MAP No.	ASSESSMENT REPORT		TYPE OF WORK:	Dawson MD
115-P-12	N.M.E.A.P.			Prospectus
	CONFIDENTIAL			Geol.
	OPEN FILE	X		

REPORT FILED UNDER	Crescent Mines Ltd.	DOCUMENT NO. 061854
DATE PERFORMED	April - Sept., 1978	DATE FILED: May 25, 1979.
LOCATION - LAT.	63°40'N	AREA: Clear Creek, Yukon.
LONG.	137°35'W	
CLAIM NO.	Placer Lease	
VALUE $		
WORK DONE BY	E.P. Sheppard	
WORK DONE FOR	Birch Industries Inc.	
REMARKS	Geology of the lease shows the gold bearing gravels are underlain by Yukon Gp. metamorphics and granitic intrusions. Work indicates 126 000 m^3 contain 116 kg of gold with potential reserves of 1 million m^3 of gravel.	

061854

Prospectus filed May 25/79

GEOLOGICAL REPORT

On The

CLEAR CREEK CLAIMS

DAWSON AREA, Y. T.

Of

Birch Industries Inc.

BY: E. P. Sheppard, P.Eng.
Consulting Geologist

Vancouver, B.C.
October 14, 1978

TABLE OF CONTENTS

CLEAR CREEK CLAIMS

Dawson Area, Y.T.

SUMMARY

Birch Industries Inc. is the holder, by an Option Agreement, of a Placer Lease located on Clear Creek, Dawson City, Y.T. The lease covers 8 km of Clear Creek and its valley, approximately 88 km southeast of Dawson City.

The Stewart-Dawson Highway passes within 9.6-12.8 km of the lease. Access is by a road which branches off the highway near Berlow Lake. The valley and channels of the creek are constricted in several places by granitic outcrops, and the south part of the lease occupies a definite bend in the creek.

The Clear Creek placers have been worked for 55 years but the part covered by this lease has never been mined. Yukon Consolidated Gold Corp. dredged the left fork and upper main Clear Creek during 1950 and early 1960. 16 to 19 km of creek bed were mined. Operations were suspended in 1960.

During the past summer a section of Bench 1, 500x275x1.9m^3, was stripped of trees and peat down into the black muck and left to thaw and drain. After the writer's visit this area was widened and stripped down to the silty and sandy layer which lies immediately above the gravels. With very little further work this bench can be mined during the 1979 season.

The operation is designed to treat 126,000 m^3 in 140 working days. Gold recovery is expected to be 115,844.4 grams (3724.7 oz) at a recovery rate of 96%.

Income for the season, based on a gold price of Can. $200 per oz., would be $744,940. Total operating costs are calculated to be $469,953, which will give an operating profit of $274,987.

Cash flow for the season would be profit plus depreciation or $368,987. Every Can. $10 increase or decrease in the price of gold per ounce will influence the cash flow by $37,247. Any improvement in exchange rates on U.S. funds will decrease the cash flow.

CONCLUSIONS

Sampling to date on the Birch Industries Inc. lease indicates the presence of gold-bearing gravels on Bench 1 sufficient to sustain a 1000m^3 operation for a period of 140 days during the 1979 season.

.... cont.

RECOMMENDATIONS

It is recommended that Birch Industries Inc. proceed with the proposed placer mining operation early in the 1979 season.

It is further recommended that sufficient funds be allocated to implement the operation.

E. P. Sheppard, P. Eng.
Consulting Geologist

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
E. P. SHEPPARD

Vancouver, B.C.
October 14, 1978

GEOLOGICAL REPORT

CLEAR CREEK CLAIMS
Dawson Area, Y.T.

INTRODUCTION

The following report was prepared at the request of the President and Directors of Birch Industries Inc. Data for the report were obtained by the writer during a visit to the area in early September 1978, examining old records and observing operations along Clear Creek and adjacent properties. Government reports were also studied. The publications of Yukon Consolidated Gold Corp. Ltd, Dawson, were of particular interest.

PROPERTY

The property consists of a Placer Lease, granted under the Yukon Placer Mining Act, covering approximately 8 km of Clear Creek in the Yukon Territory. 310 meters to both the left and right of the baseline established by the Mining Recorder define the width of the lease. The base may be converted to 155 meters long by 620 meters wide placer claims after the first, second or third year of the lease, providing that adequate assessment work has been carried out to renew the lease each year. The lease must be converted to claims before full scale mining is undertaken. When converted to claims the property will contain in excess of 50 claims.

OWNERSHIP

The property is held by Birch Industries Inc. under an option agreement.

LOCATION & ACCESS

The Clear Creek property is located approximately 88 km east-southeast of Dawson City, Y.T. The creek starts on the slopes south of the Klondike-Stewart River divide near the headwaters of the South Klondike River. Clear Creek flows from east to west in the area of the lease but turns south as it enters the Tintina Trench. The Stewart-Dawson Highway passes 9.6-12.8 km west of the lease.

Direct access to the lower end of the property is provided by a road which branches from the highway near Barlow Lake. The major part of the access road was constructed by a dredging company to service the mining operation on the left fork of Clear Creek. The remainder of the road was built for mineral exploration on a group of claims staked under the Quartz Mining Act.

TOPOGRAPHY

Clear Creek is a tributary of Stewart River. The gradient of the Creek adjacent to the lease is approximately 24.4 meters per kilometer. Flow is swift and fluctuates rapidly. Water is abundant for mining purposes but must be carefully controlled to minimize flood hazard.

The topography north of the Creek exhibits more relief than the area to the south which is a relatively flat bench approximately 100 meters above creek bottom. The valley and channels of the creek are constricted in several places by granitic bedrock outcrops. The north bank of the creek is often characterized by steep exposures of bedrock. Gravel deposits such as fans and bars make up the south bank of Clear Creek. In some stretches gravel occupies the entire broad valley floor. The gravels and much of the bedrock are overlain by fine soils (loess) and vegetation consisting of black spruce, mosses and shrubs typical of a boreal forest assemblage. Deciduous vegetation is common near the creek and on dry hillsides.

Permafrost exists in most areas where a thick vegetation mat has accumulated. When the insulation layer is removed the gravels will normally thaw to bedrock in one summer season from solar radiation. Quicker thawing is achieved by the use of water.

The summers are short and warm. Rains are infrequent but often violent and thunder storms are common. The winters are long and cold. Mining is carried out from early May until late September. The first snows usually occur in October.

HISTORY

The mining history of Clear Creek appears to be poorly documented, probably because the region is removed from the logistic center of Dawson City and events were not recorded in newspapers of the era nor in numerous historical publications. The most reliable information can be obtained from the Yukon Consolidated Gold Corp. reports covering a period from 1935 to 1965.

The chief event was the dredging of the left fork and upper main Clear Creek during the 1950's and 1960. 16 to 19 km of creek bed were mined. Operations were suspended in 1960. The dredge was left intact at the forks of Clear Creek and has since been vandalized beyond repair. Mining concessions lapsed and smaller operations using bulldozers and other earth-moving equipment mined up and downstream and to the sides of the dredged spoil heaps.

The quality and size of the gold recovered is typical of the Klondike region. A considerable amount of coarse gold from other properties has been observed by the writer.

*GEOLOGY

"The bedrock types which underlie Clear Creek are metamorphic rocks of the Yukon group and granitic intrusions of Mezozoic Age. The Yukon group metamorphic rocks are usually considered to be the original source of the placer gold. Rocks of this unit are generally schist and gneisses as well as phyllites, marbles and quartzites in lesser abundance. All the rocks are products of the same regional metamorphic events which acted upon Pre-Cambrian or lower Paleozoic sedimentary and igneous rocks. Quartz veining is ubiquitous in the metamorphic rocks.

The igneous rocks which occur along Clear Creek in the region of the placer lease are dominantly coarse grained intrusions of granitic to granodioritic composition. Some syenites and true pegmatites may also be present. Corase 2 cm to 10 cm feldspar phenocrysts are common to the degree of being characteristic.

The gravels of the area have been classified by H. S. Bostock into three convenient units. The oldest stream deposits and alluvium form one divisible unit. These deposits are pre-glacial and are usually exposed only in higher areas such as benches and slopes. Another unit of surficial deposits consists of glacial and periglacial sediments as well as materials of uncertain age. The third unit is made up of the youngest gravels which are normally products of recent stream action.

For the purposes of placer mining the recent and pre-glacial gravels are of interest; particularly recent gravels derived from pre-glacial gravels. Bostock points out in the descriptive notes of Map 1143A that White Channel gravels nearly identical to those of the Klondike creeks occur along Clear Creek and form a part of the pre-glacial gravel unit. Recent gravels as well as ome older gravels are known to contain gold upstream of the Clear Creek lease. Gold has been produced in the Stewart River and its tributaries since 1885.

To quote H. S. Bostock from the notes of Map 1143A serves the purpose of pointing out the mineral potential of the Clear Creek area and the importance of careful prospecting. He writes, "The part north of Bear Creek, McQuesten River and Tintina Trench contains most of the lode and placer mineral discoveries in the map area, including those carrying gold, silver, lead, zinc, antimony, tungsten, tin, copper, barite and monazite. The discoveries generally lie near a small granitic stock (14). In this section, glaciation and tilting of the surface have led to many intricate changes in drainage. In some creeks the placer concentrations in their earlier channels have been washed away, redistributed, or buried by new streams so that careful study of these changes is warranted in placer prospecting."

*Excerpts from Report by Eric H. Johnson.

WORK PROGRAM

The work program laid out in April and June, 1978, by Geologist Eric H. Johnson, had been completed when the writer visited the property in September.

A large area on the north side of Clear Creek at the south end of the Company's lease, now designated as Bench 1, was bulldozed. The trees, moss and peat mat were removed exposing the black muck to the elements. Late in September the area was widened and the black muck stripped down to the thin layer of sand and silt which usually covers the gravel. By the spring of 1979 these stripped areas will have thawed and drained sufficiently to allow the bulldozer to expose the gravels and mining can begin.

Ten pits were dug at designated points (Fig. 1) and sampling was carried out. Samples taken from pits 1 to 4 were $\frac{1}{2}$ m^3, the remainder were 1 m^3.

It was found that two samples from 30 cm above bedrock and into bedrock were appreciably higher than two of the first group of 4 which did not reach bedrock. (Fig. 2, S-2, 3). This indicates that concentrations of gold are just above and into the crevices and fractures of the bedrock. Sample 1 was not used in the calculations as it is considered to be an outwash of Henry Creek and consisted of a few thin flakes of gold.

The area prepared for working in 1979 (500 x 275 x 1.9m^3 = 261,250 m^3) is to be mined at the rate of 1000 m^3/day for a period of 140 days. At 90% recovery of the gravels and a 126 day operation, the amount mined equals 126,000 m^3 which, at \$5.90/m^3, gives a yield of \$731,600 the first season. At the above rate Bench 1 will last approximately two seasons. This operation would be considered a test for the equipment used and should indicate the feasibility of a larger operation. A continuation of the stripping would be carried out in conjunction with the mining.

It must be pointed out that the lease contains numerous benches greater in extent than the #1. (See Fig. 1) In the pictures of Bench 1 a much larger unsampled bench is seen directly across Clear Creek. Many of the benches were panned early in the season and "counts" were seen in almost all pans tested. The potential gravel content of this lease appears to be in excess of 1 million m^3.

The capital cost of going directly into mining the prepared area is estimated below:

ESTIMATED CAPITAL COSTS

1 DK8 Cat. wi. Ripper & Rock Blades	$200,000
1 4 m^3 Bucket loader wi. articulated turn	100,000
1 Pump, 3500 gal/min. + 2500'8" pipe	40,000
1 Sluice Box, 20'long x 8'wide, 4'deep ..	30,000
1 Fuel Tank, 5000 gal. (2nd hand)	10,000
2 4x4 Pick-ups	20,000
Shop Welder	10,000
Miscellaneous & Contingencies	60,000
	$470,000

The premise is that sufficient sampling has been completed to calculate the tenor of the ground as "Indicated Ore". Soft ground made it impossible to set up a grid pattern of sampling and when the work begins next season the drained central area must be sampled.

OPERATION

The following table shows the estimated costs for mining 126,000 m^3 of gravel in 140 days, employing 9 men on two 10-hour shifts per day:

ESTIMATED OPERATING COSTS

	Per Season	Per m^3
Labor Costs:		
*9 men @ $150/day for 140 days	$189,000	$1.500
Labor turnover costs 1 man/month @ $400	2,000	0.016
Operating Costs:		
Camp operation @ $30/day/man for 140 d.	37,800	0.300
Fuel & parts, maintenance	42,000	0.333
Sampling & Assaying	8,000	0.063
Bench preparation & tailings disposal	15,000	0.119
Supervision & Engineering	10,000	0.079
Contingencies @ 10% of above	30,380	0.241
Administration (office overhead, land rental, legal, holiday pay, WCB etc. 12½%	41,773	0.332
Depreciation (straight line over 5 yrs. on capital costs of $470,000)	94,000	0.746
	$469,953	3.729

*This rate includes overtime charges.

It is assumed that one DK8 crawler tractor and one rubber-tire 4 m^3 bucket loader will provide sluice box feed at the rate of 1000 m^3 of gravel per working day of 20 hours. A standby loader and additional sluice capacity will be necessary to ensure continuous production in the case of equipment breakdown.

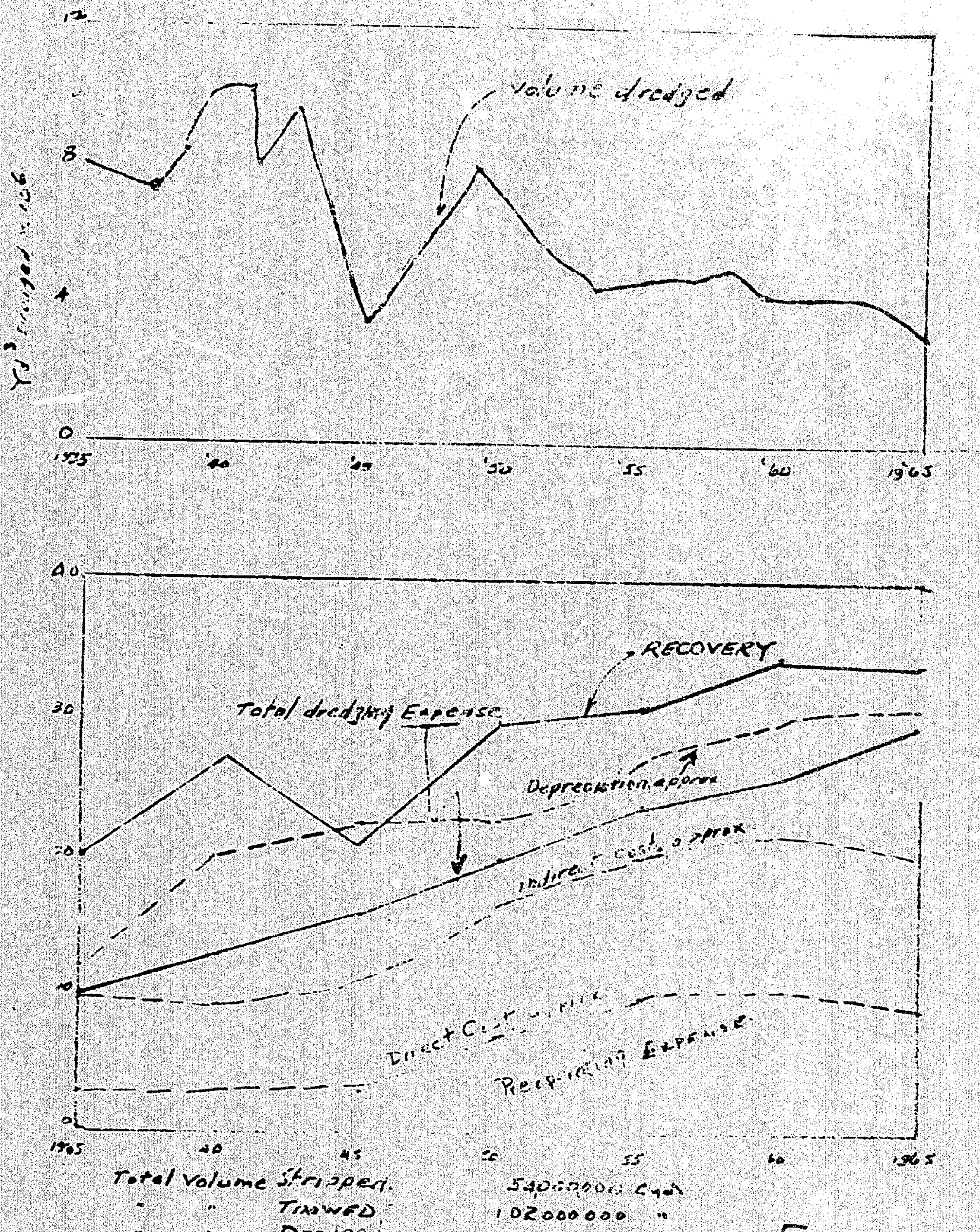
The gold content from sampling was recovered by sluicing and has been used to calculate the average content per m^3 of the deposit. It is assumed that recovery of gold in the sluice box will average 96% and operating time for the season will average 90%. Thus, during one season's operation 126,000 m^3 will be treated in 140 days. Gold recovery, at a recovery rate of 96%, is expected to be 115,844.4 grams (3724.7 oz).

Income for the season, based on a gold price of Can. $200 per oz., would be $744,940. Total operating costs are calculated to be $469,953, giving an operating profit of $274,987.

Cash flow for the season would be profit plus depreciation, or $368,987. Every Can. $10 increase or decrease in the price of gold per oz. will influence the cash flow by $37,247. Any improvement in the exchange rate on U.S. funds will decrease cash flow. Every 1.0% decrease in gold recovery will influence the cash flow by some $7500.

UNIT COSTS & RECOVERIES

Yukon Consolidated Gold Corp.,Ltd.
Dawson City, Y.T.



Total Volume Stripped.	54000000 Cyds	
" " Thawed	102000000 "	
" " Dredged	191 000 000 "	
" Recovery	$(can) 53.000.000	
Average Recovery	[illegible] "	
Operating Cost	18.3¢/[illegible]	

Fig 4

The economics of gold placer dredging has been well documented by Yukon Consolidated Gold Corp., Ltd. which operated dredging operations from 1935 to 1966. A graphical representation of their unit recovery and major elements of cost is shown in the attached graph.

Average recovery varied widely from year to year, from 14.2 to 44.1¢/cu yard, depending on the tenor of ground being mined by most of the dredges. This is a variable that cannot be controlled because topography, drainage and amount of overburden to be removed govern the plan of dredging that is laid out years ahead for each dredge.

Average recovery and total costs for a period of 28 years were 27.3¢ and 18.8¢ (Can.)/cu yard, respectively, leaving 8.5¢/cu yard, or a total of $15,000,000 for payment of certain other expenses and taxes; disbursement to shareholders amounting to several million dollars, and profit. Cost of stripping and thawing frozen ground to prepare for dredging amounted to 31% of the total dredging costs, with only 52% of dredged ground being frozen. The graph clearly shows the rising trend of costs from 1940 onwards. Operations ceased when the total dredging expenses and recovery curves met or closely approached each other.

Present day costs are going to be higher, but proportionally, and the curves still hold for the method used nowadays. The %-cost of thawing permafrost remains the same; costs of operating earth-moving equipment, sluicing, and wages of personnel are higher. However, to offset this situation the price of gold is more than six times that of 1966. Apart from dredging operations the present day costs are similar to those described in the graph.

E. P. Sheppard

E. P. Sheppard, P.Eng.
Consulting Geologist

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
E. P. SHEPPARD

October 14, 1978

E. PERCY SHEPPARD, P.ENG.
CONSULTING GEOLOGIST

1606-M, 1600 Beach Ave.
Vancouver, B.C. V6G 1Y7
April 20, 1979

Mr. Norman Pearson, Director
Crescent Mines Ltd.
8849 Oak Street
Vancouver, B.C.

Dear Sir:

As requested, I have prepared an estimated Cost Schedule for further work on Bench 1, Clear Creek claims.

The schedule covers establishing a settling pond, digging drainage ditches through the bench, and additional sampling on a grid pattern.

Very truly yours,

E. P. Sheppard

(E. P. Sheppard), P.Eng.

Enc.
EPS:d

DRAINING & SAMPLING

The Geological Report, dated October 14, 1978, written for Birch Industries Inc., now taken over by Crescent Mines Ltd., recommends that with very little further work mining operations could begin on a pattern of ground sluicing. It has been pointed out, however, that this method on an undrained bench merely carries the gold further down into the gravels, which means that the gravels have to be dug and sluiced down to bedrock; only then would the gold that is present be recovered.

By establishing a settling pond and digging a drainage ditch through the bench, the movement of gold through the gravels would be minimized. At the same time, as many samples as possible should be taken on a grid pattern of much closer spacing than was used in the original report; say, 50 metres (160 feet).

If started early in May it is estimated that this work could be completed by the first week in July. The bench will be thoroughly drained by the time the results from this work have been compiled.

If the sampling shows that there is sufficient gold to mount a feasible mining operation as indicated in the original report, then full-scale mining should begin.

cont....

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA E. P. SHEPPARD

Clear Creek Claims

ESTIMATED COSTS FOR DRAINING & SAMPLING

Cat., rental	$ 15,000
Backhoe, rental	20,400
Wages, 3 men	2,500
Room & Board	2,000
Assaying	1,000
Grid & Map of benches	3,000
*Sampling on grid pattern	2,500
Transportation	3,000
Engineering, reports	1,000
Fees, licenses, etc.	$50,400

*1 cubic yard samples

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA E. P. SHEPPARD

E. P. Sheppard

E. Percy Sheppard, P.Eng.

April 20, 1979

E P SHEPPARD, P ENG

APPENDIX

DESCRIPTION OF SAMPLES #5-#10
(To accompany Fig. 1)

Sample #5- Pit- 1 m^3
3 meters long
2.1 " wide
3.6 " deep
Composed of: 1.2 m silt
2.4 m gravel "bedrock"

Sample #6- Pit- 1 m^3
3.0 m L
1.8 " W
2.4 " D
0.6 m silt
1.8 m broken bedrock

Sample #7-Pit in Cat. cut, 1 m^3
20.3 m L
3.0 " W
1.2 " D
Pit 1.8 m L
1.2 " W
1.2 " D
1.2 m silt
1.2 m gravel
Permafrost

Sample #8-Pit- 1 m^3
6.0 m L
4.5 " W
3.6 " D
All gravel, bedrock?

Sample #9- Cat. cut 1 m^3
12 m L
3.6 m W
3.3 " D
2.1 silt
1.2 gravel, bedrock

Sample #10
2.1 m L
1.8 " W
1.8 " D
1.2 silt
0.6 gravel, then permafrost

Note: Areas were stripped, a trench dug and a backhoe used to remove a representative ½ or 1 m^3 sample.

GENERAL TESTING LABORATORIES

DIVISION SUPERINTENDENCE COMPANY (CANADA) LTD
1001 EAST PENDER ST., VANCOUVER, B.C., CANADA V6A 1W2
PHONE (604) 254-1647 TELEX 04-507515 CABLE SUPERVISE

TO:
BIRCH INDUSTRIES
8849 Oak Street
Vancouver, B.C.

CERTIFICATE OF ASSAY

No. 7809-2953 | DATE Oct. 3/73

We hereby certify that the following are the results of assays on: Black Sand Concentrates

MARKED		GOLD Au (mg)	XXXX	XXX	XX	XX	X XX	XXX	XX
Black Sand Concentrates	Sample weight :	Total gold in sample							
# 5	26.2 gm	1595							
# 6	19.8 gm	802							
# 7	29.5 gm	1030							
8	24.9 gm	1009							
# 9	26.9 gm	1693							
# 10	27.6 gm	1385							

REGISTERED PROFESSIONAL ENGINEER
E. P. SHEPPARD
BRITISH COLUMBIA
ENGINEER

REMARKS: Samples were totally fused and total gold were recovered.

NOTE: REJECTS RETAINED ONE MONTH. PULPS RETAINED THREE MONTHS. ON REQUEST PULPS AND REJECTS WILL BE STORED FOR A MAXIMUM OF ONE YEAR.

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L. WONG
PROVINCIAL ASSAYER

GENERAL TESTING LABORATORIES

DIVISION SUPERINTENDENCE COMPANY (CANADA) LTD
1001 EAST PENDER ST., VANCOUVER, B.C., CANADA V6A 1W2
PHONE (604) 254-1647 TELEX 04-507514 CABLE SUPERVISE

TO:
BLACK INDUSTRY
8049 Oak Street
Vancouver, B.C.

Attn: Mr. R. Watson

CERTIFICATE OF ASSAY

No.: 7809-1153 DATE: Sept. 13/78

We hereby certify that the following are the results of assays on: Placer Concentrates

MARKED	Total GOLD Au(mg)	~~GOLD~~	XXX	XXX	XXX	XXX	XXX	XXX
Placer Concentrates								
CC Sa #1	24.786							
Sa #2	98.061							
Sa #3	309.251							
Sa #4	365.1 — no assay sheet E.P.S							

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA E. P. SHEPPARD

NOTE: REJECTS RETAINED ONE MONTH. PULPS RETAINED THREE MONTHS. ON REQUEST PULPS AND REJECTS WILL BE STORED FOR A MAXIMUM OF ONE YEAR.

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L. WOLIC
PROVINCIAL ASSAYER

COPY

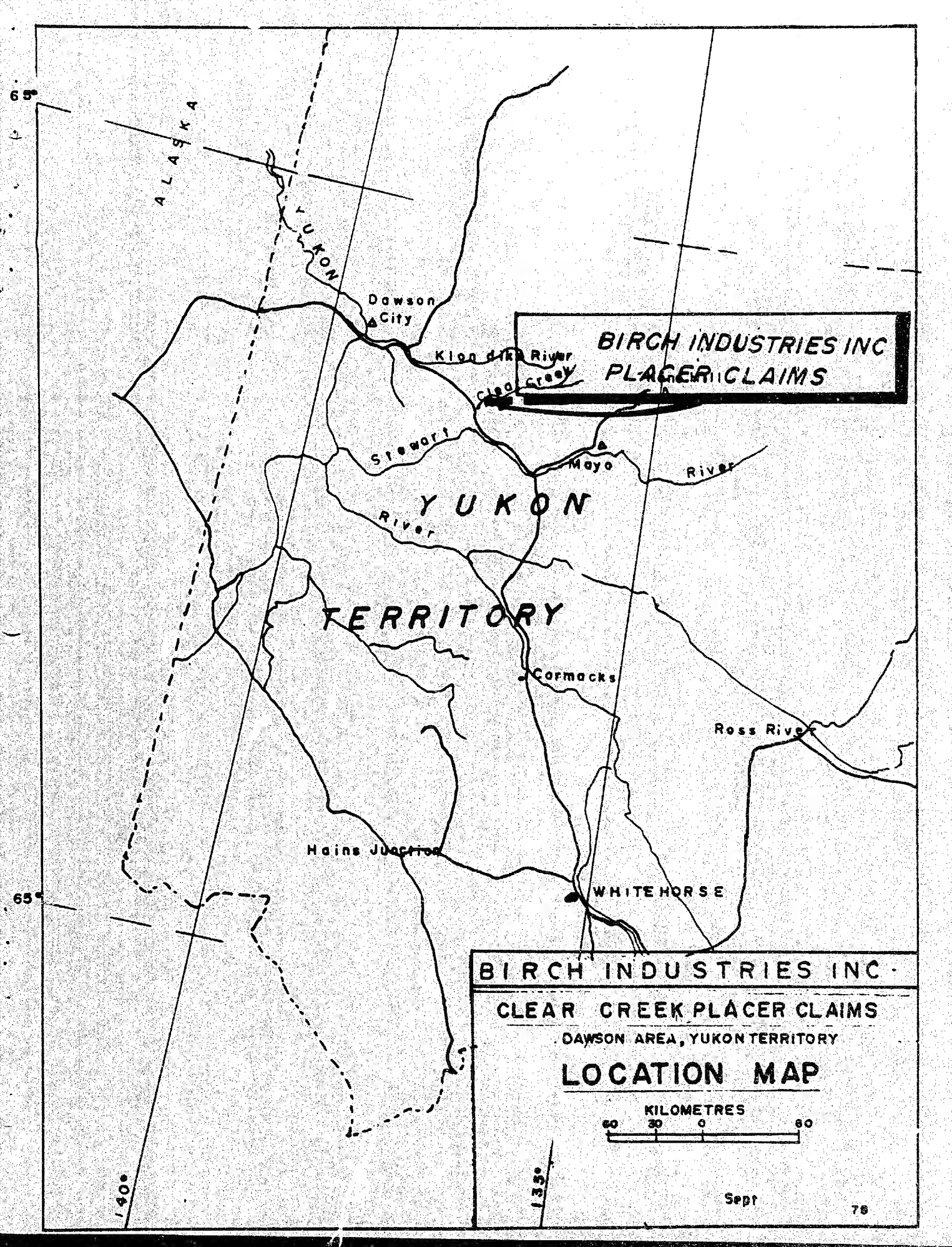
LIST OF REFERENCES

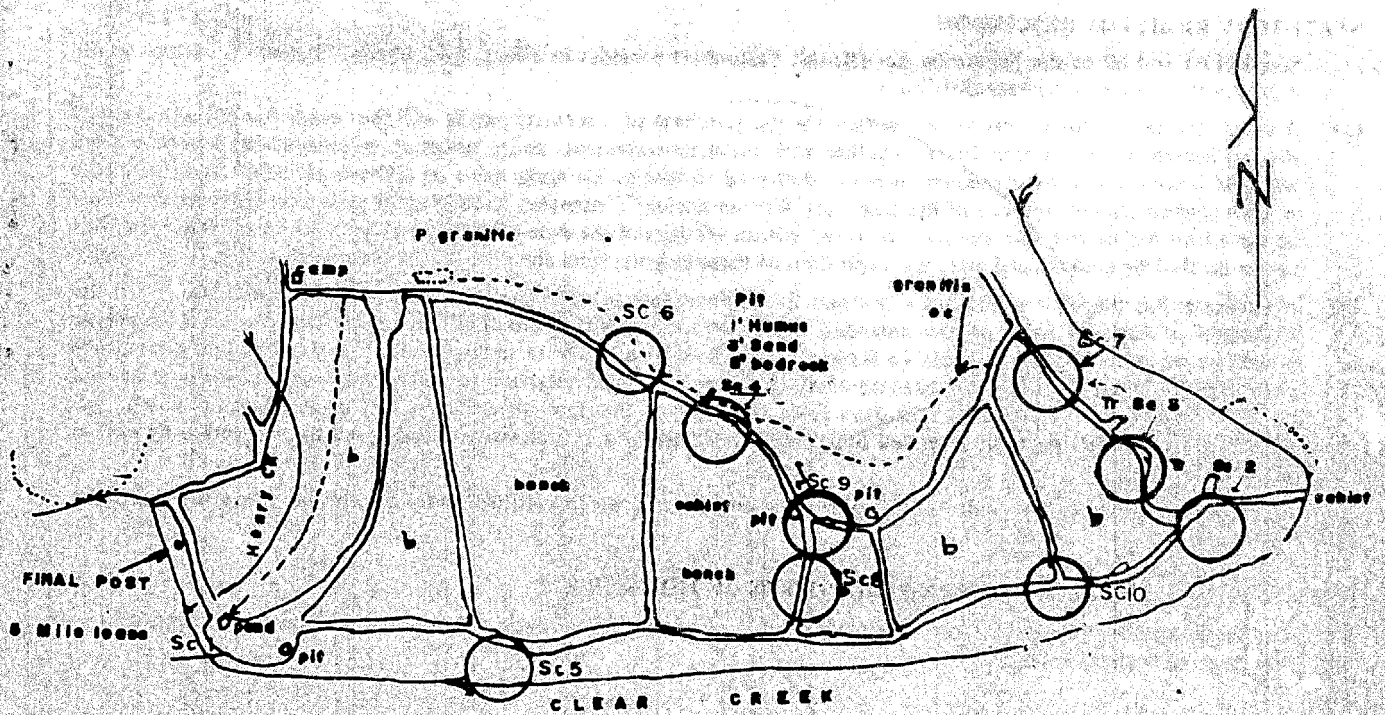
"SURFACE MINING" - AIME, Seeley W. Mudd Series, 1968

"REPORT ON CLEAR CREEK PLACER LEASE #4034"- Eric H. Johnson, Geologist, 1978

GSC Map 1143A - MCQUESTEN, Yukon Territory

Publications of Yukon Consolidated Gold Corp. Ltd., Dawson City, Y.T.


65°
ALASKA
YUKON
Dawson City
Klondike River
Clear Creek
BIRCH INDUSTRIES INC
PLACER CLAIMS
Stewart
Mayo
River
YUKON
River
TERRITORY
Cormacks
Ross River
Haines Junction
WHITEHORSE
65°
140°
135°
BIRCH INDUSTRIES INC.
CLEAR CREEK PLACER CLAIMS
DAWSON AREA, YUKON TERRITORY
LOCATION MAP
KILOMETRES
60 30 0 60
Sept
78



Sc 1 : From. Loader pit in settling pond

Pit
4·2m x 1·8m x 1·8
1·2 m sand
0·6 frosty gravel

1/2 m^3 0·00079 oz Au
NO Bedrock

Sc 2 · From cutcut, taken by loader

Pit 8m x 4·8m x 2·7m
1·2 m sand
1·8 m gravel
NO BEDROCK
1/2 m^3 SAMPLE 0·0082 oz Au

Sc-3 From cutcut taken by loader
Pit 18 m x 4·2m x 3·3 m
1·2 m
2·1 m
no bedrock
1/2 m^3 0·0094 oz Au

Sc 4 FROM Loader-hoe hole
PIT 3·6 m x 3·6m x 1·8 m
0·3 m humus
1·2 m stiff sand
2·4 m Fractured granitic bedrock
1/2 m^3 0·12 oz Au

50 METER CIRCLE

BIRCH INDUSTRIES INC.

STRIPPED AREA & ASSAY PLAN

CLEAR CREEK
DAWSON AREA
YUKON TERRITORY

SCALE 1 Cm. = 50 metres

Pages glued together

FIG 1

SEPT 1979

BENCH I · SAMPLE GRADE & RESERVES

S NO	Sample size m^3	1 Recovered Au mg	2 Gold content mg/m^3	3 Depth of goldbearing gravels m	4 Volume of gravels (m) m^3 (πr^2)h 50m circle $\pi r^2 h$ 3·1429(25)^{2}2·1	5 Gold content in 50 m^3 circle vol X content	6 Estimated Au recovery/m^3 At 96 (%)	7 Value/m^3 AT $200 /oz	8 Estimated Operating Day At 90 %	9 Recovered Au during 140 day grams	10 Total m^3 in deposit area X depth	11 Recoverable gravel m^3	12 Life of BENCH I years	VALUE
2	1/2 m^3	98406	196·12	2·1	4125·3	808000					137500X1·9	90 %	1+1	
3	1/2 m^3	303·8	618·60	1·5	2946·45	1822379								
4	1/2 m^3	365·1	730·20	2·4	471432	3442396								
5	1 m^3	1595	1595	2·4	471432	7519308				area bench	X depth sampled			
6	1 m^3	800	800	1·8	353574	2828592								
7	1 m3	1030·0	1030·0	1·2	235716	2427874 2			126					
8	1 m^3	1009	1009	3·6	7071·48	7135123								
9	1 m^3	1693	1693	1·2	2347·16	3990672	919·4							
10	1 m^3	1385	1385	0·6	117858	1632333		# 5·90	126	115844·4	261250	235125·0	1 year+	
	TOTAL	9676	9056	1·9	330000	31608686	919·4	# 5·90	126	1158446	261250	235125·0	1 year+	[illegible]40

3724·8g

BIRCH INDUSTRIES INC
CLEAR CREEK, DAWSON AREA

PROFESSIONAL ENGINEER · PROVINCE OF BRITISH COLUMBIA · E. P. SHEPPARD

FIG 2

Sept 1979

To Accompany report by E.P. Sheppard, P. Eng.

BENCH I · SAMPLE GRADE & RESERVES

S NO	Sample size m^3	1 Recovered Au mg	2 Gold content mg/m^3	3 Depth of goldbearing gravels m	4 Volume of gravels (m) m^3 (πr^2) h 50m circle πr^2 h $3{\cdot}1429(25)^2 2{\cdot}4$	5 Gold content in 50 m^3 circle vol X content	6 Estimated Au recovery/m^3 At 96 (%)	7 Value/m^3 AT $200/oz	8 Estimated Operating Day At 90 %	9 Recovered Au during 140 day grams	10 Total m^3 in deposit area X depth	11 Recoverable gravel m^3	12 Life of BENCH I years	VALUE
2	1/2 m^3	99106	196·12	2·1	4125·3	808000					137500X1·9	90 %	1+1	
3	1/2 m^3	309·5	618·50	1·5	2946·45	1822379								
4	1/2 m^3	365·1	730·20	2·4	471432	3442396								
5	1 m^3	1595	1596	2·4	471432	7519308				area bench	a X depth sampled			
6	1 m^3	800	800	1·8	353574	2828592								
7	1 m3	10300	10300	1·2	235716	2427874 2			126					
8	1 m^3	1009	1009	3·6	7071·48	7135123								
9	1 m^3	1693	1693	1·2	2347·16	3990672	919·4							
10	1 m^3	1385	1385	0·6	117858	1632333		5·20	126	1158444	261250	235125·0	1 year+	
	TOTAL	9573	9056	1·9	330000	31606686	919·4	5·20	126	1158495	261250	235125·0	1 year+	372·40

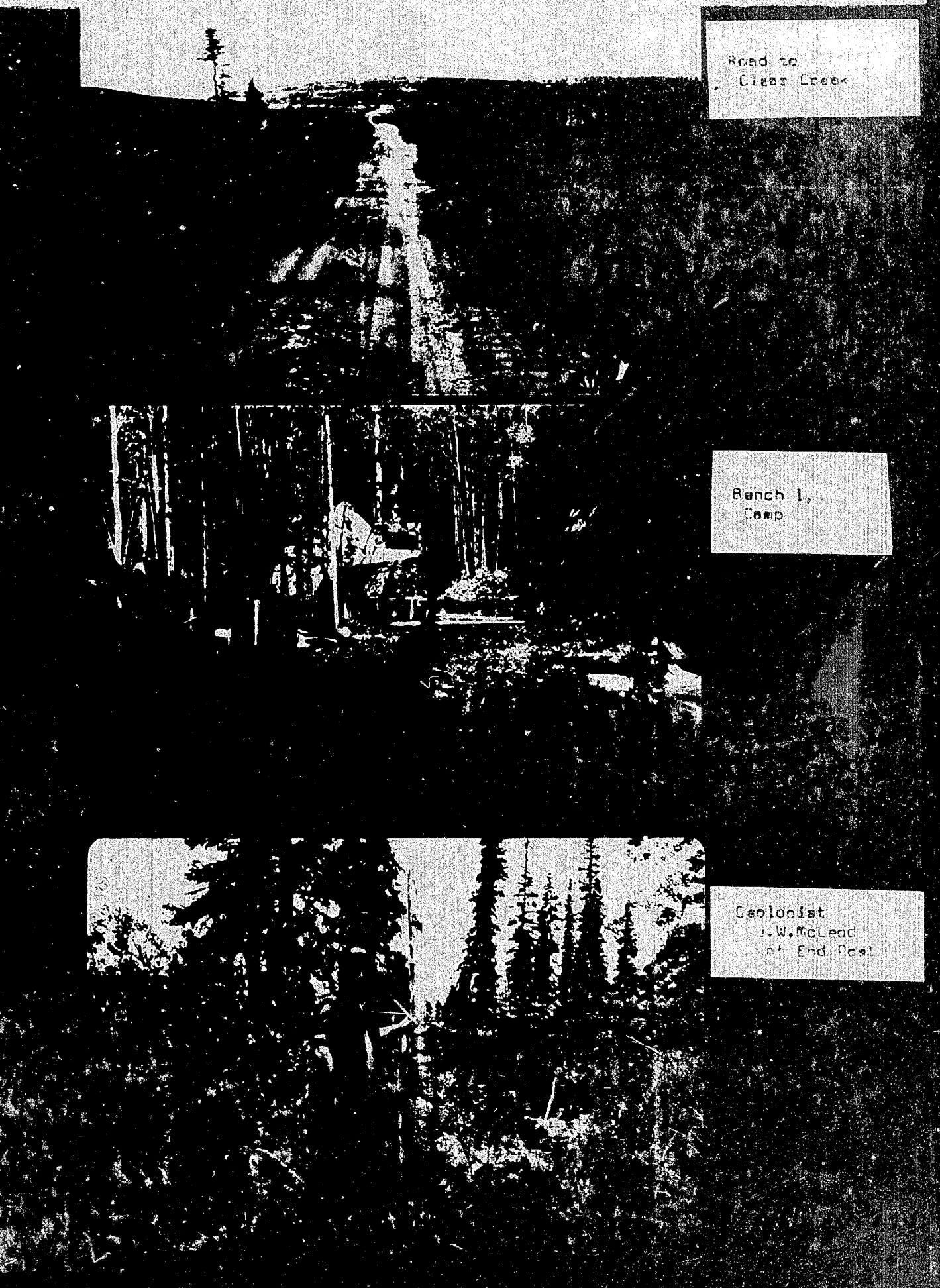
BIRCH INDUSTRIES INC
CLEAR CREEK, DAWSON AREA

FIG 2

Sept 1978

To Accompany report by E.P. Sheppard, P. Eng.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
E. P. SHEPPARD



Road to
Clear Creek

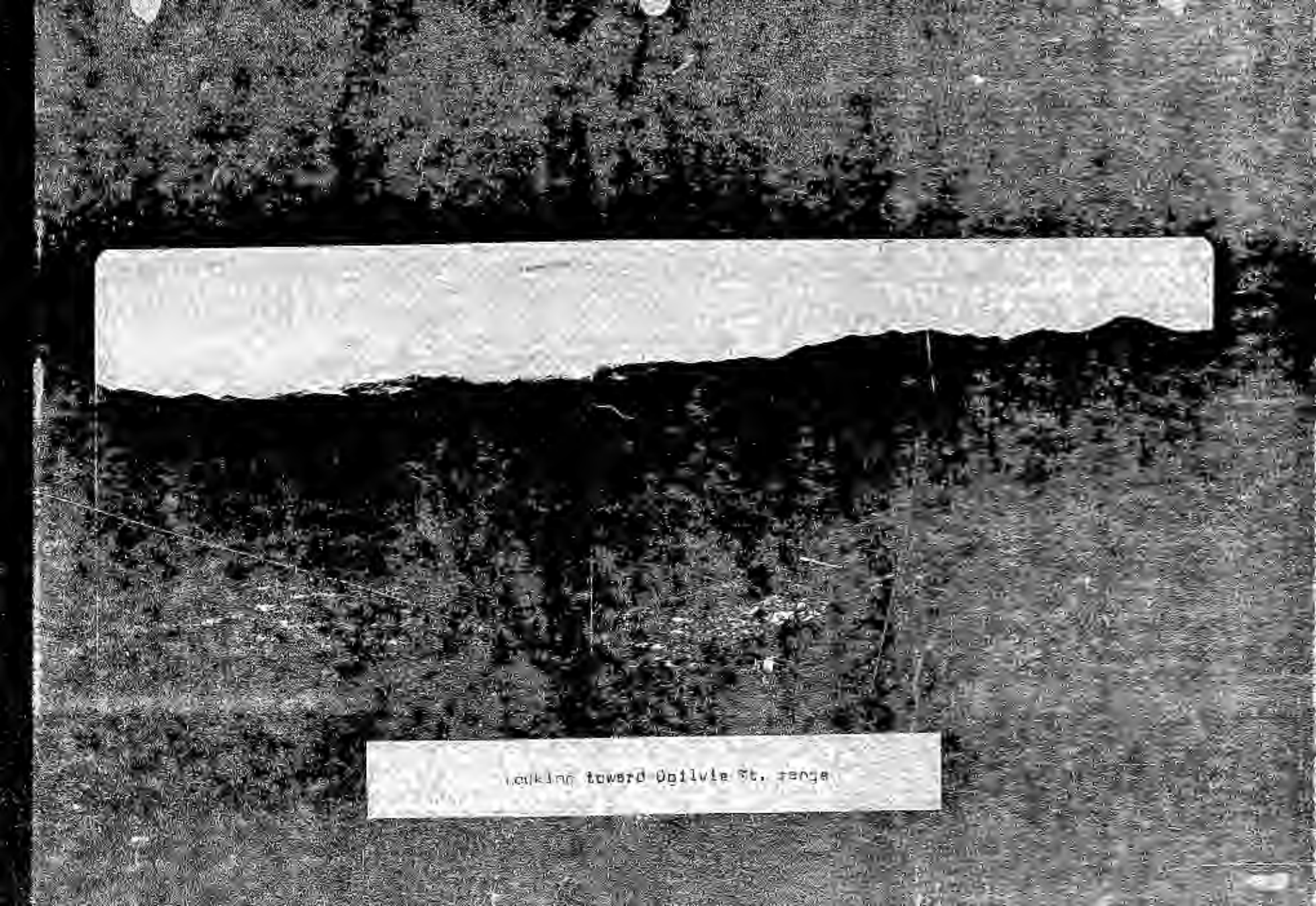
Bench 1,
Camp

Geologist
J.W.McLeod
at End Post

Bench 1,
initial stripping

Bench 1,
Sluice

E.P.S. with
Clear Creek in old



Looking toward Ogilvie St. range

Stripping on Bench 1, showing unsampled bench south of Clear Creek