Report
On
Phase #1
Wernecke Breccia Project

By
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For
Y.M I P
Focused Regional Module
2002-10a

Overview

Location – The project area is located in the central Yukon Territory, north of Mayo and east of the Dempster Highway

Access – Access was by helicopter to all targets within the project area

History – The project area has seen limited exploration work There have been several regional scale programs directed towards Zn-Pb sedex and Zn-Ni sedex conducted within it The Hart River Zn-Pb-Cu-Au-Ag VMS deposit is located just to the west and the Bonnet Plume Cu-Co-U-Au Breccias are located to the north and east of the project area, but as a whole, it can be readily characterized as under-explored

Geology – Geological mapping (1 250,000 scale) shows each of the targets to be underlain by Proterozoic aged stratigraphy, predominantly mudstone, siltstone, quartzite and dolostone

Work Program – Work consisted of a one day program of silt sampling and minor prospecting of 5 targets, each of which were centered on one or more anomalous Cu-Co-Fe-As-U RGS sites underlain by proterozoic aged rocks Silt samples were taken at an approximate density of 1 per 2 square kilometres Rock samples were taken of obvious mineralization or brecciation encountered during the silt sampling traverses No attempt was made to explore for mineralization, or to follow-up mineralization encountered Silt samples were seived to minus 80 mesh, where insufficient minus 80 mesh material existed, minus 40 mesh was used All samples were analysed by International Plasma

Results – The program resulted in 77 silt samples and 28 rock samples Numerous anomalous values for Cu-Co-Au in rock and Cu-Co in silt were returned Detailed results can be found in the target area description section

Conclusions – Recce style silt sampling and prospecting can be easily accomplished in the project area due to the nature of the topography and vegetation The type and amount of work undertaken, successfully, and accurately, delineated areas requiring more detailed follow-up The unexplored nature of the project area is highlighted by the numerous discoveries made during the one-day program

Recommendations – Detailed follow-up consisting of soil sampling and prospecting is required for targets (in order of priority) E, B, AA and A No further work is required for target C at this time

Budget –

Charles Waugh (1 5 days x $200/day)	=	$300 00
Jamie Peck (1 0 day x $180/day)	=	$180 00
Bernie Kreft (2 0 days x $375/day)	=	$750 00
Travel (1152 km x $0 48/km)	=	$552 96
Food And Camp (4 5 man-days x $48/day)	=	$216 00
Helicopter (4 6 hours)	=	$5104 27
Assaying (28 rock, 77 silt)	=	$1553 11
Bernie Kreft (3 days report prep)	=	$1125 00
Duplication	=	$50 00
		$ 9831 34

Site E

Location – Located at approximately 64° 33' and 134° 13', or UTM coordinates 537512E/7158236N, 9km east of McClusky Lake on NTS mapsheet 106-D-9, in the Mayo Mining District

Access – Access was by helicopter from Mayo, 135km one way A winter trail passes 3 5km to the north of the target The nearest 2wd road ends at McQuesten Lakes, 68km to the SW

History – Staked by Bob Caley in June 1970 Copper occurrences are common in the region, and were thought to be the cause of the staking

Geology – Geology consists of Proterozoic quartzite, cherty sandstone and black meta-siltstone intruded by diorite dykes The sediments are often fractured or weakly brecciated Mineralization consists of disseminated, vein and fracture coatings of chalcopyrite +/- iron carbonate +/- quartz within the sediments, along with disseminated chalcopyrite and pyrite within the dioritic intrusives Anomalous elements include Au, Cu, Co, As and Ni

Target – Cu-Co-As-Fe-U-Au RGS silt anomaly

Work Program – Work consisted of silt (6) and rock sampling (8) within a drainage basin upstream from a Cu-Co-Fe-As-U-Au anomalous RGS site Sampling conducted by Bernie Kreft on June 19th

Results – Highly anomalous values in copper (up to 19,500 ppm), gold (up to 2650 ppb), cobalt (up to 313 ppm) and nickel (up to 192 ppm) were returned from rock talus samples taken from the area of the coordinates listed under location Silt sample sites BKOLS-3/4/5 contain highly anomalous copper These sample sites represent 3 adjacent streams with a combined drainage basin area of 3 0 km^2, roughly centred on the basin with the highly anomalous gold-copper-cobalt-nickel values in rock talus samples

Conclusions – Anomalous metal values in rock samples are indicative of an Olympic Dam type mineralizing system A large copper anomalous area, as defined by silt samples BKOLS-3/4/5, is associated with highly anomalous copper-gold-cobalt-nickel in talus rock samples Further work is necessary to evaluate this showing and the surrounding area

Recommendations – Reconnaissance style prospecting on minfile occurrences 106-D #'s 45, 47, 48, 60, 71 and 106-C #2 Detailed prospecting and sampling in the area of the discovery occurrence Reconnaissance type prospecting and sampling within drainage basins BKOLS-3 and BKOLS-5 Further reconnaissance type silt and rock sampling in drainage basins upstream from other un-explained copper anomalous RGS sample sites in the area of the minfile occurrences to be prospected

Site B

Location – Located at approximately 65° 01' and 135° 42', or UTM coordinates 467120E/7208900N, on NTS mapsheet 106-E-4, in the Mayo Mining District

Access – Access was by helicopter from Mayo, 160km one way The Bear River winter trail is located 48km to the east of the target The nearest 2wd road is 105km to the SSE at McQuesten Lakes, or the Dempster Highway, 105km to the west

History – No staking records exist for this target Getty Canada and Archer Cathro conducted exploration for sedex type mineralization just to the north of the target They reportedly located, but never assessed, breccia material with up to 2% chalcopyrite, 10% hematite and traces of cobaltite

Geology – Geology consists of a variety of Proterozoic sediments which are commonly cherty and/or silicified, intruded by dioritic intrusive dykes and sills Breccia material ranging from homolithic to heterolithic in composition has been identified at 3 spots, one of which contains moderate amounts of disseminated hematite and the other two contain chalcopyrite

Target – Cu-Co-Fe-U RGS silt anomalies

Work Program – Work consisted of silt and rock sampling within 3 drainage basins upstream from anomalous Cu-Co-Fe-U RGS sites Sampling conducted by Charles Waugh, Bernie Kreft and Jamie Peck on June 22nd

Results – Anomalous values in copper (1181-2131 ppm) have been returned from samples of brecciated chert, dioritic intrusive and heterolithic breccia, highly anomalous values in Cu-Pb-Zn-As-Mo-Co-Ni have been returned from numerous silt samples

Conclusions – Numerous indications of hematite and chalcopyrite mineralized heterolithic breccia have been located within the target area Chalcopyrite mineralized dioritic intrusive material has been located within the target area Anomalous values for Pb-Zn in silt samples are likely due to sedex type mineralization Anomalous values for Cu-Co-As-Ni-Mo in silt samples are widespread, and likely due to Olympic Dam type mineralization Further work is necessary to fully evaluate this area

Recommendations – Reconnaissance type prospecting and sampling is required in the immediate vicinity of sample sites JPB-2 to JPB-4, JPB-7 to JPB-10, BKBR-3, BKBR-4, BKBR-5 to BKBR-8, BKBS-7 and CWB-6 Pending favourable results from prospecting at the above sites, they should be explored in greater detail by soil and rock sampling, also, further regional type silt and rock sampling

should be undertaken within a 200 square kilometre area roughly centred over this area

Site AA

Location – Located at approximately 64° 51' and 136° 38', or UTM coordinates 420890E/7192800N, 8km north of the Hart River on NTS mapsheet 116-A-15, in the Mayo Mining District

Access – Access was by helicopter from Mayo, 145km one way The nearest road is the Dempster Highway, 75km to the west The winter road to the Hart River VMS deposit is 30 km to the west

History – Explored during 1975-1976 by Union Miniere Exploration who staked the Last claims in the general area

Geology – Geology consists of varying sedimentary units ranging in age from Ordovician-Silurian to Proterozoic Cretaceous? diorite stocks and sills intrude the sedimentary formations

Target – Known showing, nearby RGS anomaly and coincident magnetic and gravity anomaly overlying the showing and RGS anomaly

Work Program – Work consisted of silt (13) and rock sampling (7) within 5 drainage basins in the target area Sampling conducted by Charles Waugh, Bernie Kreft and Jamie Peck on June 22nd

Results – A high copper value (18,269 ppm) along with anomalous cobalt (123 ppm) was returned from a sample of heterolithic breccia with predominantly sedimentary clasts, mineralized with chalcopyrite disseminated within, and rimming clasts, sample taken 2 2km west of the known showing Similar breccia type material heavily mineralized with magnetite (no chalcopyrite) was found in the vicinity of the known showing Silt sampling shows a copper anomalous area approximately 2km x 5 5km overlying the two mineralized occurrences

Conclusions – A large (11-12 km^2) area with anomalous copper in silt has been defined, and is associated with a large coincident magnetic and gravity anomaly, and several occurrences of mineralized (magnetite +/- hematite +/- copper) breccia material Further work is necessary to fully evaluate the new showing and surrounding area

Recommendations – Detailed prospecting starting just upstream of the copper rich breccia and working in a downstream direction Further work in the area depending on the results of the above work

Site A

Location – Located at approximately 64° 35' and 136° 10', or UTM coordinates 443300E/7162350N, 10km south of the Hart River on NTS mapsheet 116-A-9, in the Mayo Mining District

Access – Access was by helicopter from Mayo, 105km one way The nearest 2wd road is at Dublin Gulch, 58km to the SSE

History – No work is known in the area

Geology – Geology (1 250,000 scale) is mapped as Proterozoic aged sediments

Target – Three drainages with Cu-Co-Fe-U-As-Au RGS stream sediment anomalies

Work Program – Work consisted of silt (15) and rock sampling (2) within three drainage basins upstream from RGS stream sediment anomalies

Results – Highly anomalous Cu-Co-As-Ni values in silt were returned from all three drainages The highest copper values 1308 and 1430 ppm were returned from two adjacent sub-drainages A float sample of cherty shale cut by a chalcopyrite mineralized quartz vein returned 9370 ppm Cu, along with anomalous Au-Ag-As-Bi-Co This sample was located just upstream from a silt sample that returned 319 ppm copper

Conclusions – The two highest copper silt values are high enough to suggest significant nearby in-situ mineralization

Recommendations – Detailed prospecting at the site of the 1308 and 1430 ppm copper silt anomalies Further work consisting of more regional scale silt sampling and more detailed prospecting and sampling at the original site dependant on the results of the initial detailed prospecting program

Site C

Location – Located at approximately 64° 51' and 135° 10', or UTM coordinates 492400E/7192300N, east of Royal Creek on NTS mapsheet 106-D-14, in the Mayo Mining District

Access – Access was by helicopter from Mayo, 145km one way The Wind River winter trail passes 24km to the east The nearest 2wd road ends at McQuesten Lakes, 80km to the south

History – Dynasty Exploration conducted regional type work in the area and staked the Sourdough claims to the east of the target area on an area of chalcopyrite disseminated along fractures in cherty sediments

Geology – Geology consists of Proterozoic sediments of varying composition

Target – RGS Cu-Co-As-U-Fe stream sediment anomaly, a 1500 ppb gold in rock anomaly reported in Yukon Exploration And Geology 1992 P 83, historical showing

Work Program – Work consisted of silt (13) and rock sampling (1) within a RGS anomalous drainage basin, and in the immediate vicinity of the reported Dynasty Exploration showing

Results – One moderately anomalous copper-cobalt in silt value was returned from the sampling program No hematite breccia or dioritic intrusive material was noted at this site

Conclusions – Reported mineralization and anomalies within the target area are not likely associated with widespread mineralization

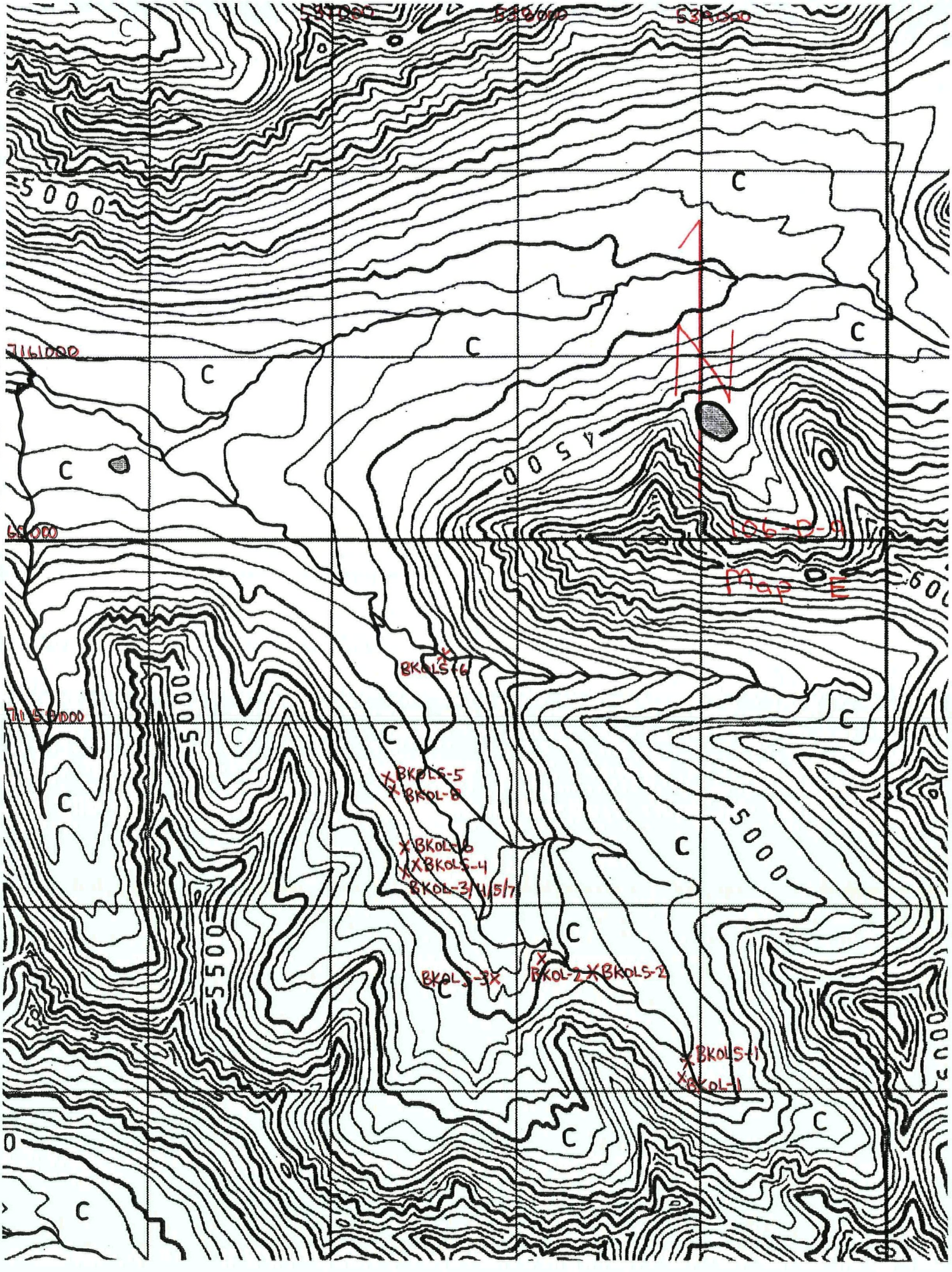
Recommendations – Further work is not recommended for this site at this time Derek Thorkelson of the Yukon Government's geology program should be contacted to obtain definitive information regarding the location of the highly anomalous gold in rock value reported in the 1992 YE&G book

Sample Descriptions

BKAR-1 Limonitic quartz veined siltstone (proximal talus)
BKAR-2 Cherty shale cut by a chalco mineralized quartz vein (float in stream)
BKAAR-1 Epidote altered jasper rich heterolithic breccia with weak malachite stain
BKAAR-2 Magnetite mineralized brecciated sediment
BKAAR-3 Epidote altered greenstone
BKAAR-4 Heterolithic breccia (quartzite and felsic intrusive frags) with abundant magnetite diss within clasts and the matrix
BKAAR-5 Weakly carbonate and sericite altered fine grained creamy sed rock
(Samples BKAAR-1 to –5 are samples of float in stream bed)
BKBR-1 Red conglomerate or breccia??
BKBR-2 As above with carbonate
BKBR-3 Silicified sed with chalco vein and hairline fractures
BKBR-4 Hematite breccia
BKBR-5 Malachite stained epidote altered dioritic intrusive with diss chalco
BKBR-6 Jasper vein with chalco cutting heterolithic breccia with trace hematite
BKBR-7 Malachite stained heterolithic breccia with chalco rimming fragments as well as diss within fragments
BKBR-8 Weakly epidote altered heterolithic breccia with malachite
(Samples BKBR-1 to –8 are samples of float in stream bed)
BKCR-1 Red conglomerate or breccia?? As per BKBR-1 (float in stream bed)
CWAAR-1 Heterolithic breccia with predominantly sedimentary clasts and a few possible volcanic a/o intrusive clasts, chalco is rimming clasts, diss within clasts and disseminated along later fractures
CWAAR-2 Limonitic sheared sed rock
(Samples CWAAR-1/2 are samples of proximally derived talus)

CWBR-1	Red heterolithic conglomerate or breccia?? As per BKCR-1 and BKBR-1 (proximally derived talus)
JPBR-1	Heterolithic purple-brown dark breccia with mainly siltstone clasts, trace diss chalco and trace malachite also possible trace fine hematite (abundant float in stream)
BKOL-1	Fine grained dioritic intrusive
BKOL-2	As above
BKOL-3	Black meta-siltstone trace diss and fracture hosted chalco, rock cut by a narrow barren QV
BKOL-4	Weakly brecciated cherty quartzite with disseminated chalco
BKOL-5	Cherty sed with fracture and disseminated chalco
BKOL-6	Sandstone/qtzt with siderite and ankerite?? veinlets trace chalco in veins and diss in rock
BKOL-7	Fractured quartzite healed with calcite/chalcopyrite also good disseminated chalco, about 1 5% chalco
BKOL-8	Dioritic intrusive with disseminated chalco and pyrite slickensided

(Samples BKOL-1 to –8 are samples of float in streams)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106-D-9
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BKOLS-4
BKOL-3/1,5/7
BKOLS-3
BKOL-2
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BKOLS-1
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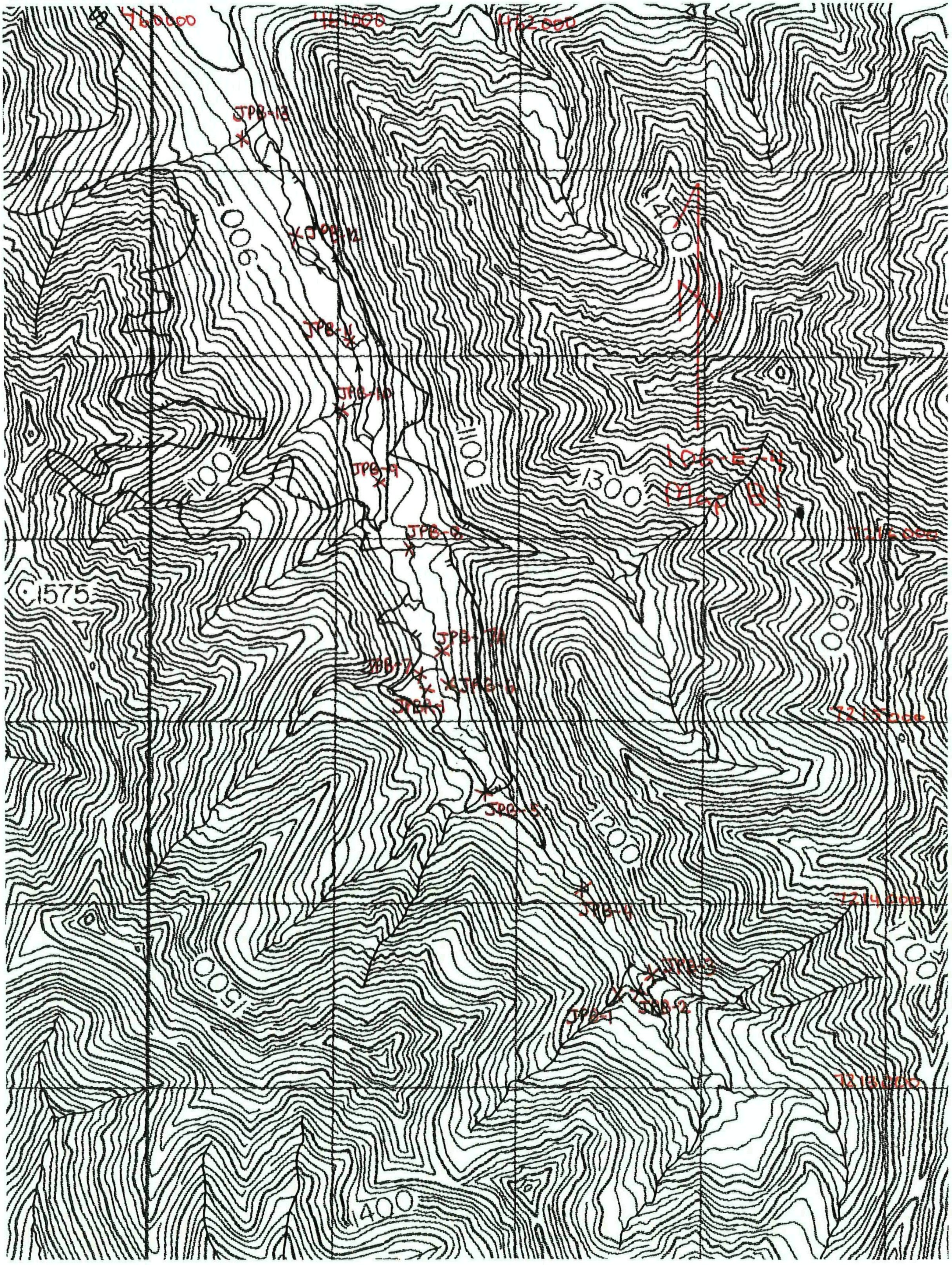
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JPB-13
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JPB-4
JPB-3
JPB-2
JPB-1
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Map B
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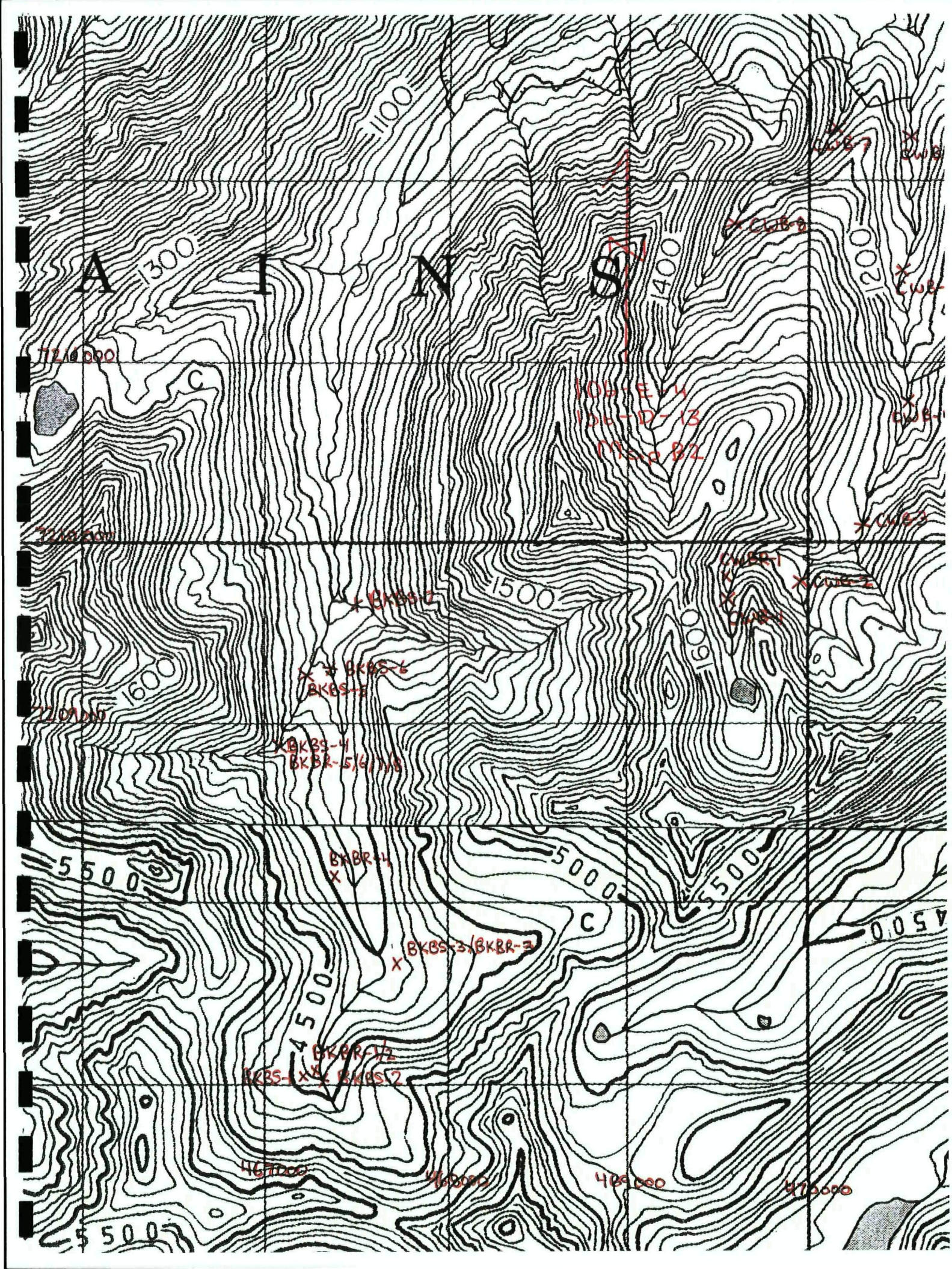
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CWB-6
CWB-5
CWB-4
CWB-3
CWB-2
CWB-1
10a-E-14
10c-D-13
M12-B2
BKBS-7
BKBS-6
BKBS-5
BKBS-4
BKBR-5/6/7/8
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BKBR-1½
BKBS-1 & BKBS-2
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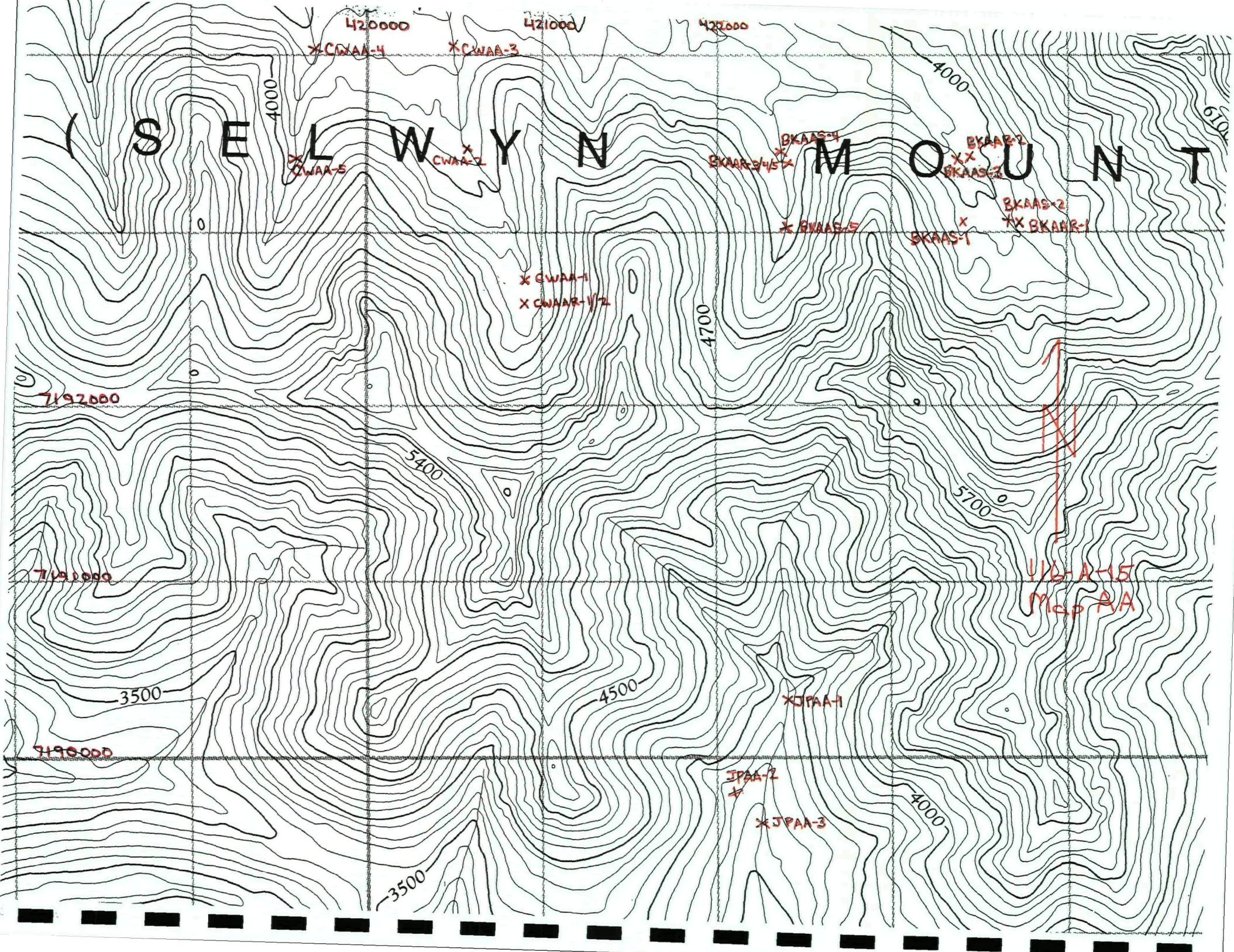
SELWYN MOUNT
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CWAA-3
CWAA-5
CWAA-2
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BKAAR-3/4/5
BKAAS-5
BKAAR-2
BKAAS-3
BKAAS-2
BKAAR-1
BKAAS-1
4000
4700
5400
5700
3500
4500
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7191000
7190000
JPAA-1
JPAA-2
JPAA-3
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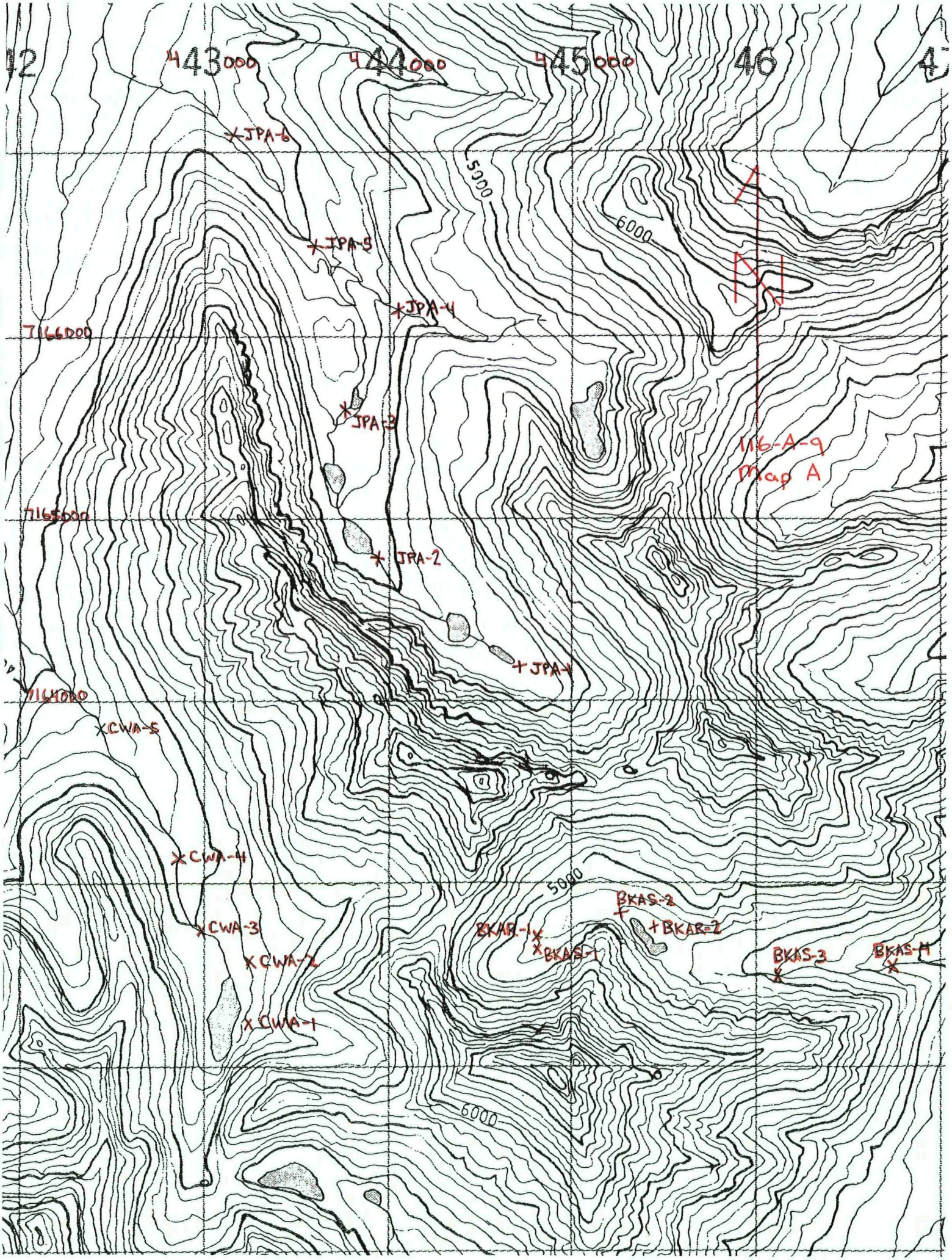
U16-A-15
McP AA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7165000
7164000
116-A-9
Map A
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BKAS-1
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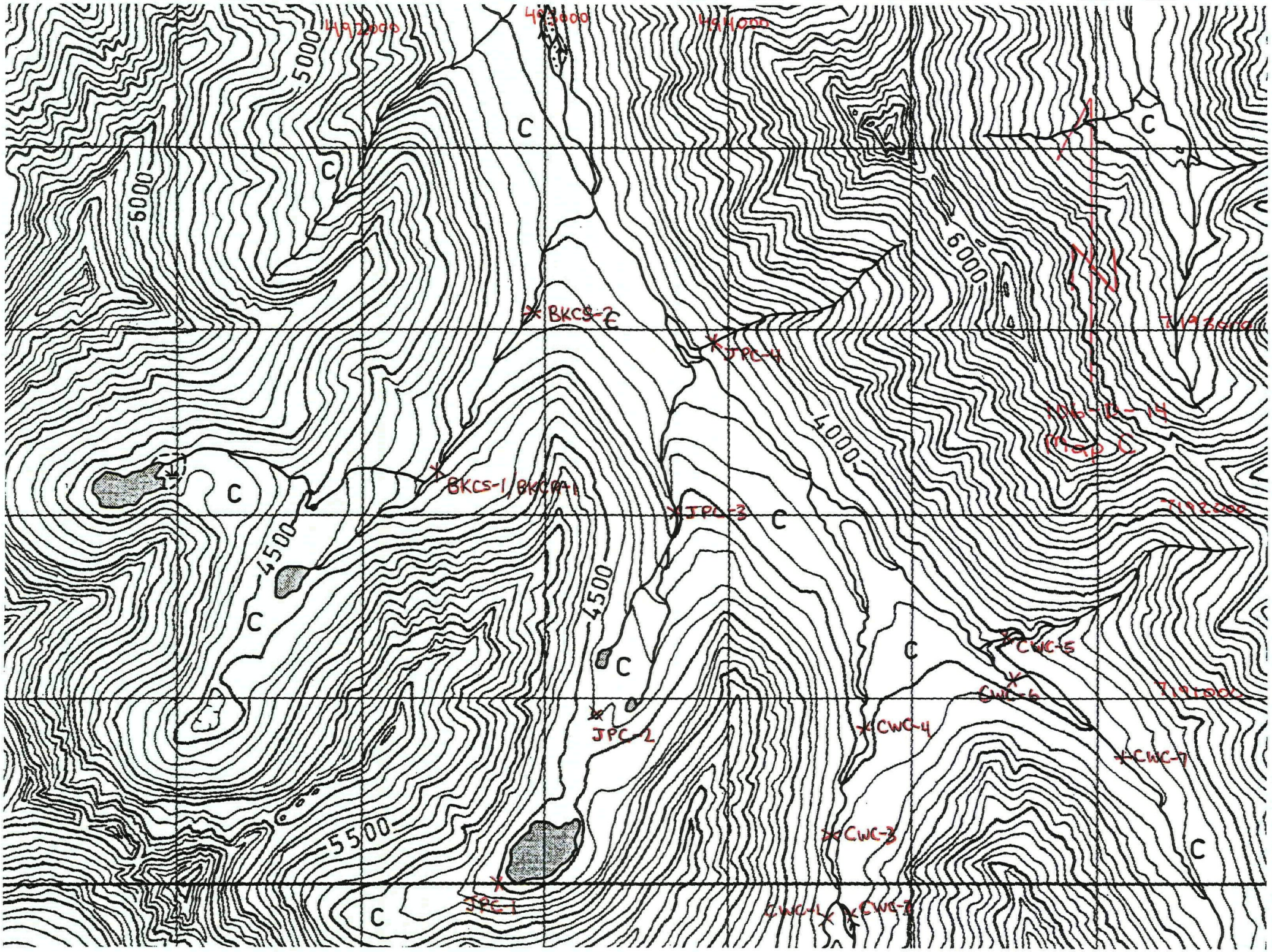
BKAS-3
BKAS-4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CWC-4
CWC-7
CWC-3
5500
JPC-1
CWC-1
CWC-2
C

Certificate# 02H0828
Client Northern Analytical Laboratories
Project W O 020019
No of Samples 79
Date In Aug 02, 2002
Date Out Aug 08, 2002

Sample Nε	SampleTyμ	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm
BKGRBS-1	Pulp	<0 1	17	14	133	<5	<5	3
BKGRBS-2	Pulp	0 1	19	23	221	<5	<5	<3
BKGRBS-3	Pulp	0 1	25	36	637	<5	<5	<3
BKGRBS-4	Pulp	0 2	34	37	818	<5	<5	<3
BKGRBS-5	Pulp	0 1	35	18	290	<5	<5	<3
BKGRBS-6	Pulp	0 2	43	24	278	<5	<5	<3
BKGRBS-7	Pulp	0 1	43	22	249	<5	<5	<3
BKGRCS-1	Pulp	0 1	106	46	230	<5	<5	<3
BKGRCS-2	Pulp	<0 1	47	44	481	<5	<5	<3
BKGRCS-3	Pulp	<0 1	63	39	295	<5	<5	<3
BKGRCS-4	Pulp	<0 1	60	32	259	<5	<5	<3
BKGRCS-5	Pulp	<0 1	51	35	210	<5	<5	<3
BKGRCS-6	Pulp	<0 1	44	29	170	<5	<5	<3
BKGRCS-7	Pulp	<0 1	46	37	215	<5	<5	<3
BKGRCS-8	Pulp	<0 1	47	33	211	<5	<5	<3
BKGRS-1	Pulp	0 1	61	12	84	<5	<5	<3
BKGRS-2	Pulp	<0 1	50	16	80	<5	<5	<3
BKGRS-3	Pulp	0 1	95	10	75	<5	<5	<3
BKGRS-4	Pulp	<0 1	57	10	57	<5	<5	<3
BKGRS-5	Pulp	<0 1	32	15	48	<5	<5	<3
BKKKS-1	Pulp	<0 1	47	11	66	<5	<5	<3
BKMELS-1	Pulp	0 2	95	16	74	<5	<5	<3
BKMELS-2	Pulp	0 2	161	19	59	13	5	<3
BKMELS-3	Pulp	0 7	99	19	36	<5	<5	<3
BKMELS-4	Pulp	0 1	79	21	76	<5	<5	<3
BKMELS-5	Pulp	<0 1	60	11	22	<5	<5	<3
BKMELS-6	Pulp	<0 1	108	6	26	<5	<5	<3
BKMELS-7	Pulp	<0 1	89	8	22	<5	<5	<3
BKMELS-8	Pulp	0.1	72	8	29	<5	<5	<3
BKNEWS-1	Pulp	0 1	134	15	32	<5	<5	<3
BKNEWS-2	Pulp	0 1	136	18	34	<5	<5	<3
BKNEWS-3	Pulp	0 1	157	22	33	<5	<5	<3
BKOLS-1	Pulp	0 1	61	55	92	<5	5	<3
BKOLS-2	Pulp	0 1	74	42	85	<5	<5	<3
BKOLS-3	Pulp	0 6	145	98	281	62	<5	<3
BKOLS-4	Pulp	0 3	361	25	64	19	<5	<3
BKOLS-5	Pulp	<0 1	205	19	50	<5	<5	<3
BKOLS-6	Pulp	0 1	59	16	58	<5	<5	<3
CWA4S-1	Pulp	1	143	42	167	<5	<5	<3
CWA4S-2	Pulp	0 1	141	19	110	<5	<5	<3
CWGRBS-1	Pulp	0 3	90	53	706	<5	<5	<3

CWGRBS2Pulp	0 4	39	21	336	<5	<5	<3
CWGRBS3Pulp	0 3	64	41	637	<5	<5	<3
CWGRBS4Pulp	<0 1	61	27	197	<5	<5	<3
CWGRBS5Pulp	0 2	49	38	471	<5	<5	<3
CWGRBS6Pulp	0 2	47	33	496	<5	<5	<3
CWGRBS7Pulp	0 1	37	20	272	<5	<5	<3
CWGRBS8Pulp	0 3	39	34	389	<5	<5	<3
CWGRCS1Pulp	0 2	75	25	140	<5	<5	<3
CWGRCS2Pulp	0 4	74	20	140	<5	<5	<3
CWGRCS3Pulp	1 2	84	16	218	<5	<5	<3
CWGRCS4Pulp	0 2	87	30	218	<5	<5	<3
CWGRDS1Pulp	1	396	423	180	443	34	<3
CWGRDS2Pulp	<0 1	46	18	87	<5	<5	<3
CWGRDS3Pulp	0 1	74	21	107	<5	<5	<3
CWGRDS4Pulp	0 2	75	26	151	<5	<5	<3
CWGRDS5Pulp	0 2	71	23	150	<5	<5	<3
CWGRDS6Pulp	0 2	82	31	166	<5	<5	<3
CWGRDS7Pulp	<0 1	62	14	94	<5	<5	<3
CWGRDS8Pulp	0 1	68	17	148	<5	<5	<3
CWKKS-1 Pulp	<0 1	93	14	76	<5	<5	<3
CWKKS-2 Pulp	<0.1	54	68	167	<5	<5	<3
CWPLS-1 Pulp	<0 1	12	8	40	<5	<5	<3
CWPLS-2 Pulp	<0 1	11	11	37	<5	<5	<3
EKA1S-1 Pulp	<0 1	28	10	44	<5	<5	<3
EKA1S-2 Pulp	<0 1	26	17	45	<5	<5	<3
EKA1S-3 Pulp	<0 1	50	13	57	<5	<5	<3
EKGRBS-1Pulp	<0 1	9	8	31	<5	<5	<3
EKGRBS-2Pulp	<0 1	10	17	40	<5	<5	<3
EKGRBS-3Pulp	<0 1	15	14	60	<5	<5	<3
EKGRBS-4Pulp	0 3	10	7	48	<5	<5	<3
EKGRBS-5Pulp	<0 1	14	17	65	<5	<5	<3
EKGRCS-1Pulp	0 3	52	18	285	<5	<5	<3
EKGRCS-2Pulp	0 1	89	24	210	<5	<5	<3
EKGRCS-3Pulp	<0 1	80	22	185	<5	<5	<3
EKGRCS-4Pulp	0 1	66	28	173	<5	<5	<3
EKGRCS-5Pulp	0 1	67	32	194	<5	<5	<3
EKGRDS-1Pulp	<0 1	44	17	60	<5	<5	<3
EKGRDS-2Pulp	<0 1	22	6	48	<5	<5	<3
Minimum detection	0 1	1	2	1	5	5	3
Maximum detection	100	20000	20000	20000	10000	1000	10000
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP

Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm
6	<10	<2	<0 1	10	21	203	11	13
5	<10	<2	1 3	11	21	169	12	16
7	<10	<2	3 8	12	41	175	8	20
7	<10	<2	6 2	14	60	170	12	25
5	<10	<2	0 3	16	39	197	14	23
8	<10	<2	<0 1	16	41	210	8	24
9	<10	<2	<0 1	12	39	209	16	32
4	<10	<2	<0 1	20	38	146	11	44
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ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %
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53	573	30	30	1	2	0 07	1 21	0 81
128	444	21	41	1	3	0 07	1 49	0 88
185	472	25	38	1	4	0 07	1 72	1 08
97	553	32	46	1	4	0 09	1 75	0 89
114	559	32	46	2	4	0 09	1 86	1 05
106	379	21	42	<1	3	0 06	1 61	1 7
48	475	11	37	1	3	0 06	1 2	1 72
29	423	25	25	2	1	0 02	1 13	0 84
35	1008	18	41	1	2	0 03	1 03	2 22
44	2265	12	45	2	2	0 04	0 92	2 09
40	1486	14	36	2	2	0 04	1	1 56
41	2143	13	34	1	2	0 04	0 88	1 31
32	1660	13	39	1	2	0 03	0 93	1 68
35	1177	15	39	1	2	0 04	0 9	2 06
59	3678	13	126	3	5	0 06	1 04	2 03
72	2185	13	97	4	5	0 07	1 11	1 7
62	1161	11	110	3	5	0 05	1 07	1 66
66	1059	11	85	4	5	0 08	1 17	1 28
83	1999	14	94	4	5	0 09	1 14	1 27
58	506	8	66	2	5	0 04	1 42	1 33
21	4177	18	14	5	5	0 01	0 71	0 56
19	3888	19	12	3	5	0 01	0 62	0 4
15	2167	12	12	4	2	<0 01	0 46	0 18
15	1470	28	5	2	2	0 01	0 85	0 08
15	1001	29	3	1	2	0 01	0 88	0 07
42	1244	18	2	3	2	<0 01	0 42	0 04
24	1006	18	1	4	1	<0 01	0 38	0 03
14	1091	21	3	2	2	0 01	0 68	0 05
28	1459	20	3	4	3	0 01	1 11	0 14
25	1577	21	4	4	3	0 01	1 06	0 15
23	1559	20	4	6	3	<0 01	0 96	0 21
24	2682	17	18	3	4	0 02	1 02	6 95
27	1956	12	20	3	4	0 02	1 08	9 95
26	2811	18	20	2	4	0 01	0 63	5 76
20	3846	16	11	3	5	0 01	0 7	0 33
34	2032	19	11	2	4	0 02	1 14	0 22
13	2105	19	8	2	2	0 01	0 56	0 2
147	963	5	64	6	11	0 12	3 28	2 55
208	1263	6	91	10	17	0 26	3 99	3 93
158	600	24	75	2	5	0 09	2 48	1 44

83	270	21	39	1	1	0 03	0 9	2 99
125	620	26	51	1	4	0 08	1 94	1 5
92	438	38	86	1	5	0 11	2 74	1 21
141	478	25	60	2	5	0 09	2 1	1 86
120	437	32	53	1	4	0 08	1 81	1 54
71	536	32	43	1	4	0 08	1 62	0 99
162	399	27	48	1	3	0 07	1 91	2 1
109	647	15	44	2	7	0 12	2 47	0 76
104	613	14	46	2	7	0 11	2 34	0 75
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57	1178	20	60	5	4	0 08	1 25	3 38
116	1994	12	61	7	8	0 15	2 11	1 45
77	1381	15	65	5	6	0 09	1 21	1 54
108	656	16	47	2	7	0 12	2 48	0 79
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120	778	16	47	1	8	0 13	2 92	0 88
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86	4730	27	73	4	5	0 1	1 56	2 47
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77	653	9	29	1	4	0 09	1 75	1 75
67	622	11	28	1	4	0 08	1 4	1 79
66	479	10	27	2	4	0 08	1 45	1 64
70	556	9	23	1	4	0 08	1 57	1 33
79	666	10	51	5	5	0 13	1 36	1 45
61	581	6	22	5	3	0 11	1 22	0 89
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ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

Fe %	Mg %	K %	Na %	P %
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1 68	0 63	0 19	0 06	0 14
1 96	1 11	0 24	0 06	0 18
2 39	1 42	0 27	0 07	0 17
2 38	1 1	0 38	0 07	0 15
2 61	1 21	0 41	0 07	0 16
2 01	1 39	0 42	0 08	0 15
2 75	1 48	0 07	0 05	0 08
2 97	1 18	0 05	0 06	0 08
2 97	1 61	0 06	0 05	0 08
4 17	1 44	0 04	0 05	0 09
3 08	1 29	0 05	0 05	0 07
3 36	1 11	0 04	0 05	0 08
2 86	1 13	0 05	0 05	0 08
2 78	1 09	0 05	0 05	0 08
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4 16	0 35	0 09	0 05	0 03
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4 03	0 8	0 07	0 05	0 03
4 05	0 74	0 06	0 04	0 03
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2 75	1 55	0 47	0 08	0 2
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4 45	2	0 68	0 1	0 12
3 81	2 36	0 2	0 13	0 07
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5 89	1 35	0 08	0 1	0 09
3 64	1 64	0 19	0 11	0 09
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1 94	0 28	0 06	0 07	0 08
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2 11	0 67	0 06	0 07	0 08
3 08	1 02	0 06	0 07	0 08
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1 32	0 43	0 23	0 06	0 12
1 68	0 52	0 29	0 06	0 15
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3 12	1 99	0 1	0 05	0 09
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0 01	0 01	0 01	0 01	0 01
10	10	10	5	5
ICP	ICP	ICP	ICP	ICP

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07/11/2002 Certificate of Analysis

Bernie Kreft

WO#020012

Certified by

	Sample #	Au ppb
r	BKAR-1	10
r	BKAR-2	173
r	BKAAR-1	15
r	BKAAR-2	<5
r	BKAAR-3	<5
r	BKAAR-4	<5
r	BKAAR-5	<5
r	BKBR-1	34
r	BKBR-2	144
r	BKBR-3	53
r	BKBR-4	15
r	BKBR-5	18
r	BKBR-6	20
r	BKBR-7	5
r	BKBR-8	16
r	BKCR-1	<5
r	CWAAR-1	55
r	CWAAR-2	39
r	CWBR-1	17
r	JPBR-1	76

W O# 020012

Sample #	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 %
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BKAAR 4	<0 1	26	2	6	<5	<5	<3	4	<10	<2	<0 1	25	13	15	<5	50	159	546	<2	29	8	4	0 1	0 67	4 89	5 62	1 05	0 22	0 06	0 06
BKAAR 5	0 3	5	5	8	<5	<5	<3	3	<10	<2	<0 1	9	23	22	<5	49	46	380	2	19	8	4	0 06	0 95	3 95	2 9	1 55	0 47	0 05	0 07
BKBR 1	<0 1	9	4	25	<5	<5	<3	2	<10	<2	<0 1	10	36	117	<5	144	34	765	7	17	4	4	0 01	0 73	1 72	2 67	0 9	0 14	0 02	0 06
BKBR 2	<0 1	25	8	33	<5	<5	<3	3	<10	<2	<0 1	10	18	771	<5	80	17	756	8	69	6	1	0 01	0 83	2 26	1 82	0 93	0 16	0 02	0 05
BKBR 3	2	1181	16	23	<5	<5	<3	6	<10	<2	<0 1	20	20	24	<5	53	8	1847	3	37	9	8	<0 01	0 12	3 3	1 77	1 16	0 05	0 07	0 07
BKBR 4	<0 1	16	9	17	<5	<5	<3	3	<10	<2	<0 1	24	38	33	6	81	53	547	8	10	10	7	0 04	1 37	2 54	3 08	2 1	0 25	0 07	0 06
BKBR 5	0 1	1909	11	26	<5	<5	<3	4	<10	<2	<0 1	29	10	14	<5	46	60	366	<2	28	2	2	0 16	0 58	0 68	2 37	0 53	0 03	0 06	0 07
BKBR 6	0 2	681	9	81	<5	<5	<3	5	<10	<2	<0 1	39	43	16	<5	93	113	979	<2	10	1	2	0 1	2 17	0 42	5 35	2 7	0 05	0 06	0 05
BKBR 7	0 5	2131	9	80	<5	<5	<3	8	<10	<2	<0 1	42	30	135	5	66	104	1370	17	7	9	2	0 1	1 51	0 26	8 55	2 24	0 02	0 07	0 03
BKBR 8	<0 1	337	12	92	<5	<5	<3	6	<10	<2	<0 1	30	26	14	<5	63	81	2797	3	9	7	2	0 05	1 92	0 28	7 57	2 64	0 06	0 05	0 07
BKCR 1	<0 1	11	6	23	<5	<5	<3	2	<10	<2	<0 1	6	13	34	<5	99	19	301	17	20	5	1	0 02	0 68	0 38	2 95	0 45	0 13	0 02	0 02
CWAAR 1	1 8	18269	<2	<1	<5	<5	<3	4	<10	<2	<0 1	123	25	28	8	41	8	16	5	3	17	1	<0 01	0 27	0 14	2 54	0 04	0 24	0 04	0 09
CWAAR 2	0 2	56	5	8	<5	<5	<3	3	<10	<2	<0 1	98	35	9	<5	82	18	56	2	4	7	3	<0 01	0 73	0 11	2 36	0 65	0 04	0 08	0 07
CWBR 1	0 2	40	13	60	<5	<5	<3	2	<10	<2	<0 1	16	21	299	<5	52	27	704	18	108	4	2	0 01	0 92	3 64	2 55	0 73	0 15	0 03	0 12
JPBR 1	0 3	25	6	24	<5	<5	<3	2	<10	<2	<0 1	3	7	59	<5	62	51	1050	25	12	6	7	0 03	0 77	2 3	2 33	2 09	0 06	0 07	0 18
BKAS 1	<0 1	510	87	170	<5	<5	<3	6	<10	<2	<0 1	149	64	96	<5	41	169	2464	12	23	4	13	0 06	4 11	0 41	6 74	3 56	0 06	0 03	0 08
BKAS 2	<0 1	374	86	147	<5	<5	<3	4	<10	<2	<0 1	76	47	162	<5	34	128	1684	18	20	2	9	0 06	3 15	0 35	5 14	2 37	0 07	0 03	0 08
BKAS 3	<0 1	319	104	158	<5	<5	<3	5	<10	<2	<0 1	91	62	270	<5	52	118	2875	21	17	2	10	0 04	3 75	0 34	5 53	2 68	0 09	0 02	0 1
BKAS-4	0 2	712	25	73	<5	<5	<3	3	<10	<2	<0 1	57	36	115	<5	27	50	813	26	16	1	3	0 05	1 8	0 25	3 16	0 67	0 08	0 02	0 1
BKAAS-1	0 3	115	373	251	<5	<5	<3	4	<10	<2	<0 1	28	80	122	<5	120	48	1861	42	18	1	3	0 06	1 78	0 34	3 14	1 24	0 09	0 03	0 09
BKAAS 2	0 2	214	393	505	11	<5	<3	3	<10	<2	<0 1	37	62	217	<5	74	46	2645	57	30	1	3	0 04	2 36	0 61	3 67	1 11	0 12	0 03	0 14
BKAAS-3	0 2	193	278	429	<5	<5	<3	5	<10	<2	<0 1	37	67	201	<5	79	45	2531	46	26	1	3	0 04	2 18	0 6	3 62	1 14	0 13	0 03	0 13
BKAAS-4	<0 1	136	17	66	<5	<5	<3	3	<10	<2	<0 1	37	52	130	<5	60	70	1660	26	14	2	5	0 04	1 72	0 47	3 89	1 33	0 08	0 02	0 09
BKAAS-5	<0 1	110	17	63	<5	<5	<3	3	<10	<2	<0 1	32	55	123	<5	65	78	1123	24	13	1	6	0 06	1 95	0 38	3 65	1 55	0 08	0 03	0 09
BKBS-1	0 3	173	73	275	<5	<5	<3	7	<10	<2	<0 1	77	120	358	<5	90	62	3217	32	22	4	8	0 03	2 11	0 58	5 49	1 71	0 14	0 02	0 14
BKBS 2	1	201	214	546	21	<5	<3	19	<10	<2	<0 1	84	151	192	<5	36	39	4087	30	28	5	4	0 03	1 72	0 88	8 88	1 24	0 11	0 03	0 16
BKBS 3	0 9	213	176	757	<5	<5	<3	12	<10	<2	<0 1	135	180	293	<5	54	49	5940	44	26	4	5	0 03	2 15	0 78	7 24	1 42	0 14	0 03	0 15
BKBS-4	<0 1	200	27	132	<5	<5	<3	4	<10	<2	<0 1	33	52	648	<5	43	58	5928	24	35	2	5	0 07	1 7	0 79	4 12	1 7	0 16	0 02	0 11
BKBS-5	<0 1	213	26	119	<5	<5	<3	5	<10	<2	<0 1	38	49	543	<5	46	74	5037	23	33	2	5	0 09	1 82	0 79	4 85	1 93	0 17	0 02	0 11
BKBS-6	0 2	149	90	510	<5	<5	<3	8	<10	<2	<0 1	83	105	173	<5	44	52	3070	33	22	3	4	0 04	1 84	1 17	5 44	1 7	0 11	0 03	0 11
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	9999	9999	9999	999	999	99 9	999	999	9999	999	9999	999	9999	9999	9999	999	99	1 00	9 99	9 99	9 99	9 99	9 99	5 00	5 00

-=No Test ins=Insufficient Sample m=Estimate/1000 %=Estimate Max=No Estimate

W O# 020012

Sample #	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 %
BKBS-7	0 4	305	99	1500	<5	<5	<3	7	<10	<2	<0 1	373	414	149	<5	23	25	8432	42	26	5	3	0 02	3 03	0 82	5 85	0 96	0 09	0 03	0 11
BKCS 1	<0 1	99	24	90	<5	<5	<3	7	<10	<2	<0 1	41	59	79	<5	26	26	629	47	19	9	2	0 05	2 24	0 33	6 06	1 23	0 21	0 04	0 09
BKCS-2	<0 1	151	23	96	<5	<5	<3	9	<10	<2	<0 1	62	103	114	<5	26	27	835	61	26	7	2	0 05	2 79	0 54	6 32	1 4	0 25	0 05	0 09
CWA 1 -40	1	1308	93	182	84	11	<3	6	<10	<2	<0 1	89	179	131	<5	212	35	1770	25	22	2	3	0 03	1 6	0 88	4 1	1 27	0 21	0 04	0 06
CWA-2	0 3	1430	115	561	5	<5	<3	4	<10	<2	<0 1	195	42	119	<5	24	61	2080	19	17	2	6	0 04	2 14	0 54	3 95	1 31	0 08	0 02	0 08
CWA-3	<0 1	896	112	471	44	<5	<3	6	<10	<2	<0 1	176	60	149	<5	34	58	3772	23	15	4	7	0 03	2 73	0 27	5 12	1 29	0 1	0 02	0 09
CWA-4 -40	2 5	176	90	359	25	14	<3	3	<10	<2	0 2	31	45	76	<5	44	36	1511	10	10	7	2	0 02	1 3	0 65	3 99	1 12	0 12	0 02	0 05
CWA-5 -40	0 2	102	52	173	<5	<5	<3	4	<10	<2	<0 1	24	30	83	<5	88	19	1067	26	12	5	2	0 01	1 58	0 96	3 38	1 31	0 14	0 03	0 04
CWAA-1 -40	0 3	170	59	125	<5	<5	<3	6	<10	<2	<0 1	135	51	103	<5	59	34	2129	20	12	3	3	0 02	1 17	0 74	3 58	1 14	0 11	0 02	0 07
CWAA-2 -40	<0 1	99	33	95	<5	<5	<3	3	<10	<2	<0 1	32	29	120	<5	93	55	1403	16	15	7	3	0 06	1 09	1 17	3 33	1 21	0 26	0 04	0 07
CWAA-3	2 8	629	615	215	171	14	<3	5	<10	<2	<0 1	64	485	220	<5	82	50	1818	15	24	2	4	0 04	1 15	0 94	4 27	1 88	0 12	0 03	0 08
CWAA-4	0 4	138	41	55	<5	<5	<3	3	<10	<2	<0 1	35	29	218	<5	15	29	2801	11	13	2	3	0 03	0 76	0 53	3 28	0 55	0 07	0 02	0 09
CWAA-5	0 3	148	30	49	<5	<5	<3	4	<10	<2	<0 1	38	31	232	<5	15	29	3369	14	14	2	4	0 03	0 79	0 65	3 5	0 6	0 06	0 02	0 09
CWB-1 -40	0 9	84	83	187	27	5	<3	4	<10	<2	<0 1	41	33	281	<5	83	52	2779	16	22	2	3	0 08	1 72	0 59	3 56	0 99	0 19	0 03	0 07
CWB-2 -40	0 2	40	54	99	<5	<5	<3	5	<10	<2	<0 1	22	28	305	<5	110	13	2655	15	25	3	1	0 01	0 87	4 99	2 53	3 01	0 15	0 03	0 04
CWB-3 -40	<0 1	50	64	187	<5	<5	<3	4	<10	<2	<0 1	17	28	98	<5	58	13	1091	11	24	5	1	0 01	0 81	3 34	2 66	2 19	0 1	0 03	0 05
CWB-4 -40	0 1	107	66	181	<5	<5	<3	4	<10	<2	<0 1	18	29	139	<5	69	11	1267	13	25	9	1	<0 01	0 64	1 98	3 2	1 3	0 19	0 03	0 05
CWB-5A -40	0 3	61	73	189	<5	<5	<3	4	<10	<2	<0 1	21	31	149	<5	11	11	1974	13	35	2	2	0 01	0 52	3 51	2 98	1 99	0 05	0 02	0 06
CWB-5B -40	0 3	83	58	157	<5	<5	<3	4	<10	<2	<0 1	22	32	156	<5	77	14	1207	16	20	9	2	0 01	0 7	1 38	2 87	0 99	0 2	0 03	0 06
CWB-6 -40	0 1	199	56	141	<5	<5	<3	2	<10	<2	<0 1	98	40	99	<5	55	21	2578	22	11	3	3	0 01	1 8	0 33	3 87	1 11	0 16	0 02	0 04
CWB-7 -40	<0 1	44	38	162	<5	<5	<3	5	<10	<2	<0 1	17	31	68	<5	78	16	748	19	26	5	1	0 01	1 24	3 49	2 73	2 46	0 09	0 03	0 04
CWB-8 -40	0 4	51	72	202	<5	<5	<3	4	<10	<2	<0 1	23	39	83	<5	57	19	996	21	13	6	1	0 01	1 12	0 47	3 46	0 82	0 1	0 03	0 05
CWC-1	<0 1	24	22	48	<5	<5	<3	5	<10	<2	<0 1	9	10	41	<5	11	8	579	6	56	1	1	<0 01	0 42	14 8	1 03	8 96	0 02	0 03	0 02
CWC-2 -40	<0 1	16	7	40	<5	<5	<3	5	<10	<2	<0 1	5	7	41	<5	19	6	388	6	61	1	<1	<0 01	0 42	16 82	0 79	10 2	0 03	0 03	0 01
CWC-3	<0 1	39	16	48	<5	<5	<3	6	<10	<2	<0 1	9	13	49	<5	12	18	360	7	51	1	1	0 02	0 96	11 89	1 64	7 13	0 03	0 03	0 02
CWC-4 -40	<0 1	30	16	63	<5	<5	<3	5	<10	<2	<0 1	12	18	94	<5	36	9	639	6	44	2	1	<0 01	0 91	11 45	1 82	7 11	0 05	0 03	0 02
CWC-5	<0 1	84	22	128	<5	<5	<3	5	<10	<2	<0 1	32	58	114	<5	22	19	1218	27	31	3	2	0 01	1 3	7 04	2 75	4 98	0 07	0 03	0 04
CWC-6	<0 1	68	30	141	<5	<5	<3	5	<10	<2	<0 1	34	60	92	<5	21	25	1175	30	33	3	2	0 02	1 51	6 88	2 75	4 88	0 08	0 03	0 04
CWC-7	<0 1	58	19	154	<5	<5	<3	6	<10	<2	<0 1	36	66	61	<5	20	17	1337	45	37	2	2	0 01	1 34	8 97	2 44	6 16	0 07	0 03	0 04
JPA-1	0 3	510	92	105	<5	<5	<3	4	<10	<2	<0 1	49	30	128	<5	25	38	588	31	11	2	3	0 02	2 08	0 16	3 72	0 85	0 08	0 02	0 08
JPA-2	0 4	504	88	89	<5	<5	<3	4	<10	<2	<0 1	20	27	101	<5	24	43	288	21	10	2	3	0 03	2 11	0 14	3 37	0 78	0 07	0 02	0 08
JPA-3	0 2	141	33	82	<5	<5	<3	2	<10	<2	1 9	24	19	134	<5	20	48	447	26	9	2	3	0 04	1 66	0 14	3	0 8	0 05	0 02	0 04
JPA-4	0 4	91	101	332	<5	<5	<3	6	<10	<2	<0 1	27	28	156	<5	23	49	719	16	19	3	3	0 02	1 35	1 15	2 61	1 02	0 08	0 02	0 08
JPA-5	0 3	170	45	155	<5	<5	<3	4	<10	<2	<0 1	83	28	222	<5	28	50	650	18	16	3	4	0 03	2 07	0 4	3 69	0 79	0 08	0 02	0 08
JPA-6	0 3	265	58	202	<5	<5	<3	4	<10	<2	<0 1	116	35	261	<5	32	53	869	19	15	3	5	0 02	2 36	0 4	3 74	0 83	0 08	0 02	0 09
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	9999	9999	9999	999	999	99 9	999	999	9999	999	9999	999	9999	9999	9999	999	99	1 00	9 99	9 99	9 99	9 99	9 99	5 00	5 00

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W O# 020012

Sample #	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 %
JPAA-1	<0 1	67	23	64	<5	<5	<3	4	<10	<2	<0 1	29	97	106	<5	183	54	482	18	22	1	2	0 05	1 8	0 47	3 01	1 56	0 11	0 03	0 06
JPAA 2	0 1	34	43	122	<5	<5	<3	3	<10	<2	<0 1	18	47	430	<5	62	46	717	23	20	1	3	0 03	2 31	0 37	3 02	0 8	0 12	0 03	0 07
JPAA-3	<0 1	66	21	67	<5	<5	<3	3	<10	<2	<0 1	38	99	116	<5	177	56	603	23	12	1	2	0 06	1 9	0 28	3 23	1 5	0 16	0 02	0 07
JPB-1	<0 1	70	71	116	<5	<5	<3	4	<10	<2	<0 1	34	35	163	<5	31	24	1141	41	14	2	2	0 01	2 26	0 16	4 4	0 99	0 06	0 03	0 07
JPB-2	0 2	155	121	275	<5	<5	<3	6	<10	<2	<0 1	154	68	140	<5	31	31	2515	43	14	3	3	0 02	2 88	0 12	5 29	0 99	0 07	0 03	0 09
JPB-3	<0 1	135	112	251	<5	<5	<3	6	<10	<2	<0 1	140	60	158	<5	30	30	2336	38	13	3	3	0 02	2 64	0 11	5 16	1	0 06	0 03	0 08
JPB-4	<0 1	124	105	314	<5	<5	<3	6	<10	<2	<0 1	145	73	174	<5	30	31	2470	47	15	2	3	0 02	2 6	0 17	4 68	0 91	0 07	0 03	0 1
JPB 5	0 1	78	62	123	<5	<5	<3	4	<10	<2	<0 1	62	37	159	5	28	32	1367	28	18	2	2	0 02	2 08	0 18	3 81	0 76	0 08	0 02	0 1
JPB-6	<0 1	64	49	166	<5	<5	<3	4	<10	<2	<0 1	65	40	112	<5	26	22	1202	24	10	3	2	0 01	2 04	0 13	3 92	0 91	0 04	0 02	0 06
JPB-7	<0 1	109	25	75	<5	<5	<3	5	<10	<2	<0 1	39	39	331	<5	18	33	2107	11	25	3	3	0 01	1 64	3 44	3 83	2 91	0 04	0 03	0 07
JPB-7A	0 3	31	17	66	<5	<5	<3	3	<10	<2	<0 1	13	21	160	<5	19	31	385	14	24	5	2	0 04	0 98	0 35	2 18	0 5	0 07	0 03	0 08
JPB-8	<0 1	132	11	53	<5	<5	<3	4	<10	<2	<0 1	39	38	747	8	48	83	2124	16	33	3	7	0 06	1 67	2 78	4 05	3 41	0 12	0 03	0 13
JPB-9	1	66	45	109	<5	5	<3	2	<10	<2	<0 1	26	22	239	<5	21	23	1327	27	14	2	2	0 01	1 45	0 27	3 29	0 7	0 06	0 02	0 07
JPB-10	<0 1	217	12	63	<5	<5	<3	4	<10	<2	<0 1	48	35	669	<5	28	136	1441	15	16	2	9	0 04	2 37	0 37	5 43	2 7	0 06	0 02	0 12
JPB-11	<0 1	82	14	66	<5	<5	<3	4	<10	<2	<0 1	42	40	229	<5	35	93	1207	17	12	4	6	0 03	2 08	0 53	5 07	2 32	0 06	0 02	0 08
JPB-12	<0 1	100	19	71	<5	<5	<3	5	<10	<2	<0 1	39	39	311	<5	32	76	1302	17	14	3	5	0 03	1 89	0 54	4 63	1 85	0 05	0 02	0 09
JPB-13	<0 1	77	25	63	<5	<5	<3	4	<10	<2	<0 1	35	32	260	<5	29	70	1130	17	12	3	4	0 02	1 73	0 33	4 39	1 62	0 05	0 02	0 08
JPC-1	0 2	32	49	155	<5	<5	<3	5	<10	<2	<0 1	13	34	102	<5	18	21	1160	16	43	2	2	0 01	0 81	9 36	1 99	5 97	0 04	0 03	0 06
JPC-2	0 3	42	48	148	<5	<5	<3	4	<10	<2	<0 1	22	47	119	<5	25	20	747	25	18	4	2	0 01	1 01	1 71	3 03	0 9	0 09	0 03	0 13
JPC-3	<0 1	54	29	111	<5	<5	<3	5	<10	<2	<0 1	50	74	135	<5	22	22	1137	25	25	3	2	0 01	1 56	3 89	3 07	2 48	0 06	0 03	0 12
JPC-4	<0 1	35	18	79	<5	<5	<3	5	<10	<2	<0 1	16	30	109	<5	13	11	822	16	49	2	1	0 01	0 75	12 07	1 63	7 6	0 03	0 03	0 03
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	9999	9999	9999	999	999	99 9	999	999	9999	999	9999	999	9999	9999	9999	999	99	1 00	9 99	9 99	9 99	9 99	9 99	5 00	5 00

---=No Test ins=Insufficient Sample m=Estimate/1000 %=Estimate Max=No Estimate

Northern Analytical Laboratories ltd.

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07/10/2002 Certificate of Analysis Page 1

Bernie Kreft WO# 020009

Certified by

	Sample #	Au ppb
r	BKOL - 1	<5
r	BKOL - 2	<5
r	BKOL - 3	<5
r	BKOL - 4	2650
r	BKOL - 5	<5
r	BKOL - 6	15
r	BKOL - 7	556
r	BKOL - 8	14
r	STUR - 1	6
r	STUR - 2	<5
r	STUR - 3	<5
r	STUR - 4	<5
r	STUR - 5	61
r	STUR - 6	<5
r	STUR - 7	<5
r	STUR - 8	<5
r	STUR - 9	<5
r	STUR - 10	39
r	STUR - 11	<5
r	STUR - 12	<5
r	STUR - 13	<5
r	STUR - 14	7
r	STUR - 15	<5
r	STUR - 16	6
r	STUR - 17	40

W O# 020009

Sample #	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 %
BKOL - 1	<0 1	61	119	575	<5	<5	<3	4	<10	<2	<0 1	43	50	10	<5	52	272	518	5	22	2	19	0 02	3 67	4 68	6 77	3 07	0 08	0 02	0 09
BKOL - 2	<0 1	15	7	61	<5	<5	<3	4	<10	<2	<0 1	34	55	8	<5	52	208	1371	3	15	2	11	0 04	3 68	2 04	8 6	2 09	0 1	0 02	0 09
BKOL - 3	0 3	399	9	14	8	<5	<3	<1	<10	<2	<0 1	3	5	17	<5	23	5	155	22	1	4	1	<0 01	0 26	0 07	0 58	0 04	0 17	0 02	0 02
BKOL - 4	0 2	838	4	26	405	<5	<3	3	<10	<2	<0 1	107	192	7	<5	98	5	1588	5	2	2	1	<0 01	0 4	0 17	2 89	0 44	0 11	0 02	0 01
BKOL - 5	0 2	1817	4	20	13	<5	<3	3	<10	<2	<0 1	17	46	5	<5	75	5	871	<2	4	1	1	<0 01	1 18	0 81	3 13	1 12	0 06	0 02	0 01
BKOL - 6	<0 1	769	8	50	19	<5	<3	5	<10	<2	<0 1	41	74	10	<5	45	15	9251	5	2	3	4	<0 01	1 7	0 11	10 76	1 91	0 06	0 01	0 01
BKOL - 7	2 8	19500	9	28	381	<5	<3	3	<10	<2	<0 1	313	191	3	6	66	8	821	<2	9	2	4	<0 01	0 3	1 62	4 81	0 79	0 01	0 04	0 02
BKOL - 8	<0 1	609	4	30	<5	<5	<3	3	<10	<2	<0 1	51	36	<2	<5	73	170	378	6	6	2	13	0 01	2 67	0 61	5 24	2 29	0 01	0 06	0 14
STUR - 1	<0 1	127	7	51	<5	<5	<3	1	<10	<2	<0 1	10	4	1356	<5	75	22	506	14	76	<1	4	<0 01	0 98	2 9	1 92	0 47	0 19	0 04	0 08
STUR - 2	<0 1	42	8	48	<5	<5	<3	1	<10	<2	<0 1	6	4	261	<5	72	28	458	9	83	1	3	0 01	0 81	1 76	1 66	0 39	0 16	0 06	0 06
STUR - 3	<0 1	60	4	53	<5	<5	<3	3	<10	<2	<0 1	22	17	280	5	53	90	364	9	45	2	7	0 21	1 68	1 68	2 91	1 74	0 3	0 12	0 23
STUR - 4	0 2	1550	6	62	<5	<5	<3	3	<10	<2	<0 1	14	2	276	<5	43	92	407	19	17	1	5	0 23	1 35	0 39	2 69	1 03	0 97	0 05	0 1
STUR - 5	0 5	2102	9	88	<5	<5	<3	3	<10	<2	<0 1	13	<1	35	<5	59	61	853	19	25	3	3	0 14	1 13	0 51	3 38	0 77	0 24	0 07	0 08
STUR - 6	<0 1	30	5	53	<5	<5	<3	3	<10	<2	<0 1	9	1	89	<5	50	50	479	10	92	1	4	0 07	1 04	1 3	2 14	0 78	0 18	0 06	0 09
STUR - 7	<0 1	24	6	58	<5	<5	<3	2	<10	<2	<0 1	14	4	443	<5	33	80	498	11	81	2	6	0 18	2 04	2 85	2 7	1 15	0 16	0 1	0 15
STUR - 8	<0 1	6	<2	44	<5	<5	<3	1	<10	<2	<0 1	5	4	68	<5	64	25	362	13	34	1	2	0 06	0 68	0 82	1 3	0 45	0 08	0 06	0 03
STUR - 9	<0 1	9	9	48	<5	<5	<3	1	<10	<2	<0 1	7	<1	111	<5	57	37	528	11	89	2	4	0 05	1 17	1 95	1 87	0 71	0 1	0 05	0 06
STUR - 10	<0 1	6	8	58	<5	<5	<3	2	<10	<2	<0 1	8	2	82	<5	49	38	640	11	112	1	3	0 03	1 57	2 8	2 18	0 79	0 12	0 04	0 07
STUR - 11	<0 1	27	8	74	<5	<5	<3	2	<10	<2	<0 1	8	3	464	<5	55	36	686	17	63	1	2	0 01	1 12	2 13	2 26	0 85	0 12	0 04	0 07
STUR - 12	<0 1	9	6	55	<5	<5	<3	2	<10	<2	<0 1	7	2	507	<5	39	27	521	10	118	<1	4	0 01	0 84	2 1	1 76	0 38	0 16	0 04	0 07
STUR - 13	<0 1	9	7	53	<5	<5	<3	2	<10	<2	<0 1	6	3	333	<5	37	23	655	14	298	<1	4	<0 01	0 88	3 09	1 81	0 31	0 17	0 04	0 08
STUR - 14	<0 1	43	7	55	<5	<5	<3	2	<10	<2	<0 1	7	1	967	<5	63	29	660	17	64	1	3	0 01	1 03	2 26	2 02	0 71	0 14	0 05	0 08
STUR - 15	<0 1	3	6	49	<5	<5	<3	1	<10	<2	<0 1	6	1	700	<5	53	23	565	12	60	<1	2	0 01	0 9	2 3	1 69	0 61	0 12	0 04	0 07
STUR - 16	0 4	2831	4	88	<5	<5	<3	2	<10	<2	<0 1	14	1	394	<5	62	81	687	22	23	1	1	0 16	1 19	0 33	2 98	0 96	1 03	0 07	0 09
STUR - 17	6 9	13536	10	153	<5	<5	<3	8	<10	<2	<0 1	18	<1	1621	6	47	63	708	43	61	3	4	0 17	1 24	0 44	2 85	0 86	0 36	0 05	0 09
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	9999	9999	9999	999	999	99 9	999	999	9999	999	9999	999	9999	9999	9999	999	99	1 00	9 99	9 99	9 99	9 99	9 99	5 00	5 00

--=No Test ins=Insufficient Sample m=Estimate/1000 %=Estimate Max=No Estimate

Report
On
Phase #2
Wernecke Breccia Project

By
Bernie Kreft

For
Y M.I P.
Focused Regional Module
2002-10

Overview

Location – The project area is located in the central Yukon Territory, north of Mayo and east of the Dempster Highway

Access – Access was by helicopter to all targets within the project area

History – The project area has seen limited exploration work There have been several regional scale programs directed towards Zn-Pb sedex and Zn-Ni sedex conducted within it The Hart River Zn-Pb-Cu-Au-Ag VMS deposit is located just to the west and the Bonnet Plume Cu-Co-U-Au Breccias are located to the north and east of the project area, but as a whole, it can be readily characterized as under-explored

Geology – Geological mapping (1 250,000 scale) shows each of the targets to be underlain by Proterozoic aged stratigraphy, predominantly mudstone, siltstone, quartzite and dolostone Diorite stocks, dykes and sills commonly intrude the above units

Work Program – Work consisted of a two day program of silt and rock sampling and prospecting of 9 targets, 4 of which were centered on anomalies outlined during Phase #1, 2 on previously known showings, 2 on anomalous RGS silt sample sites not checked during phase #1 and one on a gossanous area spotted while flying from one site to another Follow up on Phase #1 anomalies consisted of rock sampling Follow up of the other 5 targets consisted of various combinations of rock and silt sampling Silt samples were sieved to minus 80 mesh All samples were analysed by International Plasma

Results – The program resulted in 12 silt samples and 53 rock samples Numerous anomalous values for Cu-Co-Au in rock and Cu-Co in silt were returned Detailed results can be found in the target area description section

Conclusions – Recce style silt and rock sampling and prospecting can be easily accomplished in the project area due to the nature of the topography and vegetation The type and amount of work undertaken, successfully, and accurately, delineated areas requiring more detailed follow-up The unexplored nature of the project area is highlighted by the numerous grass-roots discoveries made during the two-day program

Recommendations – Follow-up work consisting of soil sampling, mapping, and prospecting is required for all targets (in order of priority) B2, E, AA, 2, 3, 1 north, 1 SW, A and 4

Budget –	Bernie Kreft (3 0 days x $375/day)	=	$1125 00
	Travel (762 km x $0 48/km)	=	$365 76
	Food And Camp (3 0 man-days x $48/day)	=	$144 00
	Helicopter (2 4 hours)	=	$2688 80
	Assaying (12 silt, 53 rock)	=	$1432 73
	Bernie Kreft (3 days report prep)	=	$1125 00
	Duplication	=	$50 00
			$6931 29

Site E

Location – Located at approximately 64° 33' and 134° 13', or UTM coordinates 537512E/7158236N, 9km east of McClusky Lake on NTS mapsheet 106-D-9, in the Mayo Mining District

Access – Access was by helicopter from Mayo, 135km one way A winter trail passes 3 5km to the north of the target The nearest 2wd road ends at McQuesten Lakes, 68km to the SW

History – Staked by Bob Caley in June 1970 Copper occurrences are common in the region, and were thought to be the cause of the staking

Geology – Geology consists of Proterozoic quartzite, cherty sandstone and black meta-siltstone intruded by diorite dykes The sediments are often fractured or weakly brecciated Mineralization consists of disseminated, vein and fracture coatings of chalcopyrite within the sediments, along with disseminated chalcopyrite and pyrite within the dioritic intrusives Anomalous elements include Au, Cu, Co, As and Ni

Target – Follow up of cluster of anomalous rock talus samples grading up to 2650 ppb Au and 19500 ppm Cu, located during Phase #1 work

Work Program – Work consisted of silt (2) and rock sampling (7) at, and in the vicinity of a cluster of Cu-Co-Fe-As-Au anomalous rock samples Sampling conducted by Bernie Kreft on July 19th and by Ken Galambos and Bernie Kreft on July 24th

Results – Numerous anomalous values were returned from rock sampling Sample BKMELR-1 was a 30 cm chip sample across a 15cm wide qtz-siderite vein and adjacent wall rock that returned 5223 ppm Cu, 2552 ppm Co, 5724 ppm As and 368 ppm Ni, along with weakly anomalous Au-Ag Sample BKMELR-4 was a 1 5m chip sample across several narrow qtz-siderite sulphide veins with disseminated sulphides in the wall rock that returned 633 ppb Au, 7960 ppm Cu, 175 ppm Co, 364 ppm As and 169 ppm Ni Numerous other anomalous rock values have been returned from this site

Conclusions – Highly anomalous values for Au-Cu-Co-Ni-As have been returned from a NNW striking qtz-siderite vein system Veins are ubiquitous, but generally less than 30cm in width Best economic potential appears to be where the vein system crosscuts reactive stratigraphy Areas such as this have good potential for vein as well as replacement type disseminated mineralization Chalcopyrite mineralized diorite has also been located at this site Economic potential may also be enhanced in areas closer to the mineralized diorite body indicated by the float samples First phase silt sampling defined a 1 2km x 2 5km NNW trending anomalous area roughly centred on the anomalous rock samples

Recommendations – Detailed prospecting and rock sampling of the silt defined 1 2km x 2 5km anomalous area Given the large amount of rock exposure and subcrop present, traditional prospecting and sampling will be effective in locating mineralization on surface at this site Geophysical surveys may be necessary to trace mineralization under overburden/till covered areas in the valley bottoms

Site B2

Location – Located at approximately 65° 01' and 135° 42', or UTM coordinates 467120E/7208900N, on NTS mapsheet 106-E-4, in the Mayo Mining District

Access – Access was by helicopter from Mayo, 160km one way The Bear River winter trail is located 48km to the east of the target The nearest 2wd road is 105km to the SSE at McQuesten Lakes, or the Dempster Highway, 105km to the west

History – No staking records exist for this target Getty Canada and Archer Cathro conducted exploration for sedex type mineralization just to the north of the target

Geology – Geology consists of a variety of Proterozoic sediments that are commonly cherty and/or silicified, intruded by dioritic intrusive dykes and sills Breccia material ranging from homolithic to heterolithic in composition has been identified at 3 spots, one of which contains moderate amounts of disseminated hematite and the other two contain chalcopyrite

Target – Follow up of a cluster of anomalous rock float samples grading between 681 and 2131 ppm copper, found during Phase #1

Work Program – Work consisted of rock sampling (10 samples) within the drainage basin upstream from the anomalous rock sample sites Sampling conducted by Bernie Kreft and Ken Galambos on July 24th

Results – A sample (BKFBR-1) of hematite mineralized diorite returned 393 ppm Cu A sample (BKFBR-7) of heterolithic breccia with predominantly diorite clasts returned 227 ppb Au and 8257 ppm Cu A sample (KGBFR-1) of hematite mineralized and jasper altered heterolithic breccia with predominantly diorite clasts returned 224 ppb Au and 6189 ppm Cu A sample (KGBFR-3) of weakly silicified siltstone cut by several qtz-chalco veins returned 1778 ppm Cu The above rock samples are approximately 150m to 500m upstream from a 1st phase silt sample that returned 200 ppm copper Five other 1st phase silt samples with values of from 201 ppm Cu to 305 ppm Cu remain unexplained

Conclusions – Anomalous copper and gold values have been returned from rock samples at this site Numerous highly anomalous copper silt anomalies remain un-explained A large area prospective for Olympic Dam type mineralization has been outlined through limited amounts of silt and rock sampling

Recommendations – Further work is recommended and should consist of prospecting within all drainages with anomalous copper in silt values Further regional type silt sampling is recommended within a 200 km² area (10km x 20km) centred over the anomalous phase 2 rock sample sites, and covering unexplained phase one silt sample sites Airborne magnetic and gravity geophysical surveys should be conducted over the 200 km² area

Site AA

Location – Located at approximately 64° 51' and 136° 38', or UTM coordinates 420890E/7192800N, 8km N of the Hart River on NTS mapsheet 116-A-15, in the Mayo Mining District

Access – Access was by helicopter from Mayo, 145km one way The nearest road is the Dempster Highway, 75km to the west The winter road to the Hart River VMS deposit is 30 km to the west

History – Explored during 1975-1976 by Union Miniere Exploration who staked the Last claims to the east of the area followed up

Geology – Geology consists of varying sedimentary units ranging in age from Ordovician-Silurian to Proterozoic Cretaceous? diorite stocks and sills intrude the sedimentary formations

Target – Rock talus sample grading 18269 ppm Cu and 123 ppm Co from Phase #1

Work Program – Work consisted of rock sampling (10) within the drainage basin containing the anomalous rock sample Sampling conducted by Bernie Kreft and Ken Galambos on July 24th

Results – Several anomalous copper values were returned from various lithologies A value of 19,198 ppm Cu was returned from a sample of weakly brecciated pink to beige chert mineralized with disseminated and fracture controlled chalcopyrite Heterolithic breccia with abundant disseminated magnetite in the clasts and groundmass returned 852 ppm Cu Green siltstone cut by two generations of quartz veins, one of which is mineralized with chalcopyrite, returned 292 ppm Cu A finely fractured and weakly silicified and carbonate altered sed rock returned 564 ppm Cu A slickensided and heavily jasper altered dioritic intrusive with malachite specks in small vugs on fresh broken surfaces, along with trace hematite, returned 655 ppm Cu Cobalt values are also commonly elevated to a maximum of 213 ppm These rock samples are

located immediately upstream from silt sample sites that returned 90 ppm and 172 ppm Cu

Conclusions – Anomalous copper in rock values have been returned from numerous different lithologies Numerous copper silt anomalies from 1st phase remain un-explained, three are of greater intensity (629 ppm, 214 ppm, 193 ppm) than the anomalies located immediately downstream from the known mineralization (170 ppm, 99 ppm)

Recommendations – Prospecting and contour soil sampling is definitely required to help define a source for the 3 unexplained silt anomalies Other anomalies of greater than 100 ppm Cu should also be checked Detailed prospecting/rock sampling in conjunction with grid soil sampling is required to assess the immediate area of the known mineralization Further recce type silt sampling is warranted to the east and west of the existing target area The westerly extent of silt sampling should thoroughly overlap the area of Recon Map 3 The entire area of recce and detailed work should be covered by airborne magnetic and gravity surveys

Site A

Location – Located at approximately 64° 35' and 136° 10', or UTM coordinates 443300E/7162350N, 10km S of the Hart River on NTS mapsheet 116-A-9, in the Mayo Mining District

Access – Access was by helicopter from Mayo, 105km one way The nearest 2wd road is at Dublin Gulch, 58km to the SSE

History – No work is known in the area

Geology – Geology (1 250,000 scale) is mapped as Proterozoic aged sediments

Target – Two adjacent drainages with high Cu-Co-As-Sb-Ni values in silt from the 1st Phase

Work Program – Work consisted of rock sampling (3) and prospecting at the site of the anomalous 1st Phase silt samples Work conducted by Bernie Kreft and Ken Galambos on July 24th

Results – Copper values of 5715 ppm and 7785 ppm were returned from samples of quartz chalcopyrite veins up to 0 6m wide These samples were located in the immediate area of the silt sample sites

Conclusions – Highly anomalous copper values were returned from samples of quartz vein material Mineralization encountered adequately explains the existing silt anomalies The potential for significant mineralization still exists as the rock samples were proximally derived talus and were not traced back to source

The source area has the potential to be large given the amount of mineralized talus present

Recommendations – Detailed rock sampling and prospecting in the immediate vicinity, and upstream, of the anomalous rock samples

Recon Map 1 (North Half)

Location – Located at UTM coordinates 541250E/7164350N, 18km E of McClusky Lake on NTS mapsheet 106-D-9, in the Mayo Mining District

Access – Access was by helicopter from Mayo, 140km one way A winter trail/road passes through the target The nearest 2wd road ends at McQuesten Lakes, 73km to the SW

History – No documented work has been conducted in the area

Geology – Geology (1 250,000 scale) is mapped as Proterozoic aged sediments

Target – RGS silt sample site with anomalous Cu-Fe-As

Work Program – Work consisted of rock sampling (2) and silt sampling (4) in the vicinity of the anomalous RGS site Work conducted by Bernie Kreft on July 19th

Results – Rock float samples grading 1965 ppm and 2777 ppm copper along with an anomalous silt sample grading 108 ppm copper were returned from the uppermost area sampled on the drainage basin

Conclusions – Anomalous copper values within rock and silt exist within the drainage basin

Recommendations – Further recce style silt sampling and prospecting is required within the drainage basin immediately upstream from sample site BKMELS-6

Recon Map 1 (South West Corner) (AKA the Pooh Pooh Showing)

Location – Located at UTM coordinates 540600E/7161550N, 17km E of McClusky Lake, on NTS mapsheet 106-D-9 in the Mayo Mining District

Access – Access was by helicopter from Mayo, 138km one way A winter trail/road passes through the target The nearest 2wd road ends at McQuesten Lakes, 71km to the SW

History – The area was staked as the Julia claims in 1970 over a narrow chalcopyrite bearing vein

Geology – Geology (1 250,000 scale) is mapped as Proterozoic aged sediments

Target – Narrow chalcopyrite bearing vein reportedly found in this area in 1970

Work Program – A total of 3 silt samples and 4 rock samples were taken while evaluating the area of the showing Work conducted by Bernie Kreft on July 19th

Results – Silt sample BKMELS-3 returned a possibly anomalous value of 99 ppm Cu A quartz-siderite vein zone approximately 30m-40m wide and at least 400m long, with the SW strike extent obscured by talus, was located in the reported vicinity of the narrow chalcopyrite bearing vein A series of small representative chips were taken of random talus blocks from this zone, this sample returned 912 ppm Cu, 542 ppm Co, 156 ppm Ni and 835 ppm As Other anomalous elements include 11 27% Mg and 11 52% Ca A grab sample of brecciated sedimentary wall-rock returned 2897 ppm Cu and 133 ppm Co

Conclusions – An aerially extensive vein zone mineralized with copper, cobalt and nickel exists at this site Average metal values in the area of the zone explored are interesting, but uneconomic

Recommendations – Further work is recommended It should consist of work designed to test the overburden covered SW strike extent, as the size of the vein zone, and amount of mineralization within it, appears to increase in this direction Some follow-up prospecting should also be conducted in the vicinity of the possibly anomalous silt sample site

Recon Map 2

Location – Located at UTM coordinates 545150E/7174775N, 7km SW of Gillespie Lake, on NTS mapsheet 106-D-9 in the Mayo Mining District

Access – Access was by helicopter from Mayo, 147km one way A winter trail/road passes to within 10km to the south The nearest 2wd road ends at McQuesten Lakes, 84km to the SW

History – There has been no known work in this area

Geology – Geology (1 250,000 scale) is mapped as Proterozoic aged sediments

Target – RGS silt sample site with anomalous Cu-Co-Fe-As-Au

Work Program – A total of three silt samples and seven rock samples were taken while prospecting in the drainage basin upstream from the anomalous RGS silt sample site Work conducted by Bernie Kreft and Ken Galambos on July 24th

Results – Three silt samples were taken upstream from the anomalous RGS site, all were anomalous in copper Several highly anomalous copper values were returned from rock grab samples within the drainage basin Sample KGF-02,

silicified shale cut by two generations of quartz veins, which are in turn cut by a narrow fault breccia zone returned 1015 ppm Cu and 197 ppm Ni Two samples of quartz +/- siderite +/- limonite +/- ankerite? veining cutting diorite (KGF-3/3A) returned 7102 ppm and 10180 ppm Cu A sample of dioritic intrusive cut by a sheeted quart-chalcopyrite vein system (KGF-3B) returned 4015 ppm Cu A sample of brecciated and veined dioritic intrusive with fracture hosted and disseminated chalcopyrite (KGF-04) returned 2582 ppm Cu Several large (+1 tonne) float boulders of weakly hematite and pyrite mineralized homolithic breccia were located in the streambed One sample returned an anomalous copper value of 218 ppm

Conclusions – Anomalous copper values occur within several different lithologies Silt sampling has returned consistently anomalous copper values from the creek

Recommendations – Further work is recommended and should consist of rock sampling and prospecting, along with contour soil sampling throughout the entire drainage basin

Recon Map 3

Location – Located at UTM coordinates 435850E/7198050N, approximately 14km WSW of Three Barrel Lake, on NTS mapsheet 116-A-16, in the Mayo Mining District

Access – Access was by helicopter from Mayo, 140km one way It is approximately 90km east of the Dempster Highway, and 90km north of the Dublin Gulch gold deposit

History – There has been no known work in this area

Geology – Geology is mapped as Silurian to Devonian sediments

Target – Slightly gossanous and jagged mountain sticking out of flat limestone plain that was spotted while flying by in the helicopter on the way from target AA to target B

Work Program – Six rock grab samples were taken from one area during a 1-minute quick stop Work conducted by Bernie Kreft on July 24th

Results – An anomalous copper value of 964 ppm was returned from a sample of heavily epidote and chlorite altered rock that is mostly groundmass (green) with numerous small randomly oriented un-altered fragments of varying composition Heterolithic hematite mineralized breccia was also encountered, but returned no anomalous metal values, other than one sample that returned 194 ppm Ni

Conclusions – An anomalous copper value was returned from a new un-explored breccia occurrence

Recommendations – Prospecting at this site is needed to better define the scale and scope of mineralization encountered, and to explore for further, possibly more significant zones Silt and airborne geophysical surveys are required and should be conducted concurrently with work on Site AA, (see AA write-up)

Recon Map 4

Location – Located at UTM coordinates 541300E/7153050N, 9km SE of Mt Braine on NTS mapsheet 106-D-9, in the Mayo Mining District

Access – Access was by helicopter from Mayo, 130km one way The nearest 2wd road ends at McQuesten Lakes, approximately 60km to the SW

History – Staked as the Mary claims in 1968, over a chalcopyrite bearing siderite vein up to 100 feet wide

Geology – Geology (1 250,000 scale) is mapped as Proterozoic aged sediments

Target – Known showing consisting of a large chalcopyrite mineralized siderite vein grading up to 0 2% Cu over 8 feet

Work Program – Four rock samples were taken during a short visit Work conducted on July 19th by Bernie Kreft

Results – A grab sample of a massive chalcopyrite pod 15cm x 60cm returned 225 ppb Au, 36 ppm Ag, 191,915 ppm Cu and 5383 ppm Bi Other than the massive copper pod, there was little mineralization encountered

Conclusions – Economic potential of the showing area is low due to a lack of mineralization that would indicate a bulk tonnage type target

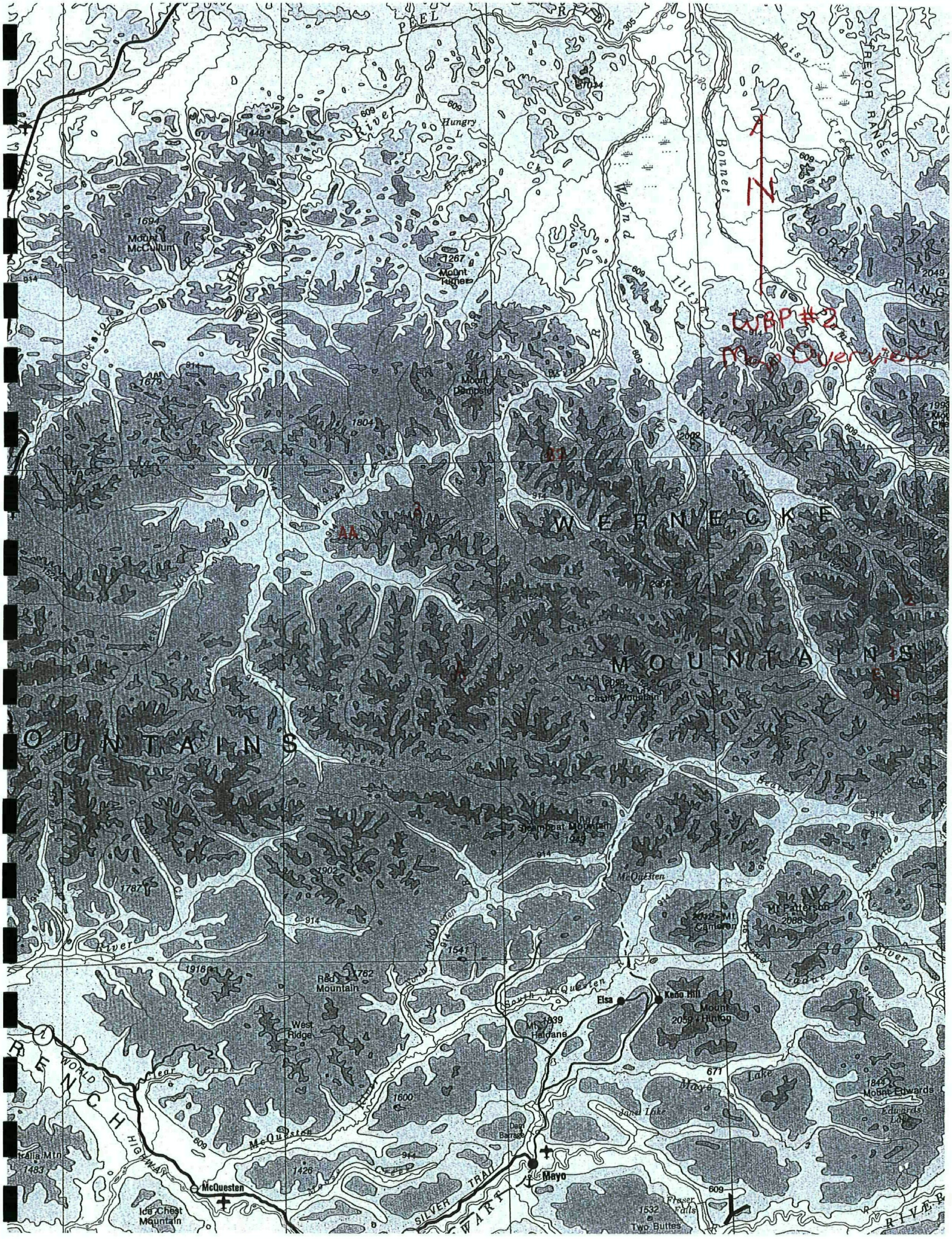
Recommendations – Further work is needed to explore for possibly more extensive zones WNW and ESE of the existing showing

Rock Sample Descriptions

BKFAR-1 qtz chalco vein 60 cm wide
BKFAR-2
BKFAR-3
(above three samples are proximally derived talus just upstream from the high silt anomaly)
BKFAAR-1 Fractured dioritic intrusive with hematite, siderite and possible trace chalco along fractures
BKFAAR-2 Weakly brecciated pink to beige chert with diss and frac controlled chalco to 5%

BKFAAR-3	heterolithic sedimentary breccia with hematite and lesser pyrite rimming clasts, in matrix and traces disseminated in clasts, possible trace chalco
BKFAAR-4	Heterolithic breccia with magnetite in groundmass and within fragments to a lesser extent, magnetite to 10%
BKFAAR-5	green siltstone cut by two generations of qtz veins, one generation is mineralized with 0 5% chalco
BKFAAR-6	limonite and siderite speckled siltstone min with very fine diss magnetite to 4% and pyrite to 0 5% also poss trace chalco
BKFAAR-7	extremely fine grained fractured tuffaceous sed rock, calcite on fractures with poss trace chalco, minor malachite on weathered surfaces
BKFAAR-8	finely fractured and silicified sed rock with weak carbonate alteration
BKFAAR-9	heterolithic hematite breccia cut by a qtz vein with brick red fragments and mineralized with fine clots of hematite
BKFAAR-10	Slickensided dioritic intrusive with heavy brick red (jasper) alteration in bands, malachite on cut surfaces (rock leached) trace hematite
(BKFAAR-1 to -9 are proximally derived talus –10 is float in creek)	
KGF-02	silicified shale cut by two generations of quartz veins which are in turn cut by a narrow fault breccia zone, qtz veins contain around 1% chalco
KGF-03	qtz siderite, ankerite? vein cutting diorite, chalco in vein to 5%
KGF-03A	qtz limonite vein cutting diorite
KGF-03B	dioritic intrusive cut by 7 qtz-chalco veins with about 10% chalco, sample is about 15cm wide and veins comprise 2 5 cm of the sample width, minor diss chalco in wallrock
KGF-04	brecciated and veined dioritic intrusive healed with qtz-calcite-siderite, chalco to 0 5% in matrix and filling fractures
(KGF series are proximally derived talus/subcrop grab samples)	
KGBFR-1	breccia predominantly dioritic intrusive with red alteration, hematite and chalco to 0 5% each
KGBFR-2	epidote and k-spar altered dioritic intrusive with about 0 5% diss chalco
KGBFR-3	siltstone cut by qtz chalco veins, chalco to 1% in the veins
(KGB series are proximally derived talus grab samples)	
BKFER-1	qtz-siderite-chalco vein chalco to 3%, with a black metallic sulphide outcrop sample
QSBRX-1	epidote and chlorite altered???? Trace malachite?
QSBRX-2	dark to purple fine grained heterolithic breccia fine diss hematite possibly fine diss chalco
QSBRX-3	as above but with intrusive fragments and fragments that are composed of fragments
QSBRX-4	heterolithic hematite breccia
QSBRX-5	as above
QSBRX-6	as above
(QSBRX samples are all proximally derived talus)	
BKNEWR-1	weakly brecciated sed rock cemented with calcite, trace hematite and pyrite also possible trace chalco
BKNEWR-2	as above but with slightly more hem and py
(BKNEW are large angular float boulders in the creek)	

BKFBR-1 hematite mineralized diorite
BKFBR-2 as above with possible diss chalco
BKFBR-3 heterolithic hematite breccia
BKFBR-4 as above with salmon coloured alteration along a fracture with trace chalco
BKFBR-5 dioritic intrusive with mottled splotches of salmon pink alteration, diss hem to 0 5% and diss chalco
BKFBR-6 as above less pink
(BKFBR-1 to –6 are proximally derived talus)
BKFBR-7 outcrop sample of heterolithic breccia predominantly diorite fragment chalco to 0 5%, nicely developed malachite in several splotches
BKMELR-1 30 cm chip across limonitic qtz-calcite-siderite vein with chalco to 0 25%
BKMELR-2 1 5m channel/chip sandstone cut by sheeted vein system with trace chalco in veins and trace diss in wallrock
BKMELR-3 as above
BKMELR-4 1 5m as above with a narrow qtz siderite vein, chalco to 1%, erythrite stain in several areas
BKMELR-5 as above 0 25% chalco no erythrite visible
BKMELR-6 1 5m chip across a qtz stkwk in sandstone no sulphides visible, large area of stkwk
BKMELR-7 qtz-calcite-siderite stkwk cutting diorite, trace chalco in veins and diss angular float in creek
BKMELR-8 brecciated sed rock
BKMELR-9 qtz-calcite veined siltstone with trace chalco in veins
BKMELR-10 rep chips of 30m wide qtz-siderite vein zone trace chalco and erythrite
(BKMELR-8 to –10 are proximally derived talus)
BKMELR-11 sheeted qtz vein system cutting tan siltstone, qtz veins are about 5% chalco occur about 1 every 10cm and vary from 4mm to 1cm in width
BKMELR-12 qtz-calcite-siderite vein 15cm wide cutting diorite, about 2% chalco in vein
(BKMELR-11 and –12 are angular float in the creek)
BKMELR-13 dioritic intrusive cut by hairline calcite stringers min with trace pyrite and poss trace chalco
BKMELR-14 limonitic qtz-calcite-siderite vein with possible trace diss chalco
BKMELR-15 as above with malachite stain
BKMELR-16 massive chalco pod 10cm wide
(BKMELR-13 to –16 are proximally derived talus)



PEEL RIVER
TREVOR RANGE
Hungry L.
Mount McCullum
Mount Turner
Mount Dampier
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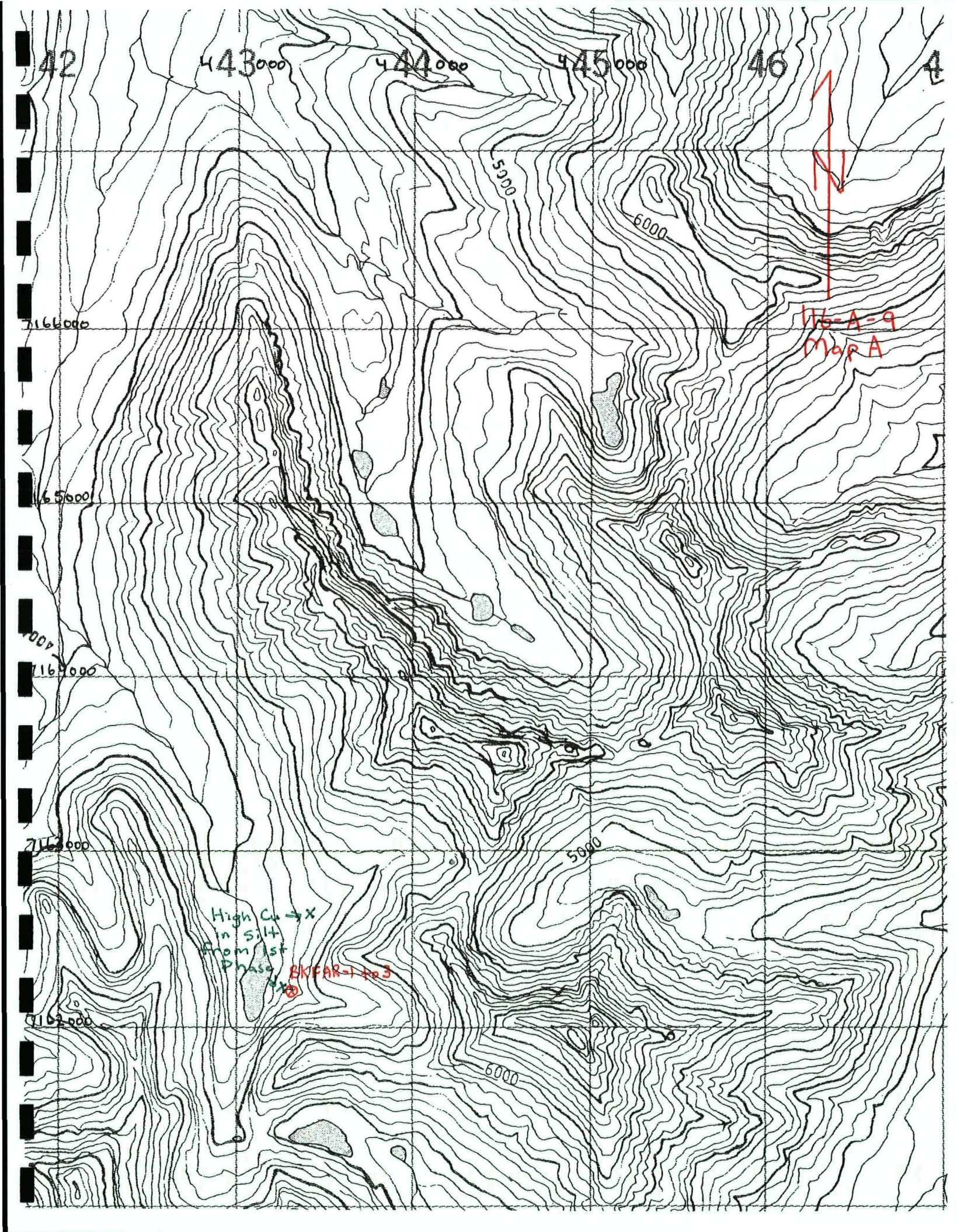
WBP #2
Map Overview
WERNECKE
MOUNTAINS
MOUNTAINS
Castle Mountain
Steamboat Mountain
McQuesten L.
Mt Cameron
Mt Patterson
Red Mountain
West Ridge
Mt Haldane
Elsa
Keno Hill
Mount Hinton
Mayo Lake
Mount Edwards
Janet Lake
Mayo
McQuesten
Ice Chest Mountain
Two Buttes
Fraser Falls
SILVER TRAIL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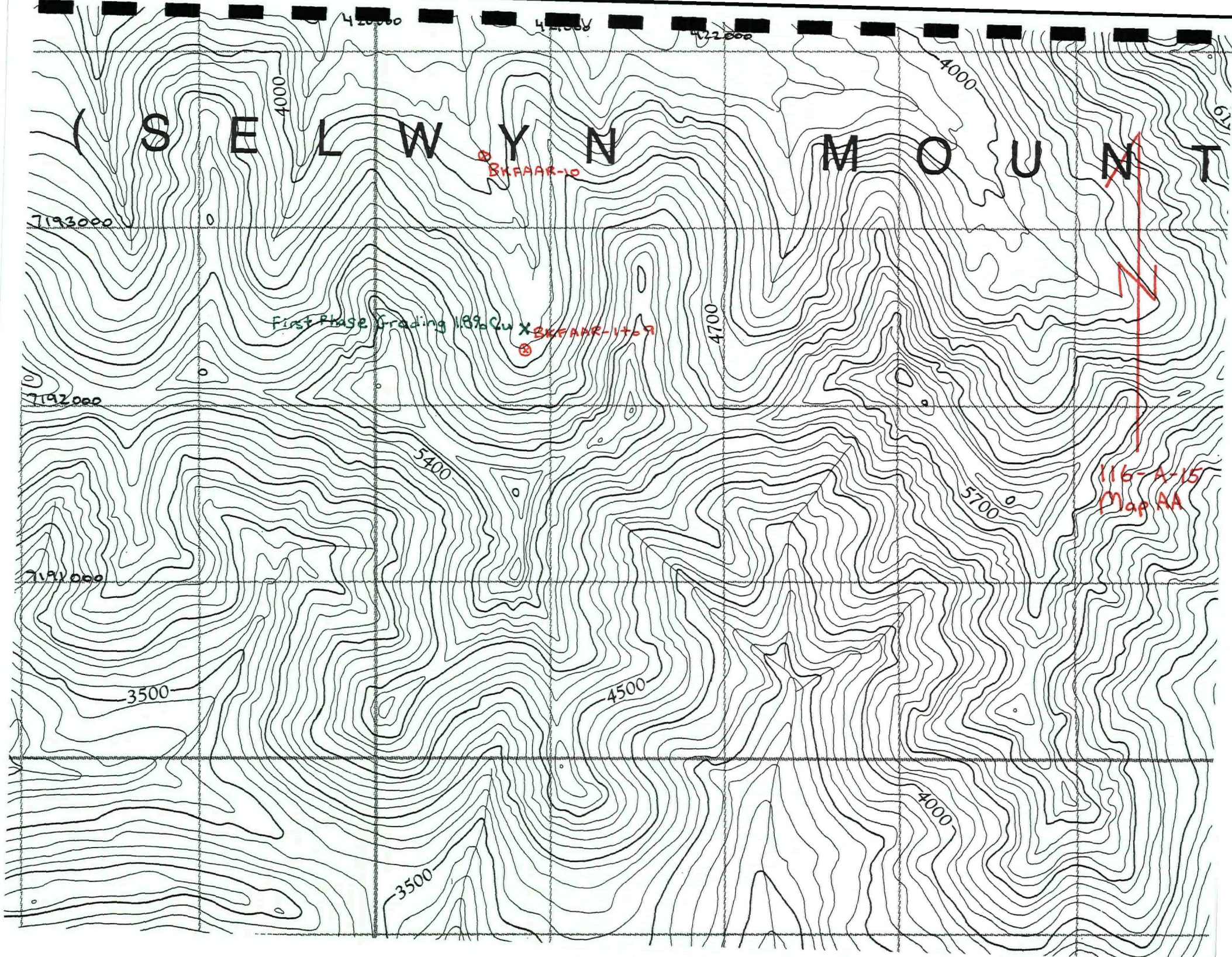
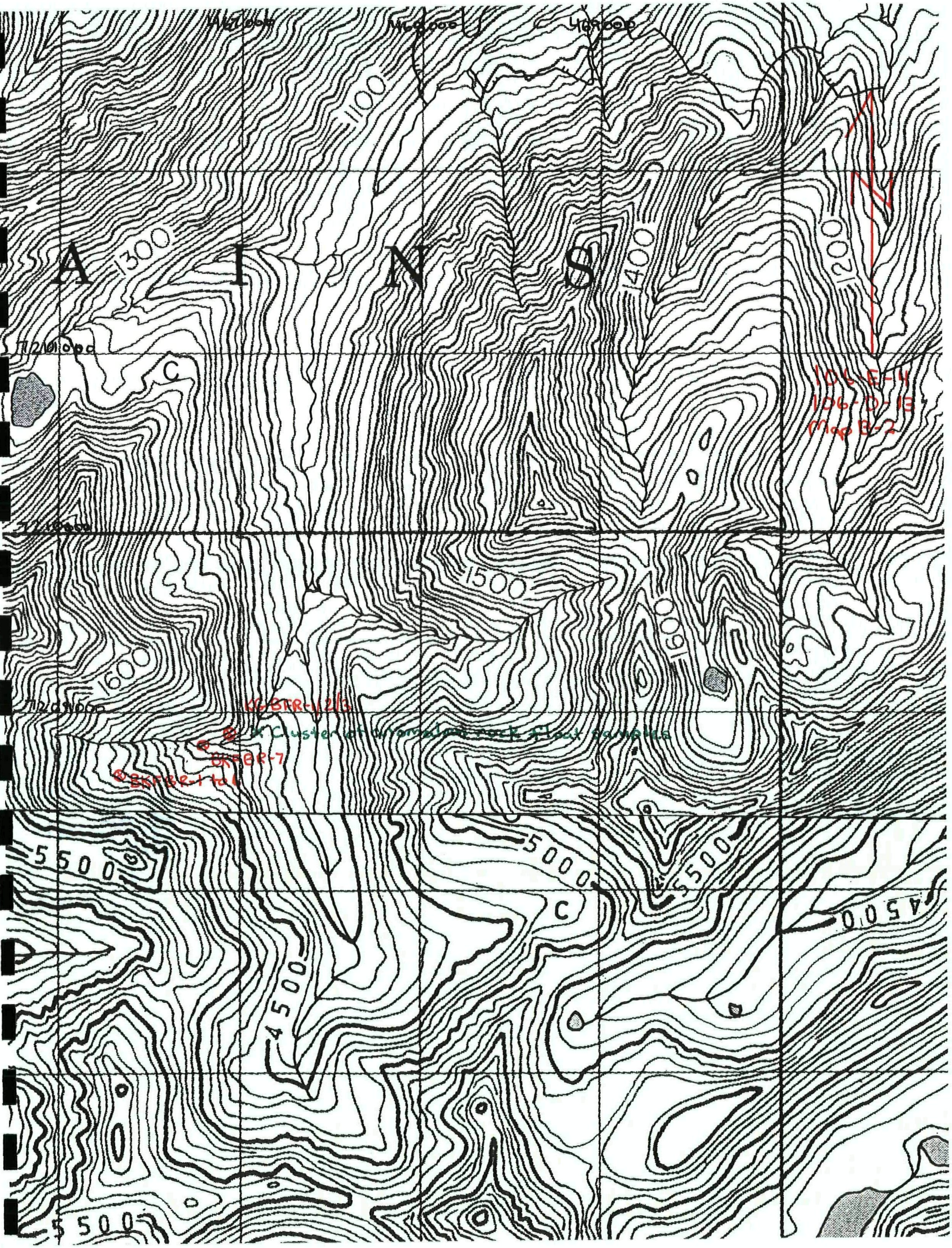
443000
444000
445000
46
4
5000
6000
N
Hb-A-9
Map A
7166000
7165000
7164000
7163000
7162000
5000
6000
High Cu → x
in silt
from 1st
Phase
BKFAR-1 to 3


SELWYN MOUNT
BKFAAR-10
First Phase Grading 1.89% Cu
BKFAAR-11+9
7193000
7192000
7191000
4000
4700
5400
5700
3500
4500
4000
3500
116-A-15
Map AA



A I N S
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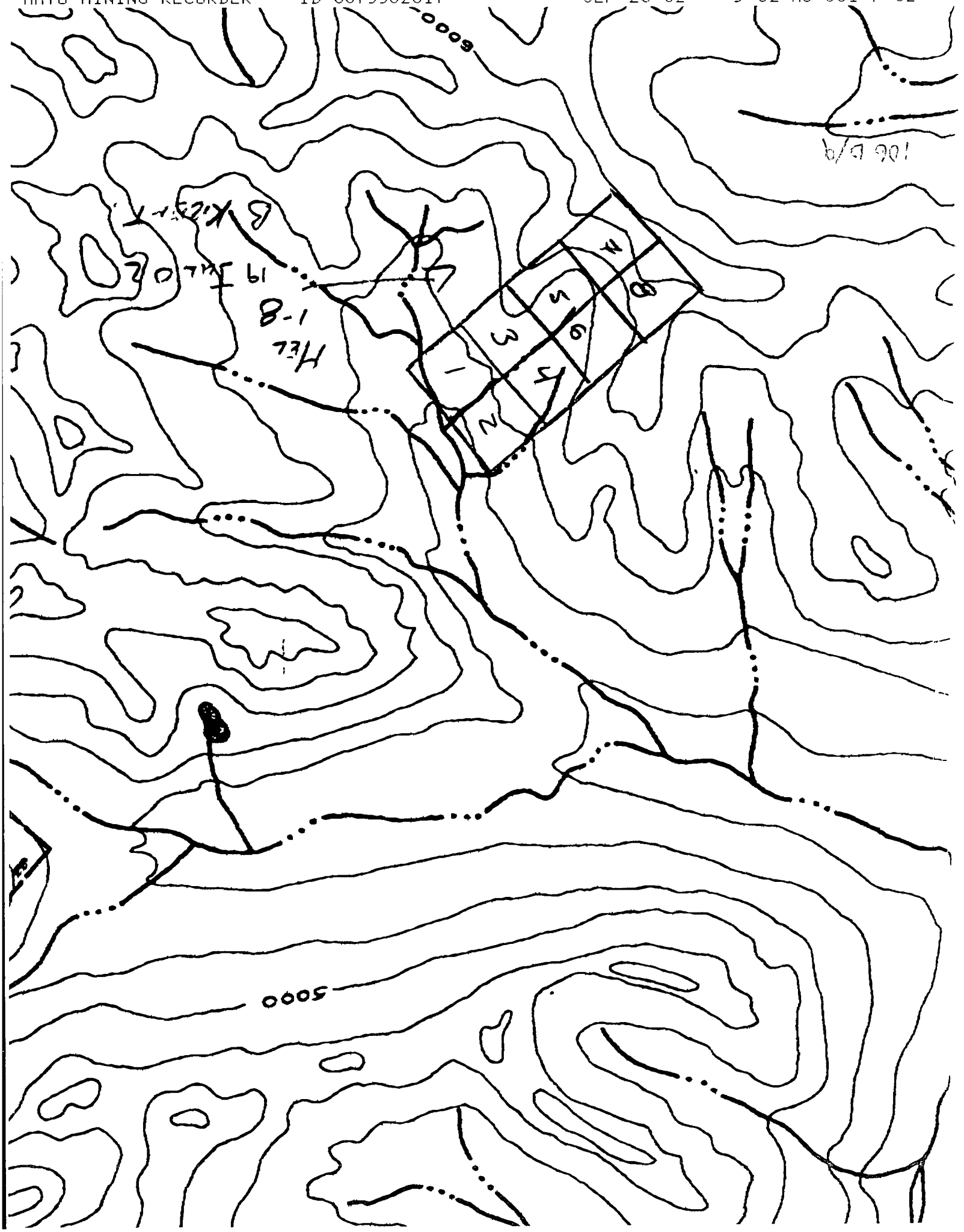
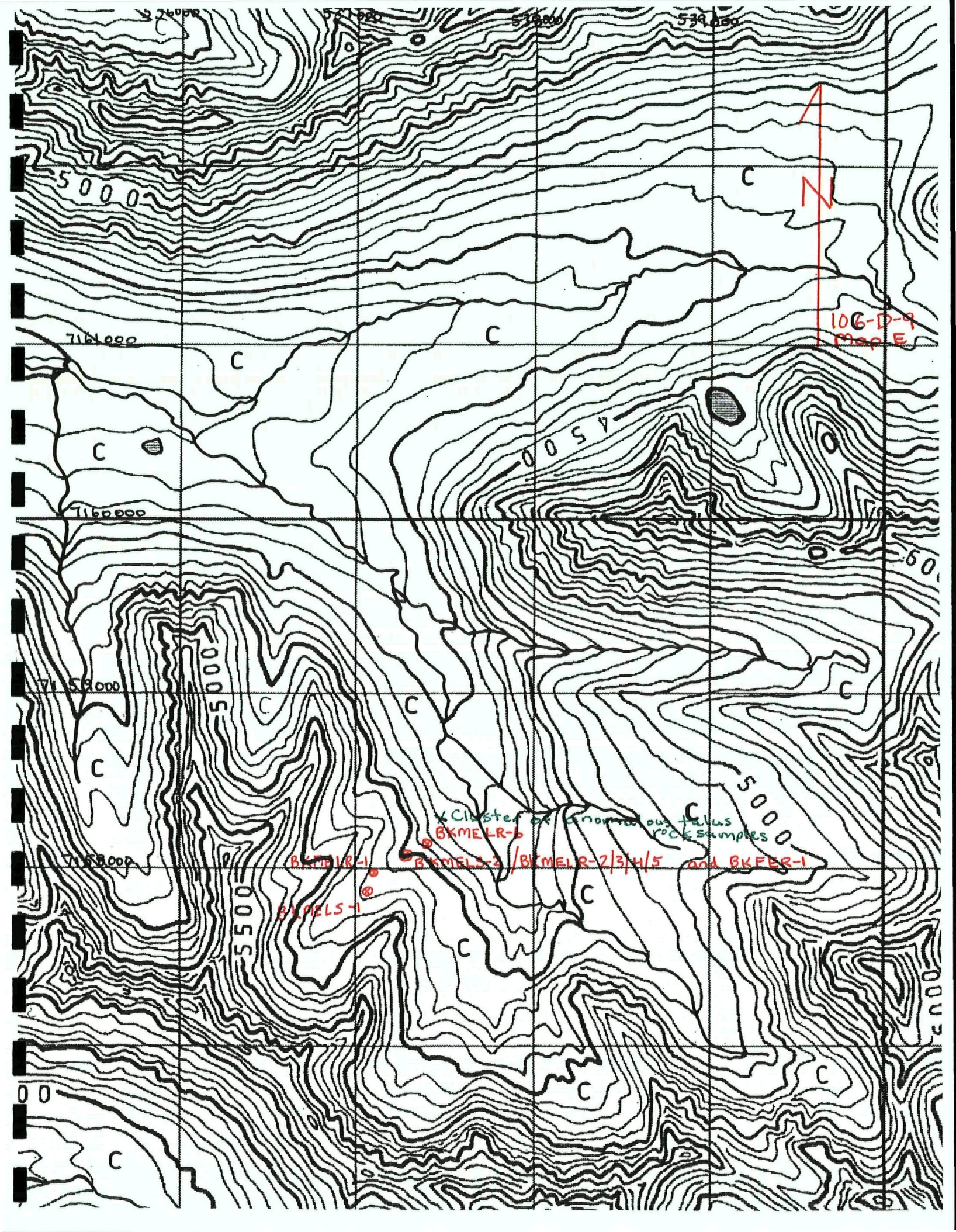
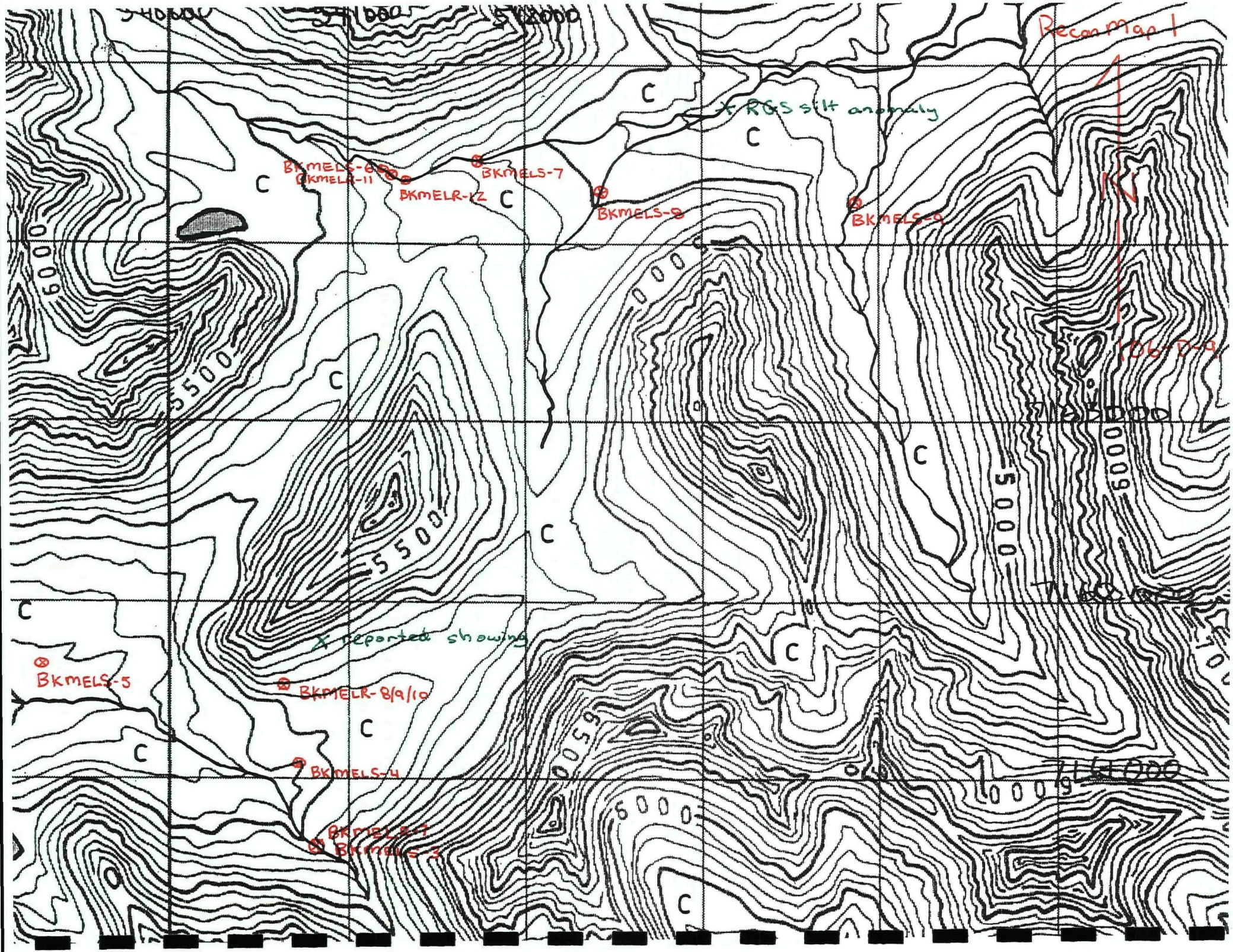
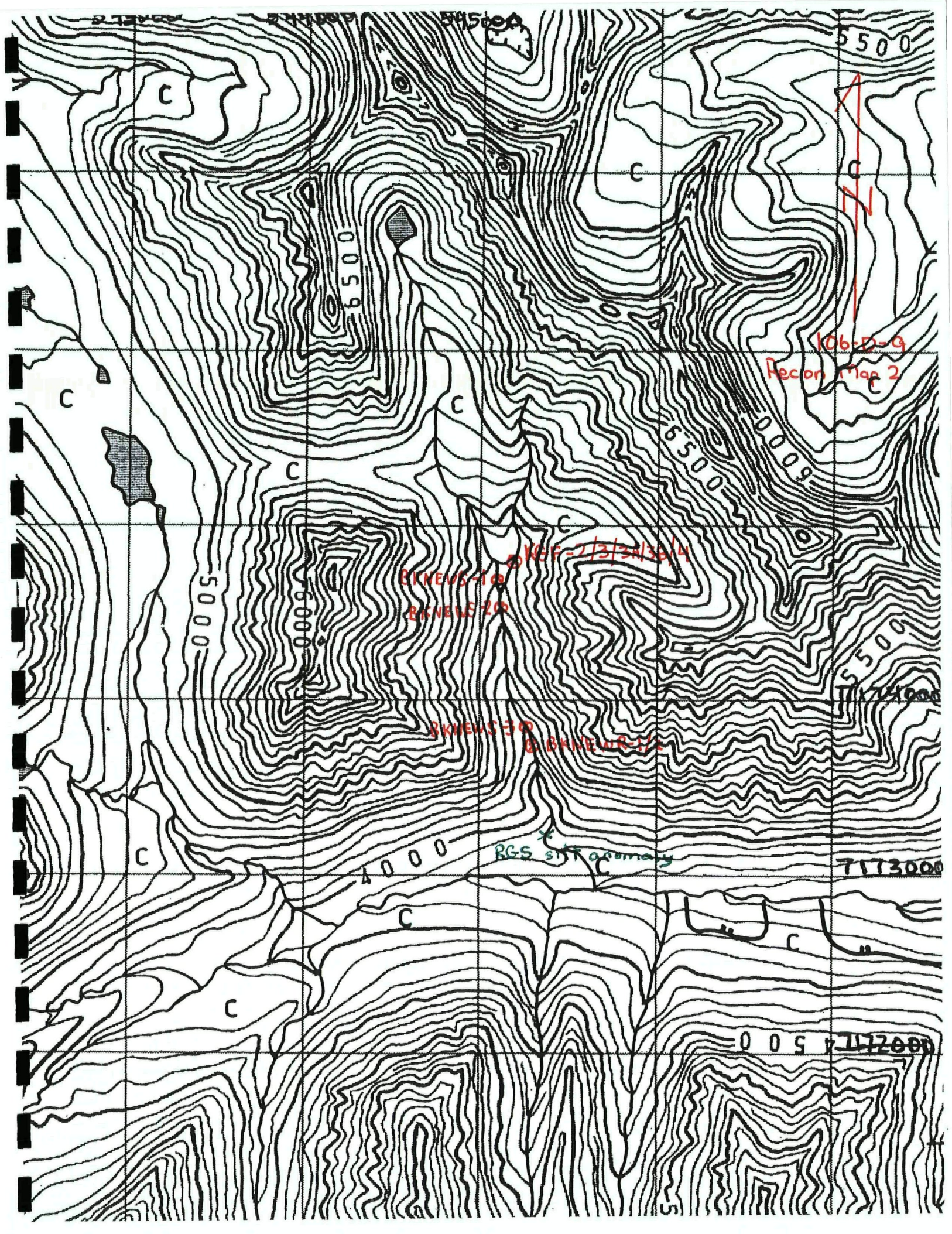
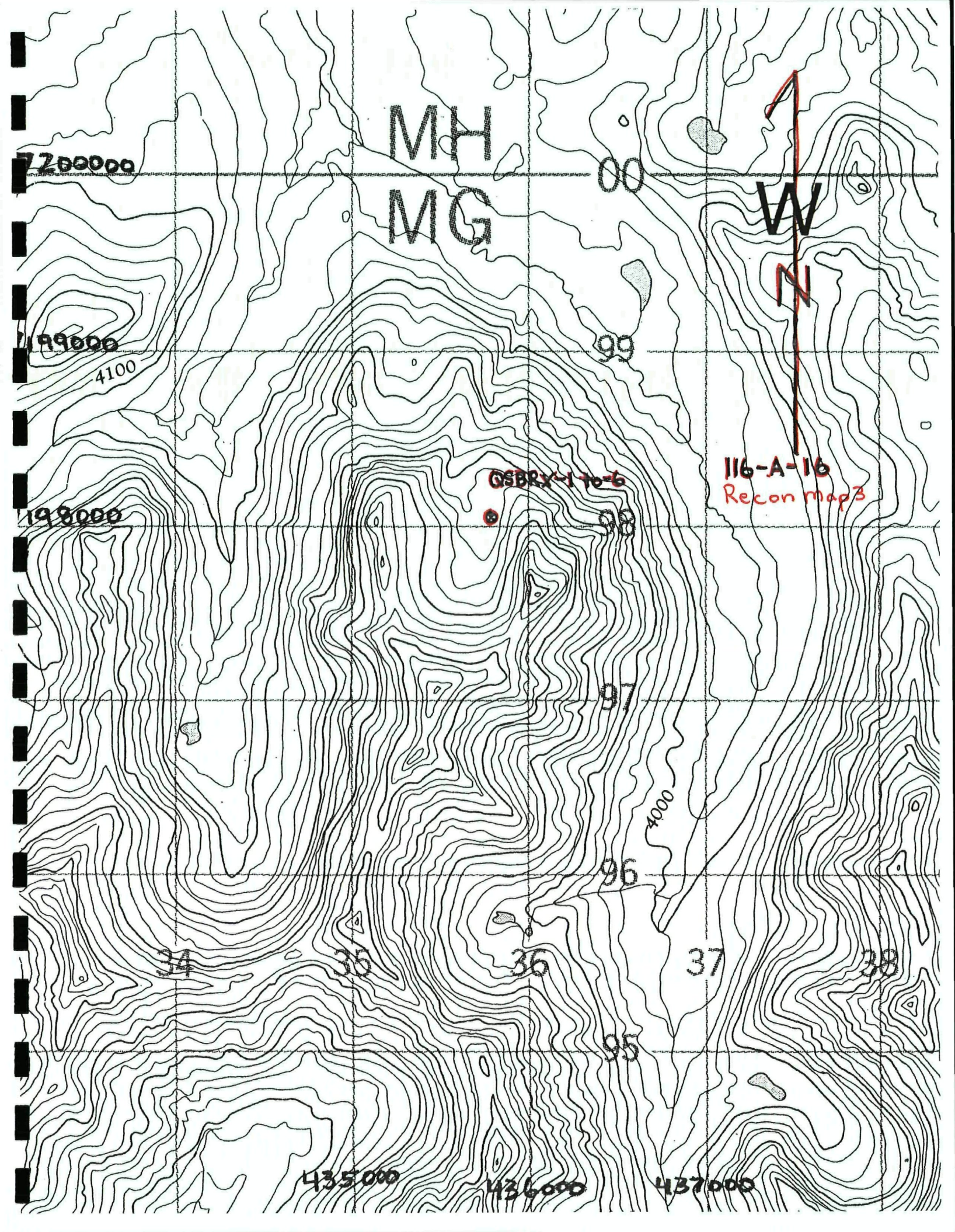
106-E-4
106-D-13
Map B-2
KG-BFR-1/2/3
Cluster of anomalous rock float samples
BKFBR-7
BKFBR-1 to 6

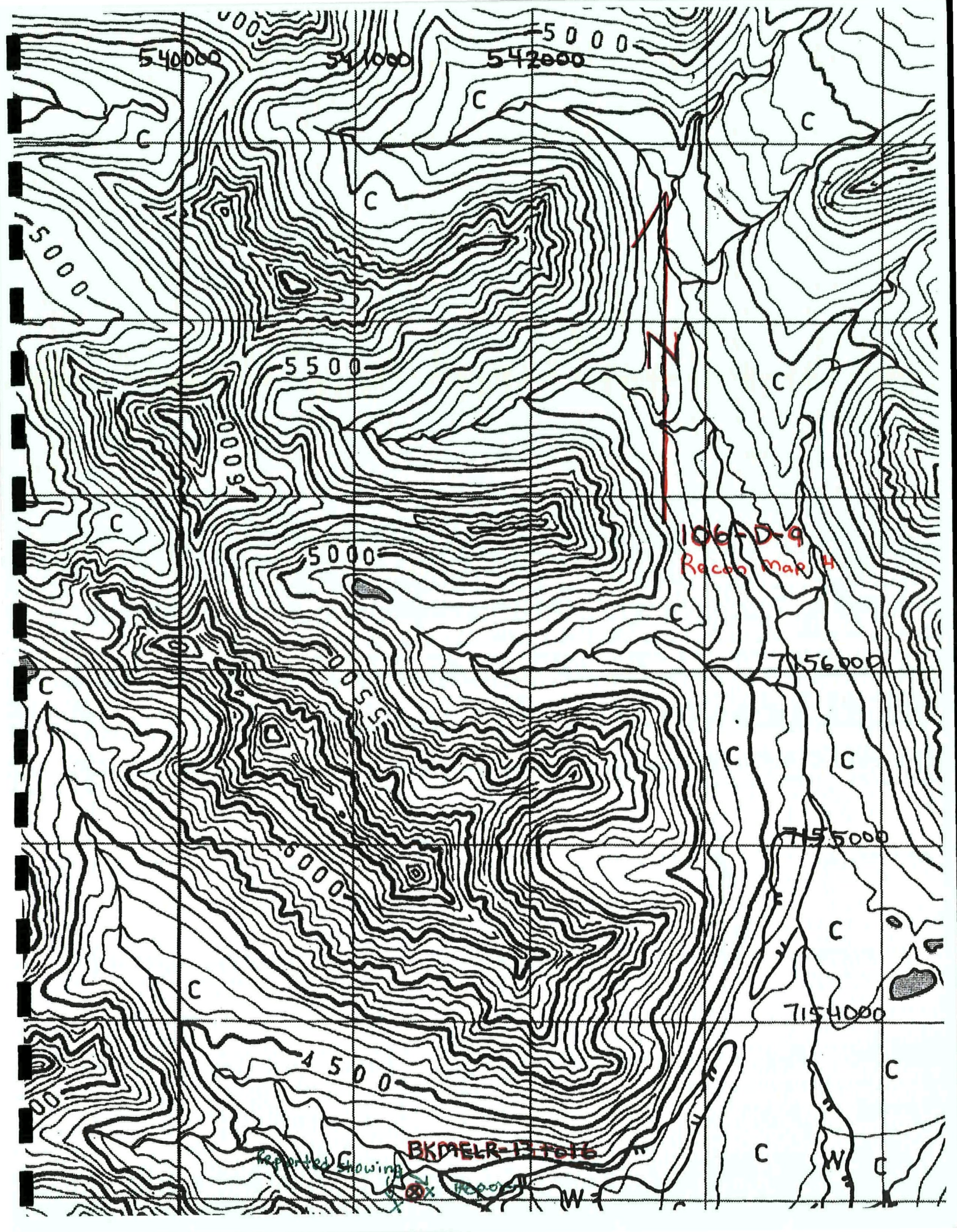

6000
5000


536000
539000
N
106-D-4
Map E
7161000
7160000
7159000
7158000
5000
5500
C
BKMELR-1
BKMELS-1
BKMELR-6
BKMELS-3
BKMELR-2/3/4/5
and BKFER-1
Cluster of anomalous talus rock samples


Recon Map 1
X RGS silt anomaly
BKMELS-6
BKMELS-11
BKMELR-12
BKMELS-7
BKMELS-8
BKMELS-9
X reported showing
BKMELS-5
BKMELR-8/9/10
BKMELS-4
BKMELS-3
5500
6000
6500
7000
7500
C


5500
6500
6000
5000
4000
7113000
7112000
N
106-D-9
Recon Map 2
KEF-2/3/34/35/4
BKNEWS-10
BKNEWS-20
BKNEWS-30
RGS site
C


MH
MG
W
N
00
99
98
97
96
95
4100
4000
34
35
36
37
38
200000
199000
198000
435000
436000
437000
OSBRX-1 to-6
116-A-16
Recon Map3


540000
541000
542000
5000
5500
6000
4500
106-D-9
Recon Map H
7156000
7155000
7154000
BKMELR-13 to 16
Reported Showing
Recon

Certificate# 02H0827
Client Northern Analytical Laboratories
Project W O 020019
No of Samples 68
Date In Aug 02, 2002
Date Out Aug 08, 2002

Sample Name	SampleType	Au ppb	Ag ppm	Cu ppm	Pb ppm
BKA1R-1	Pulp	<5	<0 1	59	8
BKA1R-2	Pulp	121	1	4670	8
BKA2R-1	Pulp	<5	0 1	196	17
BKA2R-2	Pulp	<5	0 1	1687	15
BKA4R-1	Pulp	<5	<0 1	39	25
BKA4R-2	Pulp	<5	0 1	99	17
BKA4R-3	Pulp	<5	0 1	101	18
BKFAR-1	Pulp	76	3 3	7785	24
BKFAR-2	Pulp	17	3	5715	111
BKFAR-3	Pulp	5	0 2	129	27
BKFAAR-1	Pulp	<5	<0 1	7	12
BKFAAR-2	Pulp	41	2 8	19198	<2
BKFAAR-3	Pulp	<5	<0 1	95	<2
BKFAAR-4	Pulp	<5	<0 1	852	<2
BKFAAR-5	Pulp	<5	<0 1	292	18
BKFAAR-6	Pulp	<5	<0 1	57	3
BKFAAR-7	Pulp	<5	<0 1	262	8
BKFAAR-8	Pulp	15	<0 1	564	13
BKFAAR-9	Pulp	<5	<0 1	15	2
BKFAAR-10	Pulp	<5	<0 1	655	19
BKFBR-1	Pulp	<5	<0 1	393	8
BKFBR-2	Pulp	<5	<0 1	135	14
BKFBR-3	Pulp	<5	<0 1	217	18
BKFBR-4	Pulp	<5	<0 1	47	19
BKFBR-5	Pulp	<5	<0 1	121	9
BKFBR-6	Pulp	8	3 6	61	9
BKFBR-7	Pulp	227	1 7	8257	110
BKFER-1	Pulp	209	<0 1	4541	13
BKKKR-1	Pulp	5	<0 1	85	15
BKKKR-2	Pulp	<5	<0 1	193	25
BKKKR-3	Pulp	<5	<0 1	303	16
BKKKR-4	Pulp	12	0 2	181	15
BKMELR-1	Pulp	94	1 8	5223	8
BKMELR-2	Pulp	8	<0 1	90	<2
BKMELR-3	Pulp	24	<0 1	66	2
BKMELR-4	Pulp	633	3	7960	3
BKMELR-5	Pulp	80	0 9	1577	5
BKMELR-6	Pulp	39	<0 1	72	<2
BKMELR-7	Pulp	<5	0 1	60	20
BKMELR-8	Pulp	28	0 9	2897	26
BKMELR-9	Pulp	<5	<0 1	225	25

BKMELR-10	Pulp	17	0 8	912	5
BKMELR-11	Pulp	51	0 4	1965	<2
BKMELR-12	Pulp	17	2 3	2777	<2
BKMELR-13	Pulp	<5	0 1	111	40
BKMELR-14	Pulp	6	<0 1	18	<2
BKMELR-15	Pulp	5	0 2	2271	3
BKMELR-16	Pulp	225	36	191915	35
BKNEWR-1	Pulp	9	<0 1	218	4
BKNEWR-2	Pulp	6	<0 1	15	<2
CWA1R-1	Pulp	13	<0 1	139	9
CWKKR-1	Pulp	9	<0 1	124	14
EKA4R-1	Pulp	27	<0 1	172	169
EKA4R-2	Pulp	<5	<0 1	129	17
KGBFR-1	Pulp	224	1 9	6189	43
KGBFR-2	Pulp	7	<0 1	432	17
KGBFR-3	Pulp	13	0 1	1778	17
KGF-2	Pulp	28	0 7	1015	22
KGF-3	Pulp	16	1 5	7102	6
KGF-3A	Pulp	20	1 7	10180	18
KGF-3B	Pulp	8	0 6	4015	19
KGF-4	Pulp	13	<0 1	2582	5
QSBRX-1	Pulp	<5	0 4	964	21
QSBRX-2	Pulp	<5	<0 1	32	21
QSBRX-3	Pulp	<5	<0 1	46	18
QSBRX-4	Pulp	<5	<0 1	10	18
QSBRX-5	Pulp	<5	<0 1	14	8
QSBRX-6	Pulp	<5	<0 1	50	23
Minimum detection		5	0 1	1	2
Maximum detection		10000	100	20000	20000
Method		FA/AAS	ICP	ICP	ICP

Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm
32	<5	<5	<3	5	<10	<2	<0 1	17
9	<5	<5	<3	2	<10	<2	<0 1	11
27	<5	<5	<3	4	<10	<2	<0 1	19
51	<5	<5	<3	4	<10	<2	<0 1	38
44	<5	<5	<3	7	<10	<2	<0 1	25
41	<5	<5	<3	10	<10	<2	<0 1	24
130	<5	<5	<3	16	<10	<2	<0 1	27
22	367	<5	<3	2	<10	23	<0 1	135
535	8	<5	<3	3	<10	3	5 4	30
157	<5	<5	<3	10	<10	<2	<0 1	87
8	<5	<5	<3	6	<10	<2	<0 1	50
<1	22	<5	<3	4	<10	<2	<0 1	136
5	<5	<5	<3	10	<10	<2	<0 1	191
4	<5	<5	<3	3	<10	<2	<0 1	95
23	<5	<5	<3	5	<10	3	<0 1	42
10	<5	<5	<3	7	<10	<2	<0 1	213
5	<5	<5	<3	6	<10	<2	<0 1	39
16	<5	<5	<3	9	<10	<2	<0 1	102
12	<5	<5	<3	6	<10	<2	<0 1	11
35	<5	<5	<3	7	<10	<2	<0 1	19
7	<5	<5	<3	6	<10	9	<0 1	4
63	<5	<5	<3	7	<10	<2	<0 1	53
40	<5	<5	<3	6	<10	<2	<0 1	23
69	<5	<5	<3	6	<10	<2	<0.1	73
27	<5	<5	<3	6	<10	<2	<0 1	41
24	<5	<5	<3	11	<10	<2	<0 1	30
96	<5	<5	<3	19	<10	<2	<0 1	96
9	2979	<5	<3	4	<10	<2	<0 1	636
75	<5	<5	<3	5	<10	<2	<0 1	34
52	<5	<5	<3	6	<10	<2	<0 1	30
48	<5	<5	<3	5	<10	<2	<0 1	24
352	<5	<5	<3	7	<10	<2	<0 1	16
4	5724	<5	<3	4	<10	7	<0 1	2552
37	<5	<5	<3	6	<10	<2	<0 1	28
8	42	<5	<3	3	<10	<2	<0 1	23
11	364	<5	<3	10	<10	<2	<0 1	175
19	148	<5	<3	9	<10	<2	<0 1	83
7	8	<5	<3	1	<10	<2	<0 1	12
72	<5	<5	<3	9	<10	<2	<0 1	43
24	110	<5	<3	5	<10	<2	<0 1	133
22	<5	<5	<3	7	<10	<2	<0 1	46

13	835	<5	<3	13	<10	<2	<0 1	542
5	<5	5	<3	4	<10	<2	<0 1	6
20	<5	<5	<3	20	<10	<2	<0 1	39
117	<5	<5	<3	5	<10	<2	<0 1	32
2	<5	<5	<3	13	<10	<2	<0 1	5
5	109	<5	<3	8	<10	<2	<0 1	40
1	<5	<5	<3	17	<10	5383	<0 1	18
12	<5	<5	<3	2	<10	<2	<0 1	4
7	<5	<5	<3	6	<10	<2	<0 1	31
34	<5	<5	<3	2	<10	<2	<0 1	24
47	<5	<5	<3	6	<10	<2	<0 1	23
49	<5	20	<3	6	<10	<2	<0 1	27
73	<5	<5	<3	5	<10	<2	<0 1	29
90	<5	<5	<3	10	<10	<2	<0 1	41
43	<5	<5	<3	8	<10	<2	<0 1	48
34	<5	<5	<3	8	<10	<2	<0 1	21
45	<5	<5	<3	9	<10	<2	<0 1	54
18	<5	<5	<3	6	<10	<2	<0 1	12
19	<5	<5	<3	9	<10	<2	<0 1	16
20	<5	<5	<3	10	<10	<2	<0 1	36
17	<5	<5	<3	7	<10	<2	<0 1	19
26	<5	<5	<3	3	<10	<2	<0 1	24
105	<5	<5	<3	7	<10	<2	<0 1	40
90	<5	<5	<3	8	<10	<2	<0 1	42
44	<5	<5	<3	6	<10	<2	<0 1	31
27	<5	<5	<3	4	<10	<2	<0 1	16
104	<5	<5	<3	6	<10	<2	<0 1	40
1	5	5	3	1	10	2	0 1	1
20000	10000	1000	10000	1000	1000	10000	100	10000
ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm
4	46	13	22	58	887	3	76	13
5	32	16	63	41	879	3	84	9
20	143	14	98	73	314	7	85	4
26	172	13	54	126	568	4	44	6
9	23	18	12	128	626	3	236	3
32	<2	16	84	114	264	6	8	16
31	7	15	36	166	454	7	8	12
62	3	21	133	3	75	3	2	1
24	3	15	131	14	400	7	18	3
82	20	16	89	319	3218	11	50	2
43	24	13	61	55	712	34	4	16
71	14	22	65	6	21	7	3	6
3	8	15	59	174	797	5	5	19
30	17	17	35	9	1253	40	32	15
39	21	19	74	26	876	3	7	7
30	10	16	102	158	148	<2	5	11
23	13	12	34	73	1642	12	47	12
72	10	17	73	104	1952	<2	13	8
8	43	16	56	38	4026	4	19	6
50	18	19	164	133	754	2	2	3
3	188	14	50	17	2877	9	31	5
73	36	17	78	127	1155	2	11	2
37	107	17	70	60	755	19	10	14
78	109	12	102	165	911	5	24	3
22	48	14	30	221	3285	7	75	2
32	18	23	60	101	1236	26	26	15
45	272	27	56	141	2164	35	29	19
1115	6	19	96	9	1218	3	24	3
27	19	17	58	139	1024	2	65	10
17	48	12	56	166	1016	2	91	11
18	55	11	74	147	895	4	95	11
1	36	15	27	124	923	7	18	11
368	6	16	123	5	473	2	3	2
28	14	16	31	10	2469	6	20	4
23	20	13	35	3	614	17	2	5
169	17	20	59	14	8300	2	12	3
98	18	21	41	18	9455	5	14	6
4	10	20	81	2	443	12	2	1
69	4	17	173	178	1814	<2	40	2
86	<2	15	94	17	350	6	<1	4
57	<2	11	33	24	199	44	1	7

156	9	11	19	8	7626	<2	41	1
10	7	18	57	3	419	17	8	6
<1	26	23	25	27	17632	<2	5	6
80	<2	19	244	86	713	3	11	3
<1	12	18	52	37	8939	<2	6	4
78	8	12	22	37	2778	2	48	1
37	12	59	1	42	2581	<2	2	6
11	30	14	119	6	4153	8	8	1
16	48	16	27	10	4578	6	36	3
7	11	11	50	84	418	6	86	4
3	53	17	35	97	684	9	24	13
27	52	10	47	104	425	5	122	10
19	26	18	38	150	522	3	68	4
67	33	21	88	106	1969	2	27	2
21	10	16	24	118	772	7	28	4
14	42	15	40	18	2219	7	75	10
197	62	22	100	28	1722	3	4	6
15	42	23	80	88	5353	4	19	2
33	37	20	58	167	320	5	3	4
54	14	16	52	196	1597	5	7	4
37	28	15	74	137	2295	4	8	3
15	4	14	149	102	437	28	807	14
61	62	17	142	81	913	26	26	11
92	26	13	146	100	1214	21	57	15
194	37	16	150	80	860	25	171	7
73	29	13	132	43	323	17	37	3
52	38	12	78	76	1566	22	27	8
1	2	5	1	2	1	2	1	1
10000	10000	1000	10000	10000	10000	10000	10000	10000
ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
6	0 24	1 18	2 92	2 53	1 08	0 06	0 08	0 11
5	0 21	0 76	4 12	1 43	0 38	0 02	0 05	0 08
5	0 12	1 73	1 55	2 16	1 2	0 41	0 23	0 1
5	0 26	2 36	1 74	3 32	1 6	0 8	0 14	0 11
11	0 22	4 42	2 64	3 79	1 8	0 08	0 21	0 05
3	0 19	3 14	4 67	3 2	0 25	<0 01	0 05	0 06
7	0 23	1 89	1 73	4 76	0 84	0 03	0 1	0 07
1	0 01	0 06	0 06	2 71	0.06	0 03	0 06	<0 01
1	<0 01	0 62	0 77	2 53	0 52	0 04	0 06	0 32
26	0 04	3 33	4 58	7 01	4 46	0 02	0 07	0 1
6	0 02	1 92	1 16	6 8	1 94	0 07	0 08	0 07
2	<0 01	0 09	0 11	3 32	0 02	0 03	0 12	0 05
6	0 04	0 33	1 28	8 43	0 64	0 01	0 11	0 07
4	<0 01	0 21	4 66	1 42	2 19	0 1	0 1	0 07
3	<0 01	1 73	1 58	3 31	1 77	0 22	0 06	0 03
1	0 01	0 22	0 48	8 45	0 17	0 04	0.12	0 11
13	0 01	0 27	6 26	2 04	3 01	0 05	0 09	0 2
17	<0 01	2.52	3 27	4 92	3 4	0 08	0 07	0.16
15	0 02	0 63	4 84	3 62	2 36	0 14	0 07	0 06
7	0 12	2 72	0 52	6 18	2 38	0 1	0 05	0 15
4	0 01	0 18	6 55	2 07	2 88	0 13	0 07	0 05
5	0 14	2 9	0 49	5.02	3 42	0.21	0 07	0 03
7	0 04	2 07	1 38	5 22	3 01	0 33	0 08	0 08
7	0 22	2 64	1 06	5 28	3 02	1 22	0 08	0 05
23	0 02	0 93	7 7	4 62	3 27	0 04	0 08	0 08
11	0 04	1 53	3	6 69	2 13	0 18	0 09	0 07
3	0 07	2 09	0 45	10 25	2 8	0 06	0 08	0 07
6	<0 01	0 24	3 62	2 6	1 59	0 04	0 07	<0 01
5	0 17	3 4	6 17	4 75	1 69	0 06	0 21	0 08
11	0 17	4 2	6 01	4 97	1 45	0 06	0 29	0 09
11	0 12	3 4	4 86	4 1	1 11	0 07	0 32	0 12
9	0 2	1 82	2 36	5 01	1 22	0 08	0 11	0 14
2	<0 01	0 16	0 03	3 97	0 1	0 01	0 07	<0 01
3	<0 01	0.87	2 56	6 15	1.6	0 1	0 05	0 01
1	<0 01	0 33	0 13	1 16	0 14	0 16	0 06	0 01
7	<0 01	0 51	1 89	10 67	1 54	0 04	0 06	<0 01
7	<0 01	0 65	1 82	11 5	1 59	0 09	0 06	0 01
<1	<0 01	0 21	0 19	0 74	0 11	0 13	0.06	0 01
26	<0 01	3 26	4 46	7 71	4 72	0 03	0 06	0 02
3	<0 01	2 36	0 03	2 8	3 5	0 02	0.05	<0 01
4	<0 01	3 87	0 06	2 74	5 45	0 03	0 05	<0 01

7	<0 01	0 06	11 52	7 48	11 27	<0 01	0 07	<0 01
3	<0 01	0 16	1 28	0 94	0.56	0 04	0 11	0 04
2	<0 01	0 02	0 24	27 62	5 01	<0 01	0 06	<0 01
2	0 14	2 25	0 77	3 72	2 04	0 03	0 07	0 03
5	<0 01	0 23	4 12	16 38	3 57	0 01	0 06	<0 01
18	<0 01	0 25	14 88	5 07	6 13	0 1	0 07	0 01
15	<0 01	0 01	0 43	26	0 58	<0 01	0 05	<0 01
<1	<0 01	0 41	2 08	2 41	0 6	0 09	0 06	0 01
5	<0 01	0 29	5 16	3 73	1 81	0 25	0 07	0 07
6	0 17	1 33	1 72	1 82	0 89	0 01	0 08	0 06
7	0 2	1 58	1 79	4 28	0 94	0 11	0 13	0 14
7	0 25	2 28	1 99	2 8	0 95	0 07	0 2	0 06
14	0 2	2 98	1 77	3 55	1 86	0 06	0 26	0 03
6	0 24	3 03	0 56	6 49	3 72	0 06	0 09	0 08
2	0 32	1 01	0 82	4 73	1 16	0 03	0 1	0 08
5	<0 01	0 87	9 81	1 6	0 72	0 08	0 07	0 08
2	<0 01	3 18	0 21	7 53	2 37	0 05	0 06	0 02
15	<0 01	1 27	5 56	6 08	2 1	0 09	0 07	0 02
10	<0 01	3 27	0 24	10 93	1 61	0 2	0 05	0 08
14	<0 01	3 97	1 51	10 14	2 39	0 19	0 05	0 1
14	<0 01	2 63	2 44	7 24	2 03	0 08	0 06	0 04
4	0 84	1.37	2 7	1 58	0 68	0 01	0.05	0.22
4	0 34	2 31	1 37	5 07	3 59	0 2	0 06	0 21
3	0 44	2 66	2 16	5 5	3 97	0 04	0 07	0 18
7	0 06	1 46	9 89	4 56	1 96	0 19	0 05	0 24
3	0 03	1 08	2 19	2 91	1 32	0.12	0 05	0 09
2	0 34	2 65	1 88	4 53	3 91	0 07	0 07	0 19
1	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01
10000	1	10	10	10	10	10	5	5
ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

Certificate# 02H0828
Client Northern Analytical Laboratories
Project W O 020019
No of Samples 79
Date In Aug 02, 2002
Date Out Aug 08, 2002

Sample Na	SampleTy	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm
BKGRBS-1	Pulp	<0 1	17	14	133	<5	<5	3
BKGRBS-2	Pulp	0 1	19	23	221	<5	<5	<3
BKGRBS-3	Pulp	0 1	25	36	637	<5	<5	<3
BKGRBS-4	Pulp	0 2	34	37	818	<5	<5	<3
BKGRBS-5	Pulp	0 1	35	18	290	<5	<5	<3
BKGRBS-6	Pulp	0 2	43	24	278	<5	<5	<3
BKGRBS-7	Pulp	0 1	43	22	249	<5	<5	<3
BKGRCS-1	Pulp	0 1	106	46	230	<5	<5	<3
BKGRCS-2	Pulp	<0 1	47	44	481	<5	<5	<3
BKGRCS-3	Pulp	<0 1	63	39	295	<5	<5	<3
BKGRCS-4	Pulp	<0 1	60	32	259	<5	<5	<3
BKGRCS-5	Pulp	<0 1	51	35	210	<5	<5	<3
BKGRCS-6	Pulp	<0 1	44	29	170	<5	<5	<3
BKGRCS-7	Pulp	<0 1	46	37	215	<5	<5	<3
BKGRCS-8	Pulp	<0 1	47	33	211	<5	<5	<3
BKGRS-1	Pulp	0 1	61	12	84	<5	<5	<3
BKGRS-2	Pulp	<0 1	50	16	80	<5	<5	<3
BKGRS-3	Pulp	0 1	95	10	75	<5	<5	<3
BKGRS-4	Pulp	<0 1	57	10	57	<5	<5	<3
BKGRS-5	Pulp	<0.1	32	15	48	<5	<5	<3
BKKKS-1	Pulp	<0.1	47	11	66	<5	<5	<3
BKMELS-1	Pulp	0 2	95	16	74	<5	<5	<3
BKMELS-2	Pulp	0 2	161	19	59	13	5	<3
BKMELS-3	Pulp	0 7	99	19	36	<5	<5	<3
BKMELS-4	Pulp	0 1	79	21	76	<5	<5	<3
BKMELS-5	Pulp	<0 1	60	11	22	<5	<5	<3
BKMELS-6	Pulp	<0 1	108	6	26	<5	<5	<3
BKMELS-7	Pulp	<0 1	89	8	22	<5	<5	<3
BKMELS-8	Pulp	0.1	72	8	29	<5	<5	<3
BKNEWS-1	Pulp	0 1	134	15	32	<5	<5	<3
BKNEWS-2	Pulp	0 1	136	18	34	<5	<5	<3
BKNEWS-3	Pulp	0 1	157	22	33	<5	<5	<3
BKOLS-1	Pulp	0 1	61	55	92	<5	5	<3
BKOLS-2	Pulp	0 1	74	42	85	<5	<5	<3
BKOLS-3	Pulp	0 6	145	98	281	62	<5	<3
BKOLS-4	Pulp	0 3	361	25	64	19	<5	<3
BKOLS-5	Pulp	<0 1	205	19	50	<5	<5	<3
BKOLS-6	Pulp	0 1	59	16	58	<5	<5	<3
CWA4S-1	Pulp	1	143	42	167	<5	<5	<3
CWA4S-2	Pulp	0 1	141	19	110	<5	<5	<3
CWGRBS-1	Pulp	0 3	90	53	706	<5	<5	<3

CWGRBS2Pulp	0 4	39	21	336	<5	<5	<3
CWGRBS3Pulp	0 3	64	41	637	<5	<5	<3
CWGRBS4Pulp	<0 1	61	27	197	<5	<5	<3
CWGRBS5Pulp	0 2	49	38	471	<5	<5	<3
CWGRBS6Pulp	0 2	47	33	496	<5	<5	<3
CWGRBS7Pulp	0 1	37	20	272	<5	<5	<3
CWGRBS8Pulp	0 3	39	34	389	<5	<5	<3
CWGRCS1Pulp	0 2	75	25	140	<5	<5	<3
CWGRCS2Pulp	0 4	74	20	140	<5	<5	<3
CWGRCS3Pulp	1 2	84	16	218	<5	<5	<3
CWGRCS4Pulp	0 2	87	30	218	<5	<5	<3
CWGRDS1Pulp	1	396	423	180	443	34	<3
CWGRDS2Pulp	<0 1	46	18	87	<5	<5	<3
CWGRDS3Pulp	0 1	74	21	107	<5	<5	<3
CWGRDS4Pulp	0 2	75	26	151	<5	<5	<3
CWGRDS5Pulp	0 2	71	23	150	<5	<5	<3
CWGRDS6Pulp	0 2	82	31	166	<5	<5	<3
CWGRDS7Pulp	<0 1	62	14	94	<5	<5	<3
CWGRDS8Pulp	0 1	68	17	148	<5	<5	<3
CWKKS-1 Pulp	<0 1	93	14	76	<5	<5	<3
CWKKS-2 Pulp	<0 1	54	68	167	<5	<5	<3
CWPLS-1 Pulp	<0 1	12	8	40	<5	<5	<3
CWPLS-2 Pulp	<0 1	11	11	37	<5	<5	<3
EKA1S-1 Pulp	<0 1	28	10	44	<5	<5	<3
EKA1S-2 Pulp	<0 1	26	17	45	<5	<5	<3
EKA1S-3 Pulp	<0 1	50	13	57	<5	<5	<3
EKGRBS-1Pulp	<0 1	9	8	31	<5	<5	<3
EKGRBS-2Pulp	<0 1	10	17	40	<5	<5	<3
EKGRBS-3Pulp	<0 1	15	14	60	<5	<5	<3
EKGRBS-4Pulp	0 3	10	7	48	<5	<5	<3
EKGRBS-5Pulp	<0 1	14	17	65	<5	<5	<3
EKGRCS-1Pulp	0 3	52	18	285	<5	<5	<3
EKGRCS-2Pulp	0 1	89	24	210	<5	<5	<3
EKGRCS-3Pulp	<0 1	80	22	185	<5	<5	<3
EKGRCS-4Pulp	0 1	66	28	173	<5	<5	<3
EKGRCS-5Pulp	0 1	67	32	194	<5	<5	<3
EKGRDS-1Pulp	<0 1	44	17	60	<5	<5	<3
EKGRDS-2Pulp	<0 1	22	6	48	<5	<5	<3
Minimum detection	0 1	1	2	1	5	5	3
Maximum detection	100	20000	20000	20000	10000	1000	10000
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP

Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm
6	<10	<2	<0 1	10	21	203	11	13
5	<10	<2	1 3	11	21	169	12	16
7	<10	<2	3 8	12	41	175	8	20
7	<10	<2	6 2	14	60	170	12	25
5	<10	<2	0 3	16	39	197	14	23
8	<10	<2	<0 1	16	41	210	8	24
9	<10	<2	<0 1	12	39	209	16	32
4	<10	<2	<0 1	20	38	146	11	44
3	<10	<2	<0 1	19	166	210	10	78
5	<10	<2	<0 1	20	135	191	13	83
6	<10	<2	<0 1	21	98	264	13	70
4	<10	<2	<0 1	20	74	198	11	55
6	<10	<2	<0 1	19	64	249	10	75
4	<10	<2	<0 1	18	63	323	16	49
3	<10	3	<0 1	18	60	276	10	55
4	<10	<2	<0 1	21	40	354	15	27
5	<10	<2	<0 1	21	30	297	12	28
5	<10	<2	<0 1	16	30	356	14	30
3	<10	<2	<0 1	16	20	268	14	24
3	<10	<2	<0 1	15	16	307	12	29
3	<10	<2	<0 1	11	9	119	12	18
7	<10	<2	<0 1	46	45	68	15	11
6	<10	<2	<0 1	48	52	78	10	11
5	<10	<2	<0 1	43	53	88	17	14
4	<10	<2	<0 1	28	29	57	13	13
3	<10	<2	<0 1	18	15	46	14	9
4	<10	<2	<0 1	25	17	49	16	4
3	<10	<2	<0 1	19	17	35	13	4
4	<10	<2	<0 1	18	22	42	15	9
4	<10	<2	<0 1	25	28	145	16	13
4	<10	<2	<0 1	27	29	174	10	13
5	<10	<2	<0 1	26	22	161	15	12
8	<10	<2	<0 1	23	25	64	13	14
7	<10	<2	<0 1	22	29	40	13	17
11	<10	4	<0 1	30	52	62	10	10
7	<10	<2	<0 1	57	62	74	14	11
5	<10	4	<0 1	34	43	99	20	25
4	<10	<2	<0 1	24	23	59	8	8
11	<10	<2	<0 1	37	24	56	12	30
13	<10	<2	<0 1	49	31	86	13	42
9	<10	<2	2 2	24	69	609	24	34

12	<10	<2	1	10	70	78	12	14
11	<10	<2	2 7	21	87	359	14	28
6	<10	<2	<0 1	16	31	417	16	35
9	<10	<2	<0 1	17	62	362	10	31
10	<10	<2	0 9	17	62	318	20	26
6	<10	<2	0 1	16	34	202	11	21
8	<10	<2	1 1	14	59	239	13	30
9	<10	<2	<0 1	28	76	325	12	91
10	<10	<2	<0 1	26	73	306	13	85
25	<10	<2	<0 1	13	54	189	8	15
9	<10	<2	<0 1	32	77	364	17	91
8	<10	3	<0 1	30	100	221	184	167
5	<10	<2	<0 1	29	26	266	13	40
7	<10	<2	<0 1	25	37	267	12	30
10	<10	<2	<0 1	29	78	311	8	93
9	<10	<2	<0 1	30	98	318	17	105
11	<10	<2	<0 1	31	96	327	10	111
8	<10	<2	<0 1	26	127	272	12	161
8	<10	<2	<0 1	30	119	275	18	127
8	<10	<2	<0 1	44	29	370	23	49
7	<10	<2	<0 1	25	28	274	13	63
3	<10	<2	<0 1	8	7	110	13	12
3	<10	<2	<0 1	8	4	103	17	13
4	<10	<2	<0 1	13	15	144	11	30
3	<10	<2	<0 1	13	17	152	14	27
4	<10	<2	<0 1	17	21	148	10	34
3	<10	<2	<0 1	7	10	40	20	11
2	<10	<2	<0 1	8	8	48	13	14
4	<10	<2	<0 1	10	14	88	18	17
2	<10	<2	<0 1	9	11	66	10	14
2	<10	<2	<0 1	9	14	103	15	19
10	<10	<2	<0 1	17	68	947	13	35
7	<10	<2	<0 1	25	86	441	12	98
7	<10	<2	<0 1	22	66	498	6	78
8	<10	3	<0 1	20	53	340	9	65
9	<10	5	<0 1	20	58	290	12	69
4	<10	<2	<0 1	16	14	187	9	25
3	<10	<2	<0 1	15	11	80	15	14
1	10	2	0 1	1	1	2	5	1
1000	1000	10000	100	10000	10000	10000	1000	10000
ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %
46	913	20	25	1	2	0 06	1 02	0 63
53	573	30	30	1	2	0 07	1 21	0 81
128	444	21	41	1	3	0 07	1 49	0 88
185	472	25	38	1	4	0 07	1 72	1 08
97	553	32	46	1	4	0 09	1 75	0 89
114	559	32	46	2	4	0 09	1 86	1 05
106	379	21	42	<1	3	0 06	1 61	1 7
48	475	11	37	1	3	0 06	1 2	1 72
29	423	25	25	2	1	0 02	1 13	0 84
35	1008	18	41	1	2	0.03	1 03	2 22
44	2265	12	45	2	2	0 04	0 92	2 09
40	1486	14	36	2	2	0 04	1	1 56
41	2143	13	34	1	2	0 04	0 88	1 31
32	1660	13	39	1	2	0 03	0 93	1 68
35	1177	15	39	1	2	0 04	0 9	2 06
59	3678	13	126	3	5	0 06	1 04	2 03
72	2185	13	97	4	5	0 07	1 11	1 7
62	1161	11	110	3	5	0 05	1 07	1 66
66	1059	11	85	4	5	0 08	1 17	1 28
83	1999	14	94	4	5	0 09	1 14	1 27
58	506	8	66	2	5	0.04	1 42	1 33
21	4177	18	14	5	5	0.01	0 71	0 56
19	3888	19	12	3	5	0 01	0 62	0 4
15	2167	12	12	4	2	<0 01	0 46	0 18
15	1470	28	5	2	2	0 01	0 85	0 08
15	1001	29	3	1	2	0 01	0 88	0 07
42	1244	18	2	3	2	<0 01	0 42	0 04
24	1006	18	1	4	1	<0.01	0 38	0 03
14	1091	21	3	2	2	0 01	0 68	0 05
28	1459	20	3	4	3	0 01	1 11	0 14
25	1577	21	4	4	3	0 01	1 06	0 15
23	1559	20	4	6	3	<0 01	0 96	0 21
24	2682	17	18	3	4	0 02	1 02	6 95
27	1956	12	20	3	4	0 02	1 08	9 95
26	2811	18	20	2	4	0 01	0 63	5 76
20	3846	16	11	3	5	0 01	0 7	0 33
34	2032	19	11	2	4	0 02	1 14	0 22
13	2105	19	8	2	2	0 01	0 56	0 2
147	963	5	64	6	11	0 12	3 28	2 55
208	1263	6	91	10	17	0 26	3 99	3 93
158	600	24	75	2	5	0 09	2 48	1 44

83	270	21	39	1	1	0 03	0 9	2 99
125	620	26	51	1	4	0 08	1 94	1 5
92	438	38	86	1	5	0 11	2 74	1 21
141	478	25	60	2	5	0 09	2 1	1 86
120	437	32	53	1	4	0 08	1 81	1 54
71	536	32	43	1	4	0 08	1 62	0 99
162	399	27	48	1	3	0 07	1 91	2 1
109	647	15	44	2	7	0 12	2 47	0 76
104	613	14	46	2	7	0 11	2 34	0 75
39	544	11	376	7	3	0 01	0 58	5 45
129	840	22	55	3	9	0 15	3 01	0 96
57	1178	20	60	5	4	0 08	1 25	3 38
116	1994	12	61	7	8	0 15	2.11	1 45
77	1381	15	65	5	6	0 09	1 21	1 54
108	656	16	47	2	7	0 12	2 48	0 79
110	754	15	48	1	7	0 14	2 86	0 98
120	778	16	47	1	8	0 13	2 92	0 88
116	414	13	36	2	6	0 11	1 56	0 8
108	526	14	40	2	6	0 12	1 85	0 83
153	7514	10	75	4	7	0 1	1 95	1 44
86	4730	27	73	4	5	0 1	1 56	2 47
49	341	15	70	4	3	0 06	0 78	0 78
56	308	15	63	5	3	0 07	0 71	0 73
85	455	13	62	7	5	0 15	1 32	1 33
66	445	13	59	6	5	0 13	1 31	1 29
101	777	13	68	9	7	0 16	1 5	2 2
20	175	22	27	1	2	0 06	0 85	0 7
22	217	25	31	1	2	0 08	1 08	0 52
30	261	35	37	1	3	0 09	1 4	0 65
23	328	28	32	<1	2	0.07	1 07	0 6
41	311	34	54	<1	3	0.07	1 28	1 7
49	546	20	45	2	2	0 04	0 96	2 19
77	653	9	29	1	4	0 09	1 75	1 75
67	622	11	28	1	4	0 08	1 4	1 79
66	479	10	27	2	4	0 08	1 45	1 64
70	556	9	23	1	4	0 08	1 57	1 33
79	666	10	51	5	5	0 13	1 36	1 45
61	581	6	22	5	3	0 11	1 22	0 89
2	1	2	1	1	1	0 01	0 01	0 01
10000	10000	10000	10000	10000	10000	1	10	10
ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

Fe %	Mg %	K %	Na %	P %
1 6	0 51	0 13	0 06	0 14
1 68	0 63	0 19	0 06	0 14
1 96	1 11	0 24	0 06	0 18
2 39	1 42	0 27	0 07	0 17
2 38	1 1	0 38	0 07	0 15
2 61	1 21	0 41	0 07	0 16
2 01	1 39	0 42	0 08	0 15
2 75	1 48	0 07	0 05	0 08
2 97	1 18	0 05	0 06	0 08
2 97	1 61	0 06	0 05	0 08
4 17	1 44	0 04	0 05	0 09
3 08	1 29	0 05	0 05	0 07
3 36	1 11	0 04	0 05	0 08
2 86	1 13	0 05	0 05	0 08
2 78	1 09	0 05	0 05	0 08
2 93	0 8	0 08	0 06	0 09
3 23	0 88	0 07	0 05	0 09
2 85	0 78	0 07	0 06	0 09
2 65	0 91	0 06	0 06	0 09
2 85	0 79	0 06	0 06	0 09
2 76	0 52	0 1	0 07	0 08
5 89	0 61	0 09	0 05	0 05
5 2	0 43	0 09	0 05	0 05
4 81	0 37	0 06	0 05	0 04
4 16	0 35	0 09	0 05	0 03
2 7	0 4	0 09	0 05	0 02
4 88	0 18	0 05	0 05	0 02
4	0 16	0 04	0 05	0 02
3 99	0 33	0 05	0 04	0 02
4 03	0 8	0 07	0 05	0 03
4 05	0 74	0 06	0 04	0 03
4 33	0 68	0 06	0 04	0 03
3 22	4 75	0 15	0 05	0 06
3 36	5 07	0 2	0 05	0 04
4 61	3 29	0 13	0 05	0 08
5 7	0 46	0 09	0 05	0 04
4 94	0 56	0 1	0 05	0 05
4 06	0 34	0 06	0 05	0 04
6 33	1 35	0 07	0 08	0 07
7 03	1 69	0 05	0 08	0 07
3 73	1 72	0 67	0 08	0 24

1 79	1 71	0 25	0 05	0 13
3 24	1 53	0 46	0 07	0 18
3 06	1 64	0 62	0 08	0 21
2 84	1 83	0 51	0 08	0 22
2 75	1 55	0 47	0 08	0 2
2 32	0 91	0 33	0 08	0 19
2 28	1 79	0 51	0 07	0 16
3 92	1 78	0 54	0 09	0 12
3 88	1 68	0 47	0 08	0 13
2 43	0 58	0 11	0 05	0 22
4 45	2	0 68	0 1	0 12
3 81	2 36	0 2	0 13	0 07
4 55	1 87	0 08	0 06	0 09
3 71	1 06	0 09	0 06	0 06
4 1	1 8	0 46	0 09	0 12
4 01	2 18	0 56	0 09	0 09
4 34	2 22	0 49	0 08	0 11
4 34	1 53	0 41	0 08	0 17
4 01	1 67	0 4	0 08	0 16
5 89	1 35	0 08	0 1	0 09
3 64	1 64	0 19	0 11	0 09
1 81	0 3	0 08	0 07	0 08
1 94	0 28	0 06	0 07	0 08
2 55	0 68	0 07	0 07	0 08
2 11	0 67	0 06	0 07	0 08
3 08	1 02	0 06	0 07	0 08
1 14	0 32	0 18	0 06	0 23
1 32	0 43	0 23	0 06	0 12
1 68	0 52	0 29	0 06	0 15
1 29	0 41	0 22	0 06	0 16
1 5	0 48	0 28	0 06	0 63
2 8	1 66	0 1	0 05	0 12
3 02	2 24	0 14	0 05	0 09
2 72	2 02	0 13	0 05	0 08
3 12	1 99	0 1	0 05	0 09
3 16	1 98	0 11	0 05	0 08
2 85	1	0 07	0 06	0 08
2 53	1 15	0 04	0 05	0 06
0 01	0 01	0 01	0 01	0 01
10	10	10	5	5
ICP	ICP	ICP	ICP	ICP