PROJECT FACT SHEET

CONTRACT TITLE: Use of Low Maintenance Pump to Extend Life of Stripper Wells/Independent Award

ID NUMBER: DE-FG26-00BC15261

B&R CODE: AC1010000

CONTRACTOR: Energy, Inc.

ADDR: 771 East 800 South
Fairmount, IN 46928

DOE PROJECT MANAGER:

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CONTRACT PROJECT MANAGER:

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PROJECT SITE
CITY: Fairmount **STATE:** IN
CITY: Trenton Field, Huntington & Wasbash Co. **STATE:** OH
CITY: **STATE:**

CONTRACT PERFORMANCE PERIOD:
5/17/2000 to 5/18/2002

PROGRAM: Reservoir Life Extension
RESEARCH AREA: Production Improvement; Independent
PRODUCT LINE: DCS

CO-PARTICIPANTS:

PERFORMER:	**CITY:**	**STATE:**	**CD:**
PERFORMER:	**CITY:**	**STATE:**	**CD:**
PERFORMER:	**CITY:**	**STATE:**	**CD:**
PERFORMER:	**CITY:**	**STATE:**	**CD:**

FUNDING (1000'S)	DOE	CONTRACTOR	TOTAL
PRIOR FISCAL YRS	75	191	266
FY 2002 CURRENT OBLIGATIONS	0	0	0
FUTURE FUNDS	0	0	0
TOTAL EST'D FUNDS	75	191	266

OBJECTIVE: Install a compressed-air-driven oil production system to avoid/minimize the downhole corrosive conditions impeding the efficiency of standard pumpjack equipment in the Trenton field, Huntington and Wabash Counties, Indiana.

PROJECT DESCRIPTION:

Background: Oil production using standard industrial production equipment (pumping equipment with steel tubing, rods, and bottomhole pumps) is currently not economically feasible from the Trenton Field because of the extremely corrosive properties of the crude oil and reservoir water. Labor and materials costs associated with repeated replacement of components are prohibitive. Normal measures taken to counteract the problem include the addition of costly anti-corrosive chemicals or installation of plastic-coated steel components.

A new patent-pending Airlift oil pumping system produced by Airlift Services International, Inc., offers significant operational advantages in shallow (less than 1,200 feet) fields having severe operating problems. The Airlift system uses compressed air to move the oil from the well bore to surface storage facilities through a series of alternately filled and emptied stages of plastic tubing. The cost of installing the current Airlift system is competitive with the cost of a used pumpjack, as it requires only an air line to the well and a flow line from the well to storage tanks.

The Airlift system has the ability to run with gas in the line, instead of shutting down as pumpjacks do, valves are used that do not wear as do the gaskets on lift rods, the system does not require lubrication, and there are no moving parts above the well casing to afford safety hazards. There are currently four prototypes of this system successfully being used in typical marginal wells. The first prototype operated for eighteen months before it failed because of deterioration of the air line, which has been replaced with a more resistant material.

Work to be Performed: Refit 16 wells in the Trenton Field with the Airlift systems. Other proposed developments for the system include a sensor to indicate when the bottom stage is full or empty for optimal cycle timing that will improve operating efficiency and increase production.

PROJECT STATUS:

Current Work:

Scheduled Milestones:

Accomplishments: New project 5/00

Working on design improvements to the Airlift system. Conducted major re-work of work-over rig for running the Airlift systems. The Wilson Lease has 2 units installed and operating, and the Larr Lease has 4 units installed and operating. Continuing to make design improvements based on operational experience. An interim "o" ring fix didn't work out well, so they are going to use brass. Now having down-hole sensor transmission problems with the wire signal line.

One unit in temporary operation with continuing mechanical/design problems. This unit has demonstrated the feasibility of the Airlift system, although improvements are needed. Revising the design to replace some of the poly materials with better materials. The new design will be installed as soon as it is ready.

TECHNOLOGY TRANSFER:

Technology/Information Transfer:

Public Relations:

Updated By: **Walter B. North** Date: **1/17/2002**