

Idle Well Program Report

ON IDLE & LONG-TERM IDLE WELLS IN CALIFORNIA

Reporting Period: January 1, 2018 to December 31, 2018

Prepared Pursuant to Assembly Bill 2729 (Ch. 272, Stats. of 2016)

July 1, 2019

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ABOUT DOGGR

The Division of Oil, Gas, and Geothermal Resources (DOGGR) prioritizes the protection of public health, safety, and the environment in its oversight of the oil, natural gas, and geothermal operations in California. To do that, DOGGR uses science and sound engineering practices to regulate the drilling, operation, and permanent closure of energy resource wells. DOGGR also regulates certain pipelines and facilities associated with production and injection. These duties include witnessing tests, inspections, and operations that DOGGR is both authorized and required to perform.

When DOGGR 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 DOGGR regulations included well spacing requirements and authority to limit production rates. However, those regulations and the focus of DOGGR evolved and came to include the protection of public health, safety, and the environment.

DOGGR 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.

DOGGR Districts

DOGGR operates out of four districts to best serve the needs of the State:
Northern, Coastal, Inland, and Southern.
Each district has its own offices where staff are available to assist the public and stakeholders with any requests. For more information about DOGGR, visit DOGGR's website at https://www.conservation.ca.gov/dog.





EXECUTIVE SUMMARY

The Department of Conservation (DOC) submits this report to satisfy the legislative report requirements of Assembly Bill 2729 (AB 2729) (Williams, Ch. 272, Statutes of 2016) regarding the status of idle and long-term idle wells (LTIW) for the 2018 calendar year. This report spans the period between January 1, 2018 and December 31, 2018.

Oil and gas wells that are not operated and maintained on a regular basis present several hazards to the environment as well as public health and safety. Deteriorating wells can create a conduit for contaminants such as hydrocarbons, lead, salt and sulfates to enter freshwater aquifers and pose potential risks to surface water, air quality, soils and vegetation.

Idle wells also present a liability risk to California. Operators with a large inventory of idle wells may be postponing the cost to permanently plug and abandon the wells for financial reasons. If the operator becomes insolvent, the State may inherit liability to plug those idle wells

Because of the risk and potential liability posed by idle wells in the State, DOC sponsored AB 2729 to discourage operators from leaving their wells in an idle state. Specifically, AB 2729 established new definitions for "idle well" and "long-term idle well," updated fees assessed on idle wells, revised parameters for plans for the management and elimination of long-term idle wells (LTIW), and mandated the review, evaluation, and update of DOGGR idle well regulations. The reporting period addressed in this report reflects DOGGR's first year implementing these revised statutory requirements. DOGGR invested significant resources in 2017 and 2018 to prepare for implementation, including processes to identify idle wells under the new definition, calculate and invoice new fee requirements, track fee payments, facilitate Idle Well Management Plan (IWMP) requirements, approve submitted IWMPs, and monitor IWMPs for compliance and annual reviews.

In 2018, DOGGR collected \$4.3 million in idle well fees for all wells that met the definition of idle well in the preceding calendar year. DOGGR also oversaw the implementation of 76 IWMPs, resulting in the elimination of 988 LTIW. These numbers represent a substantial increase in revenue available to remediate hazardous well conditions to protect public health and the environment, and a dramatic increase in the rate of plugging LTIWs. Additionally, DOGGR updated its regulations for the management and testing of idle wells. These idle well regulations provide for the most

rigorous testing standards for idle wells in the country to prevent damage to life, health, property, and natural resources. DOGGR anticipates that the new rules will further accelerate plugging of idle wells and LTIW.

The following key facts are included in this report:

- 29,292 wells met the definition of idle well and 17,576 of those met the definition of long-term idle well at some point during the reporting period.
- During the reporting period, the status of 1,346 idle wells changed from idle to plugged.
- During the reporting period, the status of 107 idle wells changed from idle to active.
- 76 operators submitted IWMPs for DOGGR approval.
 - 52 operators were found to be in compliance with the terms of their approved IWMPs at the conclusion of DOGGR's annual review.
 - 16 operators voluntarily voided their 2018 IWMP and filed idle well fees, totaling \$461,550 to remain in compliance with Public Resources Code section 3206.
 - Eight operators had their IWMP canceled by DOGGR due to failure to comply with the terms of their approved IWMPs. Two of the operators paid the idle well fees owed, and DOGGR is pursuing enforcement action against the remaining six operators. Four other operators received a Notice of Cancellation from DOGGR and appealed the cancellations, but in each of those cases the issues were resolved. Those four operators are included in the 52 operators found to be in compliance.
- Based upon the terms of the approved IWMPS, operators were expected to eliminate a minimum of 596 LTIW across the State.
 - o Operators eliminated 988 LTIW, significantly exceeding expectations.
 - 9 operators eliminated more long-term idle wells than was required by their approved IWMP, resulting in those operators earning 453 elimination credits, which can be used for IWMP compliance for up to two years.
- DOGGR issued orders to plug wells to 14 operators in response to failure to file idle well fees in 2018.
- The final draft of the Requirements for Idle Well Testing and Management regulations were submitted to the Office of Administrative Law on December 21, 2018 and took effect on April 1, 2019.



In sum, this report demonstrates that DOGGR has made significant progress to identify idle wells, increase funds to address wells that have not been appropriately plugged, and work with operators to reduce the overall inventory of idle wells.

This report is divided into two parts: Part 1 summarizes the objective and scope of this report and Part 2 fulfills the legislative reporting requirements prescribed in Public Resources Code section 3206.3. The appendices provide the most current lists of idle wells, references and sources of the data, and a glossary of terms.



INTRODUCTION

Objective & Scope of Report

This report provides a comprehensive accounting of the idle well population to the California Legislature and the public. This report covers the idle well counts, orphan well counts, and IWMP statistics in California from January 1, 2018 through December 31, 2018.

A primary concern with idle wells is that they pose a risk to underground sources of drinking water and are possible sources of hydrocarbon emissions. Deteriorating wells can become conduits for contamination because many go through a fresh water resource. Poorly maintained idle wells can be sources of methane and hydrogen sulfide leaks. Additionally, a large inventory of idle wells pose an increased risk that wells will become deserted when operators become financially insolvent, potentially leaving the State to fund environmental remediation.

To address these problems, DOC sponsored AB 2729 to increase bonding requirements, require operators to maintain bonds for the life of the well, increase idle well fees, reauthorize the use of idle well management plans, and direct DOGGR to promulgate regulations to better protect public health, safety, natural resources, and the environment from risks associated with idle wells.

This report presents idle well information drawn from operator records submitted to DOGGR. These records include monthly volumetric reporting, IWMPs, and well histories required for permits to abandon wells.

Public Resources Code section 3206.3(a)(1) requires that this report address the following:

- 1. A list of all idle and long-term idle wells in the State by American Petroleum Institute identification number, operator, field, and pool.
- 2. A list of all wells whose idle or long-term idle status changed in the preceding year by American Petroleum Institute identification number with the disposition and current status of each well.
- 3. A list of orphan wells remaining, the estimated costs to abandon those orphan wells, and a timeline for future orphan well abandonment with a specific



schedule of goals. Idle and LTIW that have become orphan wells shall be identified in the list. For the purposes of this report, an orphan well is a well that has no party responsible for it, leaving the State to plug it.

- 4. A list of all operators with plans filed with the Supervisor for the management and elimination of all long-term idle wells and the status of those plans.
- 5. Any additional relevant information as determined by the Supervisor.

Contact Information

For more information about the Idle Well Program, visit the program webpage: https://www.conservation.ca.gov/dog/idle_well

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

Acronyms & Abbreviations

TERM	DESCRIPTION
DOGGR	Division of Oil, Gas, and Geothermal Resources
IWMP	Idle Well Management Plan
LTIW	Long-term idle wells
NTO	Notice to Operators
PY	Personnel Year
WellSTAR	Well Statewide Tracking and Reporting



IDLE & LONG-TERM IDLE WELLS IN CALIFORNIA

1. Idle & Long-Term Idle Wells

Public Resources Code section 3206.3(a)(1)(A): A list of all idle and long-term idle wells in the state by American Petroleum Institute identification number and indicating the operator, field, and pool.

Public Resources Code section 3206.3(a)(1)(B): A list of all wells whose idle or long-term idle status changed in the preceding year by American Petroleum Institute identification number with the disposition and current status of each well.

See <u>Appendix A-1</u> for the list of all wells that met the definition of idle well at any point in the 2018 calendar year.

See <u>Appendix A-2</u> for the list of all wells that had a status change from idle to long-term idle in the 2018 calendar year.

See <u>Appendix A-3</u> for the list of all wells that had a status change from idle well to plugged.

See <u>Appendix A-4</u> for the list of wells that had a status change from idle well to active.

1.1 Idle & Long-Term Idle Wells in the State

In alignment with the 2017 Renewal Plan (for more information: https://www.conservation.ca.gov/dog/Pages/RenewalPlan.aspx), DOGGR remains committed to improving its data management via deployment of the WellSTAR application. As of March 1, 2018, DOGGR implemented the WellSTAR release associated with reporting of monthly produced and injected volumes of oil, gas, and water as required in accordance with California Code of Regulations Title 14 section 1937.1 (d) and (e). This release changed the process for how operators report the monthly volumes to DOGGR. The reporting of monthly volumes is critical to the identification of idle wells and wells that return to active status. DOGGR utilizes the monthly reported volumes for each well in the State to evaluate which wells meet the definition of idle well and which wells qualify to have their status changed from idle to active.



The 2017 idle well inventory contains all wells that met the new definition of idle well and long-term idle well at any point in the 2017 calendar year. This inventory was updated by DOGGR when an operator self-reported a well changing status and DOGGR was able to verify the change and when an idle well was plugged and abandoned in accordance with Public Resources Code section 3208.

At the end of this reporting period, a known 29,292 wells met the definition of idle well at some point during the 2018 calendar year. Based on DOGGR's idle well inventory records, DOGGR estimates that an additional 1,200-2,400 wells became idle in 2018 which are unaccounted for in the 2018 inventory. Of the total idle well population, 17,576 idle wells had been idle for eight or more years at any point during the 2018 calendar year and thus meet the new statutory definition of long-term idle well.

1.2 Idle & Long-Term Idle Wells That Changed Status in 2018

As of January 1, 2018, an estimated 29,324 wells were classified as idle wells and 17,595 of these idle wells were classified as LTIW. As of December 31, 2018, an estimated 28,032 wells were classified as idle wells and 17,870 of these idle wells were classified as LTIW. A total of 1,287 idle wells changed status to LTIW during the calendar year.

During the 2018 reporting period a total of 1,453 wells no longer met the definition of idle well. A total of 1,346 idle wells changed status from idle to plugged as they were plugged in accordance with Public Resources Code section 3208. A total of 107 idle wells are known to have changed status from idle to active. These wells returned to active status as a result of maintaining production of oil or natural gas, maintaining production of water used in production stimulation, or being used for enhanced oil recovery, reservoir pressure management, or injection for six continuous months within the year (Public Resources Code section 3008(d)). Due to the issues generating the idle well inventory described in section 1.1, DOGGR does not yet have an accurate accounting of all idle wells that changed status from idle to active during this reporting period.

2. Orphan Wells

Public Resources Code section 3206.3(a)(1)(C): A list of orphan wells remaining, the estimated costs of abandoning those orphan wells, and a timeline for future



orphan well abandonment with a specific schedule of goals. Idle and long-term idle wells that have become orphan wells shall be identified in the list. For the purposes of this report, an orphan well is a well that has no party responsible for it, leaving the state to plug and abandon it.

See Appendix A-5 for the list of idle wells determined to be deserted.

2.1 Orphan Well Process

For purposes of this report, an orphan well has been defined as "a well that has no party responsible for it, leaving the State to plug and abandon it" (Public Resources Code section 3206.3(a)(1)(C)). DOGGR's determination that a well is orphan is a multistep process that requires DOGGR to determine whether the well has been deserted by the operator, and then to determine whether there is a solvent entity responsible to plug the well. Therefore, the number of orphan wells identified in this report only reflects those orphan wells for which DOGGR has gathered sufficient information to issue a finding of desertion, and for which DOGGR has completed a financial solvency test.

Before issuing an order to plug a well, DOGGR must gather sufficient evidence to demonstrate the well has been deserted. If the operator fails to respond to the plugging order, then DOGGR will conduct a financial solvency test to decide whether to commit resources to enforcing the order or simply declare the well orphan. The financial solvency test is a factual inquiry into the solvency of the current operator and any other party responsible for plugging the well under Public Resources Code section 3237. If DOGGR determines the current operator does not have the financial resources to fully cover the cost to plug the well, previous operators that made a valid transfer after January 1, 1996, may be held responsible for the cost to plug the well (Public Resources Code section 3206.3(c)(1) & (2)). The statute does not allow DOGGR to hold a mineral interest owner responsible to plug the well unless the mineral interest owner retained a right to control the well operations that exceeds the scope of an interest customarily reserved in the lease (Public Resources Code section 3237(c)(3)). If, after researching the financial solvency for all potentially responsible parties, DOGGR determines there is no party with the financial resources to fully cover the cost to plug the well, the well can be declared orphan (Public Resources Code sections 3237(c)(1), 3251(b) & (e), 3206.3(a)(1)(C)).



DOGGR is continuing to gather evidence of desertion and conduct financial solvency tests for wells that are likely orphaned. The statutory changes implemented under AB 2729 have provided DOGGR the ability to more easily identify the wells that are likely orphan. Failure to comply with the new idle well requirements is conclusive evidence of desertion of the well. DOGGR's comprehensive efforts to implement and enforce these new requirements are facilitating systematic identification of each deserted well for which there is no solvent responsible party (Public Resources Code section 3206(c)).

The orphan well process can include multiple wells associated with the same operator and takes approximately 4-6 months to complete per order. Completion of the orphan process may result in the determination that the well is orphaned or identification of a solvent responsible party.

2.2 Orphan Well Inventory

DOGGR's Idle Well Program and Enforcement Unit are actively working the orphan well process to identify idle wells that have been deserted and for which there is no solvent responsible party, and can be considered orphan. During the 2018 reporting period, DOGGR issued orders to plug wells to 14 operators for a total of 55 idle wells. Eight operators failed to respond to the plugging orders resulting in the identification of 35 deserted wells.

The solvent entity research on the 35 deserted wells was still ongoing at the end of this reporting period with no wells being declared orphan on or before December 31, 2018. DOGGR estimates there are approximately 2,500 idle wells belonging to 943 operators that may be deserted and require orders to plug wells to initiate the orphan well process. An analysis of prior transfers and financial responsibility will require sustained effort.

2.3 Cost of Abandonment

Plugging costs on deserted wells are highly variable and, in many cases, difficult to predict. When an operator plugs one of their own wells, they are generally aware of the situation at a well including problems with obstructions that they may encounter based on having worked with the well. When DOGGR approaches a hazardous deserted well that could be as old as 100 years, it may not know if the previous



operator had attempted to plug it in the past, what material may have been emplaced in the well, if the casing is intact, and other information that is critical to understanding potential cost drivers in a plugging job. Costs can range from as low as \$11/foot in a well in Kern County if the project goes smoothly to well over \$200/foot in an urbanized area with high ancillary costs, such as temporarily moving utility lines, higher staging and mobilization costs, and where "junk" obstructs downhole operations and leads to delays and cost overruns.

More detailed estimates will be provided in the next reporting period as DOGGR will have completed the orphan well process for the deserted wells identified in the section 2.2 and awarded contracts to plug and abandon those wells declared orphan.

2.4 Timeline of Future Orphan Well Abandonment

DOGGR is appropriated funds annually to plug wells that have been declared orphan. Senate Bill 724 (SB 724) (Lara, Chapter 652, Statutes of 2017) temporarily increased the annual appropriation for orphan well abandonment from \$1 million to \$3 million per fiscal year commencing on July 1, 2018 (Public Resources Code section 3258(a)(1)). This appropriation will revert to \$1 million per fiscal year commencing with the 2022-2023 fiscal year. DOGGR intends to utilize the full amount of these funds annually to plug orphan wells.

Based on the cost range provided above, it is estimated that 23 to 100 wells may be plugged and abandoned for fiscal years 2018-2019 through 2021-2022. For fiscal year 2022-2023 and beyond, an estimated 7 to 33 wells may be plugged and abandoned annually. These annual benchmarks will fluctuate depending on the cost to plug each orphan well. Many of the costs to plug wells are driven by conditions downhole that remain unknown until projects commence work. The prioritization of orphan wells to be plugged each year will be based upon the prioritization factors for idle wells described in California Code of Regulations Title 14 section 1772.4, which includes economic efficiencies associated with grouping wells by location.

DOGGR utilized the 2018 reporting period to develop and implement a more standardized orphan well process, including new methods to identify wells that may be orphan. The 35 wells that commenced the orphan well process in 2018 will



complete the process in 2019. The wells from this grouping that have been determined to be orphan will be plugged and abandoned using the appropriated funds for the 2018-2019 fiscal year.

DOGGR is working to streamline both the orphan well determination and contracting processes. This year will also be used to identify orphan wells to plug in Fiscal Year 2019-2020 and build a queue of orphan wells for subsequent fiscal years.

The identification of wells requiring the orphan well process will be an ongoing effort. The two most common means by which these wells may be identified are: 1) failure to file annual idle well fees; and, 2) identification at the DOGGR district level based on finding of desertion under Public Resources Code section 3237.

3. Plans for the Management & Elimination of Long-Term Idle Wells

Public Resources Code section 3206.3(a)(1)(D): A list of all operators with plans filed with the supervisor for the management and elimination of all long-term idle wells and the status of those plans.

See Appendix A-6 for the list of operators with 2018 IWMPs and their status.

3.1 Idle Well Management Plans

Under Public Resources Code section 3206(a)(2), operators may, in lieu of paying annual idle well fees, file an IWMP that provides for the management and elimination of all the operator's LTIW. An operator may eliminate a LTIW by either properly plugging and abandoning the well in accordance with the requirements of Public Resources Code section 3208 or demonstrating to DOGGR's satisfaction that the well has maintained production of oil or gas or been used for injection for a continuous sixmonth period.

Under the requirements of AB 2729, IWMPs must commit operators to eliminating a minimum percentage of their LTIW each calendar year. The required rate of elimination of LTIW is based on the total number of statewide idle wells in the operator's possession on January 1 of each year. Unless and until the operator has no



LTIW, the operator must eliminate the required rate of wells annually. The required elimination rates are as follows:

- Operators with 250 or fewer idle wells must eliminate at least 4% of their LTIW.
- Operators with 251 to 1,250 idle wells must eliminate at least 5% of their LTIW.
- Operators with more than 1,205 idle wells must eliminate at least 6% of their LTIW.

Public Resources Code section 3206(a)(2)(B)(iii) affords operators the opportunity to receive credits for eliminating greater than the minimum required number of LTIW. These credits may be applied to future minimum elimination requirements in the operator's IWMP but expire after two years.

In this reporting period, DOGGR received and approved IWMPs from 76 oil and gas operators. Based upon the terms of the approved IWMPS, operators were expected to eliminate a minimum of 596 LTIW. Operators significantly exceeded the expected number of eliminations and eliminated 988 LTIW. 19 operators eliminated more LTIW than was required by their approved IWMP, resulting in those operators earning 453 elimination credits, which can be used for IWMP compliance for up to two years. On January 1, 2019, the Supervisor conducted an annual review of each 2018 IWMP which yielded the following results:

- 52 operators were found to be in compliance with the terms of their approved IWMPs.
- 988 LTIW were eliminated in 2018 as part of approved IWMPs.
- Four operators eliminated all their LTIW in the State. Two of these operators
 plugged all their idle wells in the State.
- 16 operators voluntarily voided their 2018 IWMP and filed idle well fees, totaling \$461,550 to remain in compliance with Public Resources Code section 3206.
- Eight operators had their IWMP canceled by DOGGR due to failure to comply
 with the terms of their approved IWMPs. Two of the operators paid the idle well
 fees owed, and DOGGR is pursuing enforcement action against the remaining
 six operators. Four other operators received a Notice of Cancellation from
 DOGGR and appealed the cancellations, but in each of those cases the issues
 were resolved. Those four operators are included in the 52 operators found to
 be in compliance.

3.2 Non-Compliant Idle Well Management Plans

If an operator fails to comply with their approved IWMP, then the IWMP for that operator is revoked and the operator is not eligible to propose a new IWMP for any of its idle wells for the next five years. An operator may appeal to DOC's Director



regarding the Supervisor's determination of non-compliance. If the Supervisor's determination that the operator failed to comply with the IWMP is not timely appealed, or if the Director upholds the Supervisor's determination upon appeal, then the operator is required to immediately file the idle well fees due for each year that the operator failed to comply with the IWMP.

Furthermore, failure to file the idle well fee due for any well is conclusive evidence of desertion, permitting the Supervisor to order the well abandoned pursuant to Public Resources Code section 3237.

DOGGR issued Notices of Cancellation to 12 operators for failing to comply with the requirements of the IWMPs submitted in 2018. One operator appealed the Notice of Cancellation and provided the required documentation to demonstrate compliance resulting in rescission of the Notice of Cancellation. Three operators appealed the Notice of Cancellation and settlement agreements were reached. Eight operators had their IWMPs revoked as they failed to appeal the cancellation of their plan and to pay the required idle well fees. Two operators had their IWMP revoked and filed the idle well fees required.

3.2.1 Notice of Cancellation – Rescinded

DOGGR rescinded one Notice of Cancellation after the operator provided the necessary documentation to demonstrate compliance. During this demonstration, DOGGR determined that the operator exceeded the minimum elimination requirement in its IWMP. This operator is eligible to propose an IWMP for the 2019 calendar year.

• E & B Natural Resources, Operator Code E0100

3.2.2 Notice of Cancellation – Settlement Agreements

DOGGR reached settlement agreements with all three operators that appealed the Notice of Cancellation.

- TEG Oil & Gas U.S.A., Inc., Operator Code T0135
- First Oil and Gas Company, Operator Code T0275
- HVI Cat Canyon, Operator Code G3515



3.2.3 Notice of Cancellation – IWMP Revoked

DOGGR revoked the IWMPs for eight operators that failed to appeal the cancellation of their plan. These operators will be prohibited from submitting an IWMP for five years, regardless of whether the operator pays the required fees in future years.

Two operators filed the idle well fees due in response to the Notice of Cancellation.

- White Knight Production LLC, Operator Code W2050
- Miocene Operating Services Inc, Operator Code M6655

Six operators have failed to pay the required idle well fees. DOGGR is pursuing enforcement action against these operators in 2019 and will provide the results in the 2020 Annual Report on Idle and Long-Term Idle Wells in California.

- Caltico Oil Corp., Operator Code C1380
- H2O-CH4, LLC, Operator Code H0070
- Citadel Exploration Inc, Operator Code C5845
- R. J. Bellevue, Inc, Operator Code B3079
- Valid Energy Company, Operator Code V0175
- Jaco Production Company, Operator Code J0700

4. DOGGR Enforcement

DOGGR's Idle Well Program and Enforcement Unit work closely together to pursue enforcement actions against operators that fail to comply with idle well statutory and regulatory requirements. During this reporting period, DOGGR's Idle Well program focused primarily on failure to file idle well fees and comply with IWMPs. Failure to file the annual idle well fee prescribed in Public Resources Code section 3206(a) is conclusive evidence of desertion. This permits the Supervisor to order that the well be plugged pursuant to Public Resources Code section 3237.

Idle well fees are assessed annually for the preceding calendar year. During this reporting period, idle well fees were assessed based on the idle well inventory for the 2017 calendar year. In this effort, DOGGR collected \$4,311,200 in idle well fees in 2018. DOGGR identified 957 operators that failed to file idle well fees for 2,555 idle wells in 2018. Within the reporting period, 14 of these operators were issued orders to plug 55 wells. There is also a backlog of pending orders for 943 operators to plug a total of 2,500 idle wells.



These enforcement efforts support the orphan well process as described in section 2.1 of this report. Future enforcement efforts will expand the focus to comply with new idle well regulations in addition to statutotory requirements.



APPENDIX A – IDLE WELL LISTS

A-1 2018 Calendar Year Idle Well Inventory

List of all wells that met the definition of idle well at any point in the 2018 reporting period. The list includes the API number and designation of the well, well type, operator, field, pool, idle start date, and LTIW status identified for each well.

A-2 Idle Wells That Changed Status from Idle to Long-Term Idle Well

List of all idle wells that met the definition of LTIW for the first time in the 2018 reporting period. The list includes the API number and designation of the well, well type, operator, field, pool, and idle start date.

A-3 Idle Wells That Changed Status from Idle to Plugged

List of all idle wells that changed status to plugged in the 2018 reporting period. The list includes the API number and designation of the well, well type, operator, field, pool, and idle start date.

A-4 Idle Wells That Changed Status from Idle to Active

List of all idle wells that changed status to active in the 2018 reporting period. The list includes the API number and designation of the well, well type, operator, field, pool, and idle start date.

A-5 Idle Wells Determined to be Deserted

List of all idle wells that have been determined to be deserted. The list includes the API number and designation of the well, last known operator, field, and order number and date for each well. These wells commenced the orphan well process in 2018.

A-6 Operators with 2018 IWMPs & Current Status

List of all operators with IWMPs submitted in 2018 and the status of each IWMP as of the annual review, including the minimum number of LTIW required to be eliminated, the actual number of LTIW eliminated, and credits earned for LTIW eliminated in excess of the minimum requirement.



APPENDIX B – REFERENCES & DATA SOURCES

The following were used as references for this report:

- California Statutes and Regulations for Conservation of Oil, Gas, and Geothermal Resources (April 2019): https://www.conservation.ca.gov/index/Documents/CALGEM-SR-1%20Web%20Copy.pdf
- Notice to Operators 2018-03: WellSTAR Release 2.0 New and updated forms, epermitting, and electronic reporting (March 7, 2018).
- Notice to Operators 2018-14: WellSTAR New and updated forms, and electronic reporting (December 7, 2018).
- Notice to Operators 2019-01: WellSTAR New and updated forms, and electronic reporting (January 15, 2019).
- Renewal Plan for Oil and Gas Regulation: Changing past practices to usher in a new era of oil and gas regulation (October 2015).

The following were used as data sources for this report:

- California Well Information Management System (CalWIMS) is an internal electronic database used to maintain, monitor, and track well information.
- IWMP documents submitted by operators.
- <u>WellSTAR: Well Statewide Tracking and Reporting</u> a new electronic database used to maintain, monitor, and track well information.
- WellSTAT: Internal database used to maintain, monitor, and track well information pertaining to monthly production and injection volumes.
 Decommissioned March 2018.



APPENDIX C – GLOSSARY

TERM	DESCRIPTION
AB 2729	AB 2729 (Williams, Ch. 272, Statutes of 2016) redefined an idle well and a long-term idle well; removed the option for a large operator to secure an escrow account or post a "super blanket bond" to avoid paying idle well fees; allowed an operator to implement an IWMP in lieu of paying idle well fees; and provided a means through which a person who acquires land with one or more wells on it to re-plug and abandon the well(s). It also required the Supervisor, on or before July 1, 2019, and annually thereafter until July 1, 2026, to submit to the Legislature a comprehensive report on the status of idle and LTIW for the preceding calendar year.
Idle Well	Public Resources Code section 3008, subdivision (d): "Idle well" means any well that for a period of 24 consecutive months has not either produced oil or natural gas, produced water to be used in production stimulation, or been used for enhanced oil recovery, reservoir pressure management, or injection. For the purpose of determining whether a well is an idle well, production or injection is subject to verification by the division. An idle well continues to be an idle well until it has been properly abandoned in accordance with Section 3208 or it has been shown to the division's satisfaction that, since the well became an idle well, the well has for a continuous six-month period either maintained production of oil or natural gas, maintained production of water used in production stimulation, or been used for enhanced oil recovery, reservoir pressure management, or injection. An idle well does not include an active observation well.



TERM	DESCRIPTION
Idle Well Fees	Public Resources Code section 3206, subdivision (a)(1): No later than May 1 of each year, for each idle well that was an idle well at any time in the last calendar year, file with the Supervisor an annual fee equal to the sum of the following amounts: (A) One hundred fifty dollars (\$150) for each idle well that has been an idle well for three years or longer, but less than eight years. (B) Three hundred dollars (\$300) for each idle well that has been an idle well for eight years or longer, but less than 15 years. (C) Seven hundred fifty dollars (\$750) for each idle well that has been an idle well for 15 years or longer, but less than 20 years. (D) One thousand five hundred dollars (\$1,500) for each idle well that has been an idle well for 20 years or longer.
Idle Well Management Plan (IWMP)	Public Resources Code section 3206, subdivision (a)(2): File a plan with the Supervisor to provide for the management and elimination of all LTIW. (A) For the purposes of the plan required by this paragraph, elimination of an idle well shall be accomplished when the well has been properly abandoned in accordance with Section 3208, or it has been shown to the division's satisfaction that, since the well became an idle well, the well has maintained production of oil or gas or been used for injection for a continuous six-month period.
Long-Term Idle Well (LTIW)	Public Resources Code section 3008, subdivision (e): "Long-term idle well" means any well that has been an idle well for eight or more years.
Measured Depth	The length of the wellbore measured along the path of the well.



TERM	DESCRIPTION
Plug and Abandon	Public Resources Code section 3208, subdivision (a): For the purposes of Sections 3206 and 3207, a well is properly abandoned when it has been shown, to the satisfaction of the Supervisor, that all proper steps have been taken to isolate all oil-bearing or gas-bearing strata encountered in the well, and to protect underground or surface water suitable for irrigation or farm or domestic purposes from the infiltration or addition of any detrimental substance and to prevent subsequent damage to life, health, property, and other resources. For purposes of this subdivision, proper steps include the plugging of the well, decommissioning the attendant production facilities of the well, or both, if determined necessary by the Supervisor
SB 724	SB 724 (Lara, Ch. 652, Statutes of 2017) temporarily increased funding to plug and remediate deserted oil and gas wells and oil field facilities from \$1 million to \$3 million. It required the Division to establish criteria to prioritize deserted wells and facilities for remediation. This bill made several technical and conforming changes to the Public Resources Code related to time lines for permitting and idling of oil wells. This bill clarified existing law to specify that the Division, as a part of an order requiring the plugging and abandonment of a deserted well, may also require the operator to address the adjacent production equipment associated with the well and conduct site remediation if necessary.



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