

**YUKON TERRITORIAL GOVERNMENT
EXPLORATION INCENTIVES PROGRAM
PROJECT #93 - 032**

**PLACER EXPLORATION ON
BRUIN CREEK**

June 18 - July 11, 1993

**Placer Claims P28303, P28304
P28305, P28306, P28307, P28015**

**TRANSVERSE MERCATOR PROJECTION CO-ORDINATES
140°40' longitude - 64°17' latitude
PLACER CLAIM SHEET 116C-7**

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TABLE OF CONTENTS

1. BACKGROUND 1

2. PROJECT DESCRIPTION 2

3. EQUIPMENT USED 3

4. RESULTS 4

5. CONCLUSIONS AND RECOMMENDATIONS 5

6. INFORMATION FOR THE INTERPRETATION OF TABLES 6

APPENDIX 1 - TABLES

TABLE 1
RESULTS OF 7 LB. SAMPLES FROM EXCAVATIONS IN BRUIN CREEK 9

TABLE 2
RESULTS OF 100 LB. SAMPLES FROM EXCAVATIONS IN BRUIN CREEK 15

TABLE 3
RESULTS OF 7 LB. SAMPLES FROM EXCAVATIONS IN HERBERT CREEK 17

TABLE 4
VOLUME OF EXCAVATIONS 19

APPENDIX 2 - MAPS

MAP 1 - PROJECT LOCATION 1:250,000 22

MAP 2 - PROJECT LOCATION 1:50,000 23

MAP 3 - LOCATION OF CLAIMS 24

MAP 4 - LOCATION OF EXCAVATIONS 25

APPENDIX 3 - SUPPLEMENTARY INFORMATION 26

1. BACKGROUND

Bruin Creek is a tributary of the Fortymile River. The mouth of Bruin creek is located approximately 13 miles upstream of the confluence of the Fortymile and Yukon Rivers. The main stem of the creek is approximately 18 miles in length. It is a large creek, with a channel of approximately 50 feet wide in the lower reaches. The valley alternates in width from very narrow and canyon-like to areas of wide open flats. The section of the creek which we investigated forms the widest part of the drainage with a width of approximately 2,000 feet from rim to rim.

The section of Bruin Creek which we evaluated is classified as a type IV stream under the Yukon Fisheries Protection Authorization. This classification is amenable to mining in that it allows for an effluent discharge and for relocation of the creek channel.

There is good bush road into the property; it is approximately nine miles in length, and is suitable for 4 wheel drive vehicles. This access road joins the Clinton Creek road, which is maintained by the government to Dawson.

Bruin Creek was worked by miners during the Fortymile gold rush, between 1886 and 1896. Evidence of previous workings includes shafts and open cuts.

There are several old cabins and camps in this portion of the creek. A dredging operation was implemented on the lower reach of the creek in the early 1930's. However this venture was short lived due to the poor condition of the dredge. The remains of the dredge can be seen at the mouth of the creek.

Claims were held on the creek by various people for the past 15 years before we obtained it. Some drilling was done on it by



SAMPLING PITS IN BRUIN CREEK

previous claim holders but we do not know the values obtained.

We chose to investigate this section of the creek because it showed the greatest potential for dredging. Because of the width of the valley in this area, there is an immense volume of gravel available. The gravel in this section of the valley is thawed, which is a necessary prerequisite for dredging.

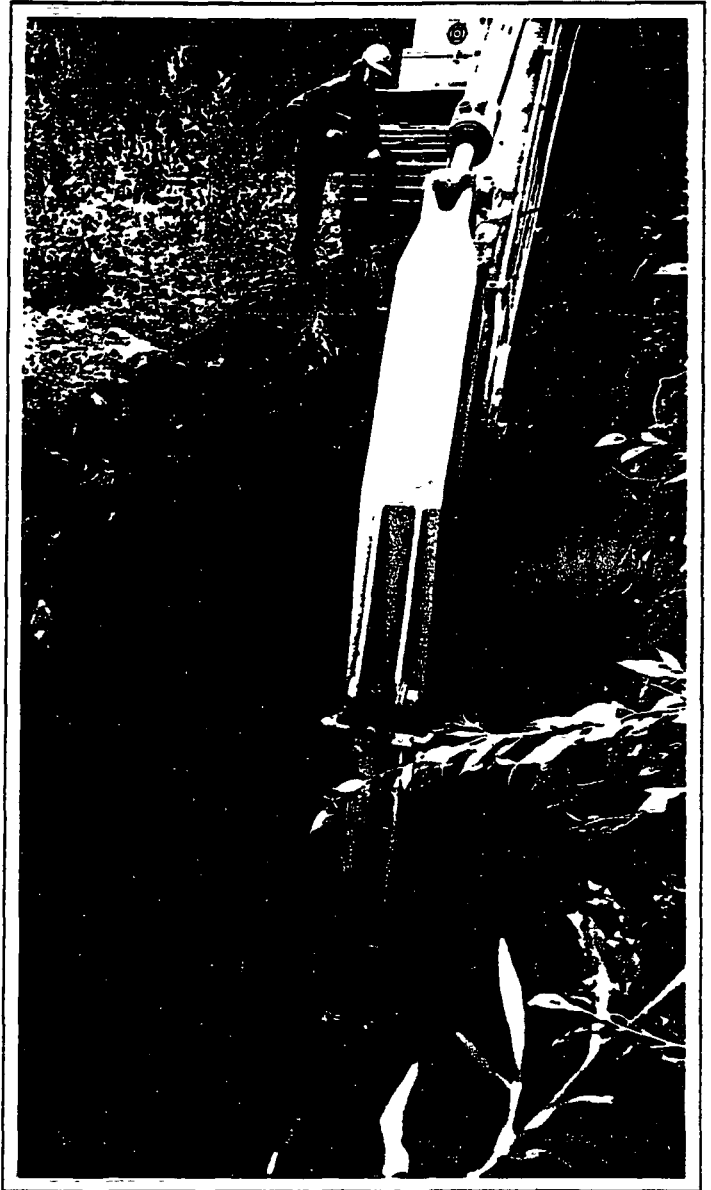
2. PROJECT DESCRIPTION

We began working on the project on June 18. We did a preliminary analysis of the property taking pans over the area which we intended to evaluate, using heavy equipment. This work allowed us to establish target areas for trenching.

We had an excavator and dozer trucked from our mine to a staging area at the Bruin Creek road turn-off on the Clinton Creek road. From this point we walked the equipment into the site. We used the dozer to fix wash-outs and other obstructions in the road, in order to make it passable for 4 x 4 traffic.

The excavation work performed can be broken down into two components as follows:

The first component of the project consisted of excavating pits to bedrock in



EXCAVATING WITH THE BACKHOE

the gravel reserves located in the valley floor. We used the dozer to pioneer access trails and to strip vegetation from the sites to be trenched with the excavator. We dug 19 pits. We took samples with a gold pan as excavation proceeded. As well, we took 100 lb. samples and processed them with gold clean-up equipment. This work was done over a length approximately 2,500 feet of the creek valley.

The second component of the project consisted of preliminary investigation of the lower reach of Herbert Creek. While we hadn't originally intended to do any work on Herbert Creek, we had obtained very good values from some of the pits which we excavated in Bruin Creek below its confluence with Herbert Creek. We felt that, because we had the equipment in the area, it was a good opportunity to perform some exploratory work on this tributary. Because the main focus of this project was to delineate dredging reserves the exploration in Herbert Creek was sketchy. We pushed a cat trail approximately 1/4 mile up the creek. We dug 3 pits and 2 trenches. We sampled the gravel with a gold pan as excavations progressed.



PIONEERING WORK

3.EQUIPMENT USED

We used the following equipment to execute the project:

- UH10 Hitachi excavator, equipped with 1 1/2 yard bucket and a 12 ft. 5 inch arm, was used for excavating the sample pits.
- D6-C Caterpillar dozer with angle blade was used to fix up the access

- road, to construct trails to the test sites, and to strip the test sites.
- 4 x 4 service truck with tools and welder/generator was used to power the gravel sampling equipment as well as for maintenance and repairs.
- 1 ton fuel truck was used to haul fuel to the equipment from our fuel cache.
- 4 wheel drive ATV was used to transport workers to the work site.
- 4 lead spiral gold wheel was used to process samples.

4. RESULTS

The results of this target evaluation in the main valley of Bruin Creek were encouraging. The work performed here confirmed that the gravel is thawed. Bedrock depth was established at between 6 to 10 feet in this section of the creek. The gravel is sandy and rounded and would be easy to wash in a sluicing operation. The ground is heavily timbered which would make stripping vegetation difficult. All of the holes which we excavated showed at least traces of gold and many of the pits had minable values. The gold which we found is similar to the gold which we are mining in the Fortymile valley, fine and flaky. The grain size of the gold is somewhat larger than that which we are mining in the Fortymile. From our work in the creek we estimate that there is in excess of one million yards of thawed gravel reserves in the area tested. From our preliminary work the gravel value established is approximately 1 raw ounce in 325 loose yards of gravel. We noticed a great improvement in grade projections from evaluating larger samples as compared with samples taken with the gold pan. We believe that this is due to the uneven distribution of the gold in the



TRENCHING IN HERBERT CREEK

gravel. We expect that there would be even more improvement in the tenor of the ground in a production mining situation. It was difficult to obtain samples off of bedrock because the gravel was so loose that it sluffed easily. Digging in the water also contributed to the difficulty of sampling bedrock effectively.

We found very good values in the lower end of the property which we tested. However, this is a fairly limited body of gravel, approximately 10,000 cubic yards. We estimated that this ground would run approximately 1 ounce in 83 bucket yards.

The trenching which we performed in Herbert Creek also delineated a deposit with minable values. We estimate that there are approximately 15,000 cubic yards in the area which we tested. We are reluctant to estimate a grade figure on this gravel because we feel that the work which we did was not adequate for grade projections. However we expect that this ground would run at least 1 ounce in 100 loose yards.

5. CONCLUSIONS AND RECOMMENDATIONS

It can be seen from the tables of our results from sampling that the values and grade projections extrapolated from the samples vary greatly. We based our prospecting and sampling program on the method which we use to evaluate ground on the Fortymile River, where we are mining. In retrospect, we believe that this was not the best way to evaluate the ground in Bruin Creek. It can be seen from the samples taken with the gold pan that many of the pans had no colours present. The resulting number of pans showing no gold present undoubtedly gave a negative slant to the grade projections. The 100 pound samples which we took improved the grade projections significantly, but the number of colours obtained in different samples of equal size from a pit varied significantly; this makes us question the accuracy of the grade projections obtained from the larger samples. If we did further evaluation work in this creek, we would run bulk samples to get a more accurate grade projection.

This preliminary target evaluation has shown that more extensive test work is warranted. We have delineated a very large low grade gravel deposit which could be viable for a high volume dredging operation with gold at US\$400 per

ounce. We believe that there is a defined pay streak in this valley that we did not hit with the work which we performed. More test work might locate the pay streak.

The deposit on the lower reach of Bruin Creek has good values which would support a short term mining operation. However for us it would not warrant the mobilization to mine this deposit, unless there were other confirmed reserves.

The work which we did at the mouth of Herbert Creek shows that further evaluation work is warranted, because we delineated a viable gravel deposit at the mouth of the creek.

We recommend that more intensive evaluation work be done on Bruin Creek with the intent of determining if there is paystreak which would carry higher gold values than those which we established. We also recommend that further work be done up Herbert Creek to get more information on the creek. Because the ground in Herbert Creek is frozen, drilling would be the best way to evaluate the gravel. Herbert is not of immediate interest to us because our operation and equipment is dredging oriented.

This evaluation work did delineate two viable gold deposits. While they are not suitable for our operations they may be of interest to other miners.

Because of the large timber in the valley consideration should be given to logging the trees off of the ground before mining is begun. This would not only make stripping easier but could also be profitable.

6. INFORMATION FOR THE INTERPRETATION OF TABLES

We did a grain size analysis on the colours which we recovered from the Bruin Creek samples. We found in comparing them to Fortymile colours that, on average, they are approximately twice as big. Previous work done on the Fortymile has shown that the presence of one colour in a small gold pan indicates that it takes 650 yards of gravel to produce one ounce of raw gold. Because the Bruin Creek colours are twice as big, each colour obtained in a sample pan indicates a ground tenor of approximately 325 yards to the ounce. Using this information, by counting the number of colours in a small pan when sampling, the grade of the ground can be readily estimated.

For example, if there are three colours found in a sample in a small gold pan, the grade of the ground is calculated as follows:

325 yards to the ounce/ 3 colours in the pan = 108 yards to the ounce

Grade figures have been calculated in terms of the number of bucket yards required to produce one troy ounce of unrefined gold.

Because the Bruin Creek gold looks very similar to Fortymile gold, fine flaky and bright yellow, we assume that it would have a similar purity to Fortymile gold, which is .835.

APPENDIX 1 - TABLES

TABLE 1

RESULTS OF 7 LB. SAMPLES FROM EXCAVATIONS IN BRUIN CREEK

EXCAV #	SAMPLE #	COMMENTS	# COLOUR	AV COLOURS/ SAMPLE	AV GRADE YDS/OZ
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PIT	B1.a	fine colour	1		
	B1.b		0		
B1	B1.c	medium flake	1	.75	433
	B1.d	thick flake	1		

Pit B1 is 8 ft. to bedrock, some red clay.

PIT	B2.a		0		
	B2.b		0		
	B2.c		0		
B2	B2.d		2	1	325
	B2.e		0		
	B2.f	1 flake	4		

Pit B2 is 10 ft. to bedrock.

PIT	B3.a		0		
	B3.b		0		
	B3.c	flake	1		
B3	B3.d	garnets	0	.25	1300
	B3.e		0		
	B3.f	flake	1		

Pit B3 is 8 ft. to bedrock, red clay and white clay on bedrock.

TABLE 1 continued
RESULTS OF 7 LB. SAMPLES FROM EXCAVATIONS IN BRUIN CREEK

EXCAV #	SAMPLE #	COMMENTS	# COLOUR	AV COLOURS/ SAMPLE	AV GRADE YDS/OZ
PIT	B4.a		0		
	B4.b	very fine colour	1		
B4	B4.c		0	.25	1300
	B4.d		0		

Pit B4 is 7 ft. to bedrock.

	B5.a		6		
PIT	B5.b		3		
	B5.c		1		
B5	B5.d	small colour	1	2.8	116
	B5.e	1 flake	3		

Pit B5 is 8 ft. to bedrock.

	B6.a		2		
PIT	B6.b		0		
	B6.c		0		
B6	B6.d		0	.5	650

Pit B6 is 8 ft. to bedrock.

PIT	B7.a	1 flake	2		
	B7.b		0		
B7	B7.c		0	.7	464

Pit B7 is 8 ft. to bedrock.

TABLE 1 continued
RESULTS OF 7 LB. SAMPLES FROM EXCAVATIONS IN BRUIN CREEK

EXCAV #	SAMPLE #	COMMENTS	# COLOUR	AV COLOURS/ SAMPLE	AV GRADE YDS/OZ
	B8.a		0		
PIT	B8.b		1		
	B8.c		1		
B8	B8.d		0	.8	406
	B8.e	1 large flake	2		

Pit B8 is 8 ft. deep, red clay on bedrock

	B9.a		0		
PIT	B9.b		1		
	B9.c		0		
B9	B9.d		0	.29	1120
	B9.e		0		
	B9.f		1		
	B9.g		0		

Pit B9 is 8 -10 ft to bedrock, soft bedrock.

	B10.a		0		
PIT	B10.b		0		
	B10.c		0		
B10	B10.d		0	.22	1477
	B10.e		0		
	B10.f		0		
	B10.g		0		
	B10.h		1		
	B10.i	flake	1		

Pit B10 is approximately 8 ft. to bedrock, hole sluffed badly.

TABLE 1 continued
RESULTS OF 7 LB. SAMPLES FROM EXCAVATIONS IN BRUIN CREEK

EXCAV #	SAMPLE #	COMMENTS	# COLOUR	AV COLOURS/ SAMPLE	AV GRADE YDS/OZ
	B11.a		0		
PIT	B11.b	2 flakes	7		
	B11.c		0		
B11	B11.d	garnets	0	.33	984
	B11.e		1		
	B11.f		0		

Pit B11 is approximately 10 ft. to bedrock.

	B12.a		0		
PIT	B12.b		0		
	B12.c		0		
B12	B12.d		0	.1	2955
	B12.e		1		
	B12.f		0		
	B12.g		0		
	B12.h		0		
	B12.i		0		

Pit B12 is 12 ft. to bedrock, near valley limit bedrock is deeper. 1 ft of frozen muck on the surface but gravel is thawed under muck.

	B13.a		0		
PIT	B13.b		0		
	B13.c		0		
B13	B13.d		0	0	--
	B13.e		0		
	B13.f		0		

Pit B13 is 10 ft. to bedrock.

TABLE 1 continued
RESULTS OF 7 LB. SAMPLES FROM EXCAVATIONS IN BRUIN CREEK

EXCAV #	SAMPLE #	COMMENTS	# COLOUR	AV COLOURS/ SAMPLE	AV GRADE YDS/OZ
	B14.a		0		
PIT	B14.b		1		
	B14.c		0		
B14	B14.d		0	.33	985
	B14.e		0		
	B14.f		1		

Pit B14 is 10 ft. to bedrock.

	B15.a		6		
PIT	B15.b	flake	1		
	B15.c	1 flake	4		
B15	B15.d		0	2.6	125
	B15.e	1 large flake	2		

Pit B15 is 10 ft. deep, some boulders.

	B16.a		0		
PIT	B16.b	large colours	2		
	B16.c	2 flakes	6		
B16	B16.d		5	2.8	116
	B16.e	flake	1		

Pit B16 is 12 ft. deep

TABLE 1 continued
RESULTS OF 7 LB. SAMPLES FROM EXCAVATIONS IN BRUIN CREEK

EXCAV #	SAMPLE #	COMMENTS	# COLOUR	AV COLOURS/ SAMPLE	AV GRADE YDS/OZ
---------	----------	----------	----------	-----------------------	--------------------

	B17.a	large colour	1		
PIT	B17.b		0		
	B17.c		0		
B17	B17.d		1	1	325
	B17.e	2 flakes	4		
	B17.f		0		
	B17.g	on bedrock	1		

Pit B17 is 14 ft. to bedrock. There are some large boulders.

PIT	B18.a		0		
	B18.b		0		
B18	B18.c	small flake	1	.33	985

Pit B18 is 4 ft. to bedrock.

	B19.a		0		
PIT	B19.b		0		
	B19.c		0		
# B19	B19.d		0	0	--

Pit B19 sluffed badly and was abandoned. Bedrock was not reached.

TABLE 2
RESULTS OF 100 LB. SAMPLES FROM EXCAVATIONS IN BRUIN CREEK

EXCAV #	SAMPLE #	COMMENTS	# COLOURS	GRADE YDS/OZ
PIT	B1.A		30	155
B1	B1.B		17	273
PIT	B2.A		56	83
B2	B2.B		22	211
PIT	B3.A		6	774
B3	B3.B		11	423
PIT	B4.A		13	358
B4	B4.B		17	273
PIT	B5.A		47	99
B5	B5.B		71	65
PIT	B6.A		21	221
B6	B6.B		16	290
PIT	B7.A		11	423
B7	B7.B		19	245
PIT	B8.A		16	290
B8	B8.B		8	581
PIT	B9.A		3	1549
B9	B9.B		8	381
PIT	B10.A		9	516
B10	B10.B		11	423
PIT	B11.A		26	179
B11	B11.B		14	332

TABLE 2 continued
RESULTS OF 100 LB. SAMPLES FROM EXCAVATIONS IN BRUIN CREEK

EXCAV #	SAMPLE #	COMMENTS	# COLOURS	GRADE YDS/OZ
PIT	B12.A		12	387
B12	B12.B		7	664
PIT	B13.A		13	358
B13	B13.B		11	423
PIT	B14.A		16	290
B14	B14.B		23	202
PIT	B15.A		61	77
B15	B15.B		123	38
PIT	B16.A		42	111
B16	B16.B		151	31
PIT	B17.A		64	73
B17	B17.B		95	49
PIT	B18.A		7	664
B18	B18.B		9	516
PIT	Abandoned, no 100 lb. samples			
B19				

AVERAGE GRADE IN BRUIN CREEK FROM 100 LB. SAMPLES.....325 YD/OZ

TABLE 3
RESULTS OF 7 LB. SAMPLES FROM EXCAVATIONS IN HERBERT CREEK

EXCAV #	SAMPLE #	COMMENTS	# COLOUR
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PIT	H1.a	fine colour	1
	H1		0

Pit H1 sluffed badly and was abandoned.

	H2.a		0
PIT	H2.b		0
	H2.c	2 flake	4
H2	H2.d		2
	H2.e	large colours	2
	H2.f		0
	H2.g	large colours	2
	H2.h		2
	H2.i	large colours	3
	H2.j	flake on bedrock	1
	H2.k		0

Pit H2 is 14 ft to bedrock.

	H3.a	large piece	1
PIT	H3.b		0
	H3.c		0
H3	H3.d		0
	H3.e		0

Pit H3 is 14 ft. to bedrock. There is sand on bedrock.

TABLE 3 continued
RESULTS OF 7 LB. SAMPLES FROM EXCAVATIONS IN HERBERT CREEK

EXCAV #	SAMPLE #	COMMENTS	# COLOUR
---------	----------	----------	----------

	H4.a	1 flake	3
TRENCH	H4.b		0
	H4.c	good colours	3
H4	H4.d		1
	H4.e	large colour	1
	H4.f	top gravel	0

Trench H4 is 12 ft to bedrock.

	H5.a	fine colours	2
TRENCH	H5.b		0
	H5.c		0
H5	H5.d		0
	H5.e		0
	H5.f		0
	H5.g		0
	H5.h	1 flake	2

Trench H5 is 24 ft. to bedrock. Boulders were encountered on bedrock.

	H6.a	1 flake	10
	H6.b		0

These 2 samples were taken from a cut bank on the cat trail.

TABLE 4
VOLUME OF EXCAVATIONS

VOLUME OF PITS & TRENCHES

PIT	DIMENSIONS (feet)	VOLUME (cubic yards)
B1	16 dia. x 8 deep	60
B2	20 dia. x 10 deep	117
B3	16 dia. x 8 deep	60
B4	14 dia. x 7 deep	40
B5	16 dia. x 8 deep	60
B6	16 dia. x 8 deep	60
B7	16 dia. x 8 deep	60
B8	16 dia. x 8 deep	60
B9	20 dia. x 10 deep	117
B10	16 dia. x 8 deep	60
B11	20 dia. x 10 deep	117
B12	24 dia. x 12 deep	201
B13	20 dia. x 10 deep	117
B14	20 dia. x 10 deep	117
B15	20 dia. x 10 deep	117
B16	24 dia. x 12 deep	201
B17	28 dia. x 14 deep	319

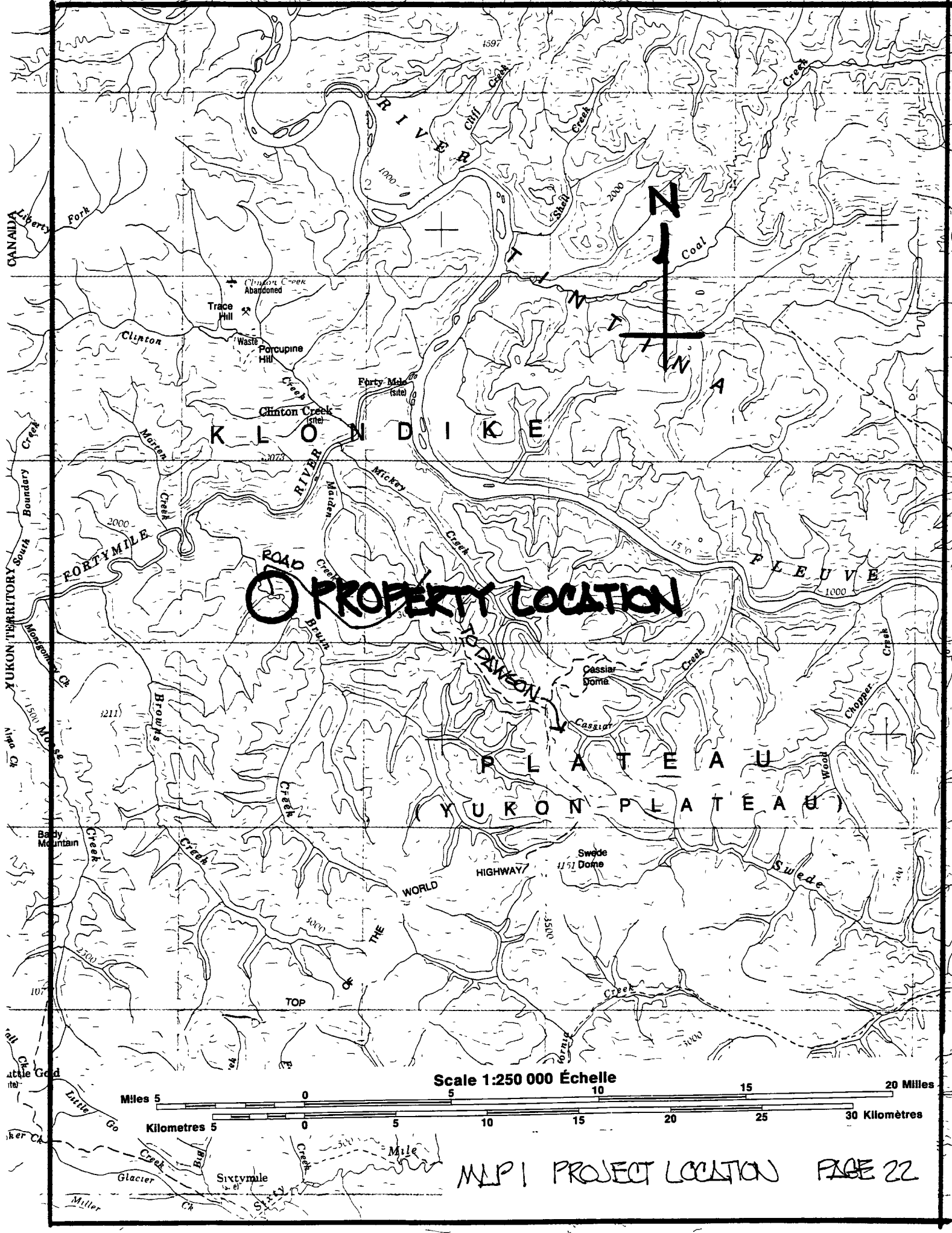
TABLE 4 continued
VOLUME OF EXCAVATIONS

VOLUME OF PITS & TRENCHES

PIT	DIMENSIONS (feet)	VOLUME (cubic yards)
B18	8 dia. x 4 deep	25
B19	12 dia. x 6 deep	13
H1	6 wide x 10 long x 6 deep	62
H2	6 wide x 20 long x 14 deep	62
H3	6 wide x 20 long x 14 deep	62
H4	6 wide x 80 long x 12 deep	213
H5	7 wide x 30 long x 24 deep	187

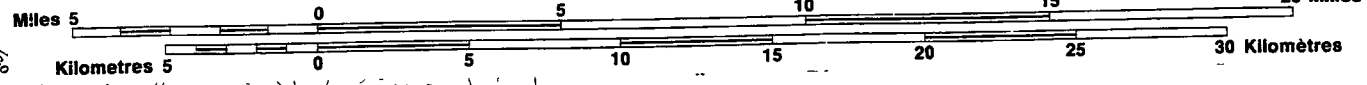
TOTAL VOLUME OF EXCAVATIONS.....2,452 BANK CUBIC YARDS

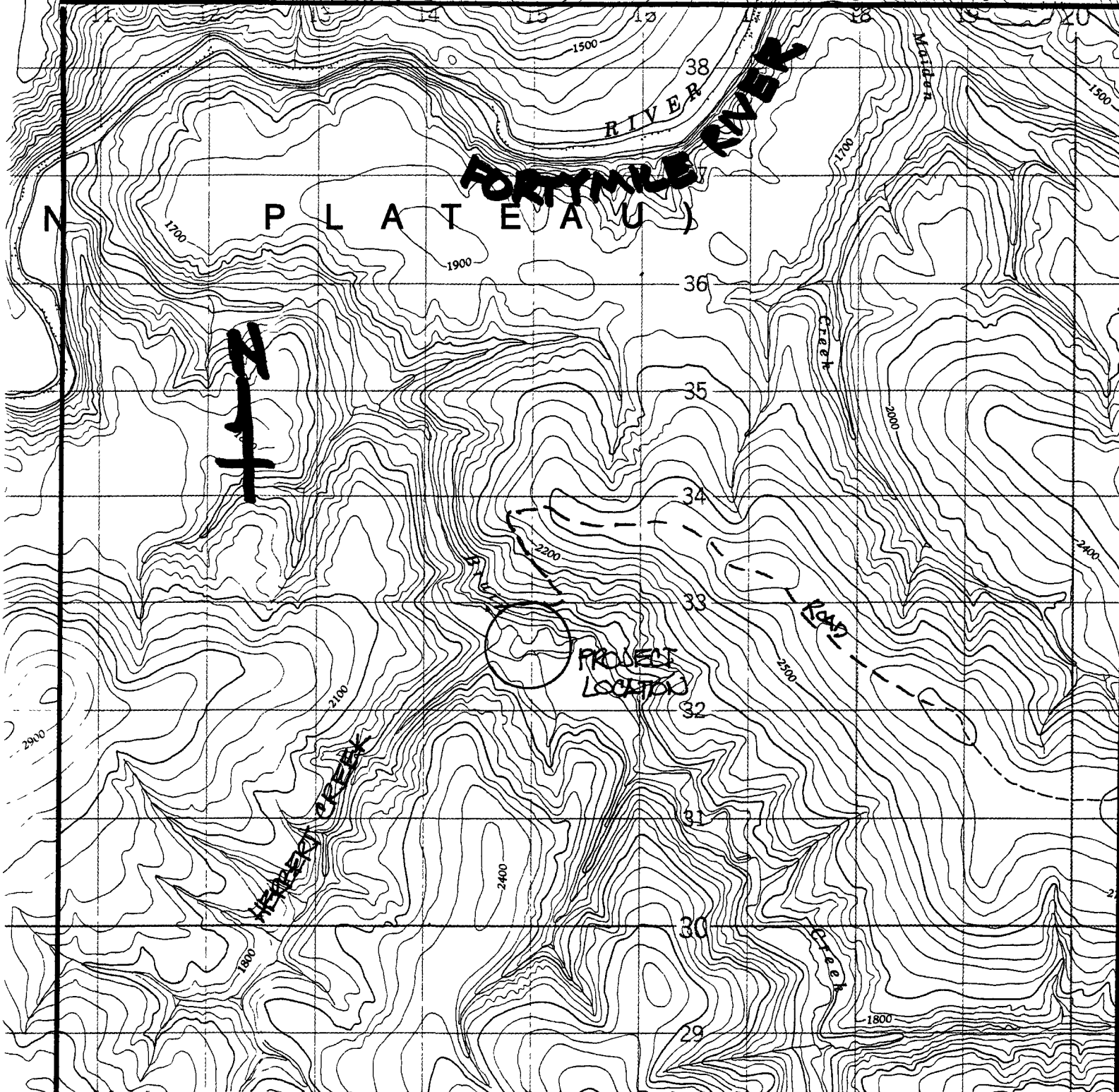
APPENDIX 2 - MAPS



PROPERTY LOCATION

Scale 1:250 000 Échelle

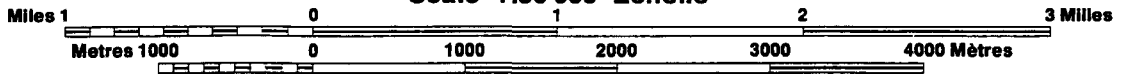


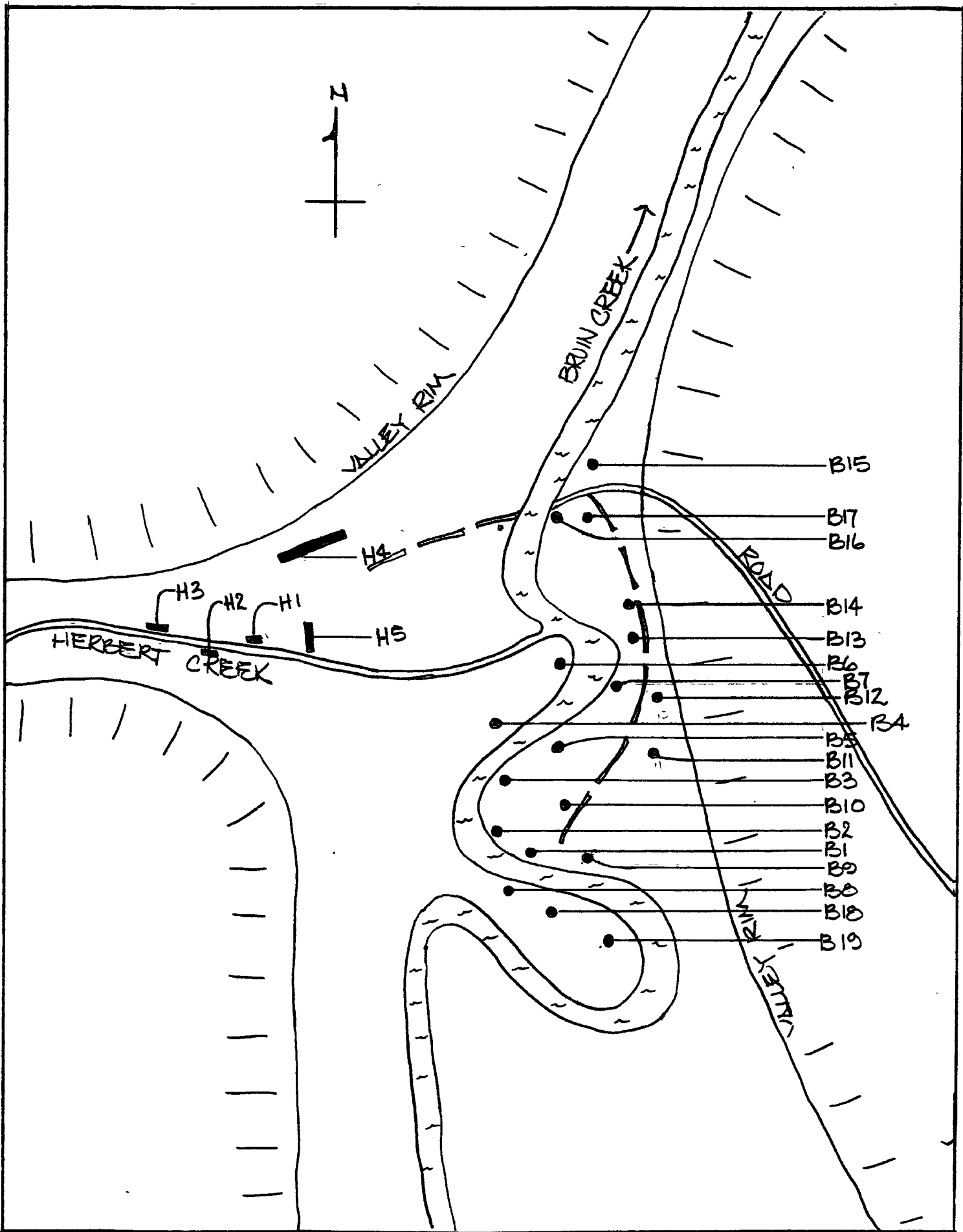


CLINTON CREEK

CANADA UNITED STATES OF AMERICA
CANADA ÉTATS-UNIS D'AMÉRIQUE

Scale 1:50 000 Échelle





MAP 4 LOCATIONS OF EXCAVATIONS 1"=500'

APPENDIX 3 - SUPPLEMENTARY INFORMATION

PEOPLE WHO WORKED ON THE PROJECT

Bill Claxton	Marten Creek, Fortymile River, Yukon
Leslie Chapman	Marten Creek, Fortymile River, Yukon
Paul Wylie	Dawson City, Yukon

PREPARATION OF THE REPORT

The report was prepared by Leslie Chapman and Bill Claxton.

PROPERTY INVESTIGATED

Placer claims P28303, P28304, P28305, P28306, P28307, P28015