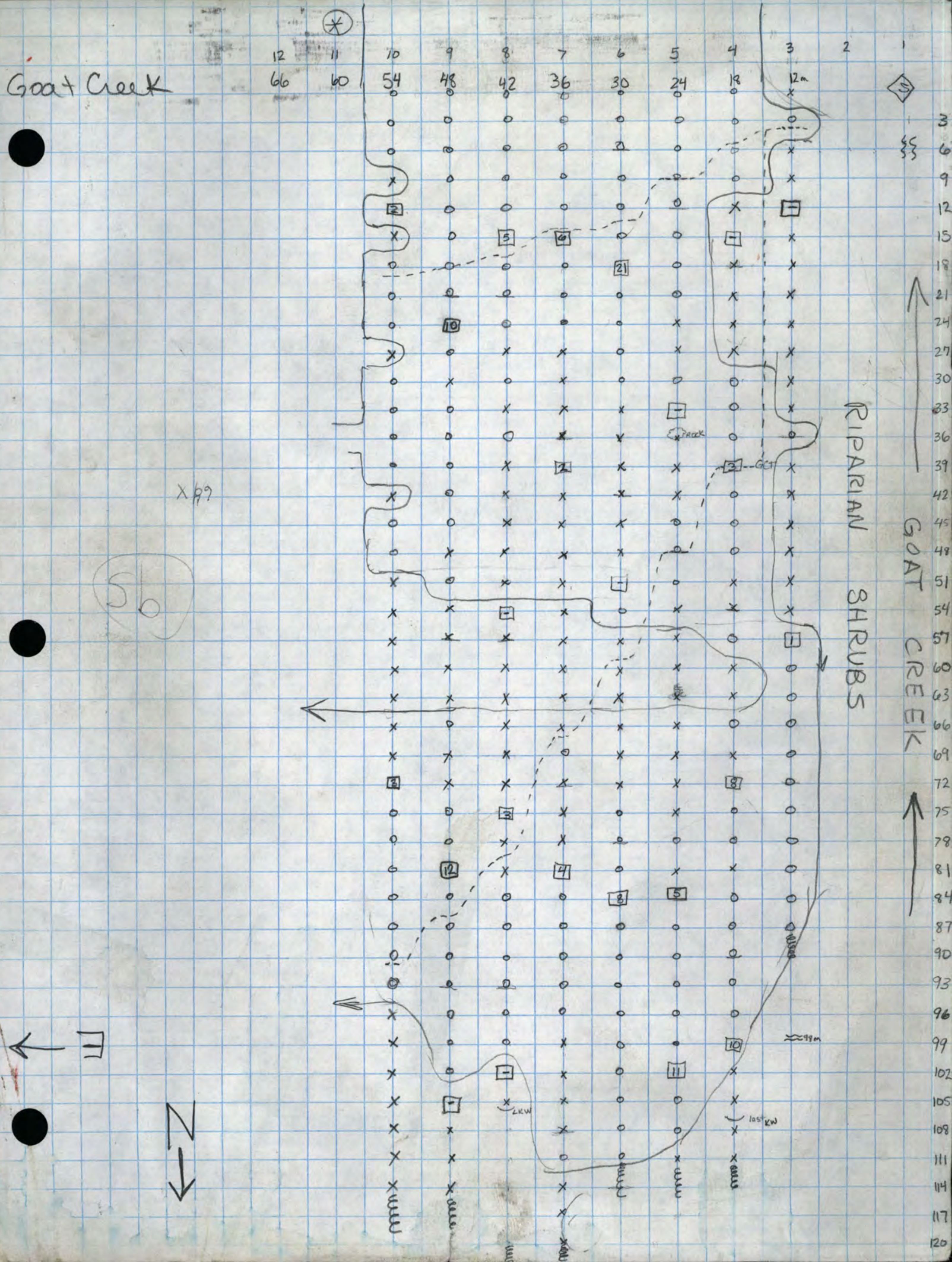
Knapweed Summary Summer 2005

On July 25, 2005 Sara Jones, Melissa Lamb and Holly Akenson went on a quest to pull knapweed; the local carcinogenic weed of the Big Creek Area. This mission required the best of the best, equipped with gloves and paper feed bags the three troopers pulled a total of 296 plants. The site location is across from the Rush Creek confluence with Big Creek and its coordinates are 11T 0668445, UTM 4996643. Of the plants pulled 11 were of last year's crop and had a total of 153 seed heads. This total was greater than that of 2004 when 176 plants were pulled but still considerably lower than the previous years; 2003 yielded 750 plants and before then 1100 were pulled each year.

Nature Conservancy research has shown that it takes seven years to effectively remove Knapweed from an area by pulling it by hand. This was the eighth year of the study at Taylor Ranch Field Station so we hope to continue seeing a decline in knapweed plants in the future.

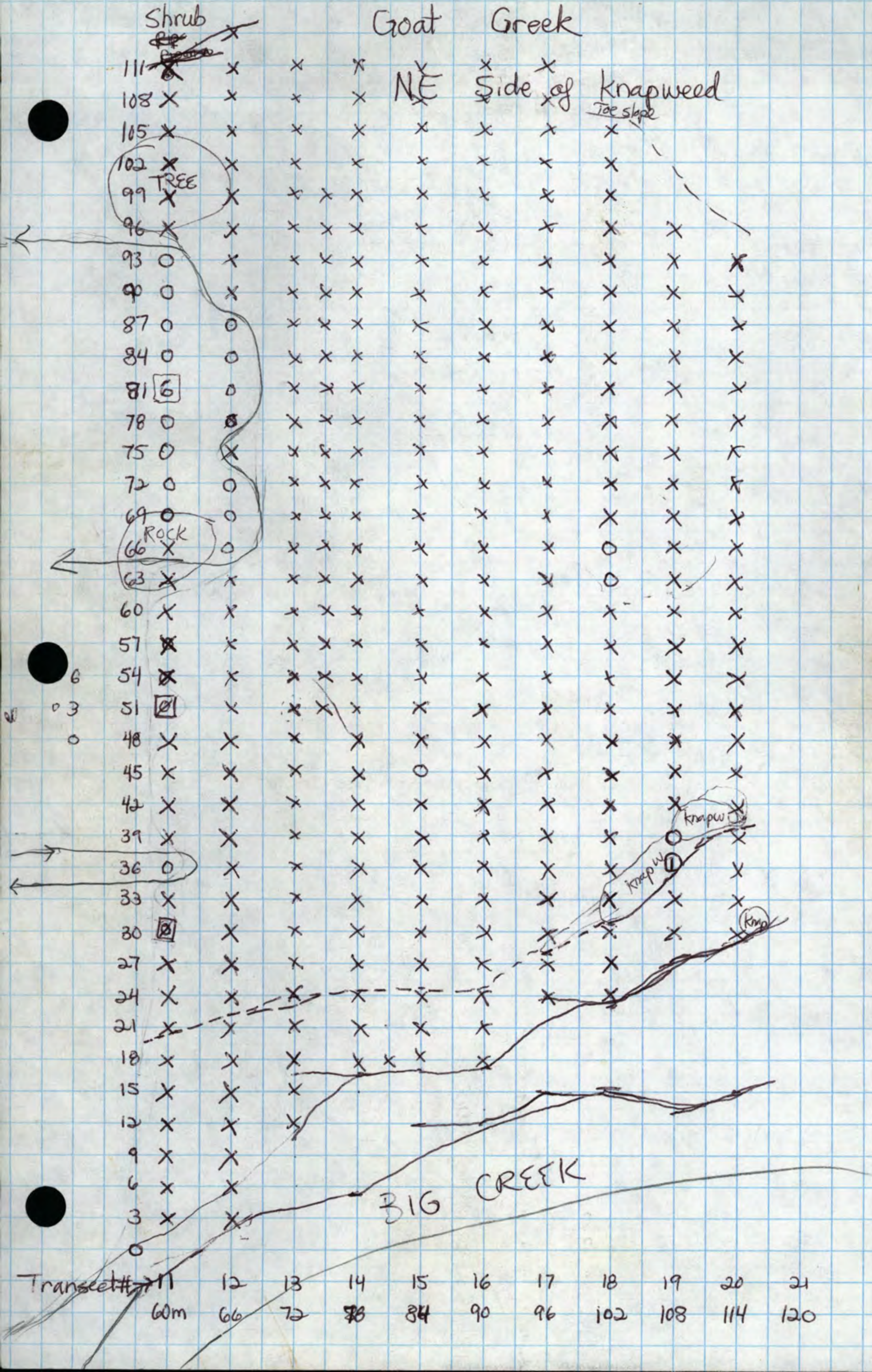
New site locations for future knapweed counts:
Gravel bar along airstrip: 11T 0668817 UTM 4996525 (40 plants 2005)
Windsock end of airstrip: 11T 0668441 UTM 4996605 (94 plants 2005)

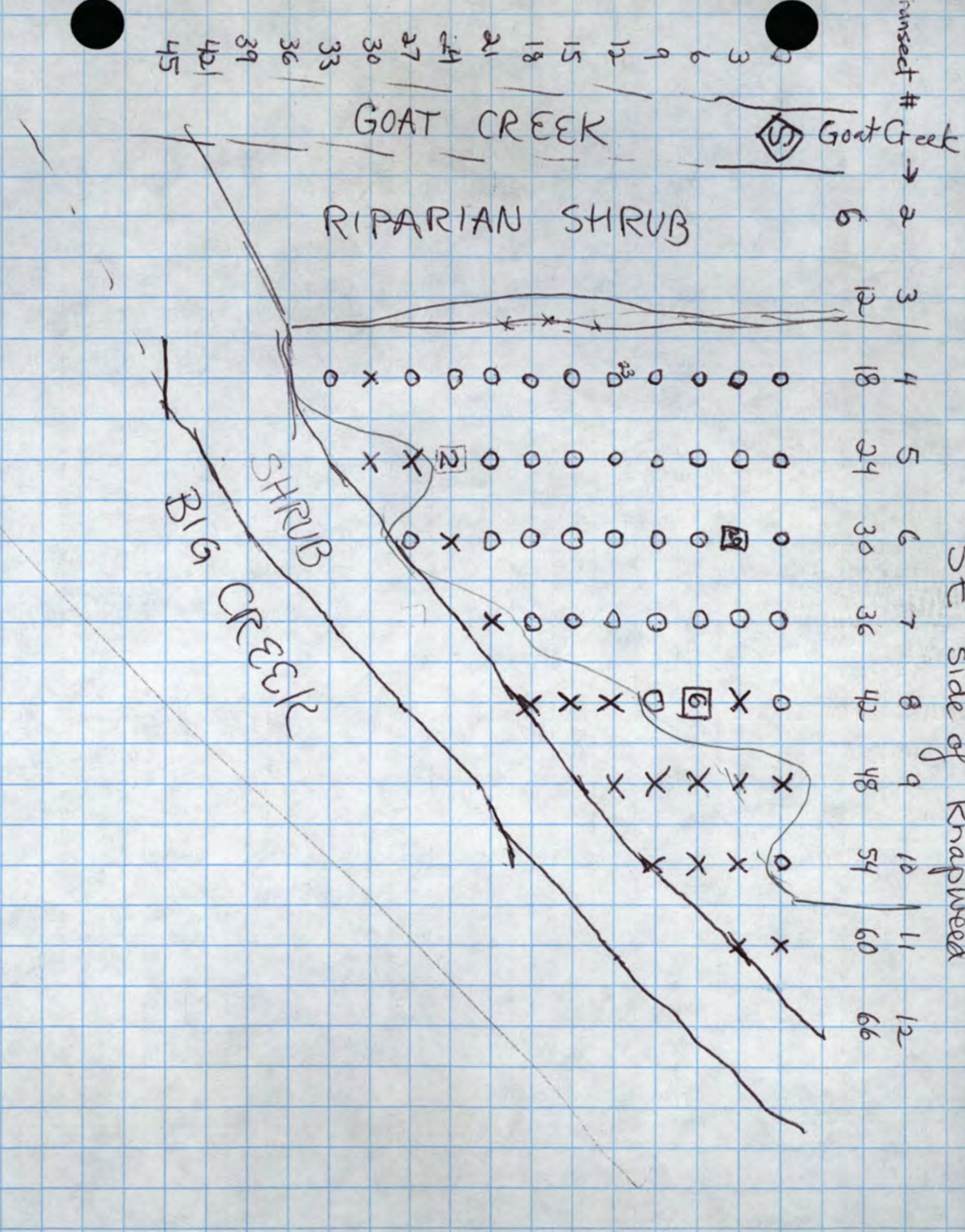
Goat Creek


12 11 10 9 8 7 6 5 4 3 2 1
66 60 54 48 42 36 30 24 18 12m
RIPARIAN SHRUBS
GOAT CREEK
5b
E
N
ROCK
GCT
LKW
lost KW
99m
3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 48 51 54 57 60 63 66 69 72 75 78 81 84 87 90 93 96 99 102 105 108 111 114 117 120

Goat Creek

NE Side of Knapweed
Toe slope



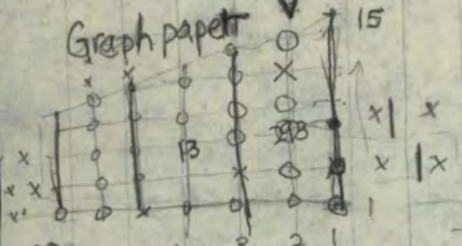


Transect #
Goat Creek
GOAT CREEK
RIPARIAN SHRUB
SHRUB
BIG CREEK
SE side of Knapweed

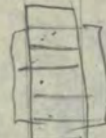
150 300
300
40
680
75
12
$\times$ 80
960

1000' X 300' = 300000 ft² = 7.5ac
187,000 = 4.7ac
every 10' = 100 rows X 30 col. = 3000 plots
yes/no presence of knapw.
(or Transects)
105K 3 50 x 30 = 1050 plots
82K 68 x 13 = 900 plots
~ 2000 plots

Graph paper

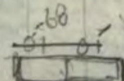


68
34 transects



1-20 $\boxed{1000 \text{ plots}}$
80 Random

Area border = topog
or veg Δ or "



30|220 M

Legend: O = knapw X = no knapw
V = veg Δ T = Top Δ

Knapweed extent

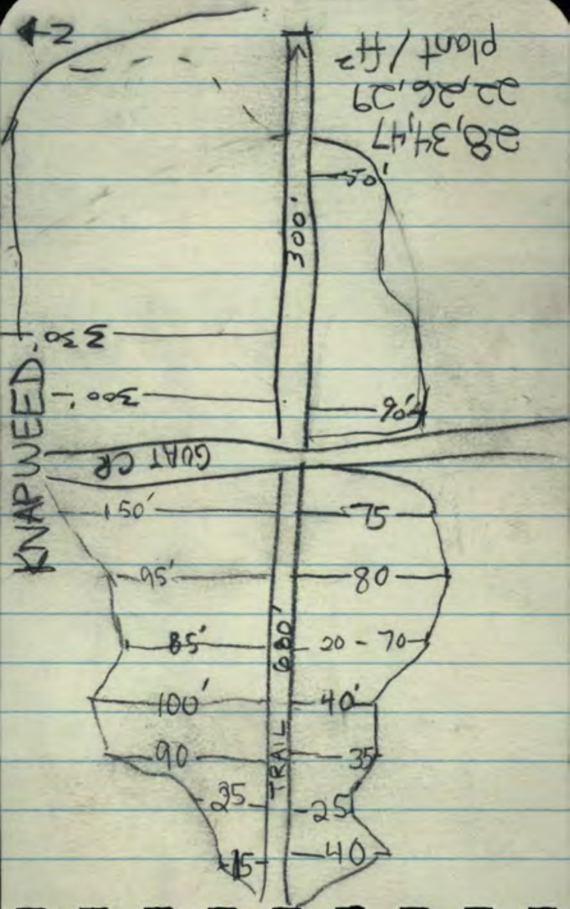
1) Map transects 6m (18') apart w/ Daubenmeir .2m x .5m plots every 3m (9'); Stop transect Length when meet topographic Δ or 2 plots w/no knapw.

2) Mark on map addl. extent of Knapweed seedheads ~~in~~ with 3m dist from transect line.

Map. veg Δ.

Min density = ~~3 plants/m²~~ = 10 plants/m²

Area = # plots × 3m × 6m w/in boundary


KNAPWEED
N
28,34,47
22,26,29
plant/ft²
300'
TRAIL
600'
330'
300'
50'
90'
GOAT CR
150'
75
95'
80
85'
20 - 70
100'
40'
90
35
25
25
15
40

Density of Knapweed

1) 80-100 random plots (Daubenmeir); plants / plot counted. A Random plot selected for each set of 12 plots by watch read.
count written on map & data forming

2) Density $= \bar{x}$ # plants $\pm$ SE per plot $\div 0.1\ m^2$ per plot $=$ # plants $/ m^2$

Airphoto; 2 mirror
GPS, compasses

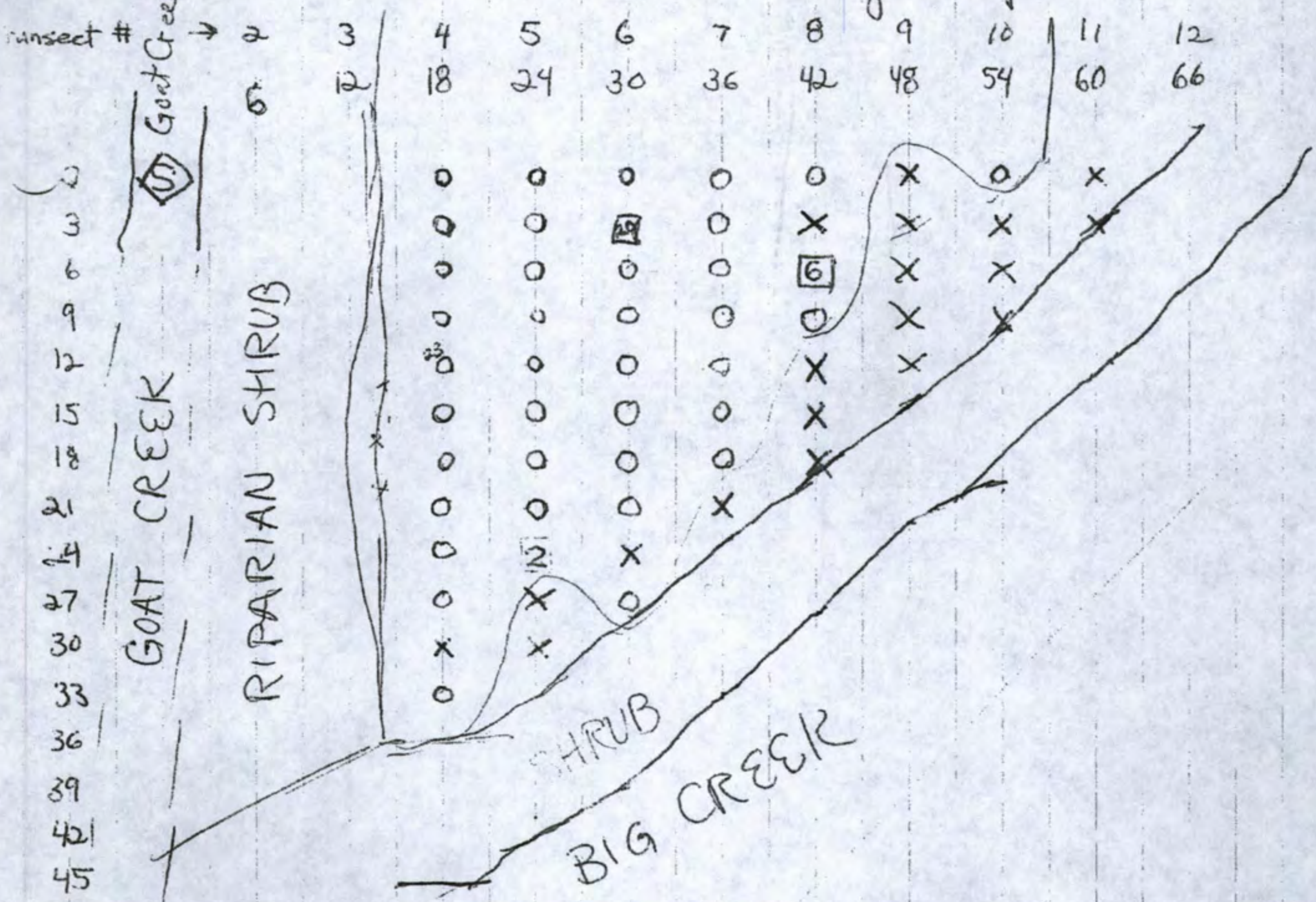
Patti
*equipment
*disposol of knapw.

756-5707

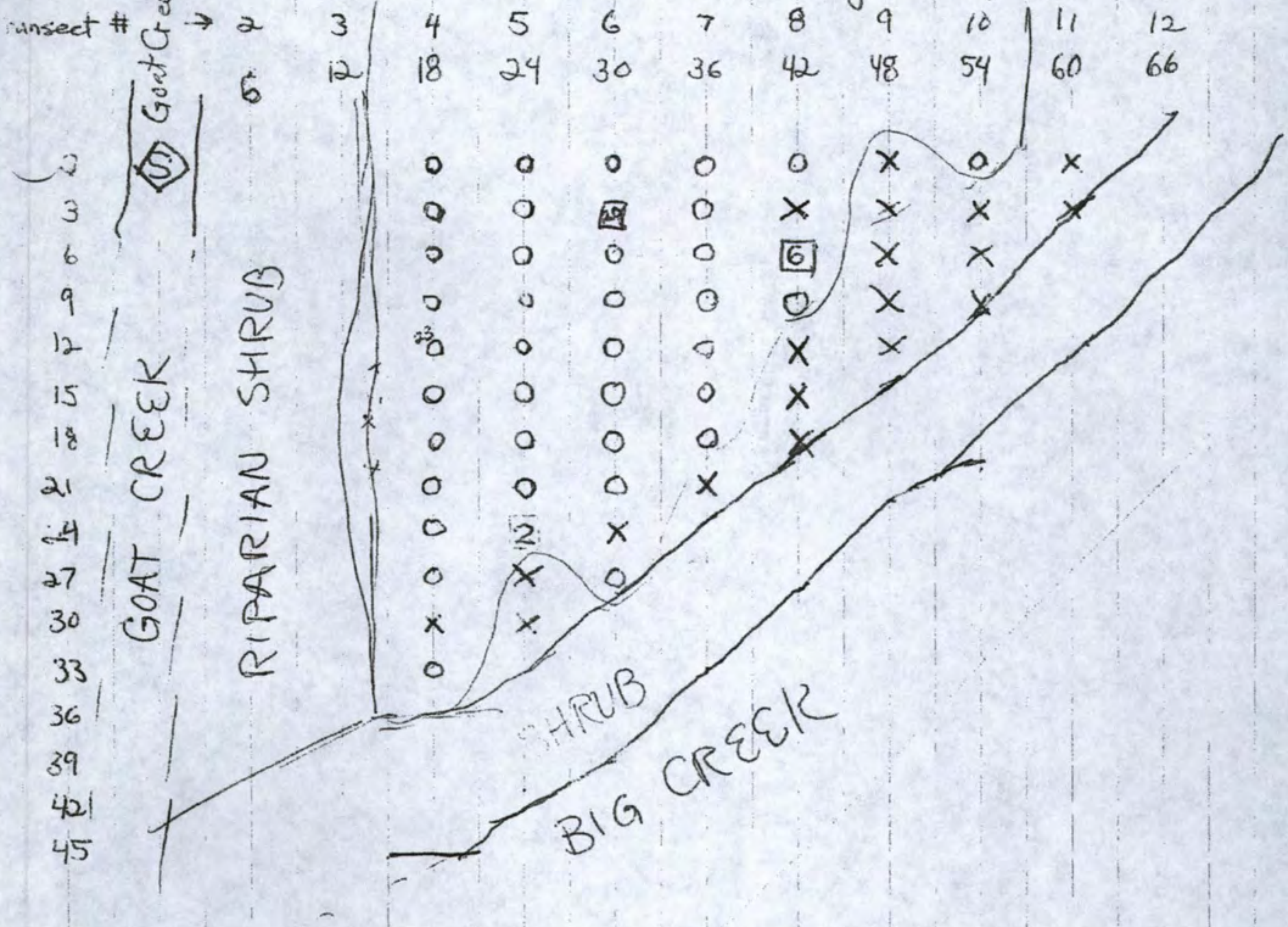
Winger – Knapweed
How Size of area?

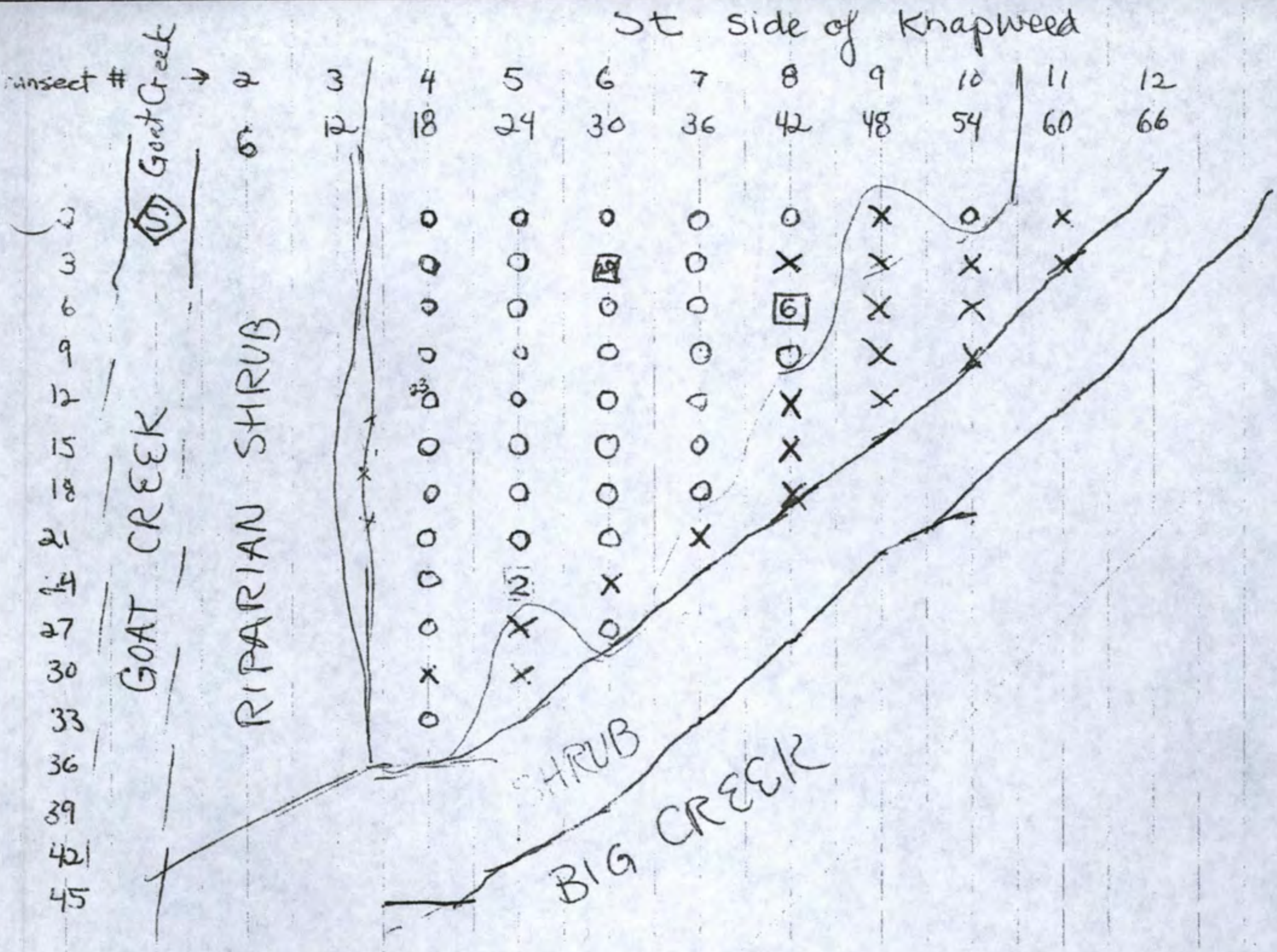
Putt - all seedlings?,
scrape? Use ~~doot~~ digger?
What use for whipping?

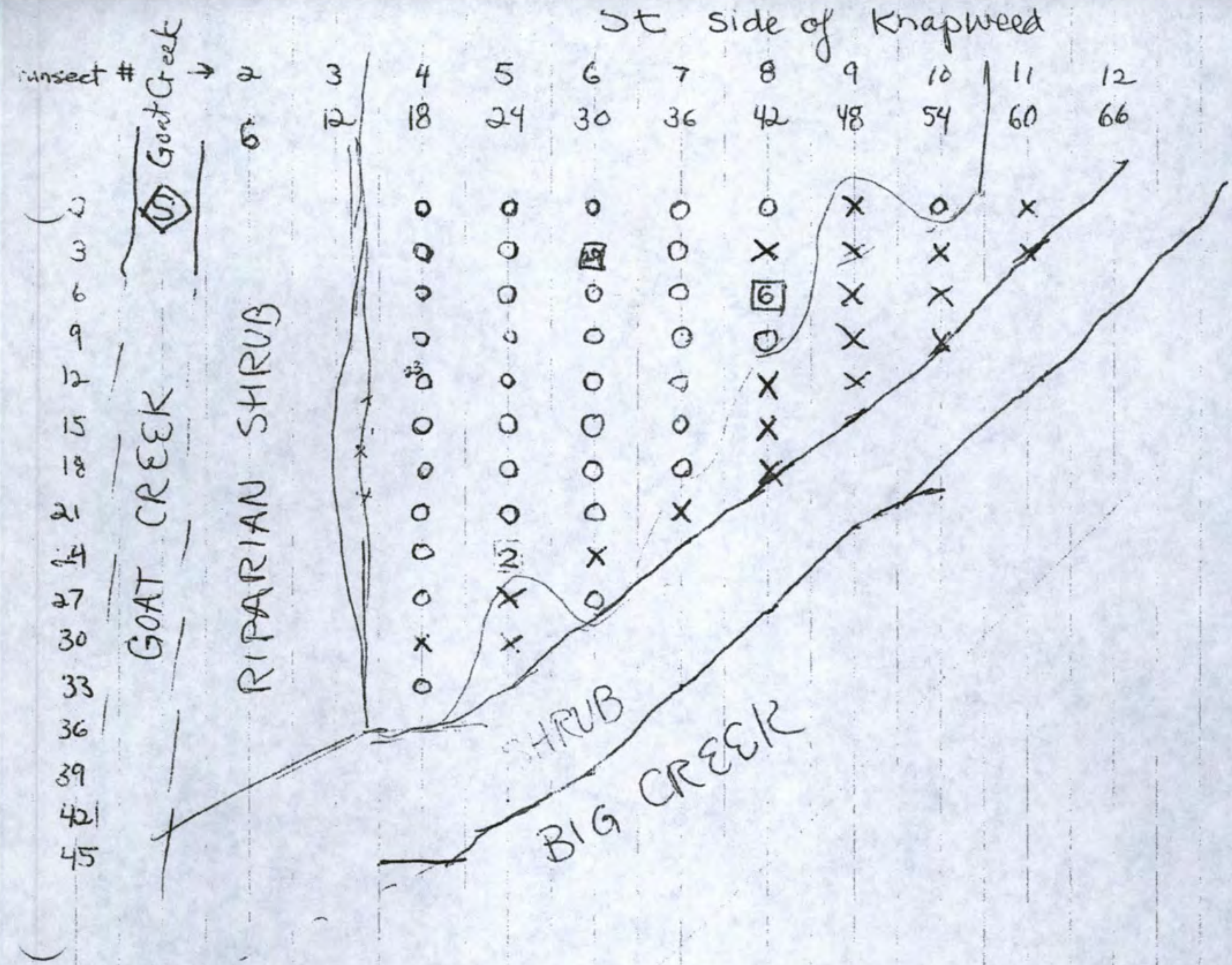
St side of Knapweed



St side of Knapweed




St side of Knapweed
ransect # → 2 3 4 5 6 7 8 9 10 11 12
6 12 18 24 30 36 42 48 54 60 66
Goat Creek
3 6 9 12 15 18 21 24 27 30 33 36 39 42 45
GOAT CREEK
RIPARIAN SHRUB
SHRUB
BIG CREEK



St side of Knapweed
Transect #
Goat Creek
2 3 4 5 6 7 8 9 10 11 12
6 12 18 24 30 36 42 48 54 60 66
3 6 9 12 15 18 21 24 27 30 33 36 39 42 45
GOAT CREEK
RIPARIAN SHRUB
SHRUB
BIG CREEK

Goat Creek

NE Side of Knapweed

Shrub

Toe slope

111	~~X~~	X	X		X		X	X	X				
108	X	X	X		X		X	X	X				
105	X	X	X		X		X	X	X	X			
102	X	X	X		X		X	X	X	X			
99	X	X	X	X	X		X	X	X	X			
96	X	X	X	X	X		X	X	X	X	X		
93	O	X	X	X	X		X	X	X	X	X	X	
90	O	X	X	X	X		X	X	X	X	X	X	
87	O	O	X	X	X		X	X	X	X	X	X	
84	O	O	X	X	X		X	X	X	X	X	X	
81	$\boxed{6}$	O	X	X	X		X	X	X	X	X	X	
78	O	O	X	X	X		X	X	X	X	X	X	
75	O	X	X	X	X		X	X	X	X	X	X	
72	O	O	X	X	X		X	X	X	X	X	X	
69	O	O	X	X	X		X	X	X	X	X	X	
66	X	O	X	X	X		X	X	X	O	X	X	
63	X	X	X	X	X		X	X	X	O	X	X	
60	X	X	X	X	X		X	X	X	X	X	X	
57	X	X	X	X	X		X	X	X	X	X	X	
6 54	X	X	X	X	X		X	X	X	X	X	X	
o 3 51	$\boxed{Ø}$	X	X	X	X		X	X	X	X	X	X	
o 48	X	X	X		X		X	X	X	X	X	X	
45	X	X	X		X		O	X	X	X	X	X	
42	X	X	X		X		X	X	X	X	X	X	
39	X	X	X		X		X	X	X	X	O	X	
36	O	X	X		X		X	X	X	X	1	X	
33	X	X	X		X		X	X	X	X	X	X	
30	$\boxed{Ø}$	X	X		X		X	X	X	X	X	X	
27	X	X	X		X		X	X	X	X			
24	X	X	X		X		X	X	X	X			
21	X	X	X		X		X	X					
18	X	X	X		X	X	X	X					
15	X	X	X										
12	X	X	X										
9	X	X											
6	X	X											
3	X	X											
0													
Transect#	11	12	13		14		15	16	17	18	19	20	21
	60m	66	72		78		84	90	96	102	108	114	120

TREE

ROCK

knpw

knpw

Knp

BIG CREEK

Goat Greek

NE Side of knapweed

Toe slope

Shrub ~~Rip~~	11	12	13		14	15	16	17	18	19	20	21
111	~~O~~ X	x	x		x	x	x	x				
108	X	x	x		x	x	x	x				
105	X	x	x		x	x	x	x	x			
102	X	x	x		x	x	x	x	x			
99	X TREE	X	x	x	x	x	x	x	x			
96	X	x	x	x	x	x	x	x	x	x		
93	O	x	x	x	x	x	x	x	x	x	X	
90	O	x	x	x	x	x	x	x	x	x	x	
87	O	O	x	x	x	x	x	x	x	x	x	
84	O	O	x	x	x	x	x	x	x	x	x	
81	$\boxed{6}$	O	x	x	x	x	x	x	x	x	x	
78	O	~~O~~	x	x	x	x	x	x	x	x	x	
75	O	X	x	x	x	x	x	x	x	x	x	
72	O	O	x	x	x	x	x	x	x	x	x	
69	O	O	x	x	x	x	x	x	x	x	x	
66	X ROCK	O	x	x	x	x	x	x	O	x	x	
63	X	x	x	x	x	x	x	x	O	x	x	
60	X	x	x	x	x	x	x	x	x	x	x	
57	~~X~~	x	x	x	x	x	x	x	x	x	x	
6 54	~~X~~	x	x	x	x	x	x	x	x	x	x	
o 3 51	$\boxed{\emptyset}$	x	x	x	x	x	x	x	x	x	x	
o 48	X	X	x		x	x	x	x	x	x	X	
45	X	X	x		x	O	x	x	x	x	x	
42	X	X	x		x	x	x	x	x	x	x	
39	x	X	x		x	x	x	x	x	O	x	
36	O	X	x		x	x	x	x	x	①	x	
33	X	X	x		x	x	x	x	x	x	x	
30	$\boxed{\emptyset}$	X	x		x	x	x	x	x	x	x	
27	X	X	x		x	x	x	x	X			
24	X	x	X		x	x	x	x	X			
21	X	x	x		x	x	x					
18	x	x	X		x x	x	X					
15	X	X	X									
12	X	X	X									
9	X	X										
6	x	X										
3	x	X										
0	O											
Transect #	11	12	13		14	15	16	17	18	19	20	21
	60m	66	72		~~78~~	84	90	96	102	108	114	120

knapw

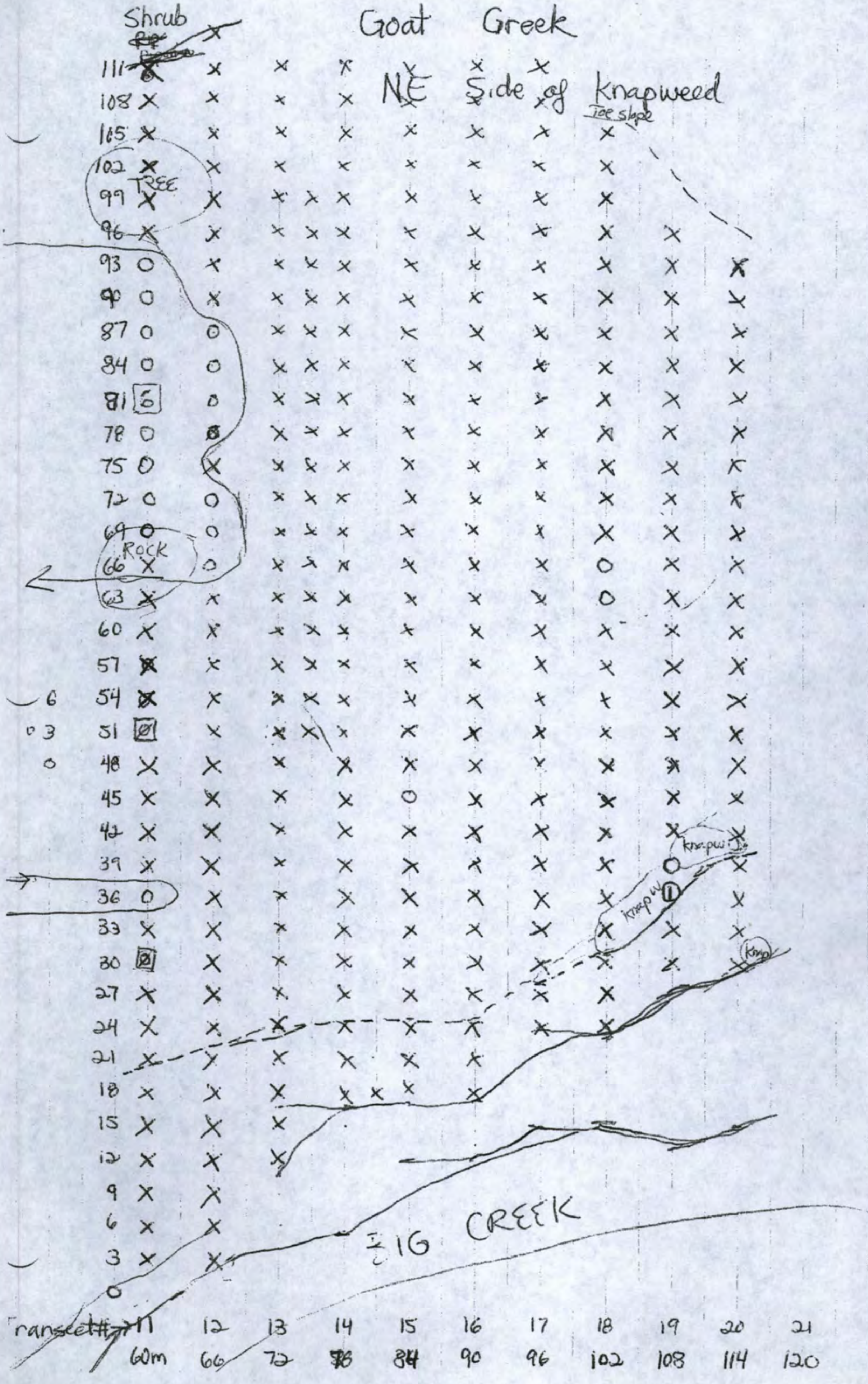
knapw

knp

BIG CREEK

Goat Greek

NE Side of knapweed



Goat Greek

NE Side of Knapweed

Toe slope

	Shrub ~~Rip~~ ~~Brome~~											
	111 X	x	x		x	x	x	x				
	108 X	x	x		x	x	x	x				
	105 X	x	x		x	x	x	x	x			
	102 X	x	x		x	x	x	x	x			
	99 X	X	x	x	x	x	x	x	x			
	96 X	x	x	x	x	x	x	x	x	x		
	93 O	x	x	x	x	x	x	x	x	x	X	
	90 O	x	x	x	x	x	x	x	x	x	x	
	87 O	O	x	x	x	x	x	x	x	x	x	
	84 O	O	x	x	x	x	x	x	x	x	x	
	81 $\boxed{6}$	O	x	x	x	x	x	x	x	x	x	
	78 O	O	x	x	x	x	x	x	x	x	x	
	75 O	X	x	x	x	x	x	x	X	x	x	
	72 O	O	x	x	x	x	x	x	x	x	x	
	69 O	O	x	x	x	x	x	x	X	X	x	
	66 X	O	x	x	x	x	x	x	O	x	x	
	63 X	x	x	x	x	x	x	x	O	X	x	
	60 X	x	x	x	x	x	x	x	x	x	x	
	57 X	x	x	x	x	x	x	x	x	X	x	
6	54 X	x	x	x	x	x	x	x	x	X	x	
o 3	51 $\boxed{Ø}$	x	x	X	x	x	X	x	x	x	X	
o	48 X	X	x		X	x	x	x	x	x	X	
	45 X	X	X		x	O	x	x	x	X	x	
	42 X	X	x		x	x	X	X	x	X	X	
	39 x	X	x		x	X	x	X	x	O	X	
	36 O	X	x		X	X	X	X	X	1	X	
	33 X	X	x		X	x	x	X	X	X	x	
	30 $\boxed{Ø}$	X	x		X	x	X	X	X	x	X	
	27 X	X	x		x	x	x	X	X			
	24 X	x	X		x	x	X	x	X			
	21 X	y	x		x	x	x					
	18 x	x	X		x x	x	X					
	15 X	X	x									
	12 x	X	x									
	9 X	X										
	6 x	X										
	3 x	X										
	0											
	Transect # → 11	12	13		14	15	16	17	18	19	20	21
	60m	66	72		78	84	90	96	102	108	114	120

TREE

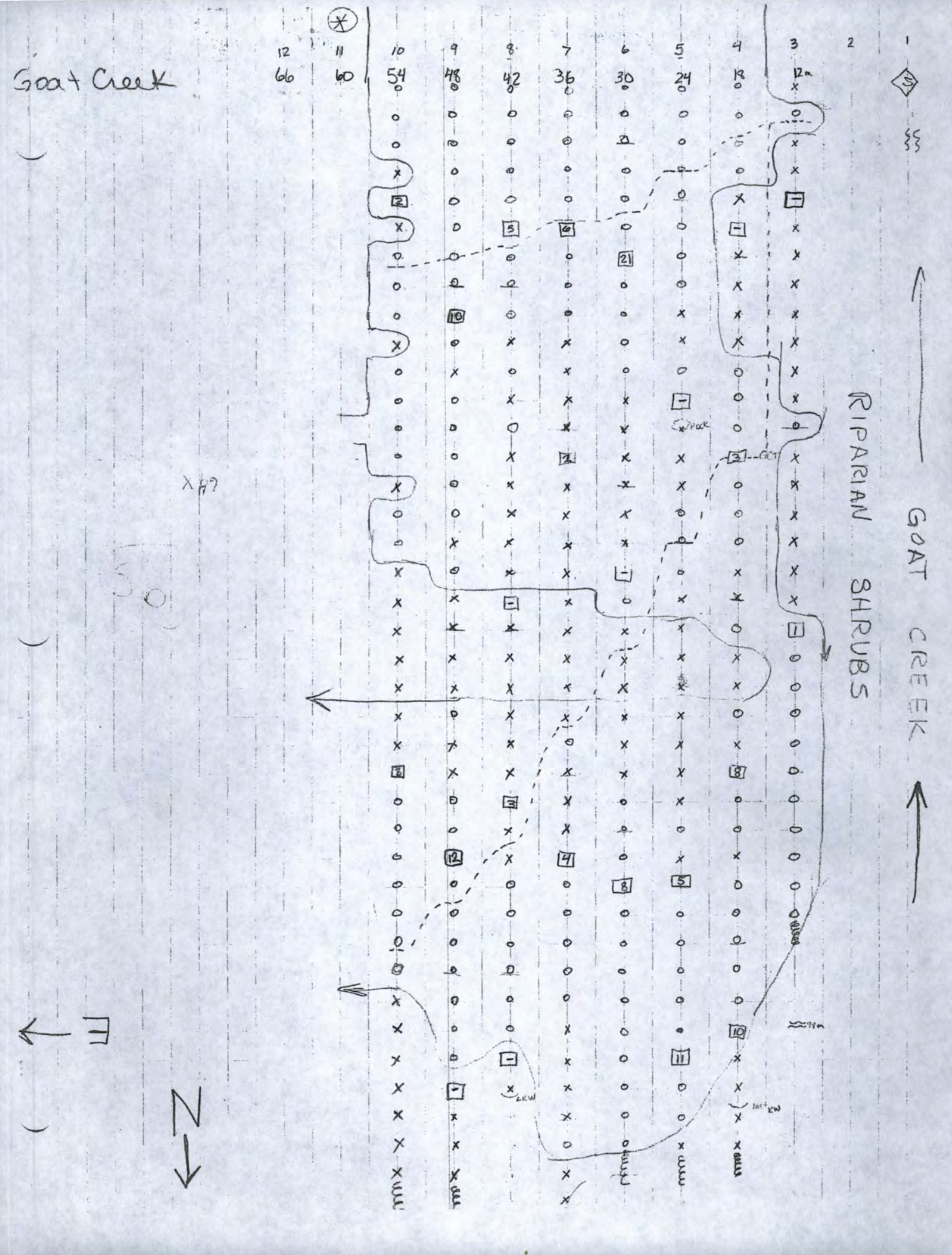
ROCK

knapw

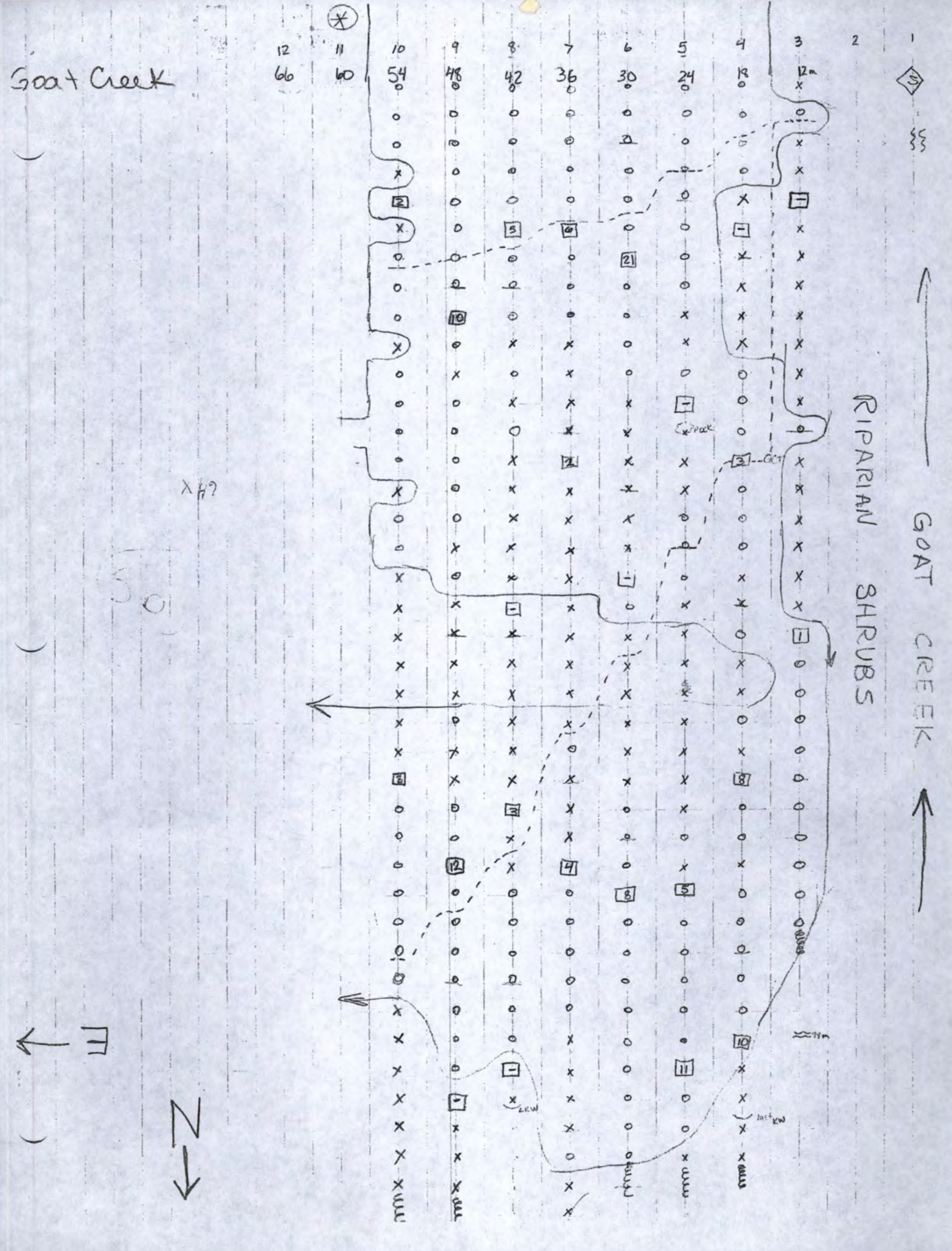
knapw

knp

BIG CREEK

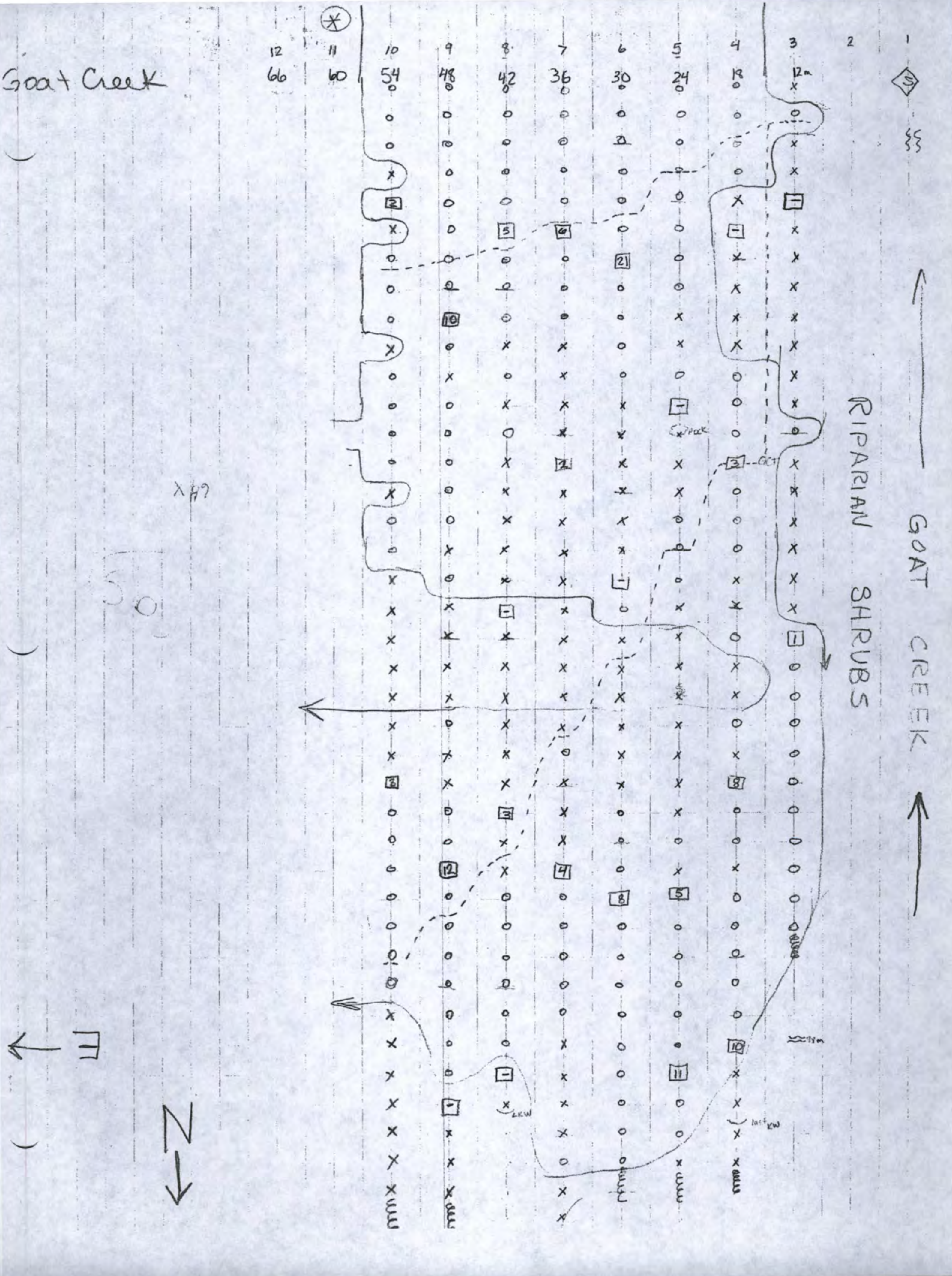

Goat Creek
12 11 10 9 8 7 6 5 4 3 2 1
66 60 54 48 42 36 30 24 18 12m
RIPARIAN SHRUBS
GOAT CREEK
E
N

Goat Creek

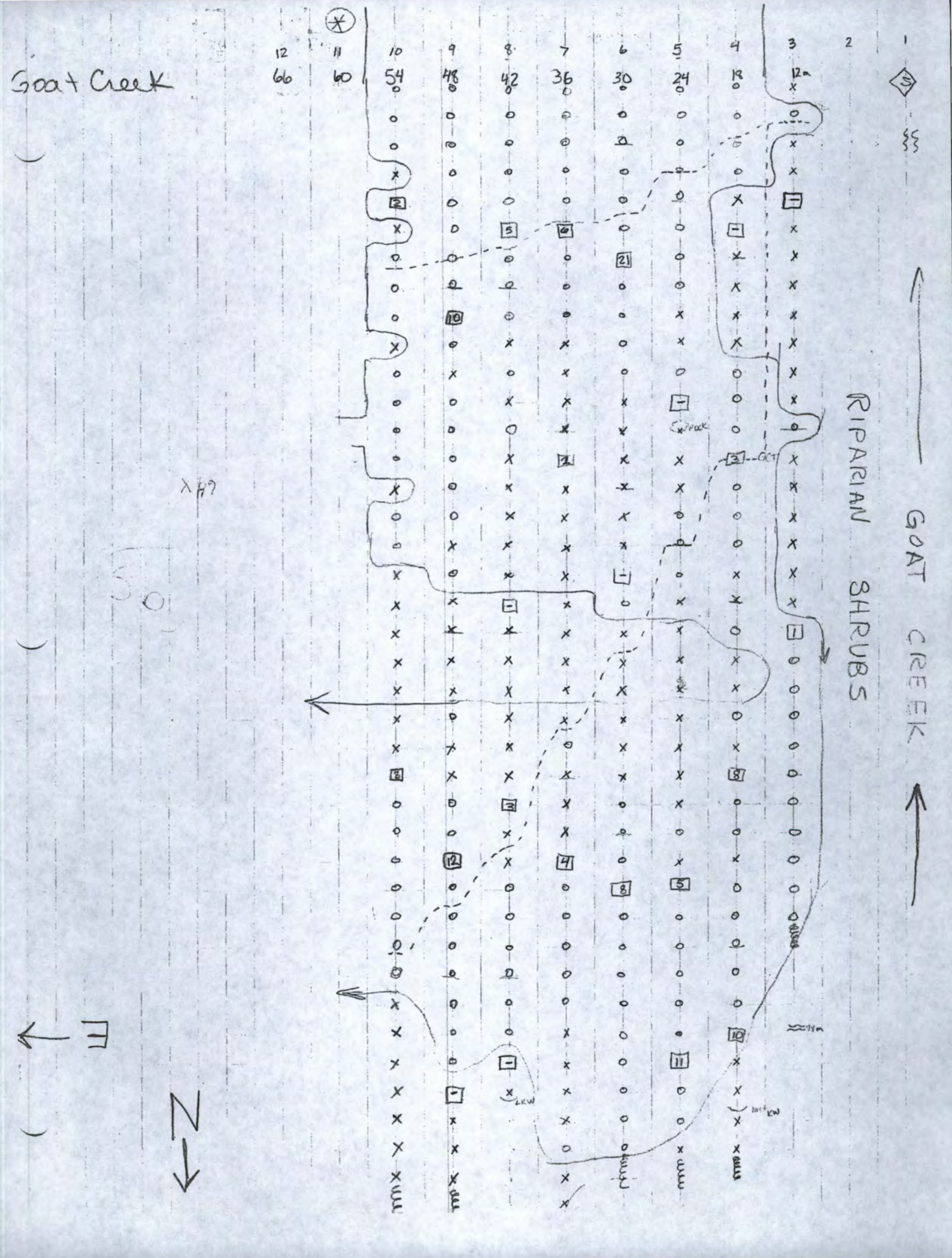


12 11 10 9 8 7 6 5 4 3 2 1
66 60 54 48 42 36 30 24 18 12m
RIPARIAN SHRUBS
GOAT CREEK
X H?
last KW
E
N

Goat Creek


12 11 10 9 8 7 6 5 4 3 2 1
66 60 54 48 42 36 30 24 18 12m
RIPARIAN SHRUBS
GOAT CREEK
E
N
last KW
LKW

Goat Creek


12 11 10 9 8 7 6 5 4 3 2 1
66 60 54 48 42 36 30 24 18 12m
RIPARIAN SHRUBS
GOAT CREEK
GCT
E
N

TAYLOR RANCH KNAPWEED PROJECT
STUDENT INTERNS 1999

Objectives

- Students will learn to set up and conduct sampling methods to monitor status of vegetation and the effects of vegetation manipulation.
- Students will gain hands-on experience in field techniques: assessing vegetation density and distribution and conducting manual control of weeds.
- Taylor Ranch will establish a cooperative relationship with the Payette National Forest to accomplish a mutual resource management goal.

Knapweed Project Activities

- Map location and extent of knapweed infestations on lower Big Creek.
- Set up a sampling design for annual monitoring of the extent and density of knapweed at 2-3 sites.
- Control knapweed at 1 site by hand pulling, with assistance from a Forest Service crew. Knapweed control will be done 2-3 times during summer. Knapweed will be removed from the edges of the infestation to control rate of spread, but eradication will not be done.
- Set up a sampling design for annual monitoring of the effects of knapweed control.

Funding will be provided for student intern participation from the Payette National Forest. Funds will go toward student internship stipends ($2,300 total).