



Newfoundland Labrador

... it's happening here.



Larry Hicks

Manager, Petroleum Geoscience

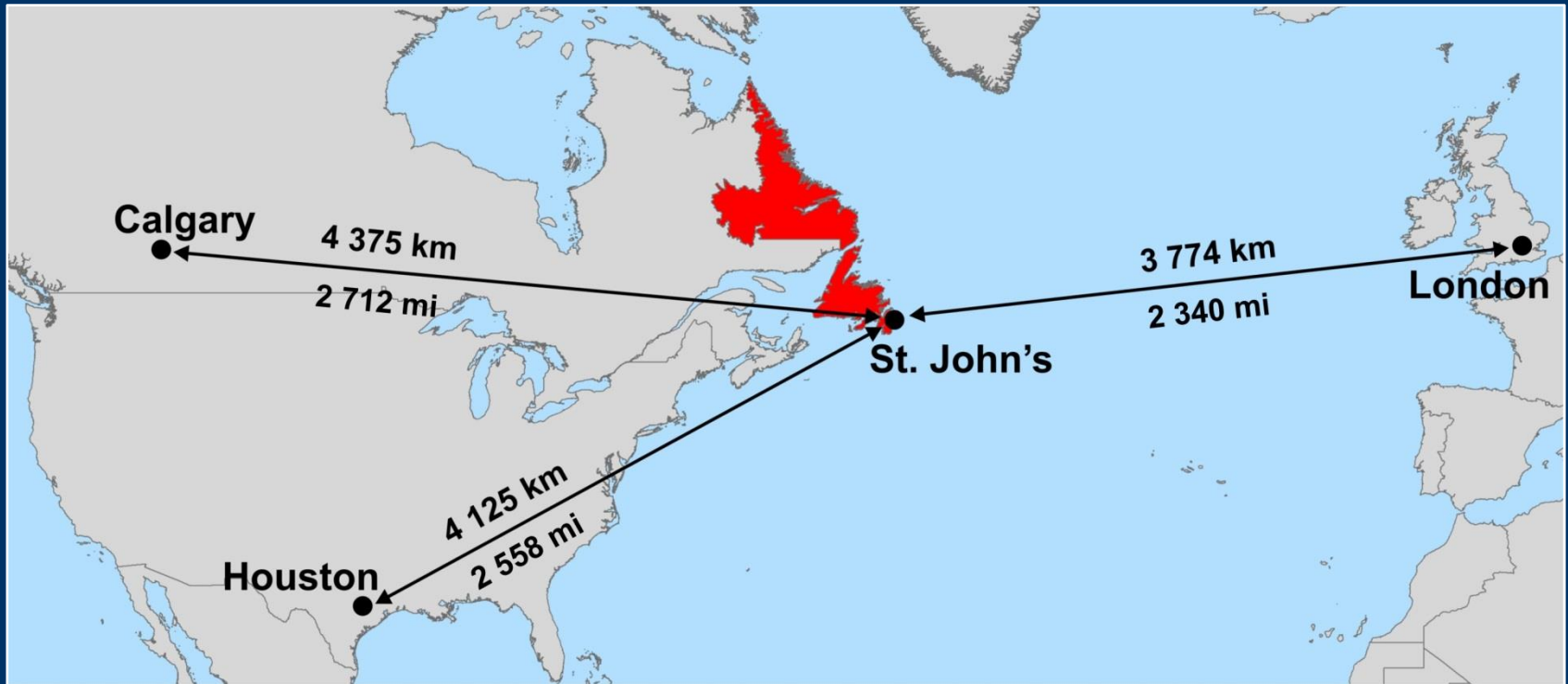
Department of Natural Resources - Energy

 Government of Newfoundland & Labrador, Canada 

AAPG 2014

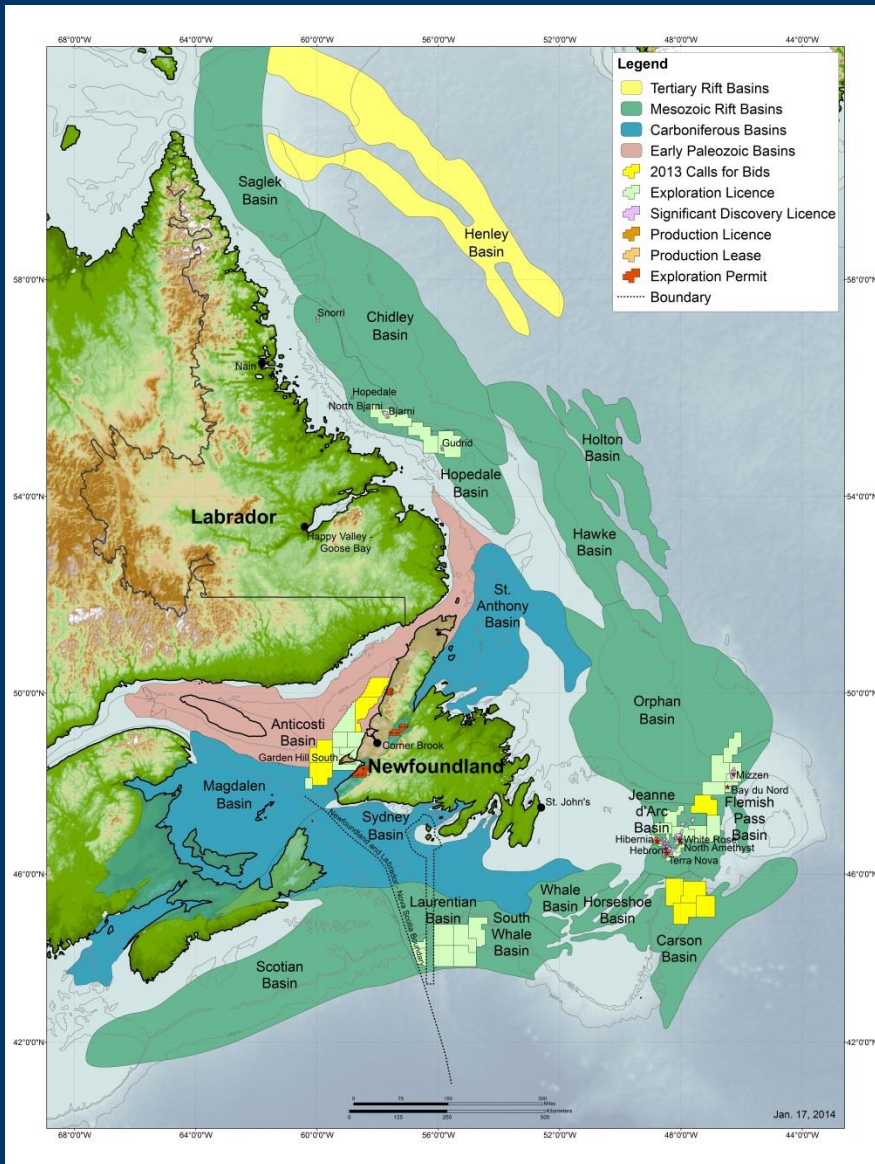
Houston, TX

Newfoundland and Labrador, Canada



- ✓ Most easterly Province in Canada
- ✓ More than 4000 km of coastline and water depth up to 4000 meters
- ✓ Population ~ 500,000
- ✓ Financially and Politically Stable
- ✓ Adjacent to Northeast US energy market
- ✓ Access to EU markets

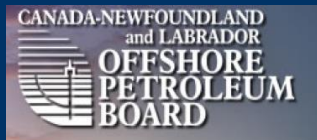
Energy Warehouse



- ✓ Home to some of the largest unexplored basins in the world
 - ✓ Area of petroleum potential greater than 1 million km²
 - ✓ Four offshore projects producing ~ 25% of Canada's conventional light crude oil
 - ✓ Light crude production of ~100 million barrels annually
 - ✓ Total cumulative oil production in excess of 1.4 billion barrels
- < 6% held under licence**

Regulatory Framework

OFFSHORE



- ✓ Administered by joint Federal / Provincial Board
- ✓ Canada – Newfoundland & Labrador Offshore Petroleum Board (**C-NLOPB**)
- ✓ Office – St. John's, NL
- ✓ Maintains Data Repository, Core Storage Facilities, etc.
- ✓ Web: www.cnlopb.nl.ca



ONSHORE



- ✓ Administered by Province
- ✓ Department of Natural Resources (**DNR**) – Energy Branch
- ✓ Office – St. John's, NL
- ✓ Maintains Data Repository, Core Storage Facilities, etc.
- ✓ Web: www.nr.gov.nl.ca/nr



Activity Summary

Wells Drilled Offshore

Exploration	155
Delineation	57
Development	186

Discoveries

Oil	18
Gas	8

Current Holdings

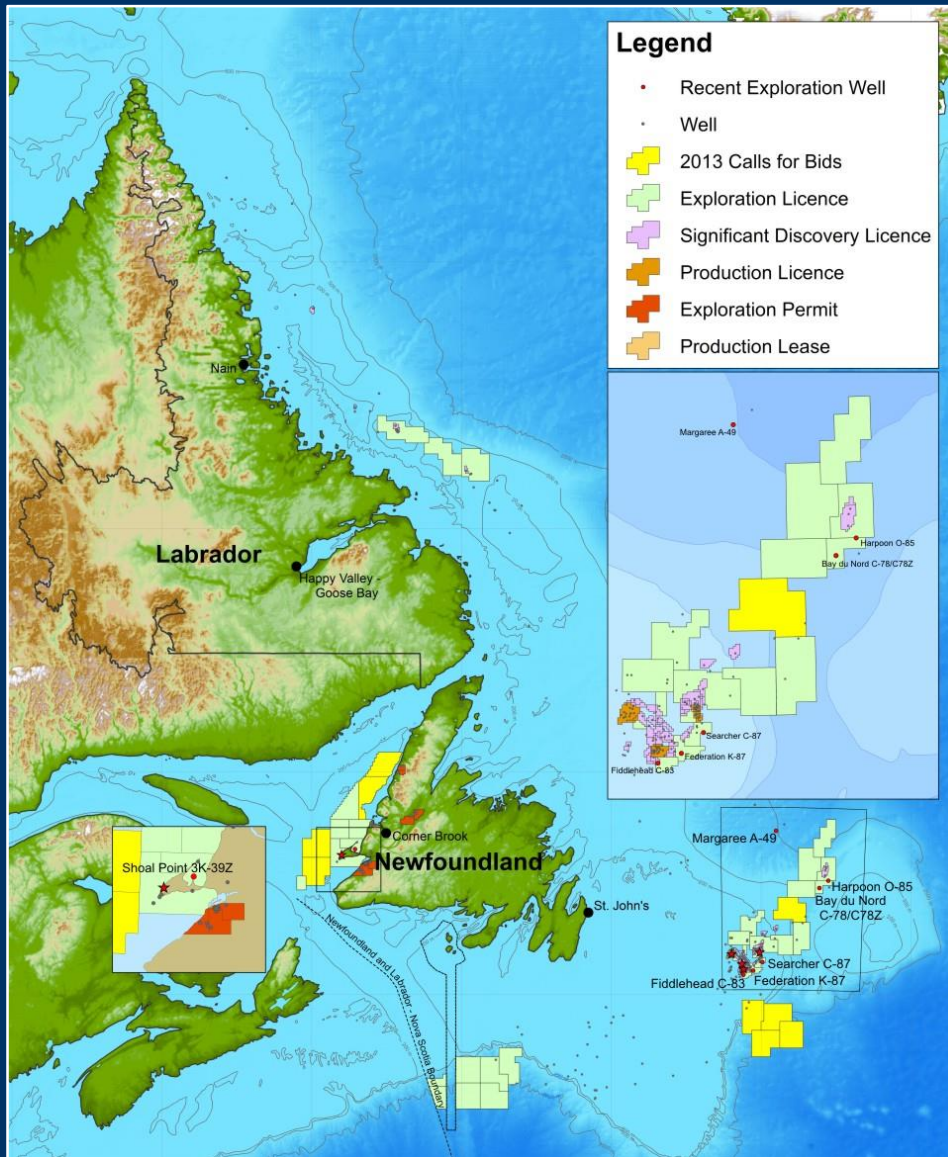
Exploration Licences	38
Significant Discovery Licences	54
Production Licences	11

1 in 6 Success Rate



(to December 31, 2013)

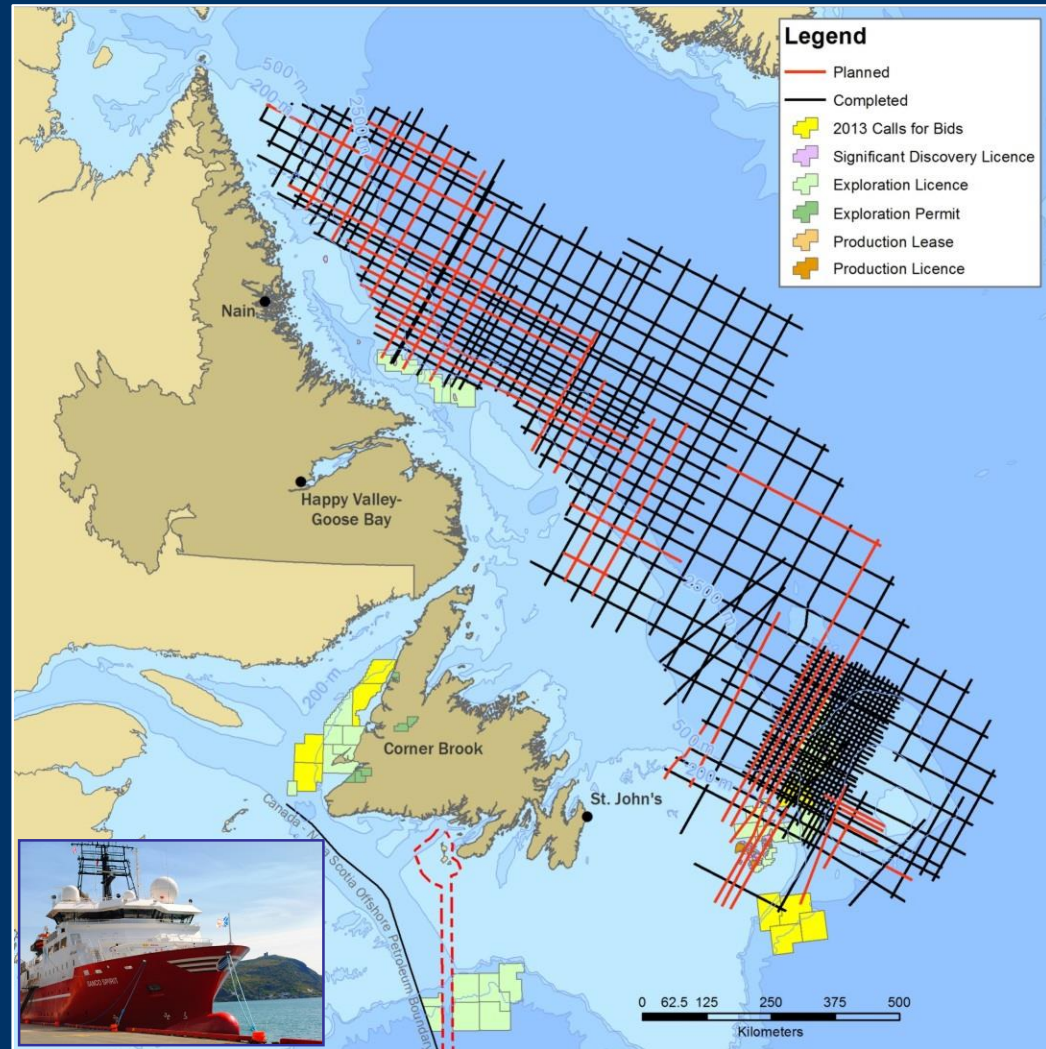
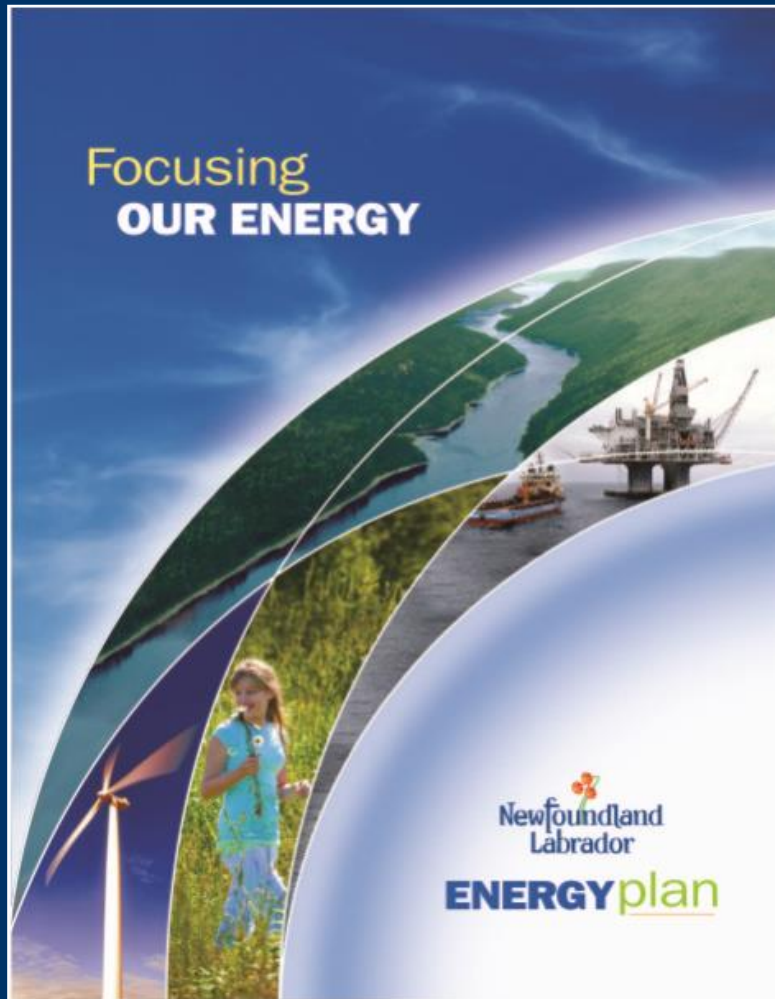
Recent Exploration Activity



- ✓ Large scale 2D & 3D seismic programs completed (2013)
- ✓ Significant exploration drilling activity (**5 wells** in 2013)
- ✓ Avg. of **\$272** million/year spent for exploration over past 5 years, ending 2012
- ✓ \$1.2 billion in outstanding work commitments
- ✓ Recent discoveries (2013) in the Flemish Pass Basin (**Harpoon & Bay du Nord**)

Offshore Geoscience Data Program

\$20 Million Government Funded Program



New Basin Discoveries



Seismic survey results:

- ✓ Discovery of three new basins: Henley, Chidley and Holton
- ✓ Also significantly increased the size of the Hawke Basin

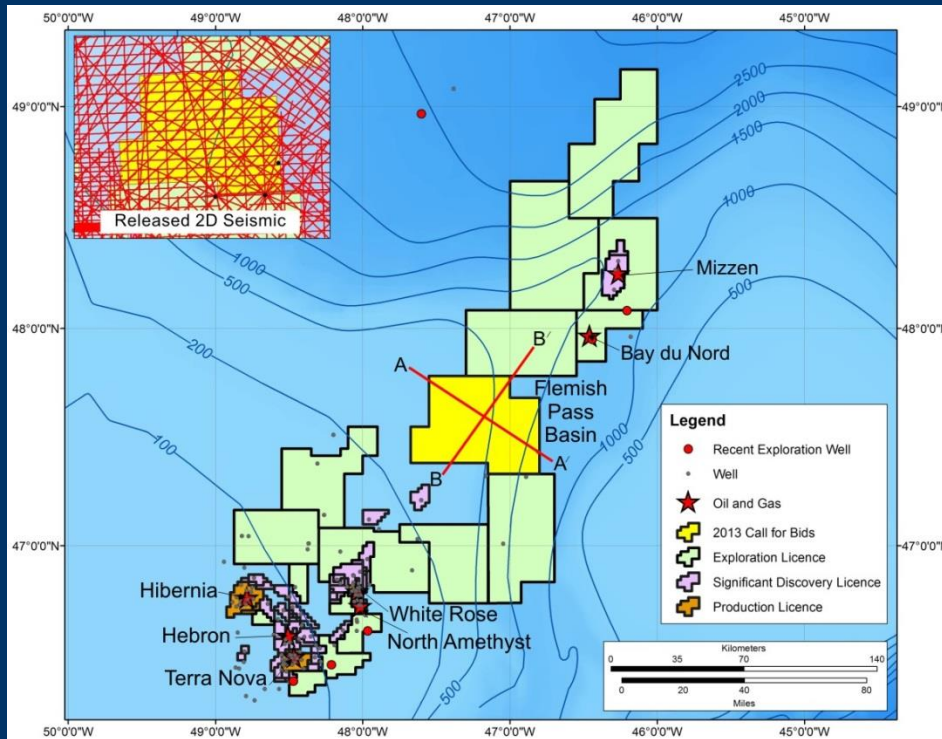
**Current
Offshore
Licensing Round**
(Parcel Descriptions)

Offshore Rights Issuance

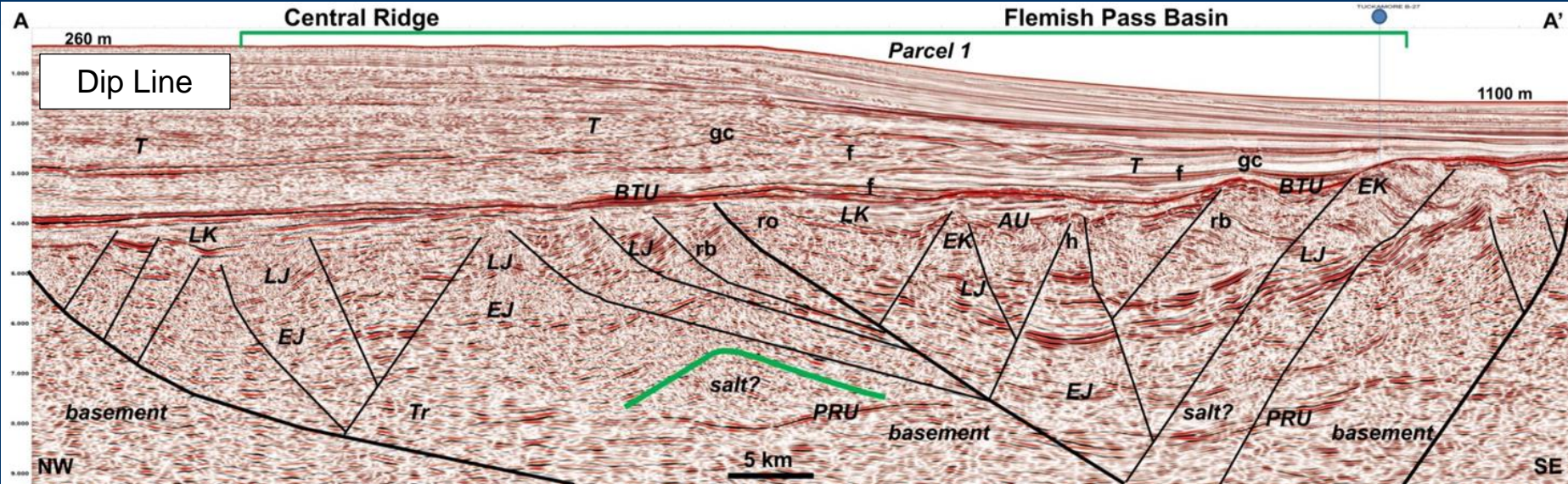


- ✓ Managed by the Canada – Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB)
- ✓ Federal and Provincial Entity

NL 13-01 Flemish Pass

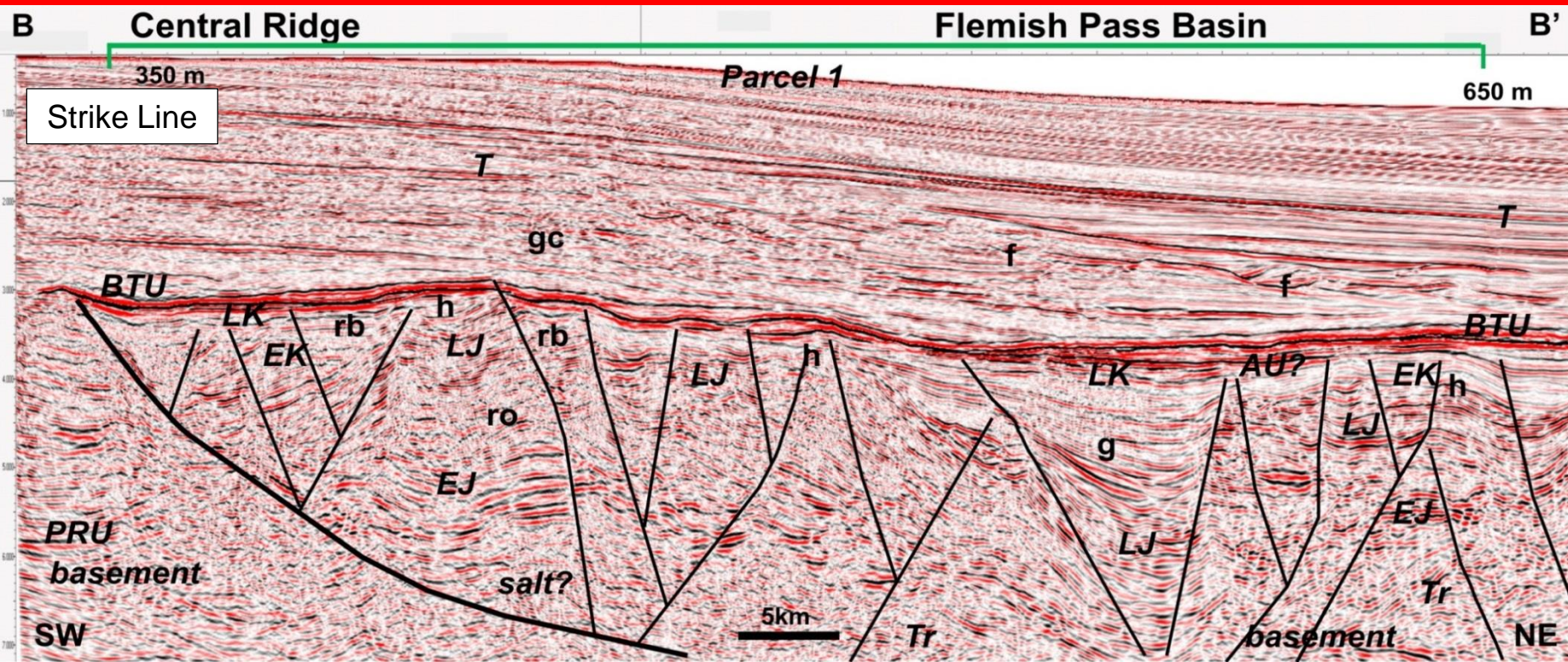


- ✓ One large parcel totaling ~266,000 hectares
- ✓ Water depth ranging from 240 to 1150 meters
- ✓ Proven Late Jurassic source; situated between producing Jeanne d'Arc basin and recent oil discoveries in the Flemish Pass basin

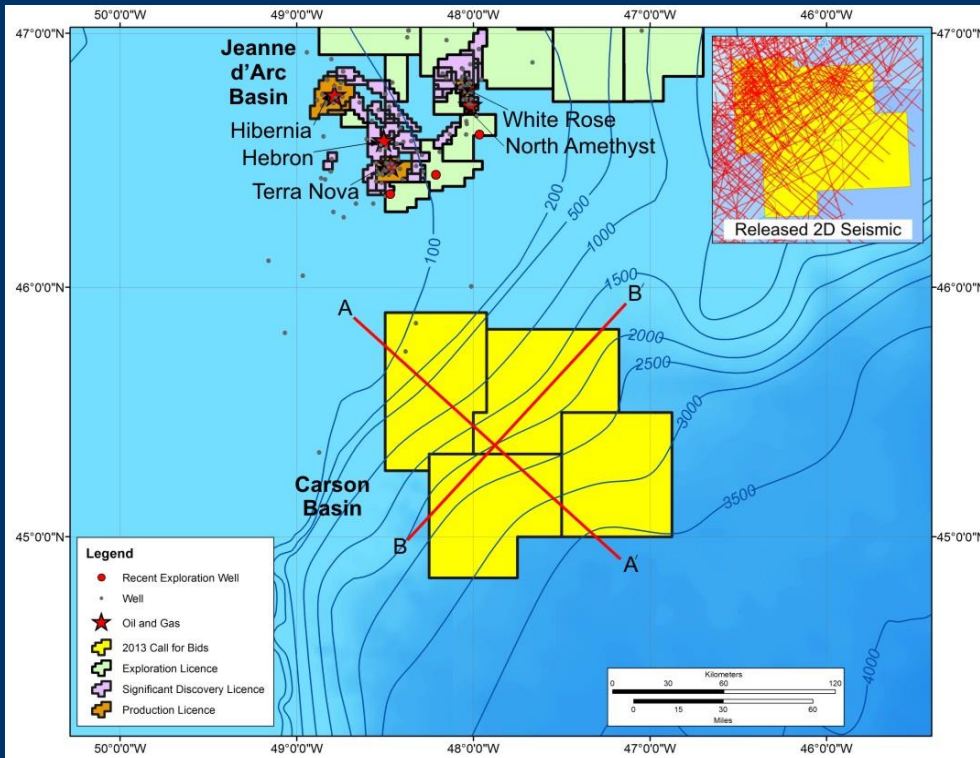


NL 13-01 Flemish Pass

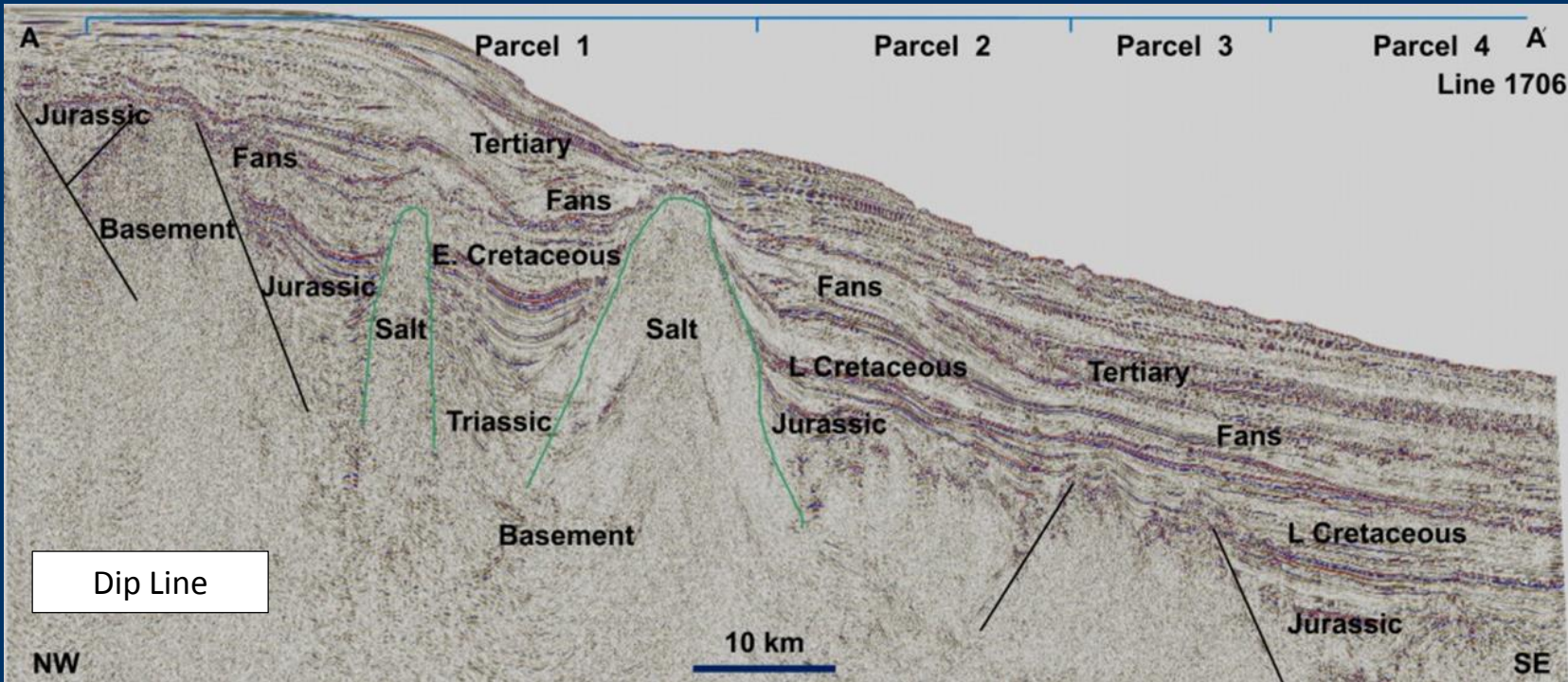
Data Source: TGS in collaboration with PGS
Interpretation: Dr. Michael Enachescu



NL 13-02 Carson Basin

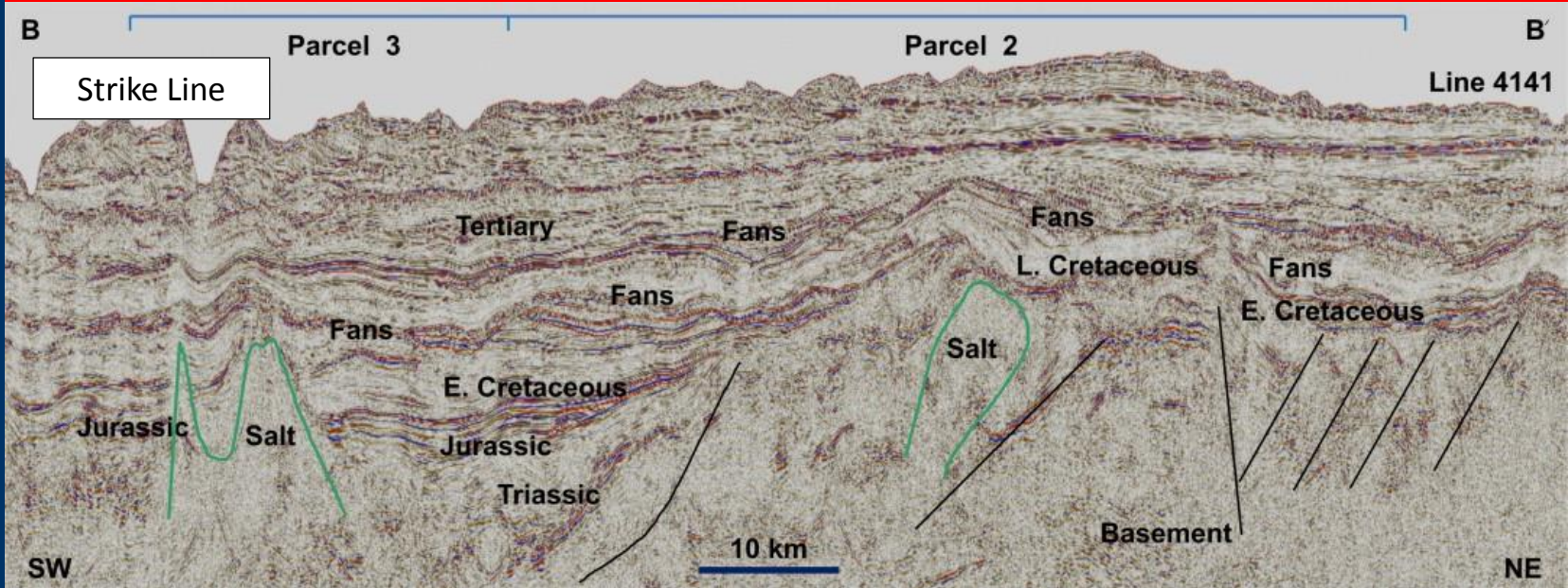


- ✓ Four large parcels totaling ~1.1 million hectares
- ✓ Water depth ranging from 90 to 3600 meters
- ✓ No deepwater wells (only 4 shelf wells); based on seismic data, Jurassic section interpreted across all parcels

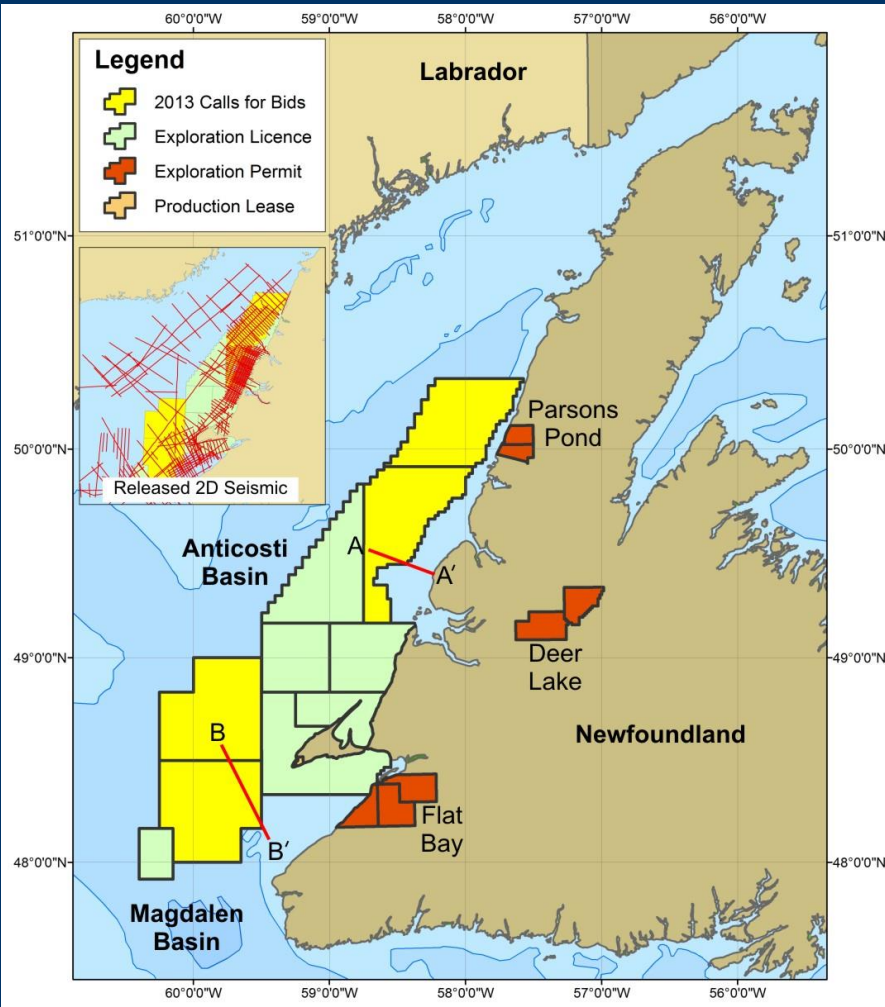


NL 13-02 Carson Basin

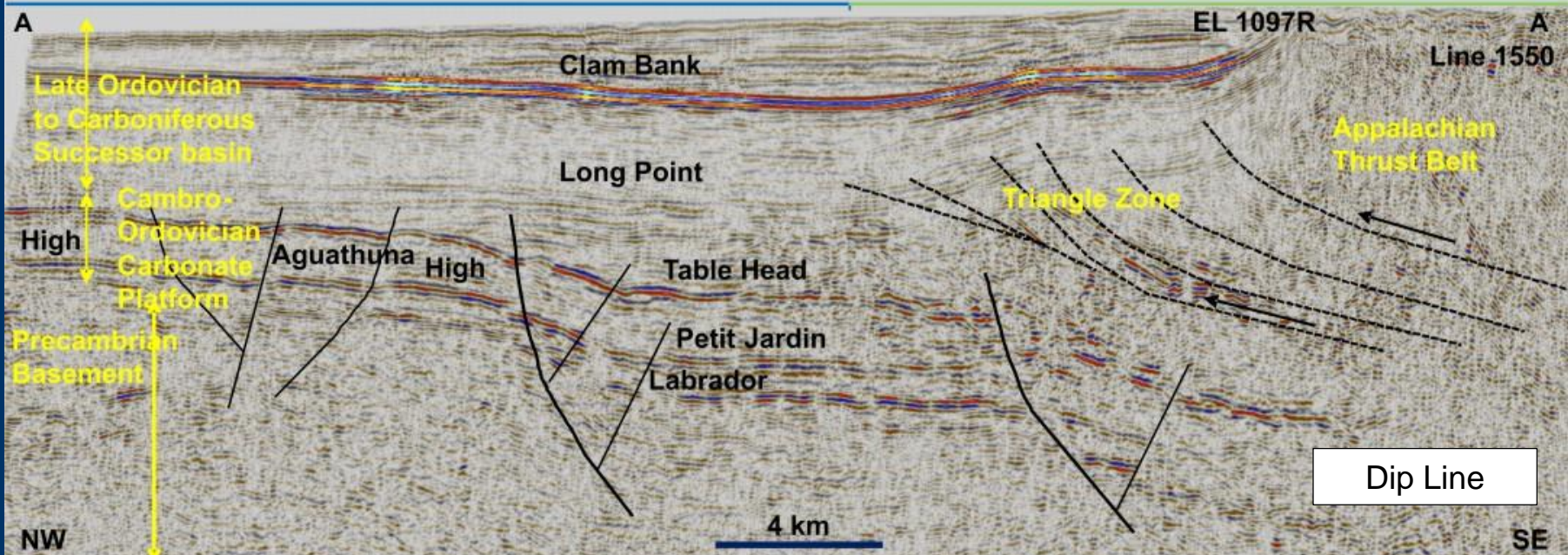
Data Source: C-NLOPB
 Interpretation: Dr. Michael Enachescu



NL 13-03 Western NL

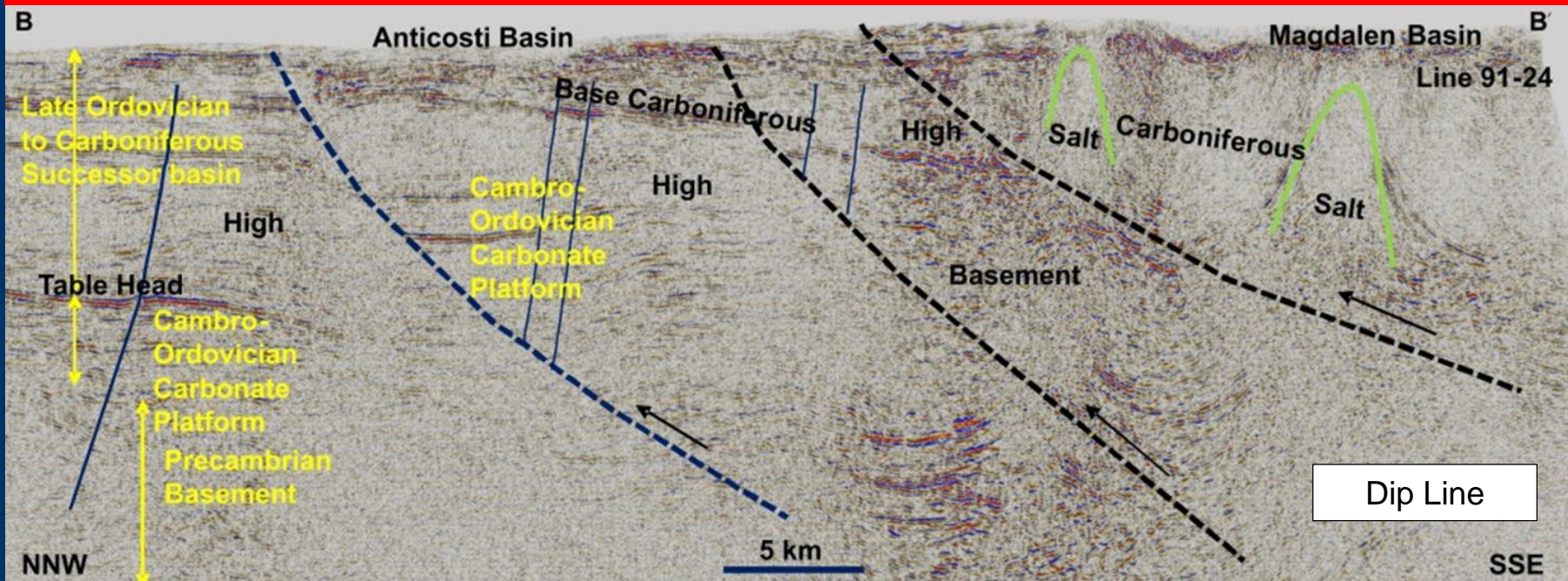


- ✓ Four large parcels totaling ~1.0 million hectares
- ✓ Water depth ranging from 90 to 330 meters
- ✓ Northern parcel spans boundary between Anticosti foreland basin & west NL triangle zone
- ✓ Southern parcel spans boundary between Anticosti basin and Magdalen basin.

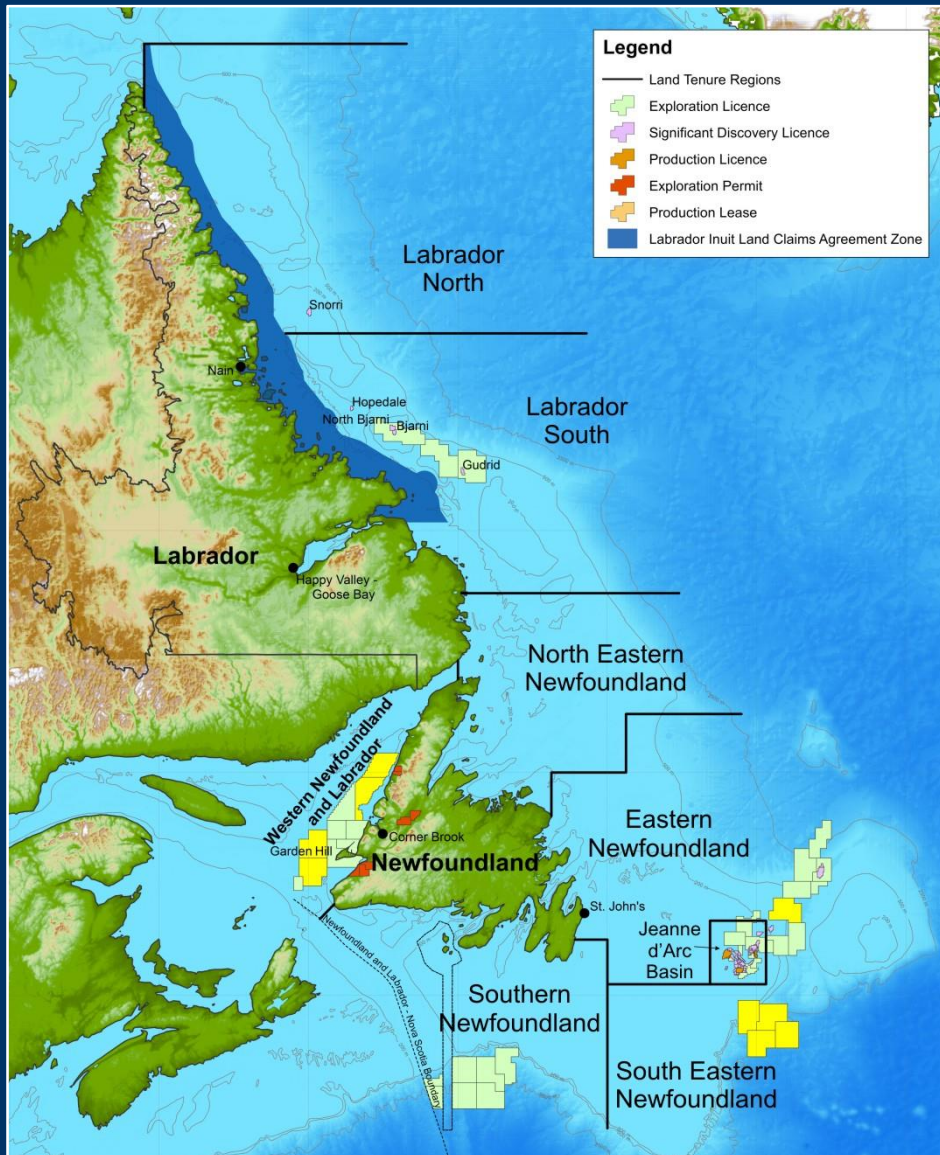


NL 13-03 Western Newfoundland

Data Source: Ptarmigan Energy
 Interpretation: Dr. Michael Enachescu



New Scheduled Land Tenure



Divided into 8 Regions

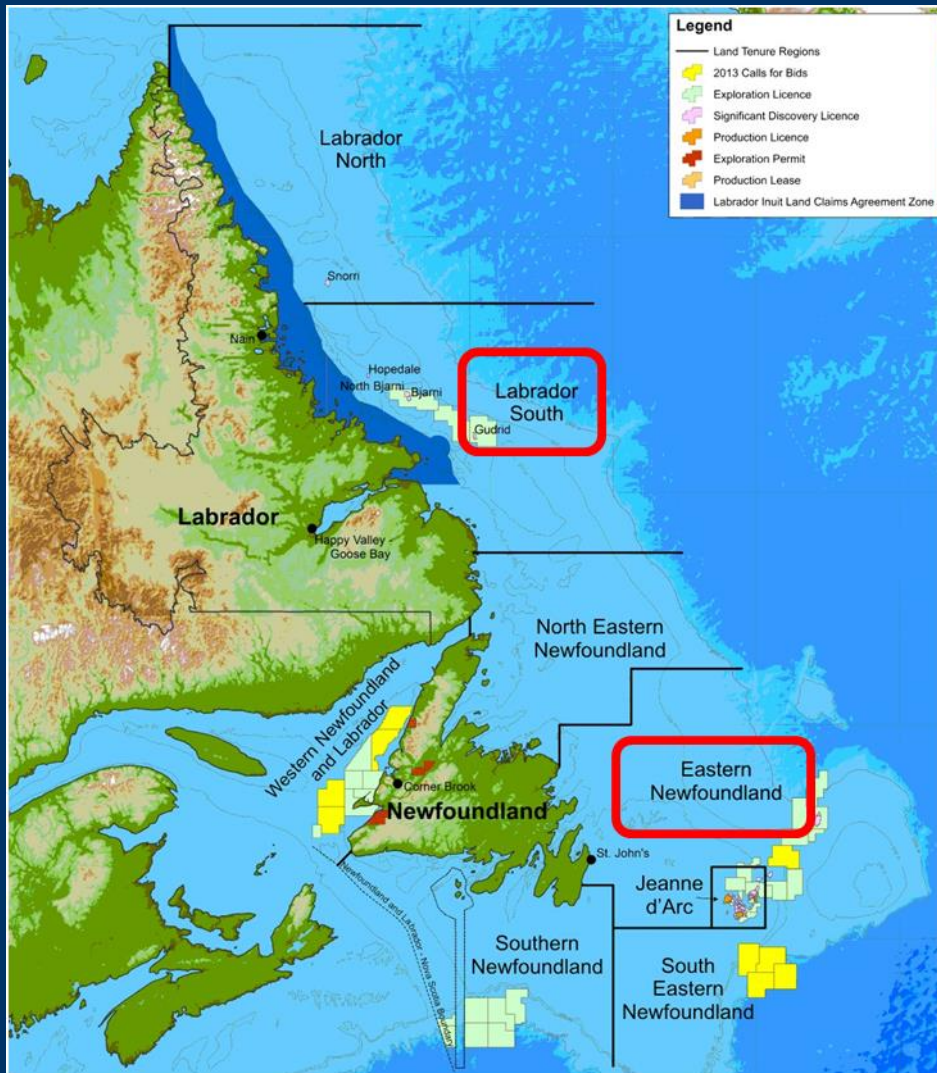
- ✓ Labrador North (LA)
- ✓ Labrador South (LA)
- ✓ North Eastern Newfoundland (LA)
- ✓ Eastern Newfoundland (HA)
- ✓ Jeanne d'Arc (M)
- ✓ South Eastern Newfoundland (LA)
- ✓ Southern Newfoundland (LA)
- ✓ Western Newfoundland (LA)

Low Activity (4 yr. cycle)

High Activity (2 yr. cycle)

Mature (1 yr. cycle)

C-NLOPB New Land Tenure System



- ✓ Two regions had Areas of Interest open for nominations
- ✓ Nominations closed on March 17, 2014
- ✓ C-NLOPB currently assessing nominations (AOI's) in prep. for April/May sector ID
- ✓ Once completed, sector nomination process opens - leading to a Call for Bids

Summary



What we have to offer:

- ✓ New modern seismic data availability
- ✓ New discoveries proving excellent prospectivity
- ✓ New opportunities with offshore Calls for Bids
- ✓ New flexible scheduled land tenure system

THANK YOU

NEWFOUNDLAND & LABRADOR
Canada

NEWFOUNDLAND & LABRADOR
Canada

Offshore Activity

Multi-Kilnt Invest
1700-1800 Eastern Canada
20 Service Industry

Offshore Opporti
Lands of Interest
Western Newfoundland

Offshore Opportunity
Lands of Interest
Flemish Pass Basin/North Central Ridge

Offshore Opportunity
Lands of Interest
Carson Basin

Current and Future Production

Offshore Opportunity
Lands of Interest
St. Lawrence Basin

On The Horizon for 2014

- ✓ NOIA Oil & Gas Conference (St. John's) – June
- ✓ Atlantic Realm Conjugate Margins Conference (St. John's) – August
- ✓ West NL Oil & Gas Symposium (Corner Brook) – Sept.

Web Address: www.nr.gov.nl.ca/nr/

Booth #635