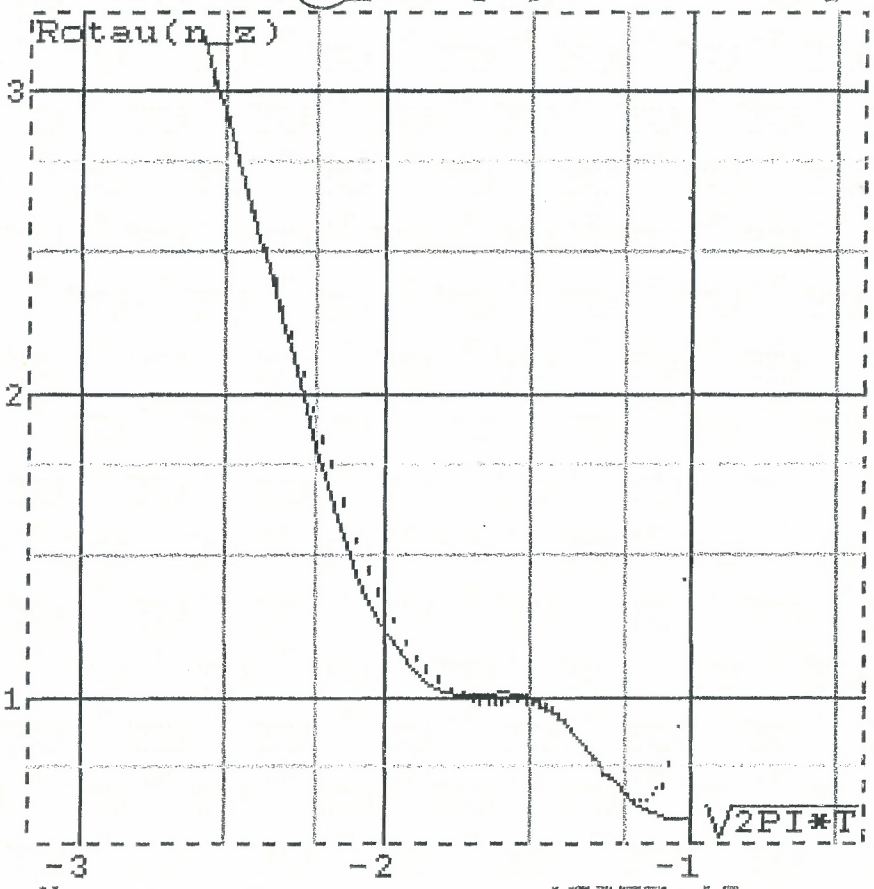
TEM 43

Графический подбор

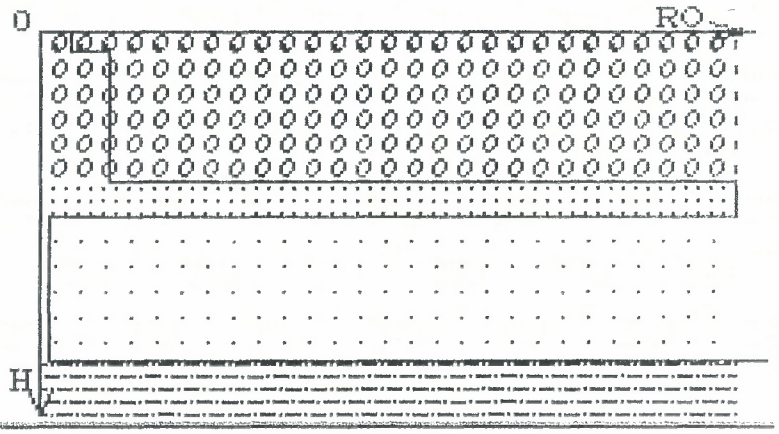
Пикет: va3043_3; Профиль: Номер



Целевая функция = .1585E+12

<Shift>+<PtScreen> - печать, иначе - выход

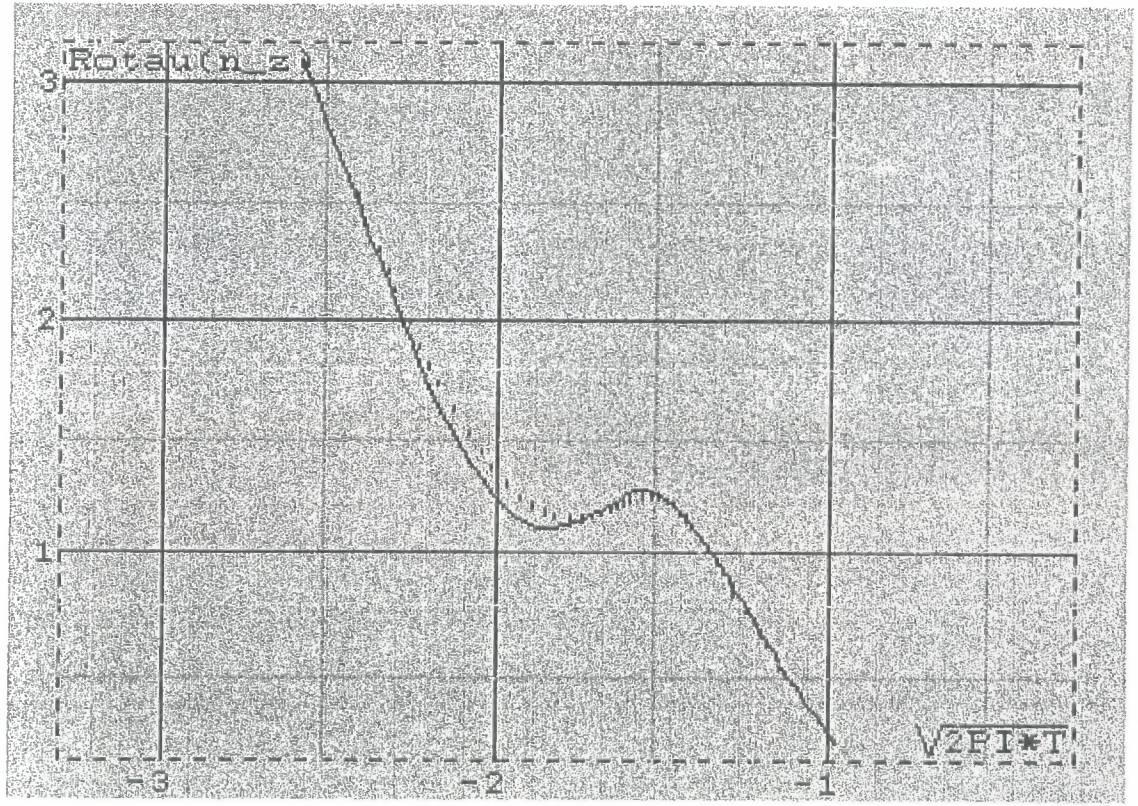
		depth
1	4.50	3.10
2	10.00	25.00
3	100.00	31.00
4	1.50	55.00
5	2000.00	



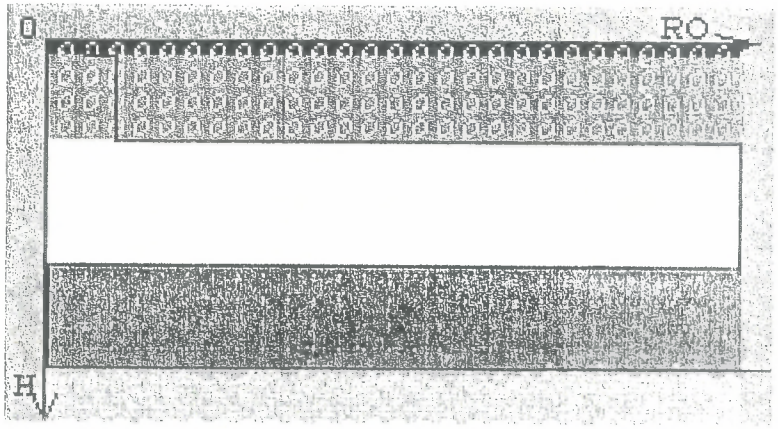
ТЕМ 44

Графический подбор

Решено прямых задач : 1



ρ	dep th
Сопротивление,	Глубина,
5.500	2.300
10.00	15.00
100.00	34.00
.200	50.00
2000.00	Бесконеч.



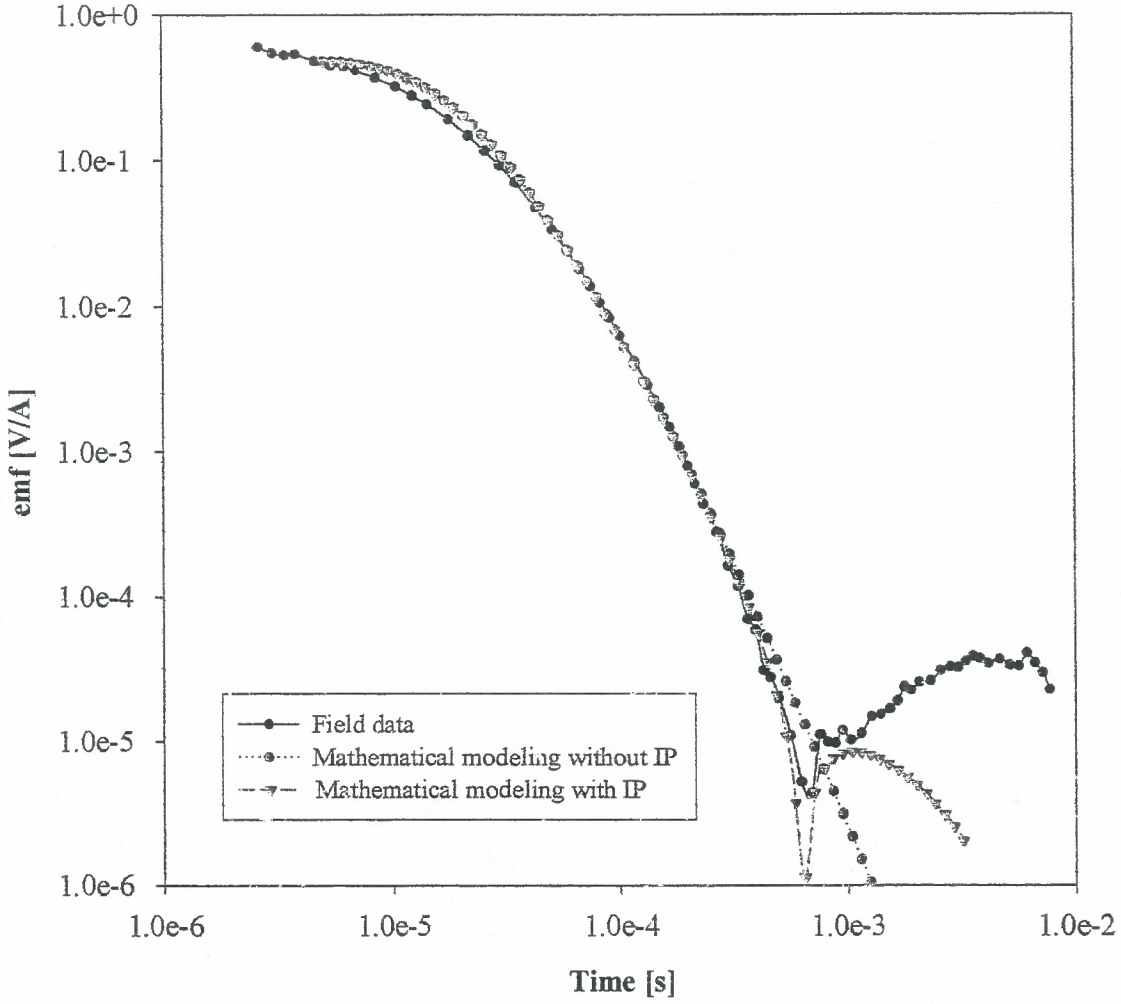
Исходная целевая функция = 5647.13

Текущая целевая функция = 5647.13

Редактирование >

F1 Помощь **F2** Счет **F10** Выход

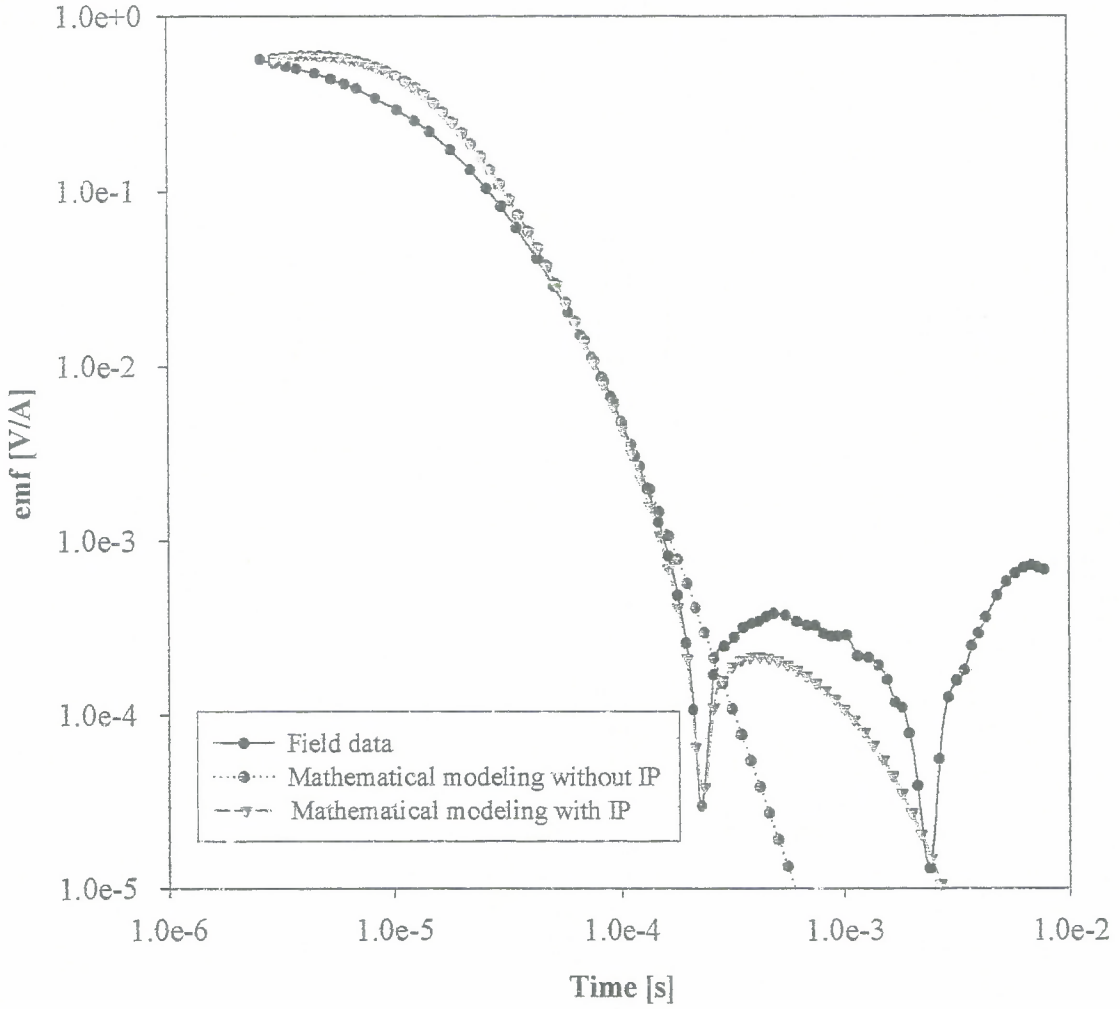
TDEM 45



TDEM 45

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	8.5	11	-	-
2	15	11	-	-
3	19.5	6	1.5	10

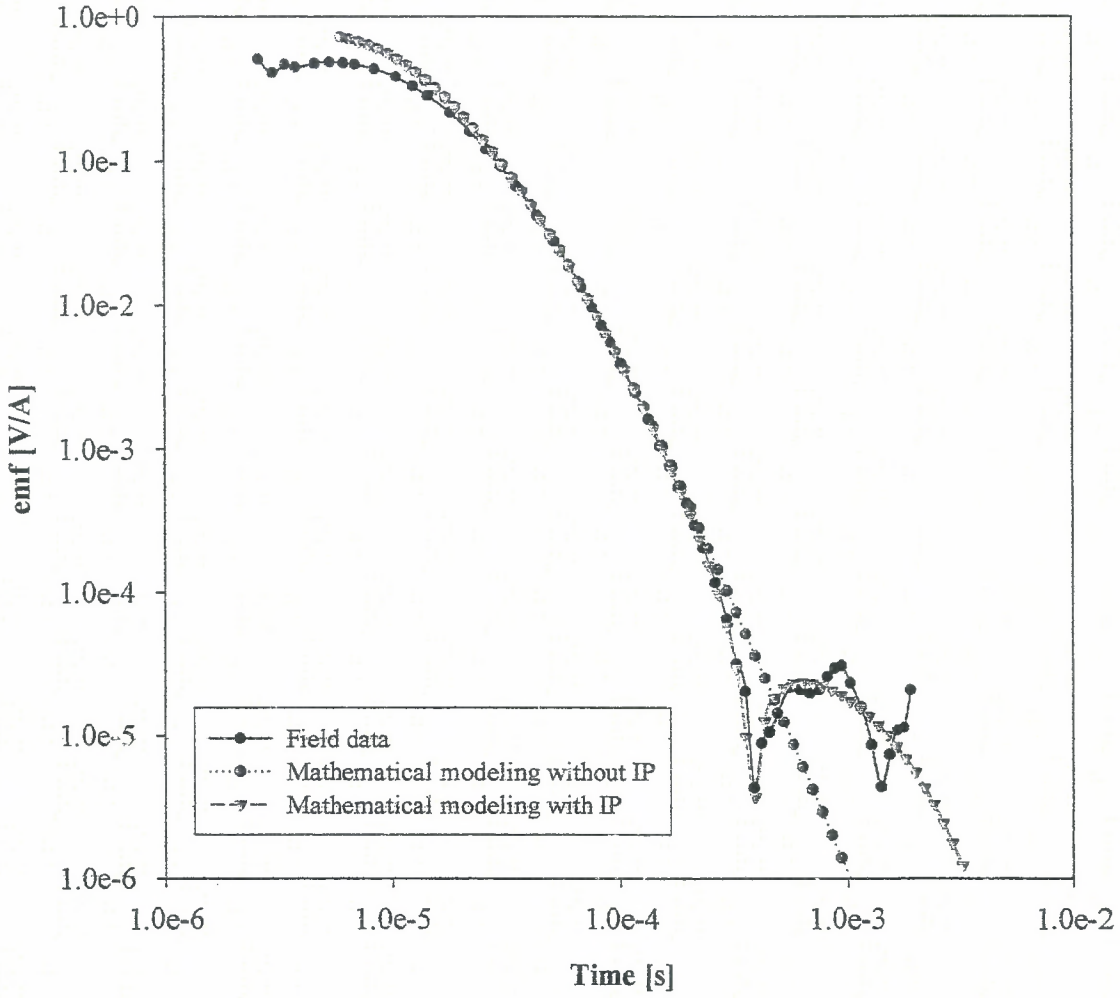
TDEM 46



TDEM 46

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	8.5	9	-	-
2	15	11	0.2	20
3	40	6	0.9	30

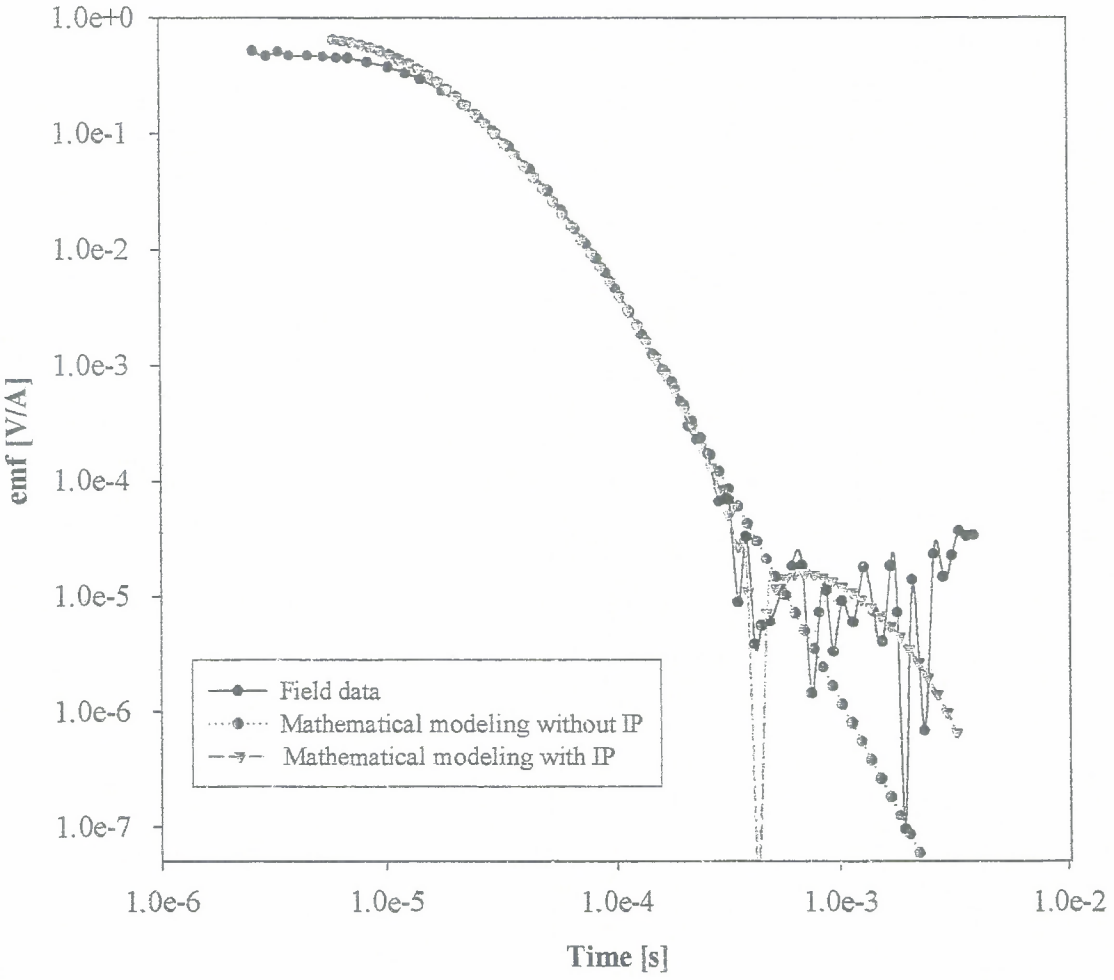
TDEM 47



TDEM 47

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	8.5	7	-	-
2	15	11	-	-
3	40	6	0.9	10

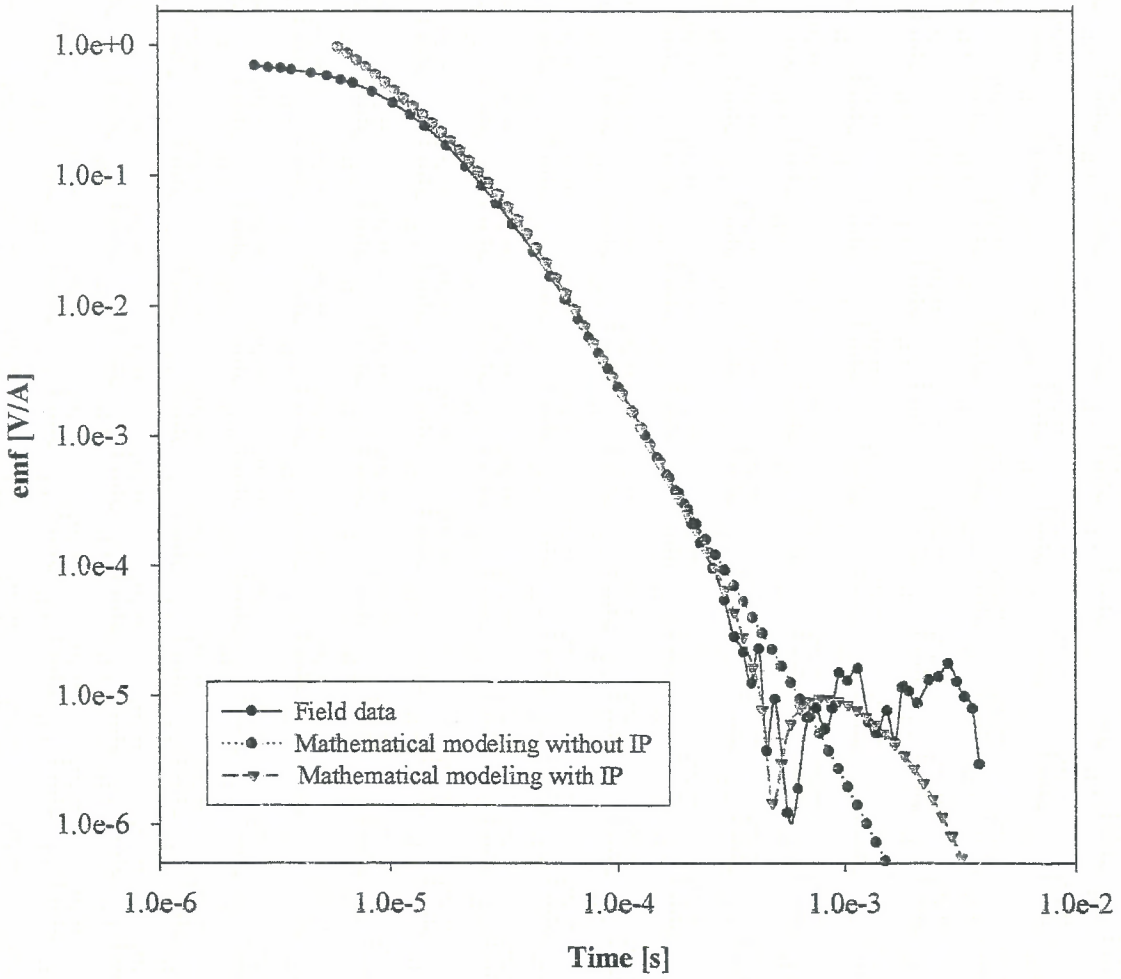
TDEM 48



TDEM 48

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	8.5	8	-	-
2	15	11	-	-
3	40	6	0.8	8.5

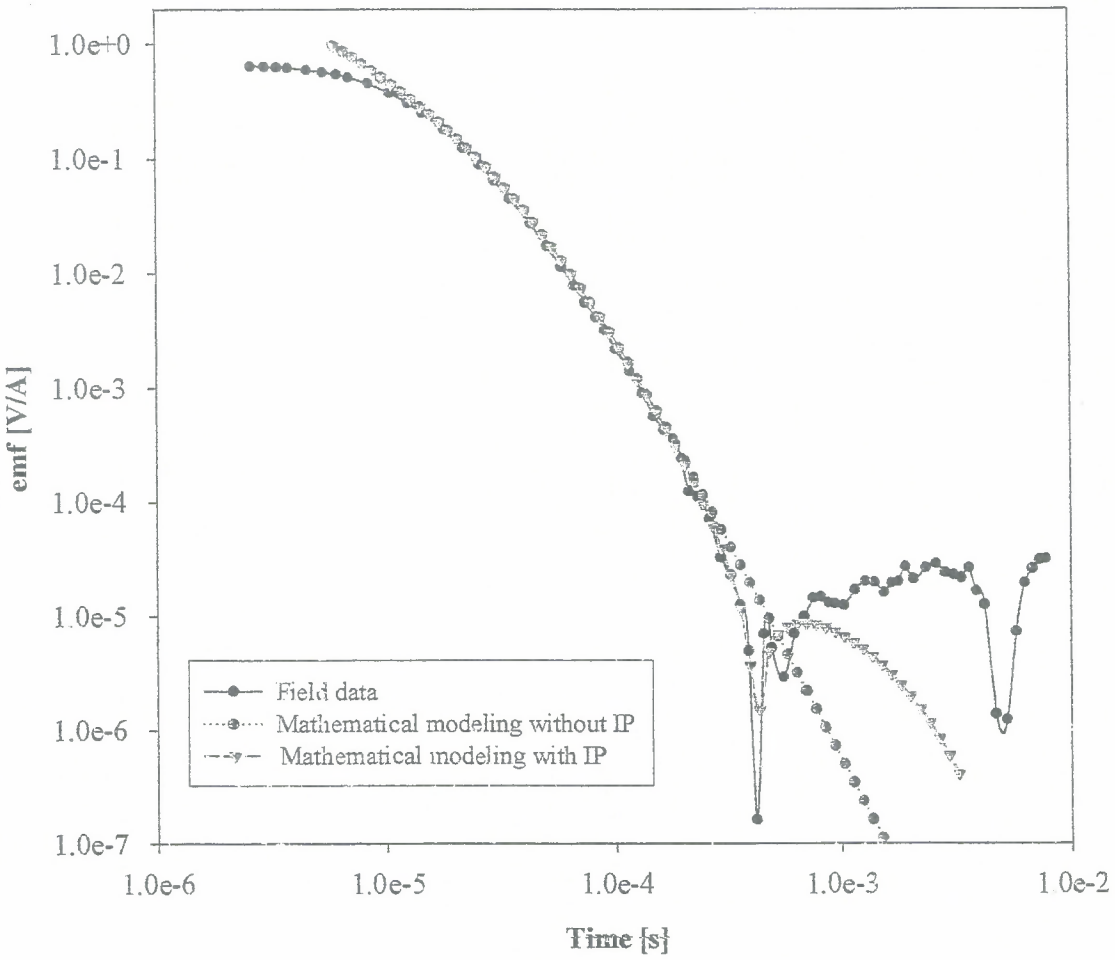
TDEM 49



TDEM 49

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	10.5	4	-	-
2	15	12	-	-
3	40	7	0.8	4.5
4	78	100	-	-

TDEM 50



TDEM 50

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	10.5	4	-	-
2	15	12	-	-
3	40	7	0.8	3

Results of interpretation TDEM data.
Vanderbijlpark, 3 part

TDEM 1

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	10	13	-	-
2	33	9	-	-
3	48	6	0.8	15

TDEM 2

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	15	12	-	-
2	33	9	0.8	5

TDEM 3

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	11.5	11	-	-
2	33	9	-	-
3	48	7	1.2	4

TDEM 4

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	12	10	-	-
2	33	9	-	-
3	48	10	1.2-1.4	3

TDEM 5

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	8	8.5	-	-
2	33	4	1.2	3

TEM 6 distorton?

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	6	4.5	-	-
2	33	4	1.4	10
3	43	1	1.2	15
4	40	28	-	

TDEM 7

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	9.6	3.4	-	-
2	33	4	-	-
3	43	2	-	-
4	40	28	-	

TDEM 8

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	10	8	-	-

TDEM 9

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	10.5	16	-	-
2	43	3	0.7	25

TDEM 10

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	13.5	10	-	-
2	28	14	0.8	2
3	48	10	1.0	14

TDEM 10a

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	13.5	10	-	-
2	32	13	-	-
3	48	11	1.2	12

TDEM 11

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	13.5	10	-	-
2	53	7	0.8	11

TDEM 12 (?? too big polarization)

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	14	11.5	-	-
2	33	3	0 8	35

TDEM 13

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	14	13.5	-	-
2	33	2	0.8	1
3	48	3	1.2	10-12

TDEM 13a

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	14	13.5	-	-
2	33	5	-	-
3	48	5	-	-

TDEM 14

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	12	8	-	-
2	33	4	1.2	3-6

TDEM 15

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	14	12	-	-
2	33	1	0.6	2

TDEM 15a

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	15.5	10	-	-
2	33	11	-	-
3	43	2	-	-

TDEM15aa (b)

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	11	10	-	-
2	33	4	-	-
3	43	2	-	-

TDEM 15c

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	9	12	-	-
2	33	4	-	-

TDEM 16

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	9.5	13	-	-
2	33	13	0.8	8
3	48	10	0.8	36

TDEM 17

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	10.5	12.3	-	-
2	53	2.5	0.7	24

TDEM 18

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	14.5	9	-	-
2	33	12	-	-
3	48	8	1.2	13

TDEM 19

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	14.5	8.5	-	-
2	33	8	-	-
3	48	7	1.2	11.5

TDEM 20

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	12	10	0.65	10
2	33	4	0.5	20?

TDEM 22 (distortion?)

	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	I cannot		But not	-
2	receive	good misfit	polarization	-

TDEM 23

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	16.5	9	-	-
2	33	15	1.4	29

TDEM 24

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	14	11	-	-
2	33	17	0.8	4
3	48	10	0.25	25

TDEM 24a

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	14	22	-	-
2	33	17	0.8	4
3	48	10	1.2	25

TDEM 24b

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	10.5	11	-	-
2	33	16	0.8	10
3	48	8	1.2	25

TDEM 25

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	12.5	18	-	-
2	33	5	0.8	24

TDEM 26

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	10.5	8	-	-
2	33	7	-	-
3	48	8	1.2	2

TDEM 26a

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	10.5	8	-	-
2	33	7	-	-
3	48	8	1.2	3

TDEM 26 b

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	5.5	10	-	-
2	33	1	-	-

TDEM 26c

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	5.5	2	-	-
2	13.5	4	-	-
3	33	10	-	-

TDEM 26d

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	5.5	10	-	-
2	33	5	0.6	5

TDEM 30

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	6.5	15	0.15	15
2	23	1	1.2	16

TDEM 31

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	8	11	-	-
2	33	4	-	-
3	48	6	1.2	15

TDEM 31a

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	7	10	-	-
2	33	4	-	-
3	48	6	1.2	14

TDEM 31b perhabs distortion.

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	6.5	15	0.8	40

TDEM 32

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	14.5	12	-	-
2	33	4	-	-
3	48	6	1.2	12

TDEM 34

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	10.5	9	-	-
2	33	3	-	-
3	48	8	1.2	3

TDEM 36

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	16.5	7.5	-	-
2	33	10	-	-
3	48	5	1.2	~7

TDEM 36a

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	16.5	7.5	-	-
2	33	10	-	-
3	48	7	1.4	5

TDEM 37

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	7.5	10	-	-
2	23	2	0.8	9

TDEM 38

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	7.53	10	-	-
2	23	2	0.8	4

TDEM 39

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	10.5	9.5	-	-
2	33	8	-	-
3	48	7	1.2	3

TDEM 40

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	7	2	-	-
2	8	12.5	-	-
3	100	28.5	-	-
4	2.5	17	-	-

TDEM 41

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	6	2.4	-	-
2	8.5	7.6	-	-
3	83	59	-	-
4	0.2	11	-	-
5	0.1	10	-	-

TDEM 42

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	4.4	8	-	-
2	10	11	-	-
3	110	61	-	-
4	0.2	20	-	-

TDEM 43

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	4.5	3.1	-	-
2	10	219	-	-
3	100	6	-	-
4	1.5	24	-	-

TDEM 44

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	5.5	2.3	-	-
2	10	12.7	-	-
3	100	19	-	-
4	0.2	16	-	-

TDEM 45

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	8.5	11	-	-
2	15	11	-	-
3	19.5	6	1.5	10

TDEM 46

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	8.5	9	-	-
2	15	11	0.2	20
3	40	6	0.9	30

TDEM 47

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	8.5	7	-	-
2	15	11	-	-
3	40	6	0.9	10

TDEM 48

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	8.5	8	-	-
2	15	11	-	-
3	40	6	0.8	8.5

TDEM 49

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	10.5	4	-	-
2	15	12	-	-
3	40	7	0.8	4.5
4	78	100	-	-

TDEM 50

№ of layers	ρ resistivity (Ω·m)	h thickness, m	τ decay constant (msec)	η polarizability (%)
1	10.5	4	-	-
2	15	12	-	-
3	40	7	0.8	3

APPENDIX II

FIGURE II-1:	Map indicating positions of Geophysical Traverse Lines.
DATA SET II-1:	Profile plots of the traverse lines.
FIGURE II-2:	Map indicating earthquakes larger than or equal to M_L 4.7.
DATA SET II-2:	List with earthquakes larger than or equal to M_L 4.7.

FIGURE II-1

Map indicating positions of Geophysical Traverse Lines.

LEGEND

- Fault
- Dolerite Dyke
- Daspoort: Quartzite & Shale, Ferrugenous in places
- Gravel
- Strubenkop: Ferrugenous shale, Quartzite
- Hekpoort: Andesite, agglomerate, tuff
- Silverton: Shale with interbedded quartzite, hornfels, limestone
- Timeballhill: Klapperkop quartzite, ferrugenous
- Alluvium
- Geophysical Traverse lines

SCALE 1: 50 000

Client: ISCOR Vanderbijlpark Steel
Project: Masterplan Baseline Study
Map Status: Final
Compiled by: G. Cloete
Checked by: R. Grobbelaar

JASPER MÜLLER ASSOCIATES CC

Project no:	Date:
10193	October 2002

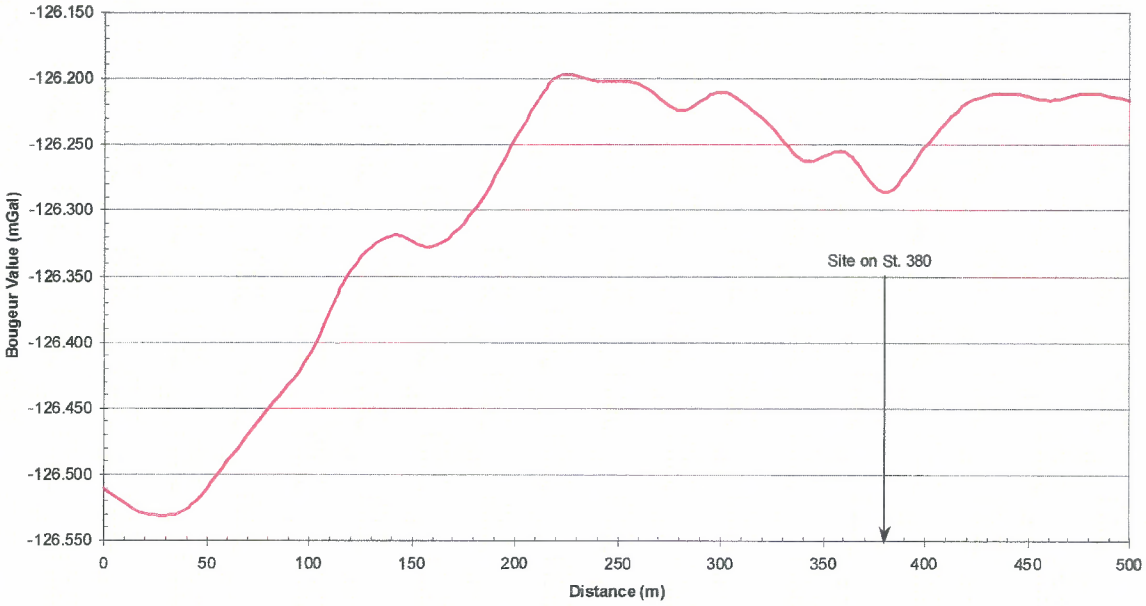
FIGURE II-1

Map indicating positions of Geophysical Traverse lines

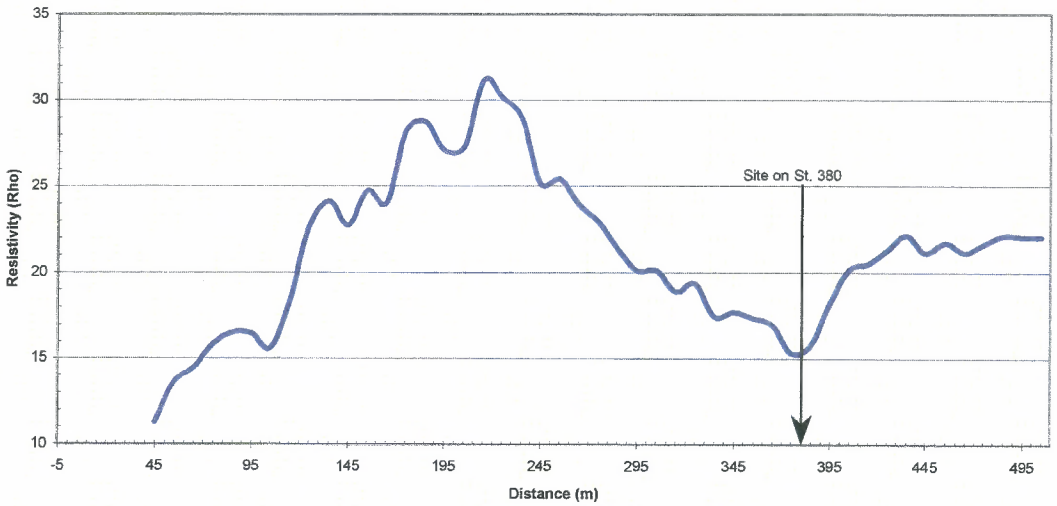
DATA SET II-1

Profile plots of the traverse lines.

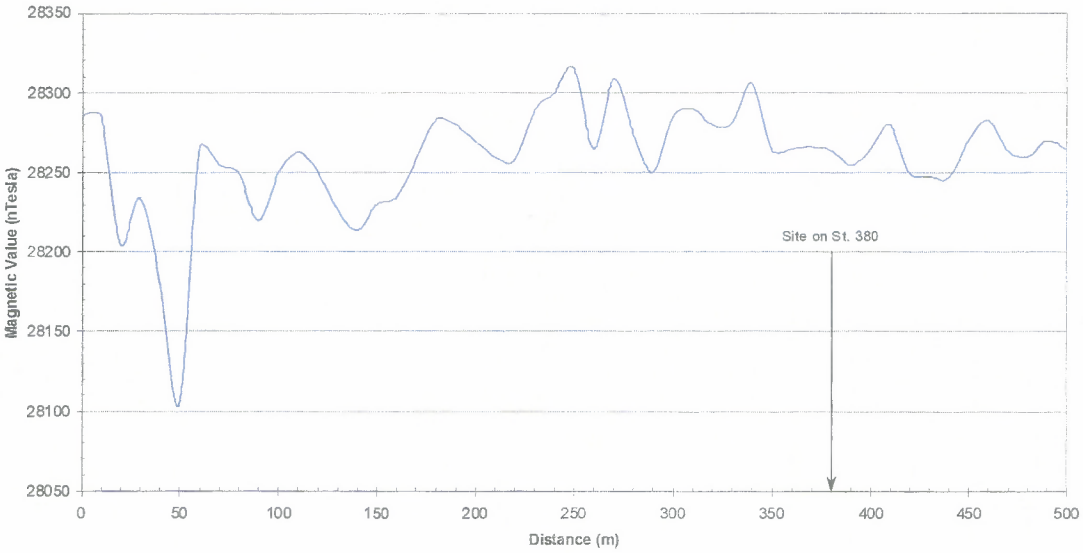
Line 1. Bougeur Profile



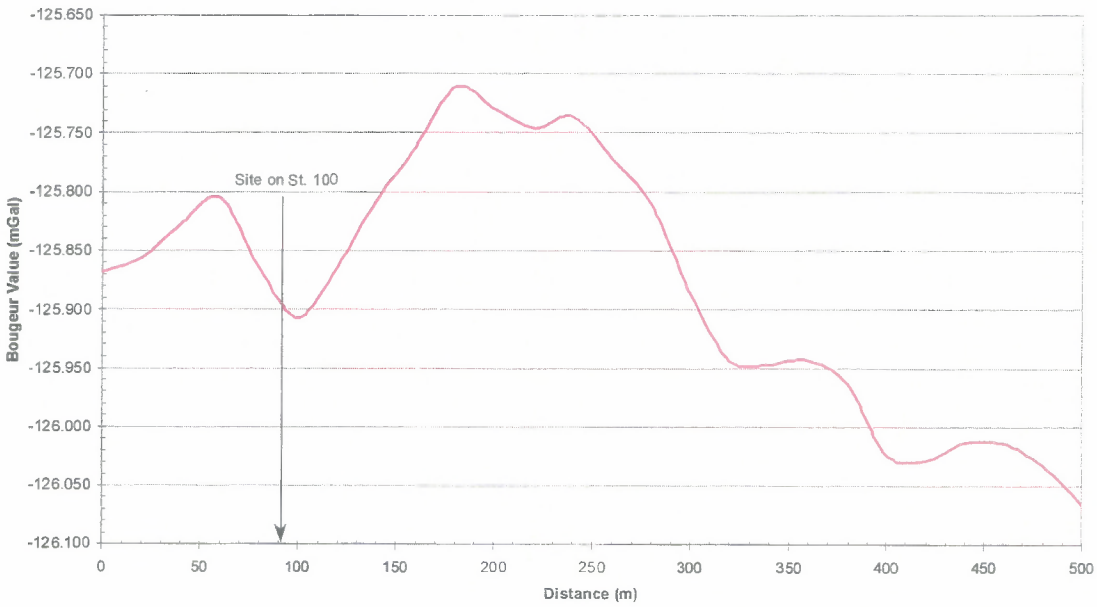
Line 1 : Resistivity Profile.
SW to NE



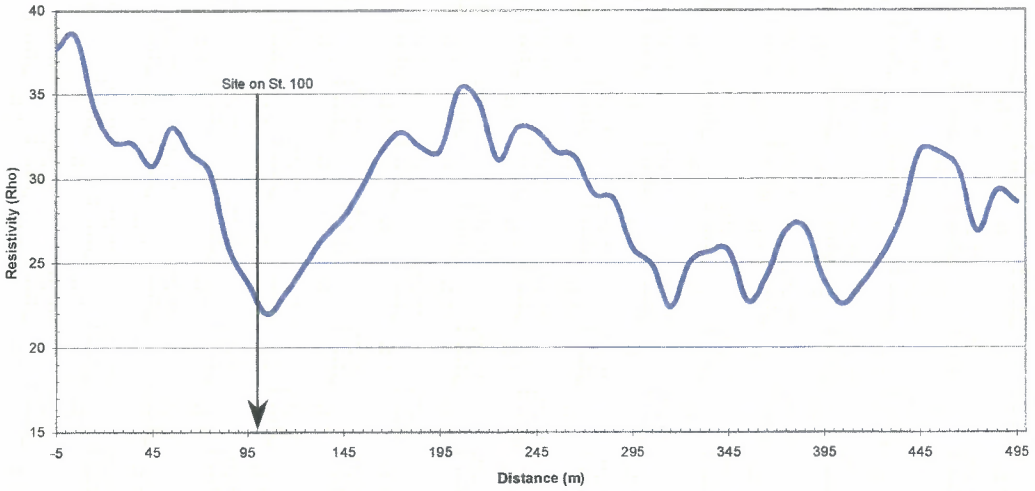
Line 1 : Magnetic Profile.
SW to NE



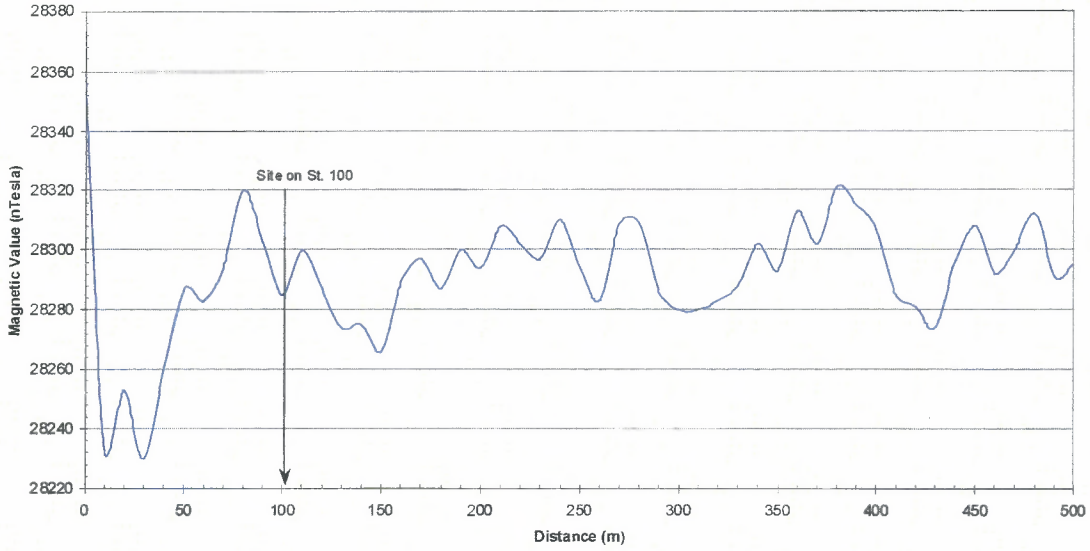
Line 2. Bougeur Profile



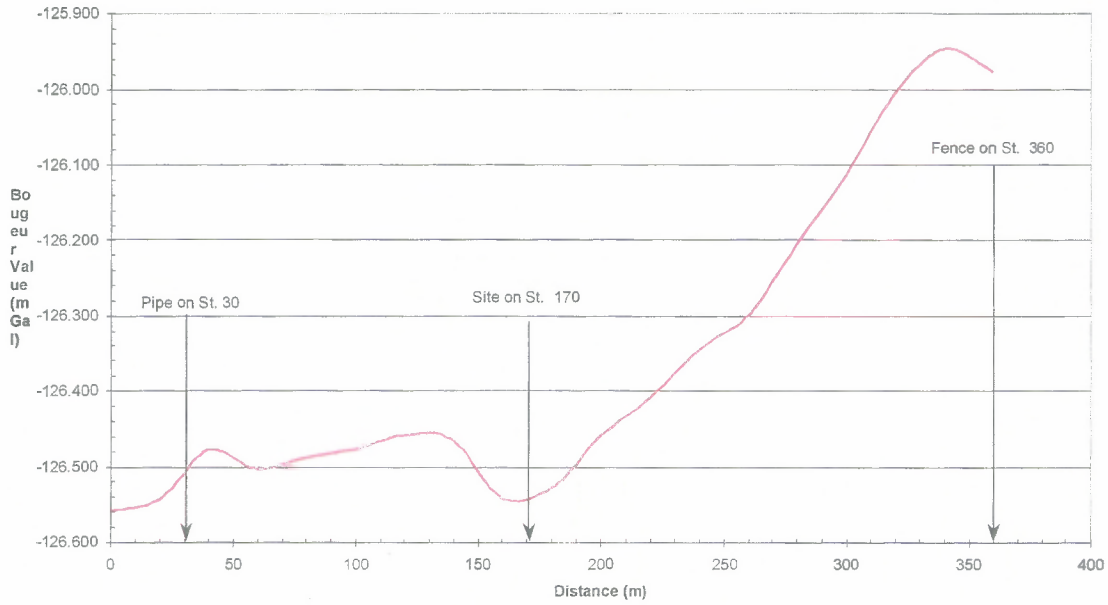
Line 2 : Resistivity Profile.
SW to NE



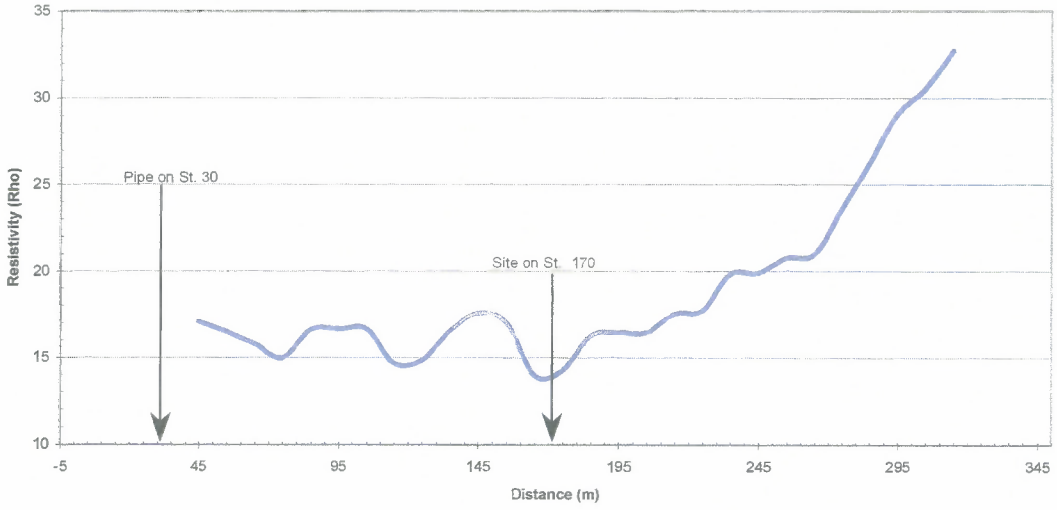
Line 2 : Magnetic Profile.
SW to NE



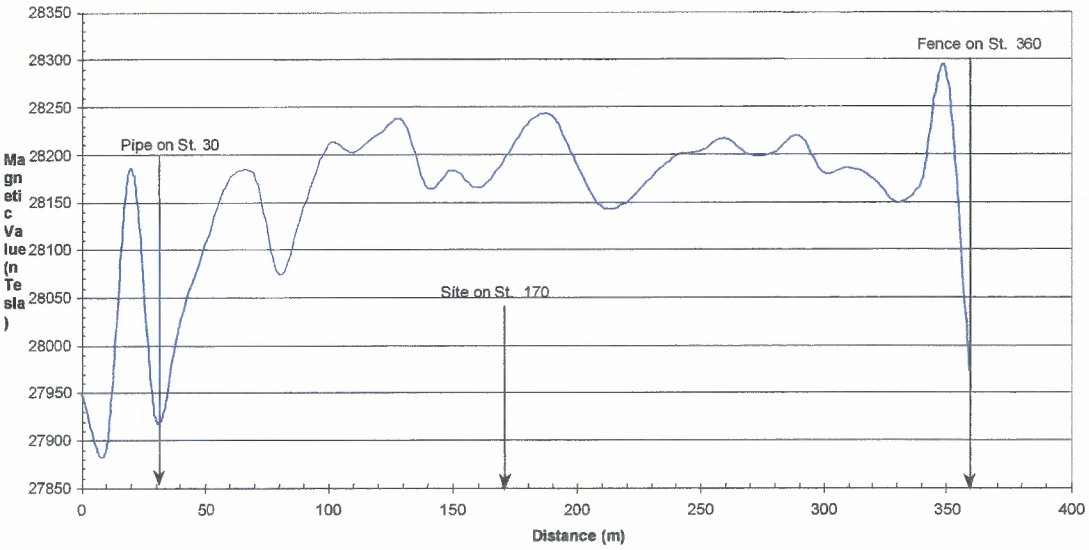
Line 3. Bougeur Profile



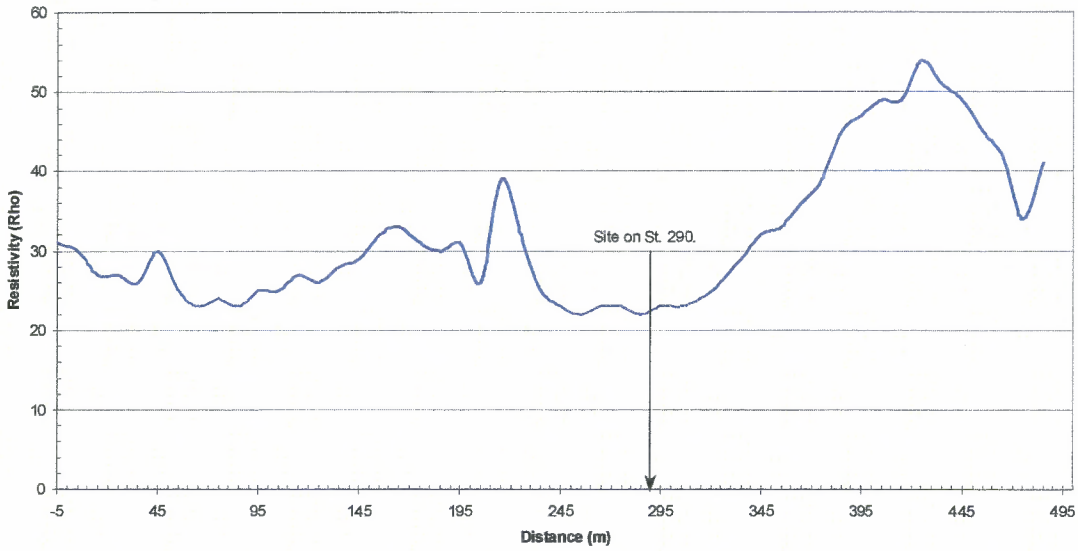
Line 3 : Resistivity Profile.
S to N



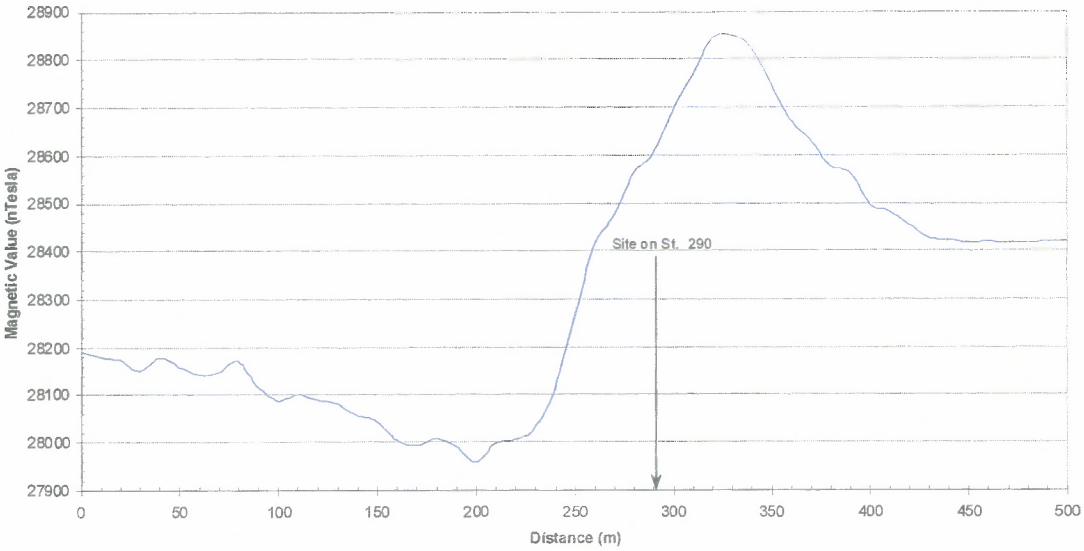
Line 3 : Magnetic Profile.
S to N



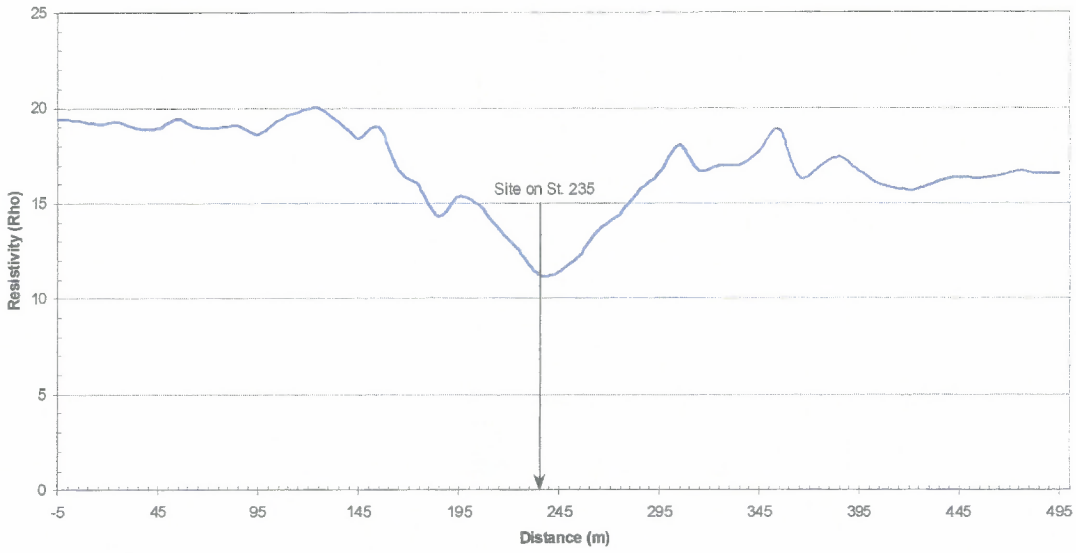
Line 4 : Resistivity Profile.
S to N



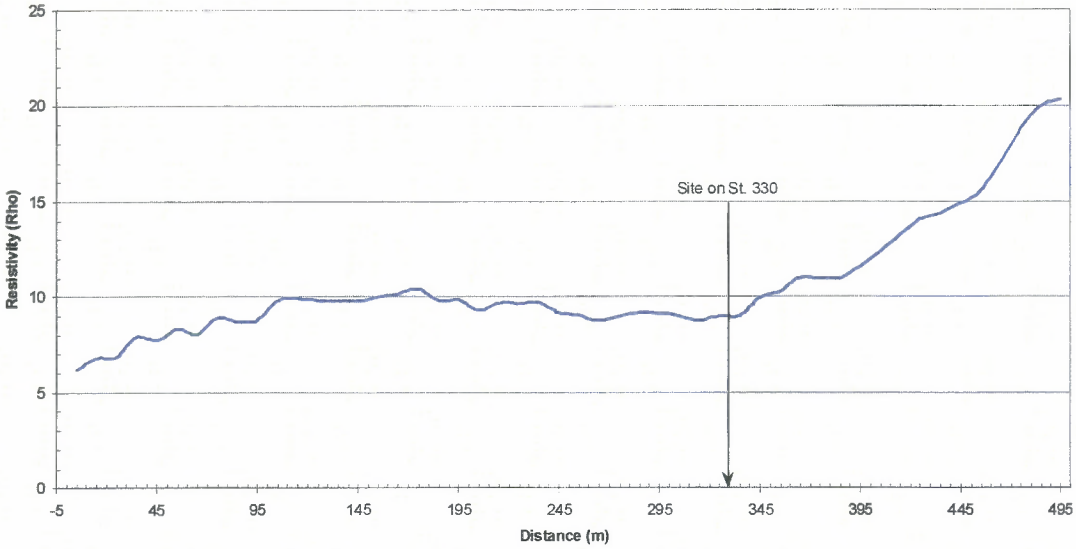
Line 4 : Magnetic Profile.
S to N



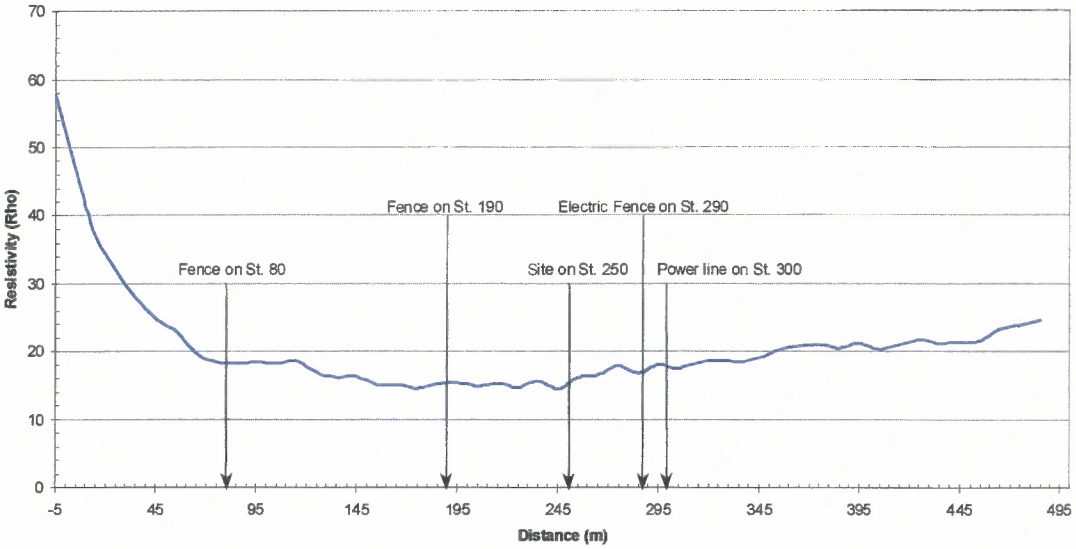
Line 5 : Resistivity Profile.
S to N



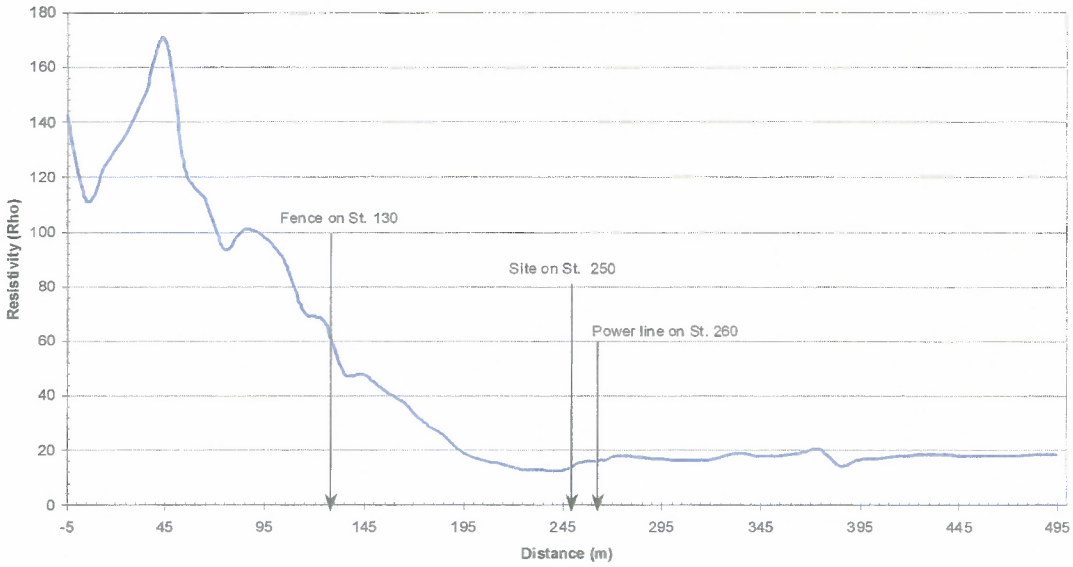
Line 6 : Resistivity Profile.
SW to NE



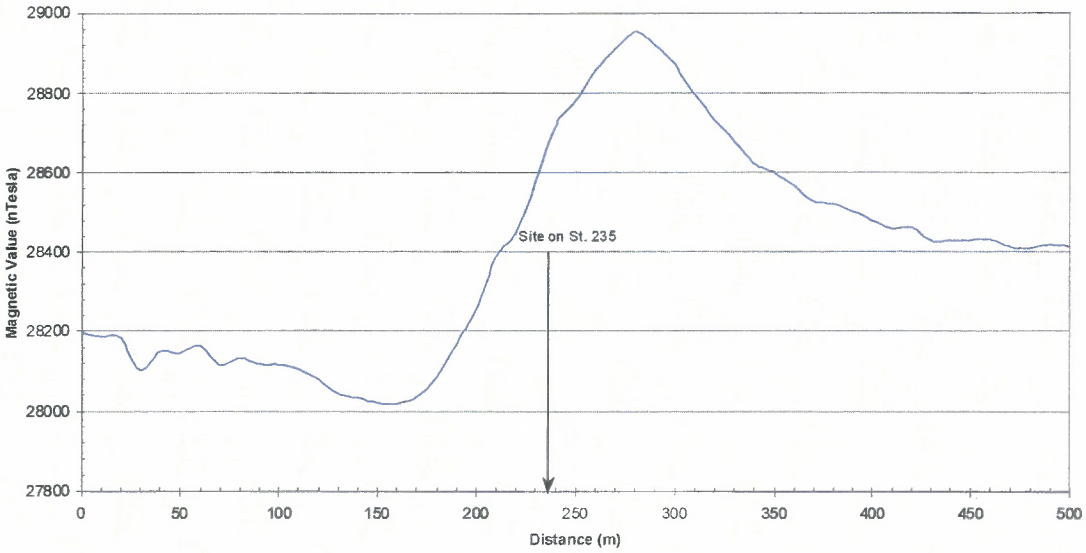
Line 7 : Resistivity Profile.
S to N



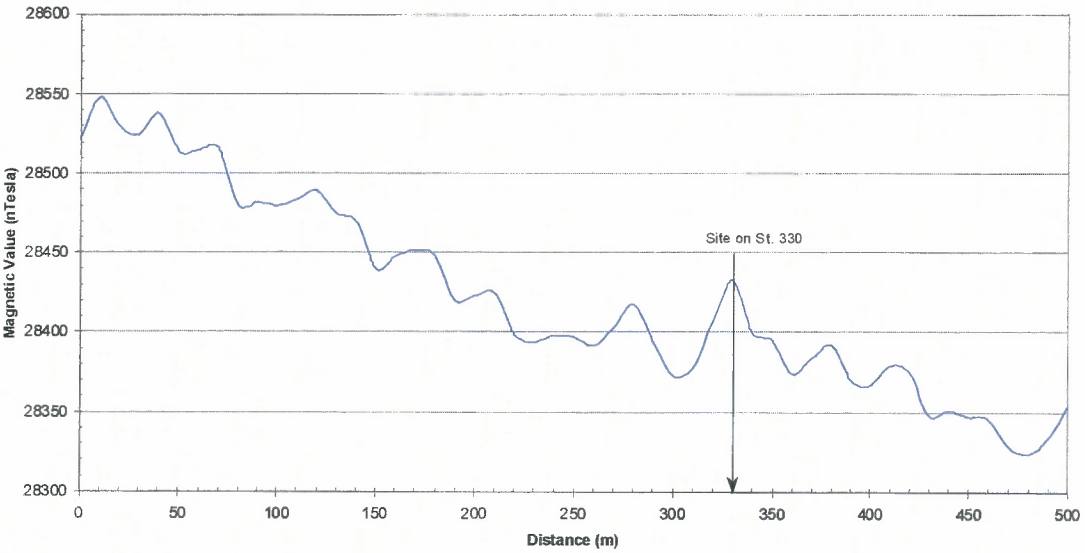
Line 8 : Resistivity Profile.
S to N



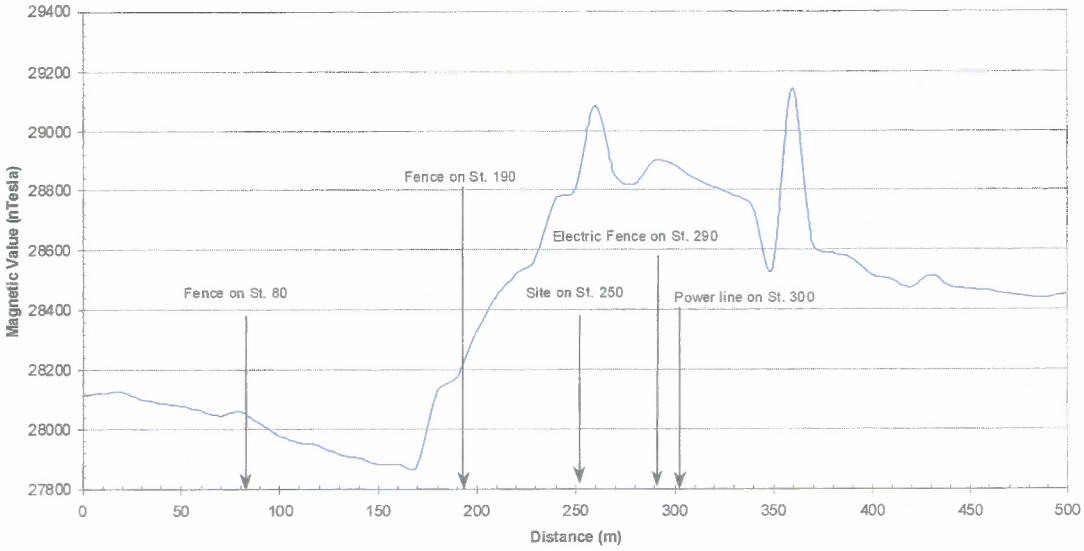
Line 5 : Magnetic Profile.
S to N



Line 6 : Magnetic Profile.
SW to NE



Line 7 : Magnetic Profile.
S to N



Line 8 : Magnetic Profile.
S to N

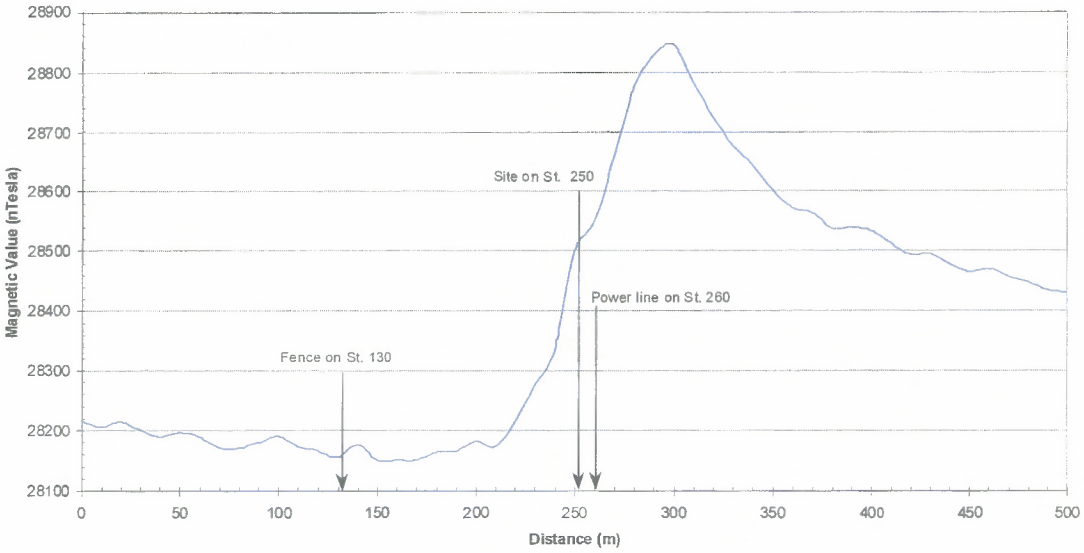
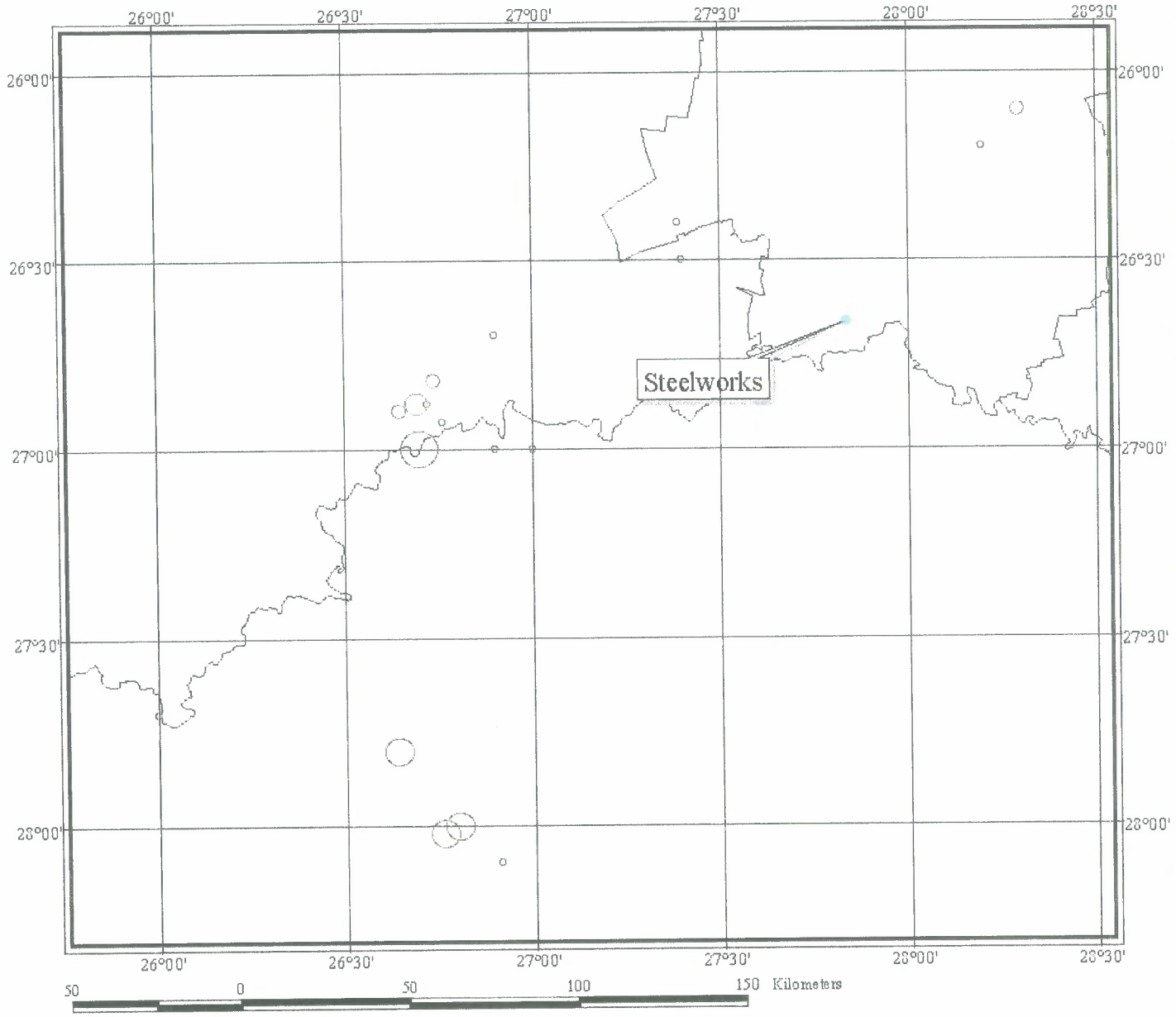


FIGURE II-2

Map indicating earthquakes larger than or equal to M_L 4.7



Magnitudes (Ml)

○	4.7 - 4.8
○	4.8 - 4.9
○	4.9 - 5
○	5 - 5.1
○	5.1 - 5.2

Client: ISCOR Vanderbijlpark Steel
Project: Masterplan Baseline Study
Map Status: Final
Compiled by: G. Cloete
Checked by: R. Grobbelaar

JASPER MÜLLER ASSOCIATES CC

Project no:	Date:
10193	October 2002

FIGURE II-2

Map showing Earthquakes of Magnitude 4.7 & greater, from the SA Earthquake Databank up to December 2000

DATA SET II-2

List with earthquakes larger than or equal to M_L 4.7

DATASET II-2
LIST OF ALL EARTHQUAKES OF MAGNITUDE 4.7 AND LARGER FROM THE SOUTH AFRICAN EARTHQUAKE DATABANK UP TO DECEMBER 2000.

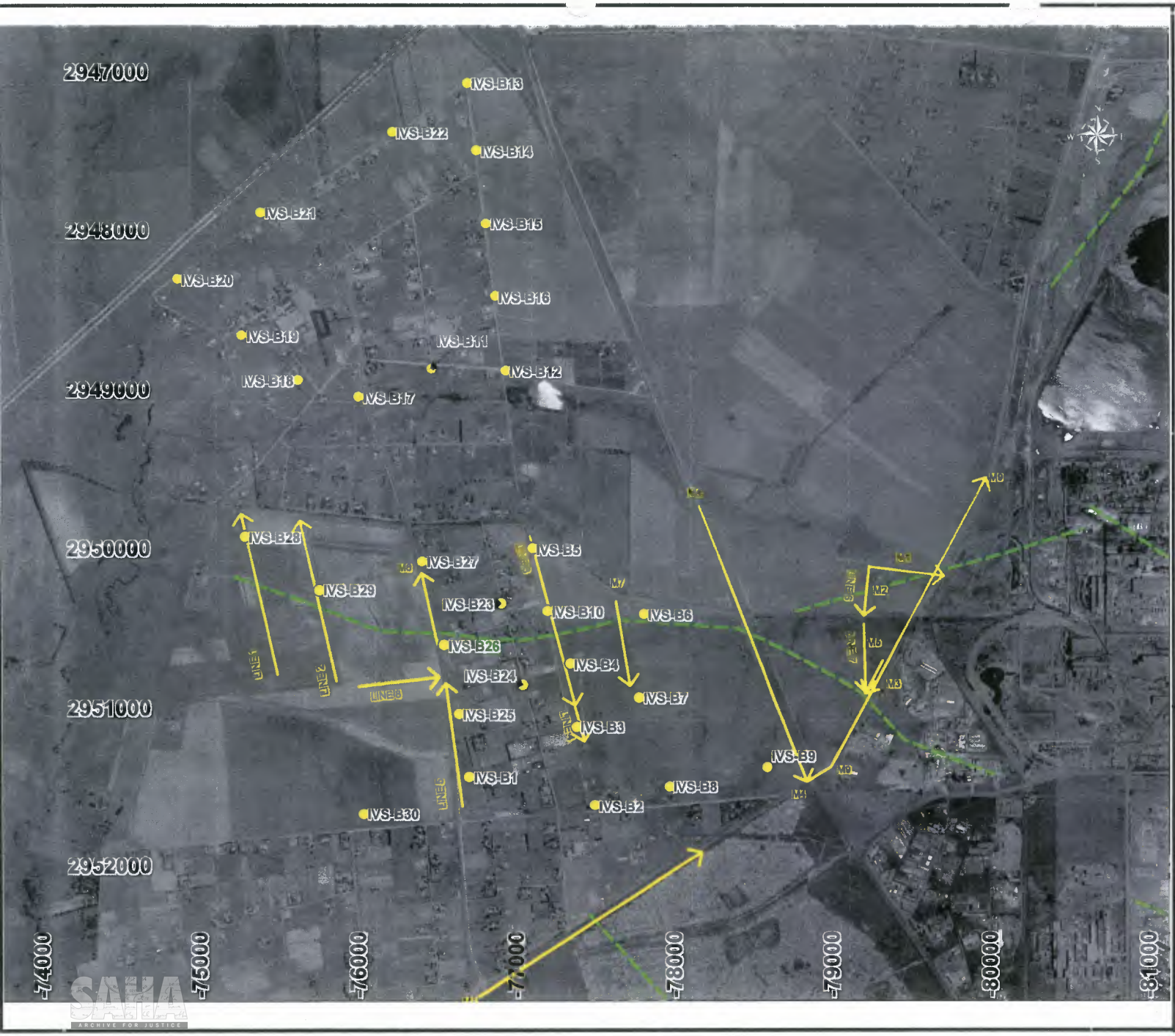
N	Date	Time (GMT)	Lat.		Long.		Region	Magnitude (ML)
1	1971-08-02	16:52:24.0	27.7	S	26.0	E	FREE STATE GOLD MINES	4.8
2	1972-11-01	21:14:40.3	27.0	S	26.9	E	KLERKSDORP GOLD MINES R.S.A.	4.7
3	1972-11-02	14:43:43.6	26.5	S	27.4	E	FAR WEST RAND GOLD MINES RSA	4.8
4	1973-12-19	03:07:00.0	26.7	S	26.9	E	KLERKSDORP GOLD MINES R.S.A.	4.8
5	1974-01-21	15:15:55.1	26.1	S	28.3	E	EAST RAND GOLD MINES R.S.A.	4.9
6	1974-07-23	14:09:54.8	27.0	S	27.0	E	KLERKSDORP GOLD MINES R.S.A.	4.7
7	1976-12-08	08:38:22.8	28.0	S	26.8	E	WELKOM GOLD MINES R.S.A.	5.1
8	1977-04-07	11:54:38.3	27.0	S	26.7	E	KLERKSDORP GOLD MINES R.S.A.	5.2
9	1980-08-30	10:36:07.4	26.2	S	28.2	E	EAST RAND GOLD MINES R.S.A.	4.8
10	1984-01-28	13:16:08.1	26.88	S	26.69	E	REPUBLIC OF SOUTH AFRICA	5.0
11	1984-01-28	14:40:13.8	26.90	S	26.65	E	REPUBLIC OF SOUTH AFRICA	4.9
12	1986-01-01	16:00:51.9	26.82	S	26.74	E	KLERKSDORP GOLD MINES	4.9
13	1986-10-28	15:04:23.2	26.93	S	26.76	E	KLERKSDORP GOLD MINES	4.8
14	1990-09-26	23:08:25.6	28.10	S	26.91	E	FREE STATE GOLD MINES	4.8
15	1992-03-07	00:43:04.3	26.40	S	27.39	E	FAR WEST RAND GOLD MINES	4.7
16	1994-10-30	06:06:29.4	28.02	S	26.76	E	FREE STATE GOLD MINES	5.1
17	1995-11-25	04:05:04.3	26.88	S	26.72	E	KLERKSDORP GOLD MINES	4.7
18	1999-04-22	22:19:39.1	27.80	S	26.64	E	FREE STATE GOLD MINES	5.1

APPENDIX III

FIGURE III-1:	Localities of the Geophysical Traverse Lines, inferred lineaments and boreholes for the Lamont Park, Rosashof and Louisrus areas.
DATA SET III-1:	EM34 profiles.
DATA SET III-2:	Magnetic profiles.

FIGURE III-1

Localities of the Geophysical Traverse Lines, inferred lineaments and boreholes for the Lamont Park, Rosashof and Louisrus areas.



LEGEND

IVS Boreholes drilled

Dyke

Geophysical Traverse line

Draft for discussion
CONFIDENTIAL
Research for IVS

SCALE 1: 35 000

Client:	ISCOR Vanderbijlpark Steel
Project:	Masterplan Baseline Study
Map Status:	Final
Compiled by:	G. Cloete
Checked by:	R. Grobbelaar

JASPER MÜLLER ASSOCIATES CC

Project no:	Date:
10193	November 2002

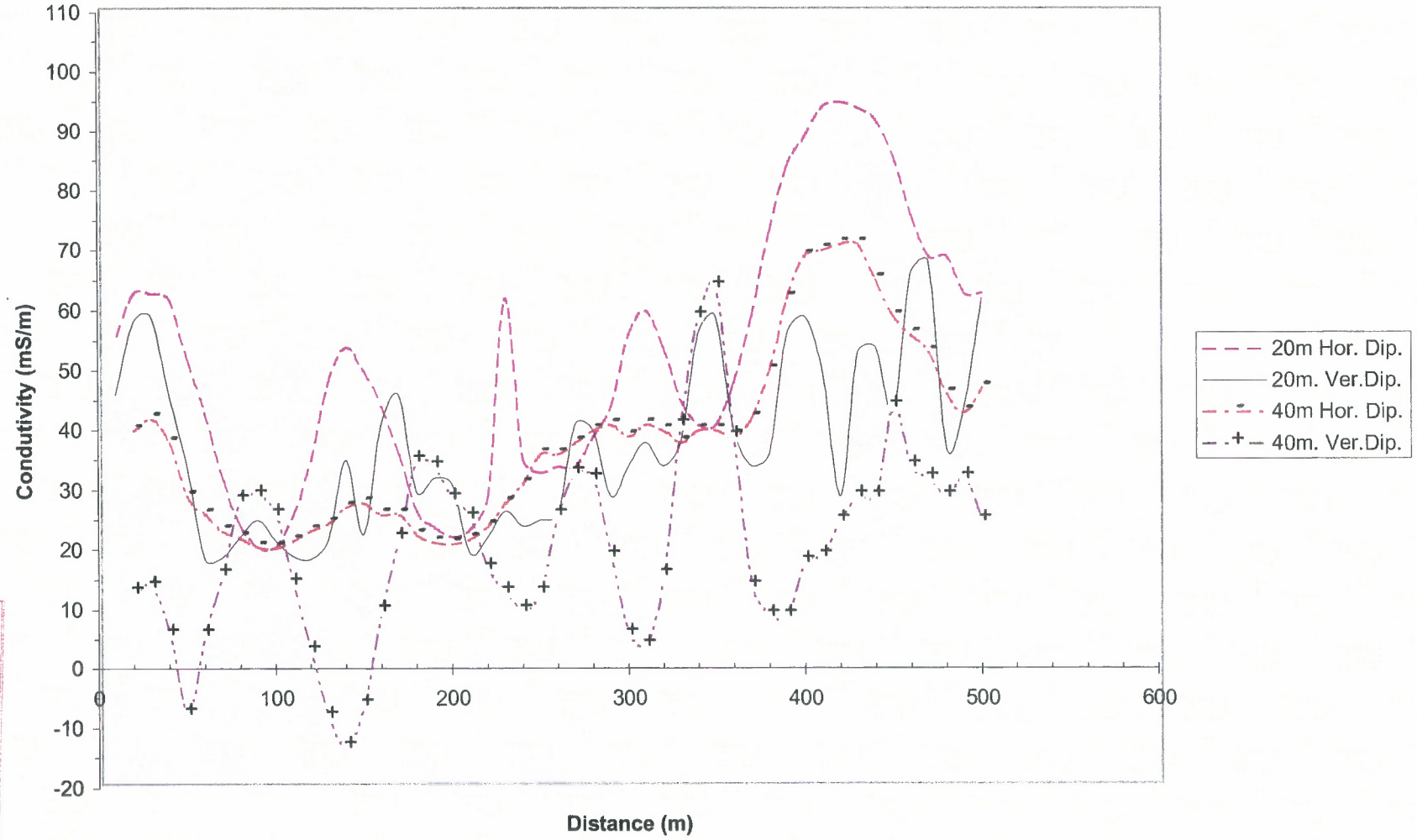
FIGURE III-1

Localities of Geophysical Traverse lines, inferred lineaments and boreholes for the Lamont Park, Rosashof & Louisrus area

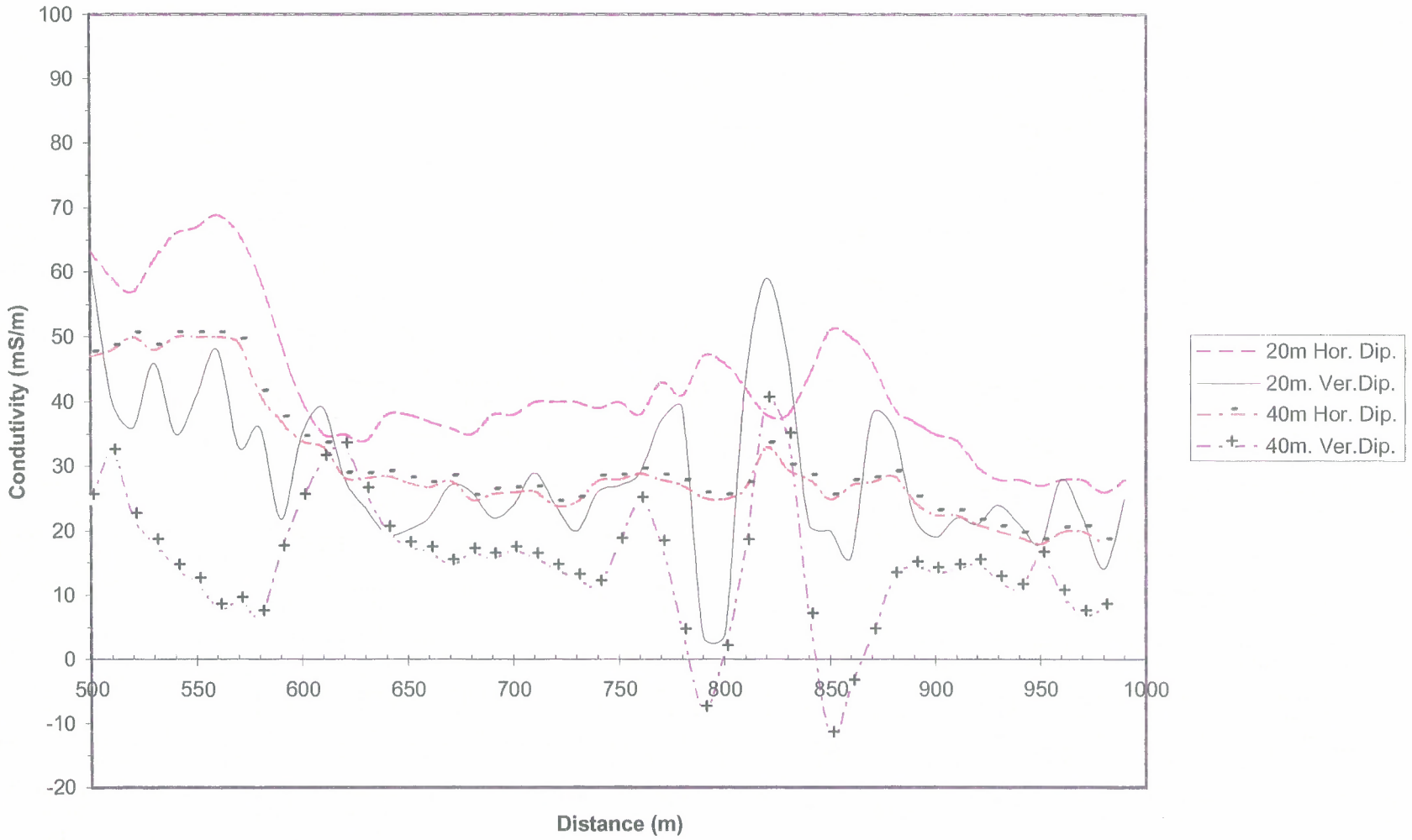
DATA SET III-1

EM34 profiles.

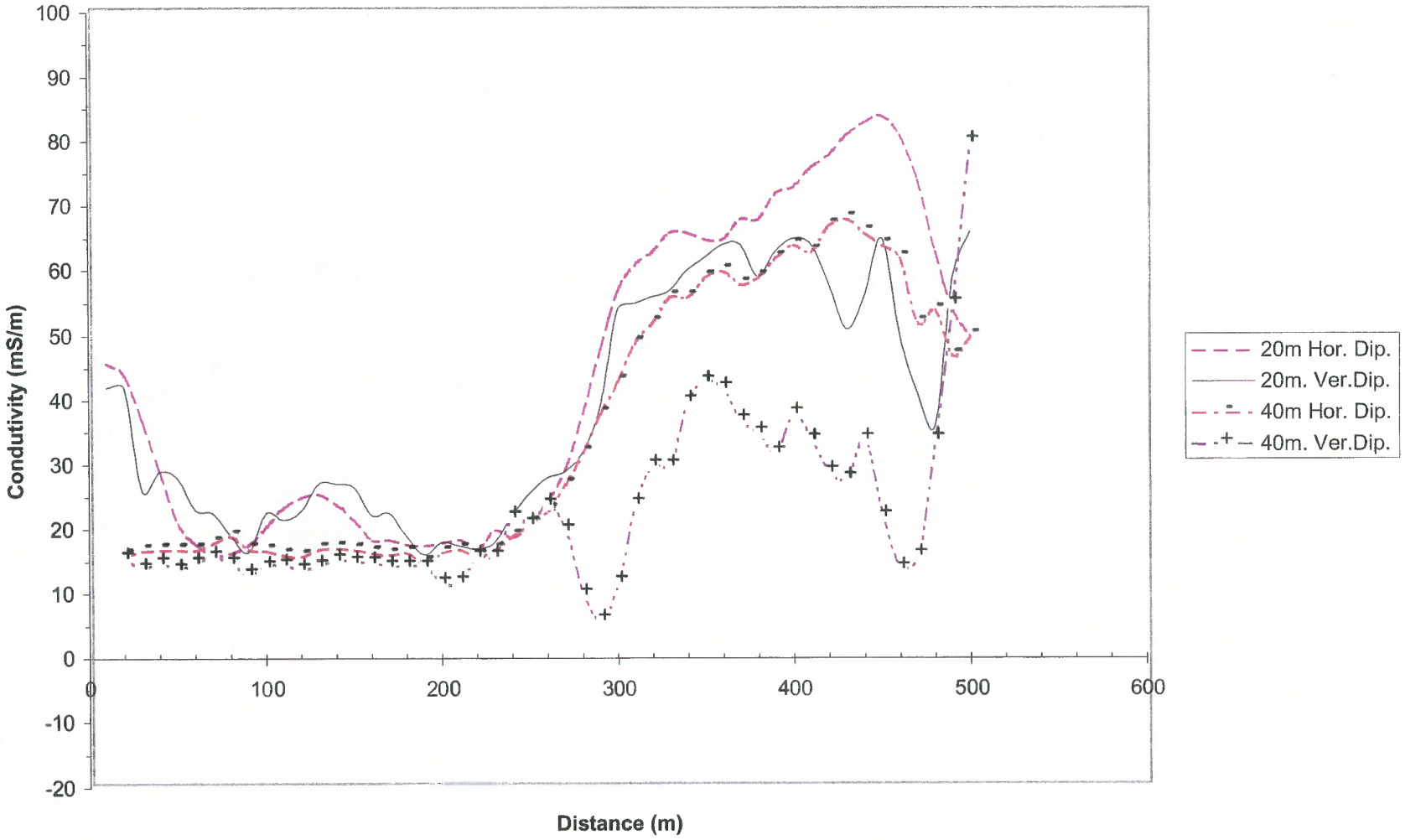
Van der Bijlpark Line 1 (0-500)



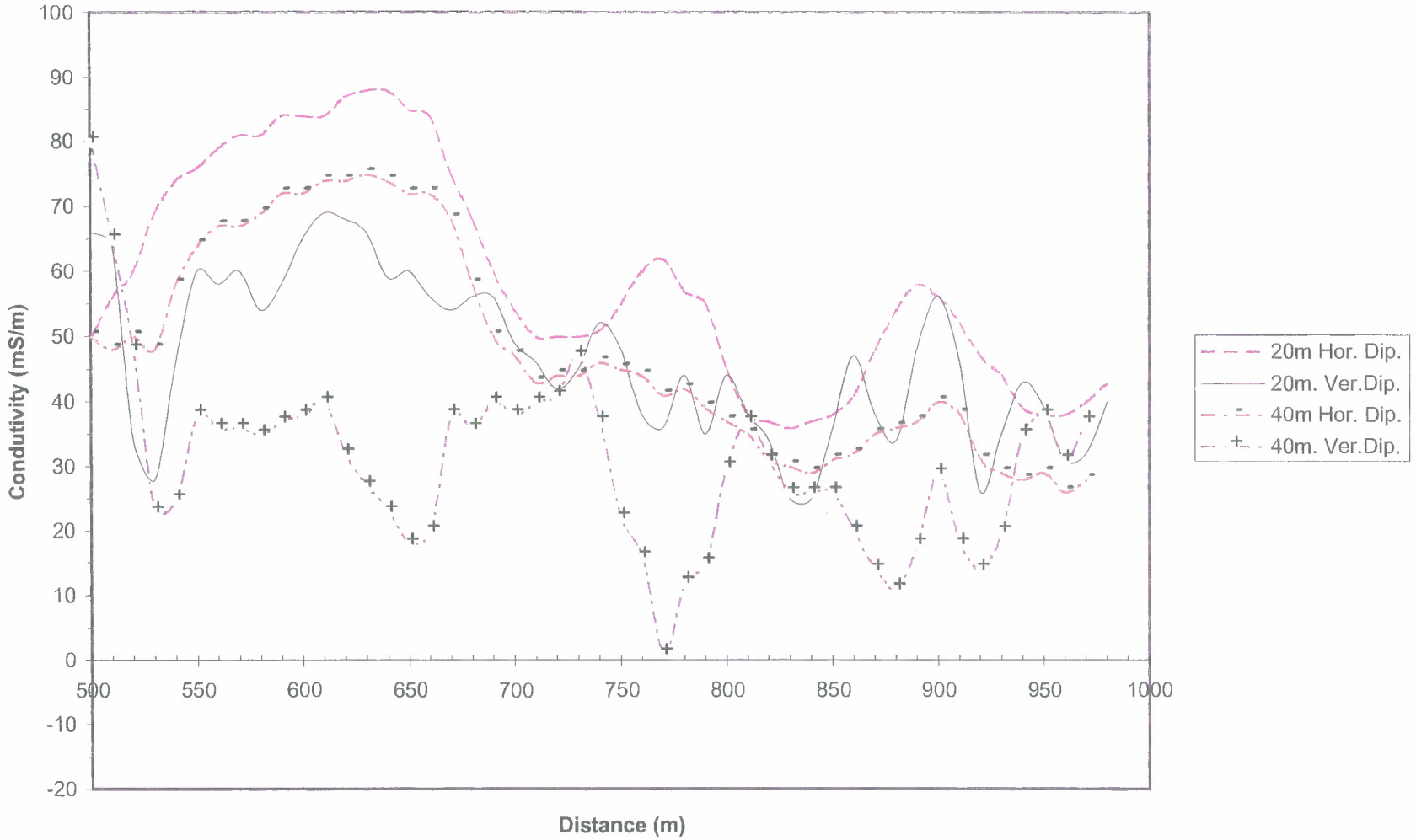
Van der Bijlpark Line 1 (500-1000)

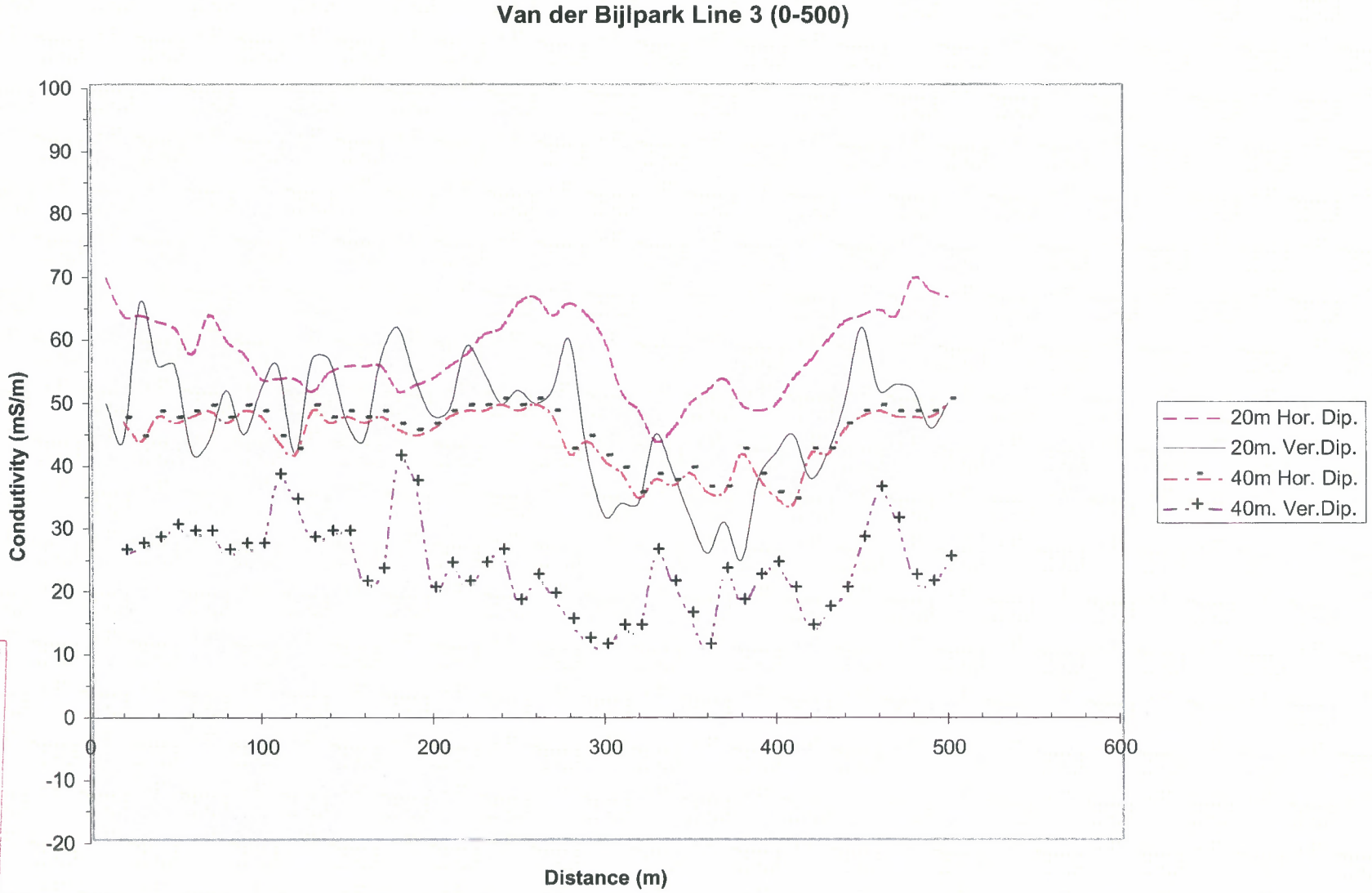


Van der Bijlpark Line 2 (0-500)

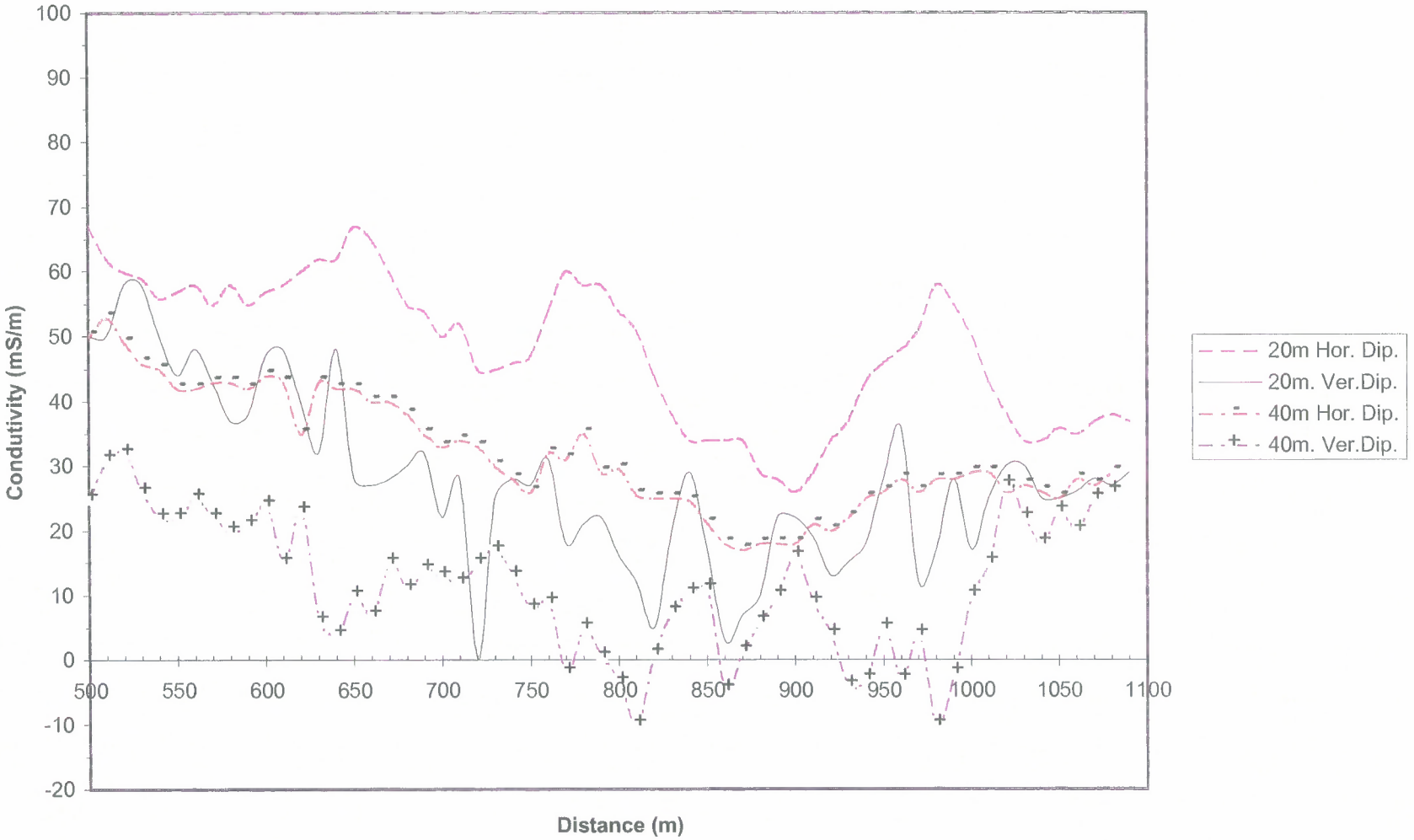


Van der Bijlpark Line 2 (500-1000)

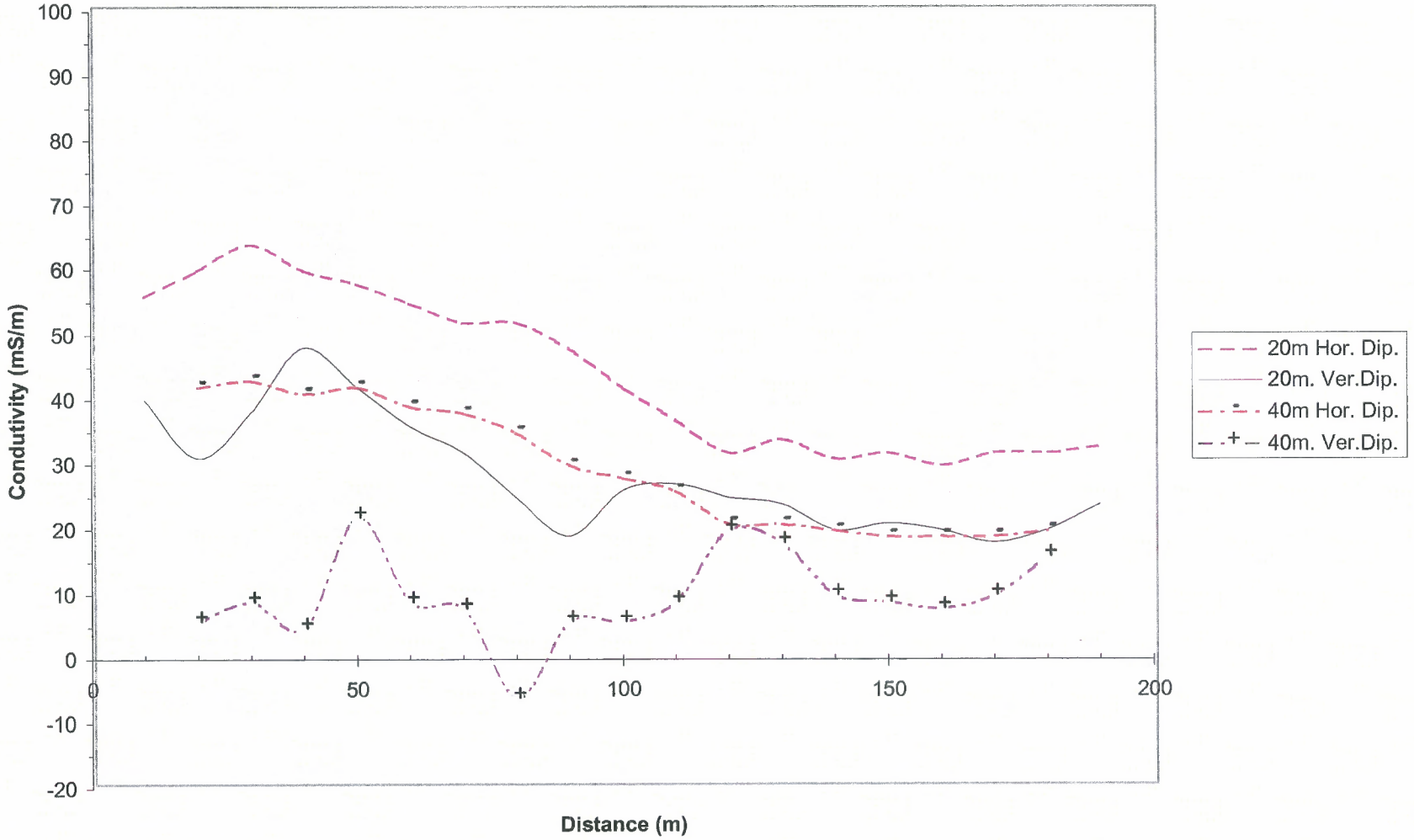


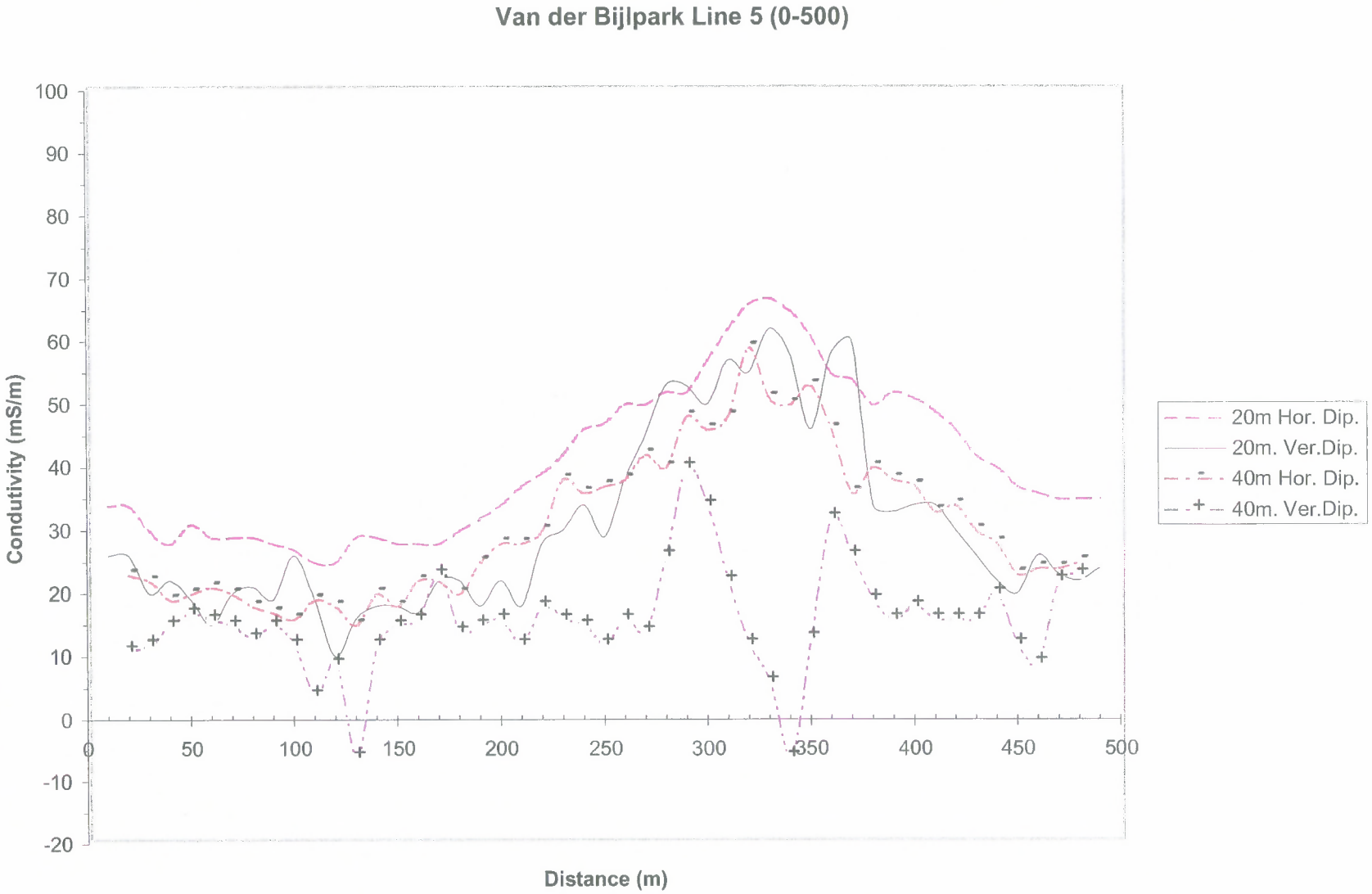


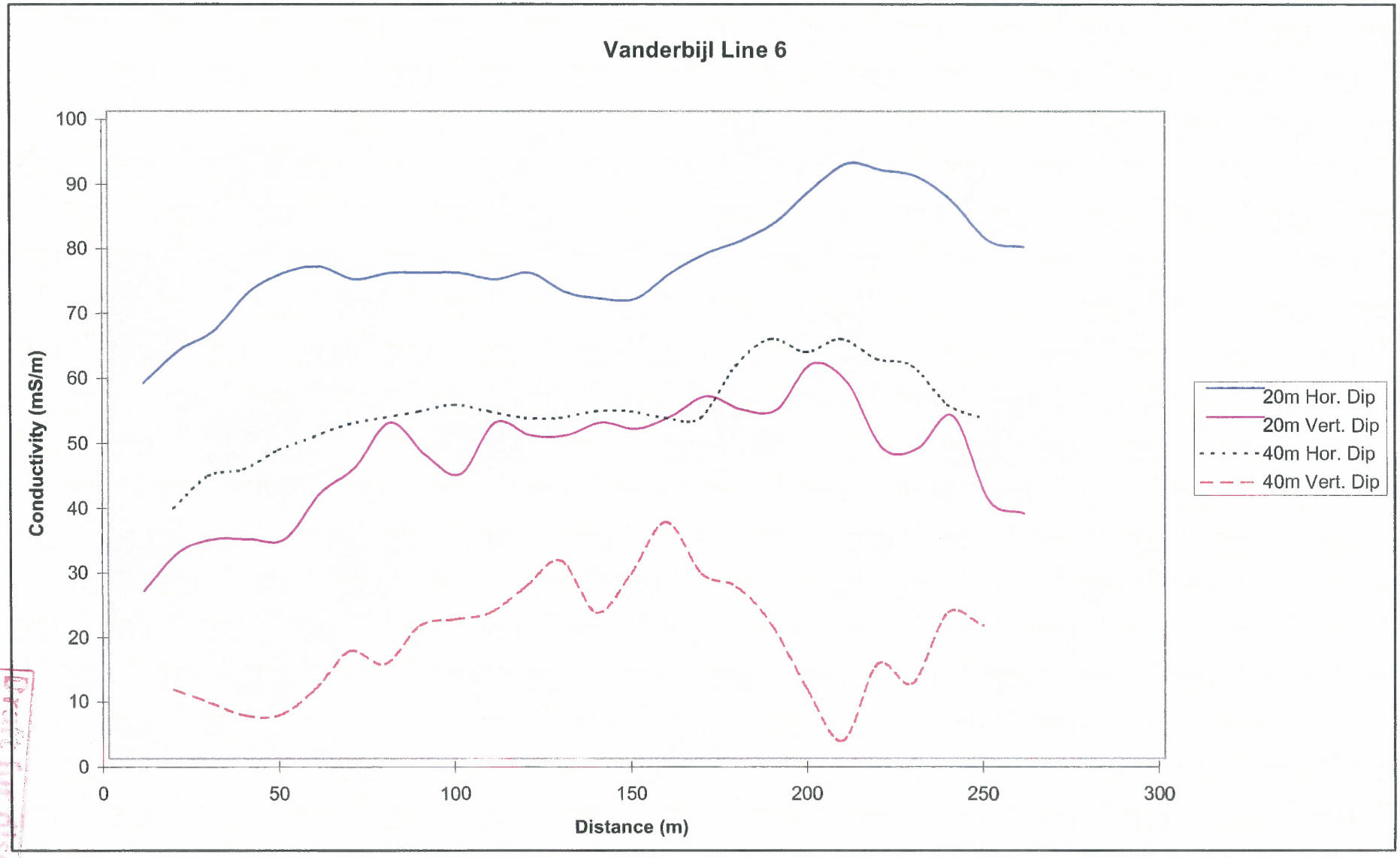
Van der Bijlpark Line 3 (500-1100)

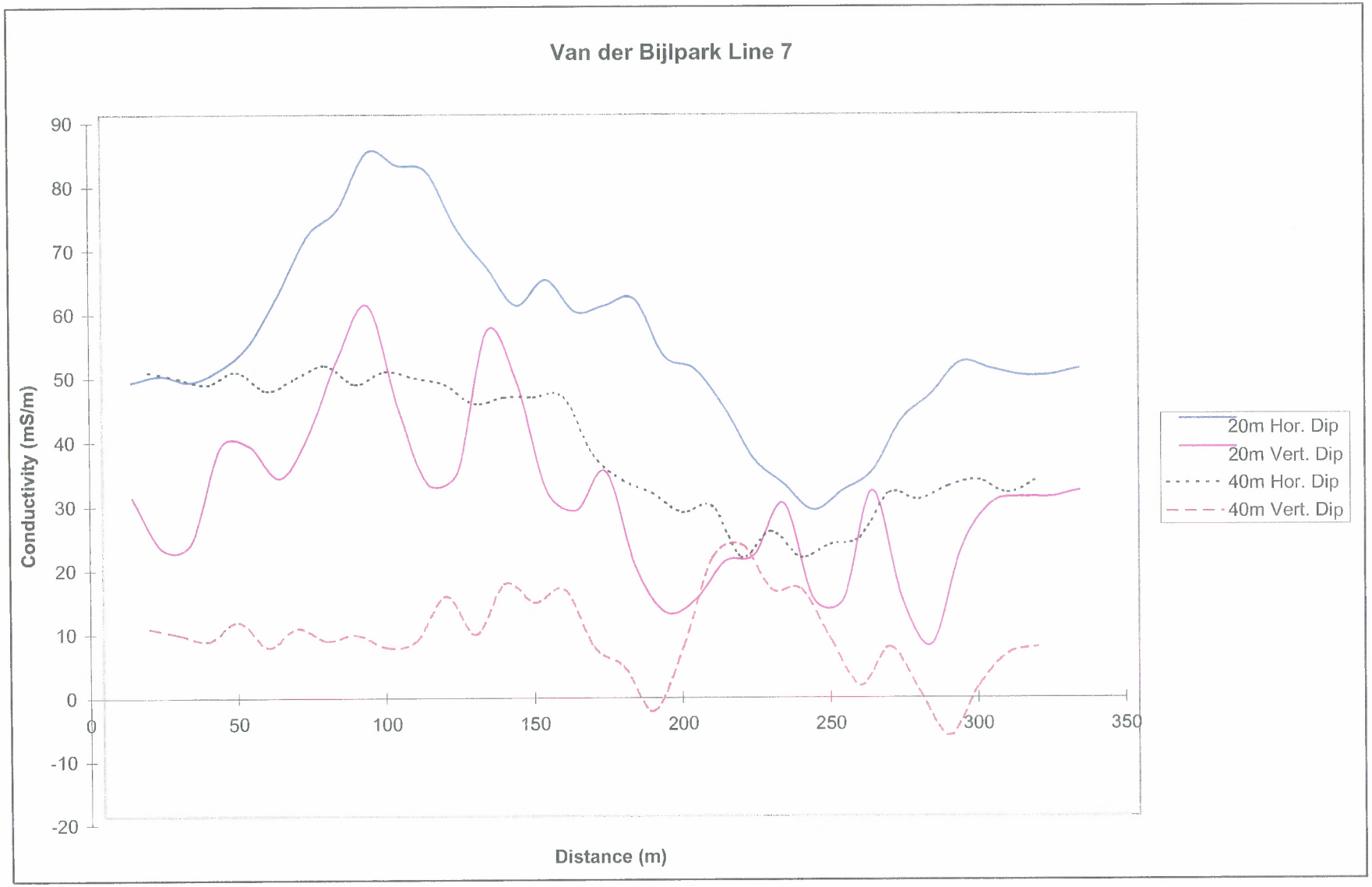


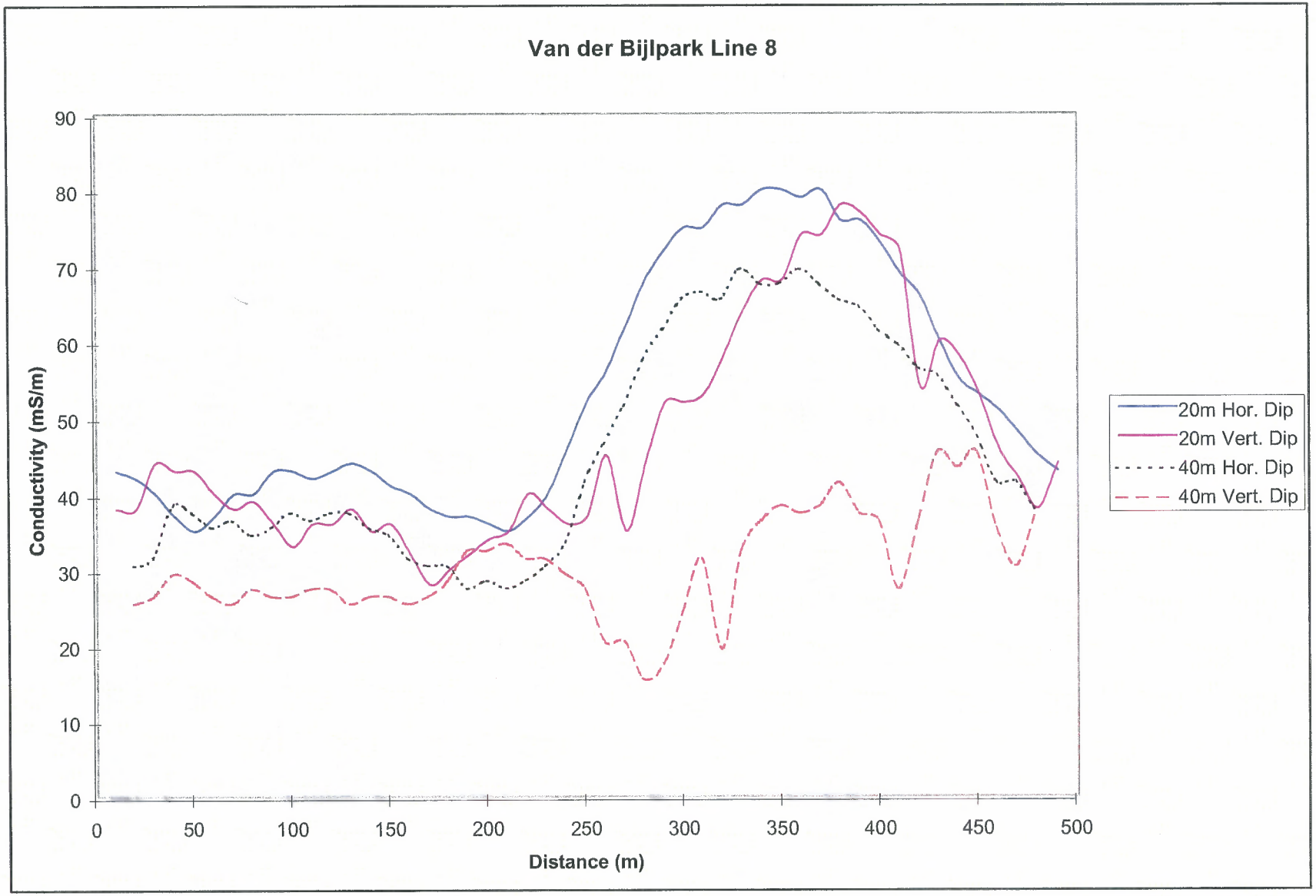
Van der Bijlpark Line 4 (0-200)

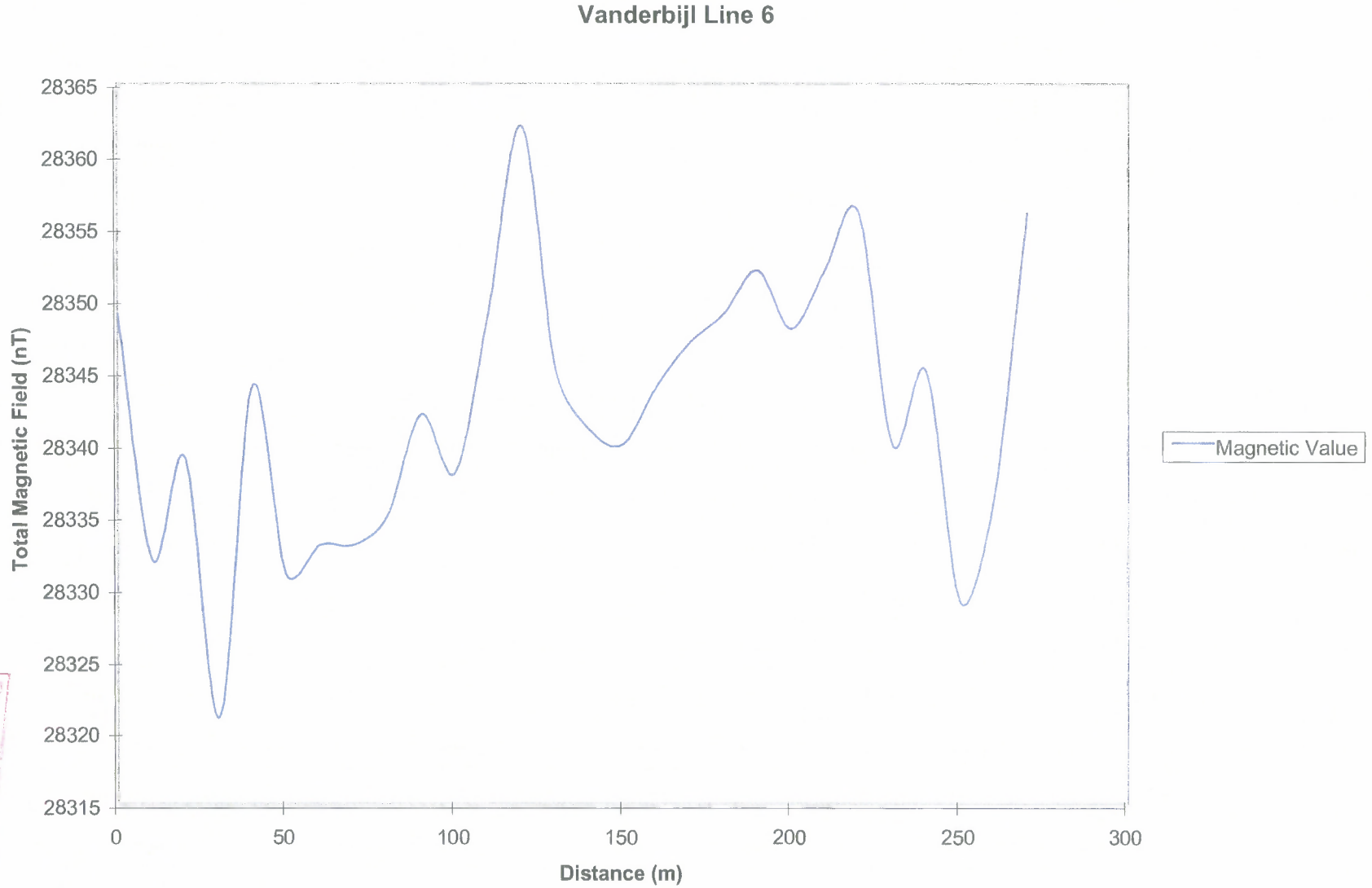


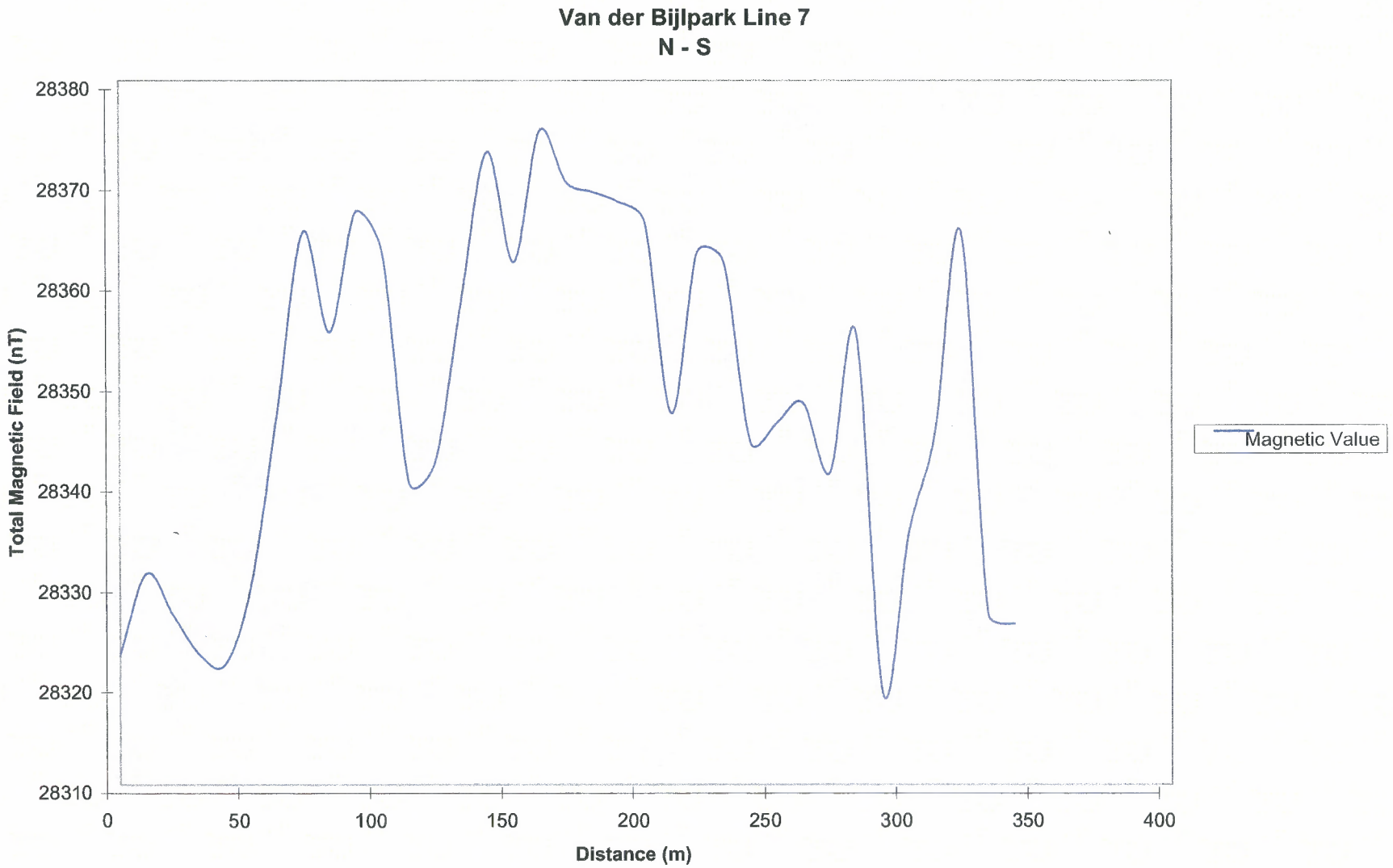

Van der Bijlpark Line 5 (0-500)
Condutivity (mS/m)
100
90
80
70
60
50
40
30
20
10
0
-10
-20
0
50
100
150
200
250
300
350
400
450
500
Distance (m)
20m Hor. Dip.
20m. Ver.Dip.
40m Hor. Dip.
40m. Ver.Dip.

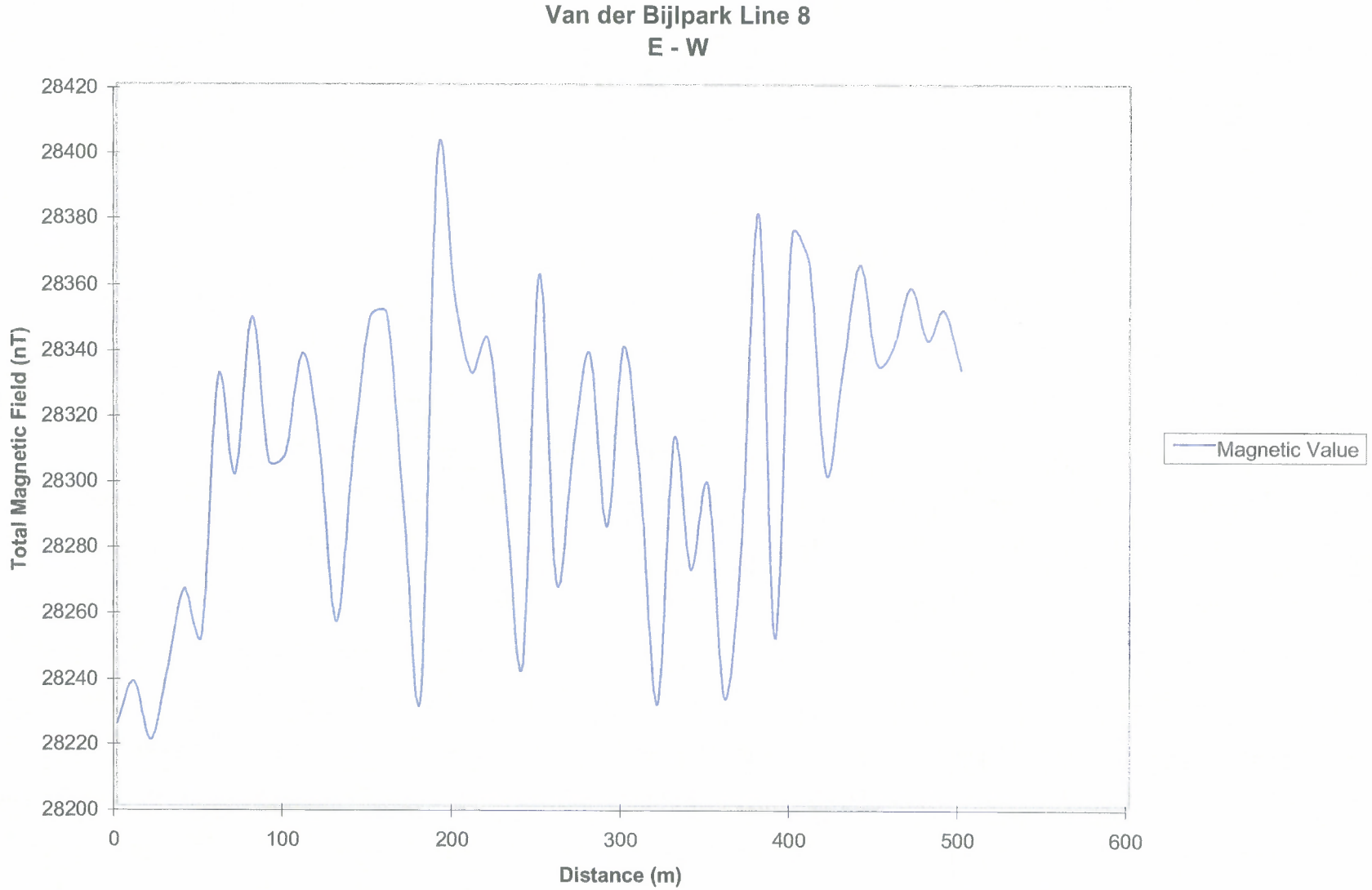



Van der Bijlpark Line 7
Conductivity (mS/m)
90
80
70
60
50
40
30
20
10
0
-10
-20
0
50
100
150
200
250
300
350
Distance (m)
20m Hor. Dip
20m Vert. Dip
40m Hor. Dip
40m Vert. Dip




Vanderbijl Line 6
Total Magnetic Field (nT)
28365
28360
28355
28350
28345
28340
28335
28330
28325
28320
28315
0
50
100
150
200
250
300
Distance (m)
Magnetic Value

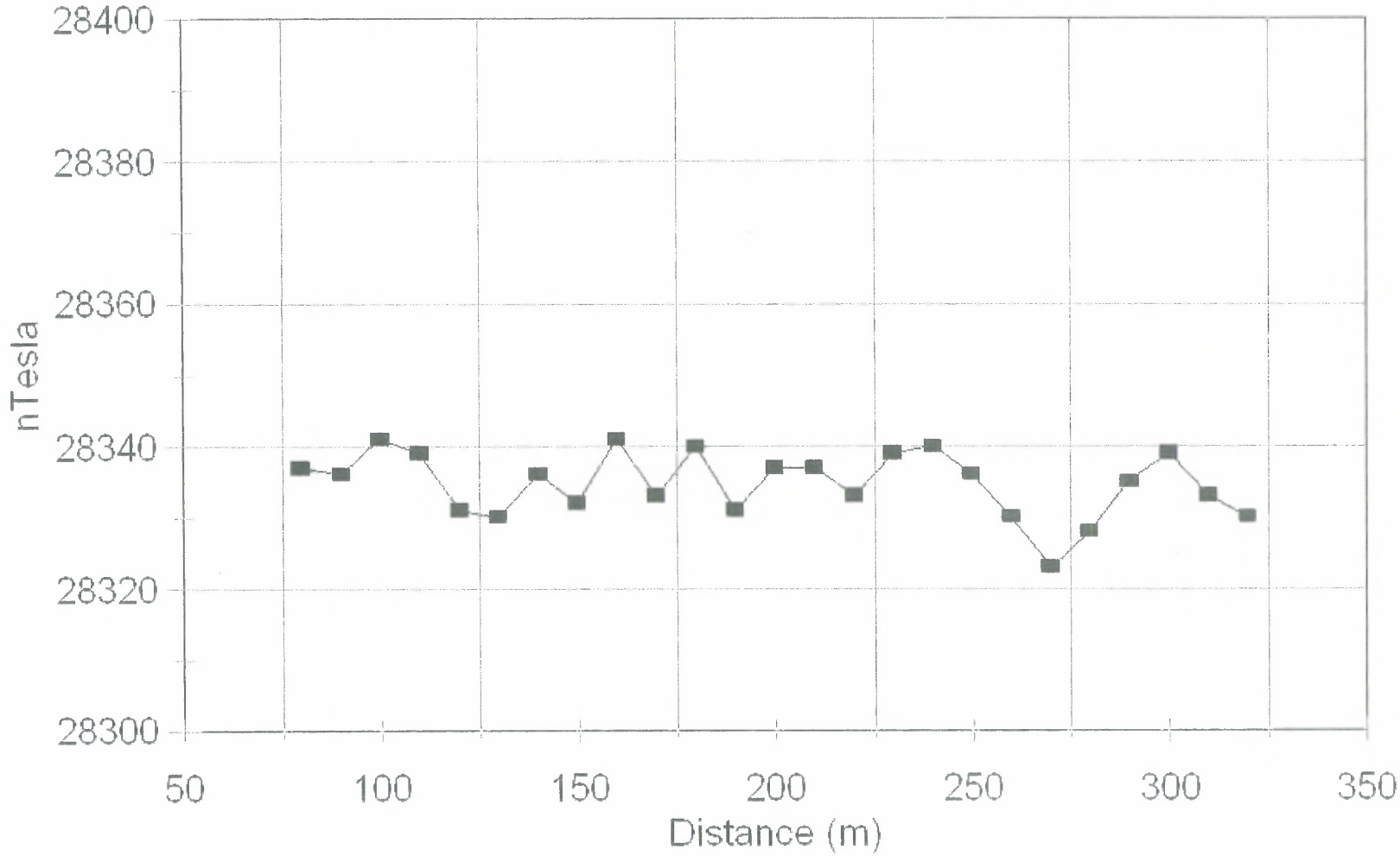


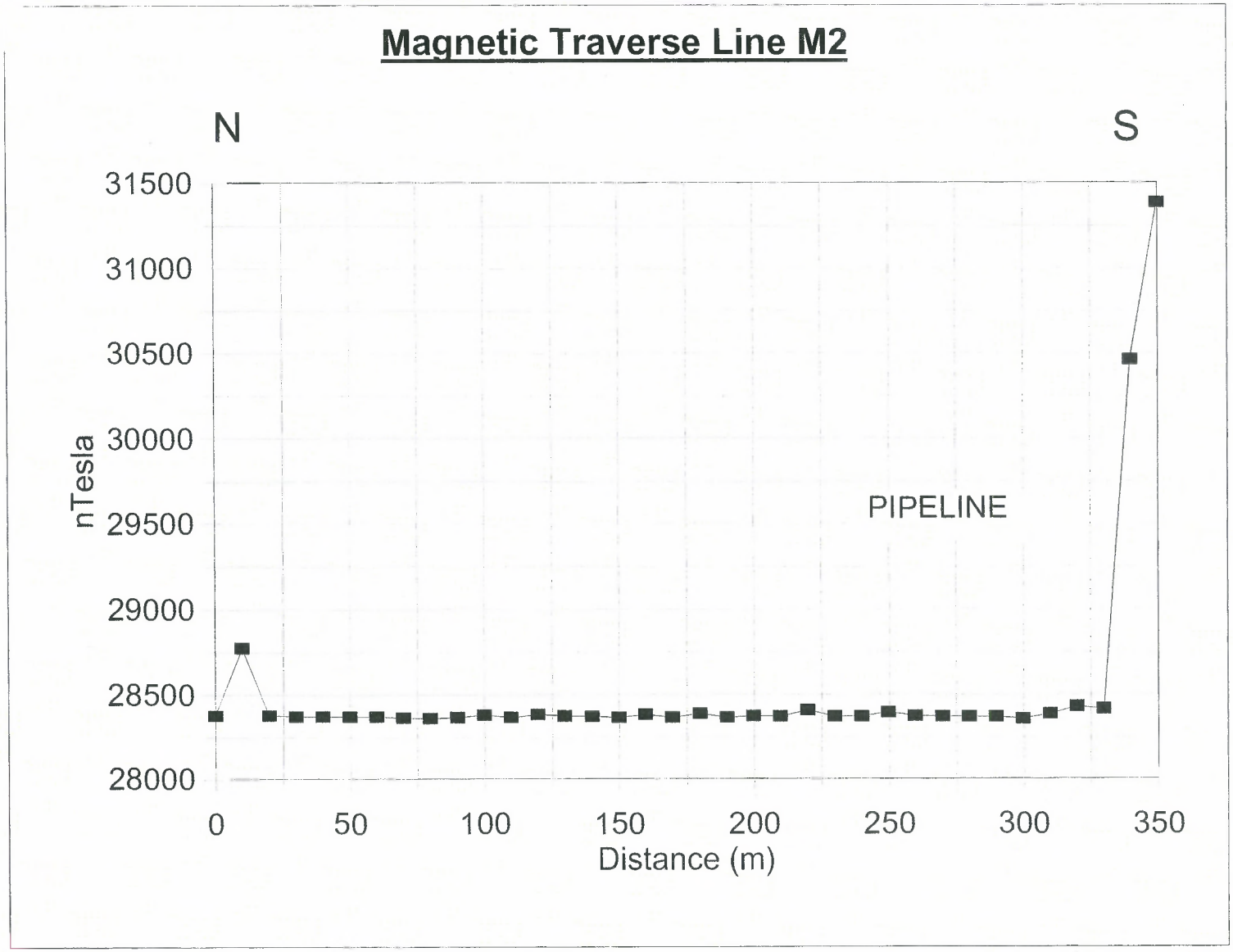


DATA SET III-2

Magnetic profiles.

Magnetic Traverse Line M1





Magnetic Traverse Line M4