

Lardeau  
82KNW050

Δ1 Δ2

004099

TL

Declination Arc Tan 5.57 / 13.35

Elevations - Lardeau

□ 10	2381'	△ Al	3675'
□ 11	2404	△ Dawson 22	2351'
□ 12	2417	△ Lake	2344'
□ 13	2430		
□ 14	2446	∩ 3.5	
□ 15	2459		
□ 16	2515		
□ 18	2565		
□ 20	2588		
□ 22	2608		
□ 32	2701		

PROPERTY FILE

$$\text{Elev} = \text{Elev}_A + \text{H.I.} - \text{X-hair} + \text{V}$$

1954

TLI

$$\text{d.e.} = \text{H.I.} - \text{X-hair} + \text{V.}$$

$$\text{Elev} = \text{Elev}_A + \text{d.e.}$$

Sta	Sight	Red Rd	Red Interval	Vert $\angle$ Rd	Level Rd	Vert. $\angle$	H	V	X-hair	h.l.	Sight Elevation	d.e.	Remarks
Ed Dawson Pt 1			.92	27° 03'	29° 29'	2° 58'	92.0	3.9	3.05	3.3	2347.3	-13.7	El. Dawson 2351'
Ed Dawson 02			.88	30° 00'	30° 00'	0° 00'	88.0	-	8.8	3.4	2345.6	-5.4	June 10 O.E.F
03			3.42	30° 00'	30° 00'	0° 00'	342.0	-	8.8	3.4	2345.6	-5.4	
04			2.15	30° 00'	30° 00'	0° 00'	215.0	-	8.9	3.4	2345.5	-5.5	
A 1			1.49	35° 47'	29° 57'	5° 50'	148.0	15.3	3.8	3.4	2365.9	14.9	
EA 1 Dawson			1.49	26° 43'	30° 03'	3° 20'	148.0	-8.8	8.8	2.7	2351.1	-14.8	June 12 O.E.F
EA 1 05			1.40	27° 29'	30° 08'	2° 39'	140.0	-6.5	8.7	2.8	2353.5	-12.4	
06			.61	36° 00'	29° 49'	6° 11'	61.0	6.6	3.3	2.8	2372.0	6.1	
EA 2			1.41	39° 41'	30° 07'	9° 34'	137.5	23.1	4.4	2.8	2387.4	21.5	
EA 2 EA 1			1.41	21° 9'	29° 57'	8° 48'	137.5	-21.3	2.5	2.1	2365.9	-21.7	
EA 3			.88	45° 4'	30° 08'	14° 56'	85.0	21.8	3.4	2.1	2407.9	20.5	
EA 3 EA 2			.88	14° 58'	30° 06'	15° 08'	85.0	-22.2	0.8	2.2	2387.1	-20.8	
07			.38	30° 04'	30° 04'	0° 00'	38.0	-	8.5	2.2	240.16	-6.3	
08			.49	30° 00'	30° 00'	0° 00'	49.0	-	9.7	2.2	2400.4	-7.5	
EA 4			.88	41° 50'	30° 03'	11° 47'	85.0	17.8	1.4	2.2	2426.5	18.6	pt on right hand side of road to Gerrard

$$d.e. = h.i. - X \text{ hair} + V$$

$$\text{Elev} = \text{El}_{\text{sta}} + d.e.$$

 1954  
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Sta	Sighton	Roof Rdg.	Rod Interval	Vert. X Rdg	Level Rdg	Vert. X	H	V	X-hair h.i.	Sight Elevation	d.e.	Remarks
EA4	EA3		.88	18° 5'	30° 07'	12° 02'	85.0	18.0	3424	2406.5	19.0	El. 10. 2426.5
										2439.5		June 19, O.E.F.
EA4	EA5		7.20	30° 59'	29° 42'	1° 17'	720.0	16.5	5.5 1.8	2439.3	12.8	"
	09		2.23	31° 29'	29° 42'	1° 47'	223.0	7.1	4.8 1.8	2430.6	4.1	Pl. on edge of road.
	010		1.80	—	—	—	180.0	—	4.5 1.8	2423.8	-2.7	Level shot
	011		3.00	—	—	—	300.0	—	3.8 1.8	2424.6	-2.0	" "
	EA6		4.95	—	—	—	495.0	—	9.5 1.8	2418.8	-7.7	" "
												June 21 O.E.F.
EA5	EA4		7.20	29° 3'	30° 9'	1° 6'	720.0	13.9	1.3 2.2	2426.3	13.0	
	EA7		6.05	30° 30'	30° 00'	0° 30'	605.0	5.3	6.0 2.2	2441.2	1.5	
										2440.8		
										2439.4		
EA7	EA5		6.05	30° 20'	30° 06'	0° 14'	605.0	2.5	6.0 1.7	2439.0	-1.8	
	EA8		7.00	—	—	—	700.0	—	2.8 1.7	2440.3		
										2439.7	-1.1	Level shot
	EA7A		3.75	—	—	—	375.0	—	3.2 1.7	2439.7		
										2439.3	-1.5	
EA8	EA7		7.00	—	—	—	700.0	—	1.0 2.1	2441.2		
										2440.8	-1.1	
										2456.9		
	012		1.05	39° 37'	29° 42'	9° 55'	102.0	18.0	3.5 2.1	2456.3	16.6	Topog.
	EA8A		1.39	43° 12'	38° 11'	13° 01'	135.0	31.0	9.0 2.1	2464.4	24.1	Edge of Creek
										2463.8		
										2437.9		
	013		2.28	—	—	—	228.0	—	4.5 2.1	2437.3	-2.4	Edge of Outcrop

1954

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Sta	Sight on	Rod Interval	Vert. X Rdg	Level Rdg	Vert. A	H	V	x-hair	hi	Sight Elev	d.e	Remarks
										2424.1		
EΔ8	014	1.02	24° 37'	29° 53'	-5° 16'	101.0	-9.3	9.0	2.1	2423.5	-16.2	Topog
	015	1.11	-	-	-	111.0	-	5.1	2.1	2437.3		Intersection of Dne
	016	3.21	28° 22'	30° 18'	1° 56'	321.0	-10.9	5.0	2.1	2436.7	-3.0	Mile Creek & Serrard Rd.
	EΔ9	7.30	29° 04'	30° 20'	1° 16'	730.0	-16.2	6.0	2.1	2426.5	-13.8	Outcrop
	EΔ9	7.35	29° 04'	30° 20'	1° 16'	730.0	-16.2	6.0	2.1	2435.9	-20.1	
EΔ9	EΔ8	7.35	31° 55'	30° 04'	1° 51'	735.0	23.8	6.0	2.0	2420.4		
	EΔ9A	2.65	39° 21'	30° 03'	9° 18'	258.0	42.5	2.0	2.0	2440.1	19.8	
	017	1.50	35° 45'	30° 00'	5° 45'	148.0	15.2	5.0	2.0	2439.3		
	EΔ10	3.10	-	-	-	310.0	-	3.5	3.9	2462.9	42.5	Outcrop
										2432.6		
										2431.0	12.2	Topog
										2418.9		
										2418.0	0.4	Picket 2' Elev 9 2417.6
												June 22 0EF
EΔ10	EΔ9	3.10	-	-	-	310.0	-	3.6	3.1	2418.8		
	EΔ10A	4.62	27° 44'	30° 06'	2° 22'	462.0	-19.0	5.0	3.1	2417.5	-0.5	
	EΔ11	6.24	27° 38'	30° 08'	2° 30'	624.0	-27.2	3.1	3.1	2401.8		
	EΔ11	7.49	28° 53'	30° 10'	1° 17'	750.0	16.8	3.5	3.5	2400.9	-17.1	
	EΔ12	7.50	31° 24'	30° 09'	1° 15'	750.0	16.6	3.3	3.3	20391.9		
	EΔ12	7.50	31° 24'	30° 09'	1° 15'	750.0	16.6	3.3	3.3	20390.8	-27.2	
	018	6.00	31° 17'	30° 09'	1° 08'	600.0	11.9	3.3	3.3	20375.3		
	019	2.90	-	-	-	299.0	-	7.8	3.3	20374.0	-16.8	
	020	1.70	24° 08'	30° 07'	5° 59'	170.0	17.8	3.3	3.3	2391.9	16.6	
										2387.2		
										2385.9	11.9	Outcrop
										2380.8		
										2369.5	-4.5	Creek & Rd. Intersection
										2357.5		
										2356.2	-17.8	30' from outcrop

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Sta	Sight on	Red Interval	Vert. & Rd.	Level Rdy	Vert. &	H	V	X	h. i.	sight elev.	d.e.	Remarks
EA12	EA13	9.30	29° 34'	30° 00'	0° 26'	930.0	-7.1	3.3	3.3	2368.5 2366.9 2375.8	-7.1	
EA13	EA12	9.30	30° 32'	30° 05'	27'	930.0	7.3	3.7	3.7	2374.2 2369.7	7.3	
	021	4.70	-	-	-	470.0	-	2.5	3.7	2368.7 2375.5	1.2	Topog (Curve)
	EA14	5.09	30° 38'	29° 55'	0° 43'	509.0	6.9	3.7	3.7	2373.8 2352.5	6.9	Curve
EA14	EA13	5.06	-	-	-	506.0	-	10.4	3.8	2367.0 2360.5	6.6	
	EA15	5.10	28° 39'	30° 10'	1° 41'	510.0	-15.1	3.8	3.8	2350.7	-15.1	At Junction
EA15	EA14	5.10	32° 03'	30° 10'	1° 53'	510.0	17.0	3.9	3.9	2354.4	17.0	
	EA16	4.78	-	-	-	478.0	-	10.0	3.9	2352.5 2360.6	6.1	
EA16	EA15	4.80	-	-	-	480.0	-	3.7	3.5	2358.7 2350.7	-1.2	
L	EA17	5.00	-	-	-	500.0	-	7.3	3.5	2348.7 2352.4	-3.8	
EA17	EA16	4.98	30° 33'	30° 07'	0° 26'	498.0	-	4.1	4.1	2352.5 2352.9	3.8	
	EA18	6.50	30° 22'	30° 02'	22'	650.0	4.2	6.2	4.1	2350.8 2350.9	+2.1	
A18	A17	6.50	-	-	-	650	-	5.0	3.9	2349.7 2354.5	+1.7	2358
	A19	3.51	-	-	-	351	-	7.7	3.9	2352.5 2352.9	-3.8	
A19	A18	3.50	30° 40'	30° 03'	+0° 37'	350	3.8	4.0	4.0	2350.8 2350.8	3.8	
	B.M. 477H	1.90	-	-	-	190	-	3.6	4.0	2354.9 2352.9	+1.4	(E.I. B.M. 477H) 2354.9



d.e = hi. - X h + V  
 elev = elev sta + d.e.

June 23 LEA.  
 1954 TLS  
 Remarks

Sta	Sight	Red Rdg	Ret. into	Vert. $\angle$ road	Level Rdg	Vert. $\angle$	H	V	X	h.	Sight elev	d.e.
A19	BM477H	-	1.85	30°40'	30°31'	9'	185	.5	3.9	3.7	2354.9	.3
	A19A	-	2.20	30°25'	29°34'	51'	220	3.3	3.7	3.7	2357.9	3.3
A19A	A19		2.20	29°8'	30°0'	-52'	220	3.3	3.8	3.8	2354.6	-3.3
	O22		3.20	30°20'	30°11'	9'	320	.84	3.8	3.8	2352.74	.84
	19B		13.40	30°40'	30°13'	27'	1340	10.6	3.8	3.8	2368.5	10.6
A15	19B		2.08	32°10'	30°00'	2°10'	208	7.9	4.1	4.1	2368.5	-7.9
	O23		3.50	-	-	-	350	-	3.4	4.1	2361.3	.7
	A20		4.30	31°13'	30°10'	1°3'	430	7.9	4.1	4.1	2368.5	7.9
A20	A15		4.30	29°50'	28°55'	1°3'	430	7.9	4.1	4.1	2360.6	-7.9
	A21		3.90	32°39'	30°10'	2°29'	390	17	4.1	4.1	2385.5	17
A21	A20		3.90	27°39'	30°6'	-2°27'	390	16.9	3.9	3.9	2368.5	-16.9
	A22		2.10	35°42'	29°45'	5°57'	209	21.9	3.9	3.9	2407.4	21.9
A21	A21		2.10	29°00'	30°00'	-6°	209	21.9	3.8	3.8	2385.5	-21.9
	A23		2.30	30°45'	30°00'	45'	930	12.3	3.8	3.8	2419.7	12.3
A23	A22		9.30	29°19'	30°4'	-45'	930	12.3	3.3	3.3	2407.4	12.3
	A23A		.73	27°25'	30°	-2°35'	73	-5.3	3.3	3.3	2416.4	-3.3

June 24 LEA.

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TL 6

de - hi xh + V  
elev - elev sta + de

Sta	Sight	Rod Rdy	Stadia	Vert A rdy	Level Rdy	Vert A	H	V	XH	HI	Sight elev	de	Remarks
A 23	A 24		2.95	37° 48'	30° 00'	7° 48'	292	40	3.3	3.3	2459.7	40	2419.7 elev 23
	0 24		1.65	34° 8'	30° 00'	4° 8'	165	11.9	3.3	3.3	2431.6	11.9	corner of road
A	A 23		2.95	22° 17'	30° 7'	7° 50'	292	40	4.0	4.0	2419.7	40	
	0 25		.60	20° 53'	30° 00'	7° 27'	59	-7.7	4.0	4.0	2452.0	-7.7	corner between gully
	0 26		.85	22° 27'	30° 00'	7° 33'	84	-11.1	4.0	4.0	2445.6	-11.1	
A 25			2.70	31° 35'	29° 55'	1° 40'	270	7.9	4.0	4.0	2467.6	7.9	
A 25	A 24		2.70	28° 24'	30° 04'	1° 40'	270	-7.9	4.0	4.0	2459.7	-7.9	
	0 27		.96	25° 00'	30° 00'	-5°	96	-8.4	4.0	4.0	2459.2	-8.4	
	0 28		2.14	34° 39'	30° 5'	4° 34'	214	17.1	4.0	4.0	2484.7	17.1	creek
	0 29		3.30	34° 50'	30° 6'	4° 44'	330	27	4.0	4.0	2494.6	27	outcrop
A 26			4.65	34° 31'	30° 3'	4° 28'	465	36.7	4.0	4.0	2504.3	36.7	
	0 30		1.10	55° 35'	30° 00'	25° 35'	89.5	42.5	4.0	4.0	2510.1	42.5	hillside
A 26	A 25		4.65	25° 41'	30° 12'	-4° 31'	465	36.6	3.8	3.8	2467.7	36.6	
	0 31		.55	45° 44'	30° 10'	15° 34'	48.7	15.6	3.8	3.8	2481.3	15.6	hillside
A 26 A			1.75	38° 37'	29° 51'	8° 46'	173	26.5	3.8	3.8	2530.8	26.5	
B.M. 13			1.80	34° 9'	29° 50'	4° 19'	180	13.6	3.8	3.8	2517.9	13.6	Topog Survey 6/52
A 27			2.30	34° 30'	29° 50'	4° 40'	230	18.8	3.8	3.8	2523.1	18.8	

$$d.e. = h.i. - (X-h) + V$$

$$elev = elev_{sta} + d.e.$$

1954  
TL7

Sta	Sight on	Red Rdg	Staviz	Vert Rdg	Level Rdg	Vert $\Delta$	H	V	X-h	H.I	Sight Elev	d.e.	Remarks
$\Delta$ 27	$\Delta$ 26		2.30	25° 18'	29° 54'	- 4° 36'	230	-18.6	4.0	4.0	2504.5	-18.6	elev 27 2523.1
	$\Delta$ 27A		1.20	14° 15'	30° 4'	-15° 49'	111	-31.8	4.0	4.0	2491.3	-31.8	
	$\odot$ 32		1.95	34° 48'	30° 6'	4° 42'	195	16	4.0	4.0	2539.1	16	
	$\Delta$ 28		5.50	34° 40'	30° 6'	4° 34'	550	43	4.0	4.0	2566.1	43	
$\Delta$ 28	$\Delta$ 27		5.50	25° 37'	30° 11'	4° 34'	550	43	4.0	4.0	2523.1	43	
													June 25, 1954
$\Delta$ 28	$\Delta$ 27		5.50	25° 28'	30° 3'	-4° 35'	550	-43	3.5	3.5	2523.1	-43	L.I.A.
	$\Delta$ 28A		.80	50° 17'	30° 10'	20° 7'	70.5	25.9	8	3.5	2587.5	21.4	
	$\odot$ 33		1.40	25° 54'	30° 1'	-4° 7'	140	-10.2	3.5	3.5	2555.9	-10.2	
	$\Delta$ 29		1.45	32° 8'	30° 7'	2° 1'	145	5.1	3.5	3.5	2571.2	5.1	
$\Delta$ 29	$\Delta$ 28		1.45	27° 48'	29° 52'	- 2° 4'	145	-5.2	3.8	3.8	2566.0	-5.2	
	$\odot$ 34		.55	53° 25'	30° 00'	23° 25'	46.5	20.1	3.8	3.8	2591.3	20.1	
	$\odot$ 35		1.05	4° 00'	30° 00'	- 26° 00'	84	-41	3.8	3.8	2530.2	-41	
	$\Delta$ 36		1.90	35° 18'	30° 9'	5° 9'	188	17	3.8	3.8	2588.2	17	
$\Delta$ 30	$\Delta$ 29		1.90	24° 58'	30° 4'	5° 8'	188	-17	3.9	3.9	2571.2	-17	
	$\Delta$ 31		1.60	30° 58'	30° 00'	58'	160	2.7	3.9	3.9	2590.9	2.7	



1954

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a	Sight	Stadia	Vert X Rdg	Level Rdg	Vert X	H	V	X-h	H1	Sight Elev	d.c.	Remarks
Δ 31	Δ 30	1.60	28° 52'	29° 51'	- 59'	160	2.7	4.2	4.2	2588.2	- 2.7	2590.9 Δ 31
	⊙ 36	.60	32° 6'	30° 12'	1° 54'	60	2.0	4.2	4.2	2592.9	2.0	outcrop
	Δ 32	3.45	33° 00'	30° 11'	2° 49'	345	17.1	4.2	4.2	2602.0	17.1	
	⊙ 37	1.05	29° 32'	29° 52'	- 0° 20'	105	- .6	4.2	4.2	2590.3	-.6	outcrop
	⊙ 38	.65	16° 55'	30°	- 13° 5'	63	- 14.3	4.2	4.2	2566.6	- 14.3	outcrop
Δ 32	Δ 31	3.45	26° 56'	29° 45'	- 2° 49'	345	17.1	4.0	4.0	2590.9	17.1	
	Δ 33	1.90	30° 59'	30° 20'	39'	190	2.3	4.0	4.0	2610.3	2.3	
Δ 33	Δ 32	1.90	29° 18'	29° 56'	38'	1.90	- 2.3	3.9	3.9	2608.0	- 2.3	
	Δ 34	3.15	31° 37'	30° 06'	1° 31'	315=0	9.4	3.9	3.9	2619.7	9.4	Point BA on old Topog Surv
												July 3rd 1954
Δ 28	cc.	3.95	14° 54'	30° 5'	- 15° 11'	396	- 99.6	4.0	4.0	2467.1	- 99.6	LEA
Δ 27A	Δ 27											2491.3 elev 27A
	Δ 27B	.78	8° 17'	29° 54'	- 21° 37'	68	- 26.5	3.8	3.8	2464.8	- 26.5	
Δ 27C	Δ 27A											
	Δ 27C	82	34° 43'	30° 00'	4° 43'	82	6.7	4.0	4.0	2471.5	6.7	
Δ 27C	Δ 27B	.60										
	Δ 27D	.60	29° 12'	30° 6'	- 54'	60	- 1.9	9.0	3.7	2465.3	- 6.2	

Sta	Sight	Stadia	Vert Ards	Level Rds	Vert A	H	V	cross ih.	int	Sight elev	D.E.	Remarks
270	039	.55	50°45'	29°48'	20°57'	48	18.5	3.7	3.7	2483.8	18.5	edge of outcrop
	27E	1.30	11°22'	30°8'	-18°46'	117	-39.5	3.7	3.7	2425.8	-39.5	
Δ27E	27F	.78	35°4'	30°3'	5°1'	77	6.0	3.2	3.2	2432.6	6.8	
	040	.70	28°30'	30°10'	-1°40'	70	-2.1	3.2	3.2	2423.7	-2.1	edge of outcrop
	041	1.35	24°	30°00'	-6°00'	133	-14.1	3.2	3.2	2411.7	-14.1	" " cliff
Δ27E	042	.80	54°00'	30°14'	19°46'	71	25.5	3.5	3.5	2458.1	25.5	July 4, 1954 LEA
	27G	1.35	34°24'	30°10'	4°14'	135	10	3.5	3.5	2442.6	10	
Δ27G	043	1.02	55°00'	30°00'	25°00'	84	39	3.7	3.7	2411.6	39.0	outcrop
	044	1.20	48°44'	29°50'	18°54'	107	37	3.7	3.7	2479.6	37	outcrop
	Δ35	2.30	36°41'	30°5'	6°36'	225	26.5	3.7	3.7	2469.1	26.5	
	Δ27H	1.80	10°40'	30°15'	19°35'	160	-56.5	3.7	3.7	2386.1	-56.5	
Δ27H	045	.85	54°00'	30°10'	23°50'	71	31.7	3.6	3.6	2417.8	31.7	
	046	1.15	31°25'	30°18'	1°7'	115	2.2	3.6	3.6	2388.3	2.2	Point
	047	2.40	28°5'	30°15'	-2°10'	240	-9.1	3.6	3.6	2377.0	-9.1	
	048	?										
	049	.98	29°28'	30°6'	0°38'	98	-1.1	3.6	3.6	2385.0	-1.1	edge of cr.

2465.3

2432.6

2442.6

$$d_e = HI - (xh) + v$$

$$d_e = \text{elev sta} + d_r$$

Sta	Sight	Stadia	rdg	Level rdg	vert A	H	V	cross H	HI	Sight elev	d <sub>r</sub>	Remarks
Δ 35	□ 18	3.95	45° 13'	30° 3'	15° 10'	370	105'	4.2	4.2	2566.1	1.05	<sup>.25601</sup> elev Δ 35 2461.1 July 5, 1954 L.E.A.
Δ 35	○ 50	1.25	45° 53'	30° 15'	15° 38'	116	32.5	9.0	3.9	2488.5	27.4	
	A 36	.80	28° 45'	30° 5'	10° 20'	80	-1.9	6.0	3.9	2457.1	-4.0	
Δ 36	Δ 37	2.20	30° 28'	30° 6'	22'	220	1.4	3.7	3.7	2458.5	1.4	
Δ 37	Δ 38	1.15	26° 14'	30° 10'	-3° 56'	115	-8.0	3.9	3.9	2450.5	-8.0	
Δ 38	Δ 39	1.90	37° 2'	30° 00'	7° 2'	187	23.1	6.5	4.0	2470.1	20.6	
Δ 39	○ 51	.55	44° 45'	30° 8'	14° 37'	51	13.5	5.5	3.5	2483.6	13.5	
	Δ 40	2.35	35° 16'	30° 7'	5° 9'	233	21.2	3.5	3.5	2491.3	21.2	
Δ 40	Δ 41	.90	22° 49'	29° 55'	-7° 6'	88	-1	3.5	3.5	2480.3	-11.0	
Δ 41	Δ 42	.45	43° 30'	30° 00'	13° 50'	42	10.3	3.9	3.9	2490.6	10.3	
	○ 52	.90	53° 7'	30° 7'	23° 00'	77	32.1	3.9	3.9	2512.4	32.1	
Δ 42	Δ 43	.67	-	-	-	67	-	1.3	3.5	2492.8	2.2	
Δ 43	Δ 44	.84	35° 24'	29° 55'	5° 29'	83	8.1	3.8	3.8	2500.9	8.1	
Δ 44	Δ 45	1.05	36° 42'	30° 3'	6° 39'	104	12.2	3.5	3.5	2513.1	12.2	
Δ 45	A 46	.83	50° 00'	29° 55'	20° 5'	73	27.1	3.3	3.3	2540.2	27.1	July 6, 1954 L.E.A.

D.E = HI - (CH) + V  
 Elev = elev sta + DE

TL 11

Sta.	Sight	Stadia	$\Delta$ vdg	level rdg	$\Delta$ vert	H	V	Cross H	HI	Sight elev	D.E	Remarks
A46	$\Delta$ 47	2.30	36° 21'	29° 52'	6° 29'	227	26'	6.0	4.0	2564.2	24	(2540.2 $\Delta$ 46)
$\Delta$ 47	$\Delta$ 48	.80	39° 35'	30° 5'	9° 28'	77	13.1	4.0	4.0	2577.3	13.1	
A48	$\odot$ 53	.85	27° 00'	30° 6'	-3° 6'	85	-4.6	10	3.9	2566.6	-10.7	
	$\Delta$ 49	1.00	34° 5'	30° 5'	4°	100	7.0	3.9	3.9	2584.3	7.0	
A49	$\odot$ 54	1.45	17° 20'	30° 00'	-12° 40'	43	-9.6	4.0	4.0	2574.7	-9.6	
	$\Delta$ 50	1.00	35° 43'	29° 46'	5° 57'	99	10.5	4.0	4.0	2594.8	10.5	
												July 8, 1954
$\Delta$ 50	$\odot$ 55	.70	4° 45'	30° 00'	-25° 15'	57	-27.7	3.7	3.2	2567.1	-27.7	
	$\Delta$ 51	.63	39° 40'	30° 8'	9° 32'	61	10.3	9.0	3.2	2599.3	4.5	
$\Delta$ 51	$\odot$ 56	.35	44° 34'	30° 5'	14° 29'	38	8.5	5.8	3.8	2607.8	8.5	
	$\Delta$ 52	1.35	35° 55'	30° 00'	5° 55'	134	14	3.8	3.8	2613.5	14.0	
$\Delta$ 52	$\Delta$ 53	.50	-	-	-	50	-	2.7	3.8	2612.4	-1.9	
$\Delta$ 53	$\Delta$ 54	.85	22° 55'	30° 9'	-7° 14'	84	-10.7	3.4	3.4	2601.7	-10.7	
$\Delta$ 54	$\Delta$ 55	.95	40° 4'	30° 10'	9° 54'	92	16.1	3.5	3.5	2617.8	16.1	
$\Delta$ 55	$\odot$ 57	1.10	44° 00'	30° 00'	14° 00'	104	25.9	3.7	3.7	2643.7	25.9	
	$\odot$ 58	.55	-	-	-	55	-	7.7	3.7	2613.8	-4	
	$\Delta$ 56	.80	16° 00'	30° 16'	-14° 16'	75	-19.1	3.7	3.7	2598.7	-19.1	

DE = HI + (cross H) + V  
 Elev = elev sta + DE

1954 T612

Sta	Sight	Stadia	∠ rdg.	low. rdg	∠ vert	H.	V	Cross +	HI	Sight elev	D.E.	Remarks
A55	059	.75	35°25'	30°00'	5°25'	75	7.1	3.7	3.7	2624.9	7.1	2617.8 D 55
A56	A57	2.40	25°20'	30°13'	4°53'	240	-20.2	5.0	4.0	2577.5	-21.2	2598.7 A56
A57	060	1.05	47°10'	30°00'	17°10'	96	29.6	4.0	4.0	2607.1	29.6	
	A58	1.30	14°18'	30°15'	-15°57'	126	-34.3	4.0	4.0	2543.2	-34.3	
A58	061	.50	43°43'	30°00'	13°43'	48	11.7	3.9	3.9	2554.9	11.7	
	062	1.50	40°50'	30°00'	10°50'	145	27.6	3.9	3.9	2570.8	27.6	
	A59	2.65	21°47'	30°5'	-8°18'	260	-37.9	3.9	3.9	2505.3	-37.9	
A59	063	1.55	51°30'	30°20'	21°10'	135	52	3.7	3.7	2557.3	52	
	A60	1.50	24°57'	29°53'	-4°56'	150	-12.9	3.7	3.7	2492.4	-12.9	
A60	064	1.80	29°41'	30°10'	-1°6'	186	-3.5	3.5	3.5	2488.9	-3.5	
	065	.55	13°30'	30°00'	16°30'	53	-15	3.5	3.5	2477.4	-15.0	
	A61	1.30	12°45'	30°6'	-17°21'	120	-37.0	5.5	5.5	2455.4	-37.0	
A61	A9'	2.50	21°53'	30°2'	-8°9'	245	-35.2	4.0	4.0	2420.2	-35.2	
July 12 O.E.F.												
∠10A	∠10B	1.60	18°58'	30°4'	11°6'	154	-30.1	3.1	3.1	2371.7	-30.1	Elev ∠10A 2401.8
∠10B	A10C	1.09	19°45'	29°54'	10°9'	107	-19.0	3.2	3.2	2352.7	-19.0	
A10C	066	5.75	-	-	-	575	-	3.3	3.3	2352.7	-	Topog.



1954  
TL13

Sta	Sight	Stadia	Vert. Rds	Level Rds	Vert. A	H	V	X-hair	h.i.	Sight Elev	d.e.	Remarks
E Δ 11	067	1.45	13° 14'	30° 03'	16° 49'	140	140.5	3.5	3.5	2351.4	40.5	Elev Δ 11
	068	.85	10° 57'	30° 20'	19° 23'	76	-26.5	3.5	3.5	2365.4	-26.5	2391.9
	069	1.25	24° 2'	30° 21'	6° 19'	124	-13.7	15.5	3.5	2366.2	-25.7	
Δ 7A	070	.93	40° 31'	30° 00'	10° 31'	90	+16.8	3.4	3.4	2456.5	16.8	Elev Δ 7A 2439.7
	Δ 7B	1.65	47° 56'	30° 00'	17° 56'	149	48.5	1.0	3.4	2490.6	50.9	
Δ 7B	071	.94	59° 40'	30° 10'	29° 30'	71	40.2	3.2	4.2	2531.8	41.2	
July 13 OFF												
Δ 8A	072	2.20	41° 51'	30° 03'	14° 48'	205	54.8	6.0	3.0	2516.2	51.8	elev Δ 8A 2464.4
	073	1.85	52° 09'	30° 02'	22° 7'	163	64.5	5.0	3.0	2526.9	62.5	
Δ 9A	074	2.20	57° 15"	30° 00'	27° 15'	175	89.2	5.0	3.5	2550.6	87.7	
	075	1.50	50° 40'	30° 00'	20° 40'	132	49.5	5.0	3.5	2510.9	48.0	Elev 9A 2462.9
	076	.71	42° 00'	30° 13'	11° 47'	69	14.3	5.0	3.5	2475.7	12.8	
Δ 5B	Δ 5BA	1.50	41° 06'	30° 08'	10° 58'	145	28.0	3.2	3.2	2571.2	28.0	Elev 5B 2543.2
	Δ 5BB	1.02	42° 13'	30° 17'	11° 56'	97	20.8	3.2	3.2	2592.0	20.8	
Δ 5B	Δ 5BC	.85	43° 29'	30° 08'	13° 21'	81	19.2	3.7	3.7	2611.2	19.2	
Δ 5B	077	.70	6° 38'	29° 53'	23° 15'	59	26.2	3.6	3.6	2586.0	-25.2	Topog
	078	.85	30° 31'	29° 53'	48'	85	1.2	3.7	3.6	2612.3	1.1	

1954  
7614

Sta	Sight	Stadia	Vert. & Rdo	Level Rdo	Vert. A	H	V	X-hair	h.I	Sight Elev.	d.p.	Remarks
Δ58C	079	.50	44°33'	30°02'	14°31'	47	42.3	3.6	3.6	2623.5	12.3	Elev 58C 2611.2
Δ58D	.95	52°23'	30°03'	22°20'	81	32.8	3.6	3.6	2644.0	32.8		
Δ58D	080	.90	53°35'	20°06'	23°29'	76	32.7	3.3	3.3	2676.7	32.7	
	081	1.95	43°35'	30°00'	13°35'	184.0	144.2	9.3	3.3	2682.2	38.2	

1955  
TL 15

STA	SIGHTON	ROD RDG	STADIA	VERT $\angle$ RDG	LEVEL RDG	VERT $\angle$	H	V	X-h	H.I.	SIGHT ELEV.	D.E.	REMARKS
28	075		.61	52°0'	29°58'	22°02'	53.2	21.2	4.5	3.75	2608.0	20.5"	ELEV. 28A = 2587.5' 20"
	$\Delta$ 65		.99	49°31'	30°05'	19°26'	87.8	30.7	4.5	3.75	2617.5	30.0"	
	076		.38	12°36'	30°04'	-17°28'	34.5	10.8	4.5	3.75	2576.0	11.5"	
$\Delta$ 65	$\Delta$ 28A		1.00	CHECK					3.5	3.5			ELEV $\Delta$ 65 = 2617.5'
	$\Delta$ 66		.78	43°45'	29°56'	13°49'	73.5	18.3	3.5	3.5	2635.8	18.3"	
$\Delta$ 66	077		0.46	51°25'	29°50'	21°35'	40.5	15.5	3.5	3.5	2651.3	15.5"	ELEV $\Delta$ 66 = 2635.8
	$\Delta$ 67		0.85	53°20'	29°50'	23°30'	72.0	30.8	3.5	3.5	2666.6	30.8"	
$\Delta$ 67	$\Delta$ 68		0.68	42°49'	29°32'	13°17'	65.0	15.2	4.0	4.0	2681.8	15.2"	ELEV $\Delta$ 67 = 2666.6
	078		1.40	46°58'	29°30'	17°28'	128.0	40.1	4.0	4.0	2706.7	40.1"	
	$\Delta$ 67A		0.75	14°33'	30°40'	-16°07'	69.5	20.0	4.0	4.0	2646.6	20.0"	
	$\Delta$ 69		1.18	52°52'	29°50'	23°02'	102.0	42.6	4.0	4.0	2709.2	42.6"	
	079		0.50	38°14'	29°50'	8°24'	49.0	7.4	4.0	4.0	2674.0	7.4"	

STA	SIGHT	ROD RDG	STADIA	VERT X RDG	LEVEL RDG	VERT Z	H	V	X-h	HI	SIGHT ELEV	D.E	REMARKS
67A	080		.50	20°04'	29°58'	-9°54'	48.5'	-8.5	3.5	3.5	2638.1'	-8.5'	Δ67A = 2646.6'
	081		.60	18°36'	30°08'	-11°32'	57.8'	-11.7	3.5	3.5	2634.9	-11.7	
68	082		.80	4°31'	29°30'	-24°59'	66.0'	-30.5	4.25	4.25	2651.3	-30.5	Δ68 = 2691.8'
	Δ70		1.25	26°11'	29°12'	-3°01'	124.0'	-6.6	4.25	4.25	2675.2	-6.6	
Δ70	Δ71		1.40	10°04'	29°41'	-19°37'	125.0	-44.2	4.00	4.00	2631.0	-44.2	Δ70 = 2675.2 +11.5
	083		.70	39°12'	29°45'	+9°37'	68.0	+11.5	4.00	4.0	2686.7	+11.5	
Δ71	084		1.10	34°51'	30°41'	+4°10'	109.0	+8.0	4.0	4.0	2639.0	+8.0	Δ71 = 2631.0
	085		.45	20°18'	30°39'	-10°21'	43.5	-7.9	4.0	4.0	2623.1	-7.9	
	Δ72		.40	49°30'	30°44'	+18°16'	36.0	+11.9	4.0	4.0	2642.9	+11.9	
Δ72	Δ73		1.18	46°46'	30°04'	+16°42'	110.0	+32.5	3.75	3.75	2715.4	+32.5	Δ72 = 2642.9
Δ73	086		.87	22°52'	30°00'	-7°08'	86.0	-10.8	4.0	4.0	2704.6	-10.8	Δ73 = 2715.4'
	Δ74		.70	55°30'	30°15'	25°15'	58.0	+27.0	4.0	4.0	2742.4	+27.0	
Δ74	087		.46	27°35'	30°12'	-2°37'	40.0	-1.5	3.75	3.75	2740.9	-1.5	Δ74 = 2742.4
	Δ74A		.37	35°28'	30°13'	+5°15'	36.8	+3.4	3.75	3.75	2745.8	+3.4	
	Δ75		.57	42°45'	30°00'	+12°45'	54.0	+12.0	3.75	3.75	2754.4	+12.0	

1955

STA	Sight On	Red Rdg	Stadia	Vert $\angle$ Rdg	Level Rdg	Vert $\angle$	H	V	V X-H	HI	Sight EL	DE
$\Delta 74A$	$\Delta 76$		1.60	$53^{\circ} 5'$	$30^{\circ} 10'$	$+ 24^{\circ} 55'$	132.0	+61.5'	4.0	4.0	2806.3	+61.5
	$\odot 88$		.92	$50^{\circ} 30'$	$30^{\circ} 9'$	$+ 20^{\circ} 21'$	81.0	+30.0	4.0	4.0	2775.8	+30.0
												$\Delta 74A = 2745.8'$



Sta.	Sight on	H.I.	R.I.	Beaman	H.P.	V H	H D	Δ E	ELEV.	Remarks
175	089	3.7ft	.46	+11	3.6	+11.0	45.5	11.1ft	2765.8	El. Δ75 = 2759.4
	090	3.7ft	.40	+42	.2	+42.0	32ft	45.5ft	2800.2	
	A77	3.7ft	1.0	+17	6.6	+17.0	97ft	14.1ft	2768.5	
B.S. Δ77	Δ75	3.9ft	.98	-17	6.5	-16.7	95ft	14.1ft	2768.5	
Δ14	Δ16	4.0ft	.6	+7	3.8	+40ft	59ft	4.4		