

WJR prep only

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104N/11E

REPORT ON PRELIMINARY GEOLOGIC EVALUATION
UPPER O'DONNELL RIVER PLACER LEASES
NEAR ATLIN, BRITISH COLUMBIA

November 10, 1983

By D. Whiting

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1.0 INTRODUCTION

Pegasus Earth Sensing Corp. was commissioned by Mockingbird Mines Ltd. to carry out a geological evaluation of the Upper O'Donnel placer property, near Atlin, British Columbia.

Geologist, Pat Whiting, spent approximately three weeks on the property in the fall of 1983, and was involved in the initial evaluation and later testing and mapping of the property. Geologists Ted Reimchen and Ebo Bakker of Pegasus spent one day at the property in September, 1983, and assisted in the geologic interpretation.

2.0 PROPERTY DEFINITION

2.1 Location and Access

The property is located in northwestern British Columbia, approximately 29 km (18 miles) southeast of Atlin, B.C. (Figure 1). The area is located on National Topographic System Map Sheet 104N/11E, and is in the Atlin Mining Division. This report describes an area which extends along the O'Donnel River valley from the junction of Providence Creek, to the junction of Bull Creek (Figure 2).

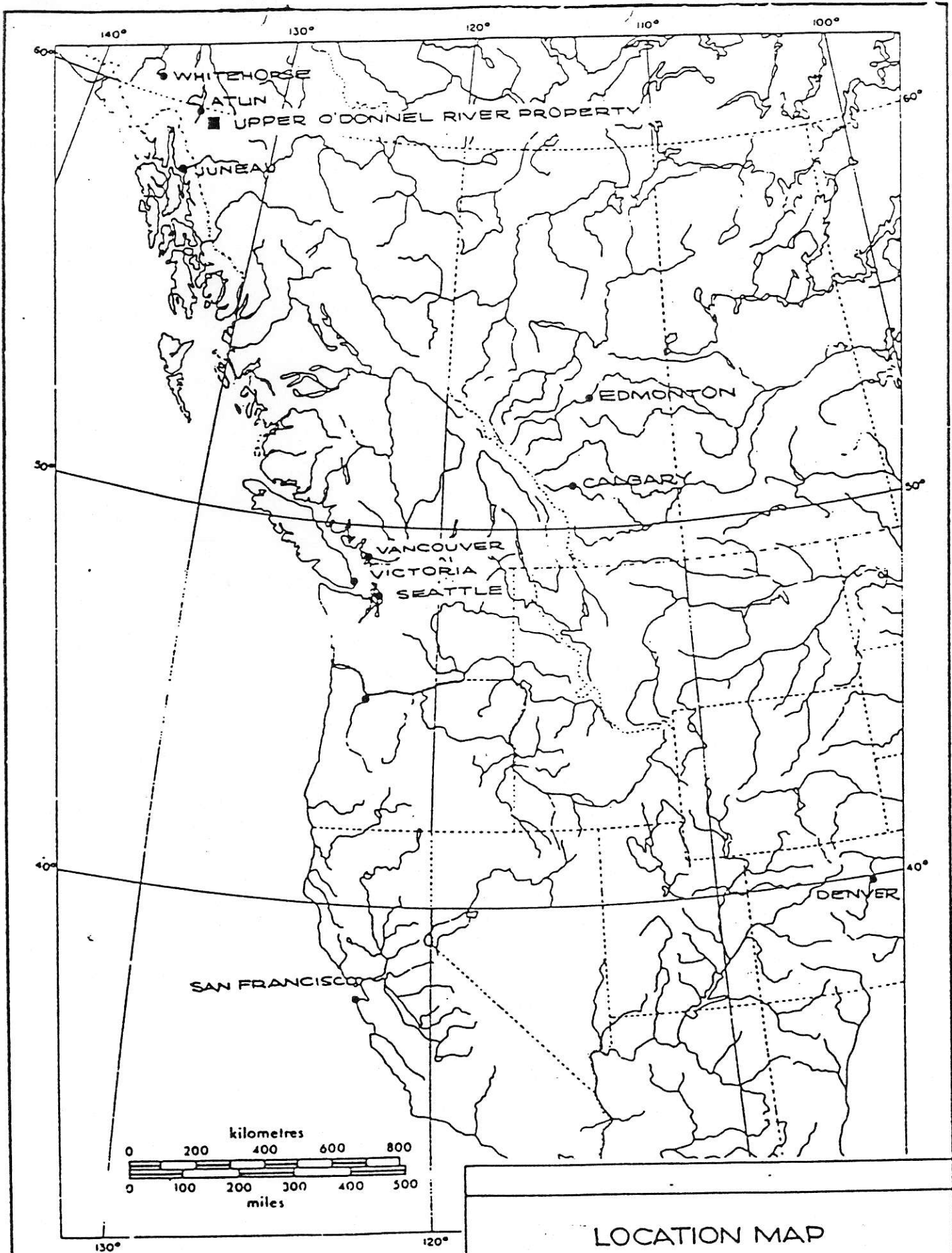
The proposed mine site is located on the west bank of the O'Donnel River 6.4 km (4 miles) upstream of the junction of Bull Creek (Figure 2).

Road access to the property is from Atlin by 35 km (22 miles) of gravel road which is passable only in the summer. An airstrip suitable for light aircraft is located on the property.

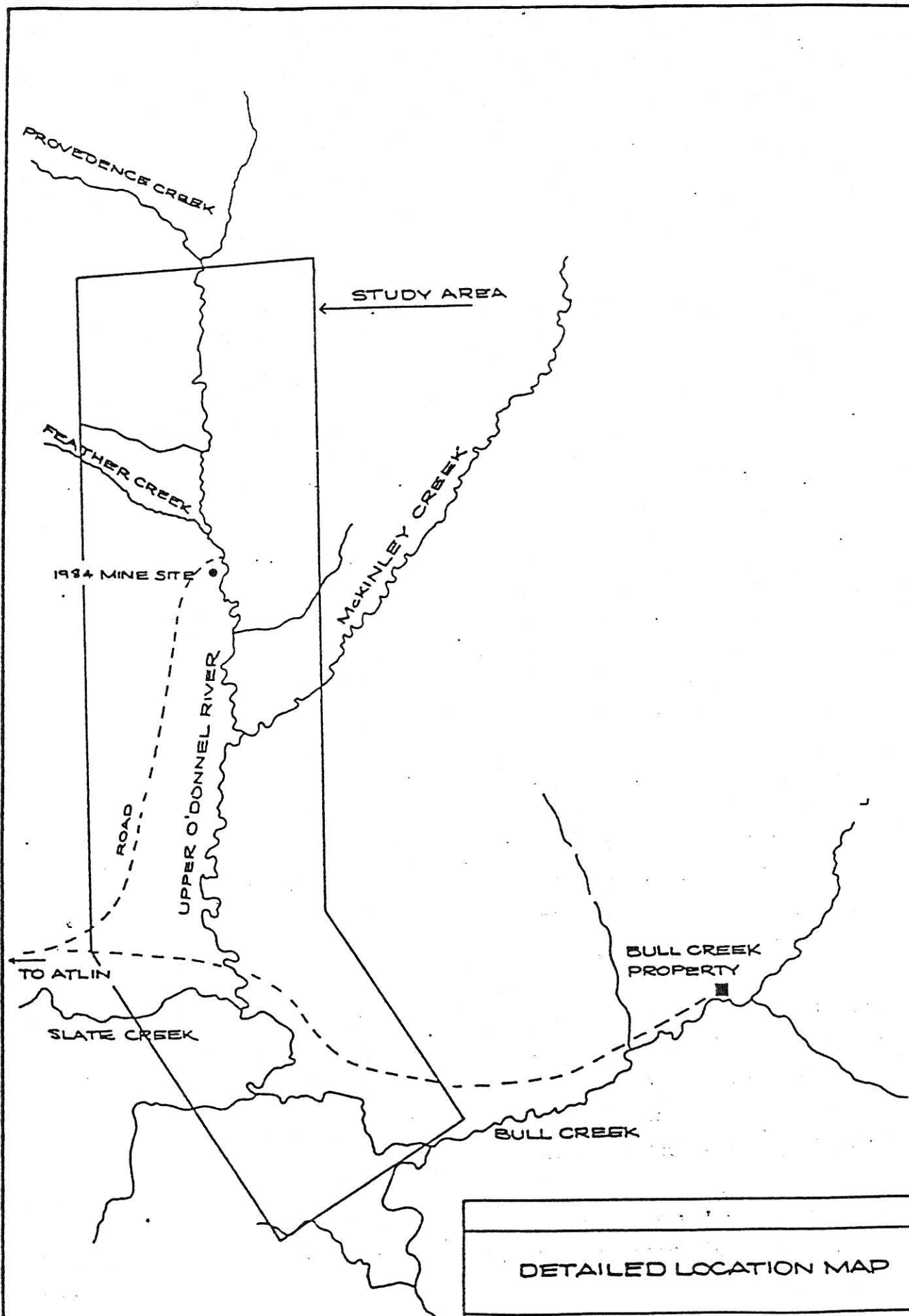
2.2 Ownership of Leases

Details on the number, location, ownership and status of placer leases which encompass the area discussed herein can be obtained from Mockingbird Mines Ltd.





LOCATION MAP		
TO ACCOMPANY REPORT BY		
PEGASUS	SCALE 1:5 MILLION	DATE NOV. 1953



DETAILED LOCATION MAP

TO ACCOMPANY REPORT BY

2.3 Physiography

The property is located at Elevation 1,058 m (3,470 ft.) which is 48 m (157 ft.) higher than the nearby Bull Creek property, at 1,010 m (3,314 ft.). The working season is approximately 120 to 150 days long, starting in early to mid May and ending in mid September to early October. There is no permafrost in the area and the O'Donnell River has a water flow which is more than sufficient for the proposed mining system.

2.4 Vegetation

The vegetation is sparse, the ground surface being primarily covered by dwarf willow, commonly known as buck brush. The few large trees on the property consist of white spruce, aspen and willow.

3.0 HISTORY

3.1 Previous Mining and Exploration

Placer leases were first staked in this area in 1899, and prospecting and small scale mining continued until 1915. From 1919 to 1922, John Noland reportedly sunk a shaft on the property which reached bedrock at depth 15.85 m (52 ft.). Noland reportedly found coarse gold averaging 0.14 oz/yd³ (1983 value Can.\$65/yd) in a tunnel driven from the bottom of the shaft, 13 m (40 ft.) south along bedrock. He also reported values of 0.0085 oz/yd³ (1983 value Can.\$3.96/yd³) in the creek gravels and 0.015 oz/yd³ (1983 value Can.\$6.99/yd³) in gravels 1.2 to 1.8 m (4 to 6 ft.) below the surface.

The next major activity in the area took place in 1975, when Ture and Allan Mattson drilled four 15.2 to 45.7 m (50 to 150 ft.) deep holes. They report reaching bedrock and finding gold in three of these holes. Midnight Sun Drilling drilled four holes on Feather Creek in 1981 under the direction of Paul Evenish to depth 9 to 30 m (30 to 100 ft.). Bedrock was not reached.

Large scale mining first took place on this property in 1982. During the 1983 season, three operators mined on the property using sluice boxes and trommels.



3.2 Testing and Mine Site Preparation Work, September 1983

In the fall of 1983, Mockingbird Mines moved a camp and processing plant to the property, upgraded roads and mine areas, and cleared areas for the 1984 mining season. Preliminary geologic mapping of the mine area and the up and down stream areas took place.

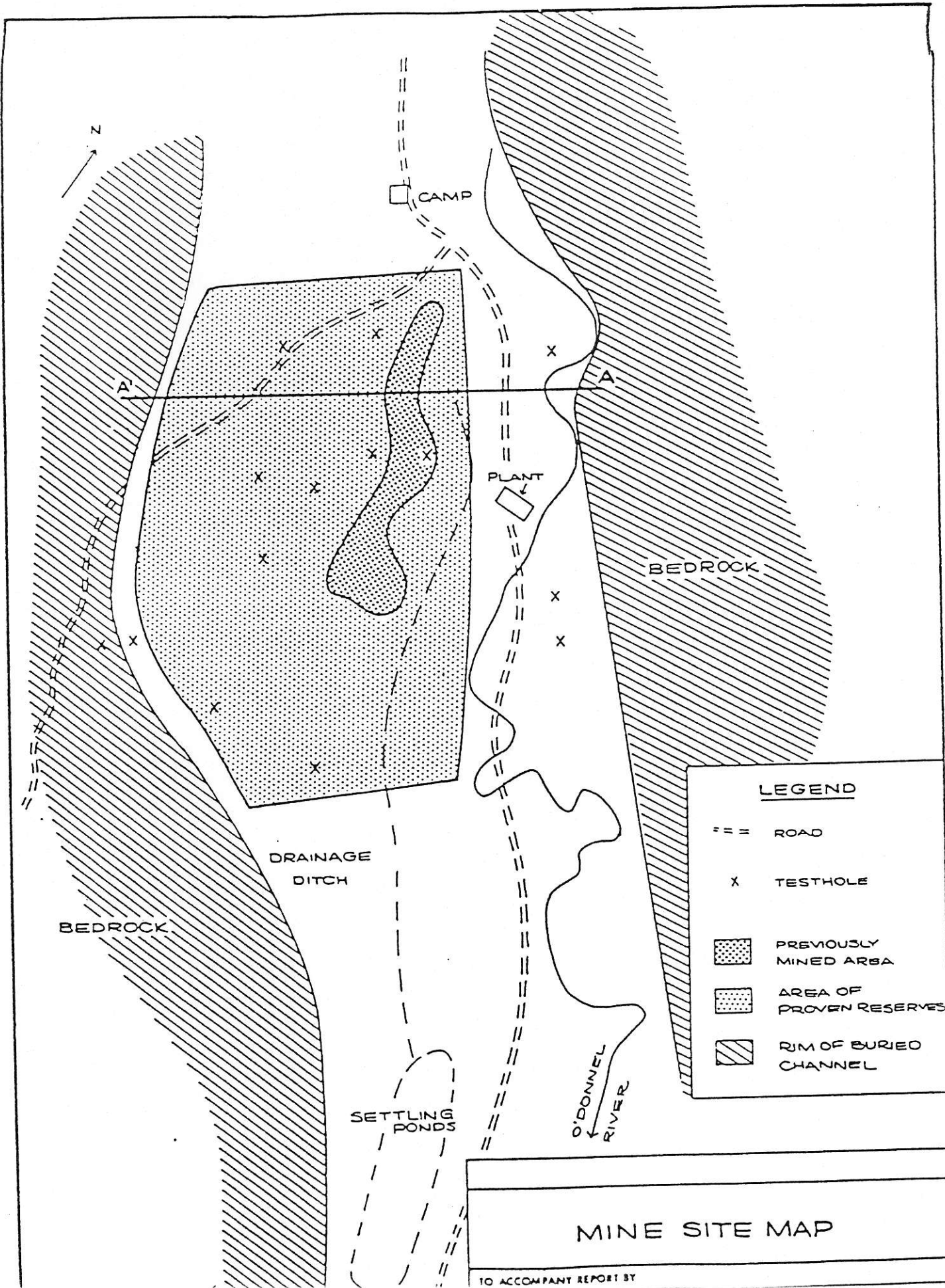
A testing program was undertaken under the joint directions of Pat Whiting and Ryan Jones. Whiting was responsible for selection of test hole locations and sample collection, and Jones for processing of the samples. Fifteen holes were dug within an area 427 by 427 m (1,400 by 1,400 ft.) located on the west bank of the O'Donnel River and encompassing a gently sloping bench (Figures 3 and 4). Selected materials from these holes and from previously mined areas were tested. Samples averaging 0.60 yd³ in volume were processed through a 12-inch spinning barrel and the concentrate was run through a spiral. Final cleanup of the spiral concentrate was achieved by chemical digestion and gold obtained was weighed in an analytical balance. Details of the sample processing procedure and test results are available from Mockingbird Mines Ltd. The testing program proved that gold bearing material exists on the west bank of the O'Donnel River. The proven material is 4.6 m (15 ft.) thick on the average, and extends over a 87,300 m (970,000 ft²) area. Therefore, the volume of proven gold bearing material is 401,580 m³ (538,888 yd³). It should be noted, that there is strong geologic evidence that the gold bearing materials could continue at depth.

4.0 GEOLOGY

4.1 Bedrock Geology

Bedrock in the study area consists of dark grey, rusty weathering argillites and limestones belonging to the Cache Creek Group. These rocks in this particular area are distinctive in that they contain pyrite cubes up to 2 cm in diameter. Where bedrock has been weathered, the pyrite has been replaced by the mineral goethite forming rusty brown cubes locally known as ironstone. It is proposed that the pyrite cubes are the source of much of the fine gold on this property. This proposition is supported by the close association of





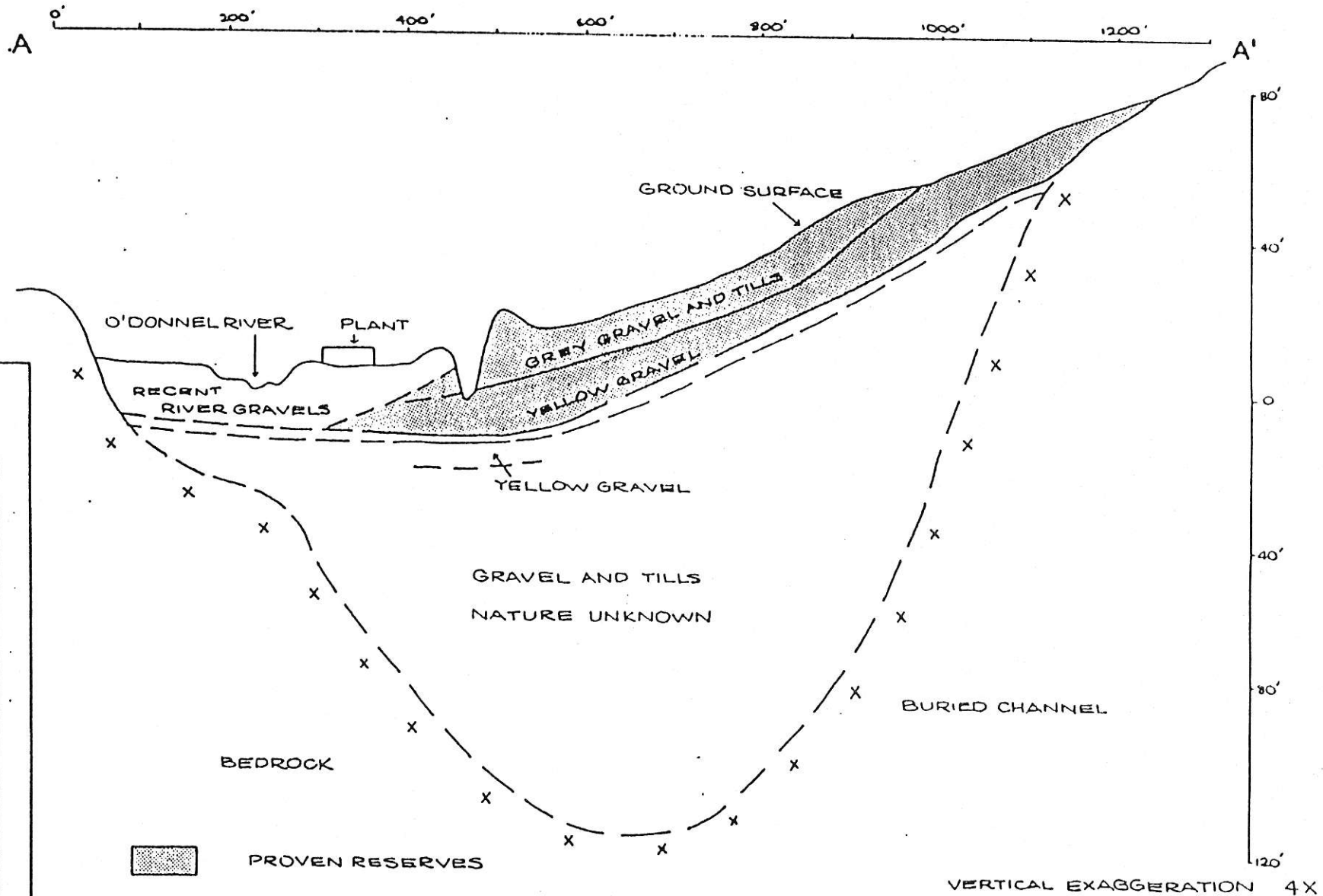
LEGEND

- ROAD
- X TESTHOLE
- [Dotted pattern] PREVIOUSLY MINED AREA
- [Stippled pattern] AREA OF PROVEN RESERVES
- [Diagonal hatching] RIM OF BURIED CHANNEL

MINE SITE MAP

TO ACCOMPANY REPORT BY

SCHEMATIC EAST-WEST CROSS SECTION
LOOKING SOUTH, O'DONNELL RIVER, ATLIN BC.



SCHEMATIC CROSS SECTION

TO ACCOMPANY REPORT BY

PEGASUS

SCALE

DATE NOV 1963

ironstone with paystreaks in the gravels. The source of the coarse gold found on the property is believed to be quartz veins in the argillite and limestone.

4.2 Surficial Geology

The geologic history of the subject placer deposits begins in Tertiary time, when rivers concentrated gold for 60 million years. Several large, gold bearing buried channels have been located in the Atlin area: on Pine, Spruce and Bull Creeks, and on the Lower O'Donnel River. A 33 m (100 ft.) deep buried channel appears to exist under the Upper O'Donnel River (Figure 3), and is believed to have been formed in part by the action of an ancient Tertiary river whose gravels may still overly bedrock. The nature and gold content of this material is unknown.

World wide glaciations during Pleistocene time followed the Tertiary, and glacial advances scoured and reworked many placer deposits in the Atlin area. One of these advances scoured the buried channel in the study area to some degree and deposited yellow coloured gravels and tills. A test hole dug 5.2 m (17 ft.) below the river level encountered yellow gold bearing gravels, which are believed to be reworked, river washed yellow tills. These gravels are overlain by a clayey yellow till layer 2 m (7 ft.) thick which is barren in gold and is believed to act as a false bedrock, trapping placer gold on its surface. Overlying the clayey till are yellow, gold bearing gravels 1.2 to 3 m (4 to 10 ft.) thick which are similar to those under the clayey till layer. All of these materials were deposited by the first glacial advance.

A second, final glacial episode followed, and is probably of the same age as the Late Pleistocene Fraser Glaciation in southern B.C. This second glaciation deposited at least 7.6 m (25 ft.) of grey gravels, tills and clays on top of the yellow gravels. The grey materials are gold bearing, but their gold and clay contents are variable.

Since the last glaciers left the Atlin area, 5,000 to 7,000 years ago, the area has been uplifted with the resultant incision of rivers into post glacial and glacial deposits and the deposition of the recent river gravels of the O'Donnel River.

5.0 1984 MINING PLAN

The processing plant has been set up on a bed of tailings from past mining operations on the west bank of the river (Figures 3 and 4). In this position material beneath the river level to the north and south as well as material in the bank to the west can be mined. The sequence and method of mining and what materials will be mined will be decided based on studies and discussions which will be undertaken in the winter of 1983/84. Building of drainage ditches, reinforcement of tailings ponds, and diversions of the creek (if needed) will take place early in the 1984 mining season.

6.0 MINING RECOMMENDATIONS

Although the volumes and gold grades of material within 5 m (15 ft.) of the surface have been determined within the proposed mining area, little is known of the extent of these materials upstream and downstream of the mine site. Testing of surface materials should take place during the 1984 mining season by using a track mounted, 20-foot reach excavator and a small testing plant to define the 1985 mining program.

Little is known of the nature and gold content of materials in the buried channel. This material could be extremely rich and should be tested. Consideration should be given to drilling and shaft sinking for deep exploration.

The true depth of the bedrock in the mine area should be determined in order to select suitable mining equipment and to design the 1984 mining plan. A seismic survey would provide a good indication of the

depth of bedrock at a reasonable cost. This could be substituted or followed up by drilling.

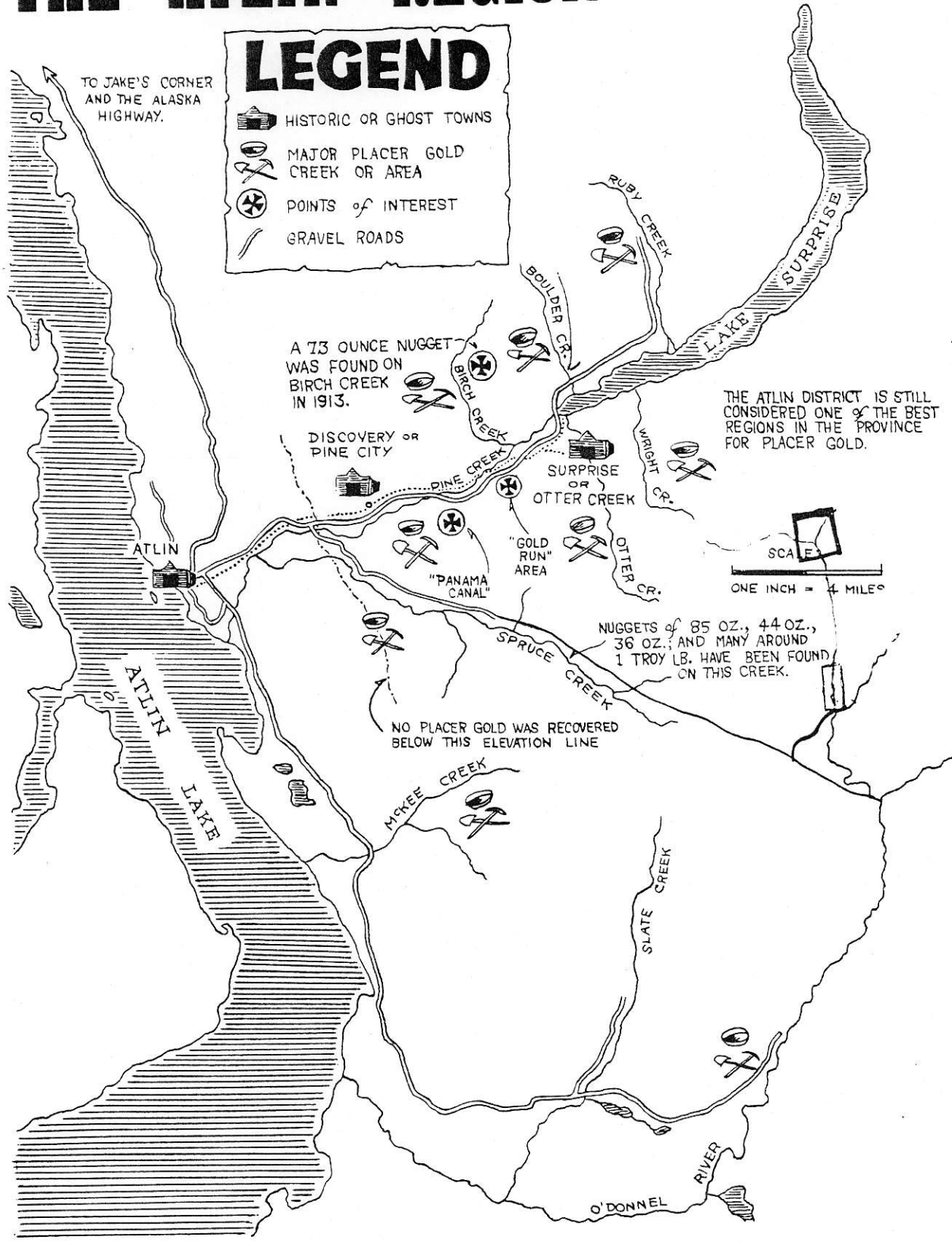
The mineable materials in this property generally have a greater clay content than those on the Bull Creek property. Samples of these materials have been collected and transported to the Pegasus office in Vancouver. We recommend that they be tested to determine their gold content and processing characteristics. Selective mining is recommended in order to mine only material which has a high gold content and a low clay content, because material with a high clay content will be difficult to process.

Having all the information described above, decisions can be made on what material to mine and what additional equipment may be needed for the 1984 mining season.

THE ATLIN REGION

LEGEND

-  HISTORIC OR GHOST TOWNS
-  MAJOR PLACER GOLD CREEK OR AREA
-  POINTS of INTEREST
-  GRAVEL ROADS



SUMMARY

During 1981 to 1987 Oliver T. Berg operated a placer operation located on the Upper O'Donnel River, twenty miles east of Atlin, in northern British Columbia, Canada.

The property consists of fifteen placer leases in two blocks, one located at the confluence of O'Donnel and McKinley Creeks and the other four miles north at the junction of O'Donnel and Sheep Creeks.

Mining and testing of a portion of the most southern placer leases during 1981 to 1987 resulted in recovered gold values of approximately 0.015 ounces per cubic yard (\$8.43 Cdn. per cubic yard). Surface sampling to a depth of 15 feet carried out by Pegasus Earth Sensing Corp. during 1983 outlined a reserve of 538,888 cubic yards of auriferous gravels. Based on work carried out by Berg, approximately 25% of the gold recovered is greater than 0.25 inch (largest nugget to date is 1/2 ounce in weight) and 75% was less than 1/4 inch in size.

Based on the recommendations outlined in the two accompanying reports, the properties require further development which can be carried out along with placer mining during the 1988 season.

Proceeds of the placer mining operation would offset exploration costs and return a profit in the first year of operation (based on a through put of 1000 sq yd per day).

The total placer operation is for sale including the equipment on site (list enclosed).

The asking price for the property and equipment is \$600,000.00 Cdn. with a 10% net gold return per annum based on the total amount of gold recovered.

Terms and conditions are negotiable. Call (604) 421-9154

PRELIMINARY EVALUATION REPORT

BERGS FEATHER CREEK PROPERTY

ATLIN MINING DIVISION

ATLIN, B.C.

59° 32'N 133° 15'W

NTS 104N/11E

FOR

O'TEABEE MINING

25 Fair Oaks

St. Alberta, Alberta

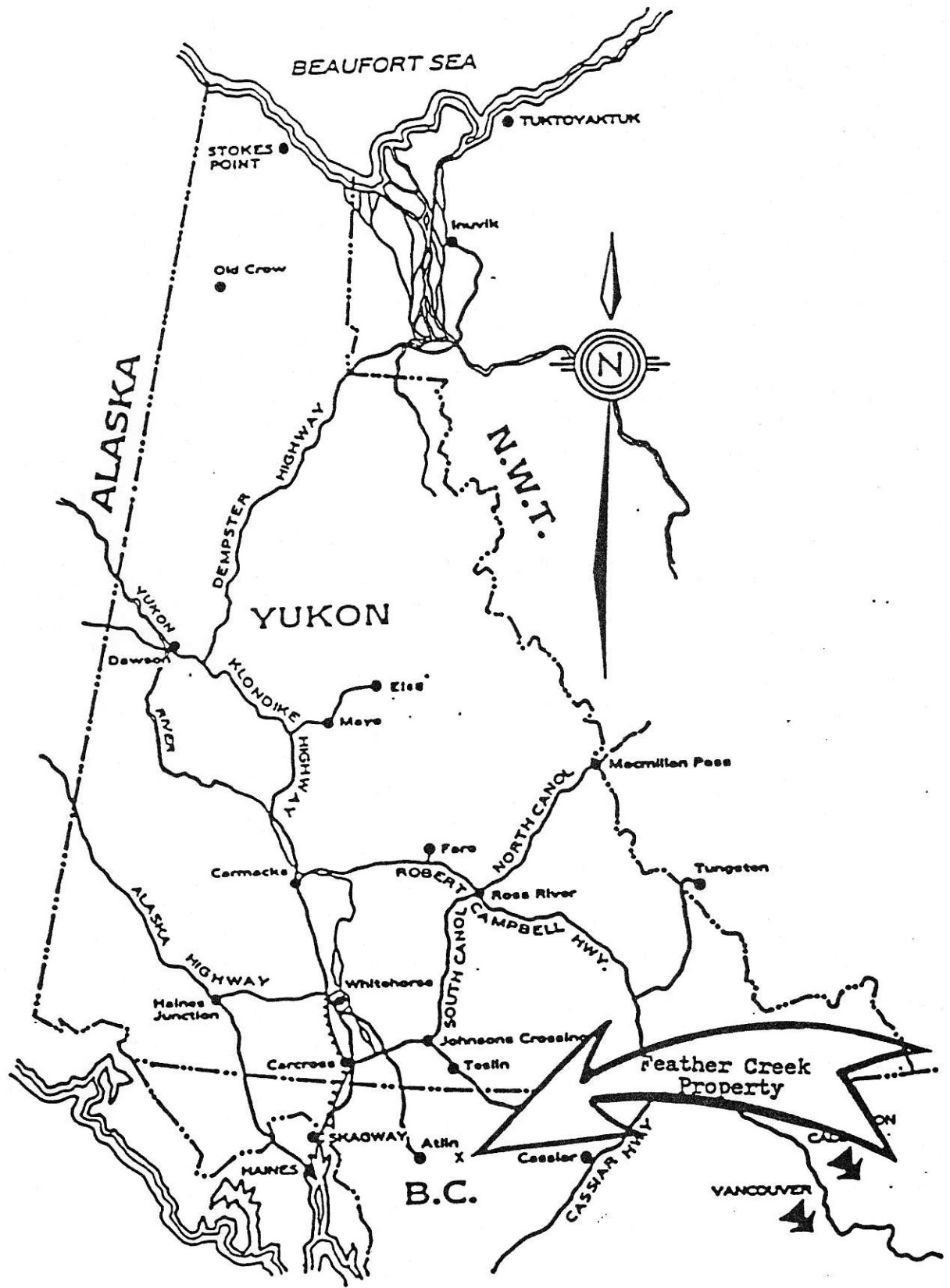
BY

J.E. WALLIS, P.Eng.

July 14, 1987

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PROPERTY LOCATION MAP

SUMMARY

Berg's Feather Creek property may contain significant reserves of readily mineable placer gold. Mining on a portion of the property between 1981 and 1987 resulted in recovered values of approximately 0.015 ozs./yd³. Surface testing to a depth of 15 feet by Mockingbird Mines and Pat Whiting of Pegasus Earth Seusing Corp. during 1983 outlined a reserve of 538,888 yd³ of mineable gravels. Use of an improved fine gold recovery system such as the Aureco System is anticipated to significantly improve recoverable grade.

A bulk testing program capable of handling 50 yds³/hour is recommended to confirm and expand reserves outlined during 1983. Total cost of the recommended program is estimated at \$304,000.

JEO.

LOCATION AND ACCESS

The property is located on NTS Map Sheet P104N/11E, approximately 20 miles east of Atlin, B.C. Geographical co-ordinates are 59° 32' North Latitude and 133° 15' West Longitude.

Good road access to the lease area is available from Atlin via the Surprise Lake road to the Spruce Creek road and thence out the Blue Canyon road, a fair 4-wheel drive trail. A rough gravel airstrip approximately 1,000 feet in length is located near the south west corner of PL 2676. Both helicopter and fixed wing air service is available from the town of Atlin.

PHYSIOGRAPHY

The placer leases cover a typical wide alpine valley floor. Vegetation is limited to alpine grasses, arctic birch and thick patches of short leafed willow. Some isolated, stunted balsam fringe the creek banks. Ground elevation is approximately 3,500 feet a.s.l. There is no permafrost in the area.

Weather records indicate that the region is semi-arid with precipitation averaging 14 inches per year. Winter temperatures as low as -40°C are common with summer temperatures as high as +25°C. The valley is usually snow covered from late September until mid May.

The sluicing season is approximately 120 days per year.

PROPERTY AND OWNERSHIP

The Feather Creek property consists of 14 placer leases plus a proposed additional 9 leases which are currently being staked. The leases are owned outright by Oliver T. Berg of #25 Fair Oaks Drive, St. Albert, Alberta T8N 1P7. Form 1, Placer Mining Act for these placer leases are appended as Appendix A.

Property details are as follows:

<u>Placer Lease No.</u>	<u>Tag No.</u>	<u>Date of Expiry</u>
11198	P36814	December 30/88
11199	P36815	December 30/88
11200	P36816	December 30/88
11201	P36817	December 30/88
11202	P36818	December 30/88
11203	P36819	December 30/88
11889	P5010	July 17/88
11890	P5011	July 17/88
11891	P5012	July 17/88
2303	P6840	December 31/88
2676	P6841	December 31/88
9434	recently restaked, new record Nos. not rec'd as of July 12/87	
9435	recently restaked, new record No.s not rec'd as of July 12/87	
9436	recently restaked, new record No.s not rec'd as of July 12/87	

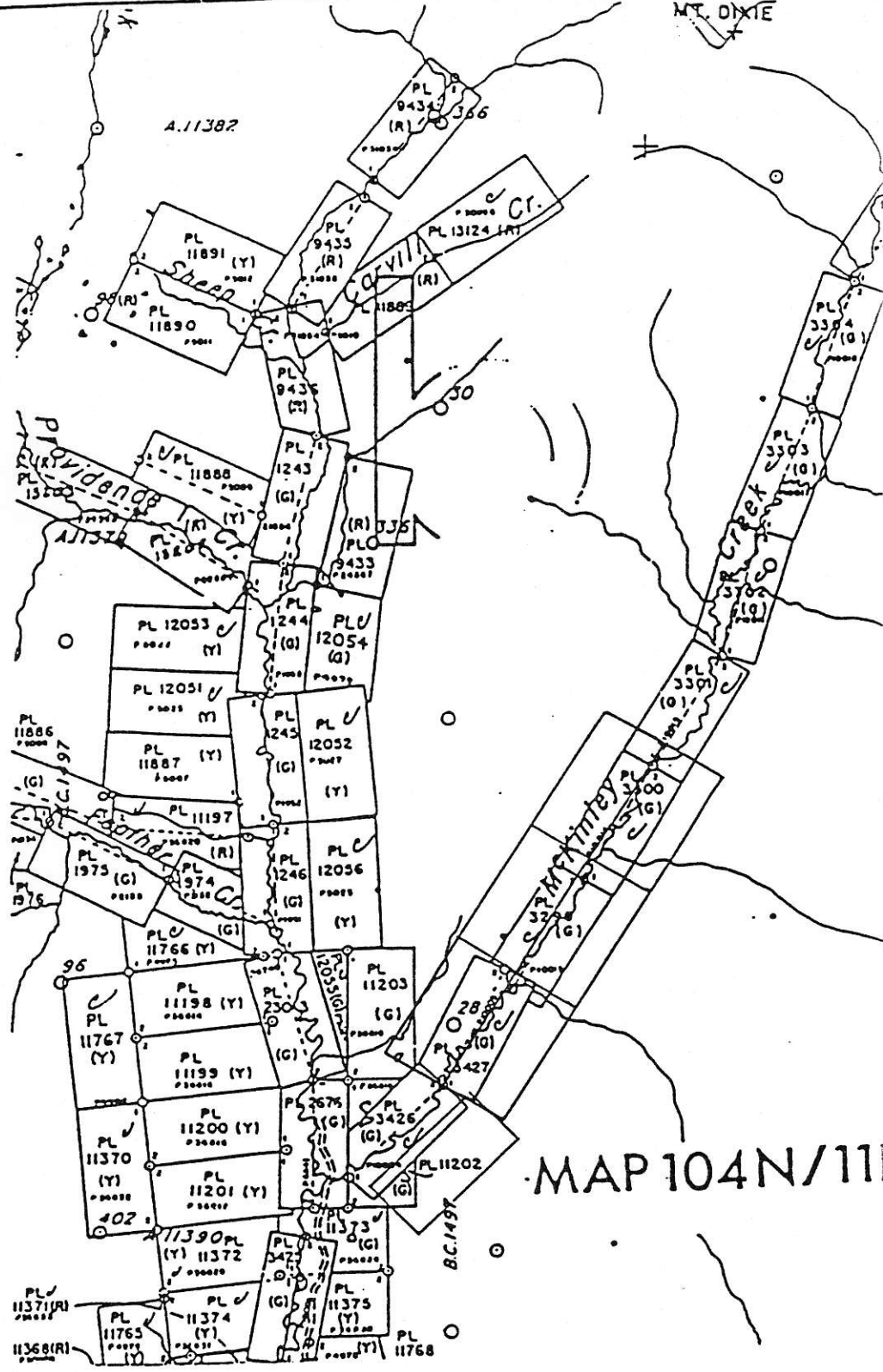
ECONOMIC GEOLOGY

The geology of the area is well documented in Geological Survey of Canada Memoir 37, Portions of the Atlin District by D.D. Cairnes, 1914, and Memoir 307, Atlin Map Area by J.D. Aitken, 1959.

The area lies on the south side of the Surprise Lake granitic batholith and is mostly underlain by the Cache Creek series of rocks. The Cache Creek series is a mixture of metavolcanics, ultrabasics and serpentinites.

MT. DIXIE

A.11382



MAP 104N/111

CLAIM LOCATION MAP

Titled Leases
Proposed Leases

PAST PRODUCTION

There are no past production records available for the property. Examination of early B.C. Minister of Mines reports for the district indicates that the first placer leases in the area were staked in 1899.

From 1919 to 1922, John Noland of Atlin, B.C. reportedly sank a shaft on the property (on PL2676?) and reached bedrock at 52 feet. Noland found coarse gold in paying quantities in a tunnel driven some 40 feet south from the bottom of the shaft. Values of 0.015 oz. Au/yd³ were reported in the surface gravels 4 to 6 feet below the surface.

Larger scale mining on the property by Oliver T. Berg first took place during the 1981-82 field seasons. During the summer of 1982 the writer visited the property and examined the sluice concentrates. Although sluice volumes as of that date were not checked in detail, production records appeared to substantiate recoveries of approximately 0.015 ozs. Au/yd³.

In the fall of 1983 Mockingbird Mines moved a camp to the property and proceeded to test the subject lease area. It appears that the bulk of the test work was completed on PL2676. Fifteen test holes were dug within a 1400 x 1400 ft. area on the west bank of the O'Donnel River approximately midway along PL 2676. Samples averaging 0.60 yd³ were processed through a 12 inch centrifugal barrel and the concentrate run through a spiral. Final clean up of the spiral concentrate was achieved by chemical digestion and gold obtained was weighed on a chemical balance. Pat Whiting of Pegasus Earth Seusing Corp. directed the program and reported that a proven reserve to the 15 foot depth, consists of 538,888 yd³. No grade was given but it is noted that Whiting quotes "there is strong geologic evidence that the gold bearing materials continue at depth."

PREVIOUS DRILLING

There is some evidence that a number of churn drill holes were completed downstream of the property, probably in the 1920's or 30's. However, no records of this can be located.

In July of 1975, Allan and Ture Mattson of Atlin, B.C. moved their track mounted churn drill to the property and drilled several holes near the northern boundary of PL 2303. During a property examination in the area, the writer visited the drill site and panned some of the drill cuttings from the upper portion of one of the drill holes. Several small pieces of gold were recovered from the panned drill section. Copies of the original drill logs for Holes 1 and 2 are appended as Appendix B.

Examination of these two drill logs shows that both holes contain placer gold, with the best values concentrated on or just above a clay layer located at the 14 foot depth in hole 1 and at 16 feet in hole 2. Hole 1 reached bedrock at 36.5 feet and show good gold values in the 1 foot section above bedrock. Hole 2 reached bedrock at 51 feet and carried good gold values in the 3 foot section above bedrock.

Although neither drill log indicates a total weight of gold recovered, recovered gold values appear to substantiate or exceed the reported grade of 0.015 ozs. Au/yd³ in the upper 15 feet of gravels.

DISCUSSIONS AND CONCLUSIONS

From the surface examination it is obvious that the area has been subjected to several stages of glaciation. Examination of the recent workings and the old drill hole logs shows that there has been an interglacial reconcentration of gold values on and above a shallow clay layer. In the area that is currently being mined, this layer is approximately 8 feet below the surface. Slightly downstream the test holes show this layer to be at the 15 foot depth. This corresponds closely with the drill logs.

Examination of the sluice concentrates in the present operation indicates that a very low percentage of the fine gold that appears in the drill logs is being recovered. Low recoveries are undoubtedly the result of poor washing of the gravels and sluicing of too wide of a range of screen fractions. Improved sluicing methods could substantially improve the currently recovered grade of 0.015 oz. Au/yd³.

Preliminary examination of the local topography, geology and drill hole results leads the writer to believe that the bedrock topography is very erratic and that a well defined bedrock channel probably does not exist on the property. However, this uneven bedrock could well have created a large number of natural traps for the first interglacial washes. If so, these traps could contain significant reserves of high grade gravels. However, they will be difficult to outline and will require an extensive drill program.

Because the surficial gravels examined consist of interglacial reconcentrations related to several stages of glaciation, areas of mineable gravels can be expected to consist of both large and small patches separated by clayey or marginal grade gravels. These areas can be readily defined by relatively inexpensive backhoe sampling on a grid system.

The shallow (6-15 foot) gravels undoubtedly contain significant reserves of placer gold which can be mined at a profit. Particular care must be taken during mining to ensure that the clayey marker bed is not penetrated. A successful operation will depend on:

- a) Close definition of areas containing viable reserves through surface sampling.
- b) Operation of a recovery system with a large scrubber section capable of washing the clay fraction and capable of efficiently separating and concentrating several size fractions (see Appendix C).

RECOMMENDATIONS

A large bulk testing program capable of handling 50 yards³ per hour is recommended for the property. Details with estimated costs are as follows:

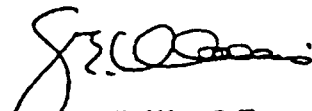
Dozer rental, 480 hrs. at \$165/hr.	\$ 79,200
Loader rental, 480 hrs. @ \$120/hr.	57,600
Recovery system, Aureco with jig systems (or similar) rental purchase	60,000
Room and board, 6 men for 30 days @ \$100/day	18,000
Camp costs	3,000
Sampling and sluicing, 2 men for 30 days at \$250/day	15,000
Fuel, 8000 gal. @ \$2.75/gal.	22,000
Truck rental	3,000
Mobilization and demobilization	10,000
Engineering and evaluation, reports, etc.	<u>8,000</u>
Sub-total	\$ 275,800
Contingency 10%	<u>28,200</u>
Total	\$ 304,000

CERTIFICATE OF QUALIFICATIONS

I, J.E. Wallis, of 214 - 475 Howe Street, Vancouver, British Columbia, do certify that:

1. I am a registered Professional Engineer in good standing in the Association of Professional Engineers of British Columbia.
2. I am a graduate of the Haileybury School of Mines 1958, the University of Alaska, B.Sc. 1965 and Queen's University, M.Sc. (Eng) 1967.
3. I have been practicing my profession for 28 years and as a Professional Engineer for the past 21 years.
4. I do not have nor have I ever had any interest direct, indirect or contingent, in the shares of O'Teabee Mining, nor do I expect to receive any interest, either direct or indirect, in the properties or securities pertaining thereto.
4. I have personally visited the property reviewed in this report on June 30, 1987 and am familiar with the district.
5. I hereby grant my permission for O'Teabee Mining to use this report for filing with the Vancouver Stock Exchange as partial requirement of a Statement of Material Facts or for any legal purposes normal to the business of O'Teabee Mining.

Dated at Vancouver, British Columbia, this 14th day of July, 1987.


J.E. Wallis, P.Eng.