



## Alaska Gold Company\*

Alaska Gold Company was incorporated in 1974 as a subsidiary of UV Industries, Inc. The company is engaged in mining its own existing gold reserves, developing additional reserves, and exploring for gold and other mineral reserves, all within the State of Alaska. In addition, the company sells waste gravel, a by-product of its gold mining operations, for use in the construction industry.

The most important economic variable that Alaska Gold must contend with is the market price of gold. Because gold is a monetary metal, in addition to being used in a variety of industrial applications, its price is determined by a number of factors that are beyond the control of the company. As a result, the rapid and often significant fluctuations in the price of gold ultimately affect the profitability of the company.

In Alaska Gold's 1977 Annual Report to shareholders, company president William R. Kastelic summarized the problem as follows:

Sharp fluctuations in the price of gold has made forward planning difficult. The subtle relationship between the market price at any given time and the International Monetary Fund's policy of selling gold from its inventory together with the possibility of sales of gold by the United States Government as well as the attitude of the dominant powers toward paper currencies are among the factors which influence and create uncertainties. Our production goals from time to time are necessarily based upon the prevailing price of gold and its near term prospects.

### Operations

Alaska Gold Company's gold placer mining operation is located near Nome, Alaska. Placer gold consists of gold particles concentrated in sand, gravel, or other detrital material. The gold has been eroded from the land mass by the sea, redistributed by surf action in beach deposits, and then covered by later deposits of gravel, sand, and clay. These gravel deposits are permanently frozen and rest on limestone bedrock.

The frozen gravel must be thawed prior to dredging. This is accomplished by forcing water into the ground through pipes that extend to the bedrock. Thawing precedes dredging

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operations by at least one year so that an adequate quantity of gravel is available for dredging at all times.

The gold is mined by floating dredges. Buckets attached to a continuous belt scoop the gold-bearing gravel and carry it upward at the bow end of the dredge. The gravel is then dumped into a hopper from which it passes through a screen. Waste gravel is discharged from the stern by a conveyor belt on to a barge that collects waste gravel for sale. The gold travels through the screen and is then recovered by a mercury amalgam in riffled sluices. The amalgam is later heated to separate the gold from the mercury. The gold is then shipped to a refiner who further processes it to remove impurities and returns it to the company.

Because of the climate in Alaska, gold mining operations are seasonal. The dredging operation is conducted during the six months from May through October; the thawing operation is conducted from May through August. During the remainder of the year, necessary dredge repairs and maintenance are completed, and preparations are made for the subsequent mining season.

### **Exploration and Development**

Alaska Gold Company's estimated gold reserves as of December 31, 1977 totaled 1,164,400 troy ounces, contained in approximately 123,346,000 cubic yards of gravel within a 1,280-acre area. Reserves are estimated by prospect drilling and by calculating the gold content of the gravel.

The company spent \$50,000 during 1975 on prospect drilling. This effort developed 7,282,600 cubic yards of gravel containing estimated reserves of 61,600 ounces of gold. There was no prospect drilling during either the 1976 or 1977 season.

### **Gold Production and Sales**

The following table summarizes Alaska Gold Company's gold production and sales from 1975 through 1977:

	<u>1975</u>	<u>1976</u>	<u>1977</u>
Gravel dredged (cubic yards)	1,414,923	1,194,620	1,369,398
Gold produced (troy ounces)	12,632	14,320	11,563
Gold sales (troy ounces)	--	--	38,515
Gold inventory (troy ounces)	12,632	26,952	--

Alaska Gold Company did not sell any gold during 1975 or 1976. During 1977, the company sold its entire inventory of 38,515 ounces, including the inventory held at December

31, 1976 and all the company's 1977 production. The decision not to sell in 1975 or 1976 was based on the price of gold, as Mr. Kastelic explained:

You will recall that the gold price reached a low of \$103 in August 1976. In light of what we then considered a precipitous drop in the price of gold, it was decided to retain our 1976 [and 1975] gold production in inventory awaiting a better market. With the upward movement in the price of gold, the company started selling its inventory toward the end of February 1977.

The continuation of the upward trend in the price of gold which started in 1973 indicates a hopeful future for the company. Our gold reserves remain substantial. We continue to look forward to a recognition of the fundamental importance of gold in a society which some believe has over-extended its use of paper currencies. It is likely that with the passage of time, gold will continue to be regarded by some as a hedge against future inflation and the resulting inherent uncertainties.

Balance sheets and income statements for the three years ended December 31, 1975, 1976, and 1977 are provided in Exhibits 1 and 2 along with the summary of significant accounting policies (Exhibit 3).

#### **A. Questions related to Revenue Recognition and Asset Valuation:**

1. Describe the operating cycle of Alaska Gold Company. At what stage in this cycle does the company incur costs of gold production? When is cash collected from customers? When does the company recognize revenues?
2. In your opinion, at what stage in its operating cycle should Alaska Gold Company recognize revenue? Why? (Ignore the constraints imposed by generally accepted accounting principles.)
3. How does Alaska Gold Company account for "thawing costs"? Is this appropriate? Why or why not?
4. Assume that Alaska Gold Company recognizes revenue from gold mining at the time that production is completed (rather than the time of sale). Also assume that, as part of recognizing revenue at the time of production, inventories are revalued to fair market value (rather than left at historical cost). Prepare statements of gross margin (i.e., revenue less related costs) for 1975, 1976, and 1977 to reflect these assumptions. (Note that Alaska Gold's gross margin *as reported* was \$847,732 for 1977 and zero for 1976 and 1975.) You may find it useful to use the attached T-accounts to answer this question.
5. Evaluate the statements of gross margin prepared in question 4 in comparison with the same statements prepared based on recognizing revenue at the point of sale. Which approach provides a clearer presentation of the firm's operating performance? Which set of statements provides a better matching of revenues and expenses?
6. At the time of the case, Alaska Gold Company's common stock was traded on the Pacific Stock Exchange. If the company published the statements prepared in question 4, how do you believe its stock price would be affected?

**B. Hypothetical Questions related to Inventory Valuation and Cost of Gold Sold:**

1. Assume that Alaska Gold sold only 11,563 ounces of gold on December 31, 1977 (rather than its entire inventory of gold) and also that Alaska Gold uses a last-in first-out (LIFO) cost flow assumption to record its cost of gold sold and inventory balance. Compute ending inventory, cost of gold sold and gross margin for 1977.
2. Again, assume that Alaska Gold sold only 11,563 ounces of gold on December 31, 1977 (rather than its entire inventory of gold). All other facts of the case are the same. Compute ending inventory, cost of gold sold and gross margin for 1977 assuming a first-in first-out (FIFO) cost flow.
3. What incentives does management have to use LIFO or FIFO? Which method would you prefer to use if you were the manager of Alaska Gold?

EXHIBIT 1  
Alaska Gold Company  
Balance Sheets, 1975-1977

	1977	1976	1975
<b>Assets</b>			
<b>Current assets</b>			
Cash	\$ 34,611	\$ 127,082	\$ 157,783
Accounts receivable	35,609	48,314	41,802
Inventories			
Gold, at cost (market value : 1976: \$3,606,517 1975: \$1,711,000)	—	2,856,511	1,262,524
Materials and supplies	2,396,834	3,130,849	2,620,409
Prepaid expenses	<u>83,824</u>	<u>15,747</u>	<u>15,418</u>
Total current assets	2,550,878	6,178,503	4,097,936
Insurance claim receivable	—	—	1,229,817
Properties, plant, and equipment, net	11,605,907	10,365,511	7,300,146
Deferred charges			
Thawing costs	3,680,996	2,602,620	1,437,817
Other	<u>146,136</u>	<u>171,366</u>	<u>145,783</u>
Total assets	<u>\$ 17,983,917</u>	<u>\$ 19,318,000</u>	<u>\$ 14,211,499</u>
<b>Liabilities and Stockholder's Equity</b>			
<b>Current liabilities</b>			
Accounts and loans payable	\$ 348,427	\$ 127,365	\$ 163,279
Accrued expenses			
Insurance	6,094	136,190	—
Other	<u>38,230</u>	<u>11,442</u>	<u>22,498</u>
Total current liabilities	392,751	274,997	185,777
Term loans payable to UV Industries	13,893,181	14,984,754	8,507,238
Stockholder's equity			
Common stock, par value \$0.10	500,000	500,000	500,000
Additional paid-in capital	4,896,926	4,896,926	4,896,926
Retained earnings	<u>(1,698,941)</u>	<u>(1,338,677)</u>	<u>121,558</u>
Total liabilities and stockholders' equity	<u>\$ 17,983,917</u>	<u>\$ 19,318,000</u>	<u>\$ 14,211,499</u>

EXHIBIT 2  
Alaska Gold Company  
Statements of Income and Retained Earnings, 1975-1977

	1977	1976	1975
Revenues from sales of gold	\$ 5,838,018	\$ —	\$ —
Cost of gold sales	<u>4,990,286</u>	<u>—</u>	<u>—</u>
Gross margin	\$ 847,732	\$ —	\$ —
Other income (expense), net	<u>(1,207,996)</u>	<u>(1,482,935)</u>	<u>144,258</u>
Income (loss) before income taxes	(360,264)	(1,482,935)	<u>144,258</u>
Provision (credit) for income taxes	<u>—</u>	<u>(22,700)</u>	<u>22,700</u>
Net income (loss)	(360,264)	(1,460,235)	121,558
Retained earnings, beginning of year	<u>(1,338,677)</u>	<u>121,558</u>	<u>—</u>
Retained earnings, end of year	<u>(\$ 1,698,941)</u>	<u>(\$ 1,338,677)</u>	<u>\$ 121,558</u>
Earnings (loss) per share	(\$0.07)	(\$0.29)	\$0.02

EXHIBIT 3  
Alaska Gold Company  
Notes to Financial Statements

## Summary of Significant Accounting Policies

### **Inventories**

Inventories of gold, materials, and supplies are carried at the lower of average cost or market. Inventory costs include materials, labor costs, and mining costs, including depreciation of equipment and amortization of deferred thawing costs.

### **Thawing Costs**

Expenditures relating to thawing mineral bearing gravel in preparation for dredging operations are deferred and amortized on the units-of-production basis over the estimated yards of gravel benefited.

### **Dredge Preparation Costs**

Expenditures relating to preparing the dredges for the following operating season are deferred and charged to operations of that season. The cost of significant repairs to the dredges are deferred and are charged to operations over the expected life of such repairs.

### **Prospect Drilling Costs**

Expenditures relating to prospect drilling are charged to income as incurred.

### **Properties, Plant, and Equipment**

Substantially all of the company's depreciable assets are long-lived assets employed in the dredging and thawing operations and are depreciated on the units of production method. Maintenance, minor repairs, and renewals are charged to operations as incurred; major repairs, and renewal are deferred to be charged off against future operations. Upon retirement or sale, the cost of the assets disposed of and the related accumulated depreciation, depletion, or amortization are removed from the accounts, and any resulting gain or loss is credited or charged to operations.