



ONE UP ON 1a

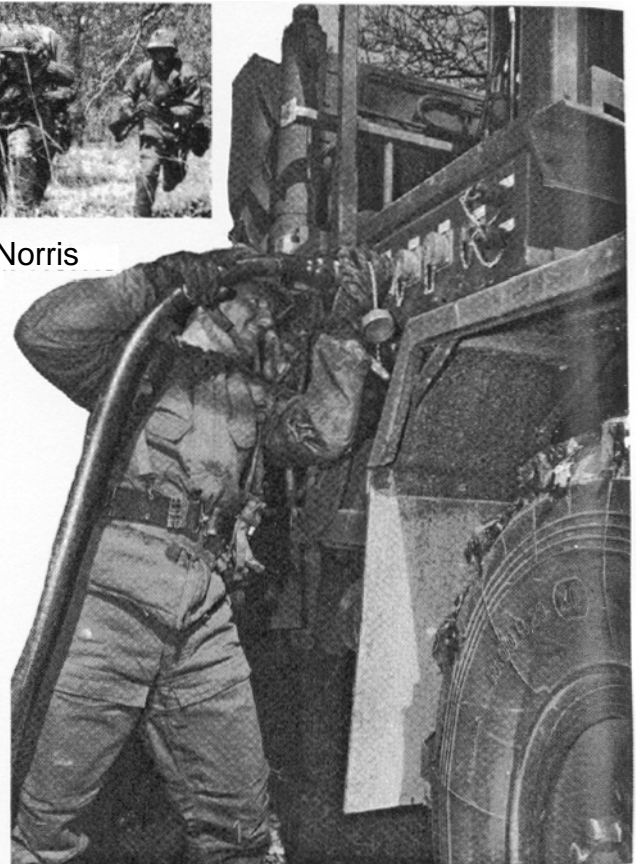


by Captain Robert Sankner and Captain Peter H. Norris

You don't need to sell Pershing II (PII) to a firing platoon leader. One day in the field is enough to convince the skeptic that II is better than 1a. The proof all starts with a familiar sound.

AAOOOGAH!

It's like the old World War II submarine movies when the captain yells "dive, dive"! The klaxon activates each Redleg's adrenaline as a screamed command pierces the platoon control central. "Fire mission! Initiate quick counts on all three rounds!" The switch from relative calm to a hotbed of activity is quick. The operations personnel decode and authenticate a message sent from the highest command center in Europe which gives the Pershing firing platoon leader, a field artillery captain, the authority to fire. The count crews start countdown operations on three Pershing II missiles as the fire control officer monitors all three counts. Within just eight minutes, the 300 by 150 meter firing position deep in the woods fills with fire, smoke, and a deafening roar that rattles the bones as the three Pershing II missiles lift off within seconds of each other and fly 1,000 miles downrange to deliver their nuclear calling cards with devastating accuracy. With



Pershing 1a, the platoon leader would still be waiting to fire his first missile and would have to wait another 20 minutes after that to fire sequentially the remaining two missiles. The smoke from the first round would surely lead the enemy special operations units directly to the position.

Too few Redlegs know about either the old or the new Pershing. The weapon system seems shrouded in mystery, which is a real shame since a Pershing firing platoon faces challenges every bit as real and demanding as those facing a howitzer battery. So here is a subtle sales pitch from the initiated to the uninitiated. Take part in a PII mission.

The alert call comes to the firing platoon leader at 0330 one day: "Report to the battery ASAP." But there is no need to worry. Preparations for this sort of call are a part of every day's training. The three firing platoon leaders have done their homework. Load plans have already been fine-tuned. Their soldiers know what they must do — load up to go to the woods indefinitely. Do not plan on coming back; do not leave anything behind; and be sure to top off the fuel pods with diesel and MOGAS. When the platoon leaders arrive at the battery area, their soldiers are handling the loading tasks efficiently. Their noncommissioned officers and enlisted personnel are a motivated group.

A platoon sergeant, an E7, checks with the battery support platoon leader, a second lieutenant, to see what can be done to get the stubborn 2 1/2-ton trucks cranked in the cold of the morning. The lieutenant explains that the support platoon personnel attached to the firing platoon for the field will be finished loading their portion of the battery's packaged POL products and will arrive shortly to help.

There is nothing left for the platoon leaders to do but check with the operations officer, another captain. Each one goes to the safe and gets the classified strip maps to his platoon's first position and makes sure that the operations personnel pick up all of the code books and assorted top secret targeting documents. These allow the platoon to respond to the Supreme Allied Commander, Europe and the US Commander-in-Chief, Europe without going through any middlemen.

The platoon leader already knows what targets he is assigned. Pershing missiles are assigned pre-selected targets designated by the theater commander. Each platoon leader has the target data for his missiles already stored on target cartridges ready for insertion into the Ground Integrated Electronics Unit on the side of the erector launcher. From the Ground Integrated Electronics Unit the recorded target data is transferred to the on-board computer in the missile, where it will be used in a later comparison with the live radar scan from the reentry vehicle. The tape cartridges come from the Reference Scene Generation Facility located at battalion headquarters. To produce target reference scenes, the Reference Scene Generation Facility uses information extracted from a target list and an operational data base. The operational data base contains digitized elevation and topographic feature data stored on discs. These discs are produced by the Defense Mapping Agency and distributed to all Pershing II units. The battalion targeting section, headed by the targeting officer, controls and distributes the cartridges as they are produced. Target cartridges are classified either secret or top secret, depending on how many targets are contained on them.



At this point, all the platoon leader is waiting for is the go-ahead to shoot, which comes down from higher headquarters in a coded message. This message traffic is remoted to the platoon control central van via the AN/TRC-133 single side-band radio set. Five single side-band nets are monitored continuously and create a background noise which is always present in the control center. There are also two AN/VRC-46 radios with Vinson secure gear; and, as if all of that is not enough, there is an AN/MSC-64 tactical satellite system which is also remoted to the platoon control central. The platoon leader *will* be able to receive that release message when it comes down.

The battery executive officer, a senior captain, returns from the battalion operations center where he has received last-minute instructions from the S3 and has picked up copies of the operations order. He has also coordinated the receipt of repaired and calibrated equipment from the direct support maintenance company located with the battalion. He briefs the battery commander, a major, on the operational plan. The battery commander reviews the unit manning roster with the first sergeant and then gathers the firing platoon leaders for a briefing.

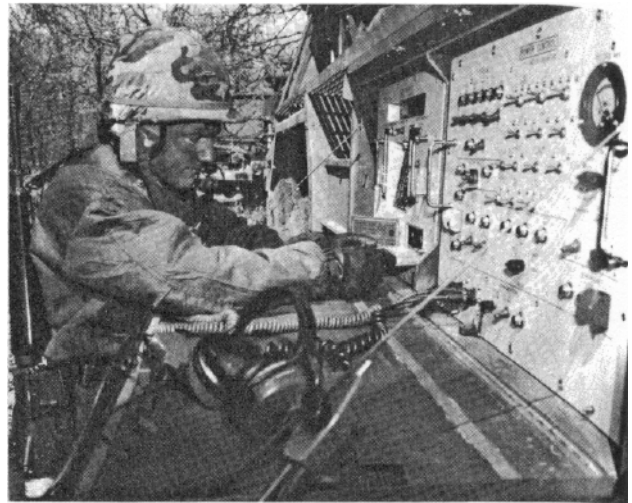
Two platoon leaders are told they will be light, and one is told he will have the heavy platoon. The two captains like being light since they are then on their own, each with a slice of the battery support sections. For communications each has an E5, an E4, and two E3 05Bs to operate the AN/TRC-133 single side-band rig; an E5 and an E4 26Q to operate the AN/MSC-64 tactical satellite rig; and an E4 and an E3 36K to lay wire. In the operations section the platoon leader has his fire control officer, a lieutenant, along with an E6 15E operations NCO, an E5 15E operations assistant, an E5 21G platoon control central operator, and an E4 21G platoon control central operator. For his mess section, the platoon leader picks up a mess trailer and two cooks who will prepare the platoon's rations at the platoon position. The battery motor pool supplies six



mechanics and a recovery vehicle to assist his assigned missile maintenance warrant officer. One medic brings the total number of personnel at the light position to 64. With these 64 soldiers, the light platoon leader must man his own perimeter defense — no small task when one considers the significant number of enemy soldiers looking specifically for Pershing.

The heavy platoon sets up with the rest of the battery headquarters, including the motor pool, the forward area support team from the forward support company, and the missile maintenance section. The battery's three platoons will be separated by several kilometers.

The firing platoon sergeants and platoon leaders have already gone with the battery operations officer a few weeks earlier to look at the areas in which they are going to deploy. They are good areas, deep in the woods with good overhead cover. The trees are evergreens, and the areas can be occupied during winter as well as summer. A solid road network winds its way through each of the areas, thereby allowing the emplacement of erector launchers on firm ground. Many of the road networks in the German forests are easily traveled because the Germans use much of the area for logging operations. Most of the trails are well-worn and either have been recently covered with gravel or have been hardened at one time. Not all roads, however, will be able to accommodate Pershing II. Some of the roads may be dirt or mud depending on weather conditions. A good reconnaissance eliminates any areas that may pose significant problems to the platoon leader. At 82,000 pounds per erector launcher with missile and prime mover, it pays to stay on solid ground.



This Pershing II system has eliminated major headaches that confronted the Pershing 1a platoon leader. The PII is a real blessing for a platoon leader in the field and for the troops as well. The platoon leader no longer has a target azimuth limitation as is the case with P1a. Therefore, he no longer must jockey erector launchers between trees. All he needs is a 10-foot hole in the overhead cover through which to fire the missile. Ground support equipment used with Pershing 1a is eliminated. The programmer test station, critical to P1a launch operations, is no longer required. The computer components needed for the launch of PII missiles are located right on the erector launcher. The sequential launch adapter, which allowed P1a to switch countdown operations from one missile to the next with the flip of a switch, is gone for good. With Pershing II, all three rounds can go through a countdown simultaneously. There is no power station with its jet turbine engine and its significant heat signature which is so easily detected by enemy infrared photography. Now there is a 30-kilowatt generator mounted on the prime mover with all the power needed to condition, count, and launch the missile. The prime mover also has its own crane for mating or demating the missile, thereby improving response time, reliability, and survivability.

Cables were another problem with Pershing 1a. Pershing 1a platoon positions looked as if someone had dumped a bowl of black spaghetti on the areas. Each of the three platoon missiles had a 1,200-pound cable bundle, a high-pressure air hose which distributed 3,000 pounds per square inch of high pressure air, and a conditioned air duct which allowed hot or cold air to pass to the missile — plus an array of grounding cables and several essential cables going to the platoon control central. Needless to say, the manual labor required of the soldiers in the mud, snow, and rain was significant. With the new system, there are only two cables (not counting the grounding cables) associated with each missile. There is one power cable and one cable from the launcher to the platoon control central. The soldier quickly learns to appreciate Pershing II!

This Pershing II battery deploys to hide positions to increase its survivability. It is not tasked to come up immediately into a quick reaction alert status on its missiles — one platoon leader is to keep one missile

and the platoon control central available for a fire mission. By checking maps provided by the engineers to illustrate all bridge weight classifications in the unit's area of operation, the platoon leader has already determined that the route of march he planned to use will support the 41-ton weight of the missile and prime mover.

The executive officer tells the firing platoon leader that the battalion ammunition platoon, commanded by a lieutenant, is conducting a ground nuclear convoy to a location near the firing platoon's first position. The firing platoon leader picks up his warheads from the ammunition platoon before he pulls into his position.

The platoon leader sends out an advance party (this time under control of the platoon sergeant) to prepare the position for occupation. The advance party consists of as few personnel as possible, but with the number of tasks to be performed it will usually include about 10 soldiers. Upon arrival at the firing position, the advance party makes a security sweep of the area, as well as a check for nuclear, biological, or chemical contamination. The advance party has many other tasks to perform: designate locations of vehicles and equipment, prepare a track plan of the area with a separate entrance and exit, designate a vehicle order of march for the main body, establish a hasty defensive perimeter, and lay wire to individual fighting positions. About 30 minutes after sending out his advance party, the platoon leader leads his platoon out of garrison.

The first few days in the hide position are quiet. The platoon pulls into position as tightly as possible, camouflages all equipment, sets up security, and minimizes electronic and infrared radiation. To minimize electronic signature, the platoon uses only FM radios, wire, and couriers for communications. An infantry squad provides early warning for each platoon position.


The platoon leader, under the direction of the battalion S3, moves his platoon twice to increase survivability before receiving the message directing his platoon to fire a single missile. To avoid giving away the position and causing the entire platoon to move again, the platoon leader chooses to take the missile, the platoon control central, and a small security force to an external firing point he had previously selected about five kilometers from his hide position. After successfully firing the missile, he takes the empty launcher to a resupply point a few kilometers from his hide position where the battalion ammunition platoon is waiting with a new missile — a first stage, a second stage, and a reentry vehicle with warhead. After mating the missile, the platoon leader and his soldiers return to the hide position.

Post-strike analysis filters down from brigade and indicates that the round was right on target. This accuracy comes as no surprise. The reentry vehicle is a terminally-guided projectile which compares live radar imagery with scenes stored in the on-board computer prior to launch. Any corrections required to the ballistic course are made by air vanes mounted on the reentry vehicle. The

improved accuracy has made possible the reduced warhead yields on the Pershing II.

On the day after firing, while the platoon is en route to a new position, the battery operations officer in the battery control central instructs the platoon leader to employ in a silent firing platoon configuration. The platoon leader immediately reaches for a radio and tells the advance party to prepare the position accordingly. When the rest of the platoon arrives at the new position, the members of the advance party guide the vehicles into a firing position configuration. All ancillary vehicles are placed where the counting and launching of all three missiles are facilitated and where the blast created by the lift off of each round will not affect the other rounds. The vehicles will also provide protection to the missiles against direct observation and small arms fire. The platoon is ready to perform confidence counts on the missiles and assume target coverage when directed to do so by battalion. The purpose of a silent firing position is to provide increased survivability while allowing a shorter reaction time than that of a hide position. The firing crews emplace the missiles as they would in a firing position, but do not perform a countdown. The platoon control central and communications vans are set up, but are still using minimal communications assets.

A day and a half later the platoon receives instructions to assume target coverage and come up "hot" on all rounds and into a quick-reaction alert status on all targets. The count crews perform confidence counts on all three rounds — they enter the required data into the on-board computer, test all circuits within the system, and generally prepare the missiles for launch. Two rounds are counted without a hitch, but there is a minor problem with the third round; the platoon's missile maintenance warrant officer and the forward area support team sent from the heavy position quickly correct this problem.

By 1800 the platoon is eating the hot meal prepared by the mess section. After everyone finishes eating, the firing platoon leader gets his chow. As he takes his first bite, he hears it. AAOOGAH! The adrenaline pumps, and you don't need to sell Pershing II to this platoon leader. 

CPT Robert Sankner, FA, received his commission through the Officer Candidate School. He is a Field Artillery Officer Advanced Course and a Combined Arms and Services Staff School graduate who has served as a forward observer and fire direction officer in the 1-77th FA and as a firing platoon leader, battery operations officer, and battalion operations officer in the 1-41st FA, 56th Field Artillery brigade (Pershing). He was most recently a senior instructor in the Pershing Division of the Field Artillery School's Weapons Department. He now commands Headquarters and Service Battery, 3-9th FA (Pershing).

CPT Peter H. Norris, FA, received his commission through the ROTC at South Dakota State University. A Field Artillery officer, Advanced Course graduate, he is a senior instructor in the Pershing Division of the Weapons Department. He has served as a support platoon leader and firing platoon leader with the 1-81st FA, 56th Field Artillery Brigade (Pershing).