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1653



# OP CYNTHIA 85

## PROJECT REPORT

CYNTHIA 1985

4 FD SVY SQN

CAT OPERATION REPORTS

ASN 1653 NOT CONTROLLED

**4 FIELD SURVEY SQUADRON**

**ROYAL AUSTRALIAN SURVEY CORPS**

4FD4

4 FIELD SURVEY SQUADRONPROJECT REPORTOPERATION CYNTHIA 8529 AUGUST - 30 OCTOBER 1985

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4 FIELD SURVEY SQUADRON

PROJECT REPORT - OPERATION CYNTHIA 85

29 AUGUST - 30 OCTOBER 1985

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B. Listing of Contacts

C. Supplementary Photography Report

PROJECT REPORTOPERATION CYNTHIA 85

- References:
- A. Dept of Defence A474/1/199 Tasking Directive 4/85 dated 31 May 85
  - B. HQ FF Comd OPORD 13/85 dated 5 Jul 85
  - C. 4 MD Mounting Instruction 7/85 dated 30 Jul 85
  - D. 4 Fd Svy Sqn OPORD 3/85 dated 31 Jul 85

General

1. Operation CYNTHIA 85 was mounted by 4 Fd Svy Sqn during the period 29 Aug to 30 Oct 85. The aim of the operation was to field complete 60 x 1:50000 enhanced orthophoto maps within the 1:250000 map areas of SF53-13 HERMANNsburg (part), SF53-14 ALICE SPRINGS (part), SG53-1 HENBURY (part), and SG53-2 RODINGA. Appendix 1 to Annex A shows the Area of Operations (AO).
2. Additional tasks to the operation were as follows:
  - a. The acquisition of supplementary photography resulting from field completion during Operation NOTARIAL 5. The photography was required in the 1:250000 areas of SG53-5 KULGERA and SG53-6 FINKE.
  - b. Collect and collate information for Divisional Deployment Area Study (DDAS) of Alice Springs township.

Operational Results

3. Field Completion. All maps listed for field completion were checked. A detailed report is contained at Annex A.
4. Supplementary Photography. Photography was obtained to enable positioning of detail and to resolve field check queries. Full details of supplementary photography are contained at Annex C.
5. Photography OP NOTARIAL 5. Supplementary photography in this area was not obtained because of adverse weather conditions and the late arrival of the aircraft in the AO.
6. Divisional Deployment Area Study (DDAS). Time did not permit a complete study of the Alice Springs township. As much as possible of the requested information was obtained and forwarded to 1 Div Int Unit for inspection and collation.

Operational Support

7. Aircraft Support. A Pilatus Porter fixed wing aircraft from 173 Gen Spt Sqn was allocated in support of the operation. Details are:
  - a. Hours. The operation was allocated 90 hours of which 78.2 were used.

- b. Serviceability. No serviceability problems were encountered during the operation.
- c. Personnel. The co-operation between RASvy and AAAvn personnel was excellent throughout the operation. The interest shown and assistance given by the pilots contributed significantly to the success of the operation.

The aircraft was originally tasked for the period 2 Oct to 24 Oct 85. However, because of other commitments this was altered by HQ FF Comd to 7 Oct to 24 Oct 85.

#### Administration

8. Manning. The following personnel were employed during the operation:

1201433 WO2 A. Adsett	4 Fd Svy Sqn	29 Aug-30 Oct 85
157511 SSGT A. Van Leeuwen	4 Fd Svy Sqn	29 Aug-30 Oct 85
226450 CPL P. Drury	4 Fd Svy Sqn	29 Aug-30 Oct 85
3143401 SPR B. Graham	4 Fd Svy Sqn	29 Aug-30 Oct 85
180890 SPR C. Hills	4 Fd Svy Sqn	29 Aug-30 Oct 85
4400413 SPR N. Houston	4 Fd Svy Sqn	29 Aug-30 Oct 85
221603 CAPT G. Rutter	173 Gen Spt Sqn	7-24 Oct 85
231956 LT J. Greison	173 Gen Spt Sqn	7-24 Oct 85
321568 CFN D. Polwarth	173 Gen Spt Sqn	7-24 Oct 85

9. Bases. Bases were situated at the following locations:
- a. Cadney Bore (Hamilton Downs Station), during the period 30 Aug - 5 Sep 85;
  - b. Alice Springs (NORFORCE Depot), during the period 5 Sep - 18 Sep 85;
  - c. The Garden Station, during the period 18 Sep - 26 Sep 85;
  - d. Deep Well Station, during the period 26 Sep - 9 Oct 85;
  - e. Orange Creek Station, during the period 9 Oct - 22 Oct 85; and
  - f. Alice Springs (Toddys Cabins), during the period 7 Oct - 28 Oct 85.
10. Rations. The force was rationed for a total of 144 mandays with rations being purchased in the AO. At one stage of the operation meals and accommodation were supplied by the owners of Deep Well Station.
11. Health. Health was good and no mandays were lost through sickness.
12. Morale. The level of morale was high throughout the operation.
13. Discipline. No situation arose where disciplinary action was necessary.

14. Pay and Allowances.

- a. Pay. Members were paid up to four pays in advance for the operation.
- b. Allowances. The following allowances were paid:
  - (1) Travelling Allowance for insertion and extraction,
  - (2) Incidentals for the duration of the operation,
  - (3) Meal element of Travelling Allowance for a total of 209 mandays,
  - (4) Survey Party Ration Allowance for a total of 144 mandays, and
  - (5) District Allowance whilst in the AO.

15. Expenditure. The following expenditure occurred:

a. T & S -Initial Allocation	\$15850.00
Expenditure (FPC 39095)	\$ 1482.77
(FPC 374034)	\$15161.00
Total	<u>\$16643.77</u>
b. F & C - Initial Allocation	\$ 4000.00
Expenditure	\$ 374.18
c. Rations - Initial Allocation	\$ 1400.00
Expenditure	\$ 962.97

All expenditure has been acquitted and was within allocated funding except for T & S. Initial AAAvn support was to consist of two personnel. However, 173 Gen Spt Sqn included an additional pilot and his expenditure was debited against T & S for Operation CYNTHIA 85. This expenditure was not allowed for in the initial allocation.

16. Public Relations. Contact was made with many members of the public and all station owners/managers in the AO. Particular assistance was received from people listed at Annex B.

Logistics17. Supply. The following items were resupplied:

- a. 1 x Truck Utility GS Landrover Series 2A,
- b. 2 x accessory maintenance kits for Landrover,
- c. gas regulator for refrigerator,



One vehicle with front end problems was exchanged as mentioned in para 17. Another vehicle suffered a broken rear axle and steering damper/front end problems in the final stages of the operation. Adelaide Wksp Coy recovered the vehicle on its arrival at Adelaide Railway Station.

#### Communications

23. Rear Link. Rear link communications were provided by telephone using a Telecom credit card. Reports were made weekly to 4 Fd Svy Sqn.

24. Field Parties. AN/PRC F1 radios were provided for communications between ground parties within the AO.

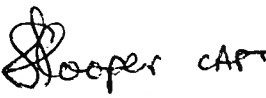
#### Operation Difficulties

25. Entry to Aboriginal Land. Application was made by 7 MD for approval to enter Aboriginal land in the AO. Although approval was given it allowed only one vehicle at a time onto the lands in question. Because the land holdings were not excessively large, little inconvenience was caused. Had there been large areas of Aboriginal land then this restriction would have extended the time frame of the operation.

#### Conclusion

26. The operation was carried out successfully within the resources allocated.

30 Apr 86

  
for (D. TAYLOR)  
Major  
Officer Commanding

- Annexes:
- A. Field Completion Report
  - B. Listing of Contacts
  - C. Supplementary Photography Report

ANNEX A TO  
PROJECT REPORT  
OP CYNTHIA 85  
DATED 30 APR 86

FIELD COMPLETION REPORT

- References:
- A. SYMBAS Edition 2
  - B. SOP for Cartographic Enhancement of Random Dot OPM dated 25 Feb 82

Task

1. To field complete 60 x 1:50000 enhanced orthophoto maps in the Northern Territory. The maps were contained within the following 1:250000 map sheets:
  - a. SF 53 13 HERMANNSBURG
  - b. SF 53 14 ALICE SPRINGS
  - c. SG 53 1 HENBURY
  - d. SG 53 2 RODINGA.
2. Appendix 1 to Annex A shows the Area of Operation (AO).
3. Standards were in accordance with References A and B.

Execution

4. Organization. The force consisted of 3 x two man parties for initial field completion by vehicle. One of these parties was later involved with the field checking by air and acquisition of supplementary photography.
5. Deployment. At all times the parties operated from main bases.

Field Completion Material

6. The following units were involved in the preparation of material:
  - a. 1 Fd Svy Sqn plotted 8 x 1:50000 map sheets in the ALICE SPRINGS 1:250000 map area. The sheets were plotted with a 20 metre contour interval, cultural information was not plotted.
  - b. 2 Fd Svy Sqn plotted 8 x 1:50000 map sheets in the RODINGA 1:250000 map area. The sheets were plotted with cultural detail and a 10 metre contour interval.
  - c. 4 Fd Svy Sqn plotted 36 x 1:50000 map sheets in the 1:250000 map areas of ALICE SPRINGS, HERMANNSBURG and RODINGA. The sheets were plotted with cultural detail and a 10 metre contour interval.

- d. 5 Fd Svy Sqn plotted 8 x 1:50000 map sheets in the HENBURY 1:250000 map area. The sheets were plotted with a 10 metre contour interval, cultural detail was not plotted.
  - e. Army Svy Regt supplied a contone negative and two composite bromides of the OPM imagery and 10000 metre grid for each 1:50000 area.
7. 4 Fd Svy Sqn produced the following:
- a. Cultural compilation overlays for the 36 sheets plotted by the unit.
  - b. Cultural compilation overlays for the 16 map sheets where no cultural detail was plotted. This was done by tracing all discernible cultural detail from the contone negatives.
  - c. Nomenclature/field check query overlays for each 1:50000 area.
  - d. 2 x composite bromide copies of the OPM imagery, cultural compilation and nomenclature/field check queries for each 1:50000 area.
  - e. 2 x composite ozafilm copies of the cultural and nomenclature/field check queries for each 1:50000 area.

The compilation of cultural sheets for the areas where cultural detail had not been plotted was time consuming as the contone negative, photography and source data had to be utilized and interpreted.

8. Photography. The date of photography for aerotriangulation/plotting was Sep 81 with one run flown Oct 80. Supplementary photography was flown during the operation using an RC10 camera mounted in a Pilatus Porter aircraft. Details are shown at Appendix 1 to Annex C.

9. Other Agency Data. As a result of technical liaison, the following data was obtained:

- a. Pastoral plans from NT Lands Dept,
- b. National Park plans from the Conservation Commission NT,
- c. Details of Aboriginal Land boundaries, and
- d. Communication Towers on the Central Australian Railway from Australian National Railways.

#### Field Completion Methods

10. Because of the nature of the terrain in the SE of the Area of Operation (Simpson Desert with numerous sand ridges and four wheel drive vehicle tracks), it was decided to check 8 x 50000 map sheets in this region by air.

11. During the initial six weeks prior to the arrival of the aircraft, 75% of the sheets to be field checked by vehicle had been completed. After the arrival of the aircraft the remaining 25% were completed by two ground parties. Working with the aircraft the third party checked the eight maps in the SE of the AO, finalised any queries passed on by the ground parties and obtained the supplementary photography.

12. Ground and air completion was done directly onto the bromide prints. All detail was later transferred to the master ozafilm and a road classification colour guide was prepared on another ozafilm. Detail from supplementary photography will be added to the master ozafilm when prints are available.

13. A field check report was prepared for each 1:50000 map area detailing problems on specific aspects encountered in the field. These reports are included in the relevant PD folders.

14. The ground and air checks included the verification of cultural detail, road classification and obtaining and verifying nomenclature.

#### Comments

15. The full complement of supplementary photography was not obtained because of the late arrival of the aircraft and adverse weather conditions.

16. The composite bromides produced of map sheets where cultural detail had not been plotted were not very successful. Although as much detail as possible was traced off the contone negatives, it was obvious from the field completion that in places much had been missed. Had cultural detail been plotted, the positioning would have been far more accurate and less time spent adding information.

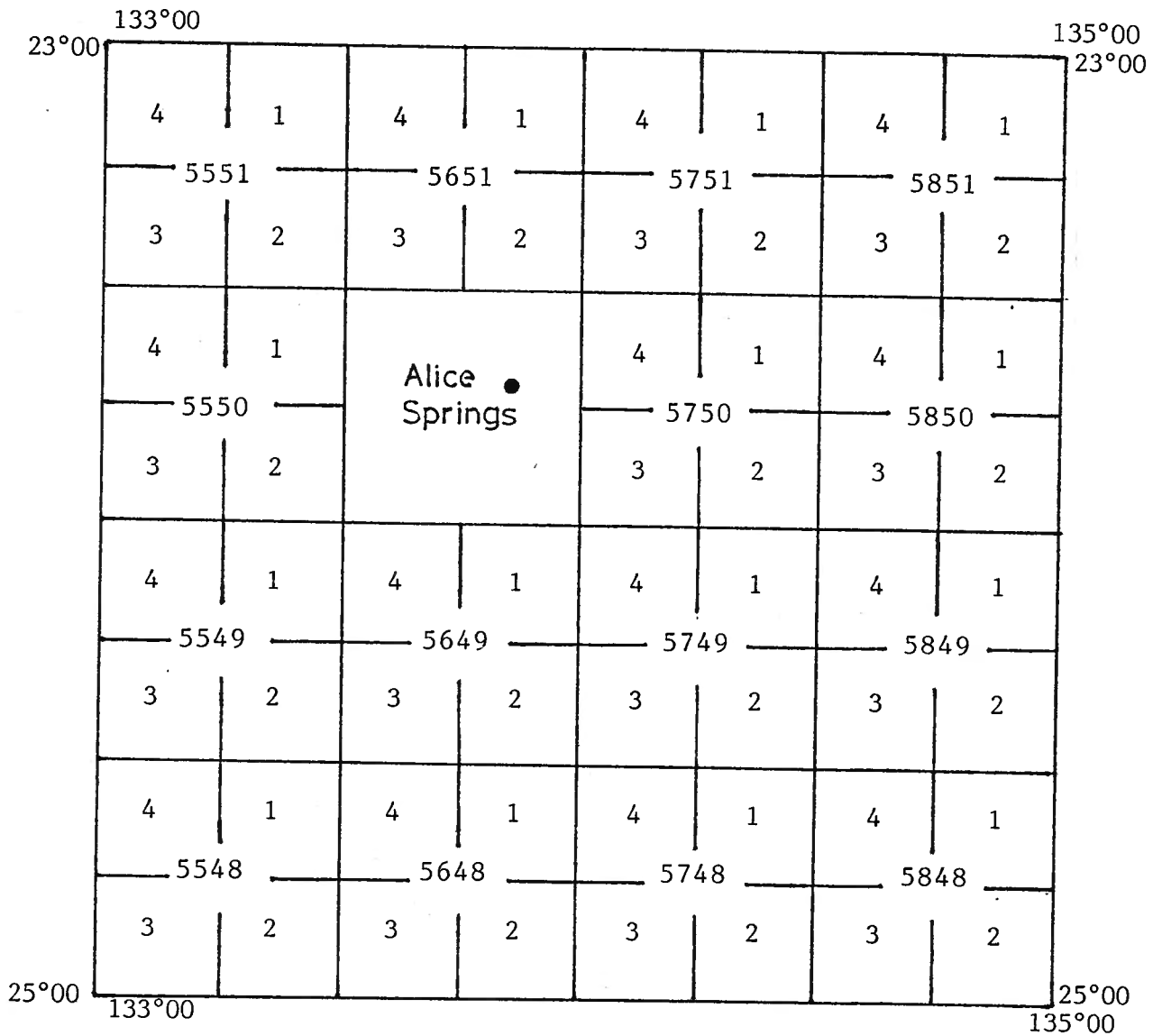
17. The basic field completion packages did not arrive from the Army Svy Regt until early July and there was a large work committment required on the sheets. This caused some problems because of the short lead time prior to departure for the AO, and the shortage of personnel to undertake the preparatory work due to other operational committments.

#### Recommendations

18. The following recommendations are made:

- a. Future OPMs have cultural detail plotted.
- b. The production by the Army Svy Regt of bromides with 10 000 metre grid cease as this is a waste of resources. These bromides have not been composited with the cultural and hence the unit tasked with the field completion produces another set of bromides, with cultural portrayed. The 10000 metre grids should be dispatched with the contone negatives.

OP CYNTHIA 85  
AREA OF OPERATION



ANNEX B TO  
PROJECT REPORT  
OF CYNTHIA 85  
DATED 30 APR 86

LISTING OF CONTACTS

1. SGT D. Gooch, NORFORCE Alice Springs.
2. SGT Hunter and SNR CONST D. Lloyd, NT Police Alice Springs.
3. Mr T. Karger, Orange Creek Station.
4. Mr B. Hayes, Deep Well Station.
5. Mr B. Hayes, Undoolya Station.
6. Mr B. Prior, Hamilton Downs Station.
7. Mr J. Turner, The Garden Station.
8. Mr M. Collings, Ringwood Station.
9. Mr A. Smith, Allambi Station.
10. Mr V. Powell, Amburla Station.
11. Mr G. Cavenagh, Ambalindum Station.
12. Mr P. Stanes, Palmer Valley Station.
13. Mr R. Morton, Henbury Station.
14. Mr G. Heaslip, Bond Springs Station.
15. CONST J. Ayliffe, Harts Range Police Station.

ANNEX C TO  
PROJECT REPORT  
OP CYNTHIA 85  
DATED 30 APR 86

SUPPLEMENTARY PHOTOGRAPHY REPORT

1. General. Supplementary photography was flown during the period 18 Oct 85 to 23 Oct 85 as required by the field completion parties. Photography was acquired using a wild RC10 camera No 1236 with a SWA lens, mounted in a Pitatus Porter aircraft No A14 687.
2. Results. 330 line km of photography were flown using a total of 15.2 hours. Scale of photography was 1:30 000. A diagram showing coverage is at Appendix 1.
3. Supplementary photography in the KULGERA/FINKE areas required from OP NOTARIAL 5 was not obtained because of adverse weather conditions and the late arrival of the aircraft in the AO.
4. Personnel. The following personnel were involved:  
CAPT G. Rutter - Pilot  
LT J. Greison - Pilot  
SPR N. Houston - Camera Operator.
5. Dispatch. One roll of exposed, undeveloped film and accompanying A36 photographic reports were dispatched to CPE Laverton on Nov 85 from 4 Fd Svy Sqn.

# OPERATION CYNTHIA 85

APPENDIX 1 TO  
ANNEX C TO  
PROJECT REPORT  
OP CYNTHIA 85  
DATED 30 APR 86

## SUPPLEMENTARY PHOTOGRAPHY

