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M I L I T A R Y   H I S T O R Y

OPERATIONS OF THE SUPPLY SECTION, 2d BATTALION,  
306th INFANTRY (77th DIVISION) ON THE VESLE RIVER,  
AUGUST 15 TO AUGUST 17, 1918.

(Personal experience of a battalion supply officer)

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Note: All localities referred to appear on Map No 1.

## BIBLIOGRAPHY

Organization History

"History 77th Division."

A typical non-technical divisional history valuable in securing dates, location of units and, in some cases, orders issued. Too general in trend to be of great value. Several instances not well authenticated.

Tiebout, F. B.

"A History of the 305th Infantry."

Even less technical than the preceding source. Replete in detail and photographs valuable in reconstructing atmosphere and conditions.

Bach, C. A.  
Hall, H. N.

"The Fourth Division."

Written by the division's chief of staff in collaboration with a well known war correspondent. This book is far more technical and accurate than most divisional histories. Not of great value in this particular instance except as a check and in reconstructing days immediately preceding the relief.

Van Every, Dale

"The A.E.F. in Battle."  
D. Appleton & Company, 1928.

A well written readable account. Apparently sourced on official reports supplemented with color taken from organization histories. Extremely valuable in obtaining a clear picture of large operations with relatively little research.

Alexander, R. G.

"Memories of the World War."  
The MacMillan Company, 1931.

A boldly written account which places praise and censure with equal facility. Very interesting in its reproduction of the reports of individual officers and battalions. Due to the fact that the author did not assume command of the 77th Division until a date subsequent to the period covered herein, not as valuable as it would otherwise have been. Slightly tinged with personal feeling.

Bullard, R. L.

"Personalities and Reminiscences of the World War." Doubleday, Page & Company, 1925.

Covers the desired period in brief outline. Critical in tenor at least during the pertinent portion. Contains an excellent word picture of conditions on the Vesle which is used verbatim in the following article.

Note: All statements where sources are not stated are based upon personal knowledge.

MARGINAL ABBREVIATIONS USED

Division History	"History 77th Division."
History, 305th Infantry	"A History of the 305th Infantry," by Captain F. B. Tiebout.
4th Div. Hist.	"The Fourth Division," by Colonel C. A. Bach and H. N. Hall.
Hist. Sect. A.W.C.	"Order of Battle, U.S. Land Forces in the World War," by Historical Section, Army War College.
Dale van Every	"The A. E. F. in Battle."
Alexander	"Memories of the World War" by Major General Robert G. Alexander, U.S.A. Ret.
Bullard	"Personalities and Reminiscences of the World War" by Lt. General R. L. Bullard, U.S.A. Ret.

## INTRODUCTION

### WHEN DO WE EAT?

The following account of the operations of the Supply Section, 2d Battalion 306th Infantry (77th Division), covering the period August 15 to 17, 1918, attempts to show in small part how the wheels turn behind the line in answer to that plaintive query.

Early August saw the 77th Division relieved from the comparative comfort of a quiet Lorraine sector and rushed by rail and marching, through mud and rain, to the vicinity of Coulommiers. (1)

(1) Division  
History,  
p 40

The sternly resisting German had by August 4 reached a strong defensive position on the heights north of the Vesle River. From these positions, aided by perfectly registered artillery, unlimited ammunition and complete control of the air, he stopped the rapid advance of the 4th Division along a line roughly following the south bank of the Vesle, on a front from Bazoches to <sup>du</sup>Chateau Diable, west of Fismes.

From the 5th to the 10th of August, the 4th Division with the 38th Division on its right, the 62d Division (Fr.) on the left, attempted in a series of desperate attacks to cross the mile wide valley of the Vesle and gain a foothold on the northern heights. Only dearly purchased local gains resulted and by August 10 it was apparent that there would have to be a halt to permit reorganization for a coordinated attack. On this date it was determined to relieve the sorely tried 4th Division with the 77th Division (2) and late that afternoon the 153d Brigade detrucked from French camions in Nesles Woods. Here during the daylight hours

(2) Dale van  
Every,  
pp 186-189

- (3) History 305th Inf., p 92 ✓ of Sunday, August 11, extra bandoleers and three days' reserve rations were issued. (3) Late that day a vigorous German counterattack swept the 4th Division from their footholds north of the river and left them clinging desperately to the south bank of the Vesle. (4)
- (4) Dale van Every, p 199 ✓

SITUATION - AUGUST 11-13

- (5) History 305th Inf., p 92 ✓ At 8:00 PM, August 11, the 153d Brigade started forward to relieve the 4th Division. (5) The 2d Battalion 306th Infantry, in column of file moved forward to take over part of the front of the 62d French Division. Heavy shelling, gas and bombing together with the confusion of lost columns and missing guides contributed to a wild night, and daylight found the relief still incomplete. (6) Another night and by daylight, August 12, the 2d Battalion 306th Infantry held the front extending from the railroad north of La Graviere to a point west of St. Thibault. From this point east the 305th Infantry with two battalions in line had taken over the entire front of the 4th Division extending to Chateau du Diable. On August 14 the line was extended further to the east to include Fismes. (17)
- (6) History 305th Inf., pp 93-95 ✓
- unofficial*
- (7) Hist. Sect. A.W.C., p 301 ✓ Many casualties were sustained during the progress of the relief, the conclusion of which found the inexperienced troops clinging to ground where, to quote General Bullard, their corps commander, "They lined the south bank of the river in the open under the eyes of the machine guns and artillery of the enemy upon the hills of the northern bank. I have rarely if ever seen troops under more trying conditions. From his commanding position on the hill the enemy dominated them in a position in which they nevertheless had to remain quiet without advancing or retiring. There they stayed,



*Not correctly quoted*

(8) Bullard,  
p 251

harried night and day by the enemy. Literally a blade of grass or a bush could not sway without calling down hostile fire." (8)

Let us leave our 2d Battalion crouching in their fox holes, tormented by thirst under the burning heat of mid-August, while hordes of loathsome flies fight for the last of their rations. Where was the organization <sup>that was</sup> supposed to feed them?

March of the Trains

Upon the departure of the 2d Battalion, their field and combat trains, reverting to the control of the regimental supply officer, began their march forward as part of the brigade train. Crowded upon a single road with the divisional artillery as well as the trains of the 154th Brigade, fifteen to eighteen hours a day were spent in draft with progress of little over a mile an hour. Marching by day as well as by night the combined trains reached Nesles Woods late in the afternoon of August 13. Here while a halt was made the regimental supply officer went forward to select the location for the distribution point and train bivouac.

Nesles Woods, reeking with the odor of putrefying bodies, was jammed with transportation and the tired men and animals had scarcely settled down for a few hours' rest when the hum of German planes indicated that the enemy was well aware of the tempting target.

(9) Alexander,  
p 91

The woods were thoroughly bombed three times that night and although casualties were fortunately light, (9) the men spent the greater part of the time endeavoring to quiet the panic-stricken animals and it was a tired, gloomy outfit that took the road for the last trek into position. The regimental train moved alone for this

last stretch and by 10:00 AM the distributing point and bivouac were established in the NE edge of the Bois de la Porte d'Arcy, west of Mareuil en Dole. The regimental supply officer together with the munitions officer went forward to report to the regimental commander at the Ferme des Dames, leaving the battalion supply officers engaged in the supervision of the routine duties of the camp.

Organization Supply Company, 306th Infantry

While they are gone let us glance at the organization of the Supply Company, 306th Infantry. Its company commander, who also functioned as the regimental supply officer, had been an old non-commissioned officer of the regular army. He was very decisive in character and greatly trusted by his regimental commander. The company itself divided naturally into three groups: (1) Company Headquarters, (2) Combat Train, (3) Field Train. The combat train was under the command of the munitions officer, an extremely able officer with long years of previous service. In practice this officer handled his train as a separate command, reporting directly to the regimental commander and reverting only to the supply company for supply and administration. Thus the battalion commanders seldom exercised any direct control of their combat trains, merely receiving notice that ammunition dumps had been established for them at certain places.

The supply train was divided into three battalion sections, each consisting of:

- 1 lieutenant (battalion supply officer)
- 1 sergeant (transport)
- 12 drivers (4 each for ration carts, water carts and kitchens)

At this time ration and water carts were mule and kitchens horse drawn. Each battalion section was also accompanied by the battalion rear echelon, consisting of the supply and mess sergeants and cooks.

Comment

The weakness of this organization as far as it effected the 2d Battalion was the dual control exercised over the battalion supply officer. The battalion commander, an outstanding man both in civil and military life, looked upon this hapless lieutenant as a member of his staff, while the regimental supply officer considered him a company officer. This resulted in much confusion, not the least of which was the conflict of the policies laid down for his guidance. The battalion commander naturally concerned from the viewpoint of his men, directed that the rations be brought forward to the furthest point possible, while the supply officer with equal force threatened dire results if due caution was not exercised to prevent casualties among the animals. This condition was to be corrected shortly by the detailing of another officer to the staff of the battalion, but its influence on the operations of the following day can be seen.

OPERATIONS TO INCLUDE 6:00 AM, AUGUST 15

About 3:00 PM the supply officer returned from the P.C. Assembling his three subordinates he briefly stated the situation as we already know it; the dominating German position, artillery and air superiority, the losses and confusion consequent upon the relief, the lack of cover and last the great need of food and water in the lines. Then indicating upon the map the position of each of the battalions, he

issued orders to the battalion supply officers in turn. Those received by the Supply Officer, 2d Battalion, were in substance as follows:

The 2d Battalion is in the front line along the railroad north of MONT NOTRE DAME. You will bring the kitchen section and rations to MONT NOTRE DAME and report to the battalion commander. It's a bad place, watch out for gas. Better consult with the Supply Officer, 1st Battalion as to your route. No movement from this position until dark.

The recommendation to consult with the senior of the battalion supply officers was probably due to the inexperience of the 2d Battalion Supply Officer, he having been recently transferred from a line company and this his first experience in taking a train forward.

Although it was but 4:00 PM and at least four hours remained before a forward move would be advisable, the 2d Battalion Supply Officer attempted no reconnaissance of his route. Examination of the map indicated a route which, although longer than its alternate and partially in the sector of the 62d Division, appeared to offer better cover. It also avoided use of the Mareuil en Dole--Chery Chartreuve Road, which was under constant fire. It was his understanding that contact with his battalion had been arranged through regiment and that he would be expected. The route appearing clear he was therefore satisfied to use the remaining time in routine preparation. Assembling his transport sergeant and the battalion supply and mess sergeants, our supply officer issued the following order:

"We move out after dark. Everything will be loaded ready to move at 7:45 PM. Stew and coffee previously prepared will be carried on kitchens, balance rations on carts, E and G water carts will go loaded and double teamed."

He then carefully went over his route on the map with his transport sergeant, a reliable soldier of Irish extraction, and by 5:00 PM was content to sit down to an excellent meal satisfied with his preparations.

At dusk the train assembled under cover. Eight enemy balloons were still up, but the lateral road through Mareuil en Dole was already noisy with traffic. At this time the sergeant in charge of the transport of the machine gun company reported to the supply officer, requesting permission to attach his transport to the battalion train as his company supported the battalion. This permission was reluctantly given and at 8:00 PM the train moved out, ration carts leading followed in order by kitchens, water carts and lastly the machine gun carts.

While on the Mareuil Road, traffic was kept well closed up but as soon as the left turn on to the empty road to Loupeigne was made the column opened out, taking 15 yards between the larger vehicles. Looking back at the rattling train stretching over 300 yards behind him, it appeared to the supply officer that the clatter must already be audible in the German lines. The transport sergeant had taken position tailing the last water cart, the machine gun non-commissioned officer in rear of his transport. For the first 1500 meters the road, protected by high ground to the northeast was quiet although constant

shelling could be heard to the southeast and north. Loupeigne was occupied by French artillery whose positions appeared to be northeast of the town. They came down to the road commenting most unfavorably upon the presence of train. Occasional shells could now be heard ahead and after reaching the road junction northwest of town the train was halted. After a short reconnaissance it was determined that ~~5.9 cm~~<sup>4.2</sup> shells were dropping at approximately two-minute intervals on the stretch of road just northwest of the railroad (Area 1). Three shells were timed and the interval being constant it was decided to send the train past in rushes to reform beyond. The train sergeant had joined his officer when the halt was made and was now instructed to send the larger vehicles forward, three at a time to the shelter of the cut just east of the underpass, where they were to wait for a shell to break and then cross at a gallop. The supply officer went forward with the five ration carts to make the first rush and reform the train beyond. A detour had been considered but it was recalled that the maps had indicated marsh in the vicinity, and it was decided to chance the road even with the gun carts whose drivers would have to run with their animals. As the five ration carts took the gallop, it was apparent that it was hopeless to attempt to maintain any distance between carts. Both drivers and animals were anxious to go and in a few yards all were tightly bunched. In fact, the next rush by the leading kitchens had all the earmarks of a chariot race.

The transport was halted some 500 yards from the bend under the slight cover of a bank which also proved of assistance in quieting the animals, who

excited by the noise as well as the run, were giving trouble. It was now noticed that the stretch of road just beyond the bend was also under fire (Area 2). Investigation indicated that the road in the vicinity of the small stream was the target. The rate of fire appeared slower and more irregular than in the first instance.

After consideration it was decided to begin a second series of rushes past this area although all the transport was not up as yet. In the hope of holding the gait down to a more ordered rate, the supply officer decided to remain at this intermediate point and send the rushes forward. As the transport sergeant had not come up, one of the supply sergeants was placed on the leading cart with instructions to collect the transport again in the first good cover beyond. Both areas were eventually passed without loss and the transport collected about a kilometer south of Lhuys. The attempt to hold down the gait had not proved a success and the difficulty of controlling the animals was increasing, the off mules on the ration carts, unhampered by shafts, in particular giving trouble. The supply sergeants were having considerable opportunity to become acquainted with the animals and it is doubtful whether their recollection of the evening is colored more by mules or shell fire.

The road through Lhuys was relatively safe as it snuggled closely under cover of Hill 120 and after passing Lhuys had the added advantage of a steep high bank along the west side. The verbal disapproval of our French allies was again received in Lhuys with the added comforting detail that several men came out

in the road to point in the direction of the train's destination with the caution "pas bon sector."

Shortly after the reason for this cheerful remark became obvious, for as the transport approached the point where the road left the shelter of Hill 120 to turn sharply eastward to recross the little valley of the Muze, (Area 3) it could be seen that the approach to Mont Notre Dame was interdicted, shells falling upon the exposed stretch ahead at the rate of two per minute interspersed with an occasional salvo of four. These shells appeared to be lighter in caliber than those previously encountered.

The train was again halted this time in the secure protection of the bank. Little reconnaissance was required as it was obvious that the bottle neck across the narrow valley was, for the present at least, tightly corked. There was marsh on both sides of the road and the railroad which the road again underpassed was steeply banked. No alternate approach was available without retracing the route almost to the starting point. So it was decided to wait for a cessation in the fire. Shortly after this decision had been made a motorcycle swept out of Mont Notre Dame across the valley. The driver was stopped and proved to be a messenger on his way to the regimental P.C. At the earnest request of the supply officer he agreed to take him into Mont Notre Dame although he emphasized the fact he was in haste and could not delay long. Leaving the train in charge of the sergeant with instructions to await his return the sidecar reentered Mont Notre Dame without incident. At the P.C. located at a house



on the reverse slope the supply officer found one of the battalion staff together with a lieutenant of the machine gun company. The battalion commander was forward with his troops. Conditions were bad, several gas concentrations had already been placed on the town and most of the troops withdrawn from it. Hasty arrangements were made for a guide to meet the transport at the southern entrance as well as for carrying parties. The supply officer left with the understanding that the train would enter as soon as conditions permitted.

(10) 77th Div.,  
p 44

Shortly after rejoining the train the rate of fire suddenly increased to 30 shells a minute, chiefly gas. (10) A ration cart was struck and the driver wounded and taken back to the French dressing station at Lhuys. The animals were still very nervous and the masks made it difficult for the drivers to handle them.

Shortly after 2:00 AM the fire died down and although the low ground was still drenched with mustard it was decided to take the ration carts forward leaving the balance of the train behind.

No guides were found at the southern entrance, so leaving the carts there the supply officer rode forward to the P.C. to find only a single soldier remaining. Both officers had been gassed and removed from town. The P.C. had also been moved.

The runner seemed indefinite as to the exact location of the new P.C. and as the wire to the regiment was still in the supply officer called the P.C. for information.

As soon as the operations officer learned the location of the transport, he emphatically directed the supply officer "to get his train out of Mont Notre Dame without delay." Returning to the carts, rations were dumped just northwest of the road junction in K 75. The supply sergeants were directed to locate their companies and return with carrying parties. The carts returned individually to the point where the train waited. Just prior to the resumption of the march the machine gun noncommissioned officer asked what he was to do with his carts. In view of the marked lack of enthusiasm manifested by the machine gun officer when he had been informed of the arrival of his transport, as well as the order of the operations officer, the supply officer directed that the carts accompany the train.

The transport returned over the same route to be pleasantly surprised by the lack of shelling. As they passed through the area of the neighboring division, the supply officer noted that the French train movements had not begun until later in the evening, as the road, empty during the trip forward, was now quite active with returning transport.

The horse lines were reached shortly before 5:00 AM. Nearby, nine hours had been consumed on a round trip of less than twelve miles. Little did the supply officer dream as he turned in for an hour's sleep that much of the ration delivered had been rendered unfit for use by the gas.

#### Comments

This night's experience provides an excellent example of how a routine operation of this type should

not be carried out. The supply officer's lack of knowledge of the situation and route, which had been the cause of the major part of the difficulties, was due to the neglect of three separate opportunities for reconnaissance. If the supply officer had been permitted to accompany his battalion when they entrucked, he would have had at least two days to familiarize himself with routes and conditions. Failing this, he should certainly have been released immediately upon the arrival at the bivouac. Both of these errors could still have been retrieved if the supply officer had made proper use of the time remaining after the receipt of orders from the regimental supply officer. If he had reconnoitered his route at this time and reported to his battalion commander for instructions much wasted effort would have been prevented and the security of the transport bettered.

Although time available was short arrangements could have been made to meet the transport enroute.

His failure to protect the rations from the effects of gas both while enroute and after establishing the dump was inexcusable, particularly, in view of the warning contained in the orders he received. However, this as well as his unauthorized use of forward roads in the area of another division can properly be charged to inexperience.

The difficulties experienced in handling the animals, particularly on the ration carts, are, it is believed, unavoidable in using carts and wagons in heavily shelled forward areas.

The failure on the part of the battalion to make any effort to meet the transport was, of course, due to the pressure of the situation. This is further

evidence of the need of having someone who is forward and conversant with the situation charged solely with the problems of supply.

The withdrawal of the machine gun transport after it was safely forward was an error. If these carts had been located in one of the ravines well south of Mont Notre Dame, they would have been in better position to have assisted in the move of the battalion which was to be made the following night.

OPERATIONS TO INCLUDE 8:00 PM, AUGUST 16

While the transport lines were busy with the routine of a new day, the regimental supply officer went forward to the Regimental P.C. The other battalions, respectively, in support and brigade reserve had received their rations without incident on the preceding night, hence he was accompanied only by our friend, the 2d Battalion Supply Officer.

Upon arrival at the P.C. the extent of the damage of the preceding night became known. The enemy in drenching the low ground of the front lines in gas had caused casualties so heavy that among other changes, the 2d Battalion was to move into the support position along the ridges some 800 meters west of the P.C.

Orders were received that the battalion commander desired his kitchens brought forward that night into Bois de Dole about a kilometer west of Ferme des Dames, a position near the present location of the kitchens of the support battalion, whose kitchens in turn were to move some two kilometers north to a position in the woods east of Montbani Ferme.

With ample time available the now cautious battalion supply officer made a careful reconnaissance

of available routes. Although many cross country trails were available, in view of the fact that the kitchens were to accompany the transport it was decided to avoid the deep sand of the wood trails and follow the route used successfully by the transport of the 2d Battalion, the preceding night. This was the lateral road through Mareuil en Dole to Chery Chartreuve, thence doubling back over a good unimproved road past Ferme des Dames to destination.

This was a trip of just under six miles and although under casual shell fire practically throughout was being systematically harassed both at the two Chartreuve crossroads and in the vicinity of woods south of road in P 79 where the enemy was searching for an ammunition dump. It was discovered that in this case it would be possible to turn off the main road just short of the crossroads. In addition to this reconnaissance, the route was discussed with the supply officer of the 1st Battalion, who had been over it the preceding night.

The supply sergeants did not rejoin until arrival at the rendezvous the following morning, but mess sergeants were notified to make the same preparations as on the preceding night. It was decided not to move forward until 8:30 PM.

#### OPERATIONS TO INCLUDE 10:00 AM, AUGUST 16

As the train moved out it was realized that the volume of traffic on the lateral road was even greater than on the preceding night. An artillery brigade relief was in progress, the artillery of the 4th Division, which had been supporting the 77th Division, being replaced by the divisional artillery. (11)

The machine gun transport having moved cross country to meet its company, a train of only ten vehicles slipped into a place on the traffic-jammed road.

In spite of the rigid supervision of the military police, it soon became obvious that traffic was almost at a standstill, a move of a hundred yards or so would be followed by a 15-minute halt and so on through the night. Traffic gradually closed up almost without interval and about 10:00 PM the familiar drone of the enemy planes announced that the welcome to the artillery was about to begin. Back and forth throughout the night, as fast as the planes could take on a new load, the enemy traversed the road. Occasionally, a fear-maddened team would crash through the double lanes of traffic, injuring men and starting secondary panics among the animals. Special details promptly pushed wrecked vehicles off the road and through it all the increasing sound of the constant pounding at the Chartreuve corners indicated that some progress was actually being made.

Although much better progress was made after turning off the lateral road, it was breaking day as the transport passed the P.C. and the enemy balloons were going up as the train entered the woods at a gallop.

Kitchens were placed as far in the woods south of the road as practicable, separated by intervals of over a hundred yards. The kitchen teams were picketed in the woods to remain available for sudden moves. Cooks who had in many cases straggled off during the night had by now arrived and by 9:00 AM the ration carts commenced their return trip using the trails

through the woods. In less than an hour and a half they were back at the transport lines covering the ground which had taken ten hours of agony to traverse during the night.

#### Comments

Although the prospective artillery relief must have been reported to the regiment, no mention of it was made to the battalion supply officer. However, even if it had been known in advance, it is doubted if a cross country move with the heavy cumbersome kitchens would have been attempted. Even the short move of the kitchens of the 1st Battalion over a wood trail proved to require doubling of teams and even then kitchens had to be pushed through the deeper sand pits by hand as all the animals could not pull at the same time on the narrow winding trails.

This almost incredibly slow progress on the main road indicated what may be expected when it becomes necessary to pass masses of transportation through highly accurate shell fire. The delay at the crossroads was felt for miles back along the roads delaying, as we have seen, even units not required to pass this point.

Therefore the lesson of outstanding importance to be derived from this night of tedious routine is the great limitation in the mobility and tactical use of battalion trains equipped with vehicles so heavy as to practically confine operations to the main roads. The relatively unlimited freedom afforded the carts when operating alone was further verified as we shall see during the operations of the following

day. During the long hours of the previous night the motorized trains of the division had been seen blocked behind the slower animal transport, the whole really ranged in column to provide a target for the alert enemy. On a densely traveled road the traffic takes the rate of the slowest vehicle. It is useless to motorize trains if the animal transport is not sufficiently mobile to clear the main roads for their use.

OPERATIONS TO INCLUDE 12:00 PM, AUGUST 17

Well before complete darkness had fallen the loaded ration carts slipped out over the cross country trails, bent on getting a jump on the enemy firing schedule. The route followed was cross country northeast to the trail junction in the edge of woods 800 yards northwest of Mottin Ferme, thence northeast to the trail junction at the western edge Bois de Dole, south of Hill 160, thence to destination.

Enroute the carts passed in front of two batteries in action, but not even a single shell dropped near the little train. In less than an hour and a half the three and a half miles had been covered, only to learn upon arrival that, due to fire attracted by the smoke of the kitchens, the cookers of both battalions had with difficulty been moved to a location southwest of Cote 185 about a kilometer and a half to the south. This position was reached without great difficulty also using trails through the woods.

The return trip was completed with equal smoothness, only a couple of wandering shells searching for our batteries, disturbing the placid tenor of the trip. The route used was the Mottin Ferme - B Mottin-Cote 133 trail and for the first time in a week the mules were tucked in by midnight for a well earned



### Comments

The following observations are based chiefly on the experience of the three nights just described, but for almost another month these routine operations continued and in general supported the conclusions which follow. The characteristics of this sector, where it is believed a maximum degree of exposure to fire was entailed in the operation of battalion supply, were later supplemented by the problems offered by six weeks' operation over the limited and almost impassable road net of the rugged Argonne Forest. Although the problems encountered here were totally different in character, the conclusions stated here were in no case contradicted.

In passing it is desired to comment upon two additional dangers entailed in the use of kitchens within the zone of well registered artillery fire. The instances cited, although occurring after the period covered in this discussion, are, it is believed, of sufficient value to warrant mention.

In the first case, troops of a reserve company were found by the division commander congregated around their kitchen. This habit, typical of inexperienced troops, is obviously one which must be guarded against by the officers concerned. (12)

(12) Alexander,  
p 128

In the second instance the kitchens of a battalion in seeking cover, located in the bottom of a ravine, which not offering sufficient defilade to serve as actual protection, afforded a well registered target which did in fact receive a direct hit. It is believed, particularly in the case of wide and relative shallow draws, that kitchens should be placed well up

on the reverse slope rather than in the bottom. Smoke in the vicinity of a likely position for kitchens is, of course, certain to draw fire.

The advantage of operating across country, where even if exposed to fire the enemy is obliged to search and find you, is further substantiated by the third night's operations. The freedom of maneuver in avoiding a shelled area in the open is great in comparison to the situation where the enemy merely maintains fire on a fixed area through which you must pass. This problem of passing fixed harassing fire is greatly complicated when the enemy varies frequently both the rate and volume of his fire as was, apparently, the practice of certain enemy batteries during the Vesle operation.

Before closing it is desired to protest against the inappropriate type of ration furnished in many cases. To cite concrete examples, in one case, when the 2d Battalion was in an exposed position and cooking impossible, a field ration of fresh beef and artichokes was delivered, only to rot away. At the opposite extreme, we have the equally objectionable constant use of thirst provoking salmon as the main component of the reserve ration. The use of salmon during the heat of August was, it is believed, not only the cause of additional casualties sustained in an effort to obtain water, but it is also in large part the cause of the dysentery from which many men were suffering for when sufficient treated water was not furnished men drank any type they could obtain.

## CONCLUSIONS

1. That the necessity for reconnaissance and knowledge of the situation requires the presence of both battalion supply officers and company supply sergeants with the forward echelon of their units.

2. The difficulty experienced in controlling animals driven in harness, while under shell fire indicates the need of limbered vehicles with mounted drivers. Infantry transport goes well forward of artillery positions, and artillery requires limbered transport. In further support of this conclusion can be cited the fact that one limbered cart, retained by the 306th Infantry as a souvenir of service with the British, was in constant use in delivering rations to exposed areas and was most popular with the drivers.

3. All the transport of an infantry battalion should be sufficiently mobile to move as freely as artillery cross country. If the horsed and motor transport of a division is to be confined to the use of a limited number of roads, the danger of loss is greatly increased for both. The horse transport is endangered by being forced to use these dangerous routes, while the danger to the motorized trains is increased in just the proportion that its speed is curtailed by being held up amidst the horse transport.

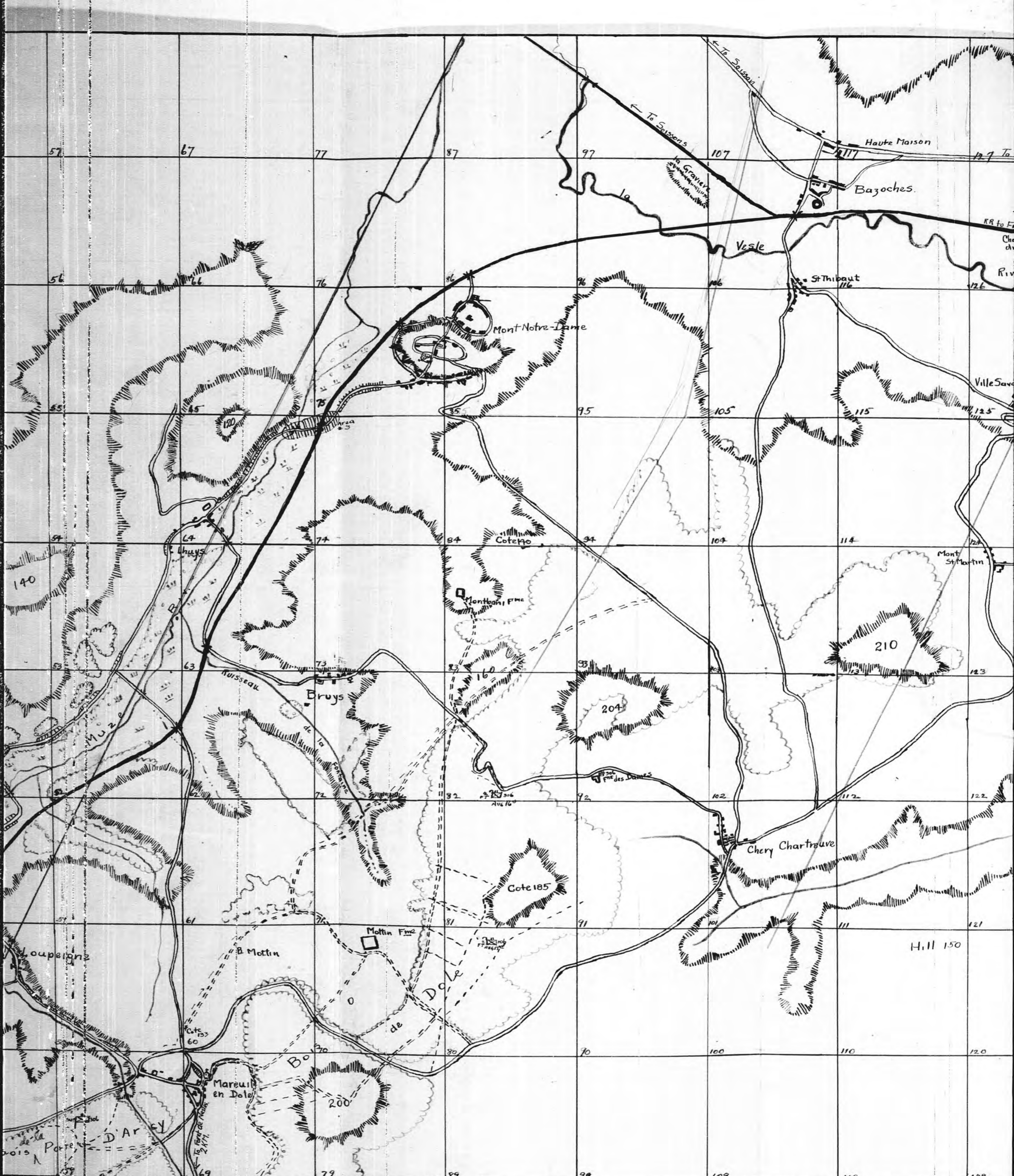
78 verb /  
4. The relative disadvantage of mules in comparison with horses for work close up under fire. Although mules are hardier than horses this fact is in a large measure due to the manner in which the mule saves himself. As this saving frequently takes the form of quitting in emergencies, and as it is very difficult to get mules to retravel a route where they

have been previously shelled, it is believed that ration carts drawn by mules should not be sent miles forward of the areas where artillery requires horses.

5. That the adoption of a two cart limber, similar in type to that used by the British, and drawn by four horses with mounted drivers, would furnish a battalion vehicle meeting most of the preceding requirements. The forward limber could be built for use as a ration cart, the rear limber to contain a cooking outfit similar to our field range. In conditions requiring extreme mobility the rear half could be detached leaving an extremely mobile cart able to go anywhere wheeled transportation can go. The carts' bodies could be easily gas-proofed and by the use of covers which fitted inside the body when not in use could be given additional carrying capacity for light articles such as bread.

6. Modern war conditions require that either the ration itself be issued in gas-proof containers, or the ration cart be made gas-proof.

7. Although the field ration as issued is highly desirable, not only can it not always be supplied, but frequently when supplied it is wasted by reason of tactical conditions or spoilage due to excess issue. Therefore, either the reserve ration should be modified to a point where it is suitable for use over relatively long periods, or an intermediate type ration, midway between the two present types, should be developed for use under certain circumstances.



MAP NO 1  
 VESLE SECTOR  
 RF 1/20,000

Note 1. Coulommiers is approximately 40 miles south of Mareuil.  
 Note 2. Return route used during daylight August 16<sup>th</sup> indicated by solid line.  
 Note 3. Trail route used night August 17<sup>th</sup> indicated by dashed line.

Capt. Henry R. Kelly