

GEOLOGICAL BRANCH
ASSESSMENT REPORT

95-453

13770

13,770

GEOLOGICAL, GEOCHEMICAL, GEOPHYSICAL
REPORT ON THE TENAS CREEK PROPERTY
(HORSES ASS CLAIMS)
LILLOOET MINING DIVISION

NTS 92J/7 & 10

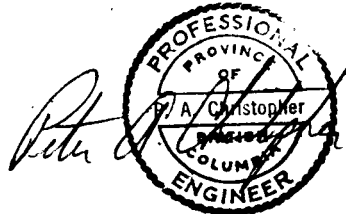
LATITUDE 50° 30'N LONGITUDE 122° 45'W

For

MORGAIN MINERALS INC.
1285 WEST PENDER STREET
VANCOUVER, BRITISH COLUMBIA

By

PETER A. CHRISTOPHER, Ph.D., P.Eng.
PETER CHRISTOPHER & ASSOCIATES INC.
3707 WEST 34th AVENUE
Vancouver, B.C. V6N 2K9



MAY 22, 1985

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SUMMARY

The Tenas Creek Property is situated in the Lillooet Mining Division near the junction of Tenas Creek and the Birkenhead River. The claim block consists of 25 units or about 625 hectares which are established by a common legal corner post. Easy road access exists to the eastern boundary of the property from Pemberton, B.C. The area is of interest because of a large pyritic, altered and gossanous zone along Tenas Creek that is geochemically anomalous in As, Au, Zn and Cu.

A total of 142 geochemical samples were collected from the property with analyses for Cu, Pb, Zn, Ag and selective Au. Zinc gave the strongest response with soil values to 3200ppm. A test VLF-EM survey was conducted over 2.6 line kilometers with a possible conductor detected at an old adit area. Geological mapping has extended the volcanic and volcanoclastic units to the northwest.

The writer recommends that the next program be conducted in the late summer or early fall when the canyon of Tenas Creek can be mapped and sampled. The results from geochemical samples from the gossanous zone in Tenas Creek will indicate if further work is warranted.

INTRODUCTION

The Tenas Creek Property consisting of four claims totalling 25 units or 625 hectares is situated in the Lillooet Mining Division about 22 kilometers north of Pemberton, British Columbia. Peter Christopher & Associates Inc. was retained by Morgain Minerals Inc. to conduct a geological, geochemical and geophysical exploration program on the property. The field program was conducted by the writer with the assistance of Mr. W. A. Howell between May 10 and May 13, 1985. This report summarizes the geochemical results obtained from 134 soil and 8 rocks samples, four VLF-EM test lines and geological mapping.

LOCATION AND ACCESS (Figures 1 & 2)

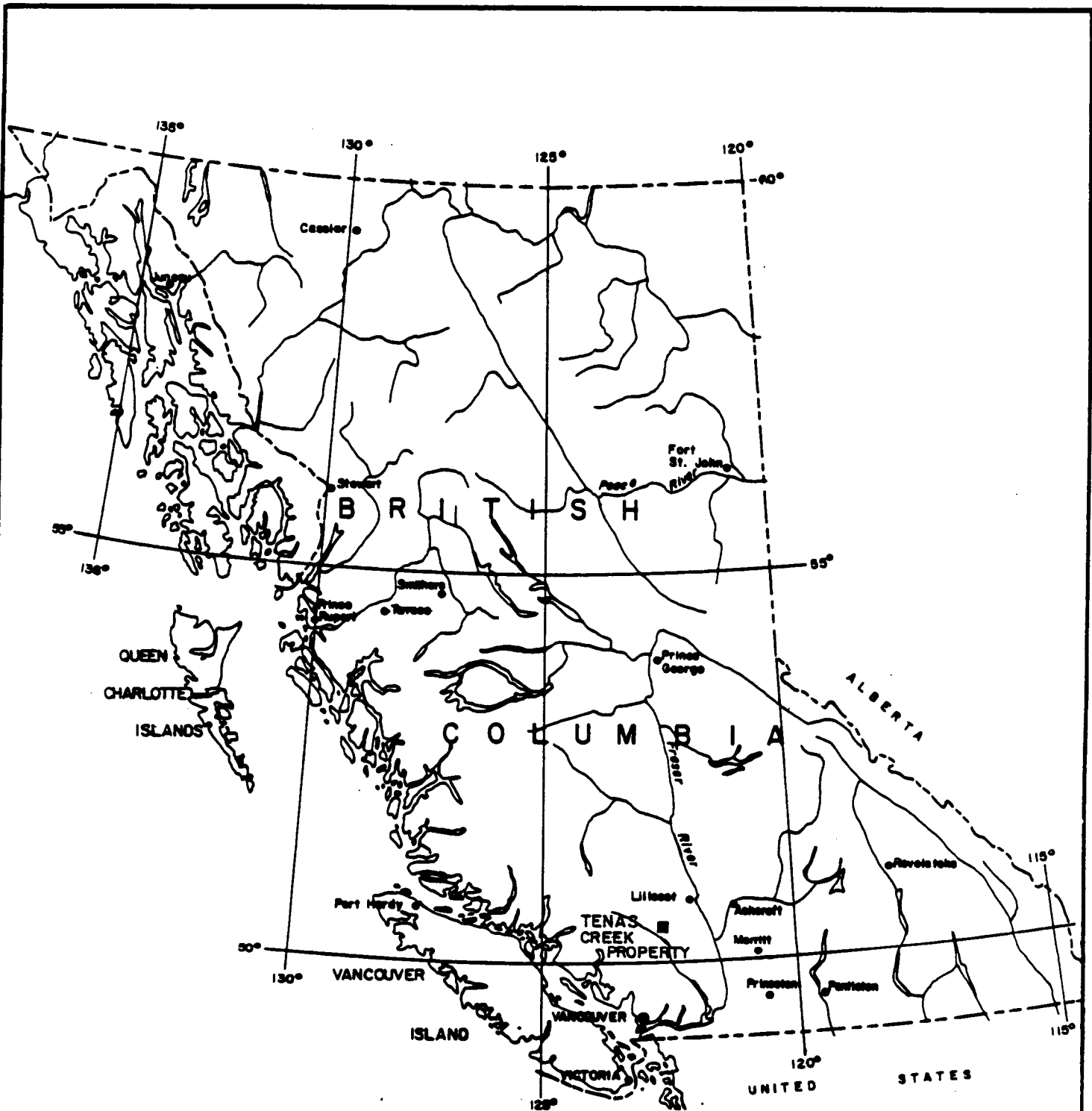
The property is situated in NTS Map sheets 92J/7E, 7W, 10E and 10W and straddles Tenas Creek near its junction with the Birkenhead River. Access to the junction of Tenas Creek and the Birkenhead River is via approximately 8 miles (12.0 km) of gravel road from Gramson's Siding on the B.C. Railroad. Gramson's Siding is reached via paved highway from Vancouver to Pemberton and then northward along the Pemberton-D'Arcy road for approximately 20 miles (32.2 km).

PROPERTY DEFINITION

The Tenas Creek Property, consisting of the four Horses Ass claims totalling 40 units was staked using the modified grid system. The claims have been modified as shown on Figure 2 to reduce the property to 25 units. Pertinent claim data for the redefined claims is presented in Table 1. The writer has examined the legal corner post and identification posts: 1N; OS and ON, 1E; OS and ON, 2E; and OS and ON, 3E. The legal corner post, identification posts and sections of the claim lines examined all comply with the mineral act. The claims shown on Figure 2 modified from British Columbia Government Mineral Claim maps NTS 92J/7E, 7W, 10E and 10W are believed to represent a reasonable location of the Tenas Creek property.

Table 1. Pertinent Claim Data

<u>CLAIM NAME</u>	<u>TAG #</u>	<u>RECORD #</u>	<u>RECORD DATE</u>	<u>UNITS</u>	<u>OWNER</u>
HORSES ASS	60181	1337 (5)	MAY 13, 1980	9	MORGAIN
SECOND HORSES ASS	60182	1338 (5)	"	6	MINERALS INC.
THIRD HORSES ASS	60183	1339 (5)	"	6	"
FOURTH HORSES ASS	60184	1340 (5)	"	4	"



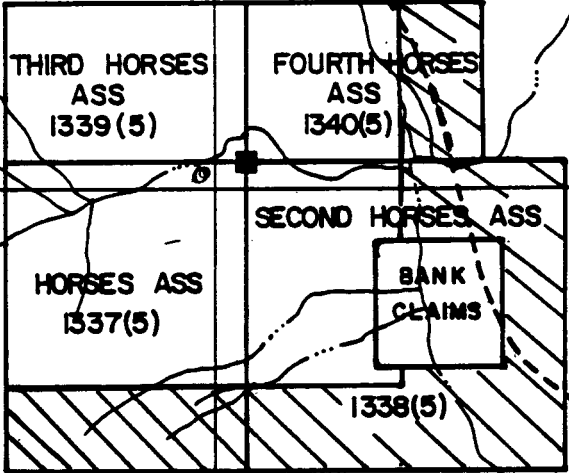
MORGAIN MINERALS INC.			
PROPERTY LOCATION MAP			
Prepared by:	Date:	N.E.S. MAP AREA	DRAWING No.
Drawn by:	Revised:		

N.T.S. 92 J/10W

N.T.S. 92 J/10E

Birkenhead R.

Birkenhead Lake



50° 30'

50° 30'

Tenas Cr.

Cr.

Fowl Cr.

N.T.S. 92J/7W

N.T.S. 92 J/7E

125° 45'

GRAMSONS SIDING



MORGAIN MINERALS INC.

HORSES ASS CLAIMS

CLAIMS MAP

SCALE 1: 50,000

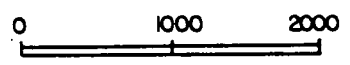


FIG. 2

HISTORY

Old exploration workings indicate that the Tenas Creek Property has experienced mineral exploration activity for at least a half century. Old claim posts and several sets of more recently tagged posts indicate intermittent recent activity on the property. An established baseline and cut grid is believed to be about 10 years old.

A program of trenching was completed in 1969 on ground held as the Bask 1-10 claims which straddled the Birkenhead River south of the Horses Ass claims. A brief discussion of these claims and trenches is contained in Assessment Report #4230 by J. Foster, Engineering and Management and Services Ltd. for Home Exploration Ltd., dated 1969.

The claim area was first investigated by JMT geologists in 1977, as a consequence of regional exploration for massive sulphides. Reconnaissance soil and silt samples and prospecting indicated an area of interest around Tenas Creek. In the spring of 1980, the Horses Ass claims were staked to cover an area of massive sulphide potential. JMT Services conducted geochemical surveys over parts of the claim area in 1981 and 1983 and filed three assessment reports on the property. Morgain Minerals Inc. acquired the property from Geo-Ex Resources Ltd. in May 1983 and an engineering report was prepared by the writer in June 1983. Part of the Stage 1 program recommended by the writer was conducted by G.G. Richards for Morgain Minerals Inc. in May 1984. The continuation of the Stage 1 program is outlined in this report.

WORK PROGRAM

The work program described in this report was conducted by the writer and Mr. William A. Howell between May 10 and May 13, 1985. Mobilization for the program was from Vancouver, British Columbia with fieldwork conducted from a camp established on the east bank of the Birkenhead River near its junction with Tenas Creek. A total of 134 soil and eight rock samples were collected along about 7 km of flagged and chained lines. Soil samples were analysed for copper, lead, zinc and silver with select samples analysed for gold. Rock samples were analysed for copper, lead, zinc, silver, gold and in one case arsenic. Certificates of analysis for geochemical samples are presented in Appendix A. A total of 2.6 line kilometers of VLF-EM was conducted with about 104 stations at 25 meter intervals. Geological mapping was conducted along geochemical traverses. Plates 1, 2 and 3 show survey stations, geological and geochemical results with EM traverse plots and data presented in Appendix B.

TOPOGRAPHY AND VEGETATION

Topographic relief on the property ranges from elevations of about 2,050 feet (625 meters) in Tenas Creek to about 5,400 feet (1646 meters) on the southwestern boundary of the claims.

The claims are roughly bisected in an east-west direction by Tenas Creek. Tenas Creek has locally formed precipitous canyons with several waterfalls between 2 meters and 20 meters in height.

Vegetation is generally quite 'open' with jackpine, and little underbrush on the lower to intermediate slopes where drainage is good and the underlying soil is, for the most part, gravelly tills. A few local areas support well developed stands of cedar and fir. Locally, particularly on the higher steeper slopes in the southwestern portion of the claims are the scars of old avalanches. The scars are presently overgrown with alder, willow, and birch, a variety of shrubs, and along the water courses, devil's club is not uncommon.

Limited logging has taken place on the west side of the Birkenhead River within the claim and recent logging has taken place near the northern boundary of the claims.

REGIONAL GEOLOGY

A pendant of Triassic age rock extends from the B.C. Railway north and west of Pemberton to approximately Tenquille Lake, the pendant is composed of tuffs, argillite, limestone, agglomerates and their medium grade metamorphic equivalents. The pendant is contained within plutonic rocks of the coast crystalline complex, with diorite to granodiorite most common and lesser amounts of quartz monzonite to granite recognized (Roddick and Hutchison, 1973). Skarns may be locally developed close to the intrusive contacts.

The regional geology on the Pemberton Map Sheet has been compiled and remapped by G. Woodsworth of the Geological Survey of Canada.

PROPERTY GEOLOGY

The claims are underlain by andesitic volcanic breccias, rhyolite, argillite and minor limestone of the Upper Triassic Pioneer Formation. These have been intruded on the western part of the claims by granodiorite. Gossanous bedrock exposed in Tenas Creek is predominantly pyritic and argillic or propylitic altered andesite and rhyolite.

Grid mapping of the property has been completed on a 1:5,000 scale with the exception of the gossanous canyon area of Tenas Creek which should be mapped and rock sampled at low water during late summer or early fall.

Outcropping bedrock is scarce over the lower to intermediate valley slopes and sparse over most of the upper slopes. The lower areas

appear to be mantled with a gravelly till believed to be up to a few tens of feet thick, as suggested by drainage incision patterns and thicknesses observed along Tenas Creek. The lower portions of Tenas Creek and the area around its confluence with the Birkenhead River appears to be local boulder-gravel outwash fan, with the present Tenas Creek having cut into its own alluvium.

The northwest area of the property, mapped during this program consists of andesite, andesite tuff and andesitic breccias. Sheared areas are altered to chlorite and sericite dominated units. Pyrite is nearly ubiquitous and varies from less than 1 to 5%. Outcrops near the baseline and on line 40N are strongly magnetic with magnetite content estimated at over 2%. Bedding, shearing and foliations continue to fall in the 120° to 160° with dips near vertical.

MINERALIZATION

The property covers a gossanous zone which reflects a pyrite content of up to at least several percent with up to 15% reported (Richards, 1984). Adjacent to the southern bank of Tenas Creek, a blasted pit reveals bedrock exposures containing minor sphalerite and chalcopyrite in a layered chloritic, epidote rich skarn zone. The projection of this zone at Tenas Creek has been explored by adits and pits which were inaccessible because of high water. Mapping and rock sampling of the gossanous zone along Tenas Creek should be conducted during late summer or early fall.

GEOCHEMISTRY

Anomalous geochemical values for zinc in regional reconnaissance silt samples from Tenas Creek lead to acquisition of the property. Follow-up silt, soil and rock sampling has led to a large soil anomaly for zinc with indications of possible associated gold, silver and copper. Arsenic results have been spotty and lead values are low.

A total of 134 soil and eight rock samples were collected during this survey. Soil samples were collected at 50 meter intervals along the baseline and cross lines spaced at 100 meters. Sample stations were chained and flagged. Samples were collected from grid lines 30N, 31N, 32N, 37N, 38N, 39N, and 40N. The B horizon was sampled whenever possible.

Samples were prepared and analyzed by Min-En Laboratories Ltd. in North Vancouver. Standard AA methods were used for sample analysis.

Copper

Copper values range from 4 to 167ppm in soils and 6 to 170ppm in rocks with values over 80 ppm considered anomalous. A total of two soil and one rock sample were found to contain anomalous copper. The highest silver value (2.7ppm) occurred with the highest copper. Pyrite is not necessarily associated with anomalous copper.

Lead

Lead values varied from 6 to 29 in soils and from 12 to 40 in rocks. No anomalous lead values were obtained.

Zinc

Zinc values varied from 23 to 3200 in soils and 50 to 190 in rocks with values over 250 ppm considered anomalous and values over 400 considered strongly anomalous. Of the 12 anomalous zinc values 4 are considered strongly anomalous. Most of the anomalous results for zinc occur along line 30N, 31N and 32N.

Silver

Silver values varied from 0.2ppm to 2.7ppm in soils and 0.6ppm to 1.2ppm in rocks with values between 1 and 2ppm considered anomalous and over 2ppm strongly anomalous. A total of 13 anomalous values with 1 strongly anomalous silver value were detected. The highest silver and copper values occurred for the same sample.

Gold

Gold values varied from 5 to 20 ppb in soils and 5 to 35ppb in rocks. Gold values are not considered anomalous.

GEOPHYSICS

VLF-EM readings were collected at 25 meter intervals along four lines totalling 2.6 line kilometers. A Geonics EM-16 was employed for the survey with survey results plotted on section lines are shown in Appendix B. VLF-EM readings show only one possible anomalous zone on line 4 in the area of an old caved adit.

DISCUSSION OF THE TENAS CREEK PROPERTY

The Tenas Creek property is situated in a belt of rocks that has been demonstrated for massive sulphide deposits (e.g. near Mt. Baker and Harrison Lake). Active exploration for massive sulphides is continuing, but more emphasis has recently been placed on the precious metal potential of acid volcanic rocks. The Fire Creek and Doctor's Point (Rhyolite Resources) areas have recently been under extensive exploration programs for precious metals.

The Tenas Creek Property represents a mineralized system that is reflected in a large gossanous zone along Tenas Creek as well as anomalous silt, rock and soil results for zinc, gold, silver and copper. The next step in evaluation of the property should be the sampling of the gossanous zone along Tenas Creek. The sampling should be conducted in late summer or early fall when water levels are low.

CONCLUSIONS AND RECOMMENDATIONS

Geochemical results obtained during the current program has expanded the anomalous zinc and silver areas of the property with only minor copper, gold or lead response. The only possible conductor located by the VLF-EM survey is in the area of known pyrite mineralization and old workings that trend toward the gossanous zone in the Texas Creek canyon. The canyon area should be rock sampled and geologically mapped during low water levels with further work dependent on favourable geochemical results.

COST STATEMENT

PERSONNEL

Peter A. Christopher	May 10-14/85 @ \$300ea.	\$1200
William A. Howell	May 10-14/85 @ \$200ea.	800

MOBILIZATION/DEMOB

100

ROOM & BOARD

8 man days @ \$40ea.

320

TRANSPORTATION

4 X 4 TRUCK

4 days @ \$40ea.
 500 km. @ 0.12ea
 fuel

160
60
30

GEOCHEMICAL ANALYSES

961.80

SUPPLIES

Maps and Reports	13.37
Sample Bags	20.00
hip chain thread	24.00
flagging	15.00
office & Field misc	20.00
	<u>\$ 92.37</u>

13.86	15% disbursement
<u>\$106.23</u>	total consumables

106.23

GEOPHYSICAL EQUIPMENT RENTAL

4 days @ \$25ea.

100

REPORT PREPARATION


1000

TOTAL PROGRAM COSTS \$ 4838.03

FROM PAC ACCOUNT 161.97

TOTAL WORK RECORDED \$ 5000.00

Peter A. Christopher
 PETER A. CHRISTOPHER Ph.D.
 May 22, 1985



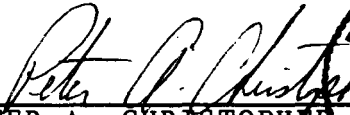
BIBLIOGRAPHY

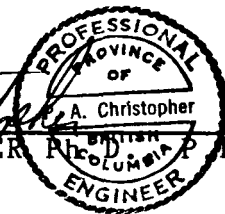
- Christopher, P.A., 1983. Report on the Tenas Creek Property, Lillooet Mining Division, British Columbia. report for Morgain Minerals Inc. June 20, 1983.
- Howell, W. A., 1981. Geochemical Survey Report on The Tenas Creek Property ("Horses Ass" Claims 1-4) for JMT Services Corp. Assessment Report #9637.
- Howell, W. A., 1983. Geological and Geochemical Survey Report on the Tenas Creek Property. (Horses Ass Claims) Assessment Report for Geoex Resources Ltd.
- Richards, G.G., 1984. Geological and Geochemical Report on the Tenas Creek Property (Horses Ass Claims), Lillooet Mining Division. Assessment Report for Morgain Minerals Inc.
- Roddick, J. A. and Hutchison, W. W., 1973. Pemberton map area 92J/E1/2; G.S.C. Paper 73-17, Map 13-1973.

CERTIFICATE

I, Peter A. Christopher, with business address at 3707 West 34th Avenue, Vancouver, British Columbia, do hereby certify that:

- 1) I am a consulting geological engineer registered with the Association of Professional Engineers of British Columbia since 1976.
- 2) I am a Fellow of the Geological Association of Canada and a member of the Society of Economic Geologists.
- 3) I hold a B.Sc. (1966) from the State University of New York at Fredonia, a M.A. (1968) from Dartmouth College and a Ph.D. (1973) from the University of British Columbia.
- 4) I have been practising my profession as a Geologist for over 15 years.
- 5) I have no direct or indirect interest, nor do I expect to receive any interest directly or indirectly in the property or securities of Morgain Minerals Inc.
- 6) I have based this report on a review of available geological data, and on a geochemical, geophysical, and geological program conducted under my supervision on May 10-13, 1985.
- 7) I consent to the use of this report by Morgain Minerals for filing assessment on the Texas Creek Property.


PETER A. CHRISTOPHER, Ph.D. Eng.
MAY 22, 1985



APPENDIX A

Certificates of Analysis

MIN-EN Laboratories Ltd.*Specialists in Mineral Environments*

705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604) 980-5814 OR (604) 988-4524

TELEX: 04-352828

GEOCHEMICAL ANALYSIS CERTIFICATECOMPANY: PETER CHRISTOPHER & ASSOC.
PROJECT: 1985-1
ATTENTION: PETER CHRISTOPHER/V.ERICKSONFILE: 5-154/P1
DATE: MAY 14/85.
TYPE: SOIL GEOCHEM

We hereby certify that the following are the results of the geochemical analysis made on 30 samples submitted.

SAMPLE NUMBER	CU PPM	PB PPM	ZN PPM	AG PPM	
85P-1	10	19	76	1.2	
2	12	16	95	0.8	
3	16	14	133	0.6	
4	17	16	118	1.0	
5	15	15	127	0.8	
6	11	14	170	0.6	
7	10	14	132	0.8	
8	10	14	168	0.6	
9	12	12	144	0.6	
10	12	16	165	0.5	
11	10	16	154	0.4	
12	22	22	235	1.0	
13	20	24	150	0.6	
14	32	22	130	0.7	
15	18	20	135	0.6	
16	20	18	148	0.6	
17	10	12	85	0.6	
18	36	26	126	0.8	
19	16	19	146	0.6	
20	4	6	32	0.2	
21	10	12	140	0.4	
22	8	7	60	0.2	
23	15	16	150	0.6	
24	24	18	112	0.7	
25	14	12	106	0.4	
26	28	15	117	0.6	
27	24	12	100	0.6	40MESH
28	80	16	105	0.6	
29	8	10	96	0.4	
35P-30	26	16	90	0.6	40MESH

Certified by



MIN-EN Laboratories Ltd.
Specialists in Mineral Environments
 705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604)980-5814 OR (604)988-4524

TELEX: 04-352828

GEOCHEMICAL ANALYSIS CERTIFICATE

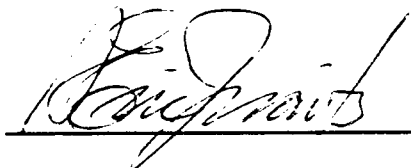
COMPANY: PETER CHRISTOPHER & ASSOC.
 PROJECT: 1985-1
 ATTENTION: PETER CHRISTOPHER/V.ERICKSON

FILE: 5-154/P2
 DATE: MAY 14/85.
 TYPE: SOIL GEOCHEM

We hereby certify that the following are the results of the geochemical analysis made on 30 samples submitted.

SAMPLE NUMBER	CU PPM	PB PPM	ZN PPM	AG PPM	
85P-31	18	14	84	0.6	
32	16	15	110	0.5	
33	18	14	118	0.6	
34	10	11	136	0.4	
35	12	12	137	0.5	
36	14	13	172	0.6	40MESH
37	20	15	218	0.6	40MESH
38	37	16	86	0.7	
39	16	10	78	0.4	40MESH
40	14	12	164	0.5	
41	167	24	160	2.7	
42	48	16	122	0.7	40MESH
43	12	10	192	0.5	
44	22	11	112	0.6	
45	36	14	78	0.6	
46	33	12	78	0.6	
47	18	12	112	0.6	
48	40	16	109	0.8	
49	25	13	76	0.8	
50	24	16	122	0.7	
51	21	16	123	0.8	
52	9	11	74	0.6	
53	10	12	120	0.6	
54	10	10	92	0.4	
55	10	10	94	0.4	
56	17	23	23	0.4	20MESH
57	10	14	115	0.6	
58	22	16	142	0.7	
59	16	11	130	0.4	
35P-60	11	14	120	0.4	

Certified by



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TELEX: 04-352828


GEOCHEMICAL ANALYSIS CERTIFICATE

COMPANY: PETER CHRISTOPHER & ASSOC.
 PROJECT: 1985-1
 ATTENTION: PETER CHRISTOPHER/V. ERICKSON

FILE: 5-154/P3
 DATE: MAY 15/85.
 TYPE: SOIL GEOCHEM

We hereby certify that the following are the results of the geochemical analysis made on 30 samples submitted.

SAMPLE NUMBER	CU PPM	PB PPM	ZN PPM	AG PPM	AU PPB	
85P-61	19	20	92	0.8		
35B-2	12	14	94	0.6	10	
3	17	20	119	0.6	15	
4	28	24	182	0.8	15	
5	28	20	188	0.7	10	
8	16	20	215	0.6	5	
9	26	23	200	0.8	5	
10	10	18	189	0.6	5	
11	18	19	143	0.8	10	
12	16	19	248	0.7	5	
13	13	20	263	0.6	5	
14	6	12	124	0.4	5	
16	16	18	350	0.6	10	
18	46	24	105	1.0	20	
20	22	22	216	0.8	10	
22	14	16	93	0.8	5	
23	21	16	132	0.6	10	
24	18	16	105	0.6	5	
25	18	16	135	0.4	10	
26	8	11	246	0.4	5	
27	30	24	179	0.8	5	
28	30	20	121	0.8	10	
29	18	21	170	0.7	5	
30	40	29	155	0.8	5	40MESH
31	20	14	128	0.8	5	
32	20	16	132	0.8	5	
33	32	20	206	0.6	5	
34	12	16	107	0.5		
35	42	20	63	0.8		
35B-36	28	14	100	0.5		

Certified by 

MIN-EN Laboratories Ltd.

Specialists in Mineral Environments

705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604) 980-5814 OR (604) 988-4524

TELEX: 04-352828

GEOCHEMICAL ANALYSIS CERTIFICATE

COMPANY: PETER CHRISTOPHER & ASSOC.
 PROJECT: 1985-1
 ATTENTION: PETER CHRISTOPHER/V.ERICKSON

FILE: 5-154/P4
 DATE: MAY 15/85.
 TYPE: SOIL GEOCHEM

We hereby certify that the following are the results of the geochemical analysis made on 30 samples submitted.

SAMPLE NUMBER	CU PPM	PB PPM	ZN PPM	AG PPM	
85B-37	140	20	112	1.2	
38	70	21	114	1.2	
39	38	16	58	0.6	
40	31	16	123	0.8	
41	22	12	104	0.6	
42	48	14	90	0.8	
43	18	11	120	0.6	
45	40	12	117	0.8	40MESH
46	25	12	154	0.6	
47	40	12	76	0.8	
48	14	10	95	0.4	
49	38	16	104	1.2	
50	22	13	235	1.0	
51	21	16	150	0.8	
52	14	12	120	0.8	
53	23	16	300	0.8	
54	14	12	184	0.6	
55	14	11	420	0.7	
56	17	11	260	0.6	
57	22	16	160	0.7	
58	16	11	240	0.6	
59	35	18	3200	1.0	40MESH
60	36	16	180	1.0	
61	24	15	84	0.6	
62	24	12	173	0.6	
63	16	12	263	0.6	
64	28	14	266	0.6	40MESH
65	31	14	1300	1.0	40MESH
66	16	14	830	0.7	
35B-67	12	10	84	0.4	

Certified by 

MIN-EN Laboratories Ltd.
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FILE: 5-154/P5
DATE: MAY 15/85.
TYPE: SOIL GEOCHEM

We hereby certify that the following are the results of the geochemical analysis made on 14 samples submitted.

SAMPLE NUMBER	CU PPM	PB PPM	ZN PPM	AG PPM	AU PPB	
85B-68	14	12	96	0.6		
69	19	16	135	0.6		
70	12	14	152	0.8		
71	16	16	157	0.7		
72	22	18	190	1.0		
73	34	18	290	0.8		
74	33	17	146	0.5		
75	38	24	162	0.8		
76	28	20	158	0.6		
77	18	18	174	0.8		
78	20	17	263	0.6		40MESH
79	28	21	190	0.5		
35B-80	19	18	110	0.4		
35B-44	20	14	57	0.4	5	20MESH

Certified by



MIN-EN Laboratories Ltd.
Specialists in Mineral Environments
705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604) 980-5814 OR (604) 988-4524

TELEX: 04-352828

GEOCHEMICAL ANALYSIS CERTIFICATE

COMPANY: PETER CHRISTOPHER & ASSOC.
PROJECT: 1985-1
ATTENTION: PETER CHRISTOPHER/V.ERICKSON

FILE: 5-154R
DATE: MAY 15/85.
TYPE: ROCK GEOCHEM

We hereby certify that the following are the results of the geochemical analysis made on 8 samples submitted.

SAMPLE NUMBER	CU PPM	PB PPM	ZN PPM	AG PPM	AU PFB	AS PPM
85PR-62	170	26	57	1.2	35	
35B-1	36	18	97	1.0	5	
6	6	40	45	1.1	10	
7	30	18	112	0.6	5	
15	17	12	137	1.0	5	
17	26	16	50	0.6	15	30
19	12	14	89	0.8	5	
35B-21	36	12	190	0.8	10	

Certified by



APPENDIX B

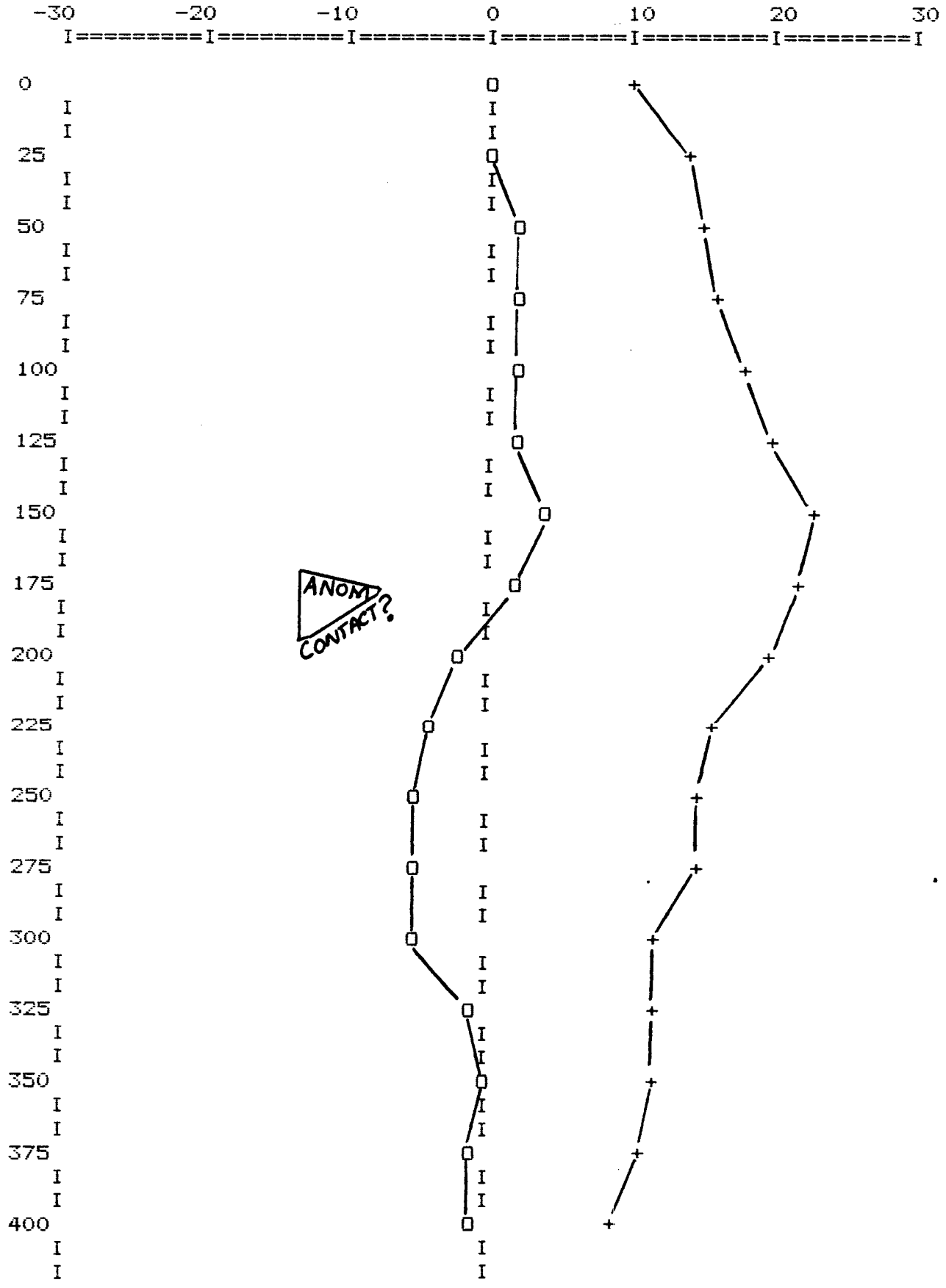
VLF-EM PROFILES

Line 1
Line 2
Line 3
Line 4

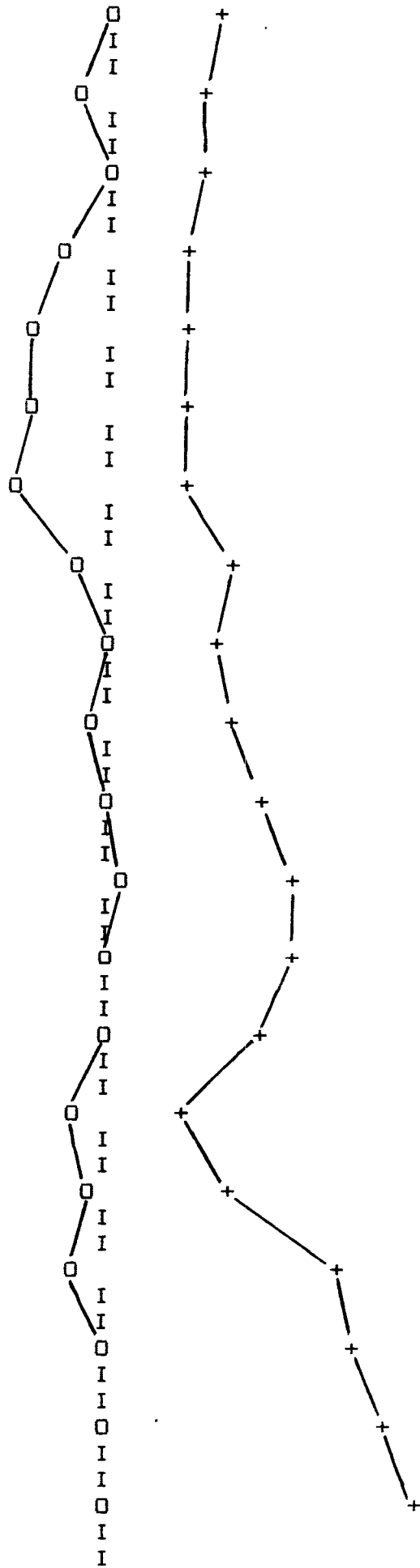
300 REM ENTER DATA: DATA Y1,Y2 .
301 REM TENAS CREEK PROPERTY MAY 12/85
302 REM OLD BASELINE 00 TO 12+00W
303 REM STA 1 CUTLER STA 2 SEATTLE
310 DATA 0,10
320 DATA 0,14
330 DATA 2,15
340 DATA 2,16
350 DATA 2,18
360 DATA 2,20
370 DATA 4,23
380 DATA 2,22
390 DATA -2,20
400 DATA -4,16
410 DATA -5,15
420 DATA -5,15
430 DATA -5,12
440 DATA -1,12
450 DATA 0,12
460 DATA -1,11
470 DATA -1,9
480 DATA 0,7
490 DATA -2,6
500 DATA 0,6
510 DATA -3,5
520 DATA -5,5
530 DATA -5,5
540 DATA -6,5
550 DATA-2,8
560 DATA 0,7
570 DATA -1,8
580 DATA 0,10
590 DATA 1,12
600 DATA 0,12
610 DATA 0,10
620 DATA -2,5
630 DATA -1,8
640 DATA -2,15
650 DATA 0,16
660 DATA 0,18
670 DATA 0,20
680 DATA 0,17
690 DATA 0,13
700 DATA -1,14
710 DATA -1,16
720 DATA 0,13
730 DATA -1,9
740 DATA 0,8
750 DATA 0,8
760 DATA 0,10
770 DATA 0,13
780 DATA 0,17
790 DATA 0,22

PROPERTY NAME : TENAS CREEK PROPERTY
 FOR CLIENT: MORGAIN MINERALS
 DATE : MAY 12/85
 LINE NUMBER : LINE 1
 RAPITAN VLF - EM PROFILE: DIP ANGLES IN DEGREES

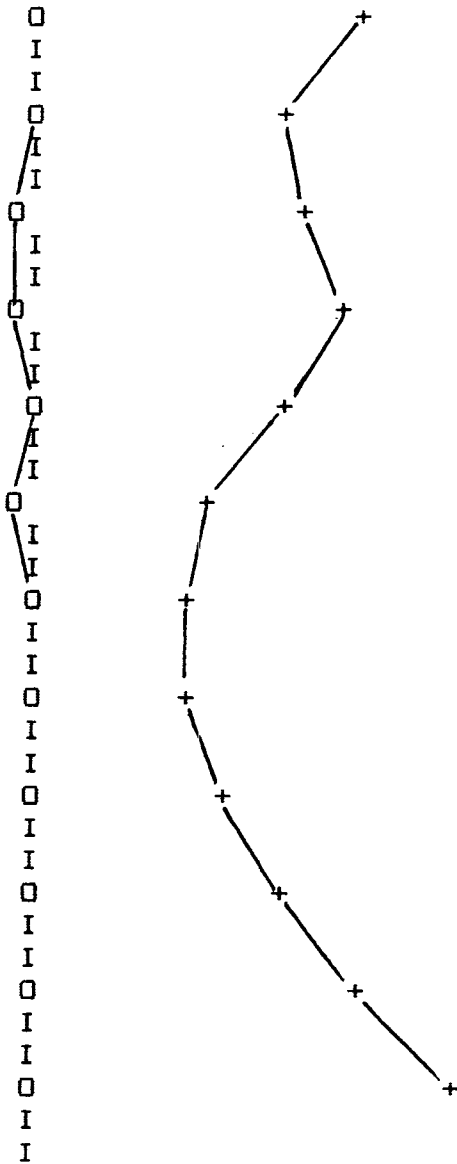
STN 1 IS CUTLER
 STN 2 IS SEATTLE



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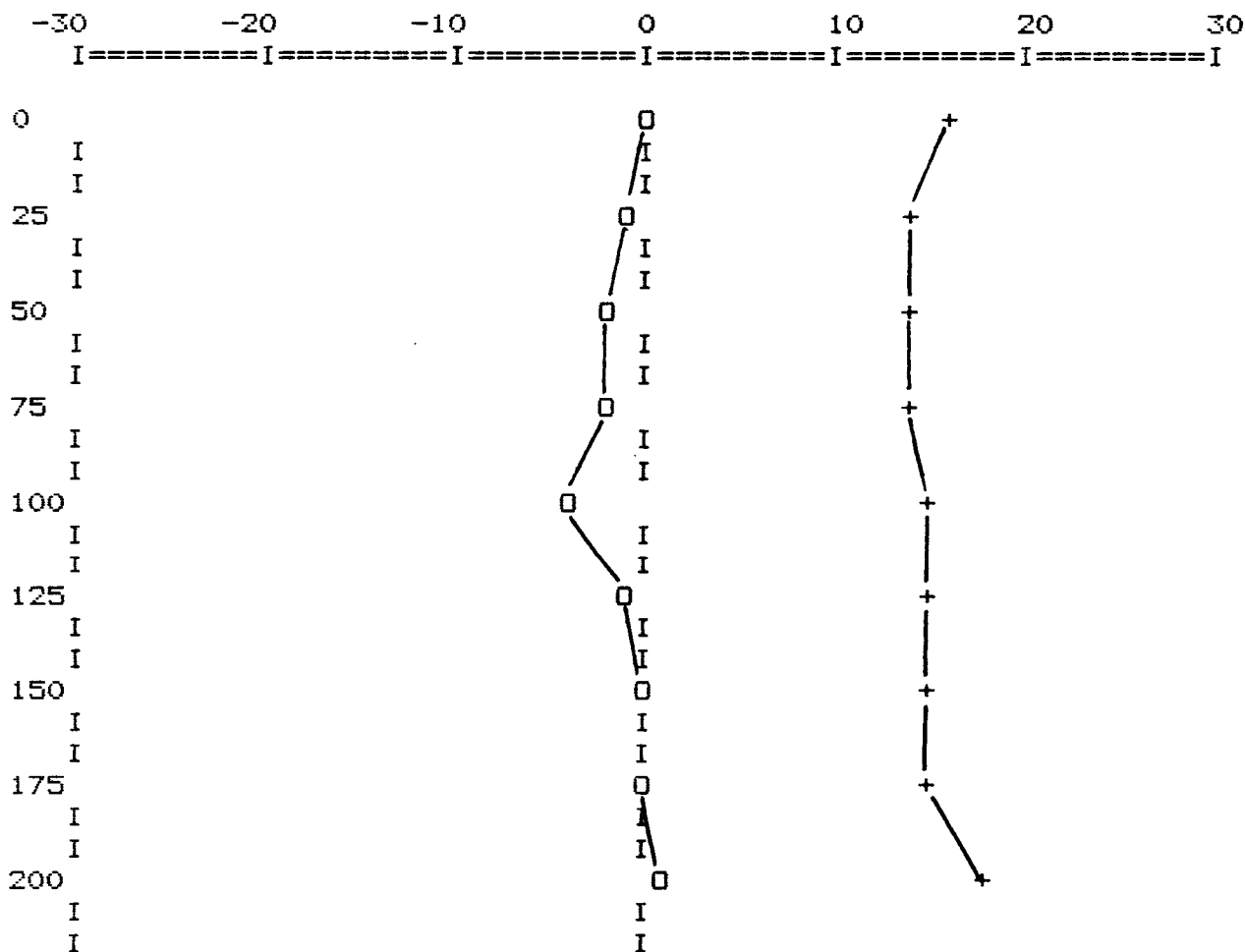
925
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300 REM ENTER DATA: DATA Y1,Y2
 301 REM TENAS CREEK PROPERTY MAY 12/85
 302 REM BL 28+50 TO 26+50
 303 REM STA 1 CUTLER STA 2 SEATTLE
 310 DATA 0,16
 320 DATA -1,14
 330 DATA -2,14
 340 DATA -2,14
 350 DATA -4,15
 360 DATA -1,15
 370 DATA 0,15
 380 DATA 0,15
 390 DATA 1,18

PROPERTY NAME :TENAS CREEK PROPERTY
 FOR CLIENT:MORGAIN MINERALS
 DATE :MAY 12/85
 LINE NUMBER :LINE 2
 RAPITAN VLF - EM PROFILE: DIP ANGLES IN DEGREES

STN 1 IS CUTLER
 STN 2 IS SEATTLE



300 REM ENTER DATA: DATA Y1,Y2
 301 REM TENAS CREEK PROPERTY MAY 12/85
 302 REM LINE 3 27N FROM 19+75E TO 15E
 303 REM STA 1 CUTLER STA 2 SEATTLE
 310 DATA 0,14
 320 DATA -2,15
 330 DATA -2,16
 340 DATA -2,18
 350 DATA -4,20
 360 DATA -1,19
 370 DATA -1,20
 380 DATA -8,18
 390 DATA -10,16
 400 DATA -12,14
 410 DATA -8,10
 420 DATA -5,12
 430 DATA -1,17
 440 DATA -2,17
 450 DATA -2,16
 460 DATA -4,15
 470 DATA -11,10
 480 DATA -11,10
 490 DATA -10,9
 500 DATA -10,9

PROPERTY NAME :TENAS CREEK PROPERTY
 FOR CLIENT:MORGAIN MINERALS

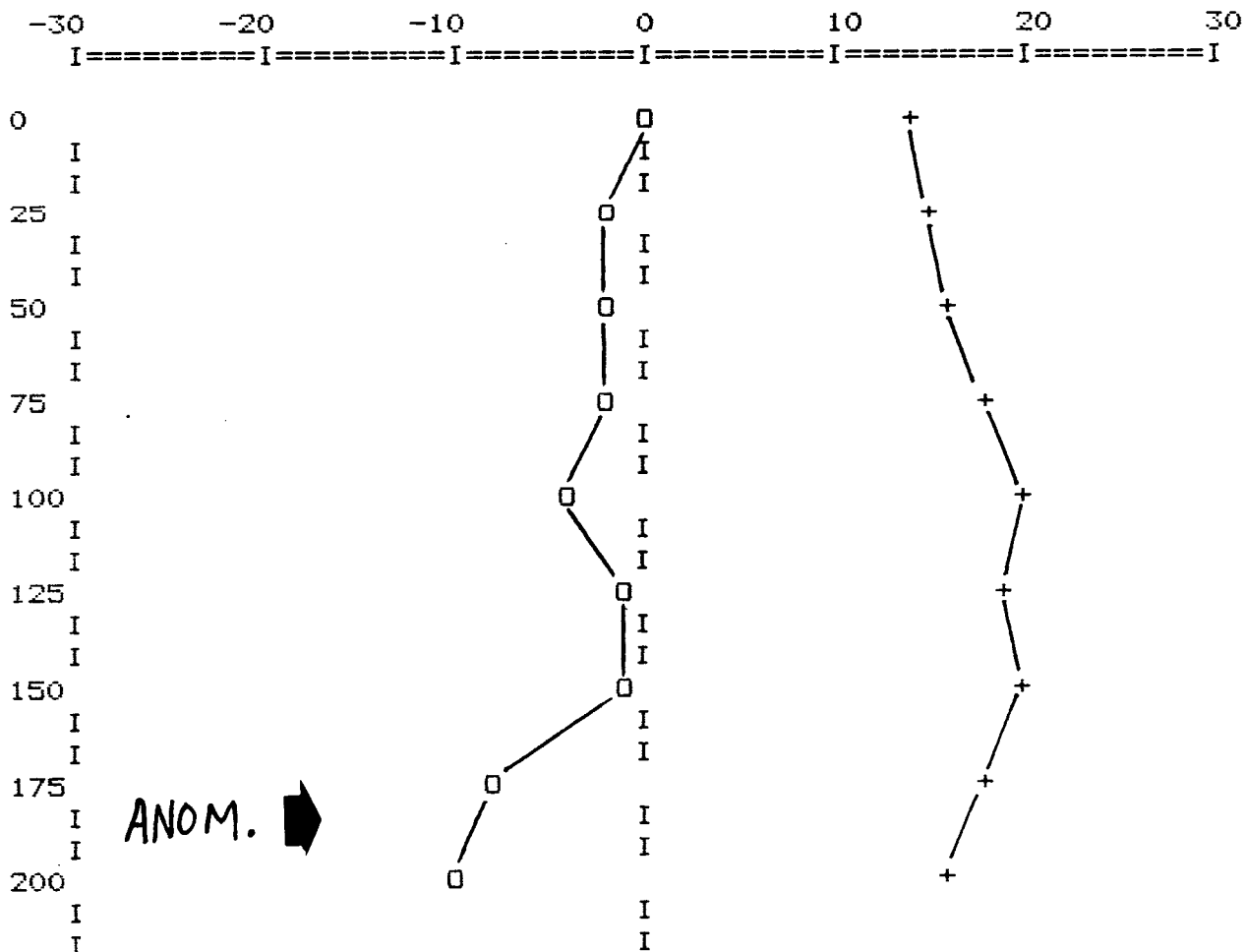
DATE :MAY 10/85

STN 1 IS CUTLER

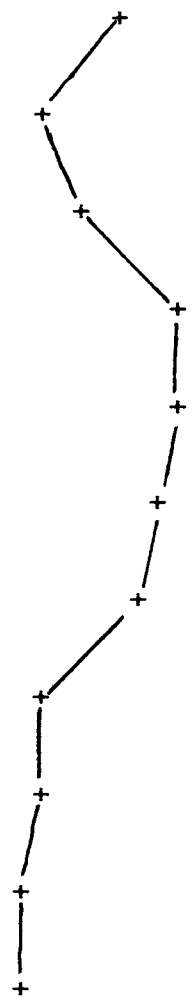
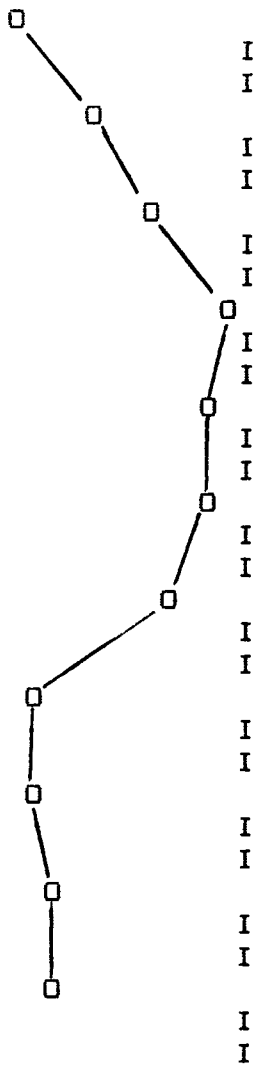
LINE NUMBER :LINE 3 27N FROM 19+75E TO 15E

STN 2 IS SEATTLE

RAPITAN VLF - EM PROFILE: DIP ANGLES IN DEGREES



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300 REM ENTER DATA: DATA Y1,Y2
 301 REM TENAS CREEK PROPERTY MAY 12/85
 302 REM LINE 4 28N FROM 19+75E TO 15E
 303 REM STA 1 CUTLER STA 2 SEATTLE
 310 DATA 0, 15
 320 DATA -3,16
 330 DATA -2,15
 340 DATA -4,16
 350 DATA -3,21
 360 DATA -5,22
 370 DATA -3,25
 380 DATA -4,20
 390 DATA -3,6
 400 DATA -3,8
 410 DATA -5,3
 420 DATA -4,3
 430 DATA -1,12
 440 DATA 0,15
 450 DATA -1,18
 460 DATA 0,20
 470 DATA -1,23
 480 DATA -3,20
 490 DATA -8,13
 500 DATA -8,13

PROPERTY NAME :TENAS CREEK PROPERTY
 FOR CLIENT:MORGAIN MINERALS

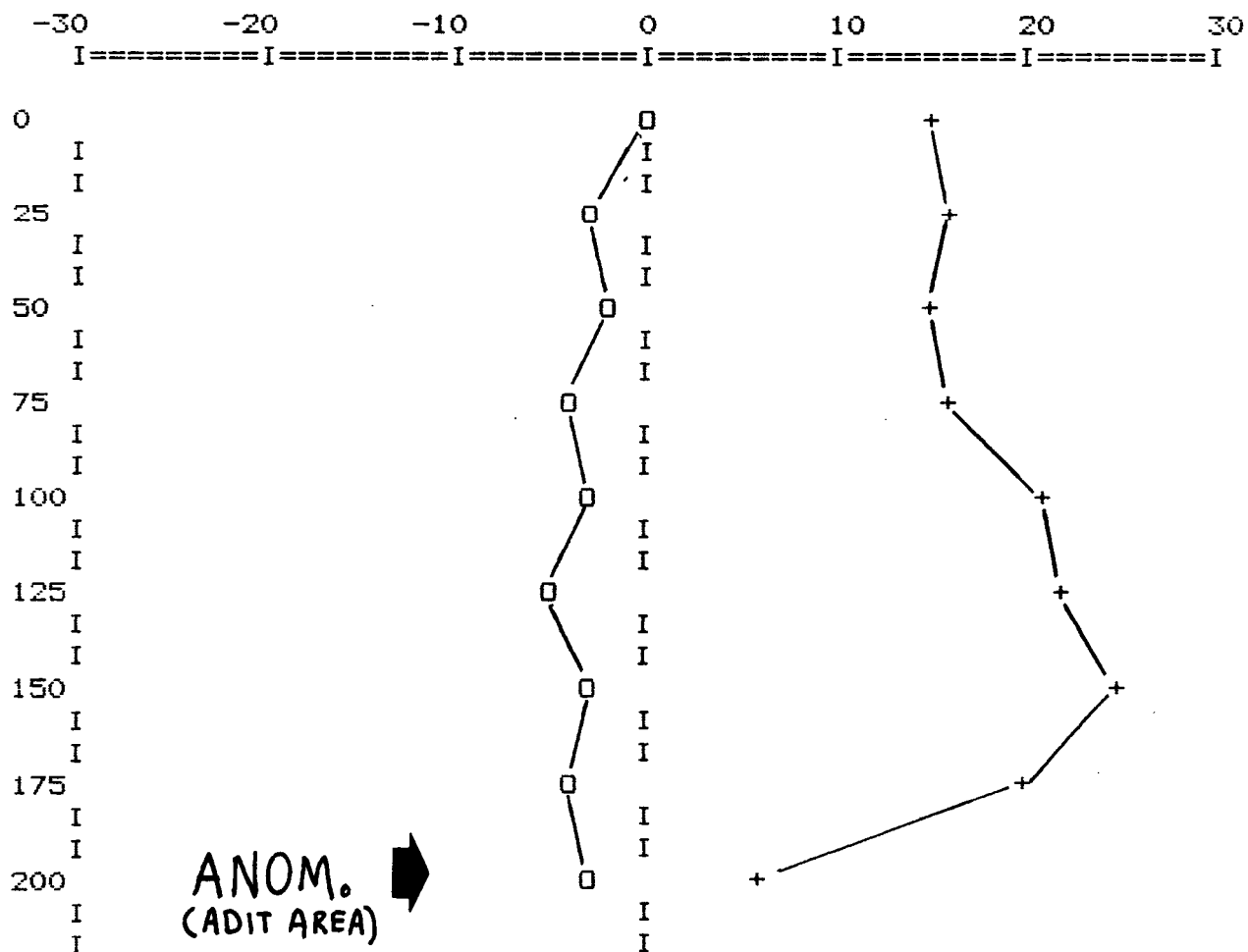
DATE :MAY 12/85

STN 1 IS CUTLER

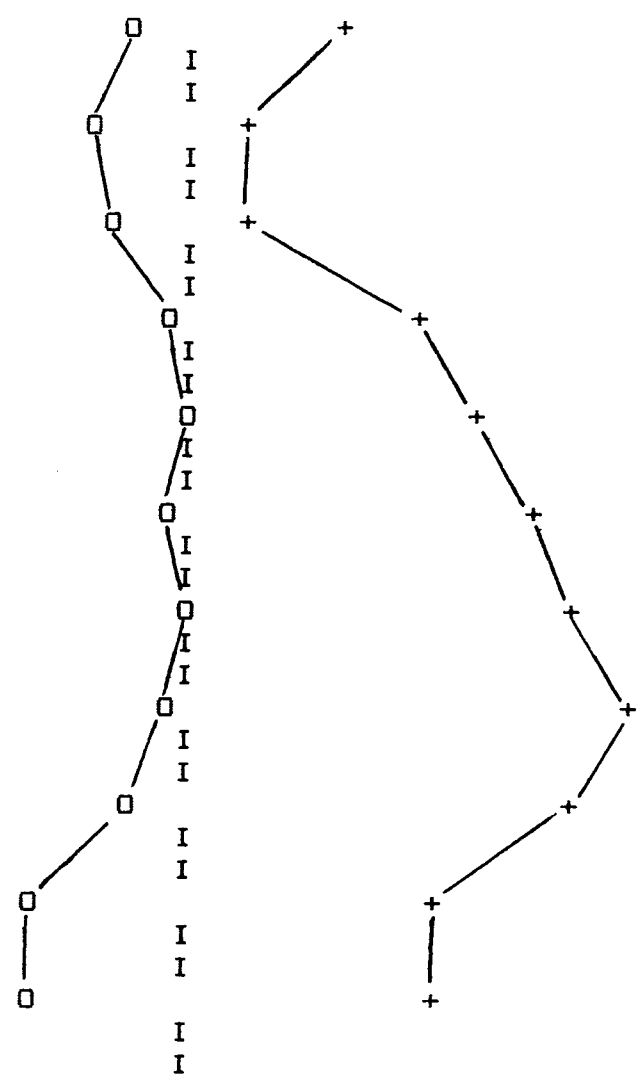
LINE NUMBER :LINE 4 28N FROM 19+75 TO 15E

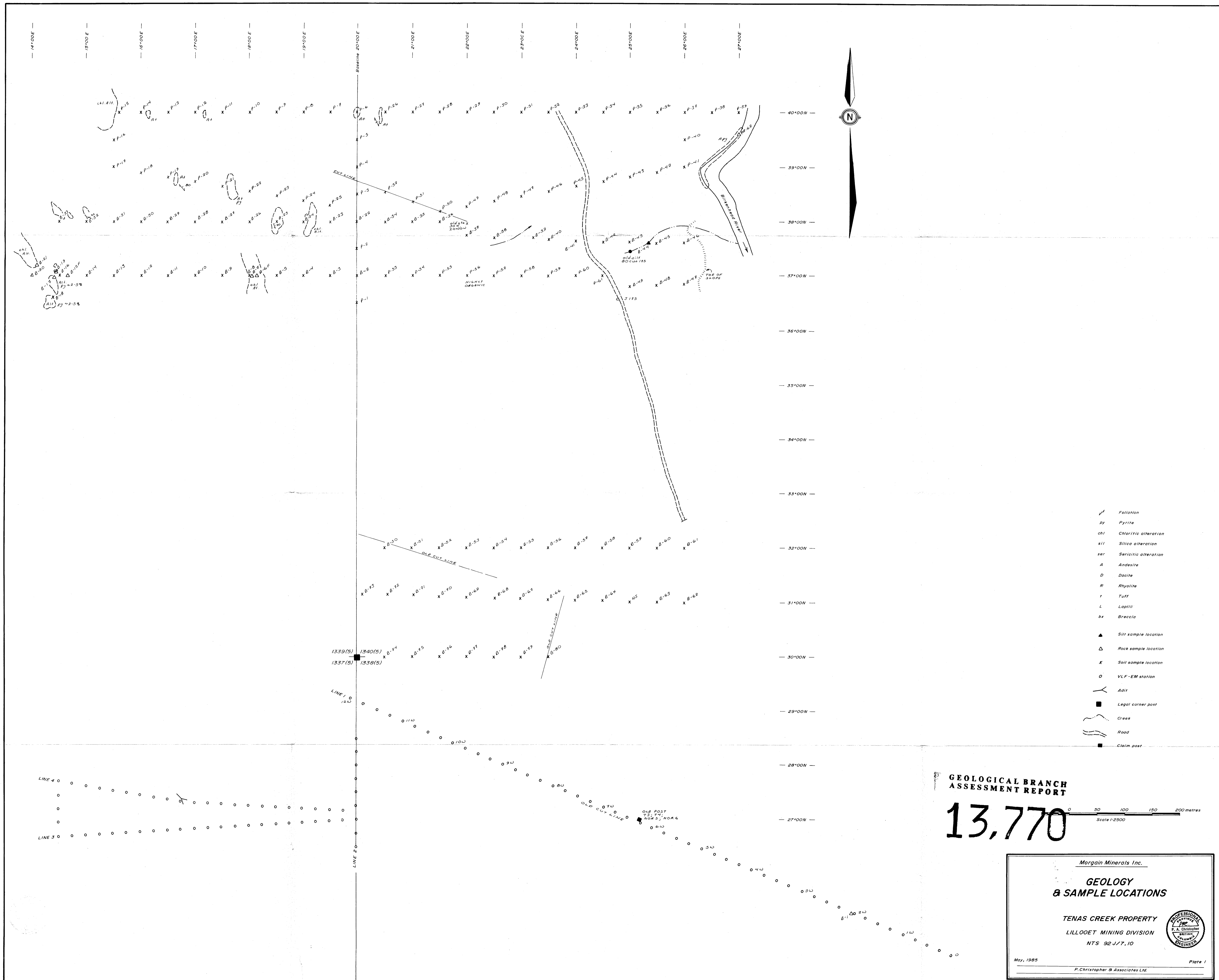
STN 2 IS SEATTLE

RAPITAN VLF - EM PROFILE: DIP ANGLES IN DEGREES



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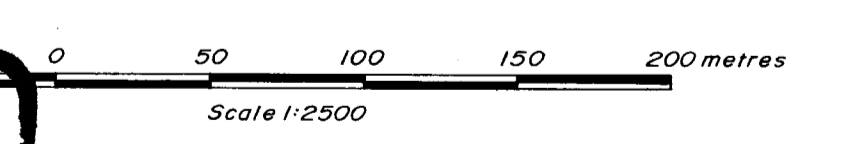




- / Foliation
- py Pyrite
- chl Chloritic alteration
- sil Silica alteration
- ser Sericitic alteration
- A Andesite
- D Dacite
- R Rhyolite
- t Tuff
- L Lapilli
- bx Breccia
- ▲ Silt sample location
- Δ Rock sample location
- X Soil sample location
- O VLF-EM station
- Adir Adir
- Legal corner post
- ~ Creek
- == Road
- Claim post

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,770



Morgain Minerals Inc.

**GEOLOGY
& SAMPLE LOCATIONS**

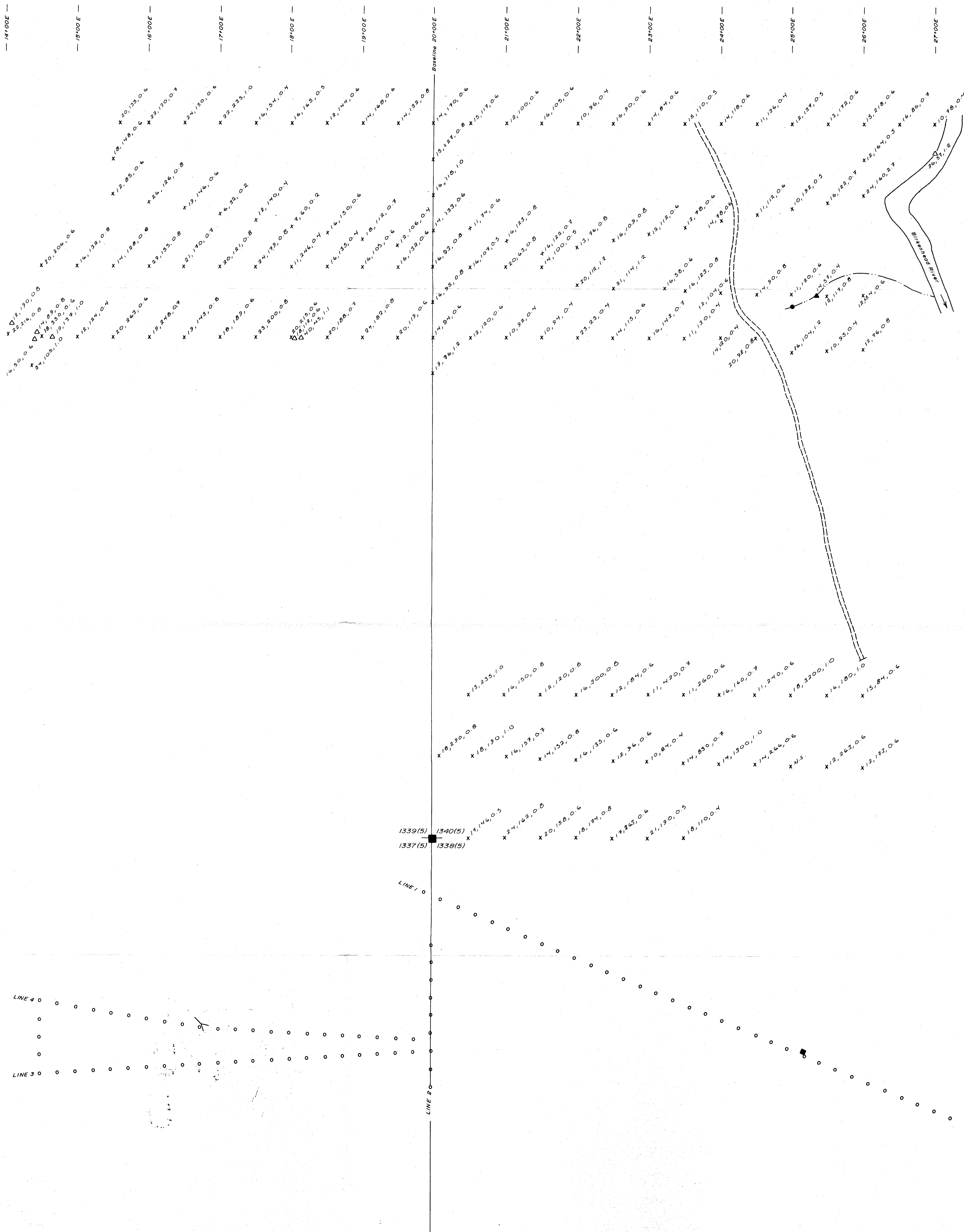
TENAS CREEK PROPERTY
LILLOOET MINING DIVISION
NTS 92 J/7, 10

May, 1985

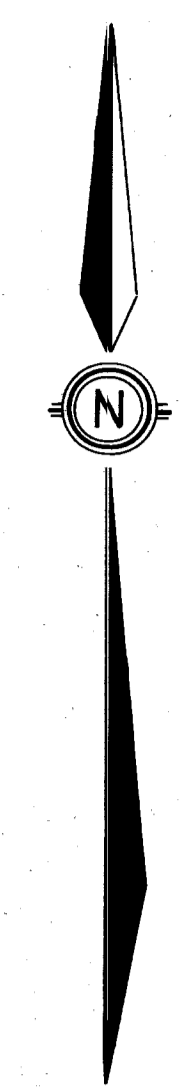
P. Christopher & Associates Ltd.

PROFESSIONAL
P. A. Christopher
BRITISH
COLUMBIA
ENGINEER

Plate 1



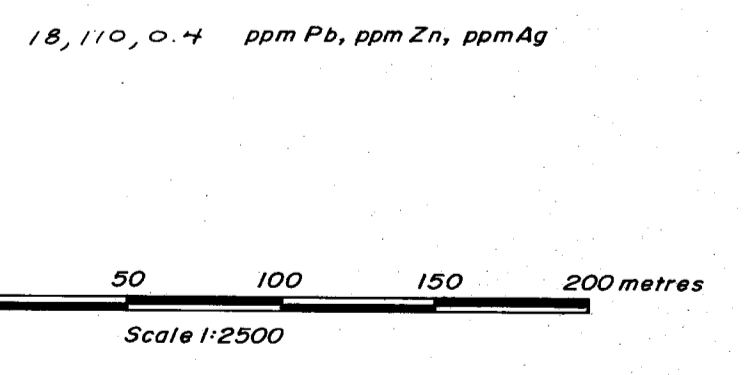
40°00N
39°00N
38°00N
37°00N
36°00N
35°00N
34°00N
33°00N
32°00N
31°00N
30°00N
29°00N
28°00N
27°00N



- △ Rock sample location
- x Soil sample location
- VLF-EM station
- Adit
- Legal corner post
- ~ Creek
- Road
- Claim post

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,770



Morgain Minerals Inc.

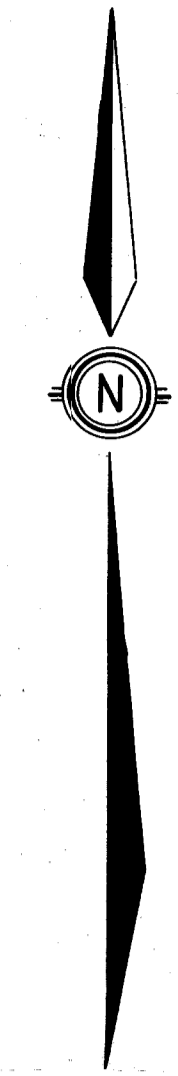
GEOCHEMICAL SURVEY
Lead, Zinc, Silver

TENAS CREEK PROPERTY
LILLOET MINING DIVISION
NTS 92 J/7, 10

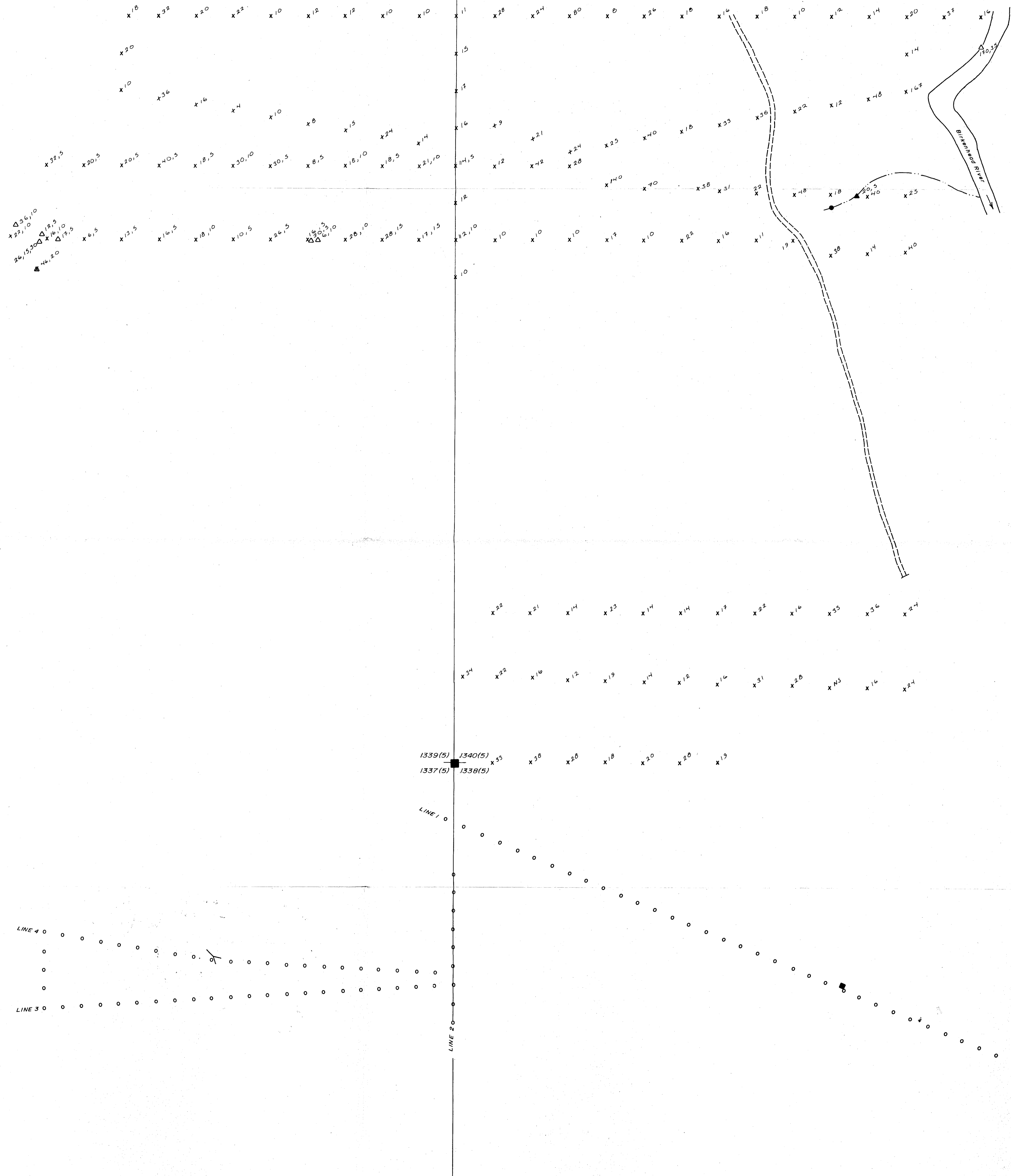
May, 1985 Plate 2

P. Christopher & Associates Ltd.

1400E 1500E 1600E 1700E 1800E 1900E 2000E 2100E 2200E 2300E 2400E 2500E 2600E 2700E



40'00N
39'00N
38'00N
37'00N
36'00N
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31'00N
30'00N
29'00N
28'00N
27'00N

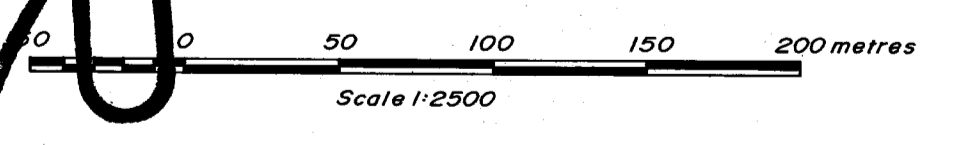


- △ Rock sample location
- X Soil sample location
- O VLF-EM station
- Adit
- Legal corner post
- ~ Creek
- Road
- Claim post

20, 15, 30 ppm Cu, ppbAu, ppm As

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,770



Morgan Minerals Inc.

**GEOCHEMICAL SURVEY
Copper, Gold, Arsenic**

TENAS CREEK PROPERTY
LILLOET MINING DIVISION
NTS 92 J/7, 10

May, 1985 Plate 3

P. Christopher & Associates Ltd.