



California Geologic Energy Management Division

SB 854 Report

Reporting Period: January 1, 2021 – December 31, 2022

Prepared Pursuant to Senate Bill 854 (Chapter 727, Statutes of 2021)

Prepared Pursuant to Senate Bill 211 (Chapter 574, Statutes of 2022)

February 2024

Gavin Newsom, Governor, State of California

David Shabazian, Director, Department of Conservation

Douglas Ito, State Oil & Gas Supervisor

(This page intentionally blank.)

CONTENTS

ABOUT THE CALIFORNIA GEOLOGIC ENERGY MANAGEMENT DIVISION4

CalGEM Districts.....4

INTRODUCTION5

Objective and Scope5

Contact Information6

OIL & GAS OPERATIONS IN CALIFORNIA7

Public Resources Code section 3113(a)(1): The number of shall-witness and may-witness operations performed.7

Public Resources Code section 3113(a)(2): The number of shall-witness and may-witness operations performed that were witnessed in person.10

Public Resources Code section 3113(a)(3): The number of shall witness and may-witness operations performed and witnessed remotely.13

Public Resources Code section 3113(a)(4): The number of shall-witness and may-witness operations performed on critical wells.15

Public Resources Code section 3113(a)(5): The number of shall-witness and may-witness operations performed on critical wells that were witnessed in person.....18

Public Resources Code section 3113(a)(6): The number of shall-witness and may-witness operations performed on critical wells witnessed remotely.20

Public Resources Code section 3113(a)(7): A complete list of all shall-witness operations that CalGEM witnessed remotely.22

APPENDIX A – REFERENCES & DATA SOURCES24

APPENDIX B – GLOSSARY.....25

APPENDIX C – PUBLIC RESOURCES CODE SECTION 311327

CONTACT.....29

ABOUT THE CALIFORNIA GEOLOGIC ENERGY MANAGEMENT DIVISION

The California Geologic Energy Management Division (CalGEM) prioritizes the protection of public health, safety, and the environment in its oversight of oil, natural gas, and geothermal operations in California. To do that, CalGEM uses data, science and sound engineering practices to regulate the drilling, operation, and permanent closure of energy resource wells. CalGEM also regulates certain pipelines and facilities associated with production and injection. CalGEM has adopted various regulations that require the operator to provide CalGEM an opportunity to witness certain tests, inspections, and other key operations. For some of those operations, CalGEM is authorized at its discretion to witness ("may-witness"), but for some operations the regulations require that CalGEM be present to witness ("shall-witness").

When CalGEM was established in 1915, the initial focus of regulation was the protection of oil and gas resources in the State from production practices that could harm the ultimate level of hydrocarbon recovery. Early CalGEM regulations included well spacing requirements and authority to limit production rates. However, those regulations and the focus of CalGEM evolved and came to emphasize the protection of public health, safety, and the environment.

CalGEM has grown significantly since it was established in 1915 and has taken major steps to ensure it will be able to handle challenges in a manner consistent with public expectations for a modern, efficient, collaborative, and science-driven regulatory agency.

In 2019, the mission of CalGEM changed to include protecting public health and safety, environmental quality, and the reduction and mitigation of greenhouse gas emissions associated with the development of hydrocarbon and geothermal resources in a manner that meets the energy needs of the state.

CalGEM Districts

Effective 2021, CalGEM operates out of three districts to best serve the needs of the State: Northern, Central (formerly Inland), and Southern. Each district has its own offices where staff are available to assist the public and interested parties. For more information about CalGEM, visit: <https://www.conservation.ca.gov/calgem>.



INTRODUCTION

Objective and Scope

This is an annual report on the number of oil and gas operations that occurred and that were witnessed by CalGEM in the State from January 1, 2021, to December 31, 2022, as required by Senate Bill 854 (Committee on Budget and Fiscal Review, Ch. 51, Statutes of 2018) and Assembly Bill 211 (Committee on Budget, Chapter 574, Statutes of 2022).

Public Resources Code section 3113(a) requires that this report include the following information statewide and by district:

1. The number of shall-witness and may-witness operations performed. The number of each type of may-witness operation as identified by law or regulation included in the total shall be provided.
2. The number of shall-witness and may-witness operations performed that were witnessed by the division in person. The number of each type of may-witness operation as identified by law or regulation included in the total shall be provided.
3. The number of shall witness and may-witness operations performed where division personnel did not witness the operations in person and witnessed the operations remotely. The number of each type of may-witness operation as identified by law or regulation included in the total shall be provided.
4. The number of shall-witness and may-witness operations performed on critical wells. The number of each type of may-witness operation as identified by law or regulation included in the total shall be provided.
5. The number of shall-witness and may-witness operations performed on critical wells that were witnessed by the division in person. The number of each type of may-witness operation as identified by law or regulation included in the total shall be provided.
6. The number of shall-witness and may-witness operations performed on critical wells where division personnel did not witness the operations in person and witnessed the operations remotely. The number of each type of may-witness operation as identified by law or regulation included in the total shall be provided.

7. A complete list of all shall-witness operations where division personnel did not witness the operations in person and witnessed the operations remotely. Information about each operation, including, but not limited to, the type of operation, the date, location, API number, and district, shall be included.

Contact Information

For more information about CalGEM visit: <https://www.conservation.ca.gov/calgem>.

For questions regarding the content of this report, please contact the Department of Conservation's Public Affairs Office at pao@conservation.ca.gov.

OIL & GAS OPERATIONS IN CALIFORNIA

Public Resources Code section 3113(a)(1): The number of shall-witness and may-witness operations performed.

During the 2021 reporting period, 60,226 shall-witness and 24,293 may-witness operations for a total of 84,519 operations were performed. This is an 41% increase in volume in total operations, 45% increase in shall-witness and 32% increase in may-witness relative to 2020.

Table 1A. 2021 Shall-Witness and May-Witness Operations Performed in CalGEM Districts

	Performed Shall	Performed May	District Total
Northern District	5,852	3,831	9,683
Central District	40,221	16,691	56,912
Southern District	14,153	3,771	17,924
STATEWIDE TOTAL	60,226	24,293	84,519
% Change from 2020	+45%	+32%	+41%

Table 1B. 2021 May-Witness Operations Performed in CalGEM Districts by Type

Type	Northern District	Central District	Southern District	Total
Abandoned Well Location (Training)*	0	79	0	79
Blowout Prevention Equipment (Training)*	0	50	10	60
Cement Memo – Cavity Shot/Perf	28	403	6	437
Cement Memo – Cement Bond Evaluation	1	0	0	1
Cement Memo – Cement Squeeze	165	576	303	1,044
Cement Memo – Plug Placement	124	119	813	1,056
Cement Memo – Plug Tag (Training)*	0	4	0	4
Cleanout Tag	217	3,677	286	4,180
Complaint Follow-Up	0	3	5	8
Conditions of Approval	180	3	0	183
Environmental Facility Inspection (Training)*	0	1	0	1
Environmental Miscellaneous Lease Inspection (Training)*	0	2	0	2
Environmental Well Site Inspection (Training)*	0	6	0	6
Fluid Level	1,104	3,506	499	5,109
Fluid Sample	3	22	5	30

Type	Northern District	Central District	Southern District	Total
Gas Leak Detection	143	10	152	305
Miscellaneous Inspection Form	81	5	66	152
Other	11	27	8	46
Pipeline – Other Test/Inspection	41	36	62	139
Pipeline Pressure Test (Training)*	0	0	1	1
Pressure Test – Casing Only	148	582	38	768
Pressure Test – Tubing Only	10	4	1	15
Radioactive Tracer Survey	531	4,828	279	5,638
Reservoir Test	18	11	9	38
Safety Valve Test	1	0	0	1
SAPT (Casing & Tubing)	35	1,350	118	1,503
Spill Drill	3	0	0	3
Subsurface Safety Valve Testing	30	0	64	94
Surface Safety Valve Testing	142	0	17	159
Tank/Vessel Test	34	41	16	91
UIC Well Inspection (Training)*	0	45	1	46
Well MIT	514	120	811	1,445
Well Pressure Test	255	1,181	201	1,637
Wellhead Valve Testing	12	0	0	12
Total	3,831	16,691	3,771	24,293

* A “training” inspection is an inspection that was shall-witnessed by a fully qualified inspector, with a second inspection performed by a trainee that is counted as a “may-witness” so that for the purposes of this report, two inspections are performed and counted for the same operator activity. As “shall-witness” tests are not included in this table, only the may-witness portion of the inspection is included here. The numbers shown are the actual number of tests performed by trainees in the field.

During the 2022 reporting period, 76,362 shall-witness and 22,796 may-witness operations for a total of 99,158 operations were performed. This is a 17% increase in volume in total operations, 27% increase in shall-witness, and 6% decrease in may-witness relative to 2021.

Table 1C. 2022 Shall-Witness and May-Witness Operations Performed in CalGEM Districts

	Performed Shall	Performed May	District Total
Northern District	8,823	2,342	11,165
Central District	55,103	15,441	70,544

	Performed Shall	Performed May	District Total
Southern District	12,436	5,013	17,449
STATEWIDE TOTAL	76,362	22,796	99,158
% Change from 2021	+27%	-6%	+17%

Table 1D. 2022 May-Witness Operations Performed in CalGEM Districts by Type

Type	Northern District	Central District	Southern District	Total
Abandoned Well Location (Training)*	0	14	0	14
Blowout Prevention Equipment (Training)*	9	30	29	68
Cement Memo – Cavity Shot/Perf	9	205	1	215
Cement Memo – Cement Squeeze	70	216	353	639
Cement Memo – Plug Placement	94	53	1,023	1,170
Cement Memo – Plug Tag (Training)*	21	24	7	52
Cleanout Tag	204	4,867	371	5,442
Complaint Follow-Up	0	8	25	33
Conditions of Approval	112	8	0	120
Environmental Facility Inspection (Training)*	0	3	0	3
Environmental Miscellaneous Lease Inspection (Training)*	0	8	0	8
Environmental Well Site Inspection (Training)*	0	264	0	264
Fluid Level	100	918	975	1,993
Fluid Sample	15	16	41	72
Gas Leak Detection	7	113	262	382
Incident Follow-Up (Training)*	0	2	1	3
Miscellaneous Inspection Form	16	30	197	243
Other	20	18	0	38
Pipeline – Other Test/Inspection	12	23	11	46
Pipeline Pressure Test (Training)*	0	1	0	1
Pressure Test – Casing Only	124	1,385	85	1,594
Pressure Test – Tubing Only	11	6	1	18
Radioactive Tracer Survey	444	4,489	135	5,068
Reservoir Test	11	5	3	19
Standard Annular Pressure Test (SAPT) (Casing & Tubing)	34	1,804	135	1,973

Type	Northern District	Central District	Southern District	Total
Safety System Inspection/Spill Drill (Training)*	0	0	2	2
Surface Safety Valve Testing	243	0	12	255
Tank/Vessel Test	3	31	5	39
Underground Injection Control Well Inspection (Training)*	0	4	16	20
Well Mechanical Integrity Testing (MIT)	437	82	1,065	1,584
Well Pressure Test	346	814	258	1,418
Total	2,342	15,441	5,013	22,796

* A "training" inspection is an inspection that was shall-witnessed by a fully qualified inspector, with a second inspection performed by a trainee that is counted as a "may-witness" so that for the purposes of this report, two inspections are performed and counted for the same operator activity. As "shall-witness" tests are not included in this table, only the may-witness portion of the inspection is included here. The numbers shown are the actual number of tests performed by trainees in the field.

Public Resources Code section 3113(a)(2): The number of shall-witness and may-witness operations performed that were witnessed in person.

During the 2021 reporting period, 45,538 shall-witness and 1,489 may-witness operations for a total of 47,027 operations were performed and witnessed in person.

Table 2A. 2021 Operations Performed in CalGEM Districts that were Witnessed in Person

	Performed Shall	Performed May	District Total
Northern District	4,417	500	4,917
Central District	30,618	728	31,346
Southern District	10,503	261	10,764
STATEWIDE TOTAL	45,538	1,489	47,027

Note: Data on remote and in person witnessing are not available prior to 2021.¹

Table 2B. 2021 May-Witness Operations Witnessed in Person by Type

Type	Northern District	Central District	Southern District	Total
Abandoned Well Location (Training)*	0	79	0	79
Blowout Prevention Equipment (Training)*	0	50	10	60

¹ Data on remote witnessing versus in person witnessing was collected beginning in 2021 after a required update of the WellSTAR database was implemented to allow for separate tracking. Data prior to this date on remote versus in person witnessing is not available.

Type	Northern District	Central District	Southern District	Total
Cement Memo – Cavity Shot/Perf	24	20	0	44
Cement Memo – Cement Squeeze	30	28	6	64
Cement Memo – Plug Placement	57	17	44	118
Cement Memo – Plug Tag (Training)*	0	4	0	4
Cleanout Tag	43	142	38	223
Complaint Follow-Up	0	2	4	6
Conditions of Approval	43	0	0	43
Environmental Facility Inspection (Training)*	0	1	0	1
Environmental Miscellaneous Lease Inspection (Training)*	0	2	0	2
Environmental Well Site Inspection (Training)*	0	6	0	6
Fluid Level	1	185	25	211
Gas Leak Detection	139	7	71	217
Miscellaneous Inspection Form	53	5	52	110
Pipeline – Other Test/Inspection	40	0	2	42
Radioactive Tracer Survey	0	22	0	22
Reservoir Test	0	0	1	1
UIC Well Inspection (Training)*	0	45	0	45
Well MIT	0	0	2	2
Well Pressure Test	70	113	6	189
Total	500	728	261	1,489

* A “training” inspection is an inspection that was shall-witnessed by a fully qualified inspector, with a second inspection performed by a trainee that is counted as a “may-witness” so that for the purposes of this report, two inspections are performed and counted for the same operator activity. As “shall-witness” tests are not included in this table, only the may-witness portion of the inspection is included here. The numbers shown are the actual number of tests performed by trainees in the field.

During the 2022 reporting period, 63,272 shall-witness and 3,066 may-witness operations for a total of 66,338 operations were performed and witnessed in person. This is a 41% increase in volume in total operations, 39% increase in shall-witness, and 105% increase in may-witness relative to 2021.

Table 2C. 2022 Operations Performed in CalGEM Districts that were Witnessed in Person

	Performed Shall	Performed May	District Total
Northern District	7,482	366	7,848
Central District	45,816	1,900	47,716
Southern District	9,974	800	10,774
STATEWIDE TOTAL	63,272	3,066	66,338
% Change from 2021	+39%	+105%	+41%

Table 2D. 2022 May-Witness Operations Witnessed in Person by Type

Type	Northern District	Central District	Southern District	Total
Abandoned Well Location (Training)*	0	14	0	14
Blowout Prevention Equipment (Training)*	9	30	29	68
Cement Memo – Cavity Shot/Perf	8	198	0	206
Cement Memo – Cement Squeeze	41	208	39	288
Cement Memo – Plug Placement	60	49	188	297
Cement Memo – Plug Tag (Training)*	21	24	6	51
Cleanout Tag	43	749	46	838
Complaint Follow-Up	0	7	25	32
Conditions of Approval	45	3	0	48
Environmental Facility Inspection (Training)*	0	3	0	3
Environmental Miscellaneous Lease Inspection (Training)*	0	8	0	8
Environmental Well Site Inspection (Training)*	0	264	0	264
Fluid Level	3	76	16	95
Fluid Sample	1	0	6	7
Gas Leak Detection	7	99	200	306
Incident Follow Up (Training)*	0	2	1	3
Miscellaneous Inspection Form	15	30	169	214
Pipeline – Other Test/Inspection	12	0	0	12
Pipeline Pressure Test (Training)*	0	1	0	1
Radioactive Tracer Survey	0	12	1	13
Reservoir Test – Step Rate	0	1	2	3
Safety System Inspection/Spill Drill (Training)*	0	0	1	1
UIC Well Inspection (Training)*	0	4	2	6

Type	Northern District	Central District	Southern District	Total
Well MIT	0	0	45	45
Well Pressure Test	101	118	24	243
Total	366	1,900	800	3,066

* A "training" inspection is an inspection that was shall-witnessed by a fully qualified inspector, with a second inspection performed by a trainee that is counted as a "may-witness" so that for the purposes of this report, two inspections are performed and counted for the same operator activity. As "shall-witness" tests are not included in this table, only the may-witness portion of the inspection is included here. The numbers shown are the actual number of tests performed by trainees in the field.

Public Resources Code section 3113(a)(3): The number of shall witness and may-witness operations performed and witnessed remotely.

During the 2021 reporting period, 12,642 shall-witness and 6,136 may-witness operations for a total of 18,778 operations were performed and witnessed remotely.

Table 3A. 2021 Operations Performed in CalGEM Districts that were Witnessed Remotely

	Performed Shall	Performed May	District Total
Northern District	1,201	541	1,742
Central District	7,956	3,946	11,902
Southern District	3,485	1,649	5,134
STATEWIDE TOTAL	12,642	6,136	18,778

Note: Data on remote and in person witnessing are not available prior to 2021.²

Table 3B. 2021 May-Witness Operations Witnessed Remotely by Type

Type	Northern District	Central District	Southern District	Total
Cement Memo – Cavity Shot/Perf	1	2	3	6
Cement Memo – Cement Squeeze	42	3	270	315
Cement Memo – Plug Placement	27	3	714	744
Cleanout Tag	122	2,289	219	2,630
Complaint Follow-Up	0	1	1	2
Conditions of Approval	132	0	0	132

² Data on remote witnessing versus in person witnessing was collected beginning in 2021 after a required update of the WellSTAR database was implemented to allow for separate tracking. Data prior to this date on remote versus in person witnessing is not available.

Type	Northern District	Central District	Southern District	Total
Fluid Level	0	571	140	711
Fluid Sample	1	0	0	1
Gas Leak Detection	1	3	80	84
Miscellaneous Inspection Form	28	0	14	42
Pipeline – Other Test/Inspection	1	0	4	5
Pipeline Pressure Test (Training)*	0	0	1	1
Radioactive Tracer Survey	0	4	5	9
Reservoir Test – Pressure Fall Off	0	0	1	1
Reservoir Test – Step Rate	0	0	1	1
Safety Valve Test	1	0	0	1
UIC Well Inspection (Training)*	0	0	1	1
Well MIT	0	2	0	0
Well Pressure Test	185	1,068	195	1,448
Total	541	3,946	1,649	6,136

* A “training” inspection is an inspection that was shall-witnessed by a fully qualified inspector, with a second inspection performed by a trainee that is counted as a “may-witness” so that for the purposes of this report, two inspections are performed and counted for the same operator activity. As “shall-witness” tests are not included in this table, only the may-witness portion of the inspection is included here. The numbers shown are the actual number of tests performed by trainees in the field.

During the 2022 reporting period, 12,747 shall-witness and 7,424 may-witness operations for a total of 20,171 operations were performed and witnessed remotely. This is a 7% increase in volume in total operations, <1% increase in shall-witness, and 21% increase in may-witness relative to 2021.

Table 3C. 2022 Operations Performed in CalGEM Districts that were Witnessed Remotely

	Performed Shall	Performed May	District Total
Northern District	1,123	517	1,640
Central District	9,217	4,341	13,558
Southern District	2,407	2,566	4,973
STATEWIDE TOTAL	12,747	7,424	20,171
% Change from 2021	<1%	+21%	+7%

Table 3D. 2022 May-Witness Operations Witnessed Remotely by Type

Type	Northern District	Central District	Southern District	Total
Cement Memo – Cavity Shot/Perf	1	7	1	9
Cement Memo – Cement Squeeze	29	8	314	351
Cement Memo – Plug Placement	34	4	835	873
Cement Memo – Plug Tag (Training)*	0	0	1	1
Cleanout Tag	138	3,571	217	3,926
Complaint Follow-Up	0	1	0	1
Conditions of Approval	67	0	0	67
Fluid Level	2	25	839	866
Fluid Sample	0	0	4	4
Gas Leak Detection	0	11	62	73
Miscellaneous Inspection Form	1	0	28	29
Radioactive Tracer Survey	0	18	16	34
Safety System Inspection/Spill Drill (Training)*	0	0	1	1
UIC Well Inspection (Training)*	0	0	14	14
Well Pressure Test	245	696	234	1,175
Total	517	4,341	2,566	7,424

* A “training” inspection is an inspection that was shall-witnessed by a fully qualified inspector, with a second inspection performed by a trainee that is counted as a “may-witness” so that for the purposes of this report, two inspections are performed and counted for the same operator activity. As “shall-witness” tests are not included in this table, only the may-witness portion of the inspection is included here. The numbers shown are the actual number of tests performed by trainees in the field.

Public Resources Code section 3113(a)(4): The number of shall-witness and may-witness operations performed on critical wells.

During the 2021 reporting period, 10,066 shall-witness and 3,135 may-witness operations for a total of 13,201 operations were performed. This is a 42% increase in volume in total operations, 60% increase in shall-witness, and 6% increase in may-witness relative to 2020.

Table 4A. 2021 Operations Performed in CalGEM Districts on Critical Wells

	Performed Shall	Performed May	District Total
Northern District	349	286	635
Central District	1,124	425	1,549

	Performed Shall	Performed May	District Total
Southern District	8,593	2,424	11,017
STATEWIDE TOTAL	10,066	3,135	13,201
% Change from 2020	+60%	+6%	+42%

Table 4B. 2021 May-Witness Operations Performed on Critical Wells by Type

Type	Northern District	Central District	Southern District	Total
Abandoned Well Location (Training)*	0	5	0	5
Blowout Prevention Equipment (Training)*	0	27	7	34
Cement Memo – Cavity Shot/Perf	5	15	2	22
Cement Memo – Cement Squeeze	18	9	212	239
Cement Memo – Plug Placement	29	7	428	464
Cleanout Tag	13	102	181	296
Complaint Follow-Up	0	0	2	2
Conditions of Approval	60	0	0	60
Environmental Well Site Inspection (Training)*	0	2	0	2
Fluid Level	46	80	260	386
Fluid Sample	0	0	3	3
Gas Leak Detection	3	0	100	103
Miscellaneous Inspection Form	22	0	40	62
Other	1	1	7	9
Pressure Test – Casing Only	8	13	29	50
Pressure Test – Tubing Only	2	0	0	2
Radioactive Tracer Survey	14	85	184	283
Reservoir Test	1	0	8	9
Safety Valve Test	1	0	0	1
SAPT (Casing & Tubing)	2	41	86	129
Safety Valve Testing	20	0	74	94
UIC Well Inspection (Training)*	0	2	1	3
Well MIT	24	0	649	673
Well Pressure Test	17	36	151	204
Total	286	425	2,424	3,135

* A "training" inspection is an inspection that was shall-witnessed by a fully qualified inspector, with a second inspection performed by a trainee that is counted as a "may-witness" so that for the purposes

of this report, two inspections are performed and counted for the same operator activity. As “shall-witness” tests are not included in this table, only the may-witness portion of the inspection is included here. The numbers shown are the actual number of tests performed by trainees in the field.

During the 2022 reporting period, 10,088 shall-witness and 4,006 may-witness operations for a total of 14,094 operations were performed on critical wells. This is a 7% increase in volume in total operations, a 1% increase in shall-witness, and 28% increase in may-witness relative to 2021.

Table 4C. 2022 Operations Performed in CalGEM Districts on Critical Wells

	Performed Shall	Performed May	District Total
Northern District	340	141	481
Central District	2,744	416	3,160
Southern District	7,004	3,449	10,453
STATEWIDE TOTAL	10,088	4,006	14,094
% Change from 2021	+1%	+28%	+7%

Table 4D. 2022 May-Witness Operations Performed on Critical Wells by Type

Type	Northern District	Central District	Southern District	Total
Blowout Prevention Equipment (Training)*	0	11	25	36
Cement Memo – Cavity Shot/Perf	3	12	1	16
Cement Memo – Cement Squeeze	8	10	205	223
Cement Memo – Plug Placement	24	4	620	648
Cement Memo – Plug Tag (Training)*	0	0	6	6
Cleanout Tag	16	108	233	357
Complaint Follow-Up	0	1	18	19
Conditions of Approval	9	1	0	10
Environmental Well Site Inspection (Training)*	0	52	0	52
Fluid Level	6	19	820	845
Fluid Sample	1	0	23	24
Gas Leak Detection	1	13	135	149
Miscellaneous Inspection Form	5	6	90	101
Other	0	1	0	1
Pressure Test – Casing Only	5	23	58	86
Pressure Test – Tubing Only	2	0	0	2

Type	Northern District	Central District	Southern District	Total
Radioactive Tracer Survey	11	86	87	184
Reservoir Test	0	0	1	1
SAPT (Casing & Tubing)	1	45	91	137
Surface Safety Valve Testing	10	0	10	20
UIC Well Inspection (Training)*	0	0	14	14
Well MIT	23	3	856	882
Well Pressure Test	16	21	156	193
Total	141	416	3,449	4,006

* A "training" inspection is an inspection that was shall-witnessed by a fully qualified inspector, with a second inspection performed by a trainee that is counted as a "may-witness" so that for the purposes of this report, two inspections are performed and counted for the same operator activity. As "shall-witness" tests are not included in this table, only the may-witness portion of the inspection is included here. The numbers shown are the actual number of tests performed by trainees in the field.

Public Resources Code section 3113(a)(5): The number of shall-witness and may-witness operations performed on critical wells that were witnessed in person.

During the 2021 reporting period, 7,709 shall-witness and 278 may-witness operations for a total of 7,987 operations were performed on critical wells and witnessed in person.

Table 5A. 2021 Operations Performed on Critical Wells that were Witnessed in Person

	Performed Shall	Performed May	District Total
Northern District	200	56	256
Central District	844	76	920
Southern District	6,665	146	6,811
STATEWIDE TOTAL	7,709	278	7,987

Note: Data on remote and in person witnessing are not available prior to 2021.

Table 5B. 2021 May-Witness Operations Performed on Critical Wells Witnessed in Person, by Type

Type	Northern District	Central District	Southern District	Total
Abandoned Well Location (Training)*	0	5	0	5
Blowout Prevention Equipment (Training)*	0	27	7	34
Cement Memo – Cavity Shot/Perf	4	2	0	6

Type	Northern District	Central District	Southern District	Total
Cement Memo – Cement Squeeze	5	2	4	11
Cement Memo – Plug Placement	21	3	11	35
Cleanout Tag	6	21	9	36
Complaint Follow-Up	0	0	1	1
Conditions of Approval	7	0	0	7
Environmental Well Site Inspection (Training)*	0	2	0	2
Fluid Level	0	7	14	21
Gas Leak Detection	3	0	62	65
Miscellaneous Inspection Form	1	0	30	31
Radioactive Tracer Survey	0	2	0	2
Reservoir Test – Step Rate	0	0	1	1
UIC Well Inspection (Training)*	0	2	0	2
Well MIT	0	0	2	2
Well Pressure Test	9	3	5	17
Total	56	76	146	278

* A “training” inspection is an inspection that was shall-witnessed by a fully qualified inspector, with a second inspection performed by a trainee that is counted as a “may-witness” so that for the purposes of this report, two inspections are performed and counted for the same operator activity. As “shall-witness” tests are not included in this table, only the may-witness portion of the inspection is included here. The numbers shown are the actual number of tests performed by trainees in the field.

During the 2022 reporting period, 8,545 shall-witness and 699 may-witness operations for a total of 9,244 operations were performed on critical wells and witnessed in person. This is a 16% increase in volume in total operations, 11% increase in shall-witness, and 151% increase in may-witness relative to 2021.

Table 5C. 2022 Operations Performed on Critical Wells that were Witnessed in Person

	Performed Shall	Performed May	District Total
Northern District	228	37	265
Central District	2,514	150	2,664
Southern District	5,803	512	6,315
STATEWIDE TOTAL	8,545	699	9,244
% Change from 2021	+11%	+151%	+16%

Table 5D. 2022 May-Witness Operations Performed on Critical Wells Witnessed in Person, by Type

Type	Northern District	Central District	Southern District	Total
Blowout Prevention Equipment (Training)*	0	11	25	36
Cement Memo – Cavity Shot/Perf	3	12	0	15
Cement Memo – Cement Squeeze	4	10	30	44
Cement Memo – Plug Placement	8	3	139	150
Cement Memo – Plug Tag (Training)*	0	0	5	5
Cleanout Tag	5	29	26	60
Complaint Follow-Up	0	1	18	19
Conditions of Approval	5	0	0	5
Environmental Well Site Inspection (Training)*	0	52	0	52
Fluid Level	0	8	13	21
Fluid Sample	0	0	4	4
Gas Leak Detection	1	13	113	127
Miscellaneous Inspection Form	5	6	77	88
UIC Well Inspection (Training)*	0	0	1	1
Well MIT	0	0	45	45
Well Pressure Test	6	5	16	27
Total	37	150	512	699

* A “training” inspection is an inspection that was shall-witnessed by a fully qualified inspector, with a second inspection performed by a trainee that is counted as a “may-witness” so that for the purposes of this report, two inspections are performed and counted for the same operator activity. As “shall-witness” tests are not included in this table, only the may-witness portion of the inspection is included here. The numbers shown are the actual number of tests performed by trainees in the field.

Public Resources Code section 3113(a)(6): The number of shall-witness and may-witness operations performed on critical wells witnessed remotely.

During the 2021 reporting period, 2,183 shall-witness and 1,215 may-witness operations for a total of 3,398 operations were performed on critical wells and witnessed remotely.

Table 6A. 2021 Operations Performed on Critical Wells that were Witnessed Remotely

	Performed Shall	Performed May	District Total
Northern District	134	95	229
Central District	186	106	292
Southern District	1,863	1,014	2,877
STATEWIDE TOTAL	2,183	1,215	3,398

Note: Data on remote and in person witnessing are not available prior to 2021.

Table 6B. 2021 May-Witness Operations Performed on Critical Wells Witnessed Remotely, by Type

Type	Northern District	Central District	Southern District	Total
Cement Memo – Cavity Shot/Perf	0	0	2	2
Cement Memo – Cement Squeeze	4	0	189	193
Cement Memo – Plug Placement	7	0	373	380
Cleanout Tag	2	54	148	204
Complaint Follow-Up	0	0	1	1
Conditions of Approval	52	0	0	52
Fluid Level	0	19	100	119
Gas Leak Detection	0	0	37	37
Miscellaneous Inspection Form	21	0	10	31
Radioactive Tracer Survey	0	0	5	5
Reservoir Test – Pressure Fall Off	0	0	1	1
Reservoir Test – Step Rate	0	0	1	1
Safety Valve Test	1	0	0	1
UIC Well Inspection (Training)*	0	0	1	1
Well Pressure Test	8	33	146	187
Total	95	106	1,014	1,215

* A “training” inspection is an inspection that was shall-witnessed by a fully qualified inspector, with a second inspection performed by a trainee that is counted as a “may-witness” so that for the purposes of this report, two inspections are performed and counted for the same operator activity. As “shall-witness” tests are not included in this table, only the may-witness portion of the inspection is included here. The numbers shown are the actual number of tests performed by trainees in the field.

During the 2022 reporting period, 1,474 shall-witness and 1,828 may-witness operations for a total of 3,302 operations were performed on critical wells and witnessed remotely. This is a

3% decrease in volume in total operations, 32% decrease in shall-witness, and 50% increase in may-witness relative to 2021.

Table 6C. 2022 Operations Performed on Critical Wells that were Witnessed Remotely

	Performed Shall	Performed May	District Total
Northern District	80	41	121
Central District	212	81	293
Southern District	1,182	1,706	2,888
STATEWIDE TOTAL	1,474	1,828	3,302
% Change from 2021	-32%	+50%	-3%

Table 6D. 2022 May-Witness Operations Performed on Critical Wells Witnessed Remotely, by Type

Type	Northern District	Central District	Southern District	Total
Cement Memo – Cavity Shot/Perf	0	0	1	1
Cement Memo – Cement Squeeze	4	0	175	179
Cement Memo – Plug Placement	16	1	481	498
Cement Memo – Plug Tag (Training)*	0	0	1	1
Cleanout Tag	7	63	135	205
Conditions of Approval	4	0	0	4
Fluid Level	0	1	710	711
Fluid Sample	0	0	2	2
Gas Leak Detection	0	0	22	22
Miscellaneous Inspection Form	0	0	13	13
Radioactive Tracer Survey	0	0	13	13
UIC Well Inspection (Training)*	0	0	13	13
Well Pressure Test	10	16	140	166
Total	41	81	1,706	1,828

* A “training” inspection is an inspection that was shall-witnessed by a fully qualified inspector, with a second inspection performed by a trainee that is counted as a “may-witness” so that for the purposes of this report, two inspections are performed and counted for the same operator activity. As “shall-witness” tests are not included in this table, only the may-witness portion of the inspection is included here. The numbers shown are the actual number of tests performed by trainees in the field.

Public Resources Code section 3113(a)(7): A complete list of all shall-witness operations that CalGEM witnessed remotely.

Please see the following spreadsheets which were released as attachments to this report:

Attachment 1 - Legislative Report Data 2021 Shall Witness Remote Witnessed.xls

Attachment 2 - Legislative Report Data 2022 Shall Witness Remote Witnessed.xls

APPENDIX A – REFERENCES & DATA SOURCES

California CalGEM Statutes and Regulations (January 2023):

<https://www.conservation.ca.gov/index/Pages/California-Geologic-Energy-Management-Division-Statutes-and-Regulations.aspx>

Well Statewide Tracking and Reporting System (WellSTAR), an electronic database used to maintain, monitor, and track well information:

https://www.conservation.ca.gov/calgem/for_operators/Pages/WellSTAR.aspx

APPENDIX B – GLOSSARY

TERM: “Critical Well”

Critical well has the same meaning as in section 1720 of title 14 of the California Code of Regulations, or a successor regulation [*Public Resources Code section 3113(b)(1)*].

(a) “Critical well” means a well within:

(1) 300 feet of the following:

(A) Any building intended for human occupancy that is not necessary to the operation of the well; or

(B) Any airport runway.

(2) 100 feet of the following:

(A) Any dedicated public street, highway, or nearest rail of an operating railway that is in general use;

(B) Any navigable body of water or watercourse perennially covered by water;

(C) Any public recreational facility such as a golf course, amusement park, picnic ground, campground, or any other area of periodic high-density population; or

(D) Any officially recognized wildlife preserve.

Exceptions or additions to this definition may be established by the State Oil and Gas Supervisor upon his or her own judgment or upon written request of an operator. This written request shall contain justification for such an exception.

TERM: “May-witness”

An operation performed that by law CalGEM is authorized to witness [*Public Resources Code section 3113(b)(2)*]. For certain operations, CalGEM's regulations require the operator to provide CalGEM advance notice so that CalGEM may witness the operation, but the operator may proceed with the operation if CalGEM elects not to witness.

Examples of may-witness operations:

- CalGEM may witness mudding operations to determine that proper mudding conditions are met [*California Code of Regulations, title 14, section 1723.7(c)*].
- CalGEM may witness the pressure testing conducted prior to hydraulic fracturing operations [*California Code of Regulations, title 14, section 1784.1(b)*].

TERM: "Operations"

Any one or all of the activities of an operator covered by Division 3 of the Public Resources Code [*California Code of Regulations, title 14, section 1720(f)*].

TERM: "Shall-witness"

Any operation performed that by law CalGEM is required to witness [*Public Resources Code section 3113(b)(3)*].

Examples of shall-witness operations:

- CalGEM shall witness zonal cavity shot operations and retainer squeeze operations [*California Code of Regulations, title 14, section 1723.7(b) and 1723.7(d)(3)*].
- CalGEM shall witness and inspect safety and pollution control systems at the time production is commenced and at 90-day intervals thereafter [*California Code of Regulations, title 14, section 1747.10*].

APPENDIX C – PUBLIC RESOURCES CODE SECTION 3113

State of California

PUBLIC RESOURCES CODE

3113. (a) Notwithstanding Section 10231.5 of the Government Code, the division shall, in compliance with Section 9795 of the Government Code, annually prepare and transmit to the Legislature a report of all of the following information statewide and by district:

(1) The number of shall-witness and may-witness operations performed. The number of each type of may-witness operation as identified by law or regulation included in the total shall be provided.

(2) The number of shall-witness and may-witness operations performed that were witnessed by the division in person. The number of each type of may-witness operation as identified by law or regulation included in the total shall be provided.

(3) The number of shall witness and may-witness operations performed where division personnel did not witness the operations in person and witnessed the operations remotely. The number of each type of may-witness operation as identified by law or regulation included in the total shall be provided.

(4) The number of shall-witness and may-witness operations performed on critical wells. The number of each type of may-witness operation as identified by law or regulation included in the total shall be provided.

(5) The number of shall-witness and may-witness operations performed on critical wells that were witnessed by the division in person. The number of each type of may-witness operation as identified by law or regulation included in the total shall be provided.

(6) The number of shall-witness and may-witness operations performed on critical wells where division personnel did not witness the operations in person and witnessed the operations remotely. The number of each type of may-witness operation as identified by law or regulation included in the total shall be provided.

(7) A complete list of all shall-witness operations where division personnel did not witness the operations in person and witnessed the operations remotely. Information about each operation, including, but not limited to, the type of operation, the date, location, API number, and district, shall be included. The division shall maintain a written justification for each remote witnessing of shall-witness operations and provide it upon request.

(b) (1) The division is authorized to witness may-witness operations remotely. The division shall prioritize witnessing of may-witness operations in person to the maximum extent possible.

(2) This subdivision shall become inoperative on January 1, 2028.

(c) The supervisor may, only in writing and only on a case-by-case basis, authorize division personnel to witness shall-witness operations remotely. The supervisor shall not delegate the authority to approve witnessing of these shall-witness operations remotely. All written authorizations for division personnel to witness shall-witness operations remotely shall be maintained and available to the public upon request.

(d) The supervisor shall not set any positive numerical quotas for division personnel to witness operations remotely. The supervisor shall not provide a blanket authorization for remote witnessing of shall-witness operations. The supervisor shall provide written guidance to division personnel on minimum standards for remote witnessing of shall-witness and may-witness operations.

(e) For purposes of this section, the following terms have the following meanings:

(1) "Critical well" has the same meaning as in Section 1720 of Title 14 of the California Code of Regulations, or a successor regulation.

(2) "May-witness" means an operation performed that by law the division is authorized to witness.

(3) "Shall-witness" means an operation performed that by law the division is required to witness.

(4) "Witnessed by the division in person" means the operation is witnessed by division personnel who were physically present at the location when the operation was performed.

(5) "Witnessed the operations remotely" or "witness the operations remotely" or "witnessing the operations remotely" means the viewing or reviewing of video, livestream, photographic, or other materials or evidence of the conduct of the operation during or after the operation was conducted without the division personnel being physically present at the location when the operation was performed.

(f) It is the policy of the state that division personnel witness operations in person that are critical to ensuring public and environmental health and safety, that the presence of division personnel in the field to regularly observe operations under the division's jurisdiction is of utmost importance, and that division staffing levels be set and maintained to ensure this policy is met. *(Amended by Stats. 2022, Ch. 574, Sec. 16. (AB 211) Effective September 27, 2022.)*

CONTACT

CALIFORNIA GEOLOGIC ENERGY MANAGEMENT DIVISION

Headquarters

715 P Street, MS 1803, Sacramento, CA 95814
(916) 445-9686 | Fax: (916) 319-9533
CalGEM_webmaster@conservation.ca.gov

Northern District

Sacramento Office

715 P Street, MS 1804, Sacramento, CA 95814
(916) 322-1110 | Fax: (916) 445-3319

Orcutt Office

195 S. Broadway, Suite 101, Orcutt, CA 93455
(805) 937-7246 | Fax: (805) 937-0673

Ventura Office

1000 S. Hill Road, Suite 116, Ventura, CA 93003
(805) 937-7246 | Fax: (805) 654-4765

Central District (formerly Inland District)

11000 River Run Blvd., Bakersfield, CA 93311
(661) 322-4031

Southern District

3780 Kilroy Airport Way, Suite 400, Long Beach, CA 90806
(562)637-4400 | Fax: (562)424-0166