

Adams County Area, Parts of Adams and Denver Counties, Colorado

AcC—Adena-Colby association, gently sloping

Map Unit Setting

National map unit symbol: 34vg
Elevation: 4,000 to 5,600 feet
Mean annual precipitation: 12 to 17 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 120 to 160 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Adena and similar soils: 40 percent
Colby and similar soils: 30 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Adena

Setting

Landform: Plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian deposits derived from mixed

Typical profile

H1 - 0 to 4 inches: loam
H2 - 4 to 22 inches: silty clay loam
H3 - 22 to 60 inches: silt loam

Properties and qualities

Slope: 3 to 5 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: 15 percent
Available water supply, 0 to 60 inches: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: R067BY002CO - Loamy Plains

Hydric soil rating: No

Description of Colby

Setting

Landform: Plains

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Eolian deposits derived from mixed

Typical profile

H1 - 0 to 5 inches: loam

H2 - 5 to 56 inches: loam

H3 - 56 to 60 inches: sandy clay loam

Properties and qualities

Slope: 3 to 5 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 (0.20 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: 15 percent

Available water supply, 0 to 60 inches: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): 4e

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B

Ecological site: R067BY002CO - Loamy Plains

Hydric soil rating: No

Minor Components

Wiley

Percent of map unit: 25 percent

Ecological site: R067BY002CO - Loamy Plains

Other vegetative classification: LOAMY PLAINS (067XY002CO_1)

Hydric soil rating: No

Platner

Percent of map unit: 3 percent

Hydric soil rating: No

Weld

Percent of map unit: 2 percent

Hydric soil rating: No

Data Source Information

Soil Survey Area: Adams County Area, Parts of Adams and Denver Counties, Colorado

Survey Area Data: Version 19, Sep 1, 2022

Report — Rangeland Productivity and Plant Composition

Adams County Area, Parts of Adams and Denver Counties, 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>
AcC—Adena-Colby association, gently sloping						
Adena	R067BY002CO: Loamy Plains	1,300	800	500	Western wheatgrass	10
					Fendler threeawn	3
					Sideoats grama	3
					Needlegrass	3
					Prairie junegrass	2
					Bottlebrush squirreltail	2
					Blue grama	—
Colby	R067BY002CO: Loamy Plains	1,600	1,100	600	Western wheatgrass	25
					Green needlegrass	10
					Needleandthread	5
					Sand dropseed	5
					Sideoats grama	5
					Blue grama	—

Adams County Area, Parts of Adams and Denver Counties, Colorado

AaB—Adena loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 34vd
Elevation: 4,700 to 5,500 feet
Mean annual precipitation: 12 to 14 inches
Mean annual air temperature: 52 to 55 degrees F
Frost-free period: 120 to 160 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Adena and similar soils: 87 percent
Minor components: 13 percent
*Estimates are based on observations, descriptions, and transects of
the mapunit.*

Description of Adena

Setting

Landform: Plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian deposits derived from mixed

Typical profile

H1 - 0 to 4 inches: loam
H2 - 4 to 22 inches: silty clay loam
H3 - 22 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 3 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: 15 percent
Available water supply, 0 to 60 inches: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: R067BY002CO - Loamy Plains
Hydric soil rating: No

Minor Components

Weld

Percent of map unit: 13 percent

Hydric soil rating: No

Data Source Information

Soil Survey Area: Adams County Area, Parts of Adams and Denver Counties, Colorado

Survey Area Data: Version 19, Sep 1, 2022

Report — Rangeland Productivity and Plant Composition

Adams County Area, Parts of Adams and Denver Counties, 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>
AaB—Adena loam, 0 to 3 percent slopes						
Adena	R067BY002CO: Loamy Plains	1,300	800	500	Western wheatgrass	10
					Needlegrass	3
					Sideoats grama	3
					Fendler threeawn	3
					Bottlebrush squirreltail	2
					Prairie junegrass	2
					Blue grama	—

Adams County Area, Parts of Adams and Denver Counties, Colorado

AcD—Adena-Colby association, moderately sloping

Map Unit Setting

National map unit symbol: 34vh
Elevation: 4,000 to 5,600 feet
Mean annual precipitation: 12 to 17 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 120 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Adena and similar soils: 35 percent
Colby and similar soils: 30 percent
Minor components: 35 percent
*Estimates are based on observations, descriptions, and transects of
the mapunit.*

Description of Adena

Setting

Landform: Plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian deposits derived from mixed

Typical profile

H1 - 0 to 4 inches: loam
H2 - 4 to 22 inches: silty clay loam
H3 - 22 to 60 inches: silt loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
*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: 15 percent
Available water supply, 0 to 60 inches: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: R067BY002CO - Loamy Plains

Hydric soil rating: No

Description of Colby

Setting

Landform: Plains

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Eolian deposits derived from mixed

Typical profile

H1 - 0 to 5 inches: loam

H2 - 5 to 56 inches: loam

H3 - 56 to 60 inches: sandy clay loam

Properties and qualities

Slope: 5 to 9 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.20 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: 15 percent

Available water supply, 0 to 60 inches: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: B

Ecological site: R067BY002CO - Loamy Plains

Hydric soil rating: No

Minor Components

Wiley

Percent of map unit: 25 percent

Ecological site: R067BY002CO - Loamy Plains

Other vegetative classification: LOAMY PLAINS (067XY002CO_1)

Hydric soil rating: No

Loamy alluvial land

Percent of map unit: 10 percent

Hydric soil rating: No

Data Source Information

Soil Survey Area: Adams County Area, Parts of Adams and Denver Counties,
Colorado

Survey Area Data: Version 19, Sep 1, 2022

Report — Rangeland Productivity and Plant Composition

Adams County Area, Parts of Adams and Denver Counties, 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>
AcD—Adena-Colby association, moderately sloping						
Adena	R067BY002CO: Loamy Plains	1,300	800	500	Western wheatgrass	10
					Needlegrass	3
					Sideoats grama	3
					Fendler threeawn	3
					Bottlebrush squirreltail	2
					Prairie junegrass	2
					Blue grama	—
Colby	R067BY002CO: Loamy Plains	1,600	1,100	600	Western wheatgrass	25
					Green needlegrass	10
					Sideoats grama	5
					Needleandthread	5
					Sand dropseed	5
					Blue grama	—

Adams County Area, Parts of Adams and Denver Counties, Colorado

PIC—Platner loam, 3 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2tlmz
Elevation: 3,580 to 5,600 feet
Mean annual precipitation: 13 to 19 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 140 to 165 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Platner and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Platner

Setting

Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed eolian deposits over calcareous tertiary alluvium

Typical profile

Ap - 0 to 6 inches: loam
Bt1 - 6 to 11 inches: clay
Bt2 - 11 to 20 inches: clay
Bk1 - 20 to 27 inches: clay loam
Bk2 - 27 to 37 inches: sandy clay loam
C - 37 to 80 inches: sandy loam

Properties and qualities

Slope: 3 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline (0.1 to 1.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): 4e

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Ecological site: R067BY002CO - Loamy Plains

Hydric soil rating: No

Minor Components

Wages

Percent of map unit: 10 percent

Landform: Interfluves

Landform position (two-dimensional): Summit

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: R067BY002CO - Loamy Plains

Hydric soil rating: No

Stoneham

Percent of map unit: 5 percent

Landform: Interfluves

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Interfluve

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: R067BY002CO - Loamy Plains

Hydric soil rating: No

Data Source Information

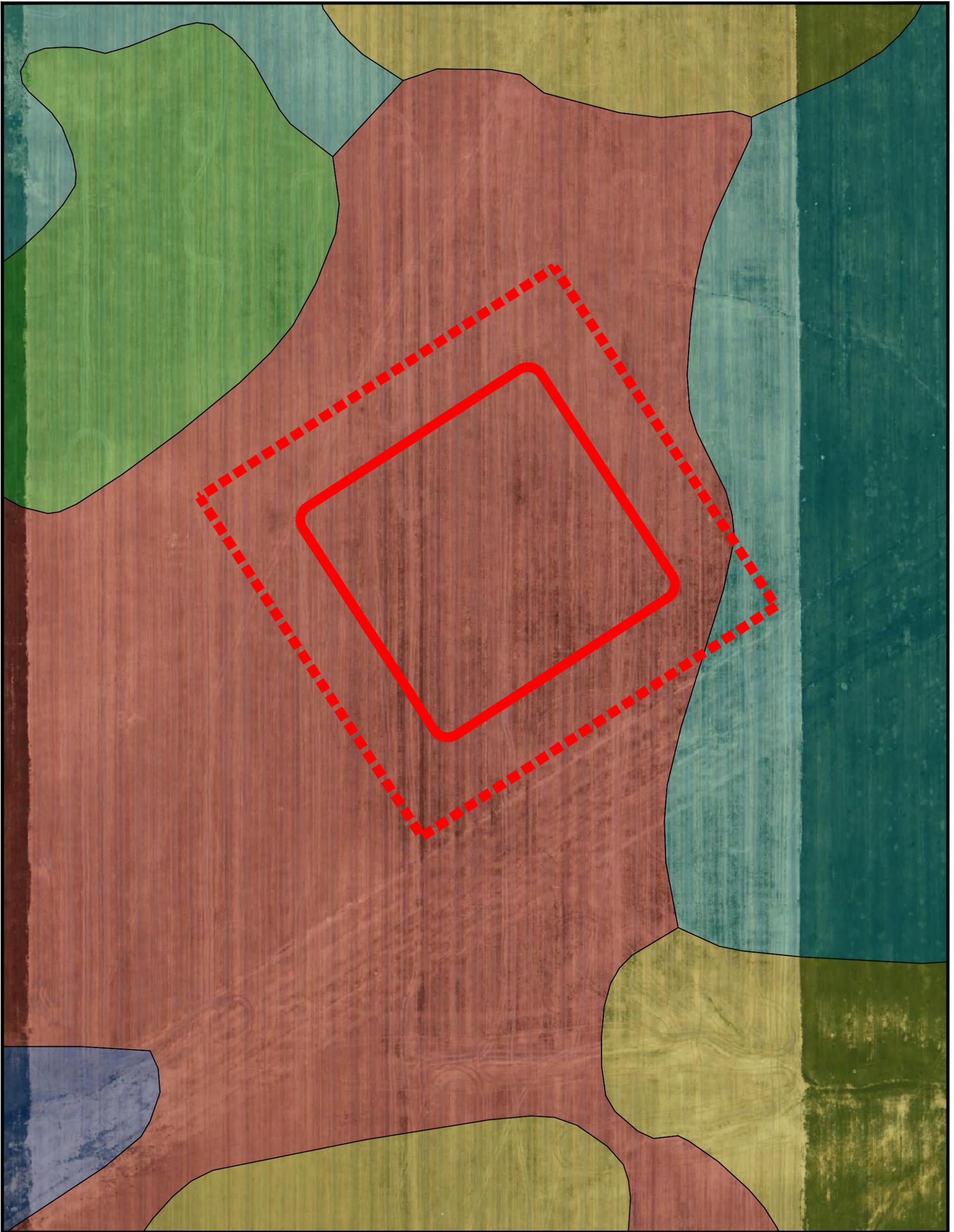
Soil Survey Area: Adams County Area, Parts of Adams and Denver Counties, Colorado

Survey Area Data: Version 19, Sep 1, 2022

Report — Rangeland Productivity and Plant Composition

Adams County Area, Parts of Adams and Denver Counties, 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>
PIC—Platner loam, 3 to 5 percent slopes						
Platner	R067BY002CO: Loamy Plains	1,800	1,300	600	Western wheatgrass	40
					Blue grama	30
					Green needlegrass	20
					Needleandthread	5
					Buffalograss	—
					Broom snakeweed	—
					Winterfat	—
					Fourwing saltbush	—
					Sand dropseed	—



LEGEND

- - - - - = OIL & GAS LOCATION
- = WORKING PAD SURFACE
- = ADENA-COLBY ASSOCIATION, GENTLY SLOPING (18.723 ACRES)
- = PLATNER LOAM, 3 TO 5 PERCENT SLOPES (0.352 ACRES)
- = ADENA-COLBY ASSOCIATION, MODERATELY SLOPING (0.000 ACRES)
- = ADENA LOAM, 0 TO 3 PERCENT SLOPES (0.000 ACRES)
- = WILEY-ADENA-RENOHILL COMPLEX, 3 TO 20 PERCENT SLOPES (0.000 ACRES)



UELS, LLC
 Corporate Office * 85 South 200 East
 Vernal, UT 84078 * (435) 789-1017



GMT EXPLORATION COMPANY, LLC

INVICTA 3-65 28 PAD
 N 1/2, SECTION 28, T3S, R65W, 6th P.M.
 ADAMS COUNTY, COLORADO

SURVEYED BY	DALLAS NIELSEN	01-26-23	SCALE
DRAWN BY	K.C.	06-29-23	1" = 200'

SOILS SITE DIAGRAM