Appendix 2

Refuse Pile

☐ Confidential
☐ Shelf
☒ Expandable
Refer to Record No 0039 Date 1/02/2001
In C/0070006 2001 Incoming
For additional information

Picture #2, 3, 4, 5

SCS-SOILS-232G
REV. 12-70
FILE CODE SOILS-11

U.S. DEPARTMENT OF AGRICULTU
SOIL CONSERVATION SERVICE

SOIL DESCRIPTION

~~photo 72-76~~

Soil type | File No

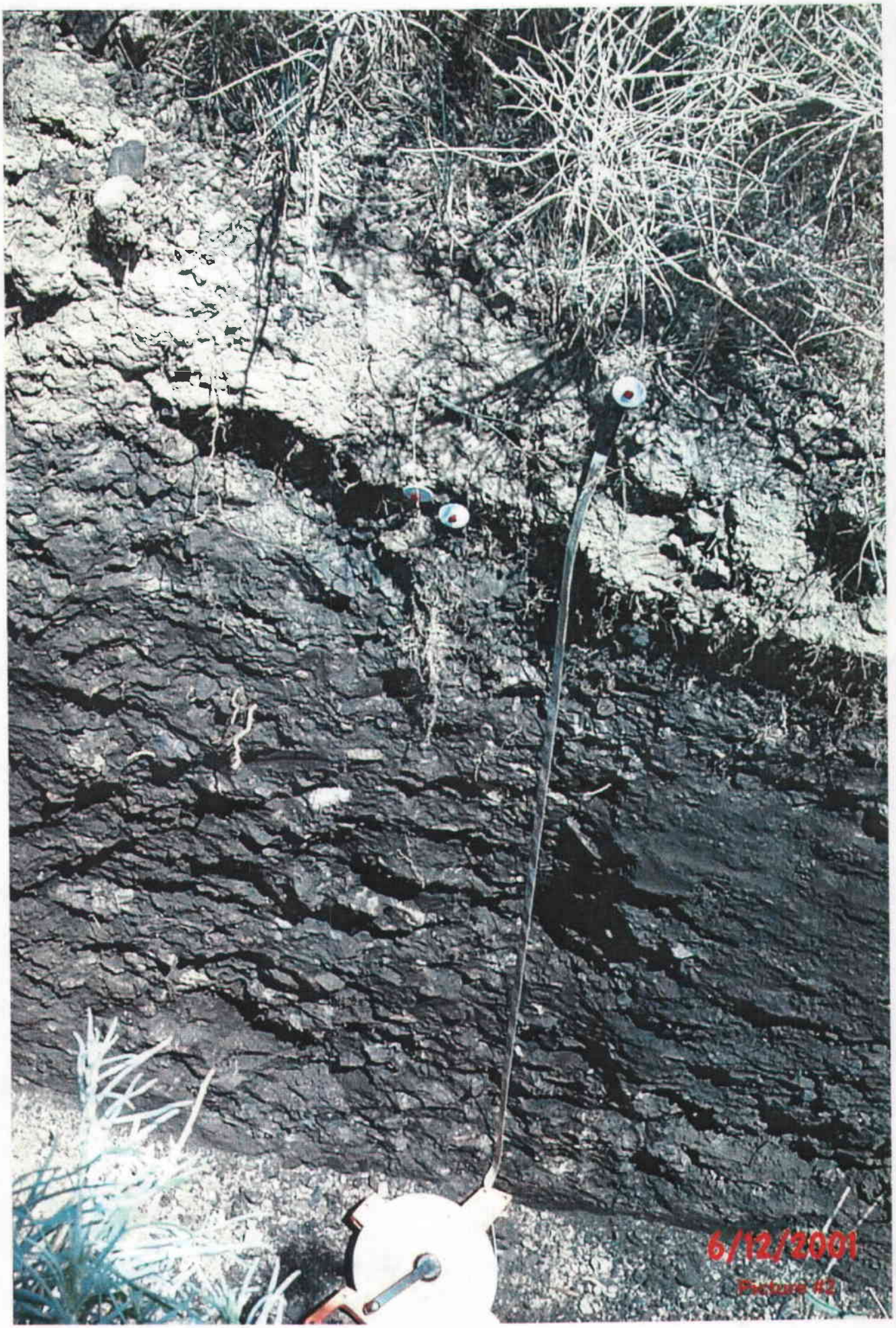
Area Star Point Refuse	Date 6/12	Stop No. #1
Classification		
Location #1, western most		
N. veg. (or crop) Fourwing		Climate
Parent material		
Physiography		
Relief	Drainage	Salt or alkali
Elevation	Gr. water	Stoniness
Slope	Moisture	
Aspect	Root distrib.	% Clay *
Erosion	% Coarse fragments *	% Coarser than V.F.S. *
Permeability		
Additional notes		

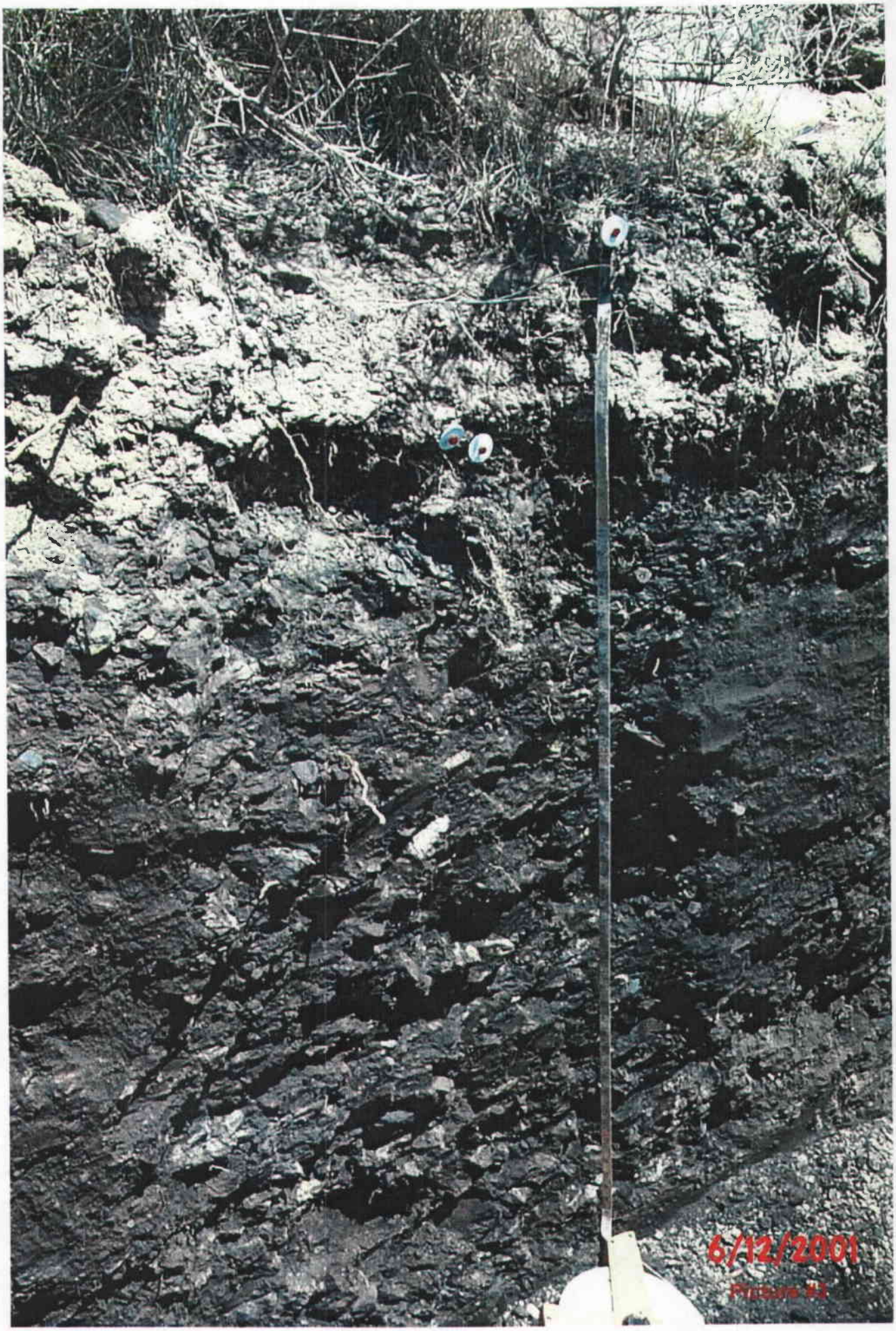
changed from sat paste extract to sat paste pH because Whetman #40 filter paper was clogged w/ clay + could not pull extract through w/ hand vacuum pump.

* Control section average

Horizon	Depth	Color Dry	Color Rock	Color Moist	pH EC 64°F	Texture	Grade/Size Type Structure	Consistence Dry	Consistence Moist	Consistence Wet	Reaction	Boundary	
Cover mate	0-5-6"	2.5YR6Z	nothing	7.9		Clay platy					Strong	0-5	common-fine to very fine few-medium
Refuse	5-27	7.5YR 2.50	vg to r w/ pig rock	7.0		mass.					none	5-18"	common, fine to very few, medium
Resin Refuse	27-43	Iron, sulfur gypsum		3.5							none	18"-27"	very few, fine to very
												43"/43"	common-very fine
Refuse	43-60"	7.5YR 2.50		not done									
												43"-	very few fine to very fine.

mixing zone b/w soil & Refuse, w/ sand


6/12/2001
Picture #2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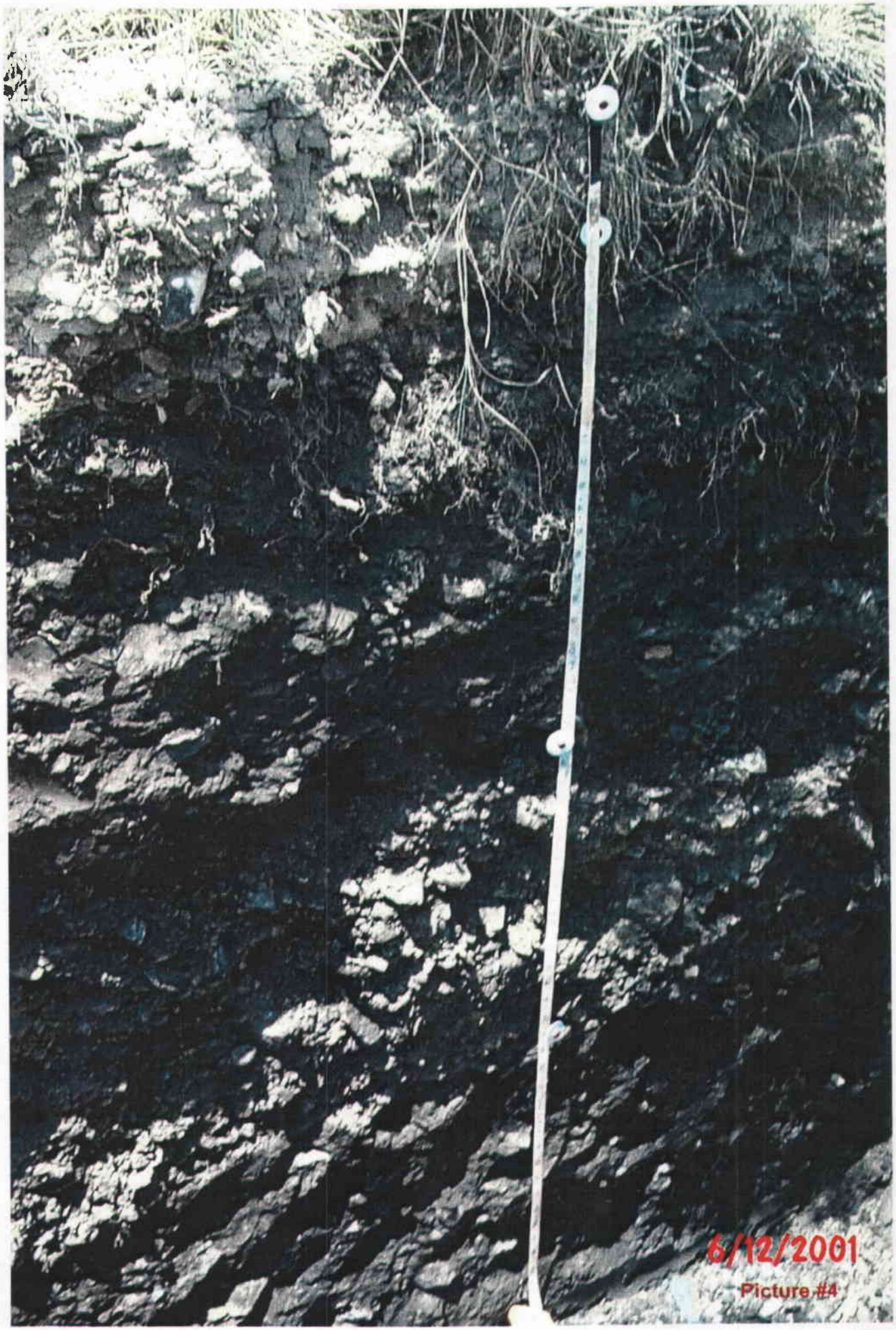

6/12/2001
Picture #4

6/12/2001
Picture #5

Picture # 16, 17

SCS-SOILS-232G
REV. 12-70
FILE CODE SOILS-11

U.S. DEPARTMENT OF AGRICULTU
SOIL CONSERVATION SERVICE

SOIL DESCRIPTION

Soil type | File No

Area: Refuse | Date: 6/12 | Stop No.

Classification

Location: #1 East side | photo - ~~66-64~~

N. veg. (or crop) | Climate

Parent materi:

Physiography: Chrn albacaulis

Relief | Drainage | Salt or alkali

Elevation | Gr. water | Stoniness

Slope | Moisture

Aspect | Root distrib. | % Clay *

Erosion | % Coarse fragments * | % Coarser than V.F.S. *

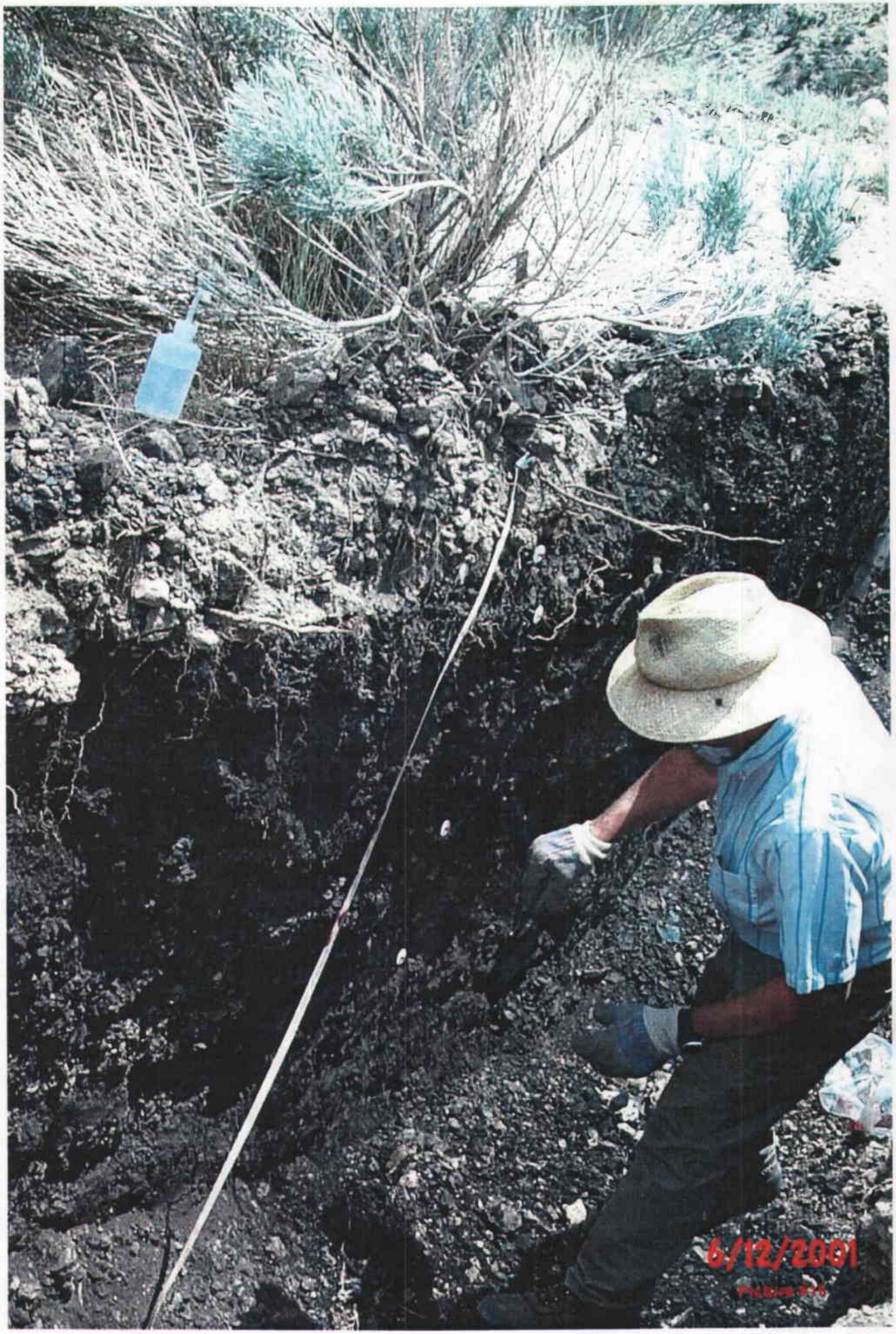
Permeability

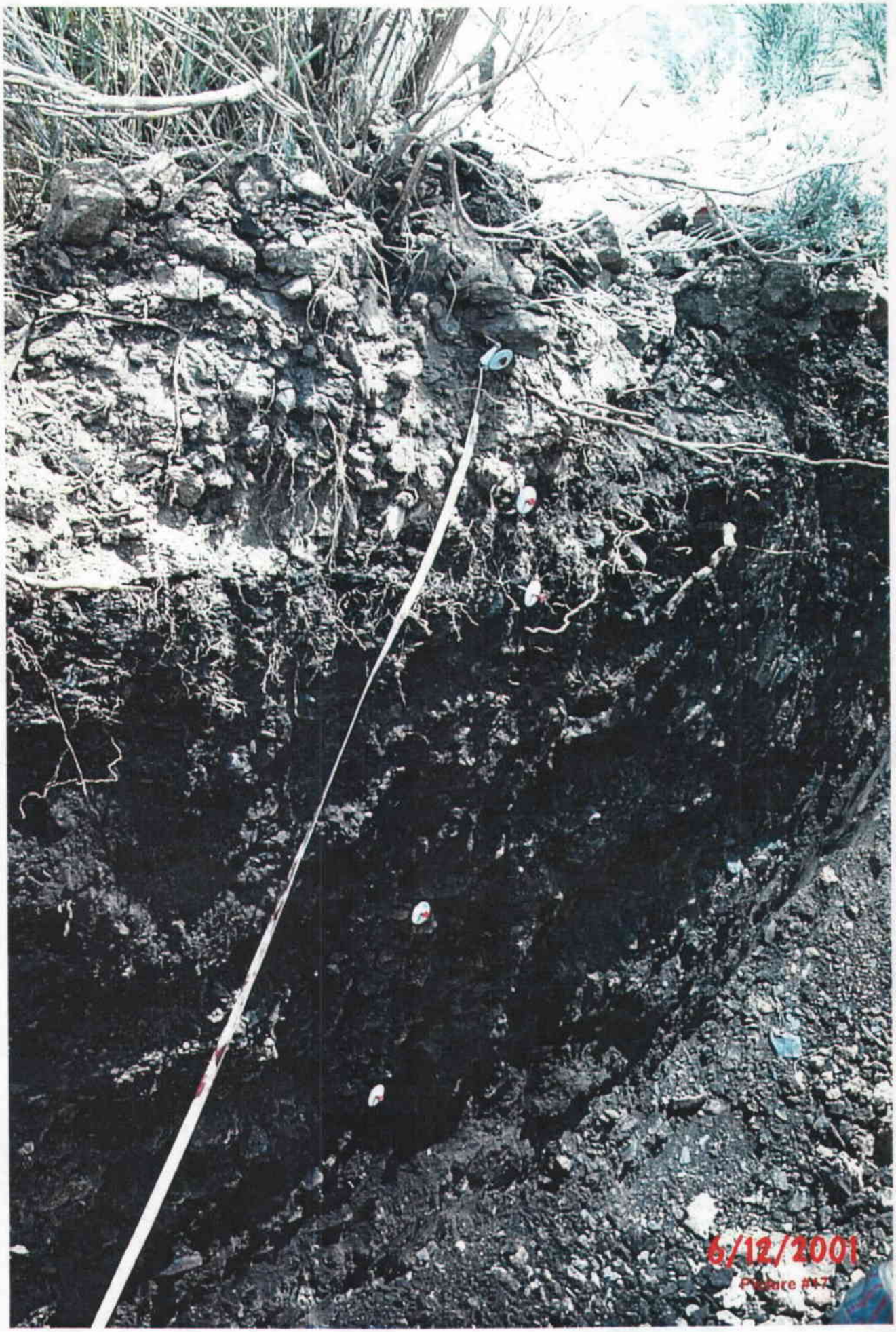
Additional notes

similar staining to #2 South 0-1" thick

* Control section average

Horizon	Depth	Color Dry	Color Moist (Rock same)	Texture	Structure (GRADE/SIZE TYPE)	Consistence Dry	Consistence Moist	Consistence Wet	Reaction	BOUNDARY				
Surface	0-6"	same	PH 7.5						strong eph, vesicle		c-fine to very fine f-medium, vf-coarse			
Refuse w/rocks	6-11"	orange interface same	7.2						no eph.		m-very fine to fine f-medium			
refuse	11-27		4.9								vf-fine to very f vf-coarse to v coarse			
resin	27-40								none to very slight		none			
refuse	40-60										very few fine to very fine			


6/12/2001


6/12/2001
Picture #47

Picture # 6, 10, 11, 12, 13, 14

SCS-SOILS-232G
REV. 12-70
FILE CODE SOILS-11

U.S. DEPARTMENT OF AGRICULTU
SOIL CONSERVATION SERVICE

SOIL DESCRIPTION

Soil type | File No

Area: Refuse | Date | Stop No. pit 2 north side

Classification

Location

N. veg. (or crop): 4 wing Salt bush Atriplex Canescens | Climate

Parent materi:

Physiography

Relief	Drainage	Salt or alkali
Elevation	Gr. water	Stoniness
Slope	Moisture	
Aspect	Root distrib.	% Clay *
Erosion	% Coarse fragments *	% Coarser than V.F.S. *

Permeability

Additional notes

4-Wing 34" Tall
53+39 Max Min

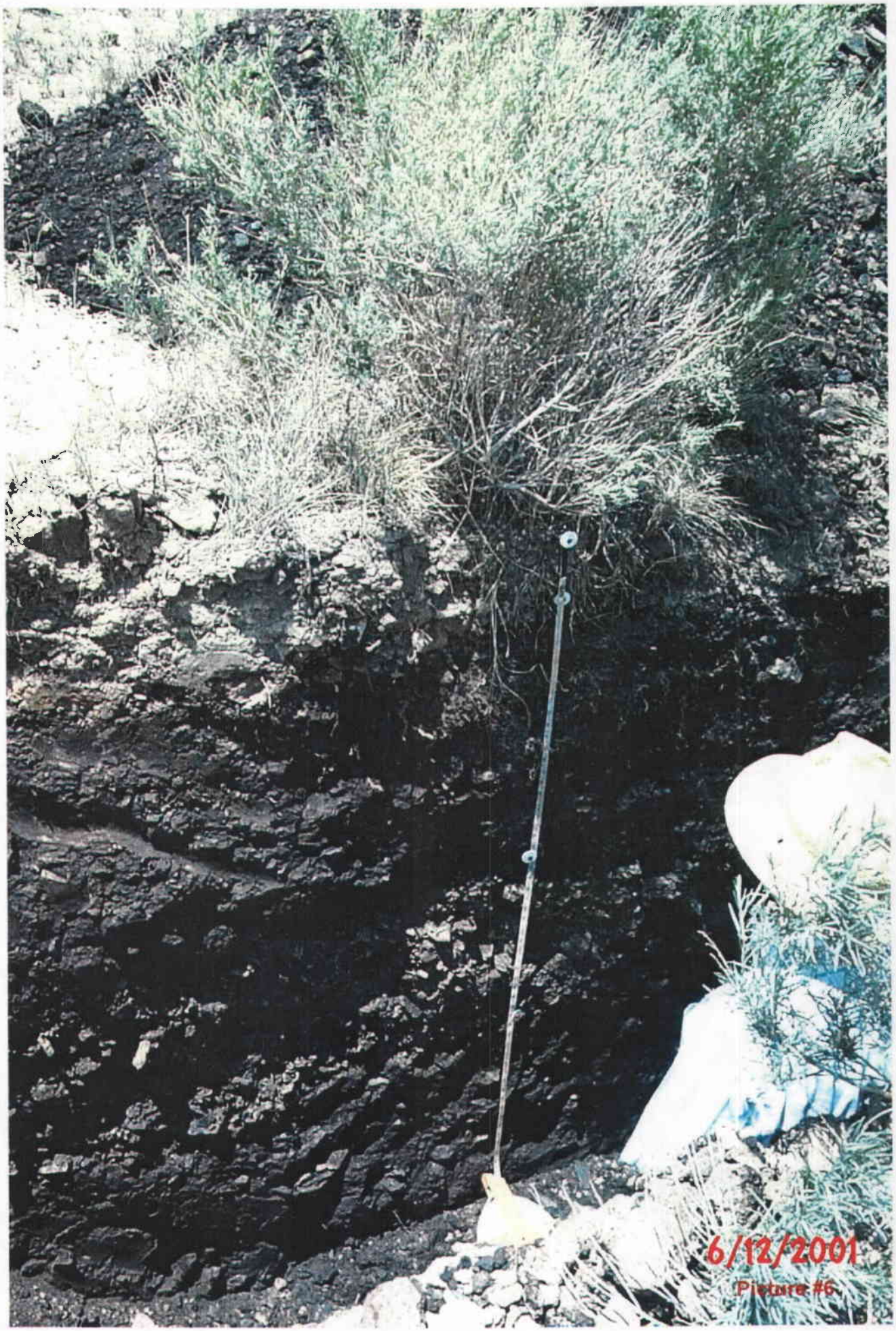
photo of root = ~~70 + 71~~ 12, 13, 14
root goes to interface
then laterally then into refuse
+ splits into three parts.

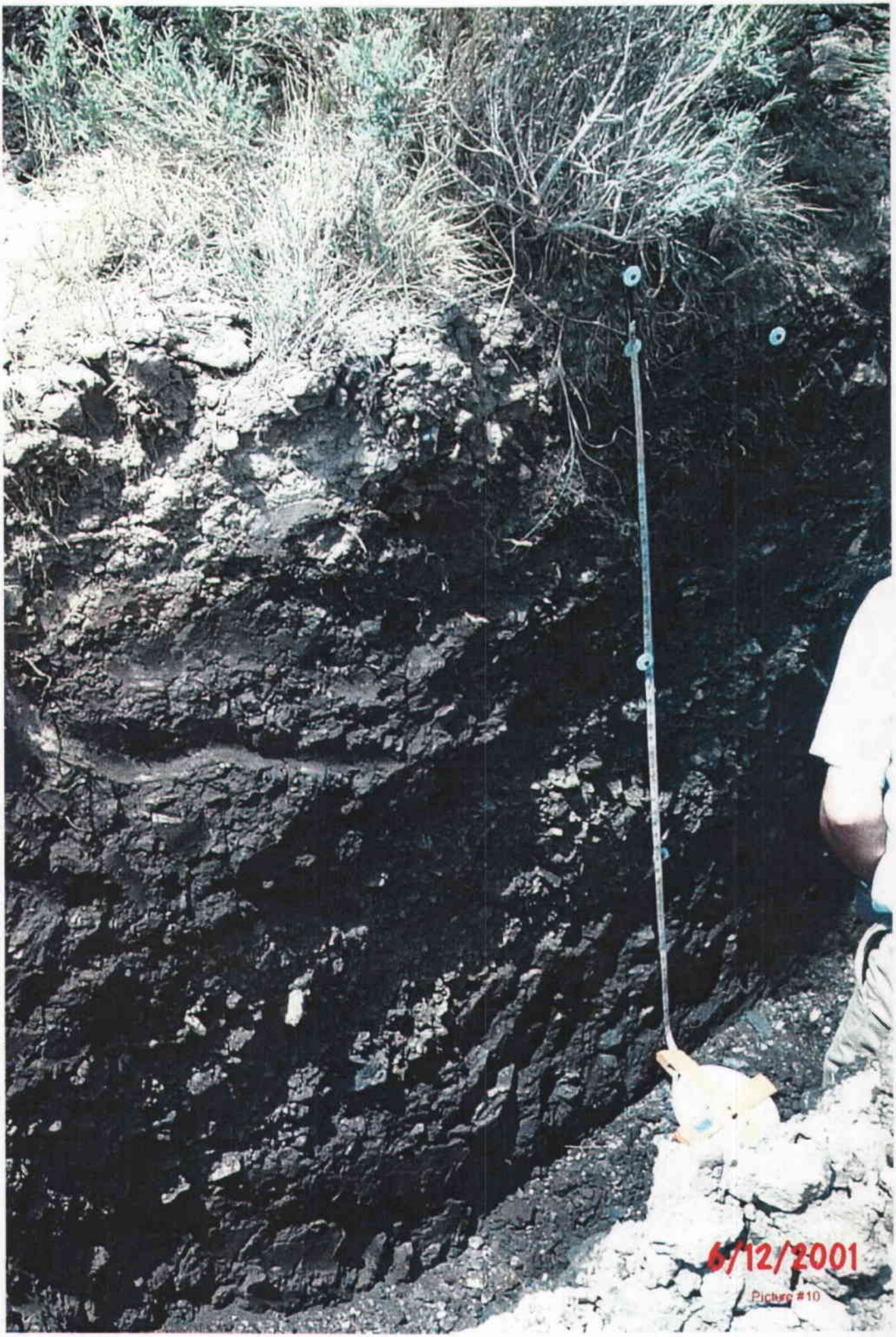
95° during pH + EC measurement. Sat. extracts stood for 1½ hr

* Control section average

EC	Horizon	Depth	Color Dry	Color extract pH	Color extract Moist	Color extract F°	Texture	GRADE/SIZE TYPE Structure	Consistence Dry	Consistence Moist	Consistence Wet	Reaction	BOUNDARY	Roots	Roots
0.69		8"	2.5YR 6/2	8.0		85°	cl	platey granular				Strong		Common VFine to Fine	Few Med
1.6	peach color	8-8¾	5YR 4/4	7.8		80'		platey				Strong	wavy	Many Fine to V. Fine	
2.5	refuse	to 56"	7.5YR 2.5/0	lost sample		73'	S	massive				None		0-6" Common F to VF 6"+ Very Few F to VF Very Few M	

had to add xtra H2O


6/12/2001
Picture #6


6/12/2001
Picture #10

6/12/2001

6/12/2001
Picture #17

6/12/2001
Picture #13

6/12/2001

Picture # 0, 1, 18, 19, 21, 22

SCS-SOILS-232G
REV. 12-70
FILE CODE SOILS-11

U.S. DEPARTMENT OF AGRICULTU
SOIL CONSERVATION SERVICE

SOIL DESCRIPTION

Soil type

File No

Area Stairpoint Refuse | Date 6/12/01 | Stop No. Pit 2 South side

Classification

Location

N. veg. (or crop) Chrysothamnus nauseosus albicaulis white stem | Climate

Parent materi:

Physiography

Relief	Drainage	Salt or alkali
Elevation	Gr. water	Stoniness
Slope level	Moisture	
Aspect	Root distrib.	% Clay *
Erosion	% Coarse fragments *	% Coarser than V.F.S. *

Permeability

Additional notes 85° - 90°

Rabbitbrush Plant 43" Tall
57" X 37" Max/Min

~~photo of root 61-62"~~

bandana + whisk broom

* Control section average

EC	Horizon	Depth	Color Dry	Color pH Moist rock	Texture	GRADE/SIZE TYPE Structure	Consistence Dry	Consistence Moist	Consistence Wet	Reaction	BOUNDARY	Roots	Roots		
	Subsoil	14"	2.5YR6/2	7.7 paste <15 rock	cL	massive granular to platey				strong effervescence		many fine vf.	Common med to coarse		
2.53	variable depth undulating	13"-17"	10YR 4/3 85°	7.4 paste 7.7 extract	L	platey				strong effervescence	Variable 2-4" wide	few very coarse	many very fine fine matter	few med coarse interface between subsoil + refuse 2" deep	
4.1	Refuse	to 55"	7.5YR2.5/0	6.4 Paste v.g. 7.58 Extract at 90%	S	massive				Sulfur precipitation rock surfaces No Reaction		mod few fine to very fine	very few med	no coarse many fine roots matted under coal refuse fragments	roots at 55"

6/12/2001
Topic 0

6/12/2001
Picture #1

6/12/2001
Picture #18

6/12/2001
Picture #19

6/12/2001
Picture #21

6/12/2001
Picture #22

Picture #'s 33, 35
~~photo # 42~~

SCS-SOILS-232G
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FILE CODE SOILS-11

U.S. DEPARTMENT OF AGRICULTU
SOIL CONSERVATION SERVICE

SOIL DESCRIPTION

Soil type: Refuse, Pit # 3, East Side — File No

Area — Date: 6/13/01 — Stop No.

Classification

Location

N. veg. (or crop) — Climate

Parent material: Ch na: consimilus (tall 33" x 65" x 55

Physiography

Relief — Drainage — Salt or alkali

Elevation — Gr. water — Stoniness

Slope — Moisture

Aspect — Root distrib. — % Clay *

Erosion — % Coarse fragments * — % Coarser than V.F.S. *

Permeability

Additional notes

Enogonum tap root to 22" w/ no beads ~~photo # 39~~ 35
but gets gnarely in refuse

no

* Control section average

Horizon	Depth	Color Dry	Color Moist	Texture	GRADE/SIZE TYPE Structure	Consistence Dry	Consistence Moist	Consistence Wet	effer Reaction	BOUNDARY				
0-8" undulating surface - shallowest.	0-4"		platy to angular								common - f. to v.f.			
intermediate layer 3", discontinuous									very slightly					
refuse	4"-8"		very gravelly angular								interface common - f to v.f.			
Refuse	8"-50"					sulfur iron					few - fine & v.f. <1cm² more w/ coarse frag vf - coarse			

6/13/2001
Picture #33

6/13/2001
Picture #38

Picture # 34, 36, 37, 38

SCS-SOILS-232G
REV. 12-70
FILE CODE SOILS-11

U.S. DEPARTMENT OF AGRICULTU
SOIL CONSERVATION SERVICE

SOIL DESCRIPTION

~~photo # 41~~, 40

Soil type: Refuse, Pile, Pit # 3, West Side — File No

Area — Date: 6/13/01 — Stop No.

Classification

Location: Fourwing Saltbush 40" x 26" x 31" height

N. veg. (or crop) — Climate

Parent material: photo 35-36 - roots gravelled

Physiography: Yucca photo # 34

Relief — Drainage — Salt or alkali

Elevation — Gr. water — Stoniness

Slope — Moisture

Aspect — Root distrib. — % Clay *

Erosion — % Coarse fragments * — % Coarser than V.F.S. *

Permeability

Additional notes

adjacent to profile described - intermediate zone 1"-4", guess it's different material 5YR43 - matrix is variable

Grasses - Western, thickspike, Brome tech., Hordeum

* Control section average

Horizon	Depth	Color Dry	Color Moist	Texture	Grade/Size Type Structure	Consistence Dry	Consistence Moist	Consistence Wet	effer. Reaction	Boundary				
Subsoil undulating varies upto 11"	0-5"	10YR 6/2			fine granular platy weakly subangular				strong		common - fine to v.f. coarse - v.f			
	4-9 refuse w/ common - fine to v.f.					blocky			wed		intermediate refuse zone - common			
Refuse	5"-52"	7.5YR 20			massive, gravelly iron, sulfur on coars				none		few - fine to v.f. some association w/ coarse refuse			

6/13/2001
Picture #34

6/13/2001
Picture #36

6/13/2001
Picture #37

6/13/2001
Picture #38

Picture # 39, 40, 41, 48

SCS-SOILS-232G
REV. 12-70
FILE CODE SOILS-11

U.S. DEPARTMENT OF AGRICULTU
SOIL CONSERVATION SERVICE

SOIL DESCRIPTION

~~Photo 33-29~~

Soil type: Refuse Pit #4, N. Side

File No

Area		Date	Stop No.
Classification			
Location	Ar tr 20" x 25 x 19" h		
N. veg. (or crop)		Climate	
Parent material	Great Basin wildrye, no other grasses		
Physiography			
Relief	Drainage	Salt or alkali	
Elevation	Gr. water	Stoniness	
Slope	Moisture		
Aspect	Root distrib.	% Clay *	
Erosion	% Coarse fragments *	% Coarser than V.F.S. *	
Permeability			

Additional notes

> root diversity

stringer of refuse in soil layer - from ripping?

looks like very compacted, denser than other sites

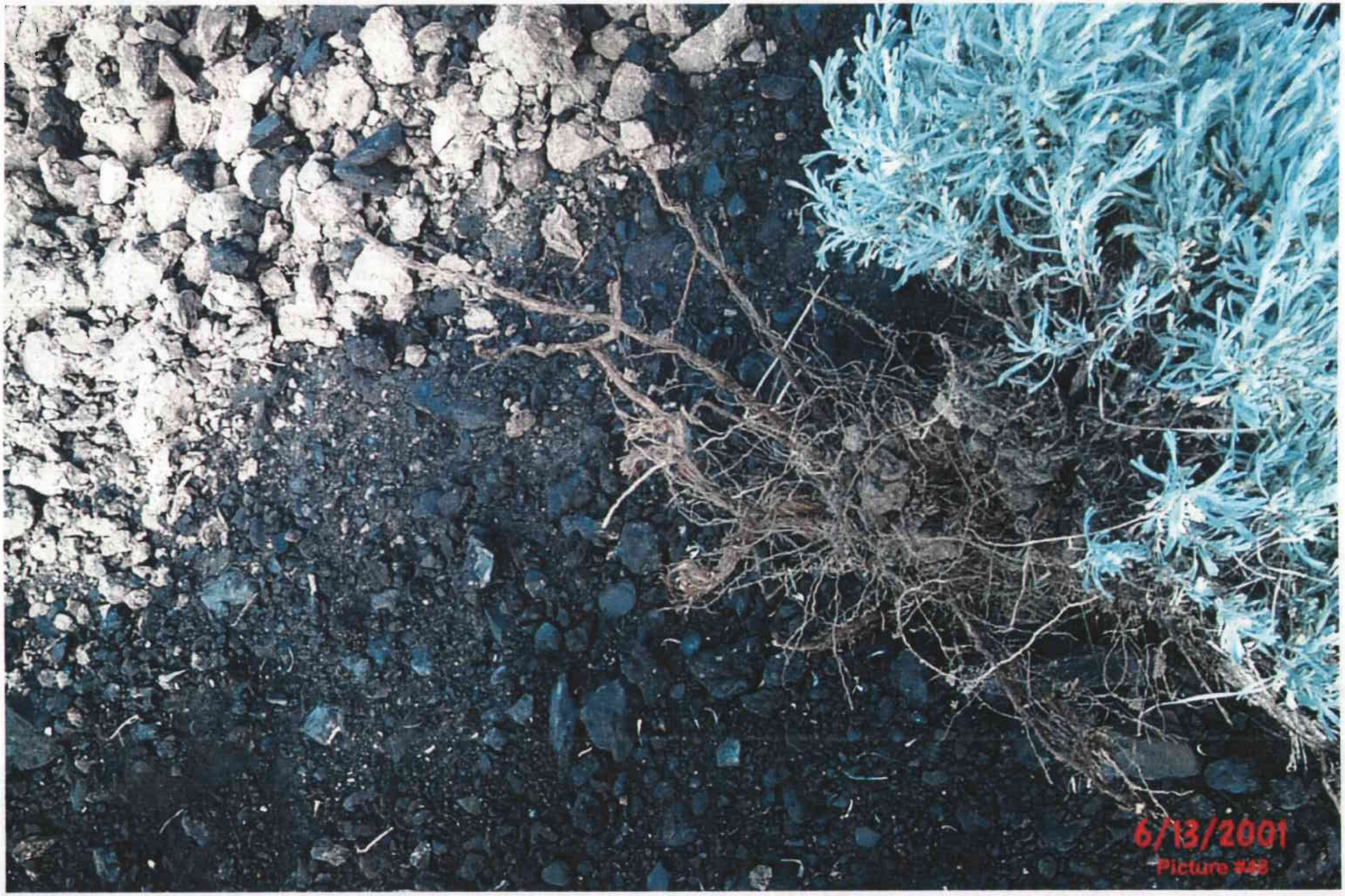
* Control section average

Horizon	Depth	Color Dry	Color Moist	Texture	Grade/Size Type Structure	Consistence Dry	Consistence Moist	Consistence Wet	After Reaction	Boundary				
weakly platy subsoil	0-5"								strong		few fine & v.f.			
blocky to massive subsoil	5"-18"										mat of roots at refuse interface very effervescent			
						medium at interface					common - f. v. few medium			
refuse	18-48"			very gravelly to rocky							v.f fine to v.f.			
refuse	48"-54"	very hard coal	becoming								none			

6/13/2001
Picture #39

6/13/2001
Picture #40

6/13/2001
Picture #41


6/13/2001
Picture #48

Picture # 42, 43, 49
~~photo 28, 27~~

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REV. 12-70
FILE CODE SOILS-11

U.S. DEPARTMENT OF AGRICULTU
SOIL CONSERVATION SERVICE

SOIL DESCRIPTION

Soil type: Refuse, Pit # 4, South Side

File No

Area		Date	Stop No.
Classification			
Location			
N. veg. (or crop)	58" x 40" x 35" h	Climate	
Parent material	Cirna: albicaulis, grasses thick spike, crested, western, great basin		
Physiography			
Relief	Drainage	Salt or alkali	
Elevation	Gr. water	Stoniness	
Slope	Moisture		
Aspect	Root distrib.	% Clay *	
Erosion	% Coarse fragments *	% Coarser than V.F.S. *	
Permeability			

Additional notes

very hard soil - 2x's as other sites

* Control section average

Horizon	Depth	Color Dry	Color Moist	Texture	Grade/Size Type Structure	Consistence Dry	Consistence Moist	Consistence Wet	Reaction	Boundary			
platy	0-4.5	10YR6/2									common - fine to few medium		
weakly platy massive	4.5-19					mat at refuse interface v f coarse					com. - f - vf		
massive	19-49"		Rocky gravelly								few - f to v f.		
	49-54												

6/13/2001
Picture #42

6/13/2001
Picture #43

6/13/2001
Picture #49

Picture # 46, 47

SCS-SOILS-232G
REV. 12-70
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U.S. DEPARTMENT OF AGRICULTU
SOIL CONSERVATION SERVICE

SOIL DESCRIPTION

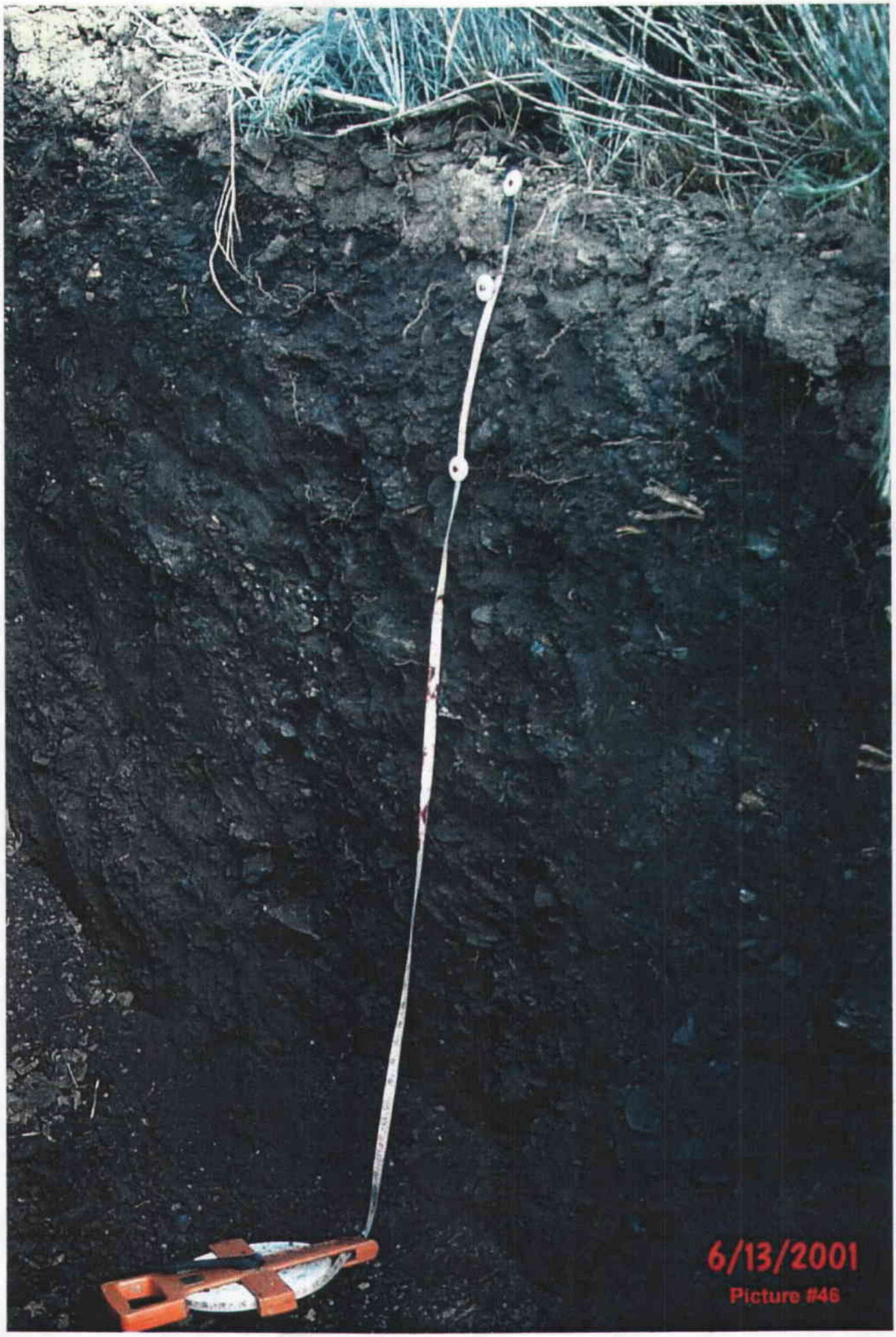
Soil type Refuse, Pit # 5, N. Side ~~photo 23, 22~~ File No

Area	Date	Stop No.
Classification Ch na al - has smut		
Location grass understory - cheat, western, crested		
N. veg. (or crop)	Climate	
Parent materi:		
Physiography		
Relief	Drainage	Salt or alkali
Elevation	Gr. water	Stoniness
Slope	Moisture	
Aspect	Root distrib.	% Clay *
Erosion	% Coarse fragments *	% Coarser than V.F.S. *
Permeability		
Additional notes		

* Control section average

Horizon	Depth	Color Dry	Color Moist	Texture	GRADE/SIZE TYPE Structure	Consistence Dry	Consistence Moist	Consistence Wet	Reaction	BOUNDARY				
platy	0-5	10 YR 52	no rock								few, f to v.f.			
weakly platy	5-13										common fine v.f. few coarse few medium			
massive	13-54"		gravelly to rocky	iron, sulfur							v. few, fine to v.f.			

6/13/2001
Picture #47


6/13/2001
Picture #46

Picture #44, 45, 50, 51, 53
~~photo, 25, 24~~

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REV. 12-70
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U.S. DEPARTMENT OF AGRICULTU
SOIL CONSERVATION SERVICE

SOIL DESCRIPTION

Soil type | File No

Area: Refuse, Pit #5, South Side | Date | Stop No.

Classification

Location: Ephedra

N. veg. (or crop): Some grasses - thickspike, western, crested | Climate

Parent materi:

Physiography

Relief	Drainage	Salt or alkali
Elevation	Gr. water	Stoniness
Slope	Moisture	
Aspect	Root distrib.	% Clay *
Erosion	% Coarse fragments *	% Coarser than V.F.S. *

Permeability

Additional notes

* Control section average

Horizon	Depth	Color Dry	Color Moist	Texture	GRADE/SIZE TYPE Structure	Consistence Dry	Consistence Moist	Consistence Wet	Reaction	BOUNDARY				
platy sub-soil	0-2"								Strong		v.f. - fine to v.f.			
refuse weakly platy	2-12"										common - fine to v.f. v.f. medium v.f. coarse			
massive	12"-56"				iron, sulfur						v.f. fine to v.f. w/ coarse fragments			

6/13/2001
Picture #44

6/13/2001
Picture #45

6/13/2001
Picture #50

6/13/2001
Picture #51

6/13/2001
Picture #53

Appendix 3

Subsoil Pile

Picture 23,24,28

SCS-SOILS-232G
REV. 12-70
FILE CODE SOILS-11

SOIL DESCRIPTION

U.S. DEPARTMENT OF AGRICULTU
SOIL CONSERVATION SERVICE

#23-24

Soil type Subsoil Pile ~~Photo # 4~~ File No

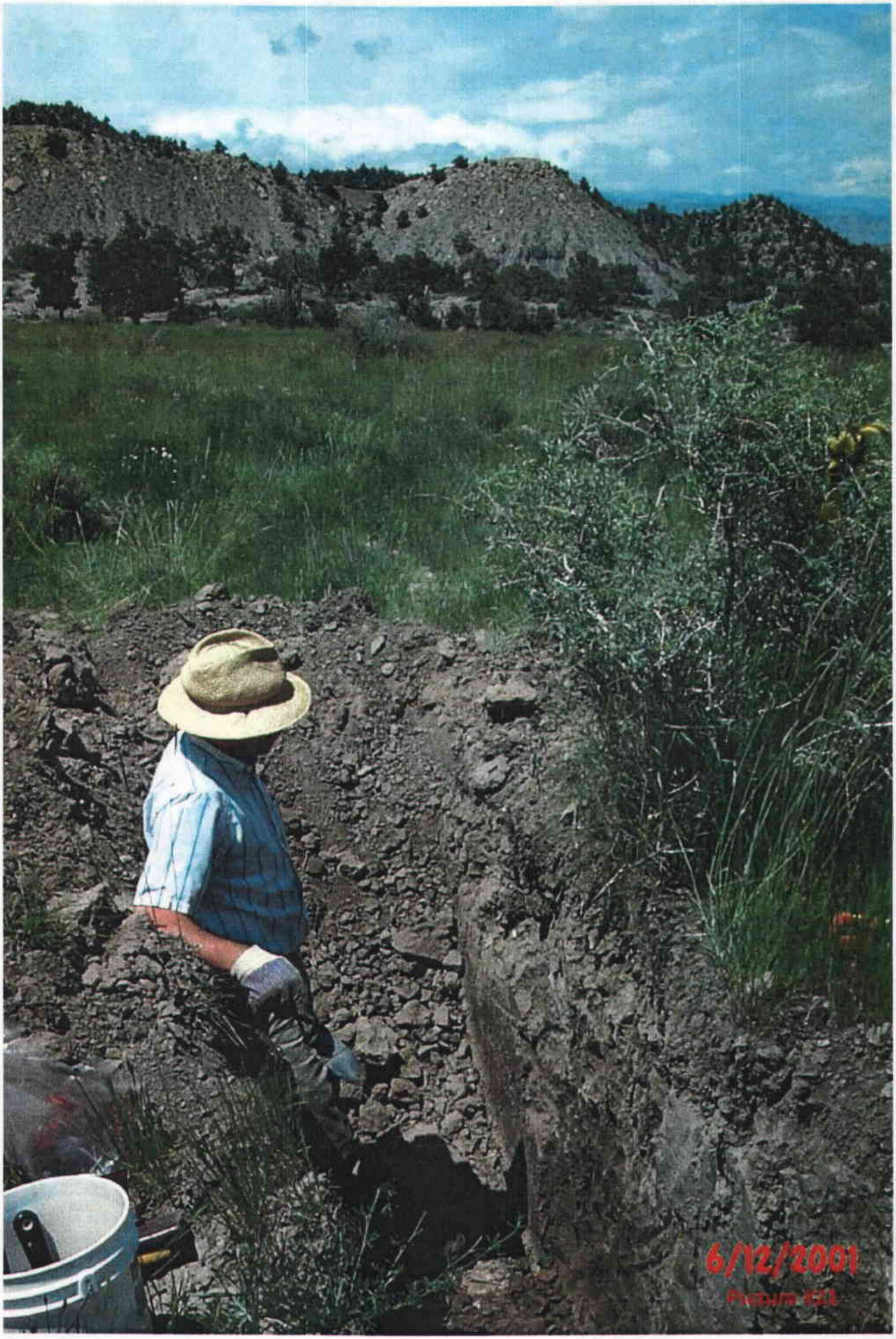
Area	Pit #1 East Side	Date	Stop No.
Classification	4-wing		
Location	81" x 78" 52"		
N. veg. (or crop)	crested	Climate	
Parent material			
Physiography			
Relief	Drainage	Salt or alkali	
Elevation	Gr. water	Stoniness	
Slope	Moisture		
Aspect	Root distrib.	% Clay *	
Erosion	% Coarse fragments *	% Coarser than V.F.S. *	
Permeability			

Additional notes

tap root to 4-wing (?) seen at 4'

* Control section average

Horizon	Depth	Color Dry	Color Moist	Texture	Grade/Size Type Structure	Consistence Dry	Consistence Moist	Consistence Wet	Reaction	Boundary				
	0-7	Same as #1	Platy fine granular						S.		many - f to vf			
		Ch ha												
	7-27"										c-f. to vf			
moisture gradient														
	27-48		no rocks								f-fine to vf vf - very coarse			


6/12/2001

6/12/2001
Picture #24

6/12/2001
Picture #28

Picture 25, 26, 27, 29, 30

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U.S. DEPARTMENT OF AGRICULTU
SOIL CONSERVATION SERVICE

SOIL DESCRIPTION

Soil type: Subsoil Pile ~~photo #53-52~~ File No

Area: Pit #1, East Side | Date | Stop No.

Classification

Location: Ch na albacalelis 34 x 30 x 29 (h)

N. veg. (or crop): crested | Climate

Parent materi:

Physiography

Relief | Drainage | Salt or alkali

Elevation | Gr. water | Stoniness

Slope | Moisture

Aspect | Root distrib. | % Clay *

Erosion | % Coarse fragments * | % Coarser than V.F.S. *

Permeability

Additional notes

some modification of upper

whole pit clay loam

0 Rock

Root photo ~~48~~, ~~49~~, ~~46~~ 26, 27, 29, 30

* Control section average

Horizon	Depth	Color Dry	Color Moist	Texture	Grade/Size Type Structure	Consistence Dry	Consistence Moist	Consistence Wet	effer. Reaction	Boundary	
	0-6.5"	10YR5/2		some sub blocks	platy to granular structure				Strong		C-fine to very fine
	6.5"-25"	10YR 6/4							VS		f-fine v.f f-medium
	25-54"		10YR 3/3 (moist)		gypsum and mottling				S		f-fine-v.f. vf-medium

may just be moisture difference

1 large rock w/ root mass (~~photo #51~~) #25

6/12/2001
Picture #23

6/12/2001

6/12/2001
Picture #27

6/12/2001
Picture #29

6/12/2001
Picture #30

Picture #62

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U.S. DEPARTMENT OF AGRICULTU
SOIL CONSERVATION SERVICE

SOIL DESCRIPTION

Soil type: Subsoil, Pile Pit # 2 | File No

Area: Ch na con similus | Date | Stop No.

Classification: 34x27x28(h) | ~~Photo 43, 44~~

Location: Russian, crested, white valley

N. veg. (or crop) | Climate

Parent material

Physiography

Relief	Drainage	Salt or alkali
Elevation	Gr. water	Stoniness
Slope	Moisture	
Aspect	Root distrib.	% Clay *
Erosion	% Coarse fragments *	% Coarser than V.F.S. *
Permeability		

Additional notes: Silty clay loam

no rocks

* Control section average

Horizon	Depth	Color Dry	Color Moist	Texture	Grade/Size Type Structure	Consistence Dry	Consistence Moist	Consistence Wet	Effer Reaction	Boundary				
	0-12.5	10YR 5 2							5.		many fine to v.f.			
	~~12.5~~ - 37.5													
	12.5-37.5	7.5YR 5 2							5		many fine to v.f. vf-medium			
moist	37.5-50	7.5 5 4	mottled mixed, orange color						5		v few-f-vy			

6/13/2001
Picture #62

Picture # 64, 65, 54, 55

~~Photo # 3~~

~~Artv from undisturbed~~ # 64, 65

SCS-SOILS-232G
REV. 12-70
FILE CODE SOILS-11

~~Photo # 2~~ - root of 4-wing

SOIL DESCRIPTION

54-55

U.S. DEPARTMENT OF AGRICULTU
SOIL CONSERVATION SERVICE

~~photo # 10-9~~

Soil type: Subsoil, Pit # 3 East side

File No

Area

Date: 6/13/01

Stop No.

Classification

Location: Fourwing 44x53x 40h

N. veg. (or crop)

Climate

Parent material: grass undisturbed crested, Russian alfalfa

Physiography

Relief

Drainage

Salt or alkali

Elevation

Gr. water

Stoniness

Slope

Moisture

Aspect

Root distrib.

% Clay *

Erosion

% Coarse fragments *

% Coarser than V.F.S. *

Permeability

Additional notes

very mixed material, mottling, iron staining

affinity for roots in the rocks

very dense material

Moist from 18" down

* Control section average

Horizon	Depth	Color Dry	Color paste pH	Color Moist	Texture	Grade/Size Type Structure	Consistence Dry	Consistence Moist	Consistence Wet	Effer. Reaction	Boundary	
fine platy tending granular	0-4.5	10YR 52	8.06	no rocks						Strong		common - fine to v.f. few - medium
platty	4.5-10	10yr 52	8.05	no rocks								common - f to v.f.
massive Density increasing	10-18	10yr 53		no rocks								few - f. to v.f.
	18-45 mix	10yr 53 more mottling	8.07 pH									few - f to v.f. vf - medium
		10yr 33										
	45-60	10yr 53										v. few fine to v.f. around rocks. Clustered

6/13/2001
Picture #54

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Picture #55

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Picture #64