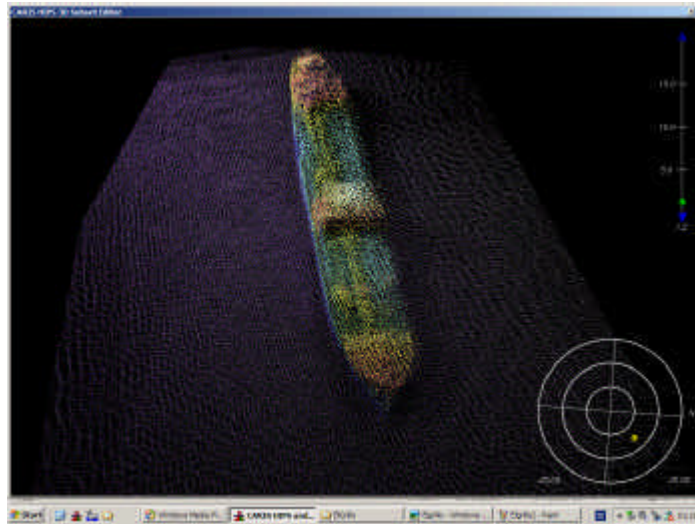


National report of Iceland

Survey Operations 2004



The wreck of the British tanker El Grillo sunk by a German airplane in Seydisfjörður during WW2.

Due to budget constraints the survey season 2004 was limited to 3 months instead of the usual 4 - 4.5 months. This really meant that funds within the ICG were only available for 3 months of operations of the survey vessel Baldur but since it was evident that other organizations sought to utilize the vessels and its survey equipment for scientific purposes the season was planned as it would be extended at least additional 2 weeks. These organizations made funds available from their own budgets.

It was decided to start the survey operations in middle of May and continue until middle of August with the possibility to extend the season until September if needed due to special assignments.

The Baldur was dry docked in April since number of alterations had to be made in the stern which resulted in 80 cm extension of the vessel. These included change of fire fighting system for the engine room, strengthening of the hull above the rudders and new furnishing of the steering engine compartment. Since the Reson multibeam sonar head amongst with other related equipment for multibeam survey had been dismantled the year before and sent away by US NAVO personnel for inspection, maintenance and calibration, these were re-mounted as well while in the dock.

The US NAVO personnel arrived in beginning of May in order to re-mount the multibeam equipment, assist with calibration and testing. All systems were ready and running by 13. May but the target had been to be ready for the survey season by middle of May.

The first assignment was search for the wreck of the Godafoss, an Icelandic cargo/passenger ship sunk in WW2 by a German submarine. Quite a search had been done some years before but new information called for a new search for the documentary film producer involved. A likely site was discovered near last known position of the ship.

Upon completion of the Godafoss assignment the course was set for the east coast of Iceland where the northern portion of chart 73 which covers the Austfirdir fjords still needed to be surveyed in order to republish the chart according to standards. The southern portion and parts of the northern portion were covered in 2003. It was estimated that this project would last until end of July.

As it turned out, the project was finished a little early. The extra time was used for transit to the north coast but a survey for geological purposes was to start in August for the University of Iceland and Iceland GeoSurvey off the north-east coast. The approach for the port of Dalvík was surveyed before the scientists arrived onboard the Baldur and preparations made for this extensive project and no time could be lost in order to finish it on time.

Due to good planning and cooperation of the weather the project was finished on time but a subsidiary of Iceland GeoSurvey requested a special survey in Eyjafjörður on the north-coast since a study was being done if it was feasible to lay a pipeline across the fjord. During this project the port of Akureyri officials asked for a special survey of the deep draft terminals in the port and this request was handled and finished before the Baldur left the Eyjafjörður area.

During the transit back to Reykjavík 3 more assignments that had been planned in advanced were undertaken but one of these was a one day survey in Skagafjörður around the ancient market town Kolkuos for the National Museum of Iceland. If the prospect was to find a historical wreck the result from the survey was negative but results from the data processing give the archaeologists a better idea about how the area could have looked like centuries ago.

The other two assignments were approach surveys for the ports of Bolungarvík and Patreksfjörður both situated on the north-west coast of Iceland. All these special assignments were finished just before the end of August but the Baldur arrived in Reykjavík on 31. August and that was the end of the survey season this year although some minor survey work has been done around Reykjavík few times this winter.



The Baldur entering Husavík harbour during the 2004 survey season

The total duration of the survey season was 118 days. During this timeframe some 4,145 NM were surveyed, covering 1,510 km². The total milage during the season logged 6,442 NM but the island was circumnavigated during the process. Although total survey milage is a little less than last year this is still one of the best seasons since the Baldur has been in use. Some of the factors contributing to this good results are very mild summer, a lot of area covered in the shelters of deep fjords, good planning and dedication.

The alterations that have been made on the Baldur during the last few years have been very successful. The vessel is now a much steadier survey platform and working conditions are much better as a result. Mainly this is due to the external water tanks that were added topside and the extension added to the stern. The frame built around the multibeam sonar head under the keel has also been very successful. In addition to being protection for the sonar head it serves as a streamliner for the water flow so interruption and noise are minimum once the sound waves return to the head.

It is evident that processing workload has increased since multibeam data started to pour in. The fact that only one licence was available for processing and that in-house computers hardly handled the enormous amount of data to begin with caused pile up of unprocessed data. With another licence, computers that can handle the load and experience the process has speeded up. It is anticipated that by the end of this year all collected data will be processed and ready to be compiled into the respective charts. So far quite a bit of the data has already been utilized for newly published charts and the result is definitely safer and more exclusive documents for the mariners.



The hull mounted Reson 8101 sonarhead

Nautical Charts and Publications:

Charts

In 2004 new charts and new editions were published as the table shows. The coastal chart series in scale 1:100 000 grew by one when chart no 37 was published.

New chart	New edition	No. – Title	Scale – Datum
	X	314 Grindavík	1:10.000 – WGS84
X		37 Hjörsey - Stykkishólmur	1:100.000 – WGS84
	X	31 Dyrhólaey – Snæfellsnes (INT 1103)	1:300.000 – WGS84
X*		426 Ólafsvík - Stykkishólmur	1:50.000 – WGS84
	X	44 Norðurflói (Breiðafjörður)	1:70.000 – Reykjavík
	X	519 Sauðárkrókur	1:10.000 – WGS84
	X	531 Húsavík	1:10.000 – WGS84
X*		613 Vopnafjörður	1:10.000 – WGS84
	X	610 Raufarhöfn	1:10.000 – WGS84
	X	611 Þórshöfn	1:10.000 – WGS84
X*		81 Stokksnes – Dyrhólaey (INT1102)	1:300.000 – WGS84

* Extended or changed limits.

ENC

ENC-production is at a preparatory stage. Plans are to start production in 2005.

Nautical publications

Tide tables and Tide almanac for 2005. Chart catalogue 2004. List of Lights 2004. Notices to Mariners, 7 issues with total of 46 NtM's.

Status of INT charts produced by Iceland in Area D

Under the existing INT scheme in area D, Iceland is responsible for production of 13 INT charts. To date 8 charts have been published, 3 charts will be published this year. The present situation and planned actions are provided in the following table:

INT Chart	Producer Number	*Latest Edition	Scale Latitude	Scale	Dimensions (mm)	Present Datum
1100	61	1999	65°00'	300,000	962 x 652	WGS-84
(1101)	71	2005	65°00'	300,000	642 x 961	WGS-84
1102	81	2004	65°00'	300,000	964 x 647	WGS-84
1103	31	2004	65°00'	300,000	964 x 656	WGS-84
(1104)	41	2005	65°00'	300,000	650 x 958	Hjörsey
1105	51	2001	65°00'	300,000	653 x 964	WGS-84
(1010)	21	2005	65°00'	1,000,000	New Chart	WGS-84
1110	57	2003	65°00'	100,000	653 x 949	WGS-84
(1111)	73	2006	65°00'	100,000	638 x 939	Reykjavik -Datum
1112	36	2003	65°00'	100,000	653 x 953	WGS-84

1113	362	2003	65°00'	10,000	963 x 661	WGS-84
1114	46	2003	65°00'	100,000	953 x 653	WGS-84
1118	530	2003	65°00'	10,000	472 x 572	WGS-84
*(Underlined figures are planned year of publication) Figures in () have not been published yet as INT charts						

Malawi Survey Project

Icelandic Coast Guard has been involved in the project “Charting of Lake Malawi” which was launched in 2001 and aims at ensuring safety of navigation on the lake and updated navigational charts. The Icelandic Coast Guard has provided technical assistant and supervises the training of local professionals.

The first two charts were published 2003. Since then another two have been printed. In addition to these 4 charts that have already been published, data has been collected for 5 other charts.

CARIS software for paper chart production was bought early 2004 and it is anticipated that the cartographic operations will increase to a significant extent.



First two charts were published in March 2003

The research vessel Arni Fridriksson

The research vessel Arni Fridriksson owned by The Marine Research Institute (MRI) has been used for deep sea survey off the south coast 2001 and off north coast 2003.

The vessel is built as a multipurpose research vessel and was delivered in April 2000. One of the main missions of the vessel is fish stock assessment and it is outfitted with a Simrad EK 500 echosounder with three transducers, 18, 38 and 120 kHz. The transducers are installed in a retractable keel which can be lowered 3.5 meters below the ship's bottom. The ship is also equipped with two Kaijo Denki Sonars, a low and a high frequency. Furthermore a multibeam echosounder, Simrad EM 300 is installed for deep sea survey.



The research vessel Arni Fridriksson

Principal Particulars: Length: 70 m, Breath: 14 m Draft: 6,8 m Speed: cruising 13 -14 knots, max 16 knots, Endurance: 30 days, Accommodation: Crew 18, Scientists: 15

