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USGS  
OFR  
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UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Audio-magnetotelluric data log and station location map for  
Fly Ranch Northeast Known Geothermal Resource Area, Nevada

Washoe Co.

By

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This report is preliminary and has not been  
edited or reviewed for conformity with U.S.  
Geological Survey standards and nomenclature.

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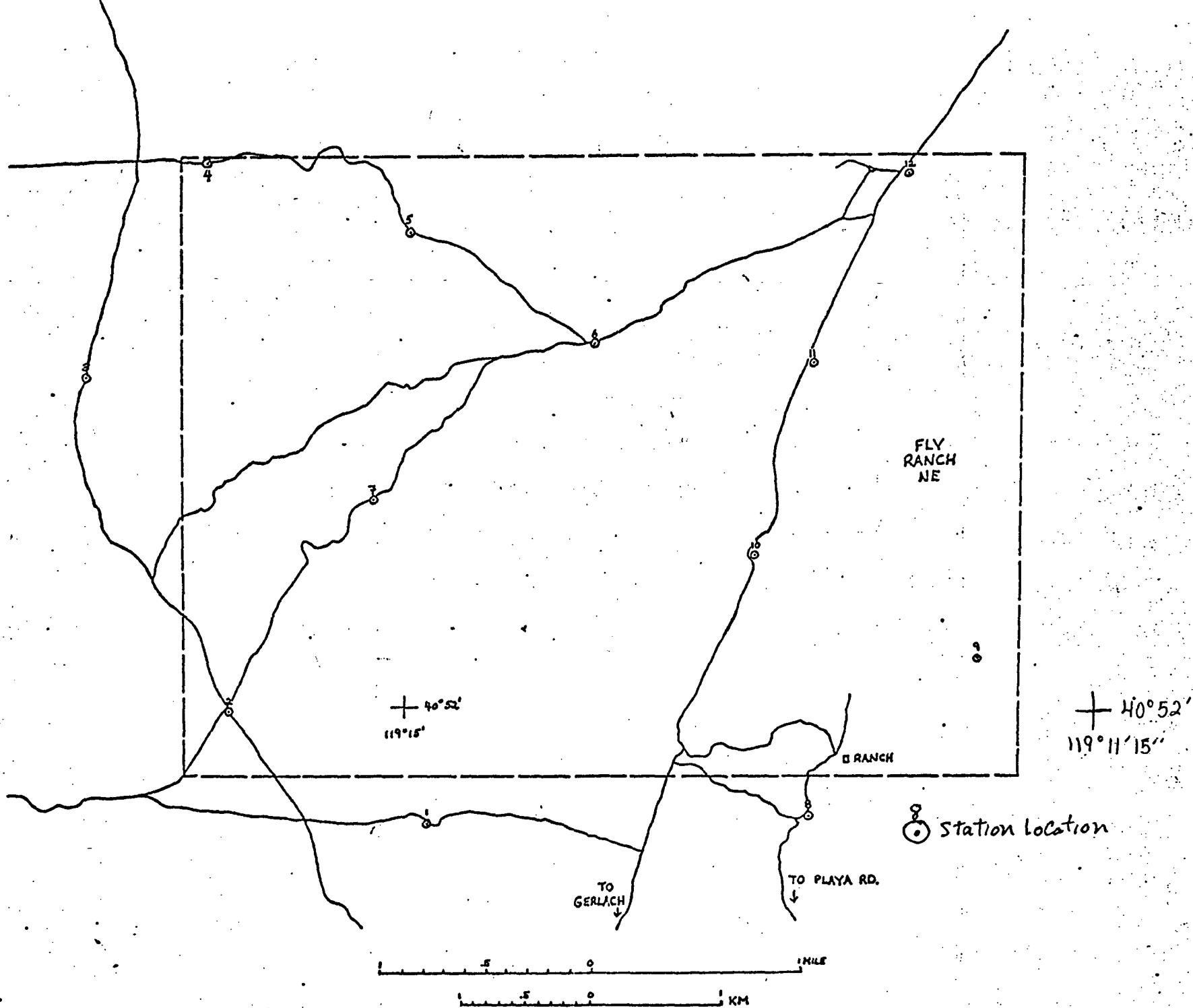


FIGURE 1. AUDIO-MAGNETOTELLURIC STATION LOCATION MAP FOR THE FLY RANCH NORTHEAST KGRA, NEVADA.

## U.S. GEOLOGICAL SURVEY A.M.T. DATA LOG

pa = observed apparent resistivity in ohm-metres

N = number of observations

Er = standard error in ohm metres

- = no data

"NOTE" - Telluric line orientation indicated with station numbers.

Sta. No.		FREQUENCY											
		7.5	10	14	27	76	285	685	1.2K	3.3K	6.7K	10.2K	18.6K
1 <sub>NS</sub>	pa	5.79	8.47	4.91	4.13	3.49	2.03	-	-	-	11.97	4.43	5.85
	N	5	7	7	7	7	7				7	1	1
	Er	0.55	1.25	0.66	0.16	0.27	0.08				0.88	-	-
1 <sub>EW</sub>	pa	3.15	2.07	2.31	2.29	4.78	3.28	-	-	-	2.24	2.25	1.31
	N	4	7	7	7	7	7				6	1	1
	Er	0.67	0.42	0.34	0.20	0.16	0.20				0.10	-	-
2 <sub>NS</sub>	pa	13.1	9.60	5.80	7.50	7.89	4.39	-	-	-	25.7	12.1	12.2
	N	5	5	4	5	5	5				6	1	1
	Er	2.60	1.00	1.00	1.10	0.55	0.24				1.24	-	-
2 <sub>EW</sub>	pa	11.6	18.9	22.8	16.3	8.13	7.75	-	-	-	6.95	13.3	3.77
	N	5	5	5	4	6	5				5	1	1
	Er	0.40	4.50	6.3	4.0	0.58	0.37				0.37	-	-
3 <sub>NS</sub>	pa	28.9	37.0	33.0	24.4	26.9	8.11	-	-	-	22.9	14.5	10.3
	N	5	5	5	6	5	6				7	1	1
	Er	1.70	1.28	5.76	1.24	0.21	0.49				1.12	-	-
3 <sub>EW</sub>	pa	9.36	4.83	8.82	9.31	14.1	9.92	-	-	-	8.82	12.8	5.58
	N	5	5	5	5	5	6				6	1	1
	Er	1.60	1.07	0.86	2.25	4.18	1.17				0.59	-	-
4 <sub>NS</sub>	pa	16.8	10.3	10.1	17.4	11.3	6.10	-	-	-	23.7	12.1	8.86
	N	3	3	5	5	5	6				5	1	1
	Er	5.50	0.27	2.58	3.18	1.58	0.14				0.98	-	-
4 <sub>EW</sub>	pa	18.2	10.2	7.63	7.49	11.2	11.2	-	-	-	10.5	11.7	10.0
	N	5	3	5	5	5	5				5	1	1
	Er	3.70	2.00	0.84	1.16	1.92	1.42				0.43	-	-

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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
5 <sub>NS</sub>	pa	16.7	7.94	9.92	6.34	5.21	2.30	-	-	-	19.8	14.2	8.24
	N	6	5	7	5	6	6				6	1	1
	Er	2.28	2.47	1.83	0.65	0.41	0.13				0.94	-	-
5 <sub>EW</sub>	pa	9.90	11.9	15.4	2.88	2.93	4.68	-	-	-	5.63	8.59	1.78
	N	5	4	3	6	6	5				5	1	1
	Er	1.29	4.22	4.25	0.60	0.15	0.55				0.26	-	-
6 <sub>NS</sub>	pa	13.1	13.7	5.00	6.01	2.51	0.85	-	-	-	8.96	4.32	4.09
	N	9	6	5	4	5	6				7	1	1
	Er	3.00	4.40	1.00	0.97	0.17	0.05				0.38	-	-
6 <sub>EW</sub>	pa	2.60	2.20	0.80	1.90	2.10	2.65	-	-	-	2.24	4.17	1.72
	N	5	5	4	5	6	6				6	1	1
	Er	0.40	0.40	0.10	0.30	0.14	0.47				0.19	-	-
7 <sub>NS</sub>	pa	16.7	6.46	7.53	3.53	4.44	1.14	-	-	-	21.4	4.99	5.42
	N	5	6	5	7	5	6				7	1	1
	Er	5.1	1.13	1.00	0.60	0.33	0.04				1.54	-	-
7 <sub>EW</sub>	pa	2.71	1.88	1.61	1.39	2.97	1.14	-	-	-	7.55	9.43	1.59
	N	6	5	7	6	7	3				7	1	1
	Er	0.30	0.27	0.16	0.06	0.14	0.02				0.42	-	-
8 <sub>NS</sub>	pa	15.3	15.6	12.9	11.4	11.4	1.73	-	-	-	9.70	2.97	2.03
	N	6	5	6	5	6	4				5	1	1
	Er	2.60	3.2	0.70	3.20	0.36	0.34				0.71	-	-
8 <sub>EW</sub>	pa	13.1	13.2	12.0	11.3	16.4	3.84	-	-	-	0.85	1.25	0.73
	N	5	6	5	5	7	6				6	1	1
	Er	0.20	4.3	1.43	1.83	3.37	0.29				0.02	-	-

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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
9NS	pa	2.98	4.55	3.06	4.14	1.71	0.34	-	-	-	3.21	0.71	1.06
	N	6	4	5	6	5	6				6	1	1
	Er	0.20	0.69	0.29	0.32	0.05	0.04				0.12	-	-
9EW	pa	1.89	3.09	2.43	1.99	1.84	0.39	-	-	-	0.67	0.68	7.81
	N	5	7	7	5	6	5				6	1	1
	Er	0.46	0.33	0.21	0.08	0.12	0.03				0.07	-	-
10NS	pa	8.70	7.60	5.70	5.60	3.92	1.29	-	-	-	17.3	4.38	3.17
	N	6	5	6	6	6	6				5	1	1
	Er	0.50	1.20	1.00	0.60	0.52	0.09				1.26	-	-
10EW	pa	13.2	10.1	5.70	6.50	8.52	3.05	-	-	-	4.57	8.87	6.05
	N	7	6	5	6	7	5				7	1	1
	Er	1.30	2.20	0.50	0.70	0.19	0.26				0.06	-	-
11NS	pa	16.8	12.1	5.40	3.70	3.10	0.90	-	-	-	5.60	1.70	1.10
	N	7	7	6	7	7	7				6	1	1
	Er	4.50	2.30	1.60	0.50	0.40	0.20				1.10	-	-
11EW	pa	3.20	2.20	1.90	1.90	1.40	0.50	-	-	-	1.00	1.60	0.40
	N	7	7	7	7	7	7				6	1	1
	Er	0.30	0.30	0.10	0.20	0.20	0.10				0.10	-	-
12NS	pa	6.30	7.80	4.70	4.30	2.30	0.40	-	-	-	11.0	3.30	2.60
	N	6	6	7	7	7	7				6	1	1
	Er	0.60	2.00	0.20	0.30	0.50	0.30				0.80	-	-
12EW	pa	3.40	3.50	1.60	1.60	2.00	1.20	-	-	-	1.4	2.00	1.10
	N	6	6	7	6	7	7				7	1	1
	Er	0.50	0.80	0.20	0.10	0.50	0.10				0.10	-	-

## ADVISORY NOTE

West of the KGRA's (Known Geothermal Resource Areas) is a high-voltage ( $\pm 400,000$  V), D.C. transmission line belonging to the city of Los Angeles. The transmission line was a serious source of noise in the AMT frequency band. Large-amplitude, even harmonics of 60Hz were radiated by the line. In addition, large-amplitude, apparently natural signals in the lower frequency AMT range were noted when operating near the transmission line during a previous survey. It is not known whether this latter effect is due to concentration of the natural fields in the vicinity of the transmission line or noise due to DC/AC converters and load variations on the line.

Users of this data should keep in mind that the plane-wave assumptions used in computing the apparent resistivities may not be valid.