

0818

GEOCHEMICAL SURVEY REPORT
ON
MINERAL CLAIMS

0818

TENA 1 - 4; record no's 9107 - 9110
Owner: Clifford McNeill
TENA 5 - 10; record no's 9399 - 9404
Owner: Ernest G. Olfert

Located in the Omineca Mining Division
of
British Columbia
NTS 93-F-12/E

lat: 53°40' N long: 125°40' W

Operator - Windflower Mining Ltd.
Author - G. Ryznar, P.Eng.

August 8, 1988

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,673

GEOCHEMICAL SURVEY REPORT

TENA CLAIMS, B.C.

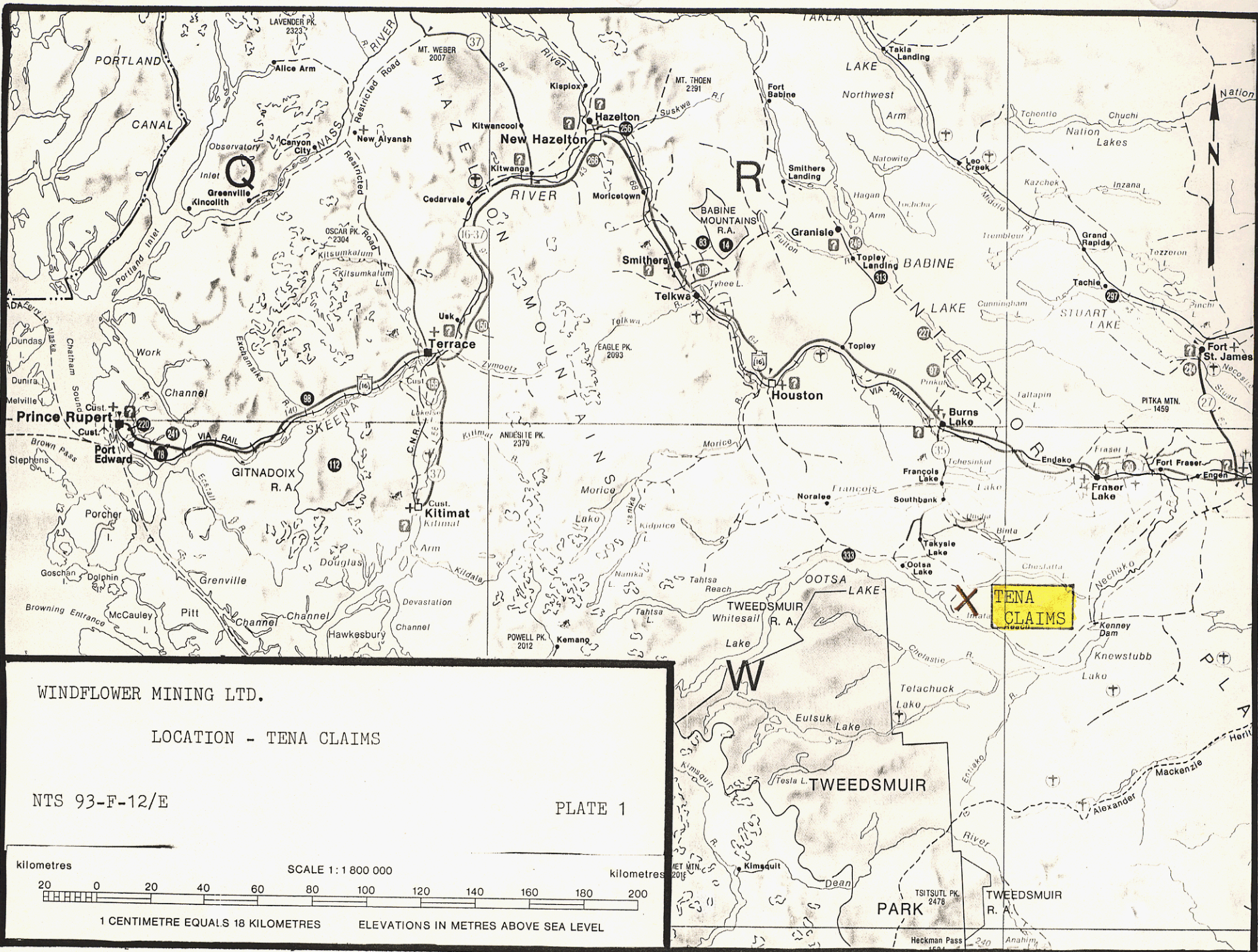
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WINDFLOWER MINING LTD.

LOCATION - TENA CLAIMS

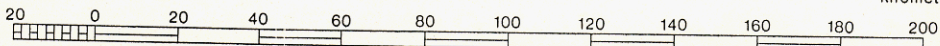
NTS 93-F-12/E

PLATE 1

kilometres

SCALE 1:1 800 000

kilometres



1 CENTIMETRE EQUALS 18 KILOMETRES

ELEVATIONS IN METRES ABOVE SEA LEVEL

GEOCHEMICAL SURVEY REPORT
TENA CLAIMS, B.C.

No mention of
earlier work
on this ground.
(10. 22. 1988)

Summary

The Tena claims are located approximately 70 km. south of Burns Lake, B.C. and cover an area underlain by Cretaceous to Tertiary volcanics, of the Ootsa Lake Group, and in part by the Jurassic Hazelton Group. The claim area is faulted extensively and exhibits a number of characteristics common to epithermal gold systems. For this reason a brief geochemical sampling program, consisting of the collection of seven stream silt samples and three rock samples from locations of particular interest, was carried out from May 9 - 12, 1988. Analysis did indicate a few high values in arsenic and mercury but negligible values in gold.

Property

The property consists of the following ten located 2 post claims:

TENA 1 - TENA 4 record no's 9107 - 9110
TENA 5 - TENA 10 record no's 9399 - 9404

Location and Access 53°40' N 125°40' W NTS 93-F-12/E

The Tena claims are located 70 km. south of Burns Lake, B.C. and are accessible by logging road from Burns Lake. The claims are located within the Omineca Mining Division of British Columbia.

Geology

The Tena claims are underlain by felsic to mafic volcanics of the Cretaceous to Tertiary Ootsa Lake Group apparently in fault contact with Jurassic Hazelton volcanic and sediments. Much of the Upper Ootsa Lake felsic volcanics are brecciated and silicified.

Geochemistry

Rock samples were collected from three different outcrop locations on mineral claim Tena 2 and analyzed geochemically for gold, silver,

arsenic, copper, molybdenum, lead, zinc, antimony, and mercury. Rock samples ER 1 and ER 2 consisted of silicified and altered felsic breccias while ER 3 consisted of siliceous, intermediate to felsic breccia. Seven silt samples were collected from well located sampling points along the drainage system within the claim group. The silt samples were geochemically analyzed for the same nine elements as the rock samples. The results of the rock and silt analysis are as follows:


SAMPLE #	TYPE	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Mo ppm	Hg ppb
7901 (ER3)	Rock	5	0.5	32	<5	48	71	9	6	50
7902 (ER2)	Rock	<5	<0.5	7	<5	14	13	<5	2	90
7903 (ER2)	Rock	<5	<0.5	13	<5	45	65	<5	5	90
7904 (ER2)	Rock	<5	<0.5	3	<5	7	9	<5	3	50
7905 (ER1)	Rock	<5	<0.5	8	<5	24	21	<5	21	125
EGT 1	Silts	6	0.7	29	10	113	25	<5	5	60
EGT 2	Silts	8	0.5	20	6	66	13	<5	3	50
EGT 3	Silts	12	0.6	22	6	91	16	<5	4	40
EGT 4	Silts	9	0.6	23	8	89	14	<5	4	35
EGT 5	Silts	9	0.7	30	10	109	15	<5	6	60
EGT 6	Silts	9	0.7	20	5	88	6	<5	5	60
EGT 7	Silts	<5	<0.5	39	8	112	40	<5	5	50

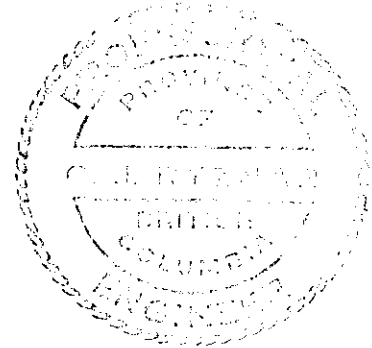
Geochemical Procedures

The procedure used for the geochemical analysis by Bondar-Clegg are standard procedures used by commercial laboratories, that is, fire assay and atomic absorption for gold and DC plasma emission spectroscopy for all other elements other than mercury for which cold vapor atomic absorption technique were used. For further details see Appendix I of this report.

Conclusion and Recommendations

From the small number of samples collected and analyzed, the few moderately high arsenic and mercury values suggest that a signature of weak epithermal activity exists over the claim group. Further sample collection and prospecting is recommended with possible drill testing for better values at depth.


G. Ryznar, P. Eng.
August 8, 1988



STATEMENT OF EXPENDITURES

GEOCHEMICAL SURVEY - TENA CLAIMS, BRITISH COLUMBIA

PROFESSIONAL SERVICES

E.G. OLFERT, GEOLOGIST May 9 - 12, 1988 - 4 days @ \$350/day	\$ 1,400.00
G. RYZNAR, P.ENG - report writing August 5, 1988 - 1 day @ \$400/day	\$ 400.00


GEOCHEMICAL ANALYSIS

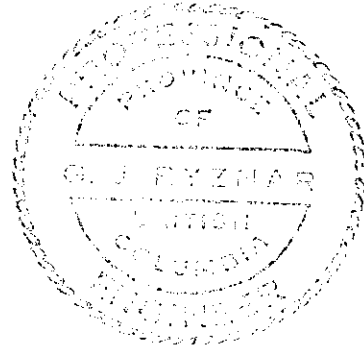
BONDAR-CLEGG (Invoice dated June 23, 1988) 12 Analysis of "Gold + 8" Group	\$ 259.75
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OLFERT EXPENSES RE: above mentioned services

Gas for vehicle; Hotel accomodation	\$ 86.25
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TOTAL COSTS THIS SURVEY	\$ 2,146.00
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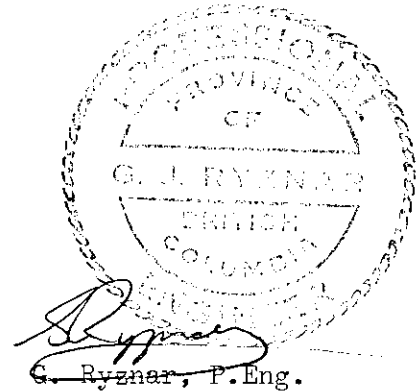

G. Ryznar, P.Eng.
August 8, 1988



AUTHOR'S QUALIFICATIONS

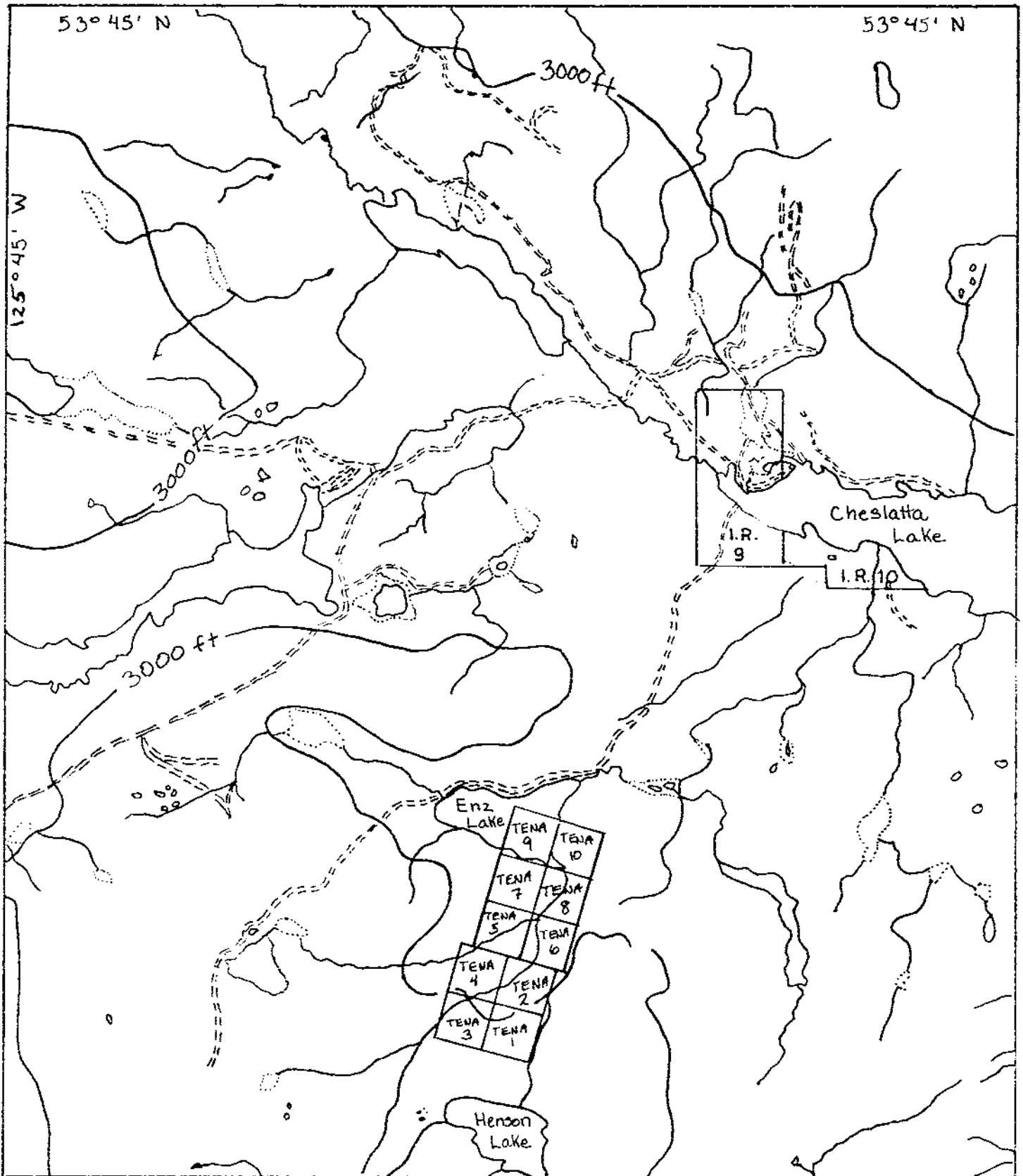
I, Gerald Ryznar, do hereby certify:

- 1) That I am a graduate of the University of Alberta, Edmonton from which I obtained a BSc. and MSc. in Geology in 1964 and 1965.
- 2) That I have practiced my profession as a mining and exploration geologist during the past twenty-three years throughout most provinces and territories in Canada, as well as in the U.S.A., Australia and New Zealand.
- 3) That I am a member of the Association of Professional Engineers of British Columbia.



G. Ryznar, P. Eng.

Dated in Vancouver, British Columbia, August 8, 1988

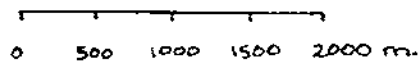


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WINDFLOWER MINING LTD.

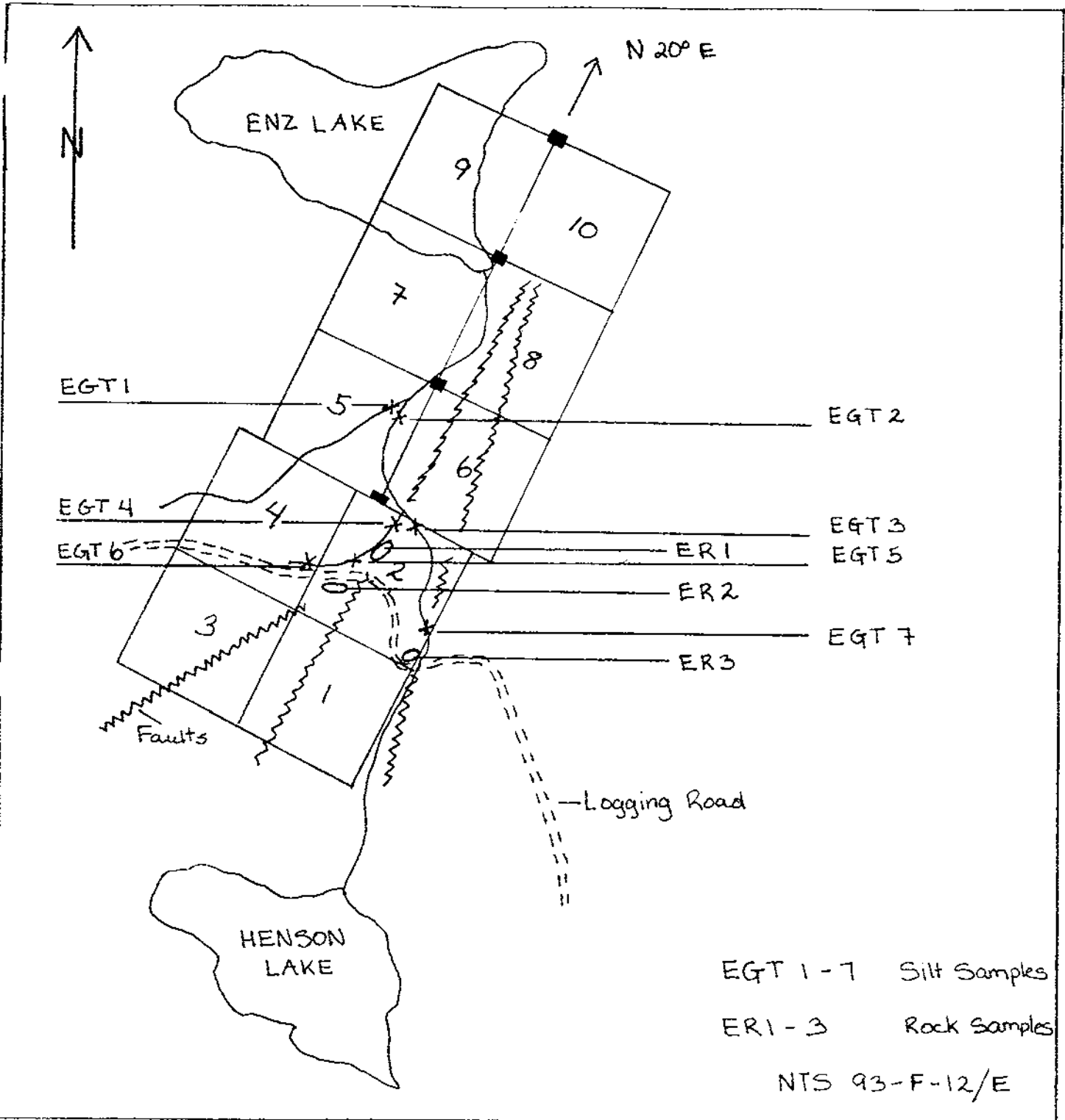
LOCATION - TENA CLAIMS

Scale 1:50,000



PLATE

2



WINDFLOWER MINING LTD.

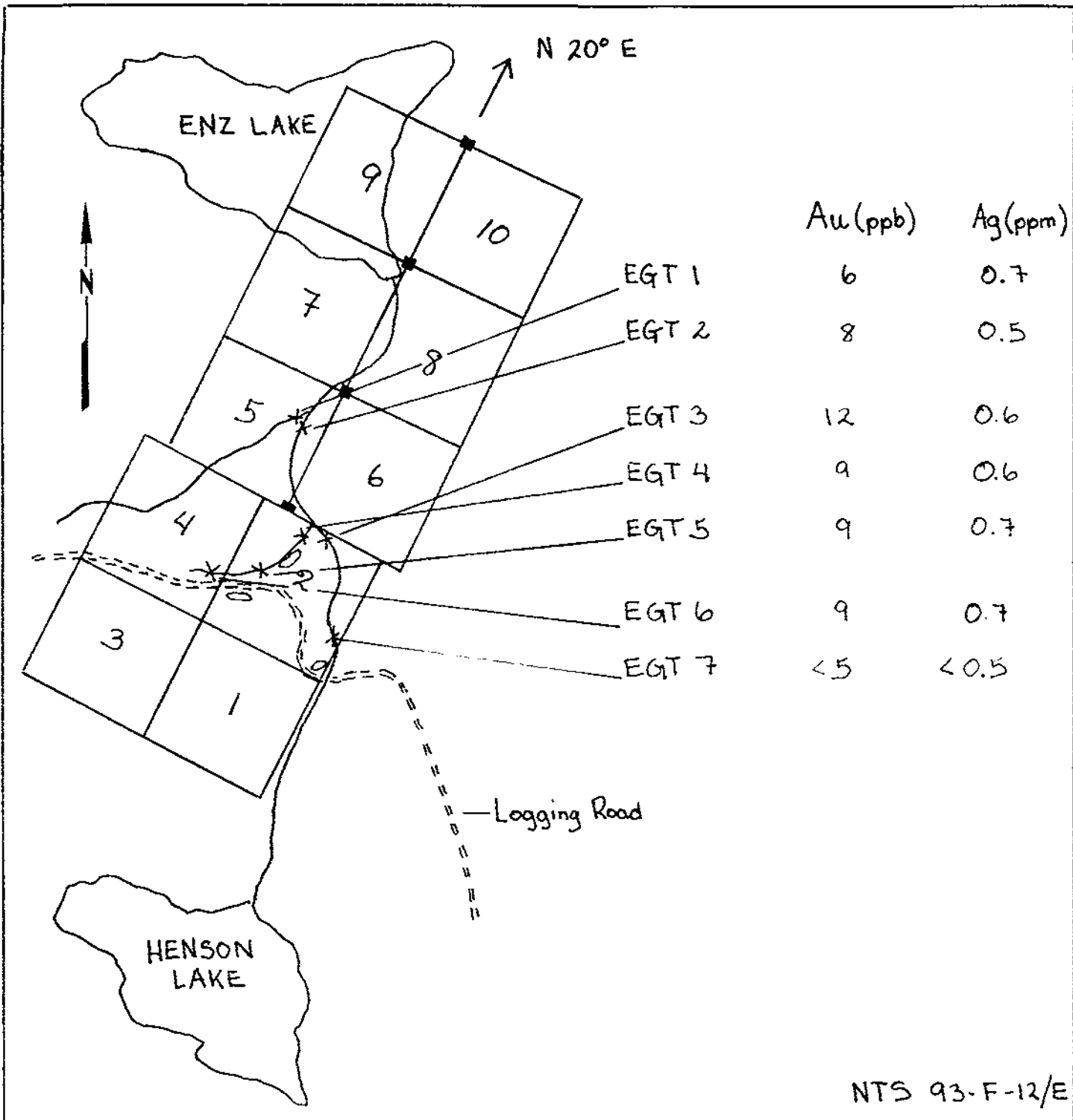
TENA CLAIMS

GEOCHEMICAL SAMPLE LOCATIONS

Scale 1:20,000

0 200 400 600 800 m.

PLATE
3

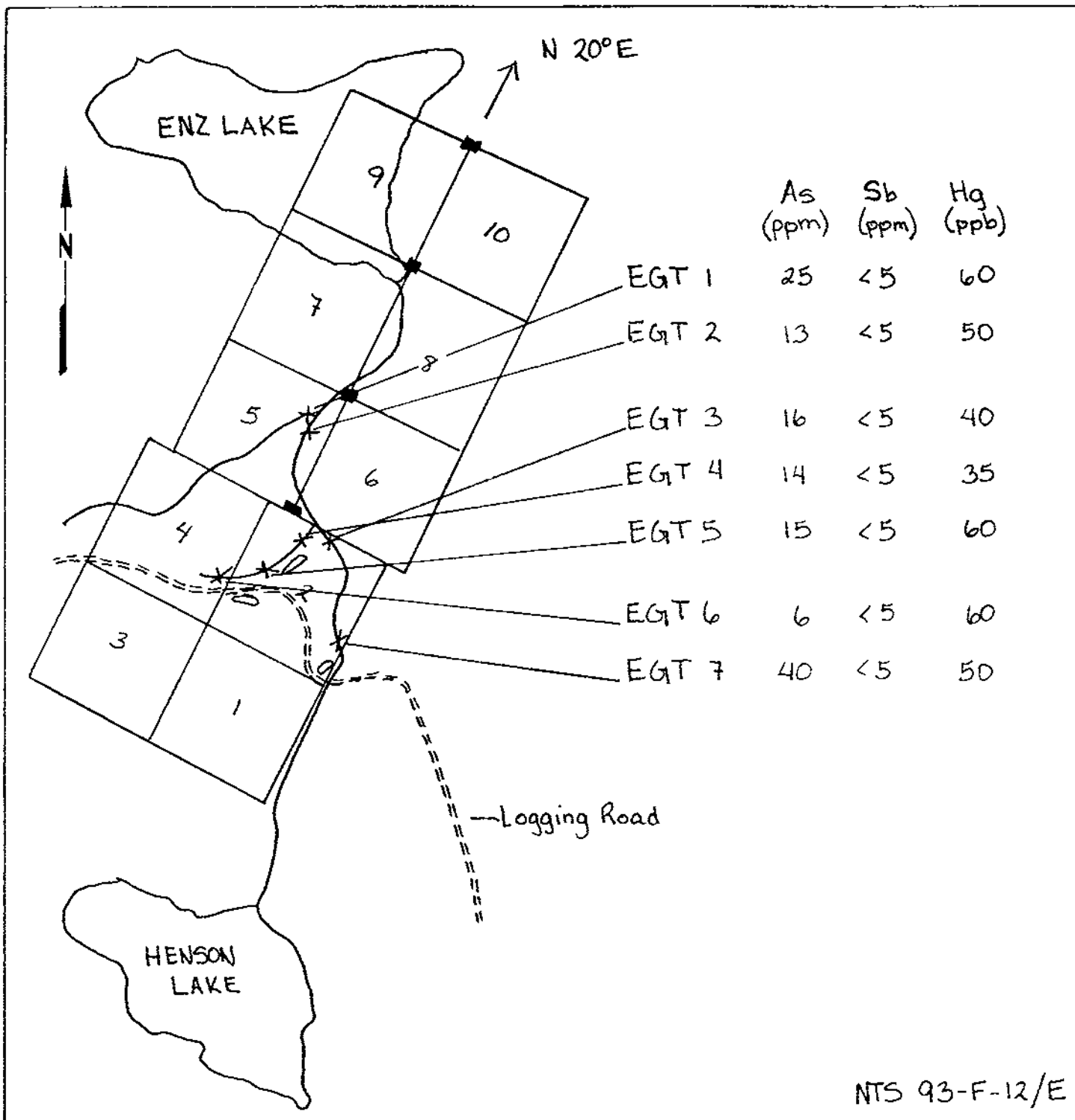


NTS 93-F-12/E

WINDFLOWER MINING LTD. - TENA CLAIMS, B.C.
 GEOCHEMICAL SURVEY - STREAM SILTS
 Au, Ag

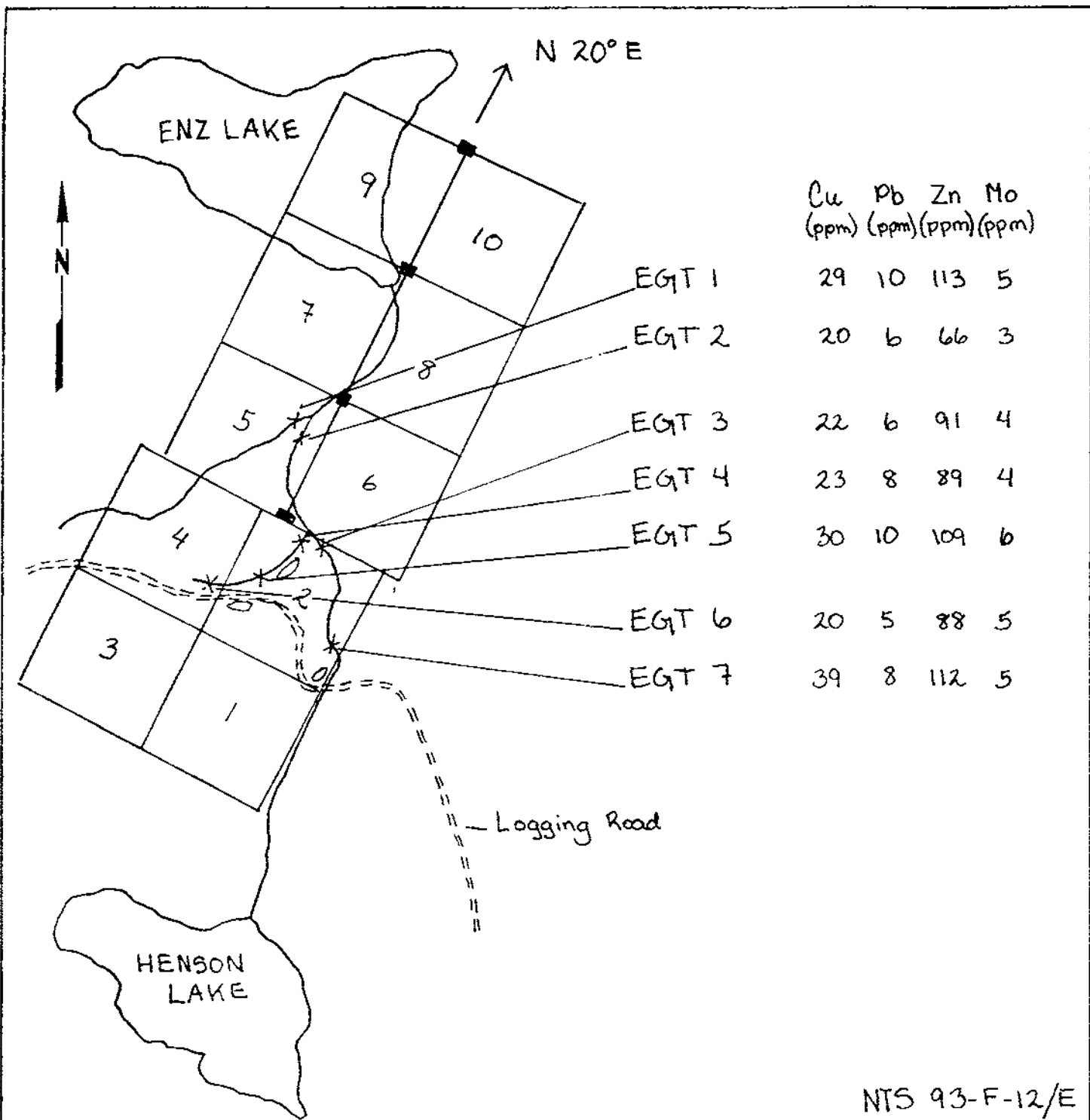
Scale 1:20,000 0 200 400 600 800 m.

PLATE
 4



WINDFLOWER MINING LTD. - TENA CLAIMS, B.C.
 GEOCHEMICAL SURVEY - STREAM SILTS
 As, Sb, Hg

Scale 1:20,000 0 200 400 600 800 m.



NTS 93-F-12/E

WINDFLOWER MINING LTD. - TENA CLAIMS, B.C.

GEOCHEMICAL SURVEY - STREAM SILTS

Cu, Pb, Zn, Mo

Scale 1:20,000

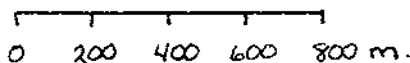
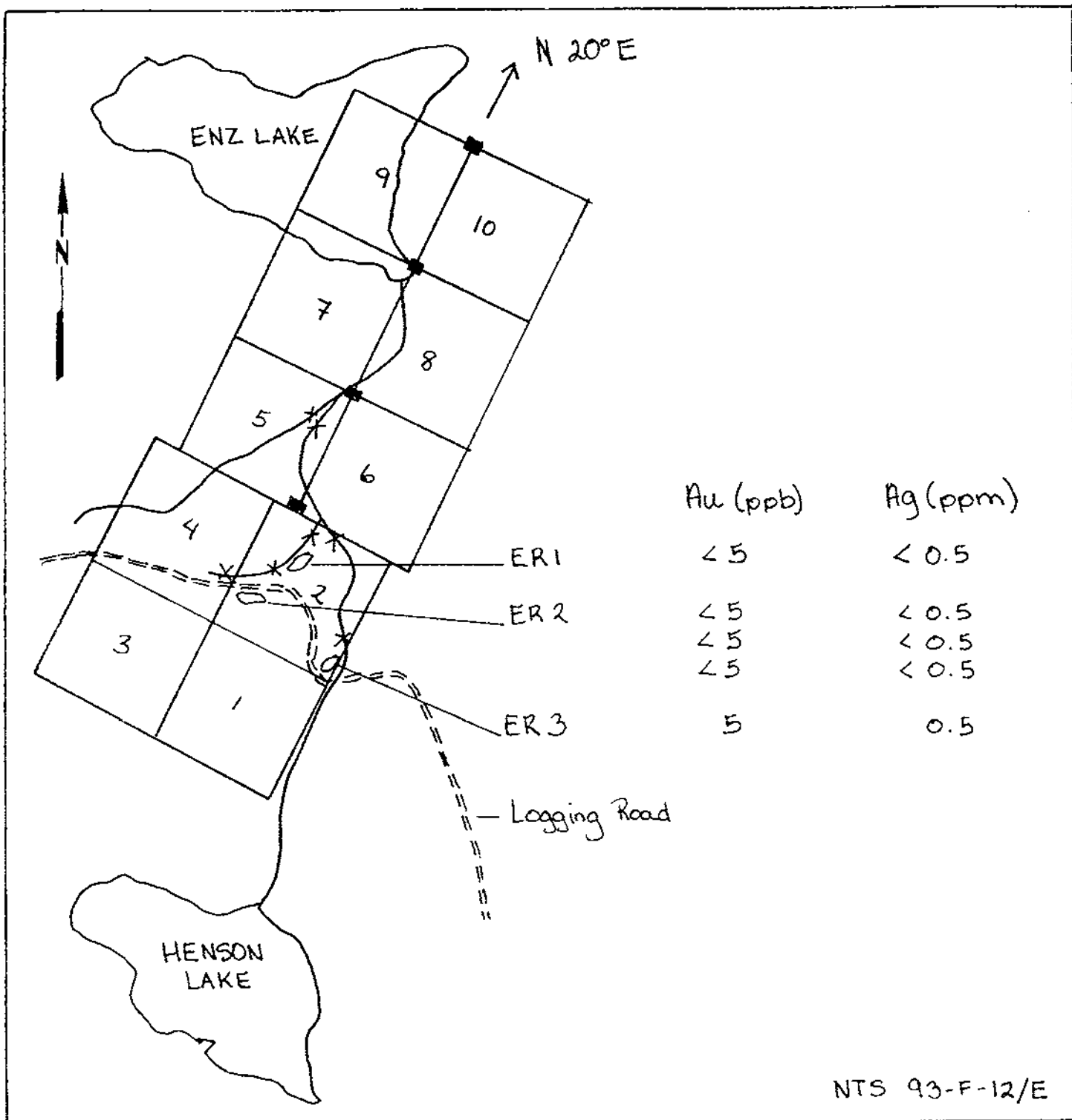


PLATE
6



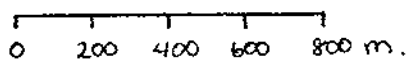
NTS 93-F-12/E

WINDFLOWER MINING LTD. - TENA CLAIMS, B.C.

GEOCHEMICAL SURVEY - ROCK SAMPLES

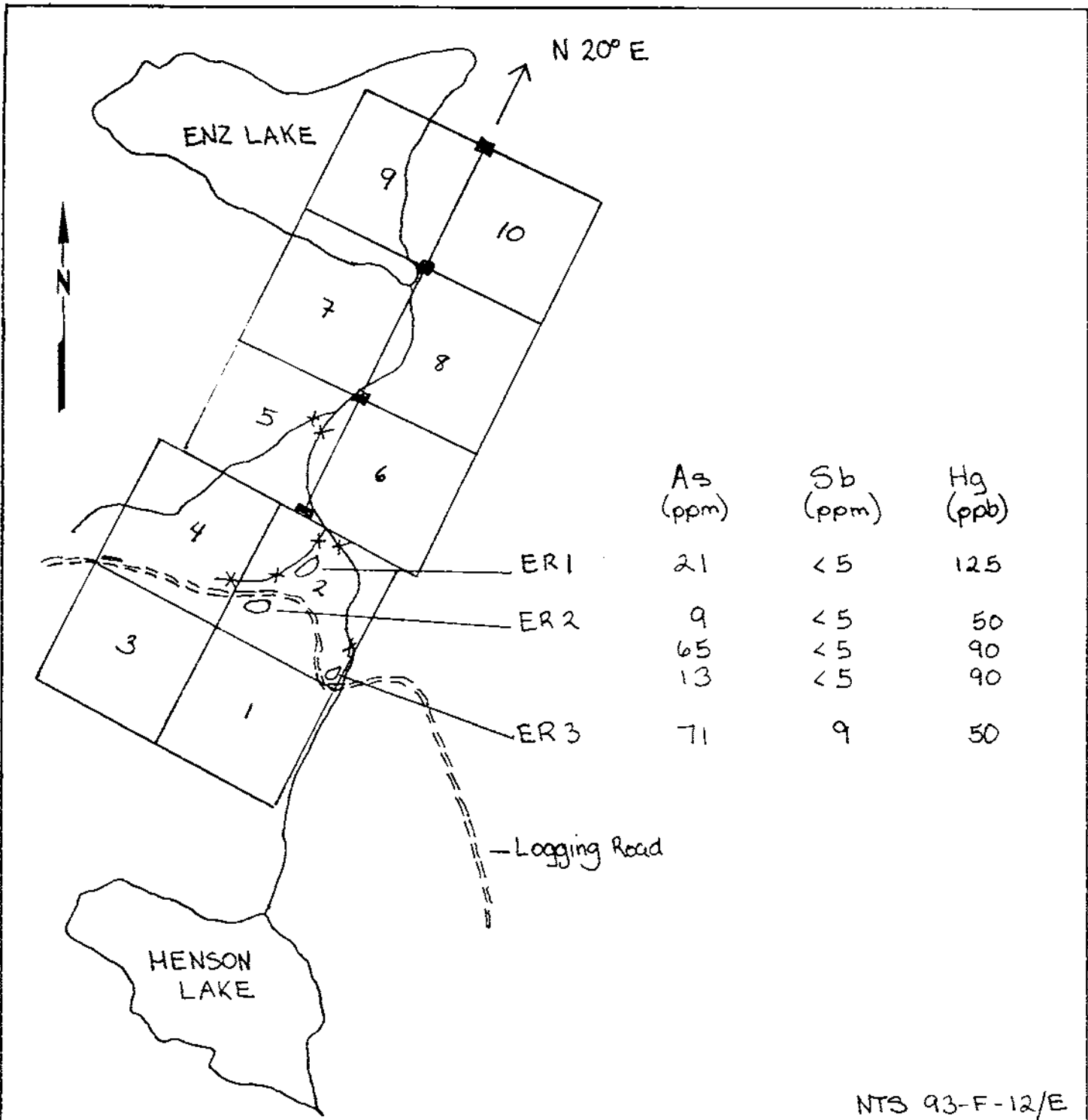
Au, Ag

Scale 1:20,000



PLATE

7



NTS 93-F-12/E

WINDFLOWER MINING LTD. - TENA CLAIMS, B.C.

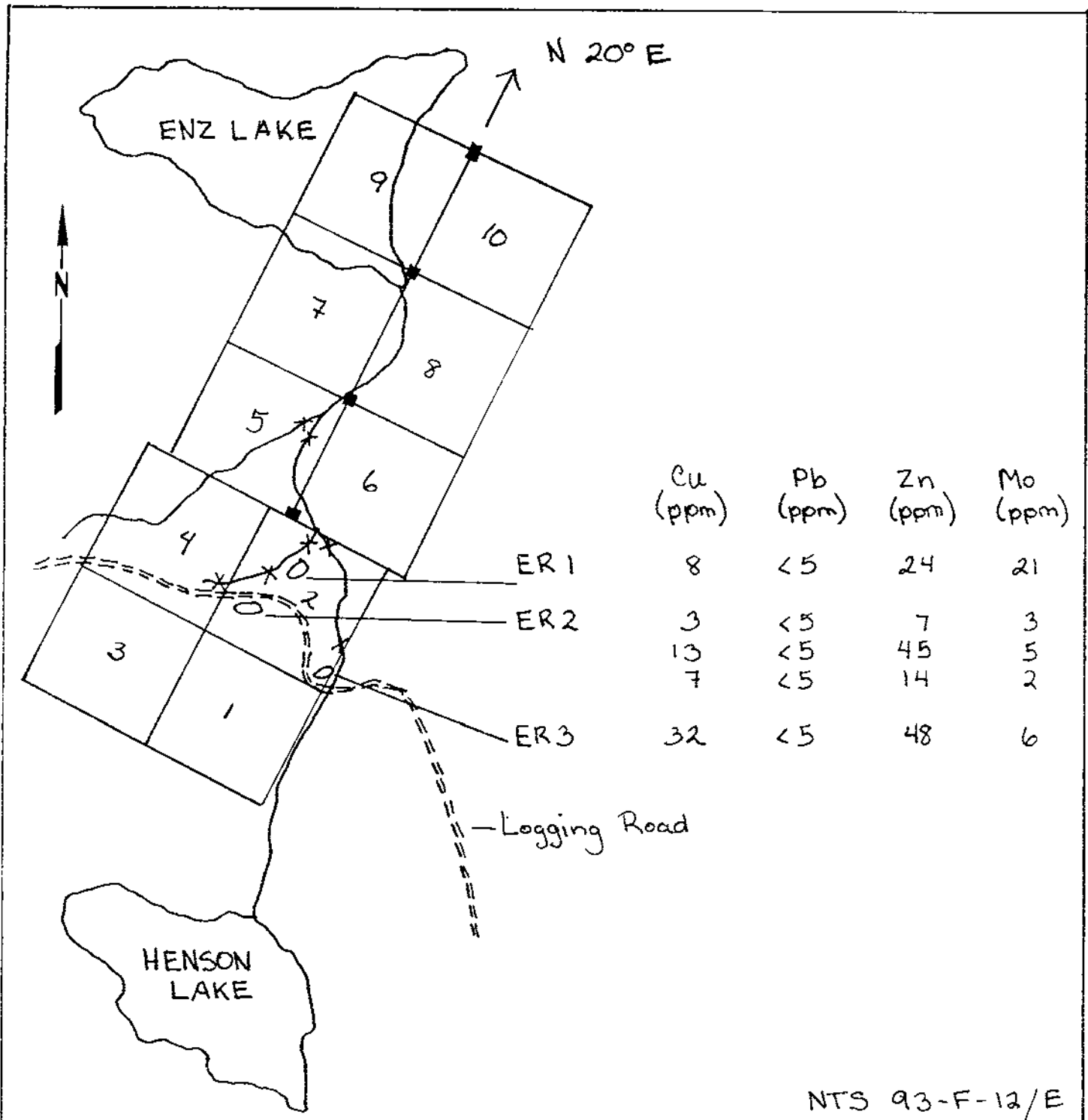
GEOCHEMICAL SURVEY - ROCK SAMPLES

As, Sb, Hg

Scale 1:20,000

0 200 400 600 800 m.

PLATE
5



	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)
ER 1	8	<5	24	21
ER 2	3	<5	7	3
	13	<5	45	5
	7	<5	14	2
ER 3	32	<5	48	6

NTS 93-F-12/E

WINDFLOWER MINING LTD. - TENA CLAIMS, B.C.
 GEOCHEMICAL SURVEY - ROCK SAMPLES
 Cu, Pb, Zn, Mo

Scale 1:20,000 0 200 400 600 800 m.



PROCEDURE for GEOCHEMICAL GOLD ANALYSIS:

APPENDIX I

A prepared sample (30 grams) is mixed with a flux which is composed mainly of lead oxide. The proportions of the flux components are adjusted depending on the nature of the sample. Silver is added to help collect the gold. The samples are fused at 1050 C until a clear melt is obtained. The lead button which also contains the precious metals is then separated from the slag. Heating in the cupellation furnace separates the lead from the noble metals. The precious metal beads that remain are transferred to test tubes and dissolved with aqua-regia. The solution is analyzed using Atomic Absorption by comparing the readings of these solutions with readings of standard solutions.

Contamination Prevention

The test tubes and cupels are used only once so that there is no possibility of cross contamination. The fusion crucibles are cleared before re-use by discarding any which had high samples in them. During the analysis a blank solution is run between each sample to ensure that there is no carry-over.

DETERMINATION of MERCURY

The samples of 0.5 grams in weight are digested in test tubes with nitric and hydrochloric acids. These tubes are heated in hot water baths for two hours. The entire sample is transferred to a gas washing cylinder and a solution containing stannous sulphate is added. This is then connected to a peristaltic pump and the vapour is pumped through a tube which is located in the light path of a mercury lamp on an atomic absorption unit. The absorbance is recorded and compared to a standard series to determine the amount of mercury that is present.

Contamination Prevention

The test tubes are used for mercury only and are cleaned with a stannous sulphate solution if they are high in mercury. The flasks are cleaned between samples and if the samples are high potassium hydroxide and stannous sulphate are used. The samples are digested in a separate area to prevent contamination from other digestions. In addition the samples are analyzed as soon as digestion so that contamination possibilities are reduced.



APPENDIX I

DETERMINATION OF ELEMENTS BY DC PLASMA EMISSION SPECTROSCOPY
Lefort Aqua-regia Digestion

The samples of 0.5 grams in weight are digested in test tubes with concentrated nitric and hydrochloric acids. These tubes are heated in hot water baths for two and one-half hours. The sample is then diluted and mixed. The resulting solution is analyzed by DC Plasma using the appropriate wavelength for each element. The readings are compared to a standard solutions to determine the amount of each element that is present.

Contamination Prevention

The test tubes are used for DC Plasma analysis only and are discarded after use. A solution of de-ionized water or dilute acid is run between samples to prevent contamination during analysis.



APPENDIX I

REPORT: V88-04157.0 (COMPLETE)

REFERENCE INFO:

CLIENT: WINDFLOWER MINING LTD.
 PROJECT: NONE GIVEN

SUBMITTED BY: UNKNOWN
 DATE PRINTED: 22-JUN-88

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au 30g Gold 30 grams	12	5 PPM	FIRE-ASSAY	Fire Assay AA
2	Au/wt Sample weight/grams	11	0.1 G		
3	Au/wt -20 Au Sample Weight	5	0.1 G		
4	Ag Silver	12	0.5 PPM	HN03-HCL HOT EXTR	PLASMA EMISSION SPEC
5	As Arsenic	12	5 PPM	HN03-HCL HOT EXTR	PLASMA EMISSION SPEC
6	Cu Copper	12	1 PPM	HN03-HCL HOT EXTR	PLASMA EMISSION SPEC
7	Mo Molybdenum	12	1 PPM	HN03-HCL HOT EXTR	PLASMA EMISSION SPEC
8	Pb Lead	12	5 PPM	HN03-HCL HOT EXTR	PLASMA EMISSION SPEC
9	Sb Antimony	12	5 PPM	HN03-HCL HOT EXTR	PLASMA EMISSION SPEC
10	Zn Zinc	12	1 PPM	HN03-HCL HOT EXTR	PLASMA EMISSION SPEC
11	Hg Mercury	12	5 PPB	HN03-HCL HOT EXTR	Cold Vapour AA

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
T STREAM SEDIMENT, SILT	7	1 -80	7	DRY, SIEVE -80	7
R ROCK OR BED ROCK	5	2 -150	5	CRUSH, PULVERIZE -150	5

REPORT COPIES TO: WINDFLOWER MINING LTD.
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INVOICE TO: WINDFLOWER MINING LTD.