

93A/11W
93A-3

General Exploration Company Limited

013953

EXAMINATIONS AND REPORTS
ON MINING PROPERTIES

ENGINEERS

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MINE DEVELOPMENT
AND MANAGEMENT

BUREAU OF MINES
Office of Prov. Mineralogist

VANCOUVER, CANADA

August 23, 1928.

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REPORT ON BLACK BEAR PLACER LEASES.

Annot.

LOCATION

Black Bear Creek is a creek about 10 miles long which forms a tributary of the more well-known Spanish Creek which empties into the north fork of the Quesnel River in the Caribee District of British Columbia. Black Bear Creek takes its rise on Black Bear Mountain, which has an elevation of 6,600 feet, and flows in a general westerly direction to its confluence with Spanish Creek.

GEOLOGY

The country rock, in the district through which the Black Bear passes, is in general a friable schist formation which pitches, generally speaking, at an angle of about 45° to 60° from the horizontal. The schist is intersected at various points by a number of quartz ledges which, for the most part, run northerly or north-westerly; thus crossing the general direction of the stream and providing falls and gisseries facilitating the picking up of bed-rock at various points along the stream. The schists are overlaid with banks of gravel and slum; the latter being of a soft porous nature intermixed with gravel and of a varying depth. On the mountainside and the higher reaches of Black Bear Mountain the quartz ledges are much larger and more numerous. The quartz ledges in Black Bear Valley contain spotty deposits of high-grade galena, and doubtless the upper reaches of these quartz ledges provided the sources of the gold and of the galena black sand found in Black Bear Creek-bed. It should be mentioned that the schist formation, through which Black Bear passes, dipping at a high angle, so that the stream passes over the edges of the strata, provides a most desirable form of bed-rock for collecting placer gold.

WATER AVAILABLE.

The rainfall in this district is fairly heavy, being about 40 to 60 inches per annum. The minimum flow in the Black Bear at the point where the intake would be made for hydraulically operating the leases under consideration is about 3 cubic feet per second in August, and the flow during the two and a half spring months and two fall months when operations would be carried on may be set down at a minimum of 15 cubic feet per second. The average stream grade along these claims is from 5% to 8%. It is well suited for securing the necessary head of water and for carrying away the tailings from hydraulic operation.

It is proposed to commence by operating only for the high water months of the spring and the fall. If, later on, conditions warrant, it may be possible to construct one or two storage dams at different points on the stream for the purpose of storing sufficient water to enable one shift to operate during the summer months.

THE CHANNEL.

Rim-rock is clearly defined on the left bank of Black Bear Creek by outcroppings at various points along the entire length. The

PROPERTY FILE 93A003-07

CHANNEL
CONT'D.

right rim-rock is very clearly defined at the point "A" and at the point marked "B". From the latter point westward the right rim appears only occasionally in ledges a little above the present stream level and in all cases is found to be dipping down at an angle of about 20° into the mountain until the point "C" is reached, where the stream again flows through a rock-wall canyon about 50 feet or 70 feet high. The inference to be drawn from this fact and the general topography of the country is that a former deep channel exists lying to the north of the present channel between the points "B" and "C," and the possibility does exist that this deep channel does not rejoin the present source of the stream until even lower down than the point "C."

At the point marked "D" a rock bluff about 600 feet in diameter exists and at the present time the stream flows through a canyon between this bluff and the rugged left bank upon bed-rock down to the point "E," where a waterfall, approximately 30 feet high, is encountered. On the northern side of the rock bluff a well-defined valley, or draw exists, and it appears the logical assumption that a slide of the gravel and the slum to the north of this bluff caused the diversion of the stream into its present channel. Former operators apparently arrived at the same conclusion, as a ditch exists from "F" to "G," which was used with the object of ground sluicing out this former channel until bed-rock could be reached somewhere under the point "G," and a large part of the bank has already been sluiced away with this object. Former operators apparently lost heart before concluding their task, and the first operation proposed is to repair that ditch and renew ground sluicing of the bank until bed-rock is found, which does not appear to lie at any great depth as very large boulders appear in the bank below the point "G" which may be expected to be reasonably close to bed-rock. When this initial operation has achieved its purpose it is then intended to construct an intake in the neighborhood of the point "H" with a ditch leading therefrom along the south or left bank of the creek, approximately to the point "J" from which a pipe-line would be laid across to the point "G" and to commence operations by monitor there taking in all the available gravels on both banks of the stream.

VALUES.

Pans of gravel were taken along the river bank from the rock bluff up stream to the end of the claims secured along both banks and also at intervals up to 200 feet away from the stream and 75 feet above stream level. Practically all pans showed gold colors as well as a consistent accumulation of galena and the average of 73 samples so taken gave 32.2¢ per yard in gold. None of these samples were taken off either rim-rock or bed-rock and in addition to the inclusion of all nuggets, (of which 3 small ones were found) one sample secured 100 feet above the stream level giving an assay of \$53.46 per yard was excluded. 14 Samples were taken from rim-rock at various points along the southern or left bank where outcroppings were visible, and these gave an average of \$8.90 per yard.

GRAVELS
AVAILABLE.

The estimates of gravel available are naturally empiric, but it is estimated that gravel to an average depth of at least 50 feet can be washed along the entire distance from the rock bluff "D" to the end of our uppermost claim, a total length of 3500 feet and to a width of at least 300 feet on each bank of the stream giving a total width of 600 feet, which gives a total yardage of just under 4,000,000 cubic yards.

GENERAL
PLAN OF
OPERATION.

The estimated cost of the entire installation, including the provision of sufficient working capital to pay men before the first clean up, is \$10,000.00. It is not, however, intended to proceed with this expenditure until bed-rock has been reached at the point "G," and the expenditure contemplated at the moment therefore is approximately \$5,000.00 for the purpose of repairing the present ditch from "F" to "G" and ground sluicing down to bed-rock so as to make sure that all factors are satisfactory beyond question for the hydraulicking of the gravels above. The cost of hydraulically washing gravel is estimated at a maximum of 6¢ per yard and the object of examinations made to date has been to insure, so far as possible, that the investment necessary could be recovered from the washing of the upper gravels, which on the basis of the above average sampling of 32.2¢ provides an ample margin of safety, and to hope for a really large profit from the bed-rock and rim-rock values.

The reason may be asked why the obvious plan is not followed of commencing operations at the Falls "E" on the present channel where bed-rock is available and working up stream from there instead of commencing at the point "G." The reason is that an ancient shaft has been found at the point "E" which was down 30 feet in gravel without reaching bed-rock in the old channel of the stream. To work up stream from point "E" would, therefore, necessitate blasting a rock out through the bottom of the canyon to 30 feet, or more, in depth for a distance of not under 600 feet; while it is evident from the topography of the country that by attacking at the point "G" blasting may be avoided altogether, or if required will only be for a very short distance.

If ground sluicing at the point "G" should by any chance fail to develop conditions suitable for hydraulicking from there up stream no great amount of money will have been expended and the option will still remain of cutting a channel through the bottom of the canyon from "E" beyond, at such depth that will insure the possibility of washing all gravels up above, or to dispense with this blasting and to wash along the southern bank of the stream from the point "D" upwards upon rim-rock, which is perfectly feasible.

The question of Keystone Drilling the property has received consideration, but a careful estimate of costs shows that all the exploration work that could be done by Keystone Drilling can be done more effectively and more economically by hydraulic operation, which will at the same stroke bring the property on to a producing basis.

REPORT ON BLACK BEAR PLACER LEASES.

No. 5

Aug. 23, 1928.

STATEMENT OF ESTIMATED PANNINGS.

<u>ESTIMATE</u> <u>OF</u> <u>PROFITS.</u>	135 days operation @ 1250 yards per day 168750 yards per annum @ 32.2¢	\$54,337.50
	Less estimated loss in recovery 15%	8,150.62
	Gross Revenue	\$46,186.88
	Labour, 7 men paid @ 150 days @ \$6.00 ... \$6300.00	
	Superintendent	3000.00
	Miscellaneous, say	2500.00
		11,800.00
		\$34,386.88
	25% to owners	8,596.72
	Net Profit per annum	\$25,790.16

NOTE: The above statement is based on the average values found in the Banks exclusive of any rim or bed-rock values; the idea being to insure, so far as possible, that the operation shall pay its way on the general run of gravel values. At the same time we look to the natural enrichment of values on bed and rim-rock to greatly increase net revenue.

The entire net profits are to be devoted to liquidating installation cost till wiped out. Thereafter the proposed issue of \$15,000 capital stock will participate to the extent of 51% of earnings.

GENERAL

Black Bear Creek is situated about 25 to 30 miles south of Barkerville, near which the famous Lightning and Williams Creeks are situated of early fame, and in some 10 miles north-west of Cedar Creek, which only a year or two ago produced a sensational strike, it may, therefore, be said to be in the center of a known and proved placer district. A large amount of gold was actually taken out of Spanish Creek (of which Black Bear is a tributary) in the early days by hand miners. The gold so recovered from Spanish Creek is generally credited with having originated from Black Bear, as there is little evidence of gold having been recovered from Spanish Creek above its confluence with Black Bear. Incidentally, efforts have been made to operate on Spanish Creek below its confluence with Black Bear which have been unsuccessful, and may possibly always remain unsuccessful, as the physical characteristics of the Spanish Creek at this point are very disadvantageous for hydraulic operation.

The results of surface samples upon Black Bear are very encouraging and probably the most striking feature of this sampling was the wide spread distribution of the values, as small colors were found in almost every pan washed, both in the stream and high up on the banks. Again the sampling upon rim-rock which we were able to do confirmed the existence of the bed-rock enrichment anticipated. Records show that several thousand dollars

GENERAL
CONT'D.

in gold were recovered at different times from Black Bear by crude hand methods, as individual cases of nuggets of \$20.00 to \$200.00 found in these claims are fairly well substantiated. The conclusion appears justified that the property, if economically equipped and soundly operated will pay a substantial profit from the hydraulicking of the upper gravels only and that really handsome returns may reasonably be expected from the washing of the bed-rock and rim-rock gravels with the possibility also of encountering something spectacular.

SUMMARY.

Black Bear Creek situated in a recognised placer district; the rock formation through which it passes is very suitable for recovery of placer gold.

WATER
AVAILABLE.

Sufficient water for handling 1250 yards per day during a minimum of 135 days of the year, which may possibly be augmented.

VALUES.

Average gold values surface and bank gravels 32.2¢ per cubic yard. Average gold values on rim-rock \$8.90 per cubic yard.

YARDAGE.

Estimated yardage approximately 4,000,000 cubic yards.

OPERATION
PROPOSED.

To commence in deep bank at point "D," ground sluice bank down to bed-rock at a cost of \$5,000.00. Thereafter, provided initial operation entirely satisfactory, to instal necessary equipment to cost about \$10,000.00 and wash up stream on both banks upon bed-rock.

ESTIMATED
NET
EARNINGS.

\$26,000.00 per annum from bank gravels subject to increase to be expected from rim and bed-rock values. This enrichment on bed-rock and rim-rock already definitely known to exist--The extent of the enrichment is problematical: It may give merely a good increase in total profits or it may produce a very decided increase in profits; a very decided increase is the more probable.

TABULATION OF ASSAYS FOR GOLD MADE BY J. R. WILLIAMS ASSAYER
ON SAMPLES TAKEN AUGUST 1928.

SAMPLE NO.	LOCATION	NO OF SAMPLES	IN BANKS		ON RIMROCK	
			TOTAL GOLD VALUES IN CENTS	VALUES PER YARD IN CENTS	TOTAL GOLD VALUES IN CENTS	VALUES PER YARD IN CENTS
A	S - 10/40	2	.560	42.0		
B	N - 5/15	2			12.54	940.0
C	S - 0/0	4	.310	11.6		
D	S - 10/40	2	.033	2.5		
E	S - 20/50	3			47.52	2360.0
F	N - 25/50	2	2.310	173.0		
G	S - 7/30	2	.080	6.0		
H	N - 7/20	2			2.64	198.0
I	N - 5/10	4	.130	4.5		
J	S - 5/20	4	.460	17.3		
K	N - 0/0	1	.019	2.8		
L	N - 50/150	1	.790	118.0		
M	N - 15/50	2	.790	59.0		
N	S - 10/50	3			.46	22.9
O	S - 10/40	2	.110	8.2		
P	N - 35/100	1	.520	78.0		
Q	S - 5/10	4	.230	8.6		
R	S - 0/0	2	.130	9.7		
S	S - 100/300	2	.033	2.5		
T	N - 5/15	2			19.80	1490.0
U	S - 70/125	2	(71.280)	(5346.0)		
V	N - 0/0	3	.260	13.0		
W	N - 0/0	3	2.370	118.0		
X	S - 12/30	3	.990	49.5		
Y	S - 5/15	3	.470	23.4		
Z	S - 0/0	2	.800	60.0		
AA	N - 5/10	3	.710	35.5		
BB	S - 7/50	1			.05	7.5
CC	S - 20/50	1			.00	0.0
DD	S - 30/50	1	.000	0.0		
EE	N - 2/10	1	.080	12.0		
FF	S - 4/20	2	.150	11.2		
GG	S - 7/20	7	1.050	22.5		
HH	S - 0/0	2	.500	37.5		
II	N - 0/0	7	1.800	38.5		
			<u>15.685</u>		<u>179.49</u>	
			Average of 73 samples in the Gravel Banks <u>32.2 cents per cu. yd.</u>		Average of 14 Samples on the Rimrocks <u>\$8.90 per cu. yard.</u>	

Under "LOCATION" the letter signifies North or South Bank; - First figures height above stream in feet; - Second figures horizontal distance away from stream.

N.B. In addition to sample "U" three nuggets valued at 54.7 cents were removed from samples before assaying. It will be seen therefore that the total gold removed before assaying is EIGHT TIMES the amount remaining upon which average values are calculated.