Sustaining the Cavalry Squadron at the National Training Center

by 1LT Ian A. Murdoch

As CSM Alan Hummel said in Gunner's Seat (October-December 2015 edition), mission success historically has been "directly tied to logistics and maintenance." I'd like to enlarge that to all sustainment in this article as applies to the Army 2020 Cavalry squadron.

Overview

During a train-up for deployment in support of U.S. Central Command (CENTCOM), 3rd Armored Brigade Combat Team (ABCT), 4th Infantry Division, conducted a rotation at the National Training Center (NTC), Fort Irwin, CA. There the brigade tested its skills while conducting a decisive-action fight – the combination of wide-area security and combined-arms maneuver against a hybrid threat in a complex environment that includes multiple military and civilian factors.

This NTC rotation was the largest in recent history, with the ABCT organized under the ABCT 2020 model. As such, the brigade gained a third combined-arms battalion (CAB), and its brigade special-troops battalion was reorganized into a brigade engineer battalion to add the capability of an extra engineer company. Including attachments, more than 7,000 Soldiers fell under the ABCT's control during four force-on-force battle periods and one BCT-minus live-fire exercise. These four battle periods consisted of three brigade-level movements-to-contact, a brigade defense and a brigade-level attack.

Cavalry support was provided by 4th Squadron, 10th U.S. Cavalry. The squadron supported the ABCT's mission by continuously providing forward reconnaissance and security assets for 16 consecutive training days. During the four battle periods and the live-fire, the squadron conducted zone and area reconnaissance, screen and guard operations, as well as limited-area security missions for ABCT-level assets scattered throughout the area of operations.

The foundation for success at NTC was built during the intense six-month train-up for the NTC rotation. The squadron's leaders identified three main friction points:

- Sustainment assets available;
- Echeloning of trains; and
- Sustainment planning/forecasting.

This made it possible for solutions to be identified before the NTC rotation. The solutions were implemented during the training, which allowed the squadron to enable decisive 3rd ABCT success in each battle period.

Available sustainment assets

The ABCT 2020 Cavalry squadron is comprised of more than 500 troopers (including the forward-support troop (FST)), more than 20 M2 Bradley-family vehicle platforms, more than 30 other tracked vehicles (M113-family of vehicles and M88A2 Recovery Vehicles) and more than 100 wheeled vehicles from humvees to Heavy Expanded Mobility Tactical Trucks and the Palletized Load System (PLS).

Supporting this heavy formation is an FST with a distribution platoon, maintenance platoon, headquarters element (including a field-feeding section) and maintenance-control section (MCS). The troop-sustainment assets consisted of the troop supply sections. Outside the FST, the squadron was sustained by its organic medical platoon, which was capable of providing role-one medical care.

As for sustainment staff, the squadron was supported by a two-Soldier logistics (S-4) shop, a six-trooper administrative (S-1) shop and the medical officer, who was dual-hatted as both the medical-platoon leader and the medical operations planner.

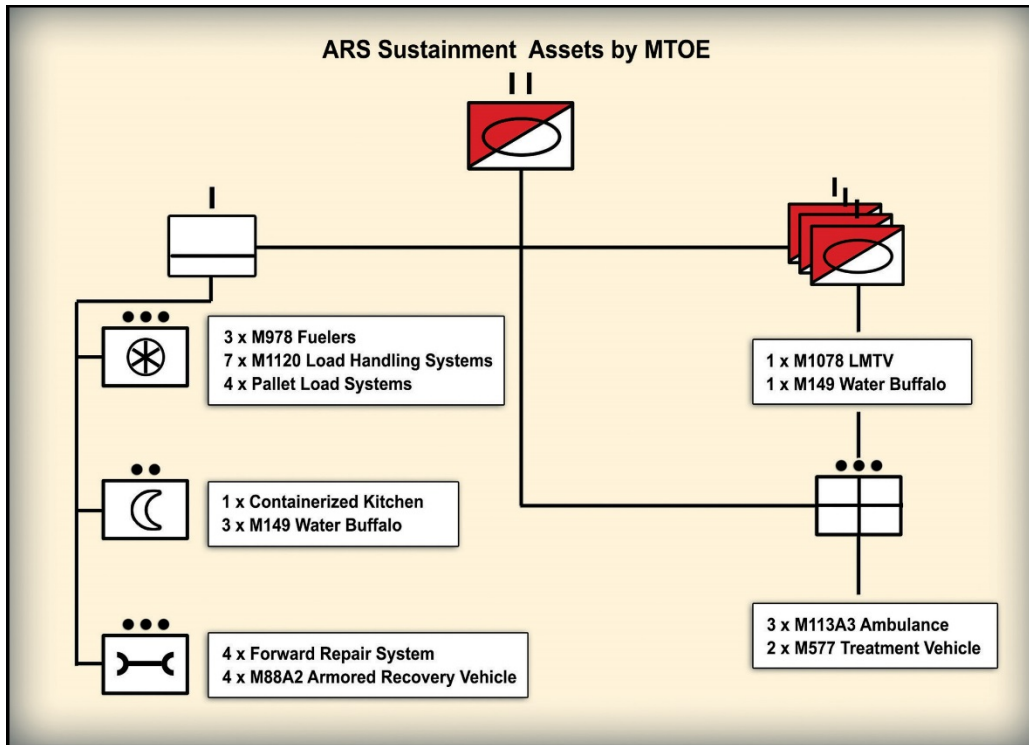See Figure 1 for more details on the squadron's sustainment assets.

Figure 1. Task-organization table – Cavalry squadron sustainment.

Due to personnel and equipment shortages, and after careful analysis by the FST and S-4 shop, the distribution platoon decided to bring only four of its Load-Handling System (LHS) vehicles from home station and draw three M1151 gun-truck platforms from the NTC draw yard. The headquarters element also drew two M1151 vehicles from the draw yard.

The squadron FST was hard-pressed or ultimately unable to simultaneously sustain each subordinate troop with these assets. The modified table of organization and equipment (MTOE) authorization is designed for the distribution platoon to operate as a single unit and either sequentially resupply the troops or resupply troops from a logistics-resupply point (LRP). However, the loss of even one of the FST's three fueler assets would have made this sustainment technique problematic during the rotation. Also, the extended distances over which the squadron operated degraded or eliminated an LRP's utility. At times during the rotation, the squadron had reconnaissance elements arrayed across a frontage of 30 kilometers with a distance of 25 or more kilometers from the brigade-support area (BSA) to the forward-most element; this required the distribution platoon to task-organize into smaller elements and attach to the scout troops. This process will be discussed in more detail in the next section.

Disseminating sustainment assets in this manner helped the squadron complete its mission in the short term, but it still forced it to rely on the brigade consolidation and reorganization process every 72 hours. Any operation that lasted longer than 72 hours between these refit periods would have been problematic for the squadron.

The brigade-support battalion (BSB) leadership task-organized their fuel assets to increase the FST's capacity, but between maintenance issues in the austere NTC environment and the additional fuel requirement of the BCT's third CAB, the BSB was unable to provide the squadron's FST with any more fuelers. The FST leadership identified several possible long-term solutions to this issue before and during the rotation. By adding more fuel assets to the Cavalry squadron's MTOE, the distribution platoon would have more depth and flexibility for logistical-package (logpac) operations. Also, adding 55-gallon fuel drums and hand pumps to either the FST MTOE or to each supported troop would add a decentralized resupply capability to the units without pulling personnel and vehicles from the FST.

The Fiscal Year 2016 MTOE for the BSB and the FST adds flat rack-mounted transfer pumping units that will allow LHS and PLS vehicles to carry fuel as part of squadron logpacs, lending more flexibility. Structural changes of this

type offer a long-term solution that would reduce the need for *ad hoc* task-organization changes during training and operations.

Echeloning of trains

With a limited number of assets available for sustainment, the use and dispersal of these assets proved to be critical time and time again. Different schools of thought exist on how the combat trains of battalions and squadrons should be arrayed across the battlefield during decisive-action training environments involving a hybrid threat. The squadron experimented with several techniques during the train-up for NTC. Eventually, 4-10 Cav decided to echelon its sustainment into four separate nodes: field-trains command post (FTCP), unit-maintenance collection point (UMCP), combat-trains command post (CTCP) and an element in the tactical-operations center (TOC). This sustainment system also included four field-maintenance teams (FMTs) and three evacuation sections with two independent aid stations.
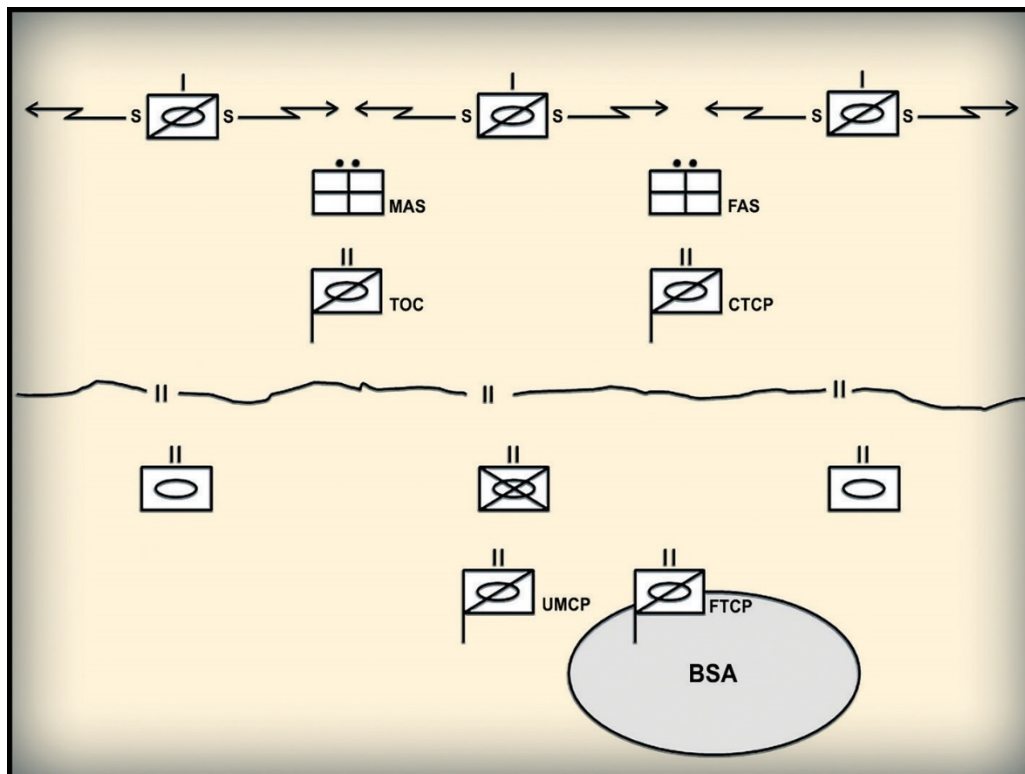

Figure 2. Echeloning of trains.

Within the BSA, the FST maintained its own command post, forming the nucleus for the squadron's FTCP. The headquarters and field-feeding elements – as well as the distribution platoon – were located at the FTCP with their assets. Each troop attached their supply sergeants along with their M1078 Light-Medium Tactical Vehicles to the distribution platoon to facilitate and streamline the logpac process.

The FTCP was responsible for receiving the separate classes of supply from the BSB, building them into logpacs and sending them out to sustain the squadron. By locating itself within the BSA, the FTCP was included in the BSA's wider security plan, and it was mere steps away from the BSB's supporting units and the support-operations (SPO) cell to deal with any issues in a timely manner.

Just outside the BSA, the squadron maintained a separate UMCP. This cell consisted of the MCS, the headquarters maintenance and service-and-recovery sections, and roughly half the mechanics normally allotted to the troop FMT. Due to the rough terrain and the squadron's rapid operational tempo, the squadron maintenance officer decided to retain all four PLS-mounted forward-repair systems at the UMCP, along with additional mechanics. This decision made maintenance assets available to "surge" to non-mission-capable vehicles as needed. No dedicated security assets were provided to the UMCP, but the squadron standard operating procedure was to send

personnel from the vehicles being repaired to the UMCP to assist with maintenance and to man weapon systems as needed. The value of this technique was validated in the first battle period of the rotation when a battle-damaged Bradley Fighting Vehicle (BFV) engaged an opposing-force vehicle maneuvering to attack two tactical assembly areas and the BSA.

By placing the UMCP near the BSA, the proscribed-load-listing clerks (Military-Occupation Specialty 92A) were able to rapidly pick up and process repair parts from the BSA with their own organic vehicles without the need to wait for the daily logpac. This technique, along with surging maintenance teams to mission-critical vehicles, helped the squadron maintain the highest operational-readiness rate on BFVs throughout the brigade.

Perhaps more importantly, the squadron's personnel officer and supply noncommissioned officer remained at the UMCP throughout the rotation. To turn in destroyed vehicles and equipment and to request replacements, as well as process casualty packets and request replacement troopers, the S-4 and S-1 needed access to Upper Tactical Internet (Upper TI), which was only available at the squadron TOC and at the MCS, located at the UMCP. These staff members embedded themselves with the MCS shop – instead of their traditional location at the CTCP – to draw Upper TI from the MCS' Very Small Aperture Terminal (VSAT), which is normally used only to send maintenance data and request repair parts. Normally, the Combat Service Support Automated Information System (CAISI) is capable of getting Upper TI connectivity from the Satellite Transportable Terminal or the VSAT to distant nodes, but CAISI's antennae line-of-sight requirement and NTC's difficult terrain precluded its use.

The squadron maintained the CTCP forward of other battalions but behind the troop command posts. That way, the squadron maintained the S-1 section; the chemical, biological, radiation, nuclear and (high-yield) explosives section; and the headquarters and headquarters troop (HHT) command team. With the TOC focused on mission command of the fight and the FTCP out of position to accurately track the squadron's logpacs once they left the BSA, the squadron needed a node capable of mission command of all sustainment operations in the squadron's support zone.

Also, when the squadron's forward momentum required the TOC to move to a more advantageous position, the squadron required a node capable of taking over mission command of the fight along with the tactical-action center. Since the CTCP was equipped with both frequency modulation and Force XXI Battle Command Brigade and Below (FBCB2) systems, it was selected to track all sustainment-related movements between the screen line and the BSA, and to assume mission command during TOC "jumps." Missions that were tracked included medical and casualty evacuations, vehicles recoveries and logpacs, among others.

The final piece of the squadron's sustainment infrastructure was located within the TOC itself. The S-4 officer in charge was located in the TOC to participate in planning for each battle period and to ensure all sustainment needs were forecast and tracked correctly. By embedding in the TOC, the S-4 was able to ensure sustainment requirements were accurately synchronized with operations as each situation developed. As the TOC was resourced with the best mission-command equipment, this layout also allowed the S-4 to receive up-to-date logistical reports and statuses. The S-4 was also able to ensure the FTCP and brigade S-4/SPO were tracking operational requirements through Lower TI and Upper TI. Also, the TOC was assigned several mechanics, both for generators and tracked vehicles, who moved as part of the TOC to ensure the Deployable Rapid-Assembly Shelter systems and M1068 command vehicles received maintenance support as needed.

At the troop level, each line troop was assigned half its normal FMT to increase maintenance capability at the UMCP. This FMT was equipped with a contact truck and an M88A2 Recovery Vehicle. Also, each troop was assigned one M113 track ambulance manned and operated by attached line medics. With an assigned surgeon, the squadron was capable of manning both a forward aid station (FAS) and a main aid station. At times during the rotation, squadron elements were separated by impassable terrain features, necessitating separate logpacs for isolated or separated units.

In such situations, the squadron established a forward logistical element (FLE) and attached it to the isolated unit. These FLEs consisted of one fuel vehicle, one LHS with ammunition resupply and the FAS for medical support. In addition to the FLE, the squadron coordinated with friendly units in the isolated unit's to provide any more sustainment requirements.

Sustainment planning/forecasting

With a highly effective and proven setup for its trains, the squadron needed a system to correctly forecast its sustainment needs and ensure resources made it to the Soldiers on the reconnaissance screen line. The S-4 used the Logistics-Estimation Worksheet (LEW), school-provided consumption tables (Command and General Staff College's Student Table 101-6) and historical data from the squadron's training to forecast the squadron's sustainment needs for every critical event during the rotational battle periods. The LEW and historical data also helped project the number of casualties by type and the number of vehicle losses to enemy action; it also helped project the amount and type of maintenance that could be expected during each critical event. Once the forecast was complete, the S-4 compiled the twice-daily troop-logistics status reports and sent both the on-hand status data and the projections to the brigade S-4 and SPO via Upper TI.

With the squadron S-4 being the only sustainer located at the TOC and other sustainment leaders scattered across the battlefield, the S-4 was vital to the squadron's sustainment-planning and forecasting process. At NTC, it was a rare occurrence for the squadron medical officer, S-1, FST leadership or the maintenance officer to be able to travel to the TOC to participate in every step of the planning process. However, the S-4 was able to plan all sustainment requirements for each battle period, not just for logistics requirements – thanks to digital input from the other sustainment leaders delivered via FBCB2 or email if available. Also, during prior military decision-making process sessions, all sustainment leaders assigned to the squadron collaborated to produce the sustainment paragraphs of operations orders, ensuring each was capable of performing the others' job to standard. This cross-training allowed the squadron S-4 or any other squadron sustainment leader to plan and forecast the squadron's sustainment needs alone if need be.

Squadron sustainment rehearsals were key to the squadron's success during the planning process. Pulling in the troop executive officers and first sergeants, the squadron S-4 and executive officer rehearsed the sustainment plan with the units and refined forecasts or timelines based on feedback from the operator level before execution of each battle period. Taking these refinements to the brigade-level sustainment rehearsal, the S-4 and squadron executive officer coordinated with the brigade staff, SPO section and other units in the brigade specifically about planned timelines and the SPO cell's own forecasts for the units. Once again, the other squadron sustainment leaders were not always able to attend the rehearsals due to distance and operational requirements. The S-4 had to be capable of briefing not just resupply but also maintenance, medical and personnel support as well. By interacting face-to-face with as many sustainment leaders as possible during the rehearsals, both brigade and squadron leadership ensured a better plan to get the right support where and when needed.

Every unit has its own personalities and its own challenges with equipment and personnel when it trains for a combat-training-center rotation and, ultimately, a deployment. By leveraging the assets available to the unit, constantly updating the way those assets are employed based on the mission and the situation, and aggressively forecasting and planning for sustainment activities, the unit will be able to do what the Army needs it to do – win!

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