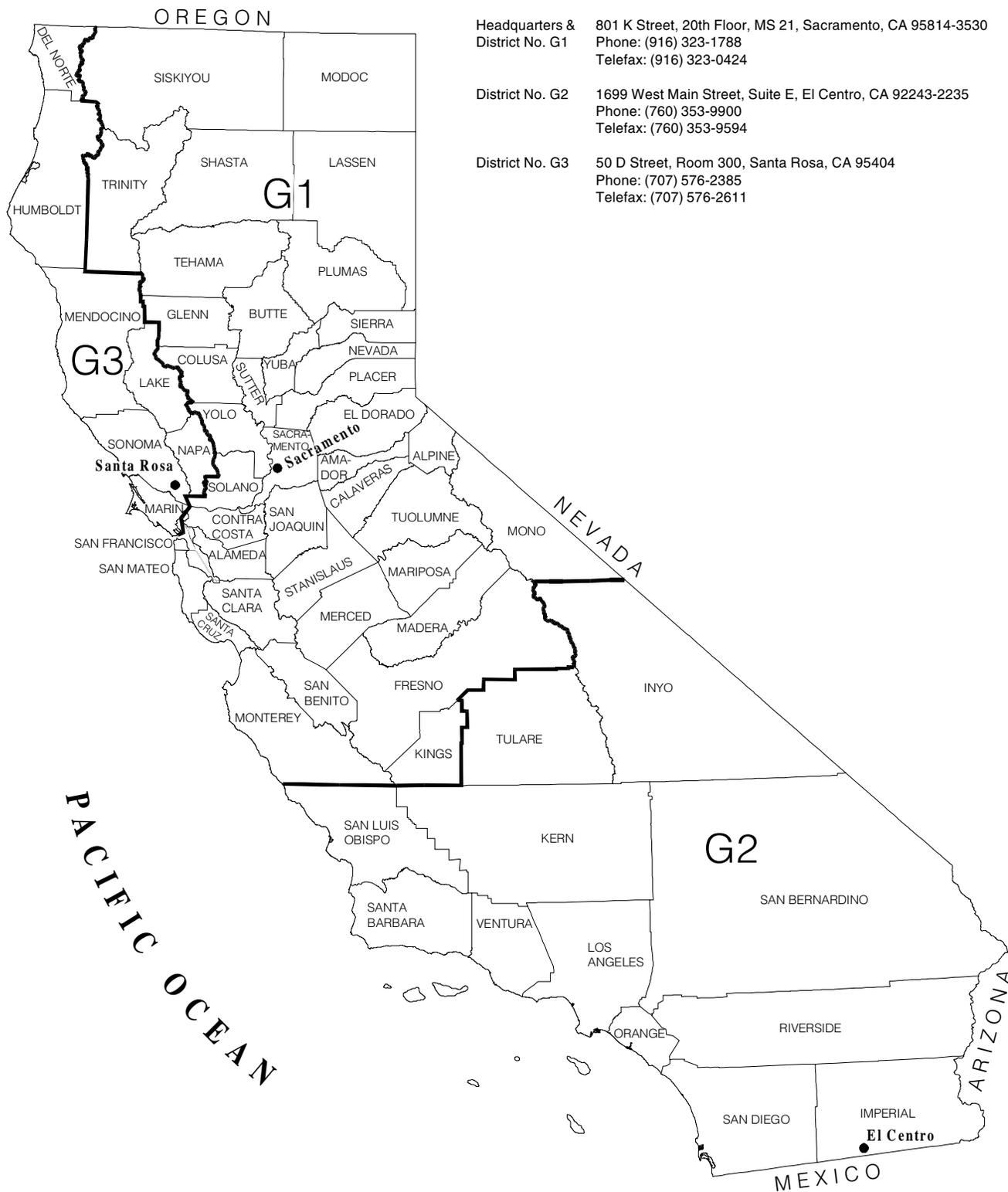


GEOHERMAL OPERATIONS

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



Headquarters & District No. G1 801 K Street, 20th Floor, MS 21, Sacramento, CA 95814-3530
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SUMMARY OF GEOTHERMAL OPERATIONS

Richard P. Thomas, Geothermal Officer, Sacramento

PROGRAM HIGHLIGHTS:

DATA SYSTEM READIED In 1999, Lawrence Livermore National Laboratory (LLNL) completed the new geothermal data-gathering and viewing system that has Internet access and electronic data submittal capabilities. Division staff began testing the system in December. The tests are expected to continue through mid-2000 and full implementation is due in September. The system, programmed in JAVA, is a joint effort of the Department of Conservation and LLNL.

ENVIRONMENTAL AWARD Mammoth-Pacific, L.P., received an award from the Department of Conservation for Outstanding Lease and Facility Maintenance in Casa Diablo Geothermal field.

DISTRICT NO. G1

Elizabeth A. Johnson, District Engineer, Sacramento



SCIENTIFIC WELL In September, drilling and coring rigs were removed from well "Long Valley Federal" 51-20. The well is cased to a depth of 7,178 feet, with open hole to a total depth of 9,832 feet. The U. S. Geological Survey is the well owner and operator.

The hole will be reconfigured as a down-hole, volcanic observatory with an instrument array designed to measure seismicity, uplift, rock stress, temperatures, and water levels. The instrument array will include a seismometer, tiltmeter, volumetric strain meter, and a fluid-pressure transducer.

The California Energy Commission, U. S. Geological Survey, U. S. Department of Energy, and the Interna-

tional Continental Drilling Program funded the well. The well was begun in 1991 and drilled to a depth of 7,588 feet. In 1998, the well was cored continuously from 7,588 feet to 9,932 feet.

GLASS MOUNTAIN POWER PROJECTS Two geothermal power projects have been proposed for the Glass Mountain area in northeastern California. One, the Fourmile Hill Geothermal Development Project, is proposed as a 49.9-megawatt geothermal power plant and well field with a 24 mile, 230 kilovolt transmission line linked to an existing power corridor. The second project, called the Telephone Flat Geothermal Development Project, is proposed as a 49.9-megawatt geothermal power plant and well field linked to the Fourmile Hill transmission line. Both projects are on federal leases in the Modoc National Forest.

Environmental analyses have been completed for both plants. The U. S. Bureau of Land Management, U. S. Forest Service, and the Siskiyou County Air Pollution Control District have not issued final decisions.

DISTRICT NO. G2

Timothy S. Boardman, District Engineer, El Centro



SALTON SEA GEOTHERMAL FIELD Construction of power plants Salton Sea Unit V (49 megawatts, net), CE Turbo (10 megawatts, net), and the Zinc Recovery Project continued on schedule in the Salton Sea Geothermal field. CalEnergy Company, Inc., plans to complete the projects by the middle of the year 2000.

The Zinc Recovery Project is the only facility in the world specifically designed to harvest minerals from high-temperature geothermal brines. The extraction technology involves ion exchange, solvent extraction,

and electrowinning to extract and plate minerals. The Zinc Recovery Project will be emission free. Geothermal well fluids—used for power generation—will supply the brine. Production is estimated at 30,000 metric tons of zinc per year.

With the new power additions, CalEnergy will produce 327 megawatts, net, of electricity. The new power plants will power the Zinc Recovery Project and the additional power will be sent to the newly deregulated California energy market.

In the spring, El Paso Energy Corporation acquired a 50-percent interest in CE Generation LLC from CalEnergy. However, CalEnergy continues to be the operator of the Salton Sea Geothermal field. CalEnergy Minerals LLC, a subsidiary of MidAmerican Energy Holding Company, is the sole owner and operator of the Salton Sea Zinc Recovery Project.

COSO GEOTHERMAL FIELD In February, CalEnergy sold its remaining interests in the Coso Geothermal field to Caithness Energy LLC. Caithness operates the field under the name Coso Operating Company. The project covers 24,000 acres of federal land, including land under contract with the U.S. Navy and on land leased from the BLM. At Coso, the company operates four geothermal power plants that generate 230 megawatts, net, of electricity.

DISTRICT NO. G3

Kenneth F. Stelling, District Engineer, Santa Rosa



THE GEYSERS GEOTHERMAL FIELD During 1999, most ownership of The Geysers Geothermal field was consolidated under Calpine Corporation. Calpine acquired the holdings of Union Oil Company of California (Unocal), the active power plants owned by Pacific Gas and Electric Company (PG&E), and the wells and power plant owned by Silverado Geothermal Corporation. The only other active operator is Northern California Power Agency. The Department of Water Resources, Central California Power Agency (CCPA), and the defunct GEO Operator Corporation have wells and facilities in the field in stages of suspension or abandonment. PG&E's Unit 15 is retired and not part of the acquisition.

By the end of the year, CCPA had plugged and abandoned 6 of its 22 wells in the field. The remaining wells should be plugged and abandoned by spring 2000.

Wastewater injection from the Lake County pipeline project continued to be productive. Field pressures in parts of the southern area of the field are stabilizing and in some areas are increasing. Estimates of additional power production due to wastewater injection are about 40 MWe.

GEOHERMAL STATISTICS

GEOHERMAL OPERATIONS AND METERS DRILLED - 1999*

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
Wendel	035	0	1	0	3	4	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	2	0	517	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	1	1	0	0	2	2	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	1	0	3	4	0	1	0	0	1	0	0	0	0	0	1	1	0	2	4	0	517	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	0	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	1	0	0	1	0	1	0	0	1	1	8	0	9	0	0	0	1	0	1	1	1	0	1,971	0	7,854
Desert Hot Springs	065	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	242	0	0
Imperial County	025	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	180	0	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	0	0
Riverside County	065	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
San Bernardino	071	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
San Luis Obispo	079	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	256	0	0
District G2 Totals		0	6	0	0	6	0	6	0	0	6	0	1	8	0	9	0	0	1	0	1	0	2,649	0	7,854		
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	0	0	0	0	0	0	0	0	0
	097	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	6	0	0	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	6	0	0	0	0	0
STATE TOTALS		0	7	0	3	10	0	7	0	0	7	0	1	8	0	9	1	6	2	2	11	0	3,166	0	7,854		

* 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	6,453,453	1	847,490	13.1
1971	27	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	23	27,318,499	28.6
1991	436	89,660,188	23	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	+78,446,982	28	24,524,066	31.3
1995	428	61,104,078	26	+26,825,435	43.9
1996	439	+65,100,514	25	30,601,721	47.0
1997	429	66,488,424	30	26,701,703	40.1
1998	424	+66,452,281	43	+43,534,759	66.6
1999	424	65,467,390	43	34,919,122	53.3

* 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			
	1996	2	5,670,982				1992	1	621,690			
	1997	2	5,374,700				1993	1	885,045			
	1998	2	+5,573,927				1994	1	701,006			
	1999	2	5,580,968				1995	1	822,790			
Brawley	1982**	2	1,833,217	2	1,578,510	Salton Sea	1982**	2	2,383,365	2	2,071,770	
	1983	2	2,397,722	4	2,342,862		1983	3	3,735,455	2	3,260,076	
	1984	1	1,122,414	3	994,175		1984	2	4,208,900	2	3,211,456	
	1985	1	555,731	1	529,041		1985	2	4,167,497	2	3,193,912	
	1986		PROJECT TERMINATED				1986	9	13,433,795	7	10,851,579	
Casa Diablo	1984**	1	1,317,788	1	1,317,788	1987	9	14,272,783	8	11,911,933		
	1985	3	3,840,401	3	3,840,401	1988	11	19,572,266	10	17,087,924		
	1986	3	6,076,840	3	6,076,840	1989	23	56,570,756	18	47,581,465		
	1987	4	6,754,790	3	6,754,790	1990	32	75,745,346	23	62,991,977		
	1988	4	6,723,808	3	6,723,808	1991	33	77,687,699	23	68,884,579		
	1989	3	6,871,002	3	6,871,002	1992	35	78,034,671	22	69,247,157		
	1990	4	6,971,231	3	6,971,231	1993	34	77,792,273	25	66,406,019		
	1991	10	24,538,220	5	24,538,220	1994	31	77,764,065	24	69,917,900		
	1992	10	24,604,335	4	24,604,335	1995	32	80,974,333	24	71,139,969		
	1993	10	23,544,466	4	23,544,466	1996	32	96,779,351	26	82,086,809		
	1994	10	23,637,236	5	23,637,236	1997	30	102,380,076	29	84,698,562		
	1995	9	22,498,589	5	22,498,589	1998	28	+101,337,579	28	91,218,237		
	1996	9	22,500,565	5	22,500,565	1999	28	112,824,103	28	100,505,584		
	1997	9	22,229,408	5	22,229,408							
	1998	9	+22,822,269	5	+22,822,269							
	1999	9	23,998,996	5	23,998,996							
	Coso	1987**	5	4,125,630	3	3,547,813	Susanville***	1982**	1	21,228	1	21,228
1988		15	13,965,143	6	9,233,591	1983		1	174,352	1	174,352	
1989		32	44,187,631	12	+34,771,770	1984		1	134,832	1	134,832	
1990		47	55,936,765	14	+36,543,678	1985		1	339,792	1	171,360	
1991		57	46,624,874	14	+26,370,492	1986		1	345,600	1	199,104	
1992		63	41,198,639	16	+24,923,696	1987		1	436,751	1	276,196	
1993		68	47,726,990	18	+24,831,128	1988		1	262,878	1	230,307	
1994		72	43,261,502	19	+23,619,268	1989		1	448,792	1	300,972	
1995		75	40,317,057	20	+24,004,829	1990		1	518,471	1	297,840	
1996		79	39,732,984	20	+22,385,912	1991		1	525,490	1	297,840	
1997		82	36,611,570	20	+19,467,543	1992		1	482,574	1	298,656	
1998		82	+36,863,050	21	+17,073,809	1993		1	589,658	1	297,840	
1999		82	38,428,411	21	18,062,638	1994		1	551,406	1	297,840	
						1995		1	565,345	1	297,024	
						1996		1	489,327	1	297,840	
						1997		1	415,313	1	297,840	
						1998		1	234,957	1	204,174	
					1999	1	247,606	1	228,375			
East Mesa	1983**	5	3,196,215	3	3,190,219	Wendel	1985**	1	833,989		0	
	1984	6	4,050,175	2	3,963,468		1986	1	1,808,949		0	
	1985	6	3,659,938	2	3,385,793		1987	1	1,773,907		0	
	1986	6	4,725,162	3	4,399,114		1988	1	1,763,722		0	
	1987	15	14,187,024	6	13,734,959		1989	2	2,542,910	1	428,745	
	1988	25	40,952,496	12	35,950,366		1990	2	2,618,618	1	978,066	
	1989	32	67,990,914	23	57,796,766		1991	2	2,440,737	1	953,641	
	1990	39	79,221,063	33	75,465,209		1992	2	2,503,719	1	1,017,408	
	1991	42	91,984,758	36	89,406,945		1993	2	2,370,861	1	1,043,371	
	1992	42	97,750,781	39	94,370,772		1994	2	2,309,924	1	1,145,622	
	1993	43	97,849,346	40	96,029,637		1995	2	2,153,224	1	956,770	
	1994	43	90,589,304	40	87,198,495		1996	2	2,032,435	1	749,124	
	1995	43	90,488,703	41	86,970,705		1997	2	1,772,335	1	605,987	
	1996	43	92,604,479	42	89,674,536		1998	2	+1,906,366	1	+545,513	
	1997	42	92,797,342	43	89,231,453		1999	2	1,835,619	1	539,320	
	1998	34	78,787,415	36	+78,787,415							
	1999	34	85,628,077	36	81,929,874							
Heber	1985**	9	13,584,658	8	13,214,051							
	1986	13	32,263,682	12	29,716,492							
	1987	16	34,472,259	13	31,300,084							
	1988	12	29,769,219	10	26,031,068							
	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	49,640,276							
	1995	22	56,645,248	23	52,587,798							
	1996	22	58,358,658	23	54,637,130							
	1997	22	60,145,589	20	56,449,799							
	1998	22	+60,273,518	23	56,825,739							
	1999	22	60,941,298	23	58,203,871							

* 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.

GEOTHERMAL NOTICES FILED AND INSPECTIONS - 1999*

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	
Wendell	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	1	0	1	0	2	0	0	0	0	0	1	1	0	0	2	
Mono County	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
District G1 Totals	1	0	1	0	2	0	0	0	0	0	1	1	0	3	5	175
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	1	1	0	2	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	1	0	0	1	0	6	11	6	23	0	0	1	0	1	
Desert Hot Springs	0	3	0	0	3	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Riverside County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
San Bernardino	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
San Luis Obispo	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	
District G2 Totals	0	5	0	0	5	0	7	12	6	25	0	0	1	0	1	152
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	4	2	0	6	0	11	0	0	11	
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	4	2	0	6	0	11	0	0	11	979
STATE TOTALS	1	6	1	0	8	0	11	14	6	31	1	12	1	3	17	1,306

*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 decreased in 1999. According to the BLM, 1 well was permitted during federal fiscal year 1999 (October 1998-September 1999), compared with 2 wells permitted the year before.

GEOTHERMAL EXPLORATORY WELLS DRILLED TO TOTAL DEPTH IN 1999

County				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)
	T.	R.	Sec.							
						NONE				

GEOTHERMAL CEQA APPLICATIONS AND SITE VISITS

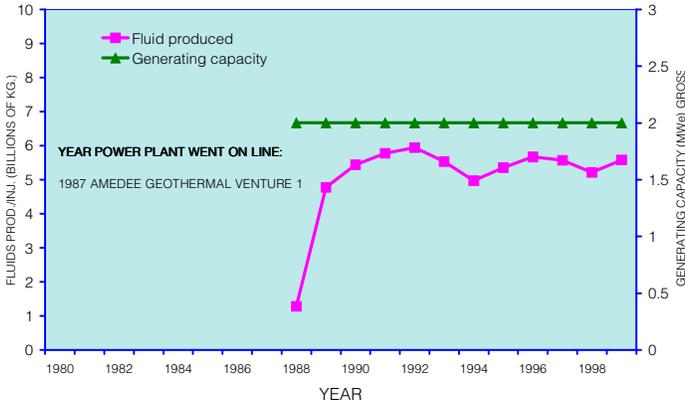
Year	Projects filed				Notices issued				Reports				Site inspections		
	Temperature gradient	Exploratory	Other	Total	Preparation	Exemption	Determination	Total	Negative declaration	Draft EIR	Final EIR	Total	General	Specific	Total
1980	24	6	0	30	9	20	6	35	3	4	4	11	2	9	11
1981	12	7	0	19	15	15	6	36	3	3	2	8	0	11	11
1982	2	6	0	8	5	3	5	13	2	1	2	5	0	2	2
1983	4	7	0	11	4	6	2	12	1	2	2	5	0	5	5
1984	5	3	0	8	1	7	5	13	0	4	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	1	3	1	1	1	1	1	0	1
1987	0	5	0	5	0	3	1	4	1	1	0	1	1	4	5
1988	0	1	0	1	0	1	1	2	0	0	0	0	0	0	0
1989	0	2	0	2	0	1	1	2	1	0	0	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	2	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
1996	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1997	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1998	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1999	0	1	1	2	0	0	1	1	1	0	0	1	0	3	3

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

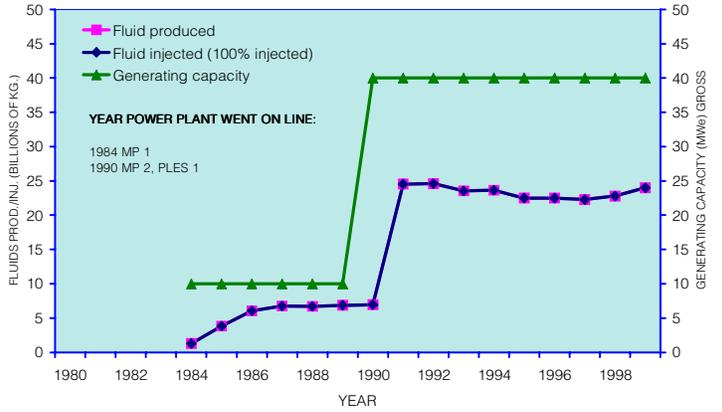
DISTRICT NO. G1



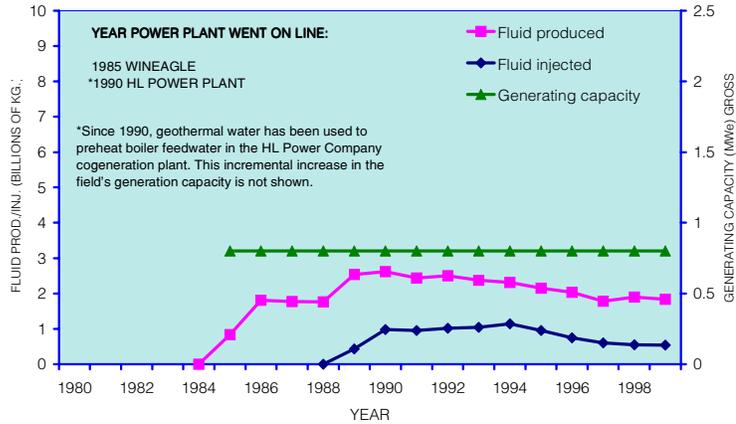
AMEDEE GEOTHERMAL FIELD



CASA DIABLO GEOTHERMAL FIELD



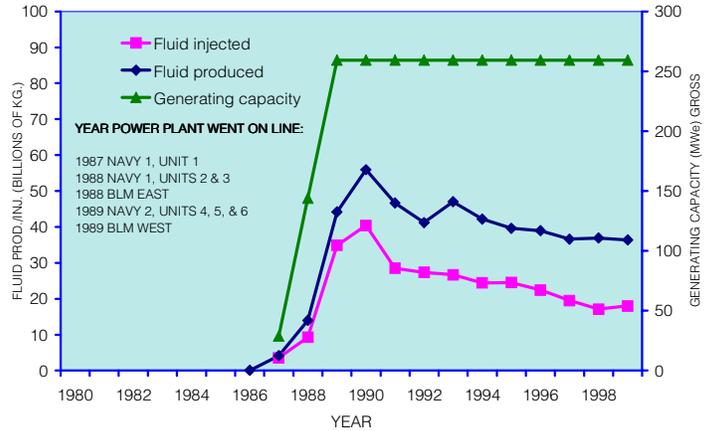
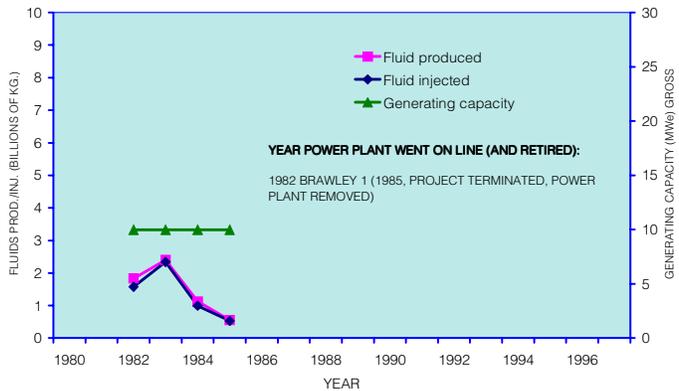
WENDEL GEOTHERMAL FIELD



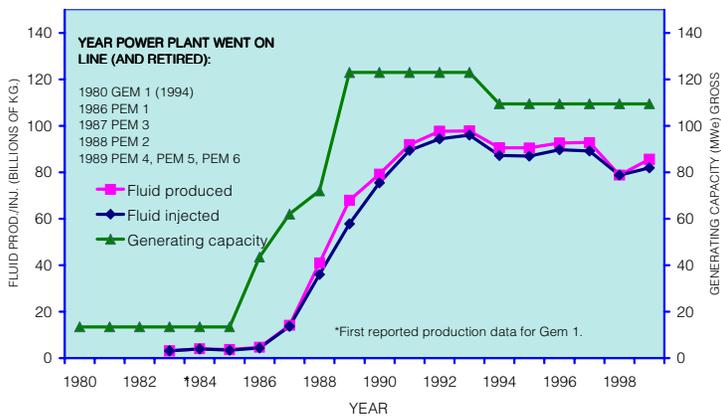
DISTRICT NO. G2



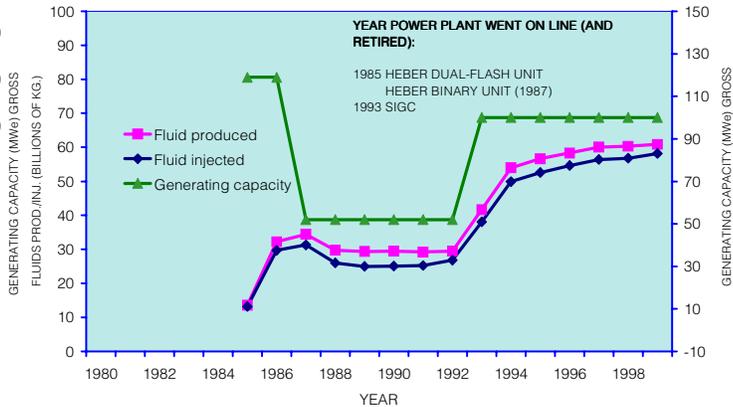
BRAWLEY GEOTHERMAL FIELD



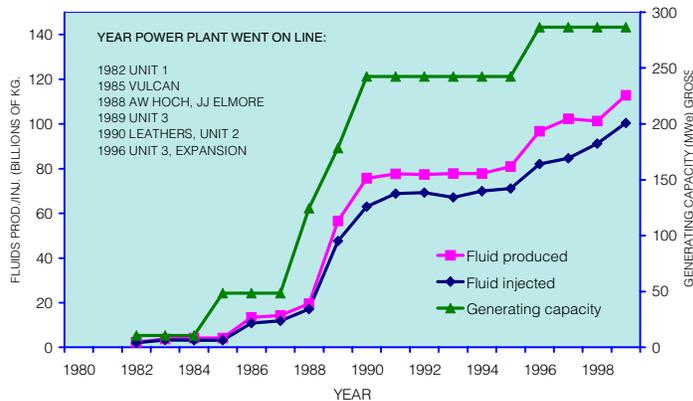
EAST MESA GEOTHERMAL FIELD



HEBER GEOTHERMAL FIELD

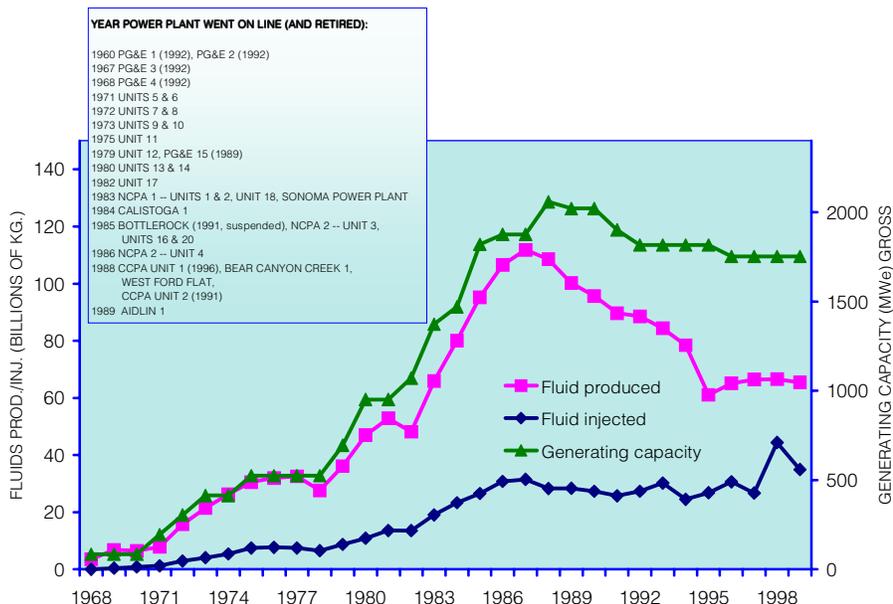


SALTON SEA GEOTHERMAL FIELD



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 1998 are published in the *84th 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."

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 1999-00 fiscal year, the rate of assessment was established at \$0.0326159 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 redrilling abandoned wells.

For the 1999-00 fiscal year, the fee-assessment was established at \$1,467.00 per high-temperature geothermal well.

Collection of Funds by Assessment

Funds for the support of the Department of

Financial Statement

1998-99 Fiscal Year

Beginning Resource	\$	539,000.00
Balance Available from Prior Year	\$	6,000.00
Revenue Applicable to Oil, Gas, and Geothermal Operations	\$	<u>11,000,000.00</u>
Total Resources	\$	11,545,000.00
Total Expenditures	\$	<u>10,641,000.00</u>
Ending Resources	\$	904,000.00

Hazardous and Idle-deserted Well Abandonment Expenditures

1998-99 Fiscal Year

No. of Wells			
67	Hazardous and Idle-deserted Wells Plugged and Abandoned	\$	409,005.94
0	Section 3237 PRC Wells Plugged and Abandoned	\$	9,341.24
<u>4</u>	Orphaned Wells Plugged and Abandoned (HIDWAF)	\$	<u>66,875.85</u>
71	Total Wells Plugged and Abandoned	\$	485,223.03
31	Wells On Which Remedial Action Was Taken	\$	<u>64,590.49</u>
	Gross Expenditure	\$	549,813.52
	Bond Reimbursement	\$	-53,261.53
	Lien Reimbursement	\$	<u>- 4,083.50</u>
	Net Expenditure	\$	492,468.49

Geothermal

0	Hazardous and Idle-deserted Wells Plugged and Abandoned	\$	0.00
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Underground Injection Control Program Expenditures

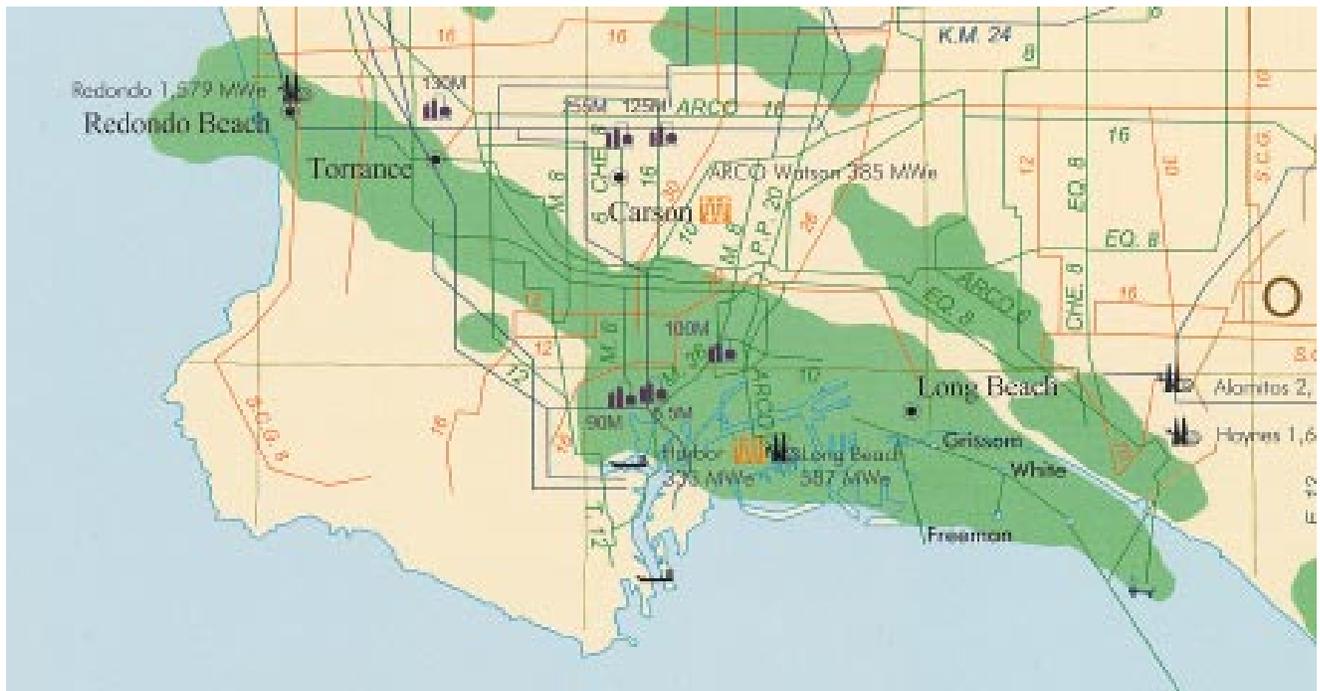
(Oct. 1, 1998 – Sept. 30, 1999 Federal Fiscal Year)*

Beginning Federal Grant Allotment	\$	446,600.00
Balance Available from Prior Year	\$	0.00
Total Resources	\$	446,600.00
Total Federal Dollar Expenditures	\$	<u>439,755.00</u>
Ending Resources	\$	6,845.00

* Amounts reflect federal funding only.



Division employees pose in front of the Taft field office in 1919. The history of the oil, gas, and geothermal industries in California is recounted in *Drilling Through Time, 75 years with California's Division of Oil and Gas*, by William Rintoul, available from the division or from Amazon.com.



Just published, the third edition of *The Energy Map of California* includes sedimentary basins; oil, gas, and geothermal fields; major pipelines; tanker terminals; offshore platforms; refineries; fossil fuel and geothermal electrical generating plants; cogeneration plants; nuclear power plants; and hydroelectric plants. Flat or folded maps are available for \$5 from all division offices.