

DEPT. OF
MINES

MINING
TRANSIT BOOK

No. 422F

729

2.00
2.83
4.17

EUGENE DIETZGEN CO.
DRAWING MATERIALS, MATHEMATICAL and
SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

Distances from Center of Roadway for Cross-Sectioning
Roadway 16 feet wide. Side Slopes 1 on 1.
Top Single Track Embankment.

MICROFILMED

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be $30.6 + (20 - 16) \div 2$ or 2 ft. added to 30.6 = 32.6. For slopes of 1 on 1½ see inside of back cover.

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Indexed to page 20 - 2/20/98 - M.R.V.

295-305 contour traverse ✓
At Lake Hodges 1-20

395 Contour Established For Thomas Chatman 21

Lake Hodges - City Prop. Line - Sec 26-5 22-31

" " Check Levels, 395 Contour 32-33

" " SKETCH 395 Contour 34

" " CHECK LEVELS AT DAM 35-36

HODGES RES. 315' Contour, Oak Grove
to Recreation Area 37

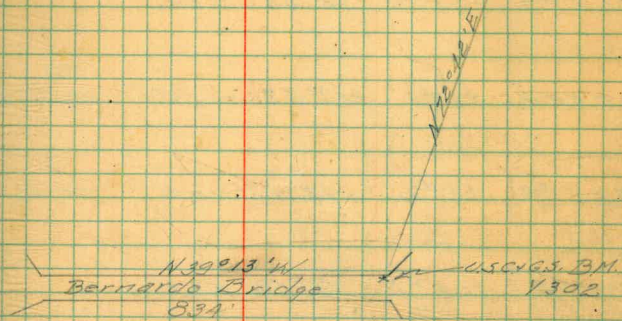
HODGES RES, GAUGE BOARD ELEV'S 38

Elev's NEW TEST WELLS SAN PASQUAL
VALLEY 39.

Crocker
 Rainey
 Niemi
 Chieman
 Laketodges
 305-295 Contour

4638

No. 009	No. 010	Azimuth	Distance	V.A.	H.L.
BM. Y302					327.54
	3.89	331.43			
To B Y302 FCC.		3.48			347.95
305#1	295#1	334°28'	197.5'		309.85
305#1	Water	327°12'	365'	15.0 Rod -0°27'	"
305#1	295#2	19°16'	195'		"
305#1	295#3	16°51'	350'		"
305#1	295#4	357°35'	430'		"
305#1	305#2	100°08'	426'		"
305#2	305#A	101°51'	305'		309.95
305#2	305#3	91°24'	4.94		
305#3	305#B	110°10'	264		309.92



2.

000	Sighted	Height	Dist	HA.	HT.
305 ^{#3}	305 ^{#C}	105°51'	505'		
305 ^{#3}	305 ^{#4}	94°01'	878'		
305 ^{#4}	SS.#1	342°03'	1014'	00 on 11.5 Rd	309.97
305 ^{#4}	SS.#2	177°02'	116'	00 on 00 Rd	
305 ^{#4}	305 ^{#D}	93°08'	193'		
305 ^{#4}	305 ^{#E}	102°11'	377'		
305 ^{#4}	305 ^{#5}	106°54'	580'	0°14'	
305 ^{#5}	305 ^{#F}	124°50'	197'		310.05
305 ^{#5}	305 ^{#G}	114°56'	326'		
305 ^{#5}	305 ^{#H}	111°53'	690'		
305 ^{#5}	305 ^{#I}	103°41'	537'		
305 ^{#5}	305 ^{#J}	107°14'	336'		

000	Sighted	Azimuth	Dist.	W.A.	H.I.
305#5	305#L	01°39'	90'		
305#5	305#6	339°22'	214'		
305#6	305#L	37°36'	187'		309.97
305#6	305#M	49°51'	295'		
305#6	305#N	66°36'	332'		
305#6	305#O	58°49'	402'		
305#6	305#P	62°23'	435'		
305#6	305#Q	53°38'	535'		
305#6	305#R	49°28'	655'		
305#6	305#7	61°59'	655'		
305#7	305#S	18°45'	215'		310.01
305#7	305#T	101°44'	360'		
305#7	305#U	91°43'	495'		

A.

Occ	Sighted	Azimuth	Dist.	V.A.	H.I.
305#7	305#V	93°41'	630'		
305#7	305#W	84°16'	630'		
305#7	305#X	81°10'	770'		
305#7	305#Y	68°17'	720'		
305#7	305#Z	63°46'	800'		
305#7	305#BA	44°46'	760'		
305#7	305#BB	09°23'	850'		
305#7	305#BC	357°29'	790'		
305#7	305#B	350°57'	800'		
305#8	BM Y 302	249°53'			309.55
305#8	305#BD	307°41'	254'		
305#8	305#BE	299°40'	560'		
305#8	305#9	300°31'	736'		0°45'

5.

Occ.	Sighted	Azimuth	Dist.	V.A.	H.I.
305#9	305#BF	312°42'	245'		310.05
305#9	305#10	322°30'	420'		
305#10	305#BF	0°19'	262'		309.89
305#10	305#BH	338°06'	278'		
305#10	305#BI	300°28'	470'		
305#10	305#BJ	282°16'	628'		
305#10	305#BK	273°42'	732'		
305#10	305#BL	279°31'	956'		
305#10	305#BM	267°10'	1148'		
305#10	305#11	258°10'	1340'		
305#11	295#5	164°30'	330'		309.95
305#11	305#BN	252°05'	360'		
305#11	305#BO	243°05'	720'		

Water

6.

Occupied	Sighted	Azimuth	Distance	V. A.	H. I.
305#11	305#BP	242°15'	924'		
305#11	305#BQ	243°18'	1230'		
305#11	305#12	242°19'	780'		
305#12	305#BR	233°55'	730'		310.15
305#12	295#6	96°46'	550'		
305#12	295#7	108°34'	388'		
305#12	295#8	150°55'	272'		
305#12	295#9	176°09'	430'		
305#12	295#10	155°31'	590'		
305#12	295#11	154°38'	810'		
305#12	Water	184°55'	804'	0°12'	15.9 Red
305#12	BMV302	180°38'			
305#12	295#12	91°56'	620'		

bottom

7.

Occupied	Sighted	Azimuth	Distance	V.A.	H.I.
305 #12	295 #13	95°21'	420'		
305 #12	295 #14	107°38'	292'		
305 #12	295 #15	201°07'	390'		
305 #12	295 #16	214°13'	604'		
305 #12	295 #17	229°05'	720'		
305 #12	295 #18	222°46'	768'		
305 #12	295 #19	217°44'	700'		
305 #12	Bridge #3	228°21'	747'	1°47'	
Bridge #3	Bridge	140°47'			

8.

Occupied	Sighted	Azimuth	Distance	V.A.	H.T.
BM V300	305 [#] 1W	249°31'	502'	2030'	310.25
305 [#] 1W	305 [#] 2W	238°28'	444' ²		
305 [#] 1W	305 [#] AW	247°52'	243'		310.11
305 [#] 1W	305 [#] 3W	246°26'	428'		
305 [#] 2W	305 [#] 3W	233°44'	179' 668'		
305 [#] 3W	305 [#] AW	270°57'	305'		309.90
305 [#] 3W	305 [#] 3W	280°07'	560'		
305 [#] 3W	305 [#] 4W	288°37'	840'		
305 [#] 4W	305 [#] AW	302°20'	302'		309.89
305 [#] 4W	305 [#] 3W	310°18'	522'		
305 [#] 4W	305 [#] 5W	313°14'	640'		
305 [#] 5W	305 [#] AW	298°13'	240'		308.67
305 [#] 5W	305 [#] 6W	300°25'	422'		

Feb. 19, 1948

Raney
Baker
Chipman

9.

occupied	Sighted	Azimuth	Distance	V.A.	H.I.
305 [#] 6W	305 [#] 7W	295°45'	251'		309.76
305 [#] 7W	295 [#] 1W	277°04'	144'		309.65
"	305 [#] 8W	267°16'	129'		
305 [#] 8W	295 [#] 2W	244°38'	133'		309.81
"	305 [#] 9W	232°53'	132'		
305 [#] 9W	295 [#] 3W	231°50'	142'		309.35
"	305 [#] 10W	222°08'	204'		309.60
305 [#] 10W	295 [#] 4W	221°04'	203'		
305 [#] 10	305 [#] 11	213°58'	775'		
305 [#] 11W	295 [#] 5W	32°24'	360'		309.82
"	305 [#] 1A	39°28'	560'		
"	305 [#] 1B	57°53'	360'		

Note: these shots connect to #10W

10.

Occupied sighted Azimuth Distance V.A. H.I.

305^{#11} 305^{#C} 71°14' 289' ✓" 295^{#4W} 59°57' 141' ✓" 305^{#12W} 96°21' 362' ✓305^{#12W} 305^{#A} 192°40' 83' ✓ 309.86305^{#12W} 295^{#7W} 284°13' 544' ✓" 305^{#5} 223°03' 193'" 305^{#C} 227°53' 262'" 305^{#1} 304°37' 540' ^{1040'}
598d" 305^{#D} 243°20' 300' ✓" 305^{#E} 257°58' 283'" 305^{#F} 281°21' 505'" 305^{#G} 272°09' 310'305^{#12W} 305^{#13W} 307°21' 1370' ✓

Across Lake

11.

occupied	Sighted	Azimuth	Distance	V.A.	HI.
305 [#] 10W	305 [#] 1AW	230°25'	92.6'	✓	309.60
305 [#] 7AW	295 [#] 8W	317°57'	128'		309.86
305 [#] 14W	305 [#] A	196°33'	130'	✓	
305 [#] 14W	295 [#] 9W	13°28'	157'		
"	305 [#] B	112°29'	285'		
"	295 [#] 10W	220°06'	270'		
"	305 [#] 15	221°50'	436'		
305 [#] 15W	295 [#] 11W	320°28'	30'	✓	309.55
"	Water	324°23'	70	14° Rd - 6° 45'	
"	"	27°12'	154	10° Rd - 4° 22'	
"	"	241°43'	136	12° Rd - 4° 05'	
"	295	12231-20	127'	✓	
"	305-16W	219°48'	137'	✓	
305 [#] 16W	Water	267°17'	70	14° Rd - 6° 38'	309.45

12.	Sight to	Bz	Dist	Vert L.	
305-16W	295-13	261°27'	34'		
"	305-17W	203°53'	310		
"	295-14	215°00'	263'		
"	water	224°-39'	270	14° Rd -1°31'	
305-17W	295-15	276°-36'	44'		309.29
	water + 16'	287°-55'	110	14.55 Rd -3°-24'	
"	16' from water	280°-28'	110	14.55 Rd -3°-24'	
"	305-18W	187°-46'	74		
305-18W	Edge water	248°-45'		00 Rd, -4°-23'	309.63
"	295-16	243°-48'	54'		
"	295-17	193°-59'	178		
"	305-19W	176°-43'	164		
305-19W	305-19a	172°-28'	138		309.49
"	water	229°-29'	140	14° Rd -3°-08'	✓

105 Elev. 286.96

Occu 13.	Sighted	By	Dist.	Vert L
305-19W	water	20633	184'	15° RH -20.16'
"	295-18	187°20'	194'	
"	305-20W	167°06'	292'	
"	water	246°06'		ord. -3°01' 309.49
305-20W	305 [#] 21W	192°14'	1480'	✓ 309.48
305 [#] 21W	305 [#] A	27°01'	1040'	309.82
305 [#] 21W	295 [#] 19	20°43'	1210'	
305 [#] 21W	295 [#] 20	21°48'	910'	
305 [#] 21W	295 [#] 21	36°56'	670'	
305 [#] 21W	305 [#] B	43°21'	750'	✓
305 [#] 21W	305 [#] C	65°26'	720'	
305 [#] 21	295 [#] 22	63°37'	540'	
305 [#] 21	295 [#] 23	83°48'	463'	

14.

Sta	Sta	Bearing	Dist	V.A.	HI
305 [#] 21W	305 [#] D	89°03'	760'		309.82
305 [#] 21W	305 [#] E	97°23'	980'		
305 [#] 21W	305 [#] F	100°56'	1225'		
305 [#] 21W	305 [#] F	106°56'	1298'		
305 [#] 21W	305 [#] G	119°30'	1070'		
305 [#] 21W	305 [#] H	128°07'	890'		
305 [#] 21W	305 [#] I	138°58'	630'		
305 [#] 21W	305 [#] J	155°38'	344'		
305 [#] 21W	305 [#] K	183°35'	608'		
305 [#] 21W	305 [#] L	189°04'	980'		
305 [#] 21W	305 [#] M	194°01'	630'		
305 [#] 21W	305 [#] N	210°44'	284'		
305 [#] 21W	295 [#] 2A	72°45'	296'		

15.

Sta.	Sta.	occupied	sighted	Azimuth	Dist.	V.A.	H.I.
		305 [#] 21W	295 [#] 25	09°17'	148'		
		305 [#] 21W	295 [#] 26	356°18'	416'		
		305 [#] 19W	305 [#] A	192°57'	1360'		309.50
		305 [#] 19W	305 [#] B	203°33'	1080'		
		305 [#] 19W	295 [#] 27	202°06'	1060'		
		305 [#] 19W	end water Green Valley	200°00'	1		4°42'
		305 [#] 19W	295 [#] 28	212°53'	860'		
	"	305 [#] C		214°28'	933'		
	"	305 [#] D		228°30'	1040'		
	"	295 [#] 29		234°16'	990'		
	"	305 [#] E		231°06'	1270'		
	"	305 [#] F		249°52'	1200'		
	"	295 [#] 30		251°09'	1070'		

134°10' 7°27' 176°43'

Sta. No.	Sta.	occupied	Sighted	Azimuth	Dist.	V.A.	H.I.
	305 [#] 19W	295 [#] 31	267°52'	1280'			309.50
"	305 [#] 6	264°50'	1400'				
"	305 [#] H	275°31'	1720'				
"	295 [#] 32	277°35'	1630'				
"	295 [#] 33	283°26'	1850'				
"	305 [#] I	282°39'	1920'				
"	S end Allard	277°52'	-	-0°52'			
"	S Hook side Allard	252°02'	-	-1°45'			
"	295 [#] 34	313°53'	1860'				
"	305 [#] J	315°51'	1920'				
"	295 [#] 35	321°49'	1410'				
"	305 [#] K	323°39'	1450'				
"	295 [#] 36	322°36'	1210'				

Feb. 17, 1948

Rainey
Baker
Shipman

Across Lake

No.	Sta.	occupied	sighted	Azimuth	Dist.	VA.	HI
	305 ¹⁷	29W	305 ²²	334°47'	1270'		
	305 ²²	22W	295 ³⁷	91°45'	297'		309.80
	305 ²²	22W	305 ^A	78°35'	285'		
	"		295 ³⁹	82°11'	430'		
	"		305 ²³	77°44'	432'		
	305 ²³	23W	^{Send across lake} Alluvial	112°00'		-2°13'	309.80
	"		295 ³⁹	53°25'	88'		
	"		305 ²⁴	34°23'	80'		309.40
	305 ²⁴	24W	^{across lake} Alluvial	76°42'		-2°26'	
	"		295 ⁴⁰	27°32'	307'		
	"		305 ^A	16°02'	322'		
	"		305 ^B	25°05'	530'		
	"		295 ⁴¹	9A°00'	510'		

305^{#21W} 295^{#42} 31°35' 745' 309.40

" 305^{#0} 24°19' 754'

" ^{pt.}
Alluvial ~~across~~ 57°50' 1 -1°15'

" 295^{#43} 35°01' 1020'

" 305^{#0} 30°10' 1000'

" 295^{#44} 39°58' 1510'

" 305^{#25} 37°12' 1535'

305^{#25W} ^{Alluvial}
^{across}
^{lake} 135°30' -1°35' 309.80

" Alluvial 125°08' -4°21'

" 305^{#A} 43°26' 530'

Alluvial 106°35' -6°05'

295^{#45} 64°40' 508'

Alluvial 220°28' -1°40'

309.80

305^{#25W} Alluvial 215°14' -1°08'" 305^{#B} 43°14' 810'" 305^{#C} 60°53' 840'" 295^{#46} 70°51' 654'

Alluvial 101°23' -2°08'

295^{#47} 88°51' 960'305^{#D} 84°46' 910'305^{#E} 92°03' 1208'295^{#48} 98°44' 1180'

Alluvial 214°55' -0°49'

295^{#49} 103°58' 1520'305^{#F} 102°32' 1800'305^{#G} 105°59' 2180'

309.80

305°25W 295°50' 109°49' 2220

295°51' 109°54' 2480'

Alluvial 119°54' -0°56'

305°25W 305°26 106°55' 2630'

305°26W 295°52' 126°18' 90'

310.00

" 305°27W 100°58' 108'

305°27W 295°53' 75°14' 112'

" 305°28W 56°18' 112'

305°28W ^{305 cont.}
_{under Br.} 45°31' 410'305°28W Pt. on
Bridge 55°35' 408' 319'

Bridge 140°35'

Feb 18, 1948

Rainey
Bater
Shipman

395 CONTOUR ESTABLISHED
FOR THOMAS CHATHAM

U.S. BM	12.78	360.38		347.6
TP	12.32	372.36	0.34	360.04
TD	12.47	384.81	0.02	372.34
TP	12.60	397.36	0.05	384.76
TP	10.52	407.60	0.28	397.08
			12.60	<u>395.00</u>
TP	10.10	407.18		397.08
			12.18	<u>395.00</u>
			2.96	404.22
				90
			3.86	403.32

White flagged lath set out on
395 Contour - Easterly & Westerly
from Bench Mark about $\frac{3}{4}$ of a
mile.

Aug. 20 1951
BEATTY
LEONARD

21

⊙ on Rock Elev. appears to have been
changed from 348.0

Top 12" steel well casing
to Nat Grid

LAKE HODGES
CITY PROPERTY LINE - SEC 32-5
Ely of Del Dies

See Next Page

Fd 2" IP By old Fence Cor Cent Sec 32
89° 43' 45" Rt Turned
50° 19' E 89° 45' Rt Rec

787.0 Rec	=	Chained	788.65
101.36' @ 6° 30'	=	100.71	"
101.45' @ 6° 54'	=	100.72	= 100.71
			+

POT Set 3/4" IP	POT	Nail	388.85
103.49' @ 4° 46'	=	103.13	"
103.43' @ 4° 20'	=	103.13	= 103.13
			+

299.87' @ 4° 03'	=	299.09	
299.81' @ 3° 59'	=	299.08	= 299.08
			+

86° 29' 15" Rt Turned

86° 29' Rt

N 89° 56' E Fd 2" IP Filled with Cement with brass Plug

229.52 Chained

229.71 Rec

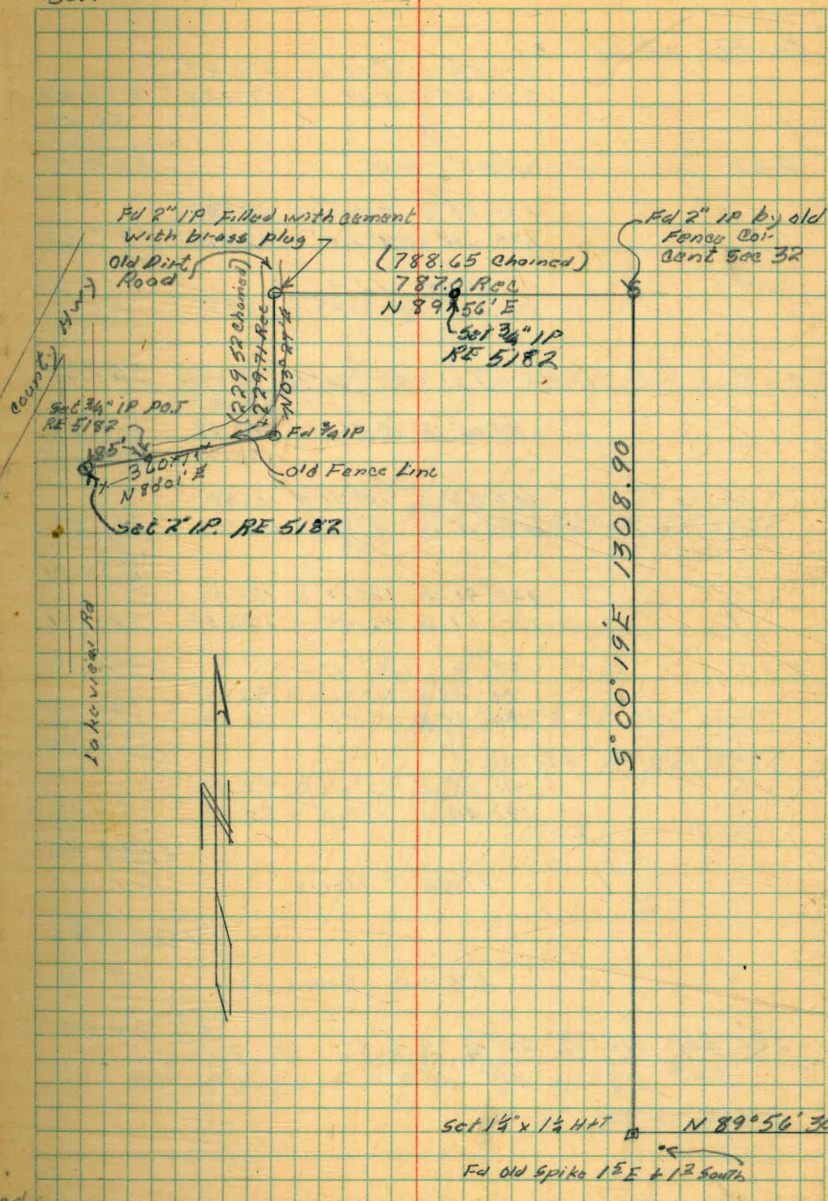
N 03° 27' E Fd 3/4" IP

360.7 Rec Dist

N 80° 01' E Set 1 1/2" x 1 1/2" Hub + Jack & Dist Road

West
Williams
Kellhofer
Bull

22



Set 1 1/2" x 1 1/2" Hub + Jack N 89° 56' 30"

Fd Old Spike 1 1/2" E + 1 1/2" South

Line as Run from Center of Sec 32
to S.W. Cor. NW 1/4 SE 1/4

Center of Sec 32

277.54 @ 4.33' = 276.67
277.45 @ 4.16' = 276.68 = 276.67
56.50

P.O.T

POT Nail 333.17

130.85' @ 9.25' = 129.09
130.64' @ 8.49' = 129.10 = 129.09

POT Nail 462.26
100.00' @ 3.933' = 99.81 99.81

P.O.T

POT Nail on Hill 562.07

159.00' @ 0.56' = 158.98 158.98
721.05

113.09' @ 10.01' = 111.39
112.94' @ 9.35' = 111.36 111.36

125.41' @ 12.21' = 122.51
125.61' @ 12.44' = 122.52 122.51

P.O.T

Set 1 1/2" x 1 1/2" H+T 954.92

94.53 @ 11.21' = 92.65
94.35 @ 10.51' = 92.66 = 92.65

1047.57

91.75 @ 17.50' = 87.29
91.40 @ 17.15' = 87.29 = 87.29

1134.86

111.00' Horiz 111.00

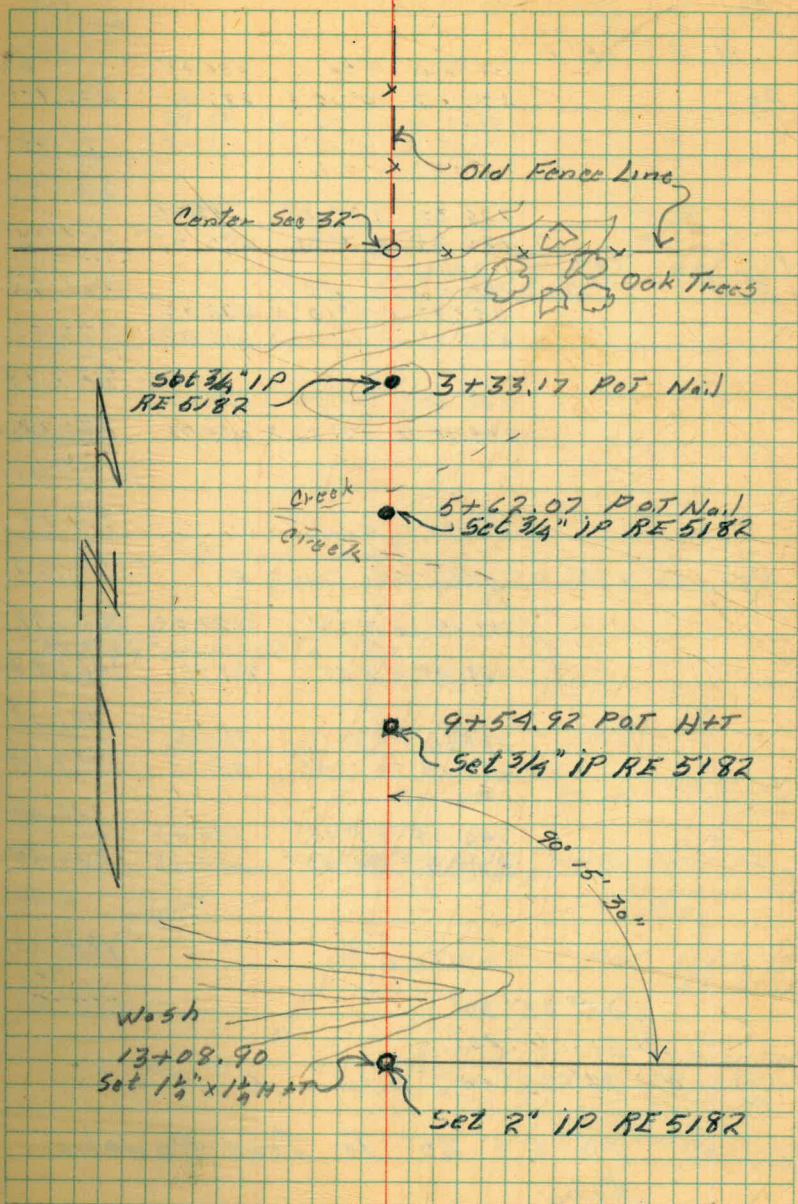
1245.86

63.04' Horiz 63.04

S.W. Cor. NW 1/4 SE 1/4 Sec 32

1308.90

Set 1 1/2" x 1 1/2" H+T



Line as Run From SW Cor NW 1/4 SE 1/4 Sec 32
To NE Cor Lot 4 inter-section With Wly Bdy
Rho San Bernardo

N 89° 15' E'
 POT 240.55 @ 9° 52' = 236.99
 240.71 @ 10° 04' = 237.00 = 236.99
 99.17 @ 3° 35' = 98.98
 99.25 @ 4° 12' = 98.98 = 98.98

335.97

226.30' @ 3° 10' 225.95
 226.37' @ 3° 30' 225.95 = 225.95

POT Set 1 1/2" x 1 1/2" HAT
 297.77 @ 6° 10' = 296.05
 292.95 @ 6° 26' = 296.07 = 296.06

857.98

294.45 @ 12° 53' = 287.04
 294.10' @ 12° 36' = 287.03 = 287.03

1195.01

53.99 Horiz 53.99

POT 1 1/2" x 1 1/2" HAT Wly edge County Rd
 (under construction) 1199.00

263.52 @ 3° 39' 262.99 = 262.98

263.49 @ 3° 35' 262.98 = 1461.98

283.38 @ 7° 11' 281.16 = 281.16

283.13 @ 6° 46' 281.16 = 1743.14

140.48 @ 1° 18' 140.43 = 140.44

140.47 @ 0° 55' 140.45 = 1883.58

2.54

1886.12

88

1887.90

1) 78° 05' 30"

2) 156° 11' 20"

M) 78° 05' 40" interior L 78° 07' 25"

78° 03' 25" To True Rancho

Line

West

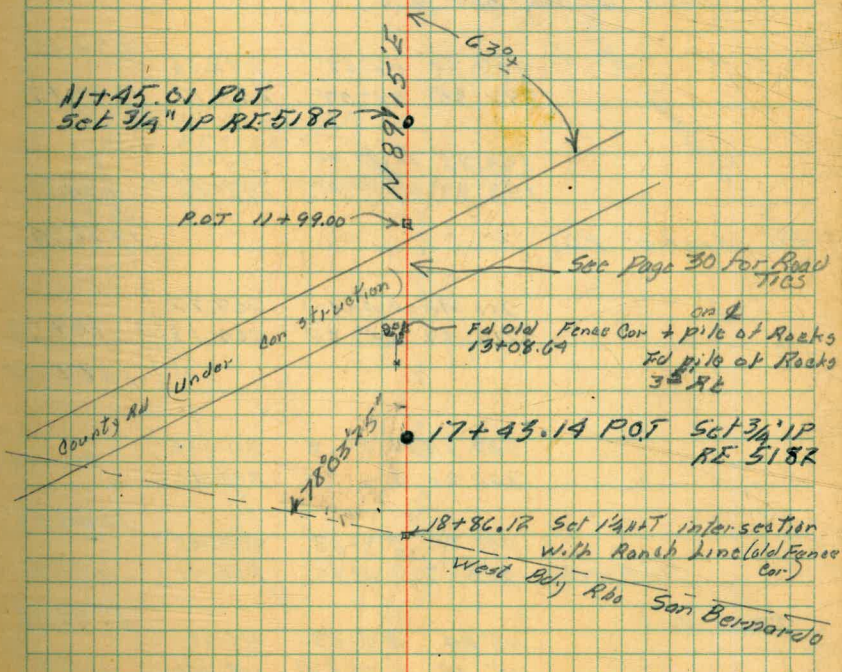
Williams
Kulhofer
Sull

29

5/31/57

0+00 SW Cor NW 1/4 SE 1/4 Sec 32

5+61.98 POT Set 3/4" IP
RE 5182



Line OS Run From NE Cor Lot 4 Sly
along Wly Bdy Rho San Bernardo to 395

Contour

299.00 @ 6°00' 297.36
298.88 @ 5°45' 297.38 = 297.37

247.90 @ 1°13' 247.74
247.77 @ 1°05' 247.73 = 247.73

545.10
148.27 148.69 @ 4°14' 148.28 545.10
148.50 @ 3°47' 148.26

POT 693.37 Set 1 1/4" H+T Wly Side County Rd

243.43 @ 3°43' 242.92
243.55 @ 4°05' 242.93 242.92

POT Ed 4" IP Filled with Cone
with brass hex nut 788.02

292.39 @ 2°17' 292.16 292.15
292.35 @ 2°07' 292.15 1080.17

193.86 @ 6°05' 192.76
193.97 @ 6°21' 192.78 192.71

Ed Spike POT 1272.94

210.42 @ 4°40' 209.72
210.39 @ 4°32' 209.73 209.73
1482.67

202.24 @ 5°13' 201.40
202.07 @ 4°38' 201.41 201.40

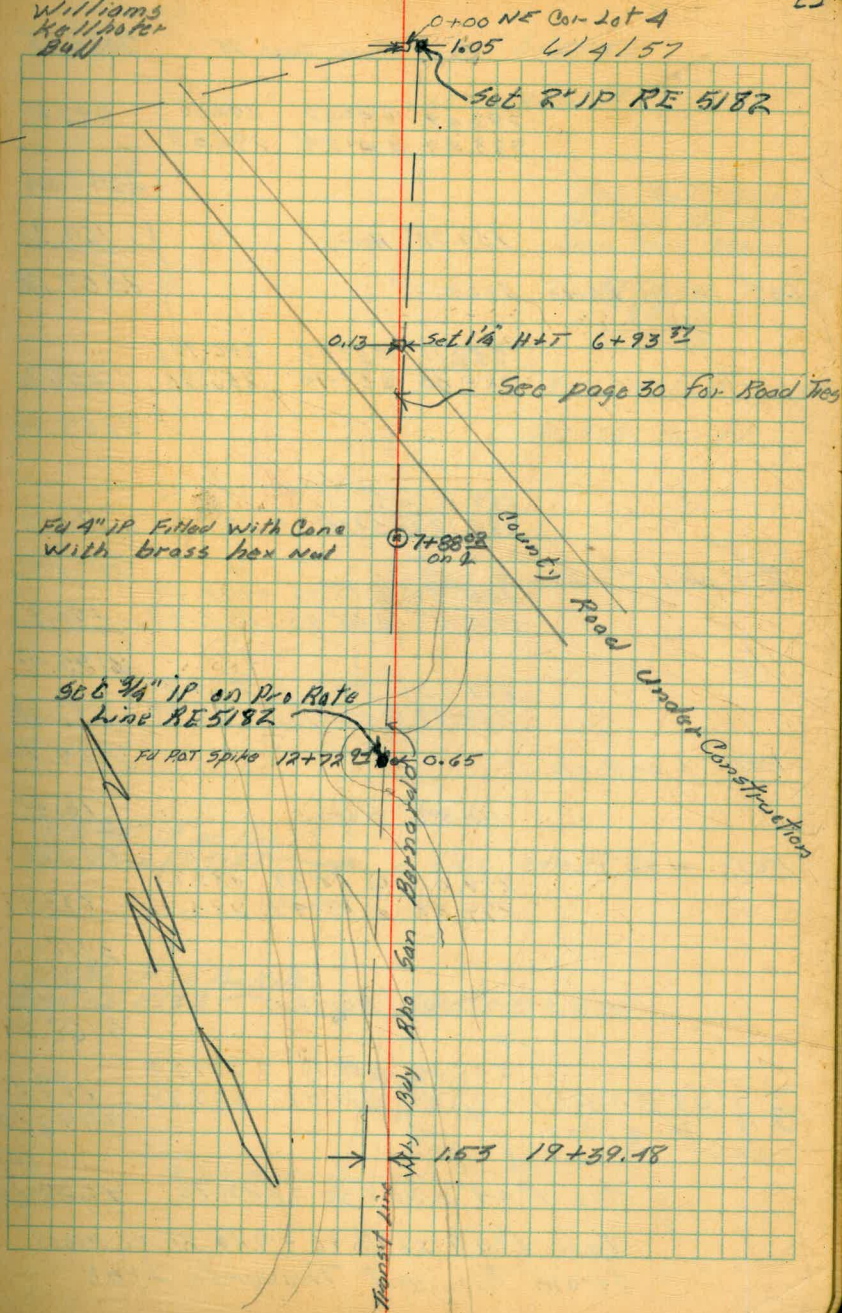
255.90 @ 3°08' 255.42 1684.07
255.67 @ 2°35' 255.41 255.41

POT Nail 1939.48

POT Mark on Large Rock 115.24 @ 3°03' 115.08 115.07
115.19 @ 2°38' 115.07 2054.55

West
Williams
Kg 11, poster
Bull

25

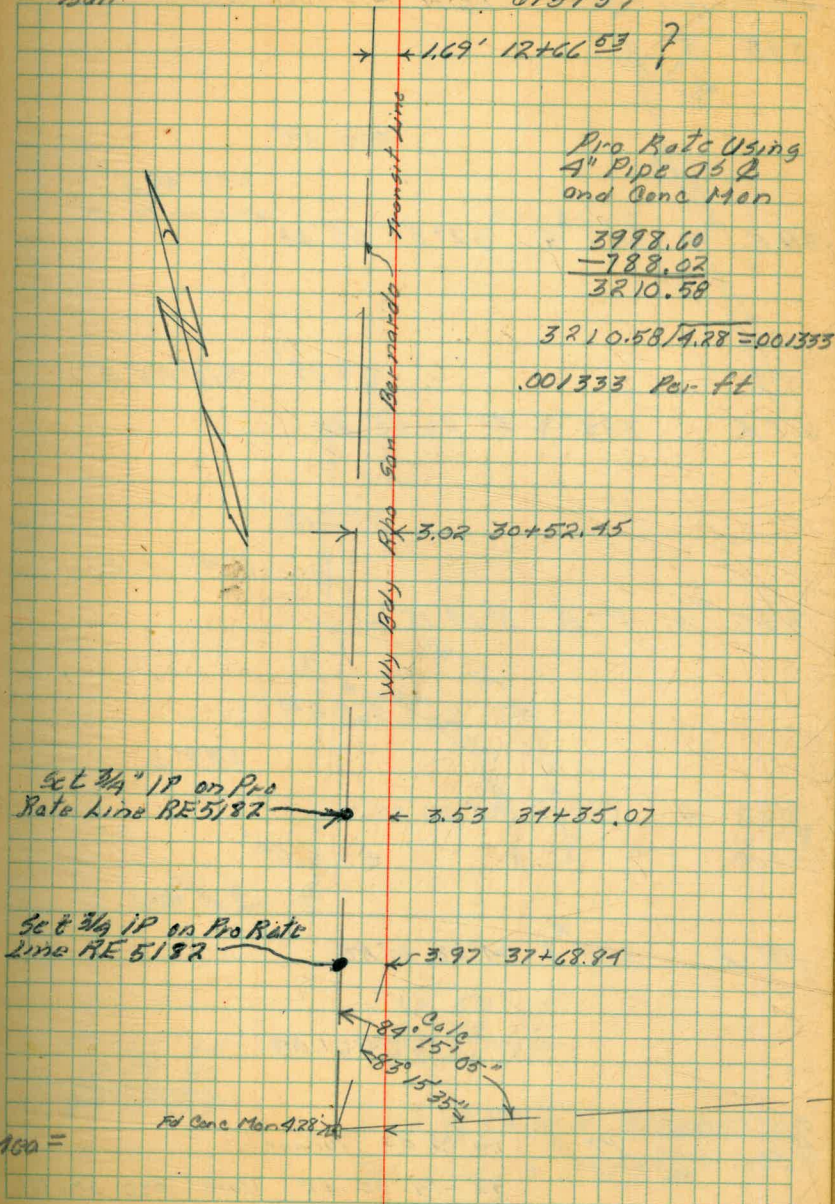


Cont from page 25		2054.55
293.49 @ 4°42'	292.50	292.51
293.40 @ 4°24'	292.53	
		2347.06
160.72' Horiz		160.72
P.O.T. ⊗ on Large Rock		2507.78
258.11 @ 5°57'	256.72	
258.00 @ 5°44'	256.71	256.71
		2764.49
289.11 @ 5°07'	287.96	
289.18 @ 5°15'	287.97	287.96
P.O.T. RH Nail		3052.45
145.55 @ 10°48'	142.97	
145.53 @ 10°43'	142.99	142.98
		3195.43
229.83 @ 3°52'	229.31	
229.89 @ 4°07'	229.30	229.30
P.O.T. x on Rock		3424.73
10.34 Horiz		10.34
P.O.T. H+T		3435.07
299.61 @ 18°39'	283.88	
299.38 @ 18°47'	283.91	283.89
		3718.96
49.88 Horiz		49.88
		3768.84
298.14 @ 22°10'	229.80	
297.49 @ 21°48'	229.79	229.80
		3998.64
		- 04
Cos 1°04' x 229.80 = 229.76		3998.60
Tan 1°04' x 229.76 = 4.28 RT to Mon		
from Tangent Traverse Line		

West
Williams
O'Brien
Bull

26

6/5/57



Sta Occupied Sighted Angle Distance Mag Bearing

395 # 4
④

300.88'

543° 45' E

395 # 3 395 # 4 32° 56' 55" Lt

69.29' 510° 45' E

PT B 395 # 3 32° 20' 25" Rt

370.15'

5° 42' 15" E

395 # 2 PT "B" 3° 14' 15" Lt

366.64'

539° E

395 # 1 395 # 2 30° 03' 00" Lt

420.09'

57° 30' E

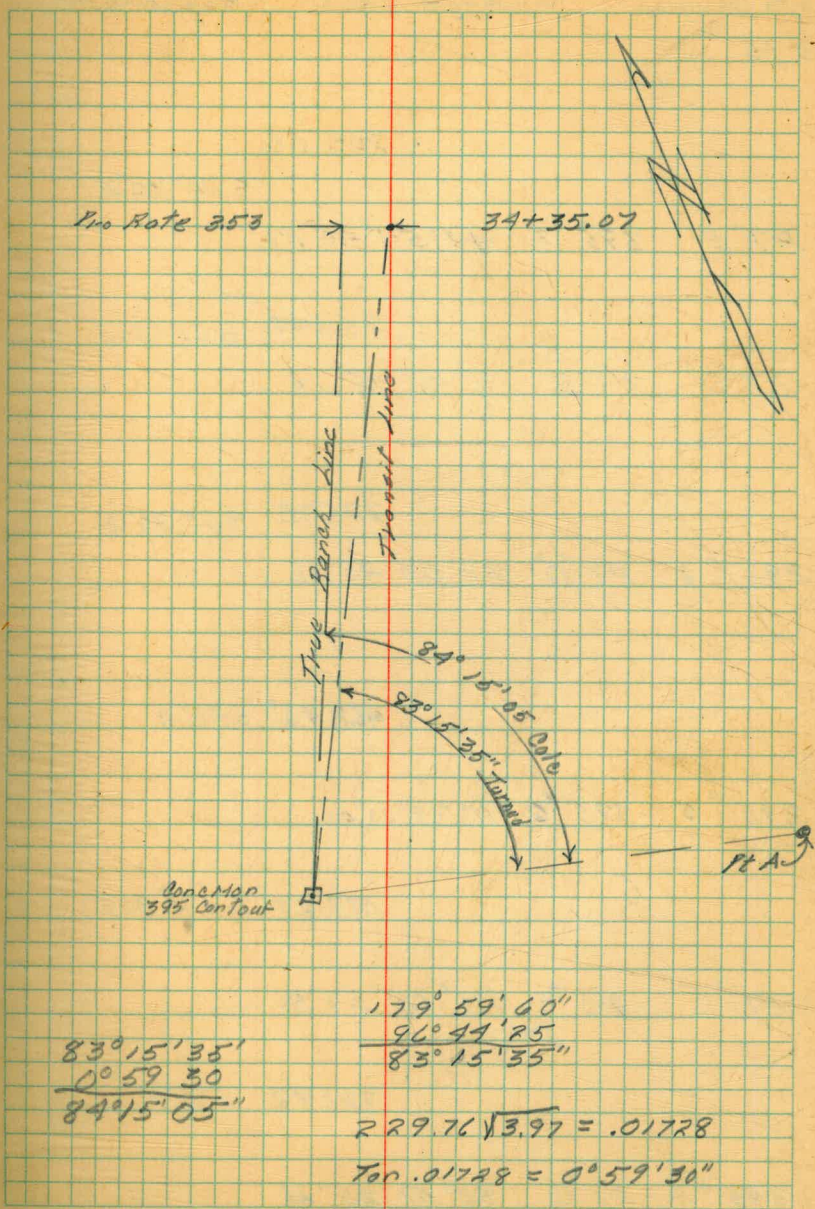
PT A 395 # 1 71° 28' 20" Rt

401.04'

Comp Meridian
Intersection
of Range Line
+ 395

PT "A" 96° 44' 25" Turned

95° 44' 55" Lt Cole see sketch



83° 15' 35"
0° 59' 30"
84° 15' 05"

179° 59' 40"
96° 44' 25"
83° 15' 35"

$229.76 \sqrt{3.97} = .01728$

$\tan .01728 = 0° 59' 30"$

Sta Occupied	Sta sighted	Angle	Dist	Mag	Bearing
--------------	-------------	-------	------	-----	---------

395 #7

205.56

570°30'E

PTE 395 #7 44°54'40" Rt

233.44

565°30'E

PT"D" PTE" 3°41'45" Lt

225.75

561°30'E

395 #6 PT"D" 22°03'45" Lt

468.46'

541°E

395 #5 395 #6 11°38'20" Rt

123.77'

552°30'E

PT"C" 395 #4 29°09'50" Rt

5)

321.92'

576°E

395 #A PT"C" 32°51'25" Lt

4

West
Williams
Kellhofer
Bull 616/57

Warm + clear

Traverse of 395 Contour Cont.

Sta Occupied	Sighted Sta	Angle	Dist	Mag Bearing
--------------	-------------	-------	------	-------------

395 #8

455.63'

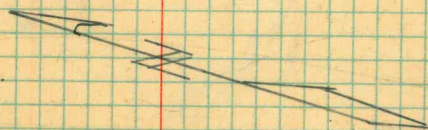
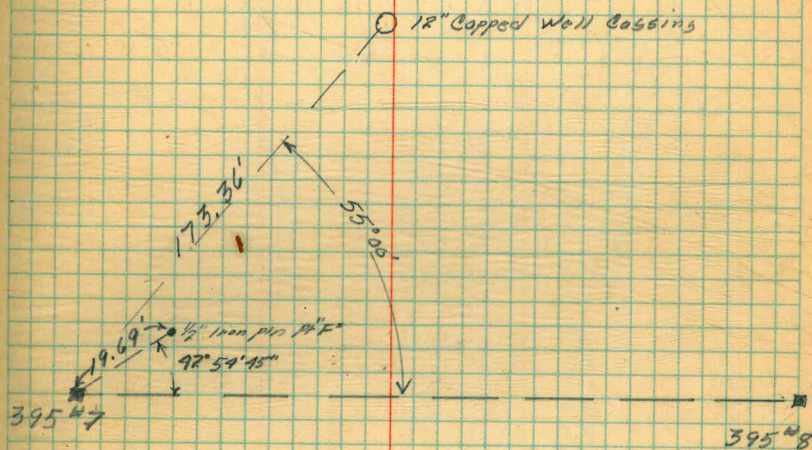
511° 30' E

395 #7 395 #8 11° 05' 05" RE

West
Williams
Kellhofer
Bull

617157

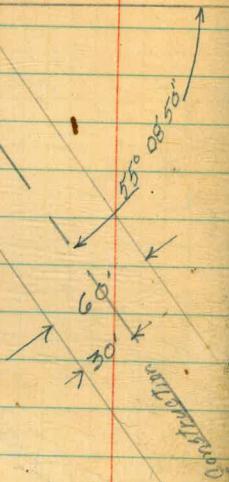
29



Ties To County Rd

51

33+0943
County Rd Sta

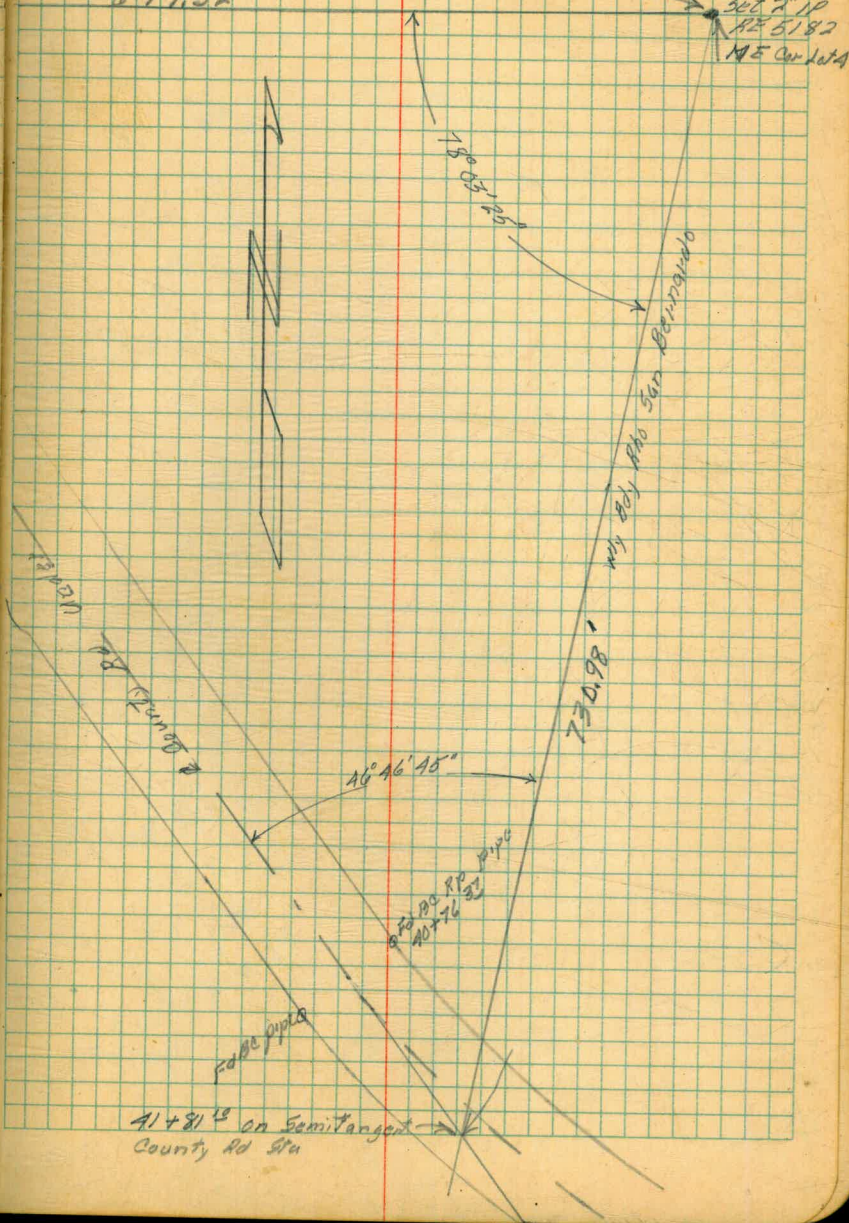


West
Williams
Kollhofer
Bull

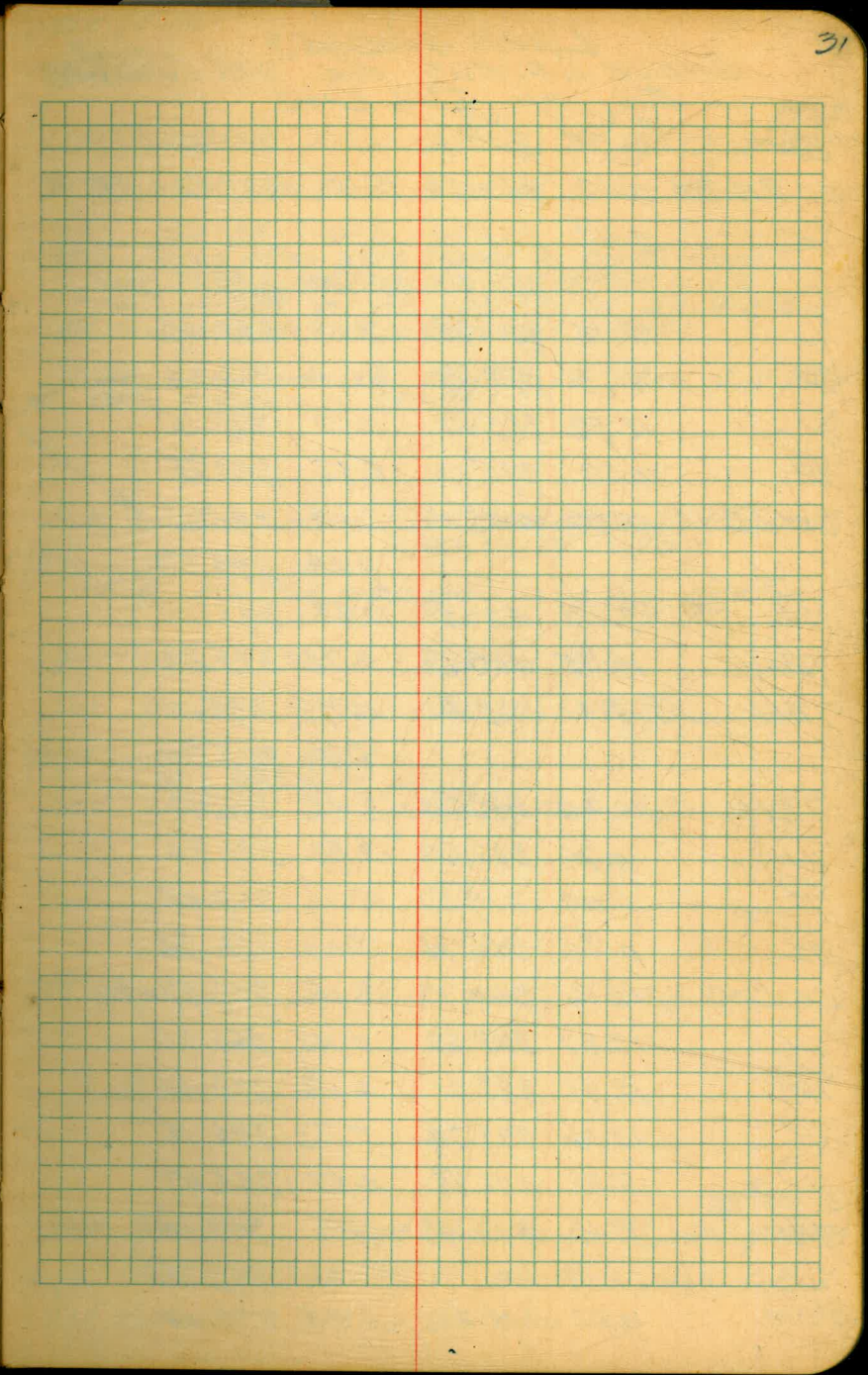
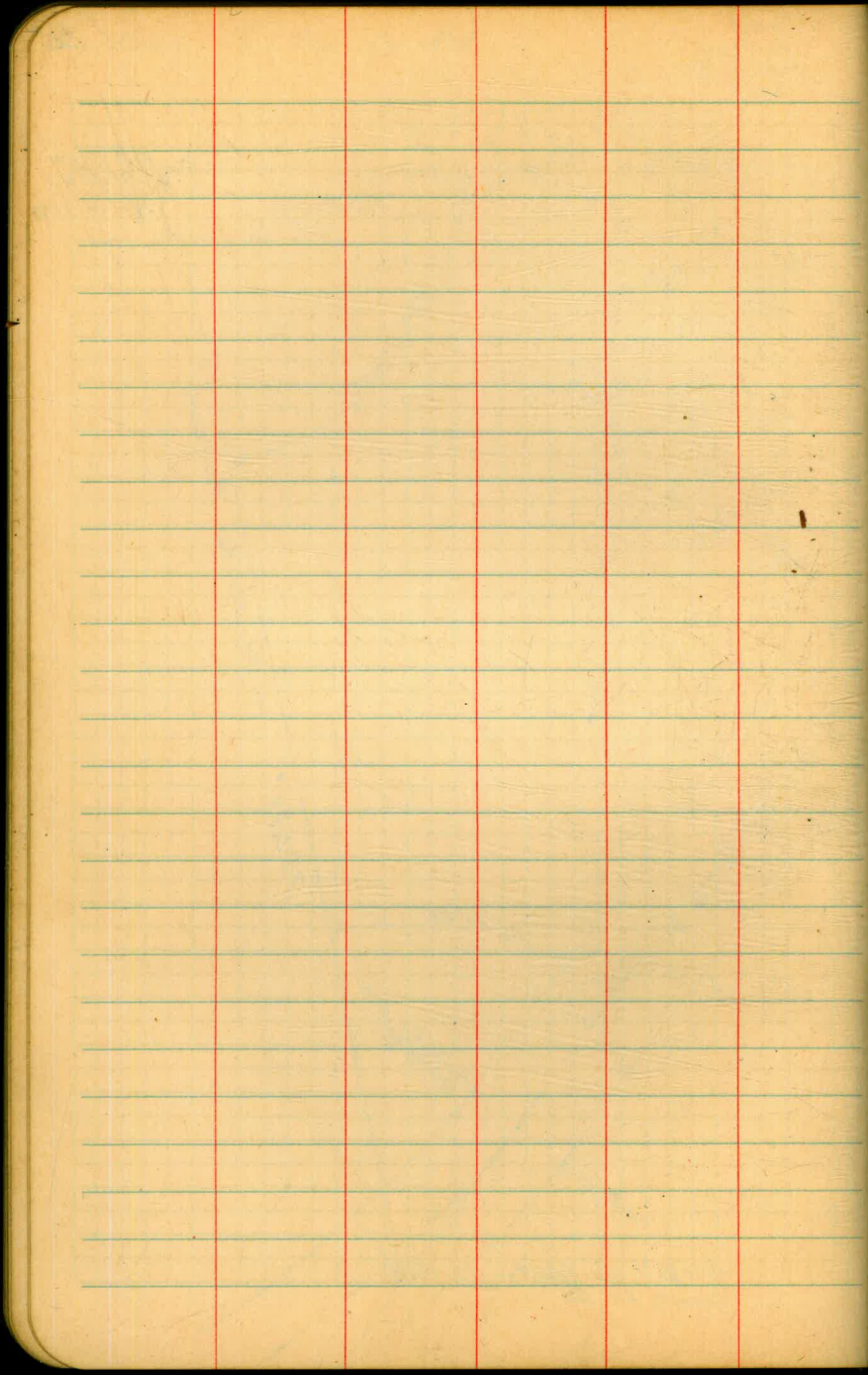
30

699.32'

Set 2" IP
#2 5182
ME Cor. 1st



41+81.13 on Semitangent
County Rd Sta



LAKE HODGES
CHECK LEVELS FOR 395 CONTOUR
Ely of DEL DIOS

BM	6.52	342.52		336.004
CK RM. BM	5.87	342.29	5.10	337.42 - 337.42
IP	9.60	348.10	3.79	338.50
IP	12.77	356.67	4.20	343.90
IP	13.12	366.78	3.01	353.66
IP	11.73	373.87	4.64	362.14
IP	12.52	385.67	0.72	373.15
IP	10.29	395.14	0.82	384.85
SET T.B.M.	10.92	405.07	1.00	394.15
			9.48	395.59
IP	7.73	400.88	11.92	393.15
T.B.M.	10.75	405.75	5.88	395.00
T.B.M.	8.41	403.41	10.75	395.00
			8.16	395.25
T.B.M.	0.24	395.24	8.42	395.00
IP	0.70	382.64	13.30	381.94
IP	0.09	369.57	13.16	369.48
IP	0.20	356.74	13.03	356.54
CK BM.	13.16	360.73	9.15	347.59 = 347.57
IP	13.37	373.62	0.48	360.25
IP	12.81	386.41	0.02	373.60
IP	13.06	399.24	0.23	386.18
IP	7.21	401.88	4.57	394.67
T.B.M.	8.45	403.45	6.88	395.00
IP			8.14	395.31
T.B.M.	9.22	404.22	8.45	395.00

MAY 28 1957

BEATTY
SMITH

32

1938
USGS CONC MARK 10' NLY of GATE #30-
X on rock 90'E & 12' N of Conc Mark

Note - These notes were copied by Beatty from
Loose leaf notes - there's a 12' error in his
+ rod of 5.87 yet he checked in ok @ H-6 -
We think he transposed that + rod

O'NEIL checked into Beatty's 1st T.B.M. @ a later
date & made it 393.99

Pipe in Conc Mark. { SAN BERNARDO RANCH LINE
300' NLY of road.

{ 0 1/2" I.P. L.S. 1344
PT. A abutts prop. Cor. (see sketch)
pg. 34

Set 3/4" I.P. 395.00 Contour #1

Set 3/4" I.P. 395.00 Contour #2

{ 0 1/2" I.P. L.S. 1344
PT. B abutts prop. Cor.
Set 3/4" I.P. 395.00 Contour #3

X on granite boulder H-6 USGS

Set 3/4" I.P. 395.00 Contour #4, 175' NLY to
Cor of House
0 1/2" I.P. L.S. 1344 PT. C abutts prop. Cor.
Set 3/4" I.P. 395.00 Contour #5

LAKE HODGES
LEVELS Cont'd

		404.22			
TBM	10.48	405.48	9.22	395.00	
P	9.84	404.36	10.96	<u>394.52</u>	
TBM	4.53	399.53	9.36	395.00	
P	12.43	408.23	3.73	395.80	
			3.93	404.30	
TBM	5.56	400.56	13.23	395.00	
P	4.85	400.27	5.14	395.42	
P	3.98	398.51	5.74	394.53	- 394.52 above
P	1.27	388.50	11.28	387.23	
P	1.39	377.29	12.60	375.90	
P	0.04	364.42	12.91	364.38	
P	0.86	352.15	13.13	351.29	
P	10.30	351.93	10.52	341.63	
CK BM	H-6		4.35	347.58 = 347.57	
BM	4.23	351.80		347.57	
	0.97	346.72	6.05	345.75	
	0.22	334.68	12.26	332.46	
	0.30	322.55	12.43	322.25	
	0.56	310.11	13.00	309.55	
	3.00	301.27	11.84	298.27	
	1.95	294.77	8.45	292.82	
	0.56	282.81	12.52	282.25	
CK WATER LEVEL			12.33	270.48 = 270.87	

5/31/57

Berry
Smith

33

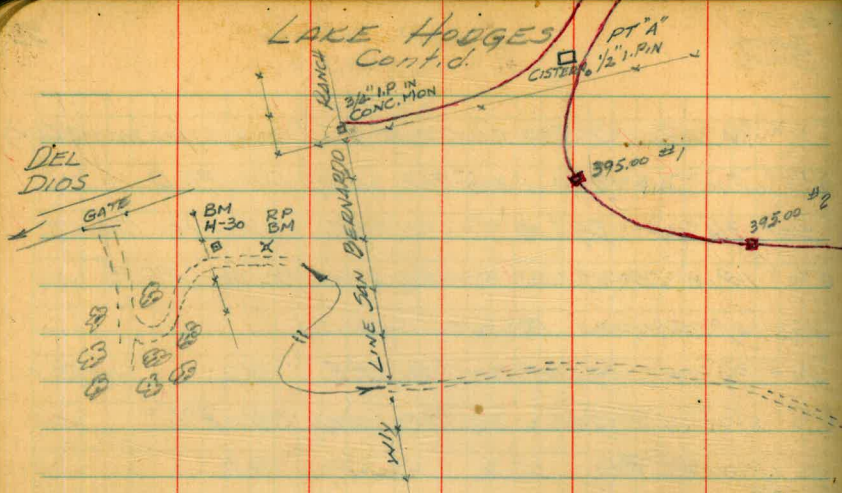
set 3/4" I.P. 395.00 Contour #6 (near small single Oak)
 0 1/2" I.P.M. L.S. 1344 abutters prop. Cor. P.T. D
 set 3/4" I.P. 395.00 Contour #7 near fen. Cor.
 0 1/2" I.P.M. L.S. 1344 abutters prop. Cor. P.T. F
 Top of capped 12" well casing
 set 3/4" I.P. 395.00 Contour #8
 0 1/2" I.P.M. L.S. 1344 abutters prop. Cor. P.T. E
 1/2" I.P.M. P.T. F.

A on Granite Boulder
 May 28 1957

0.0 GAUGE =
 200 USGS

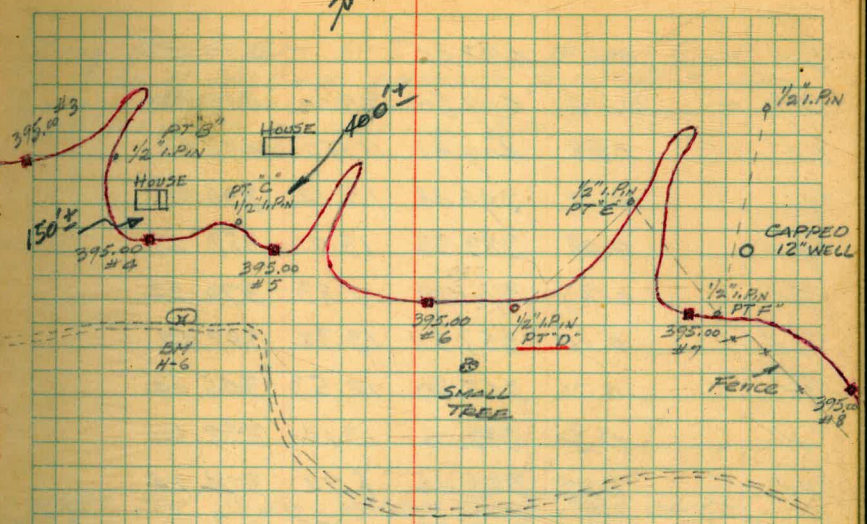
diff. 0.39 than Staff reading
 lower 5/28/57

See further "Level Check" pg. 35



5/28 31/57
BEATTY
SMITH

34



SKETCH SHOWING
395 CONTOUR &
Abutting prop. Cor's

LAKE
HODGES

WATER

LAKE HODGES
CHECK LEVELS AT DAM

BM	1.63	423.64		422.01
BM	0.10	419.80	3.94	419.70
IP	1.58	409.41	11.97	407.83
IP	0.19	396.48	13.12	396.29
IP	0.08	383.35	13.21	383.27
IP	0.27	370.79	12.83	370.52
IP	0.10	357.57	13.32	357.47
IP	0.76	345.80	12.53	345.04
IP	0.50	333.16	13.14	332.66
IP	1.22	325.46	8.92	324.24
CK BM	0.63	315.21	10.88	312.58 = 315.00
IP	0.33	302.14	13.40	301.81
IP	0.10	289.04	13.20	288.94
IP	0.77	276.82	12.99	276.05
Elev. of LAKE	8.27	278.77	6.32	270.50 =
IP	13.01	289.06	2.72	276.05
IP	12.70	301.66	0.10	288.96
IP	13.27	314.88	0.05	301.61
CK BM	12.35	326.93	0.30	312.58 = 312.58 (above)
IP	13.31	339.54	0.70	326.23
IP	13.26	352.43	0.37	339.17
IP	12.90	365.11	0.22	352.21
IP	13.11	378.22	0.00	365.11
IP	12.65	390.64	0.23	377.99
IP	13.36	403.92	0.08	390.56

JUNE 6 1957
BEATTY
SMITH

35

{ Orig. USGS BM 4-2 chis # on Rock
N. side of highway, opposite turn-off to dam.
New BM, chis # on rock by whom?
35' westerly of original BM.

{ USGS BM Brass Cap on Conc Man Mk'd
"GAGING STATION." South side Dam Keepers Res.
near staff gauge. (diff 0.42 lower.)
see pg. 33

Water level 6/6/57 1:00 pm.

Gaging Station USGS

LAKE HODGES
Cont'd

6/6/57

36

		403.92		
IP	12.52	416.31	0.13	403.79
IP	6.58	419.70	3.19	413.12
CK BM	4.07	423.75	0.02	419.68 = 419.70
CK BM			1.76	421.99 = 422.01

Chis # on Rock
Orig. USGS BM

4.46 overflow
4.43 BM

HODGES RESERVOIR
315 CONTOUR OAK GROVE TO
RECREATION AREA

BM	3.25	339.25		336.00
D	2.07	328.50	12.82	326.43
D	2.60	321.20	9.90	318.60
D	9.16	322.38	7.98	313.22
D	8.88	323.99	7.27	315.11
D	6.39	321.53	8.85	315.14
D	6.57	322.66	5.44	316.09
D	5.69	323.73	4.62	318.04
D	1.25	318.59	6.39	317.34
TBM.	1.85	315.88	4.56	314.03
D	9.15	324.12	0.91	314.97
D	12.57	327.58	9.11	315.01
D	13.16	340.57	0.23	327.35
D	9.81	350.03	0.29	340.22
CK BM			2.36	347.67 = 347.57

JAN.
1952
OAK
FRS

336.00 BM		
+ 3.25	323.73	
<u>339.25</u> Hi	6.39	
12.82	<u>317.34</u> H	340.22
<u>326.43</u> H	1.25	9.81
2.07	318.59 Hi	
<u>328.50</u> de	4.56	350.03 Hi
9.90	<u>314.03</u> TBM	2.36
<u>318.60</u> H	0.21	347.67
2.60	314.24 H	
<u>321.20</u> de	1.85	
7.78	<u>315.88</u> H	
<u>213.22</u> H	1.85	
9.16	<u>314.03</u> TBM	
<u>222.38</u> H	74 315	
7.27	4.39	
<u>215.11</u> H Cont	<u>318.42</u> de	
8.88	3.45	
<u>223.99</u> Hi	92 315	
8.85	<u>314.97</u> H Cont	
<u>215.14</u> H	9.15	
6.39	<u>324.12</u> Hi	
<u>221.53</u> Hi	9.11	
5.44	<u>315.01</u> H	
<u>216.09</u> H	12.57	
6.57	<u>327.58</u> Hi	
<u>222.66</u> Hi	0.23	
4.62	<u>327.35</u> H	
<u>318.04</u> H	13.16	
5.69	<u>340.51</u> Hi	
<u>323.73</u> Hi	0.29	
	<u>340.22</u> H	

Na

X

13/1/59

13

1/13/59

HODGES RESERVOIR
315' CONTOUR OAK GROVE TO
RECREATION AREA

BM	3.25	339.25		336.00
D	2.07	328.50	12.82	326.43
P	2.60	321.20	9.90	318.60
D	9.16	322.38	7.98	313.22
P	8.88	323.99	7.27	315.11
D	6.39	321.53	8.85	315.14
P	6.57	322.66	5.44	316.09
P	5.69	323.73	4.62	318.04
D	1.25	318.59	6.39	317.34
T.M.	1.85	315.88	4.56	314.03
P	9.15	324.12	0.91	314.97
P	12.57	327.58	9.11	315.01
P	13.16	340.57	0.23	327.35
P	9.81	350.03	0.29	340.22
ck BM			2.36	347.67 = 347.57

Jan.
302.
Obr.
Frost

37

Nail in Fern Post 30' by RECREATION Office Bldg.

A Cross on GRANITE Boulder outcrop
pg. 33

HODGES RESERVOIR DEC. 6 1960
GAUGE BOARD ELEV. S BEATTY FROST.

BM	0.21	312.79		314.58
P	0.56	302.55	12.80	301.99
P	0.15	289.51	13.19	289.36
P	0.27	277.20	12.58	276.93
			4.70	272.50
			12.10	265.10
P	11.85	288.78	0.27	276.93
P	11.93	300.50	0.21	288.57
P	13.16	312.99	0.67	299.83
P	3.46	315.56	0.89	312.10
ck BM.			1.01	314.55 = 314.58

	11.49	276.59		265.10
#1			7.01	269.58 = 70.0 GAUGE
P	10.83	286.38	1.04	275.55
#2			6.80	279.58 = 80.0
P	12.50	298.12	0.76	285.62
#3			8.52	289.58 = 90.0
P	12.98	310.37	0.73	297.29
#4			10.79	299.58 = 100.0
#5 P	5.88	315.46	0.79	309.58 = 110.0
#6			0.88	314.58 = 115.0

Conc. Mon "GAUGING STA."
@ old Dam Keepers Residence
see pg. 35

GAUGE
115.00
49.48
65.52

= 72.0 on Gauge Board.

Water Elev. 10:00 am, 12/6/60 = 65.52 Gauge

EL. 314.58
EL. 265.10
DIFF. 49.48

Water level
(Temporary gauge reads 2.61)
(66.65 Keeper Rec. 12/6/60)

GAUGE
65.52
70.00

10.57
5.89
16.46

ELEV. OF NEW TEST WELLS
SAN PASQUAL VALLEY

Well Elev Top Pump Base 125-1W-32J2 373.98
BM 375.44

Well Elev ^{Capped} 3/4" pipe 125-1W-33L3 385.39
BM 406.56 = ?
BM 394.86

Well Elev. ^{Capped} 3/4" pipe 13-S-3E2 402.55
CK Elev. 3/4" pipe 13-S-3E (old) 402.21 = 402.21
BM 411.38
BM 413.77

BEATTY
HENKE
STANDLEY March 3, 1961

39.

Top Pump Base at 1/2" measuring hole
MP 125-1W-325 Chis II NW Cor Conc Pump pit

Top 3/4" pipe (3 1/2' above ground.)
USGS BM #2-307 150' Nely Stone Entrance Gate
Chis II Near SE Cor Wly Ent. Stone Column
SAN PASQUAL BATTLE MONUMENT.

4' Wly of old TEST WELL. Top 3/4" I.P. (08 above ground.)
Chis X SE Cor. Cattle guard. Entry to FENTONS RANGH.
Spike Top 1st Pile from SE Cor Bridge SANTA MARIA CREEK
Spike gone!

.0117
 .57
 819
 585
 6679

158
 158
 316

301



570 131
**DISTANCES FROM CENTER OF ROADWAY FOR
 CROSS-SECTIONING.**

Roadway 16 feet wide. Side Slopes 1 on 1½
 For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	26.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be $41.9 + (20 - 16) \div 2$ or 2 ft. added to 41.9 = 43.9. For slopes of 1 on 1 see inside of front cover.

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