

# Module 5: Sedimentation

## Topic 5 Content: Ocean Floor Resources Notes

**Ocean Floor Resources**

- Oil
- Natural Gas
- Sand and Gravel
- Mineral Nodules
- Evaporites

Introduction



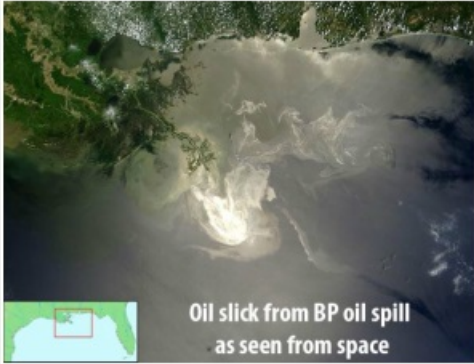
In this interactivity, click each tab to learn about some of the resources extracted from the ocean floor.

In this interactivity, click each tab to learn about some of the resources extracted from the ocean floor.

## Module 5: Sedimentation

### Topic 5 Content: Ocean Floor Resources Notes

#### Ocean Floor Resources

Oil	Oil
Natural Gas	<ul style="list-style-type: none"><li>• Most sought after ocean resource</li><li>• Offshore drilling produces for 1/3 of the world's oil</li><li>• Higher prices and new technologies have led to drilling in deeper water</li><li>• Energy security vs. environmental issues</li></ul>
Sand and Gravel	
Mineral Nodules	
Evaporites	

- Most sought after ocean resource
- Offshore drilling produces for 1/3 of the world's oil
- Higher prices and new technologies have led to drilling in deeper water
- Energy security vs. environmental issues

#### *Narration Script*

By far, petroleum is the most sought after natural resource in the oceans. Offshore drilling platforms account for one third of the world's oil supply and generate billions of dollars in profits. In the early days of this industry, companies were limited to drilling in areas that were relatively shallow. As oil prices have climbed higher, and new technologies have enabled drilling much deeper underwater, other areas much further from shore have been opened to offshore drilling. In the United States, most of these offshore platforms are located in the Gulf of Mexico.

Many politicians have been lobbying for government to open other areas to oil exploration in order to reduce dependence on foreign oil and keep prices lower. Environmentalists point to past oil spills as evidence that the risks and long term costs are not worth the economic gains. These debates will continue into the foreseeable future as long as oil remains an important part of the economy.

## Module 5: Sedimentation


### Topic 5 Content: Ocean Floor Resources Notes

**Ocean Floor Resources**

- Oil
- Natural Gas
- Sand and Gravel
- Mineral Nodules
- Evaporites

#### Natural Gas

- Collected through offshore drilling platforms
- Increased demand and new technologies have expanded drilling to areas once considered too expensive



- Collected through offshore drilling platforms
- Increased demand and new technologies have expanded drilling to areas once considered too expensive

#### *Narration Script*

Natural gas is an important resource that is collected through offshore drilling platforms. While it is not as large an industry as oil drilling, it is still very profitable. As with oil, increased demand and new technologies make it economical for companies to drill in areas once considered too expensive to be profitable.

## Module 5: Sedimentation


### Topic 5 Content: Ocean Floor Resources Notes

#### Ocean Floor Resources

- Oil
- Natural Gas
- Sand and Gravel
- Mineral Nodules
- Evaporites

#### Sand and Gravel

- Used in construction
- Even materials collected on continents can impact oceans
- Generates \$500 million dollars each year in the US alone



- Used in construction
- Even materials collected on continents can impact oceans
- Generates \$500 million dollars each year in the US alone

#### *Narration Script*

Construction companies get some of their sand and gravel from the ocean floor or areas that are connected to the ocean floor in some way, like watersheds. Even though much of the sand and gravel might be collected on the continents, any collected from rivers or watersheds can have a large impact on animals living in areas where these waters flow. Mining the oceans for sand and gravel is still big business and generates about \$500 million dollars each year in the United States.

## Module 5: Sedimentation

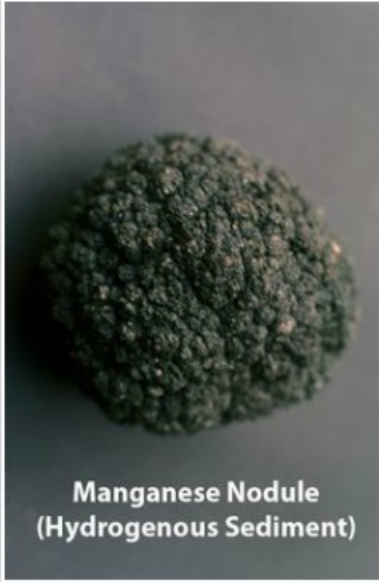
### Topic 5 Content: Ocean Floor Resources Notes

**Ocean Floor Resources**

- Oil
- Natural Gas
- Sand and Gravel
- Mineral Nodules
- Evaporites

#### Mineral Nodules

- Come from hydrogenous sediment
- Contain iron, manganese, cobalt, chromium, nickel, zinc, and molybdenum
- Not currently profitable to mine



**Manganese Nodule  
(Hydrogenous Sediment)**

- Come from hydrogenous sediment
- Contain iron, manganese, cobalt, chromium, nickel, zinc, and molybdenum
- Not currently profitable to mine

#### *Narration Script*

Mineral nodules resulting from hydrogenous sediment are something that companies might extract from the ocean floor. These nodules are rich in metals such as iron, manganese, cobalt, chromium, nickel, zinc, and molybdenum. Scientists and engineers have not yet found an economical way to extract these metals from the deep, but if they can, the oceans are filled with deposits!

## Module 5: Sedimentation

### Topic 5 Content: Ocean Floor Resources Notes

**Ocean Floor Resources**

- Oil
- Natural Gas
- Sand and Gravel
- Mineral Nodules
- Evaporites

**Evaporites**

- Materials left behind by evaporating seawater
- Sea salts
- Examples: calcium carbonate, calcium sulfate, gypsum, and sodium chloride



**Halites in Death Valley**

- Materials left behind by evaporating seawater
- Sea salts
- Examples: calcium carbonate, calcium sulfate, gypsum, and sodium chloride

#### *Narration Script*

Some of the resources from the ocean floor are no longer covered by water, such as evaporated sea salts. As waters receded, they left behind these sea salts, many of which are used to produce items we use on a daily basis. Examples of these salts include calcium carbonate, calcium sulfate, gypsum, and sodium chloride. Sodium chloride is common table salt, and gypsum is used in sheet rock for construction purposes. Your home or your school might be made from resources from the ocean floor.