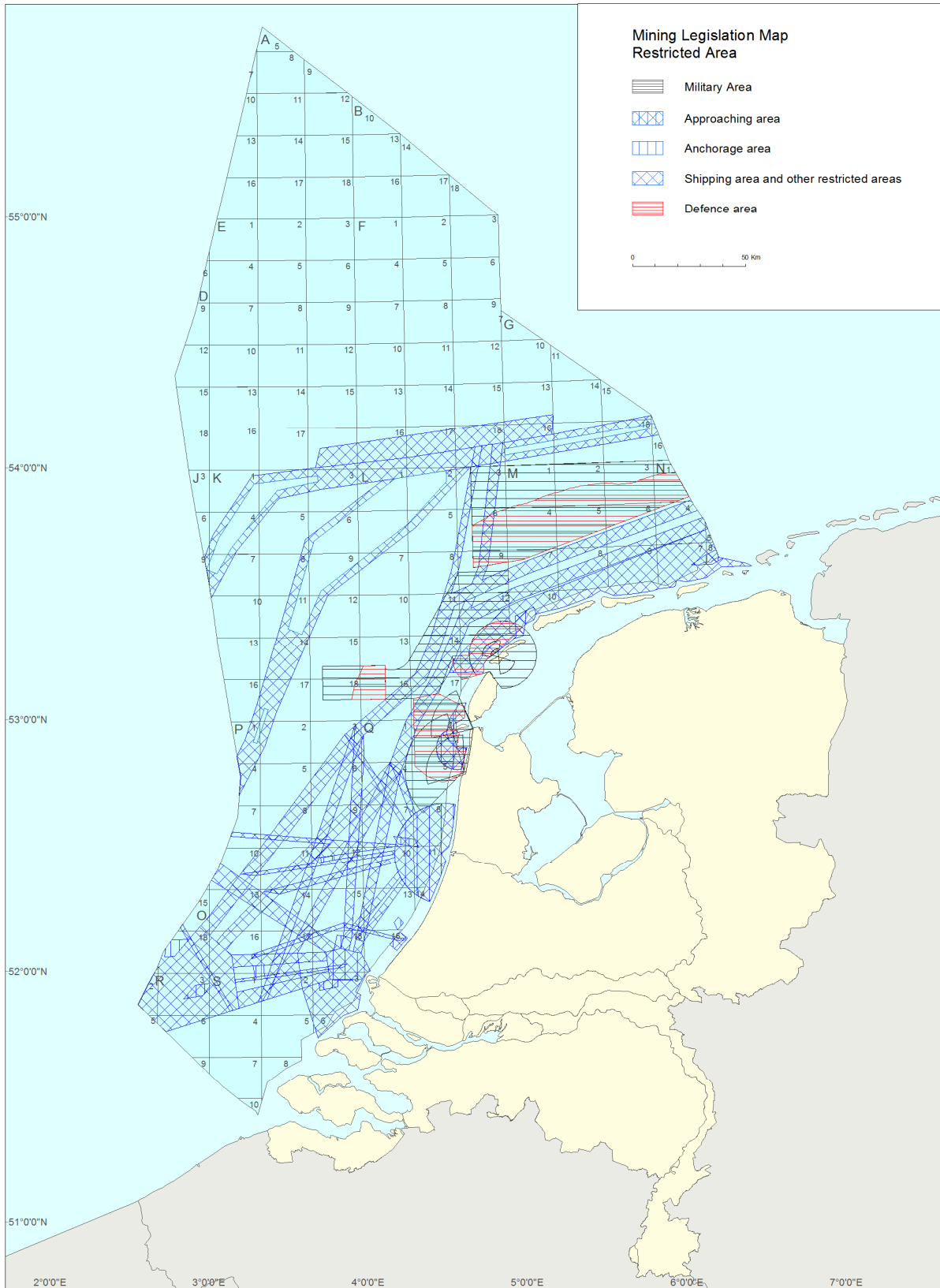
Geological time scale

Geological time scale

with composite stratigraphic column
of the Netherlands and the Continental Shelf

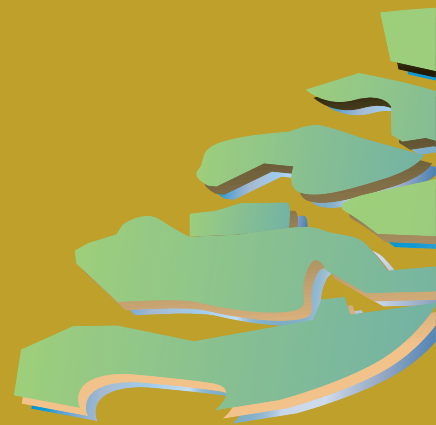


Mining legislation map





Ministry of Economic Affairs
Directorate-General Energy, Telecommunications and Competition
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