QUARTERLY TECHNICAL PROGRESS REPORT

GEOHERMAL SPACE/WATER HEATING FOR
MAMMOTH LAKES VILLAGE, CALIFORNIA

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SUMMARY

During the second three months of this one-year feasibility study to determine the technical, economic and environmental feasibility of heating Mammoth Lakes Village, California using geothermal energy, the following work was accomplished.

- (A) A saturation survey of the number and types of space and water heaters currently in use in the Village was completed. Approximately 84 percent of the connected heating load in Mammoth Lakes uses electric heaters, and about 16 percent use propane gas heaters.
- (B) Electric energy and ambient temperature metering equipment was installed. Peak demand and temperature measurement for the Village, and energy use measurement for selected individual heaters was begun.
- (C) Peak heating demand for Mammoth Lakes was estimated for the years 1985, 1990 and 2000. The demand is projected to double between 1980 and the year 2000.
- (D) Buildings were selected which are considered "typical" of Mammoth Lakes in terms of their heating systems. These buildings will be used in estimating the cost of installing hydronic heating systems in Mammoth.
- (E) Block diagrams and an order of magnitude cost comparison were prepared for high-temperature and low-temperature geothermal district heating systems.
- (F) Models depicting a geothermal district heating system and a geothermal-electric power plant were designed, built and delivered to ERDA in Washington.
- (G) Local input to the feasibility study was obtained from representatives of the State of California Departments of Transportation and Fish & Game, U.S. Forest Service, and Mono County Planning Department.

A detailed description of the work summarized above may be found in the body of this report.

LOAD SURVEYS

The results of various surveys being undertaken to establish the characteristics of the current space and water heating loads, and heating load growth estimates for Mammoth Lakes Village are summarized below.

A. SATURATION SURVEY

Southern California Edison Company personnel made a saturation survey in Mammoth Lakes with the objective of developing definitive estimates of the number and types of space heating and water heating units currently in use. These estimates will be used to determine the potential market for retrofitting from gas or electric to geothermal heating, and in sizing the geothermal district heating system.

Data were gathered from three sources: a "door-to-door" survey, the Mono Plan, and Edison's billing records. In the door-to-door survey, three Edison Energy Services Representatives interviewed the owners and/or managers of 122 commercial, residential and institutional facilities and recorded the following data at each location:

WATER HEATING

Number of Water Heaters
Manufacturer
Model No.
kw or Btu/hr Rating
Size (gallons)

SPACE HEATING

Number of Rooms
Number of Heaters
Location
Type
Manufacturer
Model No.
kw or Btu/hr Rating

Of the 122 sites surveyed, 12 were residential units and 110 were commercial and institutional facilities. This 110 figure represents approximately half the total number of commercial/institutional facilities in town.

The 12 residential units are representative of the 2,800 condominium units in town which are very similar in terms of sizes and types of heating systems. Data sheets completed during the survey are attached as Appendix I.

Information contained in the Mono Plan was used as a basis for characterizing the community in terms of absolute numbers of condominiums, single family homes, commercial and institutional facilities. Much of the Mono Plan was based on a 1972 general census. Edison records were used in some cases to update Mono Plan data, particularly in estimating the total number of condominiums and small businesses which have been built since 1972.

Using these sources of data, it is estimated that Mammoth Lakes Village was comprised of the following facilities in 1976:

- 2800 Condominium units in 60 developments
- 1200 Motel/Lodge rooms in 40 developments
- 1200 Single Family Homes
- 24 Restaurants
- 150 Other Commercial/Institutional Facilities

The only industrial type facilities observed in Mammoth were several automotive garages, the County Water District Sewage Treatment Plant and the ski lift company machine shop.

In order to characterize the Village in further detail, it was divided into four discrete areas as shown in Figure 1, Heating District Areas. The Village was divided in this manner as each discrete area will probably be served by a different branch of the geothermal district heating system. Area 1, which comprises the main commercial area of town, would probably be the first to be served by the heating system, followed by Areas 2, 3 and 4 in that order.

The data collected during the door-to-door survey, and obtained from the Mono Plan are presented in Table I by geographic area of town. Data from the survey are presented first, while Mono Plan data are found at the end of each area tabulation, designated by a name in all capital letters. The space and water heating loads associated with the condominiums identified from the Mono Plan were estimated based on survey data for similar condominiums. Gas fueled heater ratings are given in thousand Btu per hour (MBH) input, and electric heater ratings are in thousands watts (kw) input.

The total connected heating loads for each Area were then computed, and the results are shown in Table II, Estimated Connected Heating Loads by Area. To facilitate comparison, the gas fueled connected load estimates have been converted to equivalent thermal megawatt (Mwt) ratings using typical values for gas heater efficiency and derating for altitude. As mentioned previously, survey data were taken for 110 of the approximately 200 commercial establishments in the Village. In order to account for the loads associated with the 90 establishments which were not surveyed, load data from the 110 establishments surveyed were approximately doubled.

HEATING DISTRICT AREAS

FIGURE 1

TABLE I

GEOGRAPHIC TABULATION OF COMMERCIAL AND CONDOMINIUM
FACILITIES AND HEATING LOADS
MAMMOTH LAKES

LEGEND

Areas:

- 1 - Commercial Area, USFS, High School, Motels
- 2 - Meridian Village Area
- 3 - Mammoth Slopes, Warming Hunt No. 2
- 4 - Main Lodge Area

Heater Types:

- W - Wall Heater
- C - Ceiling Suspended
- FA - Forced Air
- F - Floor
- BB - BaseBoard
- RC - Radiant Ceiling
- GH - Gas/Hydronic Floor Coils
- FC - Electrical Floor Cable
- OH - Oil/Hydronic
- SB - Steam Boilers
- WBB - Wall and/or BaseBoard

AREA 1

COMMERCIAL CENTER ET AL

#	Name	Gas (MBH)		Electric (kw)	
		<u>Space</u>	<u>Water</u>	<u>Space</u>	<u>Water</u>
1	Sandy's Ski Rentals	w 24.5MBH	---		
2	Mammoth Day Care Center	w 45.0	36.0 30 gal	c 2kw	---
4	Wildwood Inn	---	520.200g.	W 112kw	30kw, 220g.
6	Moostachie Pete	w 70.	197.100g		
	-----	FA 160			
29	The Winery	---	---	FA 19kw	---
30	Lloyd Dennees (Furn.)	---	---	FA 17kw	---
31	Safeway	---	---	?FA 195kw	36kw, 125 gal
32	John Taft Elect	---	---	FC 16kw	---
33	Century Const	---	---	FC 16kw	---
34	John Taft Elect	---	---	FC 12kw	---
35	F. Shakespeare	---	---	FC 16kw	4.5, 30
36	John Taft Elect	---	---	FC 16kw	4.5, 30
40	Sierra Nevada Inn	---	---	W 400kw	63, 1400
41	Mamm. Lks, Laundrymat	CS, 125	1190, 270g	---	---
42	Comstock Lode	FA, 260	188, 100g	---	---
43	PeaSoup Andersons	---	200, 168	FA 133kw	---
44	Shotz Bakery	CS, 600	---	---	6, 40g
45	Phils Rest.	---	---	FA, 45kw	5kw, 120g
46	FireStation	CS, 720	240, 100	BB, 30kw	---
47	Kittredge Arhey & Sport Goods	FA, 200	36MBH, 30 gal	W, 2kw	---
48	Mammoth Villa	---	---	W, 57kw	14kw, 210g
49	Austrian Chalet	---	---	RC, 80kw	24kw, 480g
50	Pinecrest Lodge	W, 300	200MBH, 500g	W, 18kw	
51	Mammoth Liquors	FA 150	---	---	1.5 kn, 5g.
52	Stump Alley Rest.	---	---	RC, 18kw	4.5, 50
53	Market Platz	C, 525	38, 40g	---	---
54	Laplander Lodge	---	---	W, 66kw	27, 492g
58	Village Center Mall	---	---	W, 71kw	11kw, 50g
59	Cont. Telephone Relay	FA, 353MBH	---	---	4.5, 20g
60	Shotz Rest.	W, 5	66MBH, 60g		
61	Hot to Go	---	---	W, 12kw	4.5kw, 50g
64	Mamm. Chevron	CS, 260MBH	---	---	1.5, 6
65	Mamm Texaco	FA, 140MBH	20MH, 20g	CS, 4kw	
66	Post Office	FA, 160MBH	---	---	2kw, 12g
67	Inyo-Mens Bank	FA, 268MBH	20, 20g	W, 15kw	---
69	Village Liquor	FA, 200MBH			2kw, 20g.
74	Las Montanas	W, 135MBH	50, 65g	---	65, 6g
		FA, 150MBH			
75	The Continental	---	---	W, 58kw	40kw, 120g
				RC, 50kw	
79	Mamm Union 76	CS, 130MBH	---	---	1.5kw, 6g

AREA 1 - continued

#	Name	Gas (MBH)		Electric (kw)	
		Space	Water	Space	Water
80	KFC of Mamm.	CS,75MBH	240MBH,100g	---	---
81	The Outfitter	---	---	RC,10kw	---
		---	---	BB,28kw	---
92	Breeze Ski	---	---	RC,12kw	4.5kw,30g
94	B of A	---	---	FA,57kw	4.5kw, 30g
95	Mamm Cty Water Dist.	---	---	FA,84kw	4.5, 52g
		---	---	CS,70kw	---
96	Mamm Pharmacy	---	---	FA,35kw	4.5, 30g
97	Nicolosis	---	150MBH,100g	FA,17kw	1.5, 20g
100	USFS Visitor Center	FA,292MBH	100MBH,100g	---	---
101	Norco Gas Station	---	---	W,4kw	4.5kw, 40g
102	Shakey's	FA,120MBH	---	---	4.5, 100g
104	Pow Wow	---	---	w,16kw	4.5, 52g
105	Swiss Chalet	---	---	W,72kw	27,360g
106	Sears Catalog	---	---	W,8kw	1.5, 6g
107	Kittle Printing Co.	---	---	CS,15kw	1.5, 6g
108	Swensons Ice Cream	FA,150MBH	80MH,67g	---	---
109	Mogul Steak House			W,26kw	20kw,60g
113	Corner Hardware Store			CS,30kw	1.5, 6g
SHERWIN VILLAS (70U)				WBB,700kw	320kw
T. MORITZ VILLA (80U)				WBB,800kw	360kw
A RESIDENCE (96U)				WBB,960kw	430kw
SIERRA PARK VILLAS (100U)				WBB,1000kw	450kw
TAMARACK (40U)				WBB,400kw	180kw
KRYSTAL VILLA (86U)				WBB,860kw	390kw
THE HERITAGE (18U)				WBB,180kw	80kw
TIMBERLINE (52U)				WBB,520kw	230kw
VIEWPOINT (56U)				WBB,560kw	250kw

AREA 2MERIDIAN VILLAGE & SHERWIN PLAZA

#	NAME	GAS		ELECTRIC	
		SPACE	WATER	SPACE	WATER
5	Arlberg Chalet	FA680MBH	408MBH300gal	---	---
8	Royal Pines Resort	F 192MBH	390 200	W 48kw	---
	---	W 24	160 Jacuzzi	---	---
9	White Stag Inn	---	700MBH400gal	W 84kw	---
37	US Post Office	---	---	W 18kw	1.5kw,10g
38	The Stove	FA 120	---	---	10,45
39	The Tavern	Oil/Hyd.	800MBH	(250 gal Hot water Heater)	
63	Mamm Properties	---	---	w k4kw	3.3, 52g
68	Perrys Pizza	W 75MBH	36,30g	---	---
70	Holiday Haus	W885MBH	805MBH,580g	BB 16kw	---
71	Filsons Sports	?FA,100MBH	---	---	---
72	Mill City Laundry	---	800MBH,760g	---	---
73	Dai-San Rest.	---	---	W,4.5kw	4.5,50g
111	Mono Cty Plumbing			CS,12kw	4.5kw,40g
112	County Liquor			w,9kw w,12kw	4.5,40g
	CHATEAU BLANC CONDOS (60U)			WBB,600kw	270kw
	CHATEAU DE MONTAGNE (48U)			WBB,600kw	216kw
	MAMM. CREEK CONDOS (60U)			600	270
	LA VISTA BLANC (80U)			800	360
	CHATEAU SANS NOM (38U)			WBB,380kw	171kw
	VILLA DE LOS PINOS (80U)?			800	360
	HORIZONS IV (92U)			WBB,920kw	400kw
	SUNSHINE VILLAGE (80)			WBB,800kw	360kw
	THE SUMMIT (110)			WBB,1100kw	400kw
	SUMMIT II (100)			WBB,800kw	
	WOODSTOCK (108)			WBB,1080 kw	450kw
	CHATEAU D'OEX (18)			WBB,180kw	81kw
	TYROLEAN VILLAGE (56)			WBB,560kw	260kw
	HIDDEN VALLEY (80)?			800	360

AREA 3

MAMM SLOPES, HUT #2

#	NAME	GAS		ELECTRIC	
		SPACE	WATER	SPACE	WATER
7	Warming Hut #2	---	---	F/A 812kw	186kw, 350g
11	Engelnof Lodge	w360MBH	226MBH, 280gal	BB 6kw	19kw, 268g
12	Whiskey Creek	FA1260MBH	200MBH, 100gal	---	9kw, 100g
14	Eckert, MD	---	---	RC, 24kw	9kw, 800g
15	Bergers Burgers	---	---	RC 9	4.5 60
16	Der Alpenkoff	F 240MBH	600MBH, 500gal	BB 90kw	---
17	Minaret Lodge	F 120	400, 700	---	---
18	Mamm. Realty	W240	---	---	---
		---	---	w 6kw	1.6 5
19	Austria Hof	---	600, 300	w 52kw	---
		---	---	BB 15	---
20	Host Motor Inn	---	---	BB 183	102kw, 960g
		---	---	w 20	72 Jacuzzi & Pool
21	Seasons 4 Rec Hall	---	345 Jacuzzi	BB 20	---
		---	548 Pool	w 6	---
		---	200, 200g	---	---
22	Mamm. County Yard	GH 1,000	150, 50g	---	---
		C 200	---	---	---
24	Alpine Lodge	GH 910	1090, 1300g	w 24	---
		---	261, Pool	BB 12	---
25	Comstock II	w 60	100, 100g	BB 2	---
26	Forest Trains Comm Center	---	---	w 24 kw	4.5, 52g
27	Innsbruck Lodge	w 315	540, 240g	w15	---
		FA 160	---	---	---
28	Div. of Hwy	C 300	---	C 5kw	10kw, 130g
		---	---	w 6kw	---
93	Mamm. Minaret Corp	---	---	FA 544kw	12kw, 82g
	Maint. Garage	---	---	---	---
98	Mamm Mtn Chalets	---	---	w, 280kw	63kw, 1150g
	CHAMONIX CONDOS (100)			WBB, 1000kw	450kw
	CONESTOGAS (17)			WBB, 170kw	75kw
	DISCOVERY 4 (64)			WBB, 640kw	290kw
	MAMMOTH POINT (32U)			WBB, 550kw	140kw
	TIMBERIDE (54U)			WBB, 540kw	240kw
	THE 1849 (PT1) (100U)			WBB, 1000kw	450kw
	ST. ANTON (84)			WBB, 840kw	380kw
	SNOWBIRD (24)			WBB, 240kw	110kw
	MAMMOTH WEST (43)			WBB, 430kw	200kw
	MAMM SKI & RACKET (133)			1330	600
	COURCHEVEL (600)			WBB, 600kw	270kw
	WESTERN SLOPE VILLAS (22)			WBB, 220	100kw
	SEASONS IV (100U)			WBB, 1000	450kw
	MAMMOTH ESTATES (78U)			WBB, 780	350kw
	LAKEVIEW VILLAS (31U)			WBB, 310	140kw
	CHATEAU ENCHANTE (80)			800	360
	MAMMOTH FIRESIDES (30)			WBB, 300kw	140kw
	VAL D'ISTERE (46)			WBB, 460	210

AREA 4

MAIN LODGE AREA

#	NAME	GAS		ELECTRIC	
		<u>SPACE</u>	<u>WATER</u>	<u>SPACE</u>	<u>WATER</u>
55	Main Lodge	Unknown		SB,720kw	732kw,--g
	Minaret	---		W,200kw	---
56	Ski Lift Apts.	---	750MBH,2500gal	W,693kw	140kw,2500g
57	Mamm.Mtn Inn	---	---	FA,300kw	360kw,12000g
		---	---	w,180kw	---
		---	---	FA,150kw	---
110	Yodler Rest.	---	---	FA,69kw	9kw,120g
		---	---	w,16kw	---

TABLE II
ESTIMATED CONNECTED HEATING LOADS BY AREA
IN THERMAL MEGAWATTS (MWt)

	AREA				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>Total</u>
<u>SPACE HEATING</u>					
<u>Gas</u>					
Forced Air	2.0	0.3	0.5	NA	2.8
Other	<u>1.3</u>	<u>0.4</u>	<u>1.3</u>	NA	<u>3.0</u>
Total	3.3	0.7	1.8	--	5.8
<u>Electric</u>					
Forced Air	1.2	0	2.7	0.5	4.4
Other	<u>10.3</u>	<u>10.4</u>	<u>15.3</u>	<u>2.3</u>	<u>38.3</u>
Total	11.5	10.4	18.0	2.8	42.7
<u>Total Space Heating</u>	14.8	11.1	19.8	2.8	48.5
<u>WATER HEATING</u>					
<u>Gas</u>	2.1	1.5	2.0	0.2	5.8
<u>Electric</u>	<u>4.2</u>	<u>4.1</u>	<u>7.1</u>	<u>1.2</u>	<u>16.6</u>
<u>Total Water Heating</u>	6.3	5.6	9.1	1.4	22.4
<u>TOTAL CONNECTED LOAD</u>	21.1	16.7	28.9	4.2	70.9

NA = Information not available

The statistics presented in Table II indicate that about 88 percent of the space heating capacity in Mammoth Lakes Village is electric. However, of the forced air heating units, which will probably be the most economical to convert, only 61 percent are electric. In addition, about 74 percent of the water heating load in the Village is electric. Of the total estimated connected heating load of 70.9 MW, about 84 percent uses electric energy.

B. METERING

Several types of meters have been installed and are currently being used to collect data to assist in estimating space and water heating energy consumption and demand requirements in Mammoth Lakes.

Edison personnel at the Casa Diablo Substation are continuing to record the total electric demand for the Mammoth area. The total electric demand data will be correlated with ambient temperature data to determine what fraction of the total demand can be attributed to space heating.

A recording ambient temperature thermometer was installed at an Edison Substation in Mammoth and has been continuously recording since January 14, 1977. The data obtained will be used as described in the preceding paragraph.

A total of 57 elapsed time indicators have been installed at ten locations in Mammoth. The indicators were installed "downstream" of controlling thermostats on space heaters and water heaters to record the actual number of hours the heaters at a given facility are energized. Data collection began on February 8, 1977 and will continue through the duration of this study and perhaps beyond.

Table III is a listing of the meters in service and the data recorded at the time of installation.

C. LOAD GROWTH ESTIMATES

Estimated growth in the peak heating load has been estimated using the results of the Saturation Survey presented above, and population growth estimates for Mammoth Lakes Village projected in the Mono Plan. The estimated peak electric load demand for the Village in 1980 as derived in the first quarterly report is presented below.

Space Heating	41 MWe
Water Heating	8 MWe
Other	<u>5 MWe</u>
Total	54 MWe

The Saturation Survey indicated that electric heating is used for only 84 percent of the total connected heating load in Mammoth. This breaks down to 88 percent of the space heating load and 74 percent of the water heating load. Using these percentages,

TABLE III
METER INSTALLATIONS

LOCATION NO.	TYPE OF FACILITY	METER NO.	IN SERVICE	RATING (KW)	TYPE HEATER	ROOM
86	Sing.Fam.Home	8	2/17 9:30A	4.0	W	L
		33	10:00A	4.5	W	L
		40	10:30A	4.5	WH	Upper element
		58	10:35A	2.5	WH	Lower element
		34	11:00A	3.0	W	B
		37	11:20A	3.0	W	B
		21	11:40A	3.0	W	B
87	Condo	1	2/8 2:00P	1.5	BB	H
		11	2:15P	4.5	WH	Upper
		15	2:45P	2.5	WH	Lower
		2	3:15P	2.5	BB	L
		3	3:30P	1.5	BB	L
		4	3:45P	1.5	BB	B
		5	4:00P	2.0	BB	B
		6	4:15P	2.0	BB	B
	Condo	7	2/9 8:15A	2.5	BB	L
		9	9:30A	4.0	W	L
		10	10:00A	2.0	BB	B
		17	10:15A	4.5	WH	
		16	10:15A	2.5	WH	
	Condo	12	2/9 2:20P	2.0	BB	L
		13	2:45P	1.5	BB	D
		14	3:15P	4.0	W	L
		18	3:30P	1.5	BB	B
		20	3:45P	2.0	BB	B
92	Business Office	52	2/17 3:00P	10	FA	Office
		55	3:10P	10	FA	Lobby
		36	3:30P	4	Wall	Lobby
96	Pharmacy	24	2/18 11:00A	17.3	FA	
		25	11:30A	17.3	FA	
		72	11:45A	2.5	WH	
		66	11:50A	4.5	WH	
97	Restaurant	64	2/18 1:45P	17	FA	

TABLE III - continued

LOCATION NO.	TYPE OF FACILITY	METER NO.	IN SERVICE	RATING (KW)	TYPE HEATER	ROOM
91	Condo	38	3/7 2:30P	4.5	W	L
		28		4.5	W	B
		59		4.5	W	B
		67		4.5	WH	Upper
		65		2.5	WH	Lower
95	Offices	42	3/4 11:45A	45	FA	Lower
		43		45	FA	
		29		2.5	WH	
		39		4.5	WH	
95	Garage	27	3/3 5:00P	10	FA	Upper
		26		10	FA	
		46		10	FA	
		45		15	FA	
		19		15	FA	
		35		4.5	WH	
		43		2.5	WH	
116	Condo	22	3/7 10:00A	2.8	W	Hall
		32		2.8	W	B
		23		2.8	W	B
		53		2.5	WH	Lower
		70		4.5	WH	Upper
		44		2.8	W	B
		41		4.5	W	L
		30		4.5	W	L

the estimated 1980 peak heating demand for electric and gas heating units was calculated. The results are presented below in terms of thermal megawatts.

Space Heating	47 MWt
Water Heating	11 MWt

The Mono Plan estimated that Mammoth Lakes Village would reach its maximum weekend population of 43,000 in 1995. A recent conversation with the Mono County Planning Director indicates that the maximum is more likely to be reached in the year 2000 as recent warm winters and a water shortage have temporarily caused a reduction in the population growth of Mammoth.

If the maximum weekend population does climb to 43,000 in 2000 from an estimated 17,000 in 1975, the average growth rate in population would be 3.8 percent per year. Assuming that the peak heating demand increases at the same rate as peak weekend population, the projected heating loads for 1985, 1990, and 2000 were calculated, and are given in Table IV below.

TABLE IV

ESTIMATED PEAK HEATING DEMAND
MAMMOTH LAKES VILLAGE

<u>Year</u>	<u>Estimated Peak Load (MWt)</u>		<u>Total</u>
	<u>Space Heating</u>	<u>Water Heating</u>	
1980	47	11	58
1985	57	13	70
1990	68	16	84
2000	99	23	122

HEATING UNIT SELECTION & RETROFIT STUDY

In order for geothermal hydronic heating to take over a large portion of the space and water heating load in Mammoth Lakes Village, it must be used in both new construction and as a replacement for existing electric or gas heating. The purpose of the Heating Unit Selection & Retrofit Study is to prepare designs and cost estimates for installing hydronic space and water heating systems in existing and planned buildings. The designs and cost estimates will be combined with similar information to be prepared for the district heating system to yield estimates of the economic feasibility of geothermal hydronic heating in Mammoth Lakes Village.

The Saturation Survey summarized in the LOAD SURVEYS section of this report characterized the Village in terms of building units and space and water heating types. These results were used to identify buildings which can be considered "typical" in terms of their heating systems. Buildings which were chosen to represent typical residential and commercial loads in the Village for both existing and planned construction are listed in Table V, Typical Heating Systems.

Rough designs and cost estimates will be prepared for retrofitting the typical existing buildings with hydronic heating systems from a geothermal district heating system. In addition, designs and cost estimates will be prepared for installing gas, electric and hydronic heating systems into the typical planned buildings. These designs and cost estimates will be used to compare the overall economics of geothermal district heating in Mammoth Lakes Village with available alternatives.

A Heating, Ventilation and Air Conditioning Engineering firm will be employed as a subcontractor to assist in this portion of the work.

TABLE V
TYPICAL HEATING SYSTEMS

<u>Category</u>	<u>Name</u>	<u>Space Heating Type</u>	<u>Water Heating Type</u>
1. Existing Construction			
a. Commercial	USFS Visitor Center	Gas; Central Forced Air	Gas
	Mammoth Water District	Electric; Central Forced Air, Wall and Ceiling Suspended	Electric
	Wildwood Inn Motel	Electric; Wall Units	1 Gas, 1 Electric
	Pow Wow Shop	Electric; Wall and Ceiling Suspended	Electric
b. Residential	Season's Four Condominiums	Electric; Wall and Baseboard	Central Gas and Individual Electric
2. Planned Construction			
a. Commercial	Shakey's Pizza Parlor	Gas; Central Forced Air	Electric
b. Residential	Season's Four Condominiums	Electric; Wall and Baseboard	Central Gas and Individual Electric

SYSTEM DESIGN AND COST ESTIMATE

Work on design of the geothermal district heating system was begun during the second quarterly period. The district heating system includes a fresh water heating plant, hot water supply piping, hot water storage facilities, and water return piping. The water heating plant utilizes a geothermal water/fresh water heat exchanger to heat the fresh water loop.

Block diagrams depicting alternate district heating system concepts were prepared. The first concept is shown in Figure 2, Low Temperature System. Geothermal water is pumped from production wells to a heat exchanger, where it gives up some of its heat to fresh water and is returned to the reservoir via injection wells. The heated fresh water (about 200°F) is pumped to storage tanks in Mammoth Lakes Village. These tanks provide additional capacity during system peak demand periods, and an independent source of hot water during system emergencies such as pump outages. Heated water flows on demand through distribution piping to hydronic space and water heating units in homes and business establishments, then to return piping.

The cooled water (about 150°F) then flows back to a surge tank at the Casa Diablo site and to the heat exchanger, completing the loop.

The second district heating concept is shown in Figure 3, High Temperature System. This system is very similar to the Low Temperature System except that the supply water temperature is 300°F and return temperature is about 200°F. In addition, instead of using the water from the district heating system loop directly in hydronic heating units, each customer has a closed loop hydronic heating system with a heat exchanger to extract heat from the high temperature loop.

Each of these district heating concepts has distinct advantages and disadvantages. Because of its larger differential between supply and return temperatures, the High Temperature System has the advantage of being able to deliver the necessary heat using smaller diameter pipelines and lower horsepower pumps. However, the Low Temperature System has the advantages of requiring smaller heat exchangers at the Casa Diablo site and eliminating the need for individual water to water heat exchangers at each customer's building.

Rough conceptual designs were prepared for each system, assuming a hydronic space and water heating load of about 35 MWt, or one half of the estimated peak heating demand for 1985 as derived in the section of this report entitled LOAD SURVEYS. A summary of the conceptual design parameters for both systems is shown in Table VI.

FIGURE 2

BLOCK DIAGRAM
LOW TEMPERATURE SYSTEM

FIGURE 3
BLOCK DIAGRAM
HIGH TEMPERATURE SYSTEM

TABLE VI
DISTRICT HEATING SYSTEM CONCEPTUAL DESIGN PARAMETERS

	<u>Low Temperature System</u>	<u>High Temperature System</u>
1. Main Pipeline Diameter (inches)	14	10
2. Geothermal Water/Fresh Water Heat Exchangers Surface Area (ft ²)	13,000	42,000
3. Geothermal Water Peak Flow (gpm)	1,600	2,000
4. Fresh Water Peak Flow (gpm)	5,100	2,700
5. Number of Building Heat Exchangers Required	NONE	3,600

An order of magnitude capital cost comparison was prepared for the two district heating system concepts. The increase in cost due to larger pipeline sizes in the Low Temperature System were about offset by elimination of the heat exchangers at each customer's building, and the estimated capital costs of the systems were within 10 percent of each other. As this small cost differential is well within the accuracy of the cost comparison, both systems will be investigated in more detail to determine which is more economical.

MODELS

Two models were designed, built and shipped to ERDA to illustrate the use of geothermal energy. One model illustrated a geothermal district heating system for Mammoth Lakes Village, and the other portrayed a geothermal-electric power plant.

The Mammoth Lakes model consists of two parts. First, a three dimensional relief map showing the geothermal well locations, heat exchange equipment and pipelines, and the Village area. The second part is a "semiworking" model which illustrates the geothermal/fresh water heat exchange system using entrained air bubbles in water to simulate flow of geothermal water and fresh water.

The geothermal-electric power plant model depicts the operation of a binary cycle plant. This model is also "semiworking"; that is, a concealed pump is used to circulate water with entrained air bubbles to simulate the flow of geothermal brine, hydrocarbon working fluid, and cooling water. Colored transparent tubing was used to differentiate the various streams.

LOCAL CONTACTS

During the second three months of activity on the project, conversations were held with numerous residents of Mammoth Lakes Village and the surrounding areas to obtain their input to the feasibility evaluation.

The owners and/or managers of 122 of the residential, institutional and commercial establishments in the Village were interviewed during the saturation survey of current methods of space and water heating. Comments of those interviewed were generally very positive regarding the possibility of substituting geothermal for current gas or electric heating.

Project personnel met with Mr. Robert Sandy, Director of Planning for Mono County. Mr. Sandy feels that a geothermal heating system would be welcomed by most residents of Mammoth in view of the current and projected costs of alternative forms of energy. Mr. Sandy foresees no major problem in obtaining permits from Mono County to build a district heating plant on the Casa Diablo property.

A meeting was also held with Messrs. Robert Watkins and Stanley Lesneski, District Director and Deputy District Director respectively of the State of California Department of Transportation (CALTRANS). Both indicated their willingness to assist us in selecting a preliminary hot water pipeline right-of-way adjacent to State Highway 203 which runs from Casa Diablo to the Village. Most of the right-of-way will be on property managed by the U.S. Forest Service. CALTRANS has plans to widen Highway 203 as it passes through the Village, and add bikeways and other improvements. Any final district heating system design will have to take these projects into consideration. CALTRANS may be interested in using geothermally heated water for keeping small portions of Highway 203, such as a chain removal area, free from snow build-up.

A meeting between project personnel and Mr. Phil Peister of the State of California Department of Fish and Game was also held. Mr. Peister indicated the Department's concern that producing geothermal fluid at Casa Diablo may effect the temperature of hot springs feeding the Hot Creek Fish Hatchery located about 3 miles east of Casa Diablo. If it can be shown that geothermal production for the proposed heating plant at Casa Diablo will not significantly effect the hot springs, Mr. Peister thought that the Department would not oppose the project.

A meeting was held during the period with Mr. Charles McDonald of the U.S. Forest Service. Mr. McDonald indicated that he foresees no major problem in our finding a pipeline right-of-way along Highway 203 which would be acceptable to the Forest Service.

FUTURE PLANS

During the next quarter (March 13 - June 12, 1977), the following activities are planned.

- (A) Collection and interpretation of peak demand and temperature data for Mammoth Lakes, and energy use data for individual heaters will be continued.
- (B) Designs and cost estimates for residential and commercial hydronic heating systems will be prepared for existing and planned buildings.
- (C) Preliminary design and cost estimating work on the geothermal district heating system will be continued.
- (D) A field survey and resulting environmental evaluation report will be prepared for the proposed district heating system.

APPENDIX I

HEATING LOAD SATURATION SURVEY

INDEX

1. Sandys Ski Rentals
2. Mammoth Day Care
3. Tobacco & Candy Co.
4. Wildwood Inn
5. Arlbarg Chalet
6. Moostacio Petez
7. Warming Hut #2
8. Royal Pines Resort
9. White Stag Inn
10. Chair 15 Mamm Minaret Corp (Optrs Room)
11. Engelnof Lodge
12. Whiskey Creek Restaurant
13. Pioneer Marlet/Liquor
14. Dr. Wade Eckert (Office?)
15. Bergers Burgers
16. DerAlpenhof
17. Minarett Lodge
18. Mammoth Reality
19. AustriaHof 14 units and Restaurant
20. The Host Motor Inn 61 units
21. Seasons 4 RecHall
22. Mammoth County Yard (Garage)
23. Frank Liquors
24. Alpine Lodge (48 units)
25. Comstock II
26. Forest Trails Community Center
27. Innsbruck Lodge (15 units)
28. Calif.Div of Highways
29. The Winery
30. Lloyd Dennles Inc.
31. Safeway Stores
32. John Taft Electric Co.
33. Century Construction Inc.
34. John Taft Electric
35. Shakespear, Fred
36. John Taft Electric
37. U. S. Post Office
38. The Stove Restaurant
39. The Tavern
40. Sierra Nevada Inn (120 units)

APPENDIX - continued

41. Mammoth Laundromat
42. Comstock Load Restaurant
43. Pee Soup Andersons
44. Schats Bakery
45. Phils Restaurant
46. Mammoth Fire District
47. Kittredge Archery Co.
48. Mammoth Villa
49. Austrian Chalet
50. Pinecrest Lodge
51. Mammoth Liquors
52. Stump Alley
53. Market Plats
54. Laplander Lodge
55. Main Lodge
56. Ski Lift Apartments (50 units, 138 rooms)
57. Mammoth Mountain Inn (120 rooms)
58. Village Center
59. Continental Telephone
60. Schots Bakery
61. Hot To Go
62. Standard Oil
63. Mammoth Properties
64. Mammoth Chevron
65. Mammoth Texaco
66. U. S. Post Office Dept.
67. Inyo Mono National Bank
68. R/L Perrys Pizza
69. Village Liquor Hut
70. Holiday Haus
71. Filsons Tackle & Sports
72. Mill City Laundry
73. David Liu - Dai Som (Restaurant)
74. Las Montanas
75. The Continental (Rest.and Hotel 36 rooms)
76. Calwell/Harshbarger
77. Alpine Minimart
78. Lift #4
79. Mammoth Union 76
80. KFC of Mammoth Inc.
81. The Outfitter
82. Breeze Ski Rentals
83. Carolyn Cole
84. Devore Mobil Service Station
85. Mammoth High School
86. Samnai Salisbury House
87. 1849 (Condo Unit - Dwight Noft)

APPENDIX - continued

- 88. Apt - Tim Snyder
- 89. Condo - Courchevel #4 Mam. Slopes
- 90. Condo - 4 Seasons Managers
- 91. Forest Meadows Condos - Billy Rolls
- 92. Continental Telephone
- 93. Mam.Minaret Corp, Maint. Garage
- 94. Bank of America
- 95. Water District
- 96. Mammoth Village Pharmacy
- 97. Nicolosis Restaurant
- 98. Mammoth Mountain Chelets (14 chelets)
- 99. Sherwin Meadows Park #A-7
- 100. USFS Visitor Center
- 101. Horco Gas Station
- 102. Shakeys Pizza Parlor
- 103. Dan Hayden #10 Man. Tavern Road
- 104. The Pow Wow
- 105. Swiss Chalet 24 Units
- 106. Sears Catalogue Store
- 107. Kittle Printing Co.
- 108. Swensens Ice Cream
- 109. Mogul Steak House
- 110. The Yodler Restaurant
- 111. Mono County Planning
- 112. County Liquor
- 113. The Corner Hardware Store
- 114. La Residence
- 115. Sierra Park Villas
- 116. Sierra Mannors Condos
- 117. Jack Clark Home
- 118. Mammoth Equip Rental
- 119. Mammoth Cinema Center
- 120. Resort Properties
- 121. Mammoth Garage
- 122. Daniel Lee Home

①
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 0100

Date 12-20-76 Rep W. Lang & Demers

GENERAL

Name of Complex, Business Landip's Ski Rentals

Street Lipin Montage, Mammoth

Unit No. (Apt. No.) _____

Name of Owner Alan O'Donnell Phone No. 934-6624

Name of Manager John Swell Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS None

No. of W/H				
Manufacturer				
Model Number				
KW Rating				
Size (Gallons)				

SPACE HEATERS

How Many square feet are being heated? _____

How many rooms? _____

Type of Space Heating Units gas

Manufacturer	<u>Custom Air</u>			
Model Number				
Rating	<u>24,500</u>			
No. of Units	<u>1</u>			
Location	<u>Basement</u>			

Type:

Baseboard				
Wall	<u>1</u>			
Radiant				

COMMENTS: _____

(2)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 0300
Date 12-20-76 Rep Holman + Demoss

per
400w
700w
is

GENERAL

Name of Complex, Business Mammoth Day Care DAY CARE
Street Car Alpine Cc / Mt Blvd, Mammoth
Unit No. (Apt. No.) Evans / Coada

1 HP
rises
then
from 65-

Name of Owner Ilo Knappen Phone No. _____

Name of Manager _____ Phone No. _____

*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>Racal Mfg Co</u>			
Model Number	<u>G 24-30</u>			
KW Rating	<u>36,000 BTU</u>			
Size (Gallons)	<u>30 gal</u>			

SPACE HEATERS

How Many square feet are being heated? _____

How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>PAINE-DAVEY</u>	<u>Heat Thermostats</u>		
Model Number				
Rating	<u>4500 BTU</u>	<u>2.0 FC</u>		
No. of Units	<u>1</u>	<u>1</u>		
Location	<u>BELOW -</u>	<u>MOUNTED (4)</u>		
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

③
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 0700
Date 1-4-76 Rep Holmes & DeMott

GENERAL

Name of Complex, Business Pasadena Solar Cndy Co

Street _____

Unit No. (Apt. No.) _____

Name of Owner Larry Renner Phone No. 934-6394

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>Parsons</u>			
Model Number	<u>N/A-2</u>			
KW Rating	<u>2.5 kw</u>			
Size (Gallons)	<u>50 gal</u>			

SPACE HEATERS

How Many square feet are being heated? _____

How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>Thermo-Top</u>			
Model Number	<u>N/A</u>			
Rating	<u>4.5</u>			
No. of Units	<u>2</u>			
Location	<u>Wall</u>			

Type:

Baseboard				
Wall				
Radiant				

COMMENTS:

②
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 0700
Date 1-4-76 Rep Holmes & Demoss

GENERAL

Name of Complex, Business Pasadena Solar Crdly Co

Street _____

Unit No. (Apt. No.) _____

Name of Owner Larry Renner Phone No. 934-6394

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>Whisper</u>			
Model Number	<u>NH-2</u>			
KW Rating	<u>2.5 kw</u>			
Size (Gallons)	<u>50 gal</u>			

SPACE HEATERS

How Many square feet are being heated? _____

How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>THERMADOR</u>			
Model Number	<u>NH</u>			
Rating	<u>4.5</u>			
No. of Units	<u>2</u>			
Location	<u>Wall</u>			

Type:

Baseboard				
Wall				
Radiant				

COMMENTS: _____

(4)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 0250
Date 1-12-77 Rep NOLMAN & de Moss

GENERAL

Name of Complex, Business WILLOWOOD INN - BEST WESTERN
Street MTN BLVD, MAMMOTH

Unit No. (Apt. No.) _____

Name of ^{OWNER} ~~Owner~~ Jim & Patty Murphy Phone No. 934-6855

Name of Manager ROBERT LIND ^{OWNER} ~~Owner~~ Phone No. 934-6100
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>2</u>	<u>1</u>		
Manufacturer	<u>American Co.</u>	<u>National</u>		
Model Number	<u>360</u>			
KW Rating	<u>200,000 BTU</u>	<u>30 KW</u>		
Size (Gallons)	<u>150</u>	<u>225</u>		

SPACE HEATERS

How Many square feet are being heated? 12,800 ft²
How many rooms? 36

Type of Space Heating Units

Manufacturer	<u>Thermax</u>	<u>Thermax</u>		
Model Number	<u>N1-W 30</u>	<u>N/A</u>		
Rating	<u>3.0 KW</u>	<u>1.2 KW</u>		
No. of Units	<u>37</u>	<u>1</u>		
Location	<u>WALL</u>	<u>(HALL) WALL</u>		
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

400
32
800
00
00

(5)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

11
18
19
3
4
3

Division 4 Cycle 60 District 85 Book 894 Folio 0820
Date 12-21-76 Rep Helman + Demson

GENERAL

Name of Complex, Business Billie's Motel

Street Mammoth Hwy, Mammoth

Unit No. (Apt. No.) _____

Name of Owner Parlovich, Mrs. Phone No. 9372418

Name of Manager _____ Phone No. _____

*Primary phone

If condominium, how many units in the complex?

WATER HEATERS - propane - 100 gal - 3 HWH

No. of W/H	<u>3</u>			
Manufacturer	<u>Ray's Right</u>			
Model Number				
KW Rating	<u>146,000 BTU</u>			
Size (Gallons)	<u>00</u>			

SPACE HEATERS

How Many square feet are being heated? _____

How many rooms? _____

Type of Space Heating Units forced

BTU

Manufacturer	<u>Pharo</u>			
Model Number	<u>110FS11</u>			
Rating	<u>70,000 BTU</u>			
No. of Units	<u>4</u>			
Location	<u>1st floor</u>			

Type:

Baseboard				
Wall				
Radiant				

COMMENTS:

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Wednesday
5:00pm

Division 4 Cycle 60 District P5 Book 894 Folio 0900
Date 1-5 Rep _____

GENERAL

Name of Complex, Business Montasio Patis
Street W 11th St & Suburban, Mantoloking 11th St
Unit No. (Apt. No.) _____
Name of Owner Hylander Corp - Phone No. 934-3168
Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H				
Manufacturer	<u>Imco</u>			
Model Number				
KW Rating	<u>17700 BTU</u>			
Size (Gallons)	<u>100 gal</u>			

SPACE HEATERS

How Many square feet are being heated? 5400 ft²
How many rooms? 4

Type of Space Heating Units

Manufacturer	<u>One-Sided</u>	<u>HIPART</u>		
Model Number	<u>2-2-2</u>	<u>2-2-2</u>		
Rating	<u>15,000 BTU</u>	<u>100,000 BTU</u>		
No. of Units	<u>2</u>	<u>1</u>		
Location	<u>Basement</u>	<u>Basement</u>		
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

⑦
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 1050
Date 1-13-76 Rep HOLMAN & DEMASS

GENERAL

Name of Complex, Business MMSA WARMING HUT #2
Street TOP OF CANYON BL.
Unit No. (Apt. No.) _____
Name of Owner MMSA Phone No. 934-2571
Name of Manager PO CUNNINGHAM Phone No. EXT 373
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	2	1		
Manufacturer	AMERICAN	AMERICAN		
Model Number				
KW Rating	56 KW	24 KW		
Size (Gallons)	100	50		

SPACE HEATERS

How Many square feet are being heated? 100,000?
How many rooms? ?

Type of Space Heating Units

Manufacturer	FRASCH			
Model Number				
Rating				
No. of Units	7			
Location	FL 123, 5			
Type:				
Baseboard	52 KW			
Wall				
FORCED AIR Radiant	237.7 KW			

COMMENTS:

See attached letter

MAMMOTH MOUNTAIN SKI AREA

POST OFFICE BOX 24 • MAMMOTH LAKES, CALIFORNIA 93546

AREA CODE 714 • 934-2571

Warming Hut #2 100,000 sq. ft.

Connected Electrical Load Data

HEAT AND BLOWERS

Lower Level: 60 KW-heat, 9 KW-fans, 58 KW-stairwells

Level 2: 121 KW-heat, 12.7 KW-fans, 1 KW-compressor

Level 3: 183 KW-heat, 15 KW-fans

Level 5: 390 KW-heat, 45 KW-fans, 1 KW-compressor TOTAL HEATING LOAD: 895.7 KW

WATER HEATERS

Lower Level - 24 KW

Level 3 - 162 KW

TOTAL WATER HEATING LOAD: 186 KW

CAFETERIA EQUIPMENT

Steam cookers - 108 KW

Coffee pots - 13.6 KW

Ovens - 59 KW

Food warmers - 4.5 KW

Steam tables - 7.6 KW

Deep fryers - 48 KW

Grills - 137 KW

Mixers - 1.3 KW

Ice maker - 2.2 KW

TOTAL COOKING LOAD: 381.2 KW

TOTAL LOAD (EXCEPT LIGHTS): 1462.9 KW

Tracy Hamilton

(8)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 844 Folio 1150
Date 12/21/76 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business ROYAL PINES RESORT
Street FRONTAGE RD. ROUTE 203 S/O MINARET SUMMIT RD. MAMMOTH LAKES
Unit No. (Apt. No.) 25
Name of Owner PAUL SCHRINER Phone No. 934-2306
Name of Manager SAME Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	PROPANE PROPANE PROPANE		
Manufacturer	AMERICAN	GAFFERS	TROPICAL
Model Number	360	SATTLER	
KW Rating	300,000 BTU	190,000 BTU	160,000 BTU
Size (Gallons)	100	100	JACUZZI - POOL

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

	PROPANE PROPANE		
Manufacturer	HOLLY	HOLLY	THERMADOR
Model Number			
Rating	24,000 BTU	24,000 BTU	3 KW
No. of Units	1	8	16
Location	ROOM	ROOMS	ROOMS
Type:	FLOOR		
Baseboard			
Wall	X		X
Radiant			

COMMENTS:

(9)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 1160
Date 12/20/76 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business WHITE STAG INN
Street SUMMER HOMES Rd. MAMMOTH LAKES
Unit No. (Apt. No.) 21 + owner
Name of Owner W. G. QUANDT Phone No. 934 2746
Name of Manager " Phone No. "
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>2</u>			
Manufacturer				
Model Number				
KW Rating	<u>PROPANE</u>			
Size (Gallons)	<u>200 gal each</u>			

SPACE HEATERS

How Many square feet are being heated? 15' x 25'
How many rooms? 21

Type of Space Heating Units

Manufacturer	<u>THERMADOR</u>	<u>SILVANIA</u>		
Model Number				
Rating	<u>4 KW</u>	<u>2-250 watt</u>		
No. of Units	<u>21</u>	<u>21</u>		
Location	<u>LIVING AREA</u>	<u>Bath</u>		
Type:				
Baseboard				
Wall	<u>X</u>			
Radiant		<u>X</u>		

COMMENTS: HAS BUILT HEAT EXCHANGER IN FIRE
PLACE TO HELP HEAT LOBBY.

(10)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 25 Book 894 Folio 1183
Date 1/5/77 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business MAMMOTH MINARET COPR.-CHAIR #15
Street MAJESTIC PINES DR./MERIDIAN MAMMOTH LAKES
Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. _____

Name of Manager WERNER LANDSPACH Phone No. 934-2571
MAINTENANCE *Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H				
Manufacturer				
Model Number				
KW Rating				
Size (Gallons)				

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>THERMOPAC</u>			
Model Number	<u>1</u>			
Rating	<u>2000</u>			
No. of Units	<u>1</u>			
Location	<u>2nd FLOOR</u>			
Type:	<u>RADIANT</u>			
Baseboard				
Wall				
Radiant				

COMMENTS: _____

(11)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 1190
Date 12/30/76 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business ENGEL NOF LODGE
Street MILLERS SIDING, MAMMOTH LAKES
Unit No. (Apt. No.) 27
Name of Owner PETER ENGEL Phone No. 934-2417
Name of Manager Same Phone No. Same
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	2	2	6	1
Manufacturer	N.A.	N.A.	PROPANE	PROPANE
Model Number			NA	NA
KW Rating	5KW	4.5KW	25,000 BTU	75,500 BTU
Size (Gallons)	52	82	30	100

1
PROPANE
JACUZZI
238,000 BTU
N/A.

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

FEDERAL-				
Manufacturer	PACIFIC	CEILING	PROPANE	PROPANE
Model Number	N.A.	CABLE		
Rating	EST. 2KW	EST. 3KW	20,000 BTU	30,000 BTU
No. of Units	3	10	6	8
Location	LOBBY	LIVING	LIVING	LIVING
Type:				
Baseboard	X			
Wall			X	X
Radiant		X		

COMMENTS: MR ENGEL THINKS IT'S ABOUT TIME
HEAT AT CASA DIABLO IS UTILIZED.

(12)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 600 District 85 Book 894 Folio 2050
Date 12/21/76 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business WHISKEY CREEK RESTAURANT
Street LAKE MARY RD. & MINARET SUMMIT RD. MAMMOTH LAKES

Unit No. (Apt. No.) _____

Name of Owner ^{PARTNER} SAM WALKER Phone No. 934-2555

Name of Manager SAME Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

	PROPANE	ELECTRIC		
No. of W/H	1	1		
Manufacturer	RUDD	AMERICAN		
Model Number				
KW Rating	19,900 BTU	9 KW		
Size (Gallons)	100	100		

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

	PROPANE			
Manufacturer	LENNOX			
Model Number	OG5-630-M			
Rating	630,000 BTU			
No. of Units	2			
Location	ATTIC			
Type:	FORCED AIR			
Baseboard				
Wall				
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 2060
Date 12/20/76 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business PIONEER MKT/LIQUOR
Street 2760 85 MINARET RD. MAMMOTH LAKES
Unit No. (Apt. No.) —
Name of Owner JIM LANGLEY Phone No. 934-3232
Name of Manager SAME Phone No. —
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer				
Model Number				
KW Rating	<u>4.5 KW</u>			
Size (Gallons)	<u>10</u>			

SPACE HEATERS

How Many square feet are being heated? —
How many rooms? —

Type of Space Heating Units - HEAT RECOVERY SYSTEM FROM REFRIGERATION COMPRESSORS.

Manufacturer	<u>SUPPLEMENTAL HEAT ONLY USED</u>			
Model Number	<u>1 70 OF TIME.</u>			
Rating				
No. of Units				
Location				
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: INTERESTED IN CONSERVATION HAS
NEW 2800 SQ FT. ALLELECTRIC HOME - VERY WELL
INSULATED. HAS 80th-90th BI MONTHLY BILLS FOR RESIDENCE
MIGHT BE USED FOR SUB METERING.

(14)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 2075
Date 12/21/76 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business ECKERT, WADE R. M.D.
Street MINARET / ELLIOTT SP. MAMMOTH LAKES

Unit No. (Apt. No.) _____

Name of Owner BEN ELLIOTT Phone No. 934-8576

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>2</u>			
Manufacturer	<u>AMERICAN</u>			
Model Number				
KW Rating	<u>4.5 KW</u>			
Size (Gallons)	<u>40</u>			

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>N.A.</u>			
Model Number	<u>CEILING CABLE</u>			
Rating	<u>EST. 24 KW</u>			
No. of Units	<u>2400 SQ. FT</u>			
Location	<u>CEILING</u>			
Type:				
Baseboard				
Wall				
Radiant	<u>X</u>			

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 2080

Date 12/21/76 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business BERGERS BURGERS
Street MINARET RD. / MILLERS SIDING MAMMOTH LAKES

Unit No. (Apt. No.) _____

Name of Owner GARY BERGER Phone No. 934-6622

Name of Manager SAME Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>N.A.</u>			
Model Number	<u>N.A.</u>			
KW Rating	<u>4.5</u>			
Size (Gallons)	<u>60</u>			

SPACE HEATERS

How Many square feet are being heated? 900
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>N.A.</u>			
Model Number	<u>CEILING CABLE</u>			
Rating	<u>EST. 9 KW</u>			
No. of Units	<u>1-900 SQ. FT.</u>			
Location	<u>CEILING</u>			

Type:

Baseboard				
Wall				
Radiant	<u>X</u>			

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 2095
Date 12/21/76 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business DER ALPENHOF
Street MINARET RD. E/O ROUT 203 MAMMOTH LAKES
Unit No. (Apt. No.) 40
Name of Owner ROBERT SCHAUPMAYER Phone No. 934-6330
Name of Manager SAME Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

	PROPANE	PROPANE		
No. of W/H	1	1		
Manufacturer	AMERICAN	AMERICAN		
Model Number				
KW Rating	200,000 BTU	400,000 BTU		
Size (Gallons)	150	350		

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

	PROPANE			
Manufacturer		N.A.		
Model Number		8 FT BASEBOARD		
Rating	24,000 BTU	3 KW		
No. of Units	10	30		
Location	CABINS	ROOMS		
Type:	FLOOR FURNACE			
Baseboard		X		
Wall				
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 600 District 85 Book 894 Folio 2100

Date 12/20/76 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business MINARETT LODGE

Street MINARETT RD. MAMMOTH LAKES

Unit No. (Apt. No.) _____

Name of Owner MONTY MC CLOUD Phone No. 936-2416

Name of Manager SAME Phone No. _____

*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>2</u>	<u>5</u>		
Manufacturer	<u>PROPANE</u>	<u>PROPANE</u>		
Model Number	<u>N.A.</u>	<u>N.A.</u>		
KW Rating	<u>150,000 BTU</u>	<u>20,000 BTU</u>		
Size (Gallons)	<u>250 EA.</u>	<u>90 EA.</u>		

SPACE HEATERS

How Many square feet are being heated? _____

How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>PROPANE</u>	<u>PROPANE</u>		
Model Number	<u>N.A.</u>	<u>N.A.</u>		
Rating	<u>30,000 BTU</u>	<u>20,000 BTU</u>		
No. of Units	<u>4</u>	<u>12</u>		
Location	<u>LIVING</u>	<u>LIVING</u>		
Type:	<u>FLOOR</u>			
Baseboard				
Wall		<u>X</u>		
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 2105
Date 12/20/76 Rep. S.N. TORTAROLO

GENERAL

Name of Complex, Business MAMMOTH REALTY
Street MINARET RD. MAMMOTH LAKES
Unit No. (Apt. No.) _____
Name of Owner LARRY IRION Phone No. 934-2456
Name of Manager PETE FERRY Phone No. 934-2456
ASSOCIATE *Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H				
Manufacturer				
Model Number	<u>N.A.</u>			<u>UNABLE TO LOCATE</u>
KW Rating				
Size (Gallons)				<u>SMALL - WASHING HANDS ONLY</u>

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>THERMADOR</u>	<u>THERMADOR</u>		
Model Number				
Rating	<u>EST. 3 KW.</u>	<u>EST. 1.6 KW.</u>		
No. of Units	<u>1</u>	<u>2</u>		
Location	<u>OFFICE</u>	<u>OFFICE</u>		
Type:				
Baseboard				
Wall	<u>X</u>	<u>X</u>		
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 2175
Date 1/5/77 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business AUSTRIA HOF
Street CANYON BL. W/O MAMMOTH SLOPES RD. MAMMOTH LAKES
Unit No. (Apt. No.) 14 UNITS + RESTAURANT
Name of Owner _____ Phone No. _____
Name of Manager JOSEPH MUELLER Phone No. 934-2764
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

	<u>PROPANE</u>			
No. of W/H	<u>3</u>			
Manufacturer	<u>ATLAS</u>			
Model Number	<u>A-100-168-1</u>			
KW Rating	<u>199,000 BTU INPUT</u>			
Size (Gallons)	<u>100 EA.</u>			

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>THERMADOR</u>	<u>N.A.</u>		
Model Number	<u>—</u>			
Rating	<u>3KW</u>			
No. of Units	<u>14</u>	<u>5</u>		
Location	<u>ROOMS</u>	<u>DINNING ROOM</u>		
Type:	<u>FAN FORCED</u>			
Baseboard		<u>X</u>		
Wall	<u>X</u>			
Radiant				

COMMENTS: ACCOUNT IN NAME OF "INTERNATIONAL SKI"
METER NO. P0714-1428

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 2185
Date 12/21/75 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business THE HOST MOTOR INN
Street MINARET SUMMIT RD. / FOREST TRAIL MAMMOTH LAKES
Unit No. (Apt. No.) 61
Name of Owner BEN ELLIOTT Phone No. 934-8576
Name of Manager SAME Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	1	7	6	
Manufacturer	A.O. SMITH	A.O. SMITH	IN LINE	HEATERS
Model Number	DUE 120730	DUE 120730	CAL ROD	
KW Rating	18	12	9	
Size (Gallons)	120	120	FOR SWIMMING AND	JACUZZI POOL

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Manufacturer	FEDERAL -	THERMADOR	THERMADOR	
Model Number	PACIFIC	CEILING-FAN	-	
Rating	8FT-3KW	1.65KW	4KW	
No. of Units	61	61	5	
Location	ROOMS	BATH	LOBBY	
Type:				
Baseboard	X			
Wall			X-FAN	
Radiant		X AND		

FORCED AIR

COMMENTS:

HAS NOT BEEN OPENED THIS YEAR AS
YET - DUE TO LACK OF SNOW.

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 2200
Date 12/22/76 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business SEASONS - 4' REC. HALL
Street LAKEVIEW BLVD. E/O LAKE MARY RD. MAMMOTH LAKES
Unit No. (Apt. No.) _____
Name of Owner OWNERS ASSOCIATION Phone No. _____
Name of Manager ROBERT KERMODE Phone No. 934-2030
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	1	1	1	
Manufacturer	KAY-PAK	KAY-PAK	AMERICAN	
Model Number				
KW Rating	245,000 BTU	547,600 BTU	200,000 BTU	
Size (Gallons)	JACUZZI	SWIMMING	200	
	N.A.	POOL - N.A.	REC. SHOWERS AND MGRS. APT.	

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Manufacturer	N.A.	THERM-DOX	N.A.	THERM-DOX
Model Number				
Rating	4KW	5KW	4KW	3KW
No. of Units	2	1	3	1
Location	LOBBY	LOBBY	MGR. APT.	MGR. APT.
Type:				
Baseboard	X		X	
Wall		X		X
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 2300
Date 12/30/76 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business MAMMOTH COUNTY YARD
Street BERNER S/D MINARET SUMMIT RD. MAMMOTH LAKES
Unit No. (Apt. No.) _____
Name of Owner MONO COUNTY Phone No. _____
Name of Manager FLOYD ROBERTS Phone No. 934-2422
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>NATIONAL STEEL CO.</u>			
Model Number	<u>75050</u>			
KW Rating	<u>PROPANE</u>			
Size (Gallons)	<u>50</u>			

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units BOILER PROPANE PROPANE

Manufacturer	<u>N. A.</u>	<u>REZTOR</u>		
Model Number	<u>WG-1250</u>	<u>ITT</u>		
Rating	<u>1,000,000 BTU</u>	<u>100,000 BTU</u>		
No. of Units	<u>1</u>	<u>2</u>		
Location	<u>GARAGE</u>	<u>GARAGE</u>		
Type:	<u>SUSPENDED FROM CEILING</u>			
Baseboard				
Wall				
Radiant	<u>FLOOR</u>	<u>X</u>		

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 2540
Date 12/21/76 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business FRANK LIQUORS
Street MINARET / ELLIOTT SP. MAMMOTH LAKES
Unit No. (Apt. No.) _____
Name of Owner FRANK AXFORD Phone No. 934-2382
Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>AMERICAN</u>			
Model Number	<u>—</u>			
KW Rating	<u>1.6 KW</u>			
Size (Gallons)	<u>5</u>			

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units HEAT RECOVERY SYSTEM USING HEAT FROM REFRIGERATION COMPRESSORS TO SPACE HEAT STORE

Manufacturer				
Model Number				
Rating				
No. of Units				
Location				
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: INFORMATION FROM SON-IN-LAW
JIM EWING LOCATED AT FRANK'S HARDWARE
ON LAUREL MTN. RD.

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 2550
Date 12/21/76 Rep S. N. TORTAROLO

GENERAL

Name of Complex, Business THE ALPINE LODGE
Street MINARET RD. W/O FOREST TRAIL RD. MAMMOTH LAKES
Unit No. (Apt. No.) 48
Name of Owner BILL CHAN Phone No. 934-8526
Name of Manager SAME Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

	PROPANE PROPANE PROPANE		
No. of W/H	1	1	1
Manufacturer	A.O. SMITH	A.O. SMITH	RAY-PACK
Model Number	—	—	—
KW Rating	420,000 BTU	670,000 BTU	261,000 BTU.
Size (Gallons)	850	450	FOR POOL

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

	PROPANE			PROPANE	
Manufacturer	RAY-PACK	THERMADOR	FEDERAL-PACIFIC	AXAX	VARIOUS
Model Number	—	—	—	—	INFRA-RED
Rating	319,000 BTU	3 KW	3 KW	600,000 BTU	3-250 WATT
No. of Units	12	8	4	24	48
Location	BOILER ROOM	ROOMS	ROOMS	BOILER ROOM	BATHROOM
Type:					
Baseboard			X		
Wall		X-FAN			
Radiant	X			X	X
	HOT WATER IN FLOOR			HOT WATER IN FLOOR	

COMMENTS:

BILL CHAN - NEW OWNER - INFORMATION FURNISHED
BY BEN ELLIOTT FORMER OWNER

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 3020

Date 12/21/76 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business COMSTOCK II:
Street MINARET RD./ROUTE 203 MAMMOTH LAKES

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. _____

Name of Manager JENS HOLST Phone No. 934-8460
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

	<u>PROPANE</u>			
No. of W/H				
Manufacturer	<u>DAY & NIGHT</u>			
Model Number				
KW Rating	<u>100,000 BTU</u>			
Size (Gallons)	<u>100</u>			

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>SIEGLER</u>	<u>FEDERAL</u>		
Model Number	<u>COUNTERFLOW</u>	<u>PACIFIC</u>		
Rating	<u>100,000 BTU</u>	<u>2 KW</u>		
No. of Units	<u>1</u>	<u>1</u>		
Location	<u>DINNING ROOM</u>	<u>ENTRY</u>		
Type:				
Baseboard		<u>X</u>		
Wall				
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 3100
Date 12/21/76 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business FOREST TRAILS COMMUNITY CENTER
Street FOREST TRAILS S/O MINARET MAMMOTH LAKES

Unit No. (Apt. No.) _____

Name of Owner COUNTY OF MONO Phone No. _____

Name of Manager RON GROH Phone No. 9327911
MAINTENANCE MAN *Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>AMERICAN APPLIANCE CO.</u>			
Model Number	<u>52 AMH</u>			
KW Rating	<u>4.5 KW</u>			
Size (Gallons)	<u>52</u>			

SMALL KITCHEN

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>THERMADOR</u>	<u>THERMADOR</u>	<u>THERMADOR</u>
Model Number	<u>-</u>	<u>-</u>	<u>-</u>
Rating	<u>3 KW</u>	<u>1.65 KW</u>	<u>3 KW</u>
No. of Units	<u>5</u>	<u>2</u>	<u>2</u>
Location	<u>LARGE</u>	<u>BATHROOMS</u>	<u>MEETING ROOM</u>
Type:	<u>MEETING ROOM</u>		<u>(NOT USED)</u>
Baseboard			
Wall	<u>X</u>	<u>X</u>	<u>X</u>
Radiant			

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 3115
Date 12/21/76 Rep. S.N. TORTAROLO

GENERAL

Name of Complex, Business INNSBRUCK LODGE
Street FOREST TRAIL S/O MINARET SUMMIT RD. MAMMOTH LAKES
Unit No. (Apt. No.) 15
Name of Owner REINHOLD AL BRECHT Phone No. 934-3035
Name of Manager Same Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>2</u>	<u>1</u>		
Manufacturer	<u>AMERICAN</u>	<u>DAY & NIGHT</u>		
Model Number				
KW Rating	<u>240,000 BTU</u>	<u>60,000 BTU</u>		
Size (Gallons)	<u>100</u>	<u>40</u>		

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

	<u>PROPANE PROPANE</u>			
Manufacturer	<u>CUSTOM-AIRE</u>	<u>GAFFER</u>	<u>THERMADOR</u>	<u>THERMADOR</u>
Model Number	<u>—</u>	<u>SATTLER</u>	<u>—</u>	<u>—</u>
Rating	<u>35,000 BTU</u>	<u>160,000 BTU</u>	<u>3 KW</u>	<u>3 KW</u>
No. of Units	<u>9</u>	<u>3 ROOMS + DORM. 2</u>	<u>3</u>	<u>3</u>
Location	<u>ROOMS</u>	<u>BASEMENT</u>	<u>LOBBY</u>	<u>ROOMS</u>
Type:	<u>FORCED AIR</u>			
Baseboard				
Wall	<u>X</u>		<u>X</u>	<u>X</u>
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 3250
Date 1/4/77 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business CALIF. DIV. OF HIGHWAYS
Street MINARET RD. MAINTENANCE ST. MAMMOTH LAKES
Unit No. (Apt. No.) _____
Name of Owner STATE OF CALIF. Phone No. _____
Name of Manager MR. HADLER Phone No. 935-4205
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

	GARAGE	REST ROOM		
No. of W/H	1	1		
Manufacturer	WATSON	NATIONAL		
Model Number	MRG-120	NSG-10		
KW Rating	4.2	1.5		
Size (Gallons)	150	10		

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

	PROPANE	2	ELECTRIC	7
Manufacturer	N.F.	WESIX	WESIX	WESIX
Model Number		2415		
Rating		5 kW	7 kW	5 kW
No. of Units	6	1	1	1
Location	GARAGE	LOBBY RM	OFFICE	REST RM
Type:		forced air		
Baseboard				
Wall			X	X
Radiant	Y			

COMMENTS:

Suspended from ceiling *suspended*

69
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 55 Book 895 Folio 3312
Date 12/70 Rep W. Nelson

GENERAL

Name of Complex, Business The Winery
Street Highway 203 / Old Man Rd #6
Unit No. (Apt. No.) _____
Name of Owner Ervin Russell Phone No. 934-2700
Name of Manager - not in Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

none

No. of W/H				
Manufacturer				
Model Number				
KW Rating				
Size (Gallons)				

SPACE HEATERS

How Many square feet are being heated? 3600
How many rooms? 1

Type of Space Heating Units

Manufacturer	<u>Carrier</u>			
Model Number	<u>184</u>			
Rating	<u>19 KW</u>	<u>125</u>	<u>125</u>	
No. of Units	<u>1</u>			
Location	<u>attic</u>			
Type:	<u>strip</u>			
Baseboard				
Wall				
Radiant				

COMMENTS: Down Roof Not available see Houshberg

(30)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 875 Folio 3322

Date 12/20 Rep D. Mica

GENERAL

Name of Complex, Business Lloyd Dennee's Inc

Street Highway 203 / Old Mammoth Rd #1

Unit No. (Apt. No.) _____

Name of Owner Marvin Dennee Phone No. _____

Name of Manager J. Fredrickson Phone No. 714 934-8551
* *Primary phone

If condominium, how many units in the complex?

WATER HEATERS None

No. of W/H				
Manufacturer				
Model Number				
KW Rating				
Size (Gallons)				

SPACE HEATERS

How Many square feet are being heated? 75' x 120' = 9000 sq ft
How many rooms? 1

Type of Space Heating Units

Manufacturer	<u>Lennox</u>			
Model Number	<u>F22-JC23-2-S3</u>			
Rating	<u>12.1 input 240V 30 = 17,301 WATTS = 17.3 KW</u>			
No. of Units	<u>1</u>			
Location	<u>Attic</u>			
Type:	<u>Central</u>			
Baseboard				
Wall				
Radiant				

COMMENTS: On Roof - See Handwritten - 934-6505

(31)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3330
Date 12-21-76 Rep De Moss + Holman

GENERAL

Name of Complex, Business Salem's Stores 611

Street Highway 203 / Old Mammoth Rd, Mammoth Lakes

Unit No. (Apt. No.) 1

Name of Owner Salem's Phone No. _____

Name of Manager _____ Phone No. _____

*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>Water Heater</u>			
Model Number	<u>1/2</u>			
KW Rating	<u>36 KW</u>			
Size (Gallons)	<u>120</u>			

SPACE HEATERS

How Many square feet are being heated? 26,000 ft²
How many rooms? 1

Type of Space Heating Units

Manufacturer	<u>ELCO-USA-MAK</u>			
Model Number	<u>1/2</u>			
Rating	<u>125 KW</u>			
No. of Units	<u>1</u>			
Location	<u>2nd</u>			

Type:

Baseboard				
Wall				
Radiant				

COMMENTS:

32
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 55 Book 895 Folio 3341
Date 12/31 Rep De Moe & Holman

GENERAL

Name of Complex, Business John Left Electric Co

Street Main Tavern Rd C 3

Unit No. (Apt. No.) C 3

Name of Owner John Left Phone No. 934-2244

Name of Manager Root Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS None

No. of W/H				
Manufacturer				
Model Number				
KW Rating				
Size (Gallons)				

SPACE HEATERS

How Many square feet are being heated? 1600
How many rooms? 1

Type of Space Heating Units

Manufacturer	<u>Deep Heat</u>			
Model Number	<u>1/4</u>			
Rating	<u>1/4 HP</u>			
No. of Units				
Location	<u>Room 100</u>			
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: Cable in floor.

33
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3342
Date 12/21 Rep De Morz J Huma

GENERAL

Name of Complex, Business Century Crest

Street Main Town Rd

Unit No. (Apt. No.) C 4

Name of Owner John Taft Phone No. 934-6064

Name of Manager NA Phone No. _____

*Primary phone

If condominium, how many units in the complex?

WATER HEATERS none

No. of W/H				
Manufacturer				
Model Number				
KW Rating				
Size (Gallons)				

SPACE HEATERS

How Many square feet are being heated? 1600

How many rooms? 1

Type of Space Heating Units

Manufacturer	<u>Deep Hot</u>			
Model Number				
Rating	<u>16 Kw</u>			
No. of Units				
Location	<u>near Comb.</u>			

Type:

Baseboard				
Wall				
Radiant				

COMMENTS: Comb in Slab.

(34)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3343

Date 12/31 Rep Dr. Mon. + Holman

GENERAL

Name of Complex, Business John Fapt Electric Co

Street Mon. Fourn Rd

Unit No. (Apt. No.) C 5

Name of Owner John Fapt Phone No. 934-2244

Name of Manager Russ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS none

No. of W/H				
Manufacturer				
Model Number				
KW Rating				
Size (Gallons)				

SPACE HEATERS

How Many square feet are being heated? 1200

How many rooms? 1

Type of Space Heating Units

Manufacturer	<u>Deep Heat</u>			
Model Number	<u>11+</u>			
Rating	<u>12KW</u>			
No. of Units	<u>1</u>			
Location	<u>in cable</u>			
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: Cable in Slab.

(35)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 69 Cycle 69 District 85 Book 895 Folio 3346

Date 12/21 Rep Dr. Moore + Holman

GENERAL

Name of Complex, Business Shakespeare Motel

Street McGowan Ferry Rd

Unit No. (Apt. No.) _____

Name of Owner John Jeff Phone No. 934-2244

Name of Manager Med Shakespeare Phone No. 934-2886
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	1			
Manufacturer	Water Heaters			
Model Number				
KW Rating	2.5			
Size (Gallons)	50			

SPACE HEATERS

How Many square feet are being heated? 1600
How many rooms? 1

Type of Space Heating Units

Manufacturer	Rescue			
Model Number	100			
Rating	11 KW			
No. of Units	1			
Location	Living Room			
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: Antique in Slab.

(26)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 11 Cycle 69 District 85 Book 895 Folio 3347

Date 12/21 Rep De Mize & Helmer

GENERAL

Name of Complex, Business John Taft Elect Co

Street Main Ave Rt W & H 1

Unit No. (Apt. No.) 1

Name of Owner J. R. Taft Phone No. 934-2244

Name of Manager Russ Phone No. _____

*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>Water Standard</u>			
Model Number				
KW Rating	<u>21.5</u>			
Size (Gallons)	<u>30</u>			

SPACE HEATERS

How Many square feet are being heated? 1600

How many rooms? 1

Type of Space Heating Units

Manufacturer	<u>Electric Heat</u>			
Model Number	<u>16.4</u>			
Rating	<u>16.4 kW</u>			
No. of Units	<u>1</u>			
Location	<u>floor cable</u>			
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: Cable in slab.

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3352
Date 1/5/77 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business U.S. POST OFFICE
Street OLD MAMMOTH RD. S/O CHATEAU RD. MAMMOTH LAKES
Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. _____
Name of Manager RAY JENNINGS Phone No. 934 2204
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>1/1/1</u>			
Model Number	<u>1/1/1</u>			
KW Rating	<u>1.5 KW</u>	<u>EST.</u>		
Size (Gallons)	<u>10</u>			

UNDER FLOOR

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>THE MADDON</u>			
Model Number	<u>—</u>			
Rating	<u>—</u>			
No. of Units	<u>6</u>			
Location	<u>NEEDS &</u>			
Type:	<u>FORCED</u>			
Baseboard				
Wall	<u>✓</u>			
Radiant				

COMMENTS: FORCED AIR

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3355

Date 12-28-76 Rep. Helmer

GENERAL

Name of Complex, Business The Stone Restaurant

Street Old Man Rd. Shown Pg. 8, Mammoth

Unit No. (Apt. No.) _____

Name of Owner Henderson Phone No. 934-2821

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>2</u>			
Manufacturer	<u>Amco Appliance</u>	<u>Victor</u>		
Model Number	<u>40 AM 40</u>	<u>430 X 48</u>		
KW Rating	<u>4.5 KW</u>			
Size (Gallons)	<u>70</u>	<u>50.1</u>		

Booster 20 psi

SPACE HEATERS

How Many square feet are being heated? 28 x 100 ft = 2800 ft²
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>N/A</u>			
Model Number	<u>N/A</u>			
Rating	<u>120,000 BTU/hr</u>			
No. of Units	<u>1</u>			
Location	<u>ATTIC</u>			

Type:

Baseboard				
Wall				
Radiant				

COMMENTS: most heat from hot going kitchen

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3365

Date 12-28 Rep Colman

GENERAL

Name of Complex, Business The Tavern

Street Old Mammoth Rd / Chatsworth, Mammoth Lakes

Unit No. (Apt. No.) _____

Name of Owner Peter Blannowich Phone No. 934-2060

Name of Manager _____ Phone No. _____

*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

Oil Boiler

No. of W/H	1			
Manufacturer	Consolidated			
Model Number	HO 30			
KW Rating	100,000 BTU			
Size (Gallons)	800 gal			

SPACE HEATERS

How Many square feet are being heated? _____ ?

How many rooms? _____

Type of Space Heating Units None

Manufacturer	Watts			
Model Number	N/A			
Rating	200,000			
No. of Units				
Location	Living Room			
Type:	Baseboard			
	Wall			
	Radiant			

COMMENTS: Entire building heated thru radiator system -
from central boiler room.

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3400
Date 1/10/77 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business SIERRA NEVADA INN
Street OLD MAMMOTH RD. E/O SIERRA NEVADA RD. MAMMOTH LAKES
Unit No. (Apt. No.) 120
Name of Owner _____ Phone No. _____
Name of Manager MR. LOTTERLY Phone No. 934-2515
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>14</u>			
Manufacturer	<u>N.A.</u>			
Model Number				
KW Rating	<u>4.5KW</u>			
Size (Gallons)	<u>100</u>			

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>THERMADOR</u>		<u>N.A.</u>	
Model Number				
Rating	<u>3KW</u>		<u>2.5KW</u>	
No. of Units	<u>134</u>		<u>10</u>	
Location	<u>ROOMS & HALLWAYS</u>		<u>LOBBY</u>	
Type:				
Baseboard			<u>X</u>	
Wall	<u>X</u>			
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3553

Date 12-28-76 Rep Holmes

GENERAL

Name of Complex, Business Mammoth Laundry-mat

Street Laird Mt Rd Mammoth

Unit No. (Apt. No.) _____

Name of Owner William, Robert Phone No. 934-2237

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	2	1	1	
Manufacturer	Smith	Smith	Water - Hill	
Model Number	PL-420-680	BC-400-671		
KW Rating	420,000 BTU	200,000		
Size (Gallons)	45 50	20 gal	150 gal	

SPACE HEATERS

How Many square feet are being heated? 30 x 50 = 1500 ft²
How many rooms? 2

Type of Space Heating Units

Manufacturer	Mifflin-Satterly			
Model Number	125 HFS			
Rating	125,000			
No. of Units	1			
Location	Living Room			
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Call Wednesday
12:30

Division 4 Cycle 69 District 85 Book 895 Folio 3700

Date 12-29-76 Rep Holman

GENERAL

Name of Complex, Business Comstock Lodge Restaurant

Street Highway 203, Mammoth Lakes

Unit No. (Apt. No.) _____

Name of Owner Monte Williamson owner Phone No. 934-2594

Name of Manager Monte Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>Water Heater</u>			
Model Number	<u>160</u>			
KW Rating	<u>160,000 BTU</u>			
Size (Gallons)	<u>160 gal</u>			

SPACE HEATERS

How Many square feet are being heated? 2500 ft²
How many rooms? 3

Type of Space Heating Units

Manufacturer	<u>TRIDENT</u>	<u>160</u>		
Model Number	<u>160</u>	<u>160</u>		
Rating	<u>160,000 BTU</u>	<u>160,000 BTU</u>		
No. of Units	<u>1</u>	<u>1</u>		
Location	<u>TS-3A</u>	<u>TS-3B</u>		
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

meter
#P0264-001606

Division 4 Cycle 69 District 85 Book 895 Folio 4620

Date 12-21-76 Rep 129 + 131

GENERAL

Name of Complex, Business Pea Soup Anderson's

Street 5/5 Main Hwy 11/0 Center Mammoth

Unit No. (Apt. No.) _____

Name of Owner Bukhal, B Phone No. 934-2265*

Name of Manager Polimino, F Phone No. 934-2264
*Primary phone

If condominium, how many units in the complex? _____

WATER HEATERS

No. of W/H	<u>2</u>	<u>1</u>		
Manufacturer	<u>Aux</u>	<u>Water Heater</u>		
Model Number	<u>4</u>	<u>1</u>		
KW Rating	<u>1</u>	<u>1</u>		
Size (Gallons)	<u>1</u>	<u>1</u>		

SPACE HEATERS

How Many square feet are being heated? _____

How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
Model Number	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
Rating	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
No. of Units	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
Location	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
Type:				
Baseboard				
Wall				
Radiant				

136.55 KW
TOTAL

COMMENTS: _____

HV #s 1 & 2 each have:

~~50~~ 50 KW at 8.3 KW for each of 6 Stages X 2 = 100 KW

HV #3

33.3 KW = 11.1 KW each of 3 =

33.3 KW

ceiling htr - thermador

#1 = 1250 W = 1.25 KW

wall htr - thermador

#1 2000 W = 2.0 KW

TOTAL = 136.55 KW

WATER HT

DAY & NIGHT WATER HTR

85 - 168 (LPG)

~~168~~ 168 gal

199,999 BTU - gas

EDISON PARTNER IN ERDA GEOTHERMAL BUILDING HEATING STUDY

Southern California Edison Company, together with the Ben Holt Company and Magma Power Company has been awarded a grant from the Energy Research and Development Administration (ERDA) to perform a geothermal heating study. The objective of the study will be to assess the technical, economic and environmental feasibility of using the relatively clean geothermal fluids from the Casa Diablo Hot Springs area for supplying space and water heating to the City of Mammoth Lakes, California.

Development of the proposed system at Mammoth has the potential advantage of helping to better meet our customer's energy needs in this remote and fast-growing ski resort area. Supplementing the electric heating, (which now accounts for almost all of the space and water heating in Mammoth), with geothermal heating is also in line with Edison and Federal goals of reducing dependence on expensive, imported fuel oil.

Municipal heating with geothermal energy is not a new idea. Iceland has been using hot geothermal waters for this purpose since the 1930's. Today, 50 percent of Iceland's 200,000 population receives geothermal heating, and that percentage is rising. New Zealand, Japan, the Soviet Union, Hungary and France also have extensive geothermal heating systems.

In the United States, space heating with geothermal fluids has succeeded most effectively in Oregon. At Klamath Falls, over three hundred wells supply heat to many municipal buildings. Elsewhere in Oregon and Idaho, greenhouses, resorts, farm buildings, and schools are heated by geothermal waters.

The Mammoth feasibility study is expected to begin in October, 1976 and will take twelve months to complete. It consists of five major tasks including:

- A survey to determine the number and magnitude of space heating and water heating loads in the Mammoth Area.
- A review of existing Casa Diablo geothermal reservoir data to estimate the extent and producibility of that resource.
- The design of a heating system to use as a basis for a cost estimate and feasibility evaluation.
- A review and evaluation of present commercially available space heating

equipment for application to the geothermal system.

- A study of the environmental impact of the proposed system.

The system to be studied consists of a number of geothermal wells and a heat exchange and pumping plant at Casa Diablo Hot Springs, pipelines to and from the city (a distance of about four miles), a distribution system within the city, and individual space and water heating equipment in new or existing buildings. Operationally, it is envisioned that municipal potable water to be warmed will flow to the Casa Diablo site where heat will be transferred through closed heat exchangers from the 300°F geothermal waters. The heated water will then be pumped back to the city and distributed to individual water heaters and radiator type space heaters, thereby supplementing or replacing present and future electric water heaters and the electric resistance space heaters.

If the study demonstrates that the Mammoth geothermal heating concept is feasible, the next step would be to install and operate a test heating loop for a single facility. The Mammoth Visitor Center, operated by the U.S. Forest Service and located about two miles from Casa Diablo, is one possibility where tests could be conducted. Operation of such a test loop over a period of a year or so would provide information on geothermal reservoir temperatures and flow rates and identify possible heat exchanger fouling problems. Testing of various types of space heaters and control systems would be carried out, and data to make a preliminary environmental assessment would be collected during the test period.

In addition to the potential for space and water heating with the Casa Diablo geothermal waters, preliminary well flow data indicates temperatures which are high enough for electric power generation. It is possible that a combined power generation and heating system will ultimately be the most effective use of this energy resource. If this program is successful, it will mark the first long-term practical application of the varied geothermal resources which exist in Edison's Service Territory.

With optimistic results from the feasibility study and successful operation of a test loop, it is projected that a full scale system could be providing Mammoth Lakes with geothermal heating and perhaps electricity by the 1980's.

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3720

Date 12-28 Rep Holman

GENERAL

Name of Complex, Business Schats Bakery

Street Mammoth Hwy Center, Mammoth

Unit No. (Apt. No.) _____

Name of Owner Schats, Mr (Bakery) Phone No. 934-6123

Name of Manager John R. King Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>McQuay-Norris</u>			
Model Number	<u>N-2</u>			
KW Rating	<u>1.1 KW</u>			
Size (Gallons)	<u>30 gal</u>			

SPACE HEATERS

How Many square feet are being heated? ~~4000~~ 30 x 50 = 1500 ft²
How many rooms? 1

Type of Space Heating Units

Manufacturer	<u>Honeywell</u>			
Model Number	<u>1112</u>			
Rating	<u>100,000 BTU</u>			
No. of Units	<u>1</u>			
Location	<u>Living room</u>			
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 4000

Date 1-4-76 Rep Holmen & McNeal

GENERAL

Name of Complex, Business Phil's Restaurant

Street Center St Mammoth

Unit No. (Apt. No.) _____

Name of Owner Stokewell, Phil Phone No. 934-3241

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>1</u>			
Model Number	<u>1</u>			
KW Rating	<u>5,000</u>			
Size (Gallons)	<u>120 gal</u>			

SPACE HEATERS

How Many square feet are being heated? 118 X 38 = 4502 sq ft
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>LENEX</u>			
Model Number	<u>LENEX</u>			
Rating	<u>45 KW</u>			
No. of Units	<u>1</u>			
Location	<u>Ref</u>			
Type:	<u>1 chip</u>			
Baseboard				
Wall				
Radiant				

COMMENTS: _____

118
X 38

1944
354

4484

Q

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 4010
Date 1/5/77 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business MAMMOTH FIRE DISTRICT
Street PINECREST & ROUTE 203, MAMMOTH LAKES

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. _____

Name of ^{CHIEF} Manager JOHN SINEENEY Phone No. 934-2300
^{ASST. CHIEF} BURNER *Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>WATCO</u>			
Model Number	<u>CC-2100A-2</u>			
KW Rating	<u>240,000 BTU</u>			
Size (Gallons)	<u>100</u>			

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

	<u>PROPANE PROPANE ELECTRIC</u>			
Manufacturer	<u>KEENOV</u>	<u>KEENOV</u>	<u>ALC</u>	
Model Number	<u>XC-250</u>		<u>1-11-1</u>	
Rating	<u>240,000 BTU</u>	<u>240,000 BTU</u>	<u>2 KW</u>	
No. of Units	<u>1</u>	<u>2</u>	<u>15</u>	
Location	<u>BASEMENT</u>	<u>1ST FLOOR</u>	<u>DIFFERENT LOCATIONS</u>	
Type:	<u>SUSTAINED ROOM</u>			
Baseboard			<u>X</u>	
Wall				
Radiant				

COMMENTS: FORCED AIR SUSTAINED
FORCED AIR

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 55 Book 895 Folio 4025
Date 1/4/77 Rep No. Miss + Holman

GENERAL

Name of Complex, Business Kittredge Archery Co
Street Mammoth Pinecrest 2 Mo.
Unit No. (Apt. No.) _____
Name of Owner Mr. Kittredge Phone No. 934-8355
Name of Manager B. A. Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	1			
Manufacturer	W. H. & P. Co.			
Model Number	2.4			
KW Rating	26,000 BTU			
Size (Gallons)	30 gal			

SPACE HEATERS

How Many square feet are being heated? 55,000 sq ft
How many rooms? _____

Type of Space Heating Units

Manufacturer	W. H. & P. Co.	W. H. & P. Co.	Boyle & ITT	W. H. & P. Co.
Model Number	2.4	2.4	2.4	2.4
Rating	100,000 BTU	100,000 BTU	100,000 BTU	25,000 BTU
No. of Units	2	1	2	1
Location	Basement	Ceiling	Ceiling	Wall
Type:				
Baseboard				
Wall				
Radiant				

Shimoda
NA
2 Kw.
Wall

COMMENTS:

(48)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 55 Book 895 Folio 4050

Date 1/4/77 Rep De Mesa + Holman

GENERAL

Name of Complex, Business Manth Villa

Street Prime Crest Ave, Manth

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. 934-2451

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>2</u>	<u>1</u>		
Manufacturer	<u>C. I. E.</u>	<u>Radiant</u>		
Model Number				
KW Rating	<u>4.5 KW</u>	<u>4.5 KW</u>		
Size (Gallons)	<u>80</u>	<u>50</u>		

SPACE HEATERS

How Many square feet are being heated? _____

How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>THERMADOR</u>	<u>THERMADOR</u>	<u>THERMADOR</u>	<u>W. H. H.</u>
Model Number				
Rating	<u>3 KW</u>	<u>4.5 KW</u>	<u>1.25 KW</u>	<u>2.0 KW</u>
No. of Units	<u>7</u>	<u>4</u>	<u>1</u>	<u>5</u>
Location	<u>WALL</u>	<u>WALL</u>	<u>Ceiling</u>	<u>WALL</u>
Type:				
Baseboard				
Wall				
Radiant				

W. H. H.
2,000 sq
WALL

COMMENTS: _____

(99)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 4075
Date 12-29 Rep Holman

GENERAL

Name of Complex, Business Austrian Chalet
Street Pinecrest Lts, Mammoth Lakes
Unit No. (Apt. No.) _____
Name of Owner Ellers, Kenneth Phone No. 934-2660
Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>4</u>			
Manufacturer	<u>Water-Heater</u>			
Model Number	<u>N/A</u>			
KW Rating	<u>4600</u>			
Size (Gallons)	<u>20 gal</u>			

SPACE HEATERS

How Many square feet are being heated? 8000 ft²
How many rooms? _____

Type of Space Heating Units

100 W/ft²

Manufacturer	<u>Unit-Heater</u>			
Model Number				
Rating	<u>100 W/ft² (max)</u>			
No. of Units	<u>2</u>			
Location	<u>Unit</u>			
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: 1 water heater on - all year during snow season -
alternates on by water demand -
1-2 usually during winter #3 on at 11:00a & at 2:00p.m.
exposed to radiator steam heat - for generator on site
Not case double.

(50)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 4080

Date 1-4-77 Rep De Moss & Holman

GENERAL

Name of Complex, Business Gallagher, R.J. Pinecrest Lodge

Street Pinecrest Ave 9 Mammoth

Unit No. (Apt. No.) _____

Name of Owner Gallagher, R.J. Phone No. 934-6129

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	1			
Manufacturer	Peri			
Model Number				
KW Rating	20,000 BTU			
Size (Gallons)	100 + 400	16000 BTU		

SPACE HEATERS

How Many square feet are being heated? 75,000 ft
How many rooms? _____

Type of Space Heating Units

Manufacturer	Thermostat	645		
Model Number				
Rating	14.5	150,000		
No. of Units	4	2		
Location	Wall	Wall		

Type:

Baseboard				
Wall				
Radiant				

COMMENTS:

51
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 4081

Date 12-28-76 Rep X/olma

GENERAL

Name of Complex, Business Mammoth Liquor

Street Highway 205 Center, Mammoth

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. _____

Name of Manager John Knadler Phone No. 934-6260
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>Waterford Fast Recovery</u>			
Model Number	<u>NH</u>			
KW Rating	<u>1.5 KW</u>			
Size (Gallons)	<u>5 gal</u>			

SPACE HEATERS

How Many square feet are being heated? 1200 ft²
How many rooms? 2

Type of Space Heating Units

Manufacturer	<u>Rayco Johnson</u>			
Model Number	<u>Model 12</u>			
Rating	<u>150,000 Btu</u>			
No. of Units	<u>1</u>			
Location	<u>Back room</u>			
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

(52)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 4096

Date 1-5-77 Rep Helman De Moss
Provenzano/Ross

GENERAL

Name of Complex, Business Stockwell Coffee Stump Alley
Street Main Center, Mammoth

Unit No. (Apt. No.) _____

Name of Owner De Barnett Phone No. no phone as yet

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>Trane</u>			
Model Number	<u>W-1</u>			
KW Rating	<u>4.5</u>			
Size (Gallons)	<u>50 gal</u>			

SPACE HEATERS

How Many square feet are being heated? 20 x 60 = 1800 ft²
How many rooms? 1

Type of Space Heating Units

Manufacturer	<u>Wm. C. Clark</u>			
Model Number				
Rating	<u>1.5 KW</u>			
No. of Units				
Location				
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: Ceiling Cable 8-10 w/ ft² 10750

(53)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 6.9 District 85 Book 895 Folio 4250

Date 12-28-76 Rep Holman

GENERAL

Name of Complex, Business Market Plaza

Street Center St, Mammoth

Unit No. (Apt. No.) _____

Name of Owner L. V. Norton Phone No. 934-2276

Name of Manager Wayne Norton Phone No. 934-6377 *
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H				
Manufacturer	<u>Grund</u>			
Model Number	<u>N/A</u>			
KW Rating	<u>58,000 BTU</u>			
Size (Gallons)	<u>40 gal</u>			

SPACE HEATERS

How Many square feet are being heated? 6000 ft²
How many rooms? 2

Type of Space Heating Units

Manufacturer	<u>Jefferson-Seibert</u>			
Model Number				
Rating	<u>175,000 BTU</u>			
No. of Units	<u>3</u>			
Location	<u>Under</u>			
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: Has three of above heat, unit only used
one

(54)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 109 District 85 Book 895 Folio 4300
Date 1-5 Rep _____

GENERAL

Name of Complex, Business Mary Jean Kalin Laplander Lodge
Street Center St, Mammoth

Unit No. (Apt. No.) _____

Name of Owner George Kalin Phone No. 29342823

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>6</u>			
Manufacturer	<u>ECFRTB-FLC</u>			
Model Number	<u>N-Y-2-EGFH</u>			
KW Rating	<u>2.5</u>			
Size (Gallons)	<u>52 gal</u>			

SPACE HEATERS

How Many square feet are being heated? 2000 ft²
How many rooms? 15

Type of Space Heating Units

Manufacturer	<u>WESIV</u>			
Model Number	<u>N/A</u>			
Rating	<u>311K/1</u>			
No. of Units	<u>22</u>			
Location	<u>WALL</u>			
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

(55)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 6000

Date 1-13-76 Rep Holman + De Mass

GENERAL

Name of Complex, Business MAMMOTH MINARET CORP.

Street _____

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. _____

Name of Manager WERNER LAUNSPACH Phone No. _____
*Primary phone

If condominium, how many units in the complex?

780
1600
2580

WATER HEATERS

No. of W/H	<u>2</u>	<u>6</u>		
Manufacturer	<u>Cum</u>	<u>EDWARDS</u>		
Model Number				
KW Rating	<u>390</u>	<u>500</u>	<u>500</u>	
Size (Gallons)		<u>20 gal</u>		

FLOW + RADIANT HEAT 5 boilers at 60 KW each

SPACE HEATERS

How Many square feet are being heated? _____

How many rooms? _____

Type of Space Heating Units

Manufacturer				
Model Number				
Rating				
No. of Units	<u>125</u>			
Location				
Type:				
Baseboard	<u>4</u>			
Wall	<u>114</u>			
Radiant	<u>7</u>			

COMMENTS: _____

STEAM BOILER	<u>2</u>
MANF.	<u>CAM</u>
KW RATING	<u>720</u>

ANY PROPANE EQUIPMENT
FOR SPACE OR WATER
HEATING?

ESTIMATE ON
SIZE

S.O.C. Edison

<u>wall heater</u>	<u>KW's</u>	<u>QUANTITY</u>	
thermadon	2kw	(15)	26kw
	3kw	(35)	114
	4kw		20
	4.5		31.5

wesix	2kw		14
			<hr/> 199.5

<u>base Board</u>	2		
Bryant			

Bryant	15kw		30
	20kw	1	20

singer	7.5kw		15
	10kw		40
	20kw		80

electromode	5kw		15
	8.5kw	1	8.5

Hunter	10kw		50
	12kw		60

Beko	7.5kw	1	7.5
------	-------	---	-----

(16) chair lifts	4 x 16		64
------------------	--------	--	----

Fostoria	3.2kw		16
----------	-------	--	----

Chromolux	20kw	1	20
-----------	------	---	----

infratube spot heat	5kw	1	5
			<hr/> 636.4kw

Hot Water Heater

EDWARDS	60kw	LH	300
CAM-COATS	75kw	"	150
"	240kw	1	240
Booster	42kw	!	42
			<u>732</u>

<u>Steam Bailer</u> Cam	420 kw	1		420
"Coats" Cam	300 kw	1	200 GL.	<u>300</u>
				1410 kw
sub total other side				<u>636.4 kw</u>
				2046.4 kw

approximate total for heaters
steam bailers, hot water heaters

2.05 MW

(46)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 75 Book 894 Folio 5601
Date 1/5/77 Rep SIN. TORTAROLO

GENERAL

Name of Complex, Business SKI LIFT APARTMENTS
Street MAIN AVE SUMMIT RD. MAMMOTH LAKES
Unit No. (Apt. No.) 50 UNITS WITH 138 ROOMS IN ALL.
Name of Owner _____ Phone No. _____
Name of Manager CHUCK JONES Phone No. 924-6744
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

	ELECTRIC	PROPANE		
No. of W/H	1	1		
Manufacturer	W.A.	W.A.		
Model Number				
KW Rating	150.005	150.005		
Size (Gallons)	2500	2500		

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

72

621
72
693

Type of Space Heating Units

Manufacturer	THEODOR	THEODOR		
Model Number				
Rating	200	200		
No. of Units	207	24		
Location	POOR	WALL		
Type:	FORCED AIR	FORCED AIR		
Baseboard				
Wall	✓	✓		
Radiant				

COMMENTS: _____

(51)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 5510
Date 1/4/77 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business MAMMOTH MOUNTAIN INN
Street MINARET SUMMIT RD. MAMMOTH LAKES
Unit No. (Apt. No.) _____
Name of Owner GETTY FIN. CORP. Phone No. _____
Name of Manager CHRIS. MOORE Phone No. 934-2581
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>2</u>	<u>1</u>		
Manufacturer	<u>N.A.</u>	<u>N.A.</u>		
Model Number				
KW Rating	<u>1.5 KW EA.</u>	<u>90 KW</u>		
Size (Gallons)	<u>5000 EA.</u>	<u>2000</u>		
	(3-45KW HEATERS)	(2-45KW HEATERS)		

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? 120

270
90
360

12,000

Type of Space Heating Units

Manufacturer	<u>N.A.</u>			
Model Number				
Rating	<u>150 KW</u>	<u>10-15 KW HEATERS</u>	<u>ESTIMATED</u>	
No. of Units	<u>2</u>	<u>ELECTRICIAN SAYS 40 AMPS AT</u>		
Location	<u>BASEMENT</u>	<u>201/21T-30</u>		
Type:	<u>FORCED AIR</u>			
Baseboard				
Wall				
Radiant				

COMMENTS: HAS 1.5 KW-120 VOLT-THERMADOR WALL
HEATER IN 120 GUEST ROOMS. THAT ARE NOT USED PER
MANAGER.

(58)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

meter
#P0714-001145

Division 4 Cycle 69 District 85 Book 895 Folio 4625
Date 12-21 Rep 1294131

GENERAL

Name of Complex, Business The Village Center
Street S/S Main Hwy - W/O Center, Mammoth
Unit No. (Apt. No.) _____
Name of Owner Turner Co. Phone No. _____
Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	1	2		
Manufacturer				
Model Number				
KW Rating		2.5 KW		
Size (Gallons)		20		

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Manufacturer		4 PERSONS	4 PERSONS	7 PERSONS
Model Number				
Rating	1.5 KW	2.5 KW	2.5 KW	1.5 KW
No. of Units	2	1	1	1
Location				
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: Unit 1 - see above
also have 2nd floor, several rooms
in 1st floor

EDISON PARTNER IN ERDA GEOTHERMAL BUILDING HEATING STUDY

Southern California Edison Company, together with the Ben Holt Company and Magma Power Company has been awarded a grant from the Energy Research and Development Administration (ERDA) to perform a geothermal heating study. The objective of the study will be to assess the technical, economic and environmental feasibility of using the relatively clean geothermal fluids from the Casa Diablo Hot Springs area for supplying space and water heating to the City of Mammoth Lakes, California.

Development of the proposed system at Mammoth has the potential advantage of helping to better meet our customer's energy needs in this remote and fast-growing ski resort area. Supplementing the electric heating, (which now accounts for almost all of the space and water heating in Mammoth), with geothermal heating is also in line with Edison and Federal goals of reducing dependence on expensive, imported fuel oil.

Municipal heating with geothermal energy is not a new idea. Iceland has been using hot geothermal waters for this purpose since the 1930's. Today, 50 percent of Iceland's 200,000 population receives geothermal heating, and that percentage is rising. New Zealand, Japan, the Soviet Union, Hungary and France also have extensive geothermal heating systems.

In the United States, space heating with geothermal fluids has succeeded most effectively in Oregon. At Klamath Falls, over three hundred wells supply heat to many municipal buildings. Elsewhere in Oregon and Idaho, greenhouses, resorts, farm buildings, and schools are heated by geothermal waters.

The Mammoth feasibility study is expected to begin in October, 1976 and will take twelve months to complete. It consists of five major tasks including:

- A survey to determine the number and magnitude of space heating and water heating loads in the Mammoth Area.
- A review of existing Casa Diablo geothermal reservoir data to estimate the extent and producibility of that resource.
- The design of a heating system to use as a basis for a cost estimate and feasibility evaluation.
- A review and evaluation of present commercially available space heating

equipment for application to the geothermal system.

- A study of the environmental impact of the proposed system.

The system to be studied consists of a number of geothermal wells and a heat exchange and pumping plant at Casa Diablo Hot Springs, pipelines to and from the city (a distance of about four miles), a distribution system within the city, and individual space and water heating equipment in new or existing buildings. Operationally, it is envisioned that municipal potable water to be warmed will flow to the Casa Diablo site where heat will be transferred through closed heat exchangers from the 300°F geothermal waters. The heated water will then be pumped back to the city and distributed to individual water heaters and radiator type space heaters, thereby supplementing or replacing present and future electric water heaters and the electric resistance space heaters.

If the study demonstrates that the Mammoth geothermal heating concept is feasible, the next step would be to install and operate a test heating loop for a single facility. The Mammoth Visitor Center, operated by the U.S. Forest Service and located about two miles from Casa Diablo, is one possibility where tests could be conducted. Operation of such a test loop over a period of a year or so would provide information on geothermal reservoir temperatures and flow rates and identify possible heat exchanger fouling problems. Testing of various types of space heaters and control systems would be carried out, and data to make a preliminary environmental assessment would be collected during the test period.

In addition to the potential for space and water heating with the Casa Diablo geothermal waters, preliminary well flow data indicates temperatures which are high enough for electric power generation. It is possible that a combined power generation and heating system will ultimately be the most effective use of this energy resource. If this program is successful, it will mark the first long-term practical application of the varied geothermal resources which exist in Edison's Service Territory.

With optimistic results from the feasibility study and successful operation of a test loop, it is projected that a full scale system could be providing Mammoth Lakes with geothermal heating and perhaps electricity by the 1980's.

(69)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 4600

Date 1/5/77 Rep. S.N. TORTAROLO

GENERAL

Name of Complex, Business CONTINENTAL TELEPHONE OF CALIF.

Street ROUTE 203 N/O PINECREST AVE. MAMMOTH LAKES

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. _____

Name of Manager DARRELL FILLPOT Phone No. 934-6969
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>AMERICAN</u>			
Model Number				
KW Rating	<u>4.5 KW</u>			
Size (Gallons)	<u>20</u>			

REST ROOM

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

	<u>PROPANE</u>			
Manufacturer	<u>HAYES</u>			
Model Number	<u>SES</u>			
Rating	<u>202,124 BTU OUTPUT</u>	<u>353,260 BTU INPUT</u>		
No. of Units	<u>1</u>			
Location	<u>ATTIC</u>			
Type:	<u>FORCED AIR</u>			
Baseboard				
Wall				
Radiant				

COMMENTS: RELAY STATION

60
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 4260

Date 12-28 Rep Holman

3:00pm

GENERAL

Name of Complex, Business Schets Bakery (Restaurant/Pasture)

Street Mammoth Hwy / Center, Mammoth

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. 934-6123

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H				
Manufacturer		<u>Smith</u>	<u>Formosa</u>	<u>Formosa</u>
Model Number		<u>200</u>	<u>200</u>	<u>200</u>
KW Rating		<u>30,000 BTU</u>	<u>30,000 BTU</u>	<u>30,000 BTU</u>
Size (Gallons)		<u>30 gal</u>	<u>30 gal</u>	<u>30 gal</u>

SPACE HEATERS

How Many square feet are being heated? 800 ft² approx
How many rooms? 2

Type of Space Heating Units

Manufacturer	<u>Unifire</u>	<u>Siegler</u>		
Model Number	<u>100</u>	<u>100</u>		
Rating	<u>4500 BTU</u>	<u>4500 BTU</u>		
No. of Units	<u>1</u>	<u>1</u>		
Location	<u>Living Room</u>	<u>Bedroom</u>		
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

934-2343
Turner
G. AS
C. ARK

6
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 4310

Date 7-28-77 Rep Holman & Williams

GENERAL

Name of Complex, Business Hot-to-go

Street Center St Lt 12, Mammoth Lakes

Unit No. (Apt. No.) _____

Name of Owner Lagurus, Loren Phone No. 934-8480

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>Sinclair</u>			
Model Number	<u>10/1</u>			
KW Rating	<u>4.5 KW</u>			
Size (Gallons)	<u>50 gal</u>			

SPACE HEATERS

How Many square feet are being heated? 20 x 60 = 1200 ft²
How many rooms? 3

Type of Space Heating Units

Manufacturer	<u>Thermador</u>			
Model Number	<u>NL</u>			
Rating	<u>4.5 KW</u>			
No. of Units	<u>3</u>			
Location	<u>Wall</u>			

Type:

Baseboard				
Wall				
Radiant				

COMMENTS: 1 wood stove -

62
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 4325
Date 1-5-77 Rep Holman & McMiss

GENERAL

Name of Complex, Business Standard Oil of Calif
Street Mintz Trailer Lodge, Mammoth

Unit No. (Apt. No.) _____

Name of Owner Brown L. J. Phone No. _____

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H				
Manufacturer				
Model Number				
KW Rating				
Size (Gallons)				

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Manufacturer				
Model Number				
Rating				
No. of Units				
Location				
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: Mintz Trailer Lodge

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 450

Date 12-27-76 Rep Holman

GENERAL

Name of Complex, Business Mammoth Properties

Street Mammoth Hwy 203, Mammoth Lakes

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. 934-6881

Name of Manager Hodkin, Bill Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	1			
Manufacturer	Payne			
Model Number	5225PS1			
KW Rating	33.5 KW			
Size (Gallons)	52 gal			

SPACE HEATERS

How Many square feet are being heated? 1600 ft²
How many rooms? _____

Type of Space Heating Units

Manufacturer	Thermadec	Thermadec		
Model Number	N/A	N/A		
Rating	45	25 KW		
No. of Units	2	3		
Location	Wall	Wall		
Type:				
Baseboard				
Wall	2	3		
Radiant				

COMMENTS: _____

69
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 4480
Date 12-28 Rep Holman & De Moss

GENERAL

Name of Complex, Business Mammoth Chevron

Street Highway 203/Center St, Mammoth Lake

Unit No. (Apt. No.) _____

Name of Owner Lucas, L.M. Phone No. _____

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>Imco</u>			
Model Number	<u>N/A</u>			
KW Rating	<u>1.5</u>			
Size (Gallons)	<u>6</u>			

SPACE HEATERS

How Many square feet are being heated? 30 x 96 =

How many rooms? _____

175
25
200

Type of Space Heating Units

Manufacturer	<u>Pecomatic</u>	<u>C.H. Buerger</u>		
Model Number	<u>NA</u>	<u>N/A</u>		
Rating	<u>175,000 Btu</u>	<u>85,000</u>		
No. of Units	<u>1</u>	<u>1</u>		
Location	<u>Ceiling Mount</u>	<u>Ceiling Mount</u>		
Type:	<u>(CIR)</u>	<u>(CIR)</u>		
Baseboard				
Wall				
Radiant				

must check unit

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 1500

Date 12-28 Rep Kilmer & Demoss

GENERAL

Name of Complex, Business Mammoth Service

Street Mammoth Hwy, Mammoth Lakes

Unit No. (Apt. No.) _____

Name of Owner Kradler, John Phone No. _____

Name of Manager _____ Phone No. _____

*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>EE</u>			
Model Number	<u>200-20-7</u>			
KW Rating	<u>30 (100 BTU)</u>			
Size (Gallons)	<u>200</u>			

SPACE HEATERS

How Many square feet are being heated? 60130

How many rooms? _____

Type of Space Heating Units gas fired mounted in attic unit very old

Manufacturer	<u>Heating</u>	<u>Heating</u>		
Model Number	<u>2K6</u>	<u>140</u>		
Rating	<u>2KW</u>	<u>140 (100 BTU)</u>		
No. of Units	<u>2</u>	<u>1</u>		
Location	<u>Attic, north</u>	<u>Attic, south</u>		

Type:

Baseboard				
Wall				
Radiant				

COMMENTS: _____

attic mounted

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 4650

Date 12-22 Rep Nolman + Demers

GENERAL

Name of Complex, Business U.S. Post Office Bldg

Street Mammoth Lakes Hwy, Mammoth Lakes

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. _____

Name of Manager Paul Kitchersid Phone No. 9342505
Postmaster *Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>UA</u>			
Model Number	<u>N/A</u>			
KW Rating	<u>2KW</u>			
Size (Gallons)	<u>12 gal</u>			

SPACE HEATERS

How Many square feet are being heated? 2200 / 12
How many rooms? 4

Type of Space Heating Units

Manufacturer	<u>Byrne-Day</u>	<u>W.H. Pearce</u>		
Model Number	<u>10560</u>	<u>20450</u>		
Rating	<u>100,000</u>	<u>50,000</u>		
No. of Units	<u>1</u>	<u>1</u>		
Location	<u>main</u>	<u>main</u>		
Type:	<u>baseboard</u>			
Baseboard				
Wall				
Radiant				

COMMENTS: _____

67
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 4651

Date 12-22-76 Rep Holman & Denora

GENERAL

Name of Complex, Business Inyo Mono Natl Bank

Street Mammoth Lake Hwy, Mammoth

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. _____

Name of Manager Jerry Kolkman Phone No. 934-2546
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	4	0	Smith		
Manufacturer	1				
Model Number	K	A	20-2514		
KW Rating	20000	BTU			
Size (Gallons)	20	g.			

SPACE HEATERS

How Many square feet are being heated? 3000 ft²
How many rooms? _____

Type of Space Heating Units

Manufacturer	STRANE	Thermador		
Model Number	15C124	P12		
Rating	13400 BTU	1500W		
No. of Units	2	1		
Location	UPSET	TRUCK (OUTLINE)		
Type:	Center panel			
Baseboard				
Wall		1		
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 4200

Date 12-27-76 Rep Holman + Demers

GENERAL

Name of Complex, Business R/L Perry's Pizzeria

Street Mammoth Hwy, Mammoth

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. 934-6521

Name of Manager _____ Phone No. _____

*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>Imick</u>			
Model Number	<u>K44-30802</u>			
KW Rating	<u>36,000 BTU</u>			
Size (Gallons)	<u>50 gal</u>			

SPACE HEATERS

How Many square feet are being heated? _____

How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>Aerco</u>			
Model Number	<u>N/A</u>			
Rating	<u>15,000 BTU</u>			
No. of Units	<u>1</u>			
Location	<u>Hall</u>			

Type:

Baseboard				
Wall				
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 4800

Date 12-27 Rep Holmes

NEW OWNERS

GENERAL

Name of Complex, Business VILLAGE Alpine Liquor Hut

Street Hwy 203 / Manzanita, Mammoth

Unit No. (Apt. No.) _____

Name of Owner Previous Watterson, Bill Phone No. ~~934-2256~~

NEW OWNER
Name of Manager CULVER, DENNIS Phone No. 934-6715
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>KP2074-1</u>			
Model Number	<u>1-10-10-10-10</u>			
KW Rating	<u>2.0 KW</u>			
Size (Gallons)	<u>20</u>			

SPACE HEATERS

How Many square feet are being heated? 30' x 50'
How many rooms? _____

Type of Space Heating Units - gas

Manufacturer	<u>W. I.</u>			
Model Number	<u>W. I.</u>			
Rating	<u>100,000 BTU</u>			
No. of Units	<u>1</u>			
Location	<u>Basement</u>			
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 7620

Date 1-5-78 Rep Holman

GENERAL

Name of Complex, Business Holiday Haus

Street Mammoth Hwy, Mammoth

Unit No. (Apt. No.) _____

Name of Owner Long, Everett - Jackie Phone No. 934-2414*

Name of Manager _____ Phone No. 934-2426
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>5</u>	<u>1</u>	<u>1</u>	<u>4</u>
Manufacturer				
Model Number				
KW Rating	<u>55,000 BTU</u>	<u>150,000 BTU</u>	<u>120,000 BTU</u>	<u>35,000 BTU</u>
Size (Gallons)	<u>50 gal</u>	<u>100 gal</u>	<u>150 gal</u>	<u>20 gal</u>

SPACE HEATERS

How Many square feet are being heated? _____

How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>Co-Lit</u>	<u>N/A</u>	<u>N/A</u>	
Model Number	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	
Rating	<u>2 KW</u>	<u>30,000 BTU</u>	<u>45,000 BTU</u>	
No. of Units	<u>4</u>	<u>2</u>	<u>3</u>	
Location	<u>Basement</u>	<u>Basement</u>	<u>Basement</u>	
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle _____ District _____ Book _____ Folio _____

Date 1-4-77 Rep William DeMaso

GENERAL

Name of Complex, Business Filson's Tackle & Sports

Street _____

Unit No. (Apt. No.) _____

Name of Owner Filson Phone No. 934-2290

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

NONE

WATER HEATERS

No. of W/H				
Manufacturer				
Model Number				
KW Rating				
Size (Gallons)				

SPACE HEATERS

How Many square feet are being heated? 900 sq ft

How many rooms? 1

Type of Space Heating Units

Manufacturer	<u>NONE</u>			
Model Number	<u>N/A</u>			
Rating	<u>100,000 BTU</u>			
No. of Units	<u>1</u>			
Location	<u>1st flr</u>			

Type:

Baseboard				
Wall				
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 95 Book 895 Folio _____
Date 12/30 Rep De Moor

GENERAL

Name of Complex, Business Mill City Laundry
Street Highway 203 / Rd Mammoth Rd, Mammoth
Unit No. (Apt. No.) _____
Name of Owner Mrs. Shedd Phone No. 934 45119
Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>2</u>	<u>1 heater</u>	<u>1 heater</u>
Manufacturer			
Model Number	<u>2</u>	<u>400</u>	<u>500</u>
KW Rating			
Size (Gallons)		<u>350</u>	<u>400</u>

SPACE HEATERS

How Many square feet are being heated? 3600 ft²
How many rooms? 1

Type of Space Heating Units

Manufacturer				
Model Number				
Rating				
No. of Units				
Location				
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: Dryer - Bestone (12) - 80,000 BTU only
feels in business

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 0101
Date 1/4/77 Rep De Menezes/Holman

GENERAL

Name of Complex, Business David Liu - Dairies

Street Lipin Mortgage

Unit No. (Apt. No.) _____

Name of Owner David Liu Phone No. 934-3212

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H				
Manufacturer	<u>Day & Night</u>			
Model Number				
KW Rating	<u>4.5</u>			
Size (Gallons)	<u>50</u>			

SPACE HEATERS

How Many square feet are being heated? _____

How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>Thermocon</u>			
Model Number				
Rating	<u>4.5</u>			
No. of Units	<u>1</u>			
Location	<u>Wall</u>			

Type:

Baseboard				
Wall				
Radiant				

COMMENTS: Balance of Heat - for Cooking

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Wednesday
9-4pm

Division 4 Cycle 1.0 District 85 Book 894 Folio 0200

Date 1-5 Rep Hilman + Demoss

GENERAL

Name of Complex, Business Las Mantanas

Street Sierra Vista Lt 18 Mammoth

Unit No. (Apt. No.) _____

Name of Owner Bidwin/Campbell Phone No. 934-8014

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

1 tank - new

No. of W/H	<u>1</u>	<u>new</u>		
Manufacturer	<u>ESMITH</u>	<u>WHEEL</u>		
Model Number	<u>P300</u>	<u>N/A</u>		
KW Rating	<u>50,000 BTU</u>	<u>6.5 KW</u>		
Size (Gallons)	<u>40 gal</u>	<u>10 gal</u>		

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Gas for floor

Manufacturer	<u>Panck-Kay</u>	<u>Flama Jet</u>	<u>N/A</u>	
Model Number	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	
Rating	<u>34,000 BTU</u>	<u>54,000 BTU</u>	<u>1500 BTU</u>	
No. of Units	<u>2</u>	<u>1</u>		
Location	<u>Wall space</u>	<u>Hot-Hall</u>	<u>Room</u>	
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 0500

Date 12-20-76 Rep H. Lina (129)

GENERAL

Name of Complex, Business The Continental - Restaurant & Hotel
Street Sierra & Mountain Ave

Unit No. (Apt. No.) _____

Name of Owner Dolores PLAVIA Phone No. 9346811

Name of Manager Alan Bruce Phone No. 9346811
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>9</u>			
Manufacturer	<u>W. R. RICH</u>			
Model Number	<u>20-17110-4</u>			
KW Rating				
Size (Gallons)	<u>170</u>			

SPACE HEATERS

How Many square feet are being heated? 10,000
How many rooms? 31

Type of Space Heating Units

Manufacturer				
Model Number				
Rating	<u>4.5</u>	<u>1.2 kw</u>	<u>22.0 kw</u>	
No. of Units	<u>1</u>	<u>23</u>	<u>1</u>	
Location	<u>RESTAURANT</u>	<u>W. L. CABLE</u>	<u>RESTAURANT - G.S.</u>	

Type:

Baseboard				
Wall	<u>13</u>	<u>1</u>	<u>1</u>	
Radiant	<u>2</u>	<u>2</u>	<u>2</u>	

COMMENTS:

Make note to check rates on heaters

7920
2200
10

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District PS Book 895 Folio 3318

Date 12-21 Rep 1294131

GENERAL

Name of Complex, Business

Street

Unit No. (Apt. No.)

Name of Owner

Phone No.

Name of Manager

Phone No.

*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H				
Manufacturer				
Model Number				
KW Rating				
Size (Gallons)				

SPACE HEATERS

How Many square feet are being heated?

How many rooms?

Type of Space Heating Units

Manufacturer				
Model Number				
Rating				
No. of Units				
Location				
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS:

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3410

Date 12-27 Rep Halman

GENERAL

Name of Complex, Business Alpine Menimist
Street Old Mammoth Rd / Sierra Hwy. 16, Mammoth Lakes

Unit No. (Apt. No.) _____

Name of Owner Young, Rick Phone No. 934-3100

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	1			
Manufacturer	<u>Water-Heater</u>			
Model Number	<u>1.4 MB 5</u>			
KW Rating	<u>1.5 KW</u>			
Size (Gallons)	<u>1</u>			

SPACE HEATERS

How Many square feet are being heated? 30 x 60 = 1800 ft²
How many rooms? 2

Type of Space Heating Units NO HEATER - USES HEAT FROM COMPRESSOR FOR REFRIG

Manufacturer	<u>Thermostat</u>			
Model Number	<u>Thermostat</u>			
Rating				
No. of Units				
Location	<u>Thermostat</u>			

Type:

Baseboard				
Wall				
Radiant				

COMMENTS:

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 600 District 85 Book 894 Folio 3500
Date 1/5/77 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business MAMMOTH MINARET CORP. - LIFT #4
Street MINARET SUMMIT RD. MAMMOTH LAKES
Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. _____

Name of Manager WERNER LAUNSPACH Phone No. 934-2571
MAINTENANCE *Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>W.A.</u>			
Model Number	<u>15R11</u>			
KW Rating	<u>15R11</u>			
Size (Gallons)	<u>NONE</u>			

SPACE HEATERS

HEATER FOR ENGINE WATER

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>THE MADOK</u>			
Model Number	<u>—</u>			
Rating	<u>4R11</u>			
No. of Units	<u>2</u>			
Location	<u>ELECTRYS</u>			
Type:	<u>ROOM</u>			
Baseboard				
Wall	<u>X</u>			
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3550

Date 12-21 Rep Holman

GENERAL

Name of Complex, Business Mamth Union 76

Street Mamthlks Hwy, Mamthlks

Unit No. (Apt. No.) _____

Name of Owner Hudson L.R. Phone No. 934-2697

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>DAV. N. G. AT</u>			
Model Number	<u>N12</u>			
KW Rating	<u>1.5 KW</u>			
Size (Gallons)	<u>60</u>			

SPACE HEATERS

How Many square feet are being heated? _____

How many rooms? 2

Type of Space Heating Units

Manufacturer	<u>TRJNE</u>			
Model Number	<u>N12</u>			
Rating	<u>130 Btu</u>			
No. of Units	<u>1</u>			
Location	<u>Bedroom</u>			
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 89.5 Folio 3555
Date 1-5-77 Rep Holman + DeMora

GENERAL

Name of Complex, Business KFC of Mammoth Inc

Street Mammoth Hwy, Mammoth

Unit No. (Apt. No.) _____

Name of Owner Clifford Mills Phone No. 934-2814

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>DAL + D. 625</u>			
Model Number				
KW Rating	<u>276.00 BTU</u>			
Size (Gallons)	<u>100 gal</u>			

SPACE HEATERS

How Many square feet are being heated? 20 x 60 = 1200 ft²
How many rooms? 3

Type of Space Heating Units

Manufacturer	<u>Evans - Air</u>			
Model Number	<u>N/A</u>			
Rating	<u>15,000 BTU</u>			
No. of Units	<u>1</u>			
Location	<u>FRONT</u>			
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3705
Date 12.22 Rep. Holman + Nemosa

GENERAL

Name of Complex, Business The Outfitter
Street Aug 203 Pine ^{crest} P26, Mammoth
Unit No. (Apt. No.) _____
Name of Owner R. J. Ray Phone No. 934-6042
Name of Manager A Phone No. _____
*Primary phone

If condominium, how many units in the complex?

none

WATER HEATERS

No. of W/H				
Manufacturer				
Model Number				
KW Rating				
Size (Gallons)				

SPACE HEATERS

How Many square feet are being heated? 3500 ⁴ 2
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>HP</u>	<u>45W</u>		
Model Number	<u>10000W</u>	<u>45W</u>		
Rating	<u>10000W</u>	<u>45W</u>		
No. of Units	<u>1</u>	<u>7</u>		
Location	<u>living room</u>	<u>bedroom</u>		
Type:	<u>baseboard</u>	<u>radiant</u>		
Baseboard		<u>1</u>		
Wall				
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3706
Date 12-22 Rep Holman + Remosa

GENERAL

Name of Complex, Business Breeze Ski Rentals
Street Hwy 203 Pine Creek P24, Mammoth
Unit No. (Apt. No.) _____
Name of Owner R. J. Ray Phone No. 934-6042
Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>1/2</u>			
Model Number	<u>1/2</u>			
KW Rating	<u>4.5 KW</u>			
Size (Gallons)	<u>40</u>			

SPACE HEATERS

How Many square feet are being heated? 1350
How many rooms? 2

Type of Space Heating Units

Manufacturer	<u>1/2</u>			
Model Number	<u>1/2</u>			
Rating	<u>12,000</u>			
No. of Units	<u>1</u>			
Location	<u>1/2</u>			
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 64 District 85 Book 895 Folio 3110
Date 11-22 Rep Holman & Remond

GENERAL

Name of Complex, Business Cole Carolyn

Street Hwy 203 Pine Tree P22, Mammoth

Unit No. (Apt. No.) _____

Name of Owner R. J. Ray Phone No. 934-6042

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

none

No. of W/H				
Manufacturer				
Model Number				
KW Rating				
Size (Gallons)				

SPACE HEATERS

How Many square feet are being heated? 720
How many rooms? 12

Type of Space Heating Units

Manufacturer	<u>NH</u>			
Model Number	<u>NH</u>			
Rating	<u>20000</u>			
No. of Units	<u>1</u>			
Location	<u>Living</u>			
Type:	<u>Baseboard</u>			
Baseboard				
Wall				
Radiant				

COMMENTS:

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 1-9 District 85 Book 895 Folio 4085

Date _____ Rep _____

GENERAL

Name of Complex, Business De Vore, F.H. Mobile Serv Station

Street Center St, Mammoth

Unit No. (Apt. No.) _____

Name of Owner Rich De Vore Phone No. 935-4340

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>Smile</u>			
Model Number	<u>100</u>			
KW Rating	<u>1.5</u>			
Size (Gallons)	<u>60 gal</u>			

SPACE HEATERS

How Many square feet are being heated? 30 x 60 = 1800 ft²
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>De Vore - Smile</u>			
Model Number	<u>100-SDT</u>			
Rating	<u>2000 BTU</u>			
No. of Units	<u>1</u>			
Location	<u>Living Room</u>			

Type:

Baseboard				
Wall				
Radiant				

COMMENTS: _____

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DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3390

Date 1/5/77 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business MAMMOTH HIGH SCHOOL
Street TANARACK & SIERRA NEVADA RD. MAMMOTH LAKE

Unit No. (Apt. No.) _____

Name of Owner PRINCIPAL MARCHIA Phone No. _____

Name of Manager TOM SPIRK Phone No. 934-8541
MAINTENANCE *Primary phone

If condominium, how many units in the complex?

WATER HEATERS

	PROPANE	PROPANE	ELECTR	PROPANE
No. of W/H	2	4	1	1
Manufacturer	W. WHITE	W. WHITE	W. WHITE	W. WHITE
Model Number	W. WHITE	W. WHITE	W. WHITE	W. WHITE
KW Rating	500,000 BTU	700,000 BTU	4.5 KW	600,000 BTU
Size (Gallons)	60	75	50	65

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

	PROPANE	PROPANE	ELECTR	PROPANE
Manufacturer	SED DUCT FURNACE	SED DUCT FURNACE	SED DUCT FURNACE	SED DUCT FURNACE
Model Number	SED DUCT FURNACE	SED DUCT FURNACE	SED DUCT FURNACE	SED DUCT FURNACE
Rating	196,000 BTU	168,000 BTU	175,000 BTU	112,000 BTU
No. of Units	2	1	1	1
Location	CLAS ROOMS	CLAS ROOMS	CLAS ROOMS	CLAS ROOMS
Type:	SED DUCT FURNACE	SED DUCT FURNACE	SED DUCT FURNACE	SED DUCT FURNACE
Baseboard				
Wall				
Radiant				

COMMENTS: MFG. SED DUCT FURNACE
RATING 196,000 BTU 168,000 BTU 175,000 BTU 112,000 BTU
NO. OF UNITS 2 1 1 1
LOCATION CLAS ROOMS

(86) (1) House? Do you
MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California. *do not locate, just only houses*

Residence/Business of: Samuel S. Salisbury House
(customer) located at: Lot #11 Crystal Ln. Mammoth Lks

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
3. Customer will provide SCE personnel access for collection of readings from the test equipment on a monthly basis or alternatively customer will take readings from the test equipment and telephone or mail these readings to the local Edison office, throughout the test period.
4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 11 day of Jan 1977

Signature: Chris Salisbury

(customer)

Signature: Ray M. Holman

(SCE)

Title: FSR-EDU

1
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle _____ District 85 Book _____ Folio _____
Date 1-11-77 Rep Holman + DeMoss

GENERAL

Name of Complex, Business Samuel S. Salisbury
Street Lot #18 Crystal Lane
Unit No. (Apt. No.) _____
Name of Owner S. Salisbury Phone No. 934-2880
Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	1			
Manufacturer	N/A			
Model Number	N/A			
KW Rating	4 1/2 KW			
Size (Gallons)	50			

SPACE HEATERS

How Many square feet are being heated? 1500 ft²
How many rooms? 8

Type of Space Heating Units

Manufacturer	Thermador	Thermador		
Model Number	64			
Rating	4 KW	1.5		
No. of Units	7	2		
Location	wall	ceiling		
Type:		6-2-1		
Baseboard				
Wall				
Radiant				

COMMENTS: _____

(2)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle _____ District 85 Book _____ Folio _____

Date 1-11-77 Rep Holman + DeMoss

GENERAL

RESIDENCE
Name of Complex, Business Mr. + Mrs. DWIGHT NOTT

Street 1849 Condo Unit #204 Mammoth Lakes

Unit No. (Apt. No.) 204

Name of Owner DWIGHT NOTT Phone No. 934-8581 * - Bus. Phone _____

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>N/A</u>			
Model Number	<u>N/A</u>			
KW Rating	<u>4.5</u>			
Size (Gallons)	<u>52 gal.</u>			

SPACE HEATERS

How Many square feet are being heated? 1650 ft²
How many rooms? 10

Type of Space Heating Units

	<u>FEDERAL</u>	<u>FEDERAL</u>	<u>FEDERAL</u>	
Manufacturer	<u>BEAET</u>	<u>BEAET</u>	<u>BEAET</u>	
Model Number	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	
Rating	<u>7 KW</u>	<u>6 KW</u>	<u>7 KW</u>	
No. of Units	<u>3</u>	<u>2</u>	<u>1</u>	
Location	<u>Baseboard</u>			
Type:	<u>Baseboard</u>	<u>LIVING RM.</u>	<u>HALLWAY</u>	
Baseboard				
Wall				
Radiant				

COMMENTS: _____

(87) (2) MONITOR

MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: DAUGHT D & EDITH L. NOTT

(customer) located at: "849" CONDO UNIT 204

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
3. Customer will provide SCE personnel access for collection of readings from the test equipment on a monthly basis or alternatively customer will take readings from the test equipment and telephone or mail these readings to the local Edison office, throughout the test period.
4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 11 day of JANUARY 1977

Signature: DAUGHT D. NOTT

(customer)

Signature Barry J. De Nott

(SCE)

Title: FSR - E.D.O

(89) (3) House? Do
APT
MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

6 unit Apartment

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: TIM SNYDER 934-2882
(customer) located at: MANZANITA 2ND DRIVEWAY APT # 2 WEST
P.O. Box 7119, DORRANCE LEFT SIDE
MAMMOTH LAKES
appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
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 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 12th day of Jan 1977

Signature: Timothy W Snyder
(customer)

Signature: Robert M. Holmes
(SCE)

Title: ESR-EDU

(3)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division _____ Cycle _____ District _____ Book _____ Folio _____

Date 1-12-77 Rep Holman DeMoss

GENERAL

Name of Complex, Business Tim Snyder

Street MANZANITA 2ND DRIVEWAY S of DURRANCE LEFT SIDE

Unit No. (Apt. No.) 2

Name of Owner Tim Snyder Phone No. 934-2882

Name of Manager _____ Phone No. _____

*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>N/A</u>			
Model Number	<u>N/A</u>			
KW Rating	<u>4.5</u>			
Size (Gallons)	<u>40 gal</u>			

SPACE HEATERS

How Many square feet are being heated? 1200 sq ft

How many rooms? 5

Type of Space Heating Units 2 BR LR DR 1B

Manufacturer				
Model Number				
Rating				
No. of Units				
Location	<u>CRUISING CASE</u>	<u>FIREPLACE</u>		
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

(69) (4) MONITOR
MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

934-6515
AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: Marion Smith

Cathy Butler
Asst Manager

(customer) located at: Courchevel #4 Mammoth Slopes/Rainbow

Mammoth Lakes
appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

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2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
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 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 12th day of Jan 1977

Signature: John S Smith

(customer)

Signature: Paul M. Helman

(SCE)

Title: ESR-EDO

4
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle _____ District PS Book _____ Folio _____
Date 1-12-77 Rep Holman & deMoss

GENERAL

Name of Complex, Business Karon Smith
Street COURCHEVEL #4 MAMMOTH Slopes / RAINBOW LN, MAMMOTH LKS
Unit No. (Apt. No.) 4
Name of Owner _____ Phone No. 934-6515
Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>N/A</u>			
Model Number	<u>N/A</u>			
KW Rating	<u>4.5</u>			
Size (Gallons)	<u>52 gal</u>			

SPACE HEATERS

How Many square feet are being heated? 1400 ft²
How many rooms? 6

Type of Space Heating Units

2500 W

1 hr

Manufacturer	<u>THERMADOR</u>	<u>N/A</u>	<u>THERMADOR</u>	
Model Number	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	
Rating	<u>4 KW</u>	<u>5 KW</u>	<u>1.5 KW</u>	
No. of Units	<u>1</u>	<u>3</u>	<u>1</u>	
Location	<u>NALL</u>	<u>BASEBOARD</u>	<u>BATH ROOM</u>	

Type:

Baseboard				
Wall				
Radiant				

COMMENTS:

(99) 5 MONITOR
MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

934-2030

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: BOB + MARY KERMODE
(customer) located at: 270370 LAKEVIEW BLVD, MAMMOTH LAKES
SEASON'S FOUR MANAGER'S APT

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
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 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 12th day of Jan 1977

Signature: Mary Kermode

(customer)

Signature: Ray M. Holman

(SCE)

Title: ESR - EDO

(5)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle _____ District 85 Book _____ Folio _____

Date 1-12-77 Rep Holman + DeMaso

GENERAL

Name of Complex, Business Residence of BOB + MARY KERMODE

Street SEASONS FOUR MANAGER'S APT, 270370 LAKEVIEW BLVD
MAMMOTH LKS

Unit No. (Apt. No.) MANAGER'S APT

Name of Owner _____ Phone No. 934-2030

Name of Manager MARY KERMODE Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>AMERICAN</u>			
Model Number	<u>N/A</u>			
KW Rating	<u>200000</u>			
Size (Gallons)	<u>5'100gal</u>			

SPACE HEATERS

How Many square feet are being heated? 1200 ft²
How many rooms? 8

Type of Space Heating Units

Manufacturer	<u>BRYANT</u>	<u>Thermador</u>	<u>Thermador</u>	
Model Number	<u>N/A</u>			
Rating	<u>4KW</u>	<u>4.0KW</u>	<u>1.5KW</u>	
No. of Units	<u>5</u>	<u>1</u>	<u>1</u>	
Location	<u>BASEBOARD</u>	<u>WALL</u>	<u>BATH</u>	
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

① ⑥ MAMMOTH GEOTHERMAL HEATING STUDY

In Old Mammoth? If so, Do.

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: Forest Meadows Condos

(customer) located at: Muirwin Meadows Park #17

Mammoth Lakes
appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

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2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
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 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 11th day of Jan 1977

Signature: Anne K. Pollis
(customer)

Signature: Paul M. Holman
(SCE)

Title: ESR-EDO

19.05 000-1

(6)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3351

Date 1-5-77 Rep Holmes & McMillan

GENERAL

Name of Complex, Business Forest Meadows Condo Rolls
Anthony Campbell Billy Rolls

Street Shirwin Meadows Park #17, Mammoth

Unit No. (Apt. No.) _____

Name of Owner Birch Ann Rolls Phone No. _____

Name of Manager _____ Phone No. _____

*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>6</u>			
Manufacturer	<u>Corbin Corp</u>			
Model Number	<u>W</u>			
KW Rating	<u>7.5 KW</u>			
Size (Gallons)	<u>40 gal</u>			

SPACE HEATERS

How Many square feet are being heated? _____

How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>Heat lamps</u>	<u>Thermostat</u>		
Model Number		<u>N/A</u>		
Rating	<u>250W</u>	<u>400W</u>		
No. of Units	<u>6</u>	<u>6</u>		
Location	<u>Master Bed</u>	<u>Living</u>		

Type:

Baseboard				
Wall				
Radiant				

COMMENTS: _____

MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

~~Residence~~/Business of: CONTINENTAL TELEPHONE OF CALIF.

(customer) located at: PINECREST & SNOWCREST

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

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 - a) Install running time meters at each space heater within customer's ~~residence~~/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 11 day of January 1977

Signature: Philip R. White

(customer)

Signature [Signature]

(SCE)

Title: Energy Service Representative

92 (7)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 4077
Date 1/5/77 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business CONTINENTAL TELEPHONE OF CALIF.

Street PINECREST AND SNOWCREST, MAMMOTH LAKES

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. _____

Name of Manager SHEILA WHITE Phone No. 934-8501
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	1	2		
Manufacturer	AMERICAN	AMERICAN		
Model Number		20 HINGERS		
KW Rating	4.5 KW	1.5 KW		
Size (Gallons)	40	20		

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Manufacturer	BARD MFG. THERMALDR	DAY & NIGHT	
Model Number	WEF8		
Rating	10 KW	3 KW	10,000 BTU EST.
No. of Units	2	1	5
Location	OFFICE	LOBBY	WAREHOUSE & GARAGES
Type:	FORCED AIR		CEILING SUSPENDED
Baseboard			FORCED AIR
Wall		X	
Radiant			

COMMENTS: BUSINESS OFFICE AND WAREHOUSE.
METER NO. TP705-007512

(95) (8)
 DATA SHEET
 MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 3400
 Date 1/5/77 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business MAMMOTH MINARET CORP. MAINTENANCE GARAGE
 Street MINARET SUMMIT RD. OPPOSITE EDISON SUB. MAMMOTH LAKES

Unit No. (Apt. No.) _____

Name of Owner DAVE MCCOY Phone No. _____

Name of Manager BOB RUMBAUGH Phone No. 934-2571
GARAGE *Primary phone

If condominium, how many units in the complex? _____

WATER HEATERS

PROPANE

No. of W/H	1			
Manufacturer	<u>DELTA</u>	<u>DELTA</u>		
Model Number	<u>52-4FC</u>			
KW Rating	<u>12KW</u>	<u>450,000 BTU</u>		
Size (Gallons)	<u>52</u>	<u>1</u>		

SPACE HEATERS

How Many square feet are being heated? _____
 How many rooms? _____

HIGH PRESSURE
 HOT WATER
 WASHER FOR VEHICLES

Type of Space Heating Units #

	<u>UNITS 1 & 2</u>		<u>UNITS 3 & 4</u>		
Manufacturer	—	—	—	—	
Model Number	—	—	—	—	
Rating	<u>144 KW</u>	<u>120 KW</u>	<u>16 KW</u>	<u>16 KW</u>	
No. of Units	<u>2</u>	<u>2</u>	<u>4</u>	<u>4</u>	
Location	<u>MINARET</u>	<u>MINARET</u>	<u>OFFICE</u>		
Type:	<u>UNIT HEATERS IN COIL AIR SYSTEM</u>				
Baseboard					
Wall					
Radiant					

UNIT 5 - 2KW
6 - 1KW
7 - 7KW
8 - 6KW
16KW

COMMENTS:

193
MONITOR

Acc. No. 4-60-85-894-3400
(B)

MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: MAMMOTH MINARET CORP - GARAGE

(customer) located at: MINARET SUMMIT RD.

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

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2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
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4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 12 day of January 1977

Signature: Mammoth Mtn Shi Area by Nick P. [unclear], Treas.
(customer)

Signature [Signature]
(SCE)

Title: Energy Services Rep.

94 MONITOR (9)
MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: Bank of America

(customer) located at: 473069 Main St Mammoth Lakes

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
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4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 10 day of JANUARY 1977

Signature: [Signature] OPERATIONS OFFICER
(customer)

Signature [Signature]
(SCE)

Title: E.S.R. - E.D.O.

(9)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division ✓ Cycle 69 District 85 Book 205 Folio 335

Date 12-21 Rep 1294131

GENERAL

Name of Complex, Business Bank of America

Street 473069 main ST Mantoloking

Unit No. (Apt. No.) _____

Name of Owner B. A. Phone No. _____

Name of Manager Ernie Mendoza Phone No. 934-6839
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>Water Heater</u>			
Model Number	<u>Water Heater</u>			
KW Rating	<u>2.5 KW</u>			
Size (Gallons)	<u>30</u>			

SPACE HEATERS

How Many square feet are being heated? 7500 / 2
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>Water Heater</u>	<u>Water Heater</u>	<u>Water Heater</u>	
Model Number	<u>Water Heater</u>	<u>Water Heater</u>	<u>Water Heater</u>	
Rating	<u>2.5 KW</u>	<u>2.5 KW</u>	<u>2.5 KW</u>	<u>2.5 KW</u>
No. of Units	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
Location	<u>Water Heater</u>	<u>Water Heater</u>	<u>Water Heater</u>	<u>Water Heater</u>
Type:	<u>STRIP</u>			
Baseboard				
Wall				
Radiant				

COMMENTS: _____

MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: Mammoth County Water District
(customer) located at: Route 203 9/10 Tamarack, Mammoth Lakes

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
3. Customer will provide SCE personnel access for collection of readings from the test equipment on a monthly basis or alternatively customer will take readings from the test equipment and telephone or mail these readings to the local Edison office, throughout the test period.
4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 10 day of January 1977

Signature: Robert E. Gordon, Sr. 11/91. Mammoth County w/p
(customer)

Signature: [Signature]
(SCE)

Title: Energy Service Rep.

(10)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 2550
Date 1/8/77 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business MAMMOTH COUNTY WATER DISTRICT
Street ROUTE 203 E/O TAMARACK, MAMMOTH LAKES

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. _____

Name of Manager BOB REARDON Phone No. 934-6322
*Primary phone

- 2596

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>P.O. SMITH</u>			
Model Number	<u>VEN 52 TRO</u>			
KW Rating	<u>4.5 KW</u>			
Size (Gallons)	<u>52</u>			

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>DELTA-FLUX</u>	<u>THERMADY</u>	<u>SINGER</u>	<u>SINGER</u>
Model Number	<u>TH-4511-548L</u>	<u>—</u>	<u>34652RT</u>	<u>—</u>
Rating	<u>42 KW</u>	<u>1-2 KW 2-4 KW</u>	<u>15 KW</u>	<u>10 KW</u>
No. of Units	<u>2</u>	<u>3</u>	<u>2</u>	<u>3</u>
Location	<u>BUSINESS</u>	<u>← NEW GARAGE</u>	<u>→</u>	
Type:	<u>OFFICE</u>		<u>FORCED AIR</u>	
Baseboard		<u>+ 2-2' (5 KW)</u>		
Wall		<u>X</u>		
Radiant				

SUSPENDED UNITS

COMMENTS:

ACCORDING TO MR. REARDON THE BEN HOLT CO. HAS
LOOKED OVER THE EQUIPMENT.

MR REARDON SUGGESTS THAT EDISON CONSIDER HIS NEW
CONCEPT OF TELEMETERING FOR OUR SUB METERING.

AGREEMENT FOR TEST METERING SIGNED 1/10/77

fw

MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: Mam Village Pharmacy

(customer) located at: Highway 203, Mammoth Lakes

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
3. Customer will provide SCE personnel access for collection of readings from the test equipment on a monthly basis or alternatively customer will take readings from the test equipment and telephone or mail these readings to the local Edison office, throughout the test period.
4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 10 day of January 1977

Signature: Al Liliberto

(customer)

Signature: Ruby M. Holman

(SCE)

Title: ESR - EDO

(196) (11)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division LI Cycle 69 District 55 Book 895 Folio 3320
Date 12/30 Rep He Mon

GENERAL

Name of Complex, Business Man Village Pharmacy
Street Living 203, Manville
Unit No. (Apt. No.) _____
Name of Owner Widona / Wilson Phone No. _____
Name of Manager dk Wilson Phone No. *934-8561
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H			
Manufacturer	American	Appliance	W/Ly 6-17
Model Number	30 AM 6		
KW Rating	25		
Size (Gallons)	30	Deluxe	

SPACE HEATERS

How Many square feet are being heated? approx 75 x 120 = 9000 41
How many rooms? 1

Type of Space Heating Units

Manufacturer	Trane	Trane		
Model Number	552-10032-58			
Rating	72.1 AMPS	240 34	= 17364	W-56
No. of Units	2			
Location	Back Room			
Type:	Control			
Baseboard				
Wall				
Radiant				

COMMENTS: _____

MONITOR 12

MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: Nichols of Mamth

(customer) located at: Old Mamth Rd Mamthlks

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
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4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 10 day of Jan 1972

Signature: [Signature]

(customer)

Signature: [Signature]

(SCE)

Title: ESR-EDU

69-PS-895-3345

(12)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3345
Date 12-22 Rep Holmes & Lemond

GENERAL

Name of Complex, Business Nicolosi of Mammoth
Street Old Mammoth Rd, Mammoth Lakes

Unit No. (Apt. No.) _____

Name of Owner Nicolosi Mr. Phone No. 934-6400 *

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>	<u>1</u>		
Manufacturer	<u>Johns/Sealed 4mer-70</u>			
Model Number	<u></u>			
KW Rating	<u>15000 BTU</u>	<u>1500W</u>		
Size (Gallons)	<u>100</u>	<u>20</u>		

SPACE HEATERS

How Many square feet are being heated? 2600 42
How many rooms? 6

Type of Space Heating Units

Manufacturer	<u>Linn</u>			
Model Number	<u>E-32-1023-2</u>			
Rating	<u>12.1 amp x 240V = 17</u>	<u>KW</u>		
No. of Units	<u>1</u>			
Location	<u>attic</u>			
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

(98)

MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

~~Residence~~/Business of: MAMMOTH MOUNTAIN CHALETS

(customer) located at: MINARET SUMMITED. MAMMOTH LAKES

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
3. Customer will provide SCE personnel access for collection of readings from the test equipment on a monthly basis or alternatively customer will take readings from the test equipment and telephone or mail these readings to the local Edison office, throughout the test period.
4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 12 day of January 1977

Signature: [Signature]
(customer)

Signature [Signature]
(SCE)

Title: Energy Services Rep.

98

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 5610
Date 1/4/77 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business MAMMOTH MOUNTAIN CHALETS
Street MINARET SUMMIT RD. MAMMOTH LAKES
Unit No. (Apt. No.) 14 CHALETS
Name of Owner _____ Phone No. _____
Name of Manager HARRY GELVIN Phone No. 934-8518
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>14</u>			
Manufacturer	<u>NATIONAL & SEARS</u>			
Model Number				
KW Rating	<u>4.5KW</u>			
Size (Gallons)	<u>82</u>			

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>THERMADOR</u>			
Model Number	<u>—</u>			
Rating	<u>4KW</u>			
No. of Units	<u>70</u>			
Location	<u>5 IN EACH CHALET</u>			
Type:	<u>FORCED AIR</u>			
Baseboard				
Wall	<u>X</u>			
Radiant				

COMMENTS: _____

99
MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: Mr. & Mrs. Roll

(customer) located at: Reverend Meadows Park # 17

Mammoth Lakes
appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
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4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 11th day of Jan 1977

Signature: Anne K. Roll

(customer)

Signature: Paul M. Holman

(SCE)

Title: ESR-EDO

(99)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division _____ Cycle _____ District 85 Book _____ Folio _____

Date 1-11-77 Rep Holman & Dimson

GENERAL

Name of Complex, Business Mr. & Mrs. Rolla

Street Shirley Meadows Park # A 7 Mantlelike

Unit No. (Apt. No.) # 47

Name of Owner Mrs. Rolla Phone No. 934-2891

Name of Manager _____ Phone No. _____

*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>W. H.</u>			
Model Number	<u>112</u>			
KW Rating	<u>5.5</u>			
Size (Gallons)	<u>40</u>			

SPACE HEATERS

How Many square feet are being heated? 1100 ft²
How many rooms? 1

Type of Space Heating Units

Manufacturer	<u>Hiemaden</u>			
Model Number				
Rating	<u>5.0</u>			
No. of Units	<u>2</u>	<u>2-1/2</u>	<u>1-1/2</u>	<u>1-1/2</u>
Location	<u>1st fl.</u>	<u>2nd fl.</u>		
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: 1 heater in unit only

00
MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: U.S.D.A. - FOREST SERVICE

(customer) located at: MAMMOTH VISITOR CENTER/RANGER STATION

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
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4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 18th day of JANUARY 1977

Signature: R. Austin
RICHARD J. AUSTIN, DISTRICT RANGER
(customer)

Signature [Signature]
(SCE)

Title: _____

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3150
Date 1/10/77 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business U.S. FOREST SERVICE VISITOR CENTER
Street ROUTE 203 E/O TAMARACK, MAMMOTH LAKES
Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. _____

Name of ~~Manager~~ RANGER DICK AUSTIN Phone No. 934-2505

INFO. FROM - GENE GRIEB *Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>NATIONAL</u>			
Model Number	<u>—</u>			
KW Rating	<u>100,000 BTU</u>			
Size (Gallons)	<u>100</u>			

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>LENNOX</u>	<u>LENNOX</u>		
Model Number	<u>42R-137M</u>	<u>—</u>		
Rating	<u>137,000 BTU</u>	<u>155,000 BTU. INPUT</u>		
No. of Units	<u>1</u>	<u>1</u>		
Location	<u>LOWER FLOOR</u>	<u>UPPER FLOOR</u>		
Type:	<u>DIFFICULT TO GET TO THIS UNIT.</u>			
Baseboard				
Wall				
Radiant				

COMMENTS: RANGER AUSTIN IN BISHOP FOR REMAINDER
OF WEEK. I LEFT AGREEMENTS FOR HIM TO SIGN
AND RETURN TO MR. GRANT - BISHOP EDISON
OFFICE.

MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: U.S. FOREST SERVICE - VISITOR CENTER

(customer) located at: RT. 203 E/O TAMARACK, MAMMOTH LAKES

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
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4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this _____ day of _____ 197_____

Signature: _____

(customer)

Signature _____

(SCE)

Title: _____

Bishop Office

*Left agreements for Dick Austin - Ranger
to sign and send to Larry Grant at*

(100)

MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: U.S.D.A. - FOREST SERVICE

(customer) located at: MAMMOTH VISITOR CENTER/RANGER STATION

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
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4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 18th day of JANUARY 1977

Signature: *R. Austin*
RICHARD J. AUSTIN, DISTRICT RANGER
(customer)

Signature _____
(SCE)

Title: _____

101
MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: Norco Gas Station

(customer) located at: Hwy 203 / Main Blvd, Mammoth Lakes

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
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 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 11th day of Jan 1977

Signature: [Signature]
(customer)

Signature: [Signature]
(SCE)

Title: FSR - FDO

(101)

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 0800
Date 12-20-16 Rep Holman & Demoss

GENERAL

Name of Complex, Business Norco Gas - station

Street Highway 203 / Main Blvd, Mammoth Lakes

Unit No. (Apt. No.) _____

Name of Owner Burton Norton Phone No. _____

Name of Manager Wayne Norton Phone No. 934-6690
*Primary phone

If condominium, how many units in the complex? 73 - 6371

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>Goodman - Amana</u>			
Model Number	<u>L2593</u>			
KW Rating	<u>2412</u>			
Size (Gallons)	<u>40.0</u>			

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>Thermador</u>		
Model Number			
Rating	<u>1500</u>	<u>1000</u>	
No. of Units	<u>2</u>	<u>2</u>	
Location	<u>Living Room</u>	<u>Bedroom</u>	
Type:			
Baseboard			
Wall	<u>2</u>	<u>1</u>	
Radiant			

COMMENTS: _____

102
MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: Makys' Pizzeria Parlor

(customer) located at: Highway 203 Mtn Bl Store # 5 Mammoth Lakes

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
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 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 10 day of Jan 1977

Signature: [Signature]

(customer)

Signature [Signature]

(SCE)

Title: ESR-FDD

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

(102)

Division 4 Cycle 60 District 85 Book 894 Folio 0240
Date 12-30 Rep Holman + Hemes

GENERAL

Name of Complex, Business Makes's Pizzeria Parlor
Street Hwy 203 intrn Bl Shore #5, Montpelier

Unit No. (Apt. No.) _____

Name of Owner Larry Renner Phone No. 934-6394

Name of Manager George Bartis Phone No. 934-8140 *
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>Commercial Standard</u>			
Model Number	<u>100-2004</u>			
KW Rating	<u>45 + (5000 BTU)</u>			
Size (Gallons)	<u>100</u>			

SPACE HEATERS

How Many square feet are being heated? 3000 sq ft
How many rooms? 3

Type of Space Heating Units - propane - radiant

Manufacturer	<u>PAUNE</u>			
Model Number	<u>N/A</u>			
Rating	<u>100,000 BTU</u>			
No. of Units	<u>1</u>			
Location	<u>attic</u>			
Type:	<u>central</u>			
Baseboard				
Wall				
Radiant				

COMMENTS:

(5)
103
MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)
934' 3039

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: DAN HAYDON

(customer) located at: #10 MAMMOTH TAVERN Rd, MAMMOTH LAKES

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
3. Customer will provide SCE personnel access for collection of readings from the test equipment on a monthly basis or alternatively customer will take readings from the test equipment and telephone or mail these readings to the local Edison office, throughout the test period.
4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 12th day of Jan 1977

Signature: Dan Haydon
(customer)

Signature: Ruby M. Helmer
(SCE)

Title: ESR-EDD

(5) 105
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division _____ Cycle _____ District _____ Book _____ Folio _____

Date 1-12-77 Rep Hilma + Demos

GENERAL

Name of Complex, Business DAN HAYDON
Street #10 MAMTH TAVERN Rd Upstairs - MAMTH LKS

Unit No. (Apt. No.) _____

Name of Owner DAN HAYDON Phone No. 934-3039

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	1			
Manufacturer	N/A			
Model Number	N/A			
KW Rating	4.5			
Size (Gallons)	50 Gall			

SPACE HEATERS

How Many square feet are being heated? 1000 + 2
How many rooms? 3

Type of Space Heating Units

Manufacturer	Thermax	Thermax		
Model Number				
Rating	4.5	4.5		
No. of Units	3	1		
Location	1st fl	DINING RM		
Type:	blower type			
Baseboard				
Wall				
Radiant				

COMMENTS: _____

104
MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: He. Power House

(customer) located at: Old Man Rd. Milveril 6 Mantle

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
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 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 10 day of JAN 19777

Signature: William M. Salisbury
(customer)

Signature: Paul M. Helms
(SCE)

Title: ESR-ED 0

19 05 005 27111

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

104

Division 4 Cycle 69 District 85 Book 895 Folio 3344

Date 12-22 Rep Holmes + Remick

GENERAL

Name of Complex, Business The Pow Wow

Street Old Mam Rd Milavich 6, Mammoth

Unit No. (Apt. No.) _____

Name of Owner Mrs. Bishop Phone No. 93 460 46 * 714 5873 4666

Name of Manager _____ Phone No. _____
*Primary phone

Owner of building
Bob Milovich
714 5873 4666
Bishop

If condominium, how many units in the complex?

Bob Milovich Bros
Still Sta
714
973 3524

WATER HEATERS

No. of W/H	1			
Manufacturer	INER APPLANCE			
Model Number	2 X 1113			
KW Rating	4.5 KW			
Size (Gallons)	22 gal			

SPACE HEATERS

How Many square feet are being heated? 1200 ft²
How many rooms? _____

Type of Space Heating Units

Manufacturer	Thermador	Thermador		
Model Number				
Rating	4000W	1.0 KW		
No. of Units	2	1		
Location	unit	unit		
Type:				
Baseboard				
Wall	✓			
Radiant				

COMMENTS: _____

105

MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

~~Residence~~/Business of: SWISS CHALET

(customer) located at: VIEWPOINT DR. S/O LAKE MARY RD.

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
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4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

NOTE *all submitting to be approved by owner before installation*

Approved, Accepted and Agreed to this 11 day of January 1977

Signature: [Signature]
(customer)

Signature [Signature]
(SCE)

Title: Energy Service Representative

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

(105)

Division 4 Cycle 60 District 85 Book 894 Folio 1000

Date 1/5/77 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business SWISS CHALET
 Street ROUTE 803 FRONTAGE RD. E 1/2 MINARET SUMMIT RD. MAMMOTH LAKES
 Unit No. View Point Rd 24 + OFFICE
 Name of Owner FOLKER MARINGER Phone No. 934-2403
 Name of Manager SAME Phone No. _____
 *Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>6</u>			
Manufacturer	<u>O.A. SMITH</u>			
Model Number				
KW Rating	<u>4.5</u>			
Size (Gallons)	<u>60</u>			

SPACE HEATERS

How Many square feet are being heated? _____
 How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>THERMADOR</u>			
Model Number	<u>—</u>			
Rating	<u>3 KW</u>			
No. of Units	<u>24</u>			
Location	<u>ROOMS</u>			
Type:	<u>FORCED AIR</u>			
Baseboard				
Wall	<u>X</u>			
Radiant				

COMMENTS: HAS RADIANT HEAT ON OUTSIDE BUT
DOES NOT USE DUE TO HIGH ENERGY COSTS.

106
MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: Levi's Catalog Store

(customer) located at: Laurel Mtn Rd Cor Mammoth Lakes
Mammoth Lakes

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
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 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 10 day of JAN 1977

Signature: [Signature]

(customer)

Signature [Signature]

(SCE)

Title: ESR-ED0

10 00 045 20 20 20

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3525

Date 12-28 Rep Holman

GENERAL

Name of Complex, Business Sears, Catalog Store

Street Laurel Mt Rd Cor of Mammoth Tavern, Mammoth

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. _____

Name of Manager Mr. Thomas M Phone No. 934-6815
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	1			
Manufacturer	Lozier-Stand			
Model Number	NV			
KW Rating	1.5K			
Size (Gallons)	60 gal			

SPACE HEATERS

How Many square feet are being heated? 1800 ft²
How many rooms? 2

Type of Space Heating Units

Manufacturer	HERMADOR			
Model Number	NV			
Rating	4 KW			
No. of Units	2			
Location	WALL			

Type:

Baseboard				
Wall				
Radiant				

COMMENTS: No heater - disconnected - 62-24 x 2400 = 1 unit -

MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: Kittle Printing Co

(customer) located at: Laurel Mtn Rd Cas 203 Mammoth

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
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4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 10 day of Jan 1977

Signature: Margaret Wallace
(customer)

Signature: Paul J. De Mon
(SCE)

Title: ESR - E.D.O.

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

(107)

Division 4 Cycle 69 District 85 Book 895 Folio 3480

Date 12-28 Rep Holman

1342501
Mick
Nervine
Pinner
Ruth
for water
not
GENERAL
notes

Name of Complex, Business Kittle Printing Co

Street Laurel Mt Rd Cor 202 Mammoth

Unit No. (Apt. No.) _____

Name of Owner Margaret Walker - Phone No. 934-6218

Name of Manager _____ Phone No. _____

*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	1			
Manufacturer	EMER-STAND			
Model Number	A + MB, S			
KW Rating	1.5 KW			
Size (Gallons)	6 gal			

SPACE HEATERS

How Many square feet are being heated? 600 ft²
How many rooms? _____

Type of Space Heating Units

Manufacturer	Lenox			
Model Number	F32-851-2			
Rating	62.2 ft x 240 ft - 15 KW			
No. of Units	1			
Location	1st and 2nd fl - Eng. Dept			

Type:

Baseboard				
Wall				
Radiant				

COMMENTS: _____

108
MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: Avenson's Ice Cream

(customer) located at: Main St Center, Mammoth Lakes

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

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2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
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 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 10th day of Jan 1977

Signature: [Signature]
(customer)

Signature: [Signature]
(SCE)

Title: ESR-EDO

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

(108)

Division 4 Cycle 69 District 85 Book 895 Folio 4230

Date 12-29-76 Rep Holman

GENERAL

Name of Complex, Business Svensen's Ice Cream

Street Main St Center Mammoth

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. 934-3200

Name of Manager _____ Phone No. _____

*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>Smith</u>			
Model Number	<u>140-10-181</u>			
KW Rating	<u>80,000 BTU</u>			
Size (Gallons)	<u>7-1/2 gal</u>			

SPACE HEATERS

How Many square feet are being heated? 25 x 30 = 750 ft²
How many rooms? 2

Type of Space Heating Units

Manufacturer	<u>DAINE</u>			
Model Number	<u>1115</u>			
Rating	<u>150,000</u>			
No. of Units	<u>1</u>			
Location	<u>2nd fl</u>			
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

109
MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: Mogul Steak House

(customer) located at: Mammoth Lakes Rd. Silver Lake 10,
Mammoth Lakes

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
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 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 10th day of Jan 1977

Signature: Alan Haydon

(customer)

Signature: Paul M. Helman

(SCE)

Title: ESR - EDO

10 95 095 3450

(109)

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3450

Date 12-29-76 Rep Halman

Wednesday
9:30 A Jack Davis

GENERAL

Name of Complex, Business Mogul Steak Hse
Street Mammoth Govern Rd Merie Rd 10, Mammoth

Unit No. (Apt. No.) _____

Name of Owner Hayden, Daniel Phone No. 934-3039

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>3</u>	<u>1</u>		
Manufacturer	<u>Pine</u>	<u>Johnson</u>		
Model Number	<u>N/A</u>	<u>110-213</u>		
KW Rating	<u>4.5</u>	<u>10.5</u>		
Size (Gallons)	<u>50 gal</u>	<u>10</u>		

SPACE HEATERS

How Many square feet are being heated? 2800 42
How many rooms? 6

Type of Space Heating Units

Manufacturer	<u>WALL</u>	<u>THERMADOR</u>		
Model Number	<u>112</u>	<u>N/A</u>		
Rating	<u>5.0 KW</u>	<u>4.0</u>		
No. of Units	<u>2</u>	<u>5</u>		
Location	<u>WALL</u>	<u>WALL</u>		
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

2000
3

MONITOR Acct. No. 4-60-85-394-3300
MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

110
The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: THE YODLER RESTAURANT

(customer) located at: MINARET SUMMIT RD. MAMMOTHLAKES

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

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4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 12 day of January 1977

Signature: Billy C. Kidworth
(customer)

Signature One Retano
(SCE)

Title: Energy Services Rep.

(110)

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 60 District 85 Book 894 Folio 3300

Date 1/4/77 Rep S.N. TORTAROLO

GENERAL

Name of Complex, Business THE YODLER

Street MINARET SUMMIT RD. MAMMOTH LAKE

Unit No. (Apt. No.) _____

Name of Owner BILL WADSWORTH Phone No. _____

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>AMERICAN</u>			
Model Number	<u>—</u>			
KW Rating	<u>4 KW</u>			
Size (Gallons)	<u>120</u>			

SPACE HEATERS

How Many square feet are being heated? _____

How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>KING ELECTRIC</u>	<u>THERMADOR</u>
Model Number	<u>KFB 35</u>	
Rating	<u>34.5 KW</u>	<u>4 KW</u>
No. of Units	<u>2</u>	<u>1</u>
Location	<u>FF-ECIENT</u>	
Type:	<u>FORCED AIR FURNACES</u>	
Baseboard		
Wall		<u>X</u>
Radiant		

COMMENTS: _____

MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: Mono Co Plumbing
(customer) located at: Mammoth Bldg off 1st Mammoth Lakes

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

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2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
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4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 11th day of Jan 1977

Signature: Carl Duster

(customer)

Signature: Ruby M. Holman

(SCE)

Title: ESR - EDO

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3370

Date 12-27 Rep. Solman

GENERAL

Name of Complex, Business Mono Co. Plumbing

Street Mammoth Bldg. off 1, Mammoth

Unit No. (Apt. No.) _____

Name of Owner Preston, Carl Phone No. 934-8531

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>HOTK- STANDARD</u>			
Model Number	<u>N/A</u>			
KW Rating	<u>4.5</u>			
Size (Gallons)	<u>50 gal</u>			

SPACE HEATERS

How Many square feet are being heated? 1800 sq ft
How many rooms? 4

Type of Space Heating Units

Manufacturer	<u>Thermador</u>	<u>Thermador</u>	<u>Thermador</u>	
Model Number	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	
Rating	<u>2400 BTU/hr</u>	<u>1.0 KW</u>	<u>4 KW</u>	
No. of Units	<u>1</u>	<u>1</u>	<u>2</u>	
Location	<u>Cooling unit</u>	<u>Wall</u>	<u>Wall</u>	
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

?

MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

(12)

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: Country Lodge

(customer) located at: Old Man Rd. Shown by 7, Mammoth Lakes

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
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 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 10 day of JAN 1977

Signature: Michael Heston
(customer)

Signature: Robert M. Holman
(SCE)

Title: ESR-EDC

(112)

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 335-6

Date 12.27 Rep Holman

GENERAL

Name of Complex, Business Country Legion

Street Old Mam Rd Skoon Pz 7, Mammoth

Unit No. (Apt. No.) _____

Name of Owner Hester, Mrs Phone No. 934-3033

Name of Manager _____ Phone No. _____

*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>DWIGHT</u>			
Model Number	<u>N/A</u>			
KW Rating	<u>4.5 KW</u>			
Size (Gallons)	<u>40 gal</u>			

SPACE HEATERS

How Many square feet are being heated? ~~3000~~ 1800 ft²

How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>THERMADOR</u>			
Model Number	<u>N/A</u>			
Rating	<u>7 KW</u>			
No. of Units	<u>3</u>			
Location	<u>WALL</u>			

Type:

Baseboard				
Wall				
Radiant				

COMMENTS: _____

113
MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: The Corner Hardware Store

(customer) located at: Laurel Mtn Rd Cor 101, Mammoth Lakes

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
3. Customer will provide SCE personnel access for collection of readings from the test equipment on a monthly basis or alternatively customer will take readings from the test equipment and telephone or mail these readings to the local Edison office, throughout the test period.
4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 10th day of Jan 1977

Signature: Robert A. Schaller

(customer)

Signature: Paul M. Schuman

(SCE)

Title: ESR-ED0

60-05-095-2463

(113)

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3483
Date 12-28-76 Rep Holmes

GENERAL

Name of Complex, Business The Corner Hardware Store
Street Laurel Mt Rd Cor 101 Mammoth

Unit No. (Apt. No.) _____

Name of Owner Schaller, Robert Phone No. 934-6988

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>Water Heater</u>			
Model Number	<u>1-21185</u>			
KW Rating	<u>1.5</u>			
Size (Gallons)	<u>6</u>			

SPACE HEATERS

How Many square feet are being heated? 9000 ft²
How many rooms? _____

Type of Space Heating Units

Manufacturer	<u>FS-2</u>			
Model Number	<u>FS-2-851-2</u>			
Rating	<u>1.4 x 2400 (15 kw)</u>			
No. of Units	<u>2</u>			
Location	<u>Basement</u>			
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

114
MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: Mr. & Mrs. Lucas

(customer) located at: La Residence #, Sierra Nevada Rd
Mammoth Lakes
appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
3. Customer will provide SCE personnel access for collection of readings from the test equipment on a monthly basis or alternatively customer will take readings from the test equipment and telephone or mail these readings to the local Edison office, throughout the test period.
4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 12th day of Jan 1977

Signature: Mrs. Chas A Lucas
(customer)

Signature: Ray M. Holman
(SCE)

Title: ESR - EDO

(1)

(114)

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle _____ District 85 Book _____ Folio _____

Date 1-12-77 Rep Holman & DeMoss

GENERAL

Residence of: Mr. + Mrs. Lucas
 Name of Complex/Business _____
 Street La Residence # H5, Sierra Nevada Rd, Mammoth
 Unit No. (Apt. No.) H5
 Name of Owner MRS. LUCAS Phone No. 934-6438
 Name of Manager _____ Phone No. _____
 *Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>American</u>			
Model Number	<u>N/A</u>			
KW Rating	<u>4.5</u>			
Size (Gallons)	<u>52 gal</u>			

SPACE HEATERS

How Many square feet are being heated? 1200 ft²
 How many rooms? 6

Type of Space Heating Units

Manufacturer	<u>THEMADOR</u>	<u>THEMADOR</u>	<u>AIR-KING</u>	
Model Number	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	
Rating	<u>4.5</u>	<u>2 KW</u>	<u>1 KW</u>	
No. of Units	<u>1</u>	<u>2</u>	<u>2</u>	
Location	<u>WALL-LR</u>	<u>WALL-KIR</u>	<u>BATH</u>	
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

(2)
115
MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: Cathy Chase

(customer) located at: Sierra R Villas # 10, Old Mammoth

Mammoth Lakes
appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
3. Customer will provide SCE personnel access for collection of readings from the test equipment on a monthly basis or alternatively customer will take readings from the test equipment and telephone or mail these readings to the local Edison office, throughout the test period.
4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 12 day of Jan 1976

Signature: Cathy Chase

(customer)

Signature: Rubyn Helman

(SCE)

Title: ESR-EDO

(2)
DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle _____ District 85 Book _____ Folio _____

Date 1-12-77 Rep Halman & De Moss

GENERAL

Residence of: Cathy Chase
Name of Complex, Business _____
Street Sierra PK Village # 10, Old Mammoth Sierra Nev
Unit No. (Apt. No.) 10 Mammoth Lakes
Name of Owner ADAM CHASE Phone No. 934-6244
Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>N/A</u>			
Model Number	<u>N/A</u>			
KW Rating	<u>4.5 KW</u>			
Size (Gallons)	<u>55 gal</u>			

SPACE HEATERS

How Many square feet are being heated? 1400 ft²
How many rooms? 8

69 of
LR

Type of Space Heating Units

Manufacturer	<u>THERMADOR</u>	<u>THERMADOR</u>	<u>THERMADOR</u>	
Model Number	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	
Rating	<u>4KW</u>	<u>2KW</u>	<u>1.5KW</u>	
No. of Units	<u>1</u>	<u>2</u>	<u>3</u>	
Location	<u>WALL</u>	<u>WALL</u>	<u>CEILING MOUNT</u>	
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

9
No
116
MAMMOTH GEOTHERMAL HEATING STUDY

ERDA CONTRACT NO. E (04-3)

AGREEMENT FORM

The Southern California Edison Company (SCE) is participating in a study sponsored by the U.S. Energy Research and Development Administration (ERDA) to determine the feasibility of utilizing geothermal energy for space heating and water heating in the City of Mammoth Lakes, California.

Residence/Business of: Paul W. Elizabeth A. Hatter (HATTER)

(customer) located at: Unit #1 - Sierra Manors Cnd.-

appears to be an appropriate sample test site for this geothermal heating study.

SCE and the customer agree to conditions and procedures for conducting existing heating load survey work as follows:

1. Customer will participate in interviews, and allow for the survey of appliances and structural details by SCE personnel.
2. Customer will allow, and provide access for SCE to have a licensed electrical contractor install test equipment to monitor existing space heating and water heating equipment, and allow said test equipment to remain for a test period of at least 9 months, but not to exceed 24 months.
3. Customer will provide SCE personnel access for collection of readings from the test equipment on a monthly basis or alternatively customer will take readings from the test equipment and telephone or mail these readings to the local Edison office, throughout the test period.
4. SCE will, at its expense, engage a licensed electrical contractor to:
 - a) Install running time meters at each space heater within customer's residence/business.
 - b) Install running time meters at the customer's water heater.
 - c) Remove meters and return all space and water heaters to original condition.

Approved, Accepted and Agreed to this 11 day of January 197-

Signature: E. A. Hatter

(customer)

Signature: Ruby M. Holman

(SCE)

Title: ESR-EDO

**DATA SHEET
MAMMOTH HEATING LOAD SURVEY**

Division 4 Cycle _____ District 85 Book _____ Folio _____

Date Jan 11 Rep. W. L. L. & M. L. L.

GENERAL

Name of Complex, Business Paul & Elizabeth Lutter

Street Unit #1 Sierra Manor Condo, Mammoth

Unit No. (Apt. No.) _____

Name of Owner Mrs. Lutter Phone No. 934-2870*

Name of Manager _____ Phone No. 93 48491
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H	<u>1</u>			
Manufacturer	<u>J.A.</u>			
Model Number				
KW Rating	<u>4.5</u>			
Size (Gallons)	<u>40 gal</u>			

SPACE HEATERS

How Many square feet are being heated? 1300
How many rooms? 7

Type of Space Heating Units

Manufacturer	<u>Thermax</u>	<u>Thermax</u>	<u>Thermax</u>	
Model Number				
Rating	<u>2800</u>	<u>1500</u>	<u>4000</u>	
No. of Units	<u>4</u>	<u>3</u>	<u>2</u>	
Location	<u>Wall</u>	<u>Wall</u>	<u>Wall</u>	
Type:	<u>Baseboard</u>			
Baseboard				
Wall				
Radiant				

COMMENTS: _____

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3348

Date 12-22-76 Rep Holmes & Remond

GENERAL

locked
Name of Complex, Business Clark, Jack L.

Street Sierra Mnr Rd Wadena Menthla

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. _____

Name of Manager _____ Phone No. _____

*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H				
Manufacturer				
Model Number				
KW Rating				
Size (Gallons)				

SPACE HEATERS

How Many square feet are being heated? _____

How many rooms? _____

Type of Space Heating Units

Manufacturer				
Model Number				
Rating				
No. of Units				
Location				

Type:

Baseboard				
Wall				
Radiant				

COMMENTS: _____

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3349

Date 12-22-76 Rep Holman & Remosa

GENERAL

locked
Name of Complex, Business Month Equip Rental

Street Sierra Manor Rd Ross 5, Mammoth

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. _____

Name of Manager _____ Phone No. _____

*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H				
Manufacturer				
Model Number				
KW Rating				
Size (Gallons)				

SPACE HEATERS

How Many square feet are being heated? _____

How many rooms? _____

Type of Space Heating Units

Manufacturer				
Model Number				
Rating				
No. of Units				
Location				
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: _____

DATA SHEET
MAMMOTH HEATING LOAD SURVEY

Division 4 Cycle 69 District 85 Book 895 Folio 3350

Date 12-27-76 Rep Holman

GENERAL

Name of Complex, Business Mammoth Cinema Center

Street Sheswin Mdw Pk 14 Mammoth

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. 934-6084

Name of Manager _____ Phone No. _____
*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H				
Manufacturer				
Model Number				
KW Rating				
Size (Gallons)				

SPACE HEATERS

How Many square feet are being heated? _____
How many rooms? _____

Type of Space Heating Units

Manufacturer				
Model Number				
Rating				
No. of Units				
Location				
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: Heater not open entire time - Can't
get info on it

**DATA SHEET
MAMMOTH HEATING LOAD SURVEY**

Division 4 Cycle 69 District 85 Book 895 Folio 3385

Date 12-28 Rep Holman

GENERAL

100 Small

Name of Complex, Business Resort Properties (Mammoth Condo Rentals)

Street Red Mammoth / Meridian, Mammoth

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. 934-6828

Name of Manager _____ Phone No. _____

*Primary phone

If condominium, how many units in the complex?

NONE

WATER HEATERS

No. of W/H				
Manufacturer				
Model Number				
KW Rating				
Size (Gallons)				

SPACE HEATERS

How Many square feet are being heated? _____

How many rooms? _____

Type of Space Heating Units

WOOD FIREPLACE HEAT

Manufacturer				
Model Number				
Rating				
No. of Units				
Location				

Type:

Baseboard				
Wall				
Radiant				

COMMENTS: _____

**DATA SHEET
MAMMOTH HEATING LOAD SURVEY**

Division 4 Cycle 69 District 85 Book 895 Folio 3430
 Date _____ Rep Holman

GENERAL

Name of Complex, Business Mammoth Garage
 Street Mammoth Town Rd, Mammoth Lakes
 Unit No. (Apt. No.) _____
 Name of Owner Wilhelmy, Jack Phone No. 934-8170
 Name of Manager _____ Phone No. _____
 *Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H				
Manufacturer				
Model Number				
KW Rating				
Size (Gallons)				

SPACE HEATERS

How Many square feet are being heated? _____
 How many rooms? _____

Type of Space Heating Units

Manufacturer				
Model Number				
Rating				
No. of Units				
Location				
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: Painted Locals - Mall

**DATA SHEET
MAMMOTH HEATING LOAD SURVEY**

Division 4 Cycle 69 District 85 Book 895 Folio 3460
 Date 1-5-77 Rep Holmes & DeNoss

GENERAL

Name of Complex, Business Lee, Daniel

Street Mammoth Tavern 11, Mammoth Lakes

Unit No. (Apt. No.) _____

Name of Owner _____ Phone No. _____

Name of Manager _____ Phone No. _____

*Primary phone

If condominium, how many units in the complex?

WATER HEATERS

No. of W/H				
Manufacturer				
Model Number				
KW Rating				
Size (Gallons)				

SPACE HEATERS

How Many square feet are being heated? _____

How many rooms? _____

Type of Space Heating Units

Manufacturer				
Model Number				
Rating				
No. of Units				
Location				
Type:				
Baseboard				
Wall				
Radiant				

COMMENTS: Cannot locate