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YUKON MINING INCENTIVES PROGRAM

YMIP PROJECT 98 - 048

**KLONDIKE RIVER PLATEAU
PROSPECTING
FOR PLACER GOLD**

JULY 26, 1998 - JANUARY 31, 1999

**TRANSVERSE MERCATOR PROJECTION CO-ORDINATES
latitude 64° 00' - longitude 138° 40'
PLACER CLAIM SHEETS 1150/15 & 116B/2**

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1. Project Location

The area which I prospected is located north of the Klondike highway and west of the Dempster Highway, in the vicinity of the historic south Klondike Ditch. This area is located in the Dawson mining district. The area is plotted on the attached claim sheet and topographic map NTS 116- B2, **Map 1 and 2**. The co-ordinates are approximately 64' 00' and longitude 138' 40'. I examined the area for its placer gold potential.

2. Geology

This deposit is a massive gravel body comprised of very old glaciated coarse aggregate. In R. G. McConnell's 1903 report "**Report on the Klondike Goldfields**" he says:

"The wide depression between the Klondike hills and the Ogilvie range is covered with alternating beds of silts, sands, clays and gravels, for which the name of Flat Creek beds is proposed.....The Flat Creek beds have been partially destroyed by streams flowing from the Ogilvie range, and are carved into a series of flat-topped plateaux often lined with low terraces....The gravels are well rounded and consist of slates, cherts, quartzites, diabases, and granites occurring in the Ogilvie range. They are auriferous in places but no pay values have so far been found in them."

This area consists of a broad flat plain. The vegetation has been recently burned off by a forest fire. In numerous places where burned trees have fallen over, gravel can be seen under a shallow layer of overburden. In many places the trees appear to have been actually growing in the gravels.

The portion of the surficial geology map 115B&C, open file 3288, **Map 3**, shows the overburden composition of the area.

3. Approach

Because this area consists of a huge body of glaciated gravel, my first task was to design a program that would effectively examine the gravel contained in it.

I identified sections which are not open to staking to help define the project area. Various interest groups have claimed rights to portions of this area:

- commercial, agricultural and residential withdrawals, particularly at the Dempster corner junction and ditch road areas.
- historic lands designations of parts of the South Klondike Ditch. This ditch was built to carry water to the YCGC hydro-electric plant located on the North Fork of the Klondike River.
- Dawson first nation land claims on the east side of the North Klondike River.



Typical plateau located in the Flat Creek beds. The area has recently been burned over. An old prospecting shaft can be seen in the foreground.

- YTG Department of Highways withdrawals relating to roads.
- Placer claims and leases held by other parties in the area.

I familiarized myself with the boundaries of these areas, both on the map and in the field.

I travelled over all of the roads which provided access throughout the project area. This allowed me to gain an understanding of the geography so that I could plan my approach. My preliminary work showed that there were many areas with interesting looking exposed gravel which I would be able to obtain samples from.

While I wanted to gather grab samples from exposed material which was easy to access, I also wanted to examine some in-place gravel at depth. It was my hope that I would find a mineable placer deposit. I was looking for a specific target that had the following attributes:

- It should be located close to water (required for sluicing placer gravel).
- It should be easily accessible, preferably with established access, or in an area where access could be easily built.
- It should be a large enough deposit to warrant development work.
- Ideally, the deposit would consist of thawed gravel. This would make it easy to evaluate and also mining costs are lower than for frozen ground.

My plan was to excavate one or more pits in a suitable area to gain access to and to evaluate in-place gravel below the surface.

4. Work Performed

I began my sampling work by collecting some grab samples from cut banks in borrow pits along the Dempster Highway. These samples weighed approximately 10 lbs. I collected each sample in a 9 x 12 sample bag, labelling the bag with the date and sample number. I went to the Dempster Highway bridge across the Klondike River and panned the samples in the river by the bridge. This work is referred to on **pages 6, 7, and 8** in my diary.

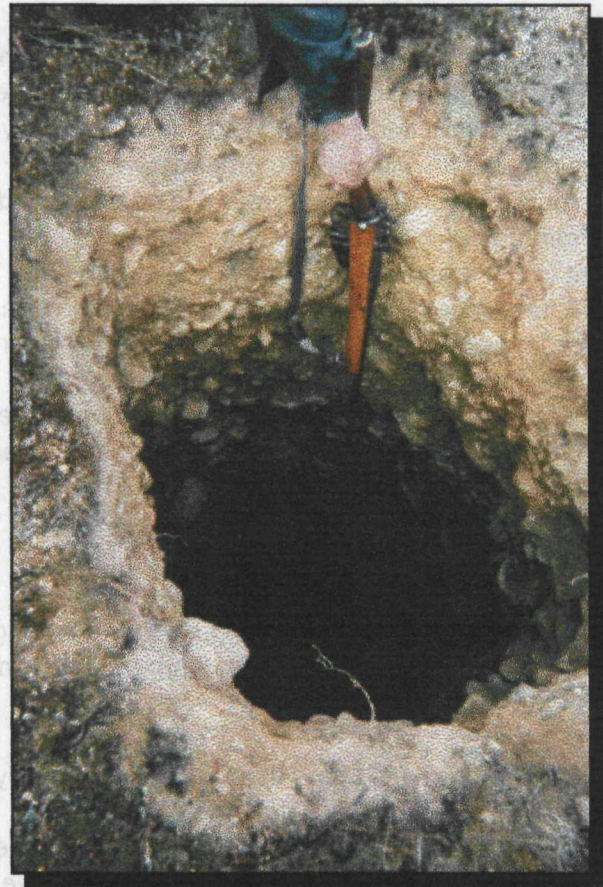
I walked upriver and downriver along the Klondike River from the bridge on the right limit, for a distance of approximately 1 mile, in each direction. I took samples from exposed bar gravel and also from cutbanks where the gravel was exposed. The samples filled a 10" gold pan to struck capacity (approximately 8 lbs.). I used a grizzly pan to screen the coarse material off before panning the fines. I examined the coarse material before discarding it. I panned the fine material down to approximately 1 teaspoonful and examined it with a magnifying glass for gold colours. **Pages 9 and 10** of my diary outline this work.



Collecting gravel samples in a borrow pit. The gravel in the foreground is typical of aggregate composition in the project area. Boulders are plentiful and the rock is rounded and well washed.

I contacted a wood cutter/pro prospector who had been doing some work in the area. I went to the project area with him and look over the work he had done. This work consisted of several shafts, which he had dug by hand. I also looked at two creeks which were located on his wood lot. I found a long, narrow, bench-like structure of gravel located approximately 1/4 mile from one of these (unnamed) small creeks. I dug a small hole, approximately 2 feet deep on this rise in the topography, and found the gravel thawed. The gravel also appeared to be more angular than the gravel typical to the area. I reasoned that, possibly, because this gravel structure was higher than the surrounding land and because of the character of the gravel, it may have escaped glaciation. It exhibited all the characteristics that I had outlined for an area in which to sink a shaft. I took a number of grab samples from this deposit. I panned some in the Klondike River and saved some for future processing using more accurate processing equipment. I proceeded with further evaluation work, excavating 3 shafts into this deposit, one at either end and one in the middle. I achieved a total depth of 8 to 9 feet in each shaft. I took large samples (between 40 and 120 lbs.) out of each shaft as the work progressed, over a period of approximately 2 weeks. I processed some of the bags of samples using a gold pan and grizzly in the river to gain immediate information on the tenor of the ground. I also saved a large quantity of the gravel to be processed later in a more controlled environment with more sophisticated equipment. I saved some of the concentrate from the samples and sent it to a lab for fire assay. **Pages 11, 21, 24, 25, 26, 27, 31, 34, 35, 36, 38, 39, 40, 41, 42, and 43** in my diary refer to this phase of the project.

I prospected along the South Klondike Ditch road on the west side of the Dempster Highway. The ditch is an excavation approximately 20 feet deep and 40 to 50 feet wide. It extends over a distance of approximately 6 miles. It meets the Dempster Highway approximately 5 miles from the Klondike bridge. The road which parallels the ditch is built on the gravel which was excavated from it.



The shafts which I excavated achieved a depth of approximately 9 feet. The gravel was thawed. Digging below this depth would require cribbing, and hoisting equipment.



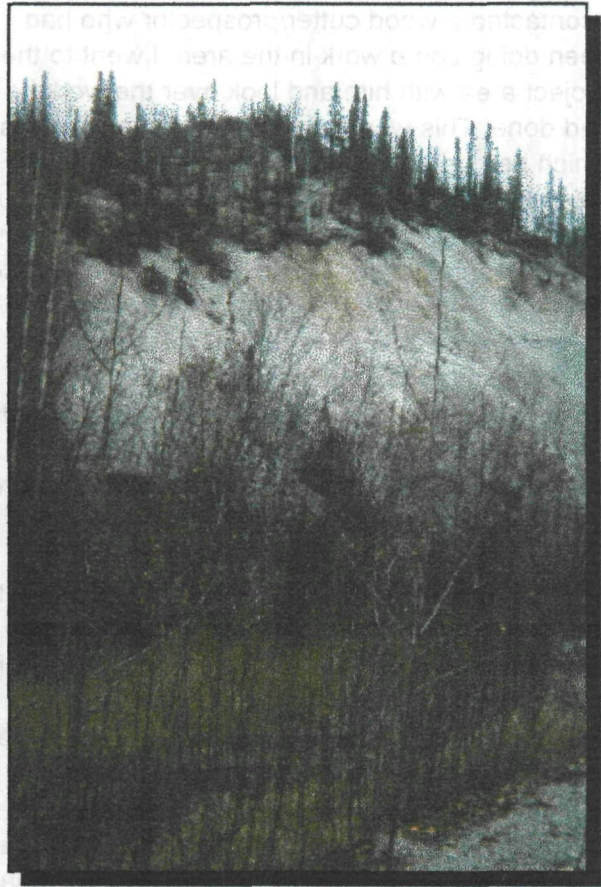
Collecting gravel samples at a depth of 6 feet in one of my shafts. My helper in the shaft can just see over the top.

During my prospecting work along the ditch I found old camps, dumps of railway iron, and other abandoned tools, material, and equipment related to this construction project. The ditch is now dry, vegetated with willows and other growth associated with low lying ground. The ditch road terminates at a gulch incised approximately 50 feet into the gravel where a bridge had crossed it and has since collapsed. This gulch afforded an excellent opportunity to sample the deeper layers of the gravel plain. I also took samples on the other side of the ditch paralleling it, in two places where high benches had been formed, and where cut banks had developed in them. I located and flagged the mouths of the 2 small creeks which flow into the ditch; the head waters of these creeks are close to the area in which I did my shafting work. The work which I performed along the west side of the ditch road can be found in my diary on **pages 13, 30, and 31.**

I evaluated gravels along the road to the Viceroy Resources heap leach gold mine. I began by contacting a geologist at Viceroy; he showed me around their property. I was hoping to find gravel strippings here, and to take samples of the gravel-



The deeply incised gulch created by a breach of the ditch left gravel cutbanks which were easily sampled. The flume can be seen in the background with a gravel bank exposed on the left side.



The Klondike Ditch seen in the foreground has been overgrown and choked with willows. A white channel gravel bank in the background has been exposed by the excavation.

bedrock contact. However, the altitude of the mine is too high for gravel deposits to have formed. I took a sample of their ore for reference, in case I encountered any interesting hardrock. I took samples out of borrow pits, which contained gravel, located along the road. **Pages 15, 16, and 17** refer to my work along the Viceroy Road.

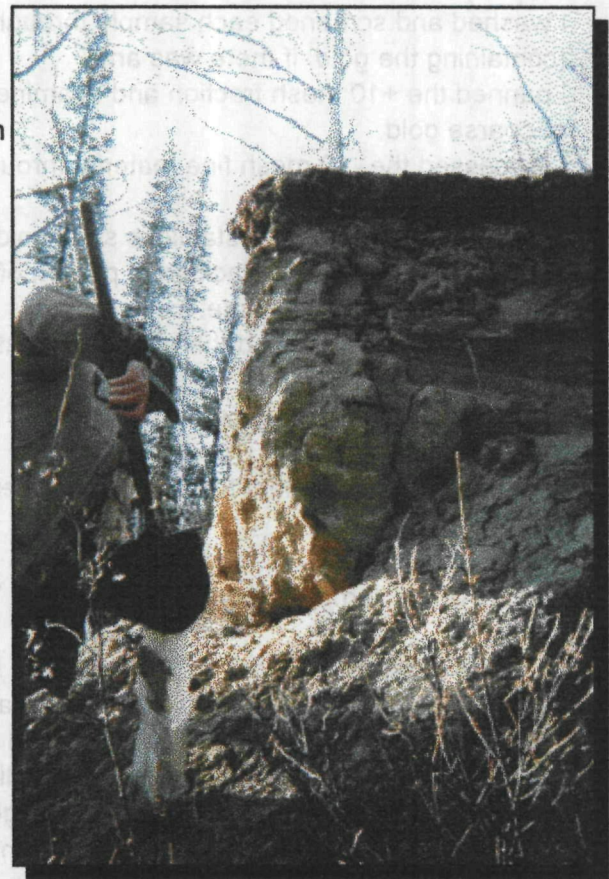
I prospected along the South Klondike Ditch Road on the east side of the Dempster Highway in the area not covered by land claims; most of this area has been withdrawn from staking. I took a sample from a large borrow pit which had been stripped approximately 1/2 mile from the abandoned North Klondike power plant, built by YCGC to provide electrical power to the dredges. It looked like somebody else had taken gravel samples here within the past year.

I also took samples from some pinnacles of cemented white channel gravel close to the location where the Viceroy Road and North Fork Road intersect. My work in this area is referred to on pages 32, and 33 of my diary.

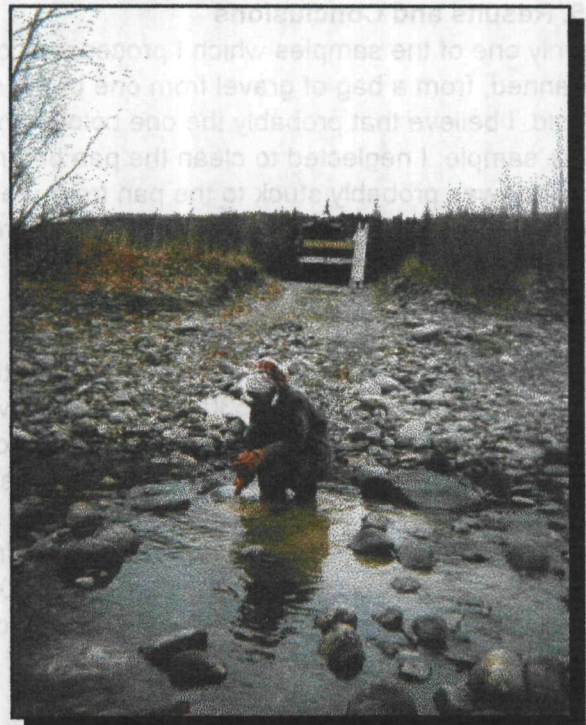
I sampled gravel along a road turning west off the Dempster Highway, approximately 3 miles from the bridge. This road runs parallel to the Klondike River and provides access to an outfitter's hay ranch. The exposed gravel was typical of the project area, consisting of a flat gravel plain. There are some exposed bluffs and cutbanks which had been created from the road construction. These exposed gravels afforded good locations to obtain samples of in-place gravels. Some of the gravel banks in this area have been oxidized and have a reddish tint to them. All of the gravel is rounded and well washed, typical of a glaciated drainage. At the junction of this road and the Dempster Highway, a large area had been stripped, probably for a borrow pit. I took several samples from the gravels exposed by this stripping. In one of these samples I found 10 heavy pieces of concentrate of approximately 10 mesh, which had a grey dull metallic colour and lustre; possibly this could possibly have been antimony. I also took some gravel samples from an old garbage pit. Pages 28, and 29 of my diary refer to work in this area.

I retained some of the samples which I collected, both bags from the shafts and grab samples obtained over the area, for later processing. I wanted to take advantage of the above freezing fall weather and lack of snow cover to spend time covering ground, collecting samples while the ground was thawed. I also thought that it would be advantageous to process samples using more refined equipment which would give more accurate results. Because much of the area which I sampled was not in the proximity of a water body for panning purposes, it was more efficient to gather and save the samples for later processing.

I processed the samples which I collected and saved in the fall, in my gold cleanup room. I used the following method to evaluate the gravel:



Sampling gravel from a pinnacle of cemented white channel. This gravel is overlain by approximately 3 feet of tightly packed clay.



Panning samples in the Klondike River. I panned some of the samples immediately after collecting them to gain information in the field.

- I washed and screened each sample through a 10 mesh sieve to split off the fine portion. (containing the gold, if there was any).
- I panned the +10 mesh fraction and examined it for interesting rock and the unlikely possibility of coarse gold.
- I processed the -10 mesh fine material through a spiral gold wheel to split off the concentrate portion.
- I put the concentrate in a stainless steel gold pan and covered it with approximately 1" of water. I drew off the magnetic black sand portion of the concentrate using a cleanup magnet, and saved it on a porcelain plate.
- I dried the black sand and the remaining material in the gold pan, and then spread them on separate plates.
- I examined the material under magnification for free gold particles and any other interesting mineralization.
- I rinsed all the equipment thoroughly between samples to avoid cross-contamination between samples.

The results of my sampling work are provide on **Tables 1 and 2.**

I finished the prospecting work, travelling with a snowmachine upstream and downstream on the Klondike River. I took gravel samples weighing approximately 20 to 30 lbs. each, from cut banks and exposed gravel bars on the river. I travelled approximately 5 miles downstream on the river and 6 miles upstream to the confluence of the Klondike and north Klondike Rivers. I took a total of 17 samples during this final phase of the work. **Pages 52, 53, 54, 55, 56, 57, 58, 59 ,and 60** refer to my work in this area. I used a pick to break chunks of frozen gravel loose and hauled them back to town where I thawed the samples out and panned them in a wash tub.

5. Results and Conclusions

Only one of the samples which I processed contained any visible gold; the first sample that I panned, from a bag of gravel from one of the shafts which I was digging, contained 1 small flake of gold. I believe that probably the one colour which I got from this pan resulted from contamination of the sample. I neglected to clean the pan before I started processing this gravel; I think that the colour was probably stuck to the pan from previous gravel which I had panned in another area. The fact that the first pan contained a particle of free gold and none of the subsequent samples had any gold makes this a likely explanation.

I was surprised that I did not turn up any gold at all from any of the locations which I sampled. (except for the 1 colour which I believe to be the result of contamination). I saved the resultant concentrate from the final 530 lb batch of gravel samples from the bottom of the shafts which I had dug. I sent this concentrate, totalling 1.2 lb., to an assay lab in Vancouver. The assay printout is appended to this report. The fire assay showed a value of 0.213 oz/ton. I calculated the grade of the ground based on the assay results of this sample. I used the following assumptions:

- the concentrate contained all of the gold from the 530 lb. sample.
- One bank cubic yard of gravel weighs 3200 lbs.
- The gold recovered in the fire assay was of placer origin.
- The concentrate from the 500 lb. batch of gravel is typical of the gravel contained in the entire sample.

I calculated the grade of the ground, based on the results of the fire assay, is outlined as follows:

1. I obtained the ratio of the raw gravel to concentrate by dividing the weight of the concentrate by the weight of raw gravel that it came from:
 $1.2 \text{ lb} + 530 \text{ lb of gravel} = 0.00226$
2. I calculated the grade of the raw gravel by multiplying the grade of the concentrate by the ratio of gravel to concentrate (obtained from step 1.):
 $0.213 \text{ oz/ton} \times 0.00226 = 0.00048 \text{ oz/ton}$
3. I calculated the number of bank cubic yards contained in 1 ton of gravel by dividing the weight of a bank cubic yard of gravel (3200 lb.) by 2000 (the number of lbs. in a ton):
 $3200 + 2000 = 1.6 \text{ bank yd}^3/\text{ton}$
4. I expressed the grade in oz/ bank yd³ by multiplying the grade in oz/ton by the number of bank yd³ in one ton:
 $0.00048 \text{ oz/ton} \times 1.6 \text{ yd}^3/\text{oz} = 0.00077 \text{ oz/ bank yd}^3$

Based on the fire assay of concentrate from the sample processed from the shaft, the grade of the ground is 0.00077 oz/bank yd³, or 1,299 bank yd³ are required to produce one ounce of placer gold from this sample. At a value of \$287US per ounce of gold and an exchange rate of 0.65, the grade of the ground is CAN\$0.35 /bank yd³.

The fire assay indicated that the gravel in the pits had a low grade gold content. While the grade was low, it was not insignificant and I would have expected to obtain occasional colours of gold from both the panning and the sample processing using the gold wheel, especially since I processed over 1,000 lb. of material. One explanation could be that the fire assay found gold that was not of placer origin; however since gold was by far the highest element revealed in the assay, it seems likely that the gold was free gold. It is conceivable, even likely, that gold too fine to see was lost in the concentrating process. If this was the case, the grade of the gravel could have been significantly higher.

Based on the excavation and evaluation work which I did on the bench deposit, I believe that I had penetrated and sampled only the top layer in a deep gravel body. This deposit could easily be 60 feet or more in depth. Because the gravel showed a low grade gold presence in the top section which I sampled, it is reasonable to assume there would be a greater concentration of gold at bedrock depth. It is possible, however, that the effects of glaciation destroyed the placer concentration and that the gravel has been redeposited in a more homogeneous unit randomly over the entire depth of the gravel body.

I believe that a few holes put down with an auger drill would provide the necessary information to determine if this particular deposit, which I dug the shafts in, should be evaluate further. The signs of gold mineralization are present in the assay, but I did not find visible gold in any of the gravel which I sampled.

The remainder of the area which I prospected did not yield any visible gold in any of the samples which I evaluated. The work which I did showed that there are numerous areas which would be easily developed for placer mining: the overburden is shallow, much of the gravel is thawed, and there is some water available for processing. However, because I did not find any gold presence, I do not have confidence that this area could support placer development. Again, I believe that drilling would provide information on the gravel body at bedrock depth, where gold concentration, if present, would take place. If placer gold could be found somewhere in this vast gravel plain, the potential of the area would be confirmed. The reserves, billions of cubic yards, are almost limitless.

Table 1 - Results from Grab Samples

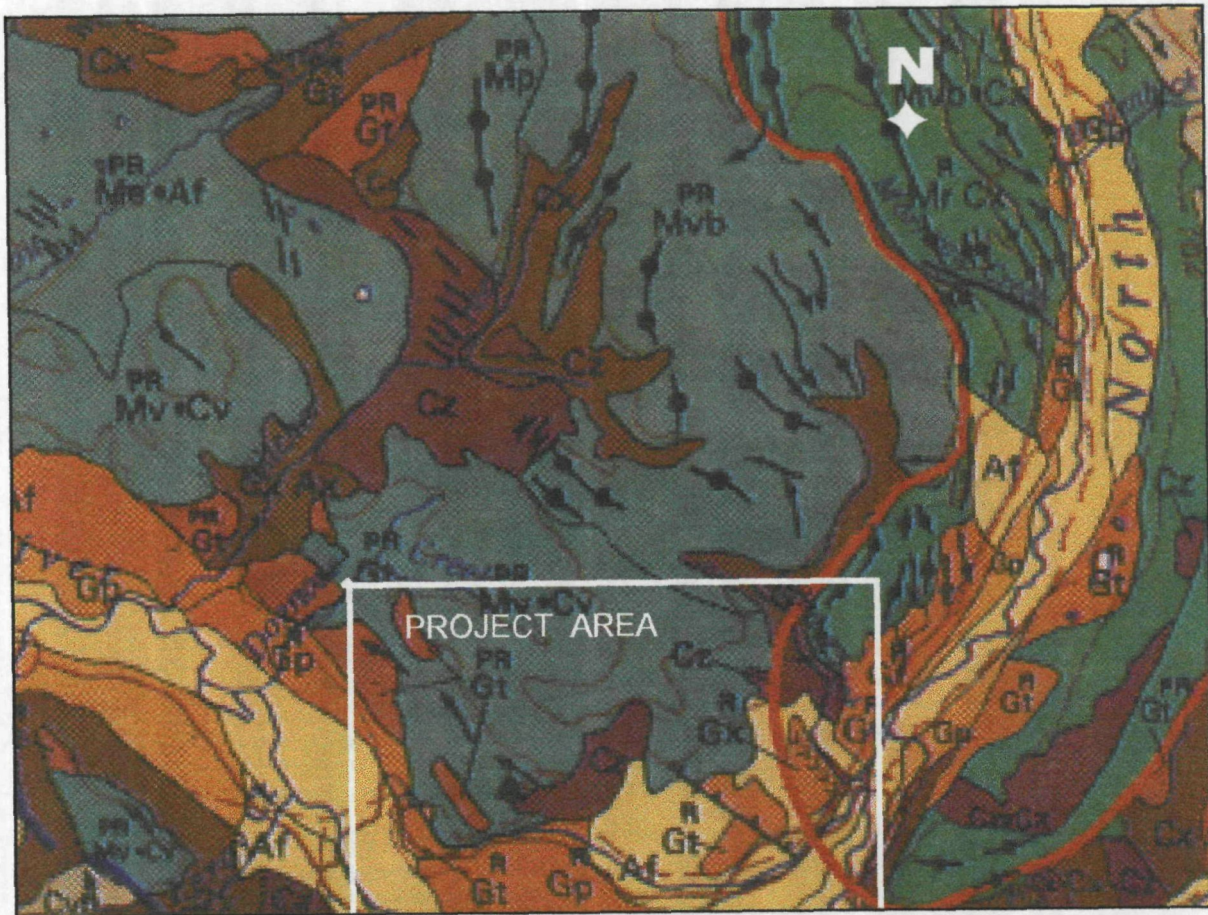
Sample #	Weight in lb.	# of colours	Comments
07.28.1	~10	0	grab sample, gravel pit
07.28.2	~10	0	grab sample, gravel pit
07.28.3	~10	0	grab sample, gravel pit
07.28.4	~10	0	grab sample, gravel pit
07.28.5	~10	0	grab sample, gravel pit
07.28.6	~10	0	grab sample, gravel pit
07.28.7	~10	0	grab sample, gravel pit
08.09.1	~8	0	pan sample, Klondike River
08.09.1	~8	0	pan sample, Klondike River
08.09.3	~8	0	pan sample, Klondike River
08.09.4	~8	0	pan sample, Klondike River
08.09.5	~8	0	pan sample, Klondike River
08.09.6	~8	0	pan sample, Klondike River
08.09.7	~8	0	pan sample, Klondike River
08.09.8	~8	0	pan sample, Klondike River
08.18.1	~8	0	pan sample, Klondike River
08.18.2	~8	0	pan sample, Klondike River
08.18.3	~8	0	pan sample, Klondike River
08.18.4	~8	0	pan sample, Klondike River
08.18.5	~8	0	pan sample, Klondike River
08.18.6	~8	0	pan sample, Klondike River
08.18.7	~8	0	pan sample, Klondike River
08.18.8	~8	0	pan sample, Klondike River
10.02.A	~10	0	grab sample, Viceroy Road
10.02.B	~10	0	grab sample, Viceroy Road
10.02.C	~10	0	grab sample, Viceroy Road
10.03.A	~10	0	grab sample, Ditch Road - east
10.03.B	~10	0	grab sample, Ditch Road - east
10.03.C	~10	0	grab sample, Ditch Road - east
10.04.A	~10	0	grab sample, Viceroy Road
10.04.B	~10	0	grab sample, Viceroy Road

Table 1 - Results from Grab Samples - continued

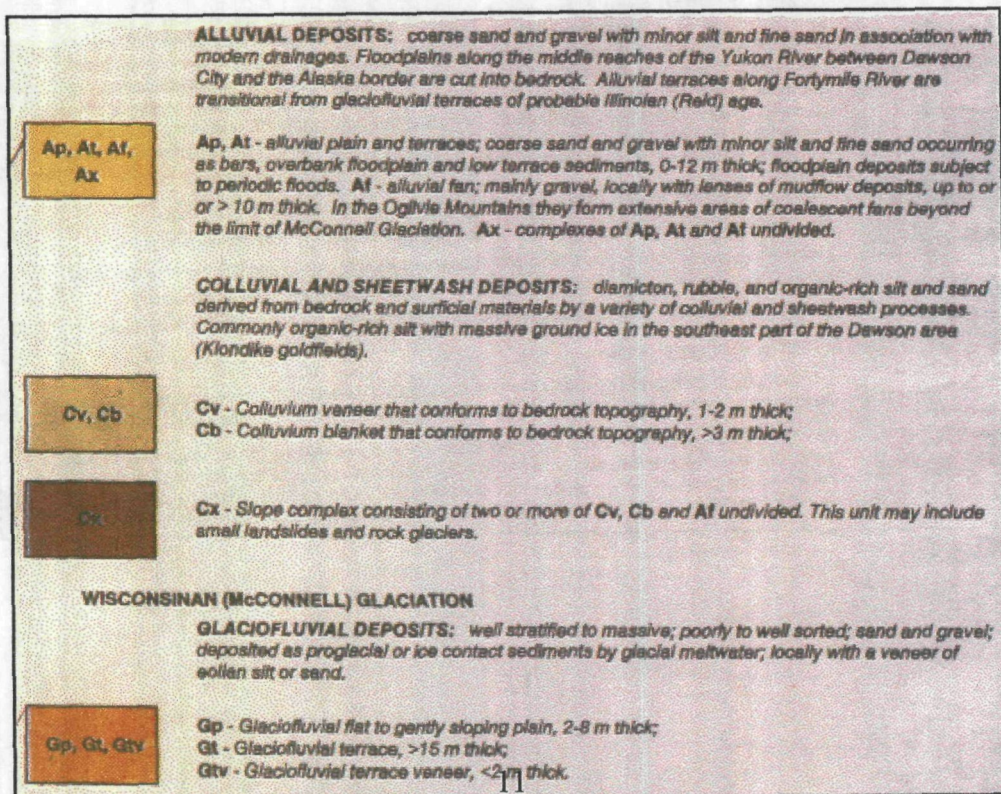
Sample #	Weight in lb.	# of colours	Comments
10.08.A	~10	0	grab sample, hayfield road
10.08.B	~10	0	grab sample, hayfield road
10.08.C	~10	0	grab sample, hayfield road
10.08.D	~10	0	grab sample, hayfield road
10.08.E	~10	0	grab sample, hayfield road
10.08.F	~10	0	grab sample, hayfield road
10.08.G	~10	0	grab sample, hayfield road
10.09.A	~10	0	grab sample, ditch road - west
10.09.B	~10	0	grab sample, ditch road - west
10.09.C	~10	0	grab sample, ditch road - west
10.09.D	~10	0	grab sample, ditch road - west
10.09.E	~10	0	grab sample, ditch road - west
10.10.A	~10	0	grab sample, ditch road - east
10.10.B	~10	0	grab sample, ditch road - east
10.10.C	~10	0	grab sample, ditch road - east
10.10.D	~10	0	grab sample, ditch road - east
12.07.A	26	0	grab sample, Klondike River
12.07.B	20	0	grab sample, Klondike River
12.07.C	23	0	grab sample, Klondike River
12.07.D	20	0	grab sample, Klondike River
12.07.E	19	0	grab sample, Klondike River
12.07.F	22	0	grab sample, Klondike River
12.07.G	20	0	grab sample, Klondike River
12.07.H	21	0	grab sample, Klondike River
12.07.J	29	0	grab sample, Klondike River
12.07.K	11	0	grab sample, Klondike River
12.08.A	21	0	grab sample, Klondike River bridge to North Fork
12.08.B	19	0	grab sample, Klondike River bridge to North Fork
12.08.C	23	0	grab sample, Klondike River bridge to North Fork
12.08.D	20	0	grab sample, Klondike River bridge to North Fork
12.08.E	19	0	grab sample, Klondike River bridge to North Fork
12.08.F	27	0	grab sample, Klondike River bridge to North Fork
1208G	22	0	grab sample, Klondike River bridge to North Fork

Table 2 - Results from Samples from Shafts

Sample #	Weight in lbs	# of Colours	Comments
Pit A-1	45	0	from 4' depth, rounded gravel
Pit A-2	60	0	from 4' depth, red clay matrix
Pit B-1	55	0	from 4' depth, quite a lot black sand
Pit B-2	50	0	from 4' depth
Pit A-3	15	0	from spill pile
Pit B-3	18	0	from spill pile
C1	30	0	from under tree root in middle of bench, lots black sand
C2	30	0	from under tree root in middle of bench
Pit D-1	25	1	from 2.5' depth, colour may be from pan contamination
Pit D-2	30	0	from 2.5' depth
Pit D-3	55	0	from 6'-7' depth
Pit D-4	60	0	from 6'-7' depth, black sand and heavies
Pit D-5	50	0	from 6'-7' depth
Pit A-4	50	0	from 6'-7' depth
Pit A-5	40	0	from 6'-7' depth
Pit A-6	55	0	from 6'-7' depth
Pit B-4	50	0	from 6'-7' depth
Pit B-5	60	0	from 6'-7' depth
Pit B-6	40	0	from 6'-7' depth
Pit A -7 (4 bags)	175	0	from 9' depth
Pit B- 7 (4 bags)	185	0	from 9' depth
Pit D-6 (4 bags)	170	0	from 9' depth



Map 1 - PORTION OF SURFICIAL GEOLOGY MAP 116B & C
 OPEN FILE 3288 scale: (approx) 1 inch = 5 miles



ILLINOIAN (REID) GLACIATION

GLACIOFLUVIAL DEPOSITS: well stratified to massive; poorly to well sorted; sand and gravel; deposited as proglacial or ice contact sediments by glacial meltwater. Distal proglacial sediments are common along the Yukon River. These deposits are sometimes interbedded with debris flow (Klondike and Fortymile rivers) and jokulhæup deposits (Yukon River) locally with a veneer of eolian silt or sand. Where exposed, Reid deposits are capped by a brown-red paleosol of about 90 cm thickness.

Gp, Gt, Gtv,
Gd, Gf, Gx

Gp - glaciofluvial plain; flat to gently sloping plain, 2 - 12 m thick; Gt - underlying a terrace, up to 60 m thick. Gtv - glaciofluvial terrace veneer, <2 m thick; Gd - glaciofluvial delta, up to 15 m thick; Gf - glaciofluvial fan; flat to gently sloping fan <15 m thick; Gx - glaciofluvial complex, plains and ridges (eskers) undifferentiated, <20 m thick.

GLACIAL DEPOSITS: unsorted silt, sand, and clay commonly (diamicton) oxidized with abundant pebbles, cobbles, and boulders; deposited by glacier ice and occurring in a variety of different landforms. Large percentage of clasts are striated and have weathering rinds. Extensive glacial plains with sporadic low amplitude moraine ridges are found along lower North Klondike River.

Mp, Mv, Mb,
Mm, Mr, Mh,
Mx

Mp - moraine plain; till occurring as flat to gently sloping plain, >20 m thick; Mv - veneer of till with slopes conforming to underlying bedrock topography, <3 m thick; Mb - gently to moderately sloping plain controlled by bedrock, >3 m thick. Mm - broad hummocks or low hills with 10 - 20 m relief, <20 m thick. Mr - ridged moraine, individual to compound, either straight or sinuous ridges; generally coarse till (20-50% pebbles); 15 to 60 m high, <60 m thick; Mh - hummocky moraine, individual and coalescent hummocks, locally hummocks have a high gravel content; up to >15 m thick. Mx - Glacial deposit complex, largely hummocky, ridged, and hilly till, undifferentiated.

PRE-ILLINOIAN (REID) GLACIATIONS UNDIFFERENTIATED (Including Pliocene)

GLACIOFLUVIAL DEPOSITS: well stratified to massive; poorly to well sorted; sand and gravel; deposited as proglacial or ice contact sediments by glacial meltwater; distal proglacial sediments are common along the lower Klondike, Yukon and Fortymile rivers. Within the Tintina Trench, gravels interbedded with massive diamicton and glaciolacustrine sediments occur with a thickness over 100 m. Where the paleosol has not been truncated by later processes brown-red paleosol with clay skins on clasts can be observed. Paleosol thickness is about 1.8 m. Highly weathered clasts are common. Locally with a veneer of eolian silt, sand and/or organic silt (muck)

Gp, Gt, Gtv,
Gd

Gp - flat to gently sloping plain, 2-15 m thick; Gt - underlying a terrace, up to 100 m thick. Gtv - glaciofluvial terrace veneer, <2 m thick. Gd - flat to gently irregular glaciofluvial plain highly modified by landsliding.

GLACIAL DEPOSITS (till): unsorted silt, sand, and clay with some coarser clasts; till has abundant pebbles, cobbles, and boulders in silty sand matrix; deposited by glacier ice and occurring in a variety of different landforms. Deposits are usually oxidized, and contain high percentage of weathered clasts. Exposures along north side of Tintina Trench include blocks of the underlying unconsolidated Tertiary deposits. These deposits have been highly modified by landsliding, particularly between Ballarat Creek and North Klondike River where rolling terrain is the remnant of a moraine plain (Me). Along the north slope of the Ogilvie Mountains they form blankets and veneers of highly colluviated deposits with occasional erratics.

Mp, Mv, Mb,
Mm, Mr

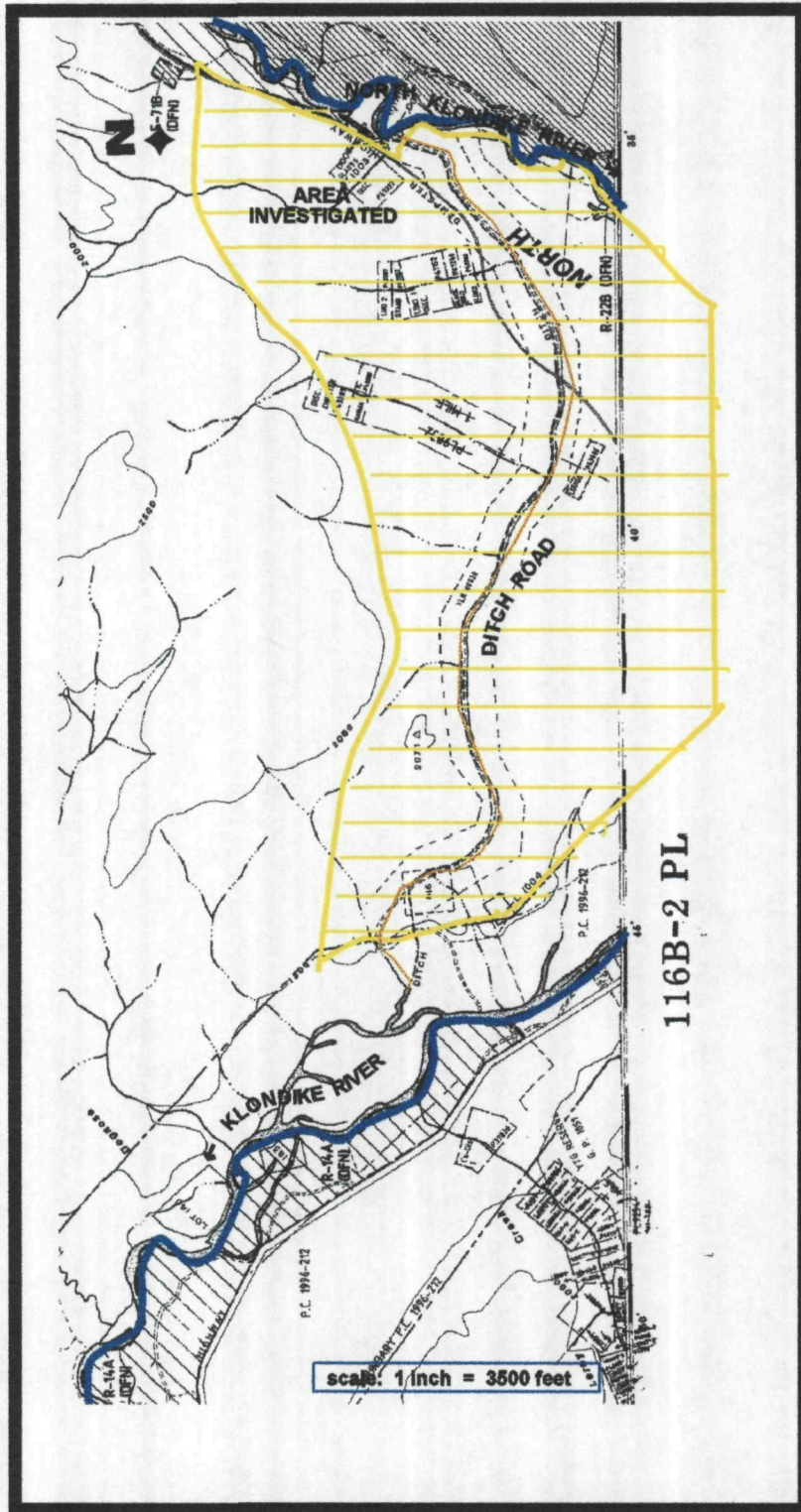
Mp - moraine plain; till occurring as flat to gently sloping plain 3-20 m thick; Me - flat to gently irregular till plain highly modified by landsliding, glaciofluvial and fluvial processes; approximately 20 m thick; Mv - veneer of till with slopes conforming to underlying bedrock topography, 0-2 m thick; Mb - gently to moderately sloping plain controlled by bedrock, 3-6 m thick. Mm - broad hummocks or low hills with 10-20 m relief, <20 m thick.

PLIOCENE-PLEISTOCENE UNDIFFERENTIATED

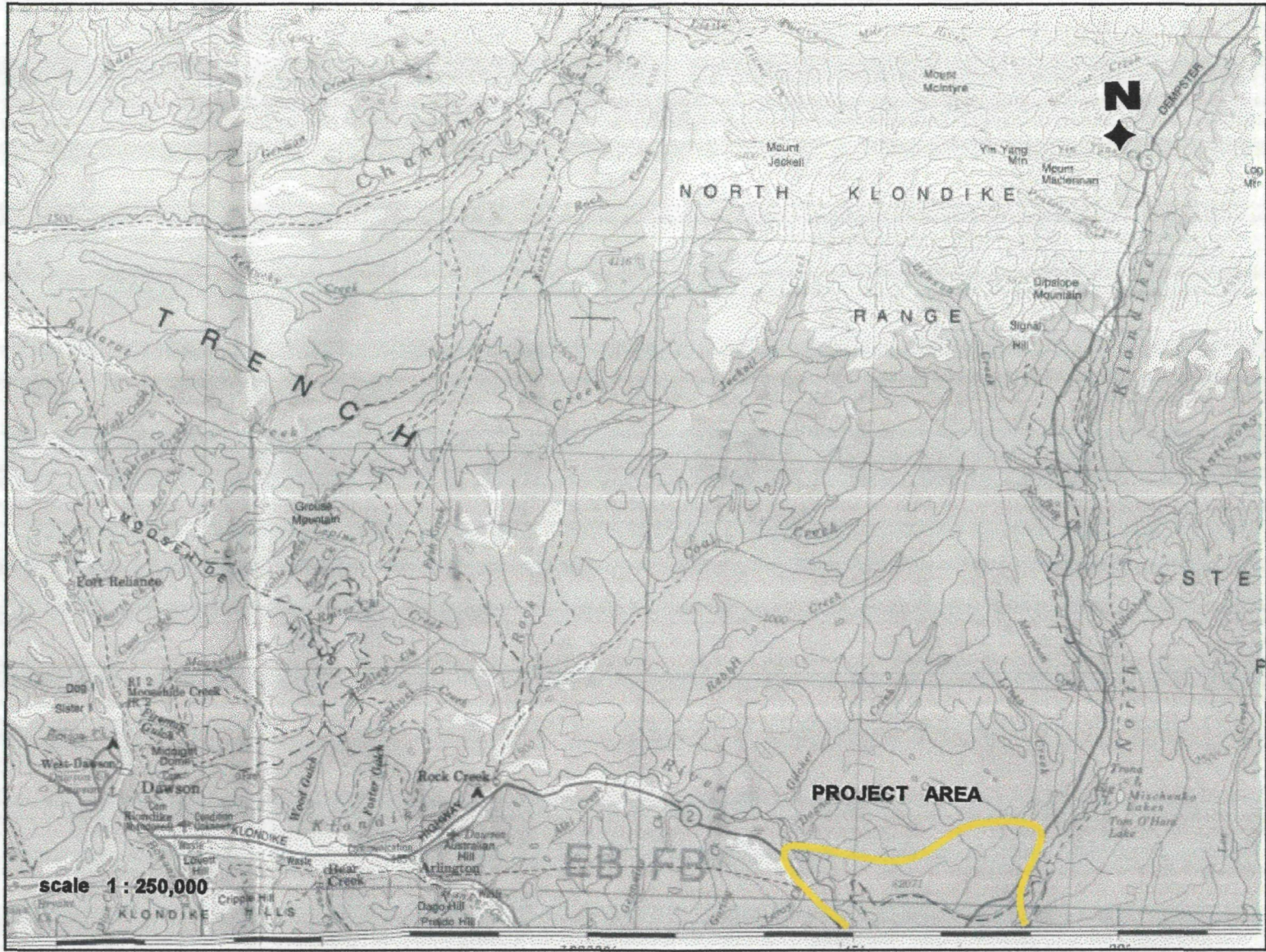
LANDSLIDES, PEDIMENTS AND CRYOPLANATION TERRACES: diamicton and rubble derived from bedrock and surficial materials by gravity, sheetwash, soilcreep and frost action.

Cz

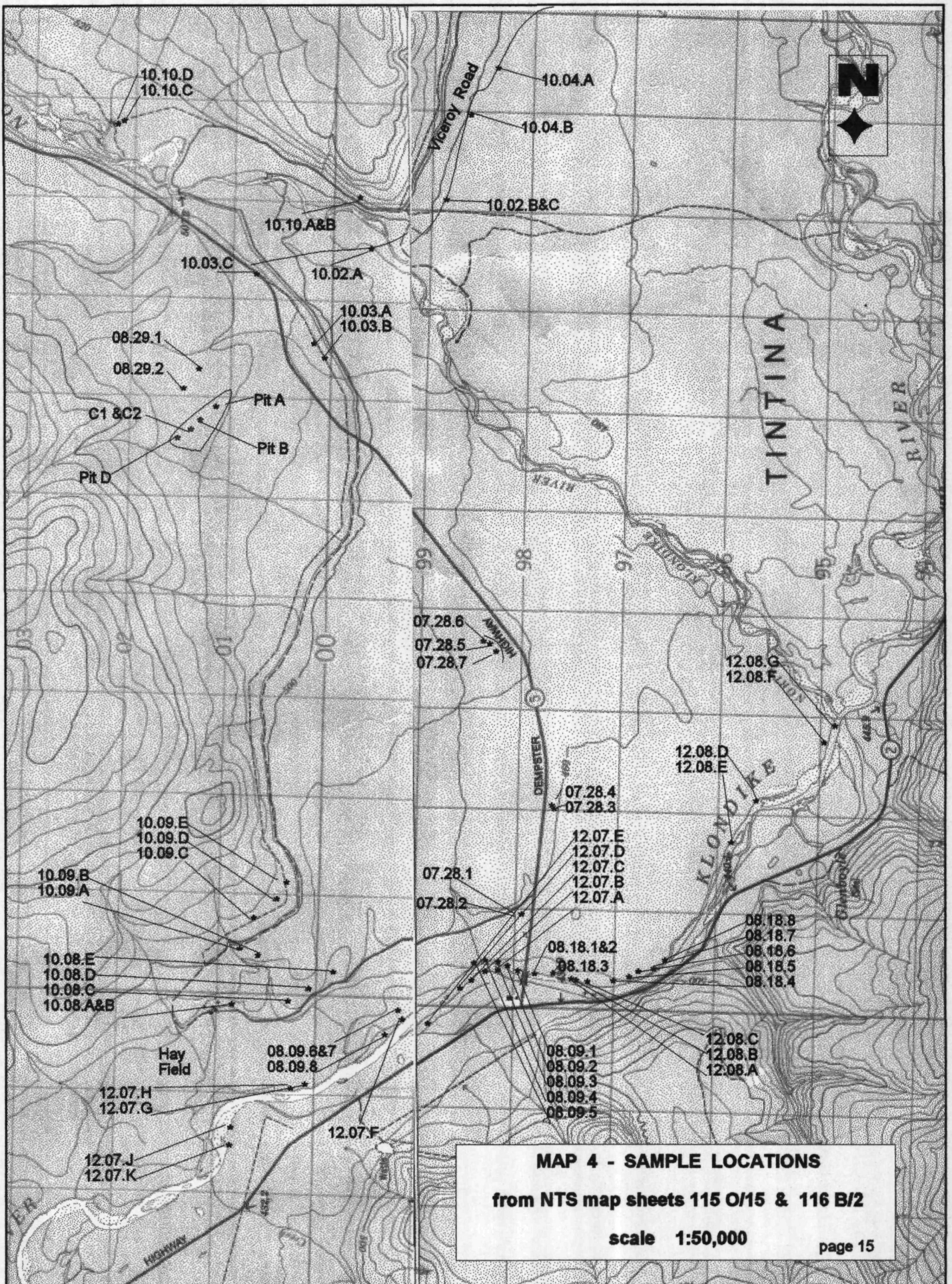
Cz - landslide deposits: rubble and/or diamicton occurring as stepped or fan-shaped deposits; mainly rotational slump failures; 10 to >100 m thick. Covers extensive areas in the Tintina Trench where deposits are derived from unconsolidated Tertiary and Quaternary deposits (eg: Ballarat Creek, >110 km²). Small percentage of landslides occurs in bedrock.



**MAP 2 - PROSPECTING AREA
from PLACER MAP SHEET 116B - 2**



MAP 3 - PROJECT LOCATION - PORTION OF TOPOGRAPHIC MAP 116B & C



MAP 4 - SAMPLE LOCATIONS
 from NTS map sheets 115 O/15 & 116 B/2
 scale 1:50,000 page 15

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GEOCHEMICAL ANALYSIS CERTIFICATE



Fortymile Placers File # 9805447
Box 460, Dawson City YT Y0B 1G0 Submitted by: Leslie Chapman

SAMPLE#	No	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au**
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	oz/t
#KLO1	3	36	7	74	.4	32	11	489	4.53	6	<8	17	6	20	.3	<3	<3	387	.60	.046	13	48	.21	252	.32	<3	.72	.04	.09	2	.213

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND MASSIVE SULFIDE AND LIMITED FOR NA K AND AL.
- SAMPLE TYPE: CONCENTRATE AU** BY FIRE ASSAY FROM 1 A.T. SAMPLE.

DATE RECEIVED: DEC 16 1998 DATE REPORT MAILED: Dec 21/98 SIGNED BY: *[Signature]* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Additional Information

People who worked on the project

William Claxton
Leslie Chapman
Eric Nelson

Dawson City
Dawson City
Dawson City

Area Investigated

Klondike River terrace area, located on claim sheets 115 O/15 & 116 B/2

Report Preparation

William Claxton and Leslie Chapman prepared the report in 30 hours.

"Rite in the Rain"



ALL-WEATHER
HIP POCKET

Spiral Memo

**PROSPECTING
KLONDIKE
PLATEAU**

No. 146
50 Sheets
4" x 6"

1998

July 26

Drove out to the project area.



Checked out road access over the area. There's good access provided by the ditch roads, the Viceroy mine road, and by the Dempster highway.

There are a number of bush roads of varying condition which can be travelled easily by 4 wheeler.

Borrow pits and roads to them will provide easy access to gravel close to the roads. (2)

The area has been burned recently. Gravel shows up just under the surface & is visible under the roots of trees which have burned & fallen over.

The ditch roads are built on the waste excavated

From the water (3.)
ditches built by
Y.C.G.C. for the North
fork power plant.
Gravel all along
the ditches is
visible. There is
also exposed gravel
in the bed of the
ditch (which is
now dry in most
places.)

Benon outcrops
of exposed gravel
along the dumpster
& vicaroy road show
tight gravel
deposits.

The main stem

blondike & North
fork have exposed (4.)
bars & cut banks.

Talked to Eric, the
woodcutter. He's
going to show
me around out
there. He has a
cabin in the area
& has sunk some
shafts.

Spent the day familiarizing
myself & trying to get
a handle on how
I'm going to handle
this. The area is
huge & there is gravel
everywhere.

July 28.

(5)

Located withdrawn areas where they cross the roads & river. There is quite a bit of land withdrawn by a lot of different interests. Land Claims has a major holding along the North fork. Heritage Branch has withdrawn a strip along the YCGC ditch. Highways has strips withdrawn along the Dempster. Some of the

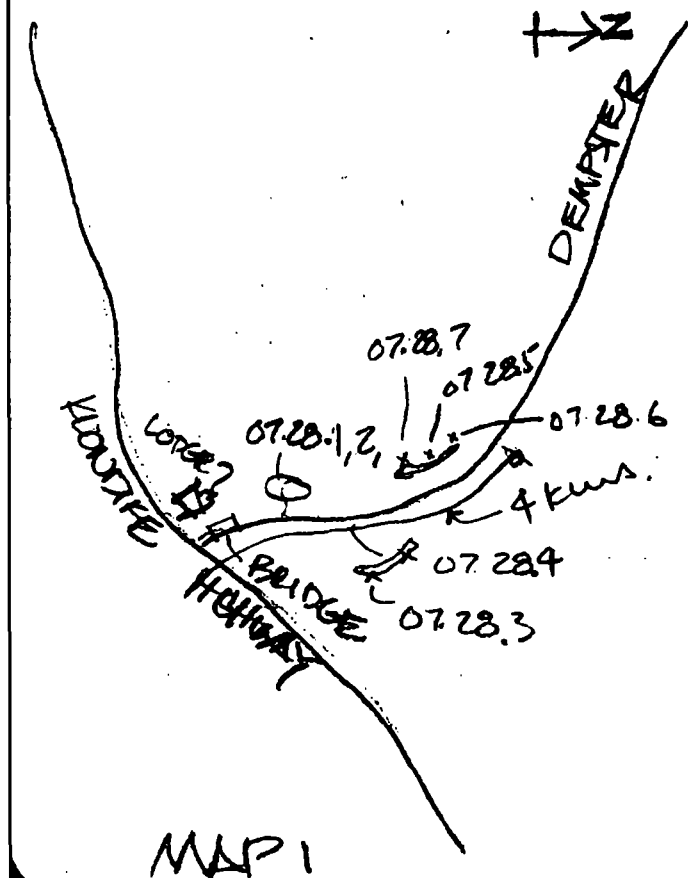
tributary creeks. (6)
have claims & leases.

Flagged where withdrawals cross roads.

Flagged entrances to trails which can be negotiated with 4 wheeler

Took some gravel samples from borrow pits & exposed gravel, see map (1).
Samples weigh approx 10 lbs @
(a 9x12 plastic sample bag full)

7.



Panned samples in
Klondike river at
the bridge.

Results

- 07.28.1 - Ocolours, little concentrate.
- 07.28.2 - Ocolours.
- 07.28.3 - Ocolours.
- 07.28.4 - O, some magnetite.
- 07.28.5 - O.
- 07.28.6 - O.
- 07.28.7 - O, mostly pea gravel.

Aug 9, 9.
 Walked down the
 Klondike, along
 the right limit,
 from the bridge
 across the dumpster

RESULTS.

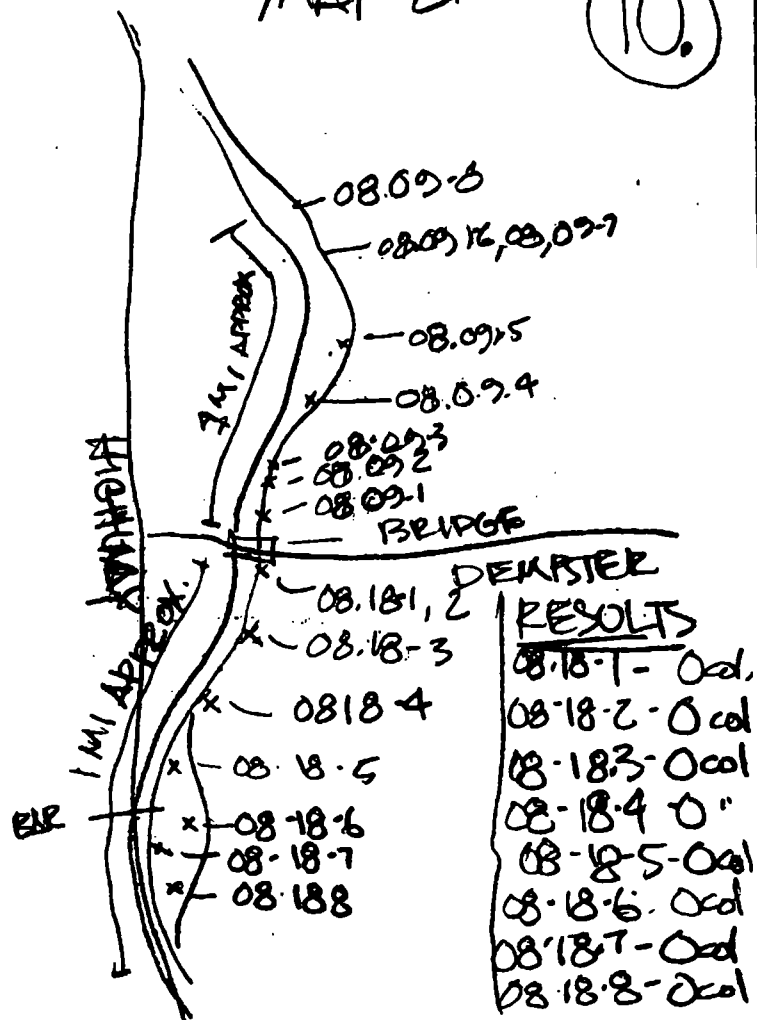
- MAP 2
- 08.09.1 - 0 colours.
 - 08.09.2 - 0 colours.
 - 08.09.3 - 0 colours.
 - 08.09.4 - 0 colours.
 - 08.09.5 - 0 colours.
 - 08.09.6 - 0 colours.
 - 08.09.7 - 0 colours.
 - 08.09.8 - 0

AUG 18

Walked upstream on
 Right limit of
 Klondike from bridge
 running. See map 2

MAP 2.

10.



Sept 28

Sunny & cool (above
freezing & no snow yet)

took Eric out with
me & took an old
wood cutting road
west off of the delapster
approx 7 mi from the
bridge. looked at
headwater areas
of 2 unnamed tribs
flowing into ditch
to assess water
supply. first trib.
(which has claims
staked. had no water -
looks like it may flow
only in spring)
2nd trib (with
lapsed claims &

a lapsed 1 mi lease (2)
has pretty good flow
for fall - estimated
200-300 gpm. probably
has good flow early
in summer.

looked at two claim-
ed shafts & took
samples (approx
8-10 lb)

-08 29.1

-08 29.2

gravel is well washed
& coarse probably
glaciated

Sept 29.

Went out to Eric's well lot
took some samples. Chose &
flagged 2 bottoms for shafts
and gravel bench.

Sept 30 - sunny cool (13.)
Went out down
road off of the
dumpyter to the
west, located
confluences of
creeks that I looked
at yesterday where
they enter the
ditch - no water
flows in either one
at this point.

found what looks
like an old mining
cut approx 6 km
down the road -
flagged location for
future sampling
drove to end of
road where a

overflow from (14.)
has washed out
the road - a canyon
approx 50' deep here.
Been cut here with
gravel exposed in
walls. Flagged
for future sampling

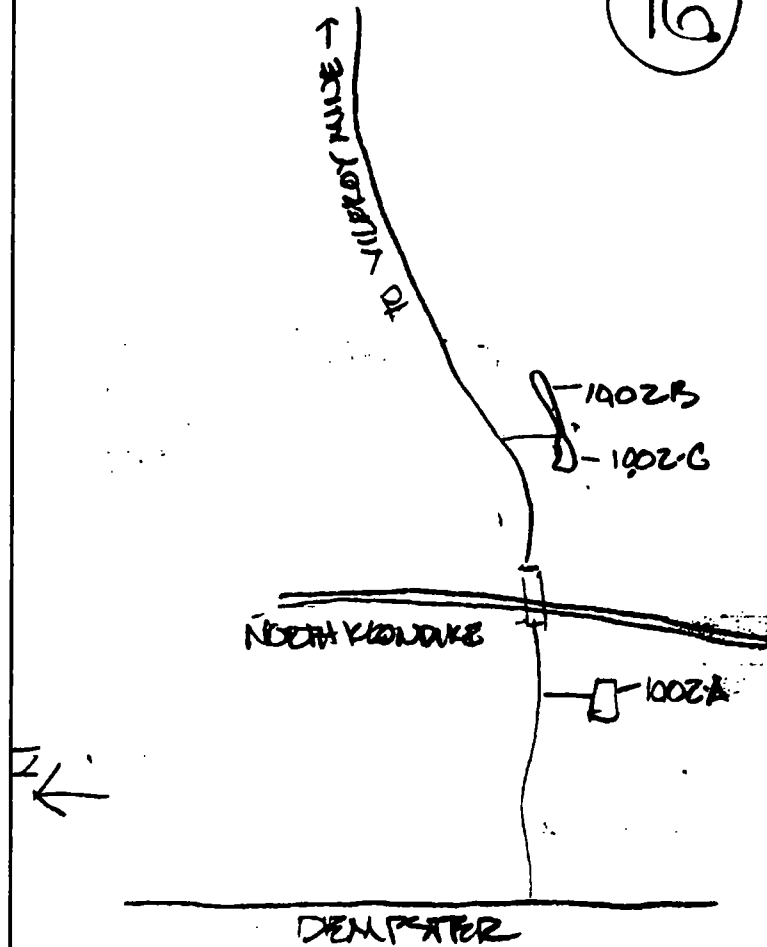
Oct 1. sunny/cool
cool.

15.

Went out to
vicinity to look
at their bedrock
& overburden.
took a tour of the
mine with
Steve Saxton one
of the geologists
on staff. took
samples of ore
for reference.

I was hoping that the
stripped overburden would
contain some high-level
bench gravels, but the
mine is too high for
gravel deposits.

16.



Oct 2. Cloudy/cold (17)

Went out viceroys road & took gravel samples.

1002 - A
1002 - B
1002 - C.

samples taken from borrow pits. all gravel is very rounded coarse - typical

Oct 3. cloudy/cool. to (18)

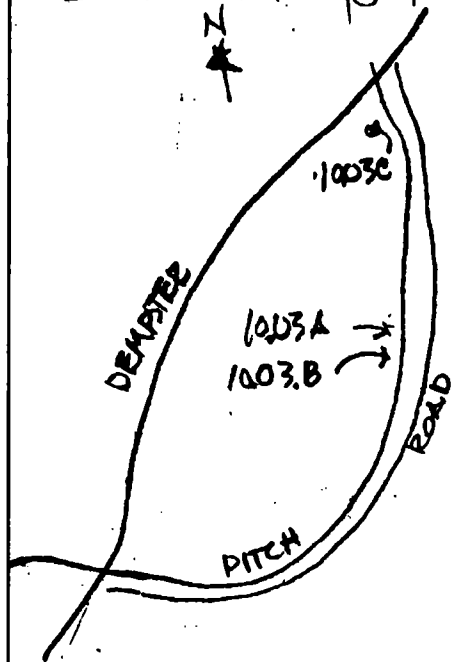
proceeded out ditch road to the east of the dumpster gravel showing all along road. Rounded cobbles lots of quartz boulders. took 3 samples

1003 A.
1003 B.
1003 C.

RESULTS	
0 cobs	
0 cobs	
0 cobs.	

overburden all along this section of approx 8 km is shallow reddish clay.

land claims 19.
cover the road from
this point so
didn't go further

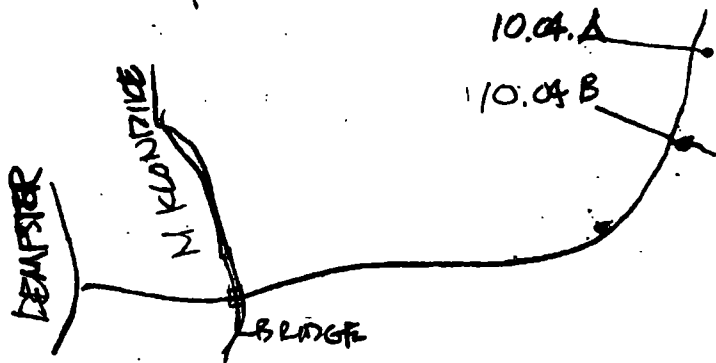


Oct. 4.

20.

traveled up valley
road. took 2 more
samples out of
gravel pits
1004 A.
1004 B.

All of this gravel
is round & large
size looks glacial
very little overburden



Oct 5 cloudy & cool ⁽²¹⁾

went out wood road to Eries to check on excavations

He put down two holes approx 4' deep on a small mound that we found on Sept 29.

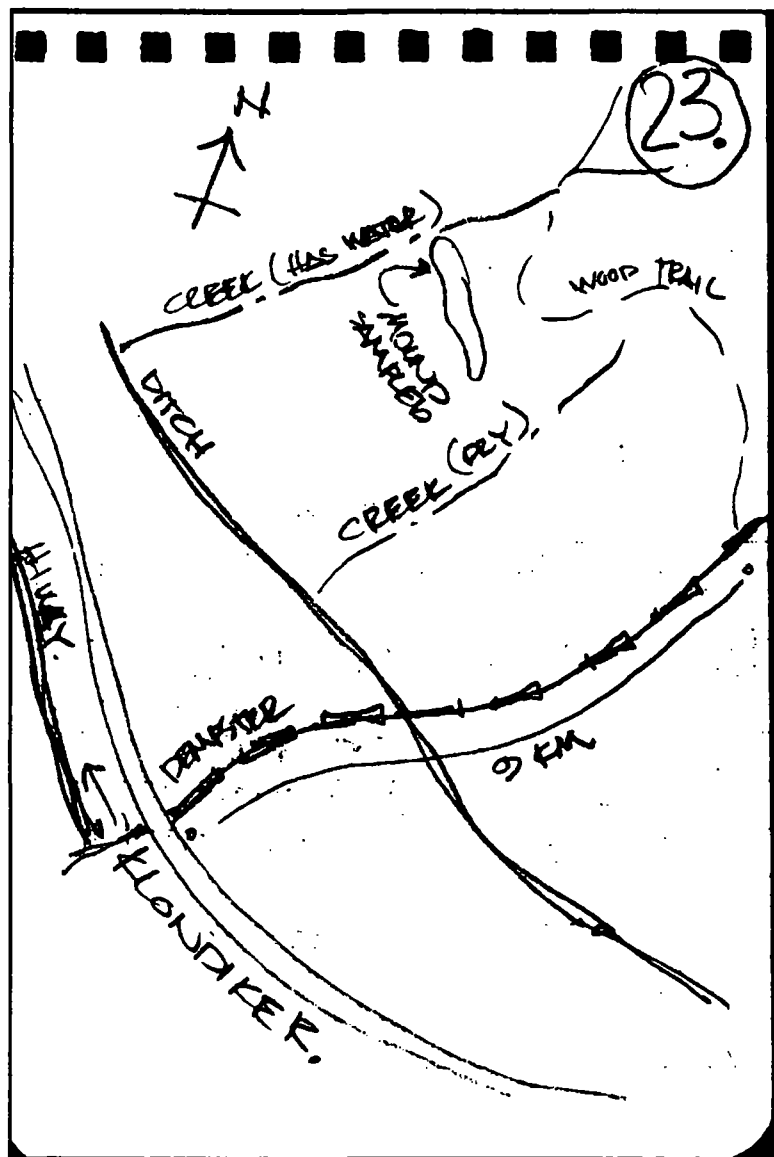
gravel in these two holes is different than typical gravel of the area - redder & not as rounded
- may not be

glaciated.

(22)

took approx 100 lbs from each pit in 2 sacks for each pit & packed them to the pickup for sampling later.

PIT /A1, PIT /A2, PIT /B1/PIT /B2
- took 2 smaller samples - approx 15 lbs each & packed them to pickup
- PIT /A3, PIT /B3



Oct 6 cloudy cool ~ 0°C (24)

got a third pit going
on the gravel bench.
- took 2 samples
around 30# each
packed them to
the 4 wheeler

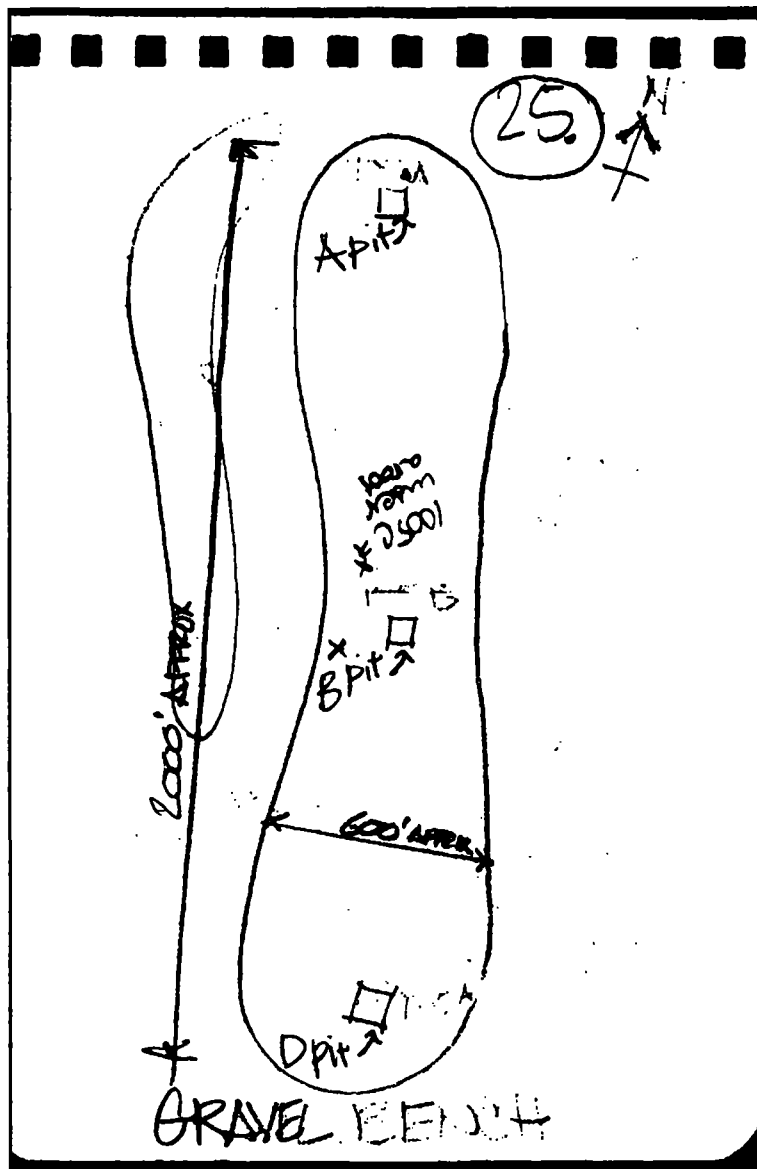
samples

PIT / D1 (2 1/2')

PIT / D2 (2 1/2')

the gravel is reddish
tinged - some big
round quartz boulders
most is rounded & well
sorted.

got down in the gravel
about 2 1/2'. not frozen
yet.



Oct 7 high clouds ⁽²⁶⁾ at 20°

Perusing samples
from pits

1 PIT A/1 approx 30 lb total
1st pan - 2 clumps - fine
2nd pan - 0 some lo sand
3rd pan 0

1 PIT A/2 approx 30 lb total
1st pan 0
2nd pan 0

PIT D 1
1st pan - 0
reddish clay - some
lots of black sand
rounded gravel
(from under a root
on the bench)

Pit D, 1 counts

(27)

2nd pair 0

3rd pair 0

4 pair 0

PIT D, 2

1st 0

2nd 0

3rd 0

Pit A, 2 approx 25/6

1st 0

2nd 0

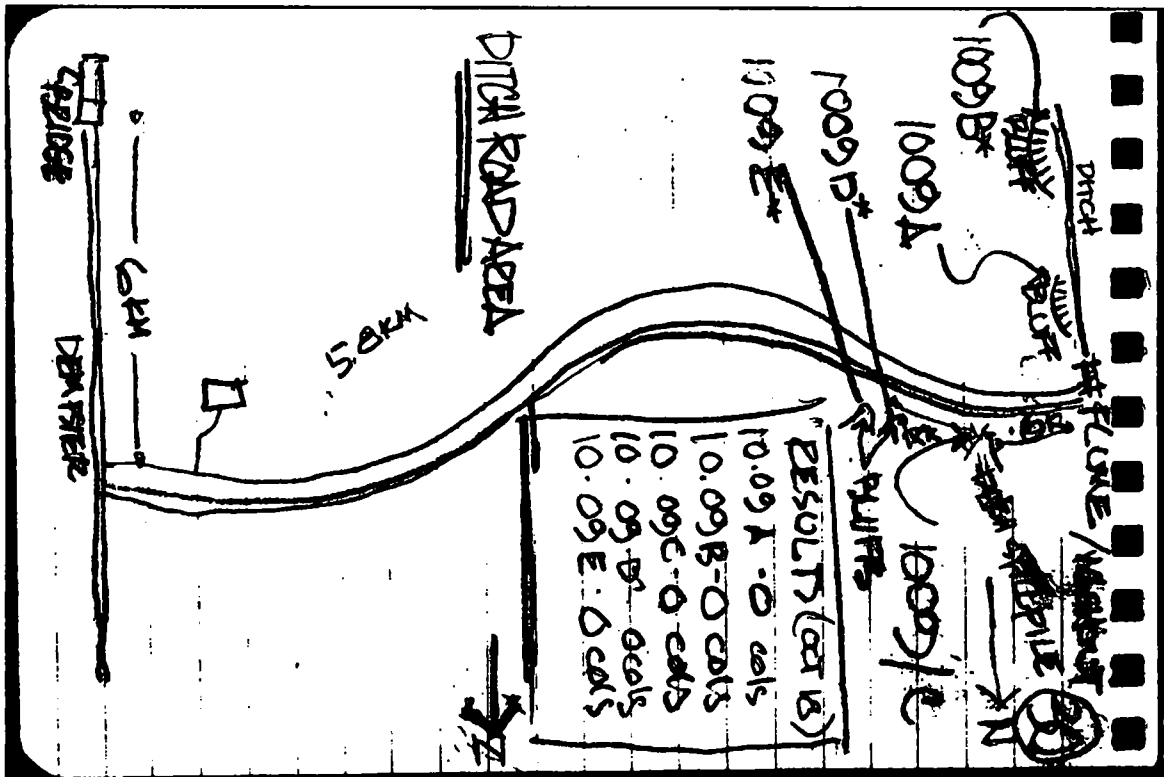
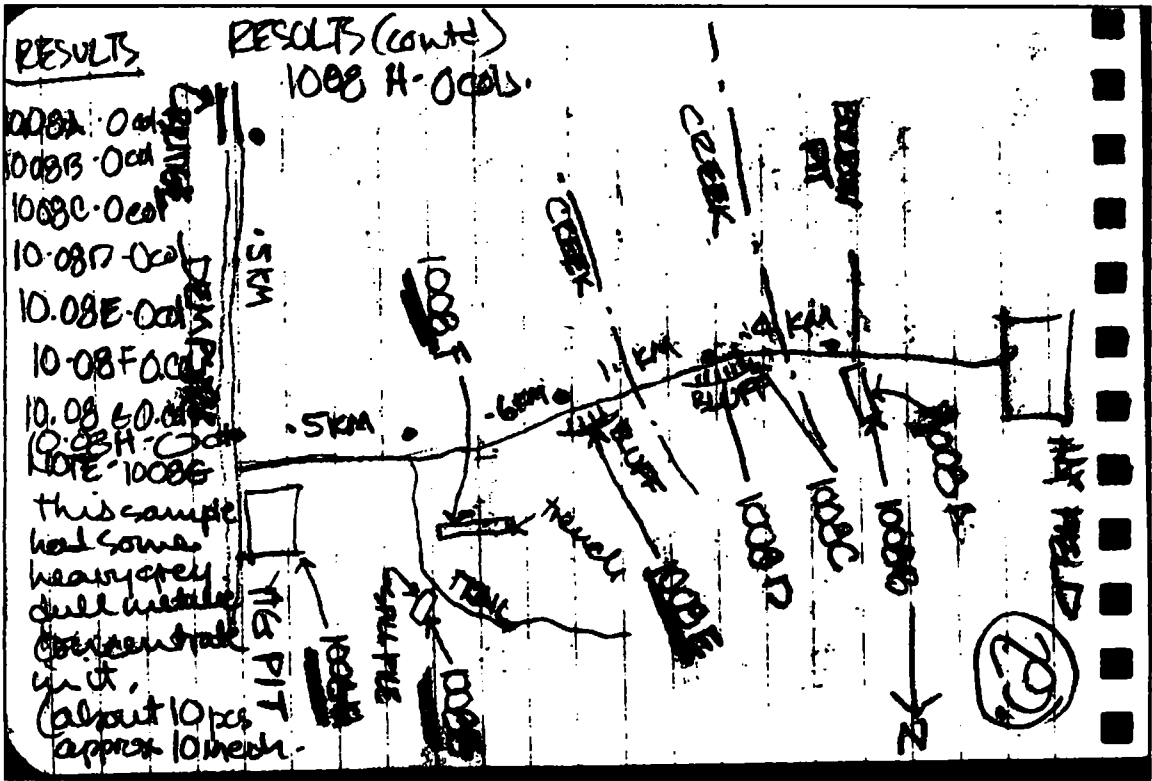
3rd 0

Oct 8 sunny cool

(28)

sampled along road turning west off of dumpster approx 5 km from bridge. Gravel starting to get a frozen crust, but still easy digging where sun shines on it. took 8 samples from 20-35 lb approx see accompanying map.

Drove south along ~~dumpster~~ highway past dumpster cut off no samples.



Oct 9

sunny cold ~ -4°C (31)

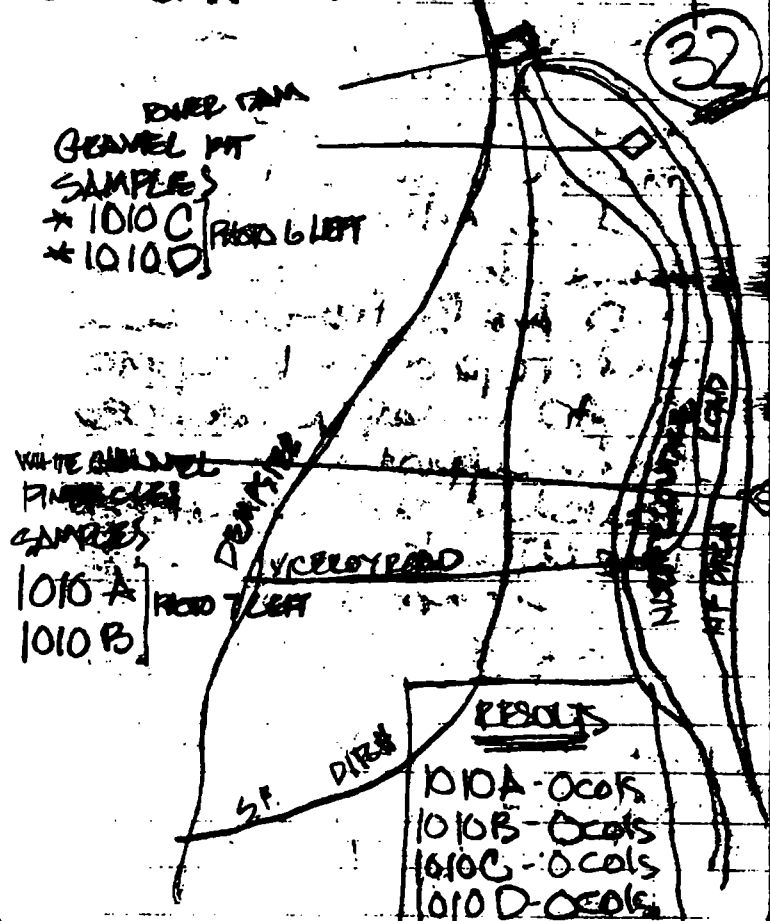
Travelled the ditch
road west of the Dempster

Took samples from
bluffs where a washout
had cut through the
gravel forming a gulch
~ 50' deep took 2 samples
1009 B, 1009 A - looks like
white channel -

Took sample from spill
pile on other side of
ditch - reddish rounded
gravel - 1009 C

Took 2 samples from
bluffs on north side of
ditch ~ 10 ft each
1009 D - 1009 E

Oct 10 cloudy cold ~ -4°C
MAP OF DITCH ROADS
ON EAST SIDE OF DEMPSTER



Oct 10 cloudy cool 2-3

took the loop around
the north fork ditch
road. looks like the
gravel has very little
overburden next to
the ditch. took samples
10 10 A & B from an
outcrop of rock approx
70-80' high capped
with approx 8-10' of gravel
Gravel is tan w/ looks
like white channel.
(2 bags approx 50 lb each)
Samples 10 10 C & D from
a gravel pit. Looks like
someone else has been
here taking small
grab samples. took
2 bags approx
50 lb each.

Oct 11 sunny warm 3-4

cut out trail to
pits A-B-D

Pits have been
deepened to approx
7' each - good looking
quartz - coarse rounded
cobbles mixed with
finer gravel in a
clay matrix.
- Still no frost
in holes.

- no snow yet.
ideal prospecting weather

samples D 3, 4, 5 from
approx 6-7'
50 lb each.

Oct 12 cloudy & warm + 2
Perfect weather (25)
& still no snow

Leslie took a load of
junk samples
(approx 6-700 lbs)
out to the forty mile
for processing later,
good traveling with
no snow.

I drove out to the shaft,
slashed some of the
bush out of the
way for access,
punctured a tire
on a root. Came back
to town to have it
fixed.

Oct 13 cloudy & warm + 2

took 3 big bags (26)
down to Flouville
for sampling.
Samples came
from the 3 shafts
1005A, 1005C, 1005D.

Each bag contained
~ 2 lbs. These bags
were saved from the
load which I took
away for later
processing.

SAMPLE RESULTS

104 - 0 counts
105 - 0 counts
104 - 0 counts.

no colours found (37)
in any of the
samples. lots of
heavy concentrates
& abnormally large
amounts of
black sand
(which is encouraging)

These samples,
taken from 7' deep
may still represent
top overburden gravels.
No way of telling
bedrock depth, although
I suspect that it may
not be excessive since
it is on a definite
rise above surrounding
land.

Oct 14 sunny warm (38)
sample panning
on Elou dike
river. (sampled from pits)
Sample A3
from approx 7' in
shaft A

pan 1 - 0 colours
pan 2 - 0 colours
pan 3 - 0 colours
little black sand
lots of fine clay & gravel
is rounded well washed

Sample C5 from 7' in C
pan 1 - 0
pan 2 - 0
pan 3 - 0
more black sand
than in A shaft
same type of

gravel, no gold. (39)

D4 sample from 7'
in shaft D.

pan 1 - 0

pan 2 - 0

pan 3 - 0

pan 4 - 0

good amt of black
sand & heavies but
no colour.

D2⁽⁴⁾ sample from
approx 7'

pan 1 - 0

pan 2 - 0

pan 3 - 0

gravel from this
hole is much
coarser & not as
red tinted

fewer fines and
little heavy conam-
itates. no gold. (40)

1005 D 3(5) from 7'
same type of
gravel as D2

pan 1 - 0

pan 2 - 0

pan 3 - 0

very little black
sand.

1005-1
from approx 3' depth
in A shaft

pan 1 - 0

pan 2 - 0

pan 3 - 0

pan 4 - 0

rounded gravel in (4!)
a red clay matrix
quite a bit of black
sand but
no gold (again)

Based on the negative
results from preliminary
panning, I'm
starting to think
that this is a very
deep deposit & that
depth achieved
blaste represents
the top layers of gravel

Oct 15 sunny cool (42)

went out to the
shatts. Dug out
another foot
from the bottom
& bagged it up & labeled
Packed it out to the
pick up on the
tower (3 trips)

flagged out trail
to the shatts &
wrapped it so that
I can find the
bench after it
snows.

Gathered up
tools & equipment
at the work

site & hauled them ⁽⁴³⁾
to the pickup
with the 4 Wheeler.

The gravel in the
shafts is getting
finer with seams
of pea gravel. The
clay component
is redder & there are
pebbles of quartz
dominating the
aggregate.

If I don't get any
colours in these
samples, I won't
dig deeper. I think
this ground should
be drilled to see
what is happening

Oct. 16 Cloudy warmer. ⁽⁴⁴⁾

Spent the morning
and early afternoon
checking distances,
& bringing my
maps up to date
with distances,
flagging into
sample sites so
that I can find
them again
in the snow.
Someone keeps
taking down my
fishbowl on the
ditch road. I don't
think I'm welcome
out there.

Hauled the 4 45
wheeler & the
last bags of
gravel which I
collected out
to the 40 mile
for processing.

The ferry is being
pulled today so
it will continue
this project after
freeze up

46
Oct 17. cloudy ^{exam} 3
Consolidated all
of the gravel which
I collected from
the project at the
cleanup shack.
on the forty mile.

Set up cleanup
equipment
filled the water
barrels.

Hauled some wood
& got a fire going.

Brought in
6 bags of gravel
from the shafts
& a box full of
grab samples

to thaw overnite
Still very little ⁽⁴⁷⁾
snow on the
ground, about
1-2 inches.

Oct 18

(48)

Spent the day
processing samples

So far, I have
not found any
gold in any of
the material.
There is a good
amount of
black sand &
heavy concs (but
no gold).

hauled the tubs
of tailings down
to the river with
the 4 wheeler
& dumped them
there.

Emptied used (49)
water & refilled
the supply drums
with clean water
for tomorrow's
batch.

brought in
The remaining
bags of gravel from
shafts & all of
remaining
gravel samples
to thaw overnight

Oct 19. cloudy warm 50°C

Spent the day (50)
processing the
remaining
samples.

No gold. the
black sand component
is also less in the
last (deepest) gravel
from the shafts.

Handled tailings
down to the
river & damped
used process
water

rinsed all

equipment ⁽⁵¹⁾
off & tied up.

I saved the concentrates from the last batch of gravel from the shafts.
- nothing visible or remarkable in the cows under 30x magnification

I am going to have the cows assayed to see if there is a gold component to this gravel.

⁽⁵²⁾ ~~lights were~~
Dec 6. Cloudy warm ~ -5

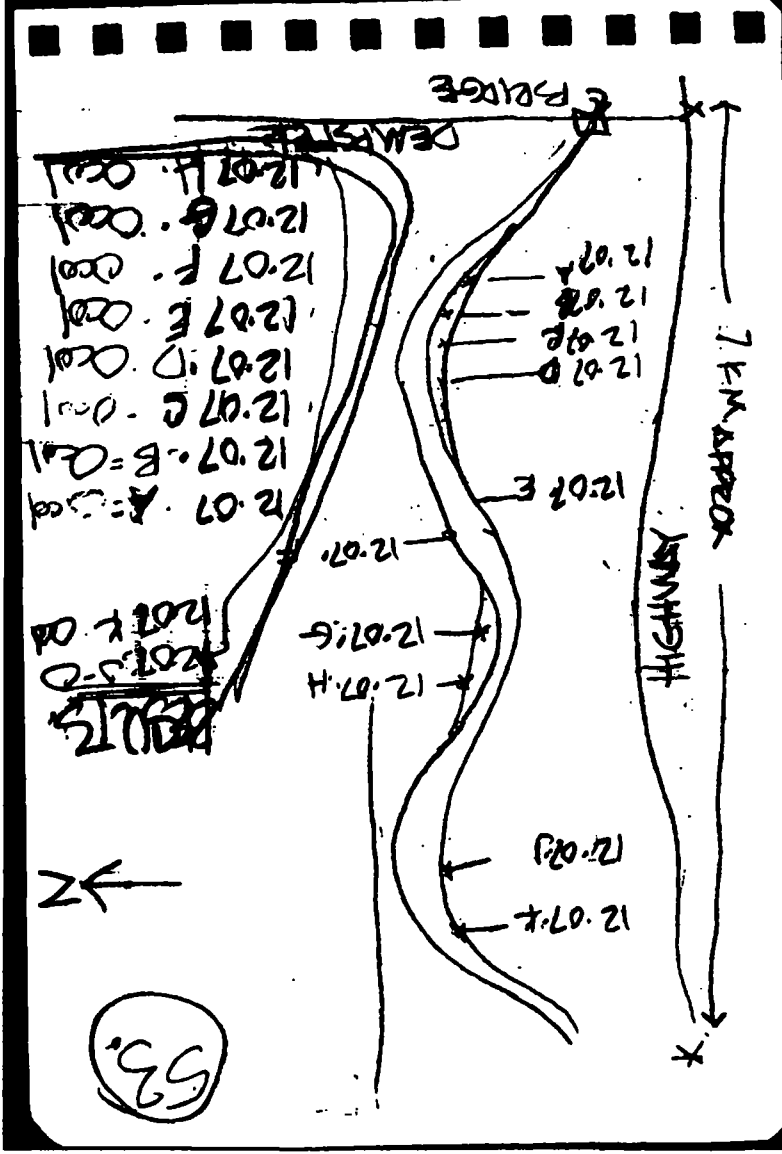
Made 2 trips out to the dumpster corner to drop off the Zelan skidoos and one sleigh for travelling on the Klondike to collect samples.

Checked out the ice on the river - it looks a little thin but should be ok - not much snow.

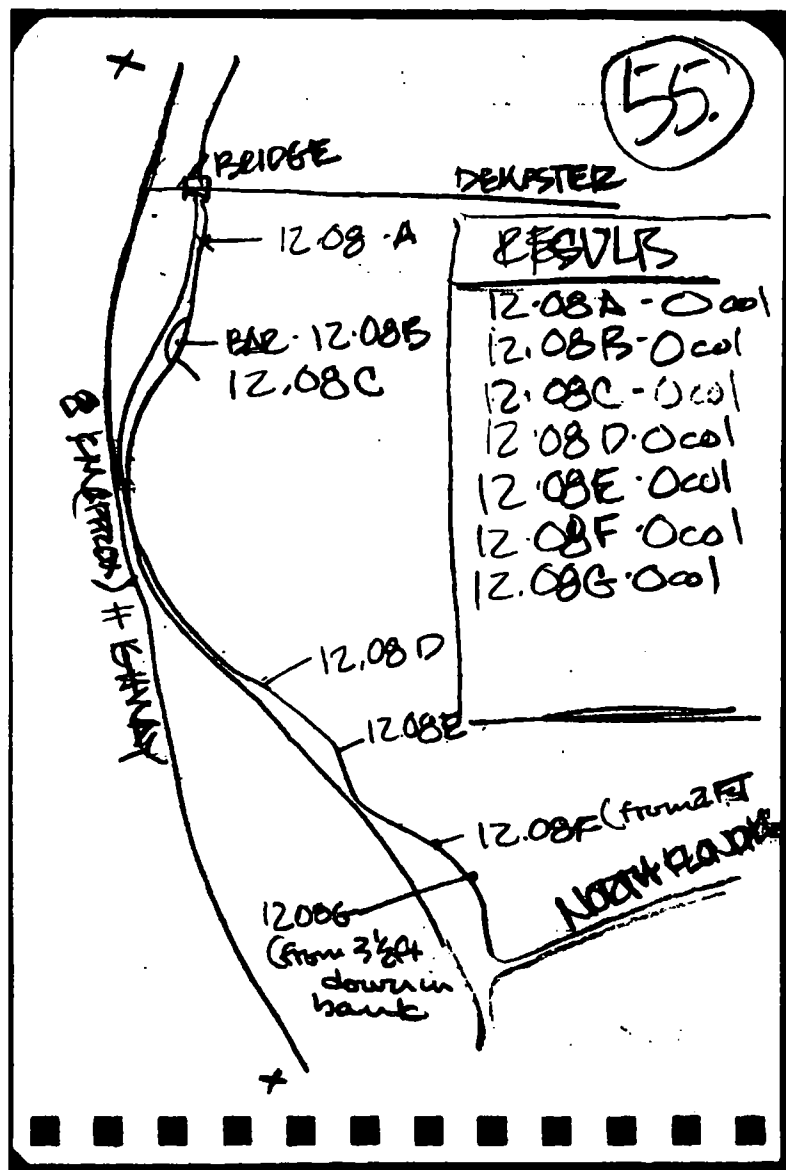
Quite a few open leads in the main channel

Dec 7
 Got both snow
 markers & 1.
 sled down, approx
 Klondike & collected
 7 samples of
 20-30 lb each
 Pretty rough going
 because snow
 cover is stumpy
 There is a lot of open
 water still, making
 river crossing difficult
 Ground is frozen but
 it can be dug in
 with a pick first

54



53



DEC. 8

cloudy light snow

(56)

Took snow machines upriver from the Bridge on the Klondike. Got as far as the North Klondike mouth.

Took 8 samples of gravel from exposed river cut banks. Samples weighed approx 25 lb each.

See map.

Traveling is difficult - will pass samples collected so far

to see if this (57)
work is yielding
results worth
pursuing.

Dec 9 (58)

Set up panning
tubs in the house
to process the bags
of gravel gathered
along the Klondike
river.

None of the gravel
had gold in it.

None of the
 samples of gravel
 which I took
 over the course
 of this project
 yielded any visible
 placer gold.

This work completes
 the project.

Dec. 10
 Made two trips
 out to the Dempster
 corner to haul
 the snow machine
 & sled back to
 town.

(9)

RESULTS OF RAUNING
 KLONDIKE RIVER GRAVEL

12.08 A	21 lbs	0 cals
12.08 B	19 lbs	0 cals
12.08 C	23 lbs	0 cals
12.08 D	20. lbs	0 cals
12.08 E	19 lbs	0 cals
12.08 F	27 lbs	0 cals
12.08 G	22 lbs	0 cals
12.07 A	26 lbs	0 cals
12.07 B	20 lbs	0 cals
12.07 C	23 lbs	0 cals
12.07 D	20 lbs	0 cals
12.07 E	19 lbs	0 cals
12.07 F	22 lbs	0 cals
12.07 G	20 lbs	0 cals
12.07 H	21 lbs	0 cals
12.07 I	29 lbs	0 cals
10.07	11 lbs	0 cals