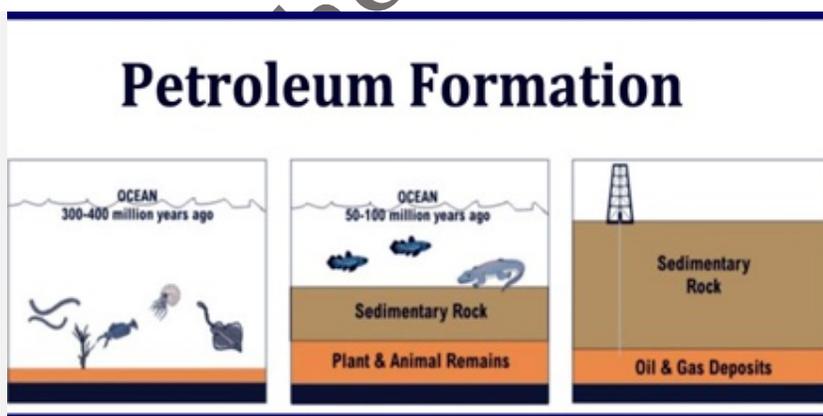


Petroleum is referred to as “Black Gold.” This name itself is an indication towards its importance to humans. Crude oil is considered to be the “mother of all commodities” as it is used to manufacture various products such as pharmaceuticals, plastics, gasoline, synthetic fabrics, etc. Petroleum or oil has also been the world’s leading source of energy since the 1950’s.

The word petroleum translates to “rock oil.” It is derived from the Greek word “petra” and the Latin word “oleum”. When it is drilled from the ground in the liquid form, it is called crude oil. Humans have known about its existence from 4000 years. However, the first time crude oil was pumped from the ground was 2500 years ago in China and the world’s first crude oil well was drilled in Pennsylvania, USA only in the year 1859.

Formation of petroleum:

- Petroleum is formed from the remains of dead plants and animals.
- When plants and animals die, they sink and settle on the seabed.
- Millions of years ago, these dead wildlife and vegetation decomposed and got mixed with sand and silt.
- Certain bacteria helped in the decomposition of this organic matter, and caused some chemical changes.
- Matter consisting of largely carbon and hydrogen was left behind. However, as there is not sufficient oxygen at the bottom of the sea, the matter could not decompose completely.
- The partially decomposed matter remained on the seabed, and eventually was covered with multiple layers of sand and silt.
- This burying took millions of years, and finally, due to high temperature and pressure, the organic matter decomposed completely and formed oil.



Refining of petroleum:

Petroleum is a mixture of many substances such as gas, petrol, diesel, kerosene, lubricating oil, paraffin wax, etc.

As these constituents serve different purposes, it is important to separate them, or in other words, refine the crude oil. This process of separation of various constituents of petroleum is called petroleum refining.

This is done in oil refineries. It is a three-step process.

The first step is separation where the crude oil is separated into various components through distillation. The heavier constituents remain settled at the bottom whereas lighter constituents rise up as vapour, or remain liquid.

Next, these constituents, which are still quite heavy are converted into gas, gasoline and diesel. Thus, the next step is conversion.

These have certain impurities, so the last step is treating, where they are treated to obtain pure forms of various products.

Uses of Petroleum:

Refined products obtained from crude oil have a number of uses.

Liquified Petroleum Gas or LPG is used in households as well as in the industry.

Diesel and petrol are used as fuels for vehicles. Diesel is generally preferred for heavy motor vehicles.

Petrol is also used as a solvent for dry cleaning, whereas diesel is also used to run electric generators.

Kerosene is used as a fuel for stoves and jet planes.

Lubricating oil reduces wear and tear and corrosion of machines.

Paraffin wax is used to make candles, ointments, ink, crayons, etc.

Bitumen or asphalt is mainly used to surface roads.

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