

86-745-15346

9/87

Geochemical Survey Report
on the
Summit Property - YMIR, B. C.
Nelson Mining Division, British Columbia

Lat. $49^{\circ} 21' 20.7''$ N Long. $117^{\circ} 09' 09.9''$ W.

N.T.S. 82 F/6E

for

Operator: Nugget Mines Ltd.

Owner(s): Nugget Mines Ltd., R.K. Endersby, D.J. Endersby, S.A. Endersby
by

Gary M. Allen, P. Eng., Ont.

FILMED

December 2, 1986

GEOLOGICAL BRANCH
ASSESSMENT REPORT Vancouver, B.C.

15,346

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SUMMARY

The Summit Group consists of 54 claim units held by Nugget Mines Ltd. They are situated in the Ymir gold-silver camp 8 kilometres northeast of Ymir and 18 kilometres southeast of Nelson and are accessible by logging road.

Ore deposits in the Ymir camp are localized in quartz veins where they intersect granitic wallrocks.

The Summit group has two known veins. The most prominent of these is the Summit vein which is a quartz vein 3 to 4 metres wide and exposed intermittently over a distance of at least 700 metres. It contains minor gold, silver, lead and zinc values. The second vein is known as the Elise vein. It is about 1 metre wide where exposed by a shaft and tunnel on the Elise claim side of Huckleberry Creek. Host rocks for these veins are argillite and phyllite of the Ymir group. Granite (favourable host for many of the Ymir ore deposits) occurs locally in float.

A small program of prospecting, soil geochemical sampling was undertaken in September, 1986 by G.M. Allen and D. Endersby. Four survey lines were run across the projection of the Summit vein. Results of the soil sampling indicated weakly to moderate anomolous zinc, lead, silver and gold values associated with the vein extensions.

CONCLUSION

The Summit vein is exposed intermittently over a distance of at least 700 metres and is still open and strong at both ends. A bench, which appears to be a topographic result of the vein, extends on strike for a considerable distance further to the northeast. This vein is probably part of a major vein system which includes the Pathfinder and Old Timer veins. The observed host rock is argillite of the Ymir group. Government reports indicate that tongues of granite outcrop along strike to the northeast. These outcrops have not yet been observed although granite float is evident in some locations. Because overburden is extensive the vein has not been exposed or tested in these favourable host rocks.

The Elise vein where exposed is not as strong as the Summit vein but is better mineralized. It has only been exposed over a short distance.

The results of the geochemical sampling and assaying indicate that the veins are favourable for mineralization and could carry ore shoots in more favourable ground, particularly where they contact or cut areas of granite

which seem to be indicated by the presence of granitic float in several areas. Detailed geological mapping and geochemical sampling is warranted, particularly along the strike of the Summit vein to the northeast.

RECOMMENDATION

A flagged grid should be established in favourable areas of the property, and soil sampling and VLF-EM surveys coupled with geological mapping should be done.

INTRODUCTION

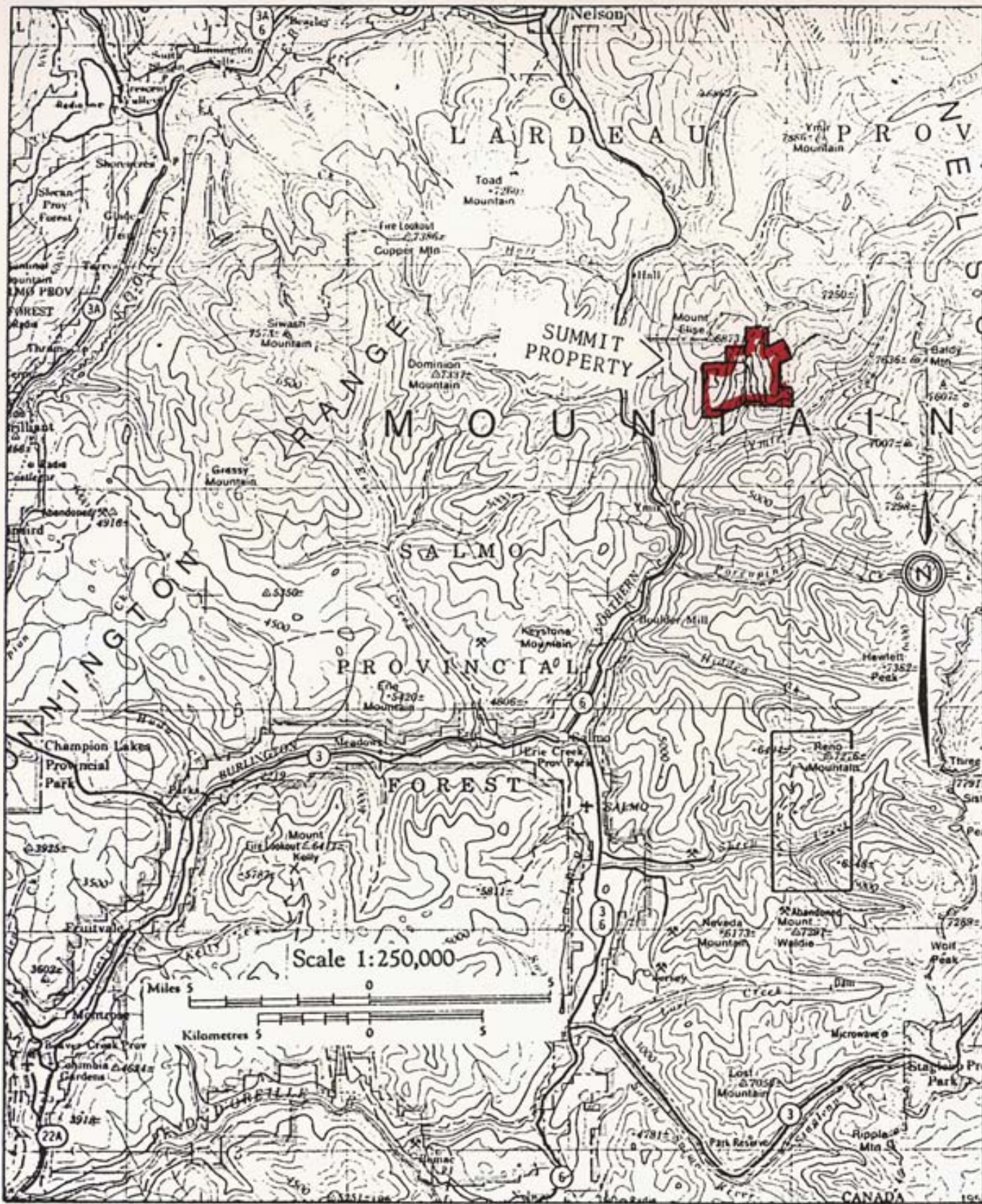
A total of 54 claim units are held by Nugget Mines Ltd. in what is referred to as the Summit group of claims. These claims are situated in the Ymir gold-silver camp.

Two veins are known in the property at the present time. The Summit vein has been developed by about 100 metres of underground workings in two adits, a shaft and several open cuts. The Elise vein has been developed by about 150 metres of underground workings in one adit, a shaft and open cuts. Both veins contain low grade gold and silver values.

Further geochemical sampling and prospecting were done on the property during September of 1986 and this report summarizes the results of that work.

LOCATION, ACCESS, PHYSIOGRAPHY

The Summit claims are situated 8 kilometres northeast of Ymir and 18 kilometres southeast of Nelson (figure 1). Access from the Nelson-Salmo highway is by logging road up Clearwater Creek to the northeast corner of the claim or by Wildhorse Creek and Huckleberry Creek to the south part of the claims. The Summit workings can easily be reached by foot.



NUGGET MINES LTD.
LOCATION MAP
 SUMMIT PROPERTY

Nelson Mining Division - British Columbia

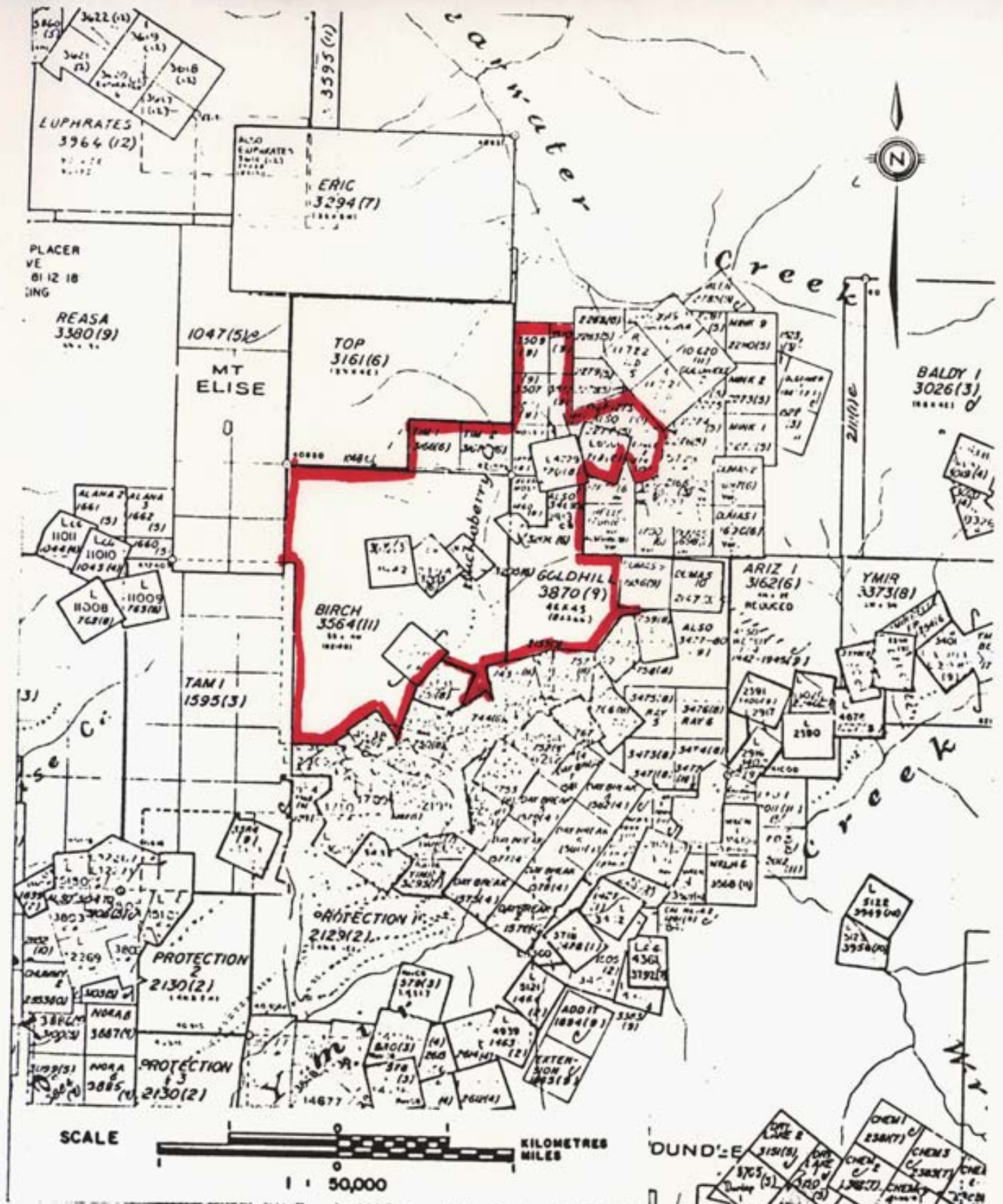


The claims lie between elevations 4000 and 5500 feet on the divide between Huckleberry Creek and the south branch of Clearwater Creek. Slopes are gentle to moderate and covered with cedar, fir and larch with a thick undergrowth of alder, huckleberry and false azalea.

CLAIM DATA

The property has been grouped as the Summit group and consists of the following claims. (See Figure 2)

<u>Claim Name</u>	<u>Lot No.</u>	<u>Record No.</u>	<u>Type</u>	<u>Anniversary Date</u>	
Editor	5861 /	719	Rev. C.G.	August	8
Summit	4229 /	720	" "	"	8
Eagle #1 /		1273	Two-post	October	1
Eagle #2 /		1274	" "	"	1
Eagle #3 /		1275	" "	"	1
Moss #1 /		1859	" "	August	12
Moss #2 /		1860	" "	"	12
Tim #1 /		3166	" "	June	6
Tim #2 /		3167	" "	"	6
Lytton	2194 /	3203	Rev. C.G.	"	6
Ema	2913 /	3204	" "	"	6
Elise	1310 /	3205	" "	"	6



NUGGET MINES LTD.

CLAIM MAP

SUMMIT PROPERTY

Nelson Mining Division - British Columbia



Figure 2

<u>Claim Name</u>	<u>Lot No.</u>	<u>Record No.</u>	<u>Type</u>	<u>Anniversary Date</u>
Moss #6 ✓		3509	Two-post	September 9
Moss #7 ✓		3510	" "	" 9
Birch (20 units) ✓		3564	Mod. grid	November 4
Salmon Star 3942 ✓		3695	Rev. C.G.	March 30
Goldhill ✓ (16 units)		3870	Mod. grid	September 12
Raven #1 ✓		3871	Two-post	" 12
Raven #2 ✓		3872	" "	" 12
Raven #3 ✓		3873	" "	" 12

Total - 54 claim units

GEOLOGY

The Summit claims are underlain by argillite, slate and phyllite of the Ymir group (Permian? to Lower Jurassic?). Bedding attitudes observed on the western claims are north-south and dips are steep to the west.

Porphyritic granite of the Nelson Plutonic suite outcrops to the west and is reported by Drysdale (1917) and McAllister (1951) to occur throughout the Ymir area as tongues or dikes ranging in width from a metre to many kilometres.

MINERALIZATION

Ymir Camp

According to Drysdale (1917), the ore deposits of the Ymir gold-silver camp occur mainly in fissure-type quartz veins. The veins trend east-northeast and dip steeply to the northwest. Ore shoots owe their localization to changes in host rock types or to the intersection of the vein with dikes or other faults. Drysdale reports examples of well-defined fissure veins containing only barren quartz except where they intersect with granite tongues. Best ore material is obtained where wallrock of such veins is granitic rather than sedimentary.

Summit Vein

A prominent quartz vein up to 4 metres wide is exposed discontinuously on the Summit claim. This showing was briefly described by Drysdale (1917) and O'Grady (1928) who reported negligible gold and silver values. The vein trends 050° to 067° and dips 70° to the northwest and has been traced for a distance of at least 700 metres. Overburden covers the extension in both directions. A flat bench on the hillside, possibly a topographic expression of the vein, suggests that the vein extends for a distance of up to 1500 metres across both the Summit and Editor claims (figure 3). The vein has a similar trend with that

of the Pathfinder and Old Timer veins to the east of the Summit group and is in line with both, indicating that all may be part of the same vein system.

The Summit vein consists of milky white quartz with scattered narrow vugs lined with quartz crystals. Minor amounts of pyrite occur in thin seams with manganese oxides parallel to vein walls and as disseminated cubes in wallrock and wallrock inclusions in the vein. Analysis of a sample of the more pyritic vein material indicate minor zinc (3140 ppm), lead (482 ppm) silver (9.6 ppm) and gold (0.13 oz/ton) values.

Elise Vein

A quartz vein about 1 metre in width is exposed over a short distance on the west side of Huckleberry Creek on the Elise claim. It is very briefly described in the B.C. Ministry of Mines Annual Reports for 1896 and 1933. A crosscut tunnel was driven about 300 feet to intersect the vein, which was then drifted on for about 140 feet. Although the tunnel is not yet accessible, the vein is reported to be about 3.5 to 4.0 feet wide, strikes at N 54° E and dips steeply to the northwest. The vein is composed of stringers and lenses of quartz in the sheared country rock.

Other

Two vein-shears were encountered to the east of the EMA claim. The easternmost vein is up to one metre wide and trends north-northeasterly with a steep dip to the west. The veins consist of drusy quartz with no visible sulfides.

GEOCHEMICAL SURVEYS

Geochemical sampling was carried out over the northwest projection of the Summit vein. To facilitate sampling, four flagged lines approximately 850 metres long and 100 metres apart, were established at an azimuth of 135°. 133 soil samples and 5 rock samples were taken at 25 metre intervals along these lines. Soil material sampled was glacial till and talus fines. In both cases, samples were taken at a depth of 10 to 20 centimetres, well below the "A" horizon. Samples were placed in Kraft paper bags and shipped to Rossbacher Laboratory Ltd. where they were analyzed for six elements (Mo, Cu, Ag, Zn, Pb, Au) by standard atomic absorption technique.

Survey lines are plotted on Figures 3 and 4 and soil sample sites and selected analytical results plotted on Figure 4.

Weakly to moderately anomalous zinc (greater than 150 ppm) lead (greater than 22 ppm), silver (greater than 0.5 ppm) and molybdenum (greater than 4 ppm) occur throughout the lines samples. Any geochemical expression of a particular vein might therefore be masked by overburden or by a high background in host rocks. More extensive surveys are required before an interpretation can be made.

REFERENCES

- Allen, D. G. and Endersby, S. A. (1985). Preliminary Geochemical Report on the Summit Property. Assessment Report dated August 28, 1985.
- Drysdale, C. W (1917). Ymir Mining Camp, B.C., Geol. Surv. Canada, Memoir 94.
- McAllister, A.L. (1951). Ymir Map Area, Geol. Surv. Canada, Paper 51-54.
- O'Grady, B. T. (1928). Summit Group, in B.C. Min. Mines Ann. Rept., 1928, p. C334.
- Little, H. W. (1960). Nelson Map Area, West Half, Geol. Surv. Canada, Memoir 308.
- Allen, D. G. (1982). Preliminary Geochemical Report on the Summit, Editor, Moss and Eagle Claims. 1982 Associated Report.
- Annual Report, B.C. Minister of Mines, 1896, p. 75.
- Annual Report, B.C. Minister of Mines, 1933, p. A227.
- Allen, D.G. and Endersby, S.A. (1986). Geochemical and Geophysical Report on the Summit Property. Assessment Report dated January 27, 1986.

Affidavit of Expenses

This certifies that geochemical and geophysical surveys were carried out on the Summit claims, Ymir area, Nelson Mining Division, British Columbia, during September 1st and 5th, 1986, to the value of the following:

Mobilization and Fieldwork

Salaries	
G. M. Allen	800.00
D. Endersby	600.00
Vehicle rental	105.00
Mileage	45.00
Fuel	30.00
Telephone	15.00
Geochemical analysis	1,607.70
Materials and supplies	100.00
Total	<u>\$3,302.70</u>

Report Preparation and Draughting

Salary	
G. M. Allen	400.00
Maps and photocopying	105.00
Typing, draughting and compilation	350.00
Total	<u>\$ 855.00</u>

Grand Total \$4,157.70



CERTIFICATE

I, Gary M. Allen of 308 Sayward St., Salmo, British Columbia, certify that:

1. I am a Mining Engineer for Nugget Mines Ltd., Salmo, B.C.
2. I am a graduate of the South Dakota School of Mines and Technology with degrees in Mining Engineering (B. Sc., 1968, MSC., 1970).
3. I have practised my profession since 1968.
4. I am a member in good standing of the Association of Professional Engineers of Ontario.
5. This report is based on fieldwork carried out personally and by D.J. Endersby.



Salmo, B. C.
December 2, 1986

Gary M. Allen
P. Eng. (Ontario)

APPENDIX I
GEOCHEMICAL RESULTS

ROSSBACHER LABORATORY LTD.

2225 S. SPRINGER AVENUE
 BURNABY, B.C. V5B 3N1
 TEL : (604) 299 - 6910

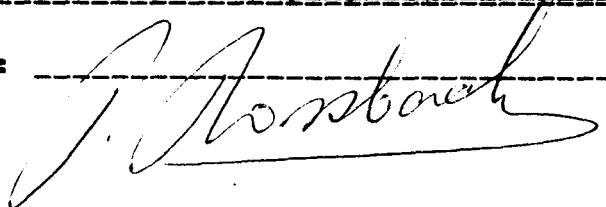
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TO : NUGGET MINES LTD.
 614-850 W. HASTINGS ST.
 VANCOUVER, B.C.
 PROJECT: SUMMIT PROPERTY
 TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 86468
 INVOICE#: 6789
 DATE ENTERED: 86-09-24
 FILE NAME: NUG86468
 PAGE # : 1

PRE FIX	SAMPLE NAME	PPM Mo	PPM Cu	PPM Ag	PPM Zn	PPM Pb	PPB Au	PPM As
S	SUM 86 1	2	30	0.6	328	45	5	12
S	2	1	26	0.8	112	20	5	18
S	3	1	34	0.6	94	202	5	4
S	4	1	30	0.6	84	32	5	6
S	5	1	24	0.4	116	34	5	12
S	6	1	32	0.4	166	28	5	16
S	7	1	42	0.8	124	40	5	14
S	8	1	34	0.6	164	58	5	22
S	9	1	20	0.6	162	38	5	10
S	SUM 86 10	1	40	0.8	188	24	5	18
S	11	1	32	0.4	130	24	5	4
S	12	1	32	3.0	142	22	5	4
S	13	1	28	1.4	190	18	5	6
S	14	1	32	1.0	186	20	5	6
S	15	1	36	1.4	158	20	5	6
S	16	1	22	0.8	98	26	5	8
S	17	1	26	0.4	156	26	5	10
S	18	1	34	0.6	138	24	5	6
S	19	1	32	1.0	114	26	5	10
S	SUM 86 20	1	26	0.8	172	22	5	18
S	21	2	28	1.6	248	36	5	20
S	22	4	32	4.0	280	40	5	10
S	24	2	18	1.0	94	52	10	8
S	25	2	30	0.8	80	20	50	12
S	26	6	42	1.4	180	28	5	18
S	27	8	34	2.0	154	20	5	16
S	28	11	36	1.6	256	18	5	12
S	29	2	24	0.6	82	18	5	8
S	30	1	20	0.8	90	32	5	10
S	SUM 86 31	1	24	0.6	36	18	5	10
T	32	1	30	0.4	64	12	5	22
S	33	1	40	1.0	68	24	5	16
S	34	1	16	0.4	54	18	5	8
S	35	1	24	0.8	66	16	5	4
S	36	1	20	0.8	58	28	5	10
S	37	1	18	0.8	56	18	5	4
S	38	1	18	0.8	66	16	5	6
S	39	1	26	0.6	70	32	5	2
S	40	1	32	1.4	82	14	5	4
S	SUM 86 41	1	28	0.8	212	18	5	6

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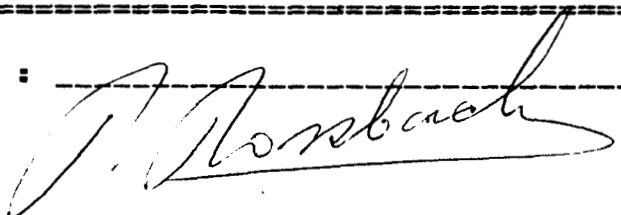
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PRE FIX	SAMPLE NAME	PPM Mo	PPM Cu	PPM Ag	PPM Zn	PPM Pb	PPB Au	PPM As
S	SUM 86 138	4	50	0.8	132	26	5	10
S	43	1	20	1.2	98	16	5	8
S	44	1	22	1.0	120	18	5	6
S	45	1	16	1.2	102	22	5	6
S	46	1	18	0.8	152	18	5	10
S	47	1	28	0.8	146	16	5	12
S	48	1	28	1.0	148	26	5	30
S	49	2	28	0.8	138	26	5	24
S	50	3	28	0.8	168	20	5	18
S	51	3	36	0.4	246	20	5	18
S	SUM 86 52	1	44	0.8	138	24	5	16
S	53	1	36	1.2	138	30	5	14
S	54	3	34	0.8	118	34	5	8
S	55	2	36	1.2	220	34	5	12
S	56	1	38	1.2	254	46	10	18
S	57	2	52	1.4	730	164	5	14
S	58	2	30	0.6	760	30	5	12
S	59	1	32	0.6	256	28	5	16
S	60	1	28	0.4	216	34	5	2
S	SUM 86 61	1	26	0.2	94	26	5	10
S	62	1	24	0.6	160	30	5	10
S	63	2	26	0.6	102	22	5	4
S	64	1	32	0.8	130	78	100	10
S	65	2	36	0.6	590	70	5	8
S	66	1	20	0.4	58	38	5	4
S	67	3	44	1.2	172	22	5	14
S	68	2	42	0.8	114	40	5	4
S	69	3	34	2.4	130	40	5	28
S	70	2	40	1.0	188	62	5	8
S	SUM 86 71	11	46	1.0	194	140	5	18
S	72	1	30	1.2	80	376	5	4
S	73	1	34	2.2	142	22	5	22
S	74	2	36	2.4	154	24	5	24
S	75	2	30	1.2	142	22	5	14
S	76	2	50	2.2	270	18	5	14
S	77	2	50	1.4	156	22	5	28
T	78	1	10	0.6	90	14	5	16
T	79	1	6	0.2	62	10	5	12
S	80	2	36	1.4	236	48	5	26
S	SUM 86 81	1	22	0.4	80	38	5	14

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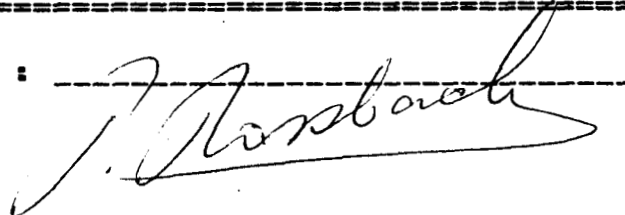
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PAGE # : 3

PRE FIX	SAMPLE NAME	PPM Mo	PPM Cu	PPM Ag	PPM Zn	PPM Pb	PPB Au	PPM As
S	SUM 86 82	2	36	1.6	178	34	10	14
S	83	1	2	0.2	18	2	5	2
S	84	1	28	1.0	134	24	5	30
S	85	1	20	0.6	95	18	5	12
S	86	2	20	0.8	92	30	5	30
S	87	1	32	0.6	112	26	5	38
S	88	2	58	3.0	406	50	5	34
S	89	7	38	1.6	30	22	5	48
S	90	5	36	1.4	176	22	5	24
S	SUM 86 91	3	24	1.0	104	16	5	20
S	92	1	24	0.6	108	16	5	16
S	93	2	24	0.6	126	16	5	26
S	94	1	30	2.4	140	22	5	24
S	95	2	30	1.0	146	22	5	18
S	96	1	22	0.4	128	28	5	18
S	97	1	26	0.6	140	20	5	12
S	98	1	22	0.6	146	24	5	14
S	99	1	22	0.6	136	18	5	12
S	100	1	24	0.6	140	20	5	20
S	SUM 86 101	2	24	0.4	116	16	5	14
S	102	1	18	0.8	66	16	5	18
S	103	1	22	1.0	84	16	5	16
S	104	1	30	0.8	102	20	5	18
S	105	1	30	1.0	116	16	5	18
S	106	1	20	0.8	62	28	5	8
S	107	1	14	1.0	62	42	5	8
S	108	1	12	0.8	34	18	5	6
S	109	1	28	1.8	62	48	5	40
S	110	1	18	0.4	64	28	5	10
S	86 SUM 111	1	22	1.0	58	28	5	10
S	112	1	18	1.2	74	18	5	10
S	113	1	22	0.6	126	26	5	12
S	114	1	26	1.2	106	24	40	22
S	115	1	24	1.6	136	22	5	16
S	116	1	30	1.8	108	34	5	18
S	117	2	24	1.2	90	18	5	10
S	118	1	30	1.8	88	20	5	20
S	119	4	30	0.6	126	28	5	12
S	120	5	40	0.8	170	28	5	20
S	121	3	30	0.6	176	26	5	12

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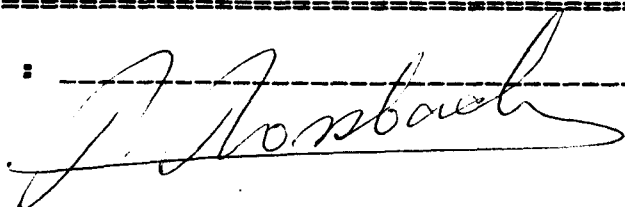
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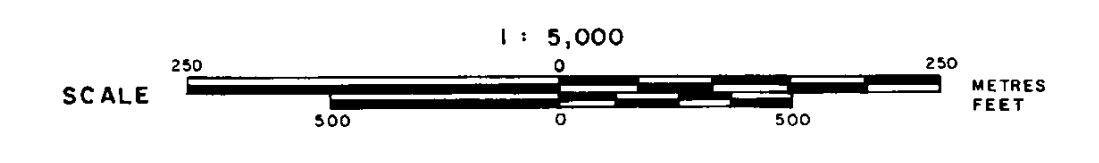
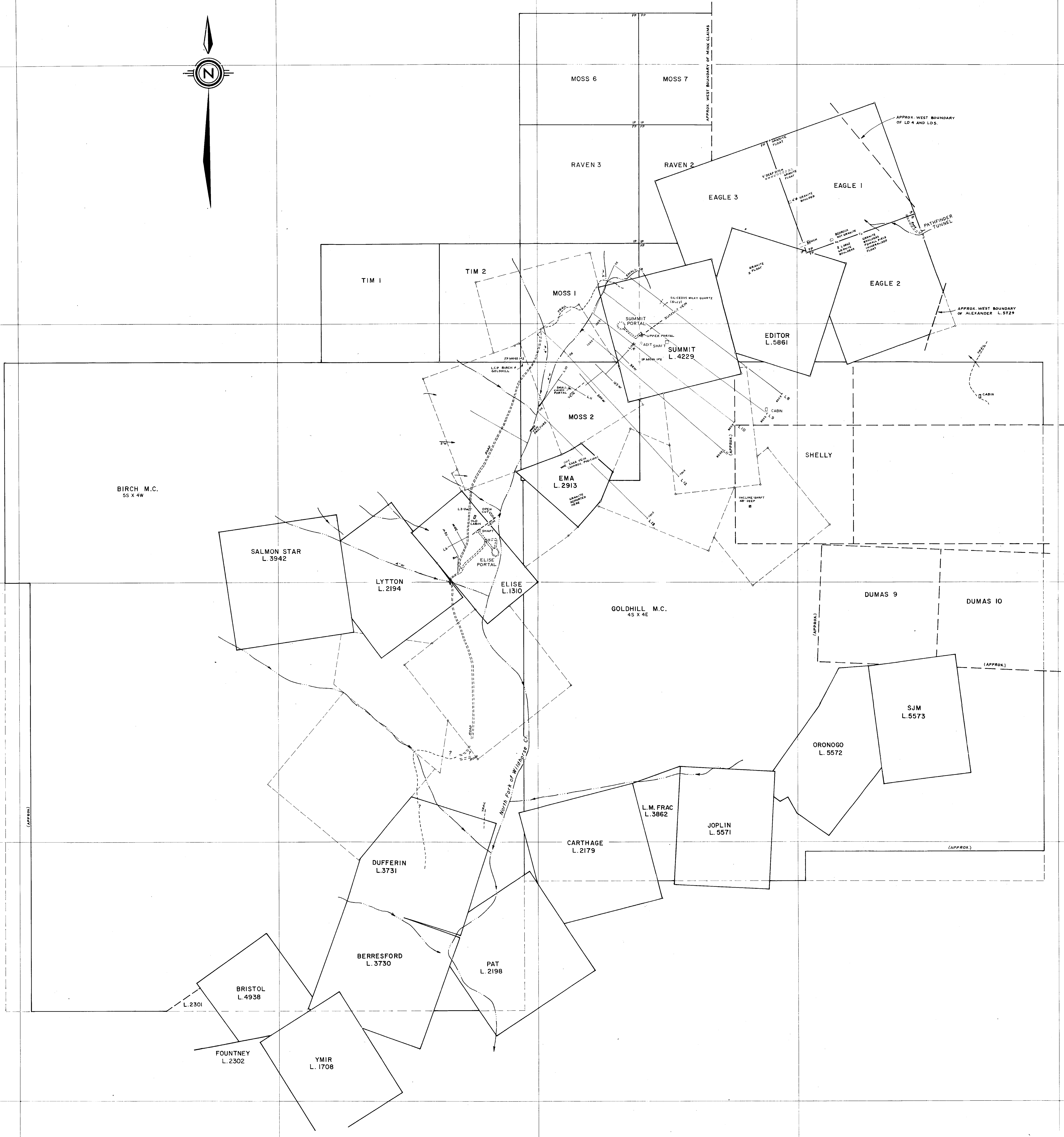
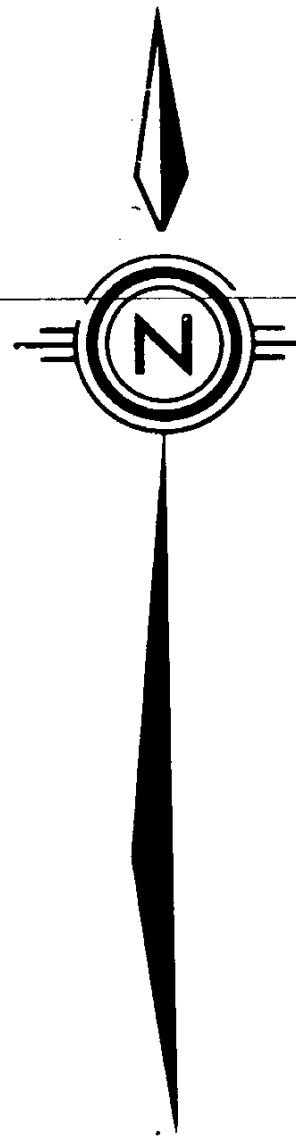
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 FILE NAME: NUG86468
 PAGE # : 4

PROJECT: SUMMIT PROPERTY
 TYPE OF ANALYSIS: GEOCHEMICAL

PRE FIX	SAMPLE NAME	PPM Mo	PPM Cu	PPM Ag	PPM Zn	PPM Pb	PPB Au	PPM As
S	SUM 86 122	3	32	1.2	172	20	5	6
S	123	3	24	0.8	130	22	5	4
S	124	2	32	0.4	114	32	5	14
S	125	9	32	2.6	192	36	10	70
S	126	6	28	2.2	142	52	5	50
S	127	4	26	1.0	114	22	5	12
S	128	1	20	0.6	160	20	5	12
S	129	4	26	1.0	98	24	5	16
S	130	3	36	1.0	122	82	5	16
S	SUM 86 131	5	28	0.8	118	20	5	10
S	132	5	36	0.8	118	60	5	12
S	133	3	46	0.6	304	48	5	12
S	134	4	20	0.6	126	22	5	8
S	135	2	34	0.6	156	50	5	14
S	136	4	58	1.0	122	22	5	22
S	137	5	42	0.8	92	34	5	10
S	SUM 86 138	4	50	0.8	132	26	5	10

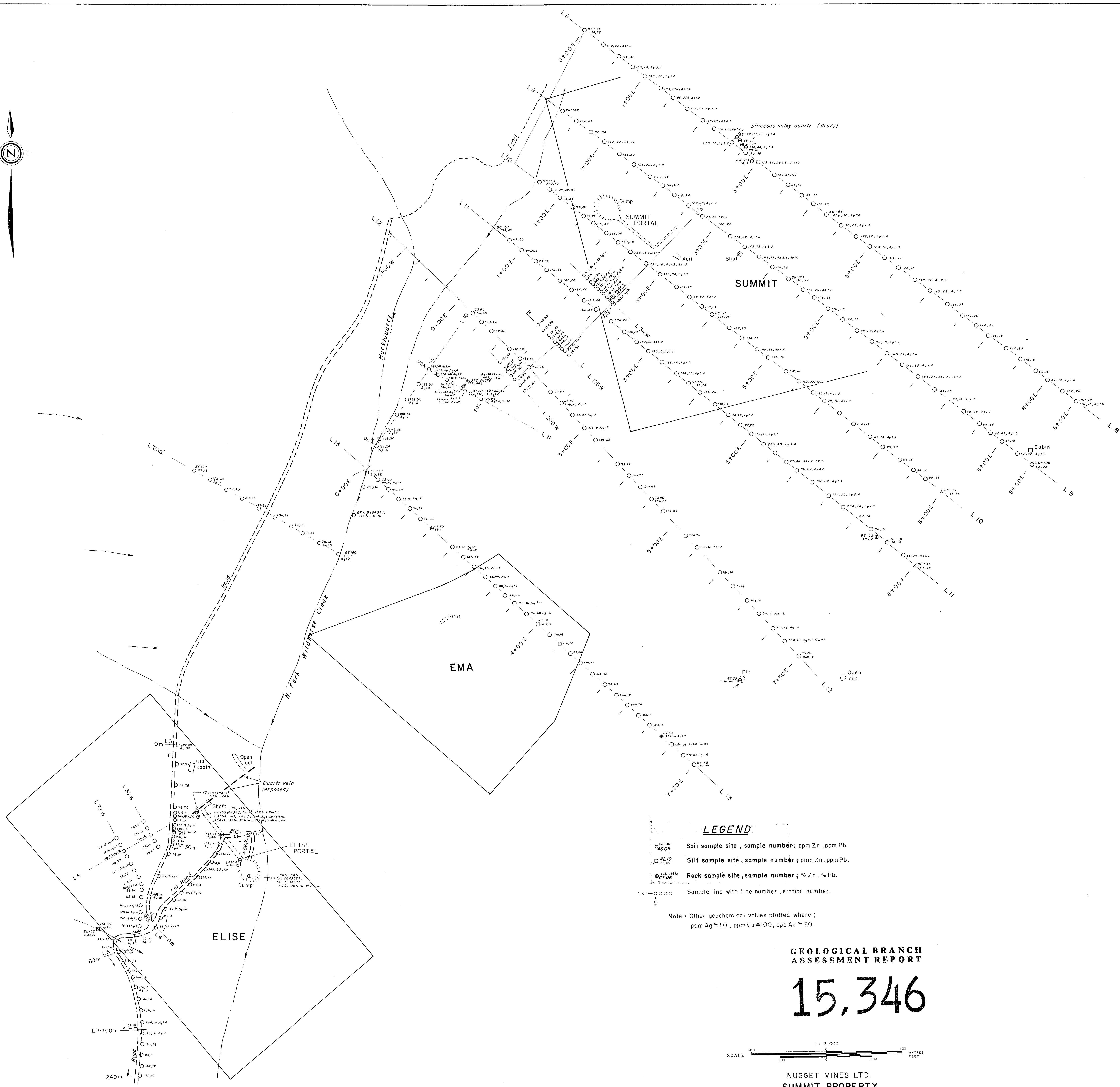
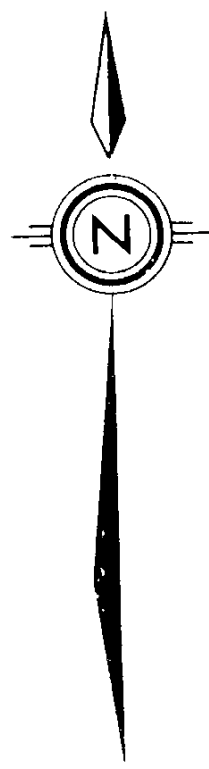
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PROPERTY PLAN MAP





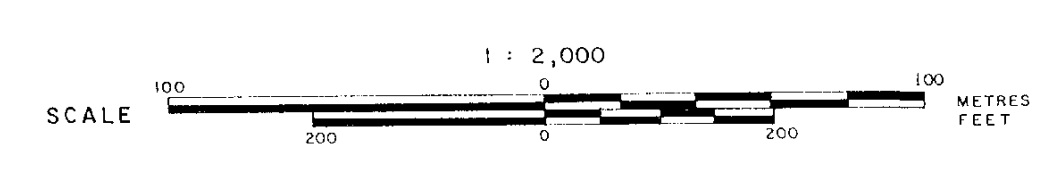
LEGEND

- 100.40
45.09 Soil sample site, sample number; ppm Zn, ppm Pb.
- 41.10
05.18 Silt sample site, sample number; ppm Zn, ppm Pb.
- 67.06
24.25, 44.25 Rock sample site, sample number; % Zn, % Pb.
- Sample line with line number, station number.

Note: Other geochemical values plotted where;
ppm Ag \approx 1.0, ppm Cu \approx 100, ppb Au \approx 20.

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

15,346



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GEOCHEMICAL MAP**