

Oil & natural gas extraction data

Richard Heede
Climate Mitigation Services
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Hess Corporation, USA
 www.hess.com New York City

yellow column indicates original reported units Investor-owned

Production / Extraction data

Year	Crude Oil & NGL			Natural Gas		
	Net production	Net production	Net production	Net production	Net production	Net production
	Thousand bbl/d	Million bbl /yr	thousand bbl / day	Million cf/d	Million SCM/d	Billion cf/yr
	Amerada 1958-67, Amerada Hess 1970-1979	Hess 1958-2018	Hess Corporation			Hess 1958-2018
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2012						
2013						
2014						
2015						
2016						
2017						
2018						
Total	na	4,720	na	na	na	13,020



Hess AnnRpt 2010, page 10
Valhall Field, offshore Norway



Hess Corporation history, hess.com, 1960



Hess AnnRpt 2013: 4Tubular Bells SPAR Salloway, Gulf of Mexico

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
88	Worldwide crude oil, natural gas liquids and natural gas production was as follows:															
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	2010	2009	2008	2010	2009	2008
Crude oil (thousands of barrels per day)						
United States						
Offshore	52	39	15			
Onshore	23	21	17			
	<u>75</u>	<u>60</u>	<u>32</u>			
Europe						
United Kingdom	19	21	29			
Norway*	16	13	16			
Denmark	11	12	11			
Russia	42	37	27			
	<u>88</u>	<u>83</u>	<u>83</u>			
Africa						
Equatorial Guinea	69	70	72			
Algeria	11	14	15			
Gabon	10	14	14			
Libya	23	22	23			
	<u>113</u>	<u>120</u>	<u>124</u>			
Asia						
Azerbaijan	7	8	7			
Other	6	8	6			
	<u>13</u>	<u>16</u>	<u>13</u>			
Total	289	279	252			
Natural gas liquids (thousands of barrels per day)						
United States						
Offshore	7	4	3			
Onshore	7	7	7			
	<u>14</u>	<u>11</u>	<u>10</u>			
Europe*	3	3	4			
Asia	1	—	—			
Total	18	14	14			

* Norway production for 2010 included 14 thousand barrels per day of crude oil, 1 thousand barrels per day of natural gas liquids and 13 thousand mcf per day of natural gas from the Valhall Field.

** Reflects natural gas production converted on the basis of relative energy content (six mcf equals one barrel). Barrel of oil equivalence does not necessarily result in price equivalence as the equivalent price of natural gas on a barrel of oil equivalent basis has been substantially lower than the corresponding price for crude oil over the recent past. See the average selling prices in the table on page 8.

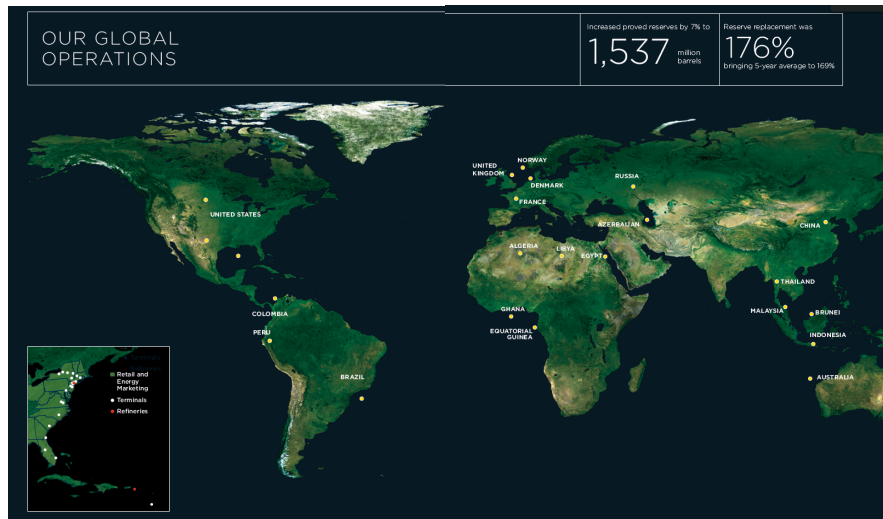
Hess Annual Report 2010, 10-K, pages 3-4.

The Corporation's total proved developed and undeveloped reserves at December 31 were as follows:

	Crude Oil, Condensate & Natural Gas Liquids (c)		Natural Gas		Total Barrels of Oil Equivalent (BOE)(a)	
	2010	2009	2010	2009	2010	2009
	(Millions of barrels)		(Millions of mcf)		(Millions of barrels)	
Developed						
United States	180	154	199	205	213	188
Europe(b)	210	171	424	417	281	241
Africa	215	241	54	59	224	251
Asia	22	27	638	864	128	170
	<u>627</u>	<u>593</u>	<u>1,315</u>	<u>1,545</u>	<u>846</u>	<u>850</u>
Undeveloped						
United States	124	95	81	101	138	112
Europe(b)	256	159	295	225	305	197
Africa	55	73	9	12	56	75
Asia	42	47	898	938	192	203
	<u>477</u>	<u>374</u>	<u>1,283</u>	<u>1,276</u>	<u>691</u>	<u>587</u>
Total						
United States	304	249	280	306	351	300
Europe(b)	466	330	719	642	586	438
Africa	270	314	63	71	280	326
Asia	64	74	1,536	1,802	320	373
	<u>1,104</u>	<u>967</u>	<u>2,598</u>	<u>2,821</u>	<u>1,537</u>	<u>1,437</u>

(a) Reflects natural gas reserves converted on the basis of relative energy content (six mcf equals one barrel). Barrel of oil equivalence does not necessarily result in price equivalence as the equivalent price of natural gas on a barrel of oil equivalent basis has been substantially lower than the corresponding price for crude oil over the recent past. See the average selling prices in the table on page 8.

Hess Annual Report 2010, 10-K, page 2.



Hess Corporation Annual Report 2010, page 4 and 5.

Hess CDP 2012	MtCO2e
Scope 1: CO2	8.132
Scope 1: CH4	0.338
Scope 1: N2O	0.040
Scope 1: total	8.509
Use of products	35.700
Total	44.209
Percent Scope 1	19.2%

Use of sold products: 35700000

Sales volumes of each type of refined petroleum product (residual oil, diesel, and gasoline) and natural gas were multiplied by EPA GHA emission factors from Table MM-1 and NN-1 in Subparts MM and NN of US EPA's Mandatory Reporting of Greenhouse Gases rule. The EPA factors for natural gas combustion were adjusted upwards to account for our gas production in Southeast Asia which has higher than average CO2 content.

Hess Corporation submission to Carbon Disclosure Project for 2012, section 15.1: Scope 3 emissions. In tonnes CO2e.

Cell: I9

Comment: Rick Heede:

Hess Oil & Chemical Corporation merged with Amerada Petroleum Corporation in 1969, becoming Amerada Hess. Amerada shareholders objected, one claiming that "It looks to me as if Hess is buying Amerada with Amerada's money." Amerada was founded by British oil entrepreneur Lord Cowdrey in 1919, and was chiefly an oil exploration and production company, whereas Hess Incorporated was formed in 1933 by Leon Hess, then 19 years old, as an oil delivery company in Asbury Park NJ. Distribution, storage, and refining followed (Hess served as a petroleum supply officer in the Army in WW2).

Amerada Hess drilled its first successful wildcat well at Prudhoe Bay in 1970.

Company expanded operations into Williston Basin in North Dakota, entered the North Sea in the early 1970s, followed by Southeast Asia, Gulf of Mexico. The company changed its name to Hess Corporation in 2006.

"Amerada Hess Corporation is a leading global independent energy company, engaged in the exploration and production of crude oil and natural gas, as well as in refining and in marketing refined petroleum products, natural gas, and electricity. Our vision is to maximize shareholder value by enhancing financial performance and providing long-term profitable growth. We are committed to meeting the highest standards of corporate citizenship by protecting the health and safety of our employees, safeguarding the environment and creating a long-lasting, positive impact on the communities in which we do business. Exploration and production is the engine of future income and growth, currently representing nearly 70% of capital employed and over 95% of annual capital expenditures. The Company has operations in the United States, United Kingdom, Norway, Denmark, Equatorial Guinea, Gabon, Azerbaijan, Thailand and Indonesia. We continue to increase reserves outside the mature regions of the United States and North Sea. ~1,250 service stations from MA to FL. The HOVENSA refinery in the United States Virgin Islands, a joint venture between a subsidiary of Amerada Hess and a subsidiary of Petroleos de Venezuela, S.A. (PDVSA), is one of the largest crude oil refineries in the world. Refined petroleum products, as well as natural gas and electricity, are marketed to customers throughout the East Coast of the United States. This integrated approach to marketing allows the Company to meet the total energy needs of our customer base while maintaining a low-cost operating base."

Oil and Gas production data for 2002 and 2003 from "operating highlights," hess.com, 15Mar05.

Cell: D11

Comment: Rick Heede:

On this worksheet we report extractive data for each company or state-owned enterprise. Three columns under crude oil and natural gas allow for data reported in one of three formats (e.g., thousand barrels per day, or million barrels per year, or million tonnes per year). Coal is normally reported in U.S. or metric tonnes per year.

Note: the carbon content of the extracted resources is adjusted by a number of factors before emissions estimates are made in the worksheet 1 to the left. Most important is the subtraction of the fraction typically sequestered in petrochemicals and other non-combusted uses such as road oils, waxes, lubricants, greases, etc. See the comment for each extracted resource for detailed discussions of the combusted vs sequestered fractions.

Cell: D12

Comment: Rick Heede:

Total net worldwide crude oil plus natural gas liquids produced by each company or state-owned enterprise. Where data is available, we list gross production (before royalty production is netted out). More often, however, oil companies report production net of royalty production.

Crude production includes natural gas liquids (NGL) unless noted.

Cell: H12

Comment: Rick Heede:

Natural gas is typically reported as dry gas; natural gas liquids are reported under crude oil.

Carbon dioxide is normally removed from the gas flow at the production site (see "Vented Carbon Dioxide").

"SCM/d" = standard cubic meters per day. "cf/d" = cubic feet per day.

Cell: F21

Comment: Rick Heede:

CMS also reviewed Hess Oil & Chemical Corporation annual reports 1962 forward, which shows refinery and shipping data, but no production data. 1963, for example, shows refinery runs of 92,651 bbl per day; in 1967, refinery runs were 188,000 bbl per day and refined products sold totaled 302,000 bbl per day.

Cell: D25

Comment: Rick Heede:

Amerada Petroleum Corporation Annual Report 1960. p. 2, New York.

Cell: D28

Comment: Rick Heede:

Amerada Petroleum Corporation Annual Report 1963. p.19, New York. Crude oil plus NGL (3,455 and 3,652 bbl per day in 1962 and 1963).

Cell: D30

Comment: Rick Heede:

Amerada Petroleum Corporation Annual Report 1965 p.21, New York. Crude oil plus NGL (4,077 and 4,403 bbl per day in 1964 and 1965).

Cell: D32

Comment: Rick Heede:

Amerada Petroleum Corporation Annual Report 1967 p.22, New York.

Cell: D36

Comment: Rick Heede:

Amerada Hess Annual Report 1979, p. 62-63, shows daily net production of crude oil, natural gas liquids, and natural gas. In 1979, 49,315 bbl per day from Libya, 10,267 from Abu Dhabi, 84,086 bbl/d from US, 10,819 bbl/d from Canada, 5,130 bbl/d from Norway, and 22.599 bbl/d from UK North Sea. Roughly half of gas production from US (329 million cf/d), but significant (221 million cf/d) from UK, and the remainder from Canada and Norway.

Cell: E50

Comment: Rick Heede:

Oil & Gas Journal OGJ400 and OGJ100, various years, for Amerada Hess 1984-2001.

Cell: D68

Comment: Rick Heede:

Oil and gas production data 2003 from Hess (2004) www.hess.com/aboutus/financial_highlights.htm

Cell: D70

Comment: Rick Heede:

Crude oil and NGL production in 2003 and 2004 from Amerada Hess (2005) 10-K, p.6. Oil = 226 kbb/d; NGL = 20 kbb/d.

Cell: E70

Comment: Joanie Henderson:

OGJ200 2005 reports 90 bbl/yr for 2004, and 227 bcf for 2004

Cell: H70

Comment: Rick Heede:

Natural gas production in 2003 and 2004 from Amerada Hess (2005) 10-K, p.6.

Cell: D72

Comment: Rick Heede (Dec09):

Hess AnnRpt 2008.

Cell: H72

Comment: Rick Heede:

Hess AnnRpt 2008.

Cell: D75

Comment: Rick Heede:

Hess AnnRpt 2010, pdf p. 52, 10-K page 27. Crude plus NGLs (2009: 14 + 279 k bb/ d; 2010: 18 + 289 k bbl / d).

Cell: D77**Comment:** Rick Heede:

Hess Form 10-K, pages 3 and 4, production of crude oil + NGLs, thousands bbl per day.

Cell: H77**Comment:** Rick Heede:

Hess Form 10-K, pages 3 and 4, production of natural gas, million cf per day. Production in US, Europe, Asia.

Cell: E80**Comment:** Rick Heede:

Hess Form 10-K, page 4: worldwide production of crude oil + NGLs (2016: 69.8 Mb+16.0 Mb). 45 Mb US, Europe 12 Mb, Africa 12 Mb, NGL chiefly US.

Cell: J80**Comment:** Rick Heede:

Hess Form 10-K, page 5: Natural gas production; 2016: 95 Bcf US, 16 Bcf Europe, 81 Bcf Asia.

Cell: D83**Comment:** Rick Heede:

Hess Annual Report for 2018, page 1. Crude oil, condensate, and NGL prodn in 2018: 185 kbpd.

Cell: H83**Comment:** Rick Heede:

Hess Annual Report for 2018, page 1. Natural gas production in 2018: 553 Mcfpd.

Cell: I180**Comment:** Rick Heede:

CDP Hess rpt for 2012; viewed 1Oct12. GHG (p. 7-fwd): 10.348 MtCO₂e. Uses IPIECA and WRI, and SAR GWP values. Scope 1: 8.51 MtCO₂e; Scope 2: 0.548 MtCO₂e. Scope 1 sources listed by country. p. 9: Exploration & Production: 5.61; Refining: 2.83, Retail & marketing: 0.009, Storage, transportation and distribution: 0.54 MtCO₂e. CO₂: 8.132, CH₄: 0.338, Other: N₂O: 0.040 MtCO₂e. Scope 2: Exploration & Production: 0.323, Refining: 0.790 Retail & Marketing: 0.135 Storage, transportation and distribution: 0.011 MtCO₂e. Fuel: 13.28 TWh, Electricity: 3.55 TWh, Heat: 0, Steam 0, Cooling: 0. Residual fuel oil: 0.127 TWh, Distillate fuel oil No 2: 1.32 TWh, Natural gas: 10.30 TWh, Petroleum coke: 1.53 TWh. Scope 3: "Use of products sold:" 35.70 MtCO₂e (biz travel 0.023 MtCO₂e, tankers and trucks [third party]: 0.24 MtCO₂e. Ratio of "use of products sold": to Scope 1: 35.70 MtCO₂ / 8.51 MtCO₂e = 4.20 x. Sum of scope 1 & Product use = 44.21 MtCO₂, of which Scope 1 is 19.2 percent. Reserves: Oil: 1.17 Gbb; Gas: 0.404 Gbbloe.