

UNIT FOUR – Parts 5-6 (OIL)
World Geog.
Practice Worksheet

Which type of drilling platform is best suited for extracting oil and gas in 2000m of water?

- A) jack-up
- B) semi-submersible anchored
- C) semi-submersible dynamically positioned
- D) submersible

According to the table below, which region had to import the largest amount of oil?

| Region | % of World Oil Demanded (1997) | % of World Needs Supplied (1997) |
|----------------|--------------------------------|----------------------------------|
| North America | 27 | 14 |
| Europe | 19 | 9 |
| Pacific | 9 | 1 |
| Russia | 6 | 10 |
| Southeast Asia | 17 | 7 |
| Latin America | 8 | 9 |
| Africa | 3 | 4 |
| Middle East | 6 | 29 |
| Other | 5 | 17 |
| Total | 100 | 100 |

- A) Africa
- B) Europe
- C) Middle East
- D) North America

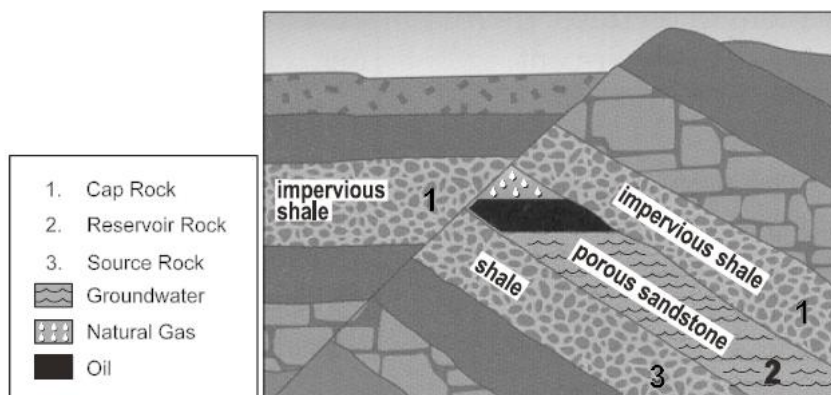
What is the best indicator of oil quality?

- (A) mass
- (B) porosity
- (C) translucence
- (D) viscosity

Which type of drilling platform is best suited for extracting oil and gas in water depths up to 20 m?

- (A) jack-up
- (B) semi-submersible
- (C) semi-submersible dynamically positioned
- (D) submersible

What type of oil and natural gas trap is shown in the drawing?



- (A) fault
- (B) fold

- (C) salt dome
- (D) stratigraphic

According to the table below, which region has experienced the slowest change in oil production from 1990 to 2000?

| Offshore Oil Production by Non-OPEC Regions (1990,1995,2000) (in millions of barrels per day) | | | |
|--|---------------|---------------|--------------|
| REGION | PRODUCTION | | |
| | 1990 | 1995 | 2000 |
| North Sea | 3.767 | 5.855 | 7.52 |
| North America* | 2.792 | 3.364 | 4.94 |
| South America | 0.538 | 0.660 | 1.45 |
| West Africa | 0.873 | 1.098 | 1.57 |
| East Africa | 0.866 | 1.222 | 1.47 |
| Australia | 0.518 | 0.517 | 0.72 |
| North Africa | 0.730 | 0.697 | 0.64 |
| South Asia | 0.436 | 0.465 | 0.52 |
| Southern Europe and Central Asia** | 0.334 | 0.217 | 0.45 |
| Total Offshore | 10.854 | 14.095 | 19.28 |
| Total Onshore | 31.006 | 28.304 | 29.40 |
| Total | 41.860 | 42.399 | 48.68 |

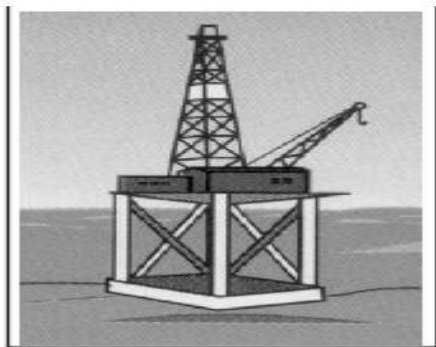
* includes Mexico
 ** includes the Mediterranean, Black and Caspian Seas
 Source: International Energy Agency, *Global Offshore Oil Prospects to 2000*.

- (A) Australia
- (B) East Africa
- (C) North Sea
- (D) South Asia

Which is used during the offshore drilling process to reduce friction, to carry out drill cuttings and to prevent blowouts?

- (A) directional drilling
- (B) drilling mud
- (C) gravity based structure
- (D) stratigraphic trap

Which type of drilling system is shown in the diagram below?



- (A) jack-up
- (B) semi-submersible anchored
- (C) semi-submersible dynamically positioned
- (D) submersible

Why wasn't the offshore oil sector in Newfoundland and Labrador developed during the 1980s?

- (A) environmental concerns
- (B) safety concerns
- (C) trouble with the oil transportation system
- (D) tumbling oil prices

Which is the first step in locating an oil field?

- (A) computerized cross section of the ocean floor created
- (B) core samples taken

- (C) sound-emitting equipment towed over ocean floor
- (D) wildcat well drilled

Which determines the quality of oil?

- (A) age
- (B) colour
- (C) sediment
- (D) viscosity

Which type of drilling platform is most economical to use for extracting oil and gas in 20m of water?

- (A) jack-up
- (B) semi-submersible anchored
- (C) Semi-submersible dynamically positioned
- (D) submersible

A rig must be placed in water depths greater than 200 m in an area largely protected from the effects of wave action. Which type of drilling technology would be used to accommodate these technologies?

- (A) jack-up
- (B) semi-submersible anchored
- (C) semi-submersible dynamically positioned
- (D) submersible

Which is true of oil and gas formation?

- (A) forms as a result of pressure, heat, and bacterial action
- (B) forms as a result of intense heating from volcanic activity
- (C) forms only in fold traps
- (D) forms only from dead plants and animals

According to the table below, which two regions most likely exported the largest amount of oil?

| Region | % of World Oil Demanded (1997) | % of World Oil Supplied (1997) |
|----------------|--------------------------------|--------------------------------|
| North America | 27 | 14 |
| Europe | 19 | 9 |
| Pacific | 9 | 1 |
| Russia | 6 | 10 |
| Southeast Asia | 17 | 7 |
| Latin America | 8 | 9 |
| Africa | 3 | 4 |
| Middle East | 6 | 29 |
| Other | 5 | 17 |
| Total | 100 | 100 |

- (A) Africa and Russia
- (B) Europe and North America
- (C) North America and Middle East
- (D) Middle East and Russia

What is the last stage in determining the location of oil and gas reserves?

- (A) analyzing seismic data
- (B) directing sound waves at ocean bottoms
- (C) drilling wildcat wells
- (D) recording sound waves using hydrophones

What type of oil rig would be best suited to extract oil in extremely deep water and heavy seas?

- (A) jack-up
- (B) semi-submersible anchored
- (C) semi-submersible dynamically positioned
- (D) submersible

Which type of technology would be used to extract oil from smaller dispersed oil deposits offshore?

- (A) directional drilling

- (B) ice-strengthened shuttle tankers
- (C) seismic surveys
- (D) three-dimensional imaging

If an oil development is stalled due to low world oil prices, which condition for a natural resource is not being met?

- (A) culture
- (B) need
- (C) profitability
- (D) technology

Which is a physical factor that must be considered when an oil company places a rig in the North Sea?

- (A) capital availability
- (B) ease of transportation
- (C) ice conditions
- (D) porous rock

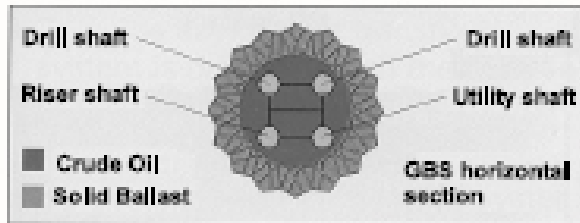
Which is an output in the oil and gas industry?

- (A) capital
- (B) drilling mud
- (C) electricity
- (D) labour

Which is a physical factor in recovering oil and gas deposits?

- (A) capital investment
- (B) demand for oil
- (C) labour supply
- (D) presence of icebergs

Why would drill platforms in the North Atlantic have jagged concrete teeth at sea level?



- (A) easier to move
- (B) endure heavy waves
- (C) store oil reserves
- (D) withstand iceberg collisions

According to the chart below, where is 2/3 of the world's offshore oil produced?

| Region | Units |
|----------------------------------|-------|
| North Sea | 7.52 |
| North America | 4.94 |
| South America | 1.45 |
| Africa | 3.66 |
| Australia | 0.72 |
| South Asia | 0.52 |
| Southern Europe and Central Asia | 0.45 |
| Total Offshore | 19.28 |

- (A) Africa and North America
- (B) Africa and South America
- (C) North Sea and North America
- (D) North Sea and South America

Which is part of an off-shore oil recovery operation?

- (A) "hit and miss" drilling
- (B) oil spills
- (C) sedimentary rock
- (D) shift rotations

Which human factor would be most important when making a decision to recover offshore gas?

- (A) age of worker
- (B) cheap manual labour
- (C) highly skilled labourers
- (D) large pool of workers