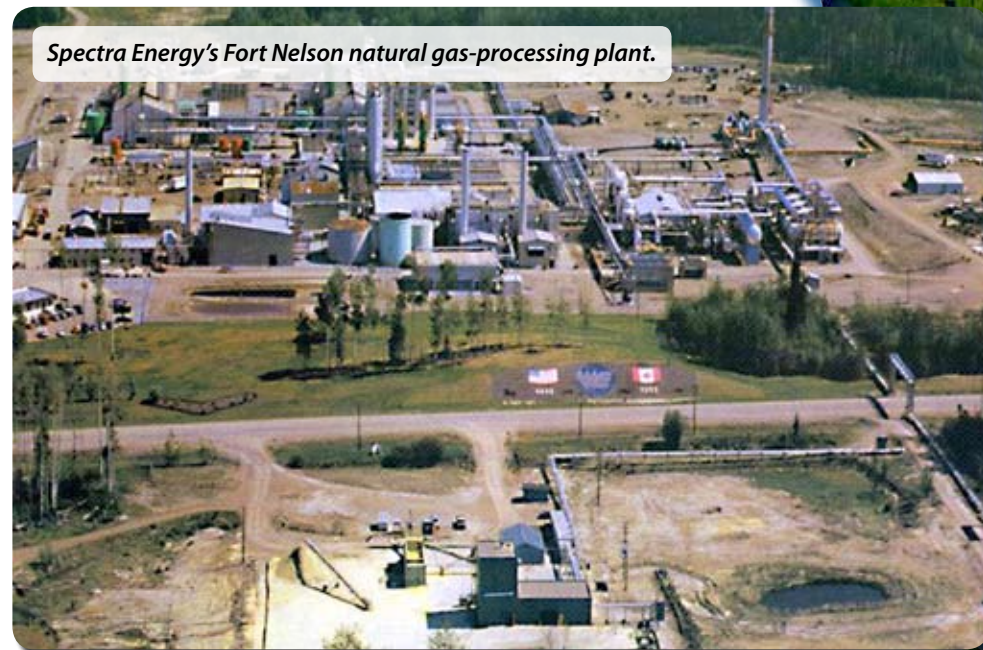


Phase III Activities

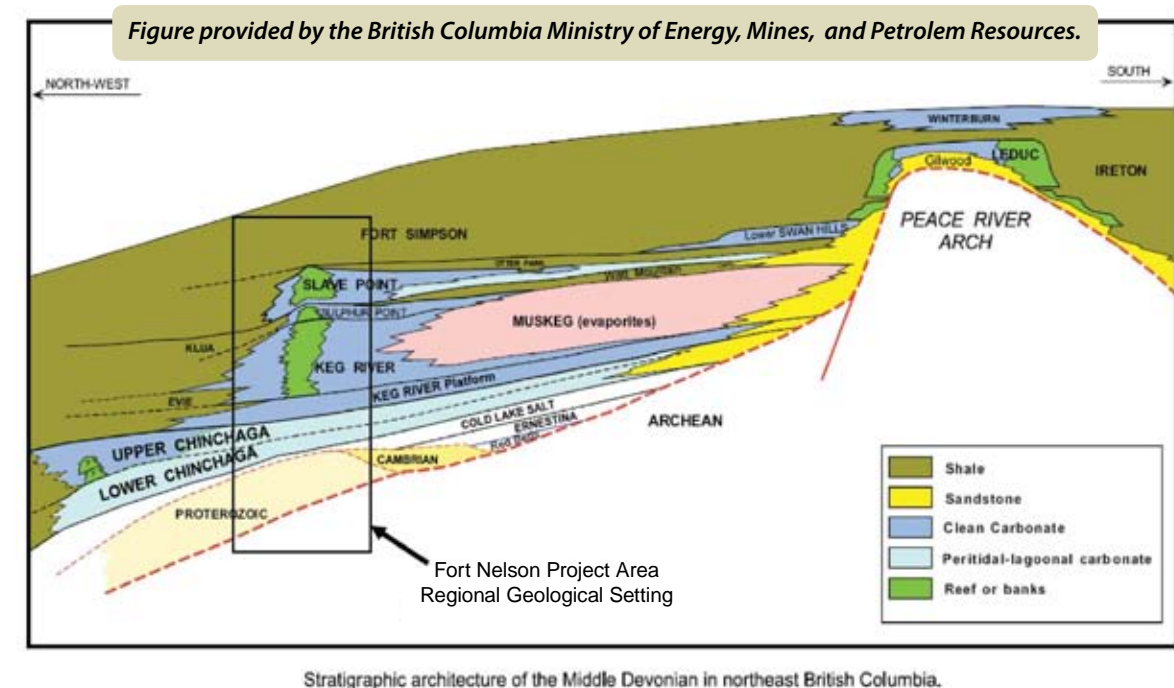


Spectra Energy's Fort Nelson natural gas-processing plant.

Fort Nelson Demonstration Test

This demonstration will develop detailed and previously unavailable insight regarding a wide variety of issues associated with the geological sequestration of CO₂. The primary research and development targets are the following:

- Cost-effective monitoring, mitigation, and verification (MMV) approaches for large-scale CO₂ sequestration in brine formations will be deployed and evaluated.
- Modeling simulation approaches to predict and estimate CO₂ injectivity, plume areal extent, mobility, and fate within the target formation will be field-tested. Site characterization and MMV activities will support these efforts.
- Approaches to predict the effects of CO₂ on the integrity of overlying sealing formations will be evaluated for their utility in the verification and validation of field- and laboratory-based data. Testing and modeling of the key geomechanical and geochemical parameters of sealing formations that might be affected by large-scale CO₂ injection will support these efforts.



Basin Electric Power Cooperative's Antelope Valley Station is a pulverized coal-fired power plant.



Williston Basin Demonstration Test

This demonstration will inject CO₂ into a saline formation in the Williston Basin for the dual purpose of sequestration and enhanced oil recovery (EOR). The demonstration will transport between 500,000 and 1,000,000 tons per year of CO₂ from Basin Electric Power Cooperative's Antelope Valley Station (an existing conventional coal-fired power plant in central North Dakota) and inject the CO₂ into an oil reservoir operated by an oil and gas company within the membership of the PCOR Partnership.

EOR Opportunities

There are several major areas of opportunities for million-ton-per year CO₂-based EOR projects in the Williston Basin:

- Cedar Creek Anticline – 400 MMcf/day (~8,000,000 t/year)
- Nesson Anticline – 100 MMcf/day (~2,000,000 t/year)
- Billings-Dickinson Area – 50 MMcf/day (~1,000,000 t/year)
- Northeast Flank – 50 MMcf/day (~1,000,000 t/year)



Phase III Goals

- Meet or exceed our partners' expectations – develop a project that leads to commercial success.
- Develop infrastructure and expertise that propagate our region's competitive advantage into the future.
- Develop public support through outreach and education.
- Develop industry standards for MMV.
- Develop user-friendly standards for:
 - Site selection/permitting
 - Risk assessment
 - MMV
- Develop markets/standards for monetization of carbon credits.



The PCOR Partnership is a collaborative program assessing regional sequestration opportunities. To learn more, contact Edward N. Steadman, PCOR Project Manager, (701) 777-5279, esteadman@undeerc.org, or visit the PCOR Partnership Web site www.undeerc.org/pcor for further information.