NORWEGIAN OFFSHORE DIRECTORATE

Guidelines for monthly production data to authorities (Green Book)

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Prepared by	
Norwegian Offshore Directorate	
Contact information	Contacts
E-mail: postboks@sodir.no Telephone: +47 51 87 60 00 Address: P.O. Box 600, 4003 Stavanger Visiting address: Professor Olav Hanssens vei 10, 4003 Stavanger	Rune Hult

1 Introduction

The purpose of this document is to define clear specifications for reporting of monthly production data to the Norwegian authorities.

Pursuant to section 10-4 of the Act relation to Petroleum Activities (“The Petroleum Act”), Regulations to Act relating to petroleum (“The Petroleum Regulations”) section 27, 48 and 49 and Section 34 of Regulations relating to resource management in the petroleum activities ("Resource Management Regulations"), the licensees are obliged to report to the Norwegian Offshore Directorate (NOD) monthly production data to the Diskos National Data Repository (NDR).

2 Reporting Requirements for monthly production data

2.1 Content

The licensee must report volume data for each calendar month for:

a) Production
   - per wellbore, facility and field/discovery
   - saleable products per field/discovery
   - consumption per facility

b) Injection
   - per wellbore, facility and field/discovery

c) Storage
   - volumes at end of the month

d) Sales
   - gas per point of sale
   - oil, NGL (Natural Gas Liquids) and condensate per boat

It should be noted that these data are to be reported for each field individually. This means that the production figures (bullet point a) are to represent physical deliveries from the field, which may be different from sales figures (bullet point d).

As mentioned above, the reported produced and injected quantities should be provided for individual fields (as listed in the NOD Fact Pages).

The "saleable quantity", as it occurs in the MPRML-file, is the quantity where fuel and flare are deducted. These figures should reflect the sales products (oil, gas, NGL and condensate) to that field. Some of these liquid figures will be value adjusted and allocated by means of its quality. The "allocated quantity", as it occurs in the MPRML-file, is the sum of all wells belonging to that field or facility.

These production quantities are stored in the Diskos NDR, and some of them are also published on the NOD fact pages and referenced in various publications. They are also forwarded to other governmental agencies.

Production from a discovery usually means producing petroleum for a limited time-period prior to approved PDO. This can be due to short test-production.

2.2 Responsible for reporting

The licensees in a production license are legally responsible for fulfilling the reporting obligations. Under normal circumstances, the operator in the license(s) in which the producing field is located, is to report data on behalf of the license.

NOD has accepted that some reporting of some products is done by the operator of land terminals (for example Gassco) if this works satisfactory.

Gassco as an operator of gas processing plants is reporting production and sales figures for all the fields that are transporting products to these plants.

Gas production is based on the Gassled allocation. Total dry gas out of the plant is allocated back to the fields based on how much the physical has delivered to the plant. Similarly, for the liquid amounts.

From other terminals, the terminal operator is responsible for reporting all field's saleable liquid production and sales figures.

2.3 Where to report

The monthly production report (MPRML-files) shall be sent to the Diskos NDR.

Diskos production module has a web-service for reading the XML file that is sent either directly from the companies or through Offshore Norge's solution.

2.4 Reporting deadlines

The deadline for reporting all files containing saleable figures is the 20th of the month after the month of production. For all other files the deadline is the last working day of the month after the month of production.

3 Technical specification

3.1 MPRML-format

The NOD has (in co-operation with Offshore Norge) developed an XML format based on PRODML from Energistics. The standard reporting shall be according to MPRML version 1.0.2. For more information, see Offshore Norge.

3.2 Validation of data

When a file is submitted the file will be tested against three levels of validation:

1) XSD validation against the XSD schema
2) The business rules validation (using Schematron technology).
3) FactPages validation – relevant for field, installations, wellbores, discoveries.

If one of these tests fails, and error message will be given with a unique error reference number. If it does not fail, a message will be sent to the provider with a unique reference number.

If a new oilfield, or new oil companies etc. are introduced, the NOD administrator must be contacted up-front to discuss how to tag the measured values and to update values in the validation tool.

Because the same data might be reported several times, there is a version control functionality to keep track of changes to the reported datasets. There are defined two status levels: "Preliminary" and "Final". Within each of these, a version number is used (e.g. "1.1","2.1"). Final version will always be chosen if both preliminary and final have been reported.

The system will store all the different statuses and versions together with the data in the database, but only the final (approved) version of the figures will be used by NOD for the final reporting purposes. Loading, status and version is tagged in the XML format.

3.3 Test environment

Diskos has a “Test Environment” which the NOD and the operators can use for:

- testing new applications in the oil company producing the files
- the test of a file from a new oil field
- test of modifications in the ReportingHub database
- test of new/modification of software in Diskos
- test of new/modification of software in NOD

3.4 Start reporting from a new field

Before reporting from a new field can start, the company responsible must contact the NOD 2-3 months before start-up and go through what is expected to be reported and by whom. Once agreed on content, the NOD will create necessary validation files. Companies must also submit a complete file in due time before start-up. The NOD will then test-load the file to see that data is stored correctly in the Diskos test environment.

3.5 Availability

Monthly production data is available from Diskos Public Portal and from NOD's FactPages.

Appendix A - Mapping of XML tags to production elements

1. Saleable production	
XML tag	Element
<flow>/<kind> = "production" and <qualifier> = "saleable"	<product/<kind>
	oil - net
	oil - gross
	gas - dry
	gas - rich
	gas - wet
	gas
	condensate - net
	condensate - gross
	normal butane
	ethane
	isobutane
	propane
	natural gas liquid
	naphta
	liquified petroleum gas
	mixed butane
	Liquid Natural Gas
2. Allocated production	
XML tag	Element
<flow>/<kind> = "production" and <qualifier> = "allocated"	<product/<kind>
	oil - net
	oil - gross
	gas - wet
	gas
	condensate - net
	water
3. Allocated injection	
XML tag	Element
<flow>/<kind> = "injection" and <qualifier> = "allocated"	<product/<kind>
	carbon dioxide gas
	gas
	cuttings
	water

4. Consumption	
XML tag	Element
<flow>/<kind> = "consume - flare" and <qualifier> = "allocated/measured"	<product/<kind>
	gas - dry
	gas
<flow>/<kind> = "consume - fuel" and <qualifier> = "allocated/measured"	<product/<kind>
	gas - dry
	diesel
<flow>/<kind> = "consume - venting" and <qualifier> = "allocated/measured"	<product/<kind>
	carbon dioxide gas
	gas
	gas - wet
5. Stored Quantities	
XML tag	Element
<flow>/<kind> = "inventory" and <qualifier> = "allocated"	<product/<kind>
	oil - net
	oil - gross
	crude - stabilized
	gas - dry
	condensate - net
	normal butane
	ethane
	isobutane
	propane
	naphta
	liquified petroleum gas
	mixed butane
	liquified natural gas
6. Fiscal quantities	
XML tag	Element
<flow>/<kind> = "production" and <qualifier> = "metered - fiscal"	<product/<kind>
	oil - net
	oil - gross

	crude - stabilized
	gas - dry
	gas - rich
	gas - wet
	gas
	condensate - net
	condensate - gross
	normal butane
	ethane
	isobutane
	propane
	natural gas liquid
	naphta
	liquified petroleum gas
	mixed butane
	liquified natural gas
7. Petroleum import	
XML tag	**Element**
<flow>/<kind> = "import" and <qualifier> = "derived and metered fiscal"	<product/<kind>
	oil - net
	oil - gross
	gas - dry
	gas - rich
	gas
	condensate - net
	condensate - gross
8. Wellbore production	
XML tag	**Element**
<flow>/<kind> = "production" and <qualifier> = "allocated"	<product/<kind>
	oil - net
	oil - gross
	gas
	condensate - net
	water
9. Wellbore injection	
XML tag	**Element**
<flow>/<kind> = "injection" and <qualifier> = "allocated"	**<product/<kind>**

	carbon dioxide gas
	gas
	cuttings
	water
10. Sale of liquid	
XML tag	**Element**
<flow>/<kind> = "hydrocarbon accounting" and <qualifier> = "saleable"	**<product/<kind>**
	oil - net
	oil - gross
	crude - stabilized
	gas - dry
	normal butane
	naphta
	isobutane
	condensate - net
	condensate - gross
	ethane
	propane
	natural gas liquid
	liquified petroleum gas
	mixed butane
	liquified natural gas
11. External gas sale, 11. Internal gas sale	
XML tag	**Element**
<flow>/<kind> = "sale" and <qualifier> = "allocated"	**<product/<kind>**
	gas - dry
	gas - rich
Internal gas fra felt, external salg fra terminal.	
Internal facility = field	
external facility = terminal	

Appendix B – Revision control matrix

Version 1.1	Jan 2024	New template due to name change from Norwegian Petroleum Directorate (NPD) to Norwegian Offshore Directorate (NOD). Minor adjustments in text.
Version 1.0	Dec 2019	This is the first version of the Green Book.