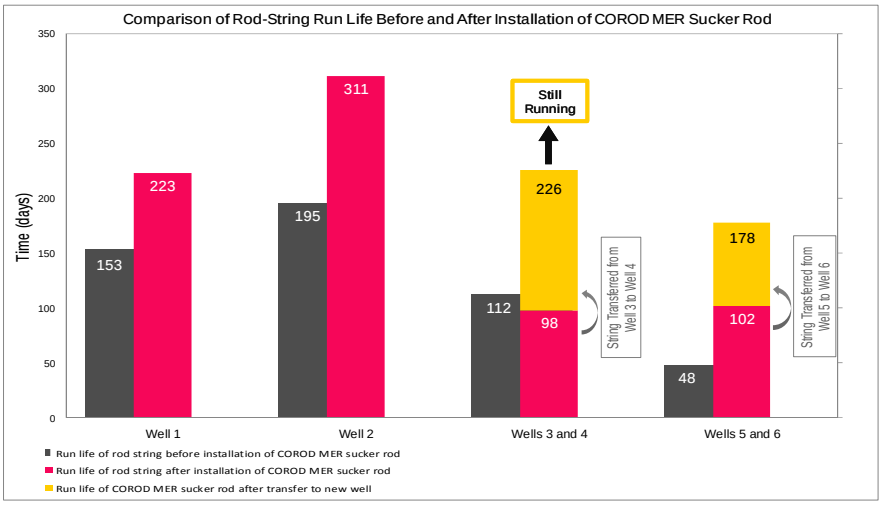
COROD® MER Continuous Sucker Rod Increases Average Run Life Of Rod Strings By 51% In Six Highly Corrosive Wells



In each well, the COROD MER continuous sucker rod significantly improved the run life of the rod string despite highly corrosive conditions. Weatherford was able to redeploy COROD MER sucker rods that had been running in two wells into two other wells to save costs, and the sucker rods performed for longer than expected.

Objectives

- Extend the run life of rod pumps in six highly corrosive wells:
  - Improve the average run life of sucker rods between failures of rod parts.
  - Improve the average run life of sucker rods between replacements related to corrosion of the rod string.
  - Lengthen the average time between interventions while decreasing operational expenses.
  - Reduce capital expenses by enabling the sucker rods to be redeployed in other wells.

Our Approach

- Weatherford designed a COROD mid-strength (ME grade) and rounded (MER) continuous sucker rod to improve the resistance of the rod string to corrosion fatigue in high loading applications. The material of the ME-grade rod was a special chrome-molybdenum alloy to improve its mechanical and heat-treating properties.
- In Well 1, run life of the rod string increased from 153 to 223 days, or by 46%, after the installation of the COROD MER sucker rod.
- In Well 2, run life of the rod string increased from 195 to 311 days, or by 59%, after the installation of the COROD MER sucker rod.

LOCATION
Colombia

NUMBER OF WELLS
6

WELL TYPE
Onshore, deviated, oil

HOLE SIZE AND ANGLE
7 to 9.625 in., 1 to 28°

CASING SIZE
7-1/2 in.

TUBING SIZE
3-1/2 in.

AVERAGE SETTING DEPTH OF PUMP
3,060 ft (933 m)

PRODUCTS/SERVICES
COROD MER 8.5 continuous sucker rod

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Our Approach (continued)

- In Well 3, the average run life of the previous rod string was 112 days. After the installation of the COROD MER sucker rod, the run life of the rod string reached 98 days before Weatherford removed the MER sucker rod and redeployed it in Well 4. The COROD MER sucker rod has been running in Well 4 for 226 days.
- In Well 5, the average run life of the previous rod string was 48 days. After the installation of the COROD MER sucker rod, the run life of the rod string reached 102 days—an increase of 113%—before Weatherford removed the MER sucker rod and redeployed it in Well 6. The COROD MER sucker rod ran in Well 6 for 178 days.

Value to Client

- As a result of the installation of the COROD MER continuous sucker rod, average run life of the rod strings has increased by 51% across all six wells.
- The frequency of workovers has decreased by 24%.
- Operational expenses have decreased by US $68,000 per rod intervention.
- Weatherford was able to redeploy into Wells 4 and 6 the two COROD MER sucker rods that had been running in Wells 3 and 5, which reduced costs. In Well 4, the MER sucker rod is still running.

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