The Antelope Creek Ranch was established in 1986 as a demonstration working ranch focussed on grazing management strategies that benefit both livestock and wildlife. As a working ranch, oil and gas activities have been allowed to continue throughout. Early reclamation efforts of some of the well sites and pipelines were completed by establishing crested wheatgrass (CWG). Since that time, CWG seeding has been removed as a reclamation strategy as it has been proven to invade neighboring healthy rangelands and permanently modify ecological integrity. This issue has been seen on Antelope Creek with native rangeland being compromised by CWG invasion.

Crested wheatgrass commonly completes its seasonal life cycle much earlier than most native grasses, with green up to seed set usually finished very early in the growing season. This quick establishment is why it was valued in early reclamation efforts as it provided quick ground cover. Crested wheatgrass tame pastures are also still valued because native grasses can be deferred early in the season while the crested fields are grazed at the time they are of highest forage value and palatability.

Crested wheatgrass however becomes problematic when it exists within the same field as native species. By the time native grasses are ready to be grazed, CWG has finished growing, set seed, and is losing both quality and palatability. This provides it a competitive advantage over native species as it is not utilized much by livestock once they've entered the pasture. Some Native fields at Antelope Creek have been modified where pipelines and well sites have been reclaimed to crested wheatgrass. With this competitive advantage, CWG has been increasing throughout these fields and decreasing the value of these native grasslands to both livestock and wildlife.

The Antelope Creek Range manager has discussed mitigating the crested wheatgrass invasion by both mowing and utilizing an early skim graze within these fields. Mowing would reduce the "wolfy nature" of the established plants, increasing their palatability. Skim grazing early in the season prior to native grasses greening up would focus livestock on the CWG over native species. Care would be given to ensure that animals focus on the CWG patches, and are removed once the CWG has been utilized, prior to the animal moving to other areas within the pasture.

As a demonstration ranch, this trial could provide valuable insight on how this methodology mitigates CWG invasion onto native range. ESRD staff are willing to document the results of the grazing strategy by both transect information and the use of GPS collars. The proposal is to have nine animals collared to provide a GPS coordinate every 5 minutes during the day that they are in the field. This information will then be mapped along with the plant communities in the fields to assess how animals distribute themselves during this skim graze. Vegetation data will be collected both on and off the pipelines to understand the degree of invasion, and if the mitigation efforts have an effect. Data gathering and analysis would be completed by the summer student also being proposed for the 2015 field season with help and supervision by ESRD staff.