Suggestions for Querying the Appendix C Excel Data File

Data are provided in a flat-file format for all states for each year from 2000 through 2024 and by well-size class (Figure 5). The *Filter* tool in Excel is one of the fastest methods for viewing a subset of the data. For example, the filters in Figure 6 are set to select only Alaska (AK) and the year 2000. In Figure 7, the filters are set to select Alaska totals for all years and to sort chronologically.

Figure 5. Example of data provided in flat-file format with filter tool added

State	Year	Production rate bracket (barrel of oil equivalent per day)	Class number for sorting	Oil wells: Number of oil wells	Oil wells: percentage of oil wells	Oil wells: annual oil production (million barrels)	Oil wells: percentage of oil production	Oil wells: oil rate per well (barrels per day)	Oil wells: annual gas production (billion cubic feet)	Oil wells: natural gas rate per well (thousand cubic feet per day)	Natural gas wells: Number of natural gas wells	Natural gas wells: percentage of natural gas wells	Natural gas wells: annual gas production (billion cubic feet)	Natural gas wells: percentage of natural gas production
AK	2024	A_0-1	1	49	3	0	0	0	0	0	36	7	0	0
AK	2024	B_1-2	2	21	1	0	0	1	0	1	11	2	0	0
AK	2024	C_2-4	3	16	1	0	0	3	0	2	7	1	0	0
AK	2024	D_4-6	4	14	1	0	0	4	0	6	9	2	0	0
AK	2024	E_6-8	5	17	1	0	0	6	0	5	12	2	0	0
AK	2024	F_8-10	6	9	0	0	0	8	0	9	8	2	0	0
AK	2024	G_Subtotal <=10	6.5	126	7	0	0	3	0	3	83	17	0	0
AK	2024	H_10-12	7	15	1	0	0	10	0	9	4	1	0	0
AK	2024	I_12-15	8	20	1	0	0	12	0	13	6	1	0	0
AK	2024	J_Subtotal <=15	8.5	161	9	0	0	5	0	5	93	19	0	0
AK	2024	K_15-20	9	22	1	0	0	16	0	11	17	4	0	0
AK	2024	L_20-25	10	26	1	0	0	20	0	17	5	1	0	0
AK	2024	M_25-30	11	31	2	0	0	25	0	15	6	1	0	0
AK	2024	N_30-40	12	58	3	1	0	30	1	26	14	3	1	0
AK	2024	O_40-50	13	62	3	1	1	41	1	26	13	3	1	0
AK	2024	P_50-100	14	301	16	7	5	69	4	39	59	12	8	4
AK	2024	Q_Subtotal <=100	14.5	661	35	10	7	44	6	27	207	43	11	6
AK	2024	R_100-200	15	443	24	21	15	129	15	94	82	17	23	11
AK	2024	S_200-400	16	368	20	31	22	236	42	320	85	18	37	18
AK	2024	T_400-800	17	273	15	39	27	406	75	793	64	13	52	25
AK	2024	U_800-1,600	18	103	6	29	21	887	38	1154	40	8	65	32
AK	2024	V_1,600-3,200	19	19	1	12	8	2063	4	636	5	1	17	8

Data source: U.S. Energy Information Administration

Figure 6. Example of data with filters set to select Alaska (AK) and the year 2000

State	Year	Production rate bracket (barrel of oil equivalent per day)	Class number for sorting	Oil wells: Number of oil wells	Oil wells: percentage of oil wells	Oil wells: annual oil production (million barrels)	Oil wells: percentage of oil production	Oil wells: oil rate per well (barrels per day)	Oil wells: annual gas production (billion cubic feet)	Oil wells: natural gas rate per well (thousand cubic feet per day)	Natural gas wells: Number of natural gas wells	Natural gas wells: percentage of natural gas wells	Natural gas wells: annual gas production (billion cubic feet)	Natural gas wells: percentage of natural gas production
AK	2000	A_0-1	1	13	1	0	0	0	0	0	9	6	0	0
AK	2000	B_1-2	2	6	0	0	0	1	0	1	1	1	0	0
AK	2000	C_2-4	3	10	0	0	0	2	0	2	3	2	0	0
AK	2000	D_4-6	4	11	1	0	0	4	0	6	1	1	0	0
AK	2000	E_6-8	5	7	0	0	0	6	0	6	1	1	0	0
AK	2000	F_8-10	6	6	0	0	0	9	0	4	1	1	0	0
AK	2000	G_Subtotal <=10	6.5	53	3	0	0	3	0	3	16	10	0	0
AK	2000	H_10-12	7	4	0	0	0	10	0	6	0	0	0	0
AK	2000	I_12-15	8	6	0	0	0	12	0	11	3	2	0	0
AK	2000	J_Subtotal <=15	8.5	63	3	0	0	4	0	4	19	12	0	0
AK	2000	K_15-20	9	13	1	0	0	16	0	11	2	1	0	0
AK	2000	L_20-25	10	10	0	0	0	20	0	13	1	1	0	0
AK	2000	M_25-30	11	8	0	0	0	24	0	21	1	1	0	0
AK	2000	N_30-40	12	15	1	0	0	29	0	31	1	1	0	0
AK	2000	O_40-50	13	25	1	0	0	39	0	38	4	3	0	0
AK	2000	P_50-100	14	122	6	3	1	66	2	46	20	13	3	1
AK	2000	Q_Subtotal <=100	14.5	256	13	4	1	41	3	31	48	30	3	2
AK	2000	R_100-200	15	264	13	13	4	141	6	65	19	12	6	3
AK	2000	S_200-400	16	518	25	50	14	270	23	122	23	14	13	6
AK	2000	T_400-800	17	540	27	98	28	512	63	329	25	16	27	12
AK	2000	U_800-1,600	18	342	17	116	33	978	97	817	22	14	53	24
AK	2000	V_1,600-3,200	19	102	5	56	16	1781	56	1781	16	10	70	31

Data source: U.S. Energy Information Administration

State	Year	Production rate bracket [barrel of oil equivalent per day]	Class number for sorting	Oil wells							Natural gas wells			
				Number of oil wells	Oil wells: percentage of oil wells	Oil wells: annual oil production [million barrels]	Oil wells: percentage of oil production	Oil wells: oil rate per well [barrels per day]	Oil wells: annual gas production [billion cubic feet]	Oil wells: natural gas rate per well [thousand cubic feet per day]	Number of natural gas wells	Natural gas wells: percentage of natural gas wells	Natural gas wells: annual gas production [billion cubic feet]	Natural gas wells: percentage of natural gas production
AK	2024	Z_Total	23	1869	100	142	100	221	180	281	483	100	205	100
AK	2023	Z_Total	23	1857	100	143	100	220	188	289	488	100	198	100
AK	2022	Z_Total	23	1781	100	142	100	227	181	290	559	100	224	100
AK	2021	Z_Total	23	1867	100	147	100	219	187	279	500	100	176	100
AK	2020	Z_Total	23	1868	100	152	100	226	199	295	456	100	153	100
AK	2019	Z_Total	23	2002	100	163	100	230	214	302	373	100	124	100
AK	2018	Z_Total	23	2015	100	167	100	231	215	298	357	100	136	100
AK	2017	Z_Total	23	2071	100	174	100	239	229	314	351	100	140	100
AK	2016	Z_Total	23	2104	100	175	100	235	234	315	325	100	122	100
AK	2015	Z_Total	23	2112	100	173	100	234	241	325	311	100	122	100
AK	2014	Z_Total	23	2066	100	179	100	245	244	335	299	100	125	100
AK	2013	Z_Total	23	1996	100	184	100	264	235	337	292	100	119	100
AK	2012	Z_Total	23	1985	100	191	100	272	246	350	257	100	121	100
AK	2011	Z_Total	23	2042	100	203	100	281	245	339	247	100	124	100
AK	2010	Z_Total	23	2055	100	218	100	300	263	363	236	100	131	100
AK	2009	Z_Total	23	2064	100	234	100	320	280	384	253	100	148	100
AK	2008	Z_Total	23	2047	100	248	100	342	275	379	244	100	161	100
AK	2007	Z_Total	23	1943	100	257	100	375	317	463	294	100	218	100
AK	2006	Z_Total	23	2032	100	268	100	373	280	389	236	100	219	100

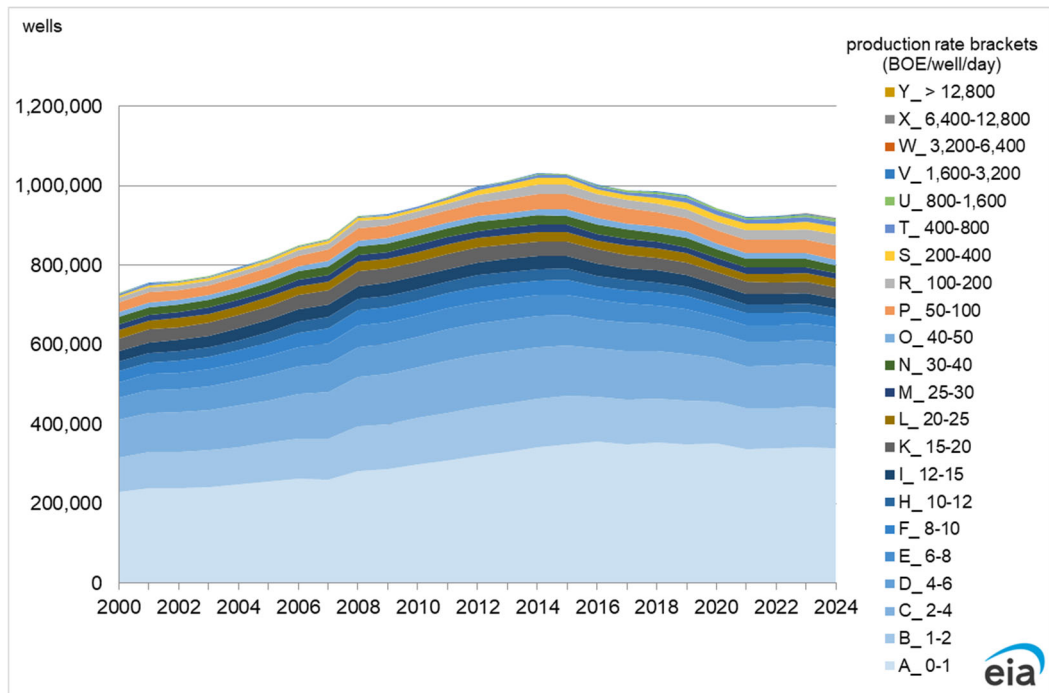Data source: U.S. Energy Information Administration

We also set up a pivot table to help organize the data to make charts. In Figure 8, the United States is selected in cell B1, the subtotal rows have been deselected in cell A4, and *Total number of wells* is selected in the *PivotTable Fields* pane. Figure 9 shows a chart of the data in Figure 8.

Figure 8. Example of a pivot table to help organize data to make charts

State	US																
Sum of Total number of wells	Column Labels																
Row Labels	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
A_0-1	230074	239939	239789	242124	248639	255474	263120	261625	282498	288315	300183	309860	321346	329305	342064	34977	
B_1-2	86991	89989	91236	92318	94543	97750	101217	103458	112132	112647	116384	119807	122381	123801	122445	12077	
C_2-4	94533	98721	99566	101095	103556	107424	112640	115688	123983	125666	126311	129863	132057	132018	130240	12886	
D_4-6	55499	57551	58606	60030	62207	65470	69245	71892	76142	76585	77630	78640	78755	78995	77766	7590	
E_6-8	38613	39731	40593	42168	43770	45352	48251	50699	53171	53151	53200	53058	52871	52576	52081	5137	
F_8-10	28956	29740	30524	31930	32764	34528	36047	37592	38402	38449	38407	38600	38197	37771	37796	3688	
G_Subtotal <=10	534666	555671	560314	569665	585479	605998	630520	640954	686328	694813	712115	729828	745607	754466	762392	76357	
H_10-12	22512	23205	24335	25012	25731	26958	28101	28562	29240	28823	28876	28951	29310	29026	28594	2821	
I_12-15	25921	27470	27565	28489	29803	30469	31376	31836	32599	32367	32413	32533	32554	32410	31837	3209	
J_Subtotal <=15	583099	606346	612214	623166	641013	663425	689997	701352	748167	756003	773404	791312	807471	815902	822823	82387	
K_15-20	31542	32178	32744	33277	33834	34298	35069	35457	36564	36161	36445	36910	37099	36811	36757	3637	
L_20-25	21337	21865	22118	22170	22349	22481	22936	23051	24105	23970	24258	24760	24885	24386	24720	2430	
M_25-30	15293	15290	15338	15295	15584	15615	16136	16192	17114	16916	17298	17556	17598	17374	17821	1725	
N_30-40	19649	19743	19652	20062	20229	20485	20829	21539	22670	22831	22882	22961	23278	23367	23709	2325	
O_40-50	11881	12107	12026	12294	12371	12581	13079	13490	14301	14042	14348	14316	14484	14761	15741	1562	
P_50-100	23586	24276	23908	24292	24727	25407	26723	28499	30675	30006	30250	30766	32238	34296	37632	3913	
Q_Subtotal <=100	706387	731805	738000	750556	770107	794292	824769	839580	893596	899929	918885	938581	957053	966897	979203	97983	
R_100-200	11448	11901	11539	11972	12704	13521	14465	15976	17778	16519	16574	17477	19823	22581	25045	2473	
S_200-400	5973	6228	6174	6321	6422	6524	6731	7191	7946	7248	8000	8918	12386	14401	15491	1462	
T_400-800	3668	3592	3153	3063	2976	2772	2582	2833	2936	2811	3657	4931	5980	6668	8243	802	
U_800-1,600	1843	1661	1440	1418	1306	1112	1058	1099	1031	1096	1609	2017	1863	1878	2494	287	
V_1,600-3,200	658	572	544	540	461	397	415	404	348	384	359	337	306	353	475	50	
W_3,200-6,400	218	227	210	203	200	169	171	158	134	129	138	116	114	107	120	11	
X_6,400-12,800	74	86	106	105	108	79	81	93	69	75	61	54	56	62	67	8	
Y_>12,800	34	44	35	32	24	23	17	10	17	38	41	21	18	15	23	2	
Z_Total	730303	756116	761201	774210	794308	818889	850289	867344	923855	928229	949324	973348	997599	1012962	1031161	103081	
Grand Total	3284758	3406054	3432930	3491807	3585215	3701493	3845864	3916574	4175801	4207203	4303052	4406417	4505329	4563189	4626740	462890	

PivotTable Fields

Choose fields to add to report:

Search

- Number of natural gas wells
- Natural gas wells: percentage of natural gas wells
- Natural gas wells: percentage of natural gas produc...
- Natural gas wells: natural gas rate per well (thousan...
- Natural gas wells: annual oil production (million bar...
- Natural gas wells: oil rate per well(barrels per day)
- ☑ **Total number of wells**
- Total wells: annual oil production (million barrels)
- Total wells: annual gas production (billion cubic feet)
- Total wells: horizontal well count

More Tables...

Drag fields between areas below:

Filters — State

Columns — Year

Rows — Production rate bracket...

Values — Sum of Total number of...

Data source: U.S. Energy Information Administration

Figure 9. Example of a chart made with a pivot table

Data source: U.S. Energy Information Administration and Enverus
Note: BOE=barrels of oil equivalent