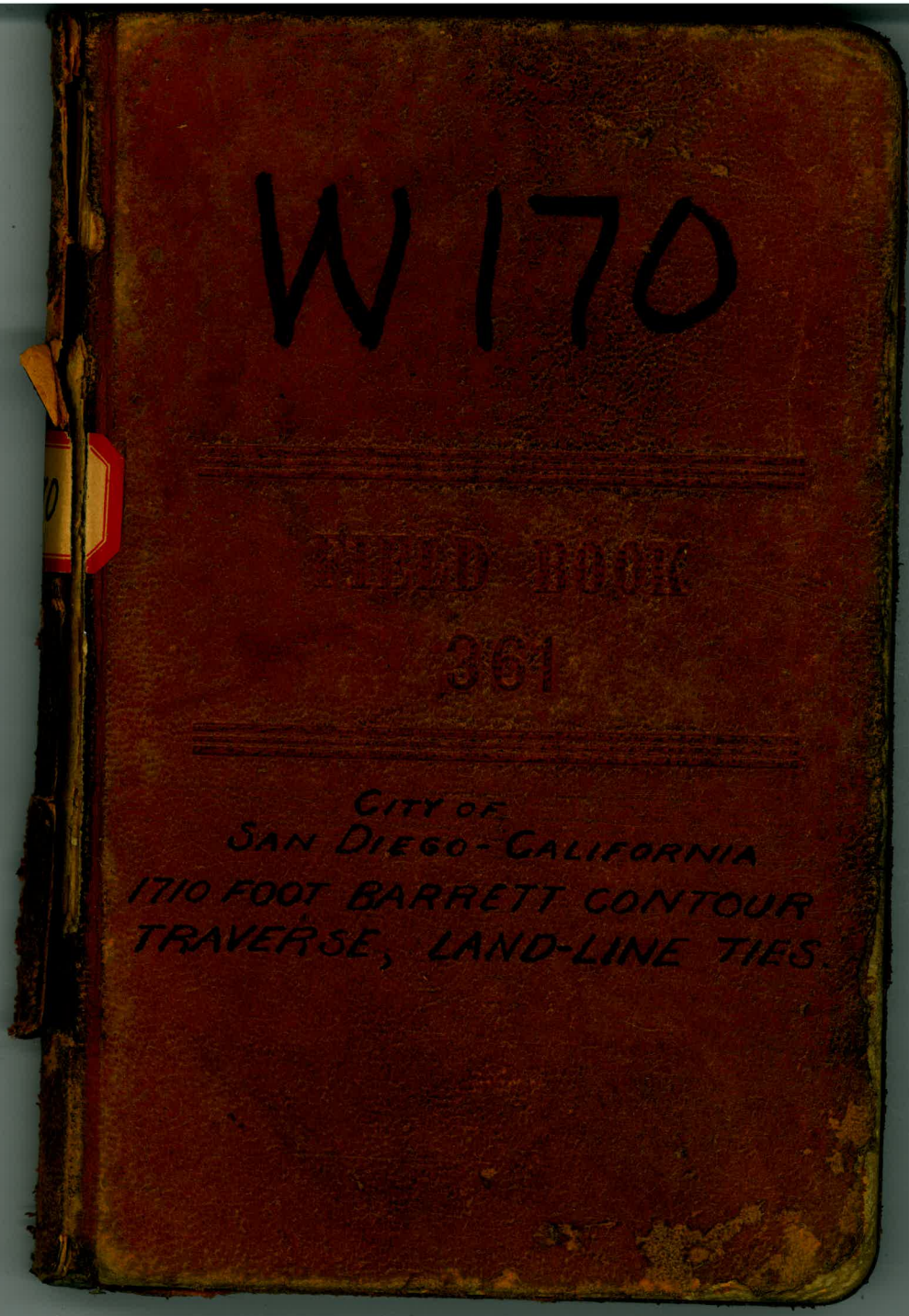

W 170
FIELD BOOK
361
CITY OF
SAN DIEGO - CALIFORNIA
1710 FOOT BARRETT CONTOUR
TRAVERSE, LAND-LINE TIES.

KEUFFEL & ESSER CO.

DRAWING MATERIALS
AND
SURVEYING INSTRUMENTS.

NEW YORK.

CHICAGO. ST. LOUIS. SAN FRANCISCO. MONTREAL.

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	40.9	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

Calculated by Julien A. Hall, M. Am. Soc. C. E.

FOR KEITH'S RAILROAD CURVE TABLES SEE END OF BOOK.

Index.

Traverse 1710 Barrett Res. Contour

Sta	Dist	Lt	Rt	Az	Mag Co
π@Δ1					
F.S. on Δ1 stake (see pg. 59 for Polaris Ob.)				331-05	
to Δ2	150.3			45-51	N45-40E
to Sec. Cor.				38-28½	N38-25E
π@Δ2-1+50.3					
BS on Δ1					N46-30E
to Δ3	195.7			27-27	N28-00E
π@Δ3-3+46.0					
BS on Δ2					N27-20E
to Δ4	146.0			61-46	N61-35E
π@Δ4-4+92.0					
BS on Δ3					N61-50E
to Δ5	103.3			80-26	N80-20E
π@Δ5-5+95.3					
BS on Δ4					
to Δ6	123.0		+	358-40½	N1-19W
π@Δ6-7+18.3					
BS on Δ5					
to Δ7	182.9			58-43	N58-30E
π@Δ7 9+01.2					
BS on Δ6					N58-30E
to Δ8	153.6			100-54	S79-05E
π@Δ8 10+54.8					
BS on Δ7					
to Δ9	134.7			324-45	N35-10W

Lietz Transit #5223
Ded. Plate @ 14°30'E

R.C. Wuestc
Ed. Ketchum
O.S. Palmer

1.

PM 12-26-22 (time)

= hub on 1710 contour on Lt Barrett Dam Tangent pt on Lt tangent on 3' offset (3' downstream from face) produced to Rt bank

N45-51E

¼ cor bet. Secs. 15 and 22 (1988.5ft by triangulation)

N27-27E

N61-46E

+ on RR.

N80-26E

N1-19W

N58-43E

+ on RR.

12-27-22
R.C. Wuestc
Ed. Ketchum
O.S. Palmer

S79-06E

N35-15W

Co.	Sta.	Dist.	Defl.	Az.	Mag Co
Δ@Δ9	11+89.5				
B.S. on Δ8					
to Δ 10		75.1	- ✓	349-59½	N10-10W
Δ@Δ10	12+64.6				
B.S. on Δ9					
to Δ 11		68.2	✓	30-31	N30-15E
Δ@11	13+32.8				
B.S. on Δ10					
to Δ12		75.1	✓	65-55	N65-55E
Δ@Δ12	14+07.9				
B.S. on Δ11					
to Δ 13		118.8	✓	27-53	N27-50E
Δ@Δ13	15+26.7				
B.S. on Δ12					
to Δ 14		81.3	✓	33-17	N33-15E
to Sec. Cor.				34-54	N34-50E
Δ@Δ14	16+08.0				
B.S. on Δ13					
to Δ 15		119.3	+ ✓	61-29½	N61-15E
Δ@Δ15	17+27.3				
B.S. on Δ14					
to Sec. Cor.				29-50½	N29-45E
to Δ 16		161.1	✓	97-47	S82-10E
Δ@Δ16	18+88.4				
B.S. on Δ15					S82-10E
to Δ 17		180.3	✓	47-36	N47-35E

N10-00W

N30-31E

to on RK

N65-55E

N27-53E

to on RK.

N33-17E

N61-30E

to on RK

S82-13E

N47-36E

12-28-22 AM fine PM Rainy

R.C. Wueste
Ed. Ketchum
O.C. Palmer
P. Horan

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.	
⊼ @ △17	20+68.7					
B.S. on △16						
to △18		96.5	✓	249-09	S69-25W	S69-09W
⊼ @ △18	21+65.2					
B.S. on △17						
to △19		64.2	– ✓	280-19½	N79-35W	N79-41W
⊼ @ △19	22+29.4					
B.S. on △18						
to △20		67.3	✓	310-22	N49-35W	N49-38W
⊼ @ △20	22+96.7					
B.S. △19						
to △21		64.7	✓	325-37	N34-30W	N34-23W
⊼ @ 21	23+61.4					
B.S. on △20						
to △22		65.3	✓	244-55	S65-00W	S64-55W
⊼ @ △22	24+26.7					
B.S. on 21						
to △23		232.9	✓	254-56	S75-00W	S74-56W
⊼ @ △23	26+59.6					
B.S. on △22						
to △1	0+00			212-06	S32-05W	For Az Check see page
to △24		60.8	✓	280-27	N79-30W	N79-33W
⊼ @ △24	27+20.4					
B.S. on △23						
to △25		100.2	✓	340-37	N19-30W	N19-23W

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
T@ Δ 25	28+20.6				
BS. on Δ 24					
to Δ 26		108.1	✓	2-18	N2-15E
T@ Δ 26	29+28.7				
BS. on Δ 25					
to Δ 27		73.0	+ ✓	12-00½	N12-00E
T@ Δ 27	30+01.7				
BS. on Δ 26					
to Δ 28		64.1	✓	47-50	N47-45E
T@ Δ 28	30+65.8				
BS. on Δ 27					
to Δ 29		179.0	✓	355-15	N4-45W
T@ Δ 29	32+44.8				
BS. on Δ 28					
to Δ 30		68.9	✓	319-04	N40-55W
T@ Δ 30	33+13.7				
BS. on Δ 29					
to Δ 31		56.9	✓	358-54	N1-05W
T@ Δ 31	33+70.6				
BS. on Δ 30					
to Δ 32		180.0	✓	34-39	N34-40E
T@ Δ 32	35+50.6				
BS. on 31					
to Δ 33		104.7	- ✓	82-22½	N82-30E

N2-18E

N12-01E

N47-50E

N4-45W

N40-56W

N1-06W

N34-39E

N82-22E

Co.	Sta.	Dist.	Ocl.	Az.	Mag. Co.
T@Δ 33	36+55.3				
BS. on 32					
to 34		64.2	✓	331-18	N28-35W
T@ 34	37+19.5				
BS. on 33					
to 35		48.15	✓	43-48	N43-50E
T@ 35	37+67.65				
BS. on 34					
to 36		215.6	+ ✓	305-39½	N54-10W
T@ 36	39+83.25				
BS. on 35					
to 37		171.7	- ✓	320-09½	N39-55W
T@ 37	41+54.95				
BS. on 36					
to 38		100.9	✓	17-09	N17-00E
T@ 38	42+55.85				
BS. on 37					
to 39		195.15	✓	44-38	N44-20E
T@ 39	44+51.0				
BS on 38					
to 40		170.25	+ ✓	340-22½	N19-46W
T@ 40	46+21.25				
BS. on 39					
to 41		116.1	✓	297-24	N62-30W
		1082.05 ✓			

N28-42W

N43-48E

N54-20W

N39-51W 12-29-22 (fine)
R.C. Wooster
Ed. Ketchum
O.C. Palmer
P. Horan

N17-09E

N44-38E

N19-37W

N67-36W

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.	
π @ 41	47+37.35					
BS on 40						
to 42		180.05	✓	309-48	N49-55W	N50-12W
π @ 42	49+17.4					
BS on 41						from rock
to 43		229.6	✓	274-46	N85-10W	N85-14W
π @ 43	51+47.0					
BS on 42						
to 44		83.35	✓	355-02	N5-05W	N4-58W
π @ 44	52+30.35					
BS on 43						
to 45		222.0	✓	30-37	N30-25E	N30-37E
π @ 45	54+52.35					
BS on 44						
to 46		146.85	✓	299-40	N59-50W	N60-20W
π @ 46	55+99.2					
BS on 45						
to 47		126.8	✓	319-38	N40-25W	N40-22W
π @ 47	57+26.0					
BS on 46						
to 48		75.2	✓	253-38½	S73-50W	S73-38W
π @ 48	58+01.7					
BS on 47						
to 49		81.7	✓	317-34	N42-30W	N42-26W
	58+82.9					
		~~1145.55~~ ✓				

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co
℄ @ 49	58+82.9				
B.S. on 48					
to Δ1	0+00			179-21½	S0-55E
to 50		138.5	+ ✓	354-58½	N5-15W
℄ @ 50	60+21.4				
B.S. on 49					
to 51		61.4	- ✓	18-57½	N18-45E
℄ @ 51	60+82.8				
B.S. on 50					
to 52		66.65	✓	61-26	N61-10E
℄ @ 52	61+49.45				
B.S. on 51					
to 53	-	110.1	+ ✓	14-57½	N14-55E
℄ @ 53	62+59.55				
B.S. on 52					
to 54		124.1	✓	309-06	N51-00W
℄ @ 54	63+83.65				
B.S. on 53					
to 55		186.9	- ✓	28-00½	N27-45E
℄ @ 55	65+70.55				
B.S. on 54					
to 56		108.35	+ ✓	59-17½	N59-05E
℄ @ 56	66+78.9				
B.S. on 55					
to 57		218.5	✓	359-51	N0-15W
		1014.50 ✓			

For Az. Check see page

N5-01W

12-30-22 (fine)
RS. Wuesta
Ed. Ratchum
O.S. Palmer
P. Horan

N18-52E

N61-26E

N14-58E

Note. This Co over rocky point + on rock

41.15 @ -21°39'
75.32 @ -14°36'

N50-54W

N28-00E

N59-18E

N0-09W

Co.	Sta	Dist	Defl.	Az.	Mag. Co.
π @ 57	68+97.4				
B.S. on 56					
to 58		77.8	− ✓	305-43½	N54-10W
π @ 58	69+75.2				
B.S. on 57					
to 59		45.2	+ ✓	355-03½	N5-05W
π @ 59	70+20.4				
B.S. on 58					
to 60		113.0	− ✓	0-11½	North
π @ 60	71+33.4				
B.S. on 59					
to 61		133.55	✓	324-51	N35-05W
π @ 61	72+66.95				
B.S. on 60					
to 62		82.2	✓	75-33	N75-40E
π @ 62	73+49.15				
B.S. on 61					
to 63		110.9	+ ✓	104-27½	S75-25E
π @ 63	74+60.05				
B.S. on 62					
to 64		203.65	− ✓	123-59½	S56-00E
π @ 64	76+63.7				
B.S. on 63					
to 65		212.3	✓	168-12	S11-30E
		978.60 ✓			

N54-17W

N4-56W

N 0-11E

N35-09W

N75-33E

= first Co. on Cottonwood arm of reservoir.

S75-32E

S56-01E

S11-48E

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.	
π @ 65	78+76.0					
B.S. on 64						
to 66		105.6		✓ 93-20	S86-10E	S86-40E
π @ 66	79+81.6					
B.S. on 65						
to 67		84.8		✓ 75-59	N76-10E	N75-59E
π @ 67	80+66.4					
B.S. on 66						
to 68		186.8		✓ 101-40	S78-15E	S78-20E
π @ 68	82+53.2					
B.S. on 67						
to 69		165.0		✓ 77-24	N77-30E	N77-24E
π @ 69	84+18.2					
B.S. on 68						
to 70		117.5		✓ 154-22	S25-30E	S25-38E
π @ 70	85+35.7					
BS on 69						
to 71		96.75	+	✓ 103-24½	S76-20E	S76-35E
π @ 71	86+32.45					+ on rock
B.S. on 70						
to 72		75.0		✓ 115-45	S63-50E	S64-15E
π @ 72	87+07.45					
B.S. on 71						
to 73		140.3	− ✓	75-47½	N75-55E	N75-47E
	88+47.75					
		971.75 ✓				

1-1-23 (fine) (windy in PM)

R.C. Wueste
Ed. Ketchum
O.G. Palmer
P. Horan

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
π @ 73	88+47.75				
B.S. on 72					
to 74		58.55	+ ✓	130-55½	S49-00E
π @ 74	89+06.3				
B.S. on 73					
to 75		78.35	- ✓	142-06½	S37-45E
π @ 75	89+84.65				
B.S. on 74					
to 76		95.15	+ ✓	108-55½	S71-00E
π @ 76	90+79.8				
B.S. on 75					
to 77		56.4	- ✓	147-47½	S32-00E
π @ 77	91+36.2				
B.S. on 76					
to 78		58.0	+ ✓	88-22½	N88-30E
π @ 78	91+94.2				
B.S. on 77					
to 79		68.55	✓	118-00	S61-55E
π @ 79	92+62.75				
B.S. on 78					
to 80		102.6	✓	153-44	S25-55E
π @ 80	93+65.35				
B.S. on 79					
to 81		140.25	✓	52-27	N52-45E
	95+05.6				
		657.85 ✓			

S49-04E

S37-54E

S71-04E

S32-13E

N88-23E

S 62-00E

S26-16E

N52-27E

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co
π@81	95+05.6				
BS. on 80					
to 82		221.85	- ✓	168-58½	S10-55E
π@82	97+27.45				
BS. on 81					
to 83		119.7	+ ✓	96-29½	S83-15E
π@83	98+47.15				
BS. on 82					
to 84		146.4	- ✓	151-49½	S28-05E
π@84	99+93.55				
BS on 83					
to 85		77.45	+ ✓	181-32½	S1-35W
π@85	100+71.0				
BS on 84					
to 86		123.25	- ✓	108-53½	S70-50E
π@86	101+94.25				
BS. on 85					
to 87		159.25	✓	96-34	S83-30E
π@87	103+53.5				
BS on 86					
to 88		45.75	✓	147-17	S32-50E
π@88	103+99.25				
BS. on 87					
to 89		133.25	✓	196-42	S17-05W
	105+32.5				
		1026.90			

S11-02E

S83-30E

S28-11E

S1-33W

S71-07E 1-2-23 (East wind)
R.C. Wuester
Ed. Ketchum
OC. Palmer
P. Horan

S83-26E

S32-43E

S16-42W

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
π @ 89	105+32.5				
BS. on 88					
to 90		121.25	✓	121-49	S58-10E
π @ 90	106+53.75				
BS. on 89					
to 91		163.05	✓	103-00	S76-50E
π @ 91	108+16.8				
BS. on 90					
to 92		54.15	+ ✓	9-40½	N9-35E
π @ 92	108+70.95				
BS. on 91					
to 93		210.1	✓	48-54	N48-45E
π @ 93	110+81.05				
BS. on 92					
to 94		68.65	= ✓	99-13½	S80-40E
π @ 94	111+49.7				
BS. on 93					
to 95		70.5	+ ✓	138-51½	S41-05E
π @ 95	112+20.2				
BS. on 94					
to 96		87.8	✓	148-41	S31-20E
π @ 96	113+08.0				
BS. on 95					
to 97		196.0	✓	102-02	S78-05E
	115+04.0				
		971.50 ✓			

S58-11E

S77-00E

Copper tack in disintegrated rock

N9-41E

N48-54E

S80-47E

S41-08E

S31-19E

S77°58E

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
π@97	115+04.0				
BS. on 96					
to 98		65.45		✓137-41	S42-40E
π@98	115+69.45				
BS. on 97					
to 99		70.8		✓ 75-19	N75-00E
π@99	116+40.25				
BS. on 98					
to 100		103.05		✓ 48-51	N48-10E
π@100	117+43.3				
BS. on 99					
to 101		123.55		✓ 1-41	N1-20E
π@101	118+66.85				
BS. on 100					
to 102		54.4		✓ 45-16	N45-05E
π@102	119+21.25				
BS. on 101					
to 103		74.25	-	✓102-3½	S77-10E
π@103	119+95.5				
BS. on 102					
to 104		135.9	+	✓115-43½	S63-05E
π@104	121+31.4				
BS. on 103					
to 105		146.9		✓129-43	S50-00E
	122+78.3				
		774.30 ✓			

S42-19E

N75-19E

N48-51E

N1-41E

N45-16E

Above rock dike

S77-29E

(?) S64-16E

S50-17E

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.		
π@105	122+78.3					+ on rock	
B.S. on 104							
to 106		144.3		× 142-42	S36-05E	(?)	S37-18E
π@106	124+22.6					+ on rock	
B.S. on 105							
to 107		89.0		× 111-52	S67-15E	(?)	S68-08E
π@107	125+11.6						
B.S. on 106							
to 108		79.8		× 123-42	S55-15E	(?)	S56-18E
π@108	125+91.4						
B.S. on 107							
to 109 ✓1		120.6		× 157-11	S22-10E	(?)	S22-50E
π@109	127+12.0						
B.S. on 108							
to 110		81.15	-×	203-08½	S25-05W	(?)	S23-07W
π@110	127+93.15						
B.S. on 109							
to 111		257.6		× 151-15	S27-05E	(?)	S28-46E
π@111	130+50.75						
B.S. on 110							
to 112		209.0		× 119-46	S60-00E		S60-15E
π@112	132+59.75					(Favorable for connection to island)	
B.S. on 111							
to 113		99.4		× 161-07	S18-30E		S18-54E 1-3-23 (fine)
	133+59.15						
		+1080.85✓					

Either static on compass glass or local attraction

R.C. Wueste Ed. Ketcham
O.C. Palmer P. Horan

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.	
π @ 113	133+59.15					
BS. on 112						
to 114		52.1		× 213-25	S33-50W	S33-24W
π @ 114	134+11.25					
BS. on 113						
to 115 ✓2		103.3		× 252-40	S73-00W	S72-38W
π @ 115	135+14.55					
BS. on 114						
to 116		114.5	+	× 165-42½	S14-05E	S14-19E
π @ 116	136+29.05					
BS. on 115						
to 117		179.5	-	× 216-02½	S36-15W	S36-00W
π @ 117	138+08.55					
BS. on 116						
to 118		65.1	+	× 99-44½	S80-15E	S80-17E
π @ 118	138+73.65					
BS. on 117						
to 119		186.6	-	× 74-24½	N74-25E	N74-22E
π @ 119	140+60.25					
BS. on 118						
to 120		114.8		× 65-00	N65-05E	N64-58E
π @ 120	141+75.05					
BS. on 119						
to 121 ✓		111.7		× 53-06	N53-00E	N53-04E
	142+86.75					
		927.6 ✓				

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
π@121	142+86.75				
B.S. on 120					
to 122		54.75		× 94-37	S85-25E
π@122	143+41.5				
B.S. on 121					
to 123		167.1		+ × 195-43½	S15-45W
π@123	145+08.6				
B.S. on 122					
to 124		63.0		× 225-34	S45-43W
π@124	145+71.6				
B.S. on 23					
to 125		182.55		× 255-54	S76-00W
π@125	147+54.15				
B.S. on 124					
to 126		70.5		- × 220-19½	S40-25W
π@126	148+24.65				
B.S. on 125					
to 127	3	207.4		× 236-16	S56-20W
π@127	150+32.05				
B.S. on 126					
to 128		53.2		× 115-07	S64-55E
π@128	150+85.25				
B.S. on 127					
to 129		69.8		× 140-47	S39-10E
	151+55.05				
		868.30 ✓			

S85-25E

S15-42W

1st Co. rounding point up Cement Road Coffer

S45-32W

S75-52W

S40-17W

S56-13W

S64-56E

Broken stake

S39-16E

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
π @ 129	151+55.05				
BS. on 128					
to 130		63.6		× 157-44	S22-20E
π @ 130	152+18.65				
BS. on 129					
to 131		123.45	+	× 174-54½	S5-05E
π @ 131	153+42.1				
BS. on 130					
to 132		142.2		× 220-07	S40-10W
π @ 132	154+84.3				
BS. on 131					
to 133	✓	73.8	-	× 247-44½	S67-55W
π @ 133	155+58.1				
BS. on 132					
to 134		129.45		× 298-52½	N61-10W
π @ 134	156+87.55				
BS. on 133					
to 135		93.55	+	× 209-54½	S29-35W
π @ 135	157+81.1				
BS. on 134					
to 136		89.9		× 264-23	S84-20W
π @ 136	158+71.0				
BS. on 135					
to 137		62.4	-	× 193-39½	S13-30W
	159+33.4				
		778.35			

S22-19E

S5-08E

S40-04W

S67-40W

N61-12W

S29-51W

S84-19W

S13-35W

1-4-23 (Fine)

R.C. Wuesta
Ed. Ratchum
O.C. Palmer
P. Horan

Co.	Sta.	Dist.	Defl.	Az	Mag. Co.
π @ 137	159+33.4				
BS on 136					
to 138		51.3		X 264-21	S84-10W
π @ 138	159+84.7				
BS on 137					
to 139	✓5	151.2	+ X	327-53½	N32-30W
π @ 139	161+35.9				
BS on 138					
to 140		109.05	- X	195-14½	S15-05W
π @ 140	162+44.95				
BS on 139					
to 141		42.6	+ X	236-31½	S56-25W
π @ 141	162+87.55				
BS on 140					
to 142		229.7	X	304-39	N55-30W
π @ 142	165+17.25				
BS on 141					
to 143		199.15	X	146-05	S34-10E
π @ 143	167+16.4				
BS on 142					
to 144		84.65	- X	210-11½	S30-00W
π @ 144	168+01.05				
BS on 143					
to 145	✓6	113.0	+ X	292-04½	N68-05W
	169+14.05				
		480.65 ✓			

S84-17W

N32-11W

S15-09W

S56-27W

N55-26W

Head of wooded draw with spring

S34-00E

S30-06W

N68-01W

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
π @ 145	169+14.05				
BS. on 144					
to 146		132.9		✗ 146-01	S34-05E
π @ 146	170+46.95				
BS. on 145					
to 147		144.6		✗ 203-15	S73-05W
π @ 147	171+88.55				
BS. on 146					
to 148		219.5		✗ 244-09	S64-05W
π @ 148	174+08.05				
BS. on 147					
to 149		141.2		- ✗ 94-13½	S85-55E
π @ 149	175+49.25				
BS. on 148					
to 150		144.6		✗ 176-46	S3-20E
π @ 150	176+93.85				
BS. on 149					
to 151	✓	78.55		⊥ ✗ 103-10½	S76-45E
π @ 151	177+72.4				
BS. on 149					
to 152		80.75		- ✗ 34-28½	N34-15E
π @ 152	178+53.15				
BS. on 151					
to 153		140.7		✗ 78-02	N77-50E
	179+93.85	~~1079.80~~ ✓			

S34-05E

S73-09W

West side Cornett Road

S64-03W

S85-53E

S3-20E

+ on rock

S76-56E

Copper tack in disintegrated boulder.

N34-21E

N77-55E

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
T @ 153	179+93.85				
BS. on 152					
to 154		109.1	+	52-40½	N52-35E
T @ 154	181+02.95				
BS. on 153					
to 155		107.1	-	88-32½	N88-20E
T @ 155	182+10.05				
BS. on 154					
to 156		86.65		46-00	N45-45E
T @ 156	182+96.7				
BS. on 155					
to 157		135.55	+	68-10½	N68-00E
T @ 157	184+32.25				
BS. on 156					
to 158		204.1		80-10	N79-55E
T @ 158	186+36.35				
BS. on 157					
to 159		110.4		76-19	N76-00E
T @ 159	187+46.75				
BS. on 158					
to 160		126.3		117-04	S63-05E
T @ 160	188+73.05				
BS on 159					
to 161		296.3		114-34	S65-40E
	191+69.35				
		1175.50			

N52-34E

N88-25E

+ on rock

N45-53E

N68-03E

N80-02E

N76-11E

1-5-23 (fine)
R.C. Wuebste
Ed. Ketchum
O.C. Palmer
Pat. Horan

S63-04E

S65-34E

Co.	Sta.	Dist.	Defl.	Az.	Mag Co.
T@161	191+69.35				
BS. on 160					
to 162		56.3	+	93-23	S86-35E
T@162	192+25.65				
BS. on 161					
to 169 ✓9		110.1	-	337-30½	N22-35W
T on 163	193+35.75				
BS. on 162					
to 164		127.4	+	356-48½	N3-35W
T@ 164	194+63.15				
BS. on 163					
to 165		56.65	-	28-03½	N27-30E
T@165	195+19.8				
BS. on 164					
to 166		132.9	+	125-25	S54-40E
T@166	196+52.7				
BS. on 165					
to 167		184.7	+	26-53	N26-45E
T@ 167	198+37.4				
BS. on 166					
to 168		190.4	+	97-01	S83-00E
T@168	200+27.8				
BS. on 167					
to 169 ✓10		158.7	+	356-27	N3-50W
	201+86.5				
		1017.15 ✓			

along steep sloping rock face

S86-45E

In gulch with tanks

N22-39W

N3-20W

N27-54E

S54-44E

N26-44E

S83-08E

+ on rock

N3-43W

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.	
π@169	201+86.5					
B.S. on 168						
to 170		76.9	+ X	47-48½	N47-35E	N47-39E
π@170	202+63.4					
B.S. on 169						
to 171		187.1	X	101-02	S79-05E	S79-08E
π@171	204+50.5					
B.S. on 170						
to 172		178.8	− X	109-25½	S70-45E	S70-45E
π@172	206+29.3					
B.S. on 171						
to 173		191.9	X	97-36	S82-30E	S82-34E
π@173	208+21.2					
B.S. on 172						
to 174		86.5	+ X	101-07½	S79-00E	S79-02E
π@174	209+07.7					
B.S. on 173						
to 175	✓	89.8	− X	84-30½	N84-25E	N84-19E
π@175	209+97.5					
B.S. on 174						
to 176		82.1	+ X	108-54½	S71-10E	S71-16E
π@176	210+79.6					
B.S. on 175						
to 177		300.5	− X	127-06½	S53-05E	S53-05E
	213+80.1					
		1193.6				

1-6-23 (fine)

R.C. Wueste
Ed. Ketchum
O.C. Palmer
P. Horan

Co.	Sta.	Dist	Defl.	Az.	Mag. Co.
π @ 177	213+80.1				
B.S. on 176					
to 178		95.3	+	90-29½	S89-30E
					S89-41E
π @ 178	214+75.4				
B.S. on 177					
to 179		98.9	×	58-01	N57-55E
					N57-50E
π @ 179	215+74.3				
B.S. on 178					
to 180		52.3	- ×	128-26½	S51-35E
					S51-45E
π @ 180	216+26.6				
B.S. on 179					
to 181	✓17	60.85	×	153-57	S26-15E
					S26-15E
π @ 181	216+87.45				
B.S. on 180					
to 182		174.0	×	89-13	N89-05E
					N89-01E
π @ 182	218+61.45				
					+ on rock
B.S. on 181					
to 183		76.2	+ ×	53-40½	N53-25E
					N53-29E
π @ 183	219+37.65				
					+ on rock (sloping rock face)
B.S. on 182					
to 184		99.3	- ×	117-18½	S62-50E
					S62-54E
π @ 184	220+36.95				
					+ on rock (sloping rock face)
B.S. on 183					
to 185	✓13	203.3	+ ×	115-24½	S64-30E
					S64-48E
	222+40.25	860.15 ✓			

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
π @ 185	222+40.25				
BS. on 184					
to 186		258.5	- ✓	33-42½	N33-20E
π @ 186	224+98.75				
BS. on 185					
to 187		70.7	X	49-57	N49-20E
π @ 187	225+69.45				
BS. on 186					
to 188		1000	+ X	86-03½	N85-35E
π @ 188	226+69.45				
BS. on 187					
to 189		195.3	✓	111-14	S68-25E
π @ 189	228+64.75				
BS. on 188					
to 190		181.3	✓	94-07	S85-15E
π @ 190	230+46.05				
BS. on 189					
to 191		293.8	- ✓	93-34½	S86-20E
π @ 191	233+39.85				
BS. on 190					
to 192		119.0	✓	70-03	N69-50E
π @ 192	234+58.85				
BS. on 191					
to 193		183.0	✓	82-30	N82-15E
	236+41.85				
		1401.6 ✓			

+ on rock

N33-29E

N49-44E 1-8-23 (fine)
R.C. Woeste - transit
P. Horan - front & rear flag

N85-51E O.C. Palmer, Ed. Ketchum (motorboat)

S68-59E

S86-06E

Chaining beginning here by Ed. Ketchum & O.C. Palmer

+ on rock

S86-39E

N69-50E

N82-17E

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
π@193	236+41.85				
B.S. on 192					
to 194		274.0	+ ✓	89-07½	N89-00E
π@194	239+15.85				
B.S. on 193					
to 195		126.0	- ✓	53-25½	N53-05E
π@195	240+41.85				
B.S. on 194					
to 196		423.7	+ ✓	98-30½	S81-50E
π@196	244+65.55				
B.S. on 195					
to 197		91.8	✓	79-21	N79-00E
π@197	245+57.35				
B.S. on 196					
to 198		211.3	- ✓	97-58½	S82-15E
π@198	247+68.65				
B.S. on 197					
to 199		98.5	+ ✓	88-25½	N88-15E
π@199	248+67.15				
B.S. on 198					
to 200		70.6	✓	136-41	S43-35E
π@200	249+37.75				
B.S. on 199					
to 201		163.0	✓	96-28	S83-50E
	251+00.75	1458.9 ✓			

+ on rock			
	N88-55E		
	N53-12E		
+ on rock			
	S81-42E		
+ on rock			
	N79-08E		
+ on rock			
	S82-15E	1-9-23 (fine) (East wind in afternoon)	
		R.C. Wueste, P. Horan	} Transit
	N88-13E	Ed. Ratchum, O.G. Palmer	} Chain
+ on rock			
	S43-32E		
	S83-45E		

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
T@ 201	251+00.75				
B.S. on 200					
to 202		229.3	- ✓	80-21½	N80-00E
T@ 202	253+30.05				
B.S. on 201					
to 203		153.8	✓	81-16	N80-50E
T@ 203	254+83.85				
B.S. on 202					
to 204		295.4	✓	90-37	S89-50E
T@ 204	257+79.25				
B.S. on 203					
to 205		129.1	+ ✓	96-10½	S84-15E
T@ 205	259+08.35				
B.S. on 204					
to 206		62.15	✓	23-15	N22-35E
T@ 206	259+70.5				
B.S. on 205					
to 207		102.9	✓	61-50	N61-15E
T@ 207	260+73.4				
B.S. on 206					
to 208		158.4	- ✓	64-49½	N64-25E
T@ 208	262+31.8				
B.S. on 207					
to 209	✓12	206.3	+ ✓	37-22½	N36-45E
	264+38.1				
		337.35 ✓			

N80-08E

+ on rock

N81-03E

+ on rock

S89-36E

S84-02E

In gulch with a little water

N23-02E

N61-37E

+ on rock

N64-36E

N37-11E

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
π@209	264+38.1				
BS. on 208					
to 210		58.4		✓ 91-47	S88-30E
π@210	264+96.5				
BS. on 209					
to 211		300.4	-	✓ 138-05½	S42-15E
π@211	267+96.9				
BS. on 210					
to 212		172.3		✓ 87-15	N87-00E
π@212	269+69.2				
BS. on 211					
to 213		337.5		✓ 94-08	S86-15E
π@213	273+06.7				
BS. on 212					
to 214		202.0		✓ 119-22	S60-50E
π@214	275+08.7				
BS. on 213					
to 215		43.0		✓ 35-02	N34-00E
π@215	275+51.7				
BS. on 214					
to 216		150.4	+	✓ 64-57½	N64-25E
π@216	277+02.1				
BS. on 215					
to 217		145.0	-	✓ 89-03½	N88-55E
	278+47.1	1409.0 ✓			

S88-25E
(Az. on this Co. uncertain acct. wind)

S42-09E
Very windy hogs-back - oak tree on flat below.

N87-03E
+ on edge of rock cliff.

S86-04E
+ on rock

S60-50E

(?) N34-50E · 1-10-23 (fine)
R.C. Wuesta, P. Horan } Transit
Ed. Ratchum, O.G. Palmer } chain

N64-46E
+ on rock

N88-51E

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
π@217	278+47.1				
BS. on 216					
to 218		297.7	✓	102-09	S78-05E
π@218	281+44.8				
BS. on 217					
to 219		164.1	✓	95-58	S84-20E
π@219	283+08.9				
BS. on 218					
to 220		217.8	+ ✓	118-56½	S61-00E
π@220	285+26.7				
BS. on 219					
to 221		133.0	✓	154-07	S25-50E
π@221	286+59.7				
BS. on 220					
to 222		159.7	✓	82-14	N82-15E
π@222	288+19.4				
BS. on 221					
to 223		94.4	✓	109-02	S70-55E
π@223	289+13.8				
BS. on 222					
to 224		75.4	✓	60-55	N61-00E
π@224	289+89.2				
BS. on 223					
to 225		102.8	✓	94-42	S85-10E
	290+92.0	1244.9 ✓			

S78-03E

S84-14E

S61-15E

S26-05E

rock slide gulch

N82-02E

+ on rock in boulder moraine below rock free

S71-10E

N60-43E

S85-30E

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
π @ 225	290+92.0				
BS. on 224					
to 226		121.0	- ✓	62-14½	N62-10E
π @ 226	292+13.0				
BS. on 225					
to 227 ✓11		128.0	+ ✓	83-47½	N83-30E
π @ 227	293+41.0				
BS. on 226					
to 228		188.3	- ✓	124-59½	S55-00E
π @ 228	295+29.3				
BS. on 227					
to 229		102.2	✓	110-53	S69-00E
π @ 229	296+31.5				
BS. on 228					
to 230		231.4	✓	128-36	S51-25E
π @ 230	298+62.9				
BS. on 229					
to 231		289.7	✓	124-58	S55-00E
π @ 231	301+52.6				
BS. on 230					
to 232		219.9	+ ✓	76-14½	N76-25E
π @ 232	303+72.5				
BS. on 231					
to 233		145.9	✓	139-12	S40-55E
	305+18.4	~~1426.4~~			

N62-02E

N83-37E

S55-12E

S69-18E

S51-35E

S55-13E

N76-04E

S40-59E

Co.	Sta.	Dist.	Defl.	Az. Mag. Co.
π@233	305+18.4			
B.S. on 232				
to 234		299.7	✓ 102-14	S78-00E
π@234	308+18.1			
B.S. on 233				
to 235		419.1	✓ 93-50	S86-15E
π@235	312+37.2			
B.S. on 234				
to 236		52.6	✓ 29-20	N29-05E
π@236	312+89.8			
B.S. on 235				
to 237		125.6	✓ 86-13	N86-00E
π@237	314+15.4			
B.S. on 236				
to 238		126.7	✓ 13-41	N13-30E
π@238	315+41.6			
B.S. on 237				
to 239 ✓11		400.0	✓ 83-05	N83-00E
π@239	319+41.6			
B.S. on 238				
to 240		117.3	- ✓ 126-10½	S54-00E
π@240	320+58.9			
B.S. on 239				
to 241		90.2	✓ 146-00	S34-05E
	321+49.1	~~630.7~~	✓	

S77-57E
this co. across gulch deviating about 5 ft from line

(?) S86-21E 1-N-23 (fine)
R.C. Wuoste, P. Horan } transit
Ed Ketchum, O.C. Palmer } chain

+ on rock

N29-09E

N86-02E

N13-30E
+ on rock

N82-54E
this co across rocks on front of Salazar Hill
+ on rock

S54-01E

S54-11E

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
T@241	321+49.1				
BS. on 240					
to 242		61.1		✓ 101-11	579-00E
T@242	322+10.2				
BS. on 241					
to 243	12	179.7	+ ✓	137-53½	542-10E
T@243	323+89.9				
BS. on 242					
to 244		176.8		✓ 106-46	573-15E
T@244	325+66.7				
BS. on 243					
to 245		279.3		✓ 108-16	571-45E
T@245	328+46.0				
BS. on 244					
to 246		241.6		✓ 100-27	579-40E
T@246	330+87.6				
BS. on 245					
to 247	13	236.5	- ✓	96-07½	584-00E
T@247	333+24.1				
BS. on 246					
to 248		99.4	+ ✓	111-54½	568-00E
T@248	334+23.5				
BS. on 247					
to 249		213.1		✓ 100-38	579-30E
	336+36.6	~~487.5~~			

579-00E

542-18E

573-26E

+ on rock

571-56E

579-45E

584-06E

568-18E

579-35E

Co	Sta	Dist	Defl	Az	Mag Co
π @ 249	336+36.6				
B.S. on 248					
to 250		74.5		✓ 125-49	S54-15E
π @ 250	337+11.1				
B.S. on 249					
to 251	14	163.1		✓ 83-32	N83-25 E
π @ 251	338+74.2				
B.S. on 250					
to 252		93.5		- ✓ 90-13½	S89-50E
π @ 252	339+67.7				
B.S. on 251					
to 253		144.3		+ ✓ 103-32½	S76-35E
π @ 253	341+12.0				
B.S. on 252					
to 254		108.0		- ✓ 141-12½	S39-05E
π @ 254	342+20.0				
B.S. on 253					
to 255	15	72.0		✓ 90-39	S89-35E
π @ 255	342+92.0				
B.S. on 254					
to 256		299.6		✓ 107-27	S72-45E
π @ 256	345+91.6				
B.S. on 255					
to 257		83.8		+ ✓ 164-40½	S15-30E
	346+75.4				
		1038.8 ✓			

+ on rock			
	S54-24E		
	N83-18 E		
+ on rock			
	N89-59E		
+ on rock			
	S76-41E		
+ on rock (copper tack in soft rock)			
	S39-02E		
	S 89-36E	1-12-23 (time)	
		R.C. Nocita P. Horan	} Transit
	S72-48E	Ed Ketchum O.C. Palmer	} chain
+ on rock			
	S15-34E		

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
℄@ 257	346+75.4				
B.S. on 256					
to 258		111.7	- ✓	108-41½	S71-30E
℄@ 258	347 +87.1				
B.S. on 257					
to 259	16	2556	+ ✓	112-58½	S67-15E
℄@ 259	350+42.7				
B.S. on 258					
to 260		187.3	✓	121-49	S58-10E
℄@ 260	352+30.0				
B.S. on 259					
to 261		67.3	- ✓	92-43½	S87-20E
℄@ 261	352+97.3				
B.S. on 260					
to 262		81.8	+ ✓	127-05½	S53-00E
℄@ 262	353+79.1				
B.S. on 261					
to 263	17	126.4	- ✓	91-46½	S88-20E
℄@ 263	355+05.5				
B.S. on 262					
to 264		118.8	✓	77-50	N77-45E
℄@ 264	356+24.3				
B.S. on 263					
to 265		1525	✓	112-44	S67-15E
	357+76.8	1101.4 ✓			

S71-34E

+ on rock

S67-17E

+ on rock

S58-27E

+ on rock

S87-33E

S53-10E

S88-31E

+ on rock

N77-33E

+ on rock

S67-33E

Co.	Sta.	Dist.	Defl.	AZ.	Mag Co
π@265	357+76.8				
BS on 264					
to 266.		134.3		✓ 89-21	N89-25E
π@266	359+11.1				
BS on 265					
to 267	18	123.5		✓ 107-30	S72-30E
π@267	360+34.6				
BS on 266					
to 268		105.3		✓ 87-02	N87-00E
π@268	361+39.9				
BS on 267					
to 269		202.9		✓ 67-15	N67-05E
π@269	363+42.8				
BS on 268					
to 270		90.5	+	✓ 102-14½	S77-50E
π@270	364+33.3				
BS on 269					
to 271	19	103.8	-	✓ 57-57½	N57-55E
π@271	365+37.1				
BS on 270					
to 272		116.3		✓ 97-58	S82-05E
π@272	366+53.4				
BS on 271					
to 273		122.8		✓ 105-44	S74-25E
	367+76.2				
		999.4 ✓			

ton rock	
	N89-04E
ton rock	
	S72-48E
	N86-44E
	N66-57E
	S78-03E
	N57-38E
	S82-21E
	S74-35E

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
π @ 273	367+76.2				
B.S. on 272					
to 274		139.5	+ ✓	78-31½	N78-30E
π @ 274	369+15.7				
B.S. on 273					
to 275	20	251.0	- ✓	92-29½	S87-35E
π @ 275	371+66.7				
B.S. on 274					
to 276		93.5	✓	114-52	S65-10E
π @ 276	372+60.2				
B.S. on 275					
to 277		113.0	+✓	91-55½	S88-00E
π @ 277	373+73.2				
B.S. on 276					
to 278		106.2	✓	84-27	N84-30E
π @ 278	374+79.4				
B.S. on 277					
to 279	21	205.0	- ✓	95-40½	S84-30E
π @ 279	376+84.4				
B.S. on 278					
to 280		158.4	+ ✓	60-53½	N60-55E
π @ 280	378+42.8				
B.S. on 279					
to 281		157.8	✓	70-14	N70-15E
	380+00.6	~~1224.4~~ ✓			

+ on rock			
	N78-13E		
	S87-51E		
	S65-28E		
	S88-24E		
+ on rock			
	N84-07E	1-13-23 (fine)	
+ on rock		R.S. Woodside, P. Horan }	Transit
		Ed. Ketchum, O.C. Palmer }	chain
	S84-41E		
	N60-33E		
	N69-53E		

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
⊼ @ 281	380+00.6				
B.S. on 280					
to 282		141.2	- ✓	63-37½	N63-30E
⊼ @ 282	381+41.8				
B.S. on 281					
to 283	zz	67.6	+ ✓	55-01½	N55-00E
⊼ @ 283	382+09.4				
B.S. on 282					
to 284		130.4	✓	77-11	N77-05E
⊼ @ 284	383+39.8				
B.S. on 283					
to 285		189.2	✓	79-52	N79-45E
⊼ @ 285	385+29.0				
B.S. on 284					
to 286	✓23 (45)	102.8	✓	92-51	S87-10E
⊼ @ 286 △	386+31.8				
B.S. on 285					
to 287		82.8	- ✓	119-49½	S60-15E
⊼ @ 287	387+14.6				
B.S. on 286					
to 288		111.0	- ✓	87-57	N87-55E
⊼ @ 288	388+25.6				
B.S. on 287					
to 289		160.7	✓	81-48	N81-50E
	389+86.3	985.7 ✓			

N63-16E

N54-40E

N76-49E

N79-30E

alongside immense boulder with two oak trees on lower side

S87-32E

S60-34E

N87-34E

N81-25E

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
π @ 289	389 + 86.3				
BS. on 288					
to 290		121.8	+	110-44½	S69-25E
π @ 290	391 + 08.1				
BS. on 289					
to 291	(20)	188.2	-	82-25½	N82-25E
π @ 291	392 + 96.3				
BS. on 290					
to 292		284.0		103-13	S77-05E
π @ 292	395 + 80.3				
BS. on 191					
to 293		653	+	66-29½	N66-25E
π @ 293	396 + 45.6				
BS. on 292					
to 294		171.2		110-42	S69-15E
π @ 294	398 + 16.8				
BS. on 293					
to 295		180.7		82-55	N82-50E
π @ 295	399 + 97.5				
BS. on 294					
to 296	(25)	210.4		118-01	S62-05E
π @ 296	402 + 07.9				
BS. on 295					
to 297		94.2		128-37	S51-30E
	403 + 02.1				
		1315.8 ✓			

	S69-38E
+ on rock	
	N82-01E
	S77-11E
	N66-06E
	S69-42E
	N82-31E
+ on rock	
	S62-24E
	S51-48E

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
Π @ 297	403+02.1				
B.S. on 296					
to 298		61.3		✗ 102-14+	S77-55E
Π @ 298	403+63.4				
B.S. on 297					
to 299		86.0		✗ 139-27	S40-35E
Π @ 299	404+49.4				
B.S. on 298					
to 300		85.8		✗ 99-47	S80-25E
Π @ 300	405+35.2				
B.S. on 299					
to 301	(20)	80.8		✗ 53-25	N53-10E
Π @ 301	406+16.0				
B.S. on 300					
to 302		66.1		✗ 119-26	S60-45E
Π @ 302	406+87.1				
B.S. on 301					
to 303		128.0		✗ 84-34+	N84-15E
Π @ 303	408+10.1				
B.S. on 302					
to 304		162.3		✗ 98-46	S81-30E
Π @ 304	409+72.4				
B.S. on 303					
to 305		60.9	+	✗ 92-54½	S87-25E
	410+33.3				
		731.2 ✓			

	S78-11E
	S40-58E
	N80-38E
+ on rock	
	N57-59E
+ on rock	
	S61-00E
+ on rock	
	N84-08E
	S81-40E
	S87-31E

1-15-23 (East Wind)

R.G. Woodside } Transit
P. Horan }

Ed. Ketchum } Chain
O.C. Palmer }

Co.	Sta.	Dist.	Defl.	Az	Mag. Co.
T@305	410+333				
BS. on 304					
to 306	(27)	183.0		X 107-56	S72-30E
T@ 306	412 +163				
BS. on 305					
to 307		172.2		X 86-25	N86-15E
T@ 307	413 + 885				
BS. on 306					
to 308		186.6		X 102-17	S78-00E
T@308	415 +751				
BS. on 307					
to 309		59.5		X 79-13	N79-10E
T@309	416 +346				
BS. on 308					
to 310		64.7		- X 114-51½	S65-10E
T@310	416 +993				
BS. on 309					
to 311	(28)	85.4		X 136-08	S44-00E
T@311	417 +847				
BS. on 310					
to 312		174.1		+ X 105-57½	S74-10E
T@312	419+588				
BS. on 311					
to 313		68.3		- X 112-11½	S68-00E
	420+271				
		993.8 ✓			

S72-31E

N85-58E

S78-10E

N78-46E

S65-36E

S44-20E

S74-30E

S68-17E

Co.	Sta.	Dist.	Defl.	Az	Mag. Co.
℄@313	420+27.1				
BS. on 312					
to 314		127.9	+	104-00½	S76-05E
℄@314	421+55.0				
BS. on 313					
to 315		43.9	-	55-15½	N55-00E
℄@315	421+98.9				
BS. on 314					
to 316 (29)		134.6	+	95-51½	S84-15E
℄@316	423+33.5				
BS. on 315					
to 317		243.7	-	83-58½	N83-40E
℄@317	425+77.2				
BS. on 316					
to 318		146.2		91-34	S88-35E
℄@318	427+23.4				
BS. on 317					
to 319		137.1		81-49	N81-40E
℄@319	428+60.5				
BS. on 318					
to 320		260.0		94-06	S86-00E
℄@320	431+20.5				
BS. on 319					
to 321 (30)		175.3	+	94-08½	S86-05E
	432+95.8				
		1268.7 ✓			

S76-27E

N54-47E

S84-37E

N83-29E

S88-55E

N81-20E

S86-23E

S86-21E

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
π @ 321	432+95.8				
B.S. on 320					
to 322		131.6	X	79-29	N79-15E
π @ 322	434+27.4				
B.S. on 321					
to 323		86.3	X	99-39	S80-55E
π @ 323	435+13.7				
B.S. on 322					
to 324		119.4	- X	110-25½	S69-30E
π @ 324	436+33.1				
B.S. on 323					
to 325		145.5	X	118-19	S62-00E
π @ 325	437+78.6				
B.S. on 324					
to 326 (38)		151.0	+ X	112-35½	S67-55E
π @ 326	439+29.6				
B.S. on 325					
to 327		234.5	- X	75-45½	N75-30E
π @ 327	441+64.1				
B.S. on 326					
to 328		125.6	+ X	97-47½	S82-50E
π @ 328	442+89.7				
B.S. on 327					
to 329		191.2	X	115-13	S65-00E
	444+80.9				
		1185.1			

N78-59E

Opposite Drop in Flume at Road Xing

S80-51E

+ on sloping rock

S70-05E

S62-11E

1-16-23 (Fine)
R.C. Wueste } Transit
P. Horan }

S67-55E

Ed. Ketchum }
O.C. Palmer } chain

N75-14E

This Co. crosses Dolores Conduit Extension
On Conduit berm

(barbwire fence) S82-43E

S65-18E

This Co. crosses Dolores Conduit Extension

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
π @ 329	444+80.9				
BS. on 328					
to 330		201.9		× 106-25	S73-45E
π @ 330	446+82.8				
BS. on 329					
to 331	(32)	118.0		- × 86-30½	N86-15E
π @ 331	448+00.8				
BS. on 330					
to 332		183.3		× 315-42	N44-30W
π @ 332	449+84.1				
BS. on 331					
to 333		226.3		× 302-10	N58-00W
π @ 333	452+10.4				
BS. on 332					
to 334		475.0 288.9		× 303-19+	N57-00W
π @ 334	454+99.3				
BS. on 333					
to 335		100.7		+ × 354-13½	N6-10W
π @ 335	456+00.0				
BS. on 334					
to 336	(33)	100.9		- × 220-56½	S40-40W
π @ 336	457+00.9				
BS. on 335					
to 337		155.6		× 269-34+	S89-25W
	458+56.5				
		1375.6 ✓			

S74-06E

N85-58E

tonrock in Creek bottom alongside flume

N44-50W

This co crosses Cottonwood Creek

N58-22W

@ outside edge of road

N57-13W

this co. crosses road

Note: this co assumed in error in plotting Lengthened to 475 ft

N6°18'W

S40°23'W

S89°01'W

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
T@337	458+56.5				
BS. on 336					
to 338		155.4	+ × 284-55½	N75-15W	
T@ 338	460+11.9				
BS. on 337					
to 339		105.0	- × 349-12½	N11-10W	
T@339	461 + 16.9				
BS. on 338					
to 340		167.0	× 247-13	S67-00W	
T@340	462+83.9				
BS. on 339					
to 341	(34)	469.9	+ × 274-15½	N86-10W	
T@341	467+53.8				
BS. on 340					
to 342		369.0	- × 287-39½	N72-30W	
T@342	471+22.8				
BS. on 341					
to 343		274.0	+ × 277-04½	N83-10W	
T@343	473+96.8				
BS. on 342					
to 344		173.6	- × 284-02½	N76-05W	
T@344	475+70.4				
BS. on 343					
to 345		463.3	+ × 292-29½	N67-50W	
	480+33.7				
		2177.2 ✓			

+ on rock		
	N75-37W	
+ on rock		
	N11-21W	
	S66-40W	
+ on rock under oak tree		
	N86-18W	
	N72-55W	
	N83-29W	
	N76-32W	
	N68-04W	

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co
π @ 345	480+33.7				
BS. on 344					
to 346	(35)	527.9	✓	287-04	N73-05W
π @ 346	485+61.6				
BS. on 345					
to 347		77.1	✓	265-23	S85-00W
π @ 347	486+38.7				
BS. on 346					
to 348		520.9	✓	295-39	N64-30W
π @ 348	491+59.6				
BS. on 347					
to 349		261.0	- ✓	295-55½	N64-25W
π @ 349	494+20.6				
BS. on 348					
to 350		257.3	✓	350-13	N10-10W
π @ 350	496+77.9				
BS. on 349					
to 351	(36)	540.8	✓	292-12+	N68-00W
π @ 351	502+18.7				
BS. on 350					
to 352		118.1	+ ✓	251-16½	S71-00W
π @ 352	503+36.8				
BS. on 351					
to 353		227.8	- ✓	282-13½	N78-05W
	505+64.6				
		2530.9 ✓			

1-17-23 (fine)

R.C. Wuesta } Transit
P. Heron }

Ed Ketchum } chain
O.C. Palmer }

N78-31W

S84-48W

N64-56W

fence running up hill @ 20 ft plus or minus c.c.

N64-40W

N10-22W

N68-24W

S70-41W

N78-23W

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
℄ @ 353	505+64.6				
BS. on 352					
to 354		150.9	+ ✓	262-47½	S82-30W
℄ @ 354	507+15.5				S82-12W
BS. on 353					
to 355		144.0	✓	280-49	N79-25W
℄ @ 355	508+59.5				N79-47W
BS. on 354					
to 356 (37)		195.4	- ✓	318-32½	N41-40W
℄ @ 356	510+54.9				N42-05W
BS. on 355					
to 357		114.3	+ ✓	281-09½	N79-00W
℄ @ 357	511+69.2				N79-17W
BS. on 356					
to 358		104.5	✓	311-43	N48-35W
℄ @ 358	512+73.7				N48-54W
BS. on 357					
to 359		122.6	✓	239-29	S59-15W
℄ @ 359	513+96.3				S58-52W
BS. on 358					
to 360 ✓38		345.6	✓	261-09	S80-45W
℄ @ 360	517+41.9				S80-31W
BS. on 359					
to 361		252.3	- ✓	271-03½	N89-10W
	519+94.2	1429.6 ✓			N89-35W

9082

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
π@ 361	519+94.2				
BS on 360					
to 362		136.8	+ ✓	350-12½	N10-05W
π@ 362	521+31.0				
BS on 361					
to 363		181.8	- ✓	216-13½	S36-00W
π@ 363	523+12.8				
BS on 362					
to 364		260.5	+ ✓	281-38½	N78-45W
π@ 364	525+73.3				
BS on 363					
to 365		146.5	- ✓	269-02½	S88-45W
π@ 365	527+19.8				
BS on 364					
to 366		182.6	✓	350-01-	N10-30W
π@ 366	529+02.4				
BS on 365					
to 367		341.8	+ ✓	326-10½	N35-15W
π@ 367	532+44.2				
BS on 366					
to 368		298.8	- ✓	196-54½	S16-30W
π@ 368	535+43.0				
BS on 367					
to 369		291.5	+ ✓	225-06½	S44-45W
	538+34.5				
		~~184~~ 0.3 ✓			

	N10-25W
	S35-35W
	N78-59W
	S88-24W
	N10-37W
	N35-27W
Inquish back of Salazar base	
	S16-16W
	S44-29W

1-18-23 (partcloudy)
R.C. Wueste } Transit
P. Horan
Ed. Ketchum } chain
O.C. Palmer

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
π@369	538+34.5				
BS. on 368					
to 370		531.2	- ✓	251-20½	S71-00W
π@370	543+65.7				
BS. on 369					
to 371		245.5	+ ✓	277-44½	N82-30W
π@371	546+11.2				
BS. on 370					
to 372		82.2	✓	253-10	S72-50W
π@372	546+93.4				
BS. on 371					
to 373		217.6	- ✓	275-56½	N84-25W
π@373	549+11.0				
BS. on 372					
to 374		56.5	+ ✓	233-24½	S53-05W
π@374	549+67.5				
BS. on 373					
to 375		117.0	✓	279-29	N80-15W
π@375	550+84.5				
BS. on 374					
to 376		213.6	✓	240-02	S59-40W
π@376	552+98.1				
BS. on 375					
to 377		58.0	- ✓	308-33½	N51-50W
	553+56.1				
		1521.6 ✓			

S70-42W	
N82-53W	
S72-37W	
N84-42W	
S52-47W	
N81-09W	
S59-24W	
N52-05W	

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
π @ 377	553+56.1				
BS. on					
to 378		132.9	✓	346-52	N13-50W
π @ 378	554+89.0				
BS. on 377					
to 379		224.8	✓	303-10	N57-25W
π @ 379	557+13.8				
BS. on 378					
to 380		74.0	✓	200-33	S20-05W
π @ 380	557+87.8				
BS. on 379					
to 381		111.1	+ ✓	227-38½	S47-20W
π @ 381	558+98.9				
BS. on 380					
to 382		60.5	- ✓	259-06½	S78-50W
π @ 382	559+59.4				
BS. on 381					
to 383	39	77.6	✓	352-15	N8-20W
π @ 383	560+37.0				
BS. on 382					
to 384		244.2	✓	40-08	N39-40E
π @ 384	562+81.2				
BS. on 383					
to 385		253.0	✓	331-55	N28-30W
	565+34.2				
		1178.1			

N13-46W
N57-28W
S19-55W
S47-01W
S78-28W
N8-24W
N39-29E
N28-44W

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.		
π@385	565+34.2						
B.S. on 384							
to 386		200.9	+ ✓	350-25½	N10-10W		N10-13W
π@386	567+35.1						
B.S. on 385							
to 387		255.8	- ✓	337-12½	N23-25W		N23-27W
π@387	569+90.9					+ on rock	
B.S. on 386							
to 388		126.3	+ ✓	5-03½	N4-00E	(P)	N4-25E
π@388	571+17.2						
B.S. on 387							
to 389		154.3	- ✓	16-53½	N16-00E	(P)	N16-14E
π@389	572+71.5					In gulch from which Salazar pipes irrigation water to lower field	
B.S. on 388							
to 390		206.8	+ ✓	235-41½	S55-00W	(P)	S55-03W
π@390	574+78.3						
B.S. on 389							
to 391		166.2	✓	198-31	S17-00W	(within 35ft of 1" pipe-line	S17-52W
π@391	576+44.5						
B.S. on 390							
to 392		295.3	✓	203-28	S23-00W		S22-49W
π@392	579+39.8						
B.S. on 391							
to 393		299.2	✓	210-34	S30-10W		S29-55W
	582+39.0						
		1704.8✓					

1-19-23 (cloudy)

R.C. Wueste } Transit
P. Horan } and
Fred Quard } chain

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.	
T@393	582+39.0					
BS. on 392						
to 394		222.4	- ✓	231-48½	S51-55W	S51-09W
T@394	584+61.4					
BS. on 393						
to 395		297.2	+ ✓	281-34½	N78-30W	N79-04W
T@395	587+58.6					
BS. on 394						
to 396		119.4	✓	243-58	S63-30W	S63-19W
T@396	588+78.0					
BS. on 395						
to 397		368.8	✓	267-06	S86-50W	S86-27W
T@397	592+47.8					
BS. on 396						
to 398		167.8	- ✓	274-12½	N86-20W	N86-27W
T@398	594+15.6					+ on rock
BS. on 397						
to 399		128.2	+ ✓	321-46½	N39-00W	N38-52W
T@399	595+43.8					
BS. on 398						
to 400		158.3	✓	266-42	S86-00W	S86-03W
T@400	597+01.1					+ on rock
BS. on 399						
to 401		176.7	✓	283-55	N76-30W	N76-44W
	598+77.8					
		4638.8 ✓				

Co	Sta	Dist	Defl	Az	Mag Co
⌅@401	598+77.8				
BS on 400					
to 402		142.8	- ✓	309-10½	N51-30W
⌅@402	600+20.6				
BS on 401					
to 403		159.0	+ ✓	226-28½	S45-45W
⌅@403	601+79.6				
BS on 402					
to 404		160.4	- ✓	244-55½	S64-30W
⌅@404	603+40.0				
BS on 403					
to 405		199.2	+ ✓	280-38½	N80-00W
⌅@405	605+39.2				
BS on 404					
to 406	✓0	106.1	✓	216-58	S36-25W
⌅@406	606+45.3				
BS on 405					
to 407		518.6	✓	302-37+	N57-55W
	611+63.9				
(to 239)		1286.1 ✓		195-17-	S14-50W
	New start with Corrected Azimuth				
⌅@406					
F.S. on △				283-13	
to 407	✓0	518.6	✓	301-57'	N57-50W
	611+63.9				

to rock

N51-89W

S45-50W

to rock

S64-16W

to rock

N 80-00W

1-20-23 (lightly clouded)
R.C. Wuesta } Transit
P. Horan } and chain

S36-18-W

Inspiary on Solazar Hill (Rt. side)

N58-03W

For Az check see page 58

See page 58

N58-03W

1-22-23 (cloudy)
R.C. Wuesta } Transit
P. Horan
Ed Katahara } chain
O.C. Palmer

Co	Sta	Dist	Def	Az	Mag Co
π@ 407	611+63.9				
BS. on 406					
to 408		140.3		✓ 262-04	S 82-00 W
π@ 408	613+04.2				
BS. on 407					
to 409		68.2	-	✓ 303-31½	N 56-30 W
π@ 409	613+72.4				
BS. on 408					
to 410		89.8	+	✓ 358-40½	N 1-30 W
π@ 410	614+62.2				
BS. on 409					
to 411		182.0	-	✓ 285-37½	N 74-35 W
π@ 411	616+44.2				
BS. on 410					
to 412		166.3		✓ 303-17	N 56-45 W
π@ 412	618+10.5				
BS. on 411					
to 413		192.4		✓ 226-47	S 47-00 W
π@ 413	620+02.9				
BS. on 412					
to 414		62.9		✓ 286-41	N 73-00 W
π@ 414	620+65.8				
BS. on 413					
to 415		310.9		✓ 286-12	N 73-40 W
	623+76.7	1212.8 ✓			

S 82-04 W

to on rock

N 56-29 W

N 1-19 W

N 74-23 W

N 56-43 W

S 47-47 W

N 73-19 W

N 73-48 W

Co	Sta	Dist	Defl.	Az	Mag. Co.
π@ 415	623+767				
BS. on 414					
to 416		545.7	+ ✓	294-30½	N65-30W
π@ 416	629 + 22.4				
BS. on 415					
to 417		488.9	✓	295-16	N64-30W
π@ 417	634 + 11.3				
BS. on 416					
to 418		295.9	✓	305-51	N53-35W
π@ 418	637 + 07.2				
BS. on 417					
to 419		600 ~~529.8~~	✓	325-17	N34-30W
π@ 419	642 + 37.0				
BS. on 418					
to 420		103.2	- ✓	219-11½	539-35W
π@ 420	643 + 40.7				
BS. on 419					
to 421		340.0	✓	240-28	561-00W
π@ 421	646 + 80.7				
BS. on 420					
to 422		324.6	✓	266-04	586-10W
π@ 422	650 + 01.8				
BS. on 421					
to 423		185.9	+ ✓	247-34½	567-45W
	651 + 90.7				
		2814.0 ✓			

+ on rock

N65-29W

N64-44W

+ on rock

(?) N54-09W

N34-43W This co. lengthened to 600 ft for plotting

Head of gulch with water

S39-41W

+ on rock

S60-28W

+ on rock

S86-04W

S67 35W

Co.	Sta.	Dist.	Defl	Az	Mag. Co.
π @ 423	651+90.7				
BS. on 422					
to 424		131.6	✓	266-55	587-05W
π @ 424	653 + 22.3				
BS. on 423					
to 425		518.5	✓	290-10	N69.50W
π @ 425	658 + 40.8				
BS. on 424					
to 426		299.8	- ✓	296-29½	N.63-15W
π @ 426	661 + 40.6				
BS. on 425					
to 427		298.6	✓	299-03	N60-30W
π @ 427	664 + 39.7				
BS. on 426					
to 428		166.6	✓	317-12	N42-25W
π @ 428	666 + 06.8				
BS. on 427					
to 429		178.7	✓	275-46	N83-30W
π @ 429	667 + 85.5				
BS. on 428					
to 430		297.2	+ ✓	289-47½	N69-30W
π @ 430	670 + 81.7				
BS. on 429					
to 431		292.4	✓	295-45	N64-30W
	673 + 74.1				
		2183.4 ✓			

+ on rock

586-55W

N69-50W

1-23-23 (cloudy)

R.G. Wuesta } Transit
P. Horan
Ed Ketchum } chain
O.C. Palmer

N63-31W

N60-57W

N42-48W

N84-14W

N70-12W

N64-45W

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.		
T@431	673+74.1						
B.S. on 430							
to 432		233.7	✓	301-35	N58-40W	(P)	N58-25W ✓
T@432	676+07.8						
B.S. on 431							
to 433		297.7	- ✓	270-02½	West		N89-58W
T@433	679+05.5						
B.S. on 432							
to 434		185.3	✓	251-45	S72-00W		S71-45W
T@434	680+90.8						
B.S. on 433							
to 435		242.8	+ ✓	263-15½	S84-30W	(P)	S83-16W
T@435	683+33.6						
B.S. on 434							
to 436		638.6	✓ ✓	257-02	S76-30W	(P)	S77-02W
T@436	689+72.2						
B.S. on 435							
to 437		145.8	✓ ✓	291-30	N68-30W		N68-30W
T@437	691+18.0						
B.S. on 436							
to 438		172.5	✓ ✓	230-03	S50-15W		S50-03W
T@438	692+90.5						
B.S. on 437							
to 439		172.7	✓ ✓	250-45	S71-00W		S70-45W ✓
	694+13.2						
		2039.1 ✓					

Co.	Sta.	Dist.	Defl.	Az.	Mag. Co.
π @ 439	694+13.7				
BS. on 438					
to 440		92.9		268-26	S88-30W
π @ 440	695+06.1				
BS. on 439					
to 441		297.5		279-24	N80-15W
π @ 441.	698+03.6				
BS. on 440					
to △				285-23	N74-30W
New Start with Corrected Azimuth					
π @ 441	698+03.6				
F.S. on △				285-26½	
to 442		44.1		319-15	N40-30W
π @ 442	698+47.7				
BS. on 441					
to 443		125.2		331-12	N28-48W
π @ 443	699+72.9				
BS. on 442					
to 444		243.7		33-59	N34-00E
π @ 444	702+16.6				
BS. on 443					
to 445		293.7		344-11½	N15-49W
π @ 445	705+10.3				
BS. on 444					
to 446		392.7		338-59	N21-01W
	709+03.0	1489.8			

+ on rock

S88-26W

N80-36W

= △

N74-37W

(105-26½ plus 180-00 = 285-26½ = minus 3½ Error - See page 68)

N40-45W

(151-12) N28-48W

+ on rock on rocky point

N33-59E

(164-11½) N15-49W

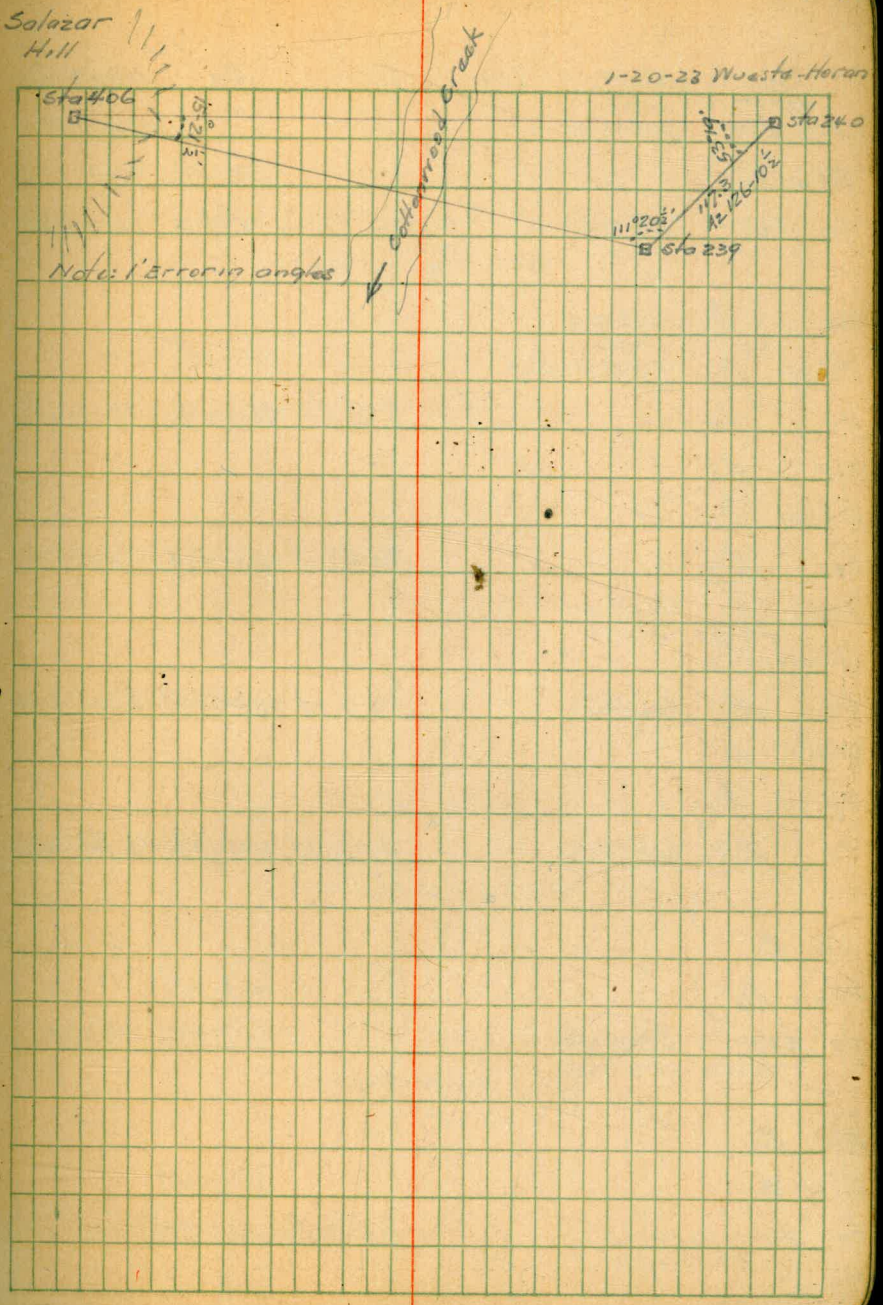
N21-01W

Ties.

Co	Sta	Dist	Defl.	Az	Mag Co
T@ 240	320+589				
BS on 239				126-10½	553-50E
to 406	606+453			359-29½	N 0-30W

Solazar Hill

1-20-23 Wuesta-Heron



Azimuth Checks.

Co.	Sta.	Dist.	Defl.	Az	Mag. Co.
℄ @ 239	319+41.6				
F.S. on 240				126-10½	S 53-50 E
to 406	606+45.3			14-50	N 14-50 E
℄ @ 1 = (B)	0+00				
F.S. on (A)	• Stakes on 3' offset			331-05	
to (C)			9-38 Rt	340-43	N 19-15 W
℄ @ (C)					
B.S. on (B)					
to (D)			124-43½ Rt	105-26½	S 74-15 E
℄ @ (D)					
B.S. on (C)					
to (E)	606-45.3		2-13-15 Lt	103-13-15	S 76-35 E
℄ @ (E)					
B.S. on (D)					
to 239	319+41.6		91-24 Rt	194-37½	S 14-50 W
℄ @ (C)					
F.S. on (D)				105-26½	
to 507	841+65.0			57-49½	N 58-00 E
℄ @ (C)					
B.S. on (A)				340-43	
to (E)			34-50½ Rt	15-33½	N 15-35 E

1-20-23
Wooster-Horan

See page 51

195-17 (15-17) [+ 0°2' Error]

1-20-23
Wooster-Horan

(mean of 4 readings)

(mean of 4 readings)

1-22-23
Wooster-Horan

(mean of 4 readings)

[+0°13' Error]

57-49½ + 180 = 237-49½ (238-0½ See page Book plus 0°12' Error)

(15-47 = +0°13½' Error)

2-11-23
Wooster-Krissig

Traverse 1710' Barrett Reservoir Contour

Azimuth Determination

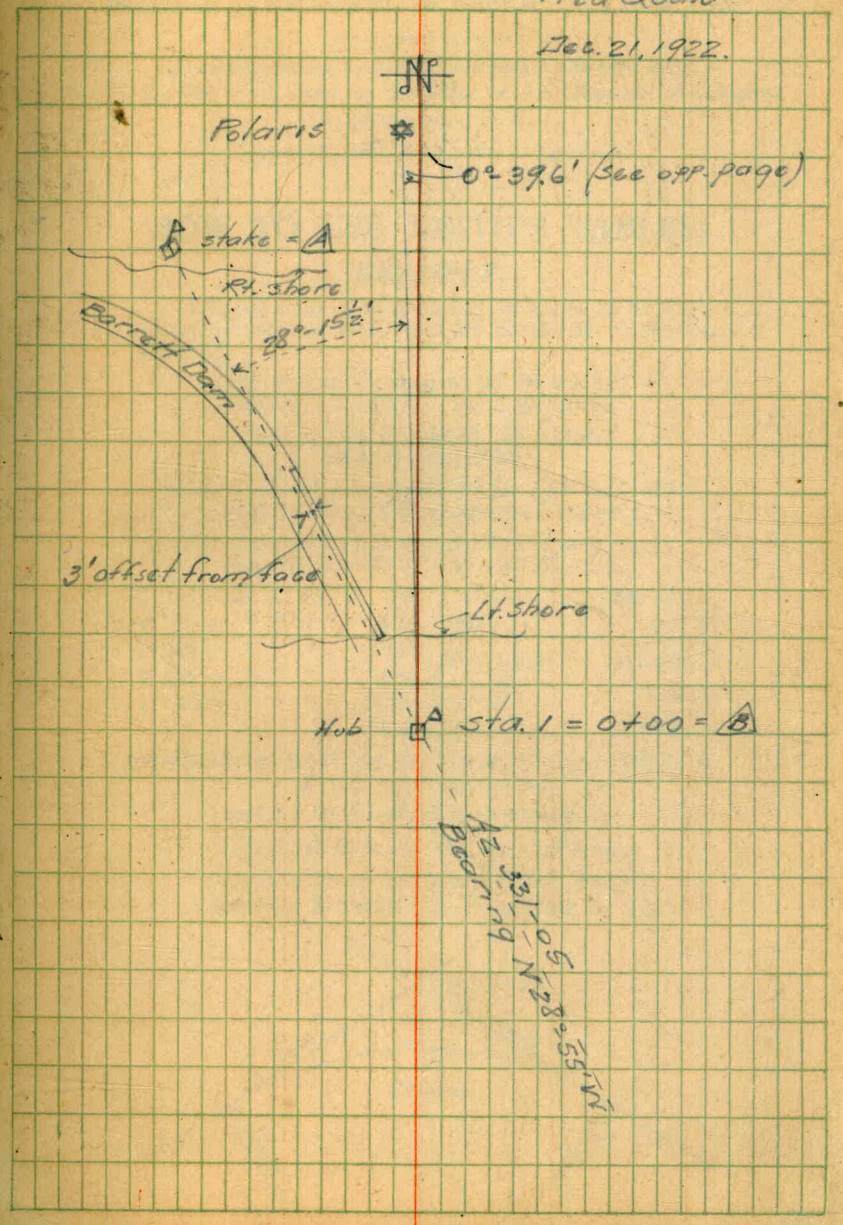
Data: Observers station, latitude N32°40.5',
longitude W116°40.4', Date 12-21-22
Standard time of observation 9h-19m PM
Local mean time of observation 9h-32.3m PM

U.C. Dec 16, 1922 (long 90° W)		7-54.6 PM
Change in 5 days (5 × 3.94)	-	19.7
U.C. Dec 21, 1922 (long 90° W)		7-34.9 PM
Long. correction (26°-40.4' ÷ 15 × 0.16)	-	0.3
U.C. Dec 21, 1922 (long. 116-40.4 W)		7-34.6 PM
Observation		9-32.3 PM
Mean solar interval after U.C.		1-57.7
Reduction to sidereal interval (III)	+	0.33
Sidereal interval = hour angle		1-58
Azimuth (from Table IV		39.8
Table IVa (Polar dist 1°6'-14")	-	0.2
Azimuth of Polaris		39.6

Polaris 39.6' W of meridian

R.C. Wueste
Dell Brumbaugh
O.C. Palmer
Fred Quaid

Dec. 21, 1922.



KEITH'S RAILROAD CURVE TABLES.

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HOW TO USE KEITH'S TABLES.

EXAMPLE.

Wanted a Curve with an Ext. of about 12 ft. Angle of Intersection or I. P. = 23° 20′ to the R. at Station 542+72.

Ext. in Tab. IV opposite 23° 20′ = 120.87
120.87 ÷ 12 = 10.07. Say a 10° Curve.

Tan. in Tab. IV opp. 23° 20′ = 1183.1
1183.1 ÷ 10 = 118.31.

Tab. V correction for A. 23° 20′ for a 10° Cur. = 0.16
118.31 + 0.16 = 118.47 = corrected Tangent.

(If corrected Ext. is required find in same way)
Ang. 23° 20′ = 23.33° ÷ 10 = 2.3333 = L. C.

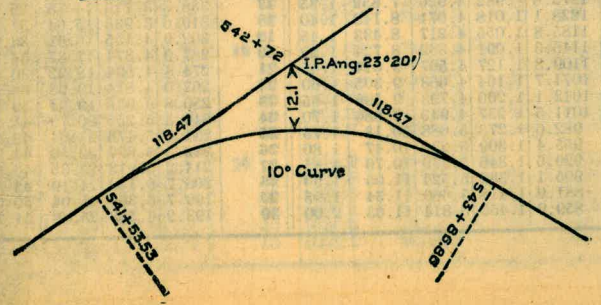
2° 19½′ = def. for sta.	542	I. P. = sta.	542+72
4° 49½′ = " " "	+50	Tan. =	1.18.47
7° 19½′ = " " "	543	B. C. = sta.	541+53.53
9° 49½′ = " " "	+50	L. C. =	2.33.33
11° 40′ = " " "	543+	E. C. = Sta.	543+86.86
	86.86		

100 − 53.53 = 46.47 × 3′ (def. for 1 ft. of 10° Cur.) = 139.41′ =
2° 19½″ = def. for sta. 542.

Def. for 50 ft. = 2° 30′ for a 10° Curve.

Def. for 36.86 ft. = 1° 50½′ for a 10° Curve.

(These tables are published in Field Books of KEUFFEL & ESSER Co., New York, N. Y.)



28-15½
39½
28 55
360
331 05
9 38
321 27
340-43
124-43½
465 26½
360
105-26½
2 13¼
103-13¼
180
283 13

340-43 mag.
15-33 (N15 33 E) 195-33
50-24

285-23
180
105-23

2713) 3300 (.0121
2713
5870
5426
4440

103-13¼
91 23½ Rt
194 37½
180
374 37½
14 - 37½ 3° curve
14 - 50 50
13 error

115
53) 406
53
76
53
233

195-17
194 37
0-40
3.5 per mi

115) 40.0
345
550

53) 320

19-17
15-33
345 0
15-33
50-24

34 51
34 50

50 24
15 33
34 51

Defl to Rt @ A

1-20-23

124-43+
249-27½
14-11
138-54
360
4) 498 54
124-43-30

N19-00W
S74-15E

124 43
134 44½
124 43½
124 43
174
43½

374-11
249 27½
124 43½
498 54
374 11
124 43

53-19
111-20½
164 39½
180
15-20½
53 10
111 20½
15 21
180 01

340-43
124 43½
465 26½
360
105 26½
2 13¼
103-13¼

9-38 Rt
19-16
28-55
4) 38-32
9-38

N19-15W

2-14 Lt
4-26½
6-40
4) 8-53
2-13¼

S76-30E
2-14
2 12½
2 13½
2 13

91 23½
182-48
91-24

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 14 FEET WIDE. SIDE SLOPES 1½ TO 1.

FOR SINGLE TRACK EMBANKMENT.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	7.0	7.2	7.3	7.5	7.6	7.8	7.9	8.1	8.2	8.4	0
1	8.5	8.7	8.8	9.0	9.1	9.3	9.4	9.6	9.7	9.9	1
2	10.0	10.2	10.3	10.5	10.6	10.8	10.9	11.1	11.2	11.4	2
3	11.5	11.7	11.8	12.0	12.1	12.3	12.4	12.6	12.7	12.9	3
4	13.0	13.2	13.3	13.5	13.6	13.8	13.9	14.1	14.2	14.4	4
5	14.5	14.7	14.8	15.0	15.1	15.3	15.4	15.6	15.7	15.9	5
6	16.0	16.2	16.3	16.5	16.6	16.8	16.9	17.1	17.2	17.4	6
7	17.5	17.7	17.8	18.0	18.1	18.3	18.4	18.6	18.7	18.9	7
8	19.0	19.2	19.3	19.5	19.6	19.8	19.9	20.1	20.2	20.4	8
9	20.5	20.7	20.8	21.0	21.1	21.3	21.4	21.6	21.7	21.9	9
10	22.0	22.2	22.3	22.5	22.6	22.8	22.9	23.1	23.2	23.4	10
11	23.5	23.7	23.8	24.0	24.1	24.3	24.4	24.6	24.7	24.9	11
12	25.0	25.2	25.3	25.5	25.6	25.8	25.9	26.1	26.2	26.4	12
13	26.5	26.7	26.8	27.0	27.1	27.3	27.4	27.6	27.7	27.9	13
14	28.0	28.2	28.3	28.5	28.6	28.8	28.9	29.1	29.2	29.4	14
15	29.5	29.7	29.8	30.0	30.1	30.3	30.4	30.6	30.7	30.9	15
16	31.0	31.2	31.3	31.5	31.6	31.8	31.9	32.1	32.2	32.4	16
17	32.5	32.7	32.8	33.0	33.1	33.3	33.4	33.6	33.7	33.9	17
18	34.0	34.2	34.3	34.5	34.6	34.8	34.9	35.1	35.2	35.4	18
19	35.5	35.7	35.8	36.0	36.1	36.3	36.4	36.6	36.7	36.9	19
20	37.0	37.2	37.3	37.5	37.6	37.8	37.9	38.1	38.2	38.4	20
21	38.5	38.7	38.8	39.0	39.1	39.3	39.4	39.6	39.7	39.9	21
22	40.0	40.2	40.3	40.5	40.6	40.8	40.9	41.1	41.2	41.4	22
23	41.5	41.7	41.8	42.0	42.1	42.3	42.4	42.6	42.7	42.9	23
24	43.0	43.2	43.3	43.5	43.6	43.8	43.9	44.1	44.2	44.4	24
25	44.5	44.7	44.8	45.0	45.1	45.3	45.4	45.6	45.7	45.9	25
26	46.0	46.2	46.3	46.5	46.6	46.8	46.9	47.1	47.2	47.4	26
27	47.5	47.7	47.8	48.0	48.1	48.3	48.4	48.6	48.7	48.9	27
28	49.0	49.2	49.3	49.5	49.6	49.8	49.9	50.1	50.2	50.4	28
29	50.5	50.7	50.8	51.0	51.1	51.3	51.4	51.6	51.7	51.9	29
30	52.0	52.2	52.3	52.5	52.6	52.8	52.9	53.1	53.2	53.4	30
31	53.5	53.7	53.8	54.0	54.1	54.3	54.4	54.6	54.7	54.9	31
32	55.0	55.2	55.3	55.5	55.6	55.8	55.9	56.1	56.2	56.4	32
33	56.5	56.7	56.8	57.0	57.1	57.3	57.4	57.6	57.7	57.9	33
34	58.0	58.2	58.3	58.5	58.6	58.8	58.9	59.1	59.2	59.4	34
35	59.5	59.7	59.8	60.0	60.1	60.3	60.4	60.6	60.7	60.9	35
36	61.0	61.2	61.3	61.5	61.6	61.8	61.9	62.1	62.2	62.4	36

Calculated by Julien A. Hall, M. Am. Soc. C. E.