

185-40-13505

ASSESSMENT REPORT ON THE
1984 GEOLOGICAL AND GEOCHEMICAL EXPLORATION ACTIVITIES
TWIN 1 CLAIMS

OMINECA MINING DIVISION
NTS 93N/11

Located approximately 46 km West of Manson Creek
Latitude 55°36' North; Longitude 125°12'

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

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,505

BPVR 84-22

Neil Humphreys
December, 1984

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1.

SUMMARY

The Twin 1 property consists of 20 claim units near Germansen Lake, northwest of Fort St. James, B.C. The claims were staked to cover a government geochemical survey lead-silver-tungsten stream sediment anomaly.

The claims are underlain by Takla Group andesite and dacite lapilli tuffs and flows.

No significant alteration or mineralization was found on the property.

A weak arsenic soil anomaly approximately 700 metres long was found in the central part of the claims.

Additional soil sampling and prospecting in the area of the anomaly is recommended.

INTRODUCTION

The 20 unit, Twin 1 property, was staked to cover a low-order lead-silver-tungsten anomaly found by the government geochemical reconnaissance program. Work consisting of geological mapping, prospecting and soil sampling was carried out between July 18 to 21, 1984 by Neil Humphreys, geologist, and Lyndon Miller, field assistant.

LOCATION AND ACCESS (Fig. 1)

NTS 93N/11E, Latitude 55°36', Longitude 125°12', Omineca Mining Division.

The claims are located near the headwaters of Kwanika and Twin Creeks, 18 km southwest of Germansen Lake, and 88 km northwest of Fort St. James. The claims straddle the Manson Creek to Takla Landing road and can be reached in about four hours by truck from Fort St. James.

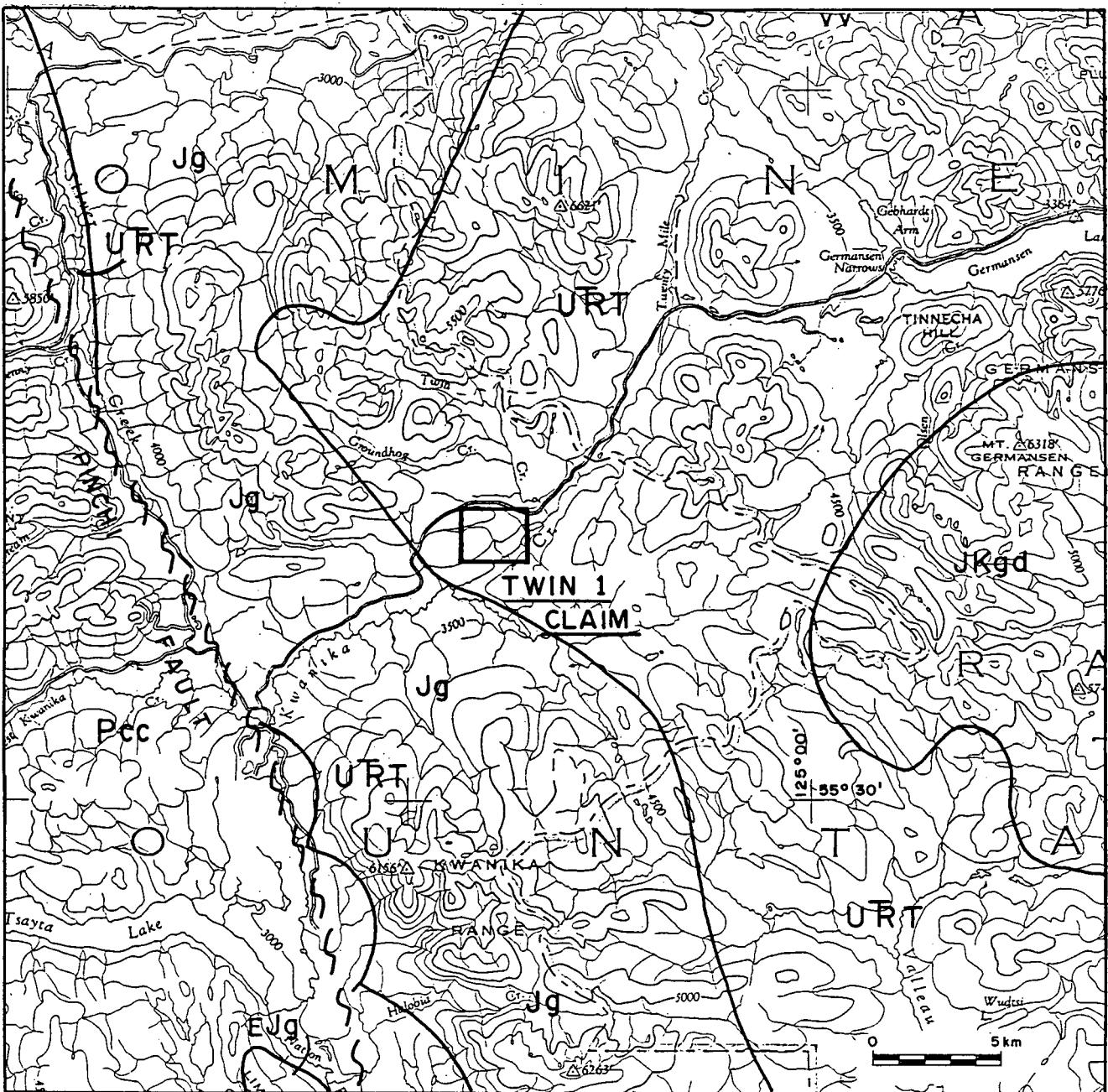
CLAIM STATUS

		<u>RECORD #</u>	<u>RECORDING DATE</u>
TWIN 1	20 Units	6474	20 July, 1984

TOPOGRAPHY AND VEGETATION

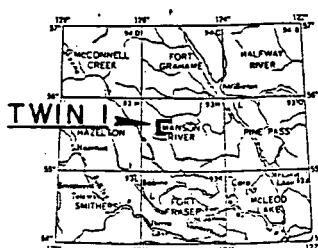
The property lies on the gently rolling north bank of Kwanika Creek which crosses the southeastern corner of the claims. Relief ranges from 1250 metres at the north end of the claims to 1050 metres at Kwanika Creek.

Spruce, pine and balsam fir trees cover most of the property. Swampy drainages are common, particularly in the central part of the claims, but traversing is easy over most of the property.



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
PRub	UPPER PALAEZOIC - TRIASSIC TREMBLEUR INTRUSIONS
Pcc	UPPER PALAEZOIC CACHE CREEK GROUP



**SELCO DIVISION -
BP RESOURCES CANADA LIMITED**
TWIN 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 84-22

REGIONAL GEOLOGY (Fig. 1)

The Twin claims lie 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 15 km west of the property and forms the western boundary of the Quesnel Trough.

Minor amounts of placer gold have been recovered over the years from Twin Creek, immediately east of the property. No other mineral occurrences are known in the near vicinity of the claims.

PROPERTY GEOLOGY (Fig. 2)

Outcrop is very sparse on the property except for a zone along the creek that parallels the road and the northern claim line. The outcrop and angular float that have been found suggest that the property is underlain entirely by Takla Group volcanic rocks.

Most of the outcrop seen is of two rock types; a maroon or green andesite lapilli tuff or breccia and a massive, maroon dacite flow rock. Bedding found in one outcrop indicates that the volcanics strike northwesterly and dip at about 30° to the northeast.

No significant mineralization or alteration was found on the property. The volcanics rocks are fresh with the exception of minor disseminated epidote occurring locally in the fragmental rocks. Up to 5% magnetite is disseminated in the volcanic rocks, but this is almost certainly of magmatic origin.

One piece of angular float, containing fracture fillings of chalcocite and hematite, was found in the northern part of the property. The rock is a leucocratic, aphanitic intrusive(?) unlike any outcrop or other float seen in the area. A sample from the float (846389) was anomalous only in copper (248 ppm).

GEOCHEMISTRY

A total of 91 soil, 16 stream sediment samples and one rock sample were collected on and near the Twin 1 claims. Soil samples were collected from banks along the anomalous stream and its tributary and from a reconnaissance line along the southern edge of the property. Soil horizons are generally well developed and most samples were collected from the 'B' soil horizon at a depth of 30

cm. The samples were analyzed for 30 elements by ICP and for gold by AA by Acme Analytical Labs at Vancouver. Overburden is probably not more than a few metres thick in most places on the claims.

The anomalous values in the government silt sample (1773) were not reproduced in BP-Selco samples collected along the 'anomalous creek'. A BP-Selco sample (846357) was collected from a branch of this creek that was anomalous in lead (20 ppm) and copper (127 ppm). This branch is only a few hundred metres long but is likely here where the anomalous government sample was collected.

The most significant anomaly found is an arsenic soil anomaly near the centre of the claims. Values range from 17 - 363 ppm arsenic for 9 samples over an area 700 metres long. Some single sample anomalies of zinc, antimony and copper are found within this zone.

CONCLUSIONS AND RECOMMENDATIONS

Little of interest was seen on the Twin 1 property. The rocks are fresh and only traces of sulphide were seen except in one piece of float found near the centre of the claims.

The weak arsenic soil anomaly is in an area where outcrop was not found and it is thus not possible to explain the source of the higher arsenic values. Outcrop found about 300 metres west of the anomaly is of fresh lapilli tuff.

A day should be spent prospecting and doing detailed soil sampling over the arsenic anomaly. This could be done easily and cheaply as the anomaly is only a few hundred metres from the access road to Fort St. James.

APPENDIX A
ROCK SAMPLE DESCRIPTIONS

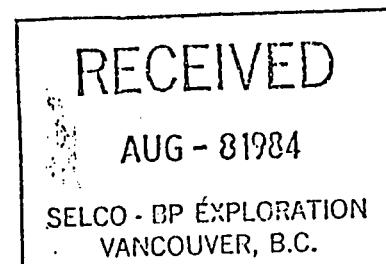
APPENDIX AROCK SAMPLE DESCRIPTIONS

SAMPLE #	DESCRIPTIONS	ANOMALOUS VALUES
846389	FLOAT: leucocratic, very fine grained, equigranular felsic intrusive(?) with chalcocite, malachite, hematite along fractures.	248 ppm Cu 495 ppm Ba

APPENDIX B
GEOCHEMICAL RESULTS

BP-SELCO MINING PROJECT# 904 REPORT# 84-20-045 JOB# 84-293 INVOICE# 8103 FILE# 84-191B PAGE # 9

SAMPLE #	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	SR	CD	SB	Bi	V	Ca	P	La	Cr	Mg	BA	Tl	B	Al	Na	K	V	Au#	Hg
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	I	PPM	PPM	I	PPM	I	PPM	I	PPM	I	PPM	PPB									
846381	1	10	10	34	.3	20	6	261	2.76	2	2	ND	2	12	1	2	2	57	.16	.07	2	100	.50	80	.04	2	.89	.01	.04	2	ND	
846382	1	15	12	19	.1	21	7	246	2.69	3	2	ND	2	22	1	2	2	58	.35	.03	2	103	.43	185	.03	5	.62	.01	.05	2	ND	
846383	1	13	10	37	.1	30	8	393	2.74	3	2	ND	2	9	1	2	2	51	.14	.10	3	108	.55	77	.03	5	1.10	.01	.03	2	ND	
846384A	2	28	1	32	.1	11	6	581	2.23	5	2	ND	2	35	1	2	2	41	.35	.09	5	54	.53	138	.03	5	.78	.02	.11	2	ND	
846384B	2	30	6	33	.1	8	5	581	2.40	5	2	ND	3	37	1	2	2	44	.38	.11	6	46	.51	181	.03	4	.80	.02	.09	2	ND	
846385A	2	27	7	35	.1	7	6	578	2.33	5	2	ND	2	33	1	2	4	43	.35	.09	6	52	.53	137	.03	3	.76	.02	.10	2	ND	
846385B	3	27	1	36	.4	10	6	590	2.28	3	2	ND	2	33	1	2	2	41	.35	.10	5	54	.54	142	.03	7	.75	.03	.10	2	ND	
846386	2	17	5	39	.3	11	5	191	2.58	4	2	ND	2	13	1	2	2	51	.15	.09	5	36	.40	175	.01	2	1.24	.01	.04	2	ND	
846387	3	28	5	31	.1	10	5	439	2.74	2	2	ND	3	26	1	2	4	53	.27	.10	6	48	.49	146	.02	2	1.16	.02	.08	2	5	
846388	2	32	1	43	.4	15	7	337	3.38	3	2	ND	3	34	1	2	3	74	.39	.16	6	46	.58	124	.06	5	1.71	.02	.09	2	15	
846389	2	248	21	18	.4	81	10	466	1.11	12	5	ND	2	248	1	3	2	34	1.92	.17	5	66	.35	495	.08	15	1.35	.01	.01	2	10	5



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	BI	V	BA	SR	AL	CA	MG	K	TI	P
2	2	45	100	25	.8	.3	.45	.02	.02	.07
4	4	55	150	30	1	.35	.6	.04	.04	.09
6	6	60	200	35	1.75	.4	.7	.06	.06	.11
8	8	70	250	40	2	.5	1	.08	.08	.13
10	10	80	300	50	2.5	.6	1.4	.1	.1	.15
12	12	100	400	100	3	1	2	.12	.12	.2

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	BI	V	BA	SR	AL	CA	MG	K	TI	P
2	2	45	100	15	1.2	.15	.35	.05	.04	.05
4	4	55	125	20	1.5	.22	.7	.07	.06	.1
6	6	65	190	25	1.7	.35	.95	.09	.08	.15
8	8	75	220	35	2.4	.45	1.2	.11	.1	.2
10	10	85	300	40	2.7	.6	1.7	.13	.12	.23
12	12	95	450	75	3.2	.7	2	.2	.15	.3

1000 METERS

TWIN PROPERTY HAZELTON PG - B.C.

1984 STREAM & SOIL SURVEY

PART 2 OF 3

DATE JAN/85 PROJECT 904C/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

MO	CU	PB	ZN	NI	MN	FE	AG	CO	AU	AS
2	30	5	40	15	600	2	.4	4	10	3
4	40	7	50	20	800	2.5	.6	6	20	5
6	60	10	65	25	1000	3	.8	8	30	7
8	80	15	80	30	1200	4	1	10	40	9
10	100	18	100	40	1500	6	1.2	15	50	11
12	125	20	125	45	5000	6.4	1.5	20	75	20

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	25	6	42	16	250	2.6	.4	8	10	4
4	40	9	50	22	400	3	.6	10	20	6
6	60	12	70	30	700	3.8	.8	12	30	16
8	75	14	75	40	1400	4.8	1	14	40	20
10	100	18	95	50	1500	5.1	1.2	19	50	35
12	150	20	110	65	2000	6	1.5	22	75	50

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TWIN PROPERTY
HAZELTON PG - B.C.

1984 STREAM & SOIL SURVEY

PART 1 OF 3

DATE JAN/85 PROJECT 904C/10250

NTS 93N/11

SCALE 1: 20000

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

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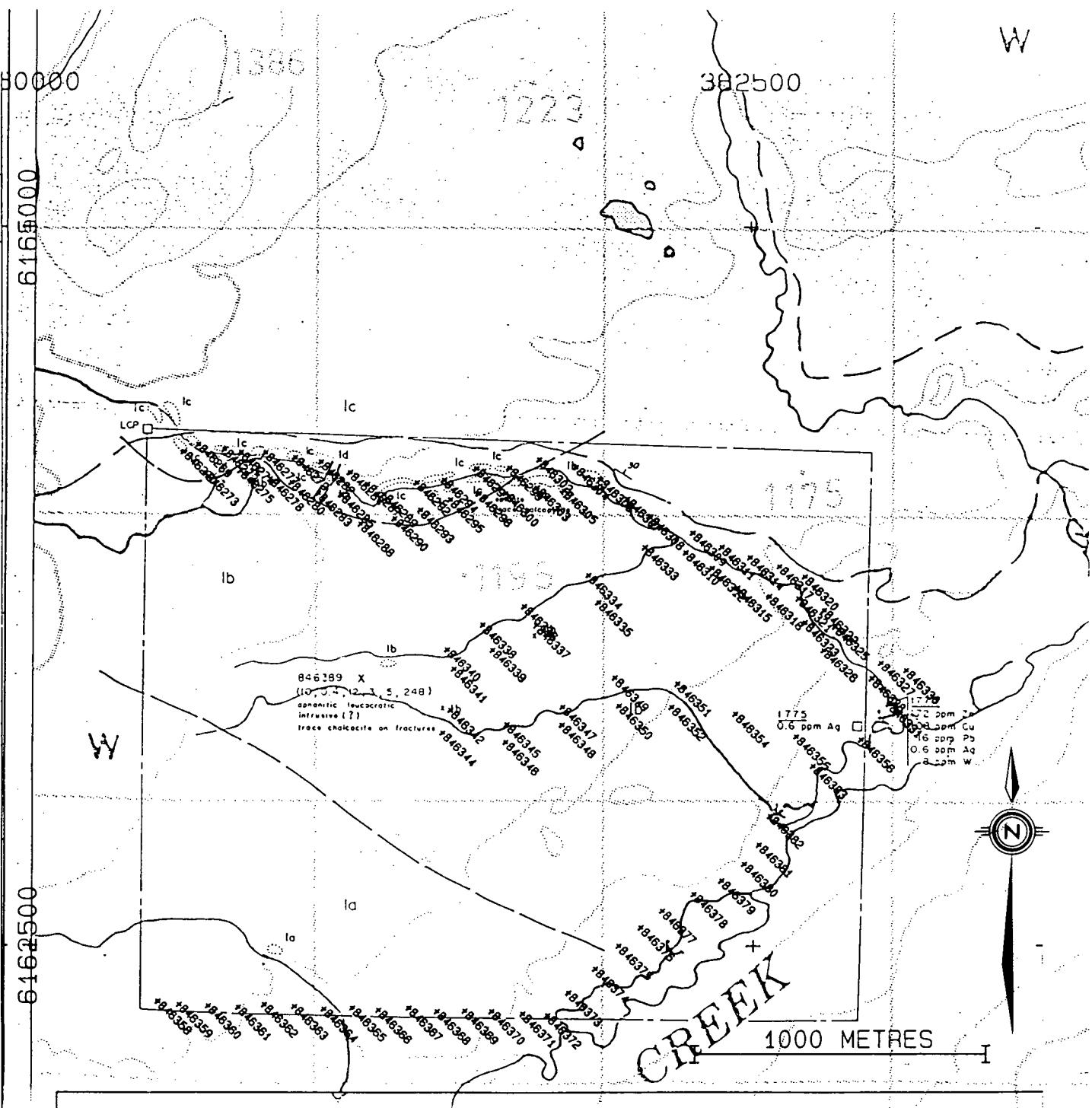
1984 STREAM & SOIL SURVEY

PART 3 OF 3

DATE JAN/85 PROJECT 904C/10250

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TWIN PROPERTY

HAZELTON PG - B.C.

1984 SOIL SAMPLES

SAMPLE LOCATION MAP

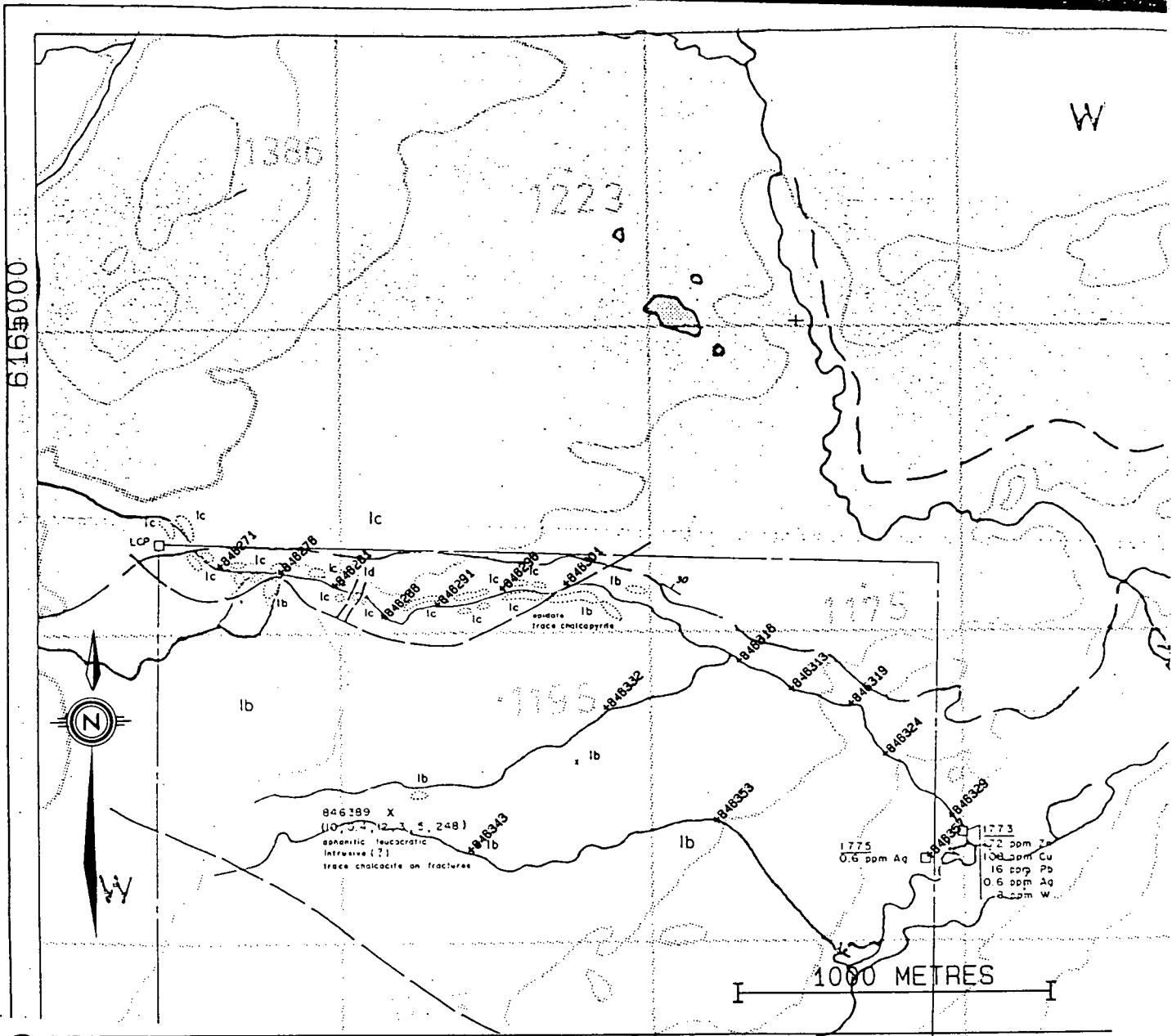
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TWIN PROPERTY HAZELTON PG - B.C.

1984 STREAM SEDIMENT SURVEY

SAMPLE LOCATION MAP

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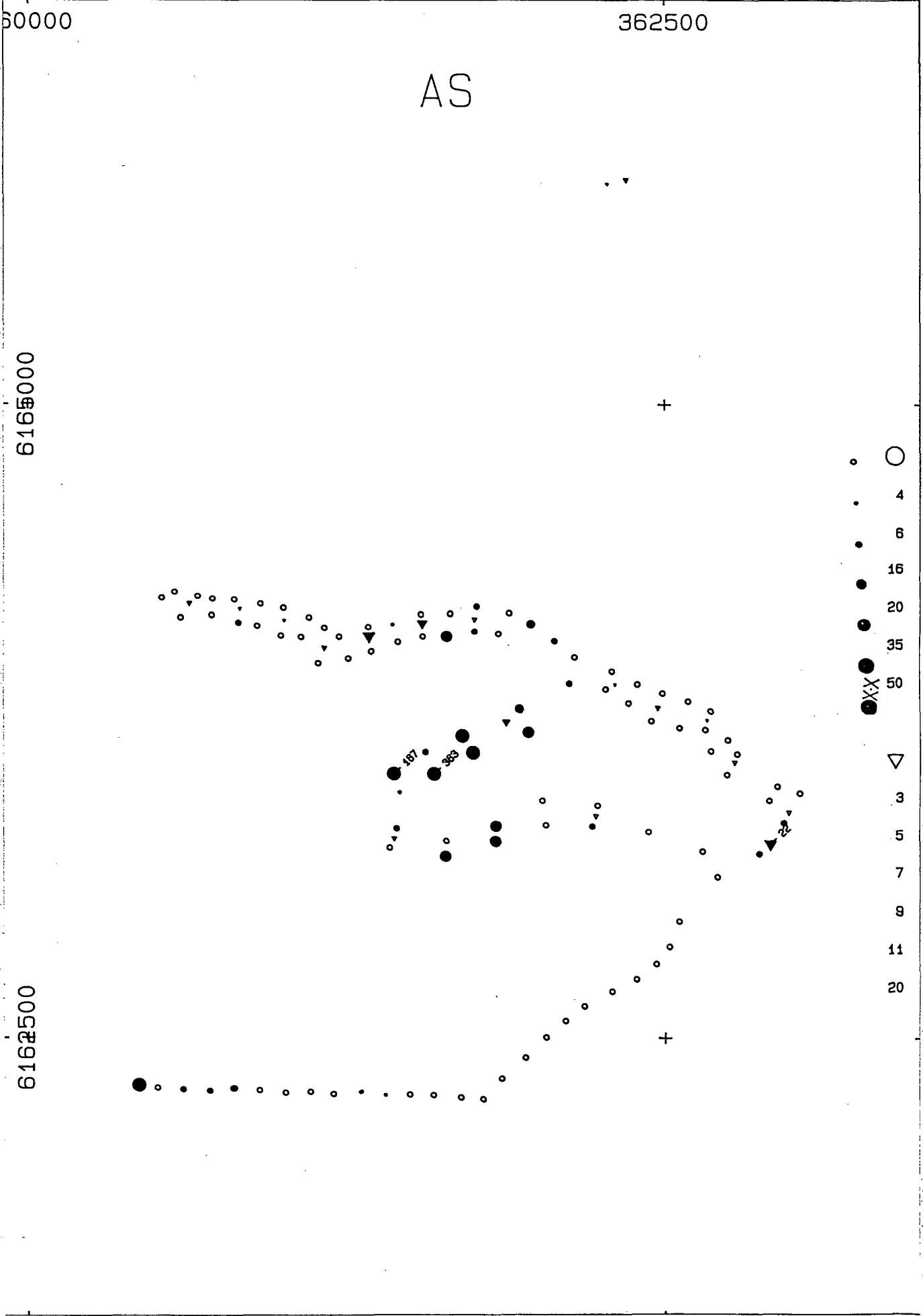
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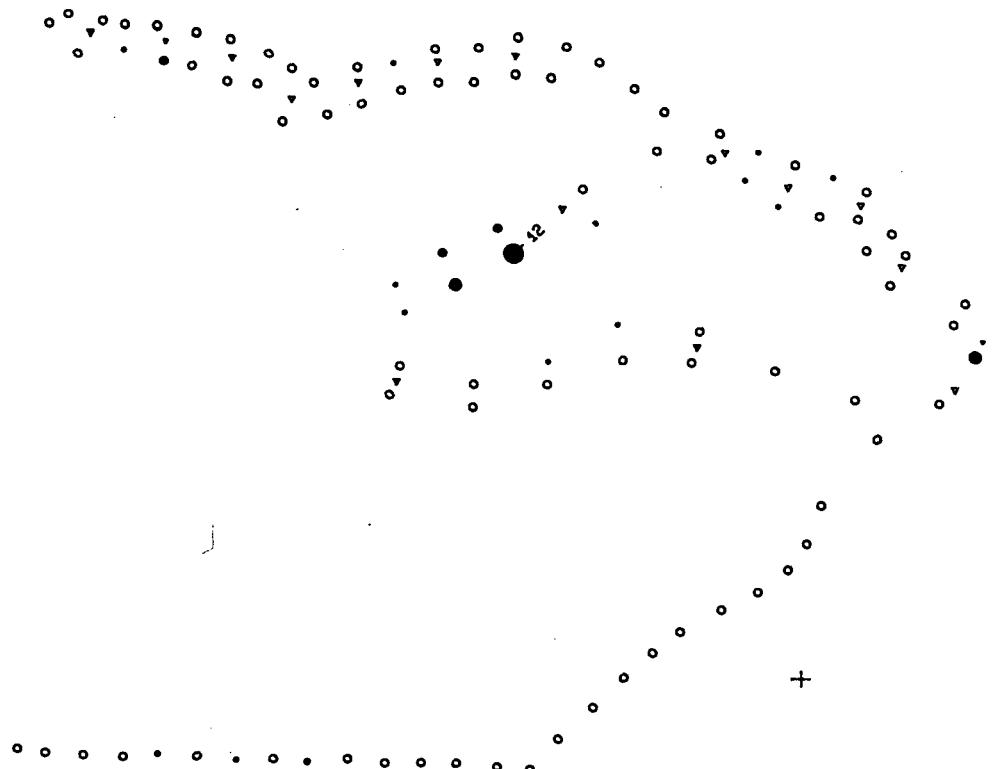
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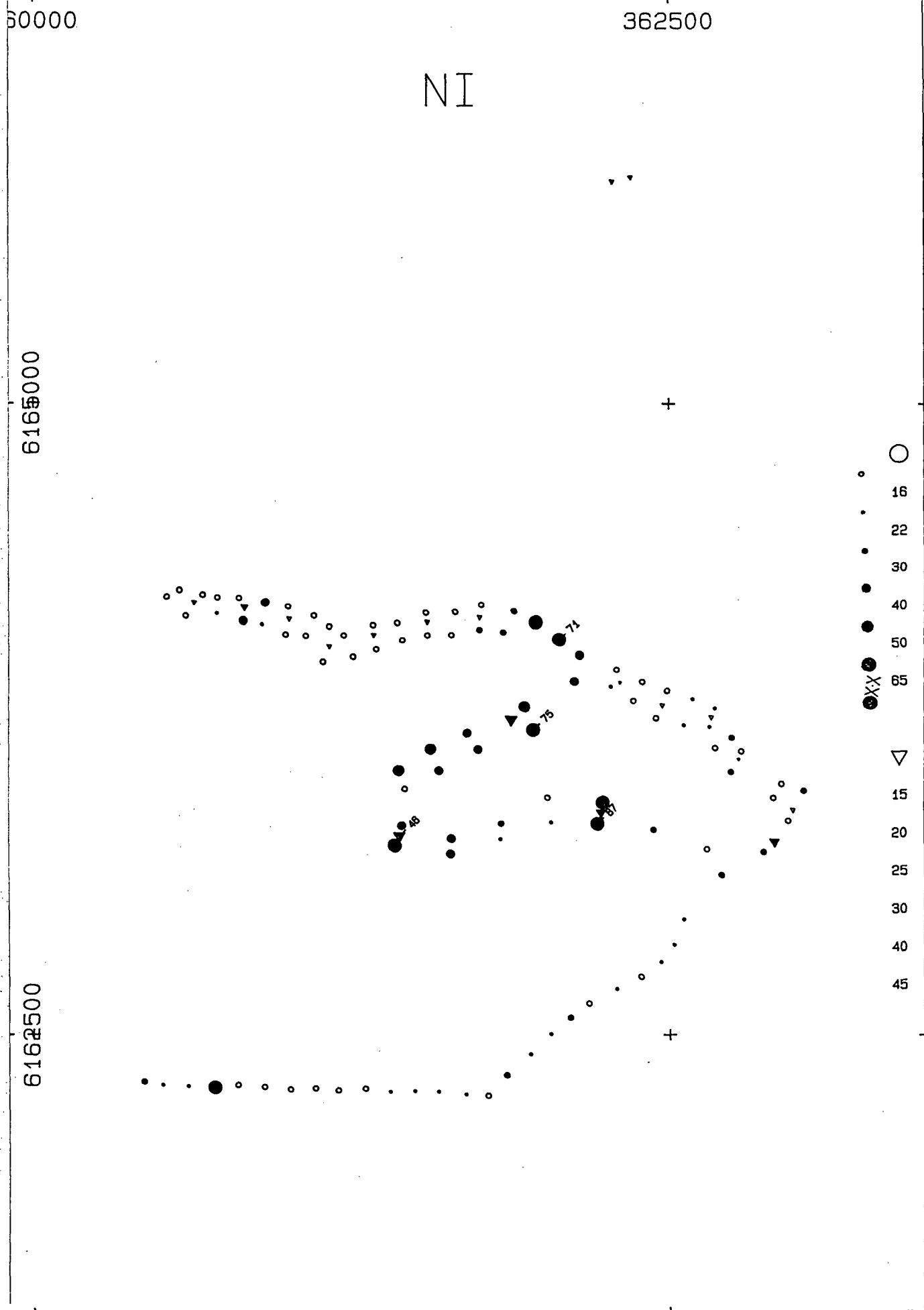
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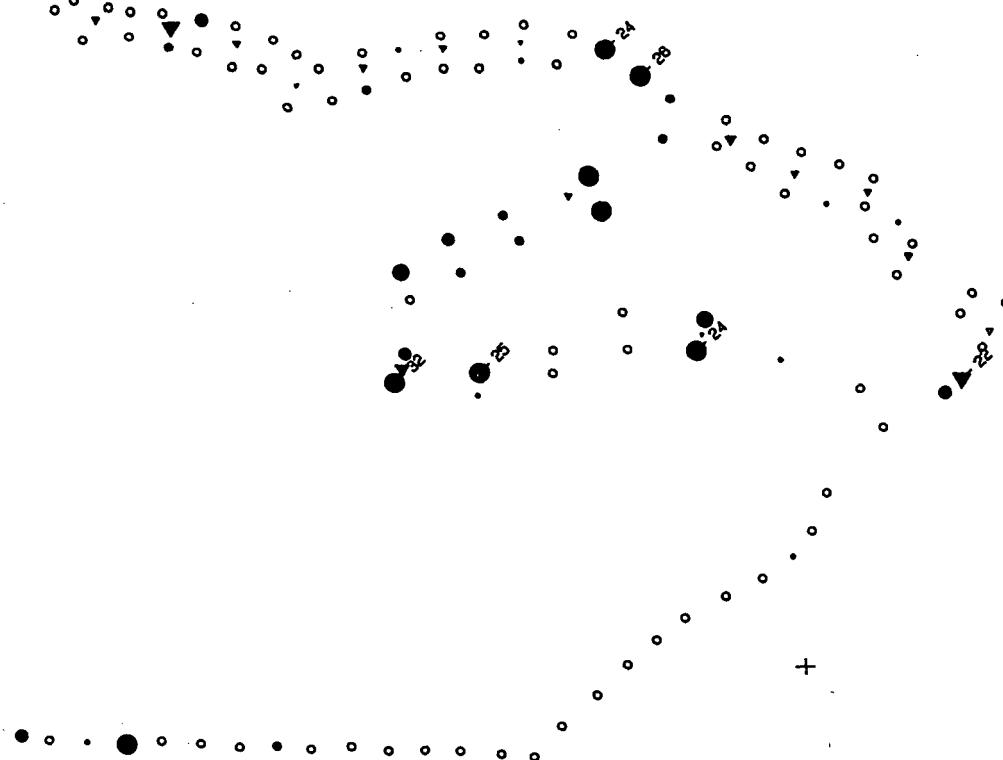
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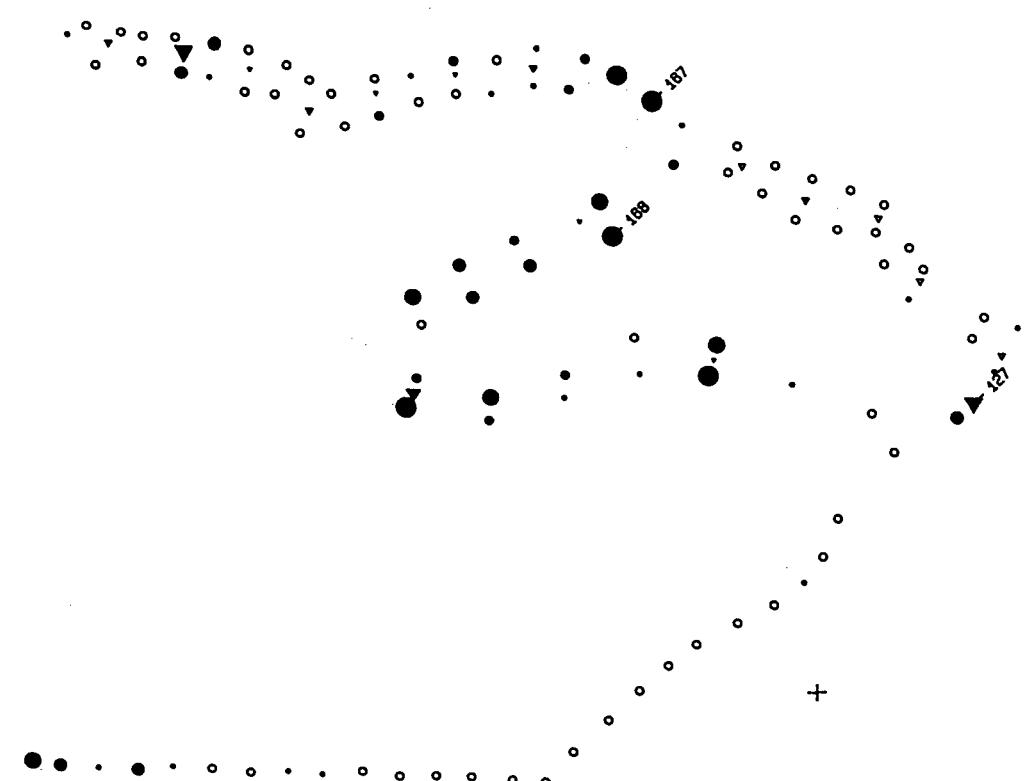
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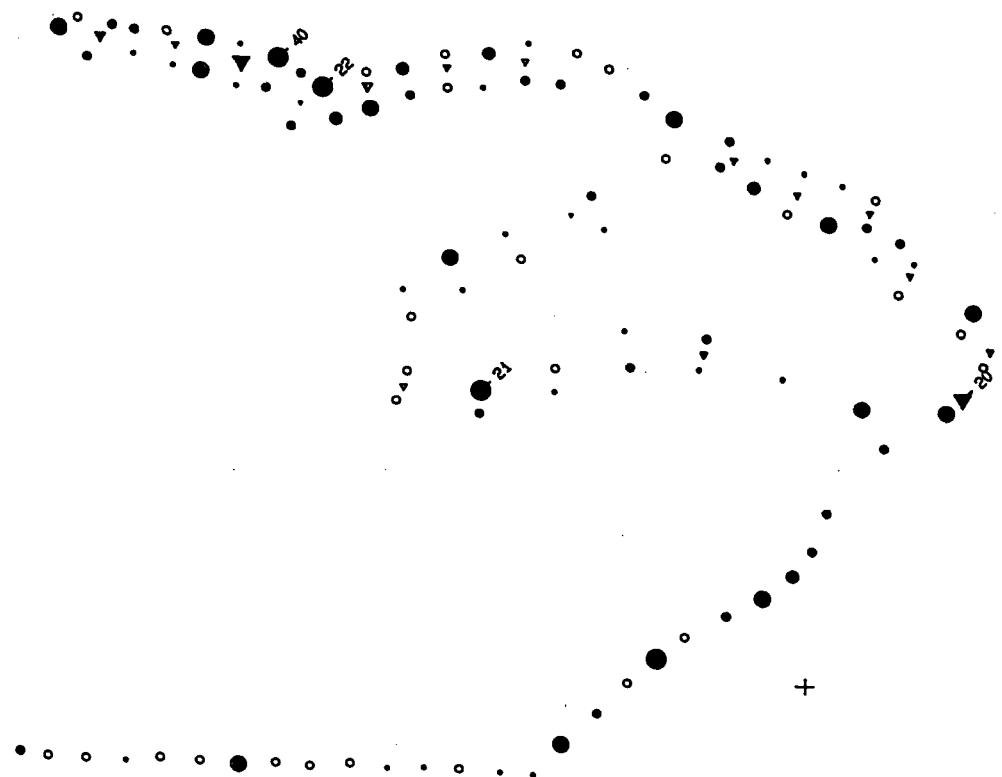
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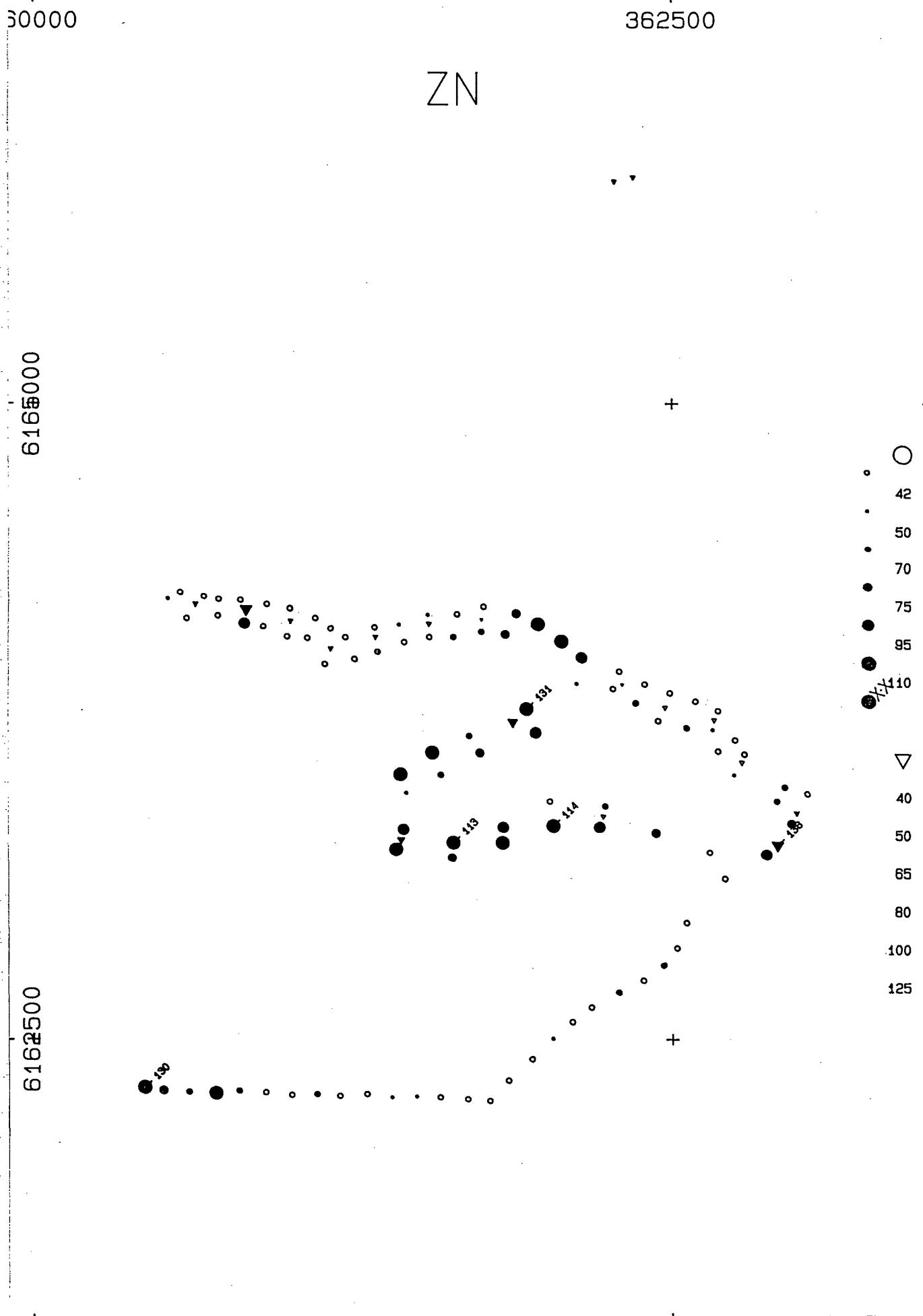
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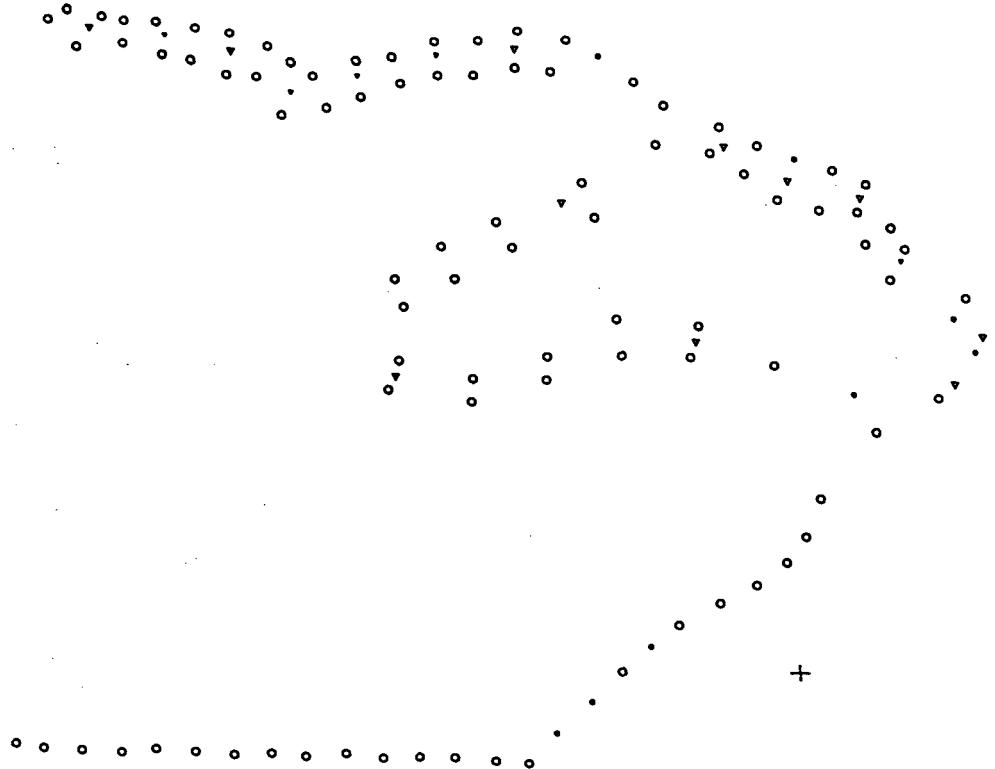
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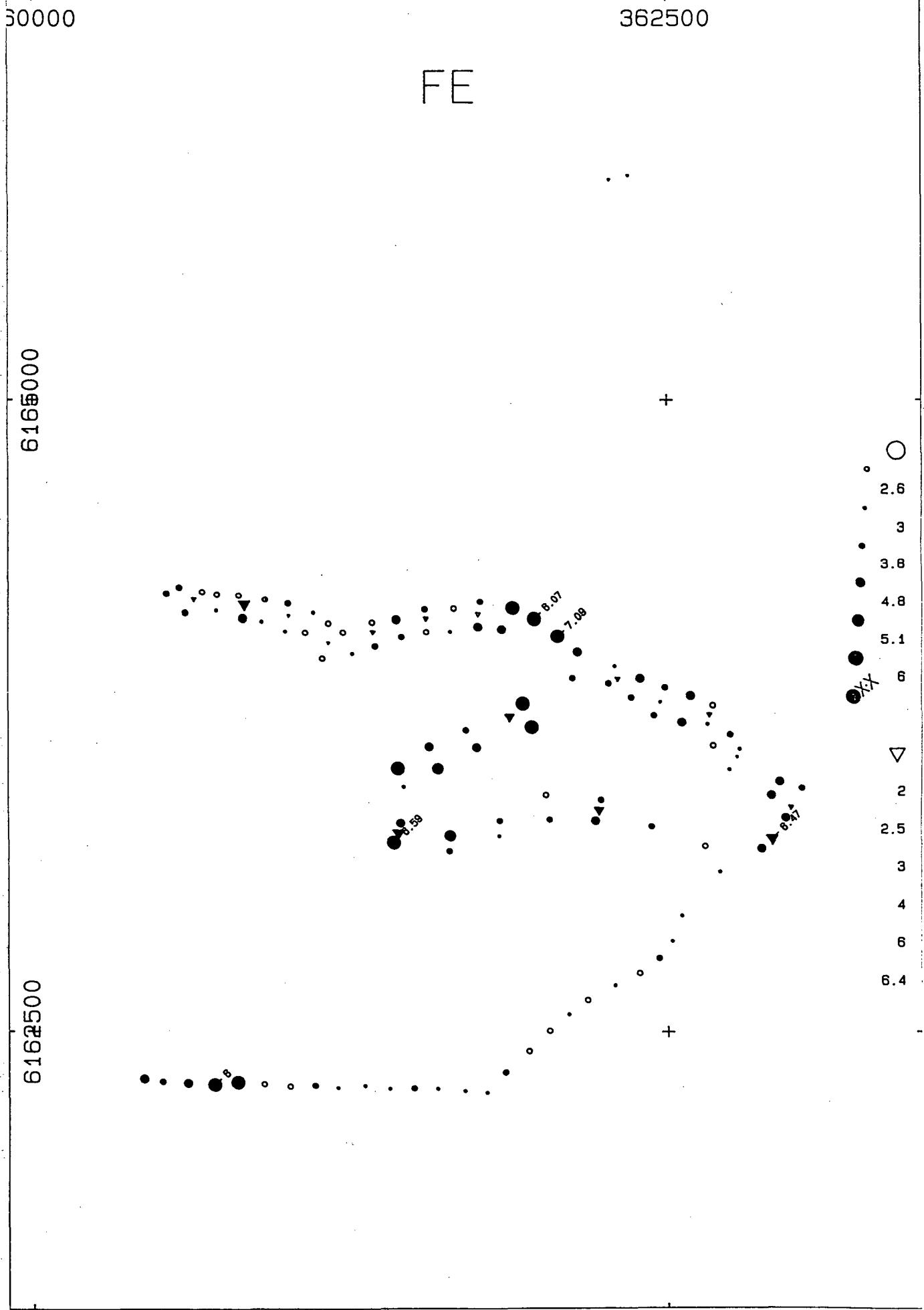
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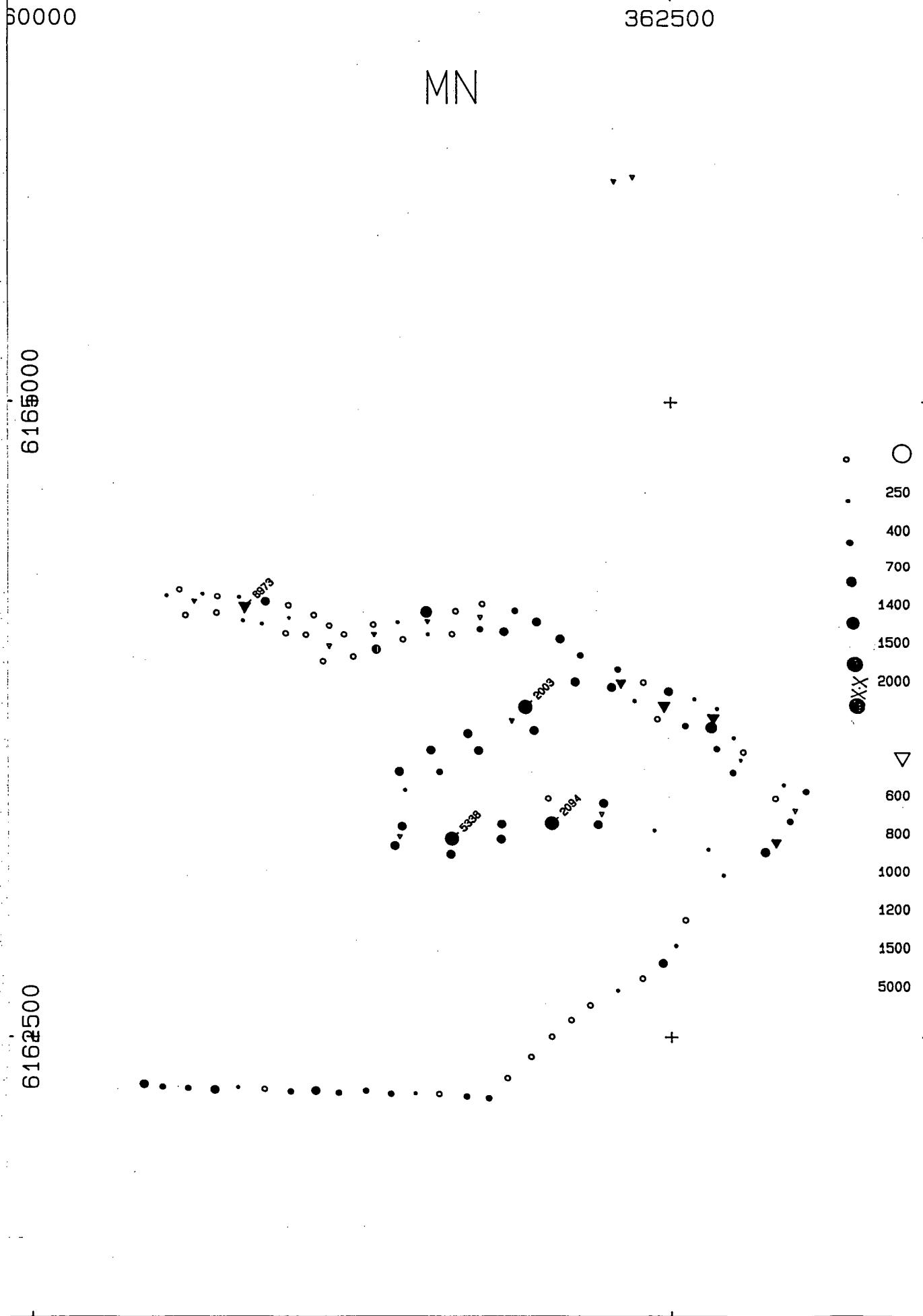
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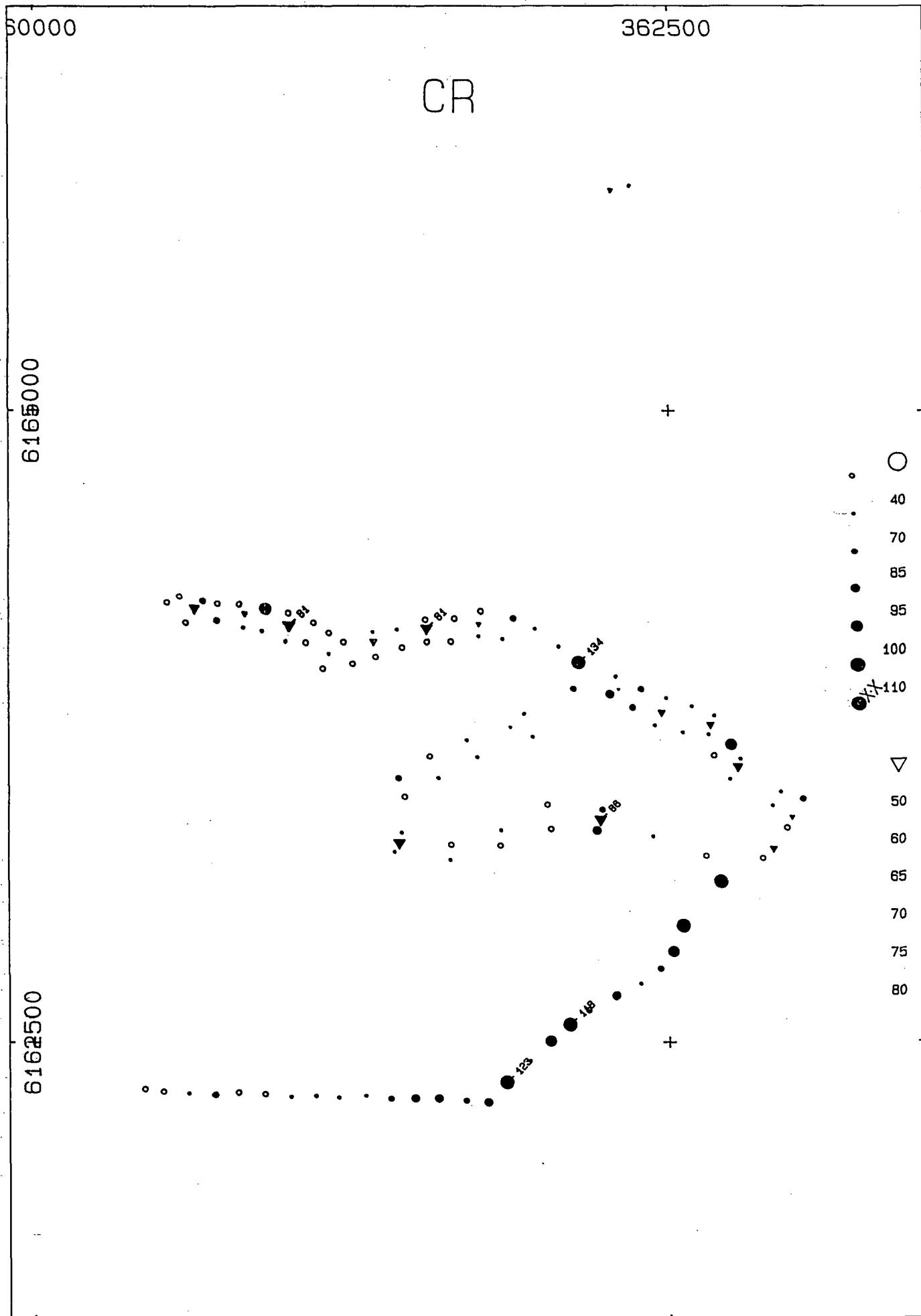
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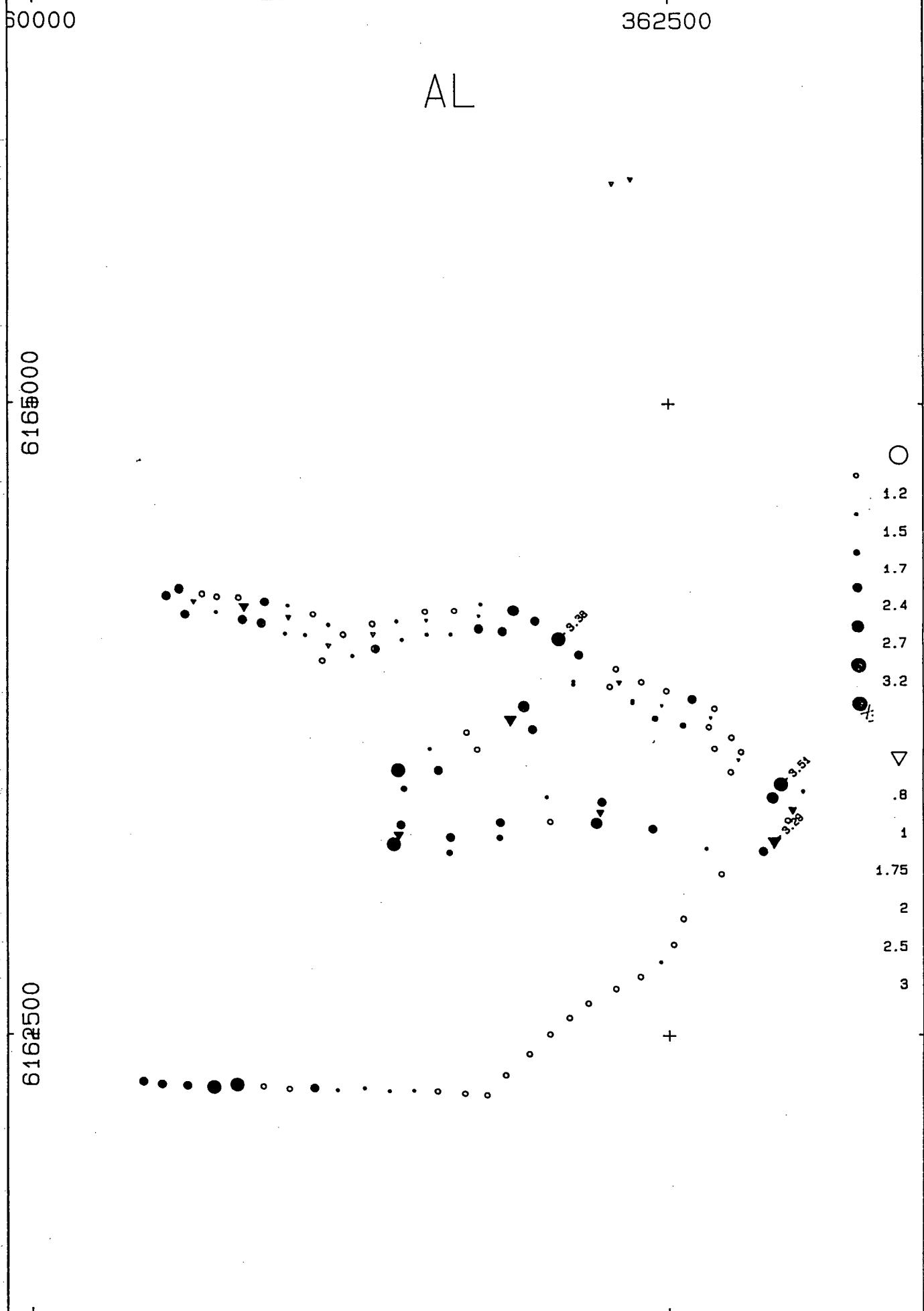
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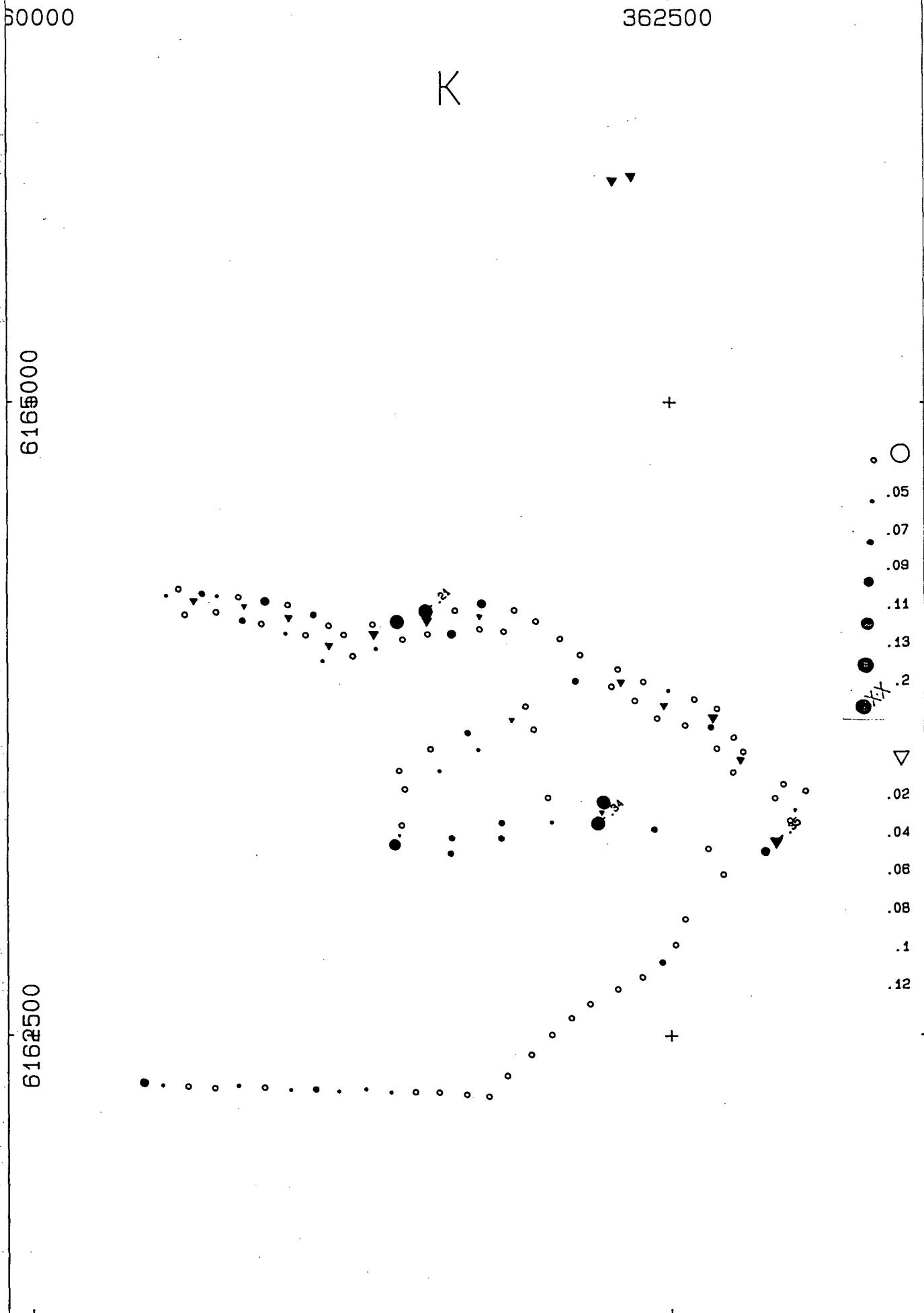












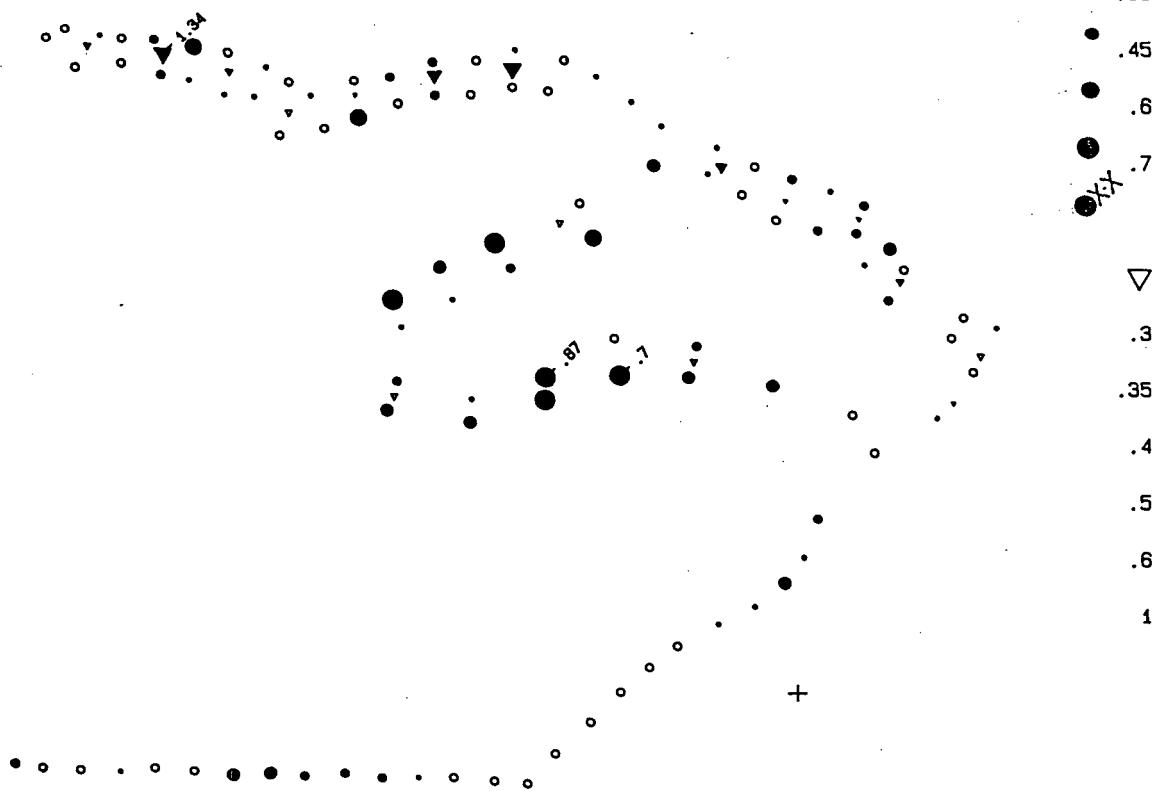
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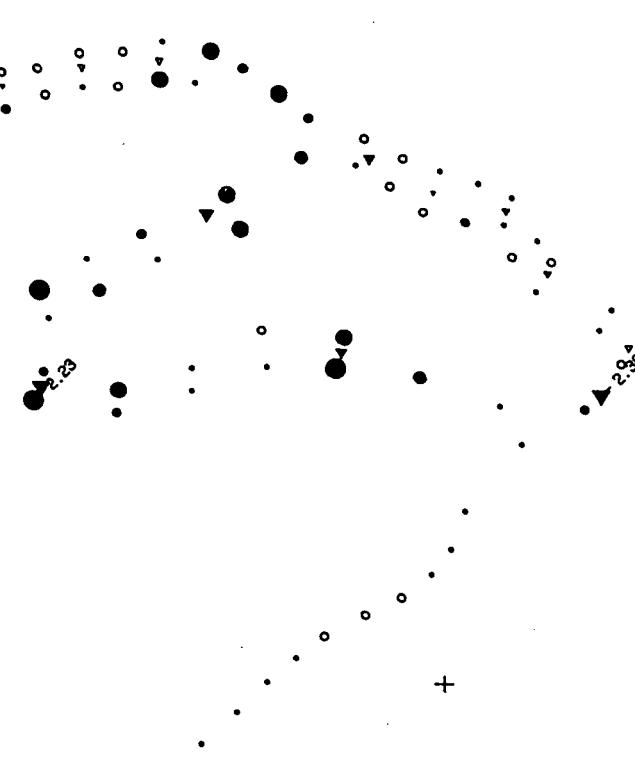
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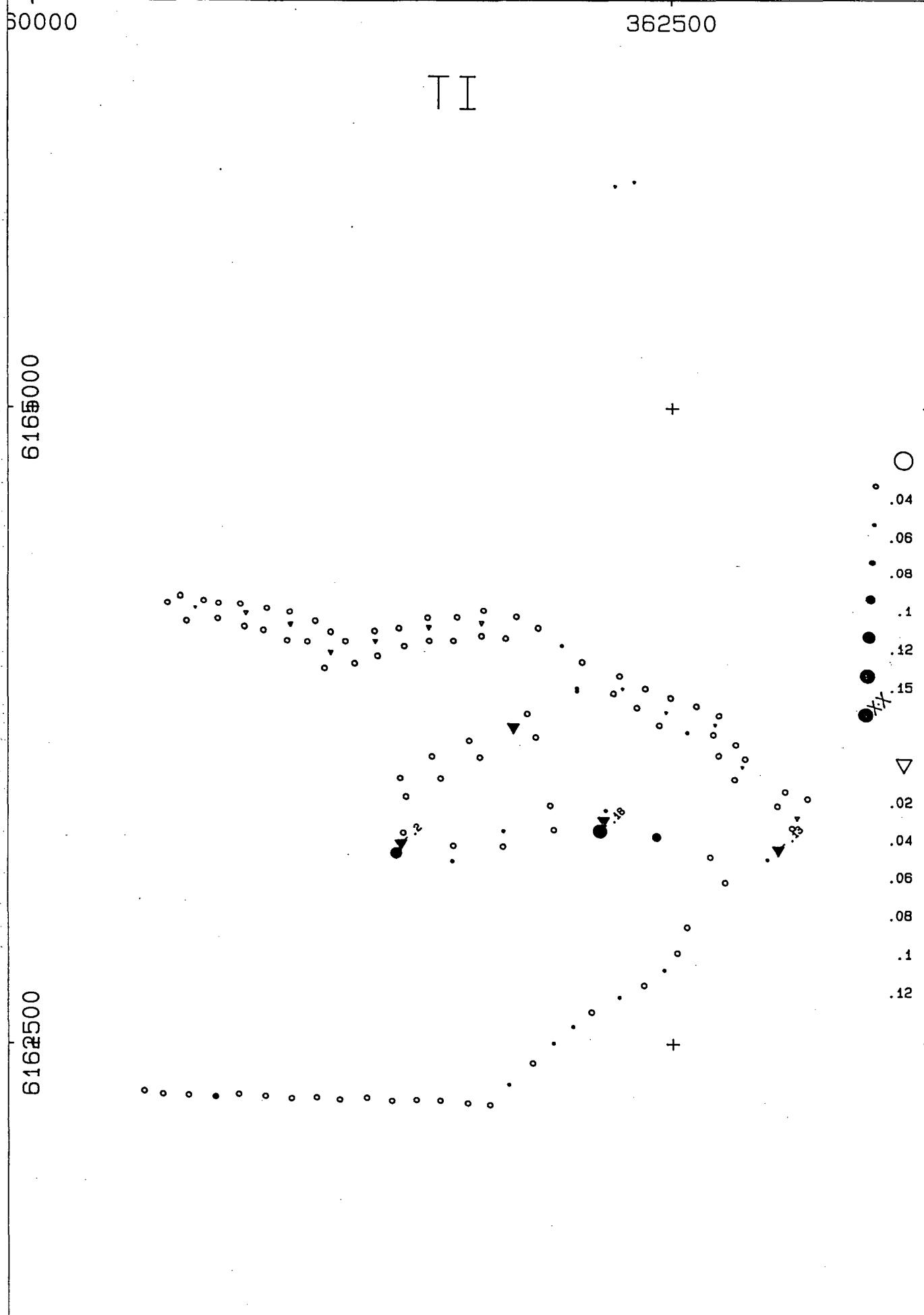
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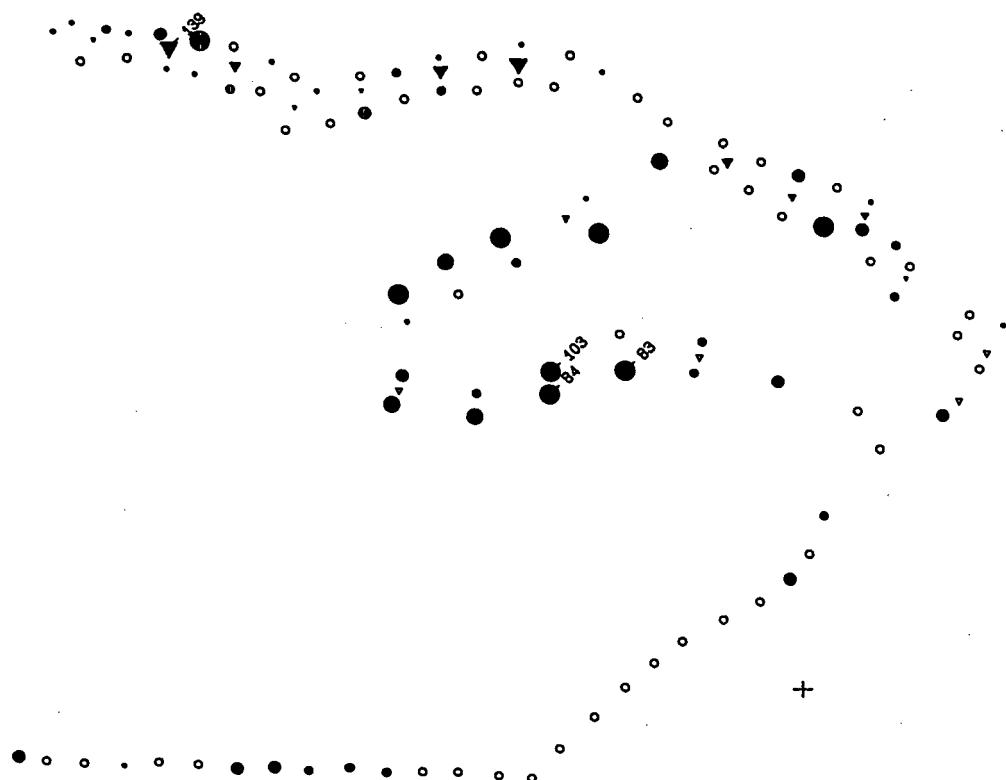
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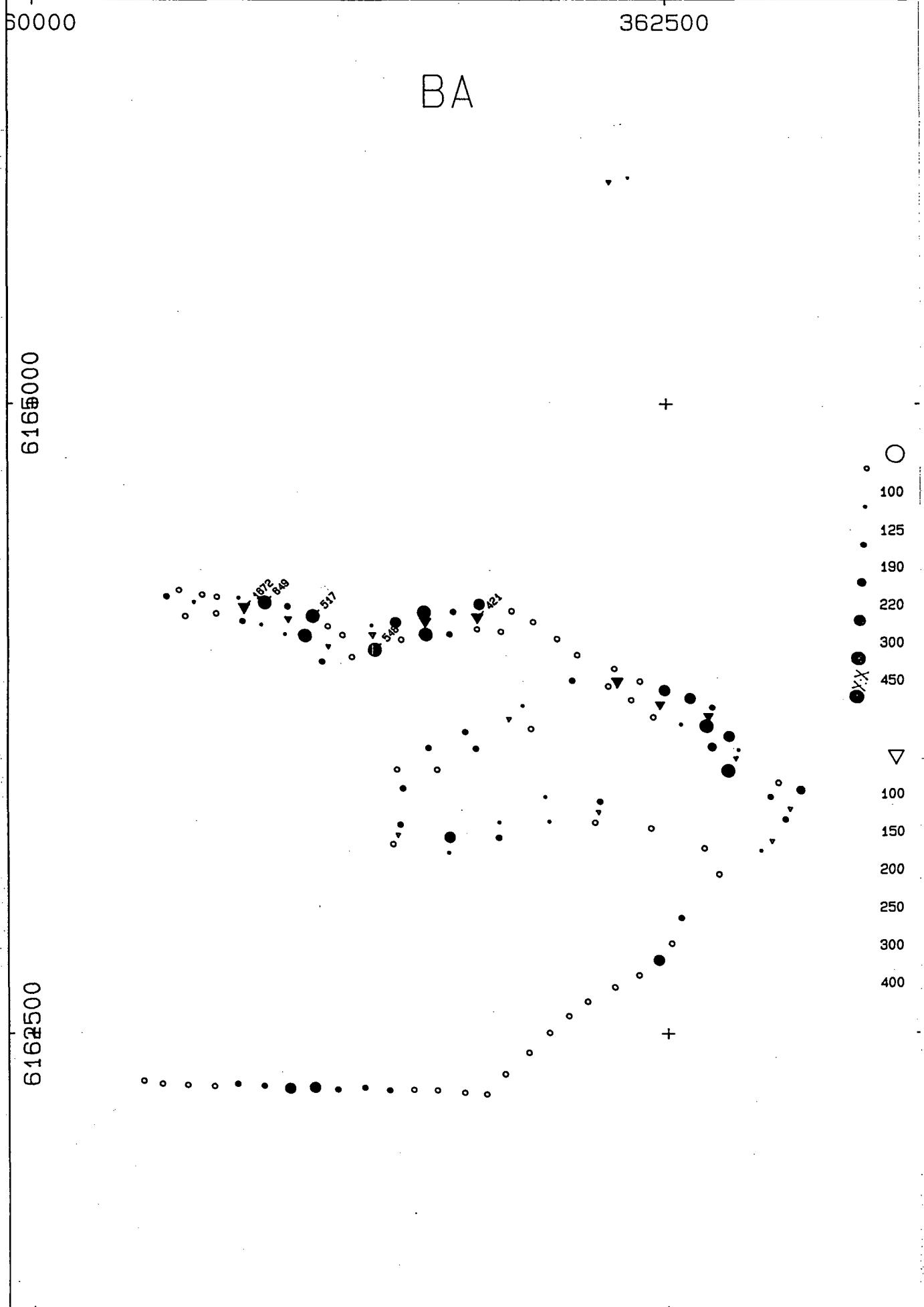
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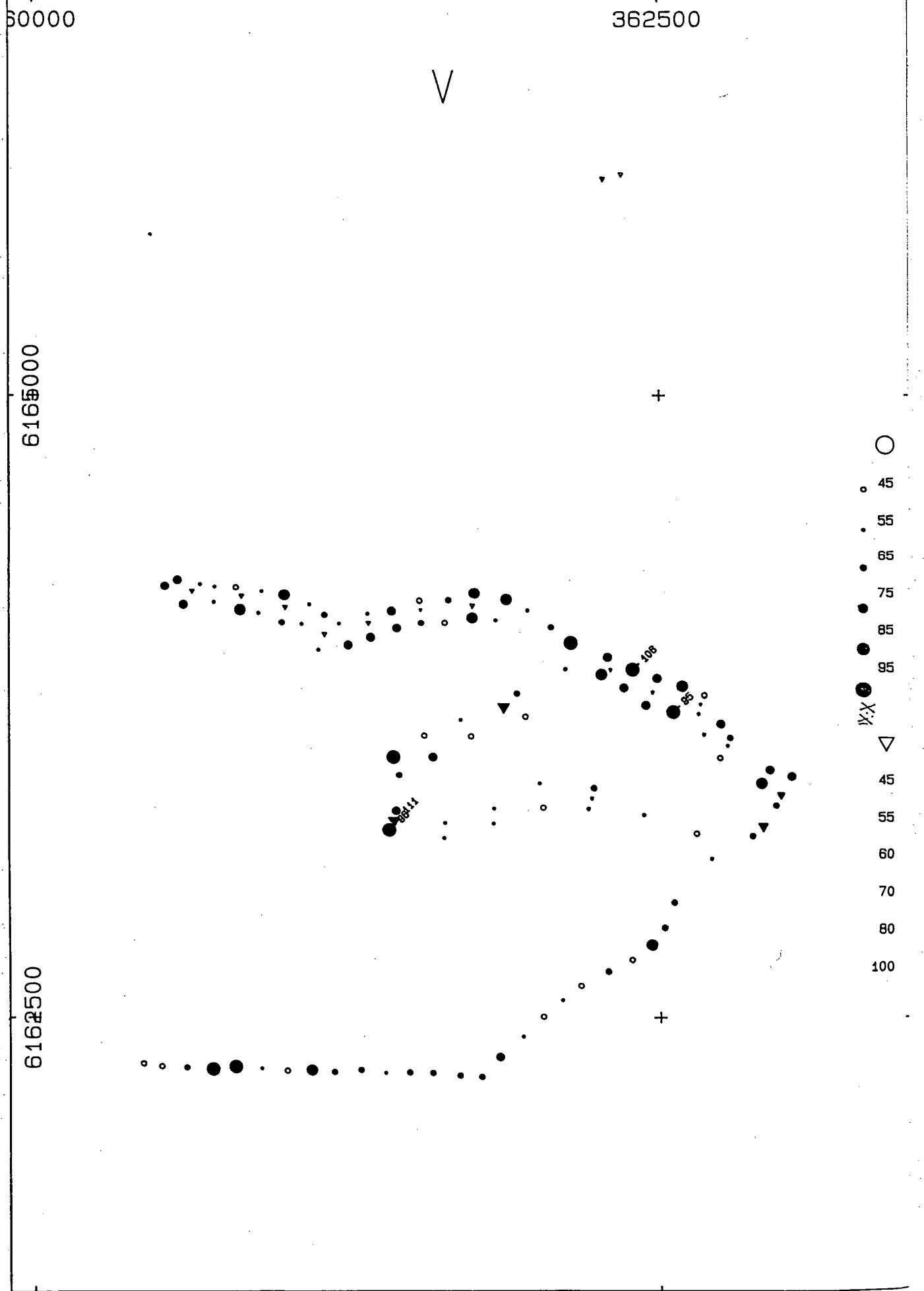
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APPENDIX C
STATEMENT OF COSTS

STATEMENT OF COSTS

TWIN 1

GEOLOGICAL 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)

107 Soil Samples @ \$15.57/sample	1665.99
1 Rock Sample @ \$19.75/sample	19.75

TRANSPORTATION

Helicopter - 1.3 hours @ \$507.32/hour	659.52
Truck Rental - \$50/day - 4 days (included fuel, maintenance, etc.)	200.00

DATA PROCESSING

108 Samples @ \$2.00/sample	216.00
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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	\$5,141.56
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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 TWIN 1 Group of Claims and interpreted results herein.
5. I hold no interest, direct or indirect in the TWIN 1 Group of Claims.

Respectfully submitted,

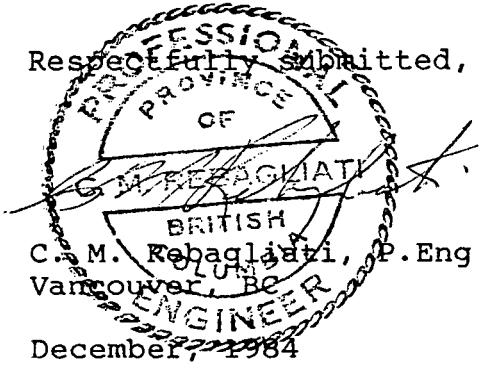
Neil Humphreys
Project Geologist

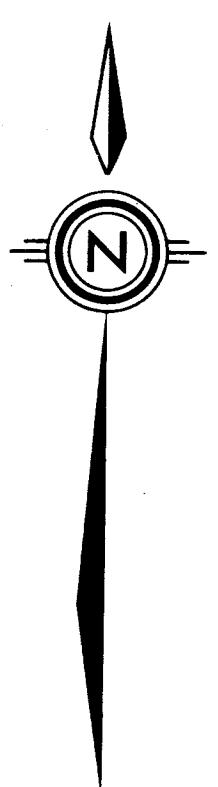
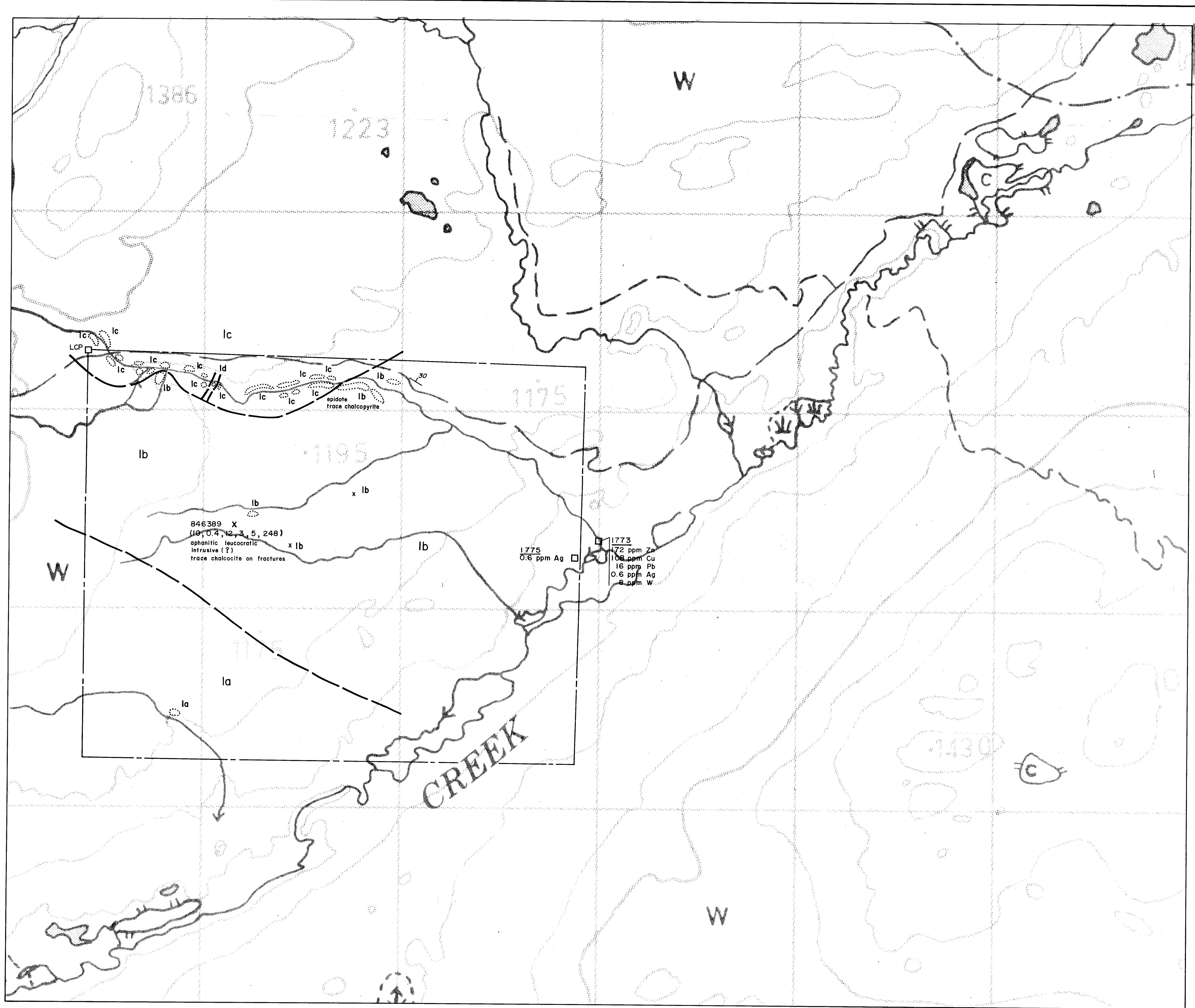
December 1984

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

TRIASSIC

- I TAKLA GROUP
- 1a. Green Andesite Feldspar-Porphyry Flows
 - 1b. Maroon-Green Andesite Lapilli Tuff, Breccia
 - 1c. Maroon Dacite Feldspar-Porphyry Flows
 - 1d. Hornblende Latite Dyke

- x Angular Float or Subcrop
 ● Outcrop
 — Geological Contact
 ↗ Bedding
 Rock Chip Sample Location with Results:
 X 846389 (10, 0.4, 12, 3, 5, 248) (Au ppb, Ag ppm, As ppm, Sb ppm, Hg ppb, Cu ppm)

□ 1773 Government Survey Stream Sediment Anomaly

GEOLOGICAL BRANCH ASSESSMENT REPORT

13,505

200 0 200 400 600 800
METRES

BP SELCO DIVISION -
BP RESOURCES CANADA LIMITED

TWIN I PROPERTY
TAKLA PROJECT - B.C.
GEOLOGY