MAD 52 - 150

ASSESSMENT REPORTS

MAP No. 115O-5, TYPE OF WORK: Prospecting

REPORT FILED UNDER	Placer Gold and Platinum
DATE PERFORMED	August 1969 DATE FILED: June 1, 1971
LOCATION - LAT	61° 16'N Hoge Creek Area, Y.T.
LONG	138° 21' W
CLAIM Nos	Elm 1, 2 12377-8 Placer lease 2045
WORK DONE BY	A. Allen
WORK DONE FOR	Lorraine 6 No 1
REMARKS	The geology and sampling plan for placer gold and platinum. The assays indicated a value of $ 1.26 per cubic yard at $40 / oz gold. Additional ~~gold~~ ~~platinum~~ content of $ 0.70 per cubic yard values but only one sample was taken in this area.

Moraine Gold Mines Ltd.
115-G-5,6 Geol.

REPORT

on

PLACER LEASE NO. 2845 and PLACER CLAIMS FIRE 1 & 2

Whitehorse Mining Division, Yukon Territory

Latitude 61° 16' N
Longitude 138° 34' W

for

MORAINE GOLD MINES LIMITED (N.P.L.)

JUNE 1ST, 1971

by

A. Allan, P.Eng.
Vancouver, British Columbia

140°00' W.
61000 N.

6 45' 7 8 30' 9 15' 0

● - Moraine Gold Mine
Placer Deposit

KLUANE LAKE

YUKON TERRITORY

Scale 1:250,000 Échelle

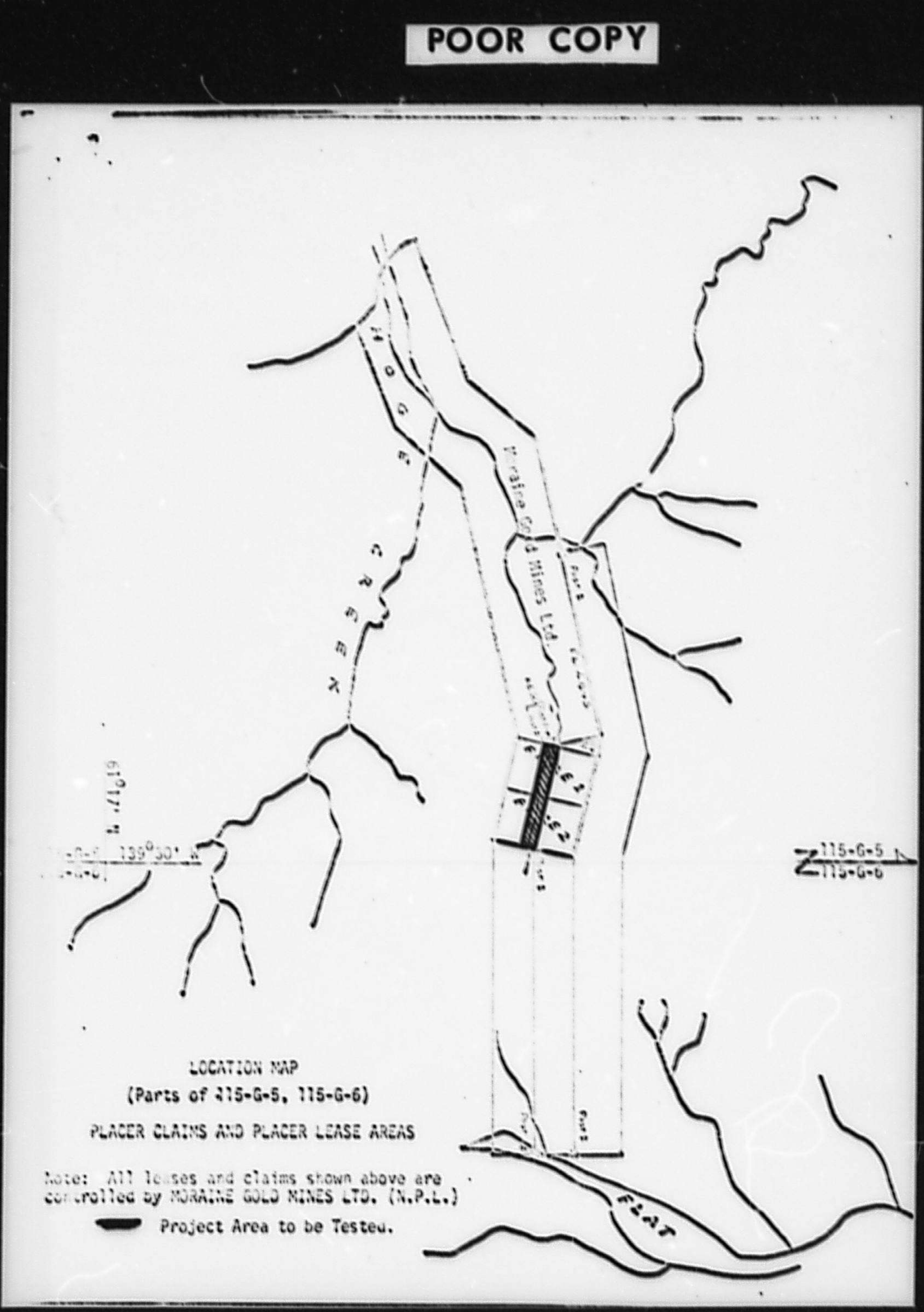
Miles 0 5 10 15 20

Kilometres 0 5 10 15 20 25 30 Kilomètres

Transverse Mercator Projection
North American Datum 1927
Contour interval 500 feet
Elevations in feet above Mean Sea Level

Projection Transverse de Mercator
Réseau géodésique nord américain unifié 1927
Équidistance des courbes 500 pieds
Élévations en pieds au-dessus du niveau moyen de la mer

POOR COPY



LOCATION MAP

(Parts of 115-G-5, 115-G-6)

PLACER CLAIMS AND PLACER LEASE AREAS

Note: All leases and claims shown above are controlled by MORAINE GOLD MINES LTD. (N.P.L.)

Project Area to be Tested.

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

SUMMARY AND CONCLUSIONS

A substantial deposit of easily recoverable placer gold has been indicated on the property of Moraine Gold Mines Limited (N.P.L.). Initial hand testing fully warrants a $100,000 production program to prove its economic potential. The property is located in an accessible area of the Yukon Territory near known economic gold placer deposits.

The results of the preliminary tests prove the existance of free gold with associated low platinum values over a length of 2500 feet extending for a width of at least 300 feet. The gold values are quite uniform from the surface to the depth of the deepest pit. The depth to bedrock could not be ascertained without drilling equipment or sinking a shaft. Similar untested gravels are present for several thousand feet along the creek bed to the west and several hundred feet on both sides of the creek. The gravels consist of a variety of material including quartz, conglomerate, jasper, limestone and serpentine. The pebbles are well rounded and contain very few boulders. There is a minimum of silt or clay and the gravels would wash very readily and rapidly. The eventual size of this deposit can only be defined by further testing.

The initial results from 10.5 cubic yards yielded a total of 7.662 grams of gold. Valuing gold at $40.00 per ounce;

7.662 gr = $9.884, i.e., 1.0 cu.yds. = $\frac{9.884}{10.5}$ = $0.99.

In appearance the gold ranged from fine flour sized particles to coarse grains measuring one millimeter or more across. Testing the tailings from both the sluice and the rocker showed very little loss. The gold particles tended to be heavy regardless of size, there was no tendency for the particles to float.

There is sufficient water in the creek to permit a sluice operation of about 100 yards per hour without a dam.

RECOMMENDATIONS

1. That the property be submitted to larger scale tests, e.g., sluicing with bulldozer and loader working upstream from bedrock. A work program totalling $100,000 is recommended.

2. That a rotary or keystone drill be utilized later, to determine depth and values to bedrock over the valley bottom.

INTRODUCTION

In August 1969 a series of test pits were completed along the headwaters of Hoge Creek for a length of 2500 feet. The test pits were designed to evaluate the creek gravels as a source of placer gold and platinum of economic value. Hand methods were used throughout. Bedrock was not encountered under the main creek gravels. The purpose of the initial test was to determine whether or not placer gold occurred along the creek. Time and methods did not permit evaluation of yardage and values per yard except in a very general way. Later testing was carried out in August 1970 by F. Horvatin, prospector of Kelowna, B. C.

SUMMARY OF WORK CARRIED OUT ON THE PROPERTY

The camp and equipment were moved onto the property by helicopter from Burwash Landing on August 12th, 1969. Work on the creek commenced on August 13th and continued to August 31st.

The equipment used for testing consisted of a 2½" suction dredge with a small riffle box, an "Australian Rocker" and hand gold pans. The most effective method of testing was to shovel a measured amount of gravel through the "Rocker" then hand pan the clean-up down to a black sand concentrate. The concentrate was submitted for assay. The usual amount of gravel put through the "Rocker" was one half cubic yard. The deepest test pit was about 5 feet, usually the penetration was in the range of 18 inches to 2 feet.

A total of 27 samples was taken during the course of the testing, all the samples have been submitted for assay.

Frank Horvatin and Allan Cutworth of Kelowna and Greenwood, B.C. respectively, spent the month of August 1970 making a detailed sampling of Hoge Creek on Fire No. 1 Claim. A hand trench was cut on the bank of the creek 3'x8'x60' representing 50 cubic yards of gold bearing gravel. The material was concentrated in a 9'x1' sluice box equipped with steel riffles and expanded metal lining. The concentrates recovered were panned and the coarse gold recovered. The magnetite concentrates were separated leaving the heavy mineral sands. The coarse gold recovered weighed 2.4311 ounces troy. The gold was recovered from the magnetite concentrates and weighed 4.1 milligrams. The gold was recovered from the sand and weighed 1350.7 milligrams. The total gold recovered from the 50 cubic yard sample weighed 76.7 grams. The magnetite concentrate was assayed for platinum and reported 12.2 milligrams.

The total recovery in gold estimated at $40.00 per ounce then is $99.25 in Gold and $0.046 in Platinum, making a total value per yard of $1.98.

Although this represents a localized sample at one location, it considerably enhances the potential of the deposit and warrants a full scale test of the deposit by sluice box and bulldozer.

PROPERTY

The property, owned by Noraine Gold Mines Ltd. (N.P.L.) of 1650-777 Hornby Street, Vancouver, B.C., consists of two discovery claims, each 1250 feet long by 1000 feet, on each side of the centre line. These are designated as the Fire 1 (#41377) and Fire 2 (41378) claims. In addition, a 5 mile prospecting lease No. 2845 was obtained on the lower portion of the creek. The lease extends from the Donjek River valley to the initial post of the Fire 1 claim and extends for 1000 feet on either side of the centre line. The purpose of the lease was to protect the steep canyon for future tailings disposal. The posts were personally inspected by the writer and found to be staked according to the Yukon Placer regulations.

LOCATION AND ACCESS

The property is located on the headwaters of the north fork of Hoge Creek, a tributary of the Donjek River. The claims are at an elevation of about 6000 feet on the south flank of Wade Mountain and are about 28 miles south from Burwash Landing on the Alaska Highway. (Approximate Lat. 61° 16' N; Long. 138° 34' W.)

Present access to the property is by charter helicopter service from Whitehorse and/or Burwash. There is a road to within 6 miles of the property along Burwash Creek, the road could be

readily extended to the property, requiring about 200 feet of rock work. There is an excellent campsite at the end of the present road which was occupied by an Imperial Oil exploration crew during the past season.

HISTORY

The occurrence of Placer gold in the Kluane Lake area has been known since the turn of the century. Lack of transportation and other facilities proved too much of a handicap to the early hand miners and many of the creeks were abandoned. At present there is a successful operation on Burwash Creek. The latest work is on Tatamagouche Creek, a tributary of Burwash Creek. The above operation is owned and operated by Mr. O. Bessner. An attempt is currently being made to open up an underground placer operation on Arch Creek.

There is evidence that hand placer mining was attempted on Hoge Creek about 50 years ago. Although there is no evidence of recorded claims in the past, there are remains of an old camp, flumes and a small shaft on the property. Coal was evidently brought in to melt through the frost. No evidence was found of permafrost along the creek although the ground is solidly frozen beneath the moss. This is believed to be local and would probably melt if the insulating layer of moss were removed.

GEOLOGY

The auriferrous gravels are underlain with sediments of the Mush Lake Group, Upper Triassic in age, consisting of shaley limestone, calcareous shale and some gypsum. Near the head of the valley there is an occurrence of Paleocene conglomerate. The sediments form a synclinal trough extending east-west and whose axis lies along the valley floor. The nature of the bedrock is such that natural riffles would be formed for the entrapment of the gold.

TOPOGRAPHY

The upper portion of Hoge Creek is a typical "U" shaped glaciated valley with steep limestone bluffs on either side of the creek. An extremely steep canyon extends from the end of the glaciated portion to the Donjek River flat, this portion of the creek has not been glaciated. The steep walled ridges on either side of the valley extend to an elevation of about 6800 feet. The present creek could not have incised the canyon to the Donjek and there must have been a period when the flow of water was much greater than at the present time. The writer believes that the source of the gold on Hoge Creek is the same as that on Burwash Creek. Burwash Creek probably captured the extension of Hoge Creek at some time during the actual gold depositional period.

SAMPLING PROCEDURE

During the 1969 suction dredge operations it was necessary to measure the area excavated. A close approximation to one half a cubic yard was obtained, then the dredge was shut down and the riffle washed into a tub. The riffle concentrate was further concentrated by hand panning. Some gold was lost by the necessity of clearing the Venturi by reversing the flow of water. Suction tests such as these are usually lower than the total gold in the sample.

The use of the "Australian Rocker" resulted in a more uniform sampling procedure. The gravel was shovelled by hand into a wash tub of 2.1 cu.ft. capacity; the gravel was then put through the rocker until 1/2 cu. yard had been processed. The clean-up was again reconcentrated by hand panning. A few of the samples were reduced to almost pure gold, these are the high value samples as shown under the assay report. Many of the other samples looked almost as rich by visual estimate.

Modifications could be made to improve the capability of the suction dredge. The capacity should be increased to 3½", a fex suction hose with appropriate handles would contribute to ease of handling. In addition, the Venturi section should have a removeable inspection plate for cleaning and removing organic material from the tube. Rocks can be removed by reversing the flow of water but moss or other organic material is very difficult to get rid of.

The initial program was to test the creek gravel at regular intervals of 100 feet. Sleet, snow and extreme temperatures necessitated a speed-up of the program. In consequence, the gravels were tested at irregular intervals although the results are deemed to be valid.

A S S A Y I N G

The writer did not specify amalgamation when the samples were submitted for assay. The assay office treated the samples in the same manner as rock samples. Concentrates were dried and put through the pulverizer. A portion of the sample was taken on an assay ton basis and the total gold content calculated for each sample. The results are attached in Appendix 1.

Samples which had been reduced to a very small volume were weighed and fused directly, a much more reliable assay than the procedures outlined above. The pulps were re-assayed by the amalgamation method. The re-assay did not recover that portion of the gold which was lost in the pulverizer. The results of the above re-assay program are attached in Appendix 2.

Assay discrepancies in the original assay results were resolved as far as possible. It was impossible to recover any of the gold which was lost in the original sample preparation. Total gold has been recovered from the pulps of the original samples by amalga-

mation. The results of the amalgamation have been added to the total gold recovered by fire assaying, the resultant is total gold recovered and expressed in milligrams of Au.

A table of the sample results with the necessary corrections is attached hereto. Corrections were not applicable to all of the samples, the smaller samples were assayed by direct fusion and all of the gold was probably recovered from these. The balance of the samples were treated by direct amalgamation, all of the gold was recovered.

The initial samples consisted of 24 bags of concentrate representing 10.5 cu. yds. of gravel. 15 samples were put through the pulverizer with a resultant loss of gold. The pulverizer plates were so badly salted that they had to be thrown out. For the most part the individual samples represented 1/2 cu. yd. of gravel each. Several other samples were taken representing lesser amounts of gravel. The results of the latter were not used in averaging the results but are listed in the tabulations attached.

Average Results:

The gold recovered from the initial set of samples was 7.662 grams from 10.5 cu. yds. of gravel. Gold value used in the evaluation is $40.00 per ounce.

7.662 grs. = $9.884

1.0 cu.yd. = $\frac{9.884}{10.5}$ = $0.99

Total gold recovered from samples 1156 to 1179 incl. and #1 test to #6 test incl. was 8.445 grams representing 13.5 cu. yds.

8.445 grs. = $10.89

1.0 cu.yd. = $\frac{10.89}{13.5}$ = $0.806

1184 represents 2.1 cu.ft. from the south bench above the creek bed. The total gold recovered was 42.82 mgrs. or 0.548 grams per yard, dollar value per yard is $0.70.

1182 represents 4 pans or approximately 1.0 cu.ft. of bedrock material from the canyon area. The gold recovered was 44.59 mgrs. or 1.204 grams per yard, dollar value per yard is $1.55. The canyon could only be worked by hand methods as there is not enough roon for mechanized equipment.

Sample 1184 from the south bench is encouraging in that gold does occur in the bench proper. The south bench extends at least 300 yards from the creek south and at least 20 yard above the creek elevation. Individual pans from various locations along the south bench all showed visible gold.

The area of gold bearing gravels had been extended to the west but nothing has been done to aid in estimating the depth of the gravel.

The results of the Horvatin test in August 1970 indicates a higher grade is present locally than original sampling. This is probably due to the larger sample (30 yards) taken and considerably enhances the potential of the deposit.

Sample Results

Sample No.	Au./Ton	Pt. /Ton	Location
1156-56A	219.8	1.48	2+00 dredge sample.
1157	195.0	nil	1+00 " " .
1158	6.4	.42	Reject from panning.
1159	322.4	.74	" " " .
1160	183.3	nil	4+00 dredge sample .
1161	720.0	nil	12+00 0-3ft. dredge.
1162	699.6	nil	12+00 3-5ft. dredge.
1163	423.0	2.00	20+00 dredge sample.
1164	5.3	----	Reject from 1163.
1165	49.3	.16	9+00 & 50 ft.N dredge.
1166	92.0	.10	9+00 & 250ft.N dredge.
1167	72.4	.42	16+00 rocker sample.
1168	304.0	.93	16+50 S. bench dredge.
1169	658.0	nil	16+50 N. bench dredge.
1170	10.4	.25	15+00 rocker sample.
1171	153.5	1.11	12+50 & 75' dredge.
1172	4.2.	.11	12+50 & 75 N repeat.
1173	125.6	.49	20+00 & 50 S dredge.
1174	7.6	nil	6+00 dredge sample.
1175	1894.2	---	16+00 rocker sample.
1176	1000.3	---	15+00 rocker sample.
1177	251.0	nil	21+00 & 50 S dredge.
1178	47.5	nil	24+00 rocker sample.
1179	89.9	.58	10+00 S side rocker.

Revised Sample Results:

No.	Vol.	Nggs. Au. Anals.	Nggs. Au. Fire	Total Nggs. Au.
1156 & A	1 yd.	220.10	22.25	242.35
1157	½ yd.	201.27	26.49	227.76
1158	Reject			3.40
1159	Reject	321.40	46.15	367.55
1160	½ yd.	185.17	9.47	194.64
1161	½ yd.	687.00	140.70	827.70
1162	½ yd.	699.60		699.60
1163	½ yd.			423.00
1164	½ yd.	Reject		5.30
1165	½ yd.	50.20	6.18	56.38
1166	½ yd.	88.30	4.75	93.05
1167	½ yd.	80.36	1.77	82.13
1168	½ yd.	285.80	16.05	301.85
1169	½ yd.	623.07	31.31	654.38
1170	½ yd.	12.50	0.85	13.35
1171	½ yd.	163.40	20.65	184.05
1172	½ yd.			4.20
1173	½ yd.	232.20	12.90	245.10
1174	½ yd.			7.60
1175	½ yd.	1894.20		1894.20
1176	½ yd.	1000.30		1000.30
1177	½ yd.	40.88	20.80	61.68
1178	½ yd.			47.50
1179	½ yd.	14.39	7.76	22.15

Totals 10.5 yds. 7662.23 mgrs.

Gold valuation @ $ 40.00/oz. then 7.662 grs.= $ 9.884

10.5 cu. yds. = $ 9.884

1.0 cu. yds. = $\frac{9.884}{10.5}$ = $ 0.99

# 1 test	½ yd.	31.88	31.88
# 2 test	½ yd.	44.93	44.93
# 3 test	½ yd.	47.33	47.33
# 4 test	½ yd.	88.66	88.66
# 5 test	½ yd.	172.68	172.68
# 6 test	½ yd.	397.41	397.41

Overall 13.5 yds. 8445.12 mgrs.

Value per yard = $\frac{8.445 \text{ grs.} = \$ 10.89}{13.5}$ = $ 10.89 = $ 0.806

1182	4 pans bedrock sample		44.59
1183	2.1 ft.		2.28
1184	2.1 ft.	south bench channel	42.82

N.B. With gold valued at $ $\frac{40.00}{\text{XXXX}}$/Oz 1.0 grs.= $ 1.29

1.0mgrs.= $ 0.00129

POOR COPY