

February 2nd, 1942.

W. H. S. McFarland, Esq.,
General Manager,
The Yukon Consolidated Gold Corporation, Limited.
1919 Marine Building,
Vancouver, B. C.

Dear Mr. McFarland:

I submit herewith a report on the Gold Run Creek Examination covering the prospecting done in 1941 and estimates of probable yardages and gold content. Incorporated is a historical resume of past examinations and mining operations on the creek and a forecast of its possibilities of becoming a future dredging enterprise with an outline of proposed operating plans, its probable total gold content, probable capital and operating costs and probable profit. Enclosed are maps showing the prospecting, both old and recent, the various areas or blocks concerned and a general project view showing its proximity to related operations, water and power sources and the main highway.

Gold Run Creek is a comparatively short stream that lies midway between and is parallel to Sulphur and Dominion Creeks. It is a tributary of the latter which it enters at an almost right angle about four miles above the mouth of Sulphur. Its total length is about nine miles and its source is at a narrow ridge that separates the heads of Brimstone and Portland Creeks, tributaries that enter Sulphur and Dominion Creeks respectively at about their mid length. The upper part is quite narrow but it gradually widens downstream until it merges into the parent valley in a broad flat. The lateral surface form in general is asymmetrical; the right limit rising with a moderate slope until the bordering hillside is reached while the left limit is mostly angular, the hillside rising abruptly from the valley bottom. In longitudinal section the valley has a fairly flat grade, .8 to 1.4 per cent for the lower 6 miles. Above that the grade increases rapidly until it reaches 3 per cent near the head. There are no well defined terraces of either silt or gravel and except for a single occurrence on the left limit opposite Claim 36 there is no remaining evidence of the plain of an older valley.

Gold Run has a very small watershed due not only to its short length but more to the absence of any large or important affluent streams. It has a total drainage basin area of 27 square miles which is less than half of that of Quartz Creek. The water supply is entirely dependent on rainfall as there are few or no springs.

Although it became one of the richest and most important gold producers of the Klondike district, it was relatively late in discovery. The first claims were staked in March 1898 as an extension of the Dominion pay. It soon became evident that an independent paystreak existed and the creek was immediately staked to its head with the expectation that the upper claims would prove the better. However, Gold Run was unlike most other creeks and had its best pay near the mouth where it approached Bonanza richness. Because of the manner in which it was staked the claims are numbered in sequence from their junction with the Dominion claims.

Shortly after its location, mining flourished along its full length. However, at the lower end where the gravel was deep and composed mostly of white quartz, thawing by wood fires proved ineffective and dangerous and in a short time most of the operators became discouraged and quit. In the upper part of the creek the mining conditions were more favorable but the shortage and distribution of water was an obstacle and bone of contention. In many cases it was necessary for miners to rock their dumps using whatever ground seepage was available.

During the spring of 1899, a mining company owned by and operated under the name of Chute and Wills, with the financial support of The Canadian Bank of Commerce, acquired title to most of the claims on the creek especially those within the productive portion. Their original intention was to mine the ground themselves for with the advent of steam thawing and the development of powered hoisting equipment, large scale operations became feasible. After operating two or three plants a short time, they let lays on most of their holdings to individual operators in order to meet their financial obligations. The average royalty demanded and received on these lays was 50 per cent of the gross output but on some of the very rich claims the royalty went as high as 75 per cent. It is obviously seen that under such arrangements, the laymen in order to bring profit to themselves, could only touch the cream and ground ordinarily rich was unworkable. These lays were let on small areas and for short periods of time and consequently many unworked pillars were left. The firm of Chute and Wills dissolved about 1906 and in liquidation most of the ground reverted to individual ownership. The small scale subsequent operations were confined to salvaging pillars and working marginal virgin ground.

The Yukon Gold Company became interested in Gold Run about 1910 and acquired control of practically the entire creek. The following year they completed a very extensive prospecting program, drilling 104 holes and sinking 206 shafts. A complete report of this examination by Mr. F. L. Morris, the engineer in charge is at hand and a few salient facts

are noted. All of the prospecting was deliberately confined to the heavily worked area, except at the lower end where it was laterally extended due to encouraging values, for only that portion was considered a dredging possibility. In the drilling and shaft sinking they used no set system of location or spacing but placed the holes wherever personal opinion directed. The drill hole and shaft values were calculated on a total depth basis as no distinction was made at that time between muck and gravel. The dredgeable limit value was set at 35 cents per cubic yard as that closely approximated the Yukon Gold dredging cost figure for the 1910 season. The total ground value was determined primarily by prospecting results but in many instances both the limits and gold content figures were altered to conform with the knowledge and opinion of workmen and former owners. In 1915 and later in 1918 additional drilling was done to confirm the values and to more closely define the limits. Reports covering these examinations are also available.

Yukon Gold Dredge No.6 was built on the lower end of Claim 12B and began digging in June 1914. Over a period of 10 years it completed an area extending from Claim 8 to Claim 36. The width of the area varied from 250 to 600 feet and its limits were substantially the same as outlined in the report of 1911. The total volume dug was approximately 6,000,000 cubic yards.

Hearsay informs us that the Yukon Gold Company was, on the whole, disappointed with the returns from this operation. It was not due to a lack of gold recovery but principally to operating difficulties encountered. Steam was then used for thawing and the results obtained in the deep muck and in the deep white channel gravel were far from satisfactory. It was not only ineffective in results but created a physical danger to the workmen that impeded the entire operation. The use of cold water came too late to be a real benefit to this operation.

The dredge was shut down in the fall of 1923 and was left intact until dismantled by The Yukon Consolidated Gold Corporation in 1934. It was rebuilt in 1935 as our present No.6 Dredge.

The Yukon Gold holdings on Gold Run were transferred to the Yukon Consolidated through the purchase of all Yukon Gold Company property in 1925. At that time the dredged portion of the creek was deemed of no value for future dredging and the claims involved were allowed to expire on January 1st, 1926. It has since been restaked by individuals.

The Canadian Idaho Company secured options from the owners of this ground in the spring of 1940 and later that season prospected both the dredge tailings and marginal virgin ground. They also drilled two lines on Company ground above the dredged areas. The examining engineer stated the values were quite satisfactory but there were many operating obstacles too difficult to overcome. First, the local water supply was inadequate for the operation and second, the ground was far too deep for the dredge they had available and

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intended to use. Consequently the options were cancelled and the ground is now free for negotiation.

The Yukon Consolidated owns all claims from 35 to 96, inclusive, with the exceptions of 45 which is controlled by option and 60 which is adversely owned. The 1941 drilling program included the prospecting of that ground.

A camp was established on the north side of 51 Pup which is a small left limit tributary that has a fair supply of water even during the driest periods. Drilling commenced on August 24th and continued uninterruptedly until September 18th when the work was concluded and the drills, equipment and supplies shipped to Bear Creek for storage. The drill holes were spaced at 100 foot intervals on lines 500 feet apart from Claim 35 to Claim 51. Above there the lines were 1000 feet apart as the values dropped below the workable limit. There were no major mechanical troubles but considerable delay in moving was caused by the rough ground conditions, old works, and numerous creek crossings. The Time and Footage Summary is as follows:

Number of Holes	Time Summary - Hours				Footage			
	Drilling	Moving	Lost	Total	Number of Shifts	Total	Per Drill Hour	Shift
191	507	231	108	846	94	5650	11.1	60.1

The deposit is characterized in general, as

- (1) A layer of fairly deep muck averaging about 18 feet. It contains a considerable amount of fine silt especially along the right limit but very little ice on the whole, although above Lasky Pup some holes showed almost 1/3 ice.
- (2) A thin layer of gravel usually less than 5 feet. It is a mixture of well rounded medium sized particles of brown stained quartz and schist, flat angular residual pieces and a small amount of dense yellow clay that adheres to and appears to be related to the residual material.
- (3) Bedrock - it is generally a decomposed schist, soft and varying in color, but predominantly green or light brown. In a few isolated holes it was a black material which resembled slate and was reticulated with narrow quartz seams.

The gold was very uniform and quite fine, occurring in small rounded grains, rather than the usual thin flakes. No coarse gold

was recovered. The main concentration was of course, on bedrock or directly above with very little in the upper gravel. The gold penetration into bedrock rarely exceeded 2 feet. There was a definite paystreak from Lasky Pup downstream but it was shown more from the evidence of old works than by drill hole results. Above that tributary the values were inconsistent and spotty which appears to confirm the opinions of many old time Gold Run residents that Lasky Pup was the main or a very important contributing gold source. Although Lasky Pup was mined for a mile or more from its mouth no drilling was done there for the valley is far too narrow to dredge.

An area of dredgeable ground of about $1\frac{1}{2}$ miles in length was developed. It extends from Drill Line 35 which is a short distance below the Upper end of the Yukon Gold dredge cut to Line 50 which is $\frac{1}{2}$ mile above Lasky Pup. In the calculation of reserves it has been divided into two parts, above and below Lasky, because of differences in depths, topographic features and operating conditions.

Block A: The upper section extends from Drill Line 50 to Line 43 and is an area on which some scattered mining has been done which shows the values to be very spotted. The gravel depth is shallow being mostly under 4 feet. The muck is comparatively deep averaging about 19 feet. It contains a fair proportion of ice but little slide.

Block B: The lower section covers the area from Line 43 to the Yukon Gold Tailings. It was intensively drifted in the early days and the surface is almost completely covered with tailings. The muck, especially along the right limit contains a considerable amount of slide but little ice. The gravel depth averages about 6 feet.

In outlining the lateral limits of the dredge area all of the previously mined ground was included although many of the adjacent drill holes indicated very low value.

The Yardage and Value Summary is as follows:

Block	Area Sq. Ft.	MUCK					
		Total		To Strip		To Dredge	
		Depth	Cu. Yds	Depth	Cu. Yds.	Depth	Cu. Yds.
A	1,355,600	19.0	954,000	13.0	653,000	6.0	301,000
B	2,318,000	18.3	1,572,000	12.8	1,100,000	5.5	472,000
TOTAL	3,673,600	18.6	2,526,000	12.9	1,753,000	5.7	773,000

DREDGE SECTION					DREDGE RESERVE				
Block	Volume		Value	Au. at	Volume	Value		Au. at	
	Depth	Cu. Yds		\$20.67		Depth	Cu. Yds.		\$38.50
		g/C.Y.	Dollars			g/C.Y.	g/S.F.	Dollars	
A	5.9	298,000	42.6	126,600	11.9	599,000	39.3	17.3	235,400
B	8.2	708,000	37.4	264,700	13.7	1,180,000	41.7	21.3	492,400
TOTAL	7.4	1,006,000	38.9	391,300	13.1	1,779,000	40.9	19.9	727,800

The dredging reserve yardage developed by the drilling in this area is less than 2,000,000 cubic yards and therefore, in itself, it can be hardly considered a potential dredging project. However, by adding the portion of the creek dredged by the Yukon Gold Company and the tract at the mouth and on Dominion which was prospected by the Company in 1939 and 1940, ample yardage is obtained. In order to make a comprehensive picture of Gold Run possibilities this report is enlarged to include these areas.

There is sufficient room for the dredge to pass along the right limit without redigging tailings but they are included in the reserves because past performance has shown profitable returns wherever Yukon Gold tailings were redug and Gold Run should prove no exception. In the following tabulation the volume figure is the amount originally dredged according to Yukon Gold Records. The value shown is their estimated present value and is arbitrarily set in accordance with values given dredge tailings elsewhere. The higher value for the tailings of 1914 and 1915 was given in consideration of the operating difficulties encountered during those years. No volume allowance for swell or for additional bedrock depth was made as it was assumed the loss due to muck runoff in slimes during the first dredging would compensate.

YARDAGE AND VALUE SUMMARY

Year Dredged	Area Sq. Ft.	Volume		Gross Value g/Cu. Yd.	Au. at g/Sq. Ft.	\$38.50 Dollars
		Depth	Cu. Yds			
1914	435,800	27.0	435,000	20.0	20.0	87,200
1915	442,100	35.9	599,000	20.0	26.6	117,800
1916	478,800	42.9	760,000	15.0	23.8	114,000
1917	440,200	44.4	722,000	15.0	24.5	108,300
1918	633,800	30.0	704,000	15.0	16.7	105,600
1919	838,700	23.7	736,000	15.0	13.2	110,400
1920	648,900	23.4	562,000	15.0	13.0	84,300
1921	609,100	25.1	566,000	15.0	14.0	85,000
1922	683,800	23.7	599,000	15.0	13.1	89,800
1923	530,700	24.1	474,000	15.0	13.4	71,000
TOTAL	5,741,900	28.9	6,148,000	15.8	16.9	973,400

The workable virgin ground which borders the dredge tailings embraces an area on which considerable prospecting was done by the Yukon Gold Company and the Canadian Idaho Company and also an area on which little or no drilling was done. Therefore, it was divided into two sections for the estimation of yardage and value.

- (1) The area on which no prospecting was done extends from Claim 28 to Claim 35 on the right limit and from Claim 20 to Claim 36 on the left limit. The dredging limit, muck and dredging section depths, and the value per cubic yard were arbitrarily set by personal judgement, the opinion of persons familiar with the ground and to conform with those immediately above and below. In the tabulation shown below, this section has been subdivided into three separate blocks, "C", "D" and "E" owing to differences in depths and values.
- (2) The area on which the yardage and value was based on the results of drill holes and shafts extends from Claim 8 to Claim 28 on the right limit and Claim 20 on the left limit. It contains approximately 200 drill holes and shafts which were used in making the estimate. Holes used which were within the dredged area and whose value per cubic yard exceeded one dollar were reduced to one dollar. Those of high value in the virgin ground that had excessive influence were treated in a like manner. Information used on all Yukon Gold drill holes and shafts was taken from the original drill logs and information sheets. The results of shafts and drill holes of the Canadian Idaho Company were taken from a map furnished by Mr. Frank J. Friedle, the engineer in charge of the examination. The area has been divided into four blocks, F, G, H, and I, due to distinctive ground conditions. The muck depth on the right limit is almost double that on the left and contains considerable ice and some slide material whereas that on the left is the fine sandy kind. The bedrock elevation drops sharply at or near Claim 14 especially on the right limit and the dredging section depths increase rapidly from there downstream. Claim 14 is also the upper limit of the white channel gravel. The dredging limits for the area were set primarily according to drill hole values but were extended in places to include all old works.

YARDAGE AND VALUE SUMMARY

Block	Area Sq. Ft.	MUCK					
		Total		To Strip		To Dredge	
		Depth	Cu. Yds.	Depth	Cu. Yds.	Depth	Cu. Yds.
C	717,900	22.0	584,000	15.5	411,000	6.5	173,000
D	305,500	18.0	203,000	12.5	141,000	5.5	62,000
E	514,900	16.0	504,000	11.0	209,000	5.0	95,000
TOTAL	1,538,300	19.2	1,091,000	13.4	761,000	5.8	330,000

YARDAGE AND VALUE SUMMARY

Block	Area Sq. Ft.	MUCK					
		Total		To Strip		To Dredge	
		Depth	Cu. Yds.	Depth	Cu. Yds.	Depth	Cu. Yds.
		Calculated					
F	1,509,900	23.6	1,147,000	17.1	832,000	6.5	315,000
G	768,600	14.6	416,000	9.6	274,000	5.0	142,000
H	712,500	20.6	543,000	14.6	384,000	6.0	159,000
I	1,694,500	11.3	707,000	7.8	487,000	3.5	220,000
TOTAL	4,485,500	16.9	2,813,000	11.9	1,977,000	5.9	836,000
GRAND TOTAL	6,023,800	17.5	3,904,000	12.3	2,738,000	5.2	1,166,000

Block	DREDGE SECTION				DREDGE RESERVE				
	Volume		Value	Au. at \$20.67	Volume		Value	Au. at \$38.50	
	Depth	Cu. Yds.	g/C.Y.	Dollars	Depth	Cu. Yds.	g/C.Y.	g/S.F.	Dollars
					Estimated				
C	9.0	239,000	27.0	64,500	15.5	412,000	29.1	16.7	120,000
D	10.0	113,000	16.2	18,300	15.5	175,000	19.4	11.2	34,000
E	10.0	191,000	24.2	46,200	15.0	286,000	30.0	16.7	86,000
TOTAL	9.5	543,000	23.8	129,000	15.3	873,000	27.5	15.6	240,000
					Calculated				
F	17.9	870,000	39.8	346,600	24.4	1,185,000	54.6	49.3	645,000
G	10.4	297,000	56.3	167,000	15.4	439,000	70.8	40.5	311,000
H	33.0	871,000	35.3	307,900	39.0	1,030,000	55.5	30.3	572,000
I	18.6	1,169,000	30.4	355,600	22.1	1,389,000	47.6	39.0	661,000
TOTAL	19.3	3,207,000	36.6	1,177,100	24.3	4,043,000	54.2	43.8	2,189,000
GRAND TOTAL	16.8	3,750,000	34.8	1,506,100	22.0	4,916,000	49.2	40.3	2,429,000

Directly below the dredged area Gold Run Creek merges into Dominion in a broad flat. In 1939 and 1940 the Company drilled the entire width of this area from the dredge tailings to Dominion Claim 252 and although surface evidence of old works indicated a fairly continuous paystreak nothing of that nature was found in the drilling. On the contrary the values were dispersed and were on the whole uniformly low with only a few insolated high grade holes.

The outline of the dredgeable portion of the area has been set

to include all holes regardless of value shown which indicated old works or which were reasonably near the worked area. It is confidently believed that much of this ground in dredging will over run the prospecting results.

The area has been divided into three separate blocks due to characteristics of ground formation and for purposes of calculation.

Block J - includes the extension of the Gold Run paystreak which is so well defined on the surface by the white tailings piles. The gravel is uniformly deep and is predominantly white channel.

Block K - covers what appears to be a continuation of a Dominion Creek paystreak. The gravel is comparatively shallow and although it is composed mostly of quartz it has a red cast which is in distinct contrast to the Gold Run gravel.

Block L - covers an area which has been intensively worked. It parallels and is adjacent to the upper end of Dredge No.5 Tailings.

YARDAGE AND VALUE SUMMARY

Block	Area Sq.Ft.	MUCK					
		Total		To Strip		To Dredge	
		Depth	Cu. Yds.	Depth	Cu. Yds.	Depth	Cu. Yds.
J	6,312,300	12.3	2,870,000	9.2	2,146,000	3.1	724,000
K	3,003,800	10.1	1,127,000	7.6	848,000	2.5	279,000
L	2,509,600	12.6	1,081,000	9.1	781,000	3.5	300,000
TOTAL	11,825,700	11.8	5,078,000	8.8	3,775,000	3.0	1,303,000

Block	DREDGE SECTION				DREDGE RESERVE				
	Volume		Value	Au. at	Volume		Value	Au. at	
	Depth	Cu. Yds.	\$/C.Y.	\$20.67 Dollars	Depth	Cu. Yds.	\$/C.Y.	\$/S.F.	Dollars
J	33.0	7,714,000	14.2	1,098,000	36.1	8,438,000	24.3	32.4	2,045,000
K	25.0	2,780,000	15.0	419,000	27.5	3,059,000	25.5	26.0	780,000
L	30.2	2,583,000	23.4	605,000	33.7	2,883,000	39.1	48.7	1,127,000
TOTAL	30.5	13,077,000	16.2	2,122,000	33.5	14,380,000	27.8	34.4	3,952,000

SUMMARY OF TOTAL YARDAGE AND VALUE

Block	Area Sq. Ft.	Total		MUCK		To Dredge	
		Depth	Cu. Yds.	Depth	Cu. Yds.	Depth	Cu. Yds.
A & B	3,673,600	18.6	2,526,000	12.9	1,753,000	5.7	773,000
C to I	6,023,800	17.5	3,904,000	12.3	2,738,000	5.2	1,166,000
J, K, L	11,625,700	11.8	5,078,000	8.8	3,775,000	3.0	1,303,000
TOTAL	21,323,100	14.6	11,508,000	10.5	8,266,000	4.1	3,242,000
Tailings	5,741,900						
GRAND TOTAL	27,065,000						

Block	DREDGE SECTION				DREDGE RESERVE				
	Volume Depth	Volume Cu. Yds.	Value \$/C.Y.	Au. at \$20.67 Dollars	Volume Depth	Volume Cu. Yds.	Value \$/C.Y.	\$/S.F.	Au. at \$38.50 Dollars
A & B	7.4	1,006,000	38.9	391,300	13.1	1,779,000	40.9	19.9	727,800
C to I	16.8	3,750,000	34.8	1,306,100	22.0	4,916,000	49.2	40.3	2,429,000
J, K, L	30.3	13,077,000	16.2	2,122,000	33.3	14,380,000	27.8	34.4	3,952,000
Total	22.6	17,833,000	21.4	3,819,400	26.7	21,075,000	33.8	33.4	7,108,800
Tailings	28.9	6,148,000	8.5	522,600	28.9	6,148,000	15.8	16.9	973,400
GRAND TOTAL	23.9	23,981,000	18.1	4,342,000	27.1	27,223,000	29.7	29.9	8,082,200

Gold Run Creek is ideally located to become another link in the Dominion-Sulphur operations. It would, of course, be desirable to operate it contemporarily but since its own water supply is inadequate for stripping it must be deferred until Australia Creek water can be diverted from Sulphur.

That would be at least 8 or 9 years hence for Dredges 6 and 8 according to their present yardage allotment, have 13 years operating life each and it is doubtful whether the stripping will gain more than 5 years. Dredges 5 and 9 have lives of 24 and 19 years respectively with the possibility of considerable extension. Therefore, a reallocation of yardage between Dredges 6 and 8 would serve a threefold purpose; it would reduce the time before water could be released from Sulphur, it would tend to equalize the dredging lives of Dredges 5, 8 and 9 and it would make Dredge 6 available for use on Gold Run. By adding 8 years to Dredge 8 and reducing No.6 by a like amount, Australia Creek water would be available in 3 years and the dredge could be moved to Gold Run after 5. In preparing the following operating plans and estimates of Capital Expenditures and Operating Costs it is presumed that a course along this line would be adopted.

The to-be-dredged yardage on Gold Run and the extension on Dominion exceeds 27,000,000 cubic yards which is greater than ordinarily needed for one boat and, also it would extend the life far beyond those of the other dredges. Therefore, three alternate operating plans are presented.

(1) Dredge No.6 to dig the entire area beginning at the uppermost end and working downstream. Its total life would be 34 years.

(2) The area divided between two dredges; Dredge 6, which is capable of digging the deep ground to start about Claim 14 and work downstream along the right limit taking all ground with a depth exceeding 30 feet. Dredge 7, when finished at Quartz which will be in not more than 6 years, to be rebuilt at the upper end and to dig downstream to the mouth of the Creek or to where the ground depth becomes greater than 30 feet. The approximate division of yardage would be Dredge No.6 - 18,000,000 and Dredge No.7 - 9,000,000 Cubic Yards or dredging lives of 23 and 18 years respectively.

(3) The area divided between Dredge No.6 and a new dredge of the same capacity and digging depth. The division of yardage would be equal, one to operate on Gold Run proper while the other would be at the mouth end on Dominion and each would have a 17 years life.

The Estimated Capital and Operating Costs under the various plans are:

PLAN 1.

Capital Expenditures

Claim Purchases or Royalty	\$ 100,000
Ditch and Syphon Construction	60,000
Power Line - 3½ Miles	7,000
Dredge Reconstruction	200,000
Camp Reconstruction	10,000
Additional Stripping and Thawing Equipment	5,000
Unforeseen	<u>40,000</u>
TOTAL	<u>\$ 422,000</u>

Operating Costs

Stripping	8,266,000 Cu.Yds. at 6.0¢	496,000
Thawing	21,075,000 " " 4.5¢	948,000
Dredging	27,223,000 " " 13.0¢	<u>3,539,000</u>
TOTAL		<u>\$ 4,983,000</u>

Total Estimated Expense	\$ 5,405,000
Total Gross Value	8,082,000
Estimated Profit	2,677,000
Estimated Number of Years	34
Estimated Annual Profit	78,500

PLAN 2.

Estimated Capital Expenditures

Claim Purchase or Royalty	\$ 100,000
Ditch and Syphon Construction	60,000
Power Line - 3½ Miles	7,000
Dredge Reconstruction	375,000
Camp Reconstruction	35,000
Additional Stripping & Thawing Equipment	10,000
Unforeseen	<u>60,000</u>
TOTAL	<u>\$ 647,000</u>

Estimated Operating Costs

Stripping	8,266,000 Cu. Yds. at 6.0¢	\$ 496,000
Thawing	21,075,000 " " 4.5¢	948,000
Dredging	19,223,000 " " 13.0¢	2,499,000
	8,000,000 " " 16.0¢	<u>1,280,000</u>

TOTAL \$ 5,223,000

Total Estimated Expense	5,870,000
Total Gross Value	8,082,000
Estimated Profit	2,212,000
Estimated Number of Years	23
Estimated Annual Profit, first 18 years	101,500
last 5 years	62,500

PLAN 3

Estimated Capital Expenditures

Claim Purchase or Royalty	\$ 100,000
Ditch and Syphon Construction	60,000
Power Line - 3½ Miles	7,000
Dredge Reconstruction	200,000
" Construction	350,000
Camp Construction	60,000
Additional Stripping and Thawing Equipment	75,000
Substation	20,000
Unforeseen	<u>80,000</u>

TOTAL \$ 952,000

Estimated Operating Costs

Stripping	8,266,000 Cu. Yds. at 6.0¢	\$ 496,000
Thawing	21,075,000 " " 4.5¢	948,000
Dredging	27,223,000 " " 13.0¢	<u>3,539,000</u>

TOTAL \$4,983,000

Total Estimated Expense	\$5,935,000
Total Gross Value	8,082,000
Estimated Profit	2,147,000
Estimated Number of Years	17
Estimated Annual Profit	126,000

There are 31 outstanding claims on which control would have to be obtained. The owners are, on the whole, men of advanced years and it would be expected that most of them would desire a cash settlement or direct sale especially if plans 1 or 3 were adopted. Under Plan 2, the possibility of early royalty payments on leases might prove attractive to the owners of ground effected which would result in a slight increase in property cost. However, that contingency is remote and is not included in the cost estimate.

The present adverse ownership is as follows:

<u>Owners</u>	<u>Claims</u>	<u>Approx. Total Length</u>
Bernier Bros.	10, 12B, 16, 17 18, 19, 20, 21	3,440 feet
Miss G. Melhus	11	450 "
C.N. Nestor	12C, 12D, 13, 13A	1,515 "
J. Lemontagne	14, 14A, 15	930 "
T. Moglebust	22, 23	930 "
J. Lenoff	23A, 24	565 "
P. Lemontagne	25	500 "
G. Sutherland	26, 27, 28, 29	2,000 "
Kate McRae	30, 31	1,000 "
H. Kvalnes	32, 33A	685 "
McGregor and Kvalnes	33	500 "
B. Bratsberg	34A	240 "
	TOTAL	<u>12,805 Feet</u>

The ditch system proposed is to take Australia water across Sulphur, near the mouth, in an inverted syphon, then carry it in a ditch along the right limits of Dominion and Gold Run Creeks to Claim 43. The total syphon length would be 6500 feet and the earthwork section 38,000 feet. The ditch and syphon capacity would be 500 M.I.'s which would be sufficient to operate under any of the three proposed operating plans. To furnish water for one or two operations would make little difference in the initial ditch system cost for the saving would only be in the purchase price of syphon pipe as a smaller size could be used with a single operation. All other costs would remain the same. The ditch section would be constructed in a manner similar to the extension to the Sulphur-Australia ditch which was made last year. No difficulty should be encountered as casual knowledge of the ground classifies it as well suited for ditching. Although in many places the hillside is steep on Dominion there is no evidence of rock, being mostly a dry loam with a few stretches of a mixture of muck and sand. The Gold Run section is mostly muck and slide.

The structures required would be inlet and outlet penstocks at the syphon, two small spillways and the end penstock. They would be made

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of native lumber and in design similar to those on the Sulphur Ditch extension.

The syphon pipe is naturally, the costly part of the ditch installation. However, there is at the present time, a syphon across Bedrock Creek in the Sixty Mile which closely fits the required specifications. It is 24" in diameter, rivetted, both joints and seams and its gauge is sufficient for a 300 foot head. The estimated length is between 4000 and 5000 feet. It was originally installed many years ago by the N.A.T. Co. and is now owned by Stewart and Campbell, who no doubt would sell it at a nominal figure. It would be necessary to purchase about 2000 feet of additional pipe but it could be of lighter gauge. The estimated cost of the ditch construction in detail is as follows:

Excavation -	38,000 Feet	\$ 12,000
Structures -	3 penstocks, 2 spillways	6,000
Syphon -	New Pipe	8,000
	Old Pipe	5,000
	Demolition of old syphon	3,000
	Transportation	10,000
	Erection	<u>16,000</u>
	TOTAL	<u>\$ 60,000</u>

The main Dominion Creek high tension power line crosses Gold Run at the mouth and a $3\frac{1}{2}$ mile branch line would be required to bring power to the substation, located on Claim 35. The line would follow the left limit and closely parallel the road. The cost of construction could be possibly reduced by use of salvage from the Quartz Creek line.

It is assumed that new lumber would be used throughout in the reconstruction of both Dredges 6 and 7. All steel structural material and machinery would be re-used after repair and overhaul. The boats would require few changes or alterations except enlargement of hulls and the increase in Dredge 7 digging depth to 25 feet. Dredge No.6 was originally designed for use on this creek and the digging depth is adequate for the deepest ground.

Should No.3 Plan be adopted and a new boat built, it would be similar in general design to Dredges 8 and 10 but would be capable of digging at least 40 feet below water level.

By Plans 1 or 2 the present camps now located at Lower Sulphur and Quartz would be moved with the dredges. Camp No.6, according to present plans will be moved farther up Sulphur in about 6 years and if No.6 operations are to be moved to Gold Run that move would be eliminated. It is pre-

- summed that the log bunk house at Quartz would not be moved but replaced with a small frame building. Plan 3 would require a complete new set of buildings similar to No.6.

Little additional stripping and thawing equipment would be needed under Plans 1 or 2 as the plants at both 6 and 7 are well equipped at present and only a few replacements would be necessary. Although most of the equipment at No.7 is old style, it is still serviceable and would be suited for the shallow ground. Plan 3 would require a complete new plant which might be hard to procure and costly even 4 years hence.

Another item of considerable importance which would have to be purchased under Plan 3 is a substation. By the other plans, those now at 6 and 7 would of course accompany the dredges to their new location.

Over the total project the amount of material to be removed by stripping compared to the amount dredged is less than at the other operations. The total muck to be stripped is 8,000,000 cubic yards while the total to be dredged is 27,000,000 cubic yards or a ratio of almost 1 to 3½. However, the depth of muck is not uniform and it will be noted that the ratio between stripped and dredged yardage varies greatly for the separate sections. In the total figure the inclusion of the dredge tailings materially reduces the muck proportion. For the separate sections the ratios are:

BLOCKS	A, B	1	Stripped to	1.01	Dredged
"	C, D, E	1	"	1.15	"
"	F, G, H, I	1	"	2.04	"
"	J, K, L	1	"	3.61	"

It is seen that the muck removed yardage will have to equal or exceed that dredged until Blocks F and G are reached or approximately Claim 25. When the dredge tailings are reached and, if dug, they will tend to reduce this proportion. With 2 boats operating the second would be in area of deep dredging section so would not demand great stripping yardage. Following is a tabulation of stripping data showing water requirements. It does not however, take into consideration the fact that under Plan 2 the lower dredge would begin digging in the dredge tailings area and stripping requirements would be materially reduced. It presents what would be the first and worst condition.

	PLAN 1	PLAN 2	PLAN 3
Annual yardage dug by dredges	800,000	1,300,000	1,600,000
Required Annual Muck Removal	790,000	887,000	1,000,000
Ratio between Muck Removed and Yardage Dredged	1:1.01	1:1.47	1:1.60
Estimated Water Duty	12	12	12
Total M.I.D's water required	66,000	74,000	83,000
Number of operating days per season	145	145	145
Required daily ditch flow M.I.'s	455	510	570

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It would be necessary to start stripping operations at the upper end of Gold Run no less than three years in advance of the start of the dredge and the lower part at least two years.

The Estimate of Stripping Cost in detail is as follows:

Labor	2.70	cents per cu.yd. muck removed
Mess	1.10	"
Supplies	.15	"
Machine Shop	.16	"
Electric Shop	.10	"
Stable	.20	"
Cats	.10	"
Local Freight	.02	"
Power	.30	"
Supervision	.15	"
Engineering	.10	"
Brush Contracts	.02	"
Australia Ditch	.90	"
TOTAL	<u>6.00</u>	

The gravel on the upper part of Gold Run is very shallow and should thaw readily. Below Claim 14 it deepens rapidly and is composed mostly of white quartz. There will undoubtedly be areas that will be too deep for driving points by hand and regular thaw drilling will have to be resorted to. These areas will be small and resultant effect on thawing costs negligible. All the tests made in dredge tailings have shown them to be thawed which is a distinct advantage for thawing tailings under the best conditions is difficult. The equipment, layouts and crews would be the same as at other plants. The detailed estimate of thawing cost is:

Labor	2.50	cents per cu.yd. thawed
Mess	1.00	"
Supplies	.15	"
Machine Shop	.10	"
Electric Shop	.05	"
Stable	.10	"
Cats	.10	"
Local Freight	.04	"
Power	.35	"
Supervision	.09	"
Engineering	.02	"
TOTAL	<u>4.50</u>	"

Dredging conditions on Gold Run are very similar to those at

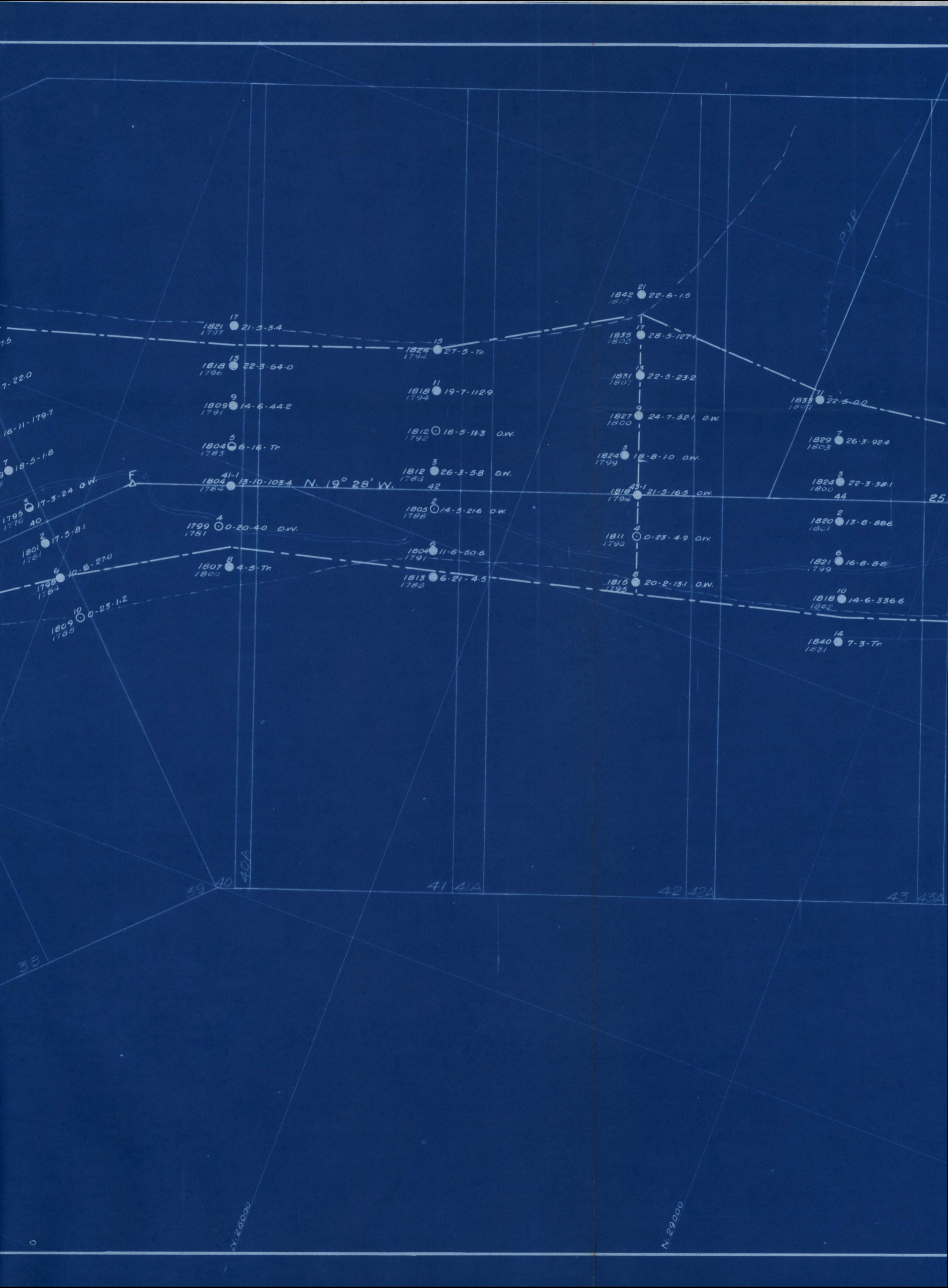
Granville and Sulphur and no dredging problems should arise. The bedrock is soft on the whole and should dig easily and wash readily. When Dredge No.6 was formerly on Gold Run, sand elevators were installed but probably some of the trouble resulted from the presence of muck and will be eliminated by stripping.

Following is an estimate of the cost per cubic yard dredged, exclusive of the cost of Stripping and Thawing for Dredge No.6 and Dredge No.7:

	<u>DREDGE NO.6</u>	<u>DREDGE NO.7</u>
<u>Direct Operating</u>		
Labor	3.0 cents	3.6 cents
Mess	1.2	1.4
Repair Parts	0.2	0.3
Other Supplies	1.2	1.0
Machine Shop	0.3	0.2
Electric Shop	0.1	0.1
Stable	0.2	0.2
Cats	0.2	0.2
Local Freight	0.1	0.2
Power	0.7	1.0
Total Direct	<u>7.2</u>	<u>8.2</u>
<u>Non - Operating</u>		
Shutdown	1.9	2.0
Drilling	.5	.5
General Expense	1.8	3.3
Bullion Expense	1.4	1.6
Engineering	.1	.2
Supervision	.1	.2
Total	<u>5.8</u>	<u>7.8</u>
TOTAL DREDGING COST	<u>13.0</u>	<u>16.0</u>

Many figures here presented are based on the results of work done many years ago but time should not detract from their accuracy. Since then there has been a certain gold depletion by small mining operations but in amount it is small and it would effect only the section lying between the areas recently drilled.

In preparing the foregoing report an effort was made to be conservative in all respects especially in the exercise of personal judgement. However should Gold Run be looked upon with favor as a future dredging project, it will be necessary to redrill the area between Claims 8 and 35 to check the estimate here submitted and to definitely establish the dredging limits.



39 40

41 41A

42 42A

43 43A

38

N. 23° 00'

N. 29° 00'

P.J.P.

F

17

15

9

5

41-1

4

8

10

15

11

1812

3

2

5

6

1813

21

17

13

9

5

43-1

4

1

8

11

7

3

44

2

6

10

14

40A

41A

42A

43A

1821 1797 21-5-3.4

1818 1796 22-5-64.0

1809 1791 14-6-44.2

1804 1783 6-16-Tr

1804 1784 13-10-103.4 N. 19° 28' W.

1799 1781 0-20-4.0 O.W.

1807 1800 4-5-Tr

1809 1788 0-23-1.2

1824 1792 27-5-Tr

1818 1794 19-7-112.9

1812 1792 18-5-11.3 O.W.

1812 1783 26-3-5.8 O.W.

1805 1788 14-5-21.6 O.W.

1804 1791 11-6-50.6

1813 1783 6-21-4.5

1842 1815 22-6-1.5

1835 1803 28-5-127.1

1831 1807 22-5-23.2

1827 1800 24-7-52.1 O.W.

1824 1799 18-8-1.0 O.W.

1818 1794 21-5-16.5 O.W.

1811 1790 0-23-4.9 O.W.

1815 1795 20-2-13.1 O.W.

1835 1807 22-5-0.0

1829 1803 26-3-92.4

1824 1800 22-3-38.1

1820 1801 13-8-88.6

1821 1799 16-8-8.8

1818 1802 14-6-336.6

1840 1831 7-3-Tr



1839 9 12-3-00
1825

1829 18-5-26.0
1808

2513.7'
45-1
1820 14-3-113.0
1805

1826 4 14-7-4.7
1807

1831 6 19-6-15
1807

1845 12 30-6-12.7
1809

1854 16 39-0-0.0
1815

1838 7 16-2-4.5
1822

1833 3 17-7-20.1
1811

1830 2 14-6-44.8
1813

44A
1836 6 20-7-82.0
1811

1850 10 28-10-21
1815

1862 14 38-8-Tr
1817

1873 18 23-3-0.0
1818

1848 9 8-14-Tr
1828

1836 5 6-13-2.1
1816

1826 47.1 9-5-9.4
1813

1839 4 24-4-196.5
1815

1862 8 34-7-12.6
1813

1874 12 25-0-0.0
1819

1853 7 18-2-Tr
1839

1837 3 7-6-2.3
1827

1828 2 5-6-0.8
1818

1852 6 30-5-10.1
1819

1864 10 37-0-0.0
1827

1849 4 15
1828

1858 8 30-3
1825

1872 12 43-4
1826

A

N. 050 51' W.

N. 30000
W. 1000

N. 31000

43 43A

44

45

46

46A

47 47A



Camp

N. 24° 21' W.

N. 34° 00'

N. 35° 00'

W. 3000

1929 25 20-6-1.1
1904

1923 21 49-3-Tr
1872

1917 17 36-6-2.7
1870

1903 13 33-4-23
1868

1898 9 27-6-8.4
1867

1894 5 25-6-21.6
1865

1892 57-1 20-7-51.0
1867

1891 4 15-10-5.2
1868

1881 8 8-5-0.0
1869

1897 12 17-12-23
1870

1902 16 25-4-0.0
1874

1891 21 31-3-Tr
1858

1883 17 22-7-4.9
1855

1879 13 18-7-18.0
1855

1883 9 20-9-4.5
1855

1878 5 17-8-15.9
1855

1884 55-1 11-8-5.4
1867

1889 4 0-4-0.0
1856

1885 21 6-8-0.0
1872

1878 17 16-4-4.9
1861

1874 13 24-7-373.4
1845

1865 9 13-7-125.9
1845

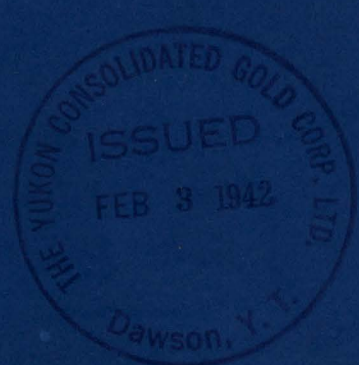
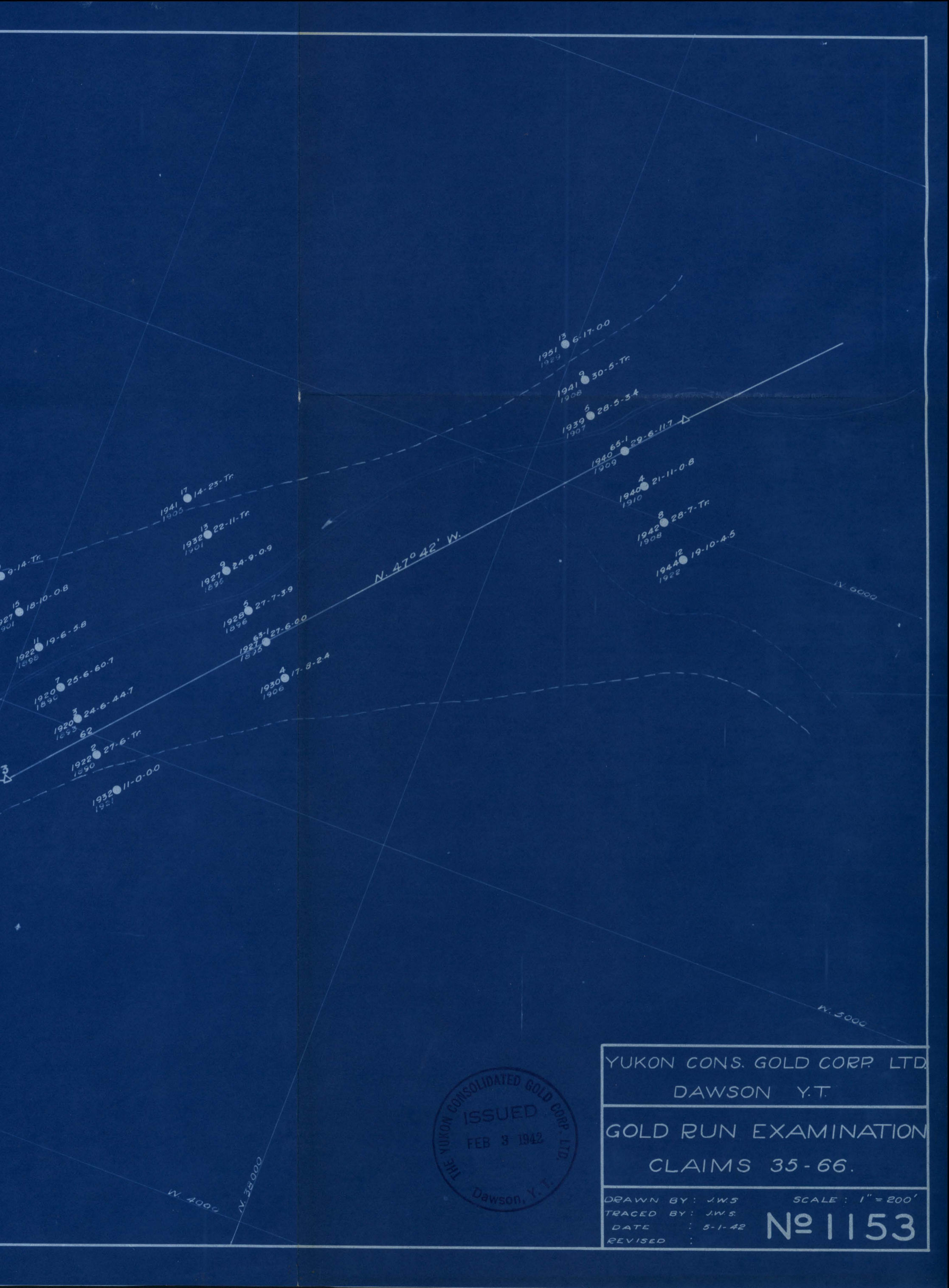
1873 5 18-10-8.9
1847

1871 53-1 25-6-15
1845

1892 18-19-0.9
1845

1886 8 19-16-0.0
1852

1888 12 23-9-0.0
1857



YUKON CONS. GOLD CORP. LTD.	
DAWSON Y.T.	
GOLD RUN EXAMINATION	
CLAIMS 35-66.	
DRAWN BY: JWS	SCALE: 1" = 200'
TRACED BY: JWS	No 1153
DATE: 5-1-42	
REVISED:	



85 ● 10-63-Tr

79 ● 16-62-0.8

73 ● 50-46-26.9

J

87 ● 27-66-0.9

81 ● 14-58-8.7

75 ● 12-40-4.7

810 ● 18-37-49.5

69 ● 17-48-3.7

3670 ● 9-41-10.2

30016-37-11.3

35018-34-41.3

10010-43-10.3

366014-36-5.4

3419-33-127.4

346018-37-30.4

21018-39-61.9

345030-25-28.2

37019-39-21.1

H

Dredged

1916

Dredged

1917

Dredged

I

N. 38° 28' W.

81 ● 7-16-6.9

5010-21-22.7

75 ● 14-23-24.6

5119-20-19.7

69 ● 10-12-10.3

5219-18-8.0

65 ● 12-17-74.8

5317-19-35.5

6842.5'

5412-17-Tr

5514-11-Tr

88A

9

10

11

12B

Bernier-Bres

G. Malhus

Bernier-Bres

CH Hester

N. 18° 00'

E. 11000

N. 19000



H

1917

3360 27-28-34.6

39015-30-103.8

51011-23-2.2

50015-22-4.3

31015-20-0

Dredged 1915



Dredged

Dredged 1914

1918

- 30020-14-20.5
- 5302
- 29018-12-13.3
- 28015-10-3.7
- 18015-12-259.0
- 5402
- 52015-11-206.2
- 15-12-39.6
- 2600-25-17
- 2500-22-Tr
- 2400-25-6.5
- 2300-27-0.6
- 2200-31-0.6
- 2100-31-6.5
- 2000-25-275.5
- 14014-845-084
- 19010-14-13.2
- 85013-17-26.2
- 13-17-45.3
- 90018-10-3
- 17015-15-13.1

41016-14-9.1

12014-14-75.8

40014-14-5.8

13013-14-54.6

9017-9-32.6

8012-13-59.4

7018-12-42.3

14014-15-34.2

15014-18-50.5

12B

12C

12D

13

13A

14

14A

N. 19000

E. 10000

N. 20000

E. 9000

CN Nestor

CN Nestor

CN Nestor

J. Lemontaynz

J. Lemontaynz



1918

Dre

G

Lemontagne 15 Bernier Bros 16 Bernier Bros 17 Bernier Bros 18 Bernier Bros 19

53 0 24-13-6.9

20-16-36.8
54 0 24-11-132.1 55 0

56 0 12-25-40.4

71 0 20-17-37.0 70 0 17-29-16.8

73 0 11-24-18.5

52 0 18-16-16.3

74 0 15-7-110.0

20 0 4-31-32.9 72 0 11-26-62.6
21 0 15-22-56.7

51 0 17-15-9.6

20 0 16-13

N. 47° 26' W.

23 0 15-16-30.9
78 0 16-12-187.9
76 0 19-11-5.1

90 0 21-4-11

71 0 20-4-454.0
70 0 5-376.5

58 0 19-5-46.5

12 0 11-61.1

60 0 10-6-119.2 18 0 12-23.9
77 0 10-12-23.8
10 0 11-1268.0

79 0 16-14-88.2
50 0 20-11-50.2 70 0 18-13-33.1

80 0 18-6-4.7

69 0 20-6-87.8

64 0 21-5-32.2

65 0 12-12-103.5

70 0 14-12-27.6

62 0 10-12-0

90 0 18-10-30.9

91 0 19-11-36.8

75 0 10-12-52.3

70 0 17-8-81.4

67 0 17-9-66.3

G

76 0 16-6-119.0

4 0 10-10-54.3

66 0 23-7-3.4

9 0 15-15-108.0

49 0 15-12-20.1

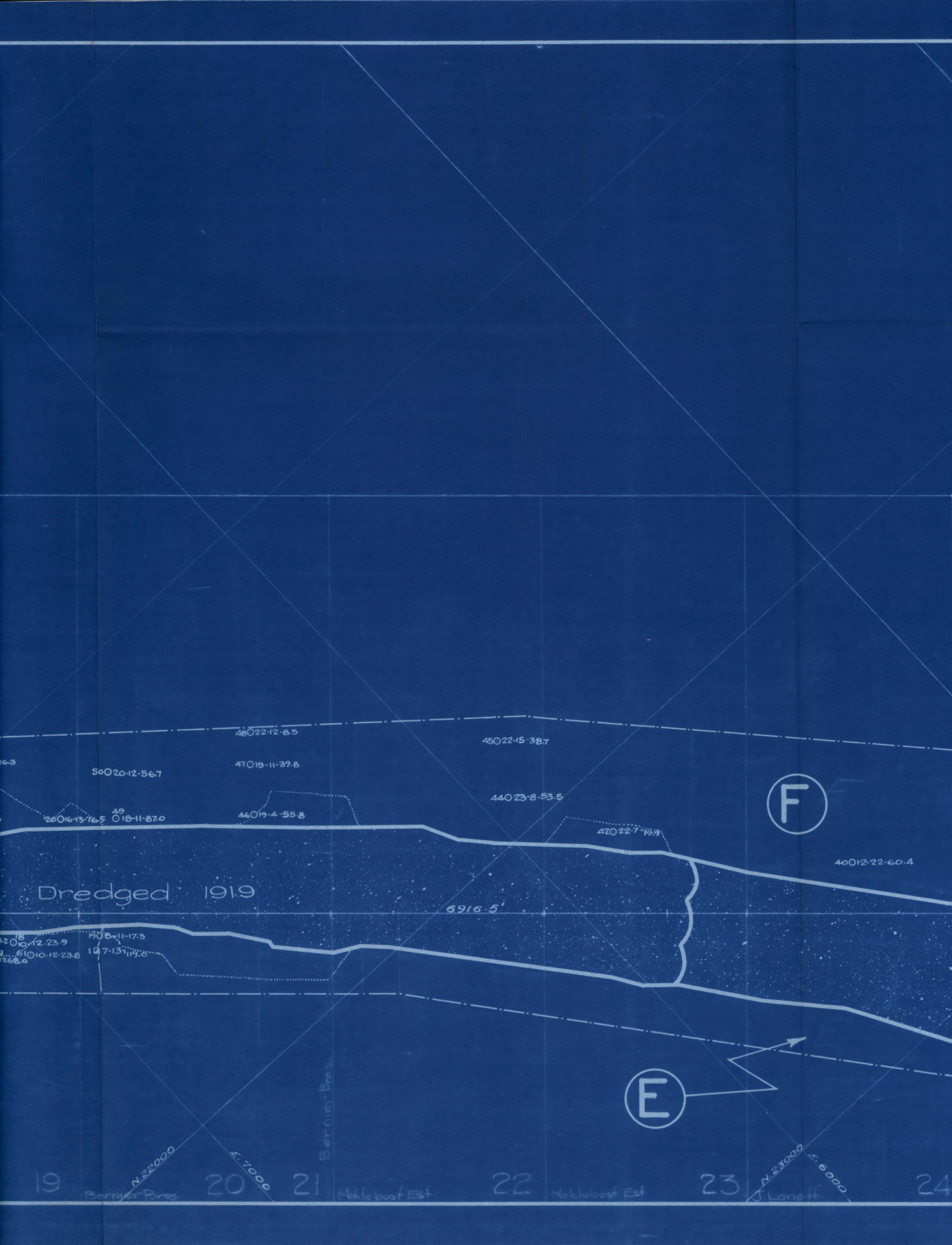
5 0 15-15-34.0

8 0 18-15-7.1

N. 21 0 0 11 0 15-8-3.4

E. 50 0 0

7 0 15-0



Dredged 1919

6916.5

F

E

19 Bernier Bros N. 22000 E. 7000 20 21 Bernier Bros Mokleboost Est 22 Mokleboost Est 23 J. Lanoff N. 23000 E. 6000 24

48022-12-8.5

45022-15-38.7

50020-12-56.7

47019-11-39.8

44023-8-53.5

20016-13-76.5 49 018-11-87.0

46019-4-55.8

47022-7-19.3

40012-22-60.4

18 010-12-23.9 1908-11-17.3 17-13-119.6 1010-12-23.8 1268.0



Down



35013-17-43.6

2609-15-124.4
"C" 09-17-16.4

"D" 015-15-8.6

"E" 015-16-64.9

24020-7-18.9
"F" 020-10-43.5

22020-10-108.8

20020-4-117.0

37020-15-27.8

34013-19-45.8

27017-11-89.0

1068015-12-113.5

21017-7-76.4

2-60.4

3609-18-29.4

"A" 09-17-177.5

Dredged 1920

Dredged 1921

c

20-10-175.1

7017-11-300.5

8012-16-22.6

E 5000 N 24000

24 24A Y 666
23A ? Lanoff
P Lemontagne

25 Sutherland

26 Sutherland

27 Sutherland



Downstream

Dredged 1922

C

D

N. 73° 57' W.

3024.0'

17016-0-0

18010-15-32.3

11010-8-11.3

15010-12-5.7

8012-16-22.6

220 20-10-108.8

200 20-4-117.0

21017-7-76.4

7017-11-300.5

1921

E. 4000

N. 25 000

Sutherland

29

Kathleen

30

Kathleen

E. 3000

N. 26000

Kyle

31



LEGEND

- Yukon Cons. Gold Corp. Drilling
- Yukon Gold Co. Drilling
- ▣ Canadian Idaho Co. Prospecting



YUKON CONS. GOLD CORP. LTD.
DAWSON Y.T.

GOLD RUN EXAMINATION
CLAIMS 8-35.

DRAWN BY :
TRACED BY : F.M.H.
DATE : 20-12-41.
REVISED :

SCALE : 1" = 200'

No 1154

N. 26° 00'

E. 2000



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RG _____ MG ²⁸ _____ R- _____ SERIES/SÉRIE ^{III-43} _____
ACCESSION _____ VOL ²⁵ _____ PAGE(S) ³³ _____
BOX/BOÎTE _____ REEL/BOBINÉ _____
FILE/DOSSIER Old Reports, Maps etc. Report on Gold Run Creek Examination 1941
DATE March 2014