

REPORT
ON

GEOLOGICAL EVALUATIONS OF PLACER LEASES

847, 692, 694

CARIBOO MINING DIVISION

BRITISH COLUMBIA

NTS - 93G/1-

Latitude - 53° 05'

Longitude - 122° 16'

Owned by -

PL. 694 - W. D. Battrum

847 - W. D. Battrum

692 - M. Mathieu

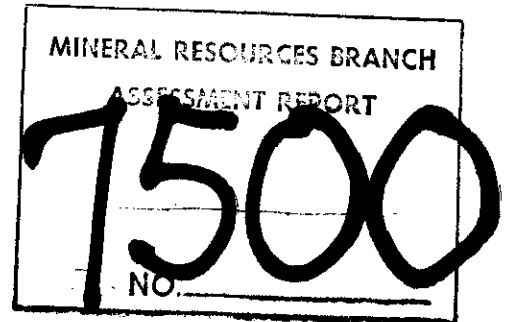
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in trust for
Brent Exploration Ltd.

Operator - Fort Steele Gold Syndicate

Author and Consultant - J. B. Prendergast, P. Geoph.

Dated - September 15, 1979.



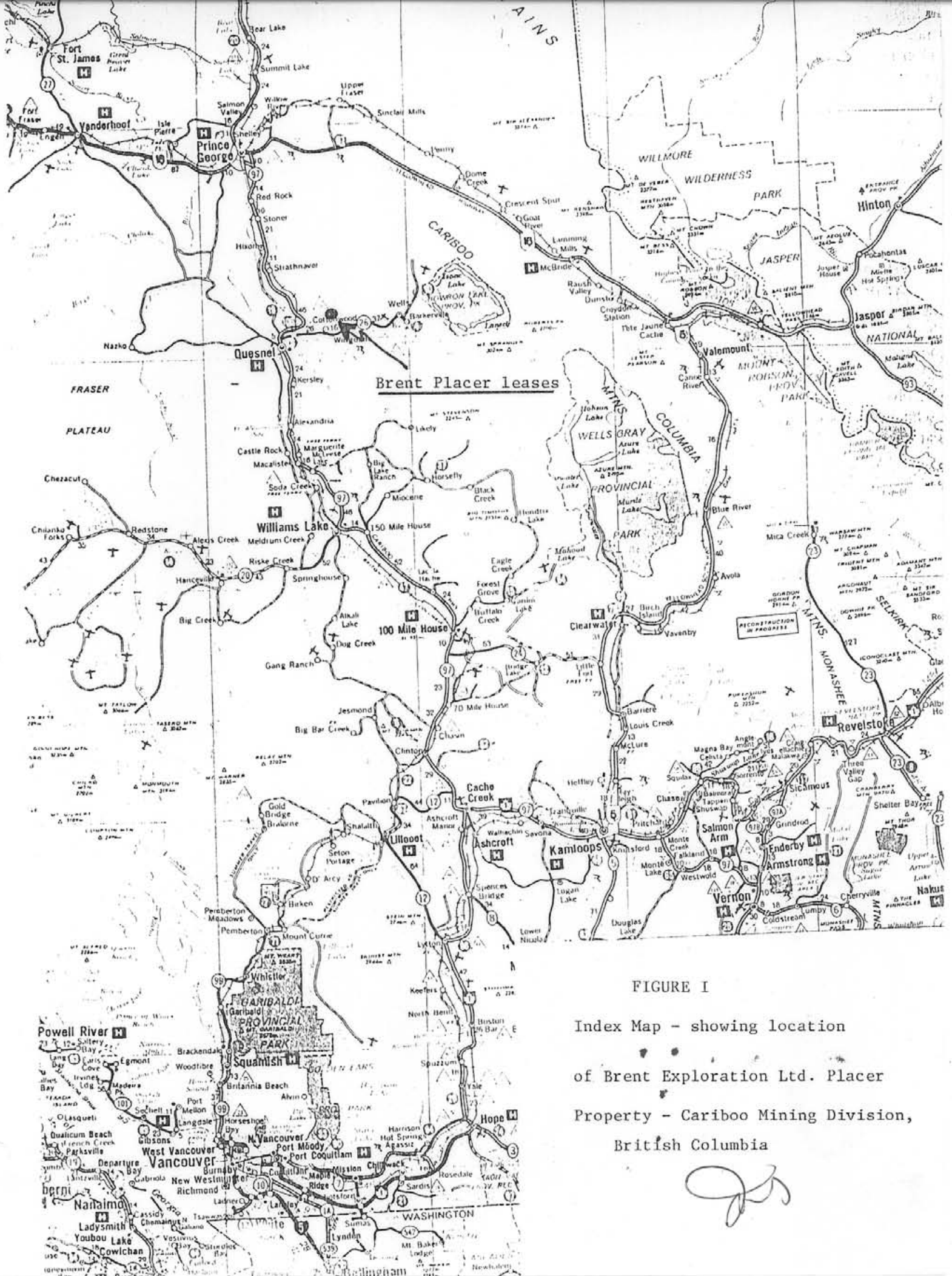


FIGURE I

Index Map - showing location
of Brent Exploration Ltd. Placer
Property - Cariboo Mining Division,
British Columbia

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INTRODUCTION

Three Placer Mining Leases have been optioned from Brent Exploration Ltd., through the registered claim owners, W. D. Battrum and Maurice Mathieu, who hold the claims as trustees for Brent, by J. B. Prendergast as representative of the Fort Steele Gold Syndicate of Calgary, Alberta. A geological evaluation has been made of these claims with a view to firstly determining if the property has any economic potential and to secondly formulate a programme to explore and develop the property to production, if warranted.

Property Location, Description and Accessibility

The three Placer Mining Claims are located in the Cariboo Mining Division on the Cottonwood River, some 18.8 kilometers northeast of the City of Quesnel. The index map included herewith as Figure 1 shows the position of the claims in relation to points of geographic reference.

The claims may be more particularly described as follows:

<u>Placer Mining Lease Number</u>	<u>Owner</u>	<u>Area</u>
847	W. D. Battrum	25.55 hectares (63.15 acres)
694	W. D. Battrum	28.61 hectares (70.71 acres)
692	M. Mathieu	13.20 hectares (32.63 acres)

Figure 11 shows the position of these claims in relation to their neighbouring leases.

Accessibility to the leases is by way of British Columbia Highway 26 east from Quesnel to a point some 21 kilometers (13 miles) east of the junction with Highway 97, thence by a gravel road 4.5 kilometers (2.8 miles) to the south shore of the Cottonwood River where a one room cabin sits and where at the time of the visit Mr. Patenaude, the holder of PL. 47, had a camp from which he was working his claim. PL. 847 and 694 are somewhat further west and can be attained using a four wheel drive vehicle over a rough trail as indicated on the Figure 11.

History of Property

The British Columbia Department of Mines Bulletin No. 28 of 1950 states that recorded gold production from the Cottonwood River to 1945 was about 10,000 ounces, this presumably from all properties that reported production along the river to that time. In 1961 to 1963 Canford Exploration did some bulk testing in the area on the south side of the Cottonwood close to the Canyon mouth near the east end of present claim PL. 694. They treated some 9400 cubic yards and recovered \$1307 in gold and \$2.90 in silver. In 1971 Stokes Exploration Management carried out an examination of four claims in the area, three of which roughly correspond to those under consideration here. Stokes washed approximately 100 pans and saw some gold in all but 4 or 5 of these pans. He remarks on the general fineness of the gold seen and indicated that the material from the river banks ran from .01 to .04 oz. per cubic yard, while that from a higher bench from .015 to .033 per cu. yd. -Canyon Bar near the mouth of the canyon ran from .01 to .18 oz. per cu. yd. He recommended a programme of bulk sampling which was carried out the following year by Brent. This latter programme yielded three selected areas where estimates of volume and grade were as follows:

- a) 50,000 cubic yards of .025 oz./yds.
- b) 100,000 cubic yards of .0188 ozs./yd.
- c) 40,000 cubic yards of .0242 ozs./yd.

No further work was carried out by Brent to the present and in fact the key portion of the claim group was lost to others when the leases expired.

The Fort Steele Gold Syndicate through the author, J. B. Prendergast, entered into an option agreement with Brent through W. D. Battrum and M. Mathieu to up date the Stokes evaluation and, if warranted, put the property into production, reserving to Brent a gross royalty. This report is concerned with the above up dating of Stokes work.

Summary of Work Done

The author and Mr. Norm Reid, Prospector, spent some time evaluating the property in August of 1979. The physiographic aspects of the leases in relation to other leases in the area and the sampling of those portions of the property considered to be most prospective form the major part of the examination. Little attention was paid to the specifics of bed rock

geology as this has little bearing on whether the leases have merit or not. Ten 40 kilogram samples were collected and brought to Calgary where they were taken to Diamin Holdings for analysis. These were collected along the bank of the river from locations that were considered to lie within the claim boundaries as well as could be judged in the field.

With regard only to the placer gold potential of the property, traverses were made of the leases, panning of any material thought to have any possible economic significance was carried out, actual locations of lease boundaries were determined to the closest limitations as might be expected from a field examination and surface samples were taken from locations thought to be most likely to yield favourable results. All information collected has been presented with this report in the commentary and on maps on a scale of 1:12,500. The total area of the leases could only be estimated after an attempt had been made to plot on a map all the pertinent leases and those that bordered to them in relation to the Cottonwood river, whose course in the immediate area of the property has changed in the last fifteen years to a recognizeable extent.

Description of Work

As previously noted the aims of the evaluation of this property were twofold, firstly to establish the real boundaries of the leases in relation to the actual placer mining potential of the property and secondly to determine in which parts of the claims further effort should be expanded.

In this respect Mr. Norm Reid, prospector, scouted the lease locations and the author, J. B. Prendergast, examined those parts of the leases lying within the valley of the Cottonwood River and more amenable to placer development. Because of the thick underbrush finding claim posts was most difficult and as can be seen from the accompanying Figure II not many were actually seen. In addition, the compilation of the various descriptions of the leases as noted by the locators in the files of the Mining Recorder's Office along with the reports of the Mines Inspector do not help very much in determining which claim owner has the actual rights to a particular sand bar or other location of promise. Nevertheless a best effort was made to do both with the result that there was very little area considered to be

of any real value and that sampling of this portion could only justify ten sample locations on both sides of the river within the small part of placer lease 692 not covered by adjacent staking.

Claim Locations

On site inspection coupled with the information available from the mining recorder's office in Quesnel indicates that very little of the three leases optioned from Brent Exploration Ltd. has any possibility of yielding sufficient volume of material to warrant placer production of any reasonable scale. Lease number 847 controls almost no river valley where any gravels could accumulate. Lease 694 is little better and certainly has no possibility of a volume accumulation of post glacial gravel - sand sequence that could support a commercial placer operation, although a portion of the Canyon Bar may lie within the lease limits, this Bar has every indication of a small volume higher grade potential. The third lease, number 692 has virtually been cut off from any large volume of sand-gravel by Patenaude's lease number 44 and Hale and Stewarts' lease and lease application 1014 and Tag 4252, leaving only the small area indicated on Figure II, most of which had been previously exploited.

GENERAL GEOLOGY

Outcrop maps of the southeast portion of NTS reference 93G suggest that the study area is underlain by Miocene sediments which lie unconformably on Upper Triassic and Lower Jurassic volcanics and related volcanic derivatives. The volcanic sequence in the vicinity of the leases strikes west of north and dips to the east. A relatively thin layer of glacial drift up to 20 feet thick extends over much of the area and masks bed rock except in cuts created by the drainage systems.

It is not, however, the bedrock geology that is of concern in this study but the surface and near surface unconsolidated material. Geological Survey of Canada (GSC) Map 3 - 1969 indicates that the surface material in the study area is of alluvial origin consisting of sand, gravel and silt, undoubtedly brought down the Cottonwood River from the Lightning Creek and Swift River drainage systems - both having been the scene of much successful gold placer operations. Lightning Creek had produced some

28,000 ounces of gold by 1945. The entire area was covered by a glacial ice sheet which moved, in its final stages, from south to north. It is not likely that this movement had much influence on the accumulation of gold in the Cottonwood River valley.

LOCAL GEOLOGY

Since this property was to be evaluated for its' placer gold possibilities little attention was paid to the bedrock geology other than to note where it enroached on the stream valley potential of the Cottonwood River. After having determined that only a small part of the leases had any volume potential the banks of the river were examined with a view to finding bars where richer gold values might compensate for smaller volumes. In this regard the author traversed both banks of the river and panned each of the small gravel - sand bars along the canyon walls - a few minute colours were all that were found in the best pans done. He also took one short traverse through the high ground west of the Number 1 post of Lease 694 to be sure that there was no possibility of stranded post glacial deposits in that location - there were not.

It was evident that much of the lower ground of lease 692 had been previously worked as evidenced by the piles of boulders obviously removed by a screening process. That area remaining was sampled at locations as indicated on the accompanying Figure III with the following results:

<u>Sample Number</u>	<u>Milligrams per cubic Meter</u>	<u>Comments</u>
1	22	fairly well sorted
2	25	fairly well sorted
3	20	fairly well sorted
4	93	inside of river bend
5	9	represents little volume
6	6	represents little volume
7	4	north bank of river, much reworked by river
8	6	as above
9	2	as above
10	8	as above

ECONOMIC GEOLOGY

The Cariboo Mining Division has been the most prolific producer of placer gold in the province having yielded about 40 percent of all reported production. The most important period of mineralization in British Columbia was during Jurassic time when the various intrusives of the Central Belt of the Cordilleran system were emplaced, for example the Cassiar - Omineca and Nelson Batholiths which have proved to be so important to the lode mining industry of the province. Auriferous quartz veins were formed by these same intrusive agencies and later erosion of these veins followed by the concentration and reconcentration of the heavy minerals by the forces of glaciation and later fluvial activity has produced the gold placer deposits.

There are four basic types of placer occurrence recognized in the area:

1. Preglacial gravels - not often seen but usually occurring on top of the bedrock and later covered by glacial material. The old time miners found these to be amongst the richest of gravels, however, they were often cut off abruptly by later glacier activity.
2. Glacial gravels - they are extensive over the area and invariably carry some gold although they were not often worked in the past because of the small quantities of gold contained. The recent major increase in the price of gold will make some of these deposits worth investigating.
3. Interglacial travels - these are reasonably common in the area and may often be recognized by the occurrence of stratified sands and gravels sandwiched between beds of boulder clay. They have been formed through interglacial stream activity which concentrated the gold from the glacial gravels.
4. Post glacial gravels are those occurring in present drainage systems and in older parts of these systems that have been stranded by diversions from the present stream beds, left high by tectonic movement of left as benches as the valleys were eroded downward. These deposits include bars and river flat accumulations, benches, stream beds and flood plains and old drainage courses. Concentration of the heavy minerals took place as the fluvial and alluvial forces worked and reworked the surface material placed previously by whatever cause. The processes

are going on at present as some river bars may be reworked each summer after high water.

The Cottonwood River placer gold has undoubtedly had its origin upstream in both the Lightning Creek and Swift River systems. Stokes in his 1971 examination did recognize some gravels that he thought to have been of preglacial origin; these were located on top of the bedrock and were recognized by their yellowish staining - probably from dissolved sulphides.

SUMMARY AND CONCLUSIONS

1. Three placer leases were optioned by the Fort Steele Gold Syndicate from Brent Exploration Ltd. and an examination carried out to substantiate previous work done by Brent's consultants and to determine the real boundaries of the claims in relation to their neighbours.

2. The area enclosed by the optioned claims that could possibly be of any potential for gold accumulation was so small that only a rich deposit would warrant further work.

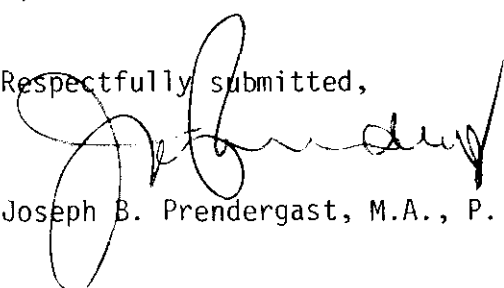
3. The results of the sample programme were not at all encouraging.

4. The original four leases held by Brent had yielded encouraging results in 1971 and 1972, even considering that gold prices were around \$50.00 per ounce at that time, however, most of the good ground included on these leases was lost when the leases expired and the restaking programme missed out on reacquiring the most important ground.

RECOMMENDATIONS

In view of the disappointing results obtained and as reported on herein, no further monies should be expended on this property, unless a deal can be made that would include leases numbered, 47, 444, 446, 1014 and tag number 4252 (lease not yet issued).

Respectfully submitted,


Joseph B. Prendergast, M.A., P. Geoph.

Qualifications of the Author

1. I, Joseph Benoit Prendergast, Professional Geophysicist prepared the attached report dated September 15, 1979 base on a personal visit to the Cottonwood River Placer Leases of Brent Exploration Ltd., also on previous reports written by R. B. Stokes, P. Eng., in October 1971 and October, 1972 also on library research carried out at the Institute of Petroleum and Sedimentary Geology in Calgary.

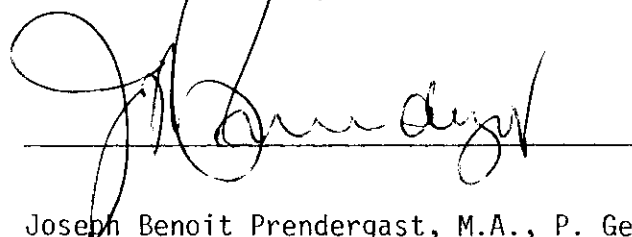
2. I am a graduate of the University of Toronto with a Bachelor' degree (1950) in Physics and Geology and a Master's degree (1951) in Geophysics.

3. I have been a practising geophysicist and geologist for 28 years with 18 of those years spent exclusively in mining work and the last ten years in both mining and petroleum activity.

4. I am resident in the City of Calgary in the Province of Alberta at 1720 - 110th Avenue Southwest and am a member in good standing of the Association of Professional Engineers, Geologists and Geophysicists for the Province of Alberta.

5. I am acting as agent for the Fort Steele Gold Syndicate, a Calgary group presently evaluating placer gold prospects in the Province of British Columbia and I have a minor interest in the various properties that have been acquired by this Syndicate including the Cottonwood leases that are the subject of this report.

Dated this 15th day of September, 1979
at the City of Calgary, Alberta

A handwritten signature in black ink, appearing to read "J. Prendergast", is written over a horizontal line. The signature is cursive and somewhat stylized.

Joseph Benoit Prendergast, M.A., P. Geoph.

STATEMENT OF EXPENDITURES

Engineering Fees

4 days at \$250.00 \$ 1,000.00

Prospector Fees

3 days at \$175.00 \$ 525.00

Typing and Drafting

10 hours at \$12.00 120.00

Expenses

Truck mileage - 346 @ \$0.25 86.50

Hotel rooms 89.92

Meals 112.00

Air Fare 196.00

\$ 2,099.42

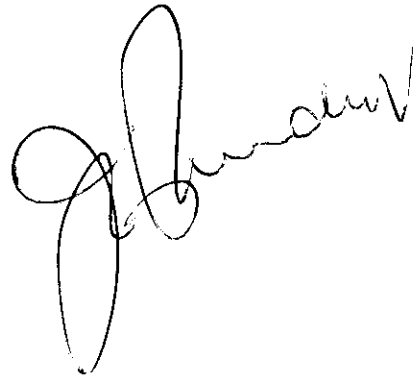
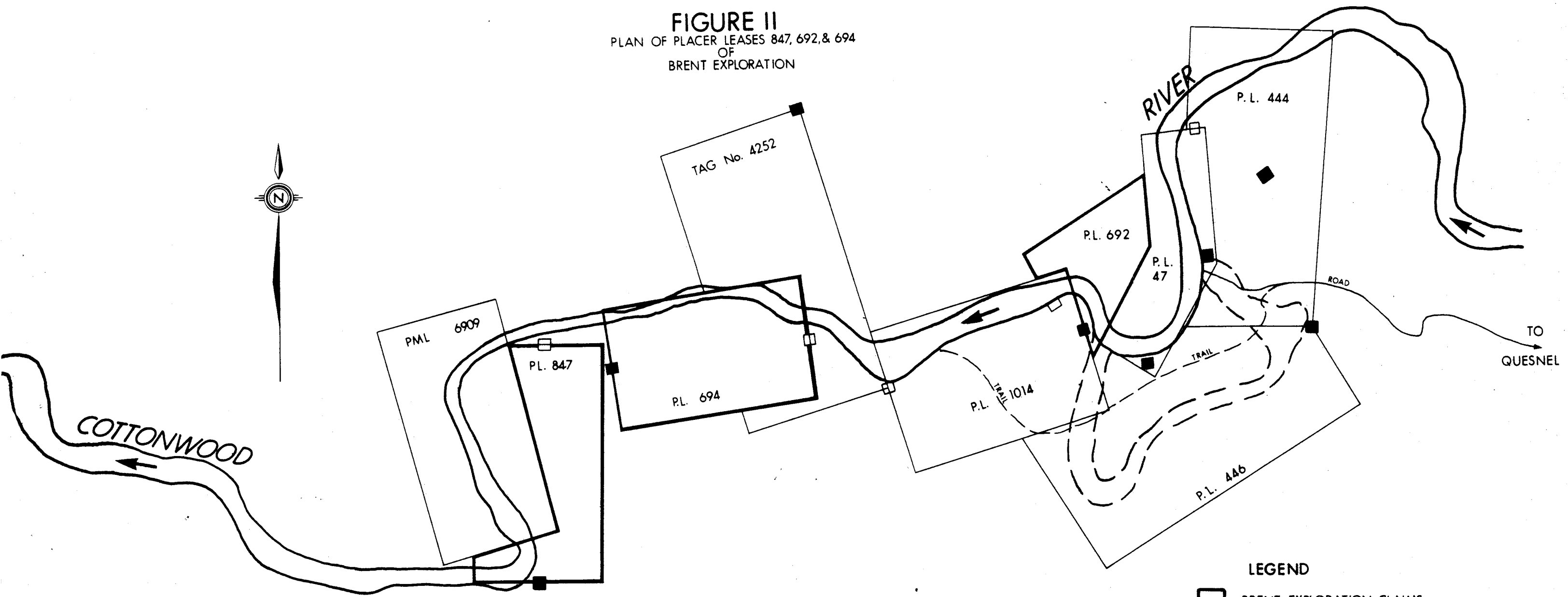
A handwritten signature in black ink, appearing to read "J. H. ...", is located in the lower right quadrant of the page.

FIGURE II
 PLAN OF PLACER LEASES 847, 692, & 694
 OF
 BRENT EXPLORATION

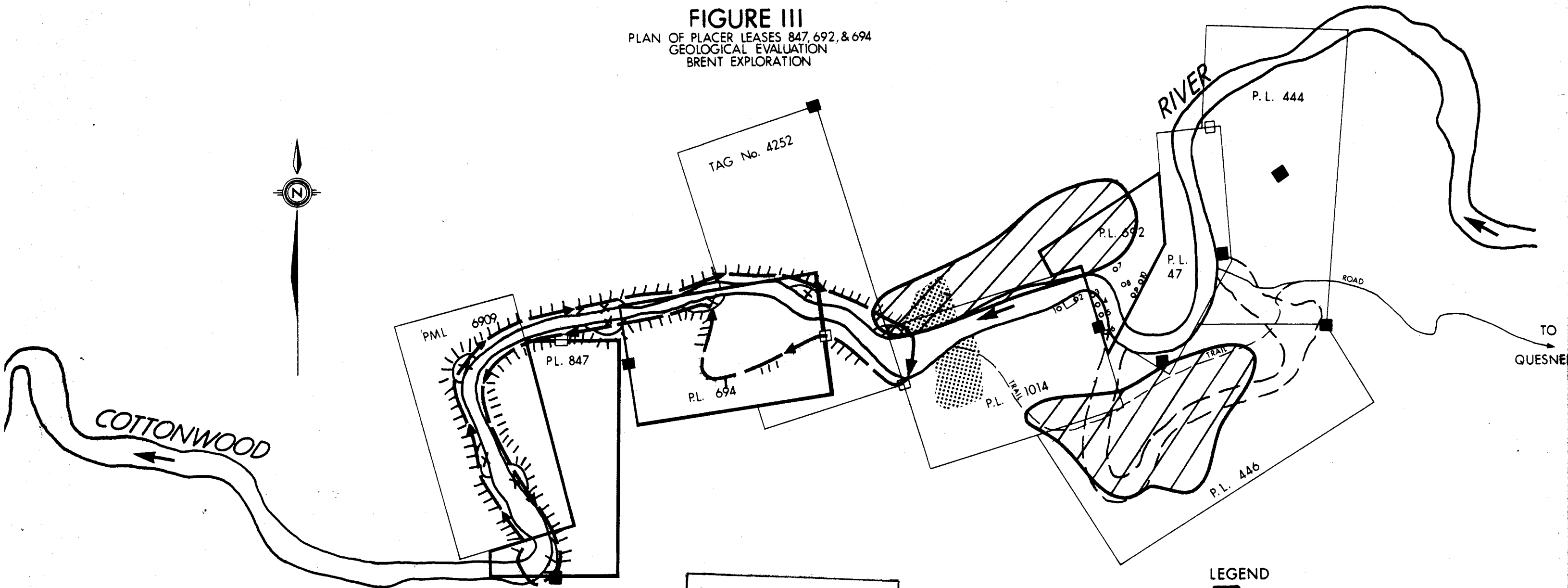


- LEGEND**
- BRENT EXPLORATION CLAIMS
 - ADJOINING CLAIMS
 - CLAIM POST OBSERVED
 - " " ASSUMED

MINERAL RESOURCES BRANCH
 ASSESSMENT REPORT
7500
 NO. _____

SCALE 1:12,500
 0 100 200 300 400 500

FIGURE III
 PLAN OF PLACER LEASES 847, 692, & 694
 GEOLOGICAL EVALUATION
 BRENT EXPLORATION



MINERAL RESOURCES BRANCH
 ASSESSMENT REPORT
7500
 NO. _____

- LEGEND**
- OUTCROP
 - GRAVEL-SAND BANK
 - PAN LOCATIONS
 - PREVIOUSLY WORKED
 - BRENT EXPLORATION CLAIMS
 - ADJOINING CLAIMS
 - GEOL. TRAVERSE
 - SAMPLE POINT
 - CLAIM POST OBSERVED
 - " " ASSUMED

SCALE 1:12500
 0 100 200 300 400 500

John