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How Oil Works

1. Wells are drilled
2. Crude is extracted from wells
3. Crude goes through a furnace
4. Crude is separated into gasses, gasoline, aviation fuel, heating oil, diesel oil, naphtha, grease, wax, and asphalt
5. Fuels are burned
6. Raw materials are used to make products

How Shale Oil Works

1. Shale rocks are removed from the ground
2. Shale rocks are crushed into small pieces
3. Crushed rocks are heated, releasing oil

­Oil Statistics

Oil is the largest source of commercial energy in America

Three largest oil users in 2007: US, 24%; China, 8%; and Japan, 7%

United States gets 85% of its energy from fossil fuels and 39% from oil

17% of domestic oil comes from Alaska and 25% is from offshore drilling

US produces 9% of the world’s oil

US uses 24% of the world’s oil

US imports 60% of oil

By 2005, 70% of oil is imported

Shale Oil Statistics

Canada has 15% of the world’s oil reserves because of its shale oil

Releases 3 times the CO2 of conventional oil

By 2015, shale oil will meet 4% of the world’s estimated oil consumption

Advantages of Oil

42-93 year supply

Low cast

High net energy yield

Easy to transport

Low land use

Well-developed technology

Efficient distribution system

Disadvantages of Oil

Must be substituted in 50 years

Large government subsidies

Environmental costs not included in price

Low price causes more waste and reduces the incentive to search for alternatives

Pollutes air when produced

Releases Co2 when burned

Can cause water pollution

Advantages of Shale Oil

Moderate costs (sand)

Large supplies

Good transportation methods in place

Well-distributed

Good technology exists to use it (oil and sand)

Disadvantages of Shale Oil

Expensive

Low net energy yield

Environmental costs are not included in market price

Water processing is need

It is a severe water pollutant

Co2 pollution