

GEOHERMAL OPERATIONS

**GEOHERMAL DISTRICT BOUNDARIES AND OFFICES
of the
Division of Oil, Gas, and Geothermal Resources**



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SUMMARY OF GEOTHERMAL OPERATIONS

Richard P. Thomas, Geothermal Officer, Sacramento

PROGRAM HIGHLIGHTS:

RESERVOIR MODELED Work continued on a numerical simulation model for the Heber Geothermal field reservoir in the Imperial Valley. The project is funded by the U.S. Department of Energy and undertaken by department engineers and by scientists from the Lawrence Berkeley Laboratory.

The cooperative effort will enable department personnel to use the TOUGH2/PC reservoir simulation program and adapt the program to match observed subsidence and uplift in the field. The program will be available for use in other California fields.



Area of the CEQA site visit for an exploratory well proposed by the New Age Church of Being. The hot spring and bath house are at photo left. *Photos by E. Johnson.*



A stone pool at the Sierra Hot Springs Resort, once the Campbell Hot Springs Resort, site of a proposed geothermal well.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) In 1995, the Geothermal Section received an application from the New Age Church of Being for an exploratory project in Sierra County (*see photos*). The well will be used to supplement flow into the hot baths and, perhaps, a small swimming pool. A Notice of Exemption was issued.

DISTRICT NO. G1

Elizabeth A. Johnson, District Engineer, Sacramento



MONO COUNTY ORPHANED WELLS Seven orphaned geothermal wells near Casa Diablo Geothermal field were once operated by Bonneville Pacific (*see photo*). Six of the wells will be plugged and abandoned by the department. Some costs will be offset with a bond of the former operator.



Part of the Chance Lease, location of six orphaned geothermal wells once operated by Bonneville Pacific.

The seventh well is part of the hydrologic monitoring network maintained by the U.S. Geological Survey on behalf of the Long Valley Hydrologic Advisory Committee. The department is working with private and public entities to obtain bond coverage and an operator for this well so it can continue to be used as a monitoring well.

NEW PLANT PROPOSED FOR MONO COUNTY

Mammoth Pacific, L.P. has proposed constructing a new geothermal power plant near the Town of Mammoth Lakes in Mono County. Mammoth Pacific, L.P., the U.S. Bureau of Land Management, the U.S. Forest Service, and Mono County are devising a process to select a third-party contractor to prepare the EIS/EIR.

DISTRICT NO. G2

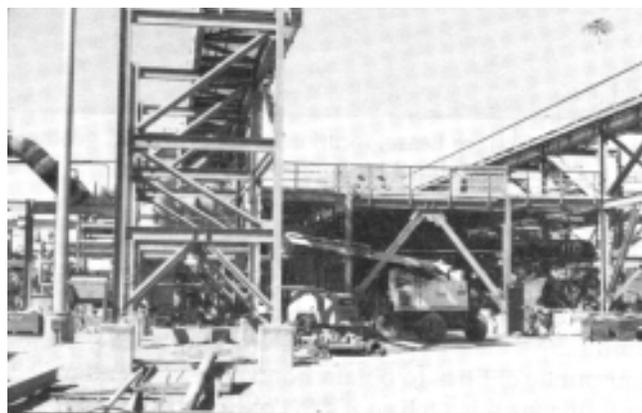
Timothy S. Boardman, District Engineer, El Centro



SALTON SEA GEOTHERMAL FIELD In 1995, California Energy Company began construction on Unit 4, a 40-megawatt power plant in Salton Sea Geothermal field (see photos). The plant, sited next to Unit 3, is scheduled to be finished in May 1996.



California Energy Company's Unit 4, under construction next to Unit 3. Units 1 and 2 are seen in the background at photo center and left, on the edge of the Salton Sea. Photos by T. Boardman.



Close-up of Unit 4 under construction.

The power plant will use the pH modification process first used on Unit 2, built in 1990 and now owned and operated by California Energy Company. In this process, hydrochloric acid is injected into the production stream, keeping the highly concentrated salts and silica dissolved in the brine. The process eliminates the crystallizer/clarifier hardware used at other California Energy power plants and no surface disposal is needed for filter cake materials.

The Unit 3 power plant was converted to the pH modification process in October 1995 and Unit 1 will be converted to pH modification by the time Unit 4 goes on line. With Unit 4 on line, California Energy and its subsidiaries will operate eight power plants in the Imperial Valley, with a net capacity of 276 megawatts.

ZINC EXTRACTION CONTINUES By December 1995, 2,200 pounds of zinc had been extracted from a test loop at California Energy's J.J. Elmore Power Plant in the Salton Sea Geothermal field. BHP Minerals, the loop operator, is a subsidiary of the Broken Hill Proprietary Co. Ltd., a company based in Melbourne, Australia, with international mining interests.

At the loop, geothermal brine is diverted from the injection line to an ion-exchange unit containing resin beads similar to those used to soften water. The ion exchange unit strips away the zinc, which can be washed off the beads with water and collected. The process yields zinc that is 99.9 percent pure. Other mining procedures yield zinc with about 50 percent purity. Although Salton Sea brines contain mostly common salts, they also have minute amounts of nearly every element in the periodic table, from arsenic to zinc.

DISTRICT NO. G3

Kenneth F. Stelling, District Engineer, Santa Rosa



PIPELINE PROJECT In October 1995, groundbreaking ceremonies were held for the Southeast Geysers Effluent Pipeline Project (see photo). Major project construction will begin in the spring of 1996 at the water-intake area by Clear Lake. Completion is scheduled for August 1997. Treated sewage effluent from the City of Clearlake and fresh water from Clear Lake will be injected into wells at The Geysers Geothermal field to enhance steam production.

The City of Santa Rosa is watching the Lake County project. The city is studying a plan to pipe treated effluent from Sonoma County to the field.



Groundbreaking ceremonies for the Southeast Geysers Effluent Pipeline Project were held on October 6, 1995. *Photo by W. Gerard.*

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GEOHERMAL STATISTICS

GEOHERMAL OPERATIONS AND METERS DRILLED - 1995*

Field or county	API county code	Drilled					Completed					Redrilled or deepened					Plugged & abandoned					Meters drilled					
		Explor.	Prod.	Serv.	Temp. grad.	Total	Explor.	Prod.	Serv.	Temp. grad.	Total	Explor.	Prod.	Serv.	Temp. grad.	Total	Explor.	Prod.	Serv.	Temp. grad.	Total	Suspended	New Wells	Reworks			
DISTRICT G1																											
Casa Diablo	051	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lake City	049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Litchfield	035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Susanville	035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wendell	035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lassen County	035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Modoc County	049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mono County	051	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plumas County	063	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shasta County	089	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sierra County	091	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District G1 Totals		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DISTRICT G2																											
Brawley	025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heber	025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Mesa	025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8134	0
Mesquite	025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salton Sea	025	0	3	3	0	6	0	3	3	0	6	0	3	3	0	6	0	3	0	0	0	3	3	0	0	8069	630
Desert Hot Springs	065	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	368	0
Imperial County	025	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	598	0
Inyo County	027	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kern County	029	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	708	0
Riverside County	065	0	4	0	0	4	0	2	0	0	2	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0
San Bernardino	071	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
San Luis Obispo	079	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District G2 Totals		0	13	3	0	16	0	11	3	0	14	0	0	3	0	3	1	2	0	3	6	0	17,877	630			
DISTRICT G3																											
Calistoga	055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Geysers	033	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0
	097	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	1	1	0	0	2	0	0	0	7252	0
Lake County	033	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mendocino County	045	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma County	097	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District G3 Totals		0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	1	2	2	0	5	0	7252	0			
STATE TOTALS		0	15	3	0	18	0	13	3	0	16	0	0	3	0	3	2	4	2	3	11	0	25,129	630			

* Data for federal leases are not included.

CALIFORNIA'S STEAM-DOMINATED GEOHERMAL FIELDS *

Year	Average number of producing wells	Gross steam produced kilograms (thousands)	Average number of active injection wells	Water injected kilograms (thousands)	Percent injected
The Geysers Geothermal field:					
1960	3	306,180	0	0	0
1961	3	857,431	0	0	0
1962	3	913,804	0	0	0
1963	7	1,530,900	0	0	0
1964	7	1,838,314	0	0	0
1965	7	1,727,581	0	0	0
1966	7	1,709,872	0	0	0
1967	13	2,862,470	0	0	0
1968	13	3,515,849	0	0	0
1969	26	6,812,616	1	410,788	6.0
1970	27	6,457,453	1	847,490	13.1
1971	30	7,813,799	2	1,224,598	15.7
1972	45	15,777,373	3	2,904,923	18.4
1973	60	21,464,314	4	4,064,929	18.9
1974	72	26,329,259	5	5,364,196	20.4
1975	84	30,514,607	5	7,473,397	24.5
1976	92	31,995,187	6	7,717,116	24.1
1977	95	32,527,275	6	7,496,076	23.0
1978	95	27,622,596	6	6,522,400	23.6
1979	123	36,138,118	9	8,723,633	24.1
1980	150	46,966,791	10	10,866,000	23.1
1981	165	52,864,353	12	13,595,090	25.7
1982	174	48,174,347	11	13,549,916	28.1
1983	225	65,893,108	15	19,081,541	29.0
1984	253	80,067,099	17	23,312,221	29.1
1985	309	95,232,214	22	26,517,067	27.8
1986	354	106,561,865	23	30,771,676	28.9
1987	390	111,821,897	23	31,495,280	28.2
1988	429	108,523,641	23	28,325,113	26.1
1989	439	100,205,378	23	28,348,657	28.3
1990	442	95,646,626	25	27,318,499	28.6
1991	436	89,660,288	26	25,747,804	28.7
1992	444	88,513,172	29	27,344,280	30.9
1993	450	84,379,560	29	30,183,128	35.8
1994	447	+78,427,345	28	+24,524,066	31.3
1995	429	61,125,959	26	26,826,230	43.9

* Data for federal leases included.
+ Contains corrected data.

CALIFORNIA'S WATER - DOMINATED GEOTHERMAL FIELDS*

Geothermal field	Year	Average number of producing wells	Gross water produced kilograms (thousands)	Average number of injection wells	Water injected kilograms (thousands)	Geothermal field	Year	Average number of producing wells	Gross water produced kilograms (thousands)	Average number of injection wells	Water injected kilograms (thousands)
Amedee	1988**	2	1,283,871	NO INJECTION		Litchfield	1984**	1	945,419	NO INJECTION	
	1989	2	4,778,856				1985	1	987,427		
	1990	2	5,443,317				1986	1	852,801		
	1991	2	5,778,129				1987	1	712,709		
	1992	2	5,946,618				1988	1	765,384		
	1993	2	5,535,367				1989	1	1,061,360		
	1994	2	4,970,443				1990	1	891,708		
	1995	2	5,357,734				1991	1	760,304		
Brawley	1982**	2	1,833,217	2	1,578,510		1992	1	621,690		
	1983	2	2,397,722	4	2,342,862		1993	1	885,045		
	1984	1	1,122,414	3	994,175		1994	1	701,006		
	1985	1	555,731	1	529,041		1995	1	822,790		
	1986		PROJECT TERMINATED				Salton Sea	1982**	2	2,383,365	2
	Casa Diablo	1984**	1	1,317,788	1	1,317,788		1983	3	3,735,455	2
1985		3	3,840,401	3	3,840,401	1984		2	4,208,900	2	3,211,456
1986		3	6,076,840	3	6,076,840	1985		2	4,167,497	2	3,193,912
1987		4	6,754,790	3	6,754,790	1986		9	13,433,795	7	10,851,579
1988		4	6,723,808	3	6,723,808	1987		9	14,272,783	8	11,911,933
1989		3	6,871,002	3	6,871,002	1988		11	+19,572,266	10	17,087,924
1990		4	6,971,231	3	6,971,231	1989		23	56,570,756	18	47,581,465
1991		10	24,538,220	5	24,538,220	1990		32	75,745,346	23	62,991,977
1992		10	24,604,335	4	24,604,335	1991		33	77,687,699	23	68,884,579
1993		10	23,544,466	4	23,544,466	1992		35	78,034,671	22	69,247,157
1994	10	23,637,236	5	23,637,236	1993	34		77,792,273	25	67,126,019	
1995	9	22,498,589	5	22,498,589	1994	31		+77,553,144	24	69,917,900	
Coso	1987**	5	4,125,630	3	3,547,813	1995	32	80,960,089	24	69,940,700	
	1988	15	13,965,143	6	9,233,591	Susanville***	1982**	1	21,228	1	21,228
	1989	32	44,187,631	12	34,771,770		1983	1	174,352	1	174,352
	1990	47	55,936,765	13	36,543,678		1984	1	134,832	1	134,832
	1991	57	46,624,874	13	26,370,492		1985	1	339,792	1	171,360
	1992	63	41,198,639	15	24,923,696		1986	1	345,600	1	199,104
	1993	68	47,726,990	17	24,831,128		1987	1	436,751	1	276,196
	1994	72	43,261,502	18	23,619,268		1988	1	262,878	1	230,307
	1995	75	40,317,057	20	24,004,829		1989	1	448,792	1	300,972
	East Mesa	1983**	5	3,196,215	3		3,190,219	1990	1	518,471	1
1984		6	4,050,175	2	3,963,468		1991	1	525,490	1	297,840
1985		6	3,659,938	2	3,385,793	1992	1	482,574	1	298,656	
1986		6	4,725,162	3	4,399,114	1993	1	589,658	1	297,840	
1987		15	14,187,024	6	13,734,959	1994	1	551,406	1	297,840	
1988		25	40,952,496	12	35,950,366	1995	1	565,345	1	297,024	
1989		32	67,990,914	23	57,796,766	Wendel	1985**	1	833,989		0
1990		39	79,221,063	33	+75,465,209		1986	1	1,808,949		0
1991		42	+91,984,758	36	+89,406,945		1987	1	1,773,907		0
1992		42	+97,750,781	39	94,370,772		1988	1	1,763,722		0
1993		43	97,849,346	40	+96,029,637		1989	2	2,542,910	1	428,745
1994		43	90,589,304	40	87,198,495		1990	2	2,618,618	1	978,066
1995		43	90,488,703	41	86,970,705		1991	2	2,440,737	1	1,717,291
Heber	1985**	9	13,584,658	8	13,214,051		1992	2	2,503,719	1	1,017,408
	1986	13	32,263,682	12	29,716,492		1993	2	2,370,861	1	1,043,371
	1987	16	34,472,259	13	31,300,084		1994	2	2,309,924	1	1,145,622
	1988	12	29,769,219	10	26,031,068	1995	2	2,153,224	1	956,770	
	1989	11	29,384,658	10	24,976,751						
	1990	10	29,487,574	9	25,085,848						
	1991	10	29,215,287	9	25,252,223						
	1992	10	29,478,685	9	26,816,804						
	1993	17	41,674,826	17	38,101,717						
	1994	22	53,988,169	22	49,908,275						
	1995	22	56,645,248	23	52,587,798						

* Data for federal leases included.

** The first year that production data were reported to the Division of Oil, Gas, and Geothermal Resources.

*** Data are only available for the city's space-heating project.

+ Contains corrected data.

GEOHERMAL NOTICES FILED AND INSPECTIONS - 1995*

Field or county	Notices to drill					Notices to rework					Notices to plug & abandon					Total inspections by district
	Explor.	Prod.	Serv.	Temp. grad.	Total	Explor.	Prod.	Serv.	Temp. grad.	Total	Explor.	Prod.	Serv.	Temp. grad.	Total	
DISTRICT G1																
Casa Diablo	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lake City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Litchfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Wendel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Susanville	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lassen County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Modoc County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Mono County	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	
Plumas County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Shasta County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sierra County	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
District G1 Totals	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	150
DISTRICT G2																
Brawley	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Heber	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	
East Mesa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Mesquite	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Salton Sea	0	4	2	0	6	0	17	13	1	31	0	0	0	5	5	
Desert Hot Springs	0	3	2	0	5	0	1	0	1	1	0	0	0	0	0	
Imperial County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Inyo County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Los Angeles County	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
Riverside County	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	
San Bernardino	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
San Luis Obispo	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
District G2 Totals	1	12	2	0	15	0	18	14	1	33	1	0	0	5	6	409
DISTRICT G3																
Calistoga	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
The Geysers	0	1	0	0	1	0	1	1	0	2	0	3	2	0	5	
Lake County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Mendocino County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Napa County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sonoma County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
District G3 Totals	0	1	0	0	1	0	1	1	0	2	0	3	2	0	5	790
STATE TOTALS	2	13	2	0	17	0	19	16	1	36	1	3	2	5	11	1,349

* Data for federal leases not included. The number of drilling permits issued by the Bureau of Land Management (BLM) for geothermal development on federal lands in California increased in 1995. According to the BLM, 15 wells were permitted during federal fiscal year 1995 (October 1994 - September 1995), compared with 11 wells permitted the year before.

GEOHERMAL EXPLORATORY WELLS DRILLED TO TOTAL DEPTH IN 1995

County	T.	R.	Sec.	B. & M.	Operator	Well designation and API number	Elev. (meters)	Month drilling completed	Total depth (meters)	Stratigraphic units penetrated and/or time-stratigraphic units at total depth (depth in meters)

GEOHERMAL CEQA APPLICATIONS AND SITE VISITS

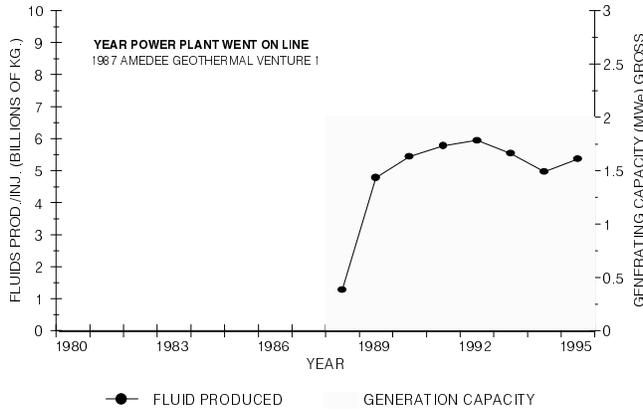
Year	Projects filed				Notices issued				Reports			Site inspections			
	Temperature gradient	Exploratory	Other	Total	Preparation	Exemption	Determination	Total	Negative declaration	Draft EIR	Final EIR	Total	General	Specific	Total
1980	24	6	0	30	9	20	6	35	3	4		11	2	9	11
1981	12	7	0	19	15	15	6	36	3	3	4	8	0	11	11
1982	2	6	0	8	5	3	5	13	2	1	5	5	0	2	2
1983	4	7	0	11	4	2	2	12	1	2	2	5	0	5	5
1984	5	3	0	8	1	7	5	13	0	5	4	9	0	4	4
1985	5	3	0	8	2	5	3	10	1	2	2	5	0	0	0
1986	0	3	0	3	0	2	2	3	1	1	1	1	1	0	1
1987	0	3	0	3	0	3	1	4	1	1	1	1	1	4	5
1988	0	1	0	1	0	1	1	2	0	0	0	0	1	0	1
1989	0	2	0	2	0	1	1	2	1	1	1	1	3	0	3
1990	0	2	0	2	0	2	2	4	0	0	0	0	0	2	2
1991	0	3	0	3	0	3	0	3	0	0	0	0	0	3	3
1992	0	2	1	3	0	0	2	2	0	0	0	2	2	6	8
1993	2	2	0	4	2	2	2	6	2	0	0	2	4	4	8
1994	0	1	0	1	0	0	0	0	0	0	0	0	1	1	2
1995	0	1	0	1	0	1	0	1	1	0	0	1	1	1	2

FLUID PRODUCED AND INJECTED, AND POWER PLANT CAPACITY FOR CALIFORNIA GEOTHERMAL FIELDS

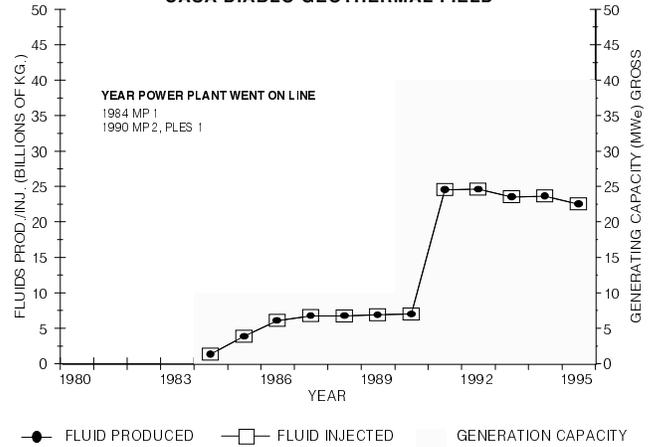
DISTRICT NO. G1



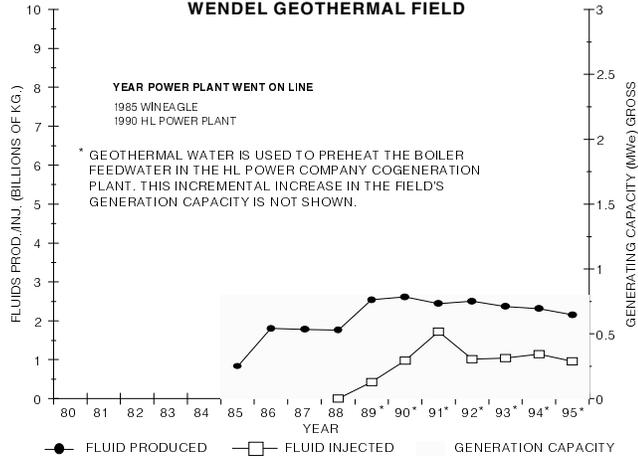
AMEDEE GEOTHERMAL FIELD



CASA DIABLO GEOTHERMAL FIELD



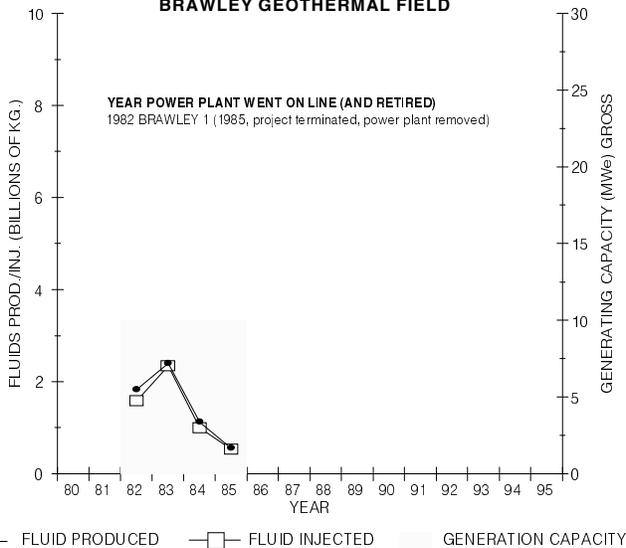
WENDEL GEOTHERMAL FIELD



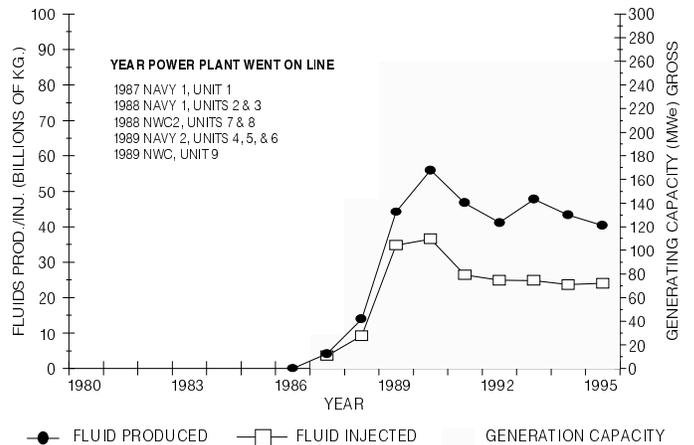
DISTRICT NO. G2

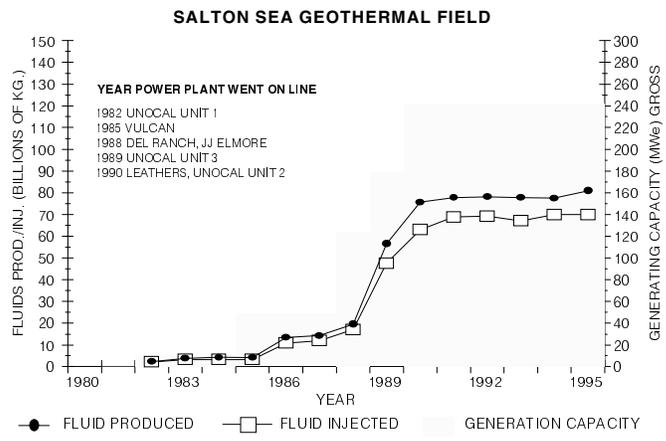
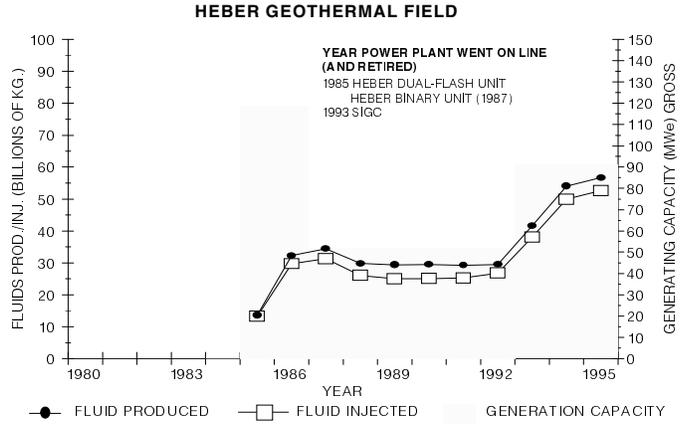
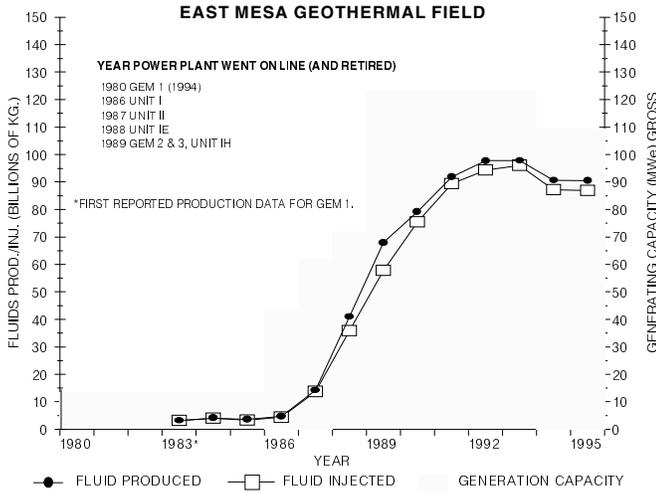


BRAWLEY GEOTHERMAL FIELD



COSO GEOTHERMAL FIELD

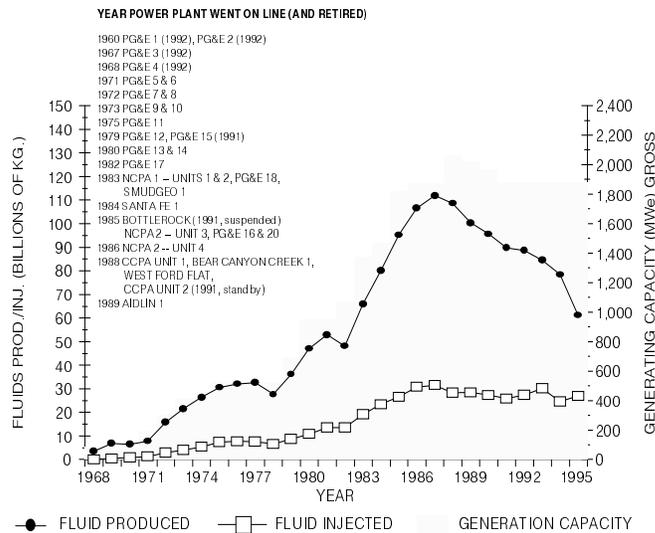




DISTRICT NO. G3



THE GEYSERS GEOTHERMAL FIELD



FINANCIAL REPORT

FINANCIAL REPORT

The following report is made in accordance with Section 3108, Division 3, Public Resources Code, which reads as follows: "On or before the first day of October of each year the supervisor shall make public for the benefit of all interested persons, a report in writing showing:

(a) The total amounts of oil and gas produced in each county in the state during the previous calendar year. (Figures for 1994 are published in the *80th Annual Report of the State Oil and Gas Supervisor.*)

(b) The total cost of the division for the previous fiscal year.

(c) The total amount delinquent and uncollected from any assessments or charges levied pursuant to the chapter.

The report shall also include such other information as the supervisor deems advisable."

Collection of Funds by Assessment

Funds for the support of the Department of Conservation's Division of Oil, Gas, and Geothermal Resources are raised by an assessment on oil and gas production as provided for in Article 7 of Division 3, Public Resources Code.

The assessment is based on the projected expenditures of the division, taking into account any previous surpluses or deficiencies, and the prior year's production. For the 1995-96 fiscal year, the rate of assessment was established at \$0.031672 per barrel of oil or ten thousand cubic feet of gas.

As provided for in Chapter 4, Division 3, Section 3724.5 of the Public Resources Code, the division is also partly funded by an annual assessment levied on operators of high-temperature geothermal resource wells and by drilling fees charged to geothermal operators for drilling new wells or re-drilling abandoned wells.

For the 1995-96 fiscal year, the fee-assessment is \$1,545.00 per high-temperature geothermal well.

Financial Statement

1994-95 Fiscal Year

Beginning Reserve	\$	26,000.00
Balance Available from Prior Year	\$	165,000.00
Revenue Applicable to Oil, Gas, and Geothermal Operations	\$	<u>10,125,000.00</u>
Total Reserves	\$	10,316,000.00
Total Expenditures	\$	<u>9,856,000.00</u>
Ending Reserves	\$	460,000.00

Hazardous and Idle - deserted Well Abandonment Expenditures

1994-95 Fiscal Year

No. of Wells		
3	Hazardous and Idle-deserted Wells Plugged and Abandoned	\$ 357,680.17 *
0	Section 3237 PRC Wells Plugged and Abandoned	\$ 0
<u>6</u>	Orphaned Wells Plugged and Abandoned (HIDWA)	<u>\$ 35,844.50</u>
<u>44</u>	Total Wells Plugged and Abandoned	<u>\$ 393,524.67</u>
22	Wells on which Remedial Action was Taken	<u>\$ 45,765.99</u>
	Gross Expenditure	\$ 439,290.66
	And Reimbursement	\$ <u>-223,546.31</u>
	Net Expenditure	\$ 215,744.35

Underground Injection Control Program Expenditures

(Oct. 1, 1994 - Sept. 30, 1995 Federal Fiscal Year)

Beginning Reserve	\$	404,600.00
Balance Available from Prior Year	\$	<u>14,337.00</u>
Total Reserves	\$	418,937.00
Total Expenditures	\$	<u>-372,850.00</u>
Ending Reserves	\$	46,087.00

*Figure includes funds for wells abandoned in the previous fiscal year.

**List of Delinquent Assessments and Penalties:
Oil, Gas, and Geothermal Operations as of June 30, 1996**

OPERATOR	YEAR	ASSESSMENT
OIL AND GAS OPERATORS		
American Barter Petro., Inc.	1993	\$3,600.23
	1994	\$2,729.72
American Titan Oil Co.	1995	\$345.77
Armstrong Farms Inc.	1993	\$406.61
	1995	\$236.73
The Arvin Co.	1995	\$69.12
Baker Oil and Gas Co.	1990	\$789.66
Blackhawk Oil Co.	1994	\$5,718.20
	1995	\$1,902.69
Weldon Bruce	1989	\$545.65
Calif. Oil Independents, Inc.	1995	\$278.85
Central Lease Inc.	1991	\$1,311.38
	1992	\$915.54
	1993	\$662.32
	1995	\$63.14
Deuel Petroleum Co., Inc.	1987	\$108.26
	1988	\$182.01
Dominion Oil Co.	1988	\$3,457.99
	1989	\$3,354.86
	1990	\$3,263.46
	1991	\$2,841.05
	1992	\$2,246.12
	1993	\$1,410.86
	1994	\$1,505.33
	1995	\$950.20
Energy Development of Calif.	1990	\$1,012.90
	1991	\$373.63
GENY Operations	1995	\$1,060.17
GEO Petroleum, Inc.	1993	\$3,496.38
Graham Royalty, LTD.	1994	\$6,332.45
Hilliard Oil & Gas Inc.	1986	\$550.54
KC Resources, Inc.	1995	\$626.25
Kalco Development Corp.	1988	\$2,646.16
	1989	\$2,008.64
	1990	\$408.67
	1991	\$273.83
Killingsworth Oil Co.	1994	\$136.96
Ted Koble, Opr.	1994	\$175.82
Lobodo Inc.	1994	\$159.84
	1995	\$49.27
Midsun Partners	1995	\$615.12
Mitchell Oil Co.	1989	\$234.86
	1990	\$288.53
	1991	\$219.83
	1992	\$111.97
	1994	\$210.03
Nahama & Weagant Energy Co.	1994	\$1,252.28
The National Oil Co.	1987	\$59.41
	1990	\$172.26
	1991	\$87.79
North Valley Oil & Gas Co.	1994	\$2,031.91
Oilfield Pet. & Energy Co.	1995	\$95.85
Oro Negro, Inc.	1995	\$916.40
Pan American Energy Corp.	1993	\$117.01
	1994	\$32.40
	1994	\$98.35
Pangea Inc.	1993	\$966.77
	1995	\$49.29
Petro Nova	1989	\$447.95
	1990	\$176.85
Prado Petroleum	1988	\$1,097.86
	1989	\$601.21
	1990	\$1,099.70
	1991	\$762.83
	1992	\$401.35
	1993	\$394.61
Pueblo Oil & Gas	1992	\$350.21
	1993	\$318.56
Res-Tech Inc.	1994	\$231.41
	1995	\$46.58
Sierra Resources, Inc.	1995	\$285.38
South Coast Oil Corp.	1994	\$881.02
	1995	\$789.05
St. Regis Resources Corp.	1995	\$291.02
Supreme Oil & Gas Corp.	1994	\$86.52
Synergy Resources Corp.	1995	\$124.55
TRV Minerals Corp.	1987	\$346.64
Zachary T. Tatum	1995	\$72.98

OPERATOR	YEAR	ASSESSMENT
OIL AND GAS OPERATORS		
Taylor-McIlhenny Op. Co., Inc.	1994	\$24.82
Terra Expl. & Prod. Co. Inc.	1995	\$3.89
Thomas Oil Co.	1987	\$298.48
	1988	\$394.27
	1989	\$239.06
	1990	\$210.60
	1993	\$289.95
	1994	\$330.45
Tri Kern Resources	1988	\$487.30
	1989	\$228.18
Troy Resources Corp.	1988	\$184.48
	1989	\$384.87
Turco Products Division	1994	\$106.24
Tycoon Oil Co.	1993	\$178.31
	1994	\$186.74
	1995	\$51.21
United Energy, Inc.	1995	\$1,542.50
West America Resources	1993	\$3,362.23
	1994	\$194.44
TOTALS	1986	\$550.54
	1987	\$812.79
	1988	\$8,450.08
	1989	\$8,045.28
	1990	\$7,422.63
	1991	\$5,870.35
	1992	\$4,025.19
	1993	\$15,203.84
	1994	\$22,424.93
	1995	\$10,466.01
		\$51,765.56
GEOTHERMAL OPERATORS		
Bonneville Pacific Corp.	1991	\$371.44
	1992	\$5,968.20
	1993	\$6,710.58
	1994	\$6,930.00
	1995	\$5,191.16
Department of Water Resources	1995	\$3,630.72
GEO Operator Corp.	1988	\$21,197.44
	1989	\$137,312.80
	1990	\$77,900.50
	1991	\$69,957.32
	1992	\$6,211.80
Geysers Power, Inc.	1992	\$39,788.00
	1993	\$44,737.20
	1994	\$46,200.00
	1995	\$34,608.00
Imperial Energy Corp.	1985	\$2,282.93
MCR Geothermal Corp.	1995	\$7,261.50
MSR Power Agency	1994	\$4,620.00
TOTALS	1985	\$2,282.93
	1986	\$0.00
	1987	\$0.00
	1988	\$21,197.44
	1989	\$137,312.80
	1990	\$77,900.50
	1991	\$70,328.76
	1992	\$51,968.00
	1993	\$51,447.78
	1994	\$57,750.00
	1995	\$50,691.38
		\$466,902.95
GRAND TOTAL		\$518,668.51