

5

Supple- mentary Information Oil and Gas Business

Supplementary Information on the Oil and Gas Business (Unaudited)

The following provides supplementary information on the Exploration & Production business of the discontinued oil and gas business. In the absence of detailed disclosure rules in this area under the International Financial Reporting Standards (IFRS), the presentation is based on the FASB standard Extractive Activities – Oil and Gas (Topic 932), which is a further development of SFAS 69. In the following sections, the determination of the amounts complies with the metrics set out by IFRS that underlie the BASF Group Consolidated Financial Statements: Operating income from oil and gas-producing activities; Period expenditures for acquisition, exploration and development of oil and gas deposits; Capitalized costs relating to oil and gas producing activities; and Capitalized exploration drilling: suspended well costs. Despite its presentation as a discontinued operation, the main accounting and consolidation methods for the oil and gas business are unchanged compared with the previous year. The definition of companies accounted for using the equity method also follows the approach of the Consolidated Financial Statements. The cash flow from the Yuzhno Russkoye project is shown in the fully consolidated company responsible for marketing the gas.

According to Topic 932, the current economic conditions were considered in the determination of oil and gas reserves as well as the standardized calculation of discounted net cash flows. The prices used are valued at the average price calculated from the prices on the first day of the month for the past 12 months. Expected proven reserves and the resulting future net cash flows can vary significantly from the current estimates. Furthermore, the realized prices and costs and the actual cash flows resulting therefrom may differ from the estimate in amount and distribution over time. Therefore, the

values presented should not be interpreted as a prediction of future cash flows, nor in their sum as the current value of the company.

Furthermore, different prices, costs and volume estimates are used for operational decisions as well as for the preparation of the Consolidated Financial Statements. Therefore, the reserves and net cash flows shown are not comparable with statements and values in the Consolidated Financial Statements.

According to the requirements in Topic 932, regions with more than a 15% share of total reserves must be shown separately. Therefore, the regions in the supplementary information differ from those presented in the Consolidated Financial Statements. Aside from the countries Germany and Russia, this includes the regions: Rest of Europe; North Africa/Middle East; as well as South America.

The regions include the following countries with operating activities:

Region	Exploration & Production	Exploration
Rest of Europe	United Kingdom, the Netherlands, Norway, Denmark	
North Africa/Middle East	Libya	Abu Dhabi
South America	Argentina	Brazil

Oil and gas reserves

Proven oil and gas reserves are the volumes of crude oil, natural gas and condensate that, according to the geological, engineering and economic conditions prevailing at the balance sheet date, can be produced in future years. Accordingly, reserve estimates based on this data could be materially different from the volumes that are ultimately recovered. To reduce uncertainties, BASF works together with independent, internationally recognized reserve auditors to perform recurring reserves audits of its major crude oil and natural gas fields.

The tables on the following pages show the company's estimated proven and proven developed reserves as of December 31, 2017, and 2018, as well as changes attributable to production or other factors.

Oil 2018

Consolidated and equity-accounted companies	Germany	Rest of Europe	Russia	North Africa/ Middle East	South America	Total Group	Of which at equity
Proven developed and undeveloped oil reserves as of January 1, in million barrels (MMbbl)	34	136	218	82	8	478	82
Revisions and other changes	6	(43)	10	3	5	(19)	(3)
Extensions and discoveries	–	10	–	–	–	10	–
Purchase/sale of reserves	–	–	63	–	–	63	63
Production	6	21	15	10	2	54	10
Proven reserves as of December 31	34	82	276	75	11	478	132
of which equity-accounted companies	–	1	69	62	–	132	132
Proven developed reserves as of December 31	29	58	161	68	10	326	61
of which equity-accounted companies	–	–	6	55	–	61	61

Gas 2018

Consolidated and equity-accounted companies	Germany	Rest of Europe	Russia	North Africa/ Middle East	South America	Total Group	Of which at equity
Developed and undeveloped gas reserves as of January 1, in million barrels of oil equivalent (MMBOE)	19	124	907	8	140	1,198	466
Revisions and other changes	1	–	171	(1)	8	179	138
Extensions and discoveries	–	8	–	–	–	8	3
Purchase/sale of reserves	–	–	125	–	–	125	125
Production	3	13	77	–	24	117	57
Proven reserves as of December 31	17	119	1,126	7	124	1,393	675
of which equity-accounted companies	–	7	661	7	–	675	675
Proven developed reserves as of December 31	17	103	536	6	104	766	221
of which equity-accounted companies	–	5	210	6	–	221	221

Oil 2017

Consolidated and equity-accounted companies	Germany	Rest of Europe	Russia	North Africa/ Middle East	South America	Total Group	Of which at equity
Proven developed and undeveloped oil reserves as of January 1, in million barrels (MMbbl)	36	127	184	86	7	440	89
Revisions and other changes	4	29	49	3	3	88	1
Extensions and discoveries	-	-	-	-	-	-	-
Purchase/sale of reserves	-	-	-	-	-	-	-
Production	6	20	15	7	2	50	8
Proven reserves as of December 31	34	136	218	82	8	478	82
of which equity-accounted companies	-	2	4	76	-	82	82
Proven developed reserves as of December 31	33	111	166	72	8	390	72
of which equity-accounted companies	-	-	4	68	-	72	72

Gas 2017

Consolidated and equity-accounted companies	Germany	Rest of Europe	Russia	North Africa/ Middle East	South America	Total Group	Of which at equity
Developed and undeveloped gas reserves as of January 1, in million barrels of oil equivalent (MMBOE)	23	111	885	9	154	1,182	520
Revisions and other changes	(1)	21	97	(1)	10	126	3
Extensions and discoveries	-	4	-	-	-	4	-
Purchase/sale of reserves	-	-	-	-	-	-	-
Production	3	12	75	-	24	114	57
Proven reserves as of December 31	19	124	907	8	140	1,198	466
of which equity-accounted companies	-	7	451	8	-	466	466
Proven developed reserves as of December 31	19	55	622	8	114	818	305
of which equity-accounted companies	-	6	291	8	-	305	305

Operating income from oil and gas-producing activities

Operating income represents only those revenues and expenses directly associated with oil, condensate and gas production. This partly results in significant differences to the figures shown for the discontinued oil and gas business. Significant deviations exist in sales revenues that do not include sales from merchandise and services as well as the financing and corporate overhead costs not included there. The depreciation and amortization that was suspended in BASF's Consolidated Financial Statements from the date of classification as a discontinued operation is also taken into account. Income taxes were computed using currently applicable local income tax rates.

2018

Million €

Fully consolidated companies	Germany	Rest of Europe	Russia	North Africa/ Middle East	South America	Total Group
Sales crude oil (including condensate and LPG)	289	1,025	121	89	98	1,622
Sales natural gas	71	384	391	–	480	1,326
Local duties (royalties, export, etc.)	54	–	–	–	89	143
Net revenue (less duties)	306	1,409	512	89	489	2,805
Production costs	113	256	30	8	118	525
Exploration expenses and technology	7	58	7	7	50	129
Depreciation, amortization and impairments	91	687	18	4	166	966
Other	4	(9)	17	8	(24)	(4)
Operating income before taxes	91	417	440	62	179	1,189
Income taxes	26	266	95	52	64	503
Operating income after taxes	65	151	345	10	115	686
Net income of equity-accounted companies	–	(7)	32	–	–	25

2017

Million €

Fully consolidated companies	Germany	Rest of Europe	Russia	North Africa/ Middle East	South America	Total Group
Sales crude oil (including condensate and LPG)	249	766	116	50	80	1,261
Sales natural gas	67	298	263	–	438	1,066
Local duties (royalties, export, etc.)	47	–	–	–	79	126
Net revenue (less duties)	269	1,064	379	50	439	2,201
Production costs	118	231	33	10	158	550
Exploration expenses and technology	6	82	15	22	24	149
Depreciation, amortization and impairments	101	587	20	10	154	872
Other	(1)	16	25	8	(163)	(115)
Operating income before taxes	45	148	286	–	266	745
Income taxes	13	47	64	18	94	236
Operating income after taxes	32	101	222	(18)	172	509
Net income of equity-accounted companies	–	79	49	4	–	132

Period expenditures for acquisition, exploration and development of oil and gas deposits

Period expenditures include all amounts incurred in connection with the acquisition, exploration or development of oil and gas deposits, regardless of whether these were capitalized or expensed.

2018

Million €

Fully consolidated companies	Germany	Rest of Europe	Russia	North Africa/ Middle East	South America	Total Group
Acquisition expenditures	–	–	–	134	1	135
For proven reserves	–	–	–	–	1	1
For unproven reserves	–	–	–	134	–	134
Exploration and technology expenditures	11	83	9	10	78	191
Development expenditures	120	490	64	5	141	820
Total expenditures	131	573	73	149	220	1,146
Total expenditures for equity-accounted companies	–	42	68	16	–	126

2017

Million €

Fully consolidated companies	Germany	Rest of Europe	Russia	North Africa/ Middle East	South America	Total Group
Acquisition expenditures	–	–	–	–	–	–
For proven reserves	–	–	–	–	–	–
For unproven reserves	–	–	–	–	–	–
Exploration and technology expenditures	6	49	12	33	31	131
Development expenditures	57	645	75	3	134	914
Total expenditures	63	694	87	36	165	1,045
Total expenditures for equity-accounted companies	–	21	18	(5)	–	34

Capitalized costs relating to oil and gas producing activities

Capitalized costs represent total expenditures on proven and unproven oil and gas deposits including the related accumulated depreciation and amortization.

2018

Million €

Fully consolidated companies	Germany	Rest of Europe	Russia	North Africa/ Middle East	South America	Total Group
Proven oil and gas reserves	1,050	6,783	1,370	151	1,892	11,246
Unproven oil and gas reserves	55	211	–	269	358	893
Equipment and miscellaneous	943	4	–	–	–	947
Total gross assets	2,048	6,998	1,370	420	2,250	13,086
Accumulated depreciation, amortization and impairments	(1,505)	(3,313)	(388)	(209)	(1,363)	(6,778)
Total net assets	543	3,685	982	211	887	6,308
Investments in equity-accounted companies	–	297	1,144	97	–	1,538

2017

Million €

Fully consolidated companies	Germany	Rest of Europe	Russia	North Africa/ Middle East	South America	Total Group
Proven oil and gas reserves	1,029	5,866	1,530	140	1,757	10,322
Unproven oil and gas reserves	34	301	–	132	412	879
Equipment and miscellaneous	888	6	–	–	–	894
Total gross assets	1,951	6,173	1,530	272	2,169	12,095
Accumulated depreciation, amortization and impairments	(1,436)	(2,487)	(391)	(195)	(1,193)	(5,702)
Total net assets	515	3,686	1,139	77	976	6,393
Investments in equity-accounted companies	–	307	1,130	97	–	1,534

Capitalized exploration drilling: suspended well costs

Exploratory drilling costs are capitalized until the drilling of the well is complete. If hydrocarbon resources are found whose commercial development is possible, the costs continue to be capitalized as construction in progress, subject to further appraisal activity that may include the drilling of further wells. Management evaluates all such capitalized costs at least once a year from both a technical and economic perspective to confirm the continued intent to develop or otherwise extract value from the discovery. If this is no longer the case, the relevant costs are written off. If proven reserves of oil or natural gas are determined and development is sanctioned, however, the relevant expenses are transferred within property, plant and equipment to machinery and technical equipment. Impairments for unsuccessful exploration wells are recognized in exploration expenses.

The following table indicates the changes in capitalized exploration drilling.

The last row shows the year-end value for equity-accounted companies.

Capitalized exploration drilling

Million €

Fully consolidated companies	2018	2017
As of January 1	303	411
Additions to exploration drilling of the year	46	32
Capitalized exploration drilling charged to expense	(25)	(34)
Reclassification of successful exploration drilling	(20)	(75)
Translation effect	7	(31)
As of December 31	311	303
Equity-accounted companies as of December 31	123	164

The following table provides an overview of the capitalization period, amounts capitalized for exploration drilling, and the number of suspended exploration wells.

Capitalized exploration drilling

Million €

Fully consolidated companies	2018	2017
Wells for which drilling is not complete	10	4
Wells capitalized less than one year	32	35
Wells capitalized more than one year	269	264
Total	311	303
Number of exploration wells in construction in progress	29	31
Number of exploration wells in construction in progress at equity-accounted companies as of December 31	20	23

Standardized measure of discounted future net cash flows relating to proven oil and gas reserves

The following information was determined based on the provisions of the standard Extractive Activities – Oil and Gas (Topic 932) published by FASB. Based on this, a standardized measure of discounted future net cash flows with the relevant revenues, costs and income tax rates is to be made. The proven reserves are valued at the average price calculated from the prices on the first day of the month for the past business year. The values thus determined are discounted at a 10% annual discount rate.

Standardized measure of discounted future net cash flows 2018

Million €

Consolidated and equity-accounted companies	Germany	Rest of Europe	Russia	North Africa/ Middle East	South America	Total Group	Of which at equity
Future revenues	1,818	8,243	10,197	4,599	2,562	27,419	5,890
Future production/development costs	1,540	4,683	3,278	921	1,055	11,477	2,109
Future income taxes	28	1,823	1,459	3,285	311	6,906	3,014
Future net cash flows, not discounted	250	1,737	5,460	393	1,196	9,036	767
10% discount rate	(36)	297	2,601	140	282	3,284	587
Standardized measure of discounted future net cash flows	286	1,440	2,859	253	914	5,752	180
of which equity-accounted companies	-	1	65	114	-	180	180

Standardized measure of discounted future net cash flows 2017

Million €

Consolidated and equity-accounted companies	Germany	Rest of Europe	Russia	North Africa/ Middle East	South America	Total Group	Of which at equity
Future revenues	1,538	9,543	6,556	3,476	3,362	24,475	3,561
Future production/development costs	1,486	4,767	1,786	1,173	1,562	10,774	1,426
Future income taxes	(22)	2,589	966	2,089	491	6,113	2,002
Future net cash flows, not discounted	74	2,187	3,804	214	1,309	7,588	133
10% discount rate	(96)	379	1,544	38	285	2,150	(1)
Standardized measure of discounted future net cash flows	170	1,808	2,260	176	1,024	5,438	134
of which equity-accounted companies	-	(27)	26	135	-	134	134

Summary of changes in standardized measure of discounted future net cash flows 2018

Million €

Consolidated and equity-accounted companies	Germany	Rest of Europe	Russia	North Africa/ Middle East	South America	Total Group	Of which at equity
As of January 1	170	1,808	2,260	176	1,024	5,438	134
Sales of oil and gas produced, net of production costs in the current period	(192)	(1,211)	(590)	(159)	(374)	(2,526)	(110)
Net changes in prices and production costs at balance sheet date	239	846	775	811	(123)	2,548	619
Net changes from extensions, discoveries and improved recovery, less related costs	–	12	–	–	–	12	21
Revisions of previous reserves estimates	62	(694)	191	122	(2)	(321)	22
Investments in the period	59	525	94	13	140	831	48
Changes in estimated investments in future periods	(30)	(439)	(24)	7	30	(456)	(29)
Purchase/sale of reserves	–	–	34	–	–	34	34
Net change in income taxes	(34)	254	(146)	(871)	97	(700)	(703)
Accretion of discount	12	340	265	154	122	893	144
Other	–	(1)	–	–	–	(1)	–
Standardized measure of discounted future net cash flows as of December 31	286	1,440	2,859	253	914	5,752	180
of which equity-accounted companies	–	1	65	114	–	180	180

Summary of changes in standardized measure of discounted future net cash flows 2017

Million €

Consolidated and equity-accounted companies	Germany	Rest of Europe	Russia	North Africa/ Middle East	South America	Total Group	Of which at equity
As of January 1	68	1,020	2,131	104	1,147	4,470	82
Sales of oil and gas produced, net of production costs in the current period	(151)	(868)	(488)	(104)	(282)	(1,893)	(94)
Net changes in prices and production costs at balance sheet date	242	1,410	474	205	(74)	2,257	143
Net changes from extensions, discoveries and improved recovery, less related costs	–	–	–	–	–	–	–
Revisions of previous reserves estimates	46	973	248	90	105	1,462	72
Investments in the period	67	652	79	–	134	932	7
Changes in estimated investments in future periods	(41)	286	(278)	(27)	(187)	(247)	(44)
Purchase/sale of reserves	–	–	–	–	–	–	–
Net change in income taxes	(61)	(1,779)	(145)	(227)	41	(2,171)	(163)
Accretion of discount	–	115	239	135	140	629	131
Other	–	(1)	–	–	–	(1)	–
Standardized measure of discounted future net cash flows as of December 31	170	1,808	2,260	176	1,024	5,438	134
of which equity-accounted companies	–	(27)	26	135	–	134	134