Bernie Kreft
Prospecting Grant
Final Report

YMIP 99-011

NTS Mapsheets
115-O-14
105-F-5
115-P-16
115-P-2,7,11,13 115-O-16

Gravel Lake Target Area

Location – The target is located adjacent to the Klondike Highway from just south of Stewart Crossing (NTS 115-P-2) to the headwaters of Flat Creek (NTS 115-O-16).

Access – Access was via truck to all the test sites.

Geology – Geology consists of various types of unconsolidated sediments, considered to be both pre-glacial and post-glacial in origin.

Work Program – The project consisted of taking between 1 and 3 samples at 16 sites which were thought to represent all of the different gold prospective gravel deposits adjacent to this stretch of the highway. Samples consisted of between two and four cubic feet of material dry screened on site to minus ½ inch. Screened material usually resulted in one or two large rock sample bags. The screened material was panned to test its placer gold content. Anomalous sites (3 in total) were subjected to a 1.5 cubic yard bulk test. The bulk test was processed in a small test sluice designed to recover fine gold.

Gravel deposits represent either an old abandoned channel of the Stewart River, or some other ancient drainage system. The volume of gravel in the area is immense, this means that locating "pay" will be difficult, but that if "pay" is found, the deposit will likely be large. Deposits can be grouped as follows: pre-glacial high level gravels, post-glacial low-level benches and postglacial high level benches. Iron staining (rare cementing) is occasionally encountered within the pre-glacial high level gravels. Post-glacial gravels are well bedded and usually appear as a thin veneer (<3.0m) of sorted gravels overlying till. Contacts between till and sorted gravel are indistinct apart from the change in sorting.

Sample Site #1
UTM 421648/7015036
Gravel pit on left side of road on the way to Stewart Crossing from Whitehorse. Two four cubic foot samples were taken. Only minor insignificant gold recovered.

Sample Site #2
UTM 421358/7016491
Gravel pit on left side of road on the way to Stewart Crossing from Whitehorse. Two four cubic foot samples were taken. Only minor insignificant gold recovered.

Sample Site #3
UTM 419987/7017705
Gravel pit on left side of road on the way to Stewart Crossing from Whitehorse. Two four cubic foot samples were taken. No gold was recovered.

Sample Site #4
UTM 367800/7071395
Gravel pit on left side of road on the way to Dawson from Stewart Crossing. Two four cubic foot samples were taken. No gold recovered, only limited black sand encountered.

Sample Site #5
UTM 367995/7072475
Gravel pit on right side of road at Clear Creek turn-off. One four cubic foot sample taken. Only minor insignificant gold recovered.

Sample Site #6
UTM 627833/7091927
Gravel pit on right side of road. One four cubic foot sample taken. Only minor insignificant gold recovered.

Sample Site #7
UTM 633255/7088335
Gravel pit left side of road 17.1 km past Meadow Creek towards Dawson. One four cubic foot sample taken. Only minor insignificant gold recovered. Gold is slightly bigger than the usual small specks.

Sample Site #8
UTM 364378/7074152
Gravel pit right side of road just before Beaver Dam Creek on the way to Dawson from Stewart Crossing. One two cubic foot sample taken. A small speck or two of gold in each pan.

Sample Site #9
UTM 361536/7075667
Gravel pit left side of road on the way to Dawson from Stewart Crossing. One two cubic foot sample taken. No gold encountered, only limited black sand recovered.

Sample Site #10
UTM 360243/7077129
Extensive till and sand, no sample taken.

Sample Site #11
UTM 359916/7077163
Right side of road from Stewart Crossing towards Dawson. One two cubic foot sample taken. Only minor insignificant gold recovered.

Sample Site #12
UTM 359940/7077158
30 metres from above site. One two cubic foot sample taken. No gold recovered.

Sample Site #13
UTM
Left side of road at Site #11. Two four cubic foot samples taken. Several specks of gold in each pan, gold is slightly larger than the usual small specks encountered.

Sample Site #14
UTM 356156/7079952
Right side of road. One two cubic foot sample taken. No gold recovered.

Sample Site #15
UTM 409747/7032503
Left side of road around 15km out of Stewart Crossing towards Dawson. Two two cubic foot samples taken. One piece of gold in each pan, gold is slightly larger than the usual small specks encountered. Abundant garnet also recovered.

Sample Site #16
UTM 423676/7005917
One two cubic foot sample taken. Only minor insignificant gold recovered.

Bulk Samples
Sample Site #1 – High level gravels
At sample site #8. Site chosen based on gold in every pan during recon test phase. Results were disappointing; 15 specks from 1.5 cubic yards. Gold is likely to fine-grained to be consistently recovered by a conventional test-sluice.

Sample Site #2 – High level gravels
At sample site #13. Site chosen based on several pieces of gold in every pan during recon test phase. Results were encouraging, but definitely un-economic. Approximately 55 specks from 1.5 cubic yards. Gold is slightly coarser than at any other site, but likely still to fine-grained to be consistently recovered in a conventional test sluice. Sample contained slightly more clay than all the other sites.

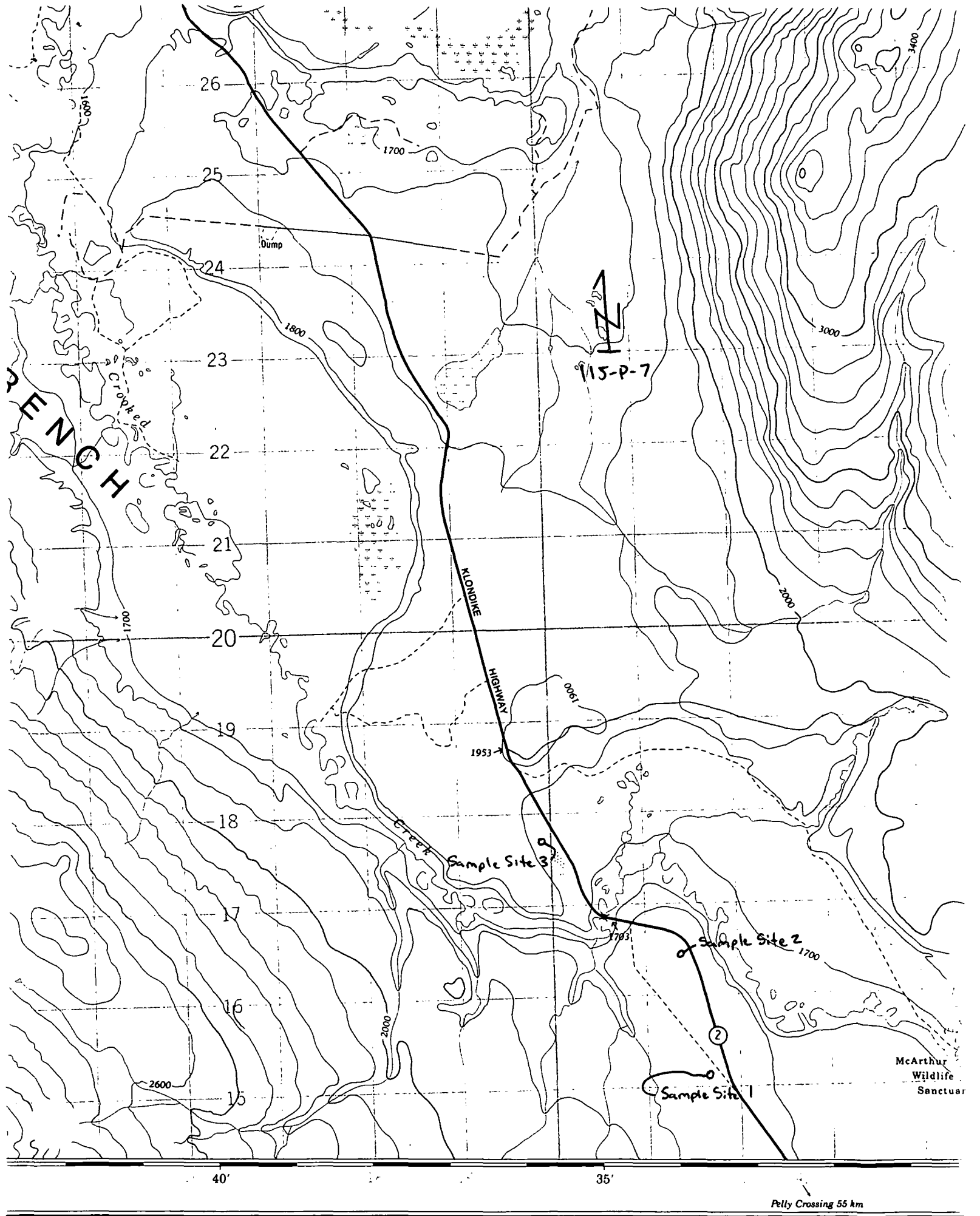
Sample Site #3 – Low level bench
At sample site #15. Site chosen on basis of gold in every pan during recon test phase. There was also abundant garnet in the sample; garnets are often an indicator of placer gold. Results were disappointing; 15 specks from 1.5 cubic yards. Gold is likely to fine-grained to be consistently recovered by a conventional test-sluice.

Conclusions – Minor gold occurrences are widespread within the area tested. Gold is very fine-grained and hard to recover using conventional test sluices. Anomalous gold does not appear to be dependant on the degree of sorting, nor the amount of heavy minerals present (magnetite or garnet), but may be associated with clay content. The distance from most of the sample sites, to water for sample processing, posed a logistical problem.

Recommendations – Further work is recommended, and should be conducted in the vicinity of site #13. This work should consist of a detailed airphoto study to try and trace/discover fluvial features that may be associated with this site. Some test pitting and sampling is also recommended for the immediate area of site 13. Small-scale bulk sampling with sample processing by panning is the best method for further testing.

Budget

P.Christensen (4 days x $125/day)	=	$500.00
B.Kreft (12 days)	=	
Test Sluice And Pump (4 days x $50/day)	=	$200.00
Truck Costs (1472km x $0.42/km)	=	$618.24
Living Expenses (16 man days x $35/day)	=	$560.00
TOTAL	=	$1878.24

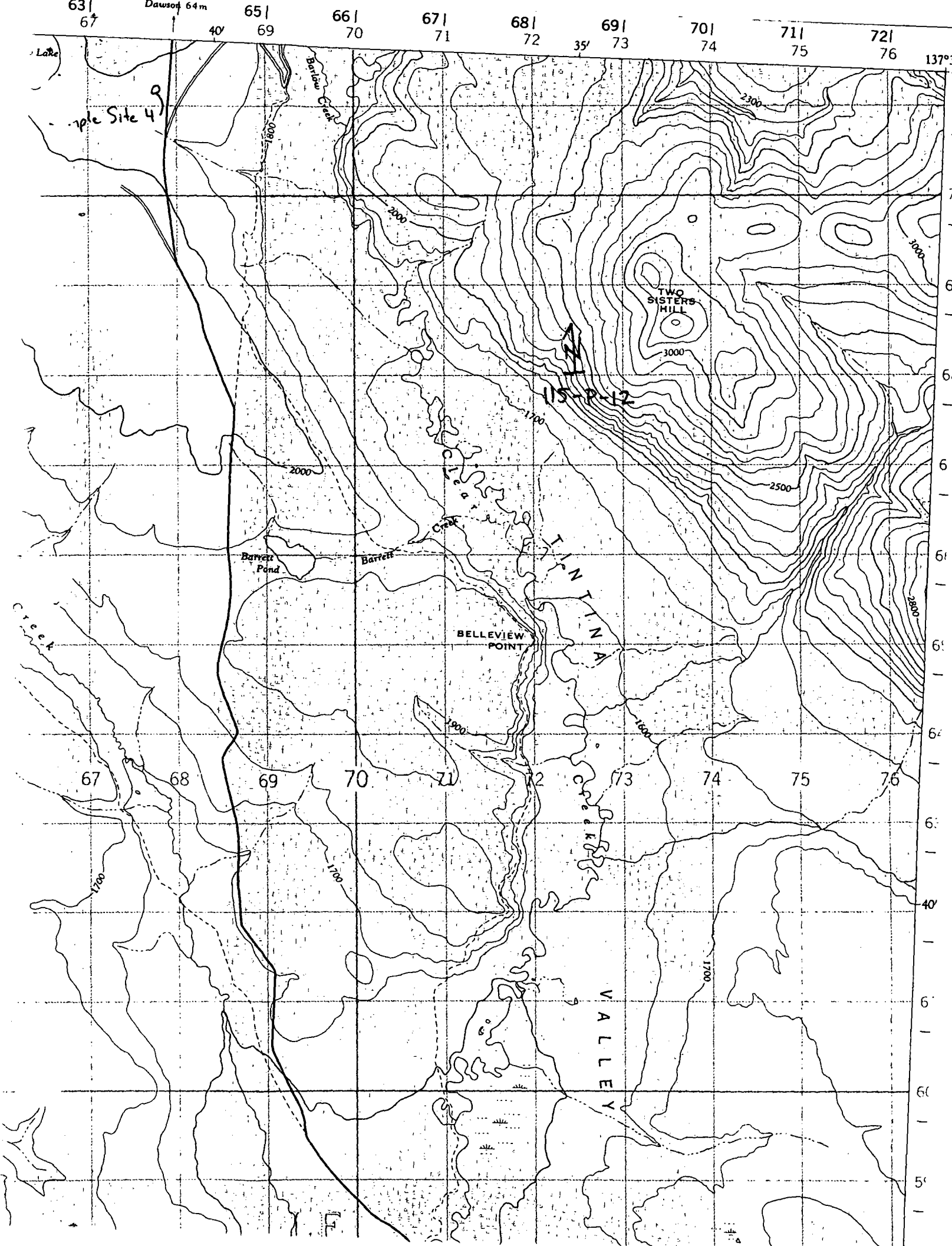


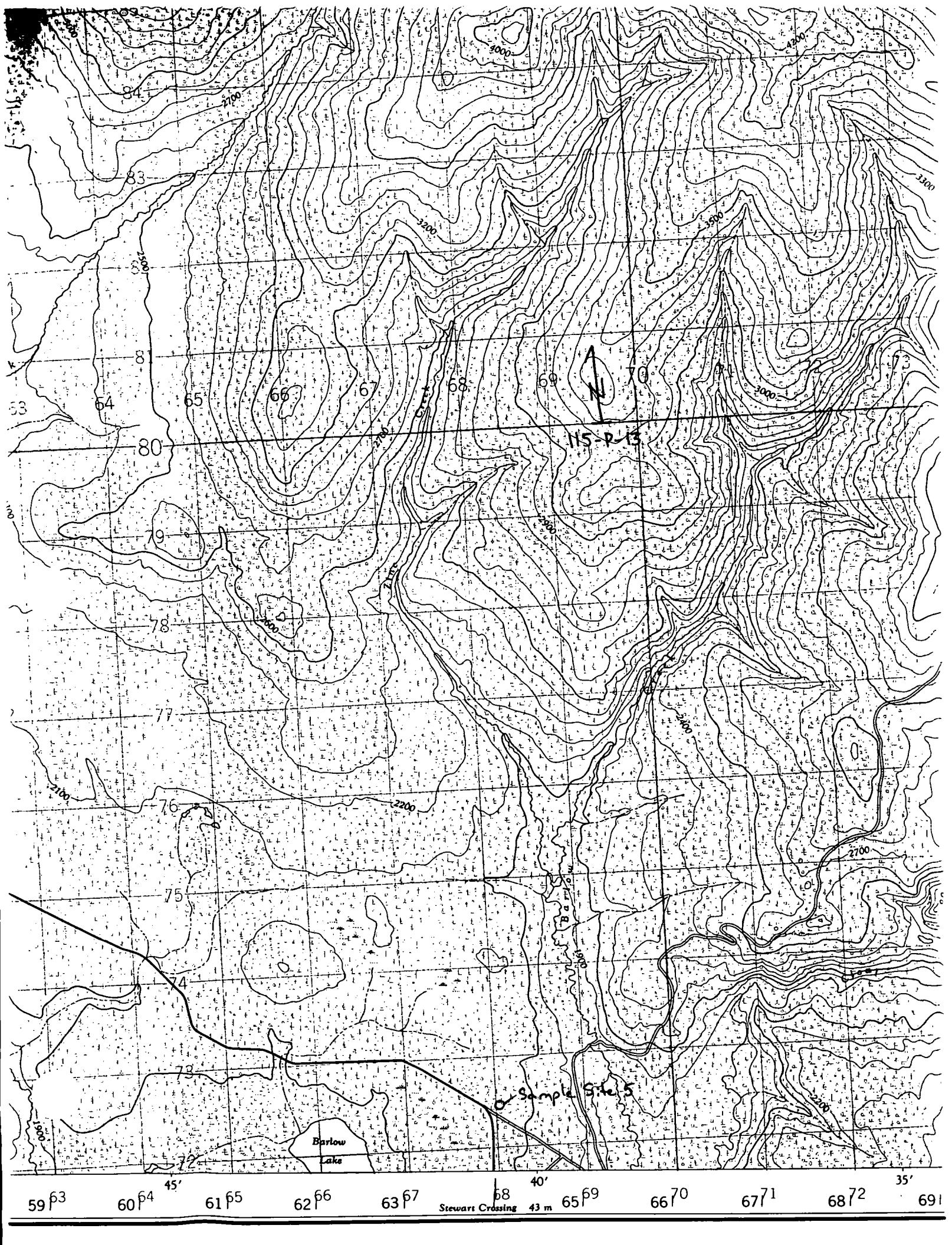
Information concerning bench marks and horizontal survey monuments can be obtained from Geodetic Survey, Canada Centre for Surveying, Ottawa.

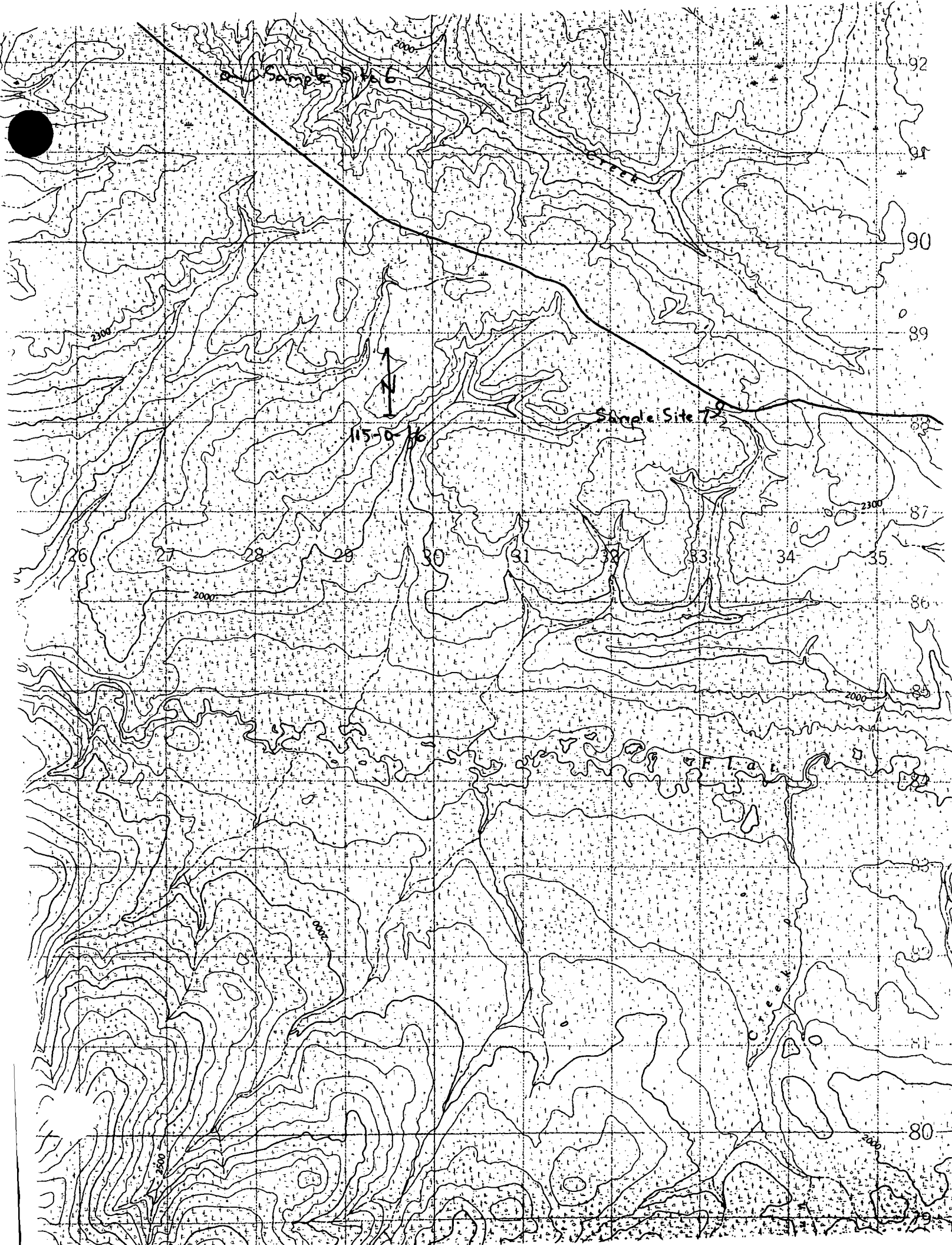
Pour tout renseignement concernant les repères de nivellement et les bornes géodésiques, prière de s'adresser à la Division des levés géodésiques, Centre canadien des levés, Ottawa.

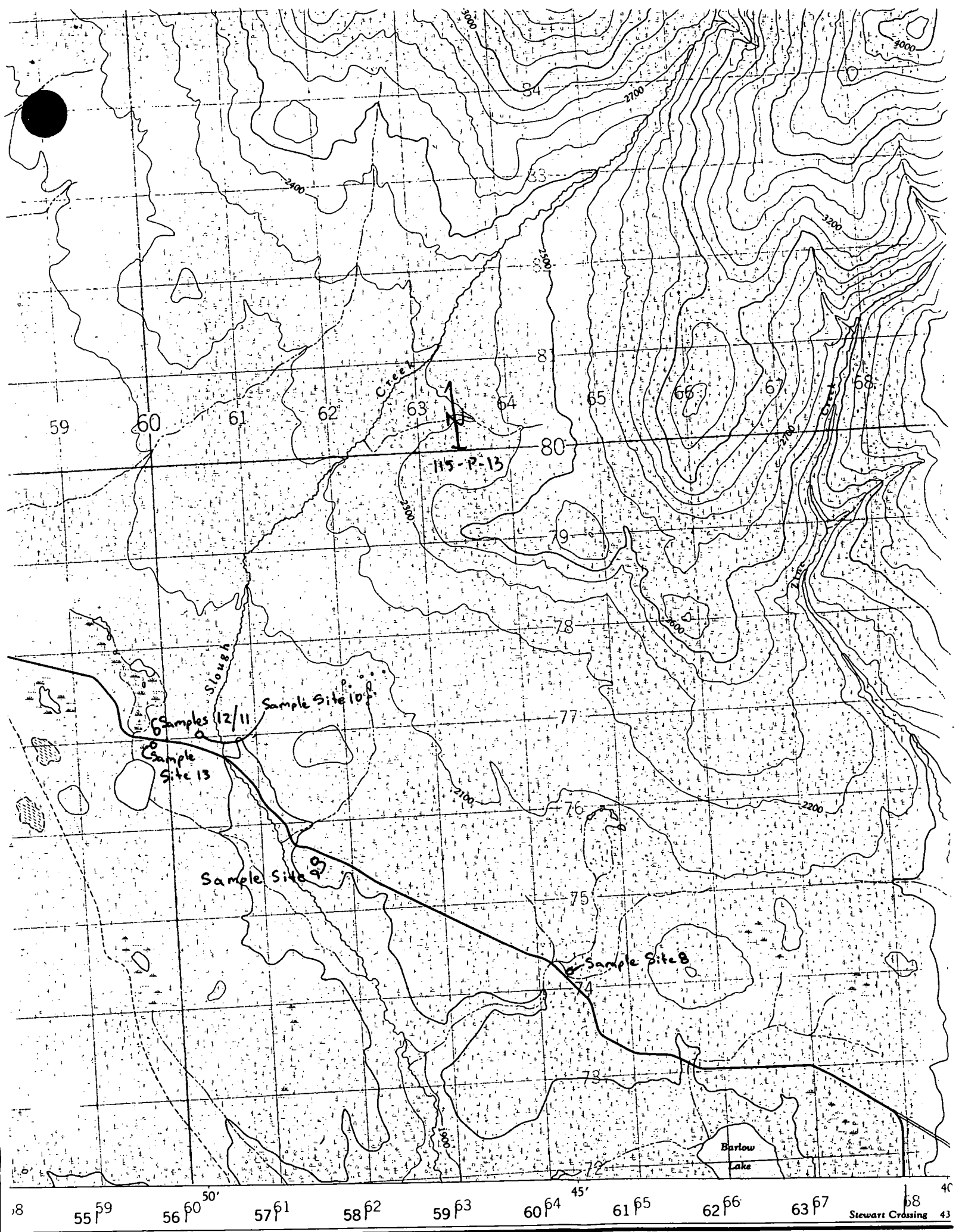
ÉTABLIE PAR
MINISTÈRE DE
RENSEIGNEMEN

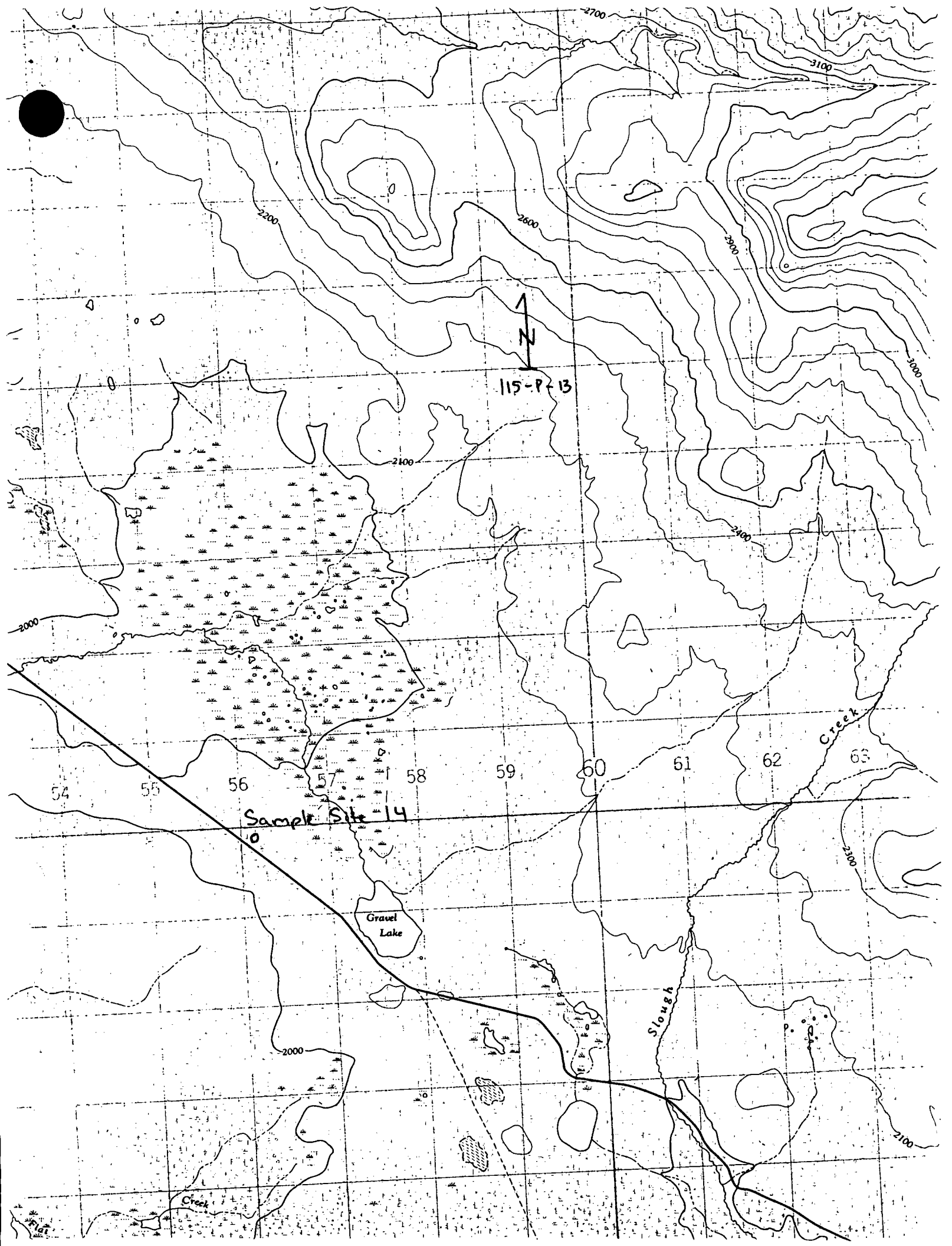
CES CARTES

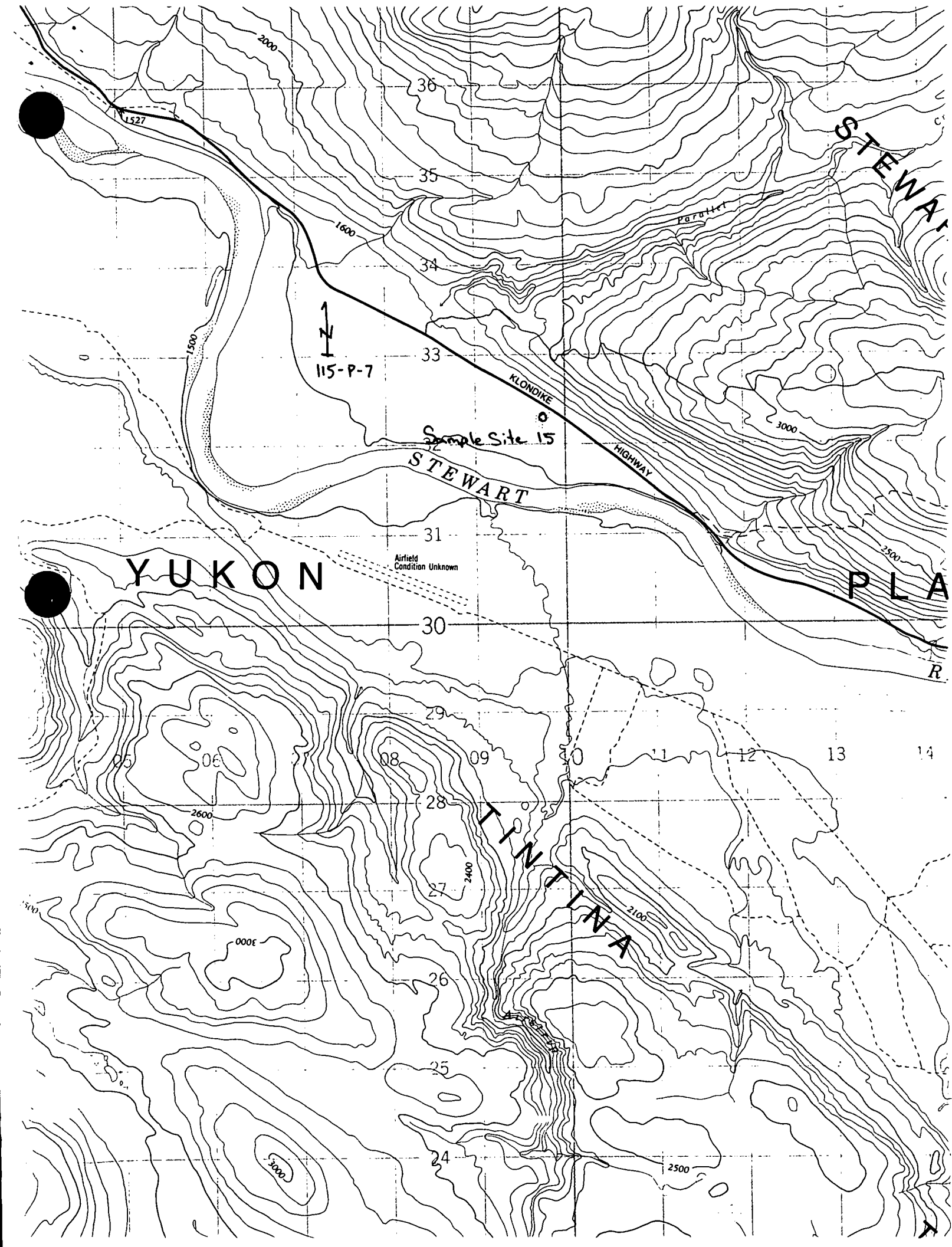

Dawson 64m
Barlow Creek
TWO SISTERS HILL
3000
2500
2300
2000
1800
1700
1600
Clear Creek
Barrett Pond
Barrett Creek
TINTINA
BELLEVIEW POINT
Creek
VALLEY
67
68
69
70
71
72
73
74
75
76
40'
35'
137°
115-P-12


115-P-13
Sample Site 5
Barlow Lake
Stewart Crossing 43 m
45'
40'
35'


Sample Site 6
Creek
Sample Site 7
N
115-0-16
Flat
92
91
90
89
88
87
86
85
84
83
82
81
80
26
27
28
29
30
31
32
33
34
35
2000
2300
2500


115-P-13
Creek
Slough
Sample Site 10
6 Samples 12/11
Sample Site 13
Sample Site 9
Sample Site 8
Barlow Lake
50'
45'
40
55 59
56 60
57 61
58 62
59 63
60 64
61 65
62 66
63 67
68
Stewart Crossing


2700
3100
2200
2600
2900
N
115-P-13
3000
2100
2400
2000
Creek
54
55
56
57
58
59
60
61
62
63
Sample Site 14
Gravel Lake
2300
Slough
2000
2100
Creek

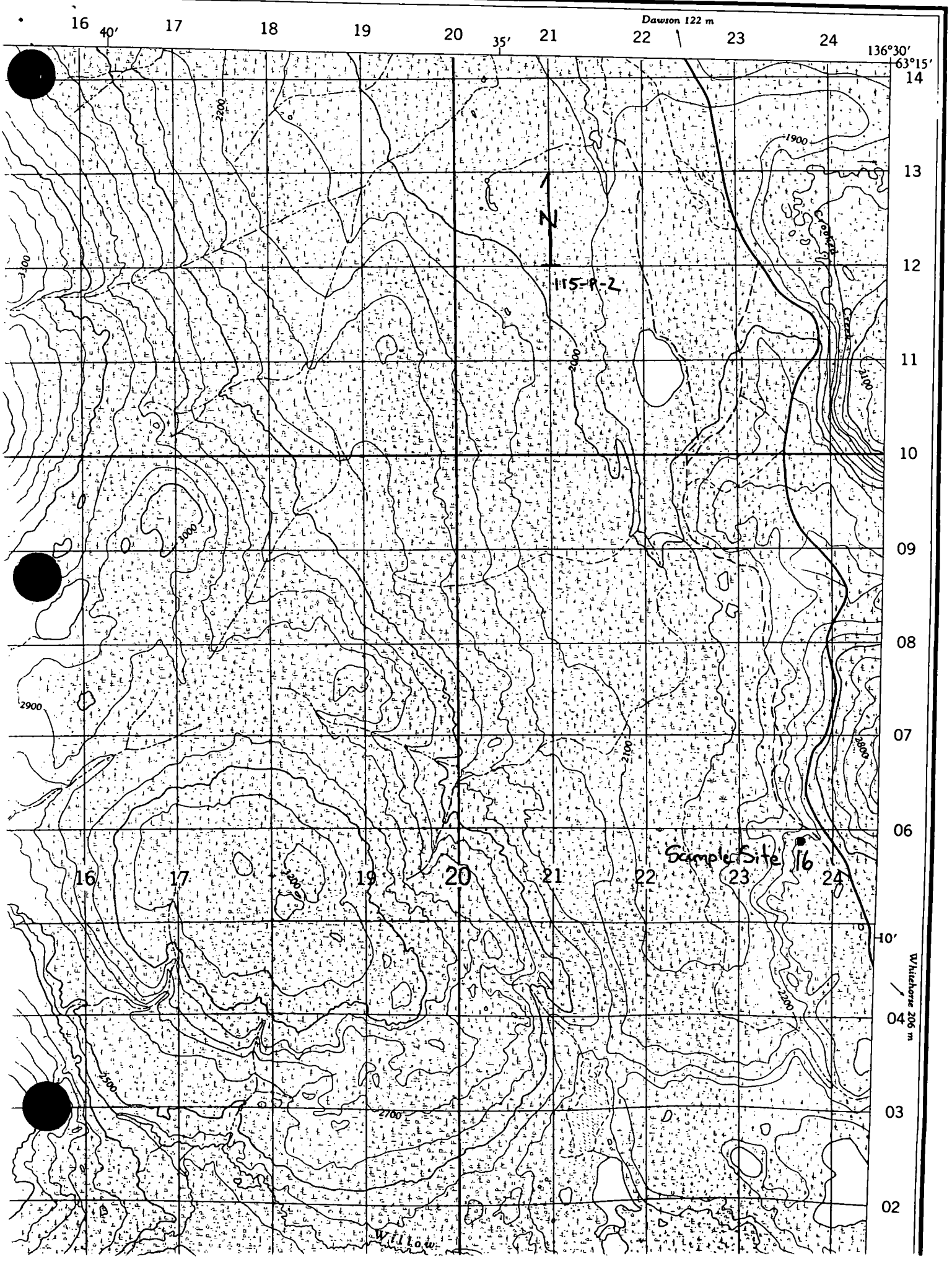

115-P-7
Sample Site 15
KLONDIKE
HIGHWAY
STEWART
YUKON
Airfield
Condition Unknown
TINTINA
Parallel
1527
1600
2000
1500
2600
2400
2100
3000
2500

This map as: SERIES A 722

EDITION 1

CARTE PROVISOIRE

115 P/2



Mendocina Target Area

Location - The target is located on NTS mapsheet 105-F-5 at the headwaters of Mendocina Creek, approximately 95 kilometres NE of Whitehorse.

Access – Access was achieved by helicopter from Whitehorse. The Livingstone placer gold camp is centered 22 km to the west of the target area. The camp contains several large airfields; it is also serviced by a winter road.

Geology – Geology consists of a northwest trending mixed sequence of graphitic schist, graphitic quartzite, quartz sericite schist and mafic metavolcanics. The graphitic units and the quartz sericite schist bound the mafic metavolcanic unit, and it may be that the units are part of a partially eroded anticlinal structure with the mafic rocks occurring near the core of the structure. Detailed mapping by Vicki Hansen (MSC. Thesis) placed these units within the Yukon Tanana Terrane and has shown them to be probable Mississippian in age. Rocks on the north side of the mafic metavolcanic unit dip approximately 20-30 degrees to the north, those on the south side dip steeply south. Several randomly oriented small-scale faults occur throughout the area, displacement along these faults appears to be minimal.

Mineralization – During 1981 Agip Resources located two areas with base metal mineralization hosted by sericite schist (Discovery and Creek zones). Rock samples returned up to 1580 ppm Zn, while soils returned up to 130 ppm Cu, 1490 ppm Zn, 82 ppm Pb and 4.2 ppm Ag. The showings were thought to be localized, and insignificant, and no further work was completed.

Both areas were re-assessed during the summer of 1999. The Discovery Zone was found to contain significant Zn mineralization within two host rock types. Highest grades were returned from sphalerite rich pods oriented parallel to bedding within quartz sericite schist. A select sample of this type of mineralization returned 7.44% Zn along with anomalous Ag, Cu, Pb, Cd, Hg and W. High zinc values were also returned from samples of graphitic quartzite/schist. This mineralization occurs within narrow beds (20-30 cm wide) and is associated with weak to moderate silicification and traces of pyrite. Consistent values of 2% to 3% Zn along with anomalous Ag, Hg, Cd and W have been returned, while the footwall to this type of mineralization consistently carries between 2000 and 6000 ppm Zn over widths of 0.4m to 0.6m. Mineralization in both occurrences is very fine-grained and occurs with only minor amounts of pyrite. Both types of mineralization have been traced discontinuously over a 350 metre strike length and are concentrated within a stratagraphic thickness of approximately 25 metres.

The Creek Zone consists of several semi-continuous foliaform quartz veins (highly silicified beds?) mineralized with 20% to 35% medium grained pyrite/pyrrhotite. These veins/beds are consistently enriched in copper (1236 ppm to 1943 ppm) and bismuth (12 ppm to 135 ppm). They also contain sporadic highly anomalous values of up to 1.9% Pb, 0.9% Zn, 3.8% As and 89.8 ppm Ag. Discovery Zone type showings (sericite schist and graphitic quartzite hosted) have also been located in this area, attaining maximum values of 3924 ppm Zn from a 0.7m chip of graphitic siltstone.

Conclusions – Numerous showings, typical of what would be expected in a VMS type environment, have been discovered in this area. Detailed government mapping has shown that these rocks

correlate with VMS prospective Mississippian aged Yukon Tanana Terrane strata in the Finlayson Lake area. The fine-grained, sulphide deficient, nature of mineralization in the Discovery Zone showings makes prospecting this occurrence difficult.

Recommendations – Soil sampling, geophysical surveys (max-min?) and detailed prospecting should be conducted over the Discovery Zone and Creek Zones. Reconnaissance scale soil, silt and rock sampling should be aggressively conducted throughout the area for similar types of mineralization.

Expenditures

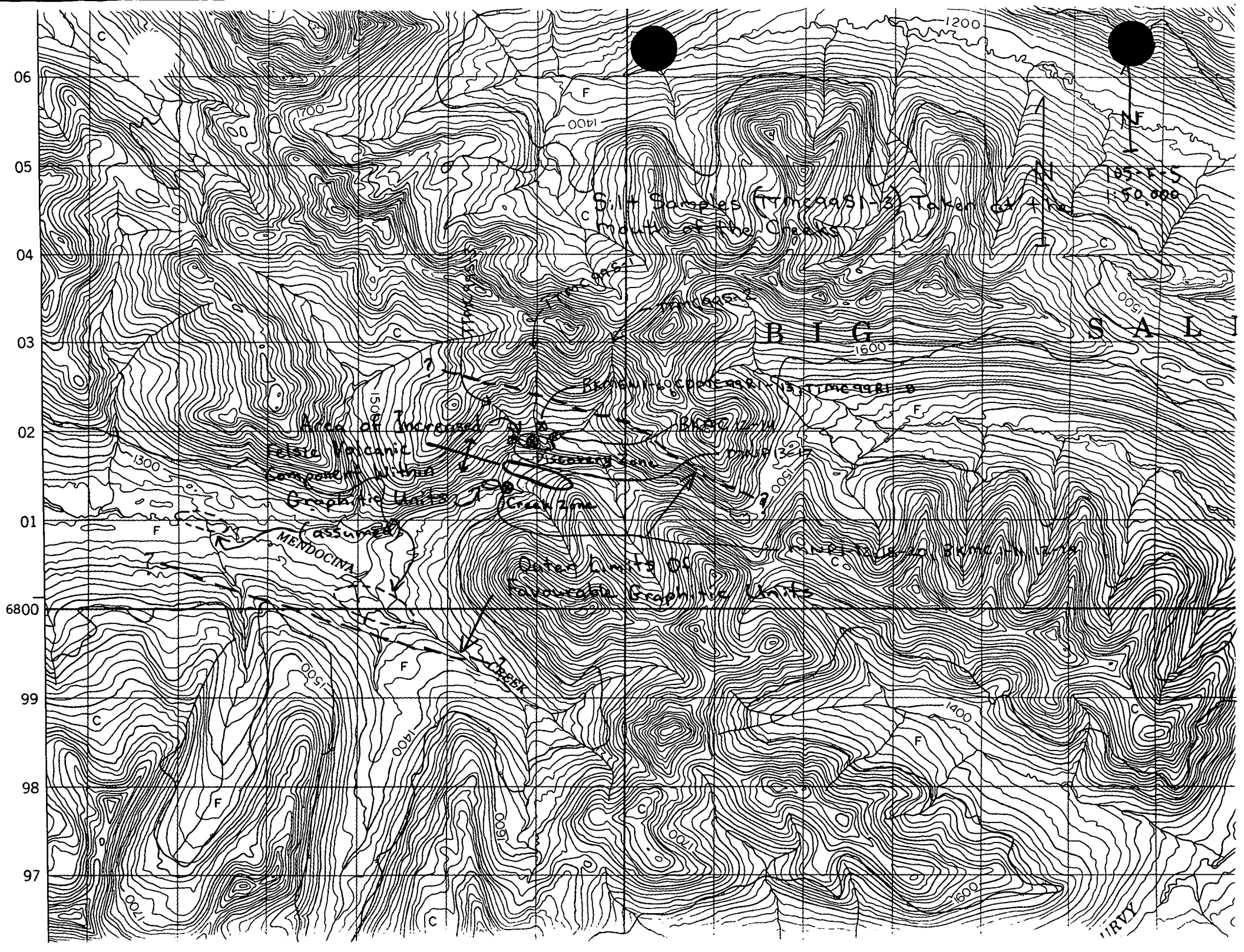
B.Kreft (6 days)	=	
C.Downie (1 day)	=	
T.Termuende (1 day)	=	
P.Christensen (5 days x $125/day)	=	$625.00
Food and Camp Supplies (13 man-days x $35/day)	=	$455.00
TNTA (2.3 hours)	=	$2014.09
NAL (sample analysis)	=	$1521.54
TOTAL	=	$4615.63

Sample Descriptions

TTMC99R01 > 3.0m chip across quartz sericite altered felsic volcanic (rhyolite?) cut by numerous ferricrete stringers sub-parallel to foliation
TTMC99R02 > 1.0m chip across black graphitic shale; host to above
TTMC99R03 > 1.0m chip as above
TTMC99R04 > 1.0m chip across black siliceous shale
TTMC99R05 > grab sample of sericite altered felsic volcanic hosted sphalerite pod. Pod is oriented parallel to bedding. Felsic unit is about 2m wide, pod is about 5cm wide, several pods occur
TTMC99R06 > 1.0m chip across felsic unit which hosts mineralized pods
TTMC99R07 > grab of limonitic black shale
TTMC99R08 > grab pyrrhotitic black shale
TTMC99S01 > silt sample
TTMC99S02 > silt sample
TTMC99S03 > silt sample
CDMC99R01 > grab sericite and silica altered felsic tuff
CDMC99R02 > grab graphitic schist with 2% diss pyrite
CDMC99R03 > 1.0m chip across silicified and sericitized graphitic schist/phyllite
CDMC99R04 > grab phyllite with strong qtz flood/silicification
CDMC99R05 > 10cm wide graphitic schist with silicification and sericitization
CDMC99R06 > grab 15cm wide foliaform qtz vein
CDMC99R07 > 0.5m chip across thin bedded graphitic schist
CDMC99R08 > 1.0m chip graphitic shale and weak silicification
CDMC99R09 > grab silicified felsic volcanic with 2% sphalerite
CDMC99R10 > 1.5m chip interbedded felsic volcanic and graphitic phyllite
CDMC99R11 > 0.1m chip felsic volcanic unit with 1.5% sphalerite
CDMC99R12 > 0.15m chip rusty weathering graphitic phyllite bed
CDMC99R13 > strongly chloritized sediment? Volcanic? With 1% coarse diss pyrite
BKMEN-1 > 1.0m channel felsic schist bed with minor diss pyrite and several foliaform qtz veins
BKMEN-2 > 0.15m chip thin bedded graphitic schist
BKMEN-3 > 0.25m chip across graphitic quartzite hosting several narrow layers of 10% fine-grained sphalerite and trace pyrite
BKMEN-4 > 0.6m chip graphitic quartzite/schist adjacent to above
BKMEN-5 > green/mafic volcanic with large biotite and coarse pyrite oriented parallel to foliation
BKMEN-6 > grab of float of felsic schist with very fine-grained zn/pb min

BKMC-1 > 0.4m chip of weakly pyritic and weak silicified bed in graphitic schist/phyllite
BKMC-2 > 20cm bed as above
BKMC-3 > 30cm bed as above with 6% pyrite diss
BKMC-4 > grab pyritic quartzite at BKMC-2
BKMC-5 > 10cm wide silicified bed with 25% diss medium grained py/po
BKMC-6 > rep grab 2cm wide bed as above
BKMC-7 > 0.2m chip graphitic quartzite weak silicification and 4% diss py/po
BKMC-8 > 0.4m chip graphitic schist with weak silicification and sericite flood
BKMC-9 > grab 4cm wide sulphide band as per BKMC-5
BKMC-10 > 1.0m chip heavily silicified bed? Vein? highly oxidized

BKMC-11 > 0.7m chip thin bedded graphitic schist
BKMC-12 > rep grab light grey limonitic schist
BKMC-13 > 0.6m chip rusty thin bedded graphitic qtzt
BKMC-14 > 0.2m chip black graphitic schist with possible sphalerite mineralization
BKMC-15 > grab oxidized/limonitic pyritic sericite schist
MNP-1 > 20cm wide well mineralized po/py silicified bed/vein? trace fine diss pb
MNP-2 > 1.5m chip hangingwall to above, weakly pyritic silicified graphitic schist
MNP-3 > 0.4m chip well min (py/po) silicified bed/vein? around 10% sulphides
MNP-4 > 1.1m chip weakly silicified graphitic siltstone with 0.5% diss py
MNP-5 > 15cm bed as above with 10% diss py/po
MNP-6 > 1.1m chip as per MNP-4
MNP-7 > 0.5m chip qtz biotite schist
MNP-8 > 0.8m chip highly silicified graphitic schist with 9% diss py/po
MNP-9 > 0.7m chip across limonitic black shale
MNP-10 > 2.0m chip as above
MNP-11 > grab as above with weak silicification
MNP-12 > grab as above
MNP-13 > rep grab thin bedded graphitic quartzite with minor py/po along bedding
MNP-14 > as above
MNP-15 > as above
MNP-16 > 0.2m chip across several zinc rich layers in graphitic quartzite
MNP-17 > 0.4m chip across graphitic quartzite footwall to above
MNP-18 > grab as per –13
MNP-19 > 0.7m chip across weakly silicified graphitic siltstone/quartzite
MNP-20 > 0.4m chip as above


Silt Samples (TTMC9981-3) Taken at Mouth of the Creeks
Area of Increased Discovery Zone
Felsic Volcanic Component within Graphitic Units
Creek Zone
(assumed)
MENDOCINA
Outer Limits of Favourable Graphitic Units
CREEK
BIG
105-F-5
1:50,000
1200
1400
1500
1600
1700
1800
1900
06
05
04
03
02
01
6800
99
98
97

CERTIFICATE OF ANALYSIS
iPL 9[illegible]556

INTERNATIONAL PLASMA LABORATORY LTD.
2036 Columbia St
Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898

Client : Northern Analytical Laboratories
Project: PO# 054595

36 Samples
36=Pulp

[055609:27:09:99070899]

Out: Jul 08, 1999
In : Jul 05, 1999

Sample Name	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
BKMC 1	P <	129	64	113	24	<	<	17	<	<	4.2	8	22	97	<	127	67	330	3	8	1	2	0.03	1.00	0.25	4.66	0.39	0.03	0.02	0.05
BKMC 2	P 1.2	24	133	198	20	<	<	26	<	<	4.2	5	18	47	<	175	11	45	<	1	1	<	0.01	0.06	0.02	1.51	0.01	0.03	0.02	0.01
BKMC 3	P 1.0	295	41	277	<	<	<	43	<	<	9.1	61	148	6	6	139	58	532	5	12	3	2	0.01	0.94	1.44	9.61	0.45	0.01	0.01	0.07
BKMC 4	P <	97	25	115	29	<	<	10	<	<	4.4	30	119	70	6	76	58	829	5	27	3	3	0.05	1.17	5.09	3.48	0.24	0.13	0.06	0.06
BKMC 5	P 2.0	1447	56	59	<	<	<	1	<	18	24.9	178	74	20	<	38	31	1499	5	78	7	1	<	0.55	5.11	17%	0.65	0.02	0.01	0.02
BKMC 6	P 2.1	1236	61	59	<	<	<	<	<	56	28.7	215	82	24	<	43	38	1035	7	33	8	1	<	0.61	2.62	18%	0.51	0.06	0.02	0.03
BKMC 7	P 2.7	1429	30	101	65	<	<	18	<	<	8.1	18	85	36	<	103	32	600	16	50	6	1	<	0.57	4.96	6.80	0.70	0.06	0.03	0.47
BKMC 8	P 2.6	837	29	138	<	<	<	17	<	<	7.5	7	72	26	<	97	48	176	6	23	9	1	<	0.59	1.33	8.36	0.44	0.10	0.02	0.26
BKMC 9	P 9.0	1510	180	54	3.8%	<	<	<	<	32	19.5	126	147	<	<	58	32	531	2	23	8	<	0.01	0.21	1.98	18%	0.55	0.06	0.01	0.02
BKMC 10	P 1.5	664	75	300	115	<	<	9	<	<	12.6	13	74	34	<	81	38	294	13	52	13	1	0.01	0.77	3.56	12%	0.58	0.22	0.02	0.21
BKMC 11	P 0.5	459	63	592	96	<	<	25	<	<	7.0	12	76	67	<	102	46	385	30	33	8	1	<	0.58	3.73	2.76	0.60	0.13	0.02	0.54
BKMC 12	P 3.5	59	23	261	90	<	<	4	<	<	6.1	2	8	294	<	57	12	157	3	38	1	2	<	1.35	0.84	3.37	0.61	0.12	0.05	0.41
BKMC 13	P 1.4	67	23	2458	32	<	<	17	<	<	35.9	9	39	276	<	154	52	276	9	64	4	1	<	0.38	3.86	2.01	0.08	0.13	0.02	0.63
BKMC 14	P 2.8	70	34	2.8%	52	<	5	12	<	<	0.3m	10	18	44	54	174	136	138	10	21	4	2	<	0.44	2.11	2.47	0.26	0.10	0.02	0.82
BKMC 15	P 1.2	67	61	417	46	<	<	4	<	<	15.4	15	17	39	<	75	26	126	4	9	4	2	<	0.55	0.18	12%	0.08	0.23	0.02	0.30
MNP 1	P 89.8	1943	19426	9434	8203	30	<	2	<	135	69.1	29	90	<	<	77	50	307	8	31	8	1	<	0.26	2.35	13%	0.64	0.07	0.02	0.35
MNP 2	P 1.8	168	325	432	116	<	<	34	<	<	7.3	6	50	97	<	123	104	144	12	16	7	1	<	0.43	1.23	2.39	0.39	0.15	0.02	0.24
MNP 3	P 1.5	704	77	68	40	<	<	3	<	12	14.6	81	57	25	<	55	33	720	16	69	4	3	0.01	1.71	4.36	9.88	0.90	0.22	0.03	0.04
MNP 4	P 0.8	117	40	136	34	<	<	21	<	<	3.8	7	34	198	<	80	52	180	19	32	5	1	<	0.77	2.70	2.27	0.63	0.19	0.02	0.86
MNP 5	P 1.4	318	28	99	30	<	<	8	<	<	5.6	5	15	63	<	64	35	101	8	12	7	1	<	1.00	0.66	4.85	1.04	0.09	0.02	0.20
MNP 6	P 1.2	114	31	164	18	<	<	17	<	<	4.0	3	<	114	<	76	54	127	10	16	5	1	<	1.00	1.06	4.66	0.97	0.15	0.02	0.26
MNP 7	P 0.3	100	28	104	25	<	<	2	<	<	2.9	7	47	301	<	145	44	383	10	10	4	2	0.03	1.17	0.06	3.29	0.55	0.28	0.02	0.02
MNP 8	P 7.7	2878	1135	709	194	<	<	17	<	<	13.6	13	75	50	<	150	96	623	18	53	5	1	<	0.72	3.80	6.47	0.94	0.15	0.02	0.72
MNP 9	P <	37	12	33	9	<	<	4	<	<	2.9	3	16	48	<	93	6	428	6	35	3	<	0.01	0.34	3.51	1.26	0.86	0.24	0.02	0.02
MNP 10	P 1.0	125	35	413	12	<	<	11	<	<	7.6	6	71	117	<	118	95	395	11	40	5	1	0.01	0.57	2.83	1.91	0.51	0.37	0.02	0.40
MNP 11	P 0.9	138	26	153	7	<	<	28	<	<	4.8	16	99	169	5	78	37	370	17	29	5	<	0.01	0.75	2.36	3.51	0.26	0.27	0.02	0.22
MNP 12	P 1.1	115	24	546	19	<	<	10	<	<	6.2	8	174	151	<	81	88	202	10	81	5	1	0.03	1.15	6.85	2.50	0.71	0.75	0.02	2.24
MNP 13	P 0.4	38	16	69	51	<	<	4	<	<	6.1	18	70	193	5	95	52	1314	15	123	2	4	0.07	2.45	11%	3.15	1.14	0.80	0.04	0.12
MNP 14	P 0.4	37	16	68	49	<	<	4	<	<	5.9	19	72	198	<	95	52	1316	15	122	2	4	0.07	2.40	11%	3.15	1.13	0.78	0.04	0.11
MNP 15	P 0.7	69	21	101	48	<	<	6	<	<	7.8	18	45	80	<	78	64	1141	13	135	2	5	0.07	2.68	9.33	5.08	2.26	0.77	0.07	0.20
MNP 16	P 3.5	82	51	2.2%	31	<	<	32	<	<	0.3m	6	33	48	25	125	115	45	5	7	7	1	<	0.33	0.51	1.32	0.15	0.12	0.02	0.18
MNP 17	P 2.2	82	45	5147	14	<	<	32	<	<	59.1	4	23	80	<	170	144	41	9	15	6	1	0.01	0.43	1.23	1.01	0.15	0.18	0.02	0.47
MNP 18	P 0.3	34	70	189	36	<	<	54	<	<	3.3	5	43	161	5	120	107	25	9	19	5	1	0.09	0.32	0.17	2.15	0.16	0.23	0.02	0.12
MNP 19	P <	30	21	3924	12	<	<	4	<	<	52.4	6	25	308	8	145	15	234	9	5	1	1	<	0.40	0.20	1.32	0.17	0.11	0.03	0.06
MNP 20	P 1.3	86	53	953	9	<	<	12	<	<	11.1	8	106	340	5	127	61	752	21	10	3	1	<	0.67	0.74	3.52	0.23	0.15	0.02	0.34
BREW 5 ?	P <	5	10	49	<	<	<	1	<	<	1.1	1	6	13	<	160	3	85	3	1	<	<	<	0.05	0.04	0.46	0.01	0.03	0.02	0.01
Min Limit	0.1	1	2	1	5	5	3	1	10	2	0.1	1	1	2	5	1	2	1	2	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Max Reported*	99.9	20000	20000	20000	9999	999	9999	999	999	9999	99.9	9999	9999	9999	999	9999	9999	9999	9999	9999	9999	9999	1.00	9.99	9.99	9.99	9.99	9.99	5.00	5.00
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

—=No Test Ins=Insufficient Sample Del=Delay Max=No Estimate Rec=ReCheck m=x1000 %=Estimate % NS=No SampleP=Pulp

INTERNATIONAL PLASMA LABORATORY LTD.

CERTIFICATE OF ANALYSIS
iPL 1486

2036 Columbia St
Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898

Client : Northern Analytical Laboratories
Project: W.O. 05659

30 Samples
30=Pulp

[048610:05:44:99061899]

Out: Jun 18, 1999
In : Jun 15, 1999

Sample Name	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
BKMEN 1 P	1.8	59	28	121	15	<	<	7	<	<	4.2	6	26	815	<	97	28	83	12	27	5	2	0.01	0.63	0.30	3.31	0.28	0.19	0.02	0.10
BKMEN 2 P	1.3	99	32	1712	35	<	<	18	<	<	31.6	15	92	384	<	236	241	591	20	37	5	3	0.01	1.04	3.30	2.74	0.51	0.28	0.02	1.08
BKMEN 3 P	2.7	76	21	2.5%	49	<	10	<	<	<	0.4m	18	27	30	64	117	51	84	3	9	4	1	0.01	0.33	0.74	2.40	0.05	0.14	0.02	0.35
BKMEN 4 P	2.7	102	30	2031	32	<	8	15	<	<	46.5	6	27	358	<	177	67	201	8	18	4	1	0.02	0.48	1.35	2.68	0.31	0.15	0.02	0.37
BKMEN 5 P	0.2	145	19	259	78	<	<	4	<	<	8.4	40	26	57	<	77	90	558	<	18	1	2	0.20	3.42	0.90	5.55	2.68	1.06	0.04	0.23
BKMEN 6 P	12.6	42	1564	3.9%	69	5	<	<	21	<	0.3m	15	30	80	116	56	22	2644	<	168	2	4	0.12	2.04	8.21	7.81	2.50	1.36	0.02	0.02
CDMC 99 - R 1 P	1.1	155	49	1264	<	<	<	5	<	<	16.7	41	66	158	<	87	28	1367	26	21	2	3	0.01	1.11	1.01	7.44	0.49	0.19	0.02	0.42
CDMC 99 - R 2 P	0.6	37	26	574	21	<	<	4	<	<	8.8	6	53	168	<	125	47	817	9	69	5	2	<	0.82	8.48	1.84	0.97	0.15	0.01	1.57
CDMC 99 - R 3 P	1.6	104	13	4386	21	<	4	5	<	<	76.8	18	18	151	<	124	18	201	13	11	1	2	<	0.81	0.48	1.70	0.24	0.13	0.02	0.17
CDMC 99 - R 4 P	1.4	81	8	2969	17	<	3	1	<	<	77.7	7	9	147	<	110	16	66	14	11	1	2	<	0.66	0.44	1.18	0.15	0.15	0.02	0.17
CDMC 99 - R 5 P	1.0	61	11	6006	23	<	5	2	<	<	0.1m	8	12	239	<	87	17	124	31	14	2	1	<	0.72	0.92	0.77	0.16	0.16	0.02	0.36
CDMC 99 - R 6 P	<	11	3	411	<	<	<	2	<	<	6.8	1	13	26	<	141	9	152	10	26	<	<	<	0.10	0.83	0.73	0.05	0.02	0.01	0.04
CDMC 99 - R 7 P	1.9	97	13	560	7	<	<	11	<	<	11.2	17	67	142	<	130	35	687	16	18	3	3	<	1.04	1.32	4.62	0.58	0.15	0.02	0.33
CDMC 99 - R 8 P	1.0	60	21	416	17	<	<	11	<	<	6.7	7	50	232	<	89	46	228	19	14	3	2	<	1.15	0.65	3.20	0.59	0.16	0.02	0.21
CDMC 99 - R 9 P	1.2	21	8	17134	31	<	<	<	<	<	0.2m	26	19	66	19	102	4	134	11	38	1	1	<	0.80	1.13	1.41	0.11	0.17	0.03	0.44
CDMC 99 - R10 P	2.2	153	19	2671	14	<	<	7	<	<	31.5	32	57	121	<	64	16	1619	7	32	1	2	0.01	1.15	2.42	5.39	0.66	0.16	0.02	0.38
CDMC 99 - R11 P	4.2	363	31	875	<	<	<	4	146	<	19.3	45	89	37	<	38	18	3628	3	81	3	3	0.01	0.81	9.81	9.48	1.26	0.07	0.01	0.18
CDMC 99 - R12 P	1.1	110	29	277	39	<	<	3	<	<	7.6	19	47	51	<	98	63	1285	9	72	8	4	0.08	1.52	4.01	4.75	1.03	0.22	0.07	0.11
CDMC 99 - R13 P	0.9	51	27	237	43	<	<	9	<	<	4.4	34	56	221	<	96	64	660	2	155	2	4	0.10	1.02	13%	2.49	0.64	0.30	0.04	0.08
TTMC 99 - R 1 P	3.8	119	20	222	9	<	<	12	<	<	7.7	7	40	72	<	66	60	462	4	20	2	3	0.01	1.12	0.92	6.67	0.79	0.14	0.03	0.19
TTMC 99 - R 2 P	1.6	36	16	111	27	<	<	21	<	<	2.8	2	26	206	<	239	282	136	13	28	4	3	0.01	0.73	2.35	2.51	0.58	0.15	0.02	1.00
TTMC 99 - R 3 P	4.3	49	13	280	6	<	<	16	<	<	9.7	5	31	300	<	119	104	298	8	28	3	5	0.01	1.15	1.75	7.07	0.53	0.23	0.02	0.89
TTMC 99 - R 4 P	2.3	45	26	495	65	<	<	11	24	<	11.2	11	35	130	<	67	64	955	5	30	2	7	0.04	3.22	0.85	8.37	1.38	0.38	0.07	0.33
TTMC 99 - R 5 P	3.6	117	157	6.2%	312	<	5	<	<	<	0.9m	69	27	8	540	281	88	545	9	41	2	2	0.01	1.86	0.89	4.01	0.34	0.28	0.14	0.28
TTMC 99 - R 6 P	1.8	52	28	1397	15	<	<	16	<	<	20.5	7	15	485	<	158	150	215	9	19	4	3	0.02	0.76	0.95	2.59	0.20	0.26	0.02	0.42
TTMC 99 - R 7 P	2.1	78	26	799	14	<	<	12	<	<	11.1	4	49	654	<	259	172	381	10	22	5	2	0.01	0.70	1.35	2.31	0.16	0.19	0.02	0.57
TTMC 99 - R 8 P	0.4	21	22	369	95	<	6	4	47	<	11.1	13	48	271	<	78	79	2374	8	165	2	6	0.11	3.88	21%	5.73	4.25	1.31	0.02	0.11
TTMC 99 - 51 P	0.9	152	27	1811	65	<	<	10	<	<	20.1	17	163	215	<	32	193	626	18	52	1	2	0.05	2.13	2.19	2.94	1.49	0.23	0.04	0.15
TTMC 99 - 52 P	0.4	77	18	1126	56	<	<	8	<	<	12.5	14	123	205	10	30	192	328	16	47	1	2	0.06	2.00	1.76	2.42	1.49	0.20	0.04	0.14
TTMC 99 - 53 P	0.9	130	38	2027	58	<	<	13	<	<	27.5	18	221	266	<	29	193	440	28	60	1	2	0.04	1.89	2.76	3.20	1.33	0.23	0.03	0.21
Min Limit	0.1	1	2	1	5	5	3	1	10	2	0.1	1	1	2	5	1	2	1	2	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Max Reported*	99.9	20000	20000	20000	9999	999	9999	999	999	9999	99.9	9999	9999	9999	999	9999	9999	9999	9999	9999	9999	9999	1.00	9.99	9.99	9.99	9.99	9.99	5.00	5.00
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

——=No Test Ins=Insufficient Sample Del=Delay Max=No Estimate Rec=ReCheck m=x1000 %=Estimate % NS=No SampleP=Pulp

Northern Analytical Laboratories ltd.

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17/06/99

Certificate of Analysis

Bernie Kreft

WO# 05659

Certified by

	Sample #	Au ppb
r	BKMEN-1	39
r	BKMEN-2	16
r	BKMEN-3	9
r	BKMEN-4	7
r	BKMEN-5	9
r	BKMEN-6	59
r	CDMC99R-1	5
r	CDMC99R-2	9
r	CDMC99R-3	<5
r	CDMC99R-4	<5
r	CDMC99R-5	<5
r	CDMC99R-6	<5
r	CDMC99R-7	<5
r	CDMC99R-8	<5
r	CDMC99R-9	<5
r	CDMC99R-10	<5
r	CDMC99R-11	<5
r	CDMC99R-12	6
r	CDMC99R-13	<5
r	TTMC99R-1	<5
r	TTMC99R-2	<5
r	TTMC99R-3	<5
r	TTMC99R-4	<5
r	TTMC99R-5	59
r	TTMC99R-6	9
r	TTMC99R-7	<5
r	TTMC99R-8	<5
s	TTMC99S-1	8
s	TTMC99S-2	<5
s	TTMC99S-3	11

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06/07/99 Certificate of Analysis

Bernie Kreft WO# 05677

Certified by

Sample #	Au ppb
BKMC-1	5
BKMC-2	241
BKMC-3	<5
BKMC-4	9
BKMC-5	14
BKMC-6	37
BKMC-7	<5
BKMC-8	5
BKMC-9	81
BKMC-10	9
BKMC-11	<5
BKMC-12	<5
BKMC-13	<5
BKMC-14	<5
BKMC-15	<5
MNP-1	56
MNP-2	<5
MNP-3	10
MNP-4	<5
MNP-5	<5
MNP-6	<5
MNP-7	<5
MNP-8	<5
MNP-9	<5
MNP-10	<5
MNP-11	<5
MNP-12	5
MNP-13	<5
MNP-14	<5
MNP-15	<5

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Bernie Kreft

WO# 05677

Certified by

	Sample #	Au ppb
r	MNP-16	7
r	MNP-17	5
r	MNP-18	<5
r	MNP-19	<5
r	MNP-20	<5
r	BREW-5	<5

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Bernie Kreft

WO# 05659a

Certified by

	Sample #	Zn %
p	BKMEN-3	2.39
p	BKMEN-6	4.46
p	CDMC99R-9	1.56
p	TTMC99R-5	7.44

Rodin Creek Target Area

Location – Rodin Creek is a south flowing tributary to the South McQuesten River located in the Mayo Mining District on NTS mapsheet 115-P-16.

Access – Access was by truck from Whitehorse to the exploration site. A well used side road leaves the Dublin Gulch road just north of the bridge across the South McQuesten River. An overgrown 4wd road branches off the side road on the west side of Rodin Creek, and continues for about 3km up the creek.

Geology – Surficial sediments consist of an approximate 75 metre thickness of interbedded sand/silt, fine gravel and coarse gravel. These sediments were likely deposited in Rodin Creek valley during the last glacial episode. Rodin Creek subsequently cut down through the unconsolidated sediments and deposited the fine sand and silt at the mouth of the creek where the gradient is shallow, with the coarser sediments remaining farther up the creek where the gradient is steep. The banks of the creek, especially along the lower reaches are still covered by this 75m thickness of glacial detritus, above the 2300 foot (approx) elevation line the glacial material rapidly diminishes, and the valley narrows.

Results/Observations – Panning was conducted along Rodin Creek from the 2000 foot elevation line to the 2350 foot elevation line. Gold was recovered up to the 2300 foot elevation line of the creek, with a slight increase in gold particle size as the 2300 foot line is approached. There is a well defined rock walled canyon immediately upstream of this area, and it is likely that this is the first spot where the material erdoded from the bank had a chance to deposit. An attempt to mine the creek using heavy equipment was made in this area (early 1980's?).

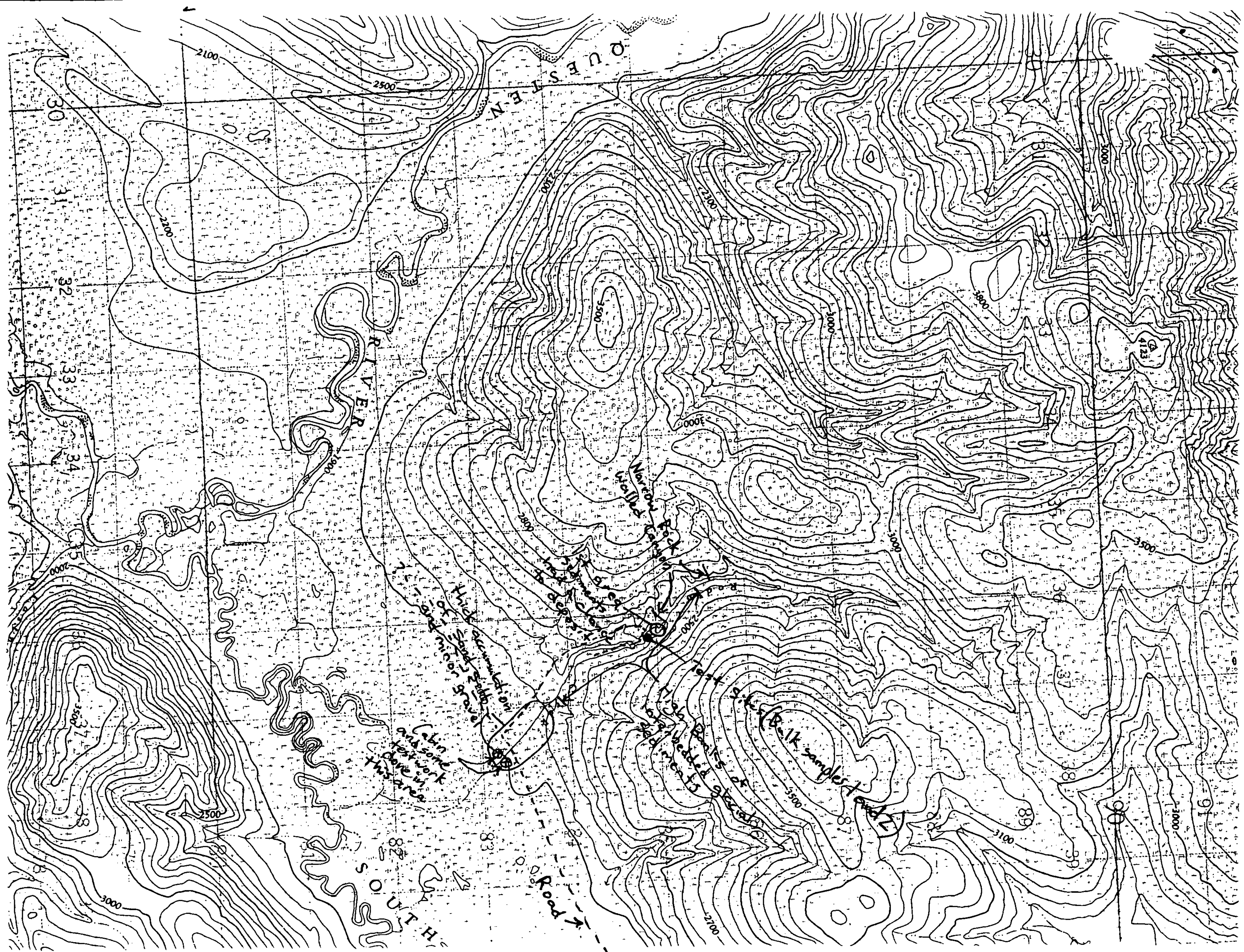
Our bulk sampling test work was completed in the immediate vicinity of the 1980's workings. Two 1.5 cubic yard samples were taken. Sample #1 consisted of an 8m channel sample across interbedded sand and gravel layers exposed in a bank at creek level. Some minor iron cementing and hematite coating was noted in the coarse gravel layers. Results show a grade of 0.003 ounces per cubic yard ($1.20 can/yd at $400/oz can). Sample #2 consisted of a 1.5m channel sample across a coarse gravel layer located immediately above a clay layer. Results show a grade of 0.009 ounces per cubic yard. Values are not adjusted for gold purity as purity is not known.

Conclusions – Gold occurs along Rodin Creek. Gold is almost certainly a reconcentrate of glacial till. The creek has been tested using heavy equipment, with what appears to be negative results. Small-scale bulk sampling shows grades significantly lower than what would be needed to support a viable operation. Some narrow gravel horizons have grades approaching economic consideration, but these horizons are covered by thick sections of low grade material.

Recommendations – No further work is recommended for this site.

Expenditures

B.Kreft (3 days)	=	
E.Kreft (3 days x $125/day)	=	$375.00
Food and Camp Supplies (6 man-days x $35/day)	=	$210.00
Truck Costs (896km x $0.42/km)	=	$376.32
Test Sluice and Pump (3 days x $50/day)	=	$150.00
TOTAL	=	$1111.32



QUESNEL
RIVER
SOUTH
Narrow Rock Walled Canyon
Road
Test Site (Bulk samples 1 and 2)
Right Banks of interbedded glacial sediments
Thick accumulation of Sand & Silt and minor gravel
Cabin and some test work done in this area
Road
2100
2200
2500
2800
3000
3500
3800
4123
2000
1900
2700
3100

French Gulch Target Area

Location – The French Gulch target area is located west of Bonanza and Eldorado Creeks, between French Gulch and Stampede Gulch. Dawson City is located approximately 20km to the N.W.

Access – Access was by road to French Gulch, and then by foot to the surrounding area. The Adams Creek/Stampede Gulch road, which was to have provided access to the north end of the project area, was found to be impassable.

Geology – Geology consists of a varied succession of N.W. striking Klondike Schist. The Klondike Schist is thought to be a higher metamorphic grade of the same rocks that host most of the Finlayson Lake VMS deposits. Two types of showings reportedly occur within the area to be prospected: base metal bearing quartz veins, and pyritic schist with highly anomalous base metal values. The main showing of interest (Hawk) occurs just south of the headwaters of Irish Gulch, and was discovered during a 1985 gold exploration program. It consists of an oxidized sulphide lens (2m x 0.4m; exposed in a bulldozer trench) with highly anomalous Zn, Pb, Cu, Au and Ag. Thin section work indicates that the host rock was an altered felsic tuff. This showing occurs in the heart of a 12km long base metal soil anomaly aligned parallel to stratigraphy. A search of exploration data pertaining to the showing area doesn't mention any follow-up work being completed.

Work Program – The first day was spent driving to Dawson and checking the status of the various roads which were to provide access to the area of interest. Day two was spent traversing the area between French Gulch and the headwaters of Irish Gulch in a search for the Hawk showing trenches. The trenches were located (exactly where, and as described) but detailed prospecting was unsuccessful in locating the Hawk showing. There was an almost total lack of sulphides, oxidized or otherwise, in the trenches. The only interesting feature noted was several 1 to 2 metre wide WNW trending quartz veins. These veins are exposed in several old grass covered pits and in the Hawk showing trenches. Several samples were taken of the quartz veins, but they were not anomalous in any of the elements analysed for. Based on an inability to locate the Hawk showing, the program was cancelled and day three was spent demobing back to Whitehorse.

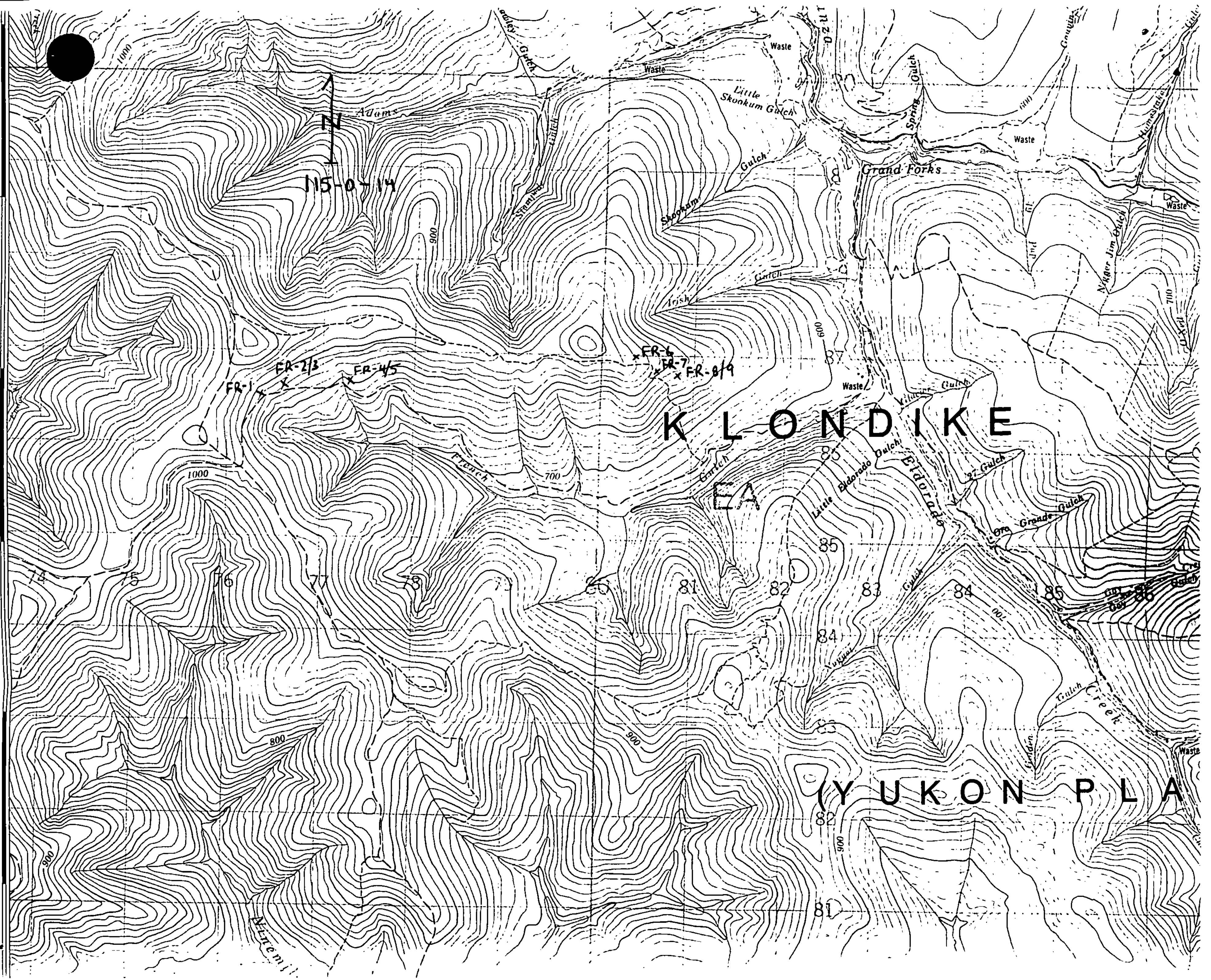
Conclusions – The Hawk showing does not exist, as, or where, described. The large qtz veins are not anomalous in any element.

Recommendations – No further work is recommended for the area of the Hawk showing.

Expenditures

B.Kreft (3 days)	=	
P.Christensen (3 days x $125/day)	=	$375.00
Truck Costs (1056 km x $0.42/km)	=	$443.52
Food And Camp Supplies (6 man-days x $35/day)	=	$210.00
Assays (9 samples)	=	$175.00
TOTAL		$1203.52

METRIC/METRIQUE



Rock Sample Descriptions

FR-1 > Grab thin bedded qtz chlorite schist with numerous minor rusty vugs
FR-2 > Grab meta granite cut by sheeted qtz vein system, 4 half cm veins over a 10 cm sample width
FR-3 > Grab rusty meta granite with no qtz veins
FR-4 > Grab sericite schist cut by qtz veins, schist is bleached and argillically altered adjacent to the veins
FR-5 > Grab as above
FR-6 > 2.0m chip across 2.0m wide qtz vein trending around 326/146
FR-7 > 1.5m wide chip across 1.5m wide qtz vein
FR-8 > 0.5cm wide qtz vein in vicinity of FR-7
FR-9 > as above with coarse cubic pyrite