

Department of the Interior
United States Geological Survey

Open File Report
No. 75-447

AUDIO-MAGNETOTELLURIC DATA LOG
FOR STEAMBOAT HILLS, NEVADA

by Carl L. Long and Robert H. Brigham

1975

This report is preliminary
and has not been edited
or reviewed for conformity
to Geological Survey standards.

pa = observed apparent resistivity in ohm-metres
 N = number of observations
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"NOTE" - Telluric line orientation indicated with station numbers.

		FREQUENCY											
Sta. No.		7.5	10	14	27	76	285	685	1.2K	3.3K	6.7K	10.2K	18.6K
1NS	pa	57.1	73.6	104.	121.	139.	113.	321.	51.4	72.6	21.9	3.19	9.14
	N	6	6	5	10	9	10	4	7	7	4	4	1
	Er	16.9	17.8	26.7	7.11	12.5	6.47	60.5	9.0	4.82	7.79	.52	-
1EW	pa	127.	101.	90.5	75.6	90.1	121.	81.4	433.	74.2	21.7	15.1	46.3
	N	7	5	7	11	8	10	6	7	5	8	4	1
	Er	20.0	19.1	11.9	9.38	14.5	16.5	15.8	60.3	3.09	1.39	.66	-
2NS	pa	98.9	290.	261.	372.	676.	-	-	-	16.8	11.6	-	7.44
	N	5	7	8	7	4	-	-	-	4	3	-	1
	Er	9.05	50.9	44.4	42.8	26.0	-	-	-	.70	1.54	-	-
2EW	pa	156.	162.	82.6	348.	544.	-	-	-	22.9	6.12	2.02	5.40
	N	7	9	7	10	8	-	-	-	3	5	6	1
	Er	26.9	29.1	8.93	36.8	38.2	-	-	-	.73	.63	.09	-
3NS	pa	495.	365.	662.	905.	2753.	-	1063.	1046.	783.	94.4	35.1	82.6
	N	8	9	11	10	10	-	1	1	1	9	5	1
	Er	85.2	48.4	81.1	146.	251.	-	-	-	-	6.19	1.81	-
3EW	pa	223.	118.	119.	173.	511.	142.	93.8	152.	29.5	2.54	1.63	28.2
	N	8	10	9	10	5	7	3	3	3	4	7	1
	Er	31.9	17.0	8.93	15.8	88.9	7.34	12.8	57.5	8.43	.28	.04	-
4NS	pa	1623.	3669.	1014.	1298.	1080.	5431.	8075.	7924.	-	1416.	808.	567.
	N	4	9	6	6	6	9	5	8	-	6	6	1
	Er	548.	836.	144.	159.	288.	682.	2202.	2615.	-	42.7	56.3	-
4EW	pa	181.	169.	189.	256.	266	387.	667.	4258.	1668.	1135.	68.1	296
	N	10	8	8	8	9	10	7	8	7		9	1
	Er	32.9	30.8	36.2	52.1	34.4	56.7	133.	679.	322.	175.	4.24	-

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		7.5	10	14	27	76	285	685	1.2K	3.3K	6.7K	10.2K	18.6K
5 _{NS}	pa	60.4	669.	256.	273.	114.	188.	1399.	1409.	1372.	232.	120.	300.
	N	7	6	5	7	5	12	4	10	7	8	10	1
	Er	19.9	368.	155.	85.3	26.1	18.9	213.	188.	293.	11.9	7.86	-
5 _{EW}	pa	743.	102	49.9	59.6	54.8	115.	181.	1325.	317.	38.4	34.2	270.
	N	5	6	6	5	11	9	7	12	9	8	7	1
	Er	110.	24.4	23.2	13.4	7.05	11.56	42.2	226.	54.7	2.56	3.67	-
6 _{NS}	pa	40.0	29.8	40.7	23.3	37.0	29.2	57.6	63.9	97.0	27.7	14.7	11.7
	N	11	9	10	7	5	15	10	7	10	10	6	1
	Er	6.78	5.33	8.27	1.20	3.90	1.87	7.42	4.92	7.13	3.50	.92	-
6 _{EW}	pa	32.3	15.6	14.8	15.5	29.5	54.8	42.4	152.	65.5	12.8	6.51	2.39
	N	10	13	10	12	14	13	10	8	5	10	8	1
	Er	6.78	1.56	.79	.65	1.90	6.66	4.30	14.2	6.30	1.34	.51	-
7 _{NS}	pa	66.0	24.0	60.7	71.9	119.0	153.	674.	166.	94.8	63.6	18.5	20.4
	N	8	9	8	9	7	8	2	1	3	6	6	1
	Er	6.15	3.66	7.74	6.30	15.8	15.4	213.	-	13.1	7.20	1.40	-
7 _{EW}	pa	35.2	32.0	27.7	39.2	89.8	117.	140.	-	-	28.3	14.7	7.14
	N	6	10	8	11	7	9	4	-	-	5	10	1
	Er	4.48	1.98	2.59	1.88	5.59	4.85	24.9	-	-	1.49	.58	-
8 _{NS}	pa	85.0	85.8	201.	225.	233.	366.	-	-	-	208.	72.7	146.
	N	10	8	12	10	10	12	-	-	-	10	7	1
	Er	11.9	11.6	21.8	10.9	23.4	11.3	-	-	-	10.8	6.53	-
8 _{EW}	pa	734.	531.	421.	545.	1211.	470.	-	-	-	116.	143.	179
	N	10	12	11	12	10	3	-	-	-	11	8	1
	Er	64.7	50.3	27.1	59.2	117.4	56.5	-	-	-	706	2.28	-

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		7.5	10	14	27	76	285	685	1.2K	3.3K	6.7K	10.2K	18.6K
9Ns	pa	21.5	17.2	13.8	17.9	11.6	13.5	-	-	-	14.2	5.27	5.43
	N	8	8	6	10	6	8	-	-	-	7	6	1
	Er	2.73	2.15	1.43	9.56	1.10	2.05	-	-	-	1.37	.68	-
9EW	pa	7.86	6.72	5.21	6.52	7.34	6.39	-	-	-	3.11	1.76	7.05
	N	7	10	10	9	7	8	-	-	-	6	7	1
	Er	1.87	.50	.52	.69	.49	.63	-	-	-	.61	.11	-
10Ns	pa	54.5	105.	43.3	23.5	19.9	68.6	132.	174.	98.1	33.4	23.3	15.4
	N	8	10	10	7	7	11	5	8	9	10	8	1
	Er	10.2	39.6	7.23	1.90	3.49	11.7	55.0	51.6	15.1	3.63	1.53	-
10EW	pa	38.0	21.6	17.7	16.9	40.8	13.28	23.0	103.	65.4	25.9	10.6	62.4
	N	6	9	10	11	6	9	9	9	5	5	6	1
	Er	7.72	2.46	3.70	2.87	9.15	.66	1.90	26.4	17.9	3.10	1.03	-
11Ns	pa	126.	116.	173	31.1	32.4	46.7	146.	238.	591	107	41.5	99.3
	N	4	6	5	7	7	8	6	10	7	7	10	1
	Er	17.1	20.7	92.7	3.44	7.45	9.20	21.1	43.6	120.	6.28	8.39	-
11EW	pa	56.0	42.3	28.83	20.1	32.2	61.7	57.9	234.	61.0	71.3	12.4	213.5
	N	5	6	8	11	6	7	5	8	10	5	7	1
	Er	18.6	14.7	8.52	1.85	4.51	13.5	15.9	71.8	5.11	10.5	.50	-
12Ns	pa	23.8	19.4	16.6	7.63	3.8	-	-	-	-	.12	.16	.03
	N	11	11	10	12	10	-	-	-	-	7	4	1
	Er	3.19	1.70	1.79	.24	.10	-	-	-	-	.01	.01	-
12.EW	pa	116.	123.	76.6	49.7	40.2	-	-	-	-	.04	.17	.37
	N	11	10	11	10	6	-	-	-	-	10	7	1
	Er	17.83	8.09	6.50	3.28	3.01	-	-	-	-	.01	.00	-

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4

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		7.5	10	14	27	76	285	685	1.2K	3.3K	6.7K	10.2K	18.6K
13 _{NS}	pa	154.	326.	172.	220.	381.	548	1142	-	263.	61.8	24.2	29.1
	N	5	8	8	10	8	11	4	-	7	5	6	1
	Er	20.4	147.	15.8	19.5	8.94	62.3	103.	-	51.7	14.5	2.09	-
13 _{EW}	pa	219.	190.	182	236.	333.	598.	309.	-	59.1	10.4	6.06	9.29
	N	8	14	10	13	10	12	7	-	10	6	8	1
	Er	31.28	20.9	16.2	15.9	15.7	84.5	20.0	-	10.3	.93	.24	-
14 _{NS}	pa	18.8	14.3	14.8	15.0	18.2	27.1	76.6	11.1	115.	305.	8.79	25.7
	N	8	11	10	10	10	10	5	12	8	7	9	1
	Er	2.16	1.25	2.48	.79	1.33	4.85	6.63	.70	21.1	25.8	.47	-
14 _{EW}	pa	29.6	23.3	17.2	16.3	28.1	32.1	229.	343.	148.	18.7	11.8	.60
	N	11	13	10	12	10	11	6	9	6	10	10	1
	Er	2.26	2.73	1.0	1.37	2.10	1.31	46.3	71.6	30.9	1.19	.56	-
15 _{NS}	pa	50.9	72.1	53.9	41.2	38.4	30.5	91.3	155.	167.	68.5	25.8	55.1
	N	7	10	6	10	5	1	1	4	6	5	6	1
	Er	8.52	11.5	8.23	7.45	3.38	-	-	84.7	45.3	19.8	1.89	-
15 _{EW}	pa	32.1	28.5	16.4	25.8	25.8	24.9	24.0	141.	40.7	25.2	13.4	17.6
	N	9	11	10	10	8	3	3	3	5	5	4	1
	Er	3.5	2.88	1.23	4.74	1.99	.35	1.2	18.6	2.01	1.54	1.42	-
16 _{NS}	pa	87.7	234	182.	458.	242	-	-	-	126.	196.	161.	202
	N	5	10	5	10	5	-	-	-	1	8	1	1
	Er	11.2	19.6	89.1	39.0	69.9	-	-	-	-	29.3	-	-
16 _{EW}	pa	123.	285.	117.	215.	217.	-	-	-	-	25.5	22.9	99.6
	N	5	9	5	9	5	-	-	-	-	6	5	1
	Er	21.6	51.0	24.8	16.3	8.92	-	-	-	-	.93	.97	-

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		7.5	10	14	27	76	285	685	1.2K	3.3K	6.7K	10.2K	18.6K
17NS	pa	84.9	110.	73.3	90.2	87.7	-	-	-	-	11.1	4.07	5.03
	N	7	5	6	10	7	-	-	-	-	5	4	1
	Er	21.4	32.34	8.48	7.13	4.71	-	-	-	-	1.09	.21	-
17EW	pa	74.3	49.3	39.5	24.8	36.3	-	-	-	-	6.0	5.20	.74
	N	5	8	8	11	6	-	-	-	-	6	7	1
	Er	16.3	7.19	3.01	2.82	1.84	-	-	-	-	.33	.17	-
18NS	pa	44.1	39.8	48.9	55.3	85.1	138.	-	-	153	112.	83.9	57.6
	N	5	7	9	6	11	4	-	-	1	4	5	1
	Er	4.92	5.66	7.43	8.43	5.87	13.9	-	-	-	24.8	9.40	-
18EW	pa	168.	127.	106.	127.	148.	233.	368.	896.	138.	33.8	21.1	40.3
	N	5	12	10	10	10	7	8	5	3	8	7	1
	Er	32.2	9.10	13.4	7.27	10.3	11.9	25.0	112.	68.1	.95	.73	-
19NS	pa	56.4	32.4	42.6	49.0	60.2	27.3	-	-	-	10.9	5.63	1.53
	N	8	11	7	10	6	11	-	-	-	8	5	1
	Er	10.4	6.02	5.43	6.53	5.11	2.83	-	-	-	1.22	.46	-
19EW	pa	54.7	36.9	37.4	36.9	44.7	23.6	-	-	-	3.46	1.80	6.05
	N	8	11	8	10	8	10	-	-	-	12	7	1
	Er	11.1	4.33	2.26	2.09	1.52	1.24	-	-	-	.27	.26	-
20NS	pa	71.0	31.8	23.6	31.2	65.6	96.7	-	-	44.0	73.7	55.8	15.3
	N	6	5	4	4	9	7	-	-	7	7	5	1
	Er	11.9	10.2	6.89	7.29	7.92	9.97	-	-	5.26	9.07	7.33	-
20EW	pa	26.9	18.6	9.71	7.68	21.5	23.7	-	-	17.6	31.8	38.5	186.
	N	5	8	8	11	8	4	-	-	4	8	6	1
	Er	13.2	2.53	2.94	.43	.35	1.53	-	-	.44	1.21	1.38	-

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6

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Sta. No.		FREQUENCY											
		7.5	10	14	27	76	285	685	1.2K	3.3K	6.7K	10.2K	18.6K
21 _{NS}	pa	1.52	6.28	3.08	18.4	7.92	14.2	-	-	-	122.	47.8	118.
	N	9	5	13	8	10	3	-	-	-	10	1	1
	Er	.29	1.61	.90	4.06	2.09	4.23	-	-	-	8.80	-	-
21 _{EW}	pa	12.7	3.90	3.49	5.25	24.3	33.4	-	-	-	53.2	82.4	189.
	N	11	13	11	13	15	9	-	-	-	15	1	1
	Er	2.75	.52	.27	.32	4.85	5.05	-	-	-	3.66	-	-
22 _{NS}	pa	1.12	.54	.68	.57	.89	3.79	-	5.73	-	40.9	12.1	49.1
	N	8	10	9	9	11	3	-	1	-	8	1	1
	Er	.24	.09	.06	.06	.03	.87	-	-	-	3.71	-	-
22 _{EW}	pa	3.57	3.05	1.24	2.05	3.85	12.0	-	-	-	20.9	30.1	39.4
	N	6	10	9	11	8	12	-	-	-	10	1	1
	Er	.64	.60	.19	.20	.51	1.51	-	-	-	1.13	-	-
23 _{NS}	pa	7.52	4.97	.57	3.53	9.15	17.2	-	27.6	123.	17.3	11.6	17.7
	N	11	8	7	10	8	6	-	8	8	10	6	1
	Er	1.40	.70	.16	.38	2.57	4.27	-	5.23	11.9	.54	1.21	-
23 _{EW}	pa	20.5	22.5	14.6	14.1	33.6	58.5	-	593.	262.	35.2	28.6	2.12
	N	8	9	13	11	11	5	-	14	8	12	4	1
	Er	3.67	6.58	2.53	2.43	7.19	11.8	-	52.9	47.1	1.97	.62	-
24 _{NS}	pa	16.4	14.4	18.2	17.0	16.4	13.1	16.0	3.34	21.5	3.98	4.52	12.0
	N	5	10	10	10	10	11	12	8	6	10	4	1
	Er	2.05	1.99	2.30	1.36	1.43	2.28	1.02	.38	1.81	.50	.87	-
24 _{EW}	pa	124.	111.	7.56	57.4	56.2	53.3	57.1	81.2	26.1	7.38	4.29	5.75
	N	5	10	10	15	10	11	10	11	12	10	5	1
	Er	33.3	13.2	.51	2.99	1.93	2.76	4.51	3.08	3.04	.20	.32	-