

15. Other intangible assets

PLN '000	Dec 31 2014	Dec 31 2013 (restated)	Jan 1 2013 (restated)
Intangible assets related to exploration for, development and production of crude oil and natural gas resources			
Assets related to exploration for and evaluation of crude oil and natural gas resources	196,676	185,676	15,356
Crude oil and natural gas development and production licences	208,287	333,037	382,127
Total	404,963	518,713	397,483
Other intangible assets			
Licences, patents and trademarks	101,251	93,607	91,286
Other	47,473	46,477	7,617
Total	148,724	140,084	98,903
Total	553,687	658,797	496,386

15.1 Intangible assets related to exploration for and evaluation of, as well as development and production of, crude oil and natural gas resources

PLN '000	Assets related to exploration for and evaluation of crude oil and natural gas resources				Crude oil and natural gas development and production licences			
	Poland	Norway	Lithuania	Total	Poland	Lithuania	Total	Total
Gross carrying amount Jan 1 2014 (restated)	9,608	297,589	11,645	318,842	6,459	477,207	483,666	802,508
Purchase	5,119	27,278	39	32,436	3,183	-	3,183	35,619
Exchange differences on translating foreign operations	-	(14,801)	293	(14,508)	-	13,260	13,260	(1,248)
Reclassification of oil and gas exploration and evaluation assets to production assets(1)	-	-	(1,764) ⁽²⁾	(1,764)	-	1,764 ⁽²⁾	1,764	-
Liquidation	(1,172) ⁽³⁾	-	-	(1,172)	-	-	-	(1,172)
Other	(543)	4,740	-	4,197	6,079	-	6,079	10,276
Gross carrying amount Dec 31 2014	13,012	314,806	10,213	338,031	15,721	492,231	507,952	845,983
Accumulated amortisation Jan 1 2014 (restated)	7,215	-	-	7,215	3,566	124,828	128,394	135,609
Amortisation	1,777	-	-	1,777	164	40,517	40,681	42,458
Exchange differences on translating foreign operations	-	-	-	-	-	4,166	4,166	4,166
Liquidation	(1,172) ⁽³⁾	-	-	(1,172)	-	-	-	(1,172)
Other	(543)	-	-	(543)	1,218	-	1,218	675
Accumulated amortisation	7,277	-	-	7,277	4,948	169,511	174,459	181,736

Dec 31 2014

Impairment losses Jan 1 2014 (restated)	-	125,951	-	125,951	-	22,235	22,235	148,186
<i>Recognised</i>	-	14,439	-	14,439	-	100,604	100,604	115,043
<i>Exchange differences on translating foreign operations</i>	-	(6,312)	-	(6,312)	-	2,367	2,367	(3,945)
<i>Used/Reversed</i>	-	-	-	-	-	-	-	-
Impairment losses Dec 31 2014	-	134,078	-	134,078	-	125,206	125,206	259,284
Net carrying amount Dec 31 2014	5,735	180,728	10,213	196,676	10,773	197,514	208,287	404,963

(1) Exploration and evaluation assets relating to mineral resources with demonstrable technical feasibility and commercial viability of extraction.

(2) Seismic surveys of the Ablinga field.

(3) Liquidation of the Sambia W licence and mining usage rights.

PLN '000	Assets related to exploration for and evaluation of crude oil and natural gas resources				Crude oil and natural gas development and production licences			Total
	Poland	Norway	Lithuania	Total	Poland	Lithuania	Total	
Gross carrying amount Jan 1 2013 (restated)	8,580	150,725	-	159,305	6,786	470,412	477,198	636,503
<i>Purchase</i>	2,458	13,797	11,824	28,079	-	-	-	28,079
<i>Acquisition of Heimdal assets ⁽¹⁾</i>	-	162,634	-	162,634	-	-	-	162,634
<i>Exchange differences on translating foreign operations</i>	-	(29,567)	(179)	(29,746)	-	6,795	6,795	(22,951)
<i>Contribution of B-4 and B-6 field development assets to Baltic Gas Sp. z o.o. i wspólnicy sp.k. ⁽²⁾</i>	(1,430)	-	-	(1,430)	(327)	-	(327)	(1,757)
Gross carrying amount Dec 31 2013 (restated)	9,608	297,589	11,645	318,842	6,459	477,207	483,666	802,508
Accumulated amortisation Jan 1 2013 (restated)	7,121	-	-	7,121	3,484	77,379	80,863	87,984
<i>Amortisation</i>	1,411	-	-	1,411	169	47,046	47,215	48,626
<i>Exchange differences on translating foreign operations</i>	-	-	-	-	-	403	403	403
<i>Contribution of B-4 and B-6 field development assets to Baltic Gas Sp. z o.o. i wspólnicy sp.k. ⁽²⁾</i>	(1,317)	-	-	(1,317)	(87)	-	(87)	(1,404)
Accumulated amortisation Dec 31 2013 (restated)	7,215	-	-	7,215	3,566	124,828	128,394	135,609
Impairment losses Jan 1 2013	-	136,828	-	136,828	-	14,208	14,208	151,036
<i>Recognised</i>	-	4,744	-	4,744	-	7,943	7,943	12,687
<i>Exchange differences on translating foreign operations</i>	-	(15,079)	-	(15,079)	-	84	84	(14,995)
<i>Used/Reversed</i>	-	(542)	-	(542)	-	-	-	(542)
Impairment losses Dec 31 2013 (restated)	-	125,951	-	125,951	-	22,235	22,235	148,186
Net carrying amount Dec 31 2013 (restated)	2,393	171,638	11,645	185,676	2,893	330,144	333,037	518,713

(1) Acquisition of the Heimdal area assets in Norway (see Note 13 to the consolidated financial statements for 2013).

(2) Joint venture operated jointly with CalEnergy Resources Poland Sp. z o.o., related to development of the B-4 and B-6 gas fields (see Note 2 to the consolidated financial statements for 2013).

15.1.1 Intangible assets related to exploration for and evaluation of crude oil and natural gas resources

The Group's expenditure on intangible assets related to exploration for and evaluation of mineral resources amounted to PLN 32,436 thousand in 2014 (2013: PLN 190,713 thousand). Cash flows associated with that expenditure amounted to PLN 48,574 thousand (2013: PLN 169,480 thousand), whereas the amount of outstanding investment commitments was PLN 5,095 thousand as at December 31st 2014 (December 31st 2013: PLN 21,233 thousand).

Intangible exploration and evaluation assets are carried until the technical feasibility and commercial viability of extracting the mineral resources is demonstrated.

Poland

In 2014, the Group held eight hydrocarbon exploration or exploration and appraisal licences covering areas in the Baltic Sea. These included the Gotlandia, Rozewie, Leba, Sambia E, Sambia W, Gaz Południe, Słupsk E and Słupsk W licence areas.

In 2014, the Group incurred expenditure of PLN 5,119 thousand on extension of licences and licence-related mining usage rights (2013: PLN 2,458 thousand).

As at December 31st 2014, the Sambia W licence and mining usage rights had expired. The value of liquidated intangible assets related to this licence area was PLN 1,172 thousand.

Norway

Heimdal exploration licences

As at December 31st 2014, the Group tested for impairment its Heimdal area assets acquired in December 2013 by LOTOS E&P Norge (LOTOS Petrobaltic Group), including interests in the newly discovered hydrocarbon accumulations awaiting development: Frigg Gamma Delta (10%), Fulla (50%) and Rind (7.87%).

Based on the results of the impairment test performed as at December 31st 2014, the Group determined the recoverable amount of these assets as their value in use, measured using the discounted future cash flows method. The computation of the recoverable amount was based on assumptions consistent with those used to determine the recoverable amount of the property, plant and equipment associated with production of hydrocarbons from the Heimdal assets, as described in **Note 13.1.3**.

As a result of the tests, as at December 31st 2014 the Group recognised an impairment loss on intangible assets related to the Rind field, in an aggregate amount of PLN 13,823 thousand (NOK 27,640 thousand).

In 2014, the Group's expenditure on hydrocarbon exploration and evaluation in the Heimdal licence area totalled PLN 21,518 thousand, and related mainly to the Trell licence (PL 102FG). In 2013, the Group's expenditure of PLN 162,634 thousand was attributable chiefly to acquisition of the Heimdal assets (see Note 13 to the consolidated financial statements for 2013).

Other exploration licences in Norway

In 2014 and 2013, the Group recognised an impairment loss on capitalised exploration expenses related to surveys performed within the PL 498 and PL 497 licence areas in the North Sea. In 2014, the impairment loss on the licences was PLN 616 thousand (NOK 1,231 thousand) (see **Note 9.4**), while in 2013 it was PLN 4,744 thousand (NOK 8,856 thousand) (see **Note 9.3**).

Expenditure incurred by the Group in 2014 on exploration for and evaluation of hydrocarbons in other Norwegian licence areas was PLN 5,760 thousand (2013: PLN 13,797 thousand).

15.1.2 Crude oil and natural gas development and production licences

Poland

Under intangible assets related to development and production of hydrocarbons, the Group discloses licences for the B-3 and B-8 fields located in the Baltic Sea.

Expenditure incurred on these assets in 2014 amounted to PLN 3,183 thousand and included the cost of acquiring the mining usage right to the B-3 field.

Lithuania

The Group holds interests in 17 onshore oil fields in Lithuania, which are located within seven onshore licence areas (Plunge, Klaipėda, Girkalai, Kretinga, Nausodis, Genciu and Gargzdai). 13 of these fields are on production.

The production operations are carried out by companies of the AB LOTOS Geonafta Group, comprising AB LOTOS Geonafta, UAB Genciu Nafta and UAB Manifoldas. The Group also holds interests in UAB Minijos Nafta, a joint venture.

Key assets held by those companies include the following fields: Genciai (UAB Genciu Nafta), Girkalai, Kretinga, Nausodis (AB LOTOS Geonafta), Ablinga, Liziai, Siaures Vezaiciai, Auksoras (UAB Manifoldas), Agluonenai, Degliai, Pietu Siupariai, Pociai, Sakuciai, Siupariai, Uoksai, and Vilkyciai (UAB Minijos Nafta). In the Siaures Vezaiciai, Auksoras and Uoksai fields, production has been suspended.

As at December 31st 2014, production licences held by companies of the AB LOTOS Geonafta Group (AB LOTOS Geonafta (Girkalai, Kretinga and Nausodis fields), UAB Manifoldas (Vėžaičiai, Ližiai and Ablinga fields)) were tested for impairment.

The Group determined the recoverable amount of the tested assets as their value in use measured using the discounted future cash flows method.

Key assumptions underlying computation of the recoverable amount of the tested intangible assets in Lithuania as at December 31st 2014 were

as follows:

- the cash flow projection period was assumed to equal the asset's planned life,
- the discount rate was assumed to equal the weighted average cost, at 10%,
- production volumes were assumed to be in line with a competent person report prepared by Miller & Lents based on available current geological information,
- capital expenditure was assumed to match the projected production volumes.

The following crude oil price assumptions (USD/bbl) were adopted for the purposes of the estimates:

- 2015–2018 – prices in line with the price assumptions for the available market scenario,
- 2019 and beyond – prices remaining stable on par with the 2018 level, adjusted for inflation.

Due to significant market volatility, in particular with respect to crude oil prices, the adopted assumptions might be subject to justifiable changes, and such changes may in the future cause a change on the carrying amounts of assets held by the AB LOTOS Geonafta Group. To determine the effect of key factors on the test results, the Group carried out an analysis of sensitivity to a -15%/+15% change of crude oil price, -15%/+15% change in production volumes, and -15%/+15% change in the USD/LTL exchange rate.

As a result of the impairment tests, as at December 31st 2014 an impairment loss totalling PLN 100,604 thousand (LTL 82,918 thousand) was recognised on production licences covering the Girkaliai, Kretinga, Vėžaičiai, Ližiai, and Ablinga fields; another impairment loss, of PLN 2,708 thousand (LTL 2,232 thousand), was recognised on the property, plant and equipment comprising production infrastructure of the Ablinga field; see **Note 13.1.3** and **Note 9.4**.

As at December 31st 2013, production licences held by companies of the AB LOTOS Geonafta Group (AB LOTOS Geonafta (Girkaliai, Kretinga and Nausodis fields), UAB Genciu Nafta (Genciu field)) were tested for impairment. The Group determined the recoverable amount of the tested assets as their value in use measured using the discounted future cash flows method.

The production assets of UAB Manifoldas (Klaipėda, Troba fields) were not tested for impairment in 2013, as the key assumptions relating to the allocation of cost for AB LOTOS Geonafta's acquisition of controlling interest in UAB Manifoldas as at December 31st 2014 were not materially different from the estimates made in connection with the final accounting for the transaction made in 2013.

Key assumptions underlying computation of the recoverable amount of the tested intangible assets in Lithuania as at December 31st 2013 were as follows:

- the cash flow projection period was assumed to equal the asset's planned life,
- the discount rate was assumed to equal the weighted average cost, at 11%,
- production volumes were assumed to be in line with a competent person report prepared by Miller & Lents based on available current geological information,
- capital expenditure was assumed to match the projected production volumes.

The following crude oil price assumptions (USD/bbl) were adopted for the purposes of the estimates:

- 2014–2016 – in line with the price assumptions adopted for the purposes of calculating budgets of the LOTOS Group companies, taking into account the average annual price in 2011–2013,
- 2017 and beyond – crude prices reflect the assumptions made for the purposes of acquisition of an interest in Heimdal assets by LOTOS E&P Norge AS (for more information on the acquisition of Heimdal assets, see **Note 13** to the consolidated financial statements for 2013).

Due to significant market volatility, in particular with respect to crude oil prices, to determine the effect of key factors on the results of the impairment test performed in 2013, the Group carried out an analysis of their sensitivity to a -15%/+15% change of crude oil price, -15%/+15% change in production volumes, and -15%/+15% change in the USD/LTL exchange rate. As at December 31st 2013, following the performance of impairment tests a PLN 7,943 thousand (LTL 6,513 thousand) impairment loss was recognised on assets related to the Girkaliai field (see **Note 9.3**).

15.2 Other intangible assets

PLN '000	Patents, trademarks and licences	Other	Total
Gross carrying amount Jan 1 2014 (restated)	175,733	67,118	242,851
<i>Purchase</i>	-	2,440	2,440
<i>Transfer from property, plant and equipment under construction</i>	17,048	4,742	21,790
<i>Exchange differences on translating foreign operations</i>	-	(837)	(837)
<i>Reclassification to non-current assets (or disposal groups) held for sale ⁽¹⁾</i>	(114)	-	(114)
<i>Sale</i>	-	4	4
<i>Liquidation</i>	(40)	(38)	(78)
<i>Other</i>	(150)	(60)	(210)
Gross carrying amount Dec 31 2014	192,477	73,369	265,846

Accumulated amortisation Jan 1 2014 (restated)	82,123	20,615	102,738
<i>Amortisation</i>	9,222	5,505	14,727
<i>Exchange differences on translating foreign operations</i>	-	(267)	(267)
<i>Reclassification to non-current assets (or disposal groups) held for sale ⁽¹⁾</i>	(86)	-	(86)
<i>Sale</i>	-	4	4
<i>Liquidation</i>	(40)	(21)	(61)
<i>Other</i>	-	52	52
Accumulated amortisation Dec 31 2014	91,219	25,888	117,107
Impairment losses Jan 1 2014	3	26	29
<i>Recognised</i>	4	-	4
<i>Used/Reversed</i>	-	(18)	(18)
Impairment losses Dec 31 2014	7	8	15
Net carrying amount Dec 31 2014	101,251	47,473	148,724

(1) Jaslo and Czechowice-Dziedzice Branches operating as separate, organised parts of business in Jaslo and Czechowice-Dziedzice; see Note 17
<<http://raportroczny.lotos.pl/en/financial-information/consolidated-financial-statements-for-2014/notes-to-the-financial-statements/17.-non-current-assets-or-disposal-groups-held-for-sale>> .

PLN '000	Patents, trademarks and licences	Other	Total
Gross carrying amount Jan 1 2013 (restated)	163,587	26,079	189,666
<i>Purchase</i>	-	39,379	39,379
<i>Transfer from property, plant and equipment under construction</i>	12,562	2,912	15,474
<i>Exchange differences on translating foreign operations</i>	-	(1,518)	(1,518)
<i>Liquidation</i>	(179)	(14)	(193)
<i>Other</i>	(237)	280	43
Gross carrying amount Dec 31 2013 (restated)	175,733	67,118	242,851
Accumulated amortisation Jan 1 2013 (restated)	72,298	18,436	90,734
<i>Amortisation</i>	10,249	2,062	12,311
<i>Exchange differences on translating foreign operations</i>	-	(293)	(293)
<i>Liquidation</i>	(172)	(10)	(182)
<i>Other</i>	(252)	420	168
Accumulated amortisation Dec 31 2013 (restated)	82,123	20,615	102,738
Impairment losses Jan 1 2013	3	26	29
<i>Recognised</i>	-	-	-
<i>Used/Reversed</i>	-	-	-
Impairment losses Dec 31 2013	3	26	29
Net carrying amount Dec 31 2013 (restated)	93,607	46,477	140,084

Other intangible assets comprise licences relating to technological processes, including licences for technologies used in the refinery, licences for fuel production, storage and trading, software licences, patents, trademarks and acquired CO₂ emission allowances.

15.3 Other information on intangible assets

The table below presents items under which amortisation of intangible assets was recognised:

PLN '000	Year ended Dec 31 2014	Year ended Dec 31 2013 (restated)
Cost of sales	42,570	49,160
Distribution costs	530	472
Administrative expenses	14,447	11,197
Change in products and adjustments to cost of sales	(362)	108
Total	57,185	60,937

As at December 31st 2014, intangible assets serving as collateral for the Group's liabilities were PLN 155,525 thousand (December 31st 2013: PLN 150,364 thousand). The collateral was created over the Heimdal assets acquired in 2013 (for more information on the acquisition of the Heimdal assets, see Note 13 of the consolidated financial statements for 2013).

As at December 31st 2014, the Group's future contractual commitments not disclosed in the statement of financial position and related to expenditure on intangible assets (specifically software licences) amounted to PLN 552 thousand. As at December 31st 2013, the Group's future investment commitments, of PLN 9,263 thousand, were chiefly related to the EFRA project, consisting in construction of a Delayed Coking Unit (DCU) and auxiliary installations, as well as to the Energy Trading and Risk Management (ETRM) system and other licences.

The Notes to the consolidated financial statements are an integral part of the statements.
(This is a translation of a document originally issued in Polish)