Arctic Riverine Operations

A skill the Russians are focused on

by LTC Lester W. Grau, USA (Ret)

Mobility in the Arctic is frequently accomplished by tracked vehicle, hovercraft, or boat. In the winter, when the ground and lakes are frozen, vehicles with wide tracks and high clearance are optimal for moving over the terrain. In the summer, the ground thaws, and tracked vehicles quickly tear up the fragile ground cover and create large mud scrapes and pits, hindering mobility. Consequently, in the summer, small and large vessels are optimal for moving and maneuvering troops and supplies. The Russian Arctic boundary is 24,140 kilometers long.[1] The mighty rivers, the Northern Dvina, Mezen', Pechora, Ob', Yenisei, Lena, Indigirka, and Kolyma, flow northward to empty into the Arctic Ocean. Economically, the most important of these is the Yenisei. The Yenisei, the world's sixth-largest river, flows some 100 kilometers to the west of the Russian industrial city of Norilsk.

Norilsk is a large inland Arctic city, located 500 kilometers (310 miles) from the North Pole. Temperatures get down to -50 degrees Centigrade (-58 degrees Farenheit), and its average annual temperature is -10 Centigrade (14 degrees Fahrenheit). Polar nights extend for two months over the city. The cold period extends for some 280 days a year. Norilsk is also one of the most polluted spots on the planet. No roads or railroads join Norilsk to other cities, and the only way for people to travel to other cities is by aircraft. What keeps the 173,000 residents of Norilsk there? Norilsk is sitting on top of the planet's largest known deposits of nickel, copper, and palladium and also has significant deposits of cobalt, platinum, arsenic, cadmium, lead, selenium, zinc, and coal. The Norilsk mines produce 17 percent of the world's nickel and 41 percent of the world's palladium. The production of Norilsk nickel alone provides two percent of Russia's GDP.[2] Norilsk smelters turn the ores into metals before shipment.

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Norilsk gets its goods to market by moving them over 80 kilometers of single-track railroad to the all-weather river port of Dudinka on the Yenisei River. Cranes load the metals onboard ships and barges, which sail north on the Yenisei to the Arctic Ocean, turn west, and then proceed to the major Arctic port of Murmansk (or international ports east). Once there, the metals are reloaded onto railroad cars and moved to waiting factories throughout Russia or sold to international customers.

Protecting the Arctic

The Russian Federation recognizes the importance of the Arctic and Northern Sea Passage. The Northern Sea Fleet and its subordinate 14th Army Corps and Aerospace Forces (air defense and air force) units are responsible for defending most of this vast area.[3] Ground combat forces include the 200th Separate Coastal Defense Motorized Rifle Brigade, the 80th Arctic Motorized Rifle Brigade, and the 61st Naval Infantry Brigade. Airborne units from the 98th Guards Airborne Division and Northern Fleet Spetsnaz units are frequent participants in joint and combined exercises. This time, however, a company from the 106th Guards Airborne Division participated.

Map 1. *(Map by Charles K. Bartles, Foreign Military Studies Office.)*

The 200th Separate Coastal Defense Motorized Rifle Brigade is a veteran Arctic unit. It was formed from the 131st Motorized Rifle Division in 1997 and became a Coastal Defense unit of the Northern Fleet in 2012. It is headquartered in Pechenga and has a primary mission of defending the port of Murmansk and the Kola Peninsula. The 61st Naval Infantry Brigade has been stationed at the military garrison town of Sputnik since 1966 and upgraded from a regiment to a brigade over the past two years. It serves as an amphibious assault force and a coastal defense force for the Northern Fleet, an operational command on equal footing with Russia's four military districts. The 80th Separate Arctic Motorized Rifle Brigade is the newcomer. It was formed in 2015 and stationed at Alakurtii. Its mission is to control the territory between Murmansk and the New Siberian Island and cooperate in operations with units of the Airborne Forces and Northern Fleet Naval Infantry.[4] All three brigades are located on the Kola Peninsula close to the Finnish and Norwegian borders. In 2015, the 80th Separate Arctic Motorized Rifle Brigade embarked on a three-month Arctic Ocean cruise which included a riverine landing at Dudinka, a movement to Norilisk, and three amphibious and air assault landings at various Arctic islands. In August 2017, the Northern Fleet conducted another Riverine exercise at Dudinka.

Fire preparation from* Severomorsk *on the Yenisei River. *(Image Courtesy: Russian Ministry of Defense/ http://mil.ru/.)*

Preparation for the August 2017 Exercise

This exercise was larger than the 2015 exercise, involving almost twice the number of personnel and combat equipment while—for the first time—employing self-propelled and rocket artillery. Northern Fleet ships and support vessels, ground troops and naval infantry subunits, Northern Fleet Naval Aviation, and airborne subunits from the Central Military District took part in this exercise. Two thousand servicemen and 200 major military systems, including Su-24 bombers, wheeled and tracked fighting vehicles, and the Grad multiple-launch rocket system (MLRS), deployed during the exercise. The naval support included large antisubmarine warship (Udaloy-1 Destroyer Class) *Severomorsk*; landing ships (Ropucha Class) *Kondopoga, Aleksandr Otrakovskiy,* and *Georgiy Pobedonosets;* and support vessels including the tanker *Sergey Osipov*, the rescue tug *Pamir*, and the mooring lighter *KIL-164*. These ships and vessels sailed some 1,900 nautical miles in transit from the Arctic port of Severomorsk. The Norilsk airport runway was being renovated at the time, so all equipment and supplies arrived by maritime transport.[5]

The 14th Army Corps was responsible for preparing the force for the ground portion of the exercise. The Army Corps was organized in the spring of 2017. Colonel Magomedali Magomedzhanov, Chief of the 14th Army Corps Combat Training Department, conducted extensive command and staff training exercises involving the Separate 200th and 80th Motorized Rifle Brigades and participation in a performance-graded command staff training exercise for Northern Fleet mixed forces.[6]

The bulk of the preparation for the ground exercise fell on the commander of the ground component, Colonel Aleksandr Bezborodov, Commander of the Northern Fleet's 80th Separate Arctic Motorized Rifle Brigade. He noted,

> On being instructed to prepare for an inter-service battalion task force tactical exercise, we set about devising the exercise scenario, which was subsequently refined and clarified during reconnaissance of the maneuver area. We also conducted meticulous planning for our operations in the river port of Dudinka and in the vicinity of the Yergalakh Water Intake Station, some 10 kilometers south of Noril'sk. During this period the smallest details relating to collaboration were coordinated with the administration of the Noril'sk Industrial Region, and all issues relating to the preparation and equipping of the exercise areas were agreed upon. Schematics and drawings of the facilities that were to be built were made available to them.[7]

In mid-July, a naval support team sailed to Dudinka aboard the Russian Navy's large maritime transport (Project 550M ice-class passenger/cargo ship) *Yauza*. The bulk freighter carried the motor transport group's equipment for hauling gear, accessories, supplies and materiel, communications equipment, and other facilities and equipment. Passage to the exercise area took a week. The *Yauza* delivered the rest of the gear on a second trip. The Northern Fleet Sailors and local workers constructed roads, earthworks, and structures in two sectors approximately 150 kilometers apart. Local authorities from Dudinka,

the city of Nikel, and the Norilsk Nikel Mining and Metallurgical Complex resolved any arising problems.

The result of all this effort was the construction of an encampment accommodating 1,000 men, a food and issue supply point, and a vehicle park. Exercise lanes for live fire tactical exercises were completed on schedule both in the Dudinka port, where an amphibious assault force landing was scheduled, and 10 kilometers from Nikel in the vicinity of the Yergalakh Water Intake Station. A full-scale mock-up of the Water Intake Station was constructed 500 meters from the actual station. It included the security barriers and defenses.[8]

Overall commander of the exercise was vice admiral Nikolai Yevmenov, the Commander of the Northern Joint Strategic Command.[9] The naval contingent was led by the commander of the Northern Fleet's Kola mixed-force flotilla VADM Oleg Golubev.[10] The opposing forces consisted of Spetsnaz troops from the Central District and Northern Fleet. The assault landing force consisted of a battalion tactical group from the 80th Arctic Motorized Rifle Brigade as well as paratroopers and naval infantry. A company of airborne soldiers from the 106th Guards Airborne Division (Tula), with vehicles, was airlifted into the naval reconnaissance airbase at Olenogorsk (about 100 kilometers from Murmansk). The vehicles were moved by rail to the amphibious warfare ship's embarkation points. The paratroopers learned how to load their vehicles for shipborne transport and conduct a riverine assault as they joined the assault task force before embarkation. An amphibious assault company, reconnaissance platoon, and battery of BM-21 MLRS from the 61st Naval Infantry Brigade joined the force in addition to elements of the Northern Fleet Spetsnaz force.[11] The assault force boarded the craft and set sail on 10 August.[12] The voyage lasted eight days.

Going against the Yenisei River's strong current was a bit of a challenge, particularly because there is less maneuver room in the Yenisei Estuary and River than in the Kara Sea. The assault force vessels split into two groups. The first group was the deep-draft Udaloy-1 Class *Severomorsk* and Rapucha Class large landing ships *Aleksandr Otrakovskiy* and *Georgiy Pobedonosets*. It took 38 hours to sail from the Kara Sea to Dudinka—some 370 nautical miles.[13]

Let the Games Begin

The Northern Fleet ships arrived at the river port of Dudinka on 18 August. The amphibious assault landing was conducted on an undeveloped Yenisei River beach. The exercise combat phase began on 21 August. According to exercise play, terrorists had mined the shore in the vicinity of Dudinka and captured an important industrial facility. A joint force of Northern Fleet forces supported by aviation and Spetsnaz of the Central Joint Strategic Command was instructed to retake the facility in order to support the amphibious assault force landing and its subsequent advance into the interior of the peninsula.[14]

Combat began with the delivery of an airstrike against terrorist positions and the infiltration of Spetsnaz teams into their rear to adjust gunfire from the ships. Upon receiving target coordinates, gunners of the large antisubmarine warfare ship *Severomorsk* opened fire against reinforced enemy positions on shore.[15] Ship-based helicopters then delivered teams of military engineers to the beach. The engineers cleared approaches to the beach through the mines and prepared a beachhead unloading site, marking it with signal flares. Naval infantrymen, who had disembarked onto fast boats carried aboard the *Severomorsk,* supported the engineers' work. After preparing a position for the landing of the amphibious assault force equipment, landing ships *Georgiy Pobedonosets, Kondopoga*, and *Aleksandr Otrakovskiy* approached the shoreline one after the other. Thirty-one wheeled and tracked vehicles of the naval infantry, the Arctic Brigade, and the Airborne disembarked onto the unimproved beach.[16] The landing force consisted of a battalion tactical group of the 80th Separate Arctic Motorized Rifle Brigade, a company of the 98th Guards Airborne Division, and a company of the 61st Naval Infantry Brigade. They drove ashore on their BMD-3 Airborne Infantry Fighting Vehicles, MT-LBv (an MT-LB with an extended chassis) armored tracked vehicles, and the new amphibious TTM-4902PS-10 articulated all-terrain tracked carrier vehicles.[17] The force moved through the lanes cleared by the engineers and secured the beachhead and directed facilities.

With the port of Dudinka under control, the second phase of the exercise began. Additional vehicles, equipment, and supplies were offloaded. A combat force now had to be moved

Russian Airborne BMD-4 unloads from Ropucha Class amphibious landing ship on Yenisei River. *(Image Courtesy: Russian Ministry of Defense/http://mil.ru/.)*

inland to protect facilities at Norlisk and nearby Nikel from foreign forces intent on disrupting or destroying vital economic facilities. The combat force needed to make a 100 kilometer move across the Taimir Peninsula. Tracked vehicles were loaded onto railroad flatcars and accompanied by security subunits formed from Northern Fleet naval infantry. Wheeled vehicles conducted a road march. Over 50 vehicles took part in the rail-and-road march, including Lynx armored paratrooper vehicles, MT-LBv armored personnel carriers, MLRSs on Ural truck chassis, 2S1 122mm self-propelled howitzers, and TTM-4902PS-10 articulated all-terrain tracked carrier vehicles.[18] The force and vehicles closed in on their encampment and vehicle lager site.

The next combat exercise began on 28 August in the northern part of Krasnoyarskiy Kray within the vicinity of Chernaya Mountain and Yergalakh Mountain in the foothills of the Plutorana Plateau. The joint force mission was to protect the main industrial hub of the Arctic region. The main fighting took place near the facilities of the Norilsk Nikel enterprise, located a short distance from the city in the estuary of the Medvezhka River. According to the scenario, Northern Fleet reconnaissance and assault landing personnel discovered several teams of commandos. They called in an artillery strike on the enemy concentrations. Grad MLRS batteries and 2S1 self-propelled howitzers moved up to the firing line.[19] Unmanned aerial vehicle coverage identified additional targets for the artillery.[20] Under cover of artillery, Northern Fleet Arctic Brigade and airborne troops advanced to the enemy positions, firing as they advanced. Their mission was to surround and destroy the enemy commandos. Su-24 bombers and Northern Fleet Naval Aviation helicopters provided fire support from the air.[21] Detachments of Spetznaz and airborne troops redeployed behind "enemy lines."

Later, the Northern Fleet Arctic Brigade and airborne troops traveled by army vehicles to another exercise area. Their mission was to encircle the sabotage groups and suppress their resistance. During the final stage, the Arctic brigade, airborne troops, and Spetznaz conducted a live fire drill with their assault rifles, grenades, and heavy machine guns.[22]

Russian Ropucha-class amphibious landing ship* Kondopoga *on the Yenisei River. Note tugboat keeping the craft's nose to shore. *(Image Courtesy: Russian Ministry of Defense/http://mil.ru/.)*

On 30 August, the force returned by conducting a short return road-and-rail march. Naval infantrymen, soldiers of the Arctic Brigade, and the paratrooper company began loading equipment onto the large landing ships moored at Dudinka.[23] During the return voyage, the assault force conducted an amphibious assault landing at Guba Belush'ya (Belush'ya Bay) on Yuzhnyy (Southern) Island in the Novaya Zemlya archipelago. The landing was conducted on 6 September from the large amphibious warfare ship *Georgiy Pobedonosets*. The Northern Fleet naval infantry contingent was onboard with its equipment. The amphibious warfare ship moved close to the shore and lowered its ramp directly onto an underdeveloped coastline, over which troops and vehicles disembarked onto land. During the exercise, the naval infantry exercised procedures to seize a beachhead. The *Georgiy Pobedonosets* provided fire support for the assault force, simulating the engagement of shore targets with its guns.[24]

Observations

- *Arctic riverine exercises require specialized equipment.* Russia has over 40 icebreakers and is building more. It is also fielding ice-class patrol boats and logistics ships that can handle up to five feet of pack ice. Icebreakers were not needed for this summer landing but would be essential during winter. Shipboard artillery and missiles are necessary, as are shipborne helicopters. Arctic tugs are essential. The current of the Yenisei is such that the large amphibious landing craft could not keep their bows to the shoreline without an Arctic tug pushing against the vessels' sides to counter the current.
- *The landing force must be mobile and have its organic vehicles on shore in quick order.* The landing force is 100 percent mechanized and task organized with organic artillery, air defense, engineers, and support troops. Russian ground forces, airborne, and naval infantry are all fully mechanized.
- *Smoke is essential to defend the landing force from top attack.* Russian ships are designed to generate their own smoke; however, getting smoke up to the water's edge and inland is a problem. At the same time that this exercise was underway, Northern Fleet Nuclear, Biological, and Chemical forces experimented with a concept to adapt a powerboat to lay smoke screens. A landing craft provided by the Kola Flotilla's assault ship forma-

tion was equipped with the newest model TDA-3 smoke generator, normally mounted on a KAMAZ-truck chassis. This smoke generator can place a raised smoke screen without covering the speedboat itself, which allows the boat to maneuver safely. It was tested for the first time in the Gryaznaya Guba on 15 August 2017. It showed an exceptional efficiency in laying a smoke screen to the shore.[25] The TDA-3 is a newer system that provides quicker and larger coverage than earlier systems. It uses an aircraft engine to disperse an aerosol fog in a horizontal or vertical pattern. The experimental combination of smoke generator and fast boat for laying smoke screens may become a regular feature of Arctic amphibious landings.

• *The sources do not indicate when the transfer of command from naval forces to ground forces took place for the assault landing forces*. In decades past, this was usually a function of the range of naval gunfire, but this transfer of command was probably determined by the ground advance to a geographic feature or designated line.

• *The assault landing force consisted of a battalion tactical group from the 80th Arctic Motorized Rifle Brigade as well as paratroopers and naval infantry*. It utilized organic vehicles and weapons in an integrated battle plan. It would have been simpler to use a single motorized rifle, paratrooper, or naval infantry unit, but the Russian military is intent on exposing all services to the conduct of the demanding mission of Arctic riverine combat while working at small unit integration and coordination between services (Russian airborne is separate from Russian Ground Forces). This exposure includes learning how to load and land various types of military vehicles on the 'tween decks of the large amphibious warfare ships. This type of integration at this tactical level is difficult for most national services; however, these three ground combat elements (ground forces, airborne forces, and naval infantry) use similar equipment, tactics, training, and doctrine. Some naval infantry officers are commissioned from the Airborne Ryazan Higher Command School, and senior naval infantry posts are often held by airborne officers.

Russian antisubmarine warfare ship* Severomorsk *Udaloy-class Destroyer provided fire support for riverine-opposed landing. *(Image Courtesy: Russian Ministry of Defense/ http://mil.ru/.)*

• *Arctic riverine assaults are best conducted during the summer; however, they may be required at any time of year*. The river port of Dudinka is an all-weather port, and the Yenisei flows year around. However, there is sometimes sea-ice buildup where the river enters into the Yenisei Estuary, which floods the surrounding area and requires the services of icebreakers to get transport moving again.

• *Norilsk is clearly a major economic facility, and Russia has now conducted two riverine exercises to prepare to protect Norilsk should it be necessary*. The first exercise was an unopposed landing followed by a rail-and-road march inland and a live fire exercise. The second exercise was more complex: a lightly opposed landing with a mined beachhead and artillery support. This involved a larger force and was followed by a road and rail march, seizure and defense of a critical facility, combat-employing aircraft, unmanned aerial vehicles, artillery, and ground maneuver. The Russians are developing Arctic riverine combat skills in digestible stages. Clearly they are now the world's most experienced force in this type of combat.

Notes

1. Laura Neilson Bonikowsky, "The Arctic, Country by Country," *Diplomat and International Canada,* (Online: October 2012), available at http://diplomatonline.com.

2. Caroline McGuire, "Life in the Freezer: Inside the Northernmost City on Earth Whose Residents Endure - 55°C Temperatures and Two Months of Total Darkness Every Year," *The Daily Mail*, (London, UK: January 2016).

3. The Eastern Military District has responsibility for the Chukotka Peninsula and eastern entrance to the Arctic passage.

4. Staff, "Ministry of Defense: Arctic Motorized Rifle Brigade Participates in its First Combat Readiness Test," *TASS,* (Moscow, RUS: March 2015).

5. Olga Chernysheva, "Battle in Medvezhka Estuary: Northern Fleet Personnel Once Again 'Win Back' the Heart of the Arctic–Taimir," *Red Star*, (Moscow, RUS: September 2017).

6. Vladimin Levchuk, "In the Thick of It—the Arctic Infantry: On Guard in the Arctic," *Northern Fleet Press Service*, (Murmansk, RUS: September 2017).

7. Ibid.

8. Ibid.

9. Olga Vorob'eva, "The Arctic is Closed to Diversionary Forces: A Major Training Operation to Safeguard Important Industrial Site is Ongoing on the Tamir Peninsula," *Red Star,* (Moscow, RUS: August 2107).

10. Staff, "Northern Fleet Destroyer Sails up Yenisei from Kara Sea for First Time," *Interfax,* (Online: August 2017), available at http://www.interfax.com.

11. "In the Thick of It—the Arctic Infantry."

12. Olga Vorob'eva, "Along the Arctic Routes: Northern Fleet Sailors Are Successfully Performing Missions in the High Latitudes," *Red Star,* (Moscow, RUS: September 2017).

13. "Northern Fleet Destroyer Sails up Yenisei from Kara Sea for First Time."

14. "Battle in Medvezhka Estuary."

15. Ibid. The *Severomorsk* mounts two AK-100 turreted 100mm guns. They fire a 28.6 kilogram (63 pound) round at 50–60 rounds per minute. There is an antiaircraft high-explosive fragmentation round and a variety of high-explosive frag rounds for ship or shore targets. The *Severomorsk* is a Udaloy-class destroyer used primarily in the antisubmarine role. If needed, additional fire support could also have been provided by the three landing ships which each mount two turrets of twin-barreled 57mm AK-257 guns, two 122mm MLRS 30-rail launchers, and two AK-630 six-barreled 30mm Gatling guns.

16. Ibid.

17. "The Arctic is Closed to Diversionary Forces."

18. "Battle in Medvezhka Estuary."

19. Ibid.

20. Staff, "Northern Fleet Training to Defend Major Arctic Industrial Facility," *Interfax*, (Online: August 2017), available at http://www.interfax.com.

21. "Battle in Medvezhka Estuary."

22. "Northern Fleet Training to Defend Major Arctic Industrial Facility."

23. "Battle in Medvezhka Estuary."

24. Staff, "Northern Fleet Naval Infantry Land on Novaya Zemlya," *Northern Fleet Press Service*, (Murmansk, RUS: September 2017).

25. Staff, "The Northern Fleet's NBC Protection Specialists Have Won Prizes at Different All-Army Competitions," *Northern Fleet Press Service*, (Murmansk, RUS: November 2017).

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