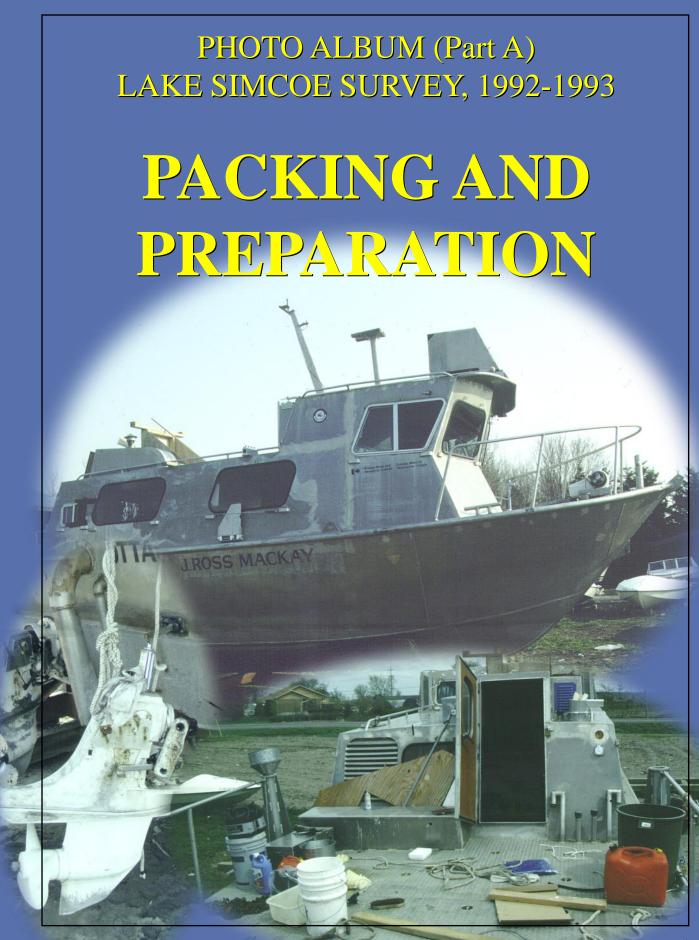


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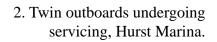
(Part A) PACKING AND PREPARATION	
(Part B) IN TRANSIT TO LAKE SIMCOE	
(Part C) BIG BAY POINT MARINA	
(Part D) SURVEYING ON LAKE SIMCOE	
(Part E) RETRIEVINGSIDESCAN SONAR TOWFISH	
(Part F) INSTRUMENTS	
(Part G) SHIP'S INTERIOR	



GSC Open File 3037 Photo Album, (Part A), Lake Simcoe Survey, 1992-93. p. 1



1. MV *J. Ross Mackay* undergoing refit, Hurst Marina, Rideau Canal near Ottawa.





GSC Open File 3037 Photo Album, (Part A), Lake Simcoe Survey, 1992-93. p. 2



3. Ship being outfitted, Spring,1993, Hurst Marina.

4. Steve Grant outfitting the ship, Spring, 1993, Hurst Marina.



## PHOTO ALBUM (Part B) LAKE SIMCOE SURVEY, 1992-1993

## IN TRANSIT TO LAKE SIMCOE

GSC Open File 3037 Photo Album, (Parr B), Lake Simcoe Survey, 1992-93. p. 4



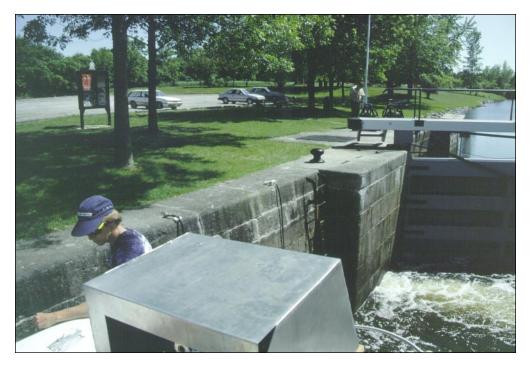


1. Bernie Peltier visiting the ship, Rideau Canal, 1992.

2. Robert Burns and Marten Douma standing by the lines in a lock on the Ridean Canal, 1992.

3. The ship in a lock on the Rideau Canal, 1992. The upturned Seistec receiver cone is in the foreground, straddling the Seistec boomer mounted on a surfboard.

GSC Open File 3037 Photo Album, (Part B), Lake Simcoe Survey, 1992-93. p. 5



4. Brian Todd assisting in a lock on the Rideau Canal, 1992.

5. A quiet summer afternoon on the Rideau Canal, 1992.





6. Marten Douma after taking an unintended swim in the Rideau Canal, 1992.



7. The ship in the Rideau Canal, 1992.



8. Late afternnon under the awning, Rideau Canal, 1992.

9. Underway on the Rideau Canal, 1992.

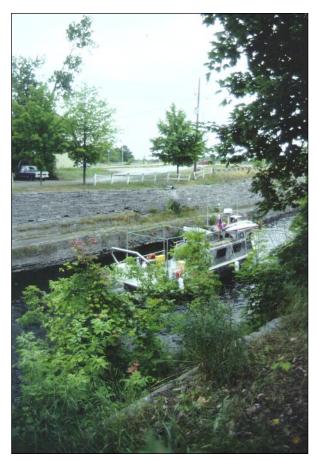


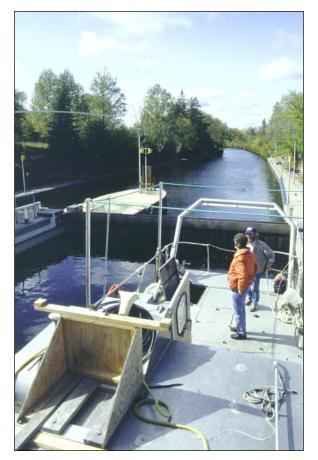


10. In the Peterborough Lift Lock, Trent-Severn Waterway, 1992.

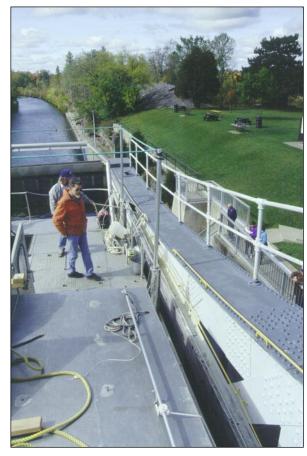
11. At the top of the Peterborough Lift Lock, Trent-Severn Waterway, 1992.







12. Underway in the Trent-Severn Waterway, 1992.



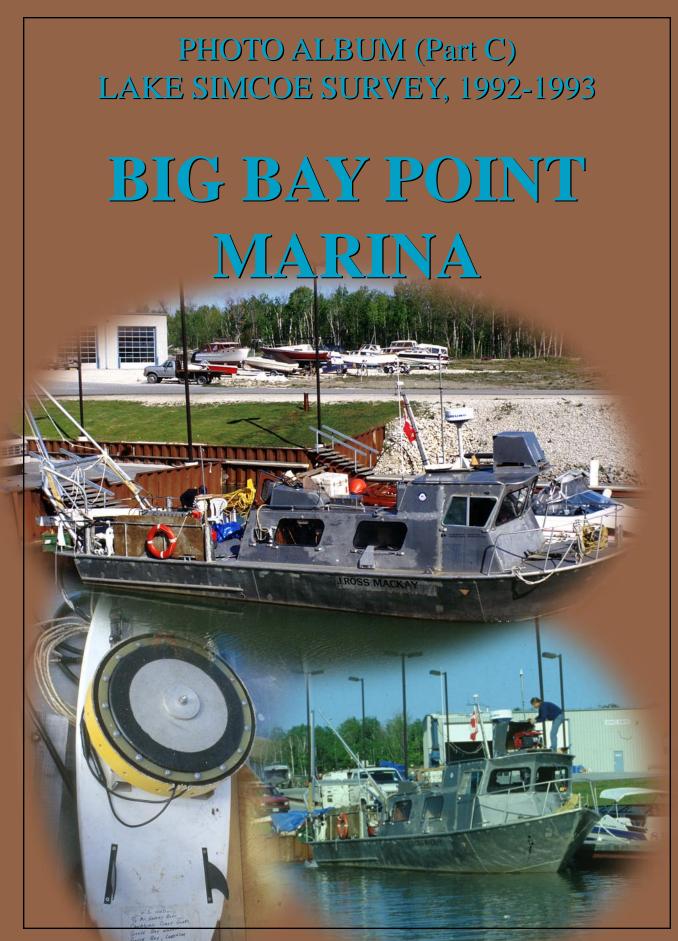
13. Jim Hunter and Robert Burns, Trent-Severn Waterway, 1992.

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14. Jim Hunter andRobert Burns, Trent-Severn Waterway,1992.

15. Robert Burns acting as lockmaster, Trent-Severn Waterway, 1992.

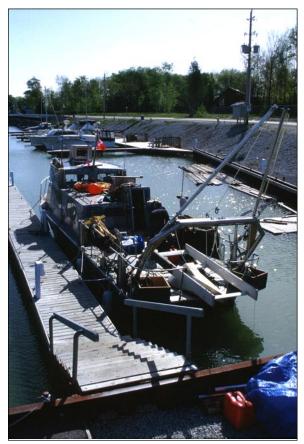




GSC Open File 3037 Photo Album, (Part C), Lake Simcoe Survey, 1992-93. p. 12

1. MV *J. Ross Mackay* at Big Bay Point Marina, Lake Simcoe.





2. MV *J. Ross Mackay* at Big Bay Point Marina, Lake Simcoe. The IKB Seistec receiver is secured over the stern for travel to the start of the survey line.

GSC Open File 3037 Photo Album, (Part C), Lake Simcoe Survey, 1992-93. p. 13



3. Ron Good loading gasoline for the generator.

4. Paul White, Robert Burns and Marten Douma repairing sidescan sonar cable and towfish on the dock at Big Bay Point Marina.





5. Michael, Phoebe and Aidan Todd in the wheelhouse of the MV *J. Ross Mackay.* 

6. Phoebe Todd in the wheelhouse of the MV J. Ross Mackay.





7.The crew of the MV *J. Ross Mackay* (from left to right): Ron Good, Brian Todd, Robert Burns, Marten Douma and Paul White.

8. The crew of the MV *J. Ross Mackay* (from left to right): Ron Good, Brian Todd, Robert Burns, Marten Douma and Paul White.



9. MV *J. Ross Mackay* at the Big Bay Point Marina, Lake Simcoe.





10. MV J. *Ross Mackay* at the Big Bay Point Marina, Lake Simcoe, with Ron Good on deck.



11. MV *J. Ross Mackay* at the Big Bay Point Marina, Lake Simcoe, with Ron Good on deck.

12. MV *J. Ross Mackay* at the Big Bay Point Marina, Lake Simcoe, with Paul White adjusting the generator above the wheelhouse.



13. MV *J. Ross Mackay* at the Big Bay Point Marina, Lake Simcoe.





14. MV *J. Ross Mackay* at the Big Bay Point Marina, Lake Simcoe.

15. MV *J. Ross Mackay* at the Big Bay Point Marina, Lake Simcoe, 1992. Marten Douma is on deck.

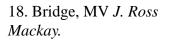




16. Jim Hunter on the bridge of the ship, 1992.



17. Brian Todd and Paul White servicing generator, Big Bay Point Marina, June, 1993.





GSC Open File 3037 Photo Album, (Part C), Lake Simcoe Survey, 1992-93. p. 21

19. The MV J. Ross Mackay at Big Bay Point Marina, Lake Simcoe, May, 1993.



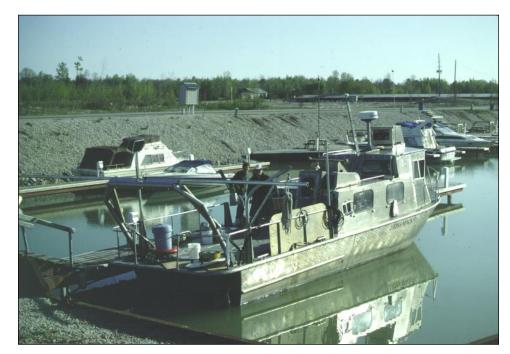


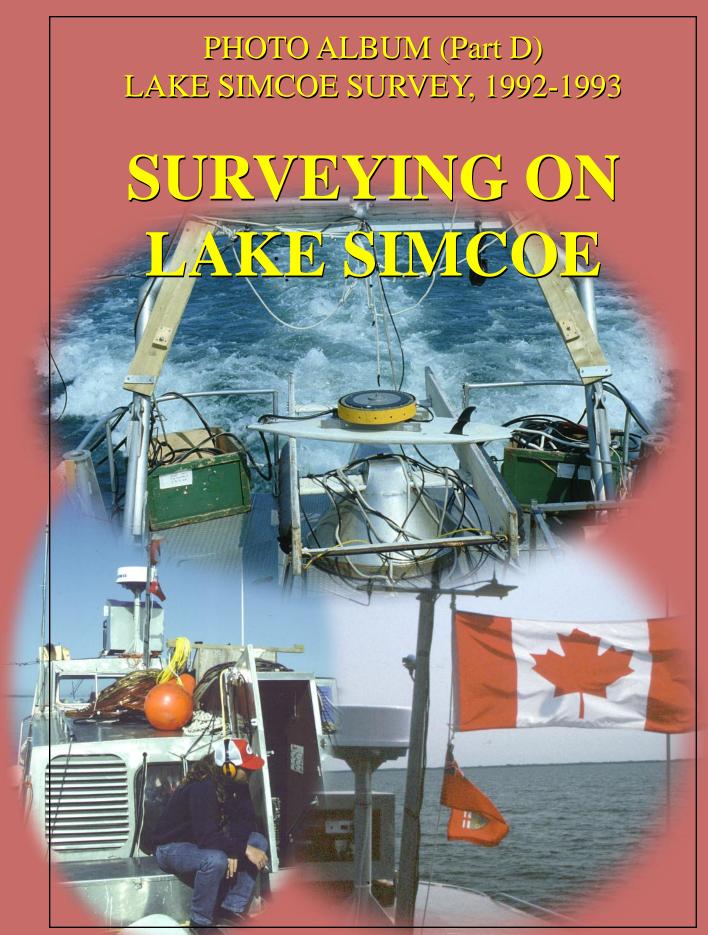
20. The MV J. Ross Mackay at Big Bay Point Marina, Lake Simcoe, May, 1993. The Seistec system is in the water for testing. The booms are extended off the A-frame for outfitting.



21. MV *J. Ross Mackay*, Big Bay Point Marina, Lake Simcoe, 1993.

22. MV *J. Ross Mackay*, Big Bay Point Marina, Lake Simcoe, 1993.





GSC Open File 3037 Photo Album, (Part D), Lake Simcoe Survey, 1992-93. p. 24



1. View aft of the ship showing the instrument towing arrangement. In the centre of the image is the surfboard under which the airgun multichannel seismic source is slung. On the right is the IKB Seistec receiver (aft) and the surfboard (forward) under which the Seistec boomer source is slung.

2. Sunny day surveying on Lake Simcoe. Note that the IKB Seistec surfboard (far right) has been adjusted to tow below the water surface. This configuration reduced the amount of noise on the records.





3. Surveying on Lake Simcoe.

4. Survey tow arrangement. Note IKB Seistec boomer surboard (lower right) below water surface.





5. Insects on a warm day in Lake Simcoe. So may insects died on the hot aluminum deck that we had to sweep piles of them off into the water once we returned to the dock.



6.The MV *J. Ross Mackay* surveying on Lake Simcoe.

7. The MV J. Ross Mackay surveying on Lake Simcoe. Marten Douma is on deck.





8. The MV J. Ross Mackay surveying on Lake Simcoe. Marten Douma is on deck to the left and to the right is Paul White. 9. The MV J. Ross Mackay surveying on Lake Simcoe. Marten Douma is on deck to the left and to the right is Paul White.





10. The MV J. Ross Mackay surveying on Lake Simcoe. Marten Douma is on deck to the left and to the right is Paul White.



11. The MV J. Ross Mackay surveying on Lake Simcoe. Marten Douma is at the stern.

12. The MV J. Ross Mackay surveying on Lake Simcoe. Marten Douma is at the stern.





13. Adjusting the survey towing configuration while underway. From left to right are Robert Burns, Marten Douma, Paul White and Brian Todd.

14. Adjusting the survey towing configuration while underway. From left to right are Robert Burns, Marten Douma, Paul White and Brian Todd.



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15. Adjusting the survey towing configuration while underway. From left to right are Marten Douma, Paul White and Brian Todd.





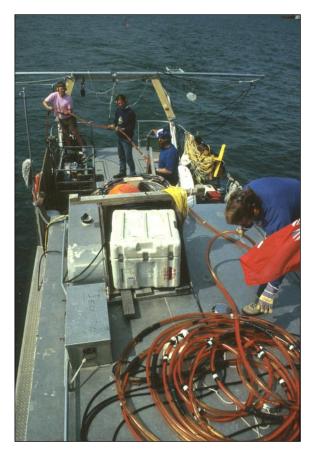
16. Adjusting the survey towing configuration while underway. From left to right are Marten Douma, Brian Todd, Paul White and Robert Burns.



17. Heading back to harbour after a day of surveying. All equipment secured on deck.

18. Paying out the oil-filled seismic eel over the starboard stern. From left to right are Marten Douma, Paul White, Robert Burns and Brian Todd.





19. Paying out the oil-filled seismic eel over the starboard stern. From left to right are Marten Douma, Paul White, Robert Burns and Brian Todd.

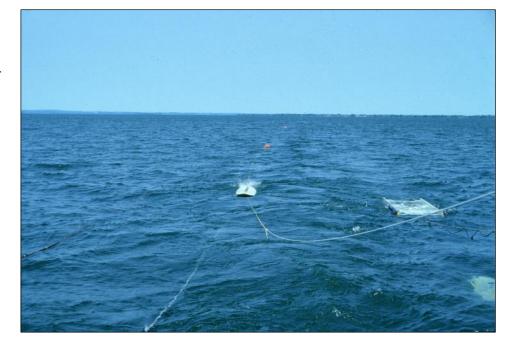
20. Launching the magnetometer towfish (dark grey) and sidescan sonar towfish (yellow). From left to right are Robert Burns, Brian Todd, Marten Douma and Paul White. The beginning and end of the seismic eel are denoted by the orange floats in the distance.





21. Underway in Lake Simcoe.

22. Towing survey instruments.



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23. Towing survey instruments. The beginning and end of the seismic eel are denoted by the orange floats in the distance. Note seismic boomer surfboard towing beneath the water surface on the lower right.

24. Deck configuration of the MV *J. Ross Mackay* while towing survey instruments. Hatches to the diesel engines are open to allow heat to escape. Door to the laboratory is closed due to the high noise level on deck.



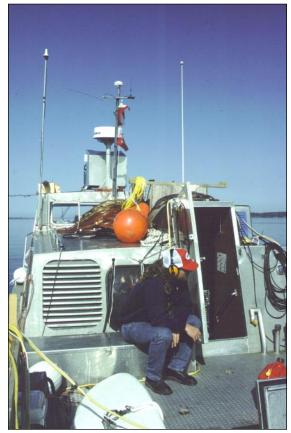
GSC Open File 3037 Photo Album, (Part D), Lake Simcoe Survey, 1992-93. p. 36

25. Heading back to harbour after a day of surveying. All equipment secured on deck.





26. Geophysical survey underway on Lake Simcoe, June, 1993. Seistec surfboard and boomer are on the right, trailed by the Seistec receiver catamaran. The sleeve gun surfboard is in the centre of the image.



27. Paul White smoking on deck.



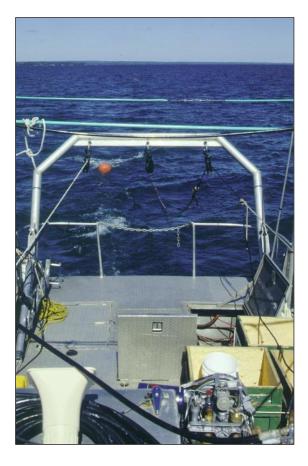
28. A calm survey day on Lake Simcoe.



29. A calm survey day on Lake Simcoe.

30. Airgun seismic survey, Lake Simcoe, September, 1992.





31. Airgun seismic survey, Lake Simcoe, 1992.

## PHOTO ALBUM (Part E) LAKE SIMCOE SURVEY, 1992-1993

## RETRIEVING SIDESCAN SONAR TOWFISH

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GSC Open File 3037 Photo Album, (Part

Lake Simcoe Survey, 1992-93. p. 40

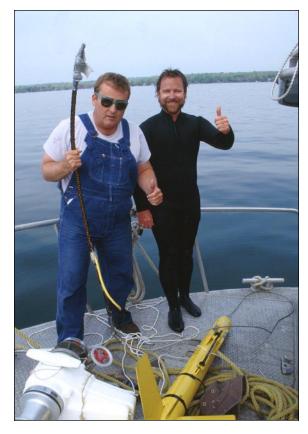


1. Mark Jones about to enter the lake to attach a recovery cable to the sidescan towfish.

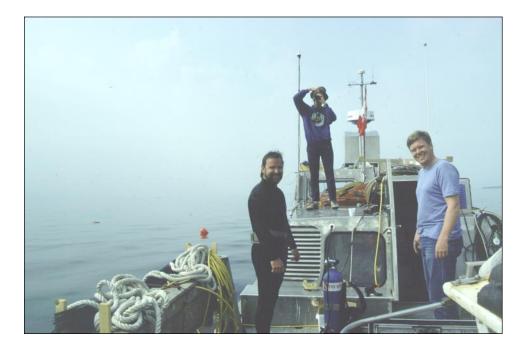
3. Ron Good, Mark Jones and sidescan towfish after the successful recovery.



2. Diver being fed the recovery cable by Marten Douma.

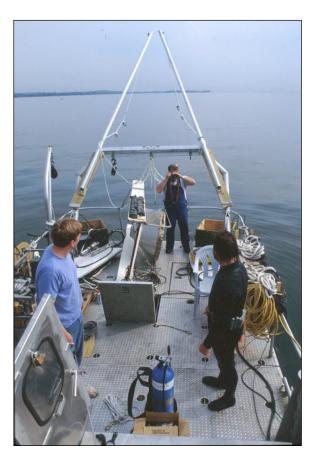


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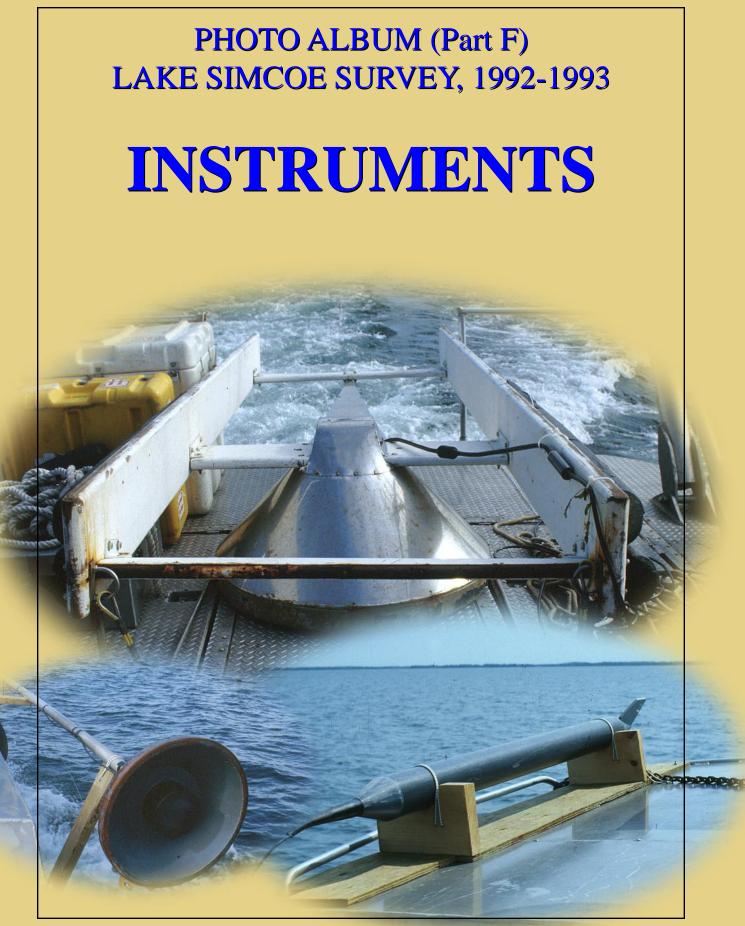


4. Retreiving the lost sidescan towfish, Friday, May 28, 1993. From left to right, Mark Jones (diver), Brian Todd and Marten Douma. Photo taken simultaneously with photo 5

5. On Oro Shoal for the recovery of sidescan sonar towfish, Friday, May 28, 1998. Marten Douma is on the left, Ron Good is in the middle (taking photograph) and Mark Jones is on the right. The sidescan was recovered on Oro Shoal (north end of line 93-1a) in approximately 10-15 feet of water. The yellow towfish was visible from the surface. Photo simultanously taken with photo 4.



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GSC Open File 3037 Photo Album, (Part F), Lake Simcoe Survey, 1992-93. p. 43



1. 3.5 kHz sounder mounted on the starboard side.



2. Seistec line-incone receiver on deck.



3. Magnetometer stowage on wheelhouse top.

4. Compressor for seismic airgun source.



5. Surfboard with airgun attachment.



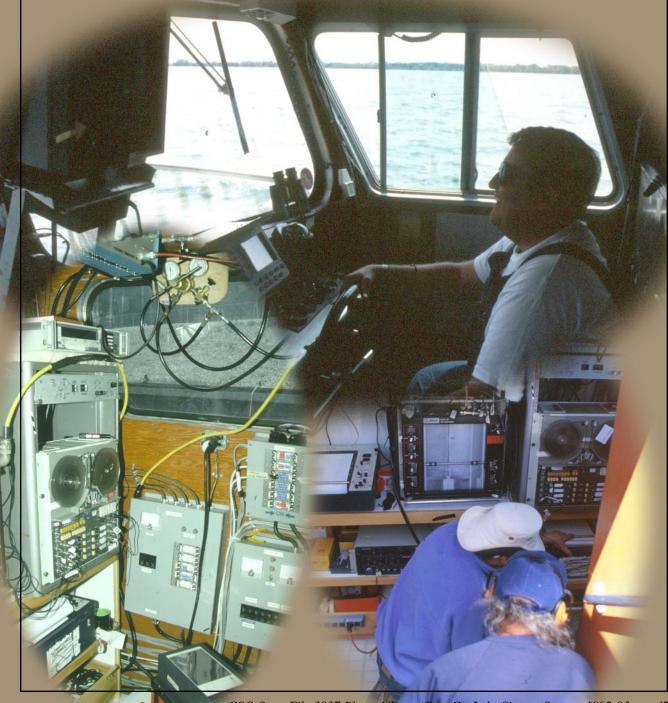
6. Close-up of surfboard with airgun attach-ment.



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## PHOTO ALBUM (Part G) LAKE SIMCOE SURVEY, 1992-1993

## SHIP'S INTERIOR



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1. Robert Burns in the geophysics lab of the MV *J. Ross Mackay.* 



2. Marten Douma and Robert Burns in the geophysics lab on the MV *J. Ross Mackay.* 



3. Paul White (left), Robert Burns (centre) and Martin Douma (right) in the geophysics lab of the MV *J. Ross Mackay*.

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4. Ron Good at the wheel of the MV J. Ross Mackay.

5. Ron Good at the wheel of the MV J. Ross Mackay.





6. Trimble NavTrak GPS display unit in the bridge.

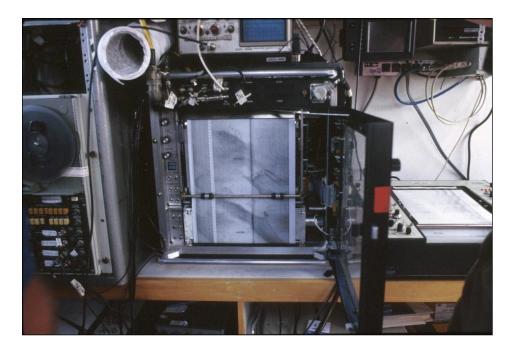
7. Marten Douma in the geophysics lab of the MV *J. Ross Mackay*.



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8. Geophysics lab of the MV *J. Ross Mackay.* 





9. Sidescan sonar recorder.

10. Wheelhouse of the MV J. Ross Mackay showing the computer setup for recording GPS navigation and magnetics.





11. Robert Burns in the geophysics lab of the MV *J. Ross Mackay.* 



12. Robert Burns recording Seistec profiles in the Kawartha Lakes, 1992.

13. Geophysics lab, MV J. Ross Mackay.



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14. Geophysics lab, MV J. Ross Mackay.

15. Geophysics lab, MV J. Ross Mackay.

