

Chairman,  
Fishing Industry Research Committee.

Report of Completed Project 1975/15  
Echo Sounder and Sonar Operators' Course  
Sydney, 21-28 September 1975

1. Introduction

The theory content of the course was conducted at the Goodsell Building, Chifley Square, followed by practical sessions on board "Kapala", "Courageous", "Sun Hunter" and "Dameeli".

A total of 36 participants attended the course (see APPENDIX 1); although primarily from New South Wales other States were also represented.

Lecturers (see APPENDIX 2) were selected, for their expertise on the subjects covered, from New South Wales State Fisheries, CSIRO Division of Fisheries and Oceanography, Fisheries Division of the Australian Department of Agriculture, AWA, Commavonics, NIC Instruments Company and ELAC.

2. Course Objectives

The course for commercial fishermen was aimed at developing their understanding of practical operation and use of electronic fishing aids, with the emphasis being placed on acoustic fish finding equipment.

3. Course Program

The course program (see APPENDIX 2) was closely adhered to with all lecturers being practically orientated. The depth of treatment was such in that it did not go beyond the level of comprehension of the participants and yet it was of sufficient complexity to motivate and stimulate interest.

The use of four vessels for practical sessions allowed for considerable student involvement.

4. Summary

The feed-back from participants indicates that the course has been a success and that further courses of this type are a most necessary part of extension activities to the fishing industry.

It was proposed by a number of participants that similar courses and others concentrating on such subjects as radar, navigation and gear technology should be conducted in other fisheries regions in Australia.

The only criticism of the course was that more practical training would have been desirable during the earlier part of the course rather than leaving it all to the end.

## 5. Acknowledgements


The hospitality of N.S.W. State Fisheries was much appreciated by all concerned and the involvement of all lecturers, support staff from N.S.W. State Fisheries, Fisheries Division of the Australian Department of Agriculture and the co-operation of all participants is gratefully acknowledged.

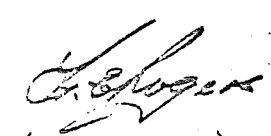
It is recognised that much of the course effectiveness was due to the provision of vessels from AWA, CSIRO, Greenwich Marine and N.S.W. State Fisheries.

The provision of a grant from the Fishing Industry Research Trust Account was a necessary contribution towards the success of the course.

## 6. Report

A report of the course will be included in the January edition of 'Australian Fisheries'.

  
(T.B. GORMAN)  
New South Wales State Fisheries

  
(H.E. ROGERS)  
Fisheries Division  
Australian Department of Agriculture

COURSE PARTICIPANTS

| Name            | Address                 |
|-----------------|-------------------------|
| R. Abercrombie  | Ulladulla, N.S.W.       |
| A. Bolton       | Eden, N.S.W.            |
| V. Boutmy       | Budgewoi, N.S.W.        |
| M. Bower        | Dubbo, N.S.W.           |
| R.J. Brown      | Cowandilla, S.A.        |
| R.W. Brown      | Cheltenham, Vic.        |
| M. Castle       | CSIRO, N.S.W.           |
| L. Crossing     | Maclean, N.S.W.         |
| J. Davidson     | Port Fairy, Vic.        |
| J. Davies       | Eumungerie, N.S.W.      |
| C. Dilosa       | Failford, N.S.W.        |
| K. Farmer       | Caringbah, N.S.W.       |
| J. Goggin       | Fremantle, W.A.         |
| F. Forrest      | Sydney, N.S.W.          |
| J. Garven       | Yamba, N.S.W.           |
| D. Gill         | Maitland, N.S.W.        |
| C. Grant        | CSIRO, N.S.W.           |
| D. Hart         | Edithburgh, S.A.        |
| R. Hochkircher  | Eden, N.S.W.            |
| N. Kelly        | Bulli, N.S.W.           |
| M. Lynch        | Eden, N.S.W.            |
| C. Mannix       | Nhulunbuy, N.T.         |
| D. Micallef     | Mannering Park, N.S.W.  |
| R. Miller       | Eden, N.S.W.            |
| W. Monk         | Eden, N.S.W.            |
| M. Moore        | Mannering Park, N.S.W.  |
| R. Petrie       | Eden, N.S.W.            |
| G. Puglisi      | Ulladulla, N.S.W.       |
| R.J. Roozendaal | Bridport, Tas.          |
| G. Searl        | Greenwell Point, N.S.W. |
| F. Smith        | Adelaide, S.A.          |
| R. Swan         | Iluka, N.S.W.           |
| A. Tetley       | Eden, N.S.W.            |
| R. Turnbull     | Eden, N.S.W.            |
| K. White        | Port Lincoln, S.A.      |
| A. Wood         | Victor Harbour, S.A.    |

PROGRAM


---

Sunday 21.9.75

1.1 2.00pm Orientation - Assembly, Inspect Vessels and Barbeque.

---

Monday 22.9.75

2.1 9.00am Properties of Sound - Mr. J.S. Hynd, CSIRO  
2.2 10.30am Laws of Reflection of Sound - Mr. W. Quinn, Comnavonics  
2.3 1.30pm Ultrasound and Echo Sounding - Mr. J.S. Hynd, CSIRO  
2.4 3.15pm Principles of Echo Sounding - Mr. W. Quinn, Comnavonics  
Mr. J. Hill, Comnavonics

---

Tuesday 23.9.75

3.1 9.00am Transducers - Mr. G.R. Owen, AWA  
3.2 9.45am Amplifier - Mr. G.R. Owen, AWA  
3.3 10.30am Transmitter - Mr. G.R. Owen, AWA  
3.4 11.00am Depth Indicator - Mr. G.R. Owen, AWA  
3.5 12.30pm Net Sounders - Mr. T.B. Gorman, N.S.W. State Fisheries  
Mr. U.V.E. Miers, ELAC  
3.6 3.45pm Sea Bed Echoes - Mr. G. Majer, N.I.C.  
3.7 5.30pm Films

---

Wednesday 24.9.75

4.1 9.00am Fish Recordings - Mr. G.R. Owen, AWA  
4.2 1.30pm Choice of Echo Sounders Mr. U.V.E. Miers, ELAC  
4.3 5.30pm Films

---

Thursday 25.9.75

5.1 9.00am Panel Discussion on the Interpretation of Local Recordings  
including Net Sounders  
5.2 3.15pm Echo Sounder Beam Characteristics - Mr. J. Hill Comnavonics

---

Friday 26.9.75

6.1 9.00am Principles of Sonar - Mr. J. Hill, Comnavonics  
6.2 10.15am Sonar Equipment - Mr. J. Hill, Comnavonics  
6.3 11.15am Phases in Fishing Operation - Mr. J. Hill  
6.4 1.45pm Principles of Radar - Mr. G.R. Owen  
6.5 2.15pm Radar Equipment - Mr. G.R. Owen  
6.6 4.30pm Uses in Fishing - Mr. H.E. Rogers  
6.7 5.30pm Barbeque

---

---

Saturday 27.9.75

7.1      9.00am      Practical Training on Echo Sounder, Sonar and Radar.

---

Sunday 28.9.75

8.1      9.00am      Practical Training on Echo Sounder, Sonar and Radar.

---