

**Series: AWM95**  
**Australian Army commanders' diaries**  
**[Vietnam]**

**Detachment, 1 Topographical**  
**Survey Troop**

**Item number: 5/1/13**

**Item: Detachment 1 Topographical**  
**Survey Troop**

**Operational Report no. 12**

**[photocopy]**

**[1-30 Apr 1967]**





# 1<sup>ST</sup> AUSTRALIAN TASK FORCE VIETNAM



Copy No. 1. AHQ, Svy Regt.  
2. Sdof, mil Svy  
3. File  
4. Action.

DET 1 TOPO SVY TP  
OPERATIONAL REPORT

Nº 12

REPORTING PERIOD 1<sup>ST</sup> 30 APRIL 1967

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9 May 67

See Distribution List

OPERATIONAL REPORT NO 12

Covering period 1 Apr - 30 Apr 67

PART 1: G MATTERS

Present Location

1. Det 1 Topo Svy Tp remains in location at GR YS 43456671.

Enemy Contacts

2. There were no enemy contacts during the reporting period either at the base camp or whilst engaged on survey operations.

Tasks

3. Technical production continued during the reporting period at a maximum level. Silk Screen production was considerably less than previous months due to the complete inability of the Ordnance Service to provide ULANO A & B developer.
4. The following tasks undertaken were completed during the reporting period. A summary of major tasks is attached as Annex A.
  - a. Hwy 15 Stripmap - PHU MY section.  
This task was finally completed during the reporting period and is attached as Appendix 1 to this report.
  - b. 1:25000 L8015 revision for reprinting and overprinting sheets 6429 - 1 - NE and 6480 - 11 - SE.  
Direct positives showing additional track information were forwarded to D Mil Svy on 27 Apr 67. Overprinting of this information cannot be carried out until the stencil developer situation is relieved. Similar information for the remaining sheet of the series, 6430 - 11 - NE is in hand.
  - c. After Action Reports as follows:
    - (1) Operation AYR - Blue overprint on black base.
    - (2) Operation DALBY - Blue overprint on black base.
  - d. Intelligence Overprints:
    - (1) Hard Intelligence - 274 Regt in HAT DICH Area - Area Analysis - One colour.
    - (2) Intelligence Assessment - VC Resupply System - One colour on 3 map sheets.
  - e. TAOR printing:
    - (1) Cattle - Farming line and areas - One colour on

/tracing

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tracing paper.

(2) Horseshoe TAOR and Cattle Line - One colour on tracing paper.

(3) TAOR, Artillery Strike Zones etc at 1:25000 on perspex sheeting - A total of 8 sets on perspex sheeting are required for battle maps, commanders maps, briefing room maps etc. Each has to be separately hand drawn on the reverse side of the perspex sheeting. This task is consuming all available draughting capability. It presents considerable problems in registration due to the extremely unstable (dimensionally) nature of the perspex.

5. The following tasks are currently in hand or pending:

a. TAOR overprint on 1:50000 series in two colours, showing the following information:

- (1) Task Force and Unit TAORS.
- (2) Cattle - farming areas of controlled excess.
- (3) Population control lines and fences.
- (4) Artillery fire zones.
- (5) RF - PF outposts.
- (6) Minefields.

b. 1 ATF Base Area - NUI DAT SPECIAL (Ref Para 5c of Op Report No 11) - This task is slowly progressing concurrently with the Cantonment Survey revision. It has not been possible to maintain continuous effort on this task or the Cantonment Survey revision due to a preponderance of the smaller semi-operational and sundry tasks during the period.

c. Cantonment Survey - A limited amount of work has been carried out on this project.

d. Uncontrolled mosaic - HAT DICH AREA covering the top one third of 6430 - 111 made up from T11 photography flown at 1:30000 with all creeks and tracks annotated.

e. Detail survey of HORSESHOE area. In the absence of suitable photography of this feature, a detailed tachometric and plane table survey was carried out during the reporting period. Reductions and detail plotting is currently in hand.

#### Silk Screen Printing

6. During the reporting period only 1660 impressions were taken from the silk screen equipment. This low number is due to the complete inability of the Ordnance Service to procure and supply the necessary expense stores. Further action is in hand to hasten the supply of all items.

#### Survey Control

7. During the reporting period, Phase 5 of Operation TRISIDER was carried out. (Annex D Op Instr 1/67) This consisted of the

/following

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a. 3rd order connexion to the feature NUI DAT at XUYEN MOC - AAS 014 (MOC) GR YS 646701.

b. 4th order connexion to:

(1) ARVN artillery battery XUYEN MOC.

(2) USAMSFE station XUYEN MOC 1959 GR YS 667677

8. Two attempts have been made to test the principle of extending artillery control by the simultaneous observation of a slow moving helicopter, taking altimetric heights on the ground stations and the air station. The height of the air station above the known and unknown stations becomes the basis of computation. The system is mathematically sound, but obviously practically unsound however it has been advanced by artillery as an alternative for the television camera principle. It is thought that enough figures are to hand now to "scotch" this idea for once and for all.

9. Various other geometrical principles have been given consideration, and one advanced by WO2 D. Christie sounds promising. Using two known stations to fix the position of the air station and a short base principle at the unknown station with an observed sun azimuth to carry the co-ordinates from the known stations to the air station and from the air station to the unknown station. The air station may consist of a meteorological balloon anchored to the ground by a long cord (500') and positioned by helicopter or APC. This principle will be tested in the near future.

10. Computations of records - All computations and records for survey work carried out in the preceding 11½ months have now been finalised. Copies will be forwarded to D Mil Svy shortly.

#### Air Photography

11. 1:10000 photography in north-south runs between DAT DO and the coast is still pending. It is not expected that this will be achieved in the coming months due to the onset of the wet season.

12. T11 photography negative film will be taken safe hand to E Comd Fd Svy Unit on 13 May 67. A duplicate negative of this film was obtained for NGS at DALAT.

#### Maps

13. Some restriction has been placed on the issue of L8015 maps 6430 - 111 - SE and 6430 - 11 - SW. An improved system of map ordering and resupply from 547 Map Dist Pl at LONG BINH has been implemented.

#### Visits

14. During the reporting period the following visits took place:

a. 18 <sup>Apr</sup> May 67

OC visited Asst C of S - M & I Div USAECV.

OC visited 66 Engr Coy (Topo).

OC visited Chief Maps Charts and Geodesy - MACV J2.

b. 19 - 20 <sup>Apr</sup> May 67.

OC visited National Geographic Service at DALAT (NGS)  
(brief report attached as Annex E)

/PART 2

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PART 2 A MATTERS

Attachments and Detachments

15. Det 1 Topo Svy Tp has had no personnel attached or detached during the reporting period.

Personnel

16. The following personnel were RTA at the completion of their tour of duty on Sat 22 Apr 67:

36616	Sgt	S.R.	Campbell
2781982	Cpl	R.B.	Smith
311459	L/Cpl	J.A.	O'Connor
37657	Spr	J.W.	Campbell

17. The following personnel arrived at NUI DAT on Tue 18 Apr 67:

235238	Lt	K.R.	McCloy
213569	S/Sgt	P.	Rossiter
42003	Sgt	R.F.	Rix
215086	Cpl	T.	Starr
38604	Spr	G.J.	Baker

Medical

18. Health is generally good in the Det. Prickly heat is re-appearing with the onset of the humid wet season. There has been no incidence of malaria or other tropical fevers. The following member was hospitalised on the 23 Apr 67 and at the time of this report he has not been discharged.

54671	Spr	E.C.	Sorenson
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R & R - R & C

19. The following members took R & R at the destinations shown during the reporting period.

37696	Cpl	D.C.	Duquemin	BANGKOK
16852	Pte	R.R.	Cole	TAIPEH

20. There were no vacancies for R & C during the reporting period.

Relief of the Det

21. The date of 18457 Spr D.E.J. Chambers has been advanced from 11 Jun 67 to 13 May 67.

Morale

22. With the imminent arrival of replacements on 3 May 67 and the prospect of departure on 13 May 67 morale is at a high level.

PART 3 Q MATTERS

Stores and Equipment

23. The repair state of tellurometers held by Det 1 Topo Svy Tp is as follows:

Unit No	1169	In workshops - double break condition
	1170	Satisfactory
	1175	Satisfactory
	1176	Satisfactory



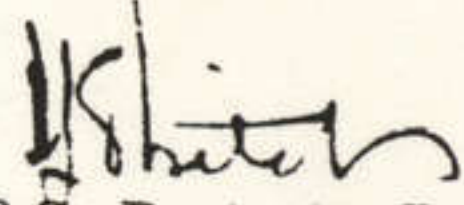
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24. Directorate correspondence SVY 38013 of 18 Apr 67 has been passed onto the LAD. The defective instrument is awaiting replacement parts.

Handover - Takeover Stocktake

25. A 100% handover stocktake of all accountable and non-accountable stores has been completed. There were nil deficiencies in the accountable stores. Indent action has been taken to replace deficient non-accountable stores which are all of a minor nature.

 Capt  
OO Det 1 Topo Svy Tp

- Annexes: A. Summary of Major Tasks  
B. Summary of Silk Screen Printing  
C. Map Distribution Summary  
D. Op Instr I/67 - Op TRISIDER - Phase 5  
E. Report on Visit to National Geographical Service at DALA
- Appendex: A. Hwy 15 Stripmap - PHU MY Section

Distribution

HQ 1 ATF	(1)
Directorate Military Survey	(4)
1 Topo Svy Tp	(2)
DAD Svy E Comd	(1)
Diary	(1)
File	(1)



SUMMARY OF MAJOR TASKS

TASK a	DATE COMMENCED OR PLANNED DATE OF COMMENCEMENT b	% PROGRESS ACHIEVED								% COMPLETED k	DATE COMPLETED OR PLANNED DATE OF COMPLETION l	REMARKS m
		FIELD WORK c	ENLARGEMENT d	PHOTO INSPECTION e	PHOTO PLOTTING f	COMPILATION WORK SHEET g	FINAL DRAWING h	COLOUR SEPARATION i	PRINTING j			
HWY 15 STRIPMAP -PHU MY SECTION	23 Nov 66	100		100	100	100	100	100	100	100	25 Apr 67	
1:25000 REVISION FOR RE- PRINTING & OVER PRINTING												
6429 - 1 NE	Mar 67											
6430 - 11 SE	Mar 67			100	100	100				100	15 Apr 67	Fwd to D Mil S
6430 - 11 NE	Apr 67			100	100					75	15 May 67	
AFTER ACTION REPORTS												
OPERATION AYR	Apr 67						100	100	100			
OPERATION DALBY	Apr 67						100	100	100	100	20 Apr 67	Overprint in bl on black base
INTELLIGENCE OVERPRINTS												
274 REGT IN HAT DICH AREA	Apr 67						100		100	100	10 Apr 67	Single contour prints on stand
VC RESUPPLY SYSTEMS	25 Apr 67						100		100	100	30 Apr 67	map series
TAOR OVERPRINTS & TRACES												
CATTLE FARMING TRACE	10 Apr 67						100		100	100	15 Apr 67	Single colour o
TAOR & ARTILLERY STRIKE ZONES	20 Apr 67						30			30	30 May 67	tracing paper
ON PERSPEX SHEETING												



[illegible]



SUMMARY OF SILK SCREEN PRINTING APRIL 1967

JOB NO	NAME	NO OF COLOURS	NO OF COPIES	NO
AFV/F7-18/1135	CATTLE - FARMING LINE TRACE	1	150	
-	HORSESHOE HILL TAOR TRACE	1	160	
-	HORSESHOE CATTLE FENCE LINE	1	80	
-	5/7 RAR MENU COVER	1	80	
AFV/F7-12/1132	AFTER ACTION REPORT OPERATION AYR	2	110	
AFV/F7-12/1102	PHU MY - GREEN	1	350	
AFV/F7-17/1136	VC RESUPPLY SYSTEM 6429-1	1	100	
AFV/F7-17/1136	VC RESUPPLY SYSTEM 6430-11	1	100	
AFV/F7-17/1136	VC RESUPPLY SYSTEM 6430-111	1	100	
AFV/F7-12/1123	AFTER ACTION REPORT - OPERATION DALBY	2	110	
AFV/F7-17/1124	INTELLIGENCE OVERPRINT - HAT DICH	1	100	
	TOTAL 1 - 30 APRIL		1440	
	ACCUMULATIVE		16231	2



# MAP DISTRIBUTION SUMMARY

PERIOD 1 APR TO 30 APR 67

UNIT	MAP SERIES AND SCALE							
	L8020 1:25000		L3015 1:25000		L7014-L701 1:50000		JOG G/A 1:250000	
	APR	ACCUM	APR	ACCUM	APR	ACCUM	APR	ACCUM
HQ 1 ATF	12	336		750	428	2400		194
A SQN 3 CAV	120	706		302	164	2003		6
1 FD REGT	36	885	62	956	40	1919		72
1 FD SQN RAE		99		145	6	278		14
TOPO SVY	5	9		104	4	122		6
103 SIG SQN		68		123		266		
5 RAR		3044	36	1561	375	4270		140
7 RAR		1100		1100		1225		
6 RAR		3842		1542		5102		199
1/3 SAS	5	615		491	60	1594		6
ALSG		160		430		1399		65
CIVIL AFF		59		69		91		6
ARU		93		263		130	50	62
1 DIV INT		77	4	303		233		65
RAAF/67 GL		236		299	5	380		28
USAF		45		185		133		
161 RECCE FLT		321		210		388	155	408
SECTOR HQ		27		222	12	127		4
TOTALS	178	11722	102	9055	1094	22060	205	1275

	APR	ACCUM
MISC MAPS	190	2454
GRAND TOTAL	1769	46566



OP INSTR 1/67 - OP TRISIDER - PHASE 5

1 SIT

a. En: Contact is unlikely in the area of operation.  
En presence may be felt in the form of:

- (1) Sniper fire.
- (2) Booby traps or land mines.

b. Own Forces: Det 1 Topo Svy Tp Survey Party will  
comprise of the following personnel:

210321	WO2	D.	Christie
37696	Cpl	D.C.	Duquemin
18457	Spr	D.E.J.	Chambers
37657	Spr	J.W.	Campbell

The party will be augmented by elm of Det 1 Div Loc Bty  
on day 2.

2. MSN

a. Det 1 Topo Svy Tp Survey Party will establish a 3rd  
order survey station on the highest point of the feature  
NUI DAT (3) GR YS 646701 and connect to the ARVN Battery  
GR YS 655 685

3. EXEC

a. General Outline: NUI DAT (3) here after called MOC  
will be connected by tellurometer distance and horizontal  
angle observation to:

- (1) HORSESHOE HILL - AAS 013 GR YS 491621.
- (2) XUYEN MOC (USAMSFE 59) GR YS 667677.

b. Tasks:

- (1) At NUI DAT AAS 001:
  - (a) Erect temporary beacon as RO.
  - (b) Maintain helio aligned on HORSESHOE HILL  
if nec as required.
- (2) At HORSESHOE HILL (AAS 013):
  - (a) Observe included angle at AAS 013 between  
AAS 001 and MOC.
  - (b) Measure 3rd order tellurometer distance  
AAS 013 - MOC.
  - (c) Observe vertical angles to MOC.
- (3) At MOC (AAS 014)

/i.

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(a) Observe the following horizontal directions:

- i. HORSESHOE HILL AAS 013.
- ii. XUYEN MOC (USAMSFE 59).
- iii. Arbitrary Azimuth mark in XUYEN MOC Village Area.
- iv. ARVN Bty Pos.

(b) Measure 3rd order tellurometer distance to the following stations:

- i. HORSESHOE HILL AAS 013.
- ii. XUYEN MOC (USAMSFE 59).

(c) Measure 4th order tellurometer distance to fol sta:

- i. ARVN Bty Pos.

(d) Measure vertical angles to:

- i. HORSESHOE HILL.
- ii. XUYEN MOC (USAMSFE 59).
- iii. ARVN Bty Pos.

(e) Observe AM & PM sun observation on either of the fol lines:

AAS 014 MOC - ARBITARY AZ MK  
AAS 014 MOC - XUYEN MOC (USAMSFE 59)

(f) Establish surface mark, subsurface mark and three recovery marks.

(4) At XUYEN MOC (USAMSFE 59):

(a) Measure tellurometer distance to MOC AAS 014.

(b) Measure verticle angle to MOC AAS 014.

(c) Observe AM & PM sun observations as alternative to (3)(e) above.

(5) At ARVN Bty Pos:

(a) Measure 4th order tellurometer distance to MOC AAS 014.

(b) Measure vertical angle to MOC AAS 014.

(c) Establish ground mari and 3 recovery marks.

c. Technical Specifications: All observations and measurements carried out will be in accordance with RA SVY practice as specified in Corps Manuals. Annex 1 outlines specifications applicable to TRISIDER PHASE 5.

d. Recording: Will be carried out on RA SVY recording

/forms



forms. Care must be taken to ensure that all detail, eg instr height is properly recorded

e. Protection: Will be provided by 6 RAR.

f. Station Clearing: Assistance is to be provided for the clearing of MOC AAS 014 by 1 Fd Sqn RAE in the form of a bulldozer. Clearing priorities will be:

(1) Cleared lane to HORSESHOE HILL AAS 013  
(MAG BRG 245)

(2) Cleared lane to XUYEN MOC - ARVN BTY  
(MAG BRG 135 - 155.

(3) Remaining clearing to North, West and South.

(4) Clearing to East.

g. Timings: Svy Party will depart KANGAROO PAD at 081100 by UH1B or UH1D for 6 RAR area GR YS 655671. Two lifts will be provided if necessary. The following schedule of timings will apply:

DAY 1 - 8 Apr 67

1100 Dep KANGAROO

1120 Arr 6 RAR

1300-1700 estb accommodation and recce XUYEN  
MOC USAMSFE 59 and ARVN Bty Pos.

DAY 2 - 9 Apr 67

Clearing of MOC - AAS 014 and ground marking.

DAY 3 - 10 Apr 67

Carry out connexion to HORSESHOE HILL AAS 013  
and commence connexion to XUYEN MOC USAMSFE &  
ARVN Bty Pos.

DAY 4 - 11 Apr 67

Complete all tasks, and RTU 1 ATF Base Area

#### 4. ADMIN AND LOG

a. Rations: Survey party will take 2 days hard rations. Further rations can be taken fwd on DAY 3 if required.

b. Transport: Mov between 1 ATF Base Area and XUYEN MOC to be by helicopter. Ground movement at XUYEN MOC to be by vehicle GS or track as provided by 6 RAR.

c. Accommodation: Members to carry lt wt camping equipment, stretchers can be taken.

d. Wons and Ammo:

(1) In the XUYEN MOC AREA the fol state of readiness will apply: Mag on - working parts forward.

(2) First line ammo will be carried.

e. Stores and Eqpt: All stores and eqpt other than

/compasses



compasses and binoculars will be issued on AAF 1A.  
Compasses and binoculars will be a personal issue to members  
nominated by WO 1/C.

5.

COMD & SIG

a. 210821 WO2 D. Christie is in charge of Det 1 Topo Svy  
Tp Survey Party. 37696 Cpl D.C. Duquemin is second in  
charge.

b. Communications: Survey party to XUYEN MOC will carry  
two ANPRC 25 sets.

(1) Callsigns.

XUYEN MOC 81  
XUYEN MOC SUBSTATION 81 ALPHA  
HORSESHOE 81 BRAVO  
NUI DAT (1) 81 CHARLIE  
ARTY 81 DELTA

(2) Frequency 59.25

(3) Callword GOLF ROMEO

(4) Q Hour 0300 daily

(5) POINT OF ORIGIN - 6366 CAR 6568 ANIMAL

(6) NICKNAMES:

MOC AAS 014	PEN GRIP
HORSESHOE	CIDER WINE
1 ATF BASE AREA	BRIGHT DAY
6 RAR LOC	HAPPY SITE
NUI DAT (AAS 001)	WELCOME CITY
XUYEN MOC (USAMSFE)	DOGS TAIL

(7) Appointment titles:

OC Det 1 Topo Svy Tp	TOPO SUNRAY
WO 1/C	TOPO SUNRAY MINOR

(8) Schedules:

a. WO 1/C is responsible for maintaining  
internal schedules within survey party.

b. Tellurometer call up time 0900 - cav 7  
master at MOC AAS 014.

c. SITREP - daily at 1850H on COMD NET.

Capt  
OC Det 1 Topo Svy Tp

Annexes: 1. Technical Specifications.

Distribution

HQ 1 ATF  
Det 131 Div Loc Bty  
6 RAR



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Annex 1 To Op Instr 1/67  
OP TRISIDER PHASE 5

TECHNICAL SPECIFICATIONS

1. TELLUROMETER MEASUREMENT

- a. The following procedure will constitute a 3<sup>rd</sup> order tellurometer determination between station A & station B.

Mets - both terminals  
Course figure - A to B  
10 fine readings A to B  
Course figure A to B  
Mets  
10 fine readings B to A  
Course figure B to A  
Mets

Fine readings to be spread over entire readable cavity range.

2. THEODOLITE OBSERVATIONS

- a. Horizontal observations -

(1) Major traverse stations or unclosed figure - 8 Arcs.  
Half the number of arcs will be observed with the back sight as RO and the remaining half with the foresight as RO.  
The summation of the two angles observed must fall on either side of  $360^{\circ}$  within  $8''.0$  of arc.

- b. Minor stations.

(1) Major lines - 4 face left and 4 face right pointings.  
(2) Minor lines - 2 face left and 2 face right pointing



REPORT ON VISIT  
TO NATIONAL GEOGRAPHIC SERVICE  
AT DALAT

by

OC DET 1 TOPO SVY TP

Purpose of Visit

- a. To formally request and obtain approval for the revision of the L7014 series - sheets 6430 - 11 and 111 and 6429 - 1 and 1V.
- b. To gain some knowledge of the organisation and capabilities of NGS.

General

1. The Vietnamese National Geographic Service is located in the mountain city of DALAT. The city of DALAT enjoys a temperate mountain climate typified by mild days, cool nights and clean fresh air. The city is apparently prosperous; it is clean, has delightful surroundings with lakes, gardens and many fine buildings. Prominent amongst the fine buildings is the building of the National Geographic Service. The building was built for and previously occupied by the Service Geographique IndoChine. It is a massive stone structure, providing ample space for all of the many draughting offices, map libraries, plotting rooms and printing rooms.

Staff and Organisation

2. NGS is a quasi-military organisation controlled by ARVN officers and staffed by civilians. The previous head of NGS, Lt Col Quy, has recently been replaced by Lt Col Diem, the latter not having taken up his appointment at the time of the visit. The two subordinate officers are Maj Ruyen in charge of Survey and compilation and Maj Khan in charge of Cartography and Reproduction. Each of these officers has a staff of two captains and there the military component of the staff ends. The administration officer is a Mr Huan, and he appears to be a very intelligent and capable person (he speaks four languages).
3. NGS has a staff of 230, although it seemed apparent that they are currently very under staffed. It is understood that this is largely due to the draft. Many of the technicians are female.

Equipment

a. Survey - NGS has all the normal range of survey equipment including electronic distance measuring equipment, 1st order theodolites and the latest 1st order self levelling levels.

b. Photogrammetry - NGS has the following photogrammetric equipment:

Wild A 8 plotters	Qty	2
Poivilliers SOM D4 Stereotopographe-typified -		
by vertical diapositive holders	Qty	1
Multiplex - 7 projector	Qty	1
Multiplex - 3 projector	Qty	5

/Stereoflex



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Stereoflex and Stereotopes -  
mainly used for training

About 10 - 12

NGS has no facility for block stereotriangulation and other than the 7 projector multiplex which seemed to be gathering cobwebs, all equipments are used simply for plotting. For some unexplainable reason, NGS is eagerly anticipating the arrival of two Kelsch plotters.

c. Cartography - Scribing techniques are extensively used.

d. Reproduction - Surprisingly the reproduction capability is some what limited to single colour machines as follows:

French Marinoni 25" x 40" max size.

US field presses of the Corps of Engineers Type 22" x 29".  
max size.

A smallish process camera is installed.

Zinc plates are used and are grained insitu.

Tasks

5.
  - a. Survey - very limited due to security problems. Some 1st order leveling along major highways in progress.
  - b. Compilation and Cartography - sporadic 1:25000 sheets and L909 city plan coverage. Also some revision of the L7014 series in preparation for the Vietnamese version of this series.
  - c. Reproduction - mainly reprint of Vietnamese version of L7014 series.

Training

6. Minor technicians are trained locally. Professional training is acquired mainly in France, but some more recently in USA. French is very much a second language at NGS.