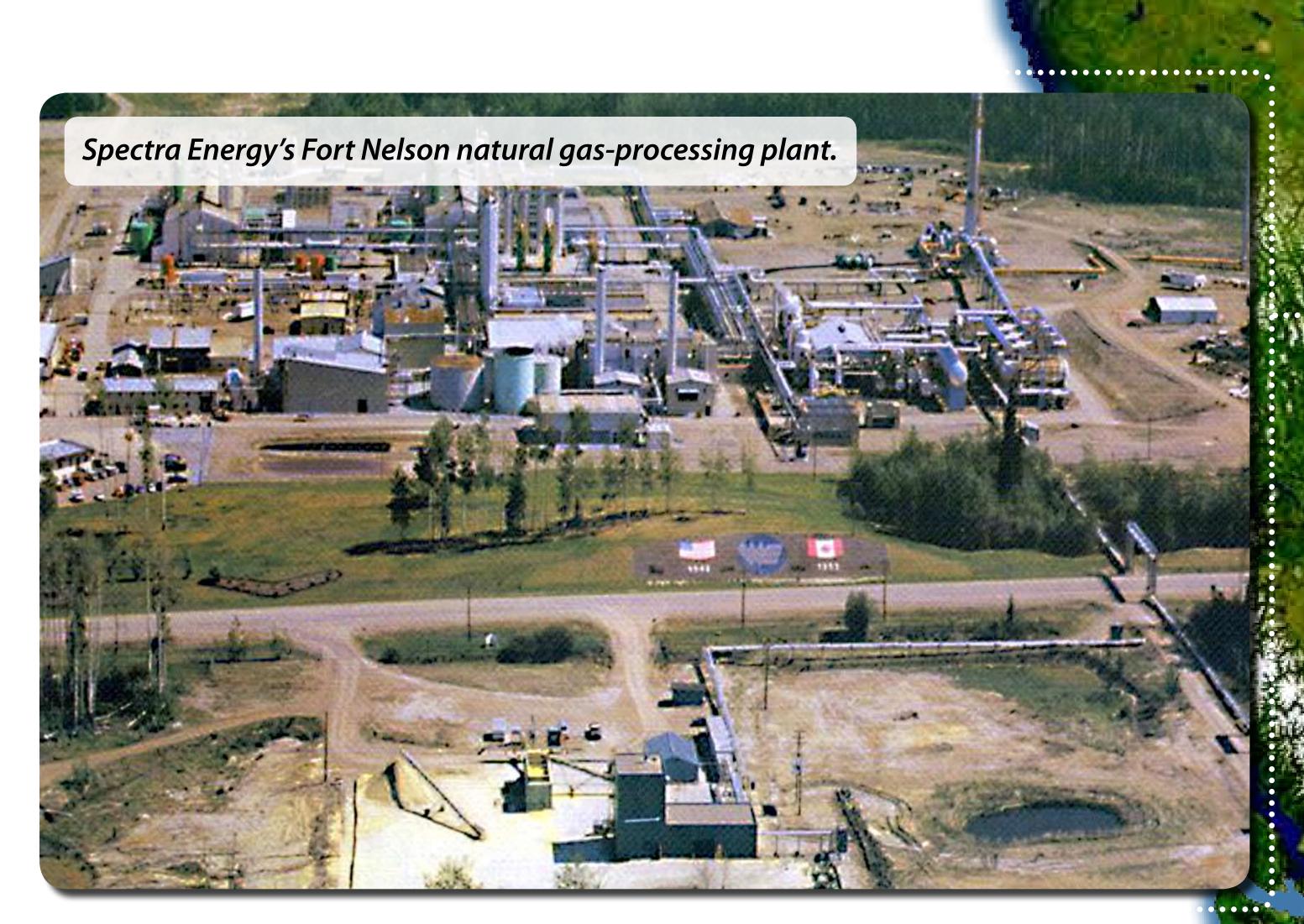


PCOR Partnership Phase III



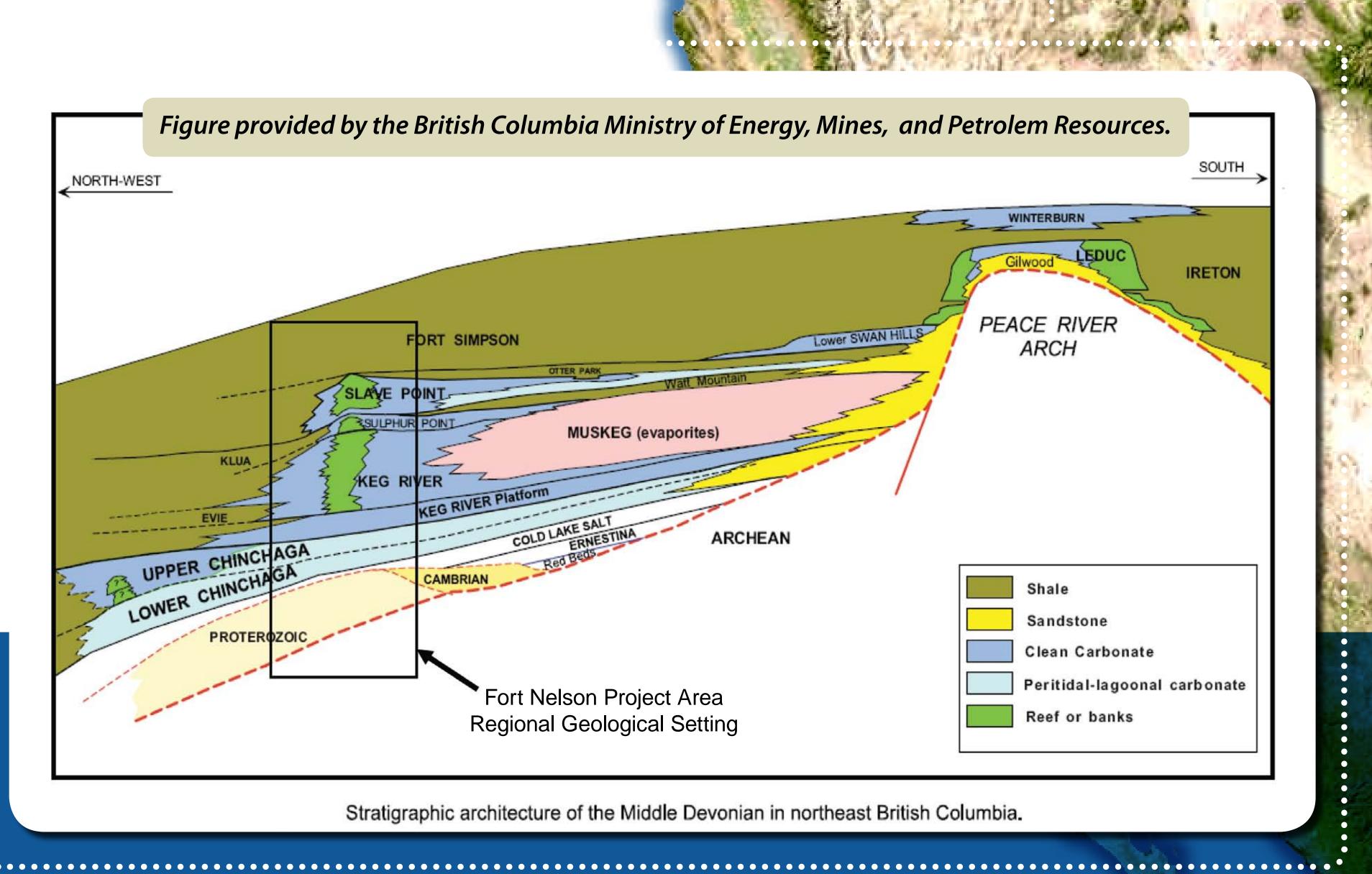
Phase III Activities



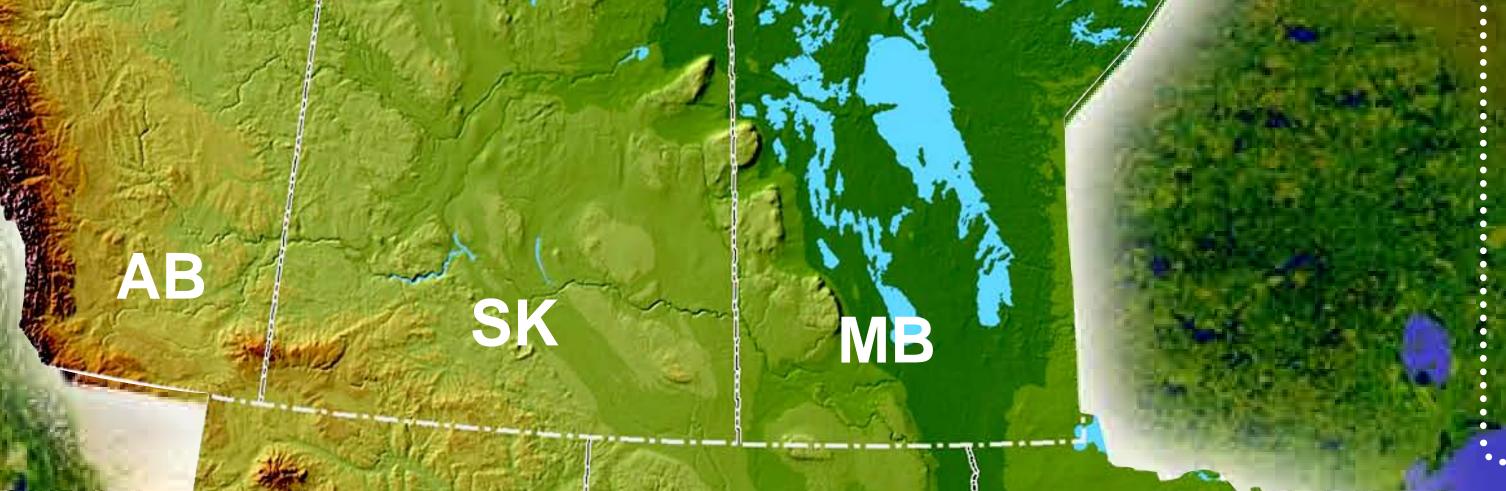
Fort Nelson Demonstration Test

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

- Cost-effective monitoring, mitigation, and verification (MMV) approaches for large-scale CO, sequestration in brine formations will be deployed and
- Modeling simulation approaches to predict and estimate CO₃ injectivity, plume areal extent, mobility, and fate within the target formation will be field-tested. Site characterization and MMV activities will support these
- Approaches to predict the effects of CO₃ 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 CO, injection will support these efforts.















Williston Basin Demonstration Test

This demonstration will inject CO₃ 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 CO, from Basin Electric Power Cooperative's Antelope Valley Station (an existing conventional coal-fired power plant in central North Dakota) and inject the CO₃ 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 CO₃-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)
- Northeast Flank 50 MMcf/day (~1,000,000 t/year)

Billings–Dickinson Area – 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.

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