

Analysis and Interpretation of the Documentary „Battle for the Pole“

Episode 2: A Review of the Production „Battle for the Pole“ by the National Film Board of Canada

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Overview of the learning unit

Episode 1:

Documentary Screening „Battle for the Pole“

Episode 2:

**A Review of the Production „Battle for the Pole“ by
the National Film Board of Canada**

Episode 3:

Interview with the contributor and Prof. Dr. Schaffeld

Learning target of the episode

Learning target 1:

You can understand and describe the deep water oil and gas development in the region of the North Pole.

Learning target 2:

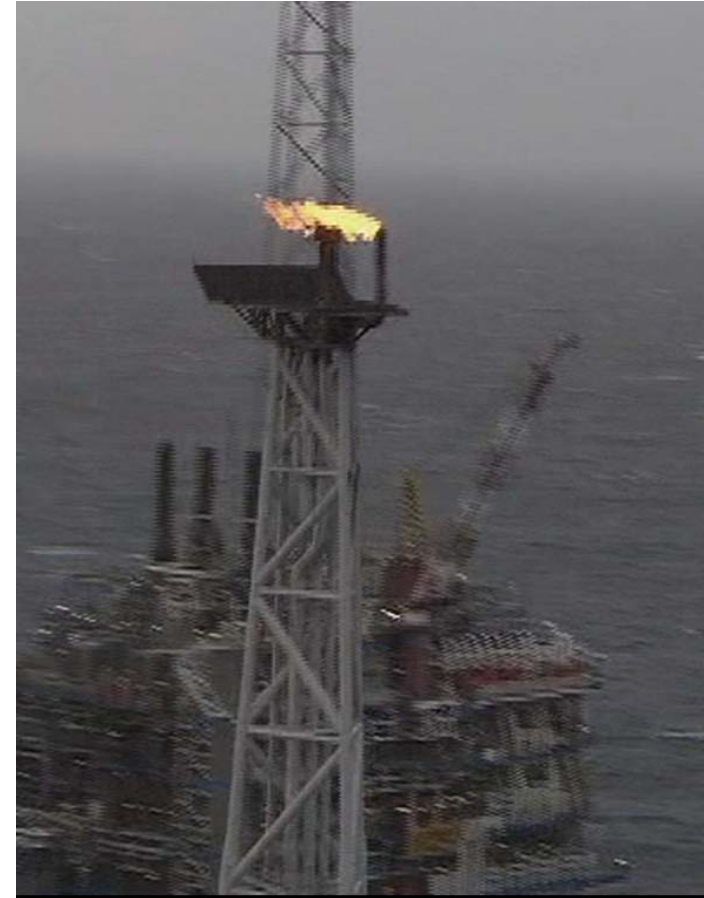
You can describe the rivalries between countries, companies and nations that natural oil and gas resources in the North Pole are creating.

Learning target 3:

You can explain how the development of a CO₂ absorber can assist in the depletion of CO₂ being released into the atmosphere.

The North Pole

- Oil and Natural Gas
- Creating rivalries between Nations and Corporations
- Global warming:
Fuel = more
reached = more burned = more
ice melts



Hammerfest, Norway

- Northernmost town in the world
- First development of an Arctic Ocean Gasfield
- First natural gas liquification plant
- Population boom
- 3000 people from 44 countries



Hammerfest´s Economy

- This century´s Gold Rush
- Was once a hunting and Fishing Village
- New Businesses and Supermarkets
- Natural gas plant expected to inject 90 Million per year
- Housing prices tripled







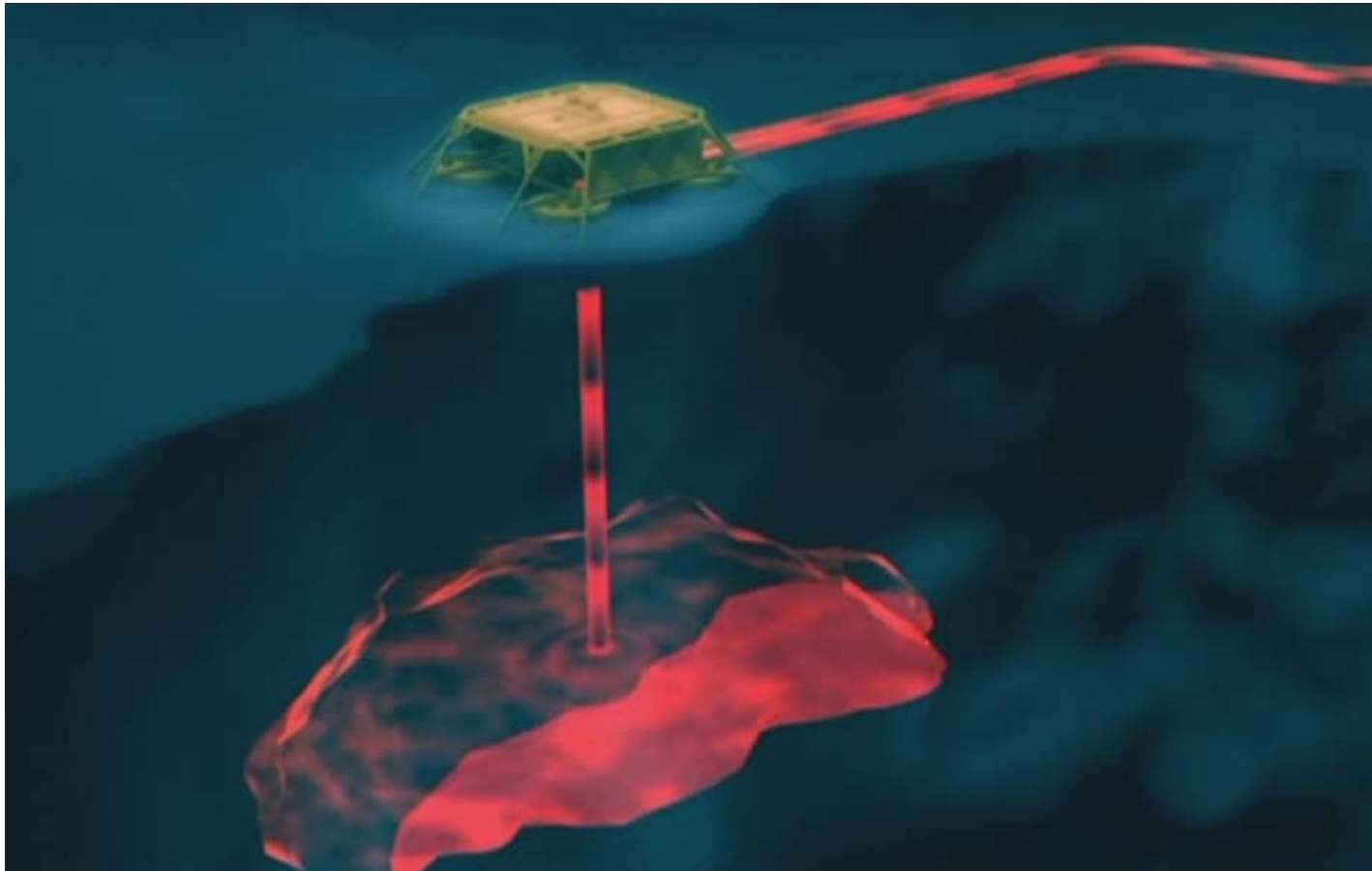
Natural Gas Plant

- Built by Statoil
- Only access via tunnel beneath the sea
- Cools gas to -162 degrees celcius
- 10 billion to build
- Overspent by 1.3 billion
- Gas (LNG) shipped to America and Europe

Natural Gas Plant



Subsea Template



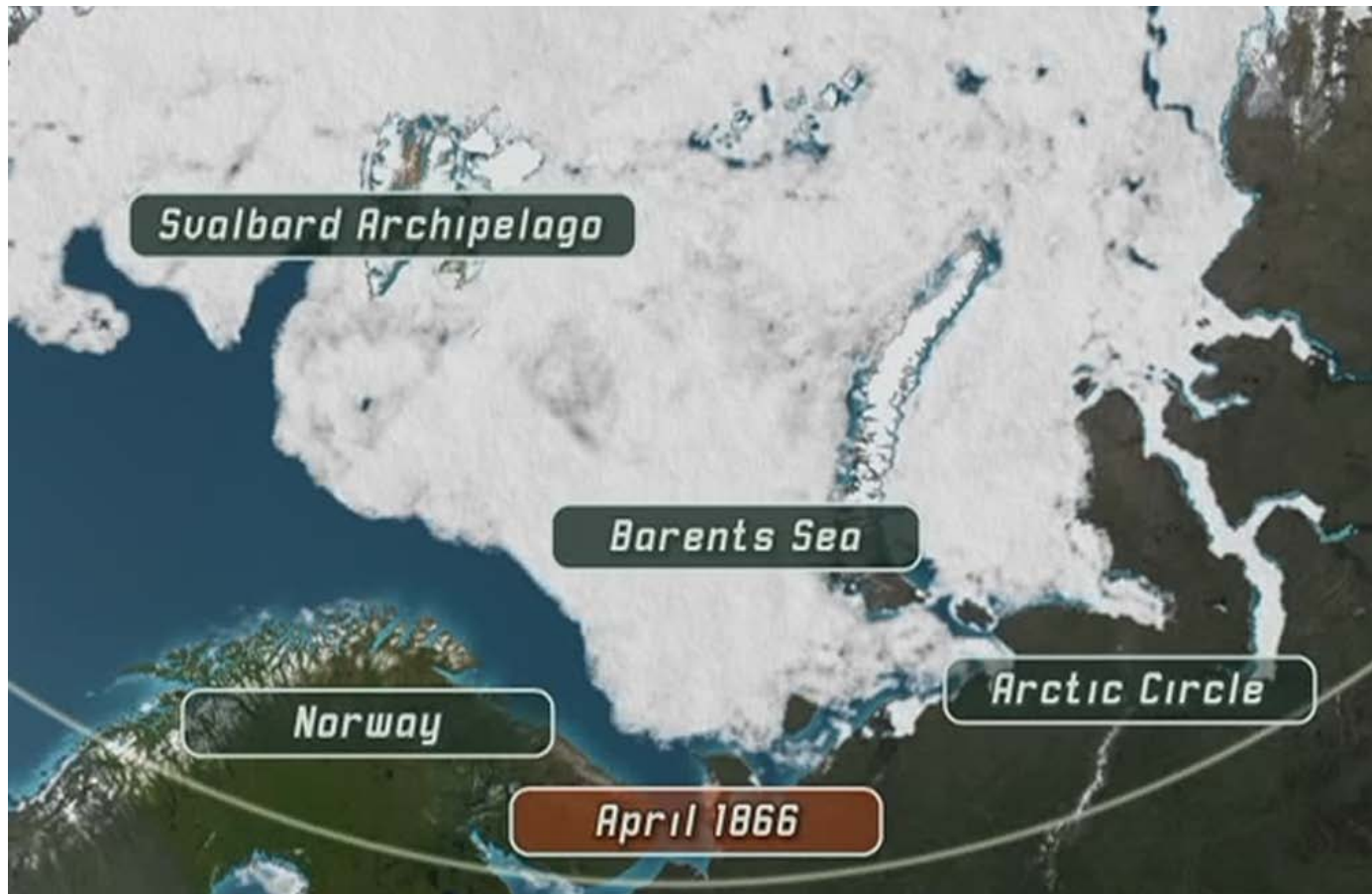
Melting Ice



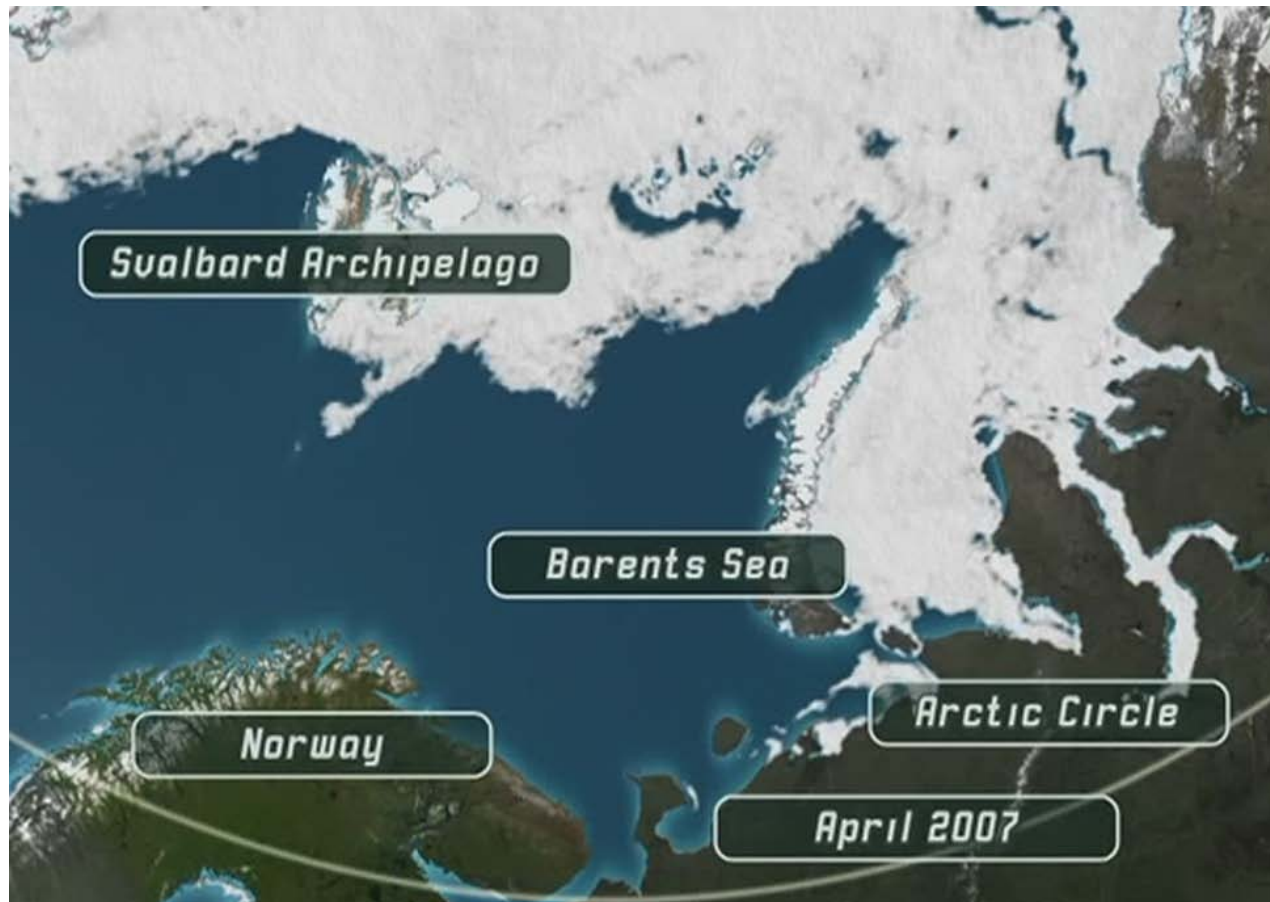
Melting Ice

- Ice melting on Russia´s coast
- 1 Million square meters opens for exploration
- Trillions of liters of gas, huge amounts of oil

Barren Sea 1866



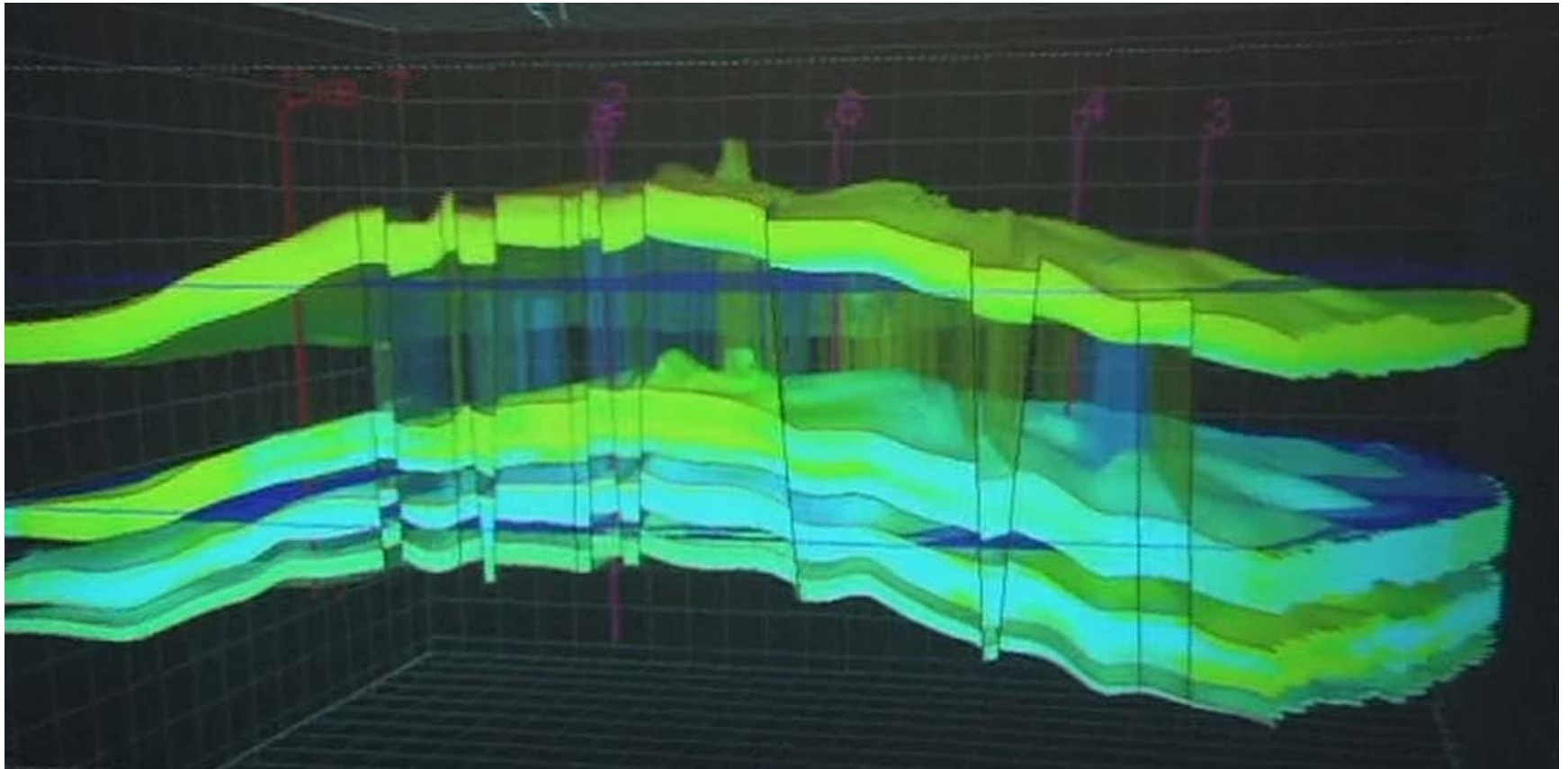
Barren Sea 2007



Schtokman Gas Field

- Gazprom. Moscow
- 4 layers, 2 meters below the earth's surface
- 3.8 Trillion cubic meters of gas





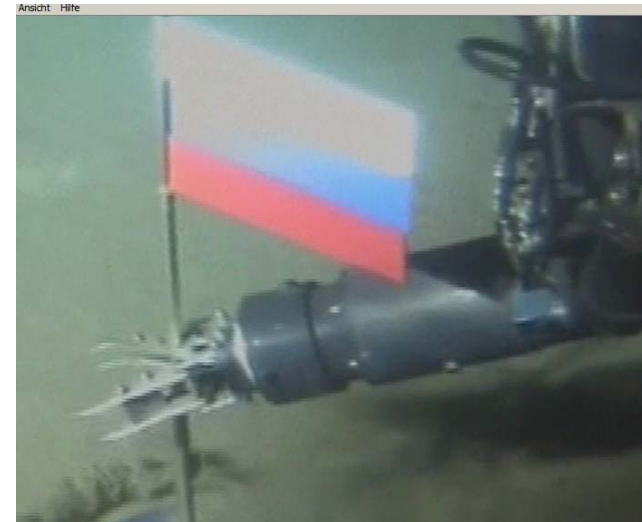
The North Pole

- International waters
- No country has development rights
- Countries with arctic coastlines
- Canada, Russia, Denmark and Norway
- Can only develop 200 Nautical miles from their shores

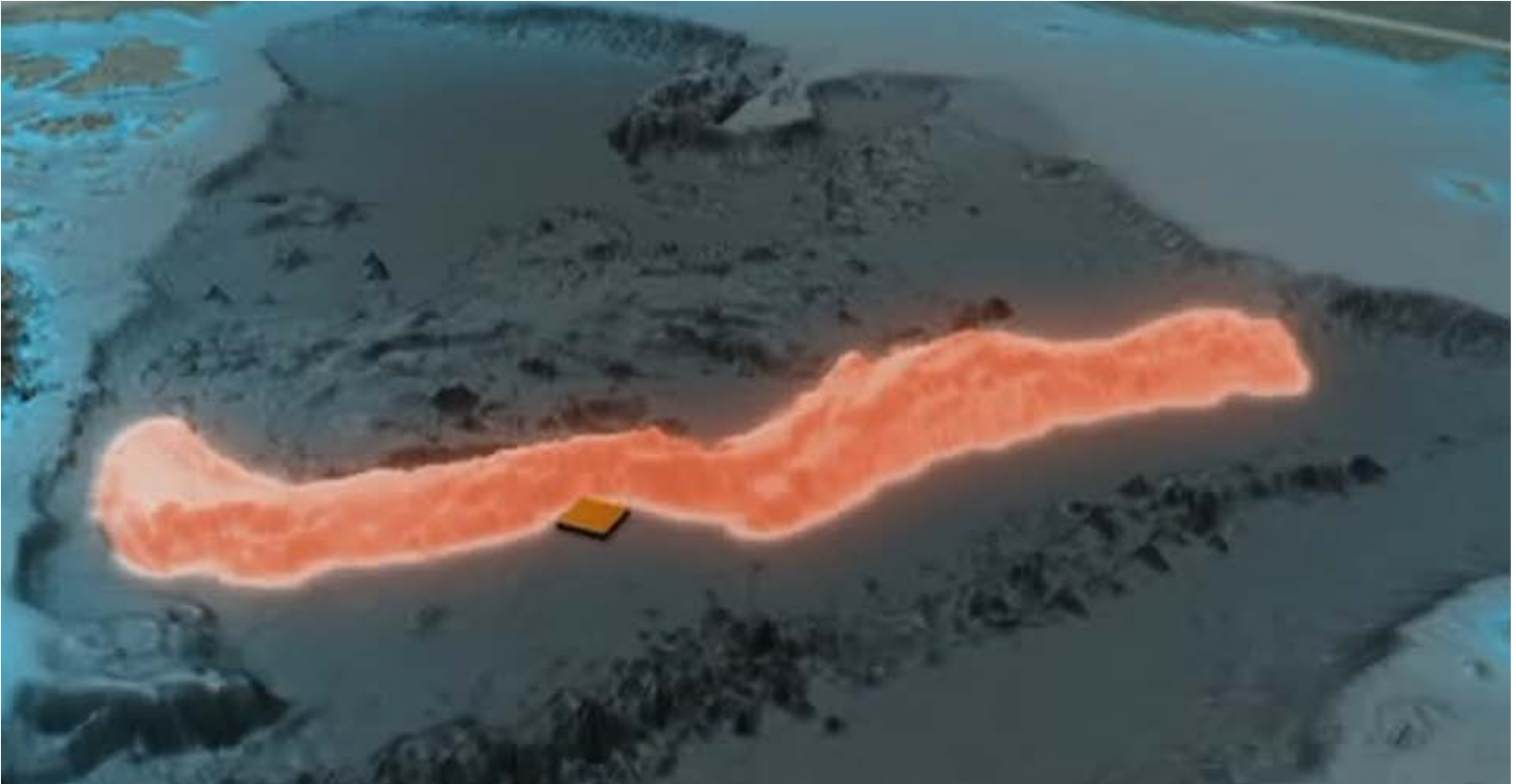


Russia

- Planted Russian flag August 3, 2007
- Lomonosow ridge, 1700 km from Russia to Greenland
- An extension of Russia´s continental shelf
- Could develop 350 Nautical miles from its shores
- Add 1.2 million square km
- Actions have caused international tension



Lomonosov Ridge



Russia and Lomonosov Ridge



Korea

- Samsung Heavy Industries and Russia working together
- Creating 3 Ice breaking tankers
- The Kapitan Gotzky
- Normal ice breakers
- New Ice breakers
- 3 times more than conventional tankers
- 20 orders in the next 10 years
- December 2007 The Gotzky was launched

Kapitan Gotzky



Norway

- Nation´s top 2 petrolium companies Statoil and Hydro
- Merged in 2007: StatoilHydro
- Largest company involved in Deepwater oil and Gas extraction
- International Conferece
- 44 countries



Norway

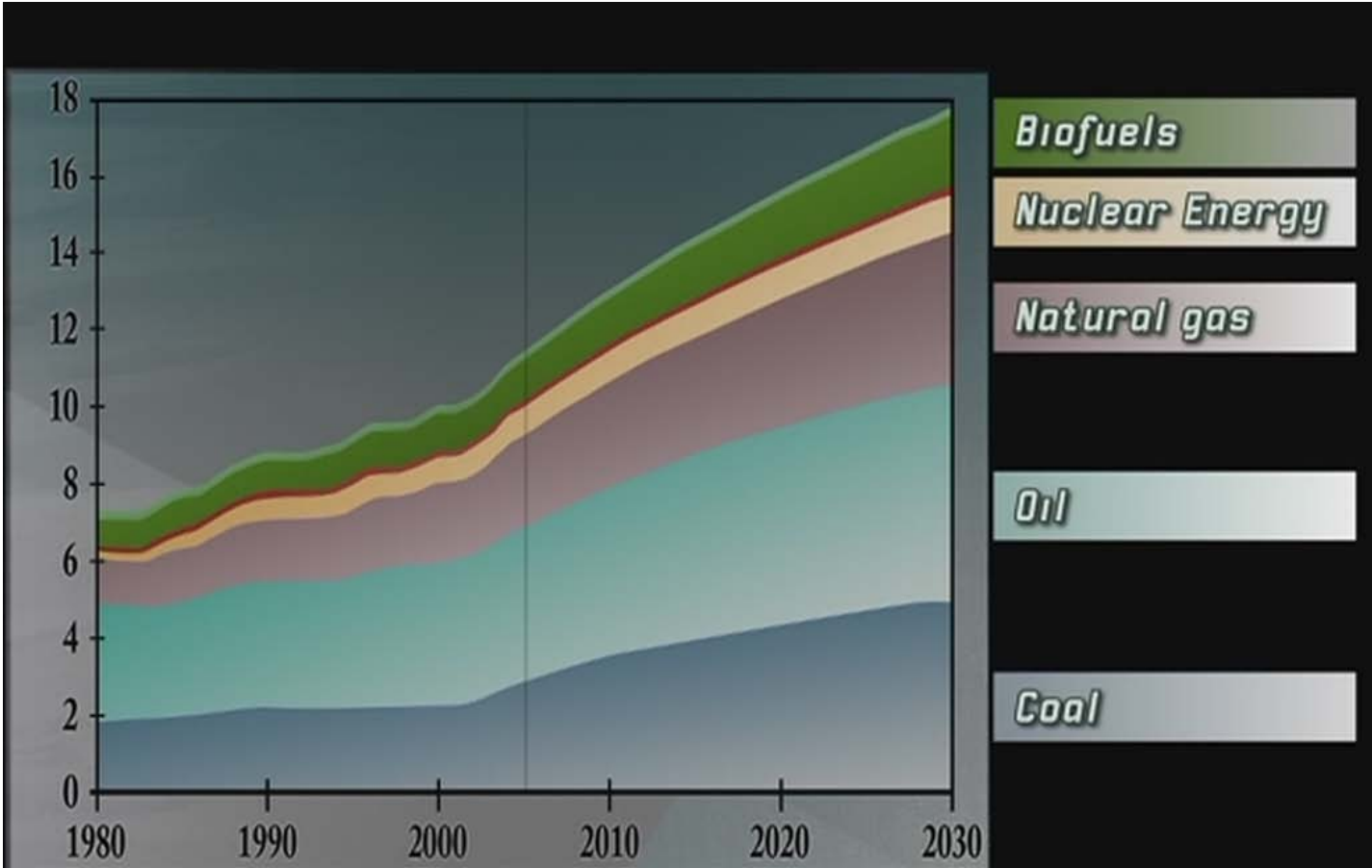
- Norway and Russia leading the race
- School for Sub sea resource Technology
- 50 people



Climate

- Development = change
- International Energy Consumption 55% by 2030
- 80 % Fossil Fuels
- Carbon Dioxide Emissions rise by 57%

International Energy Consumption

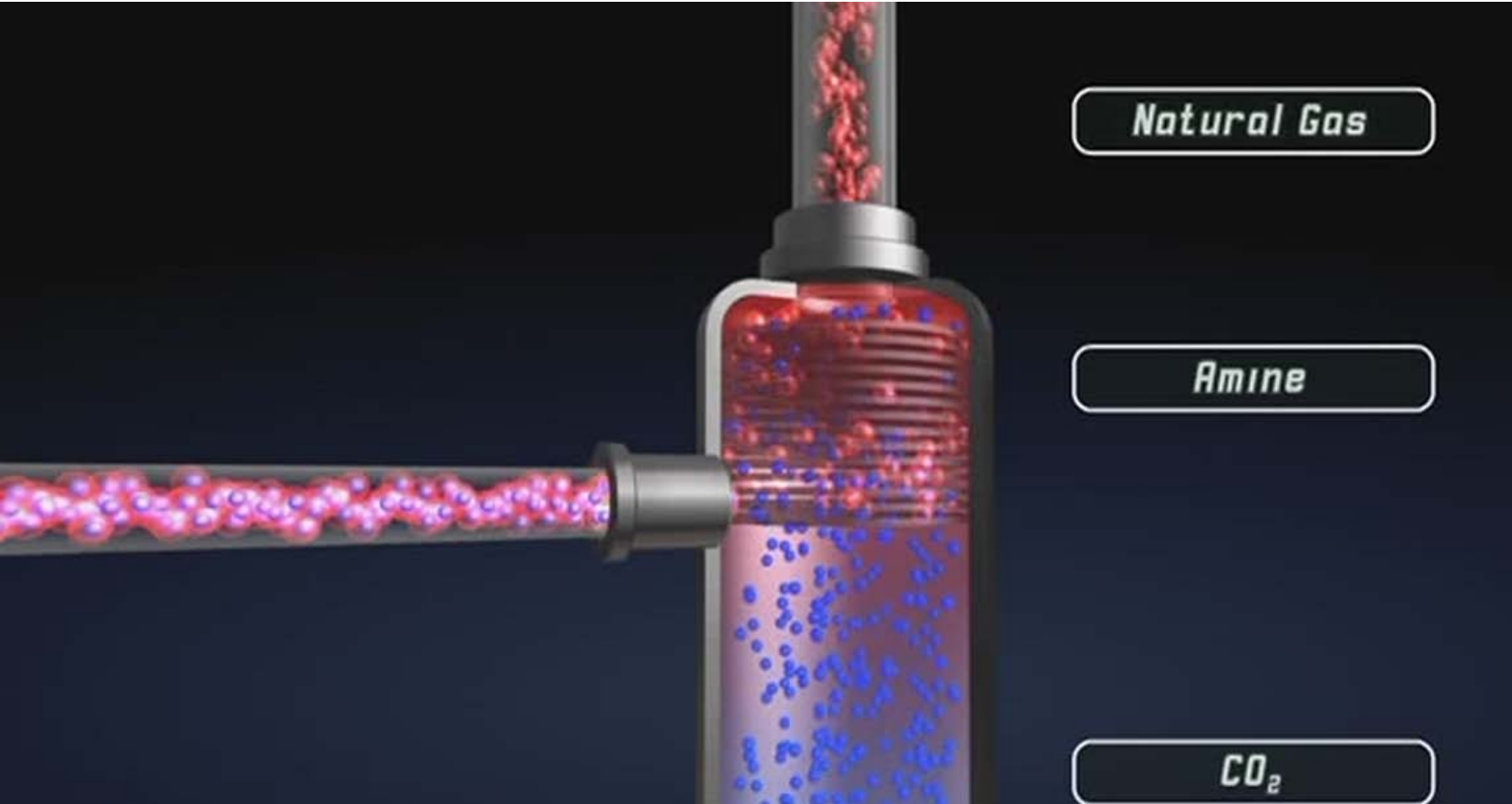


Olav Kaarstad of StatoilHydro

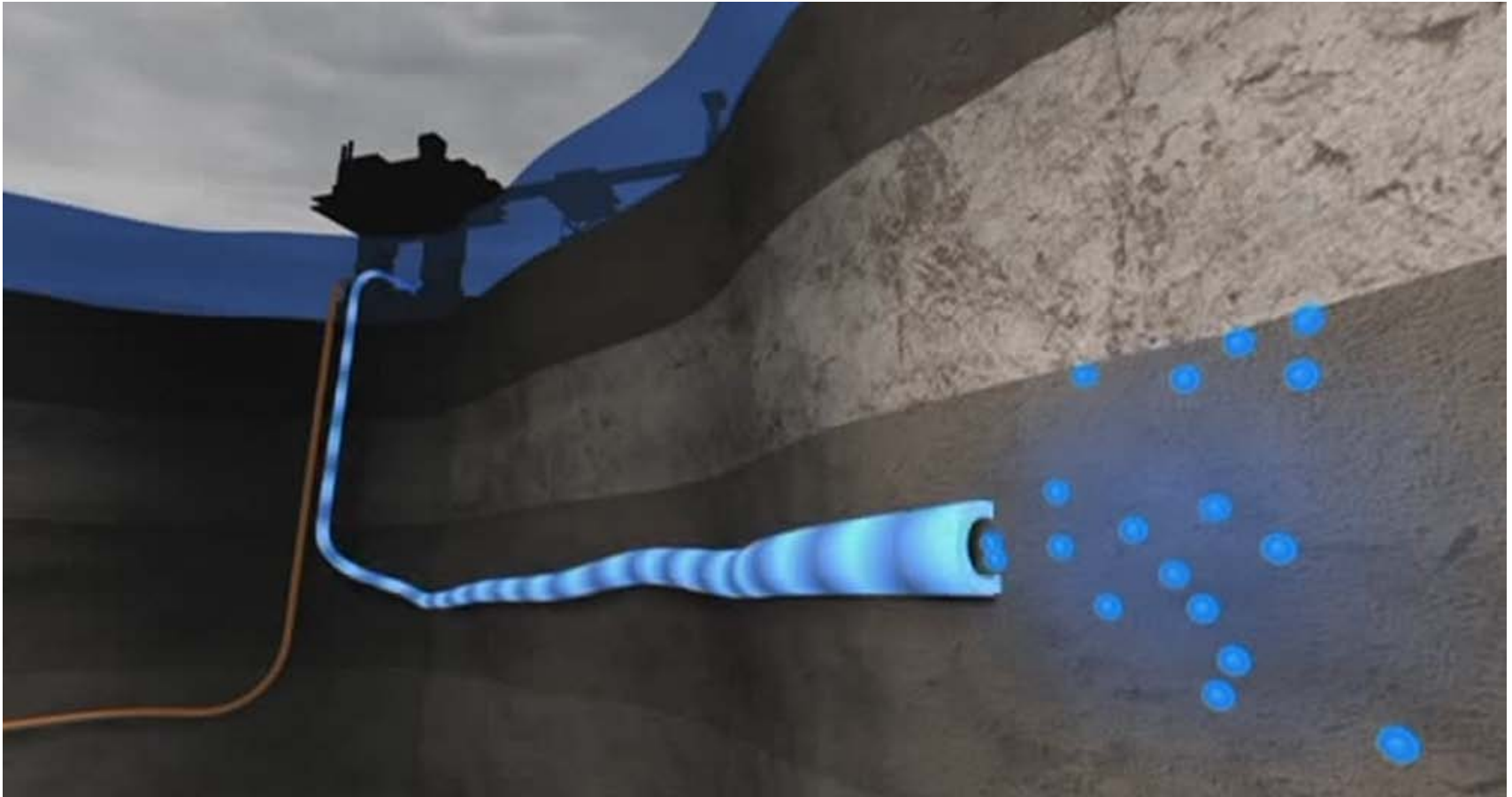
- Looking to reduce CO₂ while burning Fossil fuels
- Trap CO₂ in the earth
- CO₂ absorber separates gas and fuel
- Amine
- CO₂ sent 1000 meters down into Caprock
- 10 million tons stored in the last 10 years
- Future in injecting oil with CO₂



CO2 Absorber



Caprock



International Awareness

- Companies and nations are aware that Global Warming must be stopped
- Norway has placed a prohibition on development around Spitzburgen
- Conditions are perfect for development
- More oil = more heat = less ice

Prohibition in Spitzburg



Exercises for Self Study

1. Which role do you think the National Film Board has taken on as a contributor to the education of deep sea gas and oil exploration?
2. What do you think, through the „Language of film“, the National Filmboard of Canada was trying to portray?
3. What major role do you see Samsung taking on in the deep sea gas and oil industry?