

PROJECT FACT SHEET

CONTRACT TITLE: Evaluation of Using Cyclocranes to Support Drilling and Production of Oil and Gas in Wetland.

DATE REVIEWED: 07/27/1994

DATE REVISED: 07/27/1994

OBJECTIVE: To evaluate the use of cyclocraft to transport drill rigs, mud, pipes, and other materials and equipment in a cost effective and environmentally safe manner to support oil and gas drilling and production operations in wetland areas.

ID NUMBER: DE-AC22-92MT92012	CONTRACTOR: Mission Research
B & R CODE: AC1510100	ADDR: 735 State Street
CONTRACT PERFORMANCE PERIOD: 05/29/1992 to 11/30/1993	Santa Barbara, CA 93102
PROGRAM: Environmental Research	CONTRACT PROJECT MANAGER:
RESEARCH AREA: Wetland	NAME: Wilfred J. Eggington
DOE PROGRAM MANAGER:	ADDR: Mission Research
NAME: Bill Hochheiser	735 State Street
COMMERCIAL: (202) 586-5614	Santa Barbara, CA 93102
	PHONE: (619) 560-5351
	FAX: (619) 560-7352
DOE PROJECT MANAGER:	PROJECT SITE:
NAME: Gene D. Pauling	San Diego, CA
LOCATION: MSO	
COMMERCIAL: (504) 734-4131	

SCHEDULED MILESTONES:

TASK 1 - Environmental considerations.	10/92
TASK 2 - Transport requirements.	10/92
TASK 3 - Parametric analysis.	12/92
TASK 4 - Cyclocraft preliminary design.	04/93
TASK 5 - Subscale planning and testing.	08/93
TASK 6 - Ground support requirements.	07/93
TASK 7 - Environmental impacts.	07/93
TASK 8 - Prototype development plan.	09/93
TASK 9 - Operating costs.	10/93
TASK 10 - Technology transfer seminar.	11/93

FUNDING (1000'S)	DOE	OTHER	CONTRACTOR	TOTAL
PRIOR FISCAL YRS	197	0	0	197
FISCAL YR 1994	0	0	0	0
FUTURE FUNDS	0	0	0	0
TOTAL EST'D FUNDS	197	0	0	197

PROJECT DESCRIPTION: This project includes an environmental analysis of using cyclocraft in wetland areas; an evaluation of transportation needs by oil and gas operations in wetland areas; a parametric design analysis; developing a preliminary cyclocraft design; the testing of a cyclocraft model; ground support analysis; an analysis of the environmental impacts of utilizing cyclocraft in oil and gas operations; preparing a plan for developing a cyclocraft; a project cost analysis; and a technology transfer plan.

PRESENT STATUS: The project is on schedule and within available funds. Added objective to evaluate the use of cyclocraft to support work over existing wells in wetland areas.

ACCOMPLISHMENTS:

- Task 1. Determination of environmental considerations completed.
- Task 2. Determination of transport requirements completed.
- Task 3. Cyclocraft Parametric analysis completed.
- Task 4. Cyclocraft preliminary design completed.
- Task 8. Prototype development plan completed.
- Task 9. Operating cost analysis completed.
- Task 10. Paper presented to Western Dredging Association Seminar, New Orleans, LA, April 1993.

BACKGROUND: Traditionally the helicopter, with its vertical take-off and landing (VTOL) capability, has been used to transport drill rigs by air when surface transportation is prohibitive. The helicopter is not a satisfactory solution because of its poor operating economics, limited payload, limited adverse weather capability, poor reliability/maintenance, poor safety and high downwash. The Cyclocraft is a proven hybrid aircraft that utilizes aerostatic and aerodynamic lift. This type of aircraft has considerable payload capacity, VTOL capability, high controllability, low operating cost, low downwash and high safety. The benefits of using Cyclocraft to transport drill rigs and materials over environmentally-sensitive surfaces would be significant.