

ROYAL AUSTRALIAN SURVEY CORPS



4 FIELD SURVEY SQUADRON

OPERATION

**WELCOME  
STRANGER**

1986

PROJECT REPORT

82

PROJECT REPORTOPERATION WELCOME STRANGER 86

- References:
- A. DGOP-A Tasking Directive 4/85 dated 31 May 85
  - B. HQ FF Comd OPORD 19/85 dated 26 Nov 85
  - C. HQ 4 MD Mounting Instruction 9/85 dated 10 Dec 85
  - D. 4 Fd Svy Sqn OPORD 4/85 dated 13 Dec 85

General

1. Operation Welcome Stranger 86 was mounted by 4 Fd Svy Sqn during the period 20 Jan - 5 Mar 86 to field check 9 x 1: 100 00 Edition One maps in the Portland/Hamilton area of SW Victoria.

Operations

2. The operation was conducted in two phases operating from two base camps. The area of operations was bounded by latitude 37°00'S to 39°00'E and longitude 141°00'E to 142°30'E. The area of operations is shown at Annex A.

Execution

3.
  - a. Phase 1. During Phase 1, 20 Jan - 21 Feb 86, all maps were successfully field checked by vehicle. Any areas which were difficult to verify were noted and supplementary photography was flown during Phase 2. The following 1: 100 000 maps were field checked with time spent on each sheet and kilometres travelled shown in brackets:
 

a. NELSON	(7 days, 1906 km)
b. PORTLAND	(4 days, 1590 km)
c. WARRNAMBOOL	(5 days, 2321 km)
d. CASTERTON	(10 days, 2931 km)
e. COLERAINE	(11 days, 3334 km)
f. HAMILTON	(7 days, 1783 km)
g. EDENHOPE	(7 days, 3069 km)
h. BALMORAL	(10 days, 2920 km)
i. GRAMPIANS	(10 days, 3250 km)

All field check additions and deletions were annotated on existing printed maps. A field completion report appears at Annex B.

- b. Phase 2. This phase was conducted during the period 24 Feb - 5 Mar 86 and involved the acquisition of supplementary photography. All areas requiring photography were noted on 1: 250000 maps including proposed flight lines. A report on this phase appears at Annex C.

#### Operational Support

4. Aircraft. One Pilatus Porter from 173 Gen Spt Sqn was used for the acquisition of supplementary photography. The RC 10 aerial camera was fitted to the aircraft at Hamilton Airport. The aircraft was attached for the period 25 Feb - 5 Mar 85. The number of hours used in the operation was 17.1 out of 50 hours forecast.

5. Vehicles. No major problems were experienced with the vehicles used on the operation. All vehicles had been to workshops for major services prior to the operation. The following vehicles were used:

- a. 4 x Truck Cargo 0.75 tonne GS Landrover
- b. 3 x Trailer Cargo 0.5 tonne
- c. 1 x Truck Cargo 1.0 tonne GL

6. Personnel. The following personnel were attached to the operation:

- a. Army Survey Regiment. F227039 CPL V.G. Nielson, OIC Party 4 for the period 20 Jan - 21 Feb 86.
- b. 173 Gen Spt Sqn.
  - (1) Pilot (25 Feb - 5 Mar 86) LT D. Dixon, and
  - (2) Acft Mech (25 Feb - 5 Mar 86) CFN R. Galt.

#### Administration and Logistics

7. Manning. The following 4 Fd Svy Sqn personnel were involved in the operation.

182616	LT	D.J. Stephenson	DET IC	20 Jan - 21 Feb 86
418481	CAPT	C.J. Stein (ARes)		7 Feb - 21 Feb 86
313931	WO2	R.J. Williams	Tech WO	20 Jan - 21 Feb 86
61800	SGT	W.M. Tewson	OIC Party 2	20 Jan - 21 Feb 86
5176518	CPL	A.R. Hawkins	OIC Party 5	20 Jan - 21 Feb 86
49654	CPL	P.D. Longbottom	Camera Op	24 Feb - 5 Mar 86
56139	CPL	J.A. Ratcliffe	OIC Party 3	20 Jan - 21 Feb 86

49688	CPL N.J. Carr (ARes)	20 Jan - 2 Feb 86
416476	SPR P.R. Tuddenham	20 Jan - 21 Feb 86
314340	SPR B.A. Graham	3 Feb - 21 Feb 86
45366	SPR G.S. Kimber	20 Jan - 2 Feb 86
4100599	SPR J.E. Frith (ARes)	7 Feb - 21 Feb 86
4100351	SPR M.W. Bates (ARes)	7 Feb - 21 Feb 86
F4100947	PTE T.A. Moore (ARes)	20 Jan - 2 Feb 86
418457	SPR T.W. Daviess (ARes)	20 Jan - 2 Feb 86

8. ARES. The operation was used as the AFX for 4 Fd Svy Sqn ARES personnel. Six members were involved in the operation with 3 attending for the period 20 Jan - 2 Feb 86 and the remainder for the period 7 Feb - 21 Feb 86.

9. Accommodation. Base camps were established at Henty Bay Caravan Park (20 Jan - 2 Feb 86) and Lake Hamilton Caravan Park (2 Feb - 21 Feb 86). Accommodation in 11' x 11' tents was used for the duration of the operation. Because of the female members present it was necessary to erect additional sleeping tentage.

10. POL.

- a. MSP. MSP was obtained on SP 27 from garages at Taillem Bend, Naracoorte, Portland and Hamilton. Purchases totalled 5674.21.
- b. AVTUR. 60 drums of AVTUR were placed at Hamilton Airport by 331 Sup Coy on 20 Feb 86. A total of 18 drums (3600 l) were consumed.
- c. Oils. Oils for the operation were supplied by 4 Fd Svy Sqn.

11. Stores and Equipment. All stores were supplied from 4 Fd Svy Sqn resources.

12. Pay and Allowances. All pay and the meal and incidental elements of TA was drawn prior to leaving on the operation. Total T & S expenditure was \$9431.25.

13. Medical. Visits were made to Portland Hospital and the AMO Hamilton for an ear infection and minor skin irritation.

14. Rations. All rations were purchased from the members allowances. This system worked well.

15. Morale. A high level of morale was evident throughout the operation.
17. Communications. AN/PRC F1 radios were carried by all vehicles.
18. Visits. The OC 4 Fd Svy Sqn, MAJ D. Taylor, and LT M. Hentschel visited the base camp at Hamilton on 3/4 Feb 86.

Conclusion

19. Operation WELCOME STRANGER 86 was successful in that 9 x 1: 100 000 map sheets were field checked and all additions and deletions were annotated on existing printed maps.

13 May 86



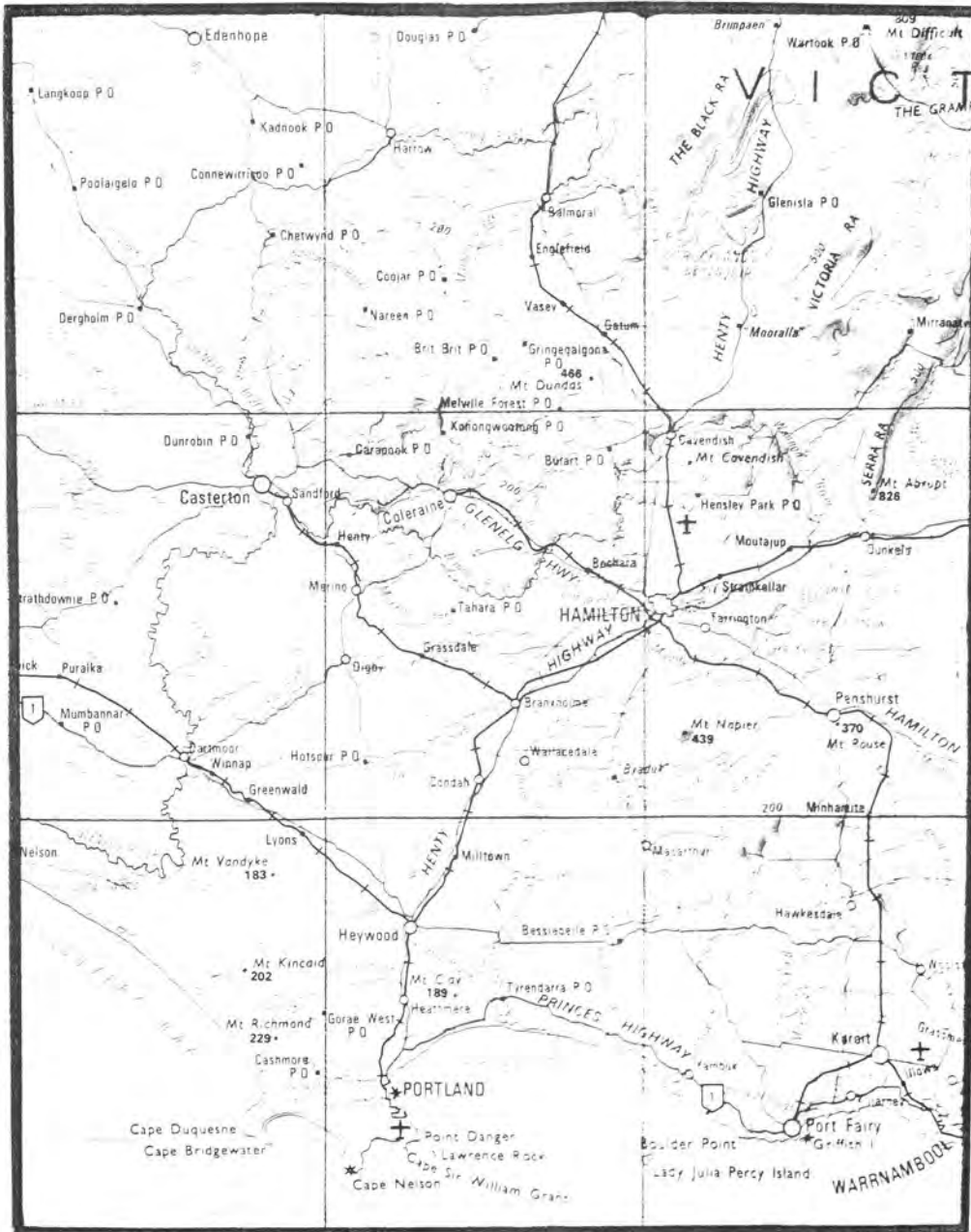
(D. TAYLOR)  
Major  
Officer Commanding

- ANNEXES: A. Area of Operations
- B. Field Completion Report
- C. Supplementary Photography Report
- D. Females in the Field

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ANNEX A TO  
PROJECT REPORT  
OF WELCOME STRANGER 86  
DATED 13 MAY 86

AREA OF OPERATIONS



SCALE 1:1 000 000

FIELD COMPLETION REPORT

Task

1. To field complete 9 x 1:100 000 RASvy Edition One maps, applying the relevant corrections to original printed maps, and produce road classification guides in accordance with RASvy Symbas Edition 2 specifications.

Correction Sheets

2. Four field check correction sheets were produced for each 1:100 000 map. These were:

- a. Cultural corrections,
- b. Vegetation corrections,
- c. Hydrographic corrections, and
- d. Road Classification Guide.

Topography

3. The terrain ranges from cleared undulating farm area to steep mountainous areas covered in dense timber. In the western and southern areas there are large areas of pine which have been planted for commercial use. Land use in the farm areas includes sheep and beef grazing, dairying and wheat.

4. There are three major centres in the area, these being Warrnambool, Portland and Hamilton. Casterton and Coleraine are secondary centres. Large areas of land have been declared as National Parks in the Grampians to the north-east and around the Glenelg River in the south-west.

Execution

5. All sheets were initially completed by vehicle. Areas of major detail change were identified and checked by aircraft.

Comments on Particular Aspects

6. Due to the age of the original maps, circa 1968, it was found that significant changes had occurred around the major centres. The changes were mainly expansion to the built-up areas but also included the aluminium smelter at Portland, a new lake at Hamilton and a 500 KVA transmission line.

7. Other cultural changes included new roads, the deletion of railways, roads and tracks, and numerous changes to homestead names. Hydrographic changes were limited to new dams and reclassification of some areas of STI and swamp.

8. Vegetation changes to sheets 7122 Casterton and 7323 Grampians were significant and a major portion of these sheets had to be covered by supplementary photography to enable accurate updating. Vegetation changes to other sheets were generally small and widespread and these were corrected by field means, available source data and in some small strips of supplementary photography

9. As appropriate with the scale, only selective detail was portrayed on the original map and thus the distinction between depicted detail and new detail was made very difficult.

10. More details on specific map sheets are included in the appendixes to this annex.

#### Conclusion

11. Although the age of the maps were in the 15-20 year range the basic pattern of cultural detail remained the same and this enabled the positioning of additional detail and portrayal of changes to detail to be carried out accurately thus producing a field completion package of the required standard.

- Appendices:
1. Field Completion Report 7322 HAMILTON
  2. Field Completion Report 7123 EDENHOPE
  3. Field Completion Report 7223 BALMORAL
  4. Field Completion Report 7122 CASTERTON
  5. Field Completion Report 7121 NELSON
  6. Field Completion Report 7221 PORTLAND
  7. Field Completion Report 7321 WARRNAMBOOL
  8. Field Completion Report 7323 GRAMPIANS
  9. Field Completion Report 7222 COLERAINE

FIELD COMPLETION REPORT  
7322 HAMILTON

Task

1. To field complete 7322 Hamilton 1:100 000 map to current RASvy Symbas Edition Two specifications.

Duration

2. 9 Feb to 19 Feb 1986.

Personnel

3. The field completion party consisted of CPL V. Neilson, SPR M. Bates (ARES) and SPR B. Graham.

Comments on Particular Aspects

4. Numerous buildings were added across the entire map sheet. BUA's have been extended to portray the growth of towns; in particular Hamilton. The Portland-Ararat Railway is the only rail line on the sheet still in use.
5. Property names close to BUA were not shown to avoid clutter. Many names on the existing map were corrected and many names added.
6. Significant dams were added and several hydrographic features have been reclassified.
7. Vegetation changes were minimal.
8. A separate guide was produced to portray State Forest boundaries.

FIELD COMPLETION REPORT  
7123 EDENHOPE

Task

1. To field complete 7123 Edenhope 1:100 000 map to current RASvy Symbas Edition Two specifications.

Duration

2. 3 Feb to 17 Feb 1986.

Personnel

3. The field completion party consisted of CPL Hawkins, CPL Neilson and SPR Frith.

Contact

4. Contact was made with the Forestry Department (Dept of Conservation Forests and Lands) and local farmers.

Comments on Particular Aspects

5. Existing 1982 Department of Lands, Victoria photography was used to reclassify vegetation in the north of the sheet.
6. Supplementary photography was requested and subsequently used to add new pine plantations.
7. A number of hydrographic features were reclassified.
8. Many nomenclature additions and changes occurred throughout the sheet.

FIELD COMPLETION REPORT  
7223 BALMORAL

Task

1. To field complete 7223 Balmoral 1:100 000 map to current RASvy Symbas Edition Two specifications.

Duration

2. 3 Feb to 18 Feb 86.

Personnel

3. The field completion party consisted of CPL J. Ratcliffe and SPR P. Tuddenham.

Contacts

4. Contacts were made with the following civilian organisations:  
Hamilton Tourist Information Centre  
Parks and Wildlife - Rocklands Reservoir.

Comments on Particular Aspects

5. Numerous vehicle tracks through farm properties were deleted.
6. Supplementary photography was requested and used to plot new roads that could not be positioned by other means.
7. Several salt lakes and numerous dams were added to the existing map.

FIELD COMPLETION REPORT  
7122 CASTERTON

Task

1. To field complete 7122 Casterton 1:100 000 map to current RASy Symbas Edition Two specifications.

Duration

2. 22 Jan to 30 Jan 86.

Personnel

3. The field completion party consisted of CPL V. Neilson, CPL N. Carr (ARES) and SPR P. Tuddenham.

Contacts

4. Contact was made with the following civilian organisations:  
  
State Electricity Commission,  
Casterton Shire Office,  
Department of Conservation Forest and Lands, and  
Local farmers.

Comments on Particular Aspects

5. Numerous buildings yards and windpumps were added across the sheet.
6. Casterton Shire Office provided a plan of new park development within the town which was used to update the existing map.
7. Significant changes to vegetation saw the need for large coverage of supplementary photography which was used to update the existing map.
8. Only dams of a significant size or of landmark value were shown.
9. A landmark object symbol is to be shown at GR 361404. This is not indicated on the cultural master overlay due to clutter. The object is in the shape of the Scout Association Badge approximately 150 m x 150 m constructed of white panels laid flat on the side of a hill overlooking the main street of Casterton. Despite its close proximity to the BUA it should be shown because of its unique landmark value.
10. A separate guide was produced to show State Forest and or Reserve boundaries.

FIELD COMPLETION REPORT  
7121 NELSON

Task

1. To field complete 7121 Nelson 1:100 000 map to current PASvy Symbas Edition Two specifications.

Duration

2. 22 Jan to 28 Jan 86.

Personnel

3. The field completion party consisted of CPL J. Ratcliffe, SPR P. Tuddenham, and SPR G. Kimber.

Contacts

4. Contact was made with the following civilian organisations:  
  
Nelson Tourist Information Centre,  
Department of Conservation Forests and Lands,  
Softwoods Pty Ltd,  
Parks and Wildlife, and  
Various local farmers.

Comments on Particular Aspects

5. Supplementary photography was flown to enable the plotting of the new Portland airport and other new roads on the sheet.
6. New pine plantation boundaries and other vegetation classification changes were plotted from supplementary photography.
7. State Forest boundaries were added from source data from the Department of Conservation Forest and Lands and produced on a separate guide.

FIELD COMPLETION REPORT  
7221 PORTLAND

Task

1. To field complete 7221 Portland 1:100 000 map to current RAS/ry Symbas Edition Two specifications.

Duration

2. 22 Jan to 29 Jan 86.

Personnel

3. The field completion party consisted of CPL A. Hawkins and SPR T. Daviess (ARES).

Contacts

4. Contact was made with the following civilian organisations:

Victorian Police Department,  
Department of Conservation Forest and Lands,  
Portland Tourist Information Centre,  
Various Local Farmers, and  
State Electricity Commission.

Comments on Particular Aspects

5. Supplementary photography was requested and used to update the BUA of Portland and to add a large aluminium smelter works and associated road complex.
6. Two offshore islands were tasked to the camera operator to field complete by air.
7. A new 500 kv powerline to the aluminium smelter was plotted from source data gained from the State Electricity Commission and produced on a separate overlay.
8. A separate guide was produced to portray State Forest boundaries.

FIELD COMPLETION REPORT  
7321 WARRNAMBOOL

Task

1. To field complete 7321 Warrnambool 1:100 000 map to current RASvy Symbas Edition Two specifications.

Duration

2. 21 Jan to 30 Jan 86.

Personnel

3. The field completion party consisted of SGT W. Tewson and PTE T. Moore (ARES).

Contacts

4. Contact was made with the following civilian organisations:

Warrnambool Tourist Information Centre  
State Electricity Commission  
Country Fire Authority  
Staywood Air.

Comments on Particular Aspects

5. Numerous buildings were added throughout the entire sheet and the expansion of Warrnambool and Port Fairy shown by the change of BUA. At Kirkstall and Koroit the BUA was deleted completely.
6. All rail lines have been completely dismantled and are reverting back to farmland.
7. Drainage of large swamps has caused a reclassification to ST1 in a number of cases.
8. A new 500 kv powerline has been added via data from the State Electricity Commission on a separate overlay.
9. Nomenclature additions and changes were very heavy.
10. A separate guide was produced to show State Forest boundaries.

FIELD COMPLETION REPORT  
7323 GRAMPIANS

Task

1. To field complete 7323 Grampians 1:100 000 map to current PASVv Symbas Edition Two specifications.

Duration

2. 3 Feb to 18 Feb 86.

Personnel

3. The field completion party consisted of SGT W. Tewson, SPR E. Graham and CAPT J. Stein (ARES).

Contacts

4. Contacts were made with the following civilian organisations:

State Electricity Commission  
Department of Conservation Forests and Lands  
Parks and Wildlife - Halls Gap and Stawell.

Comments on Particular Aspects

5. The Grampians National Park has an ongoing policy to reforest the park and to upgrade or close and revegetate numerous tracks. This meant a requirement for supplementary photography for the majority of the sheet, which was subsequently used for the replotting of vegetation boundaries and addition of cultural detail.
6. Many tanks have been replaced by dams and the notation "numerous tanks" changed to "numerous dams".
7. In the farming areas of the map numerous homesteads were added.
8. A separate guide was produced to show State Forest and National Park boundaries.

FIELD COMPLETION REPORT  
7222 COLERAINE

Task

1. To field complete 7222 Coleraine 1:100 000 map to current RASvy Symbas Edition Two specifications.

Duration

2. 22 Jan to 18 Feb 86.

Personnel

3. The field completion party consisted of LT D. Stephenson, WO2 R. Williams, CPL A. Hawkins and SPR T. Daviess (ARES).

Contacts

4. Contacts were made with the following civilian organisations:  
Telecom  
State Electricity Commission  
Department of Conservation, Forests and Lands.

Comments on Particular Aspects

5. Many buildings were added throughout the sheet with the BUA being altered in all cases.
6. Nomenclature additions were numerous and many corrections were applied to existing names.
7. Due to the significant number of dams and tanks only those of large size or landmark value were added.
8. Supplementary photography was requested and subsequently used to add new areas of pine plantations. Windbreaks were of such a large number that none were added and a small group depicted on the original map were deleted.
9. A separate overlay was produced to show State Forest boundaries.

ANNEX C TO  
PROJECT REPORT  
OF WELCOME STRANGER 86  
DATED 13 MAY 86

SUPPLEMENTARY PHOTOGRAPHY REPORT

OPERATION WELCOME STRANGER 86

1. General. Supplementary Photography was flown during the period 25 Feb 86 to 3 Mar 86, as previously requested by the field completion teams. Photography was aquired using a Wild RC10 camera, No 1466 with a SWA lens, mounted in a Piltus Porter Aircraft, No 14-701.
2. Results. 1,330 line km of supplementary photography were flown, using a total of 17.1 task hours. A Diagram showing coverage is in Appendix 1. The scale of photography was 1:25,000 with a forward overlap of 60% and side overlap of 25%.
3. Personnel. The following personnel were involved:  
  
LT D. Dixon - Porter Pilot  
  
CPL P.D. Longbottom - Camera Operator  
  
CFN R. Galt - RAEME Support
4. Film Processing. 5 rolls of exposed, undeveloped RC10 film and accompanying A36 photographic reports were despatched to CPE Laverton, on the 6 Mar 86 from 4 Fd Svy Sqn, for processing. Developed film arrived back in this unit on 2 Apr 86.

Appendix: 1. Supplementary Photography Coverage

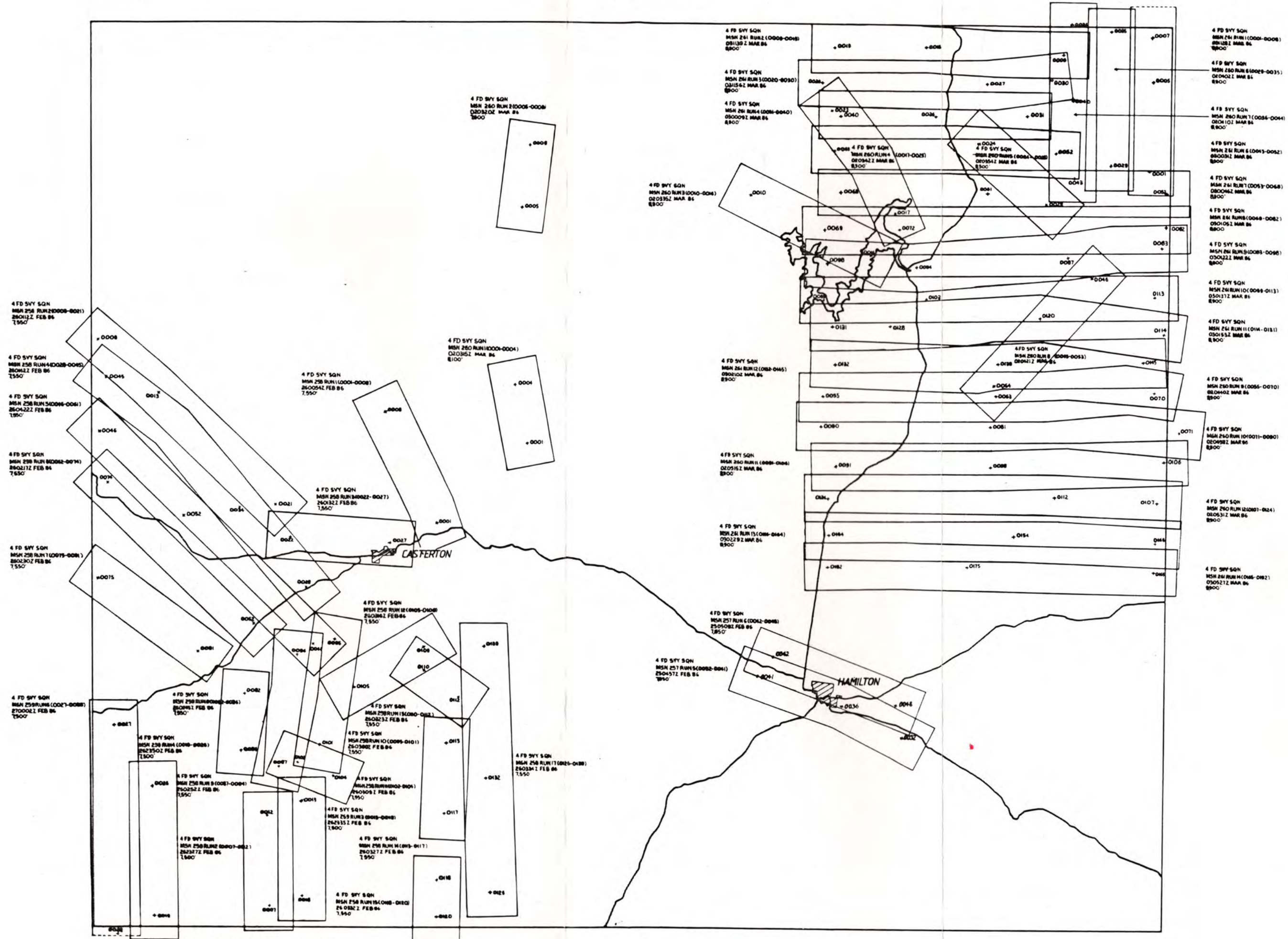
SUPPLEMENTARY PHOTOGRAPHY OVERLAY

HAMILTON

APPENDIX I TO  
ANNEX C TO  
PROJECT REPORT  
OP WELCOME STRANGER 86  
SJ 54-7

1:250,000

7372-1



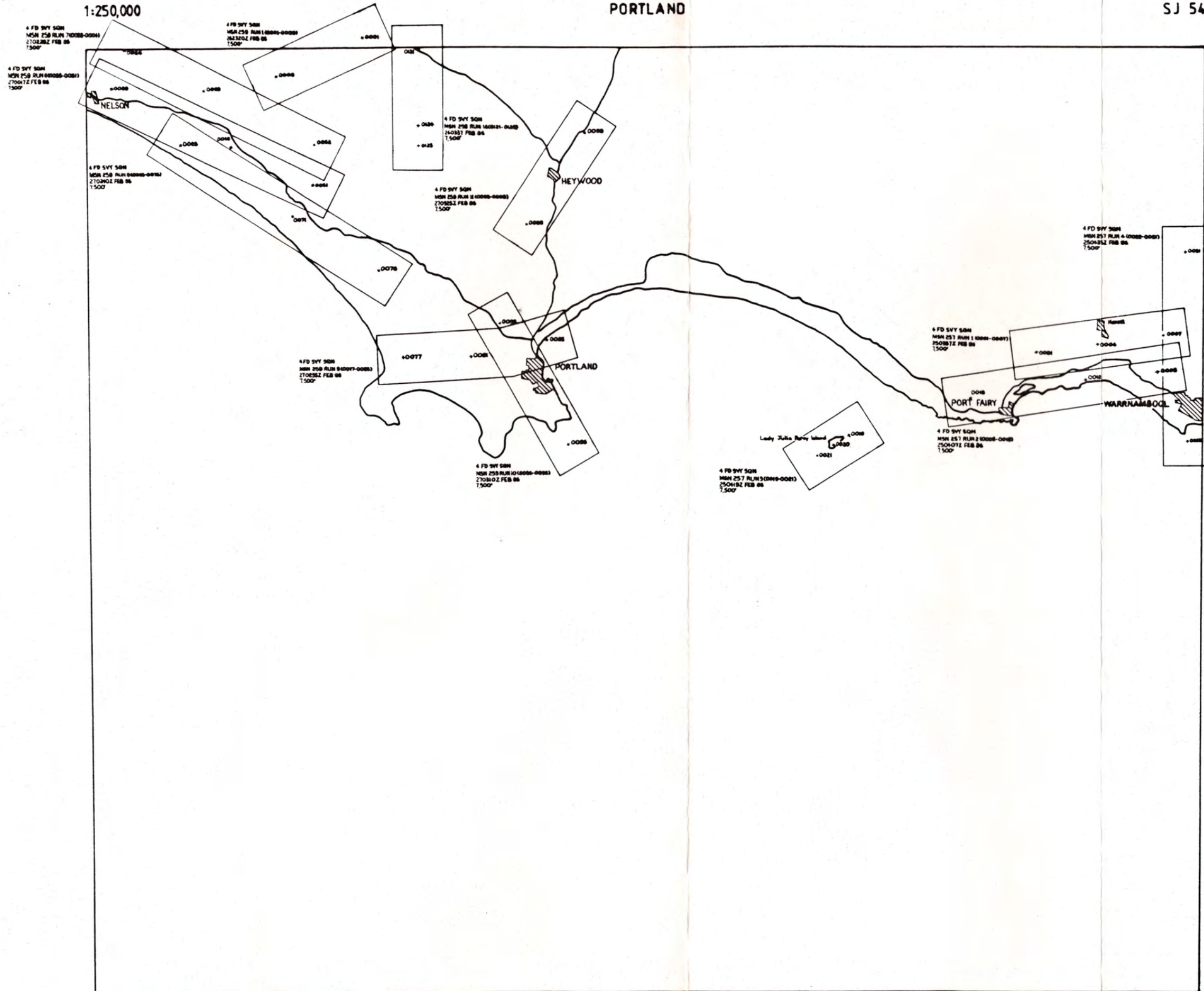
COMPILED : CPL J RATCLIFFE *J Ratcliffe*

CHECKED : CPL P D LONGBOTTOM *P D Longbottom*

SUPPLEMENTARY PHOTOGRAPHY OVERLAY

PORTLAND

SJ 54-11



COMPILED CPL J RATCLIFFE *J Ratcliffe*  
CHECKED CPL P D LONGBOTTOM *P D Longbottom*

ANNEX D TO  
PROJECT REPORT  
OP WELCOME STRANGER 86  
DATED 13 MAY 86

## FEMALES IN THE FIELD

### Background

1. Army Survey Regiment requested that a member of their unit be permitted to accompany Det 4 Fd Svy Sqn on this operation. Their proposal was accepted along with the member nominated, CPL V.G. Neilson. A female member of 4 Fd Svy Sqn ARes Tp was also present for the first two weeks of the operation as part of her AFX.

### Operations

2. Both females performed their allocated tasks to the level expected of their rank and trade. CPL Neilson was tasked as a Party IC and PTE Moore as a Party Member.

### Accommodation

3. As previously mentioned it was necessary to erect separate tentage for the women. Toilet and bathroom facilities were not a problem on this operation because both base camps were in caravan parks.

### Morale

4. Because of the short duration of this operation morale remained high throughout. There was some evidence towards the end of the operation that members were becoming bothered by the mixed company. For about the first 3 weeks the male members were restrained in their language and mannerisms, reflecting the presence of females. This restraint began to weaken in the remaining two weeks but did not get to a stage where there were problems.

5. On longer operations the combination of mixed company and separation from home could create problems. Any breakdown would depend to a large degree on the strength of character of the individuals involved. During this operation a female with a weaker constitution may not have been able to handle the pressures created by the mixed company in the field.

### Conclusion


6. The females on this operation proved that they could carry out field completion tasks at the same level as their male counterparts. This however should not be taken as a general statement because their level of achievement would depend to a large degree on the number of females present, the length of the operation and the individuals themselves. The last requirement would be difficult to judge unless the girl had previous field experience.

7. On a control survey operation which involves a long period in the field, isolation in 2 man parties and heavy lifting, it would be difficult to imagine females being effective members of the operation.

Recommendation

8. Female members of RASvy could be effective members of short field completion tasks. It is not recommended that they be included on control survey operations with the present equipment.

// Apr 86



(D. STEPHENSON)  
LT  
DET IC