

2

*City Park Contours*

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City Hall, San Diego, Cal.*

156

400

LEVEL

F.B. 156

Table showing the difference of altitude and departure in running 80 chains at any course from 1 to 60 minutes.

MINUTES	LKS.	MINUTES	LKS.	MINUTES	LKS.
1	2 1/3	21	49	41	95 2/3
2	4 2/3	22	51 1/3	42	98
3	7	23	53 2/3	43	100 1/3
4	9 1/3	24	56	44	102 2/3
5	11 2/3	25	58 1/3	45	105
6	14	26	60 2/3	46	107 1/3
7	16 1/3	27	63	47	109 2/3
8	18 2/3	28	65 1/3	48	112
9	21	29	67 2/3	49	114 1/3
10	23 1/3	30	70	50	116 2/3
11	25 2/3	31	72 1/3	51	119
12	28	32	74 2/3	52	121 1/3
13	30 1/3	33	77	53	123 2/3
14	32 2/3	34	79 1/3	54	126
15	35	35	81 2/3	55	128 1/3
16	37 1/3	36	84	56	130 2/3
17	39 2/3	37	86 1/3	57	133
18	42	38	88 2/3	58	135 1/3
19	44 1/3	39	91	59	137 2/3
20	46 2/3	40	93 1/3	60	140

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 TABLE FOR RUNNING ON SLOPES.

**MICROFILMED**

In the following table the first column shows the angle, the second the number of links to be added to a chain on the slopes, to make one chain, horizontal measurement.

DEC 7 1964

Angle	COR. IN LINKS	Angle	COR. IN LINKS	Angle	COR. IN LINKS	Angle	COR. IN LINKS
0		0		0		0	
4	0.24	11	1.88	18	5.14	25	10.54
5	0.38	12	2.24	19	5.76	26	11.26
6	0.55	13	2.63	20	6.42	27	12.24
7	0.76	14	3.06	21	7.11	28	13.37
8	0.98	15	3.53	22	7.85	29	14.34
9	1.24	16	4.02	23	8.64	30	15.47
10	1.55	17	4.56	24	9.47	35	22.07

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Contour Survey City Park

Alverson  
 McLaren  
 Anguisola  
 Luce

217103 <sup>along on</sup> ~~the~~ <sup>the</sup> ~~Laren~~ <sup>Laren</sup> 2 P.M.  
 217103 ~~the~~ <sup>the</sup> ~~Laren~~ <sup>Laren</sup> 2 P.M.  
 217103 ~~the~~ <sup>the</sup> ~~Laren~~ <sup>Laren</sup> 2 P.M.  
 217103 ~~the~~ <sup>the</sup> ~~Laren~~ <sup>Laren</sup> 2 P.M.

From pt. on 8<sup>th</sup> range line 370ft  
 north of J. o. turn angle 12°30' left.  
 (or N. 12°30' W.) and measure  
 67ft.

Δ this Pt.

→ N. 12°30' W. produced  
 270ft. contour.

135'	86°07' L	141	141	✓
150'	80°42' L	160	160	✓
175'	76°35' L	169	169	✓
200'	72°55' L	180	180	✓
200'	70°00' L	169	169	✓
210'	66°40' L	155	155	✓
205'	63°55' L	143	143	✓

Vertical Horiz Rod

200'	61°45'L	135	135	✓
205'	57°05'L	139	139	✓
220'	58°07'L	140	140	✓
220'	44°52'L	150	150	✓
205'	43°15'L	163	163	✓
205'	40°13'L	173	173	✓
200'	37°00'L	178	178	✓
200'	39°40'L	178	178	✓
200'	35°25'L	177	177	✓
200'	18°00'L	178	178	✓
200'	12°20'L	190	190	✓
145'	7°45'L	208	208	✓
130'	3°42'L	237	237	✓
135'	2°07'R	270	270	✓
130'	8°30'R	306	306	✓
115'	13°35'R	347	347	✓

265 ft Contour

0°00'	29°00'R	308	308	✓
0°00'	28°45'R	280	280	✓
0°10'	24°10'R	272	272	✓
0°20'	19°30'R	252	252	✓
0°15'	16°50'R	243	243	✓
0°15'	14°25'R	247	247	✓
0°20'	9°32'R	234	234	✓
0°20'	6°20'R	217	217	✓
0°20'	2°50'R	200	200	✓
0°20'	2°18'L	178	178	✓
0°25'	5°18'L	167	167	✓
0°25'	8°12'L	157	157	✓
0°25'	16°00'L	163	163	✓
0°25'	20°20'L	167	167	✓
0°25'	31°06'L	170	170	✓
0°30'	38°45'L	169	169	✓
0°30'	43°16'L	152	152	✓

0°25'	44°06' L	1.34	134	✓
0°15'	48°25' L	1.20	120	✓
0°25'	59°05' L	1.16	116	✓
0°30'	64°38' L	1.30	130	✓
0°25'	66°45' L	1.38	138	✓
0°30'	69°40' L	1.48	148	✓
0°35'	72°05' L	1.60	160	✓
2°05'	75°35' L	1.66	166	✓
2°00'	80°38' L	1.50	150	✓
2°00'	84°06' L	1.38	138	✓
0°45'	92°22' L	1.10	110	✓
3°45'	98°32' L	0.88	88	✓
3°30'	110°10' L	0.41	41	✓

## 260 ft contour.

0°00'	63°15' R	0.07	7	✓
9°30'	80°15' L	0.10	10	✓
9°15'	84°45' L	0.17	17	✓

1°00'	90°52' L	0.31	31	✓
0°45'	98°25' L	0.42	42	✓
4°05'	99°45' L	0.64	64	✓
0°10'	93°15' L	0.96	96	✓
0°20'	88°36' L	1.13	113	✓
0°35'	84°55' L	1.27	127	✓
0°00'	79°22' L	1.50	150	✓
0°00'	73°30' L	1.60	160	✓
0°00'	70°45' L	1.46	146	✓
0°46'	67°45' L	1.28	128	✓
0°35'	64°00' L	1.20	120	✓
0°30'	60°55' L	1.13	113	✓
1°00'	56°35' L	1.11	111	✓
1°35'	51°37' L	1.16	116	✓
4°30'	45°25' L	1.15	115	✓
4°50'	46°06' L	1.26	126	✓
2°00'	41°20' L	1.46	146	✓
1°00'	38°55' L	1.60	160	✓

100'	35°45'L	167	167	✓
100'	33°00'L	163	163	✓
130'	27°30'L	158	158	✓
050'	20°48'L	160	160	✓
100'	13°55'L	150	150	✓
110'	8°00'L	147	147	✓
125'	4°25'L	162	162	✓
125'	0°50'L	174	174	✓
130'	0°52'R	186	186	✓
105'	5°32'R	193	193	✓
100'	10°30'R	203	203	✓
100'	13°30'R	227	227	✓
055'	18°30'R	233	233	✓
050'	22°10'R	250	250	✓
050'	26°00'R	263	263	✓
050'	31°03'R	270	270	✓
050'	33°35'R	280	280	✓

## 250-ft Contour

130'	37°07'R	308	308	✓
135'	36°30'R	280	280	✓
145'	34°30'R	260	260	✓
410'	29°15'R	258	258	✓
145'	25°10'R	248	248	✓
150'	21°25'R	232	232	✓
200'	18°40'R	218	218	✓
200'	14°55'R	215	215	✓
200'	12°15'R	195	195	✓
205'	11°08'R	188	188	✓
230'	6°30'R	184	184	✓
250'	4°50'R	180	180	✓
300'	0°55'R	165	165	✓
300'	2°15'L	158	158	✓
250'	2°30'L	144	144	✓
305'	11°30'L	135	135	✓
320'	19°06'L	148	148	✓

3°15'	27°40'L	1.50	150	✓
3°15'	27°30'L	1.50	150	✓
3°05'	23°15'L	1.53	153	✓
3°20'	38°00'L	1.48	148	✓
3°20'	40°15'L	1.37	137	✓
3°30'	42°20'L	1.23	123	✓
3°25'	42°50'L	1.13	113	✓
5°35'	48°05'L	1.12	111	✓
5°10'	51°12'L	1.06	105	✓
5°00'	58°45'L	1.08	107	✓
5°00'	64°40'L	1.08	107	✓
3°15'	69°50'L	1.22	122	✓
3°35'	73°15'L	1.37	137	✓
3°45'	74°45'L	1.45	145	✓
3°35'	80°52'L	1.30	130	✓
1°30'	85°10'L	1.08	108	✓
1°30'	88°15'L	0.92	92	✓
1°15'	89°50'L	0.74	74	✓

0°50'	91°50'L	0.56	56	✓
0°50'	85°40'L	0.36	36	✓
0°50'	68°20'L	0.20	20	✓
0°55'	13°10'R	0.18	18	✓
0°45'	89°20'R	0.17	17	✓
0°50'	109°30'R	0.37	37	✓

## 250 ft. Contour.

14°50'	101°40'R	0.45	37	✓
22°40'	75°15'R	0.30	26	✓
25°00'	26°55'E	0.25	21	✓
28°10'	11°05'L	0.22	17	✓
24°00'	56°00'L	0.26	22	✓
16°15'	75°45'L	0.40	37	✓
4°10'	84°55'L	0.62	62	✓
4°00'	84°45'L	0.88	88	✓
3°35'	82°35'L	1.10	110	✓
3°40'	76°55'L	1.30	130	✓

## Vertical Horiz. Rod.

3°30'	73°00'L	115	115	✓
3°40'	65°40'L	104	104	✓
3°45'	55°25'L	102	102	✓
3°50'	52°00'L	102	102	✓
3°5'	45°40'L	105	105	✓
3°10'	39°30'L	110	110	✓
6°15'	39°10'L	127	126	✓
5°50'	36°45'L	134	133	✓
5°45'	35°25'L	150	149	✓
5°25'	31°22'L	146	145	✓
5°10'	27°05'L	143	142	✓
5°20'	23°12'L	147	146	✓
5°20'	17°15'W	130	129	✓
5°30'	9°55'L	127	126	✓
5°30'	3°55'L	135	134	✓
5°30'	0°10'L	143	142	✓
4°30'	0°15'W	152	158	✓

4°30'	2°55'R	162	162	✓
4°40'	5°05'R	180	180	✓
4°50'	11°45'R	178	178	✓
3°30'	15°10'R	216	216	✓
3°30'	19°20'R	210	210	✓
3°30'	24°45'R	233	233	✓
3°30'	30°50'R	248	248	✓
3°30'	37°45'R	256	256	✓
2°55'	39°30'R	290	290	✓

2/9/03. *Alseodon*  
*medicinalis*  
*argentina*  
Lube 2 P.M.

Δ Pt on 8<sup>th</sup> St range line produced  
100 ft north of K.O.  
→ K+100 produced westerly  
275 ft. contour

3°5'	50°50'L	270	270	✓
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125'	45°45'L	2.43	243	/
215'	41°00'L	2.25	225	/
125'	37°45'L	1.90	190	/
155'	35°30'L	1.62	162	/
210'	25°03'L	1.40	140	/
200'	8°00'L	1.30	130	/
205'	12°40'R	1.25	125	/
200'	38°35'R	1.29	129	/
155'	42°25'R	1.39	139	/
145'	47°25'R	1.63	163	/

## 280 ft contour

155'	43°30'L	3.20	320	/
200'	41°35'L	2.93	293	/
250'	38°08'L	2.65	265	/
405'	32°19'L	2.37	237	/
300'	27°48'L	2.09	209	/
400'	22°03'L	1.95	195	/

410'	17°23'L	1.87	187	/
400'	10°15'L	1.70	170	/
405'	0°50'R	1.72	172	/
400'	18°00'R	1.77	177	/
400'	31°00'R	1.88	188	/

△ On an 8<sup>th</sup> ft range line produced  
100 ft. northerly from K.o. at 35 left  
→ K.o. + 100 north  
285 ft contour

208'	99°40'R	1.39	139	/
208'	89°00'R	1.15	115	/
215'	76°48'R	1.00	100	/
230'	52°20'R	0.72	72	/
235'	11°50'R	0.52	52	/
235'	1°45'L	0.49	49	/
655'	28°31'L	0.47	47	/
415'	55°28'L	0.59	59	/

0°40' 72°06' L 0.93 93 ✓

## 290 ft. contour.

0°40' 97°55' L 0.94 94 ✓

0°50' 98°55' L 0.64 64 ✓

0°50' 98°55' L 0.36 36 ✓

0°45' 55°30' L 0.10 10 ✓

0°50' 80°22' R 0.17 17 ✓

0°45' 98°05' R 0.53 53 ✓

0°00' 121°15' R 0.72 72 ✓

Δ Pt. on N. line of Park <sup>easterly</sup> 350 ft. from  
N.W. cor. of Park.

→ N.W. cor. of Park.

## 290 ft. contour.

4°10' 41°35' L 1.09 109 ✓

4°30' 20°50' L 0.90 90 ✓

## 285 ft. contour.

4°30' 60°00' L 0.83 83 ✓

4°30' 47°42' L 0.62 62 ✓

4°30' 55°30' L 0.49 49 ✓

Δ Pt. on N. line of Park 450 ft. from  
N.W. cor. of Park.

→ N.W. cor. of Park.

## 280 ft. contour.

0°20' 91°15' L 0.66 66 ✓

0°30' 85°00' L 0.34 34 ✓

## 275 ft. contour.

0°30' 152°15' L 0.76 76 ✓

0°20' 162°50' L 0.64 64 ✓

△ Pt. on N. line of Park 600 ft  
from N.W. cor. of Park  
→ N.W. cor. of Park  
270 ft contour.

325'	83°35'L	0.70	70	✓
325'	59°05'L	0.54	54	✓
715'	29°32'L	0.58	58	✓

2/10/03. Alverson  
McLaren  
Gunnola  
rule

△ Pt. on Point Canyon base line at  
Sta. 13. Face right to Sta 14  
→ 59° 10' L. Sta. 3+40 E.

130 ft contour.

610'	49°00'L	3.00	297	✓
735'	42°30'L	2.85	280	✓

725'	36°30'L	2.35	231	✓
725'	27°35'L	2.36	232	✓
715'	18°52'L	2.37	233	✓
720'	12°48'L	2.42	238	✓
720'	6°38'L	2.48	244	✓
715'	2°00'L	2.60	256	✓
645'	0°43'R	2.70	267	✓
730'	3°15'R	2.85	281	✓

135 ft contour.

730'	4°45'R	3.23	318	✓
705'	2°30'R	3.00	295	✓
710'	0°55'L	2.77	273	✓
730'	5°00'L	2.67	262	✓
745'	10°30'L	2.58	253	✓
800'	17°42'L	2.49	244	✓
810'	25°18'L	2.47	243	✓
820'	31°38'L	2.85	279	✓

## Vertical Horiz Rods

635'	4825'L	3.07	303V
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## 140 ft Bantown

725'	4820'L	3.13	308V
730'	4500'L	3.08	303V
735'	4110'L	3.00	295V
740'	3540'L	2.95	290V
750'	3142'L	2.88	283V
750'	2738'L	2.87	282V
805'	2200'L	2.87	281V
810'	1620'L	2.96	290V
820'	1145'L	3.00	294V
830'	1008'L	2.75	269V
810'	535'L	2.83	278V
895'	105'L	2.96	290V
730'	530'R	3.26	320V
750'	515'R	3.50	344V

650'	750'R	3.90	384V
745'	349'R	3.78	371V

## 145 ft Bantown

745'	500'R	3.95	388V
730'	430'R	3.60	353V
745'	215'R	3.40	333V
810'	030'L	3.20	314V
830'	242'L	3.08	301V
830'	715'L	3.12	305V
825'	1245'L	3.06	299V
830'	1645'L	3.10	303V
840'	2410'L	2.98	291V
845'	3040'L	2.95	288V
850'	3620'L	3.00	293V
850'	4030'L	3.07	300V
850'	4310'L	3.12	305V
830'	4455'L	3.22	315V

830' 47°45' L 3.17 310 ✓

## 150 ft. contour.

840' 47°15' L 3.24 317 ✓

840' 44°30' L 3.30 323 ✓

900' 42°08' L 3.18 310 ✓

905' 40°45' L 3.12 304 ✓

915' 37°00' L 3.04 296 ✓

925' 33°50' L 3.00 292 ✓

925' 30°10' L 3.00 292 ✓

955' 26°45' L 3.01 292 ✓

945' 23°00' L 3.02 293 ✓

945' 18°00' L 3.10 301 ✓

940' 12°00' L 3.17 308 ✓

920' 7°50' L 3.26 318 ✓

835' 3°55' L 3.36 328 ✓

845' 0°05' L 3.47 339 ✓

## 155 ft. contour

845' 150' L 3.67 359 ✓

930' 45°0' L 3.25 336 ✓

945' 9°30' L 3.27 318 ✓

10°00' 43°15' L 3.19 307 ✓

10°15' 18°00' L 3.16 306 ✓

10°15' 24°30' L 3.09 299 ✓

1030' 29°00' L 3.10 300 ✓

1025' 33°55' L 3.15 305 ✓

955' 41°50' L 3.29 317 ✓

△ (2 on 8<sup>th</sup> the mangrove line at  
A4+94 R.

→ A0

## 155 ft. contour.

550' 52°25' L 0.27 27 ✓

550' 4°45' L 0.34 34 ✓

545' 3°45' R 0.70 69 ✓

200'	746'R	1.03	103V
255'	655'R	1.32	132V
253'	1245'R	1.66	166V
230'	1245'R	1.94	194V
200'	1615'R	2.28	228V
115'	1845'R	2.60	260V
110'	2300'R	2.88	288V
105'	2750'R	2.68	268V
110'	3250'R	2.50	250V
110'	4105'R	2.24	224V
115'	5190'R	2.13	213V
120'	5910'R	2.14	214V
125'	6530'R	2.29	229V
130'	7005'R	2.64	264V
135'	7148'R	2.88	288V
115'	7405'R	3.25	325V
105'	7503'R	3.56	356V
100'	7615'R	3.84	384V

150# contour

055'	7645'R	4.25	425V
015'	7818'R	4.25	425V
020'	7745'R	4.00	400V
020'	7730'R	3.67	367V
020'	7620'R	3.30	330V
020'	7553'R	3.00	300V
025'	7425'R	2.67	267V
015'	7100'R	2.32	232V
015'	6610'R	2.07	207V
015'	5635'R	1.95	195V
015'	4520'R	2.03	203V
015'	3745'R	2.20	220V
005'	2930'R	2.40	240V
000'	2430'R	2.56	256V
005'	2207'R	2.34	234V
005'	1900'R	2.17	217V

0°35'	18°10'R	1.89	189 ✓
0°35'	18°00'R	1.57	157 ✓
0°40'	15°16'R	1.37	137 ✓
0°45'	15°52'R	1.08	108 ✓
1°00'	15°25'R	0.83	83 ✓
1°00'	19°06'R	0.52	52 ✓
1°00'	18°00'R	0.24	24 ✓
0°50'	8°30'L	0.07	7 ✓
0°30'	11°55'L	0.35	35 ✓

## 115 ft. contour.

0°50'	43°15'R	0.40	40 ✓
0°50'	27°05'R	0.72	72 ✓
0°30'	22°00'R	1.03	103 ✓
0°30'	19°55'R	1.32	132 ✓
0°00'	21°30'R	1.68	168 ✓
0°05'	23°52'R	2.00	200 ✓
0°00'	26°00'R	2.20	220 ✓

0°10'	33°36'R	2.07	207 ✓
0°00'	41°48'R	1.95	195 ✓
0°05'	50°35'R	1.83	183 ✓
0°00'	58°48'R	1.78	178 ✓
0°00'	64°25'R	1.82	182 ✓
0°10'	71°30'R	2.05	205 ✓
0°10'	74°48'R	2.27	227 ✓
0°15'	76°27'R	2.58	258 ✓
0°05'	78°15'R	2.94	294 ✓
0°10'	78°12'R	3.20	320 ✓
0°45'	79°13'R	3.63	363 ✓
0°30'	79°55'R	4.04	404 ✓

## 140 ft. contour.

1°35'	81°30'R	3.92	392 ✓
1°30'	80°45'R	3.53	353 ✓
1°30'	80°40'R	3.22	322 ✓
1°40'	80°45'R	2.88	288 ✓

220'	79°05'R	2.47	247 ✓
235'	75°22'R	2.02	202 ✓
245'	68°45'R	1.72	172 ✓
300'	54°55'R	1.63	163 ✓
300'	44°10'R	1.71	171 ✓
310'	35°30'R	1.85	185 ✓
320'	30°17'R	1.80	180 ✓
330'	26°50'R	1.53	153 ✓
330'	26°25'R	1.26	126 ✓
330'	30°25'R	1.04	104 ✓
530'	34°15'R	0.80	79 ✓
710'	50°25'R	0.52	51 ✓
1040'	78°10'R	0.38	37 ✓

135 ft contour

1340'	160°50'W	0.42	40 ✓
2015'	147°35'R	0.30	26 ✓
2015'	103°38'R	0.41	37 ✓

940'	55°15'R	0.64	62 ✓
630'	39°30'R	0.97	96 ✓
445'	32°05'R	1.28	128 ✓
500'	33°10'R	1.46	145 ✓
500'	34°45'R	1.58	157 ✓
525'	44°45'R	1.48	142 ✓
525'	50°00'R	1.53	152 ✓
530'	62°00'R	1.53	151 ✓
525'	72°45'R	1.67	166 ✓
430'	78°52'R	2.04	204 ✓
340'	81°50'R	2.35	235 ✓
310'	82°10'R	2.67	267 ✓
240'	82°38'R	2.98	298 ✓
315'	82°52'R	3.44	344 ✓
2010'	82°45'R	3.63	363 ✓
315'	83°22'R	3.90	390 ✓



## 130 ft. Contour

300'	81°55'R	3.83	383 ✓
300'	84°35'R	3.53	353 ✓
310'	85°05'R	3.23	323 ✓
400'	84°55'R	2.92	292 ✓
400'	84°30'R	2.50	250 ✓
415'	83°35'R	2.18	218 ✓
515'	80°30'R	1.80	180 ✓
620'	76°44'R	1.60	158 ✓
700'	66°55'R	1.45	143 ✓
720'	55°45'R	1.38	136 ✓
730'	43°05'R	1.30	128 ✓
750'	40°50'R	1.20	118 ✓
1030'	49°20'R	0.94	91 ✓
1345'	65°55'R	0.72	68 ✓
1730'	86°00'R	0.57	52 ✓
2245'	122°07'R	0.46	39 ✓
2500'	165°45'R	0.43	35 ✓

1630' 157°30'L 0.60 55 ✓

1150' 149°10'L 0.82 79 ✓

△ Otton Point Canyon baseline  
at Sta. 24

→ Sta. 21 of same

## 130 ft. Contour

210'	172°0'R	4.44	444 ✓
220'	19°52'R	4.10	410 ✓
310'	24°50'R	3.76	376 ✓
315'	78°00'R	3.58	358 ✓
330'	30°37'R	3.40	340 ✓
330'	32°50'R	3.29	329 ✓
330'	36°30'R	3.20	320 ✓
340'	39°37'R	3.07	307 ✓
345'	43°30'R	2.88	288 ✓
410'	49°45'R	2.72	272 ✓
420'	54°40'R	2.53	253 ✓

470' 61°5'R 248 ✓

135 ft. Barton

515' 59°45'R 258 256 ✓

525' 54°00'R 265 263 ✓

515' 48°35'R 280 278 ✓

500' 44°35'R 300 298 ✓

430' 41°08'R 317 317 ✓

440' 36°12'R 333 333 ✓

490' 32°52'R 348 348 ✓

400' 29°30'R 360 360 ✓

335' 26°30'R 376 376 ✓

340' 23°00'R 400 400 ✓

330' 20°07'R 425 425 ✓

310' 18°05'R 460 460 ✓

140 ft. Barton

345' 19°30'R 458 458 ✓

410' 22°25'R 422 422 ✓

410' 26°30'R 388 388 ✓

435' 30°10'R 367 367 ✓

445' 34°20'R 357 357 ✓

510' 36°40'R 340 337 ✓

530' 40°48'R 330 327 ✓

555' 44°52'R 315 311 ✓

600' 47°00'R 296 293 ✓

600' 53°10'R 280 277 ✓

600' 59°35'R 267 264 ✓

01  
2/11/03Alverson  
McLaren  
and  
Kline

△ Pt. on Point Canyon base line  
at Sta. 24

→ Sta. 21 of same

145 ft. Contour.

655'	59°12'R	2.93	279V
650'	52°46'R	2.96	292V
645'	49°00'R	3.10	306V
615'	45°20'R	3.27	327V
605'	45°36'R	3.34	331V
600'	40°05'R	3.40	337V
550'	36°15'R	3.60	357V
535'	33°20'R	3.67	364V
505'	29°45'R	3.75	372V
500'	26°20'R	4.02	399V
455'	23°40'R	4.25	424V

205' 21°30' 4.55 455V

150 ft. Contour

515'	23°12'R	4.44	443V
530'	25°00'R	4.26	422V
550'	27°30'R	4.04	400V
600'	29°30'R	3.90	386V
600'	32°05'R	3.80	376V
620'	34°45'R	3.70	366V
655'	38°00'R	3.58	354V
685'	41°45'R	3.47	343V
700'	47°30'R	3.34	329V
705'	52°10'R	3.15	310V
750'	57°05'R	2.96	292V

155 ft. Contour

820'	62°15'R	3.15	308V
815'	57°05'R	3.20	313V

745	52°06'R	334	328 ✓
735	47°45'R	347	341 ✓
725	45°50'R	357	351 ✓
720	45°15'R	360	354 ✓
708	38°20'R	367	361 ✓
655	34°35'R	380	376 ✓
645	31°15'R	393	398 ✓
625	28°15'R	412	407 ✓
550	25°10'R	443	438 ✓

## 160 ft. Contour.

630	27°18'R	447	443
700	30°10'R	418	412
720	32°52'R	400	394
730	36°12'R	387	381
740	39°08'R	377	370
746	41°15'R	378	371
755	45°38'R	370	363

800	49°37'R	353	346
800	52°00'R	350	343
825	54°48'R	342	335
850	58°16'R	332	324
855	61°50'R	327	319

## 165 ft. Contour.

915	65°55'R	350	341
915	56°40'R	350	341
825	52°08'R	367	359
830	49°00'R	380	372
830	42°50'R	391	383
815	38°40'R	396	388
755	34°55'R	403	395
715	30°40'R	437	429
700	28°30'R	460	452
700	29°30'R	477	470

taken twice

## 170 ft. Contour.

745'	30°35'R	4.62	454
755'	34°00'R	4.40	432
815'	36°30'R	4.27	418
830'	39°07'R	4.18	409
825'	43°45'R	4.05	396
900'	47°26'R	3.96	386
905'	52°18'R	3.92	382
925'	56°36'R	3.80	370
920'	61°00'R	3.77	367
920'	63°30'R	3.70	360

## 175 ft. Contour.

935'	63°38'R	3.96	386
935'	59°45'R	3.92	382
930'	56°45'R	4.04	394
920'	50°30'R	4.12	402
900'	45°45'R	4.22	412

855'	41°50'R	4.33	423
935'	39°00'R	4.43	433
830'	35°55'R	4.54	445
800'	33°10'R	4.82	473

Δ Pt. on 8<sup>th</sup> bearing line at  
A 4494 R  
→ A 0.

## 160 ft. Contour

205'	69°25'R	3.90	290 ✓
200'	72°00'R	3.20	320 ✓
200'	72°30'R	3.50	350 ✓
150'	72°55'R	3.83	383 ✓
145'	74°30'R	4.10	410 ✓
140'	74°25'R	4.38	438 ✓

## 165 ft. Contour.

210'	73°00'	4.30	430 ✓
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## Verticality of Rod:

295'	7240 R	405	405	✓
295'	7050 R	383	383	✓
280'	7008 R	355	355	✓
300'	7350 R	333	333	X
300'	6615 R	300	300	✓

## 170 ft Contour

320'	6520 R	320	320	✓
325'	6552 R	353	353	✓
395'	6735 R	385	385	✓
300'	6916 R	418	418	✓

## 175 ft Contour

325'	6905 R	432	432	✓
330'	6615 R	402	402	✓
355'	6406 R	372	372	✓
410'	6125 R	348	348	✓

## 180 ft Contour

430'	6018 R	377	377	✓
430'	6325 R	410	410	✓
400'	6515 R	445	445	✓
325'	6555 R	460	460	✓

△ Point on 8th range line at  
B 1+50 R

→ B line produced westerly

## 180 ft Contour

230'	4620 R	185	185	✓	180
245'	4425 R	157	157	✓	
245'	4540 R	126	126	✓	
305'	4037 R	95	95	✓	
305'	2902 R	059	59	✓	
545'	678 R	034	34	✓	
935'	4035 L	022	21	✓	
900'	11442 L	036	35	✓	

4:50'	135°50'L	0.64	64 ✓
4:00'	143°15'L	0.92	92 ✓
3:55'	139°45'L	1.12	112 ✓
3:30'	133°10'L	1.37	137 ✓
2:30'	124°50'L	1.60	160 ✓
2:30'	119°35'L	1.82	182 ✓
2:25'	112°55'L	2.10	210 ✓
2:25'	107°10'L	2.18	218 ✓
2:10'	97°12'L	2.07	207 ✓
2:10'	89°00'L	2.07	207 ✓
2:15'	81°45'L	2.30	230 ✓
1:25'	81°00'L	2.77	277 ✓
1:20'	81°50'L	3.14	314 ✓
0:55'	80°00'L	3.48	348 ✓
0:50'	80°20'L	3.90	390 ✓
0:25'	80°17'L	4.20	420 ✓

175 ft Contour

1:00'	78°20'L	4.18	418 ✓
1:00'	77°45'L	3.76	376 ✓
1:55'	76°45'L	3.40	240 ✓ 340
2:05'	76°35'L	3.00	300 ✓
2:30'	76°30'L	2.60	260 ✓
3:05'	78°35'L	2.18	218 ✓
3:20'	85°53'L	1.91	191 ✓
3:25'	99°45'L	1.89	189 ✓
3:30'	108°35'L	1.97	197 ✓
3:30'	114°06'L	1.83	183 ✓
3:30'	117°30'L	1.15	115 ✓ 110?
3:05'	125°04'L	1.36	136 ✓
3:05'	130°45'L	1.10	110 ✓
3:30'	128°35'L	0.80	80 ✓
6:20'	108°18'L	0.55	55 ✓
6:25'	62°00'L	0.40	40 ✓
6:25'	13°20'L	0.48	48 ✓

## 170 ft Contour.

12 <sup>00</sup>	28°08' L	0.70	47 ✓
13 <sup>35</sup>	65°05' L	0.58	55 ✓
13 <sup>35</sup>	89°36' L	0.66	63 ✓
11 <sup>05</sup>	114°25' L	0.78	75 ✓
9 <sup>15</sup>	123°45' L	1.11	109 ✓
6 <sup>20</sup>	112°15' L	1.57	155 ✓
4 <sup>50</sup>	108°07' L	1.78	178 ✓
5 <sup>00</sup>	96°55' L	1.72	171 ✓
5 <sup>00</sup>	86°52' L	1.75	174 ✓
5 <sup>00</sup>	76°45' L	2.00	198 ✓
4 <sup>00</sup>	72°38' L	2.26	226 ✓
3 <sup>50</sup>	72°07' L	2.60	260 ✓
3 <sup>00</sup>	73°45' L	3.07	307 ✓
2 <sup>35</sup>	74°32' L	3.38	338 ✓
2 <sup>15</sup>	75°25' L	3.85	385 ✓
1 <sup>50</sup>	75°55' L	4.12	412 ✓

## 165 ft Contour.

0 <sup>05</sup>	74°55' L	4.15	415 ✓
3 <sup>00</sup>	73°06' L	3.73	373 ✓
3 <sup>20</sup>	71°50' L	3.38	338 ✓
4 <sup>00</sup>	69°48' L	2.96	296 ✓
4 <sup>40</sup>	67°50' L	2.57	257 ✓
4 <sup>30</sup>	70°00' L	2.13	213 ✓
5 <sup>05</sup>	74°30' L	1.85	183 ✓
6 <sup>00</sup>	85°15' L	1.64	162 ✓
6 <sup>05</sup>	91°12' L	1.58	156 ✓
6 <sup>00</sup>	103°25' L	1.58	156 ✓
6 <sup>05</sup>	108°04' L	1.50	148 ✓
7 <sup>45</sup>	112°08' L	1.25	123 ✓
11 <sup>00</sup>	105°08' L	0.88	85 ✓
12 <sup>10</sup>	79°30' L	0.75	72 ✓
12 <sup>10</sup>	73°10' L	0.80	77 ✓
12 <sup>00</sup>	29°45' L	0.86	83 ✓
11 <sup>50</sup>	13°20' L	0.95	91 ✓



44

2/17/03  
Alverson  
McLaren  
Annisson  
Luce

△ Pt. on Round Canyon base  
line at Sta. 22+30.

→ Sta. 34  
160 ft. Contour

taken twice

102.0'	86°20'L	2.92	283
94.0'	81°45'L	3.23	314
84.5'	79°15'L	3.48	335
80.0'	77°45'L	3.72	365
74.5'	76°08'L	4.08	400
74.5'	74°00'L	4.52	414
80.0'	70°10'L	4.27	419
80.5'	69°15'L	4.17	409
80.0'	68°07'L	3.92	384
83.0'	65°53'L	3.70	362
84.0'	62°15'L	3.42	334

taken twice

91.5'	59°45'L	3.25	317
93.5'	54°00'L	3.18	309
93.0'	49°00'L	3.20	311
90.0'	42°16'L	3.35	327
85.0'	38°22'L	3.55	347
81.5'	34°35'L	3.71	363
74.5'	31°08'L	3.95	388
71.5'	27°04'L	4.26	419

155 ft. Contour

64.0'	26°10'L	4.13	407 ✓
70.0'	28°55'L	3.93	387 ✓
74.5'	31°35'L	3.75	368 ✓
74.5'	34°58'L	3.53	346 ✓
81.5'	39°06'L	3.30	323 ✓
90.0'	43°40'L	3.11	303 ✓
90.0'	49°00'L	3.00	292 ✓
90.0'	58°25'L	3.11	303 ✓

8 <sup>00</sup> '	63°05'L	3.30	324 ✓
7 <sup>50</sup> '	66°22'L	3.54	347 ✓
7 <sup>50</sup> '	70°33'L	3.86	379 ✓
7 <sup>00</sup> '	73°38'L	3.94	388 ✓
7 <sup>30</sup> '	76°35'L	3.61	355 ✓
8 <sup>15</sup> '	78°40'L	3.27	320 ✓
9 <sup>20</sup> '	81°15'L	2.95	287 ✓
10 <sup>15</sup> '	86°50'L	2.77	268 ✓

## 150 ft. Bontour.

10 <sup>00</sup> '	85°00'L	2.60	252 ✓
8 <sup>45</sup> '	80°00'L	2.83	276 ✓
8 <sup>05</sup> '	77°30'L	3.21	315 ✓
7 <sup>30</sup> '	75°42'L	3.54	348 ✓
7 <sup>20</sup> '	73°30'L	3.78	372 ✓
7 <sup>25</sup> '	69°40'L	3.50	344 ✓
7 <sup>30</sup> '	66°08'L	3.34	328 ✓
7 <sup>45</sup> '	61°25'L	3.05	299 ✓

8 <sup>35</sup> '	55°40'L	2.88	282 ✓
8 <sup>30</sup> '	47°35'L	2.90	284 ✓
8 <sup>00</sup> '	39°42'L	3.10	304 ✓
7 <sup>30</sup> '	34°00'L	3.41	335 ✓
7 <sup>00</sup> '	29°55'L	3.64	359 ✓
6 <sup>45</sup> '	27°35'L	3.83	378 ✓
6 <sup>35</sup> '	20°25'L	4.08	403 ✓

## 145 ft. Bontour.

5 <sup>20</sup> '	23°42'L	3.97	394 ✓
6 <sup>00</sup> '	26°33'L	3.64	360 ✓
6 <sup>00</sup> '	28°34'L	3.50	346 ✓
6 <sup>45</sup> '	32°07'L	3.30	325 ✓
7 <sup>00</sup> '	36°40'L	3.07	302 ✓
7 <sup>15</sup> '	41°20'L	2.82	278 ✓
8 <sup>10</sup> '	47°35'L	2.73	267 ✓
8 <sup>00</sup> '	51°30'L	2.70	265 ✓
8 <sup>00</sup> '	59°15'L	2.87	282 ✓

700'	65°00'L	308	303 ✓
780'	69°50'L	324	319 ✓
640'	72°55'L	343	338 ✓
700'	75°10'L	315	309 ✓
715'	76°55'L	292	287 ✓
800'	79°07'L	265	260 ✓
835'	81°42'L	248	242 ✓

## 140 ft. Contour.

710'	77°55'L	250	246 ✓
700'	75°00'L	283	279 ✓
605'	71°40'L	316	312 ✓
625'	67°40'L	302	298 ✓
630'	69°55'L	283	279 ✓
725'	58°10'L	262	258 ✓
725'	53°40'L	254	250 ✓
720'	46°18'L	260	256 ✓
700'	49°15'L	270	266 ✓

700'	38°50'L	281	277 ✓
630'	34°25'L	300	296 ✓
600'	38°04'L	327	324 ✓
530'	26°04'L	352	349 ✓
515'	24°25'L	376	373 ✓
500'	23°12'L	389	384 ✓

## 135 ft. Contour.

405'	21°45'L	378	376 ✓
435'	24°15'L	350	348 ✓
500'	29°45'L	327	325 ✓
500'	30°35'L	309	305 ✓
530'	33°40'L	293	290 ✓
545'	36°55'L	276	273 ✓
625'	43°07'L	256	253 ✓
630'	47°22'L	247	244 ✓
630'	52°45'L	243	240 ✓
600'	63°10'L	204	261 ✓

600'	66°15'L	2.78	275 ✓
600'	69°45'L	2.90	287 ✓
600'	74°00'L	2.63	260 ✓
600'	76°40'L	2.41	238 ✓

Δ Pt. on Pond Canyon base line  
at Sta. 25+90

→ Sta. 27

135 ft. Contour.

615'	100°15'L	1.93	191 ✓
735'	89°12'L	1.90	187 ✓
700'	80°35'L	2.03	200 ✓
615'	75°30'L	2.30	227 ✓
525'	71°48'L	2.64	262 ✓
600'	71°55'L	2.92	289 ✓
500'	68°35'	3.17	315 ✓
500'	66°30'L	3.00	298 ✓
500'	63°15'L	2.78	276 ✓

140 ft. Contour.

570'	60°00'L	2.53	251 ✓
530'	56°12'L	2.34	232 ✓
550'	45°50'L	2.20	217 ✓
700'	45°48'L	2.37	233 ✓
700'	52°15'L	2.45	241 ✓
630'	57°45'L	2.60	257 ✓
615'	59°40'L	2.70	267 ✓
540'	64°15'L	3.04	301 ✓
500'	66°40'L	3.45	342 ✓
515'	68°45'L	3.70	367 ✓
545'	71°45'L	3.53	349 ✓
600'	72°55'L	3.23	319 ✓
635'	74°00'L	2.90	286 ✓
645'	74°50'L	2.63	259 ✓
700'	78°30'L	2.33	229 ✓
725'	83°00'L	2.14	210 ✓

## Vertical Horiz Rod

730' 92°35' L 2.05 202 ✓

800' 99°35' L 2.08 204 ✓

## 145 ft. Contour

830' 99°30' L 2.23 218 ✓

845' 89°20' L 2.24 219 ✓

800' 80°45' L 2.48 243 ✓

730' 76°55' L 2.77 272 ✓

715' 75°38' L 3.05 300 ✓

710' 75°10' L 3.15 310 ✓

635' 73°50' L 3.50 345 ✓

545' 71°39' L 4.17 413 ✓

515' 69°40' L 4.08 405 ✓

510' 66°50' L 3.85 382 ✓

520' 65°12' L 3.50 347 ✓

625' 62°37' L 3.13 309 ✓

650' 59°05' L 2.86 282 ✓

640' 54°37' L 2.67 264 ✓

715' 44°56' L 2.52 248 ✓

## 150 ft. Contour

740' 45°00' L 2.90 265 ✓

715' 52°07' L 2.77 272 ✓

725' 58°25' L 3.00 295 ✓

700' 61°40' L 3.20 315 ✓

630' 63°34' L 3.54 350 ✓

600' 64°35' L 3.93 389 ✓

500' 66°00' L 4.25 424 ✓

530' 59°10' L 4.26 422 ✓

545' 70°36' L 4.10 40.6 ✓

555' 72°15' L 3.88 38.4 ✓

700' 74°42' L 3.58 353 ✓

720' 75°35' L 3.40 33.4 ✓

715' 75°55' L 3.20 315 ✓

810' 78°15' L 2.93 287 ✓

9<sup>00</sup>' 81<sup>55</sup>'L 2.65 259 ✓9<sup>40</sup>' 88<sup>00</sup>'L 2.38 231 ✓9<sup>20</sup>' 97<sup>15</sup>'L 2.33 227 ✓

## 155 ft Contour.

10<sup>20</sup>' 99<sup>45</sup>'L 2.48 240 ✓10<sup>20</sup>' 91<sup>55</sup>'L 2.50 242 ✓10<sup>20</sup>' 88<sup>30</sup>'L 2.52 244 ✓9<sup>15</sup>' 84<sup>25</sup>'L 2.77 270 ✓8<sup>45</sup>' 81<sup>25</sup>'L 2.96 289 ✓8<sup>30</sup>' 78<sup>00</sup>'L 3.27 320 ✓8<sup>10</sup>' 77<sup>20</sup>'L 3.48 341 ✓7<sup>15</sup>' 73<sup>55</sup>'L 3.89 380 ✓6<sup>30</sup>' 70<sup>56</sup>'L 4.20 415 ✓6<sup>20</sup>' 69<sup>00</sup>'L 4.43 438 ✓6<sup>15</sup>' 68<sup>55</sup>'L 4.47 442 ✓6<sup>15</sup>' 63<sup>30</sup>'L 4.60 455 ✓6<sup>25</sup>' 63<sup>00</sup>'L 4.40 435 ✓6<sup>30</sup>' 63<sup>10</sup>'L 4.20 415 ✓6<sup>45</sup>' 62<sup>45</sup>'L 3.87 383 ✓7<sup>30</sup>' 61<sup>20</sup>'L 3.50 344 ✓7<sup>30</sup>' 60<sup>00</sup>'L 3.28 317 ✓8<sup>05</sup>' 54<sup>30</sup>'L 3.00 294 ✓8<sup>45</sup>' 47<sup>00</sup>'L 2.85 278 ✓

△ Pt. on Pound Canyon base  
line at Sta. 27

→ Sta. 33+35

## 155 ft Contour.

11<sup>10</sup>' 60<sup>55</sup>'L 2.22 214 ✓11<sup>20</sup>' 50<sup>08</sup>'L 2.30 221 ✓10<sup>25</sup>' 48<sup>45</sup>'L 2.48 240 ✓9<sup>30</sup>' 38<sup>00</sup>'L 2.72 265 ✓9<sup>10</sup>' 36<sup>00</sup>'L 2.90 283 ✓9<sup>00</sup>' 35<sup>15</sup>'L 2.96 289 ✓8<sup>30</sup>' 35<sup>35</sup>'L 3.20 313 ✓

7 <sup>30</sup>	30°10'	338	332✓
7 <sup>30</sup>	28°40'	367	361✓
6 <sup>45</sup>	27°12'	388	383✓
6 <sup>15</sup>	25°13'	426	421✓

## 150 ft. Contour

5 <sup>30</sup>	23°55'	416	412✓
5 <sup>45</sup>	25°20'	393	389✓
6 <sup>10</sup>	26°38'	375	370✓
6 <sup>25</sup>	28°22'	340	336✓
7 <sup>00</sup>	31°20'	317	312✓
8 <sup>00</sup>	33°45'	294	288✓
8 <sup>30</sup>	35°46'	267	261✓
9 <sup>00</sup>	39°10'	248	242✓
9 <sup>35</sup>	43°25'	234	227✓
10 <sup>00</sup>	49°33'	222	215✓
10 <sup>45</sup>	53°03'	214	207✓
10 <sup>45</sup>	59°52'	207	200✓

## 145 ft. Contour

10 <sup>00</sup>	61°38'	190	184✓
10 <sup>00</sup>	54°45'	195	189✓
9 <sup>20</sup>	47°10'	205	200✓
8 <sup>30</sup>	39°30'	225	220✓
8 <sup>00</sup>	34°20'	253	248✓
7 <sup>45</sup>	33°35'	270	265✓
7 <sup>00</sup>	31°00'	297	293✓
6 <sup>30</sup>	29°08'	320	316✓
5 <sup>55</sup>	26°46'	342	338✓
5 <sup>30</sup>	24°45'	376	374✓
5 <sup>15</sup>	23°05'	407	404✓
4 <sup>35</sup>	22°30'	420	420✓

## 140 ft. Contour

4 <sup>45</sup>	21°15'	405	405✓
4 <sup>30</sup>	23°10'	382	382✓
4 <sup>35</sup>	24°15'	357	357✓

575'	26°08'L	322	319 ✓
575'	28°22'L	300	297 ✓
650'	31°25'L	264	259 ✓
700'	34°40'L	233	229 ✓
830'	38°30'L	216	212 ✓
830'	44°00'L	197	193 ✓
930'	55°18'L	180	175 ✓
1000'	65°08'L	173	168 ✓

## 135 ft Contour

830'	63°55'L	160	157 ✓
800'	51°49'L	167	164 ✓
730'	41°35'L	184	181 ✓
730'	35°07'L	213	209 ✓
655'	32°30'L	227	224 ✓
535'	29°30'L	260	258 ✓
505'	27°30'L	280	278 ✓
500'	25°50'L	304	302 ✓

430'	24°20'L	320	320 ✓
430'	23°12'L	350	350 ✓
345'	21°00'L	383	383 ✓
345'	19°35'L	404	404 ✓

2/18/03  
 Alverton  
 McParment  
 Appinola  
 Ridge

Δ Pt. on 9th St. range line at C. Wright

→ Co

## 160 ft Contour

430'	169°19'R	180	180 ✓
435'	167°45'R	157	157 ✓
430'	164°00'R	145	145 ✓
430'	158°47'R	130	130 ✓
635'	145°25'R	108	106 ✓
650'	130°10'R	103	101 ✓
650'	115°42'R	107	105 ✓



635	98°30'R	110	108 ✓
700	110°22'R	084	83 ✓
930	112°05'R	053	52 ✓
1500	154°05'R	037	35 ✓
1235	173°04'L	049	47 ✓
800	156°12'L	070	69 ✓
545	146°50'L	100	99 ✓
400	146°00'L	153	153 ✓
300	141°40'L	198	198 ✓
115	137°43'L	235	235 ✓

## 165 ft Contour

015	136°40'L	222	222 ✓
100	140°15'L	178	178 ✓
130	142°20'L	146	146 ✓
200	139°32'L	114	114 ✓
200	146°42'L	074	74 ✓
545	162°35'L	045	45 ✓

10°00'	149°00'R	023	22 ✓
730'	95°00'R	028	28 ✓
450'	95°52'R	051	51 ✓
300'	94°05'R	081	81 ✓
231½'	90°30'R	107	107 ✓
230'	91°50'R	128	128 ✓
230'	102°46'R	116	116 ✓
215'	118°35'R	113	113 ✓
300'	130°50'R	110	110 ✓
210'	139°37'R	112	112 ✓
150'	152°40'R	127	127 ✓
130'	162°07'R	150	150 ✓
130'	165°26'R	182	182 ✓

## 170 ft Contour

120'	161°35'R	188	188 ✓
190'	160°15'R	167	167 ✓
190'	157°50'R	143	143 ✓

110'	144°45'R	1.25	125 ✓
110'	132°36'R	1.20	120 ✓
110'	115°55'R	1.23	123 ✓
120'	101°18'R	1.32	132 ✓
100'	92°45'R	1.48	148 ✓
120'	84°50'R	1.33	133 ✓
100'	80°35'R	1.26	126 ✓
100'	82°47'R	1.02	102 ✓
100'	83°15'R	0.82	82 ✓
100'	83°15'R	0.59	59 ✓
100'	73°45'R	0.23	23 ✓
100'	165°15'L	0.21	21 ✓
130'	147°15'L	0.47	47 ✓
100'	139°35'L	0.77	77 ✓
000'	133°50'L	1.10	110 ✓
000'	139°15'L	1.42	142 ✓
000'	138°00'L	1.80	180 ✓
000'	139°45'L	2.30	230 ✓

## 175 ft Contour

000'	129°25'L	2.20	220 ✓
000'	133°55'L	1.88	188 ✓
000'	132°00'L	1.50	150 ✓
000'	129°50'L	1.24	124 ✓
000'	128°55'L	0.90	90 ✓
000'	129°12'L	0.57	57 ✓
000'	133°55'L	0.22	22 ✓
000'	37°30'R	0.10	10
000'	47°00'R	0.35	35
000'	68°50'R	0.54	54 ✓
000'	77°15'R	0.78	78 ✓
000'	77°30'R	1.10	110 ✓
230'	75°25'R	1.33	133 ✓
200'	80°36'R	1.48	148 ✓
200'	85°45'R	1.57	157 ✓
200'	91°30'R	1.73	173 ✓
200'	101°20'R	1.48	148 ✓

146	112° 55' R	135	135 ✓
150	128° 00' R	128	128 ✓
200	139° 42' R	132	132 ✓
200	146° 45' R	142	142 ✓
145	153° 55' R	162	162 ✓
145	157° 30' R	192	192 ✓

△ Pt. on Pound Canyon face  
line at Sta. 27.

→ Sta. 30

160 ft. Contour.

1100	74° 17' L	265	255 ✓
1200	67° 45' L	243	233 ✓
1215	59° 07' L	238	227 ✓
1210	52° 30' L	240	229 ✓
1100	45° 15' L	260	251 ✓
1100	39° 45' L	283	274 ✓
930	36° 25' L	302	294 ✓

840	33° 45' L	323	316 ✓
800	30° 47' L	353	346 ✓
740	29° 42' L	370	363 ✓
700	28° 30' L	396	390 ✓
650	26° 30' L	427	421 ✓

165 ft. Contour.

730	27° 45' L	432	425 ✓
800	29° 50' L	404	396 ✓
830	31° 42' L	364	356 ✓
930	34° 47' L	337	328 ✓
1015	37° 10' L	315	304 ✓
1045	39° 50' L	296	286 ✓
1200	47° 42' L	267	255 ✓
1220	52° 55' L	254	242 ✓
1215	61° 30' L	251	240 ✓
1200	69° 05' L	262	252 ✓

## 170 ft. Contour.

12°30'	67°25'L	2.77	264 ✓
13°10'	61°35'L	2.68	254 ✓
12°45'	53°48'L	2.68	255 ✓
12°30'	48°22'L	2.80	267 ✓
11°40'	42°25'L	2.94	282 ✓
10°50'	38°38'L	3.22	311 ✓
9°50'	35°12'L	3.48	338 ✓
9°15'	32°25'L	3.82	372 ✓
8°50'	31°12'L	4.10	400 ✓
8°10'	29°32'L	4.38	429 ✓
8°00'	28°52'L	4.52	443 ✓

## 175 ft. Contour.

8°40'	30°18'L	4.60	450 ✓
9°00'	31°45'L	4.28	418 ✓
9°30'	33°00'L	3.96	385 ✓
10°20'	34°55'L	3.73	361 ✓

11°00'	39°42'L	3.43	331 ✓
12°10'	41°25'L	3.20	308 ✓
13°00'	48°05'L	2.97	282 ✓
13°30'	58°40'L	2.82	267 ✓
13°15'	63°25'L	2.83	268 ✓

## 180 ft. Contour.

13°15'	59°55'L	2.98	283 ✓
13°50'	53°05'L	3.00	283 ✓
13°15'	49°03'L	3.12	297 ✓
12°30'	42°50'L	3.22	317 ✓
12°00'	39°15'L	3.50	335 ✓
10°50'	36°37'L	3.72	359 ✓
10°30'	34°55'L	4.00	387 ✓
9°45'	33°20'L	4.30	418 ✓
9°25'	32°05'L	4.60	448 ✓

## 185 ft. Contour.

1000'	33°42'L	4.67	453 ✓
1045'	35°05'L	4.30	415 ✓
1115'	37°00'L	4.02	387 ✓
1215'	40°25'L	3.60	344 ✓
1355'	46°15'L	3.30	312 ✓
1400'	53°35'L	3.15	297 ✓
1400'	61°00'L	3.16	298 ✓

## 190 ft. Contour.

1420'	68°35'L	3.40	319 ✓
1420'	55°25'L	3.30	309 ✓
1410'	49°20'L	3.42	322 ✓
1305'	43°40'L	3.67	348 ✓
1200'	39°42'L	3.90	373 ✓
1140'	38°05'L	4.18	401 ✓
1045'	35°56'L	4.50	434 ✓

△ Pt. on 8<sup>th</sup> St range line at

□ 2 right

→ □ 2 + 75

## 195 ft. Contour.

1415'	84°42'R	4.75	475 ✓
200'	78°40'R	4.57	457 ✓
300'	74°15'R	4.04	404 ✓
350'	71°20'R	3.63	363 ✓
400'	69°40'R	3.25	325 ✓
415'	68°42'R	2.86	286 ✓
500'	66°43'R	2.43	241 ✓
600'	64°56'R	1.98	196 ✓
700'	62°46'R	1.69	167 ✓
820'	56°52'R	1.40	137 ✓
945'	43°25'R	1.20	117 ✓
1000'	28°10'R	1.23	119 ✓
1430'	12°05'R	1.33	126 ✓

## 200 ft Contour

8 <sup>30</sup>	10 <sup>22</sup> R.118	115 ✓
8 <sup>30</sup>	76 <sup>07</sup> R.104	102 ✓
8 <sup>30</sup>	41 <sup>05</sup> R.096	94 ✓
8 <sup>30</sup>	58 <sup>35</sup> R.117	115 ✓
8 <sup>10</sup>	65 <sup>18</sup> R.143	141 ✓
8 <sup>40</sup>	68 <sup>22</sup> R.178	176 ✓
4 <sup>40</sup>	76 <sup>15</sup> R.213	213 ✓
4 <sup>00</sup>	70 <sup>55</sup> R.250	250 ✓
3 <sup>45</sup>	71 <sup>38</sup> R.288	288 ✓
3 <sup>00</sup>	73 <sup>25</sup> R.320	320 ✓
3 <sup>45</sup>	74 <sup>35</sup> R.367	367 ✓
2 <sup>15</sup>	77 <sup>08</sup> R.408	408 ✓
2 <sup>00</sup>	80 <sup>18</sup> R.445	445 ✓
1 <sup>45</sup>	85 <sup>05</sup> R.470	470 ✓

## 205 ft Contour

1 <sup>35</sup>	84 <sup>46</sup> R.440	440 ✓
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1 <sup>30</sup>	80 <sup>42</sup> R.416	416 ✓
1 <sup>35</sup>	78 <sup>25</sup> R.390	390 ✓
1 <sup>45</sup>	75 <sup>36</sup> R.346	346 ✓
2 <sup>00</sup>	74 <sup>12</sup> R.305	305 ✓
3 <sup>00</sup>	74 <sup>36</sup> R.260	260 ✓
3 <sup>00</sup>	73 <sup>45</sup> R.220	220 ✓
3 <sup>00</sup>	74 <sup>38</sup> R.174	174 ✓
4 <sup>30</sup>	74 <sup>12</sup> R.142	142 ✓
5 <sup>30</sup>	70 <sup>06</sup> R.107	106 ✓
5 <sup>30</sup>	58 <sup>56</sup> R.086	86 ✓
7 <sup>40</sup>	43 <sup>55</sup> R.077	76 ✓
7 <sup>30</sup>	20 <sup>36</sup> R.090	89 ✓
7 <sup>00</sup>	9 <sup>00</sup> R.100	99 ✓

## 210 ft Contour

6 <sup>00</sup>	15 <sup>5</sup> R.078	77 ✓
6 <sup>30</sup>	29 <sup>10</sup> R.056	56 ✓
6 <sup>30</sup>	62 <sup>20</sup> R.064	64 ✓

400'	79°10'R	0.96	96 ✓
330'	80°55'R	1.33	133 ✓
215'	80°10'R	1.70	170 ✓
200'	79°37'R	2.04	204 ✓
200'	77°55'R	2.54	254 ✓
130'	78°00'R	2.97	297 ✓
130'	77°38'R	3.40	340 ✓
115'	83°55'R	3.85	385 ✓

215 ft. Contour

125'	91°30'R	2.05	205 ✓
130'	95°12'R	1.68	168 ✓
150'	94°45'R	1.34	134 ✓
300'	97°50'R	0.95	95 ✓
625'	91°30'R	0.57	57 ✓
625'	49°15'R	0.35	35 ✓
625'	4°30'L	0.63	63 ✓
424.5'	70°13'L	1.00	100 ✓

225'	29°00'L	1.20	120 ✓
130'	36°22'L	1.50	150 ✓

220 ft. Contour

100'	40°40'L	1.44	144 ✓
100'	34°40'L	1.13	113 ✓
100'	27°22'L	0.78	78 ✓
100'	24°30'L	0.43	43 ✓
100'	121°50'R	0.09	9 ✓
100'	129°30'R	0.48	48 ✓
130'	122°00'R	0.80	80 ✓

75.8

△ Phon Round Canyon base  
line at Sta. 31

→ Sta 33+85

210 ft. contour

13°30'	52°00'	4.17	394 ✓
13°30'	48°48'	4.27	405 ✓
13°15'	44°45'	4.26	404 ✓
12°45'	41°28'	4.47	425 ✓
12°30'	38°40'	4.60'	439 ✓

205 ft. Contour

12°00'	36°45'	4.53	433 ✓
12°20'	39°52'	4.32	412 ✓
12°40'	43°30'	4.10	390 ✓
13°10'	47°55'	4.08	387 ✓
13°10'	52°50'	3.95	375 ✓

38

200 ft. Contour

13°00'	51°03'	3.78	359 ✓
12°30'	45°38'	3.86	368 ✓
12°15'	41°51'	4.00	382 ✓
11°45'	37°00'	4.17	400 ✓
11°15'	34°20'	4.50	433 ✓

195 ft. contour

10°40'	33°00'	4.40	425 ✓
11°15'	38°20'	4.10	394 ✓
11°50'	38°30'	4.20	383 ✓
11°50'	41°15'	3.83	367 ✓
12°15'	45°55'	3.68	352 ✓
12°30'	49°50'	3.65	348 ✓

190 ft. contour

13°35'	93°45'	2.92	271 ✓
13°00'	87°25'	3.00	280 ✓



13°25'	79°05'	3.15	297 ✓
13°00'	71°15'	3.38	321 ✓
12°30'	64°20'	3.50	334 ✓
12°25'	59°36'	3.43	327 ✓
12°25'	52°35'	3.50	334 ✓
12°00'	46°35'	3.53	338 ✓
11°35'	41°10'	3.64	349 ✓
11°00'	35°15'	4.00	386 ✓
10°00'	31°25'	4.30	417 ✓

185 ft Bantour

9°45'	38°00'	4.22	410 ✓
10°00'	32°22'	3.93	381 ✓
11°00'	36°20'	3.73	359 ✓
11°00'	41°33'	3.50	337 ✓
11°30'	48°34'	3.38	325 ✓
12°00'	58°45'	3.32	318 ✓
12°15'	63°38'	3.28	313 ✓

12°25'	68°45'	3.24	309 ✓
12°45'	74°00'	3.16	301 ✓
13°45'	80°22'	2.96	279 ✓
14°20'	86°48'	2.80	263 ✓

180 ft Bantour

14°20'	87°20'	2.62	246 ✓
13°35'	82°20'	2.75	260 ✓
12°30'	75°06'	2.92	278 ✓
12°10'	69°30'	3.00	287 ✓
11°50'	65°05'	3.17	304 ✓
11°30'	60°55'	3.20	307 ✓
11°30'	55°40'	3.17	304 ✓
11°30'	50°28'	3.18	305 ✓
11°00'	44°17'	3.32	320 ✓
10°30'	38°45'	3.46	335 ✓
10°30'	34°50'	3.62	358 ✓
9°40'	31°42'	3.77	366 ✓

79.8

9°30' 29°06' L 3.96 385 ✓

9°10' 27°25' L 4.12 402 ✓

175 ft. Contour.

9°40' 25°40' L 4.00 389 ✓

9°15' 28°22' L 3.73 363 ✓

9°35' 32°42' L 3.50 340 ✓

10°10' 38°48' L 3.30 320 ✓

10°35' 44°00' L 3.17 305 ✓

11°30' 50°55' L 3.07 290 ✓

11°00' 56°25' L 3.04 293 ✓

11°00' 63°53' L 3.03 292 ✓

12°00' 70°22' L 2.89 275 ✓

13°00' 76°10' L 2.66 253 ✓

13°55' 84°22' L 2.50 236 ✓

2/19/03

Alverson  
McLaren  
Agnesola  
Lake

170 ft. Contour.

13°20' 86°12' L 2.30 218 ✓

12°40' 78°30' L 2.50 238 ✓

11°50' 71°55' L 2.60 249 ✓

11°15' 65°40' L 2.78 267 ✓

11°00' 62°42' L 2.90 279 ✓

10°30' 56°05' L 2.92 282 ✓

10°30' 52°18' L 2.90 280 ✓

10°30' 45°35' L 2.97 287 ✓

9°50' 39°32' L 3.10 301 ✓

9°25' 32°40' L 3.30 321 ✓

8°55' 27°45' L 3.55 347 ✓

8°10' 24°03' L 3.86 378 ✓

8°00' 22°15' L 4.15 407 ✓

## 165 ft. Bantow

7 <sup>30</sup> '	20°45' L	4.06	399 ✓
7 <sup>30</sup> '	21°15' L	3.80	373 ✓
7 <sup>50</sup> '	24°18' L	3.50	343 ✓
8 <sup>20</sup> '	28°13' L	3.30	323 ✓
8 <sup>50</sup> '	33°45' L	3.12	305 ✓
9 <sup>15</sup> '	38°52' L	2.97	289 ✓
10 <sup>00</sup> '	46°49' L	2.80	272 ✓
9 <sup>50</sup> '	52°12' L	2.77	269 ✓
10 <sup>00</sup> '	58°16' L	2.76	268 ✓
10 <sup>15</sup> '	61°02' L	2.77	268 ✓
10 <sup>20</sup> '	63°35' L	2.72	263 ✓
10 <sup>35</sup> '	68°23' L	2.52	244 ✓
11 <sup>40</sup> '	74°25' L	2.42	232 ✓
12 <sup>50</sup> '	83°50' L	2.18	207 ✓
13 <sup>00</sup> '	90°15' L	2.17	206 ✓

## 160 ft. Bantow

11 <sup>45</sup> '	89°10' L	2.04	196 ✓
11 <sup>45</sup> '	81°06' L	2.10	202 ✓
11 <sup>30</sup> '	74°55' L	2.25	216 ✓
10 <sup>00</sup> '	68°10' L	2.38	231 ✓
10 <sup>00</sup> '	63°48' L	2.50	242 ✓
9 <sup>30</sup> '	61°30' L	2.60	253 ✓
9 <sup>30</sup> '	55°40' L	2.64	257 ✓
9 <sup>30</sup> '	49°30' L	2.63	256 ✓
9 <sup>00</sup> '	43°52' L	2.70	263 ✓
8 <sup>30</sup> '	39°07' L	2.88	282 ✓
7 <sup>40</sup> '	27°03' L	3.19	313 ✓
7 <sup>00</sup> '	21°15' L	3.51	346 ✓
6 <sup>45</sup> '	18°25' L	3.92	387 ✓

## 155 ft. Bantow

6 <sup>00</sup> '	16°30' L	3.92	388 ✓
6 <sup>00</sup> '	17°05' L	3.66	362 ✓

## Vertical Horiz. Rod

620'	19°30' L	3.38	334 ✓
700'	24°35' L	3.12	307 ✓
790'	28°18' L	2.98	293 ✓
820'	35°15' L	2.80	275 ✓
850'	40°22' L	2.67	262 ✓
830'	46°32' L	2.53	247 ✓
845'	54°08' L	2.48	242 ✓
900'	58°40' L	2.52	246 ✓
840'	61°34' L	2.40	235 ✓
930'	65°15' L	2.28	222 ✓
1000'	70°56' L	2.17	210 ✓
1045'	77°00' L	2.95	285 ✓
1115'	85°35' L	1.93	186 ✓

## 150 ft. Contour

1015'	85°25' L	1.79	173 ✓
945'	75°42' L	1.91	186 ✓

940'	69°10' L	2.03	197 ✓
810'	61°45' L	2.27	222 ✓
800'	58°42' L	2.35	231 ✓
800'	54°32' L	2.30	226 ✓
800'	46°12' L	2.42	237 ✓
720'	37°15' L	2.59	255 ✓
620'	28°22' L	2.85	282 ✓
600'	20°45' L	3.15	312 ✓
525'	16°17' L	3.44	341 ✓
520'	14°30' L	3.78	375 ✓
520'	14°42' L	4.00	397 ✓

## 145 ft. Contour

430'	13°03' L	3.94	394 ✓
440'	13°10' L	3.67	367 ✓
440'	15°25' L	3.35	335 ✓
450'	18°06' L	3.11	311 ✓
530'	25°15' L	2.80	277 ✓

550'	30°10'L	2.63	260 ✓
630'	37°24'L	2.46	243 ✓
640'	42°07'L	2.34	231 ✓
700'	50°54'L	2.22	219 ✓
720'	59°10'L	2.20	216 ✓
815'	66°10'L	1.93	189 ✓
845'	76°00'L	1.76	172 ✓
900'	84°38'L	1.66	162 ✓

## 140ft Contour

745'	86°00'L	1.53	150 ✓
740'	73°30'L	1.63	160 ✓
730'	66°37'L	1.75	172 ✓
630'	61°27'L	1.90	188 ✓
530'	57°25'L	2.00	197 ✓
620'	49°35'L	2.10	207 ✓
530'	42°08'L	2.20	218 ✓
515'	37°55'L	2.30	228 ✓

500'	31°05'L	2.48	246 ✓
445'	24°30'L	2.68	268 ✓
415'	18°00'L	3.00	300 ✓
400'	13°30'L	3.34	334 ✓
350'	11°48'L	3.60	360 ✓
350'	11°22'L	3.82	382 ✓
350'	11°27'L	4.00	400 ✓

## 135ft Contour

315'	9°40'L	3.98	398 ✓
300'	9°15'L	3.67	367 ✓
300'	15°34'L	3.22	322 ✓
330'	16°45'L	2.93	293 ✓
355'	21°24'L	2.63	263 ✓
420'	27°15'L	2.47	247 ✓
430'	32°43'L	2.32	232 ✓
430'	37°35'L	2.16	216 ✓
430'	45°00'L	2.94	294 ✓

500'	50°10'L	1.94	193 ✓
600'	58°15'L	1.86	184 ✓
600'	64°30'L	1.62	160 ✓
630'	72°15'L	1.53	151 ✓
630'	85°55'L	1.41	139 ✓

△ Pt. on Pounds Canyon base  
line at Sta. 35

→ Sta. 41

135 ft. Contour.

730'	103°15'L	1.15	113 ✓
720'	93°00'L	1.45	143 ✓
500'	90°55'L	1.78	177 ✓
500'	89°15'L	2.10	208 ✓
430'	86°07'L	2.46	246 ✓
425'	83°12'L	2.16	216 ✓
430'	80°30'L	1.88	188 ✓
435'	76°55'L	1.66	166 ✓

500'	68°42'L	1.37	136 ✓
600'	57°43'L	1.26	125 ✓
600'	45°18'L	1.37	136 ✓
510'	35°20'L	1.58	157 ✓
420'	26°50'L	1.90	190 ✓
415'	23°30'L	2.11	211 ✓
350'	19°23'L	2.44	244 ✓

140 ft. Contour.

430'	22°10'L	2.51	251 ✓
500'	20°28'L	2.23	221 ✓
530'	29°00'L	2.04	202 ✓
600'	33°32'L	1.84	182 ✓
700'	38°08'L	1.67	165 ✓
710'	42°19'L	1.50	148 ✓
710'	52°30'L	1.42	140 ✓
700'	62°45'L	1.44	145 ✓
500'	72°48'L	1.70	168 ✓

510'	78°48'	2.05	203 ✓
445'	80°18'	2.38	238 ✓
400'	82°45'	2.70	270 ✓
470'	85°04'	3.00	300 ✓
430'	87°12'	3.18	318 ✓
445'	89°30'	3.50	350 ✓
500'	89°22'	2.58	256 ✓
525'	91°30'	2.20	218 ✓
600'	93°32'	1.90	188 ✓
700'	96°10'	1.63	161 ✓
830'	101°50'	1.34	131 ✓

## 145 ft. Pantour

945'	103°52'	1.50	146 ✓
750'	97°18'	1.83	180 ✓
600'	93°12'	2.30	227 ✓
535'	91°26'	2.67	265 ✓
515'	90°48'	2.98	296 ✓

445'	89°05'	3.30	330 ✓
420'	86°35'	4.15	410 ✓
415'	85°45'	3.75	375 ✓
420'	85°12'	3.34	334 ✓
475'	83°25'	3.00	300 ✓
530'	80°13'	2.80	278 ✓
530'	80°25'	2.62	260 ✓
615'	77°35'	2.48	245 ✓
615'	77°00'	2.19	216 ✓
745'	72°08'	1.90	187 ✓
800'	65°30'	1.64	161 ✓
830'	57°30'	1.58	155 ✓
800'	41°45'	1.74	171 ✓
700'	34°18'	1.98	195 ✓
630'	38°45'	2.15	212 ✓
615'	27°48'	2.37	234 ✓
600'	25°26'	2.57	254 ✓

## 150 ft. contour

700'	2950'L	270	266	✓
715'	3026'L	240	236	✓
800'	3350'L	222	218	✓
800'	3738'L	200	196	✓
900'	4240'L	185	180	✓
920'	5245'L	170	145	✓
1010'	6175'L	177	171	✓
830'	7106'L	205	201	✓
730'	7522'L	228	224	✓
620'	7800'L	260	257	✓
620'	7840'L	290	287	✓
515'	8230'L	315	312	✓
445'	8345'L	353	353	✓
445'	8505'L	397	397	✓
445'	8435'L	440	440	✓
430'	8500'L	485	485	✓
430'	8625'L	453	453	✓

430'	8730'L	434	434	✓
430'	8852'L	396	396	✓
430'	8945'L	376	376	✓
530'	9055'L	355	352	✓
550'	9150'L	330	327	✓
615'	9245'L	287	285	✓
700'	9200'L	254	250	✓
800'	9710'L	212	208	✓
930'	10100'L	182	177	✓
1040'	10612'L	158	153	✓

△ Sta 5+75.4 on line 8415'L from  
Sta. 35 of Round Canyon base line  
→ Sta 35

## 155 ft. contour

345'	900'R	440	440	✓
400'	830'R	410	410	✓
430'	825'R	390	370	✓



500'	8°35'R	340	337 ✓
500'	9°30'R	310	307 ✓
550'	11°05'R	273	270 ✓
650'	12°15'R	232	229 ✓
730'	13°20'R	217	213 ✓
820'	11°50'R	193	189 ✓
1000'	13°00'R	160	155 ✓
1300'	10°40'R	123	117 ✓
1530'	10°25'R	100	93 ✓
2015'	13°30'R	0.86	76 ✓
2000'	0°30'L	0.84	74 ✓
2430'	17°55'L	0.71	59 ✓
2420'	49°45'L	0.70	58 ✓
2030'	25°45'L	0.80	70 ✓
1700'	12°15'L	0.96	88 ✓
1245'	5°28'L	1.24	118 ✓
1000'	2°05'L	1.54	149 ✓
800'	1°45'L	1.90	188 ✓

to be corrected

160 ft. contour

815'	4°30'L	1.88	184 ✓
930'	5°15'L	1.66	161 ✓
1100'	9°15'L	1.43	138 ✓
1300'	9°15'L	1.26	120 ✓
1620'	18°45'L	0.98	90 ✓
1615'	28°50'L	0.82	76 ✓
1815'	50°10'L	0.75	68 ✓
1800'	76°55'L	0.76	69 ✓
2215'	54°20'L	0.64	55 ✓
2350'	38°00'L	0.55	45 ✓
1900'	0°30'L	0.70	63 ✓
1645'	27°45'R	0.80	73 ✓
1440'	17°50'R	0.93	87 ✓
1145'	14°30'R	1.15	110 ✓
930'	15°15'R	1.39	135 ✓
740'	15°40'R	1.66	163 ✓
700'	14°50'R	1.95	192 ✓

600'	15°50'R	2.20	218 ✓
545'	13°42'R	2.48	246 ✓
530'	12°45'R	2.67	265 ✓
430'	11°18'R	2.96	296 ✓
420'	10°30'R	3.20	320 ✓
400'	9°45'R	3.57	357 ✓
335'	9°40'R	3.87	387 ✓
315'	10°05'R	4.20	420 ✓

## 165 ft. Contour

315'	11°15'R	4.08	408 ✓
230'	10°52'R	3.80	380 ✓
400'	11°18'R	3.42	342 ✓
425'	12°18'R	3.05	305 ✓
455'	13°55'R	2.67	267 ✓
530'	15°42'R	2.40	238 ✓
535'	17°50'R	2.25	223 ✓
605'	19°12'R	2.10	208 ✓

645'	18°65'R	1.85	183 ✓
800'	17°30'R	1.63	160 ✓
800'	18°40'R	1.40	137 ✓
940'	21°30'R	1.02	99 ✓
1230'	31°00'R	0.80	76 ✓
1345'	39°37'R	0.71	67 ✓
1700'	15°06'R	0.60	55 ✓
2045'	14°50'L	0.50	44 ✓
2200'	58°15'L	0.45	39 ✓
1645'	84°38'L	0.62	57 ✓
1300'	101°15'L	0.77	73 ✓
1035'	113°45'L	1.04	101 ✓
1050'	105°00'L	0.94	91 ✓
1250'	81°35'L	0.80	76 ✓
1300'	61°35'L	0.80	76 ✓
1245'	47°40'L	0.78	74 ✓
1100'	27°55'L	0.93	90 ✓
900'	16°07'L	1.15	112 ✓

dry top hillside

840'	1130'L	1.42	139✓
630'	830'L	1.67	165✓
675'	730'L	1.77	175✓

170 ft. Centon

very steep hillside

675'	1015'L	1.73	171✓
630'	1230'L	1.53	151✓
650'	1470'L	1.46	144✓
745'	1538'L	1.31	129✓
930'	2405'L	1.08	105✓
1030'	3630'L	0.95	92✓
1200'	5130'L	0.83	80✓
1145'	6840'L	0.84	81✓
1115'	8235'L	0.87	84✓
1015'	10122'L	1.01	98✓
535'	11900'L	1.84	123✓
480'	12530'L	1.34	134✓
670'	12310'L	1.13	111✓

915'	11230'L	0.76	75✓
1250'	10030'L	0.55	52✓
2000'	7042'L	0.40	35✓
2800'	2945'L	0.38	33✓
1800'	1135'R	0.45	38✓
1100'	4900'R	0.59	57✓
1100'	5610'R	0.63	60✓
1045'	4110'R	0.80	77✓
830'	2835'R	0.99	97✓
700'	2455'R	1.13	111✓
630'	2125'R	1.42	140✓
515'	2115'R	1.65	164✓
430'	2205'R	1.94	194✓
345'	2215'R	2.14	214✓
330'	1838'R	2.34	234✓
315'	1542'R	2.63	263✓
230'	1345'R	3.00	300✓
230'	1300'R	3.23	323✓

220' 12°35'R 3.57 357 ✓

220' 12°33'R 3.87 387 ✓

2120/03  
 Alverson  
 M. Parent  
 Guajinola  
 Luke

Δ. Pt on Grand Canyon base  
 line at Sta. 33+85.

→ Sta. 41

220 ft Contour.

11°30' 58°45'L 533 512 ✓

11°35' 49°27'L 530 509 ✓

11°30' 44°17'L 535 514 ✓

215 ft Contour.

11°30' 40°40'L 514 494 ✓

11°45' 45°42'L 493 474 ✓

11°30' 50°00'L 490 472 ✓

210 ft Contour.

11°25' 58°18'L 476 457 ✓

11°30' 49°06'L 470 451 ✓

11°30' 43°15'L 477 458 ✓

Δ. Pt on Grand Canyon base  
 line at Sta. 35

→ Sta. 41

205 ft Contour.

11°15' 70°55'L 470 452 ✓

11°45' 69°30'L 486 418 ✓

12°00' 67°30'L 477 399 ✓

12°30' 63°45'L 397 378 ✓

13°00' 60°32'L 387 367 ✓

13°30' 55°55'L 385 365 ✓

13°30' 51°06'L 398 376 ✓

## 200 ft. Contour

13°30' 49°36' L 3.70 350 ✓

13°45' 52°20' L 3.60 340 ✓

13°40' 57°30' L 3.64 344 ✓

12°45' 62°00' L 3.73 355 ✓

12°10' 64°40' L 3.87 370 ✓

11°30' 69°00' L 4.08 392 ✓

11°00' 71°30' L 4.38 422 ✓

10°25' 72°55' L 4.75 460 ✓

## 195 ft. Contour

9°30' 74°30' L 4.83 470 ✓

10°00' 73°25' L 4.44 431 ✓

10°45' 70°48' L 4.04 390 ✓

11°45' 65°42' L 3.77 361 ✓

13°10' 59°39' L 3.53 335 ✓

13°40' 55°15' L 3.38 319 ✓

13°20' 49°00' L 3.44 326 ✓

13°15' 46°12' L 3.60 341 ✓

## 190 ft. Contour

12°50' 44°35' L 3.44 327 ✓

12°10' 46°52' L 3.28 311 ✓

13°45' 52°00' L 3.13 295 ✓

13°25' 57°20' L 3.20 303 ✓

12°30' 62°12' L 3.43 327 ✓

11°40' 67°10' L 3.66 351 ✓

10°40' 71°12' L 3.90 377 ✓

9°35' 74°00' L 4.20 408 ✓

9°00' 75°38' L 4.64 453 ✓

## 185 ft. Contour

8°30' 76°35' L 4.60 450 ✓

9°30' 74°43' L 4.08 397 ✓

10°30' 71°20' L 3.65 353 ✓

11°45' 66°25' L 3.40 326 ✓

13°00'	61°46'L	3.12	296	✓
13°25'	59°20'L	2.90	274	✓
13°40'	49°40'L	2.87	271	✓
12°45'	44°38'L	3.08	293	✓
12°00'	41°45'L	3.33	319	

## 180 ft. Contour

11°30'	48°00'L	3.20	307	✓
12°20'	43°18'L	2.91	278	✓
13°00'	48°08'L	2.71	257	✓
13°15'	54°28'L	2.67	253	✓
12°25'	62°50'L	2.85	272	✓
11°30'	66°30'L	3.10	299	✓
10°30'	69°30'L	3.34	323	✓
9°45'	72°55'L	3.63	353	✓
9°00'	75°10'L	3.87	378	✓
8°30'	76°43'L	4.12	403	✓
8°15'	77°22'L	4.59	448	✓

## 175 ft. Contour

7°40'	78°40'L	4.70	462	✓
8°00'	78°24'L	4.20	412	✓
8°40'	76°30'L	3.78	369	✓
9°10'	74°22'L	3.47	338	✓
10°00'	71°37'L	3.20	310	✓
10°40'	68°50'L	2.98	288	✓
12°10'	63°10'L	2.64	252	✓
12°50'	52°38'L	2.47	235	✓
12°50'	46°30'L	2.58	245	✓
11°30'	48°00'L	2.89	276	✓
10°45'	37°38'L	3.05	294	✓

## 170 ft. Contour

7°30'	78°42'L	3.87	381	✓
8°20'	77°05'L	3.60	352	✓
8°55'	74°25'L	3.20	312	✓
10°15'	70°00'L	2.86	277	✓

## Vertical Mercury Rod

11<sup>15</sup> 65<sup>25</sup>L 2.58 248 ✓12<sup>25</sup> 59<sup>00</sup>L 2.36 225 ✓12<sup>30</sup> 49<sup>48</sup>L 2.38 227 ✓11<sup>30</sup> 41<sup>07</sup>L 2.61 251 ✓10<sup>30</sup> 37<sup>04</sup>L 2.84 275 ✓10<sup>00</sup> 36<sup>00</sup>L 2.93 284 ✓

## 165 ft. Bantour

9<sup>10</sup> 33<sup>45</sup>L 2.88 282 ✓10<sup>00</sup> 36<sup>53</sup>L 2.66 258 ✓11<sup>50</sup> 44<sup>45</sup>L 2.26 216 ✓11<sup>45</sup> 52<sup>27</sup>L 2.12 203 ✓11<sup>30</sup> 60<sup>48</sup>L 2.20 211 ✓10<sup>15</sup> 69<sup>25</sup>L 2.60 252 ✓9<sup>10</sup> 73<sup>00</sup>L 2.85 278 ✓8<sup>45</sup> 74<sup>05</sup>L 3.07 308 ✓8<sup>20</sup> 76<sup>48</sup>L 3.21 314 ✓7<sup>30</sup> 79<sup>05</sup>L 3.62 356 ✓6<sup>40</sup> 80<sup>30</sup>L 3.90 385 ✓

## 160 ft. Bantour

6<sup>00</sup> 81<sup>23</sup>L 3.80 376 ✓6<sup>30</sup> 80<sup>25</sup>L 3.50 345 ✓8<sup>00</sup> 78<sup>25</sup>L 3.32 326 ✓7<sup>20</sup> 78<sup>00</sup>L 3.10 305 ✓8<sup>35</sup> 75<sup>22</sup>L 3.00 293 ✓8<sup>15</sup> 75<sup>00</sup>L 2.75 269 ✓9<sup>50</sup> 71<sup>00</sup>L 2.42 235 ✓10<sup>30</sup> 66<sup>00</sup>L 2.20 213 ✓11<sup>45</sup> 57<sup>35</sup>L 2.00 192 ✓11<sup>00</sup> 48<sup>10</sup>L 1.98 191 ✓10<sup>30</sup> 40<sup>30</sup>L 2.22 220 ✓9<sup>45</sup> 37<sup>00</sup>L 2.42 234 ✓8<sup>30</sup> 33<sup>35</sup>L 2.68 242 ✓8<sup>15</sup> 32<sup>03</sup>L 2.78 272 ✓

107  
155 ft. Contour.

730'	30°18'	2.72	267 ✓
845'	34°42'	2.40	234 ✓
950'	40°43'	2.05	200 ✓
1115'	50°15'	1.89	180 ✓
1095'	61°43'	1.91	185 ✓
930'	66°47'	2.13	207 ✓
830'	73°22'	2.34	229 ✓
720'	75°30'	2.63	276 ✓
730'	76°45'	2.85	280 ✓
630'	79°22'	3.00	296 ✓
600'	81°30'	3.17	343 ✓
515'	83°00'	3.80	377 ✓

△ Pt. on Round Canyon base  
line at Sta. 38

→ Sta. 41.

## 135 ft. Contour.

100'	114°43'	1.091	91 ✓
145'	97°48'	0.89	89 ✓
030'	77°00'	1.01	101 ✓
100'	63°37'	1.27	126 ✓
350'	61°00'	1.60	160 ✓
600'	56°35'	1.68	166 ✓
300'	43°15'	1.77	177 ✓
330'	38°45'	2.02	202 ✓
300'	33°15'	2.26	226 ✓
300'	28°45'	2.52	252 ✓
300'	26°00'	2.80	280 ✓
300'	26°48'	3.13	313 ✓



## 140 ft. Contour

3 <sup>45</sup> '	28 <sup>00</sup> '	316	345	✓
3 <sup>45</sup> '	29 <sup>30</sup> '	266	266	✓
4 <sup>00</sup> '	34 <sup>15</sup> '	235	235	✓
4 <sup>40</sup> '	43 <sup>36</sup> '	207	207	✓
5 <sup>00</sup> '	52 <sup>00</sup> '	190	189	✓
6 <sup>45</sup> '	62 <sup>23</sup> '	190	168	✓
8 <sup>25</sup> '	75 <sup>18</sup> '	127	124	✓
8 <sup>35</sup> '	85 <sup>47</sup> '	113	110	✓
9 <sup>30</sup> '	106 <sup>35</sup> '	105	102	✓

## 145 ft. Contour

11 <sup>05</sup> '	106 <sup>50</sup> '	121	116	✓
10 <sup>00</sup> '	90 <sup>45</sup> '	124	120	✓
9 <sup>30</sup> '	81 <sup>35</sup> '	134	130	✓
9 <sup>00</sup> '	75 <sup>32</sup> '	152	148	✓
8 <sup>50</sup> '	70 <sup>35</sup> '	115	171	✓
9 <sup>15</sup> '	68 <sup>30</sup> '	194	191	✓

7 <sup>10</sup> '	66 <sup>20</sup> '	208	205	✓
7 <sup>10</sup> '	60 <sup>42</sup> '	210	207	✓
6 <sup>15</sup> '	55 <sup>25</sup> '	210	208	✓
5 <sup>10</sup> '	46 <sup>50</sup> '	218	216	✓
5 <sup>15</sup> '	39 <sup>25</sup> '	240	238	✓
4 <sup>40</sup> '	34 <sup>05</sup> '	260	260	✓
4 <sup>25</sup> '	30 <sup>22</sup> '	285	285	✓
4 <sup>00</sup> '	29 <sup>35</sup> '	323	323	✓

## 150 ft. Contour

5 <sup>10</sup> '	32 <sup>00</sup> '	330	327	✓
5 <sup>30</sup> '	33 <sup>25</sup> '	296	294	✓
5 <sup>30</sup> '	37 <sup>25</sup> '	270	268	✓
6 <sup>10</sup> '	44 <sup>52</sup> '	244	243	✓
6 <sup>25</sup> '	50 <sup>40</sup> '	230	227	✓
7 <sup>00</sup> '	57 <sup>30</sup> '	227	224	✓
7 <sup>00</sup> '	65 <sup>30</sup> '	237	234	✓
7 <sup>30</sup> '	69 <sup>20</sup> '	238	234	✓

835'	72°15'L	2.07	203	✓
900'	75°06'L	1.85	180	✓
11°00'	83°25'L	1.53	147	✓
11°50'	91°20'L	1.38	132	✓
12°00'	109°35'L	1.37	131	✓

## 155 ft. Contour

12°15'	109°18'L	1.50	143	✓
12°30'	100°20'L	1.50	143	✓
11°30'	86°00'L	1.68	160	✓
10°30'	81°09'L	1.88	182	✓
9°30'	79°25'L	1.94	189	✓
9°25'	74°50'L	2.32	226	✓
8°30'	73°05'L	2.60	263	✓
7°45'	70°00'L	2.75	270	✓
7°40'	62°48'L	2.56	251	✓
7°25'	54°00'L	2.48	246	✓
7°25'	49°00'L	2.56	252	✓

## 160 ft. Contour

6°40'	37°43'L	3.43	338	✓
6°55'	39°50'L	3.17	312	✓
7°45'	40°00'L	2.85	278	✓
7°55'	53°15'L	2.66	261	✓
8°00'	65°00'L	2.70	265	✓
7°55'	67°35'L	2.85	280	✓
7°50'	70°06'L	2.98	292	✓
8°15'	73°35'L	2.83	278	✓
9°30'	75°52'L	2.62	255	✓
10°00'	78°25'L	2.38	231	✓
12°20'	84°46'L	2.00	191	✓
13°00'	89°30'L	1.76	168	✓

1250' 97°38' 1.66 158 ✓

1330' 103°22' 1.67 158 ✓

165 ft. Cantown

1330' 102°52' 1.75 165 ✓

1345' 95°20' 1.78 168 ✓

1235' 89°00' 1.808 198 ✓

1145' 84°00' 1.819 210 ✓

1035' 80°20' 1.844 236 ✓

935' 76°40' 1.875 267 ✓

835' 73°18' 1.813 306 ✓

800' 71°10' 1.830 324 ✓

820' 66°40' 1.810 304 ✓

830' 61°12' 1.883 278 ✓

845' 54°40' 1.877 271 ✓

815' 48°00' 1.888 282 ✓

815' 44°30' 1.808 302 ✓

725' 41°55' 1.826 321 ✓

700' 40°00' 1.850' 345 ✓

170 ft. Cantown

800' 42°00' 1.860 353 ✓

855' 43°50' 1.834 327 ✓

900' 47°25' 1.816 309 ✓

910' 52°07' 1.828 290 ✓

910' 60°20' 1.896 288 ✓

900' 64°08' 1.817 309 ✓

825' 67°35' 1.842 335 ✓

810' 70°26' 1.854 347 ✓

830' 72°42' 1.840 333 ✓

940' 75°25' 1.815 306 ✓

1000' 77°57' 1.805 296 ✓

1050' 80°35' 1.874 264 ✓

1215' 84°35' 1.843 232 ✓

1330' 89°34' 1.817 205 ✓

1430' 99°10' 1.800 187 ✓

1500' 104°22'N 190 177 ✓

## 175 ft. Contour

1510' 100°10'N 210 196 ✓

1410' 92°00'N 228 208 ✓

1305' 88°10'N 242 230 ✓

1230' 85°37'N 267 255 ✓

1120' 81°36'N 290 279 ✓

1015' 79°10'N 310 299 ✓

1000' 77°06'N 318 308 ✓

930' 74°50'N 345 336 ✓

820' 69°35'N 380 372 ✓

830' 68°00'N 371 363 ✓

900' 64°30'N 342 334 ✓

930' 60°15'N 314 306 ✓

935' 53°15'N 312 303 ✓

920' 48°32'N 328 320 ✓

815' 43°15'N 368 360 ✓

## 180 ft Contour

910' 45°05'N 380 370 ✓

930' 48°42'N 350 341 ✓

1010' 54°45'N 332 322 ✓

930' 61°36'N 344 335 ✓

910' 65°24'N 380 370 ✓

850' 67°30'N 400 391 ✓

900' 71°53'N 392 382 ✓

920' 74°20'N 370 361 ✓

1030' 78°20'N 328 317 ✓

1135' 81°40'N 320 307 ✓

1220' 85°12'N 277 264 ✓

1345' 90°00'N 250 236 ✓

1450' 94°45'N 240 224 ✓

1510' 98°56'N 230 214 ✓

## 185 ft Contour

1515' 97°38'N 250 233 ✓

14 <sup>00</sup>	89 <sup>30</sup> L	2.80	264	✓
12 <sup>45</sup>	84 <sup>55</sup> L	3.03	288	✓
11 <sup>30</sup>	84 <sup>20</sup> L	3.20	307	✓
11 <sup>00</sup>	78 <sup>50</sup> L	3.60	347	✓
9 <sup>50</sup>	76 <sup>20</sup> L	3.78	367	✓
9 <sup>30</sup>	73 <sup>20</sup> L	3.95	384	✓
9 <sup>15</sup>	71 <sup>40</sup> L	4.10	399	✓
9 <sup>45</sup>	69 <sup>00</sup> L	4.31	425	✓
9 <sup>05</sup>	65 <sup>50</sup> L	4.10	400	✓
10 <sup>00</sup>	69 <sup>45</sup> L	3.81	375	✓
10 <sup>15</sup>	58 <sup>00</sup> L	3.58	347	✓
10 <sup>15</sup>	52 <sup>22</sup> L	3.58	347	✓
9 <sup>25</sup>	46 <sup>30</sup> L	3.88	368	✓

190 ft Contour

10 <sup>00</sup>	48 <sup>00</sup> L	4.07	395	✓
10 <sup>15</sup>	51 <sup>45</sup> L	3.87	375	✓
10 <sup>30</sup>	56 <sup>30</sup> L	3.76	365	✓

10 <sup>00</sup>	61 <sup>48</sup> L	4.12	400	✓
9 <sup>15</sup>	65 <sup>50</sup> L	4.50	437	✓
8 <sup>45</sup>	68 <sup>30</sup> L	4.64	453	✓
9 <sup>30</sup>	71 <sup>30</sup> L	4.33	421	✓
10 <sup>00</sup>	74 <sup>40</sup> L	4.07	395	✓
10 <sup>35</sup>	78 <sup>10</sup> L	3.80	367	✓
11 <sup>30</sup>	80 <sup>45</sup> L	3.67	352	✓
12 <sup>00</sup>	83 <sup>42</sup> L	3.34	320	✓
13 <sup>20</sup>	88 <sup>00</sup> L	3.05	288	✓
15 <sup>00</sup>	96 <sup>38</sup> L	2.73	255	✓

195 ft Contour

15 <sup>25</sup>	98 <sup>12</sup> L	2.93	272	✓
14 <sup>30</sup>	91 <sup>50</sup> L	3.10	291	✓
13 <sup>30</sup>	86 <sup>50</sup> L	3.40	321	✓
12 <sup>30</sup>	83 <sup>22</sup> L	3.63	346	✓
11 <sup>00</sup>	79 <sup>05</sup> L	3.96	382	✓
10 <sup>00</sup>	74 <sup>55</sup> L	4.30	417	✓

9 <sup>30</sup> '	72°00'	4.60	448	✓
9 <sup>00</sup> '	68°10'	4.94	482	✓
9 <sup>30</sup> '	64°42'	4.75	462	✓
10 <sup>10</sup> '	61°30'	4.33	420	✓
10 <sup>35</sup> '	55°37'	4.00	387	✓
10 <sup>30</sup> '	50°40'	4.20	406	✓

200 ft. Bantow.

10 <sup>35</sup> '	50°38'	4.43	428	✓
10 <sup>45</sup> '	55°35'	4.26	411	✓
10 <sup>30</sup> '	60°20'	4.55	440	✓
9 <sup>40</sup> '	64°00'	4.94	480	✓
9 <sup>00</sup> '	67°30'	5.30	517	✓
9 <sup>30</sup> '	70°48'	4.88	475	✓
10 <sup>10</sup> '	74°40'	4.50	436	✓
11 <sup>00</sup> '	78°20'	4.28	412	✓
12 <sup>00</sup> '	83°10'	3.92	375	✓
13 <sup>30</sup> '	86°45'	3.58	339	✓

5 <sup>00</sup> '	92°55'	3.18	297	✓
15 <sup>30</sup> '	98°25'	3.08	286	✓

7/21/03  
 Albreton  
 Mc Laren  
 an pinnola  
 Luce

△ Pt. on Round Canyon base line  
 at Sta. 41

→ Sta. 48.

135 ft. Bantow

0 <sup>15</sup> '	46°40'	1.53	153	✓
0 <sup>15</sup> '	37°30'	1.80	180	✓
0 <sup>15</sup> '	29°39'	2.02	202	✓
0 <sup>30</sup> '	26°40'	2.53	253	✓
0 <sup>30</sup> '	21°08'	2.70	270	✓
0 <sup>30</sup> '	16°25'	2.94	294	✓
0 <sup>30</sup> '	11°43'	3.10	310	✓
0 <sup>30</sup> '	11°52'	3.38	338	✓

## Vertical Horiz. Rod

0°30'	10°30' L	3.64	3.64	✓
0°30'	9°55' L	3.83	3.83	✓
0°15'	8°05' L	4.17	4.17	✓
0°15'	7°20' L	4.47	4.47	✓
0°15'	7°00' L	4.80	4.80	✓
0°15'	6°50' L	5.00	5.00	✓

## 140 ft. Bantown

1°00'	8°12' L	5.00	5.00	✓
1°00'	8°33' L	4.75	4.75	✓
1°00'	8°25' L	4.34	4.34	✓
1°00'	9°48' L	4.00	4.00	✓
1°00'	10°50' L	3.75	3.75	✓
1°00'	12°30' L	3.50	3.50	✓
1°00'	14°00' L	3.22	3.22	✓
1°00'	17°56' L	2.95	2.95	✓
1°00'	22°20' L	2.74	2.74	✓

1°00'	27°25' L	2.57	2.57	✓
1°30'	30°18' L	2.32	2.32	✓
1°30'	36°12' L	2.03	2.03	✓
1°30'	45°40' L	1.71	1.71	✓
1°30'	51°08' L	1.58	1.58	✓

## 145 ft. Bantown

2°30'	52°15' L	1.70	1.70	✓
2°30'	44°45' L	1.93	1.93	✓
2°30'	37°45' L	2.20	2.20	✓
2°20'	33°20' L	2.38	2.38	✓
2°15'	28°12' L	2.73	2.73	✓
2°00'	19°55' L	2.95	2.95	✓
2°00'	16°30' L	3.27	3.27	✓
2°00'	14°18' L	3.60	3.60	✓
1°40'	11°30' L	3.90	3.90	✓
1°30'	9°50' L	4.10	4.10	✓
1°15'	9°50' L	4.43	4.43	✓

130' 9°15' L 4.95 475 ✓

150 ft. Bantown.

2°15' 10°45' L 4.73 473 ✓

2°10' 10°15' L 4.42 442 ✓

2°15' 12°18' L 4.10 410 ✓

2°30' 14°42' L 3.78 378 ✓

2°35' 17°30' L 3.46 346 ✓

2°45' 20°05' L 3.22 322 ✓

3°10' 25°05' L 2.94 294 ✓

3°00' 29°45' L 2.73 273 ✓

3°25' 35°15' L 2.50 250 ✓

3°40' 40°15' L 2.27 227 ✓

4°00' 47°07' L 2.03 203 ✓

4°00' 52°48' L 1.87 187 ✓

155 ft. Bantown.

5°30' 53°30' L 2.03 202 ✓

5°30' 47°15' L 2.22 221 ✓

5°00' 39°30' L 2.46 245 ✓

4°10' 33°55' L 2.70 270 ✓

4°00' 29°45' L 2.93 293 ✓

3°30' 25°50' L 3.13 313 ✓

3°30' 21°22' L 3.43 343 ✓

3°00' 17°42' L 3.68 368 ✓

3°00' 15°13' L 4.00 400 ✓

3°00' 13°30' L 4.26 426 ✓

2°30' 12°10' L 4.57 457 ✓

2°30' 11°55' L 4.74 474 ✓

160 ft. Bantown.

3°30' 13°15' L 4.73 473 ✓

3°30' 14°20' L 4.47 447 ✓

3°30' 15°48' L 4.17 417 ✓

3°45' 17°18' L 4.04 404 ✓

3°50' 19°53' L 3.78 378 ✓



415	22°50' L	3.56	356	✓
420	26°15' L	3.32	332	✓
430	32°08' L	3.01	301	✓
500	35°25' L	2.83	281	✓
530	39°00' L	2.67	265	✓
530	45°00' L	2.42	240	✓
600	52°25' L	2.20	218	✓

165 ft contour

745	56°00' L	2.30	226	✓
645	48°00' L	2.48	245	✓
630	43°20' L	2.63	260	✓
615	39°55' L	2.87	284	✓
540	34°05' L	3.07	304	✓
515	28°50' L	3.37	334	✓
440	24°36' L	3.67	367	✓
430	21°30' L	3.87	387	✓
430	18°55' L	4.11	411	✓

400	16°00' L	4.46	446	✓
400	14°40' L	4.73	473	✓

170 ft contour

420	16°10' L	4.77	477	✓
430	17°30' L	4.60	460	✓
500	19°55' L	4.28	425	✓
500	22°45' L	3.98	395	✓
530	26°30' L	3.70	367	✓
600	31°40' L	3.36	332	✓
645	36°38' L	3.10	306	✓
720	42°15' L	2.86	281	✓
750	46°50' L	2.60	255	✓
750	53°55' L	2.48	243	✓

175 ft contour

835	54°20' L	2.63	257	✓
815	46°22' L	2.83	277	✓

7 <sup>30</sup>	40 <sup>55</sup> L	3.00	295	✓
7 <sup>00</sup>	35 <sup>00</sup> L	3.33	328	✓
6 <sup>40</sup>	30 <sup>09</sup> L	3.64	360	✓
6 <sup>00</sup>	25 <sup>55</sup> L	3.96	392	✓
5 <sup>35</sup>	23 <sup>42</sup> L	4.16	412	✓
5 <sup>30</sup>	21 <sup>45</sup> L	4.25	421	✓
5 <sup>00</sup>	18 <sup>15</sup> L	4.73	470	✓
4 <sup>55</sup>	17 <sup>40</sup> L	4.80	480	✓

## 180 ft Bontour

5 <sup>30</sup>	19 <sup>10</sup> L	4.84	479	✓
5 <sup>45</sup>	21 <sup>12</sup> L	4.50	445	✓
6 <sup>00</sup>	24 <sup>45</sup> L	4.27	422	✓
6 <sup>30</sup>	27 <sup>50</sup> L	3.96	391	✓
7 <sup>15</sup>	33 <sup>10</sup> L	3.60	354	✓
7 <sup>30</sup>	36 <sup>00</sup> L	3.41	335	✓
8 <sup>05</sup>	40 <sup>25</sup> L	3.18	312	✓
9 <sup>00</sup>	47 <sup>05</sup> L	2.92	285	✓

9 <sup>30</sup>	53 <sup>55</sup> L	2.78	270	✓
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## 185 ft. Bontour

9 <sup>50</sup>	53 <sup>42</sup> L	2.90	283	✓
9 <sup>30</sup>	49 <sup>15</sup> L	3.04	296	✓
8 <sup>45</sup>	40 <sup>55</sup> L	3.32	324	✓
8 <sup>15</sup>	37 <sup>08</sup> L	3.50	343	✓
7 <sup>55</sup>	31 <sup>12</sup> L	3.90	384	✓
6 <sup>55</sup>	26 <sup>30</sup> L	4.26	420	✓
6 <sup>25</sup>	21 <sup>35</sup> L	4.75	469	✓
6 <sup>10</sup>	20 <sup>30</sup> L	4.93	487	✓

## 190 ft. Bontour

6 <sup>15</sup>	21 <sup>00</sup> L	5.13	507	✓
7 <sup>00</sup>	28 <sup>20</sup> L	4.83	475	✓
7 <sup>30</sup>	29 <sup>15</sup> L	4.40	432	✓
7 <sup>50</sup>	31 <sup>10</sup> L	4.04	397	✓
8 <sup>30</sup>	35 <sup>00</sup> L	3.80	372	✓

9°10'	38°36'	3.66	357	✓
9°40'	44°03'	3.33	324	✓
10°15'	50°35'	3.10	300	✓
10°25'	54°10'	3.06	296	✓

## 195 ft Contour

10°50'	52°38'	3.22	311	✓
10°10'	46°10'	3.38	327	✓
9°40'	40°30'	3.60	350	✓
9°00'	35°20'	3.95	385	✓
8°25'	31°45'	4.17	408	✓
7°50'	29°08'	4.40	432	✓
7°30'	26°15'	4.62	454	✓
7°15'	24°10'	4.90	482	✓
6°55'	21°45'	5.22	515	✓

## 200 ft Contour

7°15'	22°42'	5.32	524	✓
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7°30'	24°46'	5.00	492	✓
8°15'	29°00'	4.58	450	✓
9°00'	32°45'	4.30	420	✓
9°10'	35°25'	4.07	397	✓
10°00'	41°10'	3.76	365	✓
10°50'	47°08'	3.57	344	✓
11°20'	51°25'	3.42	328	✓
11°15'	53°48'	3.40	327	✓

## 205 ft Contour

11°20'	50°40'	3.66	352	✓
10°45'	48°45'	3.83	370	✓
10°45'	39°12'	4.08	395	✓
9°45'	35°48'	4.20	408	✓
9°00'	32°45'	4.45	434	✓
8°30'	29°27'	4.72	462	✓
8°10'	26°00'	5.08	498	✓
7°30'	23°30'	5.44	535	✓

## 210 ft. Bontour

800'	24°30'L	558	547	✓
820'	25°30'L	536	525	✓
845'	27°30'L	520	508	✓
855'	29°33'L	493	481	✓
920'	30°45'L	476	464	✓
935'	33°10'L	463	459	✓
10°00'	35°55'L	446	433	✓
10°30'	39°38'L	423	409	✓
10°50'	45°45'L	399	384	✓
11°30'	48°25'L	396	380	✓
11°45'	53°55'L	393	377	✓

## 215 ft. Bontour

11°30'	48°44'L	420	403	✓
11°00'	41°25'L	432	416	✓
10°40'	37°40'L	460	444	✓
10°15'	34°30'L	477	462	✓

950'	31°25'L	486	473	✓
920'	29°18'L	517	503	✓
830'	26°00'L	554	542	✓

## 220 ft. Bontour

900'	27°00'L	563	549	✓
920'	28°45'L	550	536	✓
945'	31°00'L	525	510	✓
10°25'	35°38'L	504	488	✓
10°40'	36°25'L	486	469	✓
11°00'	38°53'L	470	453	✓
11°20'	42°45'L	458	440	✓

## 225 ft. Bontour

11°00'	38°18'L	494	476	✓
10°30'	34°00'L	523	506	✓
10°00'	30°40'L	560	543	✓
9°20'	28°10'L	586	571	✓

## 230 ft. Bantow

925	29°12' L	6.00	583	✓
950	30°30' L	5.77	560	✓
1045	34°40' L	5.37	518	✓
1100	37°35' L	5.20	501	✓

Δ Pt. on Round Canyon base  
line at Sta. 48

→ Sta. 41

## 135 ft. Bantow

025	20°15' R	2.04	204	✓
015	26°00' R	1.84	184	✓
015	28°35' R	1.60	160	✓
015	18°55' R	1.48	148	✓
015	21°35' R	1.09	109	✓
015	26°00' R	0.69	69	✓
015	7°10' R	0.47	47	✓

## 140 ft. Bantow

015	135°25' R	0.49	49	✓
015	101°30' R	0.50	50	✓
015	67°00' R	0.60	60	✓
015	50°45' R	0.73	73	✓
015	47°04' R	0.90	90	✓
015	35°15' R	1.04	104	✓
015	29°45' R	1.34	134	✓
015	24°30' R	1.58	158	✓
015	26°55' R	1.80	180	✓
015	24°25' R	1.97	197	✓

## 145 ft. Bantow

200	24°00' R	2.13	213	✓
300	28°40' R	2.03	203	✓
300	27°50' R	1.74	174	✓
235	30°00' R	1.59	159	✓
235	35°48' R	1.40	140	✓

230'	43°20'R	112	✓
210'	53°30'R	88	✓
300'	74°45'R	74	✓
230'	91°55'R	78	✓
3°45'	102°30'R	91	✓
3°30'	115°10'R	94	✓
3°30'	130°05'R	113	✓

## 150 Contour

420'	129°20'R	136	✓
440'	128°00'R	138	✓
420'	108°39'R	137	✓
500'	98°30'R	116	✓
540'	92°06'R	96	✓
630'	74°45'R	86	✓
530'	56°00'R	103	✓
520'	45°00'R	130	✓
430'	40°00'R	150	✓

415'	33°10'R	168	168	✓
400'	30°30'R	195	195	✓
350'	22°45'R	213	213	✓
250'	25°15'R	217	217	✓

## 155 ft Contour

415'	26°55'R	230	230	✓
450'	32°12'R	210	210	✓
540'	38°22'R	196	194	✓
520'	37°00'R	183	181	✓
630'	43°40'R	156	156	✓
620'	50°04'R	138	136	✓
715'	52°45'R	118	116	✓
850'	70°15'R	105	103	✓
830'	81°45'R	108	106	✓
835'	94°15'R	130	128	✓
600'	97°40'R	157	155	✓
600'	102°55'R	188	186	✓

500'	110°36'R	173	172	✓
535'	117°38'R	162	160	✓
610'	128°12'R	160	158	✓

## 160 ft. Contour

650'	128°20'R	184	181	✓
675'	119°56'R	183	180	✓
630'	112°15'R	197	194	✓
530'	109°00'R	218	216	✓
540'	104°25'R	219	217	✓
600'	101°12'R	210	208	✓
675'	99°35'R	186	183	✓
745'	96°16'R	162	159	✓
800'	93°00'R	147	144	✓
900'	85°06'R	127	124	✓
970'	68°00'R	122	119	✓
875'	54°50'R	139	136	✓
770'	50°00'R	153	150	✓

1000' to 1000' E.S.

745'	46°25'R	169	166	✓
610'	41°45'R	198	186	✓
530'	34°36'R	213	211	✓
530'	29°50'R	233	231	✓
515'	26°53'R	243	241	✓

## 165 ft. Contour

625'	38°00'R	250	247	✓
700'	34°55'R	229	226	✓
800'	41°25'R	208	204	✓
870'	45°05'R	198	194	✓
930'	50°00'R	172	167	✓
1035'	56°00'R	155	150	✓
1045'	61°15'R	138	133	✓
1000'	84°25'R	149	144	✓
930'	93°00'R	167	162	✓
770'	99°15'R	200	196	✓
715'	101°05'R	246	242	✓

5 <sup>45</sup> '	104 <sup>30</sup> R	2.60	257	✓
7 <sup>00</sup> '	110 <sup>12</sup> R	2.34	231	✓
8 <sup>00</sup> '	117 <sup>15</sup> R	2.08	204	✓
7 <sup>50</sup> '	129 <sup>15</sup> R	2.04	200	✓

## 170 ft. Contours

8 <sup>30</sup> '	129 <sup>12</sup> R	2.30	225	✓
8 <sup>45</sup> '	121 <sup>55</sup> R	2.26	221	✓
8 <sup>10</sup> '	116 <sup>20</sup> R	2.39	234	✓
7 <sup>30</sup> '	111 <sup>45</sup> R	2.64	260	✓
6 <sup>30</sup> '	109 <sup>00</sup> R	2.97	293	✓
6 <sup>30</sup> '	105 <sup>22</sup> R	3.05	301	✓
7 <sup>00</sup> '	102 <sup>00</sup> R	2.88	284	✓
7 <sup>45</sup> '	98 <sup>15</sup> R	2.48	244	✓
9 <sup>00</sup> '	94 <sup>26</sup> R	2.10	205	✓
11 <sup>00</sup> '	91 <sup>10</sup> R	1.90	183	✓
10 <sup>35</sup> '	84 <sup>18</sup> R	1.65	159	✓
11 <sup>30</sup> '	67 <sup>40</sup> R	1.54	148	✓

11 <sup>15</sup> '	55 <sup>00</sup> R	1.74	167	✓
10 <sup>00</sup> '	48 <sup>40</sup> R	1.97	191	✓
8 <sup>05</sup> '	41 <sup>15</sup> R	2.17	213	✓
7 <sup>30</sup> '	34 <sup>20</sup> R	2.42	238	✓
7 <sup>30</sup> '	31 <sup>22</sup> R	2.67	262	✓

## 175 ft. Contours

8 <sup>00</sup> '	33 <sup>45</sup> R	2.70	265	✓
8 <sup>30</sup> '	38 <sup>15</sup> R	2.41	236	✓
9 <sup>30</sup> '	43 <sup>00</sup> R	2.21	215	✓
10 <sup>20</sup> '	49 <sup>30</sup> R	2.04	197	✓
11 <sup>50</sup> '	57 <sup>52</sup> R	1.80	172	✓
12 <sup>30</sup> '	67 <sup>55</sup> R	1.65	157	✓
11 <sup>10</sup> '	83 <sup>00</sup> R	1.60	173	✓
10 <sup>45</sup> '	90 <sup>00</sup> R	2.00	193	✓
8 <sup>30</sup> '	95 <sup>30</sup> R	2.47	242	✓
7 <sup>00</sup> '	99 <sup>52</sup> R	2.43	289	✓
6 <sup>30</sup> '	106 <sup>00</sup> R	3.26	322	✓



141

705'	108°35'R	3.35	330	✓
800'	111°40'R	2.97	291	✓
830'	117°46'R	2.57	251	✓
915'	121°38'R	2.48	242	✓
830'	129°25'R	2.48	243	✓

2124103

Alverson  
McLaren  
Aginsola  
Luce

△ Brown Pound Canyon base  
line at Star 48  
→ Star 41

180 ft. Contour

11°35'	85°25'R	2.06	198	✓
12°45'	78°15'R	1.83	174	✓
13°10'	65°39'R	1.86	176	✓
11°00'	50°35'R	2.17	209	✓
10°20'	43°12'R	2.44	236	✓

1471

855'	36°05'R	2.73	266	✓
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185 ft. Contour

9°40'	38°00'R	2.81	273	✓
10°35'	42°45'R	2.55	246	✓
11°45'	49°56'R	2.32	223	✓
15°40'	55°00'R	2.14	204	✓
13°30'	66°42'R	2.02	191	✓
13°30'	78°55'R	2.04	193	✓
11°40'	86°00'R	2.30	221	✓

190 ft. Contour

11°55'	85°30'R	2.52	241	✓
13°20'	80°25'R	2.34	222	✓
14°10'	69°30'R	2.15	202	✓
14°00'	61°06'R	2.14	202	✓
12°30'	52°26'R	2.38	227	✓
12°00'	48°03'R	2.59	246	✓

## Vertical Sounding Rod

11°20' 42°35'R 2.67 257 ✓

11°00' 41°05'R 2.82 272 ✓

## 195 ft. Contour

11°50' 43°20'R 2.84 275 ✓

12°35' 46°27'R 2.70 257 ✓

13°00' 51°00'R 2.55 242 ✓

14°25' 57°00'R 2.38 223 ✓

14°50' 64°27'R 2.28 213 ✓

15°00' 67°55'R 2.32 216 ✓

13°50' 77°25'R 2.38 224 ✓

13°00' 82°00'R 2.53 240 ✓

12°15' 85°00'R 2.68 256 ✓

## 200 ft. Contour

10°45' 84°20'R 2.90 276 ✓

14°00' 78°48'R 2.62 247 ✓

15°15' 68°23'R 2.46 229 ✓

15°15' 60°12'R 2.46 229 ✓

14°00' 52°25'R 2.67 251 ✓

13°00' 46°10'R 2.92 277 ✓

## 205 ft. Contour

13°40' 48°45'R 2.96 280 ✓

14°20' 53°00' 2.77 260 ✓

15°15' 60°20'R 2.60 242 ✓

15°25' 68°25'R 2.62 244 ✓

14°30' 76°42'R 2.76 259 ✓

13°30' 81°46'R 2.98 282 ✓

12°30' 84°25'R 3.13 298 ✓

## 210 ft. Contour

13°35' 81°17'R 3.22 304 ✓

14°20' 77°00'R 2.96 278 ✓

15 <sup>20</sup> '	68°56'R	280	260	✓
16 <sup>00</sup> '	65°50'R	273	252	✓
15 <sup>45</sup> '	60°30'R	291	251	✓
15 <sup>00</sup> '	58°20'R	286	267	✓
14 <sup>30</sup> '	50°45'R	302	293	✓

Δ Pt. on 8<sup>th</sup> St. range line at  
F 5 to right.

→ F 0

180 ft Bontour.

17 <sup>00</sup> '	106°37'R	110	101	✓
15 <sup>30</sup> '	86°10'R	119	109	✓
15 <sup>00</sup> '	70°05'R	138	129	✓
11 <sup>10</sup> '	59°13'R	167	161	✓
9 <sup>35</sup> '	58°50'R	210	204	✓
7 <sup>40</sup> '	60°22'R	240	236	✓
8 <sup>00</sup> '	69°15'R	227	223	✓
8 <sup>15</sup> '	77°18'R	228	223	✓

7 <sup>30</sup> '	89°48'R	248	244	✓
7 <sup>00</sup> '	91°40'R	273	269	✓
6 <sup>15</sup> '	91°45'R	294	291	✓

185 ft Bontour.

6 <sup>00</sup> '	89°16'R	310	307	✓
6 <sup>30</sup> '	89°33'R	285	282	✓
6 <sup>55</sup> '	86°30'R	255	251	✓
7 <sup>30</sup> '	78°06'R	240	236	✓
7 <sup>20</sup> '	71°00'R	243	239	✓
7 <sup>20</sup> '	66°07'R	246	242	✓
6 <sup>55</sup> '	59°52'R	270	267	✓
7 <sup>35</sup> '	56°06'R	240	236	✓
8 <sup>30</sup> '	54°52'R	207	202	✓
9 <sup>30</sup> '	53°08'R	184	179	✓
9 <sup>30</sup> '	53°38'R	157	153	✓
11 <sup>00</sup> '	61°55'R	134	129	✓
13 <sup>45</sup> '	75°18'R	112	106	✓

1515' 91°50'R 097 90 ✓

## 190ft Bantour

1335' 79°30'R 092 87 ✓

1300' 67°05'R 110 104 ✓

950' 52°00'R 140 136 ✓

800' 49°10'R 170 167 ✓

700' 51°10'R 203 200 ✓

600' 53°18'R 232 229 ✓

~~575~~ 53°42'R 262 260 ✓

440' 54°15'R 293 293 ✓

440' 60°00'R 282 282 ✓

520' 64°20'R 263 261 ✓

530' 69°08'R 253 251 ✓

530' 76°32'R 253 251 ✓

530' 82°20'R 265 243 ✓

430' 85°15'R 290 290 ✓

400' 86°20'R 320 320 ✓

## 195ft Bantour

320' 83°45'R 343 343 ✓

320' 82°50'R 316 316 ✓

320' 81°03'R 290 290 ✓

400' 77°22'R 270 270 ✓

350' 71°30'R 268 268 ✓

400' 67°15'R 271 271 ✓

400' 62°07'R 292 292 ✓

400' 58°35'R 308 308 ✓

400' 54°53'R 322 322 ✓

340' 51°47'R 313 313 ✓

340' 50°53'R 283 283 ✓

340' 50°22'R 248 248 ✓

455' 49°15'R 219 219 ✓

455' 45°22'R 196 196 ✓

625' 42°20'R 167 145 ✓

825' 46°45'R 127 125 ✓

1035' 60°55'R 102 99 ✓

1235' 7652'R 0.80 76 ✓

## 200 ft Bontour

930' 6027'R 0.82 80 ✓

915' 4315'R 1.05 103 ✓

546' 3615'R 1.33 132 ✓

430' 3525'R 1.71 171 ✓

345' 4300'R 2.04 204 ✓

305' 4707'R 2.40 240 ✓

245' 4830'R 2.78 278 ✓

245' 4855'R 3.10 310 ✓

215' 4936'R 3.33 333 ✓

215' 5315'R 3.38 338 ✓

215' 5852'R 3.34 334 ✓

230' 6204'R 3.14 314 ✓

230' 6645'R 2.98 298 ✓

230' 7108'R 2.90 290 ✓

230' 7755'R 3.02 302 ✓

230' 8030'R 3.30 330 ✓

230' 8145'R 3.50 350 ✓

263 ft Bontour Rod near wrong

130' 8026'R 3.68

145' 7930'R 3.40

150' 7630'R 3.10

150' 7207'R 3.02

150' 6745'R 3.05

150' 6248'R 3.73

140' 5956'R 3.42

130' 5530'R 3.50

130' 4925'R 3.55

125' 4725'R 3.70

130' 4548'R 3.58

130' 4720'R 3.24

135' 4730'R 2.84

215' 4638'R 2.61

220'	43°22'R	226
220'	39°20'R	203
220'	33°12'R	188
345'	32°40'R	158
335'	32°25'R	134
500'	39°50'R	0.98
705'	53°30'R	0.80

## 205 ft. Contour

530'	40°15'R	0.88	88	✓
400'	34°25'R	1.14	114	✓
310'	28°56'R	1.44	144	✓
300'	30°00'R	1.78	178	✓
300'	31°57'R	1.96	196	✓
200'	35°25'R	2.08	208	✓
210'	40°45'R	2.16	216	✓
210'	42°45'R	2.31	231	✓
215'	45°30'R	2.60	260	✓

150'	46°25'R	2.86	286	✓
145'	46°25'R	3.28	328	✓
115'	45°08'R	3.62	362	✓
115'	47°45'R	3.72	372	✓
115'	53°50'R	3.54	354	✓
115'	58°00'R	3.56	356	✓
120'	61°37'R	3.43	343	✓
130'	65°30'R	3.17	317	✓
130'	73°37'R	3.10	310	✓
130'	78°13'R	3.46	346	✓
125'	79°30'R	3.71	371	✓

## 210 ft. Contour

110'	76°30'R	3.88	388	✓
115'	76°00'R	3.67	367	✓
120'	73°07'R	3.41	341	✓
130'	67°22'R	3.35	335	✓
130'	62°50'R	3.60	360	✓

1 <sup>25</sup> '	58°08'R	380	✓
1 <sup>30</sup> '	54°05'R	380	✓
1 <sup>15</sup> '	50°37'R	382	✓
1 <sup>15</sup> '	45°00'R	393	✓
1 <sup>00</sup> '	43°20'R	397	✓
0 <sup>20</sup> '	42°22'R	365	✓
0 <sup>30</sup> '	43°55'R	332	✓
0 <sup>35</sup> '	44°15'R	303	✓
0 <sup>40</sup> '	43°33'R	270	✓
0 <sup>45</sup> '	41°50'R	154	?
1 <sup>00</sup> '	35°55'R	225	✓
1 <sup>00</sup> '	26°55'R	205	✓
1 <sup>00</sup> '	23°37'R	174	✓
1 <sup>00</sup> '	21°37'R	143	✓
1 <sup>00</sup> '	26°30'R	101	✓
1 <sup>00</sup> '	34°20'R	72	✓

## 215 ft Contour

0 <sup>00</sup> '	120°30'L	0.91	91	✓
0 <sup>00</sup> '	127°35'L	0.52	52	✓
0 <sup>00</sup> '	136°15'L	0.29	29	✓
3 <sup>00</sup> '	27°00'R	0.20	20	✓
0 <sup>30</sup> '	21°15'R	0.56	56	✓
0 <sup>50</sup> '	16°25'R	1.01	101	✓
1 <sup>00</sup> '	16°20'R	1.38	138	✓
1 <sup>00</sup> '	14°15'R	1.73	173	✓
1 <sup>00</sup> '	15°20'R	1.95	195	✓
0 <sup>30</sup> '	20°00'R	2.15	215	✓
0 <sup>30</sup> '	38°30'R	2.37	237	✓
0 <sup>35</sup> '	37°00'R	2.58	258	✓
0 <sup>30</sup> '	40°38'R	2.95	295	✓
0 <sup>30</sup> '	41°20'R	3.18	318	✓
0 <sup>15</sup> '	40°55'R	3.58	358	✓
0 <sup>10</sup> '	40°48'R	3.96	396	✓
0 <sup>10</sup> '	41°10'R	4.15	415	✓

0°10'	45°35'R	413	✓
0°10'	48°12'R	410	✓
0°10'	52°20'R	393	✓
0°10'	58°12'R	395	✓
0°10'	62°04'R	385	✓
0°10'	66°25'R	370	✓
0°10'	71°15'R	367	✓
0°10'	73°25'R	396	✓
0°10'	73°40'R	418	✓

## 220 ft. Baritum

0°30'	70°55'R	431	✓
0°30'	71°18'R	407	✓
0°30'	67°00'R	396	✓
0°30'	61°47'R	403	✓
0°30'	56°50'R	406	✓
0°30'	52°25'R	405	✓
0°30'	48°37'R	421	✓

0°30'	45°15'R	428	✓
0°30'	41°30'R	432	✓
0°30'	39°45'R	433	✓
0°40'	38°37'R	403	✓
1°25'	38°20'R	373	✓
1°25'	38°25'R	342	✓
0°40'	38°10'R	307	✓
0°45'	34°38'R	276	✓
0°50'	26°25'R	250	✓
0°45'	21°00'R	245	✓
0°45'	14°18'R	224	✓
0°45'	9°35'R	199	✓
1°25'	7°30'R	168	✓
1°30'	7°20'R	140	✓
1°25'	7°40'R	101	✓
1°15'	7°35'R	60	✓
2°30'	10°30'L	38	✓
2°30'	8°20'04	33	✓



230'	113°18'L	0.61	61	✓
230'	111°45'L	0.90	90	✓

## 225 ft. Contour.

535'	103°10'L	0.83	83	✓
640'	91°30'L	0.49	48	✓
945'	45°35'L	0.39	38	✓
730'	22°08'L	0.51	50	✓
530'	45°5'L	0.79	78	✓
500'	2°15'L	1.06	105	✓
300'	1°52'R	1.30	130	✓
310'	2°20'R	1.64	164	✓
300'	3°20'R	2.00	200	✓
150'	7°20'R	2.32	232	✓
200'	11°55'R	2.48	248	✓
200'	28°05'R	2.62	262	✓
200'	29°30'R	2.69	269	✓
200'	31°04'R	2.93	293	✓

130'	35°22'R	3.18	318	✓
130'	36°45'R	3.60	360	✓
130'	37°08'R	4.03	403	✓
130'	37°50'R	4.30	430	✓
130'	38°26'R	4.52	452	✓
130'	42°15'R	4.48	448	✓
130'	45°26'R	4.40	440	✓
130'	49°40'R	4.33	433	✓
130'	53°15'R	4.17	417	✓
130'	56°23'R	4.17	417	✓
125'	60°25'R	4.20	420	✓
125'	66°15'R	4.16	416	✓
125'	69°25'R	4.28	428	✓
125'	69°00'R	4.54	454	✓

## 230 ft. Contour

140'	66°35'R	4.70	470	✓
145'	65°47'R	4.54	454	✓

145'	62°40'R	440	✓
145'	57°15'R	436	✓
145'	52°05'R	435	✓
145'	47°18'R	458	✓
140'	42°36'R	460	✓
140'	39°06'R	466	✓
140'	37°22'R	470	✓
140'	36°18'R	450	✓
200'	35°15'R	414	✓
200'	34°00'R	360	✓
215'	32°00'R	320	✓
215'	28°50'R	294	✓
230'	19°48'R	280	✓
225'	11°25'R	274	✓
245'	6°00'R	263	✓
310'	1°42'R	240	✓
415'	1°00'L	207	✓
500'	2°15'L	174	✓

600'	5°06'L	143	141	✓
900'	13°56'L	107	104	✓
950'	23°30'L	0.78	76	✓
1035'	53°22'L	0.56	54	✓
915'	76°30'L	0.64	62	✓
745'	91°47'L	0.88	86	✓

## 235 ft. Continued

1000'	79°35'L	0.94	91	✓
1100'	50°23'L	0.89	86	✓
1100'	28°30'L	1.01	96	✓
900'	18°20'L	1.30	127	✓
700'	9°00'L	1.65	163	✓
530'	5°30'L	1.93	191	✓
600'	5°50'L	2.31	228	✓
515'	3°12'L	2.60	258	✓
330'	3°20'R	2.89	289	✓
320'	11°00'R	2.94	294	✓

220'	1820'R	293	✓
315'	2440'R	304	✓
310'	2895'R	330	✓
245'	3055'R	357	✓
230'	3200'R	396	✓
235'	3305'R	427	✓
230'	3320'R	463	✓
230'	3640'R	487	✓
230'	4030'R	486	✓
220'	4619'R	473	✓
215'	5355'R	460	✓
220'	5840'R	453	✓
220'	6125'R	461	✓
215'	6455'R	404	✓

Return to City Engineers Office  
City Hall, San Diego, Cal.

TRAVERSE TABLE FOR TRANSIT BOOK.

From 1° to 90° for a distance of 100.

Return to City Engineers Office  
City Hall, San Diego, Cal.

Degrees	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		Degrees
	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	
0			100.00	0.44	100.00	0.87	99.99	1.31	89
1	99.98	1.75	99.98	2.18	99.97	2.62	99.95	3.05	88
2	99.94	3.49	99.92	3.93	99.91	4.36	99.88	4.80	87
3	99.86	5.23	99.84	5.67	99.81	6.10	99.79	6.54	86
4	99.76	6.98	99.73	7.41	99.69	7.85	99.66	8.28	85
5	99.62	8.72	99.58	9.15	99.54	9.58	99.50	10.02	84
6	99.45	10.45	99.41	10.89	99.36	11.32	99.31	11.75	83
7	99.25	12.19	99.20	12.62	99.14	13.05	99.07	13.49	82
8	99.03	13.92	98.97	14.35	98.90	14.78	98.84	15.21	81
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	80
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	79
11	98.16	19.08	98.08	19.51	97.99	19.94	97.90	20.36	78
12	97.81	20.79	97.72	21.22	97.63	21.64	97.53	22.07	77
13	97.44	22.50	97.34	22.92	97.24	23.34	97.13	23.77	76
14	97.03	24.19	96.92	24.62	96.81	25.04	96.70	25.46	75
15	96.59	25.88	96.48	26.50	96.36	26.72	96.25	27.14	74
16	96.13	27.56	96.00	27.98	95.88	28.40	95.76	28.52	73
17	95.63	29.24	95.50	29.65	95.37	30.07	95.24	30.49	72
18	95.11	30.90	94.97	31.32	94.83	31.73	94.69	32.14	71
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	70
20	93.97	34.20	93.82	34.61	93.67	35.02	93.51	35.43	69
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	68
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	67
23	92.05	39.07	91.88	39.47	91.71	39.87	91.53	40.27	66
24	91.35	40.67	91.18	41.07	91.00	41.47	90.81	41.87	65
25	90.63	42.26	90.45	42.66	90.26	43.05	90.07	43.44	64
26	89.88	43.84	89.69	44.23	89.49	44.62	89.29	45.01	63
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	62
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	61
29	87.46	48.48	87.25	48.86	87.04	49.24	86.82	49.62	60
30	86.60	50.00	86.38	50.38	86.16	50.75	85.94	51.13	59
31	85.72	51.50	85.49	51.88	85.26	52.25	85.04	52.62	58
32	84.80	52.99	84.57	53.36	84.34	53.73	84.10	54.10	57
33	83.87	54.46	83.63	54.83	83.39	55.19	83.15	55.56	56
34	82.90	55.92	82.66	56.28	82.41	56.64	82.16	57.00	55
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	54
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	53
37	79.86	60.18	79.60	60.53	79.34	60.88	79.07	61.22	52
38	78.80	61.57	78.53	61.91	78.26	62.25	77.99	62.59	51
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	50
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	49
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	48
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67.88	47
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	46
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	45
45	70.71	70.71							
Degrees.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Degrees.
	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		

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