PROJECT SUMMARY 2014 HAZEN-WEST PHASE 3 AML PROJECT Contract AM 694-14

NORTH DAKOTA PUBLIC SERVICE COMMISSION Abandoned Mine Lands Division State Capitol, Department 408 600 East Boulevard Avenue Bismarck, North Dakota 58505-0480





HAZEN-WEST PHASE (3) PROJECT SUMMARY

The Hazen-West Phase 3 AML Site is located approximately 5 miles west of Hazen, North Dakota. The project site is within Sections 8 and 9, T144, R87W in Mercer County. This project site contains 30 acres of an approximately 185 acre surface mine. The project entailed the elimination of 3000 feet of dangerous highwall left at the old Knife River Coal Company surface coal mine. Reclamation work on this site started on August 11, 2014. Project Manager and Engineer for the project was Mark Knell. The Kern and Tabery, Inc. moved approximately 325,000 cubic yards of soil material to eliminate the hazardous highwalls from a 30 acre area. The contractor utilized a fleet of construction equipment which included 4-scrapers, 3-dozers, 2-off road trucks, 2 excavators and motorgrader. A sump, one small embankment and 4 dikes were constructed to control water, prevent erosional problems and establish wetland ponds. Topsoil material was salvaged prior to earthwork operations then respread following completion of the earthwork. On November 5, 2014 the earthwork at the Hazen-West Phase 3 project was completed. The project area was fertilized and seeded November 6 and 7, 2014. The placement of 15,000 feet of straw wattles, 750 feet of fence and one entrance gate were completed during the spring of 2015. The project was inspected by Allen Erickson. The project was completed for \$1,124,092.80. The attached photographs show a portion of the reclamation area.



The Dangerous Highwall Located Along the ND Game & Fish Dept. North Beulah Bass Pond



Dangerous Highwall



Unstable Highwall



Construction Equipment being Utilized During Reclamation



Contractor Utilizing Excavator to Digging Up Rock On-Site



Excavator and Truck Utilized to Move Rock



Earthwork Operations



D9 Dozer Push Loading 631 Scraper



631 Scrapers Unloading in the Project Fill Area



Post Reclamation Slope



Embankment Established to Create Wetland Pond Needed to Control Surface Water Runoff



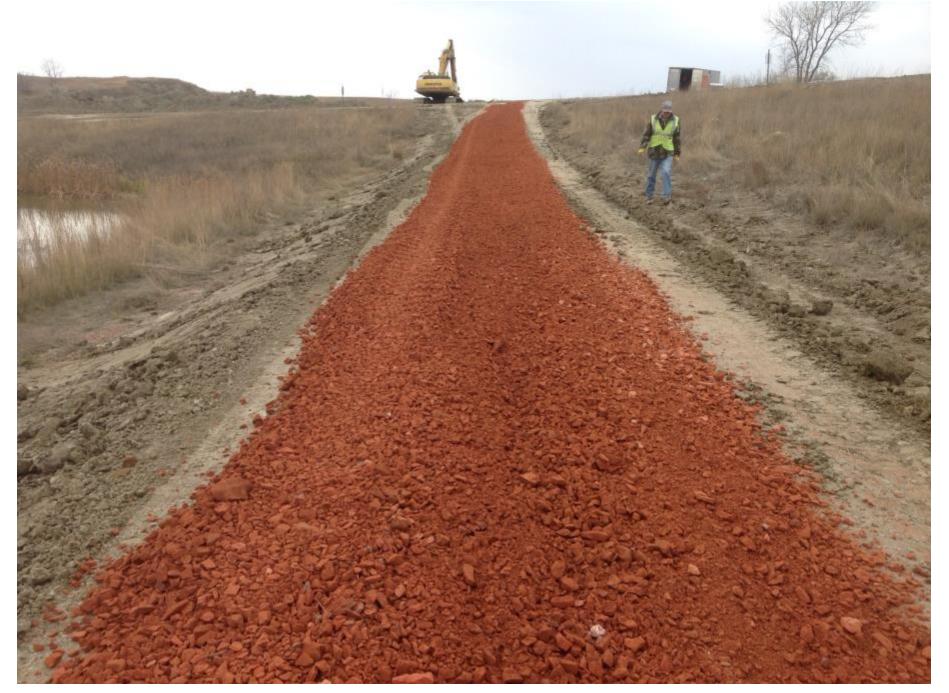
Construction of Small Wetland Sump to Help Control Surface Water Runoff



Rock Riprap Channel Established Downstream from Wetland Sump



Scoria being placed along Shoreline of Bass Pond



Scoria Trail at ND Game and Fish Dept. Bass Pond



Dozer Leveling Respread Topsoil



Post Reclamation Slope Following Topsoil Respread Operations



Soil Being Prepared Prior to Fertilizing and Seeding Operations



Placement of Straw Wattles for Erosion Control



Straw Wattles Established