

TABLE B-8.—U.S. Army division artillery, by tactical  
[Rates stated as cases per day]

Tactical operation	Calendar period	Number of U.S. Army Divisions	Number of Division days	Artillery Mean strength	Total hit		Killed in action	
					Number	Rates	Number	Rates
I. Total U.S. Army Division Artillery.....	4 Jul 1950– 27 Jul 1953	8	6,519	3,367	4,911	0.22	928	0.04
Total Combat Operations (less redeploying, regrouping, and Army Reserve).....	4 Jul 1950– 27 Jul 1953	8	5,253	3,356	4,691	0.27	901	0.06
II. Defensive Operations (major Communist offensives).....								
Delaying invasion of South Korea.....	4 Jul–3 Aug 1950	3	68	2,229	417	2.75	132	0.87
Defense of Pusan perimeter.....	4 Aug–15 Sep 1950	4	168	2,665	757	1.89	179	0.40
CCF counteroffensive in North Korea.....	25 Nov–15 Dec 1950	6	34	2,622	333	3.74	72	0.81
CCF counterattack in Wonju-Chipyong area.....	12–21 Feb 1951	3	24	2,949	339	4.78	115	1.62
CCF first spring offensive (1951).....	22–29 Apr 1951	5	32	3,259	121	1.16	20	0.19
CCF second spring offensive (1951).....	17–22 May 1951	3	15	3,741	30	0.53	9	0.16
CCF attack on western and central fronts (1952).....	6–13 Oct 1952	1	8	3,501	15	0.54	—	—
CCF attack ROK II Corps front (1953).....	10–18 Jun 1953	1	9	4,046	26	0.71	5	0.14
Battle of Kumsong River, salient.....	14–20 Jul 1953	3	17	3,789	22	0.35	1	0.02
III. Withdrawal Operations (Communist general offensive).....								
Evacuation of Hungnam.....	1–24 Dec 1950	2	43	2,677	69	0.60	9	0.08
Withdrawal from North Korea to Line "D".....	2 Dec 1950– 16 Jan 1951	4	151	2,808	94	0.22	6	0.01
IV. Offensive Operations (major UN offensives).....								
Breakout of Pusan perimeter.....	16–27 Sep 1950	6	630	3,148	766	0.38	122	0.06
Inchon landing and liberation of Seoul.....	18–30 Sep 1950	4	48	2,932	147	1.04	25	0.18
Operation Thunderbolt—Armed Recon to retake offensive.....	25 Jan–20 Feb 1951	1	11	2,711	10	0.34	2	0.07
Operation Killer—to reestablish UN Line east of Wonju.....	21 Feb–7 Mar 1951	6	125	2,976	126	0.34	26	0.07
Operation Ripper—to outflank Seoul and capture Chunchon.....	7 Mar–4 Apr 1951	4	56	3,076	32	0.19	3	0.02
Operation Rugged—to secure Phase Line KANSAS north of 38th parallel.....	1–15 Apr 1951	6	44	3,192	77	0.55	15	0.11
Operation Dauntless—to secure Phase Line UTAH forward to Line KANSAS.....	10–22 Apr 1951	3	36	3,285	25	0.21	3	0.02
Operation Detonate—to return to 38th parallel third time and retake Line KANSAS.....	20 May–8 Jun 1951	6	88	3,414	115	0.38	9	0.03
Operation Piledriver—to secure Phase Line WYOMING and The Iron Triangle.....	3–12 Jun 1951	4	35	3,499	39	0.31	3	0.02
Operation Commando—to secure Phase Line JAMESTOWN.....	3–15 Oct 1951	2	16	3,511	46	0.81	9	0.16
Operation Nomad and Polar—to secure Phase Lines later designated as Line MISSOURI.....	13–22 Oct 1951	1	10	4,484	29	0.64	6	0.13
V. Pursuit and Mopping-up Operations.....								
Pursuit and mopping-up south of 38th parallel.....	28 Sep–30 Nov 1950	6	303	2,874	322	0.36	55	0.06
Pursuit north of 38th parallel to Yalu River.....	5 Oct–27 Nov 1950	5	113	3,123	91	0.26	13	0.04
Iwon landing and pursuit north of 38th parallel.....	31 Oct–27 Nov 1950	1	28	3,387	18	0.19	2	0.02
VI. All Defensive Lines (including Limited Operations).....								
Defensive Lines (excluding Limited Operations).....								
Line "D" (furthest CCF penetration into South Korea—1951).....	5–29 Jan 1951	8	3,494	3,511	940	0.08	100	0.01
Line BOSTON (south bank of Han River; southeast of Seoul in I Corps sector).....	18 Feb–6 Mar 1951	6	107	2,925	14	0.04	1	0.00
Line KANSAS (Eighth Army Phase Line across Korea; north and south of 38th parallel).....	4–29 Apr 1951	2	32	2,932	5	0.05	—	—
					28	0.18	6	0.04

Wounded in action				All nonbattle causes				Disease				Nonbattle injury			
CRO cases		Admissions		Incl. CRO cases		Excl. CRO cases		CRO cases		Admissions		CRO cases		Admissions	
Number	Rates	Number	Rates	Number	Rates	Number	Rates	Number	Rates	Number	Rates	Number	Rates	Number	Rates
720	0.03	3,263	0.15	24,145	1.10	20,490	0.93	3,495	0.16	15,160	0.69	160	0.01	5,330	0.24
679	0.04	3,111	0.18	19,685	1.12	16,930	0.96	2,635	0.15	12,425	0.70	120	0.01	4,505	0.26
234	0.22	1,293	1.23	1,650	1.57	1,595	1.52	50	0.05	1,165	1.11	5	0.00	430	0.41
30	0.20	255	1.68	220	1.45	215	1.42	5	0.03	175	1.16	—	—	40	0.26
101	0.22	477	1.07	840	1.88	840	1.88	—	—	685	1.53	—	—	155	0.35
40	0.45	221	2.48	145	1.63	145	1.63	—	—	50	0.56	—	—	95	1.07
44	0.62	180	2.54	170	2.40	165	2.33	5	0.07	105	1.48	—	—	60	0.85
10	0.10	91	0.87	110	1.06	105	1.01	5	0.04	80	0.77	—	—	25	0.24
6	0.10	15	0.27	40	0.71	40	0.71	—	—	25	0.45	—	—	15	0.26
1	0.04	14	0.50	55	1.97	40	1.43	15	0.54	25	0.89	—	—	15	0.54
1	0.02	20	0.55	15	0.41	10	0.27	—	—	10	0.27	5	0.14	—	—
1	0.02	20	0.31	55	0.86	35	0.55	20	0.31	10	0.16	—	—	25	0.39
25	0.05	123	0.23	1,010	1.87	1,000	1.85	10	0.02	555	1.03	—	—	445	0.82
—	—	60	0.52	200	1.73	195	1.69	5	0.04	65	0.56	—	—	130	1.13
25	0.06	63	0.15	810	1.91	805	1.90	5	0.01	490	1.16	—	—	315	0.74
105	0.05	539	0.27	2,380	1.20	2,285	1.15	90	0.05	1,755	0.88	5	0.00	530	0.27
30	0.21	92	0.65	145	1.03	145	1.03	—	—	120	0.85	—	—	25	0.18
—	—	8	0.27	5	0.17	5	0.17	—	—	—	—	—	—	5	0.17
12	0.03	88	0.24	590	1.58	590	1.58	—	—	425	1.14	—	—	165	0.44
3	0.02	26	0.15	245	1.42	230	1.33	15	0.09	100	1.10	—	—	40	0.23
17	0.04	82	0.17	600	1.24	590	1.22	10	0.02	450	0.93	—	—	140	0.29
10	0.07	52	0.37	170	1.21	165	1.17	5	0.04	125	0.89	—	—	40	0.28
—	—	22	0.19	60	0.51	55	0.47	—	—	55	0.47	5	0.04	—	—
21	0.07	85	0.28	325	1.08	305	1.02	20	0.06	240	0.80	—	—	65	0.22
5	0.04	31	0.25	115	0.93	110	0.89	5	0.04	90	0.73	—	—	20	0.16
7	0.12	30	0.53	85	1.51	55	0.98	30	0.53	35	0.62	—	—	20	0.36
—	—	23	0.51	40	0.89	35	0.78	5	0.11	25	0.56	—	—	10	0.22
47	0.05	220	0.25	1,030	1.18	1,020	1.17	10	0.01	795	0.91	—	—	225	0.26
12	0.03	66	0.19	370	1.04	370	1.04	—	—	305	0.86	—	—	65	0.18
35	0.08	138	0.33	545	1.28	545	1.28	—	—	425	1.00	—	—	120	0.28
—	—	16	0.17	115	1.21	105	1.11	10	0.10	65	0.69	—	—	40	0.42
268	0.02	936	0.07	13,615	1.03	11,030	0.84	2,475	0.18	8,155	0.62	110	0.01	2,875	0.22
214	0.02	626	0.05	12,660	1.03	10,270	0.84	2,280	0.18	7,585	0.62	110	0.01	2,685	0.22
1	0.00	12	0.04	535	1.71	525	1.68	10	0.03	385	1.23	—	—	140	0.45
1	0.01	4	0.04	140	1.49	130	1.39	10	0.10	90	0.98	—	—	40	0.43
4	0.02	18	0.12	180	1.16	175	1.13	5	0.08	145	0.94	—	—	30	0.19

TABLE B-8.—U.S. Army division artillery, by tactical operation,  
[Rates stated as cases per day]

Tactical operation	Calendar period	Number of U.S. Army divisions	Number of Division days	Artillery Mean strength	Total hit		Killed in action	
					Number	Rates	Number	Rates
VI. All Defensive Lines (including Limited Operations)—(Continued)								
Line GOLDEN (I Corps Defensive Line north of Seoul, halting CCF spring offensive—1951).....	29 Apr-19 May 1951	3	58	3,618	17	0.08	—	—
Line NO NAME (Eighth Army Defensive Line in IX and X Corps, halting CCF spring offensive).....	29 Apr-19 May 1951	3	55	3,234	11	0.06	1	0.00
Line WYOMING—I Corps (Phase Line forward of Line KANSAS, around 38th parallel).....	10 Jun-2 Oct 1951	3	219	3,524	71	0.09	9	0.01
Line WYOMING—IX Corps (Phase Line forward of Line KANSAS, above 38th parallel).....	13 Jun-31 Oct 1951	3	200	3,903	73	0.09	3	0.00
Line KANSAS/HAYS—X Corps (Phase Lines above 38th parallel in X Corps sector).....	15 Jul-4 Oct 1951	1	46	3,586	24	0.14	3	0.02
Line JAMESTOWN (main battle position I Corps sector on western front).....	7 Oct 1951-27 Jul 1953	6	957	3,374	222	0.07	32	0.01
Line MISSOURI (main battle position IX Corps sector on central front).....	23 Oct 1951-27 Jul 1953	6	940	3,507	193	0.06	20	0.01
Line MINNESOTA (main battle position X Corps sector on eastern front).....	16 Oct 1951-27 Jul 1953	5	832	3,696	282	0.09	25	0.01
Defensive Lines (including Limited Operations).....		8	3,451	3,547	1,305	0.10	168	0.01
Line WYOMING—I Corps.....	10 Jun-3 Oct 1951	3	239	3,526	87	0.10	10	0.01
Line WYOMING—IX Corps.....	13 Jun-31 Oct 1951	3	221	3,907	111	0.13	9	0.01
Line KANSAS/HAYS—X Corps.....	15 Jul-15 Oct 1951	1	93	3,840	189	0.53	22	0.06
Line JAMESTOWN.....	7 Oct 1951-27 Jul 1953	6	1,077	3,372	395	0.11	69	0.02
Line MISSOURI.....	23 Oct 1951-27 Jul 1953	6	979	3,505	236	0.07	30	0.01
Line MINNESOTA.....	16 Oct 1951-27 Jul 1953	5	842	3,698	287	0.09	28	0.01
VII. Limited Operations from Defensive Lines....		8	257	3,587	440	0.48	76	0.08
Operations from Line WYOMING.....	26 Jun-3 Oct 1951	5	41	3,753	54	0.35	7	0.05
Line WYOMING—I Corps.....	1 Jul-3 Oct 1951	2	20	3,546	16	0.23	1	0.01
Operation Doughnut—to seize dominating terrain of Sobang mountains.....	1-4 Jul 1951	1	4	3,680	2	0.14	—	—
Raid on DIG and Kwijon-ni.....	3-8 Aug 1951	1	6	3,169	7	0.37	—	—
Attack on Hills 272 and 487.....	18-19 Aug 1951	1	2	3,169	—	—	—	—
Operation Citadel—to move MLR forward to OPLR.....	9-10 Sep 1951	1	2	3,528	—	—	—	—
Operation Clean-up—attempt to sweep enemy from front of position.....	18 Sep 1951	1	1	3,926	—	—	—	—
Operation Clean-up II—to secure railroad running north from Uijongbu.....	29 Sep-3 Oct 1951	1	5	3,973	7	0.35	1	0.05
Line WYOMING—IX Corps.....	26 Jun-21 Sep 1951	3	21	3,950	38	0.46	6	0.07
Operation Cat and Dog—to destroy enemy positions and capture prisoners.....	26-28 Jun 1951	1	3	3,988	5	0.42	—	—
Attack on Hills 682 and 850.....	12-15 Jul 1951	1	4	3,531	5	0.35	1	0.07
Operation Cow Puncher—to secure Phase Line UTAH forward of Line WYOMING.....	2-3 Aug 1951	1	2	3,130	—	—	—	—
Attack on Hills 658 and 851.....	31 Aug-4 Sep 1951	1	5	3,683	12	0.65	3	0.16
Operation Ohio-Sloan—to secure new positions on Line WYOMING.....	8-12 Sep 1951	1	5	4,678	10	0.43	2	0.09
Operation Cleaver—Tank Infantry raid in The Iron Triangle.....	21 Sep 1951	2	2	4,401	6	0.68	—	—
Operations from Line KANSAS/HAYS—X Corps.....	26 Jul-15 Oct 1951	1	47	4,089	165	0.86	19	0.10

Wounded in action				All nonbattle causes				Disease				Nonbattle injury			
CRO cases		Admissions		Incl. CRO cases		Excl. CRO cases		CRO cases		Admissions		CRO cases		Admissions	
Number	Rates	Number	Rates	Number	Rates	Number	Rates	Number	Rates	Number	Rates	Number	Rates	Number	Rates
2	0.01	16	0.07	280	1.33	235	1.12	45	0.21	170	0.81	—	—	65	0.31
—	—	10	0.06	135	0.76	135	0.76	—	—	105	0.59	—	—	30	0.17
21	0.03	41	0.05	935	1.21	750	0.97	175	0.23	600	0.78	10	0.01	150	0.10
15	0.02	55	0.07	775	0.99	620	0.79	150	0.19	480	0.61	5	0.01	140	0.18
7	0.04	14	0.08	115	0.70	110	0.67	—	—	85	0.52	5	0.03	25	0.15
66	0.02	125	0.04	3,135	0.97	2,320	0.72	775	0.24	1,785	0.55	40	0.01	535	0.17
32	0.01	141	0.04	3,090	0.93	2,575	0.78	505	0.15	1,820	0.55	10	0.00	755	0.23
66	0.02	191	0.06	3,340	1.08	2,695	0.87	605	0.20	1,920	0.62	40	0.01	775	0.25
260	0.02	877	0.07	12,345	1.01	9,830	0.80	2,405	0.20	7,260	0.59	110	0.01	2,570	0.21
25	0.03	52	0.06	1,015	1.20	825	0.98	180	0.21	650	0.77	10	0.01	175	0.21
15	0.02	87	0.10	845	0.98	670	0.78	170	0.20	525	0.61	5	0.00	145	0.17
42	0.12	125	0.35	195	0.55	190	0.54	—	—	145	0.41	5	0.01	45	0.13
75	0.02	251	0.07	3,865	1.01	2,725	0.75	900	0.25	2,120	0.58	40	0.01	605	0.17
37	0.01	169	0.05	3,235	0.94	2,700	0.79	525	0.15	1,880	0.55	10	0.00	820	0.24
66	0.02	193	0.06	3,390	1.08	2,720	0.87	630	0.20	1,940	0.62	40	0.01	780	0.25
54	0.06	310	0.34	955	1.04	760	0.83	195	0.21	570	0.62	—	—	190	0.21
4	0.02	43	0.28	150	0.97	125	0.81	25	0.16	95	0.62	—	—	30	0.19
4	0.06	11	0.16	80	1.13	75	1.06	5	0.07	50	0.71	—	—	25	0.35
1	0.07	1	0.07	35	2.38	35	2.38	—	—	26	1.70	—	—	10	0.68
3	0.16	4	0.21	20	1.05	20	1.05	—	—	15	0.79	—	—	5	0.26
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	5	0.71	—	—	5	0.71	—	—	—	—	—	—
—	—	—	—	5	1.27	5	1.27	—	—	—	—	—	—	5	1.27
—	—	6	0.30	15	0.75	15	0.75	—	—	10	0.50	—	—	5	0.25
—	—	32	0.39	70	0.84	50	0.60	20	0.24	45	0.54	—	—	5	0.06
—	—	5	0.42	5	0.42	—	—	5	0.42	—	—	—	—	—	—
—	—	4	0.28	10	0.70	10	0.70	—	—	5	0.35	—	—	5	0.35
—	—	—	—	10	1.60	10	1.60	—	—	10	1.60	—	—	—	—
—	—	9	0.49	10	0.54	5	0.27	5	0.27	5	0.27	—	—	—	—
—	—	8	0.34	25	1.07	25	1.07	—	—	25	1.07	—	—	—	—
—	—	6	0.68	10	1.14	—	—	10	1.14	—	—	—	—	—	—
35	0.18	111	0.58	80	0.41	80	0.41	—	—	60	0.31	—	—	20	0.10

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[Rates stated as cases per day]

Tactical operation	Calendar period	Number of U.S. Army Divisions	Number of Division days	Artillery Mean strength	Total hit		Killed in action	
					Number	Rates	Number	Rates
<b>VII. Limited Operations from Defensive Lines (Continued)</b>								
Line KANSAS.....	26 Jul-5 Sep 1951	1	15	3,699	43	0.77	4	0.07
Attack on Hills 1059, 1100, 1120, and 1179.....	26-30 Jul 1951	1	5	3,403	6	0.35	1	0.05
Battle of Bloody Ridge (Ridge from Hill 900 to 983).....	27 Aug-5 Sep 1951	1	10	3,847	37	0.96	3	0.07
Line HAYS.....	9 Sep-15 Oct 1951	1	32	4,272	122	0.89	15	0.10
Attack on Hill 868.....	9-12 Sep 1951	1	4	4,027	5	0.31	—	—
First battle of Heartbreak Ridge.....	13-20 Sep 1951	1	17	4,267	61	0.84	9	0.12
Second battle of Heartbreak Ridge.....	5-6 Oct 1951	1	2	4,369	9	1.03	2	0.23
Attack on Hills 851, 1120, and adjacent ridges.....	7-15 Oct 1951	1	9	4,369	47	1.19	4	0.10
Operations from Lines JAMESTOWN, MISSOURI, and MINNESOTA.....	16 Oct 1951-24 Jul 1953	7	169	3,407	221	0.38	50	0.09
Line JAMESTOWN—I Corps.....	16 Oct 1951-24 Jul 1953	6	120	3,359	173	0.42	37	0.09
Operation Polecharge—to secure three hill masses on Line.....	16-18 Oct 1951	1	3	3,404	3	0.29	1	0.09
Attack on Hill 199.....	24-30 Oct 1951	1	7	3,404	13	0.55	5	0.21
Defense of Hill 200.....	5-10 Nov 1951	1	6	3,247	11	0.56	—	—
First battle of Porkchop Hill.....	22-25 Nov 1951	1	4	3,801	5	0.33	—	—
Operation Clam-up—cease activity to lure enemy patrols.....	10-16 Feb 1952	2	14	3,534	1	0.02	—	—
Operation Counter—to secure eleven key terrain features on Outpost Line.....	7-25 Jun 1952	1	19	3,301	21	0.33	2	0.03
First battle of Old Baldy.....	26 Jun-17 Jul 1952	1	22	3,169	9	0.13	3	0.04
Second battle of Old Baldy.....	17-22 Jul 1952	1	6	3,083	11	0.59	3	0.16
Third battle of Old Baldy.....	1-4 Aug 1952	1	4	3,439	5	0.36	—	—
Fourth battle of Old Baldy.....	18-21 Sep 1952	1	4	3,405	2	0.15	—	—
Defense of Outpost Kelly.....	18-30 Sep 1952	1	13	3,319	7	0.16	1	0.02
Fifth battle of Old Baldy.....	23-26 Mar 1953	1	4	3,068	18	1.46	2	0.16
Third battle of Porkchop Hill <sup>1</sup> .....	16-18 Apr 1953	1	3	3,163	18	1.90	4	0.42
Vegas.....	28-30 May 1953	1	3	4,323	2	0.15	—	—
Fourth battle of Porkchop Hill.....	6-11 Jul 1953	1	6	3,590	45	2.08	16	0.74
Defense of Outpost Dale and Westview.....	23-24 Jul 1953	1	2	3,590	2	0.28	—	—
Line MISSOURI—IX Corps.....	10 Feb-4 Nov 1952	4	39	3,441	43	0.32	10	0.07
Operation Clam-up—cease activity to lure enemy patrols.....	10-15 Feb 1952	2	12	3,412	1	0.02	—	—
Operation Showdown—to secure Hill 598.....	14-27 Oct 1952	1	14	3,501	31	0.63	6	0.12
Defense of Hill 391.....	24-28 Oct 1952	1	5	3,284	1	0.06	1	0.06
Defense of Outpost Charlie and King.....	28 Oct-4 Nov 1952	1	8	3,476	10	0.36	3	0.11
Line MINNESOTA—X Corps.....	10 Feb-4 Nov 1952	3	10	3,849	5	0.13	3	0.08
Operation Clam-up—cease activity to lure enemy patrols.....	10-15 Feb 1952	1	6	3,565	—	—	—	—
Defense of Heartbreak Ridge area.....	6-7 Sep 1952	1	2	4,018	1	0.12	1	0.12
Defense of Heartbreak Ridge area.....	3-4 Nov 1952	1	2	3,913	4	0.44	2	0.22
VIII. Redeploying and regrouping.....	21 Dec 1950-10 Jan 1951	2	32	3,062	5	0.05	2	0.02
IX. Corps or Army Reserve.....	4 Jul 1950-27 Jul 1953	8	1,234	3,422	215	0.06	25	0.01

<sup>1</sup> Second battle of Porkchop Hill fought by French Battalion.

Wounded in action				All nonbattle causes				Disease				Nonbattle injury			
CRO cases		Admissions		Incl. CRO cases		Excl. CRO cases		CRO cases		Admissions		CRO cases		Admissions	
Number	Rates	Number	Rates	Number	Rates	Number	Rates	Number	Rates	Number	Rates	Number	Rates	Number	Rates
15	0.27	24	0.43	5	0.09	5	0.09	—	—	5	0.09	—	—	—	—
2	0.12	3	0.18	—	—	—	—	—	—	—	—	—	—	—	—
18	0.34	21	0.55	5	0.13	5	0.13	—	—	5	0.13	—	—	—	—
20	0.15	87	0.64	75	0.55	75	0.55	—	—	55	0.40	—	—	20	0.15
2	0.12	3	0.19	5	0.31	5	0.31	—	—	5	0.31	—	—	—	—
13	0.18	39	0.54	40	0.56	40	0.56	—	—	20	0.28	—	—	20	0.28
1	0.11	6	0.69	5	0.57	5	0.57	—	—	5	0.57	—	—	—	—
4	0.10	39	0.99	25	0.64	25	0.64	—	—	25	0.64	—	—	—	—
15	0.02	156	0.27	725	1.26	555	0.96	170	0.30	415	0.72	—	—	140	0.24
10	0.02	126	0.31	530	1.31	405	1.00	125	0.31	335	0.83	—	—	70	0.17
2	0.20	—	—	25	2.45	20	1.96	5	0.49	20	1.96	—	—	—	—
—	—	8	0.34	30	1.26	15	0.63	15	0.63	5	0.21	—	—	10	0.42
1	0.06	10	0.51	95	4.88	50	2.57	45	2.31	45	2.31	—	—	5	0.26
—	—	5	0.33	20	1.32	20	1.32	—	—	20	1.32	—	—	—	—
—	—	1	0.02	45	0.91	35	0.71	10	0.20	30	0.61	—	—	5	0.10
—	—	19	0.30	80	1.28	80	1.28	—	—	75	1.20	—	—	5	0.08
—	—	6	0.09	90	1.29	90	1.29	—	—	80	1.15	—	—	10	0.14
1	0.05	7	0.38	—	—	—	—	—	—	—	—	—	—	—	—
—	—	5	0.36	5	0.36	—	—	5	0.36	—	—	—	—	—	—
—	—	2	0.15	20	1.47	15	1.10	5	0.37	10	0.73	—	—	5	0.37
2	0.06	4	0.09	20	0.47	15	0.35	5	0.12	5	0.12	—	—	10	0.23
2	0.16	14	1.14	35	2.85	15	1.22	20	1.63	5	0.41	—	—	10	0.81
—	—	14	1.48	5	0.53	5	0.53	—	—	5	0.53	—	—	—	—
—	—	2	0.15	20	1.56	10	0.78	10	0.78	5	0.39	—	—	5	0.39
2	0.09	27	1.25	30	1.39	25	1.16	5	0.23	20	0.93	—	—	5	0.23
—	—	2	0.28	10	1.39	10	1.39	—	—	10	1.39	—	—	—	—
5	0.04	28	0.21	145	1.08	125	0.93	20	0.15	60	0.45	—	—	65	0.48
—	—	1	0.02	30	0.74	30	0.74	—	—	15	0.37	—	—	15	0.37
5	0.10	20	0.41	70	1.43	55	1.12	15	0.31	30	0.61	—	—	25	0.51
—	—	—	—	5	0.30	5	0.30	—	—	—	—	—	—	5	0.30
—	—	7	0.25	40	1.44	35	1.26	5	0.18	15	0.54	—	—	20	0.72
—	—	2	0.05	60	1.30	25	0.65	25	0.65	20	0.52	—	—	5	0.13
—	—	—	—	40	1.87	15	0.70	25	1.17	15	0.70	—	—	—	—
—	—	—	—	5	0.62	5	0.62	—	—	5	0.62	—	—	—	—
—	—	2	0.22	5	0.55	5	0.55	—	—	—	—	—	—	5	0.55
—	—	3	0.03	245	2.50	245	2.50	—	—	195	1.99	—	—	50	0.51
41	0.01	149	0.04	4,215	0.99	3,315	0.78	860	0.20	2,540	0.60	40	0.01	775	0.18