

Series: AWM95
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[Vietnam]

Detachment, 1 Topographical
Survey Troop

Item number: 5/1/36

**Item: A Section 1 Topographical
Survey Troop**

Operational Report no. 35

[photocopy]

[1-31 Mar 1969]

CONFIDENTIAL
AUSTRALIAN MILITARY FORCES
VIETNAM

A Sect 1 Topo Svy Tp
AFPO 4 G.P.O.
SYDNEY N.S.W. 2890

21 Apr 69

Distribution: See Below.

OPERATIONAL REPORT NO 35

Covering Period 1-31 Mar 69.

PART I - G MATTERS

GENERAL

1. Locations

- a. A Sect 1 Topo Svy Tp remained in NUI DAT in Phuoc Tuy Province. (-)
- b. Two surveyors were detached to 66th Engr Coy (Topo) (US) field parties in Bien Hoa, Gia Dinh, Long An, Go Cong and Kien Hoa Provinces.
- c. One surveyor was at HQ 1 ATF (Main) in Bien Hoa Province.

2. Enemy Contacts

- a. The detachment with 66th Coy (Topo) came under rocket fire at Long Binh and again at Quan Tre during the period. There were no Australian casualties.
- b. The Base at Nui Dat "Stood To" at approximately 2320 hrs on Sun 30th Mar because of the presence of small numbers of enemy near the perimeter. The enemy withdrew when engaged by 5 RAR.

3. Information

For the information of the School of Military Survey and others an outline of the duties of the surveyor at HQ 1 ATF (Main) is shown in Annex A.

SURVEY SECTION

4. Field Work

- a. Safety arcs were established for three small arms ranges at Nui Dat.
- b. A field annotation task was done to assist an investigation into an incident involving 5 RAR near Hoa Long. (See para 7c below)
- c. Mekong Delta Traverse. This work continues but the attached RA Svy personnel are to be withdrawn early in April because of the map revision programme in Phuoc Tuy Province.

d. Training Programme. At the request of the Phuoc Tuy Province Administration, made through the Province Engineer Advisor, this unit is training five Vietnamese members of the Province Staff in the use of basic instruments. These instruments, which were a gift from the Australian Government, are a dumpy level with staff and a Wild T1 theodolite. The training is conducted in six three and a half hour periods per week at Ba Ria the Province Capital. Sgt Birrell conducts the training which commenced on 19 Mar and is expected to continue for at least eight weeks. The aim is to achieve a standard of competency so that elementary engineering tasks, particularly drainage and site layout, can be undertaken by the students. At this stage the course has become reasonably proficient at levelling and has in fact carried out several small tasks, under supervision, for the Province Engineer. All the students have been educated to at least secondary level and understand trigonometry. Only one of the students speaks English well and he acts as interpreter for the group. Two of the students are women. Sgt Birrell conducts the training with enthusiasm.

5. Compilation

- a. Route 15 Sketch Maps. The annotation of names and other detail by the Sector Advisors has been incorporated into the maps. The dyelined booklet is now on issue on demand. (Cover front piece and one map attached as Annex B) (One complete copy each to D Svy and file).
- b. 1 ATF Base Defence Plan Revision. Dyeline copies of the Engineer Plan NUI DAT have been issued to Sector Comds for compilation of the 1 ATF Base Defence Plan.
- c. Binh Gia and Ngai Gaio Special. The 1:10,000 (Special) NGAI GAIO - see para 4.c. of Operational Report 34 - has been retitled BINH GIA and NGAI GAIO Special. Work on this sheet has been suspended temporarily because of higher priority tasks and the fact that considerable change has occurred in the area since the recent photography due to enemy action.
- d. Sketch Map Revisor. HOA LONG (Northern half) and LANG LONG HUONG sketchmaps were revised during the month.
- e. L7014/L8015 Revision Programme. With the rapidly changing vegetation, cultural and track pattern in this theatre there is an urgent, immediate and a continuing requirement to revise maps from current aerial photography. It has been decided that it is not sufficient to wait until a major rephotography programme is completed and then to pass this task back to Australia. The task must be done continually from every possible source whether that source is patrol reports, split vertical reconnaissance photography or proper survey photography. An investigation has revealed that more photography becomes available than was previously thought to be the case, and although this photography is generally unsuitable for map compilation, it is suitable for map revision. Therefore an immediate revision programme has commenced and it will continue as a routine task as new photography becomes available. Since it is impractical to reprint maps every time there is a change

overlays and held at this unit. Map users will be informed that this information is available and when they commence operations in an area they will be issued with a transparent dyeline of the additions and deletions or, when there are large numbers of corrections or copies of the map involved, the information will be overprinted on the maps. When it is considered necessary requests will be made for the reprinting of the map to incorporate the revisions. Currently priority has been switched to those maps listed in D Svy signal Svy 11273 of 180521Z. Annex C which is a dyeline of the combined additions and deletions sheets plus a "new tracks" overprint of map 6430-II-SE of Series L8015, which was reprinted by RA Svy in 1968, illustrates the need for the programme described above. Areas such as Vung Tau and Nui Dat have even more corrections for the new edition.

f. VC Maps. An investigation was carried out of the VC map coverage of the TAOR. The results of this investigation were promulgated to HQ 1 ATF. See annex D attached.

CARTOGRAPHIC AND REPRODUCTION SECTIONS

6. Command, Supervision and Co-ordination. Sgt T LINZ as well as commanding the Cartographic Section has been given the additional responsibility of controlling the production planning and co-ordination of the entire reproduction element. This includes the Cartographic, and Reproduction Sections. Individual Section Commanders still command their own section.

7. Operational Tasks.

a. The following overlays were produced as annexures to 1 ATF Op Os and printed on tracing paper:

- (1) AO BURRINJOCK
- (2) AO ARUNDA.

b. The following overprints were drawn and printed:

- (1) VC Names Overprint - 50 copies of each on 6 different maps.
- (2) En Installations - 30 copies of each on 2 different maps.
- (3) Track Overprint - 100 copies of each on 16 different maps plus 30 of each on tracing paper.

c. Several photographs were enlarged, annotated and copied as annexures to an investigation. (See para 4.b. above)

8. Mapping Tasks

a. Long Dien Special 1:10,000 map is being revised for reprinting.

b. Saigon - Vung Tau Area 1:500,000 map is in production. This small scale map, covering the complete area where 1 ATF has operated in the past with some safety margin for future operations is to replace the the Phuoc Tuy - Vung Tau Special Zone 1 colour map.

/It is also

It is also designed to be the only map of which this unit will provide duplicate reprints for Battalion Histories. It will be produced in several colours as a routine task with low priority.

9. Miscellaneous Drawing and Reproduction Tasks.

a. The following miscellaneous jobs were drawn and reproduced;

- (1) 104 Sig Sqn - Cover for Crypto SOPs.
- (2) A Sqn 3 Cav Regt - Invitations.
- (3) A Sect 1 Topo Svy Tp - Computing Forms.
- (4) Aircraft performance graph for 6 Sqn RAAF - 50 dyelines.
- (5) HQ 1 ATF - 12 bromides of switchboard designations.
- (6) Chaplains - Easter Poster.

b. The following tasks are being drawn for reproduction;

- (1) AATTV Graduation Certificates.
- (2) 5 RAR Menu Card.

10. Miscellaneous Hand Lettering and Charts. The following tasks were done;

- a. Safety traces for range practices.
- b. HQ 1 ATF radio net diagram for CP.
- c. Province Organisation Chart - 1 Aust CA Unit.
- d. USAF LO - ALO Activity Calendar.
- e. A Branch - Name Tags.
- f. Officers Mess - File Covers.
- g. HQ Coy - Manning Chart.
- h. Officers Mess - Telephone Book Cover.
- i. USAF LO - TACP Chart.

11. Printing. Full details of all printing during the period are shown in Annex E.

12. Photography.

- a. Prints were made of 35mm films for 3 SAS Sqn. These were of captured weapons.
- b. Several 35mm rolls of hand held aerial photographs of enemy defences were developed, enlarged and copied for Air Intelligence. This later was an urgent task and briefing was done the same day on wet prints.
- c. The above two tasks involved over 100 prints. The Regimental Funds enlarger was used for these tasks.
- d. Two portions of 1:25,000 maps were enlarged and bromide prints made for 9 RAR.

13. Dyelines

- a. Nearly 500 dyelines were made for or by 1 ATF units

b. The estar based dyeline transparency system works very successfully and is a useful addition to this units capabilities. Some concern is felt at the high cost of the material and a further request will be made for transparent paper dyeline material which can be used for those tasks which do not require the dimensional stability provided by the estar based sheets.

14. Map Distribution Section. The following maps were issued during the period.

<u>MAP SERIES</u>	<u>SCALE</u>	<u>QUANTITY ISSUED</u>
L8020	1:25,000	1,599
L8015	"	2,989
L7014	1:50,000	5,078
L607	1:100,000	337
JOG(A)	1:250,000	23
Miscellaneous	-	369
Total for month		10,395
Cumulative total for 1969		38,972

PART 2 - A MATTERS

15. Nominal Roll. (See Annex F.)

16. Postings

a. Arrivals. The following members arrived from AUSTRALIA by air:

310207	SSgt	G.HASWELL	18 Mar 69
312501	Spr	G.WHITE	25 Mar 69
41986	WO1	W.A.MUNRO	29 Mar 69

b. Departures. The following members departed for AUSTRALIA by air:

3791485	Cpl	M.APFELBAUM	18 Mar 69
42054	Sgt	P.D.COX	26 Mar 69

17. Attachments and Detachments

a. 24 Jan - Continuing:- Spr GILBERT detached to 66th Coy (Topo) (US).

b. 15 Feb - Continuing:- Cpl KNIGHT detached to 66th Coy (Topo) (US).

c. 17 Feb - 14 Mar. Pte JOHNSTON detached to TFMA (Forward) at Long Binh.

d. 19 Feb - 22 Mar: Spr WETZIG detached to HQ 1 ATF (Main).

e. 20 Mar - Continuing: Cpl LAYBUTT detached to HQ 1 ATF (Main).

18. Visits.

10 - 11 Mar Maj CONSTANTINE to HQ USAFV for monthly NGS conference.

12 - 13 " Capt THOROGOOD to 66th Coy (Topo) (US)

- 21 Mar. SSgt HASWELL and Sgt COX to 1 ALSG for Q discussions.
- 22 " Maj CONSTANTINE and Sgt LINZ to BA RIA to inspect training course described in para 4.d. above.
- 26 " Capt THOROGOOD M and I Branch HQ USAFV and 79 Engr Gp to collect intelligence and arrange air photography supply. DCRE 1 ATF was also introduced on this visit.

19. Duties

- a. Maj CONSTANTINE was HQ 1 ATF (Rear) LO to HQ 1 ATF (Main) on four occasions during the period. (This duty normally only takes about 4 hours).
- b. Capt THOROGOOD was HQ 1 ATF (Rear) LO to HQ 1 ATF (Main) on four occasions during the period.
- c. Capt THOROGOOD was Duty Officer in the Command Post at HQ 1 ATF (Rear) on two occasions during the period. (This is an 8 hour duty).
- d. The unit provided HQ Coy Orderly Sergeant on five occasions during the period. (This is a 24 hour duty but for 8 of these hours the NCO carries on normal duties)
- e. Sgt STRUNKS assisted Det 1 Div Int Unit on two field trips of less than one days duration during the period.
- f. The unit provided the main gate sentry at NUI DAT on one occasion during the period.

20. Medical

- a. Sgt COX. Hospital 8 Fd Amb 14-15 Mar. Eye injury.
- b. WO1 JONES. Consultations. 1 Aust Fd Hosp. 18-22 Mar. Internal pain.
- c. Spr OFFER. Hospital. 1 Aust Fd Hosp 26 Mar - continuing. Internal Infection.

21. Leave

Beach Annex. 13 members spent 2 days each at the Peter Badcoe Beach Annex at different periods during the month.

22. Examinations. The following members qualified at a subject C examinations held by HQ 1 ATF during the period.

Sgt BIRRELL	-	Qual	C	for	Sgt.
Sgt LINZ	-	"	"	"	"
Cpl KAY	-	"	"	"	"
Cpl RICE	-	"	"	"	"
Spr AUKSTINAITIS		Qual	C	for	Cpl.

PART 3 - Q and ACCOMMODATION MATTERS

23. Technical Stores. The following technical stores were received during Mar:

- a. 6675-66-019-0909 THEODOLITE, surveying and accessory kit WILD T2-56, quantity 2, received 29 Mar 69.
- b. Film Polyester (diaz) 3 rolls and developer dyeline 6 pkts, received 27 Mar 69.

24. Regimental Funds. Amenities have provided a television set.
25. Stocktake. A handover/takeover stocktake was done at the change over of TQMS.
26. Unit Maintenance and Improvement. The following improvements have been made or sought:
- a. Two 5-6 man bunkers were constructed. One further bunker is planned. These together with the bunker constructed last month will replace the temporary shelters constructed some years ago and now in a bad state of decay.
 - b. Work continued on the Recreation Hut when labour was available and this project is close to completion.
 - c. One of the two tents in the Sgt's lines has been moved from the proximity of the power house. It is planned to move the second tent.
 - d. An "approved pattern" incinerator has been constructed.
 - e. A vehical servicing pit is under construction.
 - f. A water point platform has been constructed.
 - g. One old "L" shaped shelter has been converted to an ammunition bunker and an old "U" shaped shelter has been converted to an inflammable and dangerous chemicals store.
 - h. Two new "fire points" have been created. These consist of opened 44 gallon drums of water surrounded by fire buckets.
 - i. A bid has been submitted on the Major New Works programme to seal and fit exhaust fans in the Draughting room to eliminate dust.
 - j. P26s have been prepared to have ceilings installed in the Compilation Room, Q store and HQ offices to 'reduce excessive heat'.

PART 1: - GENERAL INTEREST

27. On the afternoon of Sun 23 Mar a fire, which started in an adjacent unit, reached the walls of this unit's battery charging shed. About 10 members of this unit extinguished it within five minutes of the alarm being raised. This proved the value of the 'open drum' fire point method. Although the fire was 50 metres from the nearest drum, and further from the second drum, 66 gallons of water were used in a very short time. In addition four extinguishers were used, but it seemed that the water was more effective as it had more of a blanketing effect. No damage was done to the chargers or batteries and the shed was only very lightly scorched.

E. P. Constantine

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8.

ANNEXURES

- A. Duties of the surveyor at HQ 1 ATF (Main).
- B. Route 15 Sketchmap Booklet. (Attached)
- C. Map Revision Data Sheet. Series L8015.
- D. VC Maps Report.
- E. Summary of Screen Printing.
- F. Nominal Roll.

DISTRIBUTION

HQ 1 ATF	1
D Svy AHQ	4
B Sect of Topo Svy Tp	1
DAD Svy E Comd	1
66th Engr Coy (Topo)	1
M&I HQ USARV	1
Diary	1
File	1

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ANNEX A TO
OP REPORT 35

DUTIES OF THE SURVEYOR AT HQ 1 ATF (MAIN)

1. This attachment can be filled by a Cpl or Spr Surveyor (Topo) or Draughtsman (Topo). While this man is not occupied on technical work full time it is desirable that he is available to the staff when required. He is now under operational control of G2 Int. During periods of no technical work he is employed at defence or administrative tasks.

2. He does a wide variety of draughting and survey tasks. The most common are listed below:

a. Lettering and Chart Making.

- (1) Night Location Charts.
- (2) Frequency and Call Sign Charts.
- (3) Airstrike Planning Charts.
- (4) Movement Charts.
- (5) Notices, Aide-memoires, Signs etc.

b. Traces and Map Marking.

- (1) Traces of areas of operations either for Survey Troop reproduction or roneoing.
- (2) Other Annexures for Operational Orders.
- (3) Marking up boundaries etc on limited numbers of maps.
- (4) Limited map revision either on maps or for reproduction by roneo as overlays.
- (5) Joining, covering and annotating battle maps and duty officers maps etc.

c. Map Enlargements and Plans

- (1) Limited numbers of copies of enlargements of small areas for staff planning.
- (2) Sketch plans of Fire Support Bases, Forward Task Force Maintenance Areas etc.
- (3) Hand held aerial photography with 35 mm camera of bases and areas of special interest. (Processing is done at NUI DAT).

d. Maintenance and Issue of Maps. This last role has just been correctly re-allocated to Survey from Intelligence. Previously although map distribution at NUI DAT was done by Survey at the Main HQ it was done by Intelligence. This was unsatisfactory if only for the reason that orders for maps had to come through Survey at Nui Dat anyway.

AUSTRALIAN MILITARY FORCES

VIETNAM

Quote in Reply
R788/2/6

A Sect 1 Topo Svy Tp
AFPO 4
G.P.O. SYDNEY
N.S.W. 2890

20 Mar 69

VC MAPS

1. This unit holds coverage of copies of VC maps at scales 1:200,000 and 1:100,000 as indicated on the attached diagram. Generally only one copy of each map is held but they are available for study or loan if required. A limited number of additional copies could be obtained from 547 Engr Plt (Map Depot). Orders should be placed through this unit.
2.
 - a. These maps have been made by photographing captured maps, which are in five colours, and printing the image in one colour either black or sepia. This results in some loss of detail in the blue-green colours of the original maps and some "blotching" where two or more colours were overprinted on the original.
 - b. The original VC maps were produced by the Department of Survey and Mapping, North Vietnam in 1956-58 from old French Maps printed in 1942-52. There has probably been a continuing limited revision programme since 1958.
3.
 - a. These maps have a 2,000 metre Traverse Mercator grid and generally a 100 metre contour interval. In some areas there are also 25 metre auxiliary contours and in other areas there are no contours at all.
 - b. Because different projections, datums and origins are used on VC maps and our own, there is a difference between the grids, which varies slightly depending on the latitude and longitude of the locality. For most practical purposes it can be taken that the VC easting grid lines are 950 metres east of our own correspondingly numbered grid lines and the VC northings grid lines are 750 metres south of our correspondingly numbered grid lines. For example, suppose there is a well defined point of detail on both maps and on our map the grid reference of the point is 389640, on the VC map the grid reference would be 380647.
4.
 - a. The difference in co-ordinates described above is a common difference all over the area of interest. In addition there are local differences due to the inaccuracies of plotting, which vary from zero to about 500 metres.
 - b. Both series of maps were produced from the same basic control, namely, that established by the French surveyors. The American Map Service employed an accurate method of aerotriangulation and electronic adjustment to supplement the basic control. This system was not available when the French produced the original maps. Therefore it is reasonable to assume that the American maps are correct and the errors are in the VC maps.

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2.

This assumption is reinforced by the fact that there is rarely any great difference between the two map series on cultural detail such as main roads, railways and large towns. These features are always surveyed in detail during or after construction so could be plotted accurately even by the less sophisticated methods available to the French during the 1940s.

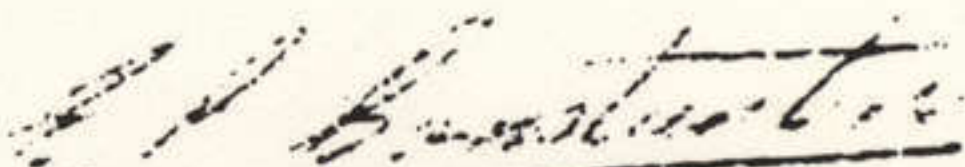
c. In addition to the two types of differences discussed above there are also of course differences due to the change of cultural and vegetation detail which occurred in the time between the production of both maps.

5. There is no significant difference between the height of bench marks or spot heights on both series. There is also a general agreement of contours.

6. a. It is recommended that if the occasion arises when a VC grid reference is to be converted to our own grid reference it should be done in the following steps:

- (1) Plot the grid reference on a VC map.
- (2) Transfer the point by comparison of detail onto our own maps.
- (3) Read off the grid reference from our own map.

b. This will ensure that the local and general differences between the series are both eliminated.


(E.P. CONSTANTINE)
Maj
OC

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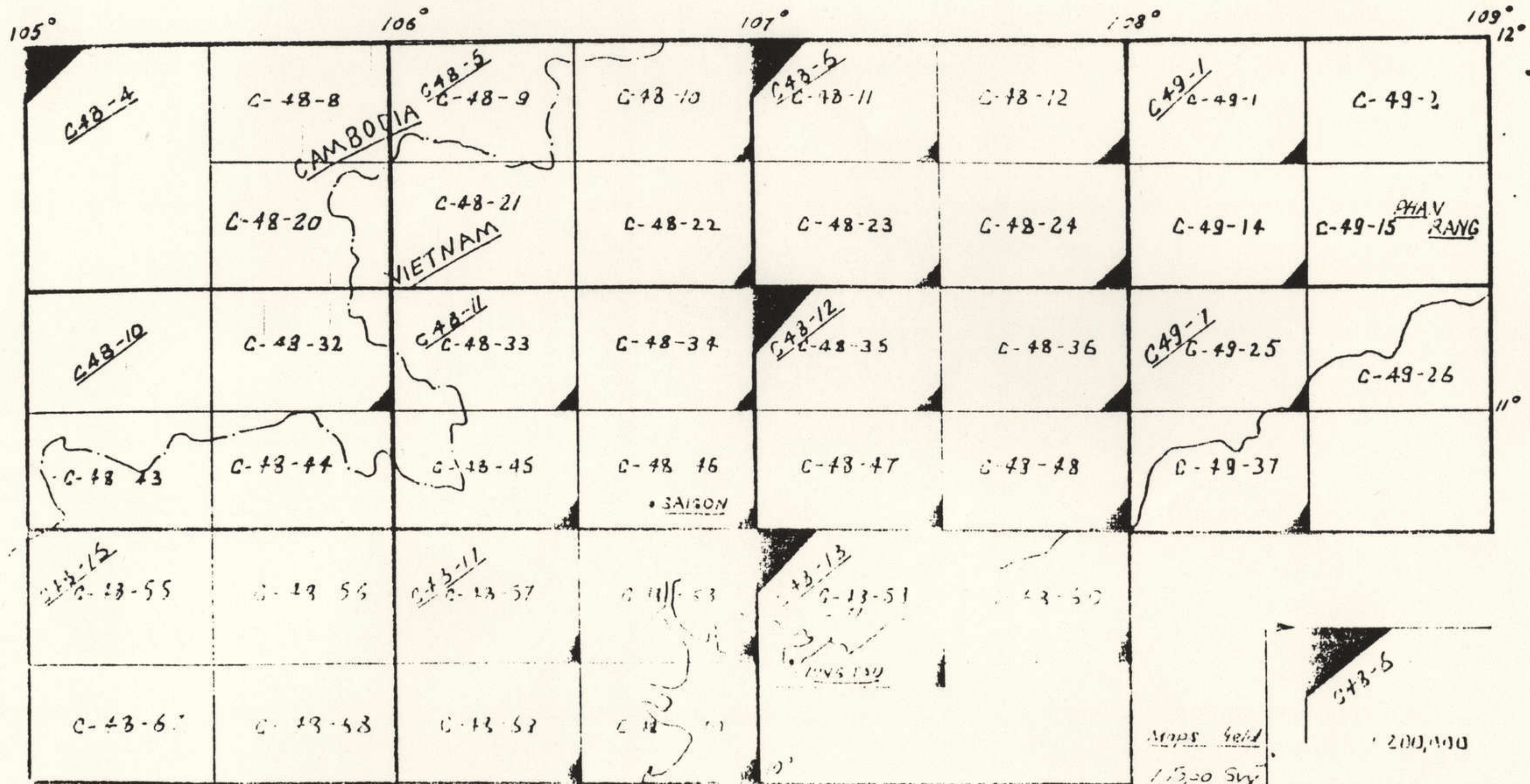


DIAGRAM SHOWING
COVERAGE OF COPIES OF VC MAPS

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ANNEX E TO OP
REPORT NO 35

SUMMARY OF SCREEN PRINTING

<u>TASK NO</u>	<u>NAME</u>	<u>COLOURS</u>	<u>COPIES</u>	<u>PULLS</u>	<u>REMARKS</u>
AFV/MISC/2159	AO BURRINJUCK	1	110	110	
" " 2155	Cover for Crypto SOPs	1	50	50	Tracing paper
" " 2154	Invitations 3 Cav Regt	1	50	50	
	Computing Forms	1	60	60	
" " 2167	AO ARUNQA	1	30	30	
" " 2160-5	VC Names Overprint	1	6x50	300	Tracing paper
" " 2169	En Installations	1	30	30	Base maps
" " 2170	" "	1	30	30	" "
" " 2166a-p	Track Overprints	1	16x100	1600	" "
		1	16x50	800	" "
	Easter Poster	3	55	165	Tracing paper
	Total for Mar 69		3115	3225	
	Cumulative Total for 1969			11,153	

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