

5. Natural Gas Liquids Statistics

Natural Gas Liquids

Proved Reserves

U.S. natural gas liquids proved reserves decreased 7 percent to 7,459 million barrels in 2003 (Table 13). The significant decline is a result of changes in the relative economics of natural gas and natural gas liquids, in the liquids content of the gas production, and a reduction in the number of U.S. gas plants active in 2003. Reserve additions replaced only 33 percent of 2003 natural gas liquids production.

The reserves of seven areas account for 87 percent of the Nation's natural gas liquids proved reserves.

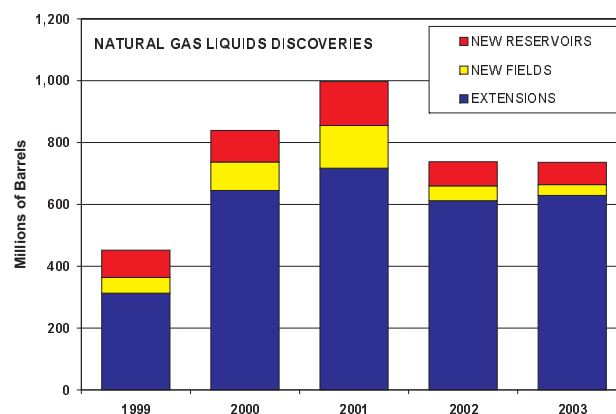
Area	Percent of U.S. NGL Reserves
Texas	34
Utah - Wyoming	12
New Mexico	12
Gulf of Mexico Federal Offshore	10
Oklahoma	9
Colorado	5
Alaska	5
Area Total	87

The volumes of natural gas liquids proved reserves and production shown in Table 13 are the sum of the natural gas plant liquid volumes listed in Table 14 and the lease condensate volumes listed in Table 15.

Total Discoveries

Total discoveries of natural gas liquids reserves were 736 million barrels in 2003, a decrease of less than 1 percent from 2002 (738 million barrels). Areas with the largest total discoveries were:

- Texas (37 percent of the National total)
- Utah & Wyoming (17 percent)
- Gulf of Mexico Federal Offshore (13 percent)
- New Mexico (11 percent)
- Oklahoma (9 percent)
- Louisiana (7 percent).



New field discoveries in 2003 (35 million barrels) were 27 percent lower than in 2002 (48 million barrels). Areas with the largest new field discoveries were the Gulf of Mexico Federal Offshore (71 percent of the National total), Texas (26 percent), and Utah and Wyoming (3 percent).

New reservoir discoveries in old fields (72 million barrels) were 8 percent lower than they were in 2002 (78 million barrels). Areas with the largest new reservoir discoveries in old fields were the Gulf of Mexico Federal Offshore (51 percent of the National total), Texas (25 percent), and Louisiana (22 percent).

Extensions were 629 million barrels in 2003, 3 percent more than the 2002 volume of 612 million barrels. Areas with the largest extensions were Texas (39 percent of the National total), Utah & Wyoming (19 percent), New Mexico (12 percent), and Oklahoma (10 percent).

Revisions and Adjustments

In 2003, there were 882 million barrels of revision increases, 1,043 million barrels of revision decreases and -338 million barrels of adjustments. The net of revisions and adjustments was -499 million barrels.

Sales and Acquisitions

There were 433 million barrels of acquisitions, and 403 million barrels of sales in 2003. The net of these transactions added 30 million barrels of natural gas liquids proved reserves.

Table 13. Natural Gas Liquids Proved Reserves, Reserves Changes, and Production, 2003
(Million Barrels of 42 U.S. Gallons)

State and Subdivision	Published Proved Reserves 12/31/02	Changes in Reserves During 2003									Proved Reserves 12/31/03
		Adjustments (+,-)	Revision Increases (+)	Revision Decreases (-)	Sales (-)	Acquisitions (+)	Extensions (+)	New Field Discoveries (+)	New Reservoir Discoveries in Old Fields (+)	Estimated Production (-)	
Alaska	405	0	0	0	0	0	0	0	0	18	387
Lower 48 States	7,589	-338	882	1,043	403	433	629	35	72	784	7,072
Alabama	57	-2	8	3	4	4	5	0	0	5	60
Arkansas	4	-1	0	0	0	0	0	0	0	0	3
California	95	11	12	9	2	2	2	0	0	10	101
Coastal Region Onshore	17	1	1	3	0	0	0	0	0	1	15
Los Angeles Basin Onshore	10	-1	1	2	1	1	0	0	0	0	8
San Joaquin Basin Onshore	68	11	10	4	1	1	2	0	0	9	78
State Offshore	0	0	0	0	0	0	0	0	0	0	0
Colorado	396	-38	51	21	10	13	33	0	0	29	395
Florida	14	4	0	0	0	0	0	0	0	1	17
Kansas	263	3	11	10	12	12	4	0	0	23	248
Kentucky	66	3	4	6	0	0	2	0	0	3	66
Louisiana	323	15	52	79	23	19	34	0	16	62	295
North	49	12	6	7	4	3	15	0	0	7	67
South Onshore	226	3	39	63	12	8	16	0	8	43	182
State Offshore	48	0	7	9	7	8	3	0	8	12	46
Michigan	47	1	5	6	3	6	1	0	0	3	48
Mississippi	8	0	1	1	0	0	0	0	0	1	7
Montana	6	1	0	0	1	2	1	0	0	1	8
New Mexico	838	66	103	137	39	47	78	0	1	82	875
East	290	10	53	81	19	20	40	0	1	42	272
West	548	56	50	56	20	27	38	0	0	40	603
North Dakota	47	3	4	6	0	1	0	0	0	4	45
Oklahoma	695	-23	124	123	69	86	66	0	0	70	686
Texas	2,711	-180	267	302	123	147	246	9	18	276	2,517
RRC District 1	39	-9	1	2	0	0	2	0	0	2	29
RRC District 2 Onshore	71	6	9	13	7	1	12	0	1	11	69
RRC District 3 Onshore	241	-26	29	30	9	4	27	4	4	37	207
RRC District 4 Onshore	370	-53	38	70	14	16	38	2	7	47	287
RRC District 5	50	-3	6	4	3	3	6	0	0	4	51
RRC District 6	277	-21	19	42	26	31	29	0	5	24	248
RRC District 7B	25	15	5	10	0	0	2	0	0	5	32
RRC District 7C	351	-40	35	16	4	8	39	0	1	29	345
RRC District 8	510	9	54	60	21	21	31	2	0	48	498
RRC District 8A	181	-11	17	9	2	2	0	0	0	15	163
RRC District 9	238	-30	9	12	15	39	32	0	0	25	236
RRC District 10	353	-18	45	33	22	22	28	0	0	28	347
State Offshore	5	1	0	1	0	0	0	1	0	1	5
Utah and Wyoming	938	-70	115	144	33	32	121	1	0	62	898
West Virginia	99	-29	4	6	0	1	3	0	0	4	68
Federal Offshore ^a	973	-101	118	189	84	61	33	25	37	148	725
Pacific (California)	8	0	0	0	0	0	0	0	0	0	8
Gulf of Mexico (Louisiana) ^a	783	-93	89	129	77	58	30	25	32	120	598
Gulf of Mexico (Texas)	182	-8	29	60	7	3	3	0	5	28	119
Miscellaneous ^b	9	-1	3	1	0	0	0	0	0	0	10
U.S. Total	7,994	-338	882	1,043	403	433	629	35	72	802	7,459

^aIncludes Federal offshore Alabama.

^bIncludes Arizona, Illinois, Indiana, Maryland, Missouri, Nebraska, Nevada, New York, Ohio, Oregon, Pennsylvania, South Dakota, Tennessee, and Virginia.

Note: The production estimates in this table are based on data reported on Form EIA-23, "Annual Survey of Domestic Oil and Gas Reserves," and Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production." They may differ from the official Energy Information Administration production data for natural gas and natural gas liquids for 2003 contained in the publications *Petroleum Supply Annual 2003*, DOE/EIA-0340(03) and *Natural Gas Annual 2003* DOE/EIA-0131(03).

Source: Energy Information Administration, Office of Oil and Gas.

Table 14. Natural Gas Plant Liquids Proved Reserves and Production, 2003
(Million Barrels of 42 U.S. Gallons)

State and Subdivision	2003 Reserves	2003 Production	State and Subdivision	2003 Reserves	2003 Production
Alaska	387	18	North Dakota	40	4
Lower 48 States	5,857	593	Oklahoma	582	59
Alabama	33	2	Texas	2,192	229
Arkansas	2	0	RRC District 1	24	2
California	101	10	RRC District 2 Onshore	56	9
Coastal Region Onshore	15	1	RRC District 3 Onshore	135	23
Los Angeles Basin Onshore	8	0	RRC District 4 Onshore	202	32
San Joaquin Basin Onshore	78	9	RRC District 5	40	3
State Offshore	0	0	RRC District 6	195	19
Colorado	325	24	RRC District 7B	31	5
Florida	17	1	RRC District 7C	319	26
Kansas	245	22	RRC District 8	484	46
Kentucky	65	3	RRC District 8A	163	15
Louisiana	183	33	RRC District 9	228	23
North	48	4	RRC District 10	315	26
South Onshore	100	20	State Offshore	0	0
State Offshore	35	9	Utah and Wyoming	756	52
Michigan	44	3	West Virginia	67	4
Mississippi	2	0	Federal Offshore ^a	364	70
Montana	7	1	Pacific (California)	0	0
New Mexico	824	76	Gulf of Mexico (Louisiana) ^a	347	67
East	251	38	Gulf of Mexico (Texas)	17	3
West	573	38	Miscellaneous ^b	8	0
			U.S. Total	6,244	611

^aIncludes Federal Offshore Alabama.

^bIncludes Arizona, Illinois, Indiana, Maryland, Missouri, Nebraska, Nevada, New York, Ohio, Oregon, Pennsylvania, South Dakota, Tennessee, and Virginia.

Note: The production estimates in this table are based on data reported on Form EIA-23, "Annual Survey of Domestic Oil and Gas Reserves," and Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production." They may differ from the official Energy Information Administration production data for natural gas plant liquids for 2003 contained in the publications *Petroleum Supply Annual 2003*, DOE/EIA-0340(2003) and *Natural Gas Annual 2003*, DOE/EIA-0131(2003).

Source: Energy Information Administration, Office of Oil and Gas.

Table 15. Lease Condensate Proved Reserves and Production, 2003
(Million Barrels of 42 U.S. Gallons)

State and Subdivision	2003 Reserves	2003 Production	State and Subdivision	2003 Reserves	2003 Production
Alaska	0	0	North Dakota	5	0
Lower 48 States	1,215	191	Oklahoma	104	11
Alabama	27	3	Texas	325	47
Arkansas	1	0	RRC District 1	5	0
California	0	0	RRC District 2 Onshore	13	2
Coastal Region Onshore	0	0	RRC District 3 Onshore	72	14
Los Angeles Basin Onshore	0	0	RRC District 4 Onshore	85	15
San Joaquin Basin Onshore	0	0	RRC District 5	11	1
State Offshore	0	0	RRC District 6	53	5
Colorado	70	5	RRC District 7B	1	0
Florida	0	0	RRC District 7C	26	3
Kansas	3	1	RRC District 8	14	2
Kentucky	1	0	RRC District 8A	0	0
Louisiana	112	29	RRC District 9	8	2
North	19	3	RRC District 10	32	2
South Onshore	82	23	State Offshore	5	1
State Offshore	11	3	Utah and Wyoming	142	10
Michigan	4	0	West Virginia	1	0
Mississippi	5	1	Federal Offshore ^a	361	78
Montana	1	0	Pacific (California)	8	0
New Mexico	51	6	Gulf of Mexico (Louisiana) ^a	251	53
East	21	4	Gulf of Mexico (Texas)	102	25
West	30	2	Miscellaneous ^b	2	0
			U.S. Total	1,215	191

^aIncludes Federal Offshore Alabama.

^bIncludes Arizona, Illinois, Indiana, Maryland, Missouri, Nebraska, Nevada, New York, Ohio, Oregon, Pennsylvania, South Dakota, Tennessee, and Virginia.

Note: The estimates in this table are based on data reported on Form EIA-23, "Annual Survey of Domestic Oil and Gas Reserves" 2003.

Source: Energy Information Administration, Office of Oil and Gas.

Production

Natural gas liquids production was an estimated 802 million barrels in 2003, a decrease of 9 percent from 2002. Alaska production dropped from 20 to 18 million barrels in 2003.

Six areas accounted for about 87 percent of the Nation's natural gas liquids production.

- Texas (34 percent of the National total)
- Gulf of Mexico Federal Offshore (18 percent)
- New Mexico (10 percent)
- Oklahoma (9 percent)
- Louisiana (8 percent)
- Utah-Wyoming (8 percent).

Natural Gas Plant Liquids

Proved Reserves

Natural gas plant liquids proved reserves decreased in 2003 to 6,244 million barrels, a 6 percent decrease from the 2002 level (6,648 million barrels) (Table 14). Six areas accounted for about 81 percent of the Nation's natural gas plant liquids proved reserves:

Area	Percent of U.S. Gas Plant Liquids
Texas	35
New Mexico	13
Utah-Wyoming	12
Oklahoma	9
Alaska	6
Gulf of Mexico Federal Offshore	6
Area Total	81

In a year where the U.S. dry natural gas reserves increased, the volume of natural gas liquids reserves decreased. This would seem to defy logic, but this resulted from changes in the relative economics of natural gas and natural gas liquids, and in the liquids content of the gas production. Coalbed methane, in particular, has almost no associated natural gas liquids and is a significant portion of the U.S. dry natural gas supply.

Production

Natural gas plant liquids production decreased 10 percent in 2003—from 677 million barrels in 2002 to 611 million barrels of production (Table 14).

In a year where the U.S. dry natural gas production increased, the volume of liquids produced from gas plants decreased significantly. The reasons for this are primarily economic.

The higher average gas prices of 2003 reduced the historical gap between gas and liquids prices. Given certain gas market conditions, it became more economic to offer higher BTU gas directly to the market than to strip the liquids from the produced gas stream.

Also, the number of active gas plants dropped in 2003. According to survey results from Form EIA-64A, the number of unique active U.S. natural gas processing plants dropped from 514 in 2002 to 497 in 2003.

The top six areas for proved reserves of natural gas plant liquids accounted for about 82 percent of the Nation's natural gas plant liquids production:

- Texas (37 percent)
- New Mexico (12 percent)
- Gulf of Mexico Federal Offshore (11 percent)
- Oklahoma (10 percent)
- Utah and Wyoming (9 percent)
- Alaska (3 percent).

Natural gas processing plants are usually located in the same general area where the natural gas is produced. Table E4 in Appendix E lists the volumes of natural gas produced and processed in the same State, and the volumes of liquids extracted.

Lease Condensate

Proved Reserves

Proved reserves of lease condensate in the United States were 1,215 million barrels in 2003 (Table 15). This was 10 percent less than the volume reported in 2002 (1,346 million barrels). The reserves of five areas account for about 86 percent of the Nation's lease condensate proved reserves.

Area	Percent of U.S. Condensate Reserves
Gulf of Mexico Federal Offshore	29
Texas	27
Utah-Wyoming	12
Louisiana	9
Oklahoma	9
Area Total	86

Production

Production of lease condensate was 191 million barrels in 2003, a decrease of 8 percent from 2002's production (207 million barrels). The production of five areas account for about 92 percent of the Nation's lease condensate production.

- Gulf of Mexico Federal Offshore (41 percent)
- Texas (25 percent)
- Louisiana (15 percent)
- Oklahoma (6 percent)
- Utah and Wyoming (5 percent).

Reserves in Nonproducing Status

Like crude oil and natural gas, not all lease condensate proved reserves were producing during 2003. Proved reserves of 399 million barrels of lease condensate, a decrease of 18 percent from 2002's level (489 million barrels), were reported in nonproducing status in 2003 (**Appendix D, Table D10**). About 41 percent of the nonproducing lease condensate reserves were located in the Gulf of Mexico Federal Offshore.