



Administration
de pilotage
des Laurentides

Laurentian
Pilotage
Authority



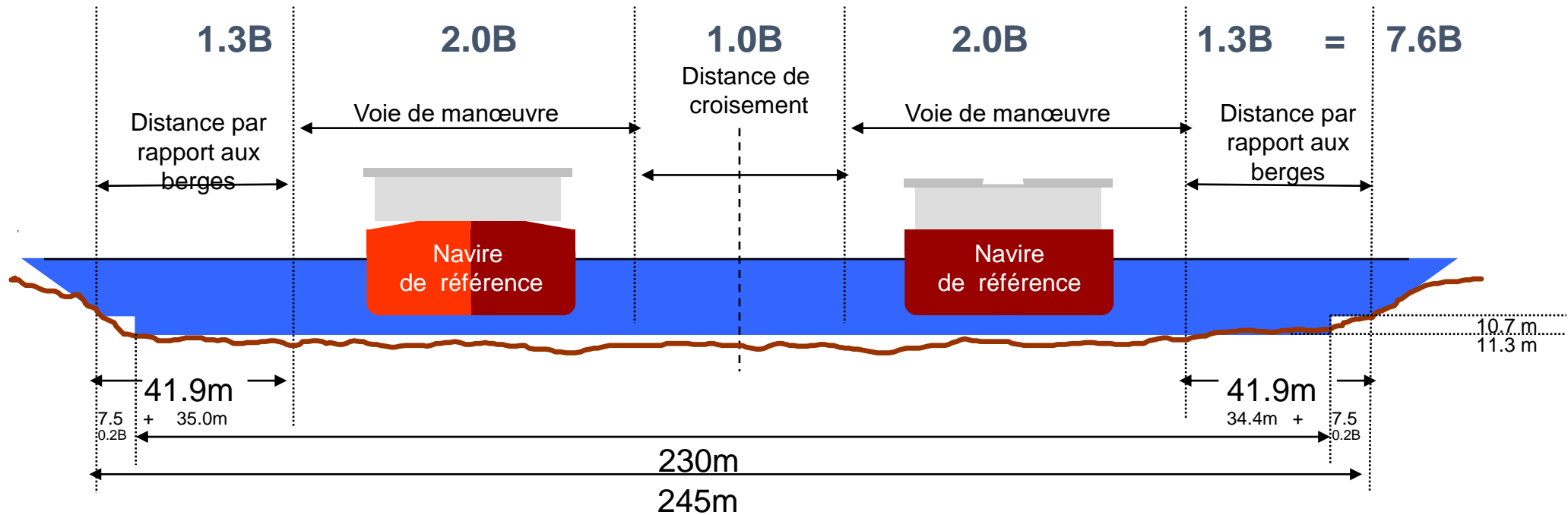
NavSim
TECHNOLOGY

PILOT PORTABLE UNITS

VN-301 DIRECTIVES
INTEGRATION PROJECT

Post Panamax Vessel in the St-Lawrence River

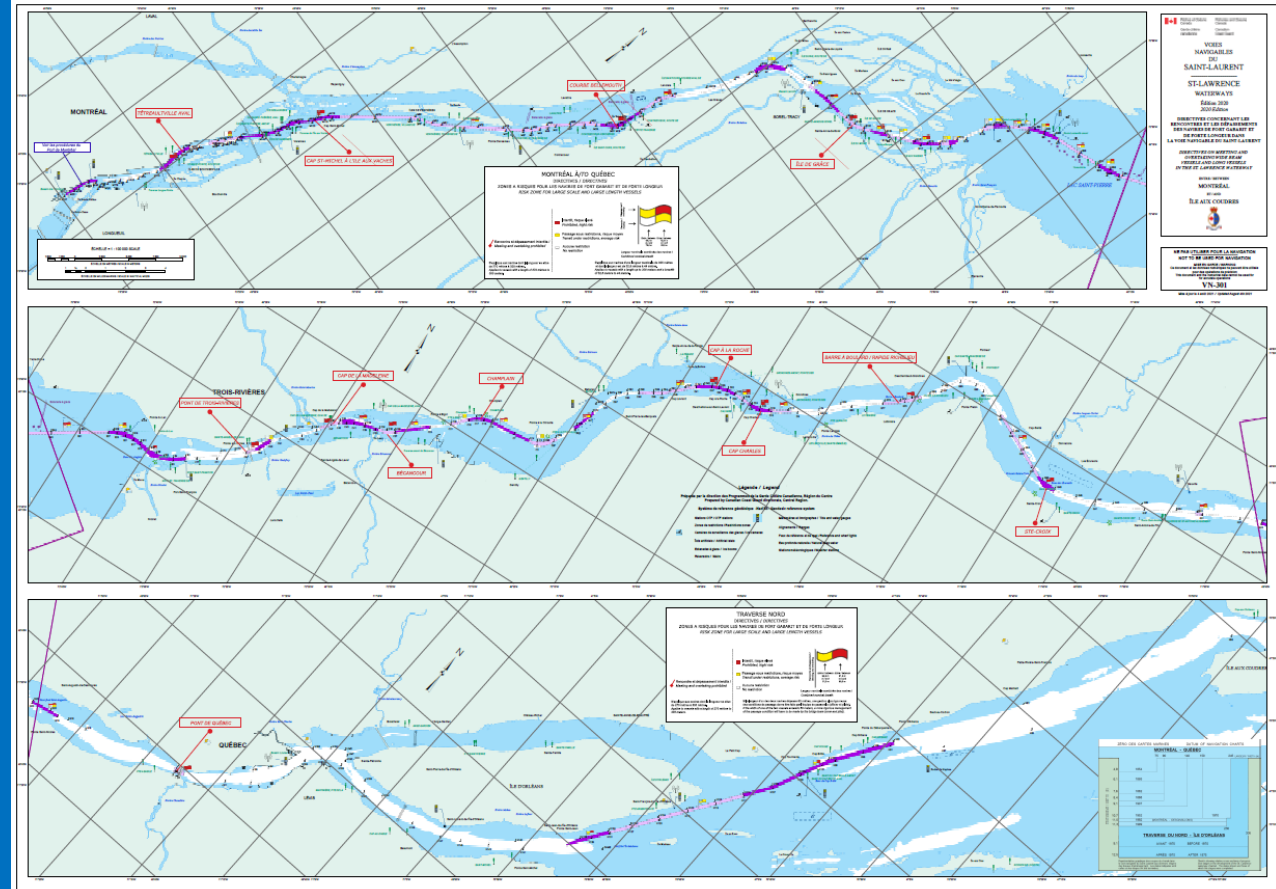
Coast Guard Waterway Design Guidelines



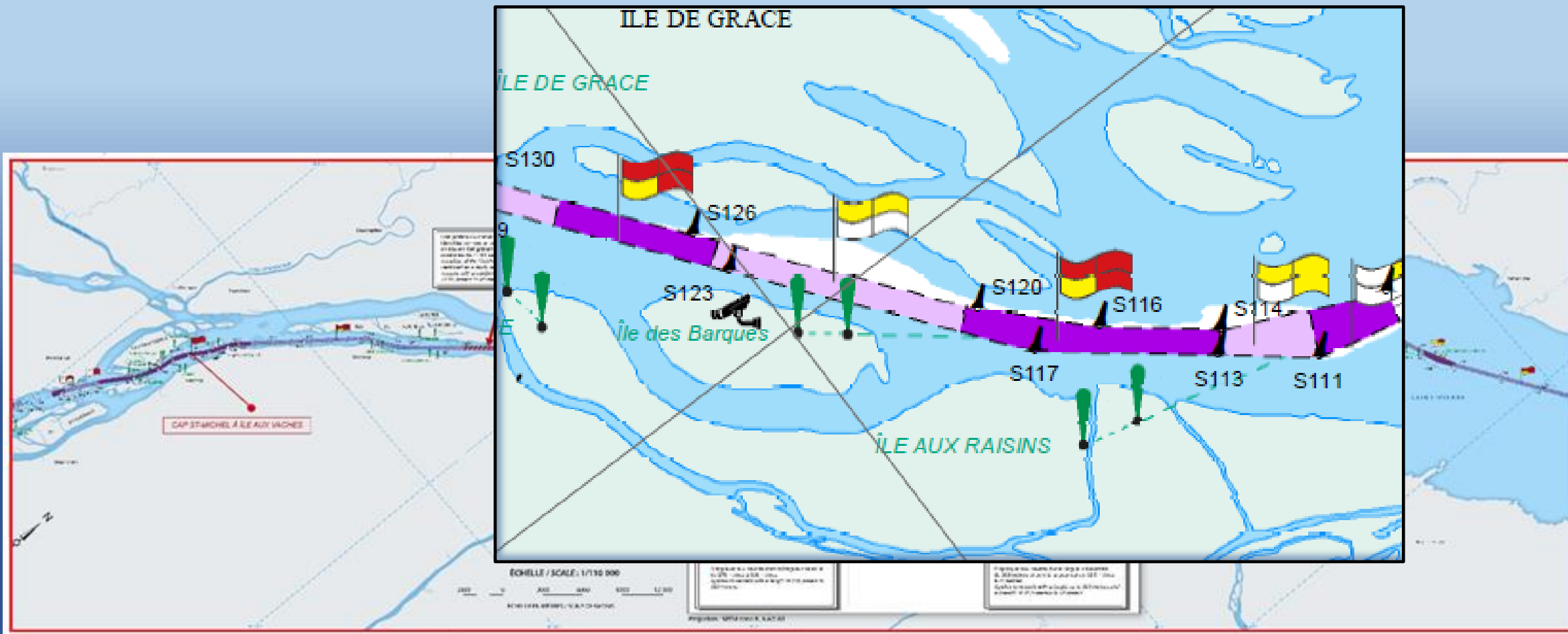
Reference vessel
 $B_{\text{max}} = 32.2\text{ m}$

Risk Study

- A risk study was conducted in and a Working Group was formed between Canadian Coast Guard, Transport Canada, Laurentian Pilotage Authority and the pilot corporations, resulting in guidelines for the passage of Post-Panamax vessels, imposing certain restrictions where vessels cannot meet or pass each other.

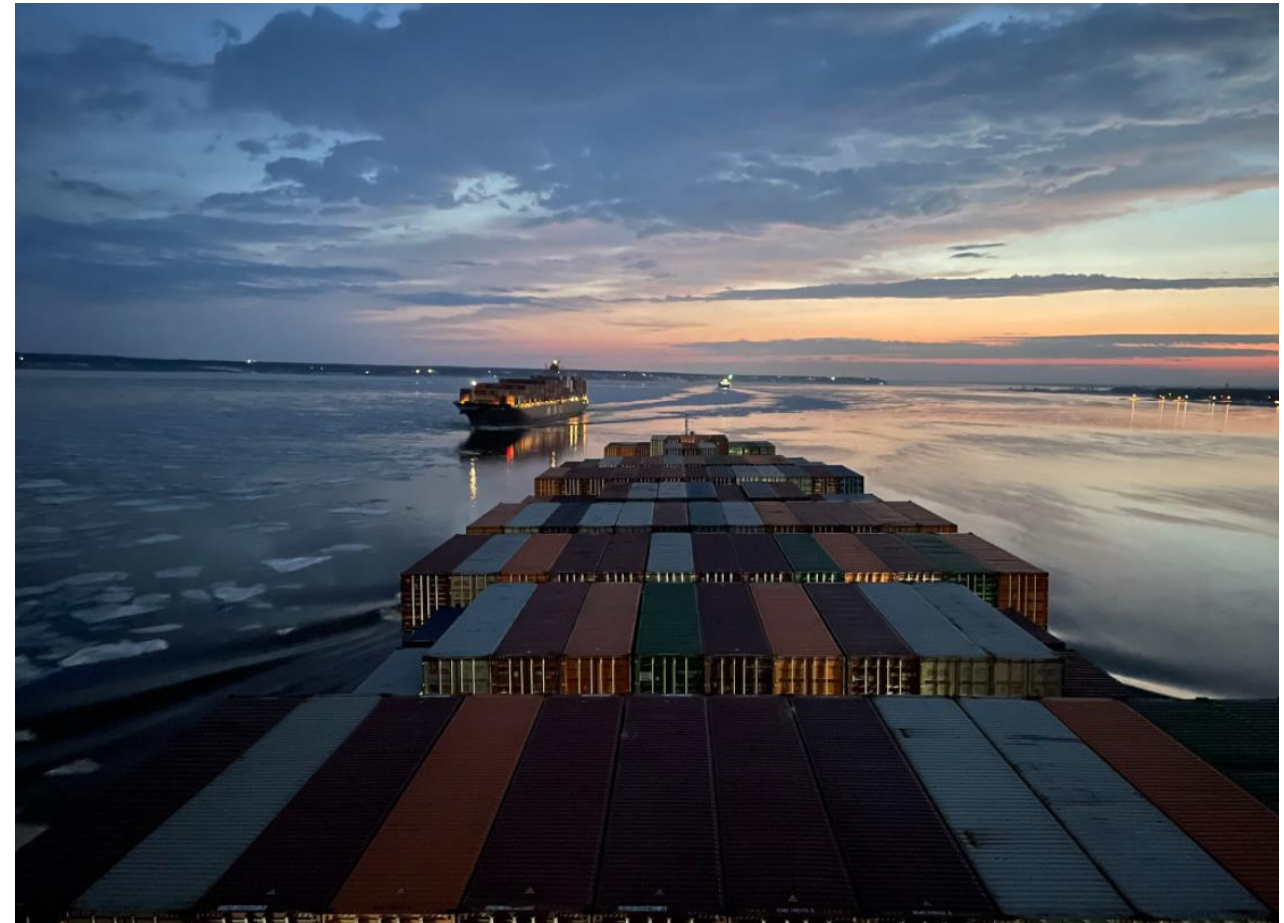


NAVIGATION DIRECTIVES - VN301



New tools to face a more complex environment

- Graphical Integration of VN-301 in the PPU
- Improved «Meeting Point» function
- VN-301 meeting checks



Technical Committee

CPSLC



The project and its partners

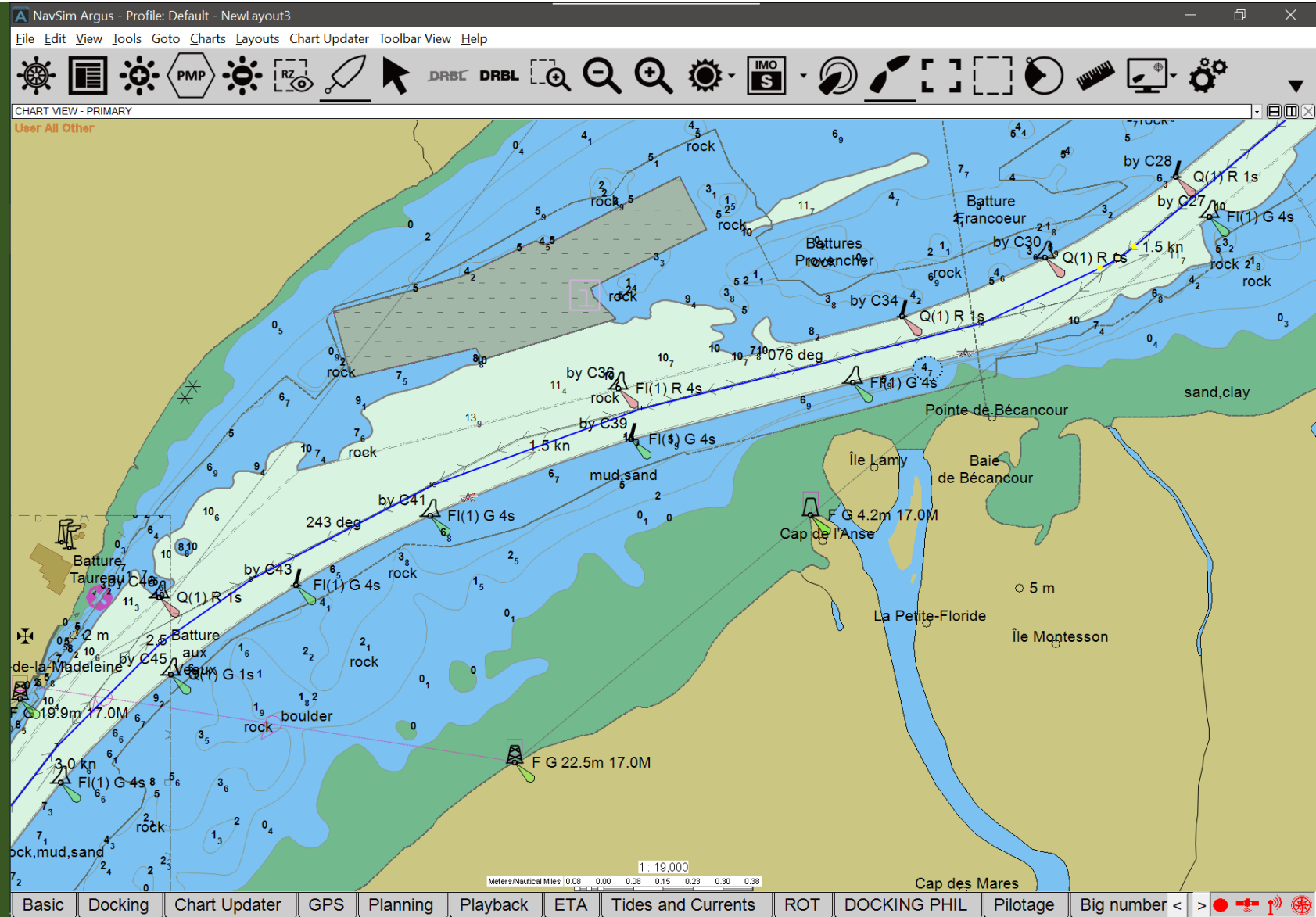
- The Laurentian Pilotage Authority
- Navsim Technology is the developer of the Argus software
- Mid St-Lawrence Pilot technical committee

Essential Characteristics



Usability

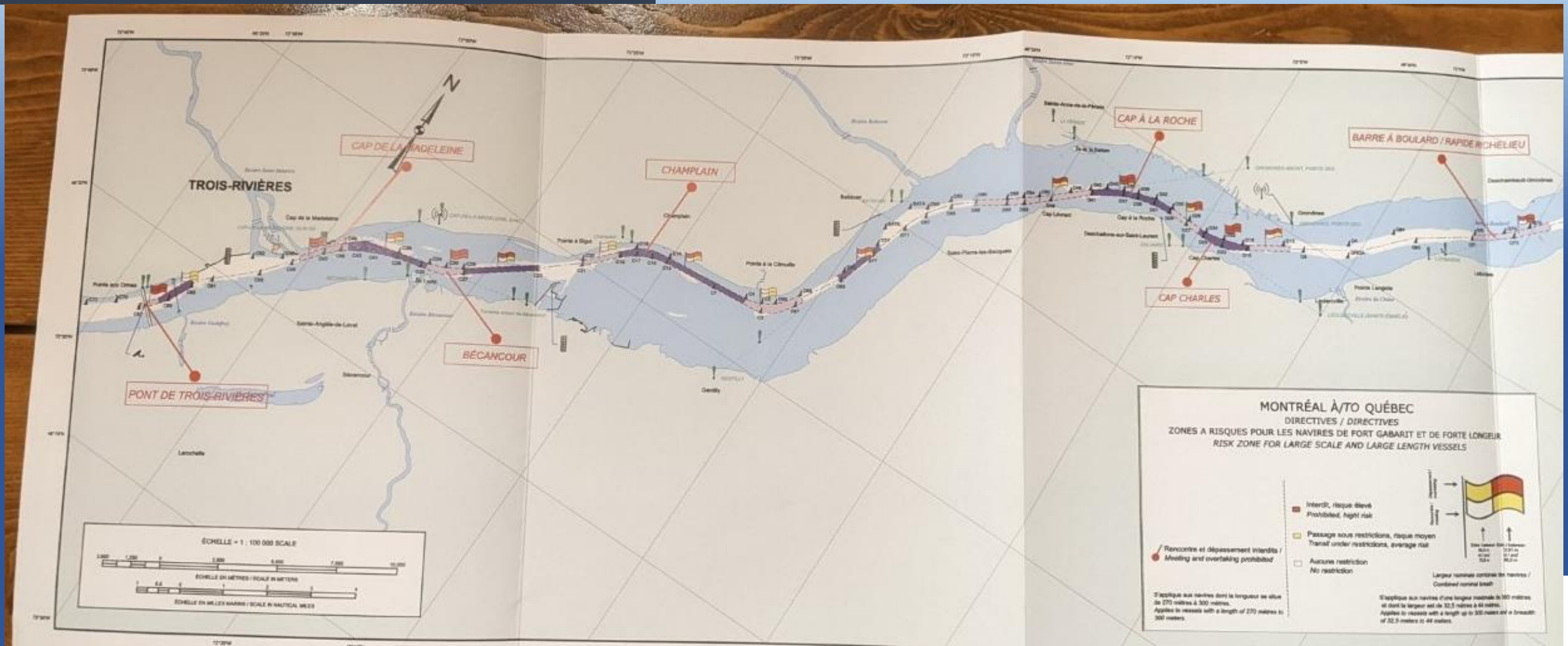
Reliability



VN-301

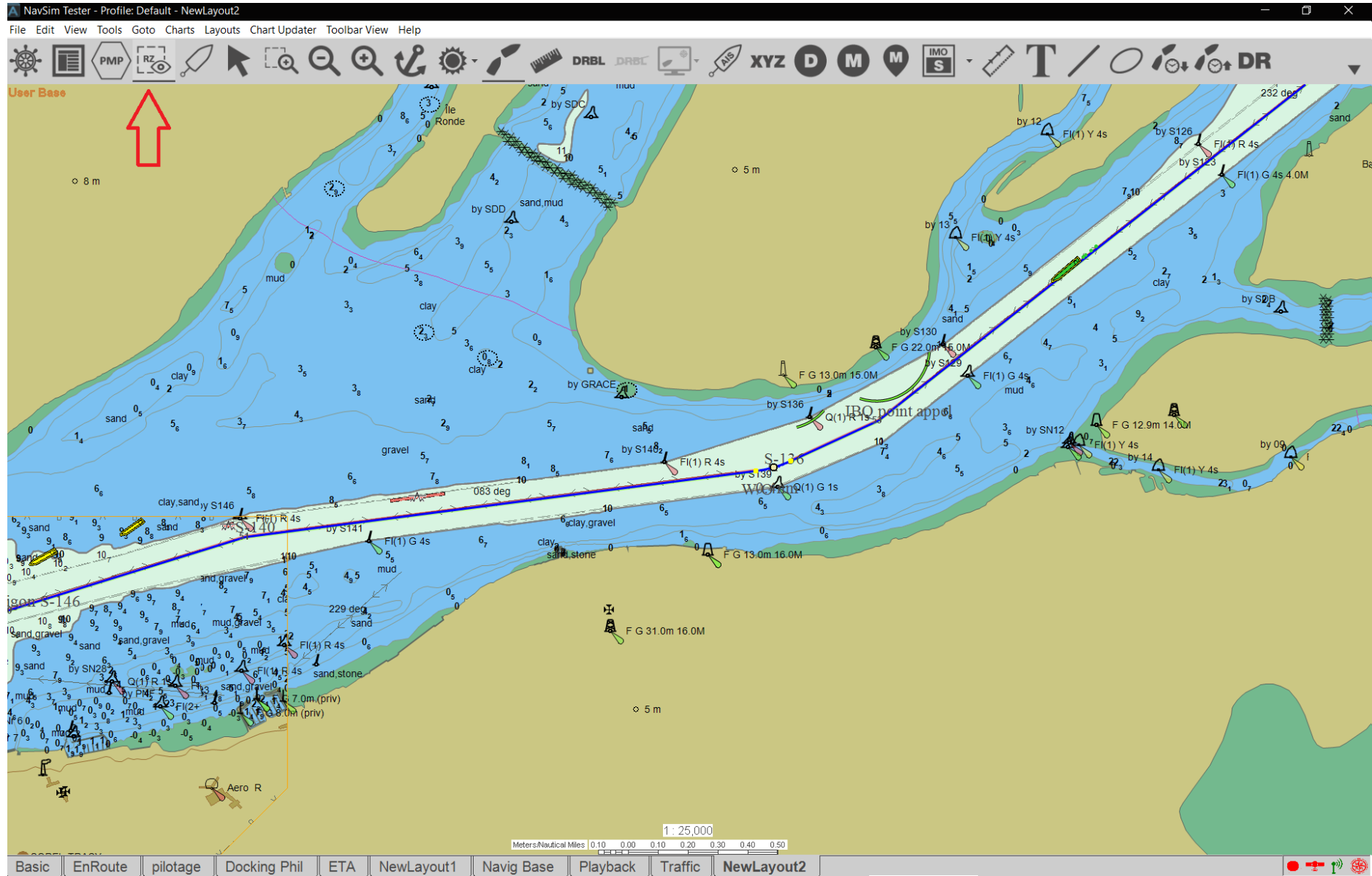
Graphical Integration

BEFORE



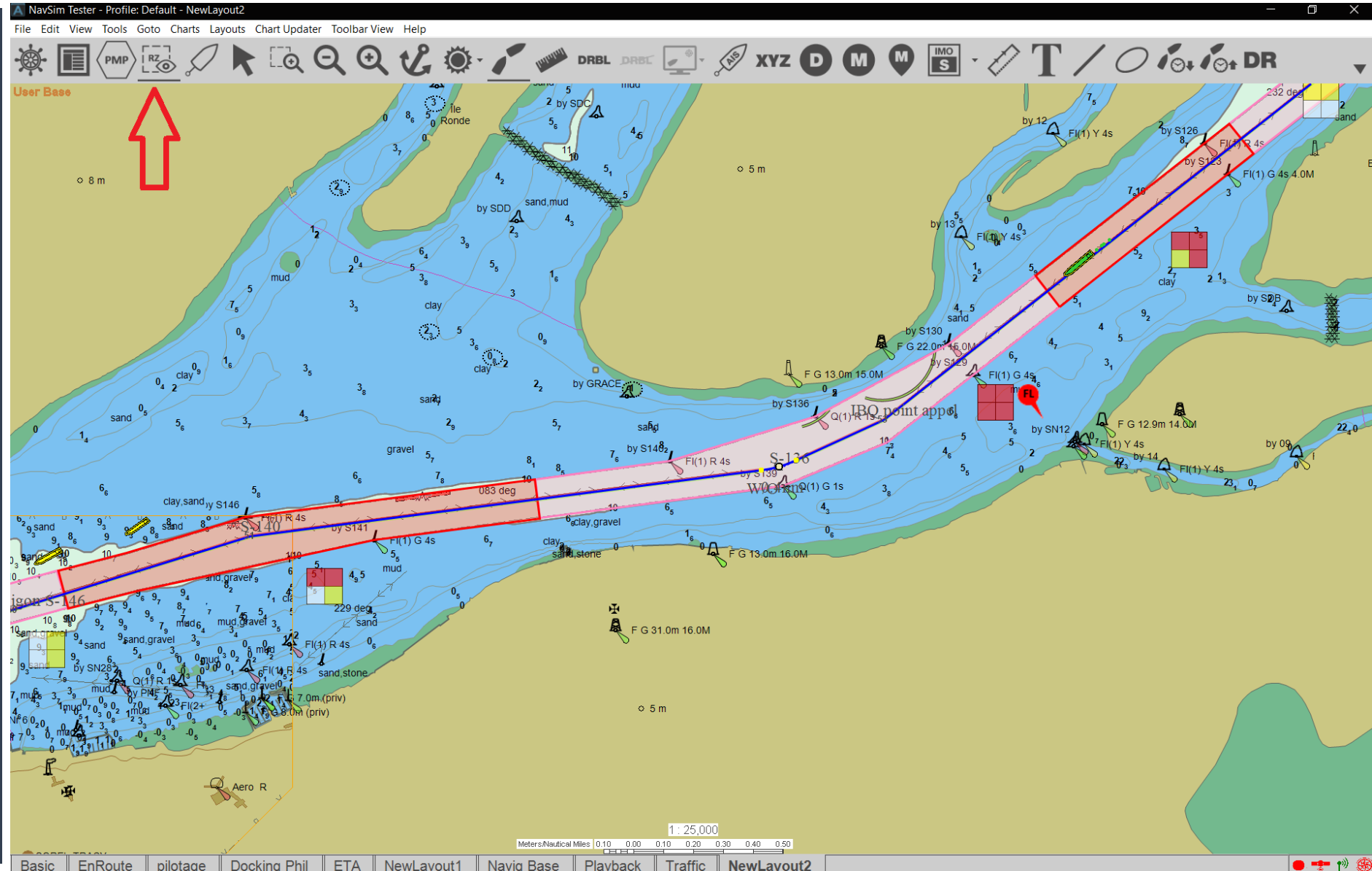
VN-301 Integration

NOW



VN-301 Integration

NOW



VN-301 Integration

Before

MONTRÉAL À/TO QUÉBEC
DIRECTIVES / DIRECTIVES
ZONES A RISQUES POUR LES NAVIRES DE FORT GABARIT ET DE FORTE LONGUEUR
RISK ZONE FOR LARGE SCALE AND LARGE LENGTH VESSELS

- Interdit, risque élevé
Prohibited, high risk
- Passage sous restrictions, risque moyen
Transit under restrictions, average risk
- Aucune restriction
No restriction

**Rencontre et dépassement interdits /
Meeting and overtaking prohibited**

S'applique aux navires dont la longueur se situe de 270 mètres à 300 mètres.
Applies to vessels with a length of 270 meters to 300 meters.

Entre / between 65,0 m et 72,81 m
45,0 m et 65,0 m

Entre / between 72,81 m et 88,0 m
65,0 m et 72,81 m

**Largeur nominale combinée des navires /
Combined nominal breadth**

S'applique aux navires d'une longueur maximale de 300 mètres et dont la largeur est de 32,5 mètres à 44 mètres.
Applies to vessels with a length up to 300 meters and a breadth of 32,5 meters to 44 meters.

Risk Zone Properties

Risk Zone Manager

Name:

Sector:

Description:

Color:

Transparency:

Locked Source: Admin

Risk Matrix Rules

Meeting & Overtaking Restrictions

Overtaking	<input type="button" value="Prohibited High Risk"/>	<input type="button" value="Prohibited High Risk"/>
Meeting	<input type="button" value="No Restrictions"/>	<input type="button" value="Proceed Under Caution Average Risk"/>
Combined Beam	Between <input type="text" value="65"/> m <input type="button" value="And"/> <input type="text" value="72.6"/> m	Between <input type="text" value="72.61"/> m <input type="button" value="And"/> <input type="text" value="88"/> m

Long Vessel Restrictions: Yes No
 ** Meeting and Overtaking prohibited for vessels with LOA of 270 m to 300 m

Coordinate Info

#	Name	Coordinate
1		46° 22.755' N, 072° ...
2		46° 22.729' N, 072° ...
3		46° 22.721' N, 072° ...
4		46° 22.630' N, 072° ...
5		46° 22.541' N, 072° ...
6		46° 22.511' N, 072° ...
7		46° 22.300' N, 072° ...

« Improved » Meeting Point function

File Edit View Tools Goto Charts Layouts Chart Updater Toolbar View Help

DRBL DRBC XYZ D M M Z MO S T / O DR

Dead Reckoning

User All Other

The screenshot displays a nautical chart with a vessel's path (blue line) and a meeting point (red circle). The path is labeled with '236.00' and '15:38'. The meeting point is labeled 'MIA DESGAGNES' with a distance of '7.6 kn' and a bearing of '15:42'. The chart includes depth contours, soundings, and various navigational markers.

MP	Name	Distance	COG	SOG	BRG	Age	Draft
<input type="checkbox"/>	MSC NADRIELY	196.68 nm	052.7°	18.4 kn	049.2°	< 1 min	10.30 m
<input type="checkbox"/>	F.-A.-GAUTHIER	261.07 nm	320.0°	16.6 kn	048.9°	< 1 min	5.40 m
<input type="checkbox"/>	OCEANEX AVALON	171.73 nm	206.0°	15.5 kn	049.0°	< 1 min	7.70 m
<input type="checkbox"/>	US GOV VESSEL	192.98 nm	055.6°	14.8 kn	049.2°	< 1 min	N/A
<input checked="" type="checkbox"/>	MIA DESGAGNES	8.73 nm	036.2°	13.8 kn	239.1°	< 1 min	5.90 m
<input type="checkbox"/>	NUKUMI	72.17 nm	217.6°	13.5 kn	062.5°	< 1 min	8.00 m
<input type="checkbox"/>	SOLAR KAREN	123.62 nm	072.2°	12.0 kn	054.1°	< 1 min	8.70 m
<input type="checkbox"/>	PELEE ISLANDER II	504.94 nm	176.4°	11.7 kn	238.2°	< 1 min	3.30 m

COG
236.0°

SOG
11.0 kn

Meters/Nautical Miles | 0.08 0.00 0.08 0.15 0.23 0.30 0.33

Meters/Nautical Miles | 0.10 0.00 0.10 0.20 0.30 0.40 0.50

« Improved » Meeting Point function

File Edit View Tools Goto Charts Layouts Chart Updater Toolbar View Help

DRBL DRBC XYZ D M M Z IMO S T DR

Dead Reckoning
User All Other

The screenshot displays a Dead Reckoning (DR) software interface. The main map shows a vessel's track (blue line) with a meeting point (red dot) and a distance of 236.0 nm. The track is labeled with various points (S32, S31, S44, S43, SP15, SP16, SP17, SP18, SP19, SP20, SP21) and depth contours (e.g., 2, 3, 4, 5, 6, 10, 11). The map also shows seabed features like sand, mud, and clay. A scale bar at the bottom indicates 1:15,000.

MP	Name	Distance	COG	St
<input type="checkbox"/>	MSC NADRIELY	196.34 nm	052.6°	18.2
<input type="checkbox"/>	F.-A.-GAUTHIER	260.93 nm	323.0°	16.7
<input type="checkbox"/>	OCEANEX AVALON	171.76 nm	204.9°	15.6
<input type="checkbox"/>	US GOV VESSEL	192.67 nm	053.7°	15.0
<input checked="" type="checkbox"/>	MIA DESGAGNES	9.02 nm	034.7°	13.7
<input type="checkbox"/>	NUKUMI	72.18 nm	217.2°	13.3
<input type="checkbox"/>	SOLAR KAREN	123.36 nm	072.4°	11.9
<input type="checkbox"/>	PELEE ISLANDER II	505.00 nm	176.8°	11.7
<input type="checkbox"/>	GRUE DES ILES	103.13 nm	201.8°	11.0
<input type="checkbox"/>	SUSANA S	22.92 nm	015.7°	11.0
<input type="checkbox"/>	NACC QUEBEC	158.43 nm	221.7°	10.8
<input type="checkbox"/>	SPRUCEGLEN	51.97 nm	071.9°	10.7
<input type="checkbox"/>	ADRIATICBORG	172.34 nm	217.4°	10.3
<input type="checkbox"/>	WOIFF ISLANDER III	197.46 nm	100.7°	10.1

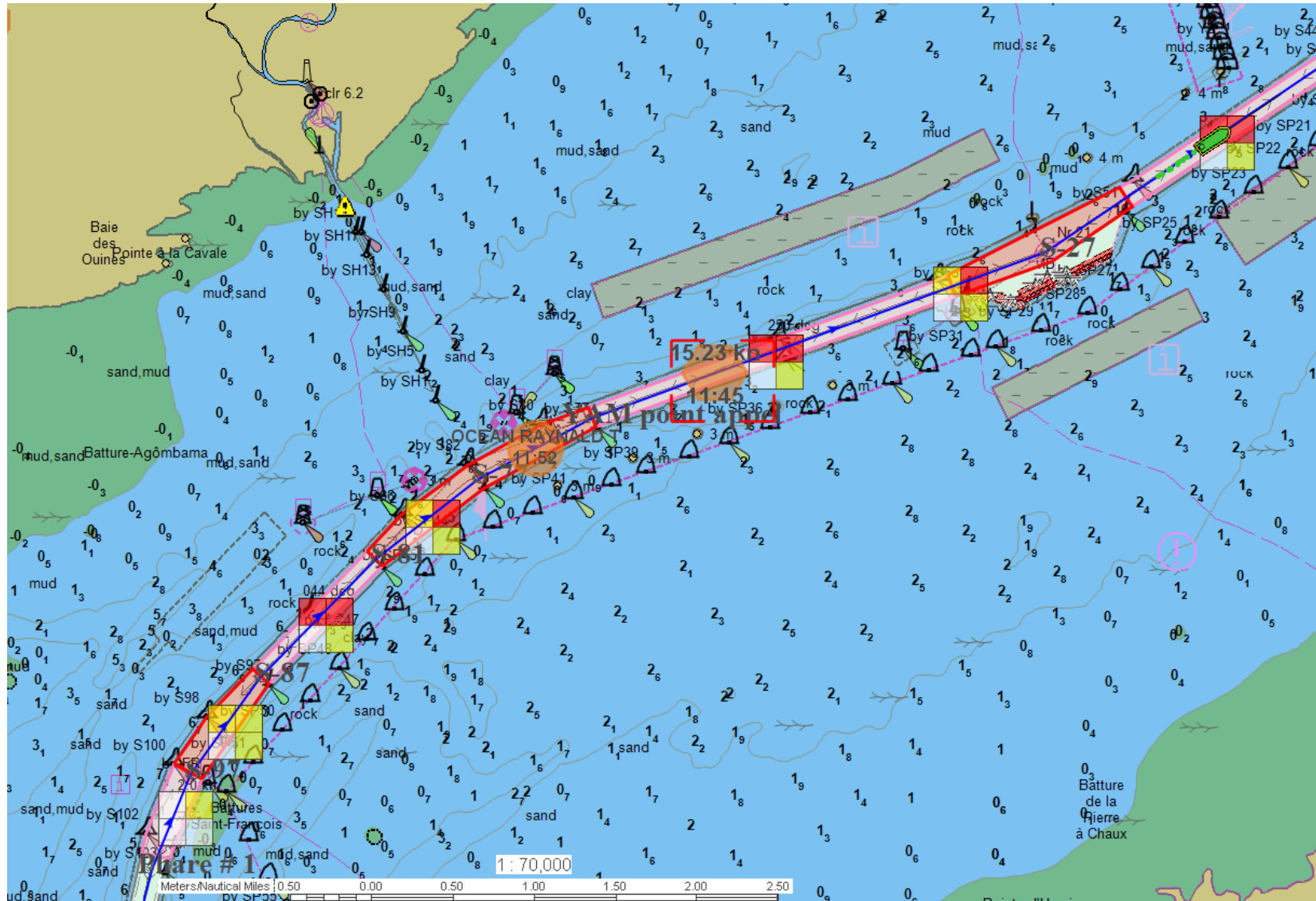
SOG
11.0 kn

COG
236.0°

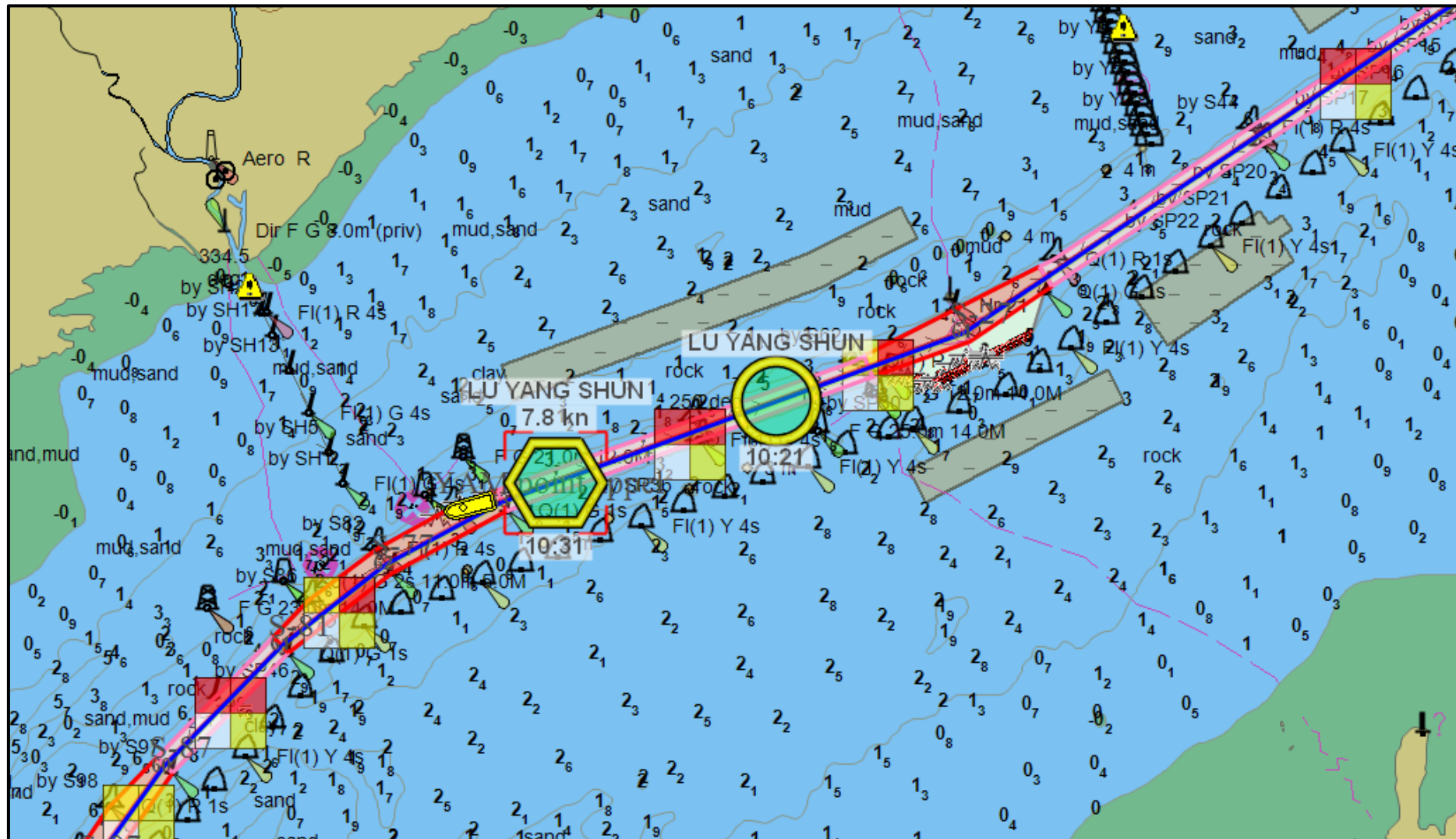
Level	Age	ID	Dire...
52.15...	3h 55...	Air Gap: PONT DE ...	N/A
50.63...	3h 55...	Air Gap: PONT LAV...	N/A
1.26 m	6h 8...	BATISCAN	DO...
0.38 m	1h 3...	BECANCOUR	DO...
0.92 m	53 min	DESCHAILLONS	DO...
0.88 m	1h 18...	NEUVILLE	DO...
2.01 m	4h 28...	PORTNEUF	DO...
1.79 m	1h 53...	QUEBEC	UP
0.44 m	3h 53...	TROIS-RIVIERES	SLA...

Meters/Nautical Miles | 0.10 0.00 0.10 0.20 0.30 0.40 0.50

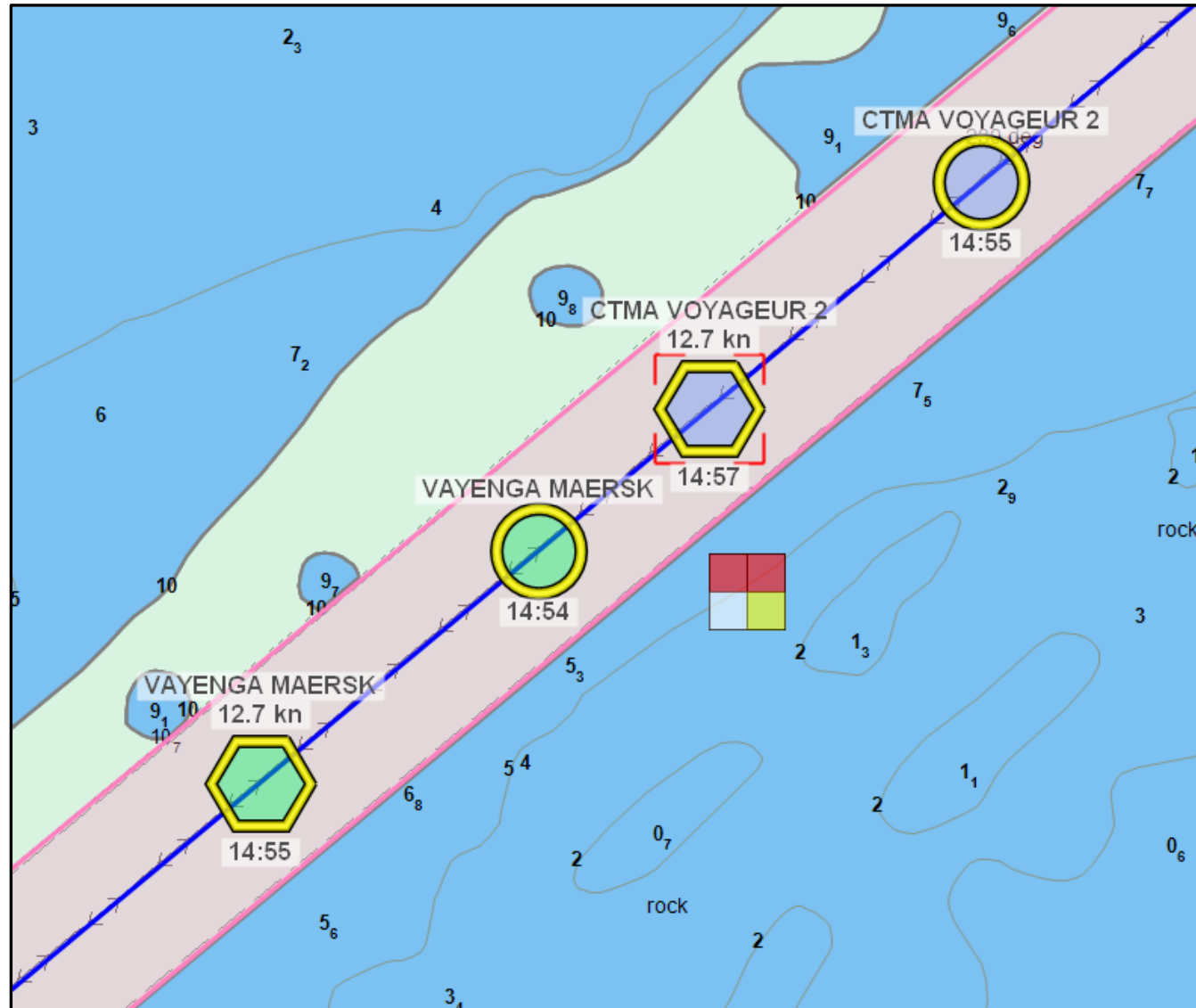
« Improved » Meeting Point function



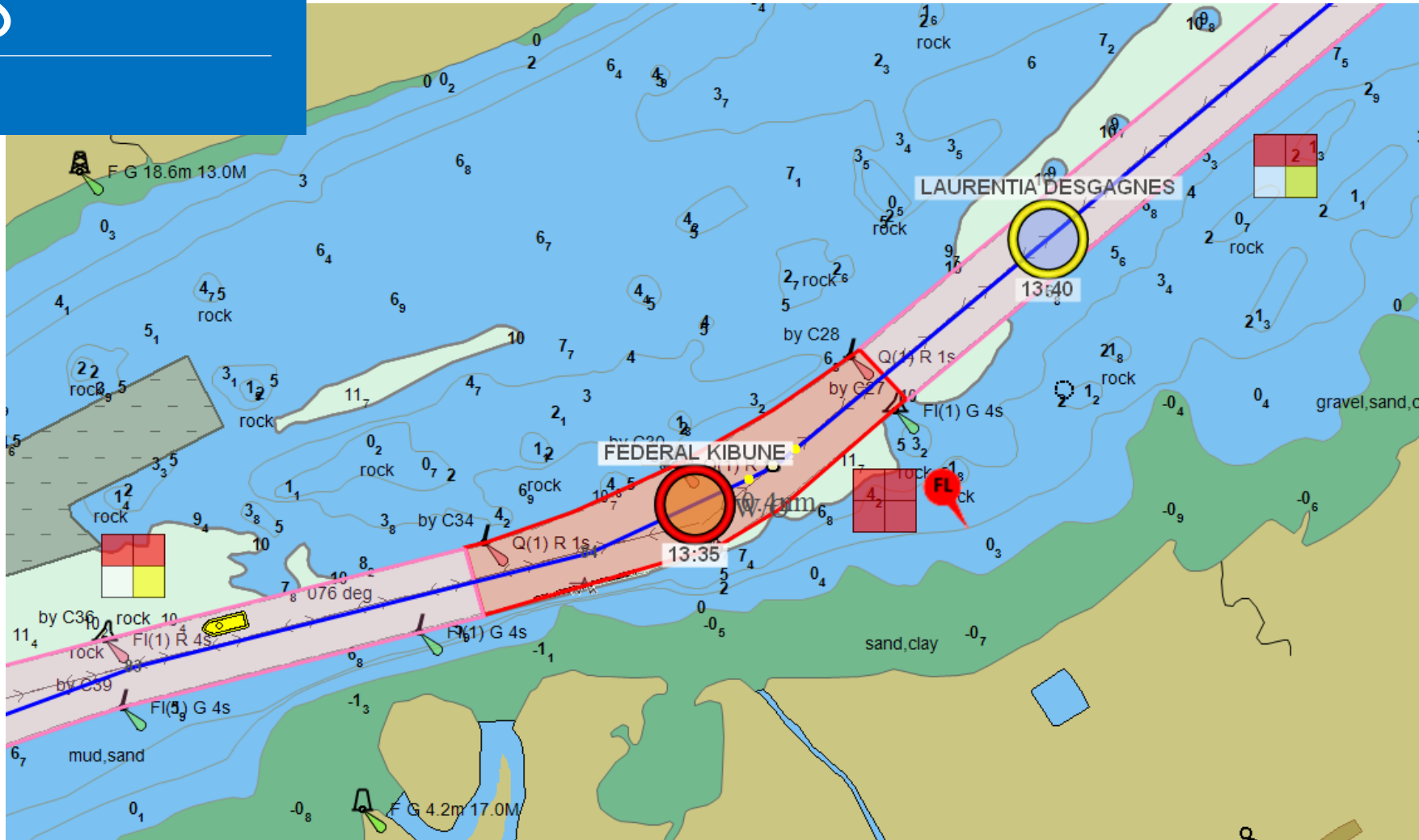
« Improved » Meeting Point function



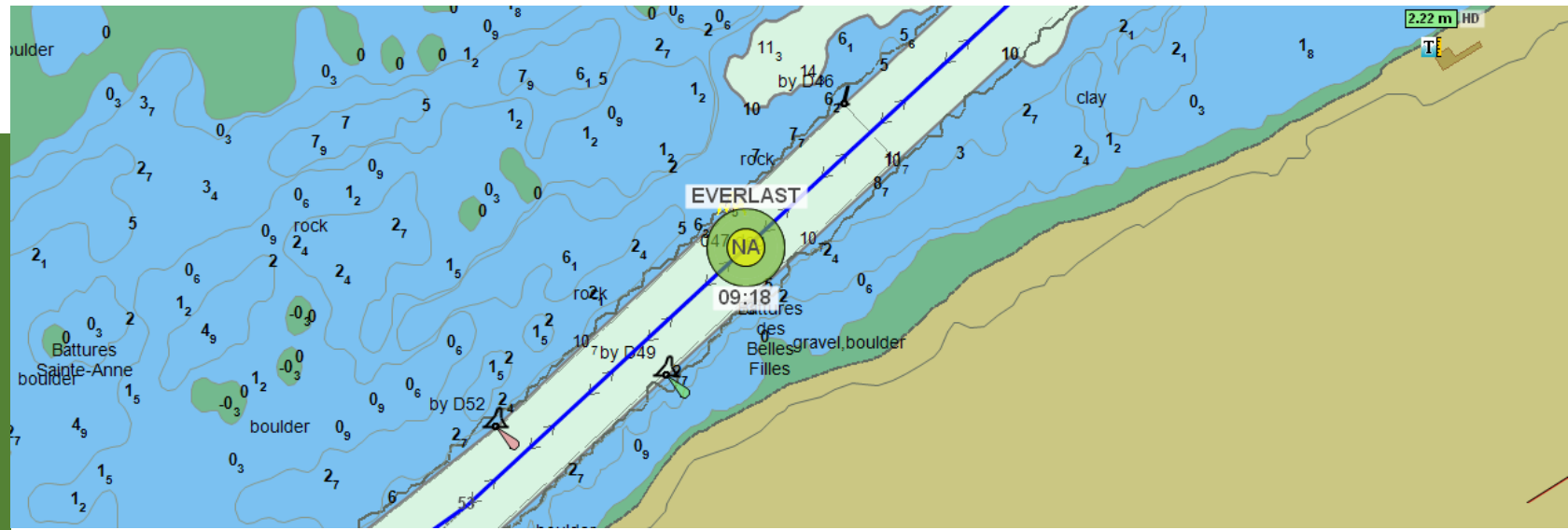
« Improved » Meeting Point function



MEETING CHECKS



RELIABILITY



PMP Table															
Vessel Name	MMSI	Go To Vessel	Beam	Comb. Beam	LOA	Ownship SOG	Planned Speed	Type	Go To	DTG	TTG	Risk Zone Name	Risk Matrix	Long Vessel Restriction	M/O Permitted
MSC SORAYA	370271000	Go To Vessel	40 m	70.48 m	277 m	19.63 km/h	35.48 km/h	MP	Go To MP	4.82 km	14min 42s	Risk Zone 6		YES	NO
								PMP	Go To PMP	6.17 km	10min 25s	Risk Zone 6		YES	NO
FRANK JAHN	367505030	Go To Vessel	10 m	40.48 m	26 m	19.63 km/h	35.48 km/h	MP	Go To MP	4.96 km	15min 8s	Risk Zone 6		YES	YES
								PMP	Go To PMP	5.62 km	9min 29s	Risk Zone 6		YES	YES
BOW PALLADIUM	257246000	Go To Vessel	27 m	57.48 m	165 m	19.63 km/h	35.48 km/h	MP	Go To MP	N/A	N/A	N/A	N/A	N/A	N/A
								PMP	Go To PMP	N/A	N/A	N/A	N/A	N/A	N/A

VERIFICATION FUNCTION

VESSEL'S CHARACTERISTICS



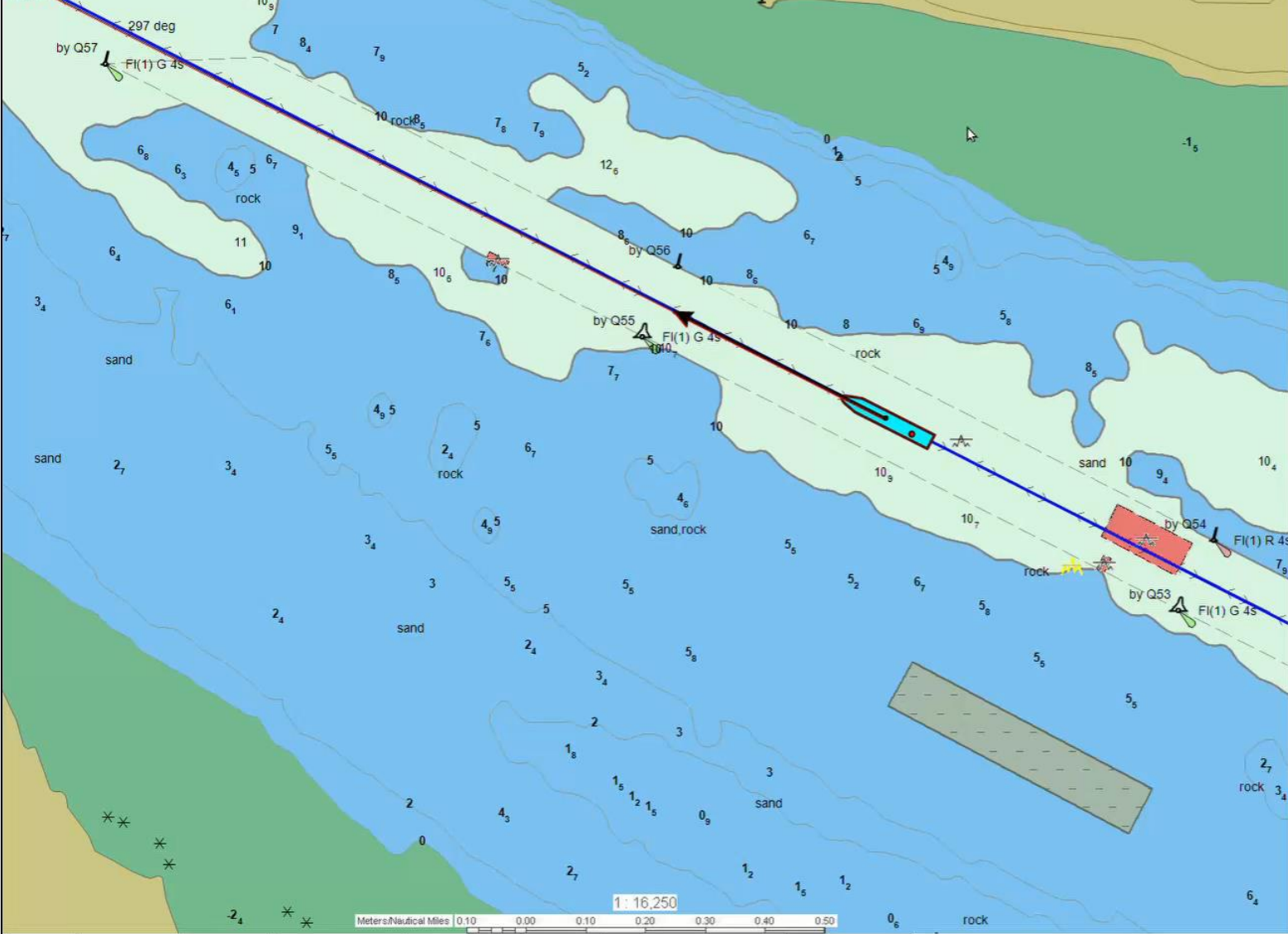
LLOYD'S DATA BASE





Dead Reckoning

User: **2112**



MP	Name	Distance	COG	St
<input type="checkbox"/>	GENEVAN TRADER	26.46 nm	191.0°	0.0 kr
<input type="checkbox"/>	SUNSET	29.01 nm	335.0°	0.0 kr
<input checked="" type="checkbox"/>	THUNDER BAY	32.02 nm	076.1°	11.8
<input checked="" type="checkbox"/>	OCEANEX CONNAIGF	32.80 nm	075.6°	17.0
<input type="checkbox"/>	POINT VIM	36.32 nm	151.6°	0.0 kr
<input type="checkbox"/>	JAMNO	36.56 nm	165.6°	0.0 kr
<input type="checkbox"/>	MEGA II	36.67 nm	342.0°	0.0 kr
<input type="checkbox"/>	ALGOMA NIAGARA	36.82 nm	311.7°	0.0 kr
<input type="checkbox"/>	STAR GWYNETH	36.96 nm	281.5°	0.0 kr
<input type="checkbox"/>	DUGA	36.97 nm	323.3°	0.0 kr
<input type="checkbox"/>	OCEAN BRAVO	36.99 nm	189.5°	0.0 kr
<input type="checkbox"/>	OCEAN CHARLIE	37.02 nm	340.7°	0.0 kr
<input type="checkbox"/>	UMIAK 1	37.22 nm	046.0°	0.0 kr
<input type="checkbox"/>	OCEAN LAVIOLETTE	39.09 nm	086.2°	0.0 kr

SOG

12.0 kn

COG

297.0°

Level	Age	ID	Dir...
2.21 m	22 min	PORTNEUF	N/A
4.65 m	17 min	QUEBEC	N/A
0.70 m	7 min	TROIS-RIVIERES	N/A

QUESTIONS / COMMENTS ?