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PRELIMINARY REPORT

BABKIRK PLACER GOLD AND PLANTINUM
PROPERTY, CLINTON AREA, B.C.

By: K. Warren Geiger

June, 1971 92 P 4

COLORADO SCHOOL OF MINES RESEARCH INSTITUTE

P.O. Box 112

GOLDEN, COLORADO 80401

7 October 1970

CSMRI Project No. 300930

Mr. Hugh R. Currie
c/o Pacific Western Securities Ltd.
601 Northgate Building
Edmonton 15, Alberta
Canada

Dear Mr. Currie:

The following quantities of the noble metals were found in the sample which you submitted to us for assay.

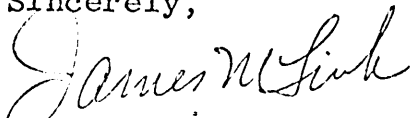
Gold	7.2 oz/ton
Silver	- 0.5 oz/ton
Platinum group	- 1.6 oz/ton

An emission spectrograph of the Doré bead indicated that the platinum group was approximately distributed as follows:

Platinum	- 0.5 oz/ton
Palladium	- 1.0 oz/ton
Others	- 0.1 oz/ton

I am enclosing our invoice for the assay work with this letter. If I may be of any further assistance, please contact me.

Sincerely,



James M. Link
Manager, Mining Division

/laj

CERTIFICATE OF ASSAY

TO Mr. Roy Erickson
101 Glenhaven Crescent
St. Albert, Alberta

Sept. 17, 1970.

Lab. No. 1575
cc: Aumas Fergusson & Wild Ltd.
1650 - 1055 W. Hastings St.
Vancouver, B.C.

THAT THE FOLLOWING ARE THE RESULTS OF ASSAYS MADE BY US UPON THE HEREIN DESCRIBED SAMPLES.

MARKED	GOLD		SILVER	PLATINUM	Percent	Percent	Percent	Percent	Percent	Percent	TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent oz/ton							
No Tag	9.88	\$345.80	2.5	0.49							

NOTE:

Rejects retained one month.
Pulps retained three months
unless otherwise arranged.

Gold calculated at \$ 35.00 per ounce

F. J. Burgess
Registered Assayer, Province of British Columbia

NORTHERN TRANSPORTATION COMPANY LIMITED



10040-105th Street
Edmonton
ALBERTA, CANADA

December 13, 1961

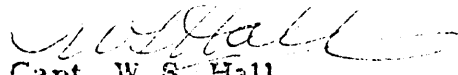
TO WHOM IT MAY CONCERN

The bearer, Mr. Roy Erickson, was employed by this Company during the seasons of navigation in the Mackenzie Watershed during the years 1935 to 1946 inclusive, except for three years in the Armed Forces.

Mr. Erickson was employed as a marine engineer and operator of shallow draft craft and, during this period, became quite experienced in the design and operation of this type of craft operating in the swift shallow rapids of the Bear River, Liard River and portions of the Mackenzie River.

Mr. Erickson left our services of his own accord, however, we have on several occasions found it necessary to recall Mr. Erickson for consultation on special jobs where we required his special experience.

We therefore have no hesitation in highly recommending this man as a consultant on any problem pertaining to shallow draft boat operations.


Capt. W.S. Hall
Superintendent of Operations.

WSH/mmt

CAREER RESUME

of

Roy L. Erickson
101 Glenhaven Crescent
St. Albert, Alberta

Summary of qualifications and experience:

Marine Engineer:

- Practical experience since 1935.
- With Northern Transportation Co. Ltd. from 1935 to 1966 specializing in supervision and construction of tugs, barges, etc. in North West Territories.
- Owned and operated his own towboat in North West Territories.
- Harbour engineer at Hay River from 1965-66.
- Supervised design and construction of several boats for Dominion Government.
- Supervised construction of Fort Providence ferry on Yellowknife Highway.
- Supervised design and building, testing of boats and barges for Kaps Transport of Edmonton. See article in Oilweek, June 12, 1967.
- Supervised deep sea boats inspection for private interests in Halifax on two occasions.

Mining Experience - Prospecting:

- Several years experience in placer developments and production in Yukon, Montana, N.W.T.
- Brought Copper Pass Mines into production from claim stage into a producing nickel mine with sale contracts to French Company.
- Is an original shareholder and Director of Copper Pass Mines, which is listed on the Calgary Stock Exchange.
- Has prospected on part-time and full-time on different occasions in Alberta, British Columbia, Yukon and North West Territories.

Personal:

- Married - now seperated
- Age 59 years
- 2 girls - 1 boy - all married

PRELIMINARY REPORT
BABKIRK PLACER GOLD AND PLATINUM PROPERTY
CLINTON AREA, B.C.

PREPARED FOR:
SHORE EXPLORATIONS LTD.

JUNE 18, 1971

K. WARREN GEIGER
CONSULTING GEOLOGIST

CONTENTS

	Page
Background	1
General Geology	4
Field Work	7
Economic Geology	10
Beach	11
Bench	13
Area of Old Chinese Workings	14
Conclusions and Discussions	15
Recommendations	17
Cost Estimate	18
References Cited	20
Figure 1	21
Figure 2	22
Figure 3	Back Pocket
Figure 4	23
Appendix A - Information, Economic Projections and Proposed Development Program Based on initial sampling (by Shore Explorations Ltd).	
Appendix B - Assay Values and Grade Calculations from samples taken during the present study.	

PRELIMINARY SURVEY OF
BABKIRK PLACER GOLD AND PLATINUM
PROPERTY OF SHORE EXPLORATIONS LTD.

BACKGROUND

The Babkirk property of Shore Explorations Ltd. of Edmonton is situated approximately eighteen miles west-southwest of the town of Clinton, B.C. (Fig. 1). The property consists of 13 leases along the Fraser River optioned to Shore by W. Babkirk and associates, and one lease staked for the company by the writer, (Fig. 2). The property is connected by a good gravel highway from Clinton to Arden Park, a holiday ranch on Kelly Creek, and thence by jeep road over the pass from Kelly Creek Valley to Cavanagh Creek valley. The Camp was located in Cavanagh Creek valley for reasons of unpolluted water supply and access. A jeep was needed to expedite travel to and from the areas of investigation, the camp being about 700 feet higher and nearly 2 miles from the point at which the river is reached.

The portion of the Fraser River along which the property is situated was first prospected by the gold rush miners of 1858 and 1859. At that time some gold was probably taken from the bars and shoreline during low water conditions in early spring and late summer and autumn but the gold is fine with relatively few nuggets and the area was bypassed in the search for richer and courser hand-diggings farther north.

After completion of the C.P.R. in 1885 a large community of Chinese miners settled on the river at roughly the same location as the present property but centered on Little Leon Creek. Much evidence of their work, both north and south of Little Leon Creek is present (Fig. 3). They left the workings in the early 1900's when they were forced off the creeks and rivers by law. It is quite evident that the bedrock fractures and gravel horizons that they were working have not been exhausted.

During the depression many people made a living by panning. The Glasgow family of father and sons travelled and panned the river by boat during this period. Ford Glasgow remembered the present property as one of the best they had sampled and subsequently led W. Babkirk and associates to stake and open up a jeep road to the property during the last few years.

In the fall of 1970 Shore acquired an option on the property and Mr. Roy Erickson carried out some initial sampling. Two measured cubic feet of gravel were taken by mixing smaller quantities from several sample points along the present river beach. Each sample was panned down to its contained concentrate of gold, platinum and other heavy minerals which are collectively called 'black sand'. Only one of these samples was weighed before sending away for assay, it weighed 9.62 ounces. The samples were sent to the

Colorado School of Mines Research Institute (Denver) and to the Crest Laboratories in Edmonton for assay. The results (see Appendix A) are tabulated below together with the equivalent value per cubic yard assuming gold at \$35.00/oz. and platinum at \$100/oz.

Sample	Concentrate		Ounces	Ounces	Value	Value	Total Value
	Dry Weight Oz/cu. ft.		Au/ton	Pt/ton	\$	Pt/	
	Gravel	Wt/yd	Conc.	Conc.	Au/yd	Yard	\$/Yard
Denver	9.62	x27	7.2	1.6	2.05	1.30	3.35
Crest	9.62	x27	9.88	0.49	2.81	0.41	3.22

Based on the results of this initial 'grab' sampling, Shore Explorations had worked on a tentative plan to put the property into production if the values proved valid with more detailed and careful sampling. Details of the plan along with the assay results as written by Mr. Hugh Currie are given in Appendix A. The difference in the value per yd. by Currie (\$4.07 and 3.91/yd) and by the writer is due to the more conservative prices for gold and platinum used by the writer.

Basically, the plan involved mining or excavating the beach area with a front-end loader and D-8 cat, transporting the material by means of a mobile conveyor, and processing the material by separation of the concentrate by washing, screening and gravity separation using a

wash plant, tromel, and some combination of gravity separation using tables, jigs and cyclones. The latter plant would be built on a self-propelled barge for optimum location during progressive mining operations and the yearly rise and fall of the river (in excess of 60 feet).

The above plan was based on the premise that an independent study of the present river beach area would prove the average value of the beach material to be in the same order of magnitude as the original sampling done by Erickson. Accordingly the writer was retained to carry out a preliminary study of the property with the main emphasis on the sampling of the beach deposits. The program was completed during the period April 6-25, 1971. Mr. Erickson looked after supplying the camp and the hiring of two prospectors, Mr. Jon Stewart and Mr. W. Babkirk, making a four-man working team.

GENERAL GEOLOGY

The Fraser Canyon at the point where the property is located is a spectacular valley rising from an elevation of approximately 900 feet at water-level to elevations of greater than 4,000 feet on the surrounding hills.

Trettin (1961) in his geological study of the area says "three major elements of the topography can be distinguished: Mid Tertiary and older mountain ranges,

Middle or Late Tertiary upland surfaces, and Pleistocene and Recent valleys."

Regarding the Late Tertiary upland surfaces, Trettin states "Flat lying sedimentary and volcanic rocks of Middle or Late Tertiary age form small plateaus at altitudes ranging approximately from 3,000 to 4,000 feet near Pavilion, between McKay Creek and Watson Bar Creek, and on Big Bar Creek. North of Pavilion, south of Watson Bar Creek, and in the vicinity of Big Bar Creek some of these depositional surfaces are continuous with younger gently sloping erosional surfaces, which are covered only with a thin veneer of unconsolidated Pleistocene and Recent deposits. These Middle or Late Tertiary surfaces are parts of the floor of a valley that possibly extended from Glen Fraser to Big Bar Mountain and was connected along Big Bar Creek with the extensive plateau east of the Marble Range. The valley partly coincides with the present Fraser River valley but has not been recognized south of Glen Fraser.

He further states that: "The present valley of the Fraser River is younger than these Middle or Late Tertiary surfaces and was probably developed in Pleistocene time. In most of the area it is approximately parallel to the strike of the rocks and to the Fraser River fault zone."

"The Pleistocene valley bottom probably coincided approximately with the present surface of the river which lies between 900 and 650 feet above sea level. This valley was filled, probably in the latest Pleistocene, with more than 1,000 feet of unconsolidated materials ranging from boulder gravel to mud. The stratigraphy of these deposits changes over short distances and their history is complicated. Much of the material showing deltaic cross-bedding appears to have been deposited by braided streams. Some of the extensive silt deposits between Pavilion and Big Bar Creek may have been laid down in glacial lakes. Mudflows appear to have been deposited on alluvial fans of tributaries."

"In recent time the river has been rejuvenated and has cut through the unconsolidated sediments into bedrock. This rejuvenation may have been caused by a decrease of the detrital load in post-glacial time (Thornbury, 1954, p. 144) or by isostatic uplift."

"Although the area was covered by glaciers (Duffell and McTaggart, 1953, p. 69) glacial erosion is slight and till very rare."

The above description of the physiography of the region by Trettin fits the area of the present property very well. Three different geomorphological areas containing gold-bearing deposits were recognized and arbitrarily chosen as units during the field study (Fig. 3) as follows:

1. Beaches along the present river - these are the deposits of the Recent valleys.

2. Terraces or Benches of bedded gravels, on which one section was mapped, have a relief of about six hundred feet (Fig. 4). These deposits probably represent the latest Pleistocene alluvial deposits which fill the Pleistocene valley.

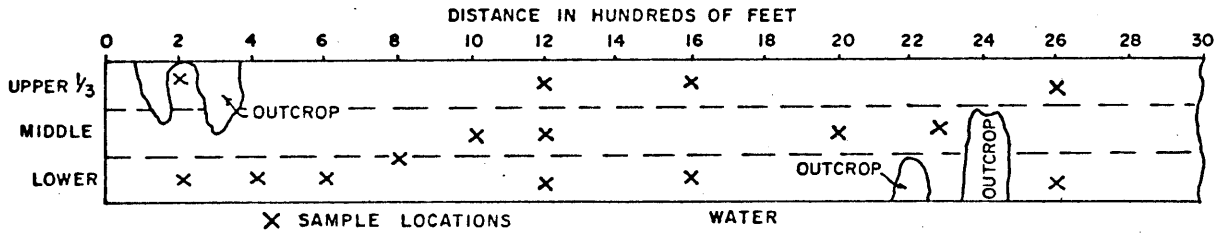
3. Area of the old Chinese workings. This area contains no well-developed terraces, the unconsolidated deposits are thin and much bedrock is exposed. These deposits were evidently found to be the richest on the property as indicated by much evidence of systematic hand mining of unconsolidated material from bedrock crevices and of the dirty gravels comprising discontinuous beds near the bedrock surface. This area may well represent a portion of the Pleistocene valley not subsequently infilled with thick terrace deposits.

FIELD WORK

Work on the property was concentrated mainly on the beaches where twenty-three one cubic foot samples were taken and panned by hand down to a black sand - gold - platinum concentrate. Because there was no excavating equipment available for the work, all samples were taken at approximately one foot of depth by hand digging except one sample which was obtained at a 4.5 foot depth by blasting

and hand digging.

Beach A (see figure 3) was sampled in detail as shown on the diagrammatic sketch below.



The average value of all fifteen near-surface samples (Appendix B) is thought to approach the average grade of the near-surface part of the beach.

Beach B was sampled by four - one cubic foot samples spaced along the beach, each a composite of material from two or three locations. The average of the four samples cannot be considered to be an accurate average of the near-surface part of the beach, but because it is approaching the average obtained for Beach A, that average may well be valid for Beach B as well.

Beach C was sampled by two composite - 1 cubic foot samples taken from the northern and southern parts of the beach. These values are not thought to be representative and in fact are exceptionally low on the basis of visual appraisal in the field.

Beach D is a composite sample from eight localities along the beach and cannot be considered

representative of the average grade.

In order to see whether the terrace or bench deposits which comprise many millions of cubic yards of materials, represented any economic potential, the section where the jeep road descends to the river was mapped and checked for any contained values (Figs. 3 & 4). Where gold was present, a one cubic foot composite sample was taken from that bed in order to give some idea of the order of magnitude of the contained values.

No time was available to map and sample the old Chinese workings adequately, however traverses were made across the area and at one gravel horizon a sample was taken which although non-representative of any average value, does indicate that high-grade material is present (\$2.90/yd.)

Some general observations pertaining to the area are:

1. The gold is quite fine and only a few pieces in all the samples could be considered of nugget size.
2. Clay is an extremely important constituent in fixing the gold. Generally the dirtier gravels are richer in gold.
3. Although boulders might be thought to lower the average grade, they may in fact help to raise it. In several cases particles of gold were seen held to the surface of boulders by a thin layer of clay.

ECONOMIC GEOLOGY

In order to discuss the potential economics of mining the three gold and platinum bearing units defined above some yardstick of costs must be calculated, albeit at this stage very approximate. To establish a reasonable per day cost of operation, the mining operation envisioned by Shore Exploration was used (See Appendix A). Thus:

Type of Operation Envisioned:

1. Mining - 1 front end loader
 - 1 D-8 cat
2. Transport - 1 movable conveyor
3. Concentrating Plant -
 - self-propelled steel barge
 - wash plant
 - tromel
 - gravity concentrating complex
 ie. tables, jigs, cyclones, etc.

Approximate Costs: 24 hour basis - 200 days/yr.

10 men @ \$50/day	500.00
Cooking Staff, food & camp	150.00
Cat costs (Amortization & repair)	200.00
Front end loader (Amortization & Repair)	150.00
Conveyor (Amortization & Repair)	50.00
Barge (Amortization & Repair)	100.00
Concentrating Plant (Amortization & Repair)	200.00
Management	100.00
Exploration & Research	100.00
Miscellaneous	100.00
	<hr/>
TOTAL COSTS	\$1,650.00/day

To date three areas of deposits with potentially profitable gold and platinum content have been outlined;

Beach

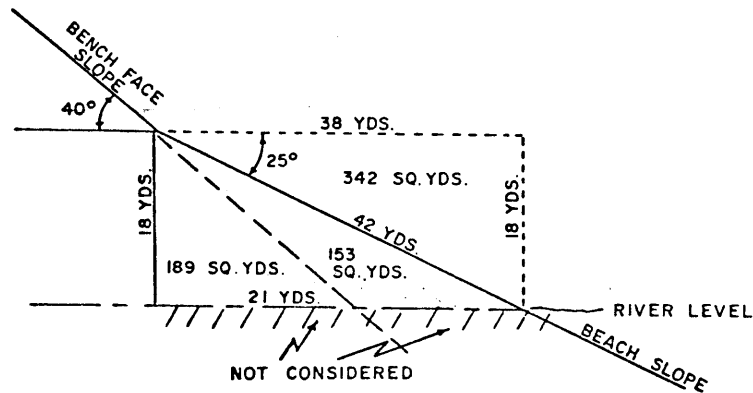
The gravel beaches along the Fraser River that are held with the present property are shown on Figure 3. Areas not shown as beach are primarily rock outcrop except for the Indian Reserve area on the west side of the river, much of which is excellent beach.

The values obtained on the two beach samples from the initial sampling by Shore Explorations suggested that 500 yards per day at the values indicated by this early sampling would have made an approximate break even operation. Thus: $500 \text{ yards}^3/\text{day} \times \$3.25/\text{yds}^3 = \$1,625.00/\text{day}$.

The testing procedure on the beaches sampled during the present investigation has been described under the heading "fieldwork". Although this work has been too limited to prove the average grade of the beaches, the extensive sampling on Beach 'A' has given a conservative order of magnitude of the beach values, at least in the near-surface area. For evaluation purposes using the average values of the samples from Beach A, the break even point would be approximately 2,600 yds/day.

$$2,600 \text{ yds}^3 \times 63\text{¢}/\text{yds}^3 = \$1,638.00$$

Below is a sketch of the approximate average configuration of the beaches in cross-section which is used to calculate ore reserves at the 63¢/yd³ figure. The sketch considers only the part of the beach above the river level stage encountered in early to mid April, which was probably not the lowest stage. Thus the deposits underlying the beach below this level are not considered, and the reserves are probably conservative in the probable and possible categories.



Reserves:

Proven (1 yd. depth on Beaches A & B)
 $= 42 \times 1 \times \frac{5000}{3} = 70,000 \text{ yds}^3$
 @ 63¢/yd.

Probable (Triangular area between beach slope and the projection of the slope of the bench face or side hill on Beaches A & B.)
 $= 153 \times \frac{5000}{3} = 255,000 \text{ yds}^3$
 @ 63¢/yd.

Possible (Total triangle underlying beach to arbitrary river level used and considering all beaches)
 $= 342 \times \frac{15,000}{3} = 1,710,000 \text{ yds}^3$
 @ 63¢/yd

On the basis of the approximate cost of the mining procedure previously described and assuming the 63¢/yd is valid for all categories

Proven Reserves	- 27 days
Probable Reserves	- 98 days
Possible Reserves	- 660 days or approximately 3 yrs @ 200 days per year.

The above evaluation indicates the definite possibility of an economic placer mining operation on the beach deposits. To prove this, more sampling will be required using equipment capable of excavating samples at depth. Further work should test:

1. The possibility of a substantial reserve of gravel below the river level.
2. The average grade of the gravels with increasing depth, particularly the possibility of increasing values at depth.
3. The amount of beach material that can be excavated per/day by a front-end loader and D-8. Very large boulders on the beach will require special handling during the operation. The possibility of alternate equipment that might handle the excavation more efficiently should be considered.

Bench

The terrace or bench of bedded gravels offers a huge reserve of gravel. The general dimensions are well documented by the area outlined on figure 3 and the mapped section shown on figure 4.

Visually interesting concentrate was recovered from horizons B,D,E, and F. When the assay results were received they were questioned by the writer and the lab reran the remaining portion of the samples. Both sets of assays are shown on figure 4. Although the samples cannot be considered as reliable average values, none-the-less they do suggest a possible huge reserve of gravel in the upper part of the bench in the 15¢ to 35¢/yd range. With the possibilities of cheap mining and transportation of this gravel in large quantities, these gravels offer an interesting economic potential. Further investigation should include:

1. Mapping of the entire outcrop length of the Bench.
2. Testing and sampling of interesting horizons within the section.
3. Sampling of the uppermost portions of the bench from surface, probably using heavy equipment and taking sizeable samples.
4. Tests on the costs of handling large volumes of bench material and transporting it to the beach area.

Area of Old Chinese Workings:

This area, comprising small poorly-developed terraces, thin unconsolidated deposits and much bedrock, was found to be very rich in streaks or pockets judging by the considerable amount of hand-mining done by the Chinese miners. The only gravel horizon sampled was above Little Leon Creek

and ran better than \$2.50/yd. Detailed mapping and testing of the various deposits should be carried out to determine whether large-scale bulk mining methods would be profitable. This investigation should include the possibility of ripping the bedrock to recover gold and platinum trapped in the many cracks which apparently acted as a series of natural riffles.

CONCLUSIONS AND DISCUSSION

1. Three separate geomorphological areas containing gold-platinum bearing deposits have been outlined offering variable reserves of gravel, average values, distribution of values, difficulty and expense of mining, transportation and concentrating. They are:

- a. Beaches along the present river
- b. Terraces or benches of bedded gravel
- c. Area of the old Chinese workings.

2. The average value of the samples taken on "A" Beach (63¢/yd) and the values obtained from samples of several beds of the Bench (Fig. 4) are definitely interesting.

3. The original values obtained by Shore Exploration Ltd. have not been duplicated by the results of the present study. Just why the discrepancy between two values of \$3.35 and \$3.22 in the original two samples and the average value of \$.63 obtained from intensive sampling of the same beach (A) during the present investigation is un-

resolved. As a routine of the sampling process, the writer recorded a visual description of the apparent values contained, based mainly on the visible gold content with such comments as poor, fair, good, excellent. In several samples where the concentrate was recorded as excellent, the results came back with poor values. Upon questioning the procedure by the laboratory, some of the last samples sent were re-run yielding some significant differences with a net increase in value. None of the samples from A Beach were available for re-run. Under the circumstances the writer has used the average value of the A Beach for this report but considers this figure to be conservative.

4. If the raw gravel can be mined, moved and the values separated at minimum expense and in sufficiently large quantities, the gold-platinum values obtained from the present study offer an interesting economic potential.

RECOMMENDATIONS

The results of the present preliminary study are the outlining of three broad areas containing whole or partial sections with gold-platinum values sufficiently high to indicate an economic potential. In the case of the beach deposits sufficient sampling was done to establish small reserves of proven ore at a price of 63 cents/yd.

The next exploration phase should include:

1. Geological Mapping and Sampling; to establish large reserves of gold and platinum bearing gravels. This would entail mapping and sampling in detail of the interesting gravel deposits and should aim at the establishment of substantial reserves of gravel at any value above the 15¢/yd figure. The use of excavation machinery would be necessary to sample the deposits away from outcrop areas at depth, as for example the top of the bench and the beach.

2. Evaluate the best equipment and mining procedure for excavating and transporting the gravels, and establish a cost estimate for this phase of the operation. Such equipment would have to have the flexibility of handling material from all the areas containing gold-platinum bearing deposits.

3. Evaluate the best combination of equipment to handle the ore concentration and to establish a cost estimate for this phase. The steel barge proposed by Shore as

a shell for the plant, appears to offer the best solution to the problems of mobility required on a property with the linear extent and large fluctuations of the Fraser River.

4. Carry out a market study to establish the greatest return from the concentrate product of the deposits.

5. Complete a feasibility report based on the reserve categories in different price ranges and the costs of mining, transportation and concentrating when calculated.

Cost Estimate:

1. Geological Mapping and Sampling:	\$30,000
2. Evaluation of Mining and Transportation Procedures	\$10,000
3. Evaluation of the Optimum Concentrating Plant	\$10,000
4. Market Study and 5 Feasibility report would be included in the above cost figures	-----
TOTAL	\$50,000

Edmonton, June, 1971



Expiry Date: Nov. 4, 1971-

K. Warren Geiger
 K. Warren Geiger Ph.D., P. Eng.
 Consulting Geologist
 42 Glenmore Crescent
 St. Albert, Alberta.

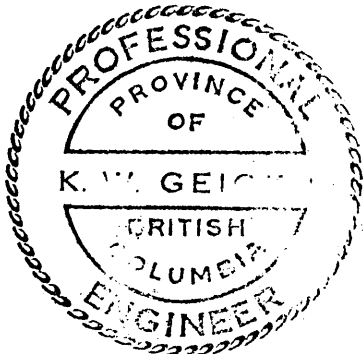
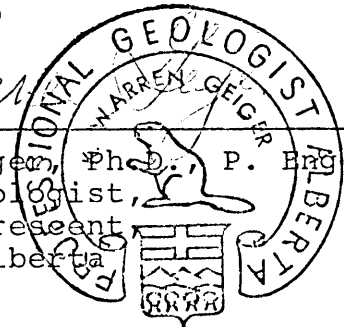
 A circular seal for a Professional Geologist in Alberta. The outer ring contains the text "PROFESSIONAL GEOLOGIST ALBERTA". The center features a crest with a bison and a shield, with the name "WARREN GEIGER" written across it.

1. I, K. Warren Geiger, am a consulting geologist residing at 42 Glenmore Crescent, St. Albert, Alberta.
2. I have a B.Sc in Mining Engineering from the University of Alberta at Edmonton and M.S. and Ph.D. degrees in Geology from Cornell University, Ithaca, New York.
3. I am a Professional Geologist registered with the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
4. I am a Professional Engineer registered by non-resident license with the Association of Professional Engineers of the Province of British Columbia.
5. I possess fifteen years of experience in the fields of mineral exploration, mining and groundwater geology.
6. I have no material interest in the Babkirk Placer Gold and Platinum property.

Within the scope of this report, all information and conclusions are believed to be accurate.

Edmonton, June, 1971

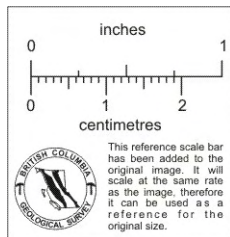
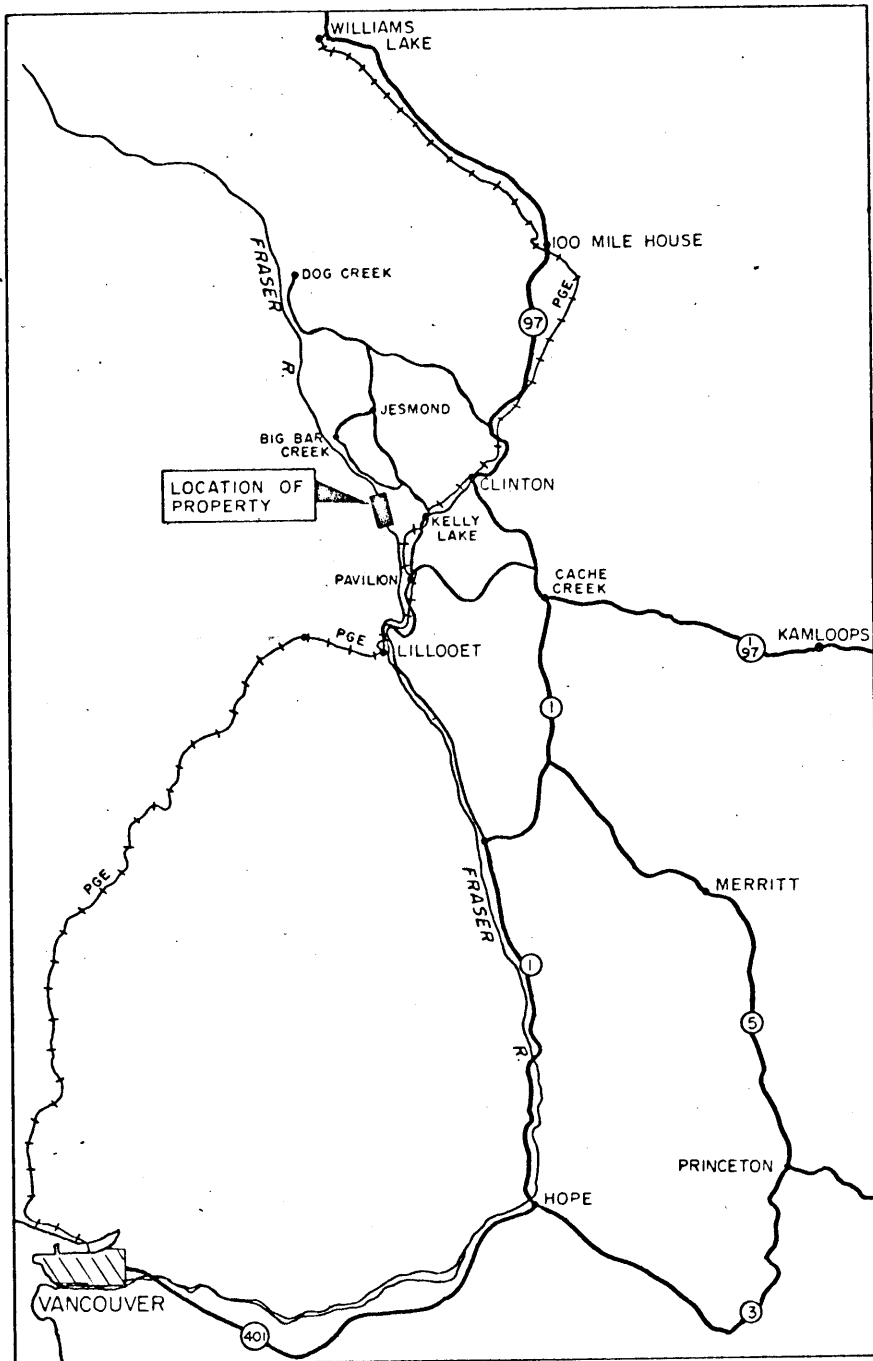
K. Warren Geiger
K. Warren Geiger, Ph.D., P. Eng., P. Geol.
Consulting Geologist,
42 Glenmore Crescent
St. Albert, Alberta



Expiry Date: Nov. 4, 1971

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- Thornbury, W.D. (1954): Principles of Geomorphology, Wiley.
- Trettin, H.P. (1961): Geology of the Fraser River Valley between Lillooet and Big Bar Creek, B.C., Dept. of Mines, Bull. 44, pp. 1-102.



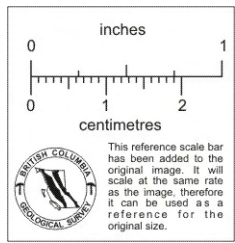
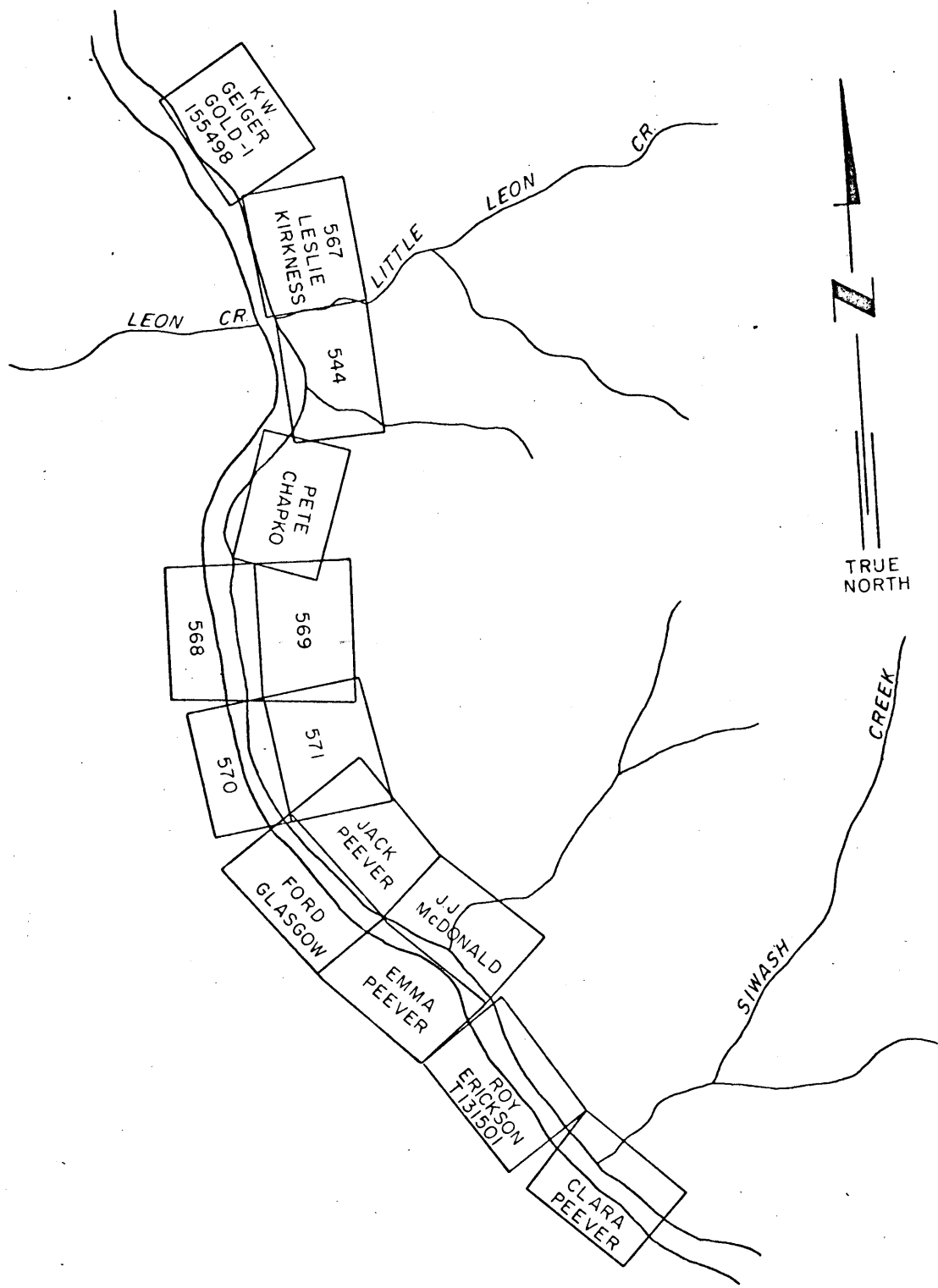
SHORE EXPLORATIONS LIMITED

LOCATION OF
THE BABKIRK PROPERTY

K. WARREN GEIGER - CONSULTING GEOLOGIST
EDMONTON, ALTA

JUNE, 1971

FIG. 1



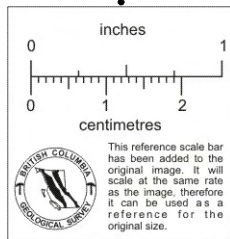
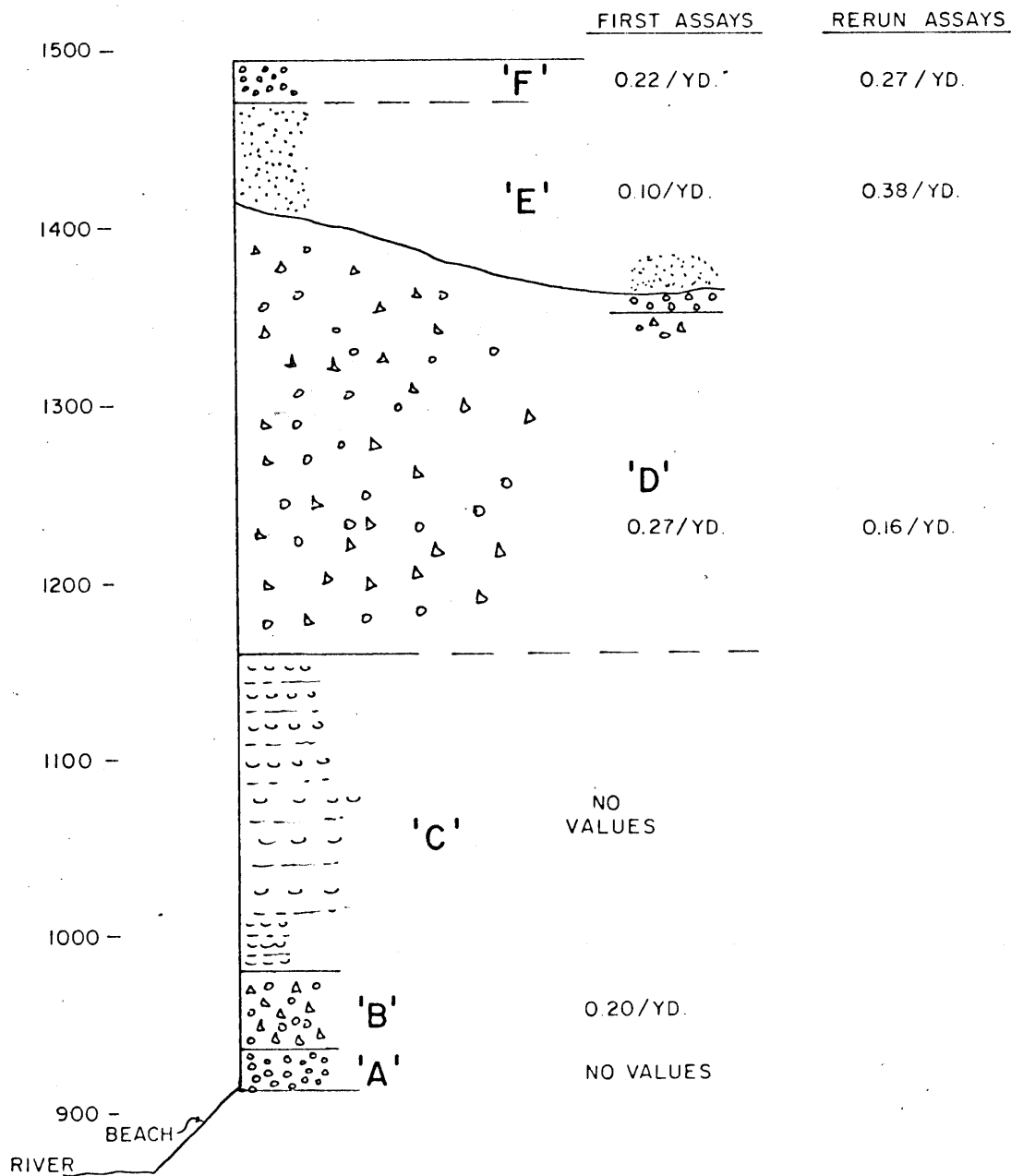
SHORE EXPLORATIONS LIMITED

LOCATION OF
THE BABKIRK ASSOC. PLACER LEASES
ALONG THE FRASER RIVER

K. WARREN GEIGER - CONSULTING GEOLOGIST
EDMONTON, ALTA

JUNE, 1971

FIG. 2



**SHORE EXPLORATIONS
LIMITED**

GEOLOGICAL SECTION A SHOWING
GENERAL STRATIGRAPHY & VALUES OBTAINED
FROM
ONE COMPOSITE SAMPLE OF EACH HORIZON

K WARREN GEIGER -CONSULTING GEOLOGIST
EDMONTON, ALTA. JUNE, 1971

FIG 4

APPENDIX A

INFORMATION, ECONOMIC PROJECTIONS AND PROPOSED
DEVELOPMENT PROGRAM
BASED ON INITIAL SAMPLING

BY

SHORE EXPLORATIONS LTD.

Shore Mines Limited.(N.P.L.)

Production Feasibility Study on Fraser River

The past experience in placer mining has proved that although the precious metals are in commercial quantities in some operations, the operations have not been successful or if they are they are on a small scale. Our thinking is that if the precious metals are in a deposit there must be a way, through new methods and up - graded processes, to bring these deposits into successful mining operations.

With this in mind we think the idea of a self propelled barge is the answer for certain types of river placer operations. On rivers the size of the Fraser the floating mobility of a barge such as this gives the production unit barge a safety feature, extends the operation time for the season and would cut operational costs once set up.

The production barge would be designed and constructed under the supervision of Roy L. Erickson. The barge will be a self propelled production unit constructed in such a way (see attached design plan) that the deposit material will be brought on board by a mobile conveyer at the front of the barge , wash and separate gravel from the clay and sand. Then process the sand and fines through a settling tank and a water separation unit. The final stage of separating the precious metals from the sand fines is possibly the slowest part of the entire process but its rate of recovery is many times higher than the panning process which was used in the test samples and resulted in the first two assay's which were rated as being high grade. After the fines and clay solution are processed to extract as much precious metals as possible the remaining sand, clay and water solution will be discharged from the back end of the barge back into the settling pond on river bank where the material was taken from. The rock and gravel which have been washed in the process will be discharged to a stockpile on bench (if there is any market possibility for washed - crushed rock) or discharged into settling pond with other discharge material.

Based on results of tests carried out by Roy L. Erickson

1 cuft	produced	9.62 oz.	concentrate	(measured)
1 cuyd	"	16.23 lbs.	"	
122.61	"	2000 lbs.	"	or one ton.

These figures were attained with panning by hand therefore it is impossible to establish how much concentrate was lost out of that measured cubic foot of material.

Shore Mines Limited (N.P.L.)

Production Financing Study

To put the Babkirk - Peever into commercial production

Estimated financing needed :

Road construction	\$ 13000.
Further evaluation work	7000.
Construction of powered barge	38000.
Bulldozer - D8	18000.
Loader - Cat 955	12000.
Diesel electric plant	5000.
Washing plant, tromel, pumps, etc.	20000.
Electric motors, pumps, etc.	18000.
Camp, trailers, cookhouse, etc.	8000.
Truck - 4 wheel drive 1 ton	6000.
Overallowance	<u>25000.</u>
	\$ 145000.

Estimated labor costs : exclusive of barge

\$ 5000.
\$ 150000.

Shore Mines Limited.(N.P.L.)

Evaluation of Babkirk - Peever Syndicate Leases

Babkirk - Peever Syndicate holds 12 placer leases .
Shore Syndicate by Roy L. Erickson holds 1 placer lease.
The thirteen placer leases are presently held in good standing
with assessment work completed for the 1971 year.

The thirteen leases cover approximately four miles in length
on the Fraser River, British Columbia. These leases take in
both sides of the river plus the benches above the actual river
bed. See attached lease map.

The portion tested is the area between the low water and the
high water lines which is the more likely area to contain the
biggest potential for a commercial placer operation to be
successful.

Mr. Roy L. Erickson on two different occasions took test
samples from the leases spread over a three mile length which
produced :

1 st. Sample : Assay attached. Done by Crest
Laboratories of Vancouver, B.C. Valued at
\$ 480.23 per concentrate ton. F.O.B. mine site.

2 nd. Sample : Assay attached. This sample was taken
in a measured cubic foot container over a
three mile area. This one cubic foot produced
(by pan only) 9.62 oz. of concentrate. This
assay was done by the Colorado School of Mines
Research Institute, U.S.A. Valued at \$ 500.20
per concentrate ton. F.O.B. mine site.

Valuation of a cubic yard of deposit material :

1 cuft. produced 9.62 oz. of concentrate,

27 cuft. or 1 cuyd. produces 16.23 pounds of
concentrate,

It takes 122.61 cuyd. to produce 2000 pounds or
one ton of concentrate.

Based on the lower valuation of \$ 480.23 per ton
the value of one cuyd. is \$ 3.91 in place,
less all production costs.

Based on the higher valuation of \$ 500.20 per ton
the value of one cuyd. is \$ 4.07 in place,
less all production costs.

COLORADO SCHOOL OF MINES RESEARCH INSTITUTE

P.O. Box 112

GOLDEN, COLORADO 80401

7 October 1970

CSMRI Project No. 300930

Mr. Hugh R. Currie
c/o Pacific Western Securities Ltd.
601 Northgate Building
Edmonton 15, Alberta
Canada

Dear Mr. Currie:

The following quantities of the noble metals were found in the sample which you submitted to us for assay.

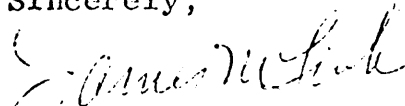
Gold	7.2 oz/ton
Silver	- 0.5 oz/ton
Platinum group	- 1.6 oz/ton

An emission spectrograph of the Doré bead indicated that the platinum group was approximately distributed as follows:

Platinum	- 0.5 oz/ton
Palladium	- 1.0 oz/ton
Others	- 0.1 oz/ton

I am enclosing our invoice for the assay work with this letter. If I may be of any further assistance, please contact me.

Sincerely,



James M. Link
Manager, Mining Division

/laj

1068 HOMER STREET
 VANCOUVER 3, B.C.
 PHONE 688-8586

CRF 30RAT LTD.
 7911 ARGYLL ROAD
 EDMONTON 82, ALBERTA
 PHONE 469-2391

CERTIFICATE OF ASSAY

TO Mr. Roy Erickson
 101 Glenhaven Crescent
 St. Albert, Alberta

Sept. 17, 1970.

Lab. No. 1575
 cc: Amas Fergusson & Wild Ltd.
 1650 - 1055 W. Hastings St.
 Vancouver, B.C.

THE FOLLOWING ARE THE RESULTS OF ASSAYS MADE BY US UPON THE HEREIN DESCRIBED SAMPLES.

MARKED	GOLD		SILVER	PLATINUM							TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent		
No Tag	9.88	\$345.80	2.5	0.49							

NOTE:

Rejects retained one month.
 Pulps retained three months
 unless otherwise arranged.

Gold calculated at \$ 35.00 per ounce

L. S. Ross
 Registered Assayer, Province of British Columbia

APPENDIX B

ASSAY VALUES AND GRADE
CALCULATIONS FROM SAMPLES
TAKEN DURING THE PRESENT
STUDY

COLORADO SCHOOL OF MINES RESEARCH INSTITUTE
P.O. Box 112
GOLDEN, COLORADO 80401

May 11, 1971

CSMRI Project No. 310433

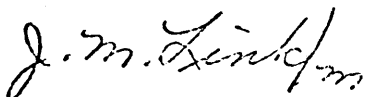
Mr. Hugh R. Currie
President
Shore Syndicate of Edmonton
P. O. Box 2767
Station A
Edmonton, Alberta

Dear Mr. Currie:

Enclosed are the analytical results of the placer samples you sent us.

The Clinton samples are in process now, and the results will be sent to you as soon as they are available.

Sincerely,



James M. Link
Director of Research
Mining Division

ebm
enclosure

Analytical Report

<u>Sample No.</u>	<u>Description</u>	<u>Pt oz/ton</u>	<u>Au oz/ton</u>	<u>Dry Weight g</u>
1	2 + 005 Upper	0.14	6.98	27.5
2	12 + 005 Upper	0.10	0.53	57.4
3	16 + 005 Upper	0.04	1.74	151.8
4	26 + 005 Upper	0.06	1.17	233.5
5	10 + 005 Middle	0.16	5.00	145.2
6	12 + 005 Middle	0.18	2.99	68.3
7	20 + 005 Middle	0.10	5.20	225.3
8	23 + 005 Middle	0.08	1.06	201.8
9	8 + 005 Lower Middle	0.20	8.49	83.3
10	2 + 005 Lower	0.30	8.22	111.0
11	4 + 005 Lower	0.20	6.56	148.1
12	6 + 005 Lower	0.20	7.51	109.3
13	12 + 005 Lower	0.12	3.38	209.3
14	16 + 005 Lower	0.18	8.48	112.7
15	26 + 005 Lower	0.14	1.67	64.4
16	A Horizon Check White Sand	< 0.01	(0.005)	374.5
17	B Horizon	< 0.01	0.930	203.1

BEACH A

Sample Location	Concentrate # Dry Wt. ozs/ft ³	Oz Au/tn Concentrate	Value Gold /yd Gravel	oz Pt/ton of Concentrate	Value Pt/yd Gravel	Total Value /yd of Gravel	Field Comments
(1) 2+00U	0.97	6.98	\$=.20/yd	0.14	\$.012	\$0.21	Poor-area of bedrock could be wash from above
(2) 12+00U	2.02	0.53	=.03/yd	0.10	.017	0.05	Poor
(3) 16+00U	5.35	1.74	=.28/yd	0.04	.018	0.30	fair to good
(4) 26+00U	8.25	1.17	=.29/yd	0.06	.042	0.33	good to excellent
(5) 10+00M	5.13	5.00	=.76/yd	0.16	.069	0.83	good
(6) 12+00M	2.41	2.99	=0.21/yd	0.18	.037	0.25	Poorer-more silt may be sluff from above
(7) 20+00M	7.95	5.20	=1.22/yd	0.10	.067	1.29	Excellent
(8) 23+00M	7.11	1.06	=0.23/yd	0.08	.048	0.28	fair to good lots of black sand
(9) 8+00L/M	2.94	8.49	=0.74/yd	0.20	.050	0.79	Good
(10) 2+00L	3.92	8.22	=0.95/yd	0.30	.099	1.05	Good
(11) 4+00L	5.23	6.56	=1.02/yd	0.20	.088	1.11	Good
(12) 6+00L	3.86	7.51	=0.86/yd	0.20	.065	0.93	Good
(13) 12+00L	7.39	3.38	=0.74/yd	0.12	.075	0.82	Good
(14) 16+00L	3.98	8.48	=1.00/yd	0.18	.060	1.06	Excellent
(15) 26+00L	2.27	1.67	=0.11/yd	0.14	.027	0.14	Poor

Average value = $\frac{8.64}{15} = 58\text{¢/yd gold} + \frac{0.77}{15} = 5\text{¢/yd pt.} = 63\text{¢/yd Gravel}$ or $\frac{9.44}{15} = 63\text{¢/yd Gravel}$

COLORADO SCHOOL OF MINES RESEARCH INSTITUTE

P.O. Box 112

GOLDEN, COLORADO 80401

May 20, 1971

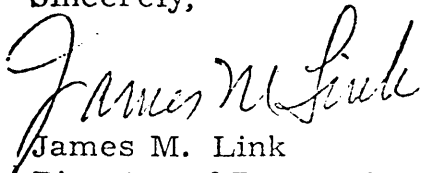
CSMRI Project No. 310433

Mr. Hugh R. Currie
President
Shore Syndicate of Edmonton
P. O. Box 2767
Station A
Edmonton, Alberta

Dear Mr. Currie:

Here are the results of the Clinton samples. If you have any questions or if we can be of further service, please don't hesitate to contact us.

Sincerely,



James M. Link
Director of Research
Mining Division

ebm
enclosure

enclosure with letter to
Mr. Hugh Currie
Shore Syndicate of Edmonton
May 20, 1971

Analytical Laboratory Report

<u>Description</u>	<u>Au</u> <u>oz/ton</u>	<u>Ag</u> <u>oz/ton</u>	<u>Pt</u> <u>oz/ton</u>
Horizon E	0.910	1.54	<0.05
Horizon F	2.69	1.82	<0.05
Horizon D	2.41	1.72	<0.05
Beach B1, Lower Middle	5.83	2.27	<0.05
Beach C, Upper	2.22	2.00	<0.05
Beach D, 8 Sample	2.64	1.71	0.09
Beach B4, Middle	1.27	0.94	0.09
Beach ^{B-3} Middle, 3 places	2.62	1.19	(0.35 (0.30
Beach B2, Lower & Middle	4.05	0.71	0.07
Horizon Above Line <i>Little Leon</i>	7.27	2.33	<0.05
Beach C, Lower Southern	0.90	0.98	<0.05
Beach "A" 10+50 ft, C 4.5 ft depth, Middle to Upper	2.72	1.10	<0.05

BEACHES B-C-D AND HORIZON AT LITTLE LEON CREEK
USING MAY 20 RESULTS OF DENVER ASSAYS

Sample Location	Concentrate # Dry Wt. Ozs/ft ³	Oz Au/tn Concentrate	Value Au/Yd Gravel	Oz Pt/ton Concentrate	Value Pt/yd Gravel	Total Value /yd Gravel	Field Comments
Beach B	(Weights Shore Exp.)						
B1-L/M	3.63	5.83	\$0.63/yd	-	\$ -	\$0.63	Poor-but may have good platinum
B2-L/M	5.50	4.05	0.66	0.07	.03	0.69	Good
B3-M	4.63	2.62	0.36	0.35	.14	0.50	Poor
B4-M	3.50	1.27	0.13	0.09	.03	0.16	Excellent
Beach C							
C1 Northern	2.88	2.22	0.19	-	-	0.19	Good to Excellent
C2 Southern	6.25	0.90	0.17	-	-	0.17	Good to Excellent
Beach D							
Composite 8 Samples	3.63	2.64	0.28	0.09	.03	0.31	-
High Grade Little Leon	13.5 (2.25 x 6)	7.27	2.90	-	-	2.90	-

COLORADO SCHOOL OF MINES RESEARCH INSTITUTE

P.O. Box 112

GOLDEN, COLORADO 80401

June 16, 1971

Project 310433

Mr. Hugh R. Currie
Shore Exploration Ltd.
301 Northgate Building
Edmonton 15, Alberta

Dear Mr. Currie:

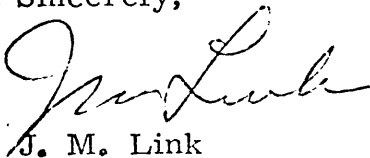
The following are assays of samples submitted for gold and platinum assays:

	<u>Ounces Gold</u>	<u>Ounces Platinum</u>
Horizon E	3.98	< 0.05
Horizon F	3.29	0.06
Horizon D	1.43	< 0.05
Beach B1 Lower Middle	4.88	< 0.05
Beach D 8 Sample	3.23	< 0.05
Beach Middle 3 places	3.42	0.30
Beach B2 Lower Middle	2.37	0.05
Beach C Lower Southern	1.13	< 0.05

Free Gold apparent in all samples.

If you have any questions, please do not hesitate to contact us.

Sincerely,



J. M. Link
Director of Research
Mining Division

/vsc

Shore Syndicate OF EDMONTON

P.O. BOX 2767 STATION-A, EDMONTON, ALBERTA

June 15 , 1971.


Mr. K. Warren Geiger
42 Glenmore Cresant,
St. Albert, Alberta.

Dear Warren:

The results of the assay's of the last twelve samples, using the complete sample this time, are as follows. These figures were taken over the telephone and confirmation will follow in the mail.

Description	Au	Ag	Pt	Gram Wt.
1. Horizon E	3.98 oz.	1.54 oz.	-.05 oz.	92.34
2. Horizon F	3.29 "	1.82 "	.06 "	75.12
3. Horizon D	1.43 "	1.72 "	-.05 "	104.95
4. Beach BI Low-Mid	4.88 "	2.70 "	-.05 "	101.31
5. Beach C Upper	3.51 "	1.96 "	-.05 "	81.05
6. Beach D 8 samples	3.23 "	1.71 "	-.05 "	102.75
7. Beach B4 Middle	1.97 "	.96 "	.08 "	98.87
8. Beach Middle 3 place	3.42 "	1.90 "	.30 "	128.71
9. Beach B2 Low-Middle	2.37 "	.71 "	.05 "	153.36
10. Horizon above Leon	6.51 "	2.70 "	-.05 "	65.30
11. Beach C Low-South	1.13 "	.80 "	-.05 "	178.08
12. Beach A - 10'+ 50' at 4.5' depth	2.72 "	1.10 "	-.05 "	37.01

Yours Truly


Hugh R. Currie

BEACHES B-C-D, HORIZON AT LITTLE LEON CREEK
AND SAMPLE FROM 4.5 DEPTH ON BEACH A USING JUNE
RESULTS OF DENVER ASSAYS

Sample Location	Concentrate # Dry Wt. Ozs/ft ³	Oz Au/tn Concentrate	Value Au/ Yd Gravel	Oz Pt/ton Concentrate	Value Pt/yd Gravel	Total Value /yd Gravel	Field Comments
Beach B							
B1-L/M	$\frac{101.31}{28.35}=3.60$	4.88	\$0.52	-	\$ -	\$ 0.52	Poor but may have good plating
B2-L/M	$\frac{153.36}{28.35}=5.38$	2.37	.38	0.05	.02	0.40	Good
B3-M	$\frac{128.71}{28.35}=4.54$	3.42	0.46	0.30	.17	0.57	Poor
B4-M	$\frac{98.87}{28.35}=3.49$	1.97	0.20	0.08	.02	0.22	Excellent
Beach C							
C1 Northern	$\frac{81.05}{28.35}=2.86$	3.51	0.30	-	-	0.30	Good to Excellent
C2 Southern	$\frac{178.08}{28.35}=6.25$	1.13	0.21	-	-	0.21	Good to Excellent
Beach D							
Composite 8 Samples	$\frac{102.75}{28.35}=3.62$	3.23	0.35	-	-	0.35	-
Little Leon	$\frac{65.30 \times 6}{28.35}=13.80$	6.51	2.66	-	-	2.66	Excellent
Beach A							
10 + 50 4.5 Depth	$\frac{37.01}{28.35}=1.31$	2.72	0.11	-	-	0.11	Fair

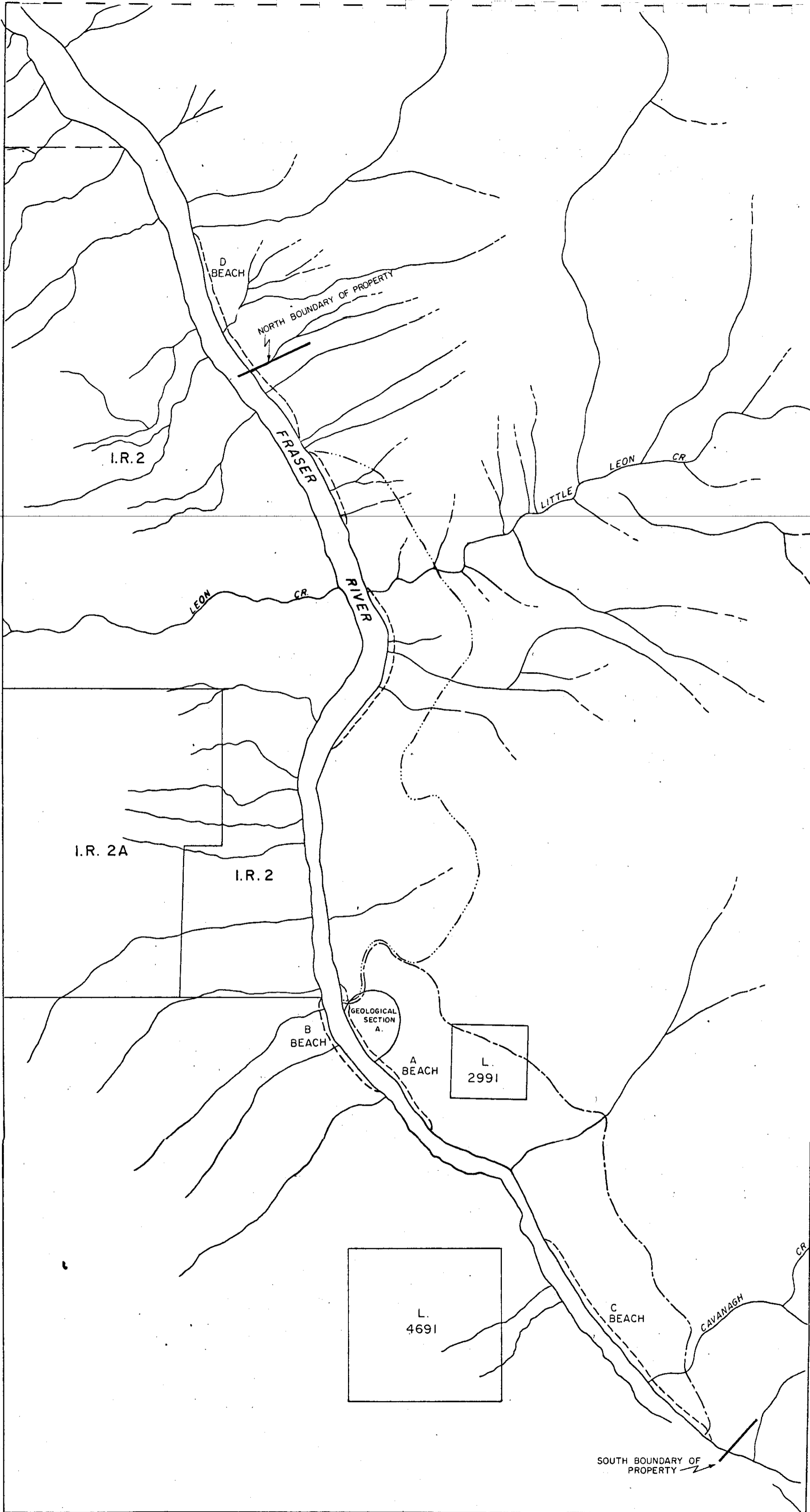
GEOLOGICAL SECTION A (SEE FIGURES 3 & 4)

FIRST ASSAYS

Sample Location	Concentrate # Dry Wt. Ozs/ft ³	Oz Au/tn Concentrate	Value Au/ Yd Gravel	Oz Pt/ton Concentrate	Value pt/yd Gravel	Total Value /yd Gravel	Field Comments
A. Horizon	13.22	-	\$ -	-	\$ -	-	-
B. Horizon	7.17	0.93	.197	-	-	\$0.20	-
D. Horizon	3.75	2.41	.267	-	-	.27	-
E. Horizon	3.25	.91	.101	-	-	.09	-
F. Horizon	2.75	2.69	.218	-	-	.22	-

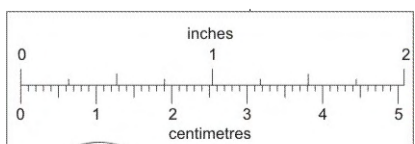
RERUN ASSAYS

D. Horizon	3.70	1.43	0.16	-	-	0.16	-
E. Horizon	3.26	3.98	0.38	-	-	0.38	-
F. Horizon	2.65	3.29	0.26	0.06	0.01	0.27	-



LEGEND

- BEACHES ALONG THE FRASER RIVER.
- AREA OF OLD CHINESE WORKINGS.
- AREA OF BENCHED OR TERRACED DEPOSITS.
- AREA OF ROAD SWITCHBACK DESCENT TO THE RIVER & GEOLOGICAL SECTION A.



This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

SHORE EXPLORATIONS LIMITED

SHOWING AREAS OF BEACHES, BENCH DEPOSITS & AREAS OF OLD CHINESE WORKINGS ON THE BABKIRK PROPERTY



K. WARREN GEIGER — CONSULTING GEOLOGIST

EDMONTON, ALTA.

JUNE, 1971

FIG. 3