

Platform Holly & PRC 421 Abandonment & Decommissioning Update

Community Town Hall

November 7, 2019

Goleta City Hall

California State Lands Commission



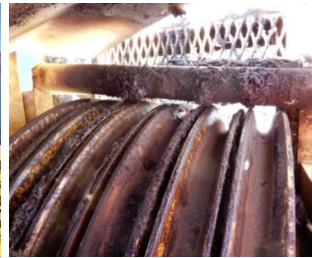
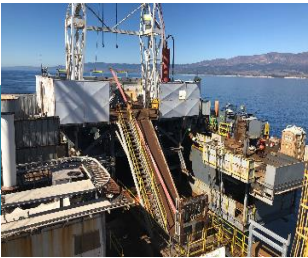
California State
Lands Commission



Platform Holly: Where We Are

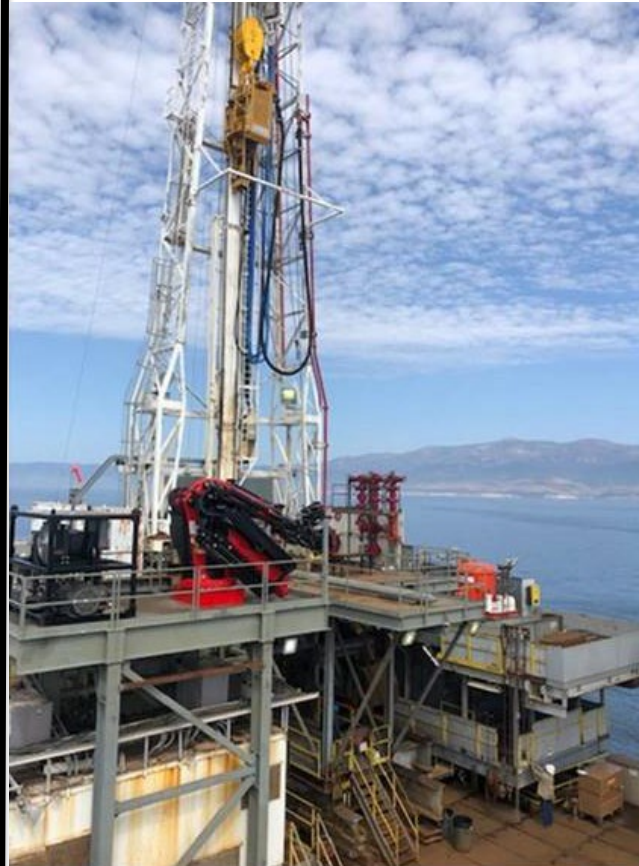
- Since our last meeting:
 - Replacement of the drilling rig and ancillary equipment has been completed and fully tested
 - The top deck on the east side of the platform has been cleared
 - The service equipment has been moved out to the platform and put in position to plug & abandon the wells (cement unit, coil tubing unit, electric logging unit, cement silo)
 - The electrical supply and back up generators have been repurposed
 - New water pumps for fire and equipment cooling have been installed as well as new bunkering lines for cement, mud, and fuel



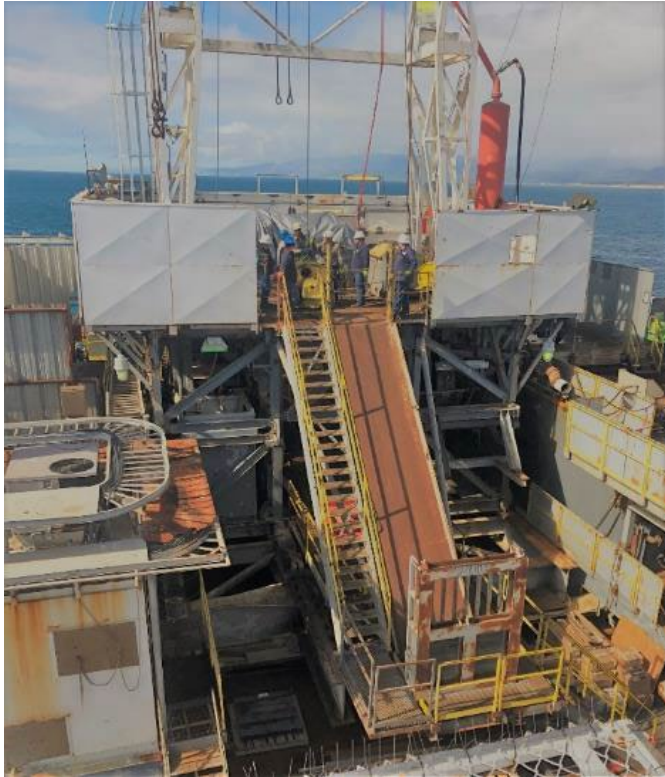


Rig Reactivation / Modifications

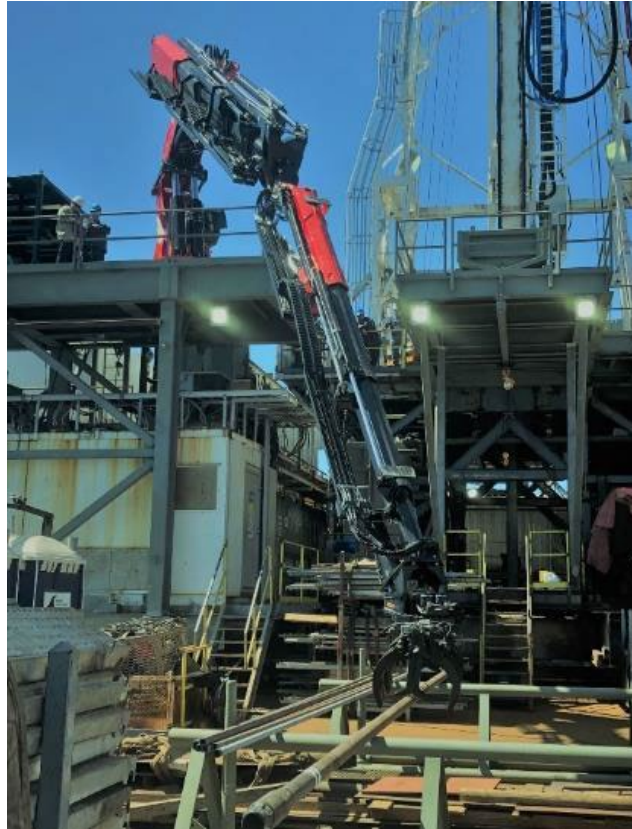
- Over 115,000 man-hours



Changes & Progress



Changes & Progress



Safety is Job #1

Environmental, Health, and Safety Plans Applicable to Platform Holly Decommissioning and Plug & Abandonment Work:

- Ellwood Oil Facility Spill Contingency Plan
- Ellwood Oil Facility Emergency Action Plan
- Spill Prevention, Control and Countermeasures Plan (SPCC)
- Storm-water Pollution Prevention Plan (SWPPP)
- Hazardous Materials Business Plan
- Operator's Company Safety Plans and Procedures
- Platform H2S Contingency Plan
- Safety, Inspection & Maintenance Quality Assurance Plan (SIMQAP)
- Pipeline Operations & Maintenance Plan
- Integrity Management Plan
- Operator Qualification Plan
- Public Awareness Plan
- Operations Safety Plan(s)
- Contractor Safety Management Plan(s)
- Evacuation Plan

Plugging & Abandonment

- P&A operations began on October 31st with the rig up of the CT BOPE
- Phase one of the operations will cement the production formation (Monterey) using coiled tubing on 12-16 wells
- The next phase will be completing the full abandonment of those wells, and conventional abandonment of all the wells using the drilling rig
- The development of the EIR for future disposition of Platform Holly should begin during the 4th Quarter of 2020 or 1st Quarter of 2021 and will include comprehensive and robust scoping and public engagement.



Ellwood Onshore Facility (EOF)

No new operations have occurred or are planned at this time. Currently the facility services Platform Holly by supplying it with required utilities and performing minor gas and fluid treatment, as required, to ensure regulatory compliance.



PRC 421 Piers and Wells

An aerial photograph of a coastal golf course. The golf course is situated on a green, rolling landscape that meets a sandy beach and the ocean. Two concrete piers extend from the shore into the water. The pier on the left is labeled 'Pier/Well #1' and the pier on the right is labeled 'Pier/Well #2'. In the background, there are rolling hills and mountains under a blue sky with scattered clouds.

Pier/Well #1

Pier/Well #2

PRC 421 Piers – The “Beachfront” Wells

- Plugging & Abandonment
 - The 421#2 Well
 - On May 28, 2019, while preparing for the surface cement plugs, there was a release of oil both inside and outside of the steel caisson.
 - The operation immediately shut down in order to respond to the release. A Unified Command was established. The oil on the beach was cleaned up in a matter of days.
 - The team reviewed all relevant information on hand and “cored” the soil inside the caisson. No “free” oil was found from the coring operations.
 - The team excavated an area of beach adjacent to the caisson and found an expression of oil from the “bedrock”.
 - A plan was formulated.
 - Well was successfully P&A’d on 9/14 and location cleared

What We Knew

- The original expression of oil occurred after a minor pressuring of the annular space between the steel casing strings
- Casing likely in contact with natural fractures
- A conduit to the beach was uncovered during the excavation at low tide

The Plan

- **Critical Operations** (cementing, circulating, cutting/recovering casing, etc.) to be done only at low-low tide in order enable a rapid response and clean up any additional surface expression of oil
- **Induced pressure** on the wellbore from operations to be kept to a minimum and only as required to complete the operation
- **Prior to commencing critical operations** response personnel and equipment to be deployed on the beach
 - An earthen berm is to be built around the known exit area of the oil expression found on the beach surrounded with response boom
 - Vacuum truck on site with suction hose deployed within the berm to immediately remove any water or oil that may appear
 - Oil spill booms to be deployed around the caisson



Excavating the Sand
Next to the caisson



Building the
berm around
the site of the
oil expression
on the beach

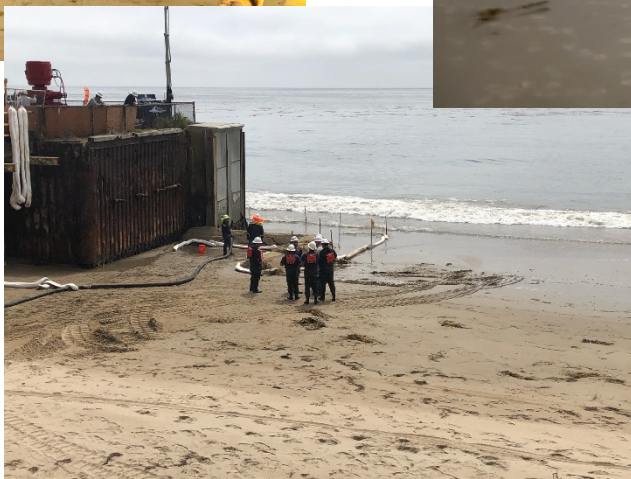


The berm surrounded
by oil absorbent boom



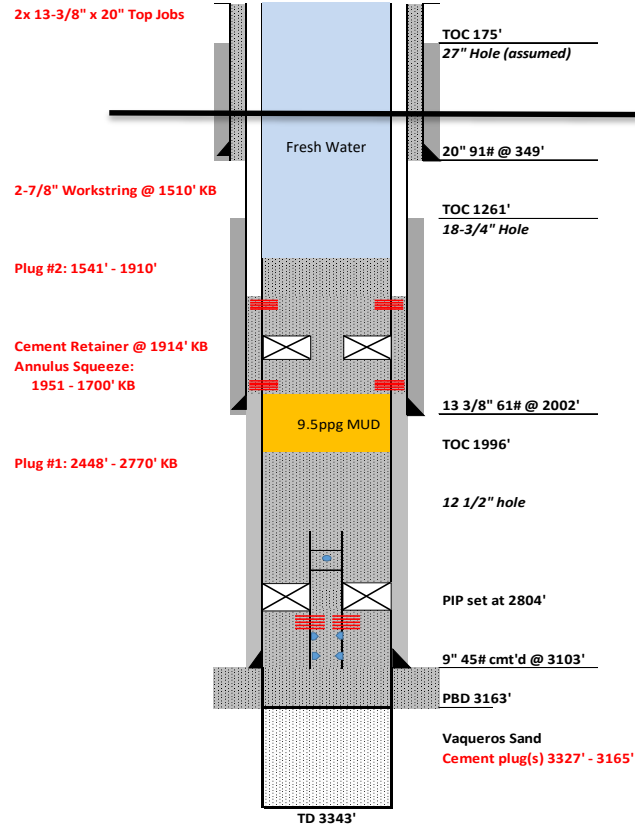
Placement of boom
Around caisson

Tide comes back in
and restores beach

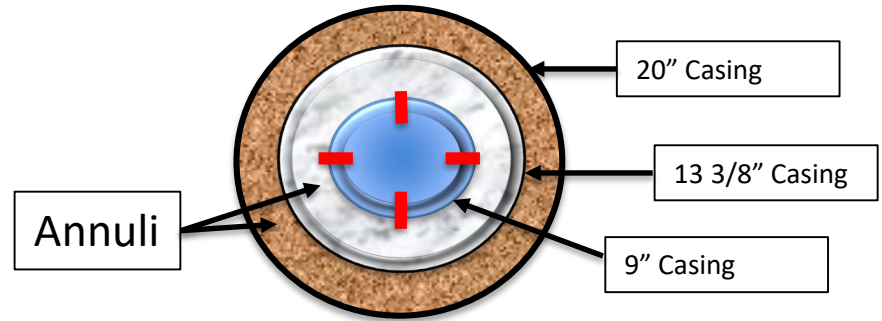


Response equipment
lined up on the road

The Wellbore



Cross-section



The Plugging Plan

- We determined that 3-100' cement plugs in the 9" by 13 3/8" casing annular space would seal off any flow paths for the old oil.
- After each set of perforations a predetermined amount of cement was placed inside the casing above the highest perf and allowed to "settle" (push out through the holes from the weight of the cement) into the annular space. This was to minimize pressure on the hole.

Result of the 3 annular plugs

- The first plug set up just as planned with no oil to surface
- The second plug set up just as planned, with the recovery of about a small amount of weathered (“old”) oil in the surface equipment
- The third plug set up just as planned with no oil to surface

The Surface Plugs

- The 9” casing was cut at approximately 430 feet and pulled out of the hole
- No oil was observed during the process.
- A plug (a kind of “cap”) was set across the top of the 9” casing “stub” sealing the 9” casing and the annular space below 430 feet.
- Next logs were run to determine the integrity of the 13 3/8” casing



New “Riser”



Pulling the Casing

9” casing wrapped in plastic for transport to waste facility



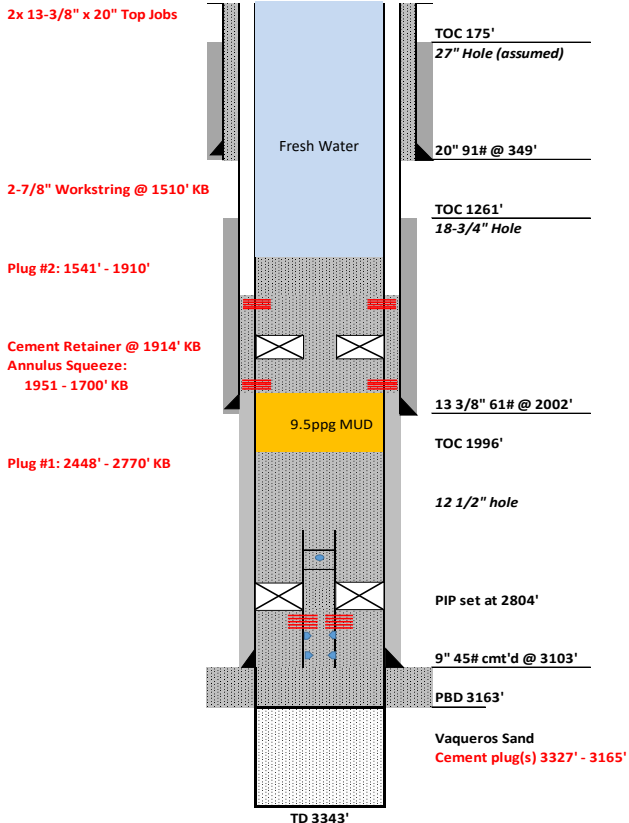
The Surface Plugs (cont.)

- Analysis of the logs showed several areas of corrosion and possible loss of integrity of the 13 3/8" casing
- After some discussion and review of the logs it was decided to cement in two stages,.
- First Stage:
 - Pumped cement and halfway through the operation the crew noticed water and a small amount of oil in the bermed containment area next to the caisson. Response crews responded (using vac truck and pads) with 100% recovery of the fluids. Water expression stopped when cement pumping was finished. **Less than a cup of oil was recovered with the water.**

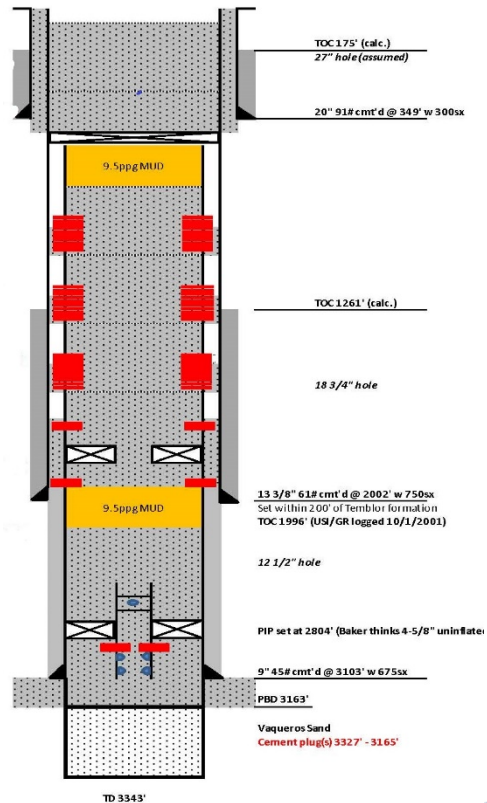
The Surface Plugs (cont.)

- Ran in hole, tagged top of cement at 285 feet (theoretical top was 100' based on the volume of cement pumped). Opened valve in cellar and saw no flow of water or any fluids.
- Second Stage:
 - Pumped cement with no expressions of water or oil observed by the spill response team anywhere.
 - Ran in hole and tag top of cement as expected at 35' – just above beach level.
- The well was fully plugged with cement and no pressure or fluids were observed. The well head was left on for continued observation pending the removal of the caisson.

Before



After





PRC 421 #1



PRC 421 #2

THANK YOU & QUESTIONS

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