A COMMAND STAFF EXERCISE.

BY MAJOR W. EGAN, D.S.O.

Royal Army Medical Corps.

The Scottish Command held a Staff Exercise on June 10, 11 and 12 of last year, in which all branches of the Army were represented, and the following notes on that exercise are written in the hope that the experiences gained may be of use to brother officers who may have to take part in a similar exercise, and to those Majors who have yet to jump the last fence in their examination race.

As far as the Corps is concerned, we were fortunate in being able to secure the attendance of the two officers who command the Field Ambulances of the Territorial Divisions in this Command. This it is believed is a new departure. In addition to these, four Regular Officers attended, as well as two on the directing Staff, of whom the writer was one. It was hoped to secure more Regular Officers, but in a Command like this where officers are few and very far between, this was found impossible.

The scheme is not based on any campaign, or part of a campaign, during the late or recent wars, but was designed to meet the local conditions; consequently, from a medical point of view, it was extremely interesting, especially when writing the medical appreciation of the situation. In the scheme one had to visualize the local possibilities and their relation to the causation of disease and their effects on battle casualties.

Object of the Exercise.

The object of the exercise is briefly summarized as follows:

(1) To bring out the necessity for rapid issue of orders and instructions in a war of movement.

(2) To show that when few roads are available special forethought is required to ensure that the order of march of units is in accordance with probable tactical requirements.

(3) To study advanced guard action and show in conjunction with (2) above that considerable time must elapse before intervention by the main body becomes possible.

(4) To study the operation and effect of the rearward services of the Corps and Division in mobile warfare.

(5) To study the advantages of the mechanicalization of the D.A.C. and Divisional Train, together with the limitations imposed by lack of sufficient roads.

(6) To consider the positions and movements of the Headquarters of formations during mobile warfare.
A Command Staff Exercise

Maps.
Reference Map, O.S. Scotland. Sheets 33 and 34. One inch to one mile.

General Idea.
(1) Southland, capital Newcastle, comprises the six northern counties of England, together with the counties of Berwick and Roxburgh.
Northland, capital Edinburgh, comprises the remainder of Scotland. These are two independent states.
The frontier between Northland and Southland is shown in red on one-inch map, Sheet 33, issued with the scheme.
Northland is an agricultural country and has no big towns except Edinburgh and Aberdeen.
Southland mainly agricultural, but has important industrial centres round Manchester.
The only railways in existence are:
York—Newcastle—Berwick—Edinburgh double, with single line branches to Eyemouth and Haddington.
Edinburgh—St. Boswells, double.
St. Boswells—Reston, single.
Edinburgh—Stirling—Aberdeen
Edinburgh—Glasgow—via Falkirk } Double.
Tweedmouth—Kelso—St. Boswells
(2) Southland commenced mobilization on May 25 and declared war on June 2. Its mobilization was complete midnight June 7/8.
(3) The armies of Northland and Southland are shown in Schedule B.
(4) Both states possess small fleets of light cruisers, but neither of these was in a position to affect the course of military operations.
(5) At the very outset Southland aircraft attacked Northland aerodromes at Leuchars and Donibristle, and inflicted heavy losses on the Northland aircraft, and by June 5 Southland had gained temporary superiority in the air.

Special Idea.
Southland Order of Battle is shown in Schedule A.
(1) When war was declared, all information pointed to the probability that the 1st Northland Division and 1st Northland Cavalry Brigade would not complete mobilization before midnight, June 9/10, and that owing to a slower mobilization these formations could not be supported in the vicinity of the frontier before June 15 at the very earliest.
(2) The latest intelligence in the hands of the Southland’s Commander was as follows:—
(a) At Haddington—two companies Infantry, one squadron Cavalry.
(b) At Edinburgh—1 Infantry Brigade, 1 Cavalry Regiment, 1 Field Artillery Brigade, and Auxiliary Services.
(c) The Forth Defences consisting of four 9.2, fourteen six inches, and guns of lesser calibre mounted at Kinghorn, Inchkeith, and Leith Fort.

(d) 1st Northland Division and 1st Cavalry Brigade (less portion mentioned in (a) and (b), mobilizing at Edinburgh) mobilizing at Perth. 2nd Division mobilizing at Aberdeen. 3rd Division at Glasgow, but it was unlikely that this division could complete mobilization before the first days of July.

(e) The non-aggressive policy of the Northland Cabinet had resulted in a total lack of defensive measures other than weak frontier guards. No military preparations had been allowed to be made except the normal mobilization scheme for the Field Army, (e.g. no preparations have been made for demolitions in the vicinity of the frontier). The Southland Commander therefore decided, as soon as mobilization was completed, to assume the offensive and march on Edinburgh with the general plan of defeating decisively the 1st Northland Division before it could be reinforced and of upsetting the arrangements for the mobilization and concentration of the Northland Army by the capture of Edinburgh, an important railway junction.

(3) As a result of Southland air reconnaissances on June 9, and from other sources of information, it appeared that the high ground north and south-east of Haddington was occupied by small bodies of Northland troops and that there was considerable movement on the railway southwards from Perth.

Infantry and guns were observed detraining at Eskbank and Prestonpans. Accordingly the Southland 1st Corps and 1st Cavalry Brigade which was under orders of the 1st Corps continued their movement westwards.

At 16.00 hours on June 9 the 1st Southland Corps after a march of an average of thirteen miles was billeted and bivouacked in the areas shown below:—

Schedule A.

Corps Cavalry Regiment.

1st Lancers, with 1st Armoured Car Coy. attached ... ... On general line Broxburn (D. 10, Sheet 33) Sprott Mill (E. 9).

1st Division.

1st Inf. Bde. ... ... ... ... Cockburnspath area (D. 1, Sheet 34) with outposts on the general line of the Dunglass Burn.

1st F.A. Bde. ... ... ... ... with outposts on the general line of the Dunglass Burn.

1st P.A. Bde. (less 1 Batt.) ... ... ... ...

1st Fd. Coy. R.E. ... ... ... ...

1st Field Ambulance ... ... ... ...
### 1st Division—continued.

<table>
<thead>
<tr>
<th>Battalion/Unit</th>
<th>Location/Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd Fd. Coy. R.E.</td>
<td></td>
</tr>
<tr>
<td>No. 1 Sect. (A Echelon) D.A.C.</td>
<td></td>
</tr>
<tr>
<td>2nd Field Ambulance</td>
<td></td>
</tr>
<tr>
<td>3rd Inf. Bde.</td>
<td></td>
</tr>
<tr>
<td>3rd F.A. Bde.</td>
<td></td>
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<tr>
<td>3rd Fd. Coy. R.E.</td>
<td></td>
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<tr>
<td>1st F. Park Coy. R.E.</td>
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<tr>
<td>3rd Field Ambulance</td>
<td></td>
</tr>
<tr>
<td>Divisional Train</td>
<td></td>
</tr>
<tr>
<td>D.A.C. (less 1 Sect.)</td>
<td>Houndwood House area, with supply sections on their way forward to meeting points.</td>
</tr>
<tr>
<td>1st Divisional Headquarters</td>
<td>Grantshouse.</td>
</tr>
</tbody>
</table>

### 2nd Division

<table>
<thead>
<tr>
<th>Battalion/Unit</th>
<th>Location/Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>4th Inf. Bde.</td>
<td>Oldhamstocks (F. 11/12, Sheet 33)—Whinhouse area, with outposts on the general line Oldhamstock's Mains—Cocklaw Hill.</td>
</tr>
<tr>
<td>4th F.A. Bde.</td>
<td></td>
</tr>
<tr>
<td>2nd P.A. Bde. (less 1 Batt.)</td>
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</tr>
<tr>
<td>4th Fd. Coy. R.E.</td>
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<tr>
<td>4th Field Ambulance</td>
<td></td>
</tr>
<tr>
<td>5th Inf. Bde.</td>
<td></td>
</tr>
<tr>
<td>5th F.A. Bde.</td>
<td></td>
</tr>
<tr>
<td>1st Batt. 2nd P.A. Bde.</td>
<td>Fulfordlees (F/G. 12)—Ecclaw Hill—Bellstruther Bog area.</td>
</tr>
<tr>
<td>5th Fd. Coy. R.E.</td>
<td></td>
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<tr>
<td>5th Field Ambulance</td>
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<tr>
<td>No. 1 Sect. (A Echelon) D.A.C.</td>
<td>Quixwood Moor (F/G. 1, Sheet 34)—Moor House—Blackerstone area.</td>
</tr>
<tr>
<td>6th Inf. Bde.</td>
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</tr>
<tr>
<td>6th F.A. Bde.</td>
<td></td>
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<tr>
<td>6th Fd. Coy. R.E.</td>
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<tr>
<td>2nd F. Park Coy. R.E.</td>
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<tr>
<td>6th Field Ambulance</td>
<td></td>
</tr>
<tr>
<td>D.A.C. (less 1 Sect.)</td>
<td>Hoardweel (H. 1, Sheet 34) with supply sections on their way forward to meeting points.</td>
</tr>
<tr>
<td>2nd Divisional Train</td>
<td>Fulfordlees (F/G. 12, Sheet 34).</td>
</tr>
<tr>
<td>2nd Divisional Headquarters</td>
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</tr>
</tbody>
</table>

### 1st Cavalry Brigade

<table>
<thead>
<tr>
<th>Regiment/Battery</th>
<th>Location/Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Regiment</td>
<td>Kingside School (H. 8, Sheet 33).</td>
</tr>
<tr>
<td>2nd Regiment</td>
<td>St. Agnes.</td>
</tr>
<tr>
<td>3rd Regiment</td>
<td>Cranshaws area.</td>
</tr>
<tr>
<td>Battery Royal H.A.</td>
<td></td>
</tr>
<tr>
<td>1st Cav. Fd. Ambulance</td>
<td></td>
</tr>
</tbody>
</table>
W. Egan

1st Cavalry Brigade Train ... Ellamford (J. 11).
1st Corps Headquarters ... Ayton (G. 5, Sheet 34).
1st Medium Artillery Bde. Myrtlehall (E. 3).
2nd Medium Artillery Bde. Press Castle (F. 4).
1st and 2nd Tank Battalions Grange Plantation.
Supply Railhead ... Reston (C. 4).
Medical Railhead ... Burnmouth (G. 6).
Ammunition Railhead ... Berwick.

Royal Air Force.
1st Wing Headquarters Ayton.
1st Squadron (Army Co-operation) affiliated to 1st Division Ayton.
3rd Squadron (single seater fighters) Berwick.
2nd Squadron (Army Co-operation) affiliated to 2nd Division Ayton.
4th and 5th Squadrons (day bombing and long distance reconnaissance) and 6th Night Bombing Squadron—Beal (8 miles south of Berwick-on-Tweed).

Note.—Divisions are responsible for air reconnaissance up to a line—Longniddry (E. 2)—Pencaitland (G. 2)—Soutra Hill (K. 3).
1st Air Defence Brigade Headquarters—Ayton.
Headquarters 1st Anti-Aircraft Artillery Brigade and a proportion of 1st A.A. Searchlight Battalion—Renton House.
Headquarters 2nd Anti-Aircraft Artillery Brigade and a proportion of the 1st A.A. Searchlight Battalion—Ayton.
Units not mentioned may be located as convenient.

Note.—The road Fulfordlees—Whinhouse (F. 12) shown uncoloured on the map is practicable for all arms.

Schedule B.
ORDER OF BATTLE.

Southern Army.
1st Corps. 1st and 2nd Divisions.
1st Cavalry Brigade.
1st Armoured Car Company.
Corps Artillery.
Two Tank Battalions.
Two Air Defence Brigades.
Six Squadrons Aeroplanes.

Northern Army.
1st Corps. 1st, 2nd and 3rd Divisions.
1st Cavalry Brigade.
Northern Army—continued.

1st Armoured Car Company.
Corps Artillery.
Two Tank Battalions.
One Air Defence Brigade.
Three Squadrons Aeroplanes.

According to the mobilization scheme of these two states, the above forces will be augmented at the end of two months by approximately 3 Divisions in each case.

Schedule A.

Order of Battle—Southland.

Note:—To allow 1st Corps Headquarters to function as General Headquarters it is augmented by the Directorates laid down in War Establishments Part XXVI. A. (Small Wars).

1st Corps Headquarters.

1st Cavalry Brigade Headquarters.
1st, 2nd and 3rd Cavalry Regiments.
"A" Battery R.H.A. and one section Brigade Ammunition Column.
1st Field Troop R.E.
1st Cavalry Brigade Signal Troop.
1st Cavalry Brigade Train, (H.T.)
1st Cavalry Brigade Field Ambulance.
1st Cavalry Brigade Mobile Veterinary Section.
1st Mounted Provost Section.

1st Division.

1st Divisional Headquarters.
1st, 2nd and 3rd Infantry Brigades.
Headquarters, 1st Division Artillery.
1st, 2nd and 3rd Field Artillery Brigades.
1st Pack Artillery Brigade.
1st D.A.C.
Headquarters, 1st Division, R.E.
1st Field Park Company, R.E.
1st, 2nd and 3rd Field Companies, R.E.
1st Divisional Signals.
1st Divisional Train.
1st, 2nd and 3rd Field Ambulances.
1st Sanitary Section.
1st Mobile Veterinary Section.
1st Provost Company.
2nd Division.

2nd Divisional Head Quarters.
4th, 5th and 6th Infantry Brigades.
Head Quarters, 2nd Division Artillery.
4th, 5th and 6th Field Artillery Brigades
2nd Pack Artillery Brigade.
2nd D.A.C.
Head Quarters, 2nd Division, R.E.
2nd Field Park Company, R.E.
4th, 5th and 6th Field Companies, R.E.
2nd Divisional Signals.
2nd Divisional Train.
4th, 5th and 6th Field Ambulances.
2nd Sanitary Section.
2nd Mobile Veterinary Section.
2nd Provost Company.

Corps Troops.

Corps Cavalry.
1st Lancers.

Corps Artillery.
Head Quarters Corps Artillery.
7th and 8th F.A. Brigades, with Brigade Ammunition Column.
1st and 2nd H.A. Brigades.
1st R.A. Survey Company.

Engineers.
1st and 2nd A.T. Companies.
1st E. and M. Companies.
No. 1 Light Bridging Park.
1st Field Survey Company.

Air Defence.
1st Air Defence Bde. (2nd Air Defence Bde. is protecting the L. of C.).

Royal Air Force.
1st Wing Head Quarters.
1st and 2nd Army Co-operation Squadrons.
3rd Fighting Squadron.
4th and 5th Day Bombing and Long Distance Reconnaissance
Squadrons.
6th Night Bombing Squadron.
1st Balloon Section.
1st Aircraft Park.

Signals.
1st Corps Signals.
7th and 8th F.A. Brigade Signal Sections.
1st and 2nd M.A. Brigade, Signal Sections.
1st A.-A. Signal Company.
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R.A.F.
1st Wing Head Quarters, Signal Section.
1, 2, 3, 4, 5 and 6 Squadrons Signal Sections.
1st Balloon Signal Section.
1st Aircraft Park Signal Section.

Tanks.
1st Tank Brigade Head Quarters.
1st and 2nd Tank Battalions.
1st Armoured Car Company.
1st Tank Salvage Company.

Supply and Transport.
Nos. 1 and 2 Railhead Supply Detachments.
No. 1 Auxiliary H.T. Company.
1st and 2nd Divisional M.T. Companies.
1st Cavalry Brigade M.T. Company.
1st Corps Troops M.T. Company.
1st M.A.M.T. Company.
1st Tank Corps M.T. Company.
1st Reserve M.T. Company.
No. 1 Advance M.T. Vehicle Reception Depot.

Medical.
7th Field Ambulance.
3rd Sanitary Section.
Nos. 1 and 2 Casualty Clearing Stations.
1st Motor Ambulance Convoy.
No. 1 Advanced Depot Medical Stores.

Ordnance.
1st and 2nd Ordnance Mobile Workshop (Light).
3rd Ordnance Mobile Workshop (Medium).
No. 1 Ammunition Company.
No. 1 General Stores Company.

Veterinary.
No. 1 Veterinary Evacuation Station.
No. 1 Advanced Depot of Veterinary Stores.

Provost.
3rd Provost Company.

Note:—(1) Line of Communication Troops, Postal and Pay Units of the Corps troops will not be considered.
(2) Establishments will be as laid down in Provisional War Establishments (Small Wars) 1st June, 1923.
(3) Road spaces will be as laid down in Road Space Tables issued under C.R. Sc. C. 3/18290 (G) dated November 19, 1923.
The Medical Officers taking part in the Staff Exercise were distributed as follows:

D.D.M.S., Southland Force—Colonel “A” (Regular).

(a) A.D.M.S., 2nd Division, Lt.-Col. “B” (T.A.)—D.A.D.M.S. Captain “X” (R).

(b) A.D.M.S., 2nd Division, Lt.-Col. “C” (T.A.)—D.A.D.M.S. Captain “Y” (R).

S.M.O. Cavalry Brigade, Major “D” (Regular).

The General and Special Ideas were issued on May 19, and on the same day the medical directing staff issued to each medical officer notes of the experiences gained on previous Staff rides as well as the following instructions and requirements.

**Command Staff Tour, 1924.**

(1) For the purpose of this exercise the General Officer Commanding of the 1st Southland Corps is the Commander-in-Chief of the Southland Forces.

(2) The D.D.M.S., 1st Southland Corps, A.D.’sM.S., and D.A.D.’sM.S., of formations and S.M.O. Cavalry Brigade, in submitting medical appreciations from the point of view of the D.D.M.S. of the Force, will include in the siting of medical units the following:

- One General Hospital, 1,200 beds, for each division.
- One General Hospital, 600 beds, for each division.
- One Convalescent Depot.
- One Base Depot Medical Stores.
- One Sanitary Section.
- One Bacteriological Laboratory.
- One Hygiene Laboratory.
- One Dental Centre.
- Two Ambulance Trains.

And such additional medical formations as they may consider necessary to meet the situation.

(3) Required:

(a) A medical appreciation from each officer attending the Command Staff Tour, from the point of view of D.D.M.S., Southland Forces, to reach the office of the D.D.M.S., Scottish Command, by the first post on Saturday, May 31.

(b) Medical arrangements of D.D.M.S., 1st Corps, after 4 p.m. on June 9. In reading the narrative the force is to be considered as having concentrated and moved out two days’ march to its present positions. The D.D.M.S. will forward copies of his medical arrangements to A.D.’sM.S. and D.A.D.’sM.S. of formations and S.M.O. Cavalry Brigade, to reach these officers by the first post on June 2, as well as a copy to reach the office of D.D.M.S., Scottish Command, the same date.
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(c) The A.D.'s M.S. and D.A.D.'s M.S. and S.M.O. Cavalry Brigade, will issue their medical arrangements from the point of view of the A.D.M.S. of the formations concerned, forwarding copies to reach the office of the D.D.M.S., Scottish Command and the D.D.M.S. Southland Force (Colonel "A") by the last post on June 5.

(d) For the remainder of the Staff Tour, officers appointed to the same formation will syndicate.

Medical Appreciations.

The medical appreciations arrived in schedule time, and on the whole were good. This is all the more creditable as none of the officers, except one had previously written an appreciation, or had any experience in Staff exercises.

What is considered the best appreciation and the worst are given below with the criticisms by the directing Staff in each case.

Medical Appreciation of the Situation (A).

Reference O.S. Sheets 33 and 34, 1 inch to 1 mile.

(1) Strength.

General Headquarters furnishes the following information as to the forces engaged:

Southland.—Southland is mobilizing one Corps, consisting of one Cavalry Brigade, two Infantry Divisions, and Air Force detachment and auxiliary services. The total strength is approximately 52,000. Mobilization will be complete on night June 7 to 9.

The organization and equipment of the Force are of the most modern type, the standard of training is excellent, and moral is high. The health of all ranks leaves nothing to be desired.

Newcastle is the capital, the entire State being comprised by the six northern counties of England, plus Berwickshire and Roxburgshire. The country is mainly agricultural, but has large industrial centres in the neighbourhood of Manchester.

Communications are by road and railway, the latter being a double-line track throughout the length of the L. of C. (approx. sixty-four miles).

The Navy consists of a small cruiser force only, and will not affect the conduct of land operations. There are no ports north of Newcastle which can accommodate transports or hospital ships.

Northland.—Northland Force consists of one Corps or one Cavalry Brigade, three Infantry Divisions, an Air Force detachment and auxiliary services. Total strength is approximately 75,000.

Equipment is similar to that of Southland, but organization and training are faulty, and moral has been adversely affected by recent Government policy. Mobilization will be slower than that of Southland,
and it is not anticipated that more than one Division and one Cavalry Brigade will be encountered near the frontier before June 15.

Edinburgh is the capital of the State, which is comprised by the whole of Scotland, less Berwickshire and Roxburghshire. The country is agricultural, Edinburgh and Aberdeen being the only large towns.

Communications are by road and railway: the railway system centres on Edinburgh.

The Navy is similar to that of Southland, and will not affect land operations.

The mobilization scheme of both States provides for augmentation of the above forces by three Divisions in August, in each case.

(2) Intention.

Southland Commander intends to advance on Edinburgh, defeating the 1st Northland Division before it can be reinforced, and then to upset the Northland mobilization and concentration by the capture of Edinburgh, which is the vital railway centre of Northland.

(3) Medical Arrangements.

Medical Services of both States are as per War Establishments, and, in addition, Southland possesses a well-organized and efficient Red Cross Society, and excellent hospitals in her industrial areas.

Voluntary aid organization of Northland is poor, but good hospital accommodation exists at Edinburgh and Aberdeen.

The following medical units are being mobilized with the Southland army, in addition to its divisional medical organization:

- Two General Hospitals, each of 1,200 beds.
- Two General Hospitals, each of 600 beds.
- One Convalescent Depot.
- One Base Depot Medical Stores.
- One Auxiliary Motor Ambulance Convoy (R.A.S.C.)
- One Sanitary Section.
- One Bacteriological Laboratory.
- One Hygiene Laboratory.
- One Dental Centre.
- Two Ambulance Trains.

Additional medical units are considered necessary, and these are detailed in paragraph 9.

Special requirements in view of special casualties are detailed in Summary.

(4) Topography.

The area to which operations at the outset will probably be confined is a strip of land of an average depth of ten to twelve miles from the coast, extending from Berwick to Edinburgh. This strip is traversed throughout
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its length by the main Berwick—Edinburgh road and by a double-line railway.

From Berwick to East Linton the country is moderately hilly, rising abruptly from sea-level to an average height of 500 to 600 feet. This high ground terminates eastwards in the high ridges of the Lammermuir Hills, east and south-east of Haddington, with a subsidiary ridge north and north-west of Haddington. East of Haddington the country again falls to the average level of 500 to 600 feet.

The entire area is well watered, two main rivers running through it from east to west, viz., the Eye Water and the White Adder. These are shallow and swift, and rise from smaller streams in the Lammermuir feature, east and south-east of Haddington. There are numerous smaller tributary streams to both rivers.

Between the frontier and Berwick the confused mass of high ground is intersected by roads both numerous and good. The main road, Berwick—Edinburgh, follows the line of the East Coast Railway, is in first-class condition, and has no severe gradients. Many of the smaller roads, especially in the Lammermuirs, have bad surfaces and severe gradients.

Two branch railway lines (single) exist between the main line and Eyemouth and Haddington.

The coast ports, Berwick, Burnmouth, Eyemouth and Dunbar, are small tidal harbours, unsuited for any but the smallest coast-wise traffic.


Northland climate is temperate, and no extreme variations of temperature may be expected during June, July and August, which are locally reckoned to be the best months of the year. But the possibility of heavy rainfall cannot be overlooked.

With the exception of the Lammermuir area, and its high moorland to the south and west, the ground is highly cultivated. Farms are numerous, large and well stocked. Buildings are good. There are numerous small woods.

Villages of moderate size, and are mostly located on, or in immediate vicinity of the main Berwick—Edinburgh road. East Linton and Haddington are small country towns.

The inhabitants are not actively hostile; little movement of the civil population between the Frontier and Haddington has been reported. Supplies are plentiful, and may be reckoned to be so as far as Haddington, beyond which point it should be assumed that the country will have been cleared of stocks.

(6) Prevalent Diseases.

Other than cases of influenza, the common infectious fevers, and sporadic cases of typhoid, among the civil population, there is no information as to special disease in the area of operations. Our troops show 100 per cent protection against typhoid and smallpox.
Venereal disease is likely to be negligible in amount until Edinburgh is reached, when a considerable increase may be anticipated. A scheme for the provision of adequate “E.T.” accommodation to meet this contingency is in course of preparation.

The sick rate will be low during good weather, but may be expected to rise rapidly if broken weather and heavy fighting are met with.

(7) Wounds.

Shell and bullet wounds will predominate, and the nature of the soil makes it certain that tetanus and gas gangrene will supervene in many wounds.

Northland is known to possess considerable stocks of gas-shell, and “gas” casualties may be reckoned upon. Special requirements for this class of case are enumerated in paragraph nine and summary.

(8) Estimation of Casualties.

These have been estimated as follows:

Approximate strength of Southland ... ... ... 52,000
3/5 of strength of Southland ... ... ... 31,680
Battle casualties: 10 per cent of 3/5 of Force (10 per cent of 31,680) = 3,168
Of this total (3,168), 20 per cent are reckoned as killed and missing ... ... ... ... ... 633
Remaining wounded ... ... ... ... ... 2,535
Of this remainder (2,535), 10 per cent do not require treatment beyond the field ambulances, etc. ... ... 253
Remainder of wounded who require train transport and hospital accommodation ... ... ... ... ... 2,282

Daily Sick.—These have been estimated at 0.3 per cent of Force. 0.3 per cent of 52,800 is 158.4, which is hereafter reckoned for convenience as 160.

In the absence of accurate statistics the average stay in hospital has been assumed to be twenty-one days, and further it is assumed that—

60 per cent are discharged after 7 days
25 " " " 14 "
15 " " " 21 "
60 per cent of 160 ... ... ... ... ... 96
25 " 160 ... ... ... ... ... 40
15 " 160 ... ... ... ... ... 24

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Calculations in support of above figures for daily sick are given on Sheet 16.

Bed Accommodation Required.

| For wounded | ... | ... | ... | 2,282 |
| sick        | ... | ... | ... | 1,580 |
| 50 per cent reserve | ... | ... | ... | 1,931 |
|             |     |     |     | 5,793 |

For convenience this figure is reckoned as 5,800.

Percentage of bed accommodation to total Force is 10.9.

Two General Hospitals, each of 1,200 beds, are mobilized, and will be capable of expansion to 1,800 beds each. Total 3,600.

Two General Hospitals, each of 600 beds, are mobilized, and will be capable of expansion to 1,200 beds each. Total 2,400.

Total beds provided on mobilization ... ... ... 6,000

"""" estimated as required ... ... ... 5,800

Surplus ... ... ... 200

(9) Distribution of Units.

One General Hospital of 1,200 beds (expands to 1,800), and two General Hospitals, each of 600 beds (expand to 1,200 beds each) at Newcastle.

One General Hospital of 1,200 beds (expanding to 1,800 if necessary) at Berwick—if approval of staff be obtained—for reception of special classes of casualties, e.g., gas cases, wounds of head and thorax, etc. It is considered advisable to open such a hospital at Berwick in view of the certain congestion on the railway to the South, and the fact that such cases bear transport badly.

One Convalescent Depot on the coast, if possible, near Newcastle.

One Base Depot Medical Stores at Newcastle.


One Sanitary Section with Corps Headquarters at Ayton.

One Bacteriological Laboratory at Newcastle.

One Hygiene Laboratory at Newcastle.

(In absence of definite information as to the mobility of these two Laboratories, they have been assumed to be Base Units.)

One Dental Centre with a Casualty Clearing Station—probably at Reston or Grantshouse.

Two Ambulance Trains based at Newcastle.

The following additional medical units are considered necessary, and will be sited as follows:

Two Casualty Clearing Stations, one to be at Eyemouth on June 8, and open in so far as may be necessary to deal with the sick evacuations,
etc. The second to be at Burnmouth ready to move forward on June 9, to Reston, Grantshouse, or Cockburnspath, according as situation permits and railway facilities allow.

One M.A.C. at Reston.
One Advanced Depot Medical Stores at Burnmouth.
One Advanced Convalescent Depot at Eyemouth.
One Mobile Laboratory (Bacteriological) at Ayton.
One Mobile Laboratory (Hygiene) at Ayton.
Two Sanitary Sections per Line of Communication.
One Water Tank Company R.A.S.C. at Ayton.
Two Foden-Thresh Lorries for disinfection of "gassed" clothing.

(10) Summary.

(a) Wastage of sick and wounded is reckoned at 0.3 per cent and six per cent respectively of the whole force.

(b) Normal scale of reinforcements is considered sufficient.

(c) Evacuation requires careful consideration of time and space problems on the road in view of the large amount of mechanical transport employed with the Force. No great difficulty is anticipated as regards the railways, but provision of one General Hospital at Berwick, and an advanced Convalescent Depot is considered necessary to relieve a possible delay of evacuation by this means.

(d) Ample stocks of anti-tetanic serum must be maintained.

(e) Cylinders of oxygen will be required in the treatment of gas cases, and leather gloves and linseed oil for the protection of hands of stretcher-bearers, etc. Estimated requirements of these articles will follow.

G.H.Q. S.F.

ESTIMATION OF DAILY SICK.

<table>
<thead>
<tr>
<th>Day</th>
<th>Daily admissions</th>
<th>Daily totals</th>
<th>Discharged daily</th>
<th>Remaining</th>
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Daily sick = 0.3 per cent, i.e., 0.3 per cent of 52,800 = 158.4, or 158 (approx.)

Remarks

- 60 per cent discharged,
- 25 per cent, 14th
- 15 per cent, 21st
- 60 per cent of 160 = 96
- 26 per cent of 160 = 40
- 15 per cent of 160 = 24
A Command Staff Exercise

REFERENCE YOUR MEDICAL APPRECIATION.

The following remarks are forwarded for your information. (Marks seventy-five per cent.)

(1) Your strength is too low. The approximate strength is 64,000.

(2) Topography, from Berwick to East Linton should read Berwick to Cockburnspath.

(3) Prevalent Diseases. You have omitted scabies, lice, and encephalitis lethargica. You should have gone into more details with reference to prevention of venereal disease, including lectures by company officers. (Details of venereal prevention and Provost Marshal's Regulations in reference to prostitution.)

(4) Distribution of units. It is inadvisable to utilize the power of expansion of your hospitals at the beginning of a campaign as it absorbs your potential reserve for emergencies. It is considered that the area Burnmouth-Berwick may be compared to Boulogne, i.e., overseas base, while Newcastle would represent United Kingdom, consequently it appears necessary to have more hospital beds available in Burnmouth-Berwick area.

(5) As Berwick is behind medical railhead it is not likely that any Staff difficulties at siting hospitals in that area would arise. You should site your convalescent depots (base and advanced) in close proximity to general hospitals to lessen transport wastage.

Your base depot medical stores should be at Berwick-Newcastle, hospitals drawing direct from army medical stores in the capital.

Your arrangements for casualty clearing stations are not clear. These mobilize one per division and should be located at Ayton, No. 1 open and the other loaded on train garaged at Ayton station.

Grantshouse and Reston are too far forward for dental centre and casualty clearing station at the present period.

Your ambulance train should be garaged at Burnmouth-Berwick area. Your motor ambulance convoy should be at Ayton. One additional sanitary section for line of communication should suffice.

It is not considered that the Water Tank Company, R.A.S.C., and two Foden-Thresh lorries for disinfection of gassed clothing are necessary.

(6) What about specialists? You make no arrangements for sick Nursing Sisters, prisoners of war, enemy civilians, infectious or venereal cases.

(Signed) DIRECTING STAFF (Medical).

MEDICAL APPRECIATION OF THE SITUATION (B).

(1) Strength of Forces Engaged.

Southland Force of Corps Headquarters, Corps troops and two Divisions, is approximately 40,000: two months later, three Divisions added, bringing total to 100,000 of all arms.

No interference of enemy aircraft or fleet is anticipated.
Northland (enemy) Force of one Division and one Cavalry Brigade, i.e., 22,000 men mobilized by June 9-10. Two Divisions mobilizing, three more expected to mobilize in two months time.

(2) Intention and Policy.

A short campaign is aimed at, to be effected by the capture of Edinburgh as early as possible, to upset enemy arrangements for mobilization of 2nd and 3rd Divisions (at Aberdeen and Glasgow).

(3) Medical Arrangements—Requirements.

Rapid evacuation of sick and wounded to base, to ensure mobility of field units.

(a) Estimation of Casualties.—No special risk of abnormal numbers of sick, as the campaign is taking place in this country and the special diseases, etc., need not be considered.

(i) Sick admission rate may be taken as low, say not more than 0.25 per cent of the total force, i.e., 100 a day, of whom probably 50 per cent will be fit in 7 days and 25 per cent in fourteen days. This leaves 25 per cent of the sick in hospital over fourteen days, and allowing 5 per cent invalided, the occupied beds in general hospitals will increase to say 650 a month.

(ii) Battle Casualties.—An estimate of 10 per cent of three-fifths of the force gives 2,500: deduct 20 per cent killed, leaving 2,000 wounded to be dealt with after an action, 200 of these (10 per cent) will not need evacuation to base. The total number of wounded to be accommodated on any one day is probably 1,800. Number of beds required is therefore 650, 1,800, add twenty-five per cent reserve beds, viz., 600, giving a grand total of 3,050.

From the above estimate it would appear that two General Hospitals to each Division, i.e., 3,600 beds in all, will be ample for immediate needs and would allow of one 600-bedded hospital being held unopened in reserve.

(iii) Nature of Casualties.—At first bullet wounds are likely to predominate, later shell wounds with gas gangrene cases owing to the cultivated ground over which fighting will take place.

(b) Siting of Medical Units.—Berwick would be the most suitable place for the medical base. Two 1,200-bedded, and one 600-bedded hospitals should open as soon as possible, the other 600-bedded hospital held in reserve.

Bacteriological and hygiene laboratories and dental centre also in the town, preferably attached to one of the hospitals.

Base medical stores in a suitable building.

A convalescent depot of say 1,000 beds in huts or tents within easy distance (able to expand).

One ambulance train should be based in Berwick to run to medical railhead at Burnmouth as required.
Burnmouth, ten miles north on the main line, is medical railhead. No. 1 Casualty Clearing Station should open at this point; No. 2 Casualty Clearing Station remain in reserve, ready to move as required.

Advanced depot medical stores and 1st M.A.C. Headquarters should establish here. One section M.A.C. might be allotted to each division to work under orders of A.D's.M.S.

One ambulance train based here, to work alternately with the other to Berwick as required.

Note.—The possibility of needing a second M.A.C. or sections should be considered and provisionally arranged for. Field medical units will be disposed of under A.D's.M.S. Divisions, who notify D.D.M.S. Forces of their locations and time of opening.

The 7th Field Ambulance and 3rd Sanitary Section should be established at or near Headquarters at Ayton, when the former unit could deal with all base troops forming aid posts and detachments as needed.

**Further Provisional Arrangements.**

1. In the event of a successful advance it is presumed that medical railhead would be advanced, possibly to Reston (junction for single St. Boswell's line) or to a similar point on the main line.

In this case No. 2 Casualty Clearing Station should proceed to new railhead and open. No. 1 Casualty Clearing Station to evacuate patients and to be held in readiness for moving along the northern or western line according to circumstances.

By this time the question of opening the second 600-bedded General Hospital could be decided. Movements of field units to be notified to D.D.M.S.; by A.D.M.S. Division.

2. In case of non-success and retirement one or more hospital ships or equivalents should be in readiness to sail for Berwick, or Burnmouth if possible, to assist in rapid evacuation.

For the present it is not proposed to deal with medical arrangements for the further three divisions to be mobilized in two months' time. Such provisional arrangements considered necessary should be proceeded with, on receipt of definite information that these divisions would be employed.

D.D.M.S. should be in touch with local Red Cross Society representatives whose assistance should be welcomed, and to whom facilities should be given.

**Consultants:**

Two Consulting Surgeons.
One Consulting Physician.
One Specialist—eye diseases.
One Specialist—ear, nose and throat.
One Specialist—mental diseases.

would be necessary and appointed. These officers should work under the direct instructions of D.D.M.S.

*(To be continued.)*