

Appendix 1: List of 59 triangulations digitized on the Newcombe and present-day topographic maps. Table fields include: triangulation point Id; X and Y of the source (before the transformation); X and Y of the target (after application of the 1st polynomial transformation model was applied); X Res, Y Res, and Res represent horizontal errors; elevation in the Newcombe map (in meters converted from feet); elevation in the present-map; absolute elevation difference between the Newcombe and the present-day map (two extreme differences are noted by an asterisk); and a notation if identification of a given triangulation point is vague.

Id	X Source	Y Source	X Target	Y Target	Res X (m)	Res Y (m)	Res	Newcombe Elevation (m)	Present Elevation (m)	Absolute Elevation diff (m)	Is Vague
1	34.737331	30.245715	174398.47	462390.88	-123.52	190.41	226.97	782.11	778	4.11	0
2	34.23214	31.268429	126860.44	575973.55	118.86	137.15	181.49	77.72	79	1.27	0
3	34.569916	31.440247	159166.43	594626.29	138.65	-138.86	196.23	142.34	152	9.65	0
4	34.993155	30.021157	199030.73	437268.75	196.713	75.04	210.54	545.59	551	5.40	0
5	34.442282	30.959087	146535.78	541307.55	-126.88	-135.17	185.39	336.49	336	0.49	0
6	34.250017	31.221514	128473.83	570734.55	45.72	108.95	118.15	90.22	90	0.22	0
7	35.15544	31.495818	215052.43	600705.60	153.74	1.21	153.74	952.19	946	6.19	0
8	34.394202	31.447838	142330.49	595776.52	59.77	101.87	118.11				1
9	34.797057	30.600896	180317.14	501462.89	-42.70	-112.17	120.02	891.54	892	0.46	0
10	34.57971	30.845443	159797.13	528711.22	71.33	-73.05	102.11		464		0
11	34.744901	30.695841	175370.72	512043.63	-52.03	-83.00	97.96	841.24	836	5.24	0
12	35.017284	30.378872	201391.12	476885.08	113.59	22.02	115.70	529.13	529	0.13	0
13	34.990245	31.274193	199035.46	576105.42	-18.49	-79.21	81.34	563.57	566	2.42	0
14	34.734674	30.423176	174250.04	481870.80	-88.97	-15.08	90.24	957.07	956	1.07	0
15	34.795026	31.190536	180362.53	566905.80	-37.69	-74.35	83.36	368.50	368	0.50	0
16	35.071917	30.88816	206788.05	533340.62	97.26	7.08	97.52	484.32	479	5.32	0
17	34.611978	30.914737	162739.70	536449.20	-91.41	-8.94	91.85	421.53	425	3.46	0
18	34.496256	31.433986	152041.29	594134.39	41.88	35.43	54.86	99.06	108	8.94	0
19	34.439874	30.742648	146268.76	517475.91	-78.28	40.20	88.00	450.79	456	5.20	0

Id	X Source	Y Source	X Target	Y Target	Res X (m)	Res Y (m)	Res	Newcombe Elevation (m)	Present Elevation (m)	Absolute Elevation diff (m)	Is Vague
20	34.635591	30.499295	164842.67	490388.51	-75.76	21.26	78.69	1034.79	1037	2.20	0
21	34.850054	29.756459	185046.37	407852.32	-33.19	-35.38	48.52	863.49	867	3.50	0
22	34.788737	31.239238	179832.99	572331.06	13.28	-53.65	55.27	302.66			0
23	34.806894	30.103951	181108.94	446519.08	8.12	70.14	70.61	582.77	579	3.77	0
24	34.998219	31.452901	199837.81	596032.21	-47.67	27.91	55.24	792.48	799	6.52	0
25	35.016763	31.492863	201731.87	600455.74	61.74	25.88	66.94	899.16	899	0.16	0
26	34.72256	30.809632	173285.53	524779.5155	-51.46	22.32	56.10	676.65	680	3.34	0
27	34.829559	29.732219	183152.35	405183.90	37.27	-22.91	43.75	896.72	902	5.27	0
28	34.752929	30.693562	176194.71	511834.18	7.12	-36.57	37.25	850.39	848	2.39	0
29	34.857185	29.685591	185782.35	400022.85	50.74	-1.25	50.75	890.01	894	3.98	0
30	34.488768	30.991617	151053.73	545049.86	-55.80	16.68	58.24	377.34			0
31	34.840788	31.242208	184760.46	572671.52	-25.18	-22.64	33.87	306.93	307	0.06	0
32	35.245259	31.044179	223330.78	550620.68	44.23	47.69	65.04	464.51	462	2.51	0
33	34.830853	31.138148	183801.02	561127.62	4.318	-27.76	28.10	386.79	386	0.79	0
34	34.830843	31.036224	183775.68	549885.00	20.39	35.26	40.73	492.25	482	10.25	0
35	35.094935	31.124733	208961.82	559583.65	-18.40	17.68	25.52	672.99	673	0.00	0
36	34.826604	29.607079	182825.11	391338.64	41.58	11.52	43.14	820.82	836	15.17	0
37	34.998644	30.981796	199766.14	543784.23	27.16	36.21	45.26	682.75	685	2.24	0
38	35.151332	30.946646	214320.44	539776.97	31.61	-13.49	34.37	548.64	542	6.64	0
39	34.89672	31.161024	190079.30	563648.44	-9.05	-19.12	21.15	458.41	458	0.41	0
40	34.905902	31.389129	191043.99	588952.79	-10.72	-13.20	17.01	616.61	614	2.61	0
41	34.96456	31.06966	196514.66	553520.06	-8.18	12.86	15.25	656.23	657	0.76	0
42	34.939798	30.935985	194111.81	538682.42	3.90	-6.72	7.77	703.78	703	0.78	0
43	34.547318	31.045973	156698.11	551032.56	-17.66	-7.43	19.16	343.20	344	0.79	0

Id	X Source	Y Source	X Target	Y Target	Res X (m)	Res Y (m)	Res	Newcombe Elevation (m)	Present Elevation (m)	Absolute Elevation diff (m)	Is Vague
44	35.367348	31.497869	235103.39	600946.44	-8.5	95.90	96.27	373.98	369	4.98	1
45	35.301491	31.149567	228589.51	562158.11	-102.47	-83.17	131.97	206.95			1
46	34.833581	29.530605	183427.83	382834.35	9.12	-7.365	11.73	721.76	797	75.3*	0
47	34.576418	30.612729	159222.21	502908.58	-97.19	-63.77	116.24	883.92			1
48	34.824843	30.827283	183110.70	526574.14	10.70	-101.69	102.25	573.93	576	2.06	0
49	35.296844	31.296497	228251.08	578628.85	-55.94	87.98	104.26	441.96			1
50	34.875957	30.967891	188072.14	542234.35	40.87	-18.38	44.82	655.92	657	1.07	0
51	35.23008	31.222536	221870.96	570390.21	-38.56	27.60	47.42	630.32	626	4.32	0
52	35.349274	31.178041	233097.63	565345.56	-163.28	-35.81	167.16	112.77	109	3.77	1
53	34.883672	30.695755	188640.70	512036.88	-18.40	-26.86	32.57	783.94			0
54	35.281513	31.084382	226808.24	555059.20	47.73	40.75	62.76	310.89			0
55	34.713345	30.871359	172672.53	531538.05	193.6	-68.41	204.91	643.12	640	3.12	1
56	34.557788	30.491884	157353.40	489575.98	-133.48	2.15	133.50	719.93			0
57	34.61189	30.368308	162459.07	475854.28	-139.1	8.49	139.37	1014.67	976	38.6*	0
58	34.764483	29.972194	176916.25	431859.66	-78.88	9.96	79.50	551.68			0
59	34.879028	29.641104	187864.99	395073.26	76.18	-7.43	76.54	832.71	838	5.28	0
Median							76.54			2.86	
Average										3.45	

Appendix 2: Similarity level of each of the Newcombe routes to its modern route analogs. Table fields include: **No** – route number; **R.Id** – unique route identifier; **Type** – Newcombe route type (LW for Light-wheeled or LC for Laden camels); **Cnt** – number of cells (cell size = 1000 m) with matching Newcombe and modern segments; **O.len** – the original length of the Newcombe route; **M.len** – the matching length; **N.avg** – averaged proximity of all matching segments comprising a given Newcombe route; **B.avg** – averaged difference in the angular bearing between matching Newcombe and modern segments; **L.avg** – averaged length difference between matching Newcombe and modern segments; **L.diff** – absolute difference between the total length (O.len-M.len); **L.diff.R** – the matching ratio (M.len/O.len*100) between given Newcombe and modern routes; **QN.avg** – the quartile of N.avg; **QB.avg** – the quartile of B.avg; **QL.avg** – the quartile of L.avg; **QL.diff** – the quartile of L.diff; **Wh** – an averaged weight of the four quartiles, ranging between 1.00 3.75; whereas, the lowest value represents the better matching.

No	R.Id	Type	Cnt	O.len	M.len	N.avg	B.avg	L.avg	L.diff	L. diff.R. (%)	QN.avg	QB.avg	QL.avg	QL.diff	Wh
1	0	LC		471.4											
2	1	LW	40	42.4	30.6	369.6	14.4	308.9	11.9	72	2.0	3.0	3.0	4.0	3.0
3	2	LW	33	42.4	23.6	348.6	12.4	302.2	18.8	56	2.0	2.0	3.0	4.0	2.8
4	5	LW	20	27.7	16.5	512.5	11.6	365.1	11.1	60	4.0	2.0	4.0	4.0	3.5
5	6	LW	6	5.4	4.7	595.4	21.3	435.8	0.8	86	4.0	4.0	4.0	2.0	3.5
6	7	LW	14	13.0	13.0	583.2	22.7	280.1	0.0	100	4.0	4.0	3.0	1.0	3.0
7	9	LW	10	8.7	7.9	502.8	23.5	417.0	0.7	92	4.0	4.0	4.0	2.0	3.5
8	10	LW	8	7.8	4.9	602.1	17.1	349.7	2.9	63	4.0	4.0	4.0	3.0	3.8
9	13	LW	5	8.8	2.8	565.4	8.9	659.6	6.0	31	4.0	1.0	4.0	4.0	3.3
10	14	LW	27	30.0	25.5	524.5	13.5	157.8	4.5	85	4.0	3.0	2.0	4.0	3.3
11	15	LW	6	5.9	5.0	617.3	8.2	234.6	0.9	85	4.0	1.0	2.0	2.0	2.3
12	16	LW	5	2.6	2.6	434.2	11.3	209.6	0.0	100	3.0	2.0	2.0	1.0	2.0
13	17	LW	3	2.2	2.2	61.5	4.5	45.0	0.1	97	1.0	1.0	1.0	2.0	1.3
14	18	LC	13	15.1	9.9	756.4	9.4	286.3	5.2	66	4.0	2.0	3.0	4.0	3.3
15	19	LW	21	23.9	19.5	406.0	7.5	127.6	4.4	82	3.0	1.0	1.0	4.0	2.3
16	20	LW	9	11.7	6.9	532.0	11.8	400.0	4.8	59	4.0	2.0	4.0	4.0	3.5
17	21	LW	5	4.3	3.7	400.0	21.5	125.4	0.7	84	3.0	4.0	1.0	2.0	2.5
18	22	LW	11	9.4	8.3	620.2	13.2	451.5	1.1	88	4.0	3.0	4.0	3.0	3.5
19	23	LW	18	16.2	13.1	271.0	9.5	317.7	3.1	81	1.0	2.0	3.0	3.0	2.3
20	24	LW	23	25.3	20.8	403.2	16.6	227.6	4.6	82	3.0	4.0	2.0	4.0	3.3

No	R.Id	Type	Cnt	O.len	M.len	N.avg	B.avg	L.avg	L.diff	L. diff.R. (%)	QN.avg	QB.avg	QL.avg	QL.diff	Wh
21	25	LC	27	28.3	22.6	473.6	15.9	252.0	5.7	80	3.0	3.0	3.0	4.0	3.3
22	26	LC	15	16.1	13.9	256.8	16.1	328.5	2.2	87	1.0	4.0	4.0	3.0	3.0
23	27	LW	21	23.7	20.4	270.1	9.7	88.9	3.2	86	1.0	2.0	1.0	3.0	1.8
24	28	LC	15	15.4	12.8	453.5	12.5	308.3	2.6	83	3.0	2.0	3.0	3.0	2.8
25	29	LW	38	35.5	31.7	405.4	8.6	234.7	3.7	89	3.0	1.0	2.0	4.0	2.5
26	30	LW	8	10.9	7.3	413.7	27.3	252.8	3.7	67	3.0	4.0	3.0	4.0	3.5
27	31	LW	21	19.8	18.5	464.8	10.8	123.0	1.2	94	3.0	2.0	1.0	3.0	2.3
28	32	LW	1	0.8	0.8	88.1	33.7	57.4	0.0	100	1.0	4.0	1.0	1.0	1.8
29	33	LW	11	7.7	7.7	213.5	13.3	192.6	0.0	100	1.0	3.0	2.0	1.0	1.8
30	34	LW	8	8.4	7.3	135.0	8.3	122.9	1.1	87	1.0	1.0	1.0	3.0	1.5
31	35	LW	7	5.8	5.8	438.5	10.4	253.4	0.0	100	3.0	2.0	3.0	1.0	2.3
32	36	LW	20	15.0	14.7	333.9	8.0	214.3	0.3	98	2.0	1.0	2.0	2.0	1.8
33	37	LW	12	12.9	11.3	314.6	8.0	322.2	1.6	88	2.0	1.0	3.0	3.0	2.3
34	38	LW	14	13.4	11.2	564.3	7.6	224.4	2.2	84	4.0	1.0	2.0	3.0	2.5
35	39	LW	37	37.6	28.9	457.8	15.2	409.6	8.7	77	3.0	3.0	4.0	4.0	3.5
36	40	LW	27	19.3	19.3	440.7	13.8	238.0	0.0	100	3.0	3.0	2.0	1.0	2.3
37	41	LC	27	28.8	21.0	306.3	11.3	287.2	7.8	73	2.0	2.0	3.0	4.0	2.8
38	42	LW	32	31.0	25.6	421.8	15.2	293.0	5.4	83	3.0	3.0	3.0	4.0	3.3
39	43	LC	5	4.4	3.7	255.7	24.2	143.8	0.8	82	1.0	4.0	1.0	2.0	2.0
40	44	LW	12	13.0	6.3	495.2	11.0	471.5	6.8	48	3.0	2.0	4.0	4.0	3.3
41	45	LW	15	13.9	13.5	346.5	10.0	152.8	0.4	97	2.0	2.0	2.0	2.0	2.0
42	46	LC	4	2.9	2.8	294.0	16.7	158.5	0.2	94	2.0	4.0	2.0	2.0	2.5
43	47	LW		3.7											
44	48	LC	20	18.8	15.4	407.9	10.1	306.5	3.3	82	3.0	2.0	3.0	4.0	3.0
45	49	LW	13	10.8	10.1	101.3	26.7	149.5	0.7	94	1.0	4.0	1.0	2.0	2.0
46	50	LC	8	9.6	6.8	662.3	21.1	431.2	2.8	71	4.0	4.0	4.0	3.0	3.8
47	51	LW	8	8.2	8.1	143.6	10.3	91.0	0.2	98	1.0	2.0	1.0	2.0	1.5
48	52	LC	13	11.4	10.2	389.9	11.8	148.3	1.2	90	2.0	2.0	1.0	3.0	2.0
49	54	LC	11	9.4	8.0	341.9	31.1	404.1	1.4	85	2.0	4.0	4.0	3.0	3.3
50	55	LC	29	29.7	24.6	294.3	12.3	263.5	5.2	83	2.0	2.0	3.0	4.0	2.8

No	R.Id	Type	Cnt	O.len	M.len	N.avg	B.avg	L.avg	L.diff	L. diff.R. (%)	QN.avg	QB.avg	QL.avg	QL.diff	Wh
51	56	LC	19	22.7	15.2	251.1	9.7	317.0	7.4	67	1.0	2.0	3.0	4.0	2.5
52	57	LW	21	18.5	15.2	494.3	10.5	368.7	3.3	82	3.0	2.0	4.0	4.0	3.3
53	60	LC	45	39.9	36.4	271.6	13.6	264.2	3.5	91	1.0	3.0	3.0	4.0	2.8
54	61	LW	25	72.0	23.0	508.1	8.8	140.1	49.0	32	4.0	1.0	1.0	4.0	2.5
55	63	LC	81	76.3	66.0	274.2	14.7	270.1	10.3	87	1.0	3.0	3.0	4.0	2.8
56	65	LC	16	13.5	12.0	223.5	14.3	222.9	1.5	89	1.0	3.0	2.0	3.0	2.3
57	66	LC	58	66.2	48.3	367.3	13.0	271.9	17.8	73	2.0	3.0	3.0	4.0	3.0
58	68	LC	22	18.5	16.2	230.9	15.3	317.5	2.3	88	1.0	3.0	3.0	3.0	2.5
59	70	LC	15	13.7	13.1	351.1	15.0	363.8	0.6	96	2.0	3.0	4.0	2.0	2.8
60	71	LC	16	19.8	13.9	322.9	22.8	390.6	6.0	70	2.0	4.0	4.0	4.0	3.5
61	73	LC	32	34.7	27.5	483.9	15.5	369.9	7.2	79	3.0	3.0	4.0	4.0	3.5
62	74	LC	39	42.8	33.2	287.8	16.1	310.7	9.6	77	2.0	3.0	3.0	4.0	3.0
63	75	LC	18	18.0	14.8	283.7	16.5	268.4	3.2	82	2.0	4.0	3.0	3.0	3.0
64	76	LC	6	4.6	4.2	199.0	7.2	173.7	0.4	92	1.0	1.0	2.0	2.0	1.5
65	77	LC	1	1.7	1.3	0.0	15.2	23.8	0.4	76	1.0	3.0	1.0	2.0	1.8
66	79	LC	31	27.0	26.0	309.2	10.4	268.3	0.9	97	2.0	2.0	3.0	3.0	2.5
67	80	LC	5	5.8	3.3	100.4	36.0	354.5	2.5	57	1.0	4.0	4.0	3.0	3.0
68	81	LC	9	9.4	8.2	114.8	23.7	249.1	1.2	88	1.0	4.0	2.0	3.0	2.5
69	82	LC	2	1.5	1.5	500.0	7.2	289.0	0.0	100	3.0	1.0	3.0	1.0	2.0
70	85	LW	14	11.8	11.6	249.5	15.3	194.8	0.2	98	1.0	3.0	2.0	2.0	2.0
71	86	LW	4	2.0	2.0	305.7	13.6	256.1	0.0	100	2.0	3.0	3.0	1.0	2.3
72	90	LC	16	10.7	10.7	427.5	22.9	343.7	0.0	100	3.0	4.0	4.0	1.0	3.0
73	91	LW	28	23.0	19.0	414.3	6.7	550.2	4.0	83	3.0	1.0	4.0	4.0	3.0
74	92	LW	1	0.7	0.4	1000.0	3.5	138.9	0.3	60	4.0	1.0	1.0	2.0	2.0
75	93	LW	2	0.7	0.5	500.0	30.8	138.5	0.2	74	3.0	4.0	1.0	2.0	2.5
76	95	LW	3	1.3	1.3	1000.0	31.0	151.3	0.0	100	4.0	4.0	1.0	1.0	2.5
77	96	LW	2	0.9	0.9	501.8	5.8	125.8	0.0	100	4.0	1.0	1.0	1.0	1.8
78	97	LW	3	2.0	2.0	41.2	4.0	118.6	0.0	100	1.0	1.0	1.0	1.0	1.0
79	98	LW	2	1.1	1.1	500.0	13.0	137.4	0.0	100	3.0	3.0	1.0	1.0	2.0
80	99	LC	15	12.4	11.9	431.0	13.7	351.9	8.6	96	3.0	3.0	4.0	1.0	2.8

No	R.Id	Type	Cnt	O.len	M.len	N.avg	B.avg	L.avg	L.diff	L. diff.R. (%)	QN.avg	QB.avg	QL.avg	QL.diff	Wh
81	100	LW	2	0.7	0.7	1.4	15.3	22.9	0.0	96	1.0	3.0	1.0	1.0	1.5
82	101	LW	3	0.9	0.9	666.7	21.5	87.1	0.0	95	4.0	4.0	1.0	2.0	2.8
83	102	LW	2	1.1	1.1	500.0	2.8	53.7	0.0	100	3.0	1.0	1.0	1.0	1.5
84	103	LW	2	1.1	1.1	500.0	54.3	162.0	0.0	100	3.0	4.0	2.0	1.0	2.5
85	104	LW	4	1.9	1.9	11.6	14.5	207.1	0.0	100	1.0	3.0	2.0	1.0	1.8
86	105	LW	23	18.5	17.6	622.4	9.3	763.5	0.9	95	4.0	2.0	4.0	2.0	3.0
87	106	LW	8	6.7	5.7	318.0	36.6	389.3	1.0	86	2.0	4.0	4.0	3.0	3.3
88	107	LW	5	2.8	2.8	800.0	21.7	506.3	0.0	100	4.0	4.0	4.0	1.0	3.3
89	108	LW	8	5.5	5.5	279.8	10.7	258.3	0.0	100	1.0	2.0	3.0	1.0	1.8
90	109	LW	8	8.2	6.4	502.3	8.8	234.1	1.8	78	4.0	1.0	2.0	3.0	2.5
91	110	LW	10	8.2	7.3	374.7	9.3	313.2	1.0	88	2.0	1.0	3.0	3.0	2.3
92	111	LW	3	3.3	2.9	666.7	16.1	165.1	0.4	89	4.0	3.0	2.0	2.0	2.8
93	112	LC	4	5.1	2.7	637.3	17.8	329.7	2.3	54	4.0	4.0	4.0	3.0	3.8
94	113	LW	3	2.6	2.6	351.1	12.8	164.6	0.1	98	2.0	2.0	2.0	2.0	2.0
95	114	LW	2	2.8	2.2	500.0	33.4	356.6	0.5	81	3.0	4.0	4.0	2.0	3.3
96	116	LW	8	4.7	4.7	397.4	5.3	117.0	0.0	100	2.0	1.0	1.0	1.0	1.3
97	117	LW	3	3.0	2.9	378.8	5.2	545.2	0.1	98	2.0	1.0	4.0	2.0	2.3
98	120	LW	7	5.4	5.3	363.9	12.9	421.2	0.0	100	2.0	2.0	4.0	1.0	2.3
99	121	LW	5	2.9	2.9	427.0	5.3	184.1	0.0	100	3.0	1.0	2.0	1.0	1.8
100	122	LW	3	2.6	2.5	0.0	9.9	84.0	0.0	99	1.0	2.0	1.0	1.0	1.3
101	123	LW	5	2.8	2.8	200.9	4.2	122.0	0.0	100	1.0	1.0	1.0	1.0	1.0
102	124	LC	3	2.7	2.2	690.7	8.7	206.1	0.5	82	4.0	1.0	2.0	2.0	2.3
103	125	LW	7	4.1	4.1	297.0	10.3	176.7	0.0	100	2.0	2.0	2.0	1.0	1.8
104	161	LC	3	1.9	1.5	157.5	14.9	312.6	0.4	80	1.0	3.0	3.0	2.0	2.3
105	172	LC	7	5.7	4.8	595.9	15.8	216.3	0.9	84	4.0	3.0	2.0	3.0	3.0
106	202	LC		4.0											
107	222	LC	7	6.6	5.6	297.6	11.8	123.7	1.0	85	2.0	2.0	1.0	3.0	2.0
108	291	LC	13	11.1	10.2	95.7	9.7	236.3	0.8	92	1.0	2.0	2.0	2.0	1.8
109	311	LC	16	16.3	14.0	358.1	10.5	392.9	2.3	86	2.0	2.0	4.0	3.0	2.8
110	312	LC	3	2.7	2.4	348.2	33.0	111.5	0.3	90	2.0	4.0	1.0	2.0	2.3

No	R.Id	Type	Cnt	O.len	M.len	N.avg	B.avg	L.avg	L.diff	L. diff.R. (%)	QN.avg	QB.avg	QL.avg	QL.diff	Wh
111	321	LC	17	18.2	15.4	547.5	14.4	285.9	2.8	85	4.0	3.0	3.0	3.0	3.3
112	341	LC	15	15.3	11.4	586.6	7.6	204.9	3.9	75	4.0	1.0	2.0	4.0	2.8
113	381	LC	10	8.7	8.0	553.5	6.6	234.7	0.8	91	4.0	1.0	2.0	2.0	2.3
114	471	LC	13	11.0	10.0	421.0	13.8	191.1	1.0	91	3.0	3.0	2.0	3.0	2.8
115	491	LC	9	7.3	7.2	364.1	7.8	235.4	0.1	99	2.0	1.0	2.0	2.0	1.8
116	492	LC	1	0.4	0.4	1000.0	0.0	111.0	0.0	100	4.0	1.0	1.0	1.0	1.8
117	571	LC	42	34.1	32.2	308.9	16.3	277.5	1.9	94	2.0	4.0	3.0	3.0	3.0
	Min			0.4	0.4										1
	Max			76.3	66.0										3.75
	Mean		14.0	17.6	11.1	397.9	14.4	255.9	2.8	85.1	2.5	2.5	2.5	2.5	2.5
	Total		1591.0	2054.2	1264.5										

Appendix 3: Classification of the matching Newcombe route type and to what type they evolved into in the modern map, classified according to the 11 Newcombe sheets (Fig. 1)

Sheet	Match	Newcombe type	Modern type	Total Length (km)	Ratio (%)	Match Ratio
North H-36 E-III Rafa	No	Laden camels		83.3	22.4	55.9
		Light-wheeled		124.1	33.4	
	Yes	Laden camels	Main	2.7	0.7	44.1
			Paved	3.8	1.0	
			Unpaved	6.4	1.7	
		Light-wheeled	Main	45.1	12.2	
			Main (two way)	18.4	5.0	
			Path	5.8	1.6	
			Paved	16.7	4.5	
			Secondary	34.0	9.2	
			Unpaved	30.9	8.3	
North H-36 E-IV Beer Sheba	No	Laden camels		62.1	15.1	36.8
		Light-wheeled		89.2	21.7	
	Yes	Laden camels	Main	18.1	4.4	63.2
			Path	0.8	0.2	
			Secondary	1.5	0.4	
			Unpaved	44.1	10.7	
		Light-wheeled	Main	36.3	8.8	
			Main (two way)	22.2	5.4	
			Passable way [car+4*4]	10.1	2.5	
			Path	8.4	2.0	
			Paved	8.8	2.1	
			Secondary	18.6	4.5	
			Unpaved	90.6	22.1	
North H-36 F-III Wadi Fai	No	Laden camels		7.1	6.3	15.5
		Light-wheeled		10.5	9.2	
	Yes	Laden camels	Main	17.8	15.7	84.5

Sheet	Match	Newcombe type	Modern type	Total Length (km)	Ratio (%)	Match Ratio
			Passable way [car+4*4]	7.9	6.9	
			Paved	2.4	2.1	
			Unpaved	4.5	3.9	
		Light-wheeled	Main	21.9	19.3	
			Path	2.1	1.9	
			Paved	5.3	4.6	
			Secondary	1.0	0.9	
			Unpaved	33.1	29.1	
North H-36 K-I El Kossaima	No	Laden camels		10.8	14.3	38.4
		Light-wheeled		18.2	24.1	
	Yes	Laden camels	Paved	3.3	4.4	61.6
			Secondary	7.3	9.7	
			Unpaved	9.8	13.0	
		Light-wheeled	Path	3.3	4.3	
			Paved	2.4	3.2	
			Secondary	3.9	5.1	
			Unpaved	16.5	21.9	
North H-36 K-II Abda	No	Laden camels		53.9	19.2	24.3
		Light-wheeled		14.4	5.1	
	Yes	Laden camels	Main	34.7	12.3	75.7
			Passable way [car+4*4]	15.1	5.4	
			Path	6.0	2.1	
			Paved	11.1	4.0	
			Secondary	2.1	0.7	
			Unpaved	102.8	36.5	
		Light-wheeled	Passable way [car+4*4]	9.3	3.3	
			Paved	5.2	1.8	
			Unpaved	26.7	9.5	
North H-36 K-IV El Mayein	No	Laden camels		102.0	33.4	35.6
		Light-wheeled		6.7	2.2	

Sheet	Match	Newcombe type	Modern type	Total Length (km)	Ratio (%)	Match Ratio
	Yes	Laden camels	Passable way [car+4*4]	69.3	22.7	64.4
			Path	17.1	5.6	
			Paved	1.0	0.3	
			Secondary	2.3	0.8	
			Unpaved	106.9	35.0	
North H-36 L-I Wadi el Jeib	No	Laden camels		31.5	11.8	22.1
		Light-wheeled		27.4	10.3	
	Yes	Laden camels	Main	19.2	7.2	77.9
			Passable way [car+4*4]	17.6	6.6	
			Path	3.7	1.4	
			Paved	18.1	6.8	
			Secondary	4.4	1.7	
			Unpaved	25.8	9.7	
		Light-wheeled	Main	33.5	12.6	
			Passable way [car+4*4]	0.3	0.1	
			Path	6.4	2.4	
			Paved	9.1	3.4	
			Secondary	18.1	6.8	
			Unpaved	51.3	19.2	
North H-36 L-III Gebel Harun	No	Laden camels		63.2	43.0	72.9
		Light-wheeled		43.9	29.9	
	Yes	Laden camels	Main	10.8	7.3	27.1
			Passable way [car+4*4]	2.7	1.8	
			Unpaved	12.4	8.5	
		Light-wheeled	Main	14.0	9.5	
North H-36 Q-II Wadi Jerafi	No	Laden camels		36.7	46.3	50.3
		Light-wheeled		3.2	4.0	
	Yes	Laden camels	Main	1.5	1.8	49.7
			Passable way [car+4*4]	5.2	6.6	
			Path	3.5	4.5	

Sheet	Match	Newcombe type	Modern type	Total Length (km)	Ratio (%)	Match Ratio
			Paved	1.2	1.5	
			Secondary	5.4	6.8	
			Unpaved	4.8	6.1	
		Light-wheeled	Main	9.3	11.7	
			Main (two way)	4.9	6.2	
			Secondary	3.6	4.5	
North H-36 R-I Aqaba	No	Laden camels		0.2	42.5	100.0
		Light-wheeled		0.3	57.5	