

The Yukon Consolidated Gold Corporation, Limited

DAWSON, Y. T.

CANADA

THE YUKON CONSOLIDATED GOLD CORPORATION, LIMITED

REPORT ON ARLINGTON AREA OPERATIONS

1935 TO 1940

During the seasons of 1933 and 1934 the Arlington Area at the mouth of Hunker Creek was prospected by drilling. The results were favorable and it was therefore decided to mine the area with Dredge No. 4, which was then on the right limit of the Klondike valley, just above Bear Creek. A report on the project, dated October 22, 1934, was prepared by R. E. Franklin, Esq., and a recalculation and report was made by W. H. S. McFarland, Esq., in 1935. Dredging in this area will be completed in approximately July, 1940. This report has been prepared to show the relation between the two estimates and the actual outcome of operations in the area.

Attached hereto are exhibits as follows:

- Exh. A - Marked Print of Y.C.G.C. Map No. 1141; a general map of the Arlington Area.
- Exh. B - Comparison of Estimates by Areas.
- Exh. C - Comparison of Profit Estimates.
- Exh. D - Comparative Production Statement.
- Exh. E - Actual Production by Months.
- Exh. F - Details of Expenditures by Years.

SUMMARY OF FRANKLIN'S REPORT:

Franklin divided the area into four blocks, viz.:

Approach Area
"A" Area
"B" Area
"C" Area

as outlined in red on Exh. A.

The Approach Area was a narrow strip across the left limit flats of the Klondike valley, following along the Hunker Creek channel and connecting the upper end of the main Klondike valley with the lower end of the Arlington Area. Prospect drilling indicated that this area was probably mostly natural thaw with thin muck overburden, and contained very low values, estimated at 2.6¢ per C. Y. (Au at \$35.00 throughout this report.) This strip crossed a deep bedrock channel where the maximum gravel depth was about 65 feet.

The "A" Area is in the Klondike valley gravels, was all frozen except a very narrow strip along the left limit edge, with frozen muck from 10 to 15 feet in thickness, and contained an estimated value of 7.5¢ per total C. Y. and 10.8¢ per C. Y. of dredging section after stripping. It was considered that it might not prove advisable to dredge all of the area on account of probable difficulty with artificial thawing, especially as the values were marginal for frozen ground of this type.

The "B" Area included the edge of the Klondike gravels and extended into the Hunker Creek gravels to the lower line of the Anderson Concession. The block was practically all frozen and covered with about 12 feet of frozen muck. Prospect values were 15.9¢ per total C. Y. and 22.2¢ after stripping.

The "C" Area included Hunker gravels at the mouth of the creek valley, was practically all frozen with 7 to 18 feet of muck overburden, but contained excellent values estimated at 35.0¢ per total C. Y. or 48.7¢ per C. Y. after stripping, including Yukon Gold dredge tailings. This area had been extensively drifted in the early days, including operations conducted for several winters by the Yukon Gold Company and a strip along the left limit dredged by the Yukon Gold Dredge No. 5 in 1909. The old dredge tailings were mostly thawed and it was considered likely that it would pay to re-dredge them.

Franklin's operating plan proposed a combined method of stripping using gravity water through drains, especially in the lower areas, supplemented by high-pressure stripping plants utilizing water from the Rock Creek Ditch with pressure provided by electric driven pumps. By this method of stripping he expected that a considerable area of Klondike gravels would thaw naturally. The remainder of frozen ground was to be thawed with hand-driven points and water furnished under pressure by pumps, the same as has been used during the past few years. The plan proposed operation of Dredge No. 4 in thawed areas of the Klondike River channel, reaching the lower end of the Approach Area late in 1937. The estimate of operating expenses was based on previous experience but did not include shut-down expense, bullion expense, general expense, supervision, engineering and certain other items of indirect expense which are charged to operations. A consolidation of Franklin's estimate is shown on Exh. B, but, for comparative purposes, the original figures have been adjusted to eliminate certain Approach Areas in the Klondike River channel.

SUMMARY OF McFARLAND'S REPORT:

Mr. McFarland's operating plan proposed several changes from the previous plan. In order to advance the date of recoveries from the high valued "C" Area, it was decided to dredge only a narrow strip through the Klondike River channel, as values in this area were low. Also, as the dredge was quite old and deteriorating rapidly, it was advisable to complete dredging the Arlington Area without incurring heavy expenditures for rehabilitation of the dredge. On account of the low values in "A" Area and the known difficulty of thawing Klondike gravels with hand-driven points, it was decided to strip and thaw only a narrow block through it to the lower end of "B" Area. A triangular strip on

the right limit side of "B" Area was dropped off on account of low values. The areas McFarland proposed dredging are shown outlined in orange on the attached print, Exh. A.

Franklin's estimate contemplated stripping all muck from the dredging areas whereas Mr. McFarland's plan included stripping only a portion of the muck to the natural grade, thus reducing materially the amount of stripping required but still not increasing the dredging section yardage by a large amount, partly due to shrinkage from artificial thawing. A re-valuation of the entire area was made, based on prospect drilling results, and showed an increase of almost 50 percent in the value of the high grade "C" Area. These changes in plan resulted in increasing the average value of the entire area from 21.2¢ to 31.4¢ per C. Y. of material to be dredged. High pressure stripping entirely was proposed and necessary to prepare the ground in time for the dredge. Unit costs of stripping, thawing and dredging as used by Franklin were considered too low so were raised accordingly. A summary of estimated expenditures and operating profit is shown on Exh. C. A summary of the two estimates is given below:

| | <u>Franklin</u> | <u>McFarland</u> |
|------------------------------|-----------------|------------------|
| Total C. Y. Before Stripping | 12,593,166 | 7,916,400 |
| C. Y. to be Stripped | 3,020,899 | 754,166 |
| C. Y. to be Dredged | 9,572,267 | 7,162,234 |
| Gross Recovery (Dollars) | 2,028,750. | 2,255,373. |
| Operating Expenses | 701,554. | 948,000. |
| Operating Profit | 1,327,196. | 1,307,373. |

It will be noted that the increase in operating expenses was offset by other changes in plan so that the estimated operating profit from the second plan was only slightly different from the first but the time required for dredging would be at least one year less.

SUMMARY OF OPERATIONS:

Stripping operations were commenced in 1935 in the strip through "A" Area and along the right limit side of "B" Area and were carried on continuously during subsequent seasons to completion at the end of 1938. Stripping was much more difficult and expensive than expected as the muck contained a large quantity of river silt which would not run well in the drains and there was a heavy mat of logs and stumps on a horizon well below the surface of the muck.

Thawing operations commenced in "A" Area in 1937, having been delayed one year on account of loss of thawing equipment when two river boats sank in the summer of 1936. Three units were started in "A" Area but soon had to be abandoned as it was found impossible to drive points by hand in the heavy Klondike wash and the estimated values in the block would not justify thaw drilling. During the same season units were started in "B" Area but were driven

only with great difficulty and it was found that most of the lower end of this area, which was heavy Klondike wash, would have to be abandoned as the points could not be driven successfully. Thawing in the balance of the area did not present any particular difficulties and a few frozen spots of Yukon Gold tailings were thawed. This work was completed at the end of the 1939 season.

Dredge No. 4 entered the lower end of the Approach Area in August, 1936, and proceeded upstream along the naturally thawed channel of Hunker Creek. This channel was found to be much narrower than expected and considerable maneuvering was required at times to get the dredge through narrow places until reaching the upper portion of "B" Area in October, 1937. Values and recoveries were extremely low in the Approach Area. As no concentration of values could be found on bedrock, the dredge dug only flotation through most of this stretch but occasionally bedrock was dug for a day or two to be sure that no values were being missed. Recoveries from the Approach Area averaged only 1.8¢ per C. Y. and at one time reached the extremely low point of one ounce recovered in four days run.

An excess of sand was found in the upper part of "B" Area and practically all of "C" Area, which hindered dredging operations and reduced the digging rate. In 1938 the dredge proceeded upstream along the right limit side of "B" and "C" Areas and mined out most of the area which had been drifted by the Yukon Gold Company. In 1939 the dredge crossed to the left limit at the upper end of "C" Area, alongside the edge of a high bedrock reef, and turned downstream through the center of the area and finished the season headed upstream along the right limit. Dredging should be completed about July, 1940. Approximately half of the remaining yardage is Yukon Gold tailings. Due to favorable weather conditions the dredge was able to run unusually late in 1938 and 1939, the shut-down dates being December 26th and December 8th, respectively. On June 10th, 1939, the dredge sank very suddenly when a short piece of planking was apparently torn off the bottom of the port bow corner. Fortunately, the dredge settled on a fairly even keel and was not damaged at all, although several motors were covered with water. The pond was pumped out, repairs made and operations resumed on June 18th.

For comparative purposes at this time, the 1940 yardage is estimated as 475,328. On this basis the total yardage dredged in the area will be 6,084,959, as compared with Mr. McFarland's estimate of 7,162,234 and Franklin's estimate of 9,572,267.

The recovery estimate for 1940 based on prospect drilling results and estimated values in the tailings is \$102,141. On this basis, total recovery from the area will be \$1,805,949. as compared with Mr. McFarland's estimate of \$2,255,373. and Franklin's estimate of \$2,028,750. The average value of ground dredged is estimated at 29.7¢ as compared with 31.4¢ and 21.2¢ respectively, in the previous estimates.

Actual operating expenses are estimated at 13.6¢ per C. Y. as compared with Mr. McFarland's estimate of 13.25¢ and Franklin's estimate of 7.3¢.

Certain indirect charges, as previously mentioned, are included in the actual charges and should be deducted for comparative purposes, which reduces actual dredging expense to 9.8¢ per C. Y. As it is expected that the dredge will be abandoned during the summer of 1940, many items of repair work have been deferred until reconstruction, so estimated operating expenses for 1940 are probably at least \$25,000. lower than would normally be required if operations were continued.

Operating profit from the area is estimated as \$978,213., as compared with McFarland's estimate of \$1,077,550., and Franklin's estimate of \$1,097,373., after correcting the latter two for operating expenses not included in their original estimates. The details are shown on Exh. C.

A percentage relation between estimates and actual is shown below:

| | | Assuming REF Est. as 100% <u>Actual was</u> | Assuming WSMcF Est. as 100% <u>Actual was</u> |
|--------------------|--------------------|---|---|
| Total Area | sq. ft. | 57.5% | 73.7% |
| Material Dredged | C. Y. | 63.5 | 84.8 |
| Gross Recovery | Dollars | 88.8 | 80.1 |
| Average Value | ¢ per C. Y. | 140.0 | 94.5 |
| Operating Expenses | (After Adjustment) | 85.2 | 63.0 |
| Operating Profit | (" ") | 89.2 | 90.8 |

The Comparative Production statement is given on Exh. D and shows that, to the end of 1939, actual recovery from the area dredged has been 100.8 percent of the total estimated from prospect drilling results. The valuation used for this comparison is the same as used by Mr. McFarland and all drill holes, including those showing very high values, have been used at their full value.

THE YUKON CONSOLIDATED GOLD CORPORATION, LIMITED

BY

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AFD:EL
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COMPARISON OF ESTIMATES BY AREAS

Au. @ \$35.00

| | <u>Franklin Estimate</u> | <u>McFarland Estimate</u> | <u>Actual</u> |
|---|--------------------------|---------------------------|---------------|
| <u>APPROACH AREA:</u> | | | |
| Area (sq. ft.) | 1,341,900 | 1,341,900 | 784,823 |
| Av. Depth (ft.) | 43.4 | 40.2 | 33.9 |
| Total C. Y. to be dredged | 2,156,980 | 1,990,000 | 984,246 |
| Av. Value (¢ per sq. ft.) | 4.2 | 6.7 | 2.3 |
| " " (¢ per C. Y.) | 2.6 | 4.5 | 1.8 |
| Gross (Dollars) | 55,880. | 89,550. | 17,981. |
| <u>"A" AREA:</u> | | | |
| Area (sq. ft.) | 1,797,300 | 390,158 | 320,234 |
| Av. Depth (ft.) | 43.7 | 33.5 | 39.8 |
| Total C. Y. (before Stripping) | 2,908,963 | 484,577 | |
| C. Y. to be stripped | 891,993 | 62,012 | |
| C. Y. to be dredged | 2,016,970 | 422,565 | 472,471 |
| Av. Value (¢ per sq. ft.) | 12.1 | 11.6 | 10.1 |
| " " (¢ per total C. Y.) | 7.5 | 9.3 | |
| " " (¢ per D.S.C.Y.) | 10.8 | 10.7 | 6.9 |
| Gross | 217,580. | 45,114. | 32,514. |
| <u>"B" AREA:</u> | | | |
| Area (sq. ft.) | 3,159,450 | 2,706,905 | 1,489,049 |
| Av. Depth (ft.) | 39.5 | 32.0 | 37.2 |
| Total C. Y. (before Stripping) | 4,622,158 | 3,199,928 | |
| C. Y. to be stripped | 1,310,586 | 397,191 | |
| C. Y. to be dredged | 3,311,572 | 2,802,737 | 2,049,958 |
| Av. Value (¢ per sq. ft.) | 23.3 | 24.0 | 26.8 |
| " " (¢ per total C. Y.) | 15.9 | 20.3 | |
| " " (¢ per D.S.C.Y.) | 22.2 | 23.1 | 19.5 |
| Gross | 736,250. | 648,666. | 399,575. |
| <u>"C" AREA: (Including Dredged Portion)</u> | | | |
| Area (sq. ft.) | 2,363,850 | 2,312,120 | 2,391,476 |
| Av. Depth (ft.) | 22.7 | 26.1 | 29.1 |
| Total C. Y. (before Stripping) | 2,905,065 | 2,241,895 | |
| C. Y. to be stripped | 818,320 | 294,963 | |
| C. Y. to be dredged | 2,086,745 | 1,946,932 | 2,578,284 |
| Av. Value (¢ per sq. ft.) | 43.1 | 63.7 | 56.6 |
| " " (¢ per total C. Y.) | 35.0 | 65.7 | |
| " " (¢ per D.S.C.Y.) | 48.7 | 75.7 | 52.5 |
| Gross | 1,019,040 | 1,472,043 | 1,355,879 |
| <u>TOTAL:</u> | | | |
| Area (sq. ft.) | 8,662,500 | 6,751,083 | 4,985,582 |
| Av. Depth (ft.) | 39.1 | 31.6 | 32.9 |
| Total C. Y. (before Stripping) | 12,593,166 | 7,916,400 | |
| C. Y. to be stripped | 3,020,899 | 754,166 | |
| C. Y. to be dredged | 9,572,267 | 7,162,234 | 6,084,959 |
| Av. Value (¢ per sq. ft.) | 23.4 | 33.3 | 36.2 |
| " " (¢ per total C. Y.) | 16.1 | 28.4 | |
| " " (¢ per D.S.C.Y.) | 21.2 | 31.4 | 29.7 |
| Gross | 2,028,750. | 2,255,373. | 1,805,949. |

COMPARISON OF PROFIT ESTIMATES

| | <u>Franklin Estimate</u> | <u>McFarland Estimate</u> | <u>Actual</u> |
|---------------------------|--------------------------|---------------------------|---------------|
| Cu. Yds. to be Stripped | 3,020,899 | 754,166 | 687,076 |
| " " " Artificially Thawed | 7,060,982 | 5,172,234 | 3,865,235 |
| " " Natural Thaw | 2,511,285 | 1,990,000 | 2,219,724 |
| " " to be Dredged | 9,572,267 | 7,162,234 | 6,084,959 |

ESTIMATED EXPENDITURES

| | | | <u>Actual Charges to Dredge</u> |
|---|-----------------|-----------------|---|
| Previous to 1935 | 56,205. | | |
| 1935 | 25,000. | | |
| 1936 | 22,000. | 135,000. | 59,344.43 |
| 1937 | 62,000. | 194,000. | 159,570.52 |
| 1938 | 110,000. | 194,000. | 313,464.55 |
| 1939 | 113,000. | 194,000. | 248,956.95 |
| 1940 | 113,000. | 194,000. | 46,400.00 |
| 1941 | 102,000. | 37,000. | |
| 1942 | 98,349. | | |
| Total | 701,554. | 948,000. | 827,736.45 |
| Deducting Non-Operating Expenses not included in Estimates | | | 229,823.29 |
| | | | <u>597,913.16</u> |

| | | | |
|---|------------------|------------------|----------------|
| Gross Recovery | 2,028,750 | 2,255,373 | 1,805,949 |
| Less: Expenditures | 701,554 | 948,000 | 827,736 |
| Operating Profit | 1,327,196 | 1,307,373 | 978,213 |
| Deducting Expenses not included in Estimates | 229,823 | 229,823 | |
| Operating Profit | 1,097,373 | 1,077,550 | 978,213 |

COMPARATIVE PRODUCTION STATEMENT

| | Area Sq. Ft. | Cu. Yds. Dredged | Gross Au. @ \$35. | Cents per Cu. Yd. |
|--|-----------------|---------------------|----------------------|----------------------|
| <u>1936:</u> | | | | |
| Estimate | 814,366 | 1,021,885 | 47,007 | 4.6 |
| Recovery | 814,366 | 1,021,885 | 21,250 | 2.1 |
| R/E | 100.0% | 100.0% | 45.2% | 45.6% |
| <u>1937:</u> | | | | |
| Estimate | 763,958 | 1,130,979 | 99,116 | 8.8 |
| Recovery | 724,473 | 1,089,377 | 110,575 | 10.2 |
| R/E | 94.8% | 96.3% | 111.5% | 115.9% |
| <u>1938:</u> | | | | |
| Estimate | 1,487,497 | 1,633,750 | 643,120 | 39.4 |
| Recovery | 1,498,923 | 1,756,372 | 626,487 | 35.7 |
| R/E | 100.7% | 107.5% | 97.4% | 90.6% |
| <u>1939:</u> | | | | |
| Estimate | 1,527,841 | 1,743,376 | 900,946 | 51.7 |
| Recovery | 1,535,796 | 1,711,997 | 928,459 | 54.2 |
| R/E | 100.5% | 98.2% | 104.8% | 103.1% |
| <u>Total as reported in past Statements:</u> | | | | |
| Estimate | 4,593,662 | 5,529,990 | 1,690,189 | 30.6 |
| Recovery | 4,573,558 | 5,579,631 | 1,686,771 | 30.2 |
| R/E | 99.6% | 100.9% | 99.8% | 98.7% |
| <u>Plus Adjustments not included in above:</u> | | | | |
| Estimate | | | 1,690,189 | 30.6 |
| Recovery | | | 1,703,808 | 30.5 |
| R/E | | | 100.8% | 99.7% |

ACTUAL PRODUCTION BY MONTHS

| Block | Month Dredged | Gross Recovered | Total Cu. Yds. | ¢/C.Y. | Area (Sq. Ft.) | ¢/Sq.Ft. |
|---------------|---------------|-----------------|----------------|-----------|----------------|------------|
| Approach | Aug. 1936 | 943 | 374,010 | 0.3 | 364,572 | 0.3 27.7 |
| | Sept. 1936 | 2,915 | 293,270 | 1.0 | 235,206 | 1.2 34.1 |
| | Oct. 1936 | 10,472 | 279,327 | 3.7 | 155,502 | 6.7 48.5 |
| | Nov. 1936 | 2,615 | 37,639 | 6.9 | 29,543 | 8.9 34.4 |
| | Adjustment | 1,036 | | | | |
| | Total | 17,981 | 984,246 | 1.8 | 784,823 | 2.3 33.9 |
| "A" | Nov. 1936 | 2,615 | 37,639 | 6.9 | 29,543 | 8.9 34.4 |
| | Jul. 1937 | 4,607 | 180,839 | 2.5 | 119,673 | 3.8 40.8 |
| | Aug. 1937 | 24,056 | 253,993 | 9.5 | 171,018 | 14.1 40.1 |
| | Adjustment | 1,236 | | | | |
| | Total | 32,514 | 472,471 | 6.9 | 320,234 | 10.0 39.8 |
| "B" | Sept. 1937 | 12,389 | 215,870 | 5.7 | 146,079 | 8.5 39.9 |
| | Oct. 1937 | 20,557 | 192,557 | 10.7 | 130,302 | 15.8 39.9 |
| | Nov. 1937 | 37,783 | 238,168 | 15.9 | 150,246 | 25.1 42.8 |
| | Dec. 1937 | 11,676 | 7,950 | 146.9 | 7,155 | 163.2 30.0 |
| | May 1938 | 25,650 | 141,926 | 18.1 | 96,768 | 26.5 39.6 |
| | June 1938 | 41,950 | 347,252 | 12.1 | 230,931 | 18.2 40.6 |
| | July 1938 | 32,832 | 258,386 | 12.7 | 219,384 | 15.0 31.8 |
| | Aug. 1938 | 25,254 | 143,739 | 17.6 | 128,085 | 19.7 30.3 |
| | Sept. 1939 | 93,235 | 207,396 | 44.9 | 178,904 | 52.1 31.3 |
| | Oct. 1939 | 73,008 | 248,987 | 29.3 | 168,488 | 43.3 39.9 |
| | Nov. 1939 | 16,381 | 47,727 | 34.3 | 32,707 | 50.1 39.4 |
| | Adjustment | 8,860 | | | | |
| | Total | 399,575 | 2,049,958 | 19.5 | 1,489,049 | 26.8 37.2 |
| "C" | Aug. 1938 | 10,259 | 58,392 | 17.6 | 52,032 | 19.7 30.3 |
| | Sept. 1938 | 51,913 | 167,777 | 30.9 | 180,477 | 28.8 25.1 |
| | Oct. 1938 | 133,411 | 218,007 | 61.2 | 218,817 | 61.0 26.9 |
| | Nov. 1938 | 208,089 | 245,720 | 84.7 | 212,643 | 97.9 31.2 |
| | Dec. 1938 | 90,822 | 175,173 | 51.8 | 159,786 | 56.8 29.6 |
| | Apr. 1939 | 7,041 | 13,998 | 50.3 | 13,743 | 51.2 27.5 |
| | May 1939 | 98,211 | 185,002 | 53.1 | 197,433 | 49.7 25.3 |
| | June 1939 | 91,989 | 169,785 | 54.2 | 161,415 | 57.0 28.4 |
| | July 1939 | 212,625 | 283,383 | 75.0 | 285,498 | 74.5 26.8 |
| | Aug. 1939 | 225,453 | 284,942 | 79.1 | 278,748 | 80.8 27.6 |
| | Sept. 1939 | 36,607 | 81,430 | 45.0 | 70,243 | 52.1 31.3 |
| | Oct. 1939 | 10,710 | 36,524 | 29.3 | 24,715 | 43.3 39.9 |
| | Nov. 1939 | 51,143 | 149,010 | 34.3 | 102,113 | 50.1 41.9 |
| | Dec. 1939 | 16,483 | 33,813 | 48.7 | 21,789 | 75.6 41.9 |
| | Adjustment | 8,982 | | | | |
| Total to Date | 1,253,738 | 2,102,956 | 59.6 | 1,979,452 | 63.2 28.7 | |
| 1940 Estimate | 102,141 | 475,328 | 21.5 | 412,024 | 24.8 31.1 | |
| Total | 1,355,879 | 2,578,284 | 52.5 | 2,391,476 | 56.6 29.1 | |
| TOTAL | 1,805,949 | 6,084,959 | 29.7 | 4,985,582 | 36.2 33.0 | |

DETAILS OF ACTUAL EXPENDITURES BY YEARS

| | <u>1936</u> | <u>1937</u> | <u>1938</u> | <u>1939</u> | <u>Estimate 1940</u> | <u>Total</u> |
|-------------------------------|------------------|-------------------|-------------------|-------------------|--------------------------|---------------------|
| Labor, | 8,225.96 | 13,792.48 | 25,399.23 | 24,858.27 | 11,100. | 83,375.94 |
| Mess, | 5,121.70 | 5,757.97 | 10,521.72 | 9,816.49 | 4,700. | 35,917.88 |
| Repair Parts, | | 15,611.00 | 14,286.60 | 6,775.77 | 5,600. | 42,273.37 |
| Other Supplies, | 3,879.88 | 5,468.23 | 11,802.81 | 4,830.66 | 2,400. | 28,381.58 |
| Machine Shop, | 2,436.74 | 3,389.07 | 4,806.43 | 4,213.90 | 4,800. | 19,646.14 |
| Garage, | | | | 37.66 | | 37.66 |
| Electrical Shop, | | 581.35 | 976.88 | 1,049.95 | 800. | 3,408.18 |
| Transport, | 1,532.85 | 1,555.25 | 310.61 | 429.43 | 1,600. | 5,428.14 |
| Stable, | | | 1,268.90 | 1,244.03 | | 2,512.93 |
| Cats, | | | 743.50 | 1,059.75 | | 1,803.25 |
| Local Freight, | | | 1.79 | 79.02 | | 80.81 |
| Power, | 9,576.65 | 17,043.31 | 17,678.62 | 9,613.26 | 2,600. | 56,511.84 |
| Total Direct, | 30,773.78 | 63,198.66 | 87,797.09 | 64,008.19 | 33,600. | 279,377.72 |
| Shut-down Expense, | 21,761.68 | 28,848.46 | 27,123.18 | 28,326.26 | | 106,059.58 |
| Stripping, | | 22,191.84 | 48,553.57 | 40,560.93 | | 111,306.34 |
| Thawing, | | 22,687.86 | 94,071.71 | 58,976.29 | | 175,735.86 |
| Drilling, | | 5,446.89 | 17,563.72 | 5,538.49 | | 28,549.10 |
| General Expense, | 4,484.14 | 12,011.84 | 14,665.68 | 11,439.09 | 6,200. | 48,800.75 |
| Bullion " | 1,118.72 | 3,964.44 | 22,109.49 | 35,637.64 | 5,600. | 68,430.29 |
| Engineering, | 1,206.11 | 639.74 | 1,052.27 | 1,027.89 | 700. | 4,626.01 |
| Supervision, | | 580.79 | 527.84 | 498.03 | 300. | 1,906.66 |
| Steam Thawing, | | | | 1,480.32 | | 1,480.32 |
| Dams, | | | | 1,463.82 | | 1,463.82 |
| Total Non-Operating, | 28,570.65 | 96,371.86 | 225,667.46 | 184,948.76 | 12,800. | 548,358.73 |
| Total Charges, | 59,344.43 | 159,570.52 | 313,464.55 | 248,956.95 | 46,400. | 827,736.45 |
| Total Gold Production, | 20,596.34 | 112,304.23 | 629,671.25 | 941,236.15 | 102,141. | 1,805,948.97 |
| Profit, | | | 316,206.70 | 692,279.20 | 89,500. | 978,212.52 |
| Loss, | 38,748.09 | 47,266.29 | | | | |

The Yukon Consolidated Gold Corporation, Limited

LONDON OFFICE:
61 MOORGATE, LONDON, E. C. 2
ENGLAND

931-2 MARINE BUILDING
VANCOUVER, B. C.

February 24th 1940

G.R.F. Troop, Esq.,
931-2 Marine Building,
VANCOUVER, B.C.

FEB 24 1940

Dear Mr. Troop:

Re: BONANZA CREEK DEVELOPMENT

As Dredge Yukon No.4 is expected to complete mining of the area in which she is now working during the summer of 1940, considerable thought has been given to finding another area which would justify her reconstruction.

Dredge Yukon No.3 has just completed three full season's of dredging on Lower Bonanza Creek in an area which had been worked by early-day hand methods, and later dredged by the Yukon Gold Company. The following tabulation gives the results of this dredging:

| Year of Opera- tion. | Cubic Yards Dredged | Operating Costs | | Production-Au @ \$35. | | Operating Profit | |
|----------------------------|---------------------------|---------------------|-----------------|-----------------------|-----------------|---------------------|-----------------|
| | | Amount | ¢ Per Cu.Yd. | Amount | ¢ Per Cu.Yd. | Amount | ¢ Per Cu.Yd. |
| 1937 | 2,721,044 | \$127,653.70 | 4.691 | \$287,947.56 | 10.582 | \$160,293.86 | 5.891 |
| 1938 | 2,045,872 | 147,063.93 | 7.188 | 350,511.54 | 17.132 | 203,447.61 | 9.944 |
| 1939 | 2,346,415 | 134,272.63 | 5.722 | 334,825.00 | 14.269 | 200,552.37 | 8.547 |
| TOTALS | 7,113,331 | \$408,990.26 | 5.750 | \$973,284.10 | 13.683 | \$564,293.84 | 7.933 |
| AVG. | 2,371,110 | \$136,330. | 5.750 | \$324,428. | 13.683 | \$188,098. | 7.933 |

These results were so encouraging that the redredging of the balance of Bonanza Creek appeared to be a good field for the future operations of Dredge No.4.

On Bonanza Creek, after the dredges of the Yukon Gold Company had passed by, the adjacent high level benches were hydraulicked off and the tailings from these dumped into the Valley. Most of the dredge tailings were thus covered over. The operations of Dredge No. 3 showed that where the dredge tailings were completely covered they were all thawed, but where they were exposed they were partly frozen back and could not be dredged without artificial thawing. As the area under consideration for No.4 had such dredge tailings exposed in places, it was necessary to determine to what extent they had frozen back.

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Vancouver, B.C.

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Accordingly an extensive barring campaign was carried on during the Fall of 1939, the results of which are shown on the attached blue prints. They show that only a part of the old dredge tailings which had not been covered by hydraulic tailings have frozen back and that the amount of such frozen tailings is not excessive. It is estimated to represent approximately 20% of the entire yardage.

Using this barring as a basis, a rough estimate of the yardage to be handled has been made, this is shown as follows:

| Location | Cubic Yards | | Total | To be artificially thawed |
|------------------------------|-------------------|------------------|-------------------|---------------------------|
| | Re-Dredge | Virgin | | |
| Lovett Gl. to 30 Bel.Disc. | 16,737,000 | 1,940,000 | 18,677,000 | 2,273,000 |
| Above 30 Bel.Disc. (6 miles) | 10,763,000 | 560,000 | 11,323,000 | 3,727,000 |
| TOTAL | 27,500,000 | 2,500,000 | 30,000,000 | 6,000,000 |

With a dredge having an annual capacity of 2,750,000 cubic yards, the life of this property will be about eleven years.

At certain places on the Creek, such as between Lovett and Trail Gulches, at Monte Cristo, Fox, American, Adams and Skookum Gulches, the hydraulic tailings are very deep and a method will have to be worked out for moving some of these off the dredging areas, or to increase the digging depth of the dredge so that the entire depth can be dredged.

With all these factors in mind, the following tabulation is made to show probable working costs and profit.

| Year Dredged | Cubic Yards | WORKING COSTS | | | | | | | | Production Au @ \$35.00 Amount | Working Profit | | | |
|--------------|-------------|---------------|-------------|-------------------|-------------|-----------|-------------|-----------|--------------|--------------------------------|----------------|-----------|--------|--------|
| | | Thawing | | Handling Tailings | | Dredging | | TOTAL | | | Amount | Cu.Yd. | Amount | Cu.Yd. |
| | | Cost | @Per Cu.Yd. | Cost | @Per Cu.Yd. | Cost | @Per Cu.Yd. | Cost | @ per Cu.Yd. | | | | | |
| 1942 | 2750000 | - | - | - | - | \$125000 | 4.5 | \$125000 | 4.5 | \$385000 | 14.0 | \$260000 | 9.5 | |
| 1943 | 2750000 | \$40000 | 1.5 | - | - | 125000 | 4.5 | 165000 | 6.0 | 385000 | 14.0 | 220000 | 8.0 | |
| 1944 | 2750000 | 40000 | 1.5 | - | - | 125000 | 4.5 | 165000 | 6.0 | 385000 | 14.0 | 220000 | 8.0 | |
| 1945 | 2750000 | 40000 | 1.5 | - | - | 125000 | 4.5 | 165000 | 6.0 | 385000 | 14.0 | 220000 | 8.0 | |
| 1946 | 2750000 | - | - | \$40000 | 1.5 | 125000 | 4.5 | 165000 | 6.0 | 385000 | 14.0 | 220000 | 8.0 | |
| 1947 | 2750000 | - | - | 40000 | 1.5 | 125000 | 4.5 | 165000 | 6.0 | 385000 | 14.0 | 220000 | 8.0 | |
| 1948 | 2750000 | 40000 | 1.5 | 40000 | 1.5 | 125000 | 4.5 | 205000 | 7.5 | 385000 | 14.0 | 180000 | 6.5 | |
| 1949 | 2750000 | 40000 | 1.5 | 40000 | 1.5 | 125000 | 4.5 | 205000 | 7.5 | 385000 | 14.0 | 180000 | 6.5 | |
| 1950 | 2750000 | 40000 | 1.5 | - | - | 125000 | 4.5 | 165000 | 6.0 | 385000 | 14.0 | 220000 | 8.0 | |
| 1951 | 2750000 | 40000 | 1.5 | - | - | 125000 | 4.5 | 165000 | 6.0 | 385000 | 14.0 | 220000 | 8.0 | |
| 1952 | 2500000 | 30000 | 1.2 | - | - | 110000 | 4.4 | 140000 | 5.6 | 350000 | 14.0 | 210000 | 8.4 | |
| | 30000000 | \$310000 | 1.0 | \$160000 | 0.5 | \$1360000 | 4.5 | \$1830000 | 6.0 | \$4200000 | 14.0 | \$2370000 | 8.0 | |

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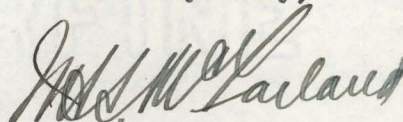
The part of Bonanza Creek which has been redredged by No.3 contained lower values in its virgin state than the part which is under consideration for No.4, and it is assumed that the values left behind by the Yukon Gold Company's Dredges in the latter part will be proportionately higher.

We entertain no doubt of our ability to economically remove the frost in the dredge tailings, or to work out a satisfactory system for going through the deep tailings piles.

No prospect drilling is recommended, as it is felt that loose tailings are very difficult to drill and the final result would not be as satisfactory as the results obtained by No. 3's operation.

With all these factors in mind I have no hesitation in giving it as my opinion that the expenditure required to rebuild Dredge Yukon No.4, on Bonanza Creek, is well justified. I feel that the costs allowed are sufficiently high and that the recoveries shown are conservative.

Yours very truly,



W.H.S. MCFARLAND.
General Manager.

WHSMcF/bw.



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