1846

KENNCO EXPLORATIONS, (WESTERN) LIMITED

REPORT

ON

GEOLOGICAL AND GEOCHEMICAL SURVEYS

PINE No. 1, 2, 3 GROUPS
(Pine Mineral Claims 1 to 98 and 129 to 134)

Situated 13 miles northeast of Thutade Lake,
Omineca Mining Division,
British Columbia

57° 126° SW

By

R. W. Stevenson, P. Eng.

June 20 to September 19, 1968

May 5, 1969

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LIST OF ILLUSTRATIONS

LIST OF CLAIMS AND DISTRIBUTION OF WORK

PINE No. 1, 2, 3 GROUPS

PINE MINERAL CLAIMS No. 1 to 98 and 129 to 134

Pine No. 1 Group (32 claims)

Claim No.	Record No.	Record Date	$ Geological Work Each Claim	$ Soil Geochem. Work Ea. Claim	$ Silt Geochem. Work Ea. Claim	Years Applied
1	59485	June 10				
2	59486	"			17	
3	59487	"			17	
4	59488	"				
5	59489	"			17	1
6	59490	"				1
7	59491	"			17	1
8	59492	"				1
9	59493	"			34	1
10	59494	"			17	1
11	59495	"			17	1
12	59496	"				1
13	59497	"		91		1
14	59498	"				1
19	59503	"				
20	59504	"				
21	59505	"				
22	59506	"				1
23	59507	"			17	1
24	59508	"				1
25	59509	"			34	1
26	59510	"				1
27	59511	"			51	1
28	59512	"				1
29	59513	"				1
30	59514	"			17	1
31	59515	"			34	1
32	59516	"	80			1
33	59517	"	40	199	17	1
34	59518	"	40	582		1
35	59519	"	80	482		1
36	59520	"	40	582		1
		Totals	$ 280	$ 1,936	$ 306	25
				$ 2,522		

The silt geochemical work was done between June 20 and July 1, 1968. The soil geochemical work was done between August 22 and September 15, 1968. The geological work was done between August 13 and September 19, 1968.

All claims in this group have a record date of June 10.

Pine No. 2 Group (33 claims)

Claim No.	Record No.	Record Date	$ Geological Work Each Claim	$ Soil Geochem. Work Ea.Claim	$ Silt Geochem. Work Ea.Claim	Years Applied
37	59873	June 19	80	226		1
38	59874	"	80	419		1
39	59875	"				1
40	59876	"	80	582		1
41	59877	"				1
42	59878	"	80	600		1
43	59879	"				1
44	59880	"		291		1
45	59881	"			17	1
47	59883	"			51	1
49	59885	"			34	1
56	59892	"			67	
58	59894	"			17	1
59	59895	"			17	1
60	59896	"				1
61	59897	"				1
62	59898	"				1
63	59899	"				1
64	59900	"				1
65	59901	"				1
66	59902	"				1
67	59903	"				1
68	59904	"				1
69	59905	"				1
70	59906	"				1
71	59907	"				1
72	59908	"				1
129	63032	Sept. 20				
130	63033	"				
131	63034	"				
132	63035	"				
133	63036	"				
134	63037	"				
		Totals	$ 320	$ 2,118	$ 203	26
				$ 2,641		

The silt geochemical work was done between June 20 and July 1, 1968. The soil geochemical work was done between August 22 and September 15, 1968. The geological work was done between August 13 and September 19, 1968. All the claims were staked in 1968.

The work has been applied to obtain Certificates of Work on only those claims with a record date of June 19.

Pine No. 3 Group (39 claims)

Claim No.	Record No.	Record Date	$ Geological Work Each Claim	$ Soil Geochem. Work Ea.Claim	$ Silt Geochem. Work Ea.Claim	Years Applied
15	59499	June 10	40	355		1
16	59500	"		18		1
17	59501	"	80	172		1
18	59502	"				1
46	59882	June 19			17	1
48	59884	"				1
50	59886	"				1
51	59887	"				1
52	59888	"				1
53	59889	"				1
54	59890	"				1
55	59891	"			17	1
57	59893	"				1
73	60887	July 16	69	154		
74	60888	"				
75	60889	"	40	227		
76	60890	"				
77	60891	"		118		
78	60892	"				
79	60893	"				
80	60894	"				
81	60895	"				
82	60896	"				
83	60897	"				
84	60898	"				
85	60899	"				
86	60900	"				
87	60901	"				
88	60902	"				
89	60903	"				
90	60904	"				
91	60905	"				
92	60906	"				
93	60907	"				
94	60908	"				
95	60909	"				
96	60909A	"				
97	60910	"				
98	60911	"				
		Totals	$ 229	$ 1,044	$ 34	13
				$ 1,307		

The silt geochemical work was done between June 20 and July 1, 1968. The soil geochemical work was done between August 22 and September 15, 1968. The geological work was done between August 13 and September 19, 1968. All the claims were staked in 1968.

The work has been applied to obtain Certificates of Work on only those claims with record dates of June 10 and June 19.

STATEMENT OF COSTS INCURRED

Geological Survey

A detailed explanation of how the geological survey expenditures were incurred is given under the section titled 'Geological Survey Field Work'.

The total cost of the geological survey on Pine No. 1, 2, and 3 groups is as follows:

Air Photo Enlargements at 1" = 800' (three)			$ 24.00
Wages:			
R.W. Stevenson	- Aug 13,30; Sept 6-8,14,16,18,19	@ $35/d	315.00
J.H. Koo	- Aug 30; Sept 6-8,12,14-16,18,19	@ $32/d	320.00
S.C. Gower	- August 13	@ $24/d	24.00
M. Murison	- September 14	@ $18/d	18.00
G. Davies	- Sept 14,16,18,19	@ $32/d	128.00
		Total ...	$829.00

The geological survey was distributed on the three claim groups as follows:

Pine No. 1 claim group	$280.00
Pine No. 2 claim group	$320.00
Pine No. 3 claim group	$229.00
	$829.00

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

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 titled 'Soil Survey Field Work'.

The total cost of the soil geochemical survey on Pine No. 1, 2, and 3 groups is as follows:

Chemical analysis of 561 samples - Cu, Mo, Zn, Pb		$3,366.00
Wages:		
R.W. Stevenson - Aug 22; Sept 2,3,5,12,15	@ $35/d	210.00
J.H. Koo - Sept 2,3,5	@ $32/d	96.00
M. Murison - Aug 25-31; Sept 1-4,7-11,13	@ $18/d	306.00
G. Davies - Aug 30,31; Sept 2-13,15	@ $32/d	480.00
M. Vreugde - Aug 30,31; Sept 1,2	@ $21/d	84.00
S.C. Gower - Aug 22,25-31; Sept 1-4	@ $24/d	288.00
D Stark - August 31	@ $18/d	18.00
I. McDougall - August 30,31	@ $20/d	40.00
Helicopter set-out 1:30 hrs @ $140/hr		210.00
	Total ...	$5,098.00

The soil geochemical survey was distributed on the three claim groups as follows:

Pine No. 1 claim group	$1,936.00
Pine No. 2 claim group	$2,118.00
Pine No. 3 claim group	$1,044.00
	$5,098.00

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

STATEMENT OF COSTS INCURRED - cont'd

Silt Geochemical Survey

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

The total cost of the silt geochemical survey on Pine No. 1, 2, and 3 groups is as follows:

Chemical analysis of 32 samples - Cu, Mo, Pb, Mn		$192.00
Wages:		
R.W. Stevenson - June 20	@ $35/d	35.00
I. McDougall - June 26	@ $20/d	20.00
D. Stark - June 26	@ $18/d	18.00
S. Gower - June 20; July 1	@ $24/d	48.00
A.R. Pudsey - June 20	@ $23/d	23.00
G. Davies - July 1	@ $32/d	32.00
Helicopter set-out 1:15 hrs @ $140/hr		175.00
	Total ...	$543.00

The silt geochemical survey was distributed on the three claim groups as follows:

Pine No. 1 claim group	$306.00
Pine No. 2 claim group	$203.00
Pine No. 3 claim group	$ 34.00
	$543.00

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

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. In some areas, the direction of cross-lines was changed slightly so as to give a direct profile in the same direction as the ground slope. Base camp was in the center of the grid area. On the lines farthest from camp, crews were set out by helicopter in nearby clarings so as to minimize unproductive walking time. Elevations range from 3800' to 4400' 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. 6. They were taken from the top of the "B" (rusty) horizon wherever possible. Exceptions to this occurred where the "A" (humus) horizon was the only horizon accessible, and in rock places where sufficient soil could not be found to take a sample. Sample locations from which the "A" horizon was sampled are marked on the maps.

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 (or the depth of sample if only the "A" horizon could be reached), the direction of drainage, the type of vegetation (i.e., grass, or scrub 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 $\pm$ 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 ($H\ ClO_4.H_2O$) 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, 300 ppm to 599 ppm for zinc, and 80 ppm to 149 ppm for lead. Sample stations that are definitely anomalous are coloured red. The results are plotted on Plates No. 2 to 6. The area that is generally anomalous for each metal is outlined in orange.

The anomalous areas for copper (Plate No. 2), and for molybdenum (Plate No. 3), are fairly well defined, and coincide almost exactly. Zinc (Plate No. 4) and lead (Plate No. 5) are not so well defined; however, these two metals also show a similarity of distribution. The anomalous lead-zinc area partly overlaps the anomalous copper-molybdenum area.

More sampling should be done to the northwest to complete the outline of the copper-molybdenum anomaly.

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 in nearby clearings, so as to utilize as much as possible of the working day in sample collection. A drainage base map with a scale of 1" = 800' was compiled for use in plotting the sample results for office interpretation.

Silt Sample Collection

In general, the samples were taken at about 1000-foot intervals, depending on where suitable silt could be found. This is shown on Plate No. 11.

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 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.

The analytical procedures used on the silt samples were the same as those used on the soil samples. These are described in the section on the Soil Geochemical Survey. The manganese was determined by atomic absorption spectrophotometer, along with copper and lead.

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.

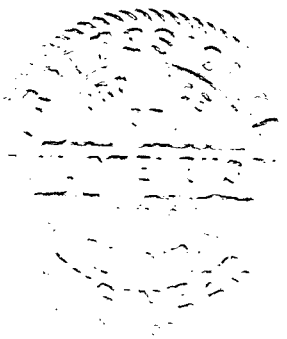
There are only scattered weak anomalies in copper (Plate No. 7), molybdenum (Plate No. 8), and lead (Plate No. 9). This has effectively explored those sections of the property that were covered by the silt survey. The silt samples were also analysed for manganese (Plate No. 10) so as to ascertain if there were large concentrations of manganese at any of the sample sites that might have co-precipitated other metals. There are none.

Vancouver, B. C.

May 5, 1969

R. W. Stevenson

R. W. Stevenson, P.Eng.



INTRODUCTION

The mineral property discussed in this report is about 13 miles northeast of Thutade Lake, B.C., on the southeast side of the Finlay River. The exploration work on these claims consisted of geologic mapping, soil sampling, and silt sampling. It was done during the period June 20 to September 19, 1968. Some of the mineral claims in the property have Record Dates of July 16 and September 20, but the assessment work has been applied to obtain Certificates of Work on only those claims with Record Dates of June 10 and June 19. All the claims were staked in 1968.

The work was done under the supervision of R.W. Stevenson, P. Eng. Part of the geological mapping was done by J.H. Koo, who has a Master of Science degree in geology from the University of British Columbia.

LOCATION AND ACCESS

The property is situated at Latitude 57°13'N, Longitude 126°43'W, about 270 miles northwest of Prince George. This is about 13 miles northeast of Thutade Lake. It is on the south 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 4500' 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 difference in elevation between the showing area and the river level. Small clearings in swamps and in burn areas provide good helicopter access to most parts of the property.

GEOLOGICAL SURVEY

Geological Survey Field Work

In planning how to conduct the geologic mapping, it was noted that there was considerable difficulty in using air photos to locate outcrops that were situated in uniform stands of Lodgepole Pine. A survey grid had already been established in the area to be mapped, for use in a soil sample survey. This grid was used to control the geologic mapping, with pace and compass location of outcrops relative to the nearest grid station. In some instances a 1" = 800' photo enlargement was used to assist in the location of outcrops remote from any grid station.

The geologic map area consists of 13 Pine Mineral Claims; No. 15, 17, 32, 33, 34, 35, 36, 37, 38, 40, 42, 73, and 75. Outcrop was found on all but one claim. Subdividing this according to claim groups, outcrop was found and mapped on 4 of the 5 claims in Pine No. 1 Group; on all 4 of the claims in Pine No. 2 Group, and on all 4 of the claims in Pine No. 3 Group.

Geology

Regional Setting

The Pine property is situated near the eastern margin of a northwest-trending belt of Takla Group volcanics of intermediate composition, which are Upper Triassic in age. The east boundary of the property approximately coincides with the edge of the main body of Omineca diorite, which is probably Upper Jurassic in age. Syenite, and lesser amounts of monzonite, occur as small stocks in much of the mapped area. They are usually porphyritic, and are thought to be younger than the diorite.

About ten miles west of the Pine property, the Takla volcanics are bordered by a narrow band of Palaeozoic sediments which lie between the volcanics and Upper Cretaceous Sustut sediments.

The geology in the mapped area is shown on Plate No. 1. Only 13 claims in the central part of the property were mapped geologically.

Lithology

Triassic

Takla Group volcanics and minor sediments are the "country rock" in the Pine area. Their age has been established as probably Upper Triassic by C.S. Lord of the G.S.C. on the McConnell Creek map sheet, the border of which is 15 miles south of the Pine property.

Fine to medium-grained andesite is a dark greenish-grey rock. It occurs throughout most of the Pine area. Near contacts with syenite, the andesite often contains pink feldspar crystals which are apparently the result of alteration by the syenite. The K-feldspar-bearing andesite grades into the typical green-grey andesite away from the contact. Andesite also occurs in small xenoliths, several feet in diameter, in syenite adjacent to the contacts.

The contacts between fine-grained and medium-grained phases of the andesite are gradational. The ratio between the amounts of fine-grained and medium-grained phases is about 3 to 2. Both fine-grained and medium-grained phases are equigranular, but there are porphyritic phases with "medium-grained" phenocrysts and fine-grained groundmass. The subhedral to euhedral, dark green, amphibole or pyroxene phenocrysts comprise up to 40% of the rock. The groundmass is a mixture of very fine-grained feldspar and mafics in approximately equal proportion. It is not as dark as the mafic phenocrysts.

Jurassic or Cretaceous

The Omineca intrusions are considered to be Upper Jurassic in age. The porphyry intrusives are thought to be only slightly younger, but there is no direct evidence to prove or disprove this.

Diorite intrudes the andesite just east of the property. This is part of a granitic body, about 5 to 10 miles in width, that trends northwest from south of Serrated Peak to beyond Chukachida Lake, a distance of over 50 miles. It is one of the Omineca intrusions. This diorite is a light-pinkish, medium-grained rock, close to granodiorite in composition. It is composed mainly of anhedral feldspar (70%), and euhedral biotite (30%).

Syenite and syenite porphyry occur as a small stock underlying about half the mapped area. It intrudes the andesite. There are three phases of syenite: syenite porphyry, fine-grained syenite, and mafic syenite porphyry. The three phases are intergradational.

The syenite porphyry is a reddish rock, in which the phenocrysts consist mainly of medium-grained, subhedral to euhedral feldspar. Occasionally there are a few phenocrysts of dark-greenish, medium-grained amphibole. The groundmass is a mixture of fine-grained feldspar and mafics. Phenocrysts and groundmass are approximately equal in volume.

Fine-grained syenite is closely similar in composition to the syenite porphyry, and appears to be just a fine-grained, equigranular phase of that rock.

Mafic syenite porphyry differs from the syenite porphyry in mineral composition and texture. The phenocrysts are mostly reddish, medium-grained feldspar, but with an appreciable amount of dark greenish-grey amphibole. The groundmass consists of a dark greenish-grey mixture of mafics and feldspar, with mafics usually predominating. Phenocrysts comprise about one-third of the rock. Mafics constitute about 30% of the rock. The mafic syenite porphyry appears to have resulted from hybridization of andesite; in some places feldspar phenocrysts are abundant and the rock is readily classed as syenite porphyry. Elsewhere, phenocrysts are less common, and the rock tends to be medium-grained, and of intermediate composition; however, the same field name is used. The mafic syenite porphyry occurs only on the west part of the Pine map-area (claims 35 and 37).

Monzonite is a grey, fine- to medium-grained rock associated with the syenite porphyry on the northeast side of the syenite intrusive. The contacts between monzonite and syenite porphyry appear to be gradational.

Aplite and pegmatite dykes intrude the syenite porphyry in two places. They strike northwest, dip steeply, are a few feet wide, and about 10 feet long.

Structure

Several strong faults have been observed elsewhere on the Pine property. Some areas of andesite are fractured; however, it

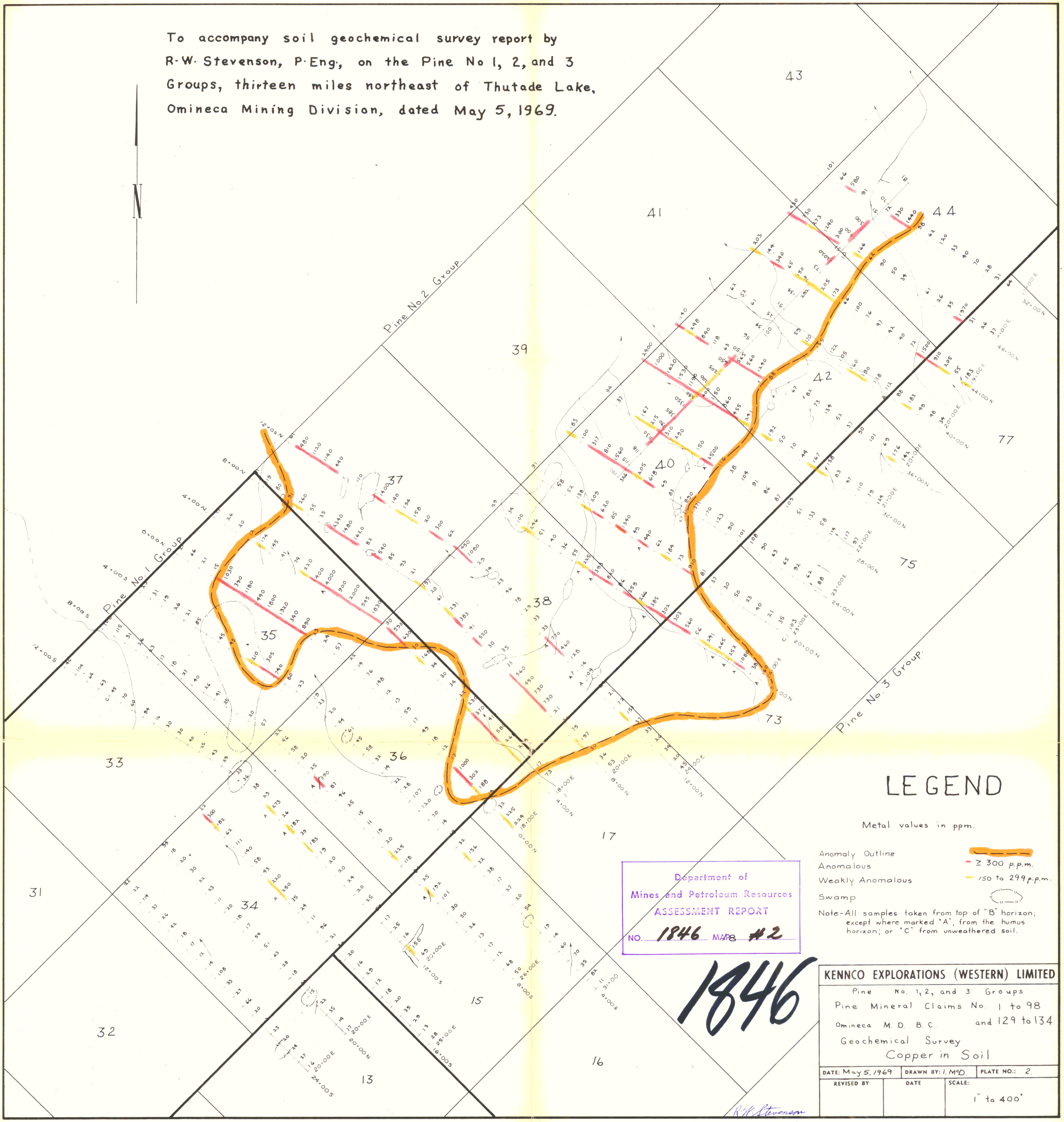
is difficult to correlate these separate areas, because most of the fracturing apparently took place before emplacement of the younger intrusives which obliterated the pre-existing structures. A northwest structural trend may be indicated by some of the drainage erosion.

Alteration

Epidote occurs in minor amounts in the andesite in much of the map area, mostly as fracture coatings.

To accompany soil geochemical survey report by R.W. Stevenson, P.Eng., on the Pine No 1, 2, and 3 Groups, thirteen miles northeast of Thutade Lake, Omineca Mining Division, dated May 5, 1969.

N



Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1846 MAP 8 #2

1846

LEGEND

Metal values in ppm.

Anomaly Outline
Anomalous — ≥ 300 p.p.m.
Weakly Anomalous — 150 to 299 p.p.m.
Swamp

Note-All samples taken from top of "B" horizon; except where marked "A", from the humus horizon; or "C" from unweathered soil.

KENNCO EXPLORATIONS (WESTERN) LIMITED

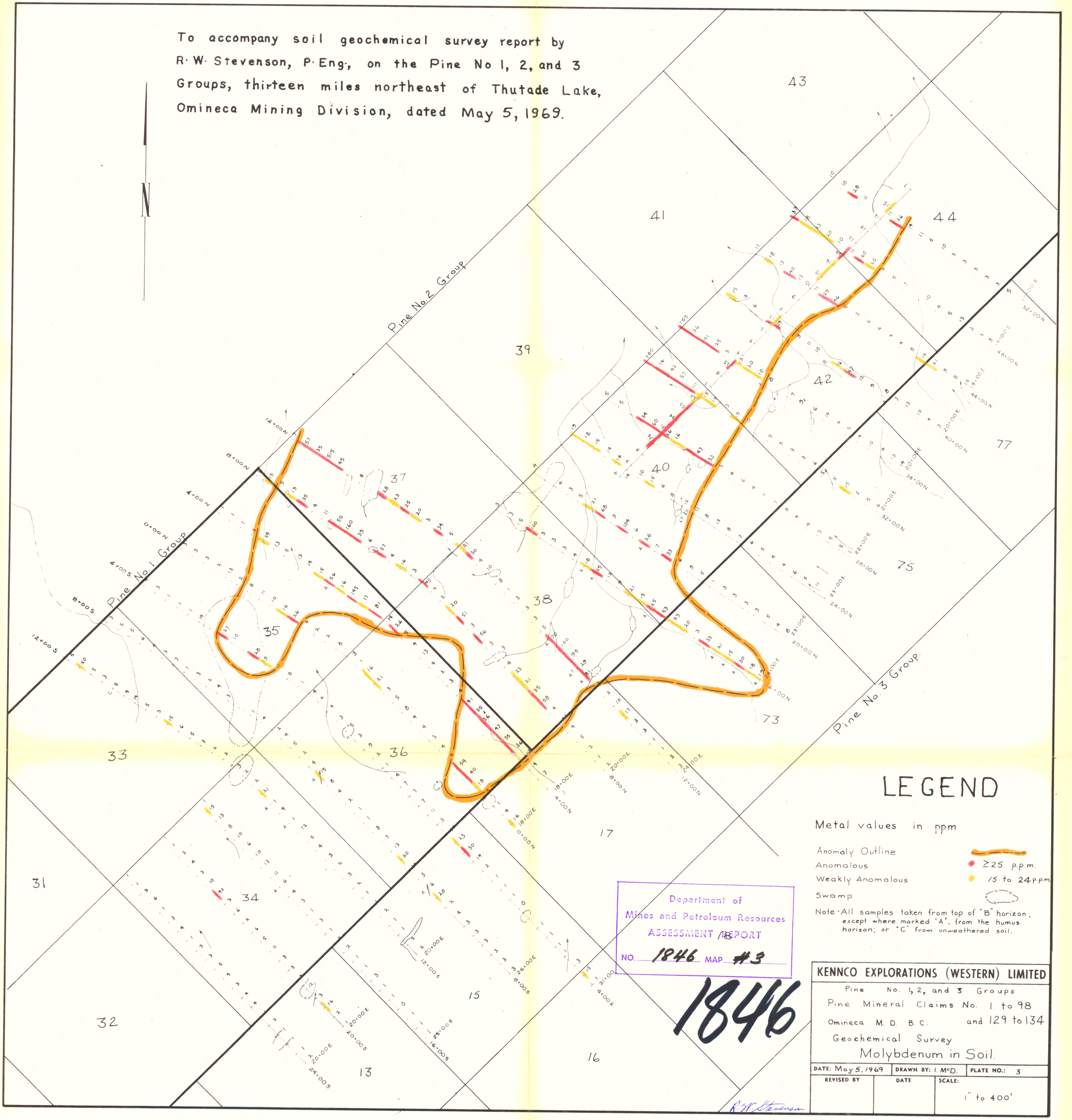
Pine No. 1, 2, and 3 Groups
Pine Mineral Claims No. 1 to 98 and 129 to 134
Omineca M. D. B. C.
Geochemical Survey
Copper in Soil

DATE: May 5, 1969	DRAWN BY: I. McD.	PLATE NO.: 2.
REVISED BY	DATE	SCALE: 1" to 400'

R.W. Stevenson

To accompany soil geochemical survey report by R. W. Stevenson, P. Eng., on the Pine No 1, 2, and 3 Groups, thirteen miles northeast of Thutade Lake, Omineca Mining Division, dated May 5, 1969.

N



LEGEND

Metal values in ppm

- Anomaly Outline
- Anomalous — ≥25 p.p.m.
- Weakly Anomalous — 15 to 24 p.p.m.
- Swamp

Note - All samples taken from top of "B" horizon; except where marked "A", from the humus horizon; or "C" from unweathered soil.

KENNCO EXPLORATIONS (WESTERN) LIMITED

Pine No. 1, 2, and 3 Groups
Pine Mineral Claims No. 1 to 98 and 129 to 134
Omineca M. D. B. C.
Geochemical Survey
Molybdenum in Soil.

DATE: May 5, 1969	DRAWN BY: I. McD.	PLATE NO.: 3
REVISED BY	DATE	SCALE: 1" to 400'

R. W. Stevenson

To accompany soil geochemical survey report by R.W. Stevenson, P.Eng., on the Pine No 1, 2, and 3 Groups, thirteen miles northeast of Thutade Lake, Omineca Mining Division, dated May 5, 1969.

N

Pine No.1 Group

Pine No.2 Group

Pine No.3 Group.

LEGEND

Metal values in p.p.m.

Anomaly Outline

Anomalous ≥ 600 p.p.m.

Weakly Anomalous 300 to 599 p.p.m.

Swamp

Note-All samples taken from top of "B" horizon; except where marked "A", from the humus horizon; or "C" from unweathered soil.

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KENNCO EXPLORATIONS (WESTERN) LIMITED

Pine No. 1, 2, and 3 Groups
Pine Mineral Claims No. 1 to 98 and 129 to 134
Omineca M. D. B.C.
Geochemical Survey
Zinc in Soil

DATE: May 5, 1969	DRAWN BY: I. McD.	PLATE NO.: 4
REVISED BY	DATE	SCALE: 1" to 400'

R.W. Stevenson

To accompany soil geochemical survey report by R.W. Stevenson, P.Eng., on the Pine No 1, 2, and 3 Groups, thirteen miles northeast of Thutade Lake, Omineca Mining Division, dated May 5, 1969.

N

Pine No. 1 Group

Pine No. 2 Group

Pine No. 3 Group

41 43 44 39 42 77 37 40 38 75 35 73 33 36 34 17 31 15 32 13 16 18

12+00 N 8+00 N 4+00 N 0+00 N 4+00 S 8+00 S 12+00 S

52+00 N 48+00 N 44+00 N 40+00 N 36+00 N 32+00 N 28+00 N 24+00 N 20+00 N 16+00 N 12+00 N 8+00 N 4+00 N 0+00 S 4+00 S 8+00 S 12+00 S

17+00 E 19+00 E 20+00 E 21+00 E 22+00 E 23+00 E 24+00 E 18+00 E 20+00 E 24+00 E 26+00 E 25+00 E 20+00 E 18+00 E 20+00 E 24+00 E 31+00 E

LEGEND

Metal values in ppm.

Anomaly Outline

Anomalous — ≥ 150 p.p.m.

Weakly Anomalous — 80 to 149 p.p.m.

Swamp

Note-All samples taken from top of "B" horizon; except where marked "A", from the humus horizon; or "C" from unweathered soil.

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KENNCO EXPLORATIONS (WESTERN) LIMITED

Pine No. 1, 2, and 3 Groups
Pine Mineral Claims No. 1 to 98 and 129 to 134
Omineca M.D. B.C.
Geochemical Survey
Lead in Soil

DATE: May 5, 1969	DRAWN BY: I.M'D.	PLATE NO.: 5.
REVISED BY	DATE	SCALE: 1" to 400'

To accompany soil geochemical survey report by R. W. Stevenson, P. Eng., on the Pine No 1, 2, and 3 Groups, thirteen miles northeast of Thutade Lake, Omineca Mining Division, dated May 5, 1969.

N

Pine No. 2 Group

Pine No. 1 Group

Pine No. 3 Group

41 43 44 39 42 77 40 37 38 75 73 35 36 33 34 15 16 17 31 32 13 18

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1846 MAP #6

1846

LEGEND

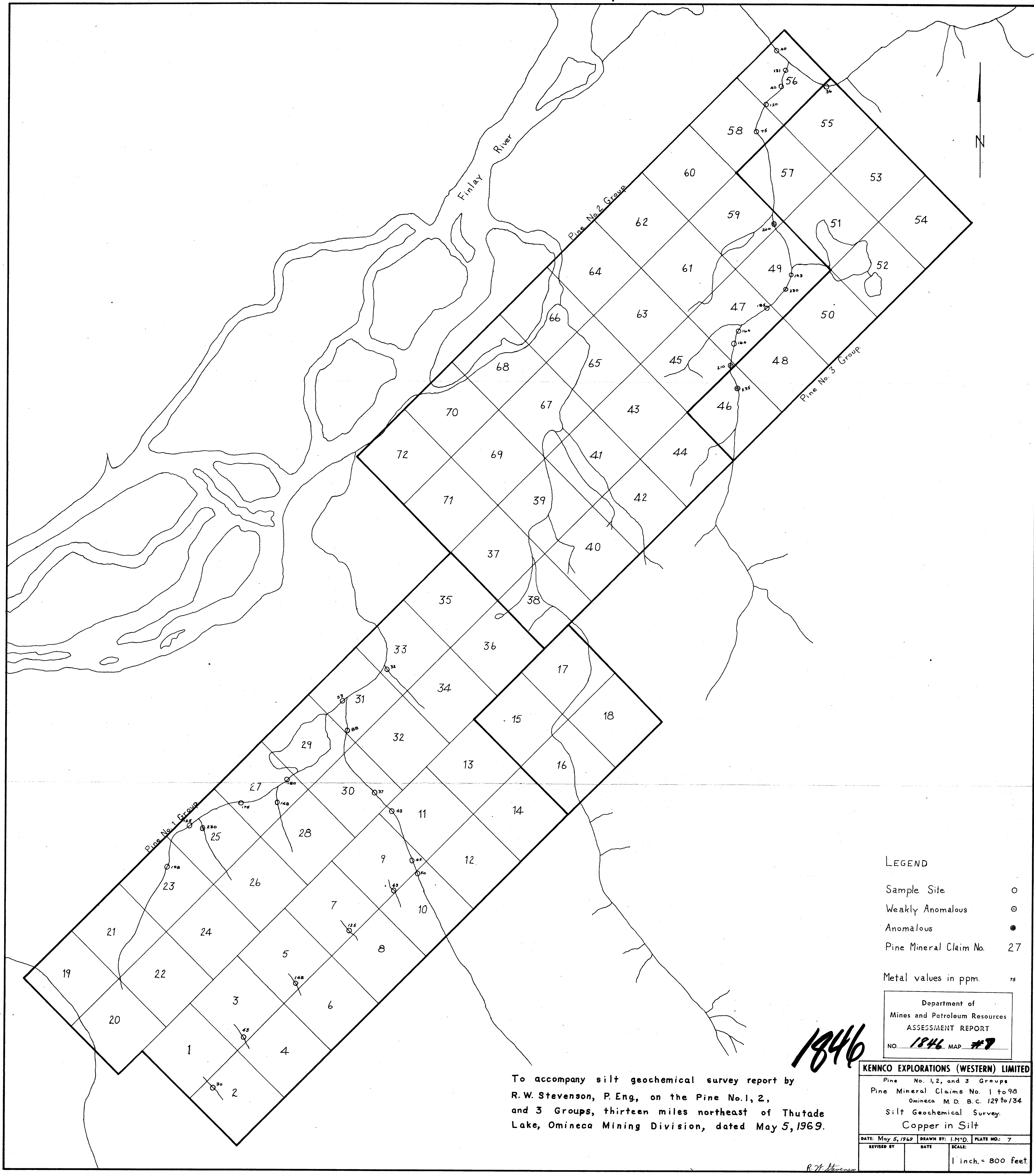
Swamp

Note-All samples taken from top of "B" horizon; except where marked "A", from the humus horizon; or "C" from unweathered soil.

KENNCO EXPLORATIONS (WESTERN) LIMITED

Pine No. 1, 2, and 3 Groups
Pine Mineral Claims No. 1 to 98 and 129 to 134
Omineca M. D. B. C.
Geochemical Survey
Soil Sample Sites

DATE: May 5, 1969	DRAWN BY: I. McD.	PLATE NO.: 6.
REVISED BY	DATE	SCALE: 1" to 400'



To accompany silt geochemical survey report by R. W. Stevenson, P. Eng., on the Pine No. 1, 2, and 3 Groups, thirteen miles northeast of Thutade Lake, Omineca Mining Division, dated May 5, 1969.

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1846 MAP #7

KENNCO EXPLORATIONS (WESTERN) LIMITED

Pine No. 1, 2, and 3 Groups
Pine Mineral Claims No. 1 to 98
Omineca M. D. B. C. 129 to 134
Silt Geochemical Survey.
Copper in Silt

DATE: May 5, 1969	DRAWN BY: I. McD.	PLATE NO.: 7
REVISED BY	DATE	SCALE: 1 inch = 800 feet.

R. W. Stevenson

Finlay River

Pine No. 2 Group

Pine No. 3 Group

Pine No. 1 Group

N

LEGEND

Sample Site o

Weakly Anomalous ⊙

Anomalous ◉

Pine Mineral Claim No. 27

Metal values in ppm. 75

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1846 MAP #8

1846

To accompany silt geochemical survey report by R. W. Stevenson, P. Eng., on the Pine No. 1, 2, and 3 Groups, thirteen miles northeast of Thutade Lake, Omineca Mining Division, dated May 5, 1969.

R. W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Pine No. 1, 2, and 3 Groups
Pine Mineral Claims No. 1 to 98
Omineca M. D. B. C. 129 to 134.
Silt Geochemical Survey.
Molybdenum in Silt

DATE: May 5, 1969	DRAWN BY: I.M°D.	PLATE NO.: 8
REVISED BY	DATE	SCALE: 1 inch. = 800 feet.

Finlay River

Pine No. 2 Group

Pine No. 3 Group

Pine No. 1 Group

N

56 58 55 57 53 60 59 62 54 51 64 61 49 52 63 47 50 66 68 65 45 48 70 67 43 46 72 69 41 44 71 39 42 37 40 35 38 33 36 34 17 31 15 18 29 32 13 16 27 30 11 14 28 25 9 12 23 26 7 10 21 24 5 8 19 22 3 6 20 1 4 2

LEGEND

Sample Site	o
Weakly Anomalous	⊙
Anomalous	●
Pine Mineral Claim No.	27
Metal values in ppm.	75

To accompany silt geochemical survey report by R. W. Stevenson, P. Eng., on the Pine No. 1, 2, and 3 Groups, thirteen miles northeast of Thutade Lake, Omineca Mining Division, dated May 5, 1969.

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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1846 MAP #9

KENNCO EXPLORATIONS (WESTERN) LIMITED

Pine No. 1, 2, and 3 Groups
Pine Mineral Claims No. 1 to 98
Omineca M. D. B. C. 129 to 134
Silt Geochemical Survey.
Lead in Silt

DATE: May 5, 1969	DRAWN BY: I. McD.	PLATE NO.: 9
REVISED BY	DATE	SCALE: 1 inch. = 800 feet.

R. W. Stevenson

LEGEND

Jurassic or Cretaceous

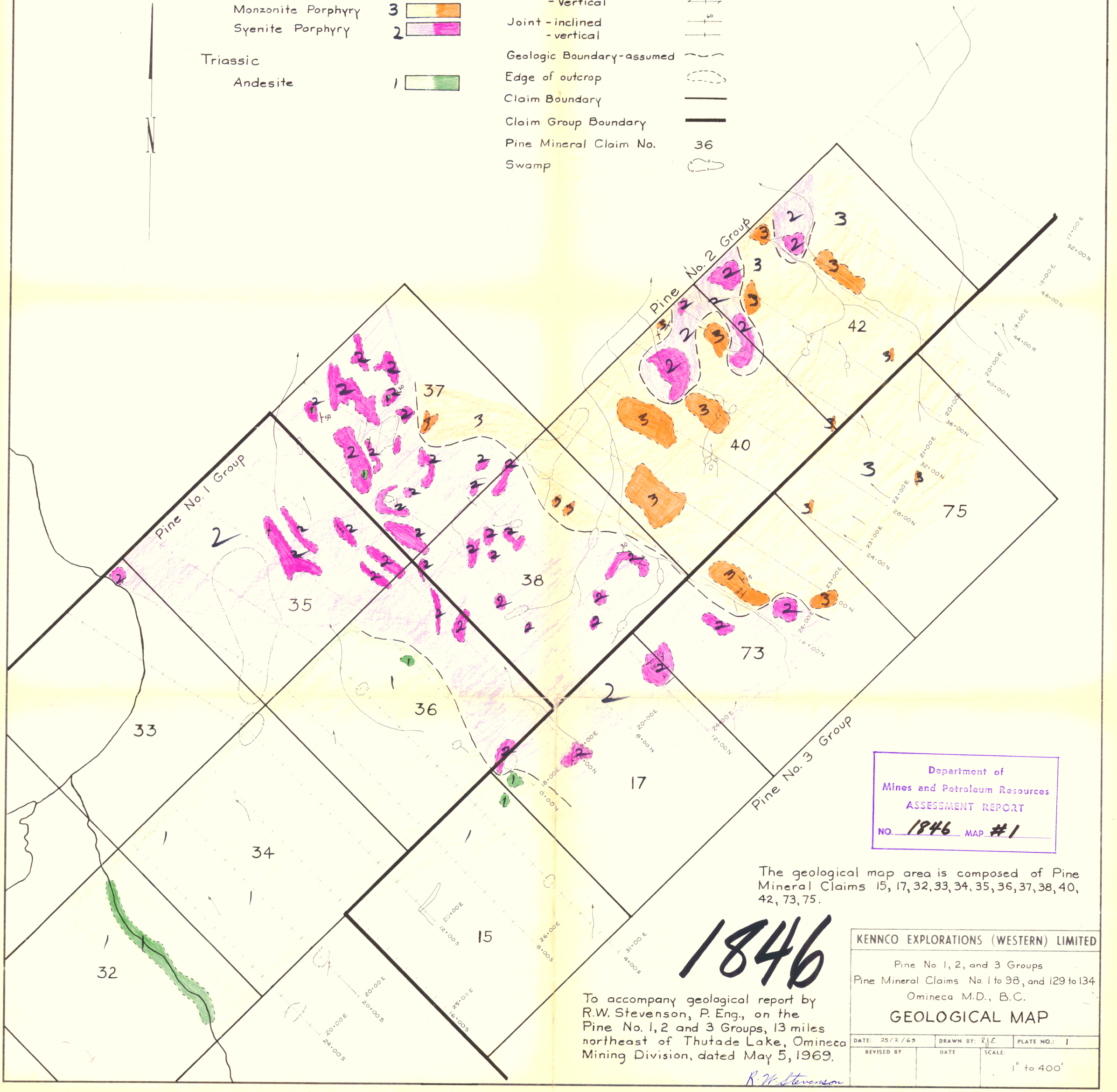
- Monzonite Porphyry — 3
- Syenite Porphyry — 2

Triassic

- Andesite — 1

SYMBOLS

- Shear - inclined
- Shear - vertical
- Joint - inclined
- Joint - vertical
- Geologic Boundary - assumed
- Edge of outcrop
- Claim Boundary
- Claim Group Boundary
- Pine Mineral Claim No. 36
- Swamp



The geological map area is composed of Pine Mineral Claims 15, 17, 32, 33, 34, 35, 36, 37, 38, 40, 42, 73, 75.

1846

To accompany geological report by R.W. Stevenson, P. Eng., on the Pine No. 1, 2 and 3 Groups, 13 miles northeast of Thutade Lake, Omineca Mining Division, dated May 5, 1969.

R. W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Pine No. 1, 2, and 3 Groups
Pine Mineral Claims No. 1 to 98, and 129 to 134
Omineca M.D., B.C.

GEOLOGICAL MAP

DATE: 25/2/69	DRAWN BY: R.J.E.	PLATE NO.: 1
REVISED BY	DATE	SCALE: 1" to 400'

Finlay River

Pine No. 2 Group

Pine No. 3 Group

Pine No. 1 Group

N

630
670
840
56
420
760
58
660
55
60
57
53
62
59
880
51
54
64
61
49
820
780
52
47
910
63
50
66
770
800
68
65
45
1170
48
1200
70
67
43
46
72
69
41
44
71
39
42
37
40
35
38
33
36
690
17
34
710
31
15
18
1870
32
29
13
16
27
420
300
280
30
820
880
11
14
490
570
25
28
9
880
1000
12
650
23
26
620
7
10
1030
21
24
8
5
19
22
1040
3
6
20
510
1
4
2550
2

LEGEND

Sample Site	o
Weakly Anomalous	◎
Anomalous	●
Pine Mineral Claim No.	27
Metal values in ppm.	75

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1846 MAP #10

1846

To accompany silt geochemical survey report by R. W. Stevenson, P. Eng., on the Pine No. 1, 2, and 3 Groups, thirteen miles northeast of Thutade Lake, Omineca Mining Division, dated May 5, 1969.

R. W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Pine No. 1, 2, and 3 Groups
Pine Mineral Claims No. 1 to 98
Omineca M. D. B. C. 129 to 134
Silt Geochemical Survey.
Manganese in Silt

DATE: May 5, 1969	DRAWN BY: I.M.D.	PLATE NO.: 10
REVISED BY	DATE	SCALE: 1 inch = 800 feet

Finlay River

Pine No. 2 Group

Pine No. 3 Group

Pine No. 1 Group

N

63773 63772 56 49992 63770 49991 49990 58 55 60 57 53 62 59 49989 51 54 64 61 49 49987 52 49986 47 49978 63 50 66 49985 49977 68 65 45 49976 48 70 67 43 49975 46 72 69 41 44 71 39 42 37 40 35 38 33 36 63631 17 34 63632 31 15 18 63633 29 32 13 16 27 63652 30 63634 63651 63650 63635 11 14 63649 63648 25 28 9 63636 12 63647 49884 23 26 49883 7 10 21 24 49882 5 8 19 22 49881 3 6 20 49880 1 4 49879 2

LEGEND

Sample Site	o
Weakly Anomalous	o
Anomalous	o
Pine Mineral Claim No.	27

Metal values in ppm. 75

1846

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1846 MAP #11

To accompany silt geochemical survey report by R. W. Stevenson, P. Eng., on the Pine No. 1, 2, and 3 Groups, thirteen miles northeast of Thutade Lake, Omineca Mining Division, dated May 5, 1969.

R. W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Pine No. 1, 2, and 3 Groups
Pine Mineral Claims No. 1 to 98
Omineca M. D. B. C. 129 to 134
Silt Geochemical Survey.
Silt Sample Sites

DATE: May 5, 1969	DRAWN BY: I.M^cD.	PLATE NO.: 11
REVISED BY	DATE	SCALE: 1 inch. = 800 feet.