



Philippines, 2018

Canada: some thoughts on naming undersea features

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https://unstats.un.org/unsd/geoinfo/UNGEGN/Toponymy_Training_Manila.html

**United Nations Group of Experts
On Geographical Names (UNGEGN)**

Promoting the collection, standardization and dissemination of geographical names

What we will cover ...

- Similarities / differences undersea vs. land naming
- Canada
 - How undersea feature names are handled
 - Gazetteer of Undersea Feature Names
 - terminology
 - entries
 - Some examples of named features
 - Status today
 - database
 - outstanding questions
 - SCUFN



Some similarities with land naming

- Need to process in the office for possible approval by Board; accurate data
- Need to store in a database with many of the same fields of information
- Need to have principles of naming to follow
- Need to disseminate for general use (texts, charts, etc.)



Some differences from land naming

- Cannot “see” the features; likely not shown on topographic maps
- Need advice to correctly identify features
 - Generic and feature type terminology is important
- Are there locally used names?
 - If so, are there language guidelines?
- Should names be created to meet particular needs? If so, how will this be done?
 - Public submissions, surveys, naming by officers



Arctic Ocean waters



CANADA

Atlantic Ocean

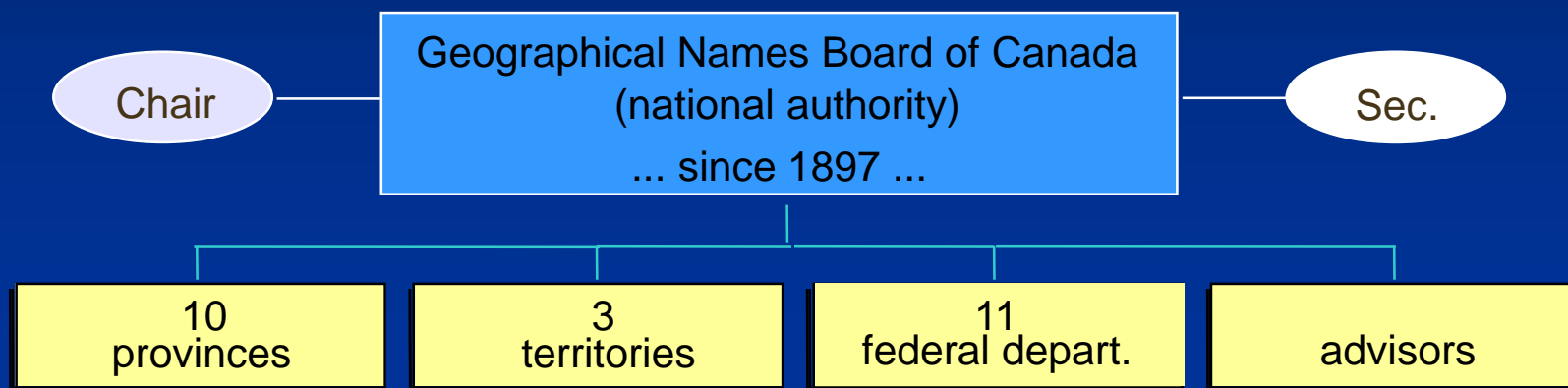
Pacific Ocean

Great Lakes (Canada/USA)

Natural Resources Canada – topographic maps
Canadian Hydrographic Service (CHS) – hydrographic charts

Geographical Names Board of Canada

- Consists of 10 provinces; 3 territories; federal government departments (including CHS)
- Each province/territory decides on names within its jurisdiction



- Undersea features – reviewed and recommended by a sub-committee (ACUFN) and signed off by GNBC Chair

ACUFN / ACNUMF / ACUFN

- Established by the Board in 1966 / 1983 / 2014
- Since 1983 also consider maritime feature names
- Chair:
 - Hydrographer General (Director General of CHS)
 - Now delegated to a Director of CHS
- Secretariat:
 - Canadian Hydrographic Service (CHS)



ACUFN members

- Members have been from:
 - Federal departments: defence, fisheries, oceanography, marine ecology and geology, Northern Affairs
 - GNBC Secretariat
 - Hydrography, charting, marine law, translation, standards
 - Provinces and territories: observers / later members
- Today – (1) core members and (2) extended members:
 - (1) CHS, Translation Bureau, private sector, academia, GNBC member, GNBC Secretariat ... 7 at present
 - (2) CHS regions, Geological Survey, other GNBC and Secretariat members



Early responsibilities of ACUFN

- Recommendations for undersea feature names and terminology in maritime regions “of interest” to Canada
 - Decision making for totally (?) submerged features in coastal waters, outside jurisdiction of provinces and territories
- 1976 – question of jurisdictional responsibilities
 - Provinces wanted greater input based on experience / local usage
 - Wanted clearer view of provincial/territorial vs. federal jurisdiction
- After 1983 influence on names of offshore waters
 - Limits for consistency on maps and charts
 - Suitability of new names and terminology
 - Official language forms
 - Provided input for Canada’s responses to limits in IHO S-23

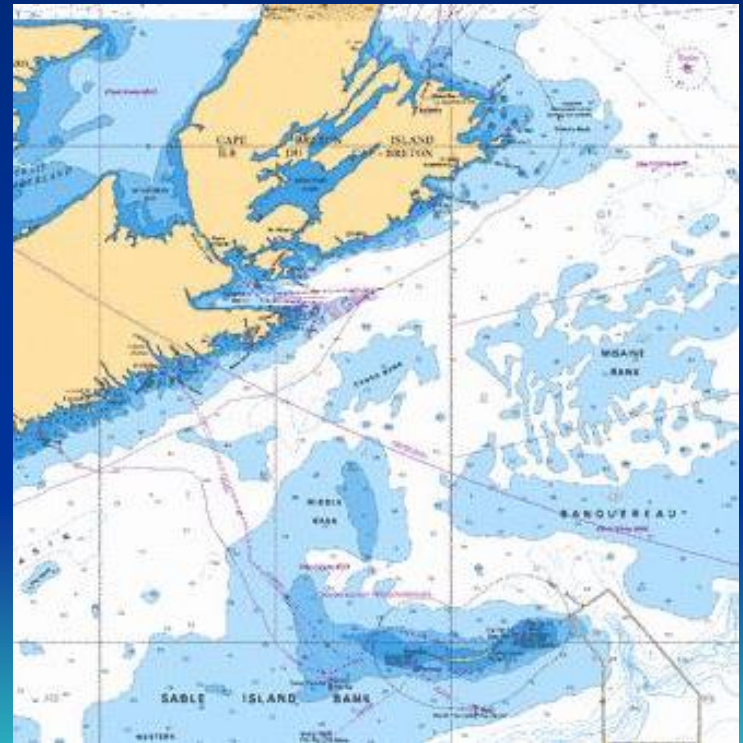


Gazetteer of Undersea Feature Names

- Published in 1983
 - Features submerged at lowest low water (chart datum)
 - Covers water areas – Canada: jurisdiction, importance, bordering
 - For scientific community; over 3600 names and variants

2nd edition, 1987

3900 names and variants



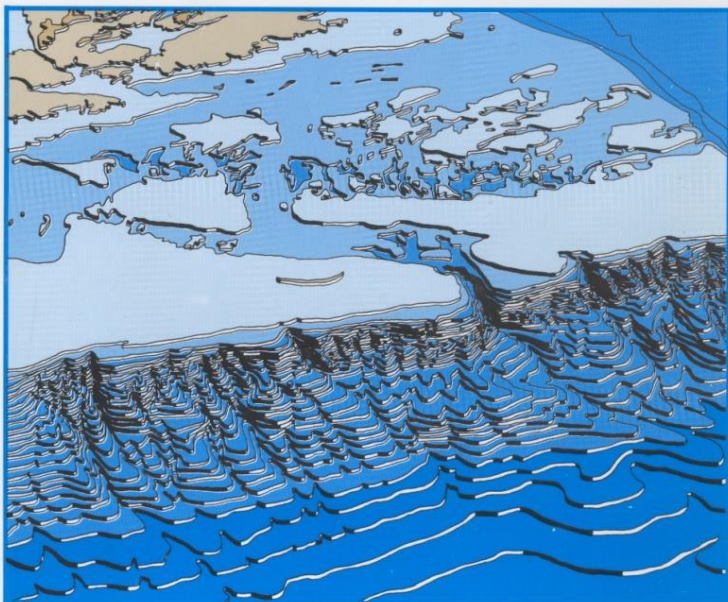


**Gazetteer
of Undersea
Feature Names
1983**

**Répertoire des
noms d'entités
sous-marines
1983**

**Advisory Committee on
Undersea Feature Names
Canadian Permanent
Committee on Geographical
Names**

**Comité consultatif des noms
d'entités sous-marines
Comité permanent canadien
des noms géographiques**



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Gazetteer of Undersea Feature Names

Terminology

GAZETTEER OF UNDERSEA FEATURE NAMES / RÉPERTOIRE DES NOMS D'ENTITÉS SOUS-MARINES	
FAN *CONE *DEEP SEA FAN *DEEP SEA CONE *SUBMARINE FAN *SUBMARINE CONE	CÔNE *CÔNE SOUS-MARIN
A relatively smooth feature normally sloping away from the lower termination of a canyon or canyon system.	Élément de forme générale conique à faible pente, situé généralement au voisinage du débouché inférieur d'un canyon.
FRACTURE ZONE	ZONE DE FRACTURES *LIGNE DE FRACTURES
An extensive linear zone of irregular topography of the seafloor, characterized by steep-sided or asymmetrical ridges, troughs, or escarpments.	Zone linéaire étendue, de morphologie irrégulière, caractérisée par des dorsales, des dépressions ou des talus escarpés ou dissymétriques.
FURROW	SILLON
A micro relief feature appearing as a long and narrow indentation of the seafloor, resulting from natural or artificial plowing action. NOTE: The term micro relief is used here to refer to features too small to show up in the contouring on most charts.	Entité du micro-relief ayant l'apparence d'une longue indentation étroite du fond sous-marin et résultant du labourage naturel ou artificiel. REMARQUE: Le terme « micro-relief » désigne ici les entités trop petites pour être montrées dans le tracé des cartes.
GAP *ABYSSAL GAP	PASSAGE *GOULET *PASSE
A narrow break in a ridge or a rise.	Brèche étroite dans une dorsale ou un massif.
GUYOT (See also <i>TABLEMOUNT</i>)	(Voir <i>GUYOT</i>)
GULLY (See <i>VALLEY</i>)	(Voir <i>VALLÉE</i>)
HILL	COLLINE
A small isolated elevation, not as high as a knoll.	Élévation isolée de faible hauteur moins importante qu'un dôme.
HOLE	CUVETTE
A small depression of the seafloor.	Dépression de faible étendue du sol sous-marin.
ISLAND SHELF (See <i>CONTINENTAL SHELF</i>)	(Voir <i>PLATE-FORME</i>) *PLATE-FORME INSULAIRE
ISLAND SLOPE (See <i>CONTINENTAL SLOPE</i>)	(Voir <i>PENTE</i>) *PENTE INSULAIRE
KNOLL	DÔME
A relatively small isolated elevation of a rounded shape.	Élévation isolée de dimensions relativement faibles et de forme arrondie.
LEDGE	CHAUSSÉE
A relatively flat projection of rock usually extending from a shoreline.	Zone rocheuse de faible profondeur s'avancant vers le large au droit d'une côte.

- English and French
- Bold type = suggested for use on charts (~70)
- * = common synonyms, but not recommended
- General and descriptive definitions as depicted by bathymetric contours
- Most terms are consistent with IHO / UN

Name/Nom	Feature/Entité	Chart or Map/ Carte	Position
Rupert Jones Shoals	Shoals/Hauts-fonds	4021	50 55N 57 16W
Russell Banks	Banks/Bancs	3724	52 41N 129 20W
Russell Point Shoals	Shoals/Hauts-fonds	4376	45 54N 59 58W
Russell Rock	Shoal/Haut-fond	4560	49 36N 53 39W
Russel Rock	Rock/Roche	4616	47 01N 55 08W
Rusty Rock	Rock/Roche	4520	49 46N 54 13W
Ryan Rock	Rock/Roche	4592	49 39N 55 38W
Sable Island Bank <i>see also/voir aussi île de Sable, Banc de l'</i>	Bank/Banc	8007	43 45N 60 45W
Sackville Knoll <i>see/voir Orphan Knoll</i> <i>see/voir Orphan, Dôme</i>	Knoll/Dôme		50 30N 46 30W
Sackville Ridge <i>see/voir Sackville Spur</i>	Ridge/Dorsale		48 15N 46 30W
Sackville Spur	Spur/Eperon	8012	48 15N 46 30W
Sacrifice Rocks	Rocks/Roches	4450	47 11N 60 09W
Saddle Rock	Rock/Roche	4321	44 57N 61 54W
Sage Rock	Rock/Roche	3724	52 57N 129 35W
Sager Rock	Rock/Roche	3993	54 39N 130 27W
Sagittarius Channel	Trough/Cuvette	5.03	49 00N 159 25W
Saglek Bank	Bank/Banc	5001	59 20N 62 00W
Segona Shoal	Shoal/Haut-fond	4830	47 28N 55 39W
St. Anns Bank <i>see also/voir aussi Sainte-Anne, Banc de</i>	Bank/Banc	4022	46 00N 59 30W
St. Ann Shoal <i>see/voir Peak, The</i>	Shoal/Haut-fond		43 36N 65 51W
St. Anthony Basin	Basin/Bassin		51 55N 53 30W
St. Anthony Deep <i>see/voir St. Anthony Basin</i>	Basin/Bassin		51 55N 53 30W
Ste. Croix Rock	Rock/Roche	3761	53 57N 130 48W
St. Georges Leads	Bank/Banc	4565	47 34N 52 40W
St. Jacques Shoal	Shoal/Haut-fond	4831	47 29N 55 23W
St. Marys Bank <i>see also/voir aussi Sainte-Marie, Banc de</i>	Bank/Banc	4817	46 38N 53 57W

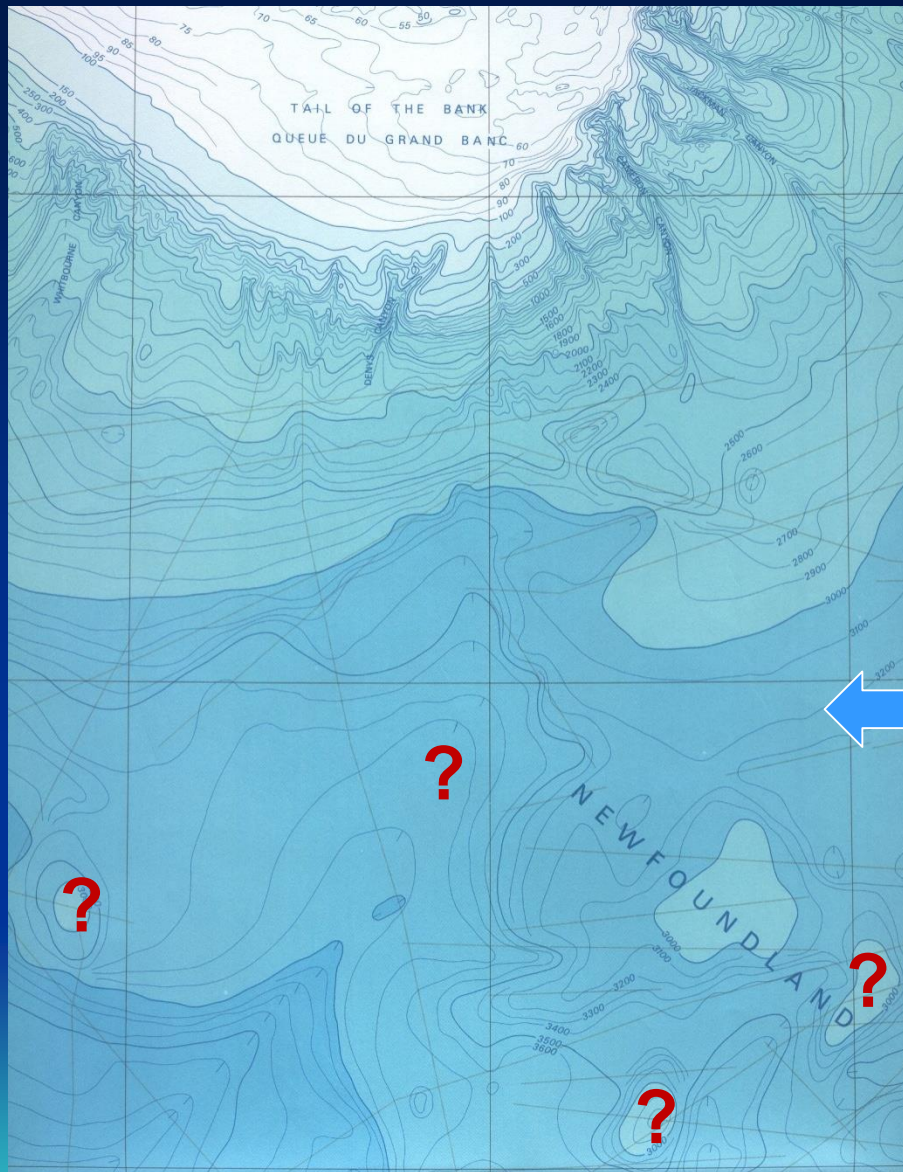
Gazetteer Entries

For scientific audience – English/French

- Name
- Feature
- Chart #
- Position – coordinates
- Variant ... “see” official name
- Dual names (English / French) ... “see also”
 - ~150 were dual names in 1987

Toponyms add value

- ... References
- ... Cultural heritage



Off Eastern Canada

CHS Bathymetry
NK 22-B
1987

WHITE STAR LINE
 ROYAL MAIL STEAMERS
 UNITED STATES MAIL

FIRST SAILING OF THE LATEST ADDITION TO THE WHITE STAR FLEET
The Queen of the Ocean
TITANIC



LENGTH 882 FT. OVER 45,000 TONS BEAM 92 FT.
 TRIPLE-SCREWS

This, the Latest, Largest and Finest Steamer Afloat, will sail from
WHITE STAR LINE, PIER 59 (North River), NEW YORK

THE NEW YORK HERALD.

NEW YORK, TUESDAY, APRIL 16, 1912. TWENTY-EIGHT PAGES. PRICE THREE CENTS.

**THE TITANIC SINKS WITH 1,800
 ON BOARD; ONLY 675, MOSTLY
 WOMEN AND CHILDREN, SAVED**

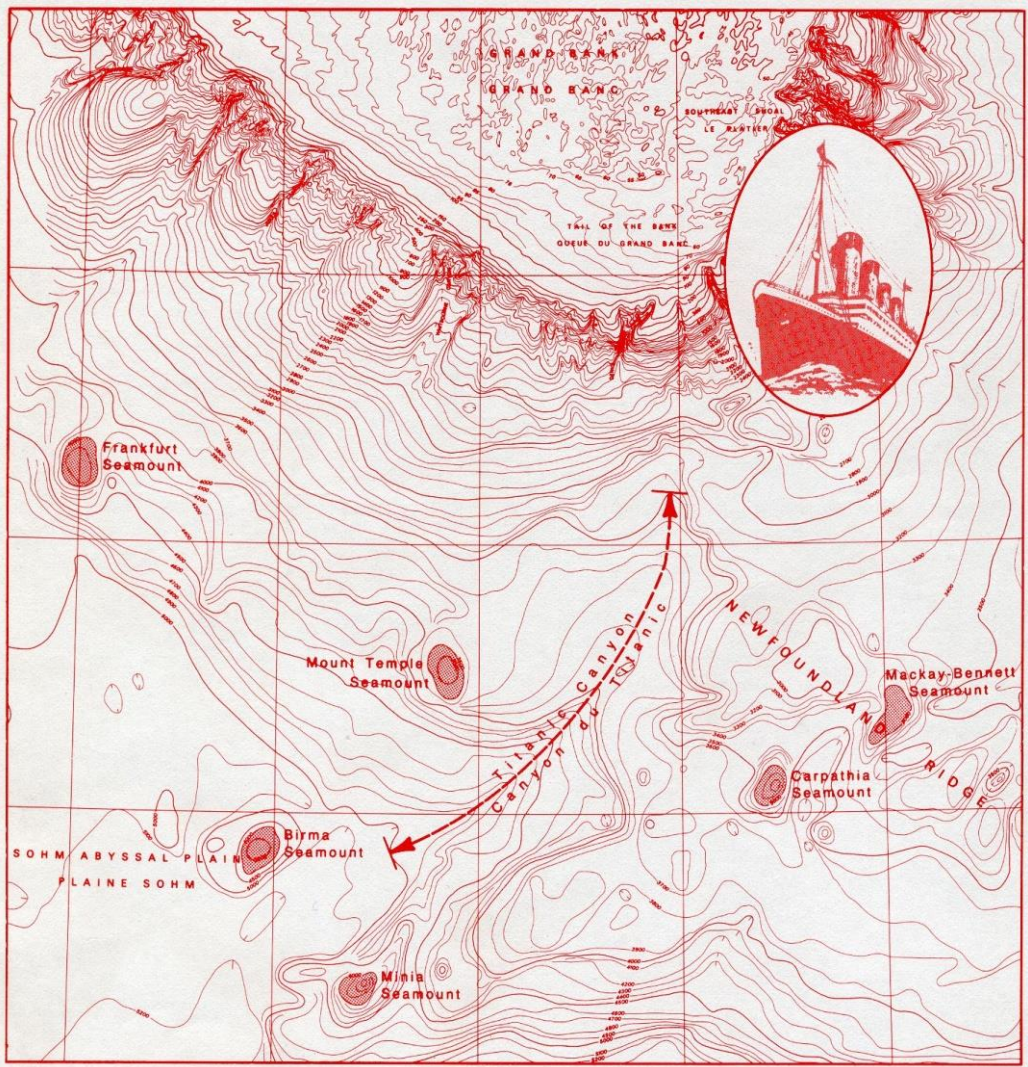
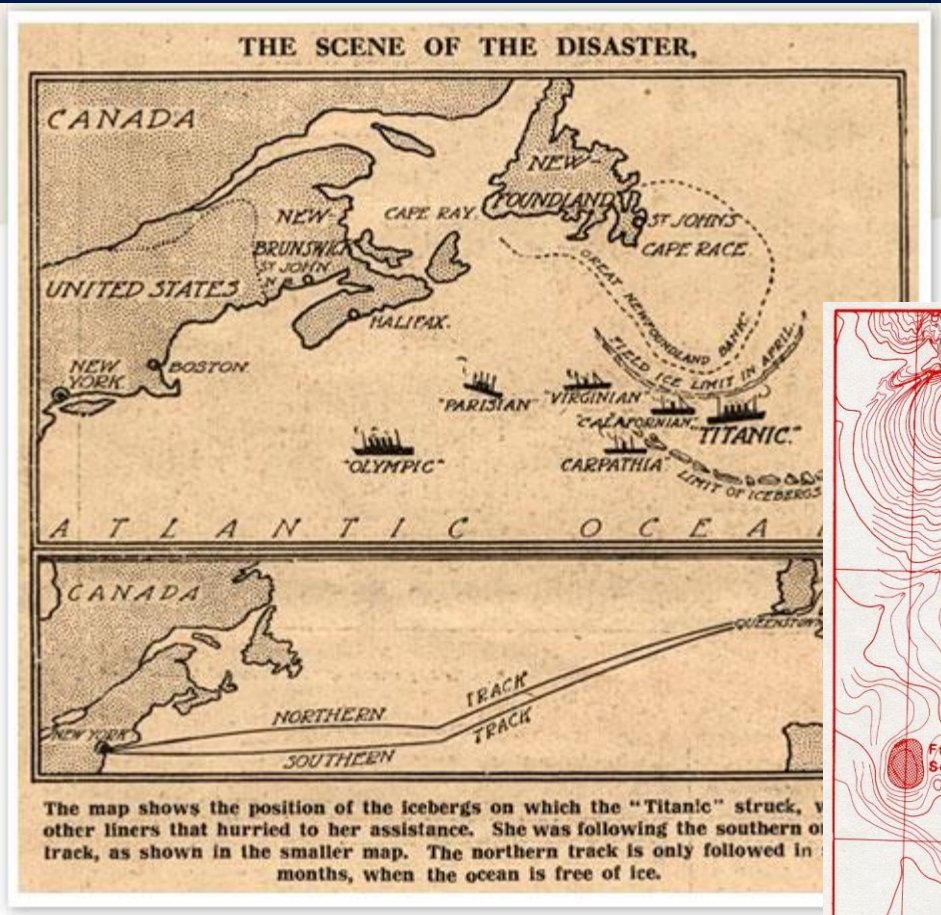


**Titanic: The
 Artifact
 Exhibition**



Struck iceberg 0:15 hr, April 15, 1912

Titanic Canyon



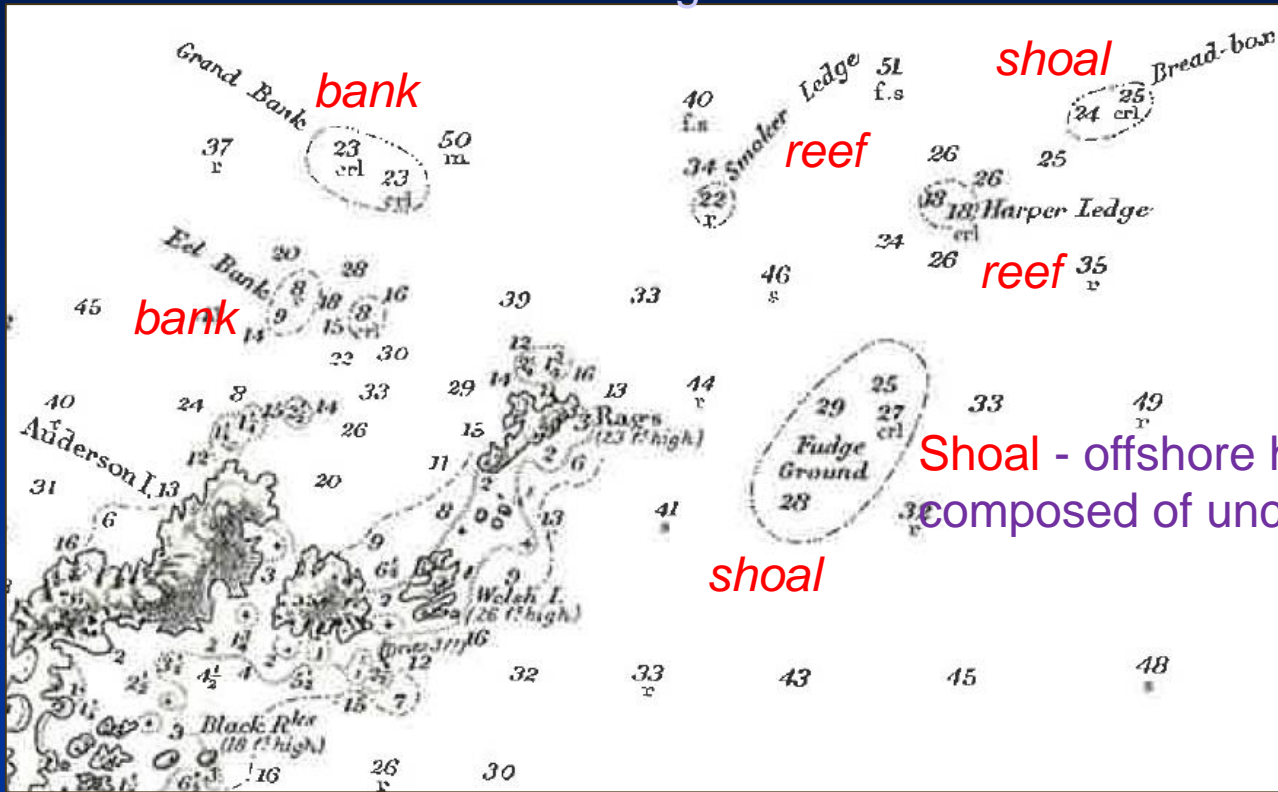
Commemorative naming

Based on CHS chart NK 22-B

Bank - elevation over which the depth of water is relatively shallow, but normally sufficient for safe surface navigation

More examples ...

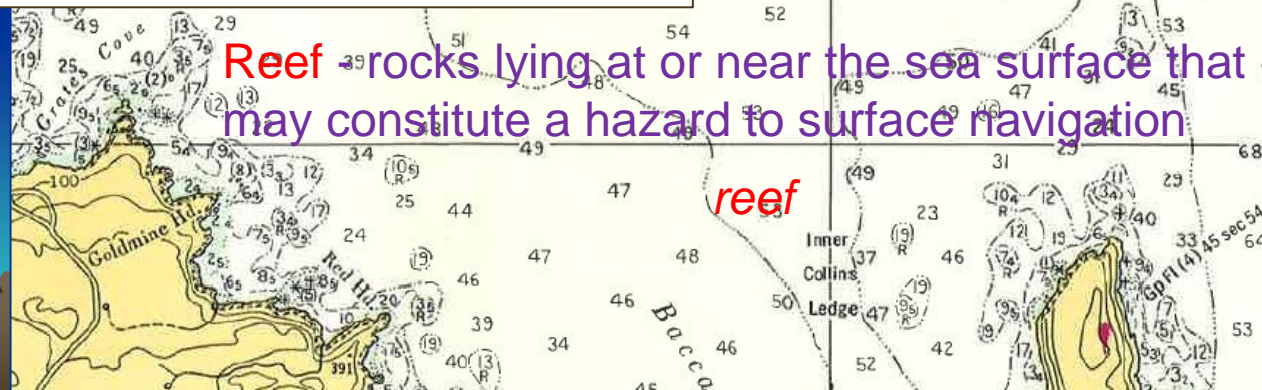
Names used by fishermen



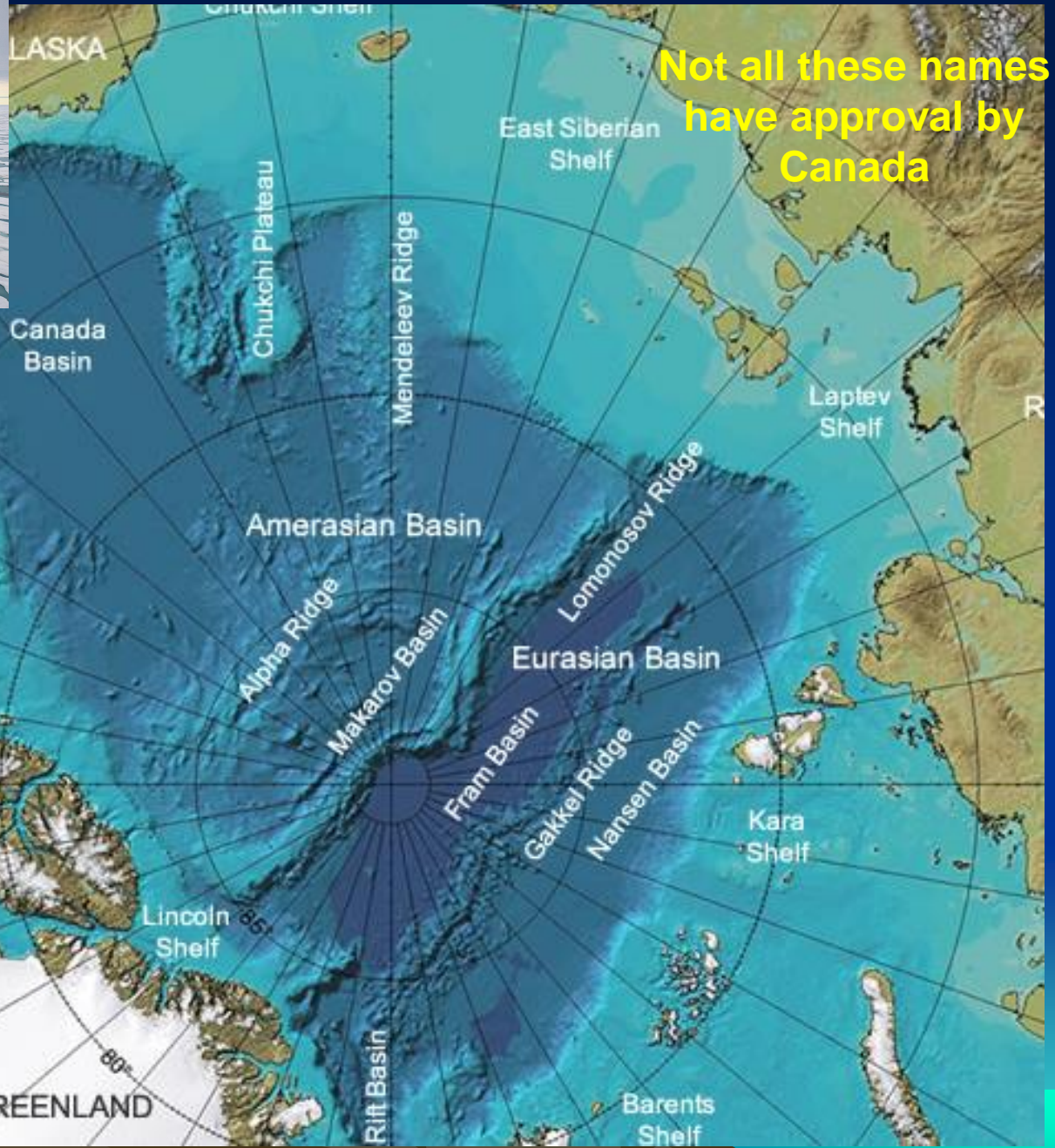
C.4563 ... fathoms

Shoal - offshore hazard to surface navigation composed of unconsolidated material

C.4548,
based on British Admiralty
chart of 1877
... fathoms



Reef - rocks lying at or near the sea surface that may constitute a hazard to surface navigation



Naming principles - General

- Apply to naming of undersea and surface maritime features in Canada's continental margins and in adjacent waters
- Naming of surface maritime features is for mapping and description and not a statement of claim
- Well established names on charts may be accepted even if specific or generic terms do not meet today's standards
- Where more than one name has been applied the older name should take precedence
- Non-Roman names applied to charts in Canada must be transliterated by a recognized system



Naming principles - details

Normally specific + generic (e.g. Georges Basin)

- **Specific**
 - Preferably short and simple
 - For associated land feature
 - For person ... contributor to ocean sciences; not living; conform to general GNBC guidelines
 - For ships (discovering, confirming feature), expeditions, scientific institutes
 - Groups of features for themes (e.g. historical)
 - Descriptive
 - Foreign names – not translated
- **Generic**
 - Reflect physical characteristics
 - New terms may be needed



Name submission forms

- Type of proposal
- Name, feature type
- Geometry
- Coordinates – lat. / long.
- Description of feature
- Map/chart
 - name shown; unnamed
- Reason for name choice
- Information on discovery
- Supporting survey data
 - + proposer's details
 - + remarks
 - + where to send form

ACUFN PROPOSAL FORM - NAMING OF UNDERSEA AND SURFACE MARITIME FEATURES
(See NOTE overleaf)

Note: The boxes will expand as you fill the form.

New name Name change Current name Any variant or unofficial names

Proposed Name:	Sea or Ocean:	
	Feature Type:	

Geometry that best defines the feature (Yes/No) :

Point	Line	Polygon	Multiple points	Multiple lines*	Multiple polygons*	Combination of geometries*

** Geometry should be clearly distinguished when providing the coordinates below.*

	Latitude (e.g. 23.99999° N)	Longitude (e.g. 71.99999° W)
Centroid Coordinates:		
Delineation Coordinates:		

Feature Description:	Maximum Depth:		Steepness :	
	Minimum Depth :		Shape :	
	Total Relief :		Dimension/Size :	

Associated Features:

Chart/Map References:	Shown Named on Map/Chart:	
	Shown Unnamed on Map/Chart:	
	Within Area of Map/Chart:	

Reason for Choice of Name (state how associated with the feature to be named):

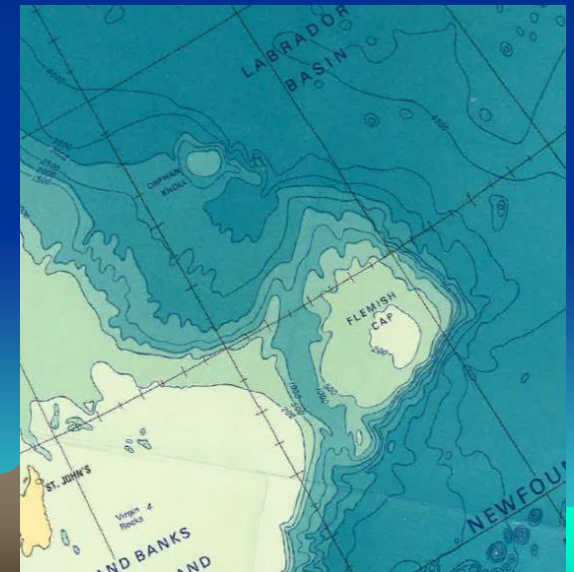
Discovery Facts:	Discovery Date:	
	Discoverer (Individual, Ship):	

Supporting Survey Data, including Track Controls:	Survey date:	
	Survey Ship:	
	Sounding Equipment:	
	Type of Navigation:	
	Estimated Horizontal Accuracy (nm):	
	Survey Track Spacing:	


Supporting material can be submitted as Annex in analog or digital form.

Undersea feature names - database status

- Part of the national geographical names database
 - 3604 official; 494 unofficial variants
 - i.e. 4098 name records in Undersea records
 - 55 feature types (45 singular; 10 plural)
 - Shoal / shoals 1311 (official)
 - Rock / rocks 1234
 - Bank / banks 415
 - Reef / reefs 194
 - Trough / troughs 66
 - Input by CHS – ACUFN Secretariat



Status today ...

- Some entries duplicated in national database
 - Names entered from fieldwork and other sources into provincial/territorial records in the CGNDB – also entered in undersea section of the CGNDB
 - Coordinates not always the same!
 - Over 2000 records involved in duplication
 - Further study and discussion needed to resolve this issue
 - Within a CGNDB record, name is stored both as:
 - **Gully, The** (as in Gazetteer) and **The Gully** (as on chart)
 - Public web access is just **The Gully**
 - Some features (~80) have names in English & French
 - Emerald Bank, Banc d'Émeraude
 - Flemish Cap, Bonnet Flamand etc.
- 

... Status today

- Recently re-invigorated ACUFN has new Terms of Reference, procedures, submission form, etc.
- Recent focus on submitting approvals to SCUFN
 - IHO report to 11th UN Conference E/CONF.105/15/CRP.15
... 139 names from Canada on hold as features are in territorial sea
- Translation of generics in text
- Anticipate more name submissions as further research/discovery and sovereignty questions with climate change in the Arctic and UNCLOS submission



Summing up ...

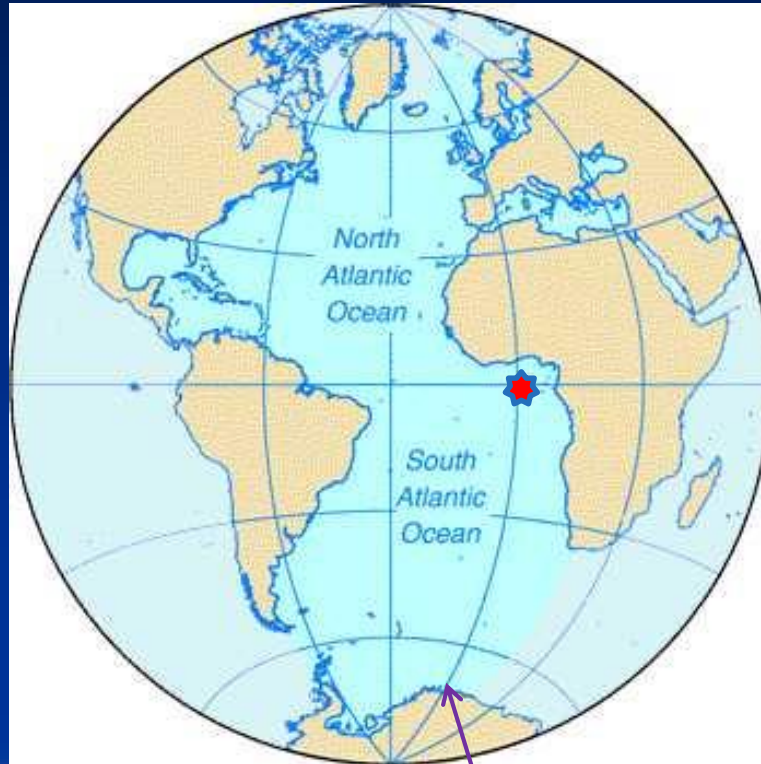
- What are useful qualifications for a member of a committee making decisions on undersea feature names?
- What type of names could be suitable for naming undersea features?
- Why is selection of appropriate feature types particularly important for undersea features?





Who can approve a name?

Anker Point



0° lat.

0° long.



Assumption that the United Nations could approve this! No!

Suggested follow-up study from web

- Distinctions in terminology:
 - inland waters; territorial sea baseline; territorial sea; EEZ; high seas
 - continental shelf, continental slope; deep seabed
 - UNCLOS
- IHO website (<https://www.iho.int/>)
 - Details of representation on hydrographic charts
 - https://www.iho.int/iho_pubs/standard/S-4/INT1_FR_Ed6_2016.pdf (English locked)
 - Work of SCUFN; B-6 Standardization of undersea feature names



