Cass Lake District

MINING
TRANSIT BOOK

CASS LAKE
Recreation Sign
Site Plan Topo

CCC 73

#2

TABLES FOR EXCAVATIONS AND EMBANKMENTS.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 18 FEET WIDE. SIDE SLOPES 1 TO 1.
FOR SINGLE TRACK EXCAVATION.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	0
1	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	1
2	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	2
3	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	3
4	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	4
5	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	5
6	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	6
7	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	7
8	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	8
9	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	9
10	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	10
11	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	11
12	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	12
13	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	13
14	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	14
15	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	15
16	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	16
17	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	17
18	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	18
19	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	19
20	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	20
21	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	21
22	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	22
23	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	23
24	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	24
25	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	25
26	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	26
27	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	27
28	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	28
29	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	29
30	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	30
31	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.0	31
32	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	32
33	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	33
34	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	34
35	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	35
36	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	36

RECEIVED
MARIETTA DISTRICT
OHIO PURCHASE UNIT
Date OCT 30 1935
Ans'd

OJibWAY ENTRANCE Sign

PAGE 18-27

SOUTH PIKE BAY
ENTRANCE SIGN
PAGE 30-35

WINNIE CAMPGROUND
ENTRANCE Sign
PAGE 41-45

Sta	+ BS	HI	− FS.	Elev	Dist.
BM	0.12	100.12			
TP_1	1.58	89.65	12.05	88.07	
TP_2	6.86	87.37	7.14	80.51	
			Pond drain 4.96	82.41	0
			Center line 6.57	80.80	61.22
Stake above creek		End of tube break above creek bed	8.83	78.54	75.65
			11.12	76.25	178.33
TP_3	6.14	82.39			39.0
			15.15	67.24	
			7.83	74.56	city street
From stake TP_3 West property line			1.0	81.39	68.81
From TP_3 E on property line			2.28	80.11	67.1
Center line of road W of TP_3					34.71
Elev. of parking area			3.03	79.36	
TP_4	11.67	91.74	2.32	80.07	W 23.72
TP_5	12.20	103.06	0.88	90.86	E 23.82
			0.80	102.26	42.23
			1.70	101.36	39.94
Coming up west side.					
			11.82	91.24	41.61
			0.42	102.64	47.71

87.37
5.91
81.46
.66
80.80

87.37
8.83
78.54
87.37
5.34
82.03
.66
81.37

87.37
11.12
76.25
87.37
7.21
81.66
.66
81.00

87.37
4.38
82.99
.66
83.33

87.37
4.30
83.07
.66
82.41

4.30
.66
4.96

7.71
4.38
3.33

5.1
20.4
73.13
10.80
62.3

4.1
2.1
8.8
3
10.8 75

10.73
4.42
15.15

47.54
23.72
23.82

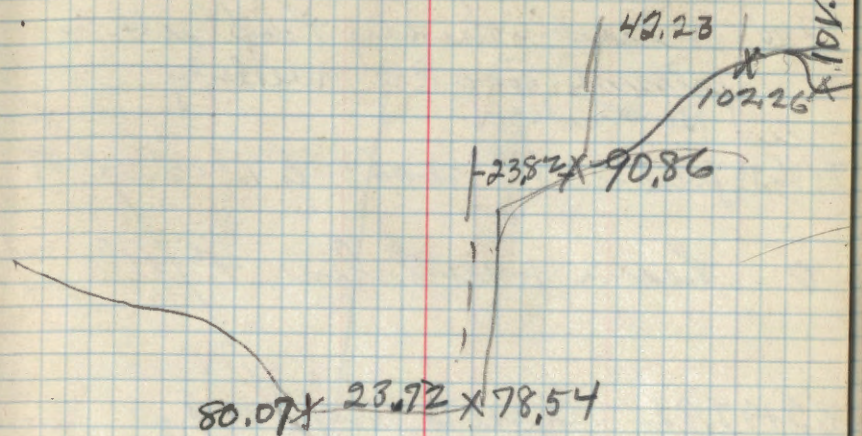
105
81
24

48
12
60

River Elev
81.37

	Elev.	Dist
Elev. Pond Drain	82.41	61.22
Dam Centerline	80.80	75.65
End of tube	78.54	
	76.25	

232



Check dist from end of tube to ~~Elev~~
Check depth of stream below grade line
Check width of city street

Lakehead Pipe Line R/W

8+00 crossed Pike Bay Loop road + follows S00 RR westerly
No timber

7+36.92 just east of road. Δ 6° 13' 24" PI

0 Lease point Line 40/51"

52+97.92 close to highway.
Start of temporary roadway west to Can Lake. Opposite highway cut on N side of road. Timbered area & pipeline & but could not be touched. Access point here from highway. From here 10 bury at soiled not in ditch.

58+00 End of timbered knoll

78+00 start of timbered area.

104+00 access to old US 2 opposite Vaughlehoff

6134 13°, 09' LP 7+36.92

129+00 Old bridge rds on US 2
across channel. End of
Nat. For.

1,46 ~~to~~ Rd intersec

1,98 to N.B road.

27° Camp W road
346. Sluty driveway

100R 489' to NB Rd.
353 to power line
Power line here 140

292' to edge of swamp
400R 76' across swamp
671' to NB Rd.

Sta 6 R
220 to Wanaki Rd.
308 to swamp edge
404 to far swamp edge

Sta 8 R
208' to Wanaki Road
268' to swamp edge
275 + 6' W to power pole
375' to far edge of swamp

739' to E NB Rd

~~Sta 4~~
672' Sta 10 to ℄ NB Rd
608' Sta 12 to ℄ NB Rd
line Sta 13R is E of Swamp
548' Sta 14R to ℄ NB Rd

181' Sta 10R to Wanaki Rd
263' " to edge of swamp
396' " to far edge of swamp
950' + 7' W to privy 4'x10'
7m N from Privy to wash hous.

66' from pole by old west hall
S by to pole along side Wanaki Rd
2' E of g-line

Rd into swamp from E by corner
of old field opening

S 115'
~~165'~~ Sta 12R to E Wanaki Rd
264 Sta 12R to edge of swamp
365' " & far edge of swamp
608' " to E.N.B.R.R.

End of swamp 40" E of
Sta 12R Cape

Sta 14 on corner of old
building lot 25 x 75'
Mounded up. 11 to lake

118' Sta 14R to Wanaki Rd

3/26
RB for.

Azimuth Dist
91

Sta	Sta	Azimuth	Dist	
1	2	91	205	Sta 1 SW Corner
2	3	347	49 (11.5)	Sta 2. Rd Intx.
3	4	262	72 (13.7)	
4	1	358	118 (9.0)	

Sta 0 at ¼ cor to lake shore

Sta 9 is in old road shown on Ober plat

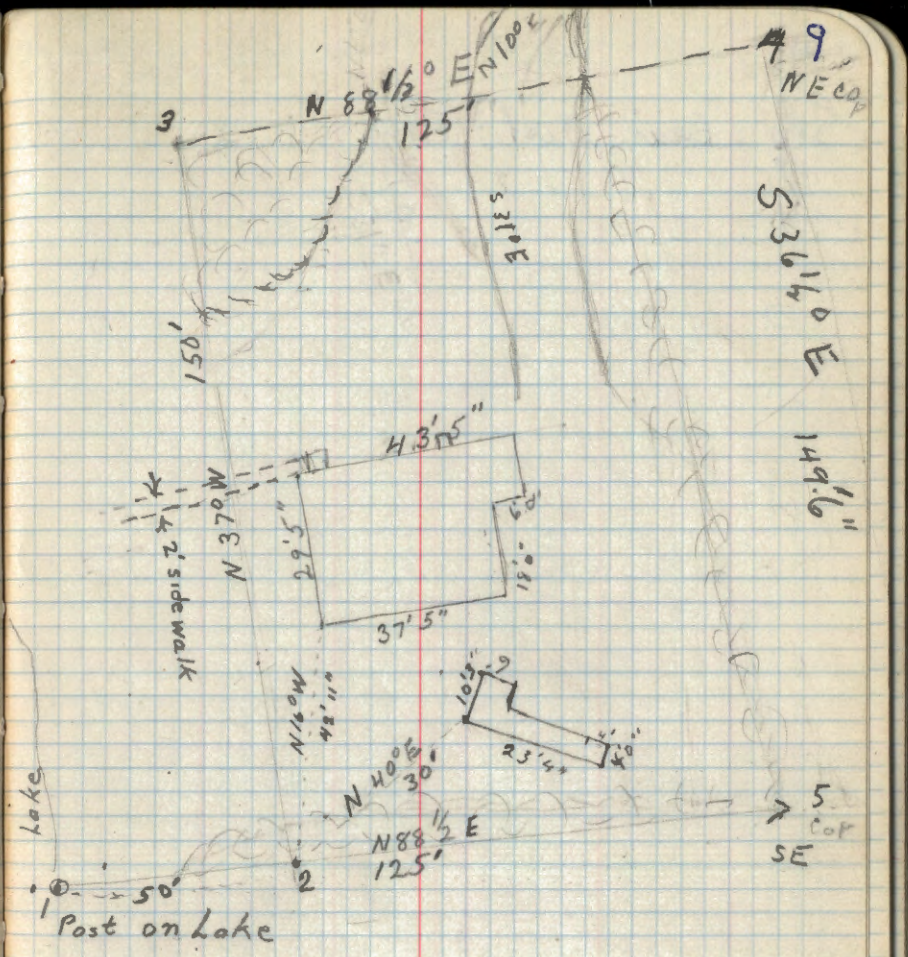
along ¼ line 70'10"

5/6
8
6/56
48

Thompson Cabin

STA.	Bearing	DIST		Remarks
1	N88½°E	50'	To Lot Cor	STA 1 Post on Lake
SW Cor 2 To Main Building	SW Cor	N16°W	42' 11"	
2. To SW cor Bunk House		N40°E	30'	
2-3 To NW (3) Lot cor		N37°W	150'	
2 To SE (3) Cor		N88½°E	125'	#5
Main Buiding		29'5" X 37'5" X 18 X 6' N37°W		
Bunk House		10'3 X 23'4" X 4.0' X 15' N20½°E		
3 - 4	N88½E	125'		
3 -	"	toward 41'		
3 -	"	to Road 60'		
3 -	"	to Bank 86'		
4 - 5	S36½°E	149.6"	SE Cor	#5
5	N88½E	128'	to E Shoulder of Road	
		Road 36' from sh - sh		
	S 17½E	352'	To Post	
	S 89°55"E	15.98 ch	TO 1/4 Cor	

Copied



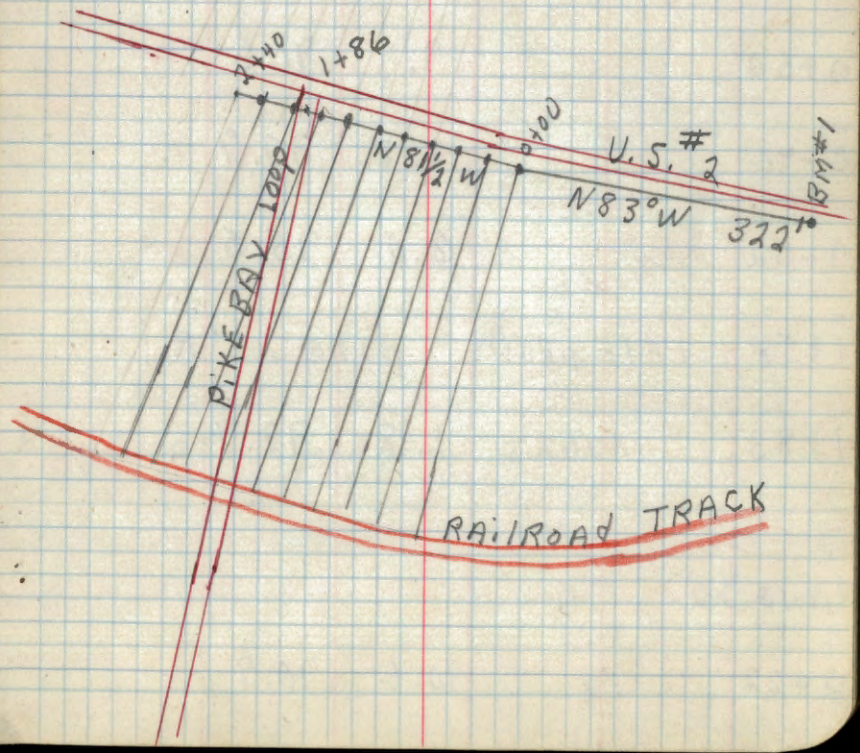
Sta	Bear.	Dist	Sta.
1			2 cor.
2			3

PAGES 11-19
ARE EMPTY

STA	BS	HI	FS	ELEV
BM #1				100.00
	N 83° W 322' TO 0+00 BASE LINE			
0+00	BASE LINE N 81½° W PARREIS #2	101.5		
BM #1	1.49	101.49		100.00
0+00	LINE	#1	4.7	96.8
0+25		#2	4.7	96.8
0+50		#3	5.0	96.5
0+75		#4	5.2	96.3
1+00		#5	5.4	96.1
1+25		#6	5.6	95.9
1+50		#7	6.0	95.5
1+75		#8	6.2	95.3
2+00		#9	6.5	95.0

24" R. PINE. SOUTH SIDE OF U.S. #2.

PIKE BAY LOOP ROAD RUNS
℄ S12° W FROM STA 1+86



STA	BS	HI 101.5 101.49	FS	ELEV	L	R
2+25		#10	7.2	94.3		
2+40		#11	7.2	94.3		
LINES RUN S 8½° W						
LINE #1						
0+20			10.2	91.3		
0+50			9.9	91.6		
0+90			8.8	92.7		
1+02			6.0	95.5		
1+58	TELEPHONE POLE 8' R					
1+83			1.8	99.7	EDGE OF RAILROAD TRACK	
LINE #2						
0+22			10.6	90.9		

STA	BS	Hi	FS	ELEV	L	R
		101.49				
0+88		101.5	8.8	92.7		
1+08			4.9	96.6		
1+24			4.3	97.2		
1+86			1.7	99.8	EdgE OF RAiIRoAd TRACK	
LiNE #3						
0+22			10.5	91.0		
0+70			9.7	91.8		
0+90			9.0	92.5		
1+10			5.2	96.3		ClumB OF W. BiRcH 6'R OF STA 1+10
1+44			3.7	97.8		
1+78	INTER SECT			pipE LiNE		
1+85			1.8	99.7	EdgE OF RR. TRACK	

STA	BS	Hi	FS	ELEV
		101.49		
LINE #4		101.5		
0+24			10.9	90.6
0+38			11.5	90.0
0+44	POWER		POLE	13' L
0+92			9.1	92.4
1+14			6.0	95.5
1+42	POWER	POLE	7' R	
1+58	INTER	SECTS	PIPE	LINE
1+87			2.0	99.5
LINE #5				
0+24			10.8	90.7
0+42			11.5	90.0
0+86			9.3	92.2

STA	BS	HI	FS	ELEV	
		101.49			
1+24		101.5	5.3	96.2	
1+94			2.1	99.4	EDGE OF RAILROAD TRACK
TP			2.43	99.06	
	3.70	102.76			
		102.8			
LINE #6					
0+26			13.0	89.8	
0+50			13.1	89.7	
0+74			11.4	91.4	
1+10			7.2	95.6	
1+54	6' R TO TELEPHONE POLE				
1+90			3.5	99.3	EDGE OF R.R. TRACKS

STA	BS	HI	FS	ELEV	L	R
LINE #7		102.76				
		102.8		95.5		
0+08			7.3	Edge of Road		
0+30			13.4	89.4		
0+58			12.5	90.3		
0+82			10.9	91.9		
1+00	ENTER SECTS			Pipe Line		
1+12			8.2	94.6		
1+91			3.5	99.3	Edge of RR. TRACK	
LINE #8						
0+25	9' L to			Stop Sign		
0+25			7.9	94.9	8' / 8.6 / 94.2	
0+55			8.0	94.8	2 / 8.3 / 94.5	
0+79			7.2	95.6	6 / 10.1 / 92.7	
1+39			4.0	98.8	11 / 5.6 / 97.2	

STA	BS	HI	FS	EIEV	L	R
		102.76				
1+51		102.8	3.6	99.2	10' / 5.0 / 97.8	—
1+92			2.5	100.3 Edge of RR.	TRACKS	6' / 1.5 / 101.3
LINE #9						
0+36			8.5	94.3		
0+80			7.5	95.3		
0+99	INTER SECTS			pipe line		
1+04			6.4	96.4		2' / 6.2 / 96.6 ; 10' / 8.7 / 94.1
1+40			4.0	98.8		
1+90			1.6	101.2 Edge of RR	TRACK	4' / 4.1 / 98.7 ; 10' / 8.1 / 94.7
T.P.			7.12	95.64		
LINE	4.29	99.93				
		99.9				
LINE #10						
0+08	OJibway RESORT Sign					
0+24			11.6	88.3	HEAVY BRUSH IN DITCH	

STA	BS	Hi	FS	ELEV	
0+44		99.93 99.9	13.7	86.2	
0+68			10.7	89.2	
0+80			9.1	90.8	
1+16			7.1	92.8	
1+83			4.0	95.9	
TP	6.08	101.91	4.10	95.83	
BM#1			1.89	100.02	100.00

L R

9'L TO CULVERT OPENING 12.7

87.2

SOUTH PIKE BAY

ENTRANCE Sign

Route 37/

KERN LEVEL

Rod

STAFF COMPASS

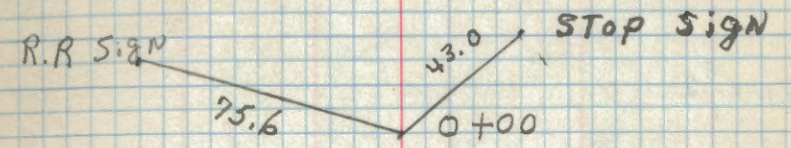
DEC. 6.5°

MARTINSON
BRUNS

8-19-68

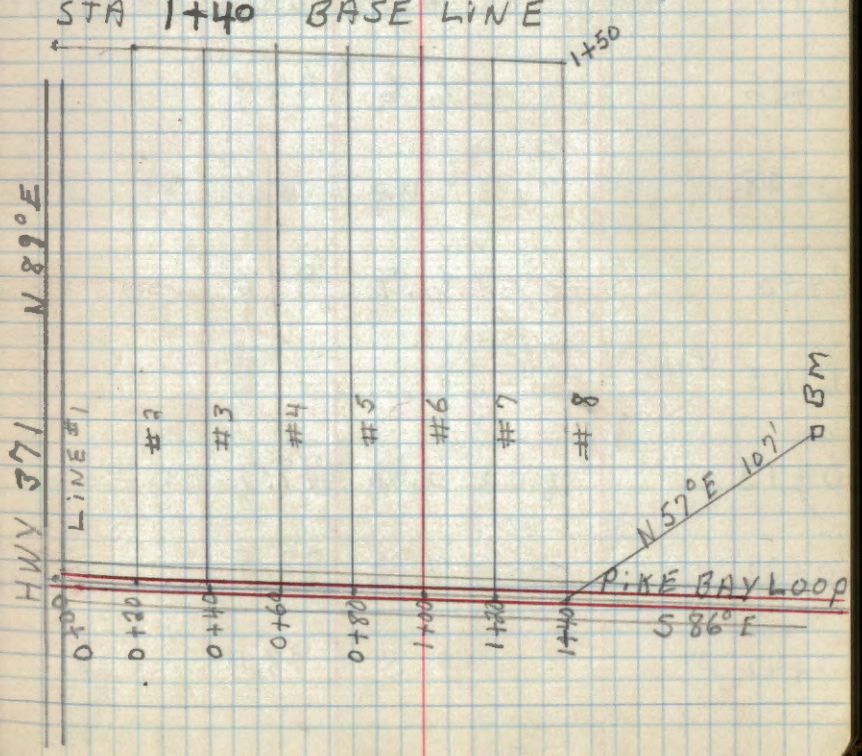
STA	BS	Hi	FS	ELEV
BASE LINE S86°E				
0+00 ℄ HIGHWAY 371 JUNCTION PIKE BAY LOOP				
	BASE LINE - ℄ PIKE BAY LOOP			
		105.7		
BM#1	5.71	105.71		100.00
0+00	LINE	#1	1.7	104.0
0+20		#2	2.3	103.4
0+40		#3	4.3	101.4
0+60		#4	5.6	100.1
0+80		#5	6.5	99.2
1+00		#6	7.2	98.5
1+20		#7	7.5	98.2
1+40		#8	8.0	97.7

NAIL IN ℄ OF HWY.



LOOP

18" OAK N57°E 107' FROM STA 1+40 BASE LINE



STA	BS	HI.	FS	ELEV
LINE #1		105.7		
1+50			1.4	104.3
LINE #2				
1+50			2.0	103.7
LINE #3				
0+17			4.9	100.8
0+26			6.6	99.1
0+28				
1+50			6.7	99.0
LINE #4				
0+13			6.0	99.7
0+21			7.2	98.5
0+40			7.3	98.4

L R

℄ HIGHWAY 371

SHOULDER OF PIKE BAY LOOP

9'L TO STOP SIGN

SHOULDER PIKE BAY LOOP

8'
7.2
98.5

STA	BS	Hi	FS	EIEV
1+50		105.7	7.3	98.4
LINE #5				
0+12			7.0	98.7
0+19			8.9	96.8
0+27			8.5	97.2
0+40			7.3	98.4
1+50			7.5	98.2
LINE #6	POWER	LINE	OVER	HEAD
0+12			7.7	98.0
0+19			9.4	96.3
0+32				
0+39			7.7	98.0
0+45				

L R

10'
7.8
97.9

SHOULDER PIKE BAY LOOP

20" OAK 14' N FROM STA 1+50
LINE #6 FOLLOWS 100' TRUNK HIGHWAY RIGHT AWAY AND TELEPHONE LINE

SHOULDER PIKE BAY LOOP

RIGHT AWAY MARKER

5' R TO FENCE LINE

91' R TO BEMIDJI WOOLEN MILLS SIGN

STA	BS	HI	FS	ELEV	L	R
		105.7				
0+84					7' L TO 20" OAK	
1+50			6.4	99.3		4' R TO FENCE LINE
LINE #7						
0+12			8.2	97.5	SHOULDER PIKE BAY LOOP	
0+17			9.7	96.0		
0+20			8.4	97.3		
0+54			7.3	98.4		
0+93			4.6	101.1		
1+50			4.9	100.8		
LINE #8						
0+12			8.4	97.3		
0+16			9.5	96.2		

STA	BS	Hi 105.7	FS	ELEV	
0+20			8.0	97.7	
0+52			7.7	98.0	
0+64					
0+96			4.0	101.7	
1+50			4.4	101.3	
BM#1			5.71	100.00	100.00

L R

10' R TO 18" OAK

	BS	. HI	FS	ELEV
	LINE #4			
		104.3		
0+80			5.8	98.5
1+00			5.8	98.5
1+20			5.7	98.6
1+00			6.1	98.2
	LINE #5			
		103.3		
0+60			4.2	99.1
0+80			4.4	98.9
1+00			4.7	98.6
1+20			4.5	98.8

L 10'

WINNIE CAMPGROUND

ROADSIDE ENTRANCE SIGN

Blackduck Road FH #3

KERN LEVEL

Rod

STAFF COMPASS

DEC. 6.5°

MARTINSON
BRUNS
8-23-68

STA	BS	HI	FS	ELEV
		108.5		
BM#1	8.47	108.47		100.00

BASE LINE - ℄ OF NEW LOCATION OF THIRD RIVER ROAD

ROAD STATIONING

0+00			4.1	104.4
0+16			5.2	103.3
0+28			8.3	100.2
0+37			8.7	99.8
0+51			6.3	102.2
0+75			7.0	101.5
1+00			7.8	100.7
1+25			9.0	99.5
1+50			10.0	98.5

10" ASPEN S51°W 62' FROM 0+00

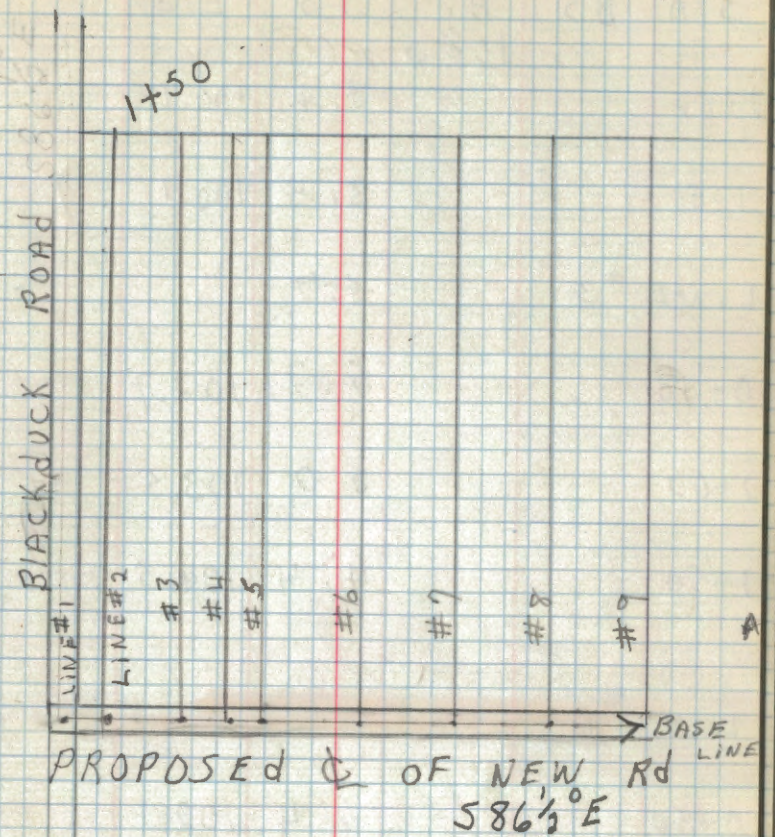
S 86½° E

℄ BLACKDUCK ROAD

EDGE OF SHOULDER

BASE LINE STA 0+50 IS EDGE OF TIMBER. BIG TOOTH ASPEN BOTH N. AND S OF PROPOSED ROAD

STA	BS	Hi	FS	ELEV
LINE #1		108.5		
1+00			4.7	103.8
1+50			4.9	103.6
LINE #2				
0+50			5.1	103.4
1+00			5.3	103.2
1+50			5.8	102.7
LINE #3				
0+50			8.3	100.2
1+00			8.5	100.0
1+50			8.5	100.0
LINE #4				
0+50			8.6	99.9



STA	BS	HI 108.5	FS	ELEV
1+00			8.4	100.1
1+50			8.4	100.1
LINE #5			~~5.7~~	
0+50			5.7	102.7
1+00			5.0	103.5
1+50			4.4	104.3
LINE #6				
0+50			6.4	102.1
1+00			5.7	102.8
1+50			4.8	103.7
LINE #7				
0+50			8.5	100.0

STA	BS	HI 108.5	FS	ELEV
1+00			7.1	101.4
1+50			5.9	102.6
LINE #8				
0+50			8.7	99.8
1+00			8.6	99.9
1+50			7.1	101.4
LINE #9				
0+50			10.1	98.4
0+91			9.4	99.1
1+50			7.4	101.1

KNUTSON DAM

ROADSIDE ENTRANCE

SIGN

TRANSIT — MARTINSON
Rod — FOLSTROM
STAFF COMPASS
50' TAPE — 10-25-68

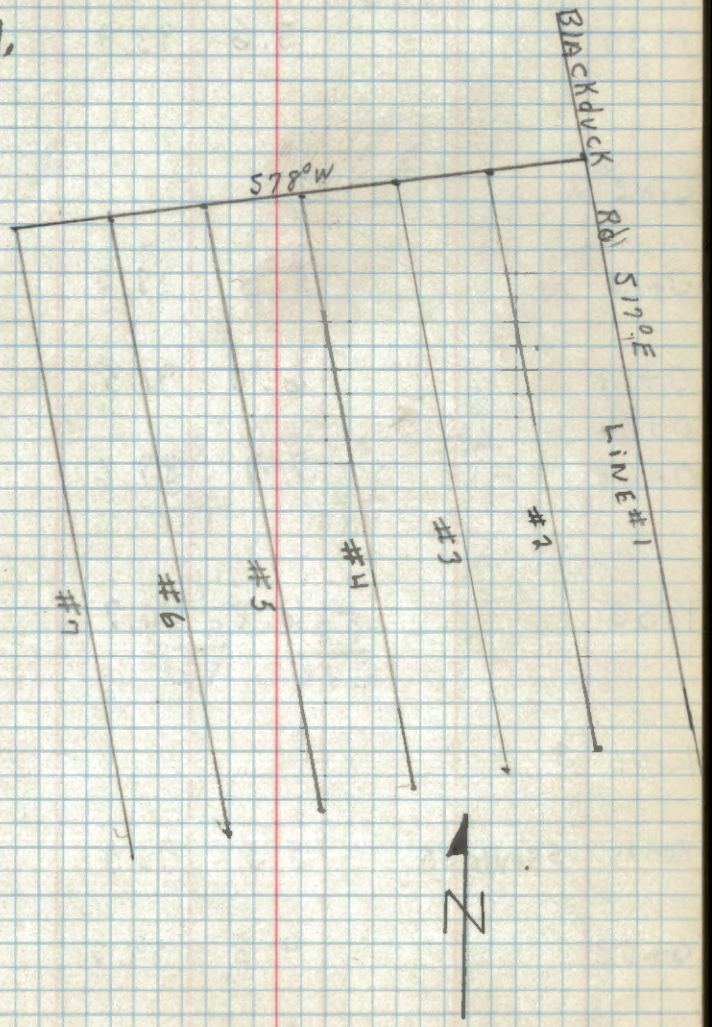
	STA	BS	H.I.	FS	ELEV
BM #1		1.47	101.47		100.00
T.P.				8.53	92.94
		4.61	97.55		

BASE LINE ℄ OF NEW KNUTSON DAM ROAD S78°W FROM ℄ OF BLACKDUCK ROAD

97.5

0+00	LINE #1	5.1	92.4
0+25	LINE #2	5.2	92.3
0+50	LINE #3	4.9	92.6
0+75	LINE #4	4.4	93.1
1+00	LINE #5	3.8	93.7
1+25	LINE #6	2.9	94.6
1+50	LINE #7	2.2	95.3

215' S 30° W FROM INTERSECTION OF BLACKDUCK AND KNUTSON DAM ROAD.



STA	BS	Hi	FS	EIEV
		97.55		
LINE #1				
		97.5		
1+50			3.6	93.9
LINE #2				
0+13			5.3	92.2
0+19			6.0	91.5
0+24				
0+28			7.9	89.6
1+50			6.8	90.7
LINE #3				
0+11	SHOULDER		5.5	92.0
0+23			9.3	88.2
0+31			9.9	87.6

℄ BLACKDUCK ROAD S17°E

L R

19'	13'	13'
5.6	10.1	10.1
91.1	87.4	87.4
9'	7'	
5.8	8.9	
91.7	88.6	

STA	BS	HI	FS	ELEV
		97.55		
1+50		97.5	8.1	89.4
LINE #4				
0+11			4.8	92.7
0+24			7.4	90.1
0+30			8.0	89.5
1+50			7.4	90.1
LINE #5				
0+11			4.2	93.3
0+26			6.5	91.0
1+50			6.8	90.7

STA	BS	HI	FS	EIEV
LINE #6		97.55		
0+12		97.5	3.3	94.2
0+17			4.1	93.4
0+26			2.9	94.6
1+50			4.2	93.3
LINE #7				
0+12			2.4	95.1
0+17			3.4	94.1
T.P.			1.38	96.17
	8.87	105.04		
0+23		105.0	6.0	99.0
1+00			5.7	99.3

L R

7'
5.5
92.0

STA	BS	HI	FS	ELEV	
		105.04			
1+50		105.0	6.8	98.2	
~~HO~~					
			5.08	99.96	100.00
BM#1					