

**Table of ceasefire violations as of 18 November 2019<sup>9</sup>**

SMM position	Event location	Means	No.	Observation	Description	Weapon	Date, time
SMM camera in Avdiivka (government-controlled, 17km N of Donetsk)	3-5km ESE	Recorded	1	Projectile	SW to NE	N/K	17-Nov, 20:05
	3-5km SE	Recorded	4	Explosion	Undetermined (also recorded by SMM camera at the DFS)	N/K	17-Nov, 20:06
	3-5km SE	Recorded	11	Explosion	Undetermined (also recorded by SMM camera at the DFS)	N/K	17-Nov, 20:07
	3-5km SE	Recorded	10	Explosion	Undetermined (also recorded by SMM camera at the DFS)	N/K	17-Nov, 20:08
	3-5km SE	Recorded	2	Projectile	WSW to ENE	N/K	17-Nov, 20:13
	3-5km SE	Recorded	4	Projectile	In vertical flight	N/K	17-Nov, 20:13
	3-5km ESE	Recorded	1	Projectile	NNE to SSW	N/K	17-Nov, 20:20
	3-5km ESE	Recorded	6	Projectile	WSW to ENE	N/K	17-Nov, 20:29
	3-5km ESE	Recorded	1	Projectile	NNE to SSW	N/K	17-Nov, 20:30
	3-5km ESE	Recorded	2	Projectile	SW to NE	N/K	17-Nov, 20:30
	3-5km ESE	Recorded	1	Projectile	NNE to SSW	N/K	17-Nov, 20:32
	3-5km ESE	Recorded	1	Projectile	NNE to SSW	N/K	17-Nov, 20:33
	3-5km SE	Recorded	1	Projectile	WSW to ENE	N/K	17-Nov, 20:33
	3-5km SE	Recorded	10	Projectile	WSW to ENE	N/K	17-Nov, 20:45
3-5km SE	Recorded	3	Projectile	W to E	N/K	17-Nov, 20:54	
SMM camera in Chermalyk (government-controlled, 77km S of Donetsk)	3-5km SE	Recorded	7	Projectile	NE to SW	N/K	17-Nov, 18:41
	2-4km SE	Recorded	4	Projectile	NE to SW	N/K	17-Nov, 21:21
	2-4km SE	Recorded	1	Explosion	Airburst	N/K	17-Nov, 21:21
	2-4km SSE	Recorded	4	Projectile	NE to SW	N/K	17-Nov, 22:00
	2-4km SSE	Recorded	3	Projectile	NE to SW	N/K	17-Nov, 22:01
	2-4km SSE	Recorded	1	Projectile	NE to SW	N/K	17-Nov, 22:01
	2-4km SSE	Recorded	1	Explosion	Impact	N/K	17-Nov, 22:01
	2-4km SSE	Recorded	2	Projectile	NE to SW	N/K	17-Nov, 22:02
	2-4km SSE	Recorded	4	Projectile	NE to SW	N/K	17-Nov, 22:11
	2-4km SE	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 22:12
	2-4km SE	Recorded	2	Projectile	NE to SW	N/K	18-Nov, 05:10
	2-4km SE	Recorded	1	Projectile	SW to NE	N/K	18-Nov, 18:07
	2-4km SE	Recorded	2	Projectile	SW to NE	N/K	18-Nov, 18:08
	2-4km SE	Recorded	5	Projectile	N to S	N/K	18-Nov, 18:08
3-5km SE	Recorded	2	Projectile	SW to NE	N/K	18-Nov, 18:28	
SMM camera at Donetsk Filtration Station (15km N of Donetsk)	1-2km S	Recorded	1	Projectile	NW to SE	N/K	17-Nov, 19:24
	1-2km S	Recorded	7	Projectile	NE to SW	N/K	17-Nov, 19:43
	1-2km SSW	Recorded	2	Projectile	E to W	N/K	17-Nov, 19:44
	1-2km SSW	Recorded	7	Projectile	E to W	N/K	17-Nov, 19:45
	1-2km SSW	Recorded	5	Projectile	E to W	N/K	17-Nov, 19:46
	1-2km SSW	Recorded	2	Projectile	ENE to WSW	N/K	17-Nov, 19:52
	1-2km SSW	Recorded	1	Projectile	NE to SW	N/K	17-Nov, 19:52
	1-2km SSW	Recorded	1	Projectile	E to W	N/K	17-Nov, 19:52
	2-4km SSW	Recorded	2	Explosion	Undetermined	N/K	17-Nov, 20:00

<sup>9</sup> The table only includes ceasefire violations directly observed by the SMM and it may include those also assessed to be live-fire exercises, controlled detonations, etc. Details provided – in terms of distance, direction, weapons-type, etc. – are based on assessments provided by monitors on the ground, and are not always necessarily precise. When information is not known (indicated with an “N/K”), the SMM was unable to ascertain such information due to distance, weather conditions and/or other considerations. Ceasefire violations recorded by more than one patrol and assessed to be the same are entered only once.

SMM camera 1.5km NE of Hnutove (government-controlled, 90km S of Donetsk)	1-2km SSW	Recorded	1	Projectile	W to E	N/K	17-Nov, 20:01
	1-2km SSW	Recorded	1	Projectile	W to E (also recorded by SMM camera in Avdiivka)	N/K	17-Nov, 20:02
	1.5-3km SSW	Recorded	7	Projectile	WNW to ESE (also recorded by SMM camera in Avdiivka)	N/K	17-Nov, 20:07
	0.7-1km SSE	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 20:08
	0.7-1km SSE	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 20:10
	0.7-1km S	Recorded	4	Explosion	Undetermined	N/K	17-Nov, 20:10
	1.5-3km SSW	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 20:10
	2-4km SSW	Recorded	10	Projectile	SE to NW	N/K	17-Nov, 20:11
	1.5-3km S	Recorded	2	Explosion	Undetermined	N/K	17-Nov, 20:11
	2-4km SSW	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 20:34
	1.5-2km SSW	Recorded	1	Projectile	ESE to WNW	N/K	17-Nov, 20:52
	1-2km SSW	Recorded	1	Projectile	NW to SE	N/K	17-Nov, 21:36
	0.7-1km S	Recorded	9	Muzzle flash		N/K	17-Nov, 21:39
	0.7-1km S	Recorded	14	Muzzle flash		N/K	17-Nov, 22:02
	0.7-1km S	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 22:14
	2-3km SSW	Recorded	1	Projectile	ESE to WNW	N/K	17-Nov, 22:55
	1-3km SSW	Recorded	1	Explosion	Undetermined (also recorded by SMM camera in Avdiivka)	N/K	17-Nov, 23:58
	2-3km SSW	Recorded	4	Projectile	ESE to WNW	N/K	18-Nov, 00:39
	2-3km SSW	Recorded	4	Projectile	ESE to WNW	N/K	18-Nov, 00:47
	0.7-1km SSE	Recorded	4	Muzzle flash		N/K	18-Nov, 01:01
	2-3km SSW	Recorded	2	Projectile	ESE to WNW	N/K	18-Nov, 01:02
	2-3km SSW	Recorded	3	Projectile	ESE to WNW	N/K	18-Nov, 01:26
	3-5km ESE	Recorded	1	Projectile	SSW to NNE	N/K	17-Nov, 20:03
	3-5km E	Recorded	1	Projectile		N/K	17-Nov, 20:09
	3-5km ESE	Recorded	3	Explosion	Undetermined	N/K	17-Nov, 20:09
	3-5km ESE	Recorded	3	Explosion	Undetermined	N/K	17-Nov, 20:09
	3-5km E	Recorded	2	Explosion	Undetermined	N/K	17-Nov, 20:10
	3-5km SE	Recorded	2	Projectile	NNE to SSW	N/K	17-Nov, 20:17
	3-5km SE	Recorded	7	Projectile	NNE to SSW	N/K	17-Nov, 20:18
	3-5km SE	Recorded	5	Projectile	SSW to NNE	N/K	17-Nov, 20:19
	3-5km SE	Recorded	1	Projectile	NNE to SSW	N/K	17-Nov, 20:19
	3-5km ESE	Recorded	7	Projectile	SSW to NNE	N/K	17-Nov, 20:47
	3-5km ESE	Recorded	4	Projectile	SSW to NNE	N/K	17-Nov, 20:48
	3-5km E	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 20:49
	3-5km E	Recorded	3	Explosion	Undetermined	N/K	17-Nov, 20:50
	3-5km E	Recorded	2	Explosion	Undetermined	N/K	17-Nov, 20:55
	3-5km SE	Recorded	1	Projectile	NNE to SSW	N/K	17-Nov, 20:56
	3-5km ESE	Recorded	2	Explosion	Outgoing	N/K	17-Nov, 20:56
	3-5km ESE	Recorded	2	Projectile	SSW to NNE (subsequent to previous event)	N/K	17-Nov, 20:56
	3-5km E	Recorded	2	Impact	Undetermined (subsequent to previous event)	N/K	17-Nov, 20:56
	3-5km SE	Recorded	6	Projectile	SSW to NNE	N/K	17-Nov, 20:57
3-5km E	Recorded	1	Explosion	Airburst	N/K	17-Nov, 21:23	
3-5km SE	Recorded	3	Projectile	NNE to SSW	N/K	17-Nov, 21:34	

	3-5km E	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 21:35
	2-4km ESE	Recorded	1	Projectile	SSW to NNE	N/K	17-Nov, 21:44
	2-4km ESE	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 21:44
	3-5km ESE	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 21:44
	2-4km E	Recorded	4	Explosion	Undetermined	N/K	17-Nov, 21:55
	3-5km SE	Recorded	4	Projectile	SSW to NNE	N/K	17-Nov, 22:41
	3-5km E	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 22:46
	3-5km ESE	Recorded	3	Projectile	SSW to NNE	N/K	17-Nov, 23:11
	3-5km E	Recorded	2	Explosion	Undetermined	N/K	17-Nov, 23:54
	3-5km E	Recorded	2	Explosion	Undetermined	N/K	18-Nov, 00:14
	3-5km ESE	Recorded	5	Projectile	SW to NE	N/K	18-Nov, 02:18
	3-5km ESE	Recorded	3	Projectile	SW to NE	N/K	18-Nov, 03:33
	3-5km ESE	Recorded	1	Projectile	WNW to ESE	N/K	18-Nov, 03:33
	3-5km ESE	Recorded	20	Projectile	SW to NE	N/K	18-Nov, 03:34
	3-5km ESE	Recorded	4	Projectile	SW to NE	N/K	18-Nov, 03:45
	3-5km ESE	Recorded	19	Projectile	SW to NE	N/K	18-Nov, 03:56
	3-5km ESE	Recorded	1	Explosion	Also recorded by SMM camera in Lomakyne	N/K	18-Nov, 10:50
	3-5km ESE	Recorded	1	Muzzle flash		N/K	18-Nov, 18:15
	3-5km ESE	Recorded	1	Projectile	NNW to SSE	N/K	18-Nov, 18:15
	3-5km ESE	Recorded	4	Projectile	SSW to NNE	N/K	18-Nov, 18:16
	3-5km ESE	Recorded	2	Projectile	NNW to SSE	N/K	18-Nov, 18:16
	3-5km ESE	Recorded	1	Projectile	SSW to NNE	N/K	18-Nov, 18:17
SMM camera at entry-exit checkpoint in Maiorsk (government-controlled, 45km NE of Donetsk)	2-4km ENE	Recorded	1	Illumination flare	In vertical flight	N/K	17-Nov, 23:50
SMM camera at entry-exit checkpoint in Marinka (government-controlled, 23km SW of Donetsk)	2-4km NNE	Recorded	2	Projectile	W to E	N/K	17-Nov, 21:48
SMM camera at entry-exit checkpoint in Pyshchevyk (government-controlled, 84km S of Donetsk)	2-4km ESE	Recorded	3	Projectile	WSW to ENE	N/K	17-Nov, 22:56
	2-4km ESE	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 23:01
	2-4km ESE	Recorded	6	Projectile	WSW to ENE (also recorded by SMM camera in Chermalyk)	N/K	17-Nov, 23:04
	2-4km ESE	Recorded	6	Explosion	Undetermined (also recorded by SMM camera in Chermalyk)	N/K	17-Nov, 23:04
	2-4km ESE	Recorded	5	Projectile	NNW to SSE (also recorded by an SMM camera in Chermalyk)	N/K	17-Nov, 23:06
	2-4km ESE	Recorded	1	Projectile	SSW to NNE (also recorded by SMM camera in Chermalyk)	N/K	17-Nov, 23:12
	2-4km ESE	Recorded	1	Projectile	SSW to NNE (also recorded by SMM camera in Chermalyk)	N/K	17-Nov, 23:14
	2-4km ESE	Recorded	2	Projectile	SSW to NNE (also recorded by SMM camera in Chermalyk)	N/K	17-Nov, 23:18

	2-4km ESE	Recorded	1	Burst	SSW to NNE (also recorded by SMM camera in Chermalyk)	N/K	17-Nov, 23:18
	2-4km ESE	Recorded	2	Projectile	SSW to NNE (also recorded by SMM camera in Chermalyk)	N/K	17-Nov, 23:23
	2-4km ESE	Recorded	3	Projectile	SSW to NNE (also recorded by SMM camera in Chermalyk)	N/K	17-Nov, 23:24
	2-4km ESE	Recorded	2	Projectile	SSW to NNE (also recorded by SMM camera in Chermalyk)	N/K	17-Nov, 23:25
	2-4km ESE	Recorded	1	Projectile	SSW to NNE	N/K	18-Nov, 00:06
SMM camera 1km SW of Shyrokyne (government-controlled, 100km S of Donetsk)	3-5km N	Recorded	6	Projectile	E to W	N/K	17-Nov, 18:24
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 18:36
	3-5km N	Recorded	5	Projectile	ESE to WNW	N/K	17-Nov, 18:43
	3-5km N	Recorded	26	Projectile	E to W	N/K	17-Nov, 18:44
	3-5km N	Recorded	8	Projectile	ESE to WNW	N/K	17-Nov, 18:45
	3-5km N	Recorded	14	Projectile	E to W	N/K	17-Nov, 19:19
	3-5km N	Recorded	4	Projectile	E to W	N/K	17-Nov, 19:21
	3-5km N	Recorded	4	Projectile	E to W	N/K	17-Nov, 19:22
	3-5km N	Recorded	1	Projectile	E to W	N/K	17-Nov, 19:23
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 19:26
	3-5km N	Recorded	1	Muzzle flash		N/K	17-Nov, 19:26
	3-5km N	Recorded	1	Projectile	W to E	N/K	17-Nov, 19:26
	3-5km N	Recorded	4	Projectile	E to W	N/K	17-Nov, 19:35
	3-5km N	Recorded	30	Projectile	E to W	N/K	17-Nov, 19:52
	3-5km N	Recorded	7	Projectile	E to W	N/K	17-Nov, 20:15
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 20:15
	3-5km N	Recorded	3	Projectile	E to W	N/K	17-Nov, 20:16
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 20:16
	3-5km N	Recorded	5	Projectile	E to W	N/K	17-Nov, 20:23
	3-5km N	Recorded	1	Projectile	E to W	N/K	17-Nov, 20:24
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 20:29
	3-5km N	Recorded	9	Projectile	E to W	N/K	17-Nov, 20:42
	3-5km N	Recorded	1	Projectile	E to W	N/K	17-Nov, 20:44
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 20:44
	3-5km N	Recorded	2	Explosion	Undetermined	N/K	17-Nov, 20:49
	3-5km N	Recorded	14	Projectile	E to W	N/K	18-Nov, 02:29
	7-9km N	Recorded	1	Explosion	Undetermined (also recorded by SMM camera in Lomakyne)	N/K	18-Nov, 16:29
	7-9km N	Recorded	1	Projectile	Airburst (also recorded by SMM camera in Lomakyne)	N/K	18-Nov, 16:29
	3-5km N	Recorded	4	Projectile	E to W	N/K	18-Nov, 16:45
	3-5km N	Recorded	3	Projectile	E to W	N/K	18-Nov, 16:46
	3-5km N	Recorded	6	Projectile	W to E	N/K	18-Nov, 16:46
	3-5km N	Recorded	1	Projectile	E to W	N/K	18-Nov, 16:47
	3-5km N	Recorded	3	Projectile	W to E	N/K	18-Nov, 16:47
3-5km N	Recorded	2	Projectile	E to W	N/K	18-Nov, 16:47	
3-5km N	Recorded	2	Explosion	Undetermined	N/K	18-Nov, 16:47	
3-5km N	Recorded	3	Explosion	Undetermined	N/K	18-Nov, 16:50	
7-9km N	Recorded	2	Explosion	Undetermined, also recorded by	N/K	18-Nov, 16:50	



					SMM camera in Lomakyne		
	3-5km N	Recorded	14	Projectile	E to W	N/K	18-Nov, 17:13
	3-5km N	Recorded	2	Projectile	E to W	N/K	18-Nov, 17:22
	3-5km N	Recorded	3	Projectile	E to W	N/K	18-Nov, 17:23
	3-5km N	Recorded	2	Projectile	SW to NE	N/K	18-Nov, 17:27
	3-5km N	Recorded	7	Projectile	W to E	N/K	18-Nov, 17:32
	7-9km NNW	Recorded	1	Explosion	Undetermined (also recorded by SMM camera in Lomakyne)	N/K	18-Nov, 17:56
	7-9km N	Recorded	1	Explosion	Undetermined (also recorded by SMM camera in Lomakyne)	N/K	18-Nov, 18:02
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	18-Nov, 18:02
	3-5km N	Recorded	3	Projectile	W to E	N/K	18-Nov, 18:13
SE edge of Avdiivka (government-controlled, 17km N of Donetsk)	2km SE	Heard	1	Explosion	Undetermined	N/K	18-Nov, 09:23
	2-3km SSE	Heard	1	Explosion	Undetermined	N/K	18-Nov, 13:51
Krasnohorivka (government-controlled, 21km W of Donetsk)	2-3km NE	Heard	1	Explosion	Undetermined	N/K	18-Nov, 11:23
About 1.8km N of Petrivske (non-government-controlled, 41km S of Donetsk)	2.5km SSW	Heard	10	Explosion	Impact (assessed as inside the disengagement area)	N/K	18-Nov, 12:52
2km SW of Pyshchevyk (government-controlled, 84km S of Donetsk)	2-4km ESE	Heard	10	Shot		Small arms	18-Nov, 10:00
	2-4km ESE	Heard	30	Burst		HMG	18-Nov, 10:03-10:05
	2-3km ESE	Heard	5	Shot		Small arms	18-Nov, 13:38-13:40
	2-3km ESE	Heard	10	Burst		HMG	18-Nov, 13:38-13:40
	2-4km ESE	Heard	4	Explosion	Undetermined	N/K	18-Nov, 13:45-13:50
	2-4km ESE	Heard	8	Shot		Small arms	18-Nov, 13:45-13:50
	2-4km ESE	Heard	25	Burst		HMG	18-Nov, 13:45-13:50
2.5km SSE of Lomakyne (government-controlled, 93km S of Donetsk)	2-3km NNE	Heard and saw	2	Explosion	Impact (followed by black smoke)	N/K	18-Nov, 00:00
About 3km SE of Lomakyne (government-controlled, 93km S of Donetsk)	2-3km SE	Heard	1	Explosion	Undetermined	N/K	18-Nov, 12:11
	3-4km E	Heard	6	Shot		Small arms	18-Nov, 12:40
	3-4km E	Heard	1	Explosion	Undetermined	N/K	18-Nov, 12:40
Verkhnoшыrokivske (formerly Oktiabr, non-government-controlled, 85km S of Donetsk)	3-4km SW	Heard	1	Explosion	Undetermined	N/K	18-Nov, 11:08
Pavlopil (government-controlled, 84km S of Donetsk)	2-4km E	Heard	2	Explosion	Undetermined	N/K	18-Nov, 11:35

About 2km E of Bohdanivka (government-controlled, 41km SW of Donetsk)	N/K SSW	Heard	35	Shot	Assessed as outside the Petrivske disengagement area	AGL	18-Nov, 12:32-12:37
	N/K SE	Heard	7	Explosion	Undetermined (assessed as outside the Petrivske disengagement area)	N/K	18-Nov, 11:56
	N/K SSW	Heard	6	Explosion	Undetermined (assessed as outside the Petrivske disengagement area)	N/K	18-Nov, 11:57
	N/K SSW	Heard	2	Burst	Assessed as outside the Petrivske disengagement area	HMG	18-Nov, 11:57
	N/K SSW	Heard	3	Explosion	Undetermined (assessed as outside the Petrivske disengagement area)	N/K	18-Nov, 13:02
	N/K SSW	Heard	1	Explosion	Undetermined (assessed as outside the Petrivske disengagement area)	N/K	18-Nov, 13:13
	N/K SSW	Heard	1	Explosion	Undetermined (assessed as outside the Petrivske disengagement area)	N/K	18-Nov, 14:09
	N/K SSW	Heard	3	Explosion	Undetermined (assessed as outside the Petrivske disengagement area)	N/K	18-Nov, 14:27
	N/K SSW	Heard	1	Burst	Assessed as outside the Petrivske disengagement area	Small arms	18-Nov, 14:27
Svitlodarsk (government-controlled, 57km NE of Donetsk)	3-5km SW	Heard	14	Burst		HMG	17-Nov, 18:40-18:44
	3-5km SW	Heard	12	Burst		Small arms	17-Nov, 19:02-19:05
	3-5km SW	Heard	4	Explosion	Undetermined	N/K	17-Nov, 19:02-19:05
	3-5km SW	Heard	12	Burst		HMG	17-Nov, 19:02-19:05
	3-5km SW	Heard	6	Burst		Small arms	17-Nov, 19:16-19:19
	3-5km SW	Heard	4	Shot		Small arms	17-Nov, 19:16-19:19

3-5km SW	Heard	6	Explosion	Undetermined	N/K	17-Nov, 19:16-19:19
3-5km SW	Heard	6	Burst		HMG	17-Nov, 19:16-19:19
3-5km SW	Heard	3	Explosion	Undetermined	N/K	17-Nov, 19:22
3-5km SW	Heard	5	Burst		HMG	17-Nov, 19:22
3-5km SW	Heard	1	Explosion	Undetermined	N/K	17-Nov, 19:28
3-5km SW	Heard	2	Explosion	Undetermined	N/K	17-Nov, 19:36
3-5km SW	Heard	4	Explosion	Undetermined	N/K	17-Nov, 19:40-19:45
3-5km S	Heard	1	Burst		HMG	17-Nov, 19:47
3-5km SE	Heard	7	Burst		HMG	17-Nov, 20:28
3-5km SE	Heard	18	Burst		HMG	17-Nov, 20:39-20:44
3-5km SE	Heard	3	Explosion	Undetermined	N/K	17-Nov, 20:45
3-5km SE	Heard	3	Burst		HMG	17-Nov, 20:45
3-5km SE	Heard	30	Burst		Small arms	17-Nov, 21:05-21:10
3-5km SE	Heard	12	Burst		HMG	17-Nov, 21:05-21:10
3-5km SE	Heard	1	Burst		Cannon (30mm)	17-Nov, 21:05-21:10
5-7km S	Heard	1	Explosion	Undetermined	N/K	17-Nov, 21:10
3-5km SE	Heard	1	Burst		Small arms	17-Nov, 21:12
3-5km SE	Heard	4	Burst		HMG	17-Nov, 21:25
3-5km SE	Heard	1	Explosion	Undetermined	N/K	17-Nov, 21:27
3-5km SE	Heard	9	Burst		Small arms	17-Nov, 21:34
3-5km SE	Heard	2	Burst		HMG	17-Nov, 21:34
3-5km SE	Heard	2	Explosion	Undetermined	N/K	17-Nov, 21:34-21:37
3-5km SE	Heard	1	Burst		Cannon (30mm)	17-Nov, 21:41
4-7km SE	Heard	5	Explosion	Undetermined	N/K	17-Nov, 21:41-21:44
3-5km SE	Heard	6	Burst		Cannon (30mm)	17-Nov, 21:46-21:50
3-5km SE	Heard	8	Burst		HMG	17-Nov, 21:46-21:50
3-5km SE	Heard	4	Burst		HMG	17-Nov, 22:04
4-6km SE	Heard	8	Burst		Small arms	17-Nov, 22:10-22:14
4-6km SE	Heard	14	Burst		HMG	17-Nov, 22:10-22:14
3-5km SE	Heard	7	Burst		HMG	17-Nov, 22:15
3-5km SE	Heard	2	Explosion	Undetermined	N/K	17-Nov, 22:15
3-5km SE	Heard	3	Burst		Small arms	17-Nov, 22:15
3-5km SE	Heard	5	Burst		HMG	17-Nov, 22:31
3-5km SE	Heard	3	Explosion	Undetermined	N/K	17-Nov, 22:32-22:33
3-5km SE	Heard	25	Burst		HMG	17-Nov, 22:34-22:36
3-4km SE	Heard	8	Explosion	Undetermined	N/K	17-Nov, 22:43
3-5km SE	Heard	41	Burst		HMG	17-Nov, 23:18-23:28
3-5km SE	Heard	6	Explosion	Undetermined	N/K	17-Nov, 23:18-23:28
3-5km SE	Heard	21	Shot		Small arms	17-Nov, 23:20-23:28

	3-5km SE	Heard	51	Shot		Small arms	17-Nov, 23:29
	3-5km SE	Heard	12	Burst		Small arms	17-Nov, 23:29
	2-4km SE	Heard	3	Explosion	Undetermined	N/K	17-Nov, 23:46
	3-4km SE	Heard	2	Explosion	Undetermined	N/K	18-Nov, 11:21
	3-4km SE	Heard	3	Explosion	Undetermined	N/K	18-Nov, 15:12-15:13
	2-4km SE	Heard	9	Explosion	Undetermined	N/K	18-Nov, 15:41-15:43
	2-4km SE	Heard	8	Burst		HMG	18-Nov, 15:41-15:43
	3-5km SE	Heard	67	Burst		HMG	18-Nov, 15:44-15:54
	3-5km SE	Heard	46	Explosion	Undetermined	N/K	18-Nov, 15:44-15:54
	3-5km SE	Heard	139	Burst		Small arms	18-Nov, 15:44-15:54
	3-5km SE	Heard	104	Shot		Small arms	18-Nov, 15:44
	3-5km SE	Heard	20	Shot		Cannon (30mm)	18-Nov, 15:44-15:54
	3-5km SE	Heard	44	Explosion	Undetermined	N/K	18-Nov, 15:55-16:04
	3-5km SE	Heard	33	Burst		HMG	18-Nov, 15:55-16:04
	3-5km SE	Heard	10	Shot		Small arms	18-Nov, 15:55-16:04
	3-5km SE	Heard	14	Burst		Small arms	18-Nov, 15:55-16:04
	3-5km SE	Heard	8	Shot		Cannon (30mm)	18-Nov, 15:55-16:04
	3-5km SE	Heard	8	Burst		HMG	18-Nov, 16:05-16:08
	3-5km SE	Heard	4	Explosion	Undetermined	N/K	18-Nov, 16:05-16:08
	3-5km SE	Heard	2	Shot		Cannon (30mm)	18-Nov, 16:05-16:08
	3-5km SE	Heard	5	Explosion	Undetermined	N/K	18-Nov, 16:19-16:21
SW edge of Novoluhanske (government-controlled, 53km NE of Donetsk)	6-8km NE	Heard	6	Explosion	Undetermined	N/K	18-Nov, 12:51-13:07
About 500m NE of Kamianka (government-controlled, 20km N of Donetsk)	3-4km SE	Heard	25	Burst		HMG	18-Nov, 13:55
SMM camera in Zolote (government-controlled, 60km W of Luhansk)	2-4km ESE	Recorded	1	Projectile	ESE to SE (assessed as outside the disengagement area)	N/K	18-Nov, 17:43
E edge of Stanytsia Luhanska (government-controlled, 16km NE of Luhansk)	4-5km SW	Heard	1	Explosion	Undetermined (assessed as outside the disengagement area)	N/K	17-Nov, 22:10