CR 301

Loader Line

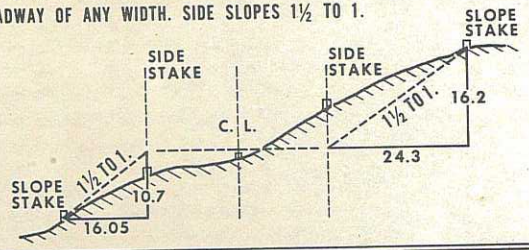
TELEDYNE
FREDERICK POST

FIELD BOOK
No. 99-10-100

POST

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

ROADWAY OF ANY WIDTH. SIDE SLOPES 1½ TO 1.



Cut or Fill	Distance out from Side or Shoulder Stake.										Cut or Fill
	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0 00	0 15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1 65	1 80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3 45	3.60	3 75	3.90	4.05	4.20	4 35	2
3	4.50	4 65	4.80	4.95	5.10	5 25	5 40	5.55	5.70	5.85	3
4	6.00	6 15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7 50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9 00	9 15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10 65	10.80	10.95	11.10	11.25	11.40	11.55	11 70	11.85	7
8	12.00	12 15	12.30	12.45	12.60	12.75	12.90	13 05	13.20	13.35	8
9	13 50	13.65	13 80	13 95	14.10	14.25	14.40	14 55	14.70	14.85	9
10	15.00	15 15	15 30	15 45	15.60	15.75	15.90	16.05	16.20	16 35	10
11	16 50	16 65	16 80	16.95	17 10	17.25	17.40	17.55	17.70	17.85	11
12	18 00	18.15	18.30	18 45	18.60	18 75	18.90	19.05	19.20	19.35	12
13	19 50	19 65	19.80	19.95	20.10	20.25	20 40	20.55	20.70	20.85	13
14	21.00	21 15	21.30	21.45	21 60	21.75	21.90	22 05	22 20	22 35	14
15	22 50	22 65	22 80	22 95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24 15	24 30	24 45	24.60	24.75	24 90	25 05	25.20	25.35	16
17	25.50	25 65	25.80	25 95	26.10	26 25	26 40	26.55	26.70	26.85	17
18	27.00	27 15	27.30	27 45	27.60	27.75	27.90	28.05	28 20	28.35	18
19	28 50	28 65	28 80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30 00	30 15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31 50	31 65	31.80	31.95	32 10	32 25	32.40	32.55	32 70	32 85	21
22	33 00	33 15	33 30	33 45	33.60	33 75	33.90	34.05	34.20	34.35	22
23	34 50	34 65	34.80	34.95	35.10	35 25	35 40	35.55	35.70	35 85	23
24	36.00	36 15	36.30	36 45	36.60	36.75	36.90	37.05	37.20	37.35	24
25	37.50	37.65	37 80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39 00	39 15	39.30	39 45	39 60	39.75	39.90	40.05	40.20	40.35	26
27	40 50	40 65	40 80	40.95	41.10	41.25	41 40	41.55	41.70	41.85	27
28	42 00	42 15	42.30	42.45	42.60	42 75	42.90	43.05	43.20	43.35	28
29	43 50	43 65	43.80	43 95	44.10	44 25	44 40	44.55	44.70	44 85	29
30	45 00	45 15	45.30	45 45	45.60	45.75	45.90	46.05	46 20	46.35	30
31	46.50	46.65	46.80	46 95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48 00	48.15	48.30	48 45	48.60	48 75	48.90	49.05	49 20	49.35	32
33	49.50	49 65	49.80	49.95	50.10	50.25	50.40	50.55	50.70	50.85	33
34	51 00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52 50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54 00	54.15	54.30	54 45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55 50	55 65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57.30	57 45	57.60	57.75	57.90	58.05	58.20	58 35	38
39	58 50	58.65	58 80	58.95	59.10	59 25	59.40	59 55	59.70	59.85	39
40	60 00	60.15	60 30	60 45	60 60	60.75	60 90	61.05	61 20	61.35	40

Property of Cache County Engineer

Address 179 North Main Logan, Utah

Telephone 752-8327

INDEX

124+00

123+50

123+00

122+50

122+00

121+50

121+00

27 Aug 1974

R.E. Sykes

P.B. Ward

G.R Foreman

16.5'

17.0'

19.0'

24.5'

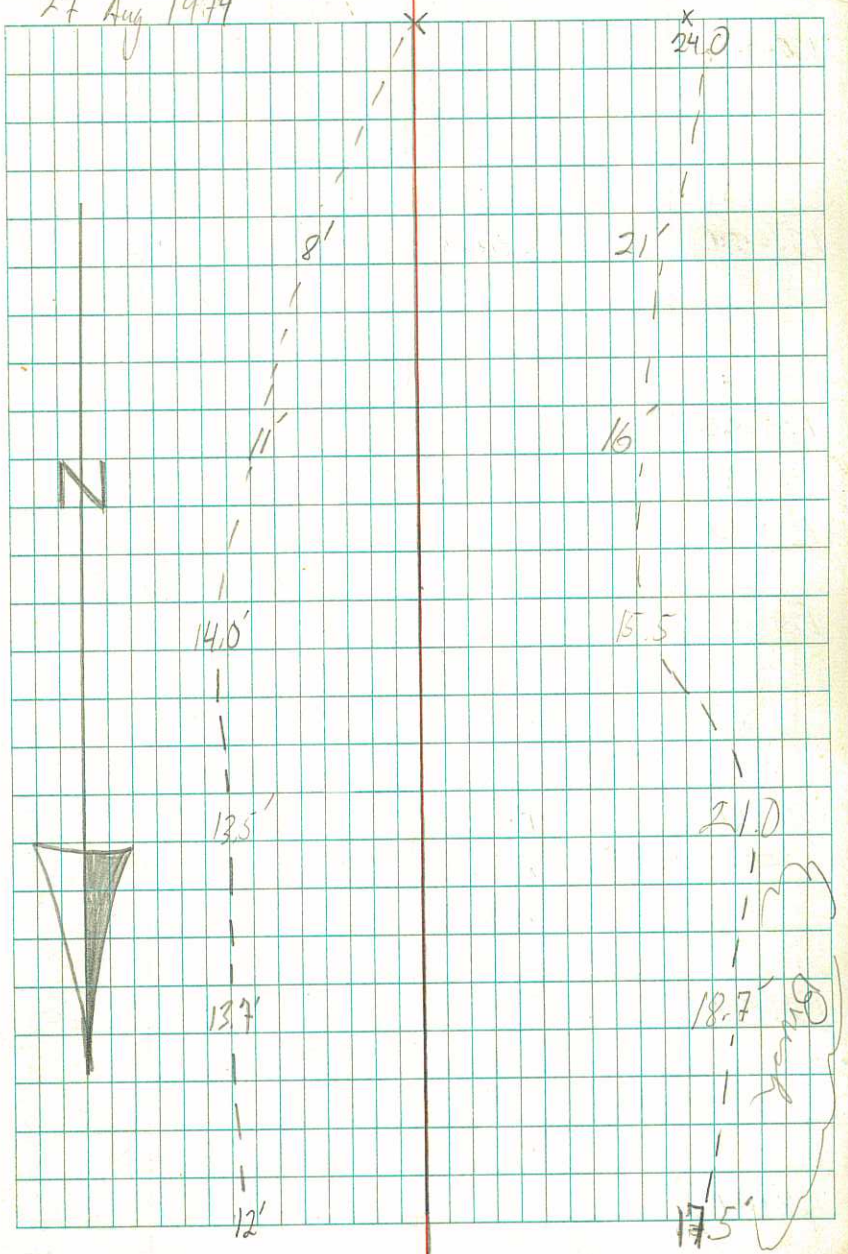
Brush

High Bank

N

		Deflection	Lt	Rt
127+50				2° 32'
		Δ = 20° 54' 40"		
		T = 92.27		
05 92	P.C.	R = 500		
127+00		L = 182.48		
		D = 11° 27' 33"		
~~63 21~~	~~PT~~			
126+50				
~~42 67~~	~~P.C.~~			
+36 21	PT		10° 27'	
		PI - PI 260.64'		
126+00			8° 23'	
		Lt.		
		Δ = 20° 54' 40"		
125+50		T = 92.27	5° 31'	
		R = 500		
		L = 182.48'		
		D = 11° 27' 33"		
125+00			2° 39'	
53 73	P.C.			
124+50				

27 Aug 1974



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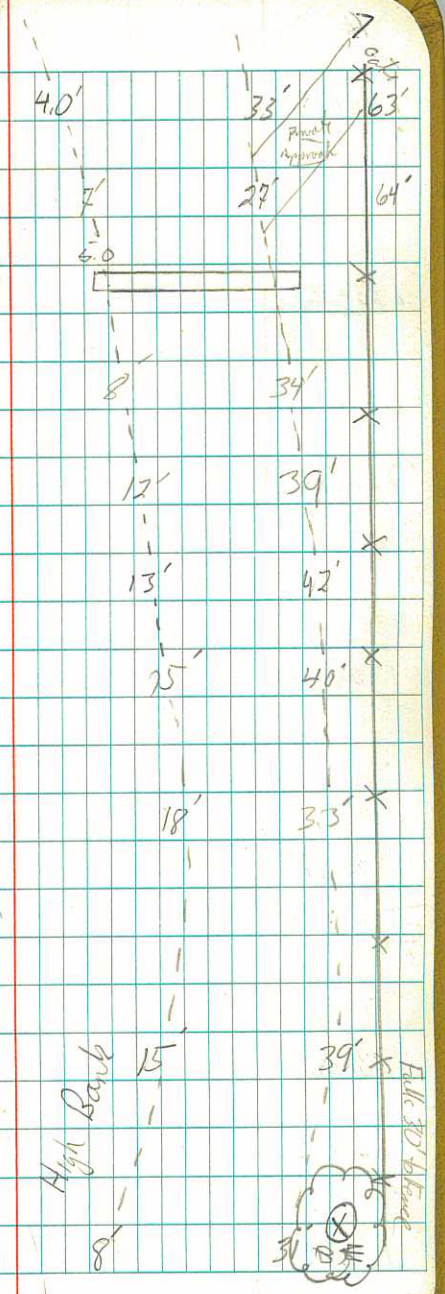
		Deflection	Lt.	Rt.
132+00				
131+50				
131+29	Pipe Culvert -		40.5'	12" Corr
131+00				
130+50				
130+00				
129+50				
		PI → PI	1483.89	
+00 ~~74~~	PT			11° 09'
129+00		Rt.		11° 07'
~~+94 86~~	~~PC~~	Δ 23°19'30"		
		T = 98.66		
		R = 500		
128+50		L = 194.82		8° 15'
		D = 11°27'33"		
~~+25~~ 15	~~PT~~			
128+00				5°23'

27 Aug 1974

Flat (10% Slope)



135+50

135+00

134+50

134+00

133+50

133+00

132+50

+29 Culvert

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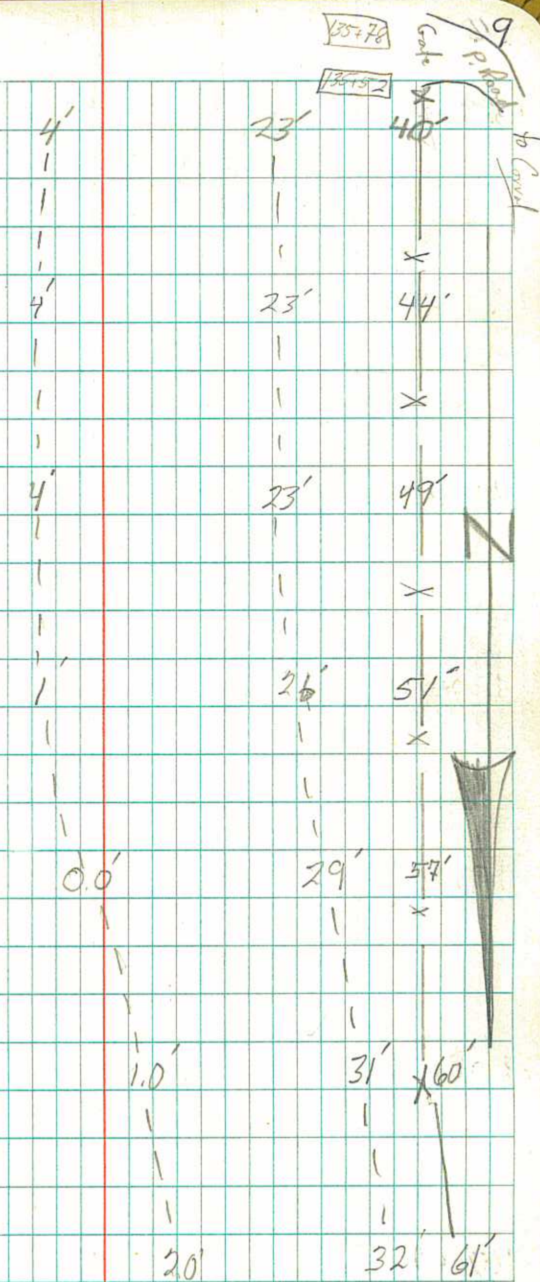

10

139+00					
+50					
138					
+50					
137					
+50					
136+					
+86	Culvert				

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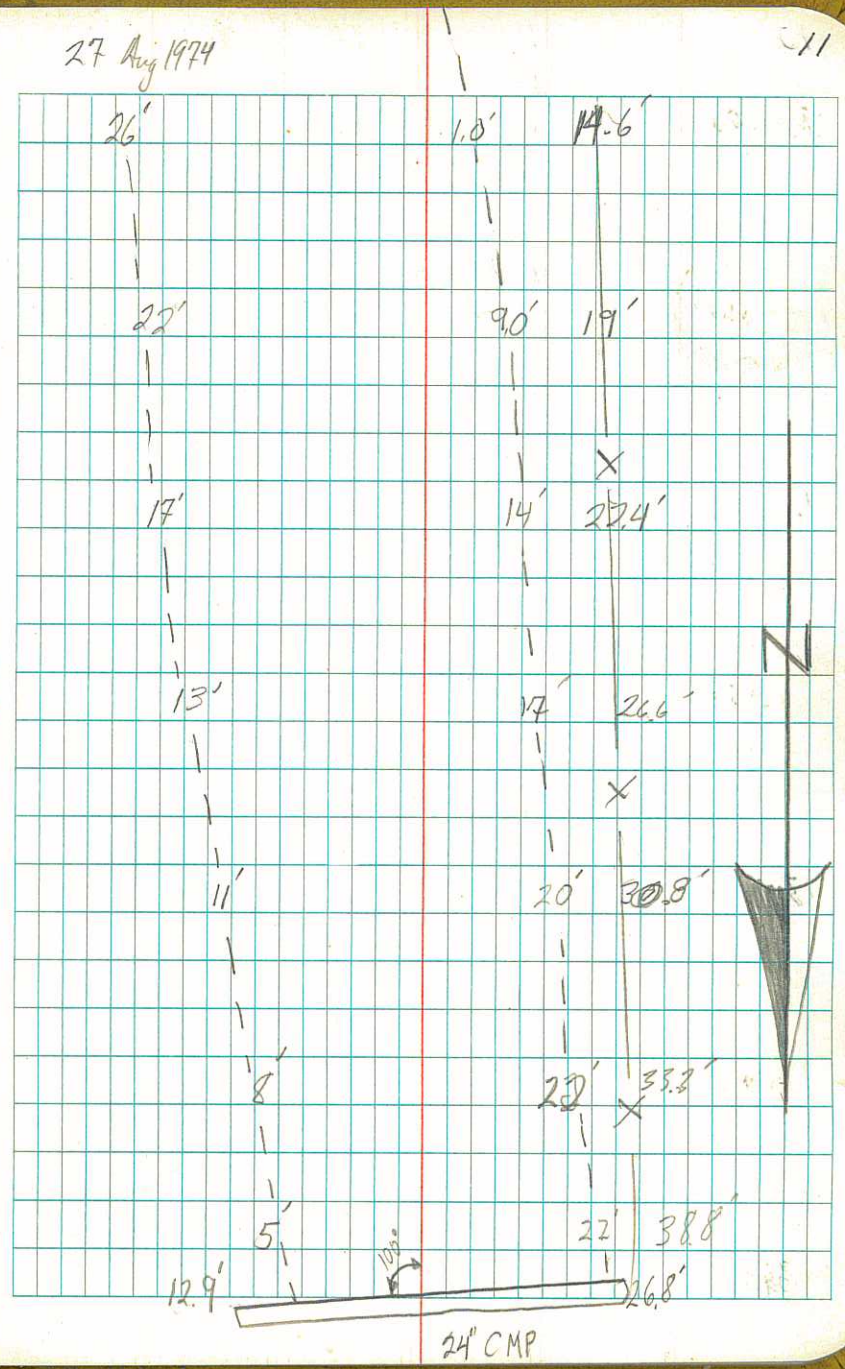
11



		Deflection	Lt	Rt
		Lt		
142+50		Δ 5°12'20"	0°47'	
		T=90.92'		
		R=2000'		
		L=181.71		
142		D=2°51'53"	0°04'	
+95.05	P.C.			
+50				
141+				
+50				
140+				
139+50				

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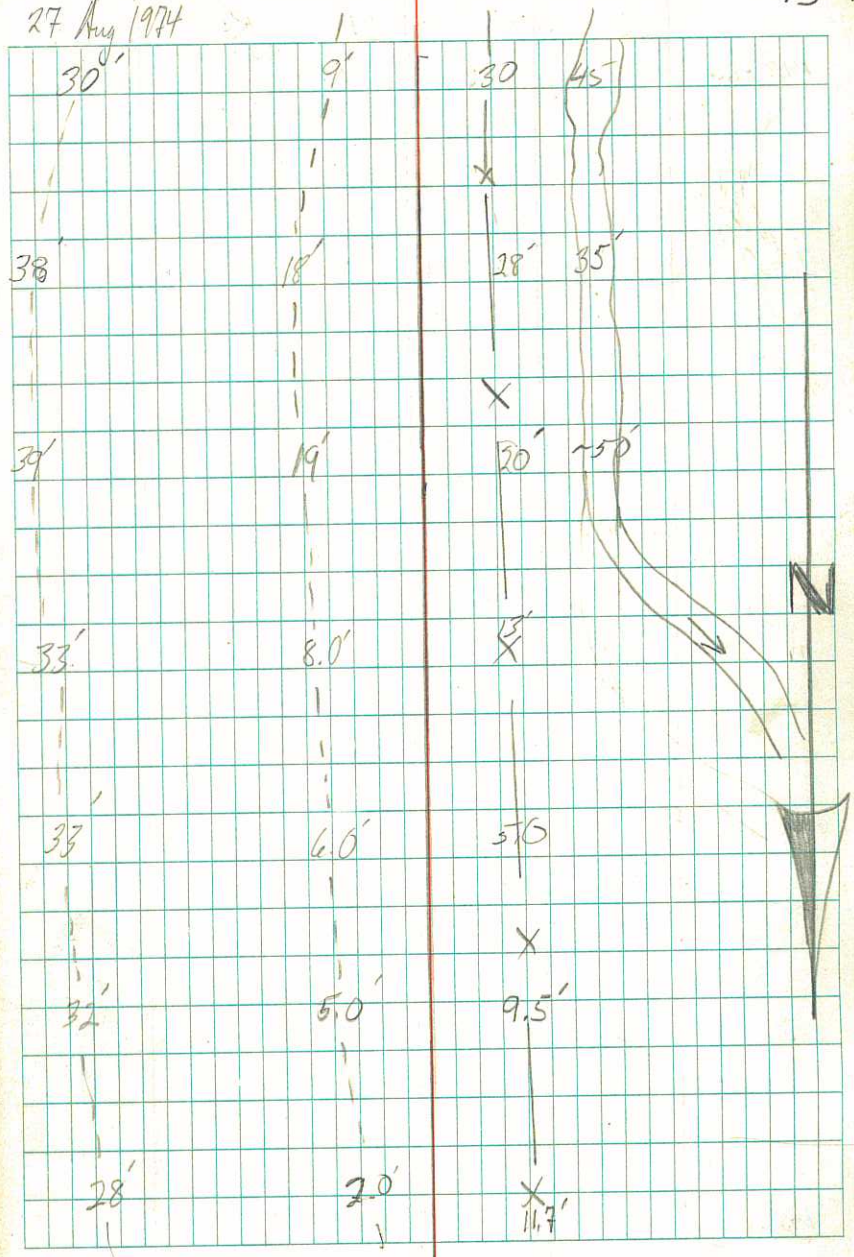

	Deflection		Lt	Rt.
146			1° 48′	
+68 71	PC			
+50				
145				
		PI → PI	375.62′	
+50				
~~+50~~				
144				
+76 76	PT		2° 36′	
+50			2° 13′	
143			1° 30′	

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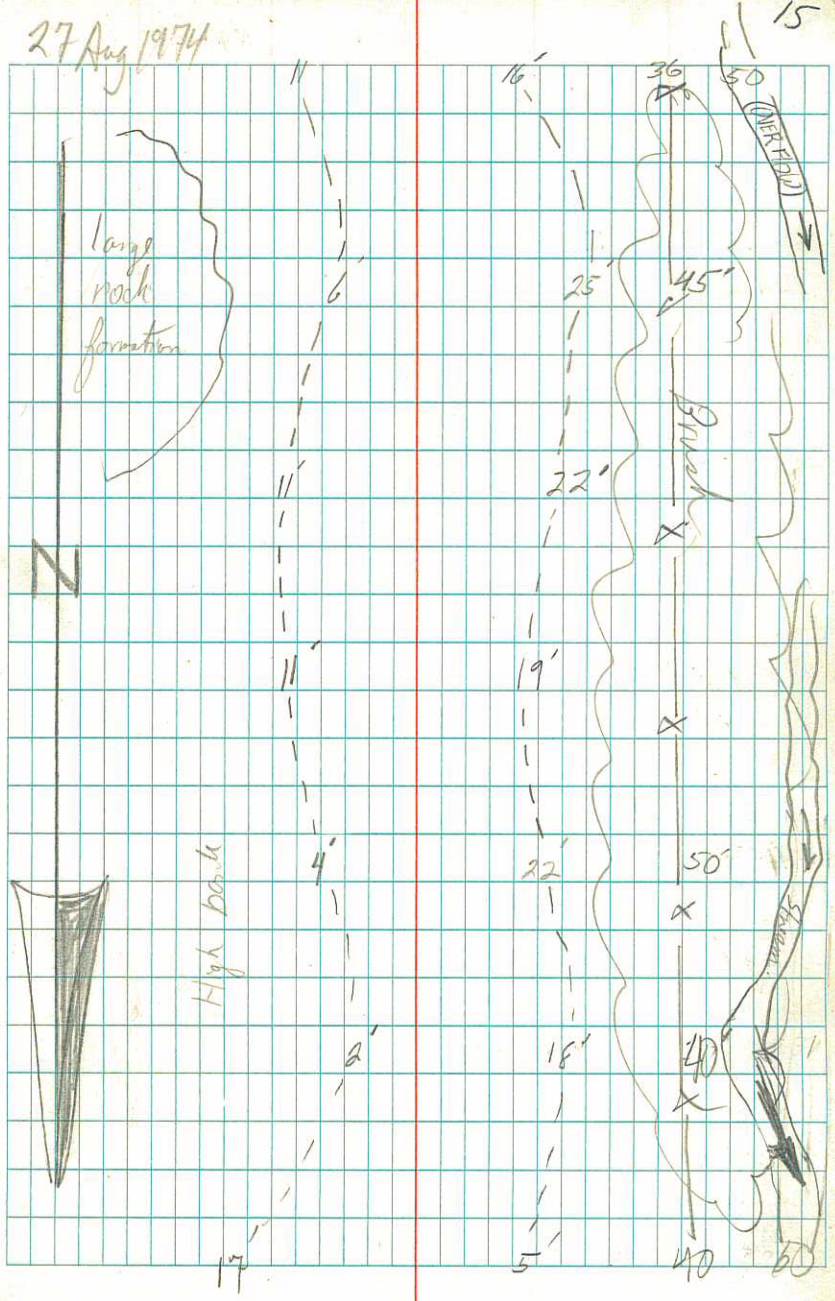

			Deflection	Lt	Rt
14	16				
14					
	+50				
	149				
14	+50				
	148				
			PI → PI.	581.84'	
	+52 13	P.T.		10° 31'	
14	+50			10° 23'	
			Lt		
			Δ = 21°02'05"		
			T = 92.75'		
	147		R = 500'	7° 31'	
			L = 183.42'		
			D = 11°27'33"		
	+50			4° 39'	

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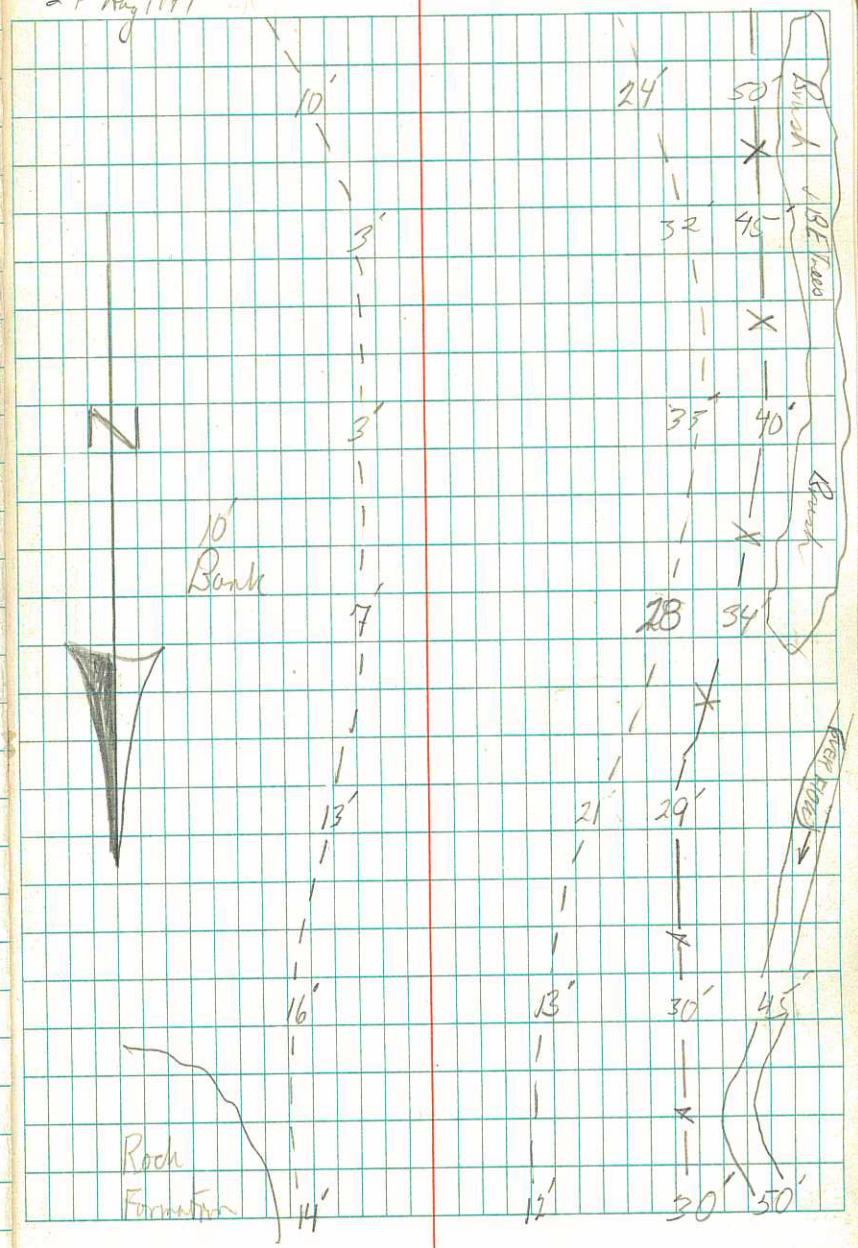

			Deflection	
		Rt	Lt	Rt
153		Δ 27°47'40"		11° 18'
		T = 98.97'		
		R = 400'		
		L = 194.04'		
+50		D = 14°19'26"		7° 43'
152				4° 08'
+50				0° 33'
#42 25	PC			
151				
+50				
150				

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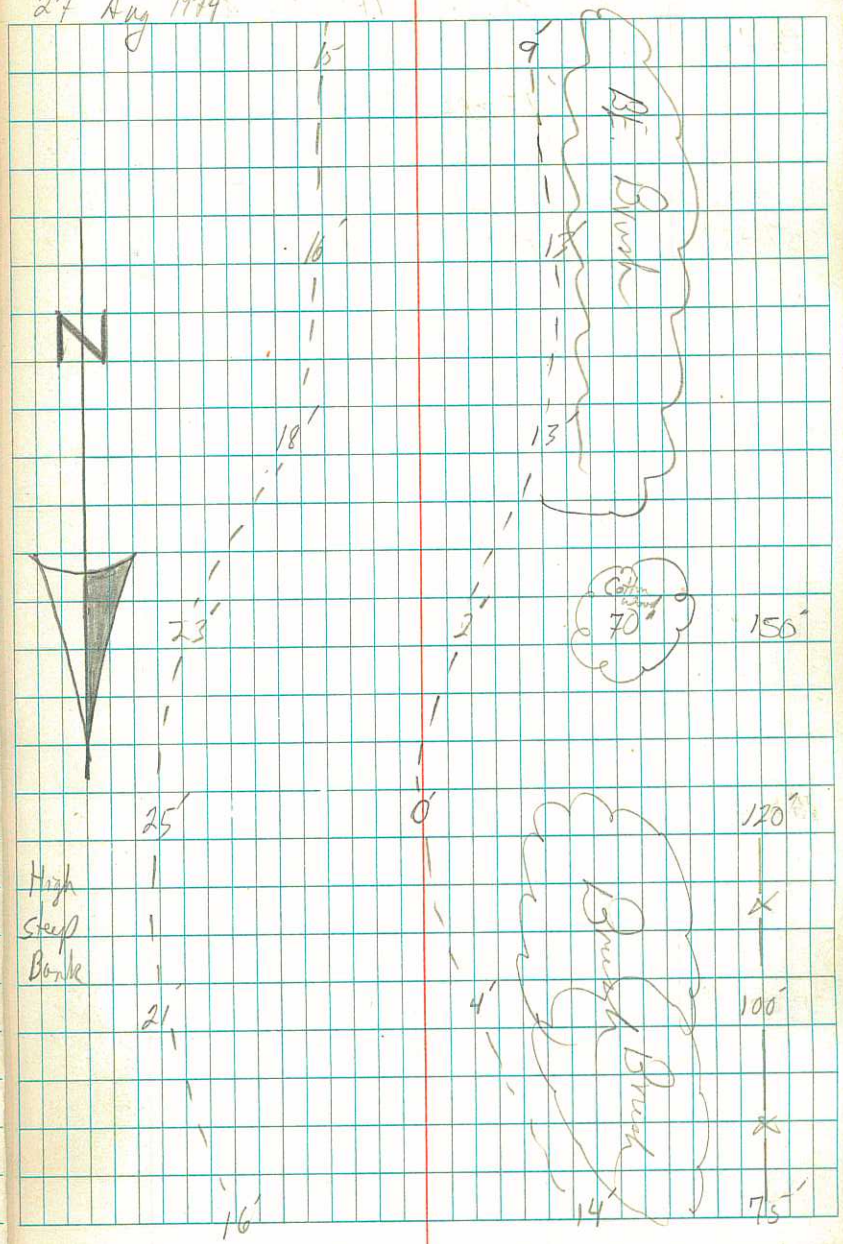

19

14	20	Perfections	Lt	Rt	
14	+50				
		PI → PI	259.22'		
	+04 54	PT		13°05' (33")	
	156		Lt ∠	12°46'	
			Δ = 26°11'10"		
			T = 93.03'		
			R = 400'		
14	+50		L = 182.81'	9°11'	
			D = 14°19'26"		
	155			5°36'	
14	+50			2°01'	
	+21 73	P.C.			
	154				
			PI → PI =	277.44'	
	+50				
	+36 29	PT			13°54'

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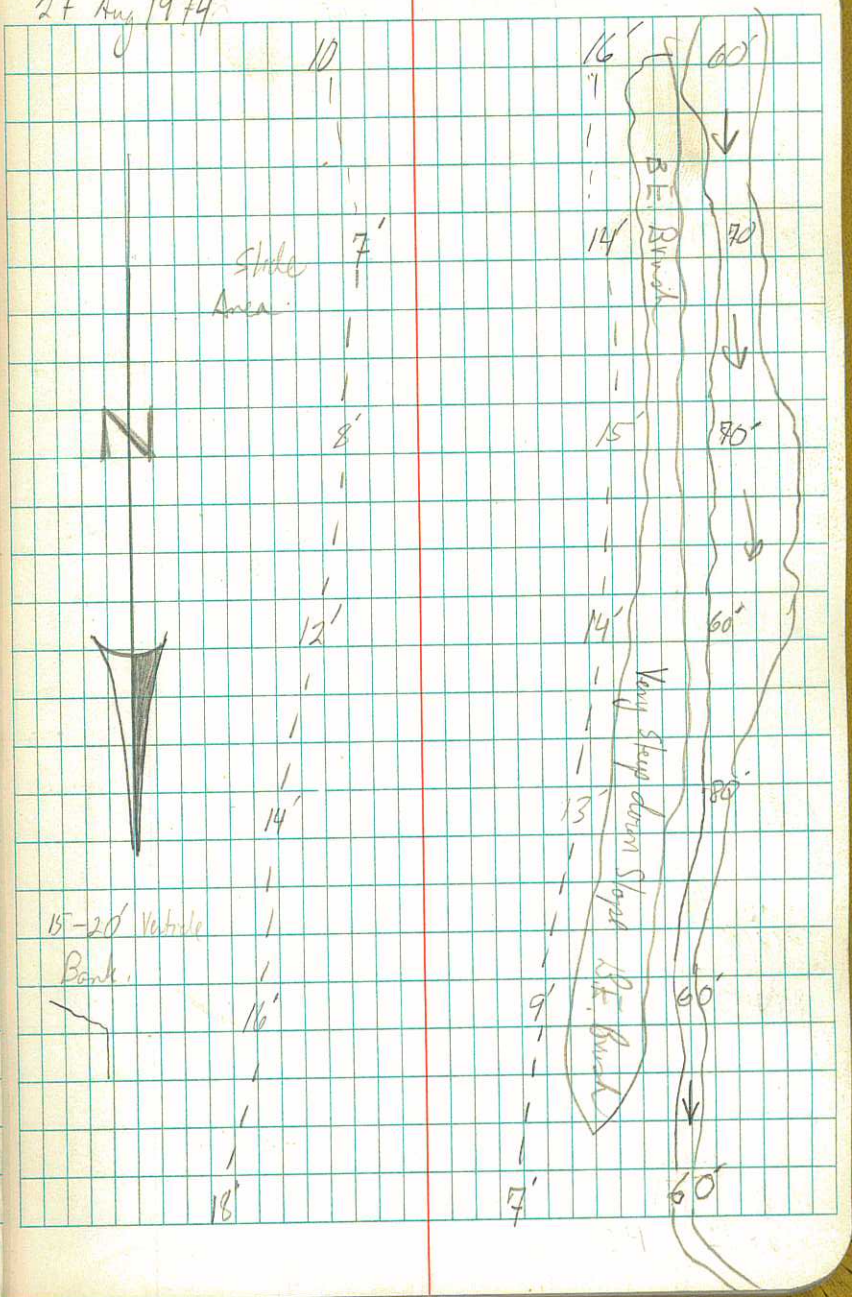

		Deflection	Lt	Rt
14 22				
14 160				
+50				
14 159				
		P.I to P.I	=824.65'	
+53.55	PT			3°10'
+50				3°06'
		R+ ∡		
		Δ = 6°20'00"		
		T = 82.99'		
14 158		R = 1500'		2°09'
		L = 165.81'		
		D = 3°49'11"		
+50				1°11'
14 157				0°14'
87 74	P.C.			

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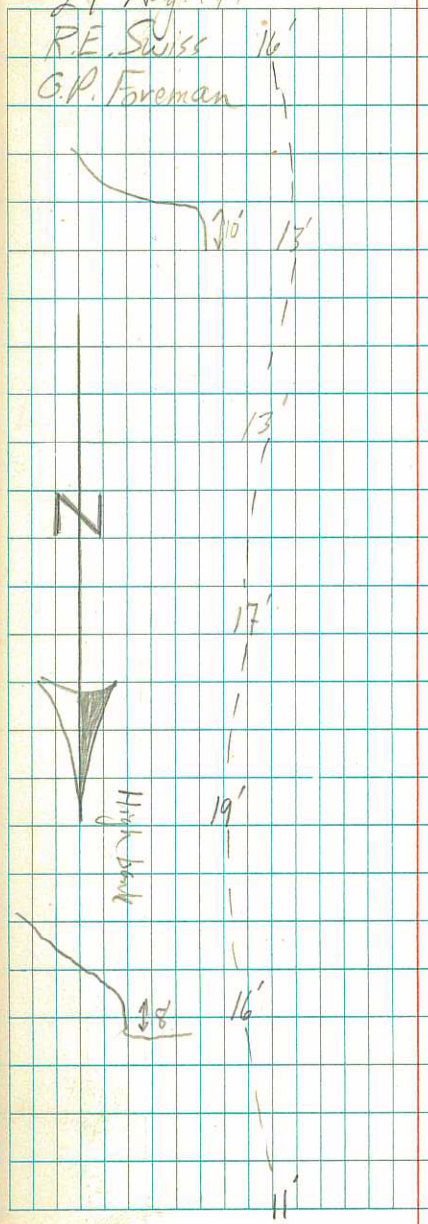
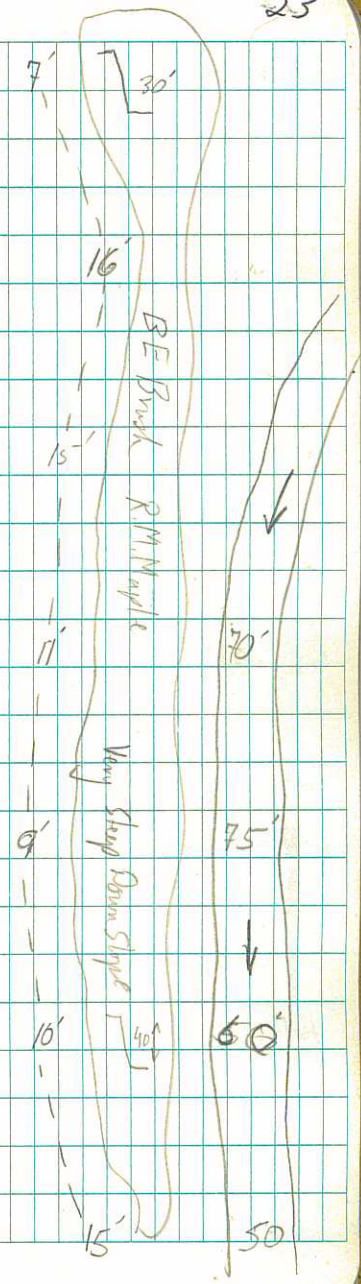
R.E. Swiss

G.P. Foreman





24

+50

163

+50

162

+50

161

+50

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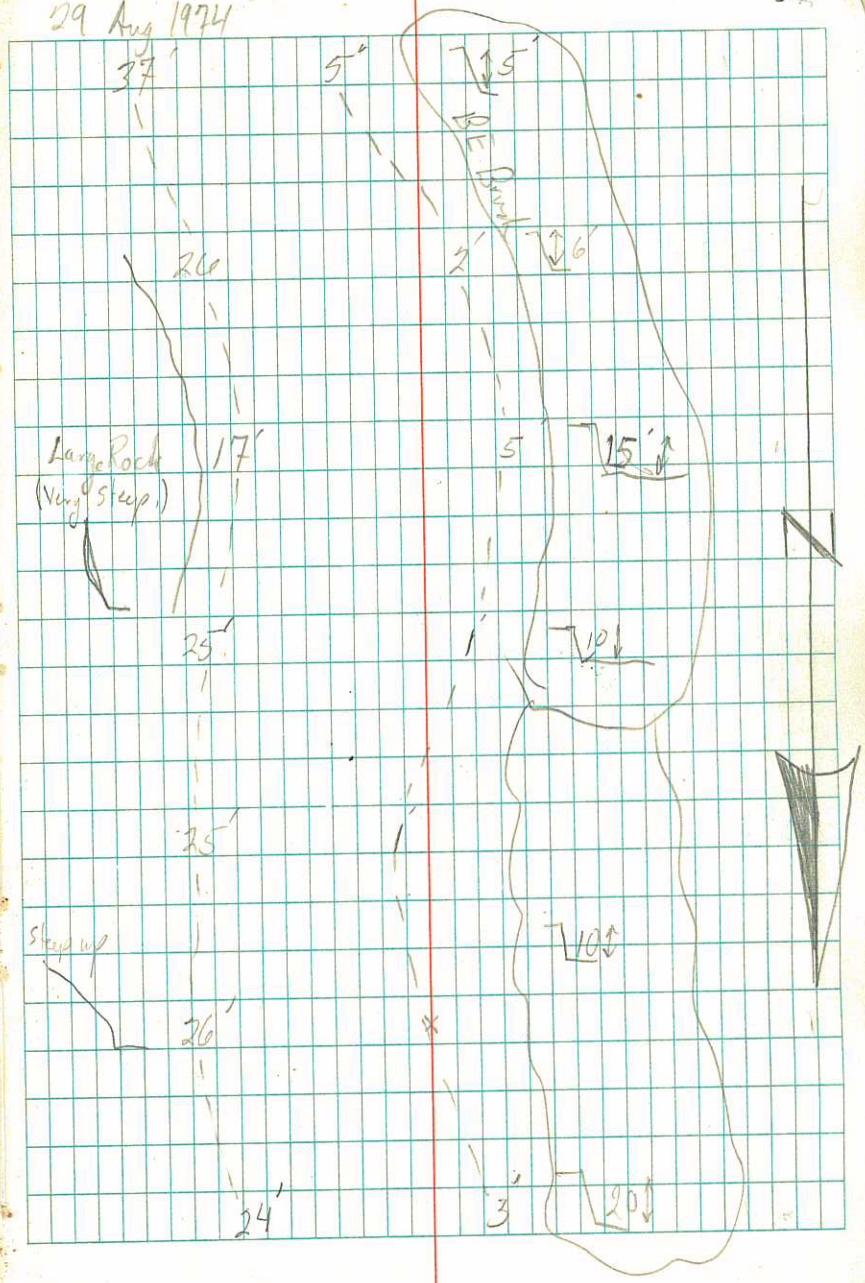
25



9340-100

		Deflection	Lt	Rt
167				
		PI → PI 899.52'		
+50				
+46 90	P.T.	Rt		0° 18'
		Δ = 0° 35' 25"		
		T = 51.51'		
166		R = 10,000'		0° 10'
		L = 103.2'		
		D = 0° 34' 22"		
+50				0° 01'
+43 70	P.C.			
165				
+50				
164				

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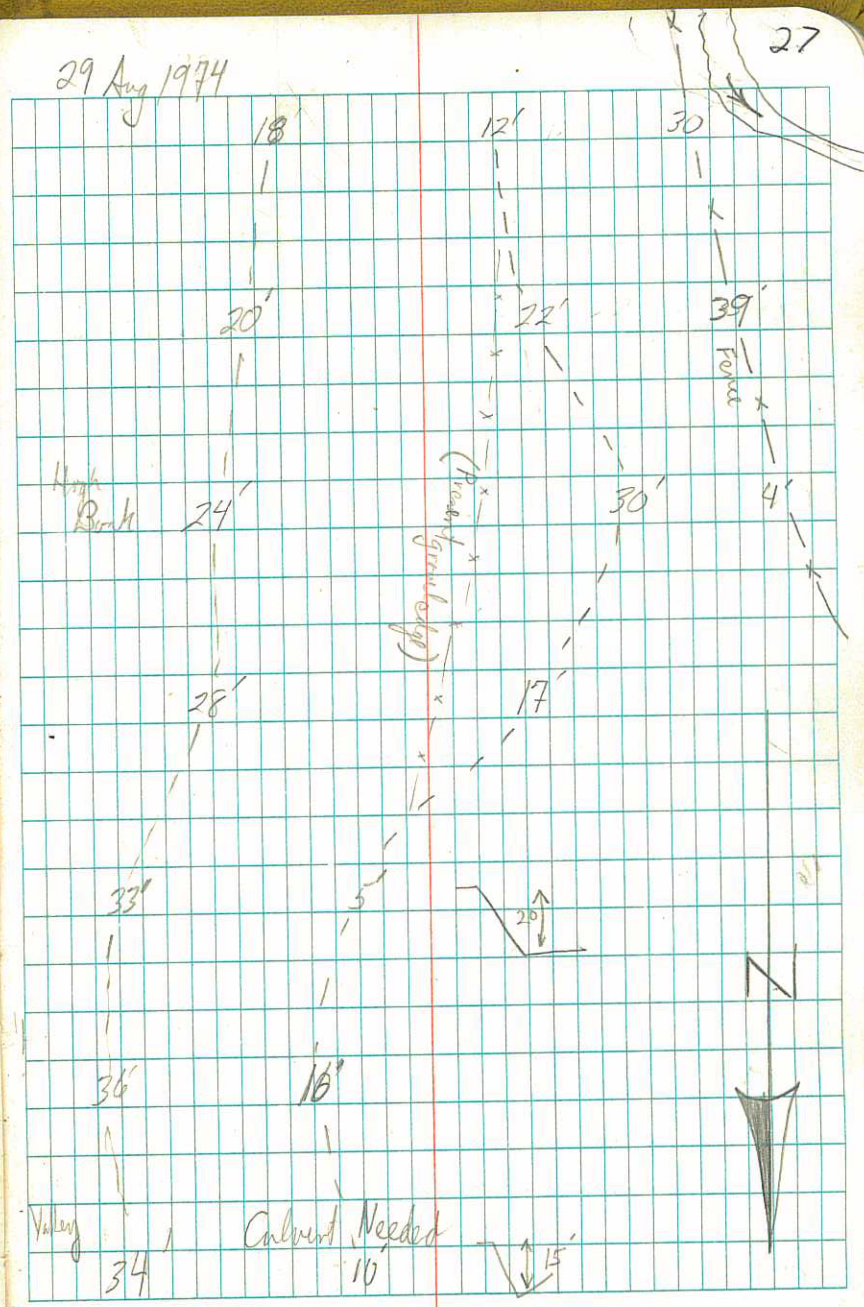

28

+50

-

170

+50

169

+50

168

+50

29

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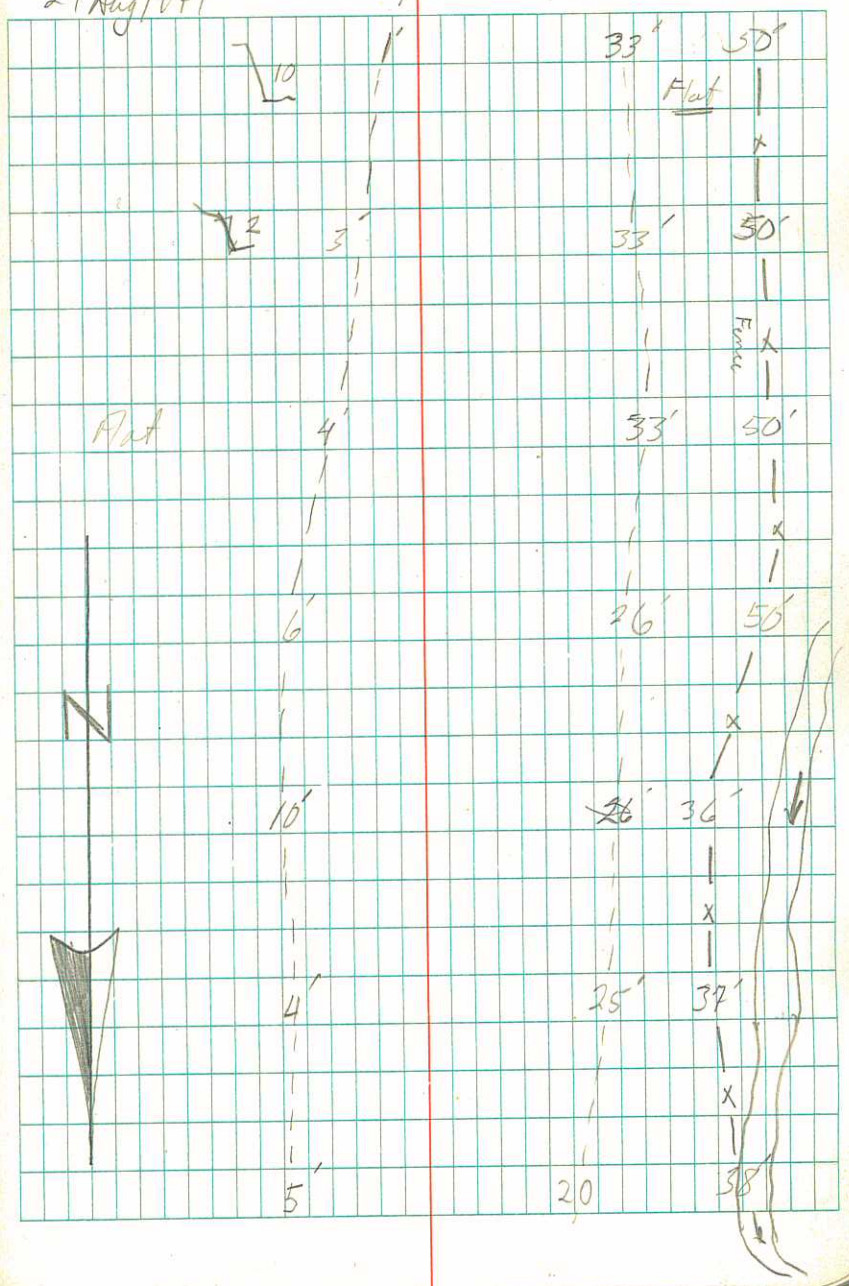

30

174

+50

173

+50

172

+50

171

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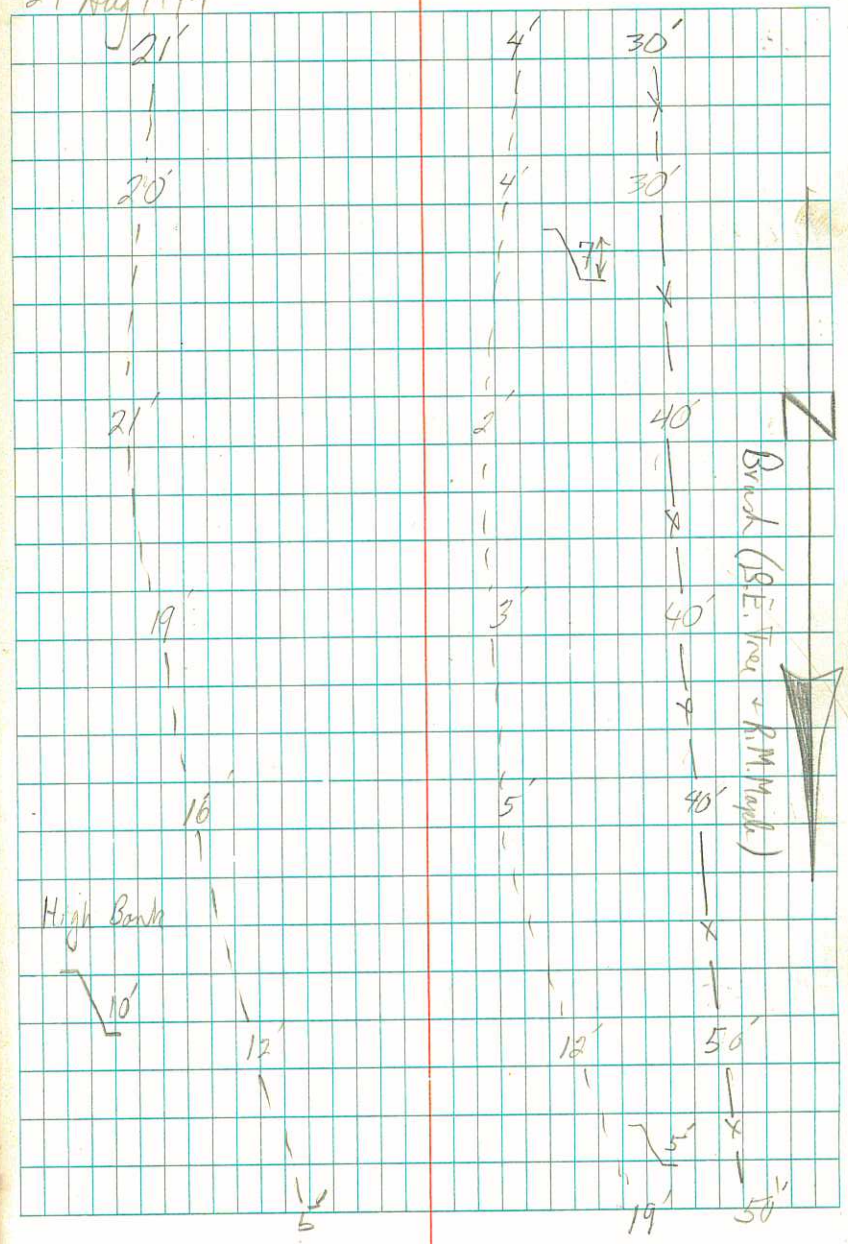
31



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		Deflection	Lt 4	Rt 4
+50				
177				
+50				
		PI → PI 570.07'		
176				
+73 19	P.T		9° 03'	
		Lt 4		
+50		Δ = 18° 05' 36"	7° 43'	
		T = 79.60'		
		R = 500'		
		L = 157.88		
175 +		D = 11° 27' 33"	4° 51'	
+50			1° 59'	
+15 31	P.C.			

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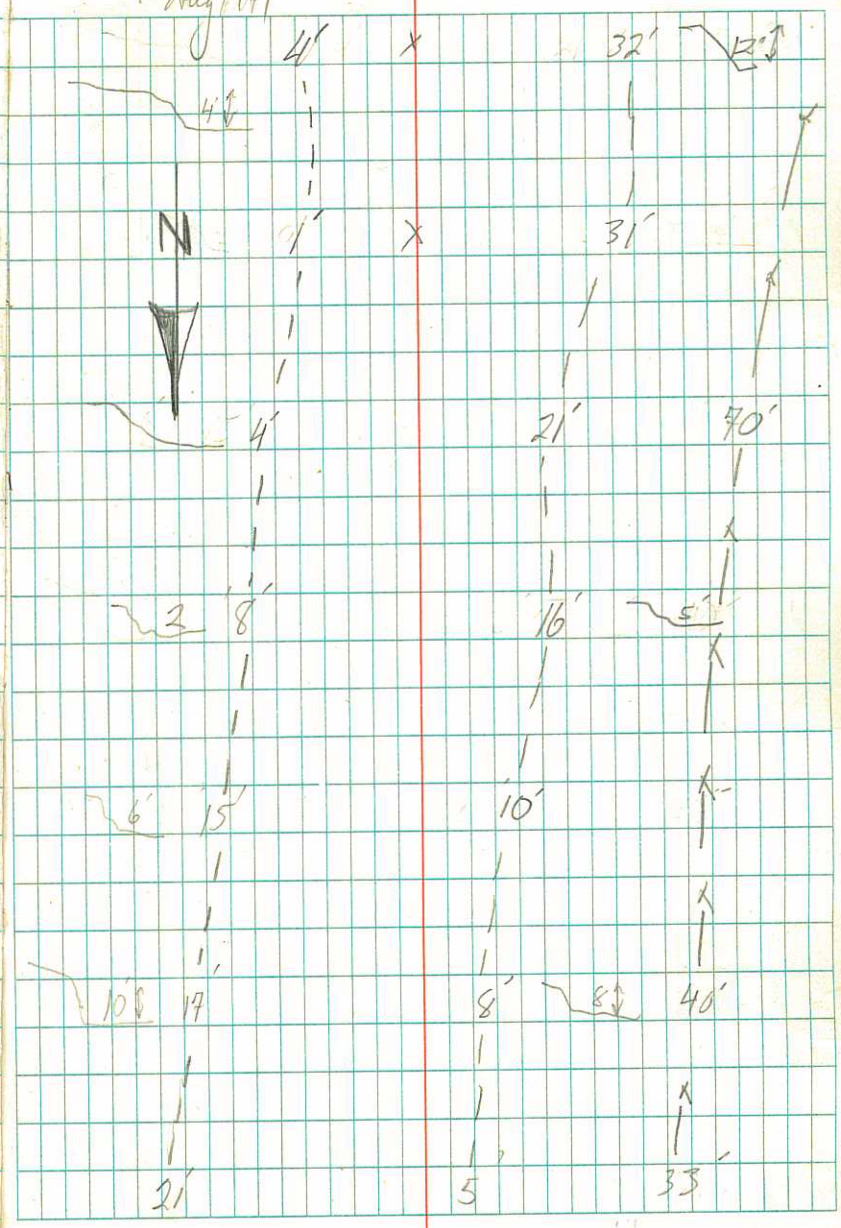
33



		Deflection	Lt	Rt	
181				12° 33'	
		Rt ✗			
		Δ = 35° 12' 05"			
		T = 95.17'			
	+50	R = 300		7° 47'	
		L = 184.31			
		D = 19° 05' 55"			
180				3° 01'	
	68 47	P.C.			
	+50				
179					
	+50				
178					

This P.I should be relocated 20' West.

Design Note:

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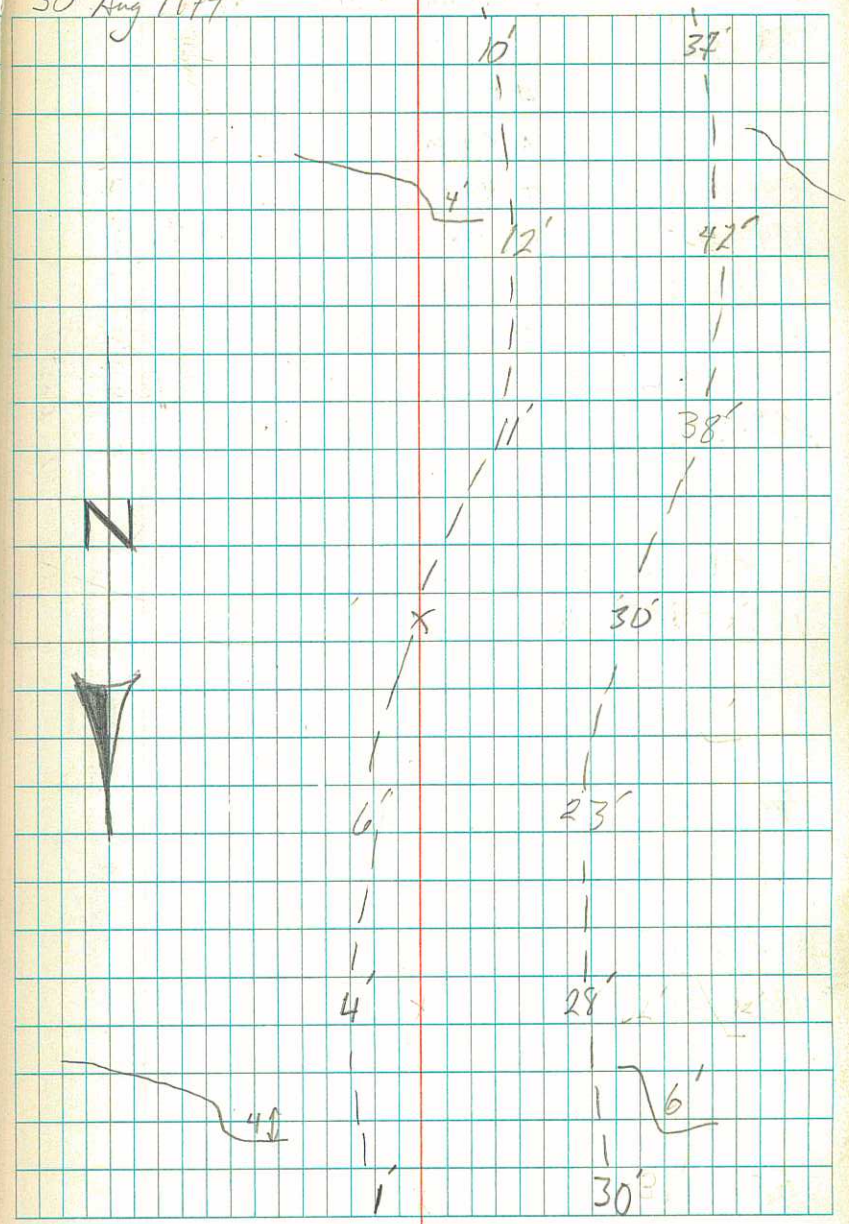
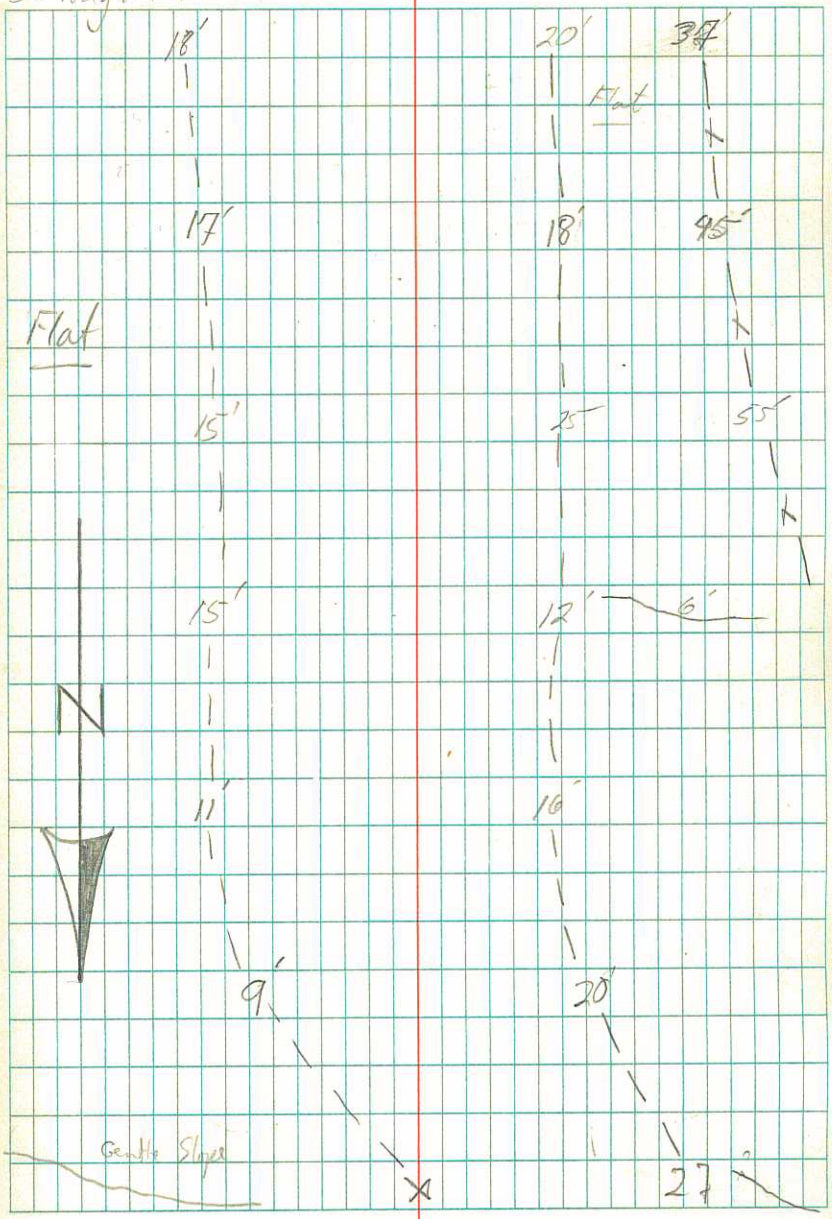


		Deflection Lt	Rt	
+50		3° 58'		
		Lt ∡		
		Δ 12°19'30"		
~~184~~		T = 97.18'		
184		R = 906'	2° 22'	
		L = 193.60'		
		D = 6°21'58"		
+50		0° 47'		
$+25^{54}$	P.C			
183				
+50				
182				
$+52^{80}$	P.T.		17° 36'	
+50			17° 20'	
		PI → P.I = 365.09		

Design North Move P.I. 10' East

30 Aug 1974



	Deflection	Lt	Rt	
188				
		PI → PI	345.69'	
+72 40	PT		7°49'	
		Lt ∡		
+50		Δ = 15°37'15"	6°32'	
		T = 68.58'		
		R = 500'		
		L = 136.32'		
187		D = 11°27'33"	3°40'	
+50			0°48'	
+36 08	P.C.			
186				
+50				
+19 14	P.T.		6°10'	
185			5°33'	
		P.I → P.I 282.70		

Design Note:
Move P.T. 10' East.

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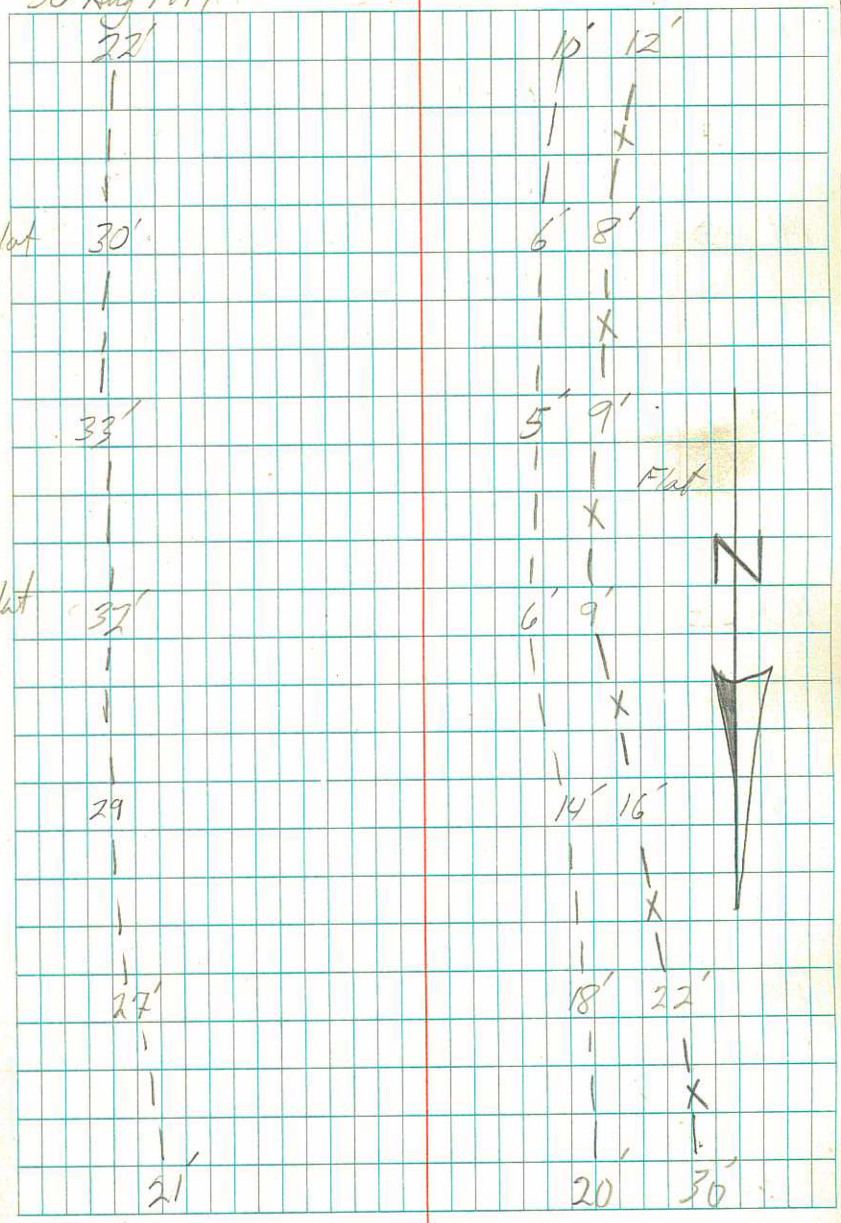

9340-100

		Deflection	Lt	Rt	
+50		Lt ∆	6°27'		
		∆=25°14'15"			
		T=89.55'			
		R=400'			
191		L=176.19'	2°52'		
		D=14°19'26"			
+59.96	P.C.				
+50					
190					
+50					
189					
+50					

Design note. Move PI 5' East.

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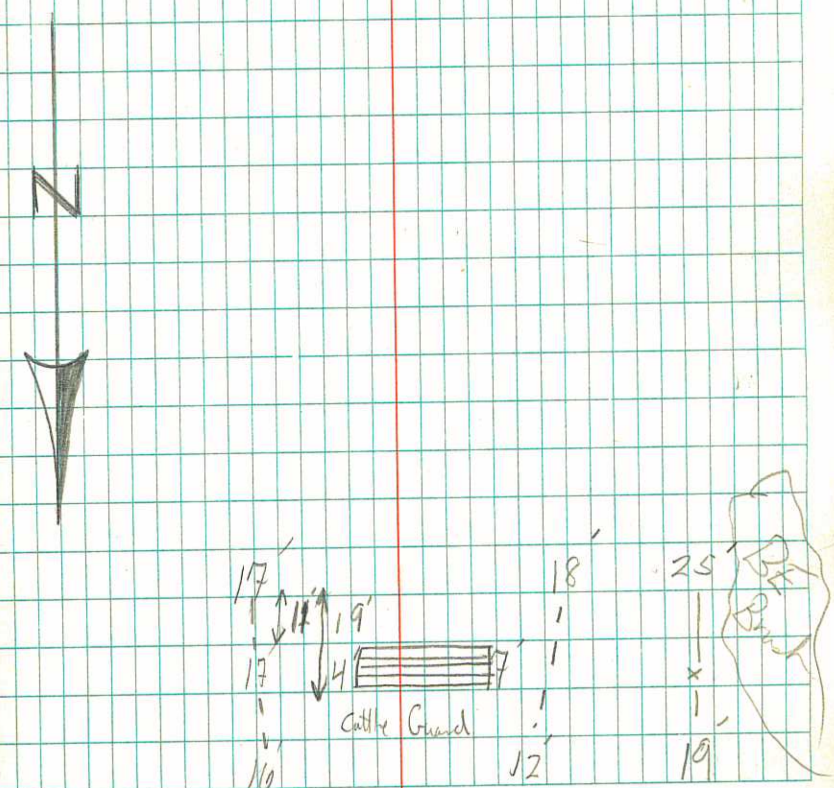

		Deflection	Lt	Rt
195				
+50				
+11.97	P.T.	PI → PI	404.15'	11° 07'
194				10° 16'
		Rt →		
		Δ = 22°15'00"		
		T = 78.66'		
+50		R = 400		6° 41'
		L = 155.33'		
		D = 14°19'26"		
193				3° 06'
+56.64	PC			
+50				
+36.15	PT		12° 37'	
192			10° 02'	
		PI → PI	188.70'	

		Deflection	Lt	Rt
+50				
+33 36	P.T.			11° 08'
198				9° 13'
		PI → PI 324.58'		
		Rt ∠		
		Δ = 22° 15' 45"		
+50		T = 98.38'		6° 21'
		R = 500'		
		L = 194.28'		
		D = 11° 27' 33"		
197				3° 29'
+50				8° 38'
+39 08	P.C.			
196				
+50				

		Deflection	Lt	Rt
202				
		PI ⇒ PI = 405.95'		
+50				
+40.99	P.T.			9° 25'
		Rt ∠		
		Δ = 18° 50' 00"		
201		T = 82.92'		7° 04'
		R = 500'		
		L = 164.35'		
		D = 11° 27' 33"		
+50				4° 12'
200				1° 20'
+76.64	P.C.			
+50				
199				

	Deflection		Lt	Rt.
+50				
+34 81	PT			8° 10′
		PI → PI =	528.09′	
		Rt ∢		
205		Δ=16°20′10″		6° 10′
		T=71.77′		
		R=500′		
		L=142.56′		
+50		D=11°27′33″		3° 19′
204				0° 27′
+92 25	P.C.			
+50				
203				
202+50				

		Deflection	Lt	Rt	
209			0° 17°		
+90 16	P.C.				
+50					
208					
+50					
207					
+50					
206					

			Deflection	Lt	Rt
+50				8° 29'	
212				3° 42'	
+61 18	P.C.				
+50					
211			PI → PI	281.58'	
+91 31	P.T.			5° 46'	
			∠ →		
			Δ = 11° 31' 30"		
+50			T = 100.92'	4° 35'	
			R = 1000'		
			L = 201.15		
			D = 5° 43' 46"		
210				3° 09'	
+50				1° 43'	

	Deflection	Lt	Rt	
216				
+50				
215				
+50				
214				
		PI→PI	546.96'	
+73.44	P.T.		20°16'	
		Lt ∢		
+50		Δ 40°32'20"	18°01'	
		T = 110.79'		
		R = 300'		
		L = 212.26'		
213		D = 19°05'55"	13°15'	

		Deflection	Lt	Rt
+50				
219				
+86 37	P.T.		15° 01′	
		P.I ⇒ P.I.	430.10′	
+50		4× Δ = 30° 01′ 30″	11° 32′	
		T = 80.45′		
		R = 300′		
		L = 157.21		
218		D = 19° 05′ 55″	6° 46′	
+50			1° 59′	
+29 16	P.C.			
217				
+50				

223		Deflection	Lt 12°51'	Rt	
		P.I → P.I.	217.98'		
		Lt ↵			
+50		Δ=26°28'35"	8°05'		
		T=70.58'			
		R=300'			
		L=138.63'			
222		D=19°05'55"	3°18'		
+65.44	P.C.				
+50					
221					
+50					
220					

		Deflection	Lt	Rt
	+50		6° 25'	
	+41.28	P.C.		
	226			
	+50			
	+14.43	P.T.		12° 13'
	225	P.I → P.I	262.58'	10° 50'
		Rt ∝		
		Δ = 24° 25' 40"		
		T = 64.94'		
	+50	R = 300'		6° 04'
		L = 127.90'		
		D = 19° 05' 55"		
	224			1° 17'
	+86.53	P.C.		
	+50			
	+04.07	P.T.	13° 17'	

		Deflection	Lt	Rt
230				
+50				
229				
+50				
228				
		PI ⇒ PI	498.46'	
+82.22	P.T.		6° 44'	
		~~Lt~~		
+50		Δ = 13° 27' 30"	5° 21'	
		T = 70.79'		
		R = 600'		
		L = 140.94'		
227		D = 9° 32' 57"	2° 48'	

		Deflection	Lt	Rt
+50				
+04 46	P.T			18° 46′
233				18° 20′
+50		PI → PI	1052.44′	13° 34′
		Rt ↺		
		Δ = 37° 31′ 30″		
		T = 101.91′		
232		R = 300′		8° 47′
		L = 196.48′		
		D = 19° 05′ 55″		
+50				4° 01′
+07 98	P.C.			
231				
+50				

66

237

+50

236

+50

235

+50

234

67

68

+50

240

+50

239

+50

238

+50

69

244					
+73 91	PT			2°16'20"	
+50				2°03'	
243				1°34'	
+50				1°05'	
		PI - PI	877.29'		
		RT Δ = 4°32'40"			
		T = 119.04'			
242		R = 3000'		0°37'	
		L = 237.96			
		D = 1°54'36"			
+50				0°08'	
+35 95	P.C.				
241					

72

+50

247

+50

246

+50

245

+50

73

	Deflection	Lt	Rt
251			3° 58'
+58 50	P.C.		
+50			
250			
+50			
249			
+50			
248			

	Deflection		Lt	Rt.
+50				
254				
+54.63	P.T		9°47'30"	
+50		PI → PI. =	9°28'	
		Lt Δ = 19°35'00"		
		T = 69.03'		
		R = 400'		
253		L = 136.72'	5°53'	
		D = 14°19'26"		
+50			2°18'	
+17.91	P.C.			
+02.97	PT			13°48'
252		PI → PI	157.63'	13°31'
		Rt Δ = 27°35'30"		
		T = 73.66'		
		R = 300'		
+50		L = 144.47'		8°44
		D = 19°05'55"		