

## RedaHPS Pump Reduces Maintenance and Operating Costs for Double Eagle Petroleum

Case study: Custom turnkey facility design offers efficient, reliable, flexible solution to fluctuating flow problems in Wyoming field

### Challenge

Eliminate excessive maintenance and fluctuating flows while improving facility design and efficiency.

### Solution

Install RedaHPS\* horizontal multistage surface pumps in a custom-designed facility for cost-effective, reliable, long-term, trouble-free service requiring no daily maintenance.

### Results

Provided a complete turnkey facility that met varying flow requirements and reduced energy and overall maintenance and operating costs.

### High maintenance in south central Wyoming

The Atlantic Rim Coalbed natural gas play is a 40-mile-long area in south central Wyoming, and the Catalina Unit that Double Eagle Petroleum Co. operates in this area consists of 21,725 total acres. Nine positive displacement injection pumps are in use at Double Eagle's A pod and B pod Catalina Unit wells. There have been numerous flexibility challenges associated with these pumps, and they also require frequent maintenance. Consequently, when planning started for the C pod injection skid, the company contacted Schlumberger representatives and the Schlumberger local distributor, Power Service, Inc. (PSI), for a more efficient, reliable solution requiring minimal maintenance.



*Fully containerized, cost-effective, flexible dual RedaHPS pumps enable mobile operations.*

### A custom-designed turnkey solution

Double Eagle Petroleum selected Schlumberger RedaHPS pumps and the PSI prefabricated facility as the ideal solution for varying flows, low maintenance, and minimal ancillary equipment. The complete turnkey package was custom-designed to meet the company's specific requirements. PSI's in-house construction offered a controlled packaging environment, a safer working environment, the ability to reduce onsite construction costs, and a one-stop shop for the complete equipment requirements. These facilities are engineered for the harshest weather and meet the strictest regulatory codes.

The custom-engineered package allowed Double Eagle Petroleum to design the facility to meet varying flow requirements. A properly sized RedaHPS pump offered flow ranges between 6,000 bbl/d and 24,000 bbl/d at pressures ranging from 400 psi to 1,650 psi, eliminating constant maintenance of packing, plungers, oil, and valves. The engineered package, which included a 6-well manifold system with actuated chokes to help maintain back pressure, allowed for a constant flow to the disposal well.

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Additional features not previously available were included in the package. The complete turnkey facility featured redundant booster, transfer, and disposal pumps, and high-efficiency variable frequency drives that allowed a single pump to operate at the fluctuating flows and pressures.

### **Reduced energy and maintenance costs**

By reducing the high energy and maintenance costs, Double Eagle Petroleum is now working with minimal downtime, and the RedaHPS pumps only require quarterly maintenance. In addition to lowering maintenance time and costs, the PSI-engineered turnkey facility requires less onsite time and offers a controlled packaging environment and remote monitoring of the facility, which reduce the overall operating costs.



*RedaHPS system installed at Double Eagle Petroleum's Catalina Unit.*

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