U. S. ARMY CHEMICAL CORPS HISTORICAL STUDIES

GAS WARFARE IN WORLD WAR I

THE 5th DIVISION CAPTURES FRAPELLE

August 1918

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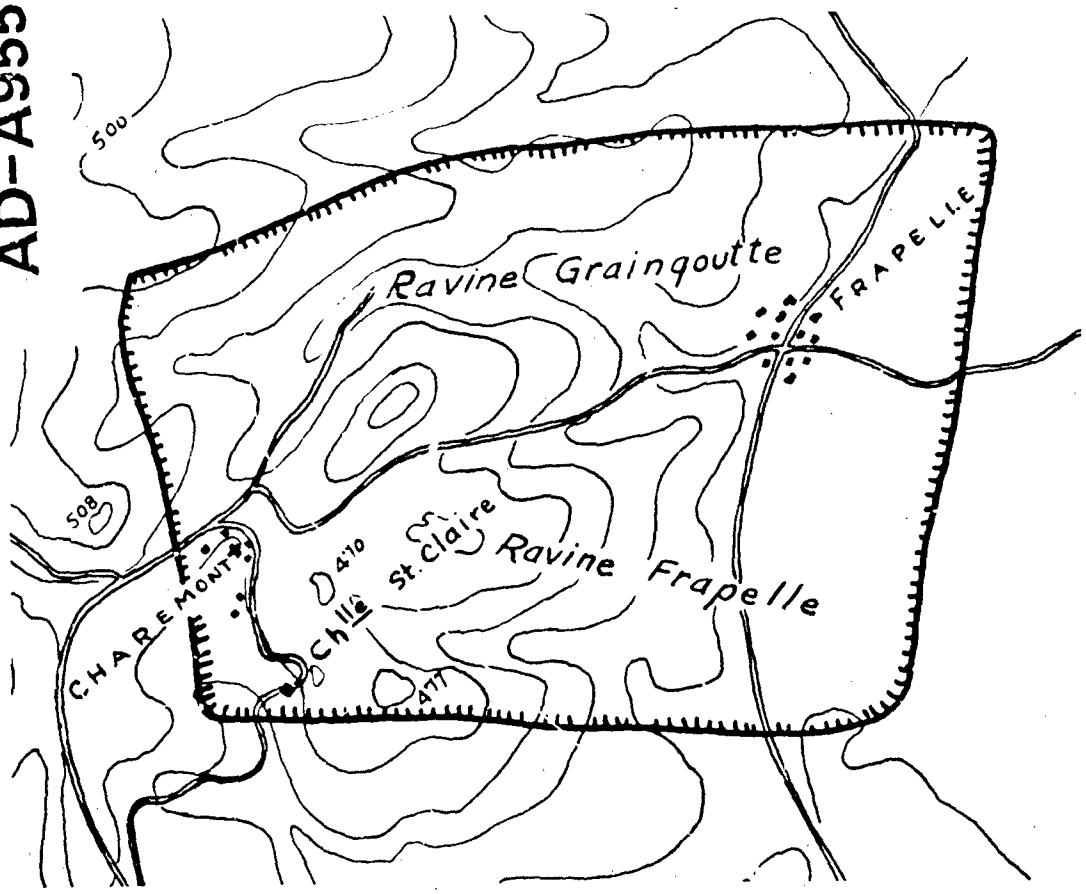

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The 5th Division Captures Frapelle
August 1918

by

Rexmond C. Cochrane

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Army Chemical Center, Maryland

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The 5th Division Captures Frapelle
August 1918

Prepared by

Rexmond C. Cochrane, Ph.D.

Under contract DA-18-108 CML-6214

with

U.S. Army Chemical Corps

This is an accepted draft study on gas warfare in World War I

W. R. CURRIE
Brigadier General, USA
Asst CCmlO for Planning & Doctrine

Foreword

This is a tentative study of the gas experience of the 5th Division during World War I. This study is not presented as a definitive and official history, but is reproduced for current reference use within the Military Establishment pending the publication of an approved history.

The author was assisted in his research by Mr. Guy F. Goodfellow and Mrs. Charlotte M. Bolin.

Note to Readers: Comments and suggestions relative to accuracy and adequacy of treatment are invited, and may be transmitted to the Chief, U.S. Army Chemical Corps Historical Office, Army Chemical Center, Maryland.

THE 5TH DIVISION CAPTURES FRAPELLE
AUGUST 1918

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THE 5TH DIVISION CAPTURES FRAPELLE
August 1918

Few operations in World War I seem so filled with contradictions as the assault on Frapelle by the 5th Division. French and American communiques hailed the operation as a notable achievement at the time, but in retrospect Shipley Thomas was to say more truly:

> ...at one time [Frapelle] had been heavily garrisoned. But the new [German] system of defense pulled practically the entire garrison back to the second line and the battalion in the attack met no resistance....Then, while the Germans shelled the town the Americans reversed the trenches and connected them with the American trenches. Next morning the Germans attempted to re-enter Frapelle but were repelled....The casualties suffered were heavy for the result achieved. A total of 571 casualties of whom 1 officer and 35 men were killed and 11 officers and 176 men were gassed, was a costly affair for taking so small a section of useless trench, except that it gave the division its first taste of actual war.[1]

The contradictions begin with Thomas's data on the cost of Frapelle and are met with throughout the records of the division itself, in the effort to arrive at the true probable cost and the circumstances of that cost.

If there was any merit in capturing Frapelle, a village fully exposed to enemy observation and situated in a natural gas trap in the Vosges Mountains, there was less in the determination of the division to hold it against repeated mustard gassing. Responsible officers of the division simply ignored standing orders on gas defense, and reaped a harvest of mustard gas and gas fright casualties.

For purposes of comparison, the present study begins with an account of a gas projector attack against elements of the division two months before the

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1 The History of the A.E.F. (New York, 1920), p. 199.

gas attack of the Frapelle operation. Both enemy attacks are notable examples of the use of gas in trench warfare.

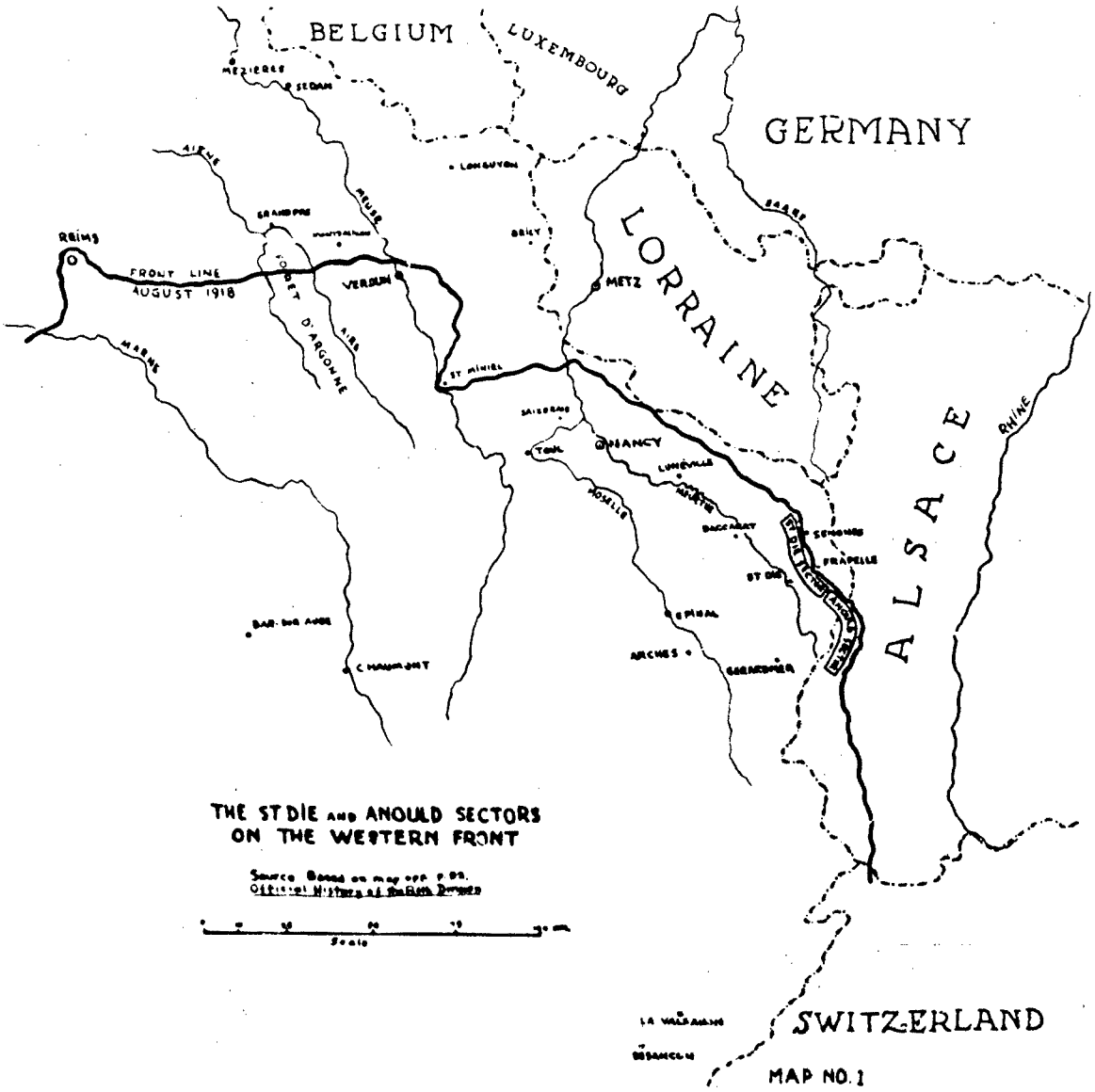
In the Anould Sector

The 5th Division, commanded by Maj. Gen. John E. McMahon, was organized at Camp Logan, Texas, in December 1917 with Regular Army units brought from North Carolina, Georgia, and Texas, and arrived in France in May 1918, to complete its training at Bar-sur-Aube (Map No. 1).

Its principal elements were the 60th and 61st Infantry, 9th Brigade, under Brig. Gen. Joseph C. Castner; the 6th and 11th Infantry, 10th Brigade, under Brig. Gen. Walter H. Gordon; the 19th, 20th, and 21st FA, 5th FA Brigade, under Brig. Gen. Clement A. F. Flagler; and the 13th, 14th, and 15th Machine Gun Battalions, the 7th Engineers, and the 5th Sanitary Train.

The 5th Division, during its training in the States and in France, appears to have received unusually thorough and continuous gas defense training. Possibly the fact that General McMahon was an artillery officer and therefore apt to be more concerned with the hazards presented by gas warfare than were infantry or cavalry officers, may account for his insistence on sound gas training.

Immediately upon arriving at Bar-sur-Aube, the Acting Division Gas Officer, Capt. J. S. Craigue, requested the appointment of regimental and battalion gas officers and gas NCOs, and with them began training the division. Most of these gas specialists had attended gas schools in the States, but to refresh them, authority was received to send one officer and 15 men from each regiment each week to take the six-day course at the AEF Gas Schools. On


BELGIUM
LUXEMBOURG
GERMANY
LORRAINE
ALSACE
SWITZERLAND
REIMS
FRONT LINE
AUGUST 1918
VERDUN
METZ
NANCY
ST MIHIEL
FRAPELLE
ARCHES
CHAUMONT
MARNE
RHINE
SAARE
MOSELLE
THE ST DIE AND ANOULD SECTORS
ON THE WESTERN FRONT
MAP NO. 1

their return, all line officers and NCO's were given three 40-minute lectures on gas defense and the troops were given further instruction and put through the gas chamber.[2]

On 1 June, after four weeks at Bar-sur-Aube, the division was declared ready for the front and assigned to General Le Conte's XXXIII French Corps, Seventh French Army, holding the sector above Gerardmer in the Vosges (Maps No. 2 and 3). On the night of 14 - 15 June, after a week's training in trench warfare tactics back of the line, the 60th, 61st and 11th Infantry were brigaded with elements of the 21st French Division and on the morning of the 16th, relieved the 70th French Division in the front line trenches in the Anould sector.[3] The 6th Infantry and 13th MG Battalion, sent as temporary support for the 26th Division in the line northwest of Toul, rejoined the division on 23 June.[4]

The Anould sector spanned 28 kilometers, from the Fave valley south to the Honeck valley, amid some of the highest peaks of the Vosges. From their OP's, the French could look down on the enemy lines and beyond as far as the plain of Alsace. Even short stretches of the Rhine could be seen in the distance. Similarly, the enemy had observation of the valley of the Meurthe,

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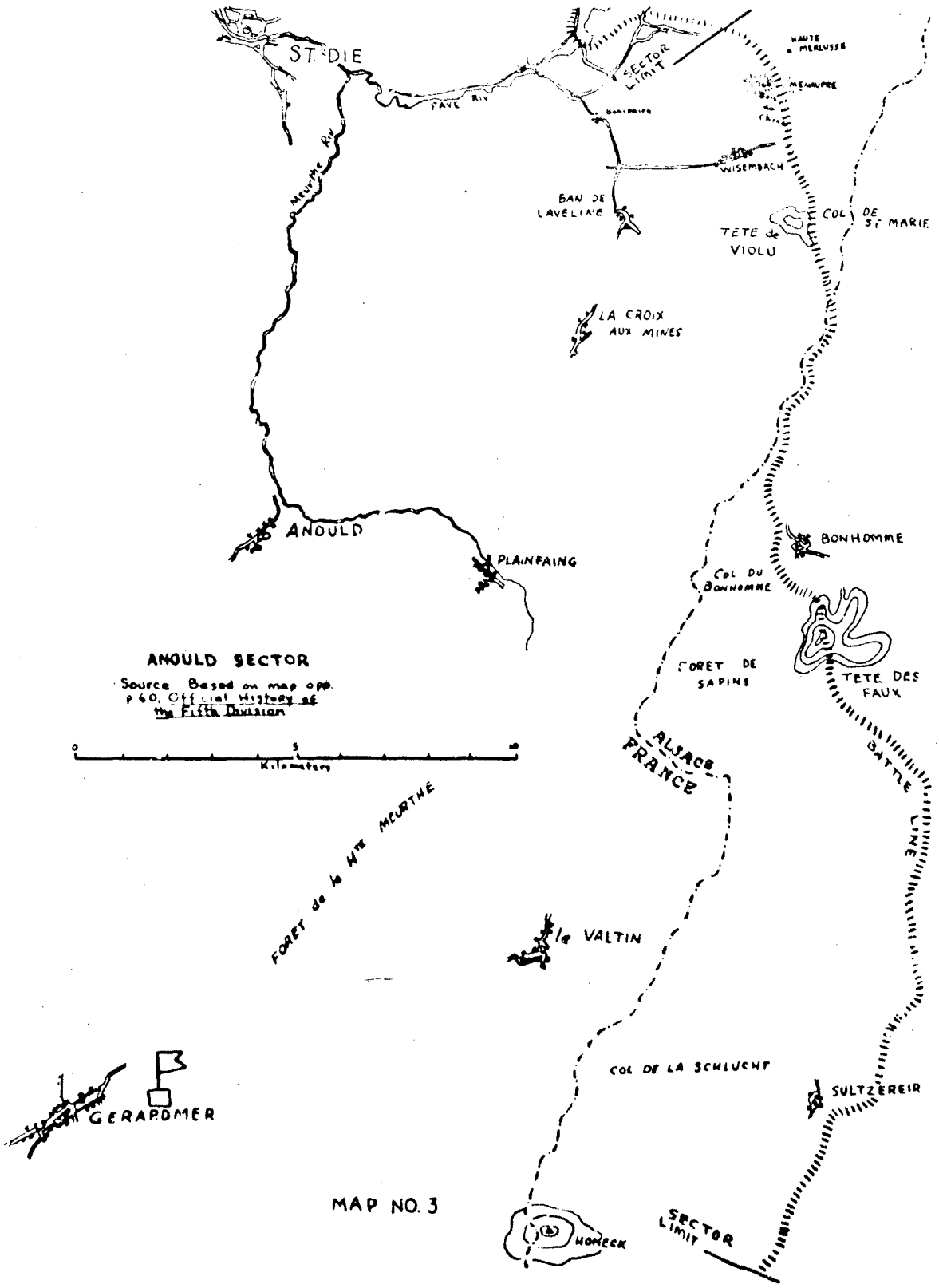
2 Rpt, 1st Lt J. L. Cauthorn, postwar Asst DGO, Particulars of Gas Attacks, n.d., based on records no longer in 5th Div files (GAF-5th Div).

3 GO 18, 70th Fr Div, 11 Jun (5th Div Box 12, 32.7); FO 4, 5th Div, 11:40 a.m., 11 Jun; FO 7, 5th Div, 4 p.m., 12 Jun (5th Div Box 8, 32.1).

4 MS. Brief History of the 5th Div (61 pp.), 24 Jun 1919, pp. 1 - 4 (5th Div Box 3, 11.4). The operational section of the MS is substantially the same in the published Official History of the Fifth Division (423 pp.), Washington, D.C., 1919.

16 JUN 1918 ANOULD SECTOR MAP NO. 2


ST. DIE
PAVE RIV
MEURTHE RIV
SECTOR LIMIT
HAUTE MERLUSSE
MENUPPE
WISEMBACH
BAN DE LAVELINE
TETE de VIOLU
COL DE ST MARIE
LA CROIX AUX MINES
ANOULD
PLAINFAING
BONHOMME
COL DU BONHOMME
FORET DE SAPINS
TETE DES FAUX
ALSACE
FRANCE
BATTLE LINE
FORET de la Hte MEURTHE
le VALTIN
COL DE LA SCHLUCHT
SULTZEREIR
GERARDMER
HOHECK
SECTOR LIMIT
ANOULD SECTOR
Source Based on map opp. p 60, Official History of the Fifth Division
0
5
10
Kilometers

MAP NO. 3

the valley of the Fave, and the valley leading to the pass, Col de St. Marie.

The first line trenches of the French crossed the summits of Tete de Voilu and Tete des Faux and spanned three passes, Col de St. Marie, Col de Bonhomme, and Col de la Schlucht. This line across the mountains was held by a series of combat groups several hundred meters apart, each combat group being wired in and supported by neighboring combat groups. Because of the difficulties of the wooded terrain in this sector, it was said, patrols operated only by day. The distance between the French and German lines varied from 75 yards to as much as a mile and a half in places.

The 5th Division troops were the first Americans to arrive in this rest sector and for that reason they were restrained by the permanent troops in the sector, the French Territorials, from activity that would announce their presence to the enemy or stir the troops opposite to unwonted hostilities. The first gas attack on the 5th Division was not, however, directed at the new troops but was, as the division learned later, the customary preparation for one of the enemy raids made periodically on this front.[5]

An officer of the 60th Infantry has left a graphic description of the entrance into the front line trenches near the top of the sector on the night of 15 June, and the gas attack that came the next night.

As soon as darkness had fallen on Saturday the 15th, we started under the guidance of a Frenchman to climb up the hill to relieve some French infantry who were occupying several combat groups in this, the Wisembach sector. As soon as we started, this French guide began to wag his head and point up the hill and whisper, 'Boche, Boche.' About every four or five steps he would point and listen and repeat the word 'Boche.'

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5 Ltr, Peacock BIO to RIO 61st Inf, 14 Jul, subs German raids and gas attacks in the St. Die sector (5th Div Box 18, 33.6).

The nearer the top of the hill we got and the nearer to the trenches, the more quiet and stealthy we went. We had almost reached the top of the hill and were halted and wondering how long before the Boche would open fire on us when all at once about twenty or thirty men with lanterns and torches and all kinds of lights suddenly appeared from out of the side of the hill and began jabbering and yelling at one another.

We were all amazed. It took us about three minutes to find out that this was the French platoon that we were to relieve and for which we had used so much caution in getting into this position without noise and without being discovered. We were finally posted and told to go to a dugout and go to sleep. We remained in this position all day and the next night without anything unusual occurring. We were just beginning to get accustomed to the quiet life when the next morning (the 17th) about 2 a.m. the Boche opened up with an artillery bombardment. He threw over a fairly heavy concentration of gas and shrapnel, concentrating on one combat group. Twenty-one casualties were suffered, most of them gas. As is usual with green troops, as soon as the artillery opened the men all got up on the parapet and began to throw hand grenades at the artillery. We remained in this sector occupying various combat group positions for about nine days after, nothing unusual occurring.[6]

Enemy Projector Attack

The gas attack had been carefully prepared. On 13 June, the 38th Pioneer Battalion arrived in the vicinity of Lusshof (Lusse?) and was attached to the 5th Ersatz Reserve Regiment, 39th Bavarian Reserve Division, to take part in a series of local operations planned by that division north and south of the Fave.[7] Two operations north of the Fave were cancelled when orders transferred the pioneers to another front, but that south of the Fave was carried out.

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6 Rpt, 1st Lt E. Beall, Jr., 60th Inf, n.d. (5th Div Box 26, 65.2).

7 For info on the German pioneer bns, see CWS Weekly Sum of Info for 9 Oct (War Dept Hist Box 298). Above the 5th Ers Res Regt was said to be the 2nd and 6th Bav Res Regts, and in support, elements of the 6th and 8th Landstrum Regts. (Daily Intel Rpt, 60th Inf, 17 Jun [5th Div Box 24, 20.1]).

In the operation, the pioneer battalion was to support six raiding parties totaling two companies in attacks on French (and American) combat groups dug in on the Chena summits and forest ravines to the north, whose shelters and reserve positions in the thick woods were believed favorably located for gas attack.

On the night of 15 June, two companies of pioneers began their installations south of Haute Merluse, on the edge of the wood on Menaupre ridge and on the edge of the Tanzwald, only a short distance from the positions of the French and Americans and concealed from their view only by darkness. Undetected, a total of 1,183 projectors were dug in, all but approximately 120 loaded with green cross (phosgene) shells, the remainder with high explosive, since blue cross (diphenylchlorarsine) shells could not be obtained in time.

The light rain that had fallen since noon of the 16th ceased just an hour before 0250 on 17 June when 923 of the gas projectors and 106 HE projectors were discharged simultaneously on the French positions. Fouled wiring, a tube burst, and a short circuit accounted for the failure of the other 152 projectors.

Allowing an hour for the gas to disperse sufficiently, during which time all available minenwerfers in the Bavarian division put down heavy diversionary fire north of the Fave, above the intended point of penetration, the German raiding parties advanced and entered the first French trenches. There they were caught and stopped by flanking machine gun fire. Unable to proceed, the raiders returned to their own lines.[8]

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8 Rpt...of 38th Pioneer Bn, 18 Jun, in Hanslian, MS. Gasangriffe an der Amerikanischen Front, pp. 50 - 56 (CMLHO).

Observers with the German pioneer battalion reported a good pattern in the impact area but had no knowledge of the effectiveness of the shoot.

In his initial report on the phosgene gas attack, 1st Lt. A. M. Fisher, 5th Division Gas Officer, said 2 deaths occurred and 20 men were evacuated.[9] More detailed accounts of the attack reveal important discrepancies with the account left by the 38th Pioneers.

Approximately 54 men from G and H Companies, 60th Infantry, including their machine gun complement, and 60 men from two companies of the 64th French Infantry, 21st Division, were in the Laveline sector on a mountainside between the command post and Ka Volme (Hill 766) when the attack occurred on the morning of 17 June. The attack began, said Lieutenant Fisher, with what he estimated to be 450 diphosgene smooth-bore minenwerfer shells, followed by a bombardment of almost 2,000 phosgene artillery shells, and accompanied by a very heavy bombardment with high explosive and shrapnel. Since this mass of fire was confined to a target area 800 by 1,000 meters, many of the casualties resulted when the concussion of exploding shells delayed adjustment of gas masks.

1st Lt. R. P. Enochs, platoon leader of Company G, who commanded the combat group caught in the gas attack, said in a postwar account that his "whole area was dense with phosgene-chlorine gas," enveloping his troops at Tete de Nialle, Tenialle, and Hills 204 and 206[sic].[10] The gas shelling

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9 Telg to C of Gas Serv, 10:50 a.m., 18 Jun, quoted in Spencer, I. 155. See also GAF-5th Div.

10 No maps of sufficient detail have been found in 5th Div files or in the Cartographic Branch, National Archives, to show minor features in the Anould and St. Die sectors.
Note: It seems probable that Hills 204 and 206 should read 604 and 606.

lasted for about forty-five minutes. When rain began falling as the gas bombardment ended, driving the gas to lower ground, he and his men removed their masks. Of the 54 men under his command, 19 became gas casualties and 5 were wounded during the gas shelling, while 2 were killed and 3 wounded in the subsequent HE bombardment. Of approximately 60 French infantrymen with his men, 40 became gas casualties through delay in masking. At the end of the HE bombardment, said Leiutenant Enochs, a few of the enemy advanced up Hill 606 and down the ravine to Tenaille, where they were driven off.[11]

The commander of the 21st French Division was to describe the attack as "a very violent bombardment of gas minen (projectors) on Heights 766 and 762.8." Losses were fairly high, he said, owing to the suddenness of the gas attack. "Men next in the support parallel who were right under the projectors had not time to put their masks on and did not protect themselves." He reported 12 killed and about 60 gassed or wounded that night in the Franco-American forces.[12]

Another post-war account, by Capt. E. A. Wilcox, who succeeded Fisher as DGO after the war repeated Fisher's total of 2,450 minenwerfer, 77-mm., and 105-mm. gas shells,[13] but said that 2 gas deaths and 23 gas wounded had

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11 Rpts quoted in Spencer, MS History of Gas Attacks upon the A.E.F. during the World War (EACD 460, 15 Feb 1928), I. 154-156 (CMLHO). Daily Intell Rpt, 60th Inf, 17 - 18 Jun (5th Div Box 24, 20.1), rptd 3 Amers killed, 3 wounded, 20 gassed; 7 French killed, 3 wounded, 16 gassed.

12 Rpt, Col de Gouvello, CO 21st Div, 20 Jun (5th Div Box 18, 32.7).

13 The German account says 923 18cm gas projector flasks, each containing 5170cc of phosgene (approximately 5.4 qts), and 106 18 cm HE minenwerfer shells were fired.

occurred in the 60th Infantry, and 45 gas wounded in the 64th French Infantry, or more than 60 percent of the men exposed.[14]

Except for the observation that two separate groups of enemy soldiers approached the lines and were repulsed, neither the French nor the Americans seem to have been aware that the enemy had intended a concerted series of heavy forays along this front. With the flare-up past, the troops settled down in their positions on the heights, and the artillery on both sides resumed their daily harassing missions.

In the two-week period that included the projector attack from 13 to 27 June, the enemy reportedly fired 9,869 small, medium, and large caliber shells into the Anould sector. The 5th Division Surgeon's summary report shows that in that same period 8 men in the division were killed by shell fire and 5 by small arms (presumably while on patrol), 14 men were wounded by small arms and 3 by grenades, and a total of 27 men were gassed. Also of interest is that 9 men were killed and 19 wounded accidentally -- as opposed to 13 killed and 22 wounded in line of duty -- through careless handling of pistols, rifles, and grenades.[15]

Coincidental with its first gas attack, the division received a copy of new standing orders for defense against gas, recently compiled by the Gas

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14 Spencer, I. 156 - 157. Also in postwar rpt, 1st Lt J. L. Cauthorn, Asst DGO, Particulars of Gas Attacks, n.d. (GAF-5th Div).

This rpt of casualties agrees with MS Medical History of the 5th Div (Med Dept Box 3475, Folder 1) which says 3 men were killed outright during the gas bombardment and 25 were severely gassed. Two of the latter died as a result of disobeying a medical sergeant who told them to lie quietly until evacuated.

15 Fortnightly SOI, 21st Fr Div, 23 - 27 Jun (5th Div Box, 22.21); MS Medical History of the 5th Div, p. 9 (Med Dept Box 3475, Folder 1).

Service in preparation for its revision of the gas defense manual in July. These orders were published as received, in General Orders 19 on 19 June.[16] Soon to be of considerable significance to the 5th Division were the paragraphs in these orders concerning the evacuation of yperited terrain where the military situation permitted such movement.

As the division prepared to leave the Anould sector, General McMahon said that in the coming period of retraining all officers were to wear their masks one full hour each week, in addition to the daily half-hour period when troops and officers alike were to wear their masks during drill. In addition, gas mask adjustment would be practiced each day at retreat.[17]

General McMahon had only the projector attack to look back on when in July Colonel (soon to become Brigadier General) Fries, Chief of the Chemical Warfare Service (as the recently reorganized Gas Service was called), wrote to him concerning the growing importance of offensive gas warfare, and asked what percentage of gas shells he would like his division to be supplied with. Colonel Fries enclosed the two letters on the subject written in May and June by Col. Paul B. Malone of the 2nd Division. General McMahon answered:

In my opinion, the percentage of gas shells to be supplied as compared with the total number of shells depends greatly on the kind of warfare that

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16 The only copy of the orders with ltr of transmittal that has been found is in 92nd Div Box 81, see ltr, Actg C of Def Div, Gas Serv, to all gas officers, 14 Jun, subj Orders for Gas Defense. The orders were sent by direction of C of Gas Serv at the special request of the Gen Staff, AEF, to all DGOs for submission to divisional commanders. GO 19, 5th Div, is in 5th Div Box 16, 64.2.

17 Memo: Tng of Troops in the Arches Tng Area, 1 Jul (5th Div Box 14, 50.4).

is being waged. For trench warfare, it appears that the number of gas shells should be less than the number of high explosives, but for a war of movement, I believe that the proportion should be the same. The experience of this division has been rather limited as regards the subject of Gas Warfare, but it is the opinion of every officer with whom I have discussed the subject that we should be prepared to return four times the number of gas shells received from the enemy. There is nothing more discouraging to our troops than to be the subject of a projector attack without any means of reply in kind. As an artillery officer, I can easily conceive that the most efficacious means of neutralizing the fire of a battery would be by the use of a large number of gas shells, rather than projectiles of other character. I concur entirely with the view expressed by [Malone] the commanding officer of the 23rd Infantry.[18]

North to St. Die

The sector had become quiet again when on 3 - 4 July the 9th Brigade left the Anould sector for Epinal for further training, leaving the 10th Brigade, extended in combat groups, to hold the sector in company with the Territorials.[19] On 15 July, with the arrival of a French unit for rest and retraining, the 10th Brigade was relieved and marched north to the St. Die sector, immediately above the Anould sector, and was there joined by the 9th Brigade.[20]

Four days later, on the 19th, the 5th Division relieved the 62nd French Division, taking over a 25-kilometer front from north of the Plaine river valley, south to the valley of the Fave (Maps No. 4 and 5). With the

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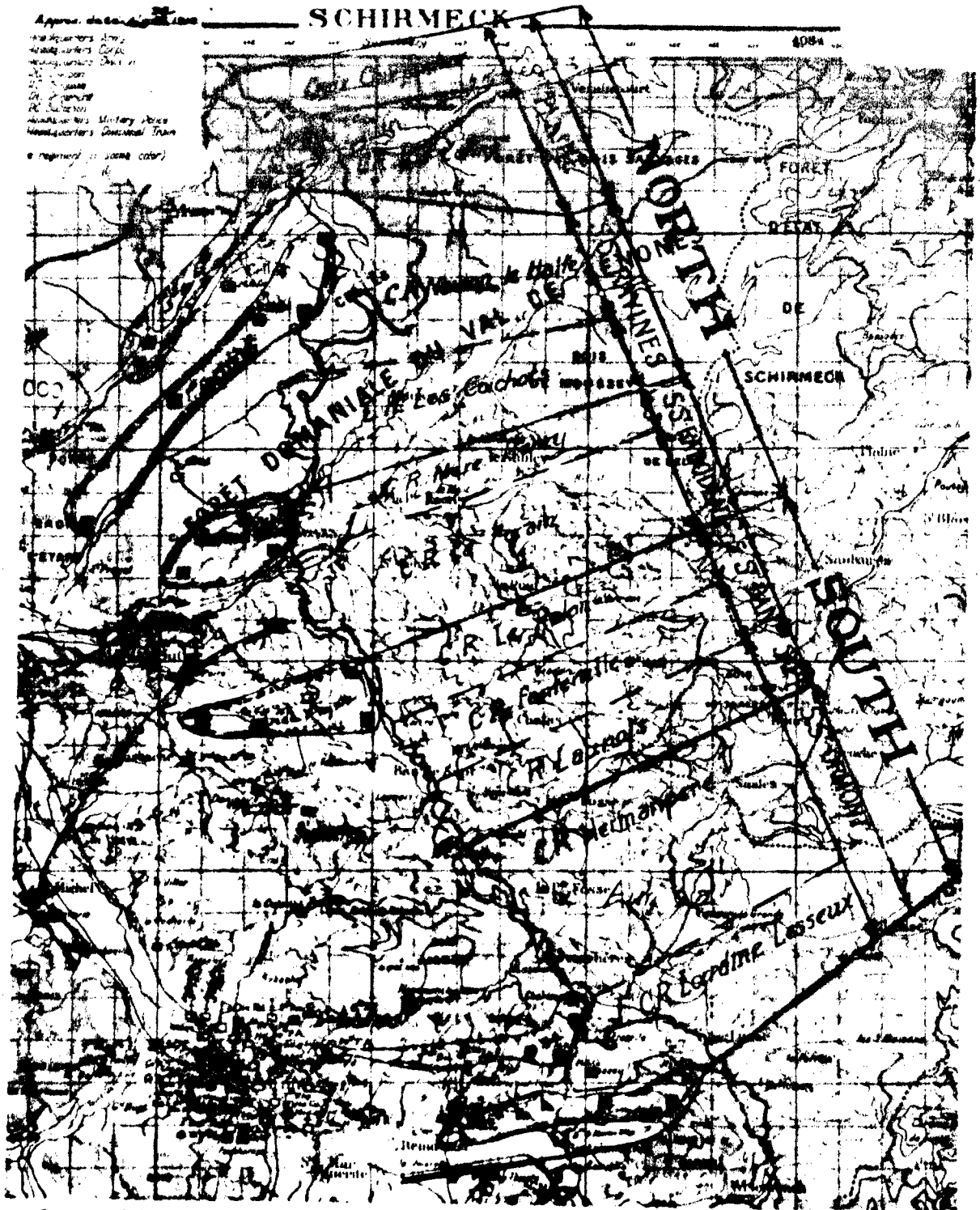
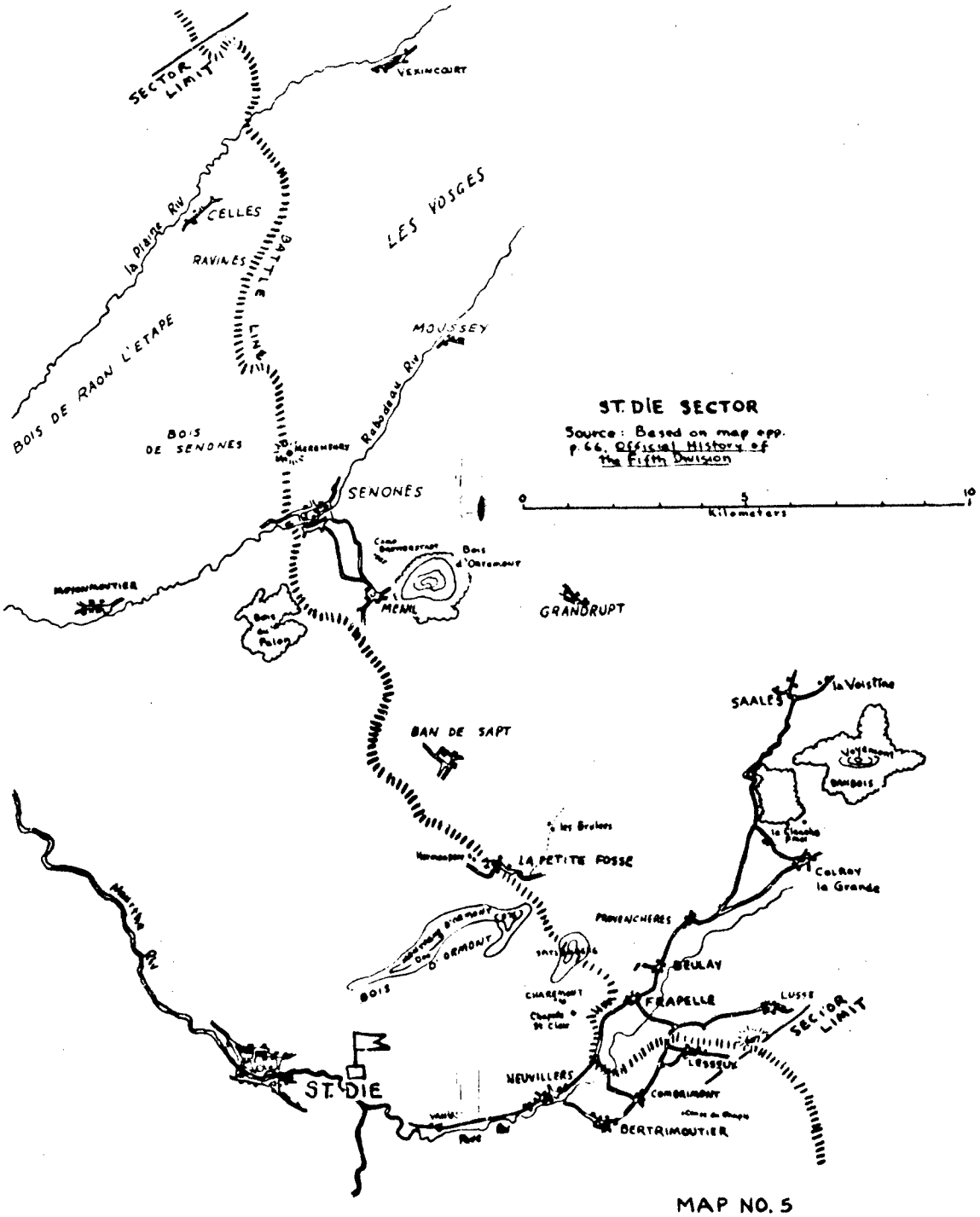
18 Ltr, CG 5th Div to C CWS, 23 Jul, sub: Gas Warfare (5th Div Box 323, 470.6). See similar corresp in 1st Div Box 173, ltr 9946; GAF-2nd Div; 35th Div Box 164, 470.6.

19 FO 13, 5th Div, 1 Jul (5th Div Box 8, 32.1).

20 FO 17, 5th Div, 9:00 p.m., 11 Jul.


SCHIRMECK
NORTH
SOUTH
SCHIRMECK
FORET
DOMAINE
22 AUG 1918
ST DIE SECTOR
MAP NO 4


ST. DIE SECTOR
Source: Based on map opp. p. 66, Official History of the Fifth Division
0
5
10
Kilometers
SECTOR LIMIT
VEXINCOURT
CELLES
la Plaine Ru
RAVINES
BATTLE LINE
LES VOSGES
MOUSSEY
Robache Ru
BOIS DE RAON L'ETAPE
BOIS DE SENONES
SENONES
MEMIL
GRANDRUPT
BAN DE SAPT
SAALES
la Voistline
LA PETITE FOSSE
COLROY la Grande
PROVENCHERES
BEULAY
FRAPELLE
LUSSE
SECTOR LIMIT
BOIS D'ORMONT
ST. DIE
NEUVILLERS
BERTRIMOUTIER

MAP NO. 5

137th French Infantry to the left of the 9th Brigade, on the north, the 5th Division was now the left flank element of the XXXIII French Corps, on the boundary line between the French Seventh and Eighth Armies.[21]

The 60th, 61st, 11th, and 6th Infantry entered the line in that order from north to south. As in the Anould sector, this sector was also held by serial combat groups, and as before, the division was in a quiet rest sector, where there had been no serious activity since the German advance down the Fave valley to St. Die in 1914. Contained at that point, the enemy had been forced back to the line Senones-La Petite Fosse-Frapelle and there he had remained. At this time the German units opposite the 5th Division were the 301st Division and the 39th Bavarian Reserve Division of Army Group Duke Albrecht.[22]

Composed for the most part of men 38 to 45 years old, these enemy divisions were no more anxious to start serious hostilities than the permanent French Territorials in the sector. On the slightest alarm, said a current French summary of intelligence, the enemy withdraws as far as his third line of defense. In the month prior to the arrival of the 5th Division, in addition to normal patrolling, two raids had been made by the French, on La Costel late in June and on Frapelle on 12 July, the latter confirming that most of the civilian populations had been evacuated from that town and also from

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21 FO 18, 5th Div, 6:00 p.m., 13 Jul.

22 The 301st Div was without permanent elements. At this time it consisted, from north to south, of five attached Landstrum battalions and the 56th and 10th Landwehr Regts (Official Hist, p. 345; Histories of 251 Divs of the German Army, [Washington, GPO, 1920], pp. 746 - 747).

Beulay. Over the month, enemy fire had averaged 380 rounds per day across the 25-kilometer front, including two gas bombardments of French artillery positions, at La Cense de Chapis and southeast of Moyenmoutier, each with approximately 250 gas shells.[23]

Three days after the arrival of the 5th Division, the enemy forces learned of the presence of Americans on that front when during a patrol on the morning of 22 July a lieutenant left his gas mask with full identification inside the German lines.[24] During the same patrol, prisoners were taken that identified the 56th and 10th Landwehr Regiments, 310th Division, and information that the 1st Bavarian Ersatz Regiment, 39th Bavarian Reserve Division, was at Frapelle.[25]

From the French OP's on the heights in the St. Die sector, on Montagne d'Ormont and the heights near the Plaine valley, observation was possible for miles in all directions. Little that went on in the enemy lines or behind them in the villages along the Alsatian border went unobserved. The 5th Division Summaries of Intelligence are filled with details of the village and farm activities carried on daily just beyond the enemy network of wire and trenches.

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23 62nd Fr Div, Fortnightly SOI, St. Die sector, 28 Jun - 13 Jul. Reprod by G - 2, 5th Div (5th Div Box 5, 22.21).

24 Opn Memo 5, 5th Div, 27 Jul (5th Div Box 9, 32.14); prisoner interr, atchd to SOI 53, 5th Div, 1 Aug (5th Div Box 4, 20.1).

25 SOI 28, 0-24 hrs, 22 Jul (5th Div Box 4, 20.1). SOI 55, 18 Aug, was to report the 1st and 5th Bav Ers Regts in the line, the 2nd Bav Ers Regt in reserve. The 1st Bav had 200-man companies (38 - 45 years old) with a stosstrupp [shock detachment] of one NCO and ten young men in each company. A sturmkompagnie was said to be in training in the rear. Fmo de Sur Beulay was reported to be the boundary between the 39th Bav Res Div and the 301st Div.

On a typical day in early August, for example, 300 women and children were observed picking potatoes or other vegetables in the fields north of Menil and carrying them into Senones. (The evacuation of Menil had been in progress for several days.) In the roads and fields between Saales and Provencheres, 194 men were seen working -- at what, the observer did not say -- and 84 civilians were counted in the streets of La Petite Fosse. Sometime that day, a body of at least 140 enemy soldiers were seen marching along the road from Saales to Voistine. (Requests by the 5th Division to shell such targets were regularly denied by its French advisors.) In the afternoon, observers saw 50 women and children on the road out of Senones, going towards Camp Bretterstadt, and 55 men with 92 horses and 12 wagons were counted on the roads in the vicinity of Vexaincourt. North of that village, 20 horses could be seen pastured in a field. Occasionally, groups of German soldiers were also seen picking vegetables near one farm or another.

That same day, an unusually active one for the enemy artillery, 346 rounds of HE and 44 shots from enemy trench mortars were fired into the 5th Division sector. The artillery of the 5th Division replied with 152 rounds. (The 5th FA Brigade arrived from La Valdahon that day, joining the 43 French batteries on the division front.)[26] In addition, there was the usual rifle fire, occasional bursts of machine gun fire, exchange of hand and rifle grenades, as well as trench mortar and antiaircraft activity. The casualties in the division as a result of all this gun fire were

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26 FO 27, 5th Div, 11:00 p.m., 28 Jul. FO 29, 4:00 p.m., 6 Aug, put all arty in the St. Die sector under the 5th FA Brig comdr as of 8 Aug.

one man wounded and another killed, both in the 60th Infantry -- but whether by shell fire or small arms, the report did not say.[27]

During the period 4 - 16 August, just prior to the assault on Frapelle, 5th Division G - 3 reported total enemy fire of 1,885 rounds of HE in the sector. On the other hand, G - 2 estimated that 2,652 rounds, 44 trench mortar shells, and 290 minenwerfer shells, for a total of 2,986 HE rounds, had fallen in the sector. (Over the same period, 5th Division guns fired 2,341 rounds.) In those twelve days, 5 officers and men were reported killed and 21 wounded, virtually all of the casualties resulting not from shell fire but from rifle and machine gun fire while on patrol.[28]

There were no gas attacks in the sector until 15 August, when the division reported approximately 150 gas shells on battery positions in the vicinity of Le Chapis, and 30 HE and 20 gas shells, "probably phosgene and mustard," over a 4-hour period on Chapelle St. Clair. The Division Gas Officer made no report on the shelling of the battery position, and in his first report of the gas at Chapelle St. Clair apparently accepted the regiment's word that there had been no casualties.[29]

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27 SOI 41, 4 Aug; DOR, 5th Div, 0-24 hrs, 4 Aug (5th Div Box 12, 33.1).

28 SOI 41 - 53, 4 - 16 Aug; DOR 4 - 16 Aug. Between 28 Jul - 12 Aug, the 60th Inf in SS Ravines (for Sub-Sectors, see Map No. 1) made over 60 patrols, the 61st Inf in SS Rabodeau made more than 12 patrols, the 11th Inf in SS San de Sapt made over 65, and the 6th Inf in SS Ormont made 30 or more -- a total of over 170 recon, combat, and ambush patrols (Semi-Monthly Rpt. G - 2, 5th Div [5th Div Box 12, 33]).

29 SOI 52, 15 Aug; Rpt on Gas Atk, 16 Aug (5th Div Box 20, 63.33); Rpt, CO 6th Inf to G - 2 5th Div, 15 Aug, subj Enemy shelling our trenches (5th Div Box 20, 33.7).

Visiting the 6th Infantry at Chapelle on the 16th, however, Fisher, the Division Gas Officer (recently made captain), learned that 22 casualties had developed among the 350 men of Companies B and C, 6th Infantry, when 40 (not 20) rounds of 105-mm. yellow cross fell on their hillside positions just before midnight on the 15th (Map No. 6). Ten of the men, asleep in dugouts, became casualties when vaporizing mustard gas penetrated their quarters the next morning. Of the 22 casualties, 3 were evacuated with lung complications, 4 with burns, and 17 as eye cases, a number of the latter also beginning to develop symptoms of lung complications.

Decontamination was begun at 1130 and completed at 1400 at which time it was decided to evacuate all the troops in the immediate area. "The Boche," said Captain Fisher, "evidently expected an attack and used gas to harass the troops. The unusual delay in notifying all gas officers was the reason for delay in evacuating the troops and decontaminating the areas."[30]

The Attack on Frapelle

Nine kilometers east of St. Die was Frapelle, a village in the enemy lines on the north edge of the Fave valley. In the long uneven front slanting down through the Vosges, the village of Frapelle and Hill 451 to its north were part of a noticeable salient in the French line. The salient, it was said, afforded the enemy a possible jumping-off point

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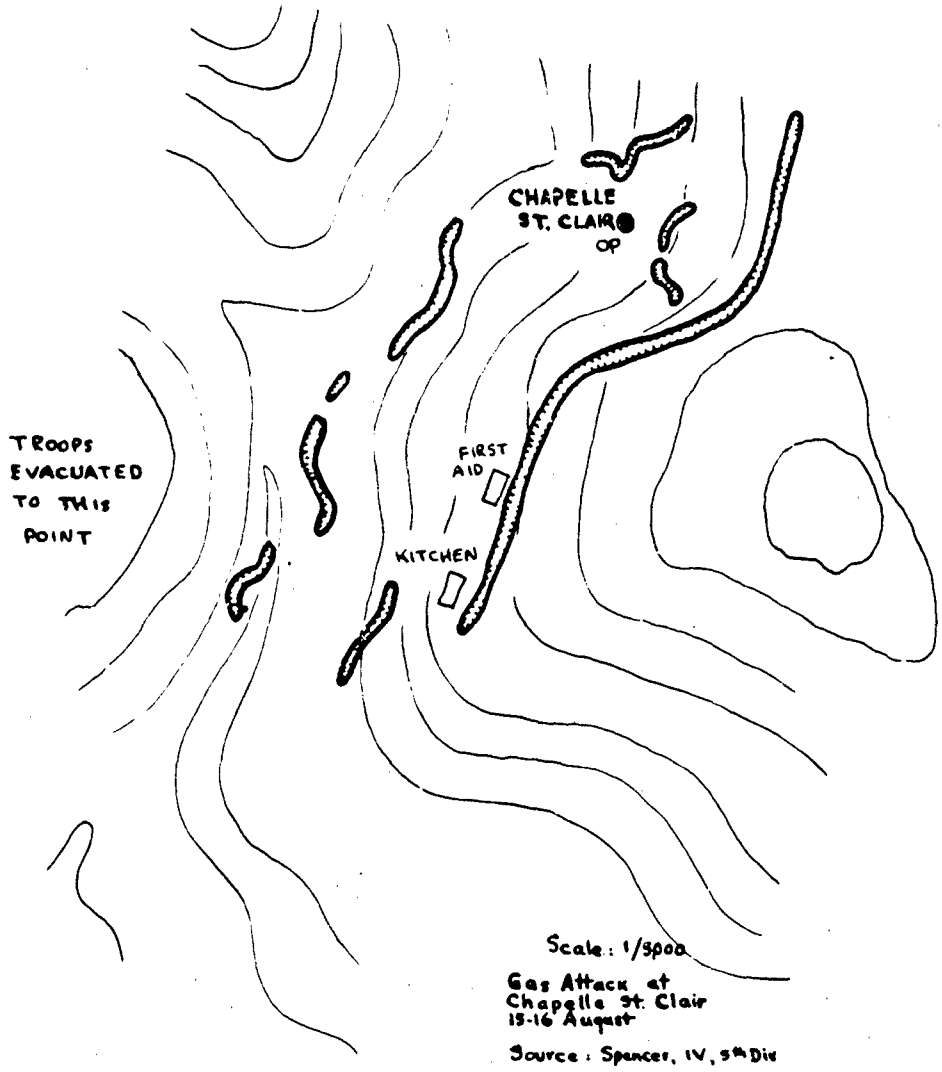
30 Telg, Fisher to C CWS, 16 Aug (GAF-5th Div) reported 18 casualties; corrected in Rpt on Gas Atk, 17 Aug (5th Div Box 20, 63.33). DOR, 16 Aug, reported 11 men in the 6th Inf and 3 officers and 5 men in the signal and MG units gassed at Chapelle St. Clair.


CHAPELLE
ST. CLAIR
OP
TROOPS
EVACUATED
TO THIS
POINT
FIRST
AID
KITCHEN
Scale: 1/5000
Gas Attack at
Chapelle St. Clair
15-16 August
Source: Spencer, IV, 5th Div

MAP NO. 6

for an offensive up the valley towards St. Die.

There is evidence that the attack on Frapelle was initiated by the 5th Division, even though its official history says that the division was directed by XXXIII Corps, pursuant to instructions from General de Boissoudy, Seventh French Army, to capture the village and hill and close the valley to the enemy.[31]

The preparations for the attack must have been difficult to conceal from the Germans. Of approximately 62 French and American batteries in the sector, commanded by Brigadier General Flagler, 34 were concentrated opposite Frapelle on the night of 14 - 15 August and placed under the direction of Col. Brooke Payne, commander of the South Groupment, for the artillery preparation. For the main attack, the artillery comprised 8 batteries of field guns, 5 batteries of mountain guns, 4 batteries of heavy shorts, 7 batteries of heavy longs, and 7 batteries of trench artillery. For the diversion on H il 607, on the sector boundary southeast of Frapelle, there were 2 batteries of heavy artillery and a battery of trench mortars.[32]

At 0354 on 17 August, all guns opened fire. The preparatory fire on the assault objectives lasted for just six minutes, from 0354 to 0400. The

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31 Brief Hist, p. 7; Official Hist, p. 70. The 5th Div did not issue a field order for this opn, nor has an order for it been found in the Ordres Generales, Ordres Particuliers, or Notes de Service of XXXIII Corps for this period (French Files Box 104). MS Hist of 5th FA Brig (5th Div Box 29, 11.4) suggests that the opn was agreed to by XXXIII Corps.

"I think it highly probable...the green Americans...spoiling for action and anxious to distinguish themselves...initiated the Frapelle attack." Pers ltr, Brig Gen Hugh W. Rowan, ret. (DGO, atchd 5th Div, 22 - 31 Aug 1918) 24 Jan 1958.

32 For the diversion, see Rpt of 5th TM Bty...on Hill 607 (5th Div Box 30, 33.6).

accompanying fire continued on enemy installations beyond the town and hill until 0430. While the mountain and heavy long guns put neutralization fire on designated enemy trenches, batteries, and machine gun emplacements all during the fire mission, the field guns and trench mortars raked the defenses of Frapelle and Hill 451 and cut pathways through the wire before the town. From H minus 6 to H plus 4 minutes, batteries of 75's fired over a thousand gas shells on machine gun emplacements in the Bois Carré, after which the heavy short artillery poured destructive fire on the wood. For all but the last five minutes, two 75-mm. batteries put smoke shells on the enemy OP's commanding the valley. A total of 192 shrapnel, 3,372 HE, 1,056 gas, and 852 smoke shells were put down on Frapelle and its defenses.[33]

At 0400, as the near artillery fire lifted and the 13th MG Battalion laid a barrage on the exits and streets of Frapelle, Companies L and M of the 3rd Battalion, 6th Infantry, climbed out of their trenches and advanced on the town. Behind them, Companies I and K moved into the vacated trenches, and Companies A and C came up as support. According to the division history, at 0406 the enemy, "evidently prepared for the attack," put down a counterbarrage on the departure trenches that caught the second, third, and fourth waves as they advanced.

33

Opns O 2, 5th Div, 14 Aug, Plan for Employment of the Arty Opn (5th Div Box 30, 32.12); Col Brooke Payne, 20th FA, Rpt of Gpmt Comdr, Light and Mountain Artillery...Opns...during the attack upon Frapelle, 22 Aug (5th Div Box 30, 33.6); Hist of the 5th FA Brig (5th Div Box 29, 11.4).

Ahead of this counterbarrage, Company L took Frapelle and Company M, overcoming machine gun fire from its slope, occupied Hill 451. The operation was over by 0445 (Map No. 7).[34]

This minor action seems to have required justification. The capture of Frapelle, the division history was to say, represented "the only indentation suffered by the Germans in their southern sector in three years of trench warfare." Elsewhere, the New York Times is reported to have said in a postwar article that the taking of Frapelle, where the entire German garrison was captured or destroyed, did not receive the notice it deserved. When informed of the article, Lt. Col. Herbert Parsons, division G - 2, demurred. Referring to the matter of the garrison, he said: "The garrison consisted of four, in two groups of two each. One was killed. The body of the other was not found. The other two were captured, one half-witted."[35]

It was, nevertheless, a successful tactical operation, and German, French, and American communiques acknowledged as much at the time.[36] The

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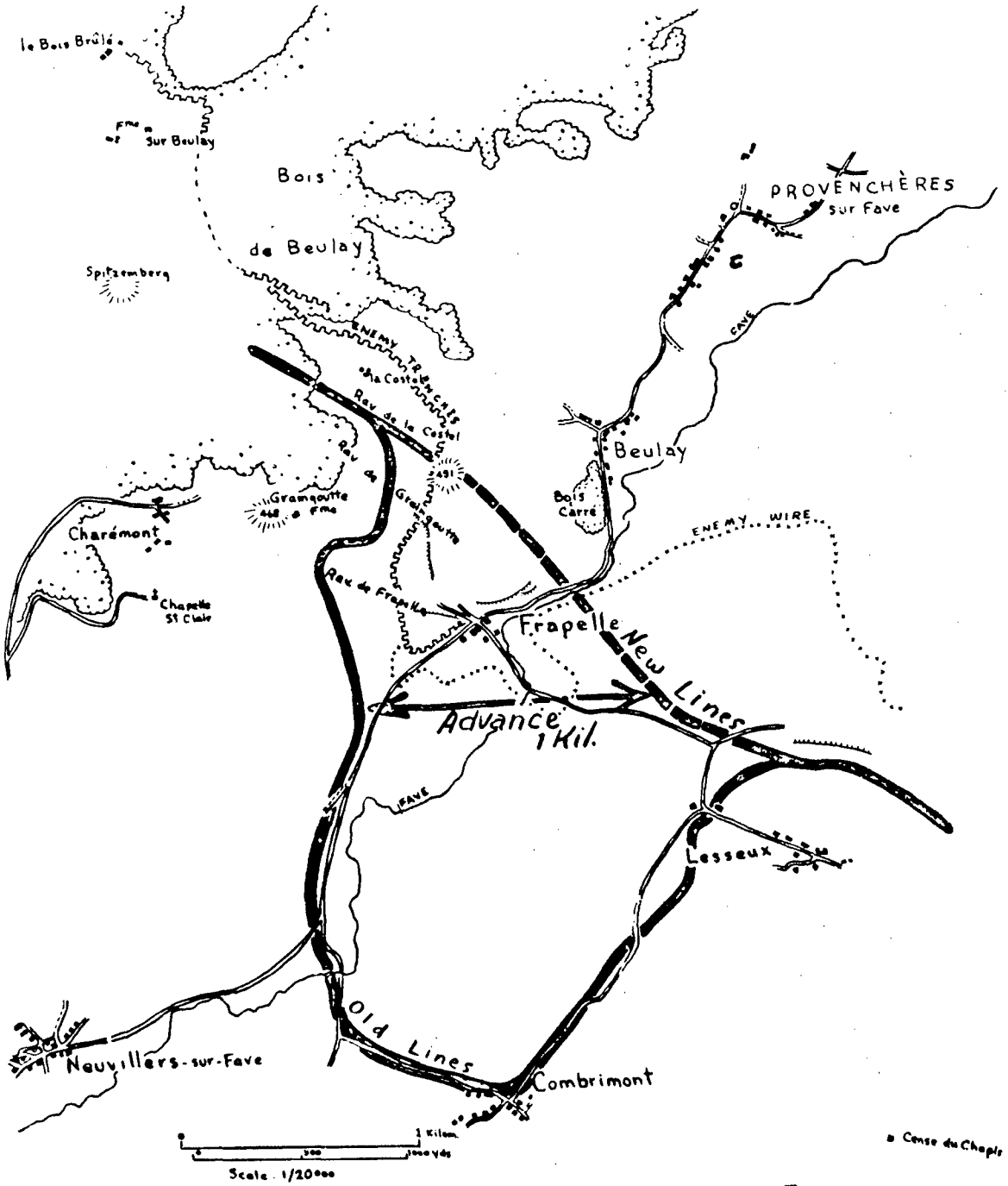
34 Brief Hist, p. 8; ltr, Lt Col E. M. Norton, CO 6th Inf to CG 10th Brig, 18 Aug, sub: Frapelle Operation (5th Div Box 20, 33.6).

35 Ltr, Parsons, former G - 2, 5th Div to Actg G - 2, 5th Div, 11 Feb 19, sub: Material for History on G - 2 of 5th Div (5th Div Box 5, 21.1). Col Parsons was one of the two proofreaders of the Official History, and this history, by a circumlocution, reports the garrison of four.

Note: A search of the files of the NY Times has failed so far to turn up the article about the Frapelle operation.

36 A Seventh French Army bulletin spoke of it as "a brilliant action." VII Armee, Bulletin de Renseignements No. 1347, 18 Aug (5th Div Box 30, 33.6).



Source: Situation map. Capture of Frapelle, 17 Aug (5th Div Box 20, 326)

MAP NO. 7

casualties sustained in taking the town and hill, as reported in Pershing's communique on the 19th, were 8 officers wounded and 2 gassed, 14 men killed, 70 wounded, and 13 gassed -- principally, it must be presumed, as the result of HE fire during the attack and gas and HE fire later in the day.[37] Keeping the town was to prove far more costly.

Air Bursts

The artillery before Frapelle was silent from 0430 to 1020 on 17 August while the infantry began consolidation of the town. It would appear that some of the enemy guns may have been put out of action, and that those still capable had expended their immediate ammunition in the counterbarrage, for the hostile artillery was also silent that morning. At 1020, a single battery in Colonel Payne's South Groupment was ordered to put gas shells on previously shelled German OP's north of Beulay, and rafale and CPO fire[38] were ordered at 1100 and 1135 on enemy troops coming down the road from Beulay.

Meanwhile the enemy artillery had recovered itself or replenished its supply. Shortly after 1000, several batteries opened with destructive fire on Neuvillers. About 1400 the first gas shells were reported falling in Frapelle. By 1610 both light and heavy enemy guns were shelling the

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37 Communique (5th Div Box 2, 11.4).

38 Rafale fire was a sudden burst of several rounds of rapid fire from each of the guns of a battery. CPO (contre preparation offensive) fire was intense fire put down in the zone just beyond the limits of barrage fire. See Opns ltr 418, 87th Fr Div Arty, 25 Aug, sub: Contre preparation offensive (French Files Box 134).

town with HE and gas. Sporadic barrages of HE appear to have continued through the evening of the 17th. Payne's South Groupment made no reply until 2000, when all guns of the groupment laid down a barrage in front of Frapelle.[39]

Soon after the barrage fire began, the artillery was notified that the infantry in Frapelle planned to advance under the fire and take the Bois Carré, "since the enemy appeared to be shelling it under the impression that it was occupied." The barrage fire was at once advanced. Then at 2045 the 10th Brigade signalled abandonment of the plan. Whether the heavy enemy fire on Frapelle made the attack too hazardous, or whether enemy troops, seen returning to the wood late that day, halted the advance of the 6th Infantry is not clear.[40]

Without distinguishing between gas and HE shells, 5th Division G - 2 reported that the enemy had fired 2,500 shells on the day of the attack in and around Frapelle.[41]

On the early morning of 18 August, the gassing of Frapelle was resumed in earnest. Situated in a valley with hills to the northwest and southeast, the town nestled against a rock cliff facing the enemy. His

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39 Rpt, Payne, Opns against Frapelle, 19 Aug (5th Div Box 30, 33.6).

40 Payne, Rpt of Gpmt Comdr...Opns...during the atk upon Frapelle.

41 SOI 54, 17 Aug. As a result of some confusion in the opns section, evident in the dating of its reports, no DOR's seem to have been issued for 14 and 17 Aug. No check is possible, therefore, on the count of enemy shells on the 17th.

yellow cross shells, fired into the face of the cliff, produced in effect air bursts of mustard gas over the town.[42] The steady crashing of mustard gas shells against this cliff and the lobbing of HE into the town began at 0110 and continued until after 0715. In midmorning and again in the late afternoon, Frapelle and Graingoutte were subjected to short intense HE bombardments.

Evacuation of gas casualties in Frapelle had just begun that night when, apparently, following heavy shelling of Frapelle and Graingoutte shortly after 2100, the enemy made his expected counterattack. The divisional artillery, upon rocket signal, put down barrages in front of Frapelle at 2125 and 2200, to contain the enemy, as the rifle and machine gun fire of the infantry drove the enemy back into the Bois Carré.[43] One of the few field messages found for this period, an artillery signal, seems to refer to this counterattack: "Enemy artillery too active. Infantry badly handicapped, losing heavily. Infantry demand and need support of our artillery. Just received report that enemy coming in large force." Appended was a last-minute note: "Clark [Major, battalion commander, 20th FA]...is about to open up with gas 600 yards in front of our line."[44] The only confirmation

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42 Interv with Brig Gen Hugh W Rowan, ret. (DGO, atchd, 5th Div, 22 - 31 Aug 18), 19 Nov 57.

43 Col Payne, Rpt of GPMT Comdr...Frapelle Opn, 22 Aug. No confirmation of this atk appears in the SOI's or DOR's, and the history does not make clear just when the counterattack occurred on the 18th. DOR, 20 Aug, rpts active reconnaissance in front of Frapelle and an atk at 2345 hrs on the 19th against Hill 451, repelled by a heavy barrage.

44 FM, 1st Lt Burkhardt 20th FA to Col Payne CO 20th FA, n.d. (5th Div Box 31, 32.16).

of this gassing is the operations item: "10:20 PM, 18 June, Zone 19 gassed," assuming Zone 19 designated a target above Frapelle.[45] There is evidence, however, that there was a further bombardment of Frapelle with gas and HE at 2220, following the failure of the counterattack.[46]

Altogether, G - 2 reported, the enemy fired 1,490 shells that day, all but 90 into the Frapelle area.[47] Gas and HE shells were not distinguished.

Late on the 18th, the division reported the total casualties for the Frapelle operation, including the occupation of the new position the day before and the gas and HE shelling on the 17th and 18th. One officer and 18 men had been killed, 8 officers and 45 men wounded, and 100 gas casualties had been evacuated.[48]

Concerning the initial gas attack, the Division Gas Officer estimated that between 1700 and 1030 on 17 - 18 August, 1,300 77-mm., 105-mm., and 150-mm. yellow cross rounds had fallen in Frapelle and in the two ravines, Graingoutte and Frapelle, sloping into the hollow where the town lay (Map No. 8). The troops there included elements of the 6th and 11th Infantry, Company B of the 15th MG Battalion, and the medical detachment with the 6th Infantry.

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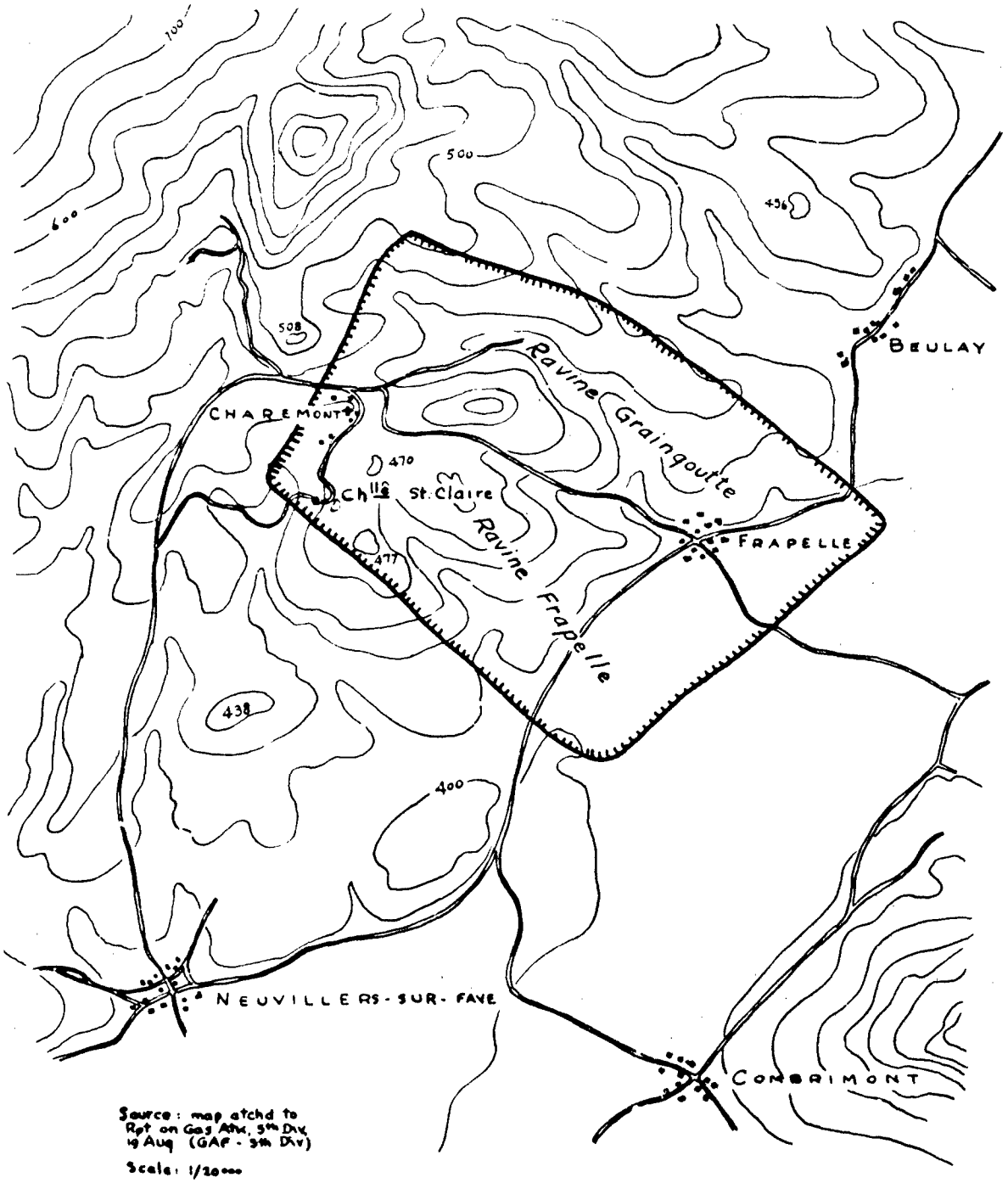
45 Rpt, Payne, Opns against Frapelle.

46 SOI, 6th Inf, 18 Aug (5th Div Box 20, 20.1).

47 SOI 55, 5th Div, 18 Aug. DOR, 18 Aug, rptd 2,150 enemy shells and said that in addition to the arty fire on Frapelle, Neuvillers had been almost totally destroyed by shell fire that morning.

The DGO was to report 10 150-mm. diphenylchlorarsine shells falling among 150 men of Co A, 6th Inf, in Neuvillers on the evening of the 17th, causing 4 eye casualties (Rpt on Gas Atk, 19 Aug [5th Div Box 20, 63.33]).

48 DOR, 18 Aug. Cf. Pershing's communique, p. 23, above.


700
600
500
456
508
BEULAY
Ravine Graingoutte
CHAREMONT
470
Ch^lle St. Claire
Ravine Frapelle
FRAPELLE
477
438
400
NEUVILLERS-SUR-FAVE
CONSRIMONT
Source: map atchd to Rpt on Gas Attk, 5th Div, 19 Aug (GAF - 5th Div)
Scale: 1/20000

MAP NO. 8

In that natural gas trap were a total of some 600 men, including reliefs and working parties.[49] There was no place in the area free from high concentrations of gas, said Captain Fisher, and evacuation of the captured town was not considered. As a result, masks were worn intermittently for 30 hours before any of the troops were evacuated. All had had to take their masks off from time to time during that long period, in order to keep from fainting from intolerable discomfort or lack of air.

It was 2030 on the 18th before the first casualties were evacuated and decontamination of the gassed area was begun. Subsequent decontamination was possible only at night since the ravines and the town were open and fully exposed to enemy observation and any movement of troops brought fire down on them at once.

By 0300 on the 19th, Company C had replaced the assault company in Frapelle and Company B had relieved the unit on Hill 451. The two platoons of Company B, 15th MG Battalion, were relieved after losing 41 men, 26 of them, including 2 officers, as gas casualties.[50] Total gas casualties evacuated by the morning of 19 August were 145, of which ten were lung cases, an unidentified number had suffered burns, and the remainder were eye cases. In an effort to hold down further casualties, said Captain Fisher, replacement of those gassed was kept to a minimum, with reduced units sent

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49 Almost 1,500 men, exclusive of artillery, took part in the operation. See Analysis.

50 H st of 15th MG Bn (5th Div Box 29, 11.4).

in to relieve the assault units.[51]

In a letter to General Fries accompanying his report on the gas attack, Captain Fisher said that only 20 of the evacuated had been severely gassed, but he had ordered out of the area all suspected of being gassed even though they showed no acute symptoms. Lest further casualties occur upon exertion, "I demanded evacuation of all men whom I thought stood any chance of having been gassed."[52]

A postwar account of the gas attack says that casualties were kept to a minimum owing to "ample gas proofed space" in the area, but Captain Fisher said nothing of this at the time, and the first action of the 92nd Division, on relieving the 5th Division on 23 August, was to send a platoon of engineers to gasproof the dugouts in and around Frapelle. It seems more likely that subsequent high casualties may have been averted when all men coming into the area on reliefs thereafter were issued Tissot masks, a special French mask without noseclip and mouthpiece that was far more comfortable to wear than the small box respirator, but was in such short supply that it was usually issued only to the artillery.[53]

This is confirmed in Captain Fisher's letter of the 19th to General Fries:

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51 Rpt on Gas Atk, 19 Aug (5th Div Box 20, 63.33); rpt, 1st Lt J. L. Cauthorn, Asst DGO (Jan 1919), Particulars of Gas Attacks, n.d. (GAF-5th Div.)

52 Ltr, DGO 5th Div to C CWS, 19 Aug, subs Report on Gas Attack (GAF-5th Div).

53 Rpt, 1st Lt J. L. Cauthorn; A. H. Waitt, Gas Warfare (New York, 1942), p. 176.

The town is so situated that just a few shells each day will necessitate the continuous wearing of the respirator. In order to lessen the exhaustion of the men, each one who must remain in the town has been given a Tissot apparatus and a pair of gloves.

My advice in this matter is to evacuate this town in either a movement forward to the surrounding hill ahead, or backward to the hills behind the town. This of course has not been done, but the next best thing has been accomplished, the number of men in the area having been decreased by fifty percent.[54]

This account of the gas situation in Frapelle from gas officer records is contradicted at some points by a report of Capt Frederick McCabe, 11th Infantry, who made a reconnaissance of the newly captured area on the morning of 19 August. He found labor parties wiring the line Frapelle-Lesseux, repairing the communication trenches, and constructing new shallow communication trenches. At the dressing station at Charemont, 30 gas casualties had come in between 2300 and 0200, 10 of them serious, and 6 or 8 more had been brought in after that hour. In Frapelle, he reported, the officers in the town said that several kinds of gas, in large quantities, had been fired into the area, but that the shelters in Frapelle appeared to be gas-free. "In the extreme southwestern part I noticed the most gas....It was not strong but sufficient in quartity to affect slightly the nose and throat. I saw no gas masks worn."[55]

54

The same advice in another form appeared earlier in the pencilled Memo on Gas Defense Measures by 1st Lt Orr, RGO 20th FA, 5 Aug (5th Div Box 30, 63.32): "Strict compliance with GO 19, 19 June, should be enforced in all organizations...."

55

Memo on conditions at Frapelle, 19 Aug (5th Div Box 11, 32.4).
Note: The surname alone, which is the only identification on this report, is almost illegible but appears to be "McCabe." The only McCabe in the officer roster in the Official History was in the 11th Inf. No roster of gas personnel is extant to identify him as a gas officer.

During the next three days, 19 - 21 August, the enemy reportedly fired 5,605 rounds of gas and HE, directed principally on Frapelle, Charemont, and Chapelle St. Clair. The signal detachment in Frapelle was to say that, "after the heavy artillery fire of the enemy began, attempts to maintain wire communication with Frapelle were abandoned. The radio station was kept in operation until the relief of the division...although often put out of commission by shells." Signal casualties over the period were 1 officer and 9 men gassed. No killed or wounded were reported.[56]

The nearest to descriptive data on the shelling during these three days is that for the 19th, when a total of 2,300 shells were counted along the 5th Division front, with Frapelle reported to have been "under almost constant gas and H.E. from 5:00 A.M. on." At 2310, said 6th Infantry G - 2, there began a "steady beat of shell fire on Frapelle" that reached a peak just before midnight when five shells per second were reported coming in. The heavy artillery fire on Frapelle, in the Ravine de Frapelle, and the Ravine de Graingoutte that day was said to have been "half gas."[57]

Despite the apparent volume of gas shell fire in this period, no formal reports of gas attack by the Division Gas Officer have been found, and postwar records and reports indicate that none were made. There is, however, a telegram sent by Captain Fisher to the Chief, Chemical Warfare

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56 Hist of the 9th Field Signal Bn (5th Div Box 35, 11.4).

57 SOI 56, 5th Div, 19 Aug; SOI, 6th Inf, 19 Aug.

Service, at 1830 on 22 August that reads: "Total of 3500 gas shells fell on Frapelle, Chapelle St. Clair, Ravine de Graingoutte and Ravine de Frapelle since night of 18th [i.e. 17 - 18 August?] . About 3000 mustard gas, 300 phosgene and chlorpicrin and 200 diphenylchlorarsine. No serious cases."[58]

The records and reports of the division offer little evidence of results that might be expected from such a concentration of gas on a limited target. Division G - 3 reported 6th Infantry casualties of 16 men killed, 5 officers and 18 men wounded, and 3 officers and 34 men gassed between 19 and 21 August--a total of 76 casualties. (There is no operation report for 22 or 23 August.) Altogether, including the initial casualty report of 172, the division admitted to 248 casualties in the 6th Infantry as the cost of the Frapelle operation. Casualties in the other three regiments those days reportedly totaled 4 killed and 14 wounded.[59]

The division history was to say that very few gas casualties occurred in Frapelle. Actually, the 6th Infantry and adjacent 11th Infantry suffered 300 gas casualties in the occupation of the town. How many

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58 GAF-5th Div.

59 DOR, 18 - 21 Aug. On the basis of statistical section data, the Brief History, p. 9, states that almost 16 percent of the troops engaged in this first action of the division became casualties: 1 officer and 35 men killed, 21 officers and 314 men wounded, 13 men captured, with over 200 of the wounded representing gas casualties. Statistical Data Rpt, 5th Div, n.d., repeats the above figures but gives precise gas casualties of 11 officers and 176 men (5th Div Box 3, 12.3).

of these were cases of gas fright, a phenomonon much remarked on by the medical officers of the division (see Analysis) but mentioned by no one else, cannot be determined. Total gas and HE casualties for the Frapelle operation were over 480.

By 20 August, the new positions were consolidated and the Fave valley was wired and closed to the enemy. The next day the relief of the 5th Division began as elements of the 92nd Division came into the sector.[60] On the 22nd, however, 5th Division troops were still in Frapelle and reported "some gas" falling in the town that day. Elsewhere on the long divisional front quiet prevailed. The lack of aggressiveness of the enemy was exemplified by an incident at Mere Henry (Hill 651), where a brush fire swept up to the trenches and the troops climbed out of the trenches and put it out without being fired on.[61]

On 23 August, a platoon of engineers of the 92nd Division was sent into Frapelle to gasproof the dugouts in the town. "Mustard gas was encountered in large quantities the first day, and phosgene gas on the second

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60 GO 634, XXXIII Corps, 17 Aug, said that between 19 - 23 Aug, the 87th Fr Div, reinforced by companies of the 92nd Div, would relieve the 5th Div. Between 24 Aug - 3 Sep, the 92nd would take over the sector. But SO 42/3, XXXIII Corps, 21 Aug, said only that the 92nd would relieve the 5th Div, making no mention of the 87th Fr Div (French Files Box 104). The 87th Div is nevertheless believed to have been in nominal command, since FO 36, 5th Div, 19 Aug, said that command of the sector would pass to the 87th Div as of 9 a.m., 23 Aug.

Note: It is Brig Gen Rowan's recollection, as a 5th Div gas officer at the time, that units of the 87th Fr Div originally relieved the 5th Div in Frapelle, and that the first time gas shells fell on them there, they promptly evacuated the town (Interv, Brig Gen Rowan, ret., 19 Nov 57).

61 SOI 59, 22 Aug.

day. The working party which remained in the town all day and night was constantly under shell fire during the 36 hours," but reportedly suffered no casualties.[62]

By the 23rd, the 5th Division was on its way to Epinal, its training in trench warfare completed. In the Arches area it was to be retrained in the tactics of open warfare, looking forward to the St. Mihiel and Meuse-Argonne operations. Plans had already been made to set up a divisional gas school under the DGO, and the troops were to begin again the practice of wearing their masks a half hour each day during drill, with mask adjustment exercises each evening at retreat.[63]

ANALYSIS

Concerning the Weight of Shell

In the German projector attack on 17 June, 70 gas casualties, including 2 gas deaths, occurred following the launching of 923 projector gas shells (narrative, pp. 10 - 11), or one casualty for each 13 shells. The statistic becomes more impressive when it is considered that these 70 casualties represented over 60 percent of the 114 men exposed to the attack.

The 5 men wounded during the gas attack (no French wounded can be distinguished as occurring then) were probably casualties of the 106 HE

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62 Col E. I. Brown, CO 317th Eng, Rpt of Opns for month of August, n.d. (92nd Div Box 1, 11.4).

Supported by HE, tear, and sneezing gas, the enemy was to make two attempts on 2 Sep to recapture the town. Both failed and the 92nd remained in Frapelle until mid-September, when it was relieved (DOR 8, 92nd Div, 2 Sep [92nd Div Box 3, 33.1]).

63 Tng Memo 25, 15 Aug; Tng Memo 30, 24 Aug (5th Div Box 14, 50.4).

projectiles launched with the gas, and represent one casualty for each 21 HE shells.

In the Frapelle operation, 5th Division G - 2 estimated that a total of 3,900 HE and gas rounds were fired by enemy batteries into the Frapelle area on the two days, 17 and 18 August. The Division Gas Officer's estimate of 1,300 mustard gas shells fired through the night of 17 - 18 August would appear to be a likely proportion of the total. Yet, 1,300 seems an excessive number of mustard gas shells in view of the enemy's counterattack to wrest Frapelle from the 5th Division on the night of the 18th, approximately twelve hours after completing that gas mission. Even assuming that the counterattack came a day later, on the night of the 19th, no evidence has been found that German troops counterattacked or attempted to occupy ground they had so recently contaminated with mustard gas, and particularly with that weight of mustard gas.

Other considerations cast further doubt on the estimation of 1,300 mustard gas shells. Despite some indication that there may have been a further barrage of gas and HE laid on Frapelle after the counterattack failed, Captain McCabe's reconnaissance of the captured area on the morning of 19 August (narrative, p. 34) indicates that, contrary to expectations, the town and surrounding area were largely free of dangerous concentrations of mustard gas. Under the circumstances, the DGO's estimate of 1,300 mustard gas shells may be as much in excess of probability as the estimate in June of 2,450 gas shells, where in fact a total of 923 gas projector rounds were fired.

Division reports that Frapelle was under "almost constant gas and HE" fire all day on 19 August, with further gas shelling during the next two days, appear to be corroborated by the Division Gas Officer in his telegram on the evening of the 22nd, saying that approximately 3,000 mustard gas shells and 500 nonpersistent gas shells had been fired into the area since the night of 17 - 18 August (narrative pp. 35 - 36). Both his count and his comment that this weight of shell had caused "no serious cases," and therefore, presumably, did not justify a formal report of gas attack, seem incredible.

If anything approximating this number of shells was fired into the area, it indicated a needless, not to say prodigal, expenditure on the part of the Germans, considering the difficulties of ammunition supply in that mountain sector and the limited mission to be accomplished. By Captain Fisher's own admission, the terrain around Frapelle could be kept sufficiently contaminated to force wearing of masks with "just a few shells each day." A total of 4,300 mustard gas shells -- to say nothing of the 500 nonpersistent gas shells -- concentrated in an area a little under one square kilometer, over a period of five days, must have effected something like total saturation. It seems impossible that even with forces in the area reduced to as few as 300,[64] all wearing Tissot masks and gloves, that "no

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64 In the attack were 24 officers and 641 men from the 6th Inf; 7 officers and 145 men from Co B, 15th MG Bn; 3 officers and 78 men from Co A, 7th Eng; and 14 officers and 459 men from the 9th Sig Bn -- a total of 48 officers and 1,323 men. The medical detachment for the attack comprised 7 officers and 74 men. (MS. Med Hist of 5th Div, p. 18 [Med Dept Box 3475, Folder 1]).

However, the DGO says that only 600 men (including 11th Inf troops) were in the town and ravines when the first gas attack took place on the night of 17 - 18 Aug, and that the forces in the area were reduced by half on the morning of the 19th.

serious cases" could have resulted. There is no evidence that anything approaching mustard gas saturation occurred in the Frapelle area.

In view of these circumstances, and in the absence of German records relating to the 5th Division for this period, it is suggested that the total number of mustard gas shells fired into the Frapelle area between 17 - 22 August probably did not exceed 1,500, and may have been fewer.

The Cost of Frapelle

The Official History of the Fifth Division (p. 73) repeats the statement that first appeared in the manuscript Brief History (p. 9) that, "there were very few gas casualties in Frapelle, although several men were gassed when reliefs and working parties had to pass through the deep ravines and valleys leading across what had been No Man's Land. These valleys were the only possible lines of communication and they were full of mustard gas all the time." A page later, speaking of the three days and nights of "constant artillery fire and continuous danger from gas," the history appears to contradict its first statement: "The casualties were rather severe, amounting to 16 percent of the troops engaged, besides many slight cases of gassing that were not reported to the Division Surgeon. Among officers, one died of wounds and 24 were wounded. Enlisted casualties were 31 killed, 4 died of wounds, 13 missing, 75 severely wounded and 218 slightly wounded. Over 150 of the wounded were gas cases, not so serious but that the men were back on duty in a week or two."

This count of the casualties at Frapelle, based on admittedly "inadequate" 5th Division records, corroborated in the Table of Casualties in the Official History (pp. 348 - 49):

	Killed		Wounded		Gassed		
	Off	Men	Off	Men	Off	Men	Totals
15 Jul - 16 Aug	4	23	6	63	3	38	137
17 - 23 Aug	1	31	13	135	11	158	349 [65]

The statistical section of the 5th Division reported total casualties in both the Anould and St. Die sectors up to the time of the Frapelle operation (i.e., 15 Jun - 16 Aug) as:

Killed		Wounded		Gassed		
Off	Men	Off	Men	Off	Men	Totals
4	38	7	128	1	50	228

There were slight differences with the Official History in the statistical reports totals for the Frapelle operation:

1	35	10	138	11	176	371 [66]

Still greater numbers of gas casualties were reported by the Division Surgeon, though his records covered only the period 17 - 21 August:

	Killed	Wounded	Gassed	Total
17 August	21	78	15	114
18 August	1	7	68	76
19 August	8	14	91	113
20 August	3	13	72	88
21 August	4	8	15	27
	37	120	261	418 [67]

65 This represents only 6th Inf and its auxiliaries. Casualties in other regiments between 17 - 23 Aug are included in the total of 137.

66 Stat Data Rpt, 5th Div, n.d. (5th Div Box 3, 12.3).

67 MS. Medical History of the 5th Division, n.d., p. 19 (Med Dept Box 3475, Folder 1). The 418 casualties, said this history, represented 16.1% of the total engaged, with the wounded being 4.6% and the gassed 9.6% of the total engaged.

Disputing the Division Surgeon's gas casualty count of 261 is the total arrived at by an actual count of the admission lists of Field Hospital 29, at St. Die, for the period 17 - 22 August:

	11th Inf	6th Inf	15th MG Bn	Eng	FA	Other	Total
17 August	0	9	3	0	0	7	19
18 August	1	6	1	0	0	8	16
19 August	11	73	21	0	3	14	122
20 August	10	51	0	1	0	7	69
21 August	6	42	1	2	1	9	61
22 August	0	12	0	0	0	1	13
	28	193	26	3	4	46	300 [68]

On the basis of the Division Gas Officer's estimate of 1,300 gas shells, 9 shells were necessary to achieve each of the 145 casualties he reported (narrative pp. 30 - 33). Assuming, as this study does, a total of 1,500 gas shells for the period 17 - 22 August, the Division Surgeon's record of 261 gas casualties indicates that fewer than 6 shells were required to achieve a casualty, and taking the actual admissions count of 300 gas casualties, the proportion is between 4 and 5 rounds per casualty.

The source of Shipley Thomas's total of 571 casualties for the Frapelle operation (narrative p. 1) is not known. His figures for those killed, wounded, and gassed agree exactly with those reported by the 5th Division statistical section, and the section total of 371 suggests that Thomas misread the first digit. Thomas's verdict was nevertheless correct.

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68 Gas hospital lists (FH 29) are in Med Dept Box 3483. Almost half of the "other" casualties were among medical corpsmen.

Note: This total of 300 does not include 5 men of the 61st Inf gassed in a brief bombardment at the top of the sector on 20 Aug and admitted to FH 17 at Raon L'Etape (Med Dept Box 3481).

If the 300 gas casualties reported in this study are added to the statistical section's report of 184 killed and wounded in the Frapelle operation, the resulting total of 484 represents the more probable cost of Frapelle, still making it "a costly affair for taking so small a section of useless trench."

Medical Department Comments

Of considerable interest are the Division Surgeon's comments, following his tabulation of 261 gas casualties, that phosgene, mustard, and lachrymatory gas injuries were observed in the patients from Frapelle; that there were 10 cases of mustard gas burns, 222 cases of phosgene inhalation, and 9 cases of carbon dioxide inhalation (the other 20 were not accounted for); and finally, that all those gassed were returned to duty within one week.[69]

It is difficult to accept these remarks since the reports of the Division Gas Officer speak only of mustard gas casualties, as do the after-action reports of the units in Frapelle and the divisional history. Moreover, all but 19 of the 300 cases recorded in the hospital admission lists are marked "Mustard Gas, surface contact."[70] It is further questioned whether all the gas cases were returned to duty within a week. The hospital lists reveal that almost 200 of the gas casualties received at St. Die from the dressing station at Charemont between 18 and 20 August were transferred

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69 MS. Med Hist of 5th Div, pp. 20 - 21.

70 There are 3 cases diagnosed "phosgene inhalation," 7 "chlorine," and 9 "gas, undetermined."

to Evacuation Hospital No. 2 at Baccarat between 19 and 22 August, and many of those received on the 21st were transferred to Baccarat with the closing of Field Hospital 29 at St. Die on the 23rd. Only 80 cases are shown returned to duty between 19 and 23 August.

It is, of course, possible that the imminent relief of the division necessitated this wholesale evacuation, but that fact is nowhere suggested in a memo of the commander of the 5th Sanitary Train on 27 August:

> In a recent attack 261 patients were sent to the Field Hospital as gassed cases. Over half of these were not sufficiently gassed to require their evacuation from the front line. There were several who manifested no evidence of gas poisoning when received at the Field Hospital....Many men are suffering not from gassing but from gas fright. All they need is reassurance....When working in gas infected areas for a long time all troops may be more or less gassed. It is for the surgeon to estimate the degree of gas poisoning in each case, taking into consideration the kinds of gases used, their concentration, amount of exposure, physical signs manifested by the patient and the exigency of the military situation.[71]

The tone of this memo was distinctly unsympathetic, with its suggestion that too many troops in Frapelle had used the presence of gas to claim that they had been gassed. The memo might legitimately have made a distinction between gas fright and exhaustion cases, particularly among the early evacuees who had worn their gas masks intermittently over a period of 30 hours. It did not, nor did any medical officer who later discussed the gas casualties at Frapelle, refer to gas mask exhaustion.

A number of discussions or comments were elicited at the request of the Division Surgeon in a postwar circular letter to his unit medical officers, and the answers are revealing whether they refer to the Frapelle action or subsequent operations.

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[71] Memo, Lt Col C. J. Vaux for all surgeons, 5th Div (Med Dept Box 3480-Memos).

The surgeon of the 6th Infantry was to say that, "gas cases were taken care of after all wounded cases had received attention. In our first engagement at Frapelle gas cases far exceeded our wounded partly owing to the fact that our orders were to evacuate all gas suspects and our lack of experience at that time in handling gas cases."[72] Quite the contrary was the view of the 14th MG Battalion medical officer: "Gas patients were given immediate treatment and evacuated to the rear. Due to the intensive training received by the men for defense against gas the casualties were extremely light."[73] The medical officer of the 15th MG Battalion had difficulty evaluating his experience: "Mustard gas was the only form of gas that gave any serious trouble....If it had been combined with some of the more dangerous gases, the effect would have been disastrous, as the men, had begun to think that they were immune to all forms of gas."[74]

While the surgeon of the 11th Infantry was content to say that his regiment had had "very few casualties from gas," with slight mustard gas burns predominating, the 60th Infantry medical officer was more explicit:

> There were very few genuine cases of gas poisoning. One man fell over dead after reporting to the Battalion Aid Station. I saw three typical phosgene gas cases...unconscious and frothing at the mouth and cyanotic. Two of these three subsequently died. There were a great number of men who sincerely thought that they were seriously gassed and a greater number who wished to be evacuated as gassed. All these were placed in fresh air

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72 Ltr, Surg 6th Inf to Div Surg, 5th Div, 9 Apr 19, sub: Rpt on Circ Ltr No. 6 (all these ltr rpts are in Med Dept Box 3475, Folders 9 - 13).

73 Hist, Med Det, 14th Mg Bn, 21 Apr 19.

74 Hist of Med Dept, 15th MG Bn, n. d.

outside the aid station for a few hours and later sent back to their companies.[75]

Succinct but in agreement was the comment of the 61st Infantry medical officer: "Gas occasionally a friend to the weakling and an enemy to the brave. As a fatal weapon, unimportant."[76]

A minority report was that of the surgeon of the 20th FA. "Of special interest," he said, "it must be stated that officers and men gassed in the 20th Field Artillery were often returned to duty too soon. The majority of them had to be returned to the Hospital as they were found unfit for duties in the field."[77]

There is evidence that at least several of the medical officers of the 5th Division took an extremely dim view of troops who reported themselves as gassed. At the end of the war, with 1,100 gas casualties officially reported by the division, the surgeon of the 5th Military Police, for example, declared that "Gas was really of very little importance as regards real casualties." (The 6,182 wound casualties had presumably been far more real.) Gas, he said, had served principally as an excuse for malingering.[78]

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75 Ltr, Surg 60th Inf to Div Surg, 11 Apr, sub: Med History of the War.

76 Ltr, Surg 61st Inf to Div Surg, 28 Mar, sub: Circ Ltr No. 6, 21 Mar 19.

77 Memo, Surg 20th FA to Div Surg, 12 Apr, sub: Circ Ltr No. 6.

78 Rpt, Surg, 5th MP, n.d. Of interest is an 18-page anon. Medical Activities Rpt, Argonne Opn, 17 May 19 (5th Div Box 5,20.1) which says that of 2,003 gas cases admitted to the 5th Div gas hospital from all sources during the Argonne battle, 625 showed slight or no symptoms when they reached the triage hospital, 30 kilometers away. Elsewhere the report says 644 were returned to duty after a short period, including 215 yperite cases, 23 diphosgene, 144 chlorpicrin and yperite or diphosgene, 125 chlorarsene, and 137 "malingerers" (pp. 8 - 9).

The regimental surgeon of the 7th Engineers put gas cases in the same class with shell shock and PN (psychoneurotic) cases:

As far as my observation goes I consider gas to be a much exaggerated bug-a-boo, and I personally censure the ones responsible for this exaggeration. When we first arrived in the Gerardmer sector a number of men were gassed in a tunnel. I went to the hospital where these men were being treated and personally examined each one....Three had quite a severe bronchitis, four severe laryngitis, while the others were affected with eye inflammation of not a severe type. These men were kept...in bed...for some two or three weeks. After being out of bed only a few days these men were marched uphill some ten kilometers...where several of them collapsed. In my opinion any other man [whether] gassed or not would have done the same thing....At the Frapelle affair I examined carefully...each man of Company A, 7th Engineers, claiming to be gassed, found no depressant signs, and laughed each one out of his fear, evacuating not a single man and losing none that I so treated....

I positively forbade the use of the terms [shell shock or war neuroses] by either officers or men, and impressed them with the fact that it was hysteria and a disgraceful thing for the men to have.[79]

Although the surgeon of the Engineers says he laughed his men out of their fears, the records nevertheless show that two of the three members of the 7th Engineers evacuated as gas casualties from the dressing station at Charemont to the field hospital at St. Die were later transferred to the hospital at Baccarat.

These comments on gas casualties are particularly pertinent to this study of the Frapelle operation, for it was an exercise in gas tolerance. The Germans, in leaving a garrison of four in the town, indicated the military importance of Frapelle, and by their prompt gassing of the town after its capture indicated their knowledge of its vulnerability.

Frapelle was a gas trap that the 5th Division elected to occupy, despite standing orders to evacuate mustard-contaminated terrain where the

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79 Ltr, Regt Surg, 7th Eng to Div Surg, 1 Apr 19, sub: Circ Ltr No. 6.

military situation did not make occupation imperative. It seems clear that the staff and line officers of the division had the support of the majority of its medical officers in depreciating both the effects and effectiveness of gas. In all the records, reports, and histories of the 5th Division there is but a single suggestion that the occupation of Frapelle bordered on folly. It appeared in the Division Gas Officer's advice "to evacuate this town" at once.