

HEADQUARTERS
823RD TANK DESTROYER BATTALION

18 October 1944

SUBJECT: Tank Destroyer Battle Experience and Recommendations.

TO : Commanding General, Tank Destroyer Center, Camp Hood, Texas
(Attn: Chief of Staff) (Thru Channels)

1. In reply to the request of Colonel Westover, Chief of Staff, Tank Destroyer Center we have compiled some pertinent information based on our experience in three campaigns in Europe and some special tests we have conducted. We have recently been authorized to convert from a Towed Battalion to a SP Battalion. However, we feel our experiences as a Towed Battalion might be of benefit to the TD Center. After six months continuous combat as a Towed Battalion, in varied types of warfare, ranging from the hedgerows of Normandy, the drive through France, the pursuit throughout Northern France, the breaching of the Siegfried Line and the push to the Roer, this Battalion is fully convinced that any self-propelled weapon would have been preferable to the towed gun.

2. The following information is based on our experiences entirely but it is felt that it should prove typical of most Towed Battalions employed on the continent:

Section I

Chronological Battle History of the Battalion

1. Landed Omaha White Fox beach 240800 June 1944. B Company fired the first round indirect into German held territory.

26 June 44 (a) C-1 destroyed first enemy pill box.

(b) Transferred from 30th Infantry Division to 29th Infantry Division and received our first battle indoctrination by assuming exposed flank position.

28 June 44 Lt Bruton first battle casualty.

3 July 44 Released 29th Infantry Division, reverted to 30th Infantry Division.

7 July 44 Fired three preparation fires. A and C Companies, 1st and 2nd Reconnaissance platoons crossed the Vire River and Vire-et-Taut Canal in first big battle operation.

9 July 44 Took our first prisoners and killed our first positively identified Germans.

11 July 44 1st Reconnaissance platoon destroyed first Mk IV tank with bazooka.

16 July 44 Established 3rd Reconnaissance platoon by drawing upon KP's and Rear Echelon personnel.

20 July 44 Suffered our first booby trap victim.

25 July 44 Unit celebrated 2nd anniversary by taking part in first day of St Lo breakthrough.

28 July 44 Release attachment VII Corps reverted to XIX Corps.

30 July 44 Nightly enemy air attacks began.

2-5 Aug 44 Unit in reserve and received first rest.

5 Aug 44 Lt Jones died as first Officer death.

Battle Experience and Recommendations, Cont'd)

- 5 Aug 44 Unit released XIX Corps; attached V Corps; released V Corps attached VII Corps.
- 6 Aug 44 Unit moved to Mortain and St Barthelmy.
- 7-11 Aug 44 German offensive launched toward Avranches, hit A and B Companies at Mortain and St Barthelmy, respectively. For this action, A and B Companies and 1st and 2nd Reconnaissance platoons were later awarded Presidential Unit Citations.
- 14 Aug 44 Battalion moved to Barenton and Domfront.
- 17 Aug 44 Reconnaissance platoon made contact with 2nd British Army NE of Domfront.
- 19-20 Aug 44 Battalion moved 118 miles to vicinity of Brezelle. Terrain now becomes open whereas fighting was previously restricted to hedgerows.
- 22 Aug 44 Situation moved so fast that we ran off maps!
- 23 Aug 44 Took Evreux and Battalion CP had stiff fight for Miserey.
- 25-26 Aug 44 Units took assembly position vicinity Mantes-Cassicourt.
- 27 Aug 44 Battalion crossed Seine River.
- 28 Aug 44 Battalion CP established in Chateau in Fennecourt from which the Eiffel Tower could be seen in the distance.
- 29 Aug 44 Relieved assignment V Corps; attached to XIX Corps.
- 1-3 Sept 44 Starting from Neuilly-en-Thelle unit moved through Roye, Peronne, Cambrai, Valenciennes, across Belgium border into St Maur and Tournai where Bn CP had another big fight. During period A Company protected Division flank at Cambrai.
- 7 Sept 44 Gas shortage held up pursuit of enemy until 7 Sept 44 at which time a limited move of 79 miles through Valenciennes, Mons, La Louviere, Nevelles to Maransart.
- 8 Sept 44 38 mile motor move to Jauche.
- 9 Sept 44 23 mile motor move to Oreye.
- 10 Sept 44 Reached Albert Canal.
- 12 Sept 44 Crossed Albert Canal and Meuse River and entered Vise.
- 13 Sept 44 Battalion moved into Holland.
- 17 Sept 44 Troops 2nd Reconnaissance platoon and B Company first of this unit to enter Germany as a unit of this Organization.
- 18 Sept 44 First rounds fired into Siegfried line. Battalion attached 120th Infantry to protect Division front to allow other units to prepare for assault.
- 20 Sept 44 Planned attack on Siegfried line delayed. Battalion CP established in Heerlen.
- 2 Oct 44 Attack on Siegfried line started with support fires by all units.
- 4 Oct 44 By order of Commanding General, 30th Infantry Division, 16 Silver, 3 Bronze Stars were awarded.
- 5 Oct 44 B Company first unit to enter Siegfried Line.
- 6 Oct 44 C Company attached 116th Infantry Regiment, 29th Infantry Division.
- 7 Oct 44 All units except C Company moved into Siegfried Line. Battalion CP established at Ubach.
- 10-12 Oct 44 Unit repulsed five German counter attacks with tanks in their attempt to prevent closing of Aachen gap. On 12th destroyed our first Tiger tank. One Silver Star awarded.



(10 Battle Experience and Recommendations, Cont'd)

- 13 Oct 44 Battalion CP moved to Herzogenrath.
- 16 Oct 44 Aachen gap closed.
- 22 Oct 44 Transferred from First to Ninth United States Army.
- 28 Oct 44 Conducted first test firing reduced charge ammunition.
- 4 Nov 44 Fired first M-54 fuze.
- 14 Nov 44 Unit started training personnel for conversion to M-10.
- 16 Nov 44 Attack launched on Euchen and Mariadorf. One Oak Leaf Cluster to Silver Star, Nine Silver Stars, Eight Bronze Stars awarded.
- 22-23 Nov 44 Enemy armor counter-attacks upon Lohn and Fronheven were repulsed with destruction of first enemy radio-controlled robot tanks destroyed by this unit.
- 28 Nov 44 Two companies withdrawn to assembly positions for their first real rest.
- 1 Dec 44 Conducted experimental firing of 3" illuminating star shell.
- 4 Dec 44 Received first four M-10s and first battle-field promotion.
- 48 Dec 44 Three battle-field promotions received.
- 9 Dec 44 One Officer and one EM on leave to States; first men left for Paris passes.
- 11 Dec 44 One Silver Star and one Bronze Star awarded.
- 15 Dec 44 Ninth US Army order effective 18 Dec 44 unit converted to Self-Propelled. Two Silver Stars and one Bronze Star awarded.
- 16 Dec 44 First tests 36M88 (Smoke)
- 17 Dec 44 Transferred V Corps, First US Army moved South through Aachen North of Eupen.
- 18 Dec 44 Took up positions in Malmedy, Stavelot, and Stoumont, in an attempt to stop German penetration, with furious battles being fought in Stavelot.
- 19 Dec 44 A Company driven from Stoumont. C Company destroyed further tanks at Stavelot.
- 20 Dec 44 Transferred from V Corps to XVIII Corps (Airborne)
- 21 Dec 44 Attack with armor repulsed by B and C Companies. Two Battalions of 90mm AA guns attached Battalion for antitank protection. Two Silver Stars and two Bronze Stars awarded.
- 24 Dec 44 Friendly aircraft bombed Malmedy causing casualties and property damage. La Gleize recaptured and Captain Grissinger, PW of the Germans, was liberated.
- 28 Dec 44 Battalion CP moved to Spa.
- 5 Jan 44 Reconnaissance Company physically established with 5 Officers and 110 enlisted men.
- 13 Jan 44 The attack to reduce the Bulge and capture St Vith was started.
- 14-15 Jan 45 B Company destroyed 5 Mk IV tanks in battle for Thiermont.
- 22 Jan 45 B and C Companies destroyed 5 Mk IV tanks and 1 anti-tank gun near Rodt, Belgium.
- 25 Jan 45 Final Division objectives just West of St Vith were taken.
- 27-28 Jan 45 Units took up assembly position at Fraiture, Regne, Bihain.



Battle Experience and Commendations, Cont'd)

2 Feb 45 Unit was relieved assignment and attached to First United States Army and XVIII Corps (Airborne) and was assigned and attached to Ninth United States Army and XIX Corps.

3 Feb 45 Unit moved via Vielsam, Stavelot, Francorchamps, Verviers, Dupon to Aachen.

ENEMY MATERIAL DESTROYED

Mark II	10
Mark III	3
Mark IV	35
Mark V	21
Mark VI	15
Half-tracks	11
Motorcycles	4
Armored Cars	7
1/4 Tons	12

AT Guns	3
Staff Cars	1
M.G. Hests	3
S.P. Guns	10
Cargo Trucks	3
O.P.s	3
Pill Boxes	21
G.P. Vehicles	1

AMMUNITION EXPENDED

<u>Direct</u>	<u>Indirect</u>
3093 Rounds	22386 Rounds

PRISONERS CAPTURED

462

**Section II
STUDY OF T/O AND T/E DEFICIENCIES**

TANK DESTROYER COMPANY (TOWED)



1. Ordnance S&L - Additions

a. One (1) 1/2 ton truck for Company Executive.

TD units have been broken down and attached to Regimental combat teams necessitating constant battalion liaison with supported units. Our present T/E makes no provision for company liaison transportation. Transportation therefore must be drawn from security sections or company maintenance hampering the proper performance of their routine duties.

b. One (1) 3/4 ton W/C wire truck.

The current T/E allows no place to carry wire, wire laying equipment, or spare radio parts. A 3/4 ton truck is needed for this space, as well as for laying wire.

c. One (1) 1/2 ton wire truck.

The 1/2 ton truck is needed as a "trouble shooting" vehicle, and also is used to lay wire when wire must be laid on short notice or over very difficult terrain.

2. Ordnance - Weapons and Miscellaneous - Addition

a. One (1) watch for NCO

Accurate timepiece is essential in FDC for scheduled fire.

3. Ordnance - Weapons and Miscellaneous - Substitution

a. One (1) BAR, two (2) Rifles and seven (7) Carbines in lieu of M-3 Submachine guns.

CONFIDENTIAL

-5-

(TD Battle Experience and Recommendations, Cont'd)

Once emplaced and committed, towed TD Guns cannot maneuver under fire. Therefore local security of gun emplacements is most essential against enemy infantry. Combat experience has proven that enemy foot troops can be held at a distance with above weapons, permitting the 3 inch gun to fire on tanks.

b. Field Classes for Security Corporal.

Security sections provide an intricate part of anti-tank warning net, man CP's and gather information as to terrain and gun positions. Field Classes provided for each security corporal would enable him to better accomplish his mission.

4. Signal

a. 3 Cheat phones per company (TO-1)

3 Reels RI-31 per company

2 Linesman's equipment, TE-21

7 Pouch w/pliers and knife TE-21

2 Additional RI wire #W110

1 SCR 610 to be mounted in maintenance 1/2 ton truck.

1 Power equipment PE-75

1 SCR 608 for Liaison Sgt.

2 SCR 536, for radios for forward observers

1 Switchboard SD 72

All wire and wire laying equipment is essential for efficient performance of secondary mission. Cheat set TD-1 is to be used by computers, so that they may have their hands free for writing while they are talking. SCR 610 in maintenance 1/2 ton truck - for use of Company Commander while moving between platoons and making reconnaissance, and making trips to higher headquarters. SCR 608 for Liaison Sgt is needed because of distance between infantry regimental CP's and TD Company CP's. Could also be used for a spare set in the company. SCR 536 for forward observers are desirable, as this set can be taken places quietly where a large set can be seen.



5. Quartermaster Organizational Clothing

- a. Combat clothing for all personnel. This Battalion is motorized and as such has little call for marching or other movement sufficient to keep the men warm. All motor marches expose the men to the cold as the vehicles are open.

6. Quartermaster Organizational Equipment

- a. Blackout tent (1 per firing company)

Needed for PFC when performing secondary mission.

-5-

CONFIDENTIAL

CONFIDENTIAL

-6-

(TD Battle Experience and Recommendations, Cont'd)

7. Officer Personnel

a. Company Executive to be 1st Lieutenant

A company executive is the second in command and should be the same rank as a platoon leader. He is also responsible for the proper performance of the PFC when the company is in their secondary mission.

8. Enlisted Personnel - Addition

- a. (1) Tec 3 - MCO
- (3) Tec 5 - Computers
- (1) Tec 4 - VCO
- (1) Sgt - Wire Chief
- (4) 2 Tec 5 and 2 Pfts - Linemen
- (2) Tec 5 - Switchboard operators

Above personnel have to date been drawn from gun squads, maintenance sections, and company headquarters. Generally the men capable of performing such duties are also assigned important duties for the normal functioning of a TD Company in its primary role. It is felt that additional personnel are essential in giving maximum performance in secondary role.

b. Liaison Sergeant

Attachment of companies to regimental combat teams make constant liaison between regimental and Tank Destroyer Companies necessary. Regiments demand constant liaison even when TD's are in a supporting role. It is impractical to send the Company executive as liaison as this generally leaves the company CP without an officer when the Company Commander is on Reconnaissance or visiting gun positions. It is also imperative that Company executives be available for more important duties.

c. Survey Crew.

- (1) Survey Sergeant
- (1) Tec 5 Instrument Operator
- (1) Chairman Pfc

Survey crews must be able to utilize daylight hours for survey. Makeshift crews are not generally available when most needed. When a survey is necessary the crew members must leave their primary job to perform their secondary mission. Often this caused neglect on their primary duty. (Our survey crew is made up of mechanics, gun crew members, and men from Company Headquarters).



-6-

CONFIDENTIAL

CONFIDENTIAL

-7-

(TD Battle Experience and Recommendations, Cont'd)

TANK DESTROYER BATTALION, TOWED - HEADQUARTERS COMPANY -



1. Ordnance SNL - Additions

- a. One (1) 2½ ton truck and one (1) ton trailer for gas and oil section.

It is necessary to furnish gas and oil for one hundred sixty three (163) vehicles of this Battalion, frequently making long hauls. At present this gas must be hauled along with water and supplies since only one (1) 2½ ton truck and one (1) ¾ ton truck are available for water, gas, oil, rations, and supplies. Due to the wide deployment of a tank destroyer battalion supply problems regarding each and every vehicle arise. Due to the necessary use of the vehicle for its routine duty of hauling water and rations, gasoline must, of necessity, take second choice in priority and cannot be gotten to the vehicles; this causes a delay in movement in many cases because of lack of fuel.

At the present time it is necessary to run the ¾ ton and the 2½ ton trucks night and day to meet problems of supply. This 2½ ton supply truck is also called upon frequently to move our Battalion Personnel Section.

- b. One (1) 2½ ton truck and one (1) ton trailer for the Battalion Personnel Section.

The Personnel Section is assigned no vehicle whatsoever.

When a movement by this section is made it is necessary to take the battalion supply 2½ ton truck away from its supply duties to move the Personnel Section.

Each time a move is made it is necessary that the truck be completely unloaded so that it can be returned to the supply section. Trailer could well be used to hold records and personnel supplies. The 2½ ton truck does not allow enough room for supplies, records, and personnel on a move. Personnel is authorized no tent and no vehicle under the present T/E. Unless there is a building nearby for their use records and equipment are liable to get wet if no cover is provided.

In a rapidly moving situation the personnel section often is left behind because the 2½ ton truck is not available to move them.

- c. One (1) ton trailer for Battalion Supply Section.

Hauling space necessary to transport emergency supplies and equipment. At present time the battalion Supply Section has a 2½ ton truck, a ¾ ton truck and one command car in which to haul supplies, rations, gas, oil and water as well as carry on all other functions of supply. Any addition whatsoever would add greatly to the working of this section. In order to provide as much space as possible for hauling of gas, oil, rations, water and supplies, it is always necessary to unload all vehicles completely at each stop whereas with a trailer this unnecessary labor could in part be avoided.

CONFIDENTIAL

ATO Battle Experience and Recommendation, Cont'd)

The one (1) ton trailer would also serve as an extra unit on which supplies could be hauled when necessary. Trailer could be used as a storage space if the occasion arose in inclement weather.

- d. One (1) $\frac{1}{2}$ ton truck for Battalion Commander with twelve (12) volt generator system.
The M-20 assigned to the Battalion Commander has the SCR 608 radio which is the Battalion MCS. This makes it impossible for this vehicle to leave the Battalion CP area. All other vehicles available in the CP must remain there for similar reasons. It has been found that it is suicidal to take large vehicles to the front lines where they expose gun positions and draw enemy fire, whereas a $\frac{1}{2}$ ton vehicle could safely go into the front lines. A fast means of travel is also necessary for the numerous trips to higher headquarters.
- e. One (1) $\frac{1}{2}$ ton truck for S-1
Necessary transportation for S-1 on the many administrative trips it is necessary for him to make.
Small vehicle is urgently needed for reconnaissance for CP positions. This vehicle can also be used for the procuring of mail from the APO and for transmission of incoming mail to the companies and platoons. Also can be used to collect outgoing mail transporting it to the APO. Can be used for messenger service when inclement weather or other reasons make the use of a motorcycle inadvisable.
- f. One (1) $\frac{1}{2}$ ton truck for Battalion Communications Section.
The current T/O makes no provision whatsoever for a communication setup for indirect fire. This Battalion has been called upon many times to fire indirect fire and its communication set-up is more or less piece-meal from what is available at the time. If this secondary mission of indirect fire is to be properly cared for a vehicle is necessary for the laying of wire.
The addition of an indirect fire mission without any change in transportation allocations has created a critical shortage of vehicles and a critical situation with regard to the laying of wire and the carrying of wire equipment. Companies of this unit have been on indirect fire missions up to eighteen (18) miles apart and while this is not normal all situations have required a wire laying vehicle.
- g. One-quarter ton trucks for Headquarters Company motorcycles.
For messenger use, it has been found that motorcycles are undependable. There have been numerous accidents and in inclement weather it was necessary to "ground" all the motorcycles because of the danger involved. On the other hand, the one-quarter ton vehicles can operate under almost any conditions and with far less chance of accidents. Lastly, the increased utility of the added cargo space for tactical and administrative needs is an extra advantage of the quarter-ton vehicle as compared to the motorcycles.



CONFIDENTIAL

(TD Battle Experience and Recommendations, Cont'd)

h. One (1) 3/4 ton truck for communication section.

Inadequate space for wire, (at present no spare wire can be carried), radio repair and wire personnel and equipment. Consequently before wire can be loaded for performance of an indirect fire mission it must be picked up from a higher headquarters causing considerable delay.

2. Substitutions

a. Four (4) 1/2 ton trucks for motorcycles in reconnaissance platoons.

Battle experience has proven the motorcycles inapt for reconnaissance work. Individual cyclist cannot be dispatched with any degree of certainty due to muddy roads and cross-country maneuverability. Cycle riders, when ambushed, have not been able to dismount and defend themselves adequately. Ability of Reconnaissance elements to slip enemy pockets and perform a Reconnaissance mission is impossible when accompanied by a motorcycle because of the excessive noise.

b. Light tanks instead of M-8's in Reconnaissance platoons.

Additional fire-power and protection for performance of his duties.

To the enemy an M-8 looks like a tank and therefore the presence in front lines always draws tremendous fire. Without having the armor, or maneuverability of a tank, it is therefore relegated to a four-wheeled motor driven SCR 608. Greater fire-power, armor and maneuverability such as a light tank possesses would enable reconnaissance units to function with some degree of success.

Protection is the prime consideration and it is felt an M-8 which operates a little further to the rear than the reconnaissance platoons could accomplish this.

3. Ordnance - Weapons and Miscellaneous - Addition

a. Ground mounts for all machine guns.

For better defense of gun positions against enemy infantry accompanying tanks.

4. Ordnance - Weapons and Miscellaneous - Substitutions:

a. 29 cal .45 pistols for supply section and drivers in transportation section in lieu of M-3 sub-machine gun. The type of work performed by men in these sections is such that the M-3 is cumbersome and unwieldy for instantaneous use. A pistol could be carried on the person at all times and provide the necessary protection.



CONFIDENTIAL

CONFIDENTIAL
-10-

(TD Battle Experience and Recommendations, Cont'd)

- b. Carbine and M-1 rifle in lieu of M-3 sub-machine gun for the CP group.
Combat experience has proven that CP groups must be able to defend themselves against isolated or infiltrating enemy pockets and patrols. A lack of long range small arms weapons has placed members of CP groups at a decided disadvantage and expose them unnecessarily to enemy fire.
- c. Carbine and M-1 rifle in lieu of M-3 submachine gun for reconnaissance platoons.
At least eight (8) of each of the above weapons per platoon. Reconnaissance personnel when forced into a fight with small arms to accomplish a mission have found the M-3 submachine gun has placed them at a disadvantage and compelled them to dangerously expose themselves to deliver fire on the enemy.

3. Signal - Addition

- a. Three (3) reels RI-31
Two (2) linesman's equipment TE-21
Ten (10) miles of wire W-110
One (1) switchboard SD-72
Essential for the accomplishment of secondary mission of the TR's.
- b. One (1) SCR 606 per Recon Platoon.
Necessary because reconnaissance often works more than fifteen (15) miles in advance of the battalion.
Radio SCR 608 does not perform reliably at more than ten (10) miles on the European continent.
- c. One (1) SCR 608 for CO's $\frac{1}{2}$ ton vehicle (12 volt system) When companies are sent out on separate missions Battalion Commander needs SCR 608 to keep in contact with all companies and Battalion Headquarters when he is on the move between them.



4. Signal - Substitutions

- a. One (1) 608 in S-4 section in lieu of SCR 610 and 506.
This substitution would place the S-4's radio communications in the 600 series with ability to link up with all elements of the Battalion at maximum range for the SCR 600 series. S-4 is usually well within range of SCR 608.
- b. One (1) 608 in lieu of 610 for Communications Officer.
This set would be used primarily as a spare set in the Battalion.

CONFIDENTIAL

CONFIDENTIAL

(TD Battle Experience and Recommendations, Cont'd)

5. Quartermaster - Organizational Equipment - Addition

- a. Combat clothing for all personnel. This Battalion is motorized and as such has little call for marching or other movement sufficient to keep the men warm. In addition, all motor marches expose the men to the cold due to the fact that the vehicles are open.

6. Quartermaster - Organizational Equipment - Addition

- a. Gasoline cans, 356.
Present authorized number does not permit sufficient hauling capacity to maintain the one hundred sixty-three (163) vehicles in a towed battalion for maximum performance.
- b. Blackout GP Tents (Two per Bn Headquarters)
One tent needed to perform routine command functions during darkness. One additional blackout tent necessary for fire-control center when Battalion is performing secondary mission (Indirect Fire).
- c. Pyramid Tent for Personnel Section.
Present T/E does not provide any kind of coverage for this section. Unless a building is available this section has been unable to properly care for records and perform their duties.

7. Officer Personnel - Substitution

- a. Battalion Motor Officer to be Captain instead of a 1st Lieutenant, due to the fact that the Battalion is motorized, an enormous responsibility rests on the Battalion Motor Officer. If he fails to function as he should, the vehicles are not properly cared for and the Battalion suffers irreparable delay. To be commensurate with the responsibility involved, the officer should be a Captain.

8. Enlisted Personnel - Addition

- a. One (1) wire chief Staff Sergeant
Two (2) switch board operators Tec 5.
Three (3) linemen (Two Tec 5 and one private)
Two (2) drivers (Privates)
- b. Present T/O does not include any personnel for a wire crew, it has been found that trained wireman are highly essential for efficiency in accomplishing indirect fire missions.



CONFIDENTIAL

CONFIDENTIAL

(TD Battle Experience and Recommendations, Cont'd)

- c. One morning report clerk.
Under the present T/O the battalion must rely on one of the Company clerks to take care of the Morning Reports. Time devoted to this task has prevented maximum performance on upkeep of company records.
Attention is invited to the fact that the T/O for a Field Artillery Battalion with a strength of slightly over 500 rates a Tco 4 for a morning report clerk as well as 5 Battery clerks. The TD Bn rates only 4 company clerks with a strength of 729.

9. General - Additions

- a. Request that T/O 18-35 be revised to include a Reconnaissance Company. Attention is invited to the fact that while self-propelled Tank Destroyer Battalion has a reconnaissance Company the towed Tank Destroyer Battalion has two (2) platoons and a reconnaissance Officer on the Staff.
- b. This unit has found, through practical experience, that a reconnaissance company is needed as much in a towed battalion as it is in a self-propelled Tank Destroyer Battalion for the following reasons:
 - (1) Reconnaissance for gun positions.
 - (2) Preparing gun positions.
 - (3) Keeping contact with frontlines.
 - (4) In the present type of terrain and warfare the three firing companies are used to protect separate organizations therefore three platoons could, and should, be used to the advantage of the Companies.
- c. At the present time this organization has established a reconnaissance platoon in order that each firing company may have some reconnaissance and added security. This platoon has been made up from the Battalion Reconnaissance Officer as platoon leader and enlisted personnel from various departments of the rear echelon. The equipment has been gathered from where it was needed the least.



TANK DESTROYER BATTALION TOWED - MEDICAL DETACHMENT

1. Ordnance - Vehicles - Addition

- a. $\frac{1}{2}$ ton truck and $\frac{3}{4}$ ton 4x4 cross country ambulance.
Additions are needed for more efficient medical service.

-12-
CONFIDENTIAL

CONFIDENTIAL

-13-

(TD Battle Experience and Recommendations, Cont'd)

2. Ordnance - Vehicles - Substitution
1 1/2 ton 6x6 vehicle and one ton trailer.
Substitutions are needed because of additional space needed for personnel and equipment.
3. Ordnance - Vehicles - Deletion
a. 3/4 ton 4x4 and 1/2 ton trailer
Deletion is because of insufficient space.
4. Quartermaster - Organizational Clothing - Addition
a. Combat trousers and jackets for each member.
Additions needed because of protection against inclement weather.

Section III

TANK DESTROYER COMMUNICATIONS

1. Radio Nets.

- a. It has been found that the Headquarters Company net is superfluous, and that by including Headquarters Company in the Battalion Command Net, one radio (the S-X set) can be used as a spare, and the operator of that net can well be used to help the S-2 crew. Our battalion command net includes the following stations:

(1) Battalion C.O.	SCR-608 (NCS)
(2) Company "A"	SCR-608
(3) Company "B"	SCR-608
(4) Company "C"	SCR-608
(5) Headquarters Co.	SCR-608
(6) Liaison Co. #1	SCR-608
(7) Liaison Co. #2	SCR-608

When the command post is moving, the following stations enter the net: Battalion Executive Officer, Medical Officer and Communications Officer.

- b. This battalion recruited a third reconnaissance platoon which had to be equipped with radios. Division signal supplied us with an SCR-608 in excess of T/W. Four SCR-608's were taken from the Rear Echelon and given to the platoon. Thus the three Reconnaissance platoons were netted together, with the S-2 set as NCS.
- c. In addition to the FM, Reconnaissance Net, we organized an AM net. The only additional equipment needed is a RC-312.

-13-

CONFIDENTIAL



CONFIDENTIAL

-14-

(TD Battle Experience and Recommendations, Cont'd)

2. Suggested Set-up for Radio Operators

a. Since arriving in Germany, most command posts have been set-up in buildings for two reasons; protection from enemy fire, and protection from the weather. In order to get radio operators under cover, three plans have been used:

- (1) Homemade remote control units and captured German loudspeakers.
- (2) Spiral 4 cable used as an extension for handset TS-13. This method allows the operator to be approximately 70 feet from the radio.
- (3) SCR-610's powered by a spare 12 volt battery through PE-1170C or dry batteries. For the set-up in the company command post, where one operator normally handles both a company and battalion station, we have set-up two SCR-610's (from the Company Executive Officers and the Reconnaissance Sergeants vehicles) and cut full-wave antennas for them. In many cases, this setup will get more distance and afford more reliable communications than the SCR-608.

3. Radio Training.

a. Training, particularly in the Tank Destroyer platoons, must be constant, due to turnover of personnel. Communications Officers and radio sergeants must assure themselves that the new men know what signal equipment they have on their vehicles and how to use it. Refresher courses should be held during rest periods.

4. Telephone Communications.

a. In direct fire positions:

- (1) Battalion CP must have telephone communications with the next higher headquarters at all times. Division will usually lay a line to you.
- (2) It is highly desirable to have each company tied in by phone. This is usually done by running a line into an Infantry Regimental or Battalion board. Most Infantry commanders are highly in favor of this system; it ties them in with the supporting Tank Destroyer Company. However, in nearly every case, the Tank Destroyer



-14-

CONFIDENTIAL

CONFIDENTIAL

(TD Battle Experience and Recommendations, Cont'd)

company lays the wire.

- (3) In fairly static situations, platoons lay W-130 between the platoon CP and each gun.

b. In indirect fire positions:

(1) Personnel and equipment.

- (a) The battalion wire crew consists of 4 basics and 1 driver with intensive wire training. The 3/4 ton truck assigned to message center doubles as a wire truck.
- (b) Security men (three per platoon) form the company wire by hand with an RL-27, or use a small, home-made RL-39 attached to a jeep.
- (c) In the battalion set-up, the wire crew, radio operators and radio electricians act as switchboard operators. In the companies, the security wire men operate the switchboards.

5. Messengers.

- a. Motorcycles are not satisfactory for messenger work at night over muddy roads. A jeep is provided to carry messages at night. Cyclists, when used, should always be dispatched in pairs.

6. Panels AP 30-C and AP 30-D

- a. These panels have been used once in five months of combat. That was a dry run.

Section IV

TANK DESTROYER INDIRECT FIRE

1. The Tank Destroyers have been called on to perform a secondary mission of indirect fire to such an extent that it has become necessary to incorporate into the battalion a complete indirect fire system to include Battalion Fire Control Center (FCC), Company Fire Direction Center (FDC), Battalion and Company Wire Crews, and Company Survey Crews.

2. Battalion Fire Control Center (FCC).

- a. Consists of the Executive Officer, Headquarters Company, Commander, S-2 and S-3 sergeants and drivers for phone operators. The main function of the FCC is to coordinate the fires of the battalion and to register each company by means of an artillery observation plane, communication



CONFIDENTIAL

CONFIDENTIAL

(TD Battle experience and Recommendations, Cont'd)

being by 608 radio between the observer and the FCC and wire to the companies. A consolidated fire capability chart is also furnished to Division Artillery. The FCC is also used for the designation of targets, time, methods of fire, and ammunition expenditures.

3. Company Fire Direction Center (FDC)

- a. Composed of the same personnel as an artillery fire direction center to include Company Executive as S-3, an HGO, a VGO, three computers, one from each platoon, and a phone operator. This Personnel comes from the Company.

4. Battalion and Company Wire Crews.

- a. Made up from basics and other personnel not then busy. The Battalion lays wire to the companies and the companies to the platoons. The switchboard is in the vicinity of the FCC.

5. Company Survey Crews.

- a. Made up of a crew chief, an instrument operator on the aiming circle, two tape and two rod men. An officer generally the Reconnaissance officer, is the survey officer and arranges for a control point to be run into the area. He has the company survey crew meet him at this point and gets the data necessary to run a survey into the gun positions.

6. Training.

- a. The following points are considered imperative and indispensable for the satisfactory completion of an indirect mission.
 - (1) A working knowledge of artillery terms commonly used, such as "open sheaf", "close sheaf", "CG", etc.,.
 - (2) Have everyone trained in the forward observation or air-ground method of adjusting fire.
 - (3) Complete training on the aiming circle for the platoon leaders, sergeants, gun sergeants and every member of the survey crew.
 - (4) Training of the FDC to include field problems using the communications net. Training drivers and extra personnel as telephone operators.
 - (5) Practical work for the survey crew on an open traverse and for a check to run a closed traverse.
 - (6) Training wire crews on splices, overhead, wiring and as switchboard operators. Night training



CONFIDENTIAL

CONFIDENTIAL
- 17 -

to include occupation of position, laying by use of night lighting devices, and night firing must be stressed.

7. General Notes.

- a. This battalion has done a great deal of indirect fire working directly under Division Artillery. It has been used in general support of an attack, as a harassing and interdiction fire, and firing on targets of opportunity. Harassing and interdiction fires are generally the type fired.
- b. By careful selection of positions enfilading fire may be delivered on a road using delay fuse and obtaining a rocket burst. This type of fire has proven very effective.

Section V

TANK DESTROYER DIRECT FIRE

1. Movement.

- a. All movement and changes of position should be at night when possible, for even then the sound of half-track motors and tracks draw fire. On two occasions our Artillery had to fire a diversionary barrage to enable us to move. A good reconnaissance still holds priority, the platoon leader and section leader must look over the positions and routes in daylight. The time you spend lost on a move is just that much more time Jerry has to keep you under artillery and mortar fire. All roads and towns in Germany look alike and one wrong turn may lead you into a German bivouac area.

2. Mine Fields.

- a. Before night movements are made check your Battalion S-2 or the S-2 of the Infantry Regiment into whose area you are moving for location of friendly mine-fields. Hasty minefields are often placed across roads just for the night and often a guard will not expose himself to warn you.

3. German Armor.

- a. Don't underestimate the German tanks or the personnel. The Mark V and Mark VI tanks are, in our opinion, the best tanks of the war and aren't easily destroyed. They

CONFIDENTIAL



CONFIDENTIAL

(TD Battle Experience and Recommendations, Cont'd)

pack a terrific wallop with their 88mm guns and are well protected with extra heavy armor. The 3 inch TD Gun will not penetrate the front of either the Mark V or Mark VI. They hit, take out a little chunk of armor, and ricochet off. The best way to destroy these tanks is to hit them on the side of the turret. The projectile will penetrate and ricochet inside often setting off the ammunition or causing the crew to abandon the tank. The next best way to stop these tanks is to hit the track. The 3 inch gun will often break the track and the Germans, seeing no chance of recovery, will destroy it rather than have it fall in our hands. He still has an excellent recovery system and tanks destroyed one day are often gone the next morning. There are no more large tank battles. The maximum number normally used in his counter-attacks against an Infantry Division, are about 20 tanks broken down into groups of 5. Don't forget that you can destroy them. This Battalion has destroyed every kind of German tank from the "doodle-bug" to and including the King "Tiger". In one action in the Siegfried Line one of our towed guns destroyed 4 tanks with 7 rounds in 60 seconds. It isn't always that fast but remember to let your flank guns take the Panthers and Tigers under fire.

- b. We have found it almost impossible to replace the 3 inch guns destroyed and have used captured 7.5 Pak 40 guns to fill in. Each Company and Reconnaissance platoon have become familiar with the gun and can use it. When the line companies have their guns replaced the German guns are given to the Reconnaissance platoons where they are used to cover road blocks. Ammunition for the gun is not too hard to find as the Germans leave quite a bit when they are forced back.
- c. The following conclusions are based on test firing of this gun (7.5 pak 40) using AP high velocity ammunition:

- (1) The AT gun is very accurate, having little dispersion and tremendous velocity. The trajectory as outlined by the tracer is extreme flat.
- (2) Shots must be sensed from a position 10 to 15 yards to the right or left of the gun, due to the action of the muzzle brake which forces the smoke of the explosion to the flanks and rear. This action also throws dirt into the sight, making it necessary for the gunner to wipe the sight clean after each round is fired. Care should be exercised to avoid placing anyone in close proximity to the gun, forward of the gun shield.
- (3) After firing 5 shots, it was discovered that the force of the explosions had bent the spades.
- (4) There are no range graduations on the telescopic



CONFIDENTIAL

CONFIDENTIAL

(TD Battle Experience and Recommendations, Cont'd)

sight. It is believed that the range is set on the drum which is part of the sight mount.

- (5) Two men can move the trails and change the field of fire of this gun without any difficulty.
- (6) It was found that the firing knob, which is part of the traversing hand wheel, was very satisfactory, allowing the gunner to fire the piece without giving commands. It is felt that this is a superior method to that of firing the gun by use of a lanyard and verbal orders of the gunner.

Section VI

RESULTS OF FIRING REDUCED CHARGE AMMUNITION

1. Firing Tables.

- a. The only firing table that is available for the reduced charge ammunition is not adequate for firing unobserved fires. The only information contained in the present firing table is the elevation and the change in elevation for a one hundred yard change in range. There is no time of flight or metro data included.
- b. The metro table taken from the firing tables of a 75mm gun, shell HE, normal charge, was used with the following effects:

(1) Deflection:

- (a) On 2 November 44 a metro message was computed with a deflection correction of left 2. This was applied and when the adjusted elevation was determined there was no deflection correction made.
- (b) On 4 November the metro deflection correction was left 11. After a precision adjustment had been made there was no further deflection correction necessary.
- (c) On 6 November a precision adjustment was made without a metro correction applied and a correction of left 18 was necessary to arrive at an adjusted deflection.

(2) Conclusions:

- (a) The metro data from the 75 mm Tables

CONFIDENTIAL



CONFIDENTIAL

(TD Battle Experience and Recommendations, Cont'd)

appear to be effective for use with the 3 inch reduced charge ammunition.

- (b) The dispersion in deflection is not enough to cause any difficulty within transfer limits.

(3) Range:

- (a) On 2 November a Metro K of plus 5 was computed and applied to the original data. After the completion of the registration a K of plus 91 was computed.
- (b) On 4 November a Metro K of plus 3 was applied and at the completion of the firing the corrected K was plus 79.
- (c) On 6 November a registration was made with no Metro K applied and when the adjusted elevation had been determined a K of plus 67 was the result.

(4) Conclusions:

- (a) The metro correction figured from the 75mm Firing Table appears to work in the right direction but the characteristics of the two weapons involved are not close enough to derive much benefit from the Metro K. It is felt that although not absolutely accurate, the table as it stands is of benefit.
- (b) From the firing that has been done no corrections have been made to the table due to the fact that it cannot be ascertained as to what factors are in error.
- (c) The dispersion in range is very large. One group of three rounds fired on the 4 November had a dispersion of around 120 yards. Adjustment is made rather difficult due to this factor.



2. General Conclusions:

- a. A mission should never be fired without a registration. If possible a registration should be made on each target during the day if they are to be fired on during the night.
- b. Due to the range dispersion area targets should be the most profitable.

CONFIDENTIAL

CONFIDENTIAL

(TD Battle Experience and Recommendations, Cont'd)

- c. From the experience thus far it does not appear that the maximum range can be reached due to the large plus K that has been apparent in all registrations. 8,000 yards is felt to be the maximum range effective fire can be delivered.

Section VII

REPORT OF EXPERIMENT OF SHELL, ILLUMINATING

1. On the night of 1 December, 1944, an experiment was conducted by the 30th Infantry Division Artillery with assistance from the 963rd Field Artillery Battalion and a platoon of the 823rd Tank Destroyer Battalion (3" gun towed) to determine the capabilities and limitations of the Shell, Illuminating, MK 24 Navy (Mod. 1) with Fuse T Sq. M-54 and Heds. The experiment was divided into two parts. The first part consisting of an adjustment with 155mm white phosphorus on a group of buildings; the second part, an adjustment of 105mm HE on a section of road. In each case the target was illuminated by the Tank Destroyer platoon. Both adjustments were on prearranged targets and were successful.

2. For ease communications a 3" Gun was moved into the position areas of the two batteries selected for the experiment. A Tank Destroyer computer was employed at each Battalion FDC with a separate direct line from this computer to the #2 gun. Normal wire communication was employed otherwise. The fuse on the Shell, Illuminating was set in the normal manner but it was found necessary to file the rotating band on two of the twenty-two rounds employed in order for them to chamber properly. Otherwise no difficulty was found in firing this shell from the 3" gun.

3. At both OP's forward observation (air-ground) methods were used, one OP axial, the other a 900 Angle T. The illuminating shell was fired to burst at an elevation of 1100 feet and to burst eight seconds prior to the arrival of the HE or WP shell in the target area and was adjusted on the target prior to starting the HE or WP adjustment. Both observers report sufficient illumination for adjustment with maximum illumination on the target when the flare was at a height of from 300-400 feet. The area illuminated by the flare was found to have a radius of about 200 yards. The flare reaches the ground in about 12 seconds from a height of 1100 feet.

4. It is not felt that sufficient experimentation has been made as yet with this type of firing to derive at any hard and fast rules. However, the following conclusions were arrived at:

- a. Each round of shell, illuminating, must be carefully inspected prior to firing and tried in the piece since some rounds necessitate a slight filing of the rotating band

CONFIDENTIAL



CONFIDENTIAL

-22-

(TD Battle Experience and Recommendations, Cont'd)

in order to fit into the chamber.

- b. The firing table issued for this type shell, FT 3-R-2 C4, is satisfactory. It combines map elevation with the angle of site necessary to obtain an 1100 feet height of burst and makes for easier computation at FDC. In this experiment the gun was not registered in either case but was laid by means of a base angle and metro data was applied.
- c. At 1100 feet, height of burst is satisfactory because, although maximum illuminating of the target is obtained at 300-400 feet, the time previous to maximum illumination is invaluable to the observer for identification of the target and accustoming his eyes to the light.
- d. The illumination shell should be adjusted on the target before any adjustment of HE or AP is attempted.
- e. Arrival of the HE or WP shell eight seconds after the flare bursts is thought to be highly satisfactory. At this time the target is well lighted and the observer's eyes are accustomed to the light.
- f. Whenever possible the initial round (3) in the adjustment should be with shell WP. This makes sensing of the initial round easier, especially if they are not close to the target.
- g. The illuminating shell should be placed in front of the target and also to the windward side. This gives maximum illumination on the target at the time the HE or WP round arrives. If the illuminating shell bursts behind the target the shadows of the target falls toward the observer and impairs sensings. This would be especially true of a target of considerable height, such as a building.
- h. It is not necessary to have the 3" gun moved to the position but fire at the command of the artillery Battalion S-3 in order to have the flare arrive at the proper time.
- i. With the present shortage of shell, illuminating, it is felt that it would be profitable to adjust on targets of opportunity by this method since it would ^{not} necessitate a comparatively large expenditure of shell, illuminating.
- j. The following uses are thought possible with shell, illuminating:
 - (1) Execution of surveillance on serenades to be fired at night.
 - (2) Adjustment on any prearranged targets.



CONFIDENTIAL

CONFIDENTIAL

-23-

(TD Battle Experience and Recommendations, Cont'd)

- (3) Furnishing direction to infantry units for night attacks (In this event the flare would have to be placed well in advance of the infantry so it would not illuminate them.)
 - (4) Illumination of an area in which it is suspected a counter-attack is forming on a road in which a column of vehicles is thought to be moving. In this case a battery volley, with an open sheaf is thought to be best.
 - (5) Guiding aircraft to an area for night photography.
 - (6) General harrassing effect on enemy installations and personnel.
- k. 1,2,3, scope is recommended for the observing instrument. Illumination of the reticle is not necessary. It should be zeroed on a known reference point whenever possible. The glare from the flare does not hinder the observer's vision.

STANLEY DETMER,
Lt. Col., Inf.,
Commanding.



CONFIDENTIAL

-23-