HISTORY OF HYDRAULIC ROD PUMPS, INTERNATIONAL (HRPI)

HRPI was founded by Morris Hodges in 1986, an independent oil producer with more than 25 years of prior experience in drilling, completion and production in the Los Angeles Basin. He had over five years of experience operating hydraulic rod pumping units on his own leases in downtown Los Angeles and Beverly Hills, before starting HRPI (originally named Subsurface Pumping Systems, Inc.). The urban oil leases he purchased from Arco in 1979 had poor economic performance (operating at a loss) during the mid 1980's, due to depressed crude oil prices and poor electrical efficiencies of the existing gas lift system.

After reviewing all available artificial lift options, he called upon a well-known local manufacturer of hydraulic rod pumping (HRP) units, (Bob Pearson of Pearson Hydraulics) to supply 8 single well non-counterbalanced units. Testing and economic analysis of the 120" stroke tower mounted "above ground" style units began and after only 12 months of service, all gas lift wells on his urban leases were converted to either Kobe piston hydraulic or Pearson HRP units. Better field economic performance with the Pearson HRP units was obvious however, logistics associated with the urban location prevented conversion of the remaining Kobe wells to HRP type units due to vertical clearance constraints.

In 1986, Mr. Hodges was referred to an engineer from Detroit, Michigan to begin collaboration on the worlds first low profile HRP cylinder, designed to fit inside the well bore. Electrical efficiency and longevity of downhole equipment was discussed during the design process and it was decided the first low profile cylinder would be powered with a nitrogen-counterbalanced, dual-well power unit. In addition, the prototype possessed a 360" stroke length to increase tubing and rod string run-life in the deep, highly deviated wells.

The world's first 360" stroke, low profile, dual-well, nitrogen counterbalanced hydraulic rod pumping unit went on-line in 1987. For the next two years the unit was continuously tested on active producing deep deviated oil wells. A larger scale test was initiated in 1988 and three more (slightly refined) dual well systems were installed. These three dual well systems replaced the remaining Kobe subsurface hydraulic piston pumps.

Chris Hodges (son of the company founder) assumed control of the development process during the installation of these units. Chris brought with him prior experience in oil lease operations, manufacturing and electronic computer control technology. The original systems were updated with Programmable Logic Controllers (PLC) and stroke lengths were reduced to 22' to reduce manufacturing lead-time and costs, as well as cylinder installation and handling difficulties. Acceptable downhole run life results were achieved with 22' stroke lengths (as compared to 360" stroke lengths).

Four more dual well nitrogen counterbalanced units were placed in service at the company founders oil leases by the end of 1990 end. 1991 was a turning point for the company as the equipment was made available for sale to the public. No marketing or selling was performed, only word-of-mouth about the results brought interested parties to HRPI. Refined versions of the dual well, nitrogen-counterbalanced units were sold to two independent producers, St. James Oil and Signal Hill Petroleum. Twenty-two wells were in service on HRPI dual well systems by the end of 1991.

Reliability (or run-time) and long-term maintenance costs were closely evaluated as the number of systems in service increased. Several components on the original power units required upgrading in late 1992 due to repetitive short run-life. In addition, the electrical efficiency of dual-well nitrogen-counterbalanced units proved not quite as beneficial (as compared to dual well non-counterbalanced) as originally expected. All power units in service were exchanged and upgraded, free of charge to the customer. The computer systems were also upgraded to include dynamometers and additional safety features.

After 12 months of trouble free service, HRPI began marketing the product to local customers. THUMS (operating unit subsidiary of ARCO) invested in 7 HRPI dual-well units for use on four different offshore man-made islands in Long Beach Harbor. Thirty-six wells were in service by the end of 1994. Stocker Resources (subsidiary of Plains Resources) and Venoco, Inc. (independent) also purchased HRPI equipment in late 1994. Sixty-two wells were on-line by year-end with excellent track records. Typical run-time performance was greater than 99.7% (on the average).

Between 1995 and 1997, UNOCAL, Brietburn Energy, Torch Operating Company (purchasers of UNOCAL's California producing properties) and Cal Resources (sub of Shell) were all using HRPI equipment.

HRPI began marketing the equipment abroad in 1997, based on feedback from customers (indicating a high level of satisfaction based on first-hand experience). It was also decided in late 1997 to change the company name from Subsurface Pumping Systems, Inc. to Hydraulic Rod Pumps, International. The decision was made primarily due to the common mistaken identification with downhole hydraulics, such as National / Dresser (Mission-Fluid King) and Kobe/Trico jet and piston pumps. In addition, the new company name categorically explains what kind of equipment is manufactured.

Several international representatives have been placed as of mid-1998. Primary focus has been to form partnerships with service companies capable of properly distributing our technology while maintaining a professional level of after-the-sale service. Most areas of the world can expect service coverage 365 days a year, 24 hours a day (our standard level of service) however; certain locations may not offer this level of service due to geographic constraints. As of January 1st, 1999, equipment has not been placed outside of the Los Angles basin, primarily due to the industry downturn however, discussions with several major oil companies indicate expected delivery and subsequent installations will occur by mid-1999.

As of January 1st 1999, 98 wells were in service on HRP pumping units, including shallow water offshore platforms, urban drillsites, downtown commercial locations and residential well sites, all within a 75-mile radius of the core manufacturing and service facility.