

2035

KENNGO EXPLORATIONS, (WESTERN) LIMITED

REPORT

ON

SOIL GEOCHEMICAL SURVEY

PINE NO. 4 GROUP
(Pine Mineral Claims 99-128)

Situated 14 miles northeast of Thutade Lake,
Omineca Mining Division
British Columbia

57° 126° SW

By

R. W. Stevenson, P. Eng.

July 19 to August 5, 1969

October 28, 1969

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Department of
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NO. **2035** MAP

LIST OF CLAIMS AND DISTRIBUTION OF WORK

Pine No. 4 Group (30 claims)

<u>Claim No.</u>	<u>Record No.</u>	<u>Record Date</u>	\$ <u>Soil Geochem.</u> <u>Work Ea. Claim</u>	<u>Years</u> <u>Applied</u>
99	63002	September 20	444	2
100	63003	"	230	2
101	63004	"	421	2
102	63005	"	214	2
103	63006	"	399	2
104	63007	"	326	2
105	63008	"	399	2
106	63009	"	377	2
107	63010	"	326	2
108	63011	"	230	2
109	63012	"	370	2
110	63013	"	362	2
111	63014	"	81	2
112	63015	"	66	2
113	63016	"	89	2
114	63017	"	155	2
115	63018	"	170	2
116	63019	"	200	2
117	63120	"	0	2
118	63021	"	156	2
119	63022	"	0	2
120	63023	"	237	2
121	63024	"	0	2
122	63025	"	176	2
123	63026	"	37	2
124	63027	"	260	2
125	63028	"	89	2
126	63029	"	214	2
127	63030	"	0	2
128	63031	"	0	2
			<hr/>	<hr/>
Totals			\$6,028	60

STATEMENT OF COSTS INCURRED

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 Pine No. 4 Group is as follows:

Chemical analysis of 815 samples - Cu, Mo, Zn, Pb		\$4,890.00
Wages & Board:		
R.W. Stevenson	- July 22,23 @ \$35.00 + \$4.50	79.00
I.J. McDougall	- July 21-23,26,28; Aug. 5 @ \$19.50 + \$4.50	144.00
M. Murison	- July 19,21-23,26-31; Aug.1,2,4,5 @ \$17.50 + \$4.50	308.00
D.R. Reid	- July 21-23,26-31;Aug. 1,2,4,5 @ \$16.50 + \$4.50	273.00
J.D. Rance	- July 19,21-23,26,28; Aug.5 @ \$16.50 + \$4.50	147.00
Helicopter set-out on property - 1:10 hrs @ \$160/hr		<u>187.00</u>
	Total =	<u>\$6,028.00</u>

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

INTRODUCTION

The mineral property discussed in this report is about 14 miles northeast of Thutade Lake, B.C., on the northwest side of the Finlay River. The exploration work on these claims consisted of soil sampling. It was done during the period July 19 to August 5, 1969.

The work was done under the supervision of R.W. Stevenson, P. Eng.

LOCATION AND ACCESS

The property is situated at Latitude 57°14'N, Longitude 126°43'W, about 270 miles northwest of Prince George. This is about 14 miles northeast of Thutade Lake. It is on the northwest side of the Finlay River, in the Finlay Valley, an area of subdued topography which is characterized by erratic drainage caused by numerous eskers and both lateral and terminal moraines. The elevation there is from 3400' to 4200' above sea level; and vegetation varies from good stands of mature pine to semi-open swamp areas.

Access to the area is by fixed-wing aircraft from Smithers to Pine Lake, a distance of about 175 miles. This is a small lake, about 4000' long, which is situated 3 miles northeast of the Pine area. Local travel on the Pine property is fairly easy, except for the moderate difference in elevation. Small clearings in swamps provide good helicopter access to most parts of the property.

SOIL GEOCHEMICAL SURVEY

Soil Survey Field Work

Control Survey Lines

A control grid was established by chain and compass survey, using surveyor's flagging to mark the stations. This gave reasonably good control of the sample sites, with minimum expenditure. The survey area is in the valley of the Finlay River, and the topography is generally subdued. Over most of the area, the vegetation is mature Lodgepole Pine.

The baseline direction is N45°E. For purposes of marking the stations, this was termed Grid North. This direction was chosen so as to give the best coverage across the area of interest. Base camp was in the southwest quarter of the grid area. On a few lines farthest from camp, crews were set out by helicopter in nearby clearings so as to minimize unproductive walking time. Elevations range from 3400' to 4200' above sea level. A base map with scale 1" = 400' was compiled for use in plotting the sample results.

Soil Sample Collection

The samples were taken at 100-foot intervals along the grid lines. The location of the sample sites is shown on Plate No. 5. They were taken from the top of the "B" (rusty) horizon. Samples were not taken in swampy areas where only the "A" horizon was accessible.

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 mature forest) and the soil type.

Packaging

The samples were placed in a 3" x 4½" brown paper envelope, 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 taken to the base camp, and were oven-dried at 80°C. They were then shipped to our laboratory in North Vancouver, where they were 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 John Barakso, MSc.

A one-gram sample is weighed to within ± 2 mgm. making a possible error of 2% at this stage. This is much more accurate than a volumetric scoop.

The sample is placed in a dry test tube, and 1 ml of reagent grade 70% nitric acid is added, or just enough to wet the sample. Four ml of reagent grade 70% perchloric acid ($\text{HClO}_4 \cdot \text{H}_2\text{O}$) is added, and the sample is digested at 200°C on a hot plate for four hours. After cooling, the sample is diluted up to 50 ml with distilled water, agitated, and allowed to settle for two hours.

An aliquot of this solution is used for determination of copper, zinc, and lead by atomic absorption spectrophotometer.

An aliquot of this solution is also taken for determination of molybdenum. Ammonium thiocyanate, stannous chloride, and amyl acetate are added to the solution. Molybdenum forms a thiocyanate complex which is removed by solvent extraction in the amyl acetate. This is aspirated in the atomic absorption spectrophotometer to determine molybdenum.

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 30' over most of the areas sampled. Considering the type of soil, it would seem likely that soil geochemistry is a reliable technique on these parts of the property. The samples were analysed for total metal content in copper, molybdenum, zinc, and lead.

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, 15 ppm to 24 ppm for molybdenum, 1000 ppm to 2999 ppm for zinc, and 100 ppm to 199 ppm for lead. Sample stations that are definitely anomalous are coloured red. The results are plotted on Plates No. 1 to 4.

The survey area is characterized by small, erratic anomalies in copper, molybdenum, and zinc. There are no large, well defined anomalies for any of the metals; however, on claims no. 107, 109, and 110, there is a limited area that is anomalous in copper and molybdenum. Zinc and lead are also anomalous over a portion of this area. Zinc has an unusually high background on this claim group. Lead is weakly anomalous on claims no. 124, 125, and 126.

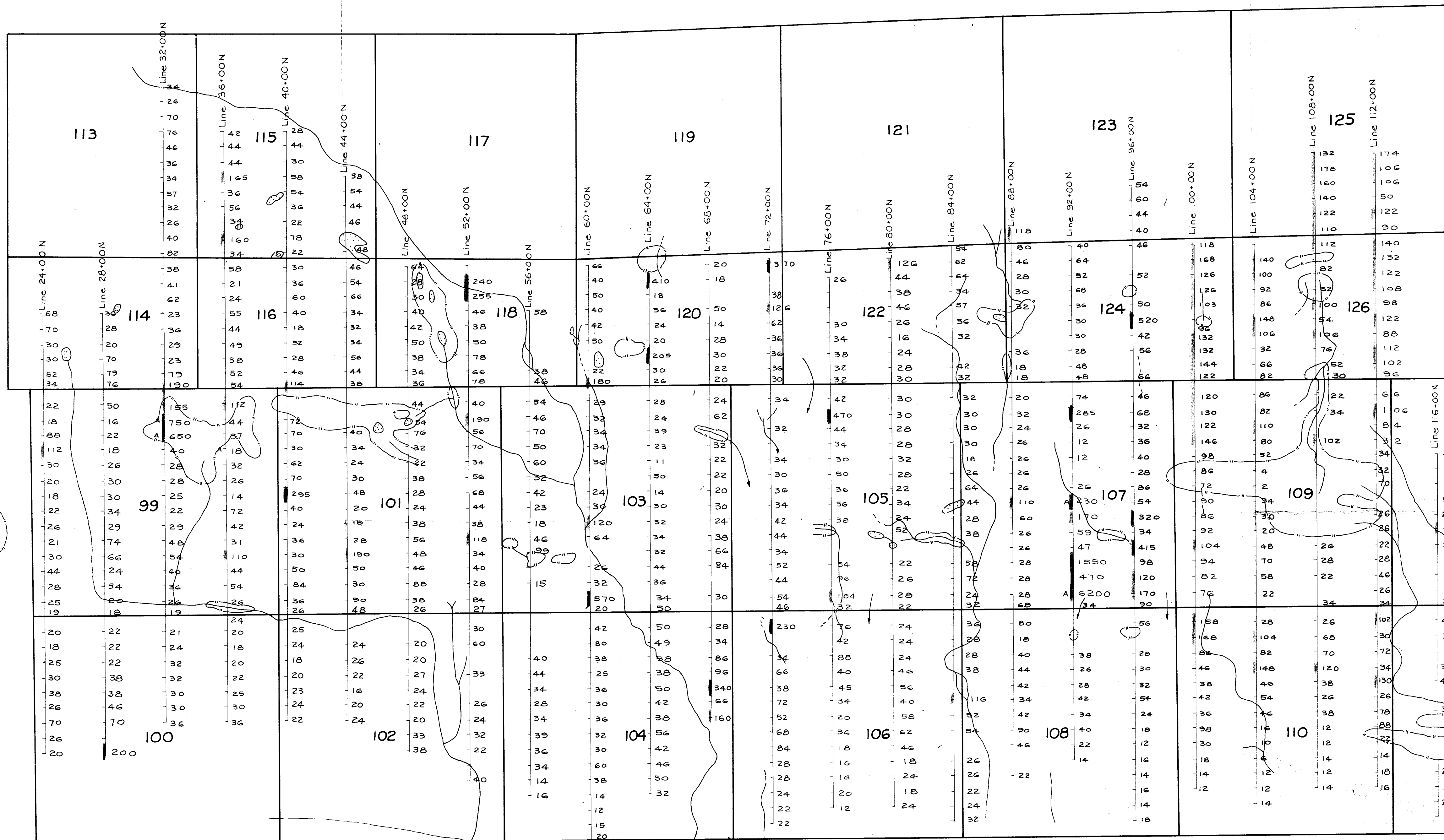
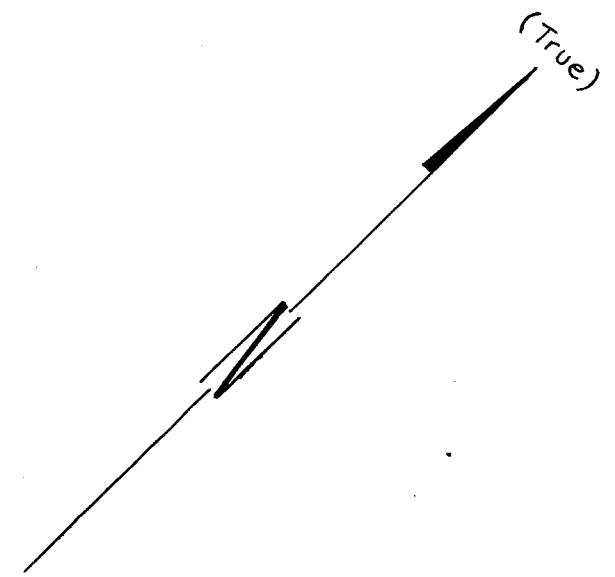
Vancouver, B. C.

October 28, 1969



R. W. Stevenson

(True)



LEGEND

Metal Values in PPM

- Anomalous
- Weakly Anomalous
- Swamp
- Sample taken from humus horizon

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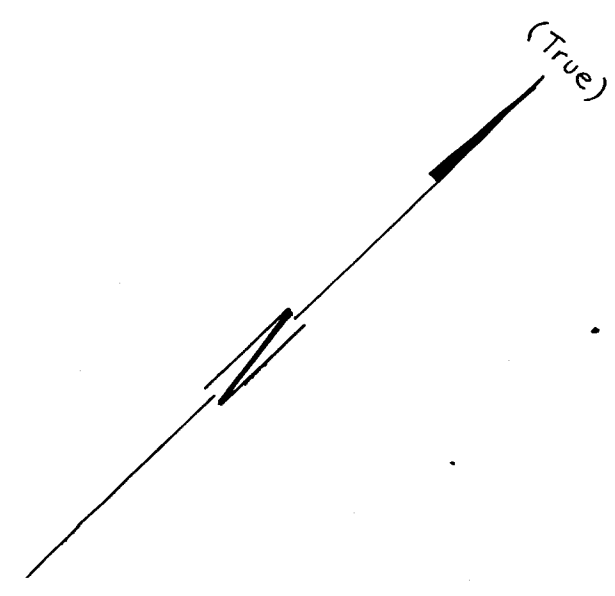
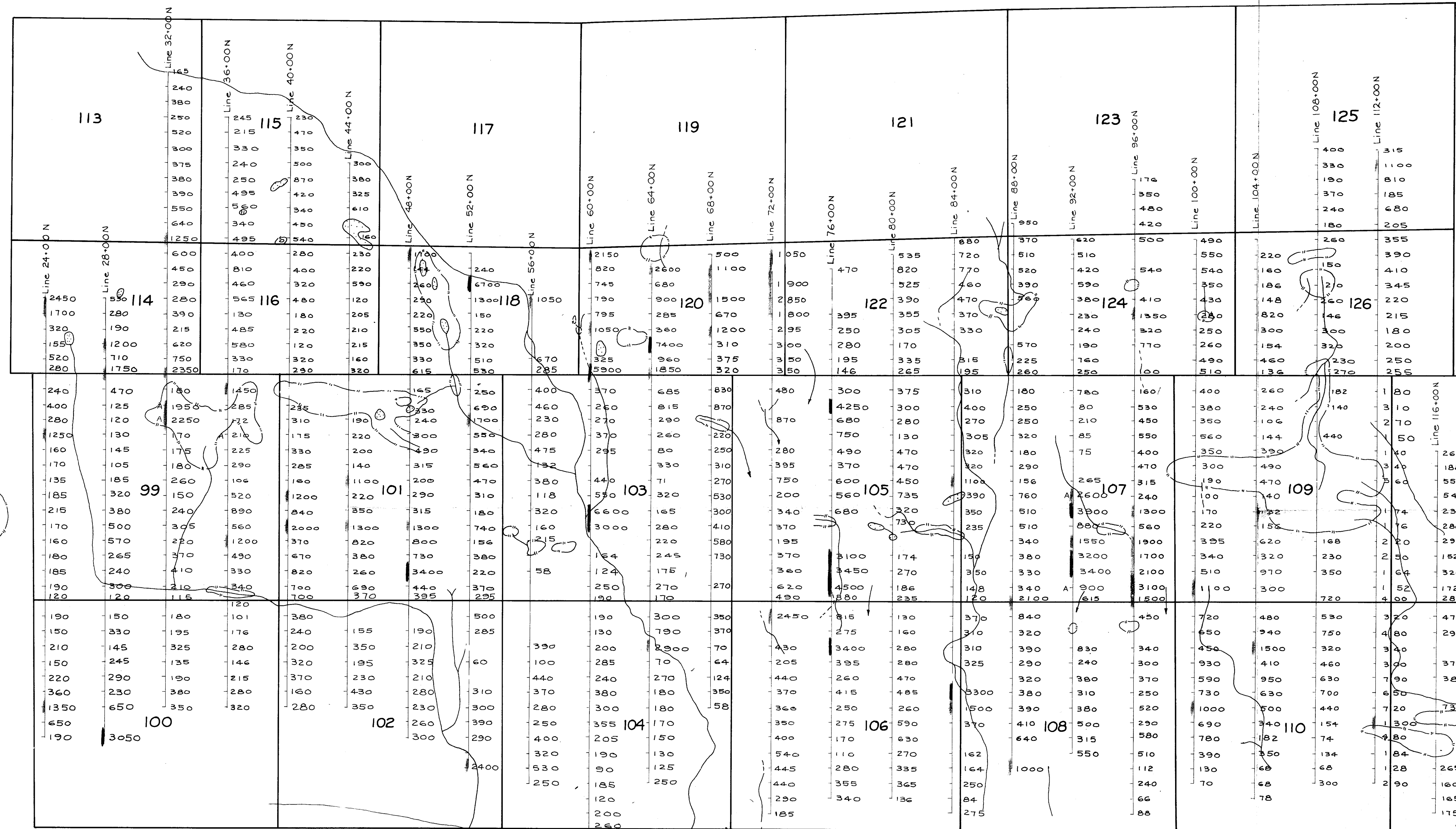
To accompany Soil Geochemical Survey Report by
R.W. Stevenson, P. Eng., on the Pine No. 4 Group
thirteen miles northeast of Thutade Lake, Omineca
Mining Division, dated October 28, 1969.

KENCO EXPLORATIONS (WESTERN) LIMITED

Pine No. 4 Group
Pine Mineral Claims No. 99-128
Omineca M.D., B.C.
Geochemical Survey
Lead in Soil

DATA BY: R.W.S.	N.T.S. 94-E	PL. NO.: 4
DRAWN BY: I.J.M'D	DATE:	SCALE: 1" = 400'
TRACED BY: R.E.	DATE: 2/8/69	
REVISIONS:		

R.W. Stevenson



LEGEND

- Metal Values in PPM
- Anomalous
 - Weakly Anomalous
 - Swamp
 - Sample taken from humushorizon

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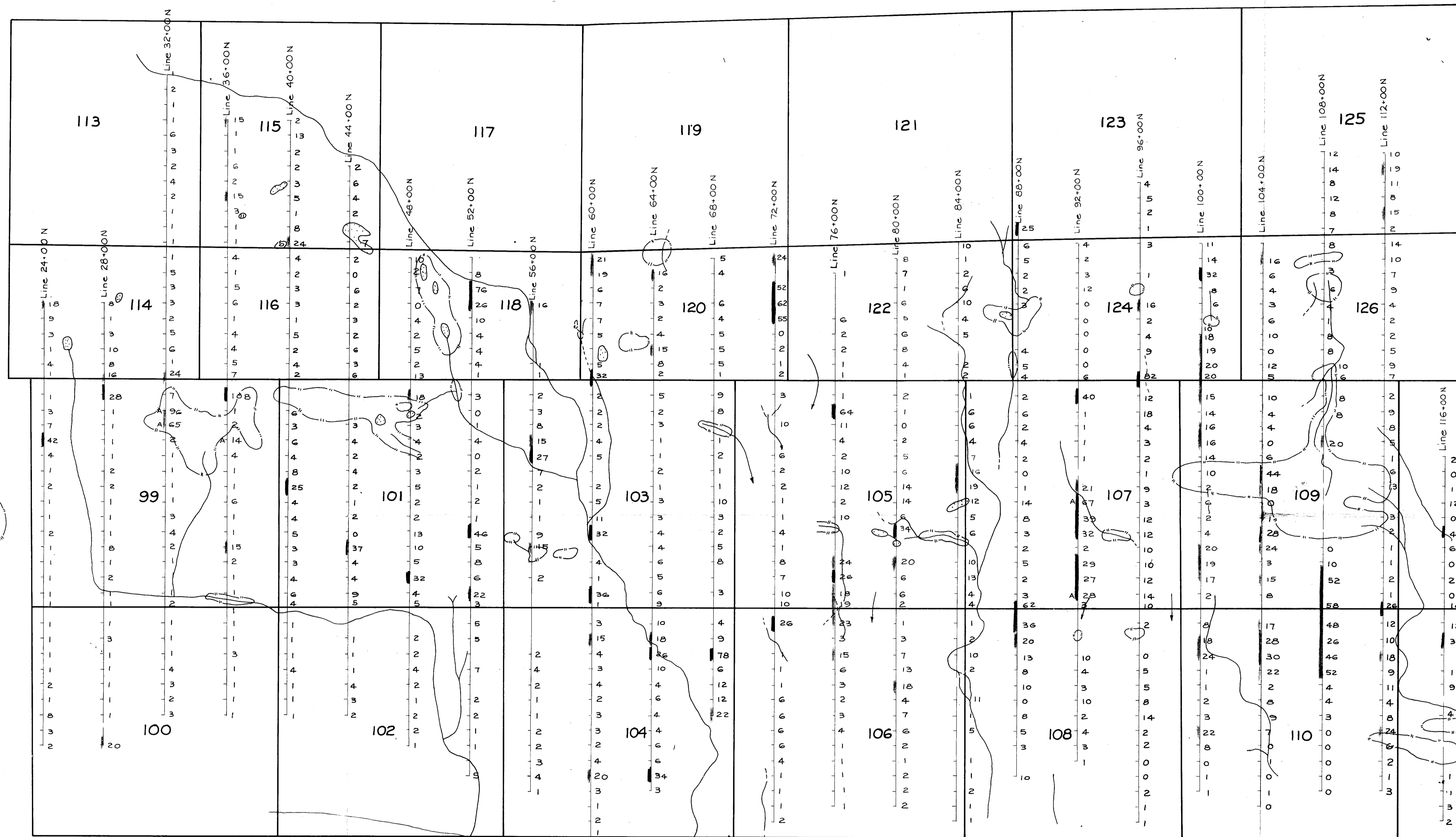
KENCO EXPLORATIONS (WESTERN) LIMITED

Pine No. 4 Group
Pine Mineral Claims No. 99-128
Omineca M.D., B.C.
Geochemical Survey
Zinc in Soil

To accompany Soil Geochemical Survey Report by
R.W. Stevenson, P. Eng., on the Pine No. 4 Group
thirteen miles northeast of Thutade Lake, Omineca
Mining Division, dated October 28, 1969.

DATA BY: R.W.S.	N.T.S. 94-E	PL. NO.: 3
DRAWN BY: I.J.M.D.	DATE:	SCALE: 1" = 400'
TRACED BY: RJC.	DATE: 21/8/69	
REVISIONS:		

R.W. Stevenson



LEGEND

- Metal Values in PPM
- Anomalous
- Weakly Anomalous
- Swamp
- Sample taken from humus horizon

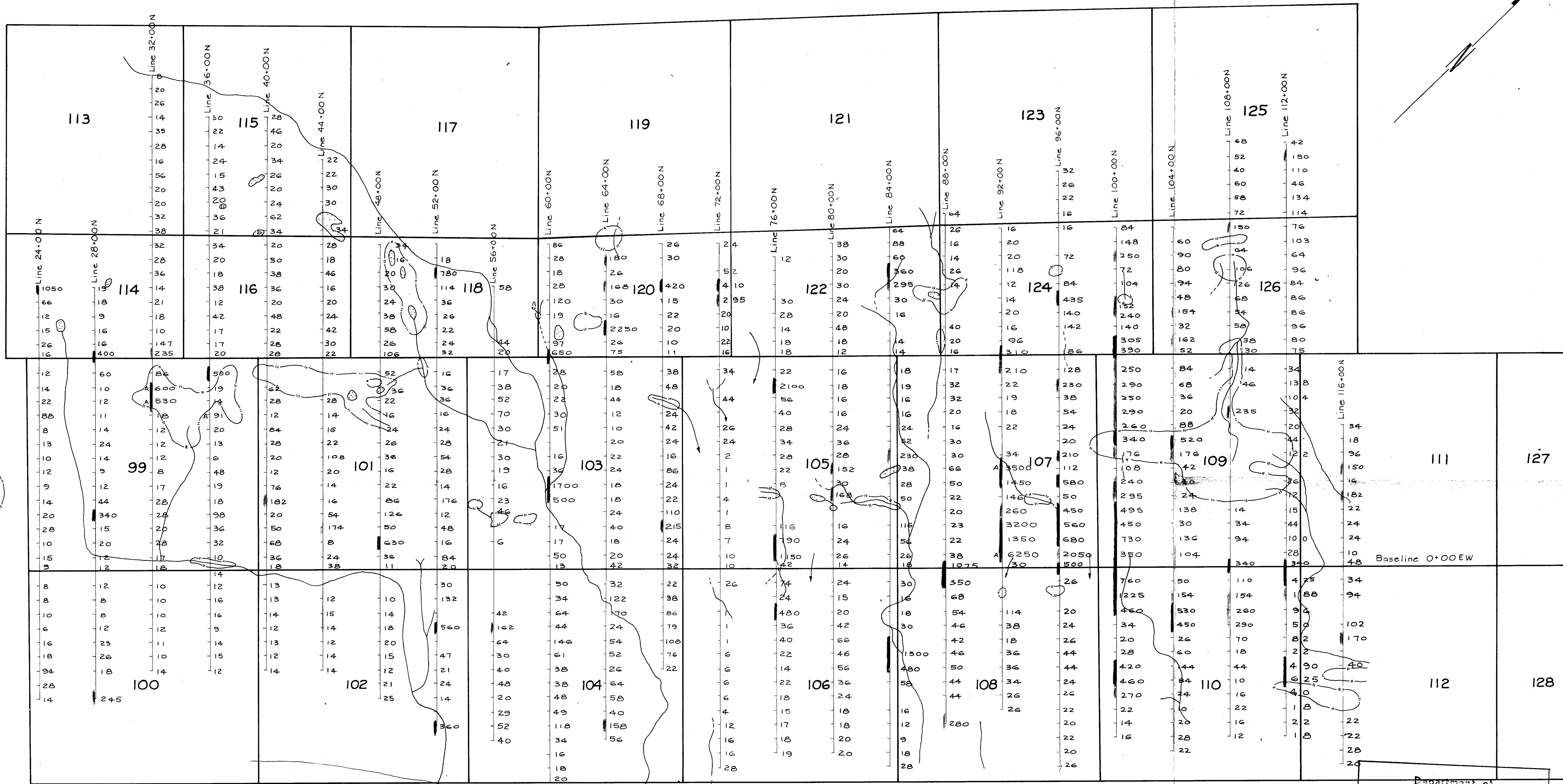
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To accompany Soil Geochemical Survey Report by
R.W. Stevenson, P. Eng., on the Pine No. 4 Group
thirteen miles northeast of Thutade Lake, Omineca
Mining Division, dated October 28, 1969.

KENCO EXPLORATIONS (WESTERN) LIMITED		
Pine No. 4 Group Pine Mineral Claims No. 99-128 Omineca M.D., B.C. Geochemical Survey Molybdenum in Soil		
DATA BY: R.W.S.	N.T.S. 94-E	PL. NO.: 2
DRAWN BY: I.J.M.D.	DATE:	SCALE: 1" = 400'
TRACED BY: RJE.	DATE: 21/8/69	
REVISIONS:		

R.W. Stevenson



Finlay River

LEGEND

- Metal Values in PPM
- Anomalous
- Weakly Anomalous
- Swamp
- Sample taken from humus horizon

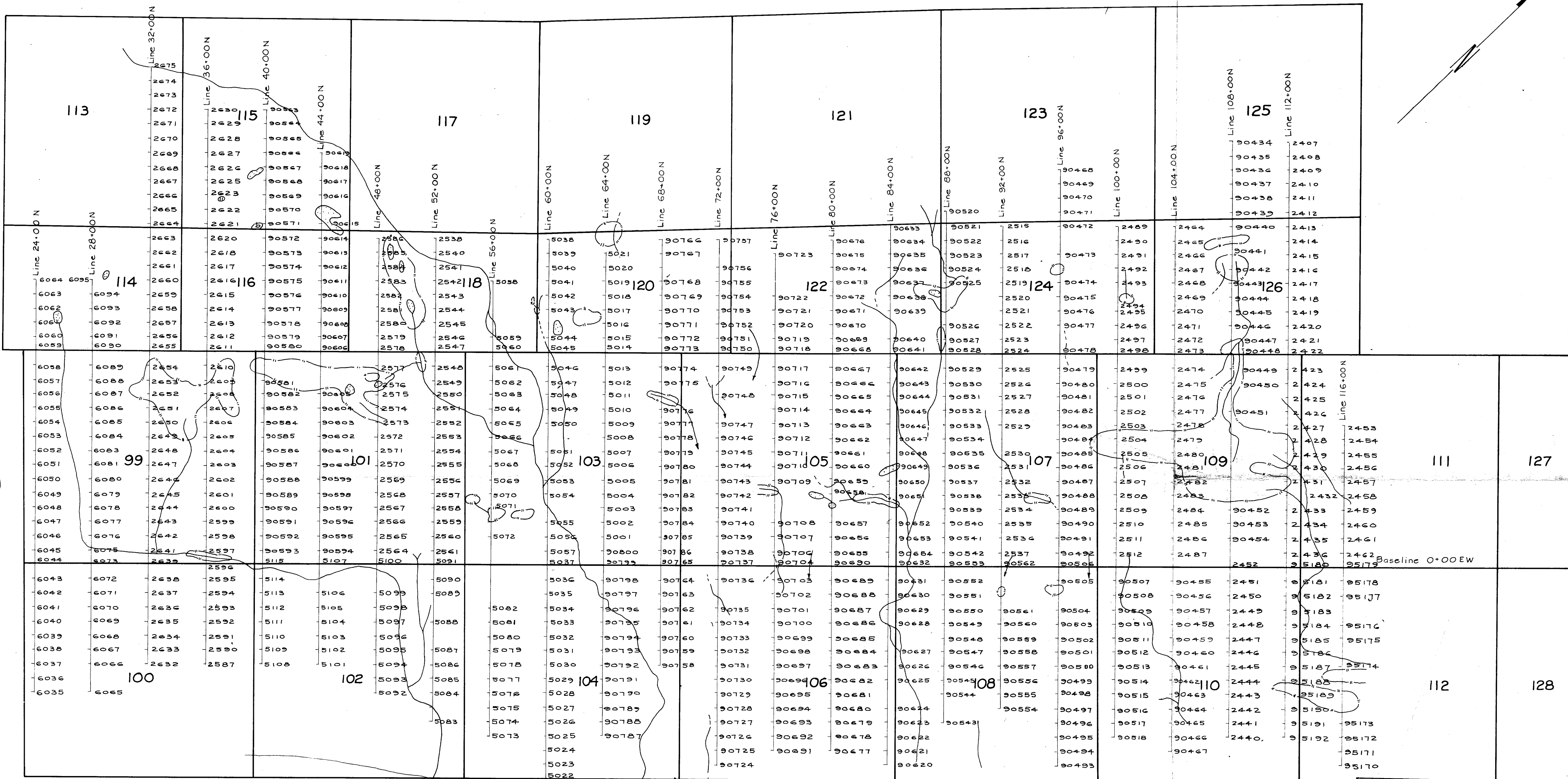
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NO. 2035 MAP #1

To accompany Soil Geochemical Survey Report by
R.W. Stevenson, P. Eng., on the Pine No. 4 Group
thirteen miles northeast of Thutade Lake, Omineca
Mining Division, dated October 28, 1969.

KENCO EXPLORATIONS (WESTERN) LIMITED		
Pine No. 4 Group Pine Mineral Claims No. 99-128 Omineca M.D., B.C. Geochemical Survey Copper in Soil		
DATA BY: R.W.S.	N.T.S. 94-E	PL. NO.: 1
DRAWN BY: I.J.M.D.	DATE:	SCALE: 1" = 400'
TRACED BY: R.J.C.	DATE: 2/8/69	
REVISIONS:		

R.W. Stevenson



Finlay River

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NO. 2035 MAP #5

To accompany Soil Geochemical Survey Report by
R.W. Stevenson, P. Eng., on the Pine No. 4 Group
thirteen miles northeast of Thutade Lake, Omineca
Mining Division, dated October 28, 1969

KENCO EXPLORATIONS (WESTERN) LIMITED		
Pine No. 4 Group Pine Mineral Claims No. 99-128 Omineca M.D., B.C. Geochemical Survey Soil Sample Locations		
DATA BY: R.W.S.	N.T.S. 94-E	PL. NO.: 5
DRAWN BY: I.J.M.D.	DATE:	SCALE: 1" = 400'
TRACED BY: R.J.C.	DATE: 21/8/69	
REVISIONS:		

R.W. Stevenson