



Consultation



Move Forward

Work with a local Indigenous group to incorporate traditional knowledge into the project plan.

Move Forward 1 Space



Consultation



Move Forward

A road will be shared with a forestry company to reduce impacts on the environment because fewer roads are built.

Move Forward 2 Spaces



Consultation



Move Forward

Landowners agree to be paid an annual fee to use their land for a drilling site.

Move Forward 2 Spaces



Consultation



Move Forward

Place a notice of the development
in the newspaper to raise
awareness about the project.

Move Forward 1 Space



Consultation



Move Forward

The nearby town is excited
about more local jobs.

Move Forward 1 Space



Consultation



Go Backward

Trappers were not given enough notice to provide input into the project plan.

Go Back 1 Space



Consultation



Go Backward

Watershed groups have objections to the plan because of impacts to water quality.

Go Back 2 Spaces



Consultation



Go Backward

Did not get your approvals from
the energy regulator.

Go Back 2 Spaces



Consultation



Miss A Turn

A town hall session raises concerns about impacts to nearby hiking trails.

Miss A Turn



Environmental Assessment



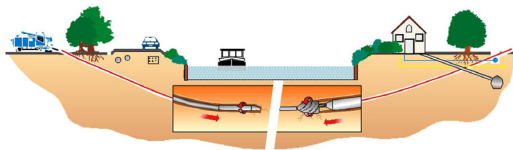
Move Forward

Development will occur in the winter months to protect sensitive wetlands.

Move Forward 2 Spaces



Environmental Assessment



Move Forward

Horizontal directional drilling will be used to avoid crossing a stream.

Move Forward 2 Spaces



Environmental Assessment



Move Forward

A local monitoring station collects air quality data, including pollutants and greenhouse gas levels.

Move Forward 1 Space



Environmental Assessment



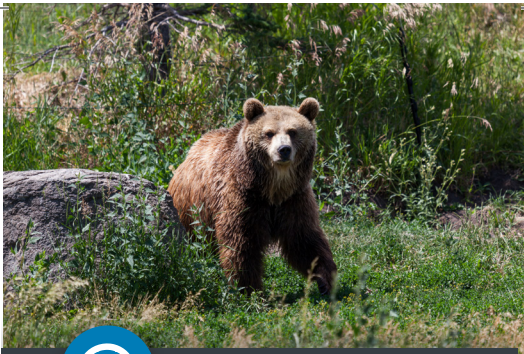
Move Forward

Research shows that bird deterrents, like scarecrows, can prevent birds from landing on oil sands tailings ponds.

Move Forward 1 Space



Environmental Assessment



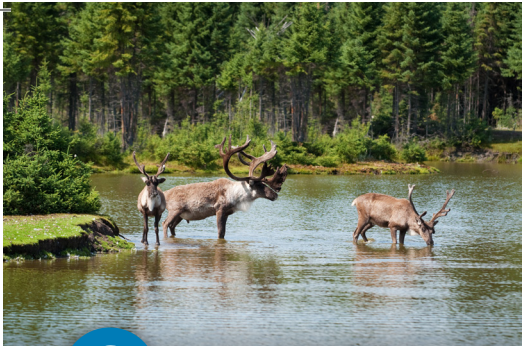
Move Forward

Fencing will be put up to keep grizzly bears out of the project site for the safety of the bears and the workers.

Move Forward 1 Space



Environmental Assessment



Go Backward

The project goes through caribou habitat.
Caribou are a species at risk.

Go Back 2 Spaces



Environmental Assessment



Go Backward

Plant surveys show that there are rare plants and old growth forest on the development site.

Go Back 1 Space



Environmental Assessment



Miss A Turn

Soil tests show sensitive areas.
Need to order rig mats so equipment
does not damage the soil.

Miss A Turn



Environmental Assessment



Miss A Turn

The project will cross a stream where fish lay their eggs. The project must be delayed until after the fish spawn.

Miss a Turn



Environmental Assessment



Miss A Turn

A historical search reveals a site that is important to First Nations culture so plans must change to avoid that area.

Miss A Turn



Resource Extraction



Move Forward

New technology uses less water in oil sands extraction.

Move Forward 2 Spaces



Resource Extraction



Move Forward

A job fair brings in new employees.

Move Forward 1 Space



Resource Extraction



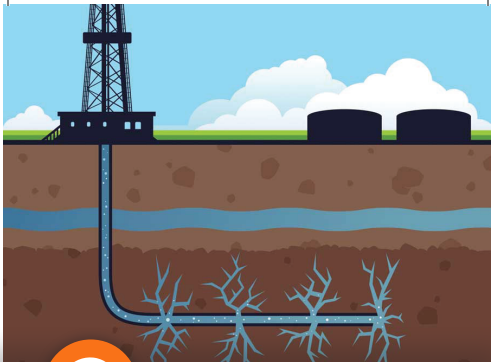
Move Forward

Receive an award for workplace safety.

Move Forward 2 Spaces



Resource Extraction



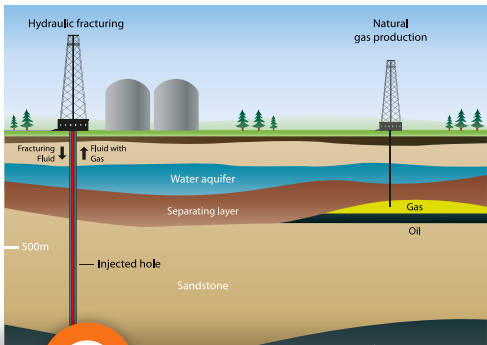
Move Forward

Company invests in new technology to reach deep oil reserves.

Move Forward 1 Space



Resource Extraction



Move Forward

Natural gas can be extracted by opening cracks below the earth's surface. This is called hydraulic fracturing.

Move Forward 1 Space



Resource Extraction



Move Forward

Fund a youth education grant for students in the community.

Move Forward 1 Space



Resource Extraction



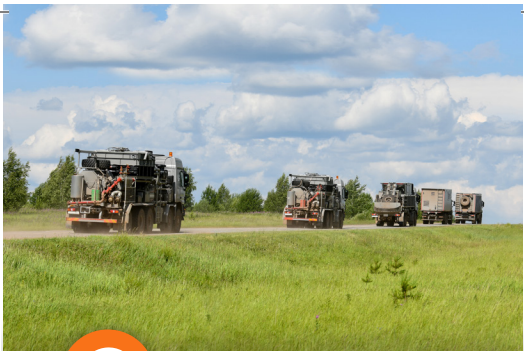
Go Backward

Greenhouse gas emissions are
higher than allowed.

Go Back 1 Space



Resource Extraction



Go Backward

Nearby community complains about increased heavy truck traffic.

Go Back 1 Space



Resource Extraction



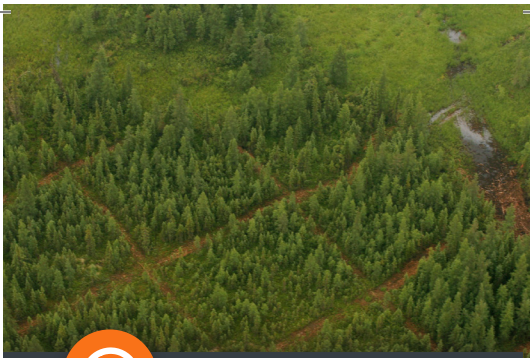
Go Backward

The price of oil drops and drilling operations are reduced.

Go Back 2 Spaces



Resource Extraction



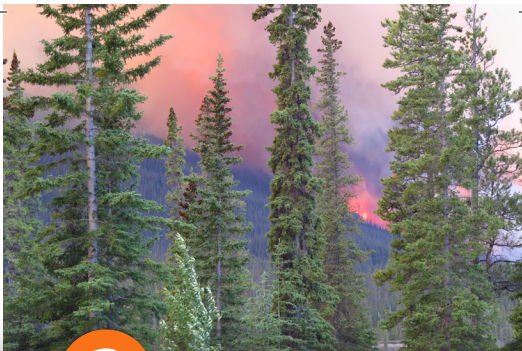
Go Backward

Seismic lines and well sites break up the forest impacting animal habitat.

Go Back 2 Spaces



Resource Extraction



Miss A Turn

A wildfire is approaching your site.
Evacuate the area.

Miss A Turn



Transportation



Move Forward

The pipeline operates with
no leaks or issues.

Move Forward 2 Spaces



Transportation



Move Forward

Crude oil from Alberta's oil sands is transported to refineries in the US and Canada, adding money to our economy.

Move Forward 2 Spaces



Transportation



Move Forward

Natural gas is moved thousands of kilometres to meet the needs of homes across North America.

Move Forward 2 Spaces



Transportation



Move Forward

Use a pipeline 'pig' with wire brushes to clean out your pipeline.

Move Forward 1 Space



Transportation



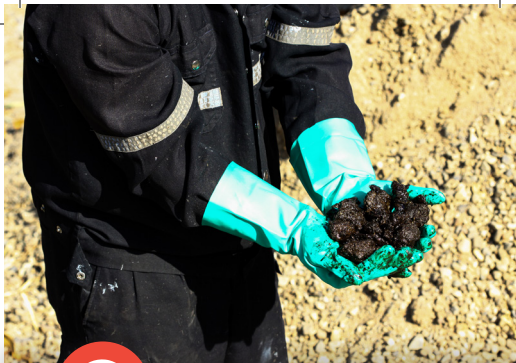
Move Forward

Canada has a rail (*train*) system that crosses the whole country. Oil can be shipped from coast to coast.

Move Forward 1 Space



Transportation



Move Forward

Oil (*bitumen*) from the oil sands is as hard as a hockey puck! It is mixed with a chemical so it can be shipped in pipelines.

Move Forward 1 Space



Transportation



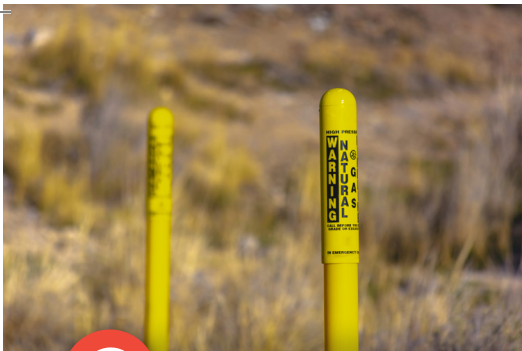
Go Backward

A Smart Ball detects a problem in the pressure level within the pipeline. That means there is a leak.

Go Back 2 Spaces



Transportation



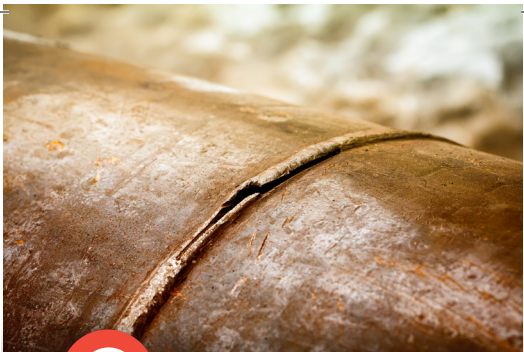
Go Backward

The Canada Energy Regulator finds lines that aren't labelled properly.

Go Back 1 Space



Transportation



Go Backward

A landowner hits a pipeline while digging, causing damage to the line.

Go Back 1 Space



Transportation



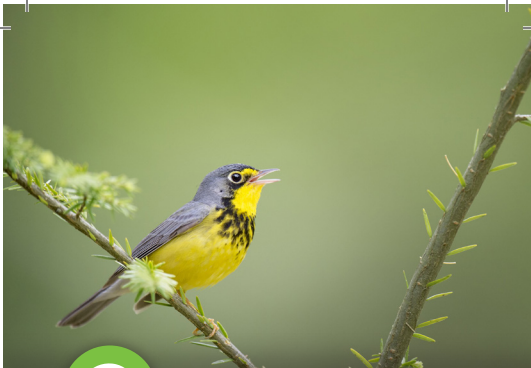
Miss A Turn

A dent in the pipeline causes
a pipeline 'pig' to get stuck.
Operations must shut down for a week.

Miss A Turn



Reclamation & Monitoring



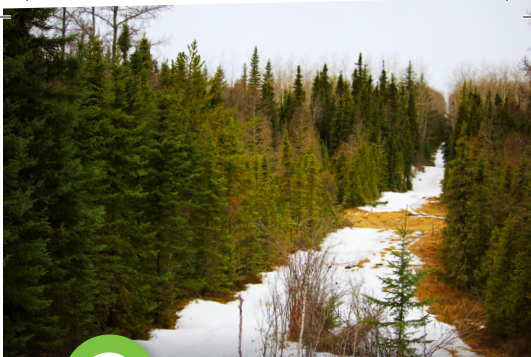
Move Forward

The migratory songbird population is growing in the area because of your efforts to maintain their habitat.

Move Forward 2 Spaces



Reclamation & Monitoring



Move Forward

The soil is put back and you plant new vegetation where it was removed to build the pipeline.

Move Forward 2 Spaces



Reclamation & Monitoring



Move Forward

There are two Carbon Capture & Storage (CCS) projects operating in Alberta. Carbon dioxide (CO_2) is sent deep underground to reduce greenhouse gases in the atmosphere.

Move Forward 2 Spaces



Reclamation & Monitoring



Move Forward

A tree planting program plants new trees on abandoned well sites, restoring habitat and absorbing carbon dioxide from the atmosphere.

Move Forward 2 Spaces



Reclamation & Monitoring



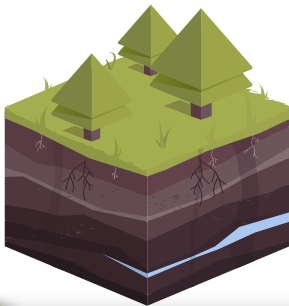
Move Forward

The company meets the legal requirement to reclaim the land once the site is no longer in use.

Move Forward 1 Space



Reclamation & Monitoring



Move Forward

Operations need water but you stay below your fresh water limits for the year by using deep groundwater that can't be used for other purposes.

Move Forward 1 Space



Reclamation & Monitoring



Move Forward

The Athabasca River is monitored by the Alberta Government to make sure the oil and gas operations aren't impacting Alberta's fresh water supply.

Move Forward 1 Space



Reclamation & Monitoring



Go Backward

Soil tests show contamination
and you need to spend time and
money to clean it up.

Go Back 1 Space



Reclamation & Monitoring



Go Backward

A farmer complains that their land is too dry where the pipeline runs underground. Workers must go to the farm to repair the damage.

Go Back 1 Space



Reclamation & Monitoring

**Government
of Alberta**

Wellsite Reclamation Certificate Application Form
2010 Reclamation Criteria for Wellsites and Associated Facilities

1.0 GENERAL INFORMATION

1.1 Company Information

Applicant Full Name*

* Full Company Name that will appear on reclamation certificate

1.2 Conservation Board Information



Go Backward

While your reclamation project is going well, it has not been given a 'Reclamation Certificate' by the Alberta Government. You still have more work to do.

Go Back 2 Spaces



Reclamation & Monitoring



Go Backward

An access road remains open allowing public to access remote areas increasing human impact.

Go Back 2 Spaces



Processing



Move Forward

At a refinery, oil can be turned into gasoline. Gasoline is used to fuel cars.

Move Forward 2 Spaces



Processing



Move Forward

At a refinery, oil can be turned
into jet fuel (*kerosene*).
Jet fuel powers airplanes.

Move Forward 2 Spaces



Processing



Move Forward

Natural gas is used in most Canadian houses for furnaces and hot water tanks.

Move Forward 2 Spaces



Processing



Move Forward

Natural gas is used to generate electricity.

Move Forward 2 Spaces



Processing



Move Forward

At a refinery, oil can be turned into asphalt. Asphalt can be used to build roads.

Move Forward 1 Space



Processing



Move Forward

Oil and natural gas can be used to make plastic products such as water bottles, bags, and clothing.

Move Forward 1 Space



Processing



Move Forward

At a refinery, oil can be turned into diesel to fuel buses, large trucks and equipment.

Move Forward 1 Space



Processing



Go Backward

The oil refinery has a release of methane that results in excessive flaring.

Go Back 2 Spaces



Processing



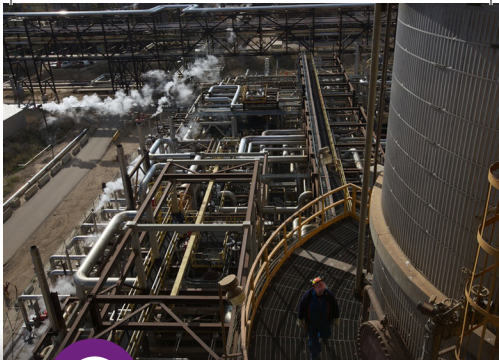
Go Backward

The refinery's air quality monitoring program detects bad-smelling emissions.

Go Back 2 Spaces



Processing



Go Backward

About 40% of bitumen from the oil sands must be upgraded before it can be sold to refineries.

Go Back 1 Space



Processing



Miss A Turn

Hydrogen sulfide (H_2S), a harmful gas, is detected on site. Shut down for a valve repair.

Miss A Turn