Suez: hardly a maritime surprise

March 2021

March 28, 2021

It now seems that not much went wrong at Suez, except the judgement of both the captain and the pilots, in my opinion.

Suezmax is reportedly 400.00 m in length and 50 m beam. However, the ship in question has a length of 399.94 m and a beam of 58.8 m, so one is entitled to question her presence in the Suez Canal, since she exceeds normal specification, although there may be special warrants.

Furthermore, you will find below the weather forecast for the time of the grounding, which occurred at 05:40 UTC on March 23, 2021, as well as some pictures and the nautical map of the canal 6 km from the Suez entrance and 155 km from Port Said.

The incident occurred very shortly after the ship entered the canal.

The weather forecast 10 m above sea level was as follows at 06:00 UTC:

> **Wind: south (169°), 34.6 knots sustained (Beaufort 8, gale), gusting 46.8 knots (Beaufort 9 to 10, severe to whole gale)**

The ship is about 40 m tall above water.

The wind was forecast to blow exactly as a tailwind, which is not a good configuration for any ship.

I calculate that with a 34.6 knots wind, and given the height and length of the ship, the beam force on the ship would have been 290 metric tons, and 530 tons in the gusts.

For reference, the strongest tugboat on earth has a bollard pull of 477 metric tons under a power of 16,000 kW (22,000 HP). The ship stuck in the canal has two 2,500 kW bow thrusters, which together can push probably about 125 metric tons, although only from the bow and provided the ducts are unobstructed.

You will see on the drawings that the canal on location is 294 meters wide between banks, or berms, but the navigable channel is only 166 meters wide.

In other words, the ship had no business at all being in the canal and should have remained at anchor in Suez Bay until the weather improved a few hours later.

I would venture that one captain and a couple of pilots will lose their license, and that regulation will change and ships too large to fit will be denied entry.

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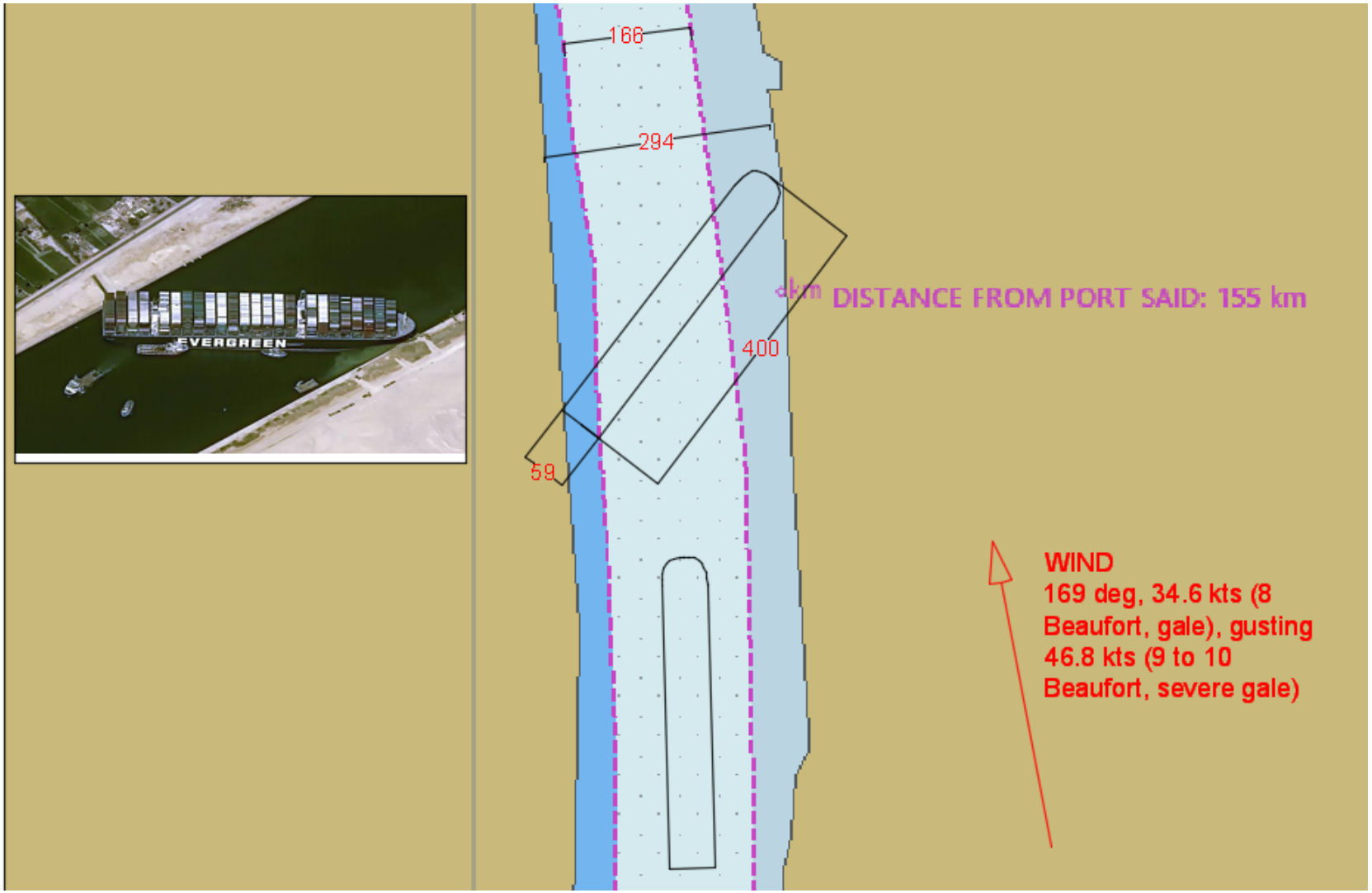
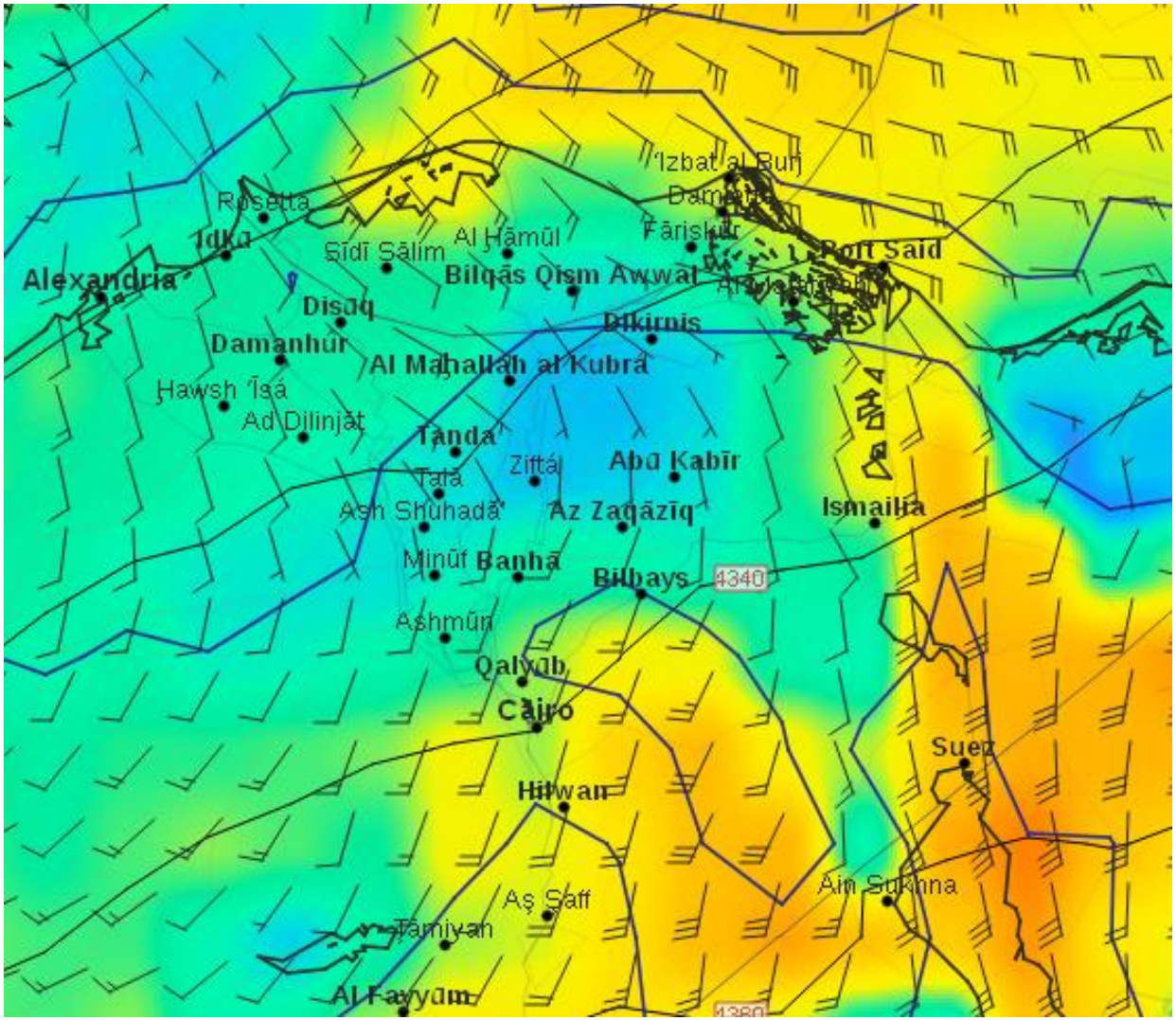
Marine chart at location



Weather forecast map and table March 23, 2021, at 06:00 UTC



	Tue 2021-03-23							
Sun Moon	⇑ 03:48 UTC ⇓ 16:00 UTC ⇑ 10:27 UTC ⇓ 00:07 UTC 66%							
	00:00 UTC	03:00 UTC	06:00 UTC	09:00 UTC	12:00 UTC	15:00 UTC	18:00 UTC	21:00 UTC
Wind (sfc)								
Wind (10 m)	 165 ° 17.5 kts 5 Bf	 163 ° 29.5 kts 7 Bf	 168 ° 34.6 kts 8 Bf	 174 ° 28.2 kts 7 Bf	 186 ° 21.4 kts 6 Bf	 272 ° 12.9 kts 4 Bf	 332 ° 19.0 kts 5 Bf	 353 ° 15.4 kts 4 Bf
Wind gust	34.0 kts	47.1 kts	46.8 kts	34.8 kts	25.1 kts	17.5 kts	22.5 kts	18.5 kts
Wind (925hpa)	 168 ° 48.9 kts 10 Bf	 177 ° 45.4 kts 9 Bf	 177 ° 48.6 kts 10 Bf	 204 ° 32.5 kts 7 Bf	 220 ° 24.8 kts 6 Bf	 301 ° 19.7 kts 5 Bf	 323 ° 23.8 kts 6 Bf	 331 ° 18.2 kts 5 Bf
Geopotential altitude (925hpa)	703 m	693 m	696 m	709 m	697 m	710 m	735 m	747 m
Wind (850hpa)	 198 ° 39.4 kts 8 Bf	 212 ° 44.3 kts 9 Bf	 215 ° 56.9 kts 11 Bf	 228 ° 38.8 kts 8 Bf	 249 ° 28.8 kts 7 Bf	 282 ° 15.6 kts 5 Bf	 248 ° 25.3 kts 6 Bf	 252 ° 24.5 kts 6 Bf
Geopotential altitude (850hpa)	1448 m	1440 m	1441 m	1453 m	1440 m	1439 m	1450 m	1455 m
Wind (700hpa)	 224 ° 49.9 kts 10 Bf	 230 ° 50.1 kts 10 Bf	 226 ° 57.5 kts 11 Bf	 235 ° 43.2 kts 9 Bf	 226 ° 39.8 kts 8 Bf	 226 ° 40.0 kts 8 Bf	 235 ° 43.9 kts 9 Bf	 231 ° 51.1 kts 10 Bf
Geopotential altitude (700hpa)	3110 m	3103 m	3101 m	3104 m	3090 m	3078 m	3083 m	3073 m
Wind (600hpa)	 249 ° 52.8 kts 10 Bf	 240 ° 52.7 kts 10 Bf	 238 ° 54.1 kts 10 Bf	 234 ° 54.1 kts 10 Bf	 226 ° 51.6 kts 10 Bf	 233 ° 57.8 kts 11 Bf	 230 ° 56.8 kts 11 Bf	 233 ° 63.7 kts 12 Bf
Geopotential altitude (600hpa)	4370 m	4360 m	4359 m	4359 m	4342 m	4332 m	4333 m	4320 m

March 26, 2021

Should anyone be surprised? Wasn't that bound to happen?

The slope of the sandy banks is probably about 30 degrees.

Obviously, the size limitation for entering the canal is not conservative enough.

Either the canal is too narrow for the ship or the ship is too large for the canal.

Either the bridge is too low for the rig or the rig is too tall for the bridge or someone couldn't read.