

CRUDE OIL

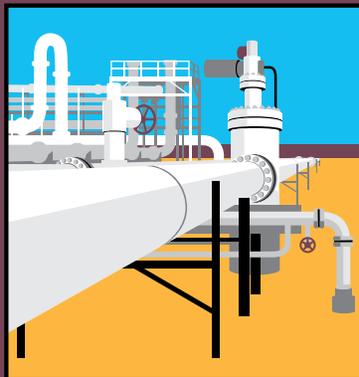
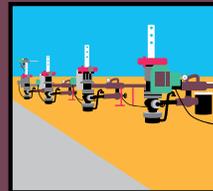
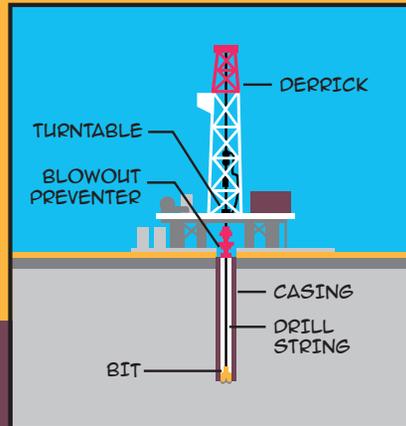
CRUDE OIL IS A YELLOW-TO-BLACK LIQUID, AND REFERS TO LIGHT, MEDIUM, AND HEAVY HYDROCARBONS. IT IS FOUND IN UNDERGROUND RESERVOIRS, OIL SANDS DEPOSITS, OR OFFSHORE RESOURCES.

CONVENTIONAL CRUDE OIL

ONCE OIL IS DISCOVERED IN AN UNDERGROUND RESERVOIR, THE SITE IS PREPARED FOR DRILLING. A DRILLING RIG IS USED TO HOUSE THE TOOLS AND PIPES NEEDED TO DRILL HOLES IN THE EARTH AND BRING OIL TO THE SURFACE.

AFTER THE RIG IS REMOVED, THE CREW PUTS A PUMP ON THE WELL HEAD, WHICH PULLS OIL UP THROUGH THE WELL. WHEN COMPLETED, THE WELL BRINGS A STEADY FLOW OF OIL TO THE SURFACE.

DRILLING RIGS ARE FITTED WITH BLOWOUT PREVENTERS (BOP) TO HELP PREVENT ACCIDENTAL RELEASES OF OIL.



THE CRUDE OIL IS THEN KEPT IN STORAGE TANKS OR TAKEN TO REFINERIES TO BE PROCESSED INTO VARIOUS PETROLEUM PRODUCTS.

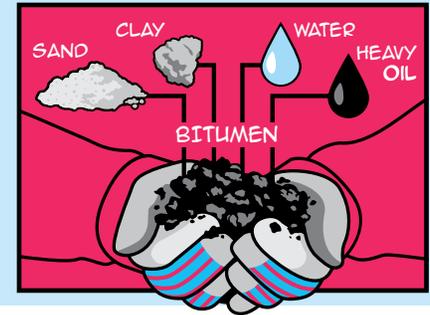
OIL IS PRIMARILY TRANSPORTED BY PIPELINES—CANADA HAS A PIPELINE NETWORK OF MORE THAN 840,000 KILOMETRES. IT IS ALSO TRANSPORTED BY RAIL, TRUCKS, OR TANKER SHIPS TO WHERE IT NEEDS TO GO.

UNCONVENTIONAL CRUDE OIL

THIS HEAVY OIL MIXTURE IS **TOO THICK AND HEAVY TO FLOW** AND IS USUALLY EXTRACTED FROM THE GROUND USING EITHER **MINING** OR **IN SITU METHODS**.



MINING IS USED WHEN OIL SANDS ARE CLOSE ENOUGH TO THE SURFACE TO BE DUG UP USING EXCAVATORS, WHICH LOAD IT ONTO LARGE TRUCKS. THE **OIL SANDS** ARE TAKEN TO A PROCESSING PLANT WHERE IT IS MIXED WITH HOT WATER TO REMOVE THE SAND AND CLAY.



IN SITU

IF THE **HEAVY OIL** CANNOT BE MINED, THEN **IN SITU** METHODS ARE USED, INCLUDING **STEAM-ASSISTED GRAVITY DRAINAGE (SAGD)**.

