EXAMPLES #1 - #3

SUBAREA "O"
WASTE POND #2
Total U Sample Calculation for 100 m^2 Elevated Grid Blocks

1.0 Example #1 - Average Concentration Calculation:

1.1 5 Meter x 5 Meter x 1 foot Grid Averages (representing a soil volume of 7.5 m^3)

Drawing No. 97P2DV-0 at 0-1' depth is used as the reference.

580E-560N	*0-1'*	*7 pCi/g*
580E-565N	*0-1'*	*7 pCi/g*
585E-560N	*0-1'*	*7 pCi/g*
585E-565N	*0-1'*	*7 pCi/g*

Drawing No. 97P2DV-1 at 1'- 2' depth is used as the reference.

580E-560N	*1'-2'*	*7.4 pCi/g*
580E-565N	*1'-2'*	*7.4 pCi/g*
585E-560N	*1'-2'*	*7.4 pCi/g*
585E-565N	*1'-2'*	*7.4 pCi/g*

Drawing No. 97P2DV-2 at 2'-3' depth is used as the reference.

580E-560N	*2'-3'*	*6.5 pCi/g*
580E-565N	*2'-3'*	*6.5 pCi/g*
585E-560N	*2'-3'*	*6.5 pCi/g*
585E-565N	*2'-3'*	*6.5 pCi/g*

1.2 5 Meter x 5 Meter x 1 Meter Grid Averages, 0-1 Meter Grid Averages (representing a soil volume of 25m^3)

580E-560N	$(7 + 7.4 + 6.5) \div 3 = 6.97 = 7.0$ *pCi/g*
580E-565N	$(7 + 7.4 + 6.5) \div 3 = 6.97 = 7.0$ *pCi/g*
585E-560N	$(7 + 7.4 + 6.5) \div 3 = 6.97 = 7.0$ *pCi/g*
585E-565N	$(7 + 7.4 + 6.5) \div 3 = 6.97 = 7.0$ *pCi/g*

The calculated average concentrations are shown on Drawing No. 97P20V-9

1.3 10 Meter x 10 Meter x 1 Meter Grid Average at <u>0-1 Meter Depth</u> (representing a soil volume of 100 $m^{3)}$

$(7 + 7 + 7 + 7) \div 4 = 7.0$ *pCi/g*

1.4 5 Meter x 5 Meter x 1 foot Grid Average (representing a soil volume of 7.5m^3)

Drawing No. 97P2DV-3 at 3'-4' depth is used as the reference.

580E-560N	*3'-4'*	*4.9 pCi/g*
580E-565N	*3'-4'*	*4.9 pCi/g*
585E-560N	*3'-4'*	*4.9 pCi/g*
585E-565N	*3'-4'*	*4.9 pCi/g*

Drawing No. 97P2DV-4 at 4'-5' depth is used as the reference.

580E-560N	*4'-5'*	*10 pCi/g*
580E-565N	*4'-5'*	*6 pCi/g*
585E-560N	*4'-5'*	*6 pCi/g*
585E-565N	*4'-5'*	*59 pCi/g*

Drawing No. 97P2DV-5 at 5'-6' depth is used as the reference.

580E-560N	*5'-6'*	*7 pCi/g*
580E-565N	*5'-6'*	*11 pCi/g*
585E-560N	*5'-6'*	*37 pCi/g*
585E-565N	*5'-6*	*12 pCi/g*

1.5 5 Meter x 5 Meter x 1 Meter Average, 1-2 Meter Depth (Representing a soil volume of 25m$^{3)}$

580E-560N	*(4.9 + 10 + 7) ÷ 3 = 7.3 pCi/g*
580E-565N	*(4.9 + 6 + 11) ÷ 3 = 7.3 pCi/g*
585E-560N	*(4.9 + 6 + 37) ÷ 3 = 16.0 pCi/g*
585E-565N	*(4.9 + 59 + 12) ÷ 3 = 25.3 pCi/g*

The calculated average concentrations are shown on Drawing No. 97P2DV-10

1.6 10 Meter x 10 Meter x 1 Meter Average at the <u>1-2 Meter Depth</u> (representing a soil volume of 100 m$^{3)}$

(7.3 + 7.3 + 16.0 + 25.3) ÷ 4 = 14.0 pCi/g

1.7 5 Meter x 5 Meter x 1 foot Averages, (representing a soil volume of 7.5 $m^{3)}$

Drawing No. 97P2DV-6 at 6'-7' depth is used as the reference.

580E-560N	*6'-7'*	*23 pCi/g*
580E-565N	*6'-7'*	*111 pCi/g*
585E-560N	*6'-7'*	*107 pCi/g*
585E-565N	*6'-7'*	*4 pCi/g*

Drawing No. 97P2DV-7 at 7'-8' depth is used as the reference.

580E-560N	*7'-8'*	*13 pCi/g*
580E-565N	*7'-8'*	*Rock*
585E-560N	*7'-8'*	*Rock*
585E-565N	*7'-8'*	*26 pCi/g*

Drawing No. 97P2DV-8 at 8'-9' depth is used as the reference.

580E-560N	*8'-9'*	*10 pCi/g*
580E-565N	*8'-9'*	*N/A*
585E-560N	*8'-9'*	*N/A*
85E-565N	*8'-9'*	*N/A*

1.8 5 Meter x 5 Meter x 1 Meter Averages 2-3 meter depth, (representing a soil volume of 25 $m^{3)}$

580E-560N	*(23 + 13 + 10) ÷ 3 = 15.3*
580E-565N	*(111) ÷ 1 = 111.0*
585E-560N	*(107) ÷ 1 = 107.0*
585E-565N	*(4 + 26) ÷ 2 = 15.0*

The calculated average concentrations are shown on Drawing No. 97P2DV-11.

1.9 10 Meter x 10 Meter x 1 Meter Average at the <u>2-3 Meter Depth</u> (representing a soil volume of 100 m^3)

(15.3 + 111.0 + 107.0 + 15.0) ÷ 4 = 62.1 pCi/g

1.10 0-2 Meter Average for each 5 x 5 Meter grid (representing a soil volume of 50 m^3)

580E-560N	*(7.0 + 7.3) ÷ 2 = 7.2 pCi/g*
580E-565N	*(7.0 + 7.3) ÷ 2 = 7.2 pCi/g*
585E-560N	*(7.0 + 16.0) ÷ 2 = 11.5 pCi/g*
585E-565N	*(7.0 + 25.3) ÷ 2 = 16.2 pCi/g*

The calculated average concentrations are shown on Drawing No. 97P2DV-12. The guideline volume for this soil volume is 102 pCi/g above background.

1.11 0-3 Meter Average for each 5 x 5 Meter grid (representing a soil volume of 75 m^3)

580E-560N	*(7.0 + 7.3 + 15.3) ÷ 3 = 9.9 pCi/g*
580E-565N	*(7.0 + 7.3 + 111.0) ÷ 3 = 41.8 pCi/g*
585E-560N	*(7.0 + 16.0 + 107.01) ÷ 3 = 43.3 pCi/g*
585E-565N	*(7.0 + 25.3 + 15.0) ÷ 3 = 15.8 pCi/g*

The calculated average concentrations are shown on Drawing No. 97P2DV-13. The guideline volume for this soil volume is 97 pCi/g above background.

1.12 10 X Meter x 10 Meter Grid Average 0-2 Meter Depth (representing a soil volume of 200 m^3)

(7.2 + 7.2 + 11.5 + 16.2) ÷ 4 = 10.5 pCi/g

The guideline volume for this soil volume is 69 pCi/g above background.

1.13 10 X Meter x 10 Meter Grid Average 0-3 Meter Depth (representing a soil volume of $^{300\ m3}$)

(9.9 + 41.8 + 43.3 + 15.8) ÷ 4 = 27.7 pCi/g

27.7 - 4.0 (Background) = 23.7 pCi/g

The guideline volume for this soil volume is 43 pCi/g above background

2.0 Example #2 - Average Concentration Calculation

2.1 5 Meter x 5 Meter x 1 foot Grid Averages (representing a soil volume of 7.5^3)

Drawing No. 97P2DV-0 at 0-1' depth is used as the reference.

575E-535N	*0-1'*	*7 pCi/g*
575E-540N	*0-1'*	*7 pCi/g*
580E-535N	*0-1'*	*7 pCi/g*
580E-540N	*0-1'*	*7 pCi/g*

Drawing No. 97P2DV-1 at 1'-2' depth is used as the reference.

575E-535N	*1'-2'*	*7.4 pCi/g*
575E-540N	*1'-2'*	*7.4 pCi/g*
580E-535N	*1'-2'*	*7.4 pCi/g*
580E-540N	*1'-2'*	*7.4 pCi/g*

Drawing No. 97P2DV-2 at 2'-3' depth is used as the reference.

575E-535N	*2'-3'*	*6.5 pCi/g*
575E-540N	*2'-3'*	*6.5 pCi/g*
580E-535N	*2'-3'*	*6.5 pCi/g*
580E-540N	*2'-3'*	*6.5 pCi/g*

2.2 Meter x 5 Meter x 1 Meter Average at 0-1 Meter Grid Averages, (representing a soil volume of 7.5 m^3)

575E-535N	$(7 + 7.4 + 6.5) \div 3 = 6.97 = 7.0$ *pCi/g*
575E-540N	$(7 + 7.4 + 6.5) \div 3 = 6.97 = 7.0$ *pCi/g*
580E-535N	$(7 + 7.4 + 6.5) \div 3 = 6.97 = 7.0$ *pCi/g*
580E-540N	$(7 + 7.4 + 6.5) \div 3 = 6.97 = 7.0$ *pCi/g*

The calculated average concentrations are shown on Drawing No. 97P2DV-9

2.3 10 Meter x 10 Meter x 1 Meter Grid Average at the <u>0-1 Meter Depth</u> (representing a soil volume of 100 m^3)

$(7 + 7 + 7 + 7) \div 4 = 7.0$ *pCi/g*

2.4 5 Meter x 5 Meter x 1 foot Average (representing a soil volume of 7.5 m^3)

Drawing No. 97P2DV-3 at 3'-4' depth is used as the reference.

575E-535N	*3'-4'*	*4.9 pCi/g*
575E-540N	*3'-4'*	*4.9 pCi/g*
580E-535N	*3'-4'*	*4.9 pCi/g*
580E-540N	*3'-4'*	*4.9 pCi/g*

Drawing No. 97P2DV-4 at 4'-5' depth is used as the reference.

575E-535N	*4'-5'*	*(9 x 1/8) + (6 x 7/8) = 6.4 pCi/g*
575E-540N	*4'-5'*	$\frac{10 + 5}{2}$ *= 7.5 (10 x 1/8) + (7.5 x 1/8) + (12 x 6/8) = 11.2 pCi/g*
580E-535N	*4'-5'*	*(9 x 1/8) + (6 x 7/8) = 6.4 pCi/g*
580E-540N	*4'-5'*	$\frac{8 + 5}{2}$ *= 6.5 (6.5 x 1/8) + (7 x 7/8) = 6.9 pCi/g*

Drawing No. 97P2DV-5 at 5'-6' depth is used as the reference.

575E-535N	*5'-6'*	*(9 x 1/8) + (32 x 7/8) = 29.1 pCi/g*
575E-540N	*5'-6'*	$\frac{23 + 3}{2}$ *=13 (13 x 1/8) + (3 x 1/8) + (12 x 6/8) = 11.0 pCi/g*
580E-535N	*5'-6'*	*(9 x 1/8) + (8 x 1/8) (63 x 6/8) = 49.4 pCi/g*
580E-540N	*5'-6*	*(46x 1/8) + (6 x 1/8) + (59 x 6/8) = 50.8 pCi/g*

2.5 5 Meter x 5 Meter x 1 Meter Average, 1-2 Meter Depth (representing a soil volume of 25 m^3)

575E-535N	*(4.9 + 6.4 + 29.1) ÷ 3 = 13.5 pCi/g*
575E-540N	*(4.9 + 11.2 + 11.0) ÷ 3 = 9.0 pCi/g*
580E-535N	*(4.9 + 6.4 + 49.4) ÷ 3 = 20.2 pCi/g*
580E-540N	*(4.9 + 6.9 + 50.8) ÷ 3 = 20.9 pCi/g*

The calculated average concentrations are shown on Drawing No. 97P2DV-10

2.6 10 Meter x 10 Meter x 1 Meter Average at the <u>1-2 Meter Depth</u> (representing a soil volume of 100 m^3)

(13.5 + 9.0 + 20.2 + 20.9) ÷ 4 = 15.9 pCi/g

2.7 5 Meter x 5 Meter x 1 foot Averages, (representing a soil volume of 7.5 m^3)

Map 97P2DV-6 at 6'-7' depth is used as the reference.

575E-535N 6'-7' (177 x 1/8) + (122 x 7/8) = 128.9 pCi/g
575E-540N 6'-7' $\frac{45 + 106}{2}$ *= 75.5 (75.5 x 1/8) + (45 x 1/8) + (133 x 6/8) = 114.8 pCi/g*
580E-535N 6'-7' (177 x 1/8) + (6 x 1/8) + (97 x 6/8) = 95.6 pCi/g
580E-540N 6'-7' $\frac{174 + 106}{2}$ *= 140 (140 x 1/8) + (111 x 1/8) + 7 x 6/8 = 36.6 pCi/g*

Map 97P2DV-7 at 7'-8' depth is used as the reference.

575E-535N 7'-8' (24 x 1/8) + (64 x 7/8) = 59.0 pCi/g
575E-540N 7'-8' (41 x 1/8) + (70 x 7/8) = 66.4 pCi/g
580E-535N 7'-8' (24 x 1/8) + (28 x 1/8) + (87 x 6/8) = 71.8 pCi/g
580E-540N 7'-8' $\frac{24 + 41}{2}$ *= 32.5 (32.5 x 1/8) + (28 x 1/8) + (7 x 6/8) = 12.8 pCi/g*

Map 97P2DV-8 at 8'-9' depth is used as the reference.

575E-535N 8'-9' No Sample
575E-540N 8'-9' No Sample
580E-535N 8'-9' No Sample
580E-540N 8'-9' No Sample

2.8 5 Meter x 5 Meter x 1 Meter Averages 2-3 meter depth, (representing a soil volume of 25 m^3)

575E-535N (128.9 + 59.0) ÷ 2 = 93.5 = 94.0 pCi/g
575E-540N (114.8 + 66.4) ÷ 2 = 90.6 pCi/g
580E-535N (95.6 + 71.8) ÷ 2 = 83.7 pCi/g
580E-540N (36.6 + 12.8) ÷ 2 = 24.7 pCi/g

The calculated average concentrations are shown on Drawing No. 97P2DV-11.

2.9 10 Meter x 10 Meter x 1 Meter Average at the <u>2-3 Meter Depth</u> (representing a soil volume of 100 m^3)

(94.0 + 90.6 + 83.7 +24.7) ÷ 4 = 73.3 pCi/g

2.10 0-2 Meter Average for each 5 x 5 Meter grid (representing a soil volume of 50 m^3)

575E-535N	*(7.0 + 13.5) ÷ 2 = 10.3 pCi/g*
575E-540N	*(7.0 + 9.0) ÷ 2 = 8.0 pCi/g*
580E-535N	*(7.0 + 20.2) ÷ 2 = 13.6 pCi/g*
580E-540N	*(7.0 + 20.9) ÷ 2 = 14.0 pCi/g*

The calculated average concentrations are shown on Drawing No. 97P2DV-12. The guideline volume for this soil volume is 102 pCi/g above background.

2.11 0-3 Meter Average for each 5 x 5 Meter grid

575E-535N	*(7.0 + 13.5 + 94.0) ÷ 3 = 38.2 pCi/g*
575E-540N	*(7.0 + 9.0 + 90.6) ÷ 3 = 35.5 pCi/g*
580E-535N	*(7.0 + 20.2 + 83.7) ÷ 3 = 37.0 pCi/g*
580E-540N	*(7.0 + 20.9 + 24.7) ÷ 3 = 17.5 pCi/g*

The calculated average concentrations are shown on Drawing No. 97P2DV-13. The guideline volume for this soil volume is 102 pCi/g above background.

2.12 10 X Meter x 10 Meter Grid Average 0-2 Meter Depth (representing a soil volume of 200 m^3)

(10.3 + 8.0 + 13.6 + 14.0) ÷ 4 = 11.5 pCi/g

The guideline volume for this soil volume 69 pCi/g above background.

2.13 10 X Meter x 10 Meter Grid Average 0-3 Meter Depth (representing a soil volume of 200 m^3)

(38.2 + 35.5 + 37.0 + 17.5) ÷ 4 = 32.1 pCi/g

32.1 - 4.0 (Background) = 28.1 pCi/g

The guideline volume for this soil volume 43 pCi/g above background.

3.0 Example #3 - Average Concentration Calculation

3.1 5 Meter x 5 Meter x 1 foot Average (representing a soil volume of 7.5 m^3)

Drawing No. 97P2DV-0 at 0-1' depth is used as the reference

580E-535N	*0-1'*	*7 pCi/g*
580E-540N	*0-1'*	*7 pCi/g*
585E-535N	*0-1'*	*7 pCi/g*
585E-540N	*0-1'*	*7 pCi/g*

Drawing No. 97P2DV-1 at 1'-2' depth is used as the reference

580E-535N	*1'-2'*	*7.4 pCi/g*
580E-540N	*1'-2'*	*7.4 pCi/g*
585E-535N	*1'-2'*	*7.4 pCi/g*
585E-540N	*1'-2'*	*7.4 pCi/g*

Drawing No. 97P2DV-1 at 2'-3' depth is used as the reference

580E-535N	*2'-3'*	*6.5 pCi/g*
580E-540N	*2'-3'*	*6.5 pCi/g*
585E-535N	*2'-3'*	*6.5 pCi/g*
585E-540N	*2'-3'*	*6.5 pCi/g*

3.2 5 Meter x 5 Meter x 1 Meter Averages, 0-1 Meter Grid Averages (representing a soil volume of 25 m^3)

580E-535N	$(7 + 7.4 + 6.5) \div 3 = 7.0$ *pCi/g*
580E-540N	$(7 + 7.4 + 6.5) \div 3 = 7.0$ *pCi/g*
585E-535N	$(7 + 7.4 + 6.5) \div 3 = 7.0$ *pCi/g*
585E-540N	$(7 + 7.4 + 6.5) \div 3 = 7.0$ *pCi/g*

The calculated average concentrations are shown on Drawing No. 97P2DV-9

3.3 10 Meter x 10 Meter x 1 Meter Average at <u>0-1 Meter Depth</u> (representing a soil volume of 100 m^3)

$(7 + 7 + 7 + 7) \div 4 = 7.0$ *pCi/g*

3.4 5 Meter x 5 Meter x 1 foot Average (representing a soil volume of 7.5 m^3)

Drawing No. 97P2DV-3 at 3'-4' depth is used as the reference

580E-535N	*3'-4'*	*4.9 pCi/g*
580E-540N	*3'-4'*	*4.9 pCi/g*
585E-535N	*3'-4'*	*4.9 pCi/g*
585E-540N	*3'-4'*	*4.9 pCi/g*

Drawing No. 97P2DV-4 at 4'-5' depth is used as the reference

580E-535N	*4'-5'*	*(9 x 1/8) + (6 x 7/8) = 6.4 pCi/g*
580E-540N	*4'-5'*	$\frac{8+5}{2}$ *= 6.5 (6.5 x 1/8) + (7 x 7/8) = 6.9 pCi/g*
585E-535N	*4'-5'*	*5.0 pCi/g*
585E-540N	*4'-5'*	*9.0 pCi/g*

Drawing No. 97P2DV-5 at 5'-6' depth is used as the reference

580E-535N	*5'-6'*	*(9 x 1/8) + (8 x 1/8) + (63 x 6/8) = 49.4 pCi/g*
580E-540N	*5'-6'*	$\frac{23 + 69}{2}$ *= 46 (46 x 1/8) + (6 x 1/8) + (59 x 6/8) = 50.8 pCi/g*
585E-535N	*5'-6'*	*(8 x 1/8) + (197 x 7/8) = 173.4 pCi/g*
585E-540N	*5'-6*	*(6 x 1/8) + (174 x 7/8) = 153.0 pCi/g*

3.5 5 Meter x 5 Meter x 1 Meter Average, 1-2 Meter Depth (representing a soil volume of 25 m^3)

580E-535N	*(4.9 +6.4 + 49.4) ÷ 3 = 20.2 pCi/g*
580E-540N	*(4.9 +6.9 + 50.8) ÷ 3 = 20.9 pCi/g*
585E-535N	*(4.9 +5.0 +173.4) ÷ 3 = 61.1 pCi/g*
585E-540N	*(4.9 +9.0 +153.0) ÷ 3 = 55.6 pCi/g*

The calculated average concentrations are shown on Drawing No. 97P2DV-10

3.6 10 Meter x 10 Meter x 1 Meter Average at the 1-2 Meter Depth (representing a soil volume of 100 m^3)

(20.2 + 20.9 + 61.1 + 55.6) ÷ 4 = 39.50 pCi/g

3.7 5 Meter x 5 Meter x 1 foot Averages (representing a soil volume of 7.5 m^3)

Drawing No. 97P2DV-6 at 6'-7' depth is used as the reference.

580E-535N	*6'-7'*	*(177 x 1/8) + (6 x 1/8) + (97 x 6/8) = 95.6 pCi/g*
580E-540N	*6'-7'*	*(174 + 106) / 2 = 140 (140 x 1/8) + (111 x 1/8) + (7 x 6/8) = 36.6 pCi/g*
585E-535N	*6'-7'*	*(6 x 1/8) + (112 x 7/8) = 98.8 pCi/g*
585E-540N	*6'-7'*	*(111 x 1/8) + (94 x 7/8) = 96.1 pCi/g*

Drawing No. 97P2DV-7 at 7'-8' depth is used as the reference.

580E-535N	*7'-8'*	*(24 x 1/8) + (28 x 1/8) + (87 x 6/8) = 71.8 pCi/g*
580E-540N	*7'-8'*	*(24 + 41) / 2 = 32.5 (32.5 x 1/8) + (28 x 1/8) + (7 x 6/8) = 12.8 pCi/g*
585E-535N	*7'-8'*	*(28 x 1/8) + (24 x 7/8) = 24.5 pCi/g*
585E-540N	*7'-8'*	*(28 x 1/8) + (28 x 7/8) = 28.0 pCi/g*

Drawing No. 97P2DV-8 at 8'-9' depth is used as the reference.

580E-535N	*8'-9'*	*No Sample*
580E-540N	*8'-9'*	*No Sample*
585E-535N	*8'-9'*	*No Sample*
585E-540N	*8'-9'*	*No Sample*

3.8 5 Meter x 5 Meter x 1 Meter Average, 2-3 meter Depth, (representing a soil volume of 25 m^3)

580E-535N	*(95.6 + 71.8) ÷ 2 = 83.7 pCi/g*
580E-540N	*(36.6 + 12.8) ÷ 2 = 24.7 pCi/g*
585E-535N	*(98.8 + 24.5) ÷ 2 = 61.7 pCi/g*
585E-540N	*(96.1 + 28.0) ÷ 2 = 62.1 pCi/g*

The calculated average concentrations are shown on Drawing No. 97P2DV-11

3.9 10 Meter x 10 Meter x 1 Meter Average at the <u>2-3 Meter Depth</u>
(83.7 + 24.7 + 61.7 + 62.1) ÷ 4 = 58.1 pCi/g

3.10 0-2 Meter Average for each 5 x 5 Meter grid (representing a soil volume of 50 m^3)

580E-535N	*(7.0 + 20.2) ÷ 2 = 13.6 pCi/g*
580E-540N	*(7.0 + 20.9) ÷ 2 = 14.0 pCi/g*
585E-535N	*(7.0 + 61.1) ÷ 2 = 34.1 pCi/g*
585E-540N	*(7.0 + 55.6) ÷ 2 =31.3 pCi/g*

The calculated average concentrations are shown on Drawing No. 97P2DV-12. The guideline volume for this soil volume is 102 pCi/g above background.

3.11 0-3 Meter Average for each 5 x 5 Meter grid (representing a soil volume of 50 m^3)

580E-535N	*(7.0 + 20.2 + 83.7) ÷ 3 = 37.0 pCi/g*
580E-540N	*(7.0 + 20.9 + 24.7) ÷ 3 = 17.5 pCi/g*
585E-535N	*(7.0 + 61.1 + 61.7) ÷ 3 = 43.3 pCi/g*
585E-540N	*(7.0 + 55.6 + 62.1) ÷ 3 = 41.6 pCi/g*

The calculated average concentrations are shown on Drawing No. 97P2DV-13. The guideline volume for this soil volume is 102 pCi/g above background.

3.12 10 X Meter x 10 Meter Grid Average 0-2 Meter Depth (representing a soil volume of 300 m3)

(13.6 + 14.0 + 34.1 + 31.3) ÷ 4 = 23.3 pCi/g

The guideline volume for this soil volume is 69 pCi/g above background

3.13 10 X Meter x 10 Meter Grid Average 0-3 Meter Depth (representing a soil volume of 200m^3)

(37.0 + 17.5 + 43.3 + 41.6) ÷ 4 = 34.9 pCi/g

34.9 - 4.0 (Background) = 30.9 pCi/g

The guideline volume for this soil volume is 43 pCi/g above background.

Drawing of

Examples #1 - #3

565 570 575 580 585 590 595

565 560 555 550 545 540 535 530

WASTE POND #2 BACKGROUND SOIL TOP CAP	
SOIL SAMPLE ALIQUOT	VALUE IN pCi/g URANIUM
0 – 1'	7.0
1' – 2'	7.4
2' – 3'	6.5
3' – 4'	4.9

URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6 URANIUM 1 – 94 pCi/g U

120 URANIUM 95 – 219 pCi/g U

245 URANIUM > 219 pCi/g U

R HIT ROCK – NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	2/16/98

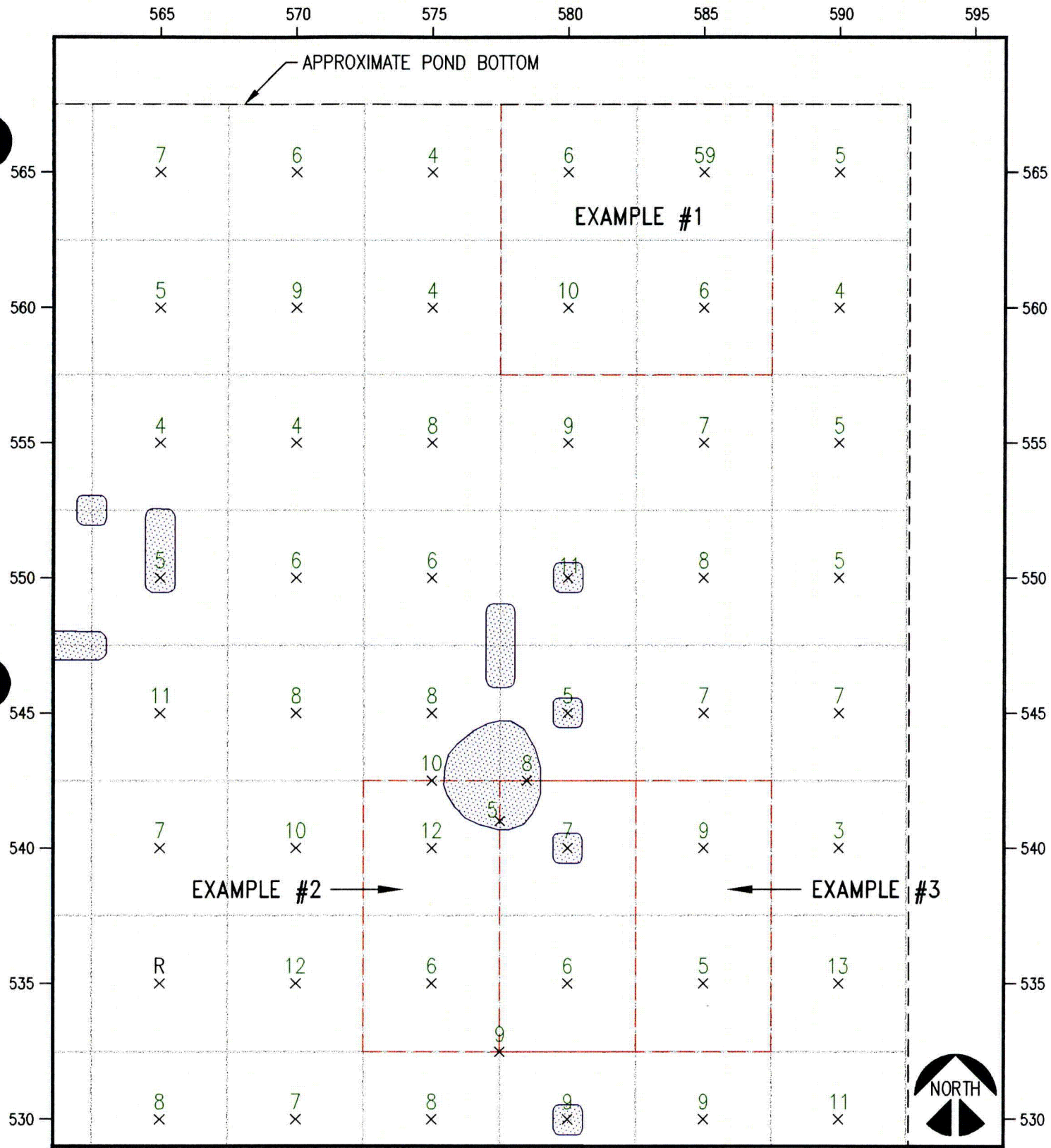
CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #2
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 0' – 4'

DRWN. BY	DATE	SCALE:
JE	1/14/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P2DV–0 TO 3	0

...\UPOND2\97DEV–0A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

CIMARRON CORPORATION

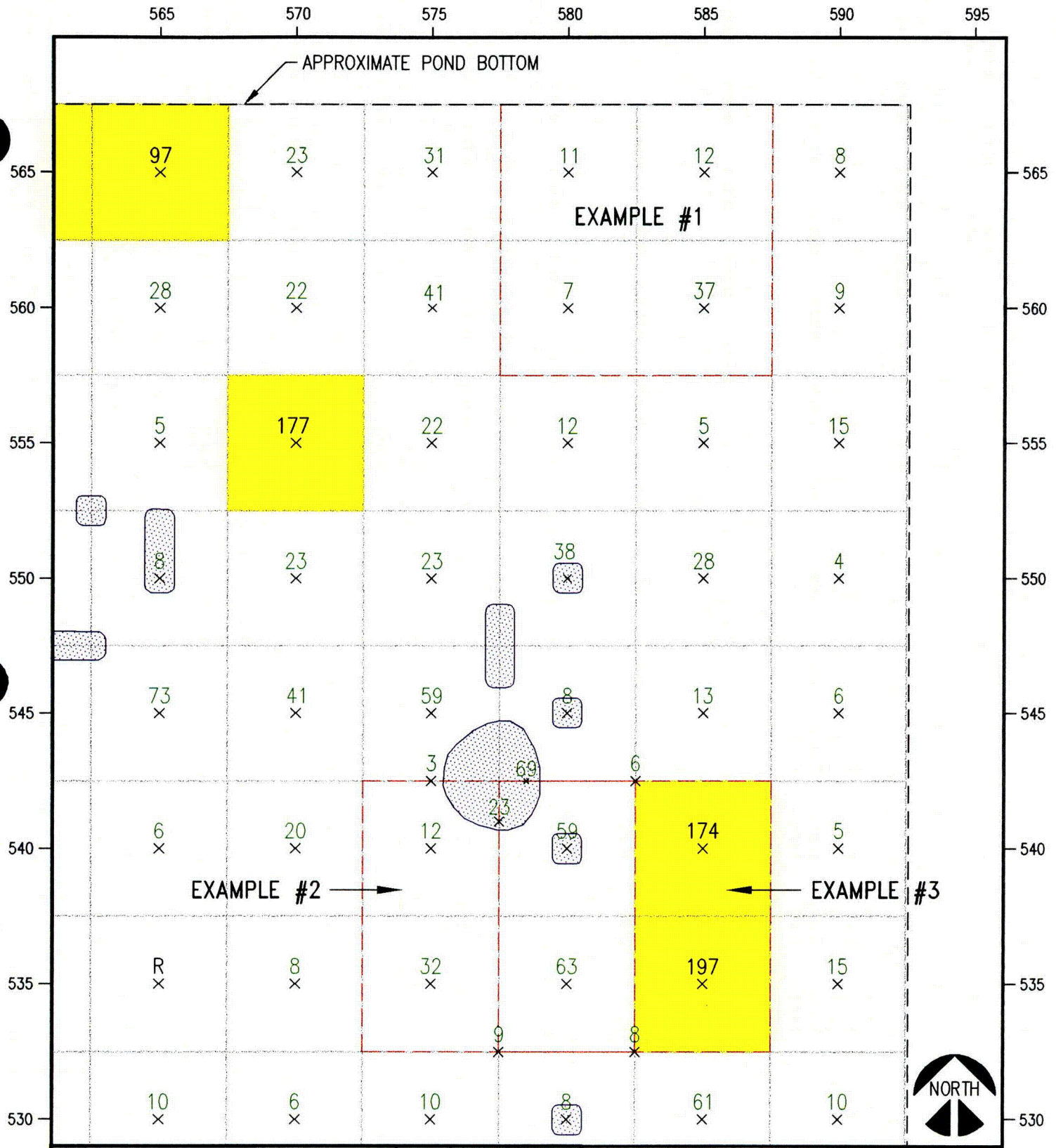
CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #2
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 4' – 5'

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	2/16/98

DRWN. BY	DATE	SCALE:
JE	1/14/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P2DV-4	0

...\UPOND2\97DEV-4A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

CIMARRON CORPORATION

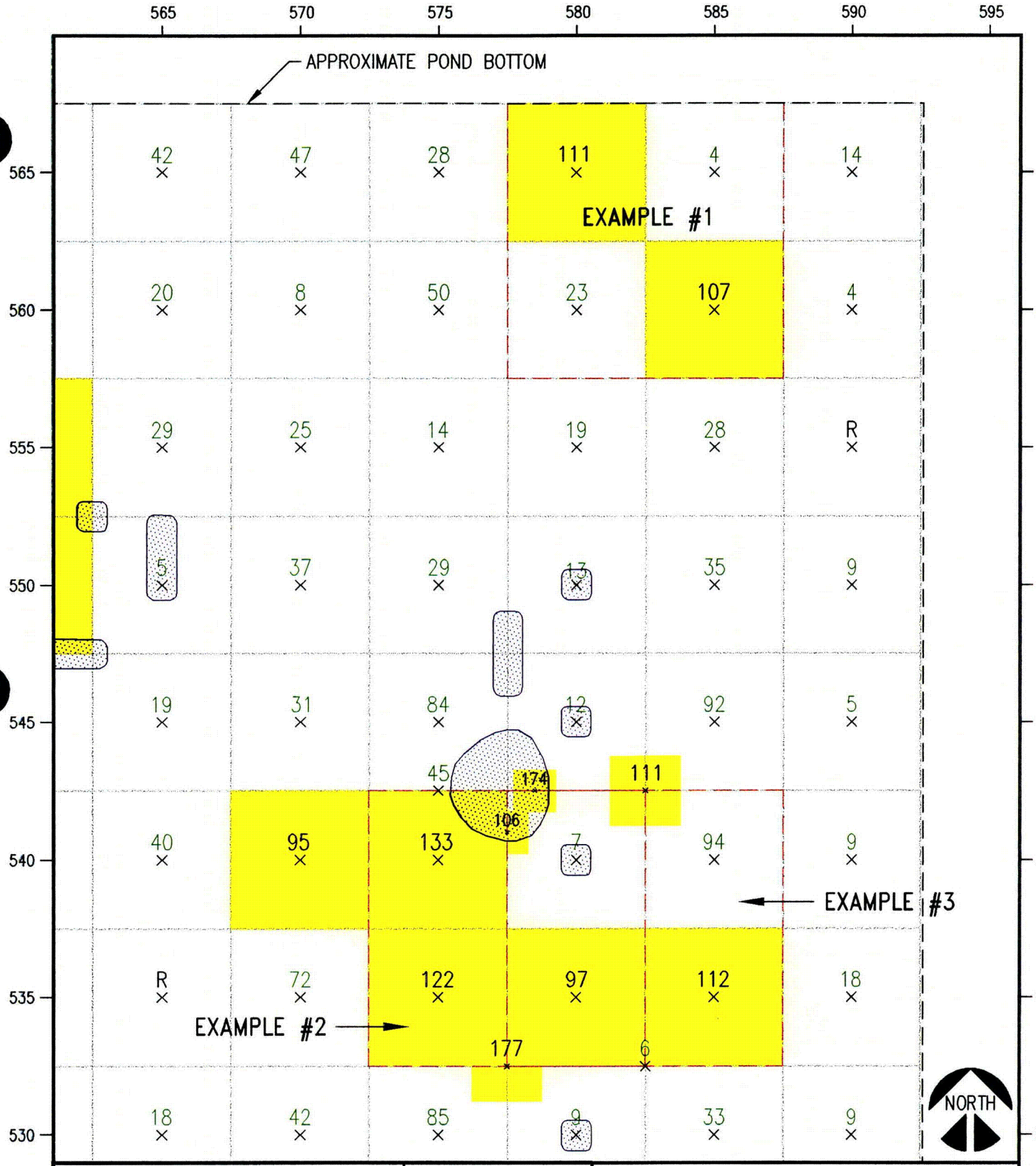
CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #2
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 5' – 6'

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	2/16/98

DRWN. BY	DATE	SCALE:
JE	1/14/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P2DV–5	0

...\UPOND2\97DEV–5A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

CIMARRON CORPORATION

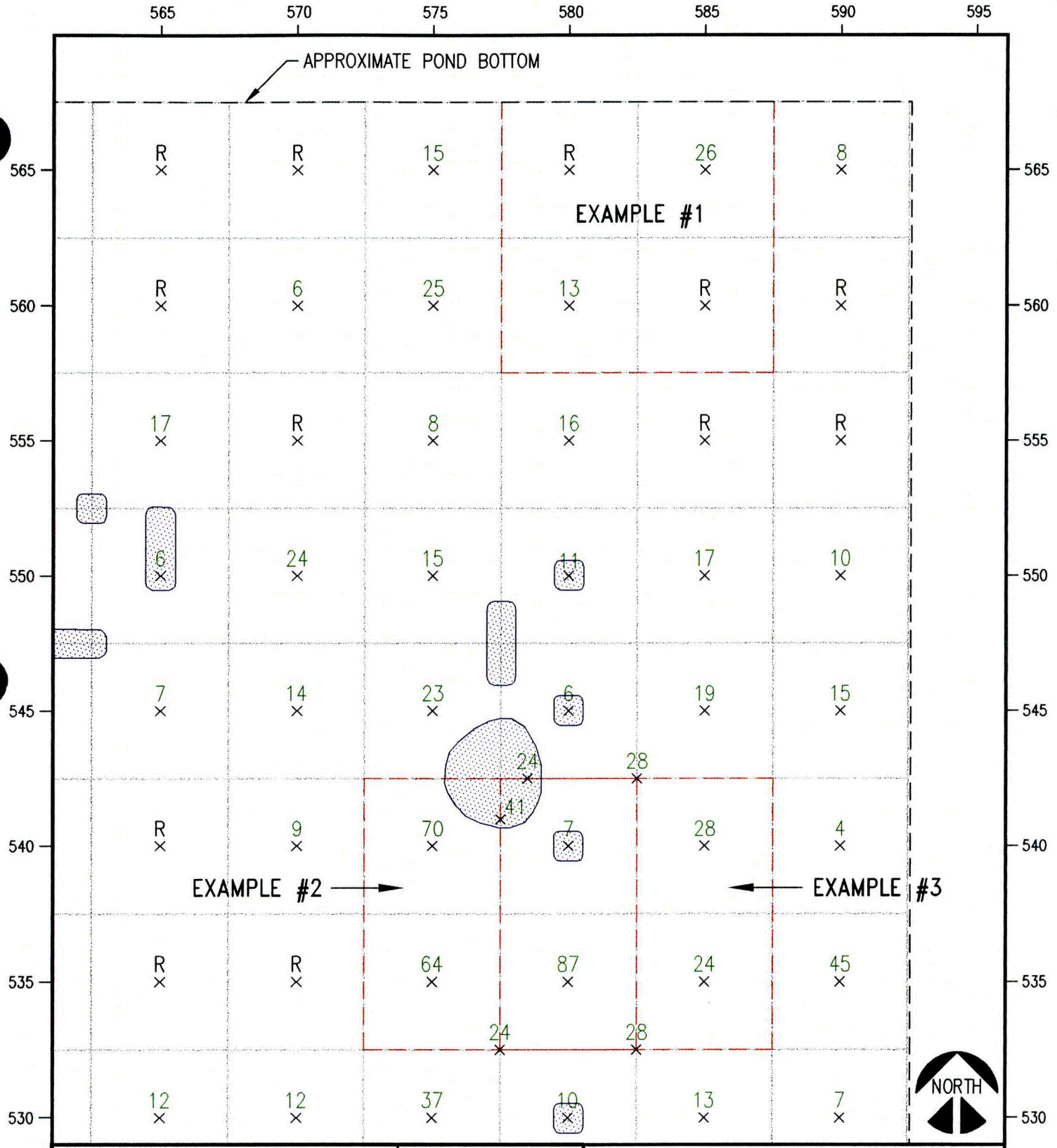
CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #2
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 6' – 7'

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	2/16/98

DRWN. BY	DATE	SCALE:
JE	1/14/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P2DV-6	0

...\UPOND2\97DEV-6A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

CIMARRON CORPORATION

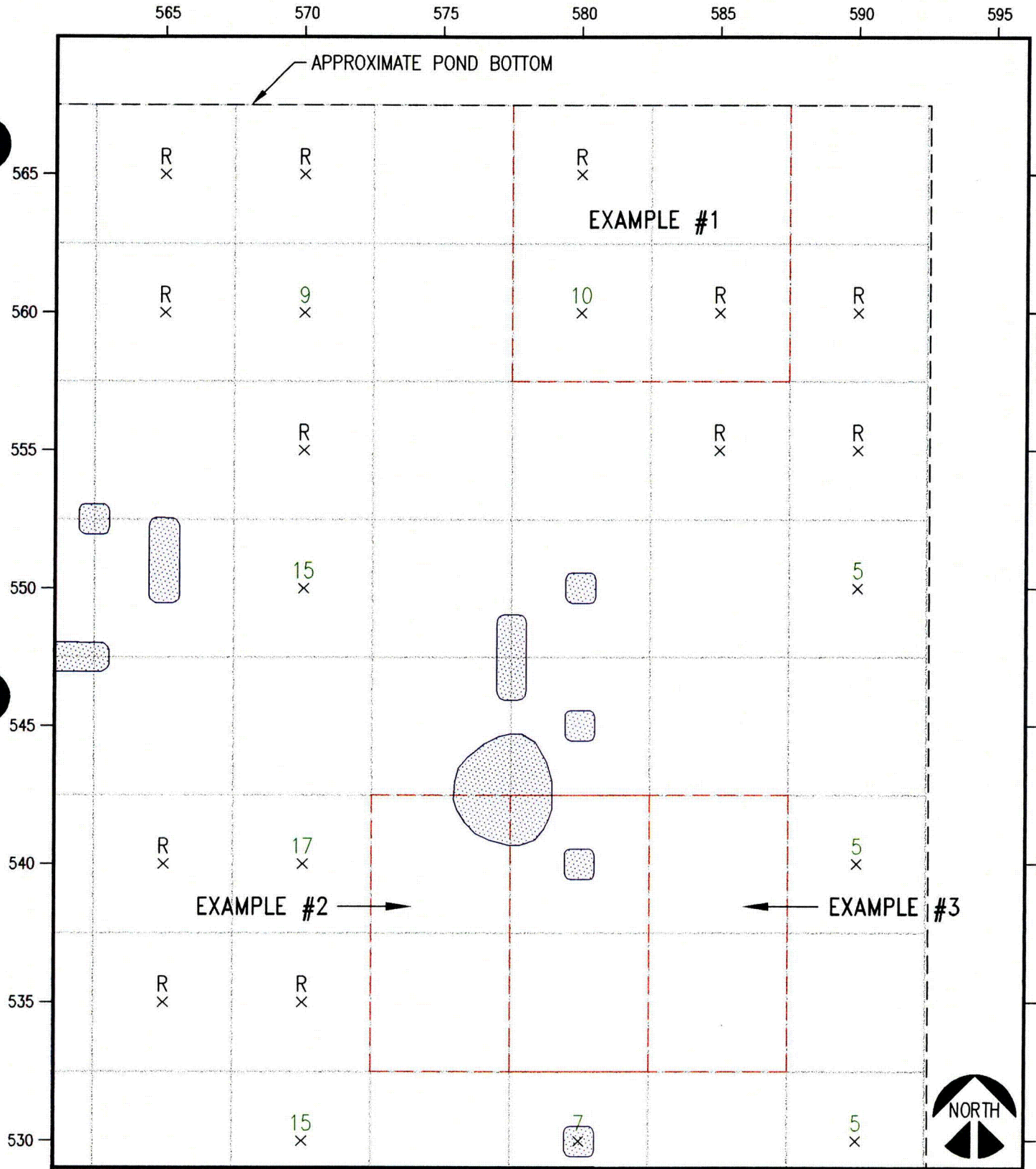
CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #2
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 7' – 8'

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	2/16/98

DRWN. BY	DATE	SCALE:
JE	1/14/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P2DV-7	0

...\UPOND2\97DEV-7A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6	URANIUM 1 - 94 pCi/g U
120	URANIUM 95 - 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK - NO SAMPLE

CIMARRON CORPORATION

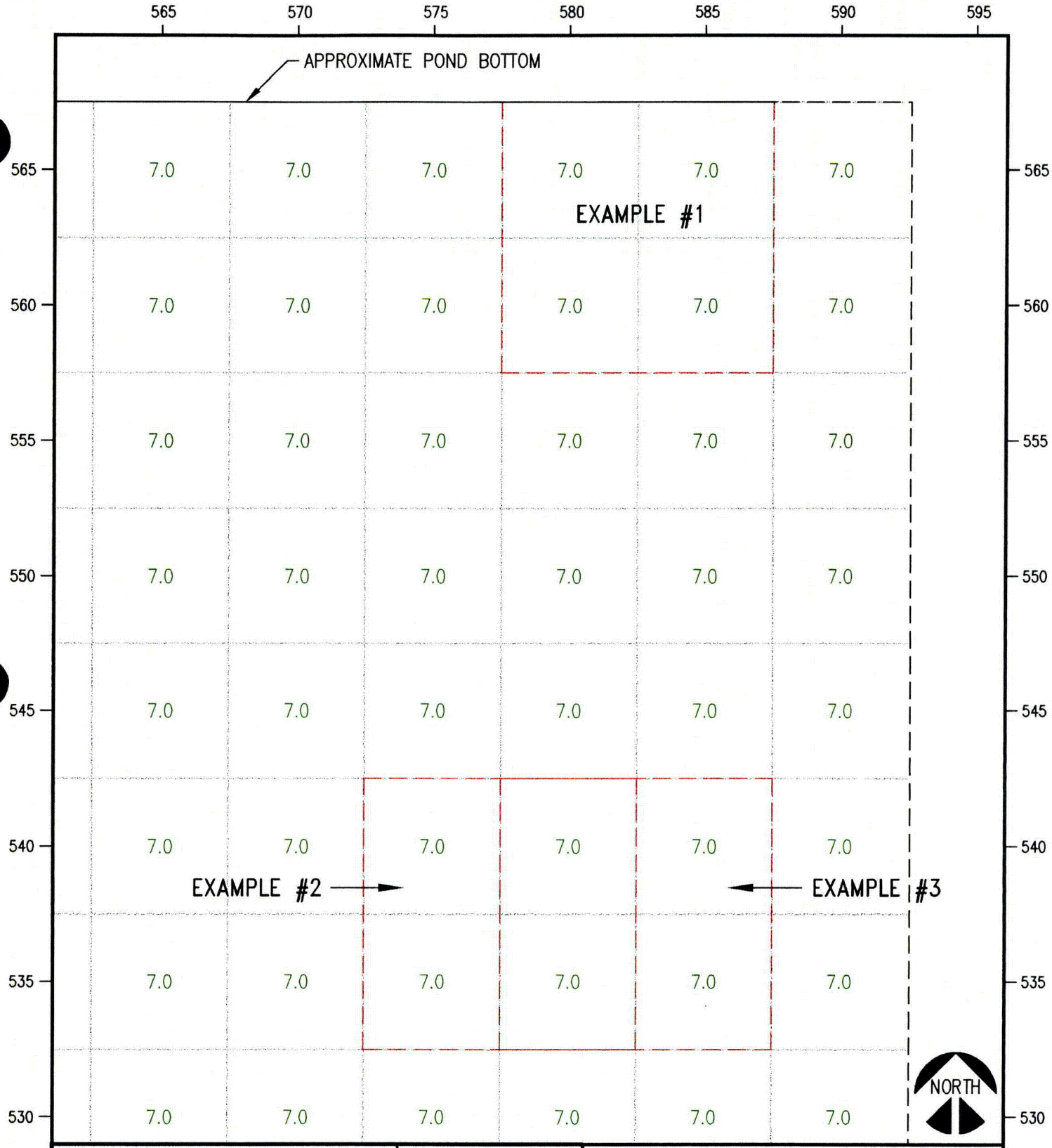
CIMARRON FACILITY
PHASE III - SUB-AREA O
URANIUM WASTE POND #2
FINAL STATUS SURVEY RESULTS - SOIL
SOIL SAMPLE ALIQUOT: 8' - 9'

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	2/16/98

DRWN. BY	DATE	SCALE:
JE	1/14/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P2DV-8	0

...\UPOND2\97DEV-8A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6 — URANIUM 1 – 94 pCi/g U

120 — URANIUM 95 – 219 pCi/g U

245 — URANIUM > 219 pCi/g U

CIMARRON CORPORATION

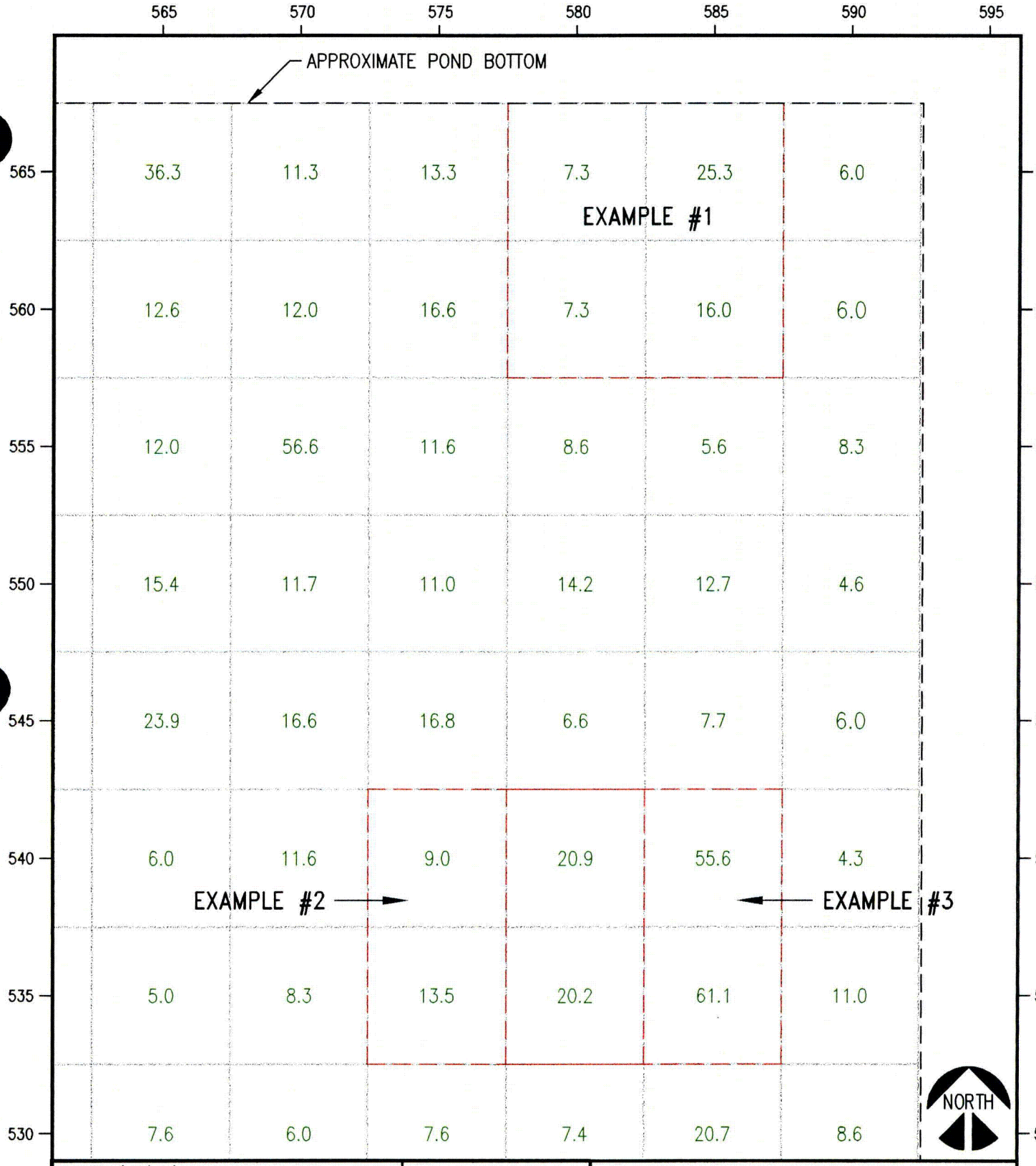
CIMARRON FACILITY
URANIUM WASTE POND #2 – SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 3 Foot Grid
Average Soil Activity
0 to 3' Soil Depth

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	2/16/98

DRWN. BY	DATE	SCALE:
JE	1/14/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P2DV–9	0

...\UPOND2\MTR_AVGS\97DEV–9A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6 — URANIUM 1 – 94 pCi/g U

120 — URANIUM 95 – 219 pCi/g U

245 — URANIUM > 219 pCi/g U

CIMARRON CORPORATION

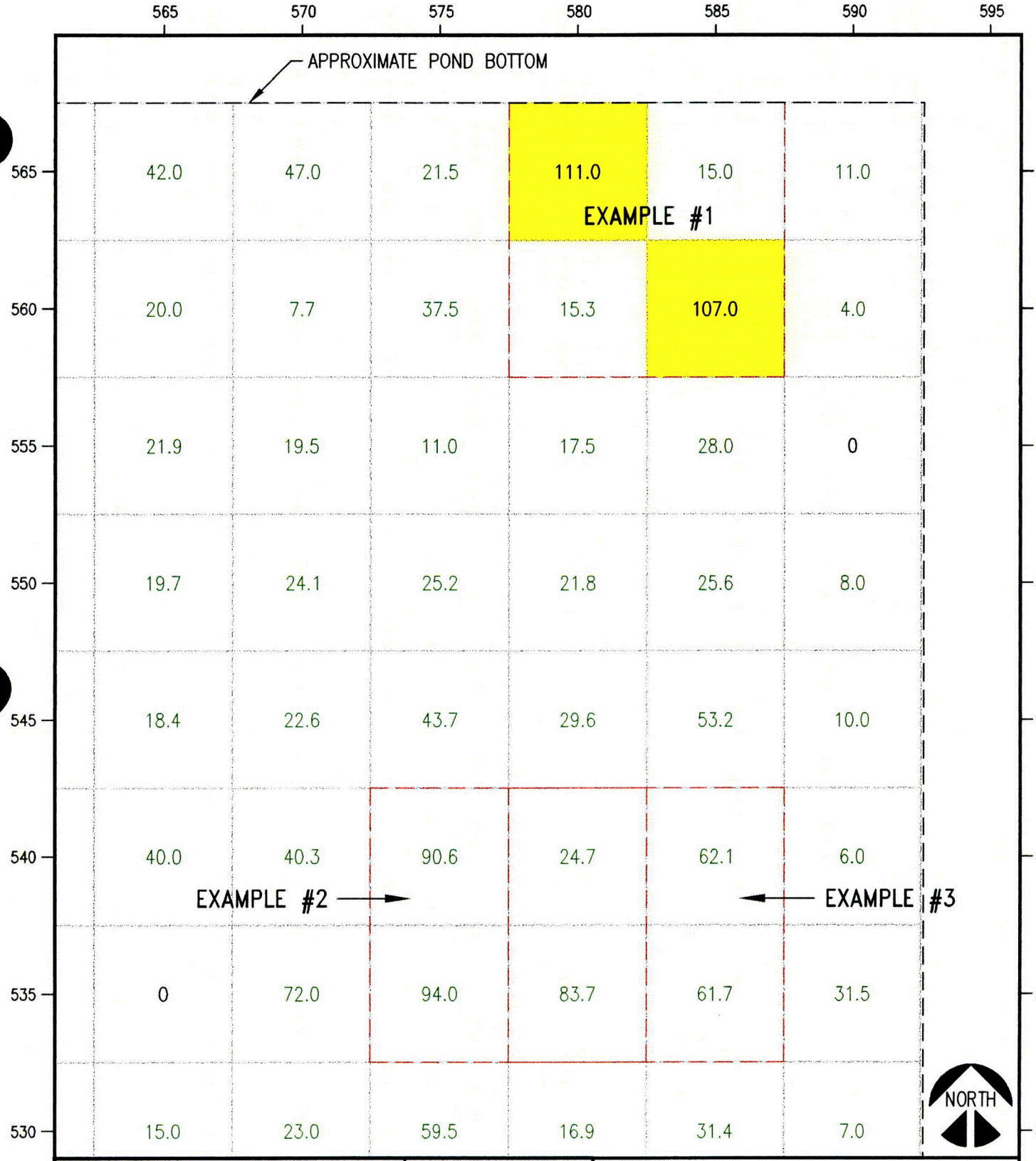
CIMARRON FACILITY
URANIUM WASTE POND #2 – SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 3 Foot Grid
Average Soil Activity
3' to 6' Soil Depth

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	1/16/98

DRWN. BY	DATE	SCALE:
JE	1/14/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P2DV-10	0

...\UPOND2\MTR_AVGS\97DEV10A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6 — URANIUM 1 – 94 pCi/g U

120 — URANIUM 95 – 219 pCi/g U

245 — URANIUM > 219 pCi/g U

CIMARRON CORPORATION

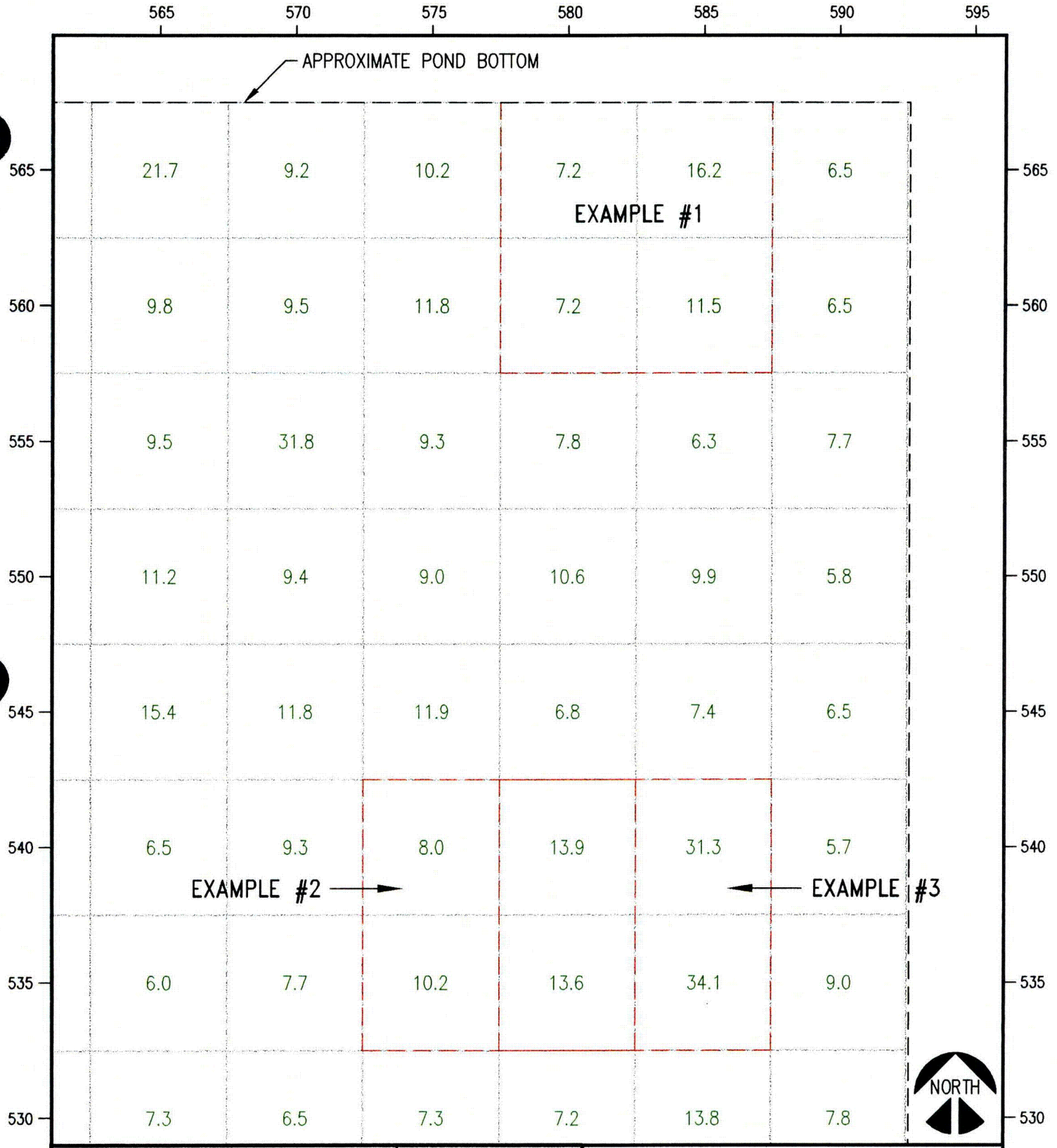
CIMARRON FACILITY
URANIUM WASTE POND #2 – SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 3 Foot Grid
Average Soil Activity
6' to 9' Soil Depth

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	2/16/98

DRWN. BY	DATE	SCALE:
JE	1/14/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P2DV-11	0

...\UPOND2\MTR_AVGS\97DEV11A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6 — URANIUM 1 - 94 pCi/g U

120 — URANIUM 95 - 219 pCi/g U

245 — URANIUM > 219 pCi/g U

CIMARRON CORPORATION

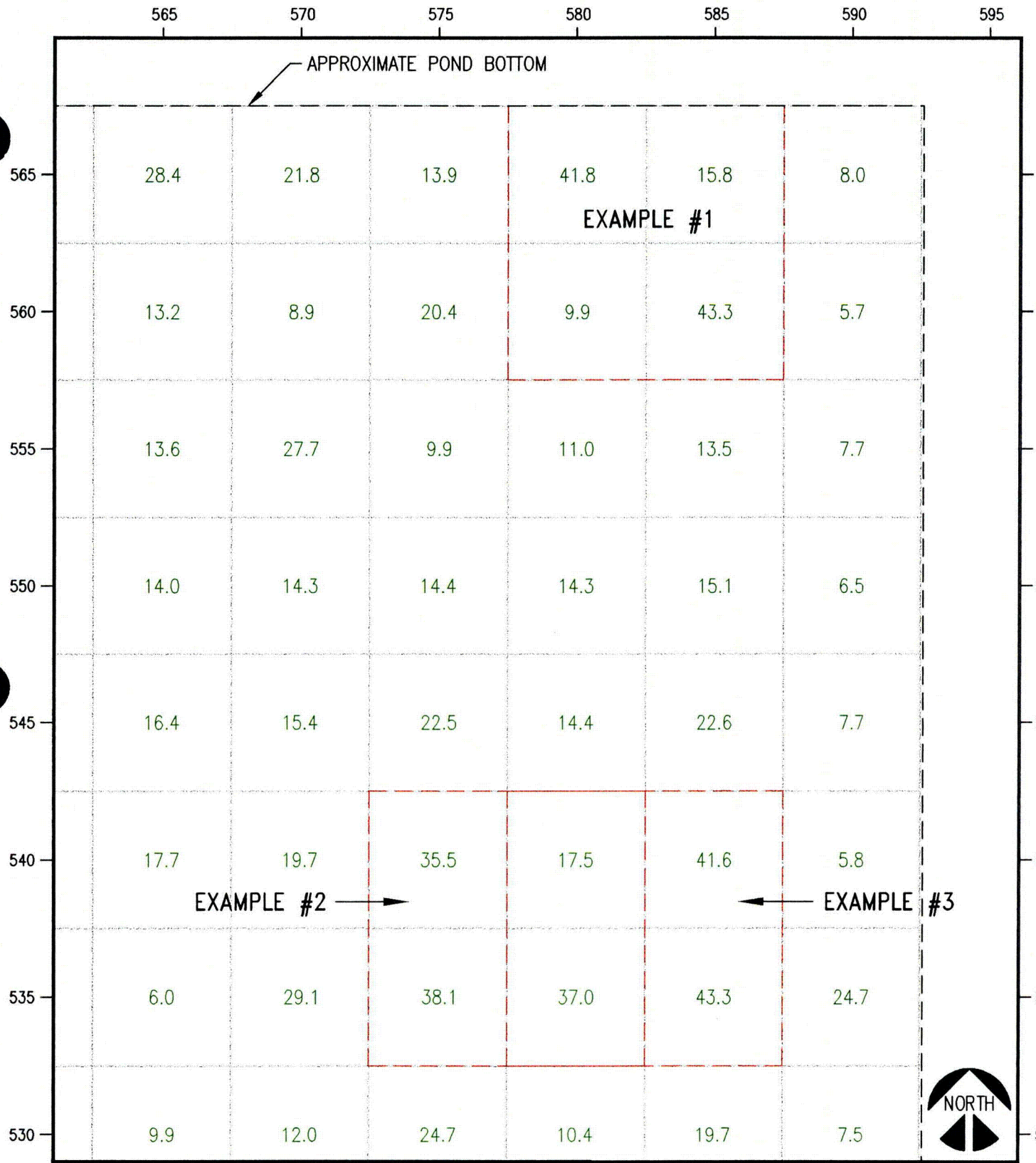
CIMARRON FACILITY
URANIUM WASTE POND #2 - SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 6 Foot Grid
Average Soil Activity
0 to 6' Soil Depth

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	2/16/98

DRWN. BY	DATE	SCALE:
JE	1/14/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P2DV-12	0

...\UPOND2\MTR_AVGS\97DEV12A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6 — URANIUM 1 – 94 pCi/g U

120 — URANIUM 95 – 219 pCi/g U

245 — URANIUM > 219 pCi/g U

CIMARRON CORPORATION

CIMARRON FACILITY
URANIUM WASTE POND #2 – SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 9 Foot Grid
Average Soil Activity
0 to 9' Soil Depth

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	2/16/98

DRWN. BY	DATE	SCALE:
JE	1/14/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P2DV–13	0

...\UPOND2\MTR_AVGS\97DEV13A

EXAMPLES #4 & #5

SUBAREA "O"
WASTE POND #1
Total U Sample Calculation for 100 m^2 Elevated Grid Blocks

4.0 Example #4 – Average Concentration Calculation

4.1 5 Meter x 5 Meter x 1 foot Grid Averages (representing a soil volume of 7.5 m^3)

Drawing No. 97P1DV-0 at 0-1' soil depth is used as the reference

285E-425N	*0-1'*	*14 pCi/g*
290E-425N	*0-1'*	*((21)(7.1) + (9)(4))(1/25) = 7.4 pCi/g (see example 5)*
		(where 21 m^2 + 4 m^2 = 25 m)
290E-420N	*0-1'*	*((1.25)(6)/(5)+(3.75)(8)/5)) = 7.5 ^{2} pCi/g*
		(where 1.25 m + 3.75 m = 5 m)
285E-420N	*0-1'*	*(4)(1/25)+(6)(6/25)+(6)(6/25)+(4)(6/25)+(11)(6/25) = 6.6 pCi/g*
		(where 1 m^2 + 6 m^2 + 6 m^2 = 25 m^2)

Drawing No. 97P1DV-1 at 1-2' soil depth is used as the reference

285E-425N	*1'-2'*	*13 pCi/g*
290E-425N	*1'-2'*	*((21)(7.1) + (9)(4))(1/25) = 7.4 pCi/g (see example 5)*
290E-420N	*1'-2'*	*((1.25)(6)/(5)+(3.75)(10/5)) = 9.0 pCi/g*
285E-420N	*1'-2'*	*(15)(1/25)+(4)(6/25)+(6)(6/25)+(8)(6/25)+(7)(6/25) =6.6 pCi/g*

Drawing No. 97P1DV-2 at 2'-3' soil depth is used as the reference

285E-425N	*2'-3'*	*8 pCi/g*
290E-425N	*2'-3'*	*((21)(7.1) + (9)(4))(1/25) = 7.4 pCi/g (see example 5)*
290E-420N	*2'-3'*	*((1.25)(6)/(5)+(3.75)(6/5)) = 6.0 pCi/g*
285E-420N	*2'-3'*	*(5)(1/25)+(8)(6/25)+(8)(6/25)+(7)(6/25)+(7)(6/25) = 7.4 pCi/g*

4.2 5 Meter x 5 Meter x 1 Meter Grid Averages, 0-1 meter soil depth (representing a soil volume of 25 m^3)

285E-425N	*(14 + 13 + 8)/3 = 11.7 pCi/g*
290E-425N	*(7.4 + 7.4 + 7.4)/3 = 7.4 pCi/g*
290E-420N	*(7.5 + 9.0 +6.0)/3 = 7.5 pCi/g*
285E-420N	*(6.6 + 6.6 + 7.4)/3= 6.9 pCi/g*

The calculated average concentrations are shown on Drawing No. 97PIVDV-10

4.3 10 Meter x 10 Meter x 1 Meter Grid Average at the 0-1 Meter Soil Depth (representing a soil volume of 100 m^3)

(11.7 + 7.4 + 7.5 + 6.9)/4 = 8.4

SUBAREA "O"
WASTE POND #1

4.4 5 Meter x 5 Meter x 1 foot Grid Averages (representing a soil volume of 7.5 m^3)

Drawing No. 97P1DV-3 at 3'-4' soil depth is used as the reference

285E-425N	*3'-4'*	*11 pCi/g*
290E-425N	*3'-4'*	*((21)(7.5) + (15)(4))(1/25) = 8.7 pCi/g (see example 5)*
290E-420N	*3'-4'*	*((1.25)(13)/(5)+(3.75)(8)/5)) = 9.3 pCi/g*
285E-420N	*3'-4'*	*(4)(1/25)+(6)(6/25)+(9)(6/25)+(9)(6/25)+(8)(6/25) = 7.8 pCi/g*

Drawing No. 97P1DV-4 at 4'-5' soil depth is used as the reference

285E-425N	*4'-5'*	*4 pCi/g*
290E-425N	*4'-5'*	*((21)(7.5) + (15)(4))(1/25) = 8.7 pCi/g (see example 5)*
290E-420N	*4'-5'*	*((1.25)(13)/(5)+(3.75)(6/5)) = 7.8 pCi/g*
285E-420N	*4'-5'*	*(18)(1/25)+(7)(6/25)+(9)(6/25)+(20)(6/25)+(13)(6/25) = 12.5 pCi/g*

Drawing No. 97P1DV-5 at 5'-6' soil depth is used as the reference

285E-425N	*5'-6'*	*10 pCi/g*
290E-425N	*5'-6'*	*((21)(7.5) + (15)(4)(1/25) = 8.7 pCi/g (see example 5)*
290E-420N	*5'-6'*	*(1.25)(13)/(5)+(3.75)(26)/(5) = 22.8 pCi/g*
285E-420N	*5'-6'*	*(86)(1/25)+(89)(6/25)+(8)(6/25)+(161)(6/25)+(41)(6/25) = 75.2 pCi/g*

4.5 5 Meter x 5 Meter x 1 Meter Grid Averages, 1-2 meter depth (representing a soil volume of 25 m^3)

285E-425N	*(11 + 4 + 10)/3 = 8.3 pCi/g*
290E-425N	*(8.7 + 8.7 + 8.7)/3 = 8.7 pCi/g*
290E-420N	*(9.3 + 7.8 + 22.8)/3 = 13.3 pCi/g*
285E-420N	*(7.8 + 12.5 + 75.2)/3 = 31.8 pCi/g*

The calculated average concentrations are shown on Drawing No. 97PIDV-11

4.6 10 Meter x 10 Meter x 1 Meter Grid Average at the 1-2 Meter Soil Depth, (representing a soil volume of 100 m^3)

(8.3 + 8.7 + 13.3 + 31.8)/4=15.6

AREA "O"
WASTE POND #1

4.7 5 Meter x 5 Meter x 1 foot Grid Averages (representing a soil volume of 7.5 m^3)

Drawing No. 97P1DV-6 at 6'-7' depth is used as the reference

285E-425N	*6'-7'*	*no data*
290E-425N	*6'-7'*	*((21)(8.2) + (36)(4))(1/25) = 12.6 pCi/g (see example 5)*
290E-420N	*6'-7'*	*(1.25)(16)/(5)+(3.75)(19)/(5) = 18.3 pCi/g*
285E-420N	*6'-7'*	*(163)(6.25/25)+(129)(6.25/25)+(88)(6.25/25)+(89)(6.25/25) = 117.2 pCi/g*

Drawing No. 97P1DV-7 at 7'-8' depth is used as the reference

285E-425N	*7'-8'*	*no data*
290E-425N	*7'-8'*	*((21) (8.2) + (36)(4))(1/25) = 12.6 pCi/g (see example 5))*
290E-420N	*7'-8'*	*(1.25)(16)/(5)+(3.75)(19)/(5) = 18.3 pCi/g*
285E-420N	*7'-8'*	*(57)(6.25/25)+(49)(6.25/25)+(47)(6.25/25)+(36)(6.25/25) = 47.3 pCi/g*

Drawing No. Map 97P1DV-8 at 8'-9' depth is used as the reference

285E-425N	*8'-9'*	*no data*
290E-425N	*8'-9'*	*((21)(8.2) + (36)(4))(1/25) = 12.6 pCi/g (see example 5))*
290E-420N	*8'-9'*	*(1.25)(16)/(5)+(3.75)(19)/(5) = 18.3 pCi/g*
285E-420N	*8'-9'*	*(27)(6.25/25)+(29)(6.25/25)+(37)(6.25/25)+(36)(6.25/25) = 32.3 pCi/g*

Drawing No. 97P1DV-9 at 9'-10' depth is used as the reference

285E-425N	*9'-10'*	*no data*
290E-425N	*9'-10'*	*no data*
290E-420N	*9'-10'*	*32.0 pCi/g*
285E-420N	*9'-10'*	*(21)(6.25/25)+(12)(6.25/25)+(22)(6.25/25)+(31)(6.25/25) = 21.5 pCi/g*

4.8 5 Meter x 5 Meter x 1 Meter Grid Averages at 2-3 Meter Depth (representing a soil volume of 25 m^3)

Drawing No. 97P1DV-12

285E-425N	*No Data*
290E-425N	*(12.6 + 12.6 + 12.6)/3 = 12.6 pCi/g*
290E-420N	*(18.3 + 18.3 +18.3 + 32.0)/4 = 21.7 pCi/g*
285E-420N	*(117.2 + 47.3 + 32.3 + 21.5)/4 = 54.6 pCi/g*

The calculated average concentrations are shown on Drawing No. 97PIDV-12

SUBAREA "O"
WASTE POND #1

4.9 10 Meter x 10 Meter x 1 Meter Grid Average at the 2-3 Meter Grid Depth (representing a soil volume of 100 m^3)

(0 + 12.6 + 21.7 + 54.6)/3 = 29.6

4.10 0-2 Meter Average for each 5 x 5 Meter grid (representing a soil volume of 50 m^3)

285E-425N	*(11.7 + 8.3)/2 = 10.0*
290E-425N	*(7.4 + 8.7)/2 = 8.1*
290E-420N	*(7.5 + 13.3)/2 = 10.4*
285E-420N	*(6.9 + 31.8)/2 = 19.4*

The calculated average concentrations are shown on Drawing No. 97PIDV-13. The guideline value for this soil volume is 102 pCi/g above background.

4.11 0-3 Meter Average for each 5 x 5 Meter grid (representing a soil volume of 75 m^3)

285E-425N	*(11.7 + 8.3 + 0)/2 = 10.0*
290E-425N	*(7.4 + 8.7 +12.6)/3 = 9.6*
290E-420N	*(7.5 + 13.3 + 21.7)/3 = 14.2*
285E-420N	*(6.9 + 31.9 + 54.6)/3 = 31.1*

The calculated average concentrations are shown on Drawing No. 97PIDV-14. The guideline value for this soil volume is 96 pCi/g above background.

4.12 10 Meter x 10 Meter Grid Average 0-2 Meter Depth (representing a soil volume of 200 m^3)

(10.0 + 8.1 + 10.4 + 19.4)/4 = 12.0 pCi/g

The guideline value for this soil volume is 69 pCi/g above background

4.13 10 Meter x 10 Meter Grid Average 0-3 Meter Depth (representing a soil volume of 300 m^3)

(10.0 + 9.6 + 14.2 + 31.1)/4 = 16.2 pCi/g

The guideline value for this soil volume is 38 pCi/g above background

AREA "O"
WASTE POND #1
Total U Sample Calculation for 100 m^2 Elevated Grid Blocks

5.0 Example #5 – Average Concentrations Calculation

5.1 5 Meter x 5 Meter x 1 foot Grid Averages (representing a soil volume of 7.5 m^3)

Drawing No. 97P1DV-0 at 0-1' soil depth is used as the reference

290E-430N	*0-1'*	*((6)(15) + ((7+7)/2)(5.75) + (7.1)(4.25))(1/25) = 6.4 pCi/g*
		(where 15 m^2 + 5.75 m^2 + 4.25 m^2= 25 m^2)
290E-425N	*0-1'*	*((21)(7.1) + (9)(4))(1/25) = 7.4 pCi/g*
		(where 21 m^2 + 4 m^2 = 25 m^2)
295E-425N	*0-1'*	*((9)(7.1) + ((4 + 10 + 4 + 6)/4)(16))(1/25) = 6.4 pCi/g*
		(where 9 m^2 + 16 m^2 = 25 m^2)
295E-430N	*0-1'*	*((17.5)(16) + (6.5)(5) + (7.1)(1.0))(1/25) = 12.8 pCi/g*
		(where 17.5 m^2 + 6.5 m^2 + 1 m^2 = 25 m^2)

Drawing No. 97P1DV-1 at 1-2' soil depth is used as the reference

290E-430N	*0-1'*	*((7)(15) + ((7+7)/2)(5.75) + (7.1)(4.25))(1/25) = 7.0 pCi/g*
290E-425N	*0-1'*	*((21)(7.1) + (9)(4))(1/25) = 7.4 pCi/g*
295E-425N	*0-1'*	*((9)(7.1) + ((4 + 6 + 9 + 7)/4)(16))(1/25) = 6.7 pCi/g*
295E-430N	*0-1'*	*((17.5)(6) + (6.5)(5) + (7.1)(1.0))(1/25) = 5.8 pCi/g*

Drawing No. 97P1DV-2 at 2'-3' soil depth is used as the reference

290E-430N	*0-1'*	*((7)(15) + ((7+7)/2)(5.75) + (7.1)(4.25))(1/25) = 7.0 pCi/g*
290E-425N	*0-1'*	*((21)(7.1) + (9)(4))(1/25) = 7.4 pCi/g*
295E-425N	*0-1'*	*((9)(7.1) + ((4 + 8 + 14 + 10)/4)(16))(1/25) = 8.3 pCi/g*
295E-430N	*0-1'*	*((17.5)(8) + (6.5)(5) + (7.1)(1.0))(1/25) = 7.2 pCi/g*

5.2 5 Meter x 5 Meter x 1 Meter Grid Averages, 0-1 Meter Soil Depth (representing a soil volume of 25 m^3

290E-430N	*(6.4 + 7.0 + 7.0)/3 = 6.8 pCi/g*
290E-425N	*(7.4 + 7.4 + 7.4)/3 = 7.4 pCi/g*
295E-425N	*(6.4 + 6.7 +8.3)/3 = 7.1 pCi/g*
295E-430N	*(12.8 + 5.8 + 7.2)/3 = 8.6 pCi/g*

*The calculated average concentrations are shown on Drawing No. 97PIDV-*10

5.3 10 Meter x 10 Meter x 1 Meter Grid Average at the 0-1 Meter Soil Depth (representing a soil volume of 100 m^3)

(6.8 + 7.4 + 7.1 + 8.6)/4 = 7.5

AREA "O"
WASTE POND #1

5.4 5 Meter x 5 Meter x 1 foot Grid Averages (representing a soil volume of 7.5 m^3)

Drawing No. 97P1DV-3 at 3'-4' soil depth is used as the reference

290E-430N	*3'-4'*	*((8)(15) + ((117+10)/2)(5.75) + (7.5)(4.25))(1/25) = 20.7 pCi/g*
290E-425N	*3'-4'*	*((21)(7.5) + (15)(4))(1/25) = 8.7 pCi/g*
295E-425N	*3'-4'*	*((9)(7.5) + ((56 + 6 + 8 +7)/4)(16))(1/25) = 15 pCi/g*
295E-430N	*3'-4'*	*((17.5)(8) + (6.5)(11) + (7.1)(1.0))(1/25) = 8.8 pCi/g*

Drawing No. 97P1DV-4 at 4'-5' soil depth is used as the reference

290E-430N	*4'-5'*	*((8)(15) + ((117+10)/2)(5.75) + (7.5)(4.25))(1/25) = 20.7 pCi/g*
290E-425N	*4'-5'*	*((21)(7.5 + (15)(4))(1/25) = 8.7 pCi/g*
295E-425N	*4'-5'*	*((9)(7.5) + ((56 + 10 + 8 + 16)/4)(16))(1/25) = 17.1 pCi/g*
295E-430N	*4'-5'*	*((17.5)(6) + (6.5)(11) + (7.5)(1.0))(1/25) = 7.4 pCi/g*

Drawing No. 97P1DV-5 at 5'-6' soil depth is used as the reference

290E-430N	*5'-6'*	*((9)(15) + ((117+10)/2)(5.75) + (7.5)(4.25))(1/25) = 21.3 pCi/g*
290E-425N	*5'-6'*	*((21)(7.5 + (15)(4))(1/25) = 8.7 pCi/g*
295E-425N	*5'-6'*	*((9)(7.5) + ((56 + 35 + 38 + 117)/4)(16))(1/25) = 42.0 pCi/g*
295E-430N	*5'-6'*	*((17.5)(18) + (6.5)(11) + (7.5)(1.0))(1/25) = 15.8 pCi/g*

5.5 5 Meter x 5 Meter x 1 Meter Grid Averages, 1-2 Meter Depth Averages (representing a soil volume of 25 m^3)

290E-430N	*(20.7 + 20.7 + 21.3)/3 = 20.9 pCi/g*
290E-425N	*(8.7 + 8.7 + 8.7)/3 = 8.7 pCi/g*
295E-425N	*(15 + 17.1 + 42.0)/3 = 24.7 pCi/g*
295E-430N	*(8.8 + 7.4 + 15.8)/3 = 10.7 pCi/g*

The calculated average concentrations are shown on Drawing No. 97PIDV-11

5.6 10 Meter x 10 Meter x 1 Meter Grid Average at the 1-2 Meter Soil Depth (representing a soil volume of 100 m^3)

(20.9 + 8.7 + 24.7 + 10.7)/4 = 16.3 pCi/g

AREA "O"
WASTE POND #1

5.7 5 Meter x 5 Meter x 1 foot Grid Averages (representing a soil volume of 7.5 m^3)

Drawing No. 97P1DV-6 at 6'-7' soil depth is used as the reference

290E-430N	*6'-7'*	*(((138 + 11)/2)(20.75) + (8.2)(4.25))(1/25) = 63.2 pCi/g*
290E-425N	*6'-7'*	*((21)(8.2) + (36)(4))(1/25) = 12.6 pCi/g*
295E-425N	*6'-7'*	*((9)(8.2) + ((24 + 31 + 97)/3)(16))(1/25) = 35.3 pCi/g*
295E-430N	*6'-7'*	*((17.5)(25) + (6.5)(8) + (8.2)(1.0))(1/25) = 19.9 pCi/g*

Drawing No. 97P1DV-7 at 7'-8' soil depth is used as the reference

290E-430N	*7'-8'*	*(((138 + 11)/2)(20.75) + (8.2)(4.25))(1/25) = 63.2 pCi/g*
290E-425N	*7'-8'*	*((21)(8.2) + (36)(4))(1/25) = 12.6 pCi/g*
295E-425N	*7'-8'*	*((9)(8.2) + ((24 + 59 + 141)/3)(16))(1/25) = 50.7 pCi/g*
295E-430N	*7'-8'*	*((17.5)(25) + (6.5)(8) + (8.2)(1.0))(1/25) = 19.9 pCi/g*

Drawing No. 97P1DV-8 at 8'-9' soil depth is used as the reference

290E-430N	*8'-9'*	*(((138 + 11)/2)(20.75) + (8.2)(4.25))(1/25) = 63.2 pCi/g*
290E-425N	*8'-9'*	*((21)(8.2) + (36)(4))(1/25) = 12.6 pCi/g*
295E-425N	*8'-9'*	*((9)(8.2) + ((24 + 55 + 89)/3)(16))(1/25) = 38.8 pCi/g*
295E-430N	*8'-9'*	*((17.5)(25) + (6.5)(8) + (8.2)(1.0))(1/25) = 19.9 pCi/g*

Drawing No. 97P1DV-9 at 9'-10' soil depth is used as the reference

290E-430N	*9'-10'*	*no data*
290E-425N	*9'-10'*	*no data*
295E-425N	*9'-10'*	*no data*
295E-430N	*9'-10'*	*15 pCi/g*

5.8 5 Meter x 5 Meter x 1 Meter Grid Averages at 2-3 Meter Depth (representing a soil volume of 25 m^3)

290E-430N	*(63.2 + 63.2 + 63.2)/3 = 63.2 pCi/g*
290E-425N	*(12.6 + 12.6 + 12.6+ 0)/3 = 12.6 pCi/g*
295E-425N	*(35.3 + 50.7 +38.8 + 0)/3 = 41.6 pCi/g*
295E-430N	*(0 + 0 + 0 + 15)/1 = 15 pCi/g*

The calculated average concentrations are shown on Drawing No. 97PIDV-12

AREA "O"
WASTE POND #1

5.9 10 Meter x 10 Meter x 1 Meter Grid Average at 2-3 Meter Soil Depth (representing a soil volume of 100 m^3)

(63.2 + 12.6 + 41.6 + 15)/4 = 33.1 pCi/g

5.10 0-2 Meter Average for each 5 x 5 Meter grid (representing a soil volume of 50 m^3)

290E-430N	*(6.8 + 20.9)/2 = 13.9 pCi/g*
290E-425N	*(7.4 + 8.7)/2 = 8.1 pCi/g*
295E-425N	*(7.1 + 24.7)/2 = 15.9 pCi/g*
295E-430N	*(8.6 + 10.7)/2 = 9.6 pCi/g*

The calculated average concentrations are shown on Drawing No. 97PIDV-13. The guideline value for this soil volume is 102 pCi/g above background.

5.11 0-3 Meter Average for each 5 x 5 Meter grid (representing a soil volume of 75 m^3)

290E-430N	*(6.8 + 20.9 + 63.2)/3 = 30.3 pCi/g*
290E-425N	*(7.4 + 8.7 + 12.6)/3 = 9.6 pCi/g*
295E-425N	*(7.1 + 24.7 + 41.6)/3 = 24.5 pCi/g*
295E-430N	*(8.6 + 10.7 +15)/3 = 12.6 pCi/g*

The calculated average concentrations are shown on Drawing No. 97PIDV-14. The guideline value for this soil volume is 96 pCi/g above background.

5.12 10 Meter x 10 Meter Grid Average 0-2 Meter Depth (representing a soil volume of 200 m^3)

(13.9 + 8.1 + 15.9 + 9.6)/4 = 11.9 pCi/g

The guideline value for the volume of soil is 69 pCi/g above background.

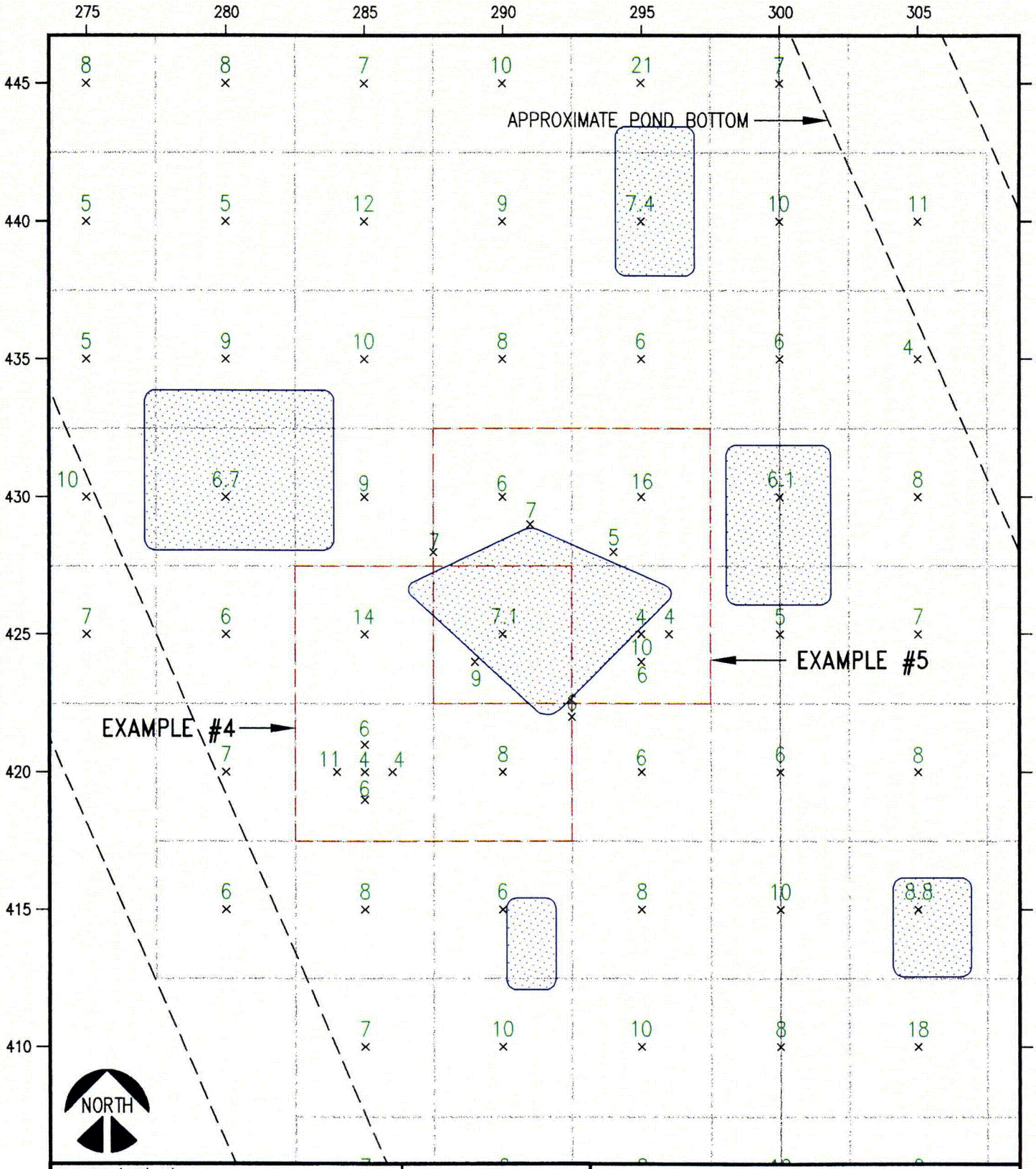
5.13 10 Meter x 10 Meter Grid Average 0-3 Meter Depth (representing a soil volume of 300 m^3)

(30.3 + 9.6 + 24.5 + 12.6)/4 = 19.3 pCi/g

The guideline value for this volume of soil is 38 pCi/g above background.

Drawing of

Examples #4 - #5



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6	URANIUM 1 - 94 pCi/g U
120	URANIUM 95 - 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK - NO SAMPLE

CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III - SUB-AREA O
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS - SOIL
SOIL SAMPLE ALIQUOT: 0 - 1'

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1DV-0	0

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
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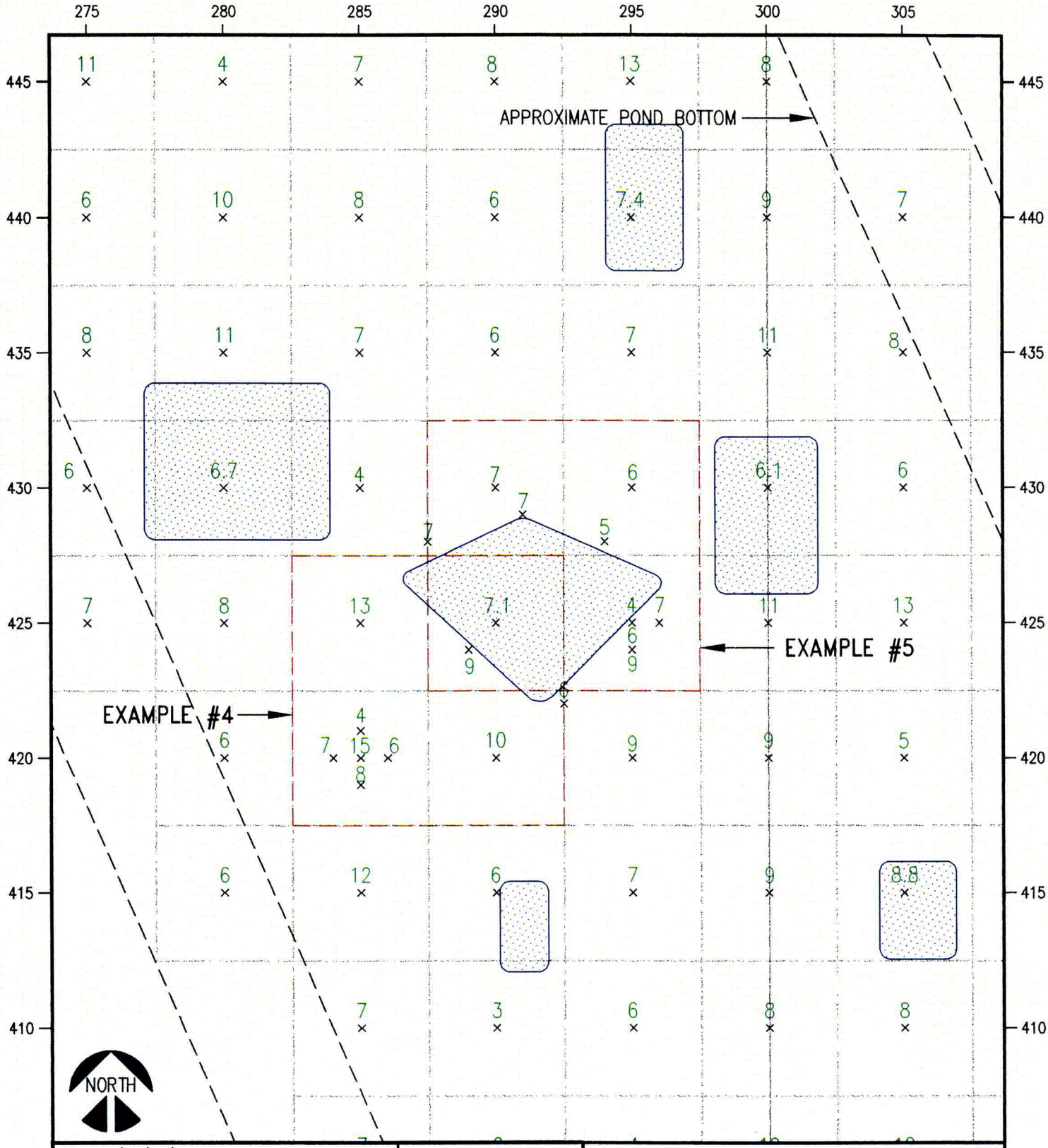


URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

CIMARRON CORPORATION

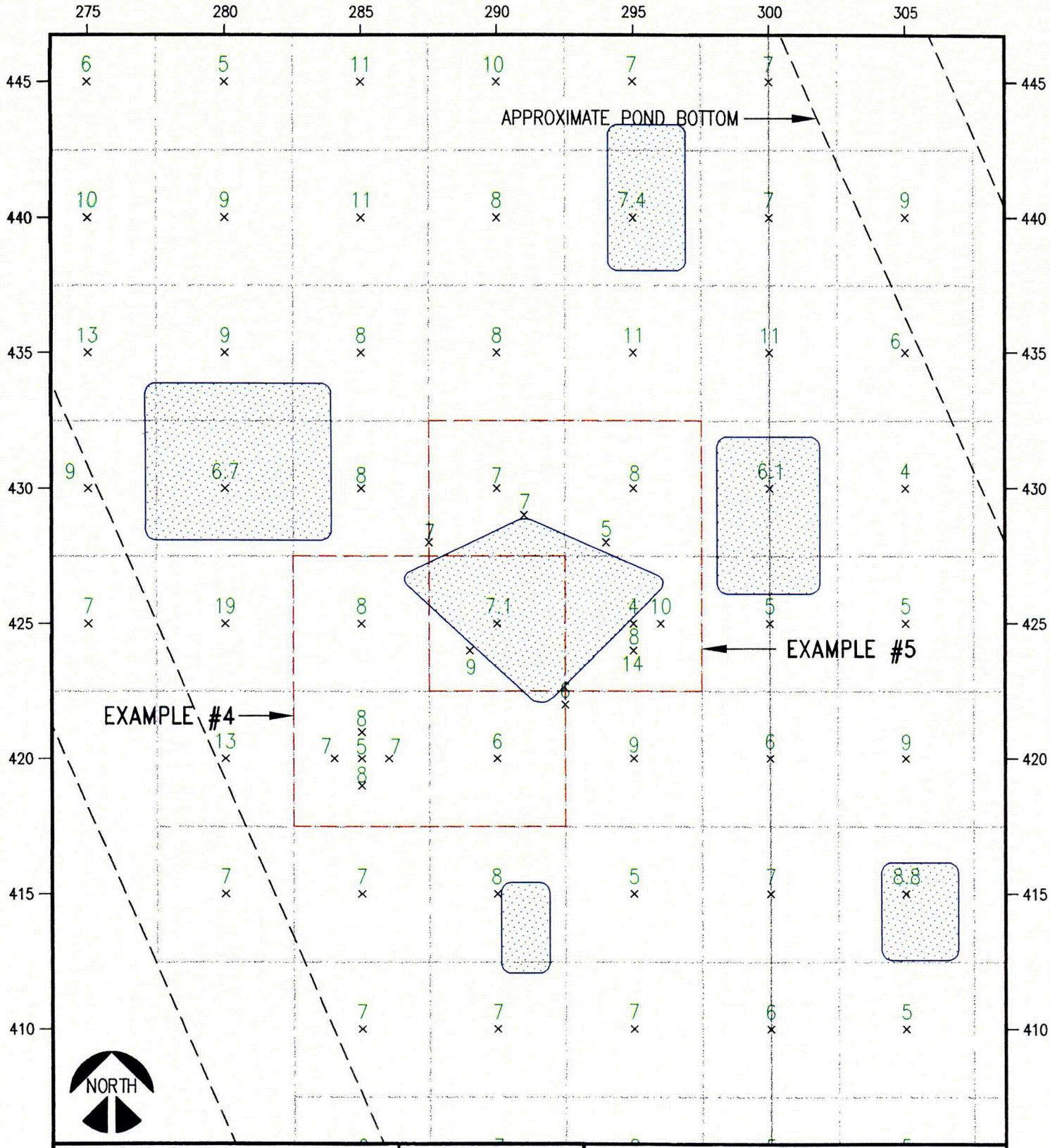
CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 1' – 2'

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	3/2/98

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1DV-1	0

...\UPOND1\POST-REM\97DEV-1A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

CIMARRON CORPORATION

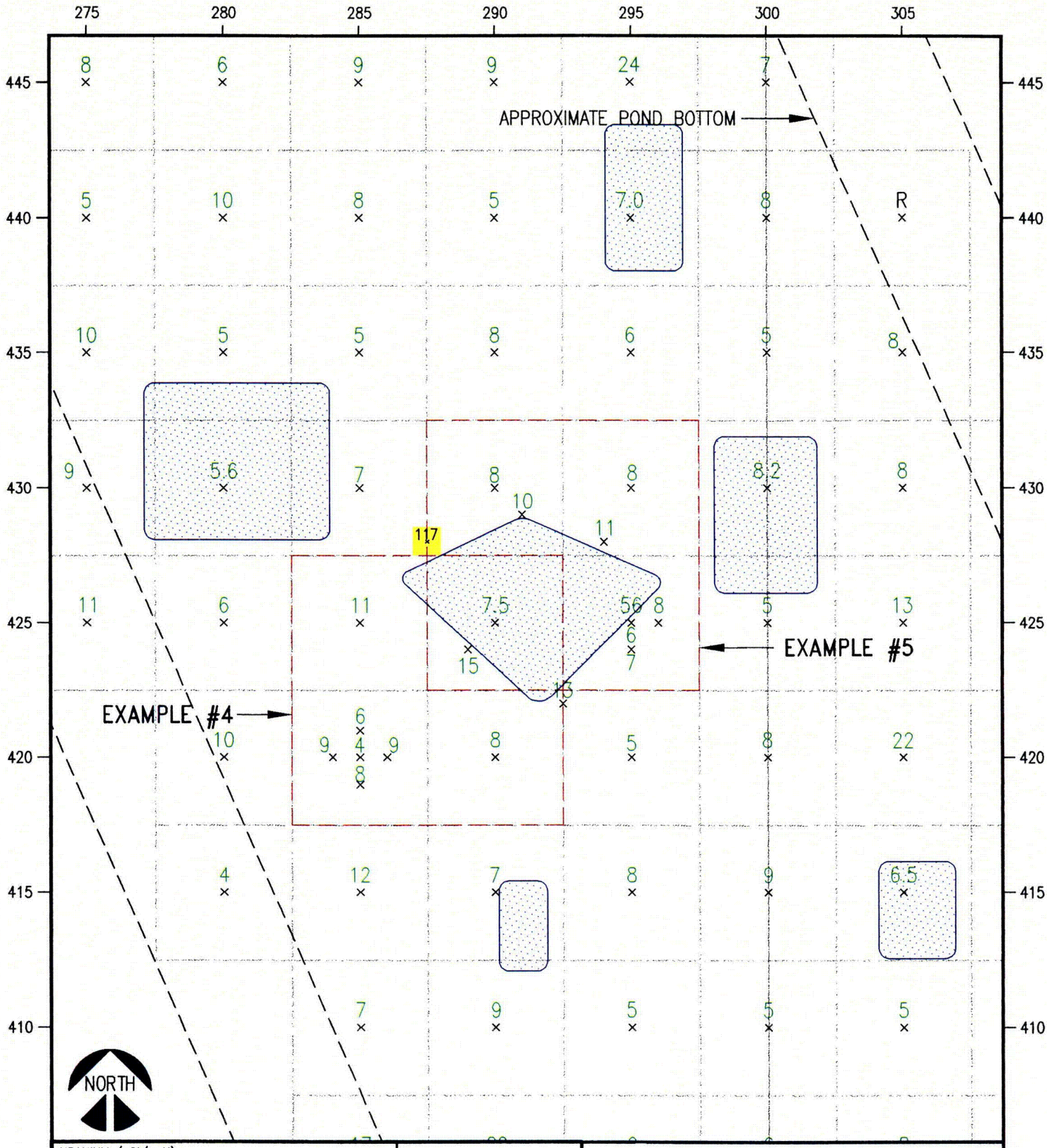
CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 2' – 3'

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	3/2/98

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1DV-2	0

...\UPOND1\POST-REM\97DEV-2A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

CIMARRON CORPORATION

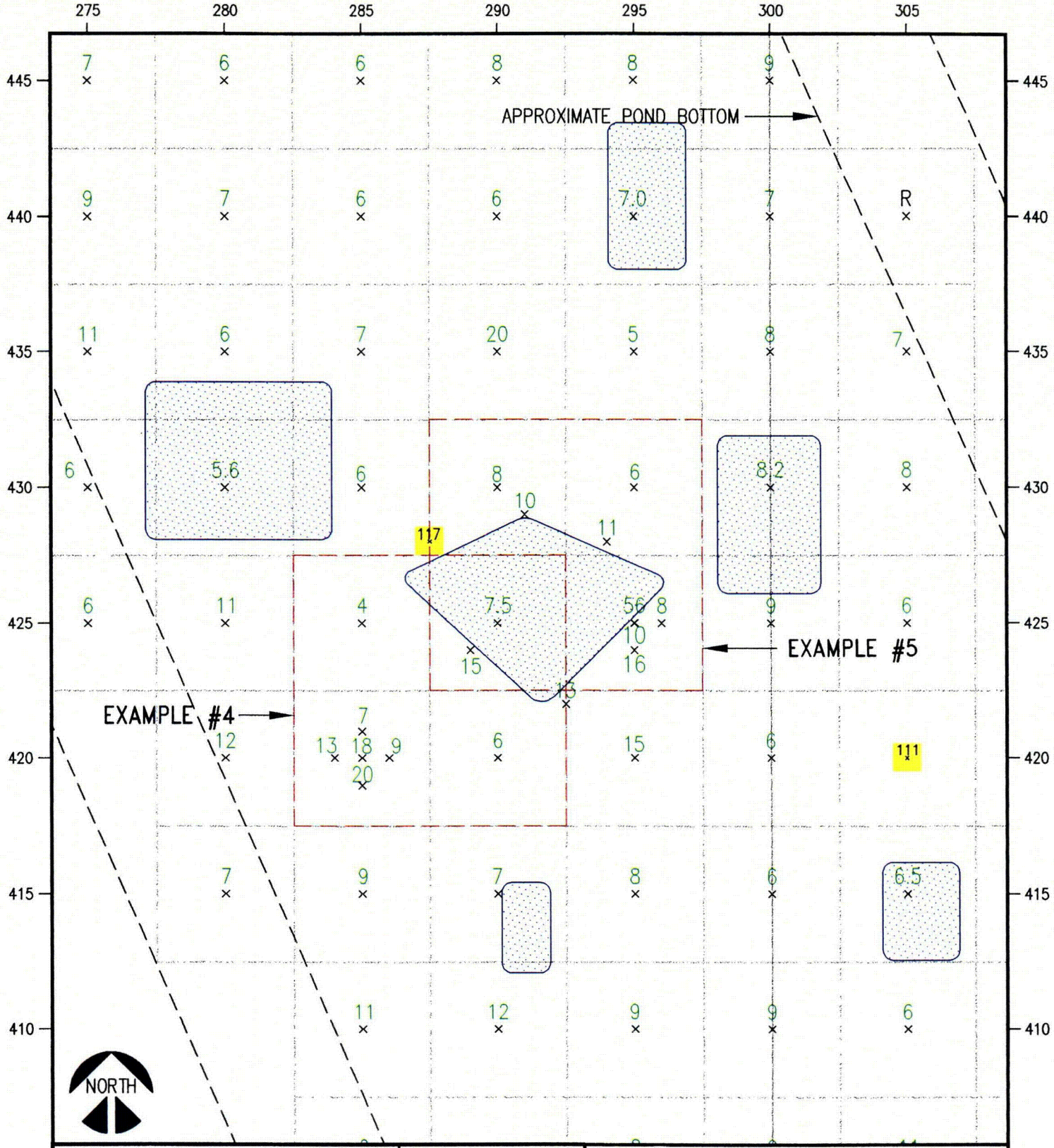
CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 3' – 4'

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	3/2/98

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1DV-3	0

...\UPOND1\POST-REM\97DEV-3A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

CIMARRON CORPORATION

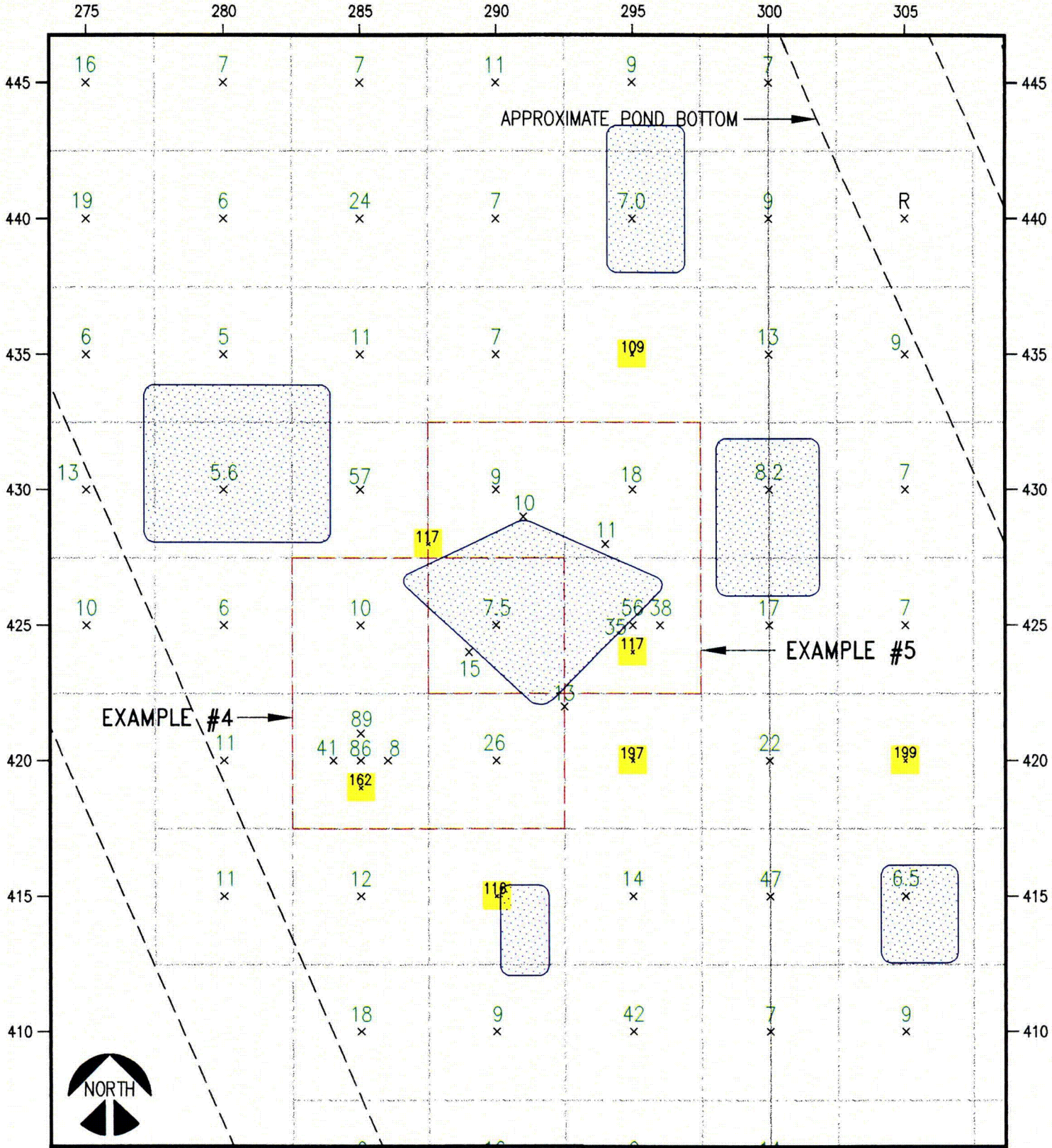
CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 4' – 5'

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	3/2/98

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1DV–4	0

...\UPOND1\POST-REM\97DEV-4A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

CIMARRON CORPORATION

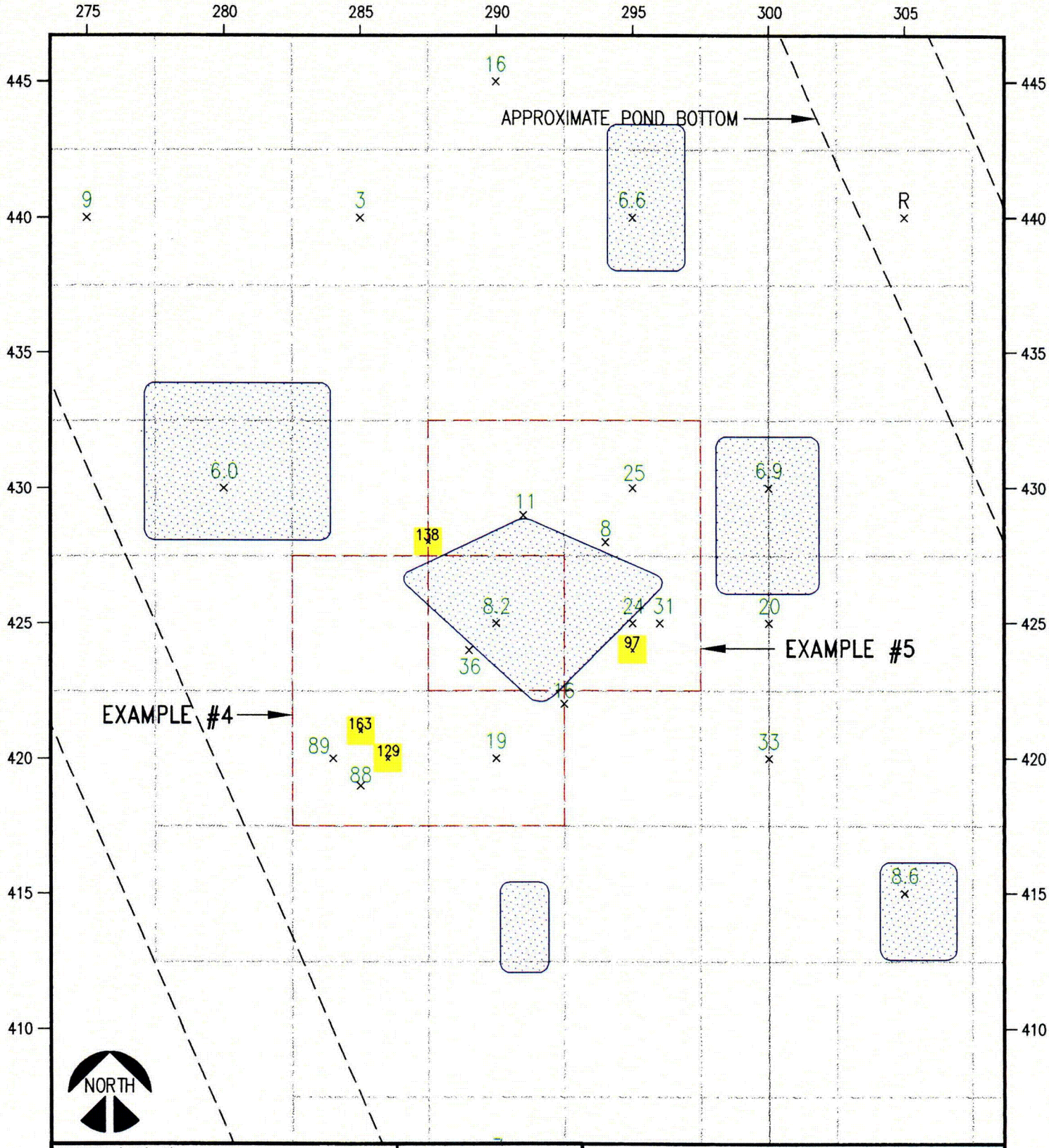
CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 5' – 6'

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	3/2/98

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1DV-5	0

...\UPOND1\POST-REM\97DEV-5A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

CIMARRON CORPORATION

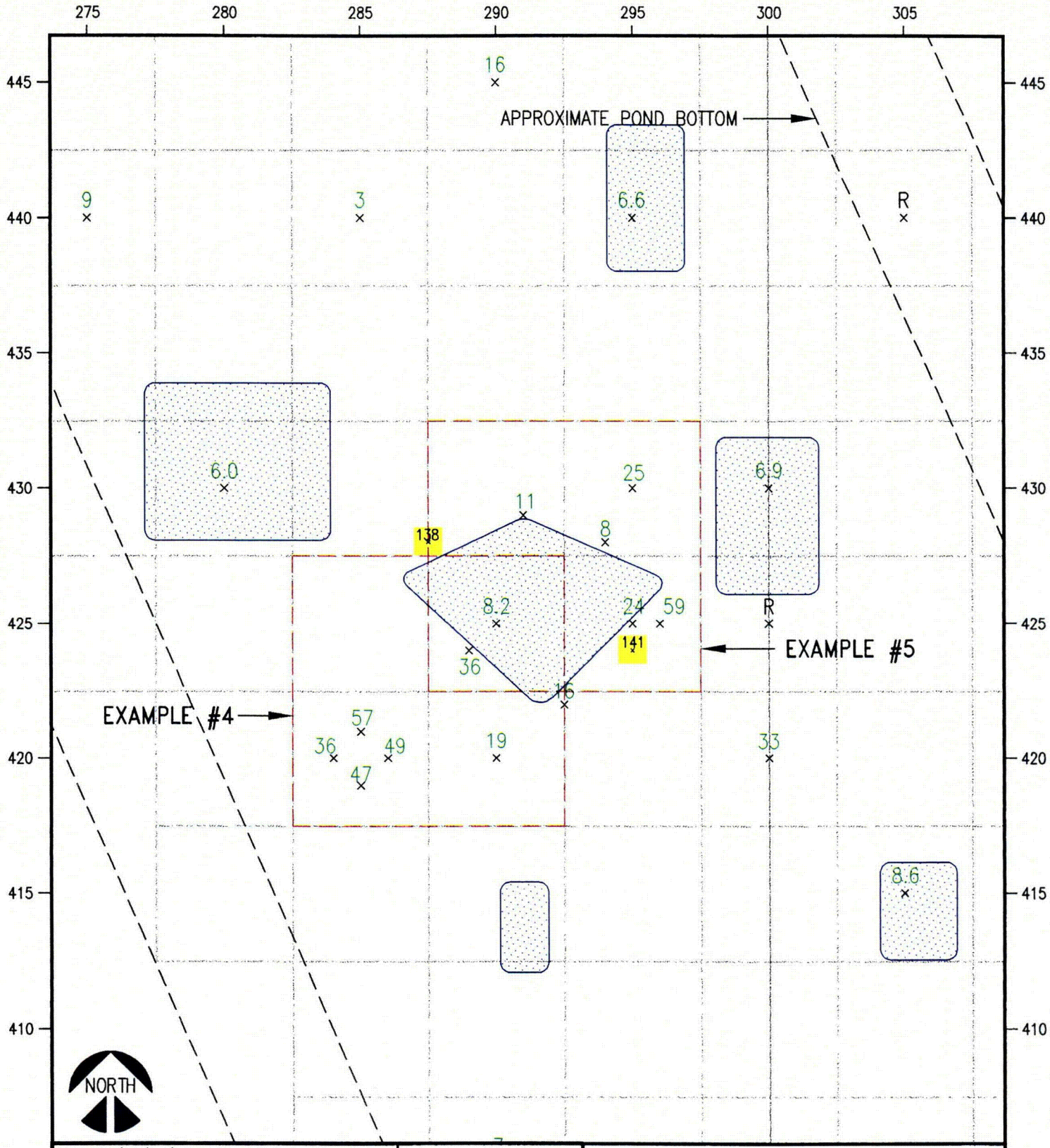
CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 6' – 7'

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	3/2/98

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1DV-6	0

...\UPOND1\POST-REM\97DEV-6A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

CIMARRON CORPORATION

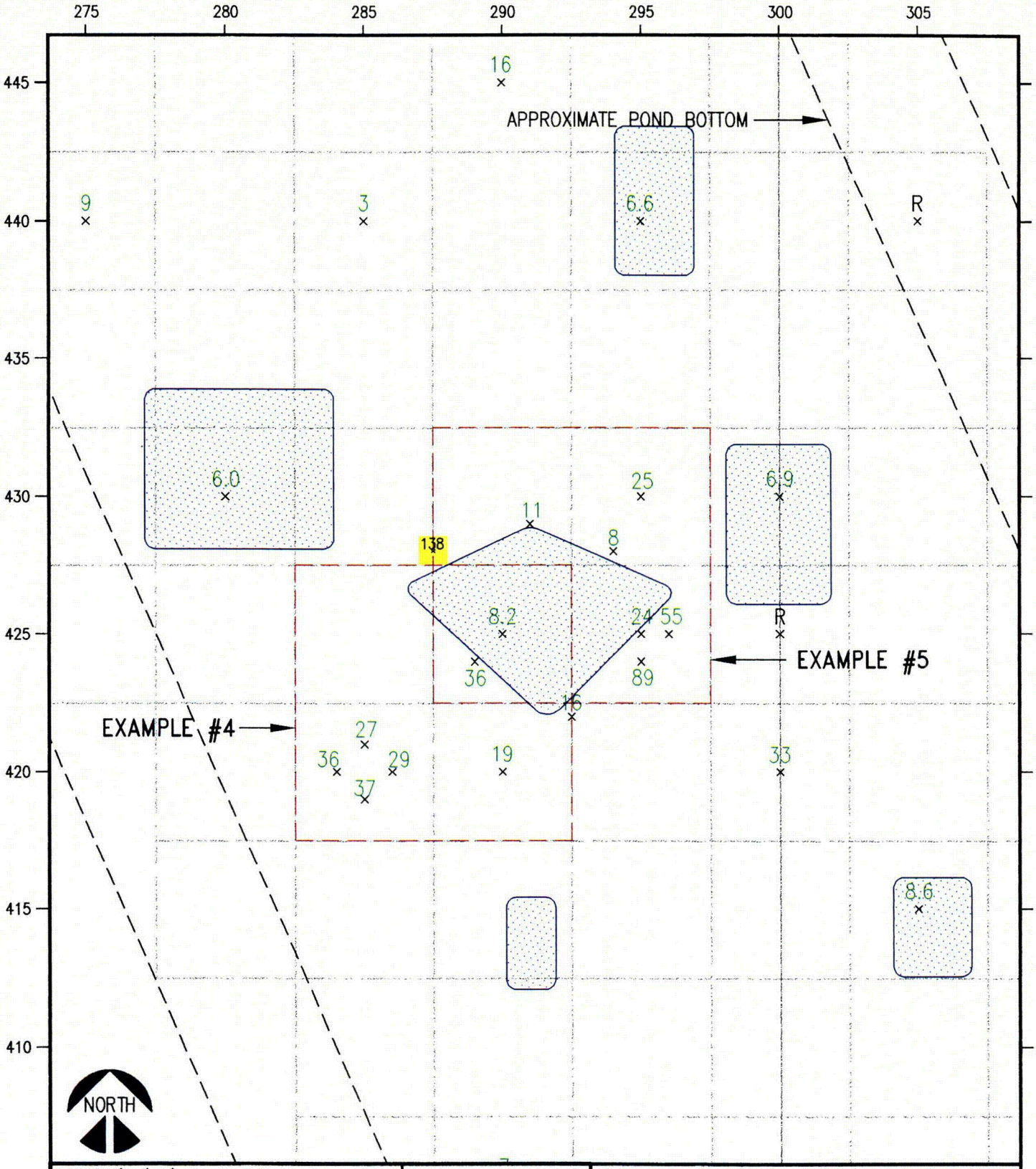
CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 7' – 8'

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	3/2/98

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1DV-7	0

...\UPOND1\POST-REM\97DEV-7A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

CIMARRON CORPORATION

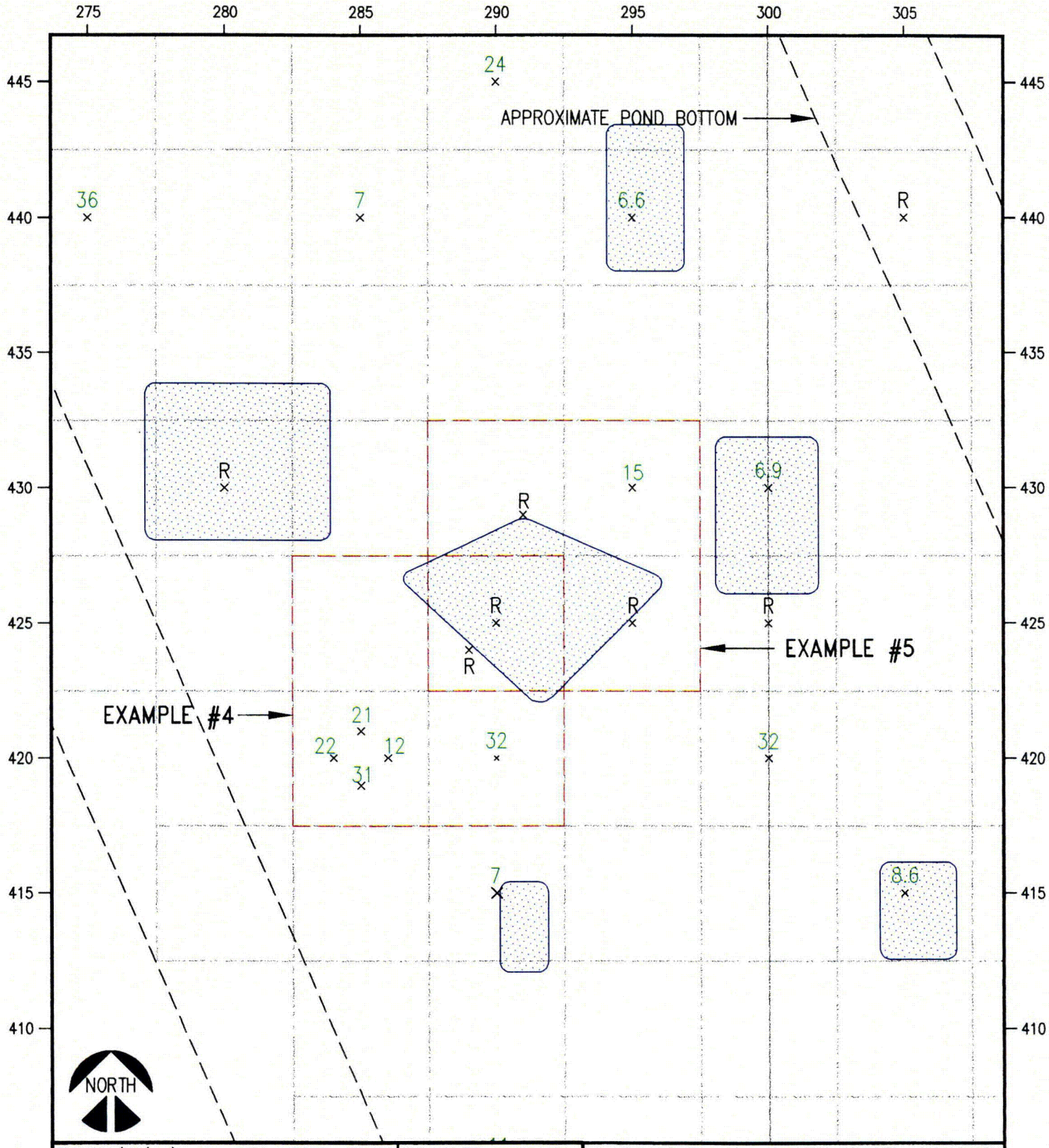
CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 8' – 9'

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	3/2/98

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1DV-8	0

...\UPOND1\POST-REM\97DEV-8A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

CIMARRON CORPORATION

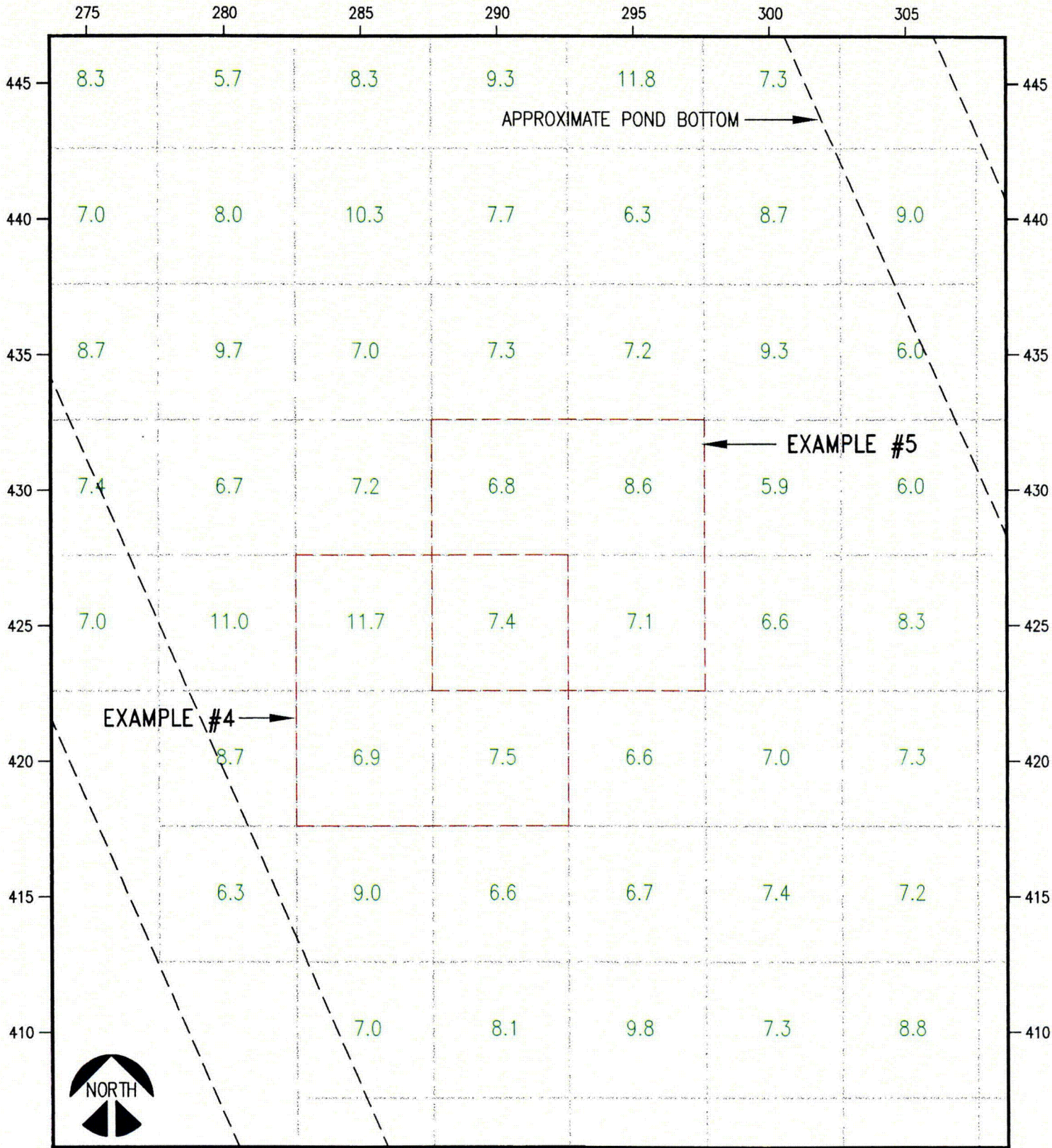
CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 9' – 10'

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	3/2/98

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1DV-9	0

...\UPOND1\POST-REM\97DEV-9A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6	URANIUM 1 - 94 pCi/g U
120	URANIUM 95 - 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK - NO SAMPLE

CIMARRON CORPORATION

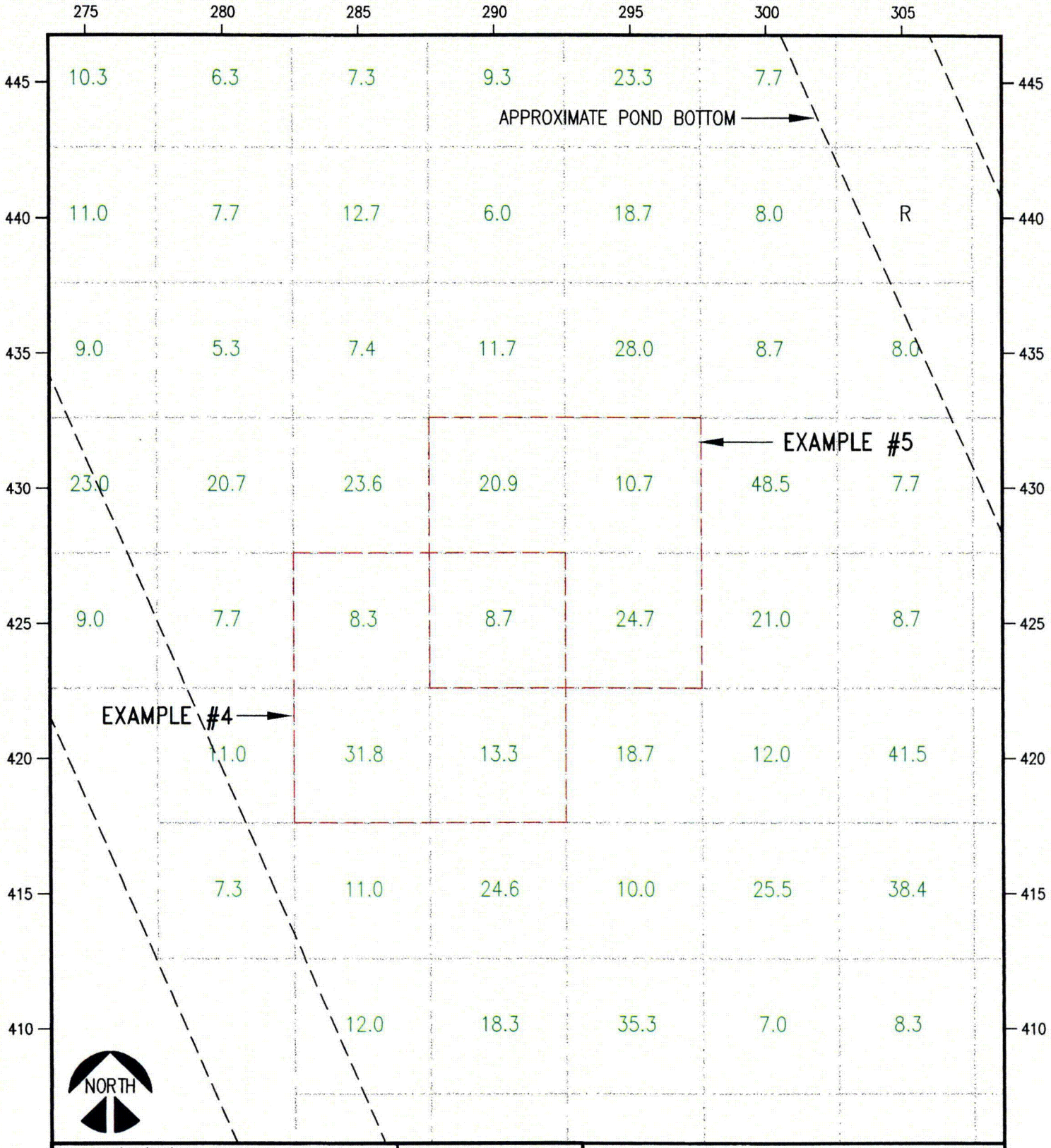
CIMARRON FACILITY
URANIUM WASTE POND #1 - SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 3 Foot Grid
Average Soil Activity
0 to 3' Soil Depth

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	3/2/98

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1DV-10	0

...\UPOND1\POST-REM\97DEV10A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

CIMARRON CORPORATION

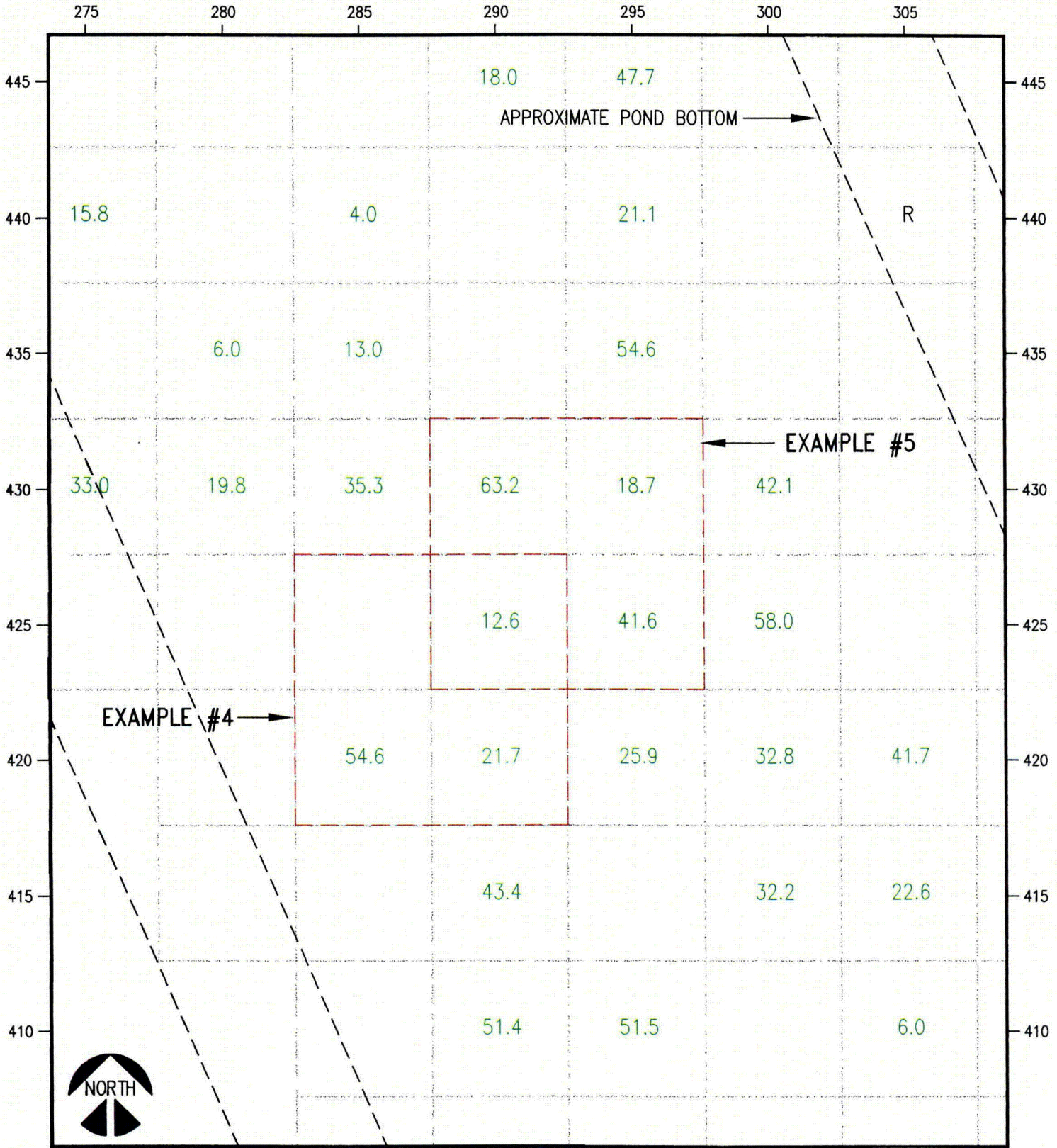
CIMARRON FACILITY
URANIUM WASTE POND #1 – SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 3 Foot Grid
Average Soil Activity
3' to 6' Soil Depth

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	3/2/98

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1DV-11	0

...\UPOND1\POST-REM\97DEV11A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

CIMARRON CORPORATION

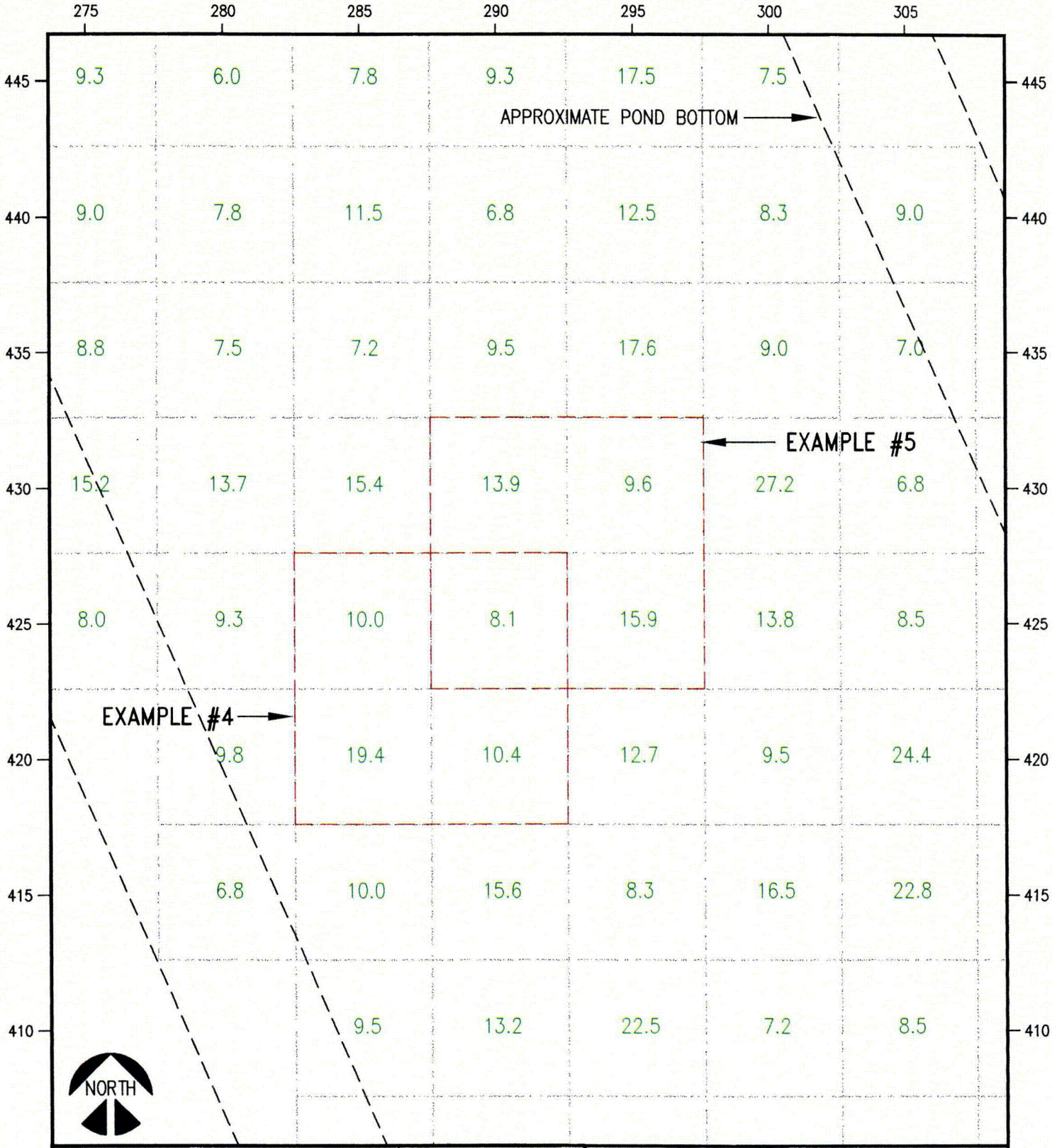
CIMARRON FACILITY
URANIUM WASTE POND #1 – SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 4 Foot Grid
Average Soil Activity
6' to 10' Soil Depth

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	3/2/98

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1DV-12	0

...\UPOND1\POST-REM\97DEV12A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6	URANIUM 1 – 69 pCi/g U
120	URANIUM > 69 pCi/g U

CIMARRON CORPORATION

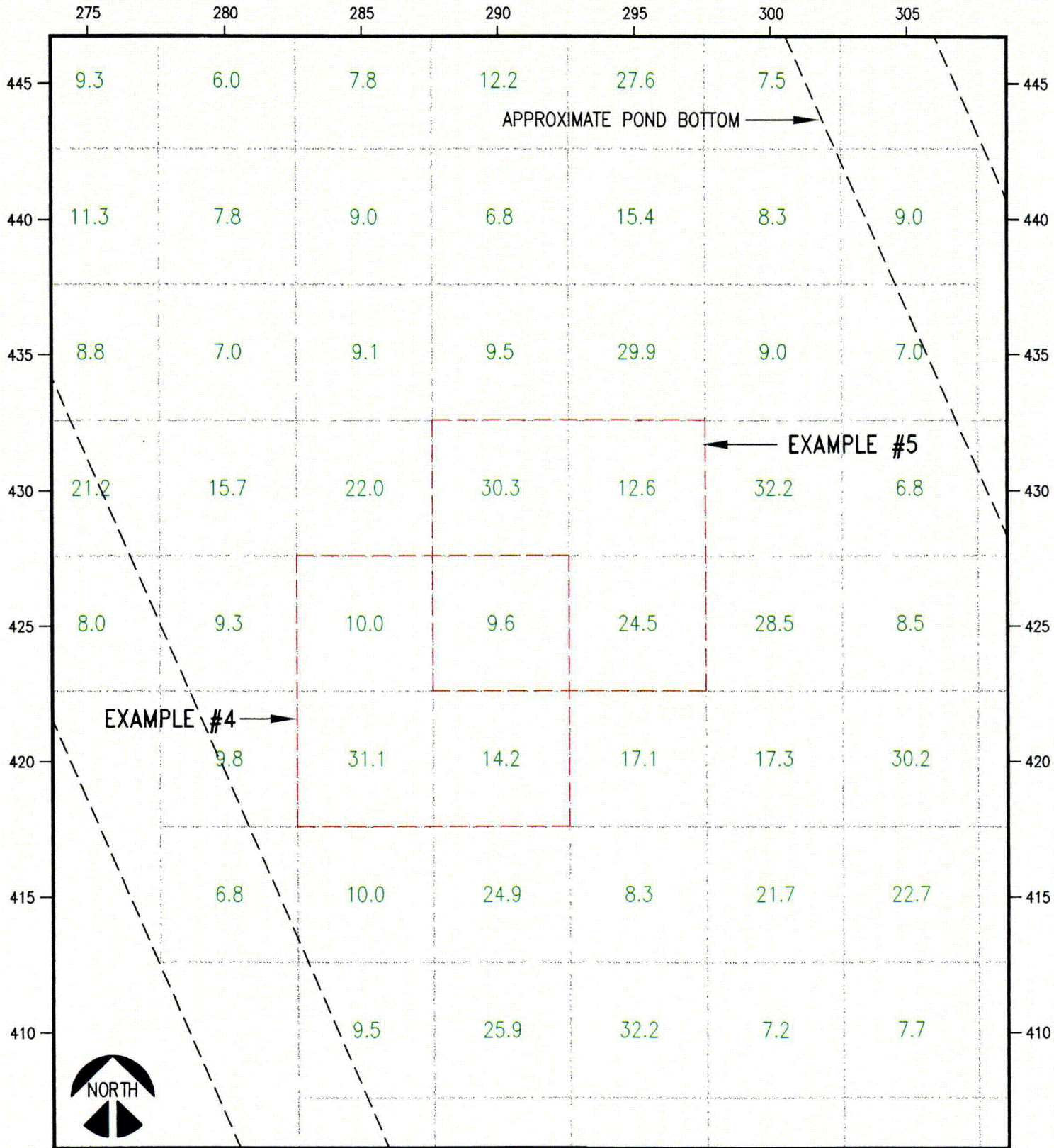
CIMARRON FACILITY
URANIUM WASTE POND #1 – SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 6 Foot Grid
Average Soil Activity
0 to 6' Soil Depth

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	3/2/98

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1DV-13	0

...\UPOND1\POST-REM\97DEV13A



URANIUM (pCi/g U)

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

5 0 5

SCALE IN METERS

LEGEND

6 URANIUM 1 – 69 pCi/g U

120 URANIUM > 69 pCi/g U

CIMARRON CORPORATION

CIMARRON FACILITY
URANIUM WASTE POND #1 – SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 10 Foot Grid
Average Soil Activity
0 to 10' Soil Depth

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	3/2/98

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1DV-14	0

...\UPOND1\POST-REM\97DEV14A

SUB-AREA O

SHADED AREAS SHOW LOCATION OF SOILS REMEDIATED

APPROXIMATE POND BOTTOM

APPROXIMATE BOUNDARY OF URANIUM WASTE POND #1 (BACKFILLED 1978)

NORTH

8 0 8

SCALE IN METERS

NOTES

URANIUM (pCi/G U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

SAMPLES INCLUDE THOSE TAKEN ON A 5 METER X 5 METER GRID & THE OFFSET DATA.

ITEMS B, E, G, H, J AND L ARE DEEP DRILLING RESULTS

LEGEND

6 × URANIUM 1 – 94 pCi/g U

120 × URANIUM 95 – 219 pCi/g U

245 × URANIUM > 219 pCi/g U

25 — 1993 DEEP DRILLING SOIL SAMPLE RESULTS

R × HIT ROCK– NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING RELEASED.	JE	RS	JL	3/2/98

CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 0 – 1'

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97POP1SS–0	0

...\UPOND1\POST–REM\97POP1SS

SUB-AREA O

SHADED AREAS SHOW LOCATION OF SOILS REMEDIATED

APPROXIMATE POND BOTTOM

APPROXIMATE BOUNDARY OF URANIUM WASTE POND #1 (BACKFILLED 1978)

NORTH

8 0 8

SCALE IN METERS

NOTES

URANIUM (pCi/G U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

SAMPLES INCLUDE THOSE TAKEN ON A 5 METER X 5 METER GRID & THE OFFSET DATA.

ITEMS B, E, G, H, J AND L ARE DEEP DRILLING RESULTS

LEGEND

6 × URANIUM 1 – 94 pCi/g U

120 × URANIUM 95 – 219 pCi/g U

245 × URANIUM > 219 pCi/g U

25 × 1993 DEEP DRILLING SOIL SAMPLE RESULTS

R × HIT ROCK– NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING RELEASED.	JE	RS	JL	3/2/98

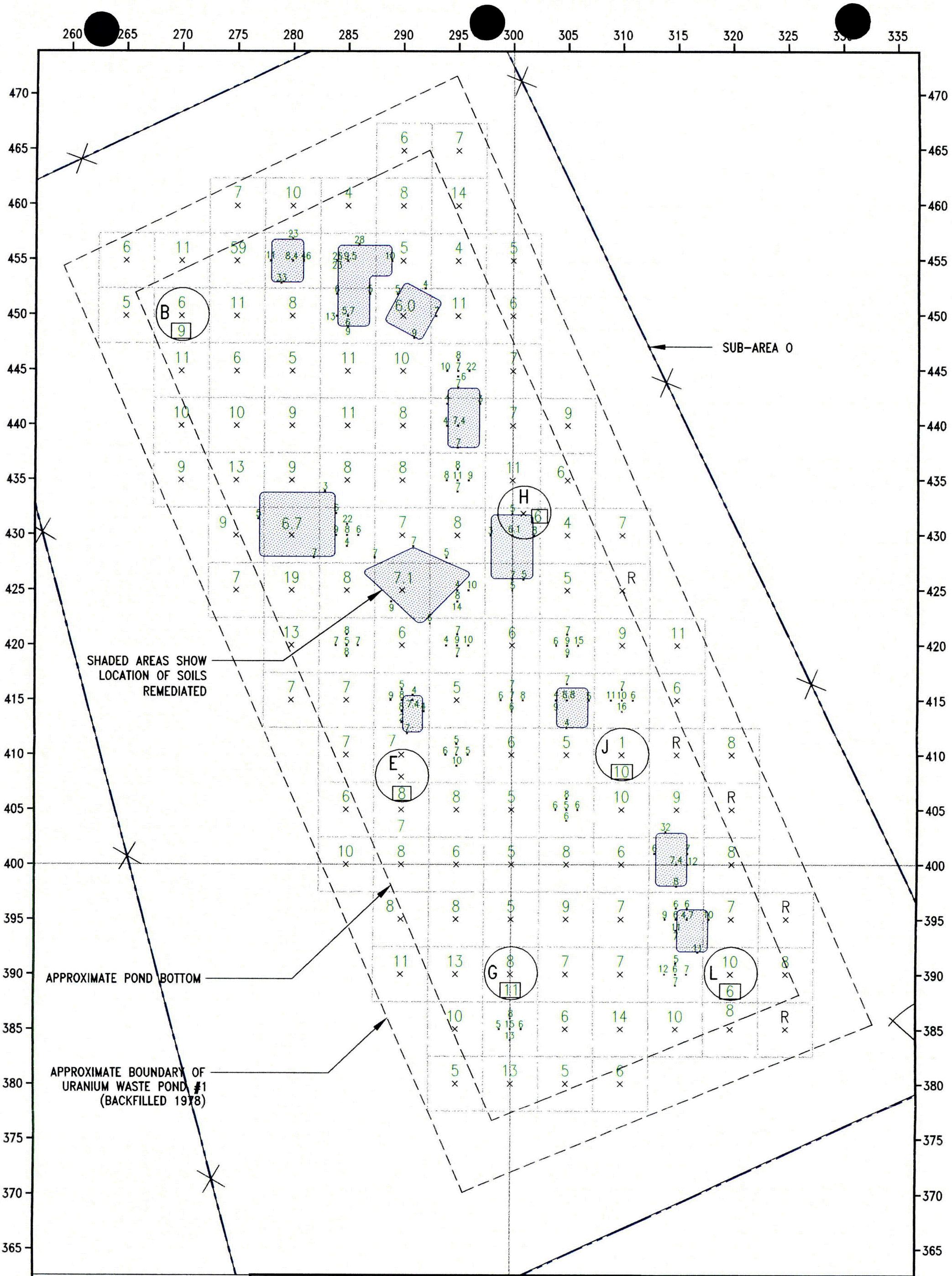
CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 1' – 2'

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97POP1SS–1	0

...\UPOND1\POST-REM\97POP1SS



NOTES
URANIUM (pCi/G U).
CIMARRON GAMMA SPEC SOIL COUNTER.
SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.
SAMPLES INCLUDE THOSE TAKEN ON A 5 METER X 5 METER GRID & THE OFFSET DATA.
ITEMS B, E, G, H, J AND L ARE DEEP DRILLING RESULTS

LEGEND
6 × URANIUM 1 – 94 pCi/g U
120 × URANIUM 95 – 219 pCi/g U
245 × URANIUM > 219 pCi/g U
25 1993 DEEP DRILLING SOIL SAMPLE RESULTS
R × HIT ROCK– NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING RELEASED.	JE	RS	JL	3/2/98

CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 2' – 3'

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN
JOB NO.	DRAWING NO. 97POP1SS–2	REV. 0

...\UPOND1\POST–REM\97POP1SS

SUB-AREA O

SHADED AREAS SHOW LOCATION OF SOILS REMEDIATED

APPROXIMATE POND BOTTOM

APPROXIMATE BOUNDARY OF URANIUM WASTE POND #1 (BACKFILLED 1978)

NORTH

8 0 8

SCALE IN METERS

NOTES

URANIUM (pCi/G U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

SAMPLES INCLUDE THOSE TAKEN ON A 5 METER X 5 METER GRID & THE OFFSET DATA.

ITEMS B, E, G, H, J AND L ARE DEEP DRILLING RESULTS

LEGEND

6 URANIUM 1 – 94 pCi/g U

120 URANIUM 95 – 219 pCi/g U

245 URANIUM > 219 pCi/g U

25 1993 DEEP DRILLING SOIL SAMPLE RESULTS

R HIT ROCK– NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING RELEASED.	JE	RS	JL	3/2/98

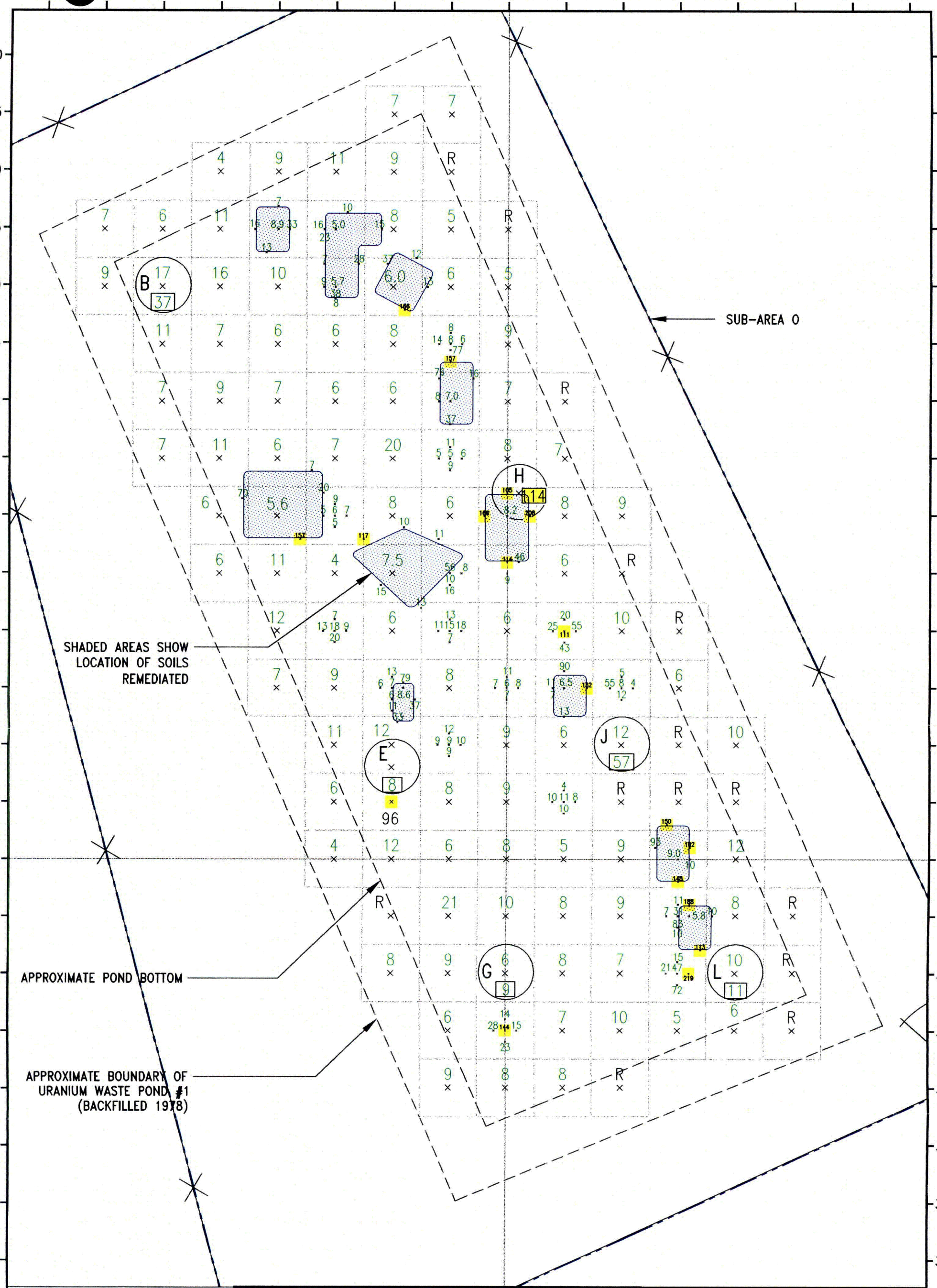
CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 3' – 4'

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97POP1SS-3	0

...\UPOND1\POST-REM\97POP1SS



NORTH

8 0 8

SCALE IN METERS

NOTES

URANIUM (pCi/G U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

SAMPLES INCLUDE THOSE TAKEN ON A 5 METER X 5 METER GRID & THE OFFSET DATA.

ITEMS B, E, G, H, J AND L ARE DEEP DRILLING RESULTS

LEGEND

6 × URANIUM 1 – 94 pCi/g U

120 × URANIUM 95 – 219 pCi/g U

245 × URANIUM > 219 pCi/g U

25 — 1993 DEEP DRILLING SOIL SAMPLE RESULTS

R × HIT ROCK– NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING RELEASED.	JE	RS	JL	3/2/98

CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 4' – 5'

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97POP1SS-4	0

...\UPOND1\POST-REM\97POP1SS

SUB-AREA O

SHADED AREAS SHOW LOCATION OF SOILS REMEDIATED

APPROXIMATE POND BOTTOM

APPROXIMATE BOUNDARY OF URANIUM WASTE POND #1 (BACKFILLED 1978)

NORTH

8 0 8

SCALE IN METERS

NOTES

URANIUM (pCi/G U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

SAMPLES INCLUDE THOSE TAKEN ON A 5 METER X 5 METER GRID & THE OFFSET DATA.

ITEMS B, E, G, H, J AND L ARE DEEP DRILLING RESULTS

LEGEND

6 × URANIUM 1 – 94 pCi/g U

120 × URANIUM 95 – 219 pCi/g U

245 × URANIUM > 219 pCi/g U

R × HIT ROCK– NO SAMPLE

25 – 1993 DEEP DRILLING SOIL SAMPLE RESULTS

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING RELEASED.	JE	RS	JL	3/2/98

CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 5' – 6'

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN
JOB NO.	DRAWING NO. 97POP1SS-5	REV. 0

...\UPOND1\POST-REM\97POP1SS

SUB-AREA 0

SHADED AREAS SHOW LOCATION OF SOILS REMEDIATED

APPROXIMATE POND BOTTOM

APPROXIMATE BOUNDARY OF URANIUM WASTE POND #1 (BACKFILLED 1978)

NORTH

8 0 8

SCALE IN METERS

NOTES

URANIUM (pCi/G U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

SAMPLES INCLUDE THOSE TAKEN ON A 5 METER X 5 METER GRID & THE OFFSET DATA.

ITEMS B, E, G, H, J AND L ARE DEEP DRILLING RESULTS

LEGEND

6 URANIUM 1 – 94 pCi/g U

120 URANIUM 95 – 219 pCi/g U

245 URANIUM > 219 pCi/g U

25 1993 DEEP DRILLING SOIL SAMPLE RESULTS

R HIT ROCK– NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING RELEASED.	JE	RS	JL	3/2/98

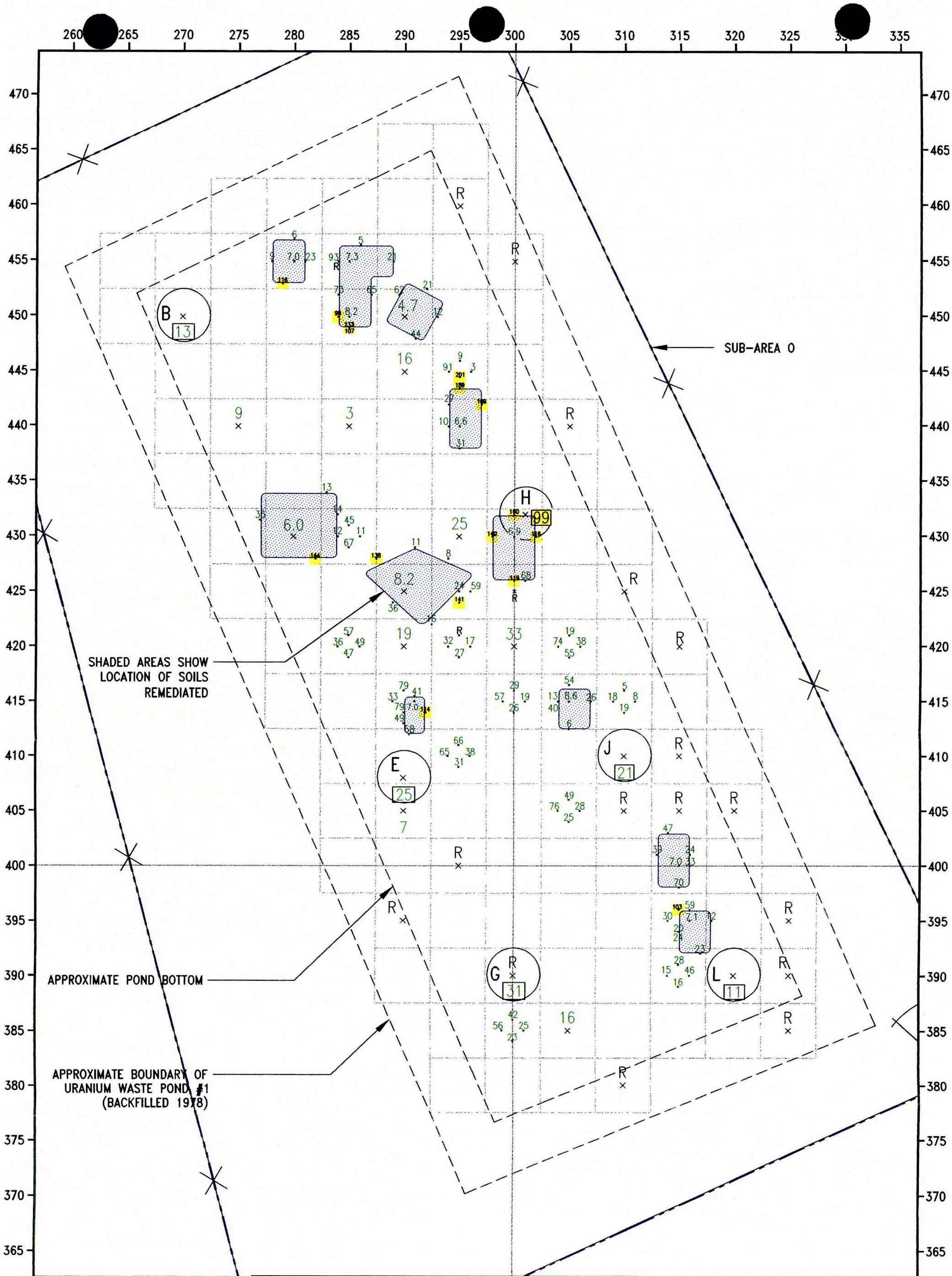
CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III – SUB-AREA 0
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 6' – 7'

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97POP1SS-6	0

...\UPOND1\POST-REM\97POP1SS



NOTES

URANIUM (pCi/G U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

SAMPLES INCLUDE THOSE TAKEN ON A 5 METER X 5 METER GRID & THE OFFSET DATA.

ITEMS B, E, G, H, J AND L ARE DEEP DRILLING RESULTS

LEGEND

6 × URANIUM 1 – 94 pCi/g U

120 × URANIUM 95 – 219 pCi/g U

245 × URANIUM > 219 pCi/g U

25 — 1993 DEEP DRILLING SOIL SAMPLE RESULTS

R × HIT ROCK– NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING RELEASED.	JE	RS	JL	3/2/98

CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 7' – 8'

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN
JOB NO.	DRAWING NO. 97POP1SS–7	REV. 0

...\UPOND1\POST–REM\97POP1SS

SUB-AREA 0

SHADED AREAS SHOW LOCATION OF SOILS REMEDIATED

APPROXIMATE POND BOTTOM

APPROXIMATE BOUNDARY OF URANIUM WASTE POND #1 (BACKFILLED 1978)

NORTH

8 0 8

SCALE IN METERS

NOTES

URANIUM (pCi/G U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

SAMPLES INCLUDE THOSE TAKEN ON A 5 METER X 5 METER GRID & THE OFFSET DATA.

ITEMS B, E, G, H, J AND L ARE DEEP DRILLING RESULTS

LEGEND

6 × URANIUM 1 – 94 pCi/g U

120 × URANIUM 95 – 219 pCi/g U

245 × URANIUM > 219 pCi/g U

25 — 1993 DEEP DRILLING SOIL SAMPLE RESULTS

R × HIT ROCK– NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING RELEASED.	JE	RS	JL	3/2/98

CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III – SUB-AREA 0
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 8' – 9'

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97POP1SS–8	0

...\UPOND1\POST-REM\97POP1SS

SUB-AREA O

SHADED AREAS SHOW LOCATION OF SOILS REMEDIATED

APPROXIMATE POND BOTTOM

APPROXIMATE BOUNDARY OF URANIUM WASTE POND #1 (BACKFILLED 1978)

NORTH

8 0 8

SCALE IN METERS

NOTES

URANIUM (pCi/G U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

SAMPLES INCLUDE THOSE TAKEN ON A 5 METER X 5 METER GRID & THE OFFSET DATA.

ITEMS B, E, G, H, J AND L ARE DEEP DRILLING RESULTS

LEGEND

6 URANIUM 1 – 94 pCi/g U

120 URANIUM 95 – 219 pCi/g U

245 URANIUM > 219 pCi/g U

25 1993 DEEP DRILLING SOIL SAMPLE RESULTS

R HIT ROCK– NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING RELEASED.	JE	RS	JL	3/2/98

CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III – SUB-AREA O
URANIUM WASTE POND #1
FINAL STATUS SURVEY RESULTS – SOIL
SOIL SAMPLE ALIQUOT: 9' – 10'

DRWN. BY	DATE	SCALE:
JE	1/1/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97POP1SS-9	0

...\UPOND1\POST-REM\97POP1SS

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA "O"
FINAL STATUS SURVEY RESULTS
SOIL SAMPLES

SAMPLE LOCATION: **WASTE POND NO. 1** DATE: 3/10/98

						pCi/g									
						0-1 METER			1-2 METERS			2-3 METERS			
LN	GRID					0-1'	1'-2'	2'-3'	3'-4'	4'-5'	5'-6'	6'-7'	7'-8'	8'-9'	9' - 10'
#	NUMBER					Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U
1	265	E	-	450	N	6	9	5	11	9	8				
2	265	E	-	455	N	5	6	6	12	7	10				
3	270	E	-	435	N	9	8	9	7	7	8				
4	270	E	-	440	N	7	9	10	10	7	8				
5	270	E	-	445	N	5	6	11	7	11	14				
6	270	E	-	450	N	7	8	6	27	17	12				
7	270	E	-	450	N	8	8	9	138	37	13	17	13	7	11
8	270	E	-	455	N	8	9	11	12	6	6				
9	275	E	-	425	N	7	7	7	11	6	10				
10	275	E	-	430	N	10	6	9	9	6	13				
11	275	E	-	435	N	5	8	13	10	11	6				
12	275	E	-	440	N	5	6	10	5	9	19	9	9	9	36
13	275	E	-	445	N	8	11	6	8	7	16				
14	275	E	-	450	N	7	9	11	7	16	19				
15	275	E	-	455	N	6	7	59	26	11	13				
16	275	E	-	460	N	10	9	7	9	4	9				
17	277	E	-	431.5	N	5	5	5	70	70	70	35	35	35	R
18	278	E	-	455	N	11	11	11	16	16	16	9	9	9	12
19	279	E	-	453	N	33	33	33	13	13	13	116	116	116	
20															
21															
22															
23															
24															
25															

INSTRUMENTS
CIMARRON SOIL COUNTER 4"X4"X16" NaI DETECTOR
BACKGROUND NOT SUBTRACTED

BACKGROUND	MDA
TOTAL U 4	10

PAGE 1
REVIEWED BY: W. A. Rogers DATE: 3-11-98
FILE: WP1AOFSSR
::

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA "O"
FINAL STATUS SURVEY RESULTS
SOIL SAMPLES

SAMPLE LOCATION: **WASTE POND NO. 1** DATE: 3/10/98

						pCi/g									
						0-1 METER			1-2 METERS			2-3 METERS			
LN	GRID					0-1'	1'-2'	2'-3'	3'-4'	4'-5'	5'-6'	6'-7'	7'-8'	8'-9'	9' - 10'
#	NUMBER					Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U
1	280	E	-	415	N	6	6	7	4	7	11				
2	280	E	-	420	N	7	6	13	10	12	11				
3	280	E	-	425	N	6	8	19	6	11	6				
4	280	E	-	430	N	6.7	6.7	6.7	5.6	5.6	5.6	6	6	6	R
5	280	E	-	435	N	9	11	9	5	6	5				
6	280	E	-	440	N	5	10	9	10	7	6				
7	280	E	-	445	N	8	4	5	6	6	7				
8	280	E	-	450	N	10	8	8	4	10	8				
9	280	E	-	455	N	8.4	8.4	8.4	8.9	8.9	8.9	7	7	7	7
10	280	E	-	457	N	23	23	23	7	7	7	6	6	6	4
11	280	E	-	460	N	5	7	10	8	9	8				
12	281	E	-	455	N	46	46	46	33	33	33	23	23	23	88
13	282	E	-	428	N	7	7	7	157	157	157	144	144	144	R
14	283	E	-	434	N	3	3	3	7	7	7	13	13	13	R
15	284	E	-	420	N	11	7	7	9	13	41	89	36	36	22
16	284	E	-	430	N	9	5	9	7	5	10	11	12	10	
17	284	E	-	432	N	6	6	6	20	20	20	14	14	14	
18	284	E	-	450	N	11	8	13	5	9	8	179	99	88	
19	284	E	-	452	N	6	6	6	7	7	7	73	73	73	R
20	284	E	-	455	N	7	10	23	13	23	R	R	R	R	R
21	284	E	-	455	N	26	26	26	16	16	16	93	93	93	109
22		E	-		N										
23		E	-		N										
24		E	-		N										
25		E	-		N										

INSTRUMENTS
CIMARRON SOIL COUNTER 4"X4"X16" NaI DETECTOR
BACKGROUND NOT SUBTRACTED

BACKGROUND
TOTAL U 4

MDA
10

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FILE: WP1AOFSSR

REVIEWED BY: W.a. Rogers DATE: 3-11-98

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA "O"
FINAL STATUS SURVEY RESULTS
SOIL SAMPLES

SAMPLE LOCATION: **WASTE POND NO. 1** DATE: 3/10/98

						pCi/g									
						0-1 METER			1-2 METERS			2-3 METERS			
LN	GRID					0-1'	1'-2'	2'-3'	3'-4'	4'-5'	5'-6'	6'-7'	7'-8'	8'-9'	9' - 10'
#	NUMBER					Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U
1	285	E	-	400	N	8	6	10	6	4	11				
2	285	E	-	405	N	7	7	6	17	6	9				
3	285	E	-	410	N	7	7	7	7	11	18				
4	285	E	-	415	N	8	12	7	12	9	12				
5	285	E	-	419	N	6	8	8	8	20	162	88	47	37	31
6	285	E	-	420	N	4	15	5	4	18	86				
7	285	E	-	421	N	6	4	8	6	7	89	163	57	27	21
8	285	E	-	425	N	14	13	8	11	4	10				
9	285	E	-	429	N	5	9	4	6	5	32	66	67	R	R
10	285	E	-	430	N	9	4	8	7	6	57				
11	285	E	-	431	N	10	7	22	6	9	9	27	45	18	
12	285	E	-	435	N	10	7	8	5	7	11				
13	285	E	-	440	N	12	8	11	8	6	24	3	3	3	7
14	285	E	-	445	N	7	7	11	9	6	7				
15	285	E	-	449	N	5	4	9	7	8	8	96	133	59	
16	285	E	-	449	N	6	6	6	38	38	38	133	107	133	R
17	285	E	-	450	N	5.7	5.7	5.7	5.7	5.7	5.7	8.2	8.2	8.2	8.2
18	285	E	-	455	N	9.5	9.5	9.5	5	5	5.1	7.3	7.3	7.3	7.3
19	285	E	-	460	N	14	4	4	5	11	7				
20	286	E	-	420	N	4	6	7	9	9	8	129	49	29	12
21	286	E	-	430	N	5	9	6	11	7	7	19	11	10	
22	286	E	-	456.5	N	28	28	28	10	10	10	5	5	5	7
23	287	E	-	452	N	5	5	5	28	28	28	65	65	65	68
24	287.5	E	-	428	N	7	7	7	117	117	117	138	138	138	
25		E	-		N										

INSTRUMENTS
CIMARRON SOIL COUNTER 4"X4"X16" NaI DETECTOR
BACKGROUND NOT SUBTRACTED

BACKGROUND	MDA
TOTAL U 4	10

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FILE: WP1AOFSSR

REVIEWED BY: W.A. Rogers DATE: 3-11-98

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA "O"
FINAL STATUS SURVEY RESULTS
SOIL SAMPLES

SAMPLE LOCATION: **WASTE POND NO. 1** DATE: 3/10/98

						pCi/g									
						0-1 METER			1-2 METERS			2-3 METERS			
LN	GRID					0-1'	1'-2'	2'-3'	3'-4'	4'-5'	5'-6'	6'-7'	7'-8'	8'-9'	9' - 10'
#	NUMBER					Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U
1	289	E	-	415	N	8	7	9	8	6	19	62	33	29	28
2	289	E	-	424	N	9	9	9	15	15	15	36	36	36	R
3	289	E	-	455	N	10	10	10	15	15	15	21	21	21	R
4	289.5	E	-	452	N	5	5	5	37	37	37	62	62	62	R
5	290	E	-	390	N	6	6	11	11	8	10				
6	290	E	-	395	N	8	6	8	5	R	R	R	R	R	R
7	290	E	-	400	N	7	8	8	14	12	8				
8	290	E	-	405	N	6	9	7	29	96	16	7	7	7	11
9	290	E	-	408	N	10	11	8	8	8	28	186	25	10	8
10	290	E	-	410	N	10	3	7	9	12	9				
11	290	E	-	413	N	2	2	2	11	11	11	49	49	49	
12	290	E	-	414	N	7	8	8	6	6	49	143	79	68	42
13	290	E	-	415	N	6	6	8	7	7	116				
14	290	E	-	416	N	11	9	5	7	13	20	113	79	39	36
15	290	E	-	420	N	8	10	6	8	6	26	19	19	19	32
16	290	E	-	425	N	7.1	7.1	7.1	7.5	7.5	7.5	8.2	8.2	8.2	R
17	290	E	-	430	N	6	7	7	8	8	9				
18	290	E	-	435	N	8	6	8	8	20	7				
19	290	E	-	440	N	9	6	8	5	6	7				
20	290	E	-	445	N	10	8	10	9	8	11	16	16	16	24
21	290	E	-	450	N	6	6	6	6	6	6	4.7	4.7	4.7	4.7
22	290	E	-	455	N	8	7	5	23	8	8				
23	290	E	-	460	N	15	12	8	8	9	8				
24	290	E	-	465	N	10	10	6	6	7	5				
25	290.5	E	-	412	N	7	7	7	33	33	33	58	58	58	R

INSTRUMENTS
CIMARRON SOIL COUNTER 4"X4"X16" NaI DETECTOR
BACKGROUND NOT SUBTRACTED

BACKGROUND
TOTAL U 4

MDA
10

PAGE 4
FILE: WP1AOFSSR

REVIEWED BY: W. a. Rogers DATE: 3-11-98

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA "O"
FINAL STATUS SURVEY RESULTS
SOIL SAMPLES

SAMPLE LOCATION: **WASTE POND NO. 1** DATE: 3/10/98

						pCi/g									
						0-1 METER			1-2 METERS			2-3 METERS			
LN	GRID					0-1'	1'-2'	2'-3'	3'-4'	4'-5'	5'-6'	6'-7'	7'-8'	8'-9'	9' - 10'
#	NUMBER					Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U
1	291	E	-	415	N	7.4	7.4	7.4	8.6	8.6	8.6	7	7	7	
2	291	E	-	415.5	N	4	4	4	79	79	79	41	41	41	70
3	291	E	-	429	N	7	7	7	10	10	10	11	11	11	R
4	291	E	-	448	N	9	9	9	166	166	166	44	44	44	R
5	292	E	-	414	N	4	4	4	37	37	37	114	114	114	33
6	292	E	-	452.5	N	4	4	4	12	12	12	21	21	21	R
7	292.5	E	-	422	N	6	6	6	13	13	13	16	16	16	
8	293	E	-	450	N	7	7	7	13	13	13	12	12	12	R
9	294	E	-	410	N	48	4	6	9	9	165	129	65	34	23
10	294	E	-	420	N	6	6	4	9	11	87	78	32	30	
11	294	E	-	428	N	5	5	5	11	11	11	8	8	8	
12	294	E	-	435	N	6	10	8	9	5	168	123			
13	294	E	-	440	N	9	3	4	10	8	30	17	10	10	
14	294	E	-	442	N	4	4	4	76	76	76	27	27	27	
15	294	E	-	445	N	10	10	10	14	14	14	91	91	91	57
16	294	E	-	465	N	6	9	7	7	7	6				
17	295	E	-	380	N	8	2	5	8	9	8				
18	295	E	-	385	N	6	7	10	8	6	4				
19	295	E	-	390	N	5	13	13	6	9	9				
20	295	E	-	395	N	5	4	8	7	21	12				
21	295	E	-	400	N	6	8	6	9	6	15	12	R	R	R
22	295	E	-	405	N	8	4	8	9	8	9				
23	295	E	-	409	N	5	11	10	7	9	22	92	31	17	17
24	295	E	-	410	N	10	6	7	5	9	42				
25	295	E	-	411	N	6	7	5	6	12	80	121	66	41	25

INSTRUMENTS	BACKGROUND	MDA
CIMARRON SOIL COUNTER 4"X4"X16" NaI DETECTOR	TOTAL U 4	10

BACKGROUND NOT SUBTRACTED

PAGE 5 REVIEWED BY: W. A. Rogers DATE: 3-11-98

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CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA "O"
FINAL STATUS SURVEY RESULTS
SOIL SAMPLES

SAMPLE LOCATION: **WASTE POND NO. 1** DATE: 3/10/98

LN #	GRID NUMBER					pCi/g									
						0-1 METER			1-2 METERS			2-3 METERS			
						0-1'	1'-2'	2'-3'	3'-4'	4'-5'	5'-6'	6'-7'	7'-8'	8'-9'	9' - 10'
						Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U
1	295	E	-	415	N	8	7	5	8	8	14				
2	295	E	-	419	N	3	10	7	8	7	19	39	27	23	
3	295	E	-	420	N	6	9	9	5	15	197				
4	295	E	-	421	N	5	4	7	7	13	16	R	R	R	R
5	295	E	-	424	N	6	9	14	7	16	117	97	141	89	
6	295	E	-	425	N	10	6	8	6	10	35				
7	295	E	-	425	N	4	4	4	56	56	56	24	24	24	R
8	295	E	-	430	N	16	6	8	8	6	18	25	25	25	15
9	295	E	-	434	N	4	7	7	8	9	29	23			
10	295	E	-	435	N	6	7	11	6	5	109				
11	295	E	-	436	N	5	8	8	8	11	20	25			
12	295	E	-	438	N	7	7	7	37	37	37	31	31	31	
13	295	E	-	440	N	7.4	7.4	7.4	7	7	7	6.6	6.6	6.6	6.6
14	295	E	-	443.5	N	7	7	7	157	157	157	189	189	189	
15	295	E	-	444.5	N	6	6	6	77	77	77	201	201	201	
16	295	E	-	445	N	21	13	7	24	8	9				
17	295	E	-	446	N	8	8	8	8	8	8	9	9	9	7
18	295	E	-	450	N	13	6	11	9	6	6				
19	295	E	-	455	N	3	6	4	8	5	7				
20	295	E	-	460	N	4	18	14	19	R	R	R	R	R	R
21	296	E	-	410	N	5	6	5	8	10	95	80	38	29	15
22	296	E	-	420	N	7	9	10	11	18	25	15	17	12	
23	296	E	-	425	N	4	7	10	8	8	38	31	59	55	
24	296	E	-	435	N	10	4	9	7	6	55	47			
25	296	E	-	445	N	22	22	22	6	6	6	3	3	3	R

INSTRUMENTS
CIMARRON SOIL COUNTER 4"X4"X16" NaI DETECTOR

BACKGROUND	MDA
TOTAL U 4	10

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 3-11-98

FILE: WP1AOFSSR

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA "O"
FINAL STATUS SURVEY RESULTS
SOIL SAMPLES

SAMPLE LOCATION: **WASTE POND NO. 1** DATE: 3/10/98

						pCi/g									
						0-1 METER			1-2 METERS			2-3 METERS			
LN	GRID					0-1'	1'-2'	2'-3'	3'-4'	4'-5'	5'-6'	6'-7'	7'-8'	8'-9'	9' - 10'
#	NUMBER					Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U
1	297	E	-	442	N	3	3	3	16	16	16	109	109	109	
2	298	E	-	430	N	3	3	3	166	166	166	140	140	140	R
3	299	E	-	385	N	5	10	5	9	28	28	47	56	15	13
4	299	E	-	415	N	9	8	6	9	7	68	95	57	26	17
5	300	E	-	380	N	5	15	13	10	8	8				
6	300	E	-	384	N	9	4	13	5	23	33	31	23	19	10
7	300	E	-	385	N	5	7	15	6	144	140				
8	300	E	-	386	N	4	8	8	10	14	76	65	42	31	18
9	300	E	-	390	N	8	3	8	7	6	R	R	R	R	R
10	300	E	-	390	N	10	5	11	6	9	25	47	31	24	13
11	300	E	-	395	N	8	8	5	7	10	8				
12	300	E	-	400	N	9	9	5	8	8	11				
13	300	E	-	405	N	12	10	5	6	9	14				
14	300	E	-	410	N	8	8	6	5	9	7				
15	300	E	-	414	N	7	8	6	13	7	92	80	26	26	20
16	300	E	-	415	N	10	9	7	9	6	47				
17	300	E	-	416	N	6	7	7	7	11	70	32	29	24	20
18	300	E	-	420	N	6	9	6	8	6	22	33	33	33	32
19	300	E	-	425	N	5	11	5	5	9	17	20	R	R	R
20	300	E	-	426	N	7	7	7	114	114	114	119	119	119	
21	300	E	-	430	N	6.1	6.1	6.1	8.2	8.2	8.2	6.9	6.9	6.9	6.9
22	300	E	-	432	N	5	5	5	105	105	105	160	160	160	R
23	300	E	-	435	N	6	11	11	5	8	13				
24	300	E	-	440	N	10	9	7	8	7	9				
25	300	E	-	445	N	7	8	7	7	9	7				

INSTRUMENTS
CIMARRON SOIL COUNTER 4"X4"X16" NaI DETECTOR
BACKGROUND NOT SUBTRACTED

BACKGROUND
TOTAL U 4

MDA
10

REVIEWED BY: W. A. Rogers DATE: 3-11-98

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA "O"
FINAL STATUS SURVEY RESULTS
SOIL SAMPLES

SAMPLE LOCATION: **WASTE POND NO. 1** DATE: 3/10/98

LN #	GRID NUMBER					pCi/g									
						0-1 METER			1-2 METERS			2-3 METERS			
						0-1'	1'-2'	2'-3'	3'-4'	4'-5'	5'-6'	6'-7'	7'-8'	8'-9'	9' - 10'
						Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U
1	300	E	-	450	N	9	6	6	9	5	7				
2	300	E	-	455	N	8	8	5	R	R	R	R	R	R	R
3	301	E	-	385	N	7	9	6	8	15	32	21	25	22	23
4	301	E	-	415	N	8	8	8	4	8	11	16	19	14	14
5	301	E	-	426	N	5	5	5	46	46	46	68	68	68	
6	301	E	-	432	N	5	6	6	39	114	65	189	99	40	23
7	302	E	-	430	N	8	8	8	208	208	208	116	116	116	R
8	304	E	-	405	N	6	4	6	8	10	10	125	76	44	30
9	304	E	-	415	N	4	4	4	11	11	11	13	13	13	19
10	304	E	-	415	N	5	5	9	10	7	47	40	33	R	
11	304	E	-	420	N	7	6	6	5	25	173	67	74	61	34
12	305	E	-	380	N	10	6	5	8	8	4				
13	305	E	-	385	N	7	6	6	9	7	23	16	16	16	10
14	305	E	-	390	N	9	6	7	8	8	14				
15	305	E	-	395	N	11	13	9	4	8	8				
16	305	E	-	400	N	6	7	8	9	5	10				
17	305	E	-	404	N	8	6	6	6	10	74	63	25	17	14
18	305	E	-	405	N	9	12	5	8	11	97				
19	305	E	-	406	N	7	9	8	9	4	56	64	49	30	23
20	305	E	-	410	N	18	8	5	5	6	9				
21	305	E	-	412.5	N	4	4	4	13	13	13	6	6	6	R
22	305	E	-	415	N	8.8	8.8	8.8	6.5	6.5	6.5	8.6	8.6	8.6	8.6
23	305	E	-	416.5	N	7	7	7	90	90	90	54	54	54	R
24	305	E	-	419	N	7	4	9	11	43	16	34	55	55	33
25	305	E	-	420	N	8	5	9	22	111	199				

INSTRUMENTS
CIMARRON SOIL COUNTER 4"X4"X16" NaI DETECTOR

BACKGROUND
TOTAL U 4

MDA
10

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. G. Rogers DATE: 3-11-98

FILE: WP1AOFSSR

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA "O"
FINAL STATUS SURVEY RESULTS
SOIL SAMPLES

SAMPLE LOCATION: **WASTE POND NO. 1** DATE: 3/10/98

						pCi/g									
						0-1 METER			1-2 METERS			2-3 METERS			
LN	GRID					0-1'	1'-2'	2'-3'	3'-4'	4'-5'	5'-6'	6'-7'	7'-8'	8'-9'	9' - 10'
#	NUMBER					Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U
1	305	E	-	421	N	8	6	7	8	20	27	20	19	21	R
2	305	E	-	425	N	7	13	5	13	6	7				
3	305	E	-	430	N	8	6	4	8	8	7				
4	305	E	-	435	N	4	8	6	8	7	9				
5	305	E	-	440	N	11	7	9	R	R	R	R	R	R	R
6	306	E	-	405	N	7	10	6	7	8	78	40	28	20	17
7	306	E	-	420	N	7	6	15	46	55	39	49	38	42	R
8	307	E	-	415	N	5	5	5	132	132	132	26	26	26	20
9	309	E	-	415	N	8	9	11	10	55	72	28	18	19	20
10	310	E	-	380	N	6	6	6	4	R	R	R	R	R	R
11	310	E	-	385	N	10	10	14	17	10	11				
12	310	E	-	390	N	8	7	7	7	7	8				
13	310	E	-	395	N	9	5	7	9	9	7				
14	310	E	-	400	N	9	10	6	7	9	9				
15	310	E	-	405	N	11	5	10	6	R	R	R	R	R	R
16	310	E	-	410	N	4	10	1	11	12	22				
17	310	E	-	410	N	13	17	10	12	57	38	50	21	13	10
18	310	E	-	414	N	6	40	16	28	12	68	34	19	18	17
19	310	E	-	415	N	5	18	10	5	8	47				
20	310	E	-	416	N	12	10	7	8	5	24	16	5	8	6
21	310	E	-	420	N	5	9	9	7	10	8				
22	310	E	-	425	N	7	10	R	R	R	R	R	R	R	R
23	310	E	-	430	N	10	7	7	10	9	9				
24	311	E	-	415	N	5	9	6	5	4	27	12	8	7	5
25	313	E	-	401	N	6	6	6	93	93	93	39	39	39	R

INSTRUMENTS
CIMARRON SOIL COUNTER 4"X4"X16" NaI DETECTOR
BACKGROUND NOT SUBTRACTED

BACKGROUND
TOTAL U 4

MDA
10

REVIEWED BY: W.A. Rogers DATE: 3-11-98

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA "O"
FINAL STATUS SURVEY RESULTS
SOIL SAMPLES

SAMPLE LOCATION: **WASTE POND NO. 1** DATE: 3/10/98

LN #	GRID NUMBER					pCi/g									
						0-1 METER			1-2 METERS			2-3 METERS			
						0-1'	1'-2'	2'-3'	3'-4'	4'-5'	5'-6'	6'-7'	7'-8'	8'-9'	9' - 10'
						Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U
1	314	E	-	390	N	11	9	12	14	21	119	28	15	20	12
2	314	E	-	395	N	4	6	9	7	7	35	47	30	26	34
3	314	E	-	403	N	32	32	32	150	150	150	47	47	47	R
4	315	E	-	385	N	10	15	10	12	5	10				
5	315	E	-	389	N	8	7	7	13	72	48	21	16	11	18
6	315	E	-	390	N	5	11	6	7	47	162				
7	315	E	-	391	N	5	8	5	10	15	85	67	28	18	25
8	315	E	-	394	N	11	11	11	83	83	83	20	20	20	
9	315	E	-	394	N	6	5	7	7	10	34	48	24	14	15
10	315	E	-	395	N	8	6	6	11	31	219				
11	315	E	-	396	N	10	10	6	7	11	133	11	103	39	
12	315	E	-	398	N	8	8	8	145	145	145	70	70	70	R
13	315	E	-	400	N	7.4	7.4	7.4	9	9	9	7	7	7	7
14	315	E	-	405	N	11	10	9	10	R	R	R	R	R	R
15	315	E	-	410	N	6	9	R	R	R	R	R	R	R	R
16	315	E	-	415	N	8	5	6	7	6	6				
17	315	E	-	420	N	8	4	11	R	R	R	R	R	R	R
18	316	E	-	390	N	11	11	7	13	219	188	117	46	38	31
19	316	E	-	395	N	4.7	4.7	4.7	5.8	5.8	5.8	7.1	7.1	7.1	7.1
20	316	E	-	396	N	6	6	6	188	188	188	59	59	59	R
21	316	E	-	400	N	12	6	12	8	10	113	63	33	21	14
22	316	E	-	401	N	7	7	7	102	102	102	24	24	24	
23	317	E	-	392	N	11	11	11	113	113	113	23	23	23	22
24	318	E	-	395	N	10	10	10	10	10	10	12	12	12	R
25		E	-		N										

INSTRUMENTS
CIMARRON SOIL COUNTER 4"X4"X16" NaI DETECTOR
BACKGROUND NOT SUBTRACTED

BACKGROUND	MDA
TOTAL U 4	10

REVIEWED BY: W. A. Rogers DATE: 3-11-98

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA "O"
FINAL STATUS SURVEY RESULTS
SOIL SAMPLES

SAMPLE LOCATION: **WASTE POND NO. 1** DATE: 3/10/98

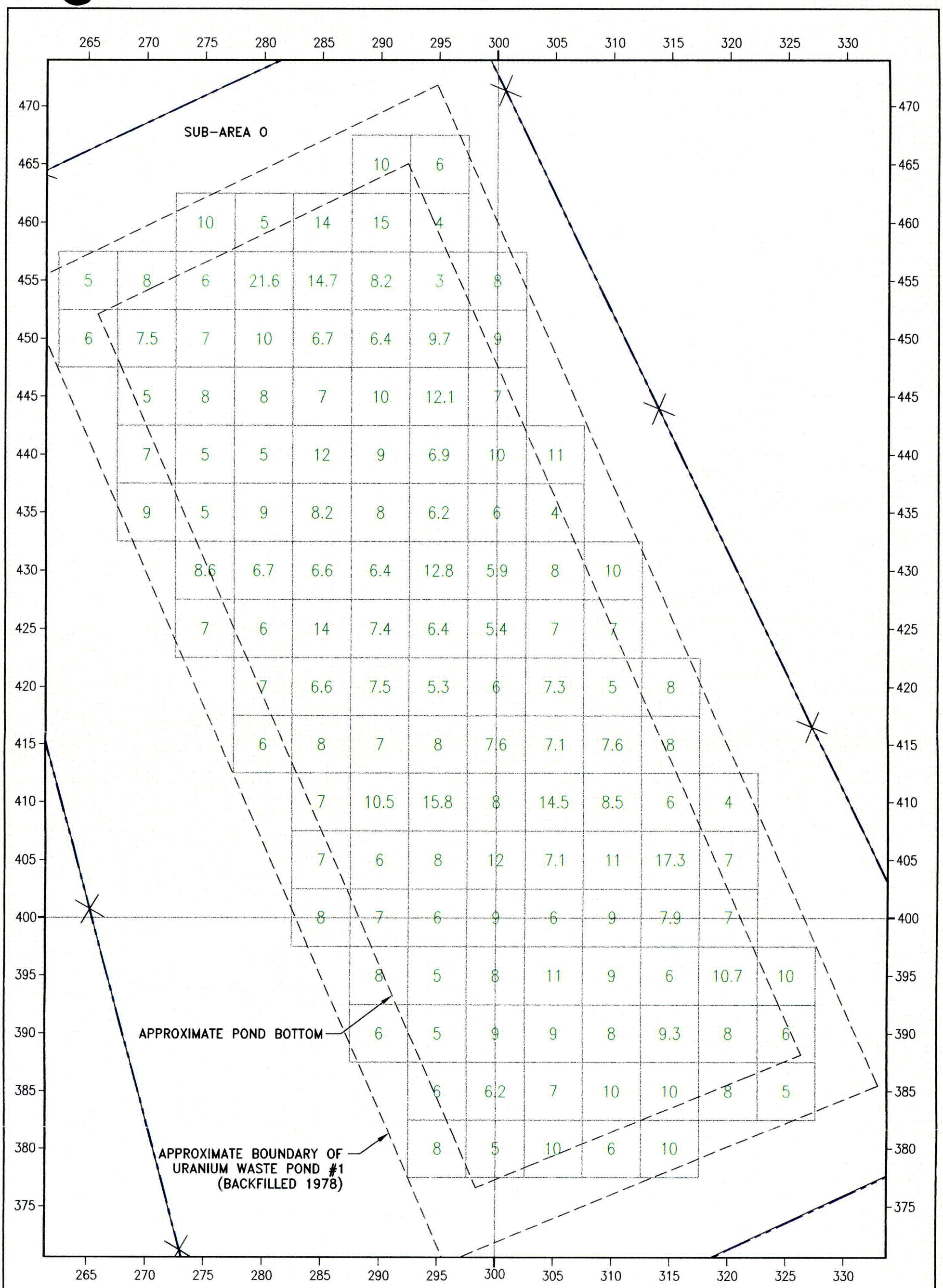
						pCi/g									
						0-1 METER			1-2 METERS			2-3 METERS			
LN	GRID					0-1'	1'-2'	2'-3'	3'-4'	4'-5'	5'-6'	6'-7'	7'-8'	8'-9'	9' - 10'
#	NUMBER					Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U	Total-U
1	320	E	-	405	N	7	2	R	R	R	R	R	R	R	R
2	320	E	-	410	N	4	6	8	7	10	10				
3	320	E	-	385	N	8	8	8	7	6	8				
4	320	E	-	390	N	7	7	10	10	10	9				
5	320	E	-	390	N	9	10	6	7	11	8	7	11	13	7
6	320	E	-	395	N	11	11	7	8	8	6				
7	320	E	-	400	N	7	9	8	7	12	8				
8	325	E	-	385	N	5	6	R	R	R	R	R	R	R	R
9	325	E	-	390	N	6	8	8	R	R	R	R	R	R	R
10	320	E	-	395	N	10	8	R	R	R	R	R	R	R	R
11		E	-		N										
12		E	-		N										
13		E	-		N										
14		E	-		N										
15		E	-		N										
16		E	-		N										
17		E	-		N										
18		E	-		N										
19		E	-		N										
20		E	-		N										
21		E	-		N										
22		E	-		N										
23		E	-		N										
24		E	-		N										
25		E	-		N										

INSTRUMENTS
CIMARRON SOIL COUNTER 4"X4"X16" NaI DETECTOR
BACKGROUND NOT SUBTRACTED

BACKGROUND	MDA
TOTAL U 4	10

FILE: WP1AOFSSR

REVIEWED BY: W.A. Rogers DATE: 3-11-98



NOTES

URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROXIMATELY 4.0 pCi/g U, NOT SUBTRACTED.

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	RS	JL	3/2/98

CIMARRON CORPORATION

CIMARRON FACILITY
URANIUM WASTE POND #1 SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 1 Foot Grid
Average Soil Activity
Soil Sample Aliquot: 0 – 1'

DRWN. BY	DATE	SCALE:
JE	1/24/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1AVG–0	0

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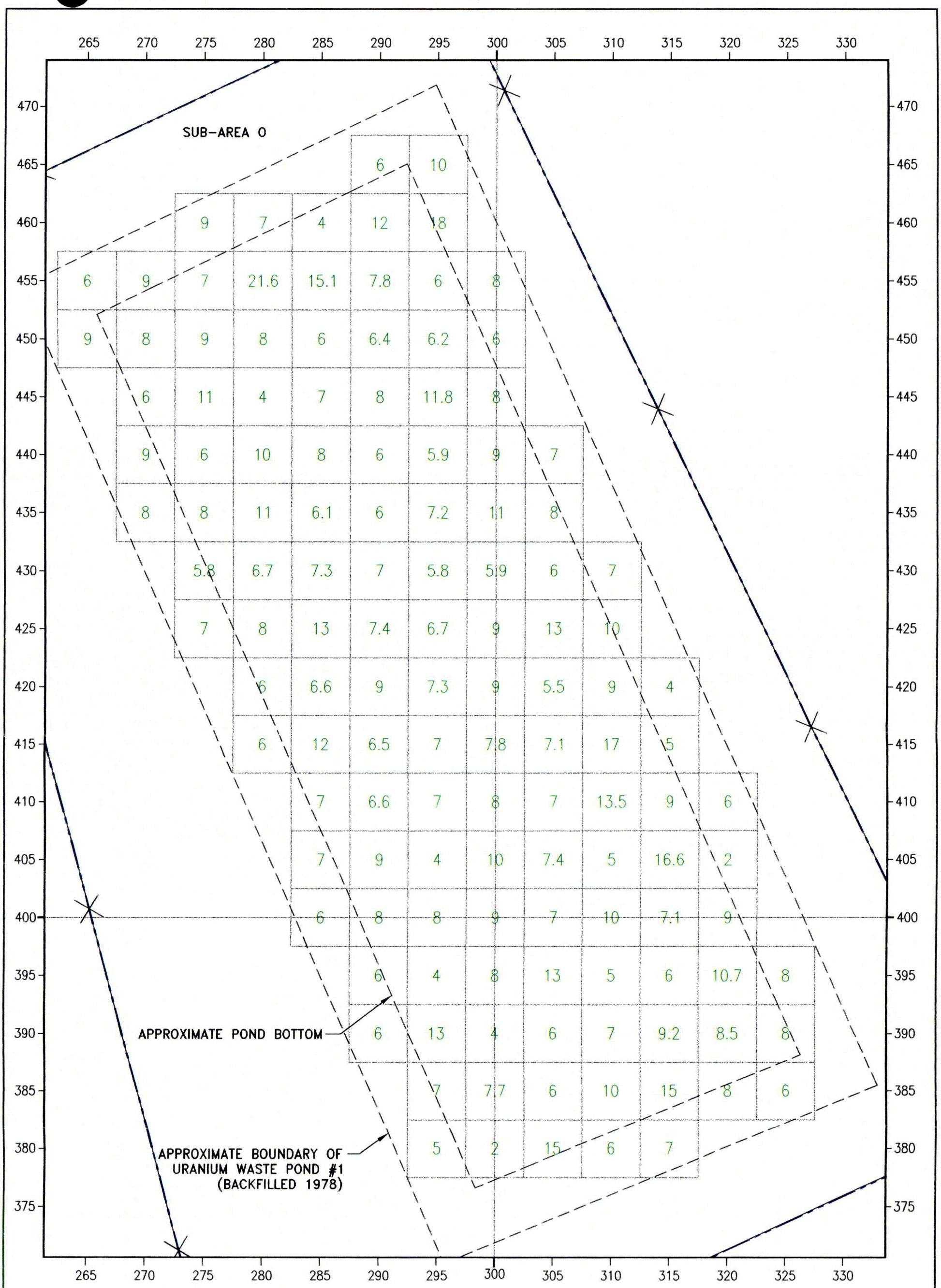


NORTH

8 0 8

SCALE IN METERS

NOTES

URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROXIMATELY 4.0 pCi/g U, NOT SUBTRACTED.

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	RS	JL	3/2/98

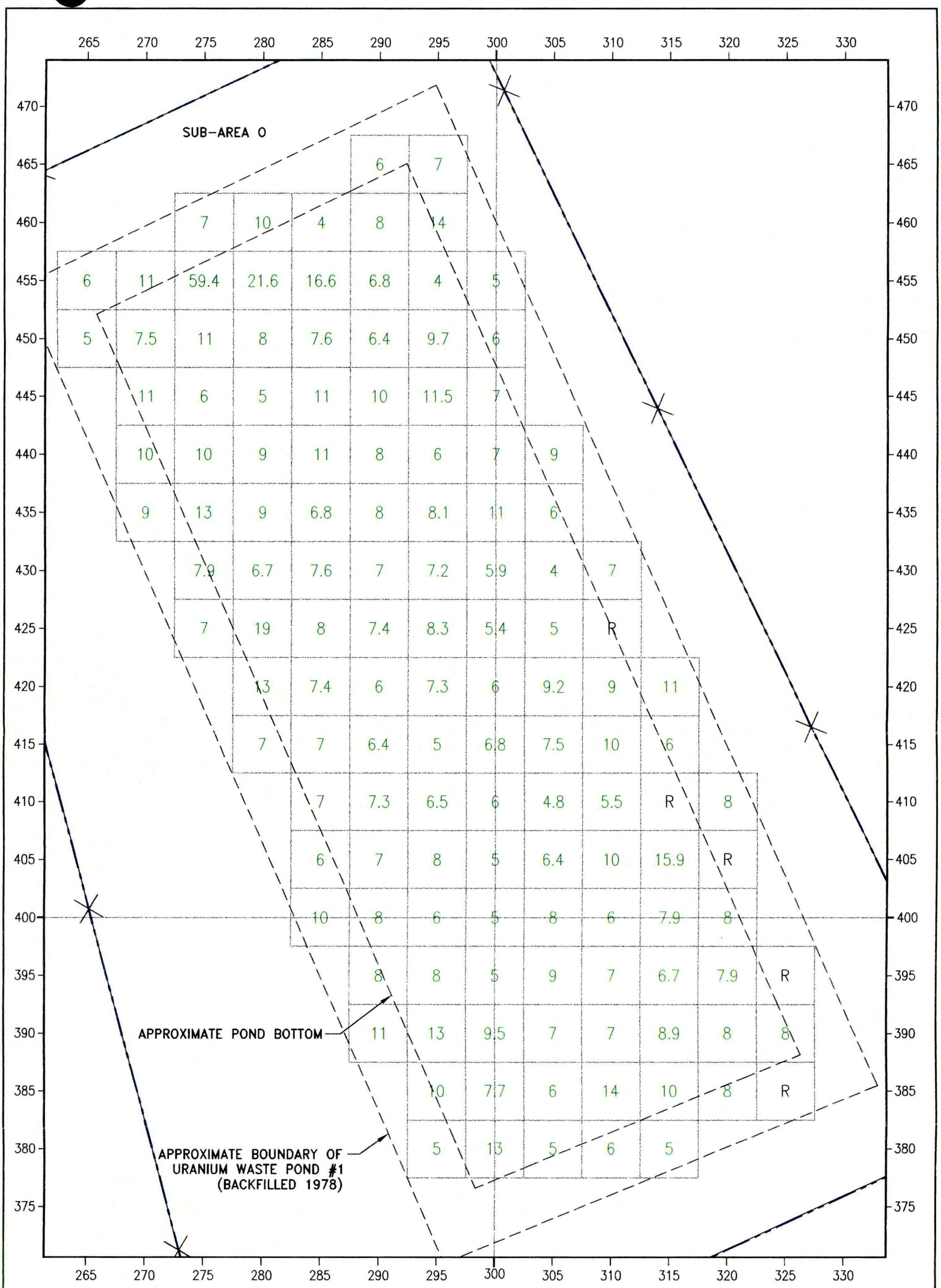
CIMARRON CORPORATION

CIMARRON FACILITY
URANIUM WASTE POND #1 SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 1 Foot Grid
Average Soil Activity
Soil Sample Aliquot: 1' – 2'

DRWN. BY	DATE	SCALE:
JE	1/24/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1AVG-1	0

...\UPOND1\AVERAGES\97P1AVGS



NORTH

8 0 8

SCALE IN METERS

NOTES

URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROXIMATELY 4.0 pCi/g U, NOT SUBTRACTED.

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	RS	JL	3/2/98

CIMARRON CORPORATION

CIMARRON FACILITY
URANIUM WASTE POND #1 SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 1 Foot Grid
Average Soil Activity
Soil Sample Aliquot: 2' – 3'

DRWN. BY	DATE	SCALE:
JE	1/24/98	AS SHOWN
JOB NO.	DRAWING NO. 97P1AVG-2	REV. 0

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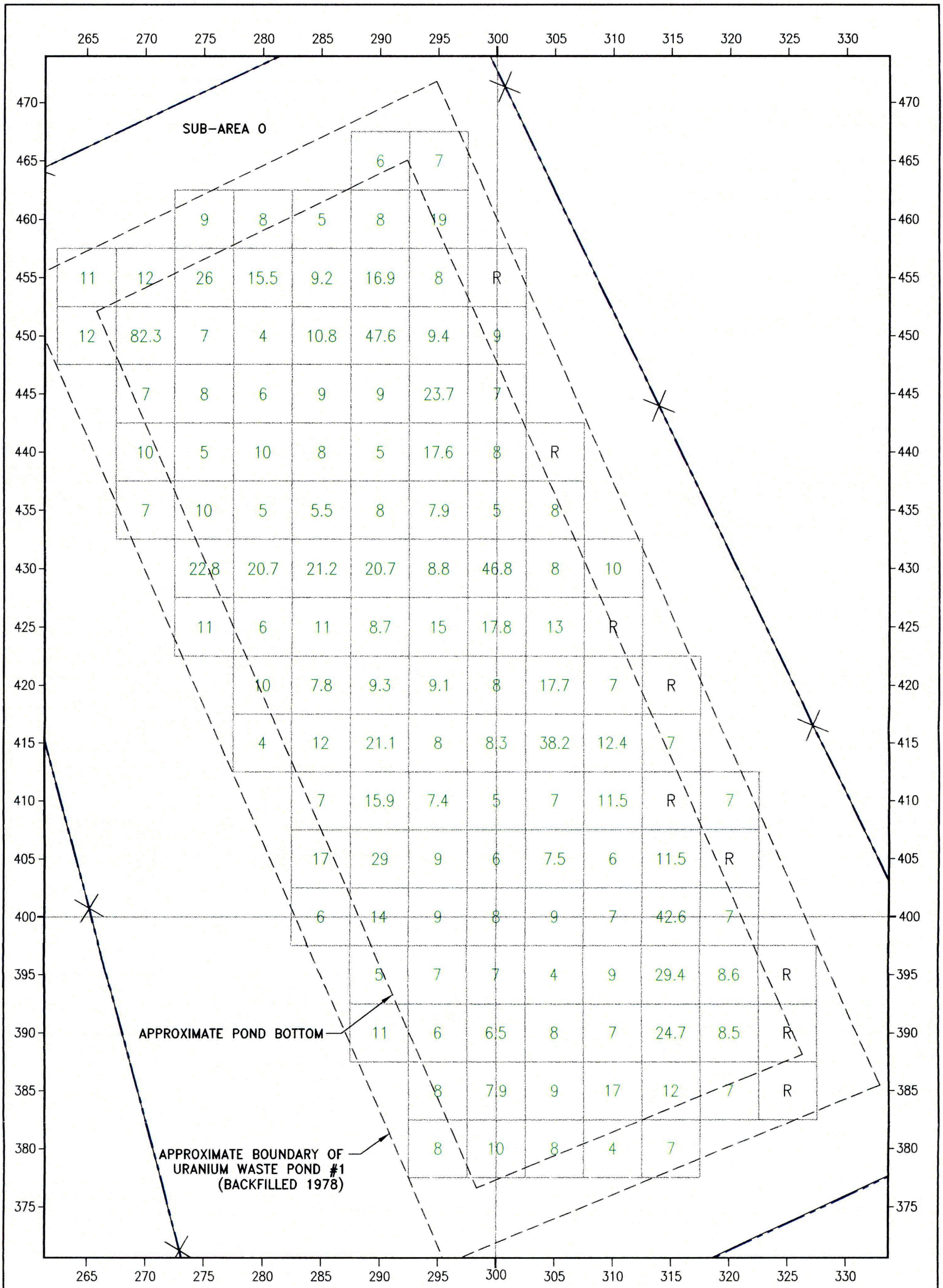


NOTES
URANIUM (pCi/g U).
CIMARRON GAMMA SPEC SOIL COUNTER.
SITE SOIL BACKGROUND OF APPROXIMATELY 4.0 pCi/g U, NOT SUBTRACTED.

LEGEND
6 — URANIUM 1 – 94 pCi/g U
120 — URANIUM 95 – 219 pCi/g U
245 — URANIUM > 219 pCi/g U
R — HIT ROCK – NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	RS	JL	3/2/98

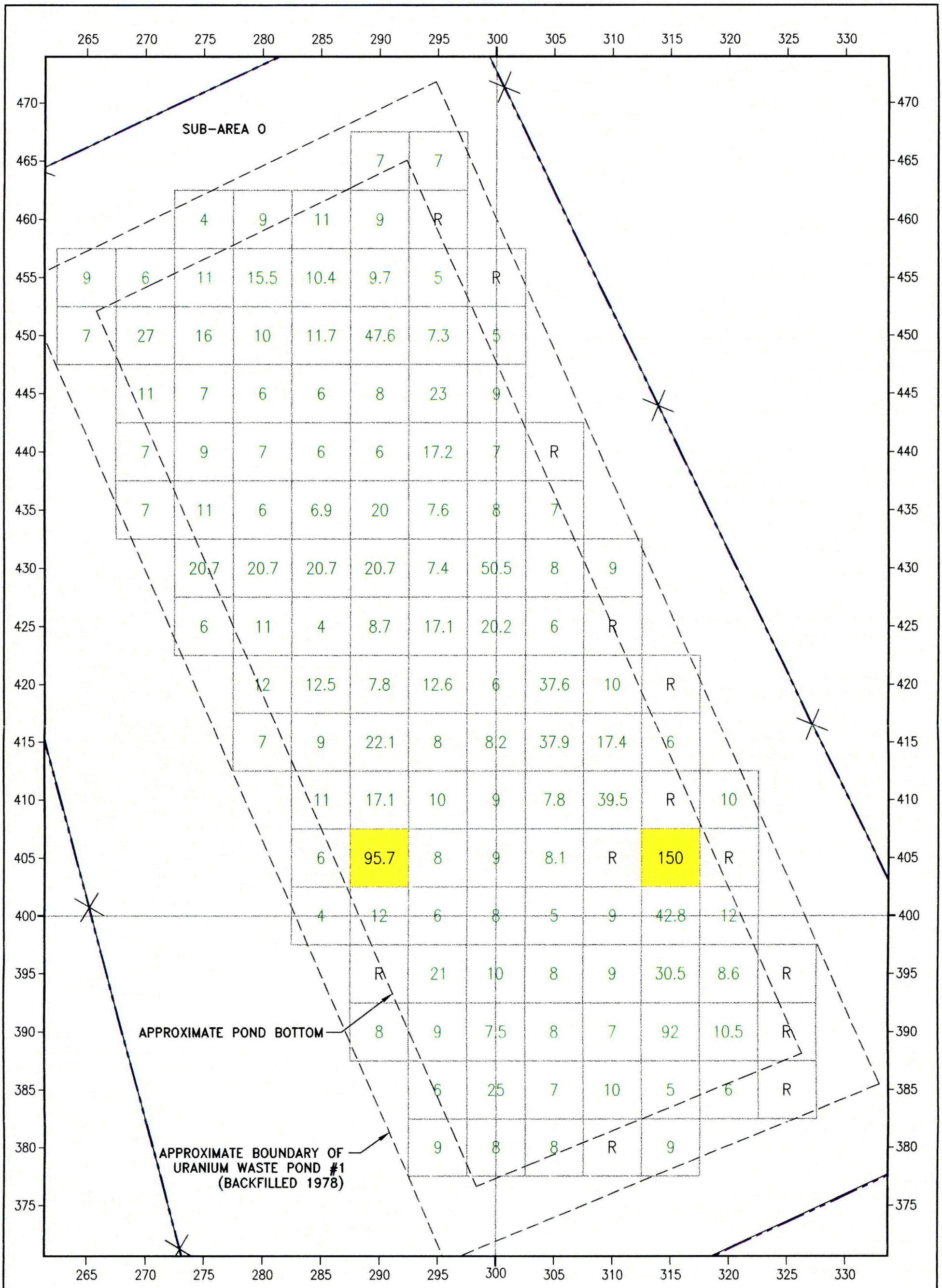
CIMARRON CORPORATION

CIMARRON FACILITY
URANIUM WASTE POND #1 SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 1 Foot Grid
Average Soil Activity
Soil Sample Aliquot: 3' – 4'

DRWN. BY	DATE	SCALE:
JE	1/24/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1AVG-3	0

...\UPOND1\AVERAGES\97P1AVGS



NOTES

URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROXIMATELY 4.0 pCi/g U, NOT SUBTRACTED.

LEGEND

- 6 — URANIUM 1 – 94 pCi/g U
- 120 — URANIUM 95 – 219 pCi/g U
- 245 — URANIUM > 219 pCi/g U
- R — HIT ROCK – NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	RS	JL	3/2/98

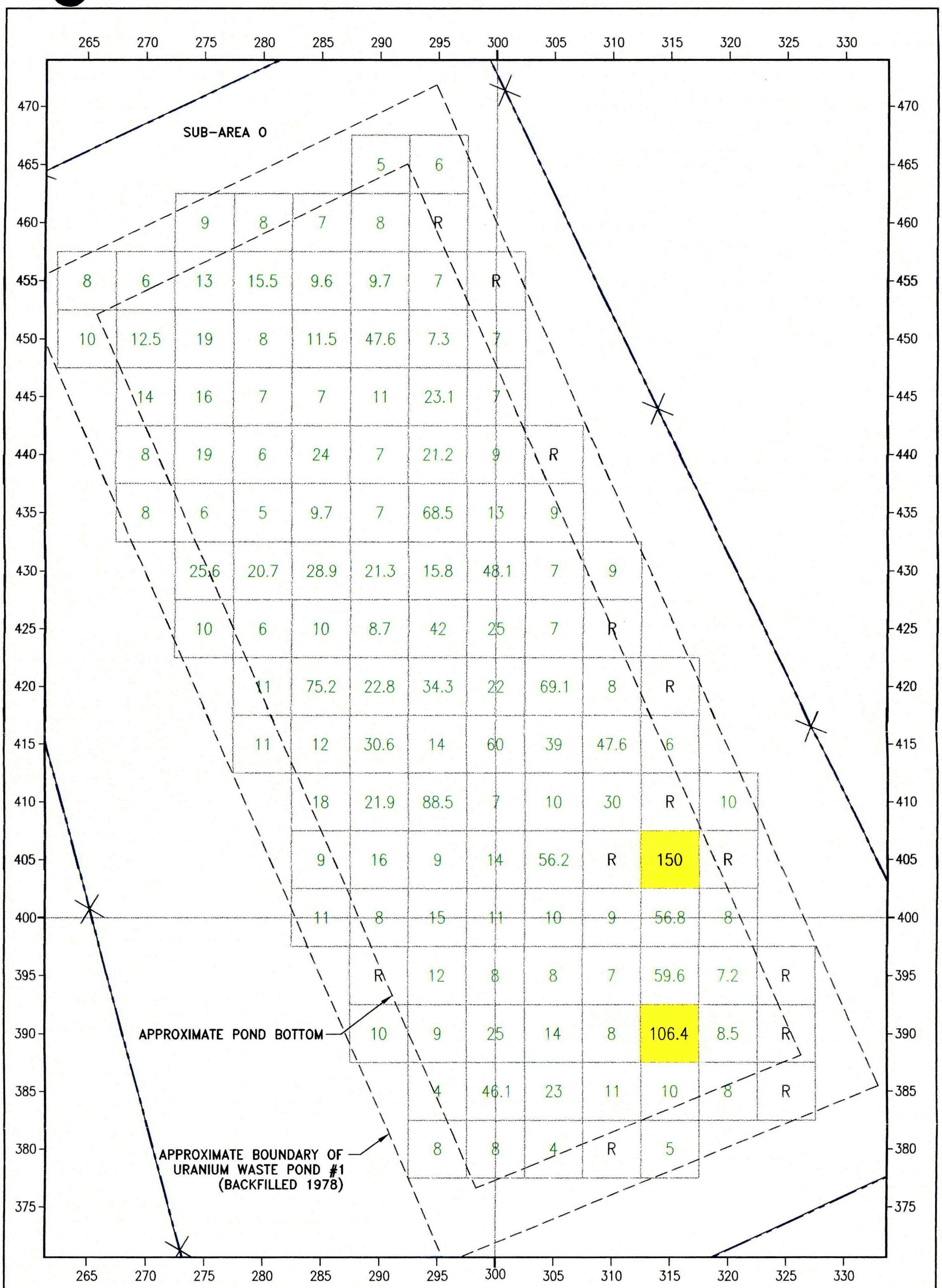
CIMARRON CORPORATION

CIMARRON FACILITY
URANIUM WASTE POND #1 SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 1 Foot Grid
Average Soil Activity
Soil Sample Aliquot: 4' – 5'

DRWN. BY	DATE	SCALE:
JE	1/24/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1AVG-4	0

...\UPOND1\AVERAGES\97P1AVGS



NOTES

URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROXIMATELY 4.0 pCi/g U, NOT SUBTRACTED.

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	RS	JL	3/2/98

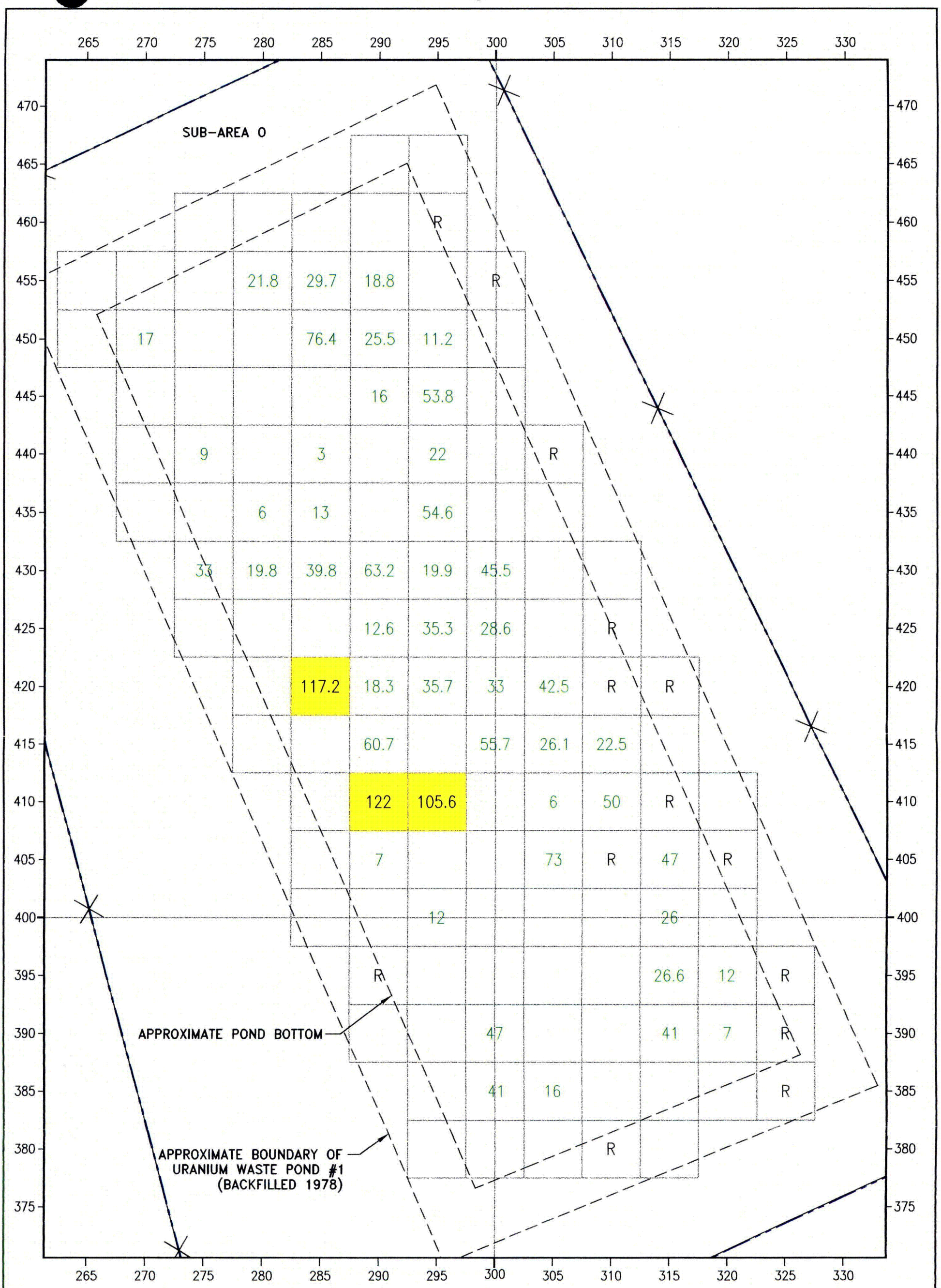
CIMARRON CORPORATION

CIMARRON FACILITY
URANIUM WASTE POND #1 SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 1 Foot Grid
Average Soil Activity
Soil Sample Aliquot: 5' – 6'

DRWN. BY	DATE	SCALE:
JE	1/24/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1AVG–5	0

...\UPOND1\AVERAGES\97P1AVGS



NOTES
URANIUM (pCi/g U).
CIMARRON GAMMA SPEC SOIL COUNTER.
SITE SOIL BACKGROUND OF APPROXIMATELY 4.0 pCi/g U, NOT SUBTRACTED.

LEGEND
6 — URANIUM 1 – 94 pCi/g U
120 — URANIUM 95 – 219 pCi/g U
245 — URANIUM > 219 pCi/g U
R — HIT ROCK – NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	RS	JL	3/2/98

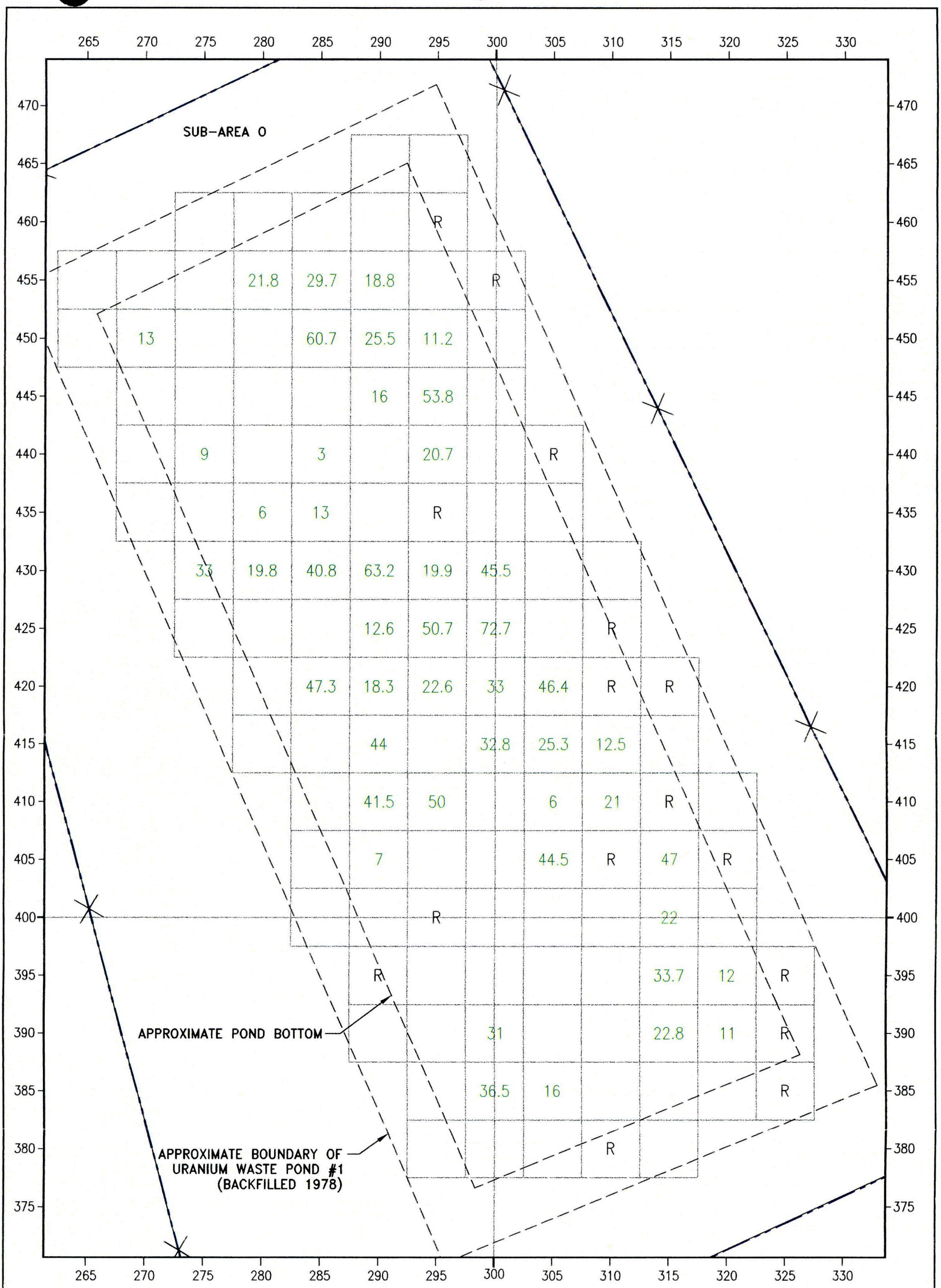
CIMARRON CORPORATION

CIMARRON FACILITY
URANIUM WASTE POND #1 SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 1 Foot Grid
Average Soil Activity
Soil Sample Aliquot: 6' – 7'

DRWN. BY	DATE	SCALE:
JE	1/24/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1AVG-6	0

...\UPOND1\AVERAGES\97P1AVGS



NORTH

8 0 8

SCALE IN METERS

NOTES

URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROXIMATELY 4.0 pCi/g U, NOT SUBTRACTED.

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	RS	JL	3/2/98

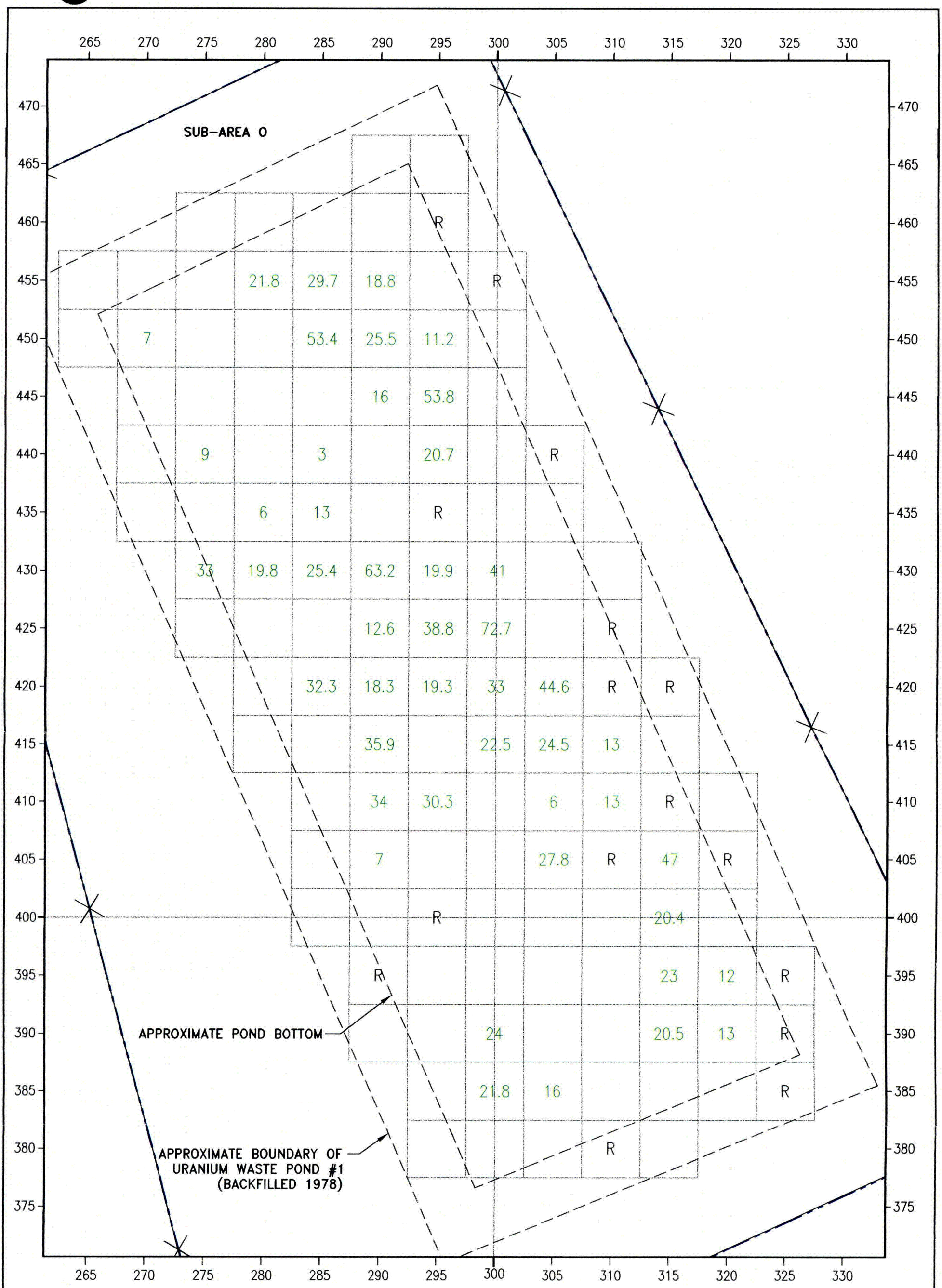
CIMARRON CORPORATION

CIMARRON FACILITY
URANIUM WASTE POND #1 SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 1 Foot Grid
Average Soil Activity
Soil Sample Aliquot: 7' – 8'

DRWN. BY	DATE	SCALE:
JE	1/24/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1AVG-7	0

...\UPOND1\AVERAGES\97P1AVGS



NORTH

8 0 8

SCALE IN METERS

NOTES

URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROXIMATELY 4.0 pCi/g U, NOT SUBTRACTED.

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

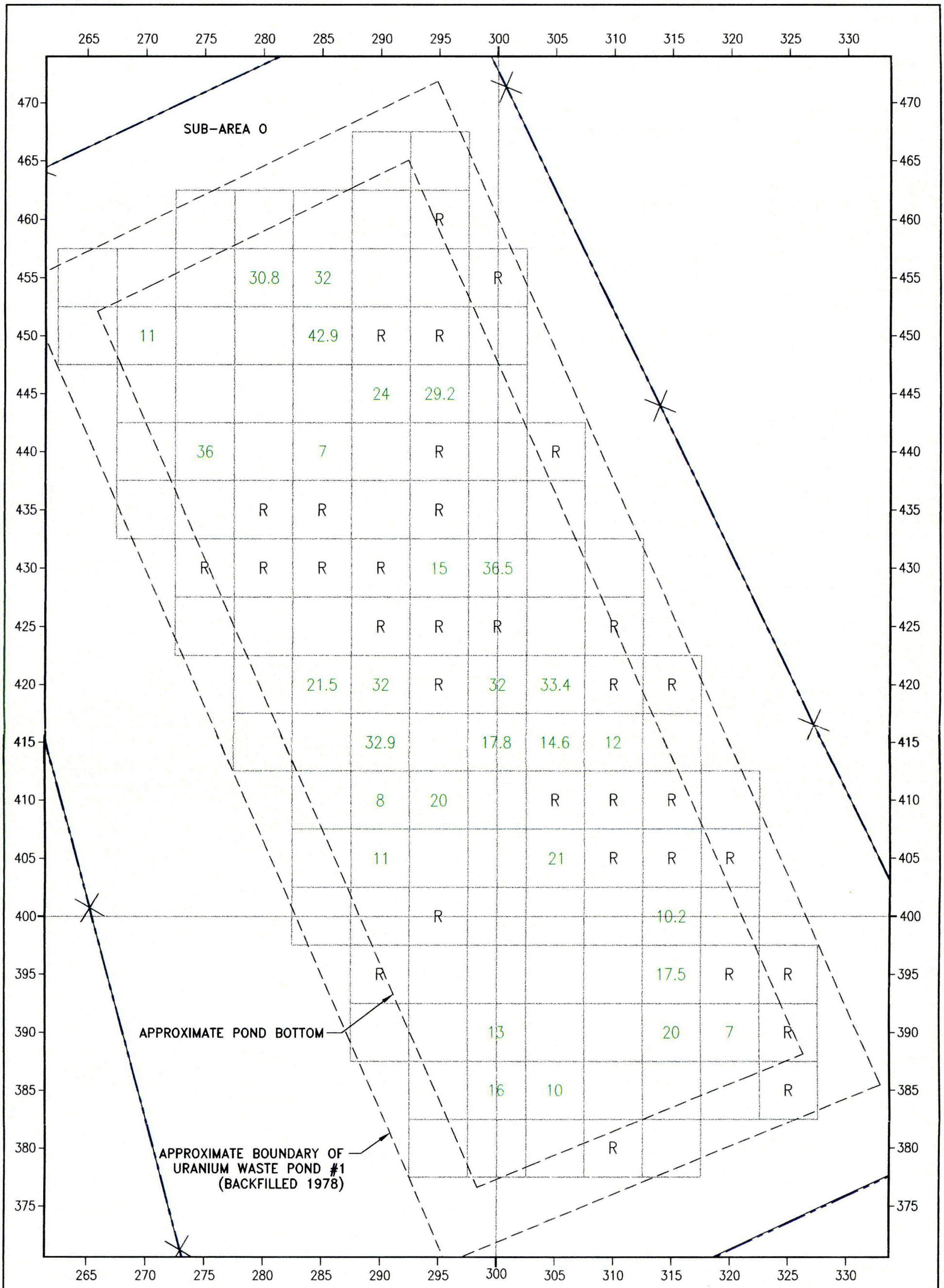
REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	RS	JL	3/2/98

CIMARRON CORPORATION

CIMARRON FACILITY
URANIUM WASTE POND #1 SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 1 Foot Grid
Average Soil Activity
Soil Sample Aliquot: 8' – 9'

DRWN. BY	DATE	SCALE:
JE	1/24/98	AS SHOWN
JOB NO.	DRAWING NO. 97P1AVG-8	REV. 0

...\UPOND1\AVERAGES\97P1AVGS



NORTH

8 0 8

SCALE IN METERS

NOTES

URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROXIMATELY 4.0 pCi/g U, NOT SUBTRACTED.

LEGEND

6	URANIUM 1 – 94 pCi/g U
120	URANIUM 95 – 219 pCi/g U
245	URANIUM > 219 pCi/g U
R	HIT ROCK – NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	RS	JL	3/2/98

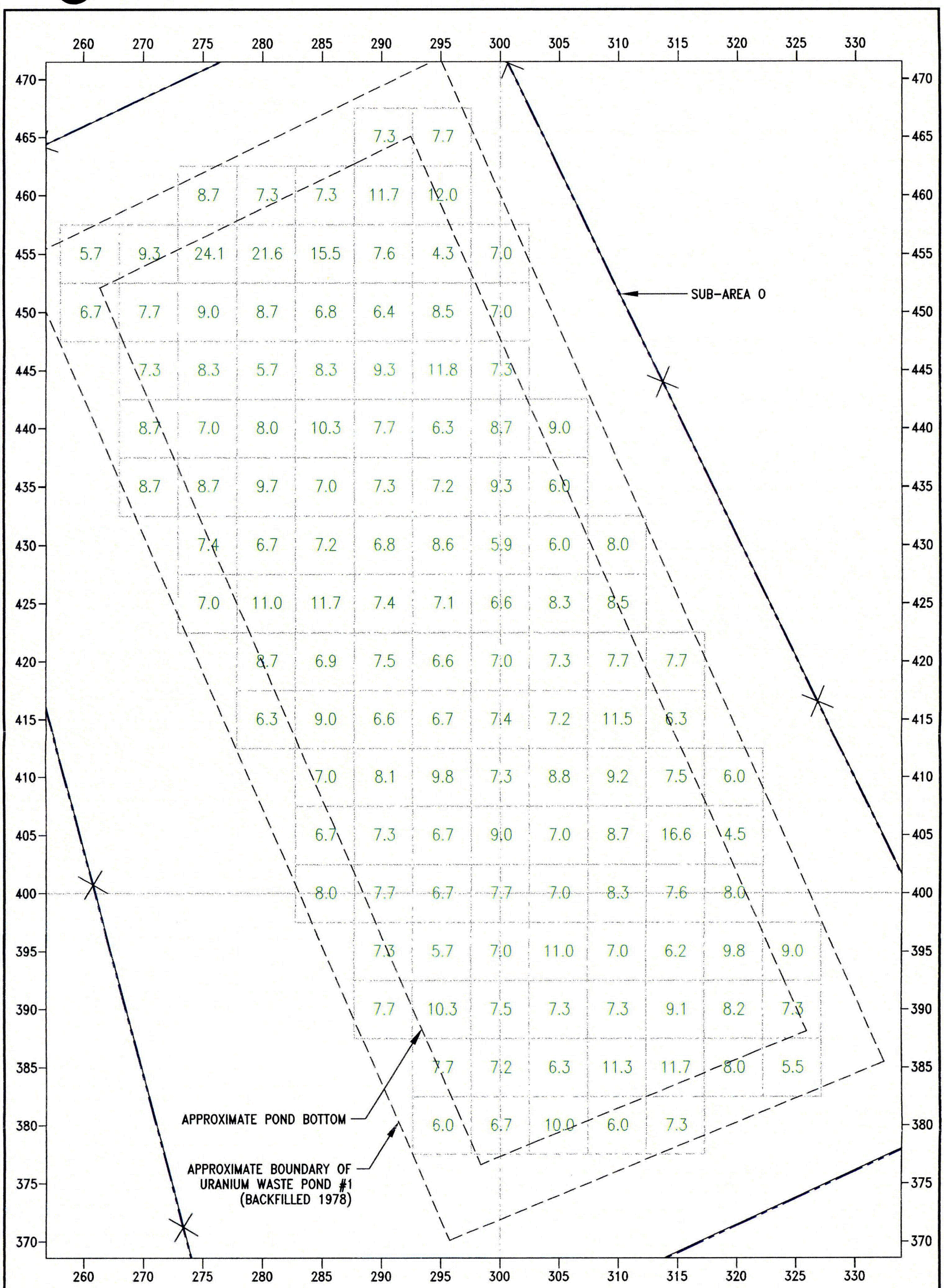
CIMARRON CORPORATION

CIMARRON FACILITY
URANIUM WASTE POND #1 SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 1 Foot Grid
Average Soil Activity
Soil Sample Aliquot: 9' – 10'

DRWN. BY	DATE	SCALE:
JE	1/24/98	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97P1AVG-9	0

...\UPOND1\AVERAGES\97P1AVGS



NORTH

8 0 8

SCALE IN METERS

URANIUM (pCi/G U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

LEGEND

6 URANIUM 1 – 94 pCi/g U

120 URANIUM 95 – 219 pCi/g U

245 URANIUM > 219 pCi/g U

R HIT ROCK– NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	3/2/98

CIMARRON CORPORATION

CIMARRON FACILITY
URANIUM WASTE POND #1 – SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 3 Foot Grid
Average Soil Activity
0 to 3' Soil Depth

DRWN. BY	DATE	SCALE:
JE	9/27/97	AS SHOWN
JOB NO.	DRAWING NO. 97AVP1–0	REV. 0

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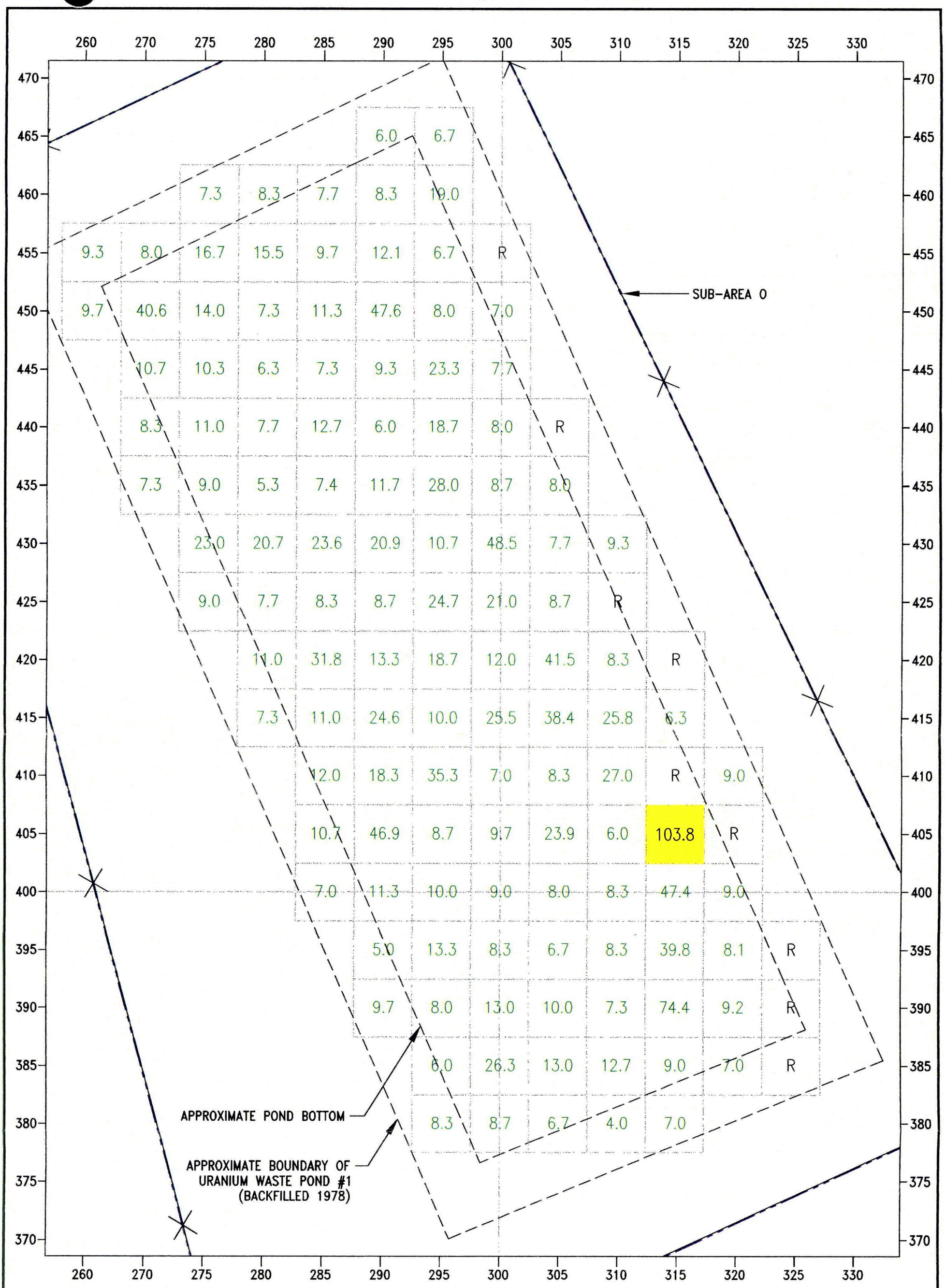

URANIUM (pCi/G U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

LEGEND

- 6 URANIUM 1 – 94 pCi/g U
- 120 URANIUM 95 – 219 pCi/g U
- 245 URANIUM > 219 pCi/g U
- R HIT ROCK– NO SAMPLE

NORTH

8 0 8

SCALE IN METERS

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	3/2/98

CIMARRON CORPORATION

CIMARRON FACILITY
URANIUM WASTE POND #1 – SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 3 Foot Grid
Average Soil Activity
3' to 6' Soil Depth

DRWN. BY	DATE	SCALE:
JE	9/27/97	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97AVP1–1	0

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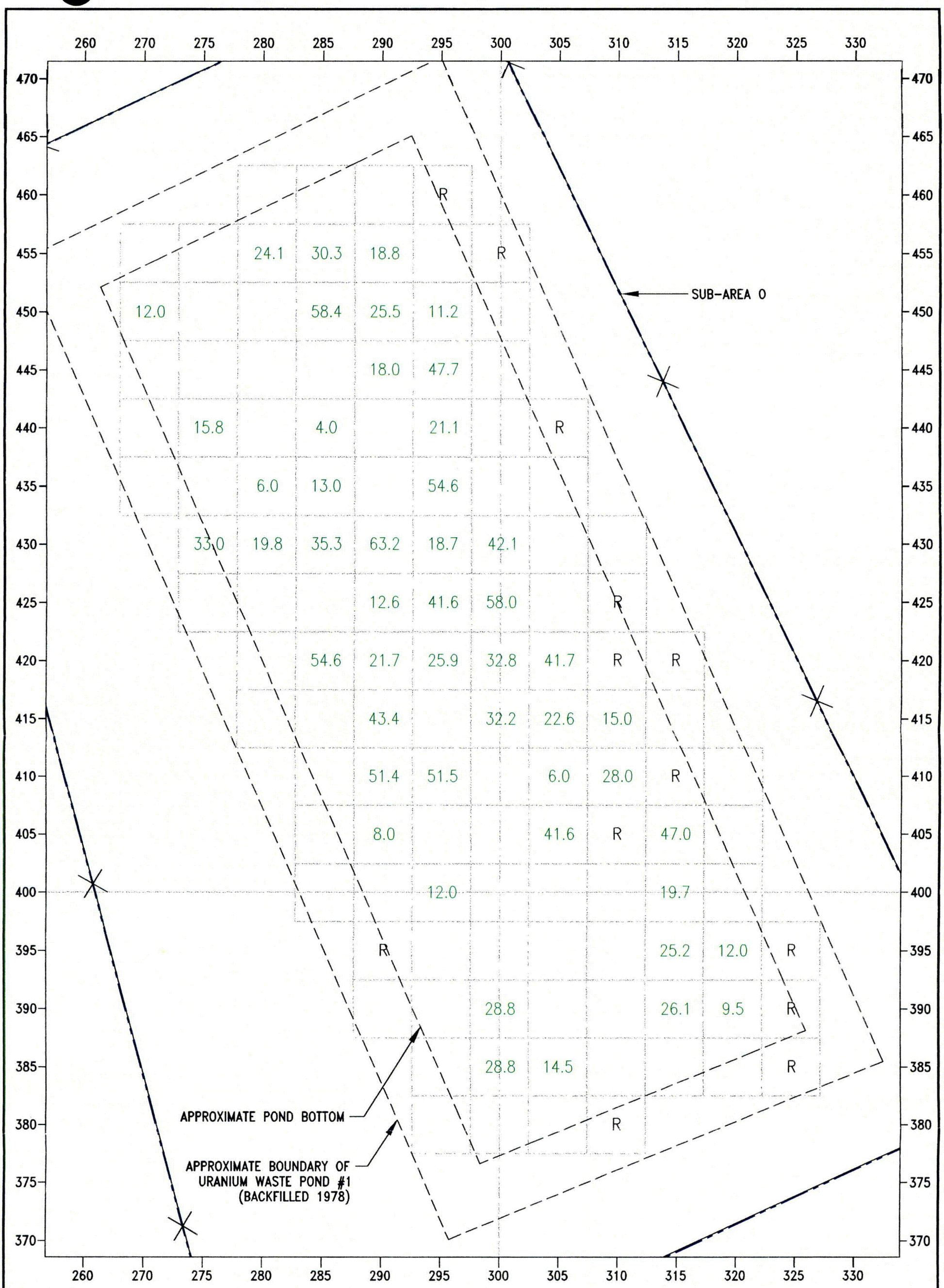


NORTH

8 0 8

SCALE IN METERS

URANIUM (pCi/G U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

LEGEND

6 URANIUM 1 – 94 pCi/g U

120 URANIUM 95 – 219 pCi/g U

245 URANIUM > 219 pCi/g U

R HIT ROCK– NO SAMPLE

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	3/2/98

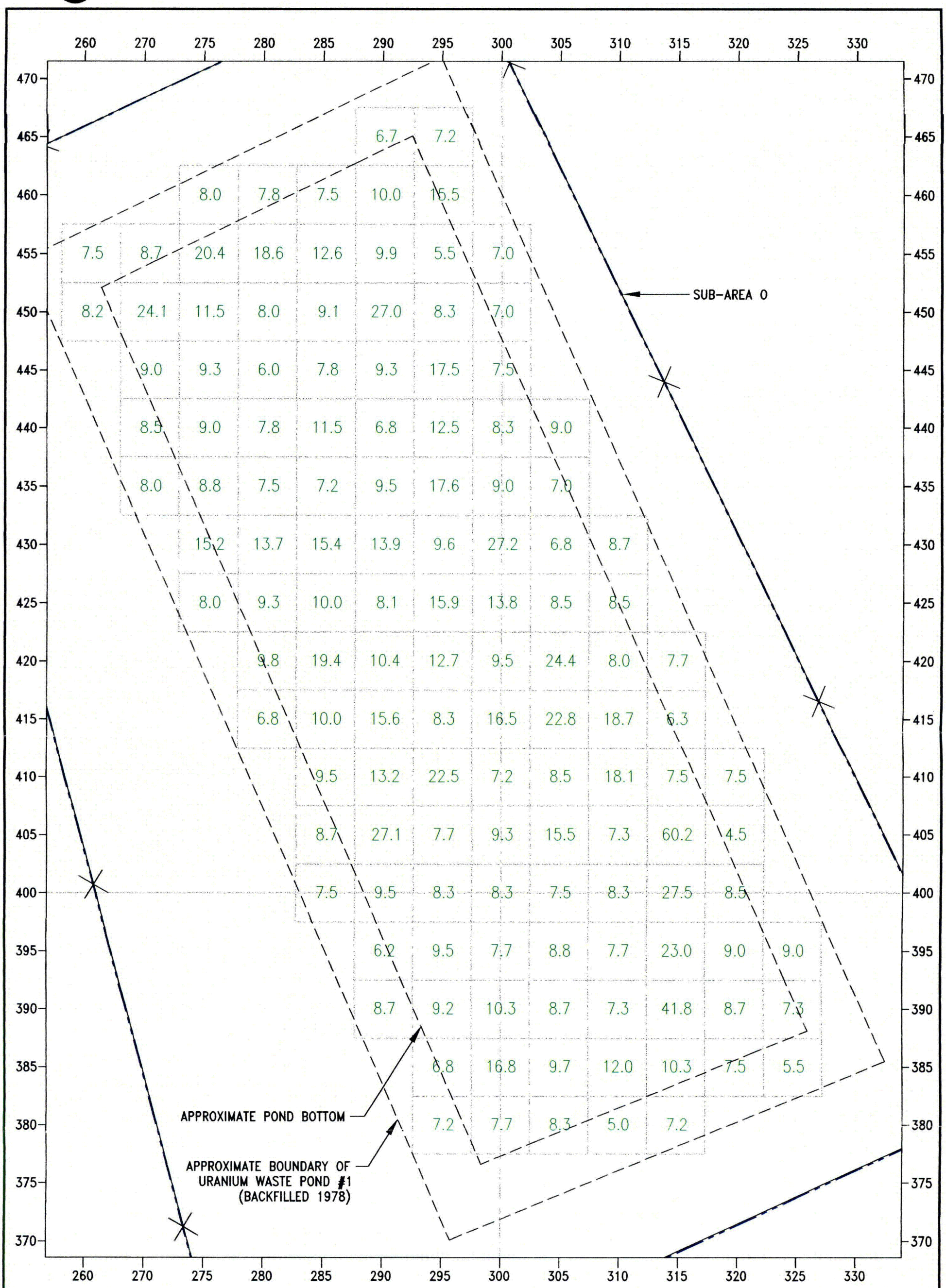
CIMARRON CORPORATION

CIMARRON FACILITY
URANIUM WASTE POND #1 – SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 4 Foot Grid
Average Soil Activity
6' to 10' Soil Depth

DRWN. BY	DATE	SCALE:
JE	9/27/97	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97AVP1–2	0

...\UPOND1\AVERAGES\P1AV6–10



URANIUM (pCi/G U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

LEGEND

6 URANIUM 1 – 69 pCi/g U

120 URANIUM > 69 pCi/g U

NORTH

8 0 8

SCALE IN METERS

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	3/2/98

CIMARRON CORPORATION

CIMARRON FACILITY
URANIUM WASTE POND #1 – SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 6 Foot Grid
Average Soil Activity
0 to 6' Soil Depth

DRWN. BY	DATE	SCALE:
JE	9/27/97	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97AVP1-3	0

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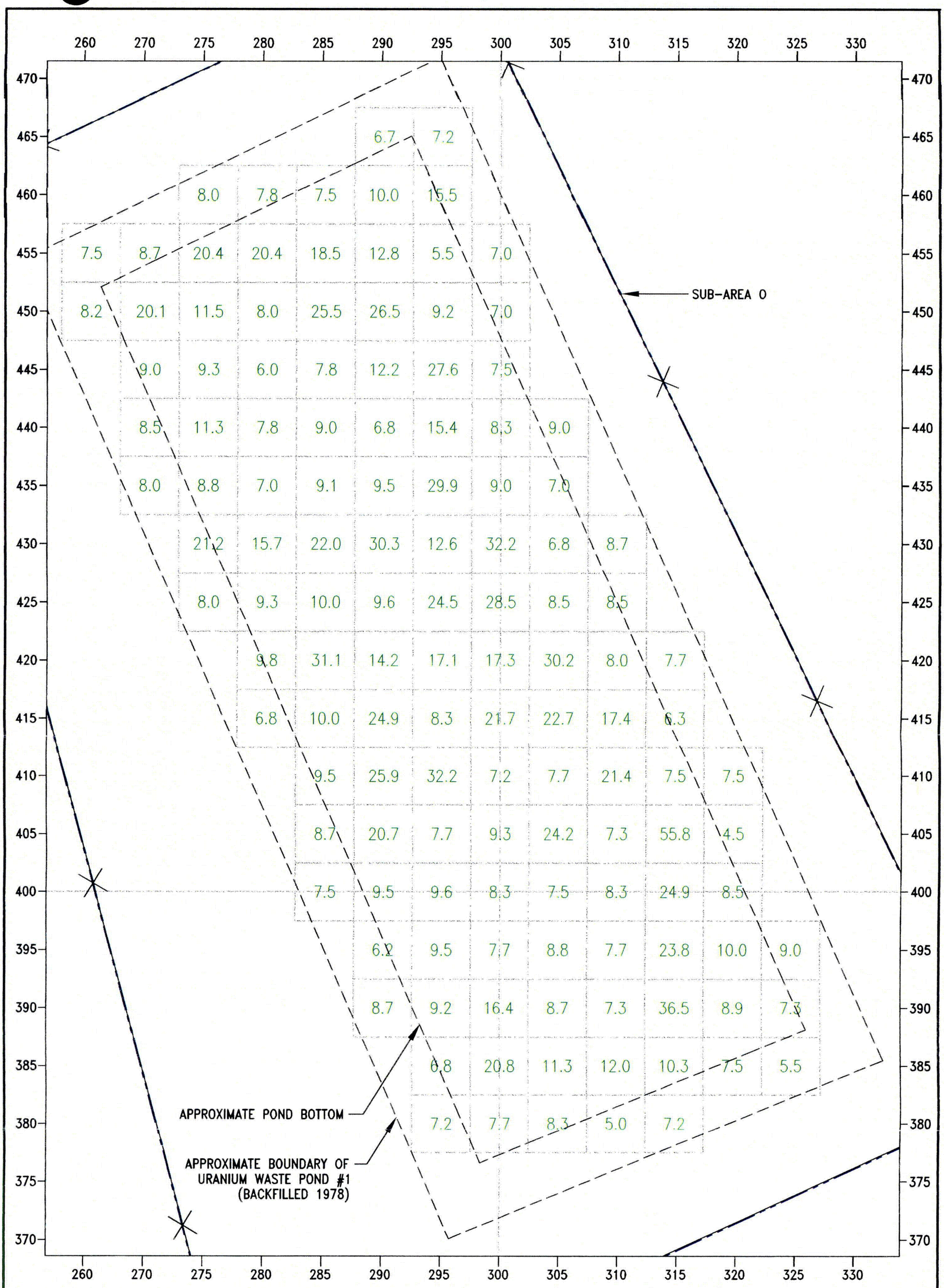

URANIUM (pCi/G U).

CIMARRON GAMMA SPEC SOIL COUNTER.

SITE SOIL BACKGROUND OF APPROX. 4.0 pCi/g U, NOT SUBTRACTED.

LEGEND

6 URANIUM 1 – 69 pCi/g U

120 URANIUM > 69 pCi/g U

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR	JL	3/2/98

CIMARRON CORPORATION

CIMARRON FACILITY
URANIUM WASTE POND #1 – SOIL SAMPLE RESULTS
5 Meter x 5 Meter x 10 Foot Grid
Average Soil Activity
0 to 10' Soil Depth

DRWN. BY	DATE	SCALE:
JE	9/27/97	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	97AVP1–4	0

...\UPOND1\AVERAGES\P1AVG0–9

Retention time=T+50

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA "O"
COVERED WASTE POND NO. 1
POST-REMEDIATION SOIL SAMPLE AVERAGES

LN #		0-1 METER U	1-2 METER U	2-3 METER U	0-2 METER AVG INDIVIDUAL HOL U	0-3 METER AVG INDIVIDUAL HOLE U
1	260 E - **450** N	6.7	9.7		8.2	8.2
2	260 E - **455** N	5.7	9.3		7.5	7.5
3	270 E - **435** N	8.7	7.3		8.0	8.0
4	270 E - **440** N	8.7	8.3		8.5	8.5
5	270 E - **445** N	7.3	10.7		9.0	9.0
6	270 E - **450** N	7.7	40.6	12.0	24.1	20.1
7	270 E - **455** N	9.3	8.0		8.7	8.7
8	275 E - **425** N	7.0	9.0		8.0	8.0
9	275 E - **430** N	7.4	23.0	33.0	15.2	21.2
10	275 E - **435** N	8.7	9.0		8.9	8.8
11	275 E - **440** N	7.0	11.0	15.8	9.0	11.3
12	275 E - **445** N	8.3	10.3		9.3	9.3
13	275 E - **450** N	9.0	14.0		11.5	11.5
14	275 E - **455** N	24.1	16.7		20.4	20.4
15	275 E - **460** N	8.7	7.3		8.0	8.0
16	280 E - **415** N	6.3	7.3		6.8	6.8
17	280 E - **420** N	8.7	11.0		9.8	9.8
18	280 E - **425** N	11.0	7.7		9.3	9.3
19	280 E - **430** N	6.7	20.7	19.8	13.7	15.7
20	280 E - **435** N	9.7	5.3	6.0	7.5	7.0
21	280 E - **440** N	8.0	7.7		7.8	7.8
22	280 E - **445** N	5.7	6.3		6.0	6.0
23	280 E - **450** N	8.7	7.3		8.0	8.0
24	280 E - **455** N	21.6	15.5	24.1	18.6	20.4
25	280 E - **460** N	7.3	8.3		7.8	7.8
26						
27						
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29						
30						

		Background	MDA
INSTRUMENTS:			
CIMARRON SOIL COUNTER			
4X4"X16" NaI DETECTOR	**Total U**	**4**	**10**

File: P3WP1AVG REVIEWED BY W. A. Boyce DATE: 3-6-98

Retention time=T+50

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA "O"
COVERED WASTE POND NO. 1
POST-REMEDIATION SOIL SAMPLE AVERAGES

LN #		0-1 METER U	1-2 METER U	2-3 METER U	0-2 METER AVG INDIVIDUAL HOLE U	0-3 METER AVG INDIVIDUAL HOLE U
1	285 E - **400** N	8.0	7.0		7.5	7.5
2	285 E - **405** N	6.7	10.7		8.7	8.7
3	285 E - **410** N	7.0	12.0		9.5	9.5
4	285 E - **415** N	9.0	11.0		10.0	10.0
5	285 E - **420** N	6.9	31.8	54.6	19.4	31.1
6	285 E - **425** N	11.7	8.3		10.0	10.0
7	285 E - **430** N	7.2	23.6	35.3	15.4	22.0
8	285 E - **435** N	7.0	7.4	13.0	7.2	9.1
9	285 E - **440** N	10.3	12.7	4.0	11.5	9.0
10	285 E - **445** N	8.3	7.3		7.8	7.8
11	285 E - **450** N	6.8	11.3	58.4	9.1	25.5
12	285 E - **455** N	15.5	9.7	30.3	12.6	18.5
13	285 E - **460** N	7.3	7.7		7.5	7.5
14	290 E - **390** N	7.7	9.7		8.7	8.7
15	290 E - **395** N	7.3	5.0	R	6.2	6.2
16	290 E - **400** N	7.7	11.3		9.5	9.5
17	290 E - **405** N	7.3	46.9	8.0	27.1	20.7
18	290 E - **410** N	8.1	18.3	51.4	13.2	25.9
19	290 E - **415** N	6.6	24.6	43.4	15.6	24.9
20	290 E - **420** N	7.5	13.3	21.7	10.4	14.2
21	290 E - **425** N	7.4	8.7	12.6	8.1	9.6
22	290 E - **430** N	6.8	20.9	63.2	13.9	30.3
23	290 E - **435** N	7.3	11.7		9.5	9.5
24	290 E - **440** N	7.7	6.0		6.8	6.8
25	290 E - **445** N	9.3	9.3	18	9.3	12.2
26	290 E - **450** N	6.4	47.6	25.5	27	26.5
27	290 E - **455** N	7.6	12.1	18.8	9.9	12.8
28	290 E - **460** N	11.7	8.3		10	10
29	290 E - **465** N	7.3	6		6.7	6.7
30						

		Background	MDA
INSTRUMENTS:			
CIMARRON SOIL COUNTER			
4X4"X16" NaI DETECTOR	**Total U**	**4**	**10**

File: P3WP1AVG REVIEWED BY W. A. Bryan DATE: 3-6-98

Retention time=T+50

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA "O"
COVERED WASTE POND NO. 1
POST-REMEDIATION SOIL SAMPLE AVERAGES

LN #		0-1 METER U	1-2 METER U	2-3 METER U	0-2 METER AVG INDIVIDUAL HOL U	0-3 METER AVG INDIVIDUAL HOLE U
1	295 E - **380** N	6.0	8.3		7.2	7.2
2	295 E - **385** N	7.7	6.0		6.8	6.8
3	295 E - **390** N	10.3	8.0		9.2	9.2
4	295 E - **395** N	5.7	13.3		9.5	9.5
5	295 E - **400** N	6.7	10.0	12.0	8.3	9.6
6	295 E - **405** N	6.7	8.7		7.7	7.7
7	295 E - **410** N	9.8	35.5	51.5	22.5	32.2
8	295 E - **415** N	6.7	10.0		8.3	8.3
9	295 E - **420** N	6.6	18.7	25.9	12.7	17.1
10	295 E - **425** N	7.1	24.7	41.6	15.9	24.5
11	295 E - **430** N	8.6	10.7	18.7	9.6	12.6
12	295 E - **435** N	7.2	28.0	54.6	17.6	29.9
13	295 E - **440** N	6.3	18.7	21.1	12.5	15.4
14	295 E - **445** N	11.8	23.3	47.7	17.5	27.6
15	295 E - **450** N	8.5	8.0	11.2	8.3	9.2
16	295 E - **455** N	4.3	6.7		5.5	5.5
17	295 E - **460** N	12.0	19.0	R	15.5	15.5
18	295 E - **465** N	7.7	6.7		7.2	7.2
19						
20						
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22						
23						
24						
25						
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27						
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29						
30						

		Background	MDA
INSTRUMENTS:			
CIMARRON SOIL COUNTER			
4X4"X16" NaI DETECTOR	**Total U**	**4**	**10**

File: P3WP1AVG REVIEWED BY W. A. Boyer DATE: 3-6-98

Retention time=T+50

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA "O"
COVERED WASTE POND NO. 1
POST-REMEDIATION SOIL SAMPLE AVERAGES

LN #		0-1 METER U	1-2 METER U	2-3 METER U	0-2 METER AVG INDIVIDUAL HOL U	0-3 METER AVG INDIVIDUAL HOL U
1	300 E - **380** N	6.7	8.7		7.7	7.7
2	300 E - **385** N	7.2	26.3	28.8	16.8	20.8
3	300 E - **390** N	7.5	13.0	28.8	10.3	16.4
4	300 E - **395** N	7.0	8.3		7.7	7.7
5	300 E - **400** N	7.7	9.0		8.3	8.3
6	300 E - **405** N	9.0	9.7		9.3	9.3
7	300 E - **410** N	7.3	7.0		7.2	7.2
8	300 E - **415** N	7.4	25.5	32.2	16.5	21.7
9	300 E - **420** N	7.0	12.0	32.8	9.5	17.3
10	300 E - **425** N	6.6	21.0	58.0	13.8	28.5
11	300 E - **430** N	5.9	48.5	42.1	27.2	32.2
12	300 E - **435** N	9.3	8.7		9.0	9.0
13	300 E - **440** N	8.7	8.0		8.3	8.3
14	300 E - **445** N	7.3	7.7		7.5	7.5
15	300 E - **450** N	7.0	7.0		7.0	7.0
16	300 E - **455** N	7.0	R	R	7.0	7.0
17	305 E - **380** N	10.0	6.7		8.3	8.3
18	305 E - **385** N	6.3	13.0	14.5	9.7	11.3
19	305 E - **390** N	7.3	10.0		8.7	8.7
20	305 E - **395** N	11.0	6.7		8.8	8.8
21	305 E - **400** N	7.0	8.0		7.5	7.5
22	305 E - **405** N	7.0	23.9	41.6	15.5	24.2
23	305 E - **410** N	8.8	8.3	6.0	8.5	7.7
24	305 E - **415** N	7.2	38.4	22.6	22.8	22.7
25	305 E - **420** N	7.3	41.5	41.7	24.4	30.2
26	305 E - **425** N	8.3	8.7		8.5	8.5
27	305 E - **430** N	6.0	7.7		6.8	6.8
28	305 E - **435** N	6.0	8		7.0	7.0
29	305 E - **440** N	9.0	R	R	9.0	9.0
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		Background	MDA
INSTRUMENTS:			
CIMARRON SOIL COUNTER			
4X4"X16" NaI DETECTOR	**Total U**	**4**	**10**

File: P3WP1AVG REVIEWED BY W. A. Rogers DATE: 3-6-98

CIMARRON FACILITY
PHASE III, SUB-AREA "O"
COVERED WASTE POND NO. 1
POST-REMEDIATION SOIL SAMPLE AVERAGES

LN #		0-1 METER U	1-2 METER U	2-3 METER U	0-2 METER AVG INDIVIDUAL HOLE U	0-3 METER AVG INDIVIDUAL HOLE U
1	310 E - **380** N	6.0	4.0	R	5.0	5.0
2	310 E - **385** N	11.3	12.7		12.0	12.0
3	310 E - **390** N	7.3	7.3		7.3	7.3
4	310 E - **395** N	7.0	8.3		7.7	7.7
5	310 E - **400** N	8.3	8.3		8.3	8.3
6	310 E - **405** N	8.7	6.0	R	7.3	7.3
7	310 E - **410** N	9.2	27.0	28.0	18.1	21.4
8	310 E - **415** N	11.5	25.8	15.0	18.7	17.4
9	310 E - **420** N	7.7	8.3	R	8.0	8.0
10	310 E - **425** N	8.5	R	R	8.5	8.5
11	310 E - **430** N	8.0	9.3		8.7	8.7
12	315 E - **380** N	7.3	7.0		7.2	7.2
13	315 E - **385** N	11.7	9.0		10.3	10.3
14	315 E - **390** N	9.1	74.4	26.1	41.8	36.5
15	315 E - **395** N	6.2	39.8	25.2	23.0	23.8
16	315 E - **400** N	7.6	47.4	19.7	27.5	24.9
17	315 E - **405** N	16.6	103.8	47.0	60.2	55.8
18	315 E - **410** N	7.5	R	R	7.5	7.5
19	315 E - **415** N	6.3	6.3		6.3	6.3
20	315 E - **420** N	7.7	R	R	7.7	7.7
21	320 E - **385** N	8.0	7.0		7.5	7.5
22	320 E - **390** N	8.2	9.2	9.5	8.7	8.9
23	320 E - **395** N	9.8	8.1	12.0	9.0	10.0
24	320 E - **400** N	8.0	9.0		8.5	8.5
25	320 E - **405** N	4.5	R		4.5	4.5
26	320 E - **410** N	6.0	9.0		7.5	7.5
27	325 E - **385** N	5.5	R	R	5.5	5.5
28	325 E - **390** N	7.3	R	R	7.3	7.3
29	325 E - **395** N	9.0	R	R	9.0	9.0
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		Background	MDA
INSTRUMENTS:			
CIMARRON SOIL COUNTER			
4X4"X16" NaI DETECTOR	**Total U**	**4**	**10**

File: P3WP1AVG REVIEWED BY W. A. Rogers DATE: 3-6-98