**TR-75 Borrow Area Field Survey**


**Summary**

On September 2, 2020 New Elk Coal Company completed a field survey to establish that the proposed borrow area and back wall of the Refuse Disposal Area (RDA) for TR-75 is adequate in material for covering the RDA with subsoil. A part of this survey is also to show the existence of topsoil in the borrow area. Photos of exposed outcrops in the borrow area and along the walls of the RDA are shown below.

Three test holes were dug at depths of 16 inches and 24 inches to establish topsoil estimates and prove material can be moved with use of blasting. The test holes were dug by hand instead of an excavator to limit disturbance to the previously undisturbed area.

In all the filed survey showed that there is adequate material on the proposed borrow are and there is significant topsoil to be used for the project.


**Photographic Locations**

The following phots were taken along the back wall of the RDA. There is not much material to be harvested from these areas.

**Back Wall of RDA - Rock can be harvested below Clean Water Ditch**

**Back wall of RDA – Material can be harvested below Clean Water Ditch**

**Back wall of RDA – Material can be harvested between Refuse and Wall**

**Back wall of RDA – Material can be harvested between Refuse and Wall**

**Back wall of RDA – Material can be harvested between Refuse and Wall**

Photos of outcrops are shown below, and were taken at locations shown in the figure attached. These locations are labeled SP-1, SP-2, SP-3, and SP-4.

Location SP-1 is located within the proposed borrow area in the current clean water ditch. This location shows some sandstone seams. These sandstone seams are very fractured and can be moved easily with machinery. The rock should be able to be used as subsoil.

**Location SP-1 – Shows fractured sandstone outcrop**

**Location SP-1 – Shows fractured sandstone outcrop**

Location SP-2 is located within the proposed borrow area in the current clean water ditch. This location shows a large sandstone seam. These sandstone seam is somewhat fractured and should be able to be moved with machinery. This seam is at a higher elevation and should not affect the amount of material to be harvested in the borrow area. The rock should be able to be used to rock line ditches.

**Location SP-2 – Shows fractured sandstone outcrop**

**Location SP-2 – Shows dirt above the fractured sandstone outcrop**

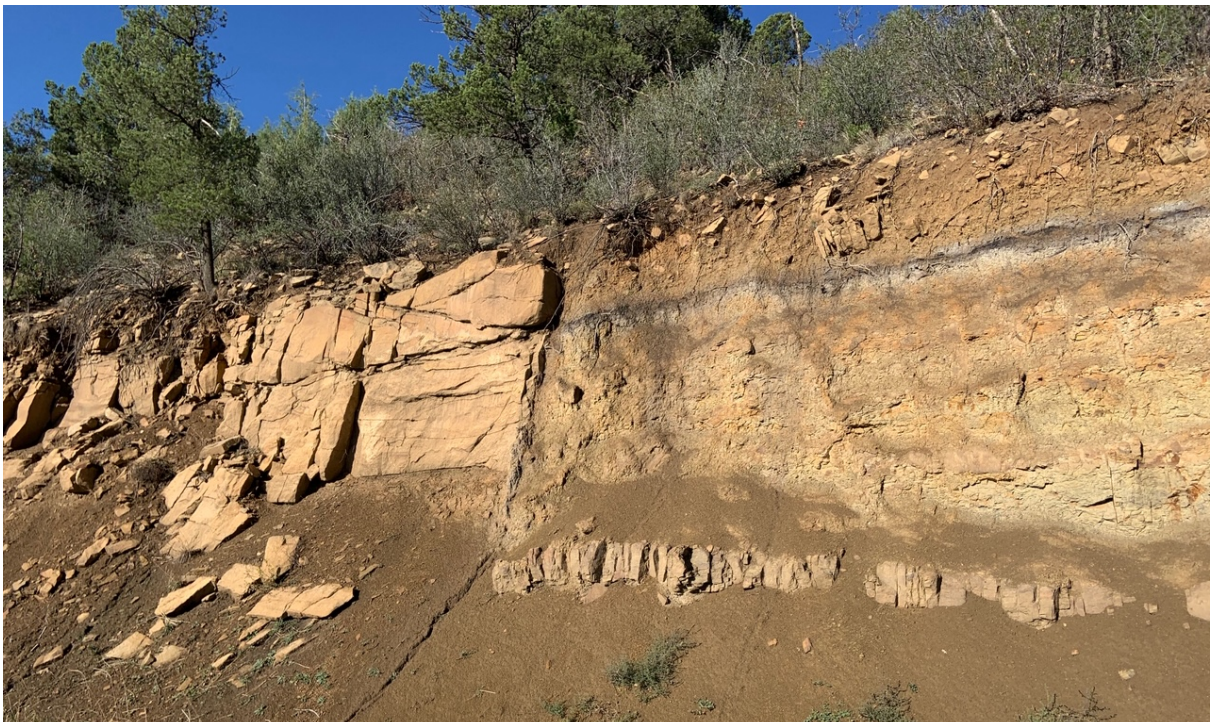
**Location SP-2 – Shows dirt and fractured sandstone outcrop on the left side of picture**

**Location SP-2 – Shows dirt and fractured sandstone outcrop above current clean water ditch**

Location SP-3 is located along the current road to the RDA. It shows a good outcrop of the material in the southeast corner of the proposed borrow area. The material is mostly dirt with fractured sandstone. Some of the sandstone is fractured large would have to be used to rock line ditches. All of the material should be moveable.

**Location SP-3 – Shows dirt and fractured sandstone outcrop above current RDA access road**

**Location SP-3 – Shows dirt and fractured sandstone outcrop above current RDA access road**



**Location SP-3 – Shows dirt and fractured sandstone outcrop above current RDA access road**

**Location SP-3 – Shows dirt and fractured sandstone outcrop above current RDA access road**

Location SP-4 is located along the current road to the RDA. It shows a good outcrop of the material in the southeast corner of the proposed borrow area. The material is mostly dirt with fractured sandstone. All of the material should be moveable.

**Location SP-5 – Shows dirt and fractured sandstone outcrop above current RDA access road**

**Location SP-5 – Shows dirt and fractured sandstone outcrop above current RDA access road**

**Test Holes**

The test holes are shown  in the figure attached and labeled as TH-1, TH-2, and TH-3.

TH-1 was dug by hand and there was little rock removed from the hole. The hole was dug on a flat spot in the borrow area. The topsoil appears to be from the surface about four inches below the surface.

**TH-1**


TH-1

TH-2 was dug by hand and there was little rock removed from the hole. The hole was dug on a relatively flat spot in the borrow area. The topsoil appears to be from the surface about four inches below the surface.

**TH-2**


TH-2

TH-3 was dug by hand and there was almost no rock removed from the hole. The hole was dug on the side of a  hill in the borrow area, representative of the entire hill side. The topsoil appears to be from the surface about six to eight inches below the surface.

**TH-3**


TH-3