

托福阅读素材实例解析：石油资源

Petroleum Resources

石油资源

1. Petroleum, consisting of crude oil and natural gas, seems to originate from organic matter in marine sediment. Microscopic organisms settle to the seafloor and accumulate in marine mud. The organic matter may partially decompose, using up the dissolved oxygen in the sediment. As soon as the oxygen is gone, decay stops and the remaining organic matter is preserved.

段落梗概：石油和天然气都是来自海底的有机物沉淀。部分有机物分解，部分沉积。

2. Continued sedimentation—the process of deposits’ settling on the sea bottom—buries the organic matter and subjects it to higher temperatures and pressures, which convert the organic matter to oil and gas. As muddy sediments are pressed together, the gas and small droplets of oil may be squeezed out of the mud and may move into sandy layers nearby. Over long periods of time (millions of years), accumulations of gas and oil can collect in the sandy layers. Both oil and gas are less dense than water, so they generally tend to rise upward through water-saturated rock and sediment.

段落梗概：持续的沉积——堆积物沉积到海底的过程将有机物埋在海底使之受到海底温度、高压的影响，最终转变成石油和天然气。当泥状沉积物被挤压在一起时，天然气和石油液滴会被挤出泥层，然后进入附近的沙层。经过很长的一个周期(数百万年)，积聚的天然气和石油会在沙层中聚集。

3. Oil pools are valuable underground accumulations of oil, and oil fields are regions underlain by one or more oil pools. When an oil pool or field has been discovered, wells are drilled into the ground. Permanent towers, called derricks, used to be built to handle the long sections of drilling pipe. Now portable drilling machines are set up and are then dismantled and removed. When the well reaches a pool, oil usually rises up the well because of its density difference with water beneath it or because of the pressure of expanding gas trapped above it. Although this rise of oil is almost always carefully controlled today, spouts of oil, or gushers, were common in the past. Gas pressure gradually dies out, and oil is pumped from the well. Water or steam may be pumped down adjacent wells to help push the oil out. At a refinery, the crude oil from underground is separated into natural gas, gasoline, kerosene, and various oils. Petrochemicals such as dyes, fertilizer, and plastic are also manufactured from the petroleum.

段落梗概：关于石油开采的一些介绍：包括油床、油田、井架概念的介绍；石油开采中的技术控制；以及地下的原油分离；石油用途等等。

4. As oil becomes increasingly difficult to find, the search for it is extended into more-hostile environments. The development of the oil field on the North Slope of Alaska

and the construction of the Alaska pipeline are examples of the great expense and difficulty involved in new oil discoveries. Offshore drilling platforms extend the search for oil to the ocean's continental shelves—those gently sloping submarine regions at the edges of the continents. More than one-quarter of the world's oil and almost one-fifth of the world's natural gas come from offshore, even though offshore drilling is six to seven times more expensive than drilling on land. A significant part of this oil and gas comes from under the North Sea between Great Britain and Norway.

段落梗概：石油越来越难以找到，石油勘探已经开始到更恶劣的环境中进行。举了一个例子：阿拉斯加北坡油田的开发和阿拉斯加管道建设就是成本高、难度大的例子。

5. Of course, there is far more oil underground than can be recovered. It may be in a pool too small or too far from a potential market to justify the expense of drilling. Some oil lies under regions where drilling is forbidden, such as national parks or other public lands. Even given the best extraction techniques, only about 30 to 40 percent of the oil in a given pool can be brought to the surface. The rest is far too difficult to extract and has to remain underground.

段落梗概：地下还能发现更多的石油。许多石油资源都是由于开采费用高、地理位置不能开采等原因不得不留在地下。

6. Moreover, getting petroleum out of the ground and from under the sea and to the consumer can create environmental problems anywhere along the line. Pipelines carrying oil can be broken by faults or landslides, causing serious oil spills. Spillage from huge oil-carrying cargo ships, called tankers, involved in collisions or accidental groundings (such as the one off Alaska in 1989) can create oil slicks at sea. Offshore platforms may also lose oil, creating oil slicks that drift ashore and foul the beaches, harming the environment. Sometimes, the ground at an oil field may subside as oil is removed. The Wilmington field near Long Beach, California, has subsided nine meters in 50 years; protective barriers have had to be built to prevent seawater from flooding the area. Finally, the refining and burning of petroleum and its products can cause air pollution. Advancing technology and strict laws, however, are helping control some of these adverse environmental effects.

段落梗概：从地下和海底开采石油并运送到消费者的途中的任何地方都会产生环境问题。石油运输管道损坏造成严重的石油泄漏，会导致海上产生浮油。海上钻井平台也可能泄露石油，导致海滩污染，危害环境。有时油田石油被抽取后，地面会下沉。举例。石油炼制、燃烧也会造成空气污染。先进的技术和严格的法律正在控制这些对环境的不利影响。

疑难词：

petroleum n. 石油

marine adj. 船舶的;航海的, 海运的

sediment n. 沉积;沉淀物

decompose vt. 分解;腐烂 vi. 分解;使腐烂

convert vi. 转变, 变换

droplet n. 小滴, 微滴

squeeze n. 压榨;紧握 v. 挤;紧握;勒索

saturate adj. 浸透的, 饱和的

drill vt. 钻孔;训练;条播 vi. 钻孔

portable adj. 手提的, 便携式的

dismantle vt. 拆除;取消 vi. 可拆卸

collision n. 碰撞;冲突

ashore adj. 在岸上的;在陆上的 adv. 在岸上

adverse adj. 不利的;相反的

长难句:

1. Continued sedimentation—the process of deposits’ settling on the sea bottom—buries the organic matter and subjects it to higher temperatures and pressures, (which convert the organic matter to oil and gas).

句子类型: 定语从句

句子拆分:

主干: Continued sedimentation buries the organic matter and subjects it to higher temperatures and pressures.

定语从句: which convert the organic matter to oil and gas, which 修饰 higher temperatures and pressures

翻译: 持续的沉积——堆积物沉积到海底的过程将有机物埋在海底使之受到海底温度、高压的影响, 最终转变成石油和天然气。

2. When the well reaches a pool, oil usually rises up the well because of its density difference with water beneath it or because of the pressure of expanding gas trapped above it.

句子类型: 时间状语从句

句子拆分:

主干: Oil usually rises up the well.

时间状语从句: When the well reaches a pool

两个 because of 原因状语: because of its density difference with water beneath it ;because of the pressure of expanding gas trapped above it.

翻译: 因为石油的密度与在下层的水不同, 或者因为石油上面的气体扩张形成的压力, 当井探至油藏时, 石油通常会上升至井内。

3.Offshore platforms may also lose oil, creating oil slicks(that drift ashore and foul the beaches), harming the environment.

句子类型: 结果状语+定语从句

句子拆分:

主干: Offshore platforms may also lose oil.

结果状语: creating oil slicks, harming the environment.

定语从句: that drift ashore and foul the beaches

翻译: 海上钻井平台也可能会泄露石油, 导致油污漂流到岸上造成海滩污染, 危害环境。

4.Advancing technology and strict laws, however, are helping control some of these adverse environmental effects.

句子类型: 插入语

句子拆分:

主干: Advancing technology and strict laws are helping control...

插入语: however

翻译: 不过, 先进的技术和严格的法律正在协助控制这些对环境的不利影响。

文章架构:

第 1.2 段: 石油的形成

第 3.4 段: 石油如何开采以及相关术语介绍。

第 5 段: 地下还有许多石油资源, 但是由于一些原因不能开采。

第 6 段: 石油的开采以及运送都会造成一些环境问题。

文章题材:

自然科学类--石油开采