

# Appendix 4-K

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Coal 101 Presentation - Elk Valley  
Métis – April 2021

# Coal 101

Elk Valley Metallurgical Coal

April 7, 2021

*Elk Valley Metis Association*



# Agenda

1. About Coal
2. Coal Mining and Processing
3. Environmental Considerations
4. Questions / Discussion



# About Coal



# Coal Formation

- Millions of years ago, plant material fell into shallow water
- Thick layers built up over many centuries
- Various changes buried the plant material deep in the earth
- Pressure, heat, and time converted the plant material into coal
- Different kinds of coal get created by different conditions



# Metallurgical Coal

*Crown Mountain Coking Coal Project is metallurgical coal*

Expands as part of coking process

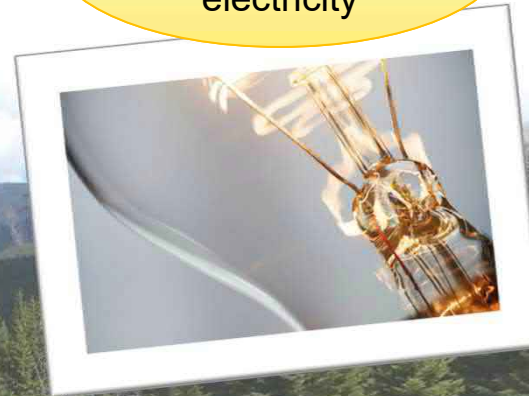
A key part of the steel making process



# Thermal Coal

Doesn't expand if coked

Burned to produce electricity



# Metallurgical Coal Facts

- Raw coal is converted into Coke
- Coke is added to a blast furnace when converting iron ore to iron as part of the steel making process
- 770 kg of raw coal is used for 1,000 kg of iron
- Primary market for metallurgical coal is Asia and India

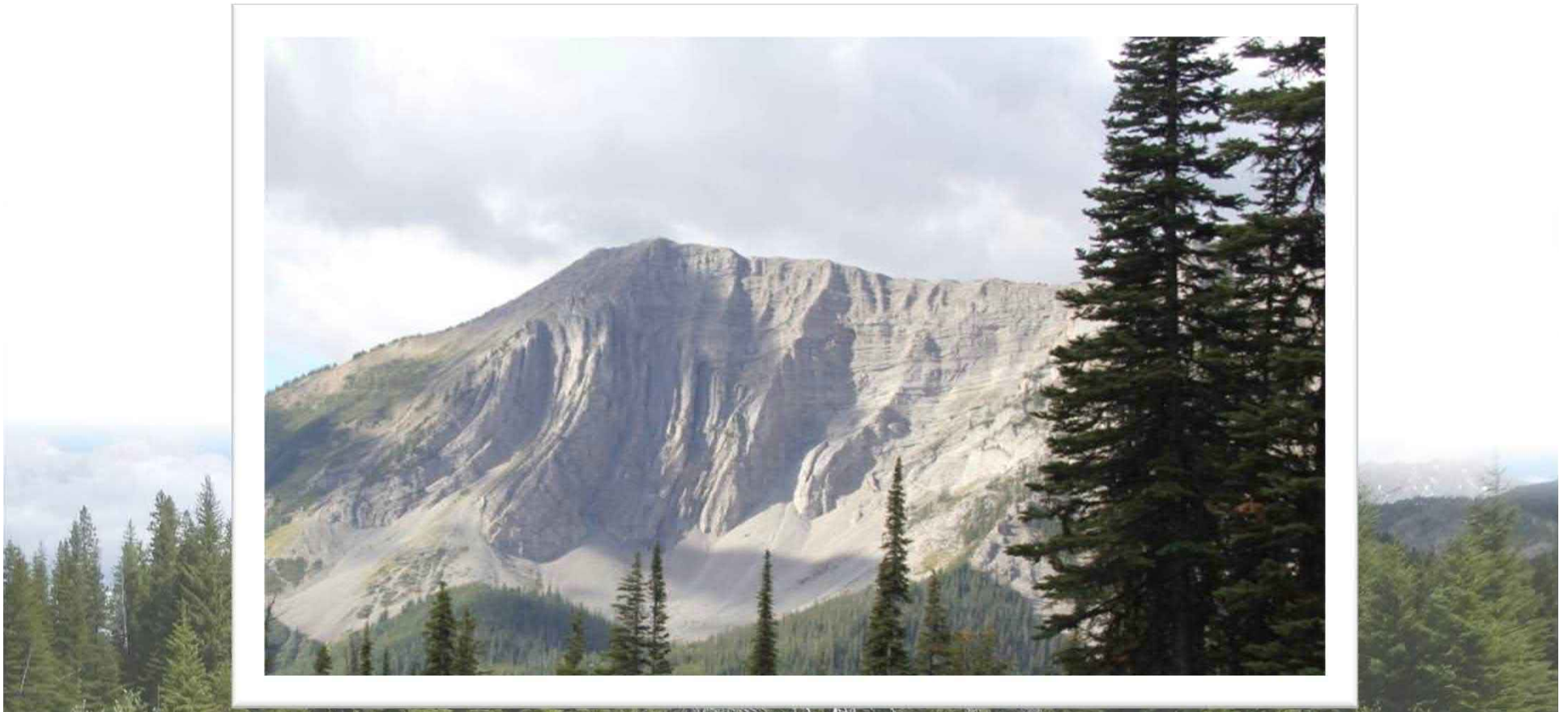
*High quality metallurgical coal, like that from Crown Mountain, will be used to make high quality steel for:*

- *Automotive manufacturing*
- *Highspeed trains*
- *Tools and equipment*



# Elk Valley Coal

- Source conditions created both metallurgic coal and thermal coal
- Mountain building processes lifted coal to near the surface
  - The processes also bent, cracked (faulted), and altered the coal...



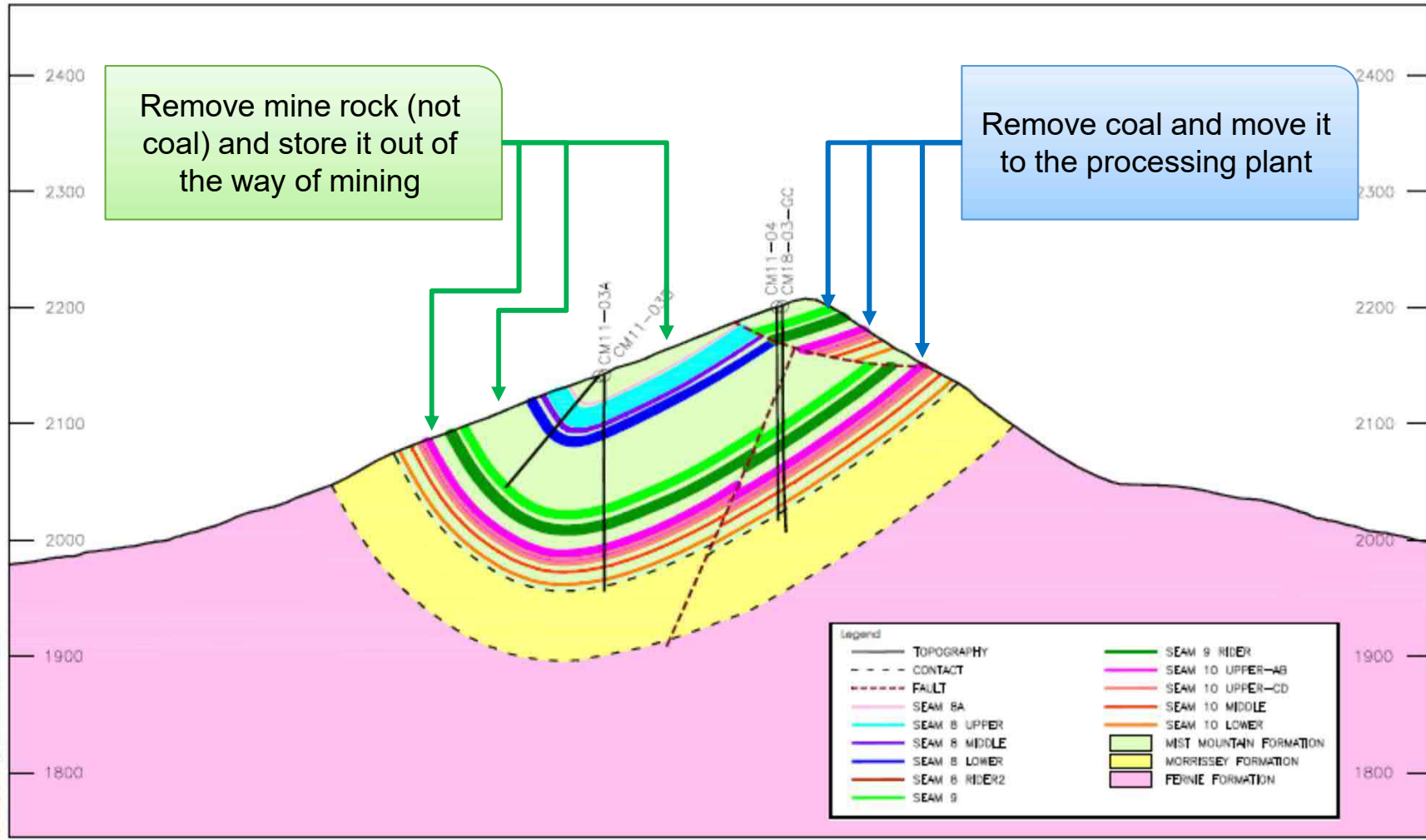


# Coal Mining and Processing



# Mining Coal

*Actual cross section from Crown Mountain Coking Coal Project*

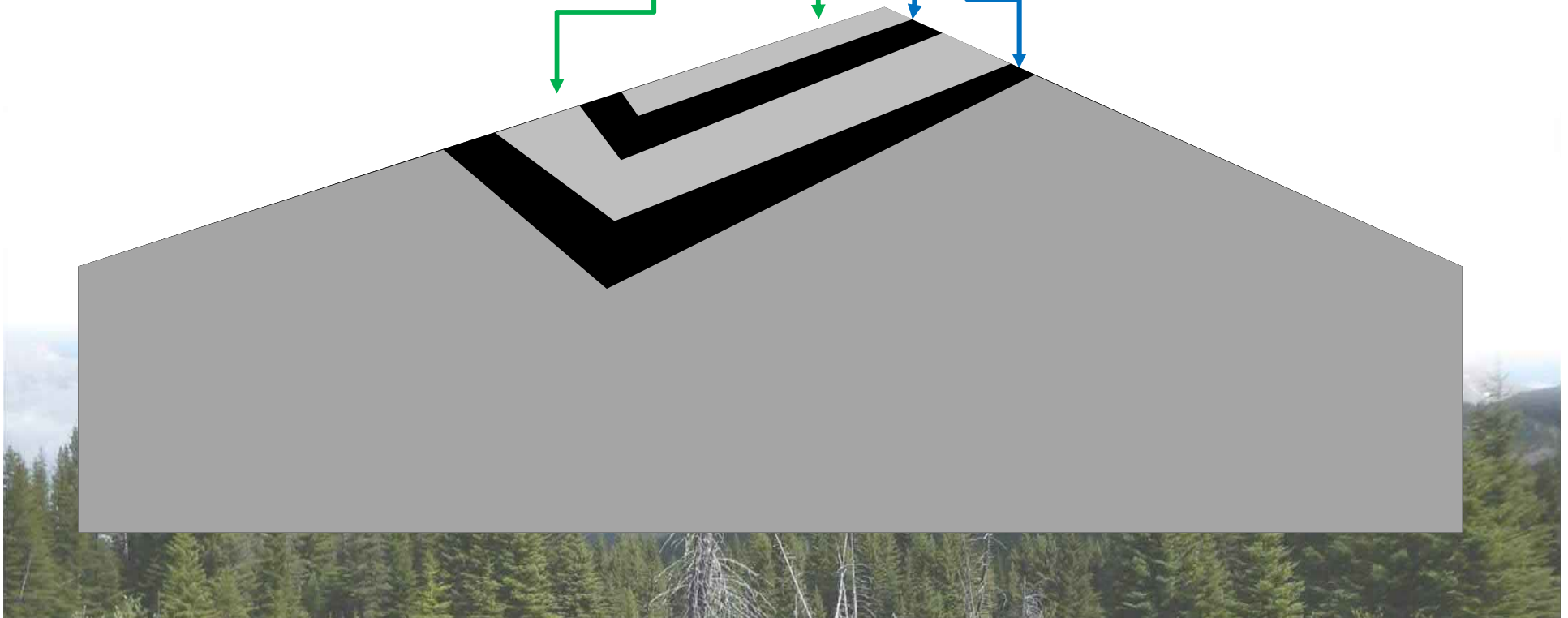


# Mining Coal - Simplified

*Simplified theoretical cross section*

Remove mine rock (not coal) and store it out of the way of mining

Remove coal and move it to the processing plant



# Mine Rock

# Coal



Drill and blast



Large Shovel



Haul Truck

Long term storage

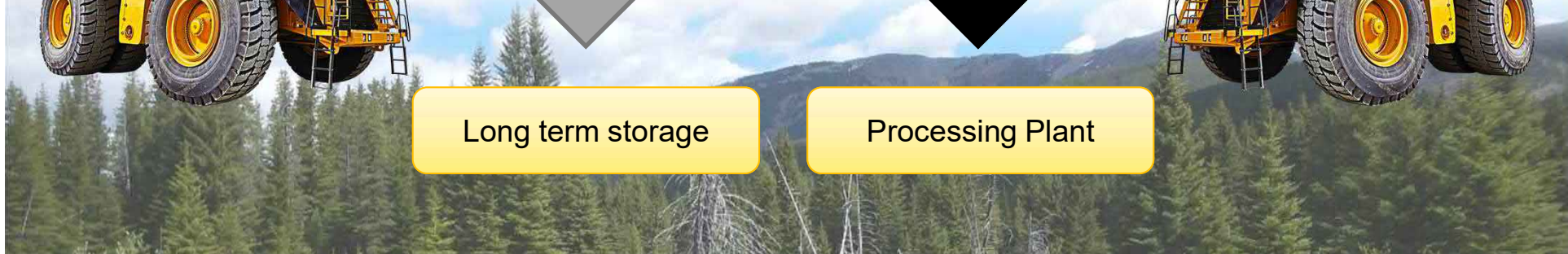


Wheeled Loader

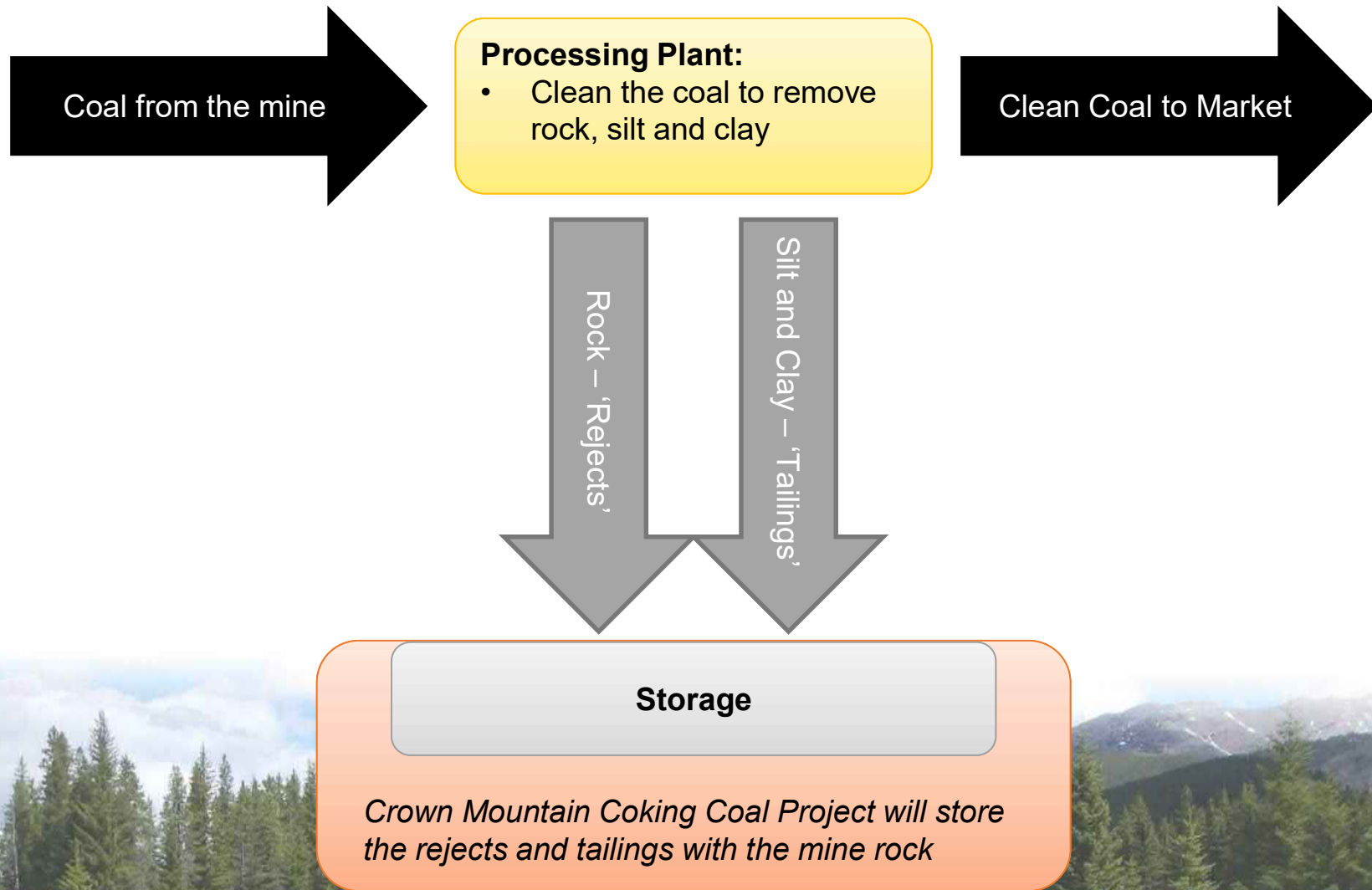


Haul Truck

Processing Plant



# Coal Processing - Simplified

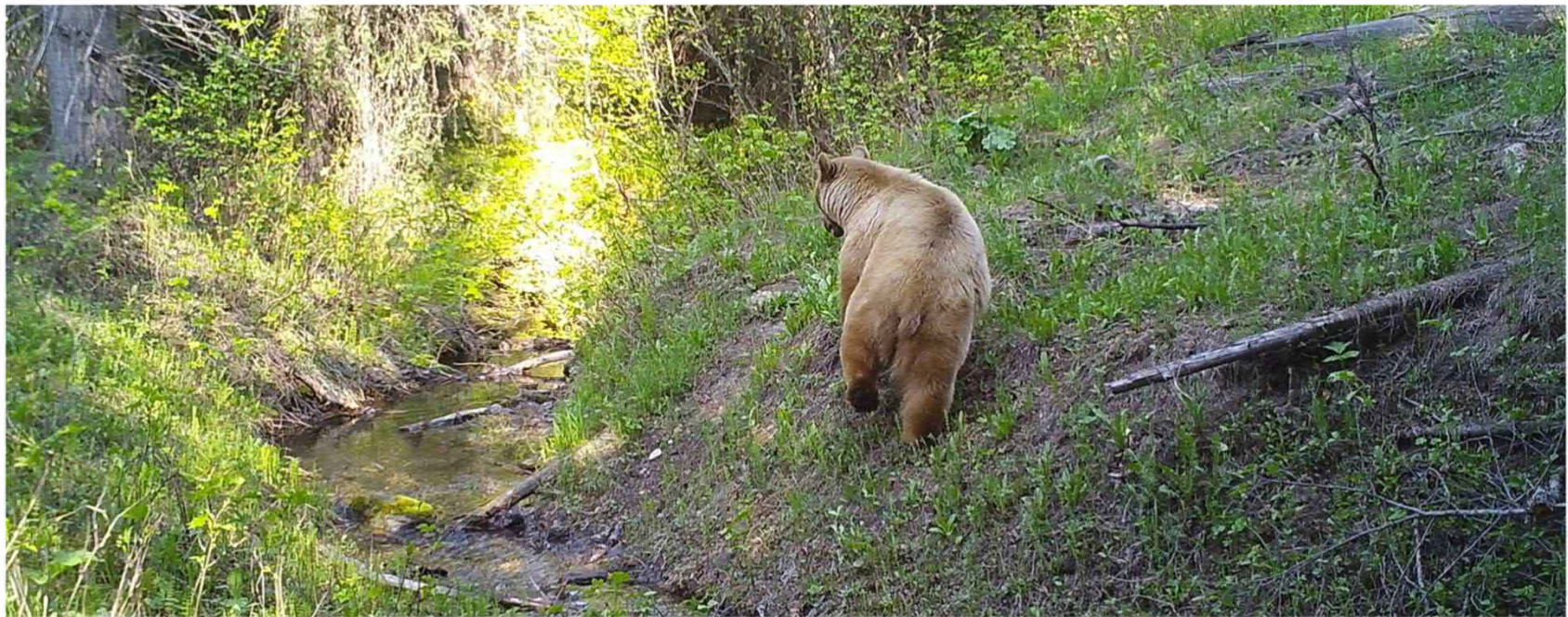


# Environmental Considerations

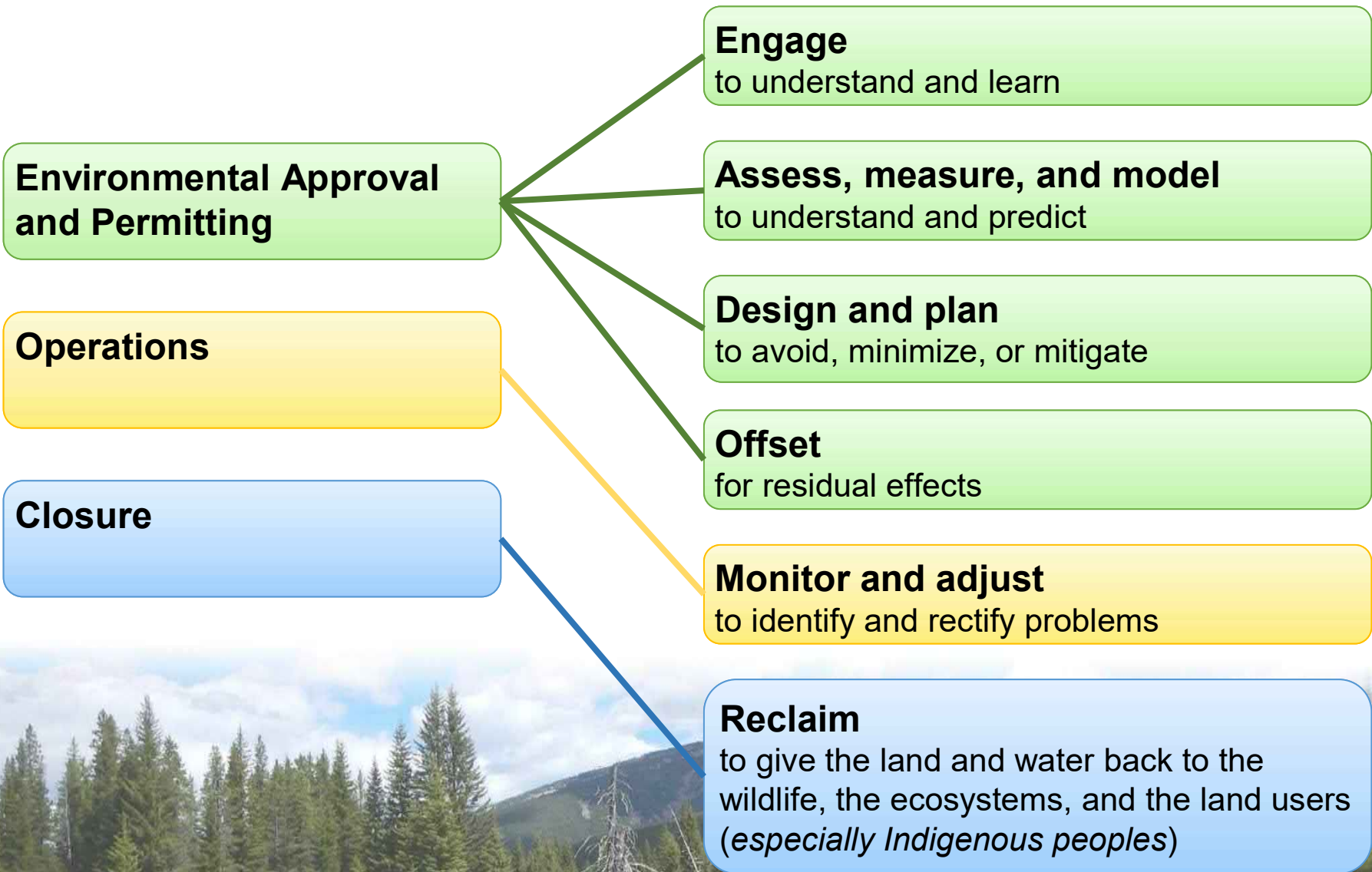


# Important Factors

- Water, wildlife, habitat, cumulative effects, climate
- Indigenous use, knowledge, rights, and title
- Trappers, hunters, recreation, industry



# Environmental Efforts





# Questions and Discussion

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