The Trouble with LOGSTATs

by MAJ Sarah A. Barron

"The logistics status report is the primary product used throughout the brigade and at higher levels of command to provide a logistics snapshot of current stock status, on-hand quantities, and future requirements. The logistics status report is a compilation of data that requires analysis before action. Providing the commander a bunch of numbers with percentages and colors is useless. The commander requires an analysis based on the data along with a recommendation for action." Field Manual (FM) 4-0, *Sustainment Operations*, July 31, 2019.

The logistics statistics (LOGSTAT) report is a critical status report in sustainment operations. It is essential for forecasting and coordinating resupply and ensuring combat readiness by accurately reporting logistics and Army Health System support status. Army leaders must shift their mindset to optimize on-hand stockages and improve reporting accuracy to avoid emergency

		ogistics	Status	Report	(LOG	IS (AI)	
Unit	A Co. 123rd AR BN		Date/Time: 1		151130MAV2021 67		
Location	Camp Smth						
Line 1	Class 1	Combat	On	Next	Nex	t Next	Status %
PERMIT NUMBER	MRF (Care)	575	363	24	50	54	1045
6	Water, Bulk (Galloria)	300	500	300	200	200	1025
0	ice (Bac)	250	150	125	120	125	679
1					1		
5		1		2		A	
8		()	_	4		Contraction of	
Line 2	Class #	2		12	-	110	Ant
	NA	N/A	N/A.	NAC	3414	NAME	NA Y
-		-		1	<u>n</u>	1 1	and the second second
			-	A	10	1	1
Line 3	Class II	1000		1.10	1		N.
-	JP-8 (Gelora)	008 1	354	306	- 32	00%	
-	FRIT (Gallors)	200	1 SAN	430	- 201	540	100%
t ine d	Chan N	1	9 94	1	1		
Line 4	NOA A	C. NA	NA	VIIIA"	100	NA	NA
	6	1	100		-		
S	101	$\langle \cdot \rangle$	10		-		8
Line 5	Class V	26	Sec.	Sec.	6	an Arrent	2
1000	120mm APABOG-T	330	175	150	900	175	\$0%
~	50 cal AP	106	8.5K	SK	26	2K	85%
~		1		1			2
Line 6	ClineW	1		10	-	-	2
	NRK/	N/A	NA	NA	N9	N/A	NA
	1	-		2	-	-	
	Charles Sale	-	_	-	-	-	
Lote 7	Closs VI		ALC: N	411.0	N.C.		414
	000	nin	nin.	INO	1.00	nen.	
-				-	-	-	
Line &	Class VII						
	Tourniquet	180	78	30	50	0	41%
	Lantated Ringer IV	70	60	20	40	15	85%
			_		-		

Figure 1: Example LOGSTAT Format from ATP 3-90.5 *Combined Arms Battalion* JUL 2021, Figure 6-3a, Pg 6-11. (U.S. Army graphic)

resupply needs. Challenges arise from inconsistent reporting frequencies hindering sustainment planning. Improving brigade LOGSTAT reporting is crucial for efficient operations, focusing on disciplined, accurate, and timely submissions to prevent unnecessary resupply missions and backhauling of supplies.

A comprehensive LOGSTAT is not just detailed, it is easily transmitted through multiple channels, universally understood, and regularly practiced. While an overly detailed LOGSTAT listing every Department of Defense Identification Code (DODIC) is excessive, a simplistic list of prowords or color codes hampers accurate resupply forecasting. LOGSTATs should not just be simple for platoon sergeants to gather data, they should be detailed enough for sustainment planners to refine estimates and reallocate assets as needed. A clear LOGSTAT reporting plan, including primary, alternate, contingency and emergency (PACE) methods, should not just be implemented in mission orders, it should be integrated into day-to-day operations, including routine garrison duties. Company, battalion, and brigade executive officers (XOs) are not just responsible for enforcing the process, they are crucial in ensuring timely, precise reports. Recipients and responsibilities for receiving, processing, and disseminating brigade LOGSTATs must be clearly defined to enable success.

A constant after-action review comment from the combat training centers is that rotational training units struggle to submit accurate and timely LOG-STATs or to accurately forecast required commodities. This results in emergency resupplies at every level from line companies to the division logistics package (LOGPAC), potentially desynchronizing the entire division sustainment infrastructure. The struggle to accomplish what, if taken at face value, is a simple task is attributed to a combination of poor time management at lower echelons (the platoon who ran out of time to count what they had

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on-hand and simply reported "No change" from the previous report) and poor connectivity between lower and higher echelons ("We were jumping"; "NIPR [Non-Secure Internet Protocol Router] was down."; and "I sent it on JBC-P [Joint Battle Command-Platform]. Didn't you get it?" are all commonly heard phrases). Leaders will issue direct guidance to subordinates to do better and the timeliness of LOG-STATs will improve, but the reports remain largely inaccurate or insufficient to inform future sustainment planning. Our observations have found that the problem is not so much how the units are reporting, as much as that subordinate units do not have a clear understanding of what to report. This is further complicated by staffs at echelon who are simply consolidating subordinate unit reports and pushing them higher without doing any analysis or using the LOGSTATs to inform forecasts.

FM 4-0 states that LOGSTATs account for a unit's requirements based on their task organization and assigned mission and should include the current on-hand stockages as well as projected needs out to 72 hours.¹ Army Techniques Publication (ATP) 4-90, Brigade Support Battalion, further states that accurate LOGSTATs are tailored to the commander's critical information requirements to support decision making. It also says that the report should include both on-hand stockage levels as well as projections out to 72 hours.² Maneuver doctrine states that LOG-STATs should identify on-hand amounts and requirements to inform the commander's decision-making process.^{3,4} While all of the reviewed doctrine stated that it was a unit responsibility to determine the exact format and reporting mechanism for LOGSTATs, if they showed an example format, they all used the same one (Figure 1). It is unrealistic for the same format to adequately meet the available reporting mechanisms and the level of detail required at all echelons.

To drive acuate reporting, the brigade must first standardize how the organization will count on-hand vs consumed, what constitutes a combat or basic load, and what green-amber-redblack actually mean as a percentage of

Defining Green/Amber/Red				
Green	80%	100%		
Amber	50%	79%		
Red	30%	49%		
Black	0%	29%		

Figure 2. Defining Green/ Amber/ Red/ Black in percentages. (U.S. Army Chart built by MAJ Sarah Barron)

on-hand stocks. A recommended tactic, technique and procedure (TTP) is to track commodities as on-hand until they are issued to the end user, at which point they are considered consumed; however, that TTP may not always apply for all commodities. If a battalion receives 350 cases of Meals Ready to Eat (MRE) (three days of supply, assuming an M-M-A ration cycle) and immediately issues the MREs to the individual Soldier, that Class I cannot be counted as consumed simply because it was issued to the end user. Likewise, a combined arms battalion that has just been refueled has more than 24,000 gallons of fuel in the vehicles. That fuel must be tracked at the company level and included in LOG-STAT reporting to fully inform commanders of their remaining operational reach.

Defining '100 percent'

Organizations must also clearly define what 100 percent means. Some commodities are easy: 100 percent of Class I rations is three meals per Soldier per day while 100 percent of Class IIIB is the total capacity of all available assets. Commodities such as Class IV and Class V can be slightly more difficult as each battalion has different requirements. The brigade staff must clearly articulate what the basic load is by DODIC, item, or combat configured load for each battalion. Once this allocation has occurred, it must be widely published to ensure that leaders at all levels understand what their "100 percent" looks like and how far they can operate before requiring a resupply.

This includes informing higher echelons of support of the defined value of 100 percent and what the total operational reach is expected to be based off those numbers. After the brigade has established how they are going to count each commodity, and at what point each commodity is considered consumed, and how 100 percent of a commodity is defined by unit, they must now set what percentage corresponds to green-amber-red-black for use in abbreviated reporting and what sustainment actions each report triggers.

Historically, units will begin reporting amber as soon as they fall below 90 percent and will be in the red at 70 percent. If the sustainment action tied to red on Class IIIB is to push an emergency resupply, the unit will be expending significant, unplanned energy to distribute less than a single fuel system worth of Class IIIB. Emergency resupplies are typically triggered by poor LOGSTAT procedures and can degrade the sustainment architecture of the brigade by placing unnecessary LOG-PACs on the road.⁵ This can further affect future operations as the drivers and convoy commanders are not able to achieve a proper work-rest cycle as well as desynchronizing planned resupply operations at both the battalion and brigade level. These inefficiencies can be mitigated by readjusting how the organization assesses green-amber-red-black.

Throughout the Global War on Terror and ensuing contingency operations, Army leaders grew comfortable having large amounts of commodities at hand and resupplied on all commodities easily. Units rarely operated at less than 50 percent of commodities on-hand. It will require a mindset shift among both maneuver and sustainment leaders to get comfortable using more of their on-hand stockages without calling for an emergency resupply, knowing that the planned resupply will be able to return them to as close to full capacity as possible in accordance with the priority of support. Figure 2 shows a recommended green-amberred-black dispersion.

Adjusted dispersion

This adjusted dispersion encourages subordinate units to consume more of their on-hand commodities before requesting resupply, which allows sustainment units to economize their movements. They can execute less frequent, larger LOGPACs which provides additional stability to the sustainment infrastructure by increasing predictability and improving work-rest cycle of sustainment executors. This provides the maneuver commander with a healthier enterprise and increased operational reach.

Once units have determined what data to report on the LOGSTAT, they must establish how each echelon will report that information. It is a delicate balance of ensuring lower echelons report enough information to properly inform decision-making while ensuring those echelons have the equipment and network necessary to submit the report. Regular brigade and division rotations at the National Training Center make it clear that LOGSTATs should look different at each echelon. A company that is conducting operations is unlikely to

Orange 1 – AR Co LOGSTAT (OH Qty)			
Line 1	a. DTG b. Unit c. Company Trains Location d. PAX Count (including attachments)		
Line 2 CL I	 a. MREs (OH at company trains) b. Hot As requested? (YES / NO) c. Water cans (gals OH/total capacity) d. Ice requested? (Ibs) 		
Line 3 CL III	 a. VIC Tank Level (By 1/4 tank increments) b. Fuel cans (gals OH/total capacity) c. Bulk fuel requested? (YES/NO) d. CL III (P) by type/qty 		
Line 4 CL IV	a. CCL required by type/qty b. C-wire (OH) c. Pickets (OH)		
Line 5 CL V	a. C787 HEAT-MP-T b. CA26 APFSDS-T c. CA38 Canister d. A064 (5.56 link) e. A059 (5.56 ball) f. A131 (7.62 link) g. A557 (.50 cal link) h. Other		
Line 6 CL VIII	a. CLS Pack b. IFAK Pack		
Line 7 Combat Power	a. M1A2 (OH/FMC) b. M1064 (OH/FMC) c. M88 (OH/FMC)		
Line 8	Special requests/Notes		

Figure 3. Example Armor Company LOGSTAT format. (Developed by MAJ Sarah Barron)

have access to a computer and network to submit a 60+ line Excel report. While vehicle mounted Joint Battle Command – Platforms (JBC-P) offer an Excel-like option, it is extremely difficult to manipulate a sheet of that size using the providing stylus and keyboard. It also becomes more difficult to transmit the sheet rather than a simple free text message. Companylevel LOGSTATs should be formatted to enable easy transmission on JBC-P free text, FM radio, or hard copy as a contingency. Additionally, the companylevel LOGSTAT should focus primarily on accurate, on-hand commodities. Figure 3 shows an example LOGSTAT for an armor company that can be easily sent by either JBC-P free text or FM.

Company commanders are responsible for submitting accurate and timely reports, to include LOGSTATs. They may choose to have their XO, or first sergeant gather and turn in the reports on their behalf, but that does not absolve them of their responsibility if the LOG-STATs are late or contain poor data. If the LOGSTAT format chosen by the battalion is too burdensome to be completed during operations, companies must provide feedback to adjust the format until it works for both echelons. Once the format is established, company commanders must prioritize accurate submissions or communication with higher if there is a delay.

As the battalion staff and forward support company (FSC) receive the LOG-STAT, they can now analyze the submissions, consolidate the data and compare with their forecasts, and prepare the battalion LOGSTAT. The staff, primarily the S-4 and the S-1, is responsible for reviewing each submission for accuracy, not simply consolidating bad data and passing in on. If a company reports an inexplicable gain of more fuel on-hand than they have capacity or states that they have gone from 100 percent Class IIIB to 15 percent since the last report but hasn't conducted any operation that would justify the change, the S-4 must reach out to the company to find out the ground truth. Units must adjust their culture and eliminate the idea that a report submitted on time, even if it has bad data, is acceptable or preferable to a slightly delayed, but accurate, report. Timely,

inaccurate reporting can have catastrophic effects on the unit. If each combined arms battalion reports that it needs 5,000 gallons of fuel that it doesn't have capacity for, the brigade will request more than 15,000 gallons of unneeded fuel from the division. This puts four M969 bulk fuel trucks with eight Soldiers on the road unnecessarily. It also causes the FSCs to each put an extra M978 with two Soldiers on their battalion LOGPACs, further disrupting work-rest cycles or preventing the FSCs from conducting proper maintenance on their equipment. This wasted effort would have been prevented if the S-4 had called the XOs to validate LOGSTATs when reports don't align with forecasts.

Before staffs can use forecasts to validate LOGSTATs, they must first build the forecasts. Forecasting should occur at all echelons; it is not simply on the support operations office (SPO) shop to create and maintain the forecasts for the brigade. The Army has several forecasting tools available and in production to assist forecasting, and sharing the forecasts with both supporting and supported units. The Operational Logistics (OPLOG) Planner and Quick Logistics Estimation Tool (QLET) are both developed by the Combined Arms Support Command (CASCOM) and available for download from the OPLOG Planner and Log Planning Tools Teams page.⁶

- QLET is an Excel sheet that is prefilled with Army Force Structure Designs and the G-4 Approved Planning Factors that enables a user to quickly forecast based on their chosen modified table of organization and equipment (MTOE) force file. Users can make minor changes to the anticipated consumption rate (Minimum/Average/Maximum) for some commodities as well as tailor available distribution asset types. The QLET data is assuming that the full MTOE of equipment is available, in use, and fully mission capable. Once the file is loaded on the user's computer it can be used offline. Each forecast would be saved as an additional file.
- OPLOG Planner is a program that must be loaded on a government computer by an administrator, which can make it more difficult to get started. It uses the same planning factors as QLET but is focused on higher echelons of support. OPLOG

planner is highly flexible and allows for building tailored task forces and linking sustainment units to maneuver units. Planners at the brigade level and below might find OPLOG planner challenging to get the level of detail required to maintain accurate forecasts.

- CASCOM and the Army Software Factory are also developing the Mercury: Sustainment Planning Tool.⁷ This tool allows the user to create highly tailorable sustainment forecasts, down to the company level. These plans can also be shared with other users to enable real-time, collaborative planning across echelons. As Mercury is a web-based tool, it requires connectivity to build and share plans, which becomes more challenging at lower echelons. The Mercury tool is still in active development and the development team invites all user to log on, make plans, and submit feedback to continue to improve the tool.
- The fourth option for forecasting is to use the Sustainment Planning Factors found in ATP 5-0.2-1, Staff Reference Guide Volume 1, to manually compute projected consumption based on the specific factors for the

Oran	ge 1 – FSC Co LOGSTAT (OH Qty)
Line 1	a DTG b Unit c FTCP d PAX Count (including attachments)
Line 2 CL I	a MREs (OH at company trains) b. Hot As requested? (YES / NO) c. Water cans (gals OH/total capacity) d. ice requested? (ibs)
Line 3 CL III	a. VIC Tank Level (By 1/4 tank increments) b. Fuel cans (gais OH/total capecity) c. Buik fuel requested? (YES/NO) d. CL III (P) by type/qty
Line 4 CL IV	a. CCL required by type/gty b. C-wire (OH) c. Pickets (OH)
Line 5 CL V	a. A064 (5.56 link) b. A059 (5.56 boll) c. A131 (7.62 link) d. A557 (.50 cal link) e. Other
Line 6 CL VIII	a. CLS Peck b. IFAK Pack
Line 7 Combat Power	a. M978 (OH/FMC) b. TRM (OH/FMC) c. LHS/PLS (OH/FMC) d. M984 (OH/FMC) e. M88 (OH/FMC) f. VSAT (OH/FMC)
Line 8	Special requests/Notes

Orange	2 - FSC Bulk LOGSTAT (OH Qty)
Line 1	a DTG b. Unit
Line 2 CL I (Bulk)	a. MREs (OH for distribution) b. UGRs (Mods) c. Bulk water (gals OH/total capacity) d. Ice (bags OH for distribution)
Line 3 CL III	a. Bulk JP8 (gals OH/total capacity)
Line 4 CL IV	a CCLs (OH for distribution) b. C-wire (OH for distribution) c. Pickets (OH for distribution)
Line 5 CL V	a. C787 HEAT-MP-T b. CA28 APFSDS-T c. CA38 Canister d. A974 APDS-T e. A975 HEI-T f. PU16 TOW g. A064 (5.56 link) h. A059 (5.56 ball) i. A131 (7.62 link) j. A557 (.50 cal link)
Line 6	Special requests/Notes

Figure 4. Example FSC LOGSTAT formats for both company internal and bulk. (Developed by MAJ Sarah Barron) unit.⁸ The ATP gives planning factors for everything from the gallons per minute bulk fill rate for a M978 to the number of casualties that can fit in a medium tactical vehicle. This is the recommend primary method of forecasting for battalion and below as it does not require any connectivity and can be conducted without a computer if the organization has identified key commodities to be forecasted ahead of time and written down the planning factors.

Continuous update

Regardless of which tools the staff chooses to utilize, they must continually update their forecasts and validate them against actual consumption. Validating the forecasts should be a continual give and take. New forecasts validate the submitted LOGSTATs to request commodities for the next 24 hours and the actual consumption from the previous 24 hours shows whether those forecasts were accurate. If the staff finds that their forecasts are continually wrong, they need to relook what planning factors they are using and make modifications as needed. Staffs must also ensure that they are forecasting against the planned operation, not just trying to get on-hand commodities back to 100 percent. In a resource constrained environment, requesting over-forecasted requirements to maintain 100 percent capacity will put unnecessary strain on the logistics enterprise. Conversely, if leaders are not forecasting for the mission, they may miss a critical resourcing shortfall where the operational requirements exceed capacity. When the shortfall is identified 24-48 hours out, there is usually time to either crosslevel internally or request additional assets for a higher echelon of support to bridge the gap. If the shortfall is not identified until units are reporting that they are black, the unit is at risk of culminating, even if they were at full capacity after the LOGPAC.

After the battalion staff has reviewed and validated the company LOGSTATs against their forecasts, they can consolidate and prepare the battalion LOGSTAT for submission. At this echelon, it is likely that staff has access to computers, even if steady connectivity is a challenge. That allows the staff to

utilize tools like Excel to assist in consolidating the FM or JBC-P company LOGSTAT submissions they received. This also enables them to compare the company LOGSTAT requirements against the FSC bulk on-hand commodities. It is highly recommended to have the FSC submit two LOGSTATs: the first is what they have on-hand to support their own movement and personnel: the second shows what they are carrying as bulk to support the battalion. This prevents miscounting commodities such as CL I MREs that are allocated to the FSC as being available for issue. Figure 4 shows an example of the recommended two FSC LOGSTATs.

Once the LOGSTATs are consolidated and analyzed, they can be submitted to brigade. Again, it is critical that brigade is mindful of what systems the battalions consistently have available to them when dictating the format and PACE for LOGSTAT submissions. They also need to ensure there is a codified feedback mechanism to inform the battalions when the LOGSTAT has been received. This prevents the "I sent the LOGSTAT three hours ago, didn't you get it?" conversations. The reporting echelon should assume that, if they did not receive a confirmation message, the LOGSTAT was not received, and they should move through the PACE to submit their report until they confirm receipt. Likewise, the higher echelon must set a time following a missed report that they begin reaching out to subordinate units to inquire about the status of the report, also utilizing the PACE if they receive no response.

Brigade level analysis

As the brigade staff receives the battalion LOGSTATs, they also conduct staff analysis to confirm accuracy and validate their own forecasts. The brigade S-4 and SPO must ensure that their forecasts do not conflict with each other and, if they identify any points of friction, they address them prior to submitting the LOGSTAT to division or confirming commodity requests to the division sustainment brigade (DSB). If the S-4 requests one thing in the submitted LOGSTAT and the SPO requests something different to the DSB, it can create confusion in the division sustainment enterprise and negatively affect the supplies that flow into the brigade's area of operations. It is vitally important that the brigade maintain and validate their own forecasts based on the upcoming operations to ensure they are feeding accurate requests to the division 48-72 hours out. Those requests can be refined by actual consumption in the 24to 48-hour window, but the initial request must be submitted with enough time for the division to react. Figure 5 shows the flow of LOGSTATs through the brigade to the division and a brief description of responsibilities at each echelon.

Additionally, the SPO must capture the status of LOGSTAT submissions, and an assessment of critical commodities determined by operational requirements in a logistics common operating picture (LOGCOP) that is available to the staff and commander. The conditions described in the LOGCOP will drive commander decisions and should also drive future planning. An incomplete or stale LOGCOP fed by poor LOGSTAT reporting will energize command involvement to correct perceived shortcomings. This action can quickly destabilize the sustainment infrastructure and degrade command trust in the sustainment community.

Conclusion

In conclusion, the trouble with LOG-STATs is a more multifaceted problem than simply assuming that companies and battalions aren't doing what they're told. Leaders at every echelon and across warfighting functions must contribute to setting conditions for success, from clearly defining expectations for LOGSTAT submission to ensuring all echelons have the necessary equipment to submit according to the PACE.

As units refine and solidify their reporting processes, they must then practice them. LOGSTATs are rarely submitted outside of field problems or CTC rotations and the LOGSTAT and forecasting processes are highly perishable skills. They must be integrated into garrison operations and trained continuously at home station if we hope to change the story at the CTC.

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Notes

¹ FM 4-0, *Sustainment Operations*, July 2019, Appendix E, Page E-1.

² Army Techniques Publication (ATP) 4-90, *Brigade Support Battalion*, June 2020, Change 1, November 2021, Chapter 2, Pg 2-20.

³ ATP 3-90.5, *Combined Arms Battalion*, July 2021, Chapter 6, Page 6-10.

⁴ ATP 3-21.20, *Infantry Battalion*, December 2017, Appendix H, Page H-15.

⁵ ATP 4-90, *Brigade Support Battalion*, June 2020, Change 1, November 2021, Chapter 6, Page 6-3.

⁶ TR-SCOE OPLOG Planner and Log Planning Tools <u>TR-SCOE OPLOG Planner and</u> Log Planning Tools | General | Microsoft <u>Teams.</u>

⁷ Mercury: Sustainment Planning Tool <u>https://mercury.swf.army.mil/.</u>

⁸ ATP 5-0.2-1, *Staff Reference Guide*, December 2020, Appendix G.

ACRONYM QUICK-SCAN

ATP – Army Techniques Publication **CASCOM** – Combined Arms Support Command **DODIC** – Department of Defense Identification Code DSB – division sustainment brigade FM - field manual **FSC** – forward support company JBC-P - Joint Battle Command-Platform LOGCOP – logistics common operating picture LOGPAC – logistics package LOGSTAT – logistics statistics, (or) logistics status MRE - Meals Ready to Eat MTOE - modified table of organization and equipment **OPLOG** – Operational Logistics **PACE** – primary, alternate, contingency and emergency **QLET** – Quick Logistics Estimation Tool **TTP** – tactics, techniques and procedures XO – executive officer





Figure 5. Brigade LOGSTAT reporting flow with brief descriptions of responsibilities at each echelon. (Developed by MAJ Sarah Barron)