



Atlantic Council



HIDING IN PLAIN SIGHT

Putin's War in Ukraine

By Maksymilian Czuperski, John Herbst, Eliot Higgins,
Alina Polyakova, and Damon Wilson

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Cover photo credit: Reuters/Marko Djurica. Pro-Russian rebels stand on top of a burnt-out Ukrainian personnel carrier near the village of Novokaterinovka in eastern Ukraine, September 24, 2014.

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ATLANTIC COUNCIL

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PREFACE

The war in eastern Ukraine is a Kremlin-manufactured conflict. The war's toll—6,200 dead, tens of thousands wounded and maimed, and over 1.2 million displaced persons—is the direct result of Russian President Vladimir Putin's efforts to establish control over Ukraine.ⁱ

Weeks after Russia's annexation of Crimea in March 2014, Kremlin-directed Russian military personnel, intelligence operatives, and public relations consultants began to organize a so-called separatist movement to oppose the Ukrainian government by force. With an interim government in Kyiv, this Kremlin-directed operation took control of government buildings and launched an offensive in eastern Ukraine's Luhansk and Donetsk regions. When newly elected President Petro Poroshenko began a successful counter-offensive in June, the Kremlin sent in more sophisticated arms and more soldiers, some from the Chechen Vostok Battalion. When that did not stop the Ukrainian military's advance, in August, the Kremlin sent in regular troops, who inflicted a serious defeat on the Ukrainians. Without Kremlin leadership, money, modern weapons, recruits, and at times cohesive Russian army units, there would be no rebellion, no war, and no occupation of territories in eastern Ukraine.

At the same time, the Kremlin has insistently and consistently denied its military involvement in Ukraine's east—as steadfastly as it denied its military's role in seizing Crimea—until Mr. Putin publically acknowledged his aggression on the peninsula in March 2015.

The evidence that this is a Kremlin-directed war is overwhelming. The initial leaders of the so-called separatists were primarily Russian citizens, many of whom served in Russian intelligence services. Following the downing of Malaysian Airlines Flight 17 over eastern Ukraine on July 17, 2014, a Dutch government investigation of the crash pointed to a Russian-produced surface-to-air missile system (Buk) as the cause of the downing. Prodigious amounts of Russian-made military equipment have been collected from battles in Ukraine's east. Cross-border artillery attacks from Russian to Ukrainian territory have provided cover at key moments of fighting. Russian soldiers on active duty have fought and died in Ukraine only to return to their families in unmarked coffins.

This Atlantic Council report, *Hiding in Plain Sight: Putin's War in Ukraine*, collects and brings to light the facts that the Kremlin is trying to keep in the dark. It exposes the breadth and depth of Russian military involvement in Ukraine's east. All the information in this report is publicly accessible—clear evidence of Mr. Putin's war is literally hiding in plain sight. In the twenty-first century, secret wars can only be fought for so long. It is time for this one to end.

Moscow's aggression in Ukraine has broken the post-Cold War international order. Unless the international community acts assertively, Mr. Putin's revanchist claims and violent policies will not stop in Ukraine. Mr. Putin's Russia is the aggressor—not a mediator at the negotiating table. As ceasefire agreements repeatedly break down, the transatlantic community must take a stand and implement comprehensive policies that will deter Mr. Putin.

We all share a common vision for a Europe whole, free, and at peace, in which Russia finds its peaceful place. But Mr. Putin's war in Ukraine threatens this vision and the international order.

We welcome this report as an important contribution to the understanding of Mr. Putin's actions and intentions and support its overall conclusions. We urge European and North American governments and parliaments to use this clear evidence to inform a clear policy aimed at deterring Russia in its reckless and brutal actions.

Individuals listed below support this report's overall conclusions, but are not responsible for the contents of this report, and therefore not all of the report's analysis and recommendations reflect the views of all signatories. Individuals reviewed this report in their private capacity; affiliations are provided for identification purposes only.

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ⁱ United Nations Office for the Coordination of Humanitarian Affairs (OCHA), *Ukraine: Situation Report No. 37 as of 24 April 2015*, http://reliefweb.int/sites/reliefweb.int/files/resources/ocha_ukraine_situation_report_37-24_april_2015.pdf.

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FOREWORD

For twenty-five years, prominent members of the Atlantic Council community have worked to advance the vision of a Europe whole, free, and at peace in which Russia enjoys its peaceful place. In fact, many in our community aspired to not only a strategic partnership with Russia, but envisioned an alliance between Russia and NATO contributing to international stability and security. Unfortunately, Russian President Vladimir Putin's actions in Ukraine today mock this vision and threaten the international order established at the end of the Cold War.

In hindsight, the West might have recognized and responded to Mr. Putin's assertiveness much earlier. Regardless of the moment of origin, however, it became clear in 2014, after Russia's seizure and annexation of Crimea and its covert war in Ukraine's east, that this major challenge to international security required a decisive and comprehensive response.

The Atlantic Council responded to this challenge in February 2014 by launching the Ukraine in Europe Initiative, with a focus on enhancing Ukraine's security, advancing Ukraine's reform process and economic prospects, and keeping attention on Russian-occupied Crimea. The Council's Initiative also aims to counter Moscow's massive disinformation campaign. If the international community cannot distinguish fact from fiction, or chooses not to do so in public, it is unlikely to coalesce around an effective strategy to support Ukraine and deter Mr. Putin. This report, *Hiding in Plain Sight: Putin's War in Ukraine*, is the Council's contribution to offer clarity.

Russian propaganda frames the Ukraine crisis as a civil war. In reality, the conflict in Ukraine's east is a Kremlin-manufactured war—fueled by Russian-made military equipment, fought by Russian soldiers, and supported by Mr. Putin. To reveal the full extent of Russian military intervention in Ukraine, the Atlantic Council has produced this study, using publicly available information and rigorous analysis.

Courageous Ukrainians and frontline diplomats inspired this effort. This report is a result of the leadership and vision of Council Executive Vice President Damon Wilson and Director of the Council's Dinu Patriciu Eurasia Center and former US Ambassador to Ukraine John Herbst; the dedication and tenacity of Associate Director of the Ukraine in Europe Initiative Dr. Alina Polyakova and social media savvy Special Assistant Maksymilian Czuperski; and the ingenuity of our key partner in this endeavor, Eliot Higgins of Bellingcat. The information documented in this report draws on open source data using innovative socialmedia forensics and geolocation and is informed by team visits Ambassador Herbst led to Ukraine in March and April 2015, during which Maks and Alina also visited the conflict zone.

This effort would not have been possible without the support of those who have stood behind the Council's work on Ukraine, including George Chopivsky and the Chopivsky Family Foundation, Ambassador Julie Finley, Frontera Resources, Ian Ihnatowycz and Marta Witer, Lenna Koszarny and Horizon Capital, James Temerty, the Smith Richardson Foundation, the Ukrainian World Congress led by President Eugene Czolij and Vice President Paul Grod, and the Patriciu family.

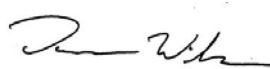
Only after the assassination of Boris Nemtsov, steps from the Kremlin, did the Council team learn about his efforts to expose Mr. Putin's war. While the work Mr. Nemtsov spearheaded remains distinct from the Council's, our teams have subsequently coordinated the release of this report with Mr. Nemtsov's report to reinforce our common message: Mr. Putin led his nation into war against a peaceful neighbor and lied about it. Review and share the facts via #PutinAtWar.

We hope you find this report lively, thoughtful, and provocative.

Frederick Kempe
President and CEO
Atlantic Council



Damon Wilson
Executive Vice President,
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EXECUTIVE SUMMARY

Russia is at war with Ukraine. Russian citizens and soldiers are fighting and dying in a war of their government's own making. President Vladimir Putin continues to deny Russian involvement in the fighting, but the evidence is overwhelming and indisputable. Drawing upon open source information that is "hiding in plain sight," this report provides irrefutable evidence of direct Russian military involvement in eastern Ukraine.

This report is the result of an Atlantic Council Working Group launched to examine direct Russian military involvement in Ukraine. Discussions in March 2015 with senior Ukrainian civilian and military officials in Kyiv, investigative journalists, and a fact-finding mission to eastern Ukraine inform the report and its conclusions. It finds:

- Satellite images confirm the movement of Russian troops and camp buildups along the Ukrainian border.
- Russian training camps stationed along the Ukrainian border are the launching points of Russia's war in Ukraine. These camps are the staging ground for Russian military equipment transported into Ukraine, soon to join the separatist arsenal, and for Russian soldiers mobilized across Russia to cross into Ukraine.
- Commanders order Russian soldiers to conceal the identifying features of military vehicles, remove insignia from uniforms, and travel across the border to join separatist forces in eastern Ukraine.
- A variety of Russian manufactured arms and munitions not used by the Ukrainian military have appeared in the hands of separatists, including shoulder launched surface-to-air missiles (MANPADS), various types of rocket launchers, anti-tank guided missiles, landmines, and various small arms.
- During key offensives, Russian forces in Ukraine have received cover from Russian territory. A combination of satellite data, crater analysis, and open source materials confirms that many attacks originated in Russia, not in the separatist controlled areas of Ukraine.

As a prerequisite for policies that can better deter Russia's aggression, Western political leaders should speak clearly about Russia's war against Ukraine, including Russian forces fighting in Ukraine and the Kremlin's direction of the campaign. To do otherwise buttresses Putin's attempt to obfuscate Russia's

direct role in the conflict. The West must also recognize that Putin has used each lull in combat, now under the cover of the negotiated ceasefire in Minsk, to further reinforce Russian and Russian-backed forces in Ukraine's east and to prepare for the next stage of fighting. Furthermore, as Russia strengthens the capacity and arsenal of the forces in eastern Ukraine, the Kremlin is building its case that forces engaged in any future outbreaks in fighting are indigenous, legitimate Ukrainian forces rather than Moscow's creation.¹

In addition, to counter Russia's disinformation war, the Working Group recommends that Western governments:

- devote substantially more intelligence assets to unveiling and countering Putin's war in Ukraine;
- employ new digital forensic methods and geolocation analysis to collect intelligence that is releasable to the public to complement covert and technical intelligence collection;
- make public, to the maximum extent possible, information documenting Putin's aggressive designs, the presence of Russian troops and equipment in Ukraine, and Russian officials directing the fighting in Ukraine, while protecting intelligence methods as needed;
- share intelligence regarding Russian plans against and Russian forces in and near Ukraine through vetted channels with the Ukrainian government;
- counter, not abet, Russia's hybrid war by speaking clearly, consistently, and publicly about Russia's war against Ukraine;
- increase funding for, and mobilize private investment in, Russian-language independent programs and media that broadcast into Russian-speaking areas to offset the impact of Moscow's propaganda;
- dedicate more intelligence assets to and analysis of Putin's burgeoning hybrid warfare against other neighbors and European nations (including other post-Soviet states and NATO and EU nations); and
- draw on these insights to inform policy decisions (such as extending, not curtailing, sanctions) and to formulate a more comprehensive transatlantic strategy to deter Russia's aggressive actions.

¹ Adrian Karatnycky, "Putin's Project Sparta," *New Atlanticist* (blog), Atlantic Council, November 12, 2014, <http://www.atlanticcouncil.org/blogs/new-atlanticist/putin-s-project-sparta>.



Then-Council of Ministers of Crimea “Chairman” Sergey Aksyonov, then-State Council of the Republic of Crimea “President” Vladimir Konstantinov, Russian President Vladimir Putin, and then-“Mayor” of Sevastopol Alexey Chaly sign a treaty making Crimea part of the Russian Federation on March 18, 2014. *Photo source:* www.kremlin.ru.

BACKGROUND: A KREMLIN-MADE WAR

In the winter of 2014, the Maidan revolution in Kyiv led then-Ukrainian President Viktor Yanukovich to flee Ukraine. As Ukrainians struggled to build a new, democratically elected government, mysterious “little green men” began to appear, first in Crimea and later in eastern Ukraine. To local residents and independent observers, the origins of the “little green men” were far from mysterious; their unmarked Russian military uniforms, Russian regional accents, and Russian-made weapons gave them away at first glance. Even as Russia annexed the Crimean peninsula in March 2014 through an illegal, falsified referendum that was not recognized by international observers, the Kremlin denied its involvement in the “Ukrainian crisis.” But in public statements in Moscow one year after the annexation, Russian President Vladimir Putin practically boasted that Russian troops carried out the Crimean operation.² The international community, while concerned about Russia’s violation of the Budapest Memorandum that promised territorial integrity to Ukraine, did not coalesce around a strong response. Crimea, now formally part of the Russian Federation, was lost to the “little green men” from day one. Russia’s advanced planning for the operation, combined

with its execution at the moment when Ukraine’s new interim leaders were attempting to reestablish authority in Kyiv, presented the new Ukrainian government and the international community with a *fait accompli*.

In Ukraine’s eastern Donbas region, “little green men” appeared in the guise of local “separatists.” While the Kremlin and its sprawling media apparatus maintains that the turmoil in the Donbas is a civil war, Russian leadership was evident from the beginning. For example, the proclaimed President of the “Donetsk People’s Republic” in the spring of 2014 was Aleksander Borodai, a Russian political consultant from Moscow, and his Defense Minister was Igor Girkin, a Federal Security Service (FSB) Colonel also known as “Strelkov.”³

Buying into its own propaganda, the Kremlin believed that providing leadership, money, and weapons would be enough to spark a local rebellion against Kyiv in the Donbas. But the locals did not rise to the task: numerous intercepts from Girkin-Strelkov made clear that he asked Moscow to send more and more “volunteers” to sustain

² “Putin in Film on Crimea: US Masterminds Behind Ukraine Coup, Helped Train Radicals,” *Russia Today*, March 15, 2015, <http://rt.com/news/240921-us-masterminds-ukraine-putin/>.

³ Gabriela Baczynska and Aleksandar Vasovik, “Pushing Locals Aside, Russians Take Top Rebel Posts in East Ukraine,” *Reuters*, July 27, 2014, <http://www.reuters.com/article/2014/07/27/us-ukraine-crisis-rebels-insight-idUSKBN0FW07020140727>.

the rebellion.⁴ The fact that Russian-supplied “volunteers” manned the original demonstrations led to some amusing moments, such as on April 7, 2014, when they seized the opera theater in downtown Kharkiv, proclaiming that they had liberated the city hall.⁵

Still, Girkin-Strelkov's operation initially enjoyed success as the provisional government in Kyiv was slow to react to the violence in the east. From Donetsk and Luhansk, his and other forces moved westward to Slovyansk and Kramatorsk. On May 25, 2014, Ukraine held a presidential election to replace the interim government set up after the flight of President Yanukovich. In a strong show of unity, Ukrainians elected Petro Poroshenko with a majority vote. Leading up to the presidential election, the Kremlin-supported authorities in Luhansk and Donetsk held their own illegal and unmonitored referendums on May 11, after which they declared independence from Ukraine for the Luhansk and Donetsk *oblasts*, or districts.⁶ The Kremlin took the opportunity of the referendum vote to increase its intervention in Ukraine: in late spring, it sent in the Chechen “Vostok” (East) Battalion and amassed troops along the border.⁷

Ukraine's newly formed government under President Poroshenko mustered the military capacity to defend itself against the Kremlin-run campaign in the east and from mid-June began to take back territory, including Slovyansk and Kramatorsk. Moscow responded to the Ukrainian counteroffensive by sending in ever more sophisticated artillery, tanks, and anti-aircraft missiles, including the Buk surface-to-air missile system that was used from Russian-controlled territory in Ukraine to shoot down Malaysian Airlines Flight 17 (MH17) by mistake on July 17, 2014. Numerous independent investigations corroborate Russia's role in this tragedy.⁸

The downing of MH17 compelled Western media and governments to take a serious look at Russia's military involvement in starting and fomenting the war in eastern Ukraine. In response to the MH17 tragedy, the transatlantic community imposed strong economic sanctions on Russia. While these sanctions have taken a considerable toll on the Russian economy, they have not deterred Russia from continuing to supply troops and weapons to eastern Ukraine. The supply of more and more sophisticated weapons did not impede Ukraine's counteroffensive operations through July and into August. Neither did the firing of sophisticated

artillery from Russian territory into Ukraine stop Kyiv's advance. By mid-August, Kyiv was on the verge of encircling Moscow's ever smaller enclaves in Donetsk and Luhansk. At that point, the Kremlin decided to send in approximately four thousand regular army troops.⁹ In a couple of weeks of fierce fighting, the Russian army soundly defeated Ukrainian forces and forced a retreat.

This sharp Russian escalation prompted additional sectoral sanctions from the European Union (EU) and gave impetus to the Minsk negotiations, which led to a ceasefire on September 5, 2014. The ceasefire agreement was signed by representatives of the Ukrainian and Russian governments, separatist leaders, and a representative of the Organization for Security and Cooperation in Europe (OSCE).¹⁰ Despite the ceasefire, the Kremlin continued to send heavy weapons into eastern Ukraine and conducted a military operation to seize Donetsk Airport from Ukrainian forces. They achieved that objective in December.

In the first half of January 2015, following a substantial resupply of heavy equipment from Russia in December, Russian-led forces renewed offensive action aimed at taking the railway hub of Debaltseve. This uptick of fighting prompted a new round of EU diplomacy, which led to a second Minsk ceasefire in February 2015, signed by the same parties as the first ceasefire agreement and brokered by France and Germany. The terms of the second agreement were much more favorable to Moscow than to Kyiv, despite the fact that Moscow's violations of the original Minsk ceasefire enabled it to take over five hundred square kilometers of additional Ukrainian territory.

Moscow's agents immediately broke the second ceasefire in order to gain Debaltseve: the ceasefire went into effect February 15, and Debaltseve was taken on February 18. After that, fighting quieted down and Moscow used this lull to bring in more arms. Starting in late April 2015, Moscow's surrogates have begun to ratchet up the violence once more.

Putin's war in Ukraine is costing Russian lives. According to the most conservative estimates, the war has killed six thousand Ukrainians and Russians.¹¹ As of March 2015, experts estimate that approximately twelve thousand Russian military personnel were present in eastern Ukraine,¹² and

4 Anna Nemtsova, “Putin's Number One Gunman in Ukraine Warns Him of Possible Defeat,” *Daily Beast*, July 25, 2014, <http://www.thedaily-beast.com/articles/2014/07/25/putin-s-number-one-gunman-in-ukraine-warns-him-of-possible-defeat.html>.

5 Echo of Moscow, <http://echo.msk.ru/blog/echomsk/1295362-echo/> (in Russian).

6 “Ukraine Rebels Hold Referendums in Donetsk and Luhansk,” BBC News, May 11, 2014, <http://www.bbc.com/news/world-europe-27360146>.

7 Claire Bigg, “Vostok Battalion, a Powerful New Player in Eastern Ukraine,” Radio Free Europe/Radio Liberty, May 30, 2014, <http://www.rferl.org/content/vostok-battalion-a-powerful-new-player-in-eastern-ukraine/25404785.html>.

8 “Tracking the Trailers: Investigation of MH17 Buk's Russian Convoy,” Bellingcat, May 13, 2015, <https://www.bellingcat.com/news/uk-and-europe/2015/05/13/tracking-the-trailers-investigation-of-mh17-buks-russian-convoy/>.

9 Neil MacFarquhar and Michael R. Gordon, “Ukraine Leader Says ‘Huge Loads of Arms’ Pour in from Russia,” *New York Times*, August 28, 2014, http://www.nytimes.com/2014/08/29/world/europe/ukraine-conflict.html?_r=0.

10 The signatories of the September 5, 2014, ceasefire agreement were: former President of Ukraine, Leonid Kuchma, Russian Ambassador to Ukraine, Mikhail Zubarov, separatist leaders Alexander Zakharchenko and Igor Plotnitsky, and OSCE representative and Swiss diplomat Heidi Tagliavini.

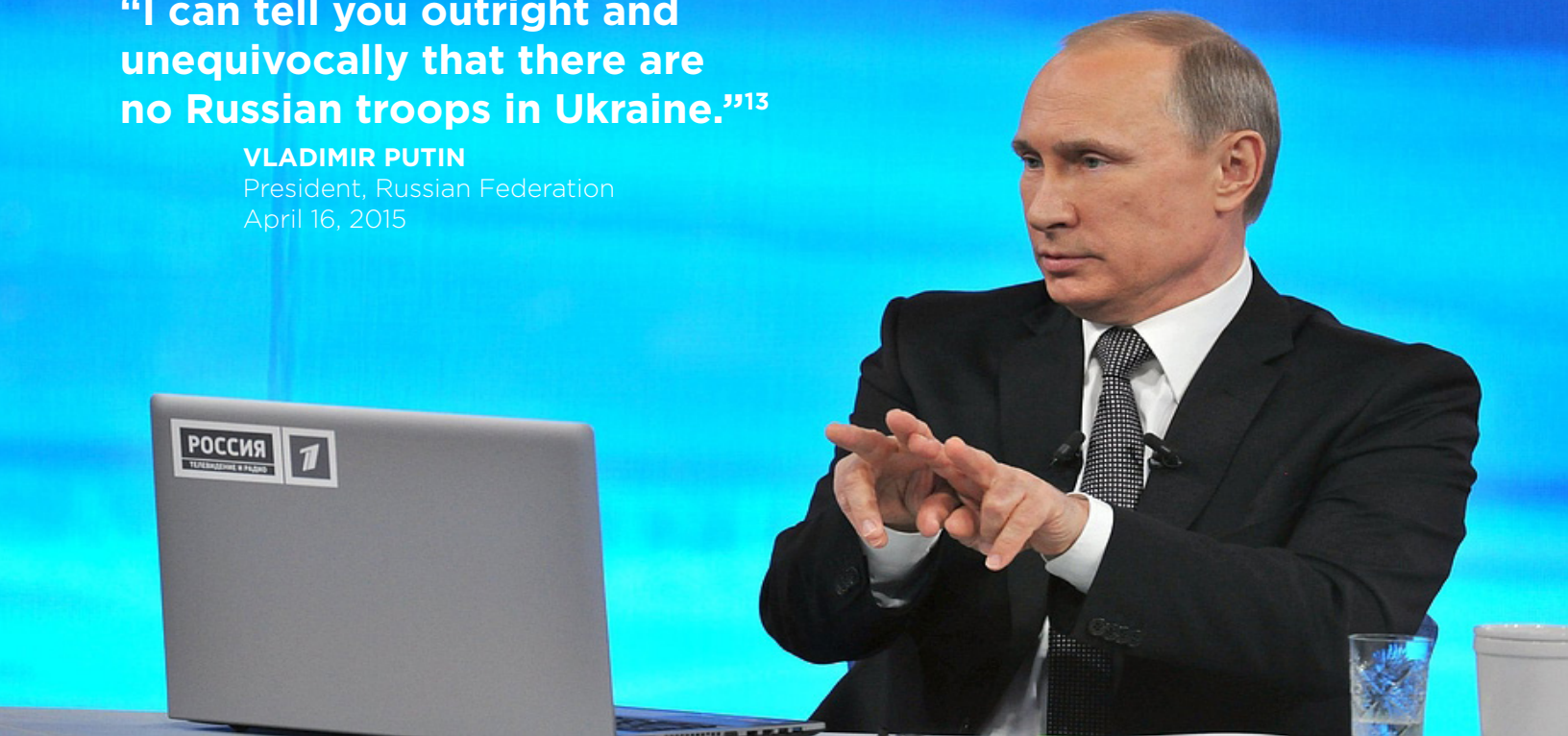
11 Mstyslav Chernov, “Misery, Tuberculosis in Prisons of War-Torn East Ukraine,” Associated Press, April 8, 2015, http://www.nytimes.com/aponline/2015/04/08/world/europe/ap-eu-ukraine-tuberculosis-prisons.html?_r=0.

12 Sabine Siebold and Caroline Copley, “Some 12,000 Russian Soldiers in Ukraine Supporting Rebels: U.S. Commander,” Reuters, March 3, 2015, <http://www.reuters.com/article/2015/03/03/us-ukraine-russia-soldiers-idUSKBN0LZ2FV20150303>.

“I can tell you outright and unequivocally that there are no Russian troops in Ukraine.”¹³

VLADIMIR PUTIN

President, Russian Federation
April 16, 2015



Annual live broadcast program *Direct Line with Vladimir Putin*, April 16, 2015.
Photo source: www.kremlin.ru.

approximately fifty thousand Russian troops were stationed in camps along the Ukrainian border.¹⁴

The Russian government must go to increasingly great lengths to conceal Russian soldiers' deaths in Ukraine from its own population.¹⁵ After all, acknowledging the devastating Russian casualties in eastern Ukraine would mean acknowledging that Russia is at war.

¹³ *Direct Line with Vladimir Putin*, Kremlin, April 16, 2015, <http://en.kremlin.ru/events/president/news/49261>.

¹⁴ Jeremy Bender, "Former NATO Commander: A New Russian Offensive in Eastern Ukraine Is 'Imminent,'" *Business Insider*, April 7, 2015, <http://www.businessinsider.com/new-russian-offensive-in-ukraine-is-imminent-2015-4>.

¹⁵ Alec Luhn, "They Were Never There: Russia's Silence for Families of Troops Killed in Ukraine," *Guardian*, January 19, 2015, <http://www.theguardian.com/world/2015/jan/19/russia-official-silence-for-families-troops-killed-in-ukraine>.

Concealing Kremlin involvement means concealing Russian deaths. But as the casualties continue to climb, keeping up the charade is becoming increasingly difficult for Putin's government. Those who die in eastern Ukraine are not celebrated as heroes, but rather shipped home in body bags by night. Funerals take place in remote areas of the country in the hopes that they will not catch the public's attention.

Putin's hold on power in Russia is dependent on continued high levels of popular support. The way to end Putin's aggression toward Ukraine and further intervention in Europe's East is not through economic sanctions alone; Putin can blame economic pain on the West and avoid the real issue. The West needs to reveal the lies that Putin is telling his own people. Putin's popular support is the base of his house of cards: once that card falls, the whole house will crumble.

RUSSIAN DENIAL OF FACTS

The Russian government and military have repeatedly denied involvement in Ukraine. In August 2014, Russian Defense Ministry spokesman General Major Igor Konashenkov said that United States' evidence of Russian involvement in Ukraine "has no relation to reality," claiming that Russian army units that had passed from Russia into Ukraine were on "tactical training exercises."¹⁶ In November 2014, Konashenkov said the Kremlin had "already stopped paying attention to unsubstantiated statements by NATO's Supreme Allied Commander Europe, General Philip Breedlove, on Russian military convoys he 'observed' allegedly invading Ukraine," accusing Breedlove of spreading anti-Russian "hot air."¹⁷

At a press conference in Budapest, Putin described separatist forces as "people who were yesterday working down in the mines or driving tractors," adding, "I don't think we should get too obsessed about these things."¹⁸

Russian Foreign Minister Sergey Lavrov described satellite images reportedly showing the movement of Russian troops as "just images from computer games," that more "recent accusations are no different," and that "no evidence of an invasion has been presented."¹⁹ The Russian Foreign Ministry has also described US accusations of Russian involvement in Ukraine as a US administration "smear campaign" and has rejected what it claims are "unfounded public insinuations" spread by the US State Department "on a daily basis."²⁰ In

¹⁶ Ibid.

¹⁷ Gabriela Baczyńska and Tsvetelia Tsołova, "Russia Denies NATO Accusations over Troops in Ukraine," Reuters, November 12, 2014, <http://www.reuters.com/article/2014/11/12/us-ukraine-crisis-russia-defence-ministr-idUSKCN01W1L820141112>.

¹⁸ Fiona Hill, "This Is What Putin Really Wants," Brookings, February 24, 2015, <http://www.brookings.edu/research/opinions/2015/02/24-what-putin-really-wants-hill>.

¹⁹ "Remarks and Answers to Questions from the Media by Foreign Minister Sergey Lavrov During a Joint News Conference with the Minister of Foreign Affairs of the Islamic Republic of Iran Mohammad Javad Zarif, Moscow, 29 August 2014," Ministry of Foreign Affairs of the Russian Federation, August 29, 2014, http://www.mid.ru/bdomp/brp_4.nsf/e78a48070f128a7b43256999005bcbb3/d0358d0b7a314fb044257d-460059b785!OpenDocument.

²⁰ "Russia Accuses US of 'Smear Campaign' over Ukraine," AFP, July 25, 2014, <http://news.yahoo.com/russia-accuses-us-smear-campaign-over-ukraine-161007782.html>.

January 2015, Lavrov responded to further accusations by stating, "I say every time: if you allege this so confidently, present the facts. But nobody can present the facts, or doesn't want to. So before demanding from us that we stop doing something, please present proof that we have done it."²¹

"... before demanding from us that we stop doing something, please present proof that we have done it."

SERGEI LAVROV

Foreign Minister, Russian Federation

The proof that Lavrov asks for is out in the open. Russian military forces, weapons, and citizens were active in Ukraine during the annexation of Crimea in February and March of 2014 and at every step of the ongoing war in eastern Ukraine. A year after the annexation of Crimea, Putin publicly admitted that the annexation by Russian military forces was planned well in advance.²²

The forces fighting in eastern Ukraine are not some rag-tag group of "mine workers" and "farmers," as Putin asserts. They are regular Russian soldiers, readied for combat at improvised base camps alongside the Russian-Ukrainian border, backed by a steady flow of arms and equipment and at times supported by the cover of cross-border artillery shelling. Overwhelming proof of each of these forms of Russian involvement in the Ukrainian conflict can be found through open source information and in-depth digital analysis of the evidence.

²¹ Gabriela Baczyńska, "Russia Says No Proof It Sent Troops, Arms to East Ukraine," Reuters, January 21, 2015, <http://www.reuters.com/article/2015/01/21/us-ukraine-crisis-lavrov-idUSKBN0KU12Y20150121>.

²² "Putin Reveals Secrets of Russia's Crimea Takeover Plot," BBC, March 9, 2015, <http://www.bbc.com/news/world-europe-31796226>.

USING DIGITAL FORENSICS TO EXPOSE RUSSIA'S WAR IN UKRAINE

While the Kremlin continues to deny the role of regular Russian forces in Ukraine, Russian soldiers fighting in Ukraine and Ukrainian and Russian civilians on both sides of the war are posting photographs and videos of convoys, equipment, and themselves on the Internet. Satellite imagery captures the movement of Russian troops and camp buildup along the Ukrainian border. These pieces of evidence create an undeniable—and publicly accessible—record of Russian involvement in Ukraine.

Digital forensic techniques involve verifying the locations of where videos and photographs were taken in a process known as “geolocating.”²³ Geolocation differs from “geotagging,” which is the automated process of adding geographical identification data to various media such as photographs and videos. Only a fraction of photographs and videos recorded on smartphones, digital cameras, and tablets that are posted online contain an embedded “geotag” of their location. Geolocation techniques, however, allow an investigator to firmly establish the location of recorded images even without an embedded geotag. Using photographs posted on various social media sites, in combination with satellite imagery and “street view” images from services such as Google Earth and Yandex Maps, investigative geolocation techniques pinpoint the coordinates of where photographs were taken.²⁴ Geolocation is thus a powerful and effective tool for tracking individuals and the images they produce.²⁵

The geolocation methodology used in this report combines multiple sources of open domain information to track the movement of soldiers, vehicles, and cross-border shelling from Russia to Ukraine. All the sources used in this report are publically available to anyone with access to the Internet, and the techniques used are documented throughout. The aspect of Russian involvement in Ukraine with the widest breadth of open source information is the movement of heavy military equipment across the border, with hundreds of videos and photographs uploaded by ordinary Russians and Ukrainians who have witnessed direct Russian support of the hostilities in eastern Ukraine.

23 Many devices with network capability (smartphones, tablets, and computers) use global-positioning software (GPS) for popular applications such as Google Maps. If a user's location services are turned on, when that user takes a photograph or a video, the device assigns a GPS determined location to it, a “geotag.” When these media images are then uploaded to social media and other platforms, the geotag remains embedded in the image and can be identified.

24 Social media sites include YouTube, Twitter, and Russian sites such as VKontakte and Odnoklassniki and local media sources in Ukraine and Russia.

25 Other organizations that frequently use geolocation in their work include Human Rights Watch, Amnesty International, and Storyful.

A STEADY FLOW OF ARMS AND MILITARY EQUIPMENT FROM RUSSIA TO EASTERN UKRAINE

Separatist forces have been relying on a steady flow of Russian supplies, including heavy weapons such as tanks, armored personnel carriers, artillery, and advanced anti-aircraft systems, including the Buk surface-to-air missile system (NATO designator SA-11/17) that shot down Malaysia Airlines Flight 17 in July 2014.²⁶

The map on the right illustrates two cases where the same pieces of uniquely identifiable Russian military equipment have been filmed in both Russia and Ukraine. Using geolocation to pinpoint the location of each vehicle from multiple sources shows that the vehicles are crossing from Russia to Ukraine in spite of the Kremlin's denials.²⁷

2S19 Msta-S is a self-propelled 152 mm howitzer system, which is deployed by both Ukraine and Russia. In July 2014, a video was uploaded to YouTube showing the movement of a military convoy in Rostov-on-Don, Russia, heading west.²⁸ The coordinates were verified through geolocation, using satellite and ground imagery available through a Russian online map service. Later in September 2014, an Al Jazeera news crew filmed the movement of Msta-S system through Novoazovsk in Ukraine, again heading west.²⁹ In both these videos, a particular unit can be seen with a number of distinctive features: the same overall camouflage pattern, white paint blotch on the turret, discoloration in the same spots, and a unique, hand-painted rail cargo marking. Taken together, these features strongly suggest that the same unit is present in both videos, and that the unit would have been transferred across the border.

In another case, a convoy of vehicles was filmed moving through Staraya Stanitsa, Russia in August 2014.³⁰ The location of the video has been verified using overhead satellite imagery and the unique landmarks visible in the video. In the convoy, a BMP-2 infantry fighting vehicle with the painted text “ЛАВИНА”—*lavina*, meaning “avalanche”—can be seen on a trailer. In February 2015, a YouTube channel

26 Eliot Higgins et al., *MH17: Origin of the Separatists' Buk: A Bellingcat Investigation* (2014), <https://www.bellingcat.com/wp-content/uploads/2014/11/Origin-of-the-Separatists-Buk-A-Bellingcat-Investigation1.pdf>.

27 Lesley Wroughton, “More Russian Tanks, Equipment Cross Ukraine Border: U.S. Official,” Reuters, March 10, 2015, <http://www.reuters.com/article/2015/03/10/us-ukraine-crisis-congress-hearing-idUSKBN0M61UB20150310>.

28 YouTube video of military convoy in Rostov-on-Don, <https://www.youtube.com/watch?v=cyr1rwS-YiY>.

29 “Ukraine Rebels Advance towards Mariupol,” Al Jazeera English, September 2014, <https://www.youtube.com/watch?v=ocfXP-lerAY>. This video is no longer viewable in the United States.

30 YouTube video from Staraya Stanitsa, Russia, <https://www.youtube.com/watch?v=CJm5bjM3Z5c>.



FEBRUARY 2015
BMP-2 'Lavina'
in Uglegorsk, Ukraine
48.311252, 38.288002



AUGUST 2014
BMP-2 'Lavina'
in Staraya Stanitsa, Russia
48.350068, 40.272248



SEPTEMBER 2014
Msta-S in Novoazovsk,
Ukraine
47.1275441, 38.0892229



JULY 2014
Msta-S in Rostov-on-Don, Russia
47.262757, 39.660493

Google earth

Image Landsat
© 2015 Google
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
US Dept of State Geographer

Tracking equipment from Russia to Ukraine

Coordinates: (clockwise from top left corner): 48.311252, 38.288002;
48.350068, 40.272248; 47.262757, 39.660493; 47.1275441, 38.0892229.

Map source: Google Earth.

Image source: Bellingcat.³¹

³¹ Bellingcat, Ukraine Conflict Vehicles Tracking Project, <https://bellingcat-vehicles.silk.co/>.



T-72B3 MODERNIZED MAIN BATTLE TANK

Entered service in Russia 2013³²

T-72B modernization, including new sight and fire control system, among other improvements.

Photo source: WikiCommons.³³



KAMAZ-43269 "DOZOR"

Entered service in Russia 2009

Armored reconnaissance and communications vehicle.³⁴

Photo source: RusGuns.com.³⁵



PANTSIR-S1 (SA-22) ANTI-AIR SYSTEM

Entered service in Russia 2012

Modern air defense system, equipped with two dual 30mm autocannons and twelve surface-to-air missiles.

Photo source: KBP.³⁶



2B26 GRAD LAUNCHER ON KAMAZ CHASSIS

Entered service in Russia 2012

Modernized version of the Grad multiple launch rocket system, fitted on KamAZ-5350 chassis.

Photo source: WikiMedia.³⁷

³² Joseph Dempsey, "Russia Deploys Latest Tank Variant to Ukraine Border," Military Balance Blog, IISS, April 17, 2014, <http://www.iiss.org/en/militarybalanceblog/blogsections/2014-3bea/april-7347/russia-deploys-latest-tank-fa72>.

³³ WikiCommons, http://upload.wikimedia.org/wikipedia/commons/6/67/2B26_Grad.jpg.

³⁴ NIISU, <http://www.niissu.ru/2013-05-27-12-43-20/dozor.html> (in Russian).

³⁵ Rus-Guns.com, <http://bit.ly/1bihz8n> (in Russian).

³⁶ KBP, <http://bit.ly/1FG2jxB>.

³⁷ WikiMedia, <http://bit.ly/1I2aTWK>.

associated with the pro-Russian separatists posted a video from Vuhlehirsk, Ukraine, showing combatants sweeping the town. In the video, a BMP-2 with the same painted text is visible, along with other features of the unit, like a painted green area and physical damages, which makes it possible to link the two videos together.³⁸ These two sightings demonstrate that the unit in question moved across the border from Russia to Ukraine.

Through systematic analysis of material from within the open source domain, it is possible to determine the movements of equipment that is not used by Ukrainian armed forces across the border from Russia to Ukraine. Examples of this equipment include (see the case book for more information on this equipment):

- T-72B3 main battle tank;
- Pantsir-S1 (SA-22) anti-air system;
- KamAZ-43269, "Dozor" variant; and
- KamAZ-5350, nicknamed "Grad-K."

Using geolocation methods, each piece of equipment can be pinpointed to its exact location coordinates using a combination of sources. This includes using satellite imagery of the area and matching it with landmarks visible in the media images.

A variety of Russian manufactured arms and munitions not used by the Ukrainian military have appeared in the hands of separat-

³⁸ YouTube video from Vuhlehirsk, Ukraine, https://www.youtube.com/watch?v=e_EDzHcyBlS.

ists groups, including shoulder launched surface-to-air missiles (MANPADS), various types of rocket launchers, anti-tank guided missiles (ATGMs), landmines, and various small arms.³⁹ Some of these arms have been captured by the Ukrainian government, including weapons used exclusively by Russian special forces. This physical evidence was on public display in Kyiv in February and March of 2015.⁴⁰

While it is impossible to give exact figures on how much equipment has been provided to separatists by the Russian government, it is clear that a wide variety of vehicles and arms—used almost exclusively by the Russian military—are in use in eastern Ukraine. Moreover, thousands of trained Russian military forces have been operating and using Russian military equipment.⁴¹ Not only are these pieces of military equipment transferred from Russia to Ukraine, they are also used by Russians, as in the case of the T-72B tanks used by members of the 5th Tank Battalion who departed from the Kuzminsky border camp in Russia in mid-February of 2015 to engage in the Battle of Debaltseve.⁴²

³⁹ Jonathan Ferguson and N.R. Jenzen-Jones, *Raising Red Flags: An Examination of Arms & Munitions in the Ongoing Conflict in Ukraine, 2014* (Australia: Armament Research Services (ARES), November 18, 2014), <http://armamentresearch.com/Uploads/Research%20Report%20No.%203%20-%20Raising%20Red%20Flags.pdf>.

⁴⁰ "Russian Army's Military Equipment Captured by Ukrainian Forces Showcased in New Kyiv Exhibition," *Ukraine Today*, February 21, 2015, <http://uatoday.tv/politics/russian-army-s-military-equipment-captured-by-ukrainian-forces-showcased-in-new-kyiv-exhibition-410910.html>.

⁴¹ Igor Sutyagin, "Russian Forces in Ukraine," RUSI, March 2015, https://www.rusi.org/downloads/assets/201503_BP_Russian_Forces_in_Ukraine_FINAL.pdf.

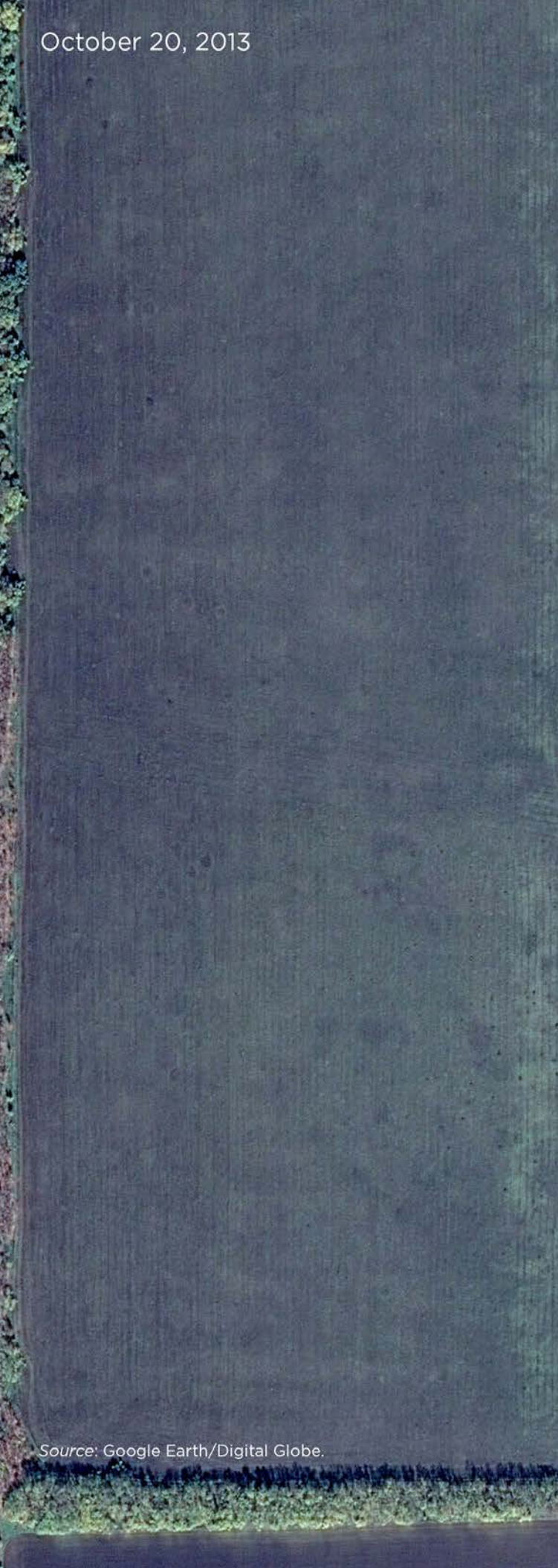
⁴² Kostyuchenko, "We Were Fully Aware of What We Brought Ourselves to and What Could Happen," op cit.

October 20, 2013

October 10, 2014

Kuzminsky Camp

47.409030, 39.2288044



MILITARY VEHICLES AND EQUIPMENT



CAMP WITH TENT CITY

Source: Google Earth/Digital Globe.

BORDER CAMPS: PREPARING FOR COMBAT

Several Russian training camps stationed along the Ukrainian border are the launching points of Russia's war in Ukraine, in plain view for anyone with access to Google Earth or Google Maps. These camps are the gathering points for Russian military equipment transported into Ukraine, soon to join the separatist arsenal, and for Russian soldiers mobilized from the far reaches of the country to cross into Ukraine.

Satellite images show the rapid establishment and expansion of those training sites just days after the annexation of Crimea. A number of these camps were set up alongside Russia's border with Ukraine shortly after the beginning of the war in Donbas. Most of them are in the Rostov and Belgorod oblasts, with clear passage into separatist-held territory. They house thousands of Russian soldiers and pieces of military equipment, including equipment and arms that later appear in Ukraine. From these camps, hundreds of Russian troops have travelled in large convoys into eastern Ukraine. In addition to the satellite images, details of Russian troop deployments on the Ukrainian border can be gleaned from accounts of Russian soldiers who were injured or killed in Donbas and their families.⁴³

Some of these camps served as staging points for cross-border artillery attacks against Ukrainian forces in the summer of 2014. Extensive analysis of artillery craters in Ukraine and firing points near Pavlovka, Russia shows that artillery firing points were staged fewer than two kilometers from a Russian training camp, which is fewer than four kilometers from the Ukrainian border.

Satellite imagery and the first-hand accounts of Russian soldiers show that the camps are launching points of Russia's covert war in Ukraine.⁴⁴

Example: Kuzminsky Camp

The Kuzminsky camp was established only forty-six kilometers from the Ukrainian border and did not exist before 2014. This camp became the site for hundreds of military vehicles, including tanks from the 5th Tank Brigade from Ulan-Ude. The Ulan-Ude tank brigade is stationed in Siberia and was deployed to the Kuzminsky camp in October and November of 2014.⁴⁵

⁴³ Kostyuchenko, "We Were Fully Aware of What We Brought Ourselves to and What Could Happen," op cit.

⁴⁴ Kostyuchenko, "We Were Fully Aware of What We Brought Ourselves to and What Could Happen," op cit.; Dmitry Pashinsky, "I Serve the Russian Federation!" Soldiers Deployed During the Annexation of Crimea Speak," *Meduza*, March 16, 2015, <https://meduza.io/en/feature/2015/03/16/i-serve-the-russian-federation>; TV Rain, http://tvrain.ru/articles/spch_poprosil_minoborony_proverit_zhaloby_kontraktnikov_na_ustnyj_prikaz_o_komandirovke_k_ukrainskoj_granitse-381929/ (in Russian); Jen Psaki, US Department of State, daily press briefing, June 20, 2014, <http://www.state.gov/r/pa/prs/dpb/2014/06/228103.htm#UKRAINE>.

⁴⁵ Irakly Komakhidze, "News of Deployment the 5th Tank Brigade of the Russian Eastern Military District to the Ukrainian Border," *BurkoNews*, November 30, 2014, <https://burkonews.info/news-deployment-5th-tank-brigade-russian-eastern-military-district-ukrainian-border/>.



Photo: The Kuzminsky camp in September 2014, with dozens of trucks and military vehicles lined up. In the satellite photos, similar formations of vehicles can be seen throughout the camp, though the positions of the vehicles were not constant throughout the fall and winter months of 2014 to 2015.

Source: Instagram of Denis Porublev.⁴⁶

Coordinates: 47.387850, 39.230453.

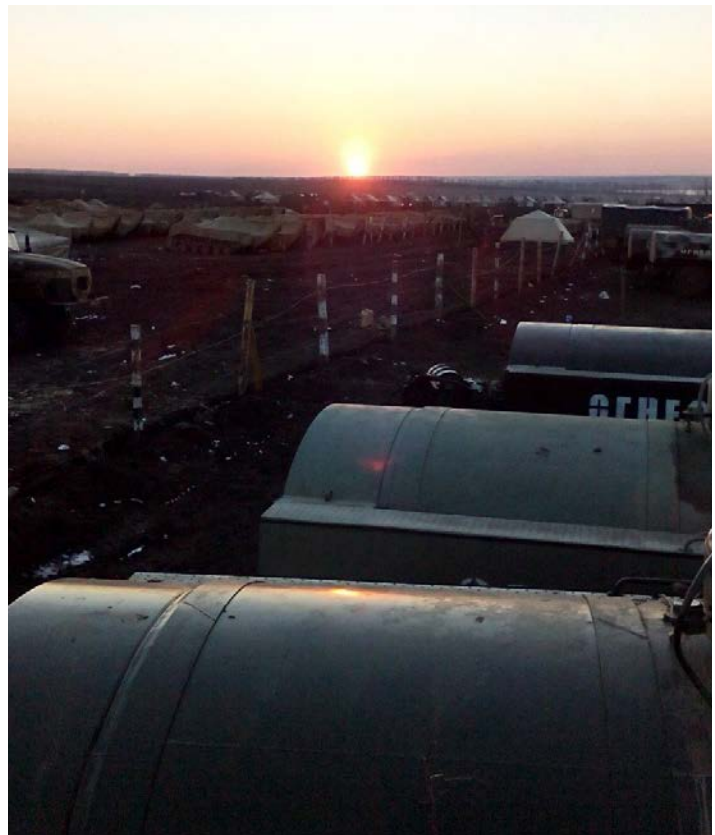


Photo: The Kuzminsky camp at sunset, captured by soldier Mikhail Krylov. In this photo, dozens of tents, military vehicles, trucks, and fuel tanks are visible.

Source: VKontakte page of Mikhail Krylov.⁴⁷

Coordinates: 47.411287, 39.231931.

⁴⁶ Instagram, <https://instagram.com/p/sMuPTjrKZ1/> (archived: <https://archive.is/2irvo>).

⁴⁷ VKontakte, http://vk.com/id292076054?z=photo292076054_356325104%2Fphotos292076054/ (archived: <https://archive.is/bvOKd>).

HIDING IN PLAIN SIGHT: Putin's War in Ukraine

One of the tank operators deployed to this base on active duty was Bato Dambayev, who fought in Debaltseve with other members of his brigade after departing from the Kuzminskiy camp (for a full profile of Dambayev, see p. 16).⁴⁸ The contributions of Dambayev and other Russian soldiers who were stationed at the Kuzminsky camp were key in the Ukrainian army's defeat in Debaltseve in mid-February of 2015, just after the second Minsk ceasefire accords were signed.

⁴⁸ Kostyuchenko, "We Were Fully Aware of What We Brought Ourselves to and What Could Happen," *op cit*.

RUSSIAN TROOPS IN UKRAINE

On March 2, 2015, US Army Europe Commander Ben Hodges estimated that twelve thousand Russian soldiers, including “military advisers, weapons operators, and combat troops” are active in eastern Ukraine.⁴⁹

There have been hundreds, likely thousands, of Russian citizens who have voluntarily crossed the border into Ukraine on their own accord. Putin has confirmed this, and many eager Russians even filled out online applications to join the separatist ranks—that is how easy it is to become a separatist fighter in Ukraine.⁵⁰

What the Russian government denies is that regular Russian soldiers are fighting and dying throughout eastern Ukraine. However, the presence of Russian soldiers on Ukrainian territory has become undeniable following the steady stream of coffins returning to Russia under the label “Cargo 200.” A series of exposé reports from local Russian news outlets, and a number of cases in which Russian soldiers accidentally revealed their presence in Ukraine on social media, confirm that the regular Russian military is active in Ukraine.⁵¹

Both Western and Russian journalists have uncovered the troubling details of active Russian soldiers who have died or suffered serious injuries in Ukraine.⁵² These reports include not only eyewitness accounts and photographs of Russian soldiers in Ukraine, but also interviews with the grief-stricken parents whose sons died fighting among the so-called “local separatists” in eastern Ukraine.⁵³

49 Sabine Siebold and Caroline Copley, “Some 12,000 Russian Soldiers in Ukraine Supporting Rebels: U.S. Commander,” Reuters, March 3, 2015, <http://www.reuters.com/article/2015/03/03/us-ukraine-russia-soldiers-idUSKBN0LZ2FV20150303>.

50 Andrew E. Kramer, “Russians Find Few Barriers to Joining Ukraine Battle,” *New York Times*, June 9, 2014, http://www.nytimes.com/2014/06/10/world/europe/russians-yearning-to-join-ukraine-battle-find-lots-of-helping-hands.html?_r=0. Some examples include: Novorossia, <http://novorossia.su/join> (in Russian); Antimaidan.info, http://antimaydan.info/2014/06/vstupaj_v_narodnoe_opolchenie_donbassa_100956.html (in Russian); Newsli.ru, <http://www.newsli.ru/news/ussr/politika/11091> (in Russian); VKontakte, https://vk.com/topic-67059574_29521374 (in Russian).

51 RBK, <http://top.rbc.ru/politics/02/10/2014/542c0dcfcb20f5d-06c1d87a> (in Russian); *Kommersant*, <http://www.kommersant.ru/doc/2671088> (in Russian); TV Rain <http://tvrain.ru/soldat/> (in Russian); *Pskovskaya Guberniya*, http://gubernia.pskovregion.org/number_706/00.php (in Russian); Kostyuchenko, “We Were Fully Aware of What We Brought Ourselves to and What Could Happen,” op cit.

52 Alec Luhn, “Russian Soldiers Have Given Up Pretending They Are Not Fighting in Ukraine,” *Vice*, March 31, 2015, <https://news.vice.com/article/russian-soldiers-have-given-up-pretending-they-are-not-fighting-in-ukraine>.

53 Alec Luhn, “They Were Never There: Russia’s Silence for Families of Troops Killed in Ukraine,” *Guardian*, January 19, 2015, <http://www.theguardian.com/world/2015/jan/19/russia-official-silence-for-families-troops-killed-in-ukraine>; Sam Masters, “Ukraine Crisis: Russian Mothers of Killed and Captured Soldiers Ask ‘Why Are Our Sons Fighting in Ukraine?’,” *Independent*, August 31, 2014, <http://www.independent.co.uk/news/world/europe/ukraine-crisis-russian-mothers-of-killed-and-captured-soldiers-ask-why-are-our-sons-fighting-in-ukraine-9701805.html>; Tatyana Volskaya and Claire Bigg, “‘He Was Just a Boy’—Russian Mother Grieves for Son Killed in Ukraine,” *Radio Free Europe/Radio Liberty*, April 23, 2015, <http://www.rferl.org/content/russia-son-killed-ukraine-mother-grieves/26651995.html>.

Russian soldiers enter Ukraine from nearby border camps. As described in numerous interviews with Russian soldiers who have fought in Ukraine, commanders will order soldiers to conceal the identifying features of military vehicles, remove insignia from uniforms, and finally travel across the border to join separatist forces in eastern Ukraine.⁵⁴ There are also reports of Russian soldiers quitting the Russian army out of fear of being sent to fight in Ukraine under pressure from commanding officers.⁵⁵

“... Russian soldiers are fighting and dying in large numbers in eastern Ukraine.”

ALEXANDER VERSHBOW

Deputy Secretary General, NATO⁵⁶

Despite an orchestrated campaign from the Russian government, the coffins arriving from Ukraine cannot be hidden. The following incidents have been confirmed through investigative journalism by independent Russian and Western media outlets:

- In mid-August, the 76th Guards Air Assault Division of Pskov lost a number of its young soldiers in Ukraine.⁵⁷
- Eleven deaths from the 18th Motorized Infantry Brigade, unit 27777, were confirmed just between August 9 and 13, two in Ukraine and nine during supposed “exercises.”⁵⁸
- A Russian tank operator from the 5th Tank Brigade of Ulan-Ude was located in a burn recovery unit in Rostov after suffering grave injuries when firing against Ukrainian soldiers in Debaltseve.⁵⁹
- Nine soldiers who quit the Kantemirovskaya division were mentioned in an exchange of letters between Viktor Miskovets, the Head of the Human Resources Department of Russia’s Western Military District, and Valentina Melnikova, who runs the Alliance of Soldiers’ Mothers Committees, a nongovernmental group based in Moscow.⁶⁰

54 “Russian Soldiers Quit over Ukraine,” Reuters, May 10, 2015, <http://www.dailymail.co.uk/wires/reuters/article-3075397/Russian-soldiers-quit-Ukraine.html>.

55 Ibid.

56 “Russian Soldiers ‘Dying in Large Numbers’ in Ukraine—NATO,” BBC, March 5, 2015, <http://www.bbc.com/news/world-europe-31747754>.

57 *Slon*, <http://slon.ru/fast/russia/v-pskove-proshli-zakrytye-pokhorony-mestnykh-desantnikov-1147710.xhtml> (in Russian).

58 TV Rain, http://tvrain.ru/articles/sovet_po_pravam_cheloveka_peredal_dozhdju_kopiju_obraschenija_v_sk_s_imenami_propavshih_soldat-374887/ (in Russian).

59 Kostyuchenko, “We Were Fully Aware of What We Brought Ourselves to and What Could Happen,” op cit.

60 “Russian Soldiers Quit over Ukraine,” Reuters, May 10, 2015, <http://www.dailymail.co.uk/wires/reuters/article-3075397/Russian-soldiers-quit-Ukraine.html>.

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These soldiers were not simply volunteers, but active duty Russian soldiers acting under their superiors' orders (see the case book for methodology, additional information, and examples).

Soldier Profile 1. Bato Dambayev 37th Motorized Infantry Brigade

Shortly after the signing of the Minsk II agreements, what appeared to be separatist forces routed the Ukrainian army and took the city of Debaltseve, a key central location linking the railways between Luhansk and Donetsk.⁶¹ These forces contained some separatist soldiers, but the reason for the overpowering victory was a combination of enlisted Russian soldiers and their heavy machinery, including the 5th Tank Brigade from Ulan-Ude, Buryatia⁶² and the 37th Motorized Infantry Brigade from Kyakhta, Buryatia.

Bato Dambayev is one soldier from the 37th Motorized Infantry Brigade and returned home to Buryatia after participating in the fierce fighting in the Debaltseve warzone.

Before fighting in Ukraine, Bato Dambayev trained at a large camp near the Russian city of Kuzminka, just like Dorzhi Batomunkuyev, the Buryat soldier of the 5th Tank Brigade who gave a now infamous interview with the Russian independent newspaper *Novaya Gazeta* detailing his involvement in Debaltseve.⁶³ In his interview, Batomunkuyev specifically mentioned that contract soldiers from Kyakhta joined him when crossing the border to fight in Debaltseve.⁶⁴

Like many other soldiers of the 5th Tank Brigade and the 37th Motorized Infantry Brigade, Dambayev photographed himself⁶⁵ with a Siberian Husky puppy at the Kuzminsky camp.⁶⁶ Additionally, he traveled to the nearby city of Taganrog with other soldiers during his free time, while deployed near the base.⁶⁷ However, they did not stay too long in these camps, as they eventually departed for Ukraine in February to deal a decisive defeat to the Ukrainian forces near Debaltseve.

Journalists in Debaltseve noticed large concentrations of soldiers identifying as Buryats in Debaltseve in mid-February—not a common sight in an eastern Ukrainian warzone.⁶⁸ Numerous photographs were taken of these soldiers with a

61 Neil Buckley, Roman Olearchyk, and Courtney Weaver, "Fierce Battle for Debaltseve Ends in Ukraine Withdrawal" *Financial Times*, February 18, 2015, <http://www.ft.com/cms/s/0/470b14da-b785-11e4-981d-00144feab7de.html>.

62 Kostyuchenko, "We Were Fully Aware of What We Brought Ourselves to and What Could Happen," op. cit.

63 Ibid.

64 Ibid.

65 VKontakte, http://vk.com/batohadambaev?z=photo225117519_353995097%2Fphotos225117519 (archived: <https://archive.is/KRbF2>); <http://cs624031.vk.me/v624031519/21313/zlUT-3vRAYws.jpg> (archived: <https://archive.is/Xm7Om>).

66 <https://wp4553-flywheel.netdna-ssl.com/wp-content/uploads/2015/03/husky5.jpg>; <https://wp4553-flywheel.netdna-ssl.com/wp-content/uploads/2015/03/husky3.jpg>; <https://wp4553-flywheel.netdna-ssl.com/wp-content/uploads/2015/03/husky2.jpg>; <https://wp4553-flywheel.netdna-ssl.com/wp-content/uploads/2015/03/husky1.jpg>.

67 VKontakte, https://vk.com/batohadambaev?z=photo225117519_349461910%2Fphotos225117519 (archived: <https://archive.is/PHKbR>) Located on the "Depaldo Stone Steps" in Taganrog.

68 *Kommersant*, <http://www.kommersant.ru/doc/2671088> (in Russian).



Photo: Bato with a Siberian husky puppy at the Kuzminsky Camp, where he trained before fighting in the Battle of Debaltseve in mid-February. Numerous other members of the 5th Tank Brigade and 37th Motorized Infantry also photographed themselves with these puppies, which lived at the Kuzminsky camp over the winter of 2014 to 2015.⁶⁹

Source: VKontakte profile of Bato Dambayev.⁷⁰

Coordinates: 47.407863, 39.228522.

tank and gear on, claiming to be from Buryatia, often near tanks close to Vuhlehirsk.⁷¹

The Russian soldier deleted the photograph shortly after posting it. But other Internet users made numerous archived copies⁷² and took screenshots of the image, and Google cached pages still show the above photo as his profile picture.⁷³

Since fighting in Debaltseve, Bato has returned to his wife and two-year-old son in Buryatia. On March 31, the soldier re-posted a story from Russian news outlet *Lenta.ru* that reports on how Buryat soldiers serving in the Russian military fought in the battle of Debaltseve.⁷⁴

69 For photos of other soldiers with puppies, see <https://wp4553-flywheel.netdna-ssl.com/wp-content/uploads/2015/03/husky5.jpg>; <https://wp4553-flywheel.netdna-ssl.com/wp-content/uploads/2015/03/husky3.jpg>; <https://wp4553-flywheel.netdna-ssl.com/wp-content/uploads/2015/03/husky2.jpg>; and <https://wp4553-flywheel.netdna-ssl.com/wp-content/uploads/2015/03/husky1.jpg>.

70 VKontakte, http://vk.com/batohadambaev?z=photo225117519_353995097%2Fphotos225117519 (archived: <https://archive.is/KRbF2>) and <http://cs624031.vk.me/v624031519/21313/zlUT3vRAYws.jpg> (archived: <https://archive.is/Xm7Om>).

71 Twitter, https://twitter.com/aa_borodulin/status/569039488921538560.

72 VKontakte itself has not deleted it: https://pp.vk.me/c621930/v621930519/146ef/vTWAi_lLkKwK.jpg <https://archive.is/D0Zgv>, <https://archive.is/Xkqwo>, and <https://archive.is/OIU02>. Note that he used to use the pseudonym "David," but has since changed it to his real name, Bato.

73 VKontakte, <http://hghltd.yandex.net/yandbttm?mode=inject&url=http%3A%2F%2Fvk.com%2Fbatohadambaev&tld=com&lang=ru&la=1425825792&text=%D0%B4%D0%B0%D0%B2%D0%B8%D0%B4%20%D0%B4%D0%B0%D0%BC%D0%B1%D0%B0%D0%B5%D0%B2&l-10n=en&mime=html&sign=45775c858eaac099d538277d3903a60a&key-no=0> (archived: <https://archive.is/bzXsV>).

74 VKontakte, http://vk.com/wall225117519_650 (archived: <https://archive.is/xH1VU>).

CARGO 200: HIDING RUSSIA'S DEAD

Russian soldiers like Tumanov, who were killed after crossing into Ukraine to fight, return home in zinc coffins under the designation "Cargo 200," indicating that the soldiers were killed in action.⁷⁵ Russian government officials have refused to publicly acknowledge these soldiers' deaths. Instead, they often lie by claiming that these soldiers died during exercises at training camps near the Ukrainian border.

The Russian government's secrecy shows the importance of hiding the truth about the human toll of the Kremlin's involvement in eastern Ukraine from Russian citizens. According to a comprehensive list published by the nongovernmental organization Open Russia, at least 273 Russian soldiers, including both conscripts and mercenaries (*kontrak-*

tniki), have died while fighting in eastern Ukraine.⁷⁶ A report by Boris Nemtsov, a prominent Putin critic and former First Deputy Prime Minister under Russian President Boris Yeltsin, on Russian involvement in the war in Ukraine was published posthumously on May 12, 2015, and put the number of deceased Russian soldiers at 220.⁷⁷

⁷⁵ "Ukraine Crisis: Russian 'Cargo 200' Crossed Border—OSCE," BBC, November 13, 2014, <http://www.bbc.com/news/world-europe-30039004>.

⁷⁶ Open Russia, <https://openrussia.org/post/view/1772/> (in Russian). The list of names was originally published on December 22, 2014. The most recent update to this list was completed on April 1, 2015.

⁷⁷ Open Russia, <https://openrussia.org/s/tmp/files/Putin-War1.pdf> (in Russian).

Photo: Bato Dambayev near a checkpoint in the eastern city limits of Vuhlehirsk, Ukraine, a city near Debaltseve where Bato and other Russian soldiers fought in mid-February.

Source: Dambayev added this photograph of himself as his profile picture on VKontakte on February 23, 2015.

Coordinates: 48.308729, 38.300529 (camera pointing northwest).



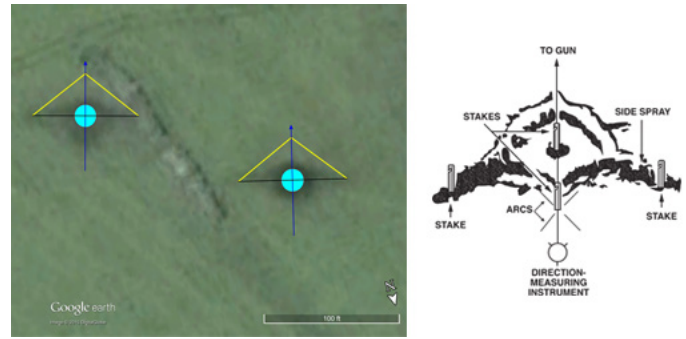
CROSS-BORDER SHELLING

During key offensives, Russian forces in Ukraine have received cover from shelling from Russian territory. In the summer of 2014, the Ukrainian Border Service and the National Security and Defense Council reported more than 120 artillery attacks from Russia.⁷⁸ Despite Russian government denials, with a combination of satellite data, crater analysis, and open source materials, one can establish that many of these attacks originated in Russia and not in the separatist controlled areas of Ukraine.

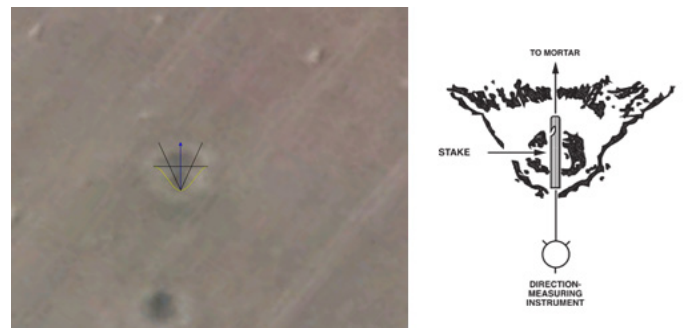
Using satellite map imagery of craters left behind by artillery shells in Ukraine, it is possible to determine attack trajectories and origins.⁷⁹ From satellite imagery, researchers located and examined artillery impact crater fields from artillery fire on a crater-by-crater basis.

The satellite images from eastern Ukraine show two main types of craters, low-angle fuse quick craters (with distinctive “side spray” areas projecting diagonally from a central crater) and high-angle shell craters (triangular-shaped craters that spread outwards toward the origin of fire):

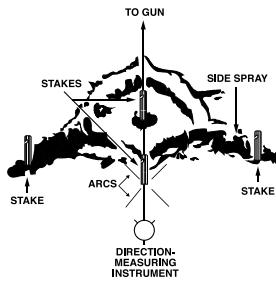
The research team then created templates for both types of craters and used these to mark and measure the angle of craters visible on Google Earth satellite map imagery. The measurements were then combined to find the average angle of all measured craters in a crater field, which was then used to identify launch sites.



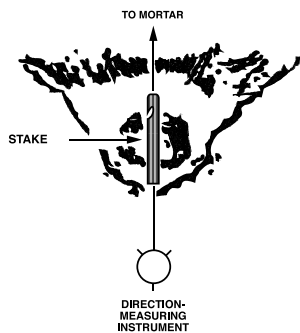
Low-angle fuse quick craters (e.g., low-angle artillery or Multiple Rocket Launcher Systems fire).
Source: Google Earth/Digital Globe.



High-angle shell craters (e.g., mortars, high-angle Multiple Rocket Launcher Systems fire).
Source: Google Earth/Digital Globe.



Low-angle fuse quick craters⁸⁰



High-angle shell craters⁸¹

78 The Ukrainian government reports were collected by Bellingcat in a database: <https://docs.google.com/spreadsheets/d/1FxrMBTanKcVff6g-cljr-kZSkwlfY8GnikejdbCOh3RQ/edit?usp=sharing>.

79 Pablo Gutierrez, Paul Torpey, and Bellingcat, “How Digital Detectives Say They Proved Ukraine Attacks Came from Russia,” *Guardian*, February 17, 2015, <http://www.theguardian.com/world/2015/feb/17/ukraine-russia-crossborder-attacks-satellite-evidence>.

80 GlobalSecurity.org, “Appendix J: Crater Analysis and Reporting,” http://www.globalsecurity.org/military/library/policy/army/fm/6-50/Appj.htm#fig_3.

81 GlobalSecurity.org, “Appendix J: Crater Analysis and Reporting,” http://www.globalsecurity.org/military/library/policy/army/fm/6-50/Appj.htm#fig_6.

82 DTEK, <http://www.dtek.com/ru/media-centre/press-releases/details/v-dtek-sverdlovanratsit-v-rezultate-boevikh-dejstvij-obestocheni-dve-shakhtoplosshadki> (in Russian); DTEK, [http://web.archive.org/web/20150210143935/http://www.dtek.com/ru/media-centre/press-releases/details/v-dtek-sverdlovanratsit-v-rezultate-boevikh-dejstvij-obestocheni-dve-shakhtoplosshadki#](http://web.archive.org/web/20150210143935/http://www.dtek.com/ru/media-centre/press-releases/details/v-dtek-sverdlovanratsit-v-rezultate-boevikh-dejstvij-obestocheni-dve-shakhtoplosshadki#.VNoYQixcpjA).VNoYQixcpjA (archived) (in Russian); http://www.gazeta.ru/social/news/2014/07/16/n_6315585.shtml (in Russian).



Photo: Map of firing sites near Gukovo.
Source: Google Earth/Digital Globe.

these six attacks led to five separate origin locations: four in the Russian Federation and one near Chervonopartyzansk, Ukraine, which is close to the border.

On July 17, 2014, a series of videos were shared on YouTube and VKontakte showing an attack with Multiple Launch Rocket Systems (MRLSs). The attack occurred on July 16, 2014 in the vicinity of Gukovo, Russia. Four videos containing geotags filmed in different locations in and around Gukovo showed the launch of rockets, and two of these videos showed burning after the launch of the rockets.

All of the calculated trajectories can be traced to five separate firing positions, with maximum differences of three hundred meters at a shelling distance of fifteen kilometers. Every one of these—with the exception of the position near Chervonopartyzansk, Ukraine, which is close to the border—is within the territory of Russia.

Following the attacks, a Russian journalist visited Gukovo and spoke to the locals. The townspeople confirmed that the attacks originated from the field identified in the video and satellite imagery analysis.⁸³ The journalist also visited the launch site and discovered clear signs of military activity, including large numbers of red endcaps from 122 mm artillery rockets. This type of end-cap is used by Russian 9M22U, 9M22S, 9M43, and 9M522 122 mm rockets in the BM-21 Grad and Tornado multiple rocket launchers.

Cross-border attacks served as cover for the renewed military incursion in the summer of 2014. Attacks originating in border towns like Gukovo allowed Russian forces operating inside Ukraine to reverse the tide of the conflict when the Ukrainian military was making headway. On the verge of defeat, Russian forces turned the tide to recapture a large amount of territory, including Slovyansk and Donetsk (see the casebook for additional examples and methodology).

⁸³ Slon, http://slon.ru/world/kak_by_voyna_reportazh_s_ukrainskoy_granitsy-1137926.xhtml (in Russian).

POLICY RECOMMENDATIONS

In April of 2014, the Kremlin launched a hybrid war in Ukraine's east, sending operatives to organize and run it: Moscow political consultant Aleksandr Borodai as President of the Donetsk People's Republic and FSB Colonel Girkin-Strelkov as Defense Minister. The Kremlin provided financing, arms, volunteer fighters, and regular troops. Using its control of the Russian media, the Kremlin also launched a massive disinformation campaign to persuade the Russian people and the outside world that Ukraine's east is the venue of a civil war.

On the whole, Moscow has enjoyed success in setting the terms of the narrative for the Ukrainian conflict: international media typically refer to the separatists in Ukraine as if they are a distinct party to the conflict rather than an instrument of the Kremlin. When the Ukrainian government or even Western governments discuss the presence of Russian weapons or soldiers in the east, the media present their statements and then the Russian denial as if they were of equal value, but they are not. To wit, Putin and Russian officials denied that their troops were involved in the seizure of Crimea until Putin bragged about orchestrating the annexation in a film commemorating the Crimean operation.⁸⁴

Western leaders often contribute to this problem. Many exhibited a lack of clarity in their own words, avoiding references to Russia's war against Ukraine or referring to the so-called separatists as if they were independent Ukrainian actors. Furthermore, Western governments have been slow to recognize the grave danger posed by the Kremlin's avowedly revisionist foreign policy. Moscow is seeking to overturn the peace settlement that ended the Cold War, and it has conducted wars against two of its neighbors, Georgia in 2008 and Ukraine today, to achieve that objective.

⁸⁴ Carol J. Williams, "In Film, Putin Justifies Russia's Seizure of Crimea Last Year," *Los Angeles Times*, March 15, 2015, <http://www.latimes.com/world/europe/la-fg-russia-putin-crimea-20150315-story.html>.

As a result of the failure to appraise the nature of the threat, major Western governments are not devoting the necessary resources, including intelligence assets, to the war in Ukraine. With this in mind, the Working Group recommends that Western governments:

- devote substantially more intelligence assets to unveiling and countering Putin's war in Ukraine;
- employ new digital forensic methods to complement traditional covert, technical, and open source methods;
- make public, to the maximum extent possible, information documenting Putin's aggressive designs, the presence of Russian troops and equipment in Ukraine, and Russian officials directing the fighting in Ukraine, while protecting intelligence methods as needed;
- share intelligence regarding Russian plans against and Russian forces in and near Ukraine through vetted channels with the Ukrainian government;
- counter, not abet, Russia's hybrid war by speaking clearly, consistently, and publicly about Russia's war against Ukraine;
- increase funding for, and mobilize private investment in, Russian-language independent programs and media that broadcast into Russian speaking areas to offset the impact of Moscow's propaganda;
- dedicate more intelligence assets to and analysis of Putin's burgeoning hybrid warfare against other neighbors and European nations (including other post-Soviet states and NATO and EU nations); and
- draw on these insights to inform policy decisions (such as extending, not curtailing, sanctions) and to formulate a more comprehensive transatlantic strategy to deter Russia's aggressive actions.

CASEBOOK

Section 1. Russian Military Equipment in Use in Ukraine

Social media is a critical source of information regarding movements of military equipment in Ukraine and in the vicinity of the Ukrainian border with Russia. The sources include both international services like Instagram, as well as regional services such as VKontakte, often called "Russia's Facebook." Most often, the material is submitted by ordinary people who encounter military equipment and share pictures out of general interest. Supporters of the separatists and the Russian Federation have also launched their own propaganda news channels on social media, which yield valuable information on the equipment used.

T-72B3 Tanks

T-72B3 sightings have been registered in Ukraine since the fall of 2014, but some of the clearest footage of the tanks has come from pro-Russian separatist supporter and British blogger Graham Phillips. His video, from the time of the Debaltsevo offensive, contains some of the clearest evidence of these modernized main battle tanks in Ukraine.⁸⁵ The self-reported description of the video makes reference to Debaltsevo, and geolocation yields a strong possible match in the village of Sanzharivka, ten kilometers north of Debaltsevo.

Dozor Armored Vehicles

Several sightings of the Dozor armored reconnaissance and communications vehicles have also been collected from both sources supporting the separatists and from videos uploaded by locals. Several of the sightings can be geolocated to the Luhansk area, with two additional sightings further east, in the town of Krasnodon near the border with Russia. The base vehicle KamAZ-43269 (with designation BPM-97), among others, is used by the Russian Border Guard and has been exported to Azerbaijan and Kazakhstan, but the Dozor⁸⁶ variant with advanced electronics has been specifically designed and equipped for the Armed Forces of the Russian Federation and is not known to have been exported.⁸⁷ Dozor vehicles with similar camouflage patterns as seen in Ukraine are known to have been operated by the 4th Military Base in South Ossetia.⁸⁸

85 Graham Phillips, "Updates (#17) Leaving NAF Positions by Debaltsevo Today," YouTube, February 15, 2015, <https://www.youtube.com/watch?v=rkbVnpEbVwY>.

86 "New Photograph Shows Russia Still Supplying Militants with Military Hardware," UNIAN, January 4, 2015, <http://www.unian.info/society/1028814-new-photograph-shows-russia-still-supplying-militants-with-military-hardware.html>.

87 NIISU, <http://www.niissu.ru/2013-05-27-12-43-20/dozor.html> (in Russian).

88 LiveJournal, <http://twtower.livejournal.com/434042.html?thread=9849978> (in Russian).

Pantsir-S1 Air Defense System

The distinctive-looking Pantsir-S1 close range air defense system has been captured on pictures and video in early 2015 by local residents in Luhansk as well as Makiivka, east of Donetsk. Exploration of the border region in Russia's⁸⁹ Rostov oblast with search tools specialized for finding geotagged social media content has also revealed that these systems have been deployed in the vicinity of Ukraine.⁹⁰ Russian soldiers posting pictures of the systems on their social media accounts have corroborated this assessment.

Grad-K Rocket System

Another example of uniquely Russian equipment is a modernized Grad multiple launch rocket system on a KamAZ-5350 chassis, also nicknamed "Grad-K." A YouTube account supporting the separatists posted a video in January 2015, showing several Grad systems firing a volley of rockets.⁹¹ After the initial volley fired in the video, the camera is aimed down while a vehicle exits the formation. When the camera is raised again, a Grad-K system can be seen driving out of the area, before the older Ural-mounted Grad systems begin firing volleys. The video can be reliably geolocated to the Kirovskiy district in Donetsk, using the buildings, landmarks, and visible signs. It is notable that the firing location is inside the city, at an apparent commercial property in the immediate vicinity of residential areas.

89 Nicholas de Larrinaga, "Russian TOS-1 and Pantsyr-S1 Systems Reported in East Ukraine," IHS Jane's Defence Weekly, February 4, 2015, <http://www.janes.com/article/48685/russian-tos-1-and-pantsyr-s1-systems-reported-in-east-ukraine>.

90 EchoSec and Yomapic are tools used for locating geotagged content.

91 Youtube, <https://www.youtube.com/watch?v=UXSyU3ais08>.

May 8, 2013

Pavlovka Camp
47.939519, 39.846468

Google earth
Image © 2015 DigitalGlobe.

1000 ft



August 31, 2014

CAMP SITE NEAR PAVLOVKA



ARTILLERY FIRING
POSTION



STANISLAV TARASOV'S
ODNOKLASSNIKI FILE



Google earth
Image © 2015 DigitalGlobe.

Source: Google Earth/Digital Globe.

1000 ft



Section 2. Russian Training Camps on Ukraine's Border

Starting in 2014, the Russian military began rapidly constructing massive training camps only a few kilometers from the Ukrainian border. This fact is supported by before and after satellite imagery comparisons and by hundreds of photographs from soldiers' social media profiles. Taken together, this evidence irrefutably confirms the existence and development of such camps and shows that they serve as launching pads for Russia's war against Ukraine. Two of these camps, near the Russian border towns of Kuybyshevo and Pavlovka, staged artillery attacks from Russian to Ukrainian territory, while a third near the town of Kuzminka housed hundreds of Russian soldiers before they fought in key battles in Ukraine.

This camp was established only forty-six kilometers from the Ukrainian border and did not exist before 2014. Ever since, it has become the site for hundreds of military vehicles, including tanks from the 5th Tank Brigade from Ulan-Ude, Siberia, which was deployed to the site in October and November of 2014. Many of the unit's members would later be found in Debaltseve.

Case 1: Pavlovka Camp

Coordinates: 47.939519, 39.846468

The Pavlovka training camp was established only two kilometers from the Ukrainian border and became the site for dozens of military vehicles. Satellite images from April 2013 show that this base did not exist then but was built up following the Euromaidan protests.



Photo: Pavlovka Camp.

Source: Stanislav Tarasov's Odnoklassniki file, captioned "At the border with Ukraine," posted on June 18, 2014.

Coordinates: 47.936203, 39.834042, facing east toward the Pavlovka Camp.⁹²

⁹² This photograph was posted to Tarasov's social media profiles on VKontakte, OK.ru, and Instagram. He deleted the photograph off of some of these services but reposted the image onto his VKontakte profile in December. The caption on OK.ru was "At the border with Ukraine," while on Instagram it was "Just like BATTLEFIELD 3." No caption was supplied for the image on VKontakte. See http://vk.com/stanislavbest?w=wall8311148_1496 (in

The 7th Airborne Division Unit 54801 was deployed to the Pavlovka base in June 2014. Photographs uploaded by an active member of this battalion and local residents confirm that this battalion, among others, were at the Pavlovka base in the summer, at the same time as the rapid expansion of the base. The Grad launchers that conducted artillery strikes against Ukrainian positions in July 2014 were located approximately one kilometer west of the Pavlovka training camp.

Case 2. Kuybyshevo Camp

Coordinates: 47.815116, 38.867638

This camp was established only three kilometers from the Ukrainian border and became the staging site for numerous artillery attacks. Since the beginning of the Ukrainian crisis, this base has grown from nothing to a large base with active heavy artillery. The firing positions for the Grad launchers that conducted the July 2014 artillery strikes against Ukrainian territory were just west of the town of Kuybyshevo.

A Russian soldier given the pseudonym "Arkady" told the independent Russian news outlet Meduza about his time in the Russian military in 2014, including a trip to the camps outside of Kuybyshevo, where he delivered shells to an artillery firing range:⁹³

There, along the border between Russia and Ukraine, stood our soldiers, a whole unit. They were living in field camps divided into cordoned-off areas near the villages Russkoye and Kuybyshevo, and the town Kamensk-Shakhtinsky. They lied to the locals, saying the military was conducting training exercises. But people aren't fools, and they understood what was going on.

... I still remember how one night I drove up to one of the units stationed in Kuybyshevo. The ground crew unloaded the ammunition and the artillerymen immediately loaded it into their weapons and fired! Then they did it again. And again! When a Grad missile is fired, it's very frightening and very beautiful, especially at night."

There are many pictures of soldiers at this camp firing artillery shells in the direction of Ukraine. Additionally, many soldiers from the 291st Artillery Brigade photographed themselves at artillery firing sites near military camps between Kuybyshevo and the Ukrainian border in the summer of 2014.⁹⁴ The dates and location of these artillery attacks near Kuybyshevo align very closely to the dates (July 21 to 26, 2014) and locations (south and west of Kuybyshevo in the Rostov oblast) of artillery attacks revealed by the US State Department on July 27, 2014.⁹⁵

Russian) and archived link <https://archive.is/XOxCO> (in Russian). Discussions of the image he posted on Instagram, which incorrectly geotagged his location as Ukraine, can be found at <http://evilmilker.livejournal.com/9385.html> (in Russian); Reddit, "Soldier Takes Selfie as Russian Regular Army Enters East Ukraine," http://www.reddit.com/r/MilitaryPorn/comments/2ak4ln/soldier_takes_selfie_as_russian_regular_army/.

⁹³ Dmitry Pashinsky, "I Serve the Russian Federation! Soldiers Deployed during the Annexation of Crimea Speak," *Meduza*, March 16, 2015, <https://meduza.io/en/feature/2015/03/16/i-serve-the-russian-federation>.

⁹⁴ BBC, http://www.bbc.co.uk/russian/russia/2014/07/140725_tr_soldier_ukraine_vkontakte (in Russian).

⁹⁵ "Satellite Images Show Russia Firing Into Ukraine: U.S. Government," NBC News, staff writer, and Tim Stelloh, Associated Press, July 27, 2014, <http://www.nbcnews.com/storyline/ukraine-plane-crash/satellite-images-show-russia-firing-ukraine-u-s-government-n166166>.

August 8, 2013

Kuybyshevo Camp
47.815116, 38.867638

Google earth

Image © 2015 DigitalGlobe



August 15, 2014



CAMP SITE

Google earth

Image © 2015 DigitalGlobe

Source: Google Earth/Digital Globe.



Section 3. Russian Soldiers in Ukraine

The Russian military is sending its soldiers across the border to mix with Russian-instigated separatist forces in Ukraine.

Once in eastern Ukraine, these soldiers are no longer considered Russian; rather they are told to refer to themselves as “local defense forces,” aiding the separatist soldiers with additional manpower and Russian equipment. In addition to Bato Dambayev, two more soldiers, Anton Tumanov and Leonid Kichatkin, profiled in this report represent the routine process of how Russian soldiers train in “exercises” near the Ukrainian border, cross covertly into Ukraine, and fight against Ukrainian soldiers.

Soldier Profile 2. Anton Tumanov Russian 18th Motorized Brigade, Unit 27777

Tumanov was sent to Ukraine while on active duty in the Russian military in August 2014. He perished on August 13, 2014, in Snezhnoe, Ukraine after crossing the border on August 11, 2014.

Life before the War

Prior to joining the Russian military, Anton frequently voiced his concerns about the state of the local economy in his hometown of Kozmodemyansk, Russia. He saw no alternative to joining the military, even knowing the danger of being sent to fight in eastern Ukraine. As his mother said:

Where can you work here in Kozmodemyansk? There are only two factories left. In May he told me “Mom, I’m going to the army.” I tried to persuade him to wait with that idea. “God forbid, they’ll send you to Ukraine,” I told him,” she recalls. “He told me the army wouldn’t be sent to Ukraine. He said, “I need money. I’m not going to a war. I’m going to a job. There is no other job anyway.”⁹⁶

His mother did not want him to join the army, but Anton went nonetheless.⁹⁷

Training for Combat

While at a training camp near the Ukrainian border, Anton’s commanders gave the order on August 11, 2014: turn in your phones, take off identifying features from your uniform, mask the unique markers on military equipment, and cross into Ukraine. Those who refused were “insulted and threatened by the commanders.”⁹⁸ The twenty-year-old entered Ukraine with over a thousand others and a large column of military equipment, and his smaller group arrived in Snezhnoe late on August 12, 2014.



Photo: Tumanov with his fiancée Natasha Chernova in June 2014, before he left for service.⁹⁹

Source: Tumanov’s VKontakte page.

Coordinates: 56.3453311, 46.5708947 (estimated).



Photo: Tumanov on the grounds of his camp near the Ukraine border before his deployment to Ukraine.

Source: Tumanov’s VKontakte page.¹⁰⁰

Coordinates: 48.320520, 40.099180.

⁹⁶ *Novaya Gazeta*, <http://www.novayagazeta.ru/society/65075.html> (in Russian).

⁹⁷ *Ibid.*

⁹⁸ *Ibid.*

⁹⁹ Chernova told *Novaya Gazeta* and Anton talked to her in late July, in which he said that he would soon be leaving for Ukraine to fight “in the role of *opolchentsy*,” a term that refers to local separatist fighters in eastern Ukraine. See <http://www.novayagazeta.ru/society/65075.html> (in Russian).

¹⁰⁰ VKontakte, https://vk.com/tyman_antoxa?z=photo140456238_334848101%2Fphotos140456238 (archived: <https://archive.is/qOaZM>).



Photo: Snezhnoe, Ukraine. August 13, 2014. The last known picture of the group before the deadly shelling. Robert Artyunyan (second from right) and Anton Tumanov (far right) died on August 13. Rolan Ramazanov, the soldier in the middle, shared this image online on August, 26, 2014.¹⁰¹

Source: *Novaya Gazeta*.¹⁰²

Coordinates: 48.058296, 38.757780 (estimated).¹⁰³

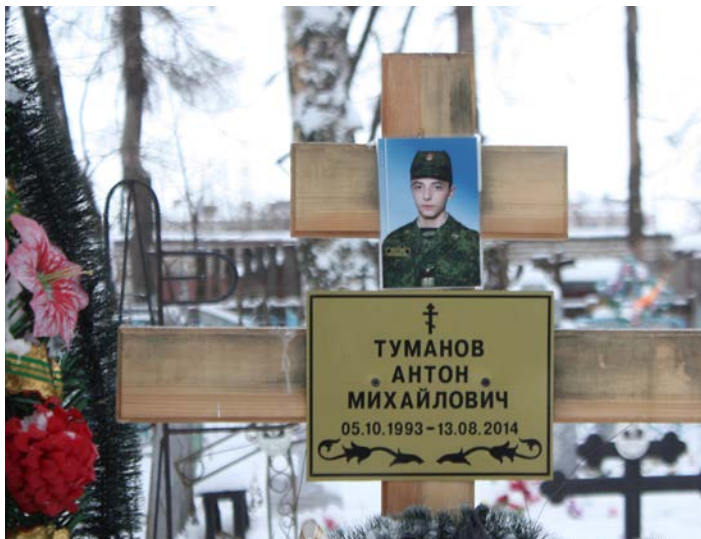


Photo: Tumanov's grave in his home town of Kozmodemyansk, four hundred miles east of Moscow, Russia.

Source: Tom Parfitt, *Telegraph*.¹⁰⁴

¹⁰¹ The exact location of this photograph is unknown, but it was taken somewhere in Snezhnoe—likely at or near the Khimmash factory, where an artillery strike killed Anton. See *Novaya Gazeta*, http://www.novayagazeta.ru/storage/c/2014/09/01/1409580145_413509_31.jpg.

¹⁰² *Novaya Gazeta*, http://www.novayagazeta.ru/storage/c/2014/09/01/1409578904_547636_54.png.

¹⁰³ *Ibid*.

¹⁰⁴ Tom Parfitt, "Secret Dead of Russia's Undeclared War," *Telegraph*, December 27, 2014, <http://telegraph.co.uk/news/worldnews/europe/russia/11314817/Secret-dead-of-Russias-undeclared-war.html>.

Deployment to and Death in Snezhnoe

Anton Tumanov and his fellow unit member Robert Artyunyan documented their arrival in Snezhnoe on August 13—the same place where, twenty-seven days earlier, the Buk system that likely shot down MH17 was spotted hours before the crash.

Numerous eyewitnesses on August 13 report seeing a convoy moving through Torez and Snezhnoe, specifically noting a BTR-80 (an armored vehicle) and men with "white bands"¹⁰⁵ on their arms and legs. Not coincidentally, Tumanov and his fellow soldiers were photographed with white bands and a BTR-80a in Snezhnoe. Only hours after the photograph was taken, local social media reports and videos described how the Khimmash factory was hit by an artillery strike from the Ukrainian military.¹⁰⁶ This strike killed Tumanov and Artyunyan. Rolan Ramazanov, a Russian soldier from unit 27777 (pictured in middle of photograph) who survived the attack, described it to Reuters:

I was in the BTR. The hatches were open, and as a result—[I suffered] a concussion and minor loss of hearing. Robert and Anton were about two-three steps from the BTR [that I was in]. They just didn't manage to get away. Robert died on the spot. They gave medical help to Anton. He died on the operating table, said Rolan, having returned home to the Krasnodar Krai to recover from his injury.¹⁰⁷

Along with Artyunyan, Tumanov died on August 13, 2014 in Snezhnoe. He is buried in his hometown of Kozmodemyansk, Russia, over a thousand kilometers from Snezhnoe, Ukraine. According to the official documentation of his death, reported in the *Telegraph* report and elsewhere, Tumanov died "carrying out responsibilities of military service at a point of temporary deployment of military unit 27777."¹⁰⁸

Soldier Profile 3. Leonid Kichatkin Russian 76th Airborne Division, Unit 74268

Like Anton Tumanov, Leonid Kichatkin died in August 2014 while fighting in eastern Ukraine, under direct orders of his commanders in the Russian military. The authorities went to great lengths to cover up his death.

Before Ukraine

Leonid Kichatkin was a Sergeant in the Russian Airborne Troops. He lived with his wife, Oksana, and children in Pskov, where he was stationed for his military service. In late July 2014, Ukraine was close to defeating separatist forces as it retook territory, but the separatists were seemingly miraculously reinvigorated. In mid-August, Oksana would speak to her husband for the last time, as he and other Russian soldiers were ordered into Ukraine where they quickly stopped the Ukrainian counteroffensive.

¹⁰⁵ Twitter, <https://twitter.com/Dbnmjr/status/499578362428686336> (in Russian); <https://archive.is/8XwoH> (archived).

¹⁰⁶ VKontakte, https://vk.com/liveuanet?w=wall-75493249_141%-2Fe412e83adad6110ba6 (in Russian); VKontakte, https://vk.com/video115925565_169894607.

¹⁰⁷ Reuters, <http://ru.reuters.com/article/topNews/idRUKB-N0H719A20140912> (in Russian).

¹⁰⁸ *Ibid*.

"Lost" Paratroopers

Dozens of the 76th Airborne Troop soldiers out of Pskov stopped contacting their loved ones between August 15 and 17, 2014. This halt in communications coincides with or precedes a number of mysterious events surrounding this brigade, including Putin granting an award for the "successful completion of military missions"¹⁰⁹ and reports of a fierce battle involving the paratroopers near the Ukrainian town of Georgievka.¹¹⁰ Particularly noteworthy was an ominous post on Kachatkin's VKontakte page on August 22: "Dear friends!!! Lyonya [Leonid] died, the burial will be at 10 a.m., the funeral service in Vybuty. Whoever wants to bid him farewell, come, we'll be pleased to see everyone. His wife, Oksana."¹¹¹

Mysterious Funerals

Despite the official claim that all of the Pskov paratroopers were alive and well, secret funerals were held for paratroopers in Pskov starting on August 24, 2014.¹¹² Kachatkin's funeral took place on August 25, as reported in his wife's message. A number of journalists, including a member of the Pskov regional assembly, attended the event, where over one hundred mourners paid their respects to Kachatkin.¹¹³ His grave marker stated that he died on August 19, three days before Oksana posted a message about his funeral on VKontakte.¹¹⁴

Cover-Up

Anton Tumanov's story ends here: unresolved questions over the circumstances of his death, a grieving family, and a homeward journey from eastern Ukraine in a coffin. In the case of Leonid Kachatkin, the story grows more complicated from this point. Reporters from both *Novaya Gazeta* and *Echo of Moscow* spoke with not only Oksana Kachatkina, but also Leonid Kachatkin himself—or more accurately, someone impersonating the slain soldier.

Novaya Gazeta spoke to a woman claiming to be Oksana Kachatkina on August 24. She claimed that her husband was alive and even passed the phone to a man claiming to be Leonid Kachatkin, who said that he was alive and that his VKontakte page was "hacked." The conversation with the *Echo of Moscow* reporter went by the same script.¹¹⁵ Yet, Leonid's father and uncle came to the funeral, along with Aleksandr Osipov's father, who grieved the deaths of both soldiers.¹¹⁶



Photo: Leonid Kachatkin with his wife, Oksana, at the Botanical Gardens of Pskov with a pillow embroidered with "VDV" (Airborne Forces). Source: Screenshot of Oksana Kachatkina's VKontakte page (almost all photographs of Leonid have been deleted). Coordinates: 57.8129077, 28.3446515.



Photo: Leonid in his paratrooper uniform while visiting the "Stalin Line" museum in Belarus. Leonid posted this photo on his VKontakte page on Paratrooper Day (August 2) in 2012. In this month two years later, Leonid died while fighting in his paratrooper division in eastern Ukraine. Source: Added on August 2, 2012 on Kachatkin's VKontakte page. Coordinates: 54.060218, 27.294158.



Photo: Kachatkin's grave in Pskov, Russia. Source: *Novaya Gazeta*/Nina Petlyanova.

109 Office of the President of Russia, <http://graph.document.kremlin.ru/page.aspx?3648446> (in Russian).

110 *Unian*, <http://www.unian.net/politics/953679-voennyiy-jurnalists-pokazal-zahvachennuyu-na-donbasse-rossiyskuyu-bmd-2-fotoreportaj.html> (in Russian).

111 http://argumentua.com/sites/default/files/533273_900.jpg?1408977980 and <https://pbs.twimg.com/media/BvwNjvIEAEPVxX.png> (in Russian).

112 *Novaya Gazeta*, <http://www.novayagazeta.ru/society/64975.html> (in Russian).

113 Denis Pinchuk, "Russian Village's Graves May Tie Kremlin to Fighting in Ukraine," *Reuters*, August 28, 2014, <http://uk.reuters.com/article/2014/08/28/uk-ukraine-crisis-russia-graves-idUKKBNOGS17V20140828>.

114 TV Rain, http://tvrain.ru/articles/snjali_tablichki_s_imenami_s_mogil_pskovskih_desantnikov-374615/ (in Russian).

115 *Echo of Moscow*, <http://echo.msk.ru/blog/otstavnih/1387356-echo/> (in Russian).

116 *Ibid.*

1.



Since his funeral on August 25, there have been no indications that Kichatkin is alive. On August 26, reporters from various Russian independent journalism outlets visited the Pskov graves of Kichatkin and Osipov. Shortly after arriving, a group of young men chased the journalists away, threw rocks at them, and later slashed their tires.¹¹⁷ Leonid Kichatkin's and Aleksandr Osipov's graves can still be found in Pskov, but following the journalists' inquiries, the nameplates at the soldiers' graves were removed.

Section 4. Russian Cross-Border Artillery Attacks on Ukraine

Ukrainian armed forces positioned near the Russian-Ukrainian border were attacked by artillery fire in the summer of 2014. Between July 9 and September 5, 2014, the Ukrainian Border Service and the National Security and Defense Council reported more than 120 artillery attacks from Russia. Russian officials, however, have denied that any artillery attacks on Ukraine originated from Russian territory.¹¹⁸

The pressure of sustained artillery attacks through early August led Ukrainian armed forces to lose control of hundreds of kilometers of border territory.¹¹⁹ Satellite images of eastern Ukraine from July, August, and September of 2014 have enabled the report team to find evidence of these artillery attacks, determine their origin, and compare them with local sources.

117 TV RAIN, http://tvrain.ru/articles/snjali_tablichki_s_imenami_s_mogil_pskovskih_desantnikov-374615/ (in Russian).

118 For collected reports see <https://docs.google.com/spreadsheets/d/1FxrMBTanKcVff6gcljr-kZSkwlfY8GnikejdbCOh3RQ/edit#gid=535700578>.

119 Russia Today, <http://russian.rt.com/article/43677#ixzz39jNve6AU> (in Russian); <http://web.archive.org/web/20150210142502/http://russian.rt.com/article/43677> (archived).

Methodology

Satellite imagery with a panchromatic resolution of up to 0.5 meters from eastern Ukraine and its border regions with Russia was examined for visible signs of artillery attacks in reported locations. Additionally, videos shared on social media (YouTube and VKontakte) capturing the artillery attacks as they occurred were analyzed and geolocated. In addition to video footage, other open source information was gathered and analyzed.

In examining each area, the research team created a novel analysis method based on internationally-recognized "on-the-ground" procedures to determine the trajectory of the artillery fire.¹²⁰ The trajectory of the projectile is determined by a variety of factors, such as the type and hardness of the impacted ground, wind direction and speed, and the type of projectile. The researchers adopted a simple linear trajectory in the analysis, but the actual trajectory may vary due to the aforementioned factors.

120 Gutierrez, Torpey, and Bellingcat, "How Digital Detectives Say They Proved Ukraine Attacks Came from Russia," op cit.



Maps showing the average trajectory of craters measured at the Amvrosiivka impact site, the approximate direction of fire indicated by burn marks on the ground near Seleznev, and the position and size of multiple rocket launchers used during the attack based on the position of track marks at the launch site. Source: Satellite image from Google Earth/Digital Globe.

Example 1. The Amvrosiivka Attack, July 14, 2014

Coordinates: 47.764550, 38.513236.

Source: Google Earth/Digital Globe.

In a July 14, 2014 summary of the “anti-terrorist operation,” Ukrainian media reported that an attack took place on positions of the Ukrainian armed forces in the vicinity of Amvrosiivka.¹²¹ It was suspected that the origin of this attack was the territory of Russia.¹²²

1. Satellite imagery from July 16, 2014, shows a corresponding extensive crater field south of Amvrosiivka. The observable direction of each of the 330 craters in this crater field were analyzed, and an average trajectory of these craters was calculated and determined to be 193.97°, i.e., from the south-south west (180° being due south).
2. When screening for possible firing positions from this trajectory, a firing position was found 14.6 kilometers from the crater field.
3. Burn marks are visible at this location on satellite map imagery from July 16, 2014 which is on Russian territory and approximately 750 meters from the border near the

Russian village of Seleznev at the coordinates 47.63709, 38.469355.

4. The Amvrosiivka crater field is located south of the town at 47.76455, 38.513236. Satellite imagery from July 16 indicates a launch site coinciding in time with the report of the attacks at 47.63709, 38.469355.

Based on the markings at the launch site of the attack, it was possible to determine the type of multiple rocket launcher used (the BM-21 Grad/Tornado) and its position in relation to the damage done to the launch site.

The launch site north of Seleznev is showing clear burn marks from multiple rocket launches and track marks from the movement of vehicles in the area.

Burn marks at the site were used to determine the likely trajectory of the attack, and this matched the trajectory determined by the crater analysis.

121 “Anti-Terrorist Operation: Summary for July 14, 2014,” InformNapalm, July 15, 2014, <https://en.informnapalm.org/anti-terrorist-operation-summary-for-july-14-2014/>, <http://web.archive.org/web/20150210142924/>.

122 Facebook, <https://www.facebook.com/v.parasyuk/posts/675221185878989> (in Ukrainian) (<https://archive.today/Z4NVR>).



Image: Ukraine: Battle aftermath litters after Sverdlovsk militia pummels 72nd Motorized Brigade.
 Source: YouTube screenshot from Ruptly Video.

Example 2. The Sverdlovsk Attack

Coordinates: 47.993078, 39.644672.

Source: Google Earth/Digital Globe.

On July 28, 2014, the Russian news agency Ruptly published a video on YouTube entitled “Ukraine: Battle aftermath litters after Sverdlovsk militia pummels 72nd Motorized Brigade.”¹²³

Several abandoned and damaged armored vehicles are visible in this video. The video description names day of the attack (Friday):

Ukrainian Army BMP-2, MT-LB and rocket launchers were left abandoned near Sverdlovsk on Saturday, after the 72nd Motorized Brigade suffered heavy losses during mortar shelling from the Lugansk People’s Militia¹²⁴ on Friday.

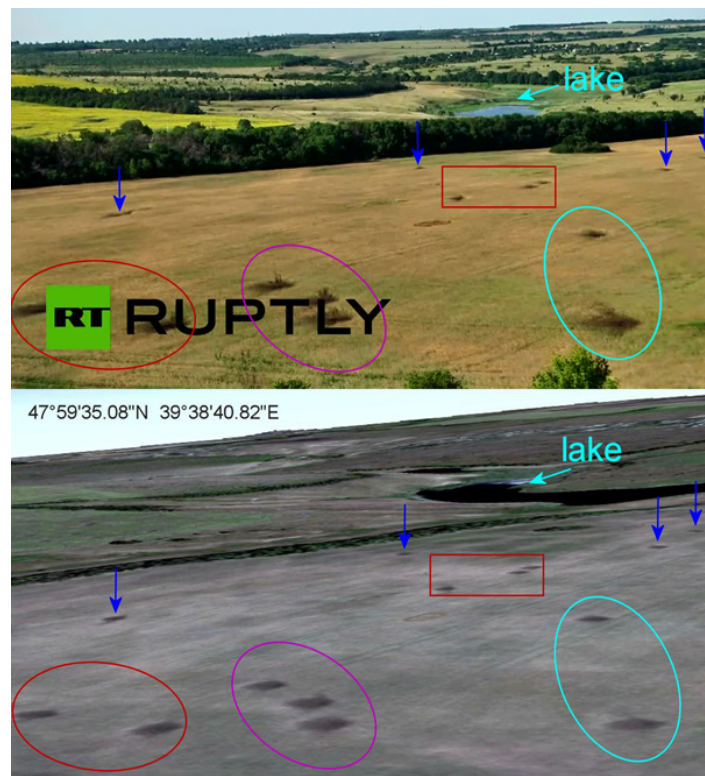
Lugansk People’s Militia has said that heavy losses were suffered by the Ukrainian army in both hardware and personnel after the Kyiv troops were hit by the 12mm [sic] mortar shells.

Since the video was released on July 28, 2014 (Monday) and the description states that the attack occurred on the previous Friday, this places the date of the attack on July 25, 2014.

¹²³ “Ukraine: Battle Aftermath Litters after Sverdlovsk Militia Pummels 72nd Motorized Brigade,” Ruptly, July 28, 2014, <https://www.youtube.com/watch?v=kj7sE6dsuW0>.

¹²⁴ The Lugansk People’s Militia is a Russian-backed separatist group.

Using the video footage, it was possible to identify the location of the Ruptly camera as a crater field close to the village of Khmelnytskyi, south of Sverdlovsk.



Images: Comparison shot from Ruptly video and the August 15, 2014.



Image: Result of the crater analysis at the village Khmelnytskyi, south of Sverdlovs'kyi.
Source: Satellite image from Google Earth/Digital Globe.

By analyzing the satellite imagery of the area it was possible to identify 209 craters. Using crater analysis, it was possible to determine three primary attack trajectories.

The trajectories of nine craters point directly east (green line). Two other trajectories (red and cyan lines) originate in a southeasterly direction. All three trajectories clearly point to firing positions within Russian territory. These firing positions are directly connected to the military camp of the Russian army near Pavlovka and a smaller firing position close to Malyy.

APPENDIX

Discussions in Ukraine, March 27 to April 3 and April 24 to April 27, 2015

Ukrainian government officials, journalists, and civil society activists shared a concern about possible future Russian military actions in eastern Ukraine. There was general consensus among interlocutors that the Kremlin was using the Minsk II ceasefire to funnel in soldiers and equipment in preparation for a possible incursion in the spring. While Mariupol's strategic location remains indisputable, concern for new aggression in the territories near Debaltseve seems greater.

The Situation in the East

Military and local government officials expressed no illusions about the Minsk II ceasefire continuing to hold in the Donetsk and Luhansk regions. Violations of the Minsk II ceasefire, including shelling of Ukrainian positions along the line of contact, have been documented regularly by the Organization for Security and Cooperation in Europe (OSCE) monitors.

Atlantic Council Ukraine Working Group members examined a series of fresh craters in the Luhansk oblast, which supported the crater analysis in this report. In one specific location along the line of contact with the so-called "Luhansk People's Republic" (LNR), soldiers reported observing the trajectory of the fire originating in separatist/Russian held LNR territory.

Local government officials in the Luhansk region confirmed the need for more humanitarian assistance. The internal refugee flows from the separatist or Russian controlled areas have strained public services and agencies. Volunteer groups, traveling from other Ukrainian regions, deliver basic aid, food, and supplies to the civilian population. Administrators noted that the most vulnerable groups, particularly the elderly, who had not been able to leave the separatist-controlled zone were living in unbearable conditions without electricity, heat, and clean water. Water shortages are expected to worsen as temperatures increase in the summer.

Local government authorities in the east face technical difficulties in countering the continued stream of Russian disinformation, which is broadcast on television and radio in the eastern regions. They expressed the need for additional technical assistance and support for developing local Ukrainian media. Ukrainian government officials and independent observers warned that the difficult living conditions in the government-designated Anti-Terrorist Operation (ATO) territories may make individuals susceptible to pro-Russian messaging and disinformation.

In addition, Ukrainian security and military officials reported the discovery of numerous storage bunkers scattered across Ukrainian-held territory, filled with arms, explosive materials, and communication instruments put in place by pro-Russian forces to ensure steady supplies for partisan activities

conducted by pro-Russian agents beyond the contact-line on Ukrainian territory.

The National Security Situation

Officials in the Security Service of Ukraine and the Ministry of Defense shared physical evidence of Russian military presence that match the findings conducted by independent social media forensic teams inside Ukraine, as well as the Atlantic Council Working Group's own findings.

Ukrainian officials in the intelligence community expressed a great deal of interest in using open source for intelligence gathering. Civil society groups using similar techniques emphasized the need for technical training.

Ukrainian sources confirmed previous estimates that the total number of Russian troops and separatist fighters in the Donbas came close to thirty-six thousand along the line of contact, including an estimated eight to ten thousand Russian regular troops among them. According to Ukrainian intelligence services, an estimated eight to fourteen airborne and mechanized battalion tactical groups, each with a battalion tactical group comprising six hundred to eight hundred officers and soldiers, are known to be operating on Ukrainian territory.

Both Ukrainian and Western officials as well as independent Ukrainian researchers reported that a significant influx of military hardware and equipment, including T-64 and T-72 tanks as well as armored personnel carriers, continues. It is estimated that up to 200 tanks and 525 armored fighting vehicles as well as 145 artillery systems and 83 MLRS are currently in use.

Further, Ukrainian forces continue to observe significant Russian use of unmanned aerial vehicles (UAVs) for surveillance and targeting purposes, but lack not only the adequate tools to interfere with the Russian UAVs, but also their own UAVs. Ukrainian forces frequently rely on donated UAVs or improvised UAVs built by citizen groups.

List of individuals met in Kyiv and Luhansk

- Ambassador Ertugrul Apakan, Chief Monitor, Organization for Security and Cooperation in Europe, Special Monitoring Mission to Ukraine
- Roman Burko, Head Editor, InformNapalm Investigative Journalist Group
- Bruce Donahue, Deputy Chief of Mission, US Embassy in Ukraine
- Anatolii Harkaviy, Head, Luhansk Regional State Administration
- Hana Hopko, Member of Parliament, Head of the Foreign Affairs Committee in the parliament of Ukraine
- Ivanna Klympush-Tsintsadze, Member of Parliament, First Deputy Chairperson of the Committee, Foreign Affairs Committee in the parliament of Ukraine
- Anna Kovalenko, Adviser to the Minister of Information, Ministry of Information of Ukraine
- Hennadii Moskal, Governor, Luhansk Regional State Administration
- Vitalii Naida, Deputy Head, Security Service of Ukraine (SBU)
- Valentyn Nalyvaichenko, Head, Security Service of Ukraine (SBU)
- Colonel Oleksandr Nozdrachov, Head, Civil-Military Cooperation (CIMIC), Armed Forces of Ukraine
- Andriy Parubiy, former Secretary of the National Security and Defense Council of Ukraine
- Lieutenant Colonel Viacheslav Popov, Deputy Chief of Section, Civil-Military Cooperation (CIMIC), Armed Forces of Ukraine
- Geoffrey Pyatt, US Ambassador to Ukraine
- Olena Tregub, Adviser to the Minister of the Economy, Ministry of the Economy of Ukraine
- Dmytro Tymchuk, Member of Parliament, Committee on National Security and Defense in the parliament of Ukraine
- Svitlana Zalishchuk, Member of Parliament of Ukraine

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