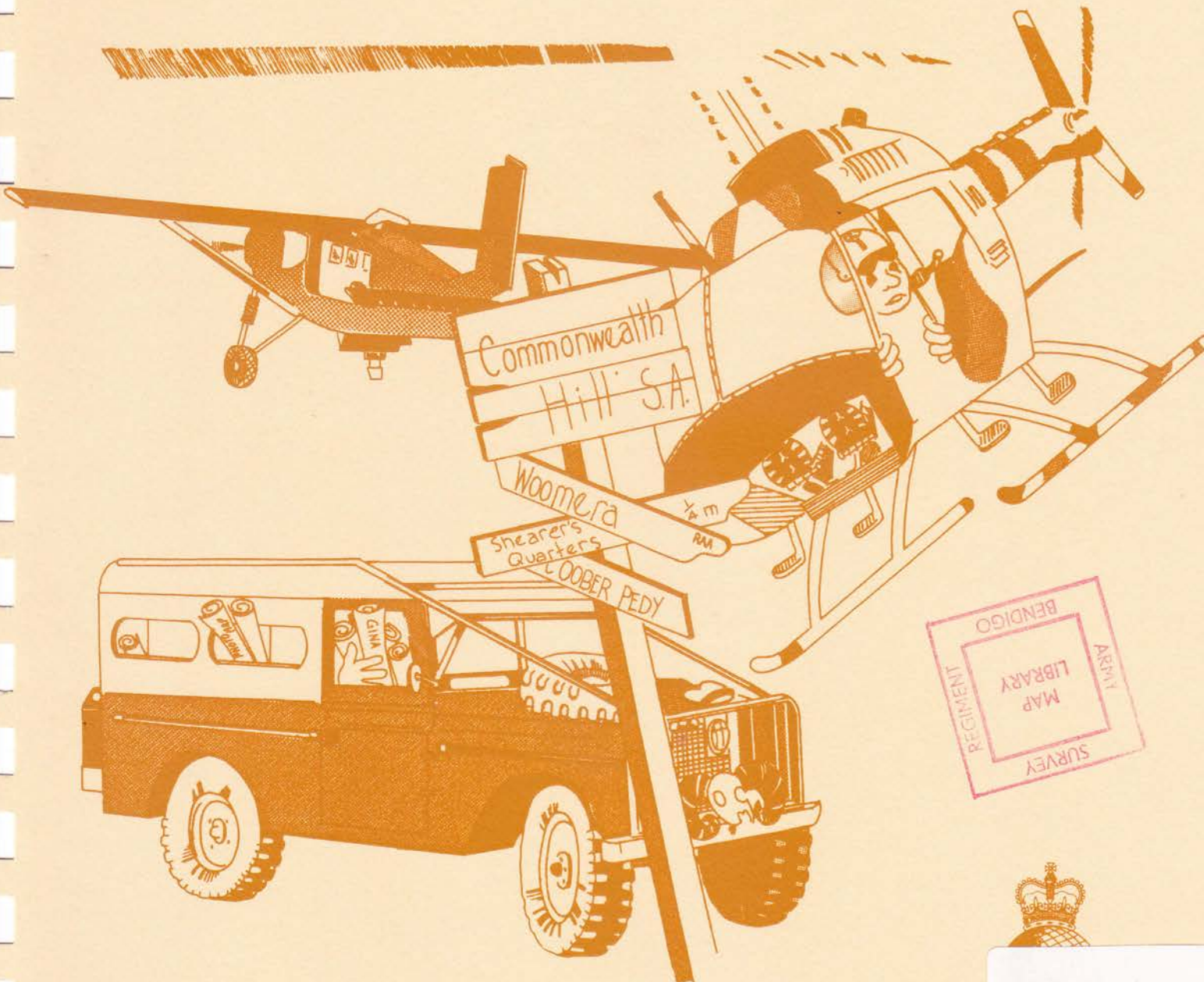


Australian Survey Corps Field Survey Squadron

12



Operation Shortwalk '80

42



AMENDMENT SHEET

OP SHORTWALK 80

MAY - JUN 80

4 FD SVY SQN

Amdt No	Amdt Entered	Amdt No	Amdt Entered

ROYAL AUSTRALIAN SURVEY CORPS

4 FD SVY SQN

OPERATION SHORTWALK 1980

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Targetting and Photography	D	1 - 2
Supplementary Photography	E	1

PROJECT REPORT

OPERATION SHORT WALK 80

See Distribution List

- References: A. Army Office A474/1/48 dated 12 Aug 79
B. HQ 4 FF Gp/4 MD 788/2S/38 dated 31 Mar 80
C. 4 Fd Svy Sqn Operation Instruction 1/80
R788/1/11 dated 23 Apr 80

General

1. Operation Short Walk 80 was mounted by 4 Fd Svy Sqn during the period 8 May 80 to 6 Jun 80. The aim of the operation was to field complete 48, 1:50,000 scale maps in the SH 53-6 Coober Pedy and SH 53-10 Tarcoola 1:250,000 scale map areas.
2. In addition to field completion, the opportunity was taken to obtain identification photography of selected horizontal control points in the area of operation.

Operational Results

3. Field Completion. All maps listed for field completion were checked.
4. Targetting and Photography. A total of 23 Horizontal Control Stations were targetted and photographed. All stations were readily identified on the target photography. A detailed report is given in Annex D.
5. Supplementary Photography. Supplementary photography was obtained for the following tasks:
 - a. Complete coverage of Coober Pedy township and environs to enable plotting of the building development and the extensive opal mining complex.
 - b. On request by field parties to enable plotting of detail not visible on mapping photography, and to resolve field check queries.
6. Full details of all supplementary photography are contained in Annex E.

Operational Support

7. Aircraft Support. Fixed wing and rotary wing aircraft were allotted in support of the operation:

/a. LOH

- a. LOH - 162 Recce Sqn. One aircraft was employed on the operation. A total of 75.0 task hours were allotted and used. The aircraft was employed on field completion and Horizontal Control station panelling tasks.
- b. PILATUS PORTER - 173 Gen Spt Sqn. One aircraft fitted with a Wild RC 10 camera was employed on the operation. A total of 40 task hours were allotted and used. The aircraft was employed on supplementary photography, Horizontal Control station target photography, movement of personnel and stores, and medevac tasks.
- c. Serviceability. There were periods of unserviceability for both aircraft early in the operation, however, at no stage did this seriously affect the progress of the operation. Total unserviceability was as follows:
- (1) LOH - 1 day
 - (2) Porter - 6 days
- d. Personnel. Excellent co-operation existed between surveyors, pilots and ground crew throughout the operation. The interest shown by the aviation personnel and their involvement and willingness to participate in all tasks, both technical and administrative, contributed significantly to the success of the operation.

Administration

8. Manning. The outline organisation of 4 Fd Svy Sqn (-) is shown in Annex A, and a nominal roll of all personnel employed on the operation is contained in Annex B.

9. Officers. The following officers were employed on the operation:

CAPT	M. van den Tol	4 Fd Svy Sqn	OC Det
2LT	A. Fraser	162 Recce Sqn	Pilot - LOH
2LT	J. Mathews	173 Gen Spt Sqn	Pilot - Porter

10. Other Ranks. A total of 9 RA Svy ORs were employed on the operation, all being employed on technical tasks. The performance of the survey party leaders was excellent particularly that of the Technical NCO.

11. The attached personnel worked well at their respective tasks and blended in well with the technical personnel. The cook's performance was exceptionally good.

/12. Visitors

12. Visitors. The following 4 Fd Svy Sqn personnel visited Main Base at Commonwealth Hill Station on 23 May 80:

CAPT J.A. O'Connor
LT M.R. Wagland
WO1 W.A. Munro

13. Rations. The rationing system was most satisfactory. An allowance of \$4.50 per man per day was allocated for the operation. This figure was calculated on the basis of the allowance received by the squadron on recent operations, plus a variation due to natural price increases verified by price comparisons during the planning stage.

14. \$2,700 was advanced for ration purchases.

15. Initial stock was purchased in Adelaide prior to departure. Subsequent supplies were bought from Ausrail Retailers, Port Augusta, a division of Australian National Railways. Orders were phoned through on Tuesday and were picked up at Malbooma Siding on the following Friday. The resupply train carries a good range of meat and groceries and provided a more than adequate service. Rations were also purchased through the store at Commonwealth Hill Station. These consisted of freshly killed sheep, bread and groceries of the tinned and packaged variety. The arrangement worked very well.

16. One multi-purpose form was used to order, purchase and distribute the rations. This document enabled both effective monitoring of the account and catering to suit individual requirements.

17. A Ration Account Ledger was maintained to show entitlements, as per daily FST 66s, against expenditure. The Ledger was subjected to frequent internal audits and after a final reconciliation, the surplus funds were returned to the cash office.

18. This system has proved to be ideal for survey operations. It allows great flexibility in the choice of commodities for individual tastes and climatic conditions and ensures minimum wastage.

19. Main Base. The main base was established at the Shearers' Quarters at Commonwealth Hill Station approx 300 km NW of Woomera. The accommodation consisted of a solid stone building and provided ample sleeping, cooking and ablution facilities. The dining area was set up on a section of the verandah to allow the dining room to be used as a working area and main base control centre.

20. The Staff of Commonwealth Hill Station were very co-operative and readily provided assistance throughout the operation, especially the Station Overseer, Mr Shane O'Connell.

21. Health. There were no major health problems during the operation. No medical orderly was taken, however, there were sufficient first aid kits available to cater for minor complaints should the need have arisen. One member was flown to Woomera Base Hospital for stitches to a cut in his finger.

/22. Canteen.

30. Generally all vehicles performed well. Most of the repairs were handled by the attached vehicle mechanic; one other repair being carried out by a local garage in Coober Pedy.

31. The Series 2A landrovers were used for the bulk of field checking whilst the Series 3 landrovers operated mainly at main base. Although the Series 3 landrovers generally performed well their unsuitability for cross country work was again evident as on previous survey operations. The limited periods of field checking on which the Series 3 LRs were employed confirmed the following:

- a. canvas canopies provide survey technical stores with insufficient protection from dust.
- b. lack of scrub protection bars.
- c. left hand side mirror is obscured by door post, rendering it of no use whatsoever.
- d. inadequate radiator and air cooler protection.

Communications

32. Rear Link. Rear link communications were provided by telephone at Commonwealth Hill Homestead and operated by Telecom Credit Card. All traffic was passed via DRS Woomera.

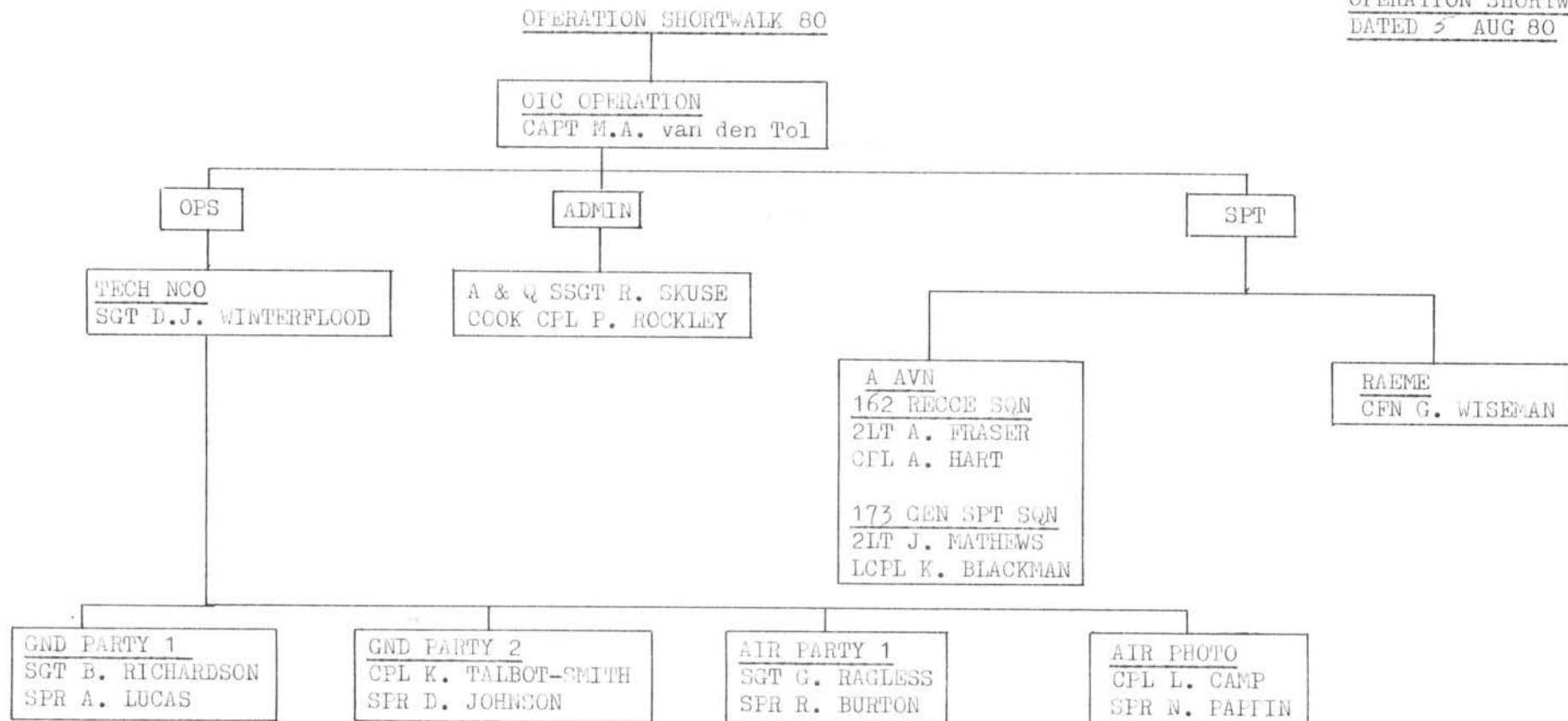
33. Main Base Net. Unit equipment, AN PRC FI radios were used on the survey network and the air traffic net. Sitrep timings were set at 0800 and 1800 hours faily. The equipment performed well and apart from atmospheric and terrain interference there were no communications problems.

5 Aug 80


(M. VAN DEN TOL)
CAPT
OIC

/Distribution

<u>Distribution:</u>		<u>Reg No</u>
Department of Defence (Army Office)	(5)	1 - 5
- (Incl 3 for D Svy)		
Field Force Comd	(3)	6 - 8
- (Incl 1 for SO1 Svy)		
4 Military District	(2)	9 -10
Army Survey Regt	(2)	11-12
School of Military Survey	(2)	13-14
1 Fd Svy Sqn	(1)	15
2 Fd Svy Sqn	(1)	16
5 Fd Svy Sqn	(1)	17
162 Recce Sqn	(1)	18
173 Gen Spt Sqn	(1)	19
 <u>Internal:</u>		
OC 4 Fd Svy Sqn	(1)	20
4 Fd Svy Sqn Library	(6)	21-26



Note 1: A third ground party was formed and operated for limited periods during aircraft inactivity.

Note 2: Sappers were rotated through ground and air parties to give them experience in all facets of field completion.

ANNEX B TO
PROJECT REPORT
OP SHORTWALK 80
DATED 5 AUG 80

NOMINALL ROLL
OP SHORTWALK 80

313871	CAPT	M.A.	Van Den Tol	4 Fd Svy Sqn	8 May - 6 Jun 80
126236	SSGT	R.M.	Skuse	4 Fd Svy Sqn	8 May - 4 Jun 80
46554	SGT	G.R.	Ragless	4 Fd Svy Sqn	8 May - 4 Jun 80
45549	SGT	B.J.	Richardson	4 Fd Svy Sqn	8 May - 6 Jun 80
1733682	SGT	D.J.	Winterflood	4 Fd Svy Sqn	8 May - 6 Jun 80
46111	CPL	L.J.	Camp	4 Fd Svy Sqn	10 May - 4 Jun 80
424853	CPL	P.D.	Rockley	4 Fd Svy Sqn	8 May - 6 Jun 80
45892	CPL	K.G.	Talbot-Smith	4 Fd Svy Sqn	8 May - 4 Jun 80
49822	SPR	R.D.	Burton	4 Fd Svy Sqn	8 May - 6 Jun 80
63270	SPR	D.F.	Johnson	4 Fd Svy Sqn	10 May - 4 Jun 80
63273	SPR	A.D.	Lucas	4 Fd Svy Sqn	8 May - 6 Jun 80
49905	SPR	N.W.	Pappin	4 Fd Svy Sqn	10 May - 6 Jun 80
46768	CFN	G.C.	Wiseman	Adel Wksp Coy	8 May - 6 Jun 80
2262492	2LT	A.P.	Fraser	162 Recce Sqn	10 May - 4 Jun 80
45328	CPL	A.P.	Hart	162 Recce Sqn	10 May - 4 Jun 80
411788	2LT	J.P.	Mathews	173 Gen Spt Sqn	10 May - 4 Jun 80
219180	LCPL	K.B.	Blackman	173 Gen Spt Sqn	10 May - 4 Jun 80

FIELD COMPLETION REPORT

Task

1. To field complete 48 x 1:50,000 maps in South Australia. The area is within the series R502, 1:250,000 map sheets of:
 - a. SH 53 - 6 Coober Pedy
 - b. SH 53 - 10 Tarcoola
2. Standards to be in accordance with RA Svy Symbolization All Series 1:50,000 Mapping Specifications.

Execution

3. Organization. The force consisted of 2 x ground party, 1 x air party and 1 x aerial photography party. Each party was supported in the technical and administrative aspects from Main Base HQ.
4. Deployment. The two ground parties were deployed as follows:
 - a. Gnd Party 1. Tarcoola : 27 - 30 May 80
 - b. Gnd Party 2. Coober Pedy : 13 - 16 May 80, 19 - 23 May 80At all other times each party operated from main base.
5. Field completion materials. Two units were involved in the preparation of the field completion data. These were:
 - a. Army Survey Regt
 - b. 4 Fd Svy Sqn

Areas of responsibility are shown at Appendix 5.

6. Units were requested to supply the following materials at 1:50,000 scale.
 - a. Preliminary orthophoto maps highlighting cultural information and showing queries for field verification.
 - b. A transparent copy and dyeline copies of each plot sheet.
 - c. Photo mosaics if material in para 6.a. could not be made available.
7. Army Survey Regt supplied:
 - a. Rectified photo mosaics, highlighting cultural detail and showing queries for field verification.

.../b. Transparent and

- b. Transparent and dyeline copies of each plot sheet.
8. 4 Fd Svy Sqn supplied:
- a. Photo mosaics showing cultural detail and queries for field verification.
 - b. As per para 7.b.

The shortage of time available prior to the commencement of the operation prevented units from complying with the requirements of para 6.a. Consequently the work load in the field was considerably increased. The mosaics were not to scale. Those supplied by the Army Survey Regt had been rectified and those from 4 Fd Svy Sqn were uncontrolled. This, combined with the lack of well defined detail on the imagery, made it very difficult and in some cases impossible to accurately position new detail.

9. Photography. The following photography was available for use during field completion:

- a. 100% coverage of the operational area by mapping photography which was flown in 1972-73 at a scale of 1:86,000.

10. Other Agency Data. As a result of technical liaison the following data was obtained from other agencies:

- a. South Australian Department of Lands. Complete plots for 12, 1:50,000 areas in the SH 53-6 Coober Pedy 1:250,000 scale area.
- b. Pastoral Plans.
- c. Station owners' detailed plans.
- d. Additional on the spot information was obtained from the following:
 - (1) Station properties.
 - (2) Department of Mines (Coober Pedy)

11. Field Completion Methods. Field completion was carried out by deploying two, two man vehicle mounted parties and one, two man LOH party. The ground parties were predominantly responsible for checking cultural detail, road classification, obtaining and verifying names and contacting local authorities and property managers for additional information. The air party was responsible for checking areas inaccessible to vehicles and checking all detail for which the ground party requested an air check. Close liaison between ground and air parties was maintained so that detail difficult to classify by one means could be checked and verified by the other.

12. Corrections noted in the field were marked onto dyeline copies of the photo mosaic or straight onto the AK Polygraphy where this material was supplied. These corrections were transferred onto master sheets (ozalids) each evening. Colour guides showing the road classification were also produced.

.../13. Supplementary photographic

13. Supplementary photographic coverage was obtained for detail that did not appear on the photography and for detail which had changed to such an extent that it could not be accurately transferred onto the existing material. Requests for supplementary photography were submitted by party leaders to the Technical NCO who co-ordinated the acquisition.

14. Colour 35 mm and polaroid photography was taken as an aid to classification and interpretation of detail. It has been included in the survey field books to supplement the information contained therein.

15. An individual field completion report was compiled for each 1:50,000 area detailing specific aspects and problems encountered during the course of the field check. A summary of field completion activity was prepared by each party leader covering his specific area of interest. These reports are included as appendices 1,2 and 3. A sample field completion report is included as appendix 4.

16. Achievements. All 48, 1:50,000 maps were field completed during the operation. The compiling agencies were supplied with the following materials for each of their map areas:

- a. Master correction sheets
- b. Road classification guides
- c. Field completion report
- d. Copy of field books
- e. Supplementary photography details

17. Observations.

- a. Interpretation and depiction of Cultural Detail. In general the interpretation, depiction and fidelity of shape and size of the cultural detail was fair. There were, however, some exceptions. The aspects of these are covered below and in the Party Leaders' Reports. (Appendices 1,2 and 3).
 - (1) In several instances, linear detail which was obvious on the photos/mosaics/rectified photomosaics had not been plotted. Plot sheets were produced from 1972 photography whilst the rectified mosaics were produced from 1979 photography. No attempt had been made to update the field completion material using the latest photography, prior to field completion. This caused unnecessary problems at the field completion stage.
 - (2) In some instances, detail transferred from source data bore little resemblance to the same detail visible on the photos/mosaics/rectified photomosaics.
 - (3) Positioning of new or missed detail on uncontrolled mosaics without grids was extremely difficult due to the lack of accurate scaling and other well defined detail.

.../18. These observations

18. These observations are in general terms only. The field completion report written for each individual 1:50,000 scale map, details and amplifies the comments that are applicable.

Conclusions

19. It is believed that the time and effort involved in field completion could be reduced and greater accuracy achieved if:

- a. No field check of any area is undertaken until a preliminary orthophotomap complete with grid is produced.
- b. More care is exercised at compilation stage to ensure alignment of linear detail from source data with the maps imagery.
- c. A better method is developed for indicating field check queries on monochromatic products. A black leader arrow is easily confused with linear detail which is also portrayed in black.
- d. More care be taken on joins involving two agencies. In some cases in this area, detail was physically joined at the map edge but alignment of the detail was in error.
- e. Much greater use had been made of available source data.

- Appendices:
1. Report by IC Ground Party 1
 2. Report by IC Ground Party 2
 3. Report by IC Air Party
 4. Sample Field Completion Report
 5. Areas of Responsibility

SUMMARY OF FIELD COMPLETION - GROUND PARTY 1

Area of Operation

1. The area of operation comprised 24, 1 : 50,000 scale maps within the SH 53-10 Tarcoola 1 : 250,000 scale map area.

Tasks

2. a. To field complete all allocated sheets using vehicle mounted techniques.
 b. To panel horizontal control stations.

Comments

3. a. The field sheets supplied were generally of good quality, however there were areas where detail which was clearly visible on the AK Polygraphy had not been plotted. This was mainly due to plot sheets being produced from 1972 photography and the mosaics from 1979 photography. In some instances the plotted detail was displaced from the imagery further than that warranted by the scale discrepancy.
- b. There were cases where a field check note was added to detail which was already portrayed by both a symbol and descriptor. This seems unnecessary and only clutters up the field completion sheet. In other cases detail was presented without any descriptive notes as to the nature of the detail.
- c. In some instances it was found that the source data itself was in error. Pastoral plans proved to be valuable as a source for names only, as linear detail was often inaccurate.
- d. The AK Polygraphy was found to be much more durable than the equivalent dyeline copies. In addition, the quality of the imagery was considerably better than that of the dyelines.
- e. In some instances detail was accurately and completely transferred. In other cases it was done only partially or incorrectly, indicating a degree of inconsistency by the compiling agency. This inconsistency created a degree of confusion and element of doubt in the material available.

Recommendations

4.
 - a. Future field completion material of the ortho-photomap type to include AK Polygraphy copies.
 - b. Property managers be contacted for additional information prior to the production of the final repromat, where time allows.
 - c. A descriptive note be added on all final maps to all bores indicating whether or not the water is fit for human consumption. This information is available from state water authorities.
 - d. As very little water is available south of the Transcontinental railway line and the area is only accessible to four wheel drive vehicles, a note to this effect should be included on the map.

(B.J. RICHARDSON)
SGT
Party IC

SUMMARY OF FIELD COMPLETION - GROUND PARTY 2

Area of Operation

1. The area of operation comprised 24, 1 : 50,000 scale maps within the SH 53-6 Coober Pedy 1 : 250,000 scale map area.

Task

2. To field complete the allocated sheets using vehicle mounted techniques.

Comments

3.
 - a. The most difficult areas were around the mines on map sheets 5839-I Brady and 5839-IV Leonard Rise. Only major access tracks have been shown. All other areas were relatively simple, with places of greater detail shown by diagram in field books.
 - b. With uncontrolled mosaics, position of detail was extremely difficult due to the lack of accurate scaling. This also made joins difficult. The problem was partly overcome by alignment with other detail where available, and air checks.
 - c. As the material supplied was without grids, grid references could not be given in individual field completion reports or with diagrams in field books.
 - d. Supplementary photographs were taken in several areas, the main one being the mining areas around Coober Pedy township and along the new Tarcoola - Alice Springs railway line.

Recommendations

4.
 - a. More care to be taken in the transfer of detail from source data to the uncontrolled mosaic. The shape of the detail often proved to be incorrect and in some cases did not agree with the original.
 - b. Field books to be registered prior to commencement of operations to avoid possible confusion when reference is being made to them.

(K.G. TALBOT-SMITH)
CPL
Party IC

SUMMARY OF FIELD COMPLETION - AIR PARTY

Area of Operation

1. The air party was involved with the greater majority of the 48 1:50,000 scale maps within the operational area.

Tasks

2.
 - a. To carry out by air, field checks of allocated areas and indicate necessity for ground checks where required.
 - b. To carry out air checks resulting from ground party queries.
 - c. To panel Horizontal Control Stations.

Comments and Recommendations

3.
 - a. Prior to the operation it was anticipated that there may be some difficulty in aerial navigation due to the lack of detail on the imagery. However, the only difficulty was experienced in the SW corner of the SH 53-10 Tarcoola 1:250,000 scale map. Salt lakes and claypans were of some use, but for the main their importance was secondary to that of the linear detail.
 - b. Due to insufficient time being available to produce preliminary orthophotomaps, plotted detail had to be compiled onto uncontrolled mosaics. The result was that linework was often poor, the detail displaced and information omitted. In field checking areas of high density of linear detail a more satisfactory result could have been obtained by using only a dyeline of the cultural detail without the imagery.
 - c. It was believed prior to going to the field that mosaics with the detail highlighted would be the most suitable product for field checking. It was found however that a grid is necessary when field checking from the air so that detail can be positioned by azimuth and distance. There is also the necessity to frequently refer to grid references.
 - d. Portrayal of detail in the SH 53-10 Tarcoola 1:250,000 scale map area was generally poor. Detail such as roads was clearly visible on the mosaics and yet had not been plotted or marked up as a field query. This was mainly due to detail being plotted from 1972 photography and mosaics being produced from 1979 photography.

e. Leader

- e. Leader arrows pointing to detail were often quite confusing and were often mistaken for fences, due in the main to the product being monochromatic.
- f. Orthophoto maps should have been produced prior to field completion because in many cases the position of the plotted detail did not coincide with the imagery.

(G.R. RAGLESS)
SGT
Party IC

SAMPLE FIELD COMPLETION REPORT

1. Map. Sheet 5839-IV, LEONARD RISE, 1:50,000.
2. Duration.
 - a. Ground Party: 20-21 May 80.
 - b. Air Party
3. Method. Ground and Air.
4. Personnel.
 - a. Ground Party: IC CPL K.G. Talbot-Smith
SPR D.F. Johnson.
 - b. Air Party: IC SGT G.R. Ragless.
5. Contacts. Mr. M. Benbow
Dept of Mines
Coober Pedy
6. Amendments.
 - a. Cultural.
 - (1) Tracks shown in mining areas are major tracks only; tracks into diggings were not shown due to density of detail in mining areas.
 - (2) No attempt was made to show mines or tailing heaps as they are so numerous and of varying size that it was impossible to show them accurately from the ground.
 - (3) Supplementary photography was requested of the entire mining area and this will have to be used to plot tracks in digging areas as indicated on the ozalid.
 - (4) All mining areas are subject to rapid change due to the extensive mining operations carried out in this area.
 - (5) Darker negatives may be required to plot detail within mining areas.
 - (6) Built up area shown in the NE corner of the sheet includes underground houses and sheds.
 - (7) Portions of fence shown as destroyed and hence deleted is where neither fence posts nor wire remain (see NW corner of sheet).
 - b. Hydrography. The position of Top Box Water Hole is uncertain but a waterhole was found to the SW of the named position.

/c. Vegetation

- c. Vegetation. The only vegetation on the sheet grows in creeks and is approx 3m in height. The remaining country is mainly saltbush.
- d. Relief. N/A.

7. Comments and Recommendations.

- a. More recent photography of the area would have been very useful.
- b. A grid was not supplied so grid references could not be given.
- c. A map showing mining area names and boundaries was obtained from Dept of Mines (Coober Pedy) and is correct as of May 1980.

22. Canteen. A small unit canteen was established at the Main Base. The function of the canteen was solely to supply members with soft drinks and beer. A loan from 4 Fd Svy Sqn Regt Funds plus credit from members was obtained to purchase initial stocks.

23. Morale. The morale remained high during the operation. Considerable praise must go to the Tech NCO for the professional execution of his duties and his management of the field party personnel; and to the cook, for his excellent work, which contributed to the high standard of morale.

24. Discipline. No situation arose where disciplinary action was required.

25. Pay and Allowances.

a. Pay. Members received pay in advance for the full period of operation.

b. Allowances. The following allowances were paid:

(1) Incidental Allowance - \$3.90 per day for the first 21 days. Thereafter \$1.95 per day for married members and \$0.97 per day for single members.

(2) Locality Allowance - \$8.68 per fortnight.

26. Public Relations. With the exception of the two ground parties operating from Coober Pedy and Tarcoola, the only contact with the public was with Station Managers and their staff. An excellent working and social relationship developed with the Commonwealth Hill Station staff, and their co-operation was much appreciated.

Logistics

27. Supply. There were no major supply problems during the operation. Additional stores were picked up by the LOH and Porter aircraft during servicing periods in Adelaide.

28. Serviceability. With the exception of the generators 2.5 KVA, equipment serviceability was good throughout the operation.

a. Generator 2.5 KVA. Two of these equipments were taken on the operation and although both were sent for repair and service prior to the operation, it became apparent that neither had been serviced as per the servicing record. One generator had one socket inoperative. It leaked oil considerably and finally seized, despite frequent oil level checks. The other generator was running in excess of 50 cycles.

29. Vehicles. The operation was supported by:

a. 1 x Truck cargo 5 ton GS with winch

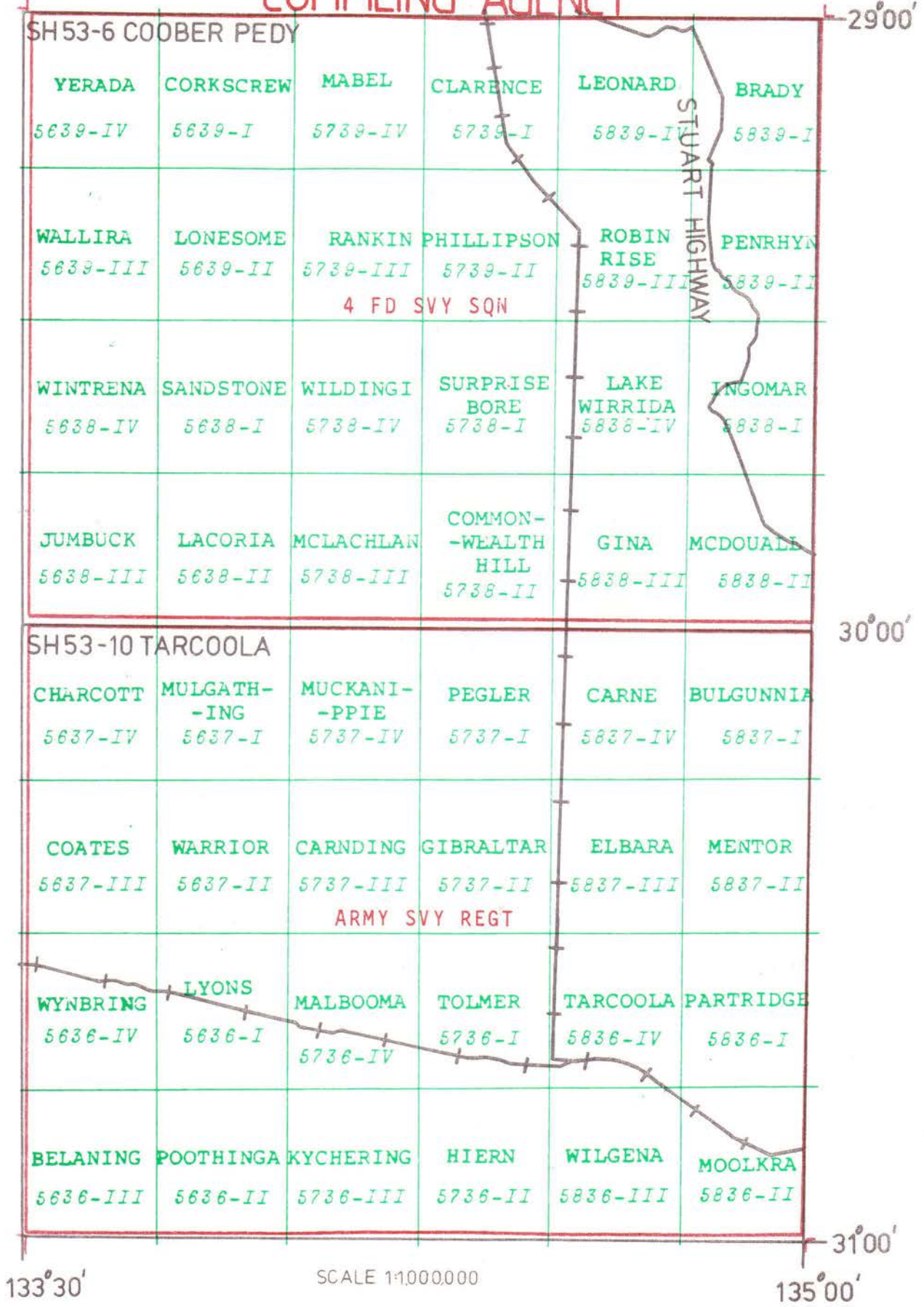
b. 2 x Truck Carryall $\frac{3}{4}$ ton GS, Topographical Survey LR Series 2A

c. 2 x Truck Ute $\frac{3}{4}$ ton GS, LR Series 3

OPERATION SHORTWALK 80

APPENDIX 5 TO
ANNEX C TO
PROJECT REPORT
OP SHORTWALK 80

COMPILING AGENCY



TARGETTING AND PHOTOGRAPHY
OF HORIZONTAL CONTROL STATIONS

1. General. The targetting and photography of the horizontal control stations was conducted during the period 18 May to 1 Jun 80. Photography was acquired using a Wild RC10 SWA camera mounted in a Pilatus Porter aircraft.
2. Results. Twenty-three stations were panelled and photographed; all were previously established stations. All stations were readily identified on the target photography. Details are given in Appendix 1.
3. Specifications. The following criteria were adopted for targetting and photography:

a. Targets

- (1) Panels - white plastic.
- (2) Dimensions - arms to be 2m wide and 6m long.
Arms to start 2m from the Ground Mark, and oriented N-S, E-W (where a cross configuration is used).
- (3) Configuration - the following to be in order of preference:
 - (a) Open cross - standard layout.
 - (b) Open Y - used where standard configuration is not possible.
 - (c) Arrow head - used only when cross or Y cannot be used.
- (4) It was possible to use the open cross in all cases.

b. Aerial Photography

- (1) Flying height - 10,000 ft above MSL.
- (2) Exposures - three frames centred about the control point with 60% overlap.
- (3) Azimuth - preferably E-W but not essential.

4. Personnel. The following personnel were involved:

a. Targetting

CAPT M.A. Van Den Tol - OIC
2LT A.P. A.P. Fraser - LOH Pilot.

.../SSGT R.M. Skuse

SSGT R.M. Skuse
SGT G.R. Ragless
SGT B.J. Richardson
CPL K.L. Talbot-Smith
SPR D.F. Johnson
SPR A.D. Lucas
SPR N.W. Pappin

b. Aerial Photography

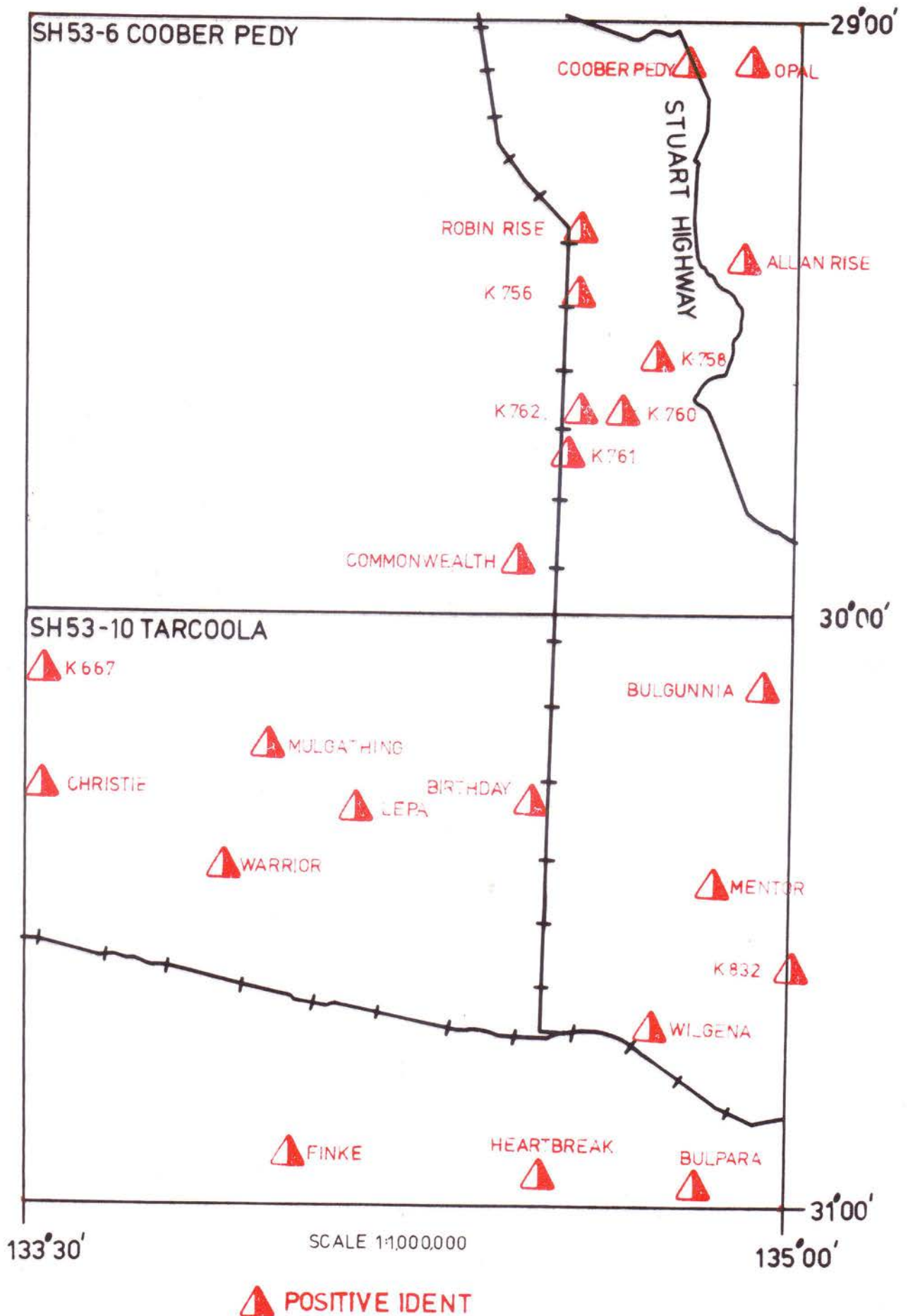
2LT J. Mathews - Porter Pilot
CPL L.J. Camp - Camera Operator

- Appendix:
1. Targetting and ident photography diagram.
 2. Summary of horizontal control photography.

OPERATION SHORTWALK 80

APPENDIX 1 TO
ANNEX D TO
PROJECT REPORT
OP SHORTWALK 80

TARGETTING & IDENT PHOTOGRAPHY



SUMMARY OF HORIZONTAL CONTROL PHOTOGRAPHY

1:250 000 Area	Control Point Name/Number	Photo Data		Viewed Target Configuration	Remarks			
		Film	Frames					
SH 53-6 COOBER PEDY	COMMONWEALTH K017	CPE 29059	025-027					
	COOBER PEDY	CPE 29059	059-061					
	OPAL	CPE 29059	062-067					
	ROBIN RISE K755	CPE 29059	068-070					
	K756	CPE 29059	071-073					
	K758	CPE 29059	077-081					
	ALLAN RISE K754	CPE 29060	163-165					
	K760	CPE 29060	208-211					
	K762	CPE 29060	212-214					
	MACK TANK K761	CPE 29060	215-217					
	SH 53-10 TARCOOLA	MONSOON K667	CPE 29059			001-003 007-009 004-006		
		CHRISTIE	CPE 29059			010-012		
WARRIOR		CPE 29059	013-015					
FINKE T1/5736		CPE 29059	016-018					
LEPA		CPE 29060	137-139					
BIRTHDAY		CPE 29060	140-142					
HEARTBREAK		CPE 29060	143-145					
BULPARA		CPE 29060	146-148					
WILGENA		CPE 29060	149-151					
BULGUNNIA		CPE 29060	218-220					
MULGATHING		CPE 29061	001-003					
K832		CPE 29061	033-035					
MENTOR		CPE 29061	036-038					

SUPPLEMENTARY PHOTOGRAPHY

1. Introduction. Supplementary photography was acquired for areas as requested by the field completion parties plus complete coverage of the new N-S railway line from Mabel Creek to Kingoonya via Tarcoola. Photographic missions were planned to ensure maximum economy of aircraft hours. A diagram showing coverage is at Appendix 1.
2. Scale. Photography was acquired at 1:50,000, 1:27,000 and 1:17,000 scale depending on the detail of density in the area and cloud base. Corresponding flying heights were 15,000, 8,000 and 5,000 ft above sea level.
3. General
 - a. All photographic missions were flown from Commonwealth Hill Homestead.
 - b. Three rolls of film were used. These were despatched to CPE Laverton Vic on 11 Jun 80 for processing.
 - c. Difficulties were experienced with the camera and although the operation was not jeopardized, the condition of the camera (including components) is considered unacceptable for future operations. A separate report has been submitted to the relevant bodies detailing the action required to bring the equipment back to an acceptable operational standard.
 - d. The operator experienced extremely cold conditions during missions at higher altitudes. This was mainly due to gaps around the camera and navigation sight. Unsuccessful attempts were made to alleviate the problem. It is recommended that the problem be looked into with the view to providing a simple arrangement to adequately insulate the trouble spots. It is felt that this would allow the operator to concentrate fully on his work with a corresponding improvement in the results obtained.

OPERATION SHORTWALK 80

APPENDIX 1 TO
ANNEX E TO
PROJECT REPORT
OP SHORTWALK 80

SUPPLEMENTARY PHOTOGRAPHY

