

85-42-13507

ASSESSMENT REPORT ON THE
1984 GEOLOGICAL AND GEOCHEMICAL EXPLORATION ACTIVITIES
KWAN 1 CLAIMS
OMINECA MINING DIVISION
NTS 93N/11

Located approximately 54 km East of Takla Landing
Latitude $55^{\circ}32'$ North; Longitude $125^{\circ}07'$ West

Owned and Operated By:
SELCO DIVISION - BP RESOURCES CANADA LIMITED

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,507

BPVR 84-27

N. Humphreys
November, 1984

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1.

SUMMARY

The 20 unit Kwan-1 property is located near Germanson Lake, northwest of Fort St. James, B.C. The claims were staked to cover copper, silver and tungsten stream sediment anomalies found by the government reconnaissance survey.

The property is underlain by diorite and monzonite of the Jurassic Hogem Batholith.

Except for local, weak sulphide mineralization and propylitic alteration, the intrusives seen were fresh.

Weakly anomalous gold values up to 110 ppb were found in silt samples from many of the creeks on the property. This does not appear to reflect increased gold concentrations in bedrock or soils nearby, but rather is a result of placer concentrations.

INTRODUCTION

The 20 unit Kwan-1 claims were staked following the government stream sediment survey release, to cover an area weakly anomalous in silver, copper and tungsten. The anomalous area lies within a linear zone of high magnetic relief. Geological mapping and soil sampling were carried out during the period July 8 - 11, 1984 by Neil Humphreys, geologist, and Lyndon Miller, field assistant.

LOCATION AND ACCESS (Figure 1)

NTS 93N/11E, Latitude 55°32', Longitude 125°07', Omineca Mining Division.

The claims are located 22 km southwest of Germanson Lake and 82 km northwest of Fort St. James. Access is by helicopter from Fort St. James.

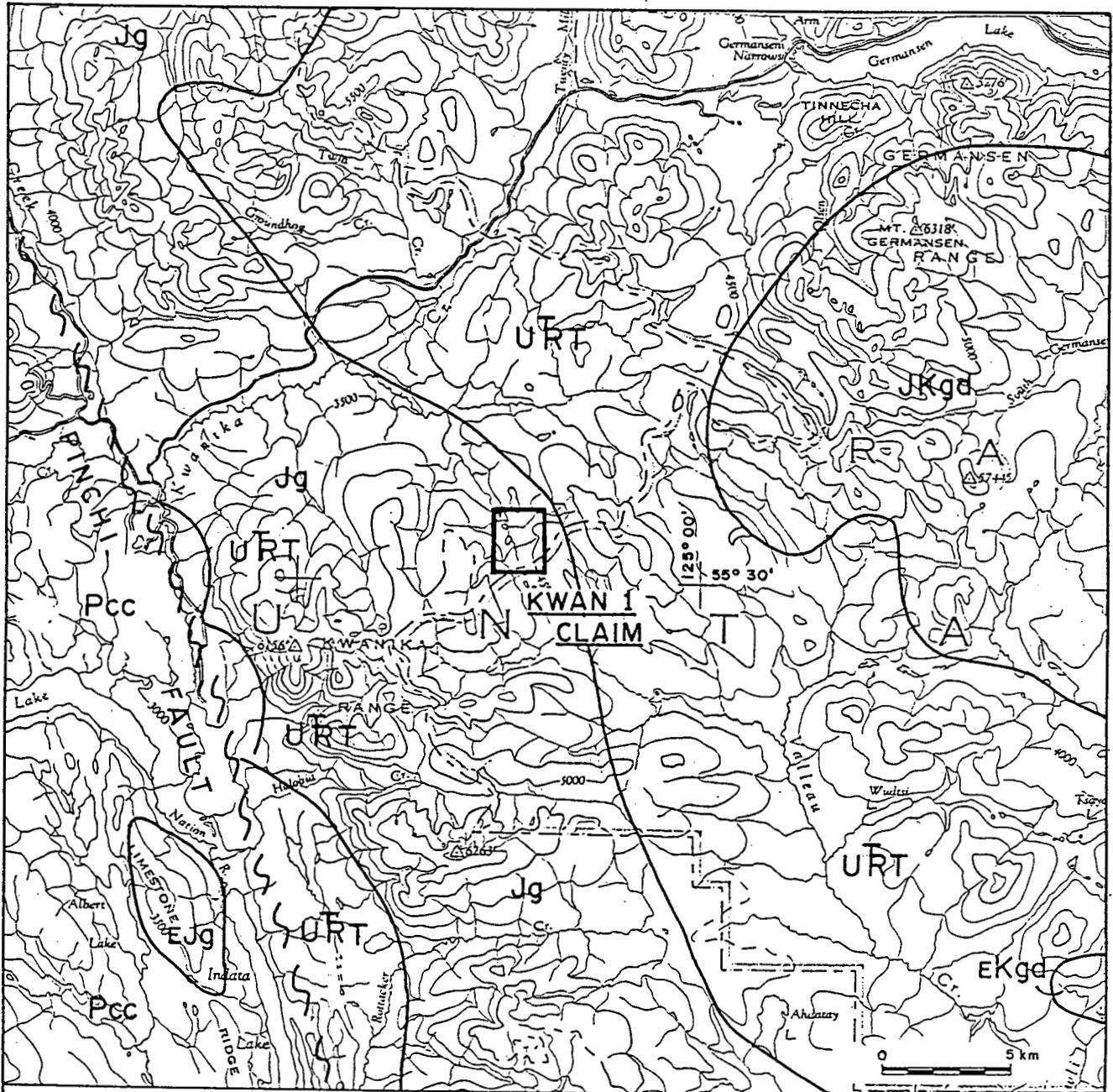
CLAIM STATUS

	<u>RECORD #</u>	<u>RECORDED DATE</u>
KWAN 1 20 units	6485	July 20, 1984

TOPOGRAPHY AND VEGETATION

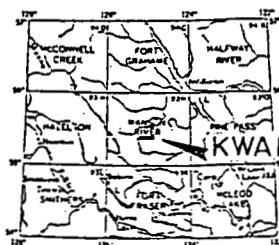
The claims straddle a swampy valley in an area of moderate topographic relief. Elevations vary from 1250 to 1450 metres. Away from the central valley, the slopes are covered by forests of spruce and balsam fir.

Outcrop is very sparse on the property and is found mainly in narrow steep sided creek banks.



LEGEND

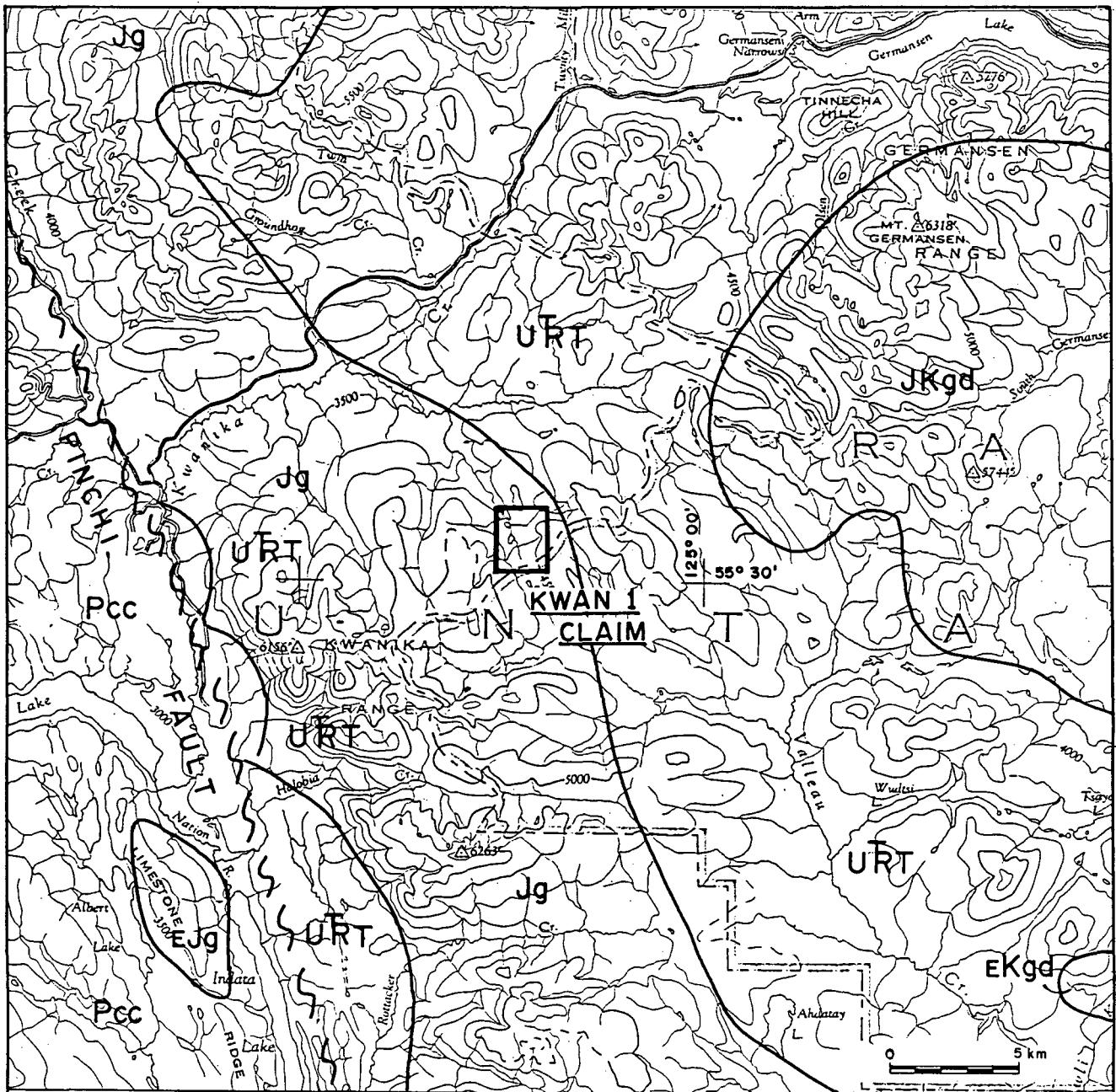
EKgd	EARLY CRETACEOUS NAVER INTRUSIONS
JKgd	JURASSIC - CRETACEOUS INTRUSIVE ROCKS
Jg	JURASSIC HOGEN BATHOLITH
EJg	EARLY JURASSIC TOPLEY INTRUSIONS
TJs	UPPER TRIASSIC - LOWER JURASSIC SITLIKA ASSEMBLAGE
URT	UPPER TRIASSIC TAKLA GROUP
PRud	UPPER PALAEZOIC - TRIASSIC TREMBLEUR INTRUSIONS
Pcc	UPPER PALAEZOIC CACHE CREEK GROUP



SELCO DIVISION -
BP RESOURCES CANADA LIMITED

KWAN I CLAIM TAKLA PROJECT - B.C. REGIONAL GEOLOGY & CLAIM LOCATION MAP

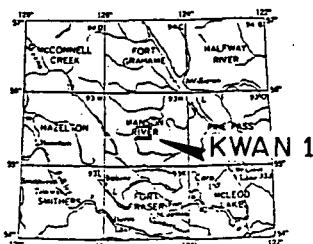
SCALE 1: 250,000 | DRAWN BY N. H. | FIG. 1
DATE DEC. 84 | DRAFTED BY L. G.
N.T.S. 93 N | PROJ. 10215 | REPORT BPVR 84-27



LEGEND



- EKgd** EARLY CRETACEOUS
NAVER INTRUSIONS
- JKgd** JURASSIC - CRETACEOUS
INTRUSIVE ROCKS
- Jg** JURASSIC
HOGEN BATHOLITH
- EJg** EARLY JURASSIC
TOPLEY INTRUSIONS
- TJs** UPPER TRIASSIC - LOWER JURASSIC
- SITLIKA ASSEMBLAGE
- URT** UPPER TRIASSIC
TAKLA GROUP
- PRud** UPPER PALAEOZOIC - TRIASSIC
TREMBLEUR INTRUSIONS
- Pcc** UPPER PALAEOZOIC
CACHE CREEK GROUP



SELCO DIVISION -
BP RESOURCES CANADA LIMITED

KWAN 1 CLAIM TAKLA PROJECT - B.C. REGIONAL GEOLOGY & CLAIM LOCATION MAP

SCALE 1: 250,000

DRAWN BY: N. H.

FIG. 1

DATE DEC. 84

DRAFTED BY: L. G.

N.T.S. 93 N

PROJ. 10215

REPORT BPVR 84-27

REGIONAL GEOLOGY (Figure 1)

The Kwan claims are located within the Intermontane Tectonic Belt near the eastern edge of the Juro-Cretaceous Hogem Batholith. The batholith is a complex, polyphase pluton of predominately granodiorite composition that has intruded Upper Triassic Takla Group basic volcanic and sedimentary rocks. These rocks formed within the Quesnel Trough, a northwest trending graben lying between highly deformed Proterozoic and Palaeozoic strata to the east and deformed Upper Palaeozoic strata to the west. The major structure in the region is the Pinchi Fault which lies 13 km west of the property and forms the western boundary of the Quesnel Trough.

No mineral occurrences are known near the Kwan 1 property.

PROPERTY GEOLOGY (Figure 2)

Most of Kwan claim is underlain by hornblende-augite diorite of the Hogem Batholith. The rock is medium grey in colour, equigranular and fine to medium grained with 30% mafics and few percent disseminated magnetite. Outcrops to the east and west of the diorite are of medium grained, equigranular hornblende-biotite monzonite. No contacts between the two intrusive phases were seen, but at one location near the eastern contact, the diorite is intruded by dykes of monzonite which suggests that the monzonite is the younger intrusive phase.

MINERALIZATION AND ALTERATION

No significant mineralization or alteration was seen on the property. Outcrop in a gully along the eastern claim line has traces of chalcopyrite associated with hematite, calcite and chlorite in sheared diorite, but the 'showing' is very limited and a rock sample had low metal content.

Weak, disseminated or fracture-filling epidote alteration is found in a number of places in otherwise fresh, barren intrusive.

GEOCHEMISTRY

Sixty-four soil, 29 silt and rock samples were collected, primarily along two contour soil lines on either side of the central swampy area. The samples were collected from the 'B' soil horizon at a depth of 25 cm and analyzed for gold by AA and for 30 other elements by ICP at Acme Analytical Labs in Vancouver. Overburden is probably less than 5 metres thick in most parts of the property.

The results indicate numerous, one or two sample soil or silt anomalies, usually of copper. The highest copper value found was 453 ppm in the northeastern part of the claim.

Weakly anomalous gold values up to 110 ppb were found in silt samples from many of the creeks on the property. This does not

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appear to reflect increased concentrations in the soils or a bedrock source, but is probably the result of placer concentrations.

The exact location of the government silt sample sites is uncertain but the BP-Selco samples taken at the probable locations had similar silver but lower copper values as compared to the government samples.

CONCLUSIONS AND RECOMMENDATIONS

The claims are underlain by fresh intrusive rocks of the Hogem Batholith. Only very minor sulphide mineralization and hydrothermal alteration is present.

No significant anomalies were found by the soil and silt sampling.

No further work on the claims is recommended.

APPENDIX A
ROCK SAMPLE DESCRIPTIONS

APPENDIX AROCK SAMPLE DESCRIPTIONS

<u>SAMPLE #</u>	<u>DESCRIPTION</u>	<u>ANOMALOUS VALUES</u>
846080	<u>FLOAT</u> Hornblende diorite with 3% pyrite, epidote.	197 ppm Cu
846148	Sheared hornblende diorite with chlorite alteration, traces of chalcopyrite, malachite, abundant hematite along fractures.	152 ppm Cu

APPENDIX B
GEOCHEMICAL RESULTS

BP-SELCO MINING PROJECT# 904 REPORT# 84-20-045 JOB# 84-293 INVOICE# 8103 FILE# 84-1918 PAGE # 3

SAMPLE #	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	SR PPM	CD PPM	SB PPM	Bi PPM	V PPM	Ca %	P PPM	La PPM	Cr PPM	Mg PPM	Ba PPM	Ti PPM	B PPM	Al PPM	Xa PPM	K PPM	X PPB	Hg PPB
846136	3	22	12	57	.7	4	7	257	3.93	2	2	ND	2	27	1	2	2	83	.29	.11	4	14	.56	.56	.13	14	1.28	.01	.04	2	15
846137	1	14	9	35	.3	5	4	227	3.61	2	2	ND	2	29	1	2	2	83	.31	.14	3	14	.55	.45	.11	9	.97	.01	.09	2	ND
846138	1	27	15	67	.2	8	8	292	4.18	5	2	ND	2	28	1	2	2	101	.33	.17	2	21	.86	.52	.18	3	1.55	.01	.08	2	10
846139	5	128	14	137	1.3	15	18	1336	4.61	2	2	ND	2	79	1	2	4	113	.88	.12	2	31	1.60	182	.16	14	2.21	.01	.10	2	10
846140	4	339	39	77	1.3	19	17	1683	4.86	3	2	ND	2	77	1	4	2	95	.75	.09	14	33	1.20	144	.10	6	2.12	.01	.10	2	5
846141	4	113	26	93	.6	17	10	748	3.91	4	2	ND	2	42	1	4	2	72	.48	.07	3	32	.69	127	.05	4	1.52	.01	.06	2	ND
846142	3	45	17	43	.4	5	3	190	3.24	2	2	ND	2	25	1	2	2	83	.17	.04	2	14	.80	71	.16	2	1.11	.01	.30	2	15
846143	2	26	16	41	.6	7	4	237	2.85	2	2	ND	2	28	1	3	2	71	.25	.09	3	16	.63	75	.11	2	1.05	.01	.14	2	25
846144	4	62	9	29	.4	7	7	150	3.19	7	2	ND	2	14	1	5	2	61	.13	.07	3	5	.40	55	.07	2	.65	.01	.07	2	25
846145	1	174	4	103	.4	14	19	1805	3.86	3	2	ND	2	99	1	2	5	140	1.23	.38	5	23	2.22	155	.12	3	2.18	.01	.30	2	15
846146	1	149	2	93	.2	17	17	1107	5.65	5	2	ND	2	88	1	2	3	151	1.16	.41	3	38	2.19	109	.11	13	2.05	.01	.33	2	20
846147	1	48	6	58	.3	20	10	1022	3.81	3	2	ND	2	55	1	2	2	79	.87	.16	5	50	1.04	127	.07	3	1.39	.01	.09	2	5
846148	2	26	13	50	.3	16	10	1484	2.77	6	2	ND	2	36	1	2	2	49	.45	.10	5	57	.51	110	.01	5	.86	.02	.08	2	10
846149	2	28	5	45	.1	17	8	1280	2.62	6	2	ND	2	41	1	2	2	46	.53	.09	5	59	.58	153	.01	14	.91	.02	.09	2	ND
8184904846080	2	197	1	28	.5	13	17	371	2.76	5	5	ND	4	35	1	3	2	63	.90	.17	4	27	1.19	47	.13	8	1.27	.06	.55	2	20
8184904846148	1	152	1	60	.3	6	17	782	3.84	3	5	ND	3	71	1	2	2	113	1.74	.25	5	11	1.52	.61	.12	2	1.49	.03	.52	2	10

REGIONAL STREAM SEDIMENT AND WATER GEOCHEMICAL RECONNAISSANCE DATA, BRITISH COLUMBIA, 1983. GSC-OF 1001, NGR 66-1983, NTS 93N

MAP	SAMPLE	UTM COORDINATES		ROCK TYPE	G	A																		
		ZN	EAST			ZN	CU	PB	NI	CO	AG	MN	AS	MO	FE	HG	U	W	SB	F-W	PH	U-W		
93N11	833226	10	359136	6154763	GRNT	41	55	75	14	12	11	0.3	646	1.0	6	2.75	100	2.7	12	0.1	26	7.5	.01	
93N11	833227	10	360340	6153196	GRNT	41	32	49	5	7	6	0.2	576	0.5	15	1.60	70	18.7	13	0.1	20	7.3	.56	
93N11	833228	10	360447	6153593	GRNT	41	40	50	6	7	9	0.1	2200	1.0	22	2.50	100	14.9	7	0.2	22	6.8	.03	
93N11	833229	10	362519	6154470	GRNT	41	115	63	4	13	12	0.2	2400	1.5	5	4.25	70	7.0	4	0.1	20	7.2	.01	
93N11	833230	10	362675	6154173	GRNT	41	41	38	1	5	10	0.2	883	0.5	2	2.35	20	4.2	4	0.1	20	7.2	.04	
93N11	833231	10	364199	6157044	GRNT	41	54	100	3	14	11	0.2	331	1.5	3	2.15	60	4.5	4	0.2	20	7.5	.04	
93N11	833232	10	363798	6157246	GRNT	41	57	93	4	10	10	0.4	667	2.5	1	2.45	60	4.8	3	0.1	20	7.3	.04	
93N11	833233	10	364898	6156641	ANDS	32	54	88	3	23	8	0.9	323	3.0	3	3.20	150	3.5	3	0.2	26	6.7	.01	
93N11	833234	10	363931	6157636	ANDS	32	45	89	2	13	12	0.4	708	1.0	1	2.50	90	6.7	4	0.1	24	7.5	.06	
93N11	833235	10	365662	6154814	GRNT	41	62	122	1	16	16	0.4	538	1.0	1	3.40	50	4.8	8	0.1	20	7.5	.12	
93N11	833236	10	366303	6154578	ANDS	32	44	135	1	13	16	0.4	471	1.5	3	2.30	40	5.3	4	0.1	26	7.8	.14	
93N11	833237	10	366243	6153653	ANDS	32	58	140	1	13	14	0.3	562	0.5	3	3.10	40	11.4	3	0.2	22	7.5	.18	
93N11	833238	10	369466	6152494	ANDS	32	60	80	2	22	14	0.4	811	2.5	1	2.70	40	1.9	3	0.3	24	7.9	.01	
93N11	833240	10	373275	6153631	ANDS	32	67	73	4	14	10	0.5	513	2.5	1	1.90	100	3.0	1	0.3	26	8.0	.01	
93N11	833242	10	373727	6156381	ANDS	32	95	48	2	21	13	0.2	395	3.0	1	2.45	60	2.4	1	0.3	28	8.0	.01	
93N11	833243	10	373727	6156381	ANDS	32	80	41	1	23	15	0.1	2600	4.5	1	2.70	50	2.4	9	0.4	26	7.8	.01	
93N11	833244	10	373676	6157227	ANDS	32	25	102	10	15	3	1.9	106	2.0	1	0.90	300	50.5	3	0.6	30	7.6	.26	
93N15	833245	10	379500	6186000	ANDS	32																38	8.0	.01
93N15	833246	10	382402	6194479	ANDS	32	72	65	3	40	16	0.1	771	3.5	1	3.20	160	1.6	2	0.7	32	7.5	.01	
93N15	833247	10	388447	6198128	GRNS	10	73	86	4	56	18	0.2	1000	2.5	2	3.15	70	2.1	1	0.3	28	7.6	.02	
93N15	833249	10	384953	6190622	GRNS	10	67	58	2	41	15	0.1	745	3.5	2	3.25	100	1.7	1	0.8	28	7.8	.17	
93N15	833250	10	389269	6189653	GRNS	10	49	58	1	35	14	0.1	467	1.5	1	2.70	70	1.2	1	0.1	30	7.8	.04	
93N11	833251	10	354341	6159609	GRNT	41	41	29	7	31	9	0.1	539	3.5	6	2.05	220	21.3	4	0.6	30	7.4	.63	
93N03	833252	10	356340	6107802	LMSN	23	44	18	4	23	7	0.1	283	1.0	1	1.50	50	2.6	1	0.2				

12.

SAMPLE TYPE (S) 10
 ROCK TYPE (S) ALL
 SOIL HORIZONS ALL
 SAMPLE TEXTURE (S) ALL
 OVERBURDEN ORIGIN (S) ALL
 LAB SIZE-FRAC EX ALL

MO	CU	PB	ZN	NI	MN	FE	AG	CO	AU	AS
2	50	3	40	10	850	3.3	.4	9	20	2
4	85	5	45	13	1100	4.2	.6	11	30	4
6	100	7	50	15	1200	4.5	.8	13	40	6
8	175	9	60	18	1600	5	1	15	50	8
10	200	11	80	20	1700	6	1.2	17	75	10
12	300	13	100	25	1800	7	1.5	19	100	12

SAMPLE TYPE (S) 50
 ROCK TYPE (S) ALL
 SOIL HORIZONS ALL
 SAMPLE TEXTURE (S) ALL
 OVERBURDEN ORIGIN (S) ALL
 LAB SIZE-FRAC EX ALL

MO	CU	PB	ZN	NI	MN	FE	AG	CO	AU	AS
2	40	5	45	10	400	3.3	.4	7	15	3
4	60	8	55	14	500	4.2	.6	9	20	5
6	90	10	60	16	650	5.4	.8	11	30	7
8	125	13	80	19	800	5.7	1	14	40	9
10	175	16	85	21	1000	6.4	1.2	16	50	11
12	250	25	100	24	1200	6.7	1.5	20	75	13

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KWAN PROPERTY

HAZELTON PG - B.C.

1984 STREAM & SOIL SURVEY

PART 1 OF 2

DATE JAN/85 PROJECT 904A/10250

NTS 93N/11

SCALE 1: 20000

SAMPLE TYPE (S) 10
 ROCK TYPE (S) ALL
 SOIL HORIZONS ALL
 SAMPLE TEXTURE (S) ALL
 OVERBURDEN ORIGIN (S) ALL
 LAB SIZE-FRAC EX ALL

SB	V	BA	SR	AL	CA	MG	K	TI	P	CR
2	75	90	52	1.35	.6	.75	.14	.04	.17	30
4	95	100	60	1.45	.7	1	.19	.06	.2	45
6	100	120	65	1.75	.9	1.2	.21	.08	.22	60
8	120	135	70	2	1	1.35	.25	.1	.25	65
10	135	140	85	2.15	1.1	1.5	.3	.12	.3	.85
12	150	160	100	2.3	1.2	2	.34	.14	.35	100

SAMPLE TYPE (S) 50
 ROCK TYPE (S) ALL
 SOIL HORIZONS ALL
 SAMPLE TEXTURE (S) ALL
 OVERBURDEN ORIGIN (S) ALL
 LAB SIZE-FRAC EX ALL

SB	V	BA	SR	AL	CA	MG	K	TI	P	CR
2	95	70	35	1.4	.3	.75	.08	.11	.15	20
4	115	105	40	1.8	.45	.95	.12	.13	.17	30
6	120	115	50	2.2	.5	1	.17	.19	.23	50
8	140	140	60	2.4	.75	1.35	.2	.21	.3	60
10	150	150	70	2.7	.8	1.5	.25	.24	.4	70
12	200	190	80	3	.85	1.6	.35	.3	.45	90

1000 METERS

KWAN PROPERTY

HAZELTON PG - B.C.

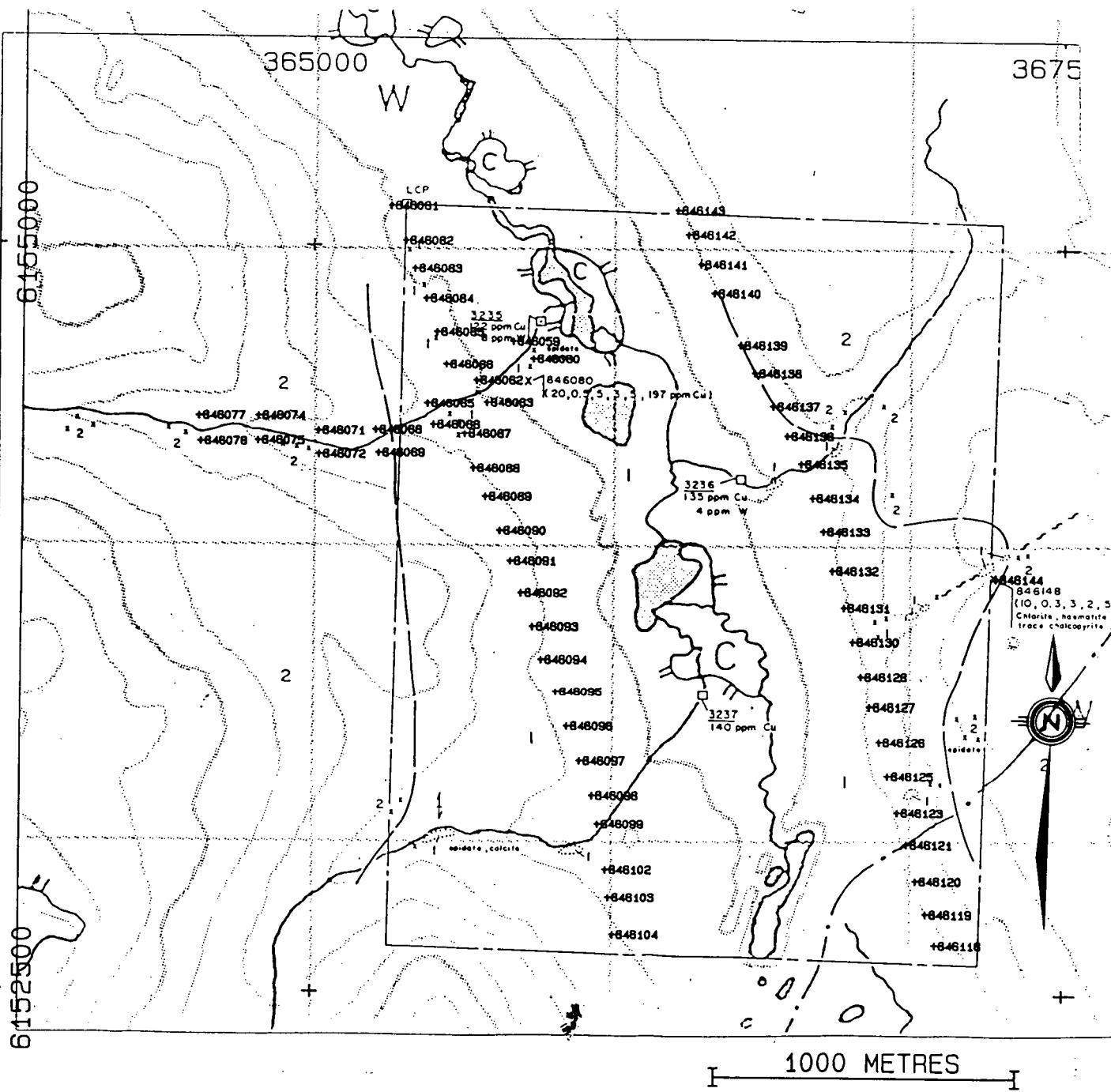
1984 STREAM & SOIL SURVEY

PART 2 OF 2

DATE JAN/85 PROJECT 904A/10250

NTS 93N/11

SCALE 1: 20000

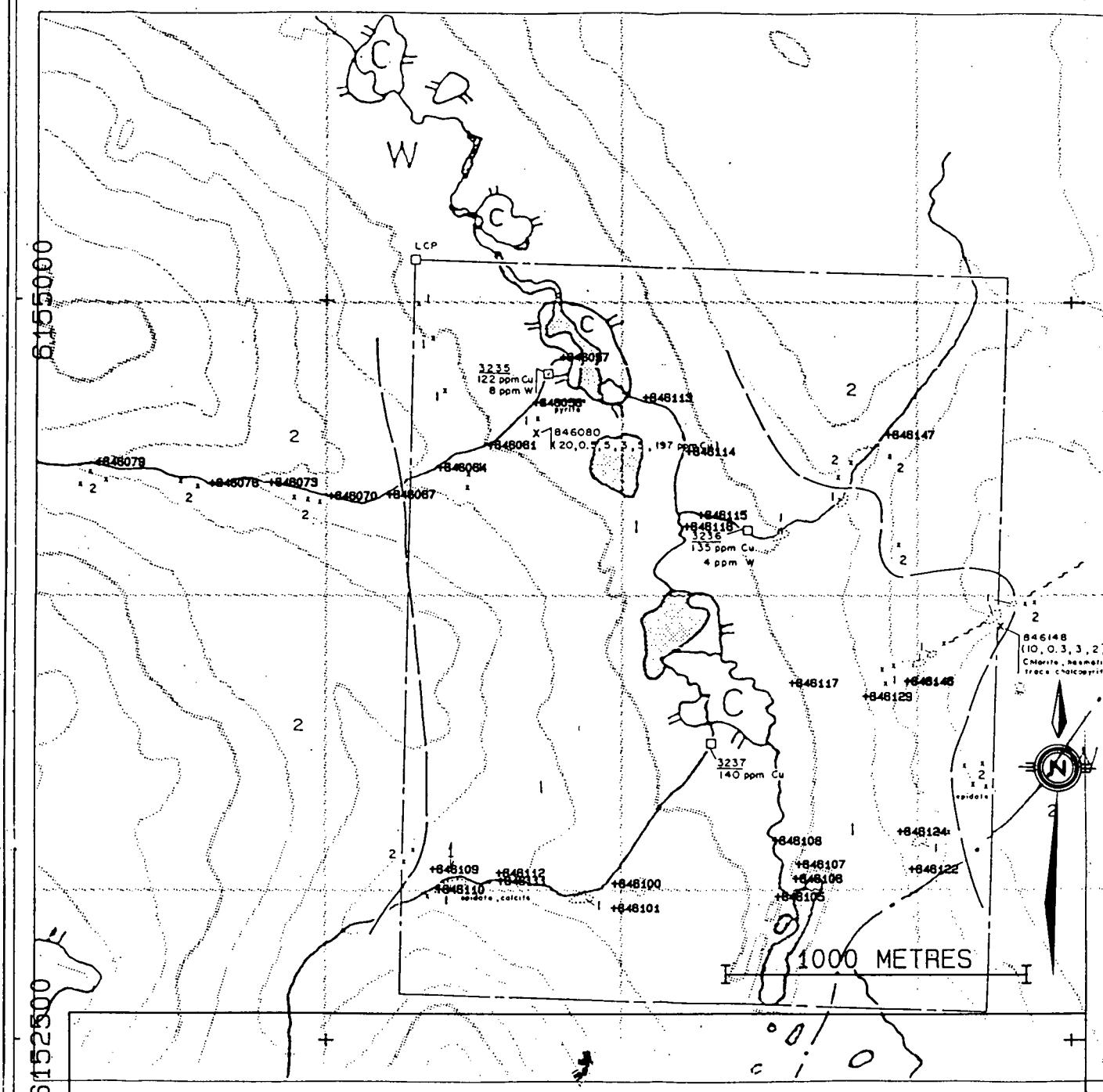


KWAN PROPERTY
HAZELTON PG - B.C.
1984 SOIL SAMPLES
SAMPLE LOCATION MAP

DATE JAN/85 PROJECT 904A/10250
NTS 93N/11 SCALE 1: 20000

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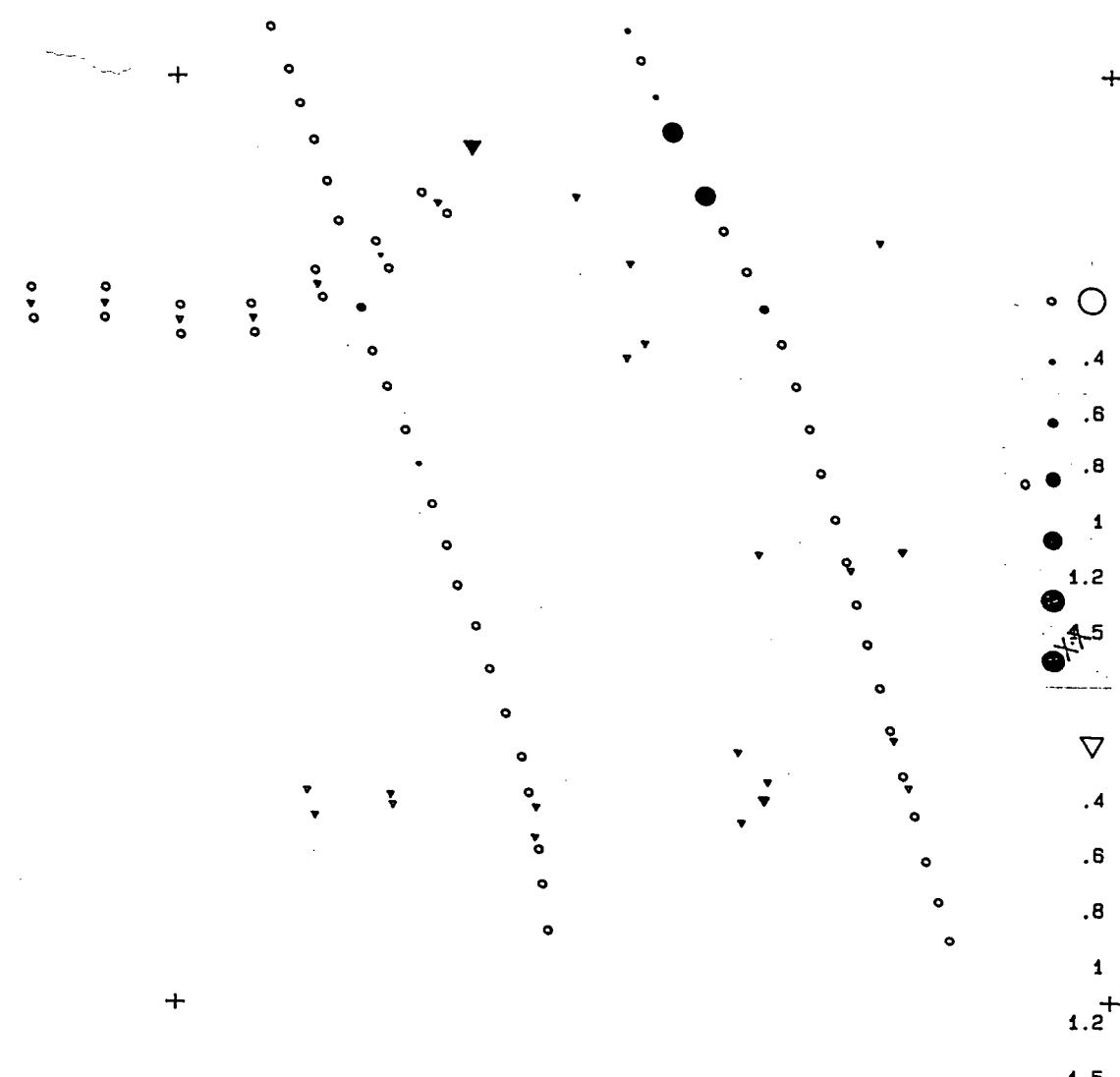
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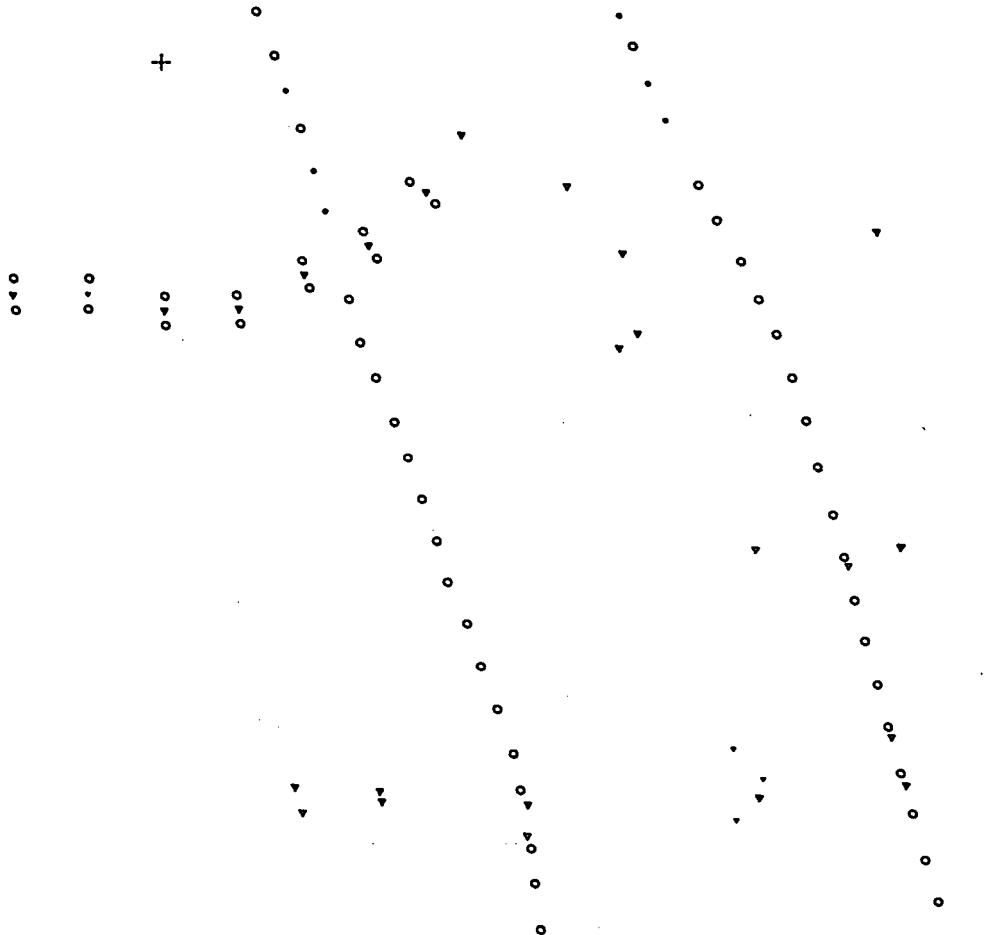
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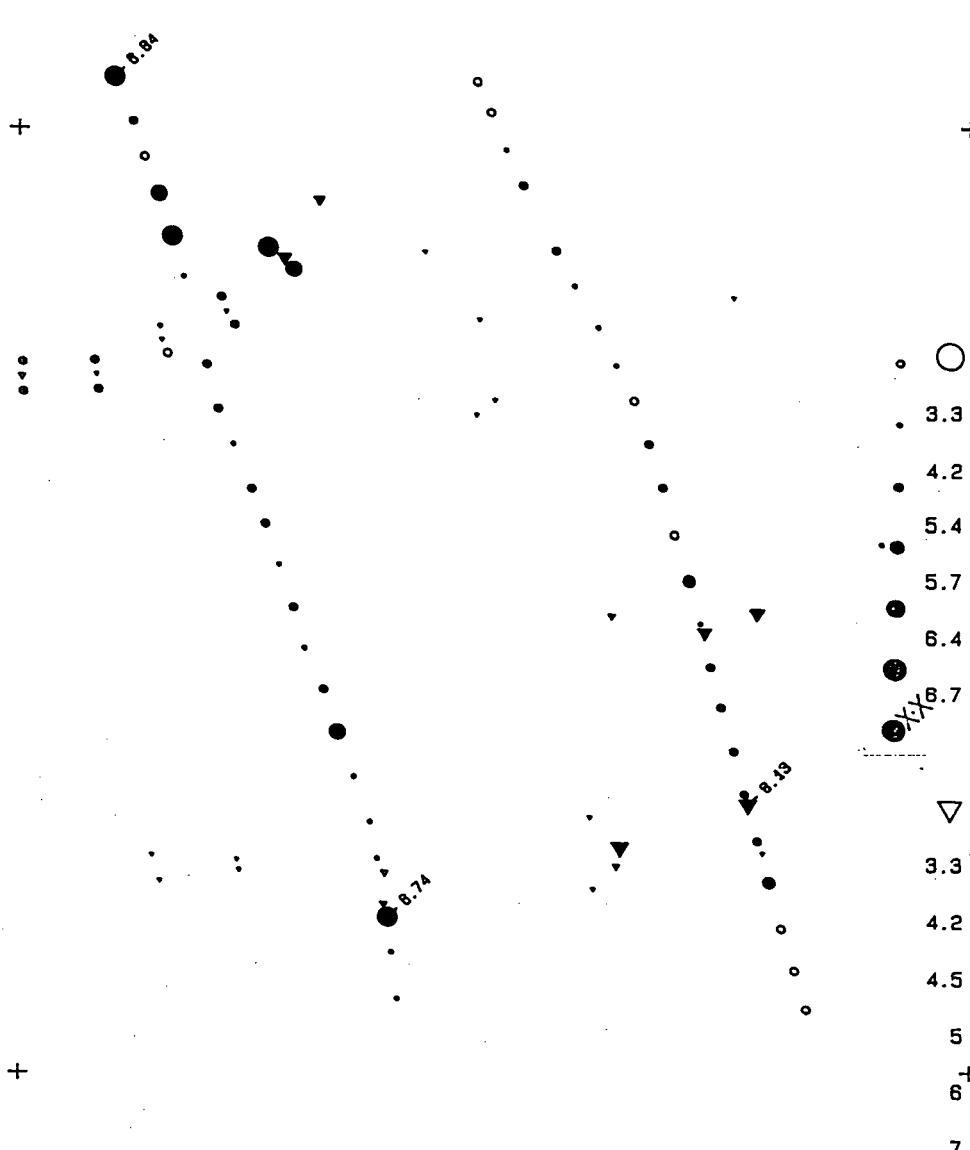
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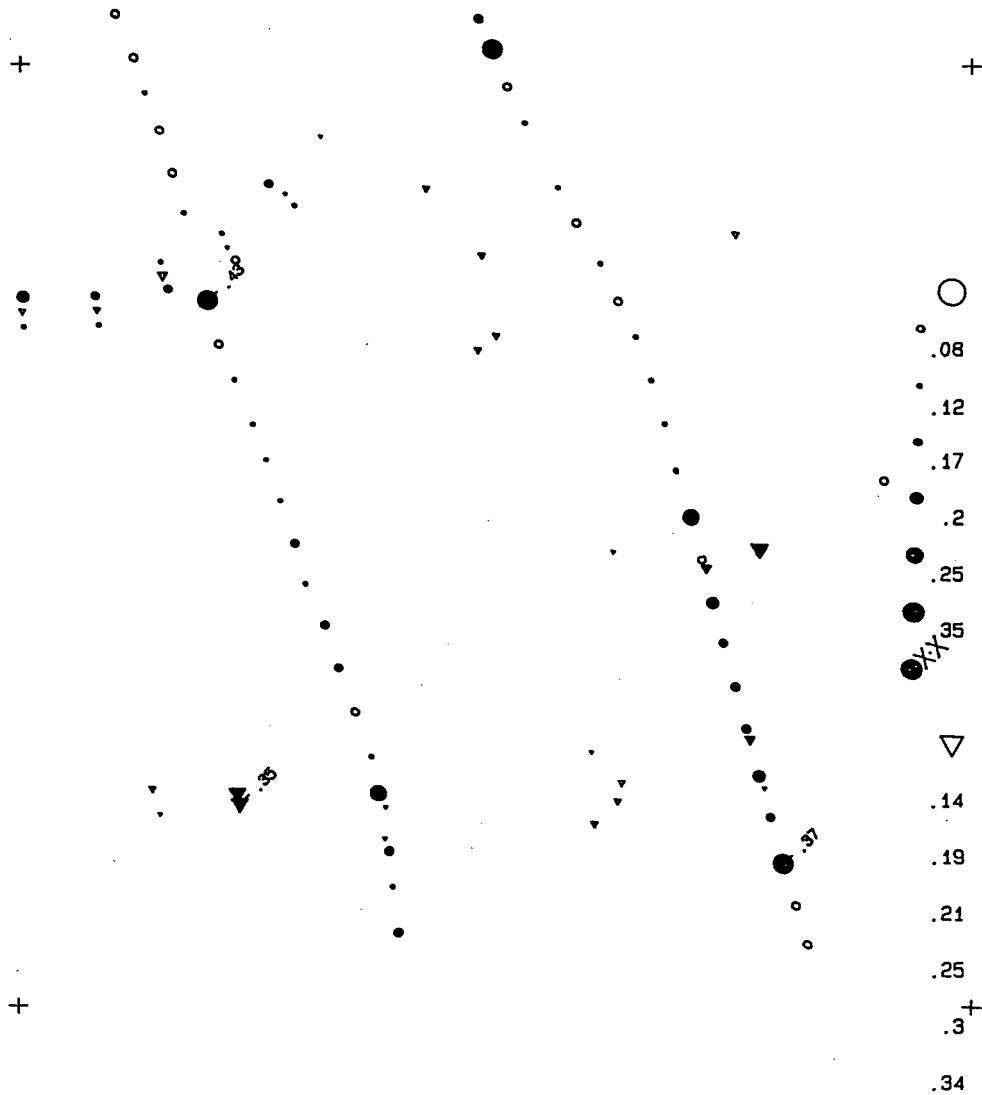
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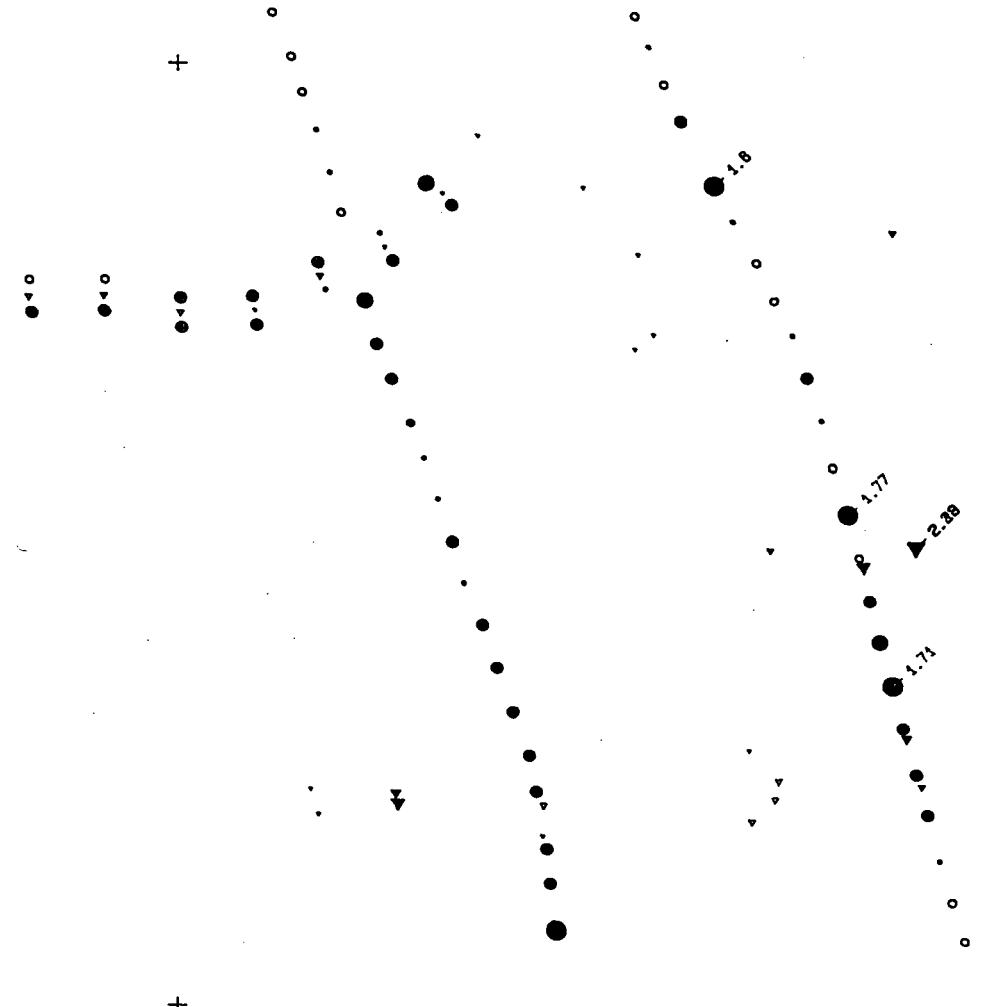
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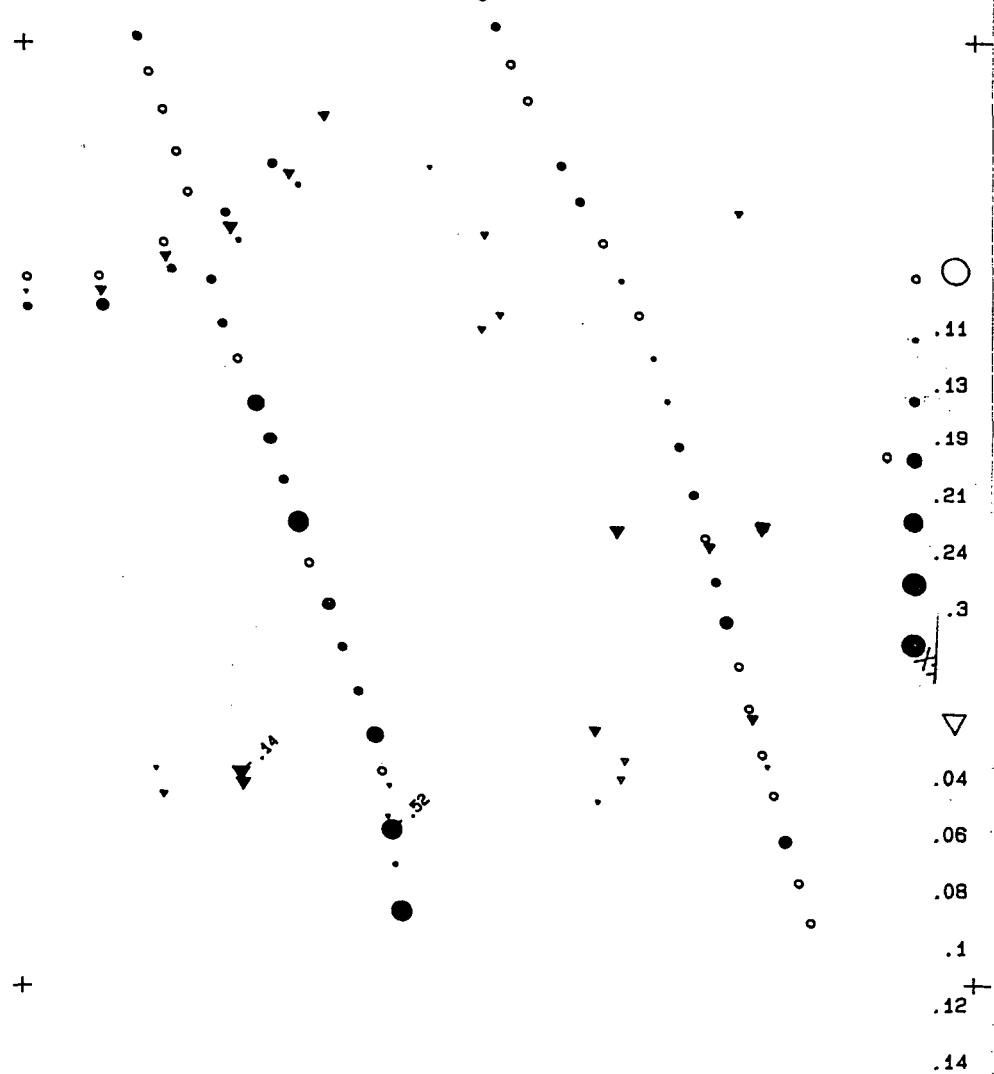
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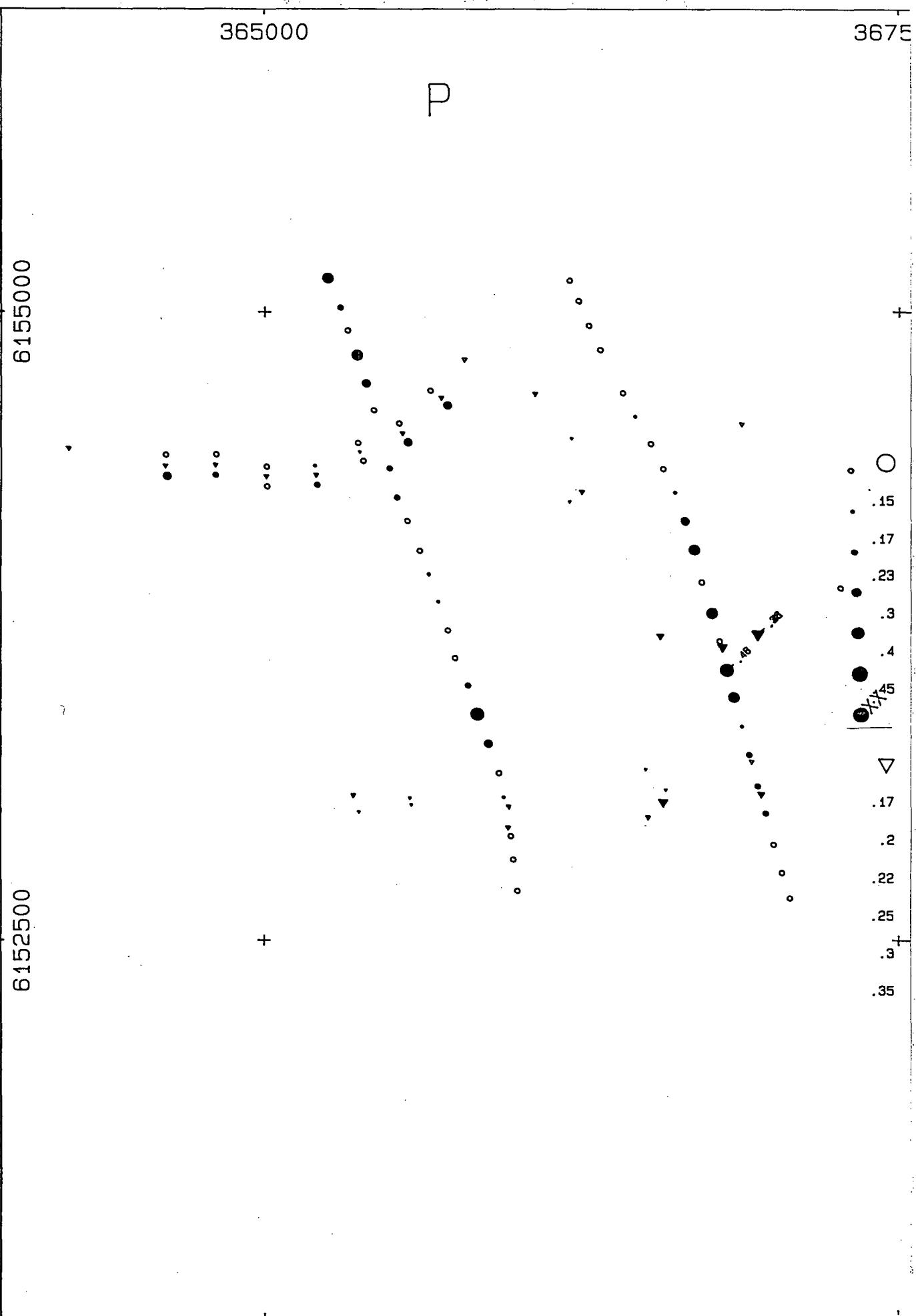
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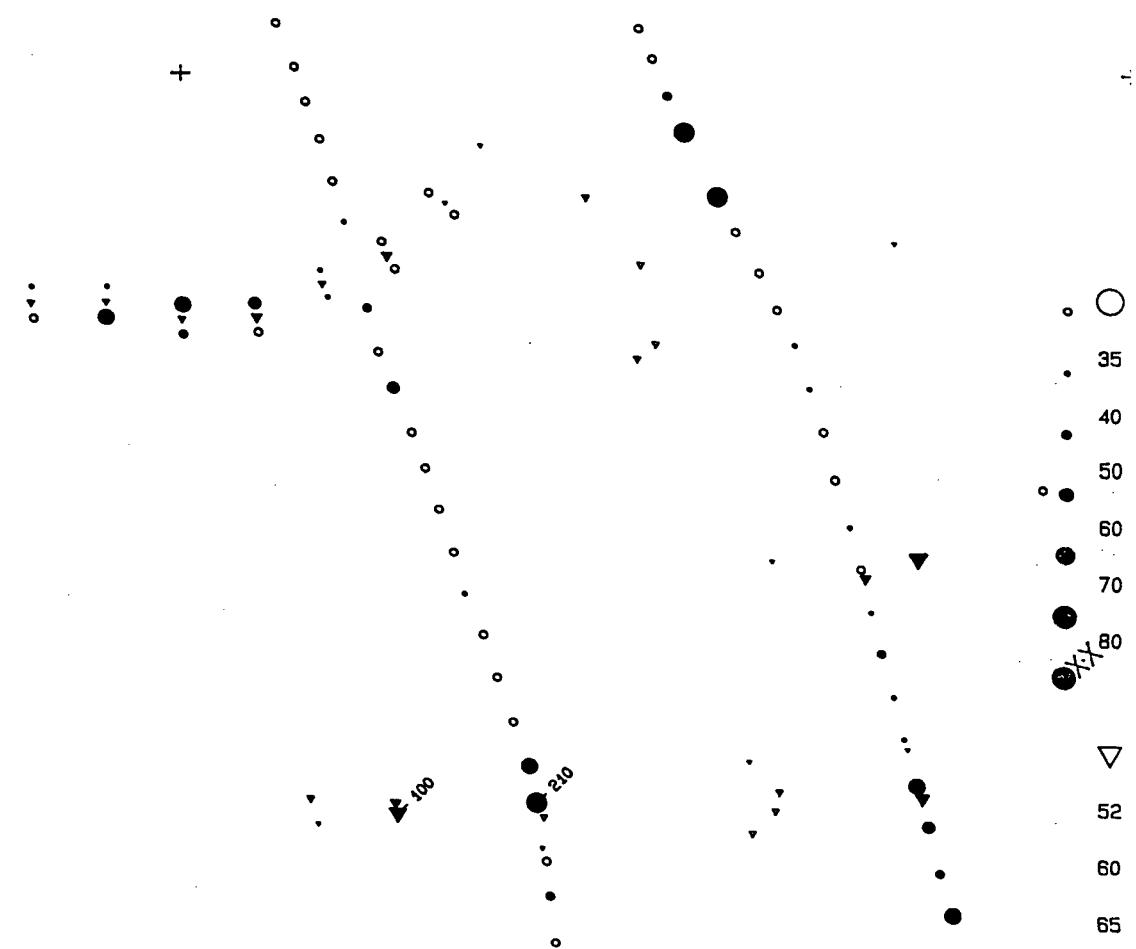
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APPENDIX C
STATEMENT OF COSTS

KWAN 1

STATEMENT OF COSTSGEOLOGICAL SURVEY

4 mandays @ \$119.70/day	\$ 478.80
4 mandays @ \$ 61.60/day	246.40

OPERATING COSTS (Equipment, Rental, Room
and Board, etc.)

8 mandays @ \$75.00/day	600.00
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GEOCHEMICAL ANALYSIS (Au, Hg, & 30 Element ICP)

93 Soil Samples @ \$15.57/sample	1448.01
2 Rock Samples @ \$19.75/sample	39.50

TRANSPORTATION

Helicopter 2.7 hours @ \$507.40/hour	1369.98
Truck Rental - \$50/day - 4 days	200.00
(included fuel, maintenance, etc.)	

DATA PROCESSING

95 Samples @ \$2.00/sample	190.00
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REPORT PREPARATION

Geologist - 3 mandays @ \$119.70/day	359.10
Geochemist - 1 manday @ \$300/day	300.00
Drafting - 12 hours @ \$18.00/hour	216.00
Typing - 8 hours @ \$10/hour	80.00
Materials	<u>100.00</u>

TOTAL COSTS	\$5,627.79
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APPENDIX D
STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

Neil Humphreys

I, Neil Humphreys, of 7647 West 14th Avenue, Vancouver, British Columbia hereby certify that:

1. I am a qualified geologist residing at the above address.
2. I have been practicing my profession since graduation from the University of Saskatchewan with a B.Sc. degree in Geology (1976).
3. That I am presently an employee of Selco Division - BP Resources Canada Limited as a geologist.
4. That I personally supervised geological and geochemical examination of the KWAN 1 Group of Claims and interpreted results herein.
5. I hold no interest, direct or indirect in the KWAN 1 Group of Claims.

Respectfully submitted,

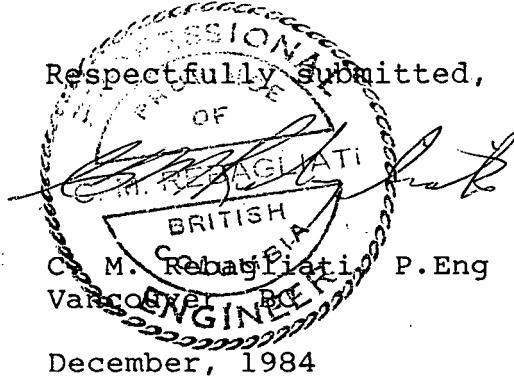
Neil Humphreys
Project Geologist

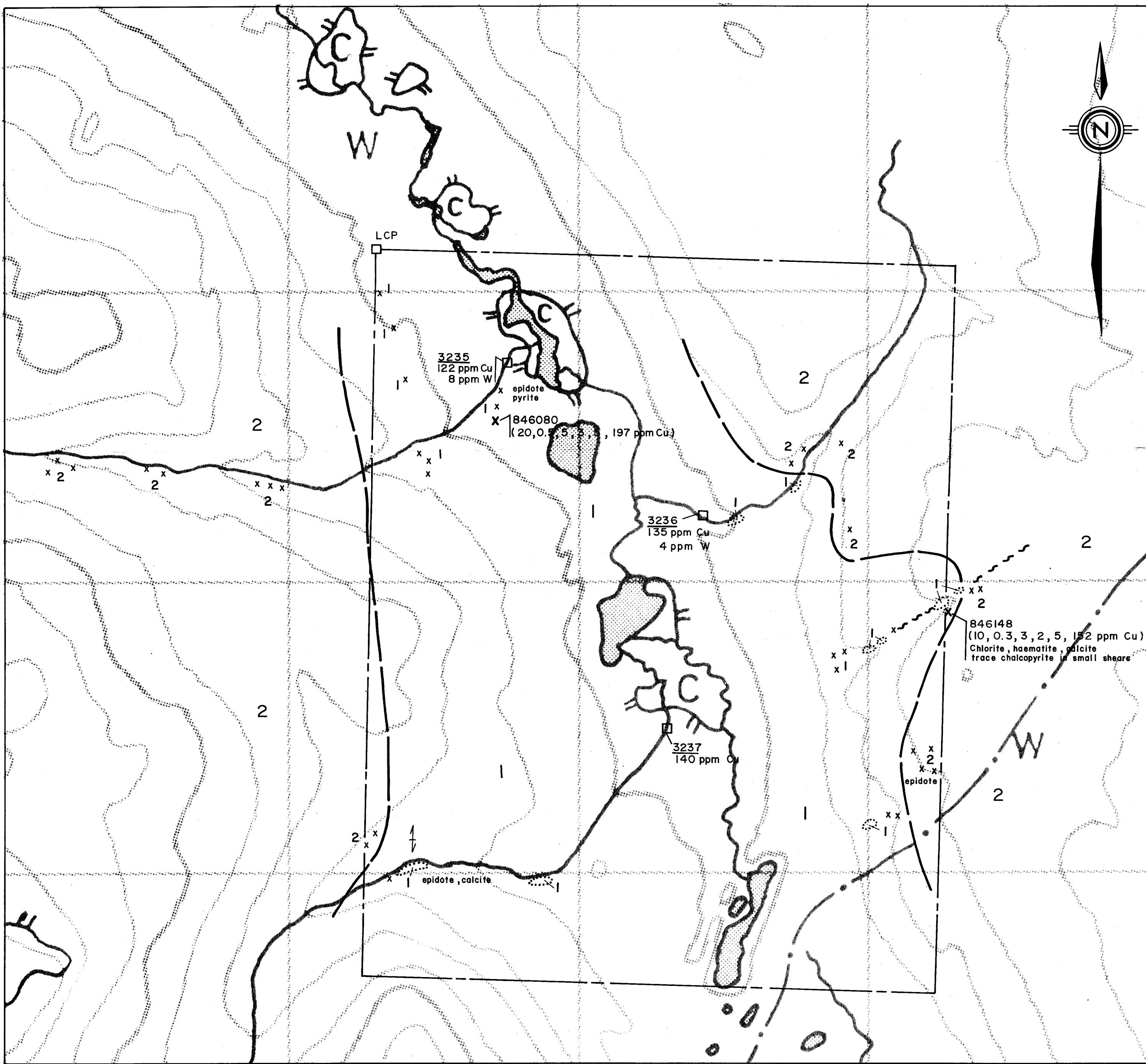
December 1984

CERTIFICATE

I, C.M. Rebagliati, of Vancouver, in the Province of British Columbia, hereby certify the following:

1. That I am a registered Professional Engineer in the Province of British Columbia.
2. That I have practised my profession since graduation from the Haileybury School of Mines of Ontario in 1966 and from the Michigan Technological University in 1969 with a B.Sc. degree in Geological Engineering.
3. That I am presently employed by Selco Division - BP Resources Canada Limited in Vancouver as Senior Geologist.
4. That I supervised the project and I am familiar with all aspects of the exploration program.





LEGEND

JURASSIC

HOGEM BATHOLITH

- 2 Medium-Grained, Equigranular Hornblende-Biotite Monzonite, Quartz-Bearing Monzonite
- 1 Fine to Medium-Grained Hornblende-Augite Diorite, 2% Disseminated Magnetite

x Angular Float or Subcrop
::: Outcrop

- - - Geological Contact
~~~ Fault

x 846148 (10, 1.0, 3, 2, 5, 152) (Au ppb, Ag ppm, As ppm, Sb ppm, Hg ppb, Cu ppb)  
□ 3256 Government Survey Stream Sediment Anomaly

chl Chlorite  
epi Epidote  
cp Chalcopyrite  
hm Hematite  
py Pyrite  
cb Carbonate

**GEOLOGICAL BRANCH ASSESSMENT REPORT**

**13,507**

METRES  
200 0 200 400 600 800



SELCO DIVISION -  
BP RESOURCES CANADA LIMITED

**KWAN I PROPERTY**  
**TAKLA PROJECT - B.C.**  
**GEOLOGY**

|                    |                        |                   |
|--------------------|------------------------|-------------------|
| SCALE 1:10,000     | DRAWN BY: N. HUMPHREYS | FIG. 2            |
| DATE DECEMBER 1984 | DRAFTED BY: S. G.      |                   |
| N.T.S. 93 N / 11E  | PROJ. 10215            | REPORT BPVR-84-27 |