

AWM4

**Australian Imperial Force unit war diaries,
1914-18 War**

Medical, Dental & Nursing

Item number: 26/77/12

Title: 2nd Australian Sanitary Section

March 1917



AWM4-26/77/12

Instructions regarding War Diaries and Intelligence Summaries are contained in F. S. Regs., Part II and the Staff Manual respectively. Title Pages will be prepared in manuscript.

WAR DIARY

or

INTELLIGENCE SUMMARY

(Erase heading not required.)

2nd Saw Sect.

1267

March

Summary of Events and Information

VOLUME 14

Remarks and references to Appendices

Place Date Hour

FRICOURT. 1.3.17.

Pte HARVEY. Pte NEAL reported back from MILLENCOURT having completed the sanitary works, erection of latrines & incinerators at the Rest Station.
Pte CURTIS sick. Mumps.
Placed water detail at Fausseston Camp. to control dipping from the reservoir & to chlorinate all water leaving the point.
Received instructions from 5th Army D.M.S. re restrictions on use of food & water in ~~conquered~~ recently conquered country until proper tests made as to safety, & the issue authorized.

Received reports from the Water Supervisors in 1st Division area, which show from large numbers of samples tested, that water is very regularly chlorinated & that the position with regard to water supply is now satisfactory.
Water going to the front lines is regularly chlorinated.
Examined samples of water from Wells at L'ENY. THILLOY. (recently conquered) supply safe.

2.3.17.

message sent recalling all men of section to FRICOURT on Sunday next for issue of the new Pay Books.
Examined samples of water from wells at. LE. BARQUE & LUISENHOF. FARA (recently conquered) Tests showed them to be good supplies. Report made to A.D.M.S 1st Aust Division.
Similar samples from FACTORY CORNER & EAUCOURT L'ABBAYE. Favourable report sent.
Reported on Circulars from D.M.S 5th Army re proposed Sanitation Orders for Town Majors suggested employment of permanent men under Town Wagon for working incinerators in villages. suggested schemes for collection of refuse in villages, & for defining responsibility for the care of all latrines.

3.3.17.

Investigation shows that large majority of cases of C.S.M occurring among the 1st Aust Division troops in France, are reinforcements very recently from England who probably brought the disease with them.

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FRICOURT	3.3.17.		Reported to A.D.M.S 1st Aust. Div on water samples from Wells at LIGNY (recently conquered). ^{No 1 well} supply safe. But no 2 well supply unsafe. Organic pollution marked.	###
	4.3.17		Prepared Special Report form for use in reporting on water samples.	Cope of Special Report form attached for reference
	5.3.17.		Report sent to A.D.M.S on chlorination of water in 1st Aust. Div. Area. Chlorination is being regularly carried out.	
			Reported to A.D.M.S on insanitary conditions in Fricourt A. Camp.	
			Reported to A.D.M.S on conditions in 11th Bn Camp at Sg central, & in 9th Bn Camp: (Bendigo Camp) S 21 C.O.4. Both camps fairly clean.	
			Special measures taken to deal with refuse heaps liable to breed flies.	###
	6.3.17.		Pay books of Pte DENNIS & Pte TOY received from C.O. K Column. duly completed with pay at Drivers M.T. as from 24.2.17.	
			Pte WASSON reported for duty, having been transferred from 11th Bn 13th. & was taken on strength of 2nd sanitary section as from 6.3.17.	
			Promoted Pte HOLMES E.S. to Acting L/Cpl. as from 6.3.17.	###
	7.3.17.		1st Aust. Division moving out of forward area. 2nd San. section to remain in & look after the area as before. Arrangements for belleting sanitary section personnel in forward part of the area, & for rationing them, to be made through A.D.M.S 2nd Aust Division now moving over to this area.	
		Recalled Sgt BOLAND from BAZENTIN to FRICOURT.		
		sent Cpl. WALKER to take charge of sanitary supervision of BAZENTIN area.		
		Tested water supply at MILLENCOURT Rest Station. Good supply.	###	
		Arranged for further sanitary works to be carried out at MILLENCOURT, erection of latrines & incinerator	provision of fresh trap	

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FRICOURT	7	3.17.	Sanitary works completed at D.H.Q. Baginbun House. Erection of latrines & incinerator	
"	8	3.17	Pls NEAL & HARVEY sent to MILLENCOURT, 1st Aust. Div ⁿ Post Station to carry out sanitary works. " to build mementos, latrines, excuse traps & ablution benches & urinals.	
			Prepared a circular notice to be served on C.O.'s all units having House transport, advising them to deal at once with fly breeding refuse. New Pay Books. Verified all new Pay Books & entered mobilisation particulars	Copy of Notice attached for reference
	9	3.17.	Plt FITZGERALD transferred to 2nd sanitary section from 11th Bn. was evacuated to CCS before reporting to 2nd sanitary section. Prepared a lecture on "Relation between unsanitary Camp conditions & disease" to be delivered to the 1st Aust. Divisional Officers School. La Chaussee. Went to La Chaussee to deliver the lecture	
	10	3.17	Served notices on 35 units in 2nd sanitary section area re disposal of house refuse. to prevent fly breeding. attended lecture by Col Foott A.A.M.C on "Discipline & Internal Economy"	
	11	3.17.	sent receipts for new Pay Book to Field cashier, 1st Aust Div ⁿ . Owing to 1st Aust Division moving out of ^{part of} this sanitary area, & 2nd Aust Division moving in to part of it, & 5th Australian Division moving in to another part of it, rearrangements for rationing & billeting men of the sanitary section stationed in various parts of the area have to be made. Also new arrangements for water details at water points & for working parties of all kinds. These new arrangements	

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FRICOURT.	11.3.17		<p>are only made with difficulty & are in their turn only very temporary as the divisions on their units move frequently. The new arrangement whereby sanitary sections are separated from their divisions & are made to work in definite areas irrespective of the units occupying these areas, is leading to very many difficulties, & to much expenditure of energy in constant rearrangement of plans & alterations necessitated by sudden movement of troops & necessity for making new arrangements with incoming units. When ^{the} sanitary was with its Division a permanent plan of action was possible & was adhered to & the ADMS & co sanitary section were in close touch & understood one another's objects & methods of working. The system worked very well. The new system is working badly. Sanitation is mainly a matter of educating the Division on sanitary lines & if this is done, the Division will be sanitary no matter in what area it may be. Part of Divisions are not so educated (& they cannot be under the new system) there is little advantage in keeping a sanitary section in a definite area. The Division will be unsanitary no matter what amount of work has been done to provide good sanitary works of all kinds in the area. Sanitation is a personal matter, not an area matter. The Divisional sanitary section scheme is the best. The sanitary section moving always with its Division.</p>	

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FRIDPORT.	11.3.	17.	<p>arranged with DADMS 2nd Aust Division to continue supply of pan latines in the trenches, this being the best way of dealing with what has always been a very difficult problem. These pans are half iron drums provided with a cover, & with a flap lid over surface. They are small, light & easily moved from one place to another & are quite fly proof.</p> <p>gave lecture to sanitary supervisors re making sanitary reports, exact details of insanitary conditions must be given, not generalised statements. (also date) hour of inspection must always be noted. all notes must be made on the spot when a report is to be furnished.</p> <p>attended sanitary officers Conference at DADMS 1st Aust office at HENENCOURT. in connection with the new arrangement of sanitary sections, withdrawing them from Divisions & settling them in an area as Coys or Army troops. also in connection with the problem of dealing with horse refuse during fly breeding season.</p> <p>A large number of points were discussed showing the advantages of remaining with Division. Views are to be put forward in writing for consideration of the Army.</p> <p>12.3.17. Staff Sgt. CARLOS of 2nd sanitary section transferred to be W.O. Class I No 11 Dermatological Hospital England, left for England today. Recommended Sgt BOLAND to be Staff Sgt in place of CARLOS. transferred.</p> <p>A. L/Opl HOLMES. E.S. to be Corporal as from 12.3.17.</p>	

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FRICOORT.	12.	3.17	<p>Sent AF B 122. Sgt DAVINETT. Pte BEATTIE Pte BURLEY & Pte FITZGERALD to officer 1/c Records Angas Section 3rd Echelon G.H.Q. Base. These men evacuated to Hospital.</p> <p>Pte NEAL. returned from MILLENCOURT.</p> <p>Inspected Infantry Camps FRICOORT. There is much improvement lately in the general sanitary conditions of camps.</p> <p>Major Reginald Smith DADMS (Sanitation) of the Army visited & inspected this portion (FRICOORT) of the area. Inspected water points & incinerators & made several suggestions as to future work. Was satisfied with the progress made.</p>	
	13.	3.17.	<p>Sent forward 100 pan latrines with fly proof covers for front trenches. Cf Kennedy to distribute them where most required.</p> <p>Received memo re giving 5 day instruction to recently joined medical officers in camp & field sanitation.</p> <p>Made inspection of camps following on my notice served on C.O's units on 10. 3. 17 re disposal of horse refuse. Very little work done so far but a start is being made on most units.</p>	<p>1267</p>
	14.	3.17.	<p>Put in new type grease trap at sanitary section Camp Red Cottage as a model for camps to follow.</p> <p>Large amount of salvage done this week by sanitary section, including building material, timber & iron, clothing, & food. All the work of the sanitary section in building latrines, incinerators, public latrines etc is being done with salvaged material.</p>	<p>1267</p>

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FRICOURT.	15.	3.17.	<p>Made an inspection of forward area, reserve, support & front line trenches. Main points requiring attention are 1. localisation of refuse dumping in shell holes. 2. Burial of long unburied dead 3. Restriction in use of wells very liable to be polluted from corpse strewn ground. Inspection Clarke's dump. Pine Copse. Seven Elms Encount & l'abbaye. Herham Rd. Butte of Waulincourt. Ancre valley trenches. Waulincourt Encount. Toupoint Wood. La Sars, & returned by Martin Busch & Bazentin.</p> <p>Reported to A D S C. C.O. One sample of water forwarded from Camp ^{Well} near Albert.</p>	<p>///</p>
	16.	3.17.	<p>Inspection of camp with a view to hurrying on the steps taken for disposal of house lines refuse. Some units doing good work, incinerating where possible, packing this burning in trenches & shell holes. In some cases pushing & blowing.</p>	<p>///</p>
	17.	3.17.	<p>Took Class of Medical Officers through water testing (a) for degree of chlorination required. (b) for detection of bacterial poison etc. also made Routine camp inspection with them & visited water points. Pointed out advantages of new type of incinerator (described in my monthly report) erected in Battalion camps & capable of incinerating large variety of refuse & to deal with daily refuse of a Battalion in less than 3 hours.</p>	<p>///</p>
	18.	3.17.	<p>Took Class of M.O's for instruction in Sanitation. Made routine inspection of camps & pointed out insanitary conditions of a dangerous nature.</p>	<p>///</p>

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Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
FRICOURT	18.	3.17.	Three batteries transport (wagon lines) 46 th 47 th 45 th , were found in a very filthy state in spite of repeated warning & were reported to Angae HQ as per instructions.	
	19.	3.17	Inspected HQ Artillery (Divisional) & condemned cookhouse & latrines. Paid visit of inspection to BAPAUME & surrounding villages. Found Bapaume especially in an indescribably filthy condition. The Germans had used their billets as latrines to an unlimited extent & the billets were not easy to enter in consequence. Filth heaps & muck heaps abounded. Latrines were practically absent. Wells polluted with filth. Whole place requires an enormous amount of cleaning up.	
	20.	3.17.	Inspection. Via Poseries, Councelle, Le Sans, Le Barque, Jigny, Thilloz, Bapaume, Hasenhof farm, Factory Courner, High Wood, Bokgentin & Fricourt. Weather. Wet & very windy. Dogs walk about 30 miles. News to A.D.M.S 1st Aust. Division re great delay in receiving notification of cases of infectious disease. Delay amounts at times to a fortnight, when of course preventive measures are of little use & usually impracticable. News sent to DDMS 1st Angae re responsibility for burying bodies which have lain long unburied on various parts of somine front, but which must now be quickly attended to. attended conference at DDMS office Henencourt with reference to rearrangement of boundaries of sanitary areas under the new scheme of ten sanitary areas to. can Army.	

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Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
FRICOURT.	20.	3. M.	Arranged new boundaries, & obtained middle forward area as my area, including Bapaume.	###
	21.	3. 17.	In connection with instructions for all sanitary supervisors to report to the M.O. of a Unit before making inspection of the camp, prepared a form signed by myself to be filled in & left at camp if the M.O. is absent or not available, the sanitary inspector then to make his inspection as though he had reported to the M.O. This saves loss of time & effort on part of sanitary inspectors who have their settled rounds to make & cannot miss a camp if M.O. should be absent. Copy of form enclosed is attached for reference. Memo sent to D.D.M.S. 1st Army requesting permission to shift sanitary Section HQ to BAPAUME.	Attached for reference. Copy of notification to R.M.O. re sanitary inspection of a camp.
	22.	3. 17.	Conference of C.O.'s Sanitary Sections (1st, 2nd, 4th, 5th) held at MAMETZ to draw up a report showing advantages attached to system of sanitary sections remaining divisional & moving with their divisions. Pte MORAN reported missing by Cpl KENNEDY. Sent Cpl KENNEDY to search for him. Second meeting of conference of C.O.'s sanitary sections at MAMETZ. Inspection of camps evacuated by 1st Aust. Division troops consequent on the Division moving out into the Back area. Shows that the standard of sanitation has risen very much during the past month. The camps were left very clean & sanitary & with very little waste of food or clothing in evidence. The number of sanitary works in the camps	###

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Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
FRICOURT.	22.3.17		has been largely increased, & all are in good working order. Report made to A.D.M.S. 1st Aust Divn. accordingly.	###
	23.3.17		3rd meeting of C.O.'s sanitary sections held at Mametz, & Report completed for forwarding to Army, "giving reasons for the desire to be returned to Division & work with them. Copy of this Report will be attached to Diary later. Great difficulties are met in dealing with urgent sanitary matters under the new arrangement, which presented no difficulties under the Divisional scheme owing to close touch between sanitary section & A.D.M.S. of Division & Q & A Branches. Pte MORAN reported back. A.W.L. from evening of 21/3/17 to evening of 22/3/17. Placed under arrest.	###
	24.3.17		Owing to 1st Division moving out, entirely new arrangements have to be made with 2nd, 4th & 5th Divisions all of whom are in my area, with regard to belching & rationing, detached squads of my section, & with regard to water point details etc. Summer time came into operation. All clocks forwarded 1 hour at	###
	25.3.17.		Visit to D.A.D.M.S. Pte Angae, HENENCOURT with reference to moving 2nd Sanitary Section to Bapaume. Obtained pass for motor being for this purpose.	###
	26.3.17.		Orderly Room, Pte MORAN tried & sentenced to 28 days HoZ Field punishment for being A.W.L. from his post in forward area for 30 hours. Evidence holds to fact that he went hunting on his own account. His explanation was that he got lost.	###

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Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
FRICOURT.	26.	3.17.	Reported to ADMS, 1st Aust Div. one case of peculiar febrile disease associated with severe headache, & marked tenderness of the shins gradually becoming worse, with fortnight's history. Cleared up in 4 days under purgatives, quinine & aspirin. & has not recurred. Sent memo to ADMS 1st Aust Div re replacement of Water details at FRICOURT Water points.	
	27.	3.17	Sent Cpl HOLMES, F.S. & 4 men forward to BAPAUME. to commence work there. Cpl Holmes in charge. & to test all wells & water supplies Pte NEAL. Carpenter (with full kit of tools). Pte KELLETT & Pte DONOVAN. Sanitary supervisors & Pte MARMONT. Sanitary detail made arrangements for collecting & rationing them with a Field Ambulance also for obtaining working parties from Brigades. Will shift HQ Sanitary Section to Bapaume as soon as instructions are received from 1st Army re new sanitary area allotted to me. Monthly Report 2nd Sanitary Section prepared & forwarded to 5th Army through DDMS 1st Army.	
	28.	3.17	Recalled water details supplied by 1st Aust Division, from these water points, & returned them to their battalion as per instructions from ADMS 1st Aust Div. & notified C.O. Battalion & ADMS accordingly. Pte LAIDLAW went on leave to Scotland. Returned gum boots & Waterproof Capes to Ordnance. & followed receipts.	
			Sent copy of monthly report to ADMS 1st Aust Division.	

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Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
FRICOURT	29	3.17	<p>Ten men sent by 2nd Aust Division, reported to me for duty as water details. These men were instructed in their duties, & given written instructions in addition & were then detailed off to their water points, under charge of water supervisors JENNINGS & GUTHRIE, at FRICOURT & BAZENTIN respectively. Receipt of these men acknowledged to ADMS 2nd Aust Division. Sent instructions to C.O. 1st Coy Engineers Bazentin re neglect to chlorinate water used in their camp. Prepared, & brought into use a circular addressed to C.O. Units re steps to be taken to place the Camps occupied by their Unit in a sanitary state. This memo is signed by C.O. 2nd Sanitary Section & is served on ^{by sanitary supervisors} C.O. of any Unit the condition of whose camp premises - states this action. The copy of memo is attached for reference.</p>	<p>Copy of Memo to C.O. Units re Sanitary Conditions in Camp.</p>
	30	3.17	<p>Received notification from DMS 5th Army re potability of well waters in the various villages in recently conquered territory. Received notification from ADMS 1st Div re special circumstances under which uses of A.W.L. may be tried regimentally. Visited BAPAUME. Inspected the town. Inspected work done by NCOs & four men stationed there. Satisfactory, & good progress made. Inspected sites for incinerators etc. Fixed on a site for Sanitary Section Camp.</p>	
	31	3.17	<p>Received notification from DMS 5th Army to supply him with a weekly report on sources of water supply examined during the week. Breaking up of camp at present & preparation for removal of sanitary section HQ's to BAPAUME.</p>	<p>12</p>

2nd Sanitary Section

1st AUSTRALIAN DIVISION.

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WATER SUPERVISION

REPORT on Sample of WATER obtained from
 ----- at ----- by -----
 ----- on -----

Distinguishing No of Sample. ----- Map Location -----

Description of Source of Supply.

REMARKS on Locality and Environment.

Whether subject to Pollution, actual or probable.

Physical Characteristics of the Water.	Degree of Chlorination Required	Mineral Impurities	Arsenic	Cyanide	Other tests made

Recommendations

Divisional Sanitary Officer.

Date Stamp.

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The C.C.

In view of the approach of the fly breeding season it is necessary that refuse of all kinds should be destroyed without delay and this is particularly urgent in the case of stable refuse and refuse from horse-lines.

All refuse other than that from stables and horse-lines must be incinerated.

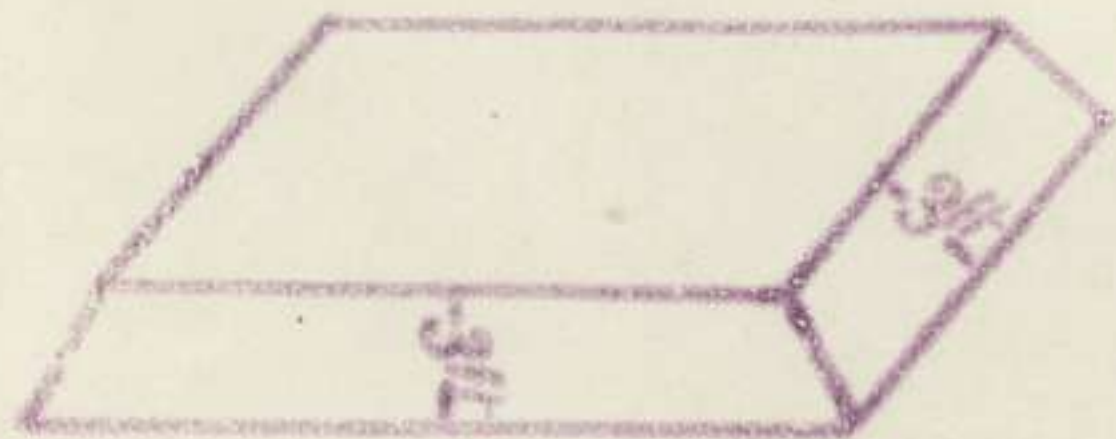
Refuse from stables and horse-lines must be dealt with by one of the following methods.—

A Wherever possible it must be INCINERATED

B Where incineration cannot be carried out, the manure must be buried in pits, shellholes or trenches and covered with at least two feet of earth.

C Where large accumulations of refuse have occurred the refuse instead of being buried may be gathered into a single heap and properly packed in the following way.—

Manure is to be gathered together at one spot, and a heap made in the form of a cube.



This heap should not be more than three feet in height

The sides and top of this heap are to be beaten tight with spades so as to make a compact surface. If necessary, earth should be thrown on to the top and sides and beaten down solid and compact.

Each day fresh refuse is to be added to the heap, by digging out a portion of the cube at the sides or top, dumping the fresh manure into the cavity and covering it at least 18 inches deep with the old manure which is then beaten down solid as before. A fresh portion of the cube is opened and used in

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this way every day until the original spot is reached.

By this means the development of fly larvae in the manure is prevented even in the summer season.

All accumulations of horse refuse about camps must be cleaned up without delay, and treated by the method which in each particular camp is the most practicable, but wherever possible INCINERATION must be carried out.

Horse refuse will burn well if thrown in small amount at a time onto a jumble of hayband ~~etc~~ or fencing or barbed wire, which forms a core and allows air to get through the burning mass.

Divisional Sanitary
Officer.

DATE
STAMP.

1267

*Notification of the Inspection of a camp by a Sanitary
Supervisor of 2nd Sanitary Section.
The R.M.O.*

A Sanitary inspection of the camp occupied by—

_____ at _____

will be made today at _____ ^{AM.}_{PM.} by the bearer

*_____ who is an Authorised Sanitary
Supervisor.*

*Divisional Sanitary
Officer.*

*Date
Stamp*

1267
The C.O.

As the warm weather approaches fly breeding will take place very extensively unless strict precautions are taken to destroy all refuse about camps.

There is a great danger that dysentery and other fly borne diseases, which have already begun to make their appearance, will become very prevalent during the coming summer, with consequent serious wastage of men from these diseases, unless camps are maintained at the highest Sanitary level, by the immediate destruction of refuse of every description.

Would you please take immediate steps to have your camp thoroughly cleaned up, and all refuse, including tins and food waste etc incinerated.

All refuse which cannot be incinerated must be buried under at least 2 feet of earth.

Latrines must be given special attention and must be of the pattern required by 5th Army Orders.

The Sanitary Section will give every assistance in advising the type of incinerator and latrines etc to be erected and in supervising erection, but it is necessary for your unit to supply labour and material.

These matters are embraced by 5th Army Orders A673/133 of 7th JAN 1917 and require very careful attention.

DATE STAMP

C.O. 2nd Aust Sanitary Section.

267
 Monthly report of the C.O. 2nd Australian
 sanitary section. for the month of

MARCH. 1917.

Furnished to DDMS 1st Augae.

Conservancy system.

Deep pit
 system.

The system of deep pit latrines has been extended, & in certain small camps where shallow trenching was still being carried out more or less carelessly, the deep pit fly proof latrines have been installed during the month.

The latrines are of the standard pattern the deep pits are rivetted to prevent collapse in wet weather, & the latrine shelters are screened with hessian or old galv. iron, & roofed with waltheid or iron.

An improvement is being effected by building the latrine nests as far as possible of galvanized iron, & the lids also of iron hinged on staples. This has proved very satisfactory & has the advantages of prolonging the life of the latrine, & reducing the likelihood of the covers being ripped off by men, & since they cannot be used for fuel.

Pan
 system.

AT MILLENCOURT. 1st Aust Div^l Rest Station
 The pan system is in use, with incineration of faeces. Four new latrines with accommodation for 32 men have been erected by the sanitary section. These latrines are built with concrete floor & guides for the pans, & with fly proof boxes.

In the Trenches. The pan system was introduced as explained in my last report, and in all, 175 pan latrines

were placed in the trenches & outposts. With the advance however, & the temporary reversion to open warfare, these portable latrines could not be controlled & some of them disappeared. However the remainder are being utilised, & more will be provided where indicated. In trench to trench warfare I think this system provides the best solution of a very difficult problem in all cases where enemy observation prevents the use of deep pit latrines. The system moreover finds favour with the Platoon commanders.

Public
latrines
&
Urinals.

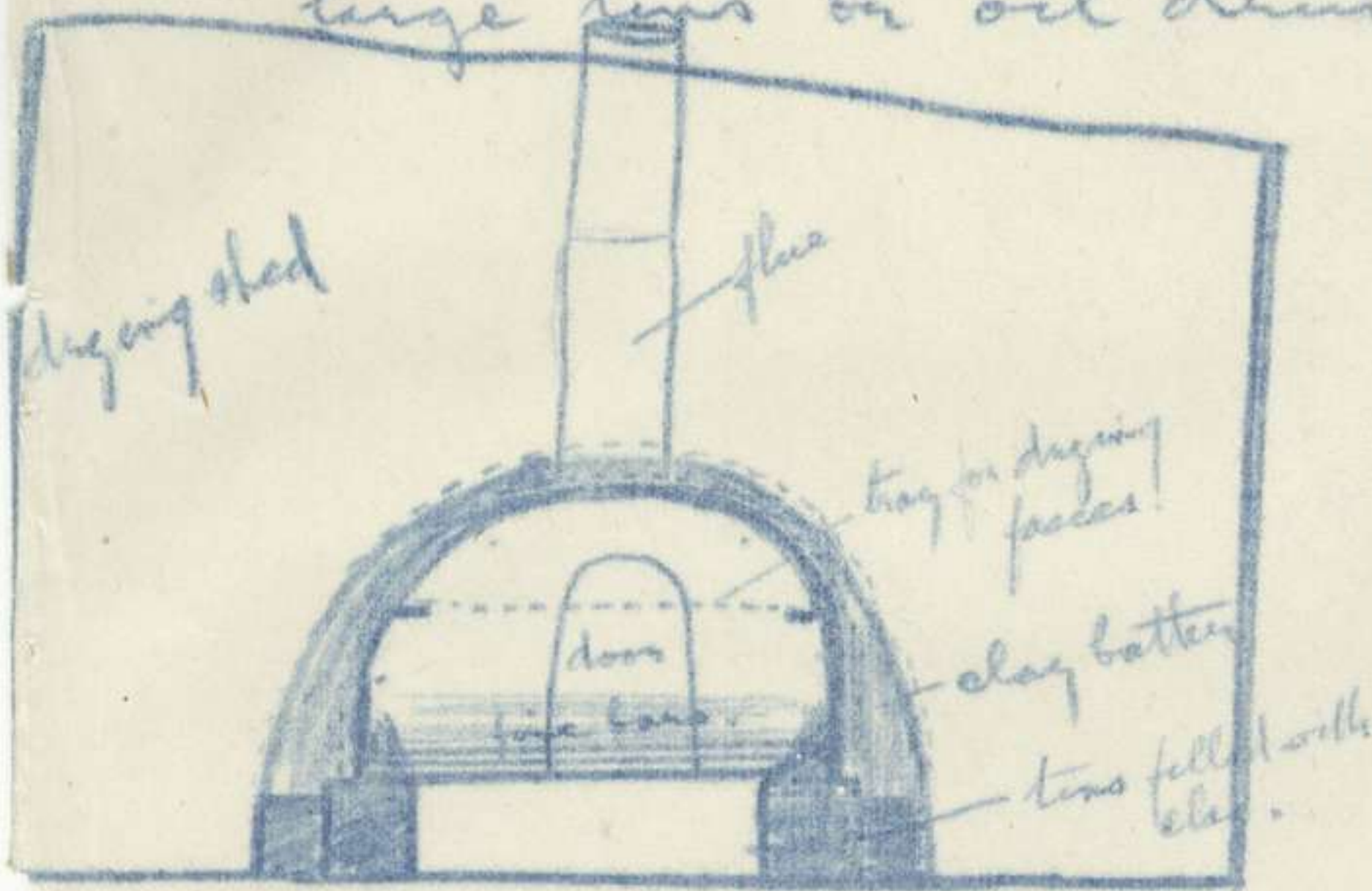
Public latrines & Urinals are provided both in the forward & the back part of the area, where troops are constantly passing, as at cross roads, Beaulieu dumps etc. A number of these were placed in position forward of High Wood during the earlier part of the month. The number in the camping area between Beaucourt & High Wood has been increased. These public latrines are freely made use of by the men. They are well sheltered & roofed to provide more comfortable accommodation than a muddy shell hole or trench & consequently fouling of ground is diminished.

The camps in the 2nd sanitary section area are now well provided with deep pit latrines & Urinals.

Refuse

Refuse is mostly incinerated. A new form of incinerator has been introduced into some of the Infantry Camps at Fricourt. It is working very satisfactorily. The daily waste of a battalion can be

incinerated within three hours, & the heat generated without any admixture of fuel is intense. The body of the incinerator is built of curved iron sheets, set on large tins or oil drums full of clay.



Fire bars are laid laterally across the chamber & are covered with expanded steel netting. The outer surface of the iron sheets forming the body of the incinerator ~~is~~ covered with

wire netting & then a thick batten of clay with a final layer of wire netting to keep the clay in place. The stoking door is in front & the chimney flue at the extreme rear. A drying shed is built over the whole & the heat inside this shed dries clothes very rapidly. Any kind of refuse will burn in this incinerator. It would burn faeces satisfactorily. The faeces could be dried on a tray placed inside the chamber, above the fire, & raked on to the fire from time to time.

Other types of incinerator are in use in camps as explained in my previous report. The above type however is most efficient in big camps, but suitable material for building it may not also be available.

The camps in the area are on the whole well supplied with incinerators. The trouble exists in getting the units to make good use of them, but matters are improving in this respect.

Efforts have been made to prevent the fouling of large numbers of shell holes & trenches with refuse & excreta, by trying to localise dumping & burial as much as possible in the forward area. It is very difficult to control this however, unless Unit C.O.'s & R.M.O.'s take more interest in the cleanliness of trenches & their surroundings. Notices have been placed at shell holes set aside for dumping of refuse & latrine waste, but the tendency still exists of course, to throw refuse into the handiest hole or old trench & to let it lie uncovered.

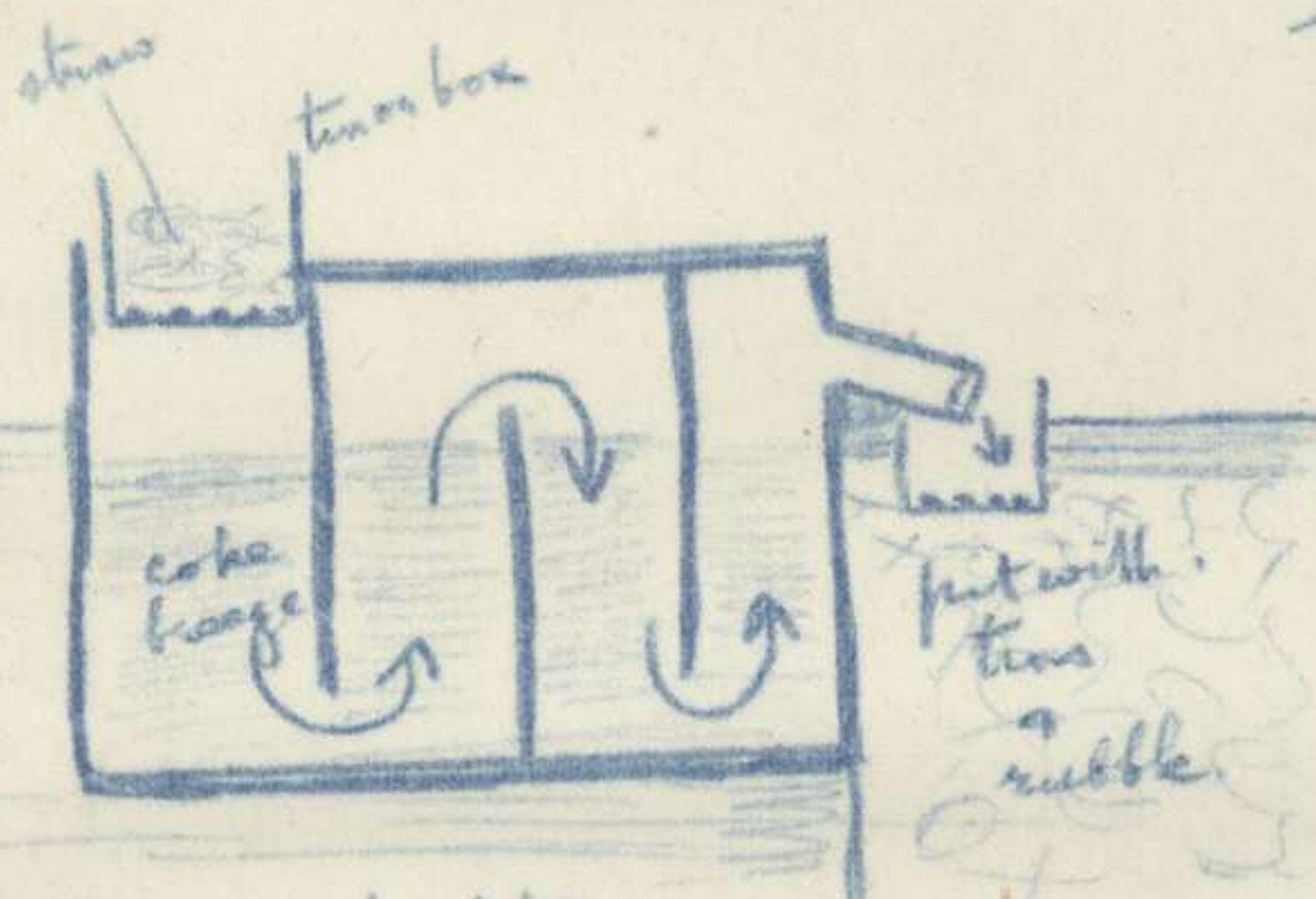
Horse
Refuse.

Special attention has been given to this matter during the month, under the instructions received from you. Following the attention drawn to the matter in Army Routine Orders, a circular was served on C.O.'s all Units possessing horse transport in my area explaining methods of disposal of manure & asking for immediate action. A copy of the notice is attached for information Form A. 35 Units were approached in this manner, & frequent inspections were then made. As a result many of the Units cleaned up their lines & disposed of the refuse satisfactorily. Other units did a considerable amount of work but, owing mainly to the long accumulation of the refuse, did not deal with the whole amount. In two cases, no attention whatever was paid to the matter & these units were reported. The proper cleaning up of old accumulations

will take time, but the matter is one of keeping constantly at the units by frequent inspections, especially as units are so frequently changing in the camps.

Waste water from cook houses etc.

Grease traps have been provided in three camps by the sanitary section, as a guide to other camps. These traps serve the purpose of looked after, & are built as follows.



A wooden box, as in the diagram is let into the ground. It is partitioned by baffle boards to direct the flow of sullage water. Cookhouse water is poured into A, which contains straw or grass

It then filters through coke breeze or charcoal from the cookhouse fire, in the direction shown & finally escapes by the outlet B into a perforated tin let into a deep pit filled with incinerated tins & rubble to serve as a distributing bed.

These traps are easily made & require only a small amount of attention in renewing straw or grass, & the coke breeze or charcoal from time to time, burning that removed in the incinerator. Better success is hoped for in getting them introduced into camps in this connection. The set of drawings brought out by 5th Army as notified in A.R.O. 529. with regard to accessory structures in camps, is not yet to hand, & consequent steps cannot yet be taken to introduce

the uniformity of sanitary works in all camps which is desired

BATHS. are in good working order at Bagatin. Ablution benches are available in most camps. Clothes are mostly washed at Ba. There are no insanitary conditions at present, arising from lack of washing facilities in camps.

WATER SUPPLY. All water supplies are frequently tested, & are properly labeled. The scheme of chlorination at the well points is detailed in my previous report. Several wells have been prohibited for use by notice fixed on them, notably two at Ligny-Thilloz, which showed evidence of surface pollution.

During the advance, samples of water have been obtained from wells in conquered territory at the earliest possible moment, & tested for impurities & poisons. Samples were obtained from 16 wells in all. Reports were furnished on a special Form, a copy of which is attached for information.

As regards chlorination. The scheme of obtaining men from Division worked very well while the 1st Division was stationed in this area. When the 1st Division moved, the water details had to rejoin their battalions, & the water chlorination scheme fell through. It is difficult to arrange for water details to be supplied from a Division moving through, such as the 4th Division at present, since, by the time the men are doing their duties they are withdrawn again. The water chlorination must be done at

water points, & the water chlorinators should be permanent men stationed at the water points. P. B. men would suit the purpose. The ~~water~~ ^{water} supervisors of the Sanitary section could easily keep them up to their work.

Chlorination has been very regularly carried out throughout the camping area during the month, as the numerous tests tabulated on the attached Monthly Return show. In the forward area, before the advance, chlorinated water was sent up the Decauville from Clankers Dump, but now this is only partly possible, & wells have come into use. R.M.O.'s of units ~~can~~ be depended on to see that water used by their unit is chlorinated. The Sanitary section keeps a general supervision over wells in the newly acquired part of its area, but the personnel is not sufficient to enable a man to be placed at each village where wells are in use. Here again P. B. men would be of use if attached to sanitary sections or to Town Majors for water duties. The work is very easy, & supervision by the sanitary section quite possible.

Monthly Water Supply Return is attached.

This shows that 92% of all samples tested during the month were properly chlorinated (116 samples chlorinated out of 126 tested)

This percentage would have been practically 100% but for two facts.

- (1) When the 1st Division moved (23.3.17) the water details were withdrawn from the Freesant Farm Reserve water point & water was consequently unchlorinated. (see Table)
- (2) at the Freesant Farm Reserve point the

the water detail did not chlorinate the water the officers cookhouse, & gave as a reason that he had been told by an officer not to do so. I was unable to find the name of the officer who gave this direction, but gave definite order to the water detail to make no exceptions. The unauthorised interference by officers has very bad effect from a disciplinary point of view.

Detailed reports showing particulars of all the samples tested during the month are kept at the sanitary section office.

Distribution of Sanitary Section Personnel

Strength of section 28.
Attached for water duties 10.

Stationed at.	N.C.O.	men.	Remarks.
FRIECOURT.	1.	6.	Including cook.
BOTTOM WOOD.		2.	batman. Carpenter office clerk.
Bazentin - le - Petit & Mametz Wood.	1.	3.	
COUGH. DROP.	1.	1.	
BAPAUME.	1.	4.	
Water supervisors.		2.	general water supervision.
Motor lorry drivers.		2.	
Foden lorry men		2.	
Hospital.		1.	
Field punishment Compound		1.	
Total	4 N.C.O.	24 men	
	28. Total.		

Movement of Troops. There has been a marked decrease of men & horses in the back part of this area, & an increase forward, as a result of the advance. A very great deal of sanitary work is required in the lately acquired area forward.

Sanitary Conduct of Moving Troops. This has improved. When the 1st Division went out it left its camps in a very satisfactory state. Very little waste or litter, & both latrines & incinerators in good working order. This is very different to the position during the previous month when special attention had to be called to uncleanly camps & waste of food, clothing & ammunition by various units.

General Remarks.

With regard to sanitary inspection of camps. The principle of a sanitary supervisor notifying his visit of inspection to the R.M.O. of the unit is strictly adhered to, but where the R.M.O. is absent or not available, the sanitary supervisor reports his intended inspection by means of a form signed by the O.C. Sanitary Section, & then immediately proceeds with the inspection. A copy of the Form used is attached, ^{to the report} for information. (Form B).

Whenever sanitary conditions in a camp require particular & urgent attention, the sanitary supervisor hands to the C.O. or senior officer a written notice signed by the C.O. Sanitary Section, asking for immediate steps to be taken to clean up the camp. It is impossible to write out

directions separately for every unit, & some form of general notice such as this is necessary. A copy of such a notice (Form C) is attached for information.

Wastage of food, clothing etc in Camps has decreased considerably during the month, & camps are left cleaner & better than was the case last month.

Work carried out during month of march.

Latrines have been provided & created as follows.

I. new, deep pit latrines, housed & roofed, erected in Camps.

		Latrines	Seats
FRICOURT.	DAHQ.	1.	5.
"	Troon majors Camp.	2.	8.
"	D.A.C.	1.	3.
"	2nd Pioneer Bn. transport	1.	5.
"	Red Cottage	1.	1.
"	Reinforcement Camp.	1.	10.
"	Camp A.	1.	10.
"	Camp B.	1.	10.
"	Camp C.	5.	29.
BOTTOM WOOD.		1.	4.
BAZENTIN.	Bazentin House.	7.	17.
BAZENTIN-LE-PETIT.	Camps.	6.	30.
MILLENCOURT.	Rest station (pan system)	4.	32.

TOTAL new latrines erected in Camps. 32 seats 164.

II. A large amount of work has been done by units in renewing latrines, digging fresh pits & ~~removing the~~ shelters to the new sites.

III Public Latrines erected during the month for use of troops on the watch.

	Latrines	Seats
Fricourt.	1	5.
North Road	1	4.
Factory Corner.	1	4.
Factory Dump.	1	4.
Trunk Rd	1	4.
near Lissenhof Farm	1	4.
TOTAL.	<u>6</u>	<u>25</u> seats.

IV. Trenches & Outposts Pan latrines with fly proof covers.
Total supplied to trenches during the month. 100.

<u>Sum Total</u>	Latrines	38	seats	191
for month.	Pans.	<u> </u>	<u> </u>	<u>100</u>
				291.

Incinerators

FRICOURT. Camp A.	1	large new type asbestos with drying shed
" Camp C.	1	do. do
" Reinforcement Camp	1	small galv. iron.
" Farm	2	small galv. iron
Bottom Wood.	1	galv. iron.
Bugentin House.	1	small galv. iron
MILLEN COURT. Rest str.	2	large brick
1		small brick & iron
Forward of HIGH WOOD	2	galv. iron & bus.

TOTAL. 12 erected during Month.

Drying sheds over incinerators
Total. 4.

Grease Traps. put in during month.

Fincourt. Red Cottage. 1.

" D. H. Q. 1.

Millencourt Rest-stn. 1.

Total 3.

Abolition Benches

Millencourt. Rest-stn. 1.

The work of the Sanitary Section during march has practically all been done with material salvaged in the forward area by the section. It has not been necessary to indent for anything beyond a few tools & half a dozen latrine seats.

The Camps are now well supplied with sanitary works as far forward as High Wood.

Outstanding Work

① The main work now lies further forward at ~~the~~ BAPAUME & neighbouring villages. A portion of the Sanitary Section is already stationed at Bapaume, & has started work there. The Headquarters of the 2nd Sanitary Section is being moved to Bapaume immediately.

Bapaume itself is in an extremely insanitary state. The bullets left by the Germans are inches deep in excreta in many cases; cess pits & muck heaps in yards are very foul & latrine accommodation is practically non-existent.

②. Protection of food supplies from access to Rats & flies, will have special attention. There is room for very great improvement.

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among all units → Quartermasters
in this respect.

- 3. Particular attention will be given to
Refuse from stables & Horse lines &
to prevention of fly breeding generally.
- 4. The burial of long unburied dead in
several portions of the sanitary area
requires early attention.

W. Holmes Capt.

C.O. 2nd Australian
Sanitary Section.

SANITARY SECTION,
1st AUSTRALIAN DIV.
27 3 17
Date.....

Sanitary Section.

Office Copy

To be filed with General Sanitary Reports.
W. Holmes

27.3.17.

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Monthly WATER REPORT.

MARCH, 1917.

Return of water carts, dippers, petrol tins, tanks etc from which samples were taken & tested to check regularity of chlorination.

DATE	Samples Tested				Results	
	Water Carts	Dippers	Petrol tins	Tanks	Chlorinated	Unchlorinated
26.2.17.	4	1	1	1	7	—
28.2.17	3	1	2	1	7	—
1.3.17	5	—	12	—	17	—
2.3.17	—	—	—	3	3	—
3.3.17	2	—	1	—	3	—
5.3.17	—	—	—	1	1	—
6.3.17	4	—	18	1	21	2
8.3.17	—	—	—	1	1	—
10.3.17.	6	—	—	2	8	—
12.3.17.	1	—	—	—	1	—
13.3.17	4	—	16	1	21	—
14.3.17	4	—	6	—	10	—
15.3.17	1	—	—	—	1	—
17.3.17	—	—	3 x	—	—	3 { Present from water point.
19.3.17	—	—	1	—	—	1 do.
23.3.17	7	—	5	—	8	4. { Water details withdrawn from present Reserve water pt.
24.3.17	—	1	2	2	5	—
TOTALS.	41	3	69	13	116	10

126

126

Percentage of samples found chlorinated 92%

The C.O.

In view of the approach of the fly breeding season it is necessary that refuse of all kinds should be destroyed without delay and this is particularly urgent in the case of stable refuse and refuse from horselines.

All refuse other than that from stables and horselines must be incinerated.

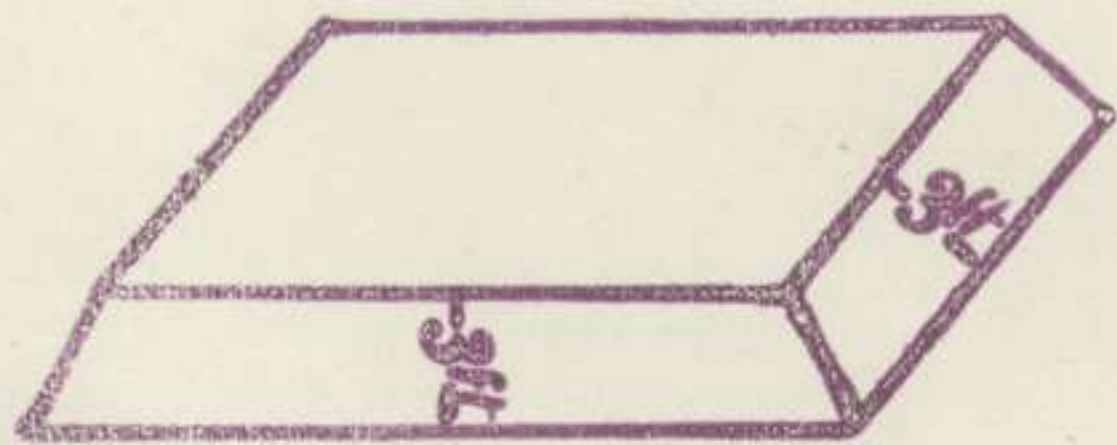
Refuse from stables and horselines must be dealt with by one of the following methods. —

A Wherever possible it must be INCINERATED

B Where incineration cannot be carried out, the manure must be buried in pits, shellholes or trenches and covered with at least two feet of earth.

C Where large accumulations of refuse have occurred the refuse instead of being buried may be gathered into a single heap and properly packed in the following way. —

Manure is to be gathered together at one spot, and a heap made in the form of a cube.



This heap should not be more than three feet in height

The sides and top of this heap are to be beaten tight with spades so as to make a compact surface. If necessary earth should be thrown on to the top and sides and beaten down solid and compact.

Each day fresh refuse is to be added to the heap, by digging out a portion of the cube at the sides or top, dumping the fresh manure onto the cavity and covering it at least 18 inches deep with the old manure which is then beaten down solid as before. A fresh portion of the cube is opened and used on

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this way every day until the original spot is reached.

By this means the development of fly larvae in the manure is prevented even in the summer season.

All accumulations of horse refuse about camps must be cleaned up without delay, and treated by the method which in each particular camp is the most practicable, but wherever possible INCINERATION must be carried out.

Horse refuse will burn well if thrown in small amount at a time onto a jumble of hayband wire or fencing or barbed wire, which forms a core and allows air to get through the burning mass.

Divisional Sanitary
Officer.

DATE
STAMP.

1st AUSTRALIAN DIVISION.

WATER SUPERVISION

REPORT on Sample of WATER obtained from
 ----- at ----- by -----
 ----- on -----

Distinguishing No of Sample. ----- Map Location -----

Description of Source of Supply.

REMARKS on Locality and Environment.

Whether subject to Pollution, actual or probable.

Physical Characteristics of the Water.	Degree of Chlorination Required	Mineral Impurities	Arsenic	Cyanide	Other tests made

Recommendations

Divisional Sanitary Officer.

Date Stamp.

B

Notification of the Inspection of a camp by a Sanitary
Supervisor of 2nd Sanitary Section.
The R.M.O.

A Sanitary inspection of the camp occupied by
_____ at _____
will be made today at _____ ^{AM.} _{PM.} by the bearer.
_____ who is an Authorised Sanitary
Supervisor.

Date
Stamp.

Divisional Sanitary
Officer.

APPENDIX

The C.O.

As the warm weather approaches fly breeding will take place very extensively unless strict precautions are taken to destroy all refuse about camps.

There is great danger that dysentery and other fly borne diseases, which have already begun to make their appearance, will become very prevalent during the coming summer, with consequent serious wastage of men from these diseases, unless camps are maintained at the highest Sanitary level, by the immediate destruction of refuse of every description.

Would you please take immediate steps to have your camp thoroughly cleaned up, and all refuse, including tins and food waste etc incinerated.

All refuse which cannot be incinerated must be buried under at least 2 feet of earth.

Latrines must be given special attention and must be of the pattern required by 5th Army Orders.

The Sanitary Section will give every assistance in advising the type of incinerator and latrines etc to be erected and in supervising erection, but it is necessary for your unit to supply labour and material.

These matters are embraced by 5th Army Orders A673/133 of 1st JAN 1917 and require very careful attention.

DATE STAMP

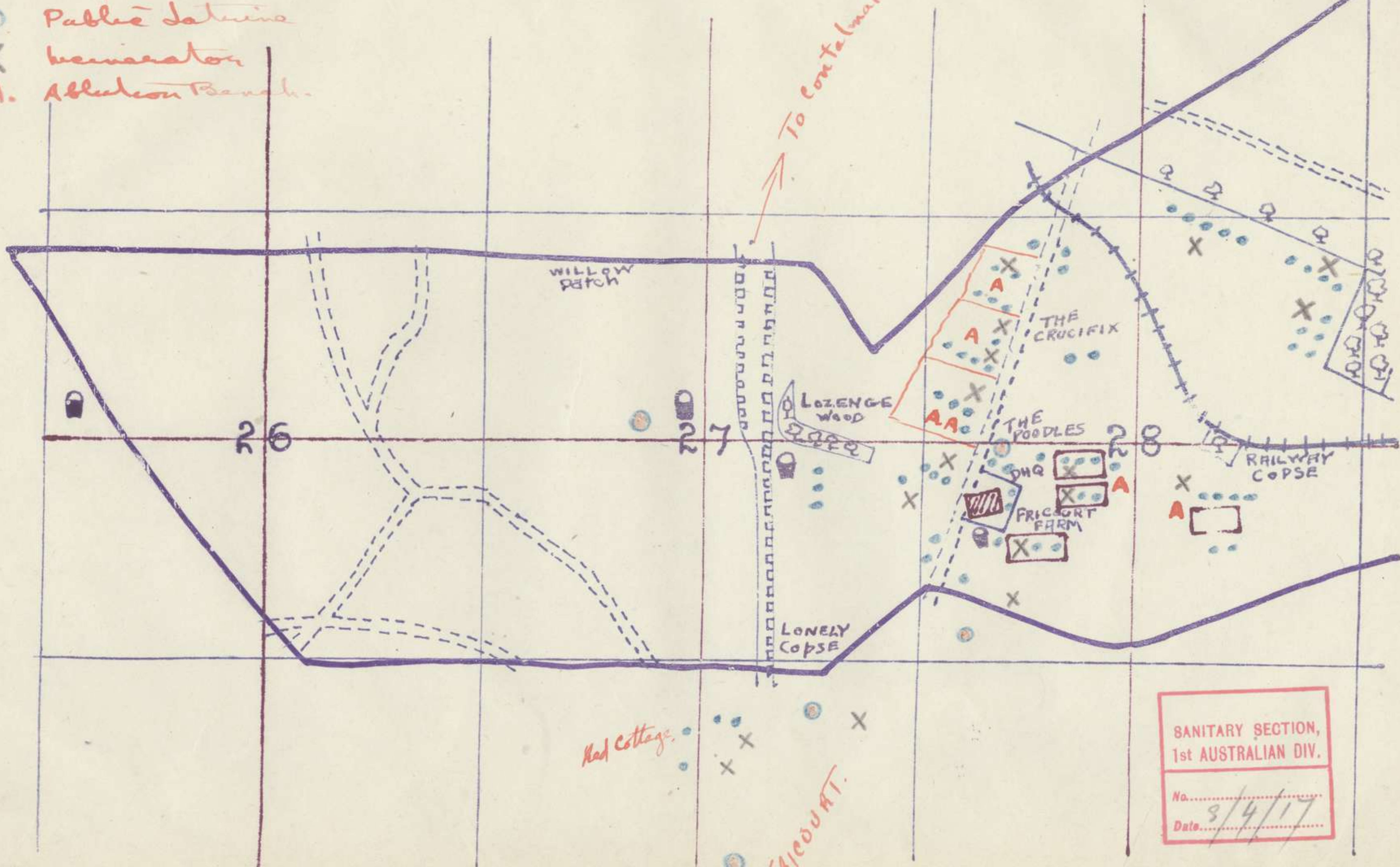
SANITARY SECTION, 1st AUSTRALIAN DIV.	
No.....	
Date.....	

A. Holmes Capt.

C.O. 2nd Aust Sanitary Section.

- Camp latrine
- ⊙ Public latrine
- X Menstruator
- A. Ablution Bench

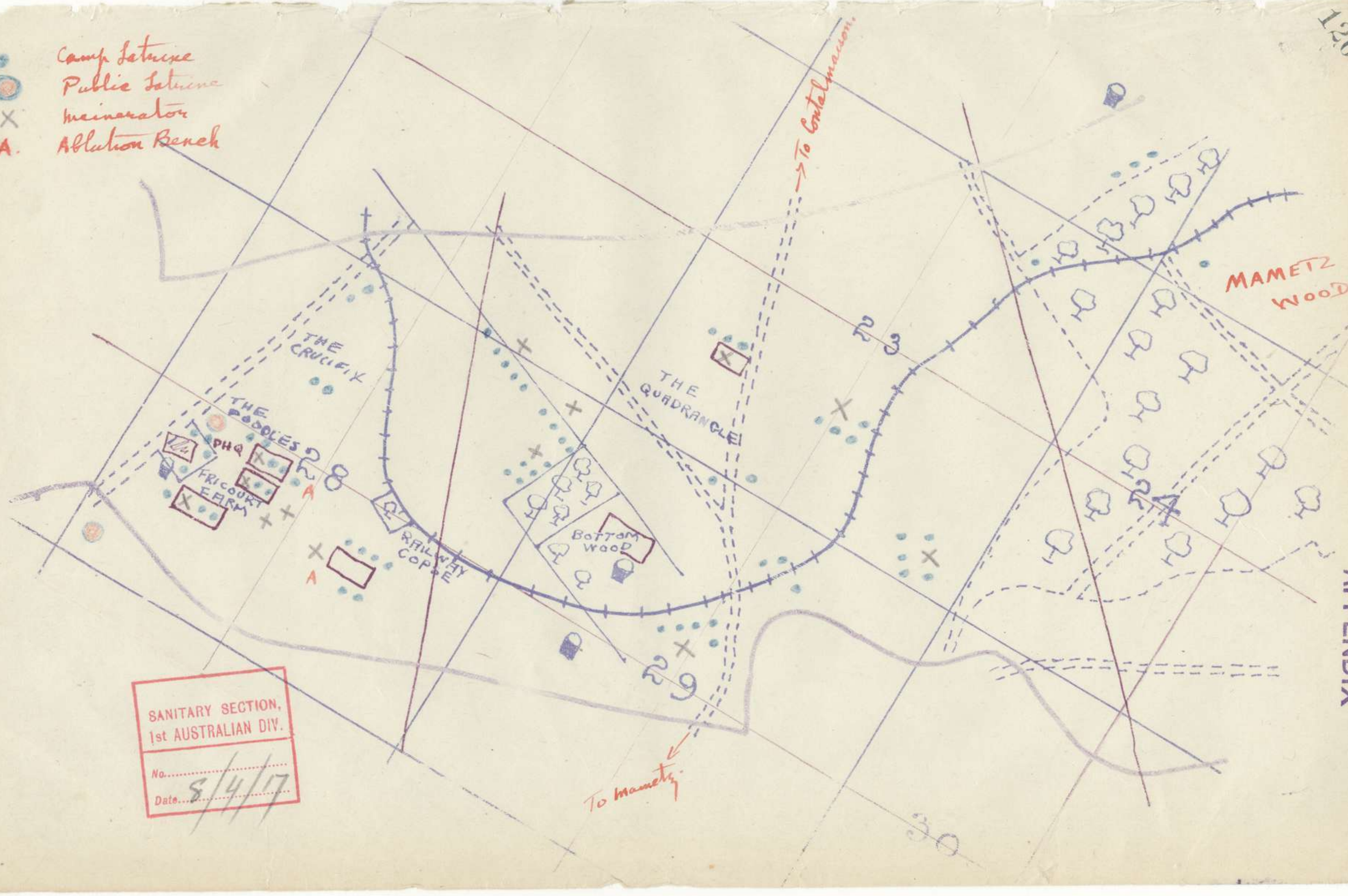
1267



SANITARY SECTION, 1st AUSTRALIAN DIV.	
No.
Date. 9/4/17

APPENDIX

- Camp latrine
- Public latrine
- X Main drain
- A Ablution Bench



SANITARY SECTION,
1st AUSTRALIAN DIV.
No.
Date 8/4/17

APPENDIX