GEOCHEMICAL AND GEOLOGICAL REPORT

ON THE

TOPPER PROPERTY

NTS 93A/7

CARIBOO MINING DIVISION

Latitude 52° 17'

Longitude 120° 44'

for

Grand National Resources Inc.

915 - 470 Granville St.

Vancouver, B.C.

&

World Cement Industries Inc.

915 - 470 Granville St.

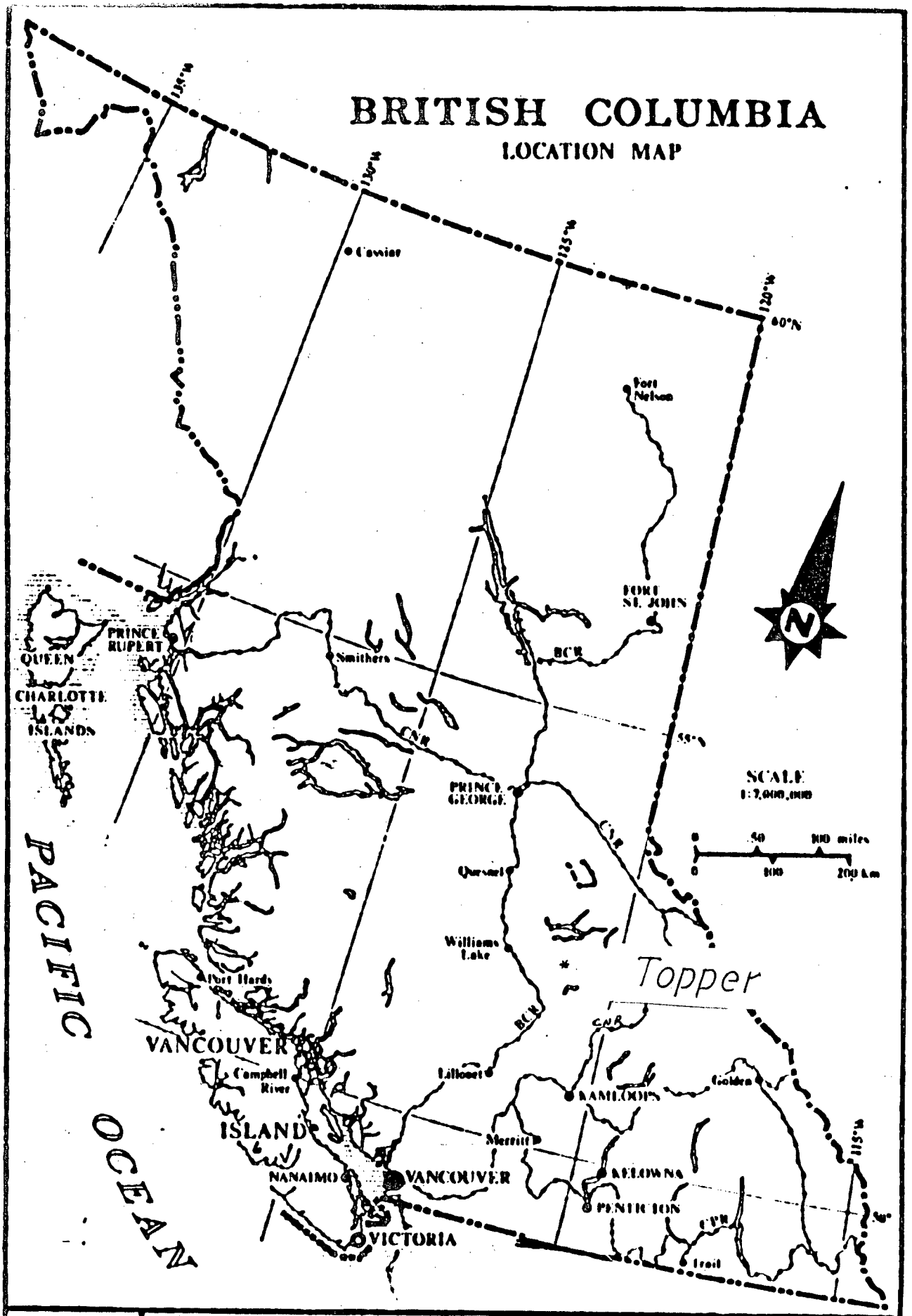
Vancouver, B.C.

August 15, 1984
Box 63
Westbridge, B.C.

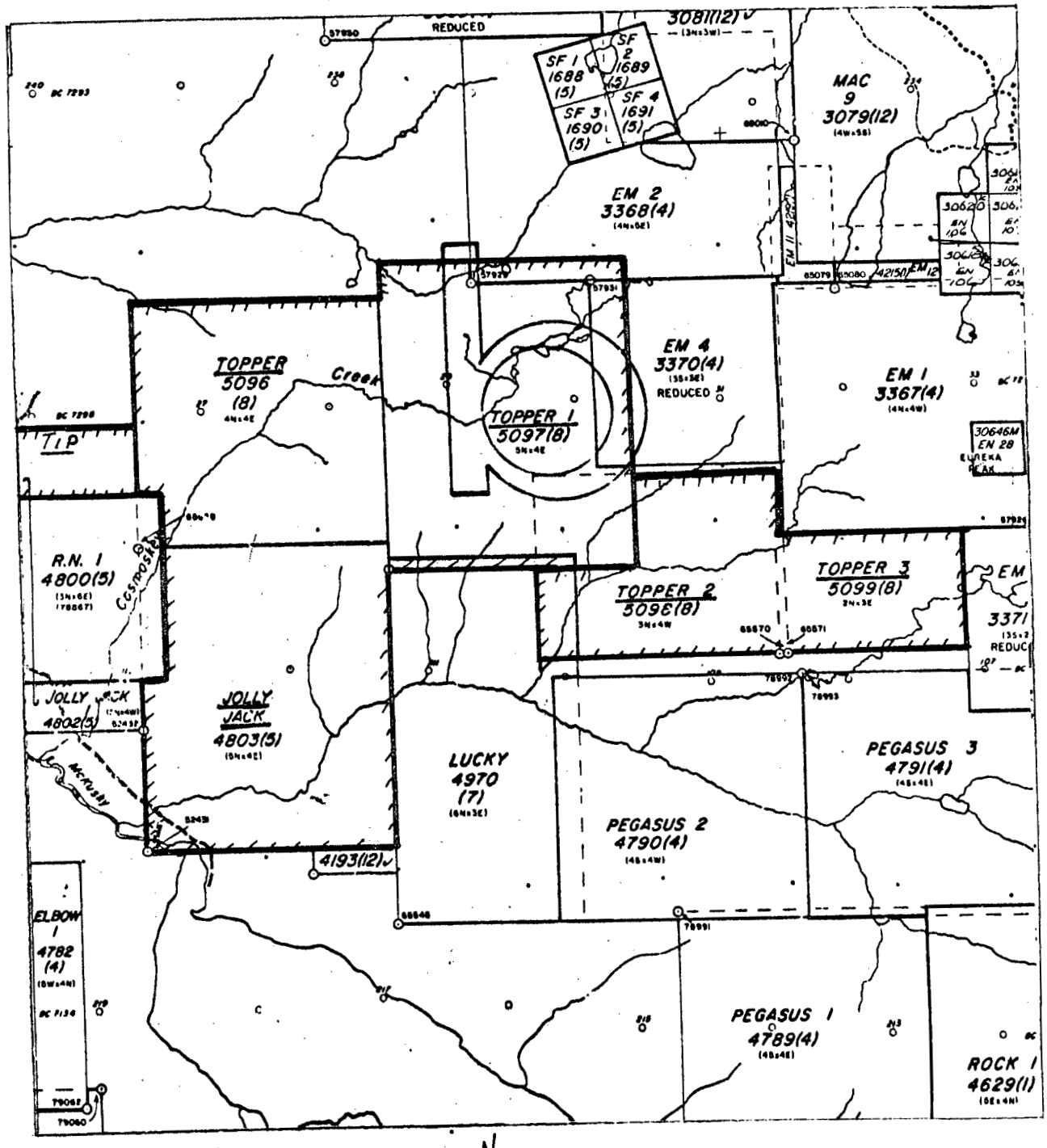
Roy Kregosky
BSc. Geology

TABLE OF CONTENTS

Illustrations



Monashee Geological Services	Grand National Resources Inc Topper Group	DATE aug.15/84 FIG. No. 1



claim location map

nts 93A/7

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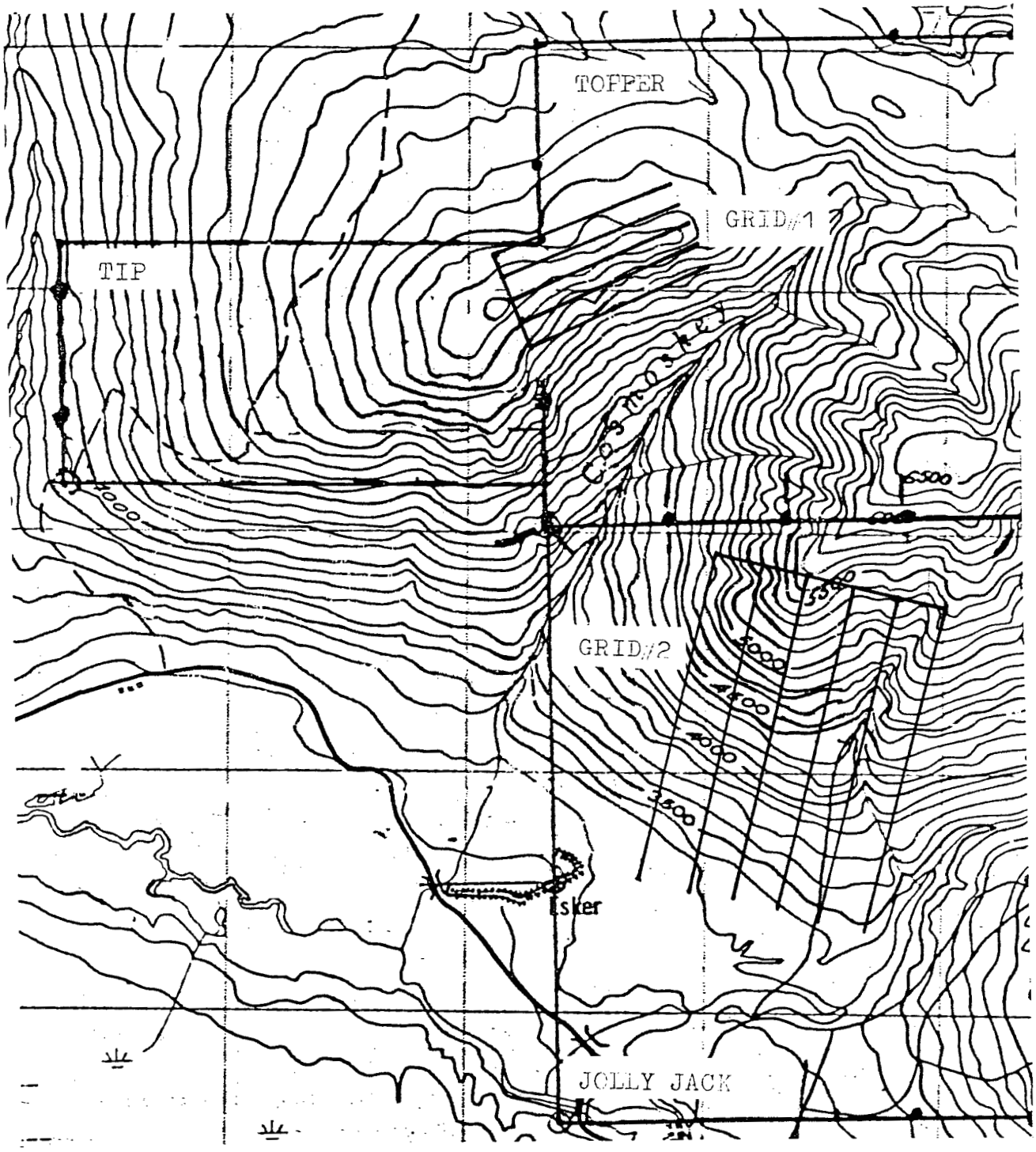
SCALE 1: 50,000

fig. 2



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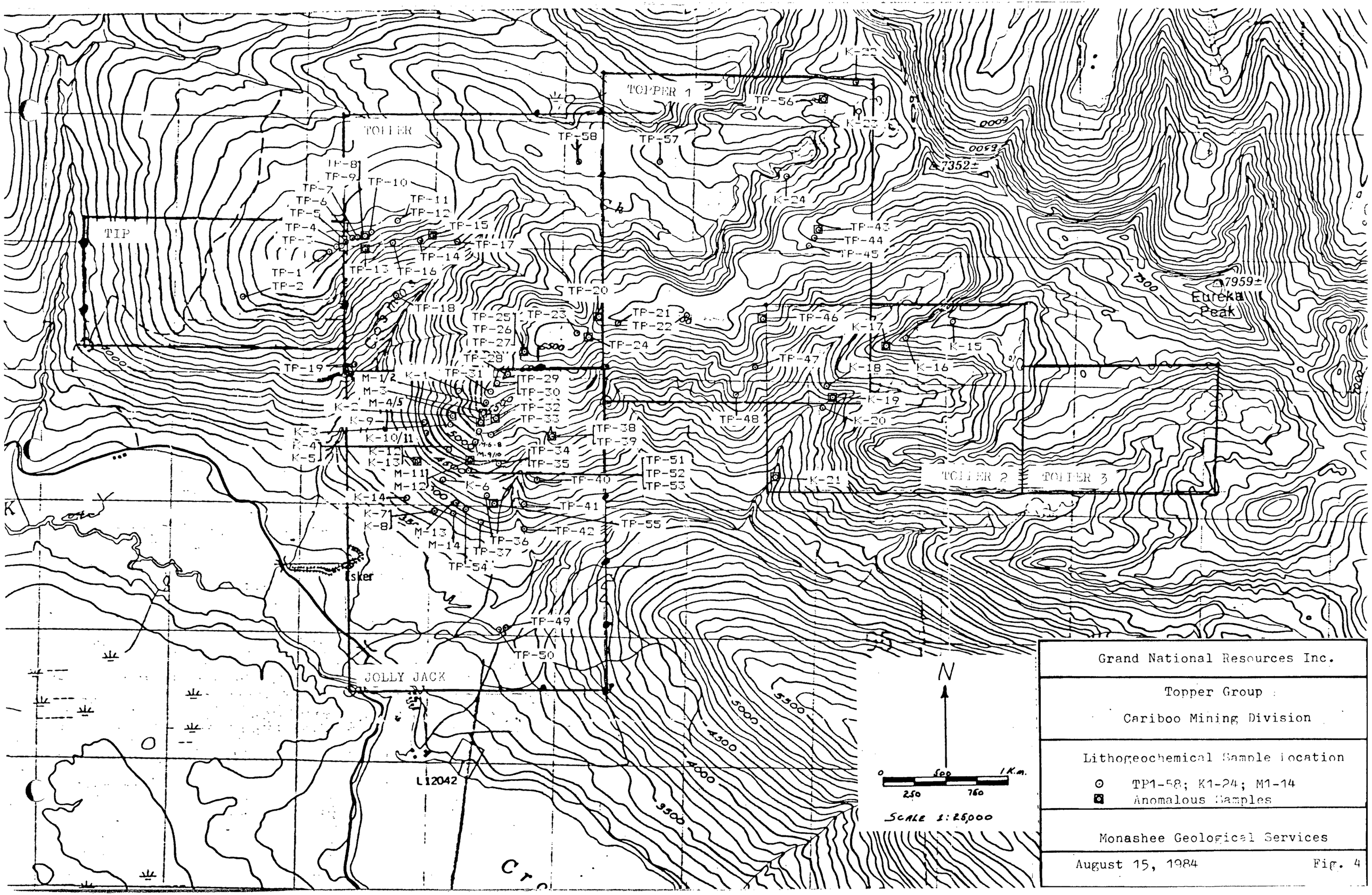
Survey Location

fig. 3



Grand National Resources Inc.

Topper Group

Cariboo Mining Division

Lithogeochemical Sample Location

⊙ TP1-58; K1-24; M1-14

◘ Anomalous Samples

Monashee Geological Services

August 15, 1984 Fig. 4

ACME ANALYTICAL LABORATORIES LTD.
852 E.HASTINGS ST.VANCOUVER B.C. V6A 1R6
PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: JULY 31 1984

DATE REPORT MAILED: Aug. 2/84...

GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-3 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: P1-3 ROCK P4-10 SOIL AU* ANALYSIS BY AA FROM 10 GRAM SAMPLE.

ASSAYER: D. Toye. DEAN TOYE. CERTIFIED B.C. ASSAYER

GRAND NATIONAL RES PROJECT # TOPPER FILE # 84-1853 PAGE 1

SAMPLE# / DESCRIPTION	CU PPM	PB PPM	ZN PPM	AG PPM	AU* PPB	LOCATION
K-1 SERICITE SCHIST	44	8	75	.2	5	GR, BL 200N
K-2 BLACK PHYLLITE	33	38	62	.2	5	L 2N 200W
K-3 " "	62	9	128	.3	5	L 2N 300W
K-4 " "	22	11	100	.3	5	L 2N 500W
K-5 QTZ SWEAT	3	1	6	.1	5	L 2N 550W
K-6 BLACK PHYLLITE	20	11	128	.2	5	L 2N 730W
K-7 SCHIST	46	10	108	.1	5	L 2N 1050W
K-8 "	22	7	96	.2	5	L 2N 1100W
K-9 BLACK PHYLLITE	39	22	148	.2	5	L 4N 300W
K-10 " "	7	10	38	.1	5	L 4N 370W
K-11 BLACK PHYLLITE	24	8	44	.1	5	L 4N 400W
K-12 " "	4	49	65	.3	5	L 4N 600W
K-13 QTZ SWEAT	2	1	4	.1	5	L 4N 640W
K-14 SCHIST	47	5	95	.2	5	L 4N 950W
K-15 INTRUSIVE	44	1	44	.2	5	1990M
K-16 BLACK PHYLLITE	47	7	84	.1	5	1945M
K-17 " "	32	25	34	.3	5	1860M
K-18 INTRUSIVE	61	4	33	.2	5	1605M
K-19 BLACK PHYLLITE	15	28	202	.5	5	1585M.
K-20 ARGILLITE	15	4	52	.1	5	1500M
K-21 BLACK PHYLLITE	11	3	240	.7	5	1357M
K-22 ARGILLITE	13	4	63	.2	5	2050M.
K-23 SLATY ARGILLITE	48	8	27	.2	5	2000M
K-24 " "	44	3	71	.3	5	1890M
M-1 SERICITE SCHIST	7	8	155	.2	5	GR, LO 25W
M-2 QTZ SWEAT	4	1	9	.1	5	LO 50W
M-3 SERICITE SCHIST	88	11	158	.6	5	LO 180W
M-4 BLACK PHYLLITE	29	6	243	.1	5	LO 170W
M-5 SERICITE SCHIST	54	7	71	.3	5	LO 185W
M-6 BLACK PHYLLITE	25	2	92	.1	5	LO 270W
M-7 SERICITE SCHIST	58	10	107	.2	5	LO 300W
M-8 BLACK PHYLLITE	21	3	101	.1	5	LO 310W
M-9 " "	33	8	104	.1	5	LO 340W
M-10 SERICITE SCHIST	40	17	46	.3	5	LO 370W
M-11 BLACK PHYLLITE	47	66	144	.3	5	LO 600W
M-12 QTZ SWEAT	49	8	47	.1	5	LO 610W
M-13 BLACK PHYLLITE	19	10	35	.5	5	LO 850W
M-14 " "	33	12	86	.2	5	L4S 600W
STD S-1/AU-0.5	123	114	184	32.6	530	

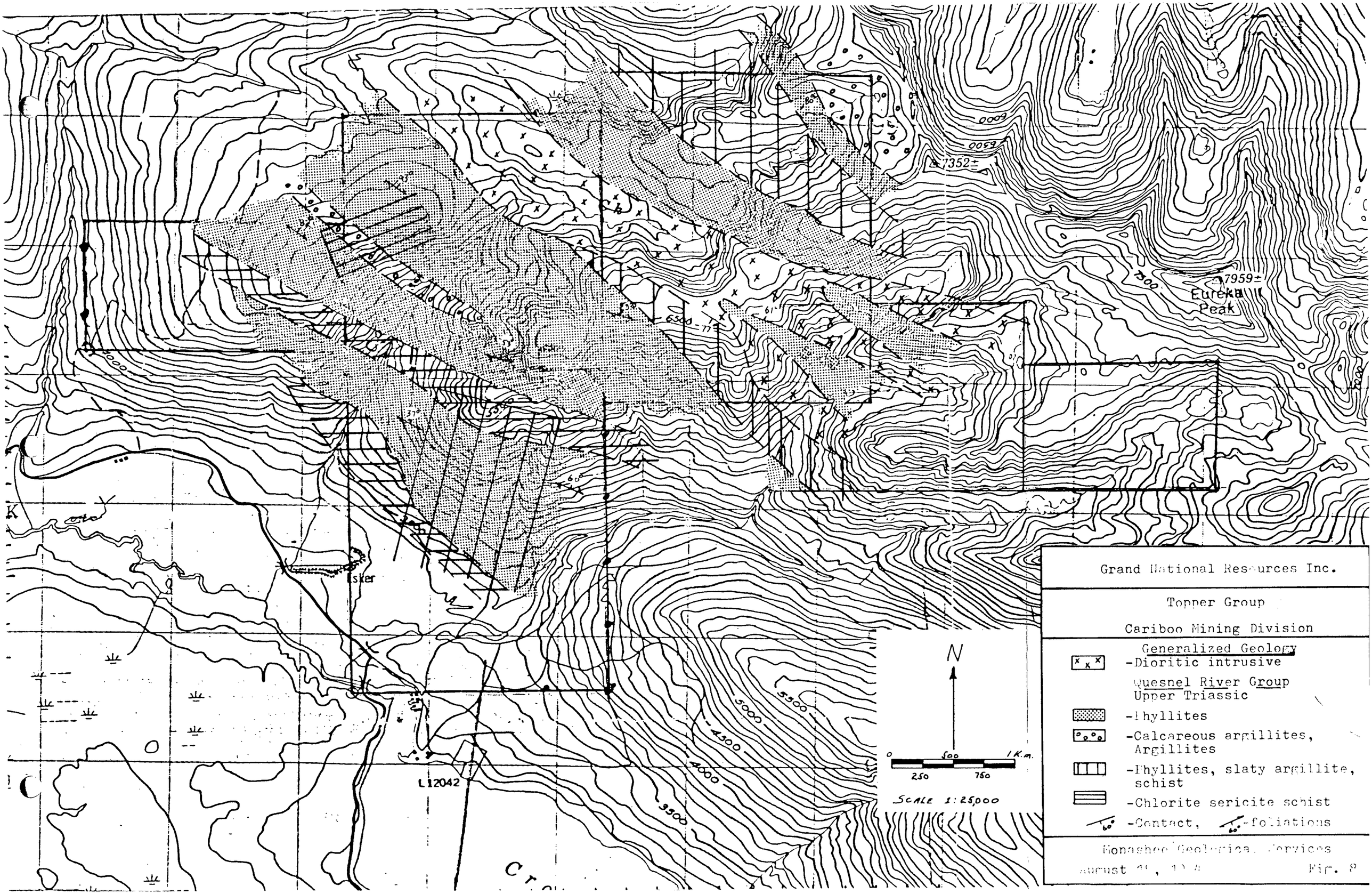
fig. 5

SAMPLE#		CU PPM	PB PPM	ZN PPM	AG PPM	AU* PPB	
TP-1	BLACK PHYLLITE	22	7	34	.2	5	GL 6L25S
TP-2	SERICITE SCHIST	53	1	31	.1	5	1610 M.
TP-3	BLACK PHYLLITE	12	8	61	.1	5	L0 200E
TP-4	" "	41	11	234	.1	5	L0 250E
TP-5	" "	79	3	261	.3	5	50S 280E
TP-6	SILICEOUS PHYLLITE	39	6	103	.3	5	25S 380E
TP-7	QTZ SWEAT	8	8	32	.1	5	L0 450E
TP-8	BLK. PYR. PHYLLITE	47	7	80	.6	5	25S 475E
TP-9	CAL. ARGILLITE	10	5	45	.3	5	25S 525E
TP-10	BLACK PHYLLITE	54	11	117	.5	5	25S 550E
TP-11	PHYLLITE	29	6	62	.4	5	25S 680E
TP-12	BLK. PYR. PHYLLITE	43	8	87	.4	5	25S 700E
TP-13	BLACK PHYLLITE	72	9	345	.2	5	L1S 900E
TP-14	QTZ SWEAT	4	1	15	.1	5	L2S 600E
TP-15	BLACK PHYLLITE	78	10	265	.6	5	L2S 800E
TP-16	BLACK PHYLLITE	19	7	49	.1	5	L1S 475E
TP-17	BLK. PYR. PHYLLITE	16	5	58	.2	5	1542 M
TP-18	" " "	26	18	85	.1	5	1355 M
TP-19	" " "	56	5	89	.3	5	1290 M
TP-20	BLACK PHYLLITE	46	2	190	.2	5	1918 M
TP-21	BLACK PHYLLITE	56	12	81	.1	5	1952 M
TP-22	ARGILLITE	6	6	33	.1	5	2000 M
TP-23	QTZ SWEAT	6	1	8	.1	5	1990 M
TP-24	BLACK PHYLLITE	25	13	71	.6	5	1959 M
TP-25	" "	56	12	149	.5	5	1985 M
TP-26	QTZ/PHYLLITE ZONE	32	8	87	.1	5	1985 M.
TP-27	" " "	84	7	120	.6	5	1985 M
TP-28	BLACK PHYLLITE	44	16	120	.1	5	1800 M
TP-29	" "	35	2	98	.1	5	1770 M
TP-30	QTZ SWEAT	3	1	6	.1	5	1770 M
TP-31	SERICITE SCHIST	64	4	62	.3	5	1730 M
TP-32	GREY PHYLLITE	34	5	321	.1	5	GL 19 200W
TP-33	" "	12	11	97	.1	5	L1S 350W
TP-34	QTZ SWEAT	11	4	26	.1	5	L2S 625W
TP-35	BLACK PHYLLITE	31	7	73	.1	5	" "
TP-36	BLACK PHYLLITE	19	5	68	.1	5	L2S 8+50W
TP-37	" "	12	10	97	.1	5	L2S 1130W
STD S-1/AU-0.5		125	116	186	34.6	530	

fig. 6

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AU* PPB	
TP-38 BLACK PHYLLITE	23	8	57	.2	5	L25 1130W
TP-39 " "	11	8	176	.1	5	L68 140W
TP-40 " "	31	22	133	.1	5	L68 525W
TP-41 " "	13	10	78	.1	5	L68 775W
TP-42 QTZ SWEAT	17	1237	10	31.0	5	L68 950W
TP-43 BLACK PHYLLITE	21	29	49	.3	5	2127 M.
TP-44 " "	30	16	28	.2	5	2110 M.
TP-45 CAL. ARGILLITE	10	14	53	.1	5	2080 M
TP-46 BLACK PHYLLITE	94	10	211	.1	20	1890 M
TP-47 QTZ SWEAT	6	2	9	.1	5	1770 M
TP-48 BLACK PHYLLITE	55	9	64	.1	5	1725 M
TP-49 " "	20	5	70	.1	5	1000 M
TP-50 QTZ SWEAT	16	4	7	.1	5	1000 M
TP-51 " "	5	1	4	.1	5	1390 M
TP-52 BLACK PHYLLITE	21	8	64	.1	5	G2 1N585W
TP-53 QTZ SWEAT	6	4	7	.1	5	1380.
TP-54 BLACK PHYLLITE	14	10	99	.1	5	1232 M.
TP-55 " "	87	7	86	.2	5	1292 M.
TP-56 CAL. ARGILLITE	28	18	80	1.3	5	1965 M
TP-57 BLACK PHYLLITE	40	11	64	.1	5	1790 M.
TP-58 " "	43	14	74	.4	5	1745 M.
STD S-1/AU-0.5	122	116	182	32.3	510	

fig. 7



Grand National Resources Inc.

Topper Group

Cariboo Mining Division

Generalized Geology

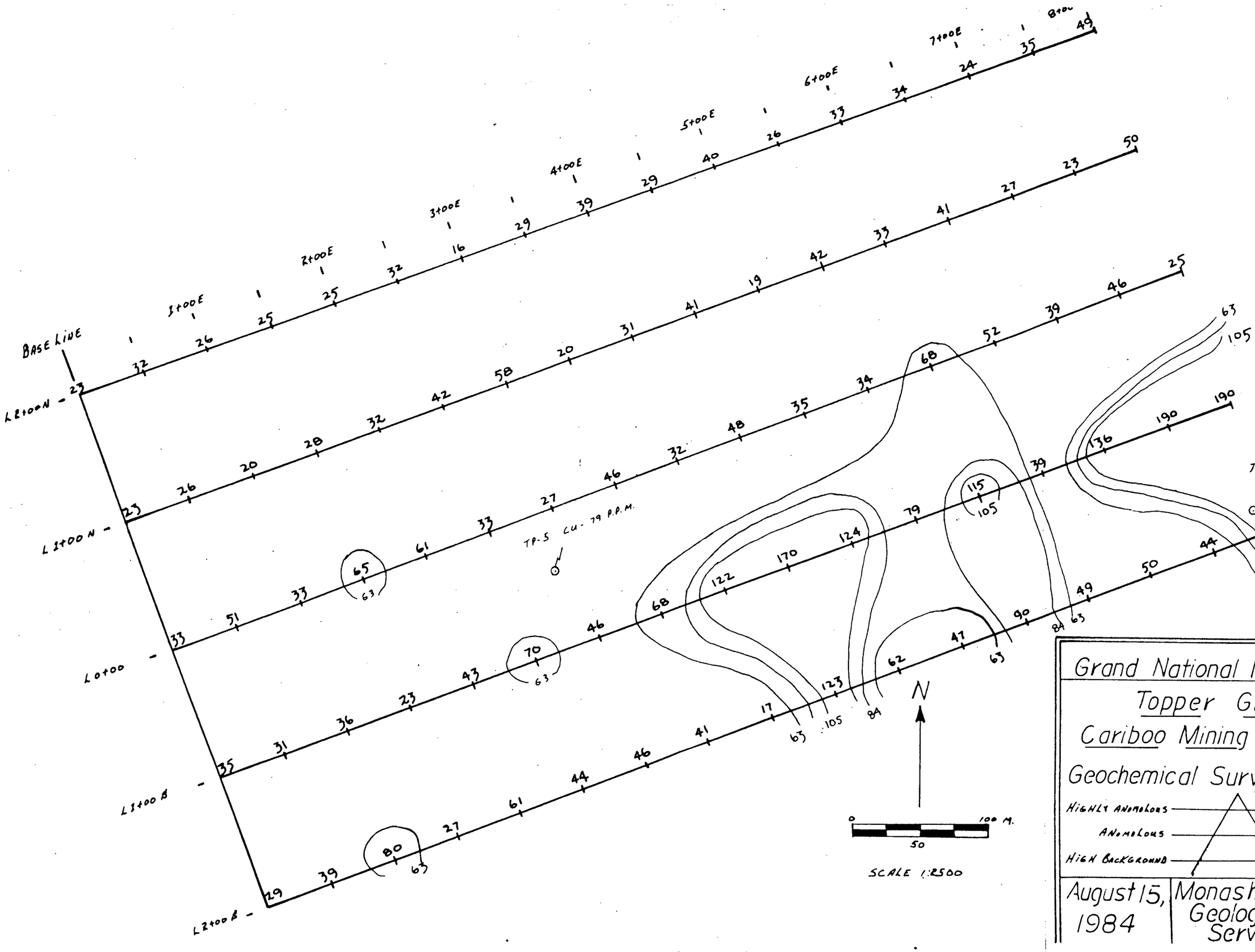
- -Dioritic intrusive

Quesnel River Group
Upper Triassic

- -Phyllites
- -Calcareous argillites, Argillites
- -Phyllites, slaty argillite, schist
- -Chlorite sericite schist
- -Contact, -foliations

Monashee Geological Services

August 4[illegible], 1[illegible] Fig. 8



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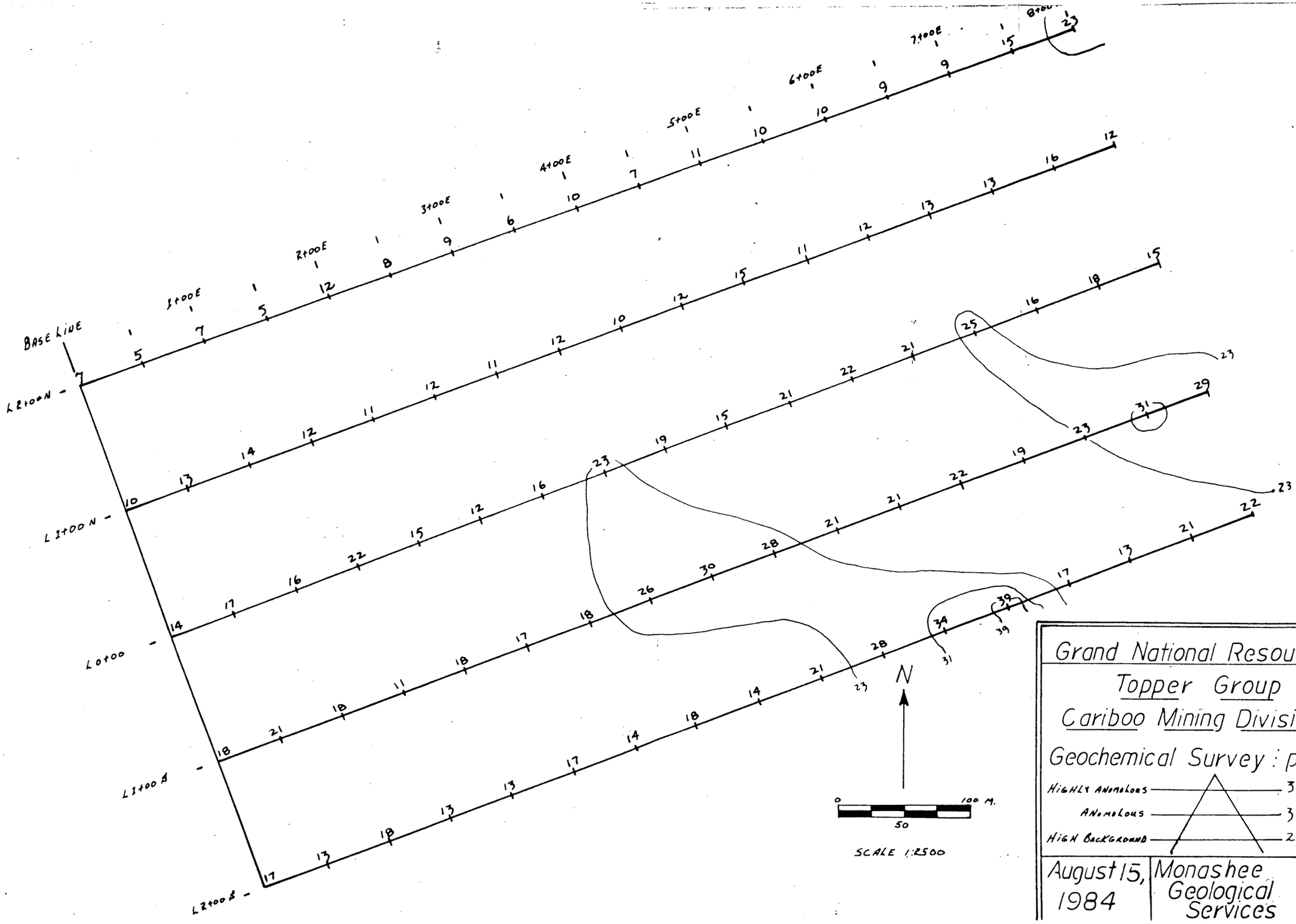
Geochemical Survey : cu ppm.

HIGHLY ANOMALOUS — 105

ANOMALOUS — 84

HIGH BACKGROUND — 63

August 15, 1984	Monashee Geological Services	fig. 9



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Geochemical Survey : pb ppm

HIGHLY ANOMALOUS — 39

ANOMALOUS — 31

HIGH BACKGROUND — 23

August 15, 1984	Monashee Geological Services	fig. 10

BASE LINE

L 1+00 N

L 0+00

L 1+00 S

L 2+00 S

1+00E

2+00E

3+00E

4+00E

5+00E

6+00E

7+00E

8+00-

TP-4 ZN - 234 P.P.M.

TP-5 ZN - 261 P.P.M.

TP-13 ZN - 345 P.P.M.

TP-15 ZN - 265 P.P.M.

N

0 100 M.

50

SCALE 1:2500

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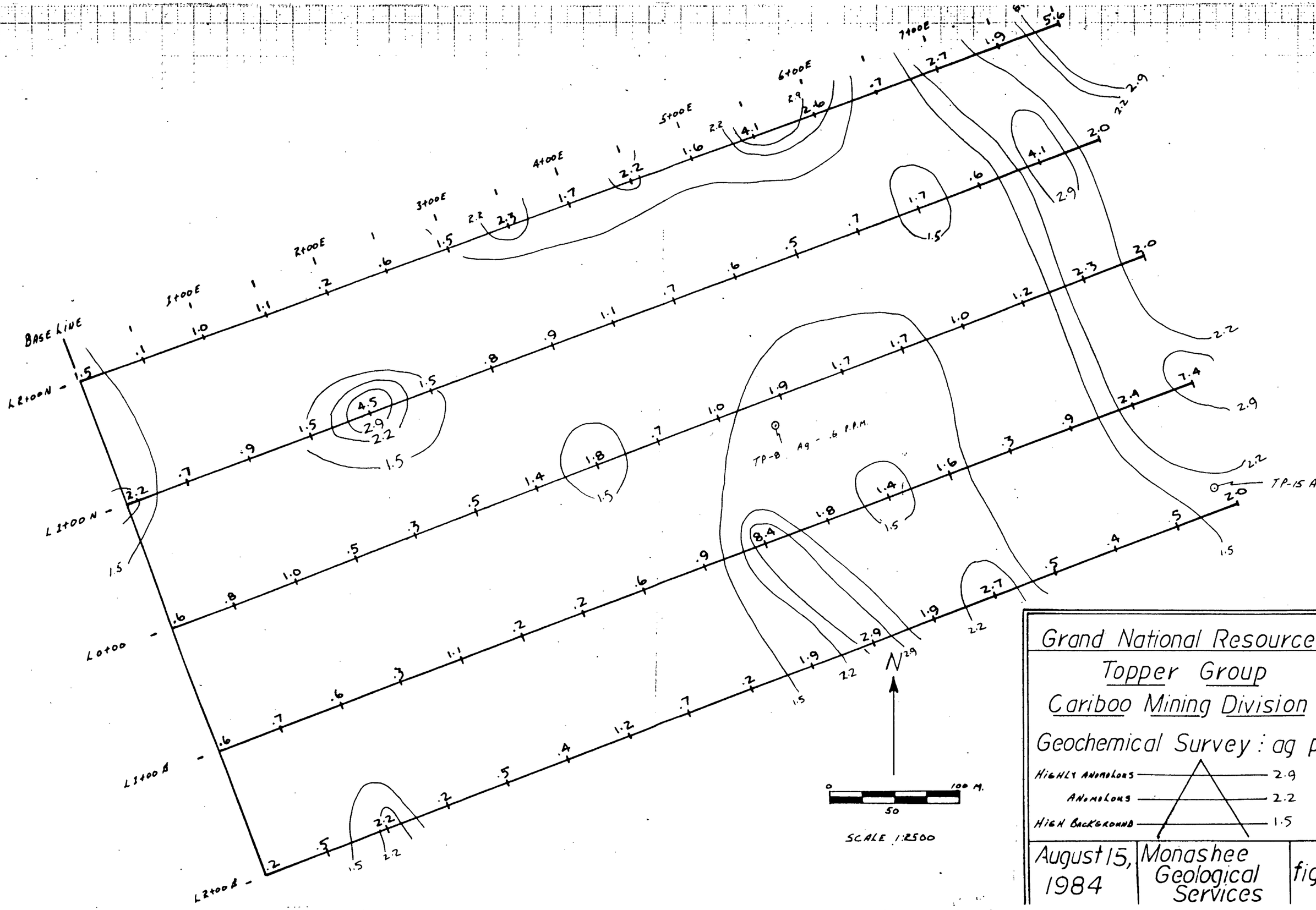
Geochemical Survey : zn ppm

HIGHLY ANOMALOUS — 401

ANOMALOUS — 320

HIGH BACKGROUND — 239

August 15, 1984	Monashee Geological Services	fig. 11



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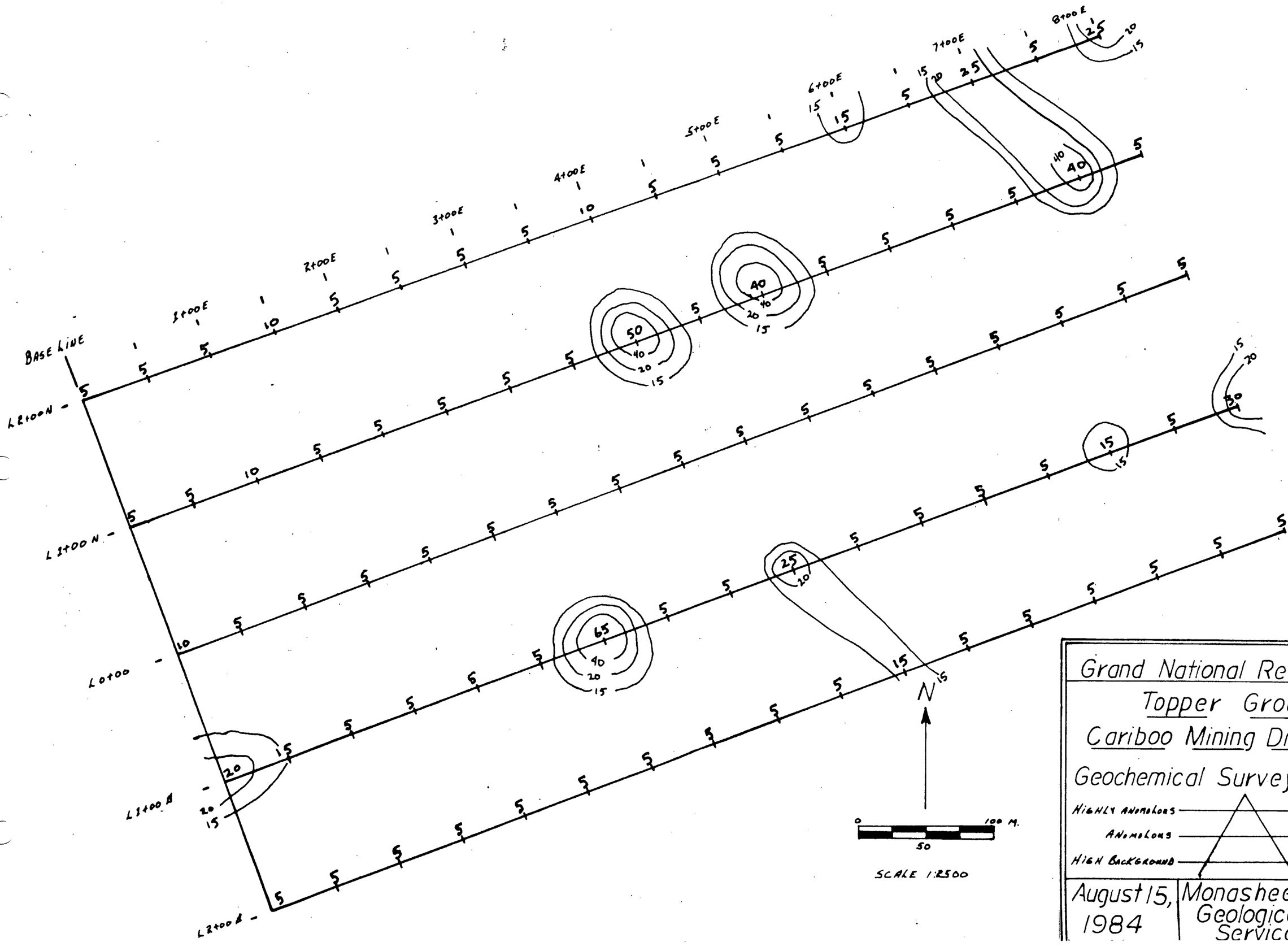
Geochemical Survey : ag ppm.

HIGHLY ANOMALOUS — 2.9

ANOMALOUS — 2.2

HIGH BACKGROUND — 1.5

August 15, 1984	Monashee Geological Services	fig. 12



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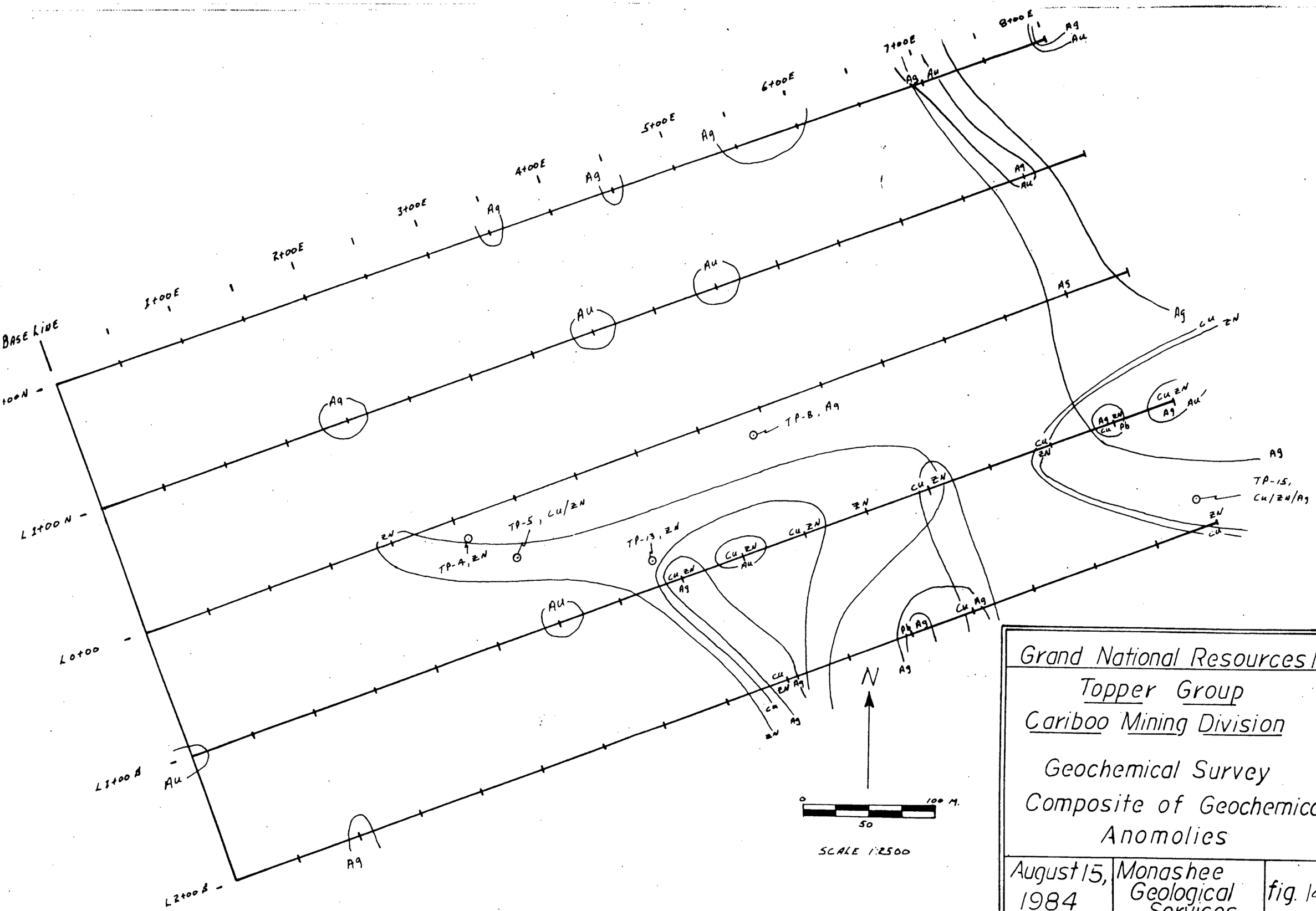
Geochemical Survey : au ppb.

HIGHLY ANOMALOUS	40
ANOMALOUS	20
HIGH BACKGROUND	15

August 15, 1984	Monashee Geological Services	fig. 13



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Geochemical Survey

Composite of Geochemical Anomolies

August 15, 1984	Monashee Geological Services	fig. 14

ACME ANALYTICAL LABORATORIES LTD. 852 E.HASTINGS ST.VANCOUVER B.C. V6A 1R6 PHONE 253-3158 DATA LINE 251-1011

GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-3 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: SOIL AU* ANALYSIS BY AA FROM 10 GRAM SAMPLE.

DATE RECEIVED: APR 19 1984 DATE REPORT MAILED: Apr 25/84 ASSAYER. D. Toye DEAN TOYE. CERTIFIED B.C. ASSAYER

GRAND NATIONAL RES FILE # 84-0586 PAGE 1

SAMPLE#	MO PPM	CU PPM	PB PPM	ZN PPM	AG PPM	NI PPM	CO PPM	MN PPM	FE %	AS PPM	U PPM	AU PPM	TH PPM	SR PPM	CD PPM	SB PPM	BI PPM	V PPM	CA %	P %	LA PPM	CR PPM	MG %	BA PPM	TI %	B PPM	AL %	NA %	K %	W PPM	AU* PPB
R3 525S	2	30	7	129	.3	35	11	367	2.92	7	6	ND	3	15	1	2	2	35	.23	.29	12	45	.54	160	.07	6	1.92	.01	.11	2	5
R3 550S	3	35	9	133	.5	46	10	300	2.73	4	9	ND	2	12	1	2	2	24	.15	.06	9	33	.46	60	.05	6	1.38	.01	.07	2	5
R3 575S	3	28	8	127	.7	49	12	265	2.92	4	4	ND	2	25	1	2	2	27	.29	.04	12	32	.51	78	.07	6	1.92	.01	.10	2	5
R3 600S	2	70	6	129	.9	44	16	365	3.33	3	2	ND	2	25	1	2	2	38	.44	.05	12	54	.92	78	.08	3	2.10	.01	.09	2	5
R3 625S	2	14	7	111	.2	21	7	152	2.13	2	4	ND	2	11	1	2	2	26	.16	.05	10	26	.41	39	.06	4	1.12	.01	.08	2	5
R3 650S	2	23	9	93	.4	29	8	481	2.06	2	6	ND	2	20	1	2	2	26	.26	.04	13	28	.41	75	.06	4	1.31	.01	.09	2	5
R4 550S	2	37	8	120	.2	47	11	280	2.90	4	2	ND	3	23	1	2	2	35	.27	.16	14	48	.66	117	.07	6	1.87	.01	.12	2	5
R4 575S	2	91	6	86	.2	86	14	208	3.20	7	7	ND	5	7	1	2	2	26	.08	.07	13	52	.67	86	.05	5	1.62	.01	.13	2	5
R4 600S	2	27	8	99	.1	59	12	244	2.69	4	3	ND	2	24	1	2	2	28	.27	.03	11	42	.60	48	.07	4	1.69	.01	.08	2	5
R4 625S	2	29	6	65	.2	43	10	218	2.46	2	7	ND	3	23	1	2	2	27	.27	.04	14	39	.61	63	.08	4	1.72	.01	.11	2	5
R4 650S	1	23	6	135	.3	35	9	225	2.16	2	5	ND	2	12	1	2	2	25	.13	.06	11	32	.44	56	.06	3	1.48	.01	.08	2	5
R4 675S	1	26	7	92	.6	35	9	262	2.85	2	9	ND	2	8	1	2	2	32	.09	.13	12	32	.46	79	.07	4	1.93	.01	.09	2	5
R5 100S	4	48	11	112	.8	42	7	336	2.93	2	8	ND	3	7	1	2	2	29	.05	.05	19	35	.56	89	.01	4	1.63	.01	.05	2	5
R5 125S	4	46	11	163	1.0	58	12	279	3.36	3	5	ND	3	15	1	2	2	44	.19	.09	17	70	.60	145	.01	2	2.26	.01	.07	2	5
R5 150S	4	43	19	160	1.3	44	11	230	4.23	3	10	ND	3	16	1	2	2	34	.14	.10	16	34	.48	138	.01	3	1.84	.01	.07	2	5
R5 175S	2	22	7	92	.4	27	8	160	2.34	3	5	ND	3	10	1	2	2	30	.07	.05	14	33	.51	93	.01	4	1.50	.01	.05	2	5
R5 200S	4	54	14	128	1.3	63	12	206	3.33	6	5	ND	3	12	1	2	2	31	.09	.05	13	38	.58	110	.02	4	1.81	.01	.05	2	5
R5 250S	5	57	17	158	.6	59	11	267	3.83	14	6	ND	3	13	1	2	2	30	.07	.10	17	42	.65	108	.02	5	1.61	.01	.07	2	5
R5 275S	5	50	17	236	1.4	82	13	297	3.65	4	9	ND	4	27	1	2	2	24	.18	.08	17	32	.52	92	.02	3	1.59	.01	.07	2	5
R5 300S	24	107	13	167	.7	126	15	353	5.26	9	9	ND	3	8	1	2	2	31	.04	.08	18	58	.75	90	.01	4	1.70	.01	.05	2	5
R5 325S	7	50	25	288	1.4	94	12	532	4.26	6	8	ND	4	19	1	2	2	23	.15	.17	14	39	.45	141	.01	5	1.59	.01	.07	2	5
R5 350S	9	72	31	489	1.4	114	16	289	4.63	5	6	ND	3	21	2	2	2	34	.13	.12	13	44	.67	100	.05	7	1.97	.01	.08	2	5
R5 375S	6	36	22	287	.9	54	10	298	3.24	6	4	ND	3	17	1	2	2	27	.11	.12	14	36	.49	96	.03	5	1.38	.01	.07	2	5
R5 400S	7	57	12	250	.7	84	13	206	3.57	2	4	ND	3	12	1	2	2	27	.11	.08	11	40	.60	116	.05	5	1.89	.01	.08	2	5
R5 425S	6	53	12	221	.7	64	13	237	3.73	2	5	ND	3	10	1	2	2	33	.08	.10	13	46	.68	83	.05	5	1.89	.01	.08	2	5
R5 450S	4	53	9	159	.4	64	13	221	3.22	8	6	ND	2	14	1	2	2	29	.15	.06	11	46	.69	71	.06	4	1.86	.01	.10	2	5
R5 575S	2	57	4	77	.1	58	13	270	3.30	3	10	ND	2	20	1	4	2	46	.21	.06	9	82	1.10	67	.06	2	1.89	.01	.09	2	5
R5 600S	1	13	9	87	.3	27	8	220	2.10	2	5	ND	2	9	1	2	2	29	.10	.06	7	38	.49	75	.05	5	1.32	.01	.06	2	5
R5 625S	1	11	7	52	.1	20	7	181	1.88	2	2	ND	2	22	1	2	2	27	.31	.06	5	54	.41	30	.05	3	1.15	.01	.04	2	5
R5 650S	1	30	5	90	.2	40	11	302	2.58	3	5	ND	2	24	1	2	2	29	.31	.05	13	44	.75	54	.08	4	1.67	.01	.14	2	5
R5 675S	2	32	6	99	.4	33	8	156	2.83	4	3	ND	3	16	1	2	2	23	.26	.19	13	28	.40	47	.05	4	1.33	.01	.09	2	5
R5 700S	2	23	8	146	.5	42	9	200	3.84	6	4	ND	3	12	1	2	2	39	.16	.20	8	38	.54	96	.08	4	2.08	.01	.08	2	5
R6 100S	4	90	15	163	1.5	79	10	332	4.36	2	7	ND	3	15	1	2	2	29	.16	.09	19	38	.75	89	.01	5	1.80	.01	.08	2	5
R6 125S	4	31	9	120	.5	47	10	164	3.31	5	4	NB	3	10	1	2	2	35	.12	.09	11	39	.51	88	.03	6	1.70	.01	.05	2	5
R6 150S	2	20	8	98	.7	31	8	159	2.94	2	6	ND	2	14	1	2	2	33	.11	.13	10	37	.45	83	.02	3	1.55	.01	.05	2	5
R6 175S	3	43	11	117	.5	46	10	349	3.17	6	3	ND	2	15	1	2	2	31	.18	.13	10	38	.55	103	.02	4	1.60	.01	.06	2	5
R6 200S	3	28	15	149	.6	39	9	239	3.69	6	8	ND	3	8	1	2	2	33	.07	.09	10	35	.48	97	.01	4	1.67	.01	.05	2	5
STD A-1/AU 0.5	1	31	38	186	.3	35	11	971	2.76	10	2	ND	2	36	1	2	2	59	.62	.10	8	72	.69	272	.09	7	2.00	.01	.20	2	520

12 fig 21

Monashee Geological Services

P.O. Box 63 • Westbridge, B.C. V0H 2B0 • Telephone 446-2525

INTRODUCTION

The Topper claim group is located approximately 95 kilometers northeast of 100 Mile House, B.C. (fig. 1) at the northern end of Crooked Lake. Access is from B.C. Highway 97 to the Canim Lake/Hendrix Lake Road and further to the McKusky Creek Road at Crooked Lake.

The property (fig. 2) is located on southwesterly trending ridges which form part of Eureka Peak at an elevation of 2427 meters. Exposures are either southerly or northerly with elevations ranging from 933 meters at Crooked Lake to over 2000 meters in some of the eastern sectors. The majority of the claims occupy an old forest fire burn area and is covered in dense growths of coniferous and deciduous trees. Central and eastern portions of the Topper claims extend above the tree line. Access on the property is poor due to dense secondary growth and steep relief. An old logging road gives limited access to the Tip and northern portions of the Topper claims. There is sufficient water and timber resources available for explorations and development purposes.

PROPERTY HISTORY

The Topper Group (fig. 2) is comprised of 6 contigous claims totalling 82 units as outlined in the following chart:

Claim	Record Number	Record Date	Units
Jolly Jack	4803	May 3/83	20
Topper	5096	Aug. 22/83	16
Topper 1	5097	"	20
Topper 2	5098	"	12
Topper 3	5099	"	6
Tip	6001	April 19/84	8

Except for the Tip claim which is owned by World Cement Industries Inc. of Vancouver, B.C., all of the claims are currently registered to Grand National Resources Inc. of 915 - 470 Granville St, Vancouver, B.C.

Previous development in the area was mainly carried out in the vicinity of Eureka Peak. Exploration centered on intrusive diorites for porphyry copper deposits. Fraser Creek was reported by the Annual Ministry of Mines Report for 1902 to have placer gold occurences. A brief examination of assessment reports filed to find any record of mining or exploration work within the claim area.

PROPERTY GEOLOGY

According to R.B. Campbell's 1978 geological map of the Quesnel Lake area (93-A), the Topper claims are located in the Quesnel Belt of the Ominica Crystalline Belt of the Intermontane region. This belt is underlain by Triassic basic volcanics and tuffs which are overlain by upper Triassic phyllites, quartzites and argillites of the Quesnel River Group. The property is situated along the southwestern limb of a northwesterly trending syncline. The axis of the syncline parallels the McKusky and MacKay River valleys. Geological examinations on the claim observed numerous small scale structures, lineations and foliations in the phyllite units which are associated with the syncline. The Topper Group is staked over possible extensions of the stratigraphically and structurally controlled gold bearing phyllites as reported by Eureka Resources/Amoco Canada on their Fraser Gold property.

GEOCHEMICAL SURVEY

The exploration surveys (fig. 3-21) on the Topper claims were conducted from July 16 to July 26, 1984. The work was carried out by the author, plus a prospector, Mr. M. Schram of Ollala, B.C. and one field assistant Mr. K. Sky of Vancouver, B.C.

The geochemical survey (fig. 3) was conducted on two grids in separate areas of the claims. The first grid (fig. 9-14) was located in the northeast corner of the Tip claim and the west central area of the Topper claim. This grid consisted of five crosslines located on a baseline of 400 meters. Sample stations were established at 50 meter intervals on the crosslines which are located at 100 meters on the baseline, The Baseline was oriented at an azimuth of 160 degrees with the crosslines perpendicular to this at 70 degrees. A total of 85 soil samples were collected on a grid of 4.4 line kilometers.

The second geochemical grid (fig. 3, 15-20) is located in the north and central portions of the Jolly Jack claim. This grid overlaps a smaller geophysical/geochemical grid (fig. 15-21) which was established by the author in April, 1984. A number of soil samples were collected at that time from VLF-EM anomalies. These samples underwent a 30 element plus gold I.C.P. analysis (fig. 21).

This second geochemical survey was located on a grid which had a 1000 meter long baseline oriented at an azimuth of 105 degrees. Perpendicular crosslines (at 15 degrees) were located at 200 meter spacings on the baseline with sample stations being established at 50 meter intervals on the crosslines. A total of

169 soil samples were collected for analysis on a grid of approximately 9.4 line kilometers. Due to the steep relief located in the area of the second grid, an attempt was made at spatial control through the use of slope correction charts. In both cases, the grids were established through the use of metric topofields.

All of the soil samples were collected from the 'B' soil horizon (5-20 cm. deep), hand sorted for rock and organic material and placed in numbered Kraft paper envelopes. The samples were analyzed for Cu, Pb, Zn, Ag and Au after being dried and sieved to -80 mesh. Copper, lead, zinc and silver values in p.p.m. are determined from a .500 gram sample which is digested by hot Agua Regia and analyzed by Inductively Coupled Argon Plasma (I.C.P.). Gold values in p.p.b. are obtained from a 10 gram sample which has the hot Agua Regia digests analyzed by Atomic Absorption. In all, a total of 254 soil samples were collected.

The geochemical results for Cu, Pb, Zn and Ag were treated by a statistical analysis to obtain anomalous samples whereas the Au values were treated visually. The results are outlined in the following table:

	Cu	Pb	Zn	Ag	Au
Population	250	254	247	247	254
Mean	41.6	14.6	157.9	.8	
Standard Deviation	21.3	7.9	80.7	.7	
Background	≤42	≤15	≤158	≤.8	5-14
High Background (1S.D.)	63-83	23-30	239-319	1.5-2.1	15-19
Anomalous (2S.D.)	84-104	31-38	320-400	2.2-2.8	20-39
Highly Anomalous (3S.D.)	≥105	≥39	≥401	≥2.9	≥40

Values of greater that 150 p.p.m. copper (4), 500 p.p.m. zinc (7) and 4.0 p.p.m. silver (7) were omitted from the calculations

to avoid erroneous geochemical levels.

GEOLOGICAL AND LITHOGEOCHEMICAL SURVEYS

The geological survey (fig. 8) consisted of examining bedrock exposures in the area of the geochemical grids. Due to the colloidal nature of the gold mineralization in the favourable black phyllite unit a number of lithogeochemical samples (fig. 4-7) were collected for analysis. These samples in the majority of cases were obtained from the black phyllites but a number of samples (fig. 5-7) were collected from large irregular quartz lenses, pods and veins which are prevalent in the phyllites. In all a total of 96 rock samples were analyzed for copper, lead, zinc, silver and gold. A brief description (fig. 5-7) of the lithogeochemical samples and their location (fig. 4, 5-7) is included at the front of the report. Only anomalous samples have been plotted on the appropriate geochemical maps (fig. 9-20).

Due to the small number of samples and the variety of material sampled, the results were visually estimated to obtain anomalous samples. Only those metasedimentary samples (82) were treated. The results are as follows:

	range	Estimated background	Anomalous	Anomalous samples
Cu p.p.m.	4-94	45	75	M-3, TP-5, TP-15 TP-27,TP-46,TP-55
Pb p.p.m.	1-66	15	25	K-2,K-12,K-17,K-19, M-11, TP-43
Zn p.p.m.	28-345	90	175	K-19,K-21,M-4,TP-4, TP-5,TP-13,TP-15, TP-20,TP-32,TP-39, TP-46
Ag p.p.m.	.1-1.3	.3	.6	K-21,M-3,TP-8,TP-15, TP-24,TP-27,TP-56
Au p.p.b.	5-20			TP-46

A total of 31 anomalous samples were obtained.

The geological survey also consisted of a number of geological traverses (fig.4) across certain ridge/drainage areas in a number of the claims. These traverses were carried out in an attempt to locate additional extensions and zones of the auriferous phyllite unit. A number of lithogeochemical samples (fig.4,5-7) were obtained during these traverses to aid in interpretation. Control on these traverses was maintained through the use of altimeters and map orienteering.

TECHNICAL DATA AND INTERPRETATION

Geochemical Survey

With respect to Grid 1, the survey outlined anomalous metal values in soils for all five elements in the southeastern and eastern portions of the grid.

Copper values (fig. 9) range from a background of less than 63 p.p.m. with anomalous values ranging from 84 to 100 p.p.m. A number of highly anomalous samples yield a strong zone on L1/2+00S 4+50E and 8+00E.

Lead (fig. 10) shows low soil values with a background value of only 15 p.p.m. and anomalous values commencing at 31 p.p.m. The lead anomaly is restricted to only 3 stations; L1+00S 7+50E, L2+00S 5+50E and 6+00E. When the high background values are taken into consideration a strong positive correlation is observed with the copper anomaly.

Zinc (fig. 11) shows a considerable extent of values from a background low of 51 p.p.m. to an anomalous high of 684 p.p.m. This anomaly also gives a strong correlation with the copper and lead anomalies in the southeast portion of the grid.

Anomalous silver values (fig. 12) are more sporatic in their occurrence, but still emphasize the anomalies located

in L1+00S and L2+00S. Values obtained show a great variance from a low of .1 p.p.m. to an anomalous high of 8.4 p.p.m. which is a considerable array for a standard deviation of only .7. The silver indicates a northerly trending anomaly from L2+00N 8+00E to L2+00S 8+00E. As well, there are a number of anomalous to highly anomalous single station locations.

Anomalous gold values are similar to the silver in that they are more sporatic and occur more as single station highs. Values range from a background low of 5 p.p.b. to a high of 65 p.p.b. A number of gold anomalies appear to correlate well with copper and silver values. One gold trend L2+00N 7+00E to L1+00N 7+50E exhibits the northerly trending anomaly.

The soil samples on L1+00S and L2+00S were collected on steep terrain below moderate cliffs of a black phyllite unit with associated quartz sweats. The location of the anomalies is also associated with a locally, thin residual soil development. The higher mobility of the copper and zinc ions probably represents the down slope migration from the break in slope located at L0+00. Also, some of the higher metal values reflect the residual nature of the soil. Lines 1+00N and 2+00N are located on moderate, northerly exposed slopes with good soil development and forest cover. As such, the good silver and gold values obtained in this area reflect and emphasize the presence of a northerly trending anomaly.

In comparison, Grid 2 (fig. 15-20) exhibits a much less structured anomaly with more single station anomalies. Nevertheless, a northerly trending anomaly which is best demonstrated by the zinc (fig. 17) and silver (fig. 18) values, is exhibited

extending from R5 3+50 to L4+00N and L2+00N 1+00W. This anomaly is better resolved and apparent if a visual filtering is performed on the high background values. Controlling factors influencing this more disseminated anomalous trend on Grid 2 is the angular orientation of the grid and the line spaceing (200M.) of the cross lines.

Grid 2 exhibits similar characteristics to those of Grid 1. These include; the positive correlation between the base metals lead and zinc but with a lesser correlation of the copper, an additional but less demonstrable correlation between the lead and silver and the zinc and silver values. Here again, the crossline trend and spacing influences the anomalies outline.

A major difference between the two grids and their element is the extremely low response of gold values in the soil. Only one station which is highly anomalous (L4+00S 4+00W) displays any significant values.

Factors of interest are; the relatively low copper values, 120 p.p.m. being the highest with respect to an anomalous value of 84 p.p.m.; a corresponding low in lead values; a higher response of zinc in soils, up to 566 p.p.m. (similar to values on Grid 1); as well as local highly anomalous silver (up to 4.3 p.p.m.) values.

The anomaly on Grid 2 has a potential lineal extent of 1500 meters (LR45+75 northerly to L4+00N 1+50W) with a width of approximately 400 meters

Geological and Lithogeochemical Survey

The anomalous results (fig.5-7) of the lithogeochemical survey corresponds well to the anomalies located on Grid 1 (fig. 14) and Grid 2 (fig. 20). The exception to this is the

sample TP-30 (fig. 20) on Grid 2 which has a value of 176 p.p.m. as compared to an estimated anomalous value of 175 p.p.m. Zinc appears to be the most responsive element as is demonstrated by the much higher (up to 345 p.p.m.) estimated anomalous samples (M-4, TP-4, TP-5, TP-13, TP-15, TP-32). Only those samples with anomolous values were plotted on the maps for the sake of clarity.

With regards to the geological traverses (fig. 4) a number of interesting lithogeochemical values were obtained. Samples TP-20 (Zn-190 p.p.m.), TP-24 (Ag-.6 p.p.m.) and TP-27 (Cu-84 p.p.m. and Ag-.6 p.p.m.) are located in a grouping which is underlain by black phyllites in which zones of irregular quartz masses are situated. This area is also relatively close (approx. 600 meters) to an intrusive contact.

One sample (fig. 4, TP-43 Pb-29 p.p.m.) is situated near the east-central claim line of Topper 1 in an area which is underlain by black phyllites.

Sample TP-46 (fig. 4, Cu 94 p.p.m., Zn 211 p.p.m. and Au 20 p.p.b.) being anomalous in three elements indicates a potential area of interest. This sample is situated in an area which is underlain by black phyllites, chlorite sericite schist and slaty argillites. This sample was taken considerably closer (approx. 50 meters) to the dioritic intrusive contact.

Another area of interest is the southwestern portion of the Topper 2 claim. In this area, two samples (fig.4) were obtained that proved to be anomalous in two elements. They are samples; K-19 (Pb 28 p.p.m. and Zn 202 p.p.m.) and K21 (Zn 240 p.p.m. and Ag .7 p.p.m.). This area is also underlain by black phyllites.

One other sample TP-56 (Ag 1.3 p.p.m.) was located in the northeast corner of the Topper 1 claim which is underlain by interbedded black phyllites and calcareous argillites.

The samples which were obtained from the synmetamorphic quartz sweats yielded no anomalous values except one. That was sample TP-42 (Pb 1237 p.p.m. and Ag 31.0 p.p.m.). The lead/silver relationship is exhibited in this sample which was obtained from a heavily haemato-limonitic stained quartz sweat of considerable size.

Geological observations (fig. 8) on the property indicated that the most widespread unit is the grey/black phyllites of Upper Triassic. These rocks are strongly foliated and exhibit numerous small scale drag folds which are associated with the synclinal terrain that they are a part of. Locally, the phyllite is tightly crenulated as well as exhibiting a knotty porphyroblastic texture. At one location on Grid 1, L1+00S 8+00E these porphyroblasts consisted of dodecahedral crystals of garnet. In other locations the phyllites have a knotted, vughy appearance which is the result of numerous haematitic, limonitic filled casts. The phyllites can also be highly graphite which is probably recrystallised from organic carbon.

The main phyllites unit is interbedded with minor calcareous arenites and quartzites. Numerous irregular, lenses, pods and veins of a porcelanous quartz are also associated with the phyllites and as sample TP-42 illustrates, can be the host for base and precious metal mineralization. Most of the quartz sweats are haemato-limonitic stained.

A number of zones of a chlorite sericite schist were encountered on the claims. These schists are coarse grained and are often characterized by a bright green mineral (hornblende?) as well as a vughy limonitic appearance. One sample M-3 (Cu 88 p.p.m. and Ag .6 p.p.m.) yielded good values but other samples were non anomalous.

In the central portion (fig. 8) of the Topper 1 claim, a medium grained dioritic intrusive has cut the phyllites, schists and slaty argillites that outcrop in this area. As sample TP-46 (fig. 4 & 7) illustrates, residual mineralizing fluids could be associated with this intrusion.

Metamorphism of the rock units is of the low grade Greenschist facies whose assemblages - moscovite, chlorite, quartz, graphite and haematite are observed in the Quesnel River phyllites. The garnet porphyroblastic habit and the bright green (hornblende?) mineral also suggest a lower range of the amphibolite facies.

CONCLUSION

The geochemical and lithogeochemical surveys conducted on the Topper group was successful in locating a northerly trending anomaly. This anomaly which has similar trends on both Grid 1 and Grid 2 is coincident in the base metals copper, lead, zinc and the precious metal silver. Anomalous gold values in the soil are located on Grid 1 but are next to nonexistant on Grid 2. A number of anomalous lithogeochemical samples correspond with the geochemical anomalies. This northerly trending soil and rock anomaly is approximately 1500 meters long and 400 meters wide on Grid 2 and approximately 400 meters long and 400 meters wide on Grid 1. Projections of this anomaly suggest a continuation between the two grids.

The geological and lithogeochemical surveys indicated the general extent of the favorable black phyllites as well as pinpointing potential areas for additional exploration.

Due to the above positive results, it is recommended that the Topper Group undergo a detailed geochemical and geological examination to determine the extent and continuity of the mineralization.

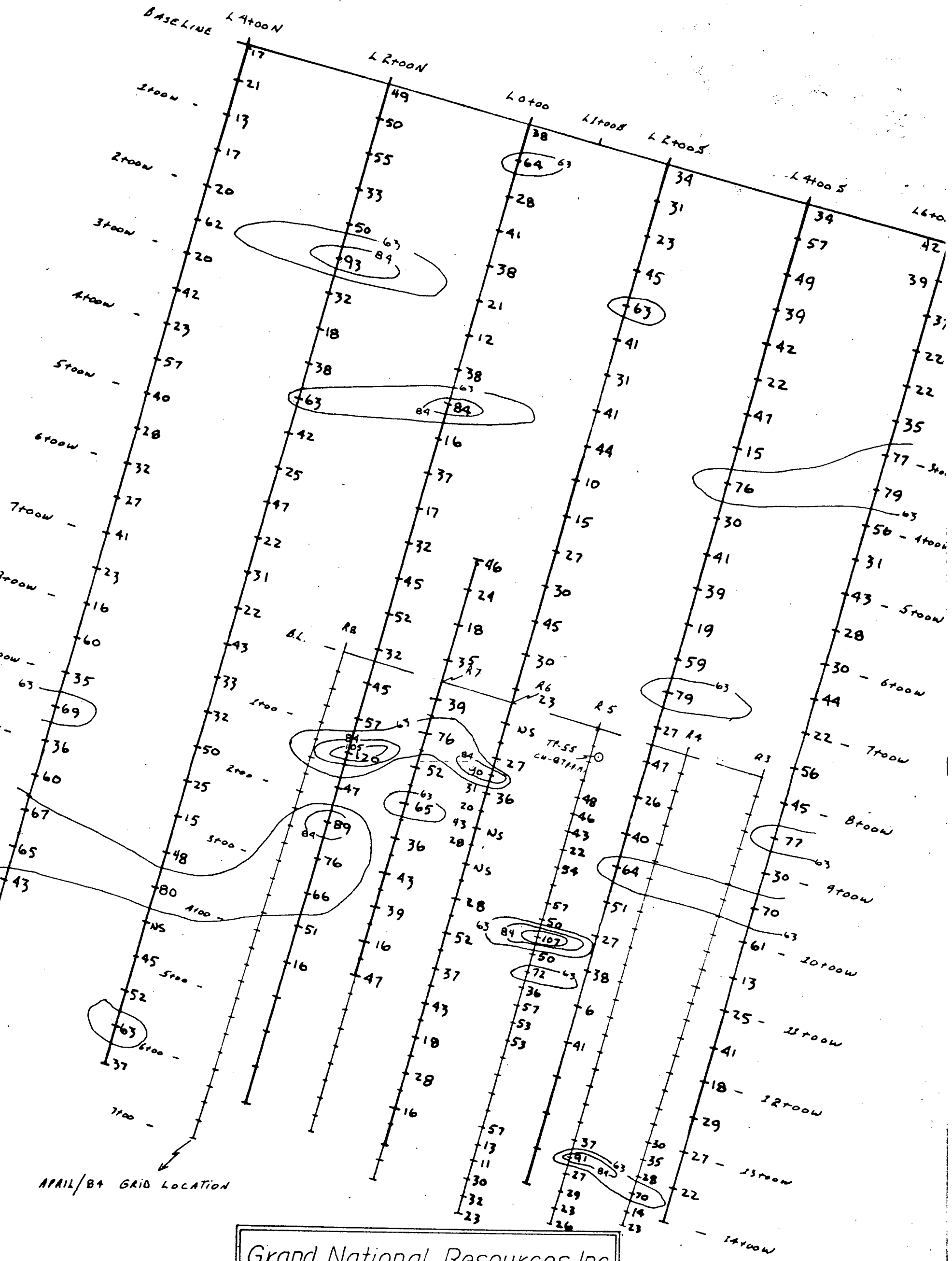
ITEMIZED COST STATEMENT

1.	R. Kregosky, Geologist; 11 days @ $200.00/day	$ 2,200.00
2.	M. Schram, Prospector; 11 days @ $100.00/day	$ 1,100.00
3.	K. Sky, Field Assist.; 11 days @ $100.00/day	$ 1,100.00
4.	F. Harrop, Camp Cook; 11 days @ $50.00/day	$ 550.00
5.	Food and Accommodation	$ 828.52
6.	Total Transportation	$ 852.00
7.	Helicopter rental - Northern Mtn. Helicopters	$ 1,294.28
8.	254 Soil samples; Cu; Pb, Zn, Ag @ $4.00	$ 1,016.00
	Au @ $4.00	$ 1,016.00
	Preparation @ $.60	$ 152.40
9.	96 Rock samples; Cu, Pb, Zn, Ag @ $4.00	$ 384.00
	Au @ $4.00	$ 384.00
	Preparation @ $2.75	$ 265.00
10.	Air Photos	$ 72.23
11.	37 I.C.P. Analysis - 30 element	$ 222.00
12.	37 Au samples @ $4.00	$ 148.00
	Preparation @ $.60	$ 22.20
13.	3 day report preparation @ $200.00/day	$ 600.00
	TOTAL	$12,206.63

AUTHOR'S QUALIFICATIONS

I declare, that I, Roy D. Kregosky am a practicing Geologist having graduated from the University of Calgary in 1971 with a Bachelor of Science degree in Geology.

Roy Kregosky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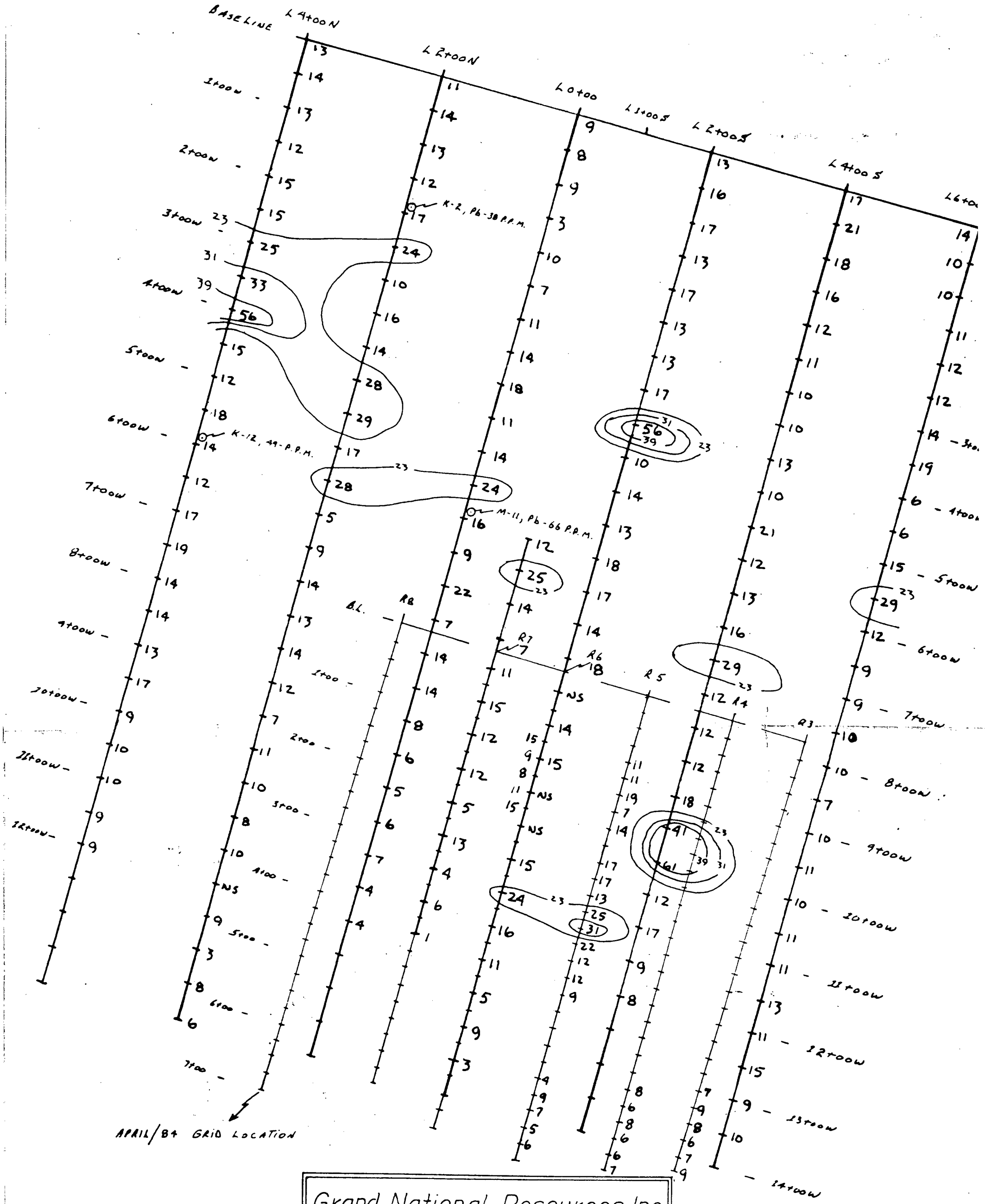
APRIL/84 GRID LOCATION
N
0
100
200 M.
50
150
SCALE 1:5000
Grand National Resources Inc.
Topper Group
Cariboo Mining Division
Geochemical Survey : cu p.p.m.
HIGHLY ANOMALOUS 105
ANOMALOUS 84
HIGH BACKGROUND 63
August 15, 1984
Monashee Geological Services
fig. 15
GEOLOGICAL BRANCH
ASSESSMENT REPORT
12,517



N

0 100 200 m

50 150

SCALE 1:5000

Grand National Resources Inc.

Topper Group

Cariboo Mining Division

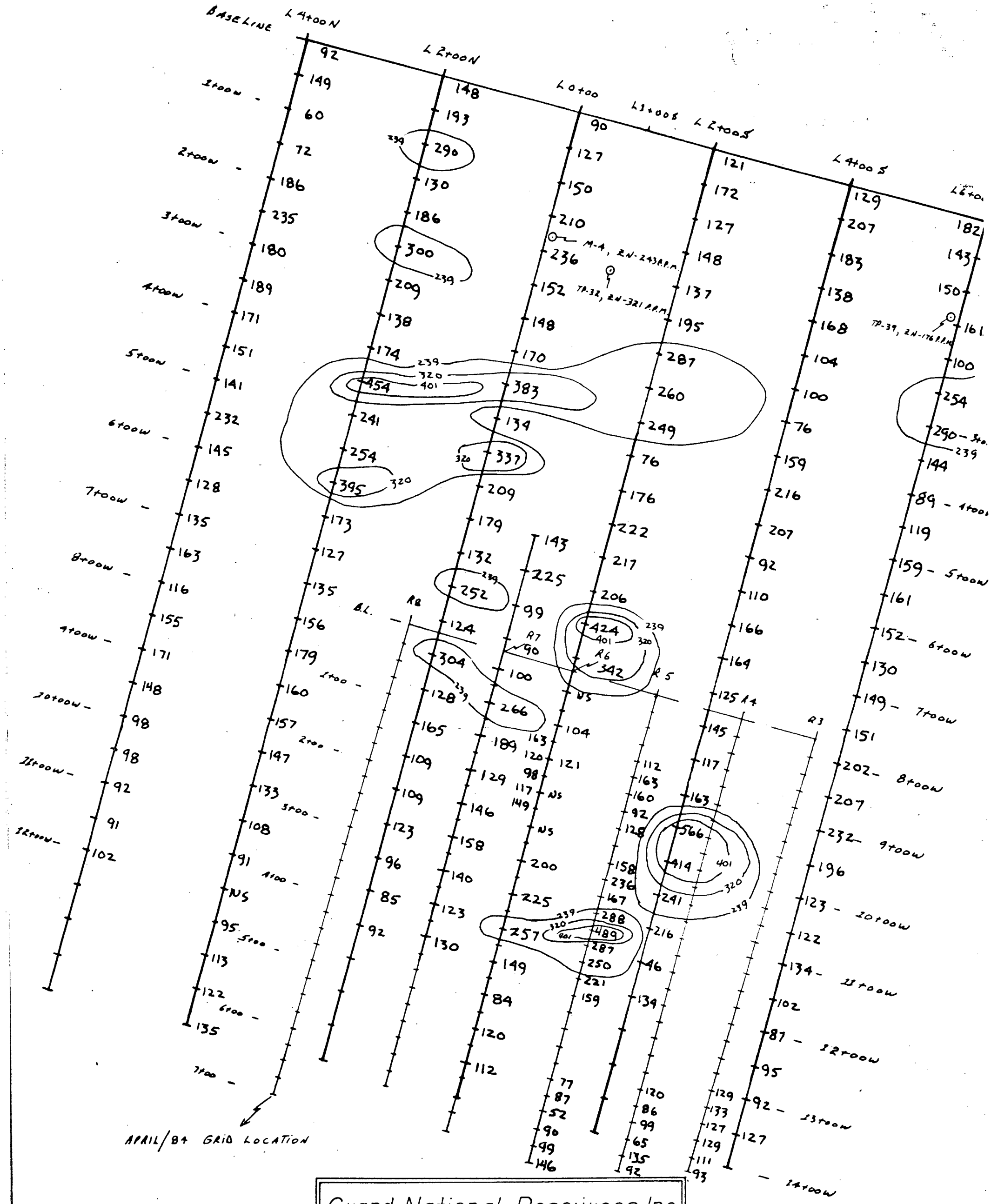
Geochemical Survey: pb p.p.m.

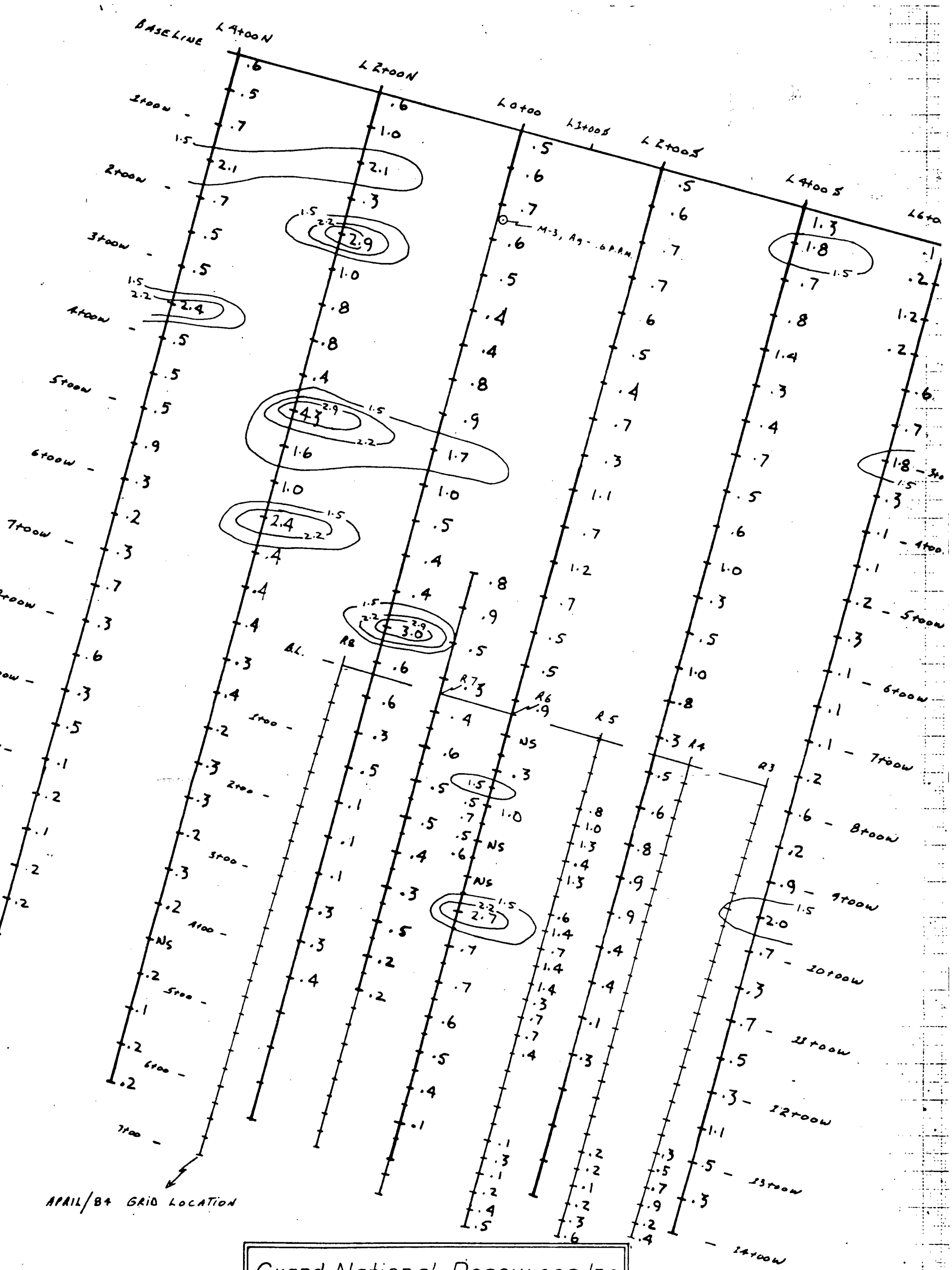
HIGHLY ANOMALOUS — 39

ANOMALOUS — 31

HIGH BACKGROUND — 23

August 15, 1984 | Monashee Geological Services | fig 16





N

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50 150

SCALE 1:5000

Grand National Resources Inc.

Topper Group

Cariboo Mining Division

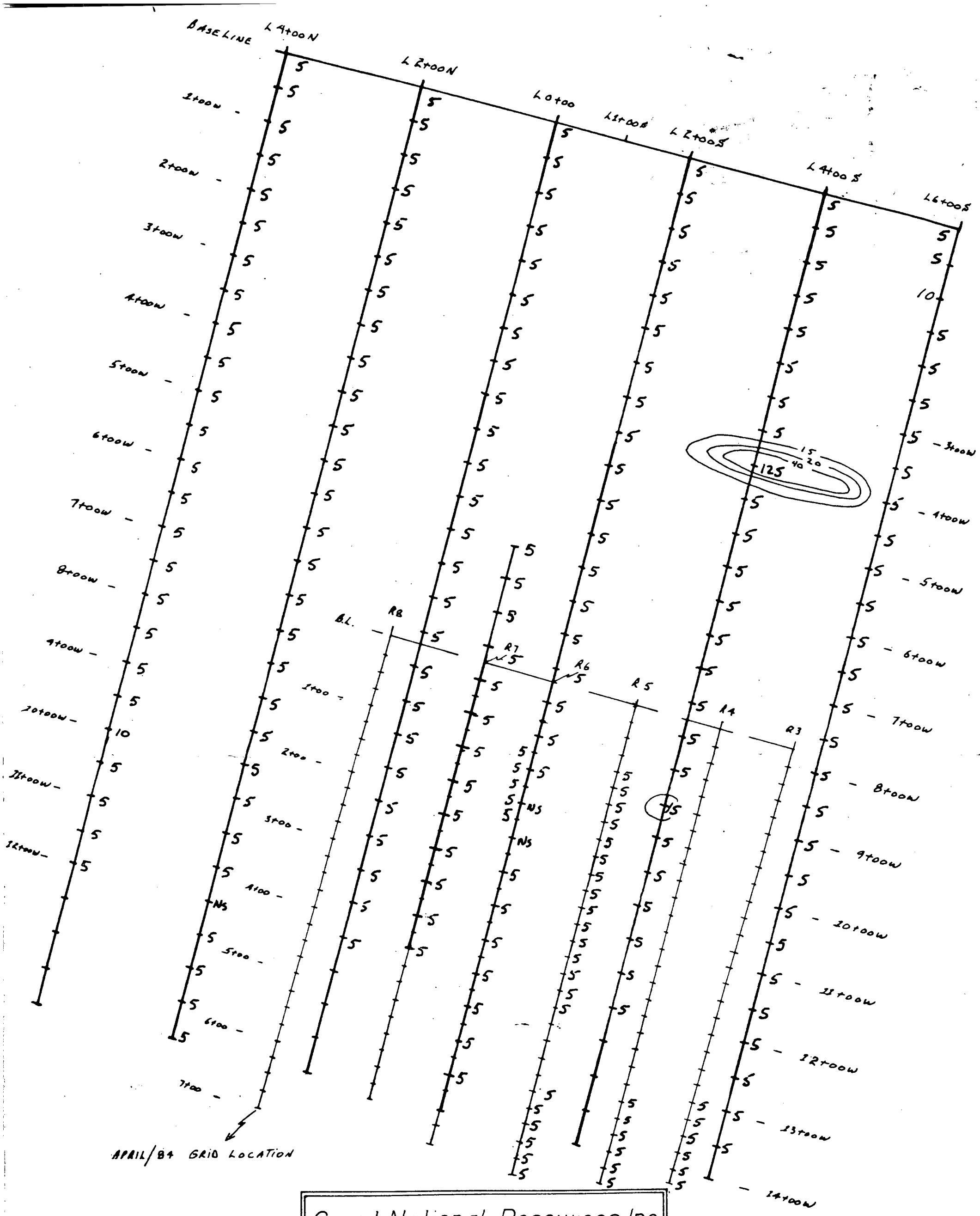
Geochemical Survey: ag p.p.m.

HIGHLY ANOMALOUS — 2.9

ANOMALOUS — 2.2

HIGH BACKGROUND — 1.5

August 15, 1984	Monashee Geological Services	fig 18



APAIL/84 GRID LOCATION

N

0 100 200 M.

50 150

SCALE 1:5000

Grand National Resources Inc.

Topper Group

Cariboo Mining Division

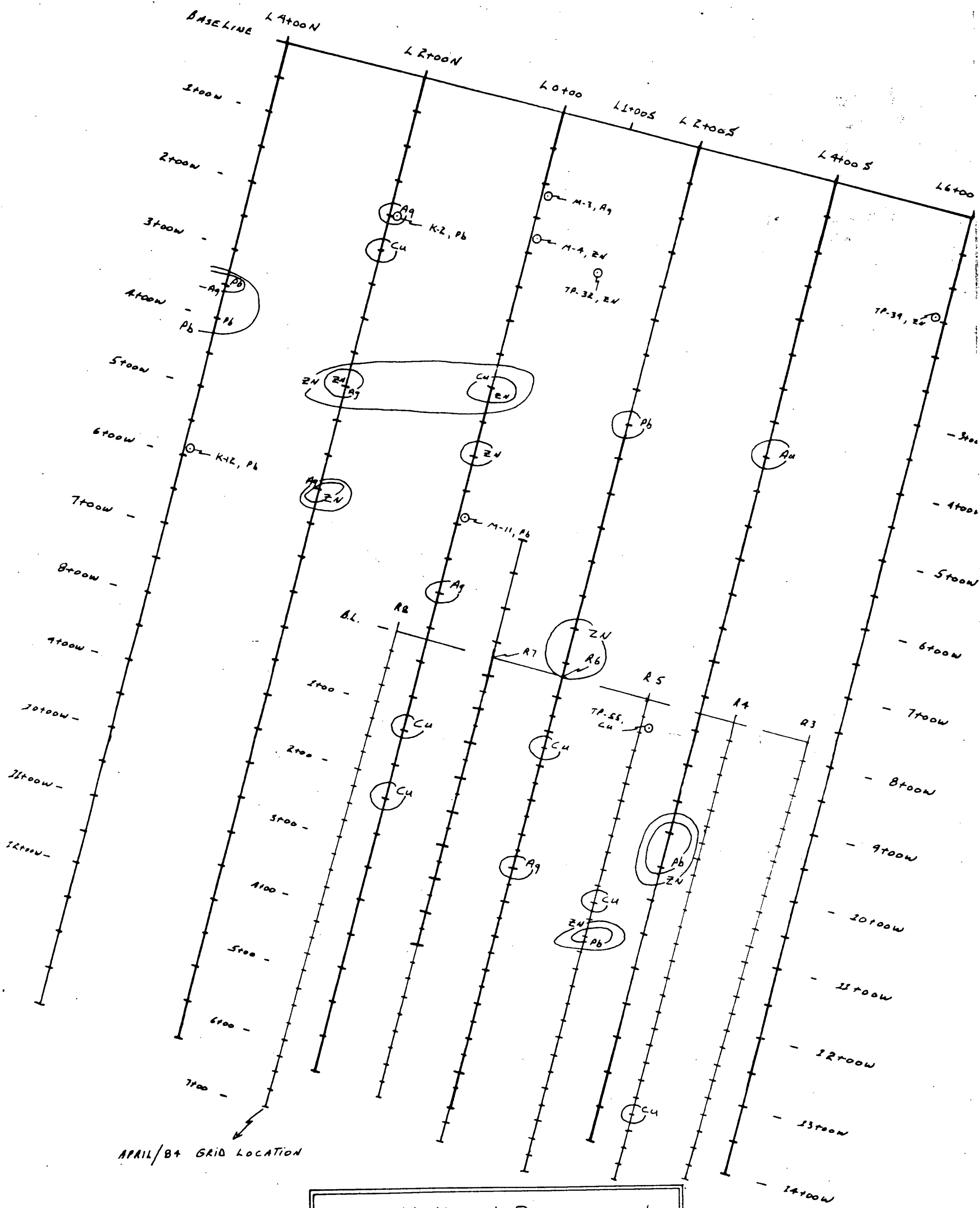
Geochemical Survey : au p.p.b.

HIGHLY ANOMALOUS — 40

ANOMALOUS — 20

HIGH BACKGROUND — 15

August 15, 1984 | Monashee Geological Services | fig 19



Grand National Resources Inc.

Topper Group

Cariboo Mining Division

Geochemical Survey

Composite of Geochemical Anomolies

August 15, 1984	Monashee Geological Services	fig20

GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,517