PROGRAM RMCRUZ 12:33:46 07-10-1992

STAND: TRAIL CREEK NO3 AREAG

PER ACRE STAND SUMMARY
ALL SPECIES

		HEIGHT CLASS										
	DBH	20	30	40	50	60	70	80	90	100	110	120TOTAL
STEMS	6	0	7	188	88	0	0	0	0	0	0	0 283
CUVOL	6	0	14	621	456	0	0	0	0	0	0	0 1092
SCRIB	6	0	51	2395	1833	0	0	0	0	0	0	0 4278
STEMS	8	0	3	29	38	10	0	0	0	0	0	0 80
CUVOL	8	0	19	175	325	121	0	0	0	0	0	0 640
SCRIB	8	0	75	709	1344	508	0	0	0	0	0	0 2636
STEMS	10	0	0	3	12	4	0	0	0	0	0	0 19
CUVOL	10	0	0	26	170	83	0	0	0	0	0	0 280
SCRIB	10	0	0	110	717	352	0	0	0	0	0	0 1179
STEMS	12	0	0	0	3	5	0	0	0	0	0	0 8
CUVOL	12	0	0	0	69	120	0	0	0	0	0	0 189
SCRIB	12	0	0	0	295	537	0	0	0	0	0	0 832
STEMS	14	0	0	0	0	0	3	0	0	0	0	0 3
CUVOL	14	0	0	0	0	0	90	0	0	0	0	0 90
SCRIB	14	0	0	0	0	0	426	0	0	0	0	0 426
STEMS	16	0	0	0	0	0	1	0	0	0	0	0 1
CUVOL	16	0	0	0	0	0	44	0	0	0	0	0 44
SCRIB	16	0	0	0	0	0	214	0	0	0	0	0 214
TOTAL												
STEMS		0	0	11	220	141	19	4	0	0	0	0 394
CUVOL		0	0	33	822	1020	325	134	0	0	0	0 2334
SCRIB		0	0	126	3214	4188	1397	640	0	0	0	0 9565

29.18 cond/A
~~28.43 cond/A~~

80 ft³/cond

X 3.99 A

STAND: TRAIL CREEK NO3 AREAG
PER ACRE SUMMARY

STEMS	BA	DBH	HT	AGE
394	116	7.3	47	100

116.4 conds

CRUISE SUMMARY
BAF USED = 10 PTS SMPLD = 7 AVG. # TREES/PT. = 11.6

85 ft³/cond 27.46
X 4
109.84
110
less 10%

90 ft³/cond = 25.93 cond/A

X 3.99 A

103.5 conds

TRAVERSE COMPUTATION AND ADJUSTMENT (COMPASS RULE)

FOR: TRAIL CREEK NO3 AREA G

COURSE	DEGREE (AZIMUTH)	LENGTH (CHAINS)	BALANCED LAT	BALANCED DEP	COORDINATE NORTH	COORDINATE EAST
1- 2	237.00	2.00	-1.052	-1.704	0.000	0.000
2- 3	193.00	1.10	-1.051	-0.262	-1.052	-1.704
3- 4	142.00	0.90	-0.692	0.542	-2.103	-1.966
4- 5	186.00	3.00	-2.928	-0.354	-2.796	-1.424
5- 6	188.00	2.00	-1.943	-0.305	-5.723	-1.778
6- 7	200.00	0.70	-0.645	-0.249	-7.666	-2.083
7- 8	106.00	0.81	-0.208	0.768	-8.311	-2.332
8- 9	162.00	1.20	-1.119	0.355	-8.519	-1.564
9- 10	207.00	1.40	-1.221	-0.654	-9.638	-1.209
10- 11	193.00	2.40	-2.294	-0.572	-10.859	-1.864
11- 12	278.00	1.70	0.268	-1.706	-13.153	-2.436
12- 13	200.00	2.00	-1.842	-0.711	-12.885	-4.142
13- 14	211.00	0.70	-0.587	-0.370	-14.727	-4.853
14- 15	186.00	1.20	-1.171	-0.141	-15.314	-5.223
15- 16	66.00	1.10	0.468	0.990	-16.485	-5.364
16- 17	23.00	1.70	1.597	0.641	-16.017	-4.374
17- 18	115.00	0.80	-0.323	0.714	-14.420	-3.732
18- 19	184.00	1.40	-1.370	-0.116	-14.743	-3.018
19- 20	226.00	0.70	-0.473	-0.513	-16.114	-3.134
20- 21	144.00	0.90	-0.711	0.517	-16.587	-3.647
21- 22	83.00	0.90	0.126	0.881	-17.298	-3.130
22- 23	54.00	1.20	0.728	0.955	-17.172	-2.249
23- 24	36.00	0.60	0.497	0.345	-16.444	-1.294
24- 25	6.00	0.70	0.709	0.064	-15.948	-0.950
25- 26	301.00	1.50	0.801	-1.306	-15.238	-0.886
26- 27	36.00	1.60	1.324	0.919	-14.438	-2.192
27- 28	350.00	1.00	1.003	-0.187	-13.113	-1.273
28- 29	38.00	0.60	0.484	0.361	-12.110	-1.460
29- 30	15.00	1.00	0.985	0.245	-11.626	-1.098
30- 31	8.00	2.50	2.522	0.314	-10.641	-0.853
31- 32	58.00	2.00	1.097	1.669	-8.119	-0.538
32- 33	17.00	1.50	1.462	0.418	-7.022	1.131
33- 34	39.00	1.00	0.796	0.616	-5.559	1.549
34- 35	338.00	1.00	0.946	-0.388	-4.764	2.165
35- 36	3.00	1.70	1.729	0.066	-3.818	1.777
36- 37	287.00	0.70	0.218	-0.679	-2.088	1.844
37- 38	353.00	1.40	1.416	-0.189	-1.871	1.165
38- 39	6.00	0.80	0.811	0.073	-0.455	0.975
39- 1	250.00	1.10	-0.356	-1.048	0.356	1.048
		50.51	-0.943	0.676		

CLOSURE = 1.160 CHAINS

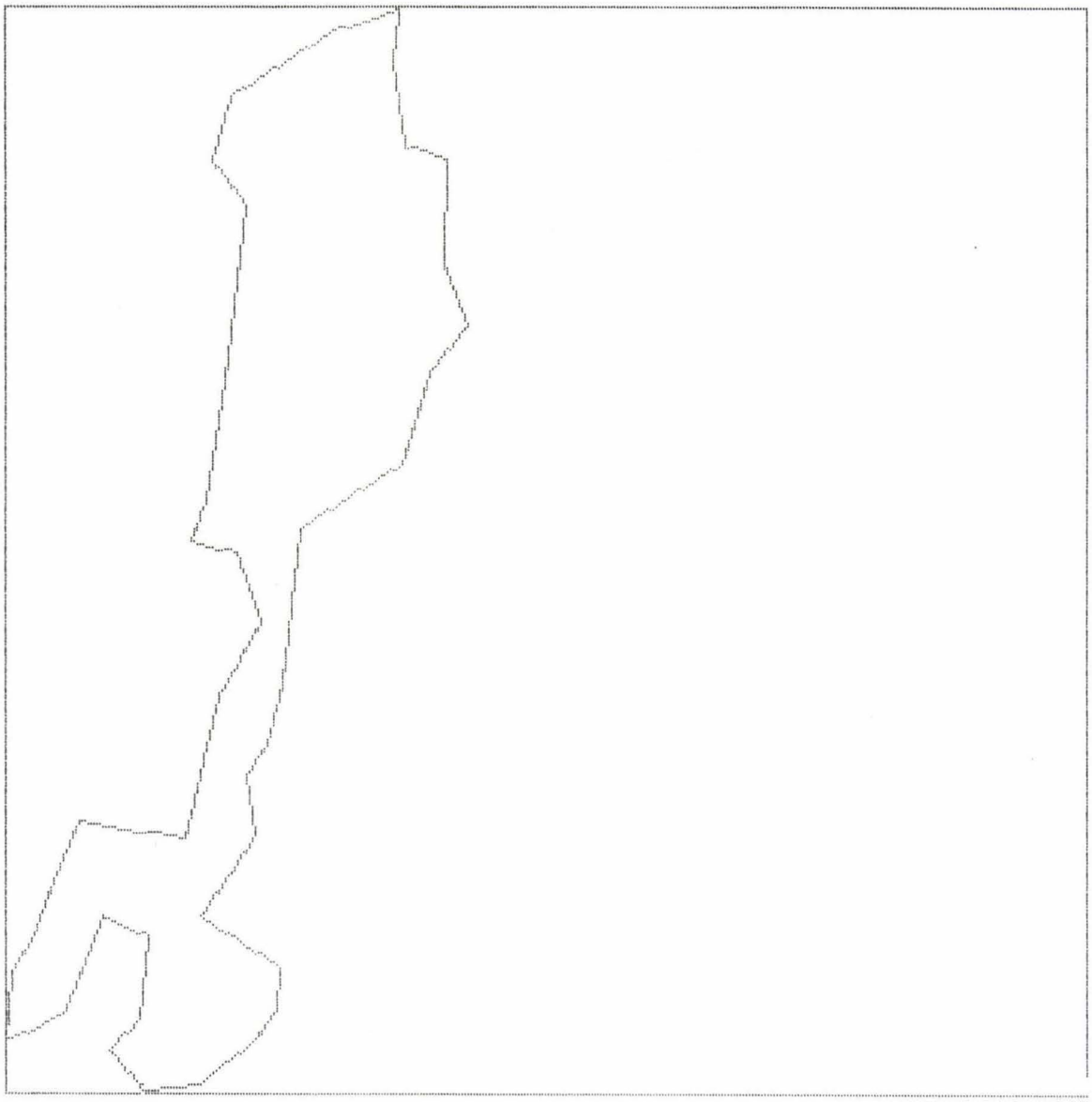
PRECISION = 1 IN 44 (2.3%)

CORRECTED AREA = 3.992 ACRES
39.921 SQUARE CHAINS

UNCORRECTED AREA = 4.660 ACRES
46.598 SQUARE CHAINS

CORRECTED MAP OUTPUT FOR: TRAIL CREEK NO3 AREA G

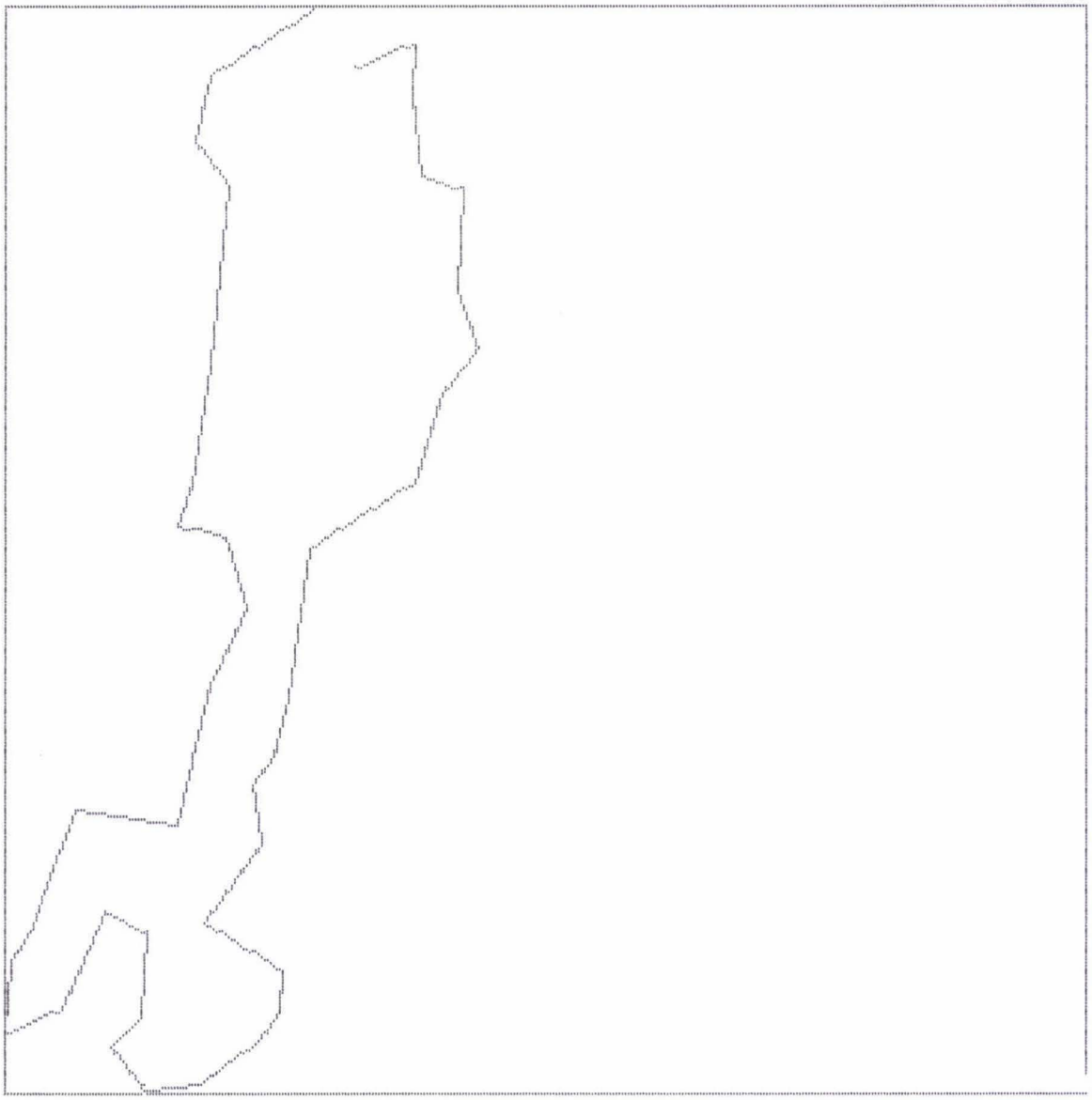
North



MAP SCALE: 1 : 2327
1 INCH = 2.94 CHAINS
193.94 FEET

UNCORRECTED MAP OUTPUT FOR: TRAIL CREEK NO3 AREA G

North



MAP SCALE: 1 : 2352
1 INCH = 2.97 CHAINS
195.97 FEET

Area #G Trail Creek

	Bearing	Distance
Start (2 blue)	1 237°	2 chains
	193°	T.10"
	~ 142°	0.90"
	3 156°	3,[illegible]
	[illegible]	[illegible]
	4 188°	2.00 chains
	5 200°	0,70"
	6 106°	0.81"
	7 162°	1,20"
	8 207°	1,40"
	9 193°	2,40"
	10 278°	1,70"
	11 200°	2,60"
	12 211°	0,70"
section line	13 186°	1,20"
	14 66°	1,10"
	15 23°	1,70"
	16 115°	0,80"
	17 184°	1,40"
	18 226°	0,70"
	19 144°	0,90"
	20 83°	0,90"
	21 54°	1,20"
	22 36°	0,60"
	23 6°	0,70"
	24 301°	1,50"
	25 36°	1,60"
	26 350°	1,00"
	27 38°	.60"

	Bearing	Distance
28 29	15°	1.00 chains
29 30	8°	2,50 "
30 31	58°	2,00 "
31 32	17°	1,50 "
32 33	39°	1,00 "
33 34	338°	1,00 "
34 35	3°	1,70 "
35 36	287°	0,70 "
36 37	353°	1,40 "
37 38	6°	0,80 "
38 34	250°	1,10 "
	312°	1,73 "

Area HG Stand LP Plot 1

BAF 10 BA 150

	Species	DBH	Ht.	DMR	Remarks
1	LP	6	40		
2		8	40 (43)		
3		7	50		
4		7	40		
5		6	40		
6		7	40		
7		8	40		
8		11	50		
9		7	50		
10		6	40		
11		8	40		
12		6	40		
13		6	40		
14		7	40		
15		7	40		

Area HG Stand LP Plot 2

BAF 10 BA 90

	Species	DBH	Ht.	DMR	Remarks
1	LP	9	50 (50)		
2		11	50		
3		8	50		
4		11	50		
5		11	60		
6		9	30		
7		8	40		
8		8	40		
9		6	30		

Area ~~HG~~ Stand LP Plot 3

BAF 10 BA 110 (LP)

	Species	DBH	Ht.	DMR	Remarks
1	LP	16	70 (74)		
2	↓	9	60		
3	↓	14	70		
4	Aspen	8			
5	↓	10			
6	LP	9	50		
7	Aspen	7			
8	↓	8			
9	LP	15	70		
10	↓	13	60		
11	↓	13	~~5~~0		
12	Aspen	8			
13	LP	12	60		
14	↓	12	50 ~~60~~		Twin Top
15	↓	13	60		
16	Aspen	12			
1	LP	10	40		Dead Top

Area HG Stand LP Plot 4

BAF 10 BA 90

	Species	DBH	Ht.	DMR	Remarks
1	LP	6	40		Twin top
2		8	50 (53)		Gall Rust
3		8	50	Heavy	Heavy DM
4		6	40		
5		7	40		
6		7	50		
7		6	40		
8		6	50		
9		7	50		

Area HG Stand LP Plot 5

BAF 10 BA 150

	Species	DBH	Ht.	DMR	Remarks
1	LP	10	50		
2		7	50		
3		6	40		Twin Top Dead
4		7	50		
5		9	50		
6		11	60		
7		8	50 (51)		
8		9	60		
9		9	60		
10		6	40		FK Top
11		6	40		
12		8	50		Twin Top
13		10	50		Twin Top
14		7	50		
15		7	50		

Area #G Stand LP Plot 6

BAF 10 BA 150

	Species	DBH	Ht.	DMR	Remarks
1	LP	6	40		
2		6	40		Twin top
3		6	50		
4		6	40		
5		6	50		
6		6	40		Twin
7		6	40		Twin
8		7	50		
9		7	40		Twin
10		6	40		Twin
11		8	50		
12		8	50		
13		8	40		
14		6	40		
15		7	40 (45)	~~(45)~~ (45) Heavy DM	Gall Rust

Area #6 Stand LP Plot 7

BAF 10 BA 70

	Species	DBH	Ht.	DMR	Remarks
	LP	6	40		
2		7	40		
3		7	50		
4		6	40		
5		7	40		
6		6	40		Crook @ 12'
7		8	40		

SW Corner next to Section Line

Rays Copy

ROOSEVELT NATIONAL FOREST
REDFEATHER RANGER DISTRICT

Original

STATISTICAL ANALYSIS - SMALL SAMPLE

Trail Creek #3 — 2230 Unit
G — Type

x = Board feet or basal area per sampling point. From R2-2400-60.
n = Number of sample points taken. _____

x	x^2	x	x^2	x	x^2	x	x^2	x	x^2
150	22500								
90	8100								
110	12100								
90	8100								
150	22500								
150	22500								
70	4900								
Column Sub-Totals									
~~810~~ 810	100,700								

Σx = 810 Σx^2 = 100,700 n = 7

(1) Mean = $\bar{x} = \frac{\Sigma x}{n}$ = 115.7 MBF(BA)

(2) Standard Deviation = S.D.

$= \sqrt{\frac{\Sigma x^2 - \frac{(\Sigma x)^2}{n}}{n-1}}$ = $\frac{100,700 - 93,729}{6}$ = $\sqrt{1,162}$ = ± 34.1 MBF(BA)

(3) Coefficient of Variation = C.V.

$= \frac{SD\ (100)}{\bar{x}}$ = $\frac{3410}{115.7}$ = 29.5 %

(4) Number of sampling points needed = N.

$= \frac{(C.V.)^2}{(\text{Maximum Sampling Error})^2} = \frac{(\text{~~870~~})^2}{(5)^2} = \frac{870.25}{25} = 9$ Plots

10 100

(5) Standard Error of the Mean = S.E.

$= \frac{S.D.}{\sqrt{n}}$ = $\frac{29.5}{2.646}$ ± 11.15 MBF(BA)

(6) Sampling Error = E.

$= \frac{S.E.\ (100)}{\bar{x}}$ = $\frac{11.15 \times 100}{115.7}$ = 9.6 %

Reference FSM 2431.23 RF-2400-13 (4/70)

PROGRAM RMCRUZ 09:38:03 11-13-1991

STAND: Unit 1

PER ACRE STAND SUMMARY
ALL SPECIES

		HEIGHT CLASS										
	DBH	20	30	40	50	60	70	80	90	100	110	120TOTAL
STEMS	4	19	57	11	0	0	0	0	0	0	0	0 88
CUVOL	4	20	58	15	0	0	0	0	0	0	0	0 93
SCRIB	4	106	213	58	0	0	0	0	0	0	0	0 377
STEMS	6	0	102	50	0	0	0	0	0	0	0	0 151
CUVOL	6	0	199	153	0	0	0	0	0	0	0	0 351
SCRIB	6	0	658	584	0	0	0	0	0	0	0	0 1241
STEMS	8	0	34	62	3	0	0	0	0	0	0	0 99
CUVOL	8	0	146	385	23	0	0	0	0	0	0	0 554
SCRIB	8	0	555	1568	93	0	0	0	0	0	0	0 2216
STEMS	10	0	2	25	4	0	0	0	0	0	0	0 31
CUVOL	10	0	13	260	47	0	0	0	0	0	0	0 321
SCRIB	10	0	55	1082	198	0	0	0	0	0	0	0 1335
STEMS	12	0	0	8	1	0	0	0	0	0	0	0 9
CUVOL	12	0	0	115	24	0	0	0	0	0	0	0 139
SCRIB	12	0	0	483	103	0	0	0	0	0	0	0 586
TOTAL												
STEMS	0	19	195	156	8	0	0	0	0	0	0	0 378
CUVOL	0	20	416	928	94	0	0	0	0	0	0	0 1458
SCRIB	0	106	1481	3774	394	0	0	0	0	0	0	0 5755

90 ft²
4.3 Acres
80 ft²

16.2 cords/A
14.7 cords/A
18.2 cords/A
78.3 cords

STAND: Unit 1
PER ACRE SUMMARY

STEMS	BA	DBH	HT	AGE
378	97	6.9	36	95

CRUISE SUMMARY
BAF USED = 10 PTS SMPLD = 10 AVG. # TREES/PT. = 9.7

85 ft² ~ 17.153/A = 74 cords

÷ 85 = 17.2/A
× 4.3
less 10% defect
66.6 cords

TRAVERSE COMPUTATION AND ADJUSTMENT (COMPASS RULE)

FOR: TRAIL CREEK -- UNIT A

COURSE	DEGREE (AZIMUTH)	LENGTH (CHAINS)	BALANCED LAT	BALANCED DEP	COORDINATE NORTH	COORDINATE EAST
1- 2	308.00	1.25	0.771	-0.997	0.000	0.000
2- 3	5.00	1.00	0.998	0.078	0.771	-0.997
3- 4	5.00	2.00	1.995	0.156	1.769	-0.919
4- 5	5.00	0.50	0.499	0.039	3.764	-0.763
5- 6	8.00	2.00	1.983	0.260	4.263	-0.724
6- 7	7.00	2.00	1.988	0.225	6.246	-0.464
7- 8	7.00	1.40	1.392	0.158	8.234	-0.239
8- 9	73.00	1.10	0.323	1.042	9.626	-0.082
9- 10	5.00	0.90	0.898	0.070	9.949	0.960
10- 11	308.00	1.20	0.740	-0.957	10.847	1.030
11- 12	6.00	1.50	1.494	0.143	11.587	0.074
12- 13	82.00	1.00	0.141	0.981	13.081	0.216
13- 14	101.00	1.20	-0.227	1.167	13.222	1.197
14- 15	140.00	1.00	-0.765	0.633	12.994	2.364
15- 16	178.00	2.00	-1.996	0.051	12.230	2.998
16- 17	36.00	2.00	1.621	1.157	10.234	3.049
17- 18	36.00	1.00	0.810	0.578	11.855	4.206
18- 19	147.00	1.00	-0.837	0.535	12.665	4.784
19- 20	199.00	1.00	-0.944	-0.335	11.828	5.320
20- 21	220.00	1.00	-0.765	-0.652	10.884	4.985
21- 22	212.00	1.50	-1.270	-0.809	10.119	4.333
22- 23	130.00	0.60	-0.385	0.454	8.849	3.524
23- 24	190.00	2.00	-1.967	-0.366	8.464	3.978
24- 25	182.00	1.60	-1.597	-0.071	6.497	3.612
25- 26	239.00	2.00	-1.027	-1.733	4.901	3.541
26- 27	239.00	1.00	-0.514	-0.866	3.873	1.809
27- 28	167.00	2.00	-1.946	0.431	3.360	0.942
28- 29	167.00	1.25	-1.216	0.270	1.414	1.373
29- 1	263.00	1.64	-0.198	-1.643	0.198	1.643
		39.64	-0.056	0.368		

CLOSURE = 0.372 CHAINS

PRECISION = 1 IN 106 (0.9%)

CORRECTED AREA = 4.266 ACRES
42.664 SQUARE CHAINS

UNCORRECTED AREA = 4.537 ACRES
45.368 SQUARE CHAINS

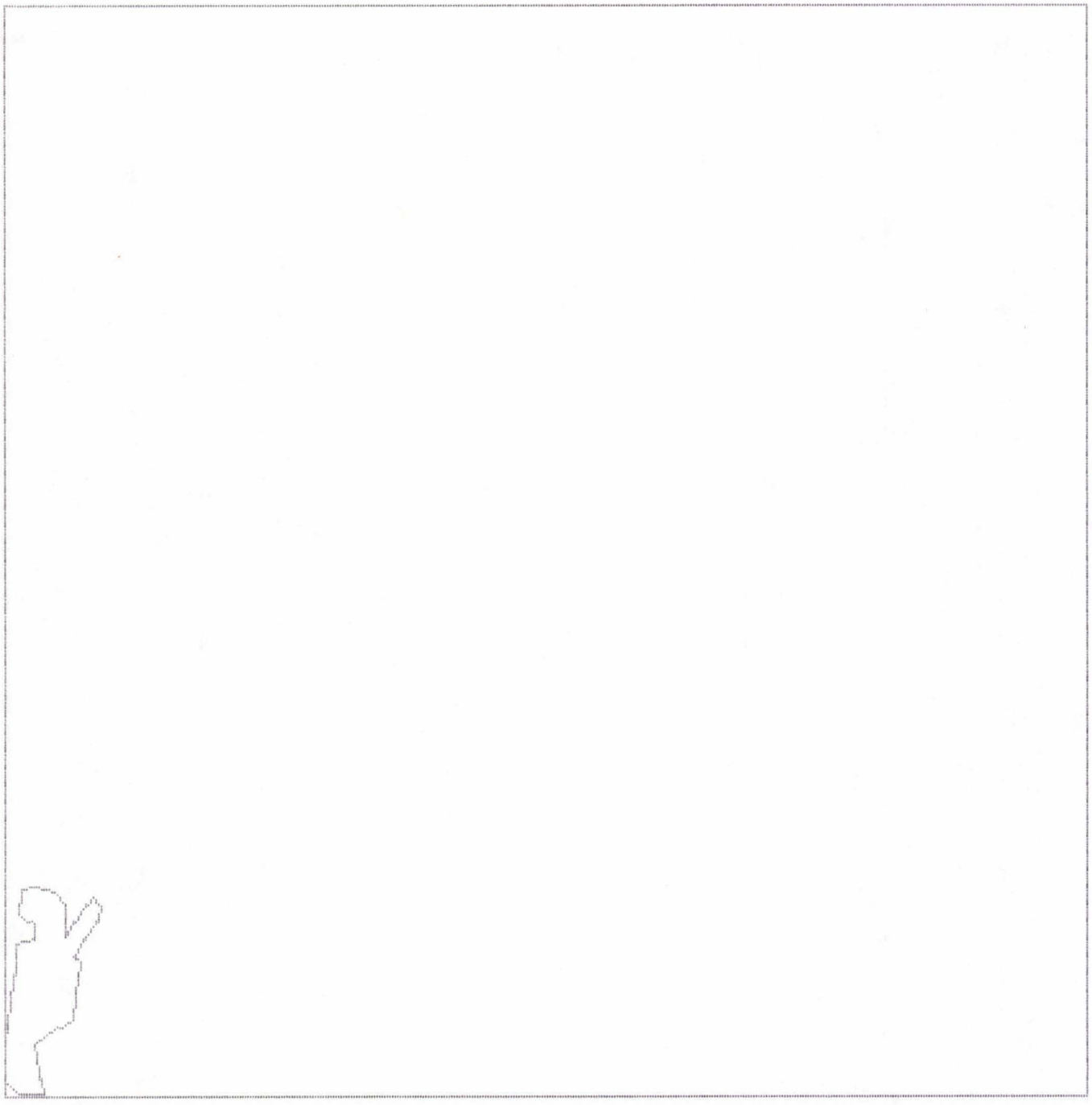
CORRECTED MAP OUTPUT FOR: TRAIL CREEK -- UNIT 1

North

MAP SCALE: 1 : 1484
1 INCH = 1.87 CHAINS
123.65 FEET

CORRECTED MAP OUTPUT FOR: TRAIL CREEK -- UNIT 1

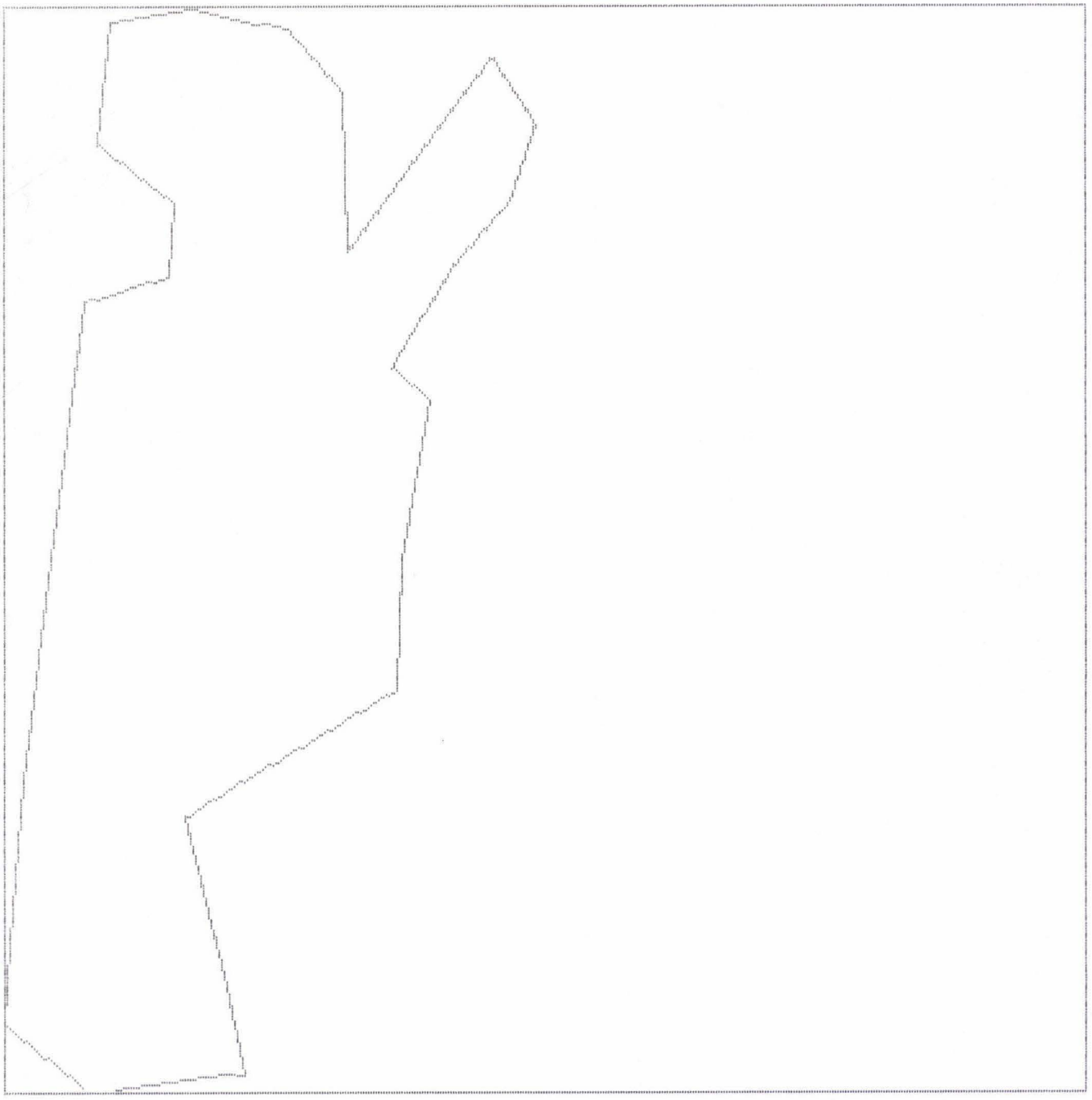
North



MAP SCALE: 1 : 7920
8 INCHES = 1 MILE (80 CHAINS)

UNCORRECTED MAP OUTPUT FOR: TRAIL CREEK -- UNIT 1

North



MAP SCALE: 1 : 1500
1 INCH = 1.89 CHAINS
124.98 FEET

Area 1 Stand ____ Plot 1

BAF 10 BA 70

Species	DBH	Ht.	DMR	Remarks
LP	7.7	31	0	Age 94
DF	6.1	26	0	
LP	6.8	30	1	
LP	5.9	28	1	
LP	5	22	0	
DF	8.1	32	0	
LP	8	32	0	

Slope 6%

Regen 0 $\frac{1}{100}$ of acre

Starting From where boundary Crosses Road in 3 chains then every 1.5 to 2 chains for 6 Plots at 10°.

Turning to 140°, 1.5 to 2 chains for 2 Plots

Then turning 190°, 1.5 to 2 chains for 2 Plots

Area 1 Stand ____ Plot 2

BAF 10 BA 130

Species	DBH	Ht.	DMR	Remarks
LP	8.9	34	0	
LP	5.1	28	0	
LP	4.5	29	0	
LP	10.1	36	0	Age 96
LP	6	33	1	
LP	5.9	30	1	
LP	5.1	32	0	
LP	5.2	30	0	
LP	7.7	30	0	
LP	4.7	32	0	
LP	6.9	31	0	
LP	5.7	32	0	
LP	4.6	32	0	

Regen = 0
Slope 12%

Good Growth For 1st 20 years
then Slows.

Area 1 Stand ____ Plot 3

BAF 10 BA 100

Species	DBH	Ht.	DMR	Remarks
LP	11.3	43	0	
LP	9	40	1	
LP	9	45	2	
LP	6.5	35	0	
LP	9.8	40	0	
LP	11.4	41	1	
LP	8	36	0	Forked top
LP	10.6	45	1	Age 96 to 98
LP	11.1	43	0	
LP	11	41	1	
	Regen	21		
	Slope	15		

Area 1 Stand ____ Plot 4

BAF 10 BA 90

Species	DBH	Ht.	DMR	Remarks
LP	9.4	40	0	
LP	9.9	41	0	
LP	7.6	37	0	
LP	8.8	40	0	
LP	9.7	42	1	Age 92
LP	9.4	43	1	
LP	6.8	35	0	
LP	9.5	45	1	
LP	7.2	39	1	

Regen 4

Slope 12%

Good Growth 1st 20 years then slows appeared to respond to thinning over 20 years ago.

Area 1 Stand ____ Plot 5

BAF 10 BA 90

Species	DBH	Ht.	DMR	Remarks
~~LP~~	11.5	40		
LP	12.4	42		
LP	5.8	33		
LP	6.2	37		
LP	6	35		Dead
LP	8	39		
LP	7	35		
LP	7.1	36		
LP	6.2	34		

Age Approx 90 yrs

Slope 8%

Rogen 1 aspen

Area 7 Stand ____ Plot 6

BAF 10 BA 110

Species	DBH	Ht.	DMR	Remarks
LP	6.8	35	0	
LP	3.9	25	0	
LP	8.3	33	1	
LP	10.4	34	1	
LP	7.8	36	1	
LP	8	35	1	
LP	9.9	36	0	
LP	8.9	35	1	
LP	9.3	36	0	
LP	7.1	32	1	
LP	6.3	32	1	
	Slope	11%		
	Regen	0		
	Approx age	90		

Area 1 Stand ____ Plot 7

BAF 10 BA 150

Species	DBH	Ht.	DMR	Remarks
LP	9.3	45	0	Canker
LP	7.4	45	1	
LP	8.1	46	0	
LP	9.9	46	0	
LP	8.4	45	0	
LP	6.4	45	0	
LP	4.5	37	1	
LP	5.9	40	1	
LP	7.2	44	1	
LP	5.8	45	0	
LP	10.5	46	0	
LP	8.2	44	0	
LP	6.8	41	0	
~~LP~~				
	Slope 4%			
	Approx Age 90			
	Regen 10 Aspen 1 DF			
LP	8.6		1	
LP	5.6		1	

Area 1 Stand ____ Plot 8

BAF 10 BA 60

Species	DBH	Ht.	DMR	Remarks
LP	4.8	30	1	
LP	7.9	30	1	
LP	6.7	34	1	Forked top
LP	6.2	36	1	
LP	5.6	32	1	
LP	8.1	29	1	
LP				

Regen 0
Slope 15%
Approx Age 50

Area 1 Stand ____ Plot 9

BAF 10 BA 100

Species	DBH	Ht.	DMR	Remarks
LP	8.9	39	1	
LP	6.1	35	0	
LP	6.6	35	1	
LP	7.4	37	1	Forked top
LP	8	38	0	
LP	7.1	37	1	
LP	8.5	39	1	
LP	7.2	36	1	
LP	6	35	2	
LP	7.6	34	1	

Rogue 0
Slope 14%
App Age 90

species	DBH	HT	DMR
LP	10.4	42	0
LP	10	40	0
LP	8.3	39	1 FT
~~DF~~	4.8	20	0
LP	11.5	45	1 0
LT	12	45	1 FT
LP	7.2	30	1

Slope 10

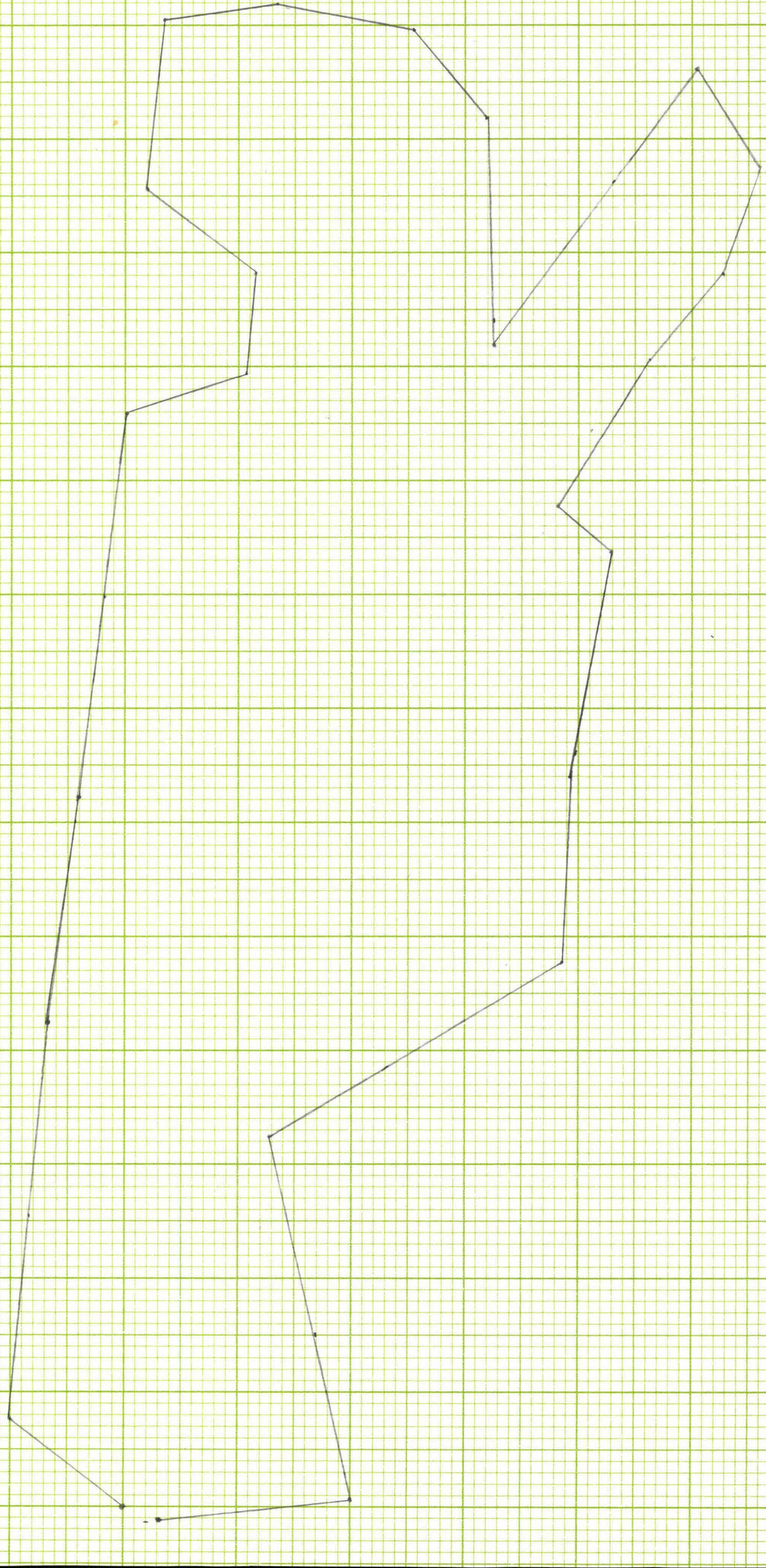
Regen 7

Area 7 Stand ____ Plot 10

BAF 10 BA 70

Species	DBH	Ht.	DMR	Remarks
LP	10.4	42	0	
LP	10	40	0	
LP	8.3	39	1	Fork top
DF	4.8	20	0	
LP	11.5	45	1	
LP	12	45	1	Fork top
LP	7.2	30	1	

Approx Age 90
Regen 7
Slope 10



Unit 1 (A)
1" = 1 chain
N ↑

Sta	Dis (Chains)	Az ~~Bearing~~
1	1.4	308
2	1	05°
3	2	05°
4	.5	05°
5	2	09°
6	2	07°
7	1.40	07°
8	1.1	73°
9	.9	05°
10	1.2	308°
11	1.5	06°
12	1	82°
13	1.2	101°
14	1	140°
15	2	178°
16	2	36°
17	1	36°
18	1	147°
19	1	199

Visit

Sta		Dis	Az
20	✓	1	220
21	✓	1.5	212
22	✓	.6	130
23	✓	2	190
24	✓	1.6	182°
25	✓	2	239°
26	✓	1	239°
27		2	167
28		1 ¼	167
29		1.64	263
30			

NW Unit

Wells – Longmont

N Glen

Rays Copy

ROOSEVELT NATIONAL FOREST
REDFEATHER RANGER DISTRICT

Original

STATISTICAL ANALYSIS - SMALL SAMPLE

24 Unit

Trail Creek #2

A Type

x = Board feet or basal area per sampling point. From R2-2400-60.
n = Number of sample points taken. _____

x	x^2	x	x^2	x	x^2	x	x^2	x	x^2
70	4900								
130	16900								
100	10,000								
90	8,100								
90	8,100								
110	12,100								
150	22,500								
60	3600								
100	10,000								
70	4900								
Column Sub-Totals									
970	101,100								

Σx = 970 Σx^2 = 101,100 n = 10

(1) Mean = $\bar{x} = \frac{\Sigma x}{n}$ = 97 MBF(BA)

(2) Standard Deviation = S.D.

$$= \sqrt{\frac{\Sigma x^2 - \frac{(\Sigma x)^2}{n}}{n-1}} = \frac{101,100 - 94,090}{9} \pm 27.9 \text{ MBF(BA)}$$

$\sqrt{779}$

(3) Coefficient of Variation = C.V.

$$= \frac{SD\ (100)}{\bar{x}} = 28.8\ \%$$

(4) Number of sampling points needed = N.

$$= \frac{(C.V.)^2}{(\text{Maximum Sampling Error})^2} = \frac{(\ )^2}{(5)^2} = \frac{829}{25} = 8 \text{ Plots}$$

100

(5) Standard Error of the Mean = S.E.

$$= \frac{S.D.}{\sqrt{n}} = \frac{27.9}{3,162} \pm 8.82 \text{ MBF(BA)}$$

(6) Sampling Error = E.

$$= \frac{S.E.\ (100)}{\bar{x}} = = 9.1\ \%$$

Reference FSM 2431.23 RF-2400-13 (4/70)

B

PROGRAM RMCRUZ 09:43:45 12-23-1991

STAND: UNIT B

landing

PER ACRE STAND SUMMARY
ALL SPECIES

	DBH	HEIGHT CLASS 20	30	40	50	60	70	80	90	100	110	120	TOTAL
STEMS	4	147	122	0	0	0	0	0	0	0	0	0	269
CUVOL	4	51	128	0	0	0	0	0	0	0	0	0	179
SCRIB	4	1419	1905	0	0	0	0	0	0	0	0	0	3324
STEMS	6	17	59	0	0	0	0	0	0	0	0	0	76
CUVOL	6	16	143	0	0	0	0	0	0	0	0	0	159
SCRIB	6	45	528	0	0	0	0	0	0	0	0	0	572
STEMS	8	0	8	76	0	10	23	0	0	0	0	0	116
CUVOL	8	0	43	466	0	92	334	0	0	0	0	0	935
SCRIB	8	0	175	1892	0	383	1407	0	0	0	0	0	3857
STEMS	10	0	0	0	0	0	31	0	0	0	0	0	31
CUVOL	10	0	0	0	0	0	565	0	0	0	0	0	565
SCRIB	10	0	0	0	0	0	2387	0	0	0	0	0	2387
STEMS	12	0	0	0	0	0	16	0	0	0	0	0	16
CUVOL	12	0	0	0	0	0	432	0	0	0	0	0	432
SCRIB	12	0	0	0	0	0	1959	0	0	0	0	0	1959
STEMS	14	0	0	0	0	0	3	0	0	0	0	0	3
CUVOL	14	0	0	0	0	0	105	0	0	0	0	0	105
SCRIB	14	0	0	0	0	0	495	0	0	0	0	0	495
TOTAL													
STEMS	0	164	189	76	0	10	73	0	0	0	0	0	511
CUVOL	0	67	314	466	0	92	1437	0	0	0	0	0	2376
SCRIB	0	1464	2608	1892	0	383	6248	0	0	0	0	0	12595

2376 ÷85 = 28.0

× 1.9

53.2

less 10%

47.88 cords

STAND: UNIT B
PER ACRE SUMMARY

STEMS	BA	DBH	HT	AGE
511	130	6.8	44	100

CRUISE SUMMARY
BAF USED = 10 PTS SMPLD = 3 AVG. # TREES/PT. = 13.0

85 ft³ solid wood per cord

83 | 2356 = 28.39

85 | 2376 ft ≃ 28 cords/Acre

85 ft³ = 27.95 ×

1.9

53 cords

```
01 01 2 12.0 070 100
01 02 2 08.0 060 100
01 03 2 14.0 070 100
01 04 2 12.0 070 100
01 05 2 13.0 070 100
01 06 2 10.0 070 100
01 07 2 10.0 070 100
01 08 2 10.0 070 100
01 09 2 10.0 070 100
01 10 2 09.0 070 100
01 11 2 09.0 070 100
01 12 2 09.0 070 100
01 13 2 12.0 070 100
01 14 2 10.0 070 100
02 01 2 05.0 030 100
02 02 2 05.0 030 100
02 03 2 05.0 030 100
02 04 2 06.0 030 100
02 05 2 09.0 030 100
02 06 2 08.0 040 100
02 07 2 08.0 040 100
02 08 2 08.0 040 100
03 01 2 08.0 040 100
03 02 2 06.0 020 100
03 03 2 08.0 040 100
03 04 2 05.0 020 100
03 05 2 08.0 040 100
03 06 2 05.0 020 100
03 07 2 05.0 020 100
03 08 2 05.0 020 100
03 09 2 05.0 030 100
03 10 2 05.0 020 100
03 11 2 05.0 030 100
03 12 2 05.0 020 100
03 13 2 07.0 030 100
03 14 2 07.0 030 100
03 15 2 08.0 040 100
03 16 2 08.0 040 100
03 17 2 06.0 030 100
```

B

Area 3
Landing

Pt	DIST	BRNG	
1	1.3	241°	Culvert @ Stream * Along Rd @ bottom
2	2	282°	
3	2	264°	
4	1 1/2	295°	
5	0.9	338°	End of #5 is E Access Rd.
6	1.1	56°	Along Access Rd
7	1.1	36°	
8	1 1/2	82°	
9	0.7	135°	
10	1 3/4	44°	
11	1.4	69°	
12	1 1/2	165°	← Protect Christmas Tree Regrad.
13	2	181°	
14	0.6	148°	

Area _____ Stand _____ Plot _____

BAF ____ BA _____

Species	DBH	Ht.	DMR	Remarks

TRAVERSE COMPUTATION AND ADJUSTMENT (COMPASS RULE)

FOR: LANDING

COURSE	DEGREE (AZIMUTH)	LENGTH (FEET)	BALANCED LAT	BALANCED DEP	COORDINATE NORTH	COORDINATE EAST
1- 2	241.00	85.80	-41.893	-74.838	0.000	0.000
2- 3	282.00	132.00	26.988	-128.801	-41.893	-74.838
3- 4	264.00	132.00	-14.254	-130.962	-14.905	-203.639
4- 5	295.00	99.00	41.497	-89.488	-29.159	-334.601
5- 6	338.00	59.40	54.869	-22.110	12.338	-424.089
6- 7	56.00	72.60	40.346	60.361	67.208	-446.199
7- 8	36.00	72.60	58.484	42.846	107.554	-385.838
8- 9	82.00	99.00	13.436	98.273	166.038	-342.992
9- 10	135.00	46.20	-32.828	32.778	179.474	-244.719
10- 11	44.00	115.50	82.685	80.508	146.646	-211.941
11- 12	69.00	92.40	32.794	86.483	229.331	-131.432
12- 13	165.00	99.00	-95.969	25.859	262.124	-44.949
13- 14	181.00	132.00	-132.436	-1.989	166.156	-19.090
14- 1	148.00	39.60	-33.720	21.079	33.720	-21.079
		1277.10	4.414	-3.045		

CLOSURE = 5.362 FEET

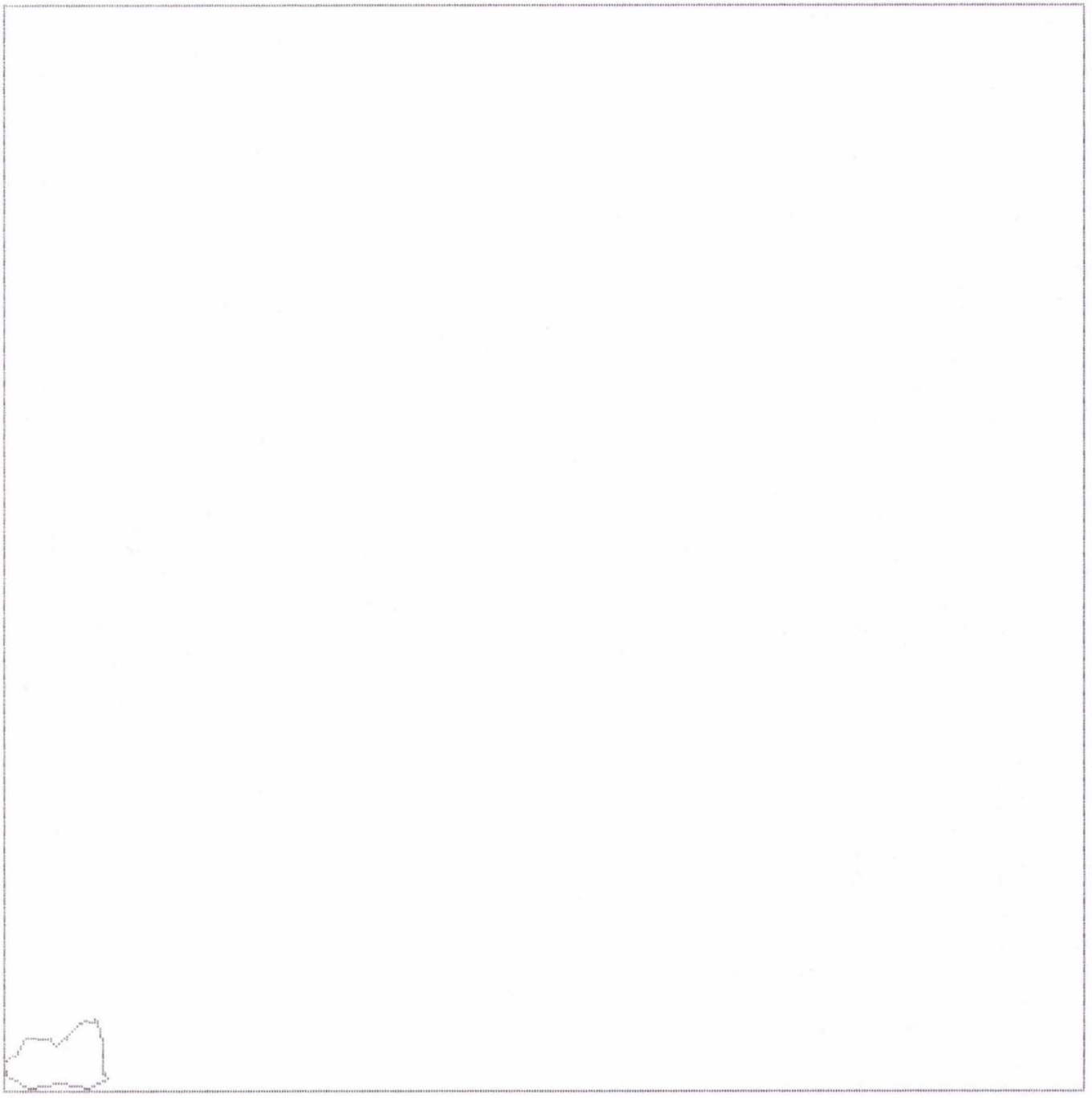
PRECISION = 1 IN 238 (0.4%)

CORRECTED AREA = 1.917 ACRES
83521.644 SQUARE FEET

UNCORRECTED AREA = 1.926 ACRES
83889.769 SQUARE FEET

CORRECTED MAP OUTPUT FOR: LANDING

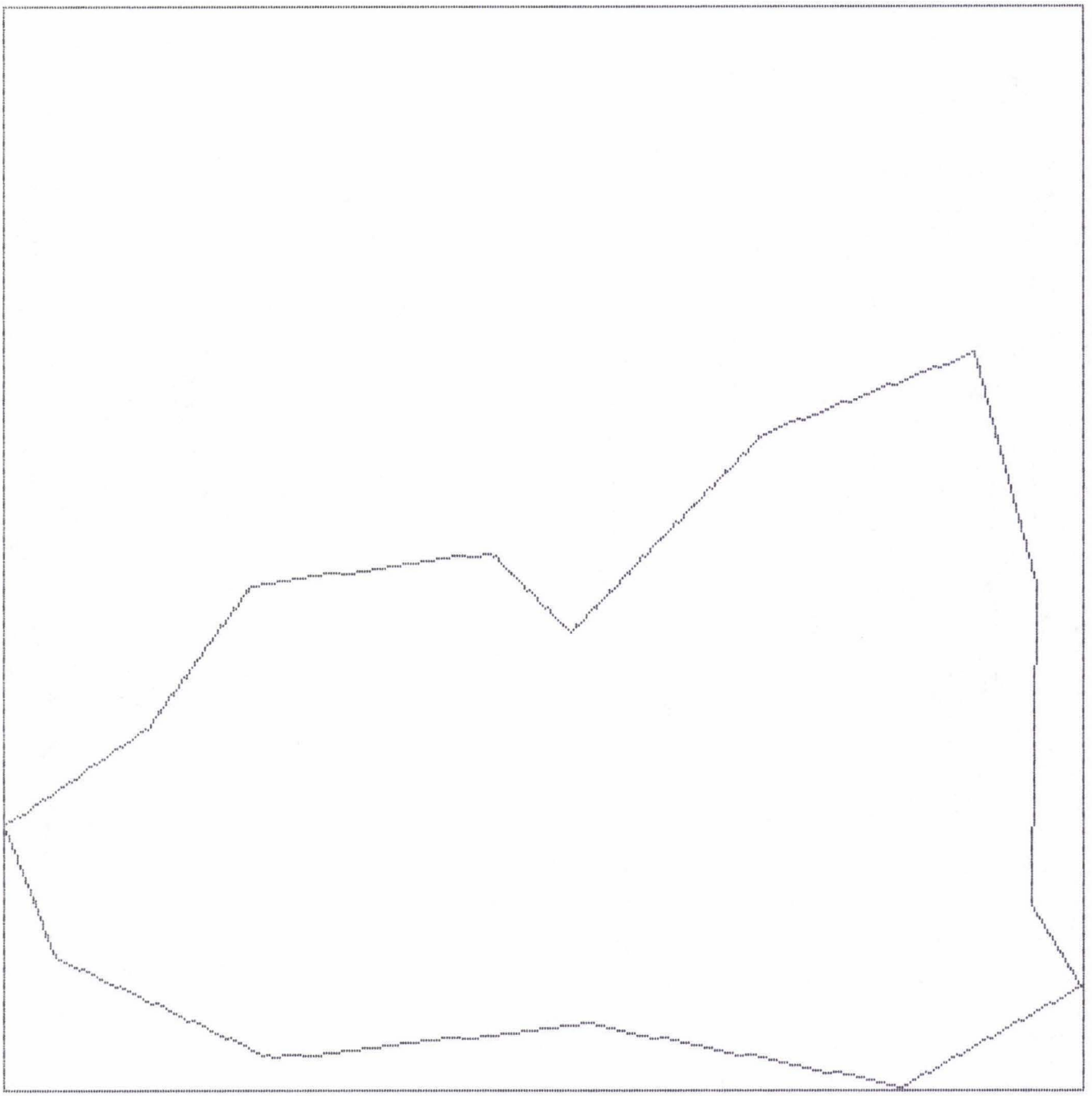
North



MAP SCALE: 1 : 7920
8 INCHES = 1 MILE (80 CHAINS)

CORRECTED MAP OUTPUT FOR: AREA 3

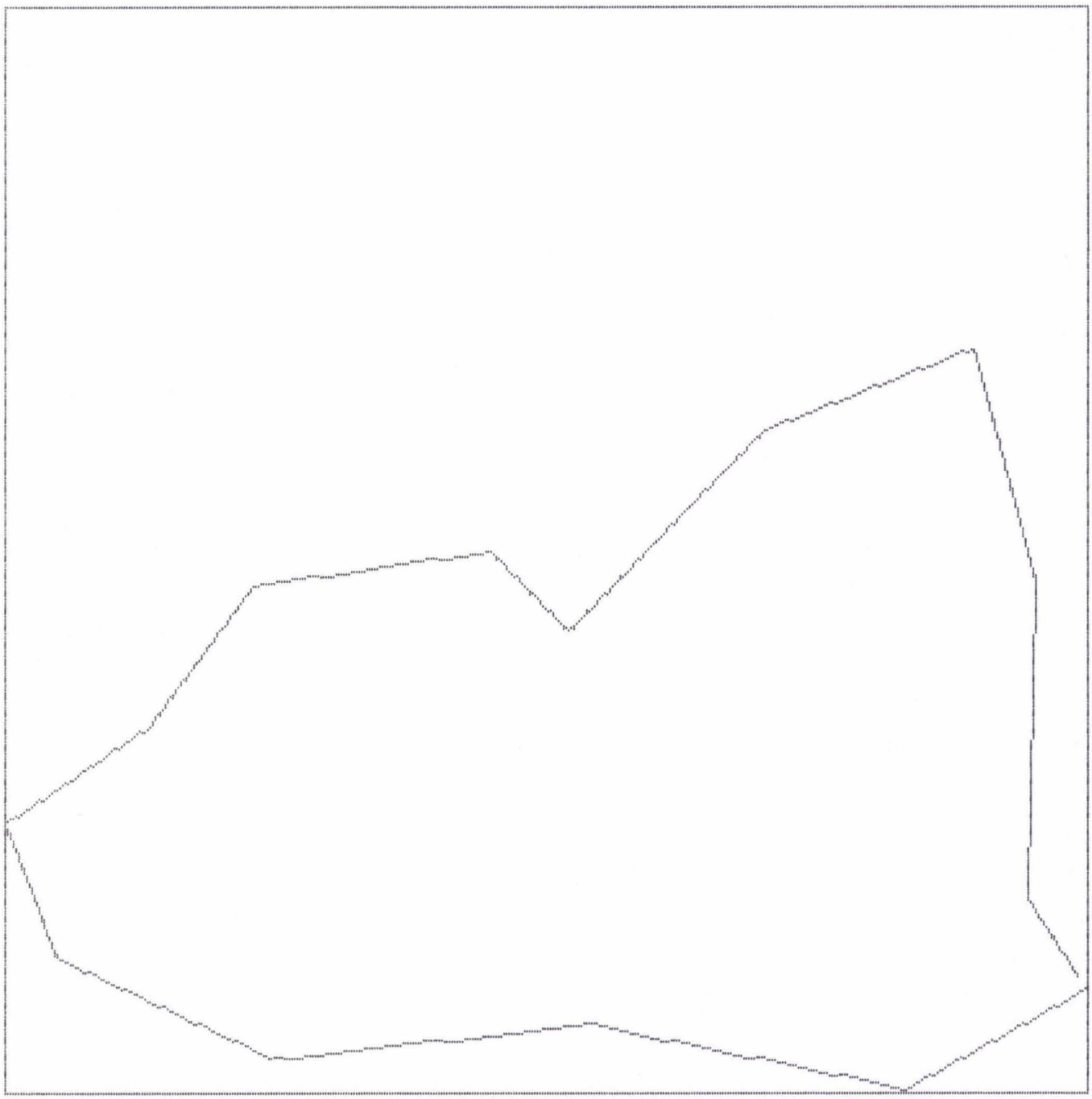
North



MAP SCALE: 1 : 765
1 INCH = 0.97 CHAINS
63.77 FEET

UNCORRECTED MAP OUTPUT FOR: AREA 3

North



MAP SCALE: 1 : 767
1 INCH = 0.97 CHAINS
63.92 FEET

TRAVERSE COMPUTATION AND ADJUSTMENT (COMPASS RULE)

FOR: AREA 3

COURSE	DEGREE (AZIMUTH)	LENGTH (CHAINS)	BALANCED LAT	BALANCED DEP	COORDINATE NORTH	COORDINATE EAST
1- 2	241.00	1.30	-0.635	-1.134	0.000	0.000
2- 3	282.00	2.00	0.409	-1.952	-0.635	-1.134
3- 4	264.00	2.00	-0.216	-1.984	-0.226	-3.085
4- 5	295.00	1.50	0.629	-1.356	-0.442	-5.070
5- 6	338.00	0.90	0.831	-0.335	0.187	-6.426
6- 7	56.00	1.10	0.611	0.915	1.018	-6.761
7- 8	36.00	1.10	0.886	0.649	1.630	-5.846
8- 9	82.00	1.50	0.204	1.489	2.516	-5.197
9- 10	135.00	0.70	-0.497	0.497	2.719	-3.708
10- 11	44.00	1.75	1.253	1.220	2.222	-3.211
11- 12	69.00	1.40	0.497	1.310	3.475	-1.991
12- 13	165.00	1.50	-1.454	0.392	3.972	-0.681
13- 14	181.00	2.00	-2.007	-0.030	2.518	-0.289
14- 1	148.00	0.60	-0.511	0.319	0.511	-0.319
		19.35	0.067	-0.046		

CLOSURE = 0.081 CHAINS

PRECISION = 1 IN 238 (0.4%)

CORRECTED AREA = 1.917 ACRES
19.174 SQUARE CHAINS

UNCORRECTED AREA = 1.926 ACRES
19.258 SQUARE CHAINS

Unit 3 Landing B
1 inch = 1 Chain
N↑

N↓

Area B ~~Landing~~ Stand Landing Plot 1 1/4

BAF 10 BA 140

Species	DBH	Ht.	DMR	Remarks
LP	12	3		#16-20' to top after 3 logs
	8	2 1/2		
	14	3		
	12	3		Excellent Site (Bo) / similar to Area D
	13	3 2		
	10	3		
	10	3		
	10	3		
	10	3		
	9	3		
	9	3		
	9	3		
	12	3 (2)		
	10	3		

37

Area B Stand Land Plot 2

BAF 10 BA 80

Species	DBH	Ht.	DMR	Remarks
LP	5	20'	6	28' total Ht
	5	16' +10	6	
	5	16'	6	
	6	22'	6	32' total
	9	1	3	Fork Top
	8	12	3	
	8	12	6	38' Total Ht
	8	12	6	

Area B Stand Landing Plot 3

BAF 10 BA 170

Species	DBH	Ht.	DMR	Remarks
LP	8	2	3	38' total Ht
	6	16	5	Fork Top
	8	2	5	
	5	16	6	
	8	12	5	
	5	22	3	
	5	22	3	
	5	24	3	
	5	26	2	
#10	5	24	1	
	~~5~~ 5	26	1	
	5	16	3	w/ Grn Rust
	7	28	6	
	7	32	6	
	8	2	3	
	8	2	3	
	6	26	5	

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C

STAND: UNIT C

Unit 2

PER ACRE STAND SUMMARY
ALL SPECIES

	DBH	HEIGHT CLASS 20	30	40	50	60	70	80	90	100	110	120	TOTAL
STEMS	4	0	21	21	0	0	0	0	0	0	0	0	42
CUVOL	4	0	34	44	0	0	0	0	0	0	0	0	78
SCRIB	4	0	219	279	0	0	0	0	0	0	0	0	499
STEMS	6	0	6	69	0	0	0	0	0	0	0	0	76
CUVOL	6	0	23	346	0	0	0	0	0	0	0	0	369
SCRIB	6	0	90	1388	0	0	0	0	0	0	0	0	1478
STEMS	8	0	11	69	16	0	0	0	0	0	0	0	96
CUVOL	8	0	71	572	142	0	0	0	0	0	0	0	784
SCRIB	8	0	288	2361	587	0	0	0	0	0	0	0	3237
STEMS	10	0	0	45	11	0	0	0	0	0	0	0	56
CUVOL	10	0	0	572	147	0	0	0	0	0	0	0	720
SCRIB	10	0	0	2399	619	0	0	0	0	0	0	0	3018
STEMS	12	0	0	7	4	0	0	0	0	0	0	0	11
CUVOL	12	0	0	139	68	0	0	0	0	0	0	0	207
SCRIB	12	0	0	587	282	0	0	0	0	0	0	0	868
STEMS	14	0	0	2	0	0	0	0	0	0	0	0	2
CUVOL	14	0	0	32	0	0	0	0	0	0	0	0	32
SCRIB	14	0	0	138	0	0	0	0	0	0	0	0	138
TOTAL													
STEMS	0	0	38	213	31	0	0	0	0	0	0	0	282
CUVOL	0	0	128	1705	357	0	0	0	0	0	0	0	2190
SCRIB	0	0	597	7152	1488	0	0	0	0	0	0	0	9238

25.76 cord/A

x 2.11

STAND: UNIT C
PER ACRE SUMMARY

STEMS	BA	DBH	HT	AGE
282	117	8.7	42	100

85 cuft = Cord

54 Cords

CRUISE SUMMARY
BAF USED = 10 PTS SMPLD = 6 AVG. # TREES/PT. = 11.7

25.8
x 2.1
54.2
less 10%
48.78 = 49

TRAVERSE COMPUTATION AND ADJUSTMENT (COMPASS RULE)

FOR: TRAIL CREEK -- UNIT 2

COURSE	DEGREE (AZIMUTH)	LENGTH (CHAINS)	BALANCED LAT	BALANCED DEP	COORDINATE NORTH	COORDINATE EAST
1- 2	165.00	1.75	-1.706	0.455	0.000	0.000
2- 3	183.00	1.50	-1.512	-0.076	-1.706	0.455
3- 4	200.00	2.00	-1.898	-0.681	-3.218	0.379
4- 5	207.00	1.75	-1.575	-0.792	-5.116	-0.302
5- 6	159.00	1.75	-1.650	0.630	-6.691	-1.094
6- 7	60.00	1.75	0.859	1.518	-8.341	-0.465
7- 8	55.00	1.50	0.847	1.231	-7.482	1.053
8- 9	12.00	1.25	1.211	0.262	-6.635	2.284
9- 10	33.00	1.10	0.912	0.601	-5.424	2.546
10- 11	350.00	1.50	1.464	-0.258	-4.511	3.146
11- 12	348.00	1.80	1.744	-0.372	-3.048	2.888
12- 13	330.00	1.75	1.500	-0.873	-1.304	2.516
13- 14	304.00	1.00	0.550	-0.828	0.196	1.644
14- 1	228.00	1.10	-0.746	-0.816	0.746	0.816
		21.50	0.196	-0.030		

CLOSURE = 0.199 CHAINS

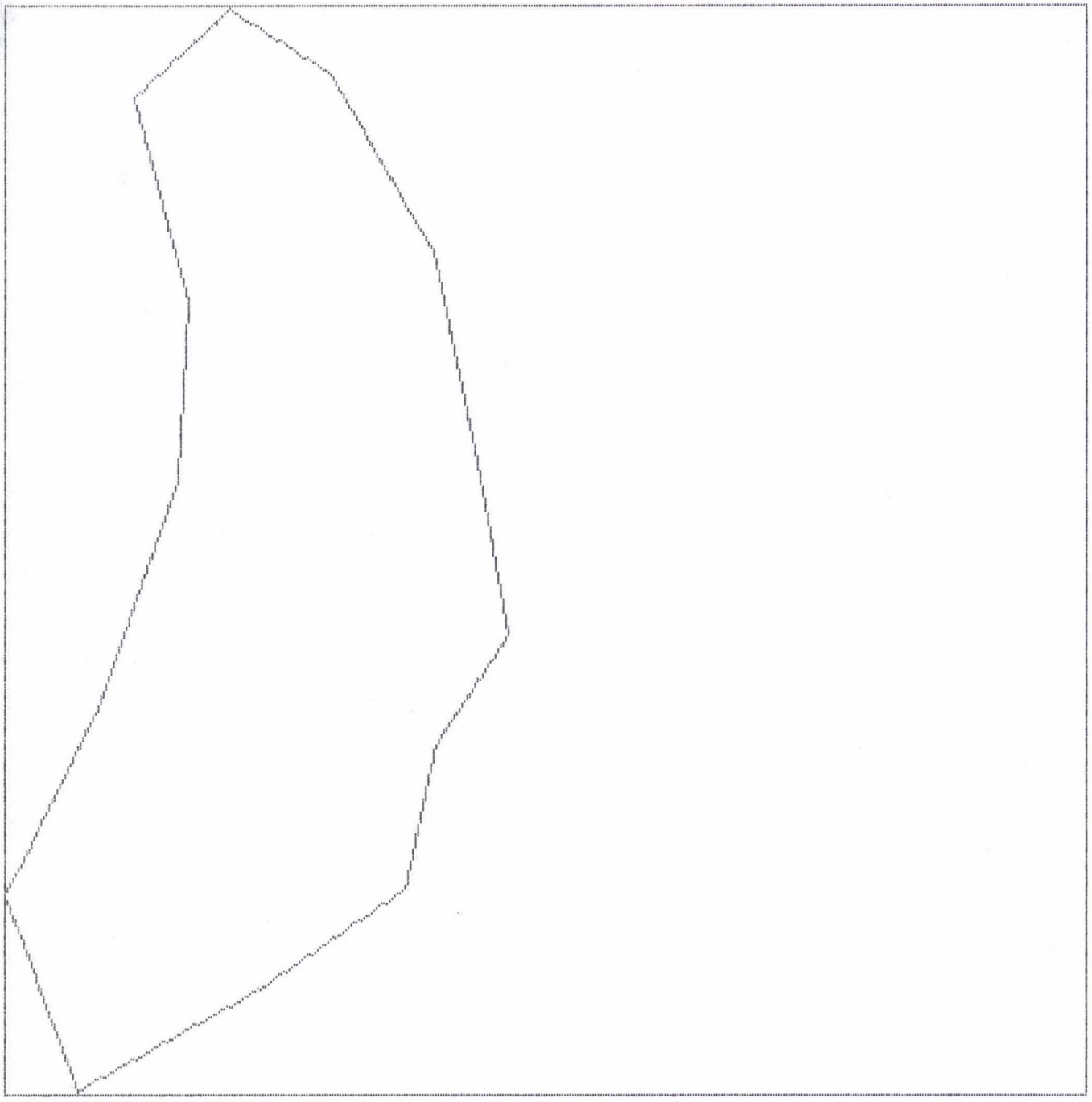
PRECISION = 1 IN 108 (0.9%)

CORRECTED AREA = 2.110 ACRES
21.101 SQUARE CHAINS

UNCORRECTED AREA = 2.117 ACRES
21.169 SQUARE CHAINS

CORRECTED MAP OUTPUT FOR: TRAIL CREEK -- UNIT 2C

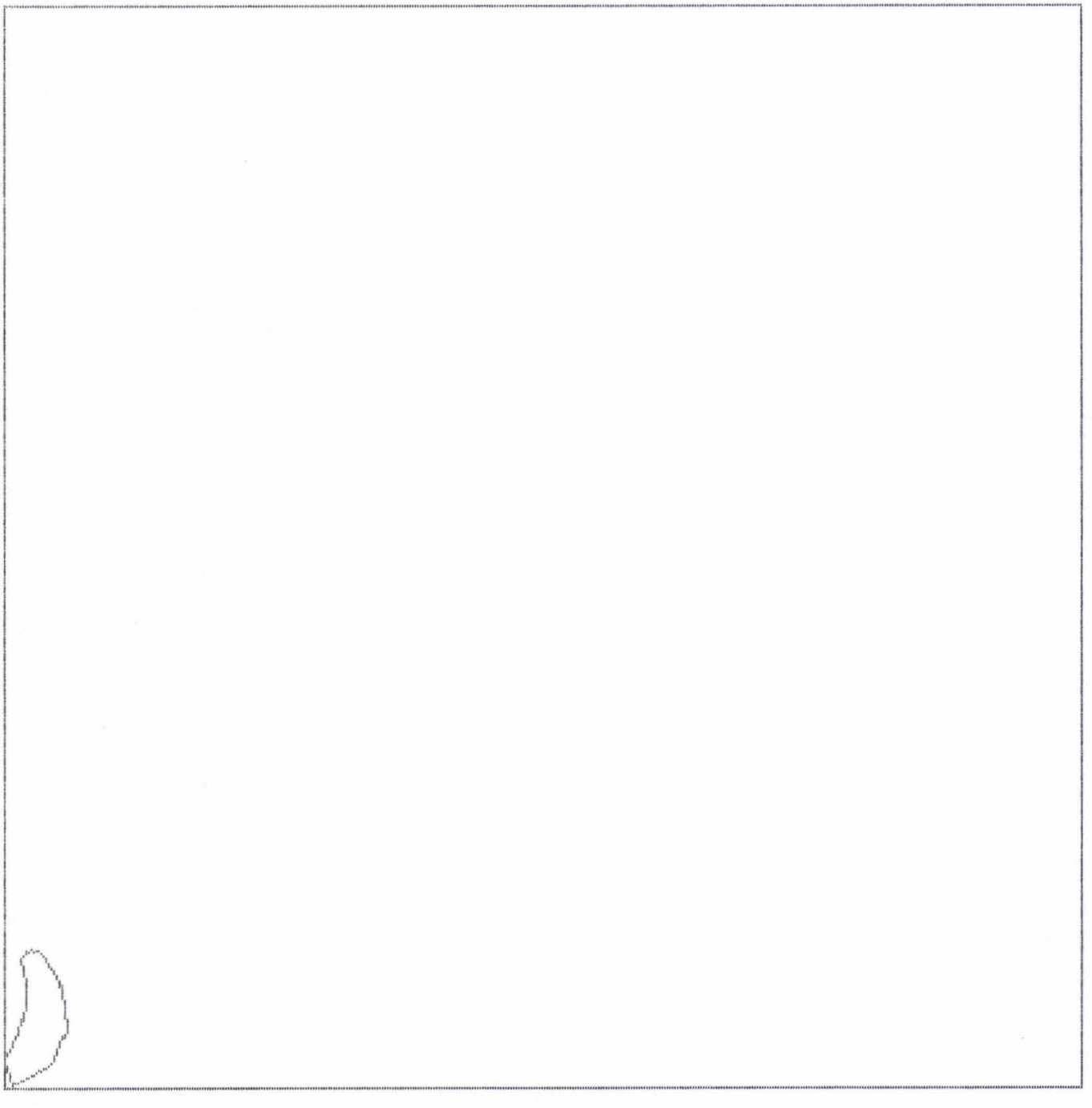
North



MAP SCALE: 1 : 1019
1 INCH = 1.29 CHAINS
84.90 FEET

CORRECTED MAP OUTPUT FOR: TRAIL CREEK -- UNIT 2

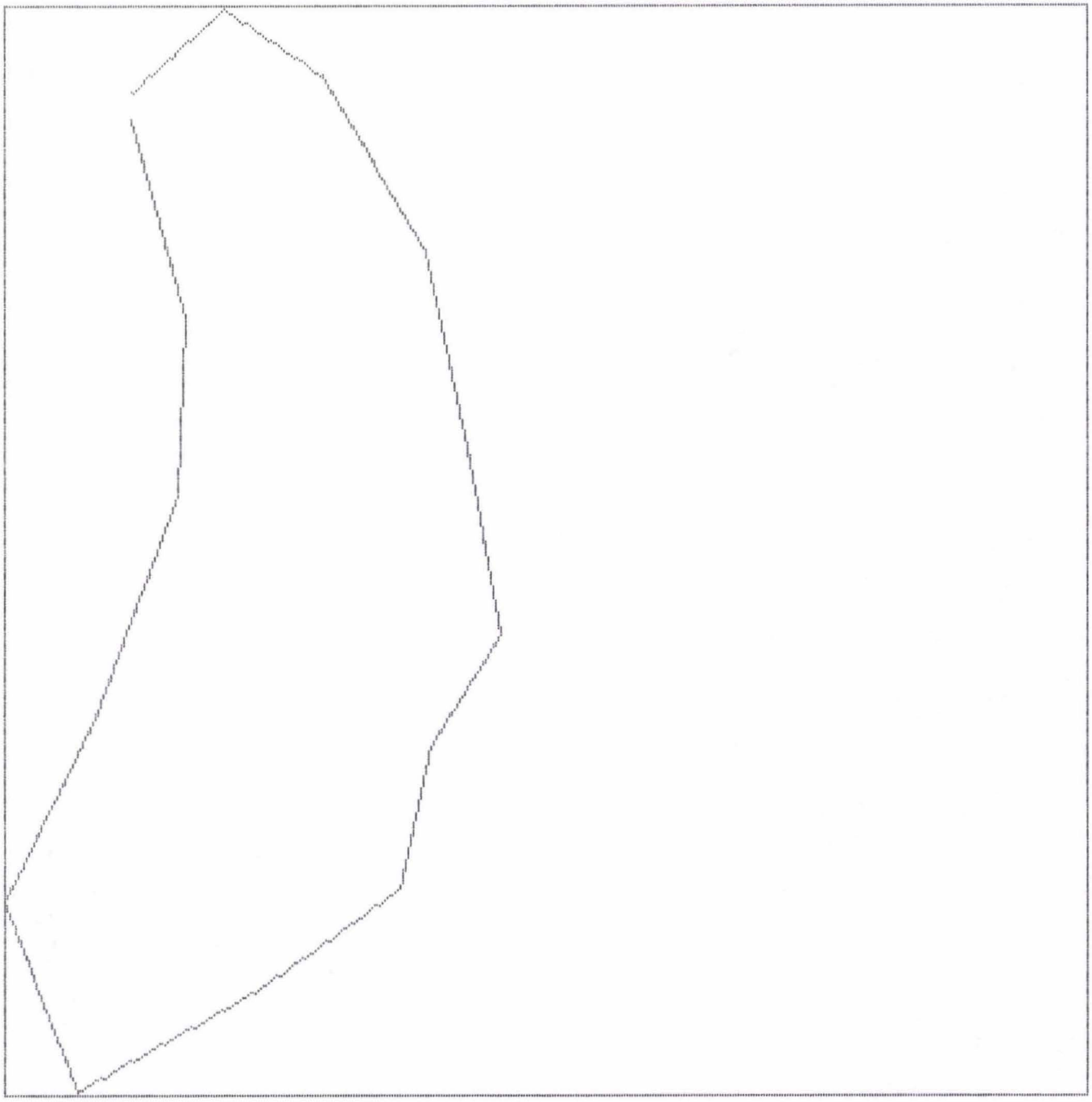
North



MAP SCALE: 1 : 7920
8 INCHES = 1 MILE (80 CHAINS)

UNCORRECTED MAP OUTPUT FOR: TRAIL CREEK -- UNIT 2

North



MAP SCALE: 1 : 1040
1 INCH = 1.31 CHAINS
86.68 FEET

Area 2 Stand ____ Plot 1

BAF 10 BA 140

Species	DBH	Ht.	DMR	Remarks
LP	9.7	43	0	
LP	5.3	38	1	
LP	10	40	0	
LP	9.8	41	0	
LP	10.8	42	0	
LP	11.5	44	1	Forked Top Age 107
LP	7.9	42	1	
LP	7	39	1	
LP	7.5	41	0	
LP	8.4	46	1	
LP	8.6	45	1	
LP	10.2	44	0	
LP	8.9	46	0	
LP	9.9	45	0	

Rgen 20

Slope 14%

Starting at Creek Crossing 130° for 3 Chains, Then Due S 2 ch, Next 180° 1.5 to 2 Chains next 2 plots. Then 220° 1 chain to top of Sale.

First plot 30° 3 ch near riparian area

Area 2 Stand ____ Plot 2

BAF 10 BA 100

Species	DBH	Ht.	DMR	Remarks
LP	9.1	32	3	
LP	5.9	30	1	
LP	8.7	30	2	
LP	9	35	0	
LP	9.5	37	1	
LP	7.7	36	2	
LP	10.2	40	2	
LP	12.2	42	1	
SF	11.8	44	0	
LP	11.1	39	2	

Approx Age 90 - 100

Slope 12%

Rogers 10

Area 2 Stand ____ Plot 3

BAF 10 BA 120

Species	DBH	Ht.	DMR	Remarks
LP	10.7	44	0	
LP	8	40	1	
LP	7.6	37	0	
LP	13	45	0	
LP	10.2	47	0	
SF	12.4	46	0	
LP	6.9	35	0	
LP	9.1	42	1	
LP	7.3	43	0	
LP	8.9	40	0	
LP	5.1	35	1	
LP	9.4	40	0	

Approx Age 90-100

Slope 8%

Regen 6

Area 2 Stand ____ Plot 4

BAF 10 BA 100

Species	DBH	Ht.	DMR	Remarks
LP	10.7	45	0	
LP	10.5	46	0	
LP	8.6	46	0	
LP	11.5	47	0	
LP	9.2	48	0	
LP	10.6	45	1	
LP	10.5	45	1	Poor form
LP	9.9	44	0	
LP	11	45	0	
LP	10.7	46	1	

Approx Age 90-100
Slope 10%
Regen 8

Area 2 Stand ____ Plot 5

BAF 10 BA 90

Species	DBH	Ht.	DMR	Remarks
LP	11.5	40	0	
LP	14	42	1	
LP	13.1	41	0	
LP	11	40	1	
LP	9.8	39	1	
LP	9.6	43	2	
LP	8	38	1	
LP	10.1	40	0	
LP	12.9	44	1	

Slope 10%
App Age 90-100
Rege 1

Area 2 Stand ____ Plot 6

BAF 10 BA 150

Species	DBH	Ht.	DMR	Remarks
LP	12.7	46	0	
LP	10.9	45	0	
LP	8	42	—	Dead
LP	7.1	43	0	
LP	8.5	43	0	
LP	7	43	1	
LP	8	43	0	Fork top
LP	7.8	43	1	
LP	7.2	42	0	
LP	7	42	0	
LP	8.7	45	0	
LP	5.5	39	—	Dead
LP	9.4	45	0	
LP	6.5	40	1	
LP	[illegible] 10.4	45	1	

Approx Age 90-100
Slope 14 %
Regen 46

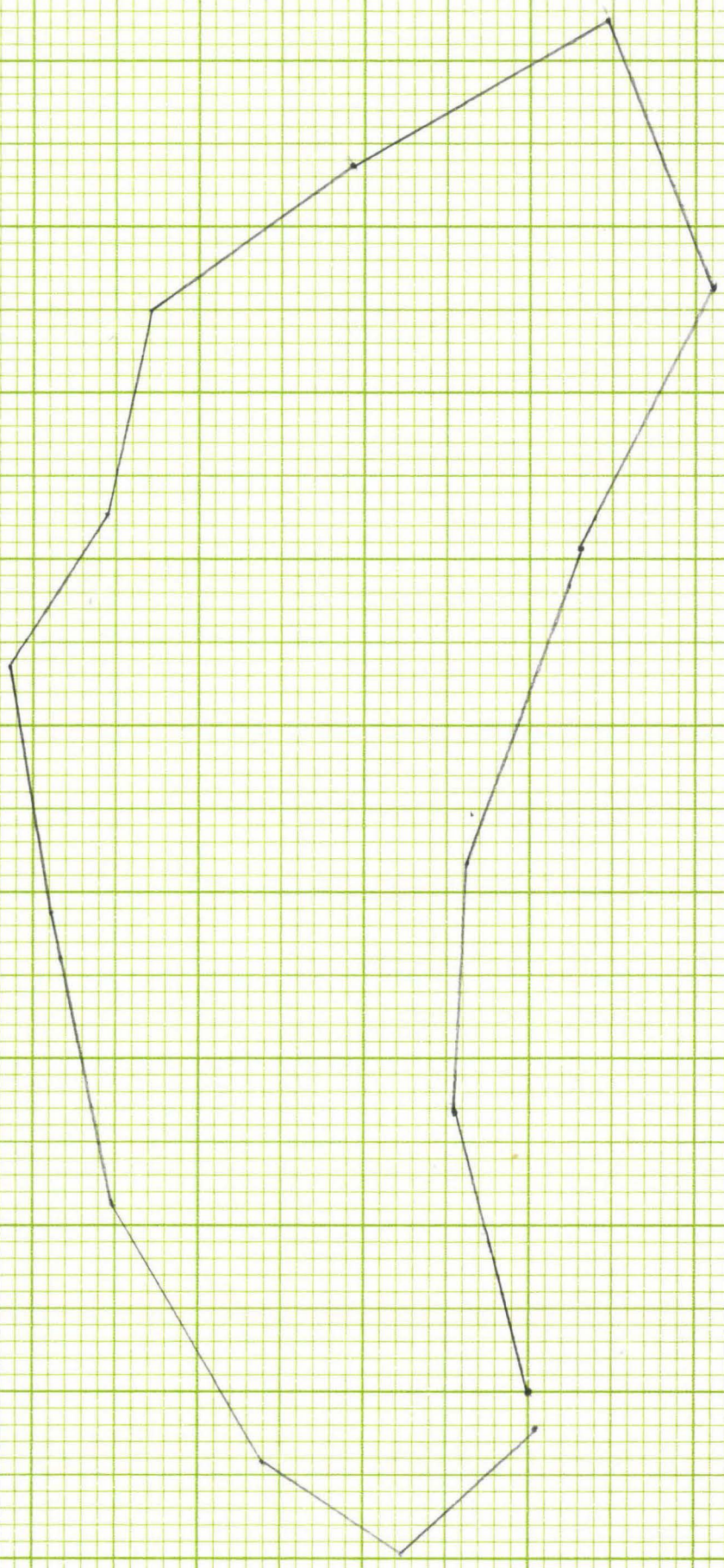
Area 2

STA	Dist	BR	
1 ✓	1 3/4	165°	
2 ✓	1 1/2	183°	
3 ✓	2	200°	
4 ✓	1 3/4	207°	
5 ✓	1 3/4	159°	
6 ✓	1 3/4	60°	
7 ✓	1 1/2	55°	
8 ✓	1 1/4	12°	Protect Christmas Trees Along Boundary on E side
9 ✓	1.1	33°	
10 ✓	1 1/2	350°	
11 ✓	1.8	348°	
12	1 3/4	330°	
13	1	304°	
14	1.1	228°	End @ Beginning

Area _____ Stand _____ Plot _____

BAF ____ BA _____

Species	DBH	Ht.	DMR	Remarks



Unit 2 (C)

1 Chain = 1 inch

N

Unit D

LP Board Feet 7,046

x 5

35,230

+ 140 Trees 9,134

44,364 bd. ft.

÷500 = 88.73 cords

~~29~~

D-f Board feet

15 2½ = 10,620

10 2 = 60

44.36 LP

0.24 D-f

44.60

x 2

89.20 cords

Tops 682 Trees

÷30 Tops/Cord 22.7

111.9 = 112 cords

34 Cords/Acre

LP

Unit 4 (D)

S:1 TM ± 140 Trees 6" Top

Trees

			Logs 1	1²	2	2²	3	3²
160	8	(20)	1 2	6	7	3	3	—
279	9	(31)		5	11	11	4	—
210	10	(21)		1	9	8	3	—
143	11	(13)		1	3	3	6	—
132	12	(11)			1	6	3	1
DBH 91	13	(7)				3	3	1
42	14	(3)				1	1	1
30	15	(2)				1	—	1
1087"		108 Trees						
Trees (Logs)			1 (1)	13 (19.5)	31 (64)	36 (90)	23 (69)	4 (14)

Avg. DBH = 10.06" Total logs = 257.5 ÷ 108 = 2.38 logs/tree

Bd ft content of logs - Bruce Roy

Volume - Gross

	1	1²	2	2²	3	3²
8	2	3½	5	6½	8	—
9		3½	5	6½	8	—
10		3½	5	7½	9	—
11		4½	6	9	11	—
12			8	10½	12	14½
13				11½	14	17½
14				12½	18	19½
15				15½	—	21½

Trail Creek

Trees

	30	40	50	60	70	80
8		7	7	3	3	-
9		5	11	11	4	-
10		1	9	8	3	-
11		1	3	3	6	-
12			1	6	3	1
13				3	3	1
14				1	1	1
15						1

Cubic Feet

					4" top
8	44	55	28	33	-
9	40	104	132	56	-
10	10	108	112	51	-
11	12	42	51	120	-
12	-	17	120	69	27
13	-	-	69	81	31
14	-	-	27	31	36
15	-	-	-	-	41
	106	331	539	441	135

$106 + 331 + 539 + 441 + 135 = 1,552$

$1,552 \times 5 = 7,760$

$1552 \div 108 \times \frac{140}{(4.37)} = +\ 2,012$

$9,772\ ft^3$

118 Cords

Board Feet

6" top

	40	50	60	70	80
8	161	217	114	138	–
9	155	451	561	240	–
10	40	468	512	228	–
11	50	195	240	564	–
12	–	79	576	342	131
13	–	–	342	405	155
14	–	–	134	158	181
15	–	–	–	–	209
	406	1,410	2,479	2,075	676

= 7,046 /

× 5

35,230

7,046 ÷ 108 × 140 = + 9,134

44,364 bd. ft.

98 cord

Area 4 ● Stand LP ● Plot All

BAF 5:1 TM Df 100% BA ——

Species	DBH	Ht.	DMR	Remarks
LP	8	30		
LP	8	30		
LP	10	32		Trail Creek
LP	10	32 ~~32~~		Unit D (4)
LP	9	32		
LP	13	40		
Df	15	40		
Df	10	32		
LP	10	2		
LP	9	2		
LP	12	2½		
LP	9	2		
LP	9	2		
LP	8	1		
LP	11	1½		
LP	9	2		
LP	9	1½		
LP	10	2½		
LP	8	1½		
LP	10	2		
LP	11	2		
LP	10	1½		
~~LP~~	10	2		
LP	9	2½		

(2)

Area 4 • Stand ____ • Plot all

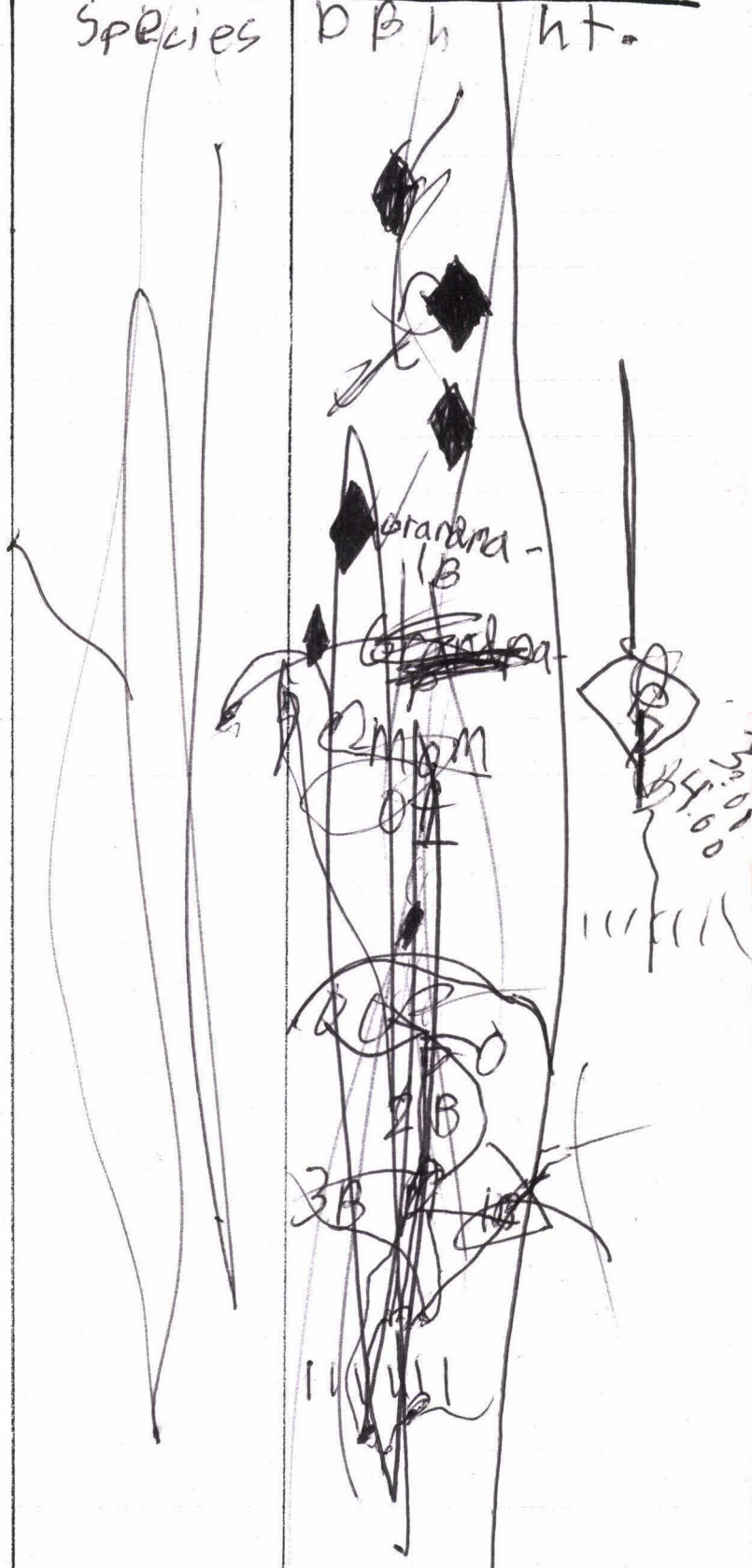
BAF ____ BA ____

Species	DBH	Ht.	DMR	Remarks
LP	12	2½		Colleen Blanchard 2008
LP	12	2½		
LP	10	2½		
LP	10	2		
LP	10	2		
LP	11	2		
LP	11	2½		
LP	9	1½		
LP	10	2½		
LP	11	~~2½~~ 3		
LP	9	2½		
LP	11	3		
LP	9	2½		
LP	8	2½		
LP	8	2½		
LP	9	2½		
LP	9	3		
LP	9	3		
LP	8	2½		
LP	9	2½		
LP	9	2		
LP	13	[illegible]		
LP	8	3		
LP	11	2½		
LP	11	3		
LP	9	2½		

Area 4 ● Stand ____ ● Plot ____ (3)

BAF ____ BA ____

Species	DBH	Ht.	DMR Species	Remarks DBH	Remarks ht.
LP	8	2			
LP	12	2½			
LP	8	2			
LP	12	3½			
CP	8	2			
LP	13	2½			
LP	10	2½			
LP	10	3			
LP	14	3			
LP	8	1½			
LP	13	2½			
LP	10	2½			
LP	12	1½			
LP	12	2			
LP	12	2½			
LP	10	2½			
LP	8	2			
LP	8	2			
LP	11	1½			
LP	11	2			
LP	13	2½			
LP	9	3			
LP	10	2½			
LP	8	2			
LP	15	3½			
LP	13	3½			
LP	9	2½			
LP	12	3			



Area _____ ● Stand _____ ● Plot _____ (4)

BAF _____ BA _____

Species	DBH	Ht.	DMR	Remarks
LP	14	3		
LP	10	2½		
LP	9	2		
LP	14	3½		
LP	9	1½		
LP	8	2		
LP	11	3		
LP	12	3		
LP	8	1½		
LP	13	3		
LP	9	1½		
LP	12	2½		
LP	14	2½	LP	3
LP	10	2½	LP	3:00 11:00
LP	14	2		
LP	9	2		
LP	12	3		
LP	8	1½		
LP	11	3	LP	
LP	9	2		
LP	9	2½		

Area _____ ● Stand _____ ● Plot _____ ⑤

BAF ____ BA _____

Species	DBH	Ht.	DMR	Remarks
LP	10	3		
LP	9	3		
LP	9	2½		
LP	9	3		
LP	8	1½		
LP	9	2½		
LP	10	3	1	

Trees not marked

Q = Creek crossing

Protect SA Fir ~~over~~ All

Blue flag bdy - Paint met

TRAVERSE COMPUTATION AND ADJUSTMENT (COMPASS RULE)

FOR: TRAIL CREEK THREE UNIT D

COURSE	DEGREE (AZIMUTH)	LENGTH (CHAINS)	BALANCED LAT	BALANCED DEP	COORDINATE NORTH	COORDINATE EAST
1- 2	92.00	2.00	-0.095	2.017	0.000	0.000
2- 3	75.00	2.00	0.493	1.950	-0.095	2.017
3- 4	83.00	1.60	0.175	1.603	0.398	3.967
4- 5	202.00	1.90	-1.785	-0.695	0.573	5.569
5- 6	236.00	1.70	-0.972	-1.394	-1.212	4.875
6- 7	145.00	1.10	-0.915	0.641	-2.184	3.481
7- 8	66.00	2.00	0.789	1.845	-3.099	4.122
8- 9	82.00	1.70	0.215	1.699	-2.310	5.967
9- 10	9.00	2.40	2.341	0.397	-2.094	7.666
10- 11	120.00	0.60	-0.307	0.525	0.246	8.063
11- 12	144.00	2.30	-1.889	1.373	-0.061	8.588
12- 13	65.00	1.80	0.738	1.648	-1.951	9.961
13- 14	40.00	2.50	1.884	1.630	-1.212	11.609
14- 15	356.00	1.20	1.182	-0.073	0.672	13.238
15- 16	293.00	2.60	0.984	-2.370	1.854	13.165
16- 17	218.00	2.00	-1.601	-1.213	2.838	10.796
17- 18	260.00	2.00	-0.372	-1.951	1.237	9.583
18- 19	293.00	2.00	0.757	-1.823	0.865	7.631
19- 20	274.00	2.00	0.115	-1.977	1.621	5.808
20- 21	262.00	2.00	-0.303	-1.962	1.736	3.831
21- 22	260.00	2.00	-0.372	-1.951	1.433	1.869
22- 1	176.00	1.05	-1.060	0.083	1.060	-0.083
		40.45	0.503	-0.367		

CLOSURE = 0.622 CHAINS

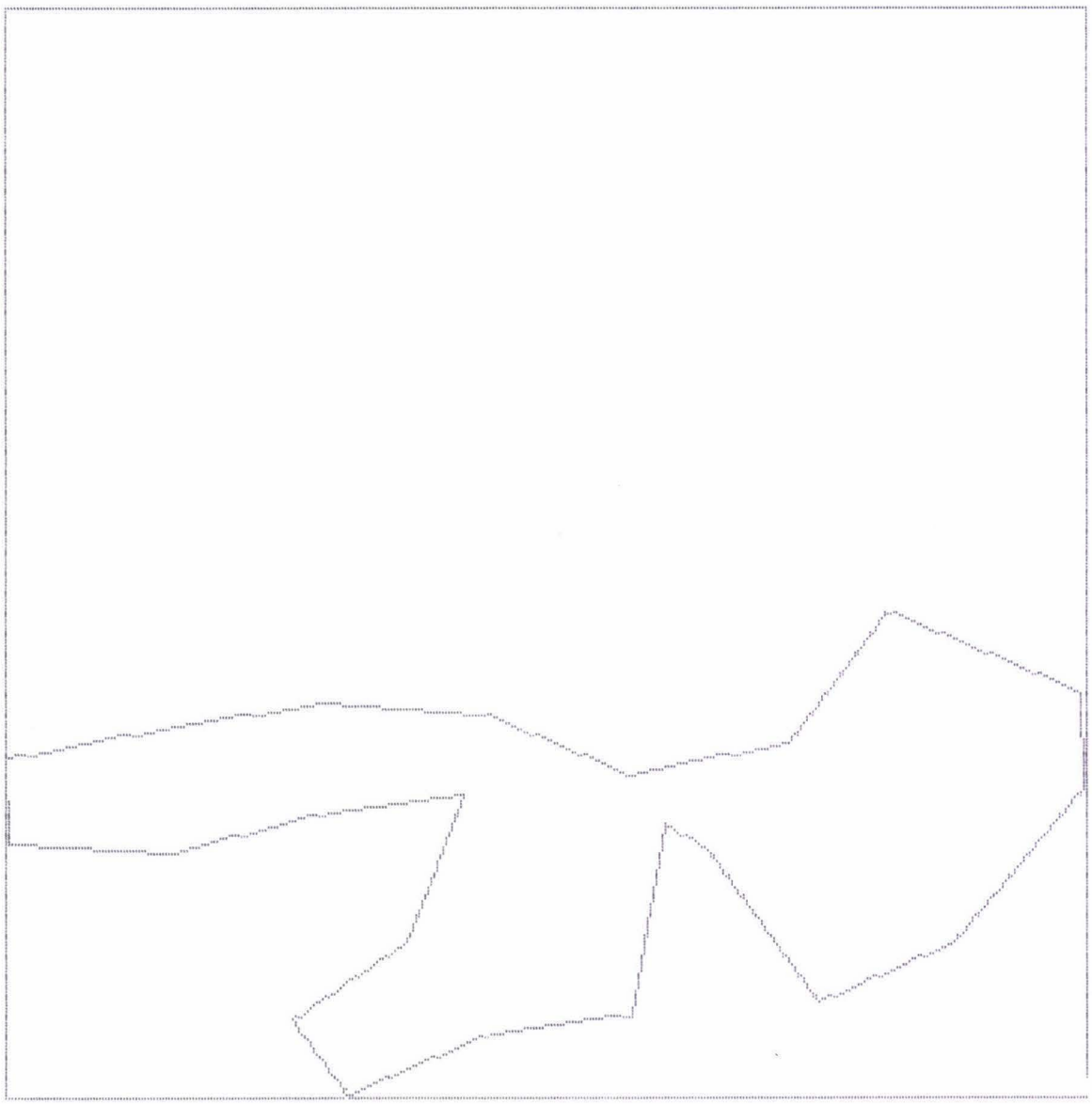
PRECISION = 1 IN 65 (1.5%)

CORRECTED AREA = 3.286 ACRES
32.856 SQUARE CHAINS

UNCORRECTED AREA = 3.574 ACRES
35.743 SQUARE CHAINS

CORRECTED MAP OUTPUT FOR: TRAIL CREEK THREE UNIT D

North



MAP SCALE: 1 : 1742
1 INCH = 2.20 CHAINS
145.14 FEET

Trail Creek #3
Unit D

Start	Bearing	Chains
1	92°	2
2	75°	11
3	83°	1.6
4	202°	1.9
5	236°	1.7
6	145°	1.1
7	66°	2
8	82°	1.7
9	90	2.4
10	120°	.6
11	144	2.3
12	65°	1.80
13	40°	2.5
14	356°	1.2
15	293°	2.6
16	218°	2
17	260°	2
18	293°	2
19	274°	2
20	262	2
21	260	2
22	176°	1.05 end

PROGRAM RMCRUZ 09:58:06 02-05-1992

STAND: unit e

PER ACRE STAND SUMMARY
ALL SPECIES

		HEIGHT CLASS										
	DBH	20	30	40	50	60	70	80	90	100	110	120 TOTAL
STEMS	4	0	0	23	0	0	0	0	0	0	0	0 23
CUVOL	4	0	0	58	0	0	0	0	0	0	0	0 58
SCRIB	4	0	0	328	0	0	0	0	0	0	0	0 328
STEMS	6	0	7	40	47	6	0	0	0	0	0	0 100
CUVOL	6	0	23	204	309	55	0	0	0	0	0	0 590
SCRIB	6	0	87	820	1259	227	0	0	0	0	0	0 2393
STEMS	8	0	0	15	113	40	0	0	0	0	0	0 168
CUVOL	8	0	0	107	1110	510	0	0	0	0	0	0 1727
SCRIB	8	0	0	437	4613	2139	0	0	0	0	0	0 7190
STEMS	10	0	0	0	21	32	0	0	0	0	0	0 53
CUVOL	10	0	0	0	285	575	0	0	0	0	0	0 861
SCRIB	10	0	0	0	1198	2451	0	0	0	0	0	0 3649
STEMS	12	0	0	2	0	23	0	0	0	0	0	0 25
CUVOL	12	0	0	38	0	561	0	0	0	0	0	0 599
SCRIB	12	0	0	162	0	2508	0	0	0	0	0	0 2670
STEMS	14	0	0	0	2	2	0	0	0	0	0	0 3
CUVOL	14	0	0	0	46	55	0	0	0	0	0	0 101
SCRIB	14	0	0	0	210	254	0	0	0	0	0	0 464
TOTAL												
STEMS	0	0	7	80	182	103	0	0	0	0	0	0 373
CUVOL	0	0	23	407	1750	1756	0	0	0	0	0	0 3935
SCRIB	0	0	87	1748	7280	7579	0	0	0	0	0	0 16695

44/Acre

80 ft³

49.2 cds/A

7.761 Acres

382 conds

STAND: unit e
PER ACRE SUMMARY

STEMS	BA	DBH	HT	AGE
373	164	9.0	52	100

CRUISE SUMMARY
BAF USED = 10 PTS SMPLD = 5 AVG. # TREES/PT. = 16.4

85 = 463

* 85 = 46.29

7.8 Acres less 0.8A aspen

x 7.0

324.1

less 10% defect

292

90 ft³

43.7 cds/A.

7.761 Acres

339 conds

TRAVERSE COMPUTATION AND ADJUSTMENT (COMPASS RULE)

FOR: TRAIL CREEK -- UNIT E

COURSE	DEGREE (AZIMUTH)	LENGTH (CHAINS)	BALANCED LAT	BALANCED DEP	COORDINATE NORTH	COORDINATE EAST
1- 2	191.00	1.42	-1.394	-0.278	0.000	0.000
2- 3	229.00	1.33	-0.872	-1.011	-1.394	-0.278
3- 4	214.00	2.00	-1.658	-1.129	-2.266	-1.289
4- 5	197.00	1.30	-1.243	-0.387	-3.924	-2.418
5- 6	214.00	0.94	-0.779	-0.531	-5.167	-2.805
6- 7	231.00	2.00	-1.258	-1.565	-5.946	-3.336
7- 8	161.00	0.66	-0.624	0.211	-7.205	-4.901
8- 9	93.00	0.76	-0.040	0.755	-7.829	-4.689
9- 10	119.00	1.17	-0.567	1.017	-7.868	-3.935
10- 11	126.00	0.63	-0.370	0.506	-8.436	-2.917
11- 12	78.00	1.56	0.325	1.518	-8.806	-2.411
12- 13	115.00	1.72	-0.727	1.550	-8.481	-0.893
13- 14	109.00	0.89	-0.290	0.837	-9.208	0.656
14- 15	38.00	1.39	1.095	0.848	-9.498	1.493
15- 16	56.00	1.28	0.716	1.054	-8.402	2.341
16- 17	76.00	2.00	0.484	1.930	-7.686	3.396
17- 18	44.00	0.62	0.446	0.427	-7.202	5.326
18- 19	115.00	1.28	-0.541	1.153	-6.756	5.753
19- 20	103.00	0.93	-0.209	0.901	-7.297	6.906
20- 21	129.00	1.53	-0.963	1.181	-7.506	7.808
21- 22	80.00	1.06	0.184	1.038	-8.469	8.989
22- 23	1.00	1.58	1.580	0.019	-8.285	10.027
23- 24	325.00	1.95	1.598	-1.129	-6.705	10.046
24- 25	293.00	2.00	0.782	-1.852	-5.107	8.917
25- 26	306.00	2.00	1.176	-1.629	-4.325	7.066
26- 27	335.00	1.33	1.206	-0.569	-3.150	5.437
27- 28	340.00	1.25	1.175	-0.434	-1.944	4.868
28- 29	310.00	1.85	1.189	-1.427	-0.769	4.434
29- 1	262.00	3.02	-0.420	-3.007	0.420	3.007
		41.45	-0.004	0.220		

CLOSURE = 0.220 CHAINS

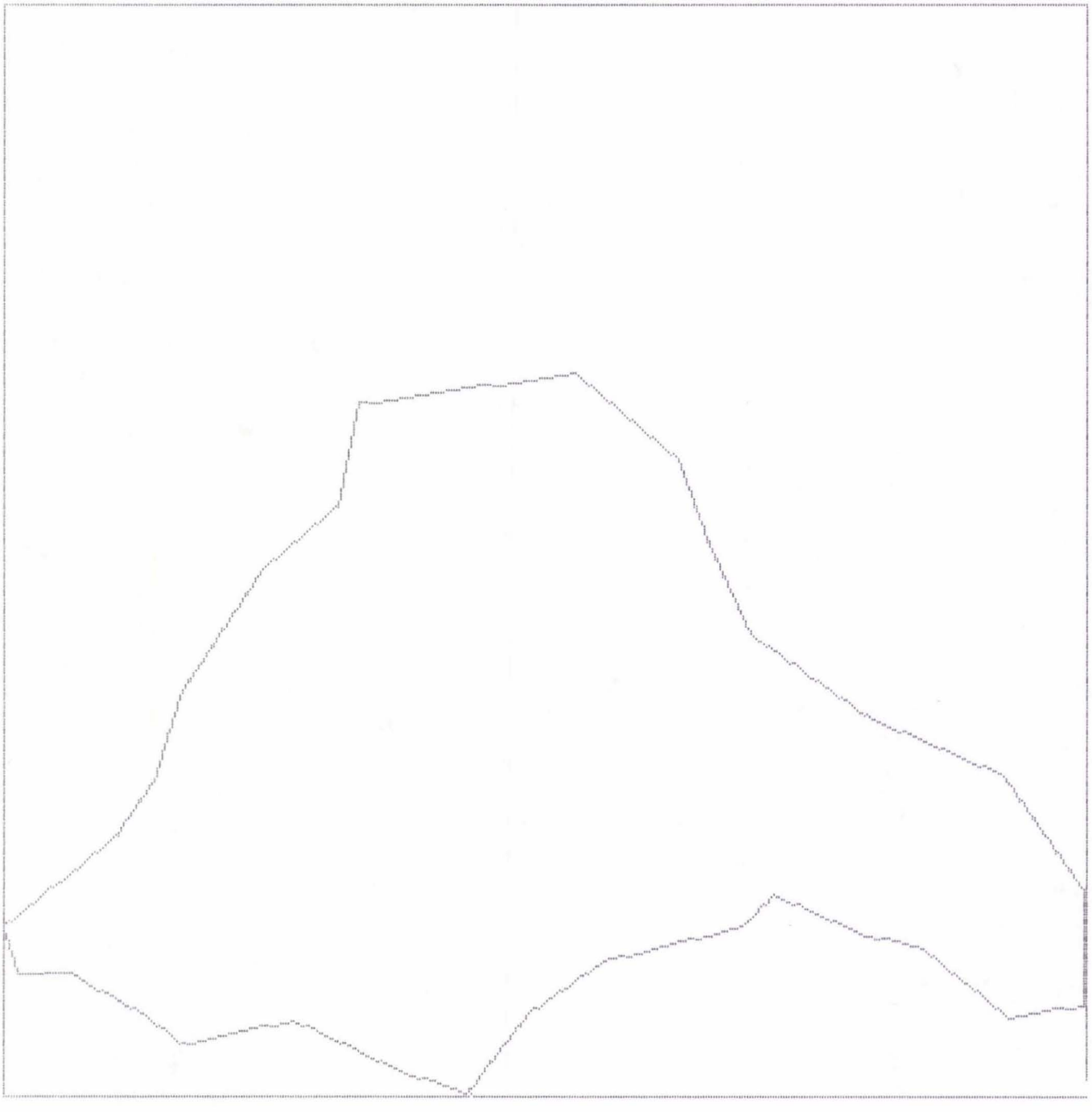
PRECISION = 1 IN 188 (0.5%)

CORRECTED AREA = 7.761 ACRES
77.614 SQUARE CHAINS

UNCORRECTED AREA = 7.862 ACRES
78.620 SQUARE CHAINS

CORRECTED MAP OUTPUT FOR: TRAIL CREEK -- UNIT E

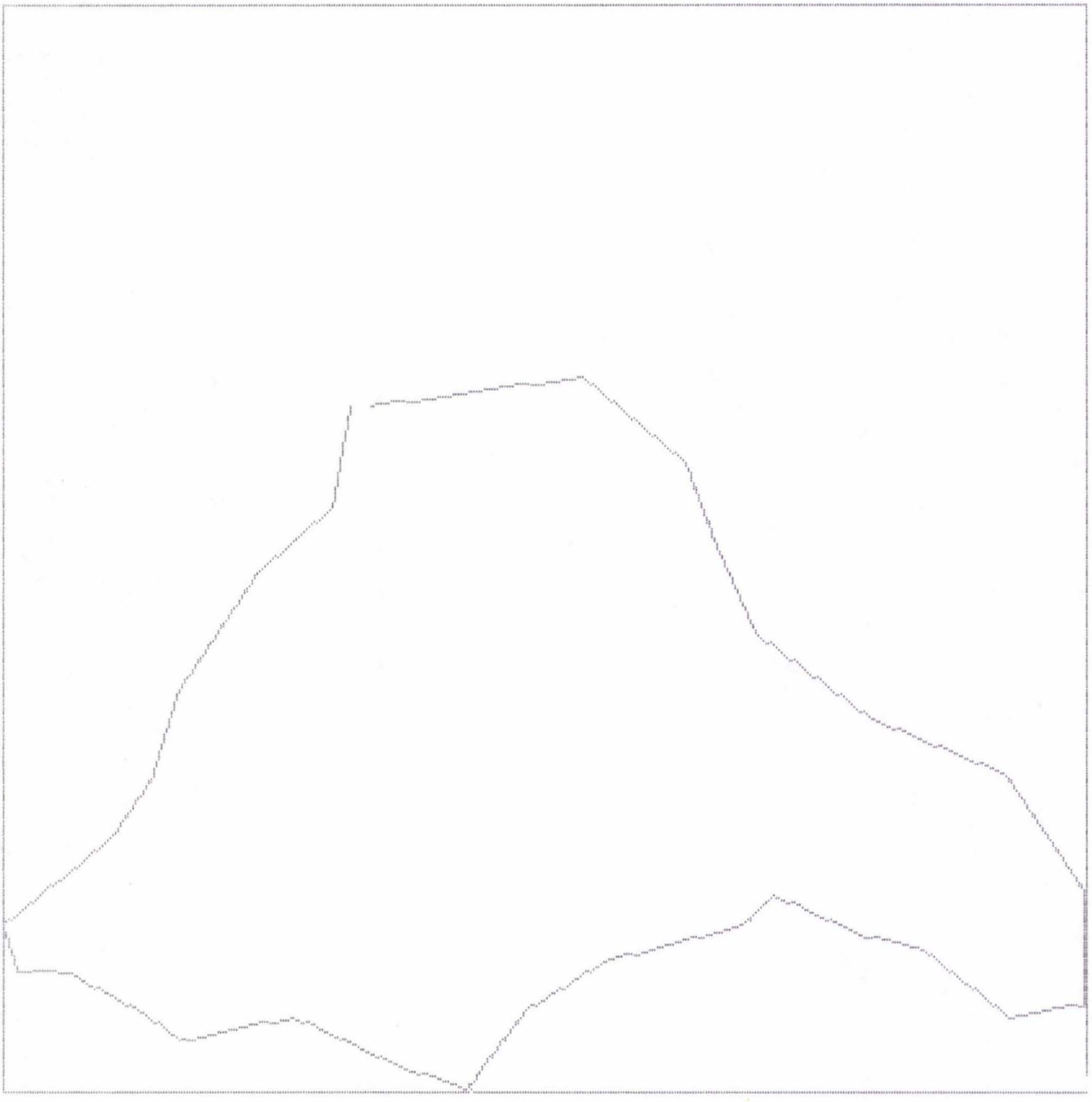
North



MAP SCALE: 1 : 1690
1 INCH = 2.13 CHAINS
140.80 FEET

UNCORRECTED MAP OUTPUT FOR: TRAIL CREEK -- UNIT E

North



MAP SCALE: 1 : 1703
1 INCH = 2.15 CHAINS
141.88 FEET

Area E Stand LP Plot 1

BAF 10 BA 100

Species	DBH	Ht.	DMR	Remarks
LP	12.4	60		
	13.2	60		
	10.0	60		Twin/Fork
	13.2	60		
	12.2	60		
	14.3	61		
	10.6	60		Control F-5
	11.8	60		G
	12.3	60		
	12.4	60		

Area E Stand LP Plot 2

BAF 10 BA 130

Species	DBH	Ht.	DMR	Remarks
LP	9.3	50		
	10.2	60		
	9.5	50		
	12.7	60		
	11.8	60		
	6.8	40		
	13.4	60		
	9.6	(48) 50		
	10.3	50		
	8.2	50		
	10.8	60		
	8.3	50		
	10.5	50 (54)		

Area E Stand ____ Plot 3

BAF 10 BA 160

Species	DBH	Ht.	DMR	Remarks
LP	9.1	40 ~~50~~ ~~40~~ 40		
	7.8	40		
	5.7	40		
	8.3	50		
	8.1	50		
	14.7	50		
	10.0	60		
	7.2	50		
	9.5	50		
	7.7	40		
	9.9	50		
	~~8.~~ 9.2	50		
	7.8	40		
	8.4	40		
	10.1	50		
	9.2	50 (52)		

Area E Stand LP Plot 4

BAF 10 BA 220

Species	DBH	Ht.	DMR	Remarks
LP	9.6	50		Fork
	7.7	50		
	9.7	60		
	8.6	50		
	9.2	50		
	8.7	50		
	9.2	60		
	7.7	40		
	8.1	40		
	8.7	50		
	10.0	60		
	9.6	60		Commandra Rust
	9.4	50		
	8.0	50		
	10.0	50		
	13.8	60		
	9.4	60		
	8.7	60		
	8.1	50		Fork
	8.7	60		
	7.7	50		
	9.3	50 (48)		

Area _____ Stand F Plot 5

BAF 10 BA 210

Species	DBH	Ht.	DMR	Remarks
LP	7.1	40		
	12.4	40		
	12.0	60		
	11.8	60		Fork
	8.0	60		
	7.7	60		
	7.0	50		
	10.4	60		
	6.9	50		
	9.7	60		
	8.3	50		
	5.6	40		
	9.1	60		
	7.7	50		
	10.8	50		Fork
	9.3	50		W C Rock
	9.0	50		Fork
	8.3	50		Fork
	7.0	30		Fork
	10.2	50		Fork
	7.6	50 (52)		

Rays Copy

ROOSEVELT NATIONAL FOREST
REDFEATHER RANGER DISTRICT

Original

STATISTICAL ANALYSIS - SMALL SAMPLE

2430

Trail Creek #3 Unit

E Type

x = Board feet or basal area per sampling point. From R2-2400-60.
n = Number of sample points taken. _____

x	x^2	x	x^2	x	x^2	x	x^2	x	x^2
100	10,000								
130	16,900								
160	25,600								
220	48,400								
210	44,100								
Column Sub-Totals									
820	145,000								

Σx = 820 Σx^2 = 145,000 n = 5

(1) Mean = $\bar{x} = \frac{\Sigma x}{n}$ = 164 MBF(BA)

(2) Standard Deviation = S.D.

$$= \sqrt{\frac{\Sigma x^2 - \frac{(\Sigma x)^2}{n}}{n-1}} = \frac{145{,}000 - 134{,}480}{4} \quad \sqrt{2630}$$

± 51.3 MBF(BA)

(3) Coefficient of Variation = C.V.

$$= \frac{SD\ (100)}{\bar{x}} =$$ 31.3 %

(4) Number of sampling points needed = N.

$$= \frac{(C.V.)^2}{(\text{Maximum Sampling Error})^2} = \frac{(\ )^2}{(5)^2} = \frac{979.7}{25} =$$ 10 Plots

5% = 39

(5) Standard Error of the Mean = S.E.

$$= \frac{S.D.}{\sqrt{n}} = \frac{51.3}{2.236}$$ ± 22.9 MBF(BA)

(6) Sampling Error = E.

$$= \frac{S.E.\ (100)}{\bar{x}} = \frac{22.9 \times 100}{164} =$$ 14 %

Reference FSM 2431.23 RF-2400-13 (4/70)

PROGRAM RMCRUZ 10:49:55 07-10-1992

STAND: AREA F - TRAIL CREEK SALE #3
PER ACRE STAND SUMMARY
ALL SPECIES

	DBH	HEIGHT CLASS 20	30	40	50	60	70	80	90	100	110	120	TOTAL
STEMS	6	0	47	54	5	0	0	0	0	0	0	0	107
CUVOL	6	0	102	177	31	0	0	0	0	0	0	0	310
SCRIB	6	0	304	681	125	0	0	0	0	0	0	0	1110
STEMS	8	0	11	33	29	0	0	0	0	0	0	0	73
CUVOL	8	0	54	220	262	0	0	0	0	0	0	0	535
SCRIB	8	0	215	832	1083	0	0	0	0	0	0	0	2130
STEMS	10	0	3	15	24	9	0	0	0	0	0	0	51
CUVOL	10	0	19	159	340	166	0	0	0	0	0	0	685
SCRIB	10	0	79	664	1430	701	0	0	0	0	0	0	2874
STEMS	12	0	0	0	7	5	0	0	0	0	0	0	12
CUVOL	12	0	0	0	132	121	0	0	0	0	0	0	253
SCRIB	12	0	0	0	557	536	0	0	0	0	0	0	1093
STEMS	14	0	0	0	0	1	0	0	0	0	0	0	1
CUVOL	14	0	0	0	0	39	0	0	0	0	0	0	39
SCRIB	14	0	0	0	0	182	0	0	0	0	0	0	182
TOTAL													
STEMS		0	61	102	66	15	0	0	0	0	0	0	244
CUVOL		0	175	556	765	326	0	0	0	0	0	0	1822
SCRIB		0	597	2177	3196	1418	0	0	0	0	0	0	7388

1822 = 22.78

~~80 ft³/Cord~~

~~x 2.7 A.~~

STAND: AREA F - TRAIL CREEK SALE #3
PER ACRE SUMMARY

STEMS	BA	DBH	HT	AGE
244	93	8.3	44	100

CRUISE SUMMARY
BAF USED = 10 PTS SMPLD = 7 AVG. # TREES/PT. = 9.3

= 61.5 cords

1822 ÷ 85 = 21.4

85 ft³/Cord = 21.44

x 2.7 = 59 cords

x 2.7 A

57.78

x .9

90 ft³/cord = 20.2 cords/Acre

x 2.7 A

= 54.5 cords

TRAVERSE COMPUTATION AND ADJUSTMENT (COMPASS RULE)

FOR: TRAIL CREEK #3

COURSE	DEGREE (AZIMUTH)	LENGTH (CHAINS)	BALANCED LAT	BALANCED DEP	COORDINATE NORTH	COORDINATE EAST
1- 2	196.00	2.00	-1.731	-0.409	0.000	0.000
2- 3	188.00	2.00	-1.789	-0.136	-1.731	-0.409
3- 4	103.00	1.25	-0.162	1.307	-3.520	-0.546
4- 5	76.00	2.00	0.675	2.083	-3.682	0.761
5- 6	72.00	0.90	0.364	0.920	-3.006	2.844
6- 7	148.00	0.70	-0.527	0.421	-2.642	3.764
7- 8	234.00	0.60	-0.295	-0.443	-3.169	4.184
8- 9	312.00	0.70	0.535	-0.470	-3.464	3.741
9- 10	232.00	1.70	-0.884	-1.219	-2.929	3.271
10- 11	291.00	0.90	0.409	-0.776	-3.813	2.052
11- 12	252.00	1.20	-0.256	-1.056	-3.404	1.276
12- 13	185.00	1.20	-1.081	-0.019	-3.660	0.220
13- 14	116.00	2.40	-0.822	2.328	-4.741	0.200
14- 15	89.00	0.70	0.079	0.750	-5.563	2.528
15- 16	104.00	2.00	-0.292	2.083	-5.484	3.277
16- 17	86.00	2.60	0.430	2.778	-5.776	5.360
17- 18	318.00	1.80	1.510	-1.077	-5.346	8.138
18- 19	300.00	0.80	0.477	-0.636	-3.836	7.062
19- 20	234.00	1.60	-0.787	-1.181	-3.359	6.426
20- 21	7.00	1.60	1.741	0.309	-4.147	5.245
21- 22	276.00	2.00	0.400	-1.847	-2.405	5.553
22- 23	315.00	1.70	1.365	-1.081	-2.005	3.706
23- 24	268.00	1.20	0.073	-1.114	-0.640	2.625
24- 1	284.00	1.68	0.567	-1.511	-0.567	1.511
		35.23	-3.372	-2.501		

CLOSURE = 4.198 CHAINS

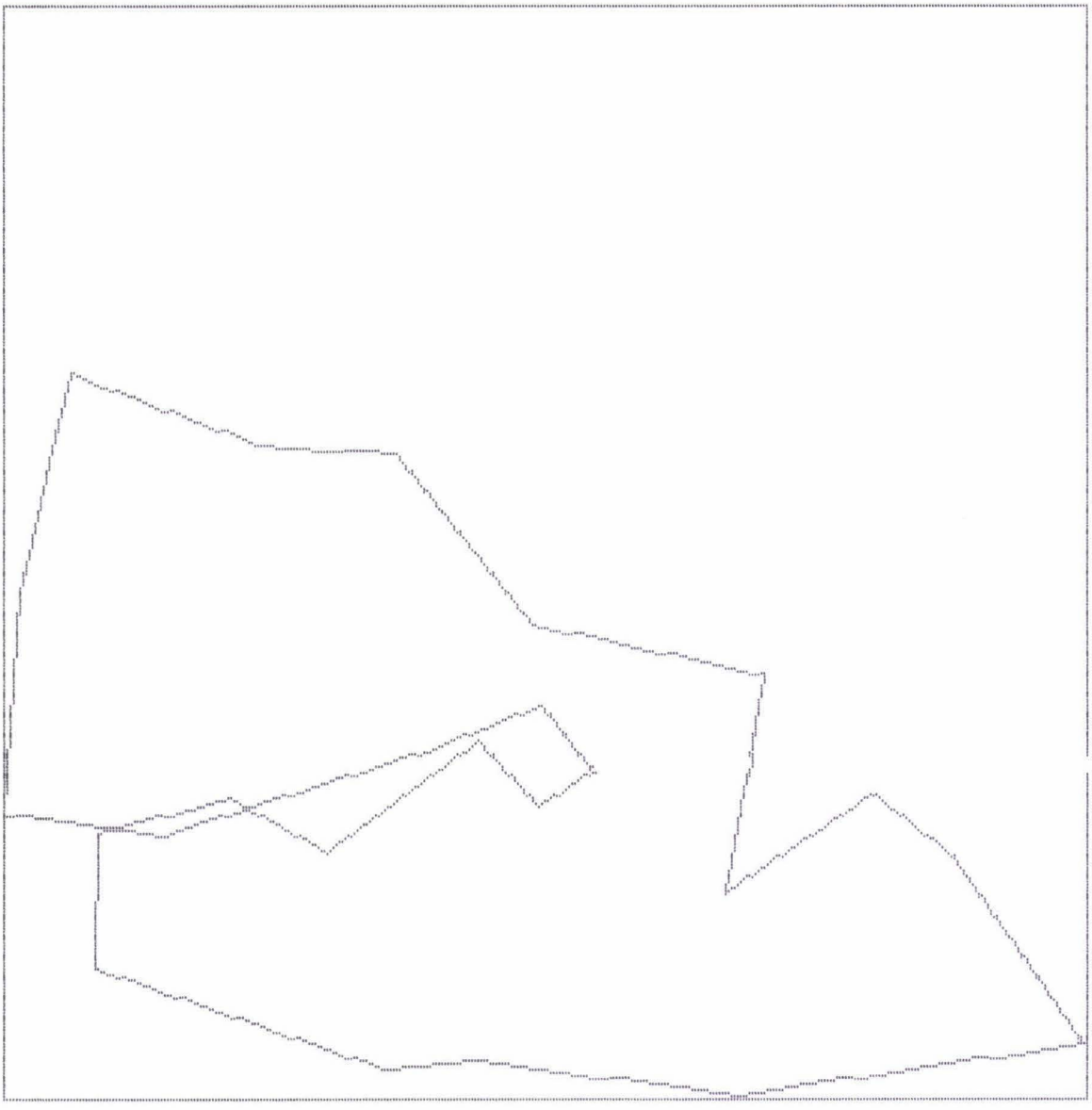
PRECISION = 1 IN 8 (11.9%)

CORRECTED AREA = 2.713 ACRES
27.134 SQUARE CHAINS

UNCORRECTED AREA = 1.002 ACRES
10.024 SQUARE CHAINS

CORRECTED MAP OUTPUT FOR: TRAIL CREEK #3

North



MAP SCALE: 1 = 1289
1 INCH = 1.63 CHAINS
107.40 FEET

Trail Creek
Area F
6/11/92

		Bearing	Dist in Chains
start	1	196°	2
	2	188°	2 chains
	3	103°	1.25 chains
	4	76°	2 chains
	5	22°	.9 chains
	6	148°	.7 chains
	7	234°	.6 chains
	8	312°	.7 chains
	9	232°	1.7 chains
	10	291°	.9 chains
	11	252°	1.2 chains
	12	185°	1.2 chains
	13	116°	2.4 chains
	14	89°	.7 chains
	15	164°	2.[illegible] chains
	16	86°	2.[illegible] chains
	17	58°	1.45 chains
	18	16°	2.5 chains
	19	318°	1.8 chains
	20	300°	.8 chains
	21	234°	1.6 chains
	22	7°	1.6 chains
	23	276°	2.[illegible] chains
	24	315°	1.7 chains
	25	268°	1.2 chains
	26	284°	1.68 chains

Area GF Stand LP Plot 1

BAF 10 BA 70

Species	DBH	Ht.	DMR	Remarks
LP	6"	~~40~~		
	6"	~~40~~		
	7 ~~9~~"	40		
	6	40		
	7	40		
	6	40		
	9	40		

Area GF Stand ____ Plot 2

BAF 10 BA 50

Species	DBH	Ht.	DMR	Remarks
LP	8	50 (47)		
↓	11	50		Fork Thru
↓	8	50		Fork Top
D-f	6	30		
LP	9	50		

Area GF Stand LP Plot 3

BAF 10 BA 90

Species	DBH	Ht.	DMR	Remarks
LP	11	50		
	11	60		
	12	60		
	9	40		
	11	60		
	11	50		
	12	50		
	6	30		Dead top
	12	50		

Area ~~OF~~ Stand LP Plot 4

BAF 10 BA 120

Species	DBH	Ht.	DMR	Remarks
LP	11	60 (64)		
↓	13	60		Twin top
	9	50		
	6	30		
↓	13	60		
ES	9	40		
LP	11	50		
↓	12	60		
	10	60		
	8	50		
	11	50		Dead top
↓	10	50		

Area ~~GF~~ Stand _____ Plot 5

BAF 10 BA 120

Species	DBH	Ht.	DMR	Remarks
LP	8	50 (53)		
↓	10	50		
	7	50		
	8	50 50		
	9	50		
	10	50		
	9	50		
	8	40		
	10	40		
ES	12	50		
LP	10	50		
↓	15	60		

Area GF Stand LP Plot 6

BAF 10 BA 120

Species	DBH	Ht.	DMR	Remarks
LP	6	40 (44)		
	8	40		
	6	40		
	6	30		
	9	30		
	7	30		
	8	30		Twin top
	6	30		
	7	30		
	8	40		
	10	30		
	10	40		

Area GF Stand ____ Plot 7

BAF 10 BA 90

Species	DBH	Ht.	DMR	Remarks
LP	10	40 (45)		
	8	30		Gall Rust
	10	40		
	10	40		
	11	40		
	10	50		
	8	40		
	9	40		
	—	—		
PP	9	40		Twin top

Ray's Copy

ROOSEVELT NATIONAL FOREST
REDFEATHER RANGER DISTRICT

Original

STATISTICAL ANALYSIS - SMALL SAMPLE

Trail Creek #3 — Unit
F — Type

x = Board feet or basal area per sampling point. From R2-2400-60.
n = Number of sample points taken. _____

x	x^2	x	x^2	x	x^2	x	x^2	x	x^2
70	4900								
50	2500								
90	8100								
120	14400								
120	14400								
120	14400								
90	8100								
Column Sub-Totals									
660	66,800								

Σx = 660 Σx^2 = 66,800 n = 7

(1) Mean = $\bar{x} = \frac{\Sigma x}{n}$ = $\frac{660}{7}$ = 94.3 MBF (BA)

(2) Standard Deviation = S.D.

$= \sqrt{\frac{\Sigma x^2 - \frac{(\Sigma x)^2}{n}}{n-1}}$ = $\sqrt{\frac{66,800 - 62,229}{6}}$ = ± 27.6 ~~761.8~~ MBF(BA)

(3) Coefficient of Variation = C.V.

$= \frac{SD\ (100)}{\bar{x}}$ = $\frac{27.6 \times 100}{94.3}$ = 29.3 %

(4) Number of sampling points needed = N.

$= \frac{(C.V.)^2}{(\text{Maximum Sampling Error})^2}$ = $\frac{(\quad)^2}{(5)^2}$ = $\frac{858.5}{25}$ = 9 Plots

(5) Standard Error of the Mean = S.E.

$= \frac{S.D.}{\sqrt{n}}$ = $\frac{29.3}{2.646}$ = ± 11.1 MBF(BA)

(6) Sampling Error = E.

$= \frac{S.E.\ (100)}{\bar{x}}$ = $\frac{11.07}{94.3}$ = 11.7 %

Reference FSM 2431.23 RF-2400-13 (4/70)