2819 4E 16E

KENNCO EXPLORATIONS, (WESTERN) LIMITED

REPORT

ON

SILT AND SOIL GEOCHEMICAL SURVEYS

CHAPPELLE NO. 1 & 2 GROUPS
(Chappelle Mineral Claims 1-22, 25-30, 33-48)

Situated 17 miles northwest of Thutade Lake,
Omineca Mining Division,
British Columbia

57° 127° SE

By

R. W. Stevenson, P. Eng.

Work done July 13 to 23, 1970

January 18, 1971

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

Kennco Explorations (Western) Limited

CHAPPELLE CLAIMS

Situated 17 miles northwest of Thutade Lake

Omineca Mining Division

British Columbia

Scale :

1 : 250,000

57 ° 127 ° S. E.

LOCATION MAP

R. V. Stevenson

LIST OF CLAIMS AND DISTRIBUTION OF WORK

Chappelle No. 1 Group

Claim No.	Record No.	Record Date	$ Silt Geochem Work Ea.Claim	$ Soil Geochem Work Ea.Claim	Years Applied
2	60862	July 16	-		
4	60864	"	-		
6	60866	"	67		
7	84367	February 11	16		
8	84368	"	50		
9	84369	"	16		
10	84370	"	50		
11	84371	"	25		
12	84372	"	25		
13	84373	"	59		
14	84374	"	33		
15	84375	"	25		
16	84376	"	-		
17	84377	"	25		
18	84378	"	42		
19	84379	"	67		1
20	84380	"	25		1
21	84381	"	-		1
22	84382	"	-		1
33	84391	"	-		
34	84392	"	-		
35	84393	"	-		
36	84394	"	16		1
37	84395	"	-		
38	84396	"	16		
39	84397	"	-		
40	84398	"	-		
41	84399	"	-		
42	84400	"	-		
			$557	-	5

List of Claims and Distribution of Work - cont'd

Chappelle No. 2 Group

Claim No.	Record No.	Record Date	$ Silt Geochem Work Ea.Claim	$ Soil Geochem Work Ea.Claim	Years Applied
1	60861	July 16	32		
3	60863	"	106	659	
5	60865	"	40		
25	84385	February 11	16		2
26	84386	"	24		1
27	84387	"	24		1
28	84388	"	8		2
29	84389	"	-		1
30	84390	"	-		2
43	89813	July 13	-		
44	89814	"	-		
45	89815	"	-		
46	89816	"	-		
47	89817	"	-		
48	89818	"	-		
			$250	$659	9
			$909		

STATEMENT OF COSTS INCURRED

Silt Geochemical Survey

A detailed explanation of how the silt geochemical survey expenditures were incurred is given under the section entitled 'Silt Survey Field Work'.

The total cost of the silt geochemical survey on Chappelle No. 1 and 2 groups is as follows:

Chemical analysis of 98 samples - Cu, Mo, Zn, Pb, Co, Ni			$ 441.00
Wages & Board:			
S.C. Gower	July 13,22,23	$30.00 + $10.00	120.00
D.R. Reid	July 13	$21.00 + $10.00	31.00
E.A. Black	July 22,23	$18.00 + $10.00	56.00
A.B. Flower	July 22	$17.00 + $10.00	27.00
R.J. Beaty	July 23	$16.00 + $10.00	26.00
Helicopter set-out	0:40 hrs @ $160/hr		106.00
			$ 807.00

The amount expended on each claim is shown on the list of claims.

Total on Group No. 1 = $557

Total on Group No. 2 = $250

$807

Statement of Costs Incurred - cont'd

Soil Geochemical Survey

A detailed explanation of how the soil geochemical survey expenditures were incurred is given under the section entitled 'Soil Survey Field Work'.

The total cost of the soil geochemical survey on Chappelle No. 2 group is as follows:

Chemical analysis of 109 samples for Cu, Mo, Zn, Pb, Co, Ni			$ 490.00
Wages & Board:			
S.C. Gower	July 18	$30.00 + $10.00	40.00
G. Davies	July 18	$35.00 + $10.00	45.00
E.A. Black	July 18	$18.00 + $10.00	28.00
A.B. Flower	July 18	$17.00 + $10.00	27.00
R.J. Beaty	July 18	$16.00 + $10.00	26.00
Laths for station markers			3.00
			$ 659.00

The entire amount was expended on Chappelle No. 3 claim.

INTRODUCTION

The mineral property discussed in this report is situated about 17 miles north of Thutade Lake, British Columbia. The exploration work on these claims consisted of a silt geochemical survey done on July 13, 22, and 23, 1970; and a soil geochemical survey done on July 18, 1970. All work is being applied on claims having a record date of February 11.

The work was done under the general supervision of R.W. Stevenson, P.Eng., and the immediate supervision of S.C. Gower.

LOCATION AND ACCESS

The property is situated at Latitude 57°17'N, Longitude 127°07'W, about 285 miles northwest of Prince George. This is about 17 miles northwest of Thutade Lake. The soil survey area is at an elevation of about 5700' above sea level, and is above tree-line. The silt survey area ranges in elevation from 4800' to 5700' above sea level. It is above tree-line, except for a few scattered patches of alpine fir.

Access to the property is by fixed-wing aircraft from Smithers to Thutade Lake, a distance of about 165 miles, and by helicopter from there.

SILT GEOCHEMICAL SURVEY

Silt Survey Field Work

Sample Site Control

Sample sites were plotted in the field, on a topographic map having a scale of 1" = 2640'. These maps were obtained by enlarging portions of the 1:250,000 topographic map. Each sampling traverse was started from a point which could be identified easily on the topographic map. Sample site locations were plotted by pace and compass until another easily identifiable checkpoint was reached. Crews were set out by helicopter on the traverses that were remote from camp so as to utilize as much as possible of the working day in sample collection. A drainage base map with a scale of 1" = 1320' was compiled for use in plotting the sample results for office interpretation.

Silt Sample Collection

In general, the samples were taken at about 400-foot intervals on the main streams, depending on where suitable silt could be found. More detail was added on the central stream as shown on Plates No. 1 to 7.

Samples were taken from "active" material; that is, under flowing water, either in streams or seepages. The samples were taken with either a folding shovel, or with a hand trowel, depending on the depth of silt and the presence of pebbles or boulders. Fine-grained silt was selected. Care was taken to avoid high organic material, and well washed clay.

The sample site and number were then plotted on the field map. A note was made of the sample number; the width, depth, and speed of flow of the stream; the type of sediment sampled; and any peculiarities of nearby drainage, such as above or below a pond or swamp.

Packaging

The samples were placed in 3" x 4 1/2" brown paper envelopes on which the sample numbers had been marked. These were closed with a triangular triple fold. (The bags are not anomalous in trace metals).

Sample Preparation

The samples were shipped to our laboratory in North Vancouver, where they were oven-dried at 80°C and sieved through an 80-mesh size stainless steel screen. (These sieves do not show noticeable wear even after several thousand samples have been sifted.) The minus 80 mesh fraction was collected for all the analyses involved.

Analysis

The samples were analysed in the North Vancouver laboratory of Kennco Explorations, (Western) Limited, under the supervision of H. Goddard, laboratory manager, and G. Henrioulle, chemist.

A one gram -80 mesh sample is placed in a 25 x 200 mm test tube. Two ml of concentrated nitric acid is added. The sample is allowed to digest 15 minutes, and 5 ml of 70% perchloric acid is added. The sample is digested on a medium heat hot plate for four hours. After cooling the sample is diluted to 55 ml with distilled water, agitated, and after settling, the solution is used for the determination of Mo, Cu, Zn, Pb, Ni, and Co by an Atomic Absorption Spectrophotometer (Techtron AA5).

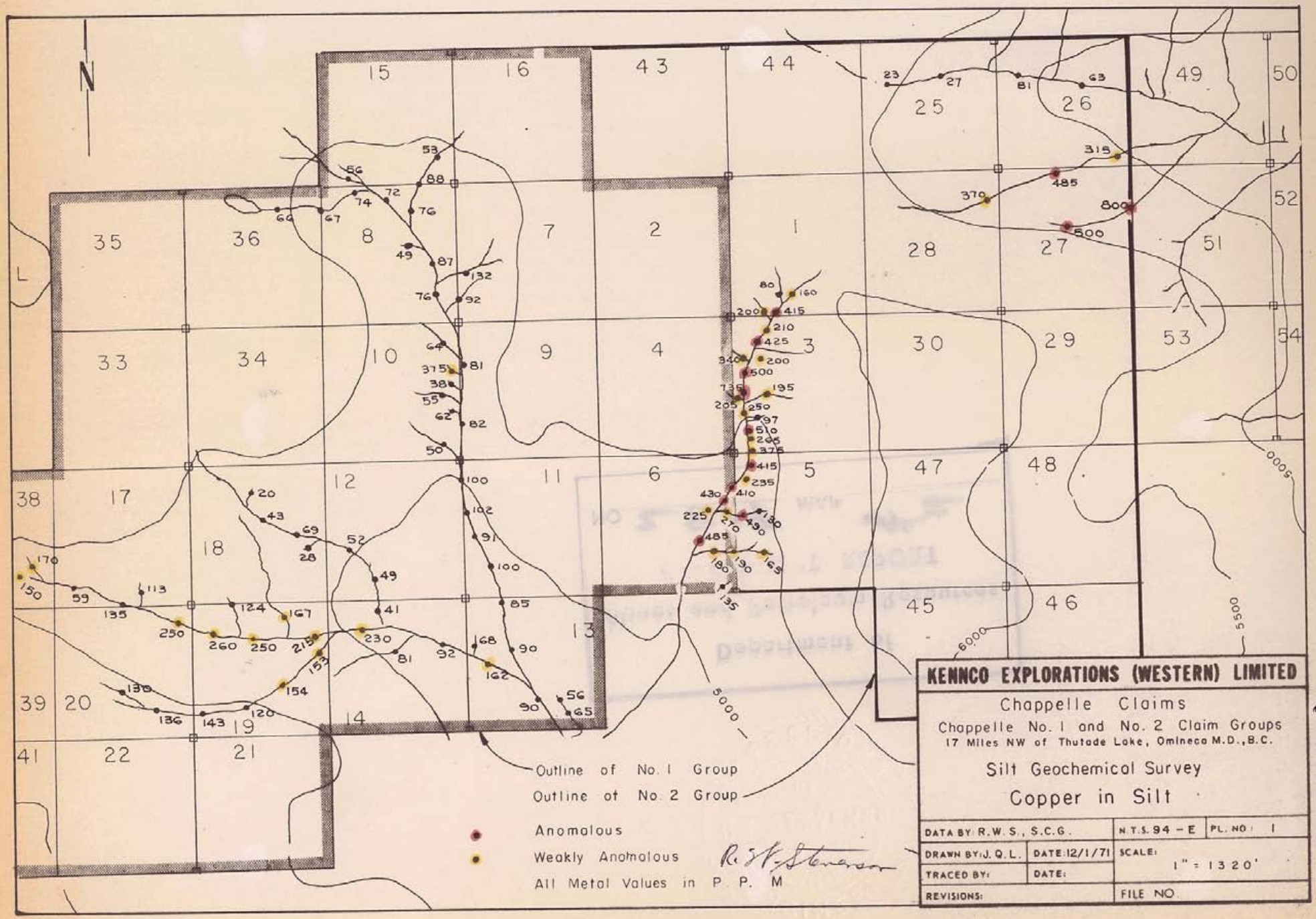
Interpretation

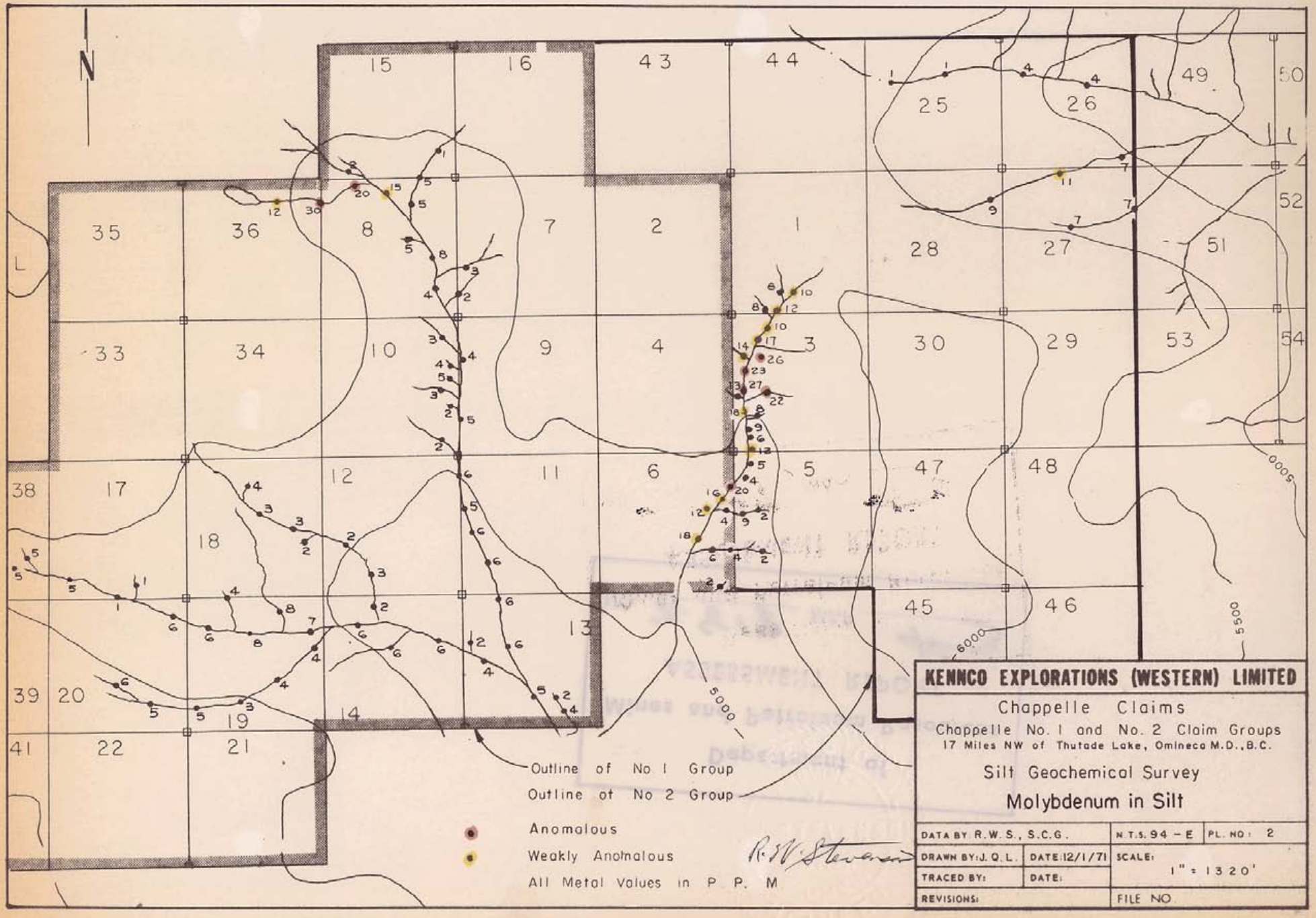
The purpose of the silt survey was to explore the potential of the property outside the soil survey area. The configuration of streams and seepages made this a practicable goal.

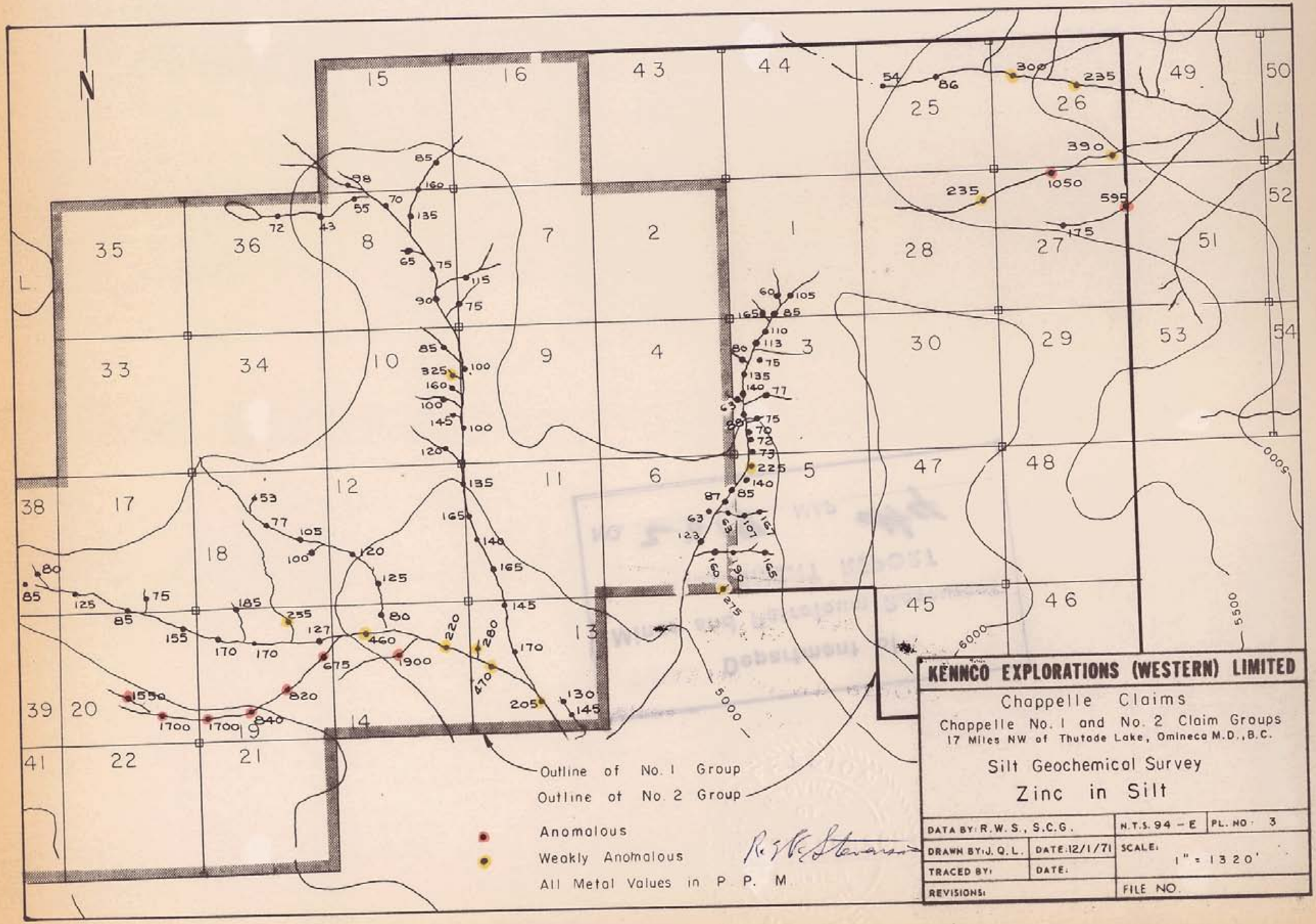
Sample stations that are considered to be background are uncoloured. Sample stations that are considered to be only weakly anomalous are coloured yellow; those that are anomalous are coloured red. The weakly anomalous levels vary somewhat with the size of the stream and the drainage area. For example, a value of 300 ppm Cu would be only weakly anomalous in a small seepage, but would be definitely anomalous in a large stream.

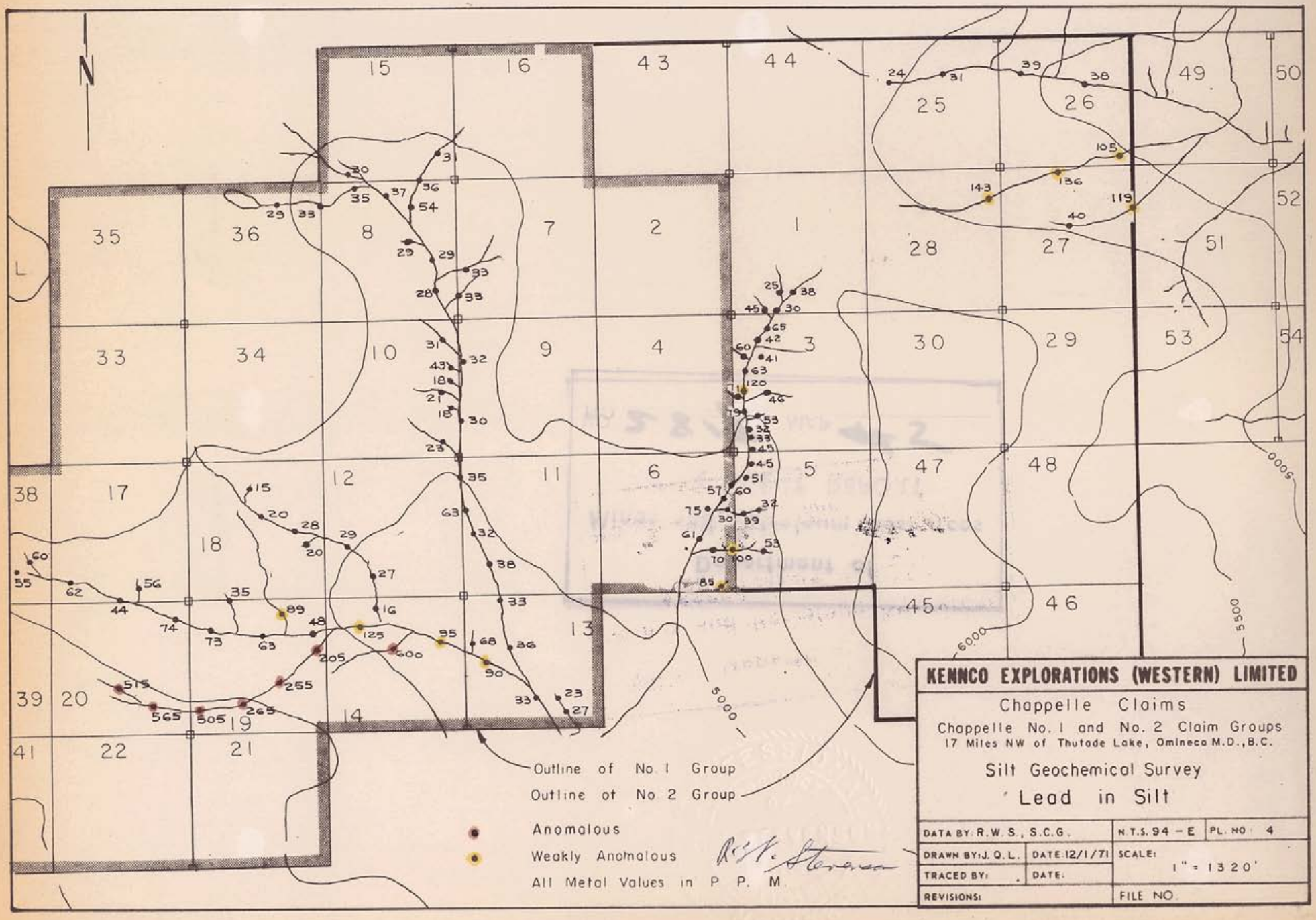
The central stream on claims 1, 3, 5, 6 is noticeably anomalous in Cu, Mo, and Co. Weaker Cu and Co anomalies occur on two other streams: on claims 27, 28, and on claims 17, 19, 20, 38. Molybdenum alone is anomalous in a stream on claims 8, 36. Lead and zinc are strongly anomalous in a stream on claims 19,20; the other elements are not anomalous there. Nickel is generally not anomalous.

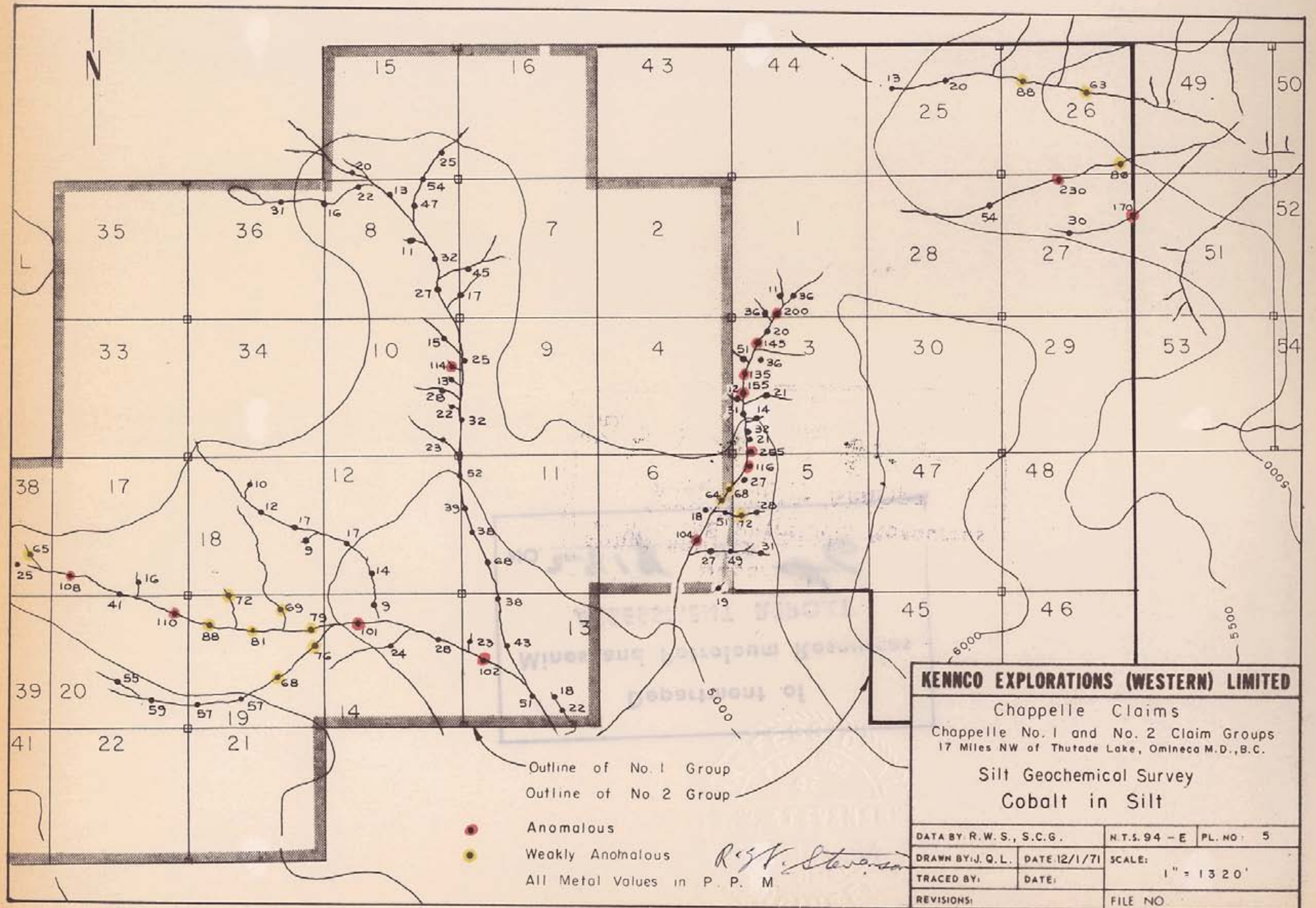
The anomalous streams should be followed up in an attempt to ascertain the sources of the anomalies.

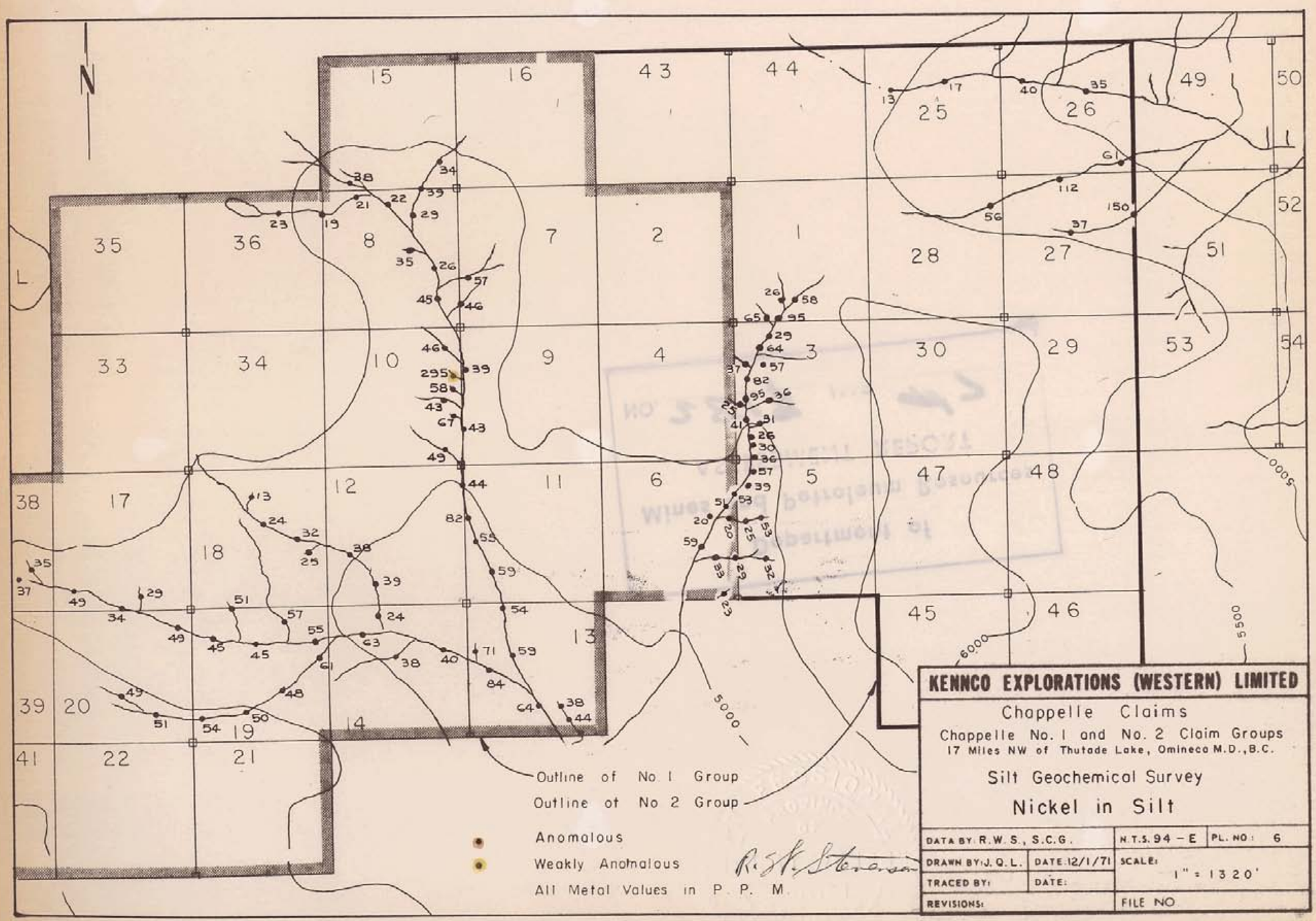

N
Outline of No. 1 Group
Outline of No. 2 Group
Anomalous
Weakly Anomalous
All Metal Values in P. P. M
KENNCO EXPLORATIONS (WESTERN) LIMITED
Chappelle Claims
Chappelle No. 1 and No. 2 Claim Groups
17 Miles NW of Thutade Lake, Omineca M.D., B.C.
Silt Geochemical Survey
Copper in Silt
DATA BY: R.W.S., S.C.G.
N.T.S. 94 - E
PL. NO: 1
DRAWN BY: J.Q.L.
DATE: 12/1/71
SCALE: 1" = 1320'
TRACED BY:
DATE:
REVISIONS:
FILE NO.

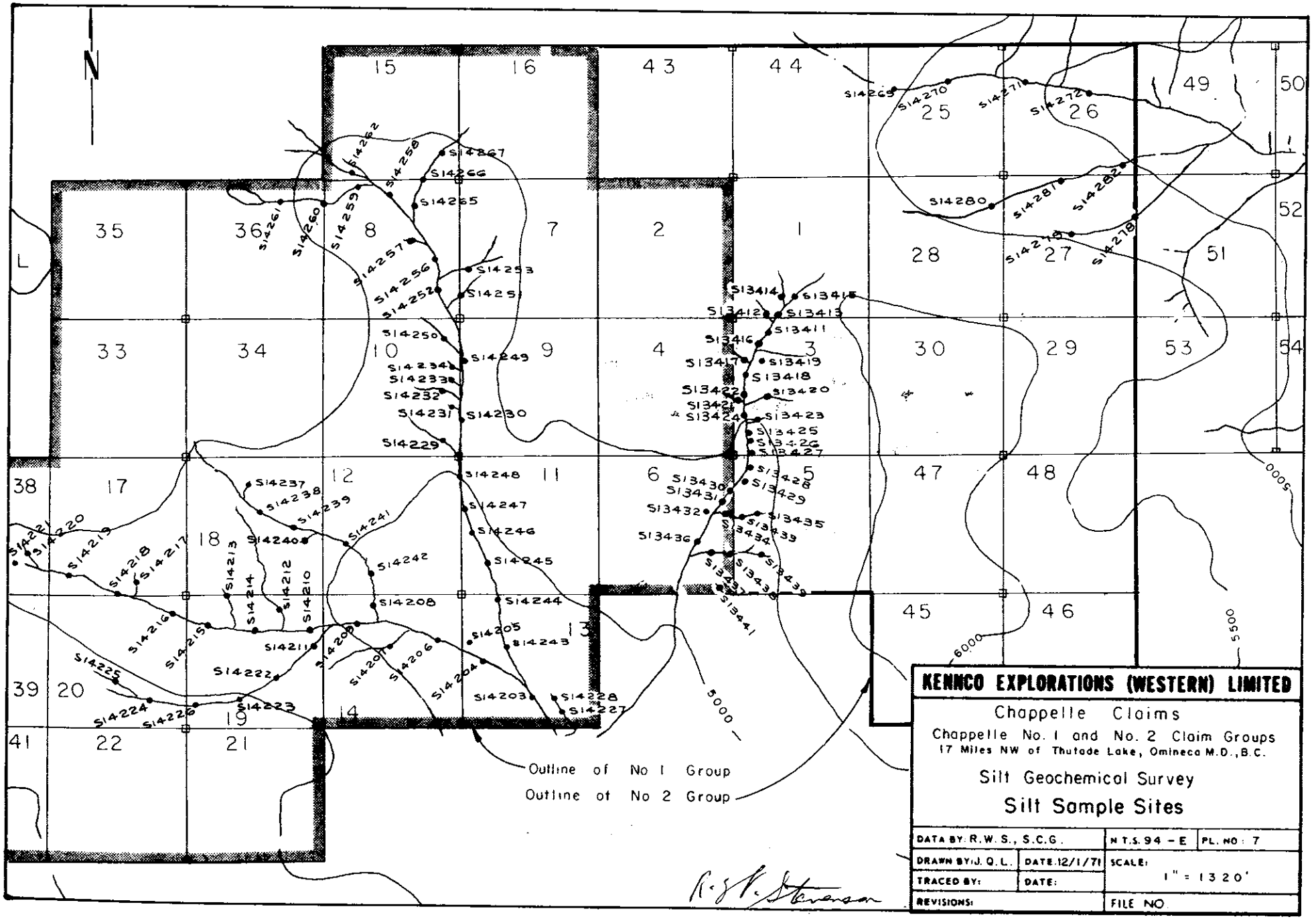

N
15
16
43
44
25
26
49
50
35
36
8
7
2
1
28
27
51
52
33
34
10
9
4
3
30
29
53
54
38
17
12
11
6
5
47
48
18
45
46
39
20
19
14
13
41
22
21
5000
5500
6000
Outline of No 1 Group
Outline of No 2 Group
Anomalous
Weakly Anomalous
All Metal Values in P. P. M
R. W. Stewart
KENNCO EXPLORATIONS (WESTERN) LIMITED
Chappelle Claims
Chappelle No. 1 and No. 2 Claim Groups
17 Miles NW of Thutade Lake, Omineca M.D., B.C.
Silt Geochemical Survey
Molybdenum in Silt
DATA BY: R.W.S., S.C.G.
N.T.S. 94 - E
PL. NO: 2
DRAWN BY: J.Q.L.
DATE: 12/1/71
SCALE: 1" = 1320'
TRACED BY:
DATE:
REVISIONS:
FILE NO.


N
Outline of No. 1 Group
Outline of No. 2 Group
Anomalous
Weakly Anomalous
All Metal Values in P. P. M.
KENNCO EXPLORATIONS (WESTERN) LIMITED
Chappelle Claims
Chappelle No. 1 and No. 2 Claim Groups
17 Miles NW of Thutade Lake, Omineca M.D., B.C.
Silt Geochemical Survey
Zinc in Silt
DATA BY: R.W.S., S.C.G.
N.T.S. 94 - E
PL. NO: 3
DRAWN BY: J.Q.L.
DATE: 12/1/71
SCALE: 1" = 1320'
TRACED BY:
DATE:
REVISIONS:
FILE NO.


N
Outline of No. 1 Group
Outline of No. 2 Group
Anomalous
Weakly Anomalous
All Metal Values in P P. M
KENNCO EXPLORATIONS (WESTERN) LIMITED
Chappelle Claims
Chappelle No. 1 and No. 2 Claim Groups
17 Miles NW of Thutade Lake, Omineca M.D., B.C.
Silt Geochemical Survey
Lead in Silt
DATA BY: R.W.S., S.C.G.
N.T.S. 94 - E
PL. NO: 4
DRAWN BY: J.Q.L.
DATE: 12/1/71
SCALE: 1" = 1320'
TRACED BY:
DATE:
REVISIONS:
FILE NO.


N
Outline of No. 1 Group
Outline of No 2 Group
Anomalous
Weakly Anomalous
All Metal Values in P. P. M.
KENNCO EXPLORATIONS (WESTERN) LIMITED
Chappelle Claims
Chappelle No. 1 and No. 2 Claim Groups
17 Miles NW of Thutade Lake, Omineca M.D., B.C.
Silt Geochemical Survey
Cobalt in Silt
DATA BY: R.W.S., S.C.G.
N.T.S. 94 - E
PL. NO: 5
DRAWN BY: J. Q. L.
DATE: 12/1/71
SCALE: 1" = 1320'
TRACED BY:
DATE:
REVISIONS:
FILE NO.


N
Outline of No 1 Group
Outline of No 2 Group
Anomalous
Weakly Anomalous
All Metal Values in P. P. M.
KENNCO EXPLORATIONS (WESTERN) LIMITED
Chappelle Claims
Chappelle No. 1 and No. 2 Claim Groups
17 Miles NW of Thutade Lake, Omineca M.D., B.C.
Silt Geochemical Survey
Nickel in Silt
DATA BY: R.W.S., S.C.G.
N.T.S. 94 - E
PL. NO: 6
DRAWN BY: J.Q.L.
DATE: 12/1/71
SCALE: 1" = 1320'
TRACED BY:
DATE:
REVISIONS:
FILE NO



KENNCO EXPLORATIONS (WESTERN) LIMITED

Chappelle Claims

Chappelle No. 1 and No. 2 Claim Groups

17 Miles NW of Thutade Lake, Omineca M.D., B.C.

Silt Geochemical Survey

Silt Sample Sites

DATA BY: R.W.S., S.C.G.		N.T.S. 94 - E	PL. NO: 7
DRAWN BY: J. Q. L.	DATE: 12/1/71	SCALE:	1" = 1320'
TRACED BY:	DATE:		
REVISIONS:		FILE NO.	

SOIL GEOCHEMICAL SURVEY

Soil Survey Field Work

Control Survey Lines

A control grid was established by chain and compass survey. Laths were used to mark the stations because the survey area is above tree-line. This gave good control of sample sites, with minimum expenditure.

Five north-south lines were run, approximately 150' apart. This layout was chosen so as to give efficient coverage of the upland area that was to be sampled, as well as conforming to the claim boundaries. A base map with scale 1" = 200' was compiled for use in plotting the sample results.

Soil Sample Collection

The samples were taken at 50-foot intervals along the grid lines. The location of the sample sites is shown on Plate No. 14. They were taken from the top of the "B" (rusty) horizon.

The samples were collected by digging a small hole with a trenching tool type of spade. By this means it was possible to see where the top of the "B" horizon was. The soil sample was then taken from the top of the "B" horizon, either with the tip of the spade, or with a small trowel.

A note was then made of the grid line location, the sample number, the depth to the top of the "B" horizon, the direction of drainage, the type of vegetation (i.e. - grass, or bare soil), and the soil type.

Packaging

The samples were placed in 3" x 4 1/2" brown paper envelopes on which the sample numbers had been marked. These were closed with a triangular triple fold. (The bags are not anomalous in trace metals).

Sample Preparation

The samples were shipped to our laboratory in North Vancouver, where they were oven-dried at 80°C, and sieved through an 80-mesh size stainless steel screen. (These sieves do not show noticeable wear even after several thousand samples have been sifted). The minus 80 mesh fraction was collected for all the analyses involved.

Analysis

The samples were analysed in the North Vancouver laboratory of Kennco Explorations, (Western) Limited under the supervision of H. Goddard, laboratory manager, and G. Henrioulle, chemist.

The analytical procedures used on the soil samples were the same as those used on the silt samples. These are described in the section on the Silt Geochemical Survey.

Interpretation

Over most of the area, a good sample which was representative of the "B" horizon was obtained. The depth of overburden varies from a few inches to probably about 20' over most of the area sampled. Considering the type of soil, it would seem likely that soil geochemistry is a reliable technique on this part of the property. The samples were analysed for total metal content in copper, molybdenum, zinc, lead, cobalt, and nickel.

Sample stations that are considered to be background are uncoloured. Sample stations that are considered to be only weakly anomalous are coloured yellow. The weakly anomalous levels are 150 ppm to 299 ppm for copper, 14 ppm to 24 ppm for molybdenum, 300 ppm to 599 ppm for zinc, 80 ppm to 149 ppm for lead, 50 ppm to 99 ppm for cobalt, and 200 ppm to 499 ppm for nickel. Sample stations that are definitely anomalous are coloured red. The results are plotted on Plates No. 8 to 13.

Copper and molybdenum form a coincident anomaly on the northern quarter of the soil grid. Copper is only moderately anomalous and is somewhat erratic. Molybdenum forms a slightly smaller, but stronger and more continuous anomaly.

A few samples are anomalous in lead. Four of these are coincident with anomalous copper, but the anomalous lead samples are generally outside of the copper-molybdenum anomaly described above. Zinc is not anomalous.

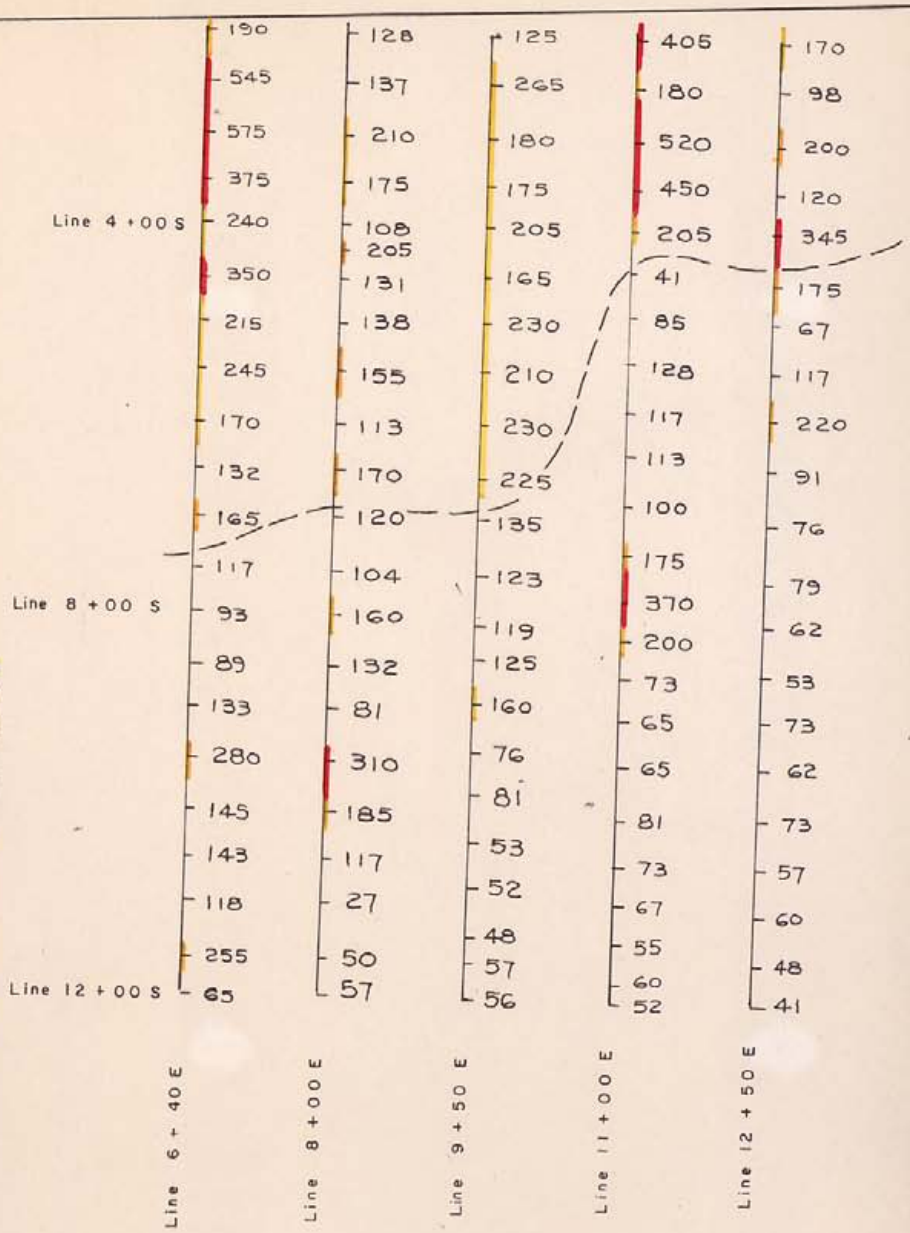
Cobalt and nickel are generally not anomalous, but one sample (S8329 on Line 12+50E) is of some interest. Both cobalt and nickel are anomalous (380 ppm Co, 355 ppm Ni). Copper is the only other element that is co-anomalous (345 ppm Cu).

An attempt should be made to ascertain the cause of the coincident copper-molybdenum anomaly. The coincident cobalt-nickel anomaly is also of interest, even though it is only at one sample station.

Vancouver, B.C.

January 18, 1971

R. W. Stevenson, P.Eng.



Anomalous

Weakly Anomalous

All Metal Values in P. P. M.

R. W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Chappelle Claims

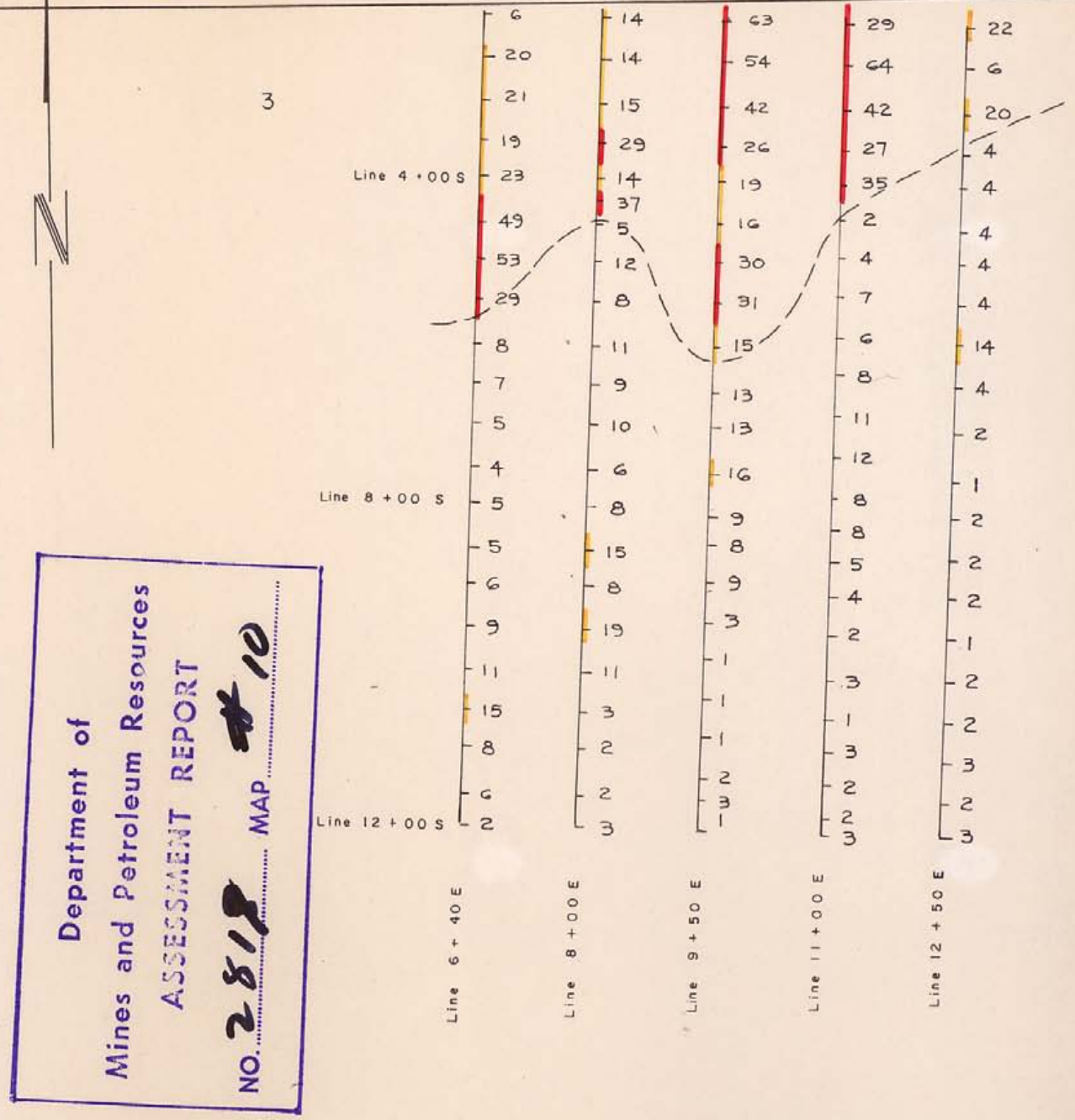
Chappelle No. 1 and No. 2 Claim Groups

17 Miles NW of Thutade Lake, Omineca M.D., B.C.

Soil Geochemical Survey

Copper in Soil

DATA BY: R.W.S., S.C.G.		N.T.S. 94 - E	PL. NO.: 8
DRAWN BY: J.Q.L.	DATE: 13/1/71	SCALE: 1" = 200'	
TRACED BY:	DATE:		
REVISIONS:		FILE NO.	



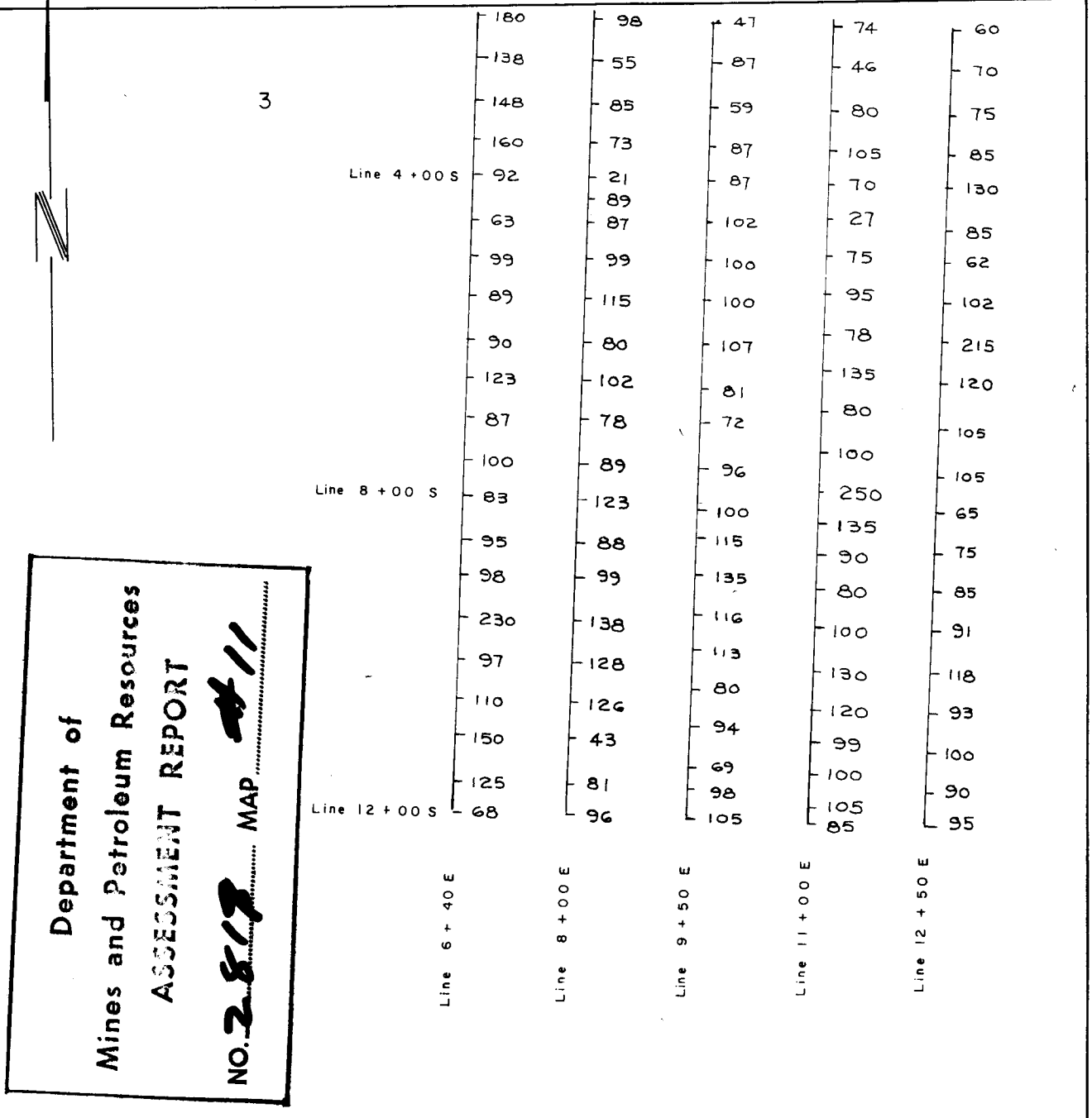
Anomalous

Weakly Anomalous

All Metal Values in P. P. M.

R. S. V. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED			
Chappelle Claims Chappelle No. 1 and No. 2 Claim Groups 17 Miles NW of Thutade Lake, Omineca M.D., B.C. Soil Geochemical Survey Molybdenum in Soil			
DATA BY: R.W.S., S.C.G.		N.T.S. 94 - E	PL. NO.: 9
DRAWN BY: J.Q.L.	DATE: 13/1/71	SCALE: 1" = 200'	
TRACED BY:	DATE:		
REVISIONS:		FILE NO.	



Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2813 MAP #11

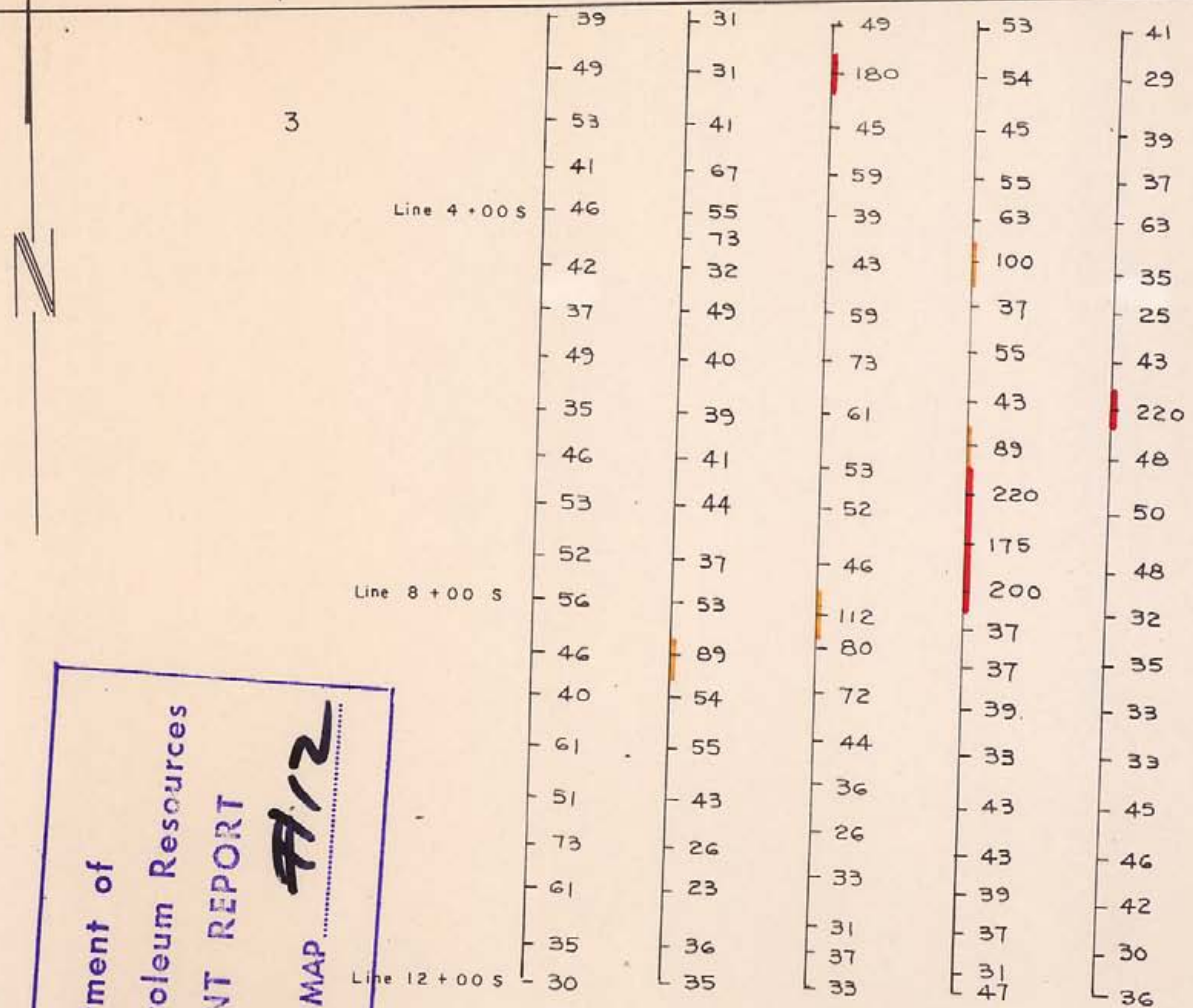
Anomalous
Weakly Anomalous
All Metal Values in P. P. M.

R. St. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Chappelle Claims
Chappelle No. 1 and No. 2 Claim Groups
17 Miles NW of Thutade Lake, Omineca M.D., B.C.
Soil Geochemical Survey
Zinc in Soil

DATA BY: R.W.S., S.C.G.		N.T.S. 94 - E	PL. NO.: 10
DRAWN BY: J.Q.L.	DATE: 13/1/71	SCALE: 1" = 200'	
TRACED BY:	DATE:		
REVISIONS:		FILE NO.	



Anomalous

Weakly Anomalous

All Metal Values in P. P. M.

R. W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Chappelle Claims

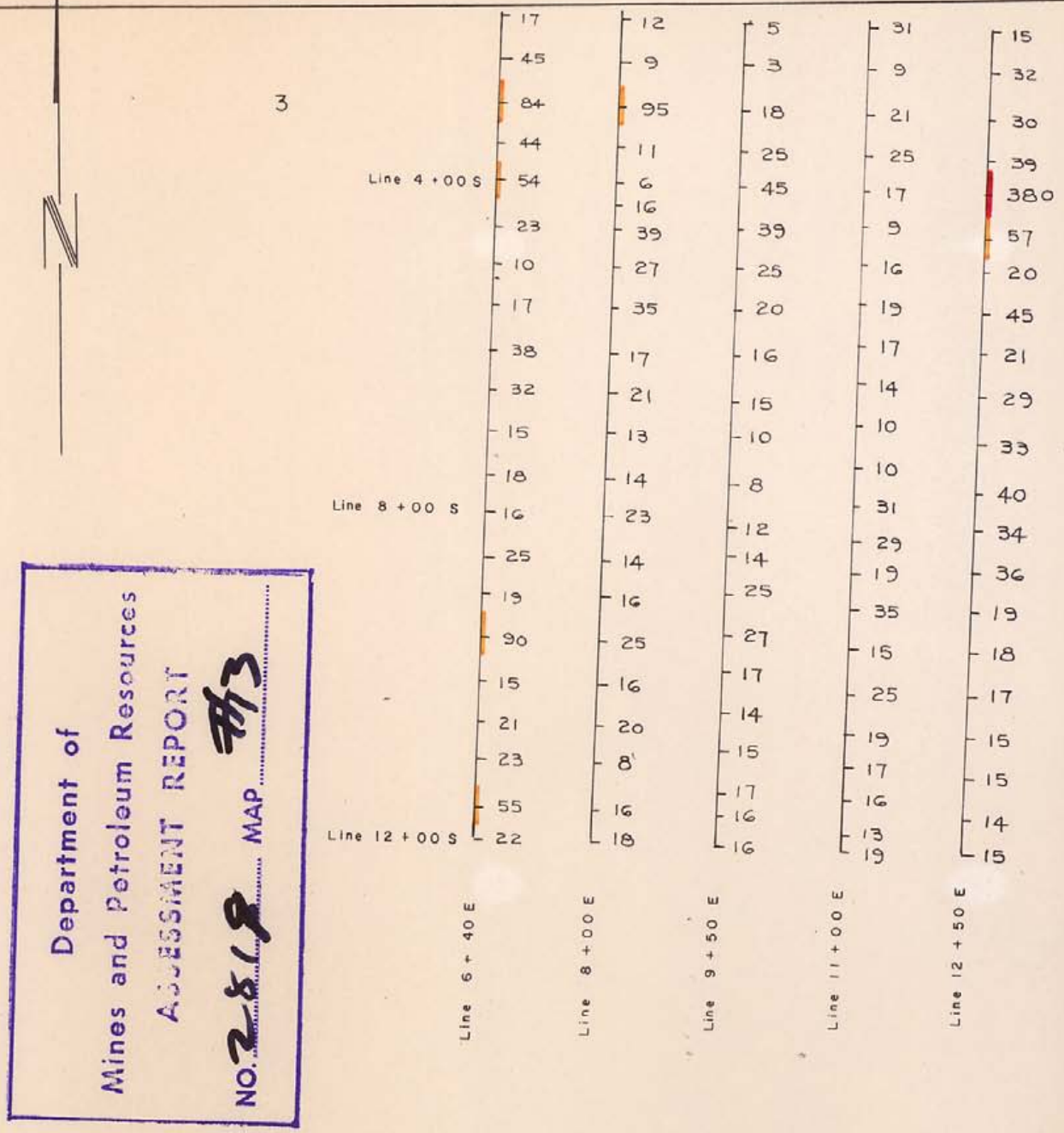
Chappelle No. 1 and No. 2 Claim Groups

17 Miles NW of Thutade Lake, Omineca M.D., B.C.

Soil Geochemical Survey

Lead in Soil

DATA BY: R.W.S., S.C.G.		N.T.S. 94 - E	PL. NO.: 11
DRAWN BY: J.Q.L.	DATE: 13/1/71	SCALE: 1" = 200'	
TRACED BY:	DATE:		
REVISIONS:		FILE NO.	



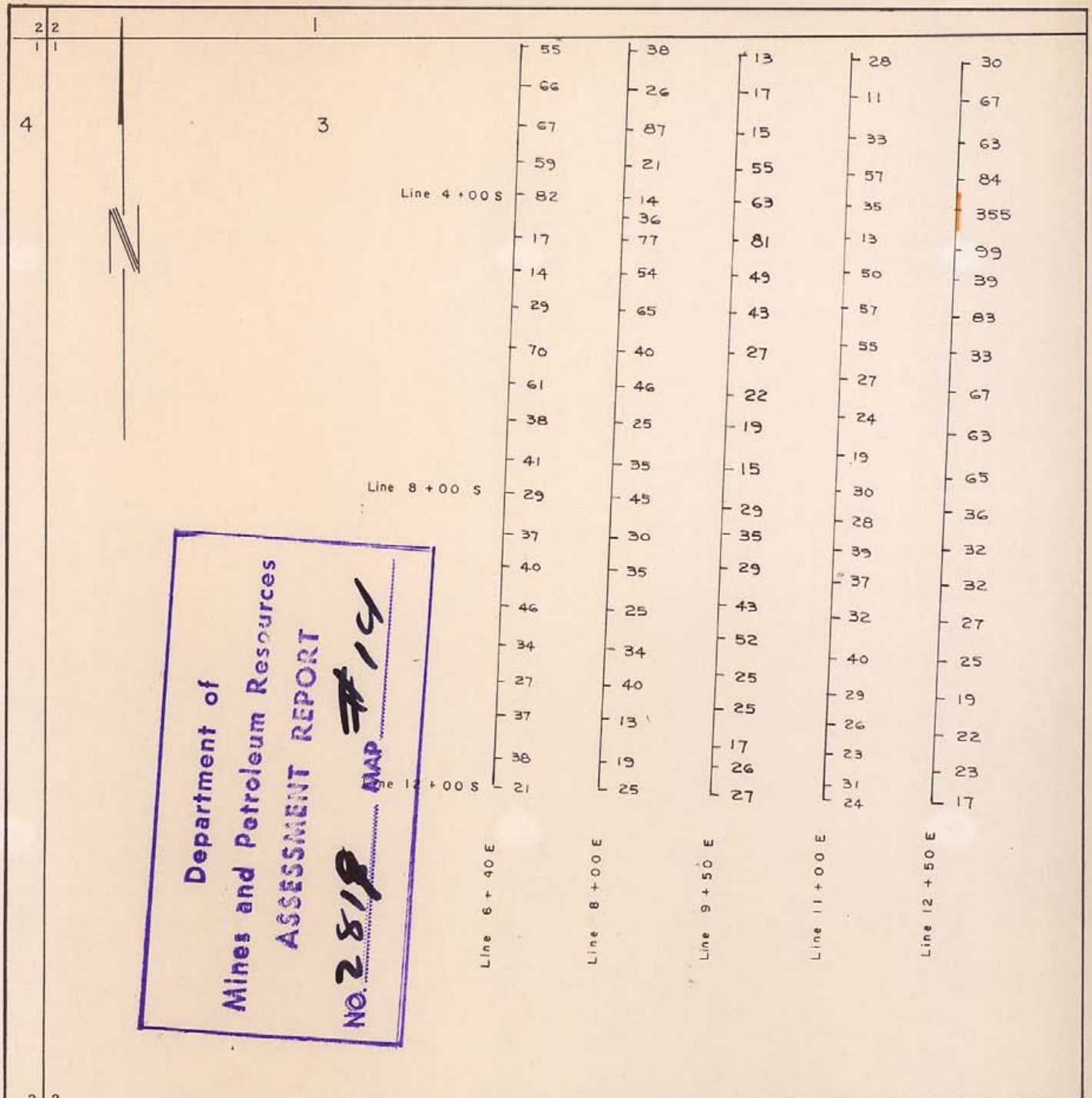
Anomalous
Weakly Anomalous
All Metal Values in P. P. M.

R. W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Chappelle Claims
Chappelle No. 1 and No. 2 Claim Groups
17 Miles NW of Thutade Lake, Omineca M.D., B.C.
Soil Geochemical Survey
Cobalt in Soil

DATA BY: R.W.S., S.C.G.		N.T.S. 94 - E PL. NO.: 12
DRAWN BY: J.Q.L.	DATE: 13/1/71	SCALE: 1" = 200'
TRACED BY:	DATE:	
REVISIONS:		FILE NO.



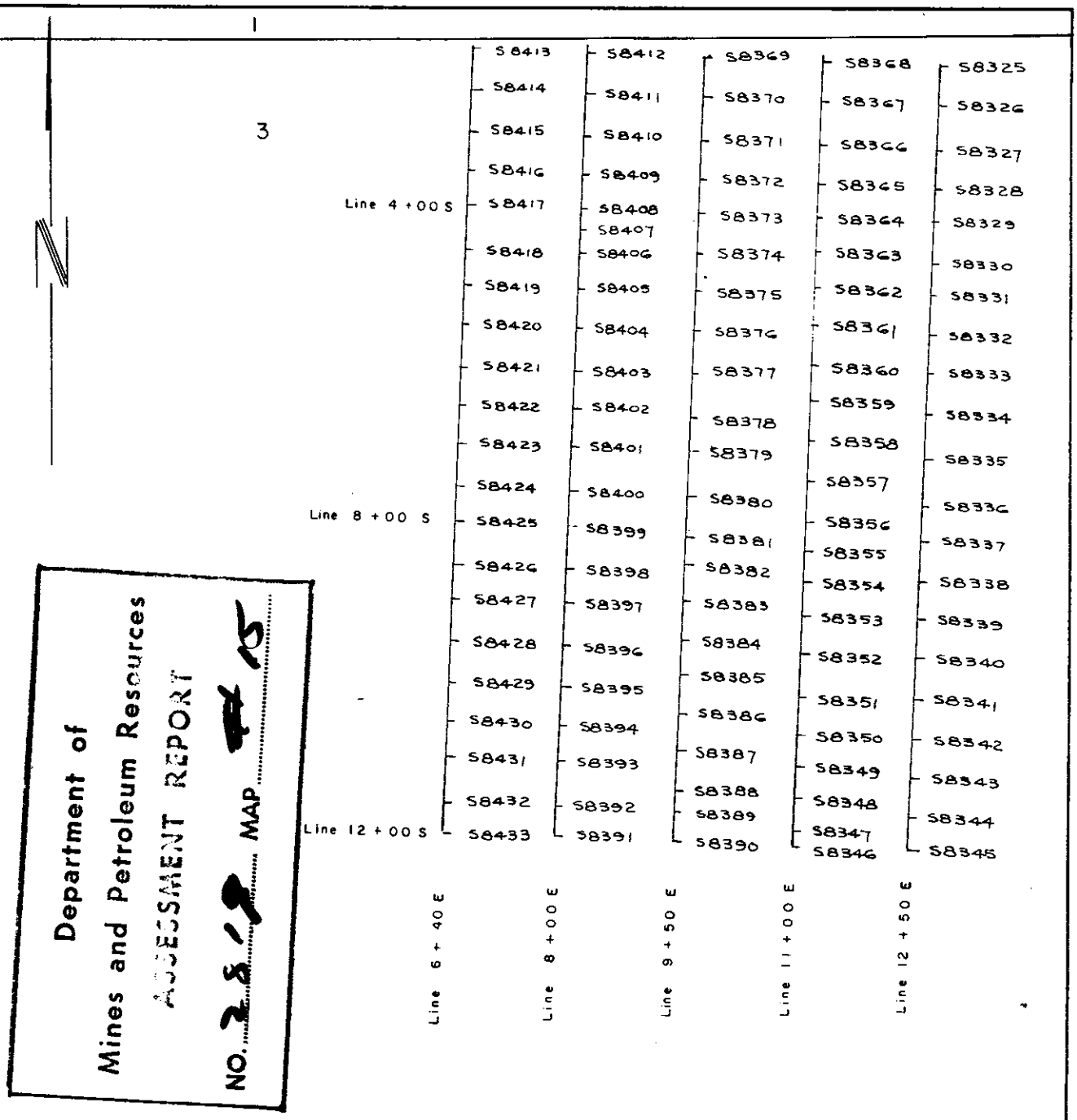
Anomalous

Weakly Anomalous

All Metal Values in P. P. M.

R. V. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED			
Chappelle Claims Chappelle No. 1 and No. 2 Claim Groups 17 Miles NW of Thutade Lake, Omineca M.D., B.C. Soil Geochemical Survey Nickel in Soil			
DATA BY: R.W.S., S.C.G.		N.T.S. 94 - E	PL. NO.: 13
DRAWN BY: J. Q. L.	DATE: 13/1/71	SCALE: 1" = 200'	
TRACED BY:	DATE:		
REVISIONS:		FILE NO.	



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2815 MAP 15

KENNCO EXPLORATIONS (WESTERN) LIMITED			
Chappelle Claims Chappelle No. 1 and No. 2 Claim Groups 17 Miles NW of Thutade Lake, Omineca M.D., B.C. Soil Geochemical Survey Soil Sample Sites			
DATA BY: R.W.S., S.C.G.		N.T.S. 94 - E	PL. NO.: 14
DRAWN BY: J.Q.L.	DATE: 13/1/71	SCALE:	
TRACED BY:	DATE:	1" = 200'	
REVISIONS:		FILE NO.	

R. W. Stevenson