Report on the stranding of Wilson Skaw

Case nr.: **23-021-S-011**

Date: **18th of April 2023**

Location: **Iceland NV region Lat. 65°35,85N, Long. 021°15,47W**

Description: **Vessel stranded when hitting an underwater rock**

1 Summary

On the 18th of April 2023, the general cargo vessel Wilson Skaw was underway from Port of Hvammstangi, to the Port of Hólmavík, both harbours in Húnaflói on the North coast of Iceland. Stranded near to Kýrhamarsboði in Húnaflói whilst underway loaded with salt in big bags off Kollafjarðarnes, in Lat. 65 35' 50"N, Long. 021 15' 28"W at 1318 hours LT (UTC) in good weather.

The vessel was unable to break free using her own engines and the Coast Guard vessel Freyja was sent to the scene. The Environment Agency of Iceland was sent on scene as well and it fenced the vessel with a barrier to avoid pollution. Figure 1 shows the area and position were Wilson Skaw grounded. The crew of CGV Freyja inspected the hull and bottom of Wilson Skaw as well as connecting a towline to her. Divers from Freyja inspected the bottom in the surrounding area as well as the crew of Freyja using the ship's echosounders. The weather when Wilson Skaw grounded was 0-2 m/s, no swell, clear sky and good visibility (Figure 2 &3).

On the 21st of April 2023 the light wind turned from SE and SW to NNE 10-12 m/s. Because of the rougher sea Wilson Skaw started to move on the rock. At that time, she was connected to Freyja, which managed to free her of the rock and tow her into deeper water. Following that Wilson Skaw was towed into Steingrímsfjörður towards the Port of Hólmavík were she dropped anchor outside the harbour for further inspection.

Underwater rock on the Wilson Skaw grounding site (fig.1).

Figure 1

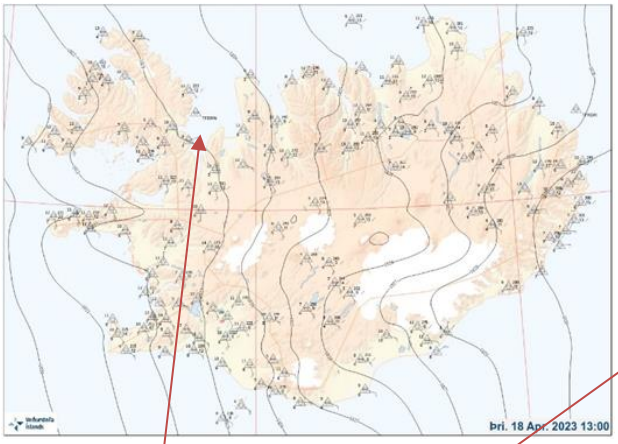


Figure 2

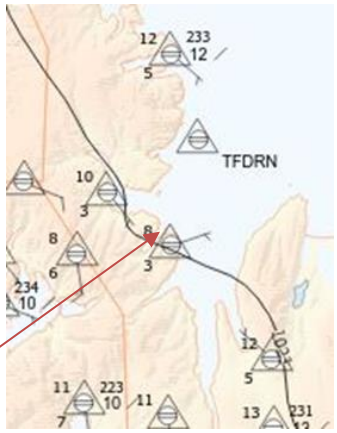


Figure 3

Weather on the grounding site on the 18th of April at 13:00 from Icelandic Met Office (fig 2 &3).

2 FACTUAL INFORMATION

2.1 Technical specifications of Wilson Skaw.

Identification

Ship Type:	General cargo ship	*Flag:*	Barbados
IMO Number:	8918459	*Port of Registry:*	BRIDGETOWN
		Call Sign:	8PAK4

Classification

Class Symbols:	I ✠Hull ✠Mach
Service Notations:	General cargo ship -heavycargo
Navigation Not.:	Unrestricted navigation
Add. Class Not.:	✠AUT-UMS, ICE CLASS ID, GRABLOADING
Machinery:	✠MACH
Equipment:	2 Main anchors, chain diameter 46 mm, steel quality Q2 (High tensile strength steel)

Hull

Gross Tonnage 69:	4197	*Builder:*	Apatin Shipyard
Deadweight:	6460 ton	*Date of build:*	31 Jul 1996
LPP:	112.7 m	*Hull Material:*	Steel
Breadth:	15.2 m	*Hull Info:*	Double Hull
Depth:	8.6 m		Machinery Aft
Draught:	6.68 m		2 cargo holds (0 m3)
Freeboard:	1923 mm	*Survey Type:*	Normal (Hull)

Hatch covers

Identification	Type	Last Close-up survey	Job Number	Last Operational tests	Job Number
1	M.O.	11 Sep 2016	ARK0/2016/J5001	13 Jun 2022	AVS0/2022/J5479
2	M.O.	11 Sep 2016	ARK0/2016/J5001	13 Jun 2022	AVS0/2022/J5479

M : Mobile, P : Pontoon, M.O. : Mechanically Operated

Machinery

Propelling type:	Diesel	*Elec. installation:*	1 Generator 975 kVA (780 kW), 480 V, 60 Hz 2 Generators 259 kVA (207 kW), 440 V, 60 Hz
Total power:	2949 kW (4007 HP)		
Propelling machinery:	1 MAN DIESEL & TURBO 12V28/32A 4T, 12 cyl, 775 rpm		
Builder:	MAN Diesel & turbo	*Boiler(s):*	1 Combined Auxiliary boiler 114 m², 9 bar
Date of build:	01 Dec 2018		
Propeller:	1 Controllable pitch Screw Propeller (oil - closed) 5, 146 rpm	*Thruster(s):*	1 forward thruster 590 kW
		Survey Type:	Normal
Auxiliary Engine(s):	2 Diesel (556Kw/756HP)		
Emergency Engine(s):	1 Diesel (90Kw/122HP)		

Automated Installations

Engin. room alarm/contr. panel.
Marker : Moland Automation AS.
Type : Macom 100
Serial No 122
Oil mist detector
Marker : Schnaller Automation
Type: Visatron VN 115/87A
Serial No : 12/1-03972// 12/1-13436
Firealarm type : Autronica
Type : BB 20

2.2 Ownership and management.

Registered Owner

Name:	WILSON SHIPOWNING AS
Company Number:	55738
IMO Number:	5025661
Address:	Damsgårdsveien 135 5160 Laksevåg NORWAY

Manager

Name:	WILSON SHIP MANAGEMENT AS
Company Number:	14926
IMO Number:	1168545
Address:	Damsgårdsveien 135 5160 Laksevåg NORWAY

Wilson Skaw

2.3 Marine Casualty information

Date and time: 18th April 2023 at 13.18 (UTC)

Location of incident: Húnaflói Iceland 65°35,85‘N – 021°15,47‘W

Injuries/fatalities: None

Damage/environmental impact: Damage to the hull in various places, propeller and rudder.

Ship operation: On passage

Voyage segment: Enroute

External/internal environment: Wind 0-2 m/s, no swell clear sky, good visibility.

Persons onboard: 10

2.4 Crews’ nationality

Master: Poland

Chief officer: Poland

Second officer: Philippines

Able seaman: Philippines

Able seaman: Philippines

Able seaman: Philippines

Chief engineer: Poland

Third engineer: Philippines

Motorman: Philippines

Cook: Philippines

3. Narrative

3.1 Reconstructing events

Wilson Skaw was fitted with Simplified Voyage Data Recorder (S-VDR) which records communications on the bridge. For the investigation of the accident, the quality of the recordings was not clear but in accordance with the testimony provided by the Master and the Officer on watch. Wilson Skaw was fitted with double ECDIS electronic charts. She had also a JFE-380 echosounder and all other required navigational equipment. When the sequence of events was reconstructed, the investigators used a variety of sources, including Automatic Identification System (AIS) data from the Icelandic Coast Guard, interviews with the Master and the Officer on watch when the incident occurred, police reports and data collected from the vessel's electronic charts. (See fig. 4-6).

Figure 4: One of two ECDIS on board Wilson Skaw

Figure 5: S-VDR

Figure 6: Microphone for the S-VDR over the chart table

3.2 The Crew

The crew of Wilson Skaw was formed by three Polish officers i.e. Master, Chief Officer and Chief Engineer. The remaining crew of ten where Philippines including Second Officer and Second Engineer. The Master of Wilson Skaw had been a Master on cargo vessels for more than 28 years. The Second officer had two years' experience. Both had all appropriate qualifications.

3.3 Preceding events

After discharging cargo (salt) in Hvammstangi Wilson Skaw unberthed and set course to Hólmavík at 1150 on the 18th of April 2023. The Chief Officer had then performed a draught survey and the maximum draught was estimated 4.9 metres. The Master expected squat effects to be 2 meters and assumed that 10 metres depth would be sufficient. The tide tables showed 0.3 metres above high tide sea level**.** The final passage plan is shown in figure 7. The previous passage plan was altered.

Route name: HVAMSTANGI - HOLMAVIK

WAYPOINTS														
WPT	Name	Position	Leg	Total Distance	X PORT X STBD	Turn Radius	Draught	Wave Respond	Water Depth	Passage Type	CATZOC	UKC	Masthead	Overhead Clearance
0	BERTH	65° 23.641 N 020° 56.877 W	XXX.X XXX.X	XXX.X	XXX.X XXX.X	XXX.X	XXX.X	XXX.X	XXX.X	XX	XX	XXX.X	XXX.X	XXX.X
1	BREAKWATER	65° 23.578 N 020° 56.956 W	207.6° 0.07 NM	0.07 NM	0.01 NM 0.01 NM	0.00 NM	4.5 m	Undefined	10.0 m manual	Constrained Waters	A1	5.5 m manual	25.5 m	
2	PILOT OFF	65° 23.648 N 020° 57.240 W	300.4° 0.08 NM	0.15 NM	0.02 NM 0.02 NM	0.20 NM	4.5 m	Undefined	10.0 m manual	Constrained Waters	B	5.5 m manual	25.5 m	
3	HUNAFLOI	65° 27.434 N 021° 02.205 W	331.4° 4.36 NM	4.52 NM	0.20 NM 0.30 NM	0.40 NM	4.5 m	Undefined	10.0 m manual	Constrained Waters	B	5.5 m manual	25.5 m	
4	HUNAFLOI W	65° 35.701 N 021° 15.447 W	326.4° 9.97 NM	14.48 NM	0.10 NM 0.20 NM	0.40 NM	4.5 m	Undefined	10.0 m manual	Constrained Waters	D	5.5 m manual	25.5 m	
5	STEINGRIMSFJORD	65° 37.991 N 021° 18.745 W	329.2° 2.56 NM	17.05 NM	0.15 NM 0.40 NM	0.40 NM	4.5 m	Undefined	10.0 m manual	Constrained Waters	D	5.5 m manual	25.5 m	
6	ABORTPOINT	65° 42.049 N 021° 39.202 W	295.7° 9.51 NM	26.56 NM	0.20 NM 0.10 NM	0.03 NM	4.5 m	Undefined	10.0 m manual	Constrained Waters	D	5.5 m manual	25.5 m	
7	APROACH ENTRANCE	65° 42.197 N 021° 39.966 W	295.2° 0.34 NM	26.89 NM	0.20 NM 0.10 NM	0.03 NM	4.5 m	Undefined	10.0 m manual	Constrained Waters	B	5.5 m manual	25.5 m	
8	BREAKWATER	65° 42.283 N 021° 40.047 W	338.9° 0.10 NM	26.99 NM	0.01 NM 0.01 NM	0.03 NM	4.5 m	Undefined	10.0 m manual	Constrained Waters	B	5.5 m manual	25.5 m	
9	BERTH	65° 42.327 N 021° 40.138 W	319.2° 0.06 NM	27.06 NM	0.00 NM 0.00 NM	0.00 NM	4.5 m	Undefined	10.0 m manual	Constrained Waters	B	5.5 m manual	25.5 m	

Figure 7

The voyage input in the vessels ECDIS is shown in figure 8.

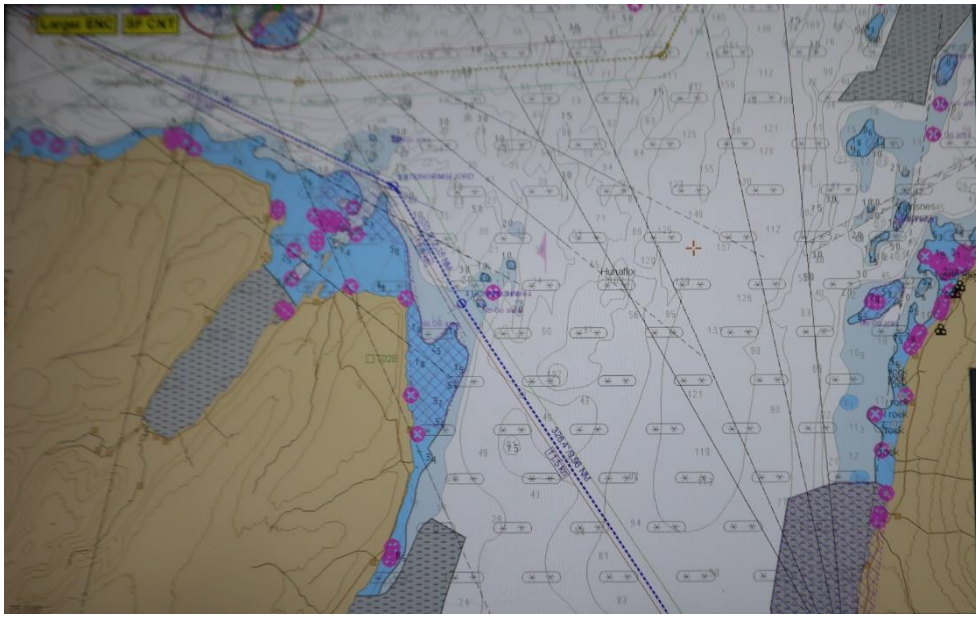
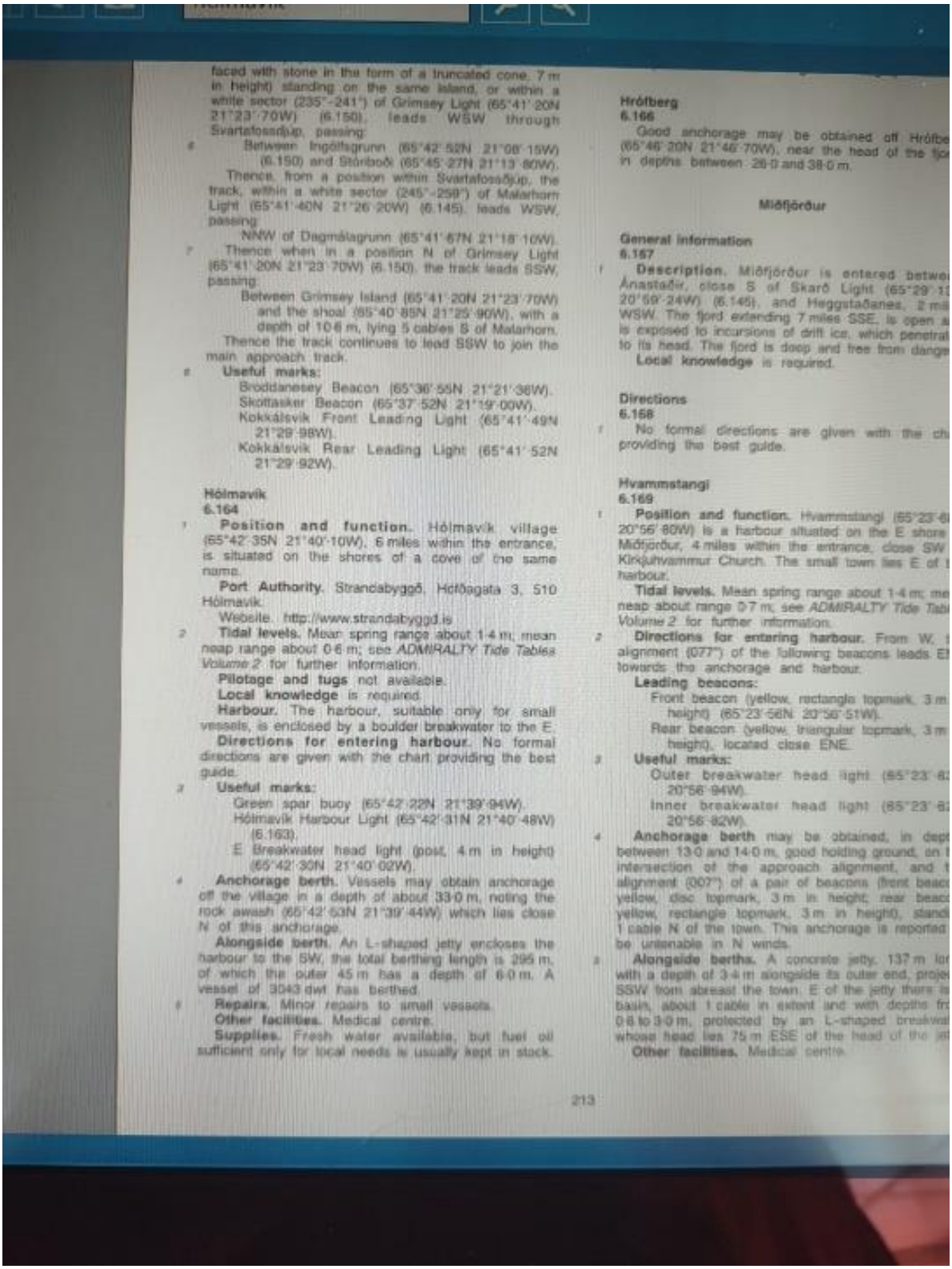


Figure 8.

The Master had access to Admiralty e-nautical publications viewer (Figure 9). It states clearly that when entering Hólmavík local knowledge is required.



faced with stone in the form of a truncated cone, 7 m in height) standing on the same island, or within a white sector (235°–241°) of Grimsey Light (65°41′·20N 21°23′·70W) (6.150), leads WSW through Svartafossdjúp, passing:

6 Between Ingólfsgrunn (65°42′·52N 21°08′·15W) (6.150) and Stórboði (65°45′·27N 21°13′·80W).

Thence, from a position within Svartafossdjúp, the track, within a white sector (245°–259°) of Malarhorn Light (65°41′·40N 21°26′·20W) (6.145), leads WSW, passing:

NNW of Dagmálagrunn (65°41′·67N 21°18′·10W).

7 Thence when in a position N of Grimsey Light (65°41′·20N 21°23′·70W) (6.150), the track leads SSW, passing:

Between Grimsey Island (65°41′·20N 21°23′·70W) and the shoal (65°40′·85N 21°25′·90W), with a depth of 10·6 m, lying 5 cables S of Malarhorn.

Thence the track continues to lead SSW to join the main approach track.

8 **Useful marks:**

Bröddanesey Beacon (65°36′·55N 21°21′·36W).

Skottasker Beacon (65°37′·52N 21°19′·00W).

Kokkálsvík Front Leading Light (65°41′·49N 21°29′·98W).

Kokkálsvík Rear Leading Light (65°41′·52N 21°29′·92W).

Hólmavík

6.164

1 **Position and function.** Hólmavík village (65°42′·35N 21°40′·10W), 6 miles within the entrance, is situated on the shores of a cove of the same name.

Port Authority. Strandabyggð, Hafnagata 3, 510 Hólmavík.

Website: http://www.strandabyggd.is

2 **Tidal levels.** Mean spring range about 1·4 m; mean neap range about 0·6 m; see *ADMIRALTY Tide Tables Volume 2* for further information.

Pilotage and tugs not available.

Local knowledge is required.

Harbour. The harbour, suitable only for small vessels, is enclosed by a boulder breakwater to the E.

Directions for entering harbour. No formal directions are given with the chart providing the best guide.

3 **Useful marks:**

Green spar buoy (65°42′·22N 21°39′·94W).

Hólmavík Harbour Light (65°42′·31N 21°40′·48W) (6.163).

E Breakwater head light (post, 4 m in height) (65°42′·30N 21°40′·02W).

4 **Anchorage berth.** Vessels may obtain anchorage off the village in a depth of about 33·0 m, noting the rock awash (65°42′·53N 21°39′·44W) which lies close N of this anchorage.

Alongside berth. An L-shaped jetty encloses the harbour to the SW, the total berthing length is 295 m, of which the outer 45 m has a depth of 6·0 m. A vessel of 3043 dwt has berthed.

5 **Repairs.** Minor repairs to small vessels.

Other facilities. Medical centre.

Supplies. Fresh water available, but fuel oil sufficient only for local needs is usually kept in stock.

Hrófberg

6.166

Good anchorage may be obtained off Hrófbe (65°46′·20N 21°46′·70W), near the head of the fjo in depths between 26·0 and 38·0 m.

Miðfjörður

General information

6.167

1 **Description.** Miðfjörður is entered betwe Ánastaðir, close S of Skarð Light (65°29′·1 20°59′·24W) (6.145), and Heggstaðanes, 2 mi WSW. The fjord extending 7 miles SSE, is open a is exposed to incursions of drift ice, which penetrat to its head. The fjord is deep and free from dange

Local knowledge is required.

Directions

6.168

1 No formal directions are given with the ch providing the best guide.

Hvammstangi

6.169

1 **Position and function.** Hvammstangi (65°23′·6 20°56′·80W) is a harbour situated on the E shore Miðfjörður, 4 miles within the entrance, close SW Kirkjuhvammur Church. The small town lies E of t harbour.

Tidal levels. Mean spring range about 1·4 m; me neap about range 0·7 m; see *ADMIRALTY Tide Tab Volume 2* for further information.

2 **Directions for entering harbour.** From W, t alignment (077°) of the following beacons leads E towards the anchorage and harbour.

Leading beacons:

Front beacon (yellow, rectangle topmark, 3 m height) (65°23′·56N 20°56′·51W).

Rear beacon (yellow, triangular topmark, 3 m height), located close ENE.

3 **Useful marks:**

Outer breakwater head light (65°23′·62 20°56′·94W).

Inner breakwater head light (65°23′·62 20°56′·82W).

4 **Anchorage berth** may be obtained, in dept between 13·0 and 14·0 m, good holding ground, on t intersection of the approach alignment, and t alignment (007°) of a pair of beacons (front beac yellow, disc topmark, 3 m in height; rear beac yellow, rectangle topmark, 3 m in height), standi 1 cable N of the town. This anchorage is reported be untenable in N winds.

5 **Alongside berths.** A concrete jetty, 137 m lo with a depth of 3·4 m alongside its outer end, proje SSW from abreast the town. E of the jetty there is basin, about 1 cable in extent and with depths fr 0·6 to 3·0 m, protected by an L-shaped breakwa whose head lies 75 m ESE of the head of the je

Other facilities. Medical centre.

Figure 9

3.4 The ECDIS

The ECDIS was updated only a few days before the incident. The bathymetry data that the electrical charts was based on is mostly from Danish charts since 1948 (Figure 10). Closer to shore the depth was surveyed with a led line and a sinker.

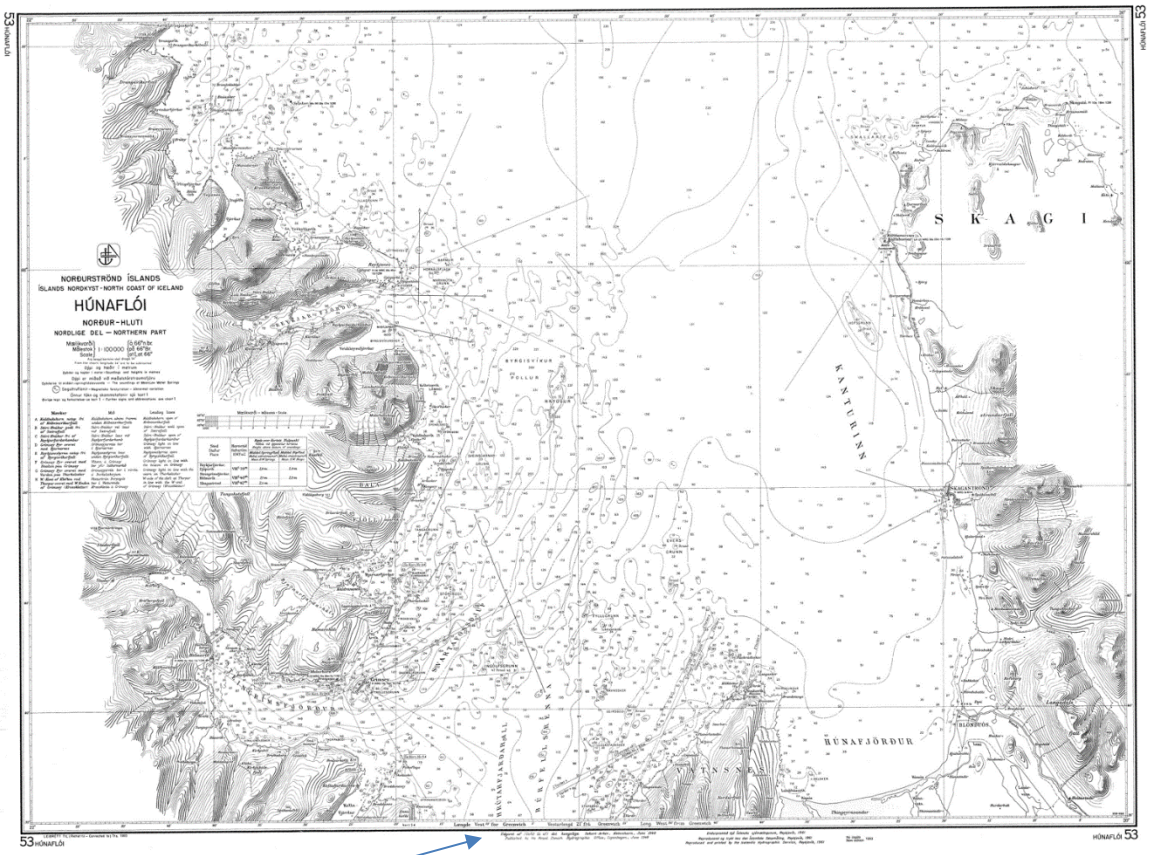


Figure 10

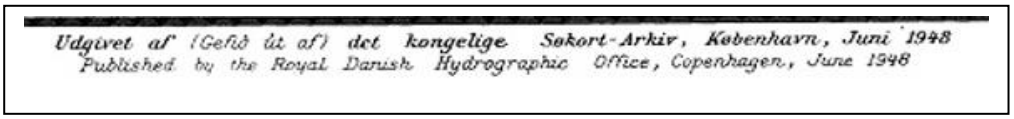


Figure 11 shows bathymetry data from the Royal Danish Hydrographic Office (Kongelige Sökort - Arkiv), Copenhagen, June 1948.

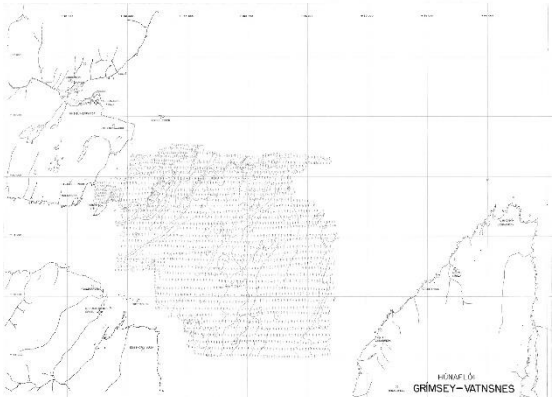
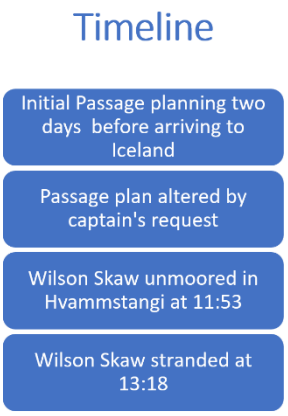


Figure 11

3.6 Timeline of events



3.7 Effects on environment

Very little or no effects were on the environment, but it is a possibility that small amount of oil leaked shortly after the grounding.

3.8 Effects on crew

There were no physical effects on the crew, but the Master was offered trauma care for the crew, which he declined.

3.9 Effects on the vessel

The cargo was discharged but the vessel was declared as a total loss and was towed abroad for recycling. Sea Appendix 2.

4. ANALYSIS

4.1 Aim

The purpose of the analysis is to determine contributing factors and circumstance of the accident used as basis for safety recommendations to prevent similar incidents in the future.

4.2 Possible contributing factors.

When looking at the contributing factor that may have influenced what led to the incident the focus was on quality of the charts, knowledge of the officers (mainly on ECDIS), local weather knowledge sought after, and human factors i.e., cultural difference and onboard atmosphere and culture.

4.3 ECDIS

The navigational practises when using ECDIS, requires the user to have knowledge of the limitations and the quality of the ECDIS data. A passage plan is developed and used by a ship's bridge team to find the safest, favourable and the most economical route. If necessary, the user should also be questioned by other on the bridge team whether a passage plan fits the criterial.[1]
The limitations of ECDIS (data reliability) can be seen in Figure 12.
When Wilson Skaw stranded, she was in CATZOC (Category Zone of Confidence) area D (Figure 18). CATZOC C gives position accuracy of +/- 500 metres and depth accuracy of 2.5 metres on 10 metres depth as shown in chart. The position accuracy of CATZOC D is not defined, but instead it is stated that it is worse than C. Furthermore, in case of CATZOC, the seafloor coverage and typical survey characteristics, state: **"Full area search not achieved,**

ZOC	Position Accuracy	Depth Accuracy	Seafloor Coverage	Typical Survey Characteristics	Symbol
A1	± 5m	=0.50 + 1%d Depth [m] / Accuracy [m] 10 / ± 0.6 30 / ± 0.8 100 / ± 1.5 1000 / ±10.5	Full area search undertaken. Significant seafloor features detected and depths measured.	Controlled, systematic survey high position and depth accuracy achieved using DGPS or a minimum three high quality lines of position (LOP) and a multibeam, channel or mechanical sweep system.	
A2	± 20m	=1.0 + 2%d Depth [m] / Accuracy [m] 10 / ±1.2 30 / ± 1.6 100 / ± 3.0 1000 / ± 21.0	Full area search undertaken. Significant seafloor features detected and depths measured.	Controlled, systematic survey achieving position and depth accuracy less than ZOC A1 and using a modern survey Echosounder and a sonar or mechanical sweep system.	
B	± 50m	=1.0 + 2%d Depth [m] / Accuracy [m] 10 / ±1.2 30 / ± 1.6 100 / ± 3.0 1000 / ± 21.0	Full area search not achieved; uncharted features, hazardous to surface navigation are not expected but may exist.	Controlled, systematic survey achieving similar depth but lesser position accuracy less than ZOC A2 and using a modern survey echosounder, but no sonar or mechanical sweep system.	
C	± 500m	=2.0 + 5%d Depth [m] / Accuracy [m] 10 / ±2.5 30 / ± 3.5 100 / ± 7.0 1000 / ± 52.0	Full area search not achieved, depth anomalies may be expected.	Low accuracy survey or data collected on an opportunity basis such as soundings on passage.	
D	Worse than ZOC 'C'	Worse Than ZOC 'C'	Full area search not achieved, large depth anomalies may be expected.	Poor quality data or data that cannot be quality assessed due to lack of information.	
U	Unassessed - The quality of the bathymetric data has yet to be assessed.				U

**In practice, it is usually assumed that the reliability error of bathymetric data measurements estimated for ZOC (D) and ZOC (U) zones assumes values at least 10% higher than the values estimated for the ZOC zone (C), which can also be recorded as: (2.0m ± 5% · d) · 1.1.*

Figure 12

[1] Application and usability of ECDIS (dmaib.com)

large depth anomalies may be expected. Poor quality data or data that cannot be quality assessed due to lack of information".

On the 16th of April 2023, at 1630, Wilson Skaw left the Port of Sauðárkrókur, enroute to Port of Hvammstangi. Examining this voyage is important when trying to evaluate the vessels tendencies to sail in a poorly charted area. The passage plan is shown in Figure 13. The voyage is shown in Figures 14-16.

Route name: SAUDAKROKUR - HVAMSTANGI

WAYPOINTS														
WPT	**Name**	**Position**	**Leg**	**Total Distance**	**X PORT X STBD**	**Turn Radius**	**Draught**	**Wave Respond**	**Water Depth**	**Passage Type**	**CATZOC**	**UKC**	**Masthead**	**Overhead Clearance**
0	BERTH	65° 45.281 N 019° 38.616 W	XXX.X XXX.X	XXX.X	XXX.X XXX.X	XXX.X	XXX.X	XXX.X	XXX.X	XX	XX	XXX.X	XXX.X	XXX.X
1	BREAKWATER	65° 45.216 N 019° 38.327 W	118.4° 0.11 NM	0.11 NM	0.02 NM 0.02 NM	0.03 NM	5.0 m	Undefined	10.0 m manual	Constrained Waters	A2	5.0 m manual	25.0 m	
2	PILOT OFF	65° 45.749 N 019° 36.886 W	048.1° 0.62 NM	0.74 NM	0.10 NM 0.40 NM	0.40 NM	5.0 m	Undefined	10.0 m manual	Constrained Waters	B	5.0 m manual	25.0 m	
3	ABORTPOINT	65° 48.118 N 019° 37.200 W	356.9° 2.50 NM	3.24 NM	0.20 NM 0.40 NM	0.40 NM	5.0 m	Undefined	10.0 m manual	Constrained Waters	C	5.0 m manual	25.0 m	
4	SKAGAFJORDUR	65° 52.497 N 019° 40.287 W	343.9° 4.56 NM	7.80 NM	0.40 NM 0.40 NM	0.40 NM	5.0 m	Undefined	10.0 m manual	Constrained Waters	B	5.0 m manual	25.0 m	
5	SKAGATA	66° 09.215 N 020° 06.699 W	327.3° 19.71 NM	27.51 NM	0.40 NM 0.40 NM	0.40 NM	5.0 m	Undefined	10.0 m manual	Constrained Waters	B	5.0 m manual	25.0 m	
6	HUNAFLOI NORTH	66° 06.738 N 020° 30.650 W	255.7° 10.04 NM	37.55 NM	0.40 NM 0.40 NM	0.40 NM	5.0 m	Undefined	10.0 m	Constrained Waters	B	5.0 m	25.0 m	
7	VATNSNES	65° 38.456 N 020° 53.686 W	198.4° 29.98 NM	67.53 NM	0.40 NM 0.40 NM	0.40 NM	5.0 m	Undefined	10.0 m manual	Constrained Waters	D	5.0 m manual	25.0 m	
8	HUNAFLOI SOUTH	65° 36.915 N 020° 58.429 W	231.8° 2.50 NM	70.03 NM	0.10 NM 0.40 NM	0.40 NM	5.0 m	Undefined	11.0 m manual	Constrained Waters	D	6.0 m manual	25.0 m	
9	SKARD N	65° 32.350 N 021° 02.357 W	199.6° 4.95 NM	74.97 NM	0.30 NM 0.30 NM	0.40 NM	5.0 m	Undefined	11.0 m manual	Constrained Waters	D	6.0 m manual	25.0 m	
10	SKARD	65° 30.380 N 021° 03.375 W	192.1° 1.97 NM	76.94 NM	0.30 NM 0.30 NM	0.40 NM	5.0 m	Undefined	10.0 m manual	Constrained Waters	D	5.0 m manual	25.0 m	
11	SKARD S	65° 28.832 N 021° 02.686 W	169.5° 1.63 NM	78.57 NM	0.30 NM 0.30 NM	0.40 NM	5.0 m	Undefined	10.0 m manual	Constrained Waters	D	5.0 m manual	25.0 m	
12	MIDFJORDUR	65° 24.726 N 020° 59.396 W	161.6° 4.30 NM	82.87 NM	0.30 NM 0.30 NM	0.40 NM	5.0 m	Undefined	10.0 m manual	Constrained Waters	D	5.0 m manual	25.0 m	
13	APPROACH TO ENTRANCE	65° 23.609 N 020° 57.312 W	142.1° 1.45 NM	84.32 NM	0.10 NM 0.10 NM	0.10 NM	5.0 m	Undefined	10.0 m manual	Constrained Waters	B	5.0 m manual	25.0 m	
14	BREAKWATER	65° 23.578 N 020° 56.956 W	101.7° 0.15 NM	84.47 NM	0.02 NM 0.02 NM	0.05 NM	5.0 m	Undefined	10.0 m manual	Constrained Waters	B	5.0 m manual	25.0 m	
15	BERTH	65° 23.642 N 020° 56.877 W	027.4° 0.10 NM	84.57 NM	0.00 NM 0.00 NM	0.00 NM	5.0 m	Undefined	10.0 m manual	Constrained Waters	A1	5.0 m manual	25.0 m	

Figure 13: Passage plan Sauðárkrókur-Hvammstangi

As can be seen in Figures 14-16 Wilson Skaw went from waypoint 7 (Vatnsnes) to waypoint 12 (Midfjördur) in a CATZOC area D.

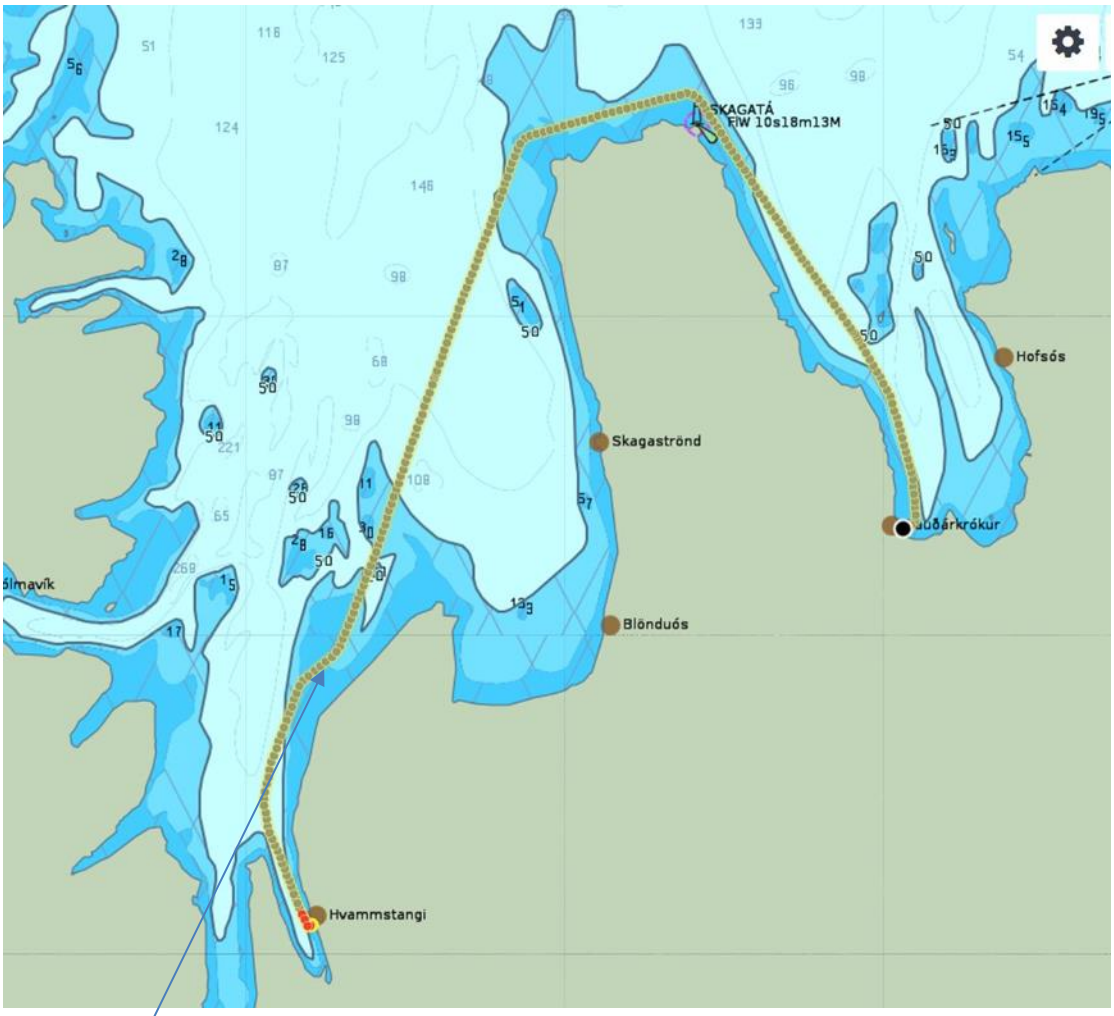


Figure 14 Voyage Sauðárkrókur-Hvammstangi

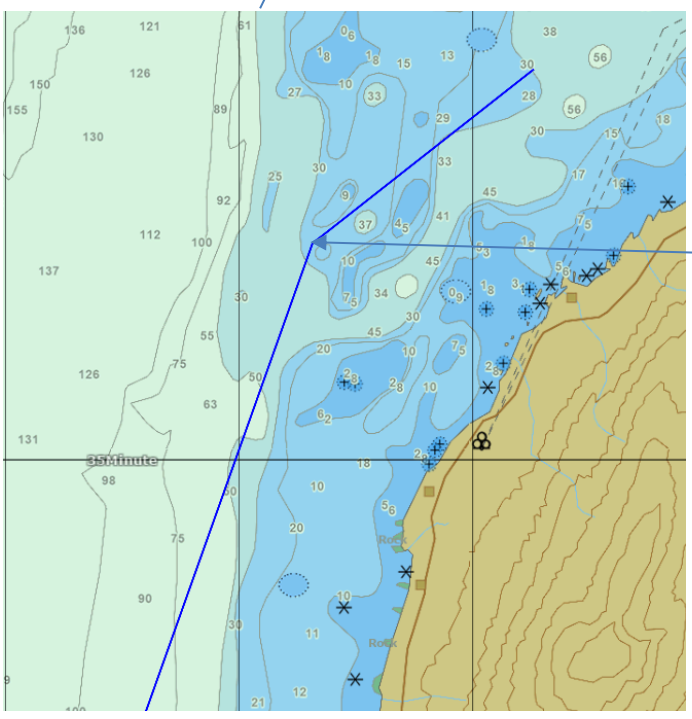


Figure 15

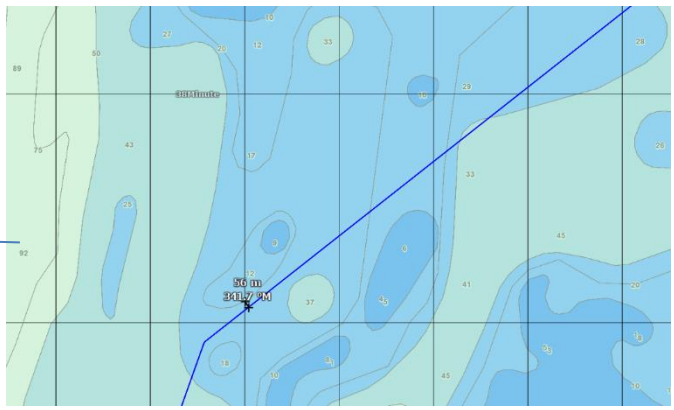


Figure 16

Two days before arriving to Iceland the captain checked the planned routs by the Second Officer. He suggested shorter routes, which were prepared and the passage plan was accepted by the captain the day after. According to the Second Officer he suggested a route further to the North when sailing to Hólmavík than the final passage plan. The Master wanted to save time and fuel and asked for a shorter route. This is considered a contributing factor. The passage plan is shown in Figure 17 (passage plan Hvammstangi-Hólmavík.) As shown in figure 18 part of the route was in CATZOC area D where the depth was only 10 metres.

Route name: HVAMSTANGI - HOLMAVIK

WAYPOINTS														
WPT	Name	Position	Leg	Total Distance	X PORT X STBD	Turn Radius	Draught	Wave Respond	Water Depth	Passage Type	CATZOC	UKC	Masthead	Overhead Clearance
0	BERTH	65° 23.641 N 020° 56.877 W	XXX.X XXX.X	XXX.X	XXX.X XXX.X	XXX.X	XXX.X	XXX.X	XXX.X	XX	XX	XXX.X	XXX.X	XXX.X
1	BREAKWATER	65° 23.578 N 020° 56.956 W	207.6° 0.07 NM	0.07 NM	0.01 NM 0.01 NM	0.00 NM	4.5 m	Undefined	10.0 m manual	Constrained Waters	A1	5.5 m manual	25.5 m	
2	PILOT OFF	65° 23.648 N 020° 57.240 W	300.4° 0.08 NM	0.15 NM	0.02 NM 0.02 NM	0.20 NM	4.5 m	Undefined	10.0 m manual	Constrained Waters	B	5.5 m manual	25.5 m	
3	HUNAFLOI	65° 27.434 N 021° 02.205 W	331.4° 4.36 NM	4.52 NM	0.20 NM 0.30 NM	0.40 NM	4.5 m	Undefined	10.0 m manual	Constrained Waters	B	5.5 m manual	25.5 m	
4	HUNAFLOI W	65° 35.701 N 021° 15.447 W	326.4° 9.97 NM	14.48 NM	0.10 NM 0.20 NM	0.40 NM	4.5 m	Undefined	10.0 m manual	Constrained Waters	D	5.5 m manual	25.5 m	
5	STEINGRIMSFJORD	65° 37.991 N 021° 18.745 W	329.2° 2.56 NM	17.05 NM	0.15 NM 0.40 NM	0.40 NM	4.5 m	Undefined	10.0 m manual	Constrained Waters	D	5.5 m manual	25.5 m	
6	ABORTPOINT	65° 42.049 N 021° 39.202 W	295.7° 9.51 NM	26.56 NM	0.20 NM 0.10 NM	0.03 NM	4.5 m	Undefined	10.0 m manual	Constrained Waters	D	5.5 m manual	25.5 m	
7	APROACH ENTRANCE	65° 42.197 N 021° 39.966 W	295.2° 0.34 NM	26.89 NM	0.20 NM 0.10 NM	0.03 NM	4.5 m	Undefined	10.0 m manual	Constrained Waters	B	5.5 m manual	25.5 m	
8	BREAKWATER	65° 42.283 N 021° 40.047 W	338.9° 0.10 NM	26.99 NM	0.01 NM 0.01 NM	0.03 NM	4.5 m	Undefined	10.0 m manual	Constrained Waters	B	5.5 m manual	25.5 m	
9	BERTH	65° 42.327 N 021° 40.138 W	319.2° 0.06 NM	27.06 NM	0.00 NM 0.00 NM	0.00 NM	4.5 m	Undefined	10.0 m manual	Constrained Waters	B	5.5 m manual	25.5 m	

Figure 17

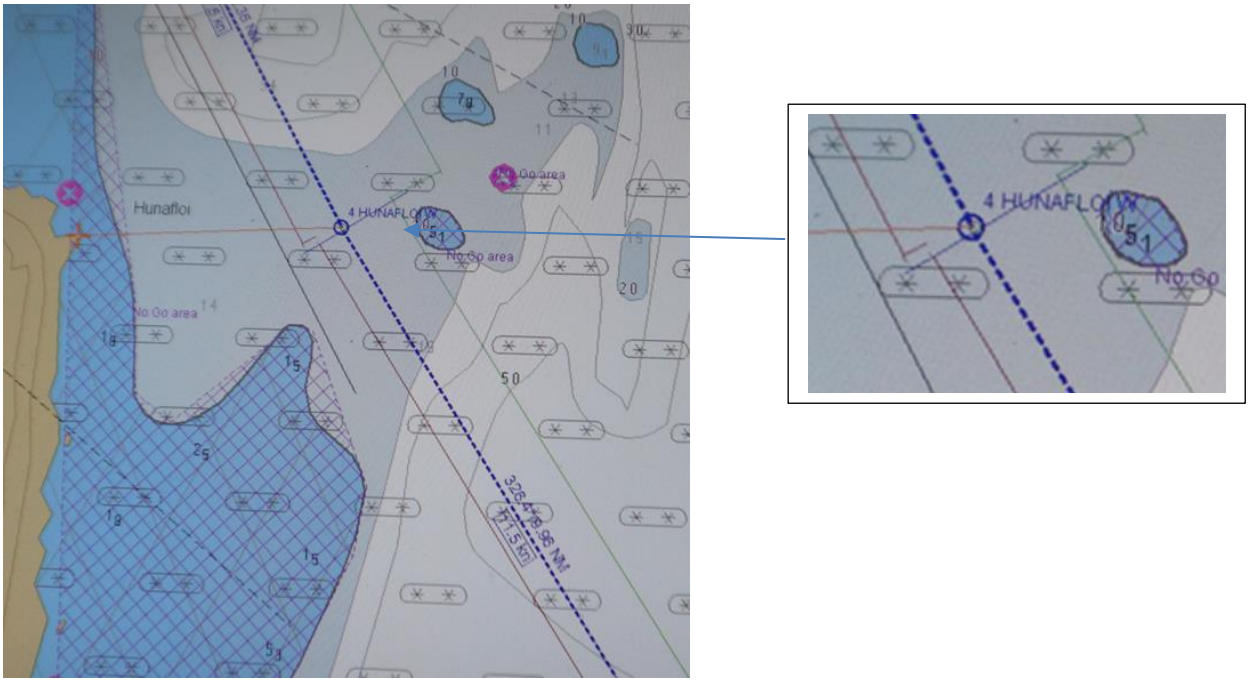
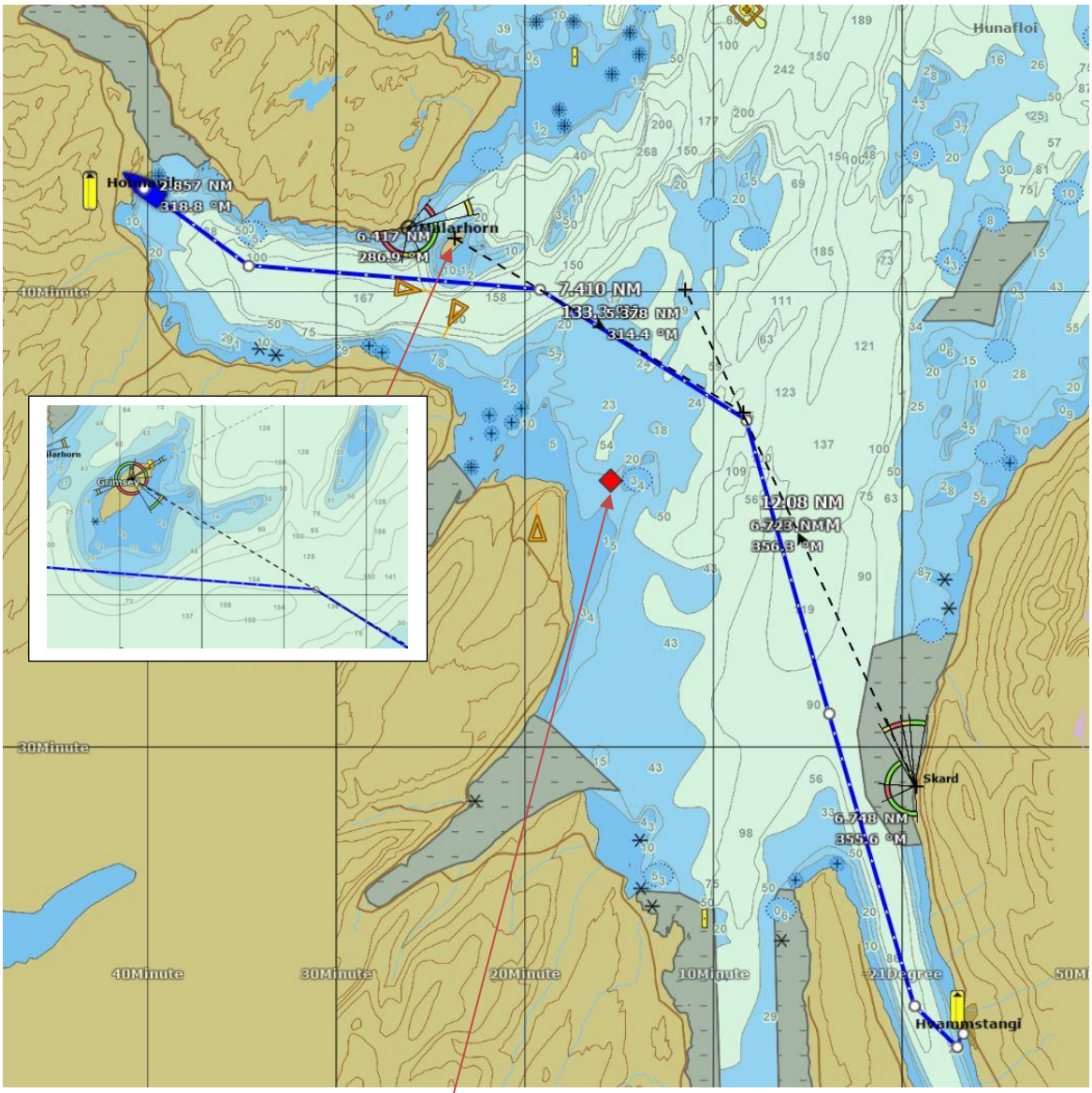


Figure 18 CATZOC are D.

Maps issued by Icelandic Coast Guard Hydrographic Department suggest a sailing route by light sectors as shown in Figure 19. Such a route is also shown in electronic charts like the one that was being used on board Wilson Skaw.



The route Wilson Skaw took was further to the South (Figure 20).

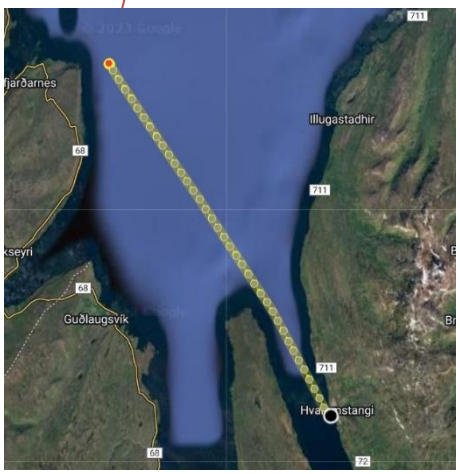


Figure 20

Figure 19

The distance difference between Wilson Skaws route and the certainly safe route is about 3 NM.

4.4 Local Knowledge

As stated in Admiralty e-nautical publications viewer, local knowledge is required when sailing to Hólmavík. During SIA-Iceland investigation there was uncertainty where to get such a knowledge, who should give guidance and what credentials such individuals should have. According to Icelandic law nr 34. 27th of April 1993 2. Paragraph "Navigator: A person certified to navigate vessels in a specific area." When further investigated SIA found out that Icelandic Transport Authority kept an unformal list of individuals with such credentials, but they are a total of nine, one of which is only permitted to navigate in the Faxaflói area.

4.5 Human factors

In interviews with the crew and during inspection of the vessel it was noticeable that there was an authoritative culture onboard. This was further confirmed when the crew stated that they would not question the Master. This was reconfirmed in two separate incidents, when being asked, the Master refused psychological counselling for the crew after Wilson Skaw came afloat on the 26th and 27th of April (Appendix 1). The Master has considerable seniority over the Second Officer, 28 years as Master compared to 2 years for the Second Officer. This can likely have a negative impact on communication unless training takes place. If there is a large age difference this will increase the impact. The decision of the Master to attain a faster route must be addressed. SIA did not investigate the company's Bridge Resources Management system (BRM) but can conclude that if it was present and covers procedures regarding cultural pressure and hierarchy the BRM wasn't followed. This is linked to the incident.

4.6 Echo sounder

The echo sounder had a display fitted to the rear of the officer's chair on the bridge but had the depth alarm off figure 21. This is not considered as a contributing factor. The speed of the vessel when she stranded was too high and the underwater rock appeared on the screen to sudden for the officer on watch to respond by reducing the speed or to make a turn.

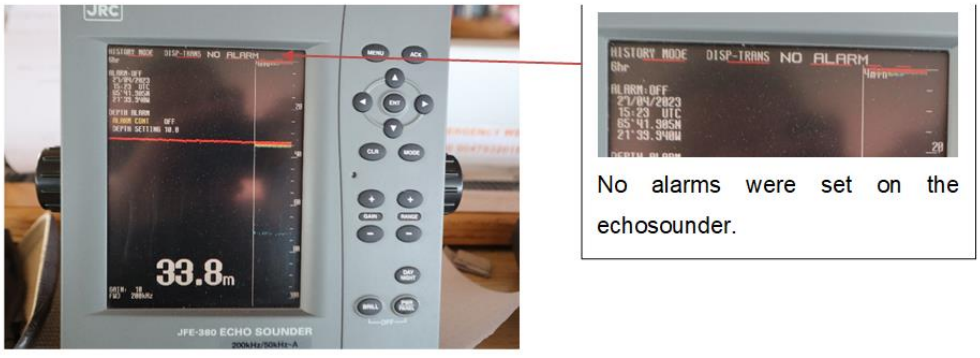


Figure 21

SECTION 5 – CONCLUSIONS

5.1 Safety issues contributing to the accident.

When using electronic charts for navigation the user should be aware of its limitations. Although a passage plans purpose is to find the safest, and the most favourable and economical route officers must always consider the limitations of such charts. The failure to notice or ignore that a part of the voyage was in CATZOC area D, where the depth was about 10 meters was a serious safety issue.

When making a voyage plan officers shall have opinion about what is the most expedient route. They must have an opportunity to question each other and have an opinion whether safety factors are to be met or not.

Local knowledge should be available as stated in Icelandic law ***nr. 41 20th of Mars 2003.***[2] Those law took some changes on the 21st of November 2023 after the incident. Unfortunately, this knowledge is not easily available and not mandatory. The Icelandic Transport Authority should keep a list of certified navigators and have this list easily available for vessels entering or leaving Icelandic harbours. The Icelandic Transport Authority (ICETRA) is responsible for authorizing navigators and keep a list of them. This had not been done in a formal way, and no official list of coastal pilots is publicly available nor were to seek licenced pilots for Icelandic waters. According to the Master he did not trust local knowledge and relied on electronic charts (ECDIS). According to the Master, "it is not practical to seek advice from the local people, were does their knowledge come from? I trust the charts". Shortage or lack of this valuable information and the fact that piloting is not mandatory is considered a contributing factor of the stranding of Wilson Skaw.

5.2 Other safety issues not directly contributing to the incident.

Cultural difference between different nationalities can be somewhat difficult to estimate, but as stated in Appendix 1 there are some indications of authoritative environment. The companies BRM (Bridge Resource Management)[3] should ensure that authority and cultural pressure will not affect communications, or any other working procedures onboard the vessel. BRM should among other things focus on cultural difference and hidden pressure.

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[2] 41/2003: Lög um vaktstöð siglinga | Lög | Alþingi (althingi.is)

[3] https://www.marineinsight.com/guidelines/understanding-bridge-resource-management-and-its-key-elements-on-board-ships/

SECTION 4 – RECOMMENDATIONS

1 SIA-Iceland directs to the Ministry of infrastructure that the Ministry adopt a regulation in accordance with 1. paragraph. 17. article. law nr. 41/2003, in accordance with 3. article law nr. 86/2023.

2 SIA-Iceland directs to the Icelandic Transport Authority that the Authority updates the Admiralty e-nautical publications viewer stating where local knowledge is needed and providing information on where guides can be found.

3 SIA-Iceland directs to Wilson Ship Management AS to ensure the safe management of its vessels through good communication with BRM vessel management.

4 SIA-Iceland directs to Wilson Ship Management AS to enforce the International Convention on the Fair Treatment of Seafarers in the wake of incidents like these. [4]

Final report approved at a meeting 7th of Mars 2024 by Guðmundur Freyr Úlfarsson, Hilmar Snorrason, Hjörtur Emilsson and Jón Finnbjörnsson.

4 https://wwwcdn.imo.org/localresources/en/KnowledgeCentre/IndexofIMOResolutions/AssemblyDocuments/A.1056(27).pdf

Appendix 1 the rescue of Wilson Skaw. (summary of the assisting report from C/V Freyja)

On the 18th of April to 1st of May the Coast Guard vessel Freyja salvaged the general cargo vessel Wilson Skaw after it stranded on Lat. 65°35´843N, Long. 021°15´466 W.

Further chain of incidents is at follows:
On Tuesday, 18th of April 2023 at 1415, the Coast Guard vessel Freyja was informed that Wilson Skaw had stranded. Freyja set course to the scene, instantly with increased speed. Freyja was informed that a SAR vessel Húnabjörg was on her way from Skagaströnd as well as Coast Guard helicopter. At that time no information was available about the crew other than it was not considered to be in any danger.

At 1857, when Freyja arrived on scene, the SAR vessel Húnabjörg was there. Wilson Skaw seemed to sit high up on a rock, it sat normally and did not move. Onboard were 1.895 Tonnes of salt in big bags. Most of it was in the after holds of the vessel. A rescuer from the helicopter went onboard to check the conditions of the crew, as well to check the stability of the vessel. He informed that the ship's crew was not harmed and nothing wrong with the condition of the crew. The vessel was well founded on the scene. The rescuer informed that most bottom tanks were damaged, although they were empty. He also informed that 195.000 litres of maritime diesel were in tank nr 7, which was located well above sea level. No pollution was visible. The crew of Wilson Skaw had inspected the vessel and estimated that she was stuck somewhere in front of the bridge. The 2. Officer from Freyja was also sent onboard Wilson Skaw to perform an onsite survey. CGV Freyja had only one diver in its crew. Therefore, two divers were requested from Icelandic Coast Guards special operation team. The wind was NE 2 m/s.

At 2020 the SAR Húnabjörg arrived with the divers from Hólmavík. It was also decided that pollution protection gear from the Icelandic Environmental Agency would be sent to the town of Hólmavík and from there to Freyja.

At 2039, the 2. Officer from Freyja arrived back after having performed the onsite survey onboard Wilson Skaw. He and the Master of Wilson Skaw estimated that the bottom tanks had ruptured, but no visible pollution was present.

At around 2100, two divers from Icelandic Coastguard inspected Wilson Skaw in harsh conditions. They estimated that she had grounded in a 50 meters long area from bow to bridge. The weather at midnight was variable wind.

On Wednesday, 19th of April the SAR vessel Húnabjörg arrived at Freyja with four specialized persons and pollution barriers.

At 0600, the crew of Freyja and started setting out pollution barriers around Wilson Skaw. That operation was finished at around 0950.

The following day all rescue bodies discussed next steps. Wilson Skaws insurance company hired a specialized salvage company (SMIT). The wind at 1200 was calm. At midnight, the wind was S 6 m/s.

On Thursday, 20th of April, six people from SMIT salvage, from the insurance company and from the Environment Agency of Iceland were transferred onboard Freyja. During that day, arrangements were made, and a rescue plan constructed.

At 2050, oil barriers were moved to the port side of Wilson Skaw, due to change of weather forecast. The wind at 1200 was S 12 m/s and at midnight the wind was S 6 m/S.

On Friday 21st of April, at 0720, a movement of the bow of Wilson Skaw was noticed. The wind had increased to 13-15 m/s, with a wave height of 1.5 metres. At 0735 the Master of Wilson Skaw was informed that a towline would be connected to the vessel. The operation was finished at 0840. At that time, Wilson Skaw had turned on the rock to port side, about 50 degrees. Freyja moved closer to Wilson Skaw and positioned herself in a direction to safer depth, West of Wilson Skaw.

At 0939, Wilson Skaw came afloat. Freyja slowly towed her to deeper water and following she was towed to Steingrímsfjörður. Small oil pollution was noted at first, but not substantial.

At 1108, a small leakage was noticed in the engine room. The bilge pumps managed the leak. The leakage was soon stopped. The following day Wilson Skaw was towed closer to shore and to safe waters.

From Saturday 22nd of April to 1st of May, Wilson Skaw was inspected by the interested parties and the cargo was moved with Freyja's cranes and oil was pumped from Wilson Skaw to Freyja.

At 1445 on the 1st of May, Coast Guard vessel Freyja finished her operation and left Wilson Skaw to anchor.

On the 26th of April, it was requested that the crew would be given an opportunity to get a psychological counselling after the trauma, which the Master refused.[5]

On the 27th of April, the charter was informed that there was a concern about mental health of the crew.

5

https://wwwcdn.imo.org/localresources/en/KnowledgeCentre/IndexofIMOResolutions/AssemblyDocuments/A.1056(27).pdf

Appendix 2 damages to Wilson Skaw.

After Wilson Skaw stranded, on the 18th of April, divers from the Icelandic Coast Guard inspected the vessel. The conditions were bad for diving. Nevertheless, they noticed that Wilson Skaw sat on a volcanic rock about 25 meters aft from the stern all the way to 75 metres aft from the stern of the ship, meaning that roughly 50 metres or more were sitting on a rock (see figure 22).

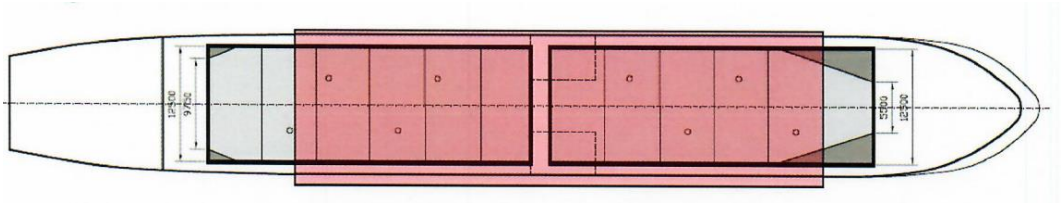

Figure 22 red area shows were the ship sat.

At that time, both the propeller and the rudder were intact (Figure 23). Damage on the stern was visible.

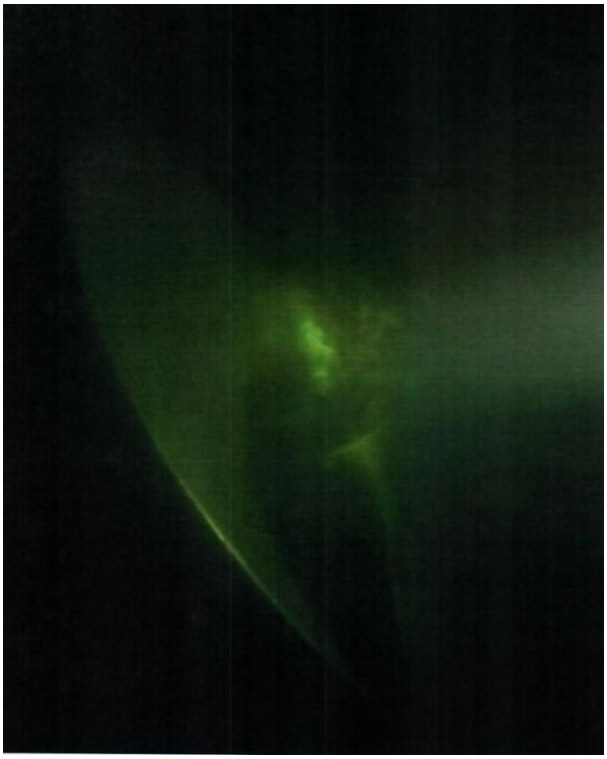

Figure 23 propeller blade

The divers were unable to go under the bottom due to current.
The hull of the vessel wasn´t inspected again until 23rd of April, by Köfunarþjónustan.
The survey report stated that:
The bulbous bow was severely damaged, there were multiple cracks running alongside the front, from frame 157 to frame number 144. From frame 144 to frame 95, there were multiple damages on the hull, combination of cracks, dents etc. From frame 91 to frame 65 there were a lot of cracks present, including an 11-meter crack running alongside portside from frame 85 to 71. Approximate location 3,5 meters from turning of the bilge keel, the bilge keel portside and starboard side were severely damaged. One propeller blade was bent at the radius 0.8. Damage was also found on the rudder.

Figures 24-30 show damage on Wilson Skaw.

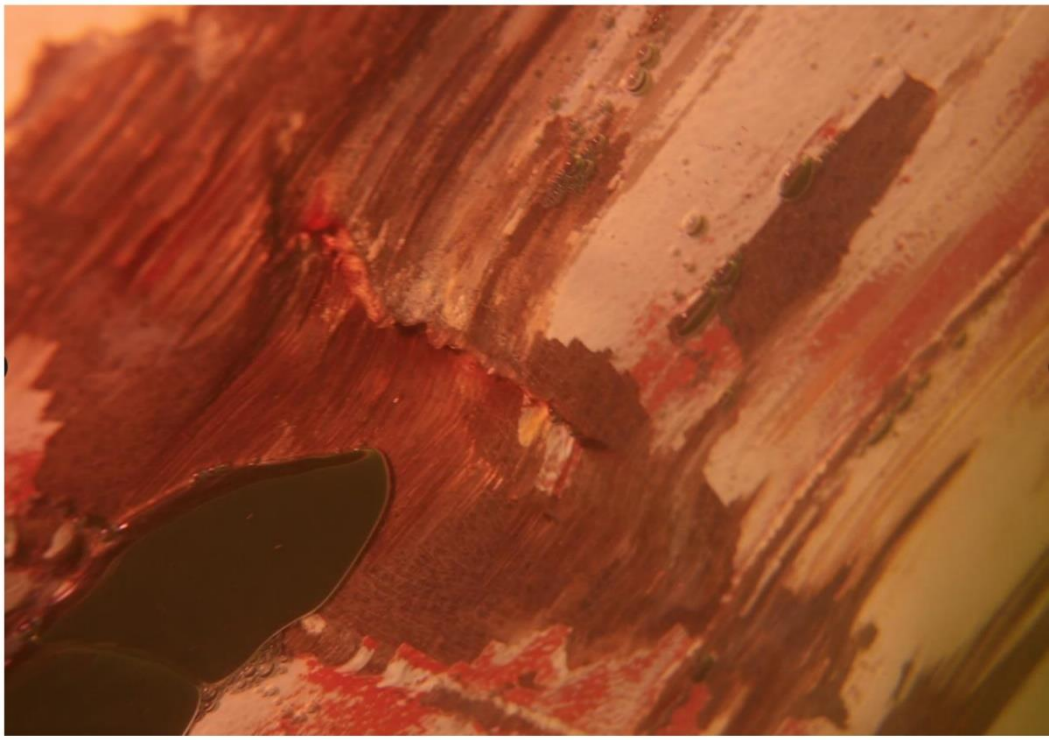

Figure 23

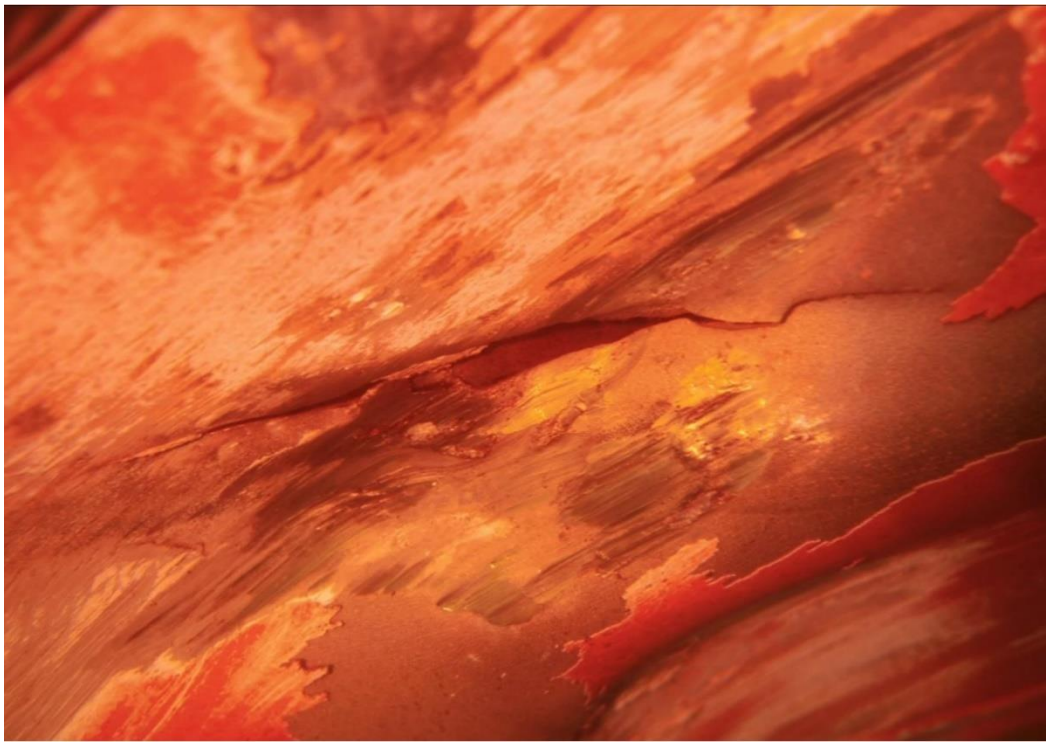

Figure 24

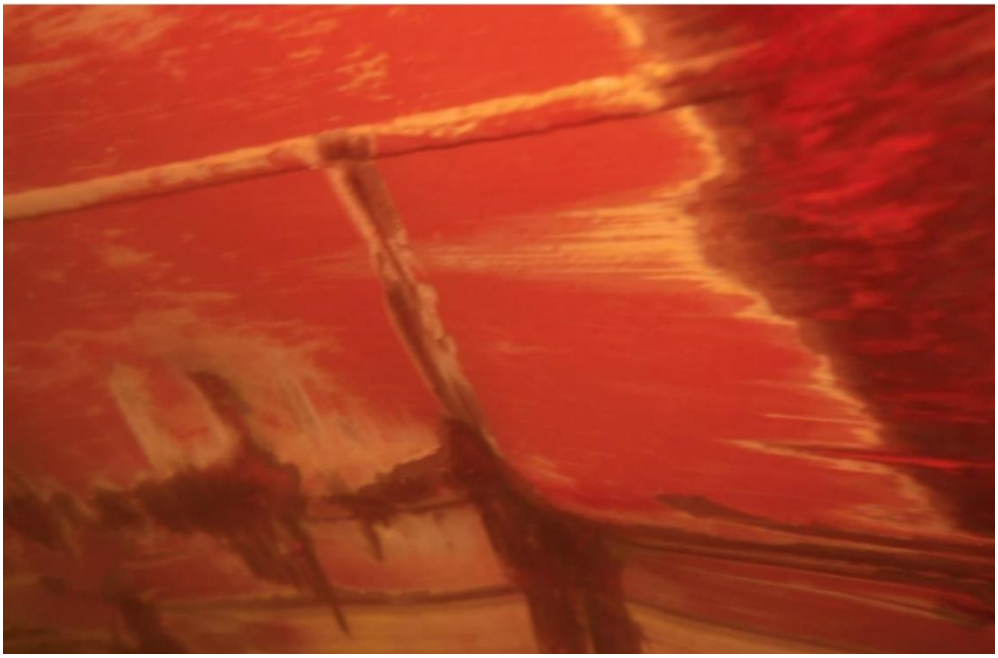

Figure 26 damages on the hull

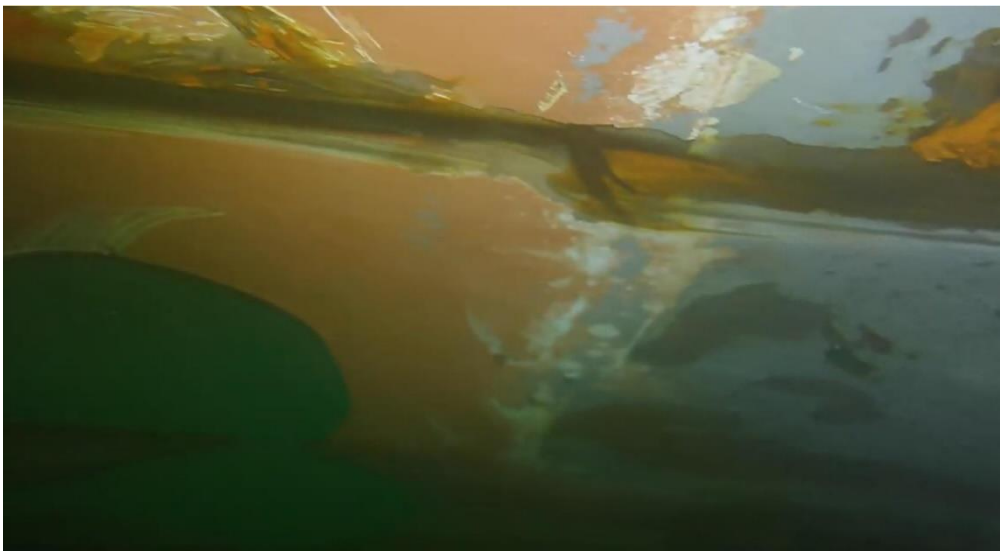

Figure 27 On frame 89, there is a transverse crack that runs between the section of the bilge keel. The length is 15cm above the bilge keel and 16cm below.

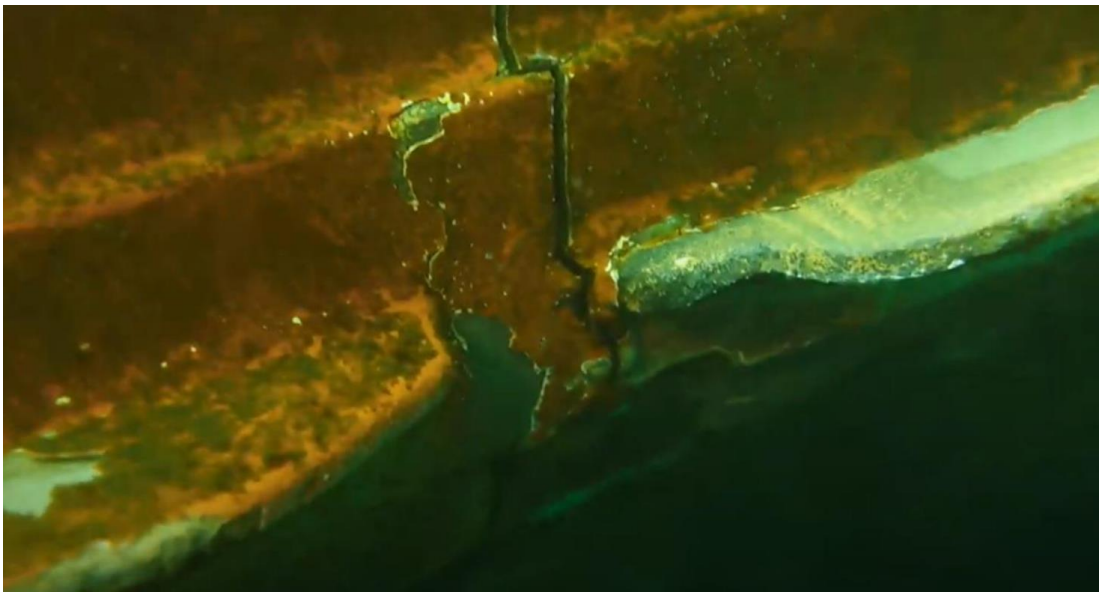

Figure 28 From frame 65 to frame 30 the damage gradually reduces to the stern.

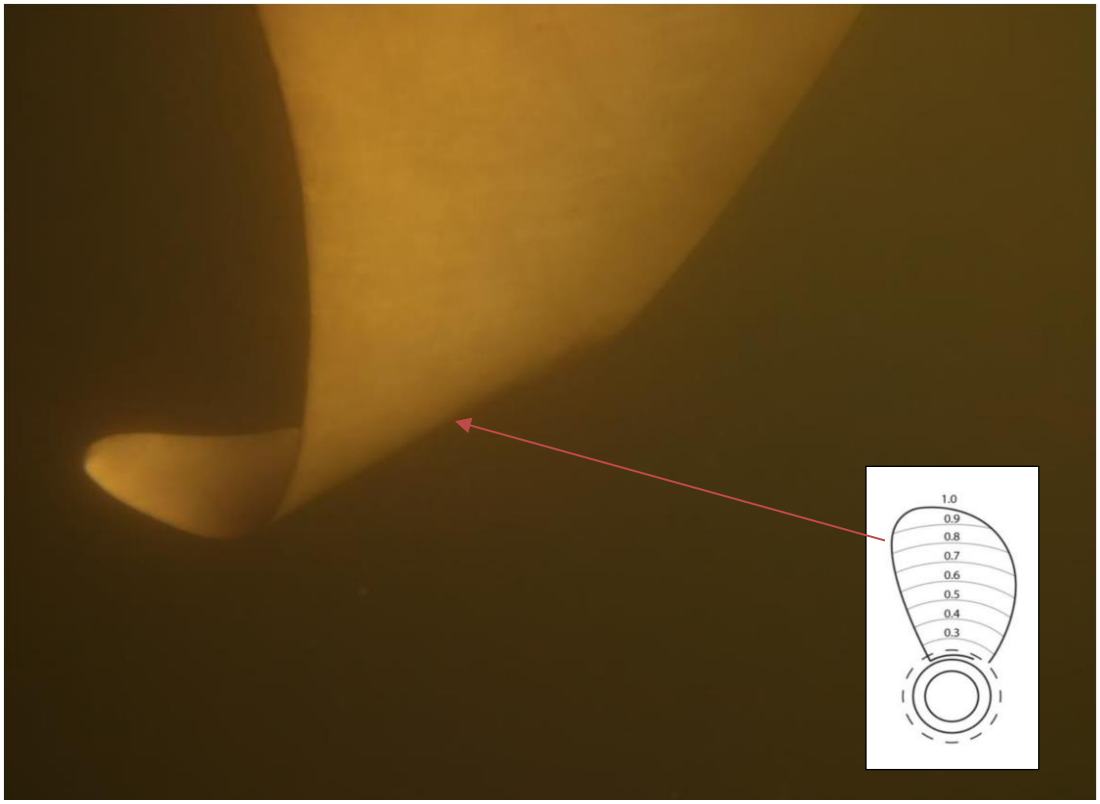

Figure 29 One blade bended at the radius 0,8.

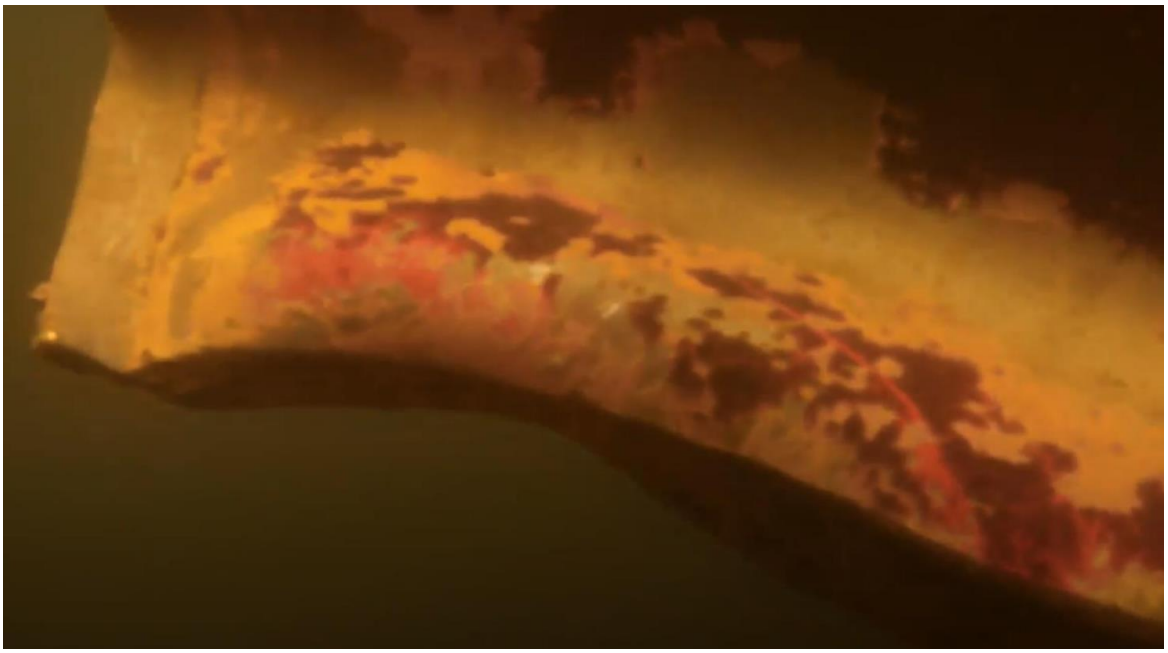

Figure 30 lower part of the rudder

On the 21st of April, when the wind had increased, the Master of CGV Freyja decided to secure the vessel and towed her off the rock.