

Table 10: Natural gas, wet after lease separation, proved reserves, reserves changes from shale plays, by states and areas, 2023
(billion cubic feet)

State and Subdivision	Changes in proved reserves during 2023						Proved producing reserves of shale plays	Proved nonproducing reserves of shale plays	Proved reserves of shale plays 12/31/23
	Proved reserves of shale plays 12/31/22	Revisions and other changes (b) (+,-)	Divestitures (-)	Acquisitions (+)	Extensions and discoveries (+)	Estimated production (-)			
Alaska	0	0	0	0	0	0	0	0	0
Lower 48 States	431,413	-52,423	8,447	20,517	34,262	32,228	236,747	156,346	393,094
Arkansas	5,341	-1,144	0	0	0	361	3,655	181	3,836
Colorado	9,546	-1,029	4,392	3,345	238	746	4,420	2,543	6,964
Kansas	0	0	0	0	0	0	0	0	0
Louisiana	34,770	-4,391	53	708	2,799	3,975	13,514	16,344	29,858
North Onshore	34,770	-4,391	53	708	2,799	3,975	13,514	16,344	29,858
South Onshore	0	0	0	0	0	0	0	0	0
Michigan	1,246	-150	0	32	0	61	1,067	0	1,067
Mississippi	0	0	0	0	0	0	0	0	0
Montana	395	55	0	6	25	20	231	229	460
Nebraska	0	0	0	0	0	0	0	0	0
New Mexico	25,794	-1,861	334	986	6,019	2,384	12,727	15,493	28,220
East	25,794	-1,861	334	986	6,019	2,384	12,727	15,493	28,220
West	0	0	0	0	0	0	0	0	0
North Dakota	12,822	-1,196	452	687	1,173	1,155	8,654	3,225	11,879
Ohio	32,362	-3,769	114	199	1,951	2,174	15,507	12,948	28,455
Oklahoma	24,025	-5,201	8	235	1,216	1,444	12,488	6,334	18,823
Pennsylvania	104,998	-3,051	430	76	7,152	7,502	70,782	30,462	101,243
Texas	130,448	-25,019	2,664	11,582	9,309	9,330	64,503	49,822	114,326
RRC District 1	10,236	-1,594	882	2,047	1,013	746	5,141	4,932	10,073
RRC District 2 Onshore	5,834	-1,295	1	228	663	645	2,572	2,212	4,785
RRC District 3 Onshore	176	310	66	12	6	8	345	85	430
RRC District 4 Onshore	16,390	-1,142	706	679	1,910	759	5,828	10,543	16,371
RRC District 5 Onshore	6,946	-1,503	1	1	529	481	4,578	915	5,492
RRC District 6 Onshore	26,315	-9,537	2	4,387	795	1,546	6,531	13,881	20,412
RRC District 7B Onshore	1,223	-311	0	0	0	66	818	28	846
RRC District 7C Onshore	11,699	-2,929	192	1,848	608	876	7,765	2,393	10,158
RRC District 8 Onshore	43,647	-4,598	814	2,378	3,747	3,853	26,980	13,528	40,509
RRC District 8A Onshore	160	42	0	2	38	12	114	116	230
RRC District 9 Onshore	7,823	-2,463	0	0	0	340	3,830	1,190	5,020
RRC District 10 Onshore	0	0	0	0	0	0	0	0	0
State Offshore	0	0	0	0	0	0	0	0	0
West Virginia	48,226	-5,752	0	2,662	3,917	2,997	28,333	17,723	46,056
Wyoming	1,174	72	0	0	443	58	599	1,031	1,631
Federal Offshore	0	0	0	0	0	0	0	0	0
Other Shale States (a)	264	14	0	0	19	20	267	11	278
U.S. Total	431,413	-52,423	8,447	20,517	34,262	32,228	236,747	156,346	393,094

(a) Includes Alabama, California, Florida, Illinois, Indiana, Kentucky, Missouri, New York, South Dakota, Tennessee, Utah, and Virginia.

(b) Annual balancing item calculated by EIA.

Notes: The above table is based on shale natural gas proved reserves and production volumes reported and imputed from data on Form EIA-23L. For certain reasons (e.g. incorrect or incomplete respondent submissions, respondent mis-identification of shale vs non-shale reservoirs) the actual proved reserves and production of natural gas from shales may be higher or lower. The production estimates are offered only as an observed indicator of production trends and may differ from official EIA production volumes listed elsewhere on the EIA web site.

Natural gas is measured at 60 degrees Fahrenheit and atmospheric pressure base of 14.73 pounds per square inch (psia)

Source: U.S. Energy Information Administration, Form EIA-23L, "Annual Report of Domestic Oil and Gas Proved Reserves," 2022 and 2023.