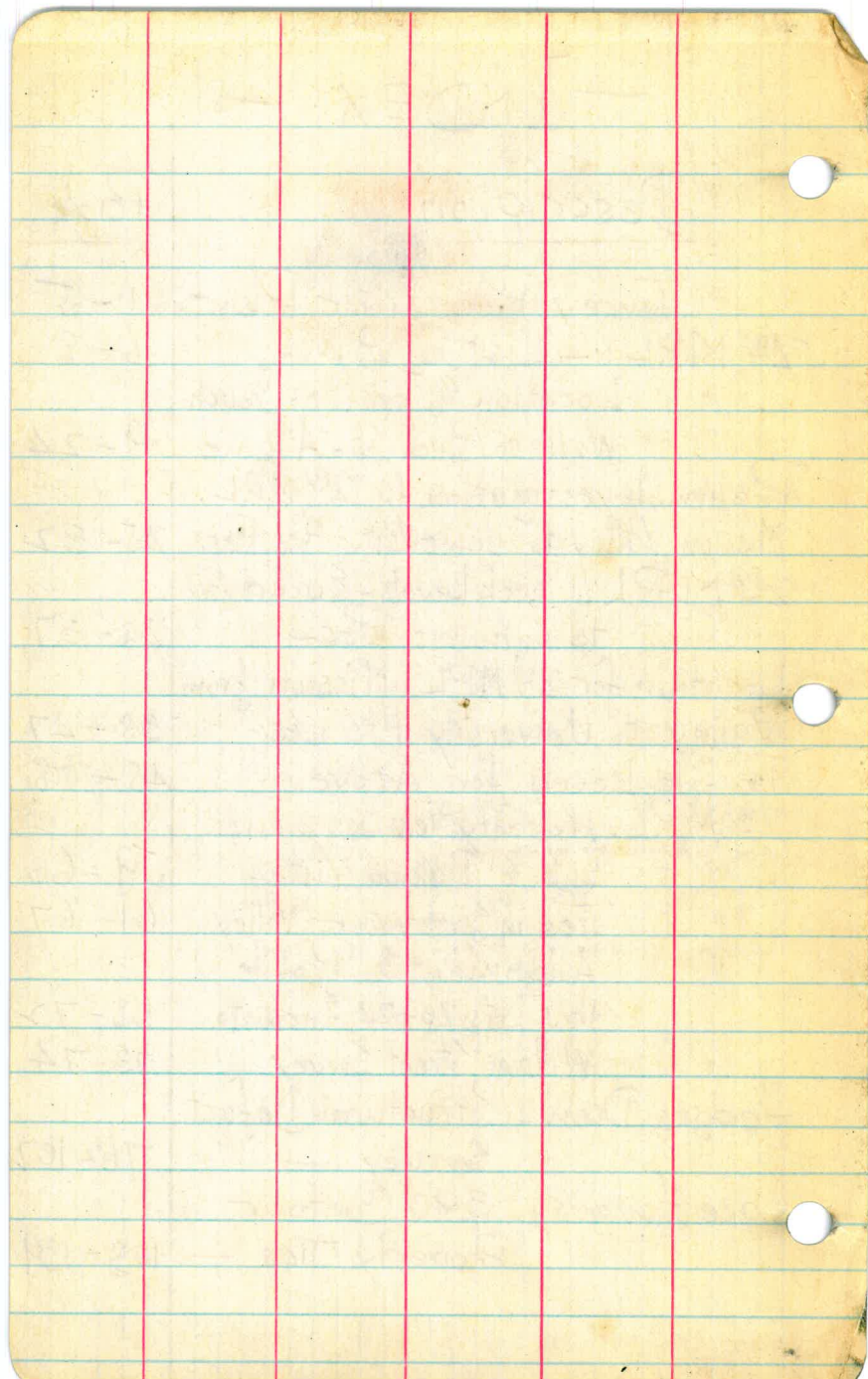


- INDEX -

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2 nd M.P.L. - List of B.M.s	6-8
" Location ^{4/4} profile - Pouch	
Wall to Bach St. - "A" Line	9-24
Prelim. Investigation for 2 nd M.P.L.	
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2 nd M.P.L. Check Levels - Euclid Ave to Chollas Res -	33-37
Location for 2 nd M.P.L. Mission from Valley to University Hts. Res. -	38-47
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2 nd M.P.L. Property ties Seaman's Sub. ^{2/3} Balboa Vista -	59-60
" Ties in Sweetwater Valley	61-67
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Lake Hodges - 390 Contour Property Ties -	103-139



Elevations of Torrey
Pines Filter Plant

April 20, 1929

Converse

Elliott

Simpson

Pages 1-5

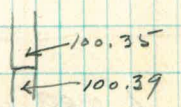
Concrete Foundations for Filters

T.P.				100.00	100.66 Highest
	12.507	112.507			
		6 1/2 - 52	11.92	100.59	Front - .07
		6 - 52	11.91	100.60	Center - .06
99.90	.12		11.88	100.63	Rear - .03
1-2		5 1/4 - 44	11.92	100.59	Front - .07
			11.99	100.54	Center - .14
99.95	.01		12.06	100.45	Rear - .21
2-3		5 1/2 - 46	12.00	100.51	Front - .15
			12.06	100.45	Center - .21
	.89		12.16	100.35	Rear - .29
100.00			12.12	100.39	
3-4		4 - 37	12.22	100.29	Front - .39
100.05	.88		12.30	100.21	Rear - .45
4-5		2 1/2 - 20	12.23	100.78	Front - .38
			12.27	100.74	Center - .42
100.10	.96		12.35	100.16	Rear - .50
5-6		3 - 25	12.12	100.39	Front - .27
			12.16	100.35	Center - .31
	.07		12.19	100.32	Rear - .34
6-7		4 1/2 - 37	11.98	100.53	Front - .13
	.11		12.03	100.48	Rear - .16
7		4 3/4 - 48	11.85	100.66	Front - .00
			11.89	100.62	Center - .04
	.19		11.92	100.59	Rear - .07

} Outside #1.

} Joint in Foundation
Front No Center. (Platform)
Back

Between 2-3.



} Outside #7.

Elevations Bottom Filters.

T.P.					Highest ⁺ 1.163
	5.378	105.378		100.00	
#1.			4.215	101.163	+.000
			4.347	101.031	-.132
	4.411	104.411			
#2.			3.360	101.051	-.112
			3.595	100.816	-.347
#3.			3.414	100.997	-.166
			3.722	100.689	-.474
	4.289	104.289			
#4			3.331	100.958	-.205
			3.600	100.689	-.474
#5			3.340	100.949	-.114
			3.518	100.771	-.392
	4.371	104.371			
#6			3.461	100.910	-.253
			3.556	100.815	-.348
#7			3.337	101.034	-.129
			3.432	100.939	-.224

Front
Rear

Front
Rear
Front
Rear

Front
Rear
Front
Rear

Front
Rear
Front
Rear

In Large Hor. Pipe along
Face of Filters.

T.P.

100.00

17.507 117.507

Distance
approx.

	6.710	93.290		
	6.705	3.295	⁺⁰⁴⁶	.295
41"	6.751	.249		.295
	6.751	.249		.295
	6.700	.300	⁺⁰⁰⁵	.295
	6.687	.313		.308
	6.741	.259	⁺⁰⁴⁹	.308
	6.775	.225		.274
	6.778	.222	⁺⁰⁵²	.274
	6.772	.228	⁺⁰²⁸	.280
	6.748	.252		.280
	6.749	.251	⁺⁰²⁰	.279
	6.761	.239		.279
	6.640	.360	⁺⁰⁰⁰	.400
	6.600	.400		.400
	6.585	.415		.415
	6.600	.400	⁺⁰¹⁵	.415
	6.480	.520		.535
	6.420	.580		.535



} 90° Bend Bet. 6-7.

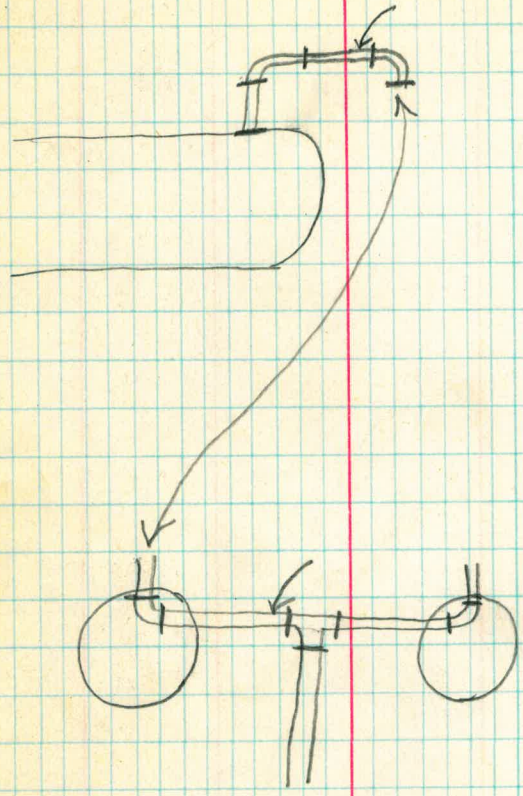
}
On Pipe above Vert. Pipe to Ground,

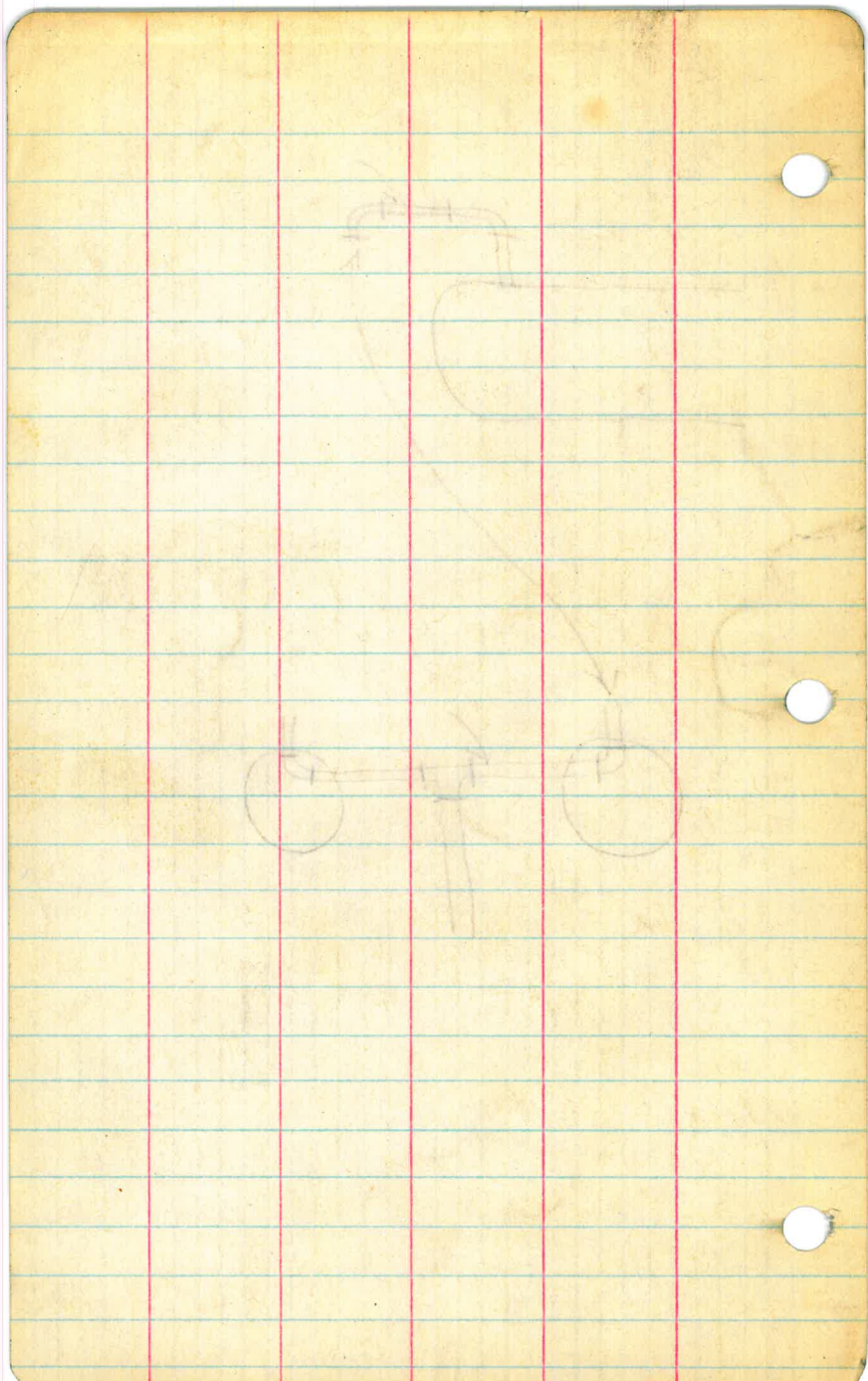
90° Bend at #1.

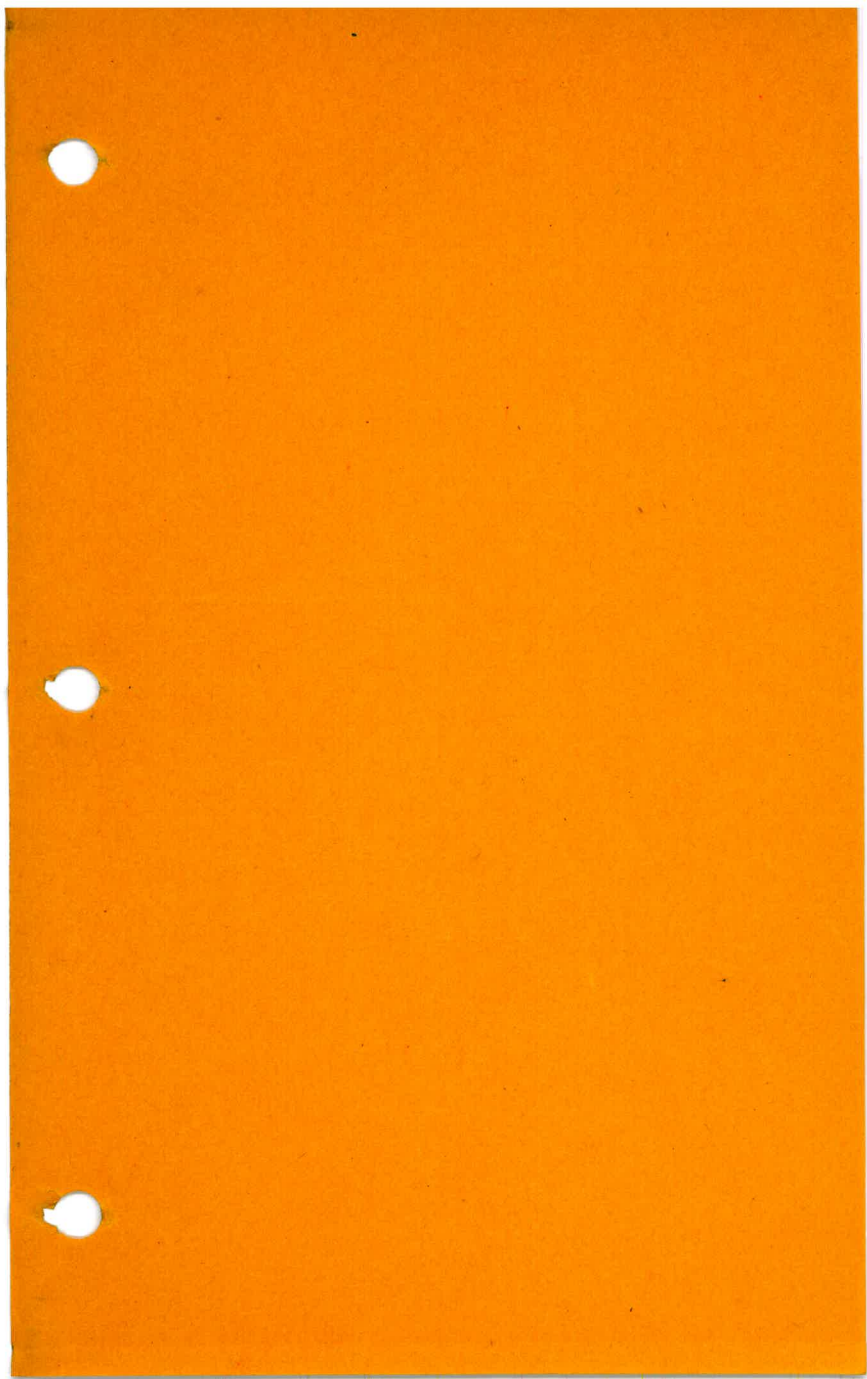
On Hor. Pipes from Tops of
Filters.

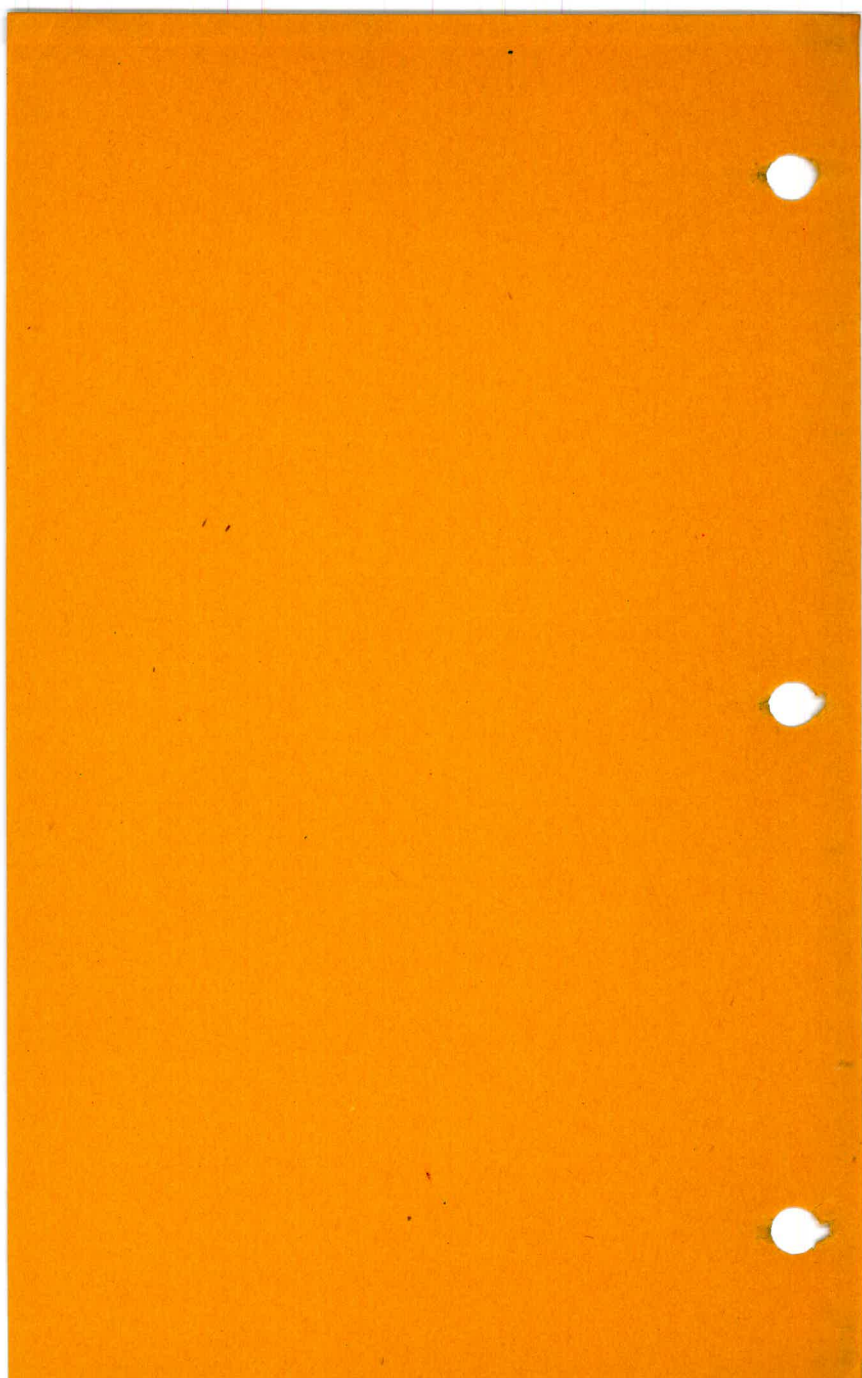
T.P.			100.00	highest
	17.507	117.507		100.00
#1			2.076	97.924 .000
2			2.292	97.708 -.216
3			2.391	97.609 -.315
4			2.452	97.548 -.376
5			2.442	97.558 -.366
6			2.283	97.617 -.307
7			2.217	97.783 -.141

				highest
1-2			4.243	95.757 .000
3-4			4.411	95.589 -.168
5-6			4.460	95.540 -.217









Bottom Floor of Footbridge
Cholla Hts Res. 429.21 ⁶
B.M. # 8 Spike in Tel. Pole
10' L. 53+40 325.72

B.M. # 9 Top Air Valve
15' L. 56+00 367.56

B.M. # 105 Spike in
Transformer Pole, Filter Plant. 393.44

B.M. # 70 On S.E. Cor. of Cap of North
Tunnel Portal. 387.27

B.M. # 71 On S.E. Cor. of Cap of
South Tunnel Portal 388.04

B.M. # 72 On Air Valve 10' Rt. 572+00
Elev 384.23

B.M. # 73 On Air Valve 10' Rt. 576+97.7
Elev 384.78

B.M. # 74 On Air Valve 10' Rt. 582+04.7
Elev. 385.85

B.M. # 75 On Air Valve 10' Rt. 586+26.9
Elev 385.89

B.M. #76 On Air Valve 10' RT 593+61.1

Elev 385.37

B.M. #77 " " " Sta 596+93

Elev. 384.95

B.M. #78 " " " Sta 601+96.1

Elev 386.18

B.M. #79 " " " Sta. 616+57.4

Elev. 382.59

B.M. #80 " " " Sta 628+25.7

Elev. 387.54

B.M. #83 On Air Valve Near N. End Tunnel #2

Elev. 388.34

B.M. #84 Nail in Cap of S. Portal Tunnel #2

Elev 389.76

B.M. #85 On Air Valve 6' RT 712+00

Elev. 389.36

On Cap. N. Portal #1, El. 389.9.

No. Portal #4 557+46 On Cap

So. " #4 567+64 So. Portal #1

No. " #3 630+53 390.3

So. " #3 649+11.1

No. " #2 662+88.1

So. " #2 684+01

No. " #1 688+80.6

So. " #1 709+50

Air Valve. So. End Tunnel #3 385.42

7
S.E. Cor. Howard + Illinois 361.009

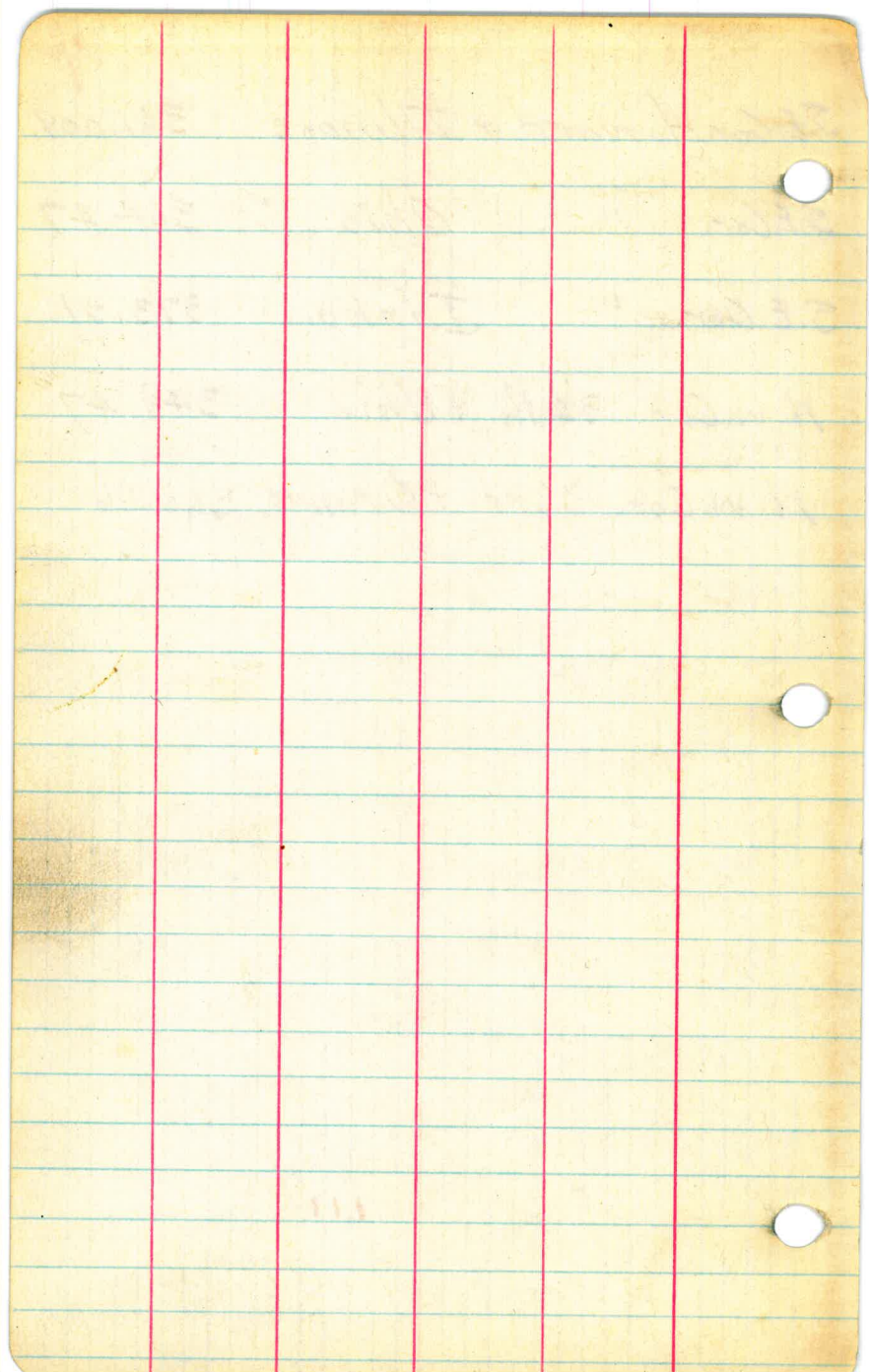
S.E. Cor. " Ohio ✓ 364.47

S.E. Cor. " Idaho 373.01

N.W. Cor. 34th + Univ. 349.47

N.W. Cor. 33rd. + Orange. 366.66

111



8

N. W. Cor. Swift + Wightman
Top Brass Plug. 337.42

(Story)
N. W. Cor. 36th + Wightman
Top Brass Plug. 347.68. 5135

N. W. Cor. 37th. (Reed) + Wightman
Brass Plug. 338.82

N. W. Cor. 38th (Thomas) + Wightman
Brass Plug. 319.70

N. W. Cor. 40th. (Sisson) + Wightman
Brass Plug 343.09

N. W. Cor. Central + Wightman
Brass Plug. 343.56

N. W. Cor. 41st. (Conklin) + Wightman
Brass Plug. 335.49

N. W. Cor. Marlborough + Wightman
Brass Plug. 347.09

(Copeland)
N. W. Cor. 42nd. + Wightman
Brass Plug 352.57

N.W. Cor. Van Dyke + Wightman
Brass Plug. 354.61

N.W. Cor. 43rd. (Pauly) + Wightman
Brass Plug. 353.57

N.W. Cor. Fairmont + Wightman
Brass Plug. 355.33

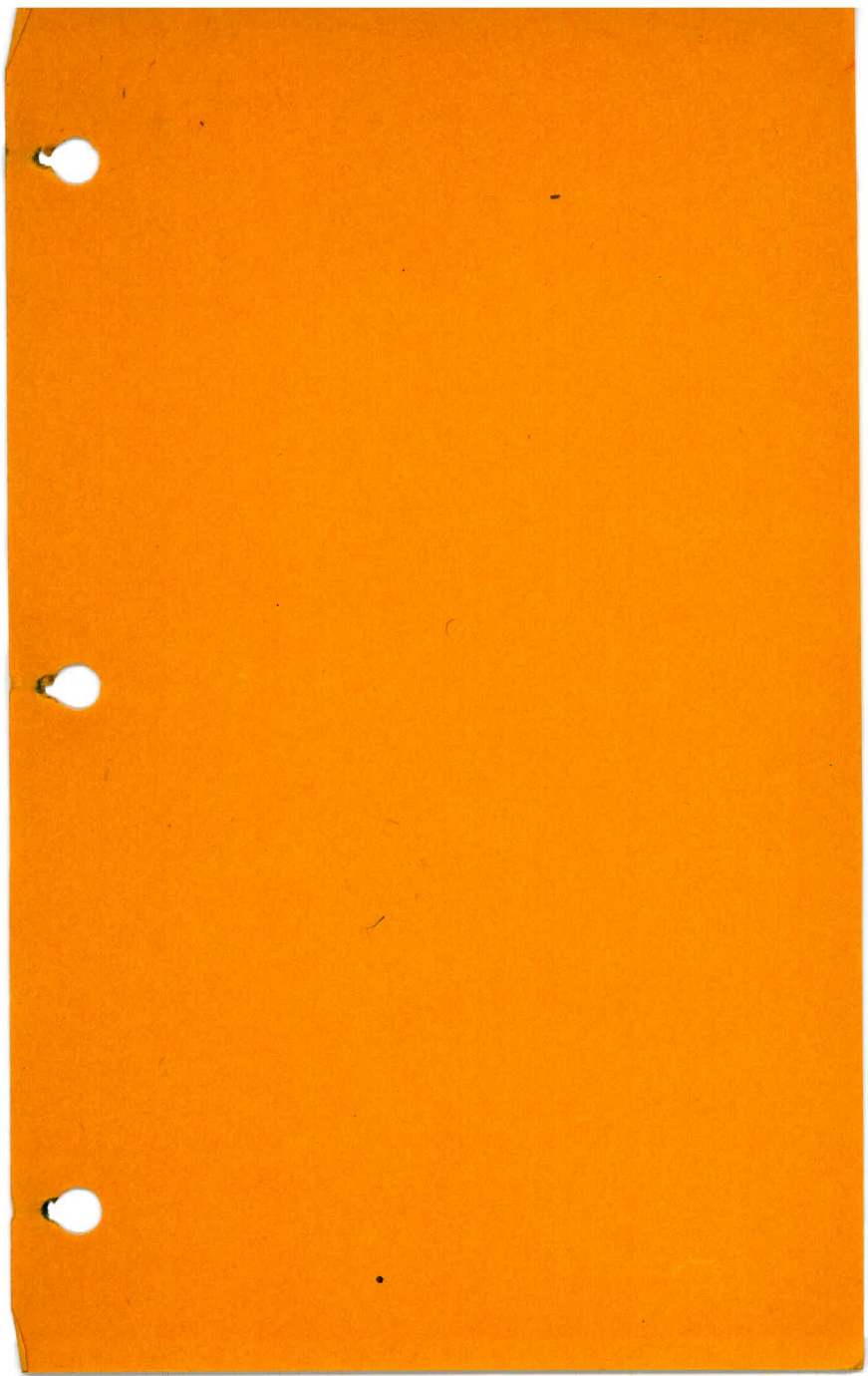
N.W. Cor. 44th (Colonial) + Wightman
Brass Plug. 354.71

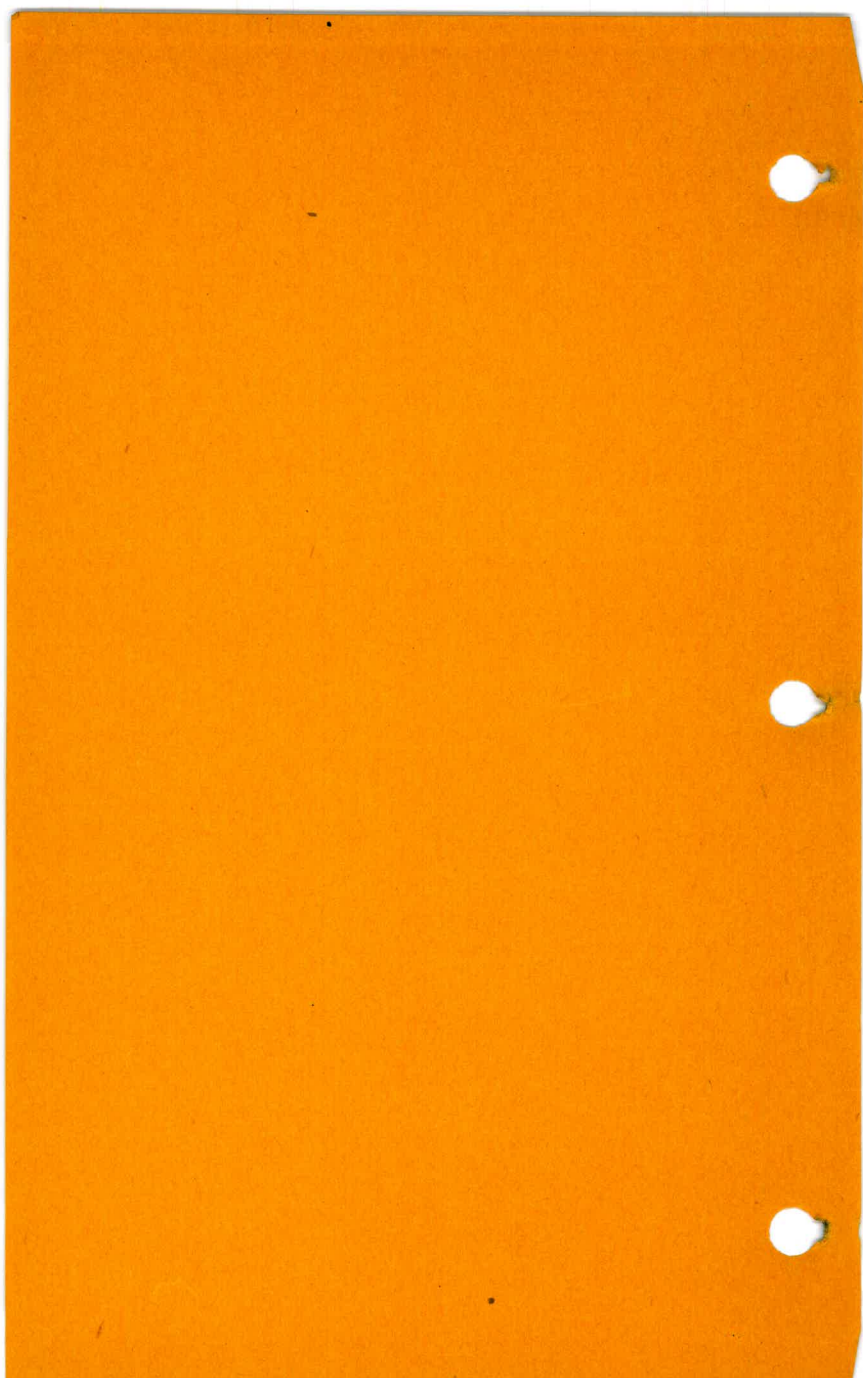
N.W. Cor. 45th. (Cabrillo) + Wightman
(Two Plugs. Use South) 347.37

N.W. Cor. Chamouné + Wightman
Brass Plug. 347.93.

N.W. Cor. Univ. + Euclid
Brass Plug. 340.68

N.E. Cor. Lantanna + Euclid
Brass Plug. 340.46





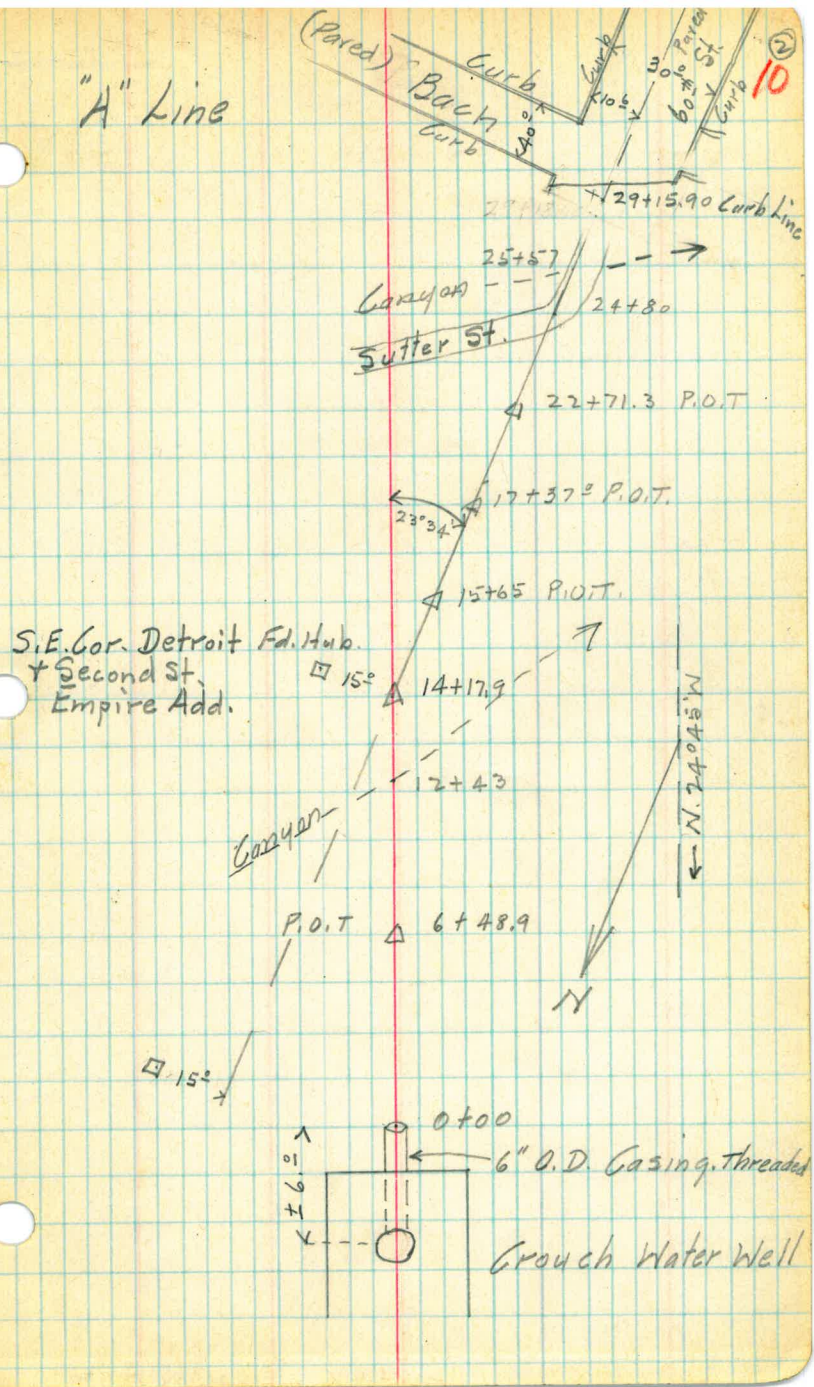
Location and Profile Levels
for Pipe Line from Crouch Water
Well to Bach and Detroit Streets,
also from Detroit and Second Streets
to Sta. 133 to Williams Second Pipe
Line Survey, - also from Sta. 149 to
Williams Second Pipe Line Survey to
Concrete Res. Basin - Encanto.

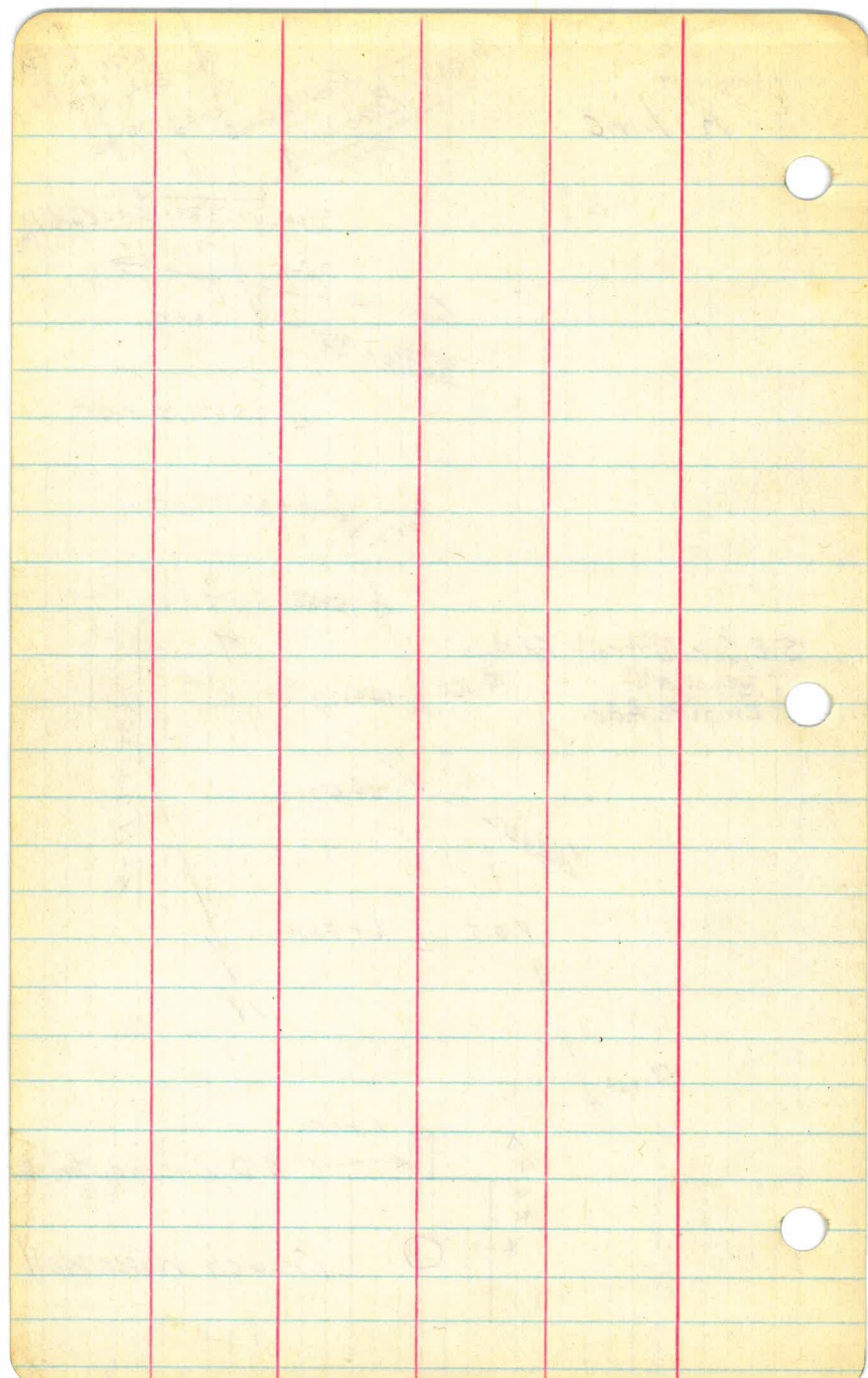
Pages 1-12
Converse
Elliott
Simpson
Apr. 1929

S. 1° 15' E

S. 24° 45' E

"A" Line





"B" Line

③

11



Sta. 133+00 Williams 2nd.
Otay Pipe Line

133+00
214+34.2
Otay Pipe Line

120° 53'

20+58.38

20+52.38

Found Hub.
Empire Ave. + Water
Sts.

Found Hub

6.3

19+92.2

18+43.5

5.75 Found Hub

17+33.2

5.38 Found Hub

Hub S.E. Cor. Second +
Detroit Sts.
Empire Addition

14+20.8

7.5

14+17.9

"A" Line

To Back Ave →
See Page #2

Crouch Hill Otay

150'

91° 30'

161° 05'

"B" Line

Line

Line

Profile Levels. Crouch Well to
Bach Ave. "A" Line

B.M. #16				374.48 373.48
	10.96	385.44		
T.P.			0.82	384.62
	10.91	395.53		
			3.30	392.23
T.P.			2.40	393.13
	3.04	396.17		
			8.42	387.8
			7.91	388.3
0+00			9.2	387.0
T.P.			12.72	383.45
	0.24	382.69		
1+00			3.0	380.7
2+00			7.5	376.2
3+00			7.9	375.8
4+00			5.3	378.4
5+00			4.4	379.3
6+00			8.0	375.7
T.P.			7.43	376.26
	0.20	376.46		
6+48 ²⁷			3.9	372.6
7+00			8.5	368.0
T.P.			12.60	363.86
	0.67	364.53		

④
12

Top Air Valve. Corr. Elev. 374.48

Floor of Reservoir East of Well

Flow Line of 6" Discharge Pipe at 0+00

Top of 6" Discharge Pipe " "

"A" Line

	364.53		
T.P		12.19	352.34
	0.21	352.55	
8+00		7.7	344.9
T.P		12.90	339.65
	0.60	340.25	
9+00		12.0	328.2
T.P		11.78	328.47
	0.52	328.99	
10+00		13.2	315.8
T.P		11.25	317.74
	0.49	318.23	
10+50		7.0	311.2
T.P		12.67	305.56
	0.11	305.67	
11+00		4.6	301.1
11+20		8.6	297.1
T.P		12.94	292.73
	1.09	293.82	
T.P		12.59	281.23
	0.79	282.02	
11+75		2.4	279.6
12+00		6.3	275.7
12+38		12.8	269.2
12+47		18.1	263.9
12+52		12.5	269.5

③

13

Bottom of Gulley

"A" Line				
		282.02		
T.P.			0.66	281.36
	12.04	293.40		
13+00			5.2	288.2
T.P.			0.24	293.16
	11.60	304.76		
T.P.			0.18	304.58
	10.98	315.56		
13+75			4.0	311.6
T.P.			0.19	315.37
	12.15	327.52		
14+00			11.1	316.4
14+17.2			7.1	320.4
Set B.M.			3.60	322.72 323.92
T.P.			0.84	326.68
	12.33	339.01		
15+00			4.2	334.8
T.P.			2.09	336.92
	9.62	346.54		
15+65			1.1	345.4
16+00			2.0	344.5
17+00			5.0	341.5
17+37			7.0	339.5
T.P.			12.76	323.78
	0.94	324.72		
18+00			3.0	331.7

⑥
14

Top of hub 15' Lit of Sto 14+172

"A" Line				
		334.72		
T.P.			12.69	322.03
	0.38	322.41		
19+00			2.7	319.7
20+00			12.7	309.7
T.P.			12.65	309.76
	0.31	310.07		
21+00			7.9	302.2
22+00			11.6	298.5
T.P.			12.32	297.75
	0.47	298.22		
22+50			4.0	294.2
22+71 ²			7.2	291.0
T.P.			11.99	286.23
	1.72	287.95		
23+00			3.3	284.7
T.P.			12.75	275.20
	0.52	275.72		
T.P.			12.92	262.80
	1.21	264.01		
24+00			8.8	255.2
T.P.			12.93	251.08
	0.58	251.66		
24+57			10.5	241.2
24+65			14.7	237.0
Hand level T.P.			13.1	238.56
	0.0	238.56		

7
15

"A" Line

		238.56		
25+00			3.4	235.2
25+57			7.1	231.5
26+00			5.8	232.8
T.P.			0.0	238.56
	13.1	251.66		
		251.66		
27+00			5.7	246.0
T.P.			0.30	251.36
	12.60	263.96		
28+00			1.8	262.2
T.P.			0.14	263.82
	12.32	276.14		
T.P.			1.27	274.87
	11.26	286.13		
29+00			5.9	280.2
29+18 ⁶⁵			5.15	280.98
29+56			4.36	281.77
T.P.			1.87	284.26
	6.51	290.77		
B.M.			1.81	288.96

8

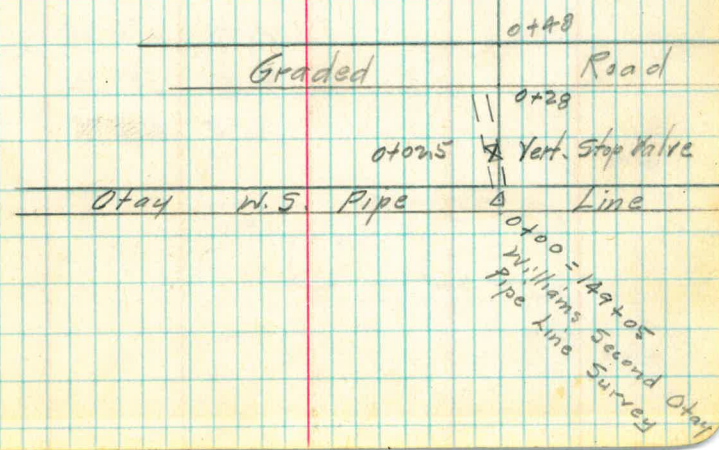
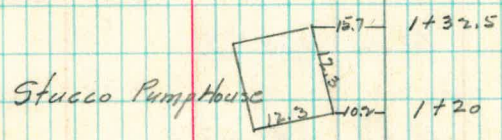
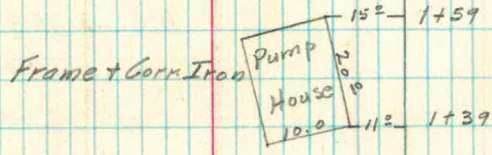
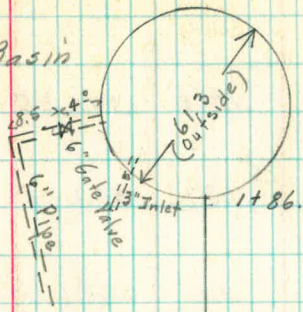
16

Edge of Pavement

Spike in Power Pole # P77843 S.W. Cor.
Record-289.28 Back of 60th

Location of Concrete Basin and
Pump Houses. Lot #2 Rosemont
Addition to Encanto Hts.

Conc. Storage Basin
8" walls.



Levels to Concrete Basin
See Page 9

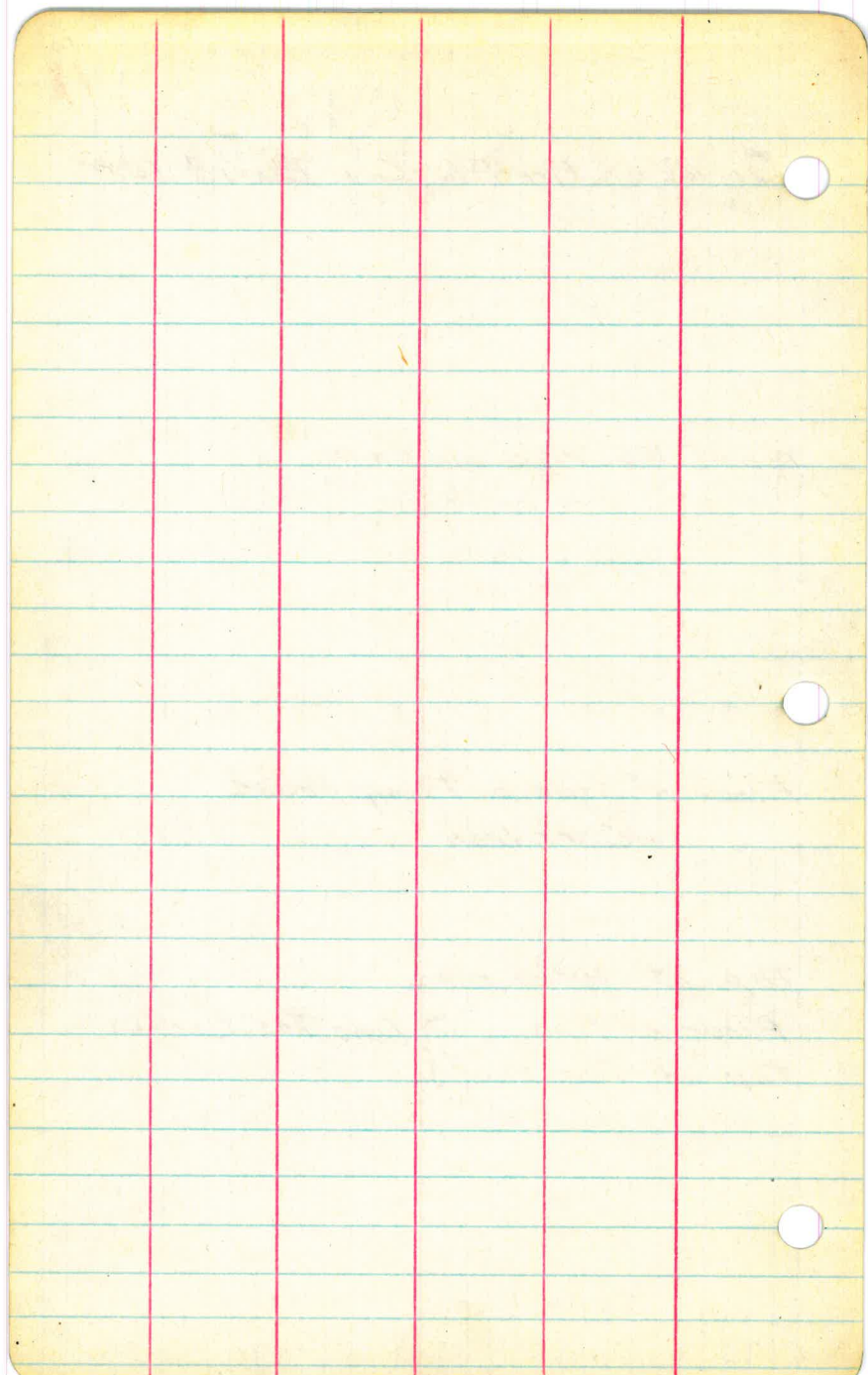
B.M.				334.40 333.40
	11.95	346.35		
T.P.			1.03	345.32
	11.87	357.19		
T.P.			0.58	356.61
	2.0	358.61		
			6.6	352.0
0+28			1.6	357.0
0+48			0.0	358.6
T.P.			2.0	356.61
	13.22	369.83		
T.P.			0.94	368.89
	12.63	381.52		
			9.2	372.3
			6.4	375.1
T.P.			0.07	381.45
	12.28	392.73		
			7.45	386.28
			8.3	385.4
			0.95	392.78

#21 Top of Fire Plug Cor. Birch & 63rd.

Top of W.S. Pipe Sta 0+00

Floor of Stucco Pump House
" " Corr. Iron " "

Top of outlet pipe
Floor of Res. }
Top of Res. Wall } Conc. Res. Basin



Profile Levels on "B" Line
See Page #3.

①
19

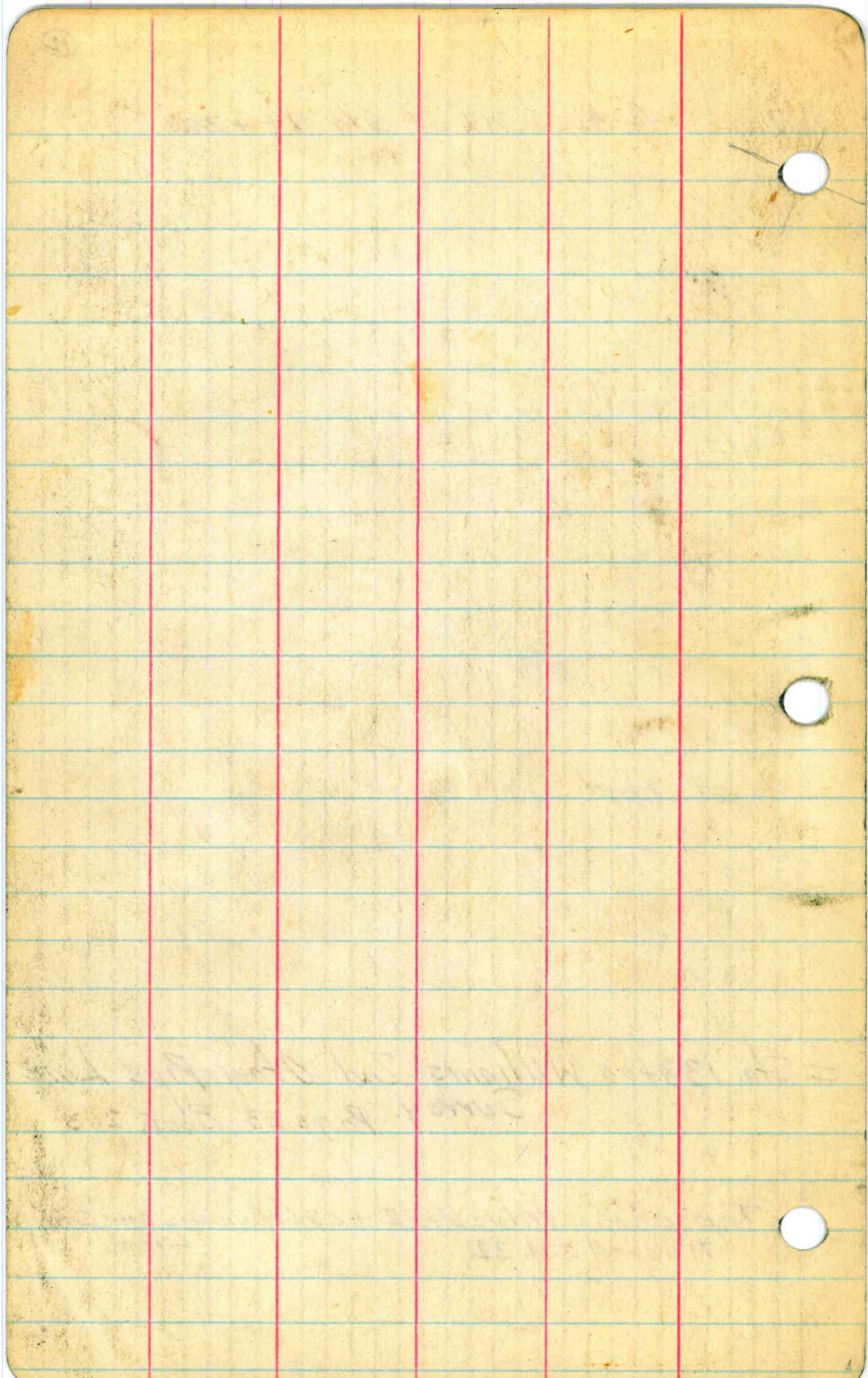
"B" Line			
B.M.			323.92 322.92
	11.28	335.20	
14+17.92		14.7	320.5
15+00		9.5	325.7
16+00		5.0	330.2
17+00		2.3	332.9
T.P. 17+33.9		1.45	333.75
	11.65	345.40	
18+00		11.0	334.4
19+00		11.1	334.3
19+60		5.9	339.5
T.P.		0.25	345.15
	12.81	357.96	
20+00		11.7	346.3
20+18		8.2	349.8
T.P. 20+58.38		0.9	357.1
T.P.		0.46	357.50
	12.85	370.35	
21+00		7.1	363.3
21+20		4.9	365.5
21+34.3		1.6	368.8
T.P.		1.05	369.30
	7.35	376.65	
B.M.#18		5.46	371.19

Top of hub RT. of Sta 14+30.8

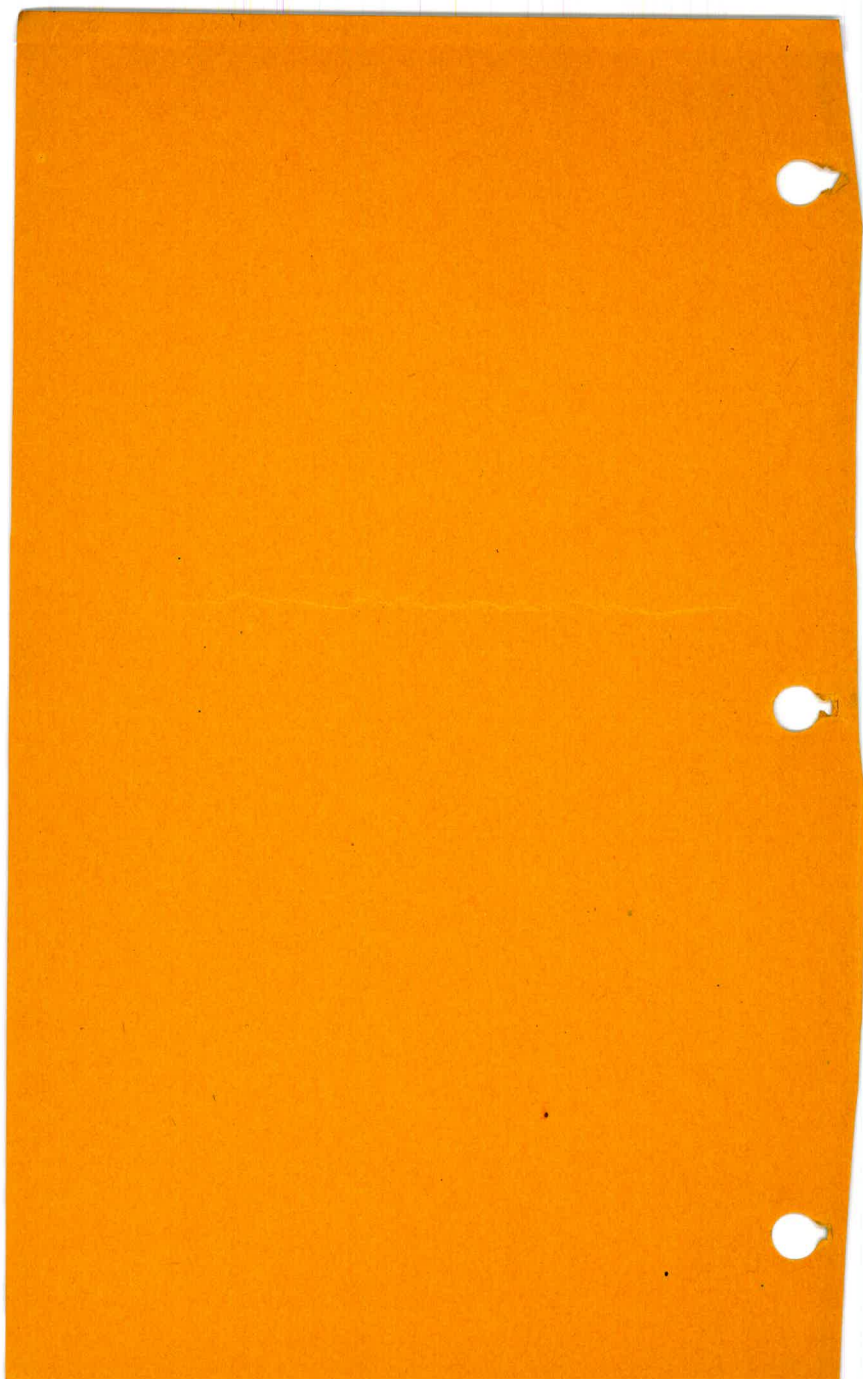
E. of Road

= Sta. 133+00 Williams 2nd. Stay Pipe Line
Survey. Page 23 Book 263

Top of Air Valve Lt. 132+08 (Williams 2nd Stay)
Record 371.32 Line



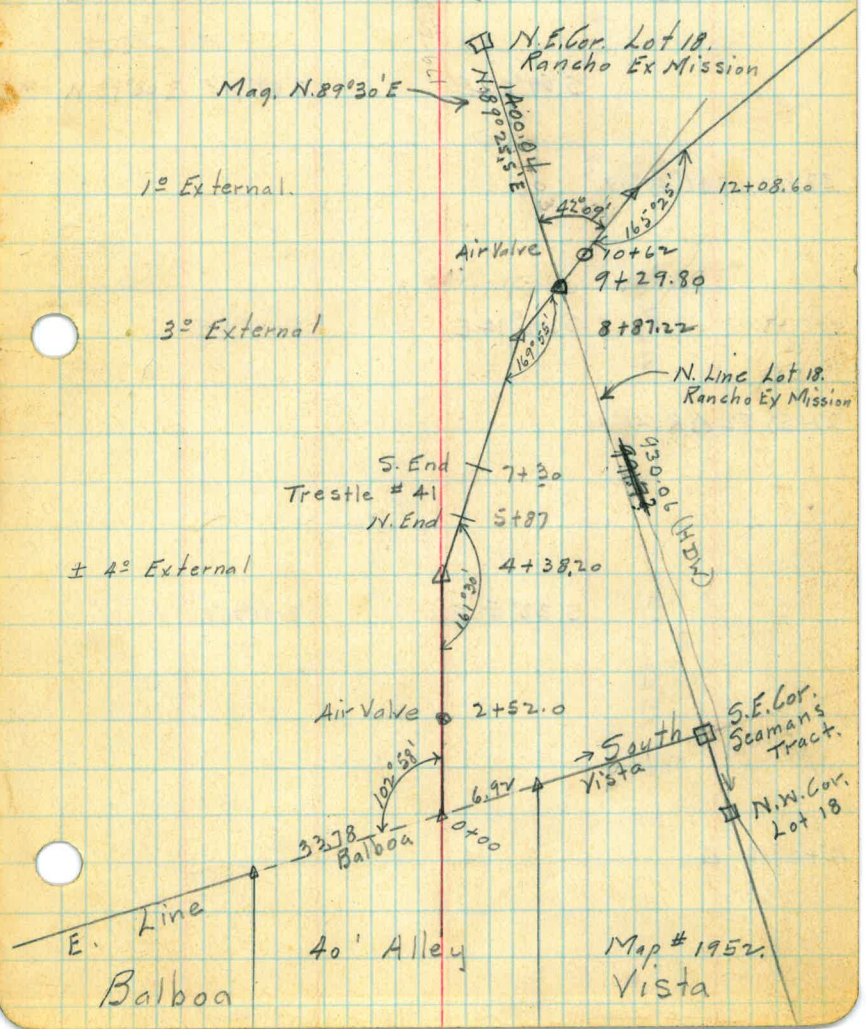




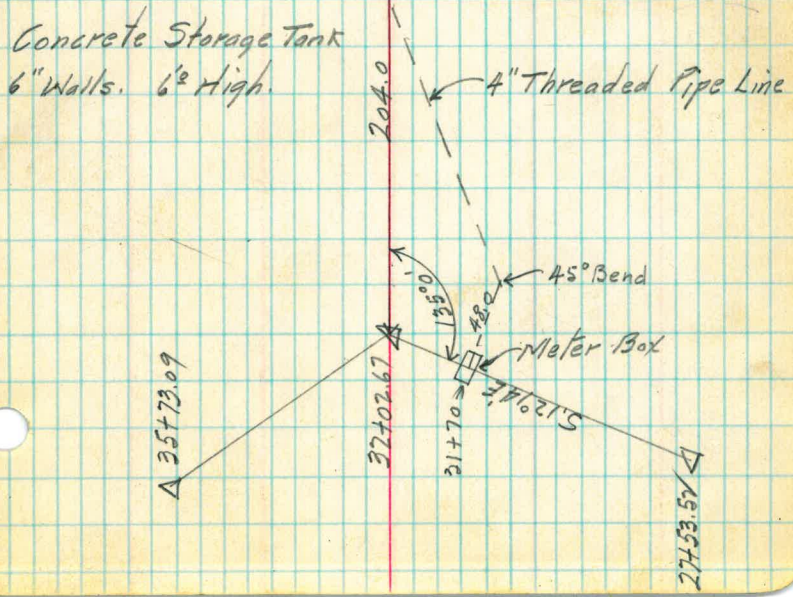
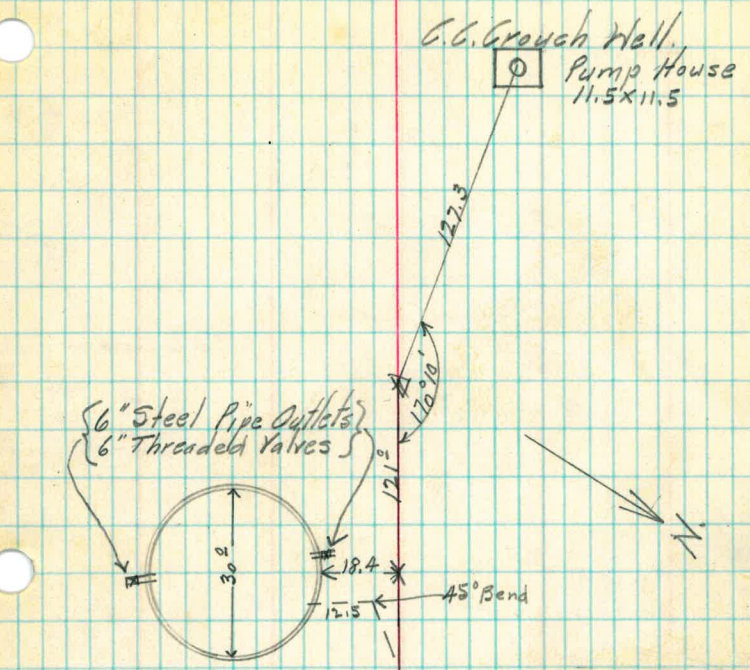
Traverse of Present Otay Pipe
Line from East Line Balboa Vista
Subdivision to West Line Empire
Addition to Encanto Heights.
Location of Grouch Water Well.

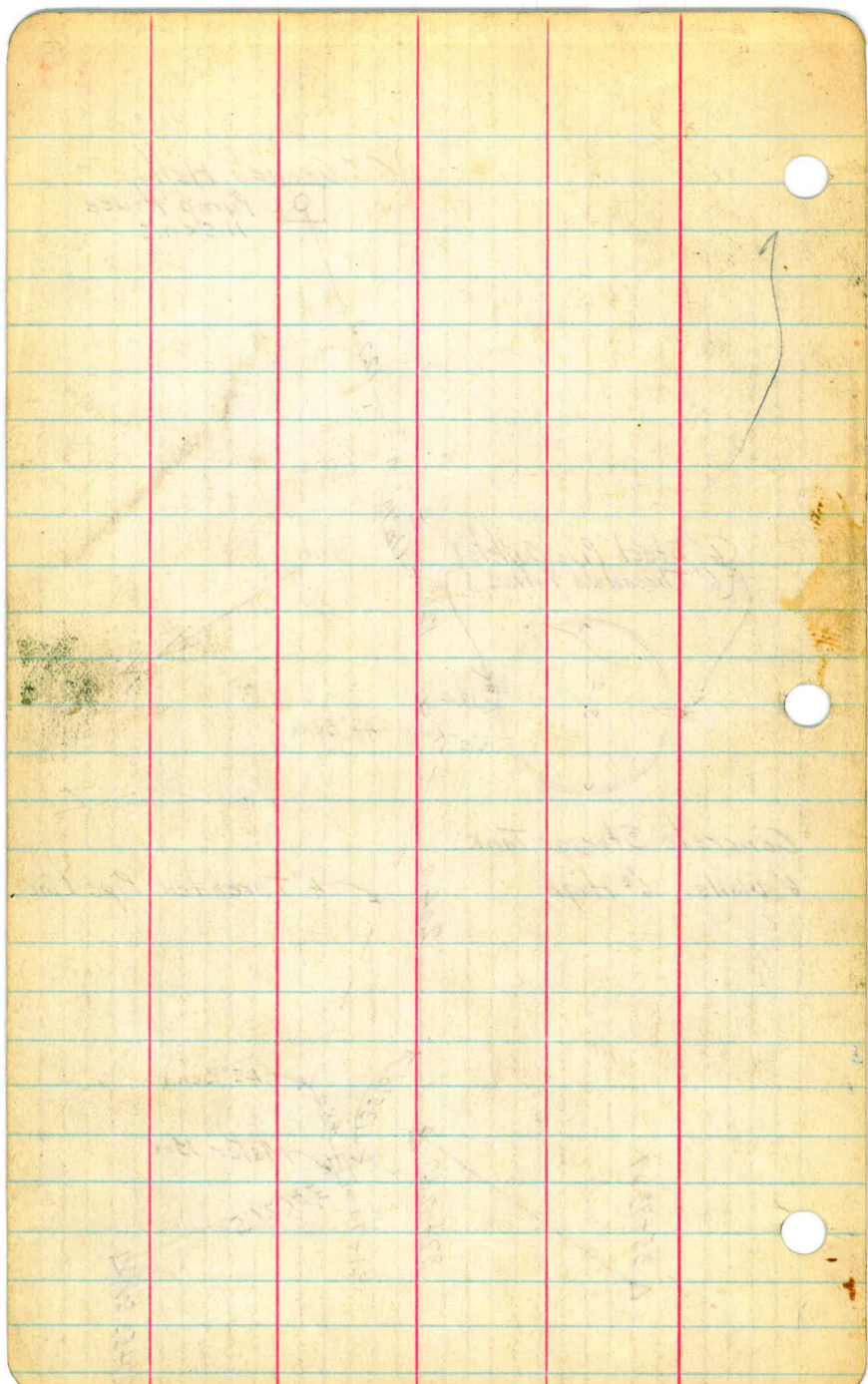
Pages 1-4
Converse
Elliott
Simpson
Mch. 15-16. 1929.

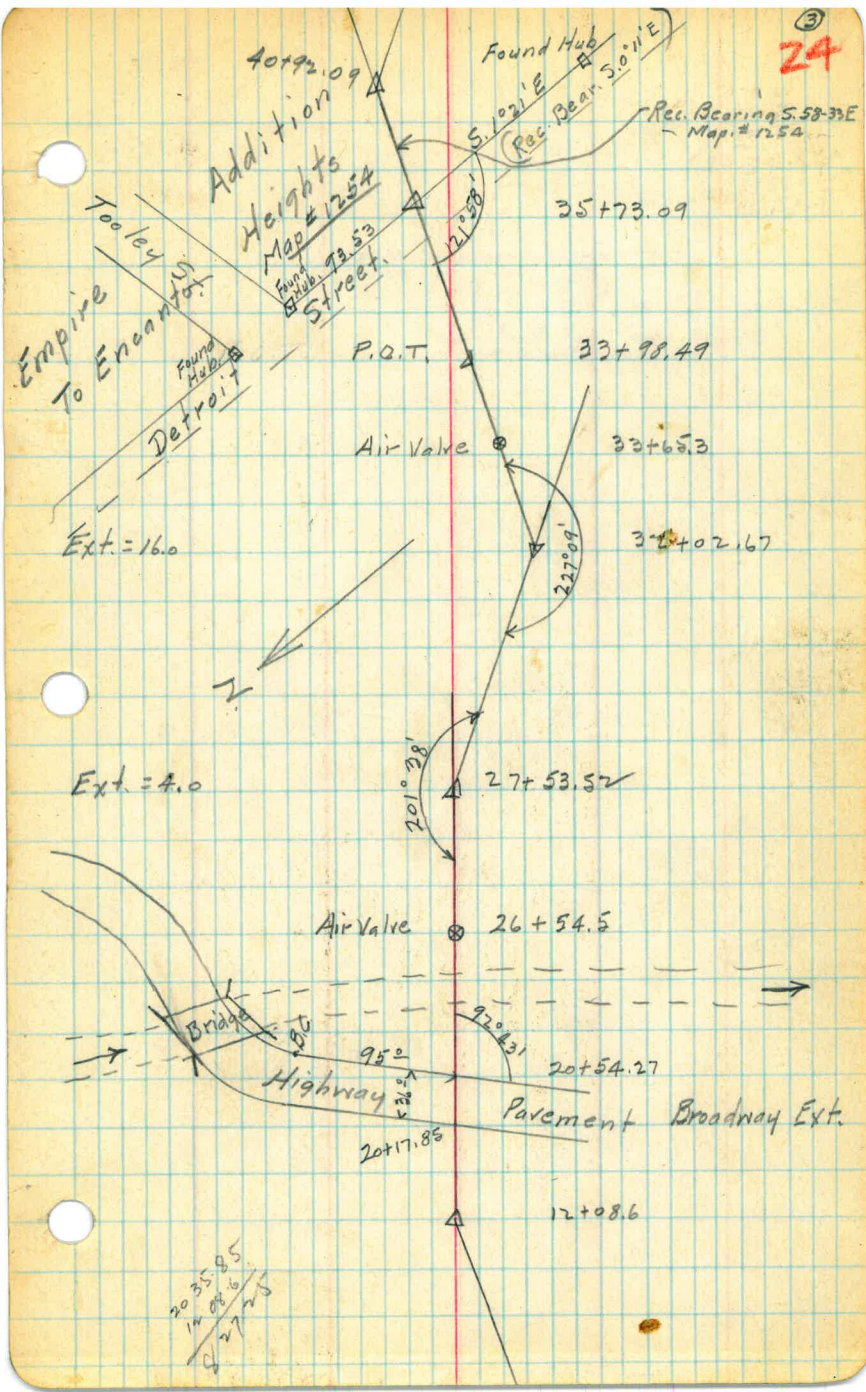
Sta.	Hor. L	Bearing	Mag.
	1544.92	S. 33° 52' E	S. 32° 10' E
12+08.60	Δ R. 14° 35'		
	321.4	S. 48° 27' E	S. 47° 30' E
8+87.22	Δ R. 10° 05'		
	449.02	S. 58° 32' E	S. 58° 30' E
4+38.2	Δ R. 18° 30'		
	438.20	S. 77° 02' E	S. 77° 0' E
0+00	Δ		
		South	

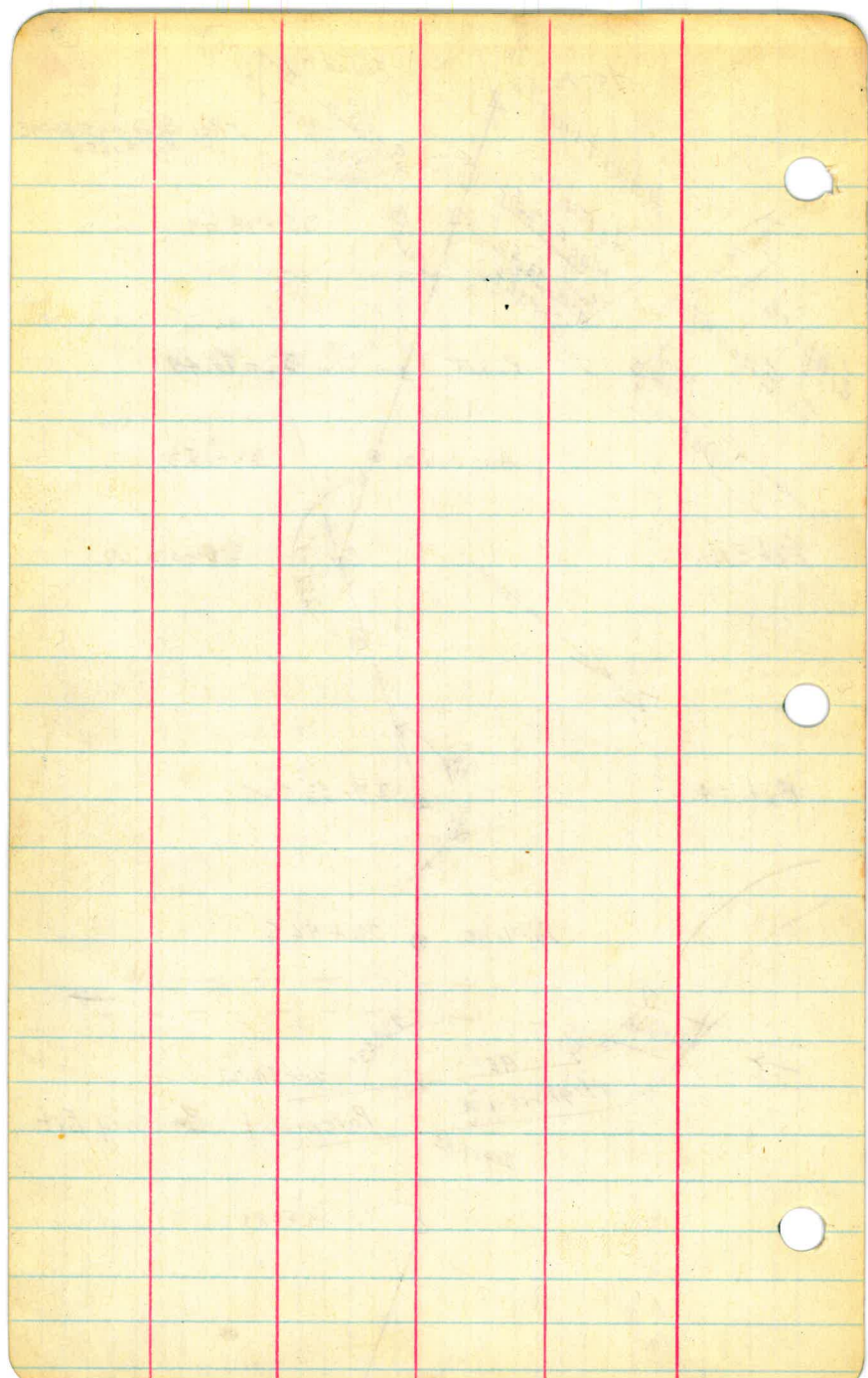


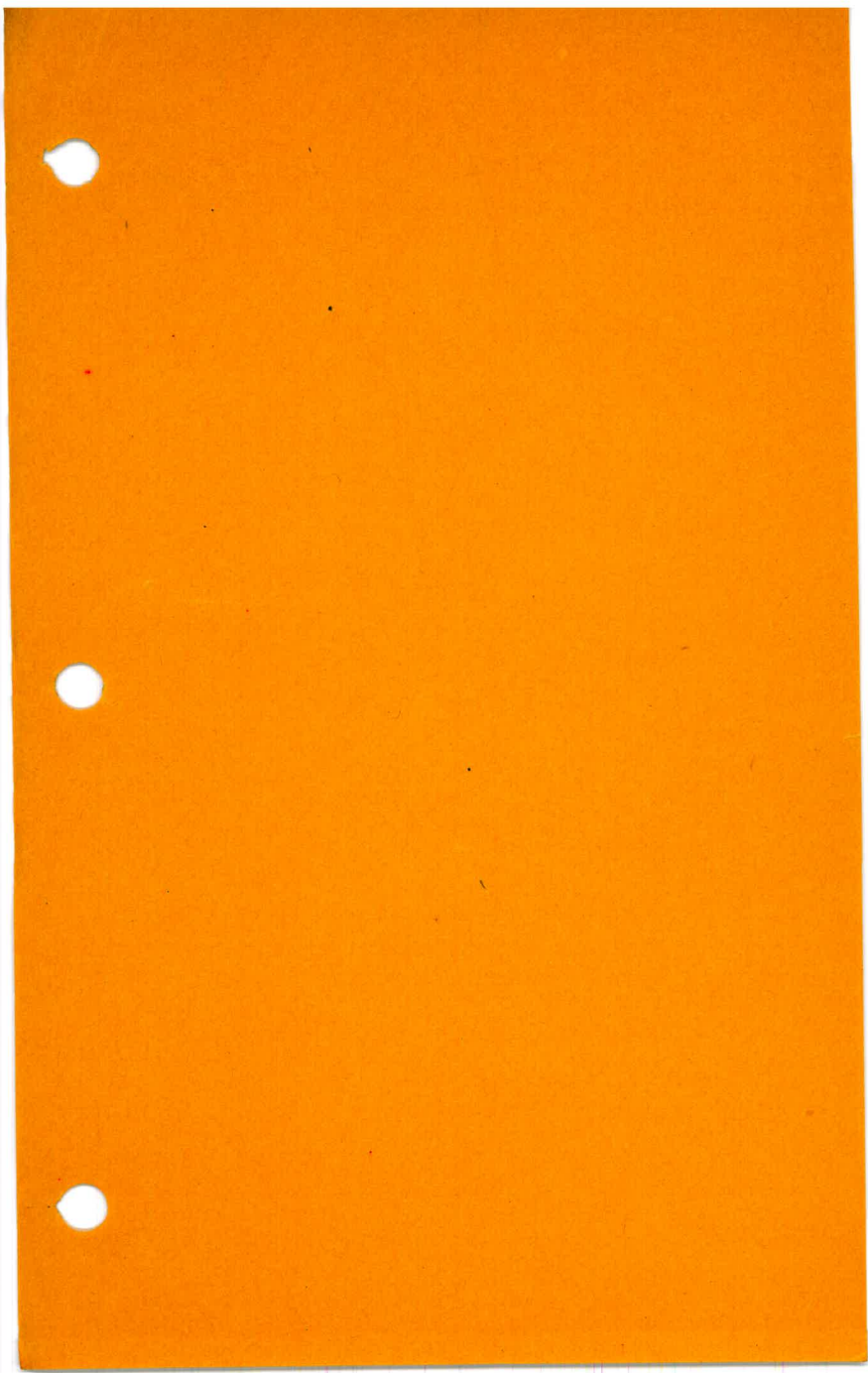
Sta.	Hor. L.	Bearing	Mag.
40+92.09	Δ R.		
35+73.09	P.O.T.		
33+98.49	P.O.T.		
	370.42	S. 59° 23' E	S. 59° 20' E
32+02.67	Δ L. 47° 09'		
	449.15	S. 12° 14' E	S. 12° 15' E
27+53.52	Δ R. 21° 38'		
	1544.92	S. 33° 52' E	S. 31° 20' E
12+08.6	Δ		

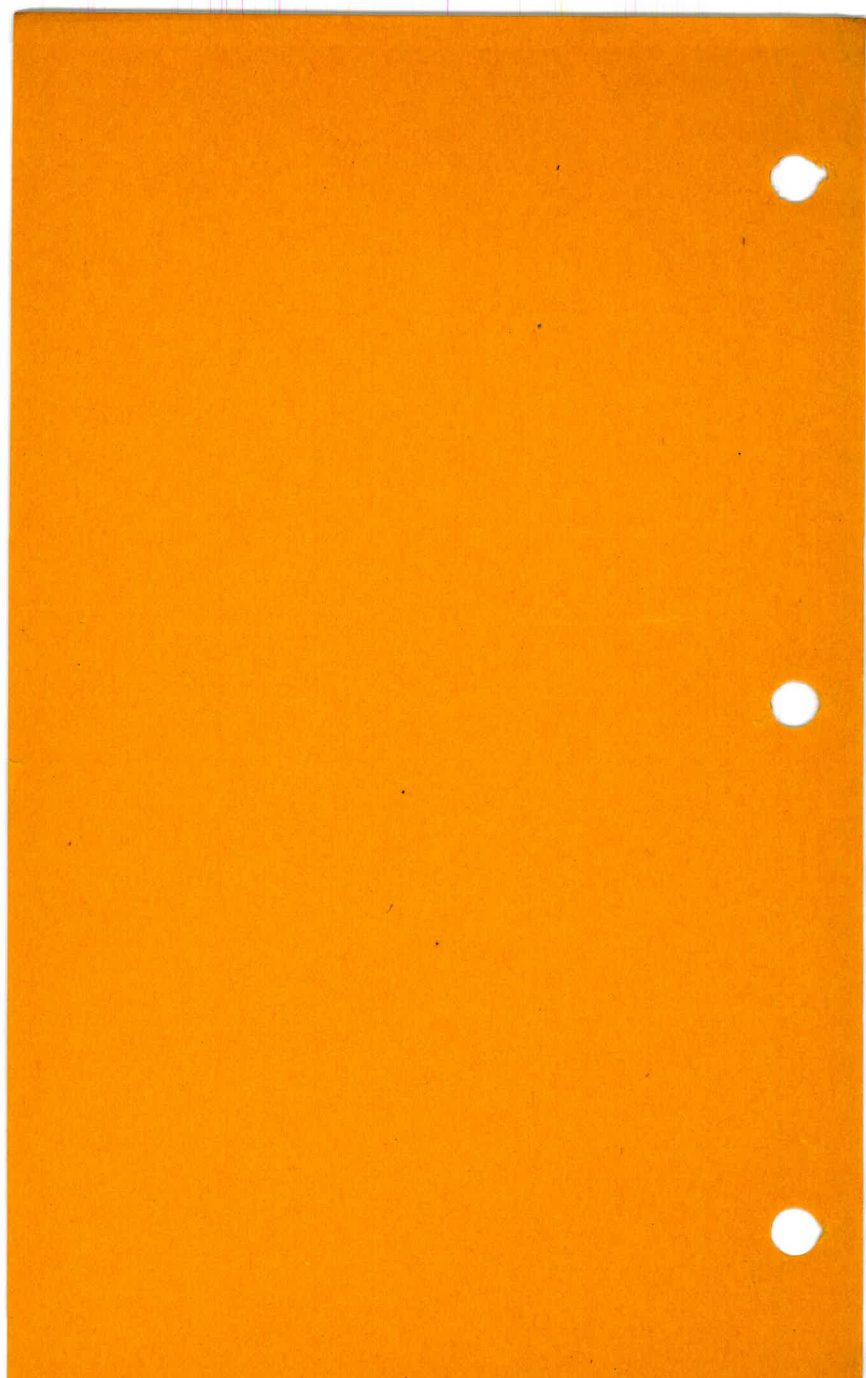












Preliminary Investigation
for Second Main Pipe Line
from Mission Valley Pumping
Plant to University H^{ts}
via El Capitan Pipe Line
at Meade and Illinois
Pages 1-5.

Location of House, Garage, Pump
House, Sump, Pipelines and other
Features at Mission Valley
Pumping Plant.
Pages 6-8.

Converse
Elliott
Simpson
Mch. 1929.

9.0 E. of W. Curb of Bdry
2" Gas Main 35.6 N. of So Curb Line
of Suncrest Drive. (Works)

Gas Main 9.2 from W. Curb } Bdry. bet.
Sewer 20.0 " " " } Suncrest + Adams.

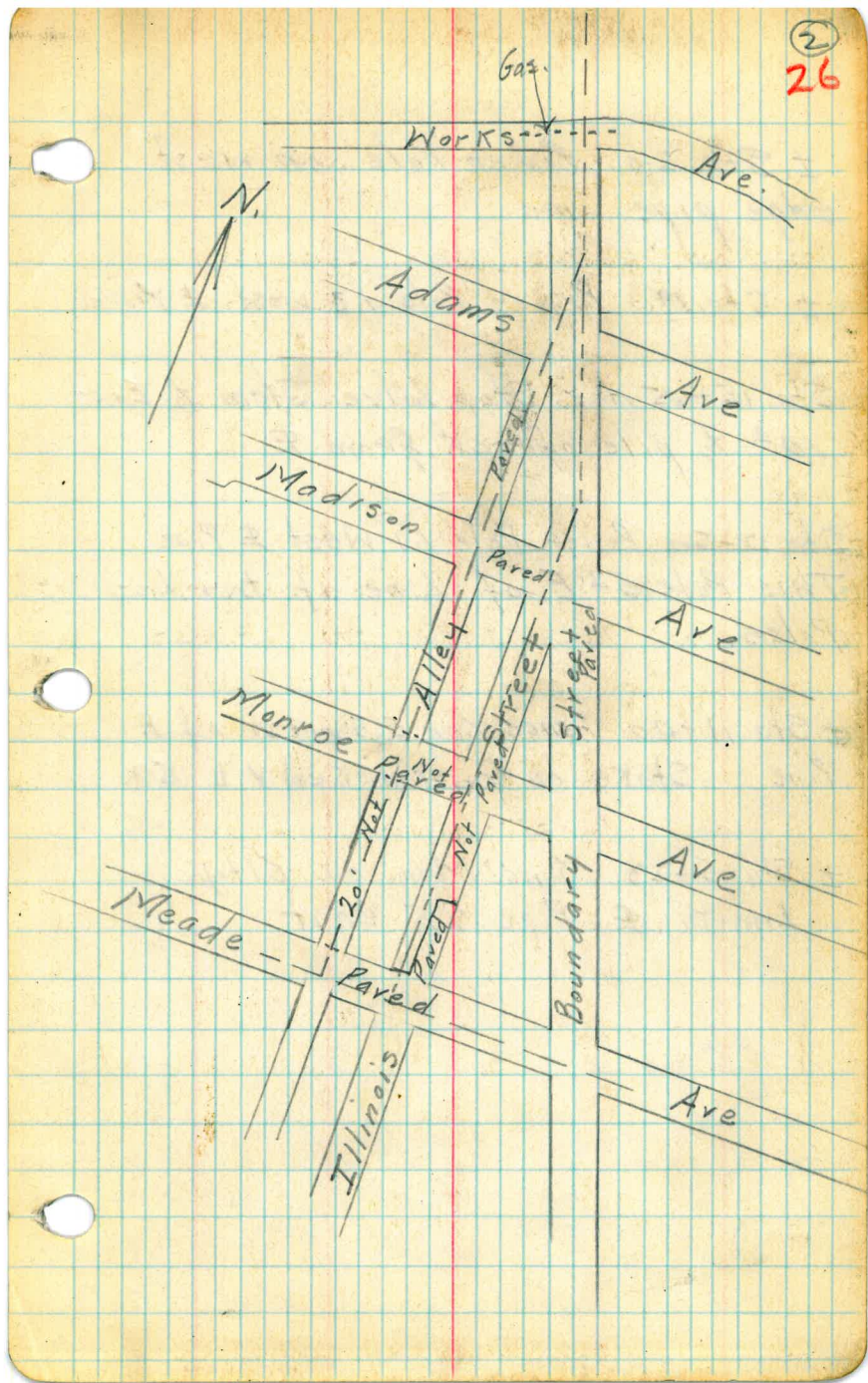
Adams Ave. Double St. Car Tracks.

Sewer 19.5 from W. Curb } Madison
Sewer 20.0 from W. Curb }

Get. Location of Sewer Lines and
Elevations - Water Lines and Gas.

Bench Marks.

Pavement Elevations and Street
and Alley Widths



± Sta. 23. Power Pole. on west
edge pipe line.

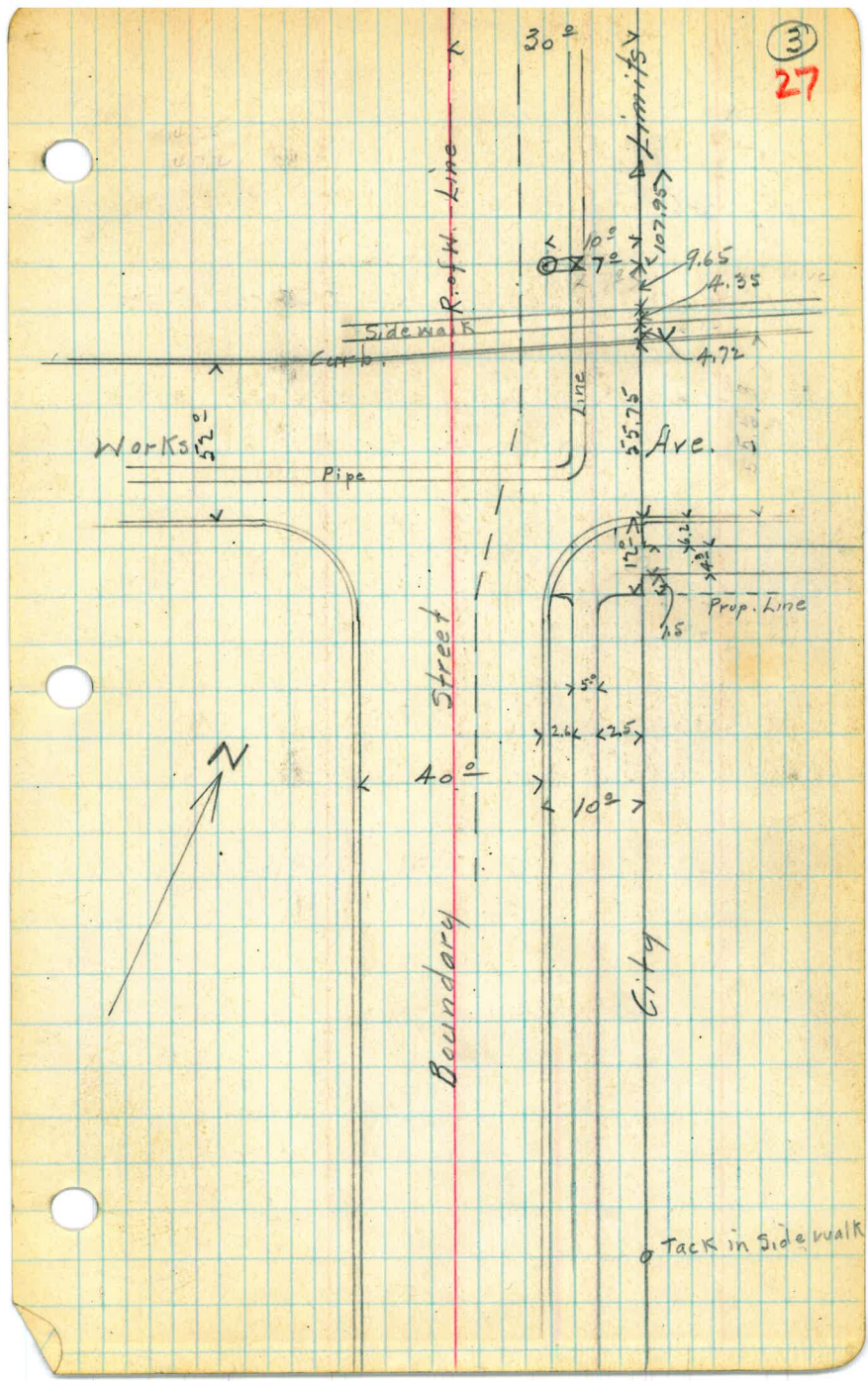
± Sta. 19 Power Pole 1.3 west of Pipe

Sta. 15+65 Hor. Stop Valve. Stem to East.
10' to pile of rock from E.

± Sta. 12+50 Power Pole 1.1 West of Pipe.
This Pole 5' E. of Line of two last
Poles.

± Sta. 11+00 Fence Cor. 5.5 West of E
Pipe. Stake on Gro marked V.L 59.

± Sta. 5+23 Conc. Mon. on City
Limits. E Pipe 2.5 east.



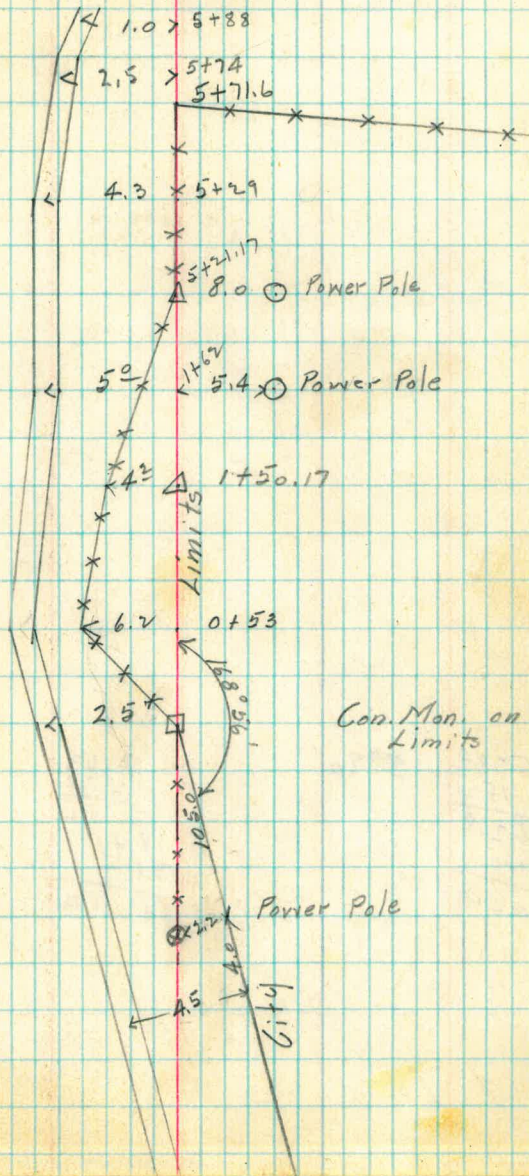
74
95.5
6+6 9.5

5+71.6

8+40	<	6.0	>	⊗ Power Pole ④
7+90	<	6.2	>	
7+47	<	5.8	>	
7+14.5	<	5.6	>	
Δ 6+69.2				P.O.T.

28

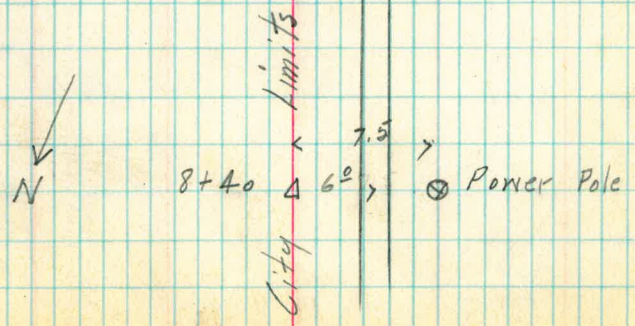
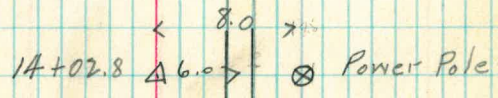
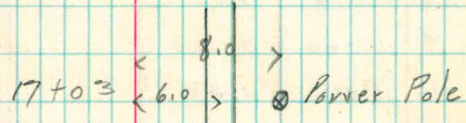
$$\begin{array}{r} 690.17 \\ 150.17 \\ \hline 840.17 \end{array}$$

$$\begin{array}{r} 578 \\ 820 \\ \hline 1418 \\ 150.17 \\ 27 \\ \hline 52.17 \end{array}$$


$$\begin{array}{r} 578^{\circ} \\ 15.2 \\ \hline 562.8 \\ 840. \\ \hline 1402.8 \end{array}$$

9°20'

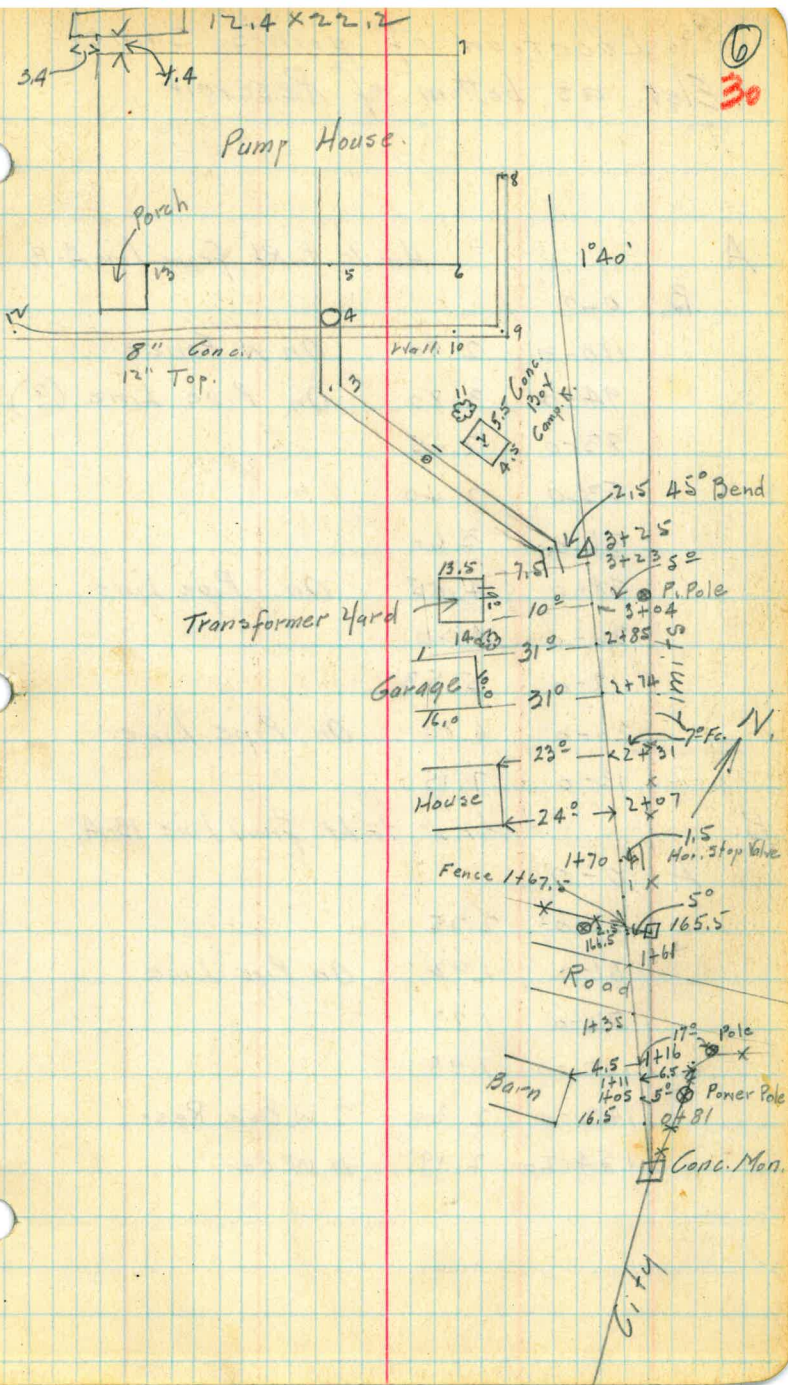
$$\begin{array}{r} 2.63 \\ 5.78 \\ \hline 2104 \\ 1841 \\ 1315 \\ \hline 52014 \end{array}$$



N
↙

limits
City

	Hor. L.	Rod.	Vert. L.	
Δ 3+25				
1	129-0	0.21		Pipe Line
2	144-07	0.12		⊕ Conc. Box
3	133-20	0.53		45° Bend.
4	138-0	0.57	-6-50	Air Chamber
5	148-16	0.72	-7-15	Pipe into Pump House
6	164-0	0.63		S.E. Cor. Pump H.
7	170-30	1.00		N.E. Cor
8	174-0	0.75		N. End Coping 2.5 High
9	167-40	0.40		S.E. Cor. " 6.3 "
10	161-15	0.41		S. Side " 3.0 "
11	144-35	0.21		Tree
12	117-20	0.92		W. End Coping 3.0 High
13	137-55	0.83		S. Face Pump House
14	26-10	0.37		TREE



Location of points same
Elev. as bottom of Reservoir.

A	Hor. L. to Rt. from Line A-B.		
B.	0-0		
	110-0	2.90	On W. Fence.
	94-0	3.80	On Pipe Line (?)
	83-0	2.05	
	53-0	2.40	
	36-0	3.60	
	38-0	4.05	On Pipe Line
	26-0	4.50	
	18-0	5.53	
	20-0	6.80	On Pipe Line.
	13-0	7.15	

B.	Hor. L. to Lt. from Line B-A.		
A	0-0		
	37-0	2.75	
	61-0	1.92	On Pipe Line
	72-0	1.73	
	122-0	1.98	
	142-0	2.30	S.W. Cor. Resc
	154-20	2.19	N.W. Cor "

474.5

⑦

31

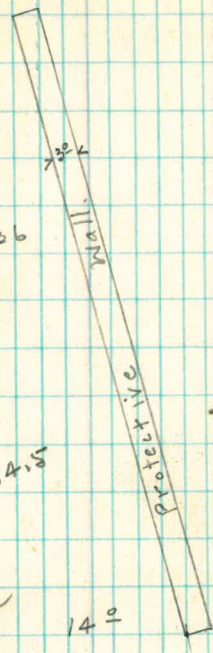
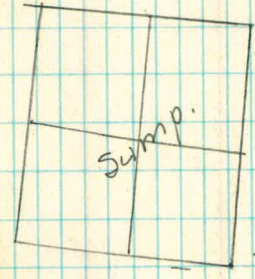
6+39.15

19° 5+36

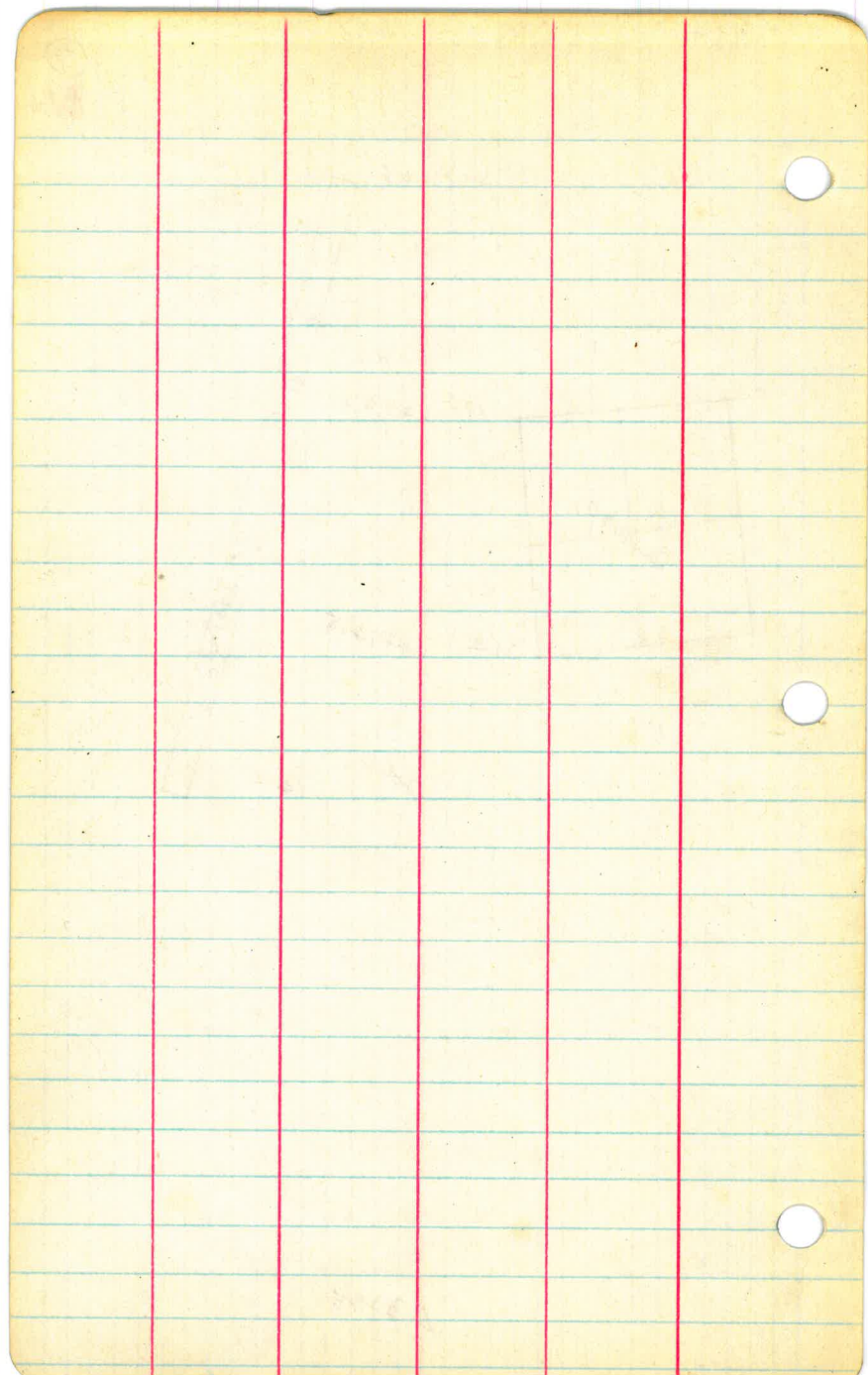
21° 4+74.5

4+62

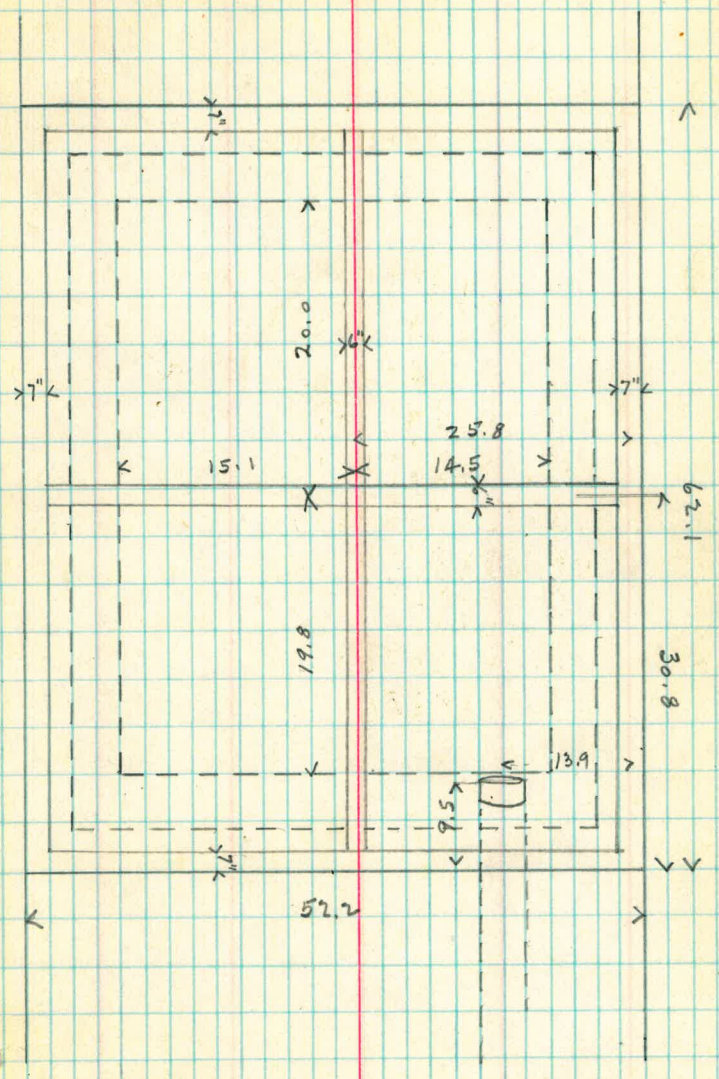
14°



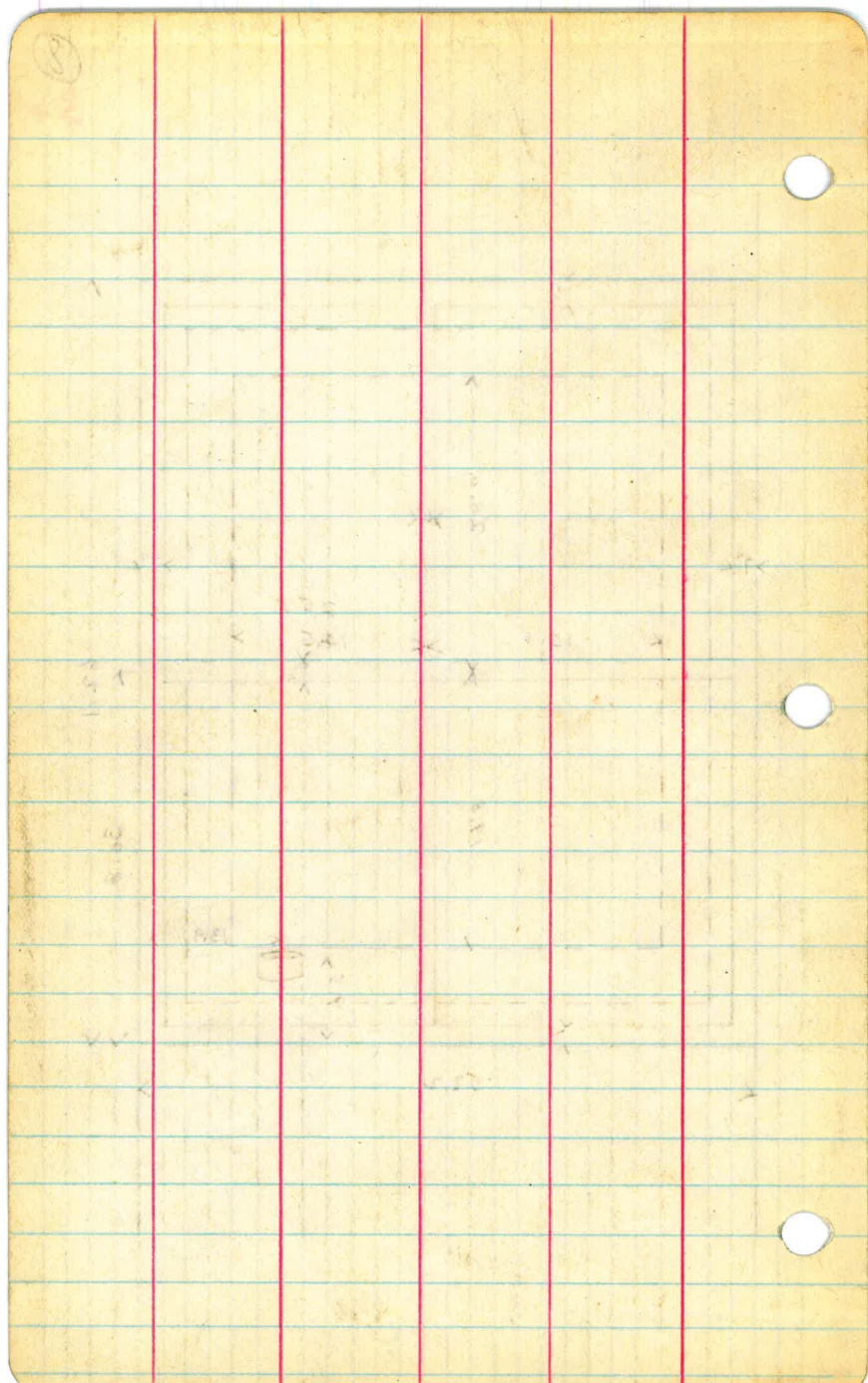
△ 3+25



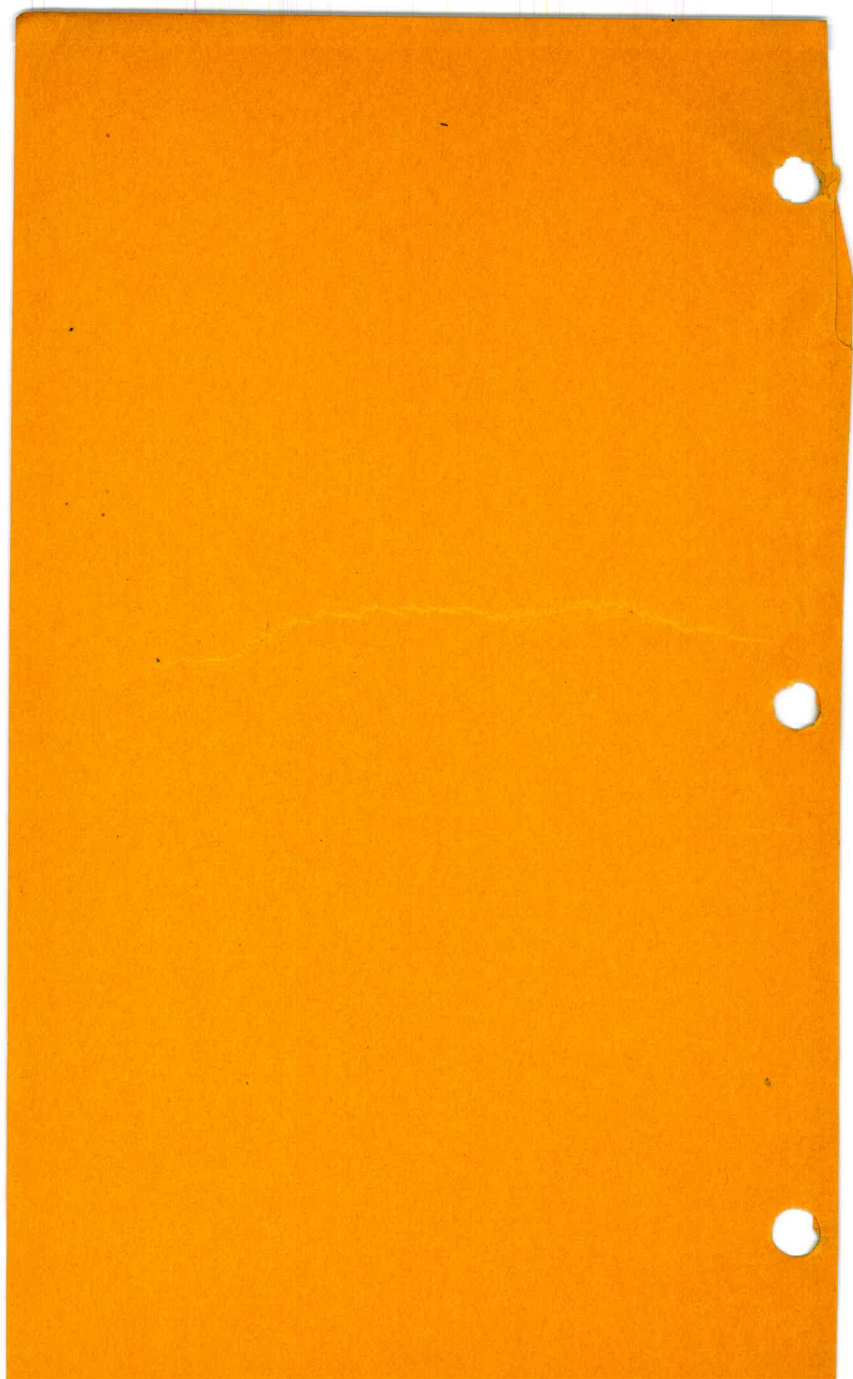
⑧
M ✓



52.2 x 62.1 30.8







Check Levels from City
Bench Mark at Euclid and
University to Chollas Heights
B. M #9. 2nd Stay Pipe Line.
City Datum.

Pages

Converse

Elliott

Simpson

Mar. 7, 1929

B.M.				340.68	✓
	3.02	343.70			
			3.71	339.99	✓ 2.77 4/14/19.
B.M.	6.60	346.59	6.16	340.43	✓
			4.95	341.64	✓ -.03
	0.54	342.18			
Set B.M.			1.45	340.73	✓
			12.48	329.70	✓
	0.70	330.40			
			12.82	317.58	✓
	0.53	318.11			
			12.70	305.41	✓
	1.03	306.44			
			2.52	303.92	✓
	10.61	314.53			
			4.53	310.00	✓
	8.82	318.82			
Set B.M.			3.91	314.91	✓
			1.40	317.42	✓
	4.26	321.68			
Set B.M.			1.73	319.95	✓
			13.15	308.53	✓
	0.32	308.85			
			12.95	295.90	✓
	0.08	295.98			

Brass Plug. N.W. Cor. Euclid & Univ.
City Bench Mark.

Starting B.M. for 2nd. Otay Pipe Line
Survey, El. 34.46

Top of Air Valve

34.0 ⁷⁴/₃₃
19

Top of Air Valve Sta 11+50

Top of Air Valve

295.98 ✓

12.32 282.66 ✓

1.13 284.79 ✓

12.20 272.59 ✓

0.33 272.92 ✓

12.52 260.40 ✓

0.43 260.83 ✓

12.77 248.06 ✓

1.21 249.27 ✓

12.80 236.47 ✓

0.74 237.21 ✓

12.84 224.37 ✓

1.44 225.81 ✓

7.68 218.13 ✓

6.72 224.85 ✓

1.88 222.97 ✓

10.94 233.91 ✓

1.18 232.73 ✓

11.35 244.08 ✓

0.84 243.24 ✓

12.43 255.67 ✓

0.82 254.85 ✓

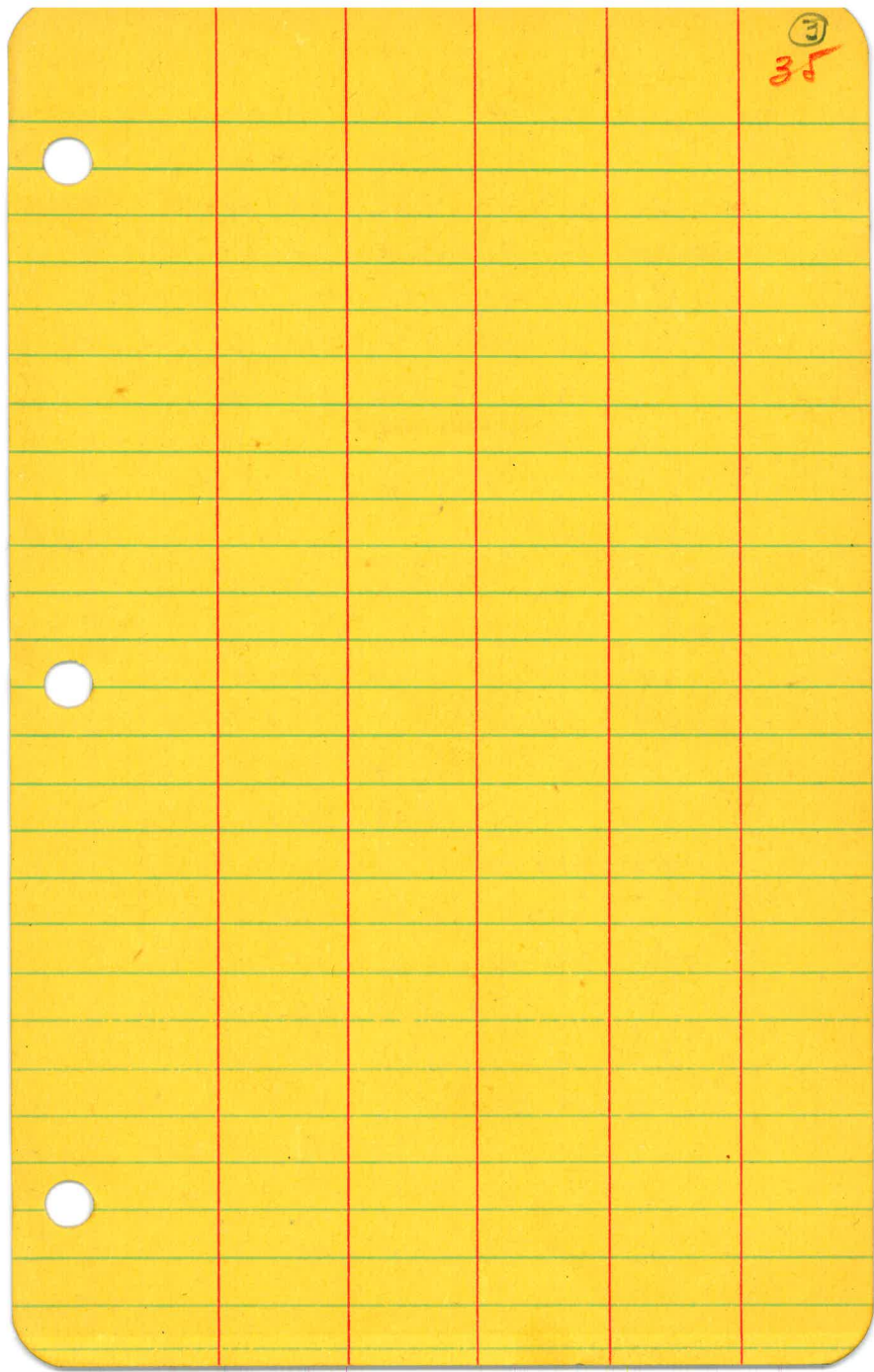
12.60 267.45 ✓

0.22 267.23 ✓

11.78 279.01 ✓

0.86 278.15 ✓

3.99 282.14 ✓



	282.14			
Set BM.		2.56	279.58	
		0.96	281.18	
10.68	291.86			
		0.77	291.09	
12.02	303.11			
		0.39	302.72	
12.20	314.92			
		0.40	314.52	
8.58	323.10			
		12.62	310.48	
0.37	310.85			
		6.19	304.66	
5.67	310.33			
Set BM.		5.35	304.98	
		2.57	307.76	
11.63	319.39			
		0.74	318.65	
12.31	330.96			
B.M.#8		4.05	326.91	+1.19
		0.68	330.28	
13.17	343.45			
		0.45	343.00	
12.33	355.33			
		0.16	355.17	

(4)

36

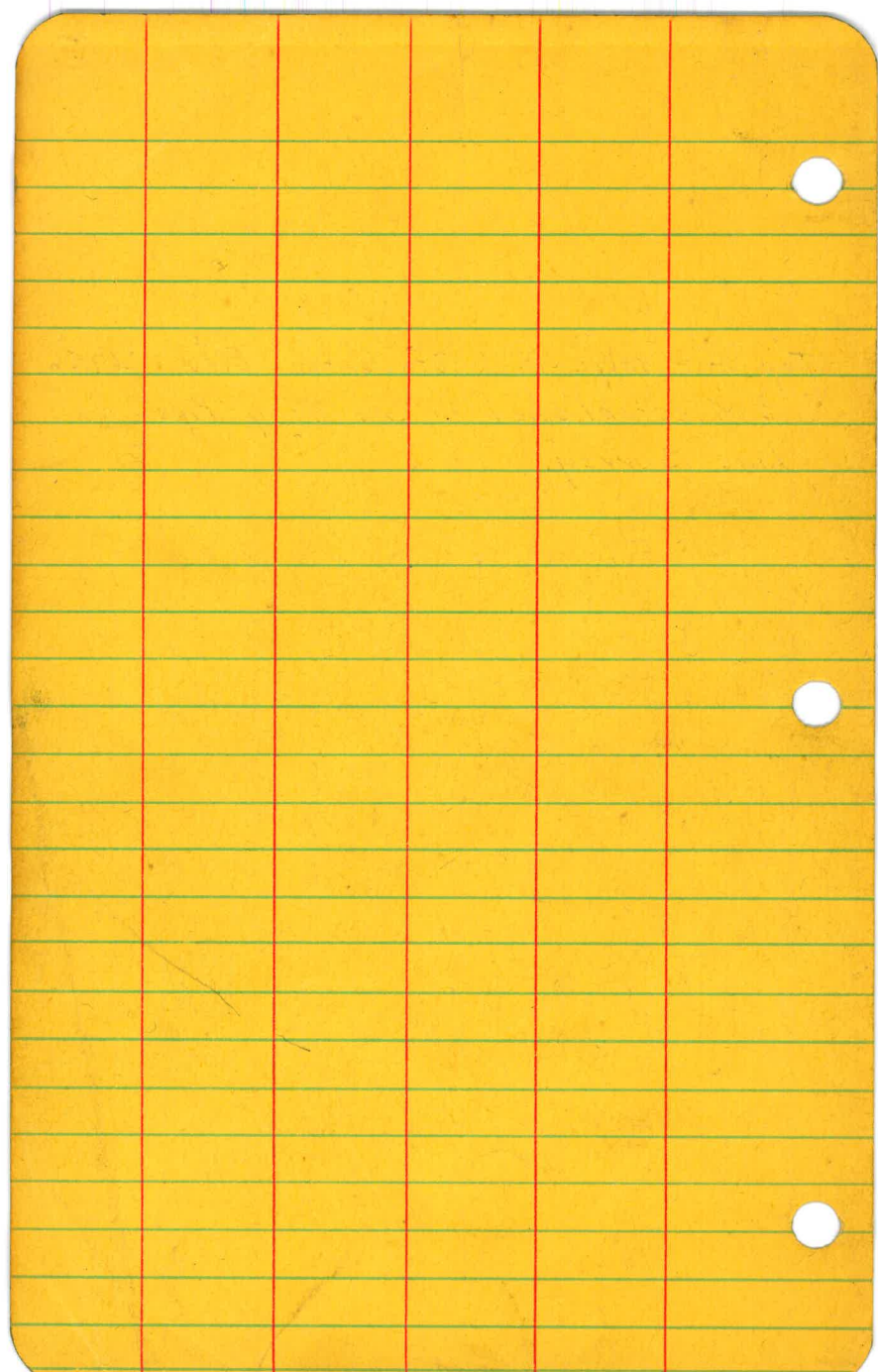
Top of Air Valve 29+15

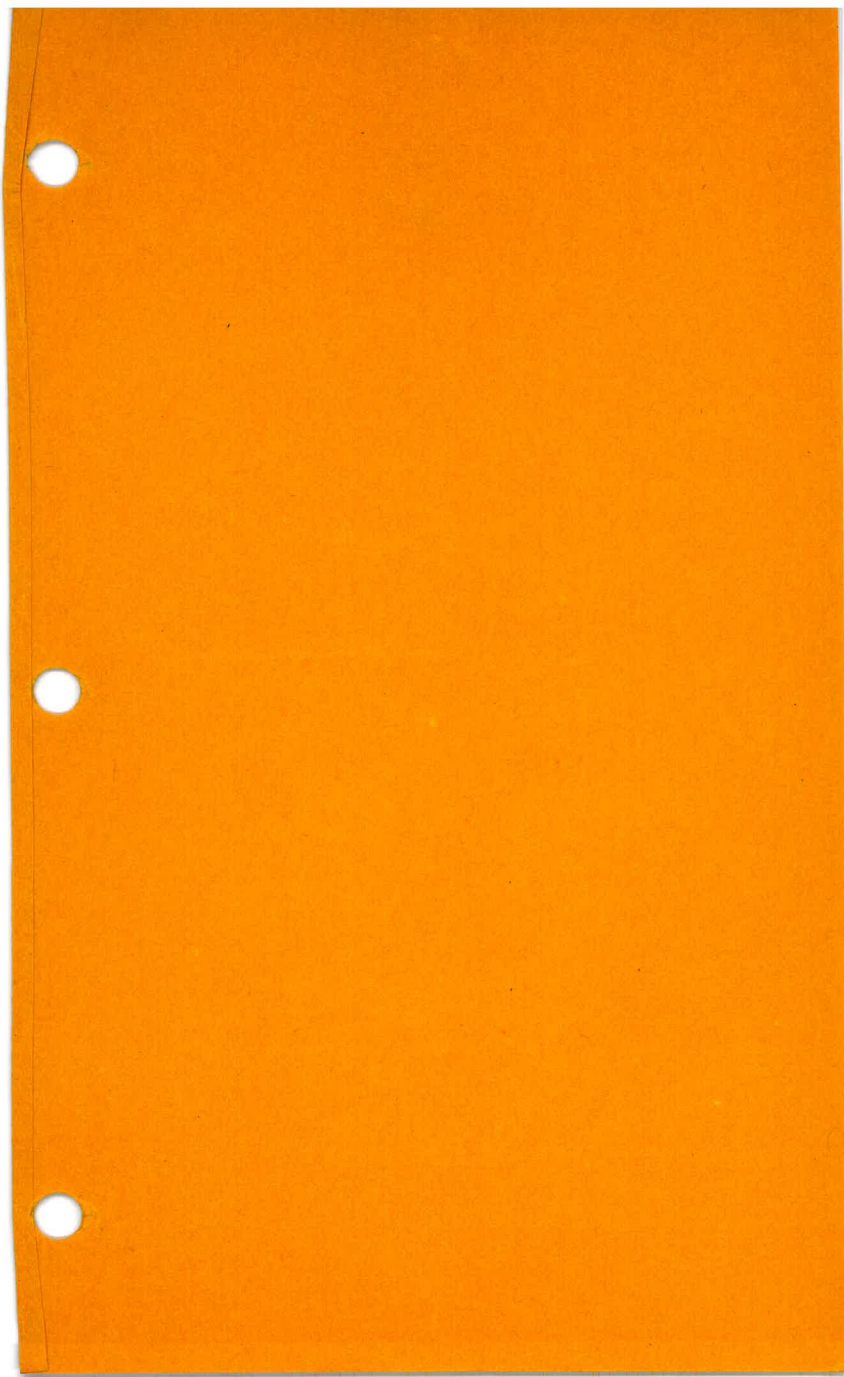
Top Air Valve Sta. 45+50

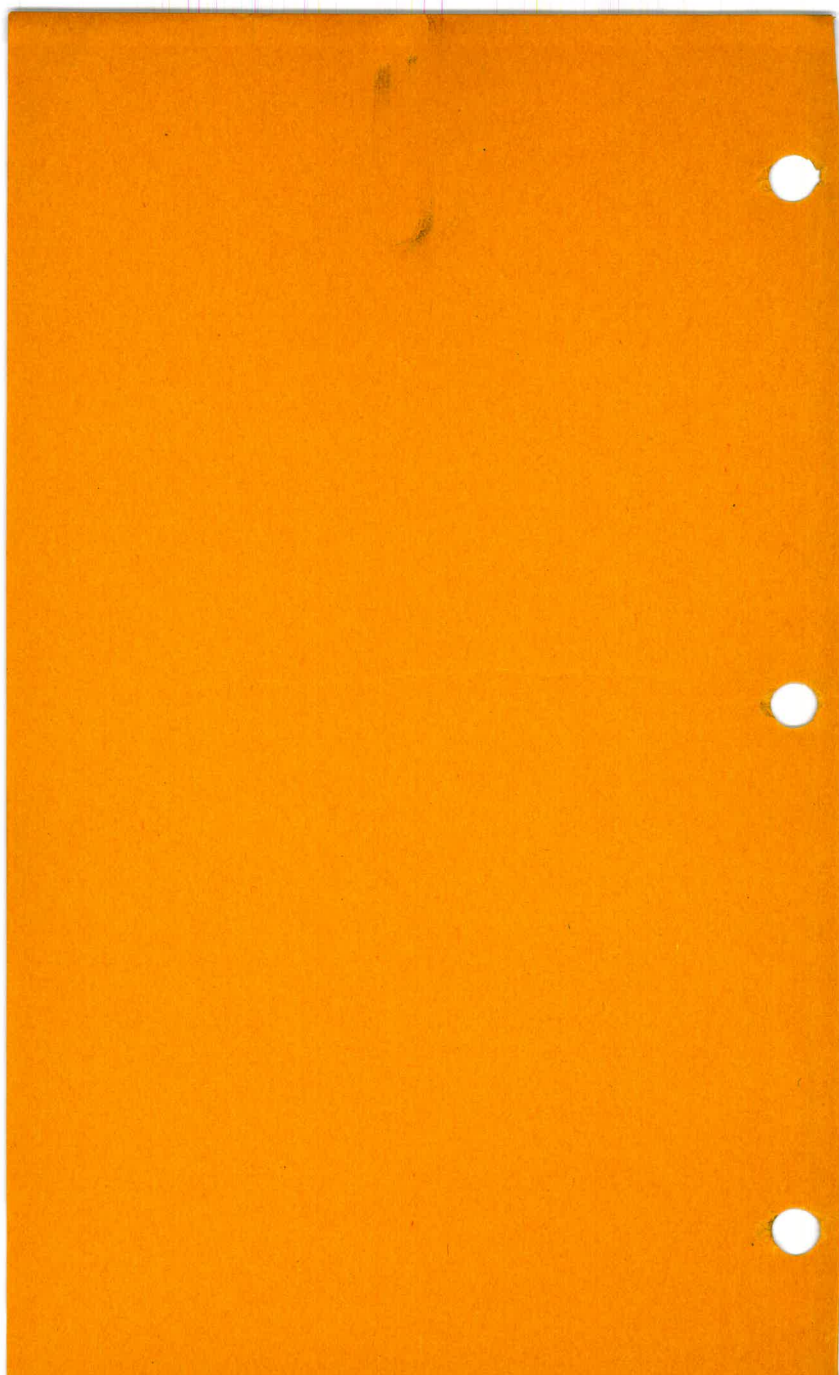
				355.17 ✓	
	12.11	367.28 ✓			
			2.93	364.35 ✓	
	7.43	371.78 ✓			
B.M. #9.			3.18	368.60 ✓	+ 1.04

5
37

Top Air Valve 15' L. Sta. 56+00. Elev. $\frac{368.60}{367.56}$
B.M. established on 2nd. Otay Pipe $\frac{1.04}{}$
Line Survey.







Mission Valley - Univ. Hts.

Location Line for Second
Main Pipe Line from Mission
Valley Pumping Plant to El Capitan
Pipe Line at Meade and Illinois

Pages 1-10.

Converse

Elliott

Simpson

Mar. 4-5, 1929.

put in ...

32-40
11-20
44

97.66
17.80
115.46

97.66
19.70
117.36

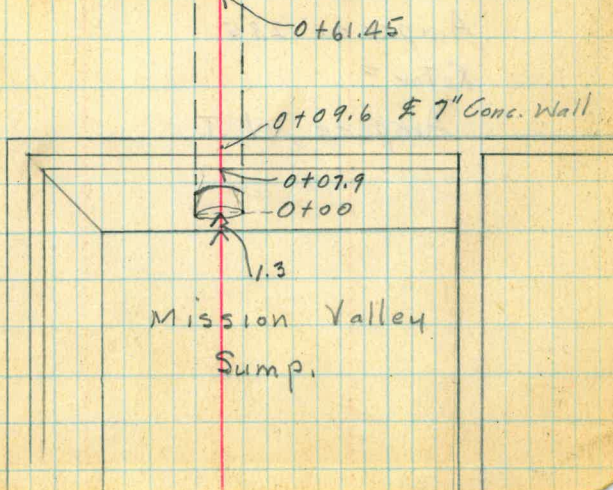
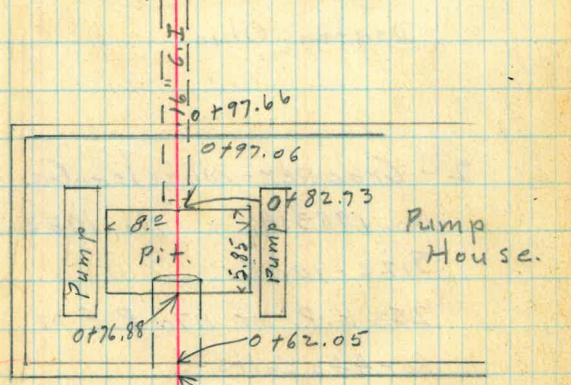
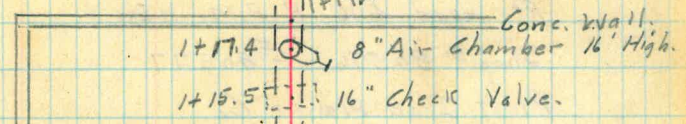
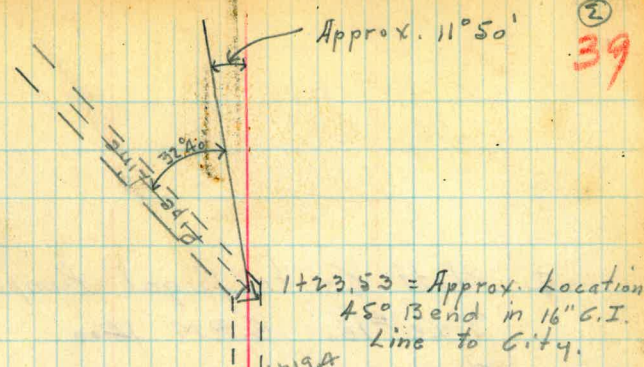
82.73
5.85
76.88

97.66
21.
118.66
72
149.38

118.66
4.87
123.53

20.68
62.05
82.73
14.33
97.06

0+00 = N. End of 24" Cona. Pipe in Settling
Basin.



2

1250

2- Platt Centrifugal Pumps

Size #10. G.P.M. 1400

Ft. Head 416. R.P.M. 1150

Shop # 80576 - #80577

Platt Iron Works Co.

Dayton, Ohio

2- Crocker-Wheeler Co. Motors

No. 198319 No. 198317

Size - 100 R

250 H.P. at 1170 R.P.M.

60-440 Volts - 3

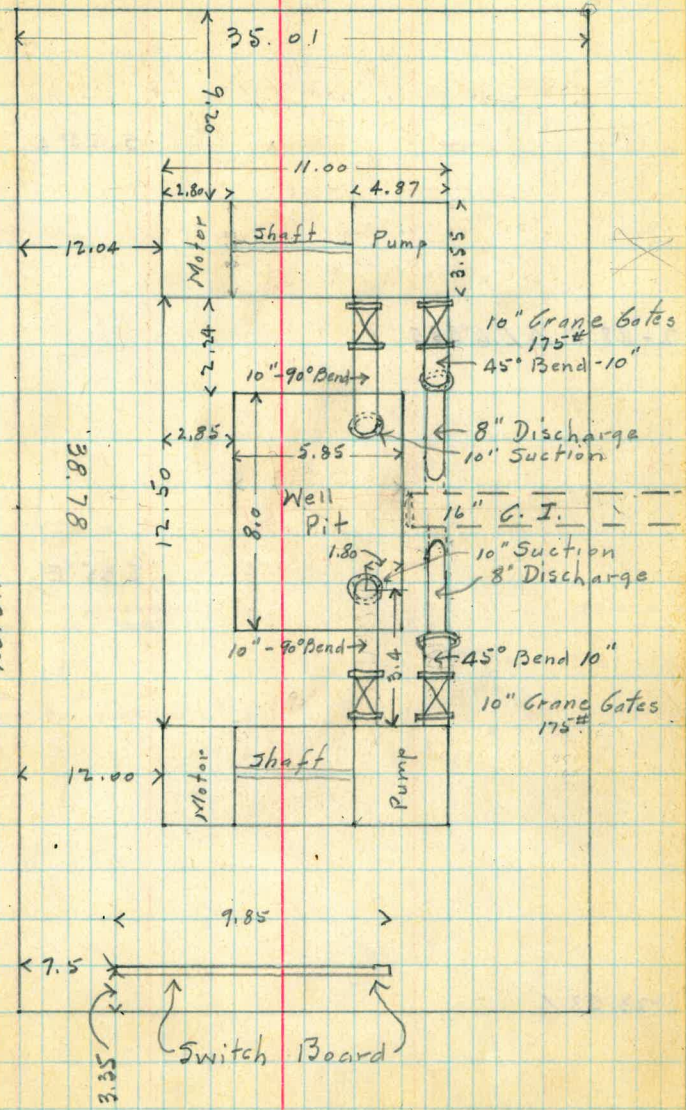
Amperes 285

Rotor #

Ampere, N.J.

Main Pump Room Mission Valley.

Concrete Motor Bases Raised 0.75 above
Floor level.



3+52.42 $\Delta R. 20^{\circ} 10'$

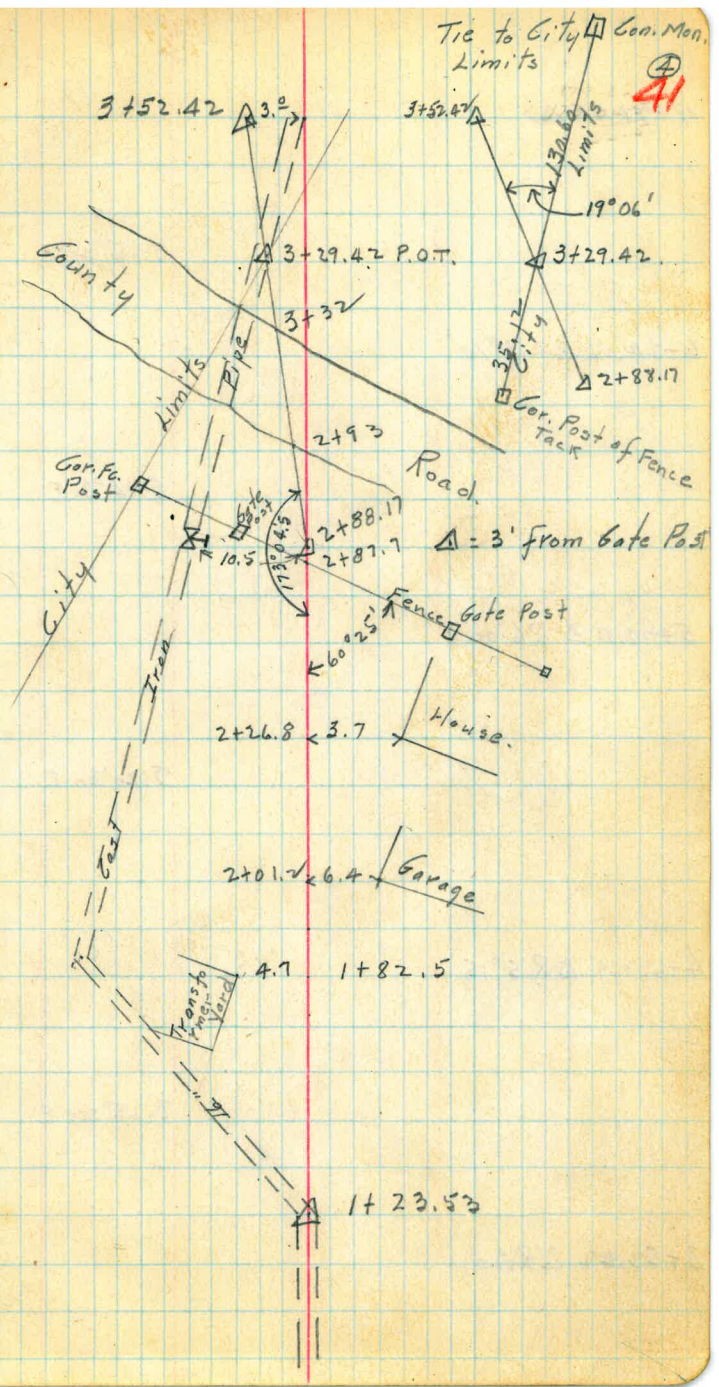
Mag.

5.53° E ?

2+88.17 $\Delta L. 6^{\circ} 55.5'$

5.35° E. ?

1+23.58 Δ



92.25
7.5
84.75

9+92.25 Δ

S. 15° 40' E

6+24.16 Δ L. 1° 10'

S. 14° 30' E

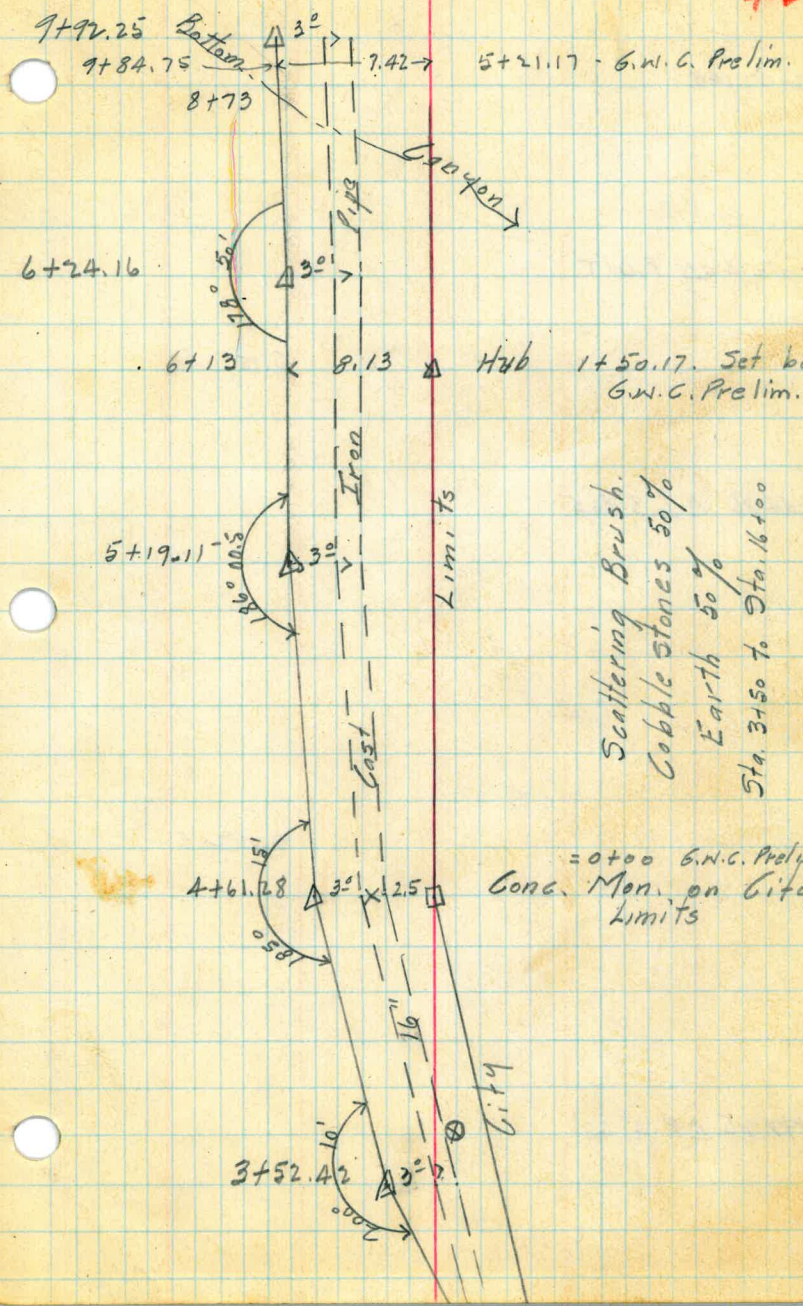
5+19.11 Δ R 6° 00.5'

S. 20° 30' E

4+61.28 Δ R 5° 15'

S. 25° 20' E

3+52.42 Δ R. 20° 10'



13402.48

12+70.42 Δ P.O.T.

S.15°20'E

11+84.86 Δ L.3°56.5'

S.11°20'E

9+97.75 Δ R.4°48'

← Canyon

← Large

Medium Thick High Brush
50% Cobblestones - 50% Earth
Sta. 3+50 to Sta. 16+00

From Sta. 11+60 to Sta. 13+40 Line on
Steep Side Hill Slope

City Limits

City

9+97.25

10+37

10+51

10+78.78
P.O.T.



Small

Draw

9+97.25

City
605.75

Con. Mon.

Tie to City Limits

Limits

11+84.86

4° 53'

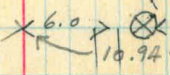
10+78.78 P.O.T.

11+79

11+84.86

12+70.47

13+02.48



Power Pole

100'

100'

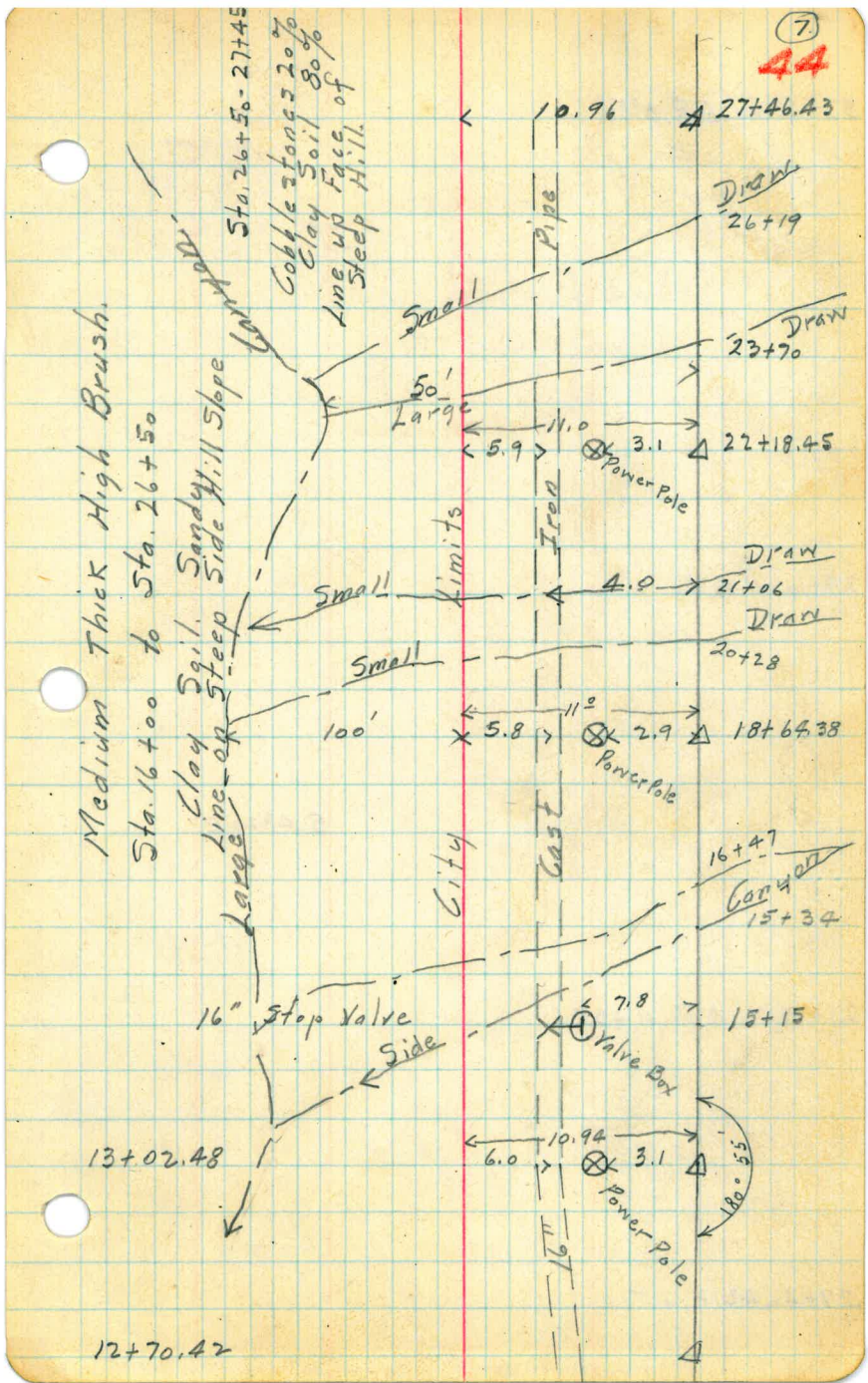
27+46.43 P.O.T.

22+18.45 Δ P.O.T.

18+64.38 Δ P.O.T.

S. 16°30' E

13+02.48 Δ L. 0°55'



33+43.56 Δ R. 0°05'

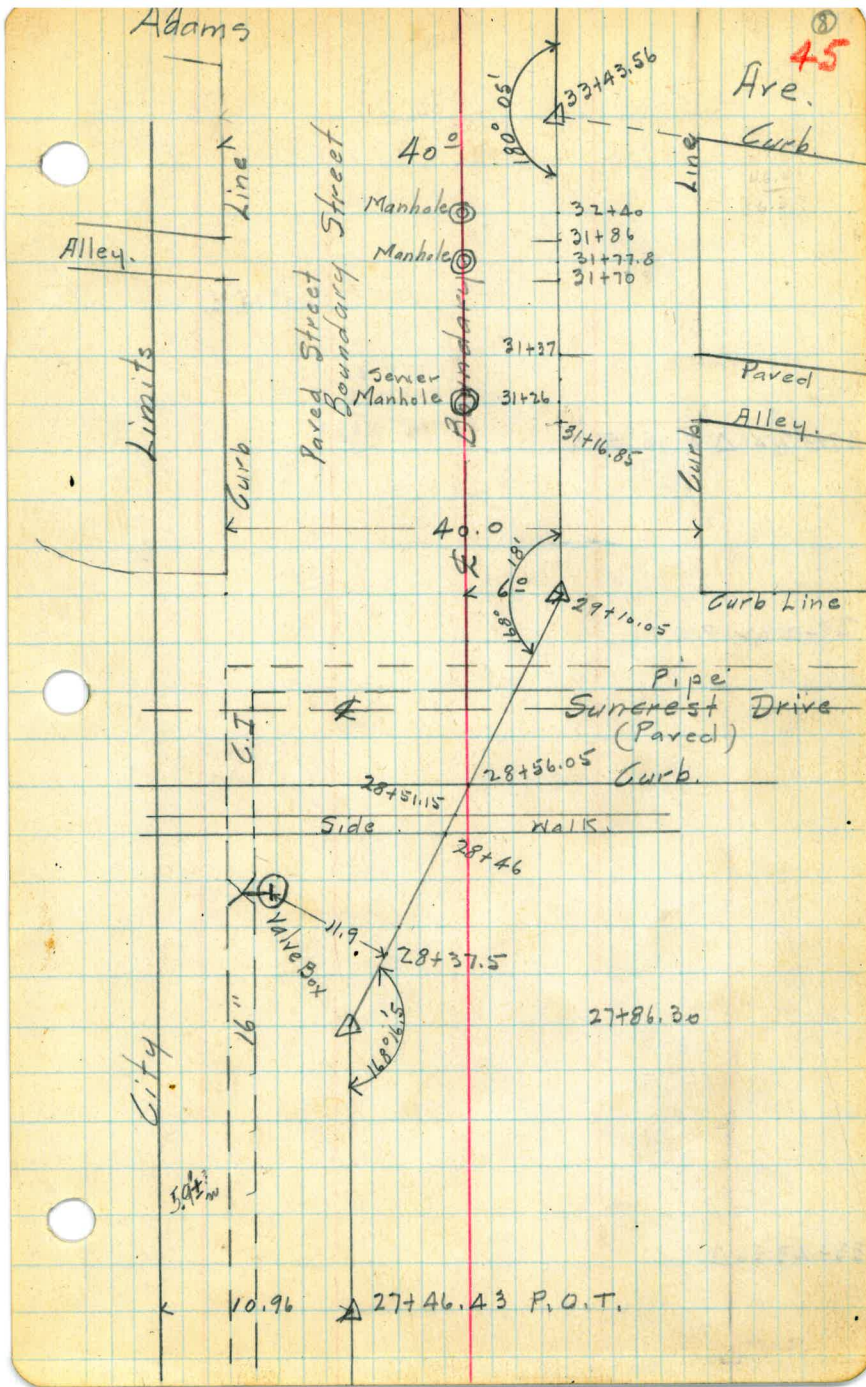
53.83
43.56
97.39

29+10.05 Δ L.

S. A°20'E

27+86.30 Δ R. 11°43.5'

27+46.43 P.O.T.



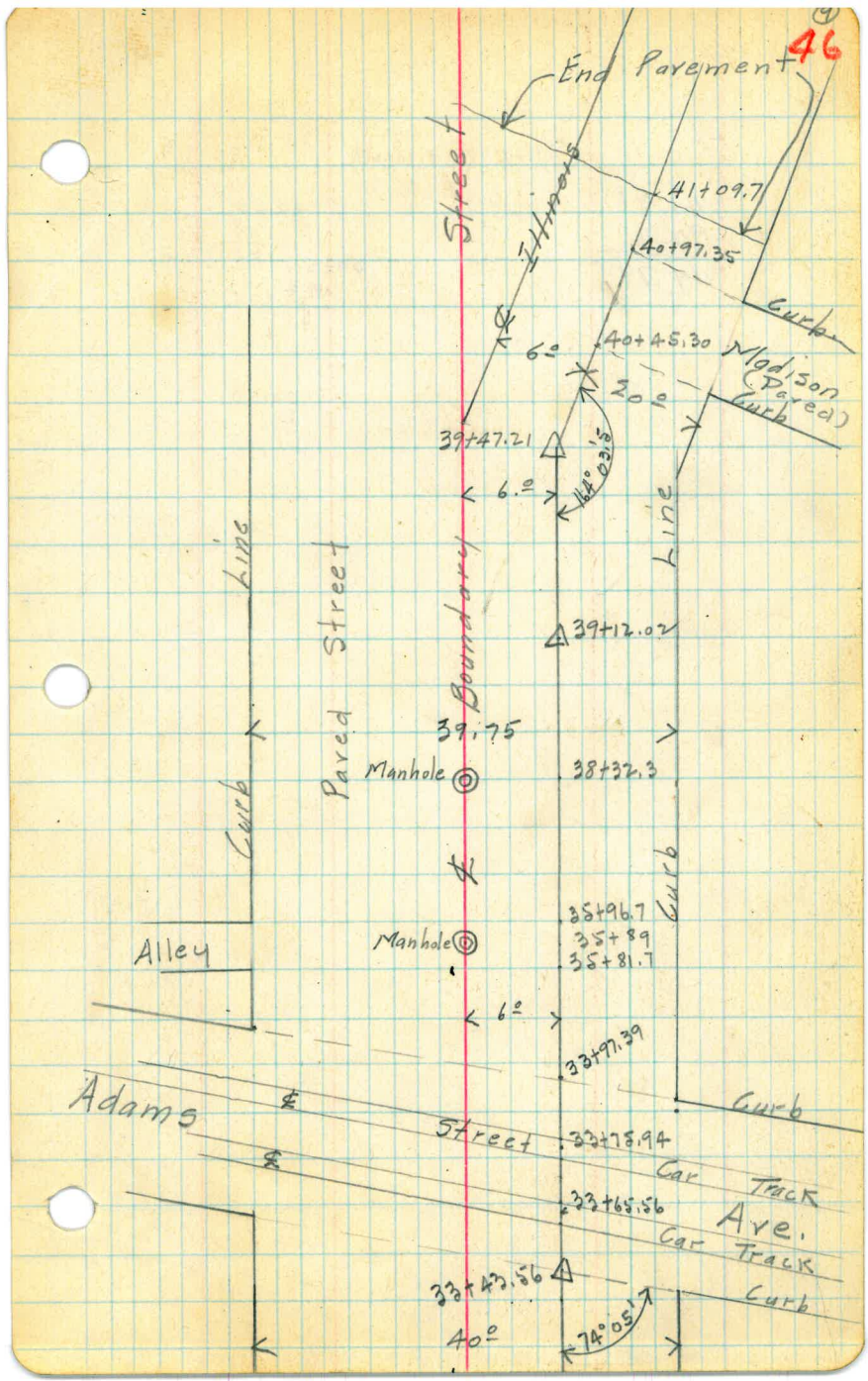
S. 0° 15' E

179-60
164-23.5
15 56.5

39+47.21 Δ R. 15° 56.5'

39+12.02 P.O.T.

33+43.56 Δ



41.98
92.28

134.26

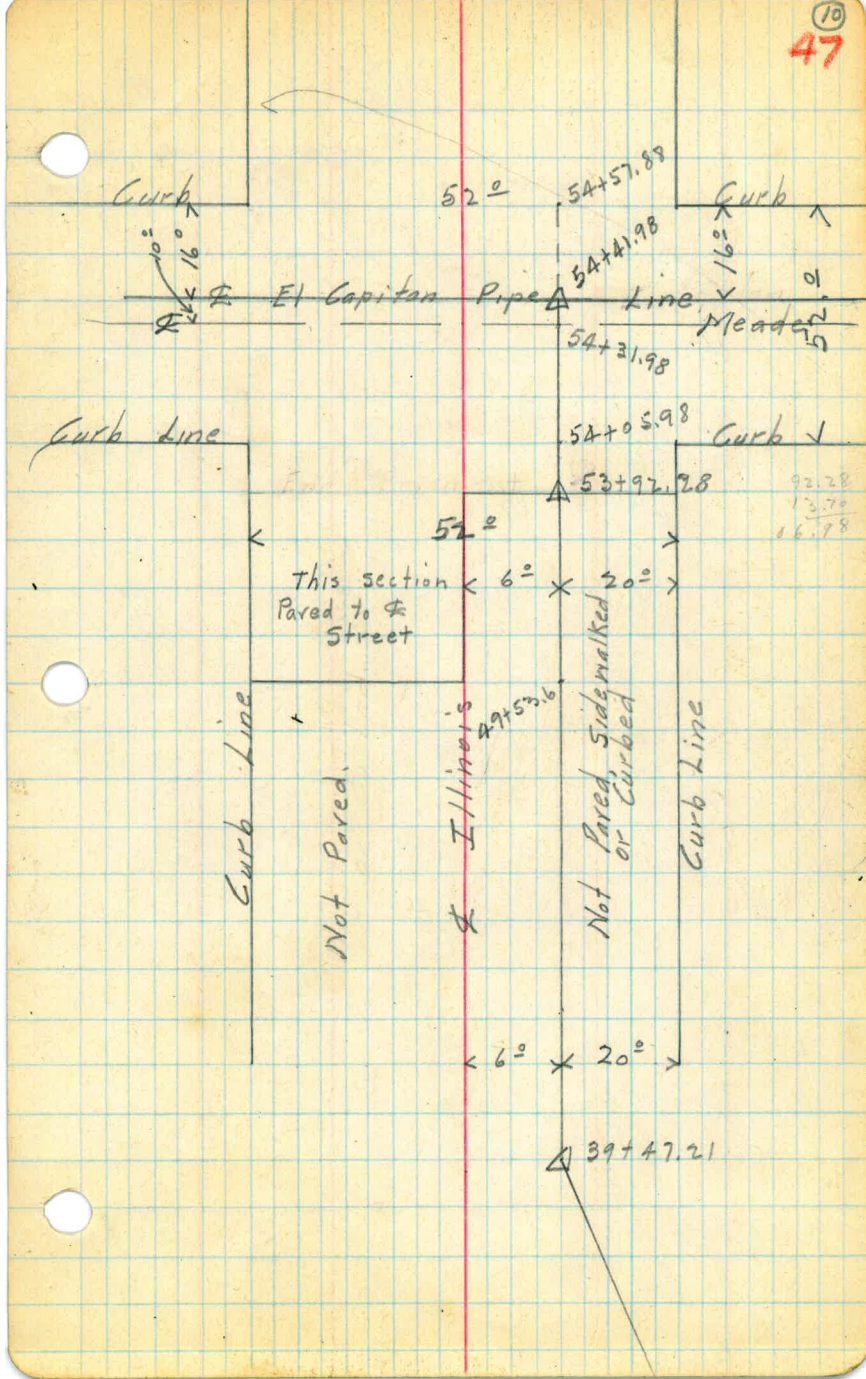
65.60
92.28
54.70

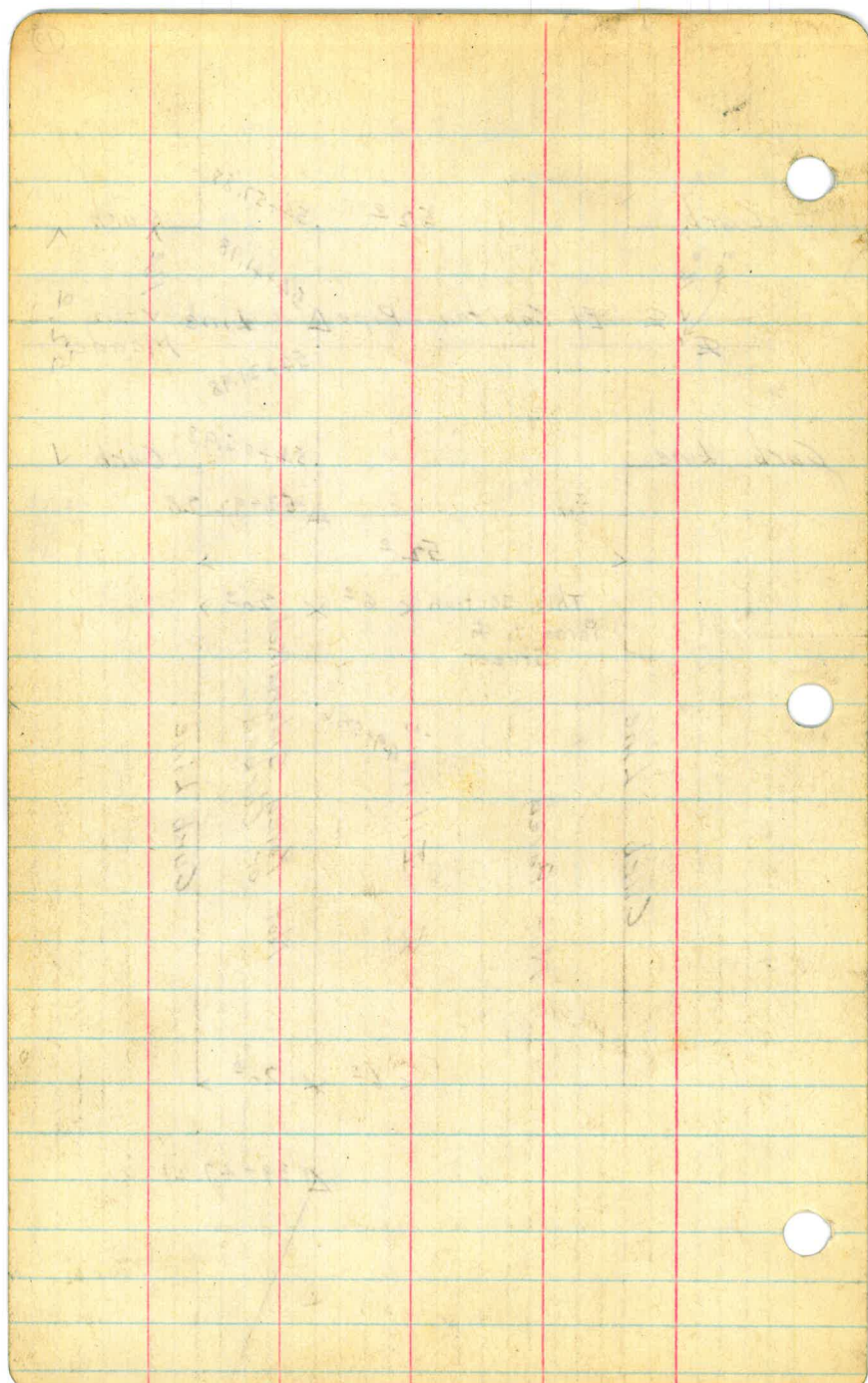
57.88
05.90

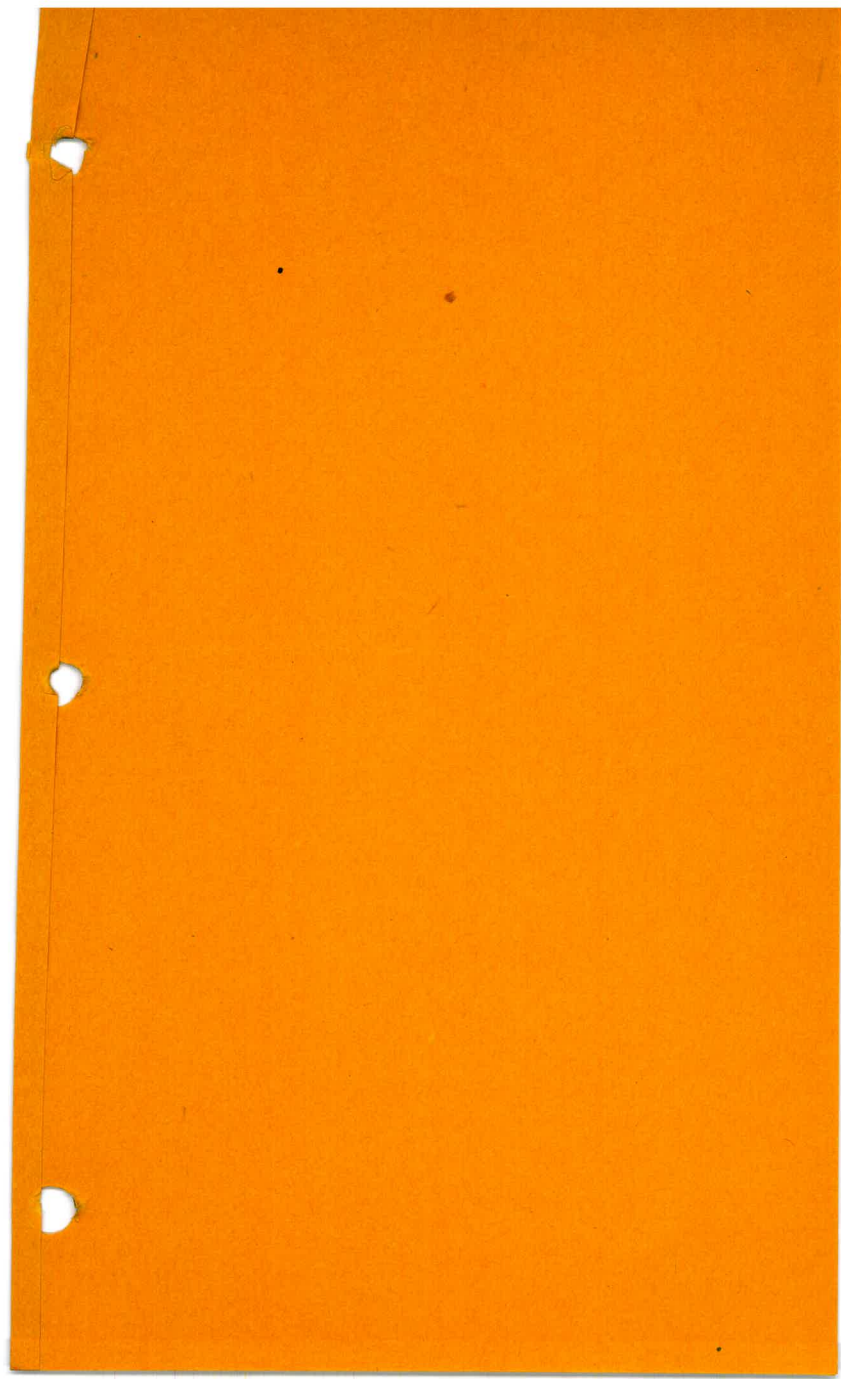
51.90

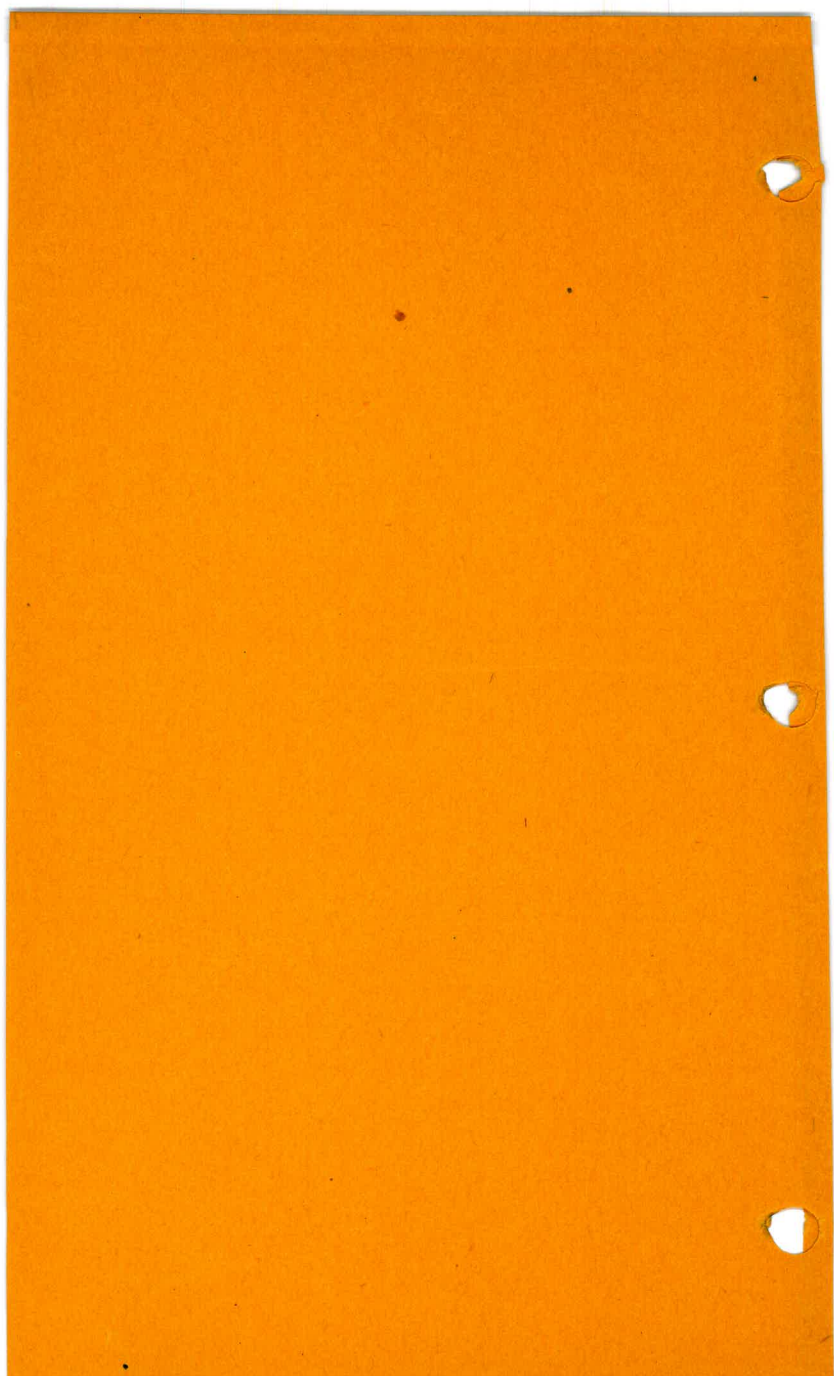
05.98
26

31.98









Mission Valley - Univ. Hts.
Profile Levels for Second Main
Pipe Line from Mission Valley
Pumping Plant to El Capitan Pipe
Line at Meade and Illinois.
City Datum.

Pages 1-11.
Converse
Elliott
Simpson
Mch. 6-7, 1929

B.M.				53.45	
	0.80	54.25			
			19.3	34.9	✓
0+00			18.52	35.73	✓
0+09			13.3	40.9	✓
0+09 2			10.07	44.18	✓
0+10			11.9	42.3	✓
0+61 45			7.5	46.7	✓
			7.17	47.08	✓
			23.2	31.0	✓
0+97 66			7.25	47.00	✓
1+15 5			8.78	45.47	✓
			+92	63.4	✓
1+19			7.4	46.8	✓
1+19 ±			4.30	49.95	✓
			4.30	49.95	✓
			0.80	53.45	✓
			5.70	48.55	✓
1+20			4.9	49.3	✓
1+23 ⁵³			4.0	50.2	✓
T.P.B.M.			0.80	53.45	✓
	8.89%	62.34			
			10.78	51.56	✓
			9.62	52.72	✓

Brass Plug in Cor. Retaining Wall
Mission Valley Pumping Plant.

Floor of Sump

Flow Line of 24" Conc. Pipe

Shoulder of S. Wall

Top of Sump Wall

Ground

Ground

El. Conc Floor of Pump Plant

" Bottom of Pit. (Soft Material in Bottom Possibly Silt.)

Ground El. S. Wall of Plant

Top of 16" Cast Iron Pipe

Top of 8" Air Chamber

Top of Ret. Wall

" " " " 25' Left

" " " " S.E. Cor.

" " " " N. End

Ground

Top of 16" Cast Iron Pipe at 2" Connection

of 16" Gate Valve (Old Camp Kearney Line.)

		62.34 ✓			
1+50			8.5	53.8	✓
2+00			2.3	60.0	✓
T.P.			0.21	62.13	✓
	10.74	72.87 ✓			
2+50			10.1	62.8	✓
2+88 ¹²			8.4	64.5	✓
			12.10	60.77	✓
3+00			7.9	65.0	✓
3+29 ⁴²			7.9	65.0	✓
3+52 ⁴²			5.9	67.0	✓
			8.5	64.4	✓
4+00			2.4	70.5	✓
T.P.			0.08	72.79	✓
	12.99	85.78 ✓			
4+61 ²⁸			7.0	78.8	✓
			9.1	76.7	✓
T.P.			0.74	85.04	✓
	13.02	98.06 ✓			
5+00			7.3	90.8	✓
5+19			0.8	97.3	✓
			3.0	95.1	✓
T.P.			0.29	97.77	✓
	12.58	110.35 ✓			
5+50			5.7	104.7	✓
T.P.			0.26	110.09	✓
	10.17	120.26 ✓			

50

Q. of 16" Hor. Stop Valve 105 Left of Sta 2+88.17

Top of 16" Cast Pipe 3' RT of Sta 3+52

Appon Piping
3+49 M.

Top of 16" Cast I. Pipe

Top of 16" Cast I. Pipe 3' RT

		120.26 ✓			
6+00			5.3	115.0	✓
6+24 ¹⁶			2.5	117.8	✓
			4.1	116.2	✓
6+50			3.1	117.2 ✓	✓
T.P.			13.13	107.13	✓
	2.60	109.73 ✓			
7+00			3.7	106.0	✓
7+50			9.8	99.9	✓
8+00			10.0	99.7	✓
8+60			6.3	103.4	✓
8+73			8.0	101.7	✓
9+00			4.4	105.3	✓
T.P.			0.95	108.78	✓
	13.10	121.88 ✓			
9+50			5.6	116.3	✓
T.P.			0.79	121.09	✓
	3.16	124.25 ✓			
9+92 ²⁵			1.8	122.4	✓
			4.9	119.3	✓
10+00			1.2	123.0	✓
10+24			1.5	122.7	✓
			7.9	116.3	✓
10+51			7.2	117.0	✓
			9.8	114.4	✓
10+80			1.8	122.4	✓

Top of 16" Cast Iron Pipe

Bottom of Canyon

Top of 16" Cast I. Pipe 3' RL

Top " " " " 1.2 RL of Sta 10+37

" " " " " " " " 10+51

		✓ 124.25			
T.P.			0.75	123.50	✓
	12.61	✓ 136.11			
11+00			12.1	124.0	✓
11+28			7.3	128.8	✓
11+43			3.1	133.0	✓
11+79			0.7	135.4	✓
			6.84	149.27	✓
T.P.			0.32	135.79	✓
	11.54	✓ 147.33			✓
12+00			6.8	140.5	✓
T.P.			0.34	146.99	✓
	12.84	✓ 159.83			
12+40			7.7	152.1	✓
12+45			7.0	152.8	✓
12+50			7.7	152.1	✓
12+58			1.5	158.3	✓
12+70			0.7	159.1	✓
13+00			2.3	157.5	✓
			7.4	152.4	✓
13+42			4.7	155.1	✓
13+80			1.5	158.3	✓
14+00			0.3	159.5	✓
Set B.M.			4.73	155.10	✓
T.P.			1.18	158.65	✓
	12.82	✓ 171.47			

5

57

Top of Pipe 3' Lit

Top of Cast Iron Pipe

Spike in E side Power Pole 5' Lit. Sta 13+02
(#90004)

		✓ 171.47			
14+41			7.1	164.4	✓
14+65			7.9	163.6	✓
15+00			12.5	159.0	✓
15+34			12.1	159.4	✓
15+58			6.1	165.4	✓
T.P.			0.30	171.17	✓
	13.02	✓ 184.19			
16+00			12.6	171.6	✓
16+60			3.9	180.3	✓
17+00			0.9	183.3	✓
T.P.			0.51	183.68	✓
	12.70	✓ 196.38			
17+10			11.0	185.4	✓
17+25			4.3	192.1	✓
			0.59	195.79	✓
	13.20	✓ 208.99			
17+50			4.1	204.9	✓
17+57			2.2	206.8	✓
T.P.			0.42	208.57	✓
	12.77	✓ 221.34			
T.P.			0.42	226.92	✓
	13.16	✓ 234.08			
18+00			5.4	228.7	✓
T.P.			0.35	233.73	✓
	12.81	✓ 246.54			

6
53

Canyon Bottom

" "

Stake $2\frac{1}{2}$ ' Lt. of Sta 16+00

Stake at Sta. 17+01

	246.54 ✓			
18+20		5.9	240.6	✓
18+37		+0.6	247.1	✓
T.P.		0.45	246.09	✓
	12.63	258.72 ✓		
18+64 ³⁸		9.0	249.7	✓
Set B.M.		10.00	248.72	✓ <i>marked</i>
		13.4	245.3	✓
19+00		6.1	252.6	✓
19+57		5.5	252.2	✓
20+00		8.1	250.6	✓
20+28		9.4	249.3	✓
20+66		3.4	255.3	✓
21+00		6.4	252.3	✓
21+06		7.1	251.6	✓
		8.5	250.2	✓
21+15		6.0	252.7	✓
T.P.		0.21	258.51	✓
	12.84	271.35 ✓		
21+52		4.9	266.5	✓
22+00		0.1	271.3	✓
22+18 ⁴⁵		0.1	271.3	✓
		4.8	266.6	✓
Set B.M.		1.73	269.62	✓
22+44		2.5	268.9	✓
T.P.		12.94	258.41	✓
	3.44	261.85 ✓		

(#90003)
Spike in Power Pole 3' Lt. of Sta 18+64
Top of Cast I. Pipe 52' Lt of Sta "

Bottom Draw

Bottom Draw
Top of Pipe 4' Lt.

Top of Pipe 5' Lt of Sta 22+18
(#90002)
Spike in Power Pole 3' Lt of Sta 22+18

		✓ 261.85			
23+00			2.0	259.8	✓
23+70			15.0	246.8	✓
24+00			4.4	257.4	✓
T.P.			0.27	261.58	✓
	13.17	274.75			
T.P.			0.54	274.21	✓
	12.90	287.11			
24+50			10.6	276.5	✓
24+62			5.4	281.7	✓
T.P.			0.36	286.75	✓
	12.99	299.74			
25+00			6.6	293.1	✓
25+20			1.5	298.2	✓
T.P.			0.20	299.54	✓
	13.09	312.63			
26+00			3.2	309.4	✓
+19			1.8	310.8	✓
T.P.			0.20	312.43	✓
	12.54	324.97			
T.P.			0.17	324.80	✓
	12.76	327.56			
T.P.			0.32	327.24	✓
	11.17	348.41			
T.P.			0.31	348.10	✓
	12.49	360.59			

8

Bottom Draw

Bottom Draw

	360.59 ✓		
27+00		2.2	358.4 ✓
T.P.		0.80	359.77 ✓
	11.13	370.92 ✓	
T.P.		0.63	370.29 ✓
	12.16	382.45 ✓	
		2.40	380.05 ✓
	11.98	392.03 ✓	
27+43		8.8	383.2 ✓
27+60		6.5	385.5 ✓
27+86 ³⁰		5.9	386.1 ✓
28+00		5.5	386.5 ✓
28+56		5.23	386.80 ✓
"		5.98	386.05 ✓
29+00		6.08	385.95 ✓
29+10 ⁰⁵		6.08	385.95 ✓
29+23		5.25	386.78 ✓
Set B.M.		5.27	386.76 ✓
		7.8	384.2 ✓
30+00		4.73	387.30 ✓
31+00		3.63	388.40 ✓
		8.2	383.8 ✓
		8.7	383.3 ✓
32+00		2.6	389.4 ✓
		8.5	383.5 ✓
33+00		1.5	390.5 ✓

Top of Curb
Pavement

S. Curb Ret. S. W. Cor. Works (Suncrest) & Boundary
(Int. of gas main 10' N. of C. of Suncrest and
gas main 10' W. of C. of Boundary)

Flow line of Sewer 6' Lt of 31+26 M.P.
" " " " 6' Lt of 31+78
" " " " 6' Lt of 32+40

		✓ 392.03		
T.P.			0.84	391.17 ✓
	3.79	394.98		
33+4355			3.96	391.02 ✓
34+00			3.88	391.10 ✓
B.M.			3.72	391.26 ✓
35+00			4.20	390.68 ✓
			9.7	385.3 ✓
36+00			4.48	390.50 ✓
37+00			4.69	390.79 ✓
38+00			4.84	390.14 ✓
			10.6	384.4 ✓
39+00			5.08	389.90 ✓
39+274			5.20	389.78 ✓
40+00			5.23	389.75 ✓
T.P.		✓	4.90	390.08 ✓
	2.65	392.73		
			9.5	383.2 ✓
41+00			3.03	389.70 ✓
41+09.7			3.08	389.65 ✓
42+00			3.4	389.3 ✓
43+00			4.5	388.2 ✓
44+00			5.3	387.4 ✓
45+00			5.5	387.2 ✓
46+00			6.1	386.6 ✓
47+00			6.0	386.7 ✓

E. Curb Return N.W. Cor. Boundary & Adams

Brass Plug in E. Curb Ret. S.E. Cor. Adams &
 City B.M. Elev. 390.96 91.26 Boundary
90.36
.30

Flow Line of Sewer Manhole Lit of 35+87

" " " " " " " 38+32

" " " " " Int. of & of Madison &
Boundary

		392.73 ✓			
48+00			6.6	386.1	✓
T.P.			6.58	386.15	✓
	2.90	389.05 ✓			
49+00			3.8	385.2	✓
			6.5	382.5	✓
49+53.6			4.5	384.5	✓
			4.2	384.8	✓
50+00			4.7	384.3	✓
51+00			4.9	384.1	✓
			5.3	383.7	✓
52+00			5.2	383.8	✓
			6.0	383.0	✓
53+00			6.5	382.5	✓
			6.8	382.2	✓
53+92.8			7.55	381.50	✓
54+00			7.63	381.42	✓
54+41.98			8.29	380.76	✓
B.M.			8.88	380.17	✓

Bottom of Concrete-Loading Pit 10' Rt

Top of Pavement 6' Lt

Top of Pavement 6' Lt

" " " " "

" " " " "

End of Line.

S. Curb Ret. S.W. Cor. Illinois & Meade

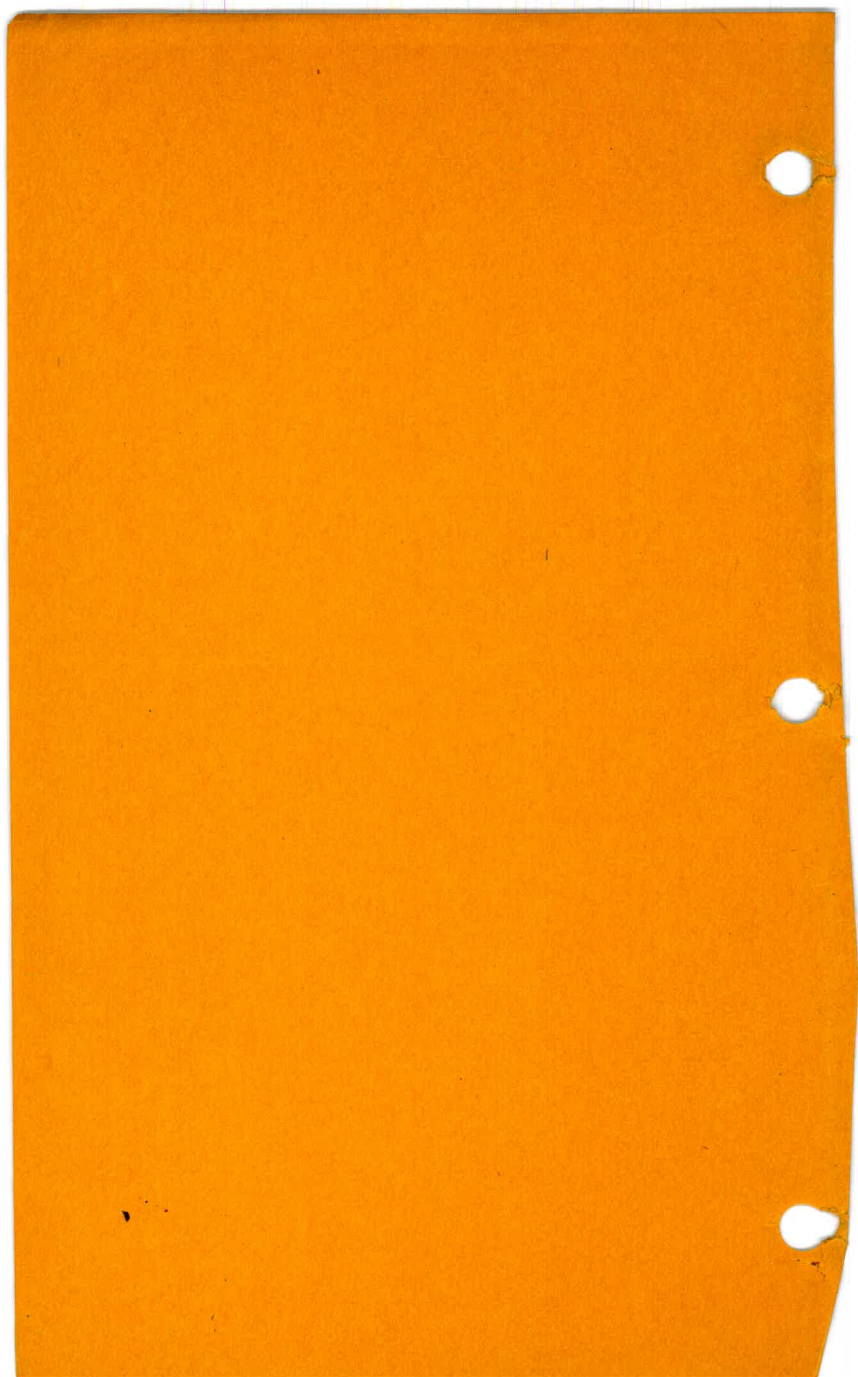
El Capitan Pipe Line B.M. El. 379.99

380.17
<u>379.99</u>
.18

Check Levels

B.M.		374.17
8.88	383.05	
	2.52	380.53
6.30	386.83	
	2.71	384.12
5.01	389.13	
B.M.	3.84	385.29
2.40	387.69	
B.M.	4.91	380.78
2.10	382.88	
	12.56	370.32
1.76	372.08	
	12.02	360.06
1.00	361.06	
	12.65	348.41
1.27	349.68	
	12.01	337.67
0.64	338.31	
	12.45	325.86
0.15	326.01	
	12.11	313.90
1.01	314.91	
	12.43	302.48
4.09	306.57	
	11.79	294.78
0.85	295.63	





Property Ties to Present Otay
Pipe Line thru Lots 1-2-3, Seaman's
Subdivision, also Tie to N. Line
Balboa Vista Subdivision.

Pages 1-2
Converse
Elliott
Simpson
Mch. 15, 1929.

199.30
13.08
186.22

N. 89° 53' E
79.47
17.06

S. 19° 03' W

87.53
17.03
70.50

N. 89° 24.5' E

43.5

90.080

S. 89° 52' E

87.52

7
109.065

87.53

19.03
70.47
89.50

33.58
186.22
145.6

103.02
20
125
30
278.02

103.02
20
125
30
278.02

Seamans Subdivision

Lot 1.

Lot 2.

Lot 3.

D. Line

Balboa

Balboa Vista Drive

Vista

S. Line
N. 89° 24' E

Stake set in
Concrete

Air Valve.

City Property.

Conc. Mon.
N.E. Cor. Lot 1.

Old 2x2 Lot Stake
N.E. Cor. Lot 2. N

Concrete Mon.
N.E. Cor. Lot 3.

N.E. Cor. Balboa
Vista Subdivision
N.E. Cor. Lot 4

West

West

South

Mile Post #15

109° 03'

S. 19° 03' W

19° 03'

329.25

178.05

328.9

20° 51'

278.02

13.88

82°

N 89° 53' E

15.16

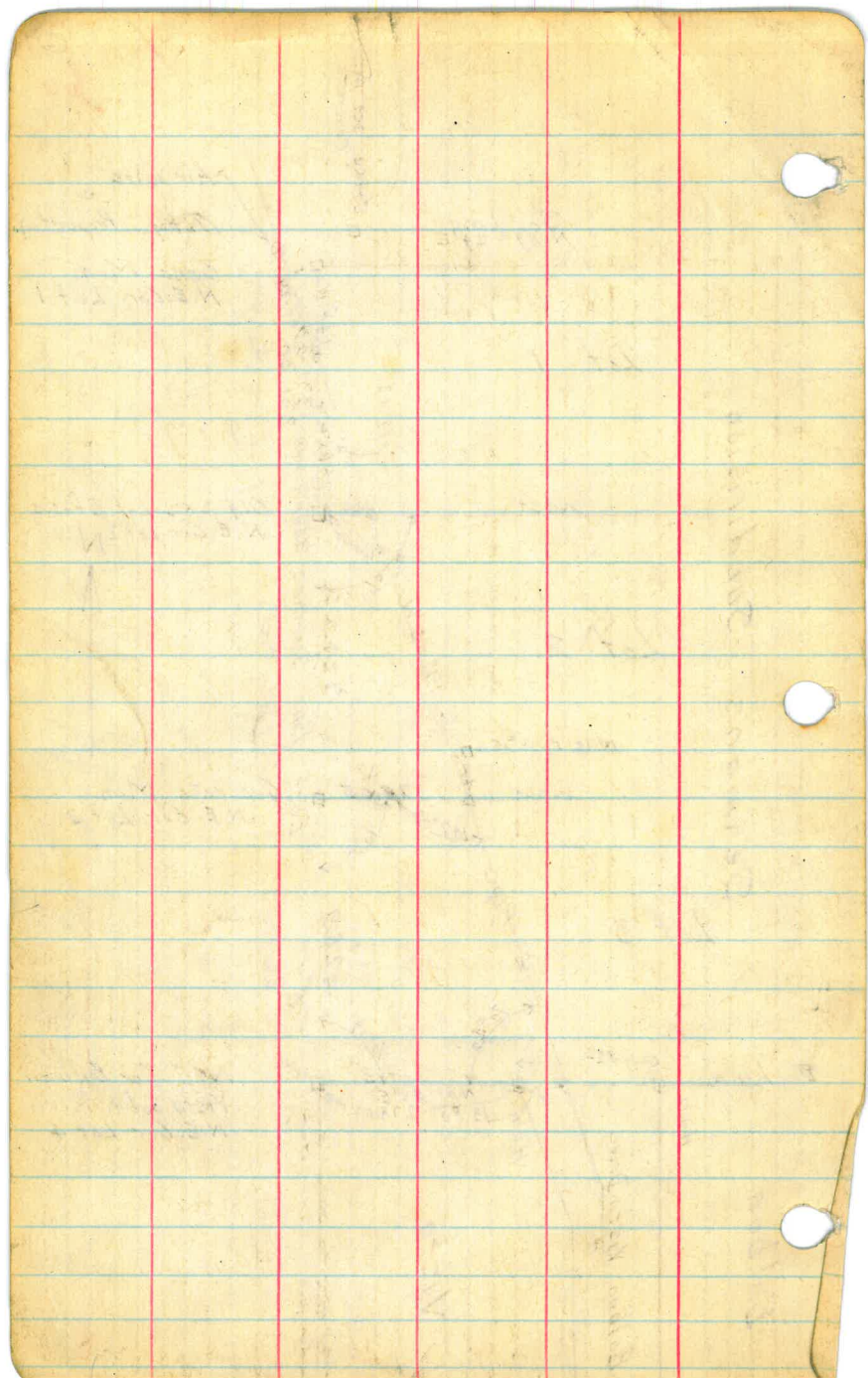
331.38

(332 Plat)

(330 Plat)

(330 Plat)

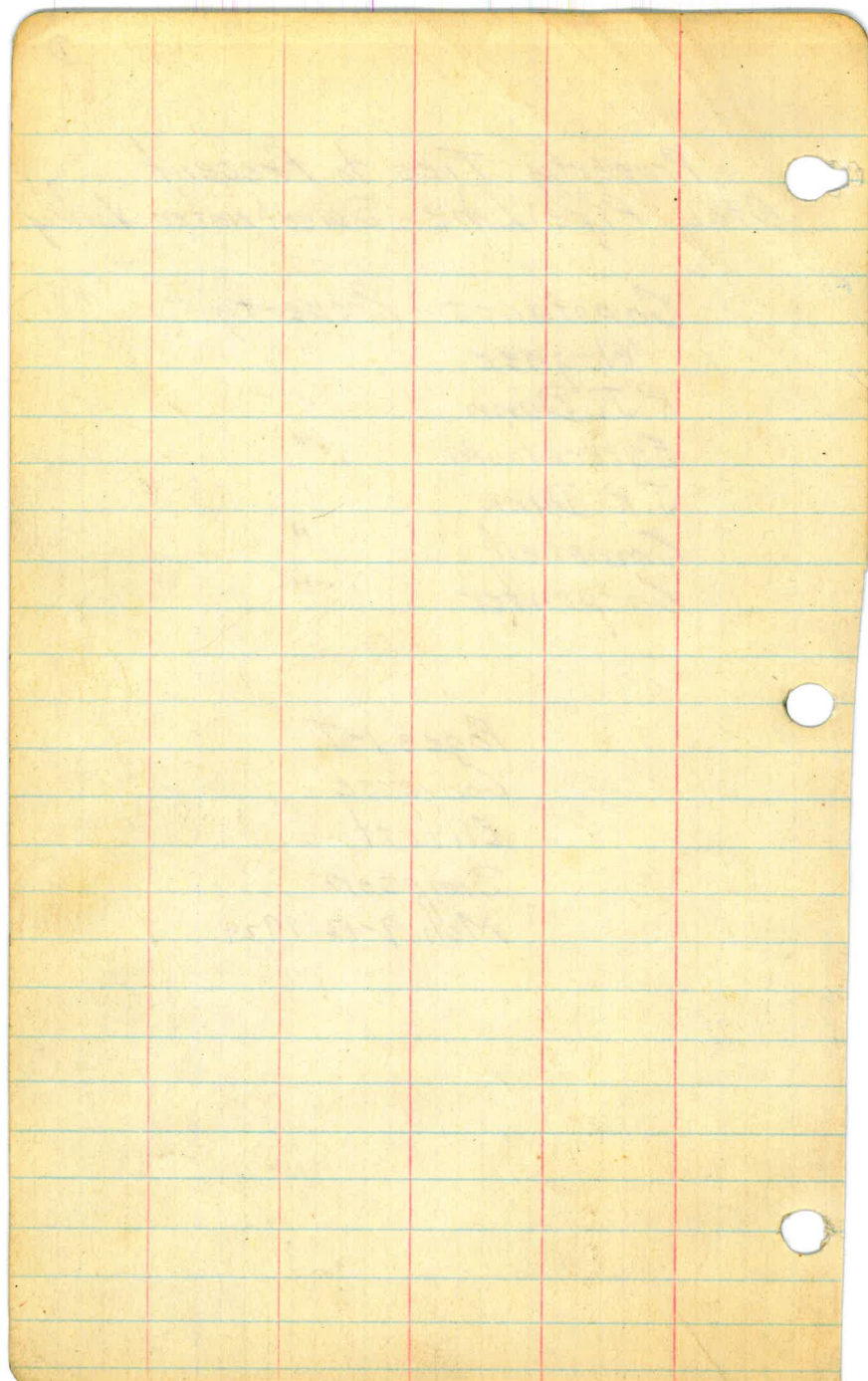
N



Property Ties to Present
Otay Pipe Line - Sweetwater Valley.

- Capatanos Property
- Wagner "
- R.J. Dunn "
- Esterbloom "
- J.R. Dunn "
- Campbell "
- Carpenter "

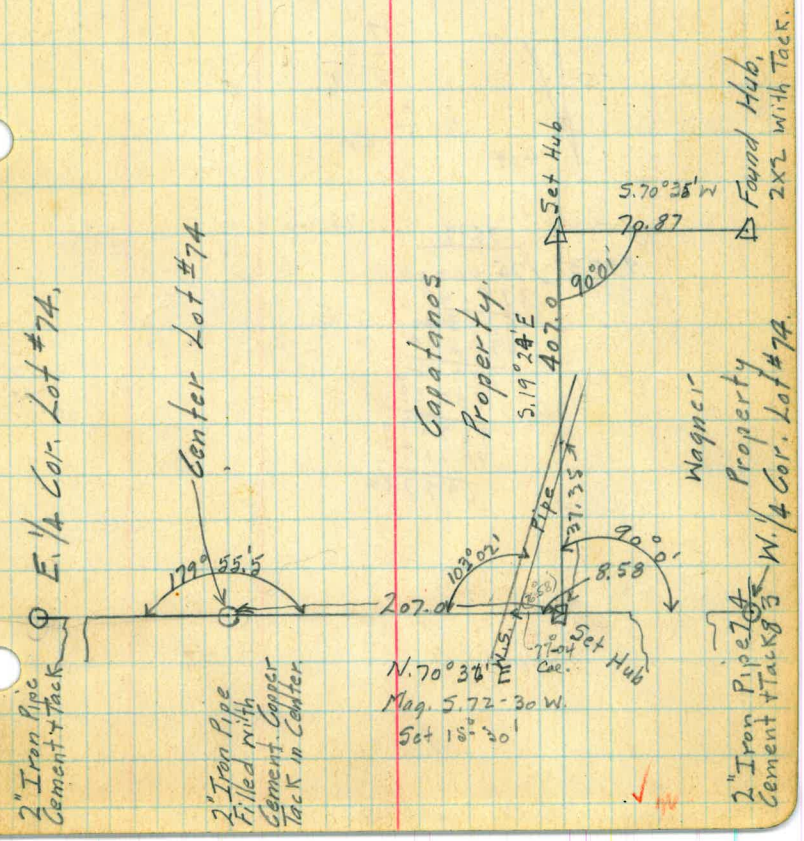
Pages 1-7.
 Converse
 Elliott
 Simpson
 Mch. 9-12. 1929.



196.9
10.1
207.0

119.60
76.58
43.02

②
62

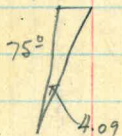




2" Pipe
 Peg 33° 24.3 3/8 Post P.L. #2

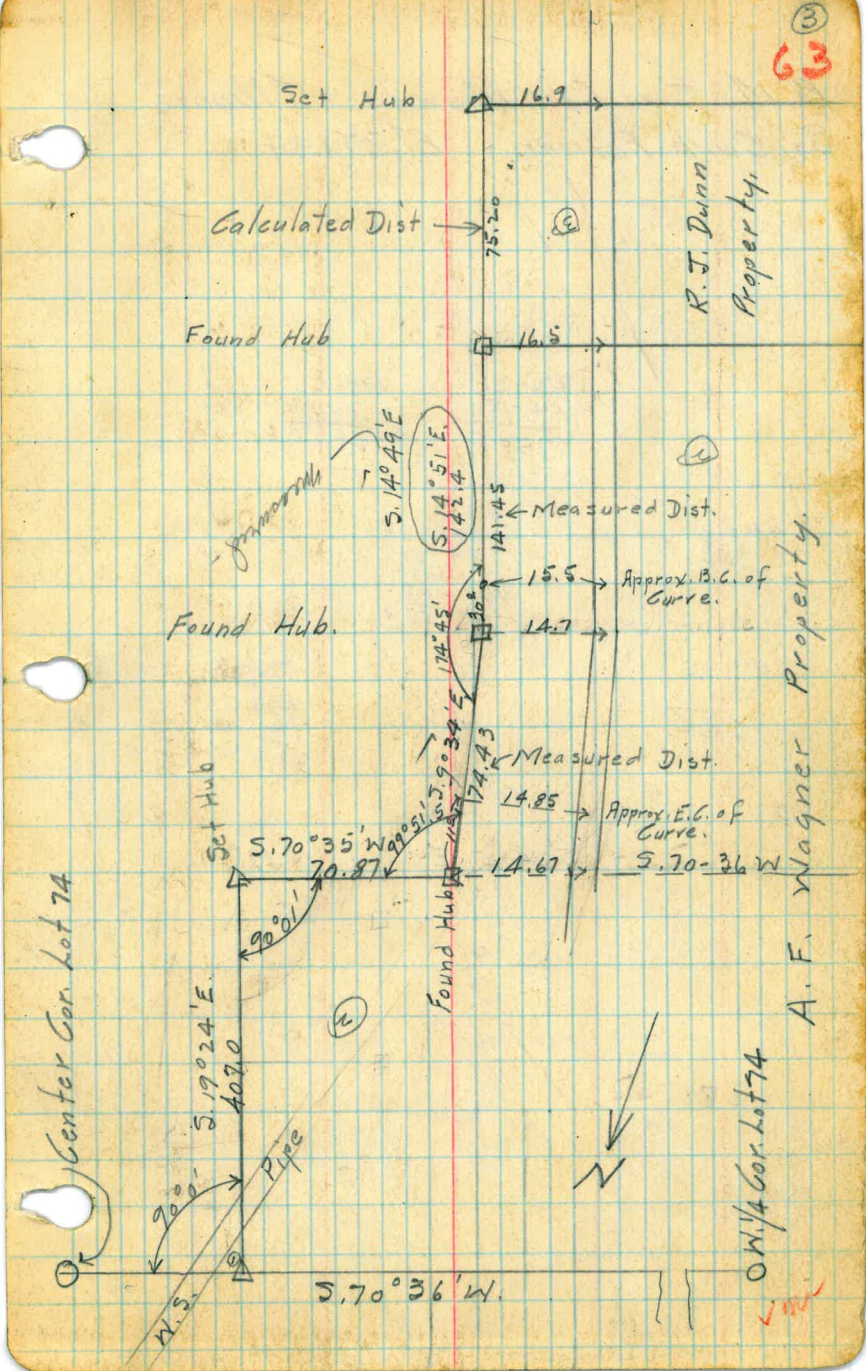
	70-38	14-57
90°	9-34	9-34
70	179-60	5-23
35	80-09	
19	99-51	

179-60
 5-23
174-37



19
 14-51
4-09
 $c = \frac{25}{\cos 4.09}$

75.19 75.20
 .99738) 75.00000
 698166
 518340
 498690
 196500
 99738
 967620
 897642
 697780



B.M. S.W. Cor. Meade + Illinois
So. Curb Return. El. 379.99.

22-36
14-51
7-45

179-60
7-45
172-15

172-17

474.5
154.3
320.2

5 22-36 E
86 29
172-60
109-05
N 70-55 E

90
3-31
86-29

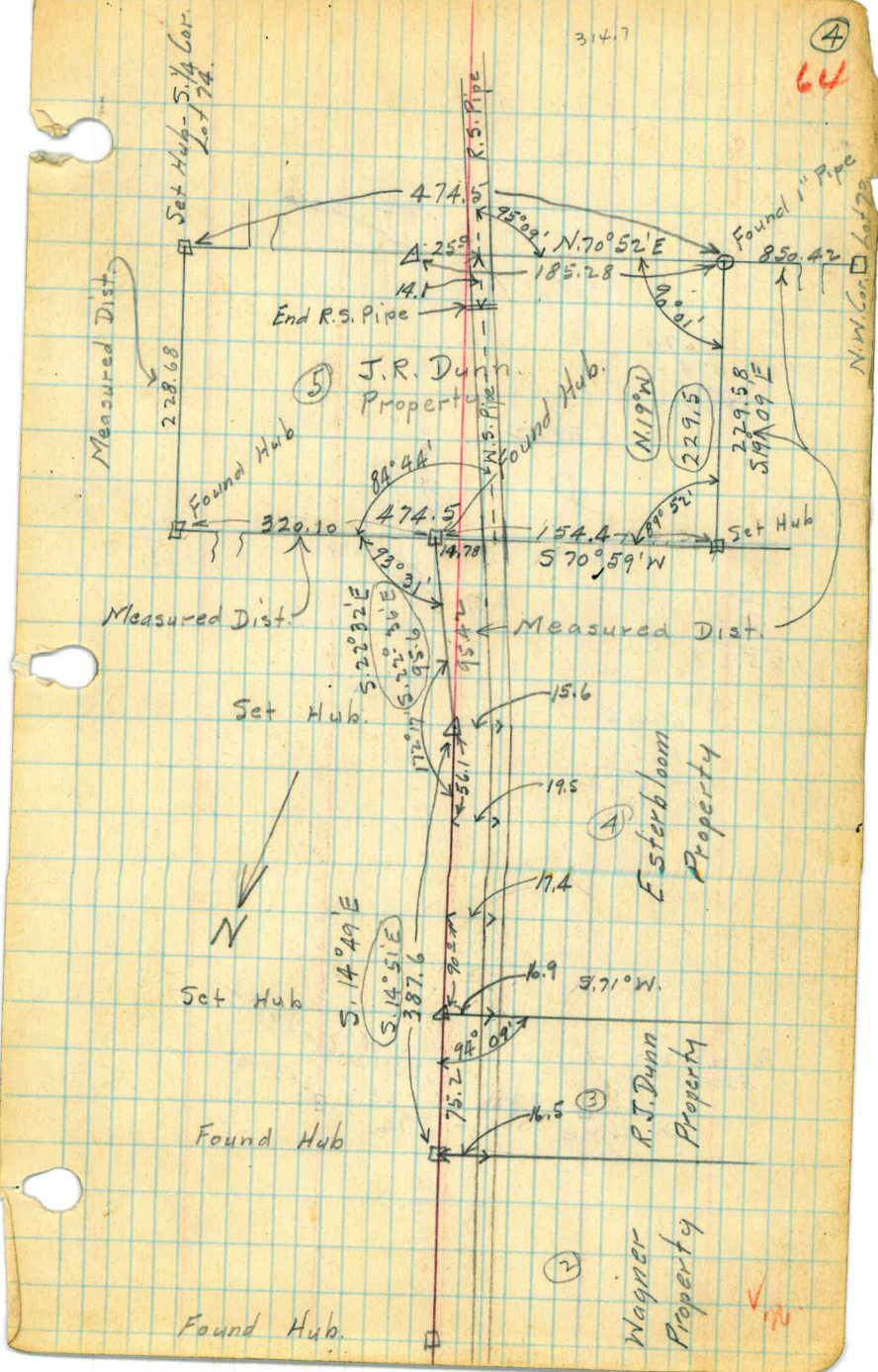
474.5
320.1
154.4

185.28
474.5
160.28
314.2

5 14-51 E

90
N. 19° W
71

71
14 51
85 51



791.70
 474.5
 1266.2

2640
 1320

38.42

90° 21'

850.40

850.42

5730

3.37

90° 21'

5.42

850.42
 791.7
 58.72

224
 58.72
 185.28

474.5
 185.28
 289.2

Peg with 2x2
 Guard.

W. Line

33°

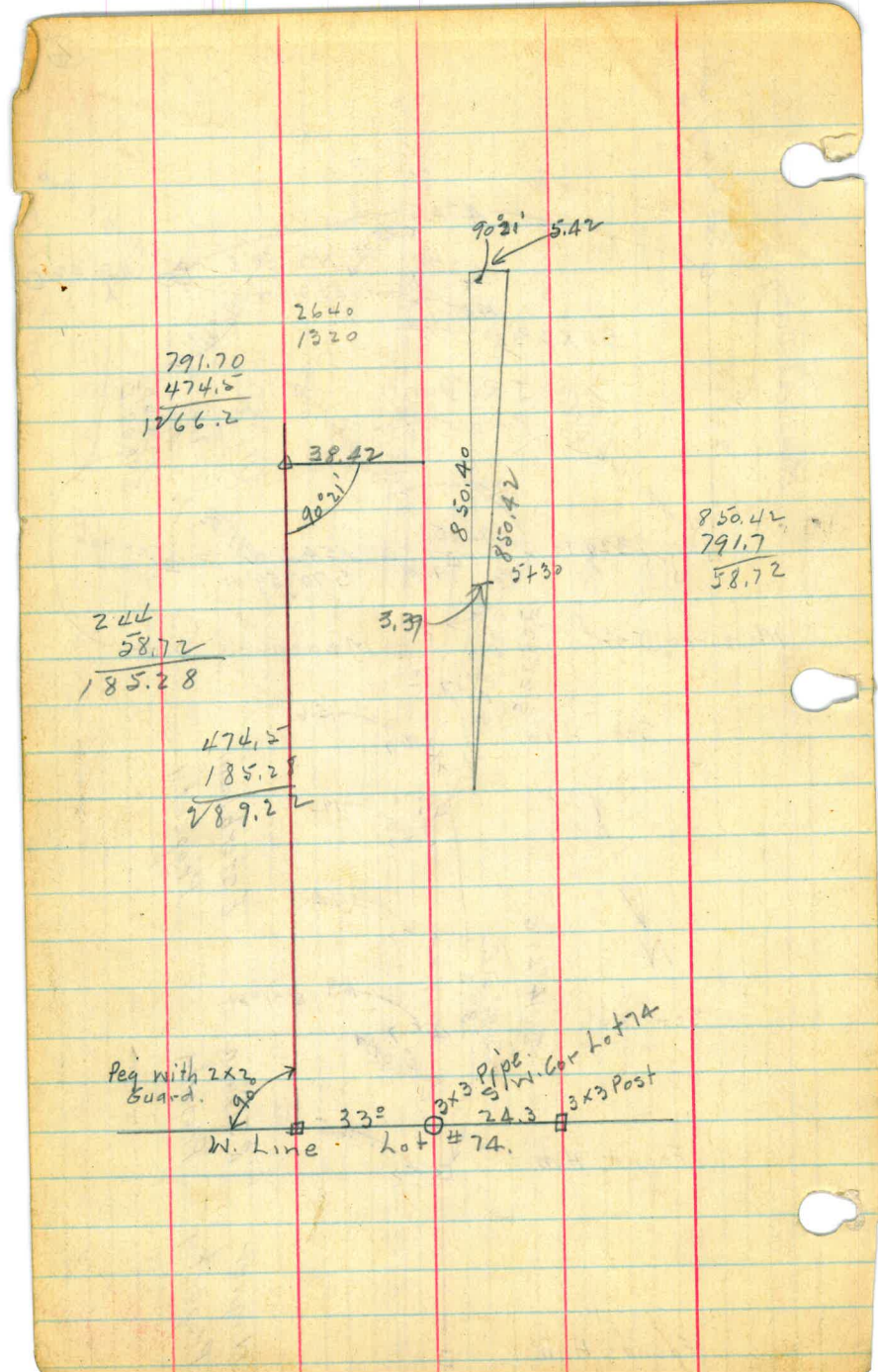
Lot #74

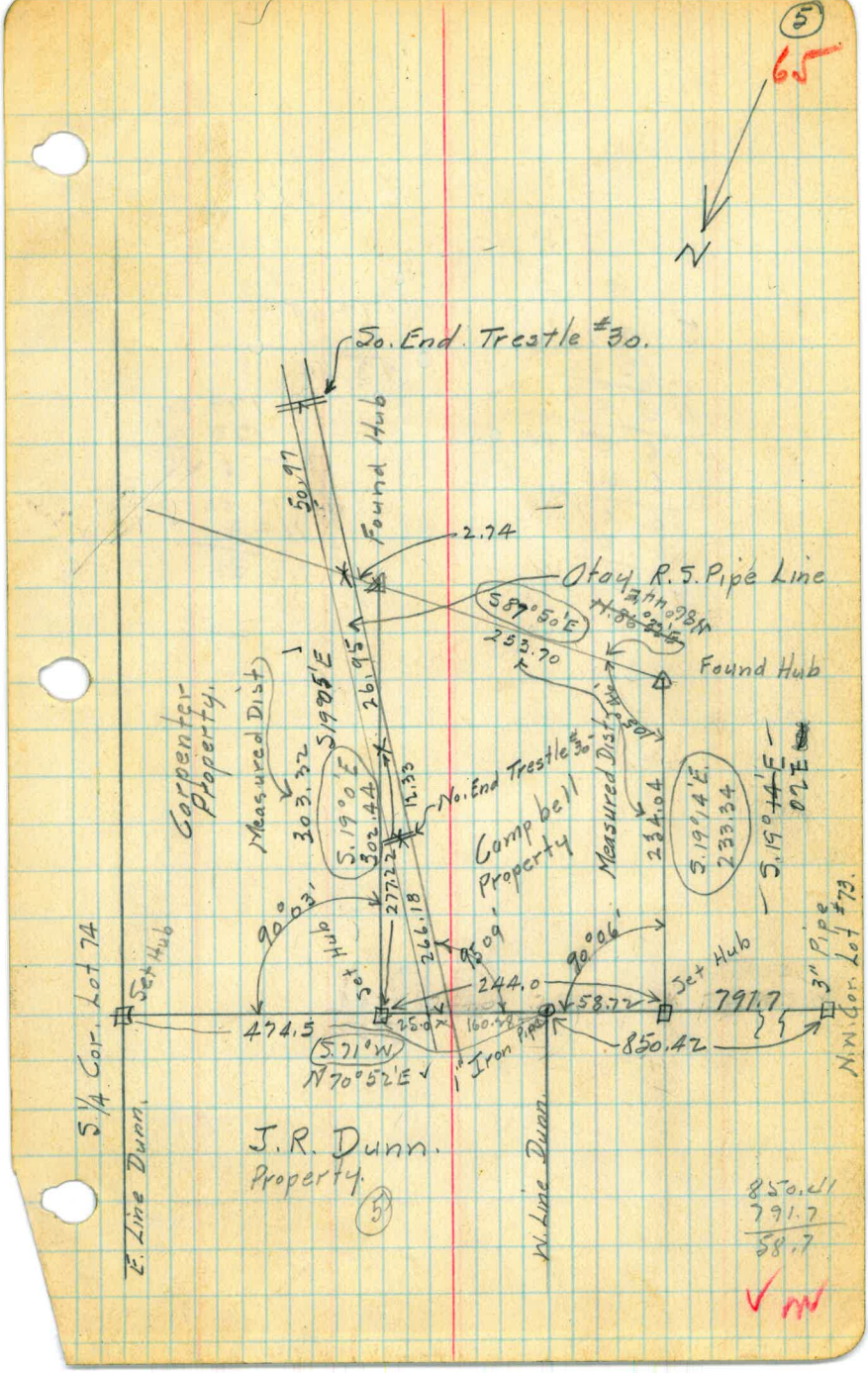
3x3 Pipe

24.3

3x3 Post

Corner Lot 74





850.41
 791.7
 58.7
 ✓ m

5. 19° 15' N
92 56
129 80
113 09
N 66 53 W
6 46
60 07
10 30
N 49 37 W

179 60
86 06
93 54

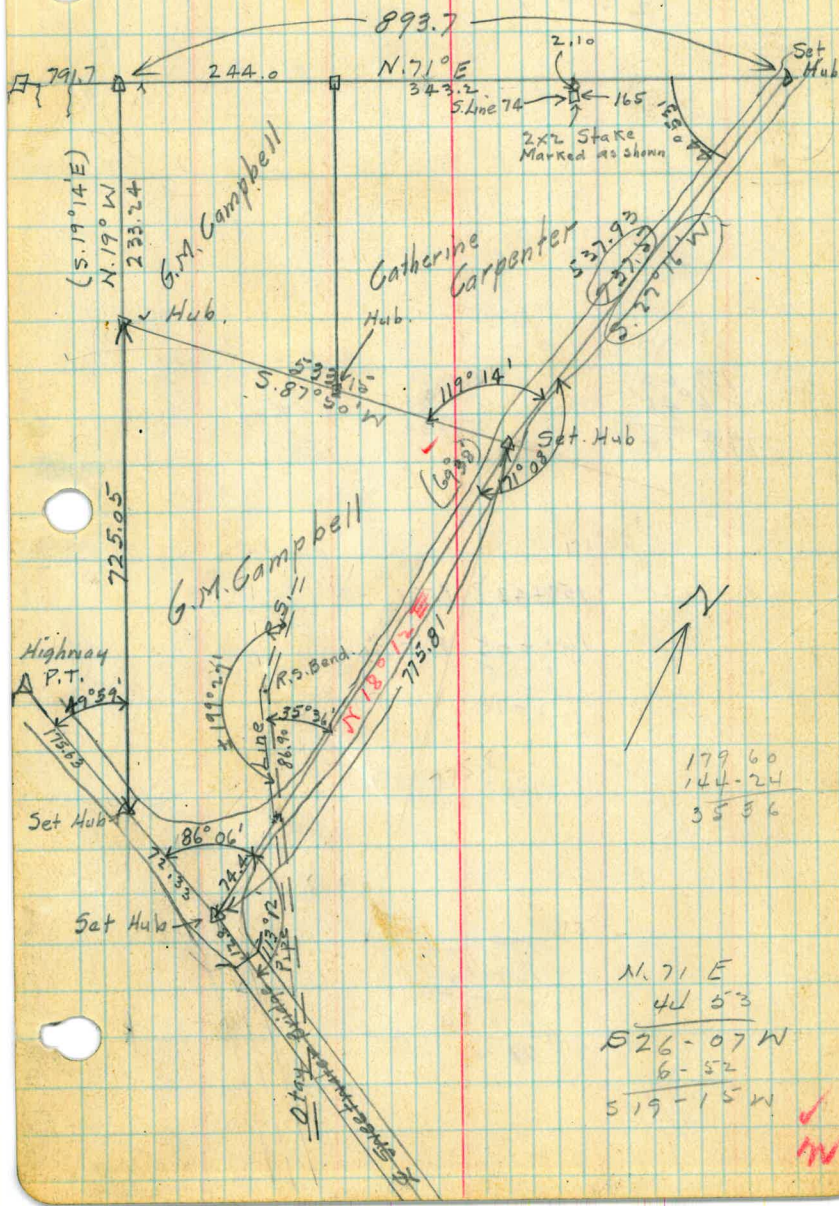
179 60
173 14
6 46
179 60
169 30
10 30

179 60
171 68
6 52

76
44 53
26 07

893.7
244.0
649.7
28.65
621.05

66



$$\begin{array}{r} 161+05 \\ 158+43 \\ \hline 212 \end{array}$$

$$\begin{array}{r} 62+5596 \\ 58+947 \\ \hline 26126 \end{array}$$

$$\begin{array}{r} 17960 \\ 646 \\ \hline 17314 \end{array}$$

$$\begin{array}{r} 179-60 \\ 10-30 \\ \hline 169-30 \end{array}$$

158+43? P.T.

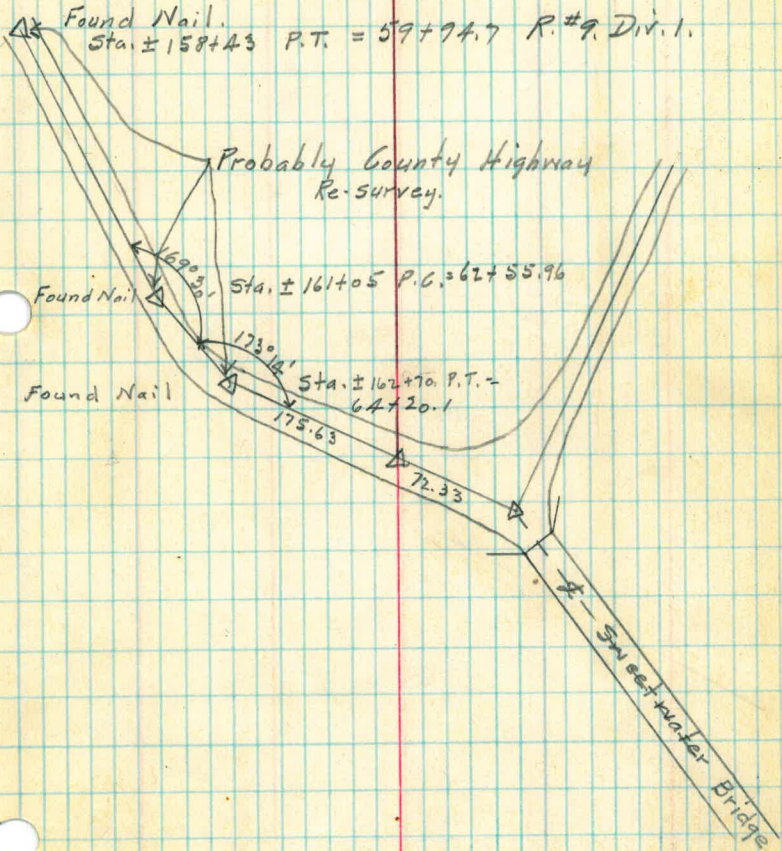
$$\begin{array}{r} 161+05 \text{ P.C.} \\ 105 \\ \hline 162+70 \end{array}$$

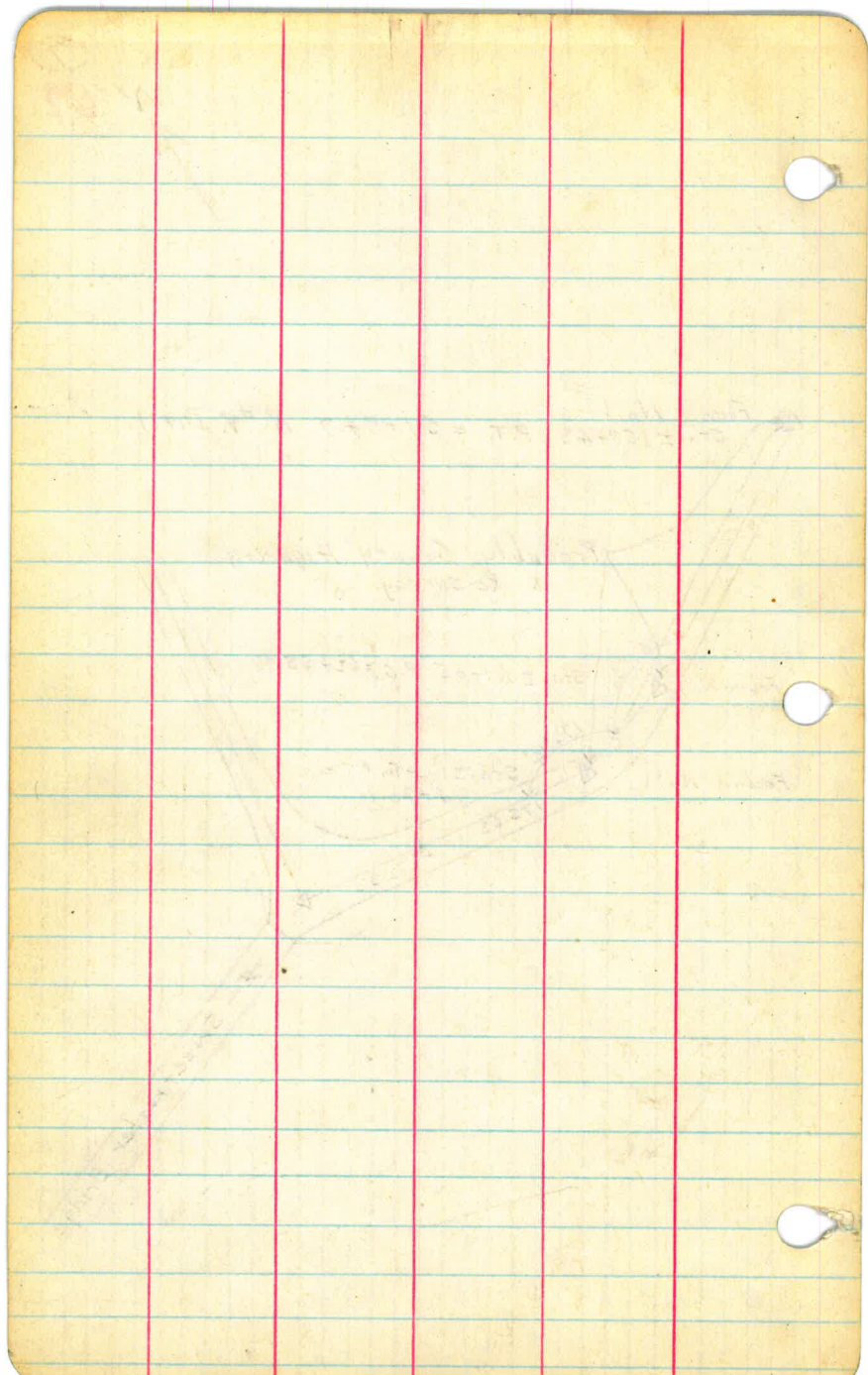
175.63

$$\begin{array}{r} 17960 \\ 169-30 \\ \hline 10-30 \\ 21-0 \end{array}$$

7

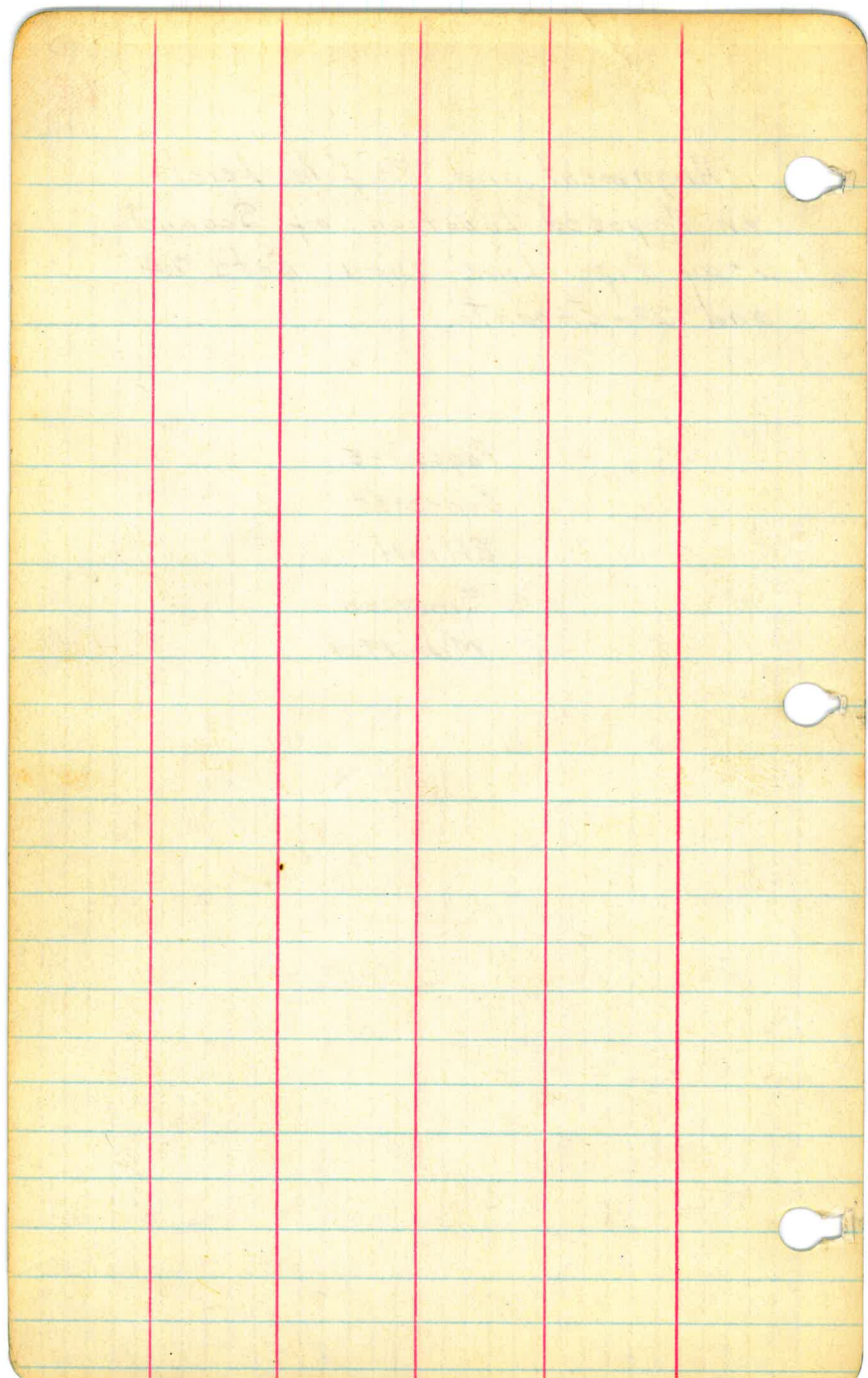
67

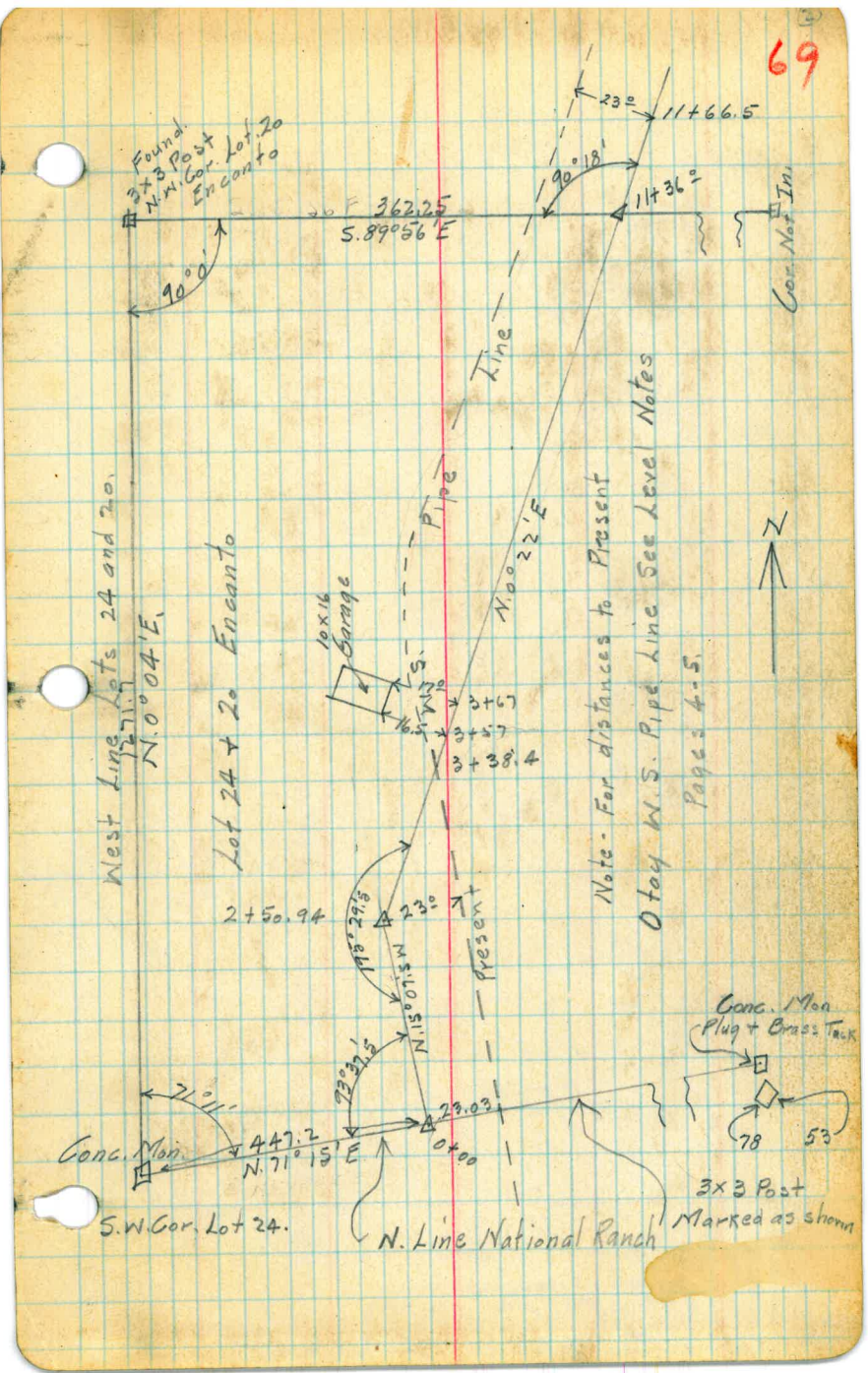




Alignment and Profile Levels
on Proposed Location of Second
Otay Pipe Line thru Lots 24
and 20-Encanto.

Pages 1-5.
Converse
Elliott
Simpson
Mch. 1929.





Found
3x3 Post
N.W. Cor. Lot. 20
Encanto

West Line Lots 24 and 20.
N. 0° 04' E.

Lot 24 + 20 Encanto

10x16
Garage

3+5
3+5
3+38.4

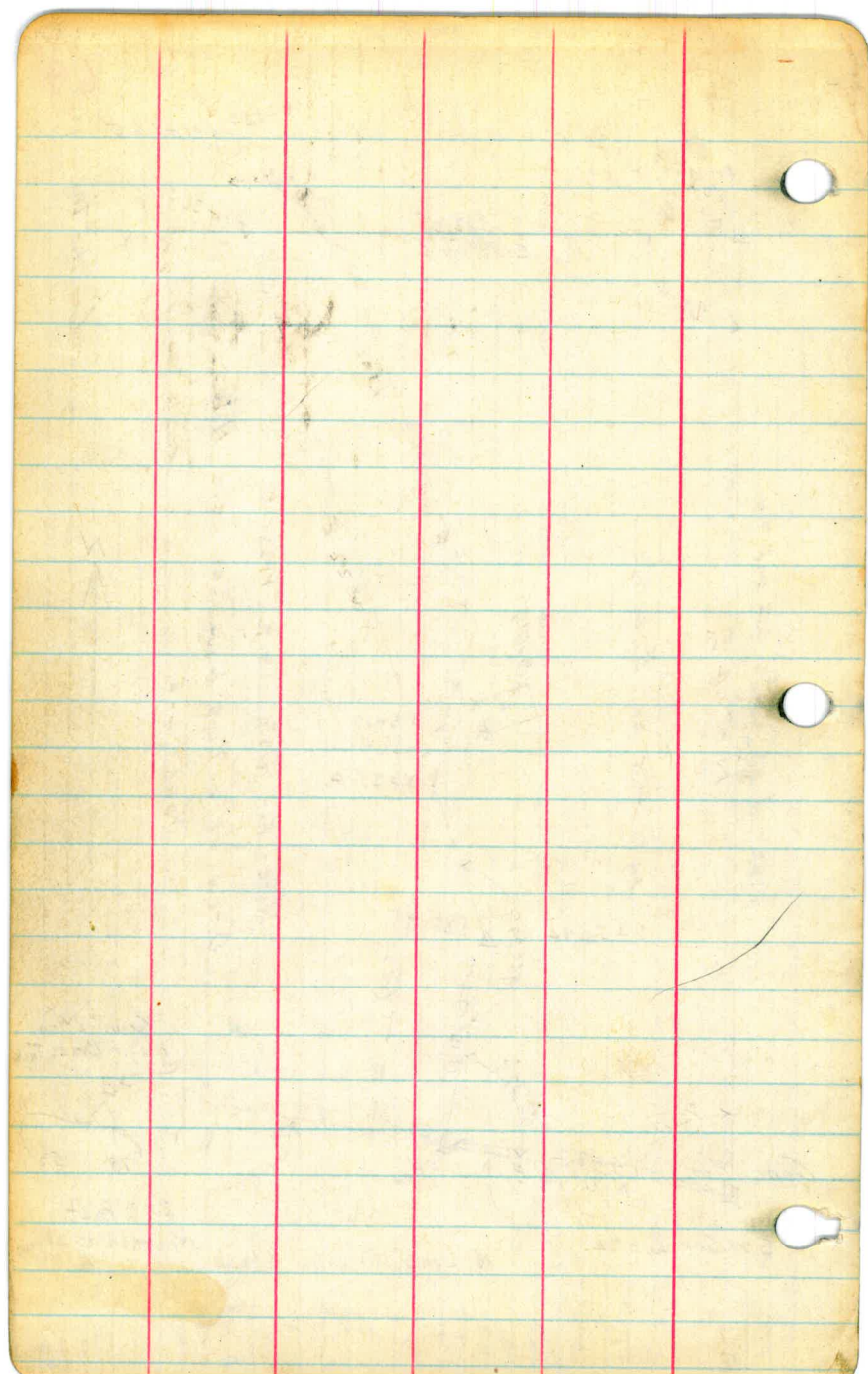
Note - For distances to Present
Otay N.S. Pipe Line See Level Notes
Pages 4-5

Conc. Mon.
Plug + Brass Tack

3x3 Post
Marked as shown

Conc. Mon.
S.W. Cor. Lot 24.
N. 71° 15' E

N. Line National Ranch



3
70

B.M. #29			347.00
	0.56	347.56	
0+00		11.1	336.5
1+00		7.5	340.1
2+00		4.0	343.6
2+50 ⁺		2.1	345.5
		2.8	343.8
3+00		1.5	346.1
T.P.B.M.		0.56	347.00
	0.79	347.79	
3+38.4		1.5	346.3
3+38.4		3.1	344.7
		4.6	342.2
3+82.5		3.2	344.6
4+00		5.0	342.8
4+55		10.6	337.2
3+19 ^{OK}		1.5	346.3
		3.0	344.8
		10.6	337.2
5+00		14.4	333.4
		12.2	335.6
5+30		12.8	335.0
5+53		12.7	335.1
		12.8	335.0
6+00		11.4	336.4
		12.3	335.5

Top of Air Valve Lt. of Sta 221+55 of Williams
second Clay Pipe Line

Top of W.S. Pipe 23' East

Ground

Top of W.S. Pipe

Top of W.S. Pipe 12' West of 2+82.5

(1.5' of cover)

Top of W.S. Pipe at Air Valve 5' E. of Sta 3+19

1.5 of Cover

Top of W.S. Pipe 32.5 W. of Sta. 4+68

1' of cover.

Top of W.S. Pipe 38.5 " " 5+02

1.5 of cover

Top of W.S. Pipe 45' W. of Sta. 5+53

1.8 of Cover

Top of W.S. Pipe 45.5' W of Sta 6+04

		347.79		
		24	11.0	336.8
7+00			9.8	338.0
T.P.			9.03	338.76
	11.10	349.86		
			10.7	339.2
8+00			9.2	340.7
9+00			4.1	345.8
			0.7	349.2
T.P.			0.66	349.20
	12.80	362.00		
10+00			7.5	354.5
			3.5	358.5
11+00			1.8	360.2
T.P.			0.66	361.34
	11.81	373.15		
11+36			12.1	361.1
11+66.5			10.1	363.1
			10.0	363.2
			4.9	368.3
B.M. #28			0.92	372.23 (372.19)

1.5 Cover
Top of Pipe 41.5 W. of Sta. 6+87

72

1.5 Cover
Top of Pipe 36.5 W. of Sta 7+77

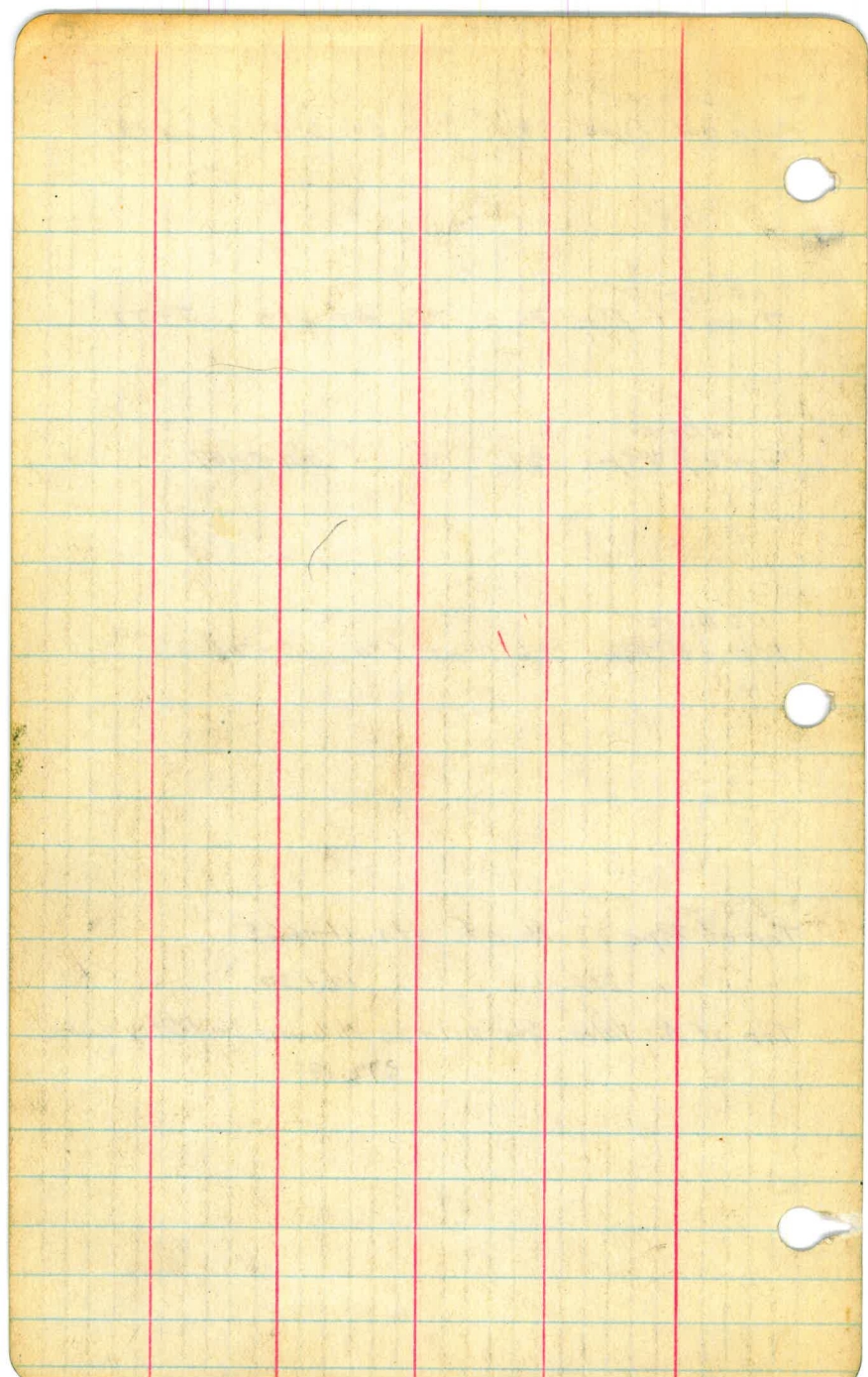
1.4 Cover
Top of Pipe 27.5 W. of Sta 9+49

1.5 Cover
Top of Pipe 23.6 W. of Sta 10+72

2' Cover
Top of Pipe 23' W. of Sta 11+66.5

" " " 23.5 " " " 12+30

Top of Air Valve Sta 211+25 Williams 2nd Oday Line
372.19



5/22/29 clear

Parker
Converse
Hill
Elliot
Simpson

Willow Street Survey
Information for
Mr. Williams

accurately met
on new line
20-547
20-567

10+42.8

10+00

8+93

7+90

6+23

3+00

2+00

73
Paved Road

Pipe Line

13' x 13' 12" blow off

225-0

285-0

296-0

298-0

310-0

327-0

37-0

37-0

37-0

37-0

37-0

37-0

37-0

37-0

37-0

37-0

37-0

37-0

37-0

37-0

37-0

37-0

37-0

37-0

37-0

37-0

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37-0

37-0

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37-0

37-0

37-0

37-0

37-0

37-0

37-0

37-0

37-0

37-0

37-0

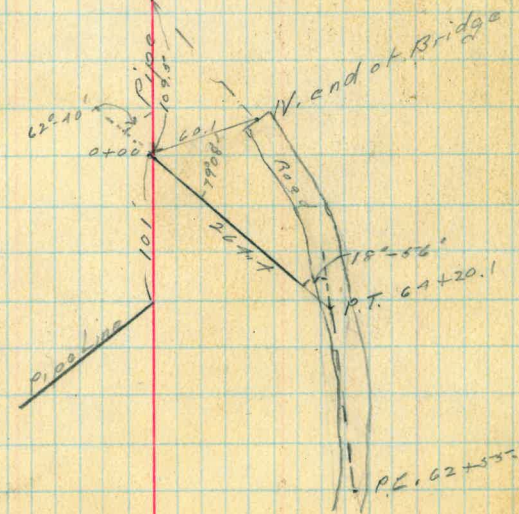
37-0

37-0

37-0



See sheet 1 of District Route 9
County Highway Com.



P.T. 62+53.28

775
387

1680
840

1800
1680
120

1610
805

225

40

30
300
250
250
800 80

WL

2W

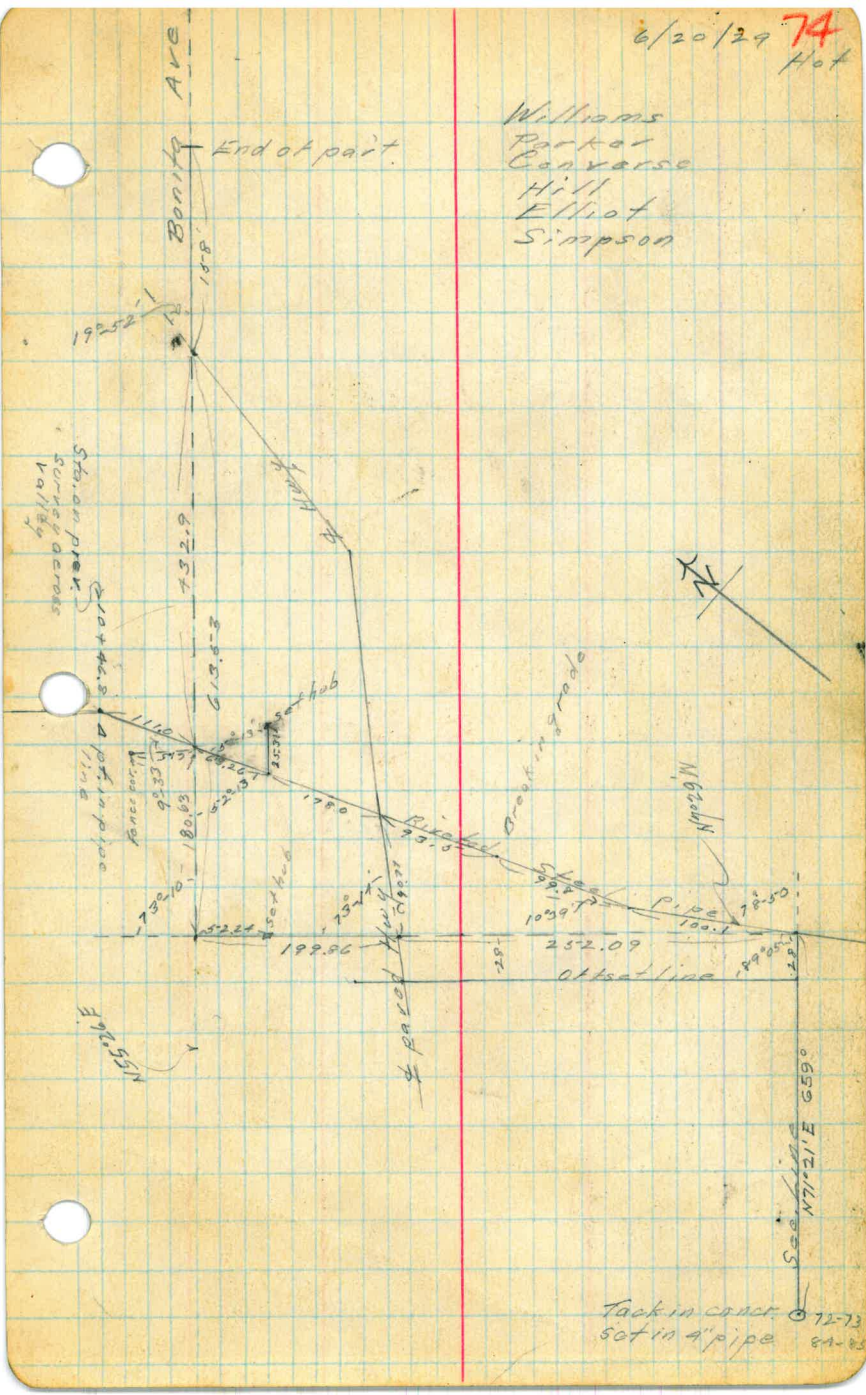
740
370

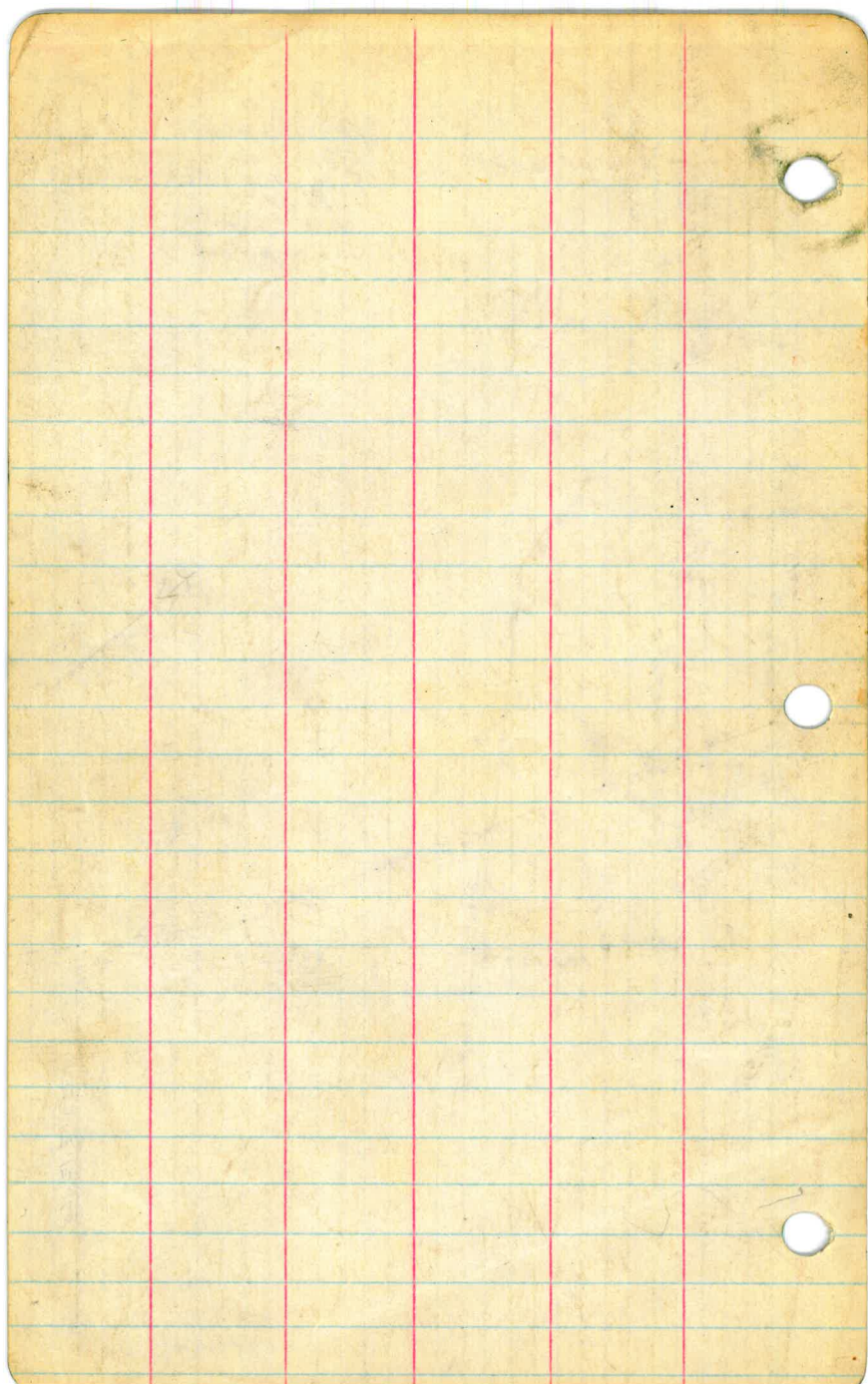
1270
635

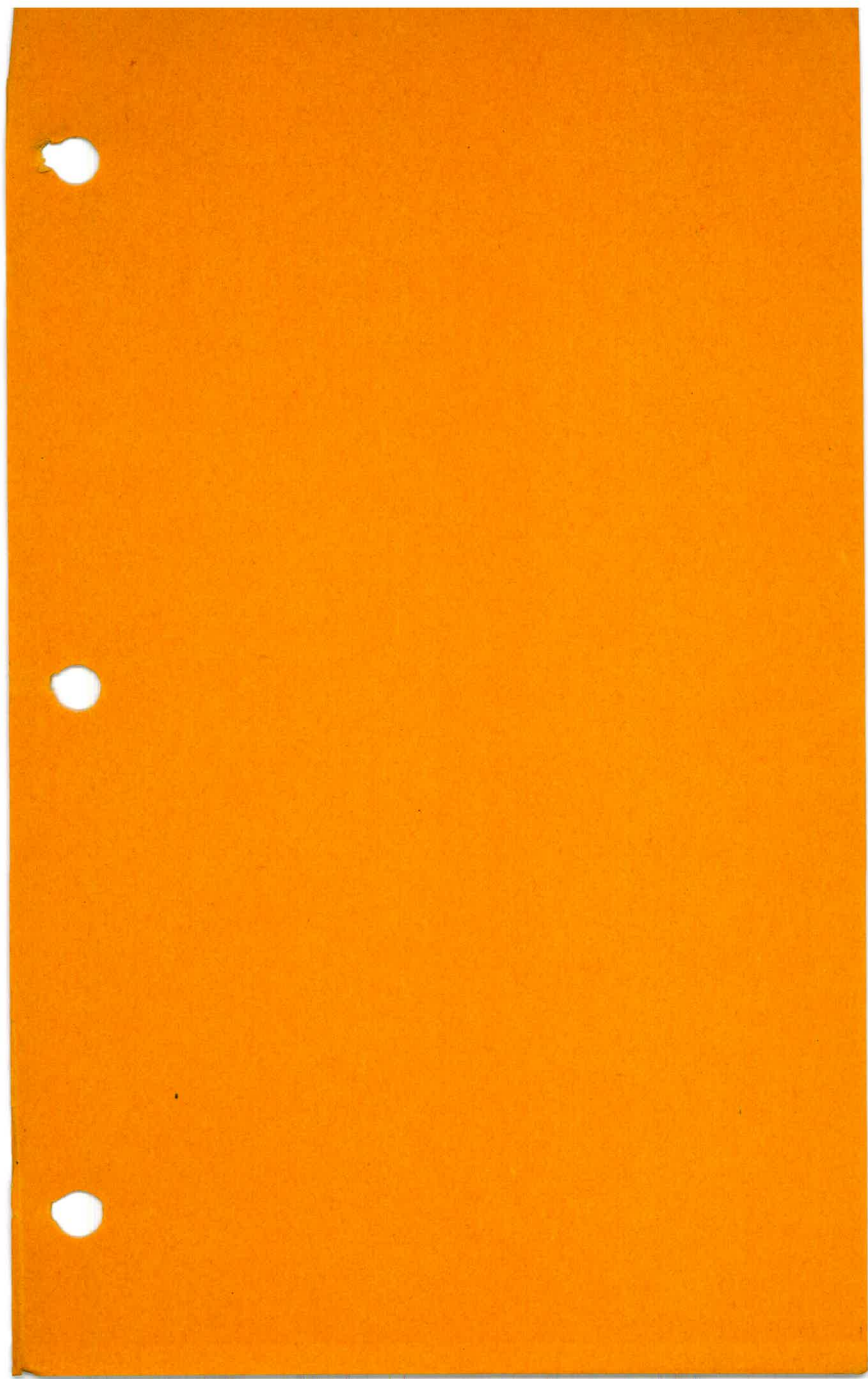
320

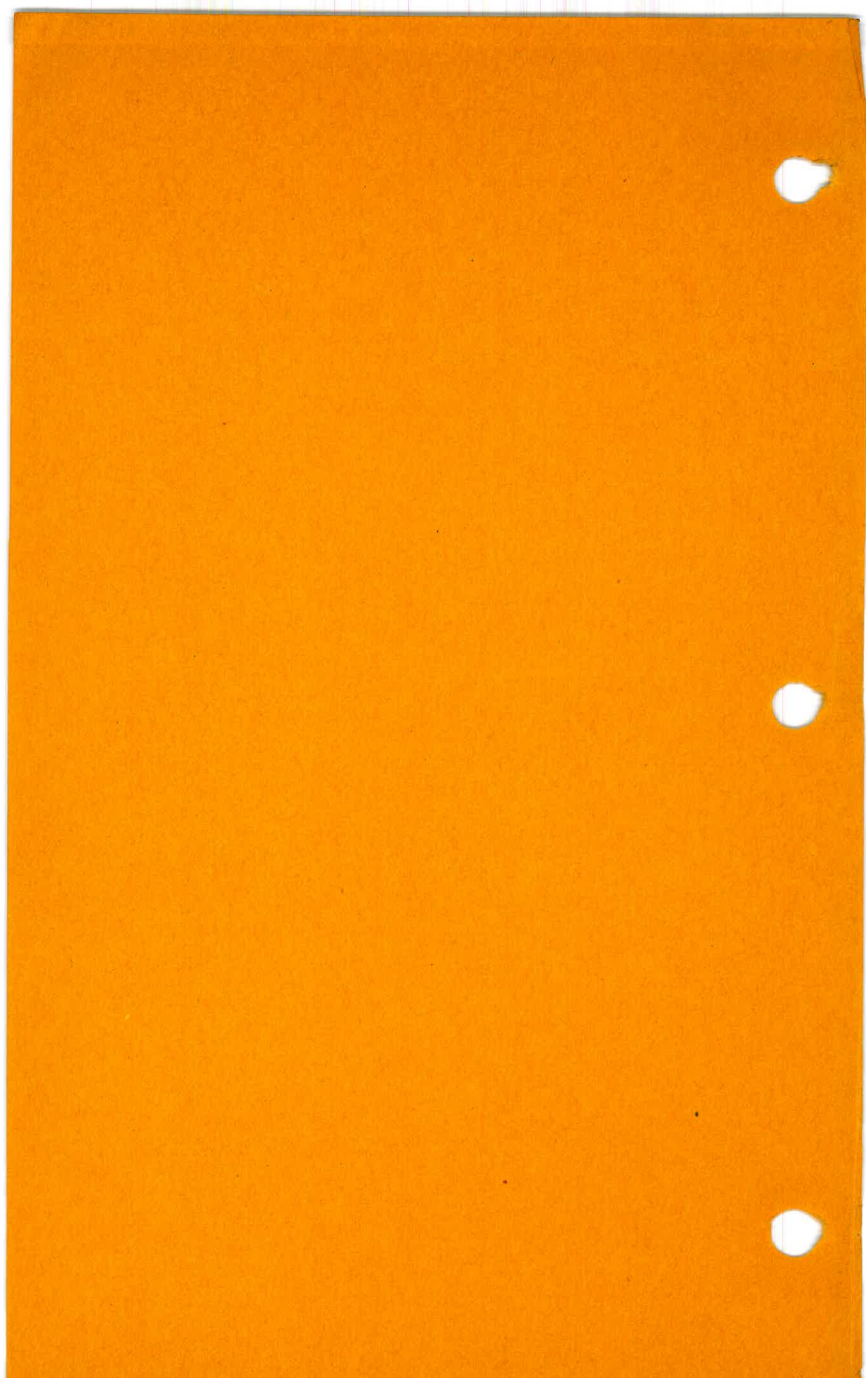
6/20/39 74
Hot

Williams
Parker
Converse
Hill
Elliot
Simpson

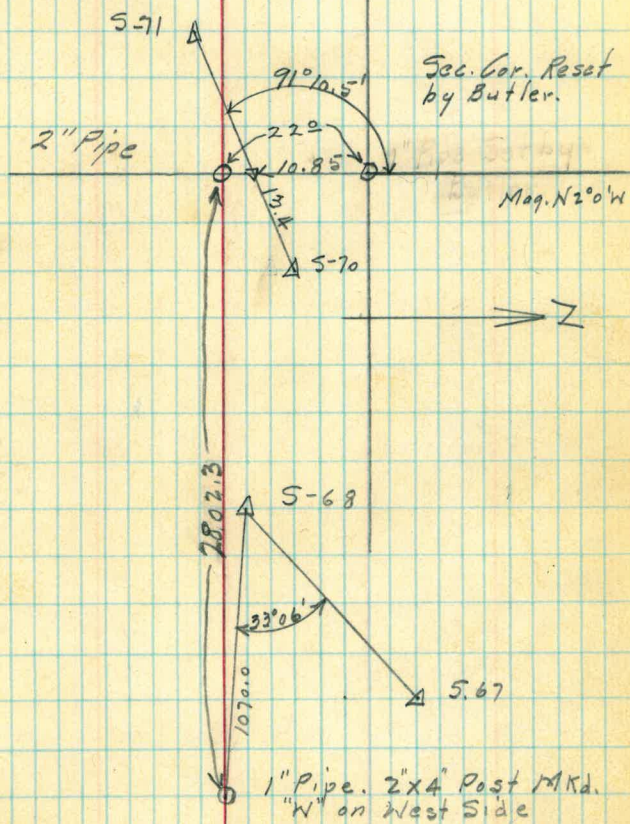


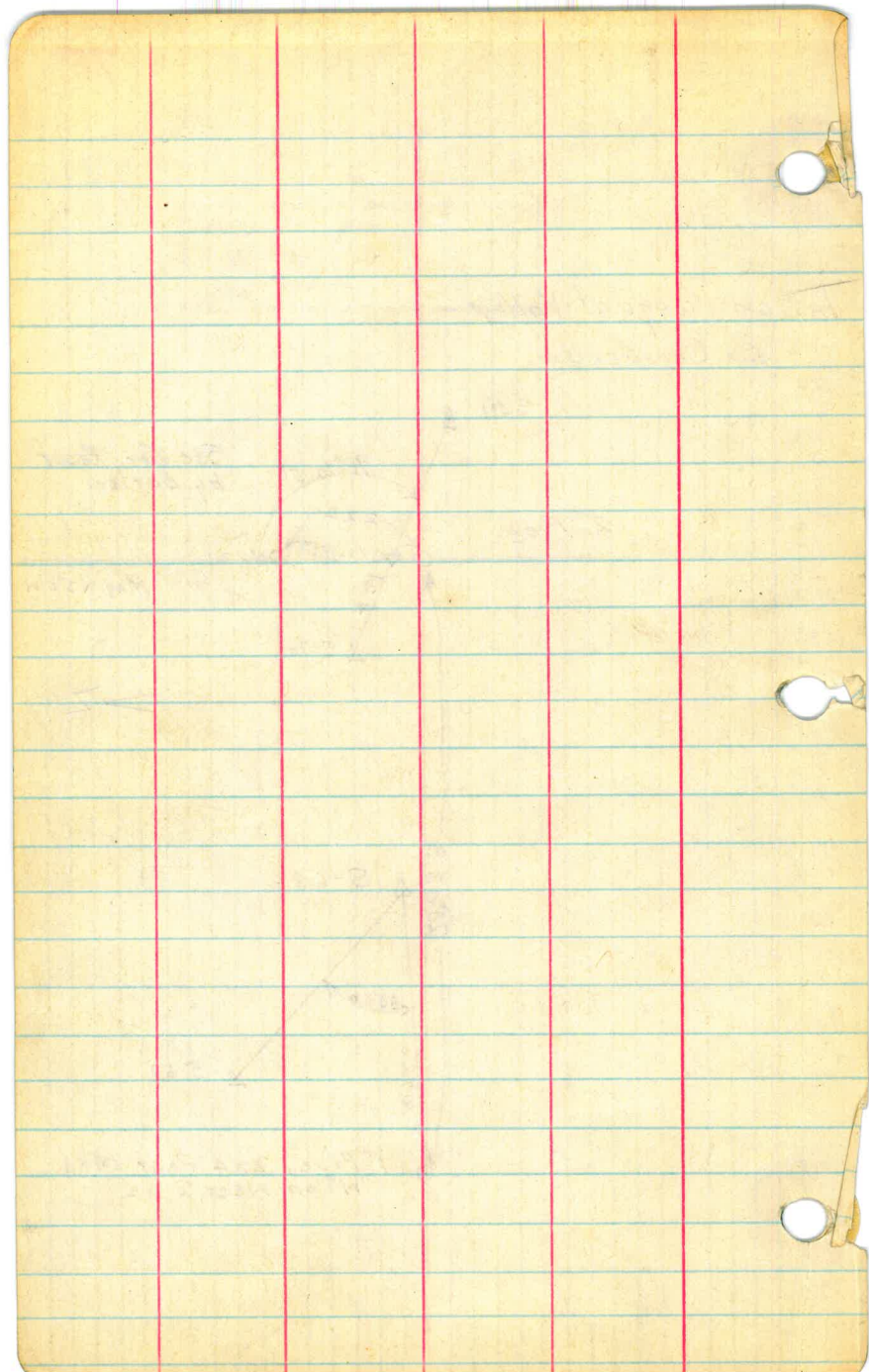






In San Pasqual Valley -
by Converse

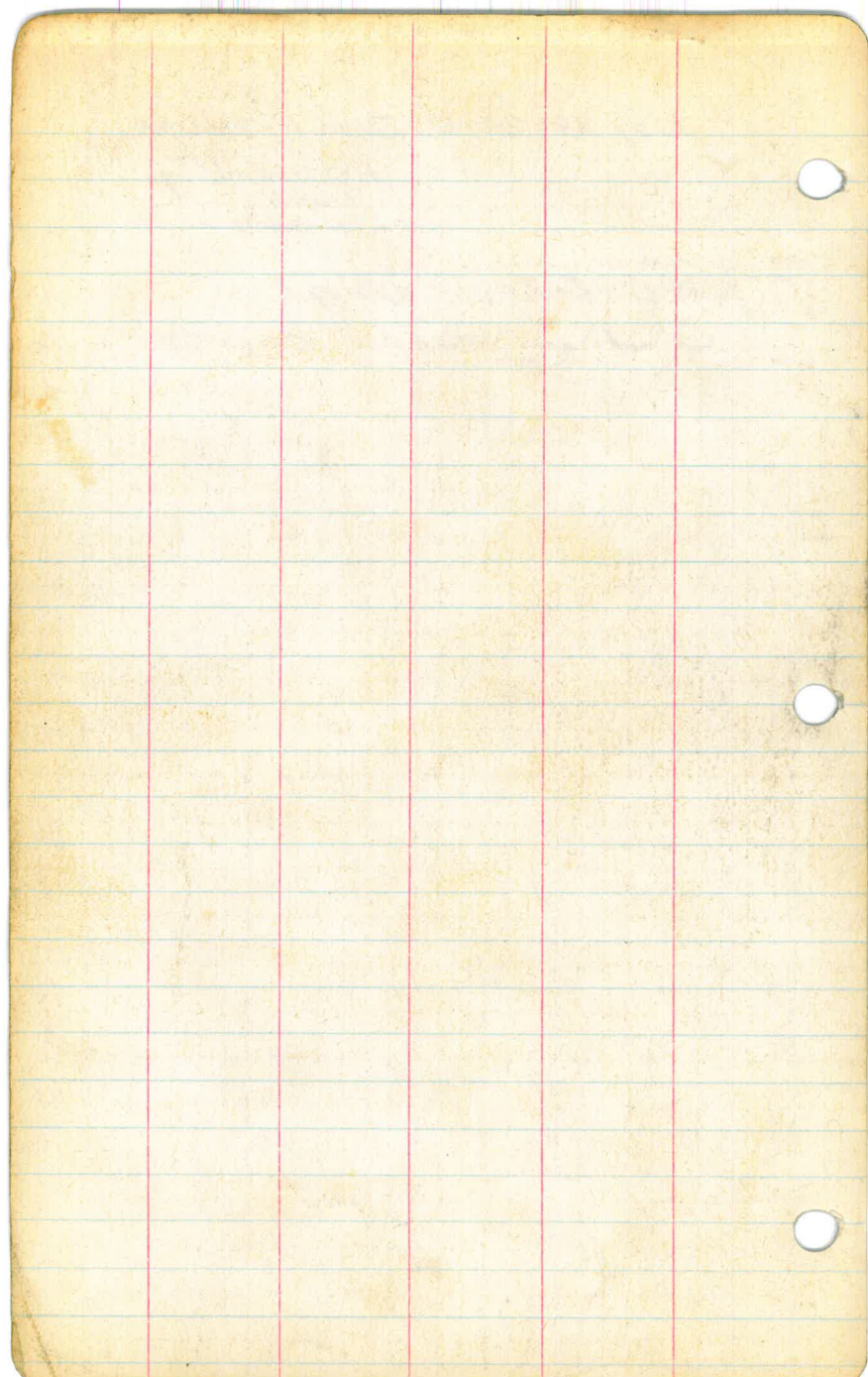




76
May 29-30-31 June 1-2 '28

P.O. Gottschling
Leach
Simpson

Lake Hodges Dam
structural defect survey



↑ N ↓

May 29-28
R.O.G.
Leach
Birmingham

77

#9 S-Face Bull #9 = 1000
A = 10.82

#10 N-Face " " #10 = 1020.82
t = 3.19
d = 20.81

#11 N - " " #11 = 1074.82
t = 3.17
d = 20.82

#12 N - " " #12 = 1028.71
t = 3.18
d = 20.92

#13 N - " " #13 = 1092.81
t = 3.23
d = 20.75

#14 N - " " #14 = 1116.79
t = 3.19
d = 20.72

#15 N - " " #15 = 1140.70
t = 3.19
d = 20.72

#16 N - " " #16 = 1164.75
t = 3.19
d = 20.88

#17 N - " " #17 = 1188.78
t = 3.18
d = 20.79

#18 N - " " #18 = 1212.75
t = 3.14
d = 20.84

#19 N - " " #19 = 1236.73
t = 3.15
d = 20.83

#20 N - " " #20 = 1260.71
t = 3.10
d = 20.78

#21 N - " " #21 = 1284.69
t = 3.10
d = 20.78

d = 18.41
1282.22 to Sta to observe

Starting Elev. 231.00 = Floor of Gallery at Sta. 1020.82 = #10

N - Side Buttress #10

H. 1. 236.45

Instrument at Sta. 1000 - 5-5-B #9

H° Δ V°

x

y

N.S. of #10 wall sh. 1020.82

d = 20.82

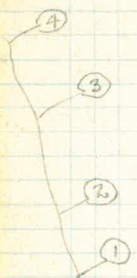
$$x = d \tan H$$

$$y = d \tan V$$

# 4	L [±] 24°06	+ 26°37	runs out
	x = 9.10	10.47	246.9
# 3	L [±] 23°15	+ 25°22	
	8.93	9.86	246.3
# 2	L [±] 22°27	+ 25°46	
	8.60	9.91	246.4
# 1	L [±] 22°29	+ 24°36	
	8.63	9.54	246.0

N-side #10

May 29-78
P.O. 78
Leach
Simpson

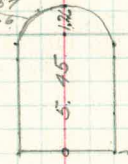


4.8 4.5
39.45 39.55

3.02 2.02
38.19 38.19

1.04 0.57
36.81 36.26

H.I. 236.45
5.45



Door 231.00
of Gallery

5.2 runs out
231.0

South Side Buttress #9

H.I. 235.96

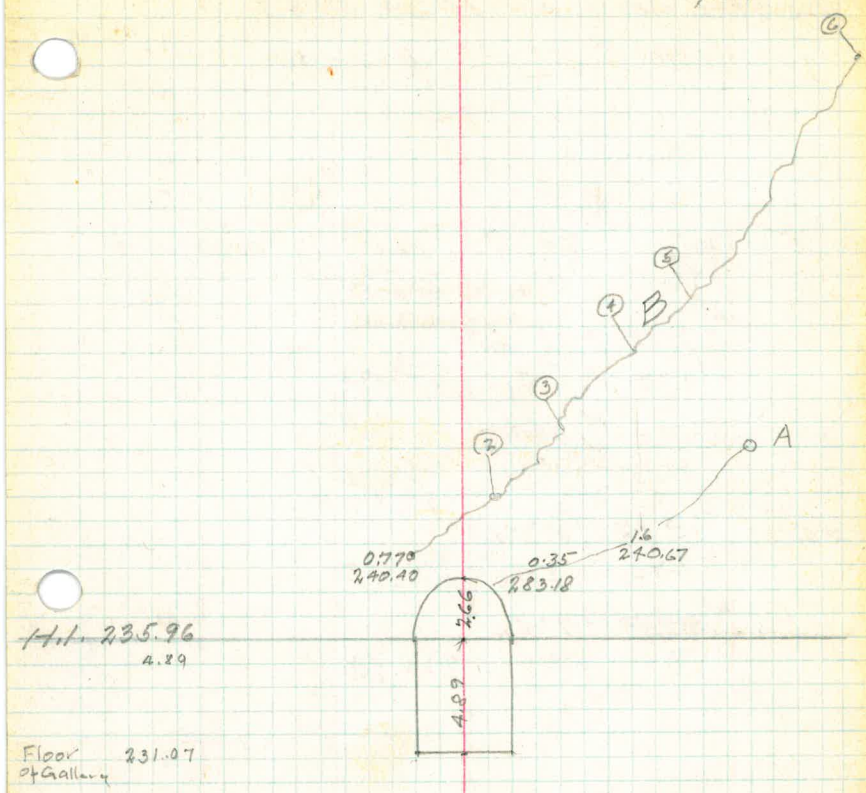
Instr. at Sta. 1020.82 = N-5 #10

d = 20.82

	Δ	∇	
#6	RT 30°32	+37°25	201.23 arch
#5	12.28 RT 5°00	15.93 +22°18	251.49
	1.82	8.54	244.50
#4	RT 4°17	+17°35	
	1.56	6.6	242.56
#3	RT 2°49	+15°52	
	1.02	5.92	241.88
#2	RT 1°18	+16°00	
	.47	5.98	241.94
B#1	LT 2°06	+13°00	
	.76	4.82	240.78
A	RT 6°02	+15°50	
	2.2	5.91	241.87

S-side # 9

May 29-28
D.O.G. 79
Leach
Simpson



North Side #11

H. 1. 236.05

Instrument at 1024.01 = 5-5 #10

H Δ V d = 20.81

#5 L^+
35°16' +28°18' runs 12" from arch
14.71 11.2 247.25

#4 L^+
27°19' +19°05'
10.78 7.21 243.26

#3 L^+
25°11' +14°04'
9.78 5.21 241.26

#2 L^+
19°37' +8°07'
7.42 2.98 239.03

#1 L^+
19°37' +7°52'
7.42 2.88 238.93

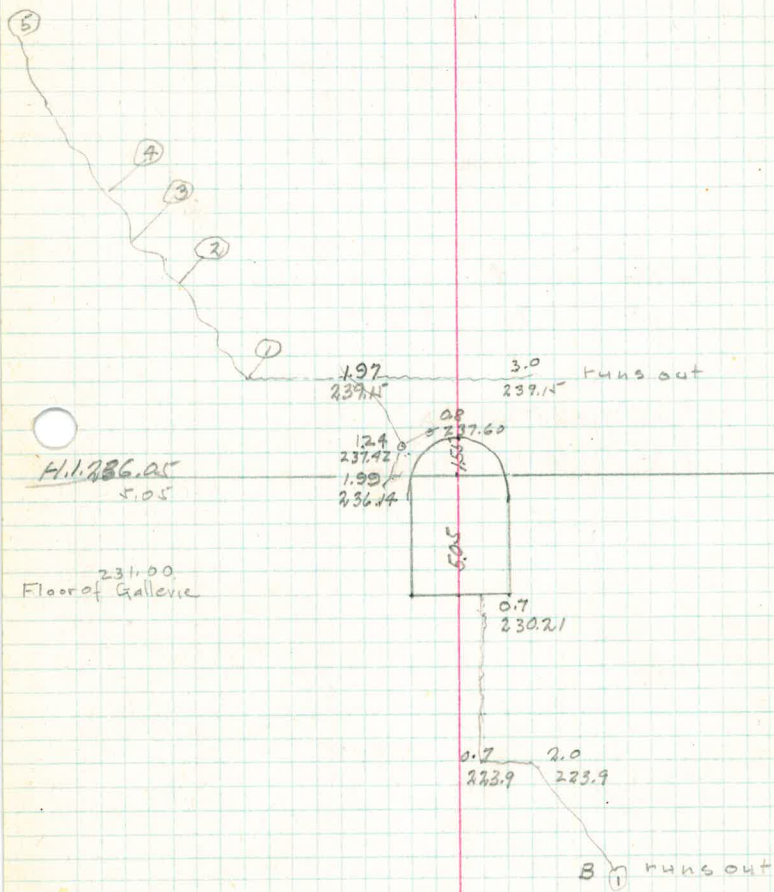
B#1 R^+
17°37' -37°47'
6.55 16.12 119.92

N-side #11

May 30-28

ROG.
Leach
Simpson

80



South Side #10
H. 1, 236.01
Instr. at 1044.82 = N-3 #11
H Δ V d = 20.81

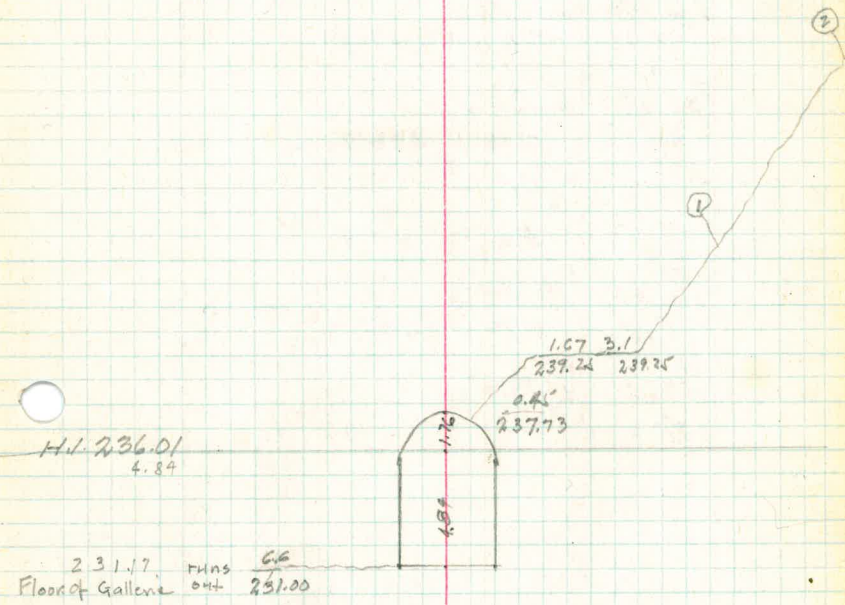
2 R^+ 32°06' 36°54' joins arch
13.68 16.90 252.91

1 R^+ 20°40' R^+ 27°36'
7.85 10.00 246.01

S-side #10

May 30-28
P.O.G
Leach
Simpson

81



N-Side #12

H.I = 236.04
 Instr at 1047.99 = S-S #11

H Δ V

d = 20.82

#	Lt	+	
#6	29°25'	30°39'	runs out
	11.75	12.35	248.39
#5	26°39'	28°17'	
	10.43	11.20	247.24
#4	21°18'	26°02'	
	8.13	10.18	246.22
#3	19°10'	23°05'	
	7.25	8.86	244.90
#2	16°26'	18°04'	
	6.15	6.79	242.83
#1	15°21'	18°04'	
	5.73	6.79	242.83

N-side #12

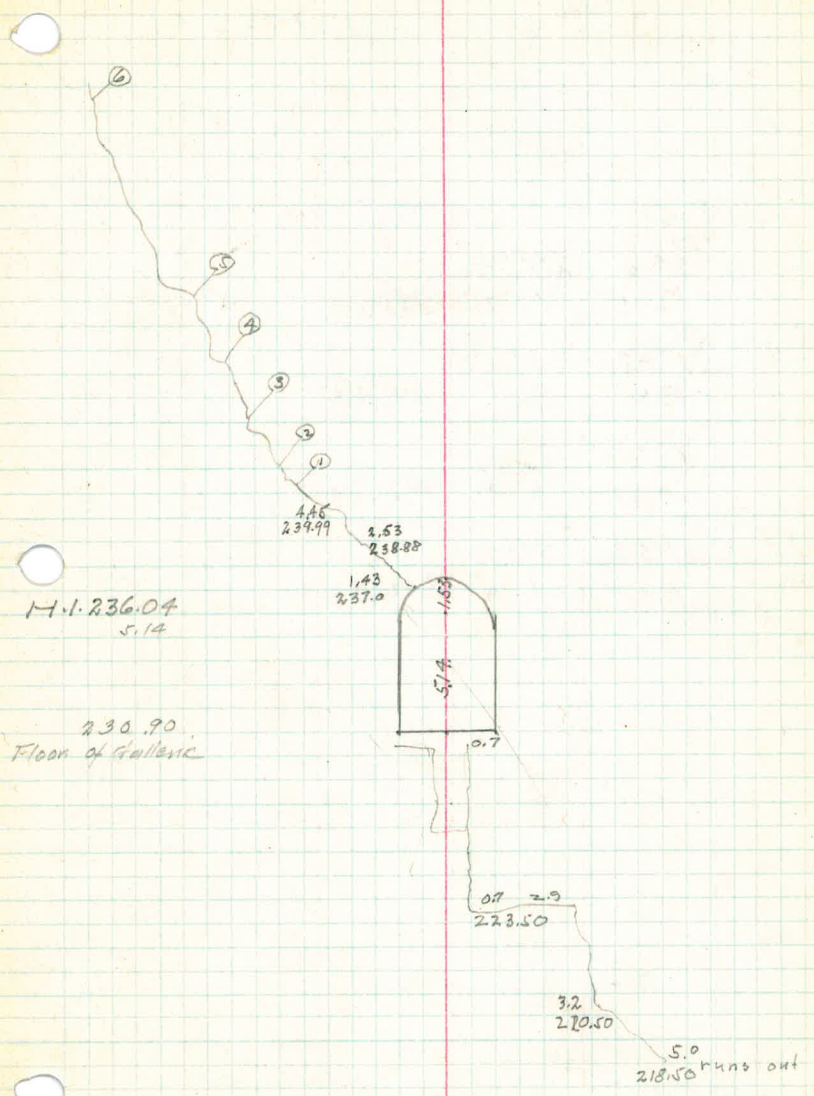
May 30-28

P.O.G.

Leach

Simpson

82



1-1.236.04
5.14

230.20
Floor of Gallenc

1.43
237.0

2.53
238.88

1.53

0.7 2.9
223.50

3.2
220.50

5.0 runs out
218.50

4.46
234.99

S-Side #11

H.I. 235.91

Instrument at 1068.71 = N.S. #12

T-1 Δ N

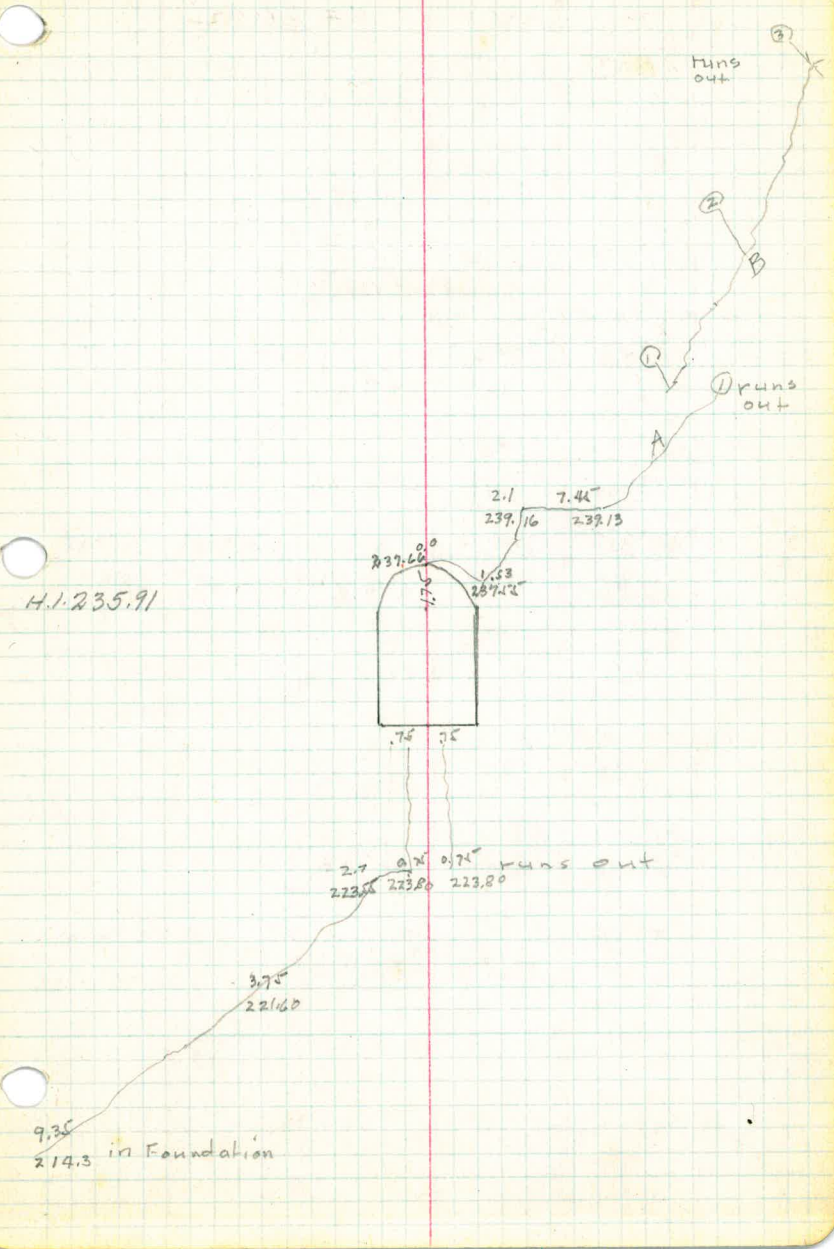
d = 20.82

#3	R^+ 33°18	$+$ 27°14	
	12.61	10.72	246.63
#2	R^+ 31°42	$+$ 29°45	
	12.88	9.6	245.51
#1B	R^+ 27°07	$+$ 17°49	
	10.67	6.69	242.60
#1A	R^+ 27°53	$+$ 17°57	
	11.01	6.44	242.35

S-side #11

May 31-28
P.O.G.
Leach
Simpson 83

H.I. 235.91



2.1 7.44
237.16 237.13

237.60
1.3
237.12

2.7 0.7 0.7 runs out
223.80 223.80

3.7
221.60

9.35
214.3 in Foundation

N-side #13

H 235.96

Instrument at 1071.89 = S-S #12

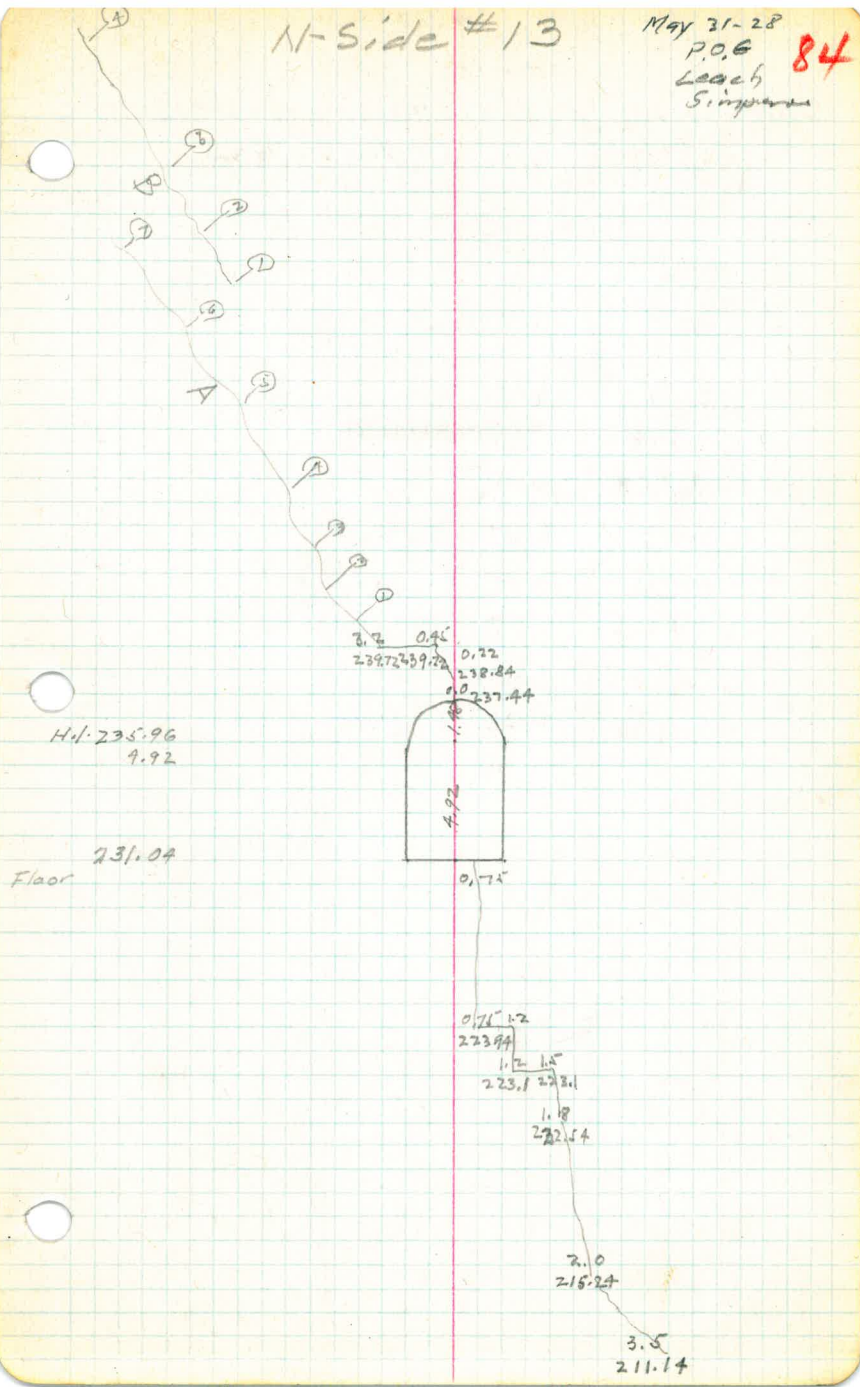
H Δ V d = 20.92

# 6	21°01	21°12			
	8.02	8.16	244.12		
# 5	19°03	18°13			
	7.21	6.88	242.84		
# 4	17°59	+18°12			
	6.8	6.92	242.88		
# 3	17°59	# 17°22			
	6.8	6.55	242.51		
# 2	^L 15°32	13°54			
	5.81	5.18	241.14		
# 1	^L 12°35	+ 13°22	# 7	24°05	23°08
A	4.66	4.98	240.94	9.35	8.93
B #1	23°42	22°26			EI 245.31
	9.18	8.65	244.61		
# 2	24°49	23°31			
	9.66	9.1	245.06		
# 3	26°51	24°03			
	10.59	9.33	245.29		
# 4	36°00	30°37	end in wet spot at junction		
	15.2	12.39	248.35		with Arch

N-Side #13

May 21-28
P.O. 6
Leach
Simpson

84



S-Side #12
236.14

Instrument at 1092.81 = N-S #13

H \triangle V $d = 20.92$

#A 20953 23955 runs out

7.98 9.28 245.42

#3 16052 21917

6.34 8.15 244.29

#2 16035 19055

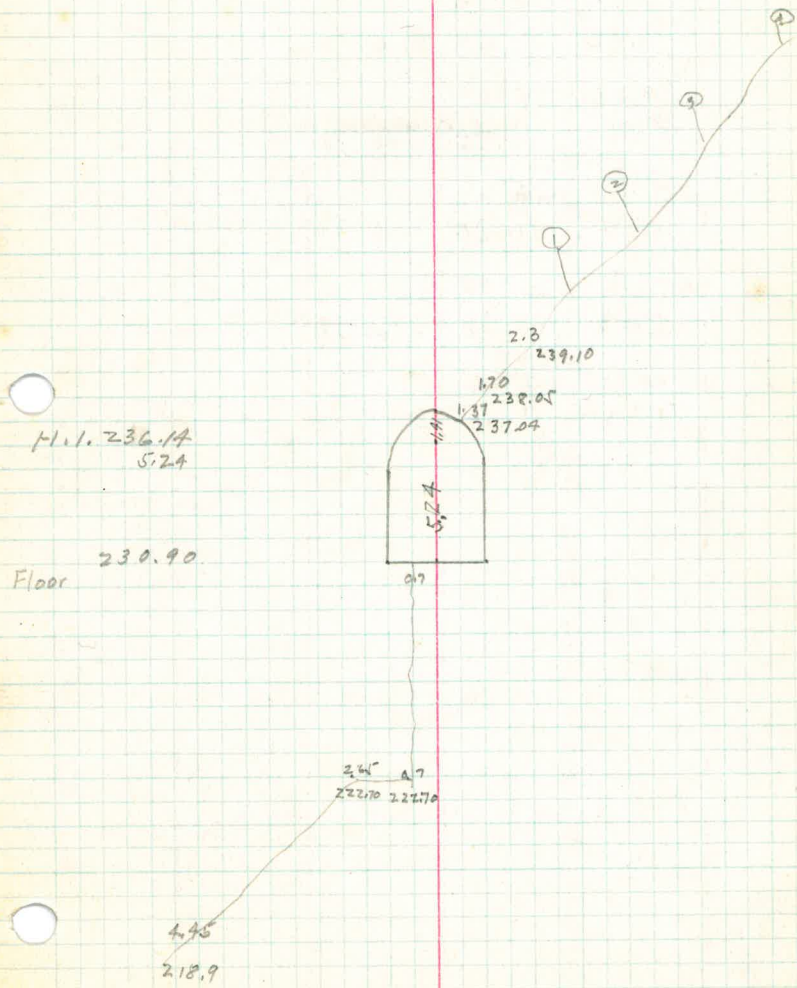
6.23 7.59 243.71

#1 ^R 14007 16047

5.25 6.32 242.46

S-Side #12

May 31-28
P.O.G
Leach 85
Samp barn



N-Side # 14

H. 1.23600

Instrument at 1096.04 = S-Side #13

H Δ V d = 20.75

5 33041 34058 joins arch
13.83 14.5 250.50

4 23023 27023
8.96 10.75 246.75

3 22037 26022
8.65 10.30 246.30

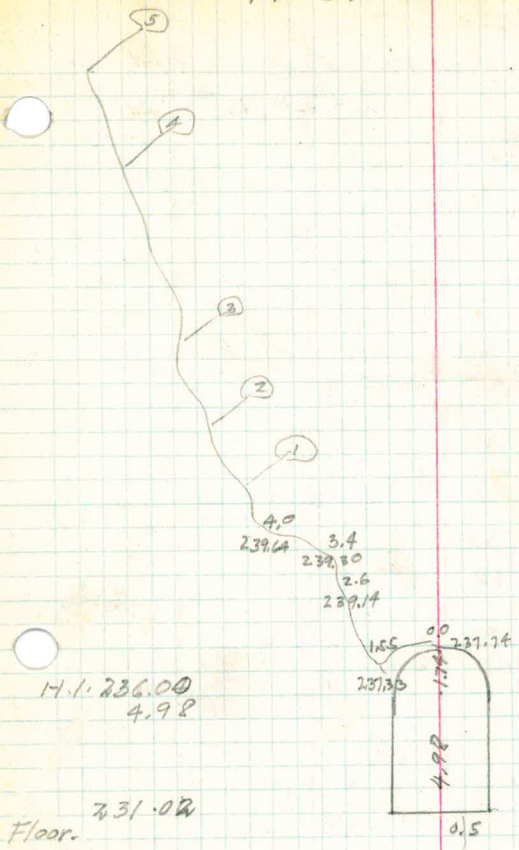
2 20055 26037 246
7.93 10.38 246.38

1 ^{L+} 11048 ⁺ 13040
4.33 5.04 241.04

N-side #14

May 31-28
P.O. 6
Laqab
Sampson

86



H.I. 236.00
4.98

Floor. 731.02

0.0 237.74
1.14
4.98
0.5
0.7
0.9
215.95

S-Side #13

H. 1286.07

Instrument 1116.79 = N. Side #14

H \triangle V $d = 20.71$

#4 25°42' 23°34' runs out

9.88 9.15 245.22

#3 18°54' 17°37'

7.17 6.66 242.73

#2 17°31' 17°37'

6.62 6.66 242.73

#1 15°46' 14°41'

A 5.91 5.49 241.56

B

#1 25°28' 22°12'

9.98 8.55 244.62

#2 29°51' 24°39'

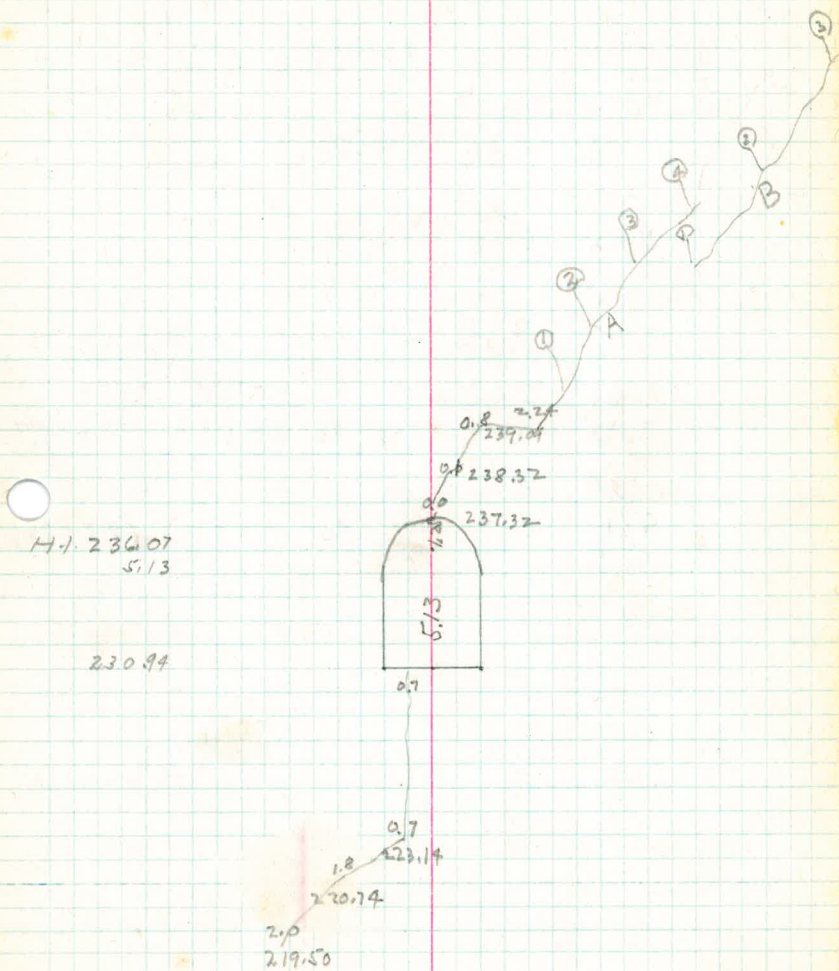
11.9 9.61 245.68

#3 36°22' 29°49' runs out 12" from Arch

15.28 11.89 247.96

3-5190-15
This appears the worst as water
is continually dripping but the water
originates in a leak directly above gallerie
were Buttress and Arch join R96

87



N-Side # 15

H.I. 236.09

Instrument at 119.88 = S-Side # 14

H \nearrow \searrow

d = 20.72

# 6	35°23	23°26			
	14.84	9.06	245.15		
# 5	28°54	24°49			
	11.54	9.67	245.76		
# 4	23°33	18°10			
	9.13	6.86	242.95		
# 3	21°45	15°41			
	8.35	6.08	242.17		
# 2	19°47	14°13	# 8	38°34	29°11
	7.53	5.29	241.98	16.67	11.68
# 1	15°08	14°00	# 7	37°17	26°13
	5.65	5.21	241.30	15.9	10.29

joins arch E.C.

247.77

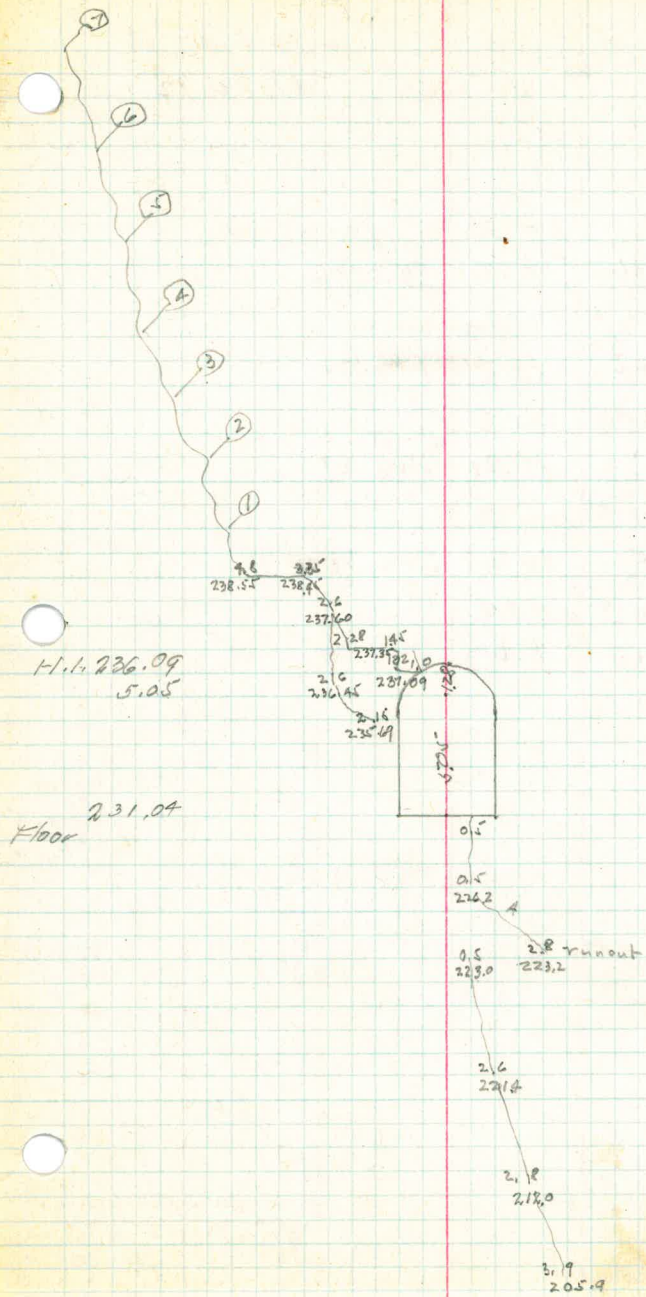
246.38

N-Side #15

May 31-28

P.O. # 88

Leads
Simpson



S-Side #14
H.I. 236.07

Instr. at

M Δ V

= N-side #15

d = 20.72

#5 33°32' 34°51' joins arch
13.86 14.55 250.62

#4 24°08' 26°53'
9.28 10.6 246.67

#3 21°52' 26°03'
8.3 10.21 246.27

#2 19°55' 26°16'
7.5 10.31 246.38

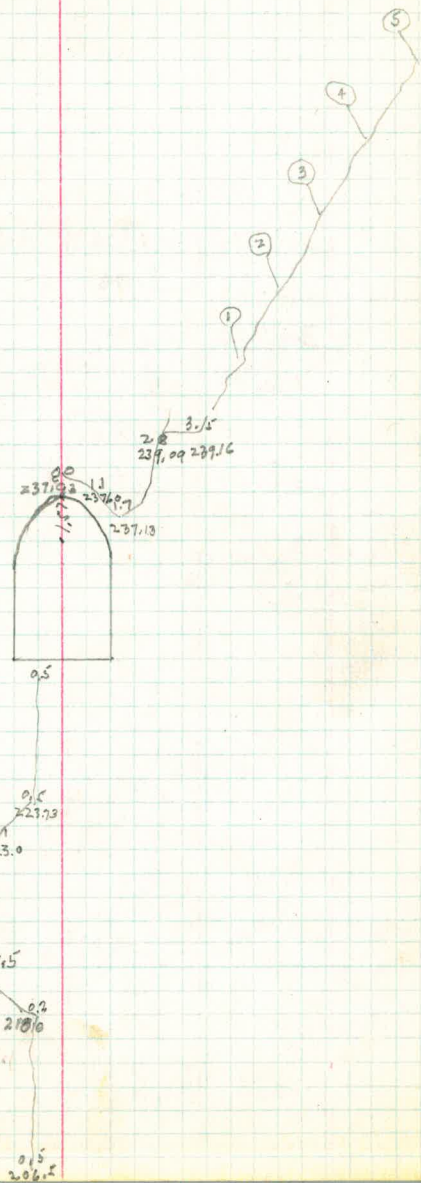
#1 13°57' 17°44'
5.14 6.63 242.70

S-side #14

Jan 1-28
P.O. 89
Leach
Striper

H.I. 236.07
5.04

231.03



N-Side #16

236.09

Instr at 1143.87 = s-side #15

H Δ V

d = 20.88

#3 38°31' 23°14' run out

16.65 8.96 245.05 .14

#2 38°06' 22°33'

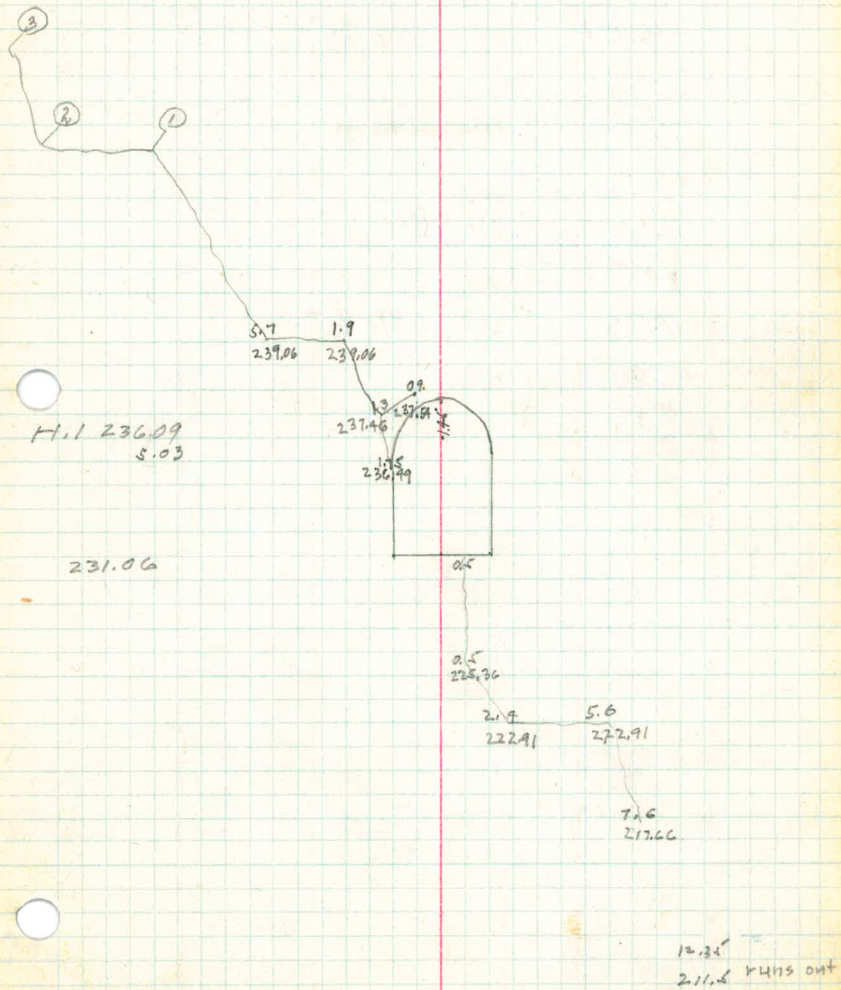
16.37 8.47 244.56

#1 29°54' 24°24'

12.01 9.48 245.57

N-Side # 16

June
P.O.C. 90
Lead
Simpson



S-side # 15
H.I. 236.10

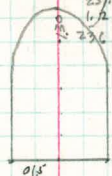
Instr. at 1164.75 = N-side # 16
H Δ V $d = 20.88$

#5	38°23	28°35	joins arch
	16.54	11.39	247.49
#4	35°12	23°26	
	14.72	9.05	245.15
#3	29°12	24°30	
	11.68	9.54	245.64
#2	19°27	14°06	
	7.38	5.25	241.35
#1	15°24	13°43	
	5.76	5.1	241.20

S-side #15 200 91

H.I. 236.10
4.06

231.04



0.5

0.5
221.9

2.84
220.2

3.6
216.8

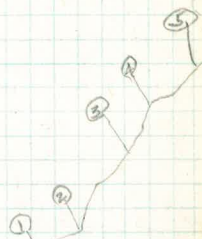
3.6
210.8

4.2
202.8

3.85 4.5
238.22 238.90

14 3.7
237.40 231.90

0.25 236.9



N-Side #17

H₁ 236.03

Instr. at 1167.95 = S-Side #16

H Δ V

d = 20.79

#3 37°19 +30°18 *7017 = 248.13*
15.84 12.1

#2 33°36 +23°37
13.8 9.09 245.12

#1 6°04 -27°26
2.2 10.78 246.81

Rt
#1 35°17 -35°24
14.71 14.78 221.27

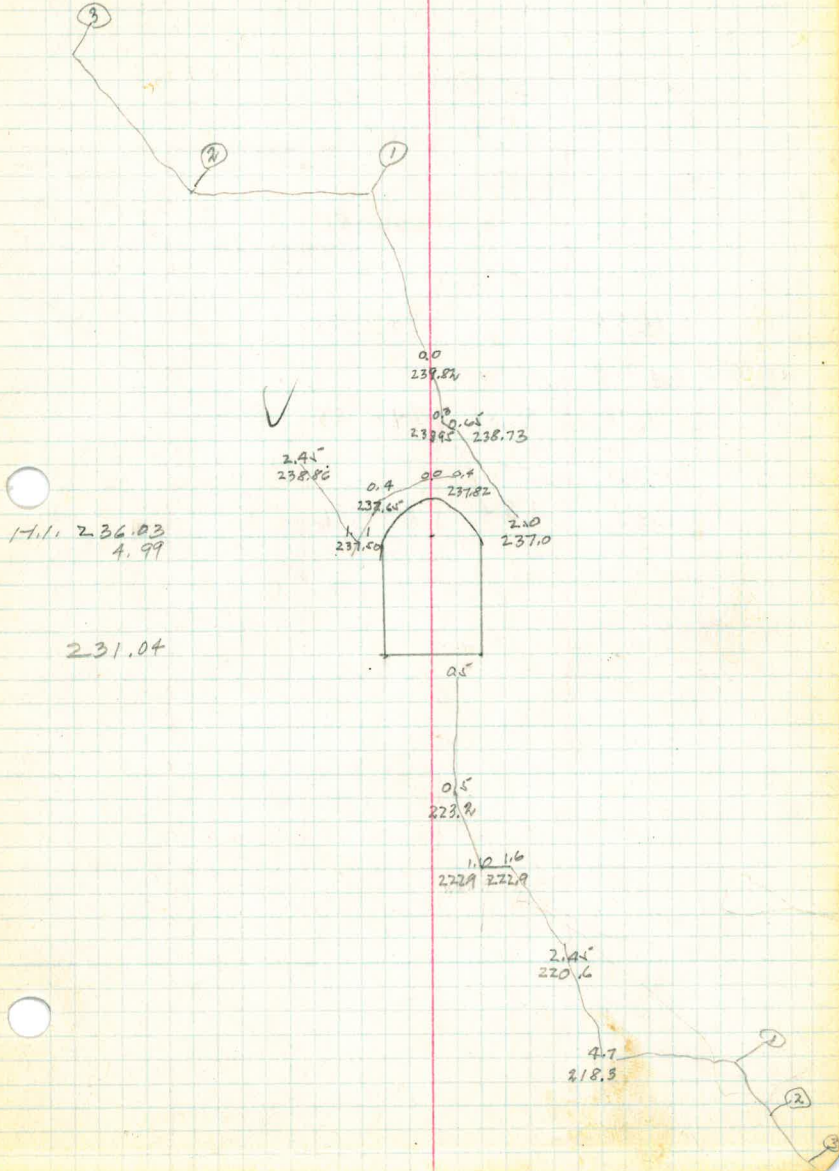
#2 40°38 -38°07
17.85 16.31 219.72

#3 47°14 -43°58
24.12 20.06 216.60

N-Side #17

Jan 1-22

P.O. 092



S-Side #16

H.I. 236.12

Inst. at 1188.72 = N-Side #17

d = 20.79

#5	41°36	+25°00	joins arch
	18.48	9.7	245.82
#4	40°07	+21°56	
	17.52	8.39	244.51
#3	29°08	+24°47	
	11.58	9.6	245.72
#2	24°18	15°44	
	9.4	5.86	241.98
#1	21°50	15°41	
	8.34	5.84	241.96

S-side #16 Jun 2-28
H.O.C. 93
Leaves
Sampler

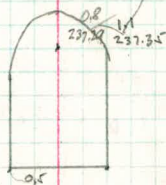
H. 1. 236.12
5.08

231.04

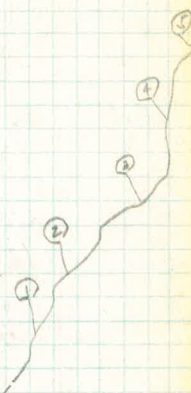
13.14
209.1

12.55
211.4

5.6 12 26
227.9 222.9 223.6



1.85 5.83
238.74 238.80



N-Side #18

H.I. 236.06

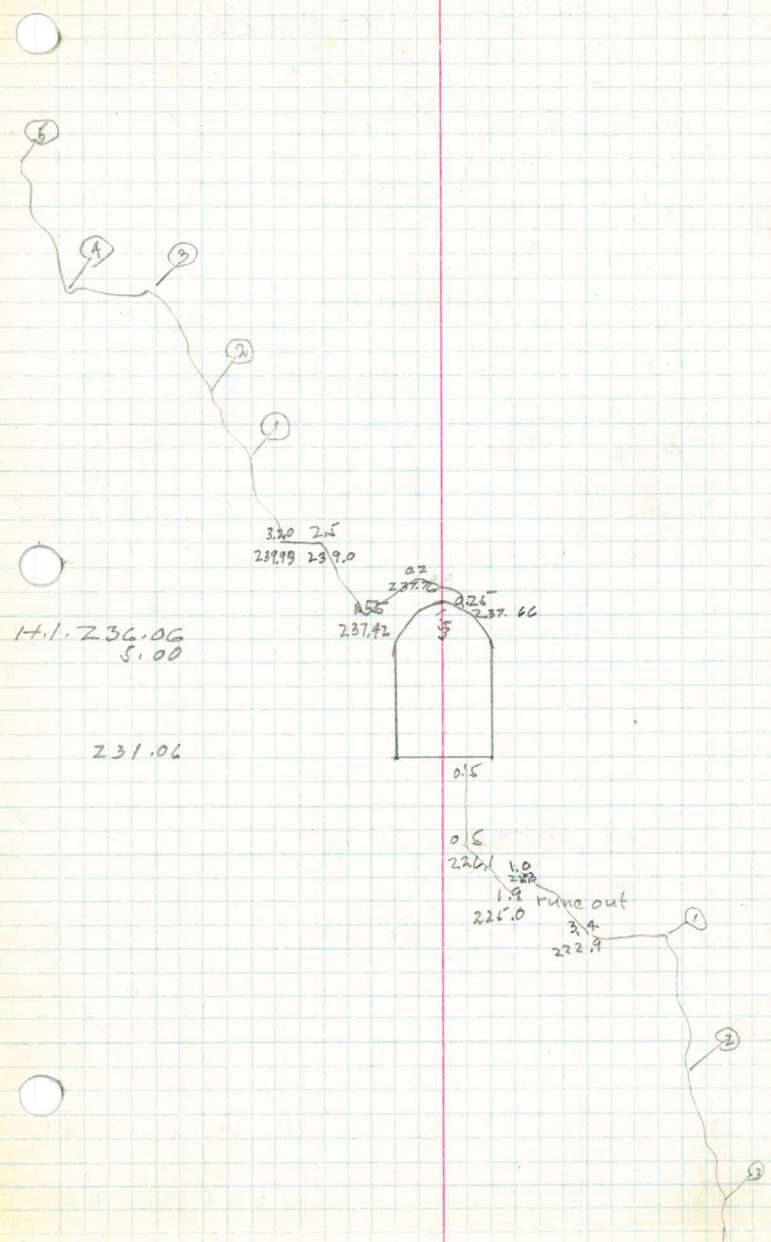
Instr. at 1191.95 = S-Side #19

H I Δ V d = 20.80

#5	38°10 + 29°10	joins arch
	16.35 11.6	247.66
#4	33°51 + 23°34	
	13.96 9.07	245.13
#3	27°44 + 24°55	
	10.94 9.67	245.73
#2	20°15 + 17°01	
	7.68 6.26	242.42
#1	14°17 + 13°58	
	5.3 5.09	241.15
#1	23°26 - 29°59	
	8.88 12.0	224.06
#2	28°02 - 34°57	
	11.08 14.53	221.53
#3	29°33 - 48°46	runs vertically to
	11.80 23.77	212.29 Bedrock

N-Side #18

R.O. 94



S-Side #17

17.1.236.16

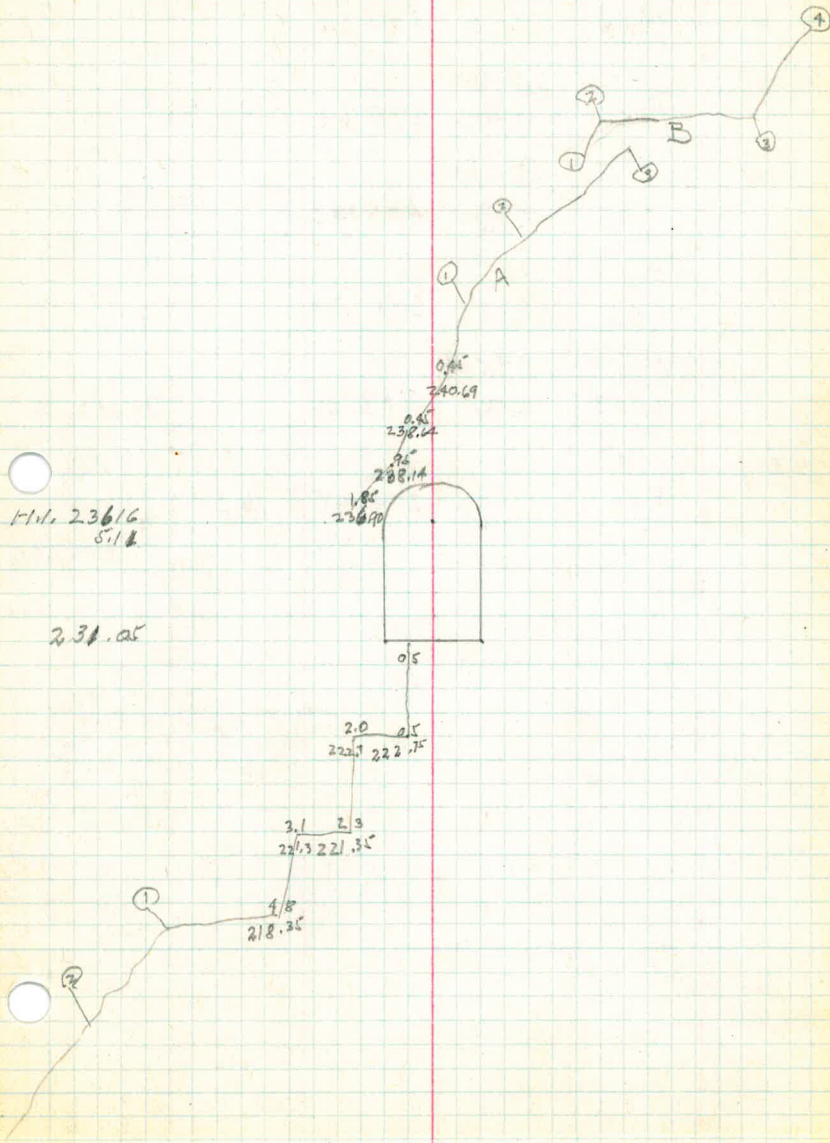
Instr. at 1212.75 = N-Side #8

~~#2~~ H Δ V d = 20.80
Et.

#2	26°22	27°25	246.95		
	10.33	10.79			
B #1	4°51	25°00	246.85		
	1.77	9.69			
#3	8°11	26°10	246.38		
	3.0	10.22			
#2	5°54	25°16	246.97	joins arch	
	2.16	9.81	+4	37°44	30°30
				16.1	12.26
A #1	1°43	18°30	246.13		Et. 44.4~
	.62	6.97	#3 B	33°44	23°30
				13.9	9.05
					Et. 241.21
#1	35°04	-35°42	221.20		
	14.6	17.97			
#2	43°30	-37°20	220.30		
	19.74	15.88			

S-Side #17

P.O. 6
95



1.11, 2.3616
5.18

2.31.05

2.0 0.5
222.7 222.75

3.1 2.3
224.3 221.35

1.8
218.35

N-Side #19

H.I. 236.06

Instr. at 1215.89 = S-side #18

H Δ ∇ $d = 20.84$

#6 35°31' 29°28'
14.88 11.56 247.62

#5 34°45' 29°49'
14.96 11.92 247.68

#4 25°45' 25°07'
10.03 9.77 245.83

#3 24°46' 25°13'
9.63 9.83 245.89

#2 19°39' 18°04'
6.63 6.79 242.85

join arch

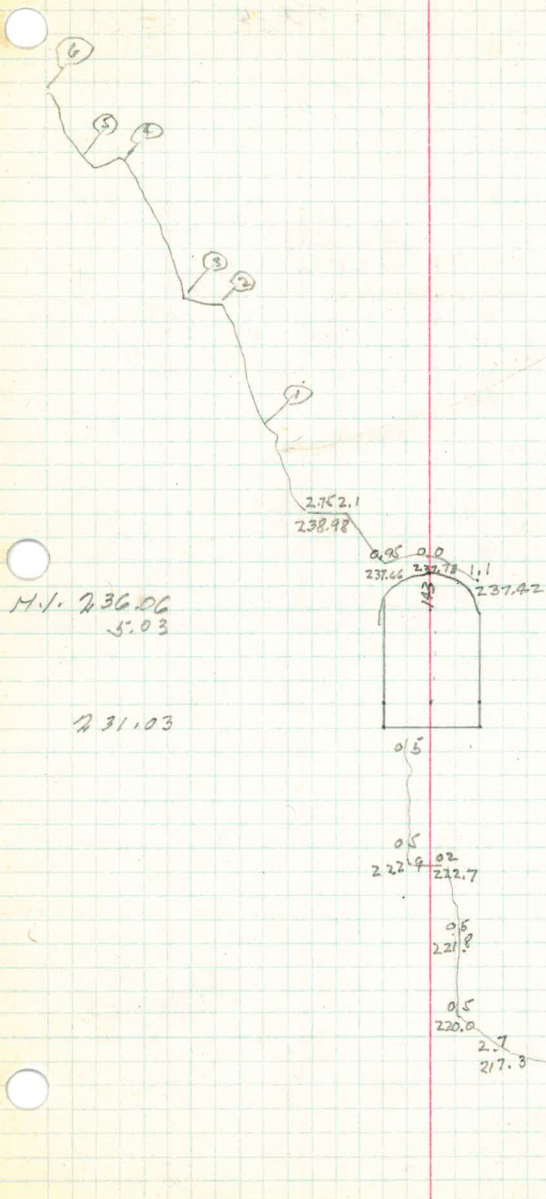
#1 15°42' 15°00' #7 36°14' 31°22'
5.86 5.59 241.65 15.29 12.70
E1.248.76

N-Side # 19

June 2-28

P. 96 ⁹⁶

Lead
Spring on



S. Side #18

H. 1 236.11

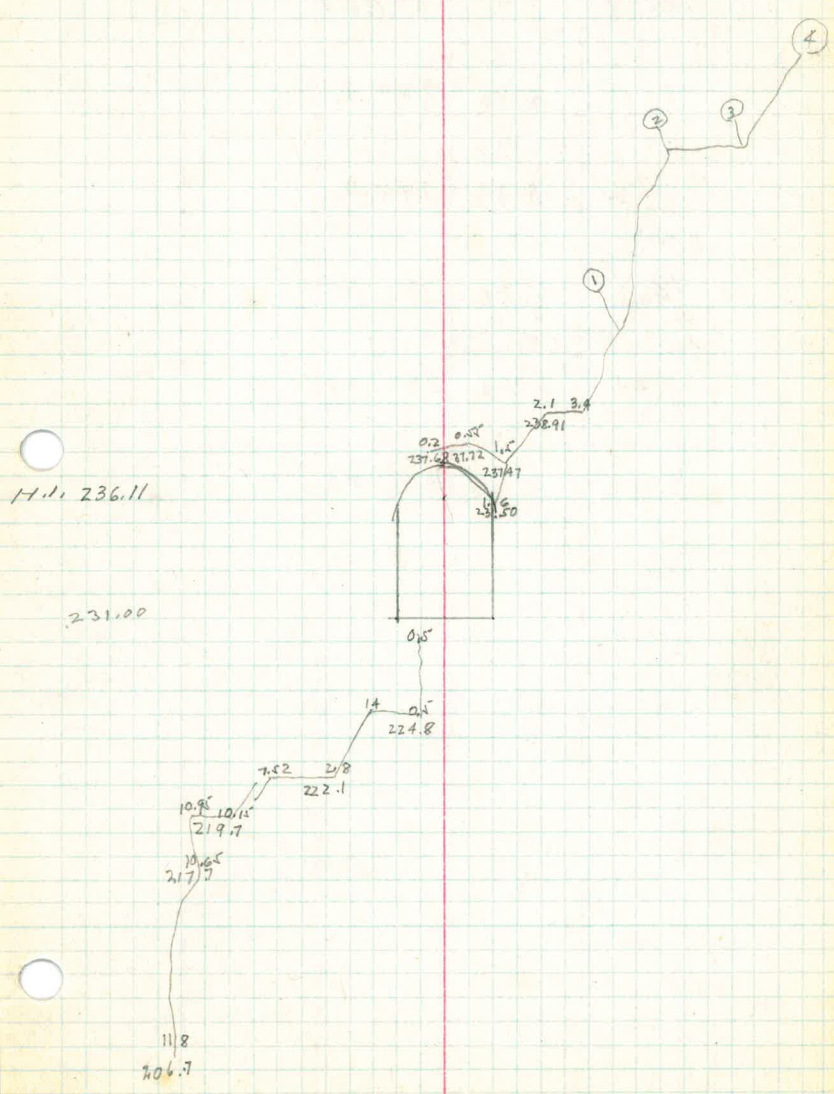
Instrument at 1236.73 = N-Side #19

H Δ V $d = 20.84$

# 4	38°27	28°45	joins arch
	16.54	11.64	247.75
# 3	34°27	23°24	
	14.3	9.04	245.15
# 2	28°31	24°46	
	11.32	9.63	244.74
# 1	12°05	12°26	
	4.46	4.6	240.71

S-Side #18

June 2-28
20.6 97



11.1, 236.11

231.00

11.8
206.7

N-Sideⁿ 20

H.I. 236.07

Instr. at 1239.88 = S-Side #19

d = 20.83

#6 38°41' 27°50' joins arch
16.69 11.0 247.07

#5 34°53' 23°05'
14.57 8.88 244.95

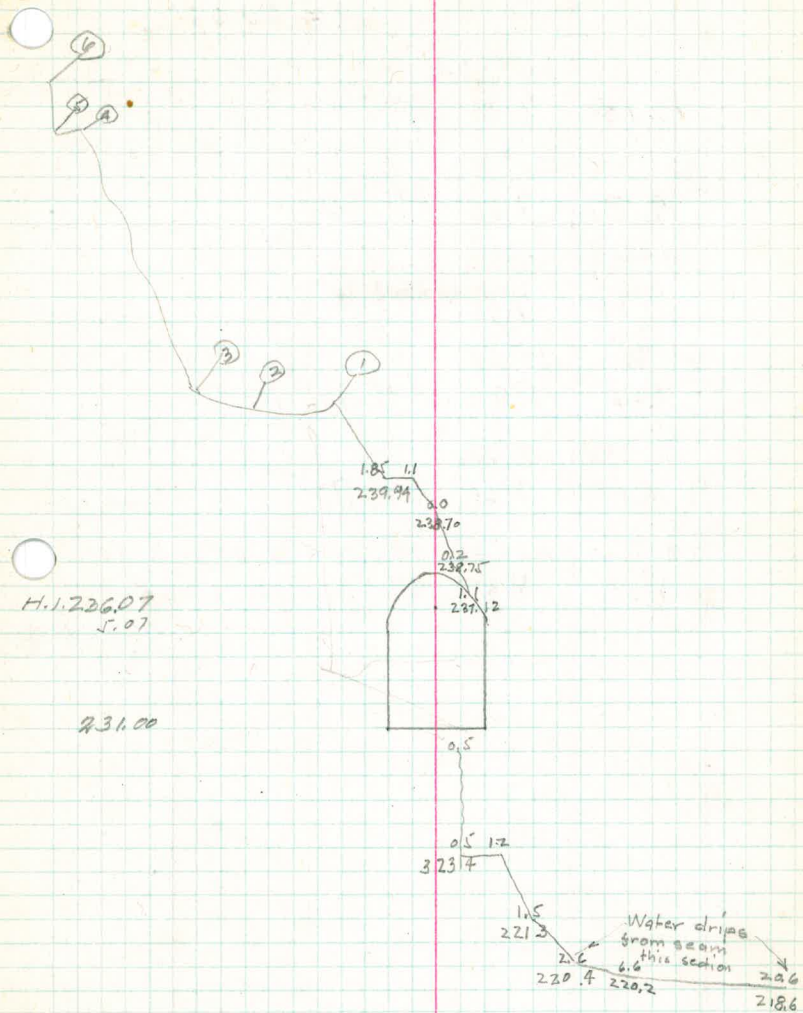
#4 34°17' 23°12'
14.2 8.83 244.90

#3 29°57' 15°20'
12.0 5.71 241.78

#2 23°54' 14°36'
9.24 5.42 241.49

#1 11°10' 16°02'
4.11 5.98 242.05

N-Side #20 June 2-28
P.O. 698



S. Side #9
H.I. 230.04

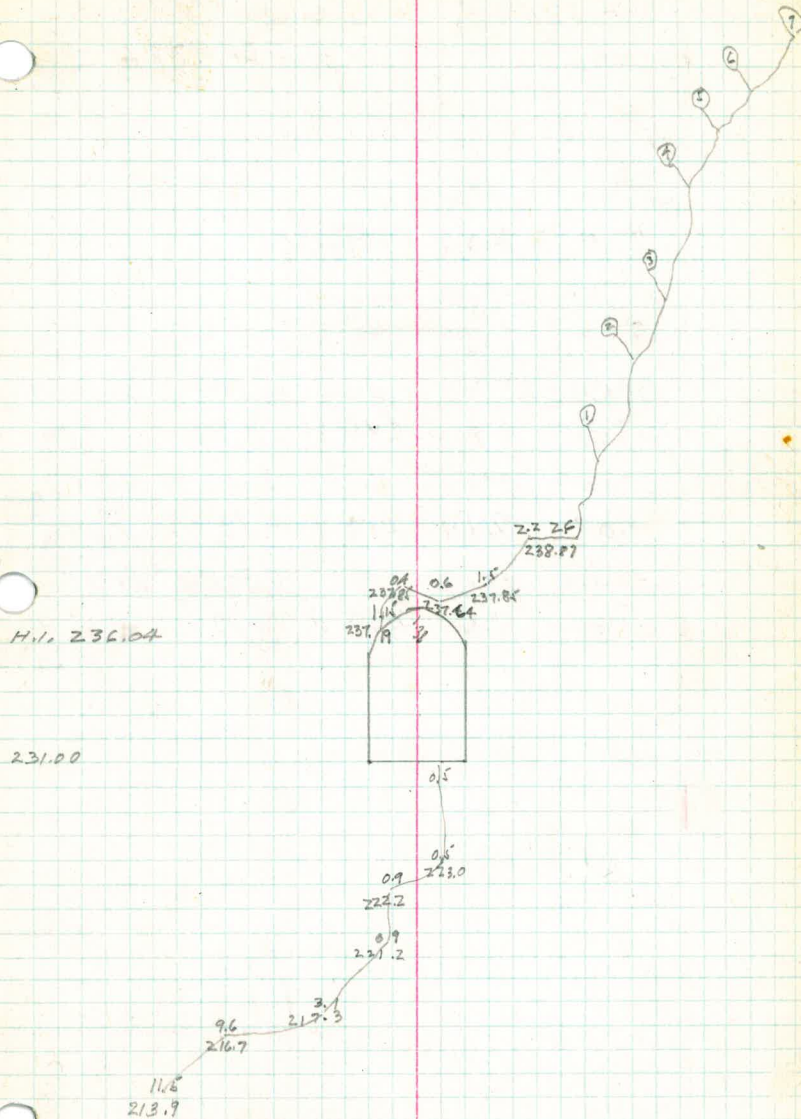
Intf. at 1260.71 = N. Side 20

H Δ V d = 20.83

# 6	26°03	25°10			
	10.18	9.79	245.83		
# 5	25°08	25°20			
	9.77	9.86	245.90		
# 4	19°26	19°58			
	7.36	7.56	243.60		
# 3	17°43	15°51			
	6.67	5.92	241.96		
# 2	16°08	15°16			
	6.03	5.69	241.70	run out	
# 1	14°56	13°23	# 7	32°38	29°37
	5.56	4.87	240.91	13.32	11.82
					EI. 247.86

S-side #19

P. 26 99



N-Side #21

H.I. 236.05

Instr. at 1263.81 = S-Side #20

H Δ V

d = 20.78

A

B

#5 28°31' 29°05'

11.29 11.57 247.62

#4 24°51' 24°38'

9.63 9.55 245.60

joins north

EI

#3 19°55' 25°15'

7.52 9.81

#3 245.86

32°48' 13.38

35°03' 250.64

17.59

#2 16°20' 19°42'

6.09 7.44

#2 243.49

30°20' 12.15

33°42' 13.86

219.91

#1 14°41' 19°52'

5.44 7.5

#1 243.55

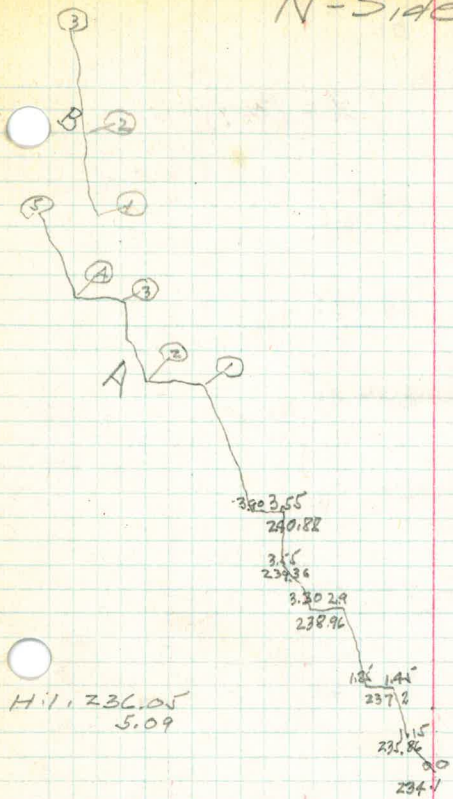
26°58' B 10.58

29°51' 11.93

247.98

N-side # 21

PAGE 100



H.I. 236.05
5.09

230.96

112 141
237.8

115
236.8
234.1

S - Side # 20
HI. 236.06

Instr. at 1282.22

H Δ V

d = 18.41

6 41°43 29°21
16.42 9.5 245.56

5 39°06 24°45
14.98 8.50 244.56

4 38°06 25°04
14.44 8.63 244.69

3 33°47 16°55
12.32 5.62 241.66

2 25°08 16°31
8.65 5.48 241.54

1 11°04 12°18
3.60 6.1 242.61

S-Side # 20

20.9

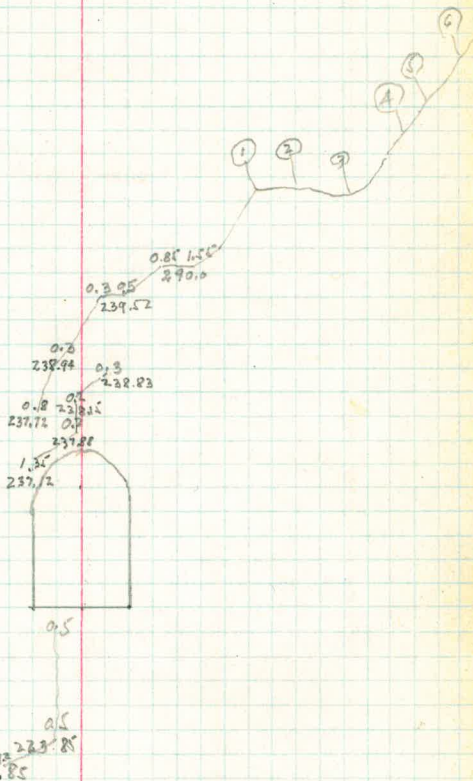
101

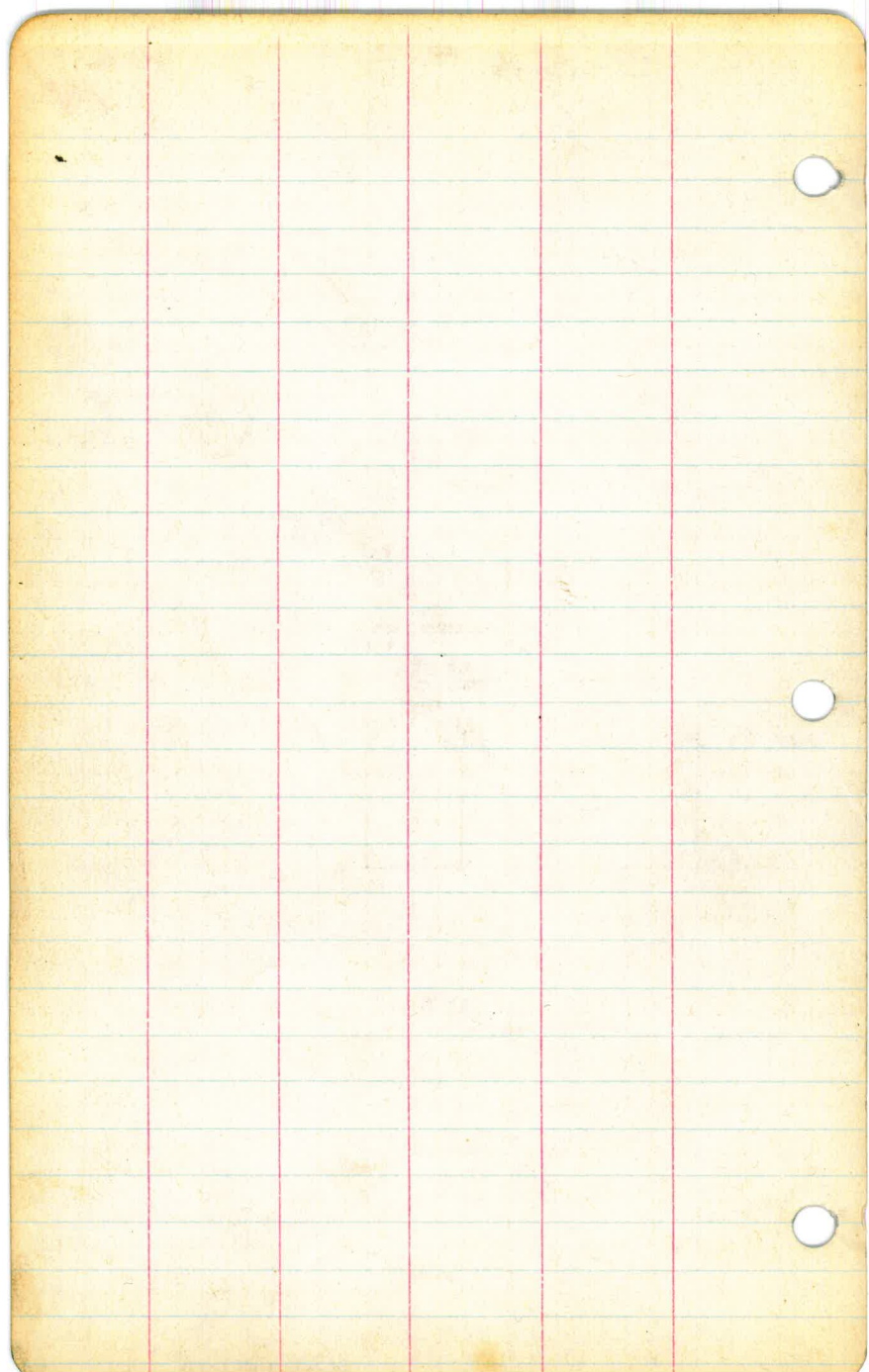
H.L. 236.06

231.00

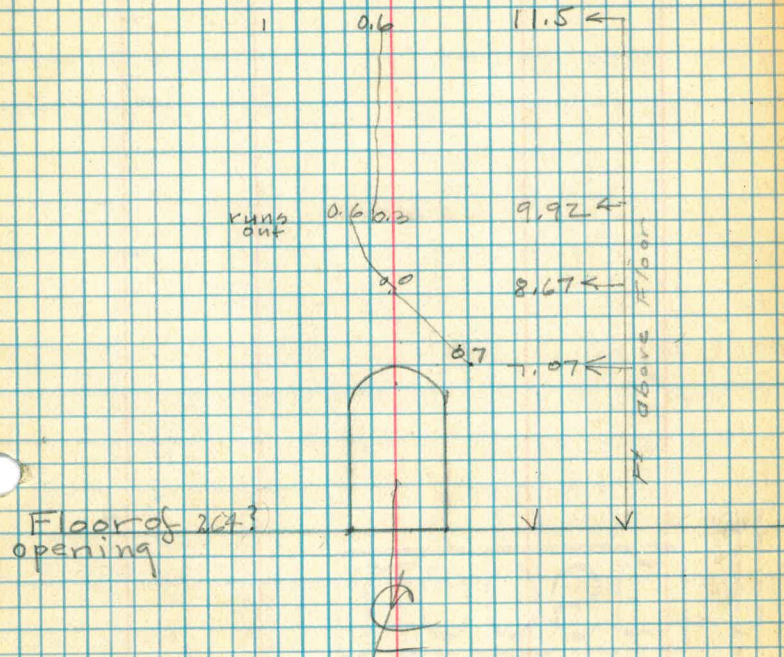
runs out

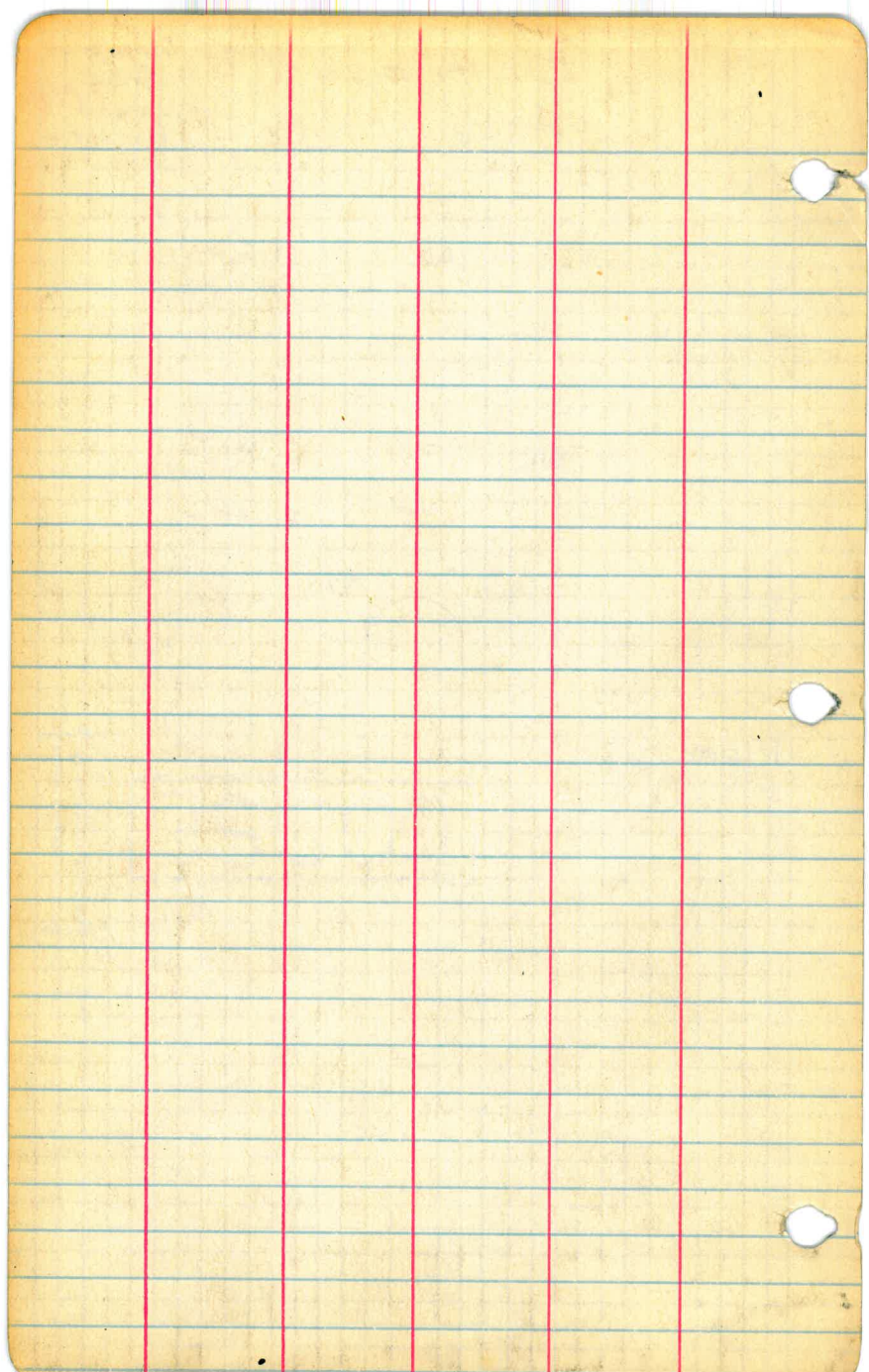
222.85





Buttress #8 June 2-28
Looking South
POF
Lead
Simpson





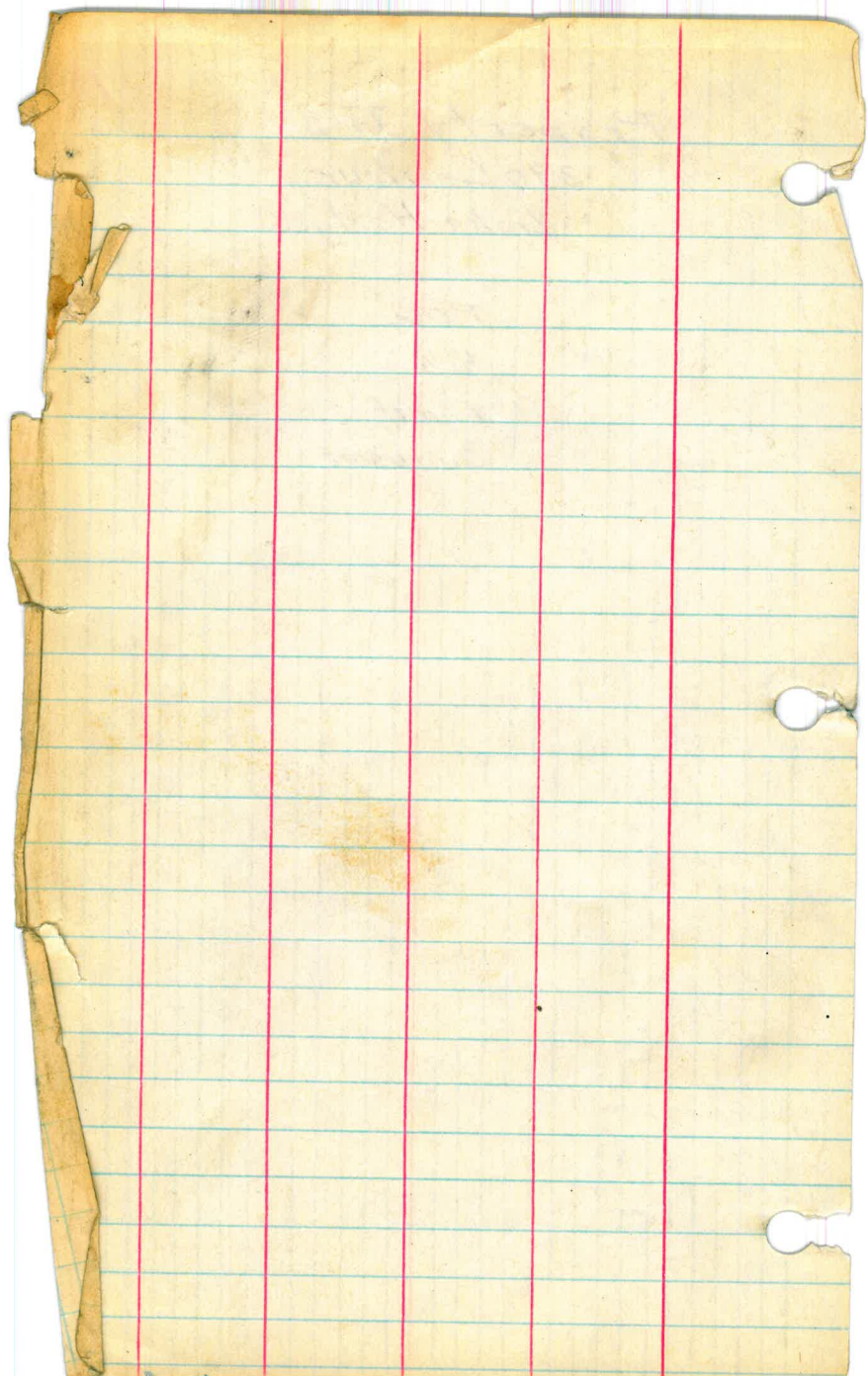
10.
Property Ties
390 Contour
Lake Hodges

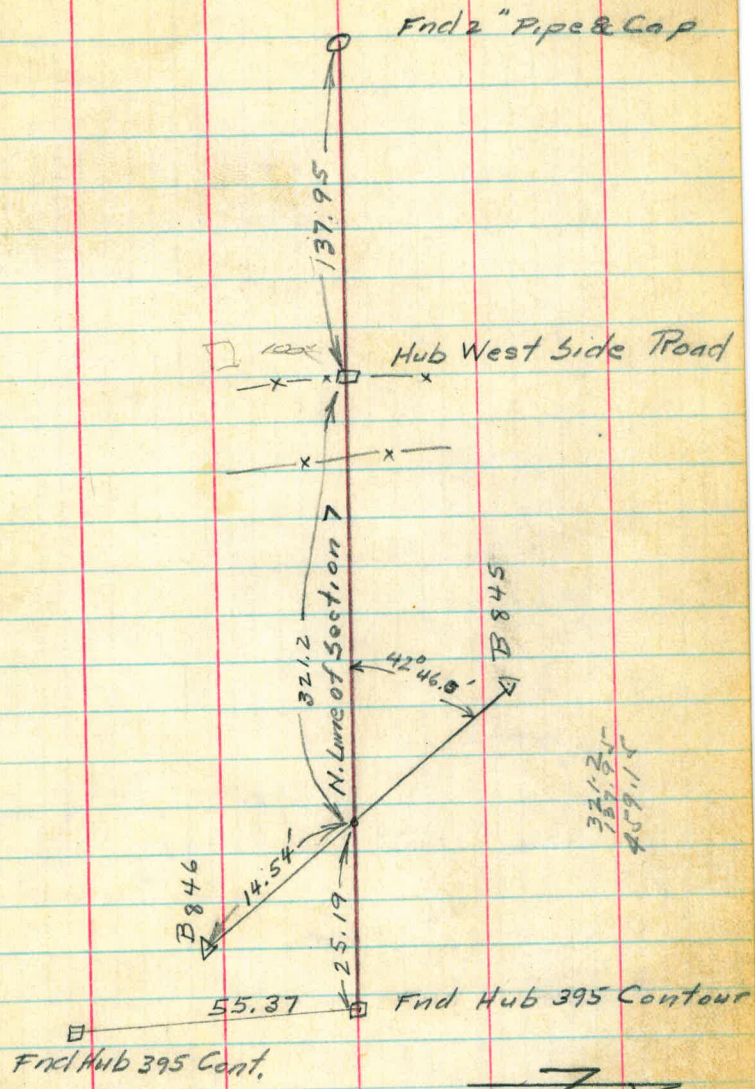
P.O.G.

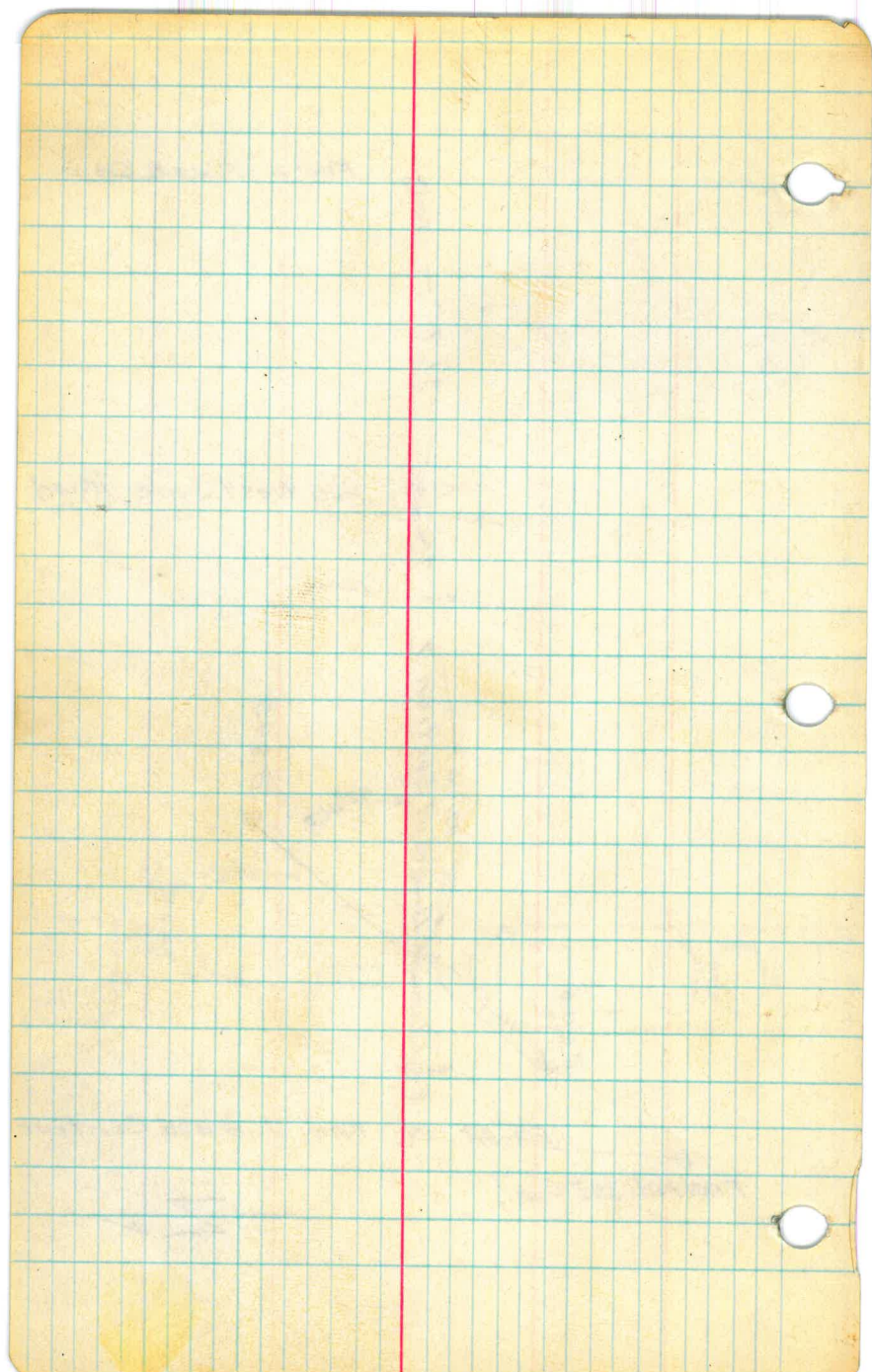
Hill

Elliott

Simpson

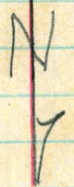
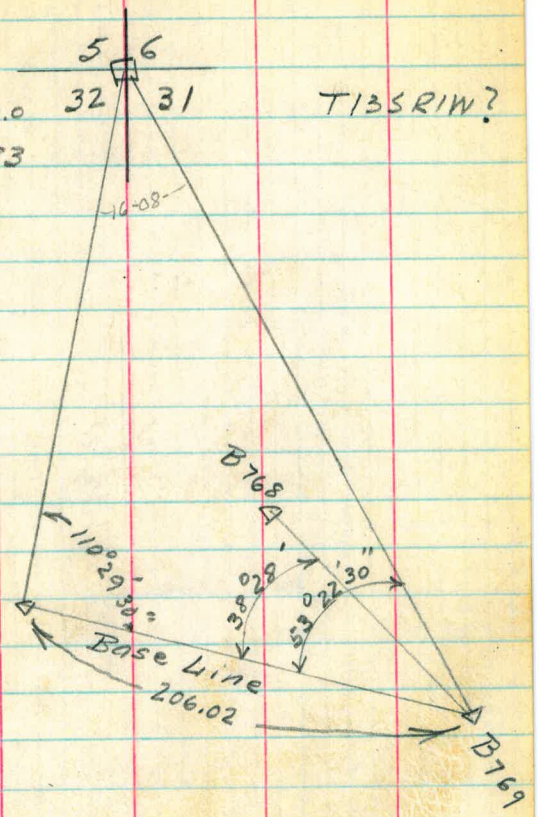




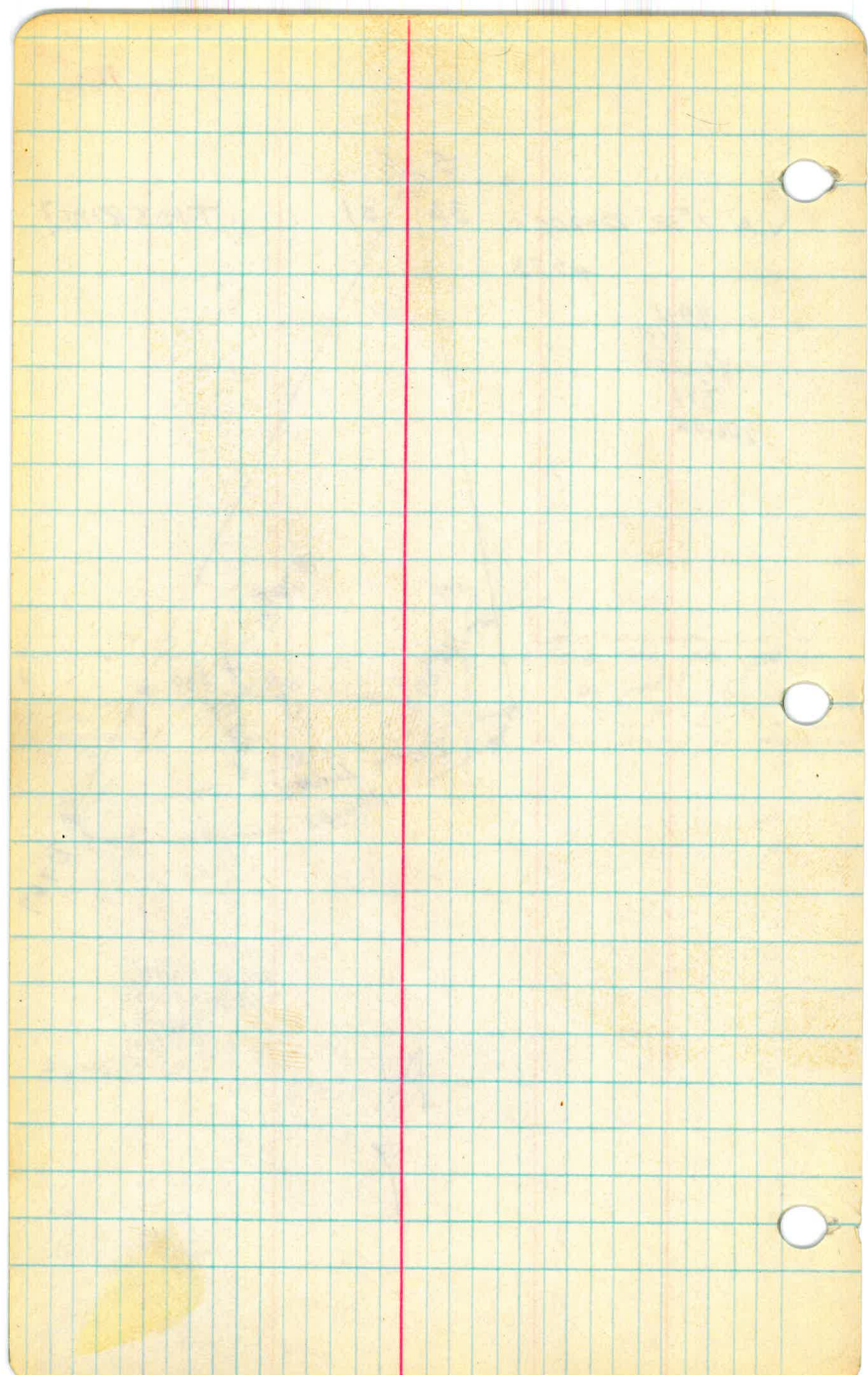


V.A $7^{\circ}38'$ $D=200.0$ 32 31 T13SR1W?
 +7.83

$$\begin{array}{r} .9911 \\ \times 200 \\ \hline 198.2200 \\ + 7.83 \\ \hline 206.05 \end{array}$$



$$\begin{array}{r} 206.02 = 2.315867 \\ 09-10-30 = 9.971622 \\ \hline 2.285531 \\ 16-08 \quad 9.948847 \\ \hline 2.841624 = 694.52 \end{array}$$



B692

W. Cor.

220

34

33

34

33

133° 15'

85° 45' 15"

53° 14' 30"

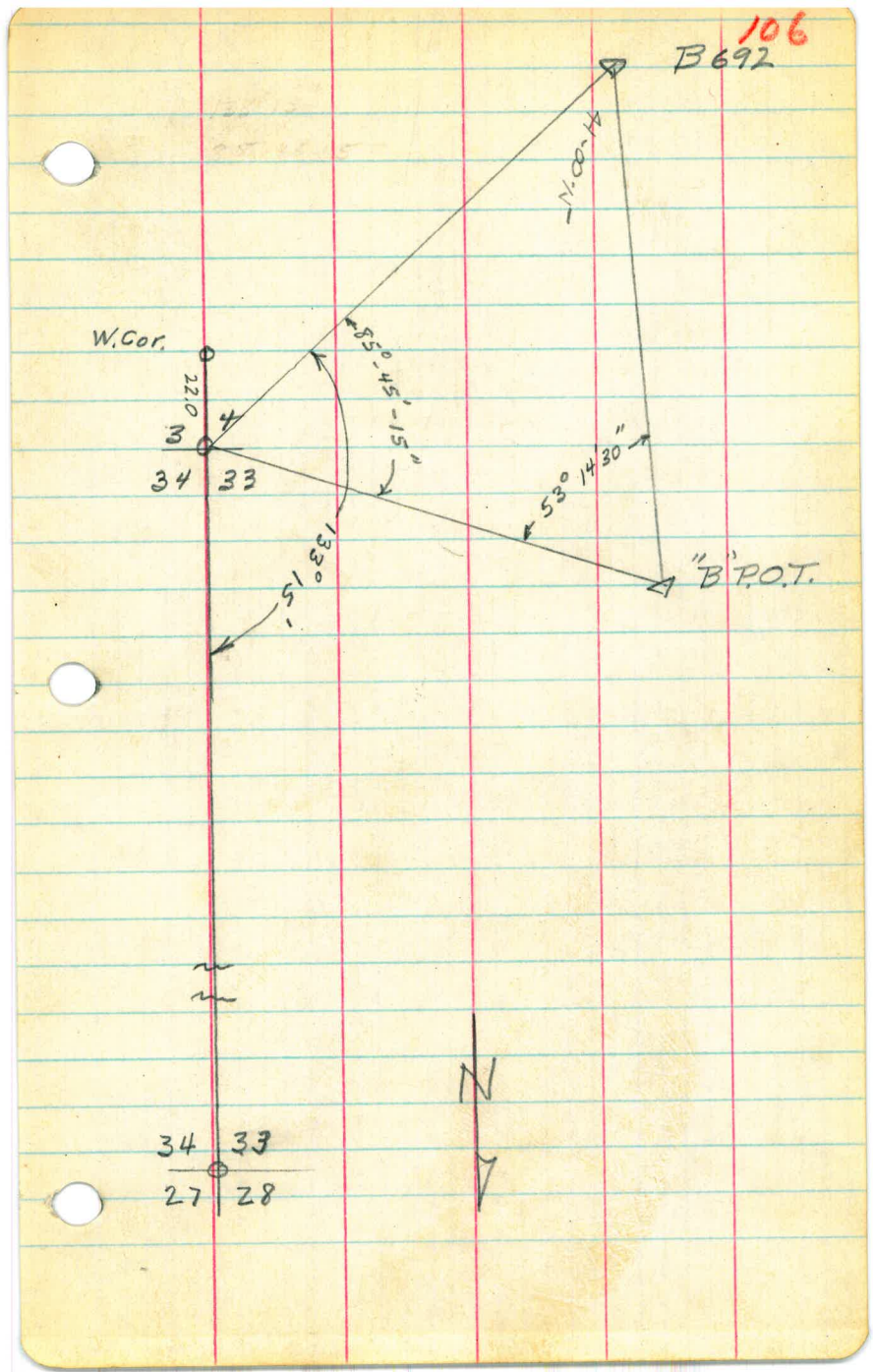
1100.14

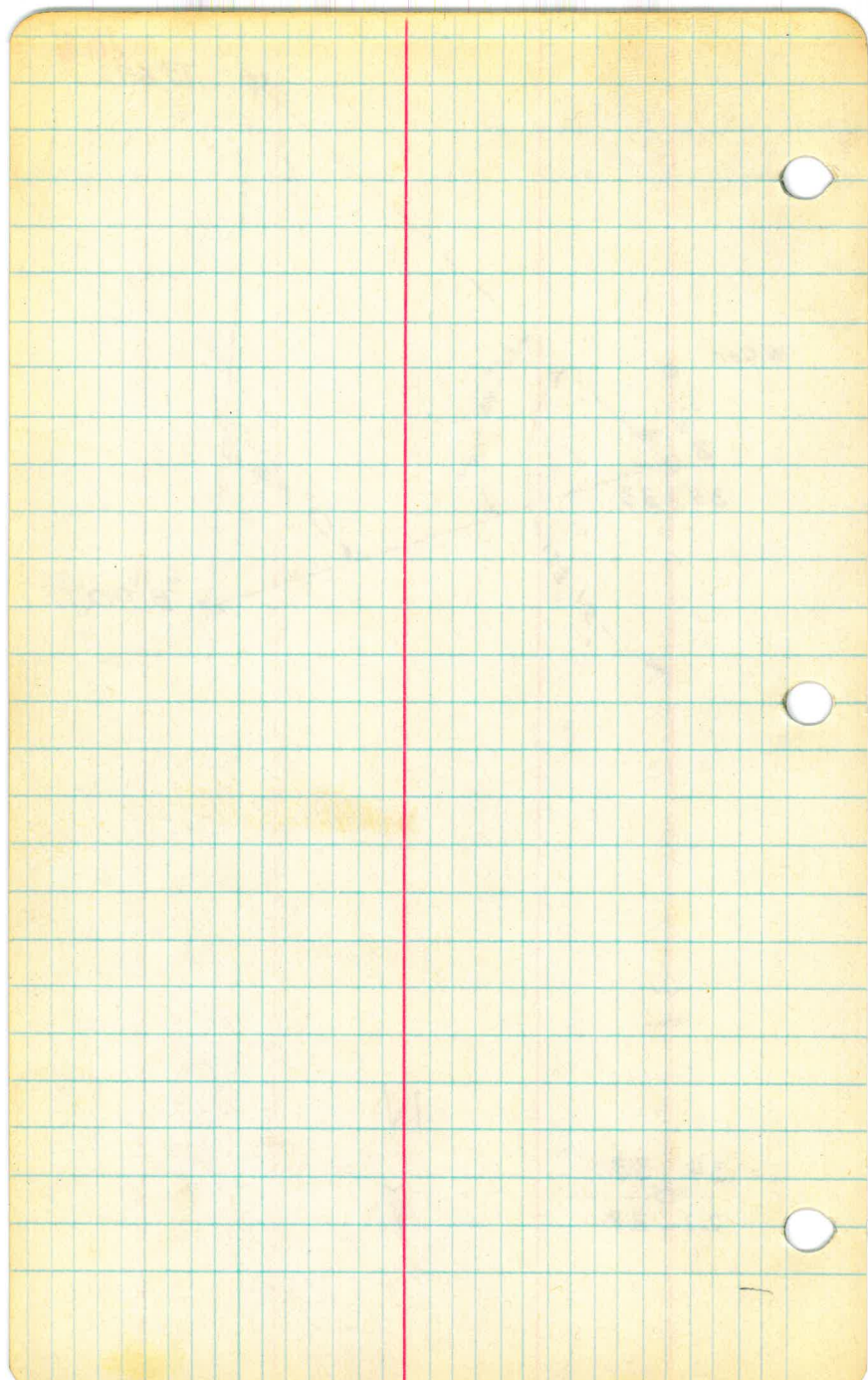
"B" P.O.T.

~
~

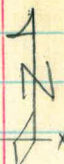
34 33

27 28





Found 6"x6" Conc.
Mon & Brass Tack



170-31
85-15-30

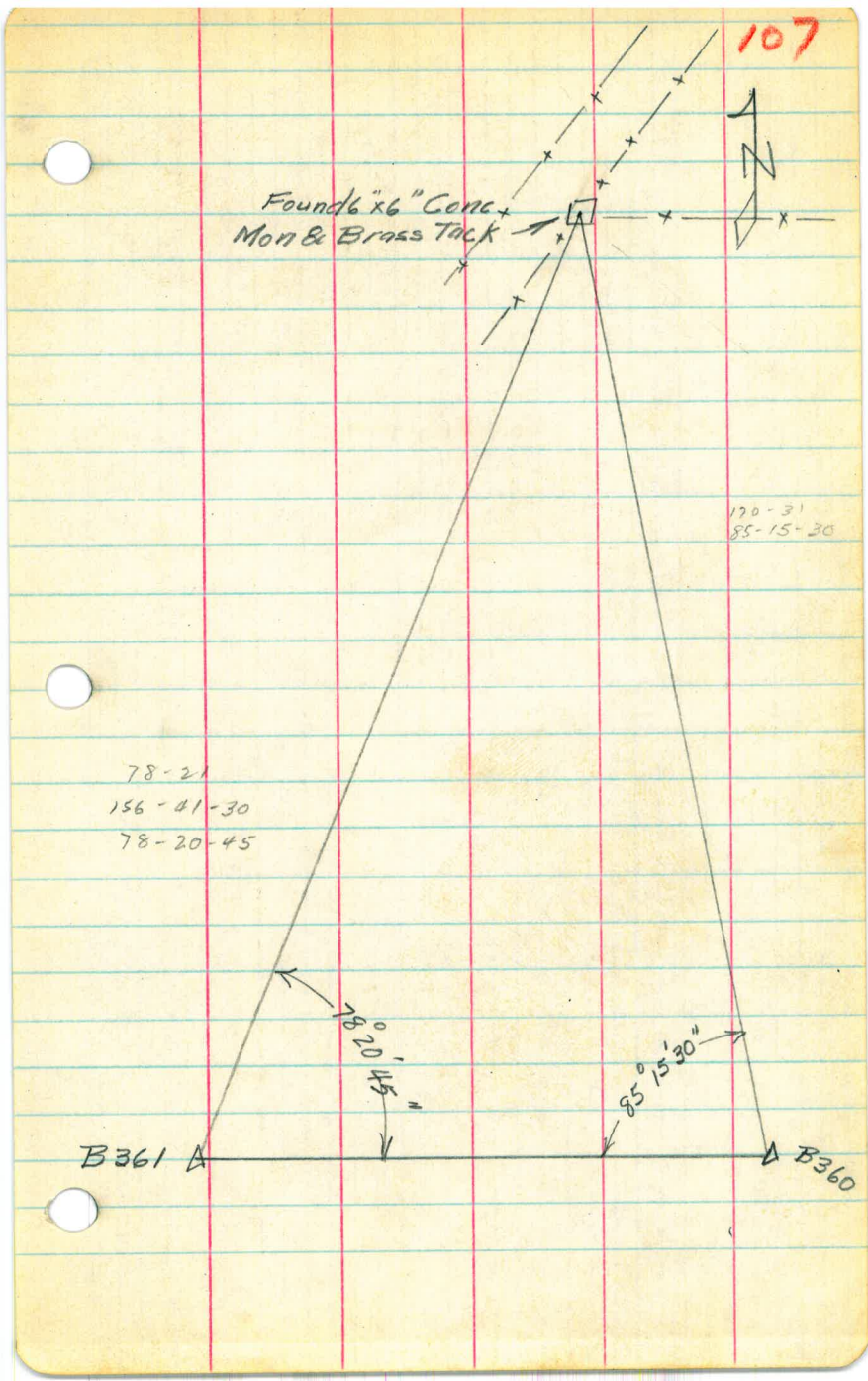
78-21
156-41-30
78-20-45

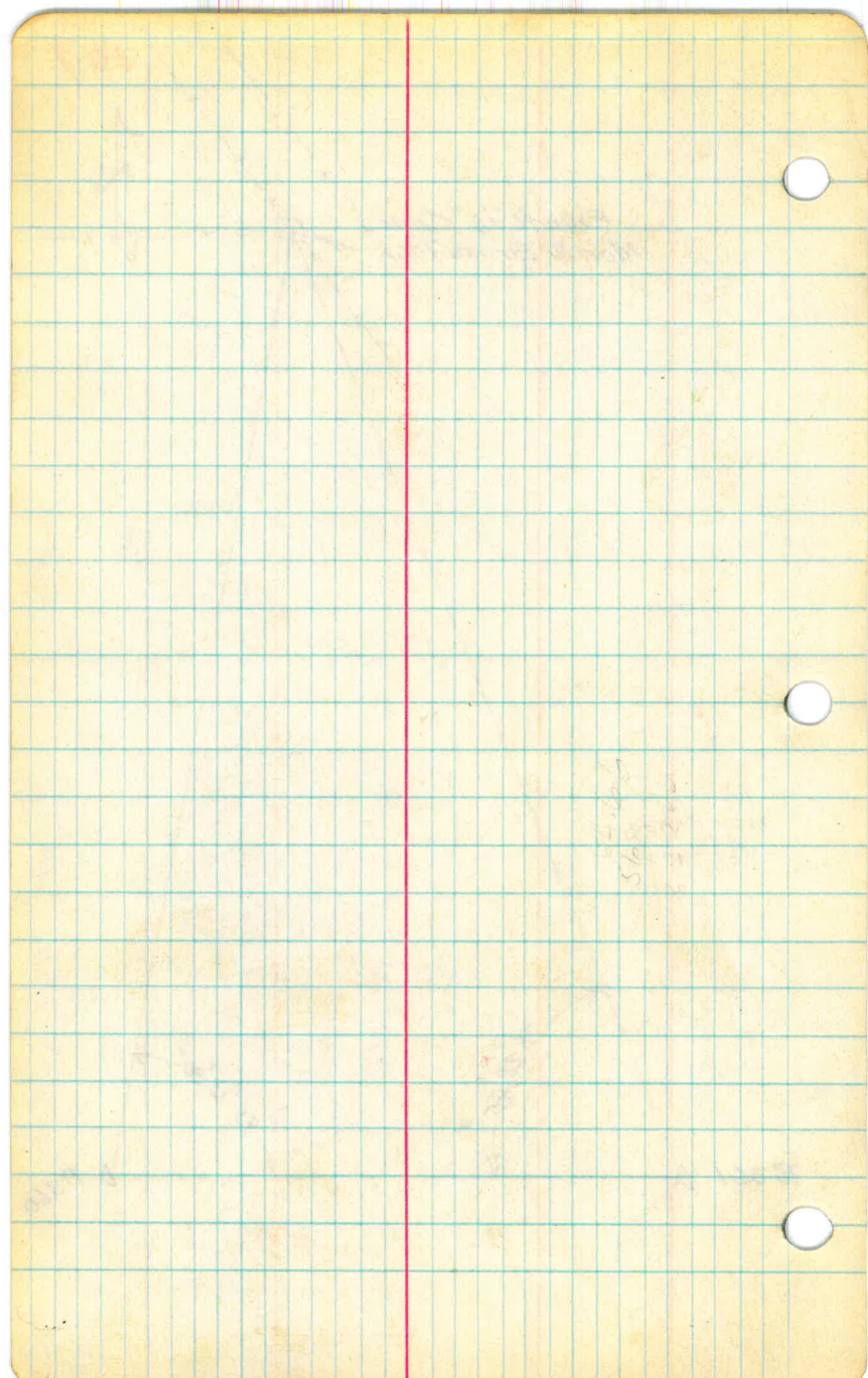
B361

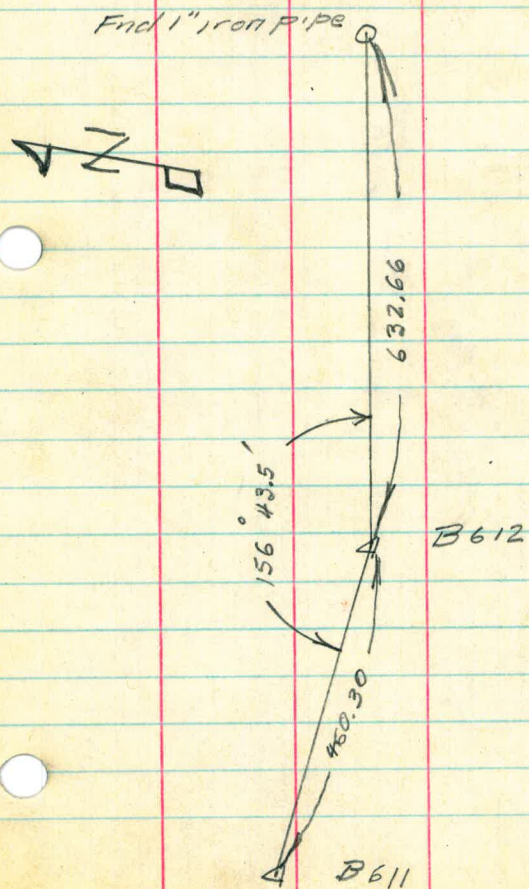
B360

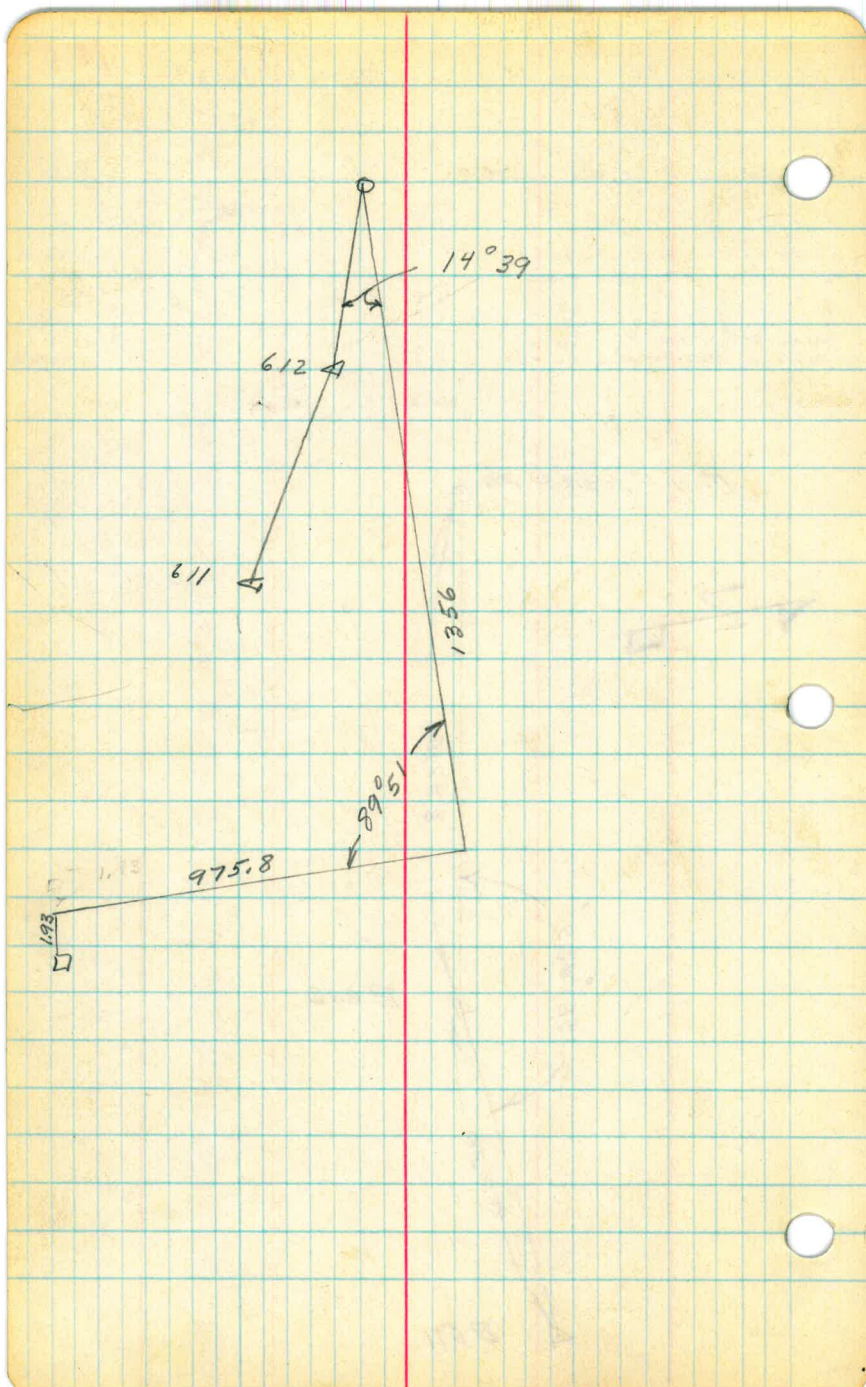
78° 20' 15" N

85° 15' 30"









End 1" iron pipe

14°40.5' O.K.

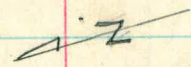
156°43.90'

632.66

B612

460.80

B611



1256.0

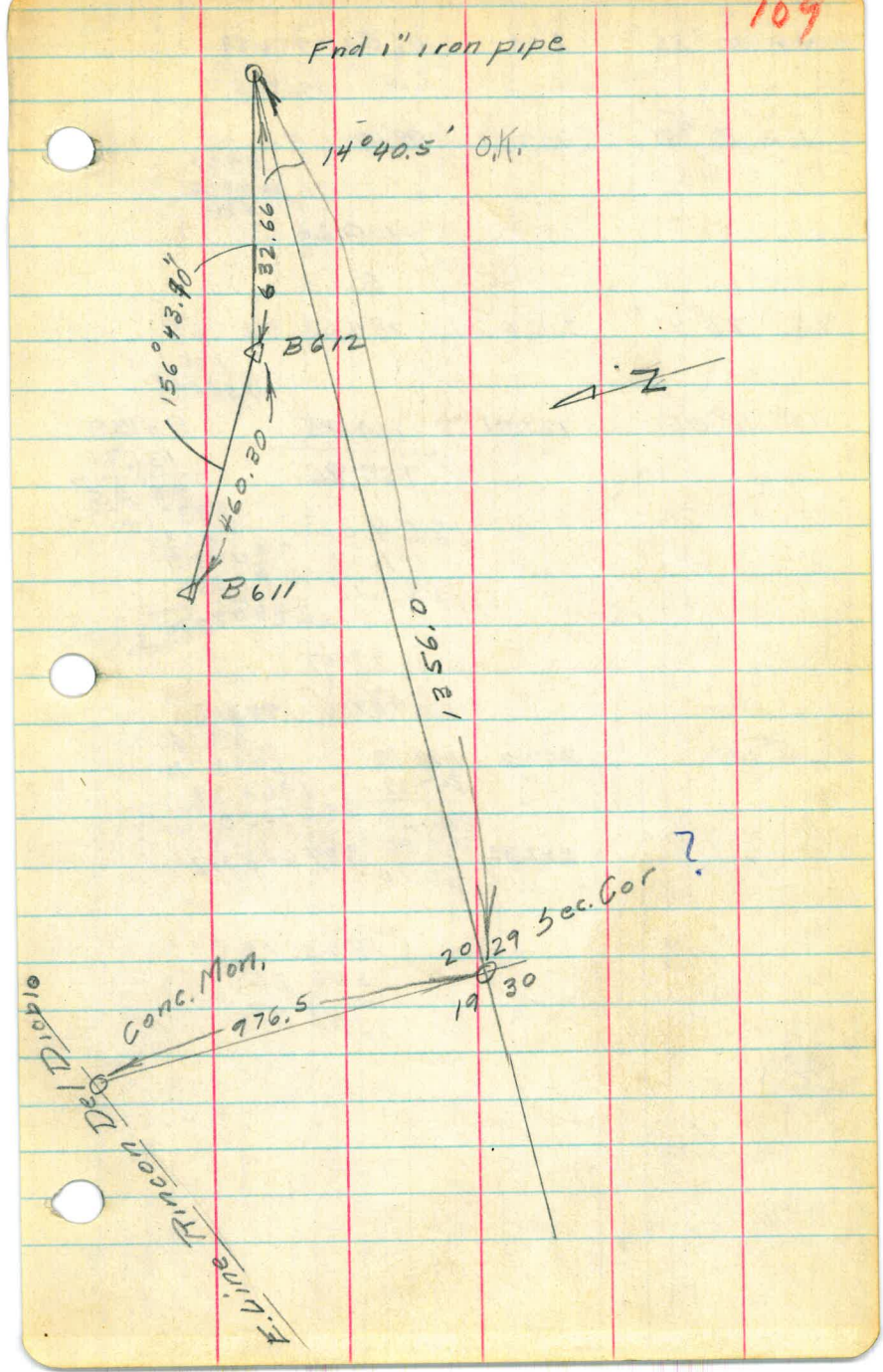
E. Line
Trench
Diplo

Conc. Mort.

976.5

20 29 Sec. Cor ?

19 30



V.A. 10°35' 200.0 196.60 982.99
 $\begin{array}{r} 200 \\ 196.59800 \end{array}$

V.A. 10°51' 100.26 198.47 982.12
 $\begin{array}{r} 100.26 \\ 5872.72 \\ 1964.24 \end{array}$
 100.26

50.65

V.A. 22°41' 200.0 184.53 92.265
 $\begin{array}{r} 200 \\ 184.53000 \end{array}$

V.A. 11°05' 131.91 129.45 98135
 $\begin{array}{r} 131.91 \\ 759.96 \end{array}$
 $\begin{array}{r} 98135 \\ 131.91 \\ 98135 \\ 883215 \\ 98135 \\ 1.07 \\ 294405 \\ 98135 \\ 1853.18 \end{array}$
 $\begin{array}{r} 129.4478785 \\ 99467 \\ 2 \\ 198934 \end{array}$

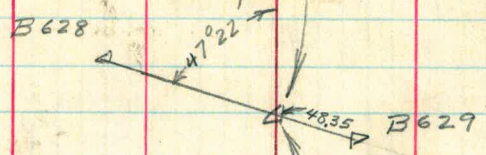
V.A. 5°55' 200.0 198.93 98212
 $\begin{array}{r} 200.0 \\ 198.93 \\ 347.32 \\ 546.25 \\ 347.32 \\ 759.86 \\ 1306.11 \end{array}$
 $\begin{array}{r} 98212 \\ 100.26 \\ 5872.72 \\ 1964.24 \\ 7821200 \\ 984673.512 \end{array}$

1853.18
 $\begin{array}{r} 546.25 \\ 1306.73 \end{array}$

6.457
 18.019
 20.720
 5.24

4.24

Fnd Conc. Mon & Tack
1/4 Cor 29 & 30 110

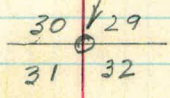


759.96

546.25

1306.93

Fnd. 4x4" Post



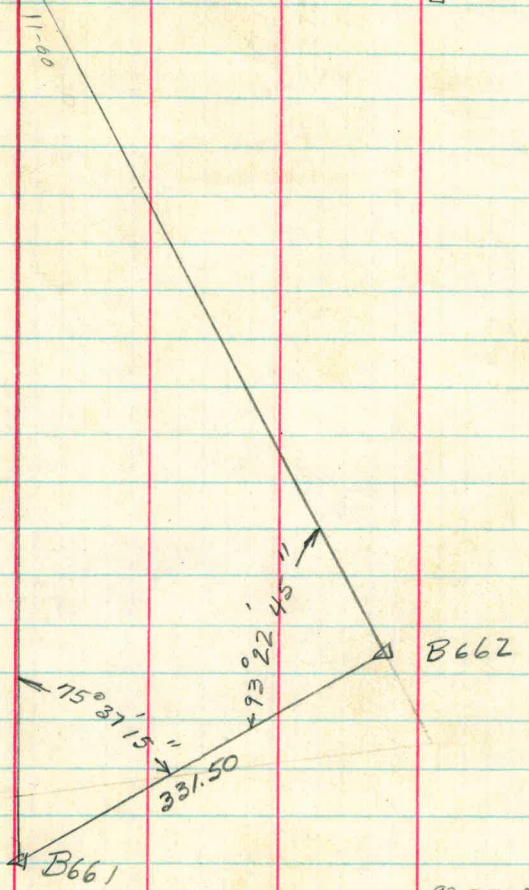
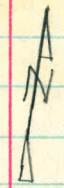
Fnd 4x4" Ped Wd.

75-37-15
151-14-30
75-37-15

93-22,5
186-45-30
93-22-45

///

29 | 28
32 | 33
End conc. Mon
with Copper



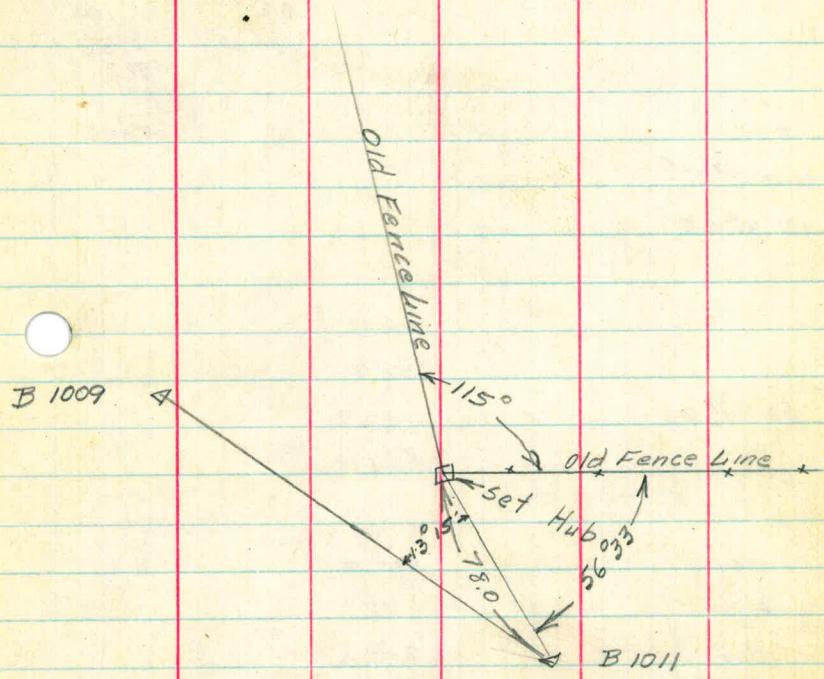
93-22-45
 75-37-15
 169-00-06
 11-0000

VA 19° 34'

135.0

200.0

185.0



543-16-45 E
 13-45
 530-01-45-
 56-37
 586-34-45 E
 2-58
 589-24-45 E
 17-39
 109-03-45
 70-56-15 E
 72-19
 70-52-15
 51-22-45 E
 36-06
 54-18-45
 51-43-15 W
 52-04-45 E

327.2
616.4
371.8
1315.4

992.5
2
1985.0

94225
135
471125
282675
94225
12720375

416
799.4
163.5
1378.5

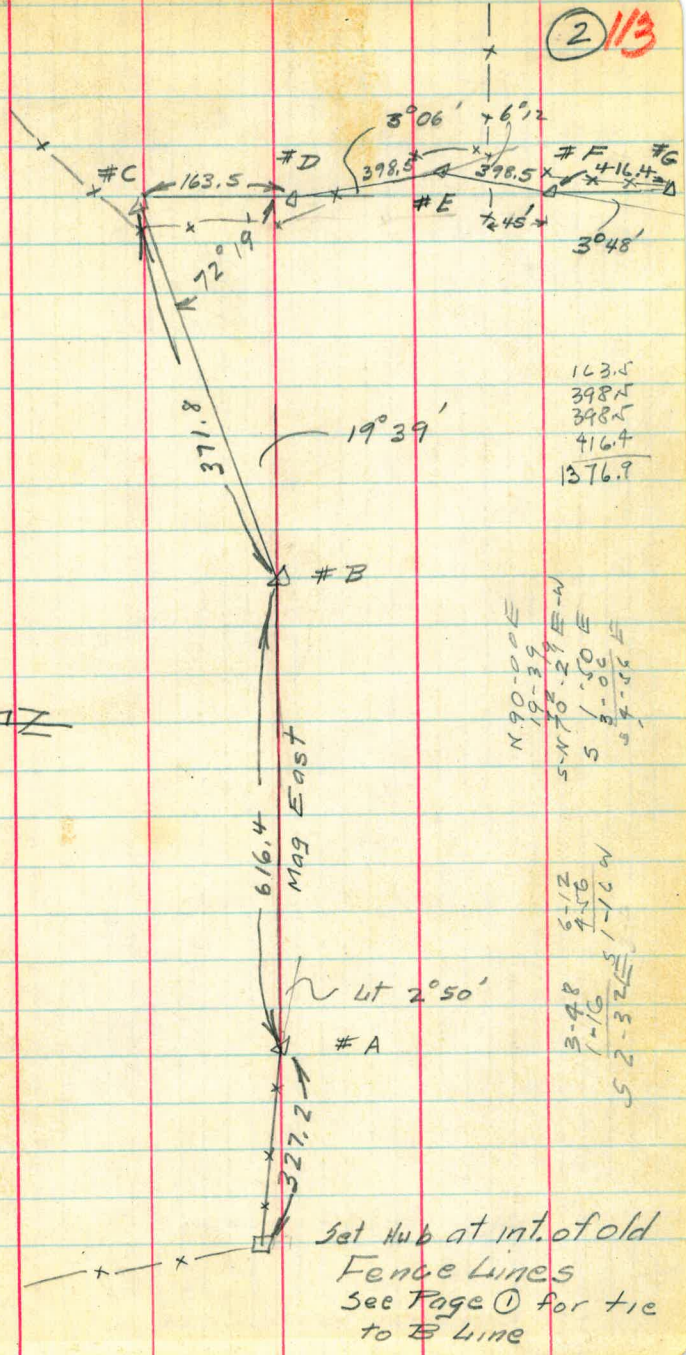
9968
185
49840
79744
9968
1844082
997
163508

Hor. 200.0
V.A. 7°02' 200.0
V.A. 4°25' 164.0

125.9
46.0
V.A. 1°30' 200.0 199.9
371.8

Hor 214.0
Hor 18.0
Hor 200.0
V.A. 4°34' 185.0 194.4
616.4

Hor. 200.0
V.A. 19°34' 135.0 127.20



163.5
 398.5
 398.5
 416.4
 1376.9

N 90-00 E
 19-39
 S 170-29 E-N
 5
 1-50 E
 54-56 E

3-48
 1-16
 52-32 E
 5-12
 4-56
 1-16 W

Set Hub at int. of old
 Fence Lines
 See Page 1 for tie
 to B Line

236.4

150

416.4

#G 416.4 #F 114
Remains of old lath flag

15' 0" 80" oak blazed on south side
7.24

150

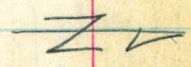
1024
1580
75
45
1101

1024

End of Rocks

7.24 offset

Remains of Fence Post in mound of Rock 8' south



0921

1260
158
17
1335

Mag. West

End Red Head

End of rocks.
+ Remains of Fence Cor

548-51 E

525-11 W

179 60

74-02

105-58

107-19-30

214-38-20

107-19-10

13.00

8.28

4.72

13.00

5.52

7.47

99485

2

198970

32.90

231.87

46-45

93-30

13.00

7.12

5.87

5.8

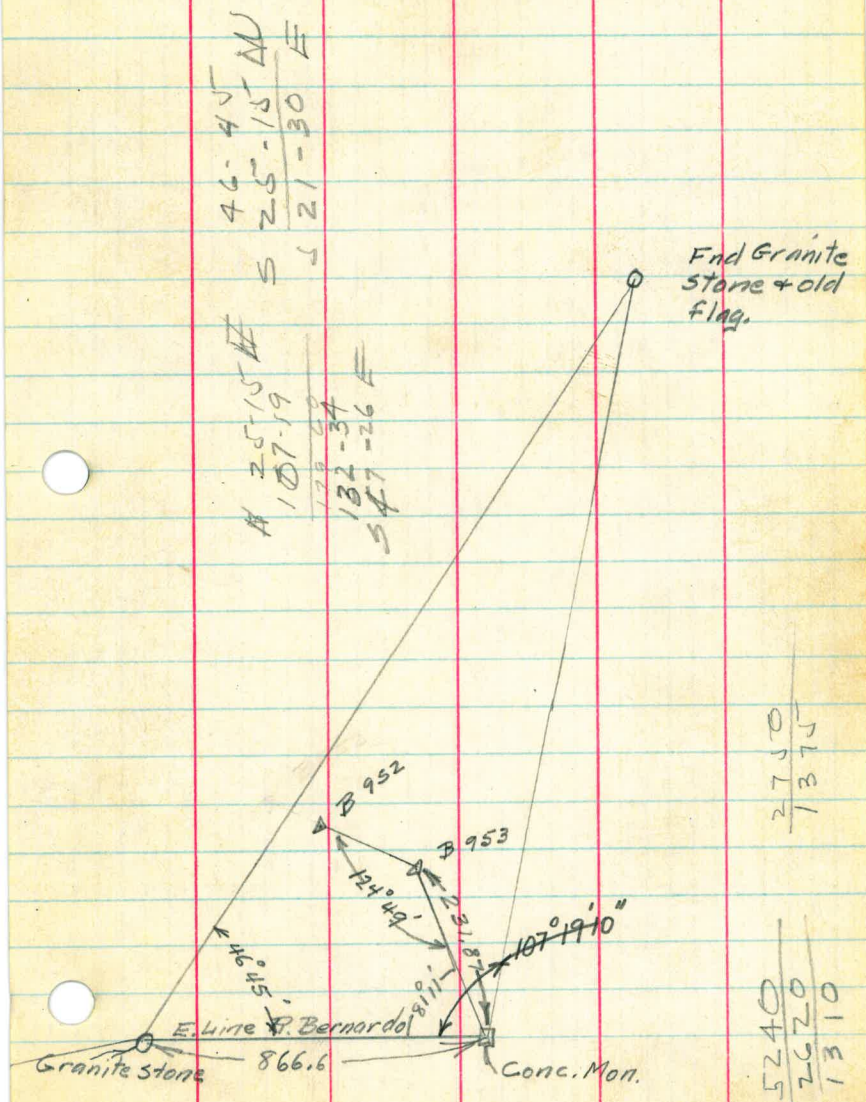
588.2

V.A. 5⁰⁴⁹

200

32.90

80°11'



46.45
 25.15
 21.30

A 25.15
 107.19
 124.49
 132.34
 547.26

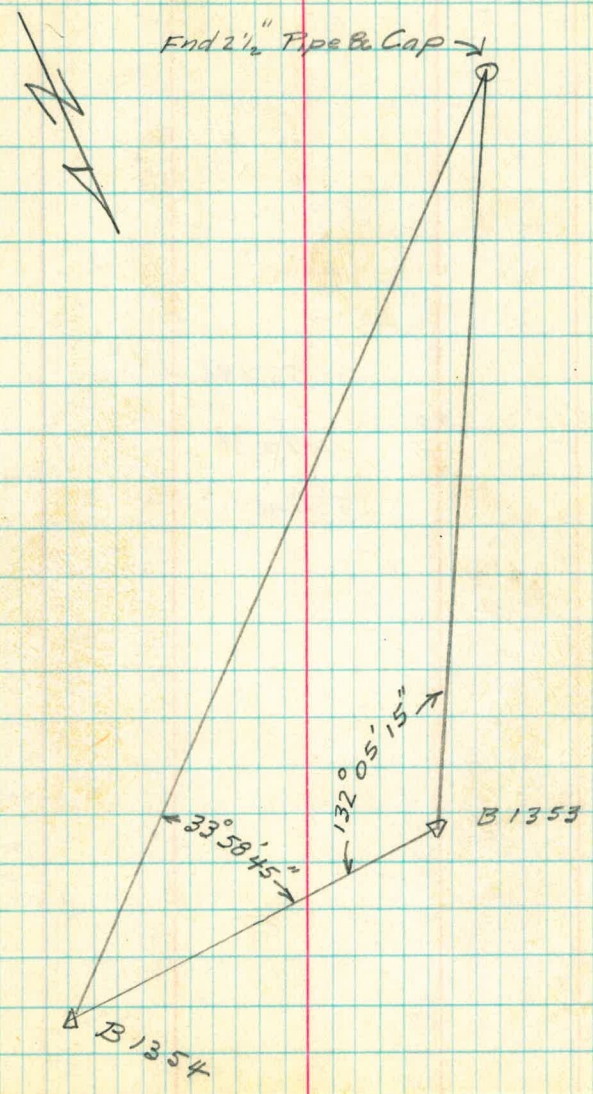
2750
 1375

5240
 2620
 1310

511-52 W

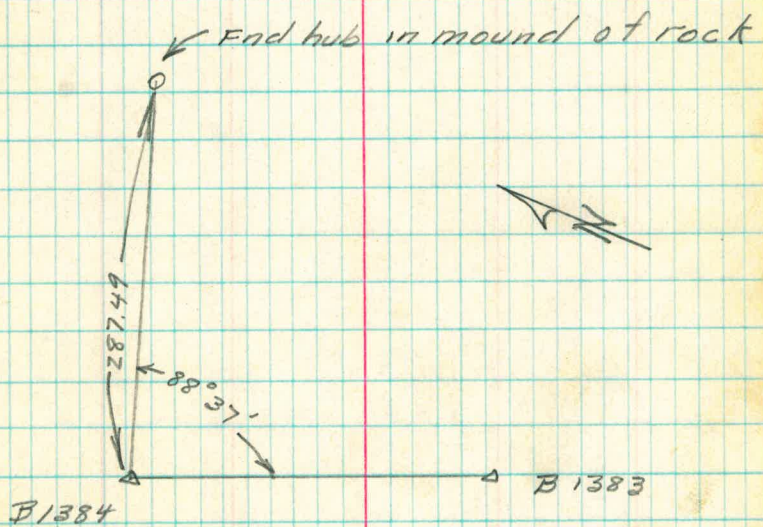
132-05
264-10-30
132-05-15

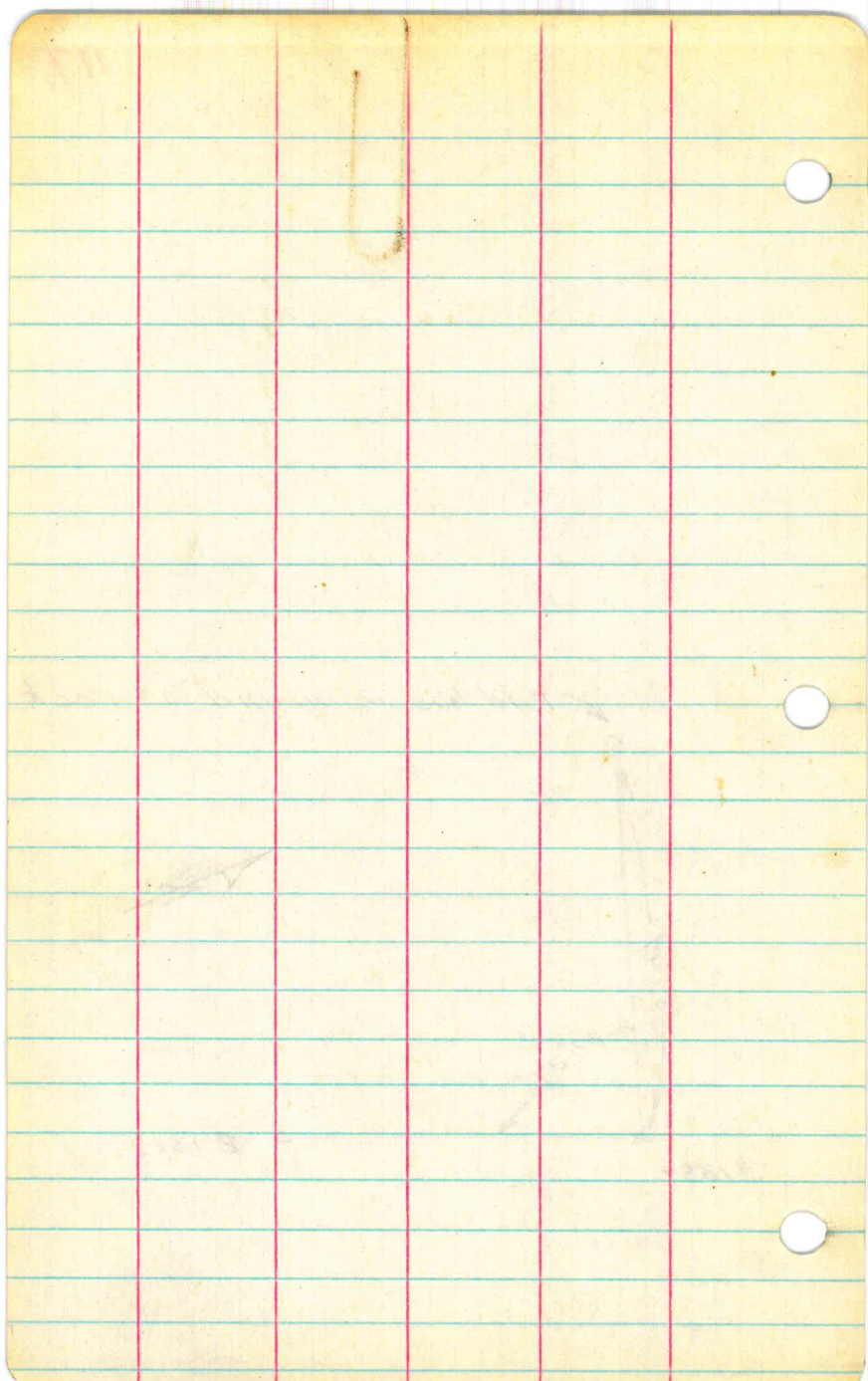
33-59
67-57-30
33-58-45



YA 9⁰⁵ 200

$$\begin{array}{r} 98746 \\ \underline{\quad 2} \\ 197492 \\ \underline{90.} \\ 287.49 \end{array}$$





90 - 91

1446 - 1447

118

A425 - A426 J 1960
About 80' from 25

1562

10-01-30 Lt.

1561

14-32-30 Lt

1560

14-35-45 Lt

1459

10-43-45 Lt

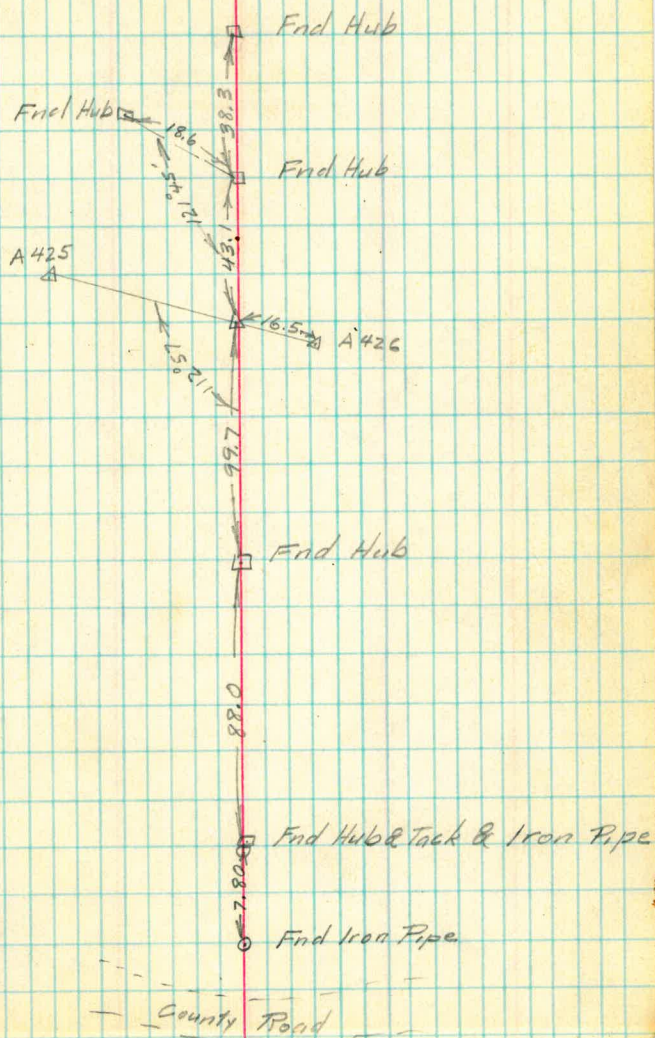
1458

0-50-0 Rt

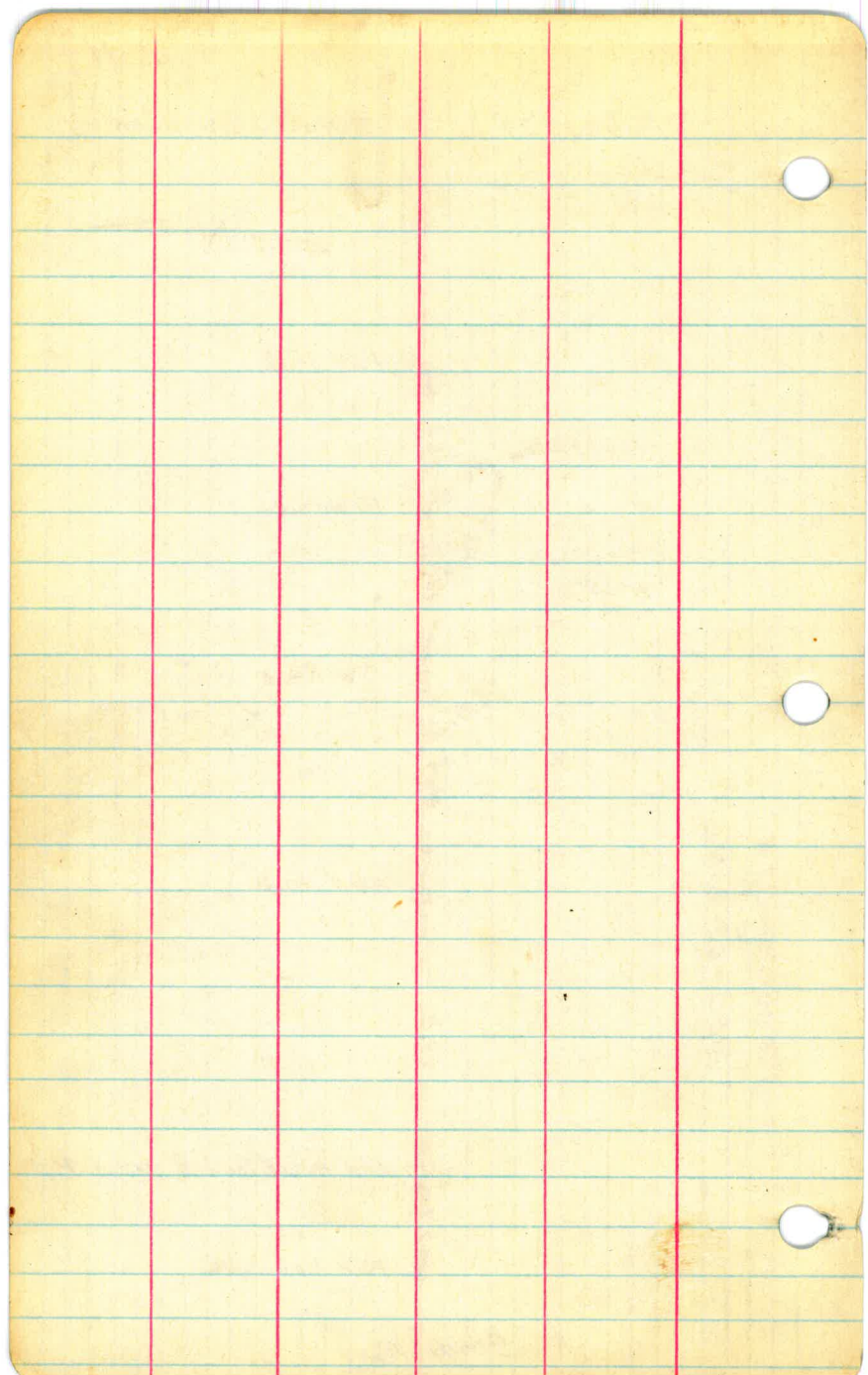
x 83.58, 308.88, 7993 x 134.20

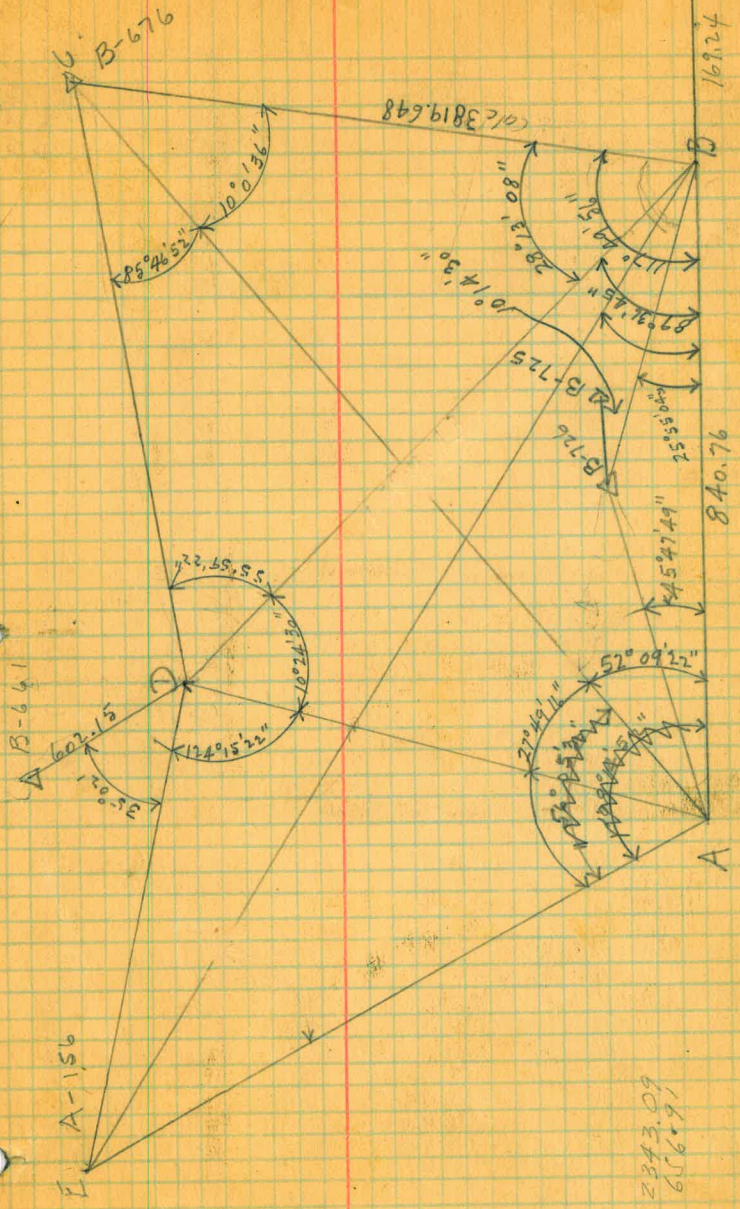
Feb 28-29

Elliott-Simpson



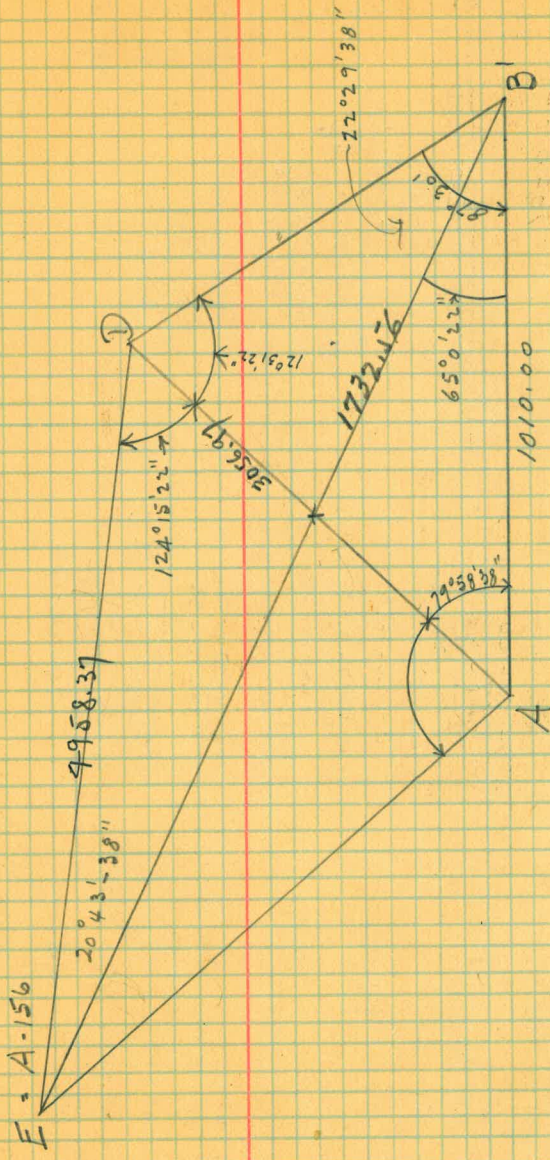
N 19-57-05 E
 67-03
 N 87-00-05 E





2843.09
656.91

66.5
63.5
12+300



A - 52-09-30 BC

$$4 \overline{) 208-37-30}$$

$$52-09-22$$

56
24

A 56-05-30 CE

$$4 \overline{) 224-22}$$

$$56-05-30$$

A 108-15-0 BE

$$45-48 \overline{) 491}$$

$$4 \overline{) 183-11-15}$$

$$45-47-49$$

$$25-55-15$$

$$4 \overline{) 103-40-15}$$

$$25-55-08$$

$$117-49-45$$

$$4 \overline{) 471-19-45}$$

$$117-49-56$$

$$191 \overline{) 195}$$

$$47$$

$$55$$

$$4 \overline{) 220}$$

$$55$$

$$11$$

$$360$$

$$111$$

$$199$$

$$16$$

$$4 \overline{) 225}$$

$$56$$

$$189.24$$

$$840.76$$

$$1080.00$$

D - 55-59-30 BC

$$4 \overline{) 223-57-30}$$

$$55-59-22$$

150

237

410

D - 10-24-30 AB

$$4 \overline{) 121-28}$$

$$10-24-30$$

$$124-15-22$$

$$4 \overline{) 197-61-50}$$

$$124-15-22$$

$$C-10-0-40 AB$$

$$4 \overline{) 40-02-15}$$

$$10-0-36$$

$$C-85-47-0-AD$$

$$4 \overline{) 343-67-30}$$

$$85-46-52$$

92

117-49-56

52-09-22

179

169-18

10-0-42

124

476

137-01-30

497-01-30

B-28-13-20-CD

$$4 \overline{) 112-52-30}$$

$$28-13-08$$

B-89-36-40-AD

$$4 \overline{) 358-27-80}$$

$$89-36-45$$

$$27-49-15$$

$$4 \overline{) 111-17-20}$$

$$27-47-20$$

75-46-52

10-0-36

954728

55-59-22

157

1574650

2812-70

117-49-56

281308

89-36-48

55-59-22

1024-30

8546-52

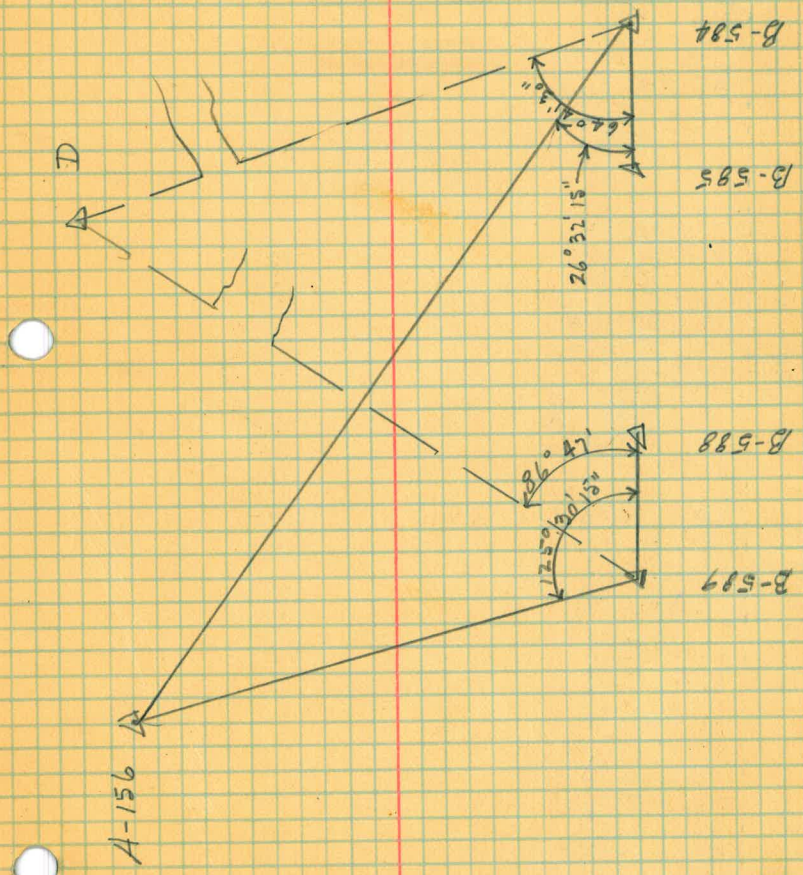
179

152

21

520922

795838



87-29-50

$$4 \overline{) 350} \begin{array}{r} 110 \\ 87-30 \end{array}$$

65-0-20

$$4 \overline{) 260} \begin{array}{r} 90 \\ 65-0-22 \end{array}$$

79-58-38

$$87-20 \overline{) 179} \begin{array}{r} 60-38 \\ 167 \end{array}$$

$$167 \overline{) 28} \begin{array}{r} 22 \\ 31 \end{array}$$

124-15-22

$$12-31-22 \overline{) 36-46-44}$$

$$22-29-38 \overline{) 29-60-22}$$

$$129-16-22 \overline{) 2043-38}$$

$$87-30 \overline{) 65-0-22}$$

$$22 \overline{) 29} \begin{array}{r} 38 \end{array}$$

$$17068.34$$

$$12519.02$$

$$\hline 4549.32$$

$$179.60$$

$$100-21$$

$$\hline 79.39$$

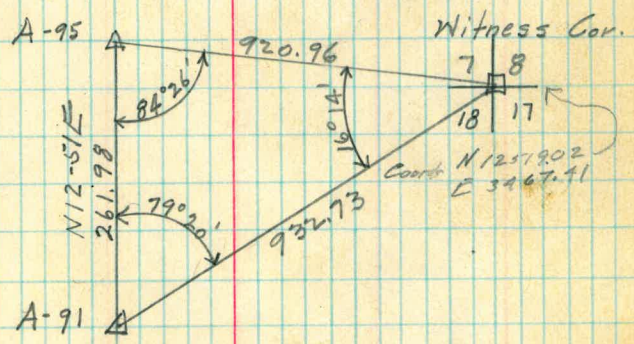
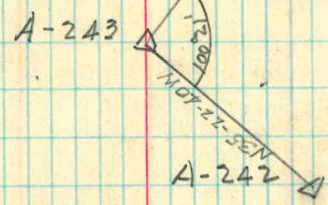
$$35-22-40$$

$$\hline 44-16-20E$$

Coords: N 17068.34
E 3126.24

123

Witness Cor. 6 5 7 8 Gov. Cor.

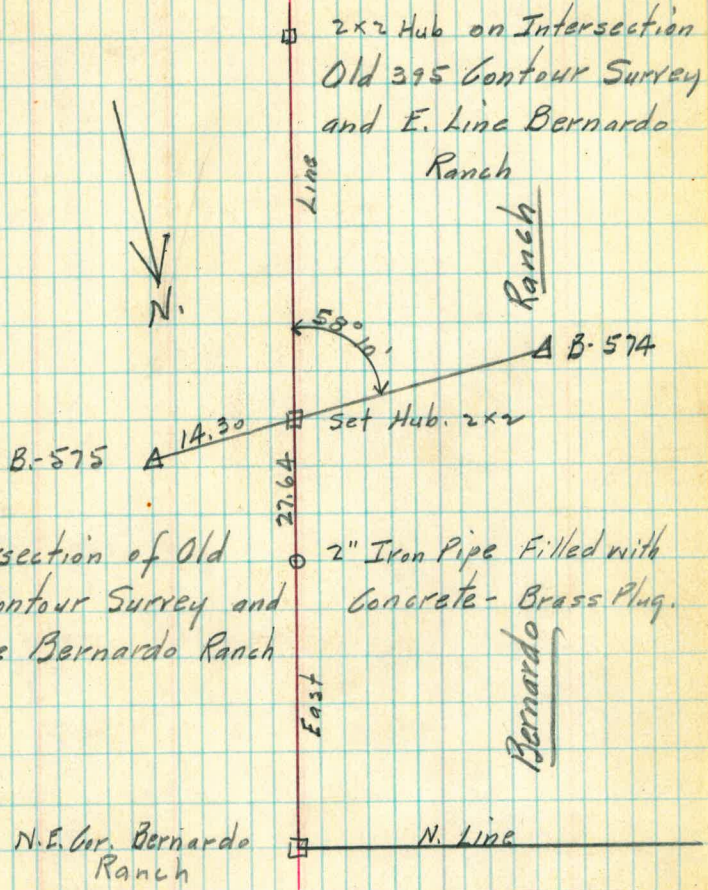


N 12° 51' E
79-20
92-11
S 87° 49' E

58-10

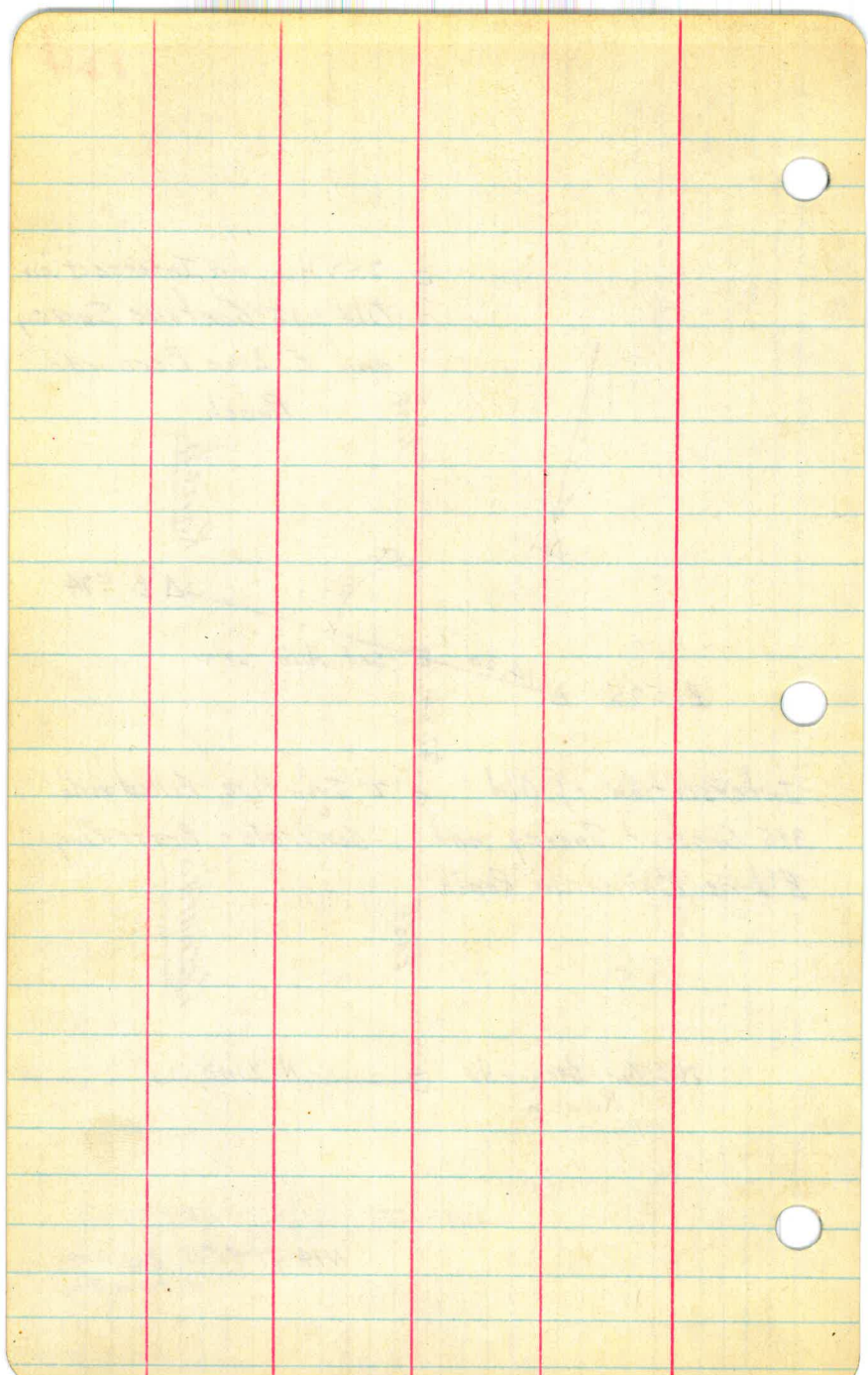
27.64

14.30



Intersection of Old 395 Contour Survey and E. Line Bernardo Ranch

$574 - 575 = N 72^{\circ} 59' 45'' E$
 $58' 10''$
 N 14^{\circ} 49' 45'' E Bearing of Ranch Cor.



Ranch

12" x 12" Stone Angle in Bernardo Ranch Line

B-967



Iron Pin Sta. 40+30.4 on Old 395 Contour Survey of E. Line Bernardo Ranch

94.50



Set 2x2 Hole

Bernardo



B-968

2" Pipe S.W. Cor. Fenton Property

178.02
66.77
111.25

B-1034



56°20'

East Line



B-1033

17.4

Iron Pin on Old 395 Contour Survey of E. Line Bernardo Ranch

138.9
321.2
460.1

24

38

132-46.5
37-52.25
9-21-15
180-00.0

75
46
4/29
7.25
3
275

68

$$C = \frac{567}{\sin 9-21-15} \times \sin 37-52-25$$

	348537	348537	61389
16268)	567.00	.61401	
	48804	348537	.6139
	78960	13941480	
	65072	348537	
	138880	2091222	
	130144	348537	
	87360	40.0520337	
	81340		
	60200		
	48804		
	13960		

	3488.59	3488.59	
.16253)	567.000	.6139	
	48759	3139731	
	79410	1076577	
	65012	348859	
	143980	2092154	
	130024	24845401	
	139560		
	130024		
	95360		
	81265		
	140950		

2726
1363

20960

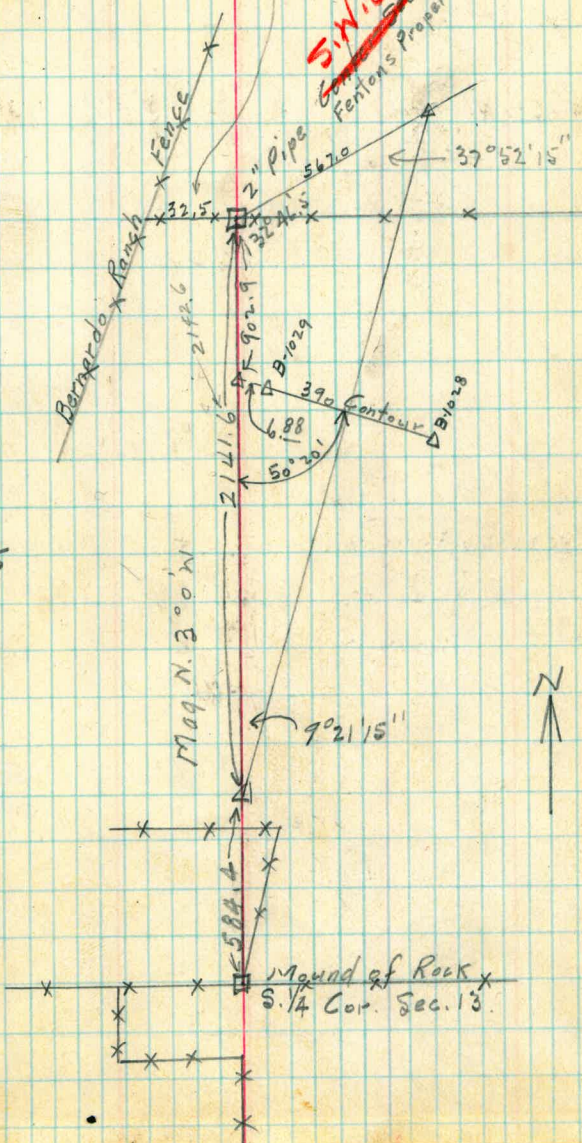
37-52.5
4) 151-29
37-52-15

~~S.W. Cor Fenton Property~~
S. 1/4 Cor. Sec. 13. Survey.

132-46-15
4) 531-06
132-46.5

9-21-10
4) 37-25
9 21-15

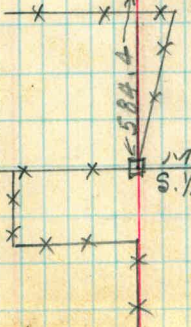
2141.6
584.4
2726.0

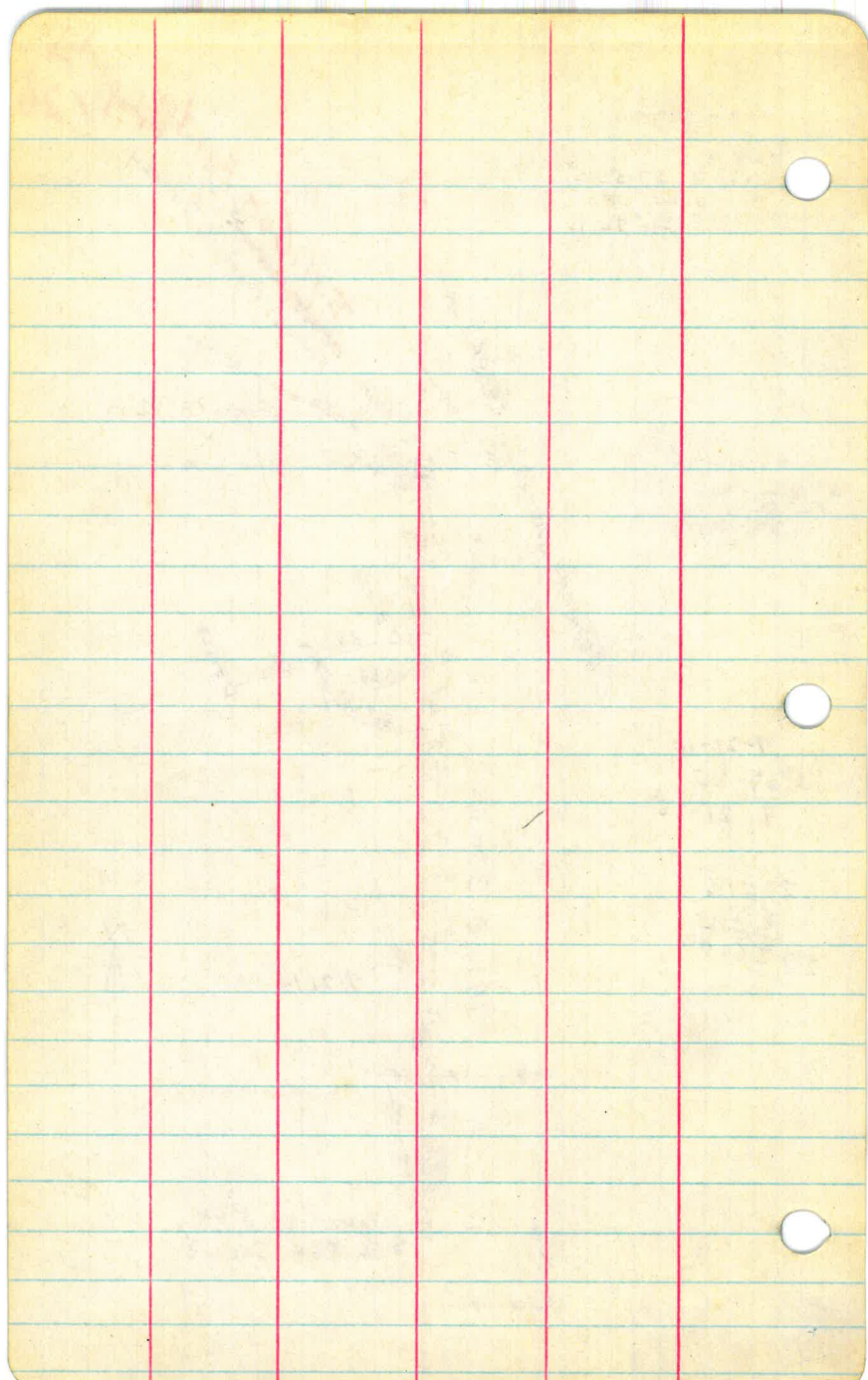


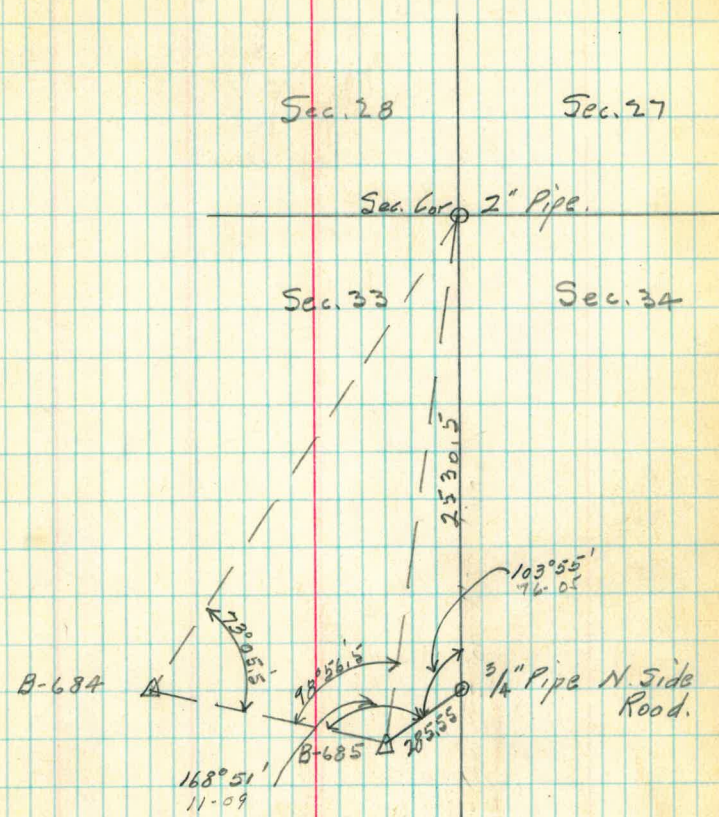
Bernardo Ranch
Fence

Mag. N. 3° 0' W

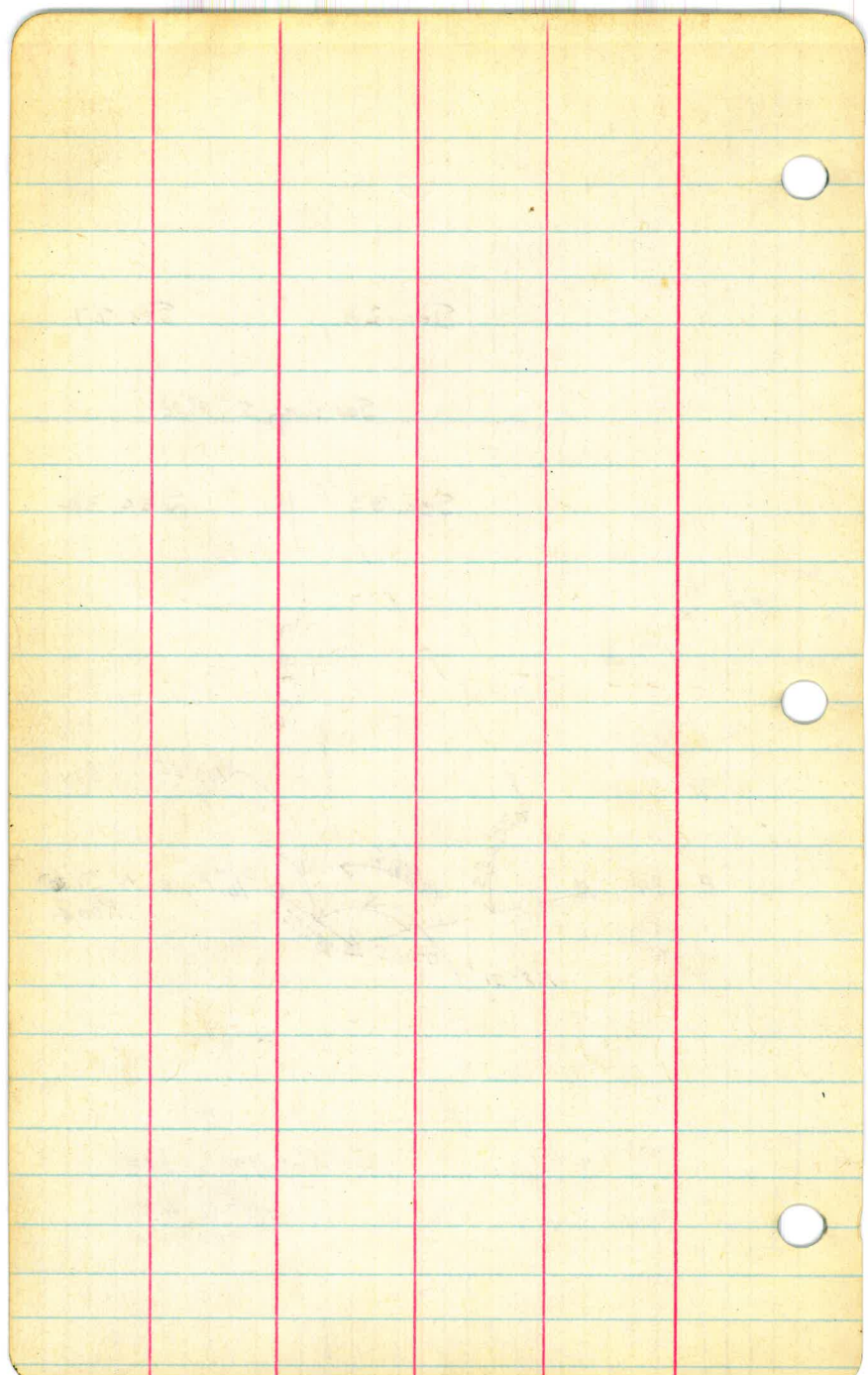
Mound of Rock
S. 1/4 Cor. Sec. 13







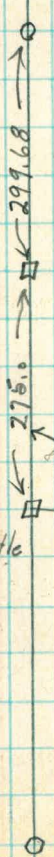
284 GRS N 26-11-25 E
 11-09
 N 75-02-25 E
 N 1-02-35 W



1/2" Pipe Center Sec. 33.



Hub set by Childs.



299.68

275.0

Hub set by Childs, Cor. of Battle Mon.

99° 51' 50.81"

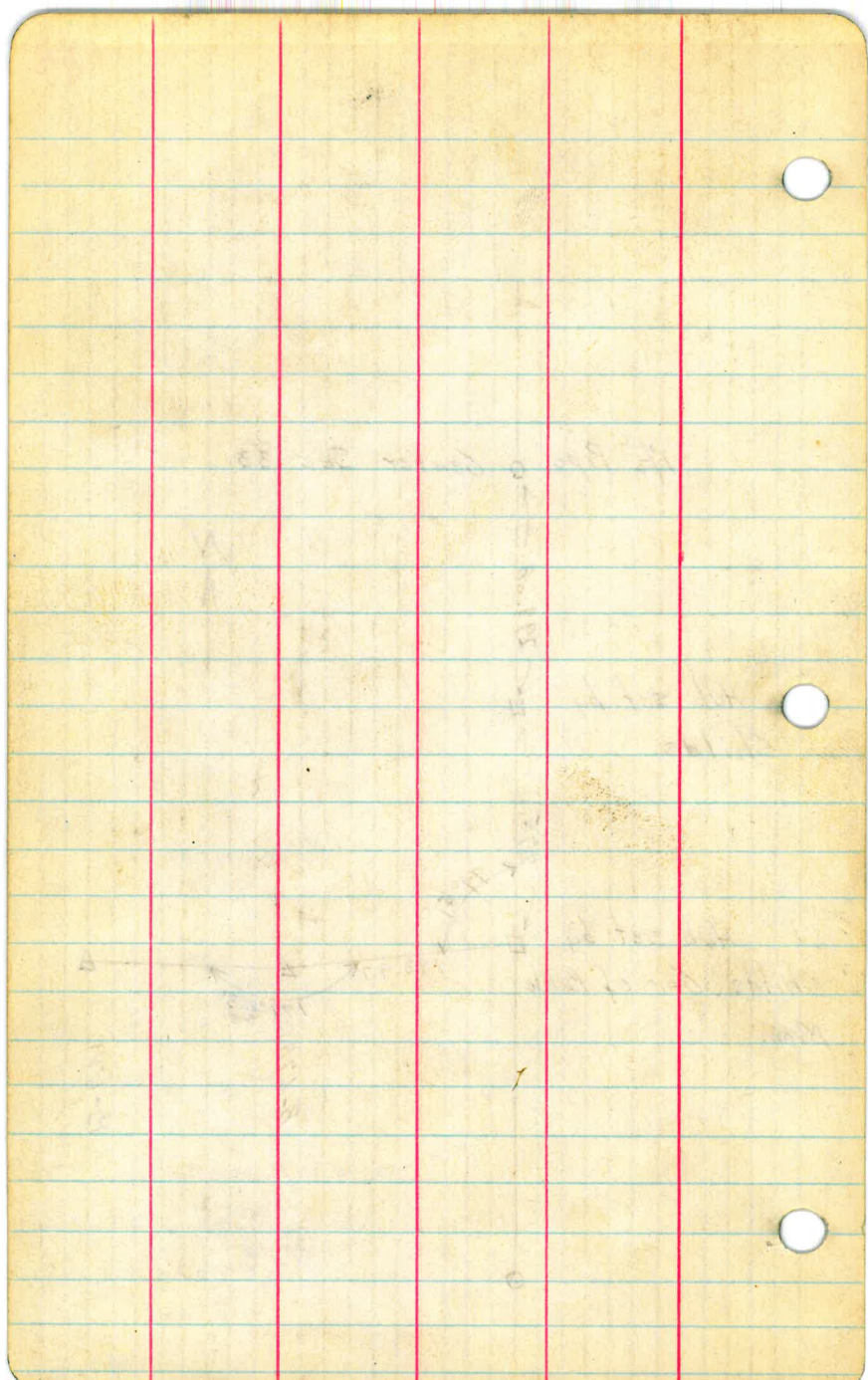
193.97

191° 43' 16.43"

B-678

B-679

678-679 N 87-13-50 E
17-43
98-56-10
N 81-03-10 N
50-09
N 08-54-10 W



Elliott-Simpson
Mar 18 2 1929

End 6" x 6" Conc. Mon. Pipe & Trk.
B 93
129



Baseline

13° 21'	=	194.60
200.00	=	45.00
	=	600.00
	=	65.03
	=	904.63

West Line Bernardo Rancho
REC. N 11-33 E

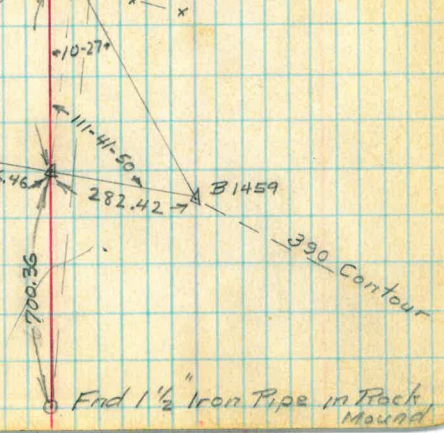
8° 33' 45" To
South Cor. for
rough check on
Chaining

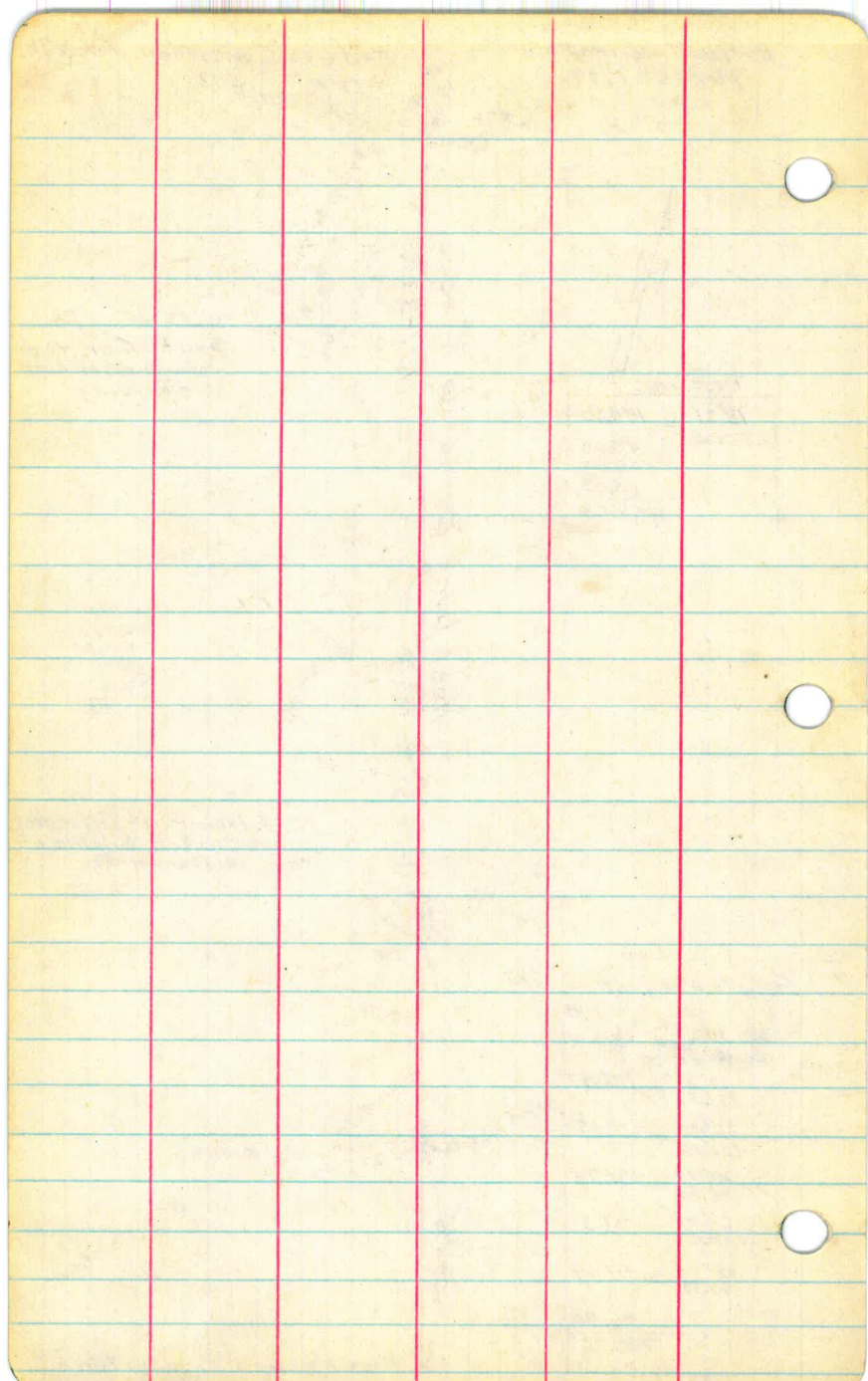
176.75
587.1
235.46

End Iron Pins Intersect
of 215 Cont. & W. Line of
Rancho Bernardo

Cor. to 390 Cont.

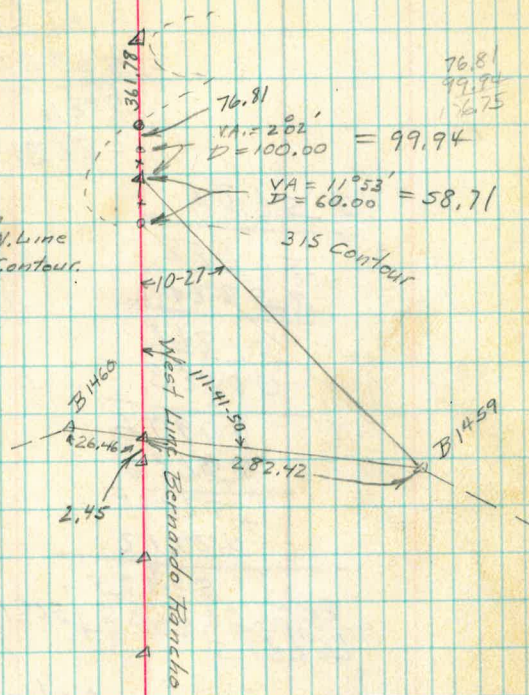
KA. 30° 24'	=	2.48
D 150.85	=	130.11
28° 22'	=	106.97
121.57	=	91.25
26° 43'	=	102.16
25° 57'	=	131.73
146.50	=	97.31
20° 42'	=	104.03
15° 55'	=	93.64
97.37	=	46.90
	=	700.36





End 6" x 6" Conc. Mem. Pipe & Tack

End Iron Pin
Intersection of W. Line
B. Ranch & 315 Contour.



VA = 30°24'
D = 150.85

VA = 28°22'
D = 121.57

VA = 26°43'
D = 102.16

VA = 25°57'
D = 146.50

VA = 20°42'
D = 104.03

VA = 15°55'
D = 97.37

End 1 1/2" Iron Pipe in
Mound of Rocks

518737
 11325
2593685
 1037474
 1556211
 518737
 518737
5874696525

518737
 11325
98950
 90600
83500
 79275
42250
 33975
22750

518737
 480498
38239

518737
58747683
 11325
 56625

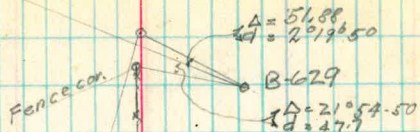
64941
 90463
194823
 389646
 359764
 5844690
5874857683

179 59 60
 514 139-30-10
 514 40-29-501 X =
 64941 X =
 139-30-16
 33 59 40
 179 59 60
 173-29-50
 514 6-30-10
 11325

R-628

131

Hill & P.O.S.



170 1/2

$$\begin{array}{r}
 557.3 \cdot \log 2.746089 \\
 \sin 65-24 = \frac{9.958277}{2.704766} \\
 \sin 17^\circ 11' = \frac{9.470455}{3.234311} = 1715.18 \\
 \frac{264}{47} + 146 \\
 \frac{25.3}{21.7} \quad 1861.2
 \end{array}$$

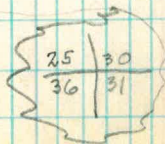
48-13
 17-11
 65-24
 114-36

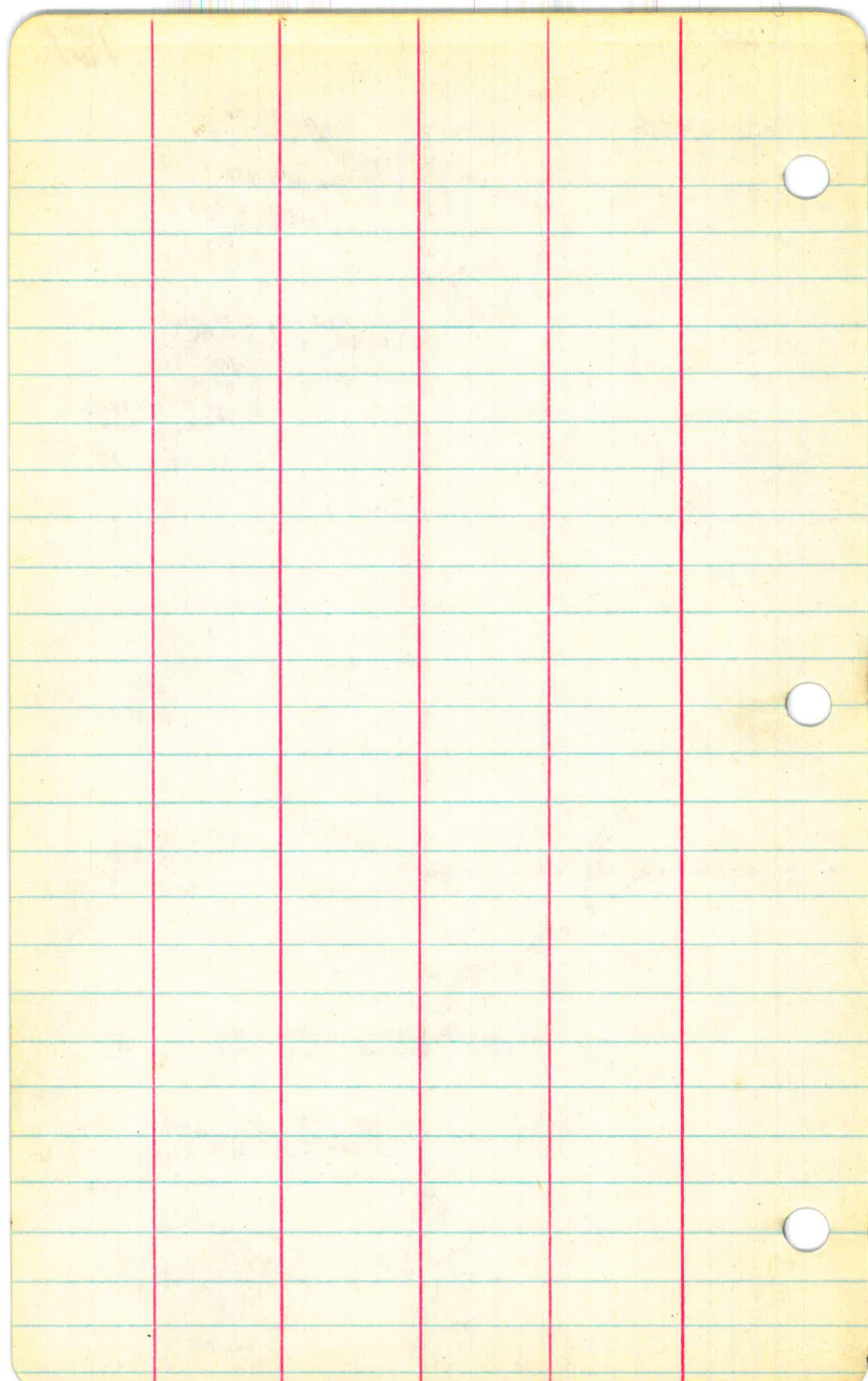


High Flag in N-S Fence

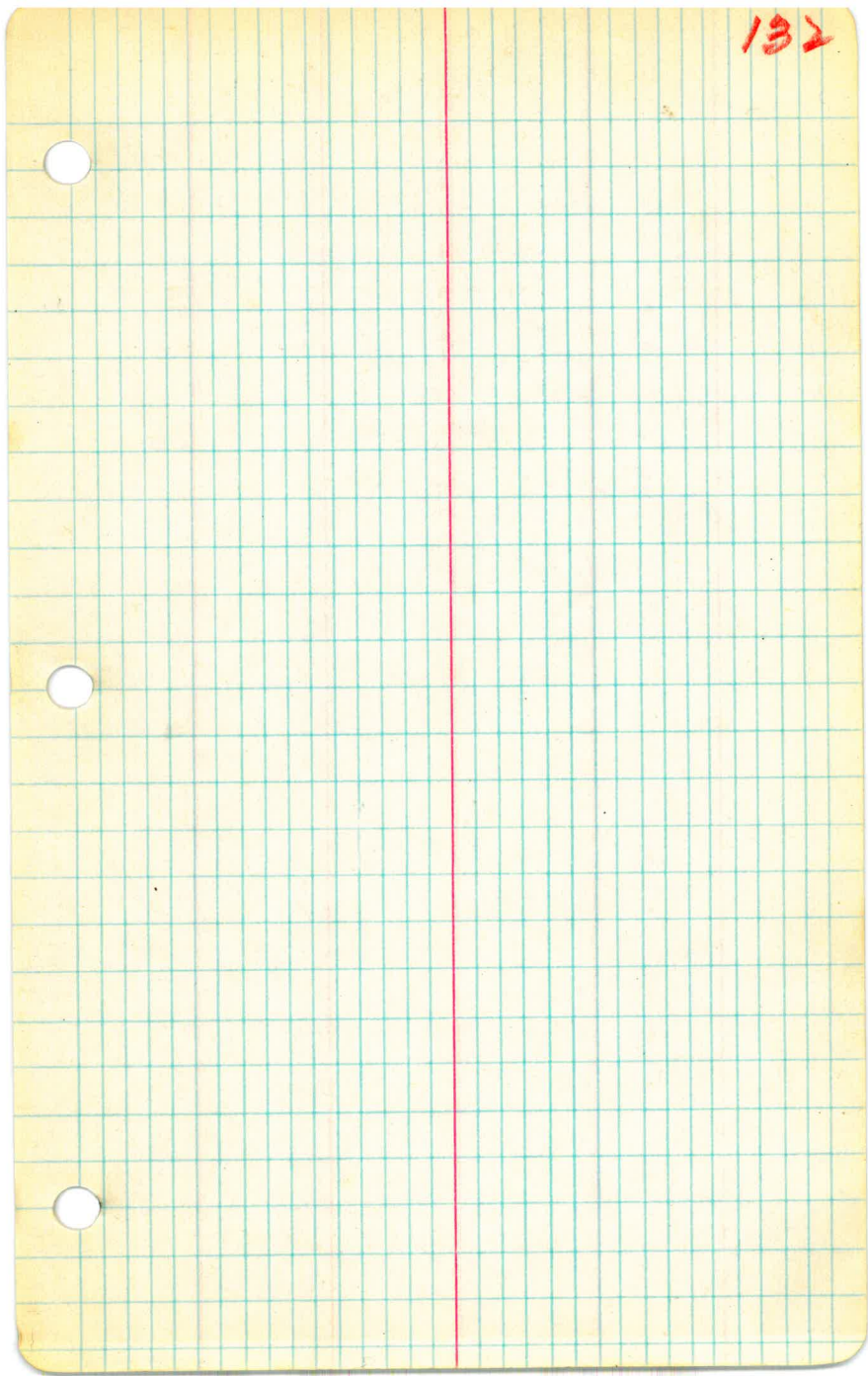
nail in top strand of Wire Fence must be about the cor.

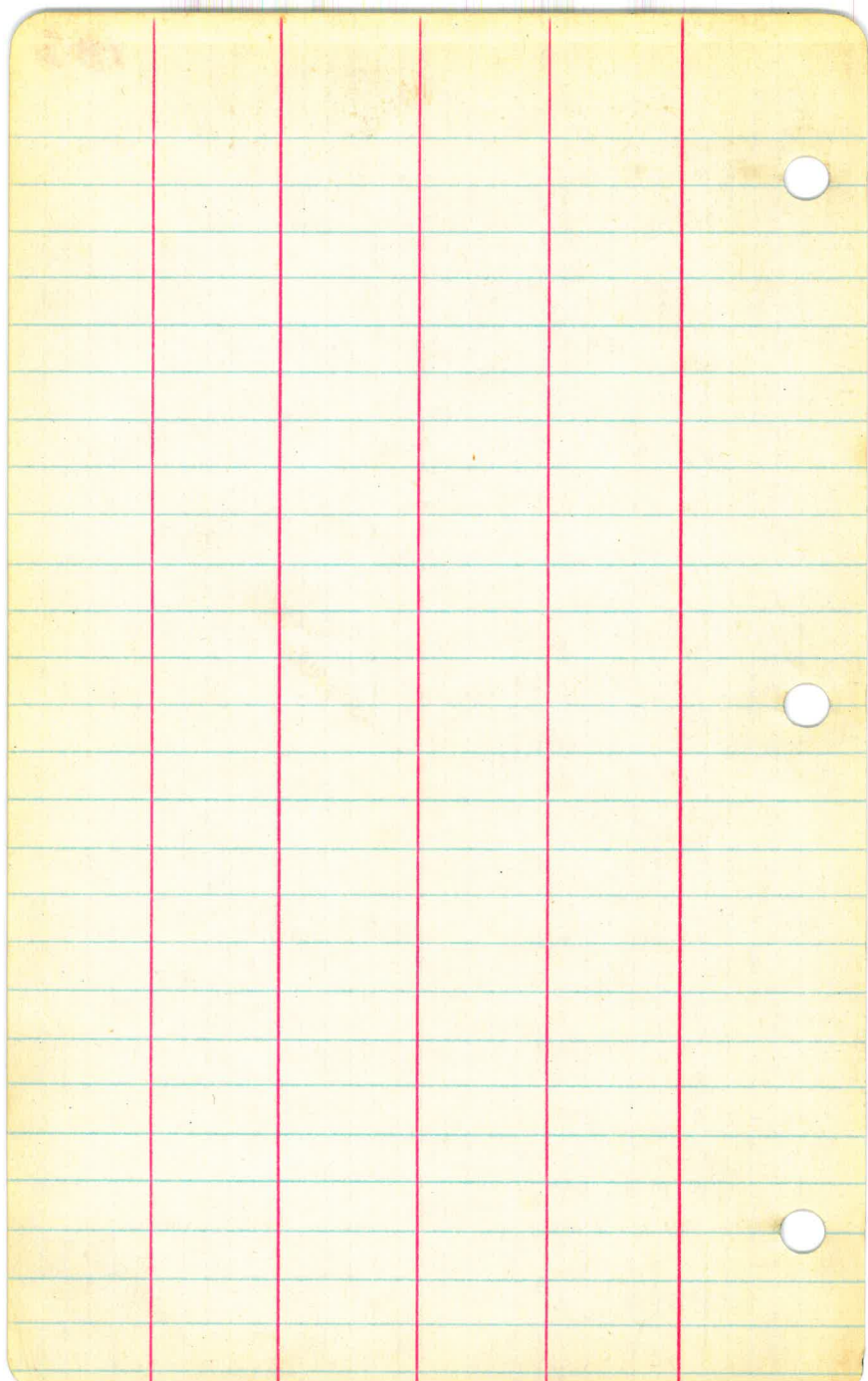
300 1/2 E
← sight on Flag to the south





132





Distances on Traverse "A" Line 133
Lake Hodges

Sta. #	#	=	Sta. #	#	=
341	-342	=	74	-75	=
342	-343	=	75	-76	=
43	-44	=	76	-77	=
44	-45	=	77	-78	=
45	-52	=	78	-79	=
52	-53	=	79	-80	=
53	-54	=			
54	-55	=			
55	-56	=			
56	-57	=			
57	-58	=			
58	-59	=			
59	-60	=	97	-98	
60	-61	=	98	-99	=
61	-62	=			
62	-63	=			
63	-64	=			
64	-65	=			
65	-66	=			
66	-67	=			
67	-68	=			
68	-69	=			
69	-70	=			
70	-71	=			
71	-72	=			
72	-73	=			
73	-74	=			

1/31/29

N. E. Course $5^{\circ} 2'$

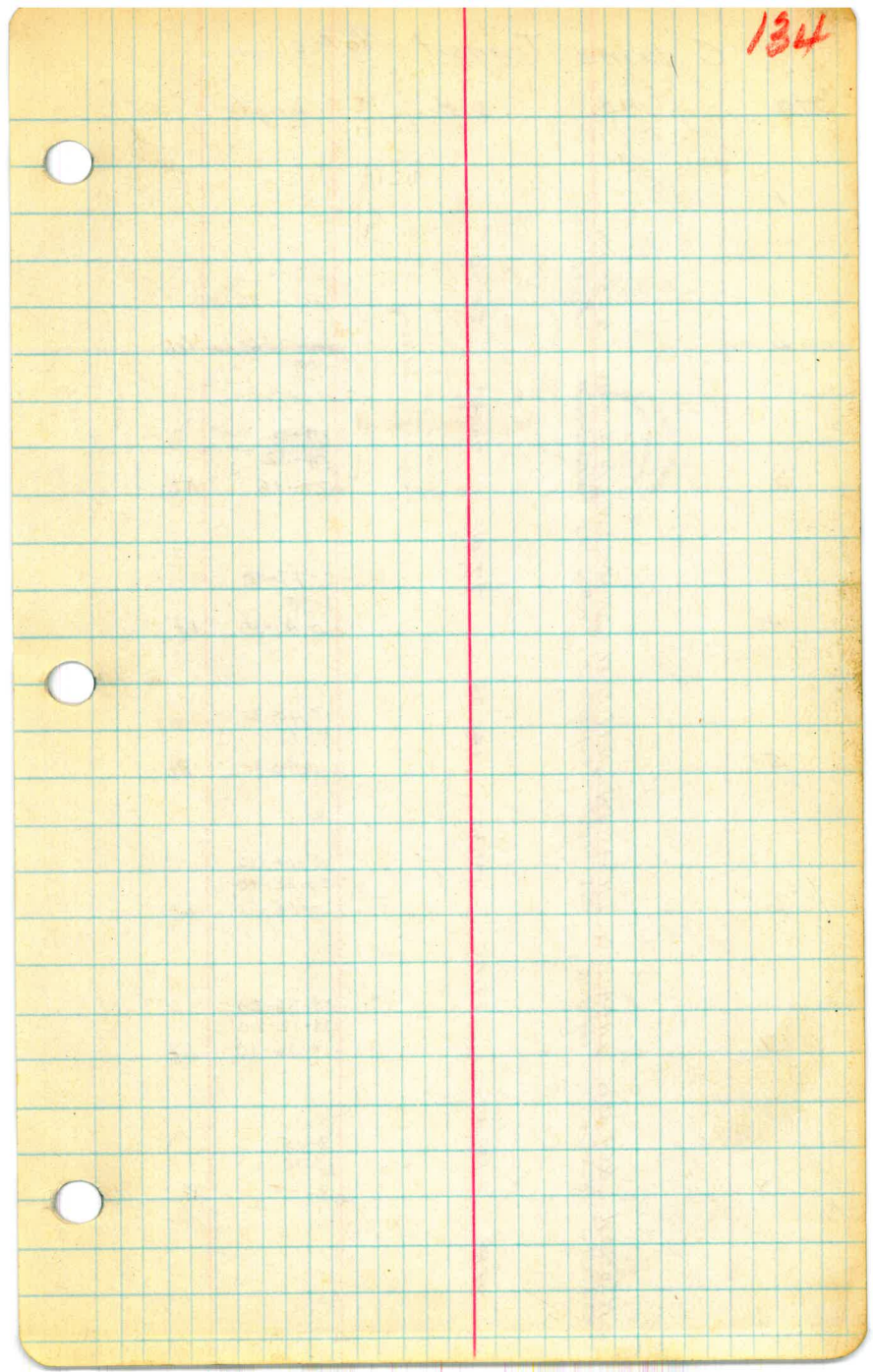
5 W

13

1.8

11.2

134



"C" Line Transit Notes

Sta	M. B.	Dist.	Angle
1			
	N 53-0 W N 53-42-20 W	87.76	22-26 44-52-40
2			
	N 75-45 W N 76-38-20 W	70.86	22-26-20 Lt
3			
	N 48-30 W N 48-22 W	77.48	27-16 54-32 27-16 Rt.
4			
	N 49-30 W N 49-30 W	77.48	0-47-40 1-35 0-47-30 Lt.
5			
	N 49-30 W N 49-30 W	140.38	15-40-30 31-21 15-40-30 Rt.
6			
	N 54-15 W N 54-15 W	171.30	10-14-30 29-28-40 10-14-20 Lt.
7			
	N 44-30 W N 44-30 W	189.42	19-36-20 39-12-20 19-36-10 Lt.
8			
	N 64-20 W N 64-20 W	139.97	8-05 16-10 8-05 Rt.
9			
	N 56-20 W N 56-20 W	78.88	

Elliott -
Simpson -
2/5/29

135

cloudy & cold



B 139 518-49-40E B 140



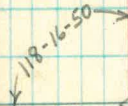
D = 300.
V.A = 10.00

214.0

V = 11° 27'
D = 251.5

547-34-50W
755.88

"C" 2 118-16-50 "C" 1



518-49-40E

"C" Line transit Notes

sta	Mag Bt	Dist.	Angle	
9	N74-15W N73-47-00W	259.72	18-05-36-10 18-05	Lt
10	S85-40W S87-30-00W	148.58	20-39-30 41-18-40 120-39-20	Lt
11	S68-0W S67-40-00W	218.60	17-46 35-31-40 117-45-50	Lt
12	N84-30W N85-22-NW	171.64	27-12-30 54-25-30 127-12-45	Rt
13	N67-15W N67-44-15W	225.47	17-18 34-36 117-18	Rt
14	N43-30W N44-30-00W	90.73	22-53-30 45-47 122-53-30	Rt
15	N59-0W N60-26-45W	72.10	15-36-00 31-12 115-36	Lt
16	N82-15W N83-24-15W	109.26	22-39-00 45-18-00 122-39-00	Lt
17				

cloudy & cold

Elliott-
Simpson-
2/5/29

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"C" Line transit notes

Sta.	Mag. Br.	Dist.	Angle	
17	S 72-45 W S 72-00 SW	79.57	22-53-30 45-46-40 22-53-20	Lf
18	S 57-30 W S 57-27 SW	120.85	16-32 33-03-40 16-31-50	Lf
19	S 57-30 W S 57-27 SW	120.85	34-45 69-29-40 34-44-50	Lf
20	S 23-0 W S 22-44-4 W	53.47	40-38-20 81-16-20 40-38-10	Lf
21	S 73-0 NE S 71-53 NE	63.27	36-00-50 72-02 36-01-00	Rt
22	S 17-0 W S 18-07-4 W	88.70	18-31-10 37-02 18-31-00	Lf
23	S 16-23-0 E S 16-23-0 E	81.21	21-21-30 42-43-00 21-21-30	Lf
24	S 21-47-25 E S 21-47-25 E	79.17	22-59-30 45-59 22-59-30	Rt
25	S 0-30 W S 1-12-0 W	113.20		

137

cloudy & cold

Elliott -
Simpson -
2/5/29

"C" Live transit notes

Sta	Mag. Br.	Dist.	Angle	
25			43-42-10 87-24-30 43-42-15	Lt
26		68.40	28-47-10 57-34-10 28-47-05	Lt
27		95.69	17-49 23-38-20 11-49-10	Rt.
28		109.28	1-58 3-56 1-58-00	Lt.
29		73.68	25-25-40 50-51-20 25-25-40	Lt.
30		68.78	103-36-10 207-12-40 103-36-20	Rt.
31		51.70	37-24-00 74-47-30 37-23-45	Lt.
32		84.60	29-38 59-16 29-38-00	Lt.
33		67.80		

S 59-30-E
 S 59-16-07-E
 S 57-14-01-E
 S 51-14-01-E
 S 81-01-E
 S 82-39-41-E
 S 72-12-35-W
 S 22-01-E
 S 20-27-08-E
 S 10-01-10-E

138

cloudy & cold

Elliott-
S. Simpson-
2/5/29

"C" Line transit Notes

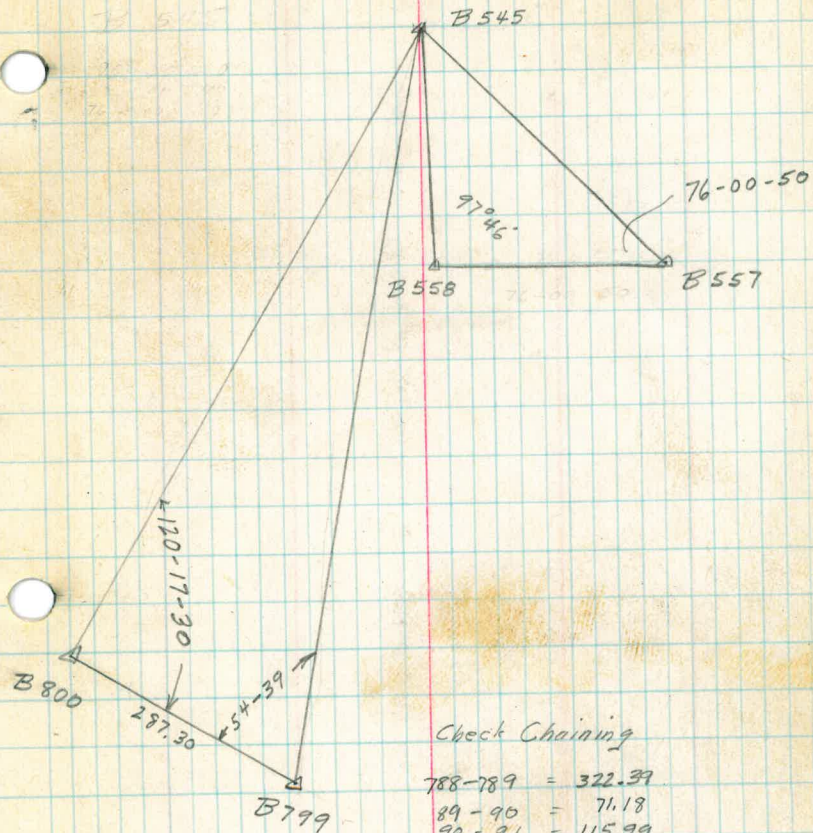
Sta	Mag. Br.	Dist.	Angle
33	x	x	125-05-30 250-11-00 △ 125-05-30 Rt.
34	x	x	41-55-30 83-50-40 △ 41-55-20 Lt.
35	x	x	△
36	x	x	△
37	x	x	△
38			
39			

125-00-12.5
 530-50 W
 333-45-000

271.10
 61.17

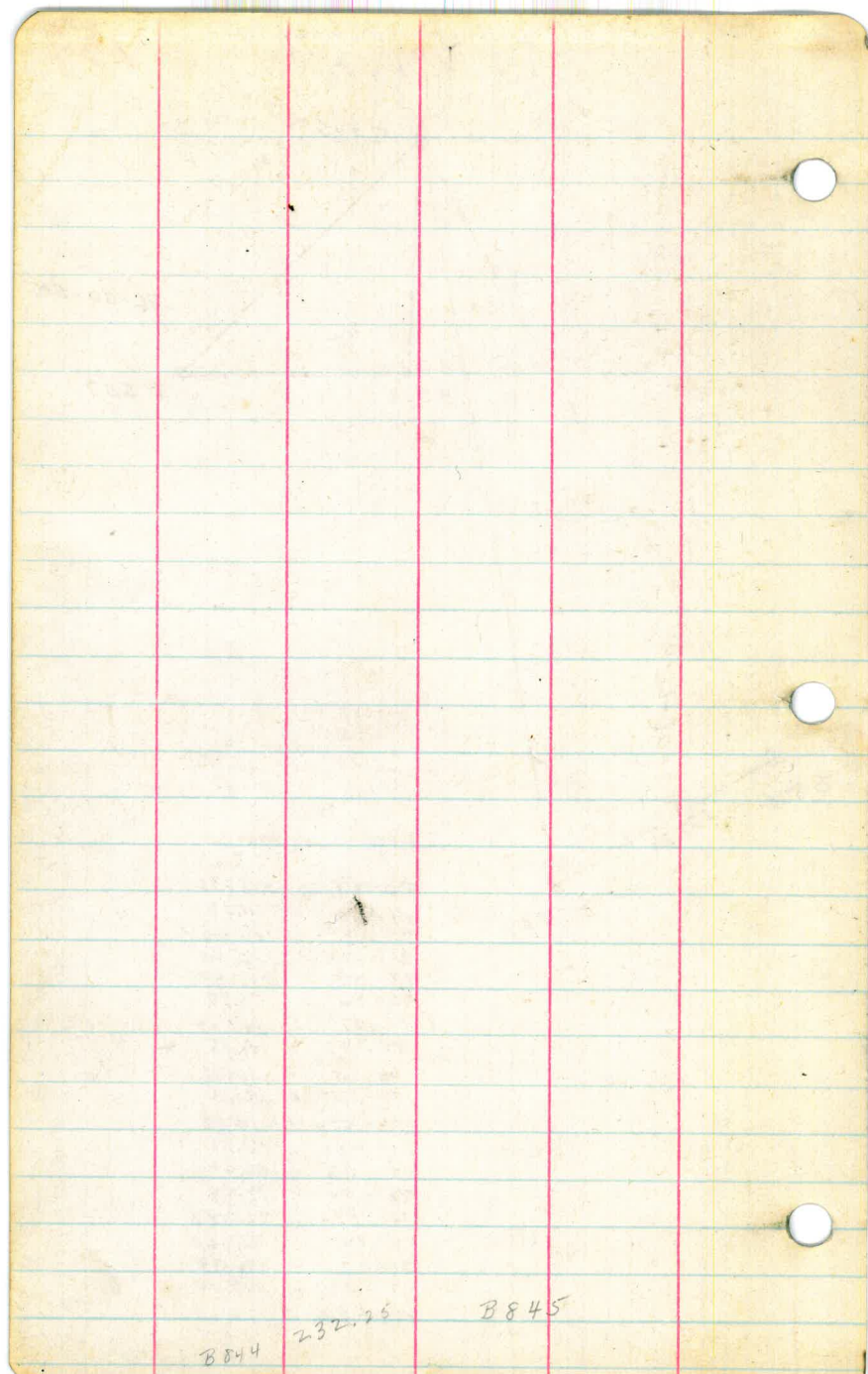
Elliott - Simpson
Feb 25 1929

139



Check Chaining

- 788-789 = 322.39
- 89-90 = 71.18
- 90-91 = 115.99
- 91-93 = 180.40
- 93-95 = 280.50
- 95-96 = 75.79
- 96-97 = 220.17
- 97-98 = 192.13 - o.k.
- 98-99 = 116.42 - o.k.
- 799-800 = 287.3
- 800-01 = 114.88
- 01-02 = 82.58
- 02-03 = 66.94
- 03-04 = 98.09
- 04-05 = 220.82
- 05-06 = 86.60
- 06-07 = 176.74
- 07-09 = 307.18
- 809-810 = 109.27



B844

232.25

B845

W E
S

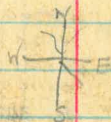
N34-20-00 W
 10 14 20
~~N44-34-20 W~~
 17 36 10
 N64-10-30 W
 8 05
 N56-05-30 W
 12 05
 N74-10-30 W
 20 39 28
 179 59 28
 94 49 50 W
 S85-10-10 W
 17 45 50
 S67-24-20 W
 27 12 45
 179 59 28
 94 49 50 W
 N85-22-55 W
 17 18 Rt.
 N68-87-15 W
 22 53 30 Rt.
 N45-10-45 W
 15 36 Lt.
~~N60-46-45 W~~
 22 39 Lt.
 N83-25-45 W
 22 53 20 Lt.
 179 59 60
~~106 19 05~~
 S73-40-55 W
 16 31 50 Lt.
 S57-09-05 W
 34 44 50 Lt.
 S22-24-15 W
 40 38 70 Lt.
 S18-13-55 E
 36 01 00 Rt.
 S17-47-05 W
 18 31 00 Lt.
 S00-43-55 E
 21 21 30 Lt.
 S22-05-25 E
 22 59 30 Rt.
 S00-54-05 W
 43 42 15 Lt.
 S42-48-10 E
 28 47 05 Lt.
 S71-35-15 E

10096.20
~~899.95~~
 1525.35
 3723.45
~~1525.35~~
 2057.10
 989.29
²⁰⁰
 29687.00
 6.38
 290.49

S71-35-15 E
 A 11 09 10 Rt.
 S59-46-05 E
 A 1 58 Lt.
 S61-47-05 E
 A 25 25 40 Lt.
 S87-09-45 E
 A 103-36-20 Rt.
 S15-26-35 W
 A 37 23 45 Lt.
 S24-52-10 E ✓
 29 38 Lt.
 S51-35-10 E
 125 85 30
 S73-30-20 W
 41 55 20
 S21-35-00 W

98957
 3
 296871
 6.38
 290.49

179 59 60
 18 16 50
 64 3 10



99 27 20
 300
 299 81 600

9995
 300

com. here 29985300

99836 99911
 300 300
 29950800 29972300

S 62-40 W

61 43 10
 729 59 60
 127 23 10

S 55-38 50 E

22 20 20

N 77-03-10 W

27 16

N 50-47-10 W

48 30

N 51-34-40 W

15-40-30

N 35-54-10 W

N 34-20 W

10 14 20

N 44-34 20 W

17 36 10

N 64-10 30 W

8 05

N 56 05 30 W

18 05

N 74-10-30 W

20 39 20

S 85-10-10 W

17 45 50

S 67-24 20 W

27 12 45

N 79-59 60

94 49 50

N 85-22-55 W

179 59 60

94 37 05

135 20

95

4730

1544 30
 2 31 21

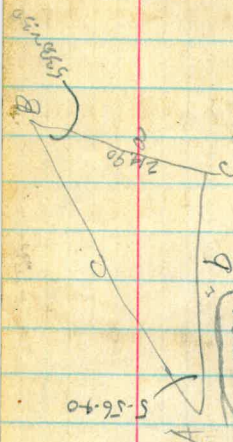
2 81

1745 50
 2 35 31 40

2 79

02

0 10 20



B = 25.5
 A = 6.5

B = 51.4
 A = 6.5

166884

N 85-22-55 W

179 59 60

94 37 05

172 84 900

103 51

103 51

103 51

103 51

103 51

103 51

103 51

103 51

80 979
 2149
 723861
 321716
 80429
 160858
 172341.921

297.82
 299.85
 299.73
 299.51
 297.23
 1226.14

196-197-104.5 ✓

1184-1185 N4-49.5SE 141.38 ✓

1214-1216 302.00 ~~OUT 1214-1234~~

1240-1241 S3-22-10W 272.70 ✓

1257-1258 52.6.90 ✓

1302-1303/0 280.21 ✓

1317-1318 208.50 ✓

1333-1334 S4-34-00W 63.19 ✓

1344-1345 N3-47-10W 143.68

1362-1364 N3-29-35E 326.42 ✓

321.2
127.0
194.22

1111
130.48

61-28

60-10

N29-50W
89-60

63.5
63
126.5
194.7
321.2

95-02
94-58

88-42
N 6-20 W

23-30 E

1-18

88-42
89 60

194.74
200.0
97.37

130.10

118-32
N29-50W

88-42
529-50E

18 34
110 16



92.09
310.55
24

19435200
200
97176

N 87-41 W
29-50
51-51

321.2
138.9
460.10
146.64
313.46

200.0 VA. 13°39'