

84-#700 - 12967
8/85

GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,967

GEOCHEMICAL REPORT

ON

HAPPY CLAIMS

SKEENA MINING DIVISION

56°16'N, 130°02'W

104 B 1-8 East

FOR

TIDE JOINT VENTURE

(TENAJON, NEWHAWK, NORTHAIR)

BY

J.W. MacLeod, P.Eng.

Vancouver, B.C.

August 31, 1984

PART
1 OF 2

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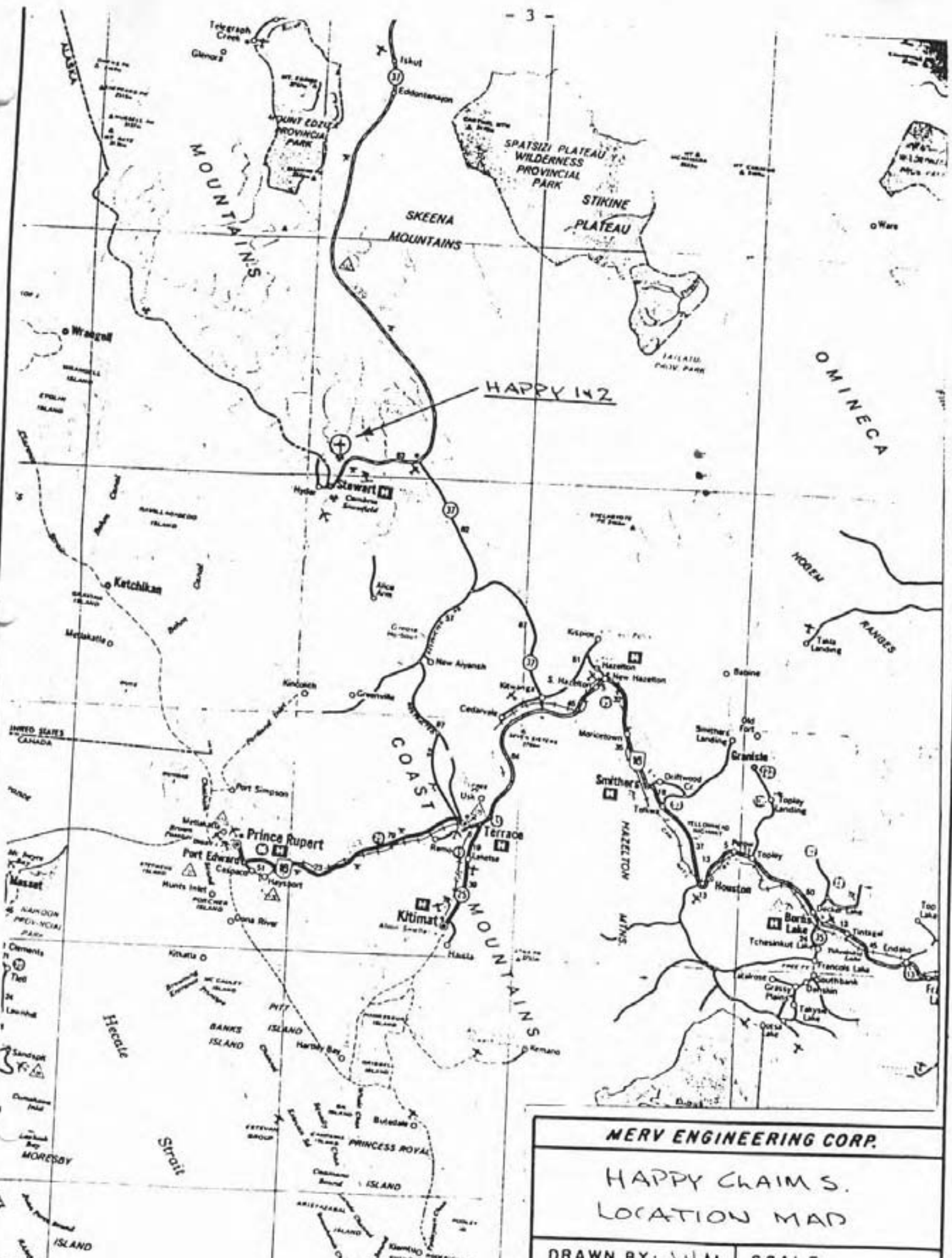
ENGINEERS CERTIFICATE

REPORT ON
HAPPLY CLAIMS - SILT SAMPLING

INTRODUCTION:

The following report has been prepared to fulfill the requirements of the Mineral Act with regard to the application of geochemical work for assessment credit.

Between July 25 and 27 a preliminary examination of the Happy claims was carried out by N. Wychopen, R. Brown and I. Weemees. To evaluate the property, stream samples were taken from each stream crossing the property.



MERV ENGINEERING CORP.

HAPPY CLAIMS.
LOCATION MAP

DRAWN BY: S.J.M | **SCALE:**

PROPERTY:

The property is made up of two grid claims; Happy 1 of 16 units and Happy 2 of 18 units. The claims were recorded on August 23, 1983 and have record numbers 4051 and 4052.

LOCATION AND ACCESS:

The Happy claims adjoin to the east of Mineral Reserve covering the Bowser River valley to the north of the Granduc mill portal. 52 km of good gravel road connect the airstrip in the valley to the west of the claims with the town of Stewart.

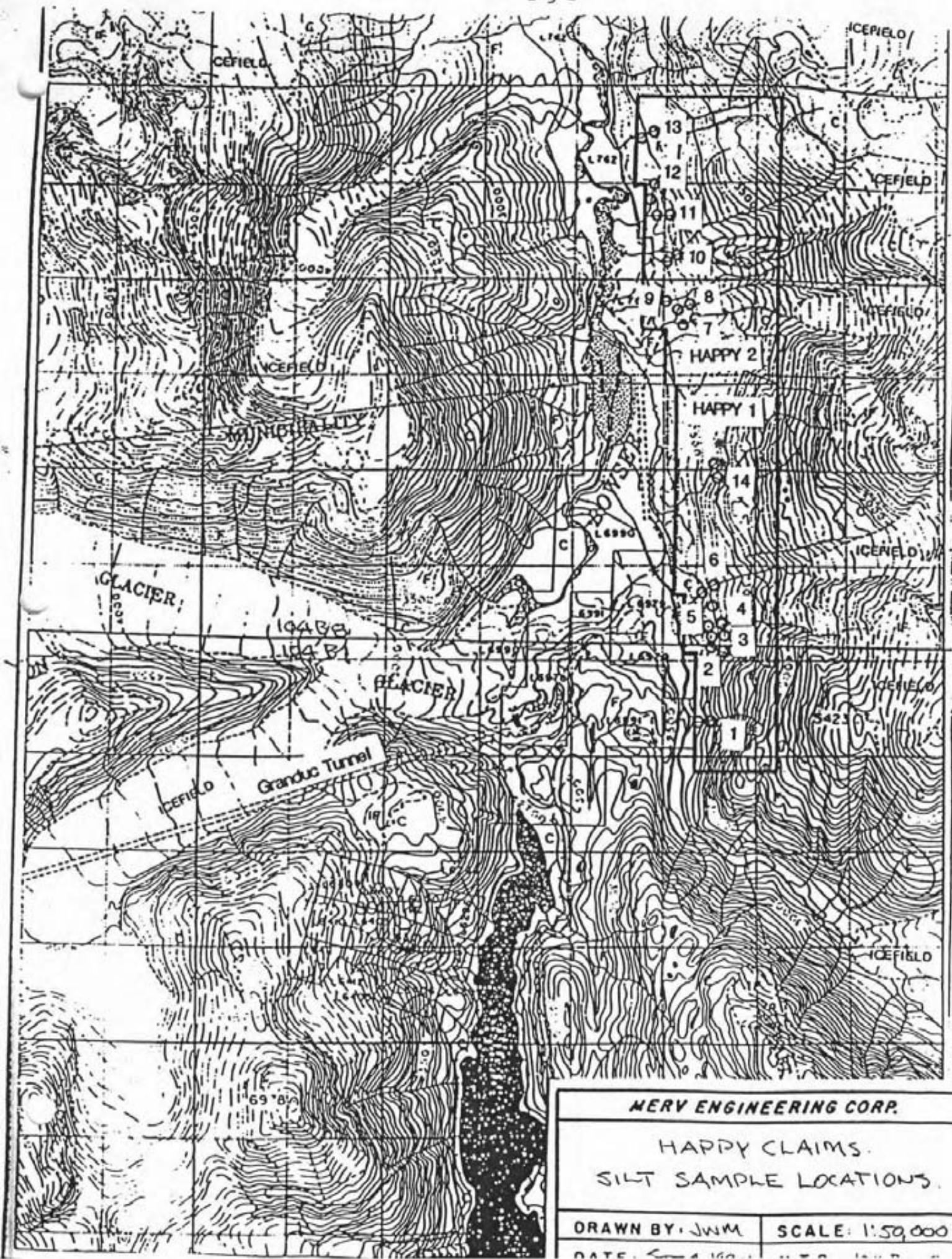
GENERAL:

The claims are located on the steep slope of the Bowser River valley on the east side of the river. Elevations range from the valley bottom at 650 metres to 760 metres, the old lake level, and the upper limits of the property at treeline elevation of 1000 metres.

14 streams were sampled, taking the available sediment from the active part of the stream. Where possible a check sample was taken and marked "A" close by each site for a total of 27 silt samples.

The claims are underlain by volcanics, considerably sheared, but lacking the pervasive gossan formed on the west side of the valley.

A short, 10 metre, adit has been driven on an east-west trending quartz vein located in the northwest corner of the property. The vein is 1 m wide at the face and contains minor galena.



MERV ENGINEERING CORP.

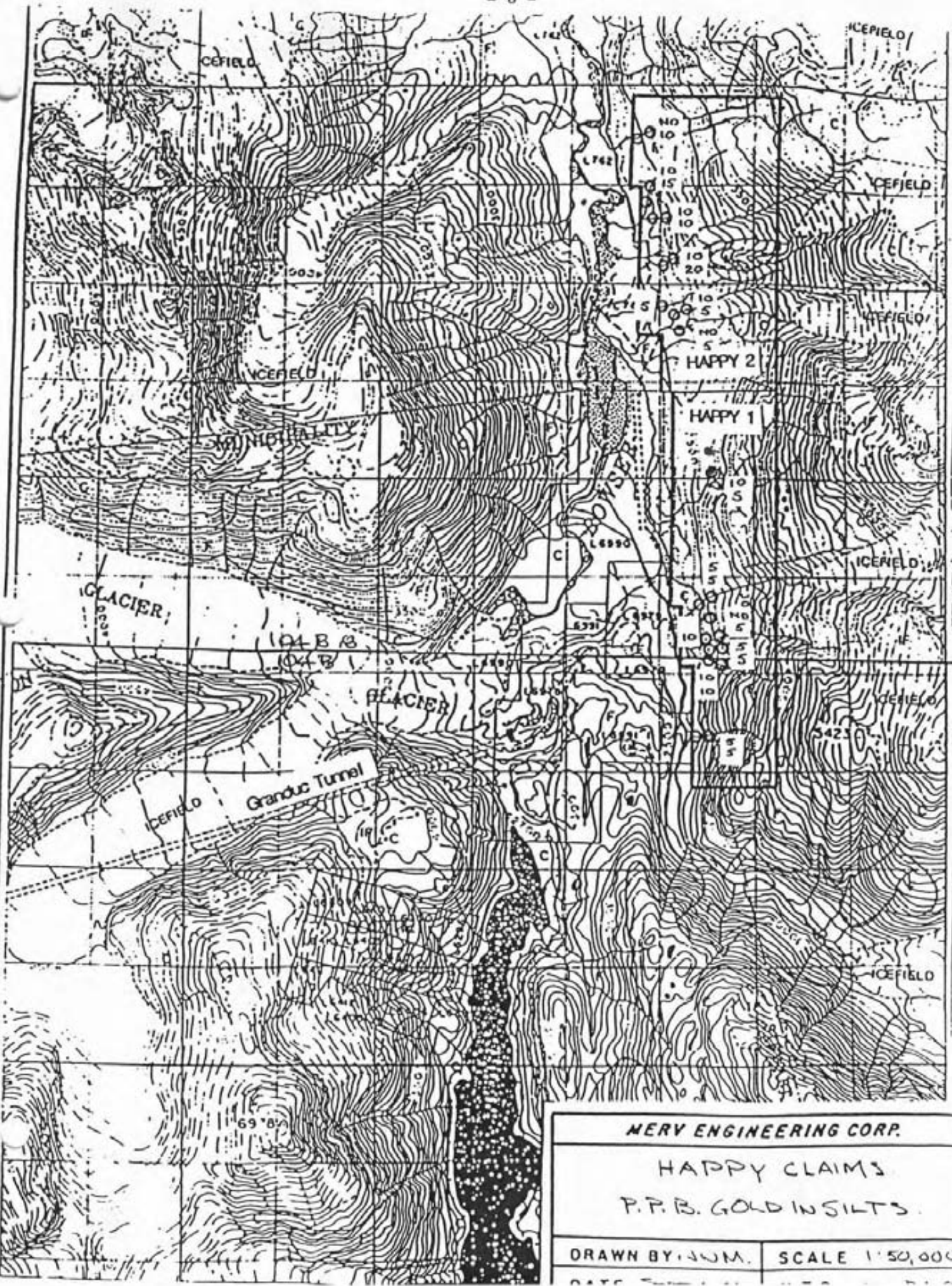
**HAPPY CLAIMS.
SILT SAMPLE LOCATIONS.**

DRAWN BY: JWM

SCALE: 1"=50,000'

DATE: 4-1-60

PROJECT: 10488



NERV ENGINEERING CORP.
HAPPY CLAIMS
P.P.B. GOLD INSILTS
DRAWN BY: J.W.M. SCALE 1" = 50,000'
DATE: _____

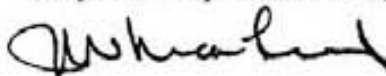
SILT SAMPLE RESULTS:

The silt samples were analysed for gold and silver, the principal exploration target in this area. Multi element I.C.P. analysis was also carried out.

The assay results are all very low with no anomalous condition indicated. The results are in particular contrast to the general high values for all metals obtained on the west side of the valley.

The survey does not indicate the presence of any significant mineralization on the claims.

Respectfully Submitted,



J.W. MacLeod, P.Eng.

APPENDIX I

ANALYTICAL PROCEDURES

VANGEOCHEM LAB LTD.
1521 Pemberton Ave.
North Vancouver, B.C.
V7P 2S3

TO: TENAJON SILVER MINES
#1450 - 625 Howe Street
Vancouver, B.C. V6C 2T6

FROM: Vangeochem Lab Ltd.
1521 Pemberton Ave.
North Vancouver, B.C. V7P 2S3

SUBJECT: Analytical procedure used to determine hot acid soluble
for Ag in geochemical silt, soil, and samples.
For Report # 84-69-021

1. Method of Sample Preparation

- (a) Geochemical soil, silt or rock samples were received in the laboratory in wet-strength 4" x 6" Kraft paper bags or rock samples sometimes in 8" x 12" plastic bags.
- (b) The dried soil and silt samples were sifted by hand using a 8" diameter 80-mesh stainless steel sieve. The plus 80-mesh fraction was rejected and the minus 80-mesh fraction was transferred into a new bag for analysis later.
- (c) The dried rock samples were crushed by using a jaw crusher and pulverized to 100-mesh or finer by using a disc mill. The pulverized samples were then put in a new bag for later analysis.

2. Method of Digestion

- (a) 0.50 gram of the minus 80-mesh samples was used. Samples were weighed out by using a top-loading balance.
- (b) Samples were heated in a sand bath with nitric and perchloric acids (15% to 85% by volume of the concentrated acids respectively).
- (c) The digested samples were diluted with demineralized water to a fixed volume and shaken.

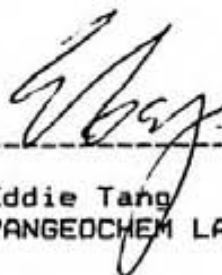
3. Method of Analysis

**** Ag **** analyses were determined by using a Techtron Atomic Absorption Spectrophotometer Model AAS with their respective hollow cathode lamps. The digested samples were aspirated directly into an air and acetylene mixture flame. The results, in parts per million, were calculated by comparing a set of standards to calibrate the atomic absorption units.

4. Background Correction

A hydrogen continuum lamp is used to correct the Silver background interferences.

5. The analyses were supervised or determined by Mr. Conway Chun or Mr. Eddie Tang and the laboratory staff.



Eddie Tang
VANGEOCHEM LAB LTD.

VANGEOCHEM LAB LTD.
1521 Pemberton Ave.
North Vancouver, B.C.
V7P 2S3

TO: TNEAJON SILVER MINES
#1450 - 625 Howe Street
Vancouver, B.C. V6C 2T6

FROM: Vangoechem Lab Ltd.
1521 Pemberton Ave.
North Vancouver, B.C. V7P 2S3

SUBJECT: Analytical procedure used to determine Aqua Regia
soluble gold in geochemical samples
For Report # 84-69-021

1. Method of Sample Preparation

- (a) Geochemical soil, silt or rock samples were received in the laboratory in wet-strength 4" x 6" Kraft paper bags or rock samples sometimes in 8" x 12" plastic bags.
- (b) The dried soil and silt samples were sifted by hand using a 8" diameter 80-mesh stainless steel sieve. The plus 80-mesh fraction was rejected and the minus 80-mesh fraction was transferred into a new bag for analysis later.
- (c) The dried rock samples were crushed by using a jaw crusher and pulverized to 100-mesh or finer by using a disc mill. The pulverized samples were then put in a new bag for later analysis.

2. Method of Digestion

- (a) 5.00 - 10.00 grams of the minus 80-mesh samples were used. Samples were weighed out by using a top-loading balance into beakers.
- (b) 20 ml of Aqua Regia (3:1 HCl : HNO₃) were used to digest the samples over a hot plate vigorously.
- (c) The digested samples were filtered and the washed solids were discarded and the filtrate was reduced to about 5 ml.

- (d) The Au complex ions were extracted into diisobutyl ketone and thiourea medium. (Anion exchange liquids "Aliquot 336").
- (e) Separate Funnels were used to separate the organic layer.

3. Method of Detection

The gold analyses were detected by using a Techtron model AA5 Atomic Absorption Spectrophotometer with a gold hollow cathode lamp. The results were read out on a strip chart recorder. A hydrogen lamp was used to correct any background interferences. The gold values in parts per billion were calculated by comparing them with a set of gold standards.

- 4. The analyses were supervised or determined by Mr. Conway Chun or Mr. Eddie Tang and his laboratory staff.



Eddie Tang
VANGEOCHEM LAB LTD.

VANGEOCHEM LAB LTD.
1521 Pemberton Ave.
North Vancouver, B.C.
V7P 2S

TO: TENAJON SILVER MINES
#1450 - 625 Howe Street
Vancouver, B.C. V6C 2T6

FROM: Vangeochem Lab Ltd.
1521 Pemberton Ave.
North Vancouver, B.C. V7P 2S3

SUBJECT: Analytical procedure used to determine elements in hot
acid soluble by Induction Couole Plasma Soectrometer
(ICP) analysis.
For Report # 84-69-021

1. Method of Sample Preparation

- (a) Geochemical soil, silt or rock samples were received in the laboratory in wet-strength 4" x 6" Kraft paper bags or rock samples sometimes in 8" x 12" plastic bags.
- (b) The dried soil and silt samples were sifted by hand using a 8" diameter 80-mesh stainless steel sieve. The plus 80-mesh fraction was rejected and the minus 80-mesh fraction was transferred into a new bag for analysis later.
- (c) The dried rock samples were crushed by using a jaw crusher and pulverized to 100-mesh or finer by using a disc mill. The pulverized samples were then put in a new bag for later analysis.

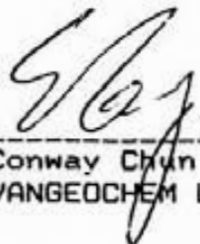
2. Method of Digestion

- (a) 0.500 gram of -80 mesh sample was used.
- (b) Samples were digested in a hot water bath with conc. HNO₃ and conc. HCl acids.
- (c) The digested samples were diluted to a fixed volume and shaken well.

3. Method of Analysis

The ICP analyses elements were determined by using Jarrel Ash, model 885. Direct reading emission spectrograph of a inductive coupled plasma excitation source. All major matrix and trace elements are interelement corrected to trace elements. All data is entered into Apple II plus, stored on floppy disks, and printed by Epson 100.

4. The analyses were supervised by Mr. Dean Toye and Mr. Conway Chun of Vangeochem Lab Ltd. and their staff.


for Conway Chun
VANGEOCHEM LAB LTD.

APPENDIX II

ASSAY RESULTS

VANGEOCHEM LAB LIMITED

MAIN OFFICE
1521 Pemberton Ave.
North Vancouver B.C. V7P 2S3
(604)986-5211 Telex: 04-352578

BRANCH OFFICE
1630 Pandora St.
Vancouver B.C. V5L 1L6
(604)251-5656

GEOCHEMICAL ANALYTICAL REPORT

CLIENT: TENAJON SILVER CORP.
ADDRESS: 1450 - 625 Howe Street
: Vancouver B.C.
: V6C 2T6

DATE: August 13 1984

REPORT#: 84-69-021
JOB#: 84330

PROJECT#: --
SAMPLES ARRIVED: August 1 1984
REPORT COMPLETED: August 13 1984
ANALYSED FOR: Ag Au ICP
SAMPLES FROM: TENAJON SILVER CORP.
COPY SENT TO: TENAJON SILVER CORP.

INVOICE#: 8126
TOTAL SAMPLES: 26
SAMPLE TYPE: 26 SILT
REJECTS: DISCARDED

PREPARED FOR: TENAJON SILVER CORP.

ANALYSED BY: VGC Staff

SIGNED: _____

GENERAL REMARK: None

WANGCHEEN LAB LIMITED
1521 Pemberton Avenue
North Vancouver B.C. V7P 2S3
(604) 986-5211 Telex: 04-352578

PREPARED FOR: TENAJON SILVER CORP.

NOTES: nd = none detected
: - = not analysed
: is = insufficient sample

REPORT NUMBER: 84-69-021

JOB NUMBER: 84338

PAGE 1 OF 1

SAMPLE #	Ag ppm	Au ppb
HAPPY SILT 1	.4	5
HAPPY SILT 1A	.3	5
HAPPY SILT 2	.7	10
HAPPY SILT 2A	.6	10
HAPPY SILT 3	.6	5
HAPPY SILT 3A	.6	5
HAPPY SILT 4	.8	nd
HAPPY SILT 4A	.8	5
HAPPY SILT 5	.4	10
HAPPY SILT 6	.1	5
HAPPY SILT 6A	.4	5
HAPPY SILT 7	.4	nd
HAPPY SILT 7A	.4	5
HAPPY SILT 8	.2	10
HAPPY SILT 8A	1.1	5
HAPPY SILT 9	.6	5
HAPPY SILT 10	.7	10
HAPPY SILT 10A	.3	20
HAPPY SILT 11	.4	10
HAPPY SILT 11A	.3	10
HAPPY SILT 12	.5	10
HAPPY SILT 12A	.4	15
HAPPY SILT 13	.4	5
HAPPY SILT 13A	.2	nd
HAPPY SILT 14	.4	10
HAPPY SILT 14A	.3	5
DETECTION LIMIT	0.1	5

VANGEOCHEM LAB LIMITED
 1521 PEMBERTON AVENUE
 NORTH VANCOUVER, B.C. V7P 2S3

GEOCHEMICAL ICP ANALYSIS

1.000 GRAM SAMPLE IS DIGESTED WITH DMG 20-1-1 NDL-HNO3-HCl AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 100 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR MN, FE, CA, P, CR, Ni, Ba, Ti, S, AL, NH4, K, Li, Sr, Zr, Ce, Sm, Y, La AND TA. AN DETECTION LIMIT BY ICP IS 0.1 PPM.
 * SAMPLE TYPE: SOLUTION

REPORT # 84-69-021
 INVOICE # 8126

DATE RECEIVED: AUG 1 1984 DATE REPORT MAILED: *Aug 17/84* ASSAYER: *N. Jupp* DEAN: *TOM* CERTIFIED: *1984/88*

TENAJON SILVER SOLUTION FROM VANGEOCHEM JOB # 84-300 FILE # 84-0008

PAGE 1

SAMPLE#	MO	CU	PB	ZN	AG	NI	CO	MN	FE	AS	U	AU	TH	SR	CD	SB	BI	V	CA	P	LA	CF	MG	BA	TI	B	AL	CR	Y	La
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	%	%	%	%	PPM
HAPPY SILT 1	1	17	7	71	.2	6	12	1070	3.31	7	5	ND	2	25	1	2	2	20	.32	.12	12	23	.69	259	.04	0	1.42	.01	.07	2
HAPPY SILT 1A	1	16	3	69	.2	8	11	1041	3.17	5	5	ND	2	25	1	2	2	29	.32	.12	12	23	.67	254	.04	2	1.42	.01	.07	2
HAPPY SILT 2	1	24	15	111	.2	14	12	916	3.83	9	5	ND	2	15	1	2	2	37	.36	.11	12	22	.96	108	.05	2	1.42	.01	.04	2
HAPPY SILT 2A	2	25	10	127	.3	14	14	956	3.98	15	5	NE	2	13	1	2	2	33	.32	.10	13	11	.85	116	.05	2	1.45	.01	.05	2
HAPPY SILT 3	1	17	7	85	.3	10	11	773	3.37	7	5	ND	2	24	1	2	2	32	.39	.12	12	21	.82	176	.05	4	1.29	.02	.09	2
HAPPY SILT 3A	1	22	9	106	.3	12	11	756	3.56	10	5	ND	2	19	1	2	2	33	.35	.11	12	24	.86	148	.05	3	1.42	.01	.07	2
HAPPY SILT 4	1	20	10	92	.2	8	11	752	3.46	7	5	ND	2	21	1	2	2	32	.37	.11	11	27	.85	165	.05	5	1.41	.01	.07	2
HAPPY SILT 4A	1	21	14	95	.2	10	12	741	3.44	9	5	NE	2	19	1	2	2	30	.32	.11	11	25	.82	155	.04	2	1.29	.01	.07	2
HAPPY SILT 5	1	25	6	81	.2	9	12	665	3.32	2	5	ND	2	22	1	2	2	40	.47	.10	9	42	1.02	108	.07	4	1.24	.02	.06	2
HAPPY SILT 6	1	20	8	51	.3	6	11	574	2.70	2	5	ND	2	18	1	2	2	35	.46	.11	10	3	.85	95	.04	8	.67	.01	.02	2
HAPPY SILT 6A	1	22	2	65	.3	11	12	626	3.22	3	5	ND	2	21	1	2	2	42	.47	.11	10	34	.97	99	.07	4	1.12	.01	.04	2
HAPPY SILT 7	1	22	6	67	.4	3	12	792	3.74	6	5	ND	2	36	1	2	2	23	1.37	.16	11	9	.69	107	.02	4	1.22	.01	.02	2
HAPPY SILT 7A	1	24	10	69	.4	4	13	801	4.04	6	5	ND	2	33	1	2	2	27	1.15	.16	12	8	.71	106	.02	4	1.20	.01	.02	2
HAPPY SILT 8	1	19	8	59	.3	5	12	749	3.52	4	5	ND	2	30	1	2	2	27	.82	.12	11	19	.73	132	.04	8	1.22	.01	.06	2
HAPPY SILT 8A	1	22	8	75	.3	6	13	755	3.80	5	5	ND	2	28	1	2	2	32	.81	.14	10	22	.86	106	.05	2	1.27	.01	.04	2
HAPPY SILT 9	1	13	5	74	.3	8	11	800	3.38	2	5	ND	2	23	1	2	2	28	.70	.12	8	41	.90	217	.02	2	1.56	.01	.06	2
HAPPY SILT 10	1	21	7	68	.5	4	12	1130	4.11	19	5	ND	2	98	1	2	2	26	2.91	.17	7	6	.77	77	.01	5	1.20	.01	.02	2
HAPPY SILT 10A	1	22	9	70	.5	2	15	1085	4.28	22	5	ND	2	96	1	2	2	25	2.85	.17	7	6	.75	66	.01	5	1.27	.01	.02	2
HAPPY SILT 11	1	19	16	77	.4	9	11	741	3.40	8	5	ND	2	26	1	2	6	22	.60	.11	7	42	.95	153	.05	5	1.45	.02	.06	2
HAPPY SILT 11A	1	20	9	76	.4	14	12	857	3.39	11	5	ND	2	28	1	3	2	25	.66	.12	9	35	.85	179	.02	2	1.42	.01	.05	2
STD	17	162	39	88	2.4	672	15	621	3.41	11	5	ND	2	24	1	11	2	42	1.47	.11	6	61	.61	60	.03	22	.73	.02	.19	2
HAPPY SILT 12	1	22	7	86	.4	17	14	1143	3.97	17	5	ND	2	25	1	2	2	28	.61	.12	9	37	1.03	181	.02	7	1.69	.01	.05	2
HAPPY SILT 12A	1	44	14	99	.4	18	16	1544	4.50	18	5	ND	2	32	1	4	2	47	.65	.13	9	37	1.19	198	.02	16	1.84	.01	.05	2
HAPPY SILT 13	1	19	4	79	.2	11	13	900	3.61	6	5	ND	2	21	1	2	2	32	.53	.11	9	33	.88	206	.03	4	1.70	.01	.05	2
HAPPY SILT 13A	1	15	1	77	.2	6	11	902	3.52	4	5	ND	2	23	1	2	2	29	.64	.12	10	36	.89	225	.04	2	1.62	.01	.07	2
HAPPY SILT 14	1	17	3	76	.2	7	11	914	3.49	2	5	ND	2	22	1	2	2	29	.63	.12	10	40	.98	214	.02	5	1.51	.01	.06	2
HAPPY SILT 14A	1	19	8	75	.3	6	11	959	3.50	2	5	ND	2	22	1	2	2	30	.62	.12	10	36	.85	241	.04	4	1.61	.01	.06	2
STD S-1	89	121	114	182	21.7	151	81	494	3.16	113	99	36	170	125	81	69	91	57	.56	.12	130	63	.58	122	.07	165	1.49	.22	.20	65

APPENDIX III
EXPENDITURES

EXPENDITURES

Apex Airborne Survey	\$ 2,119.00
Vangeochem Lab.	366.60
N. Wychopen - July 25-26 - 2 days @ \$125	250.00
T. Weemees - July 25-26 - 2 days @ \$ 60	120.00
R. Brown - July 25-26 - 2 days @ \$ 60	120.00
J. MacLeod - July 25 & report	<u>500.00</u>
	<u>\$ 3,475.60</u>



VANGEOCHEM LAB LTD.

(604) 886-5211

521 PEMBERTON AVE. NORTH VANCOUVER B.C.

CANADA V6P 2S8

PHONE 871 215

FAX 871 215

TELETYPE 871 215

TELEPHONE SERVICE
VANGEOCHEM LAB LTD.

EDMONTON SERVICE CENTER
1470 62nd Street
Edmonton, Alberta
T6C 2A9

PAID
1986

34-59-0721
34-59-0722

34-59-0721
34-59-0722

SECTION 34-59-0721

20	Rock sample for preparation	C 1	2.00	22.00
25	Lead analysis for Pb	C 2	2.50	52.00
25	Lead analysis for Ag	C 3	2.75	122.50
25	Lead analysis	C 4	5.50	169.00
Sub Total:				365.50

SECTION 34-59-0722

1	Rock sample for preparation	C 5	2.75	2.75
1	Ag & Au assay	C 6	12.00	12.00
Total for invoice:				15.75

PLEASE PAY BY VOICE
NO STATEMENT WILL BE ISSUED



APEX AIRBORNE SURVEYS LTD.

514 - 625 Howe St., Vancouver, B.C.
Canada V6C 2T6

Phone (604) 683-3934
Telex 04-51309

I N V O I C E

October 7, 1983

Tenajon Silver Corporation
1450 - 625 Howe Street
Vancouver, B.C.
V6C 2T6

RE: Happy Claims - Helicopter Survey

Survey: 9 km x \$113.00	\$1,017.00
Report	1,000.00
Draughting (per attached invoice)	<u>102.00</u>
TOTAL AMOUNT DUE	<u>\$2,119.00</u>



NOVA	
RECEIVED	
DATE	AMOUNT

CK 610

APPENDIX IV
ENGINEERS CERTIFICATE

CERTIFICATE

I, James W. MacLeod, of 1220 Arbutus Street, in the city of Vancouver, in the Province of British Columbia.

DO HEREBY CERTIFY:

1. That I am a Consulting Engineer, with a business address at #1450-625 Howe Street, in the City of Vancouver, in the Province of British Columbia.
2. That I am a graduate of the University of Alberta with the degree of B.Sc. in Mining Engineering.
3. That I have actively practiced my profession in mineral exploration since graduation in 1946.
4. That I am a registered Professional Engineer in the Province of British Columbia.
5. That this report is based on a property examination carried out July 25, 1984.


J.W. MacLeod, B.Sc., P.Eng.

Dated at the City of Vancouver,
Province of British Columbia,
this 4th day of September 1984.