

### Legend

-  Proposed Access Road/Pipeline ROW
-  Proposed Disturbance Area
-  Proposed Working Pad Surface
-  One Mile Buffer

### Soil Types

-  20, Keith-Ulysses silt loams

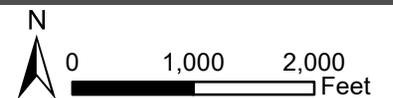
SOURCE: NRCS July 2020

Date: 9/9/2022

### Project Location



**WAVETECH ENERGY, INC.**  
 UPRC 1 EIGER 14-11  
 SEC. 11 T12S R43W (SW/4 SW/4)  
 CHEYENNE COUNTY, COLORADO  
 SURFACE: FEE  
 SOILS



Prepared By: Redhawk GIS, LLC

## Cheyenne County, Colorado

### 20—Keith-Ulysses silt loams, 1 to 4 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2tv5w

*Elevation:* 3,840 to 4,720 feet

*Mean annual precipitation:* 14 to 16 inches

*Mean annual air temperature:* 50 to 54 degrees F

*Frost-free period:* 130 to 170 days

*Farmland classification:* Prime farmland if irrigated

#### Map Unit Composition

*Keith and similar soils:* 45 percent

*Ulysses and similar soils:* 30 percent

*Minor components:* 25 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Keith

##### Setting

*Landform:* Plains

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Loess

##### Typical profile

*Ap - 0 to 6 inches:* silt loam

*Bt1 - 6 to 10 inches:* silty clay loam

*Bt2 - 10 to 25 inches:* silty clay loam

*C - 25 to 79 inches:* silt loam

##### Properties and qualities

*Slope:* 1 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately high (0.20 to 0.60 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 8 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water supply, 0 to 60 inches:* Very high (about 12.6 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* 2e  
*Land capability classification (nonirrigated):* 3e  
*Hydrologic Soil Group:* C  
*Ecological site:* R072XY100KS - Loamy Tableland  
*Hydric soil rating:* No

### **Description of Ulysses**

#### **Setting**

*Landform:* Hillslopes  
*Landform position (two-dimensional):* Shoulder, backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Loess

#### **Typical profile**

*Ap - 0 to 3 inches:* silt loam  
*Bw - 3 to 8 inches:* silt loam  
*Bk - 8 to 13 inches:* silt loam  
*C - 13 to 79 inches:* silt loam

#### **Properties and qualities**

*Slope:* 2 to 4 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 2.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 6 percent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water supply, 0 to 60 inches:* Very high (about 12.7 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* 3e  
*Land capability classification (nonirrigated):* 4e  
*Hydrologic Soil Group:* B  
*Ecological site:* R072XY100KS - Loamy Tableland  
*Hydric soil rating:* No

### **Minor Components**

#### **Colby**

*Percent of map unit:* 10 percent  
*Landform:* Hillslopes  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Nose slope

*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Ecological site:* R072XY101KS - Limy Slopes  
*Hydric soil rating:* No

#### **Goshen**

*Percent of map unit:* 5 percent  
*Landform:* Swales  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Ecological site:* R072XY117KS - Tableland Swale  
*Hydric soil rating:* No

#### **Richfield**

*Percent of map unit:* 5 percent  
*Landform:* Rises  
*Landform position (two-dimensional):* Summit, backslope  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Ecological site:* R072XY100KS - Loamy Tableland  
*Hydric soil rating:* No

#### **Wiley**

*Percent of map unit:* 5 percent  
*Landform:* Plains  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R072XY100KS - Loamy Tableland  
*Hydric soil rating:* No

## **Data Source Information**

Soil Survey Area: Cheyenne County, Colorado  
Survey Area Data: Version 23, Aug 31, 2021



Cheyenne County, Colorado



Map unit symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		<i>Lb/ac</i>	<i>Lb/ac</i>	<i>Lb/ac</i>		<i>Pct</i>
20—Keith-Ulysses silt loams, 1 to 4 percent slopes						
Keith	R072XY100KS: Loamy Tableland	2,200	1,700	900	Miscellaneous perennial grasses	85
					Miscellaneous perennial forbs	10
					Miscellaneous shrubs	5
Ulysses	R072XY100KS: Loamy Tableland	2,200	1,700	900	Miscellaneous perennial grasses	85
					Miscellaneous perennial forbs	10
					Miscellaneous shrubs	5