

MODULE 21

Module 21: Topsoil / Subsoil

[§77.456(4)]

21.1 Topsoil Characteristics

- a) Identify the thickness of topsoil present at the site. If the thickness of the topsoil varies, key the thickness of the topsoil to Exhibit 18.

“Topsoil” generally does not exist at the project site, or exists in very small quantities. The material (overburden soils) that overlies the bedrock consists of varying proportions of mixed clay, sand and fine gravels. There is no A or B horizon that can be effectly separated from the highly heterogeneous overburden soil.

- b) Provide a 8 ½” x 11” copy of USDA Soil Survey Map delineating the proposed permit area.

See attached Exhibit 21.

21.2 Operations Plan

- a) Provide a plan for removal, storage and redistribution of topsoil and subsoil.

The existing overburden soil, as needed for reclamation, will be conserved onsite for replacement on affected areas upon completion of mining and prior to revegetation. The soil will generally be placed in existing soil stockpile areas at the Charmian Site, or used locally to stabilize and vegetate earthwork areas at the Northern Tract Quarry.

When the overburden soil is compacted in the berms or other storage areas, revegetation will be effected as soon as practicable with temporary cover, in accordance with Module 23. After mining, the overburden soil will be spread over the areas of the site to be revegetated and scarified. Revegetation will then be effected in accordance with Module 23.

- b) If the B and C horizons will be segregated and replaced as subsoil, identify the thickness in inches of the B and C horizons to be removed, segregated and replaced.

The overburden soils totaling a minimum of 12 inches will be removed, segregated, and replaced as the final surface soil layer. There are no B and C horizons to segregate and replace. Soil productivity will be consistent with the postmining land uses.

- c) If material other than the B and C horizons will be replaced as subsoil, identify the material and include test results demonstrating that this material will insure revegetation and soil productivity consistent with the postmining land use. Provide the name(s), address(es) and telephone number(s) of the individual(s) responsible for the collection and analysis of this data and a description of the methodologies used to collect and analyze this data

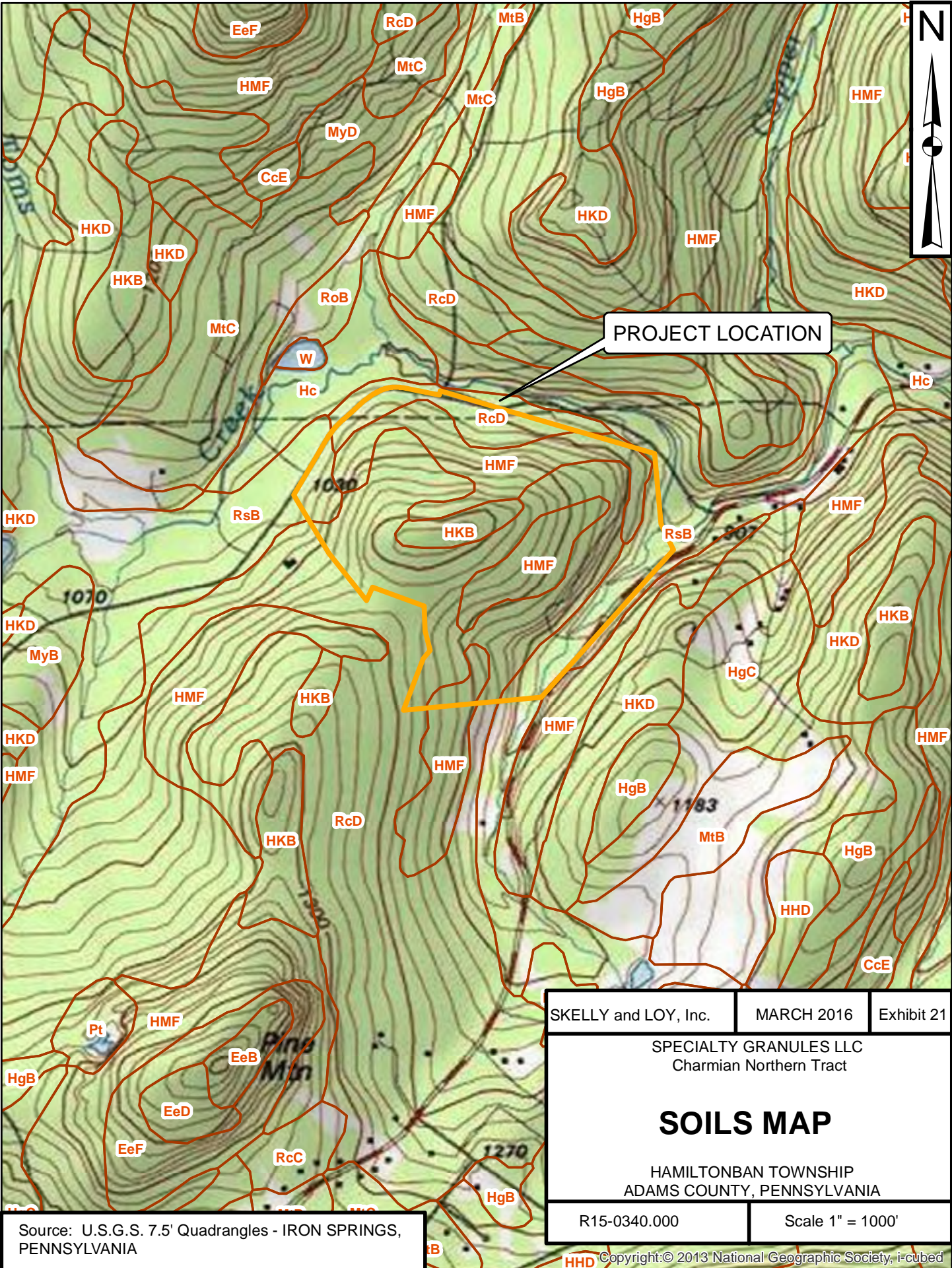
N/A

21.3 Previously Affected Areas

If an area has been previously affected by mining and no topsoil or subsoil is present, identify the material that will be used as the final surface layer and provide a demonstration, including chemical analysis, that the material is capable of supporting the vegetation of the postmining land use.

N/A

EXHIBIT 21.1



PROJECT LOCATION

SKELLY and LOY, Inc.	MARCH 2016	Exhibit 21
SPECIALTY GRANULES LLC Charmian Northern Tract		
SOILS MAP		
HAMILTONBAN TOWNSHIP ADAMS COUNTY, PENNSYLVANIA		
R15-0340.000	Scale 1" = 1000'	

Source: U.S.G.S. 7.5' Quadrangles - IRON SPRINGS, PENNSYLVANIA