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CURRAGH RESOURCES INC.

**CURRAGH'S SOCIO-ECONOMIC
CONTRIBUTION TO THE YUKON**

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TABLE OF CONTENTS

| | Page |
|---|-----------|
| I CURRAGH HAS OPERATED A LEAD-ZINC MINE AT FARO SINCE 1986 | 1 |
| II CURRAGH DIRECTLY SUPPORTS 737 WORKERS IN THE YUKON, WITH AN ANNUAL PAYROLL OF \$34.6 MILLION | 3 |
| A. THE COMPANY HAS 515 YUKON EMPLOYEES | |
| B. THE COMPANY ALSO HAS 222 PERMANENT CONTRACTORS | |
| III CURRAGH HAS UNDERTAKEN A NUMBER OF EMPLOYMENT AND RECRUITING INITIATIVES | 7 |
| A. YUKON RESIDENTS ACCOUNTED FOR 45% OF HIRES IN 1989 | |
| B. WOMEN MAKE UP 12% OF THE WORKFORCE | |
| C. YOUTH ACCOUNT FOR 25% OF THE WORKFORCE | |
| D. EMPLOYEE TURNOVER IS DECLINING | |
| IV CURRAGH SPENT \$66.4 MILLION IN 1989 ON GOODS AND SERVICES SUPPLIED BY YUKON BUSINESSES | 13 |
| V CURRAGH AND ITS WORKERS DIRECTLY CONTRIBUTED \$3.1 MILLION TO THE YUKON GOVERNMENT IN 1989 | 14 |
| VI CURRAGH'S TOTAL DIRECT SPENDING OF \$92.7 MILLION IN 1989 IN THE YUKON GENERATED ADDITIONAL ECONOMIC ACTIVITY | 16 |
| VII THE VANGORDA DEVELOPMENT WILL SUPPORT A SIMILAR LEVEL OF ECONOMIC ACTIVITY DURING OPERATIONS | 18 |

I CURRAGH HAS OPERATED A LEAD-ZINC MINE AT FARO SINCE 1986

Curragh Resources Inc. (Curragh) owns and operates a lead-zinc mine at Faro in the Yukon. The mine was previously owned by Cyprus Anvil Mining Corporation, which operated it from 1967 through to temporary closure in 1984 because of economic difficulties. Curragh purchased the mine assets, including additional ore reserves at Vangorda Plateau, in 1985 and began preparing for reopening of the mine.

Reopening of the mine required a capital expenditure of \$55.8 million by Curragh in 1986. The contribution of government to the start-up costs, although small in comparison to the total dollars expended, was viewed by the company as instrumental in the reopening. As part of this contribution, Curragh and the Government of the Yukon Territory implemented a "Business and Employment Opportunities Accord" at the time of the mine purchase.

Curragh's operation is the largest open-pit lead and zinc mine in North America. The company produced 487 thousand dry metric tonnes of zinc and lead concentrate at the mine in 1989, with a net value of \$204 million (FOB Skagway). In terms of gross value, the company estimates this represented nearly 80% of the total value of mineral production in the Yukon in 1989. Curragh's concentrate is transported by truck from Faro to Skagway, Alaska, where it is loaded onto ships destined for smelter locations worldwide. Since all concentrate is exported, the company makes a significant contribution to Canada's positive balance of trade.

The operation of the Faro mine provides a significant socio-economic benefit to the Yukon, as well as Canada. The Coopers & Lybrand Consulting Group was retained by Curragh to identify the various forms of this benefit within the Yukon.

This report examines five major areas of Curragh's socio-economic contribution:

- direct employment and payroll;
- employment and recruiting trends;
- expenditures on local goods and services;
- payments to government; and
- indirect and induced economic activity stimulated by Curragh.

The report also comments on Curragh's planned activities at the Vangorda Plateau mine development near Faro, which will be gradually phased in to replace the existing Faro open-pit mining operation by 1992.

II CURRAGH DIRECTLY SUPPORTS 737 WORKERS IN THE YUKON, WITH AN ANNUAL PAYROLL OF \$34.6 MILLION

Curragh has two types of workers in the Yukon: people who are permanently employed by the company, and people who are employed as exclusive contractors on a long-term basis. Both can be considered part of Curragh's direct employment since they work for the company full time.

A. THE COMPANY HAS 515 YUKON EMPLOYEES

As of the end of 1989, Curragh had 515 employees in the Yukon, including 505 at the minesite in Faro and another 10 at the company's regional office in Whitehorse*.

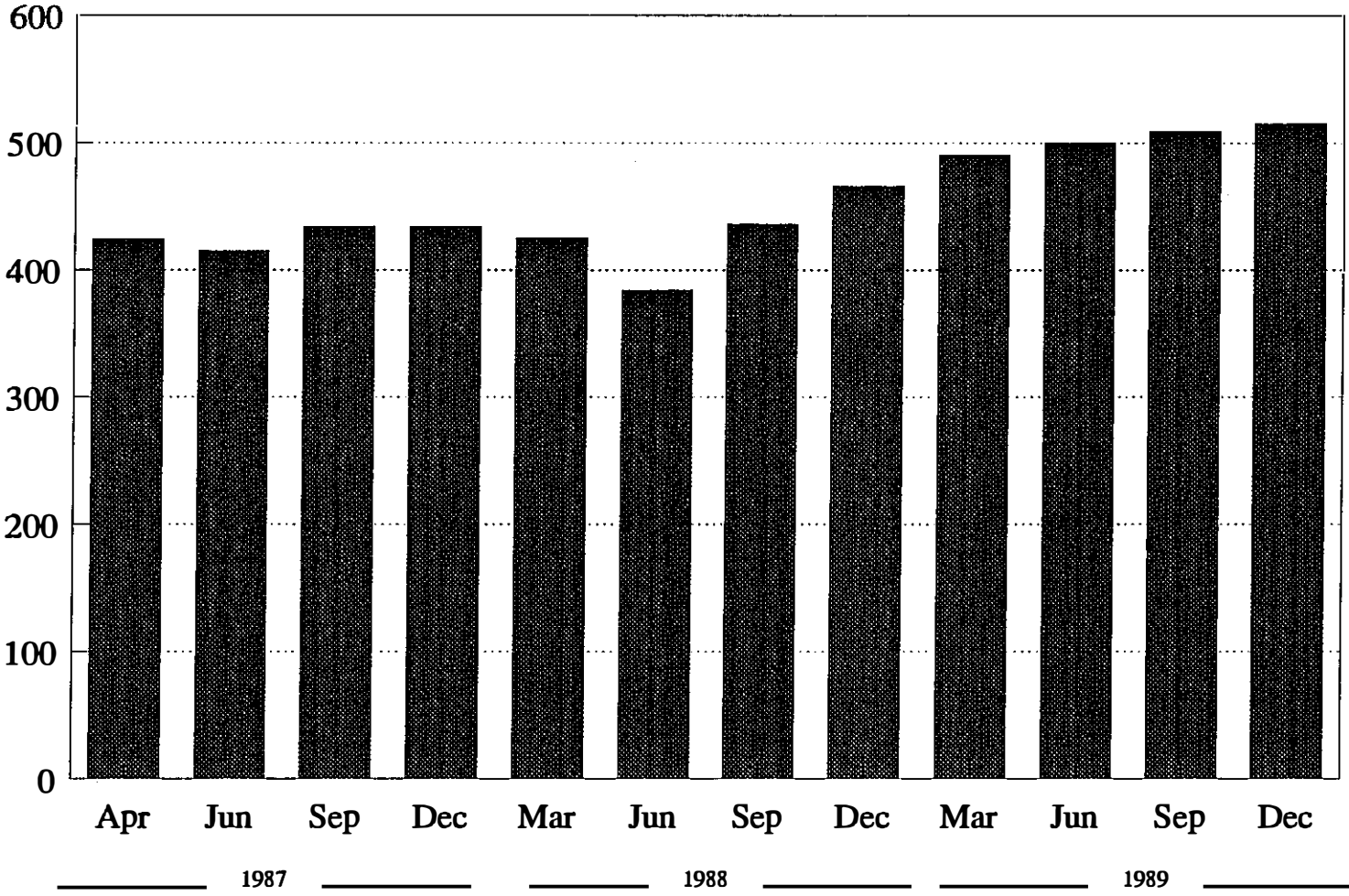
As the chart on page 4 shows, employment has increased by nearly 50 people over the past year, largely due to expansion of the mine operations and maintenance departments.

Curragh's Yukon payroll for 1989 was approximately \$25.3 million, including wages and benefits. This is an average of \$49,100 per employee.

* The company's employment level fluctuates somewhat. Other Curragh documents may show a different employment figure, depending on the date they were prepared.

CURRAGH RESOURCES INC.

Total Employment-Faro & Whitehorse



B. THE COMPANY ALSO HAS 222 PERMANENT CONTRACTORS

A number of services are performed for Curragh by permanent contractors. The company has identified these services and the associated employment as including:

- the hauling of concentrate from Faro to Skagway by Yukon-Alaska Transport (170 employees on average); and
- vehicle maintenance, tire repair, security and janitorial services at the minesite (52 employees).

In total, there are 222 workers employed under contract to perform these services.

The annual payroll for the Yukon-Alaska Transport employees is nearly \$6.7 million - an average of \$39,400 per employee. There is no payroll figure available for the 52 contract workers at the minesite since they are paid through the companies contracted by Curragh. However, it would seem reasonable to assume an average income per employee similar to that of Curragh's own employees at the minesite (i.e., \$49,100 each). The 52 employees, therefore, are estimated to have an annual payroll of \$2.6 million.

In total, then, Curragh directly supports 737 workers in the Yukon, with an annual payroll of about \$34.6 million. According to the Yukon Economic Forecast (February 1990), there were approximately 13,050 people employed

in the Yukon in 1989. This means Curragh directly accounts for 5.6% of Yukon employment. In other words, approximately one in 18 workers in the Yukon is directly employed by Curragh.

The company is by far the largest employer in the mining and exploration industry in the Yukon, accounting for 46% of the estimated 1,113 jobs in the industry as of June 1989 (based on the 515 direct Curragh employees only).

Curragh is also a major contributor to total employee earnings in the Yukon. Its payroll of \$34.6 million in 1989 represented 8% of the estimated \$440 million (including an assumed 15% for benefits) earned by workers in the Yukon.

III CURRAGH HAS UNDERTAKEN A NUMBER OF EMPLOYMENT AND RECRUITING INITIATIVES

Curragh tracks a number of employment and recruiting trends at its mine, including:

- Yukon versus non-Yukon hires;
- women in the workforce;
- youth in the workforce; and
- employee turnover.

The statistics presented in the following sections pertain only to Curragh's permanent employees and exclude its permanent contractors (for which similar data are not available).

A. YUKON RESIDENTS ACCOUNTED FOR 45% OF HIRES IN 1989

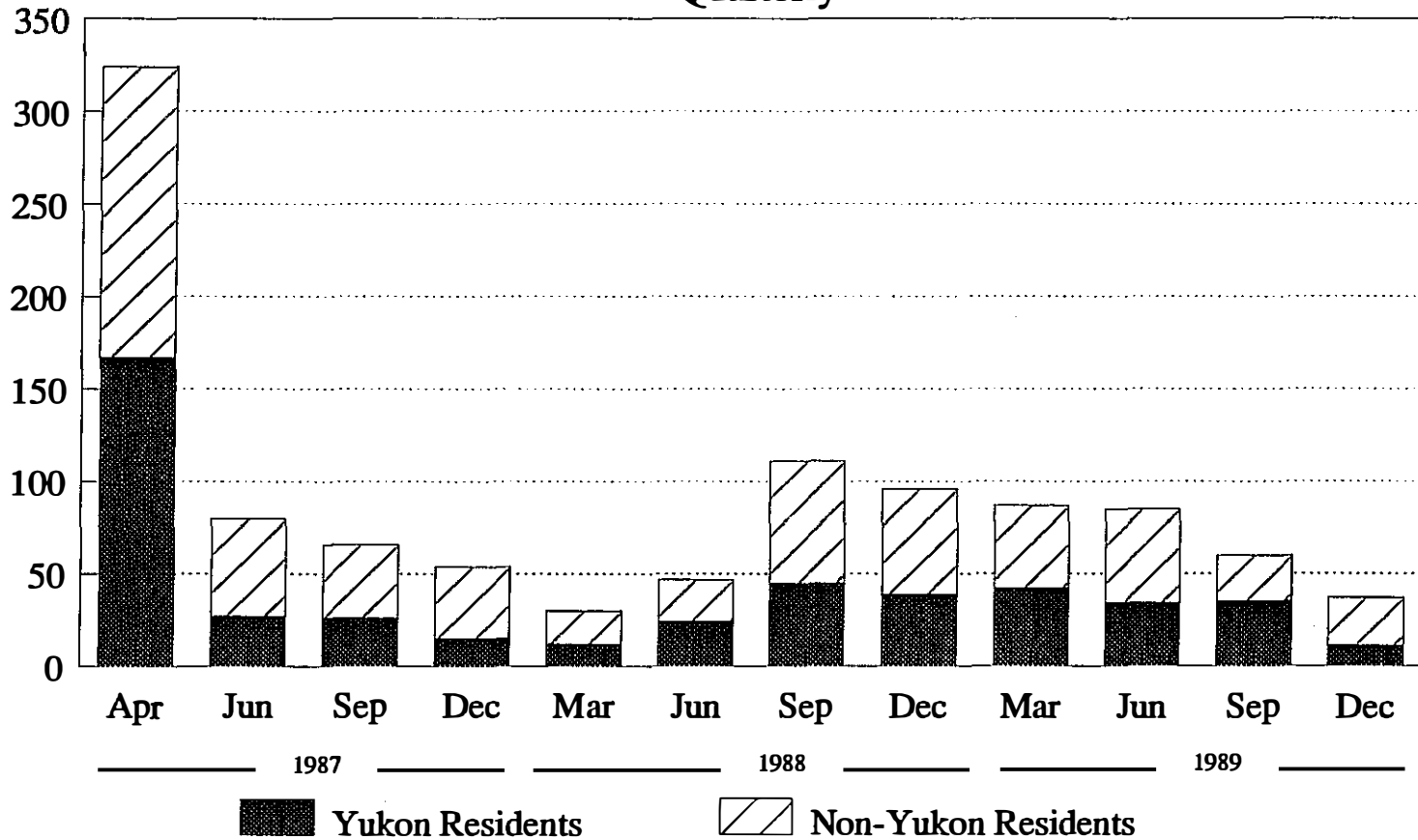
The chart on page 8 shows the number of Yukon versus non-Yukon hires at Faro on a quarterly basis since mine start-up.

There were 269 people hired by Curragh in 1989, of whom 122 (45%) resided in the Yukon at the point when they were hired. The proportion of Yukon hires in 1989 was up slightly over 1988, when 42% of the hires were Yukon residents.

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Yukon vs Non-Yukon Hires - Faro

Quarterly



Note: April, June and September 1987 figures exclude management, clerical and technical employee hires.

B. WOMEN MAKE UP 12% OF THE WORKFORCE

There are currently 64 women employed by Curragh, which is 12% of the company's employment (see chart on page 10). This is the highest level of female participation in the workforce since Curragh began tracking female employment in December 1987.

Thirty-five (55%) of the women are employed in management, clerical and technical positions, and 29 (45%) are employed in operations and maintenance positions.

C. YOUTH ACCOUNT FOR 25% OF THE WORKFORCE

As the chart on page 10 shows, youth account for a substantial portion of Curragh's workforce. The company defines youth as employees in the 18- to 25-year-old age bracket. There were 130 youth employed as of December 1989, comprising 25% of the workforce.

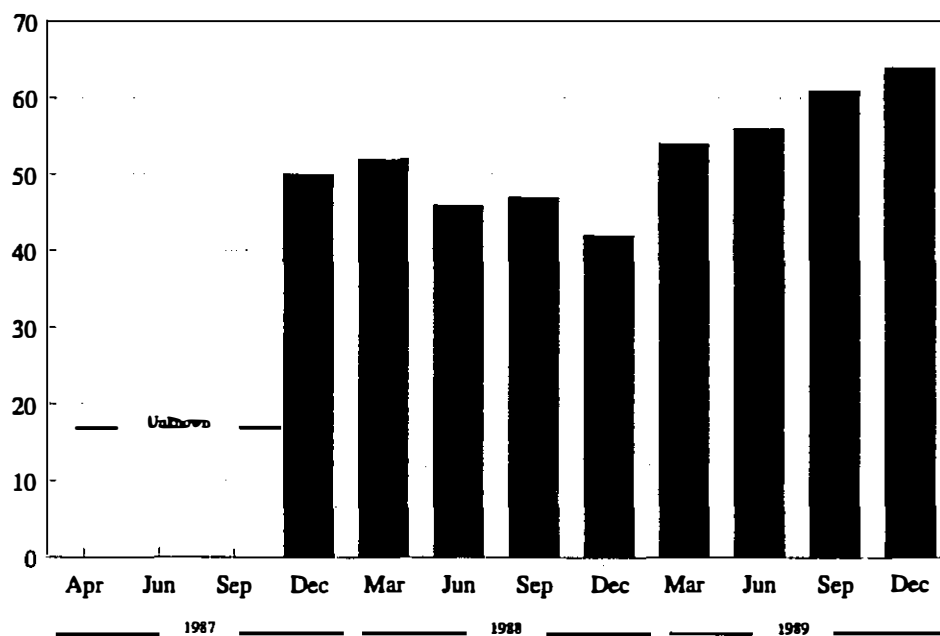
D. EMPLOYEE TURNOVER IS DECLINING

Workforce turnover in the mining industry tends to be relatively high, particularly in northern locations. Curragh's experience has been similar to that of many other newly opened mines.

The chart on page 11 shows that turnover at Curragh is beginning to decline as workers become more settled in their jobs and in the

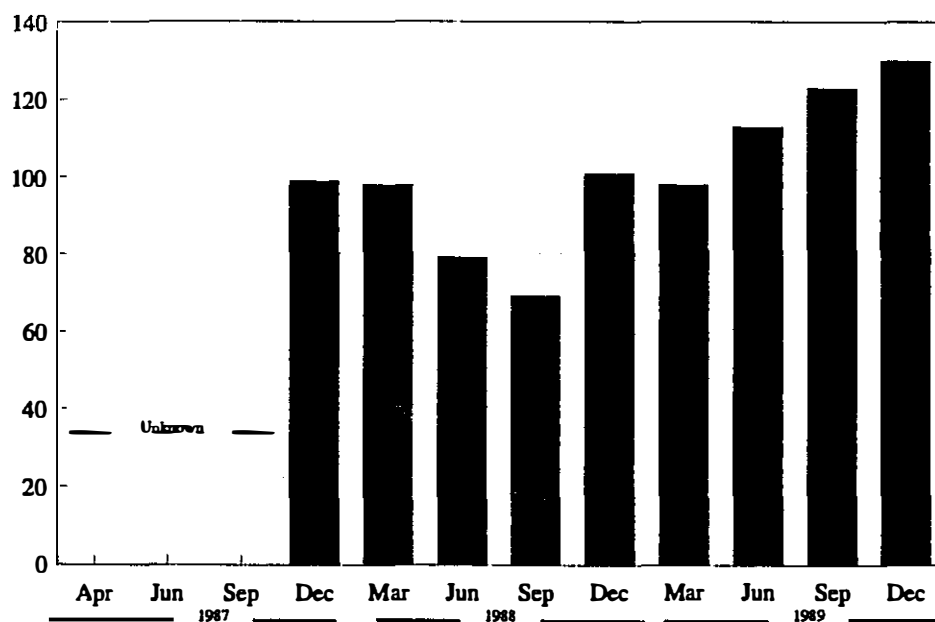
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Total Female Employment Faro and Whitehorse



CURRAGH RESOURCES INC.

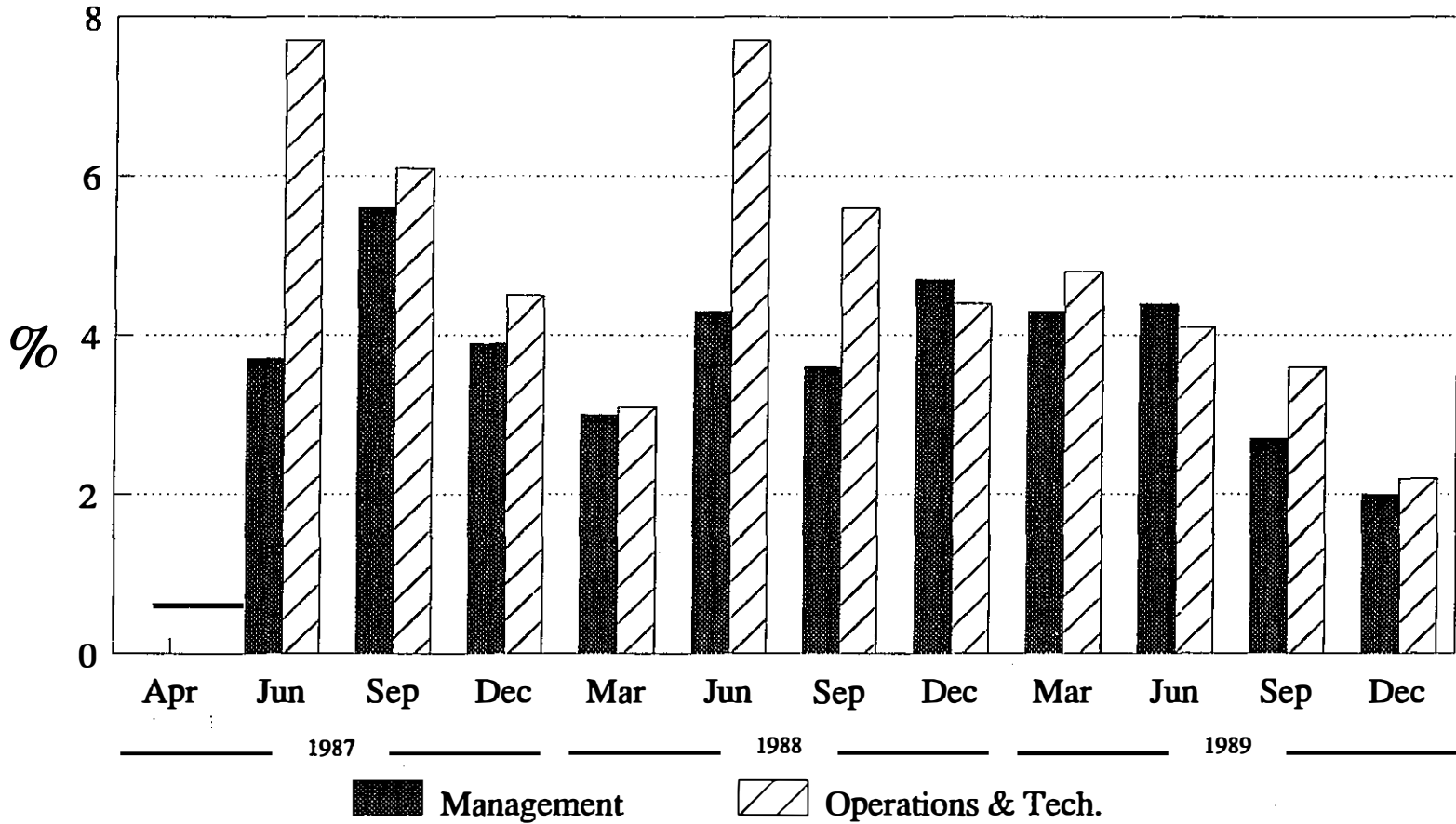
Total Youth Employment-Faro & Whitehorse



Note: Youth are defined as employees age 18-25.

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Employee Turnover at Faro Quarterly Averages



community.* Lower workforce turnover benefits Faro by providing greater community stability and cohesion.

Curragh anticipates that most of the employment and recruiting trends for 1989 will continue through 1990, with possibly a small increase in employment at the mine.

* The relatively high turnover rate in June 1988 was during a four-week strike at the mine. Also, June is typically a time of higher employee turnover due to some workers planning their departures to coincide with school year-end for their children.

IV CURRAGH SPENT \$66.4 MILLION IN 1989 ON GOODS AND SERVICES SUPPLIED BY YUKON BUSINESSES

Curragh procures a wide range of goods and services from Yukon business, with a total of \$66.4 million spent in 1989. This included some spending on the Vangorda mine development

The greatest proportion of money was spent on contractors and consultants, who accounted for approximately 50% (\$33.2 million) of the total. These contractors included Yukon-Alaska Transport, which hauls Curragh's concentrate, and smaller contractors with 52 employees at the minesite providing vehicle maintenance, tire repair, security and janitorial services. The construction sector was also a major recipient of business from Curragh.

Materials accounted for 29% (\$19.3 million) of the total expenditure. Examples of major items purchased are reagents and machinery and equipment parts.

The remaining 21% (\$13.9 million) was spent on energy, including hydro, gas and diesel. Curragh consumed 156,000 MW hours of electricity in 1989 worth \$6.8 million. This represented approximately 35% of total electricity consumption in the Yukon. Curragh also consumed an estimated 13% of gas and diesel fuel used in the Yukon in 1989.

Curragh anticipates that its expenditures on local goods and services will increase over the next year as part of developing the Vangorda Plateau minesite, then settle back to around the spending level for the Faro mine in 1988 (approximately \$57 million).

V CURRAGH AND ITS WORKERS DIRECTLY CONTRIBUTED \$3.1 MILLION TO THE YUKON GOVERNMENT IN 1989

Curragh contributes revenue directly to the Yukon Government in two basic forms: tax payments by the company, and tax payments by its employees.

Curragh is a private company and certain of its tax payment information is confidential, including corporate income taxes. However, for property and road taxes alone the company paid \$975,000 to the Yukon Government in 1989.

The annual payroll of \$34.6 million for the 737 employees and permanent contractors of the company also has a significant impact on government revenues. The Curragh workers are conservatively estimated to have generated about \$2.1 million in tax revenue for the Yukon Government in 1989.*

The Yukon Economic Forecast (February 1990) shows total Yukon Government revenue for 1989-90 at \$338 million. Hence, the \$3.1 million contributed by Curragh and its direct workforce accounted for nearly 1.0% of total government revenue. If grant revenue from the Government of Canada is excluded (\$195 million), Curragh accounted for 2.2% of Yukon Government revenue. This is a conservative estimate of Curragh's contribution to Yukon

* The figure of \$2.1 million was calculated assuming an average taxable income of \$37,000 per worker (roughly 80% of the average gross payroll figure of \$46,900 for each of the 737 workers). The tax payable in the Yukon on \$37,000 was \$9,068 for 1989. The Yukon Government tax rate is 45% of the federal tax, which means an average of \$2,800 per worker. The figure of \$2,800 was applied to each of the 737 workers, for a total of \$2.1 million.

Government revenue since not all of the company's taxes have been included (e.g., corporate income tax, fuel tax).

The total payments to the Yukon Government generated by Curragh are even higher when one considers the indirect and induced economic activity, such as the taxes paid by the Yukon businesses providing goods and services to the company and its workers.

VI CURRAGH'S TOTAL DIRECT SPENDING OF \$92.7 MILLION IN 1989 IN THE YUKON GENERATED ADDITIONAL ECONOMIC ACTIVITY

Curragh spent a total of \$92.7 million in the Yukon in 1989, including employee payroll (\$25.3 million), purchase of goods and services from Yukon businesses (\$66.4 million), and payments to government (\$975,000).

This direct spending of \$92.7 million generates further economic activity in the Yukon through respending of the money by the workers, businesses and government. This is often referred to as the "multiplier" or "ripple" effect. The additional economic activity comes about in two forms:

- indirect activity, which is the respending of money on goods and services by the businesses that receive money from Curragh; and
- induced activity, which is the respending of money on goods and services (e.g., accommodation, food, transportation, clothing) by the workers who are directly supported by Curragh.

There are a number of different ways to estimate the multiplier effect of spending activity, including use of such econometric models as Statistics Canada's interprovincial input-output model. The structure of the Yukon economy is such that many models are not applicable. This study has instead relied on the findings of other studies of the mining industry in northern Canada. On this basis, a conservative employment multiplier of 2.0 has been selected, which means that each direct job at Curragh supports the full-time

equivalent of one indirect/induced job in the Yukon.* Hence, the combined direct, indirect and induced employment impact of the company is estimated at $(737 \times 2 =) 1,474$ jobs. This was 11.3% of all Yukon employment in 1989, which means that Curragh is directly and indirectly responsible for supporting nearly one in 9 jobs in the Yukon.

* The multiplier effect for Canada as a whole would be even higher since there is "leakage" of money out of the Yukon to other regions of the country for the purchase of goods and services not available locally. Curragh's employment multiplier for Canada is likely in the range of 3 to 5 based on the findings of other studies of the Canadian mining industry.

VII THE VANGORDA DEVELOPMENT WILL SUPPORT A SIMILAR LEVEL OF ECONOMIC ACTIVITY DURING OPERATIONS

Curragh is planning to develop additional orebodies at the Vangorda Plateau near Faro. The company estimates that these orebodies have proven, open-pit, mineable reserves sufficient for a 13-year project life. Mining operations will be gradually transferred over to the Vangorda Plateau as the reserves at the existing mine are depleted. Curragh expects that this will occur in full by 1993.

Development of the Vangorda Plateau orebodies will provide two forms of socio-economic benefit to the Yukon. First, Curragh's current employment and its annual spending activity of nearly \$93 million (in constant 1989 dollars) will continue through the 1990s. Second, the company will generate additional economic activity during the construction period at Vangorda. This will provide more work for Yukon contractors and will create more expenditures on goods and services supplied by Yukon businesses. The company estimates that, at the peak of development activity in 1991, it could have as many as 790 employees and permanent and temporary contractor employees working in the Yukon. Additional economic activity will be generated through the multiplier effect.

THE COOPERS & LYBRAND CONSULTING GROUP



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