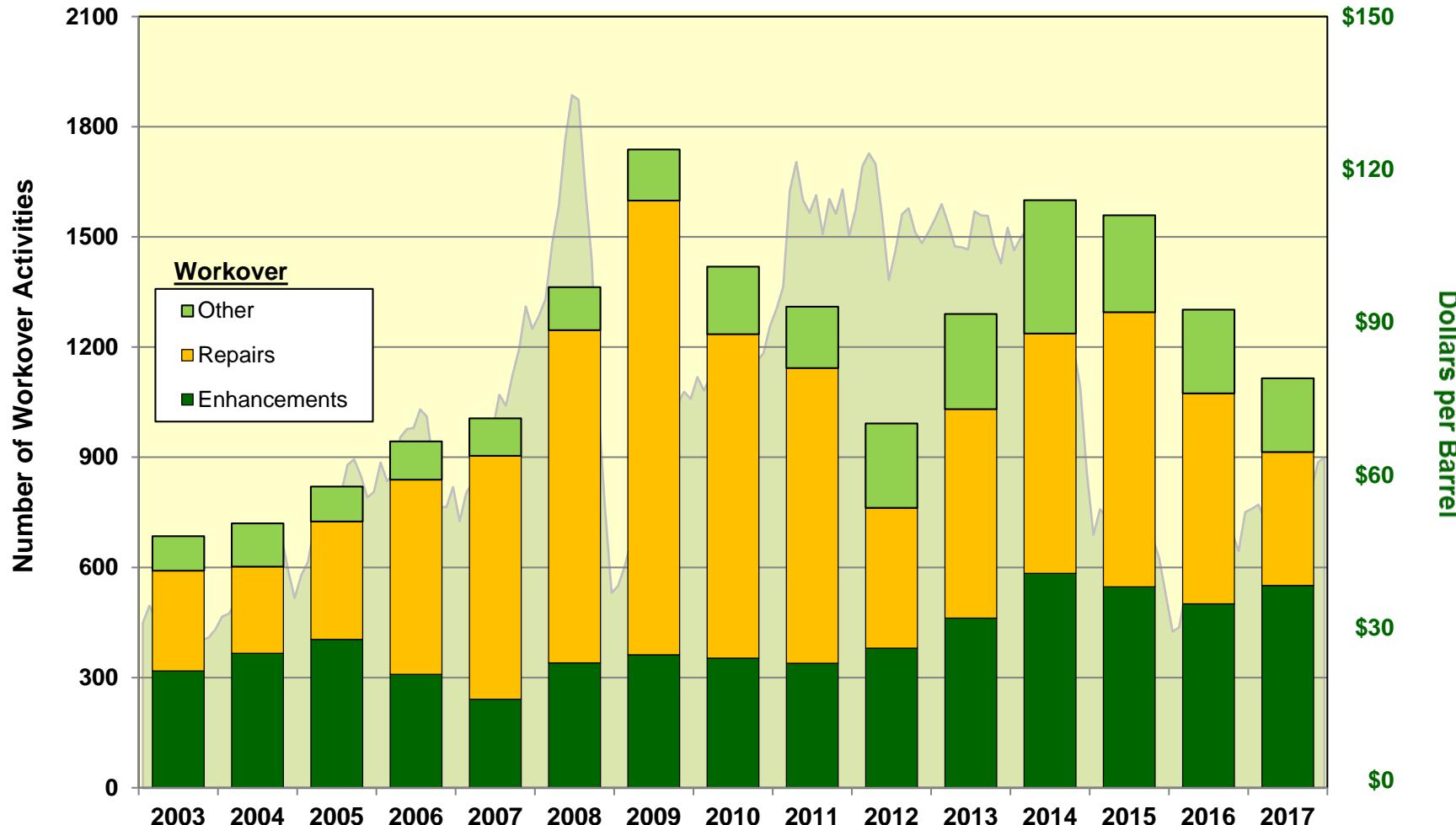


Workover Activities (2003 – 2017*)

Statewide: Conventional Oil and Gas Only**

Background: West Coast Monthly Average Spot Price for Alaska North Slope Crude Oil (Dollars per Barrel)



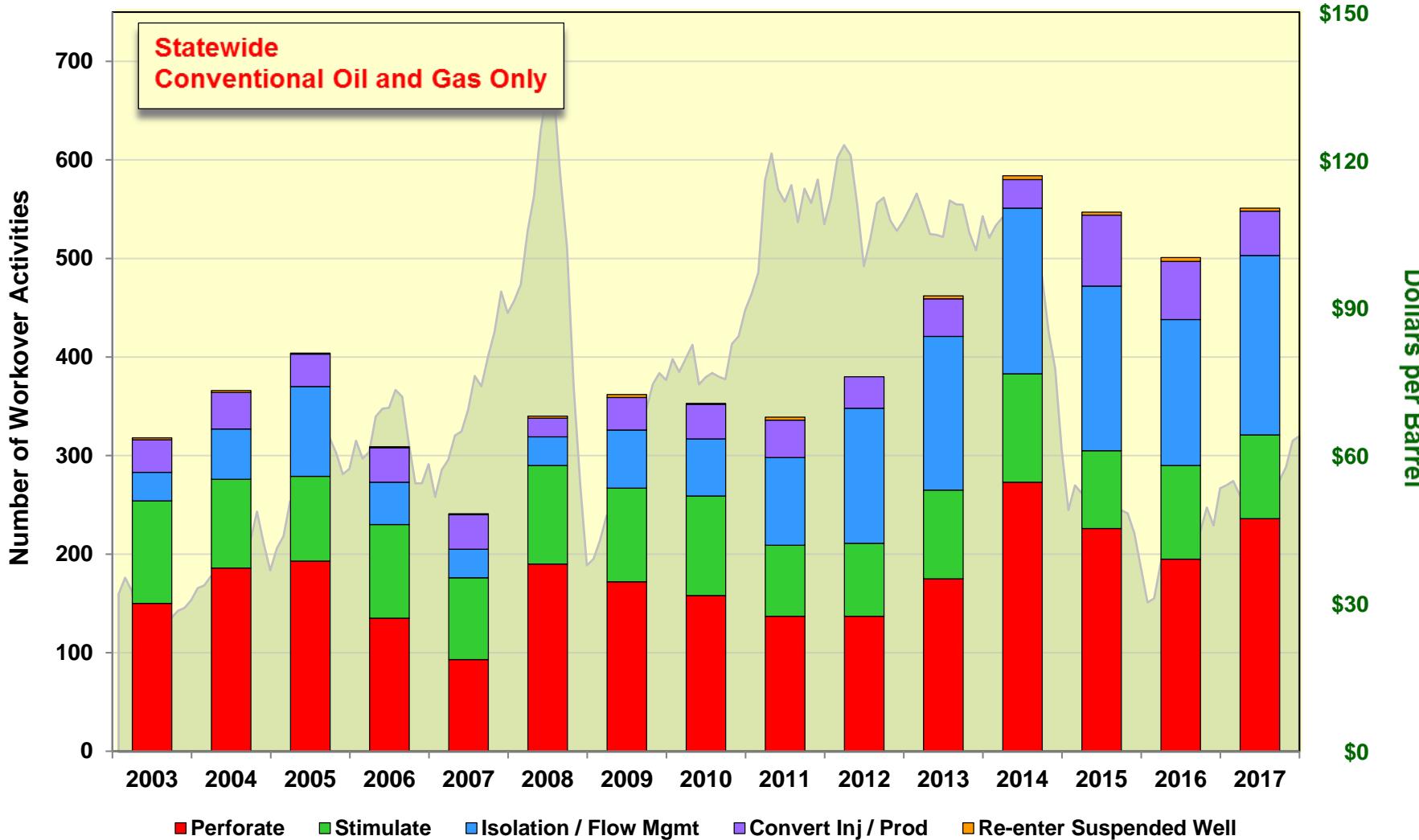
Total Activities since 2003 = 17,917

**Does not include coal- or shale-bed natural gas, or gas hydrate wells

Workover Activity by Type (2003 – 2017*)

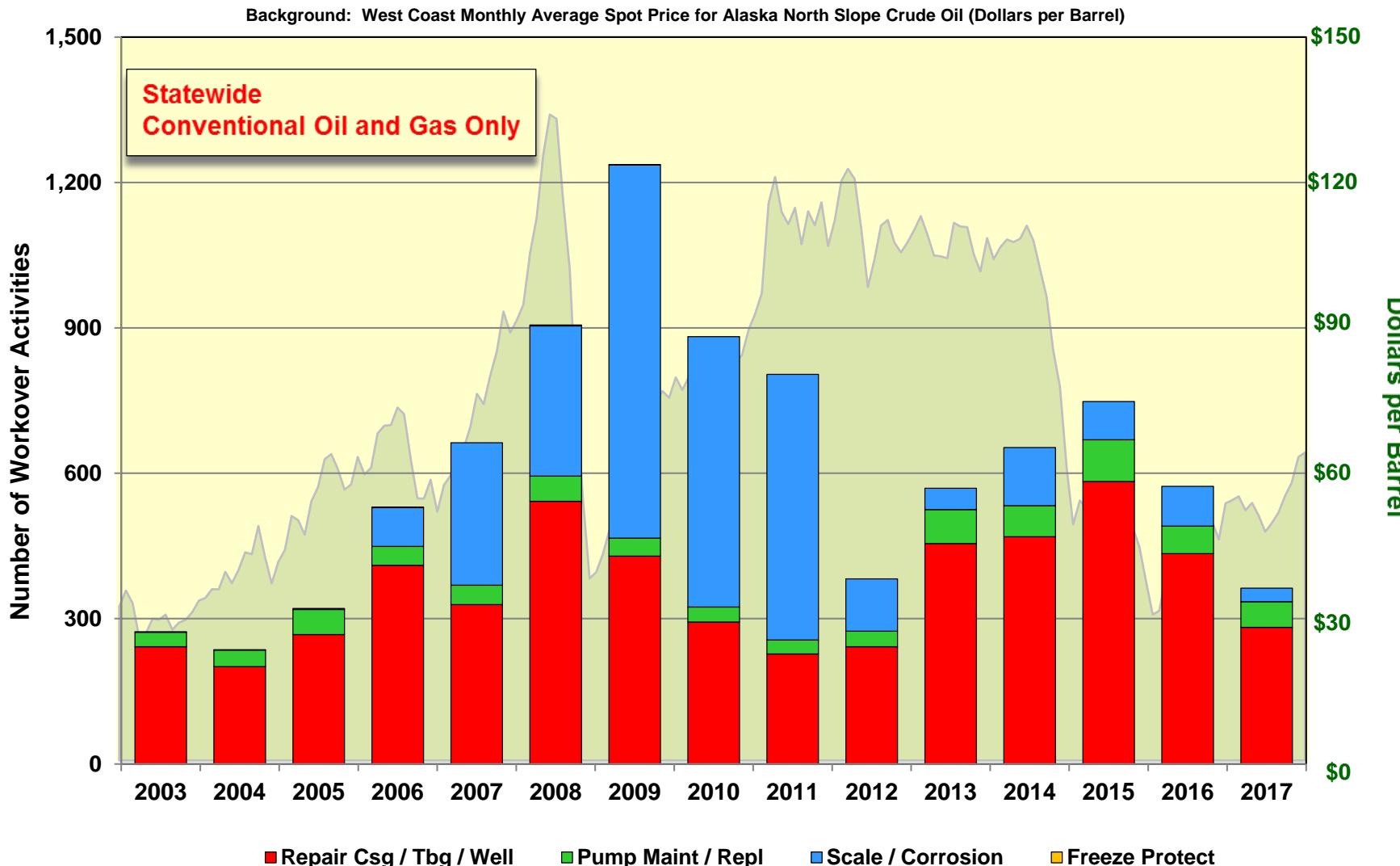
Alaska Wells: Production Enhancements

Background: West Coast Monthly Average Spot Price for Alaska North Slope Crude Oil (Dollars per Barrel)



Workover Activity by Type (2003 – 2017*)

Alaska Wells: Maintenance



Workover Activities (2003 – 2017*)

Statewide: Conventional Oil and Gas Only**

Operation Type	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Grand Total
Enhancement	321	367	405	310	241	348	366	360	345	387	468	588	547	501	551	6105
Maintenance	273	236	321	530	663	906	1237	882	804	382	569	653	748	573	363	9140
Other	94	118	95	109	102	117	139	184	168	231	259	363	264	228	201	2672
Grand Total	688	721	821	949	1,006	1,371	1,742	1,426	1,317	1,000	1,296	1,604	1,558	1,288	1,115	17,917

Total Activities since 2003 = 17,917

**Does not include coal- or shale-bed natural gas, or gas hydrate wells

Workover Operations Class and Category Table

Definition	Class	Category
Acid Treatment	Stimulate	Enhancement
Annulus Corrosion Inhibitor	Scale / Corrosion	Maintenance
Capillary String	Stimulate	Enhancement
Cement Squeeze	Isolation / Flow Mgmt	Enhancement
Cement Squeeze	Isolation / Flow Mgmt	Enhancement
Cement Squeeze	Isolation / Flow Mgmt	Enhancement
Control Flow Mgt Zone	Isolation / Flow Mgmt	Enhancement
Convert to Injection	Convert Inj / Prod	Enhancement
Convert to Producer	Convert Inj / Prod	Enhancement
ESP Maintenance or Replacement	Pump Maint / Repl	Maintenance
Freeze Protect Well	Freeze Protect	Maintenance
Gravel Pack Maintenance	Stimulate	Enhancement
Isolation Sleeve	Isolation / Flow Mgmt	Enhancement
Jet Pump Maint or Replacement	Pump Maint / Repl	Maintenance
K Valve Maintenance	Repair Csg / Tbg / Well	Maintenance
Kill String Maintenance	Repair Csg / Tbg / Well	Maintenance
Outer Annulus Cement Maint	Repair Csg / Tbg / Well	Maintenance
Packer Maintenance	Repair Csg / Tbg / Well	Maintenance
Perforate New Pool	Perforate	Enhancement
Perforated	Perforate	Enhancement
Plug Milling Operations	Other	Enhancement
Plug Perforations	Isolation / Flow Mgmt	Enhancement
Re-enter Op Shutdown Well	Re-enter Op Shutdown Well	Enhancement
Re-enter Suspended Well	Re-enter Suspended Well	Enhancement
Repair / Replace Casing	Repair Csg / Tbg / Well	Maintenance
Repair / Replace Tubing	Repair Csg / Tbg / Well	Maintenance
Repair Well	Repair Csg / Tbg / Well	Maintenance
Replace Tubing	Repair Csg / Tbg / Well	Maintenance
Rod Pump Maint or Replacement	Repair Csg / Tbg / Well	Maintenance
Scale Inhibitor Squeeze	Scale / Corrosion	Maintenance
Scale Removal	Scale / Corrosion	Maintenance
Stimulate	Stimulate	Enhancement
Tubing Patch	Repair Csg / Tbg / Well	Maintenance
Velocity String	Stimulate	Enhancement
Water Wash	Stimulate	Enhancement
Well Fractured	Stimulate	Enhancement

Operations Included in “Other” Class and Category

Definition	Class	Category
Abandon	Other	Other
Annular Disposal	Other	Other
Change Approved Program	Other	Other
Change Completion Type	Other	Other
Change Method Operation	Other	Other
Modify Well Marker	Other	Other
Operational Shutdown	Other	Other
Other	Other	Other
Surface Plug	Other	Other
Suspend	Other	Other
Temperature Survey	Other	Other
Well Secure or Plug Set	Other	Other
Well Testing Completed	Other	Other

West Coast Monthly Average Spot Price for Alaskan North Slope Crude Oil (Dollars per Barrel)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1988	\$14.23	\$14.03	\$13.79	\$15.29	\$14.86	\$14.14	\$13.70	\$13.63	\$12.58	\$11.34	\$11.36	\$13.23
1989	\$15.11	\$15.99	\$17.25	\$19.37	\$17.64	\$17.00	\$16.78	\$16.04	\$16.62	\$17.27	\$17.49	\$19.07
1990	\$20.00	\$19.30	\$17.91	\$14.82	\$14.38	\$13.20	\$15.55	\$25.99	\$32.16	\$31.53	\$28.79	\$24.02
1991	\$20.57	\$15.74	\$17.02	\$17.56	\$16.67	\$16.36	\$17.25	\$17.18	\$17.37	\$18.47	\$17.57	\$14.83
1992	\$14.92	\$15.30	\$15.50	\$16.96	\$18.03	\$20.20	\$19.40	\$17.97	\$18.46	\$18.71	\$17.46	\$16.33
1993	\$15.62	\$16.78	\$17.35	\$18.17	\$17.47	\$16.02	\$14.84	\$15.42	\$14.98	\$15.39	\$13.07	\$10.29
1994	\$11.66	\$12.59	\$12.91	\$14.96	\$16.47	\$16.43	\$16.52	\$16.66	\$16.11	\$16.02	\$16.71	\$15.38
1995	\$16.16	\$17.14	\$17.31	\$18.36	\$18.43	\$17.43	\$16.23	\$16.72	\$16.65	\$15.96	\$15.88	\$16.94
1996	\$17.23	\$17.78	\$20.40	\$22.04	\$19.65	\$18.98	\$19.79	\$19.90	\$21.69	\$22.60	\$21.50	\$23.66
1997	\$23.57	\$21.03	\$20.07	\$18.54	\$19.41	\$17.30	\$17.48	\$17.98	\$18.09	\$19.59	\$18.33	\$16.39
1998	\$14.79	\$13.39	\$12.25	\$12.41	\$12.31	\$11.62	\$12.92	\$12.49	\$14.13	\$13.38	\$11.47	\$9.39
1999	\$10.69	\$10.43	\$13.07	\$15.64	\$15.86	\$15.82	\$18.16	\$20.08	\$22.96	\$21.83	\$23.65	\$24.54
2000	\$25.74	\$27.65	\$28.01	\$23.83	\$27.15	\$29.62	\$27.63	\$29.40	\$32.25	\$31.56	\$32.74	\$23.72
2001	\$24.37	\$26.02	\$24.70	\$25.55	\$26.70	\$25.82	\$24.60	\$24.12	\$23.21	\$19.45	\$17.23	\$16.69
2002	\$17.52	\$19.14	\$22.76	\$24.99	\$25.87	\$24.16	\$25.82	\$27.39	\$28.76	\$27.53	\$24.69	\$28.03
2003	\$31.91	\$35.20	\$32.59	\$25.59	\$26.19	\$29.35	\$29.17	\$30.22	\$27.09	\$28.55	\$29.11	\$30.67
2004	\$33.10	\$33.66	\$35.50	\$35.43	\$39.07	\$36.73	\$39.44	\$43.12	\$42.71	\$48.56	\$42.15	\$36.66
2005	\$41.12	\$43.59	\$50.63	\$49.75	\$46.77	\$53.67	\$56.67	\$62.40	\$63.47	\$60.37	\$56.11	\$57.17
2006	\$62.85	\$59.26	\$60.61	\$67.74	\$69.32	\$69.50	\$73.10	\$71.74	\$62.33	\$54.27	\$54.26	\$58.13
2007	\$51.52	\$57.00	\$59.01	\$63.92	\$64.76	\$69.11	\$75.93	\$73.83	\$79.72	\$84.77	\$92.98	\$88.64
2008	\$91.16	\$94.42	\$105.06	\$112.37	\$125.41	\$133.78	\$132.87	\$115.98	\$101.86	\$73.65	\$53.94	\$37.70
2009	\$39.01	\$42.78	\$47.75	\$46.56	\$58.23	\$69.80	\$64.53	\$71.52	\$69.20	\$74.28	\$76.52	\$75.12
2010	\$79.34	\$76.74	\$79.45	\$82.23	\$74.23	\$75.66	\$76.53	\$75.78	\$75.27	\$82.41	\$83.93	\$89.75
2011	\$92.56	\$96.79	\$115.34	\$120.86	\$113.57	\$111.08	\$114.47	\$106.95	\$113.74	\$110.84	\$115.58	\$106.55
2012	\$111.87	\$119.65	\$122.68	\$120.95	\$110.55	\$98.06	\$103.75	\$110.79	\$111.94	\$107.30	\$105.24	\$107.31
2013	\$109.88	\$112.76	\$108.93	\$104.58	\$104.42	\$104.01	\$111.34	\$110.57	\$110.48	\$104.82	\$101.28	\$108.19
2014	\$103.82	\$106.30	\$107.91	\$107.36	\$108.06	\$110.76	\$107.63	\$101.78	\$96.05	\$84.91	\$77.41	\$60.90
2015	\$48.87	\$53.85	\$52.28	\$58.49	\$64.37	\$64.40	\$56.20	\$48.26	\$48.83	\$48.20	\$44.24	\$37.15
2016	\$30.22	\$31.14	\$38.10	\$41.79	\$46.61	\$47.40	\$44.07	\$44.17	\$44.51	\$49.39	\$45.76	\$53.26
2017	\$53.90	\$54.72	\$51.81	\$53.34	\$50.72	\$47.38	\$49.18	\$51.37	\$54.82	\$57.55	\$62.86	\$63.79

Source: Alaska Department of Revenue, Tax Division, 2017, ANS West Coast Average Spot Price (for the period from 1988 through 2017), available online at: <http://www.tax.alaska.gov/programs/oil/pervailing/ans.aspx>.