
SENATE COMMITTEE ON NATURAL RESOURCES AND WATER

Senator Henry Stern, Chair

2019 - 2020 Regular

Bill No: SB 1012 **Hearing Date:** May 19, 2020
Author: Hurtado
Version: March 26, 2020 Amended
Urgency: No **Fiscal:** Yes
Consultant: Katharine Moore, Grayson Doucette

Subject: Oil and gas wells: hazardous or idle-deserted wells and facilities

BACKGROUND AND EXISTING LAW

California is a major oil and gas producing state; at the end of 2019, California ranked 7th and 14th among all fifty states for oil and natural gas production, respectively. About 80% of the state's active wells are located in Kern County, and produce collectively about 70% of both the state's oil and natural gas.

There are about 107,000 active or idle oil and gas wells in the state. Active wells are those currently in use that either produce or inject fluids related to hydrocarbon production. By contrast, idle wells are not in use, and have not been used for at least 24 consecutive months (see Public Resources Code (PRC) §3008). As wells are expensive to drill and to seal ("plug and abandon"), operators may prefer to keep wells idle – sometimes for extended periods of time. A well that has no operator or other responsible party to pay for its costs becomes an "idle-deserted" or "orphan" well which must then be plugged and abandoned by the state (see PRC §3251, §3206.3). Idle wells are more likely to become orphan wells.

The California Geologic Energy Management Division (division) in the Department of Conservation (department) is the state's oil and gas regulator. The State Oil and Gas Supervisor (supervisor) leads the division.

In the last few years, multiple department-sponsored and other bills have substantially revised and updated several outdated elements of state law governing oil and gas operations in the state. For example, these bills made changes to the law regarding idle and orphan wells, and to the requirements regarding indemnity bonds. Among other things, those bills established a series of reports regarding the idle well program and including data related to orphan and other wells to be provided to the Legislature as follows:

- a) Starting July 1, 2019 and annually until July 1, 2026, the supervisor shall submit a comprehensive report to the Legislature on the status of idle and long-term idle wells for the preceding calendar year, as specified. (PRC §3206.3)
- b) Requires the department to issue a legislative report on April 1, 2021 that includes the number of hazardous wells and facilities, idle-deserted wells and deserted facilities remaining, the estimated costs of abandoning and decommissioning those wells and facilities and related information, among other things. (PRC §3258)

- c) Requires the department on October 1, 2023 to provide an update to the April 1, 2021 report that describes the total costs, average costs and number of wells and facilities addressed, projects completed, and other related information. (PRC §3258)

In November 2019, the division released the first annual idle well report for calendar year 2018 as required by SB 724. Among the report's findings, there was a significant increase in the plugging and abandonment of idle and long-term idle wells (about 1,346 total) as intended, although over 29,000 idle wells remain, including about 17,575 long-term idle wells. Long-term idle wells are those that have been idle for at least 8 years (PRC §3008). The division estimates that an additional 1,200 – 2,400 wells started the transition to idle status during 2018. Based upon operator responsiveness to the new idle well management requirements in 2018, the division estimates that approximately 957 operators may have deserted about 2,555 idle wells. Given the large number of operators and wells to be assessed, the division has a backlog of work to do to try to find any potential responsible parties to pay for the plugging and abandonment of these wells. Initially, 14 operators responsible for 35 wells were prioritized for assessment.

In a related effort, and at the division's request, the California Council on Science and Technology (CCST) investigated the status of the state's oil and gas wells in order to estimate the potential cost to the state should the wells become orphaned. In January 2020, the CCST report was released. The CCST report suggested that there were about 5,540 wells that were either likely to be orphaned or at high risk of becoming orphaned soon. The potential liability to the state was estimated to be roughly \$500 million net for these two categories alone. While there are indemnity bonds in place for many of these wells, the sum of the bond amounts is much less than the likely costs.

CCST recommended, among other things, that its methodology should be refined to improve its predictive ability, that the ownership history of wells should be assessed, and the potential environmental impacts of the wells should be investigated.

Existing law:

- 1) Requires the operator of an oil and gas well, or oil and gas production facility to notify the supervisor or applicable district deputy of the sale, assignment, transfer, conveyance, exchange, or other disposition of the well or production facility as soon as it becomes final, as specified. (PRC §3201)
 - d) The acquirer also has certain associated reporting requirements to the division. (PRC §3202)
- 2) Requires an operator who engages in the drilling, redrilling, deepening, or in any operation permanently altering the casing, of a well, or who acquires a well, to file with the supervisor an individual indemnity bond for each well so drilled, redrilled, deepened, permanently altered, or acquired in specified amounts depending upon the depth of the well. (PRC §3204) For operators who own 20 or more wells, blanket bonds covering all of an operator's wells are acceptable. (PRC §3205)
- 3) Requires a well to be properly abandoned before an individual or blanket indemnity bond can be terminated or canceled. (PRC §3207) The division is also authorized to

impose a life-of-facility bond in certain circumstances of an amount to cover, among other things, the decommissioning of a production facility. (PRC §3270.4)

- 4) Authorizes the supervisor to order the plugging and abandonment, or decommissioning of an idle-deserted well or facility, as specified. (PRC §3251, §3255)
- 5) Requires an operator to either file with the supervisor certain annual idle well fees per well that increase the longer the well has been idle, or file an idle well management plan with the supervisor that eliminates between 4% – 6% of the long-term idle wells each year.
 - a) Failure to pay idle well fees or file a plan is sufficient evidence for the well to be considered legally deserted.
- 6) Phases in the requirement that each operator of an oil or gas well submit a report to the supervisor that demonstrates the operator's total liability to plug and abandon all wells and to decommission all related production facilities, as specified.
 - a) Initial reports will be filed starting July 1, 2022, as specified, and there are periodic ongoing reporting requirements thereafter. (PRC §3205.7)

PROPOSED LAW

This bill would further enhance the division's idle well program. Specifically, this bill would:

- 1) Require that the location of hazardous well and facilities, idle-deserted wells and deserted facilities be included in the report due April 1, 2021, and require that the report update, due October 1, 2023, also include information on the location of applicable wells and facilities, as specified.
- 2) Require that the report and update identify wells that are registered to an operator that has reported no active injection or production operations for that well in the prior 5 years and that did not pay the required annual fee for each idle well or have a valid idle well management plan, as specified.
- 3) Require the division to undertake all reasonable steps to recover costs for plugging and abandonment oil and gas wells, for decommissioning attendant facilities and for remediating sites from the current registered owner of any well identified, as specified, including seeking enforcement in other state jurisdictions.
- 4) Make numerous relevant legislative findings.

ARGUMENTS IN SUPPORT

According to the author, “[h]istorically and to the present day, most of the state’s oil and gas development and production is located in the southern Central Valley region of the state. In those communities, a number of idle and abandoned oil wells not being properly decommissioned are contributing to public health and environmental concerns.”

“According to the California Council on Science & Technology (CCST), there are approximately 107,000 active and idle oil and gas wells in California. Additionally, according to their estimate, there are 5,540 wells in California that may have no viable operator or be at high risk of becoming orphaned in the near future. As a result, those wells will continue to release toxic emissions to the surrounding area. [...] SB 1012 is critically needed in a region of the state where public health outcomes are impeded by toxic emissions and pollution.”

ARGUMENTS IN OPPOSITION

None received

COMMENTS

Enhanced transparency. The changes proposed by this bill will help to provide public transparency in the required hazardous and related wells and facilities report and update described above. The change needs to be made this legislative year to apply to the report due on April 1, 2021.

Evaluation of the CCST methodology. While the data required to be collected will presumably be over a different range of years than those used in the CCST report, the information required to be provided in the report and update will be useful to evaluate the CCST methodology for identifying wells that are likely orphan or at high risk of becoming orphan for the given conditions. This helps to implement one of the recommendations in the CCST report, and may yield insight into an improved assessment methodology.

Technical clarification needed. Should the bill move forward, the author should clarify which wells and facilities are subject to the requirement to pursue all reasonable steps for cost recovery, as the reference to “subdivision” in proposed PRC §3258(e) is unclear.

The oil market is dynamic and volatile. Due to the price war between Saudi Arabia and Russia and the drop in demand associated with the COVID-19 pandemic, the price for a barrel of benchmark oil fell below \$25 recently. If these prices persist for an extended period of time, there may well be additional wells and facilities orphaned in the state. The age of the state’s oil and gas fields and the intensive efforts needed to produce oil and gas from them make oil and gas relatively expensive to produce in the state compared to other locations.

The division’s efforts to determine responsible parties. The creation of an enforcement unit was one of the recent reforms instituted at the division. Among other things, the enforcement unit has the responsibility to try to find responsible parties to pay for the plugging and abandonment of orphan wells and related costs. The enforcement team can look for operators responsible for wells transferred after January 1, 1996. (PRC §3237) As noted above, the idle well report identifies a substantial backlog of cases to be assessed – almost 940 operators and 2,500 wells – as these efforts typically involve an extensive in-person search of county records and take several months to complete each. It is unknown if the division has ever failed to pursue these identification efforts to the extent practicable. However, it seems reasonable, given funding and other constraints at the division, that if the cost of legal action against an operator substantially exceeds the cost to plug and abandon the well, it may make sense not to

pursue the operator. That written, it generally is in the division's interests to find responsible parties. For example, finding a responsible party means that the limited funds available to the division for plugging and abandonment and decommissioning efforts can be used for other wells and facilities. Potentially the division would be liable to the owner if it plugged and abandoned a well that was not actually orphaned, or arranged for the well to be taken over by another operator.

Funding for the plugging and abandonment of orphan wells and decommissioning of attendant facilities. If an orphan well and/or associated facility have changed ownership recently, an indemnity bond should be available to help fund plugging and abandonment and decommissioning. These funds may be insufficient. Moneys in the Hazardous and Idle-Deserted Well Abatement Fund (HIDWAF) could also be used to help fund these operations (see PRC §3206). HIDWAF received about \$4.2 million from idle well fees in 2018. The \$3 million from the oil/gas production fee (paid by operators) available annually could also be used (PRC §3258). It is the understanding of committee staff, that wells are formally identified as "orphan" only when funding is available to address them.

Costs for decommissioning. According to the division, the cost to plug and abandon an orphan well in Kern County could be as low as \$11 per foot. By contrast, in Los Angeles or other urban location, the cost could be as much as \$200 per foot when ancillary costs are included. The indemnity bond for a well that is 10,000 feet in depth is \$40,000. Plugging and abandoning that well at \$11/foot would cost a total of \$110,000, which exceeds the indemnity bond amount by about a factor of 2.75.

Data supplied to CCST by the division from 2013 to 2018 indicate that an idle well in the Inland district (including Kern County) was about \$47,000 on average to plug and abandon compared to \$152,000 in the southern district. The range was \$1,200 - \$391,000. Generally the more urban and older a well – the more it costs to plug and abandon it.

More from the CCST report. "Likely orphan" wells are those wells that have not produced or injected in five years and that belong to operators with no other California production. There are 2,565 of these wells and a potential net liability of \$298M to the state.

Wells "at high risk of becoming orphan wells" are wells with no production or injection activity during the past five years whose operator is active in California but is small and operates mostly idle or marginal wells. This includes operators who average production rate is less than 5 barrels of oil or the equivalent per day, and operators with fewer than 1,000 actively producing wells. There are 2,975 wells in this category and there is about the potential net liability of \$230M.

In addition to the "likely orphan," and "high risk of becoming orphan wells" in the near future categories, CCST identified to further categories of wells – "other idle and marginal wells," and "higher producing wells." There are 69,425 wells – of which 13,057 are just injection wells – in the former category. These are wells owned by major operators that produce less than five barrels of oil (or the equivalent) per day. There are also 31,722 "higher producing wells." Given the number of wells in these two categories, the potential net liability to the state is on the order of \$5.2 billion, and \$3.4

billion, respectively, or a total of over \$8.5 billion. These amounts highlight the importance of the division's recent reforms, which seek to ensure over time that operators plug and abandon their own wells to the extent possible.

Efforts to determine emissions in the vicinity of oil and gas production. While outside the jurisdiction of this Committee, the State Air Resources Board has started conducting investigations of various ambient pollutant concentrations in the vicinity of the state's oil and gas production areas through its Study of Neighborhood Air near Petroleum Sources (SNAPS) program. Additionally, the Community Air Protection Program, established by AB 617 (C. Garcia, Chapter 136, Statutes of 2017) has been providing grants to and assessing communities with nearby oil and gas production. AB 1328 (Holden, Chapter 772, Statutes of 2019) will help to determine the emissions from plugged and abandoned oil and gas wells to help determine if additional work on the well, for example, is necessary.

Recent related legislation

AB 345 (Muratsuchi, 2020) would impose a buffer zone around oil and gas development to protect public health, among other things. (*This bill is in the Senate Rules Committee pending assignment.*)

AB 1057 (Limón, Chapter 771, Statutes of 2019) authorized the division to impose an additional supplemental indemnity bond amount on certain risky operators, as specified, among other things.

AB 1328 (Holden, Chapter 772, Statutes of 2019) directs the division, in consultation with the State Air Resources Board, to initiate a study to be conducted by independent experts of fugitive emissions from idle, idle-deserted, and abandoned wells in the state, as provided.

SB 551 (Jackson, Chapter 774, Statutes of 2019) requires that operators determine the potential liability to the state for their facilities, as specified, among other things.

SUPPORT

California Independent Petroleum Association
Kern County Board of Supervisors
Western States Petroleum Association

OPPOSITION

None Received

-- END --