

# ENERGY MINERALS

## Oil, gas and minerals

*The Arapaho and Roosevelt National Forests and Pawnee National Grassland (ARP) have a long history of hard rock mining and mineral exploration. Oil and gas production and exploration continues to grow on the Pawnee National Grassland (PNG). Planning activities continue for both oil and gas production and exploration, as well as other minerals, across the Forest and addressing abandoned mines.*

► **Oil and gas** efforts focused on processing five applications for drilling. Completed a 3-D seismic project encompassing 20,000 acres of the PNG. The seismic work helps industry plan for better placement of wells and associated facilities, and eliminates or avoids placement of those wells that prove to be unproductive and are eventually plugged due to low productivity.

► Four water infrastructure projects within or adjacent to the ARP are currently undergoing **Federal Energy Regulatory Commission (FERC)** relicensing or amendments. These include Gross Reservoir and Barker Gravity Line in Boulder County, Cabin Creek in Clear Creek County, and Idlewild Reservoir and Pipeline in Larimer County. The ARP worked closely with FERC and other federal agencies to ensure that resources are protected while providing for renewable energy projects such as hydropower generation.

► The Forest installed **safety closures** on eight abandoned mines on the Boulder Ranger District (BRD) and 13 on the Clear Creek Ranger District (CCRD) in partnership with the Colorado Division of Reclamation, Mining and Safety (CDRMS) and Colorado Parks and Wildlife.

► The ARP completed project development and obtained funding to begin the NEPA process to implement abandoned mine safety closures across BRD and CCRD in partnership with CDRMS.

► CCRD coordinated a **multiagency partnership** for a project of Leavenworth Creek Watershed across multiple ownerships and completed two sampling events to collect surface water, sediment and soil for analysis to determine if historical mining is impacting the watershed. The ARP partnered with U.S. Geological Service to complete groundwater research to identify the surface to groundwater interactions throughout the watershed to provide information for potential project decisions.

► CCRD also completed the **Minnesota Mine/Lion Creek** stabilization and erosion control project in partnership with the Clear Creek Watershed Foundation, Trout Unlimited and Freeport-McMoRan.

► The Forest partnered with the Environmental Protection Agency, U.S. Fish and Wildlife Service, Colorado Department of Public Health and Environments and CDRMS to sample surface water, sediment and soil to analyze the **Gamble Gulch watershed** during low and high flows to determine potential impacts from the Perigo and Tip Top Mines.



Mine safety closure.

## OIL&GAS 2012FACTS

■ *As of fall 2012, there were **62 active oil and gas wells** on the Pawnee National Grassland.*

■ *Accepted **14 Plans of Operations or Notices of Intent**, approving **12** and completing **12** inspections across the ARP in the **Minerals Program**.*



The ARP started a preliminary analysis of the current and potential level of oil and gas development on the PNG to determine future planning needs.