

Miocene Well Abandonment, Re-abandonment & Facility Demolition Projects

- 1. Sycamore Development Properties, 110 Oil Wells and All Surface Facilities Demolition, Brea-Olinda Field, Brea California 2025 – present**
 - Providing Senior Engineering Advisor services and Field Project Management services on real estate redevelopment project in existing oilfield site covering 265 acres.
 - Demolition of all surface facilities, buildings, and above ground and buried pipelines.
 - Vegetation grubbing of site.
 - Plug and abandonment of approximately 70 active and idle oil wells.
 - Re-abandonment of approximately 40 previously plugged and abandoned oil wells.
 - Provide site security.
- 2. State of California, 55 Orphan Wells, Placerita Field, Santa Clarita, California, 2022-2023**
 - Provided engineering and permitting support for the abandonment of 55 orphan oil wells for CalGEM.
 - Coordinated with City of Santa Clarita to permit the work under an existing Conditional Use Permit for the property.
 - Project completed in 2022.
- 3. State of California, 2 Orphan Wells, Rincon Field Onshore, Ventura, California 2022**
 - Provided engineering and permitting support for the abandonment of 2 orphan oil wells for CalGEM.
 - One well included evaluation of complex sidetrack and re-intercept to bypass failed section well.
 - Projected completed in 2022.
- 4. SoCal Gas Company, Complex Plug and Abandonments, Los Angeles County, California 2022 - 2023**
 - Miocene provided engineering support to design the drilling/P&A programs and to obtain CalGEM permits for a total of 8 highly complex plug and abandonments requiring sidetracks out of existing casings, directional controlled drilling, magnetic ranging to locate target casings, well re-intercepts, and well re-entries at depths down to the gas storage reservoir level.
 - Sidetracks were required to well to bypass junk, to re-enter original holes and sidetracks that were no longer connected to the well or to surface. Average sidetrack depths of 3,000' and re-entering casing at depths from 6,000' to 9,900'. Many of the old sidetracks targeted did not have directional surveys and this required locating the 7" and 5-1/2" diameter casings deep underground using magnetic ranging. These projects were high profile and closely scrutinized by CalGEM at each step of the projects.
 - To date 5 of 8 projects have been completed with a 100% success rate. Of these 4 wells required a total of 5 new casing window cuts, a total of 6 re-intercepts and re-entries, and the cleaning out of 800' of total footage inside casing through the intercept windows through the sidetracks created to reach deeper portions of the wellbores, in

order to clean them out, and fill with cement, for P&A's in compliance with regulations. For one of the 8 wells, because of work completed by Miocene, CalGEM determined that a sidetrack and re-entry was not required, and that well was P&A'd using concentric methods.

- Miocene provided daily engineering support for these complex drilling/P&A projects 7 days a week for the 5 successfully completed projects, and supplied the Drill Site Managers for the wells P&A'd to date. Further work to continue the program for the remaining 3 wells is scheduled to commence later this year.

5. Linc Housing Wilmington LP – SagePointe Housing for Homeless Seniors & Site in Long Beach 2021-2024

- Worked with City of Los Angeles Department of Building and Safety, LA City Fire Department, and City of Los Angeles Office of Petroleum and Natural Gas Administration and Safety to conduct re-abandonment of four wells, with one well not meeting CalGEM requirements but approved by the City of Los Angeles.
- Obtained permits from CalGEM and City of Los Angeles and re-abandoned four wells for property re-development.
- One well required complex sidetrack and magnetic ranging to intercept the well below obstacles for final re-abandonment.
- Identified owner of unknown abandoned petroleum pipelines and removed pipeline to allow for utility corridor.
- Currently preparing Construction Site Well Review application to CalGEM for five wells located on a site Long Beach planned for redevelopment.

6. UDR Corporation, Huntington Beach, California – Pacific City Condominiums 2018-2019

- Seven well re-abandonment project at PCH and 1st Street in Huntington Beach
- Heavy building construction at site and needed quick response.
- Mobilized 3 rigs and completed project on time.
- Prepared all permitting, ownership transfer, CalGEM Agent Services, WSM supervision, rig and services subcontracting, and Well History reporting.

7. Meritage Homes, Huntington Beach, California 2019-2024

- Completed a complex ranging and intercept well to re-enter a 1930 well abandonment where top of casing is ~250' below ground surface with no surface pipe or conductor.
- Prepared risk assessment of submittal to the Huntington Beach Fire Department for 3 wells that did not meet CalGEM current abandonment requirements and received approval for re-development to proceed.
- Prepared and submitted cement plug waiver request to CalGEM for approval of re-abandonment that was not approved by CalGEM for three wells. Decision is pending.

8. Los Angeles County Sanitation Districts 2022-2023

- Prepared demolition plan and estimated cost for two oil and gas facilities and four oil wells located within the Boys and Girls Club and the Wilmington Athletic Complex in Wilmington.
- Report was used in negotiations between Los Angeles County and the oil company to complete an agreement for the County to purchase the facilities and wells and remove them from the Club and Athletic Complex.

9. KB Homes LA/Ventura, Santa Clarita, California 2018-2019

- Program to re-abandon 4 wells and to change the final well cap elevation of six wells.
- Site for former oil and gas production site being re-developed for single family homes.
- Coordination with both CalGEM and US BLM for permitting.
- Work completed and final history submittals to CalGEM.

10. Eric and Susan Dunn Family Trust, La Honda Field 2022-2023

- Engineering and permit support abandon 11 wells and remove 4 production facilities.
- Site located in San Mateo County.
- Coordinated permitting with San Mateo County and CalGEM.
- Completed project in September, 2023.

11. Sunshine Canyon Landfill, Los Angeles County, California 2018

- Re-abandonment of two wells to allow landfill expansion in Los Angeles County
- Prepared all permitting, ownership transfer, CalGEM Agent Services, WSM supervision, rig and services subcontracting, and Well History reporting.

12. Chiquita Canyon Landfill, Los Angeles County, California 2019

- Locate 2 abandoned wells and advise landfill on CalGEM permitting and re-abandonment requirements.

13. DR Horton Homes, Santa Clarita, California 2017

- Attempted to locate abandoned well on future home development site. Could not locate well and coordinated with CalGEM on path forward to allow development to continue.

14. Jamison Properties, Los Angeles and Signal Hill, California 2021-2023

- Coordinated location and leak testing of existing abandoned well on the site of new development in Koreatown Los Angeles.
- Re-abandoned one well in Koreatown, downtown Los Angeles for property re-development.
- Worked with client and met with City of Los Angeles Planning Department staff on re-abandonment of the well.
- Advised client on 4 abandoned oil wells on site in Signal Hill where a new residential development is planned. Work is ongoing.
- Prepared report to CalGEM to document efforts to locate a pre-1900 plugged and abandoned well in LaFayette Park. Found CalGEM Wellfinder was in error of well location based on 1903 Bureau of Mines map of oil wells in City of Los Angeles.

15. Bonanni Development, Huntington Beach, California 2021-2024

- Located, excavated, and leak tested 3 abandoned wells at the Holly Triangle property and submitted results to Huntington Beach Fire Department and CalGEM.
- Prepared risk assessment reports to Fire Department to demonstrate that two wells do not require re-abandonment even though they do not meet CalGEM current abandonment requirements. Report was approved by City of Huntington Beach.
- One well re-abandoned in 2023.
- Currently working to locate and leak test the fourth well.

16. Excelebrate Housing Group, Long Beach, California 2022 - 2024

- Preparing request to transfer ownership, bond, and permit the re-abandonment of two oil wells to facilitate site re-development for low-income housing in Long Beach.
- Serving as the CalGEM Agent of Record for Excelebrate.
- Re-abandoned one well. The re-abandonment did not meet CalGEM current standards.
- Prepared risk assessment report for City of Long Beach and they approved the development without the well meeting CalGEM current standards.
- Prepared and submitted cement plug waiver request to CalGEM for approval of re-abandonment that was not approved by CalGEM for one well. CalGEM accepted the cement plug waiver, refunded the \$25,000 well bond, and removed the well from the idle well list.

17. Lennar Homes, Torrance and Whittier, California 2022-2025

- Preparing request to transfer ownership, bond, and permit the re-abandonment of one oil well to facilitate site re-development in Torrance.
- Mobilized equipment and managed the re-abandonment of the well and received approval from the City of Torrance to develop housing over the plugged and abandoned well.
- Prepared report of efforts to locate well to CalGEM on a site in Whittier. The well was not found and CalGEM accepted the effort to locate the well as sufficient.
- Construction Site Well Review for re-abandonment of one well in Del Amo.
- Engineering and risk assessment for two wells at Cielo Vista development in Yorba Linda that did not meet CalGEM current well abandonment standards.

18. Hammond Canyon I, Ventura, California 2017 - 2024

- Two well abandonment project in Canada Larga Field, Ventura County for Hollister & Brace law firm in Santa Barbara
- Heavy scrutiny by County and CalGEM due to past operator infractions
- Prepared all permitting with County and CalGEM, WSM supervision, and Well History reporting
- Completed flowline and surface facility abandonment for all facilities associated with the wells. Provided field supervisor for facility abandonment work.
- Currently preparing plans to plug and abandon the last well and remove the tank farm and production facilities.

19. Jacobs Homes, Huntington Beach, California 2019

- Prepared Risk Assessment for submittal to Huntington Beach Fire Department to demonstrate well not abandoned to current CalGEM standards doesn't pose a risk to the surface and future planned home development.
- The City accepted the report and approved the future development.
- Miocene is approved by the City of Huntington Beach as an expert, qualified to prepare and submit Risk Assessment of abandoned wells.

20. Rio Vista West LLC, Huntington Beach, California 2021

- Prepared Risk Assessment for submittal to Huntington Beach Fire Department to demonstrate well not abandoned to current CalGEM standards does not pose a risk to the surface and future planned home development.
- The City accepted the report and approved the future development.
- Miocene is approved by the City of Huntington Beach as an expert, qualified to prepare and submit Risk Assessment of abandoned wells.

21. Bolthouse Properties and Wood Pacific Group Bakersfield, Bakersfield, California 2019-current

- Re-abandonment of three wells in Canfield Ranch Field
- Prepared all permitting, ownership transfer, CalGEM Agent Services, WSM supervision, rig and services subcontracting, and Well History reporting.
- Prepared a review of 45 abandoned wells within future development at Seven Oaks Business Park, Seven Oaks home expansion, and Stockdale Ranch new home development to advise them on what wells may require re-abandonment and potential cost.
- Currently conducting well bonding, ownership transfer and re-abandonment of one well at the Stockdale River Ranch subdivision in Bakersfield, California.

22. Citadel Environmental, Tracy, California 2018

- Prepared all permitting, ownership transfer and CalGEM Agent Services for gas well re-abandonment in Tracy.
- Subcontracted rig services, and complete re-abandonment.
- Submitted OG103 well history to CalGEM and assisted client in getting well bond refund.

23. Foothill Energy LLC, Kern, Grimes, and Solano County, California 2017-2022

- Three abandonments for Foothill Energy in Canfield Ranch Field and facility demolition and lease cleanup activity for final lease restoration
- Project site was for home development
- Prepared all permitting, ownership transfer, CalGEM Agent Services, WSM supervision, rig and services subcontracting, and Well History reporting.
- Prepare and submitted CalGEM and State Water Resources Board permitting to abandon 9 wells in Sacramento area. Completed abandonments of all 9 wells.
- Worked with State DWR and US COE on final cap grade of two of the wells within the footprint of a levee improvement project for the Sacramento River.

24. Overland Pacific & Cutler, Kern County, California 2018

- Providing ongoing engineering support to CALTRANS project to widen Highway 46 in Lost Hills.
- Reviewed Chevron potential well re-abandonments in highway expansion right-of-way.
- Prepared final report with recommendations.

25. Urban Planning Concepts, Santa Maria, California 2019

- Located and leak tested two abandoned oil wells to support Land Use Permit application in Santa Barbara County, California.

26. Holmes Western Oil Corporation, Kern County, California 2023 -2024

- Prepared abandonment procedures for 14 complex well abandonments in Kern County, California.
- Obtained bids and prepared AFEs for approvals.

27. Halliburton, Denver, Colorado 2021

- Provide Well Site Manager and well service rig to support well re-abandonment for BP near Denver International Airport.

28. Rio Bravo Jasmin, Bakersfield, California 2022-2023

- Prepared permit to plug and abandon idle water disposal well and facility in the Jasmin Field, Kern County, California.
- Prepared Lease Restoration Plan and Final Report for CalGEM.
- Coordinated permitting from SJVAPCD for asbestos abatement and demolition permit of facilities.
- Completed well abandonment and facility removal in 2023.

29. Texican Pacific, LLC., Santa Maria, California, 2023 - 2024

- Provide permitting to plug and abandon three wells and removal of facilities.
- All three wells were plugged and abandoned in 2023.
- Coordinated permitting from Santa Barbara County APCD for asbestos abatement and demolition permit of facilities.
- Prepared and submitted Lease Restoration Plan to CalGEM.
- Facility demolition currently and well subsurface abandonments are completed.
- Prepared and submitted Site Closure Plan for submittal to Santa Barbara County Environmental Health Department.
- Obtained grading permits and air quality permits for the work from Santa Barbara County.
- Flowline purge and cap of all flowlines is underway.
- Site trenching work to discover and remove in ground drilling and production sumps is scheduled to commence soon.

30. Tejon Ranch Company 2022 -2024

- Provide permitting to re-abandon two wells for the development of a major warehouse facility at the Tejon Commerce Center, Kern County.
- Work completed in 2024.
- Provided well re-abandonment support for 9 wells on Lots 14A and 14B at the Tejon Commerce Center by submitting Construction Site Well Review application to CalGEM.

31. CW Driver 2024

- Provide engineering support and WSM for re-abandonment of Union Oil Company well on the campus of CSU Dominguez Hills for new dormitory.
- Work completed in October 2024.



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