

VALUES AND YARDAGES-

The writer has had no opportunity to test for values and depths and widths of gravel and the conclusions reached are based upon the data furnished in the above mentioned W. E. Thorne report of January 10th, 1911; by Mr. A. N. C. Treadgold and his men, made up as Exhibit "J"; and by talking with a few of the men who worked on the ground in earlier days. The claims are now practically deserted and there are very few of the early operators in the country. For all these reasons, the statements made under this heading are not as definite and positive as could be desired.

As there is naturally considerable variation in the different parts of the creeks, the claims are grouped according to these differences.

Dominion Creek, 7 Above Upper to 16 Below Lower.

This portion of the creek is conceded by all to have been the richest. It was the first worked in the days when most of the thawing was with wood fires which allowed the extraction of a comparatively thin layer of the richest portion, that over bedrock, and did not result in much of a thaw in bedrock itself. Dominion Creek has usually been short of water and the spring sluicing was done with as little water as possible with the consequent poor extraction of the gold in the material mined. Much of the work was by lessees, or "laymen", whose chief idea naturally was to extract as much gold as possible during the lives of their leases, without regard to the ultimate total extraction from the claims. In those early days wages were very high and supplies were dear. Consequently the costs, even for the laymen, were very heavy, and only the richest ground could pay the handsome profit then demanded. At first the lessors specified that all dirt

of 25 cents to the pan (\$32.50 per cubic yard) or over must be taken out; then, as costs lowered, this limit was gradually reduced to a few cents per pan. Thus, at first only the richest dirt was taken out and that which a little later would be considered good grade gravel was left behind.

The work was usually done in the winter. A shaft was sunk in the pay streak into the first foot or two of bedrock and drifts were run in different directions from it, just cutting into the bedrock the desired depth. For protection, solid pillars were left around the shaft and at times in the stopes. The drifts were widened into stopes limited by the pay values encountered and by the difficulty of keeping the lower grade upper gravel from falling in. The higher values were usually in the two feet of gravel next to the bedrock and in the upper foot or two of the bedrock itself. These portions were hoisted to the surface and the lower grade material that had to be moved in mining was thrown back into the worked out spaces.

When the winter's work was over, or the shaft had to be abandoned for safety, the workings filled with water and generally remained thawed. Usually no attempt was made to take out the pillars. The next winter other shafts and drifts were excavated and care was taken to keep away from all of the previous workings on account of the danger of flooding from the water they contained. Thus, other solid ground was left unworked. Much of the original bed of the creek was found to be thawed nearly to, or into the bedrock and so could not be drifted. In the early days.

the miners did not appreciate the depth to which gold will sink in the crevices of the bedrock, particularly in the harder parts and because this harder bedrock was slabby and more difficult to handle, it was generally left behind after the top had been but scratched.

Thus, even after a piece of ground was well worked by the drifting method, it contained considerable values in virgin ground. To get these, some of the claims were "open cut". That is, the overburden of the pay-streak was stripped as it thawed in the summer and the pay portions were worked from the surface down. The poorer portion was piled to one side and the rich dirt was washed as excavated. This was costly and usually required pumping both to keep the cut clear and to provide water for sluicing. Thus, only good grade ground could be handled with profit and the work was largely confined to those claims with the largest pillars. As a rule, if the bedrock was soft, it was well cleaned, but until the last few years of working, the miners seemed reluctant to take up the harder kind. One of the last workers on the creek told of having made a handsome cleanup on a certain claim by taking up ten feet of bedrock after the former owners had taken off the top five feet. As a rule, however, open cutting was very effective and did not leave much value other than that lost in sluicing.

Of these claims under consideration, many were well drifted and probably have only 10% of the pay streak unworked. Other claims were less thoroughly worked and their percentage of unworked ground is considerably larger. In some of the claims the old creek bed, a strip from 20 to 35 feet wide, is also unworked because thawed. But this excess of virgin pay-streak is probably offset by the thoroughness with which some of the claims were open cut on the whole width of the pay-streak. So, for the

purpose of computing values, it is probably not far off to consider that of the whole pay-streak of this portion of Dominion Creek, 10% is still virgin.

The apparent width of the gravel in this section under consideration varies from 100 feet to 450 feet and averages, 230 feet. The length is approximately 35,000 feet. The apparent gravel area is thus 894,400 square yards. Of this, the known richer portion, the "pay streak", seemingly averages 80 feet of width, which for the length of 35,000 feet, gives an area of 311,100 square yards. The balance of the gravel, with an apparent area of 583,300 square yards, was considered as "out of the pay" and except for desultory working, is virgin. An exception to this is the gravel on the right side on several of the claims which was worked a little with some success. Too little is known about it, however, to class it with the pay gravel.

In his report of about 1908 Charles W. Gardner gives six tests on claims Nos. 5 A.L., 4 and 9-a B.L., averaging \$2.73 per cubic yard. He also gives seven miscellaneous tests on Nos. 13, 14 and 15 B.U. and 16 and 8-a B.L., showing an average of \$12.79 per cubic yard, two tests of \$20.00 and \$54.50 per cubic yard having been included. Combining these two sets, a result of \$8.14 per cubic yard is obtained. Exhibit "J", Mr. Treadgold's results, gives three tests of mixed dump of Nos. 28 B.U. and 2 B.L., averaging \$2.63 per cubic yard, not stating the depths represented, nor if they are from virgin pay-streak.

Gardner reports nine tests on "tailings" from No. 15 B.U. to No. 9 B.L. averaging \$0.47 per cubic yard. W. E. Thorne reports six pan tests on "old dumps" from No. 3 A.L. to No. 13 B.L. averaging \$0.18 per cubic yard, and 176 "rocker" tests, tailings and waste" of 0.315 cubic yards each, from what are probably meant to be claims of this group, averaging \$0.312 per cubic yard. The average of all these results is \$0.316 per cubic yard, the value assumed for the tailings in the computations following.

Pages 96 to 103 of Thorne's report give many results of "Dominion Creek Pan Tests", but as nothing is said of the class of material tested nor of the depths represented, they are not used in this report.

The results given above are too few upon which to base an estimate of values and only by assuming a given creek production can an approximation be reached. Unfortunately, there is no record of the output of these claims, but from the statements of various former operators, it does not seem unreasonable to estimate that the creek gravels of this group have produced \$8,000,000.

The paystreak averaged about 6 feet thick which with $1\frac{1}{2}$ feet of bedrock taken up, amounts to $7\frac{1}{2}$ feet of worked depths, or $2\frac{1}{2}$ yards. The pay streak then, with an area of 311,100 square yards and the above worked depth contained 777,000 cubic yards. Of this, 90%, or 699,300 cubic yards were extracted with an estimated yield of \$8,000,000, or \$11.44 per cubic yard. Adding to this the \$0.31 left in the tailings gives \$11.75 per cubic yard, as the original pay streak value. It is assumed that 10% of the pay streak, 77,700 cubic yards, were not removed. This, at \$11.75 per cubic yard equals \$912,975, the amount assumed to still be

in the virgin part of the pay streak. The material that was washed was sluiced back on the ground being 699,300 cubic yards at \$0.316 per cubic yard according to the Gardner, Thorne and Treadgold results, amounting to \$220,978. Adding this to the value given for the virgin ground, gives \$1,133,953, as the present total gold content of the worked pay streak. This has an average depth of 18 feet, made up of virgin gravel and bedrock, tailings, waste and muck, amounting to a total of 1,866,000 cubic yards, which, with the above value, averages \$0.60 per cubic yard.

The value of the remaining dredgeable ground in this section, amounting to 3,500,000 cubic yards, is yet to be determined.

Dominion Creek - No. 16 B.L. to No. 95 B.L.

This section of the creek is about 25,000 feet long, with an area according to Thorne, of 477.23 acres. It was worked a little later than the upper section of Dominion, mostly by steam trowing and machinery. Some of the old channel shows in benches on the left limit and the gravels are lower in grade than in the upper section. It was upon this portion of the creek that Messrs. Gardner and Thorne seem to have done the most work.

On fourteen of these claims, scattered through the section, Gardner reports the results of 37 shafts as averaging 18 feet of muck and 6.6 feet of gravel. The gravel averaged \$1.23 per cubic yard.

Thorne gives the results of 81 holes on 11 of the claims as 18 feet of muck and 6.8 feet of gravel going \$0.966 per cubic yard. By interpolating these results he gives a tabulated summary including all the claims in the section, showing 477.23 acres averaging 17.7 feet muck and 7 feet of gravel, with a total of 5,430,076 cubic yards of gravel averaging \$0.769 per cubic yard.

Exhibit "J", Mr. Treadgold's results, shows 28 pan tests on claim No. 35 B.L. averaging \$2.08 per cubic yard and 38 pan tests on No. 68 B.L. averaging \$1.37 per cubic yard. These were of gravel, bedrock and mixed material. As a rule no data is given as to depths represented by the prospecting.

Gardner also gives tests on "tailings" on five of the claims, showing an average of \$0.259 per cubic yard.

The writer has no further data on the value of this ground and from a study of these results is of the opinion, until more complete prospecting results are at hand, that the average of the gravel of this section is probably about \$0.80 per yard. Figuring this value to include the overburden, as was done with the first section of this creek, gives an average of \$0.23 per cubic yard of material, showing that this material cannot be worked by steam thawing and dredging.

Dominion Creek - 95 B.L. to 224 B.L.

This section is made up chiefly of wide muck covered flats. Very little work has been done on it. Gardner reports 19 holes on 5 claims down to 182 B.L. showing 16.7 feet of muck with 7.1 feet of gravel and bedrock which averages \$0.43 per cubic yard. Exhibit "J", Mr. Treadgold's results, gives 21 holes on Claims Nos. 133 B.L. and 139 B.L., inclusive, showing 11.8 feet of muck with 6.2 feet of gravel and bedrock which averages \$0.432 per cubic yard and 23 pan tests of gravel and bedrock from these same claims which average \$0.60 per cubic yard. Gardner also reports 10 holes on Claims Nos. 216, 218 and 223 B.L. showing 13.5 muck with 23.2 gravel and bedrock averaging \$0.082 per cubic yard.

Thorne gives no specific results below No. 95 B.L., but in his summary gives the section No. 95 to 143 B.L., 5.5 feet of gravel and bed-

rock averaging \$0.70 per cubic yard. The other results indicate that this last is too high. However, no real estimate can be made of this section without more prospecting work. It has a large yardage of gold bearing gravel.

Dominion Creek - 224 B.L. to 276 B.L. (Granville Flat)

This comprises the section known as Granville Flat. It is about 19,000 feet long with gravel deposits averaging probably 2500 feet in width, making an area of 1092 acres. It is covered with from 8 to 20 feet of muck.

The worked pay streak, as indicated by the old dumps, extends from Gold Run (No. 224 B.L.) to No. 260 B.L., a distance of 14,000 feet. Its width varies from 300 feet on No. 238 B.L. to 850 feet on No. 240 B.L. and averages about 600 feet. This gives an area of 192 acres. The gravel and the bedrock that carries values have a total average depth, as nearly as can be judged from the meager evidence at hand, of about 21 feet. This will give 6,500,000 cubic yards of gold bearing material in the worked pay streak. Below No. 260 B.L. and in the mouth of Sulphur Creek, which is included in the Granville Flat, there are isolated dumps showing that some work was done. But there is nothing to indicate that values equal to the upper part were found there.

Neither Thorne nor Gardner give results of any holes in this section, though Thorne in his summary reports 8 feet of pay gravel amounting to over 5,000,000 cubic yards averaging \$0.65 per cubic yard, or less than \$0.20 per square foot of bedrock. Exhibit "J", Mr. Treadgold's results, gives a statement of the output of Granville claims for the spring of 1911, showing that 97,715 square feet of bedrock yielded \$37,659.49 or 38.5 cents per square foot and that the equivalent of 1,110,900 pans of material produced

\$33,785.50, or 3.04 cents per pan. Considering 31 feet as the average depth of gold bearing material and that 3 feet of the bottom depth was usually washed, these values are equivalent to about \$0.50 per cubic yard for the whole 31 feet.

Exhibit "J" also gives the results of 73 pan tests, presumably all from the pay streak. These run from 14 cents a cubic yard to \$19 per cubic yard and average \$2.80 per cubic yard. However, as there is usually no indication of the depth of material represented, no exact average value of the material can be computed from these figures.

The values still in the pay streak of this section cannot be estimated in the manner employed for the first section of Dominion Creek as the gravel is in thick deposits, only a small portion next to the bedrock was taken out and seemingly there are no results available to show what values are in the upper part of the gravel. The gold contents of Granville Flat are said to have been very irregular in distribution, both across the pay streak and in its longer dimensions and as a result it is likely that at least 25% of the virgin bedrock values remain. Until further prospecting work provides data upon which to base a more accurate estimate, it is assumed that the values still in the 6,500,000 yards of pay streak gravel and bedrock will give a dredge yield of 31 cents per cubic yard.

Outside the Granville pay streak, chiefly on its right limit, is a strip likewise 14,000 feet long with a width as yet undefined, but probably 400 feet. With the pay streak depth of 31 feet, this amounts to 4,355,000 cubic yards. On Claim No. 236 B.L., two holes were put

down on the extreme right limit of this ground, showing an average of 15 feet of gravel and bedrock, the pan test of which indicate an average value of 29 cents per cubic yard. Likewise on the extreme right limit of Nos. 241 and 242 B.L. are two holes showing an average of 19 feet of material, the pan tests of which indicate 5 cents a cubic yard. On the right bench claim opposite No. 263 B.L. a row of seven holes starting at the extreme right limit and extending out to the worked pay streak, a distance of 450 feet, show an average of 13.1 feet of material, the reported pan tests of which indicate a value of \$1.13 per cubic yard. These three sets of holes are the only evidence at hand as to the values of this strip of gravel. The first two sets are up on the right rim and are about 8,000 feet from the others. This is insufficient data for basing even a tentative estimate of values. These holes are shown on Exhibit "G", and the available data covering them is given in Exhibit "J".

Below the lower end of the worked pay streak from No. 260 B.L. down to No. 276 B.L. and including the mouth of Sulphur Creek, there is a mile of the flat which is undoubtedly underlain with gold bearing gravel for a width increasing from 700 feet at the upper end to 4,000 feet at the lower end, amounting to about 12,500,000 cubic yards of gold bearing material. The only prospecting work on this ground of which I have definite information, consists of 25 shafts connected with tunnels, extending from Dominion Creek across the mouth of Sulphur Creek, as shown on the plan, Exhibit "H". From the man who did the work, Victor Moquin, detailed information has been obtained for the last seven holes put down, those

across the mouth of Sulphur Creek. This is given in full in Exhibit "J". These seven holes show an average of 15 feet of muck overlying 32 feet of pay material which Moquin's panning results indicate as giving \$0.38 per cubic yard. Exhibit "J", Mr. Treadgold's results, gives a statement of the pan values of this work. That of the third year does not check with the figures from Moquin, but considering the three as comparative, they indicate a value of \$0.29 per cubic yard for about 30 feet of pay material. These results are from panning, which at best is uncertain, and they also assume, I understand, that the values are all confined to the bottom 4 or 6 feet of gravel and to a foot or two of bedrock, allowing nothing for the upper gravels. Therefore, they are not particularly accurate. And being from but one line of shafts in 285 acres, these results cannot be considered as being more than an indication of what the 12,500,000 cubic yards might average.

Summing up: Granville Flat has an approximate total of 23,355,000 cubic yards, made up of 6,500,000 cubic yards with a tentative gross dredging value of \$3,015,000. and 16,855,000 cubic yards, the value of which is yet undetermined, but much of which will likely prove payable under the proposed system of working.

Indian River.

This comprises a strip of 20 miles with 1500 feet approximate width of gravel flat. There is very little data as to the values, although all evidence shows that it is gold bearing.

Thorne gives no detailed results, but in his summary figures the upper 37,000 feet at 20 cents per cubic yard for the whole width. In Exhibit "J", Mr. Treadgold's results, are given five tests upon fairly large lots, running from 2 cents to 17 cents per cubic yard.

Undoubtedly the values of certain strips of this ground and particularly of those near Eureka Creek and Quartz Creek, are higher than these.

Sulphur Creek.

Owing to the limited time, the writer made no investigations on Sulphur Creek. Mr. Treadgold, in Exhibit "J", gives 79 pan tests showing from "colors" to \$31.00 per cubic yard and averaging \$2.79 per cubic yard. However, these have no indication as to the quantities represented by the tests and so a true average cannot be computed from them. Thorne reports 13 holes on 6 claims with an average of \$0.97 per cubic yard. In his summary, he gives Sulphur Creek as having 23,853,166 cubic yards of gravel with a gross content of \$15,989,591 or 67 cents per cubic yard.

Quartz Creek.

The only data available on the values of the gravel of this creek is from Thorne's report. He reports 59 holes on 12 claims having a total of 1,181,983 cubic yards with a gross value of \$1,296,345 or \$1.016 per cubic yard. One hole on Claim No. 30 B.A. gave \$15.08 per cubic yard. Without this one high result, the gross total of the 12 claims would be \$1,079,532. or \$0.913 per cubic yard. For the balance of the claims from 12 B.A. to 51 B.A., he gives 2,278,935 cubic yards with a gross value of \$1,383,508, or 61 cents per cubic yard. Combining these two sets and leaving out the high grade hole on No. 30 B.A., the sum is 3,460,914 cubic yards with \$2,463,040, or 71 cents per cubic yard.

That part of Quartz Creek which is of interest at present is that from which the overburden is removed. It extends from No. 34 B. A. to No. 45 B.A. and contains, 344,400 cubic yards of thawed gravel and bedrock.

Using the results Thorne gives for Nos. 35 and 36 B.A. and interpolating for the values between Nos. 36 and 45 B.A., a result of 52 cents per cubic yard is obtained. This gives a gross value of \$179,088 for the thawed material.

J. A. Collins, who was in charge of the Corporation's work here, claims that operations on Claims Nos. 37, 38, 39 and 42 B.A. produced 40 cents per square foot of bedrock and that these values will hold for 1,000 feet of width. However, no proof was forthcoming that the work mentioned was not in a known pay streak of limited width.

Until further prospecting is done on these lower claims, there is no justification for figuring on more than 52 cents per cubic yard for the stripped portion.

Summary.

The conclusions derived from the above statements must, because of the lack of sufficient definite prospecting data, be approximations only. They are as follows:

Dominion Creek, from its upper end down 35,000 feet to No. 16 B.L. has an old pay streak containing 1,866,000 cubic yards, averaging \$0.60 per cubic yard with a total content of \$1,133,953. Alongside this are gravels amounting to 3,500,000 cubic yards of value yet undetermined but which are thought by many to be equal per cubic yard to pay streak material. If so, the total for this section would be 5,366,000 cubic yards containing \$3,219,000.

Dominion Creek from 16 B.L. to 95 B.L., 25,000 feet in length, has, according to Thorne, 5,430,000 cubic yards, which according to the writer's tentative estimate of \$0.80 per cubic yard, would contain \$4,344,000.

Dominion Creek 95 B.L. to 224 B.L., a section 40,000 feet long, has some millions of yards of gravel but neither the quantity nor the values have been determined even approximately.

Dominion Creek, 224 B.L. to 276 B.L., Grayville Flat, a section 19,000 feet long, has in the old pay streak 6,500,000 cubic yards estimated at \$0.31 per cubic yard, a total gross dredging content of \$2,015,000. Besides this, there are 16,855,000 cubic yards which are hoped to equal the pay streak value of \$0.31 per cubic yard. If so, it will give for this section a total of 23,355,000 cubic yards with a gross dredging content of \$7,240,000.

Indian River has 20 miles of gravel covered flats which are undoubtedly more or less gold bearing. The quantity and its values are as yet undetermined.

Sulphur Creek is reported by Thorne to have 23,853,000 cubic yards of gravel with a total content of \$15,989,500.

Quartz Creek, according to the Thorne measurement, has 3,460,900 cubic yards at \$0.71 per cubic yard with a total content of \$2,463,000.

These various approximations show a total of 61,464,900 cubic yards with a gross gold content of \$33,255,500. This is in addition to the great yardages of Middle Dominion and Indian River, yet to be determined.

EXHIBIT "J"Prospecting Data received from A. N. C. Treadgold October 3, 1915.Output of Granville Flat placer claims Spring 1911.

97,715 sq. ft. bedrock yielded \$27,659.49 or 38.54¢ per Sq. ft.
 1,110,900 pans yielded \$33,785.50 or 3.04¢ per pan.

No. 231 & 232 (upper 1/2)	4000 sq. ft. bed-rock	\$2,800.00 = 70¢ per sq. ft.
232 (lower ")	3600 9 pan buckets	1,200.50 = 3.7¢ per pan
232 "	4000 7 " "	400.00 = 1.4¢ " "
233	620 sq. ft.	415.00 = 66.9¢ per sq. ft.
233	35195 " "	13,462.99 = 38.2¢ " " "
235 Hill	5500 9 pan buckets	1,525.00 = 3.7¢ per pan
238 " A	4000 sq. ft.	2,000.00 = 50¢ per sq. ft.
241	7000 7 pan buckets	1,600.00 = 3.2¢ per pan
240 A	8000 sq. ft. bed rock	4,000.00 = 50¢ per sq. ft.
243 fraction	9000 7 pan buckets	2,200.00 = 3.5¢ per pan
244 creek cl.	10000 sq. ft. bed rock	3,000.00 = 30¢ per sq. ft.
245 & 246	10000 7 pan buckets	3,300.00 = 4.7¢ per pan
249 ch. cl.	14500 sq. ft. bed rock	4,600.00 = 31.7¢ per sq. ft.
249 lower 1/2	12000 7 pan buckets	1,440.00 = 1.7¢ per pan
249 " "	5000 7 " "	600.00 = 1.7¢ " "
250	10000 7 " "	4,600.00 = 6.5¢ " "
251	10000 7 " "	2,500.00 = 3.5¢ " "
252	12000 7 " "	3,100.00 = 3.7¢ " "
254	12000 7 " "	2,000.00 = 2.3¢ " "
256	10000 7 " "	1,200.00 = 1.7¢ " "
252	8000 7 " "	1,520.00 = 2.7¢ " "
257	11000 sq. ft. bed rock	3,100.00 = 28.1¢ per sq. ft.
257	12500 7 pan buckets	3,500.00 = 4.1¢ per pan
257	8000 7 " "	1,400.00 = 2.5¢ " "
259	9500 7 " "	600.00 = 0.8¢ " "
259	8000 7 " "	700.00 = 1.2¢ " "
259	6700 sq. ft. bed rock	2,981.50 = 44.5¢ per sq. ft.
269	3700 " " " "	1,300.00 = 35.1¢ " " "
		<u>\$71,444.99</u>

VICTOR MOQUIN'S PROSPECTING 1912 MOUTH OF SULPHURGold valued at \$16.75 per ounce.

<u>Sample</u>	<u>Pans</u>	<u>Material</u>	<u>Per Cubic Yard.</u>
1	120	Gravel	\$0.122
1	210	Bedrock	0.953
2	110	Gravel	0.160
2	235	Bedrock	0.606
3	145	Gravel	0.138
3	255	Bedrock	0.335
4	168	Gravel	0.303
4	260	Bedrock	0.708
5	180	Gravel	0.551
5	285	Bedrock	1.790
6	132	Gravel	0.378
6	248	Bedrock	2.218
7	188	Gravel	0.177
7	310	Bedrock	1.540

Averages irrespective of number of pans

Gravel - - - - - \$0.261 per cu. yd.

Bedrock- - - - - \$1.164 " " "

Victor Mequin's work Sulphur-Dominion - Year 1911
5174 Pans give 57.35 cnt. equals 1.01 ct. to Pan

Victor Mequin's work Sulphur-Dominion - Year 1912
Total number of Pans 10434 give 10599 cnt.

1.0015¢ per pan.

Victor Mequin's work Sulphur-Dominion - Year 1913
Total number of Pans 2413 give 2777 cnt.

1.109¢ per pan.

MOQUIN'S WORK 1911.

<u>Shaft No.</u>	<u>Total Depth</u>	<u>Muck</u>	<u>Yellow Gr.</u>	<u>White Gr.</u>	<u>Tunnel Length.</u>
1					80 ft.
2	45 ft.	18 ft.	12 ft.	12.5 ft.	83 "
3	44.5 "	18 "	12 "	13.5 "	82 "
4	46 "	18 "	12 "	14 "	77 "
5	45 "	17 "	12.5 "	14.5 "	85 "
6	43.5 "	18 "	11.5 "	14 "	79 "
7	45 "	17.5 "	13.5 "	14 "	81 "

DOMINION CREEK

Data from A. N. C. Treadgold.

130 pans to 1 cu. yd. material in place. Gold at \$16.75 per ounce.

Number of Claim	Shaft	Pans Washed	Value of Gold in cents	Value per Cu. Yd. \$	Material washed	Remarks
28 B. U.	1	9	13.085	\$1.89	Dump mixed	
	1	9	22.682	3.27	" "	
2 B. L.	2	6	12.649	2.74	" "	
35 B. L.	2	2	10.468	6.80	Bed Rock	
	Upp. Tunnel	7	1.745	0.32	Mixed	
	3	5	3.053	0.66	Gravel	
	Low Tunnel	5	2.181	0.56	Mixed	
	" "	9	6.973	1.01	"	
	" "	8	9.159	1.48	"	
	" "	8	9.159	1.48	"	
	3	4	4.361	1.41	Bed Rock	
	3	6	2.617	0.56	Gravel	
35 B.L.D.	Lower Tunnel	1	0.872	1.13	Bedrock	
	Upper "	2	0.436	0.28	Gravel	
	" "	3	2.181	0.94	Bedrock	
	Lower "	2	1.745	1.13	"	
	Short "	3	1.408	0.61	Mixed	
	Upper "	6	8.722	1.88	Bedrock	
	Lower "	1	1.408	1.83	"	
	Short "	2	1.408	0.91	"	
	" "	3	0.436	0.18	Mixed	
	Upper "	5	1.745	0.45	Gravel, last than	
	" "	1	0.436	0.56	" " "	
	Lower "	1	0.436	0.56	" Gold 1"	
	Upper "	1	4.361	5.67	Bedrock, /in bedrock	
	" "	1	3.925	5.10	Top of bedrock	
	U "	1	1.745	2.27	Bedrock	
	" "	1	6.542	8.51	" 6" in bedrock	
	" "	1	3.053	3.97	" 6" " "	
	" "	1	4.897	6.37	"	
	" "	1	1.408	1.83	Bedrock, 1 ft. deep	
68 B.L.D.	1	5	0.972	0.25	Bedrock	
		3	1.745	0.78	Gravel, 6' above bedrock	
	2	2	1.408	0.91	Gravel	
		2	2.181	1.42	Gravel, 4" above bedrock	
		4	3.925	1.27	Bedrock	
		3	5.670	2.46	Bedrock, sticky gumbo	
	Upper Tunnel	3	2.181	0.94	Hard against rim	
	" "	3	2.617	1.13	" " " Mixed	
	" "	5	5.234	1.36	" " " "	
	" "	2	3.49	2.27	" " " "	
	" "	5	18.855	2.90	" " " "	
	Lower Tunnel	4	10.031	3.26	" " " "	
	" "	4	3.925	1.27	" " " "	
	Upper "	4	3.053	0.99	" " " "	

Number of Claim	Shaft	Pans Washed	Value of Gold in cents	Value per Cu. Yd. \$	Material washed Remarks
68 B.L.D.	2	4	0.436	0.14	Gravel First 4'
	2	1	1.745	3.27	Bedrock
	2	3	1.408	0.61	Gravel
	2	3	3.490	1.51	Bedrock
		6	0.872	0.18	Gravel
		2	1.745	1.13	7' above bedrock
	Lower Tunnel	3	1.408	0.61	Mixed
	Upper "	5	2.181	0.56	"
	3	5	3.053	0.80	Mixed bottom of shaft
		3	0.872	0.37	Mixed gumbo, gravel & bedrock
	Upper Tunnel	3	1.408	0.61	Mixed
	Lower "	6	1.745	0.38	"
		2	5.670	3.68	Mixed gumbo, gravel & bedrock
	Lower Tunnel	5	3.49	6.90	Mixed
	Upper "	6	3.49	0.75	"
	" "	1	6.106	7.93	Bedrock
	" "	4	3.925	1.27	Mixed
	Lower "	5	2.181	0.56	"
		4	6.542	2.12	Mixed gumbo & gravel
	Lower Tunnel	5	3.925	1.02	Mixed
	" "	3	2.181	0.94	"
	" "	5	2.181	0.56	"
	" "	4	2.617	0.85	"
Upper "	3	3.053	1.32	"	
133 B.L.D.	1	20	2.181	0.141	Gravel 13-18 ft.
	1	4	13.085	4.252	Bedrock 18-19 ft.
	2	28	1.745	0.081	Gravel 15-22 ft.
	2	4	5.234	1.701	Bedrock 22-23 ft.
	2	52	0.872	0.021	Gravel shaft 2½ x 3½
	3	8	14.394	2.339	Bedrock shaft 2' x 3'
134 B.L.D.	1	20	9.595	0.623	Gravel fine, no boulders
	1	4	3.925	1.275	Bedrock soft, Gold fine
					Bedrock 18-19 ft.
	2	28	0.436	0.020	Gravel 15-22 ft.
	2	4	2.617	0.850	Bedrock 22-23 ft.
	3	52	2.617	0.065	Gravel 11-24 ft.
	3	4	13.085	4.252	Bedrock 24-25 ft.
135 B.L.D.	1	20	0.436	0.028	Shaft size 2½ x 3½
					Gravel 16' x 15'
	1	4	2.617	0.850	Shaft size 2' x 3'
					Bedrock 15-16 ft.
	2	16	0.872	0.070	Shaft size 2½' x 3½'
					Gravel 15-19 ft.
	2	4	14.830	4.619	Shaft size 2' x 3'
					Bedrock 19-20 ft.
3	12	2.181	0.236	Shaft size 2' x 3'	
				Gravel 20-23 ft.	
3	4	12.213	3.969	Shaft size 2' x 3'	
				Bedrock 23 - 24 ft.	

Pannings from Dominion (Ed. Brady's check on Wamp)

Number of Claim	Hole No.	Pans Washed	Value of Gold in cents	Value per Cu. Yd. \$	Material washed Remarks
133 B.L.D.	1	5	2.617	0.680	Bedrock
	2	10	1.745	0.226	"
	3	5	5.234	1.361	"
134 B.L.D.	3	8	1.408	0.228	Gravel
	1	5	3.490	0.907	Bedrock
	2	8	5.670	0.921	"
135 B.L.D.	3	10	15.366	1.997	"
	3	5	0.436	0.113	Gravel
	1	6	1.408	0.305	Bedrock
136 B.L.D.	2	10	2.181	0.283	"
	3	5	0.436	0.113	"
	1	5	0.436	0.113	"
137 B.L.D.	2	8	1.745	0.283	Gravel
	2	8	2.181	0.345	Bedrock
	3	10	1.745	0.226	"
138 B.L.D.	1	10	22.682	2.948	" One lg. color 5-1/8 gr.
	2	7	2.181	0.405	"
	3	10	7.414	0.963	"
139 B.L.D.	1	5			"
	2	10	0.436	0.056	"
	3	6	0.436	0.093	"
139 B.L.D.	1	10	12.649	1.644	"
	2	10	7.414	0.963	"
	2	5			Gravel
	3	10	2.181	0.283	Bedrock
	4	5	1.745	0.453	"
139 B.L.D.	4	10	4.361	0.567	Gravel
	5	8	2.181	0.354	Bedrock

Number of Claim	Shaft	Pans Washed	Value of Gold in cents	Value per cu. yd. \$	Material washed Remarks
136 B.L.D.	1	32	2.181	0.088	Shaft size 2' x 3' Gravel 4-12 ft.
	1	4	3.490	1.134	Shaft size 2' x 3' Bedrock 12-13 ft.
	2	20	2.181	0.141	Shaft size 2' x 3' Gravel 9-14 ft.
	2	4	2.181	0.708	Shaft size 2' x 3' Bedrock 14-15 ft.
	3	28		.001	Shaft size 2' x 3' Gravel 11-18 ft.
	3	8	2.617	0.425	Shaft size 2' x 3' Bedrock 18-20 ft.
137 B.L.D.	1	24	6.872	0.047	Shaft size 2' x 3' Gravel 8-14 ft.
	1	4	2.181	0.708	Shaft size 2' x 3' Bedrock 14-15 ft.
	2	20	4.361	0.283	Shaft size 2' x 3' Gravel 13-18 ft.
	2	4	7.850	2.551	Bedrock 18-19 ft.
	2	20	0.872	0.056	Gravel 16-21 ft.
	3	4	7.850	2.551	Bedrock 21-22 ft.
138 B.L.D.	1	4	2.181	0.708	Gravel 13-14 ft.
	1	12	5.670	0.614	Shaft size 2' x 3' Bedrock 14-17 ft.
	2				Shaft size 2' x 3' ½ ft. no Gravel Shaft 2'x3'
	2	14	4.361	0.405	Bedrock 3½ ft.
	3	8	3.490	0.567	Shaft size 2' x 3' Gravel 16-18 ft.
	3	8	16.139	2.630	Shaft size 2' x 3' Bedrock 18-20 ft.
139 B.L.D.	1				Shaft size 2' x 3' Sand 4' No Gravel
	1	12	2.617	0.283	Bedrock 10-12
	2				Shaft size 2' x 3' Gold fine
	2	8	4,897	0.795	Sand 8' No Gravel
	2				Bedrock 16-18
	3	8	2.181	0.354	Shaft size 2'x3' Gold fine Sand 9' No Gravel Bedrock 16-18 ft. Shaft size 2'x3' Soft Gold fine

DOMINION CREEK

Claim No.	Shaft No.	Muck	Depth of Values	Value per Cu. Yd. \$
133 B.L.	1	13'	6 ft.	0.826
	2	15'	8 "	0.283
	3	11'	15 "	0.830
	Average	13'	9.6 "	0.419
134 B.L.	1	13'	6 ft.	0.731
	2	15'	8 "	0.123
	3	11'	14 "	0.364
	Average	13'	9.3 "	0.373
135 B.L.	1	10'	6 ft.	0.165
	2	15'	4 "	1.019
	3	20'	4 "	1.169
	Average	15'	4.6 "	0.695
136 B.L.	1	4'	9 ft.	0.141
	2	9'	6 "	0.235
	3	11'	9 "	0.095
	Average	8'	8 "	0.147
137 B.L.	1	8'	7 ft.	0.141
	2	13'	6 "	0.661
	3	18'	6 "	0.472
	Average	12.3'	6.3 "	0.409
138 B.L.	1	13'	4 ft.	0.635
	2	14'	3 $\frac{1}{2}$ "	0.405
	3	16'	4 "	1.598
	Average	14.3'	3.8 "	0.900
139 B.L.	1	6'	2 ft.	0.283
	2	8'	2 "	0.795
	3	7'	2 "	0.354
	Average	7'	2 "	0.477
Total Average		11.6'	6.2 ft.	0.432

Dominion Creek.

Data from A. N. C. Treadgold.

130 Pans to 1 cu. yd. material in place. Gold at \$16.75 per ounce.

Number of Claim	Shaft No.	Pans Washed	Value of Gold in cents	Value per cu. yd. \$	Material washed	Remarks
243 B.L.D.	2 3LL	5	4.361	1.134	Mixed	
		6	6.978	1.512	"	
		5	12.649	3.288	"	"From old dump LL of Valley
		10	28.788	3.742	Waste " " " " " "	
245 B.L.D.	1RL 3	8	2.617	0.425	Mixed	
		5	3.490	0.907	"	" From dump
		5	6.978	1.816	Waste old dump center of Valley	
Beh. off 245 B.L.D.)		5	0.872	0.226	Old dump	
246 B.L.D.		4	6.106	1.984	" "	
249 B.L.D.	1 RL of 1	5	3.053	0.793	" "	
		20	13.085	0.850	Dump	
		6	13.085	2.965	Mixed	
		11	16.575	1.958	"	" From dump
		10	5.670	0.737	" " "	
		5	2.617	0.680	" " "	
		10	8.286	1.077	" " "	
		6	21.373	4.630	" " "	
		10	27.916	3.629	" " "	
		6	4.897	1.061	" " "	
229 B.L.D.		5	6.106	1.587	Mixed from old dump	
230 B.L.D.		6	8.722	1.889	"	centre of valley
232 B.L.D. Taddy's Shaft	" "	10	6.106	0.793	Mixed Shaft R.L.	
		15	55.832	4.838	" " "	
		10	9.595	1.247	Mixed 12' LL of Taddy's Shaft	
		10	17.447	2.268	Mixed	
		6	5.234	1.134	Gravel	
		10	12.213	1.587	Mixed	
		16	69.780	4.535	"	6' R.L. of Taddy's Shaft
238 B.L.D.		5	13.085	2.402	Tailings of	
		5	6.106	1.587	Old dump LL/Valley	
		5	5.670	1.474	Mixed " RL of Valley	
		5	2.181	0.567	" " center of Valley	
239 B.L.D.		10	26.171	3.402	Old Dump mixed	
240 B.L.D.		6	6.978	1.512	Mixed old dump LL	
		8	13.521	2.197	" " " "	
		5	3.490	0.907	Waste Center of Valley	
		5	5.670	1.474	" " " "	
		6	16.139	3.496	Mixed from dump	
		10	4.897	0.636	" " "	
249 B.L.D.	3	3	17.477	5.670	Bedrock	
		4	16.575	5.387	Bedrock Gold 1' in Bedrock	
		3	1.745	0.756	Gravel	
		8	0.872	0.141	Mixed from dump	
		8	17.011	2.764	" " "	
		2	8.286	5.385	Bedrock Gold 11" in Bedrock	
		9	12.649	1.604	Old dump R.L. of Valley	

Number of Claim	Shaft No.	Fans Washed	Value of Gold in cents.	Value per cu. yd. \$	Material washed	Remarks
249 B.L.D.		5	3.490	0.907	Tailings	
250 B.L.D.		5	3.490	0.907	Mixed from old shaft	
253 B.L.D.		5	5.670	1.474	LL of Valley	
254 B.L.D.	1	5	3.053	0.793	Mixed from old shaft	
	2	5	6.106	1.323	LL of Valley	
	3	5	3.053	0.793	Mixed from old shaft	
	4	5	6.106	1.587	LL of Valley	
255 B.L.D.		5	6.978	1.814	Mixed from shaft	
		10	11.340	1.474	LL Valley	
269 B.L.D. Moquin		7	30.097	5.589	Waste	
		7	24.862	4.517	Bedrock upstream tunnel	
		32	7.414	0.801	" 3' gravel "	
		20	44.055	2.863	Gravel 3' to 6' upstream tun.	
		2	3.053	1.984	Bottom 3' downstream tunnel	
		1	0.872	1.133	Poor Bedrock upstream "	
		5	12.649	3.286	Gravel overhead 6' high but	
		7	20.500	3.807	in Ruby Sand downstream Tun.	
249 B.L.D. A. Nelson		4	20.937	6.804	Bottom 3' upstream tunnel	
254 B.L.D. T. Nelson		4	10.031	3.260	" " " "	
		4	20.064	6.521	Dump	
250 B.L.D. T. Legacy		4	15.366	4.993	"	
258 B.L.D. T. Morris 1		2	3.490	2.268	Drift	
" " "		1	0.872	1.134	Dump	
" " 2		1	1.745	2.268	Shaft 1 (upstream) gravel	
238 B.L.D. A. Day		2	1.745	1.134	Bedrock	
243 B.L.D. H. Lawrence		4	18.319	5.953	(Toward Hill) dump	
261 B.L.D.		4	61.066	19.846	Dump worst	
					"	
					T.E. Moskelund (Best Shaft)	
257 B.L.D.		4	17.883	5.812	Lowest 2' black gold.	
		1	0.436	0.566	Oie's dump	
252 B.L.D.	1	1	4.897	6.366	3' up in gravel	
	2	1	1.408	1.830	Bedrock Mr. Larkin's	
	3	1	3.923	10.203	Gravel 3' up "	
		1	1.408	1.830	Bedrock "	
		1	0.872	1.133	Bedrock Mr. Mathisen's	
Leroux B.		1	12.213	15.877	Bedrock & Gravel	
269 B.L.D.		1	2.617	3.402	Picked from top Bedrock	
		5	7.414	1.927	Bedrock, Out of pay, but	
		25	6.978	0.362	near it (Moquin)	
		4	14.830	4.819	1st Attempt (Contact)	
		1	3.053	3.969	Yellow Gravel	
		1	19.192	24.949	1st Attempt (3' up)	
		5	16.139	4.196	Yellow Gravel	
					Bedrock (Away from pay)	
					2nd Attempt (coming into	
					pay) (gr)	
					2nd Attempt (better) (bk)	
					2nd Attempt bottom of Shaft	
					6" thick	

Number of Claim	Shaft No.	Pans Washed	Value of Gold in cents	Value per cu. yd. \$	Material washed Remarks
		32	5.670	0.230	2nd attempt from 4' up to Chicken feet
		5	59.321	15.423	2nd attempt from side of Tunnel coming toward pay
		10	47.980	6.237	2nd attempt picked from the Bedrock of 2 sq. ft.
		9	53.750	7.764	2nd attempt picked from the Bedrock of 2 sq. ft.
		1	3.053	3.969	2nd attempt 2' above Bedrock
		1	7.850	10.205	Gravel
		1	5.234	6.804	bk.
		11	78.514	9.279	2nd attempt 3' of gravel 8' of bk.
		1	4.897	6.366	2nd attempt Gravel near bk
		1	0.436	0.567	2nd attempt Gravel (4ft. up)
		1	0.436	0.567	2nd attempt Gravel 6'-7" high along tunnel
Not given T. Nelson's		1	3.490	4.537	General
269 B.L.D. 2nd		1	1.408	1.830	Dump (small pan) gravel
		1	66.106	7.937	(bk good) in pay
		1	13.952	18.145	" " " "
		12	6.978	4.536	Gravel in tunnel upstream
		24	12.213	0.661	Gravel in tunnel upstream
		5	7.850	2.041	Gravel in tunnel downstream
		3	27.479	11.907	Mixed pay (gravel & bk.)
		6	23.118	5.008	Bk. (not best)

DOMINION CREEK.
 PROSPECTING DATA RECEIVED FROM VICTOR MOQUIN
 SEPTEMBER 10, 1915.
 130 PANS TO CU. YD. MATERIAL INPLACE. GOLD AT \$16.75 PER OUNCE.
 1 MGM - 0.0538¢

No. of Claim.	No. of Shaft.	Muck.	Yellow Gravel.	White Gravel.	BR.	Pans.	Val. of Gold.	Per Cu. Yd.	Remarks.
		Ft.					Cents.		
242BL	1	19	13'			16	0.4304	0.034	Yellow Gravel.
	1			10		16	0.807	0.065	White "
	1				1	80	27.545	0.4475	Bedrock.
Aver.	Aver	19'	13'	10'	1			0.064	Average of shaft. Gravel & Br.
242BL	2	18½	11½	0	2	24	1.883	0.102	Bedrock only.
Aver.		18.5	11.5	0	2			0.015	Shaft averages Gr. & Br.
236BL	3	18.0	8.0	2.0	2	60	87.811	1.902	Bedrock only.
Aver.		18.	8.	2.	2.			0.317	Shaft average. Gr. & Br.
236BL	4	18	10.			24	1.614	0.087	Yellow gravel only.
	4			6	2	48	75.427	2.042	Shaft average. Gr. & Br.
Aver.		18	10.	6.	2.			0.275	
The above shafts were for the purpose of defining the right limit of the pay.									
259BL	1	14.5	12			110	20.0	0.236	About 2' yellow gravel in sample
	1			3	1	265	673.0	3.301	White gravel & bedrock.
Aver.		14.5	12	3	1			0.854	Shaft average All Gr. & Br.
259BL	2	14.5	10			85	30.0	0.458	Probably 2' yellow gravel in the sample.
	2			5	1	245	735.0	3.900	White gravel & bedrock.
Aver.		14.5	10	5	1			1.520	Shaft average. All Gr. & Br.
259 BL.	3	15.0	8			175	45.0	0.335	Probably only 2' yellow gravel in the sample.
	3			6	1	365	1000.0	3.561	White gravel & bedrock.
Aver.		15.0	8	6	1			1.706	Shaft average. All Gr. & Br.
259BL	4	15.5	8			145	22.0	0.197	Probably only 2' yellow gravel in the sample.
	4			5	1	330	580.0	2.285	White gravel & bedrock.

No. of Claim.	No. of Shaft.	Muck.	Yellow Gravel.	White Gravel.	BR.	Pans.	Val. of Gold.	Per Cu. Yd.	Remarks.
Aver.		Ft. 15.5	8	5	1		Cents.	1.007	Shaft average All Gr. & Br.
259BL	5	20.	6			125	30.0	0.312	Probably only 2' yellow gravel in the sample.
	5			4	1	280	465.0	2.158	White gravel & bedrock.
Aver.		20	6	4	1			1.037	Shaft average All Gr. & Br.
259BL	6	22.5	5			100	35.0	0.413	Probably only 2' yellow gravel in the sample.
	6			4.5	1	260	300.0	1.500	White gravel & bedrock.
Aver.		22.5	5	4.5	1			0.864	Shaft average. All Gr. & Br.
259BL	7	23.0	4	4.5	1	165	150.0	1.181	White gravel & bedrock only.
Aver.		23.0	4	4.5	1			0.683	Shaft average All Gr. & Br.
		17.8	7.5	4.6	1			1.137	Total average of the 7 shafts on No. 259BL.
MOQUIN'S 3rd WINTER SHAFTS, MOUTH OF SULPHUR.									
	1	16	14.5	13.5	1	178	119.0	0.869	White gravel from drifts 2' above Br.
	1					378	800.0	2.751	Lower 2' of white gravel & bedrock.
Aver.								0.359	Shaft average. All Gr. & Br.
	2	15	15	14.5	3	68	93.0	1.777	See No. 1
	2					377	525.0	1.810	" " "
Aver.								0.333	Shaft average. All Gr. & Br.
	3	17	13.5	13.0	1.5	135	80.0	0.562	See No. 1
	3					425	470.0	1.435	" " "
Aver.								0.229	Shaft average. All of Gr. & Br.
	4	13	17.0	15.0	1.5	220	73.0	0.461	See No. 1
	4					470	690.0	1.908	" " "
Aver.								0.233	Shaft average. All Gr. & Br.

No. of Claim.	No. of Shaft.	Muck.	Yellow Gravel.	White Gravel.	BF.	Pans.	Val. of Gold.	PerCu. Yd.	Remarks.
		Ft.					Cents.		
	5	15	14	20.	1.5	300	160.0	0.693	See No.1
	5					215	500.0	3.023	" " "
Aver.								0.346	Shaft average All Gr. & Br.
	6	14	11	20	1.5	185	62.0	0.435	See No.1
	6					285	425.0	1.938	" " "
Aver.								0.242	Shaft average. All of Gr. & Br.
	7	15	16	16	1.5	175	105.0	0.780	See No.1
	7					310	490.0	2.054	" " "
Aver.								0.272	Shaft average All Gr. & Br.
		15	14.4	16	1.7			0.288	Total average of the 7 shafts at mouth of Sulphur Creek.

SULPHUR CREEK.
 DATA RECEIVED FROM A. W. C. TREADGOLD, OCTOBER 3, 1915.
 130 PANS TO 1 CU. YD. MATERIAL IN PLACE. GOLD AT \$16.00 PER OUNCE.

Claim Number.	Shaft Number.	Number of Pans.	Val. in Cents.	Val. Per Cu. Yd.	Material & Remarks.
46 Below	1	5	5.833	1.516	Gravel
	1	3	2.916	1.263	Gravel R.L.
	1	3	7.916	3.430	Bedrock first 6"
	1	3	45.415	19.679	35' ^{1st} second 6"
	1	5	28.333	7.366	" of dump.
	1	6	27.083	5.866	Mixed of dump.
	1	5	5.000	1.300	" " "
	2	6	11.666	2.527	Gravel of dump about 20' in tunnel R.L. of shaft/
	2	5	24.583	6.391	Bedrock in tunnel 25' L.L. of shaft
	2	5	81.666	21.233	Mixed of dump.
	2	5	15.000	3.90	35' ^{1st} " "
	2	3	2.082	0.902	Bedrock. Gold 6" in bedrock.
	2	5	4.166	1.083	Mixed of dump R.L.
	2	5	6.250	1.625	" " " " "
	2	5	9.583	2.491	110' ^{1st} " " " from tunnel 55' R.L. of shaft.
	3	6	2.082	0.451	Dump mixed 30' L.L. of shaft.
	3	5	5.416	1.408	" " 40' R.L. of shaft.
	3	5	1.250	0.325	" " 50' L.L. of shaft.
	4	5	0.416	0.601	Gravel from 23 - 33 in shaft.
	4	5	0.833	0.216	" " " " " " "
	5	5	3.333	0.866	Dump mixed 7' in tunnel L.L. of shaft.
	5	5	11.250	2.925	Dump mixed 4' in tunnel R.L. of shaft.
	5	5	7.500	1.950	Bedrock 10' in tunnel L.L. of shaft.
	5	4	2.500	0.812	Gravel 25' in tunnel L.L. of shaft.
	5	5	53.333	13.866	Mixed 35' " " " " " "
	5	5	16.666	4.333	Bedrock 43' " " " " " "
	5	5	11.250	2.925	Dump mixed 4' in tunnel R.L. of shaft.
	5	4	2.916	0.947	Bedrock 9' in tunnel R.L. of shaft.
	5	5	80.000	20.800	Mixed 25' " " " " " "
	5	6	5.833	0.964	" 36' " " " " " "
5	5	3.750	0.977	" 53' " " " " " "	
5	5	9.583	2.491	" 55' " " " " " "	
6	5	0.833	0.216	Gravel from 24' - 27' in shaft.	
6	4	1.666	0.541	Bedrock. Gold 3' in bedrock.	
7	5	0.416	0.108	Gravel from 30' - 36' in shaft.	
7	5	1.250	0.324	Mixed	
8 Above	1	5	3.333	0.866	"
	1	5	1.666	0.433	3.2' " 6.5' ^{1st} ^{2nd}
	2	3	-----	-----	Gravel
	2	5	.833	0.216	Mixed
	2	7	.333	0.155	"
	2	5	4.582	1.191	"
	2	2	2.082	1.353	Bedrock. Gold 1' in bedrock.
	2	5	5.416	1.408	Mixed.

Claim Number.	Shaft Number.	Number of Pans.	Val.in Cents.	Val.Per Cu.Yd.	Material & Remarks.
	3	5	5.833	2.516	Mixed
	3	3	5.000	2.166	Bedrock. Gold 8" in bedrock.
8 Above	4	6	1.666	0.361	Mixed of dump.
	5	6	1.566	0.361	Gravel of dump 40' in tunnel R.L.of shaft.
	5	7	2.916	0.541	Gravel of dump 50' in tunnel R.L.of shaft.
	5	5	4.166	1.083	Gravel of dump 60' in tunnel R.L.of shaft.
6 Above	1	6	1.666	0.361	Dump mixed.
3 Below	1	5	2.082	0.541	Dump mixed 63' in tunnel R.L. of shaft.
	1	6	1.666	0.361	Dump mixed 97' in tunnel R.L. of shaft.
	2	9	5.833	0.844	Mixed
	2	3	3.333	1.444	Bedrock. Gold 14" in Br.
11 Below		5	6.250	1.625	Mixed from old dump.
28 "	1	6	45.000	9.750	Mixed
30 "	3	3	4.166	1.805	"
	4	5	8.333	2.166	"
	4	5	7.500	1.950	"
	4	4	4.166	1.354	Bedrock. Gold 1' in Br.
	4	5	17.916	4.658	Dump mixed 45' in tunnel R.L. of shaft.
44 Below		8	133.333	21.666	From Royal's Drift. Shot pillar.
35 "	3	5	0.416	0.108	Dump mixed.
		5	1.250	0.325	" " about 12' in tunnel R.L.of shaft.
39 Above		5	7.083	1.841	Gravel 30'-138' in Alexander's shaft.
		5	2.916	0.756	Mixed Alexander work.
		5	3.750	0.975	"
		5	4.582	1.191	"
60 Below	3	5	4.166	1.083	Dump 57' in tunnel R.L.of shaft.
	3	5	2.916	0.756	" 35' " " L.L. " "
	3	4	4.582	1.486	B.R. 35' " " " " " "
					gold 12" in Br.
	3	4	2.082	0.676	B.R. 62" in tunnel R.L.of shaft. gold 4" in Br.
	3	5	2.916	0.756	Dump 62' in tunnel R.L.of shaft.
	3	2	0.833	0.541	W.R. 57' " " " " " "
					gold 12" in Br.
3 Below	New	3	15.00	6.50	New shaft on L.L.Muck 29' gravel 3 1/2' Br. 4 1/2' from top of bedrock.
					Washed bedrock av. 4 X 4 X 4 cu ft.)
					6 X 6 - 8 sq.ft.) - 10 dwt. 22 gr.
31 A Below	New	1	2.082	2.706	New shaft on R.L.
		2 cu.yd.	185.833	0.929	Bedrock.
		50	9.583	0.249	Gravel

INDIAN RIVER.
 DATA RECEIVED FROM A. N. C. TREADGOLD, OCTOBER 3, 1915.
 130 PANS TO 1 CU. YD. IN PLACE. GOLD AT \$16.00 PER OUNCE.

Claim Number.	Shaft Number.	Number of Pans.	Val. of Gold.	Val. Per Cu. Yd.	Material & Remarks.
16B Krueger	5		5.000		First 3 Ft.
	3		68.333		All gravel & bedrock.
	1		50.000		" " " "
	2		37.083		" " " "
	4		29.583		" " " "
8 Below		10	98.333	12.78	From 4 shafts. (my tests 6½' gr. & br.)
	Legacy's 1		50¢	0.17	78 cu. ft. gave 4½' overburden.
<i>Above</i>	" 2		37¢	0.11	90 cu. ft. gave 3' overburden. 9½' gr. & br.
<i>Eschly</i>	" 3		69¢	0.13	144 cu. ft. gave 3' overburden, 12' gr. & br.
	" 4		27¢	0.10	72 cu. ft. gave 5½' overburden, 6' gr. & br.
	" 5		5¢	0.02	54 cu. ft. top gravel 6½' overburden, 5½' gr. & br.
	" 6				7' overburden, 7' gr. & br.

one half years dredging was prospected in this way. These holes are used principally as a guide to the width of the dredge cut and to limit the areas of costly thawing where the values indicated by the drilling do not warrant the expense. Sixty seven holes were drilled totalling 1884 feet at a cost of \$2,953.83 or \$1.60 per foot.

(6) Dredging:

Shortly after the camp was opened, the regular operating crew was put to work making the usual spring repairs. Inspection revealed that the spud was badly cracked so this was removed and repaired. Digging for the season was started at 9:00 A.M. on May 24th and continued without serious interruption until October 30th. 409.35 hours were lost due to various causes, making the running time 89.3% of the possible. Practically all ground was dug which had been thawed. 2,155 square yards which had not been entirely thawed were left over for the 1924 season. The camp was closed on November 2nd.

During the 1923 season Dredge North West No. 1 handled 608,177 cubic yards of material yielding \$187,666.97, at a cost including overhead of \$116,110.08, leaving a net profit of \$71,556.89. The dredge started the season on the upper end of Claim 11 below Lower Discovery (old number) and made an advance upstream of about 3500 feet, completing the season on the upper end of Claim 5 below Lower Discovery (old number). Fifty seven percent of the ground dug was classed as frozen and thawed by artificial means. Schedule No. 2 attached hereto shows the dredging costs for the season in detail.

The average depth of the area dredged as given by the drill holes

was 25.5 feet. The average depth as dug by the dredge was 19.5 feet, showing a shrinkage of 6.0 feet due to thawing. The thawing results were very satisfactory, practically no frost being encountered by the dredge during the entire season.

Excluding one abnormally high value drill hole, the average value for the season's dredging as indicated by the prospecting was 20.6 cents per cubic yard. The average value per cubic yard recovered by the dredge was 30.9 cents per cubic yard. Taking into consideration the fact that the dredge yardage was figured after the ground had shrunk six feet due to thawing and the drill values were figured before shrinkage, we find the dredge recovered approximately 115% of the drill values.

With the present size of water thawing plant it is not possible to efficiently thaw the frozen ground and have any reserve left on hand for the following season. Comparing the 373,064 cubic yards dug in 1922 with the 608,177 cubic yards dug in 1923 shows what this boat can do when digging ground properly prepared. It is my recommendation that a Capital Expenditure of \$3500 be made to further increase this thawing plant.

THE BIG CREEK MINING COMPANY OPERATIONS

The camp at Granville was opened on April 11th to take care of the men employed on the Spring dredge repairs and thawing plant operation.

(1) Steam Thawing:

Steam Thawing was started on April 25th and was completed on May 7th. This work consisted of sweating the winter's frost in the area

immediately ahead of the dredge, so that an early start could be had and the progress of the dredge not impeded. An expenditure of \$3,016.05 was made of which amount \$1,917.00 was for wood. This wood is already on hand and will shortly be unfit for use if not consumed and some value derived from it.

(2) Water Thawing:

Water Thawing operations were started on May 7th and continued without material interruption until September 6th, when the plant was closed down for the season on account of the low temperature of the water. We operated as high as 1100 points but during the time of low water were down as low as 500 points. As the time of low water coincides with the time when the water is at its maximum temperature we have ordered a 10 x 20 centrifugal pump for this plant, to be placed in Dominion Creek, and this will be used to augment the supply from the Dominion-Granville ditch. As the size of the present plant is not sufficient to gain on the dredge when it is digging well prepared ground, I recommend that it be further increased by the expenditure of \$7500, which includes the purchase of 1000 feet of twenty inch hydraulic pipe at a cost of about \$3860. Thawing operations for the next two years will be on the opposite side of the Dominion Flat from the ditch line and with our present pipe line the friction loss is too high.

85,209 square yards of ground were thawed at a cost of 23.5 cents per square yard, and 3.05 cents per cubic yard dredged. There is no covering blanket of muck at this place which accounts for the extremely low cost we are able to get. Schedule No. 5 attached

hereto shows thawing costs in detail.

(3) Prospecting for frost:

We have done no prospecting for frost as this ground is all classed as frozen. There is considerable surface thaw but as the bedrock is all frozen and the points have to be driven to thaw this, we take credit for thawing the entire area.

(4) Drilling:

There being a considerable area ahead of this dredge which had not been previously drilled and as it was difficult for the thawing plant foreman to tell when his points had reached bedrock, it was decided to put down a few holes both for values and depth. Accordingly drilling was started on 30th of May and completed on 11th June. Twelve holes were drilled at a total cost of \$542.15, or 247 lineal feet at \$2.20 per foot. The average depth as determined by drilling checks the average depth as given by the dredge, showing that there is very little, if any shrinkage of ground after the muck has been removed. The average value indicated by the drilling was about 34.9 cents, and the recovery of the dredge in this area about 30.4 cents, showing that the dredge recovered about 87% of the indicated value.

(5) Dredging:

Immediately on the opening of the camp, the regular operating crew was put to work on the usual spring repairs. In addition to the ordinary work of replacing wearing plates and liners, and general overhauling of the machinery, it was necessary to put in an entirely

new set of manganese screen plates and to extend the digging ladder six feet, as with the old length of ladder it was difficult for the dredge to properly clean the bedrock and make satisfactory yardage.

Digging commenced at 7:30 A.M. on May 20th and was completed at 7:00 A.M. on November 7th. All ground thawed was not dredged but cold weather made it impractical to continue operations for a longer period.

On July 17th the lower screen tread gave out completely and it was necessary to close down and install a new tread. This was done and operations started again on July 24th. This was the only serious interruption during the season.

A total of 649.00 hours were lost due to various causes making the dredge operating time 84.2% of the possible.

686,614 cubic yards of material were handled yielding \$196,687.71 at a cost, including overhead, of \$108,242.25, leaving a net profit of \$88,445.46.

All the ground dredged was classed as frozen and thawed by means of water points. Digging conditions were good throughout the season and no serious frost was encountered. The camp was closed and the men laid off on November 14th.

Schedule No. 3 attached hereto shows the dredging costs for the season in detail.

THE CALDER MINING COMPANY OPERATIONS

No work was performed for the account of The Calder Mining Company, Limited. The Company's mining claims are included in the

OPERATION DREDGE NORTH WEST No. 1 - 1923.

YARDAGE		<u>608,177</u>	Per Cu.Yd.
<u>Operating Costs:</u>			
Wages,	17,035.09		2.80
Supplies and Sundries,	4,814.28		.79
Power,	6,508.25		1.07
Thawing - Steam,	16,837.15		
- Water,	<u>24,980.63</u>		
	41,817.78		6.88
Secondary Power Line,	1,981.33		.33
Repairs and Steel Reserve,	26,417.44		4.34
Gold Handling,	5,891.63		.97
Drilling,	<u>2,577.08</u>		<u>.42</u>
Total Operating Costs,		107,042.88	17.60
<u>Overhead Costs:</u>			
General Expense,	3,405.48		
Management,	1,363.22		
Superintendence,	2,779.64		
Engineering,	<u>1,518.86</u>	9,067.20	1.49
Total Dredging Costs,		116,110.08	19.09
<u>Revenue, - Gold Returns,</u>		<u>187,666.97</u>	<u>30.86</u>
<u>Result, - Gain,</u>		<u>71,556.89</u>	<u>11.77</u>

COMPARISON OF OPERATIONS - NORTH WEST No. 1.SEASONS 1920 - 1923.

<u>Year</u>	<u>Cu.Yds. Dredged</u>	<u>Costs including Overhead</u>	<u>Gold Returns</u>	<u>Net Profit</u>	<u>Net Loss</u>
1920	169,570	54,589.18	43,040.40		11,548.78
1921	393,701	113,294.69	107,791.20		5,503.49
1922	373,064	134,909.74	103,028.10		31,881.64
1923	608,177	116,110.08	187,666.97	71,556.80	-

OPERATION DREDGE NORTH WEST No. 2 - 1923.

YARDAGE		<u>688,614</u>	
<u>Operating Costs:</u>			Per Cu. Yd.
Wages,	20,325.88		2.95
Supplies and Sundries,	7,220.70		1.05
Power,	7,063.32		1.03
Thawing,	23,453.77		3.40
Repairs and Steel Reserve,	34,430.70		5.00
Gold Handling,	5,913.84		.86
Drilling,	<u>542.15</u>		<u>.08</u>
Total Operating Costs,		98,950.36	14.37
<u>Overhead Costs:</u>			
General Expense,	3,630.17		
Management,	1,363.23		
Superintendence,	2,779.63		
Engineering,	<u>1,518.86</u>	9,291.89	1.35
Total Dredging Costs,		108,242.25	15.72
<u>Revenue</u> - Gold Returns,		<u>196,687.71</u>	<u>28.56</u>
<u>Result</u> - Gain,		88,445.46	12.84

COMPARISON OF OPERATIONS - NORTH WEST No. 2.SEASONS 1921 - 1923.

<u>Year</u>	<u>Cu.Yds. Dredged</u>	<u>Costs including Overhead</u>	<u>Gold Returns</u>	<u>Net Profit</u>
1921,	342,930	53,380.76	54,239.32	858.56
1922,	582,960	96,784.21	114,542.98	17,758.77
1923,	688,614	108,242.25	196,687.71	88,445.46

THE DOMINION MINING COMPANY, LIMITED.STEAM AND WATER THAWING - 1923.

<u>Steam Thawing Costs:</u>		12,298 Sq. Yds.
		<u>Per Sq. Yd.</u>
Wages,	5,314.05	.43
Wood,	9,825.20	.80
Supplies and Sundries,	1,332.91	.11
Moving boiler,	<u>364.99</u>	<u>.03</u>
TOTAL, - -	<u>16,837.15</u>	<u>1.37</u>
 <u>Water Thawing Costs:</u>		43,688 Sq. Yds.
		<u>Per Sq. Yd.</u>
Wages,	18,218.20	.417
Caribou Ditch,	652.69	.014
Supplies and Sundries,	2,822.25	.065
Barring,	711.62	.016
Power,	1,940.75	.044
Operating Pumps,	<u>1,325.56</u>	<u>.031</u>
TOTAL, - -	<u>25,671.07</u>	<u>.587</u>
 Steam Thawed, April and May,	9,287	
June,	<u>3,011</u>	12,298 Sq. Yds.
 Water Thawed, June,	14,686	
July,	14,720	
Aug. & Sept.	<u>14,282</u>	43,688 do
 Natural Thaw Dredged, June,	7,344	
July,	6,400	
August,	12,380	
September,	9,987	
October,	<u>4,323</u>	<u>40,434</u> do
Total,		96,420 do
 Total Area dredged, May,	4,554	
June,	15,088	
July,	17,277	
August,	22,080	
September,	21,755	
October,	<u>13,511</u>	<u>94,265</u> do
 Balance, Thawed and undredged,		<u>2,155</u> Sq. Yds.

THE BIG CREEK MINING COMPANY, LIMITED.WATER THAWING - 1923.Water Thawing Costs:

85,209 Sq. Yds.

		<u>Per Sq. Yd.</u>
Wages,	14,910.53	.175
Supplies and Sundries,	2,704.68	.032
Dominion-Granville Ditch,	<u>2,376.95</u>	<u>.028</u>
Total,	<u>19,992.16</u>	<u>.235</u>

Thawed and undredged 31st December, 1922,

17,422 Sq.Yds.

Water Thawed May and June, 1923,	20,700	
July,	27,775	
August,	33,566	
Sept. & Oct.	<u>3,168</u>	<u>85,209</u> do
Total,		102,631 do

Dredged,	2,555	
May,	14,133	
June,	13,511	
July,	20,800	
August,	15,633	
September,	17,199	
October,	5,720	<u>89,551</u> do
November,		

Balance thawed and undredged, 31 Dec. 1923,

13,080 Sq.Yds.

NORTH FORK POWER PLANT OPERATION - 1923.

K.W.H. Delivered, 9,671,945

Expenses:

Generation - Operation,	13,316.88	
do - Maintenance,	10,448.76	
Transmission - Operation,	76.00	
do - Maintenance,	4,468.05	
General Expense,	222.05	
Pumping Plant,	<u>1,756.97</u>	30,288.71

Revenue:

Power Sales,	79,047.75	
Pumping Plant,	<u>5,586.76</u>	<u>84,634.51</u>

<u>Result:</u> - - - Gain,		<u>54,345.80</u>
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COMPARISON OF OPERATIONS NORTH FORK POWER PLANTSEASONS 1920 - 1923.

<u>Year</u>	<u>K.W.H. Delivered</u>	<u>Operating Cost</u>	<u>Revenue</u>	<u>Net Profit</u>
1920		22,945.09	52,861.20	29,916.11
1921		35,603.39	50,626.85	35,603.39
1922	7,287,165	39,547.14	75,869.41	36,222.27
1923	9,671,945	30,288.71	84,634.51	54,345.80

ESTIMATED WORKING COSTS AND PRODUCTIONNEW NORTH WEST DREDGES Nos. 1 and 2.

and

POWER PLANT WORKING COSTS AND PROFITSEASON - 1924

	<u>Dredge 1</u>	<u>Dredge 2</u>	<u>Dredging Total</u>	<u>Power Plant</u>	<u>Grand Total</u>
Estimated cubic yards to be dredged,	550,000	600,000	1,150,000		1,150,000
<hr/>					
<u>Operating Costs:</u>				40,000.	40,000.
Drilling,	2,500.		2,500.		2,500.
Thawing,	50,000.	25,000.	75,000.		75,000.
Dredging,	62,500.	70,000.	132,500.		132,500.
Overhead,	11,000.	11,000.	22,000.		22,000.
Total,	126,000.	106,000.	232,000.	40,000.	272,000.
<u>Revenue:</u> Gold Returns,	170,500.	150,000.	320,500.		320,500.
Power Sales,				70,000.	70,000.
Total,	170,500.	150,000.	320,500.	70,000.	390,500.
<u>Result:</u> Net Profit,	44,500.	44,000.	88,500.	30,000.	118,500.
<u>Cost per cubic yard,</u>	22.9¢	17.7¢			
<u>Revenue per cubic yard,</u>	31.0¢	25.0¢			
<u>Net Profit per cubic yard,</u>	8.1¢	7.3¢			
Prospecting not included in Dredging Costs,	5,000.	2,000.	7,000.		7,000.
Capital Expenditure	3,500.	7,500.	11,000.		11,000.

Note: Estimate based on assumption that Dredge Canadian 4 will not operate.

Thawing costs Dredge N.W.1 are higher than last season as percentage of natural thaw is less and ground will be more difficult to thaw. (Estimated percentage of natural thaw - 35%).

Power Plant costs include expenditure of \$14,000. for purchase and installation of new stator for Generator No. 2.



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