

# CURRAGH RESOURCES INC.

## EXPENDITURE (AFE) PROPOSAL

003740

AFE No. \_\_\_\_\_

Division: Whitehorse

Department: Exploration

Capital   
 Operating   
 Tax Classification

Nature and Purpose of Expenditure: By shaft pilot hole access groundwater and geotechnical conditions

TYPE OF EXPENDITURE:  
 Development   
 Replacement   
 Expansion   
 Cost Reduction   
 Priority Code (see reverse) \_\_\_\_\_  
 Priority

NEW PROPOSAL  CARRY-OVER

ITEM OR ACTIVITY

PROPOSED SPENDING  
 Detail Schedule attached Y  N

	1990	Subsequent Years	Total	Budgeted 1990
1. Contractor selection	12,500		12,500	
2. Site investigation	72,000		72,000	
3. Drill 3,000 foot hole in shaft location	415,500		415,500	500,000
Planned submission date _____	500,000		500,000	500,000

Approval required by \_\_\_\_\_  
 Timing of Spending April-September, 1990

Attendant Expense \$ \_\_\_\_\_

Escalation included \_\_\_\_\_ %  
 Lead Time \_\_\_\_\_ (months)

Full  Estimated

Economic Justification

(ROR, + Pay-Back, or Others) \_\_\_\_\_

**Approval/Review**

Sponsor \_\_\_\_\_  
 General Manager \_\_\_\_\_  
 Controller \_\_\_\_\_  
 Chief Financial Officer \_\_\_\_\_  
 Executive VP Mining \_\_\_\_\_  
 President & C.O.O. \_\_\_\_\_  
 Chairman & C.E.O. \_\_\_\_\_

Date	Approval Required
<u>7/10/90</u>	X
_____	X
_____	X
<u>7/10/90</u>	X
_____	X
_____	X

Job #: \_\_\_\_\_ Home Account: \_\_\_\_\_

## DY SHAFT PILOT HOLE

### INTRODUCTION

In order to begin underground development of the Dy ore body, shaft access is required. Prior to shaft excavation, a pilot hole is necessary to:

- 1) confirm that the ground in the shaft location is acceptable.
- 2) quantify expected water in-flows.
- 3) define rock quality for contractor bids, and
- 4) insure the shaft will not intersect ore.

### PROBLEM

The problem is to define the geotechnical characteristics and hydrologic characteristics of the area of a proposed shaft for the Dy deposit. The shaft proposal is to gain access to the Dy ore by sinking on the northeast margin of the ore deposit from an elevation at surface of about 1,200 metres to an elevation of approximately 400 metres. A cross-cut south will access the ore body. Drifting along strike within the ore, or below it, with diamond drilling from the drift will define the various ore horizons.

### SOLUTION

- 1) A consultant with expertise and experience in controlled drilling techniques will be hired to write drilling procedures and to word the drilling contract to best insure completion of the Dy shaft pilot hole to specifications.
- 2) Four or five shallow angle holes will be drilled to define the geologic structure at the site. The results will be integrated with geological mapping and drill results to date to define fault locations, and the collar of the shaft pilot hole will be sited to avoid the faults, or the drill plan will be revised to account for the faults.
- 3) A diamond drill hole using controlled drilling techniques is required to assess the ground within the shaft location. Specifications for this hole will be 6.35 centimetre (2.5 inch) diameter core (HQ). The hole will be vertical and is not to deviate more than 2.44 metres (8 feet) from its collar. The hole will be approximately 850 metres (2,800 feet) to 925 metres (3,000 feet) deep. Drill techniques will employ large diameter drill string, stabilized core barrel, stabilization of the lower 15.24 metres (50 feet) of drill string, and weighted drill string. A mud program will be developed for this hole specifically. Directional determination will be by combination of single shot and gyroscope methods. The drill plan is for the hole to be straight, however in the event that the hole

does deflect, a down hole motor will be used to pull the hole back to vertical.

#### ALTERNATIVES

There is no known alternative to drilling the pilot hole other than sinking the shaft blindly, or drilling ahead of the shaft in three phases of 300 metres (1,000 feet) each, and delaying the shaft. It would be possible to prove that there is no ore in the vicinity of the shaft without controlled drilling, however geotechnical data would be not be from within the shaft.

#### BENEFITS

This is a critical path item for the development of the Dy deposit and is justified on the same grounds as the mining of the Dy deposit is justified.

**PROPOSED SPENDING**

1990 Dy Shaft Pilot Hole	May	July	August	September
Stage 1: Consultant	\$12,500			
Stage 2: Site Investigation	\$2,000	\$70,000		
Stage 3: Pilot hole			\$207,750	\$207,750