

Geology

Coal Seam Characteristics

- ◆ Two distinct coal seams, the Rosebud and McKay, presently mineable by surface technology, underlie Area F.
- ◆ Western Energy proposes to mine only the Rosebud seam because:
 - The cost of mining the McKay coal is far greater than the cost of producing the Rosebud coal.
 - The McKay seam lies an average of 78 feet below the Rosebud seam.
 - The McKay seam is of poorer quality.
 - McKay coal has a higher sulfur content (0.97% by weight) than Rosebud coal (0.59% by weight).
 - The percentages of problem constituents in the ash (when burned), primarily iron and sodium, are typically higher in McKay coal than in Rosebud coal.
 - Increased iron content promotes boiler slagging problems and the higher sodium content increases the likelihood of boiler tube deterioration.
- ◆ Due to factors such as poor quality coal, high stripping ratios, equipment maneuverability, 94% coal recovery rate, and coal not in the current mine plan, not all coal within the lease boundaries will be mined.

Overburden Suitability

- ◆ Overburden suitability baseline studies were completed for Area F.
 - Study utilized 31 core holes drilled between 2004 and 2007.
 - Suitability of sample intervals was determined based on pH, electrical conductivity, saturation percentage, SAR, boron, molybdenum, nitrate- nitrogen and selenium.
- ◆ 94% of the overburden in the drill holes is suitable overburden.
 - Only small pockets (< 20 feet thickness) occur of unsuitable material, which would be blended by the mining process with suitable overburden.