

YUKON TERRITORIAL GOVERNMENT
EXPLORATION INCENTIVES PROGRAM
PROJECT ED90-1/91050

PLACER EXPLORATION ON
FORTYMILE RIVER

August 13 - November 30, 1991

DREDGING LEASE 83/4

TRANSVERSE MERCATOR PROJECTION CO-ORDINATES
141°41' longitude - 64°21' latitude
PLACER CLAIM SHEET 116C-7

prepared by
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50%

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1. PROJECT BACKGROUND

The Fortymile Pacific Joint Venture controls two and a half miles of placer property on the left limit of the Fortymile River, including the portion of dredging lease DL83/4 which fronts this property. We have been dredging on the river bars for three seasons

This exploration program was carried out on two river bars on the Fortymile River directly upstream from the upper boundary of the joint venture property. These bars are located approximately eight miles upstream for the confluence of the Fortymile and the Yukon Rivers. The property location is shown on Map M1.

A bucket-line dredge operated on the lower Fortymile River between 1906 and 1911. The remains of this dredge can still be seen on the left limit of the river approximately eight miles above its confluence with the Yukon River. The dredge stopped working where it sits now. This dredge was operated by the Yukon Consolidated Dredging Company. It was reportedly worn out and stopped working because it could no longer be kept running. As well, the start of the first World War meant that labour to run the operation was no longer available.



DREDGE REMAINS ON FORTYMILE RIVER

We have obtained some production records from the Yukon Consolidated dredge, as well as records of some drilling work which they did in the

river. The drill records indicate that the area above where the dredge stopped work should have good pay.

Most of the bars which we have mined to date were, in part, dredged previously. The target area for this exploration project was promising because it has not been dredged and the drill records from the early dredge operation look favourable.

2. PROJECT DESCRIPTION

The purpose of the exploration work on the property was to get an idea of potential volumes and grades of gravel on the bars. While we had previous drill records, we wanted to confirm these grades for ourselves. We did the work in two stages; in the first stage we took grab samples from the surface gravels, and in the second stage we sampled pits dug to bedrock.

Because road access to the property has not yet been established we used a boat to travel from our mining camp to the exploration area in the first stage of the project. The boat was equipped with a jet drive to negotiate the many shallow riffles in the river channel. We walked the property taking grab samples and panning them in the river. As well, seven pound samples were bagged and taken to our camp for processing with cleanup equipment. Twenty litre pails were also filled with gravel (approximately 100 lbs.) and processed at the camp.

For the second stage of the project, a loader was used to transport personnel, supplies, and samples. We used an excavator to dig a series of pits to bedrock on the bars. Samples were taken from the excavator bucket as excavations progressed in order to get representative samples. Because the holes sluffed quickly, it was difficult to establish the depth from which samples were obtained. This did not concern us, since when dredging, the total gravel depth is mined, without prior stripping. Both seven pound and one hundred pound samples were taken for later processing. The pits were backfilled after sampling. The Department of

Fisheries and Oceans requires that we fill in sample pits in order to avoid the possibility of fish being trapped in the excavations.

The first set of grab samples taken were panned on the site. The grade has not been calculated from the number of colours obtained. Because this gold is hard to save when panning, and resultant panning losses makes grade calculations inaccurate. These samples are not plotted on the map.

Locations where all other samples were taken are shown on the map M2. Seven pound grab samples are shown with a "g" after the number. One hundred pound samples are labelled with a "p". Pits are labelled with a "t" after the number.

3. EQUIPMENT USED

The following equipment was used:

- UH10 Hitachi excavator, equipped with a 1 1/2 yard bucket and a 12 foot stick.
- D6C Caterpillar dozer with angle blade and ripper.
- 920 Caterpillar rubber tired loader
- Service truck with welder, torches and tools
- 18 foot jet boat
- 4 lead Gold Hound spiral gold wheel

4. RESULTS

Results of samples taken, and of yardage estimates made, are tabulated in the accompanying tables.

Our experience is that the volume Fortymile gravel swells by 25% when excavated. This swell factor has not been accounted for in calculating the volumes and grades from our sampling work, so all results are quoted in bank yards.

There are two gravel bars in this area, one on each side of the river. The left limit bar has a volume of 40,000 bank cubic yards, and the right limit bar has a volume of 64,000 bank cubic yards, for a total volume of 104,000 bank cubic yards. These estimates are established for mean water volume in the river. At low water, more bar is exposed and consequently more gravel volume is available for dredging.

The average grade of the bars is calculated to be 68 bank yards per ounce of gold present. This gives an estimated total projected reserve of 1,529 raw troy ounces of gold.

The gold is fine and flat; virtually all gold recovered from sampling would pass through a 40 mesh sieve screen, and most would pass through a 60 mesh screen.

The depth to bedrock on the bars is an average of 12 feet. The gravel is unfrozen because it is within the river's high water boundaries.

The gravel is relatively coarse here, and there are a large number of boulders in the gravel. Occasionally a four foot diameter boulder is encountered and there are many boulders of two feet in diameter. This area is at the lower end of the Fortymile canyon, a rapid stretch of water. The water is moving with sufficient force through the canyon to move large rock. These boulders are deposited in this area because the river channel widens here and the current slows down.

5. CONCLUSION

The exploration work identified enough gravel reserves to warrant building a road into this section of the river. The 104,000 cubic yards of gravel is sufficient to mine for two seasons in this area. The grade established would make mining of these bars profitable. The large boulders in the deposit will make mining more expensive due to wear and tear on equipment and reduced throughput, however the good grade of the ground will offset this drawback. While we didn't encounter coarse gold

in this exploration work, previous mining has shown that when boulders are encountered in the gravel, generally there is more coarse gold than when all the gravel is smaller.

The gold which we obtained from our samples is similar to other gold which we have mined. While we did not have any of the gold assayed for purity, we expect that the purity will be consistent at .831.

The grade which we established is not as good as the grade indicated in the drill reports from 1911.

6. INFORMATION FOR THE INTERPRETATION OF TABLES

Work done with Fortymile gold previously has shown that, on average, it takes 163,484 colours to make one troy ounce of Fortymile gold. While obviously this figure varies as the size of colours in any representative sample, it has proven accurate for establishing rough estimates of pay grade in typical Fortymile gravel.

The weight of one bank cubic yard of gravel was assumed to be 3,200 lb.

Small samples were assumed to have a weight of 7 lb. because experience has shown that to be the average weight of a 9" by 12" sample bag full of river gravel. Larger samples were taken in 5 gallon pails. This size of sample has been previously determined to have an average weight of 100 lbs. The larger the sample taken, the more accurate will be the grade estimate.

Grade figures have been calculated in terms of the number of bank yards required to produce one troy ounce of unrefined gold. These calculations were made from the samples as follows:

1. number of samples per yard =
3,200 lb. per yard / X lb. per sample
2. number of colours per yard =
number of colours per sample x samples per yard
3. number of yards per ounce =
163,484 colours per ounce / number of colours per yard

For example, if a 7 lb. sample of gravel contains four colours, then the number of bank yards required to produce one ounce of gold is calculated as follows:

1. 3,200 lb. / 7 lb. = 457 samples/yd.
2. 4 colours x 457 samples = 1,828 colours/yd.
3. 163,484 colours per oz. / 1,828 colours per yard = 89 yd. per oz.

7. TABLES

TABLE 1
RESULTS OF SAMPLES PANNED ON SITE (10" PAN)

SAMPLE #	# OF COLOURS	SAMPLE #	# OF COLOURS
1	1	24	1
2	0	25	3
3	5	26	2
4	4	27	1
5	0	28	3
6	2	29	2
7	2	30	4
8	3	31	1
9	6	32	0
10	2	33	4
11	3	34	3
12	0	35	1
13	4	36	1
14	2	37	8
15	1	38	1
16	6	39	5
17	2	40	2
18	3	41	0
19	0	42	1
20	1	43	4
21	6	44	3
22	2	45	0
23	0		

TABLE 2
RESULTS OF 7 LB. GRAB SAMPLES

SAMPLE #	COMMENTS	# of COLOURS	GRADE in YDS/OZ
1g	1/2 gravel is < 1/4"	2	179
2g		8	45
3g		6	60
4g		3	119
5g		1	358
6g		3	119
7g		1	358
8g		7	51
9g		5	72
10g		0	--
11g		6	60
12g		4	89
13g		2	179
14g		1	358
15g		1	358
16g		0	--
17g		4	89
18g		1	358
19g		0	--
20g		9	40
21g		3	119
22g		1	358
23g		0	--
24g		2	179
25g		5	72
26g		3	119
27g		3	119
28g		7	51
29g		0	--

TABLE 2, continued
RESULTS OF 7 LB. GRAB SAMPLES

SAMPLE #	COMMENTS	# of COLOURS	GRADE in YDS/OZ
30g		2	179
31g		2	179
32g		6	60
33g		3	119
34g		2	179
35g		1	358
36g		4	89
37g		6	60
38g		2	179
39g		1	358
40g		5	72

TABLE 3
RESULTS OF 100 LB. PRELIMINARY SAMPLES

SAMPLE #	COMMENTS	# of COLOURS	GRADE in YDS/OZ
1p		40	128
2p		31	165
3p		24	213
4p		60	85
5p		50	102
6p		80	64
7p		51	100
8p		79	65
9p		60	85
10p		35	160

TABLE 4
RESULTS OF 7 LB. SAMPLES TAKEN FROM EXCAVATIONS

EXCAV #	SAMPLES #	COMMENTS	# COLOURS	GRADE YDS/OZ	AV GRADE YDS/OZ
	1.1		7	51	
	1.2		2	179	
Pit	1.3		3	119	
# 1t	1.4		8	45	119
	1.5	large colours	4	89	
	1.6		1	358	
	1.7		4	89	
	1.8	2 flakes	18	20	
	2.1	garnets	13	28	
	2.2		5	72	
Pit	2.3		6	60	
# 2t	2.4		3	119	62
	2.5	fine colours	8	45	
	2.6		9	40	
	2.7		0	0	
	2.8		2	179	
	3.1	2 large flakes	16	22	
	3.2		7	51	
Pit	3.3		1	358	54
# 3t	3.4		4	89	
	3.5		10	36	
	3.6		8	45	
	3.7		2	179	
	3.8		6	60	

TABLE 4, continued
RESULTS OF 7 LB. SAMPLES TAKEN FROM EXCAVATIONS

EXCAV #	SAMPLES #	COMMENTS	# COLOURS	GRADE YDS/OZ	AV GRADE YDS/OZ
	4.1		3	119	
	4.2	2 large flakes	12	30	
Pit	4.3	fine colours	3	119	
# 4t	4.4		5	72	64
	4.5		3	119	
	4.6	chunk	14	26	
	4.7		1	358	
	4.8		4	89	
	5.1		2	179	
	5.2	lots black sand	8	45	
Pit	5.3		6	60	
# 5t	5.4		3	119	62
	5.5	lots black sand	4	89	
	5.6	garnets	12	30	
	5.7		1	358	
	5.8		11	33	
	6.1		14	26	
	6.2		3	119	
Pit	6.3	large boulder	18	20	
# 6t	6.4		2	179	43
	6.5		6	60	
	6.6		5	72	
	6.7		11	33	
	6.8		8	45	

TABLE 4, continued
RESULTS OF 7 LB. SAMPLES TAKEN FROM EXCAVATIONS

EXCAV #	SAMPLES #	COMMENTS	# COLOURS	GRADE YDS/OZ	AV GRADE YDS/OZ
	7.1		6	60	
	7.2		8	45	
Pit	7.3		2	179	
# 7t	7.4	boulders	9	40	93
	7.5		2	179	
	7.6		1	358	
	7.7		3	119	
	7.8		0	--	
	8.1		7	51	
	8.2		12	30	
Pit	8.3	large flakes	9	40	
# 8t	8.4		0	0	57
	8.5	2 large flakes	11	33	
	8.6		9	40	
	8.7	coarse colours	2	179	
	8.8		0	--	
	9.1		1	358	
	9.2	boulders	10	36	
Pit	9.3		6	60	
# 9t	9.4		0	--	56
	9.5		8	45	
	9.6	large flakes	5	72	
	9.7		4	89	
	9.8		2	179	

TABLE 4, continued
RESULTS OF 7 LB. SAMPLES TAKEN FROM EXCAVATIONS

EXCAV #	SAMPLES #	COMMENTS	# COLOURS	GRADE YDS/OZ	AV GRADE YDS/OZ
	10.1	large boulders	8	45	
	10.2		5	72	
Pit	10.3		4	89	
# 10t	10.4	chunky gold	4	89	70
	10.5		2	179	
	10.6		1	358	
	10.7		6	60	
	10.8		12	30	
	11.1	6 flakes	9	40	
	11.2		3	119	
Pit	11.3		2	179	
# 11t	11.4		8	45	56
	11.5		4	89	
	11.6		6	60	
	11.7		1	358	
	11.8		18	20	
	12.1		2	179	
	12.2	coarse colours	14	26	
Pit	12.3		8	45	
# 12t	12.4		9	40	58
	12.5		4	89	
	12.6		5	72	
	12.7		3	119	
	12.8		5	72	

TABLE 4, continued
RESULTS OF 7 LB. SAMPLES TAKEN FROM EXCAVATIONS

EXCAV #	SAMPLES #	COMMENTS	# COLOURS	GRADE YDS/OZ	AV GRADE YDS/OZ
	13.1	large flake	16	22	
	13.2		2	179	
Pit	13.3		8	45	
# 13t	13.4		2	179	64
	13.5		3	119	
	13.6		5	72	
	13.7		7	51	
	13.8		2	179	

Average grade for all excavations.....68 yards per ounce

TABLE 5
RESULTS OF 100 LB. SAMPLES TAKEN FROM EXCAVATIONS

EXCAV #	SAMPLES #	COMMENTS	# COLOURS	GRADE YDS/OZ	AV GRADE YDS/OZ
Pit	1.1	large colours	80	64	
# 1t	1.2		62	82	73
Pit	2.1		56	91	
# 2t	2.2		110	46	69
Pit	3.1		103	50	
# 3t	3.2		48	76	63
Pit	4.1		57	90	
# 4t	4.2		116	44	67
Pit	5.1		96	53	
# 5t	5.2		37	138	96
Pit	6.1		49	104	
# 6t	6.2		88	58	81
Pit	7.1		73	70	
# 7t	7.2		91	56	63
Pit	8.1		45	113	
# 8t	8.2		132	39	76
Pit	9.1		63	81	
# 9t	9.2		53	96	89
Pit	10.1		105	49	
# 10t	10.2		88	58	54

TABLE 5, continued
RESULTS OF 100 LB. SAMPLES TAKEN FROM EXCAVATIONS

EXCAV #	SAMPLES #	COMMENTS	# COLOURS	GRADE YDS/OZ	AV GRADE YDS/OZ
Pit	11.1		65	79	
# 11t	11.2		107	48	64
Pit	12.1		140	36	
# 12t	12.2		89	57	47
Pit	13.1		121	42	
# 13t	13.2		75	68	55

Average grade for all excavations.....69 yards/ounce

TABLE 6
Gravel Volume and Gold Reserve Estimates

Volumes*	Cubic bank yards**
Left limit bar gravel volume 900 ft. long x 100 ft. x 12 ft.	40,000
Right limit bar 1200 ft. x 120 ft. x 12 ft.	64,000
Total Volume	104,000
 Gold Reserve Estimate	 Raw Ounces***
104,000 cubic yards/ 68 yards per ounces	1,529

* These estimates are established for mean water volume in the river. At low water, more bar is exposed, and therefore more gravel is available.

** In place yards with no allowance for swell factor which occurs when gravel is excavated.

*** Gold is assumed to have a purity of .831

8. SUPPLEMENTARY INFORMATION

VOLUMES OF EXCAVATIONS

Average depth of holes is 12 feet.

Average diameter of holes is 20 feet.

Average volume of each pit is 3,768 cubic feet or 140 bank yards.

Total excavated volume of pits is $140 \times 13 = 1,820$ bank cubic yards

PEOPLE WHO WORKED ON THE PROJECT

Bill Claxton Marten Creek, Yukon

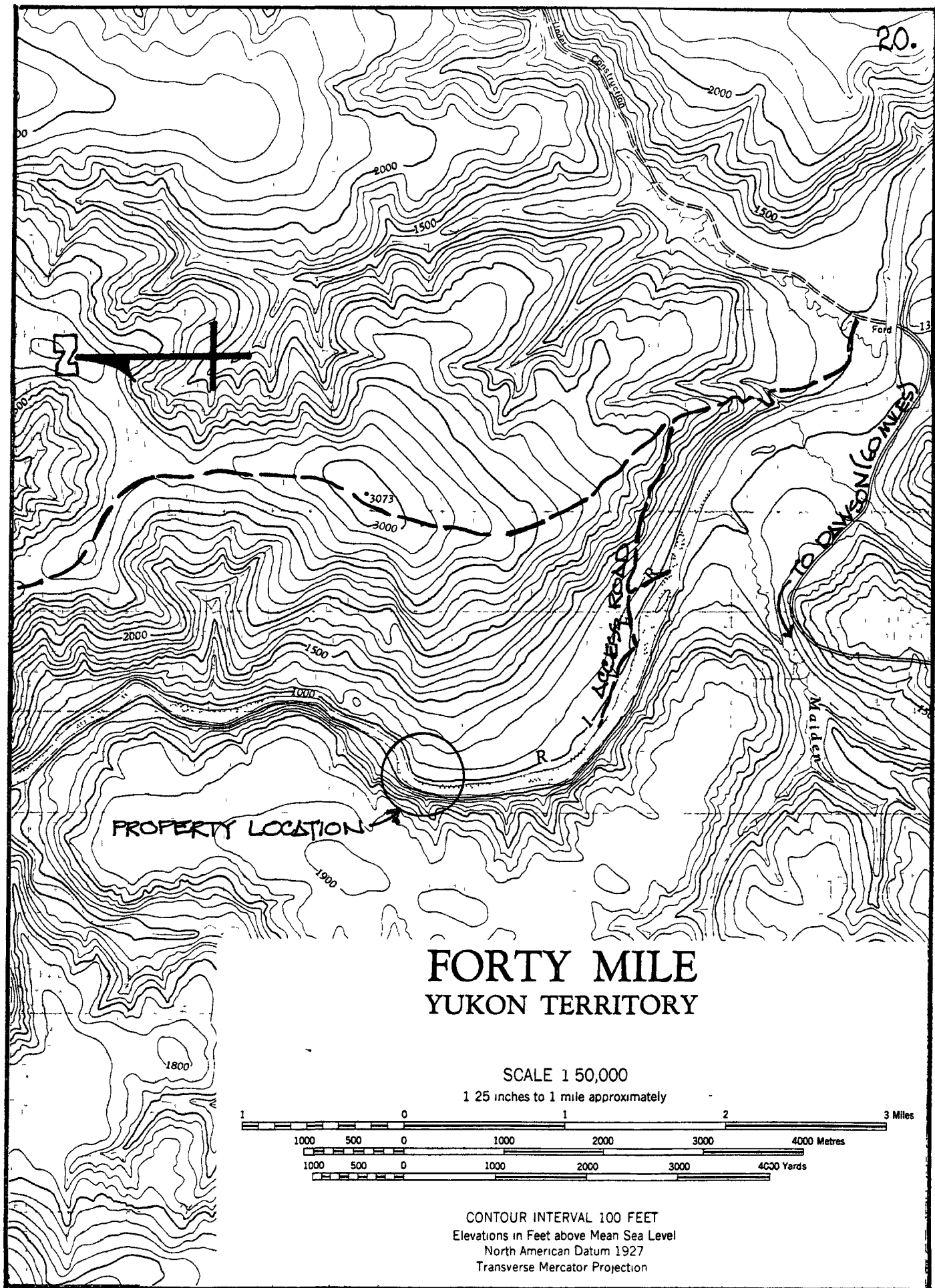
Leslie Chapman Marten Creek, Yukon

PREPARATION OF THE REPORT

The report was prepared by Leslie Chapman and Bill Claxton.

PROPERTY INVESTIGATED

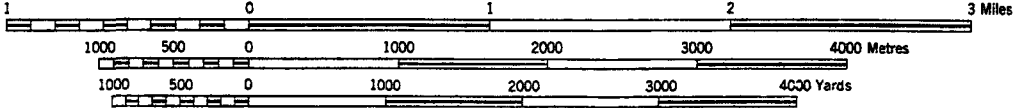
Dredging Lease DL83/4, held by Bill Claxton



FORTY MILE YUKON TERRITORY

SCALE 1 50,000

1 25 inches to 1 mile approximately

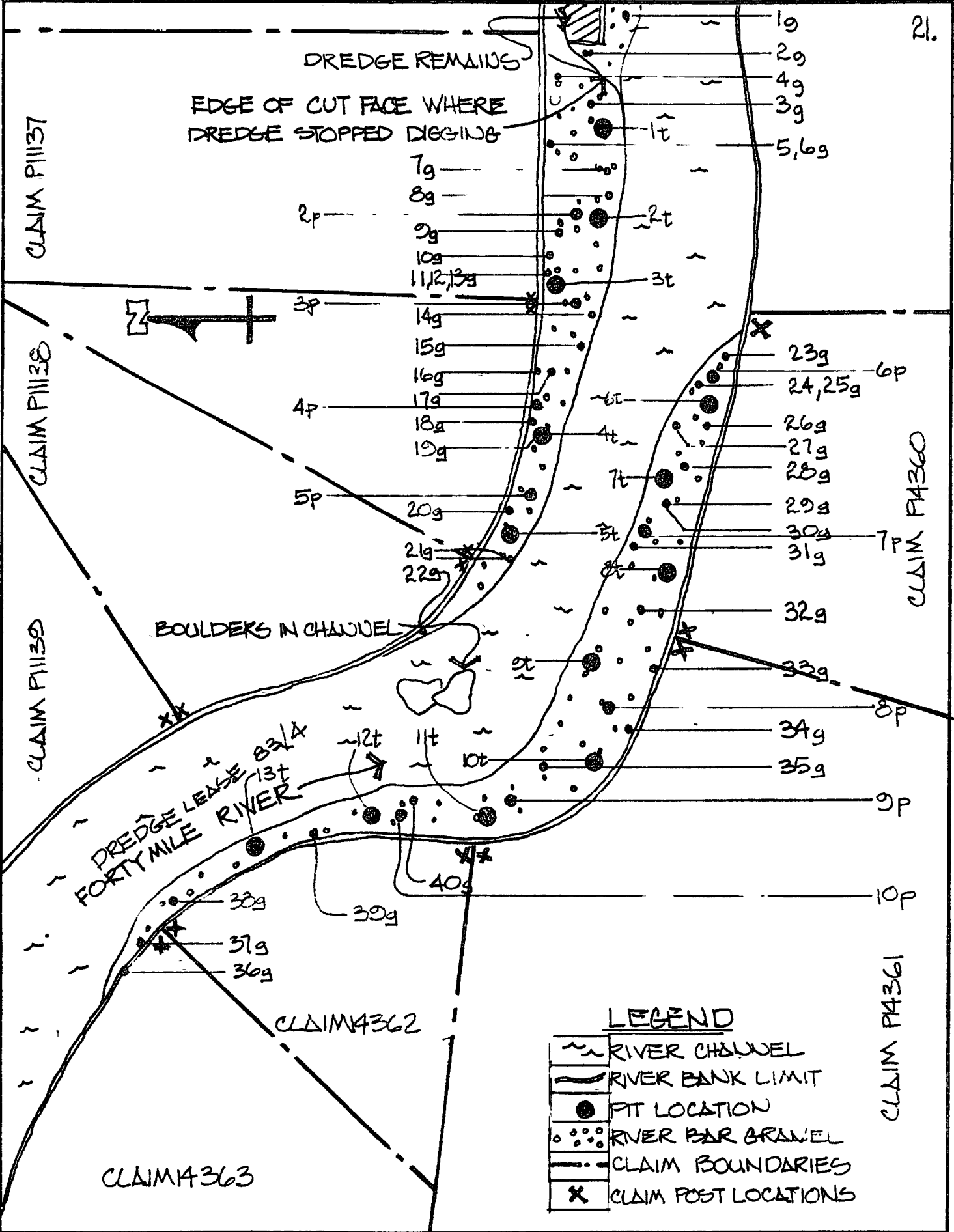


CONTOUR INTERVAL 100 FEET
Elevations in Feet above Mean Sea Level
North American Datum 1927
Transverse Mercator Projection

M 1

PROPERTY LOCATION

SCALE 1:50000



M2 WORK LOCATIONS

SCALE 1"=200'(APPROX.)