

**APPLICATION PROFILE**

# OFFSHORE OIL PRODUCTION

## Lubricating Oil Systems

Challenge: **FLOATING SEMI-SUBMERSIBLE OIL PRODUCTION FACILITY**

Location: **CALIFORNIA/GULF OF MEXICO**

Located 80 miles off the coast of Louisiana, Shell's Appomattox deep-water (7,200') floating semi-submersible oil production facility is the largest platform operating in the Gulf of Mexico.

Through its OEM customer, Flodraulic's RHM Division was selected to provide three API 614, Chapter 3 specification lubricating oil systems to support their 2,700gpm, 9,000psi waterflood injection application centrifugal pumps.

Water injection or water flooding refers to the method in the oil industry where water is injected into the ground reservoir, usually to increase pressure and thereby stimulate production. Water injection wells can be found both on and offshore, to increase oil recovery from an existing reservoir.

In addition to lubricating the bearings of the main centrifugal pump, the RHM lube oil system also provides lubrication to the 18,000hp electric motor and gear drive assembly driving the centrifugal pump.

The three systems built by Flodraulic's RHM Division each included a 156gpm screw type pump; 1200gal, 316 stainless steel reservoir; Eaton 316 stainless steel duplex lube oil filters; Basco 12" dia. X 120" long, stainless steel, ASME rated, shell & tube heat exchanger capable of dissipating 118,000 BTU/HR; all 316 stainless steel welded pipe which was 100% sand blasted, and coated for offshore duty.

All pipe welds were tested and examined with radiography (x-ray) and liquid penetrant. All pipe and fittings were positive material tested, and provided with material test reports.



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