

FIRST YEAR TRANSPLANT RESPONSE ON CONSTRUCTED TEST PLOTS, QUESTA MINE, QUESTA, NEW MEXICO¹

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Abstract: Molycorp, Inc. has initiated a test plot program to evaluate the potential cover and planting treatments for reclamation of its Questa Mine rock piles. The Questa Mine is located near the Village of Questa in Taos County, New Mexico at an elevation of approximately 8,000 feet. The test plot program consisted of constructing multiple test plots of sloped plots (3:1 and 2:1 slopes) and flat gradient plots. This poster and discussion will focus on the first year transplant response observed on the 2:1 slope test plots. Each test plot was constructed with three cover treatments (no cover, 1-ft, and 3-ft of cover material) over the existing rock pile material. The cover material used was neutral material, less than 8 inches, excavated from an existing rock pile. The test plots received treatments of either forest soil mycorrhizal inoculant or no inoculant. Each test plot was hydro-seeded, hydro-mulched, and planted with transplanted tree and shrub seedlings. The transplanted seedlings were broken into three categories; nurse species, crop species, and shrub species. The nurse species planted are fast establishing, short lived species which will shade and protect the crop species. The crop species consist of multiple conifer species which represent the post mining land use plant community. The shrub species will provide understory growth and a wildlife food source. Two transplant seedling treatments were planted on each of the test plots. These seedling treatments included maintaining a constant planting rate for both the crop and shrub species while planting the nurse species at two different planting rates. First year transplant survival studies were undertaken to determine the stocking rates of each test plot and to identify any initial observations regarding the applied treatments.

Additional Key Words: Revegetation, reforestation, high altitude reclamation, transplant establishment, soil amendments, inoculant and cover depth

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