



Bergvesenet

Postboks 3021, N-7441 Trondheim

Rapportarkivet

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Kommer fra ..arkiv	Ekstern rapport nr	Oversendt fra Mindex ASA	Fortrolig pga	Fortrolig fra dato:

Tittel

Røros Zinc Project: Geological Investigations of Stratiform Sulphide Deposit in the Røros - Meråker area. Part 3: Geophysical Report from Røros Area

Forfatter

Gonzales, Cesar

Dato År

1998

Bedrift (Oppdragsgiver og/eller oppdragstaker)

Mindex ASA

Kommune

Røros Tydal
Meråker Os

Fylke

Sør-Trøndelag
Hedmark
Nord-Trøndelag

Bergdistrikt

1: 50 000 kartblad

16202 17201 17202 17203
17204 17211 17212 17213

1: 250 000 kartblad

Trondheim Røros

Fagområde

Geofysikk

Dokument type

Forekomster (forekomst, gruvefelt, undersøkelsesfelt)

Røros Nordgruvefelt, Røros Østgruvefelt, Holtålen, Kjølvi,
Tydal Meråker Østfelt, Guldalen, Tolga

Råstoffgruppe

Malm/metall

Råstofftype

Zn Cu

Sammendrag, innholdsfortegnelse eller innholdsbeskrivelse

The selected areas encompassing more than 3000 sq.km of prosperous ground

The objective for the investigations was to evaluate and delineate targets with a potential for economic stratiform zinc-deposits in the Røros and Røsjo formations, an environment regarded as having a strong affinity for sedex-type zinc deposit of Besshi-type as well as in adjacent of the Hersjø formation.

Mangler nettelkart
som viser hver enkelt
punktene ligger
Påføles uten farge og
kledning - umulig å tolke.

GEOPHYSICAL REPORT FROM RØROS AREA 1998

BY

Part III

CESAR GONZALES

PROSPECT / MINE INFO

PROSPECT / MINE	MAPSH EET NO.	REF. COORD.	STR. OF MIN.	DIP OF MIN.	TYPE OF MIN.	DIR. OF PROF.	REMARKS
KONGENSG. 1	1720 III	0617824 E 6950948 N	300°			30°	P1/100N
SEXTUS 3	1720 III	0619691 E 6952899 N	160°			250°	BL000
MUGGRUVE 5	1720 III	0617066 E 6956748 N			po, cpy; py, mag	240°	P1/000
FRUHAUGEN 9	1720 III	0617775 E 6939441 N	210°		py, sp, cpy	120°	BL000
KVERNENGL 13	1720 III	0619332 E 6946371 N				355°	
LOBEKKEN 16	1720 III	0614549 E 6947892 N	270°		no outcrop	0°	P1/000
SLETTMOEN 18	1720 III	0623487 E 6949857N				340°	P1/140W
PUSTBAKKEN 19	1720 III	0623221 E 6949387 N			po, cpy; sp, gal	250°	P1/030W
STORWARTZ 20	1720 III	0630062 E 6946763 N	250°		po, cpy, sp	340°	BL000
KLASBERG 29	1720 III	0631794 E 6950043 N	300°		sp, po, cpy	30°	BL000
ABRAHAMS 31	1720 III	0630377 E 6956282 N	120°		py, sp; cpy, po	225°	qtz-ser. Schist P0/020SW
KLINKENB. 32	1720 III	0635964 E 6958524 N	170°		sp, py; po, cpy,	?°	B50S
TJØNNVOLL 37	1720 IV	0636831 E 6972613 N				340°	P1/200W
KILLINGDAL MAIN 45	1720 IV	0626075 E 6965180 N	25 NNE- SSW	30WNW		90°	
KILLINGDAL NORTH	1720 IV	0626093 E 6965692 N	NNE- SSW	30WNW		90°	
SKARSGRB. 46		0622550 E 6961910 N	50°			?°	

MENNA M. Svenskm. 62 Rørosm. 63 Gualdalsg. 64	1720 IV	0629821 E 6970318 N	45° 45° 45°			135°	BL1850
LANGDALSV 78	1721 III	0641343 E 6991284 N	130°(?)			40°	
SAGSKJ. 88	1721 I	0637755 E 7028317 N	145			235°	
LANGSUNDG 90	1721 I		80°(55° ?)			30°(?)	
S KNOLL 91	1721 I	0638443 E 7024623 N	70°			160°	
N KNOLL 92	1721 I	0638443 E 7024623 N	10°			100°	
ANNA 93	1721 I	0637478 E 7023853 N	150°			60°(0°?)	
GOSTA 94	1721 I	0637626 E 7023700 N	10°			100°(0°?)	Overburden Near 92
DUDDU 95	1721 I	0637669 E 7023277 N	45°			120°	
EBBA 96	1721 I	0637286 E 7023051 N	30°			120°	

MINE/PRO SPECT	Proje cted strike of target	V L F S T A T I O N									Station utilized
		N A A			G B R			U M S			
		Dir. to targ et	Angul ar deviation	Signal	Dir. To targ et	Angul ar deviation	Signal	Dir. To targ et	Angul ar deviation	Signal	
1. Storwartz No 20	250°	290°	40°	weak/ intermittent			weak to no signal			no signal	NAA
2. Klasberget No 29	300°	270°	30°	weak	250°	50°	weak to no signal	260°	40°	weak to no signal	none
3. Fruhaugen No 9	210°	200°	10°	weak to modera te	240°	30°	weak	250°	40°	weak	NAA
4. Kongens No 1	300°	260°	40°	weak/ intermittent	260°	40°	strong			no signal	GBR
5. Sextus No 3	160°			no signal	200°	40°	weak	300°	40°	weak/ intermittent	GBR
6. Lobekken No16	270°			no signal	210°	60°	strong			no signal	GBR

RØROS / ÅLEN VLF-EM AND MAG

Kongens 1

An in-phase crossover is apparent within the trenched section of the profile, however, an extension of the apparent anomalies in lines P1, P2, and P3 appears to be evident between 1.15N and 0N. This may be indicative of a continuation of the mined orebody.

Magnetic intensities are conspicuously high along the northern sections of profile lines P1 and P3 and within the southern sections of profile P2 and P4 exhibit similar characteristics.

Sextus Gruve 3

Two (2) anomalies were detected along the profile lines. These are:

1. anomaly A1 at ca 010E, 020E, and 050E along lines BL0.00, BL0.50S, and BL0.50N, respectively, and
2. anomaly A2 at ca 0.60E and 1.65E of lines BL0.00 and BL0.50S, respectively.

A slightly conductive anomaly was detected at ca 1.20E along line BL0.50N. This may possibly represent a reworking of anomaly A1. Moreover, a possible extension of anomaly A2 is possible farther east of line BL0.50N based on the upturn trend of filtered in-phase data curve along this profile line. The congruency of filtered quadrature and in-phase curves of anomaly A1 and the converse trend of filtered curves for anomaly A2 is indicative of a higher conductivity grade for anomaly A2 relative to A1.

Except for an anomaly at ca 0.12W of line P7, no other significant variations in magnetic intensities were noted.

Muggruve 5

An anomaly (A1) is discernible along both profile lines on similar profile stations (0.50W). The analogous trend of both quadrature and in-phase curves may denote a resistive body. A weak anomaly (A2) at ca 2.30W is observable along line P2. This

indicated anomaly appears to be very weakly perceptible also along line P1 within the same profile station.

No significant magnetic deviations noted.

Fruhaugen 9

An anomaly (A1) can be discerned at ca 0.25E on all of the profile lines. Moreover, a narrowing of the anomaly can be observed towards the direction of line P4. Another anomaly (A2) also appears to be located at 0.50W of line P4. The congruous trend of the filtered in-phase and quadrature curves may be indicative of a lower conductivity rating for the anomaly source.

Disturbances in the ambient magnetic field is discernible within a zone between 010W and 010E along lines BL 0.00, BL0.50S, and BL 0.50N. This deviation is most prominent along line BL 0.50S and appears to wane out along line BL 1.00N.

Kvernenglia 13

Two (2) anomalies were detected. These are:

1. anomaly A1 at ca 150S of lines P3 and P4, and
2. anomaly A2 at ca 350S of lines P1, P2, and P3.

The swarm of filtered data peaks along the north side of the profile lines may be indicative of zone of mineralization.

Except for an abrupt drop in magnetic intensities as depicted at 010N along line P1, which can be attributed to a car within the immediate proximity of the measured station, no other significant magnetic field deviations can be observed from the plotted data.

Lobekken 16

Four (4) distinct anomalies were delineated along the profile lines. These are:

1. anomaly A1 located at ca 50S of all profile lines,
2. anomaly A2 at ca 175S-250S, 175S-240S, 125S-200S of lines P1, P2, P3, respectively,
3. anomaly A3 located at ca 400S of the profile lines, and
4. anomaly A4 at ca 550S, 525S, 485S of lines P1, P2, P3, respectively.

The anomaly swarm depicted within the northern half of the profile lines may indicate the presence of a zone of conductive mineralization. Anomaly A4 appears to have weakened along line P3, however, the uptrend direction of the filtered in-phase data curve along the southern extremities of the profile lines may be indicative of another anomaly farther south of the profiles.

A wide zone of magnetic variance can be noted between 400S and 660S along all profile lines.

Slettmoen 18

No significant anomalies were detected along the test lines. However, the steep upturn trend of filtered data on the western flanks may denote the proximity of a possible conductive body.

A magnetic anomaly zone can be noted between 080W and 125W. Mean magnetic susceptibilities within this zone are significantly higher than contiguous sections of the profile.

Pustbakken 19

An anomaly (A1) was detected at ca 75SW of both profile lines, although the anomaly is more conspicuous along line P1. The analogous to almost linear trend of the filtered quadrature data curve may be indicative of a higher resistivity ratio relative to conductivity.

A zone of higher magnetic susceptibilities relative to adjoining sections of the profile can be noted between 090W and 110W of line P1 and appears to have also been detected along line P2. The magnetic anomaly at ca 005W can be attributed to a powerline within the vicinity.

Storwartz Gruve 20

Magnetic intensities significantly increase along the southeastern extremities of lines P1, P2, and P4. Isolated point anomalies e.g., at 1.00SE of line P5 and 0.10SE of line P3, no other notable magnetic intensity deviations were noted.

Klasberget 29

Discernible anomaly within this area is one located at 010S to 030S as depicted in the plotted data for lines P1 and P2. A predominance of magnetic noise along lines P3 and P4 considerably affects data reliability along the aforementioned lines.

Abrahams Gruve 31

Three (3) anomalies can be noted from the filtered data curves, These are:

1. anomaly A1 at ca 350SW of line P0 and at ca 375SW of lines P1 and P2,
2. anomaly A2 at ca BL of lines P0 and P1 and ca 050NE of line P2, and
3. anomaly A3 at ca 225NE of line P1.

Anomaly A3 seems to persist farther to the east of lines P1 and P2.

A magnetically deviant zone can be noted within a section from stations 130SW to 010NE along line P0. This zone persists in a northeasterly to southeasterly direction towards the southeasternmost lines (P1-P3). Another significant anomaly is situated between 340SW and 360SW of line P2. Correlation of this anomaly with that located along line P0 at 320SW to 350SW may be inconclusive since both anomalies do not persist along line P1.

Klinkenberg 32

Except for an anomaly peak at 0.50E of line P1, no other distinct anomalies can be noted from the filtered data. This anomaly appears to have weakened along lines P2 and P3. The numerous peaks depicted in the filtered data curves along the profile lines indicate an environment with a high level of EM noise.

High magnetic field intensities can be observed along a zone situated within 070W and 280E of line P2. This same zone was also detected along profile P3 where the zone is located between 140W and 225E. A probable but weak manifestation of this zone can be deduced from the data curve along line P1 at 080W to 250E.

Tjønnvollåsen 37

Three (3) anomalies are discernible along Line P1. These are:

1. anomaly A1 at ca 055W,

2. anomaly A2 at ca 050E, and
3. anomaly A3 at ca 175E.

Anomaly A1 was no longer detected along lines P2 and P3, while anomaly A3 seems to weaken further along P1 and P2, and may be discerned as the same anomaly at ca 225E of line P3. Moreover, anomaly A2 is constantly perceptible along ca 075E of line P2 and ca 100E of line P3. The perceived congruency of the quadrature curve relative to the in-phase curve based on filtered data may denote a lower degree of conductivity for the indicated anomaly.

Two (2) significant magnetic anomalies were delineated. These are:

1. anomaly A1 variably located at 015E, 005E, and 025E on lines P1, P2, and P3, respectively,
2. anomaly A2 located at 208E

Killingdal 45

Four (4) anomalies are discernible along the profile section. These are:

1. anomaly A1 at ca 175W and 160W of lines P1 and P2, respectively,
2. anomaly A2 at ca 020W-025W of lines P8, P9, P10,
3. anomaly A3 at ca 175E on lines P7 and P8 and at ca 250E on lines P9 and P10, and
4. anomaly A4 at ca 280E, 315E, 330E on lines P7, P8, P9, respectively.

An extension of anomaly A4 seems to be evident farther onto the eastern extremities of line P10. Furthermore, an anomaly (A5) can also be discerned at ca 040E of line P7.

A significant decrease in magnetic field intensities can be noted at a zone centered at 030W along line P1. This, however, was not detected along line P2, where no significant magnetic field deviations were encountered. A zone of magnetic high is discernible at 285W to 305W along line P3. This anomaly is not manifested in the intensity curves along lines P4 and P5. An anomaly zone is apparently noticeable along lines P8, P9, and P10 between stations 180E to 320E. Intensified field intensities on the western extremes of this anomaly is manifested in the reduced data curve for line P10. Another anomaly was detected between 010E and 010W of line P9, while the anomaly zone between 140W

and 200W which is more distinct along line P7 appears to weaken towards lines P8 and P9.

Killingdal Kleppen, Skargruben 46

Two (2) distinct anomalies were detected along the test lines. These are:

1. anomaly A1 located at ca 100W of all profile lines, and
2. anomaly A2 at ca 175E, 150E, 125E of lines P1, P2, P3, respectively.

A broadening of anomaly A1 along line P3 can be noted. Furthermore, an anomaly (A3) can be observed at ca 025E on line P1, however, this anomaly does not persist in the other lines.

Most prominent magnetic field deviation observed is along line P1 located at ca 140W to 190W. A weaker anomaly can be noted within a zone centered at 080E along line P1. This same anomaly appears to widen along line P2 from 060E to 110E.

Menna Mines 62, 63 and 64

Two (2) major 3 km. profile lines (P1 & P2) were established and of the three abandoned mines encountered during the course of the survey, the Rorosmenna mines, 63, indicated the most conspicuous anomaly. Supplementary profile lines (P3-P6) were also established within the proximity of abandoned diggings. Three (3) distinct anomalies were delineated from these supplementary lines. These are:

1. anomaly A1 at ca 850NE of lines P4, P5, and P6,
2. anomaly A2 at 730NE of line P3, and
3. anomaly A3 at ca 775Ne of line P4.

These anomalies may be correlated to existing diggings and some scattered metal objects within the immediate vicinity of the test lines.

Magnetic intensities were most pronounced within the Gualdalsgruve area, 64, as depicted in line P1. The Svenkmenna, 62, and Røros Menna, 63, areas registered similar magnetic deviations although of lower intensities, as illustrated in Line P2. Other significant anomalies are located at ca 860NE of line P4, ca 730NE of lines P5 and P6, which can be attributed to the Røros Menna deposit.

Langdalsvollen 78

Four (4) anomalies were detected along the test lines. These are:

1. anomaly A1 located at ca 50N and 75N of lines P2 and P3, respectively,
2. anomaly A2 located at ca BL, 20S, 05S of lines P1, P2, P3, respectively,
3. anomaly A3 at ca 175S and 150S of lines P1 and P3, respectively, and
4. anomaly A4 at ca 300S, 325S, 275S of lines P1, P2, P3, respectively.

Anomaly A1 is not discernible along line P1 and seems to be most conspicuous on line P2 and wanes out on line P3. Anomaly A4 evidently persists and further intensifies towards line P3.

A magnetic anomaly can be noted between 040S and 050S of line P1. Another field deviation can be observed at 230S to 245S and the southern extremity of line P3.

Sagskjerpet 88

Three (3) anomalies were detected along the profile lines. These are:

1. anomaly A1 located at ca 155W of line P1,
2. anomaly A2 at ca 050W along lines P1 and P2, and
3. anomaly A3 at ca 020E along line P1.

Field observations indicate a predominance of surficial sources of anomalies, e.g., dumps, which may be attributed to anomaly A2. Moreover, anomaly A3 can be attributed to the dumps within an abandoned digging wherein massive pyrite outcrops were observed.

Langsundsgruva 90

An anomaly (A1) can be observed at ca 010S of line P2. An extension of this anomaly may exist farther south of the profile lines.

Although a highly variant magnetic field within the area can be observed, no significant anomalies can be noted.

Anna Gosta 93-94

An anomaly (A1) can be observed centered at 050E, 100E, 125E along profile lines P1, P2, P3, respectively. This anomaly trends in a northeasterly direction. A similar anomaly (A2) is discernible at ca 075 E of line P4.

Except for the highly deviant field intensities, no significant magnetic field disturbances are discernible.

Duddu 95

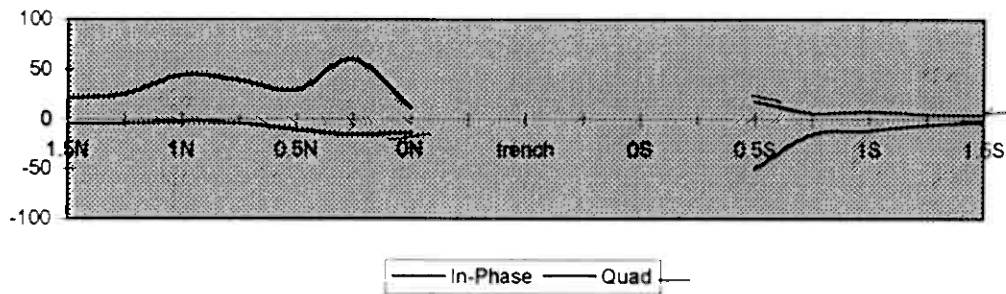
An anomaly (A1) can be observed starting at ca 130W. However, the anomaly zone was not completely covered by the survey. A possible anomaly may also exist in the eastern extremities of the profile lines.

An abrupt disturbance of the magnetic field seems to transpire along the western section of line P2 between stations 135W to 165W. However, this zone is not discernible along line P3 where magnetic field intensities are seemingly constant.

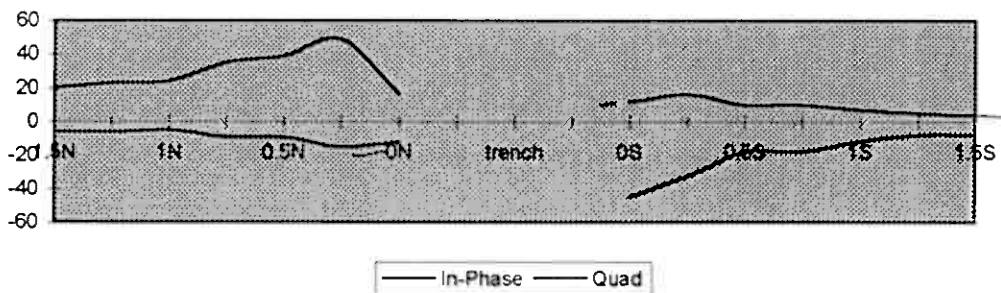
Ebba 96

The highly deviant character of the ambient field affects data reliability, however, a magnetic high can be observed at ca 205E to 215E along lines P1 and P2.

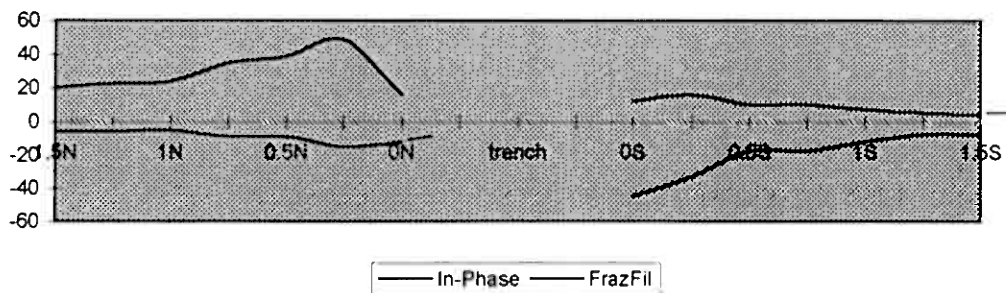
KONGENS VLF
P1 (Unfiltered)



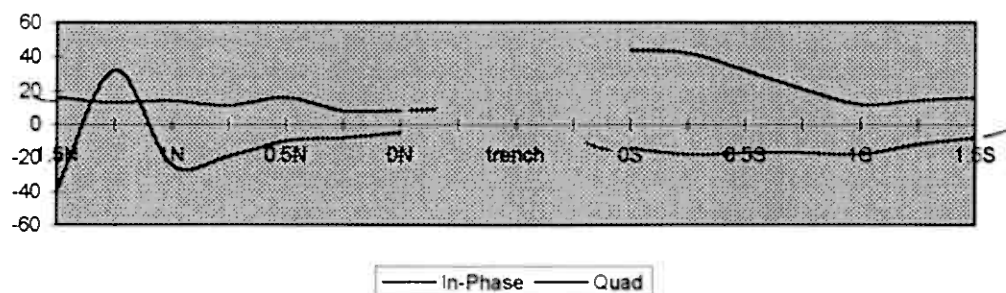
KONGENS VLF
P2 (Unfiltered)

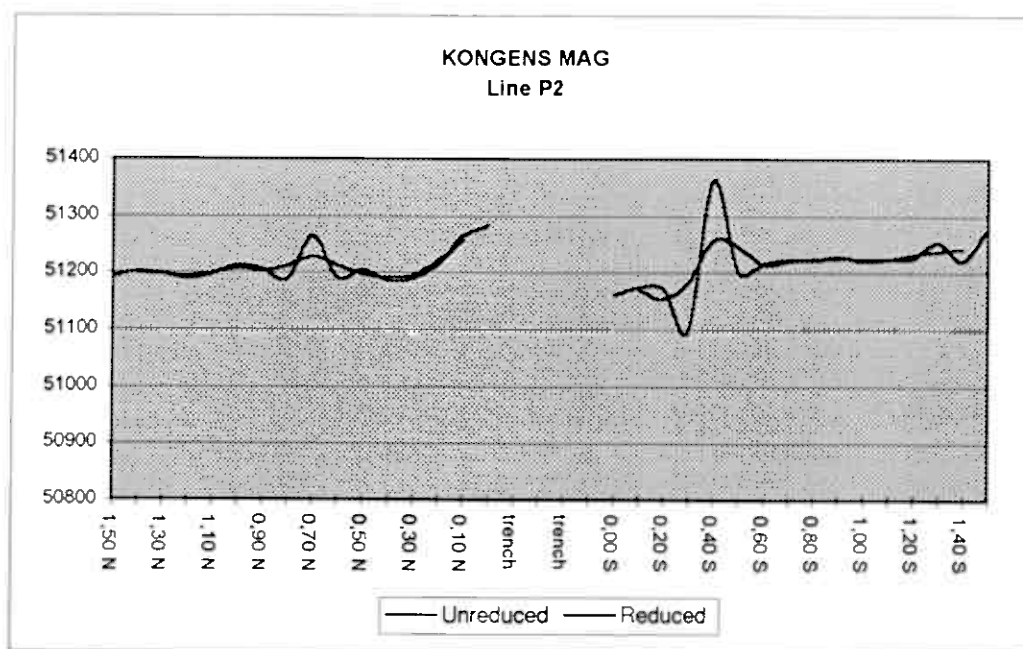
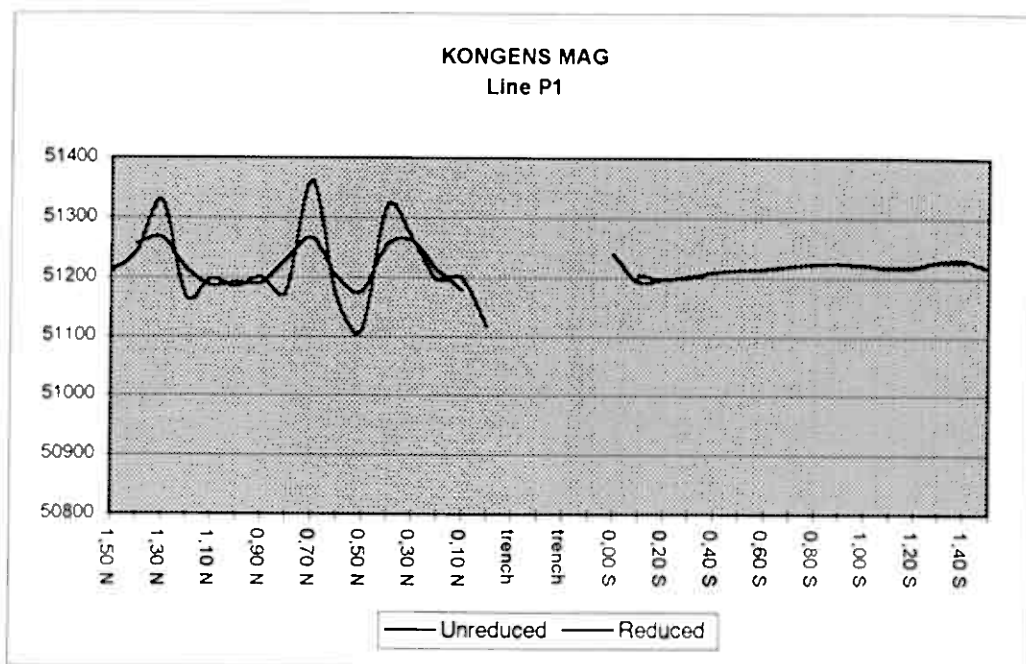


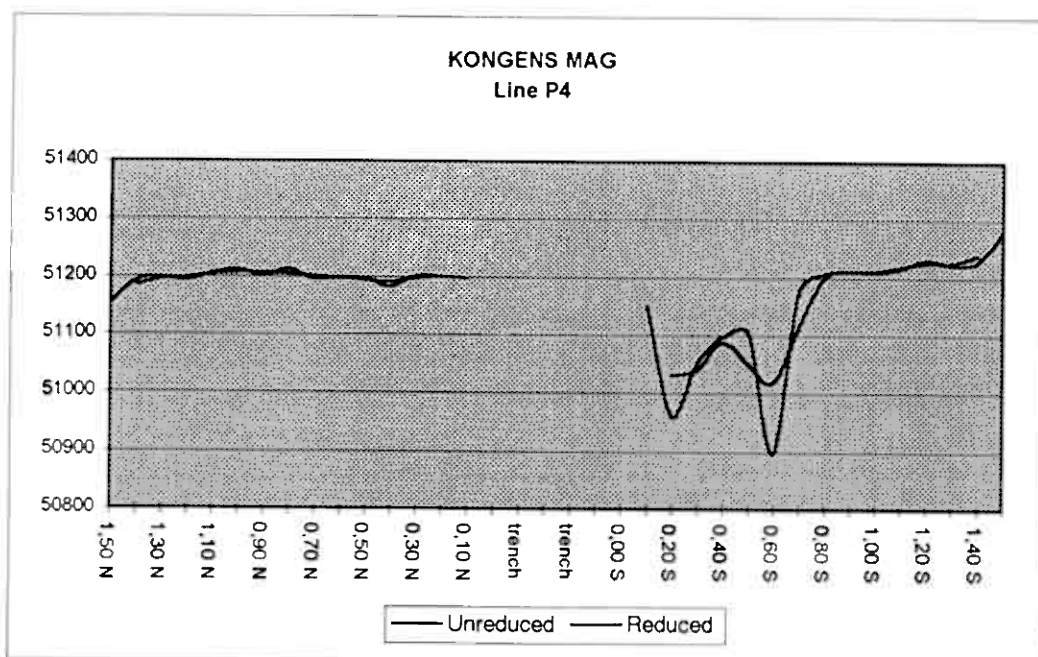
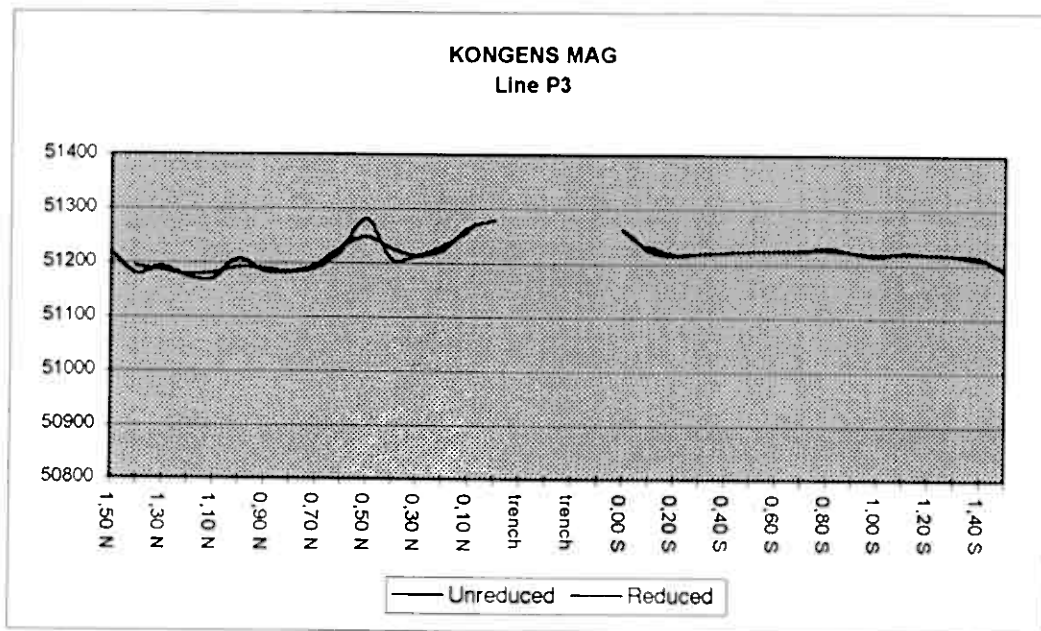
KONGENS VLF
P3 (Unfiltered)



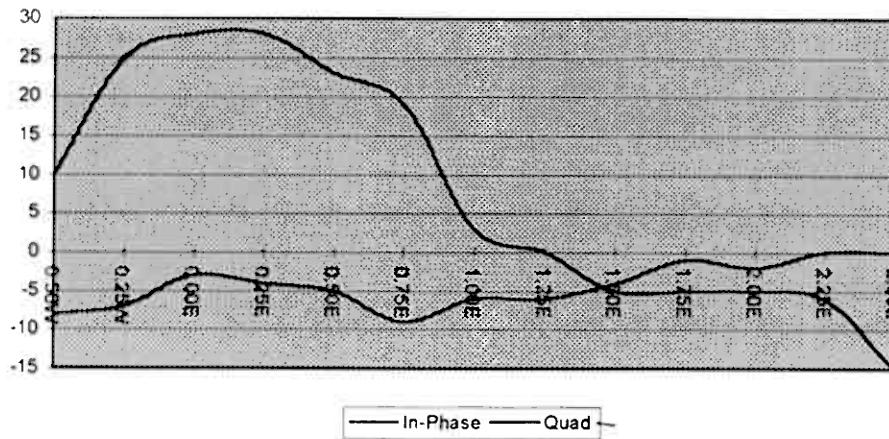
KONGENS VLF
P4 (Unfiltered)



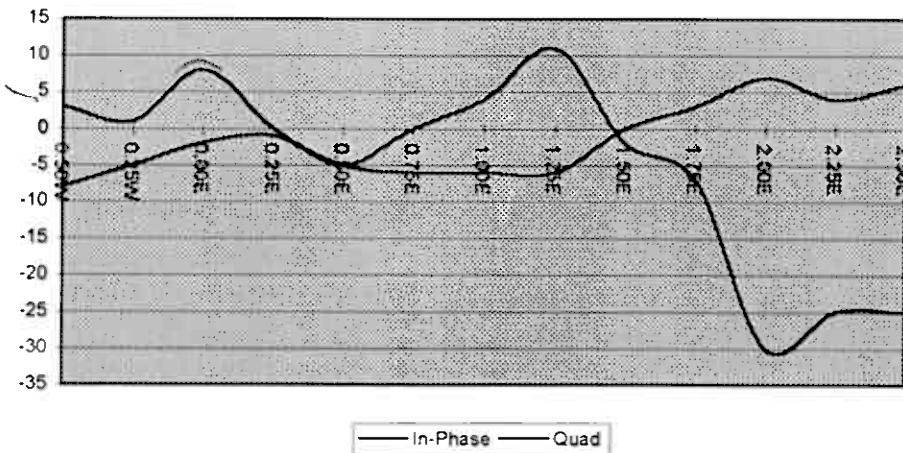




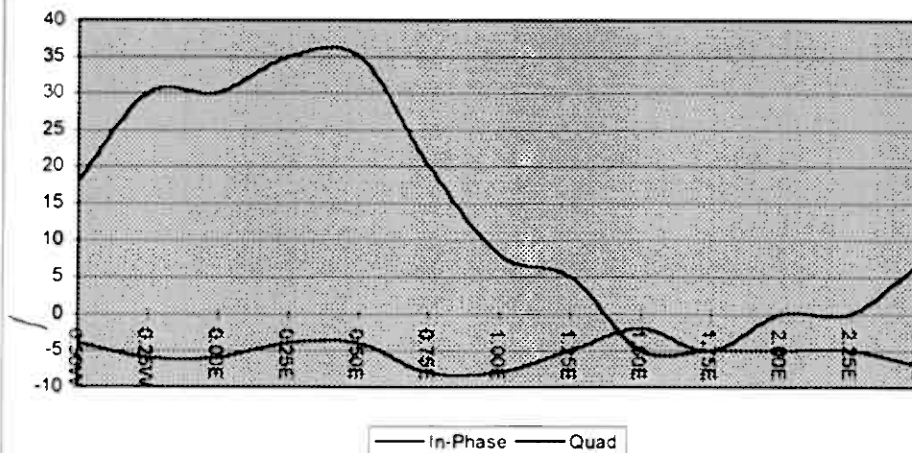
SEXTUS VLF
BL0.00 (Unfiltered)



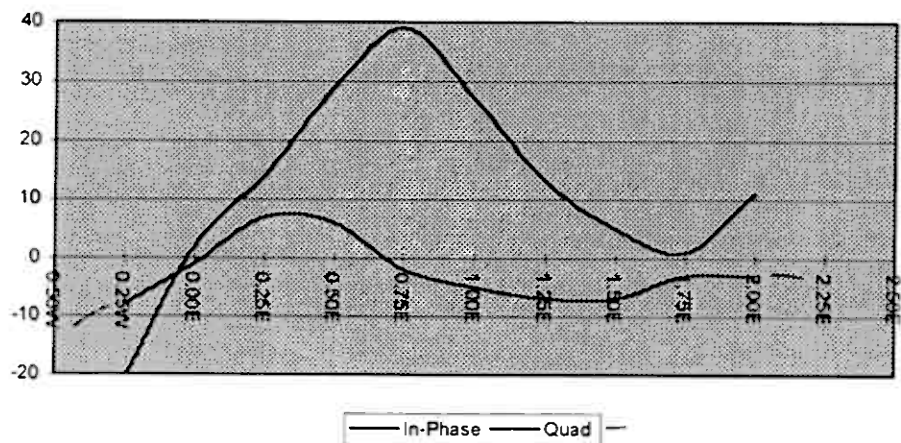
SEXTUS VLF
BL 0.50S (Unfiltered)



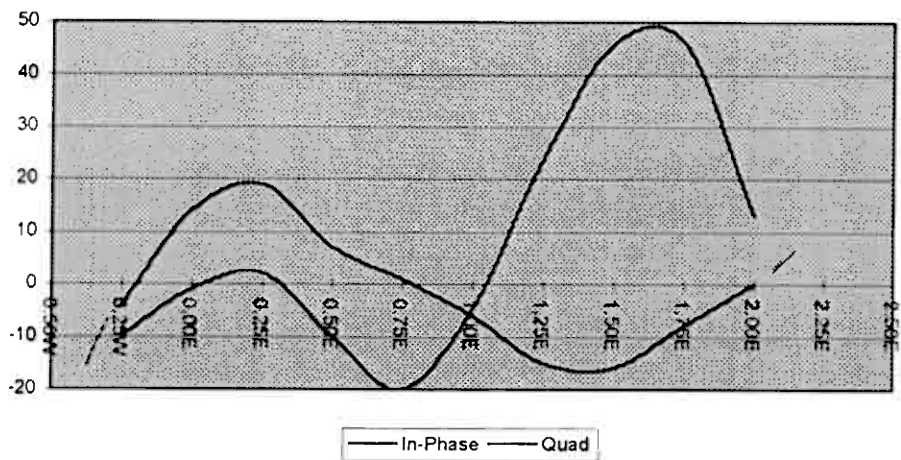
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BL 0.50N (Unfiltered)



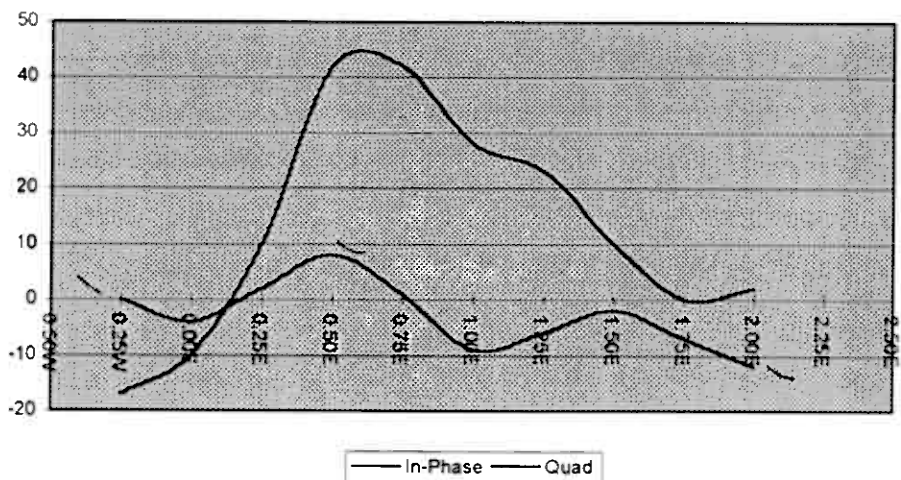
SEXTUS VLF
BL 0.00 (Filtered)



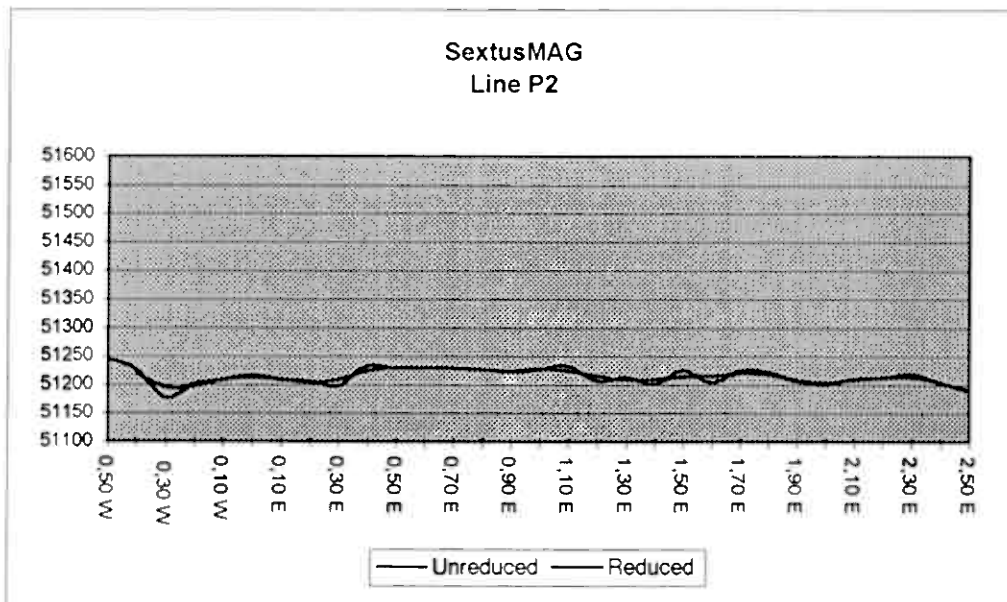
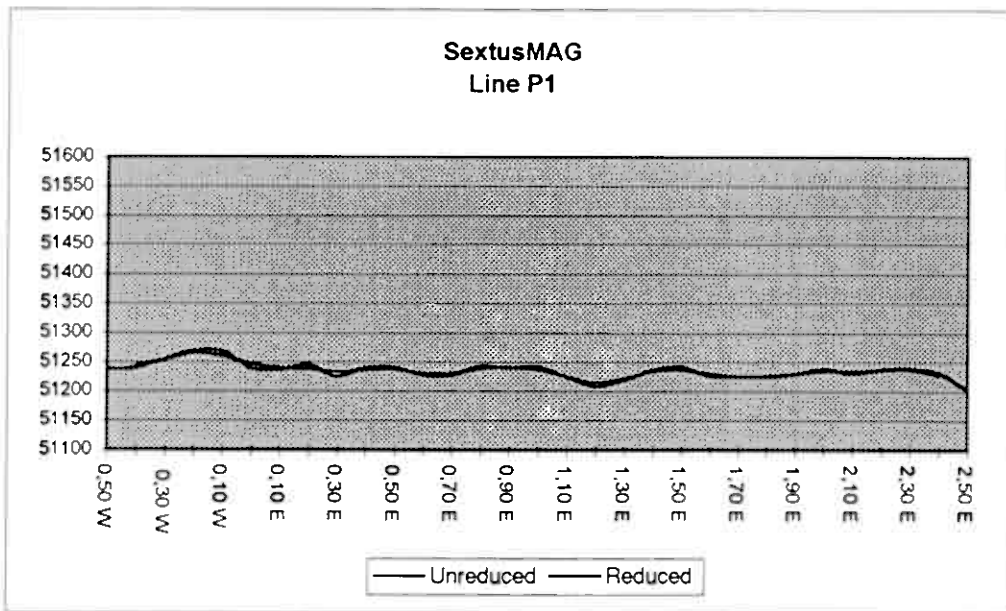
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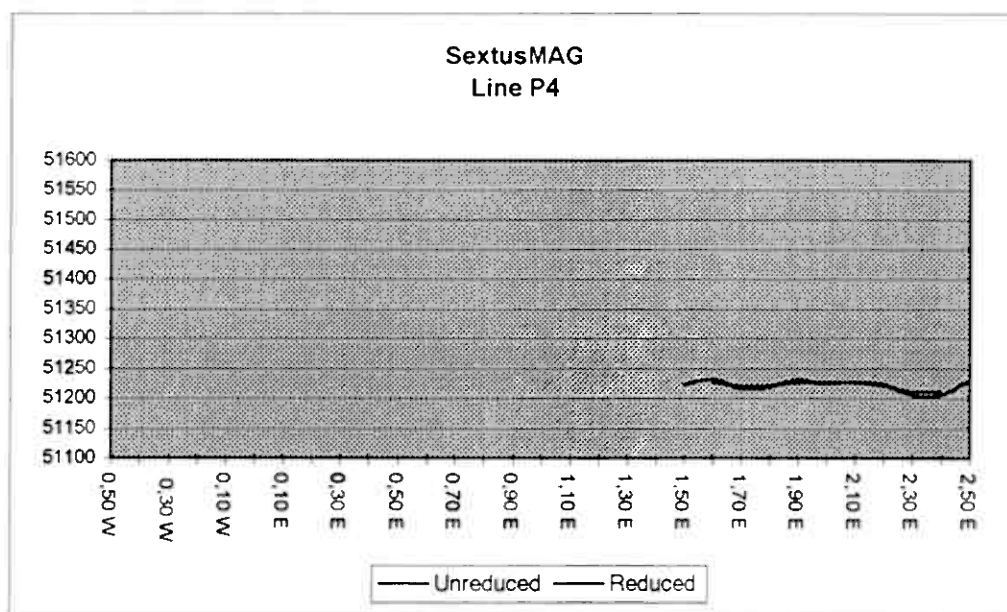
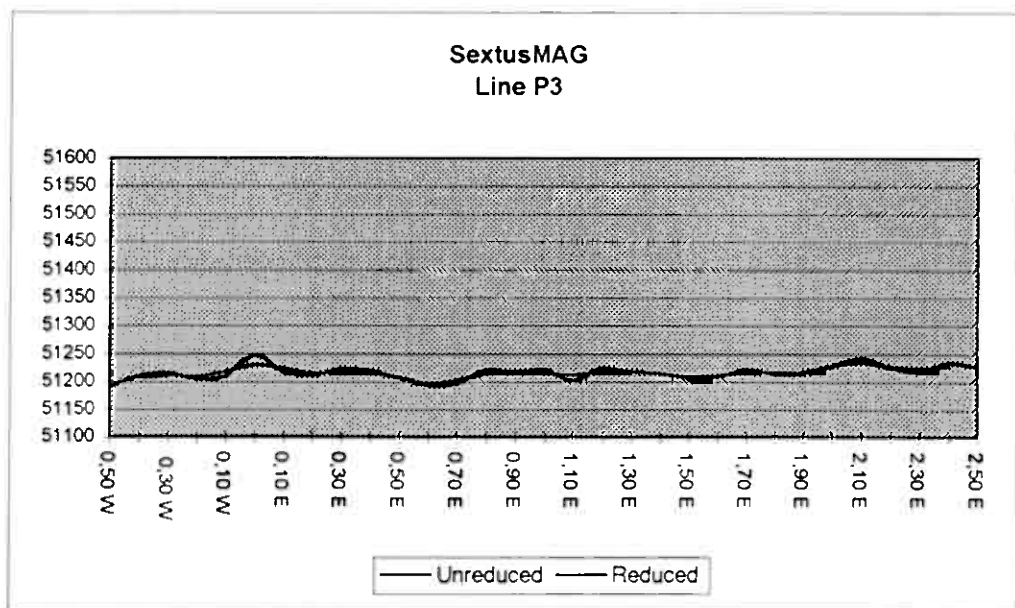


SEXTUS VLF
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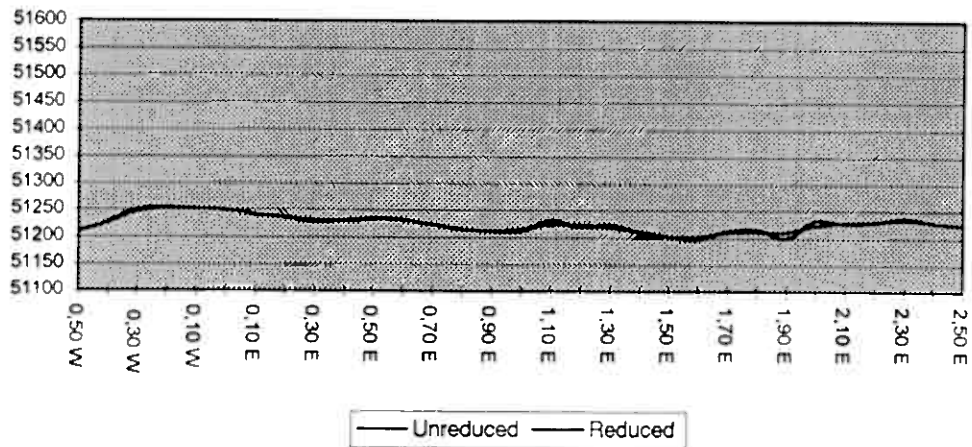


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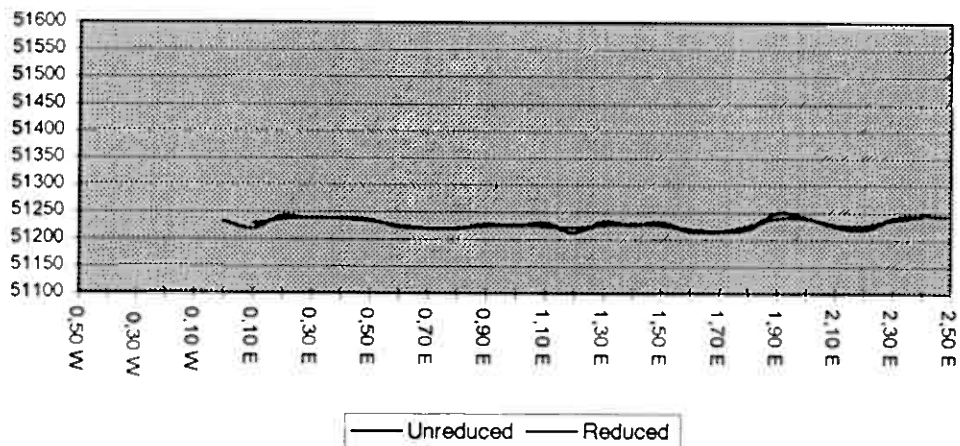




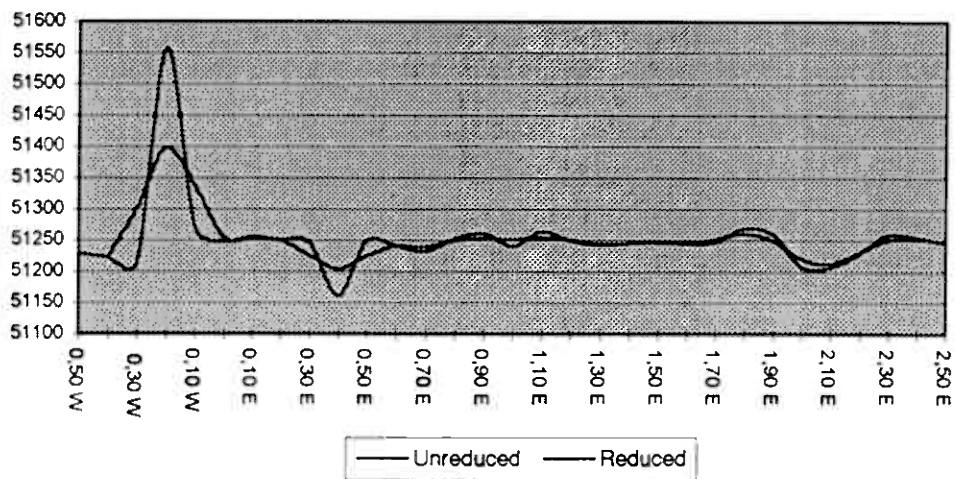
SextusMAG
Line P5



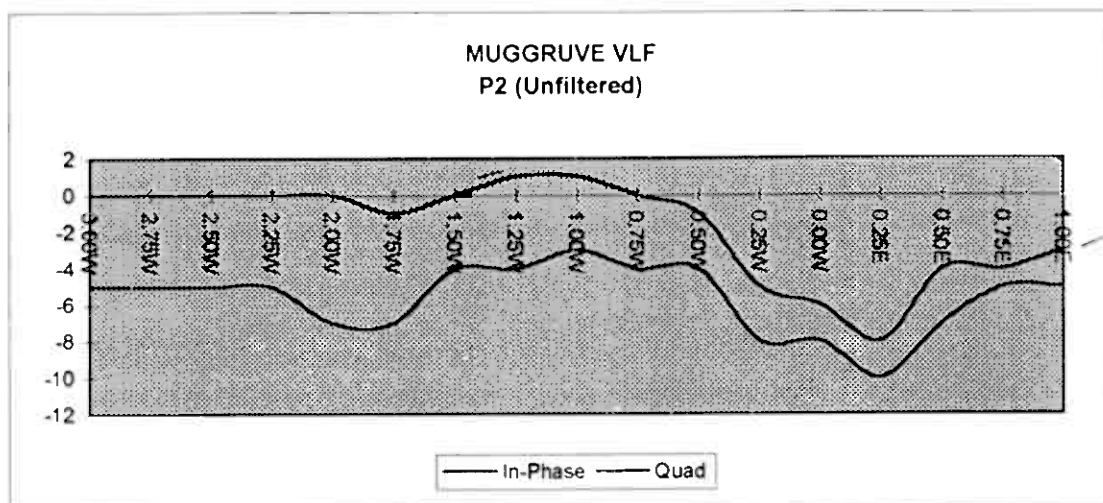
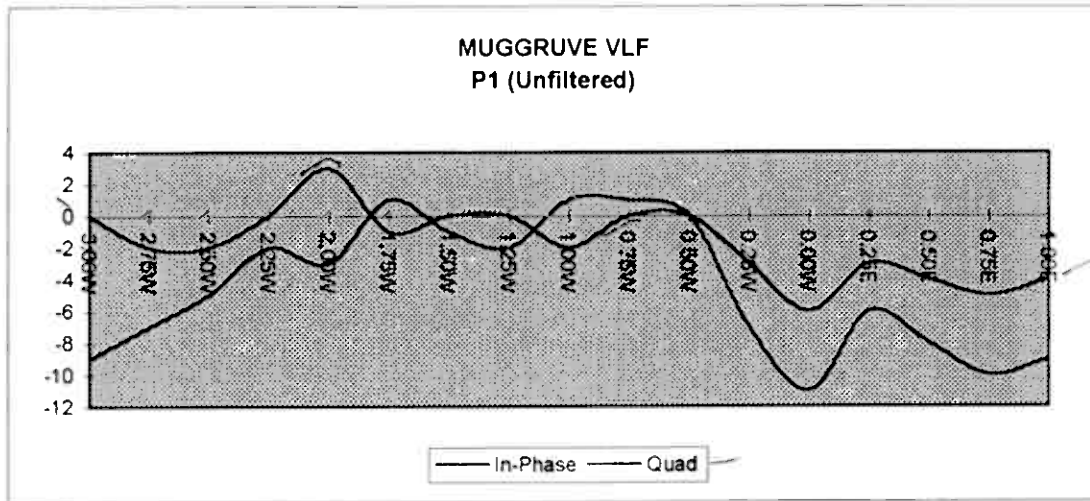
SextusMAG
Line P6



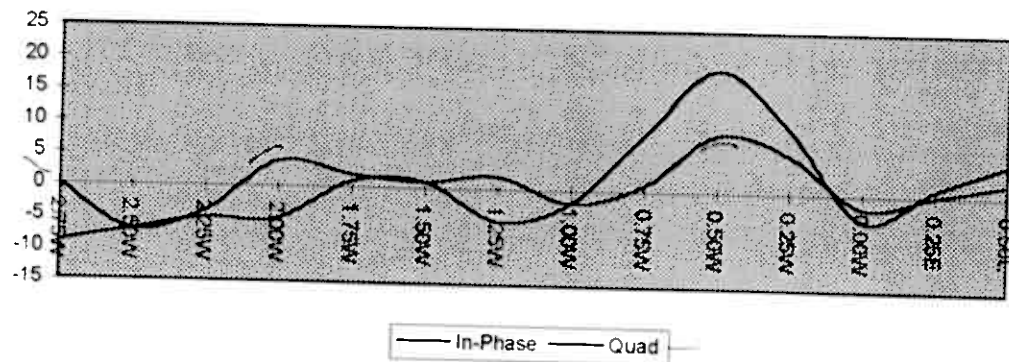
SextusMAG
Line P7



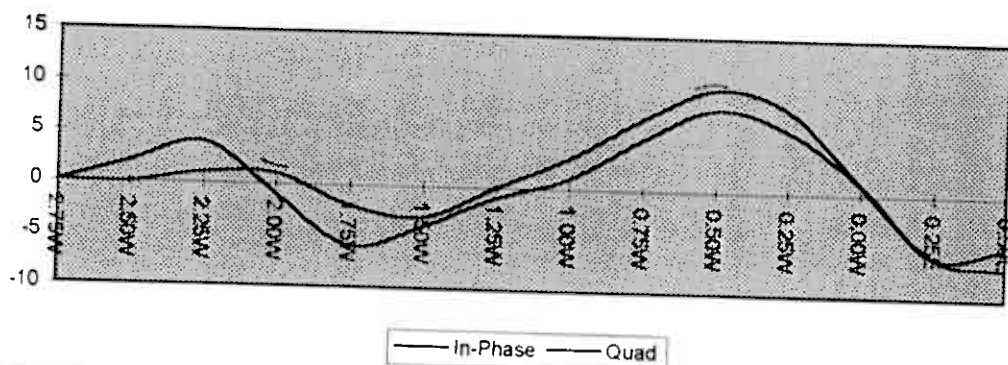
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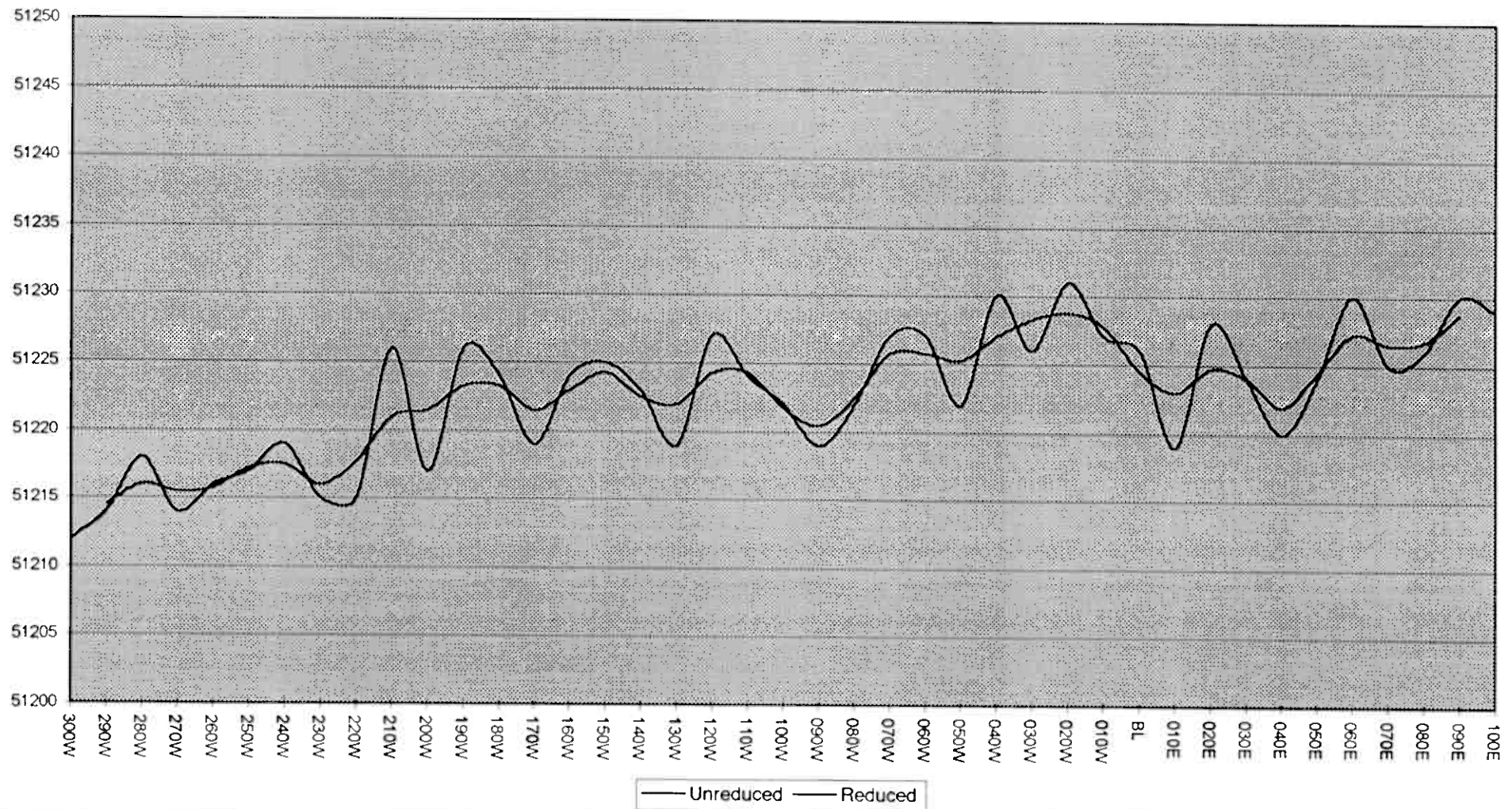
MUGGRUVE VLF
P1 (Filtered)



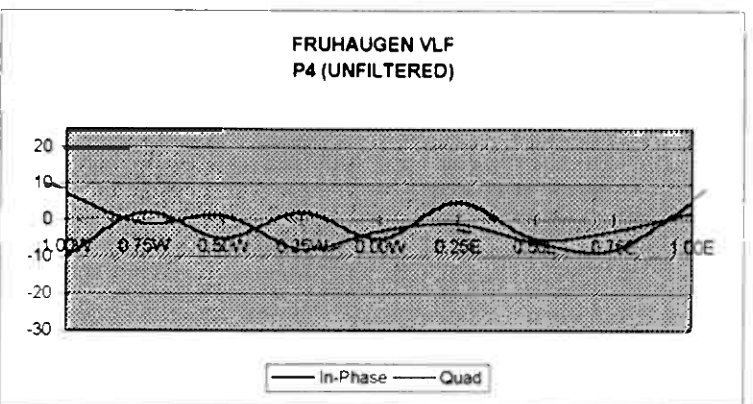
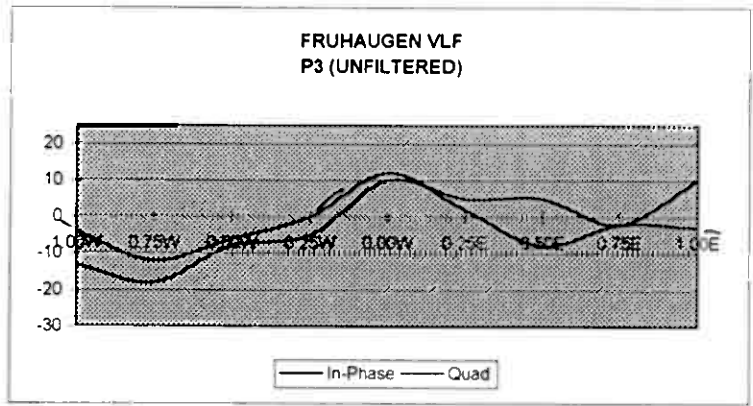
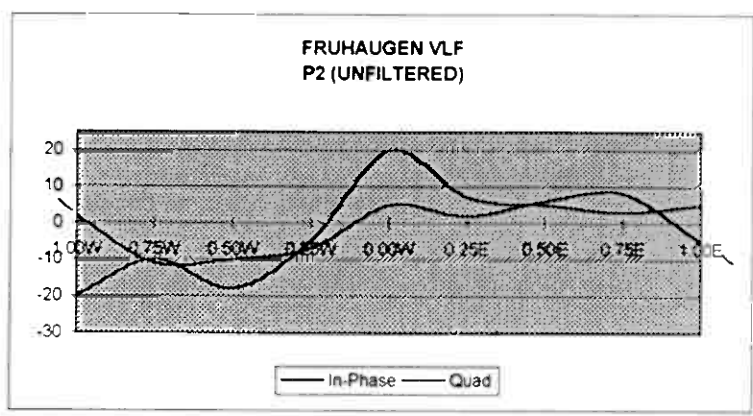
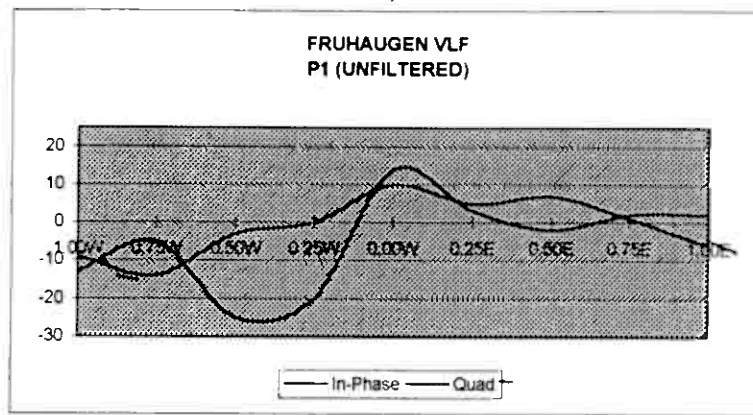
MUGGRUVE VLF
P2 (Filtered)

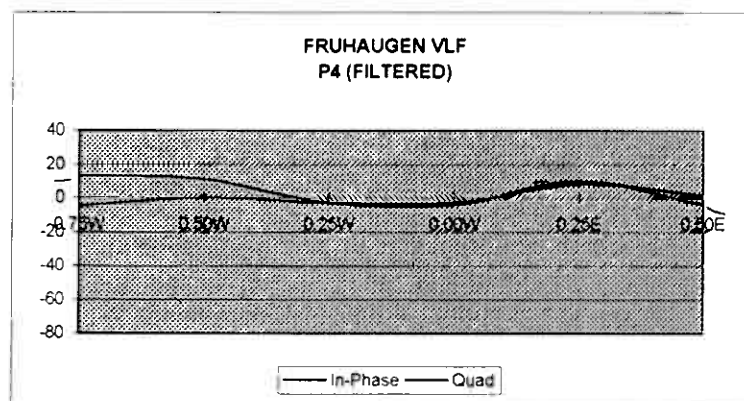
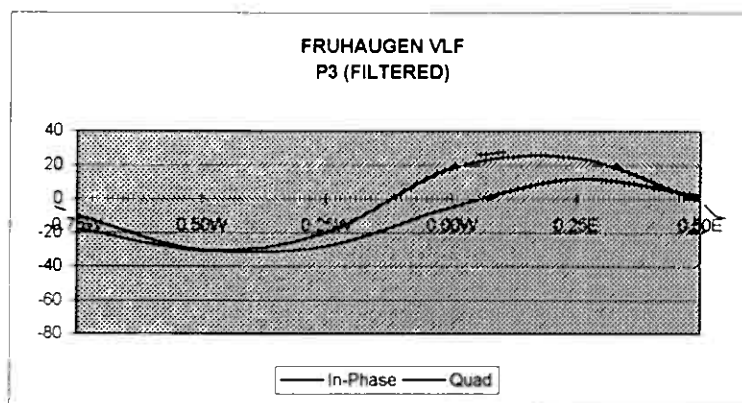
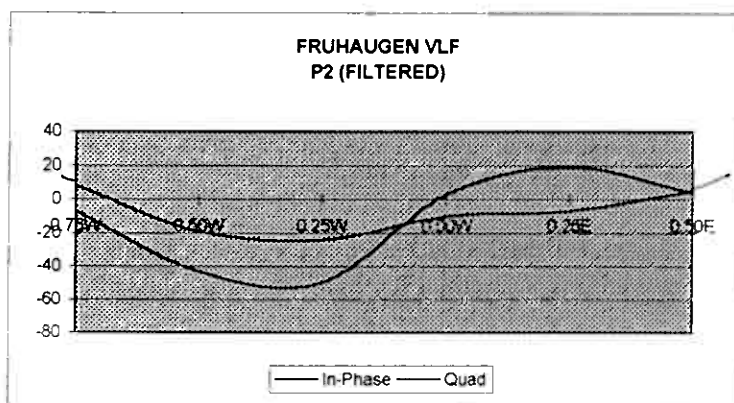
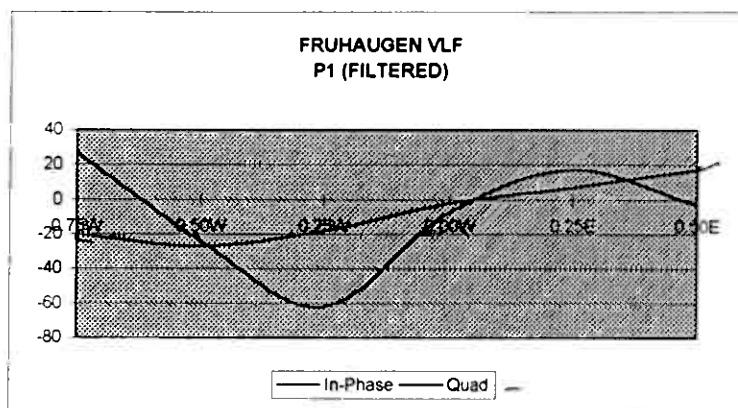


MuggruveMAG
Line P2

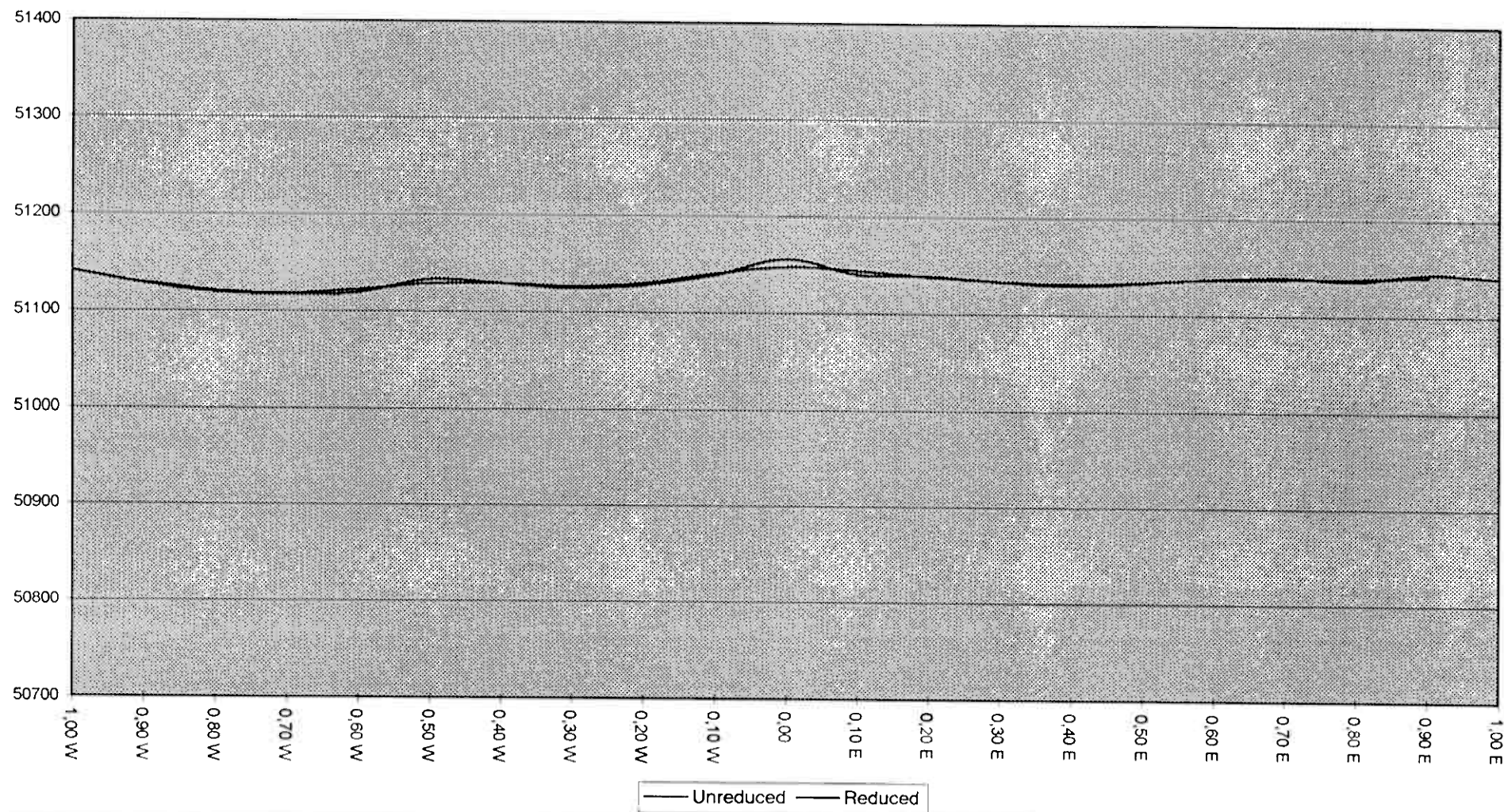


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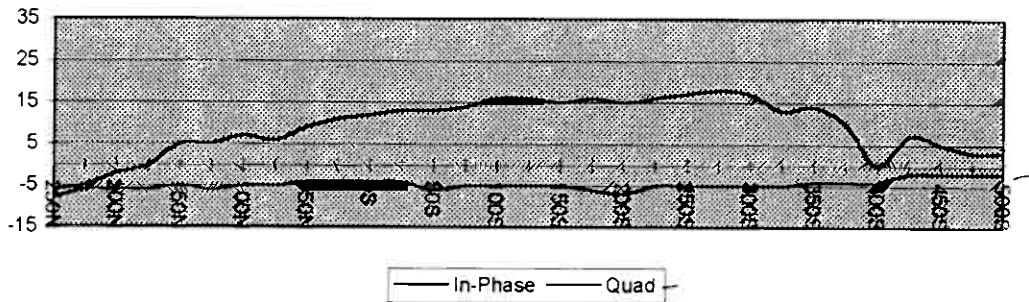


FRUHAUGEN MAG
BL 1,00N

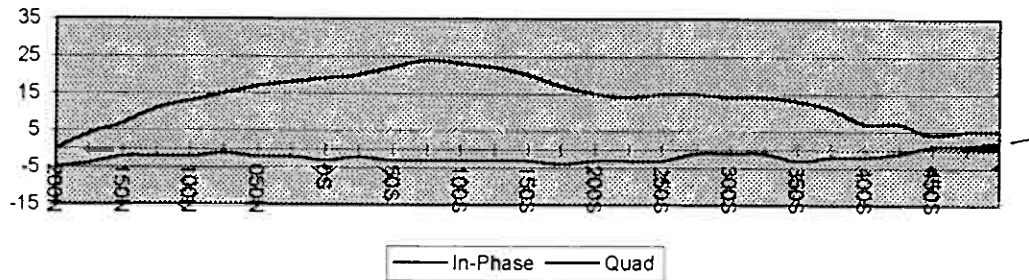


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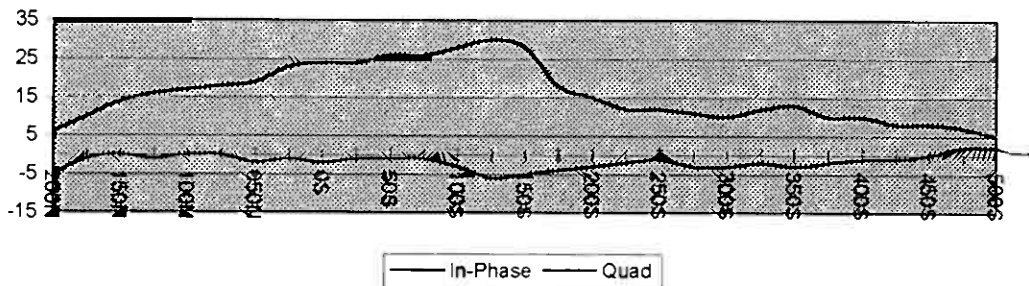
KVERNENGLIA VLF
P1 (Unfiltered)



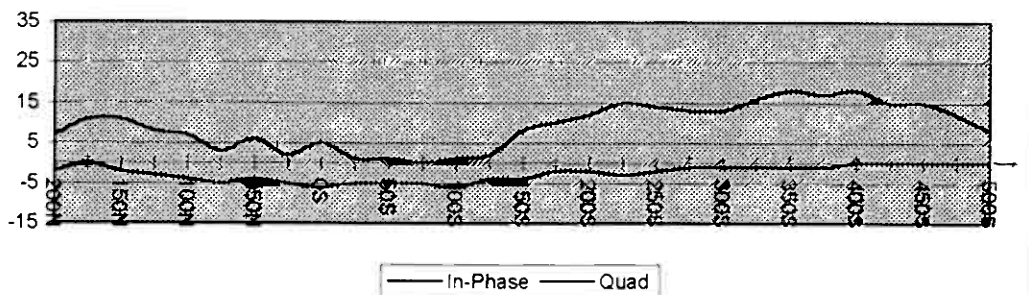
KVERNENGLIA VLF
P2 (Unfiltered)



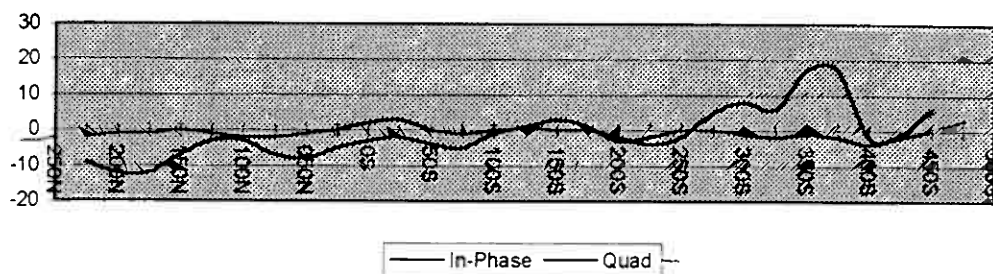
KVERNENGLIA VLF
P3 (Unfiltered)



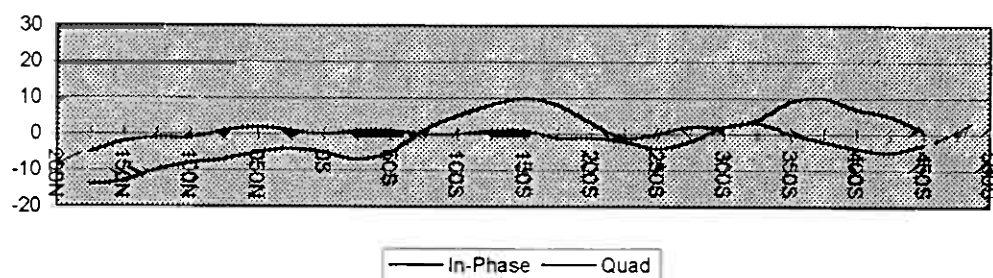
KVERNENGLIA VLF
P4 (Unfiltered)



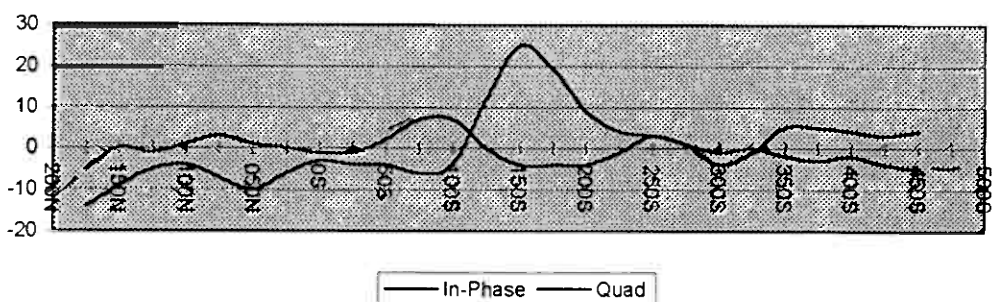
KVERNENGLIA VLF
P1 (Filtered)



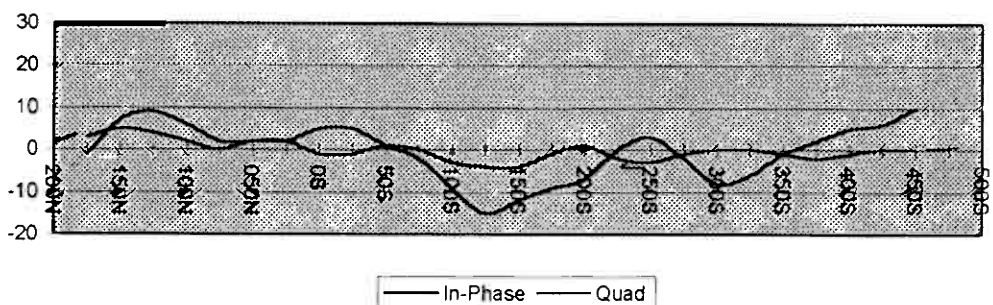
KVERNENGLIA VLF
P2 (Filtered)



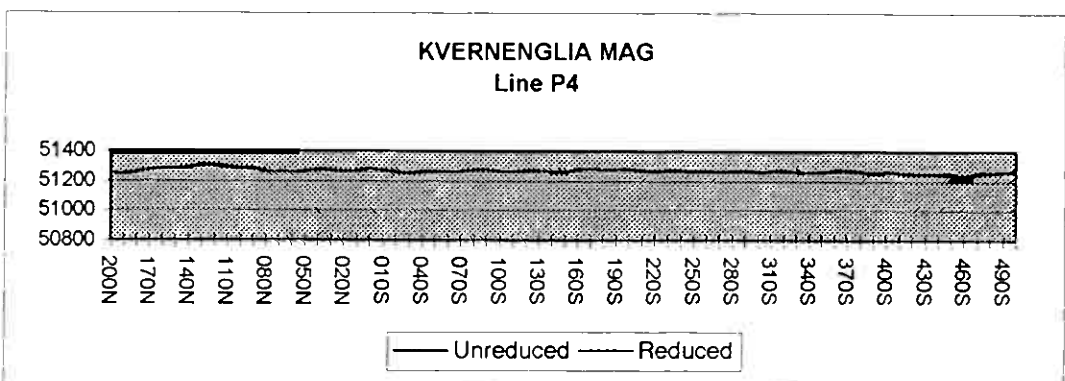
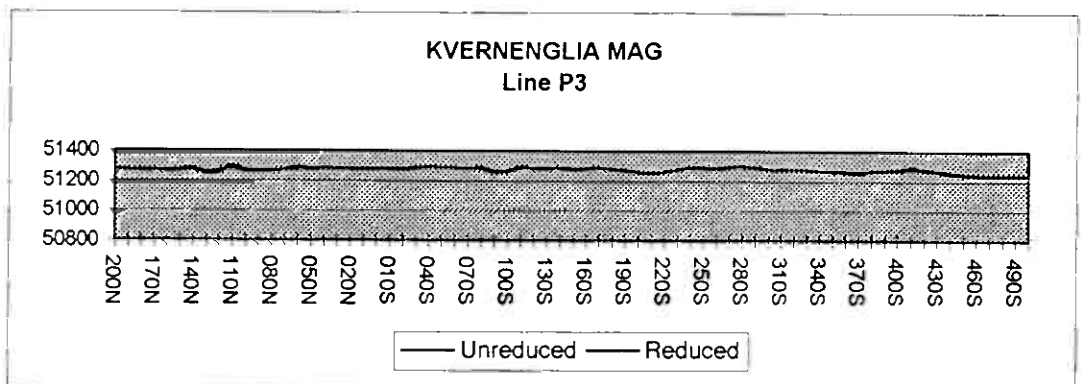
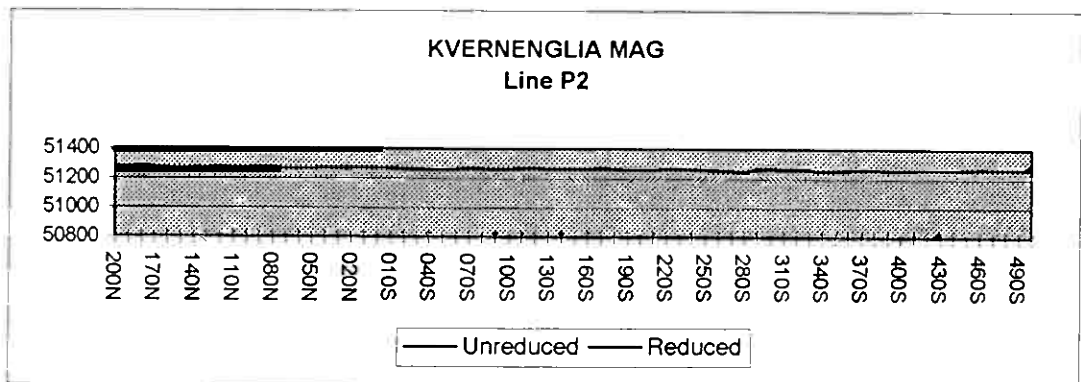
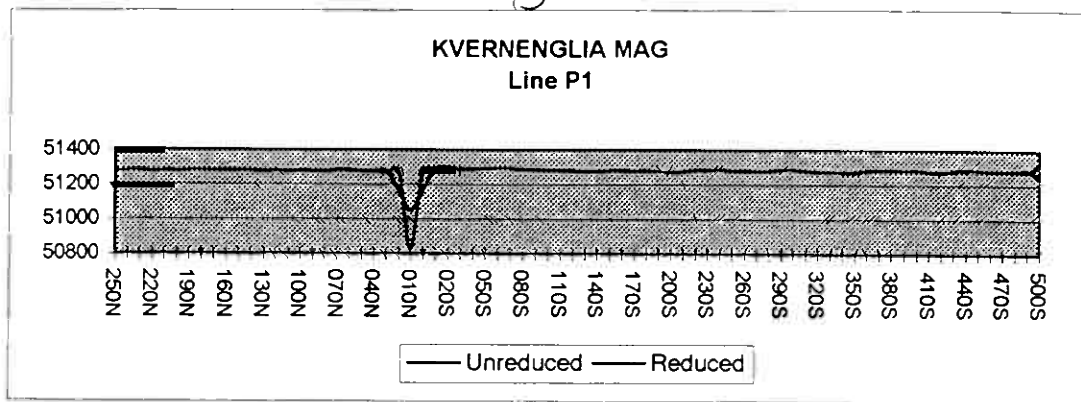
KVERNENGLIA VLF
P3 (Filtered)

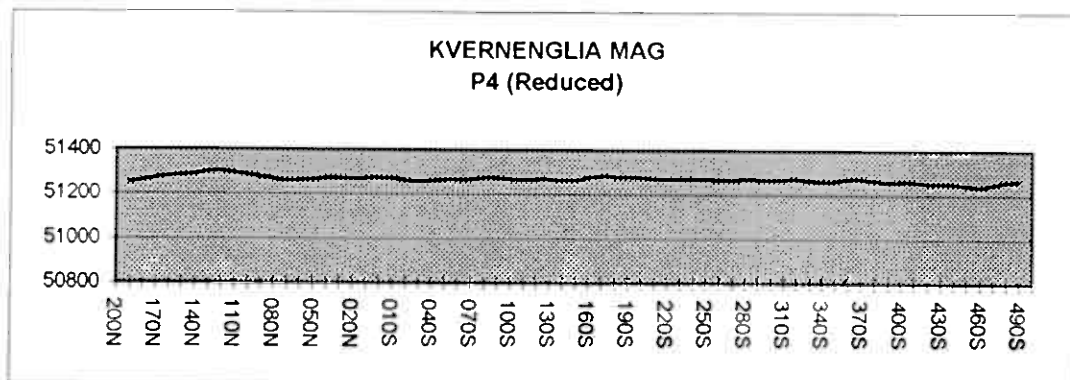
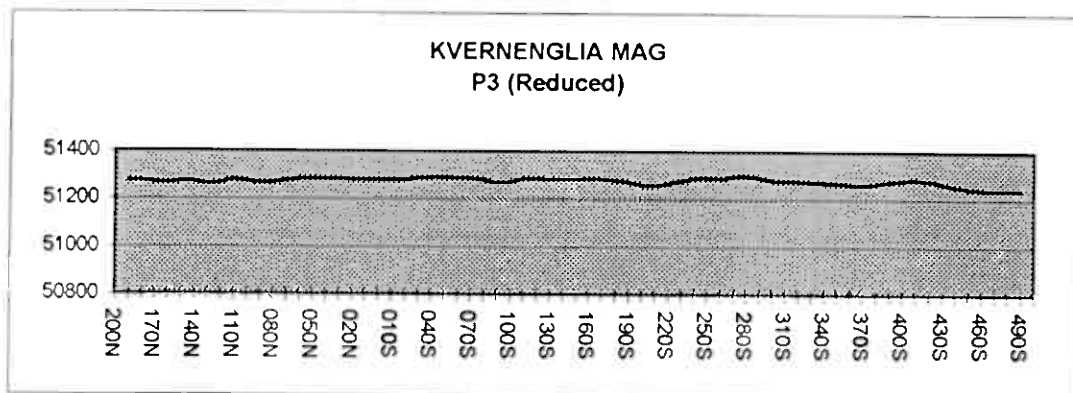
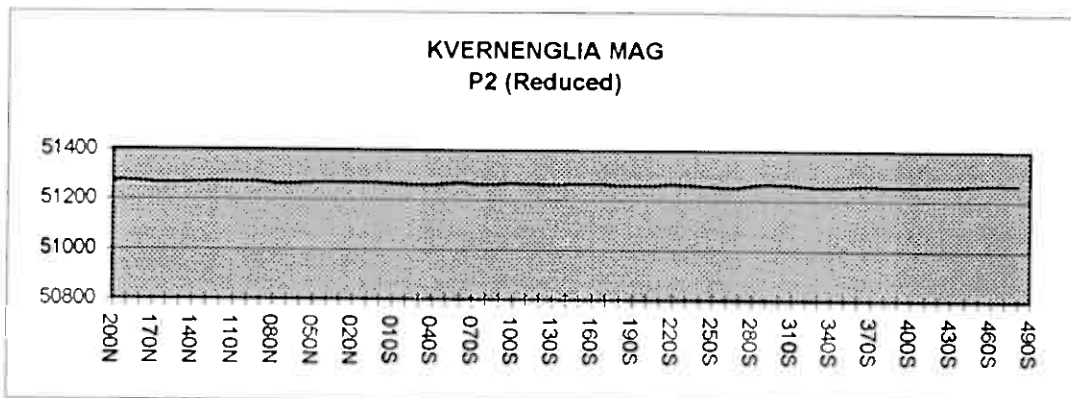
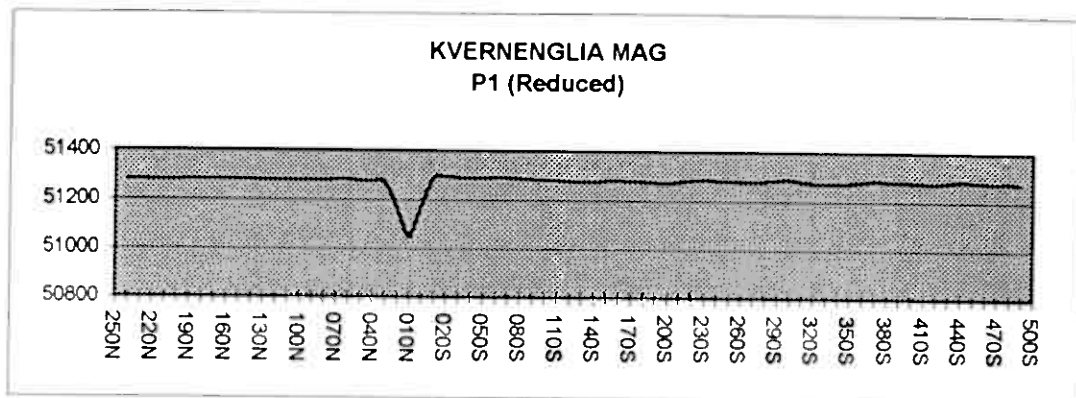


KVERNENGLIA VLF
P4 (Filtered)



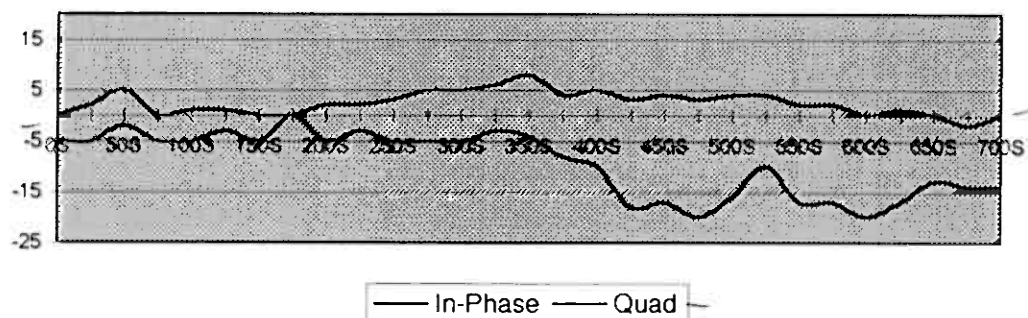
13



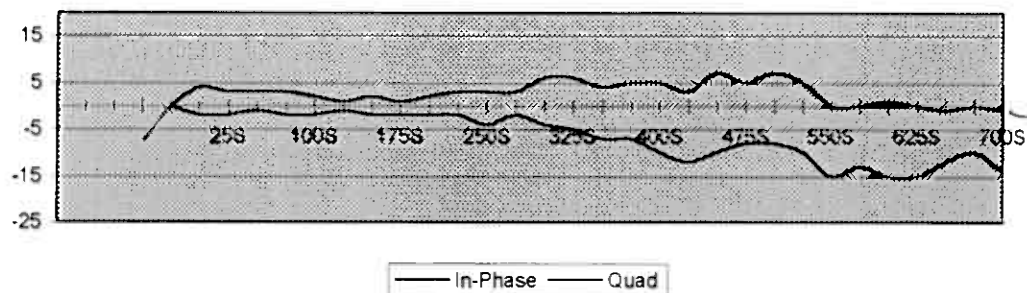


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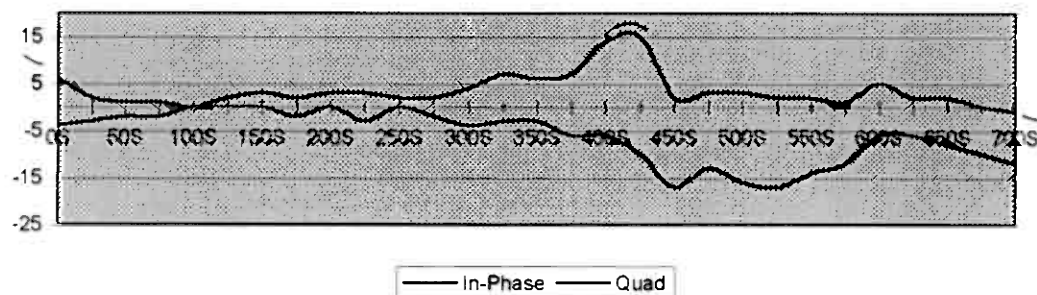
LOBEKKEN VLF
P1 (Unfiltered)



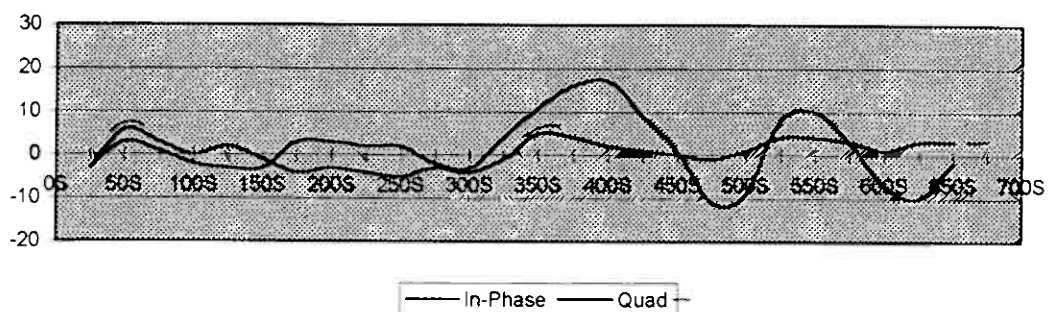
LOBEKKEN VLF
P2 (Unfiltered)



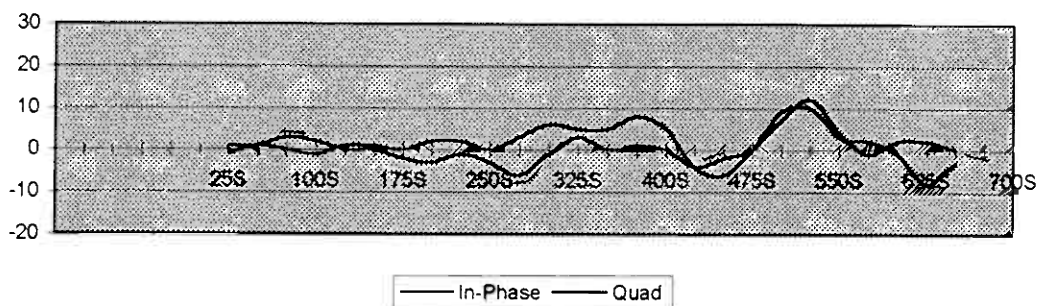
LOBEKKEN VLF
P3 (Unfiltered)



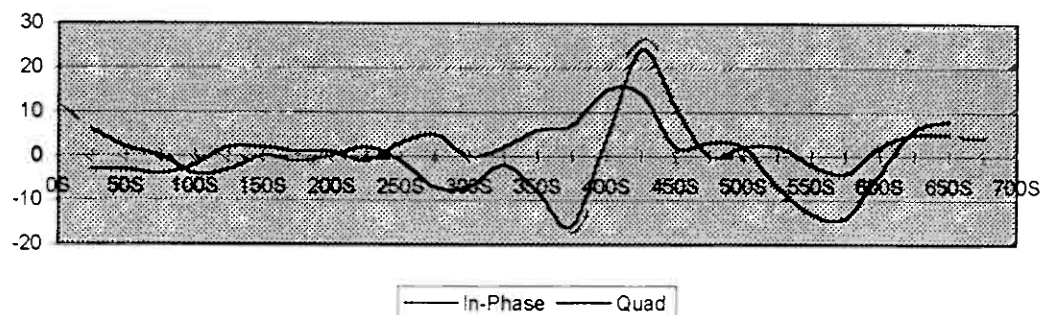
LOBEKKEN VLF
P1 (Filtered)



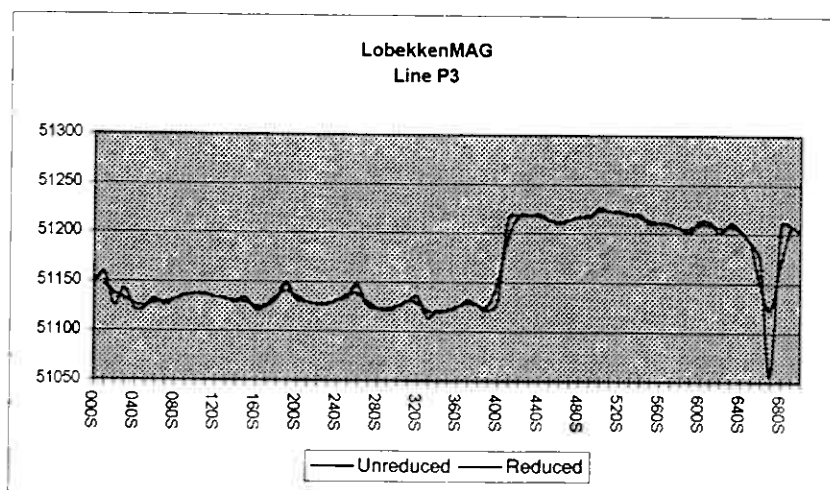
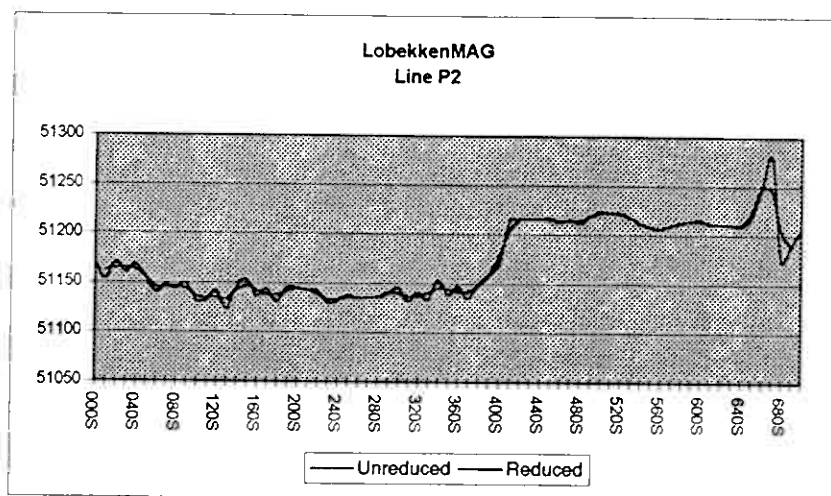
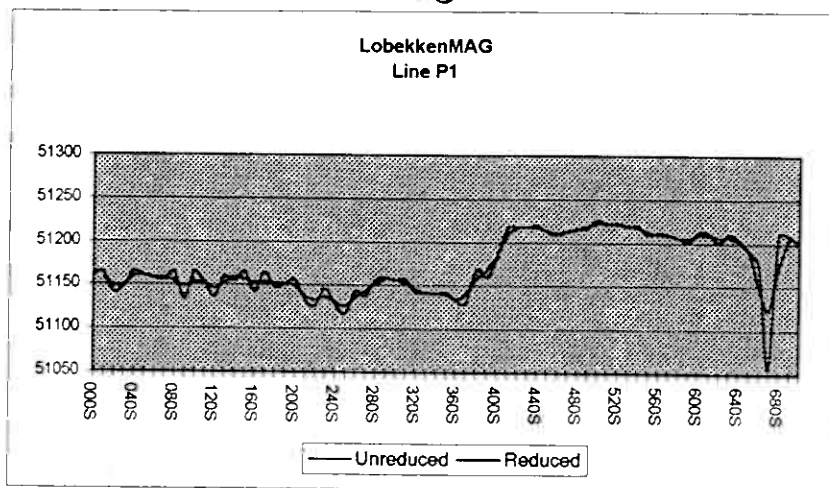
LOBEKKEN VLF
P2 (Filtered)



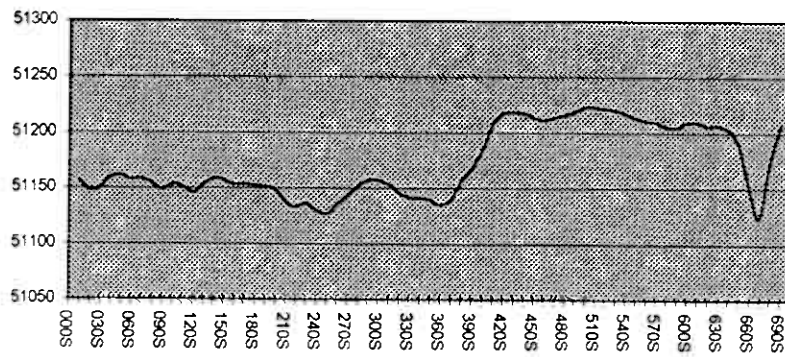
LOBEKKEN VLF
P3 (Filtered)



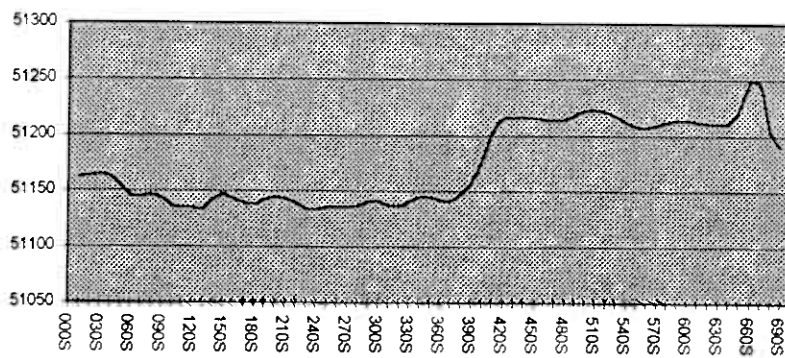
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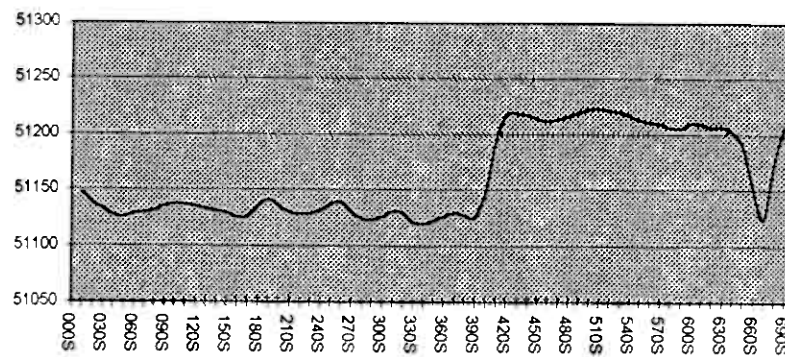
**LobekkenMAG
P1 (Reduced)**



**LobekkenMAG
P2 (Reduced)**

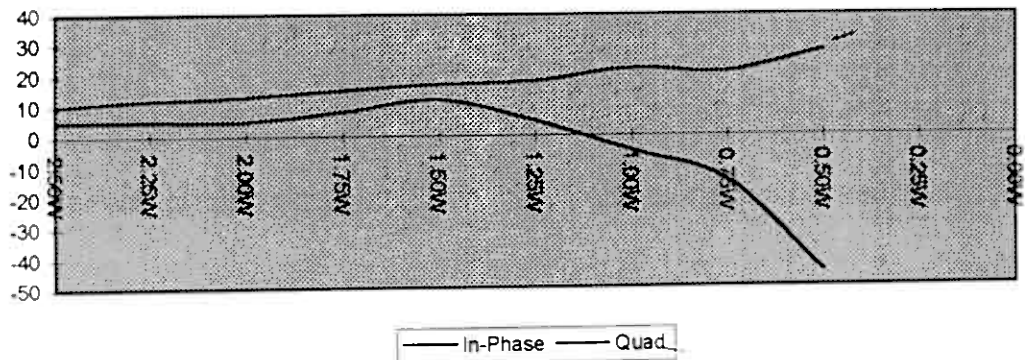


**LobekkenMAG
P3 (Reduced)**

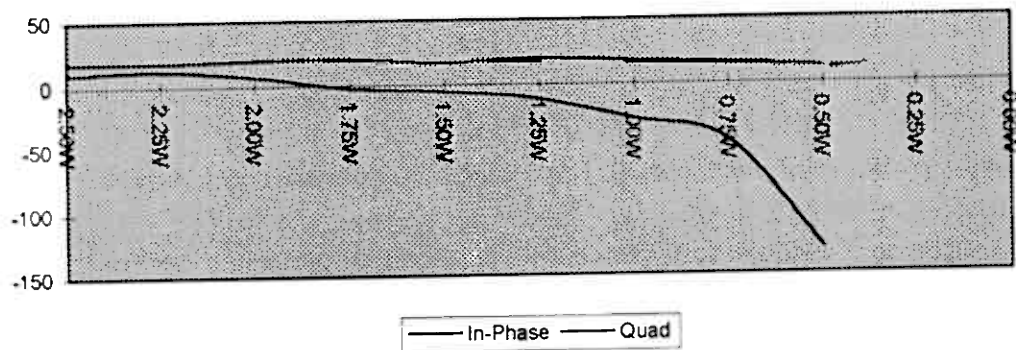


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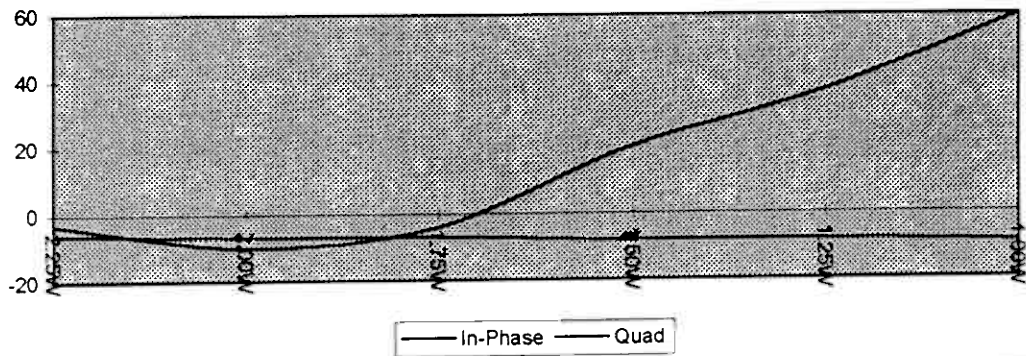
SLETTMOEN VLF
P1 (Unfiltered)



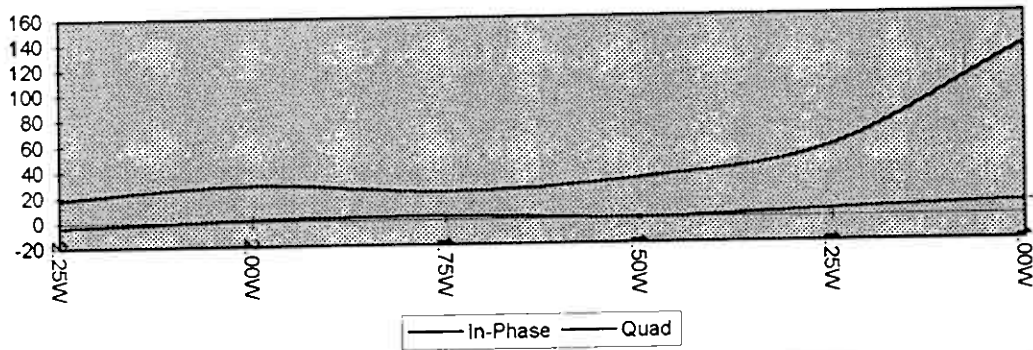
SLETTMOEN VLF
P2 (Unfiltered)



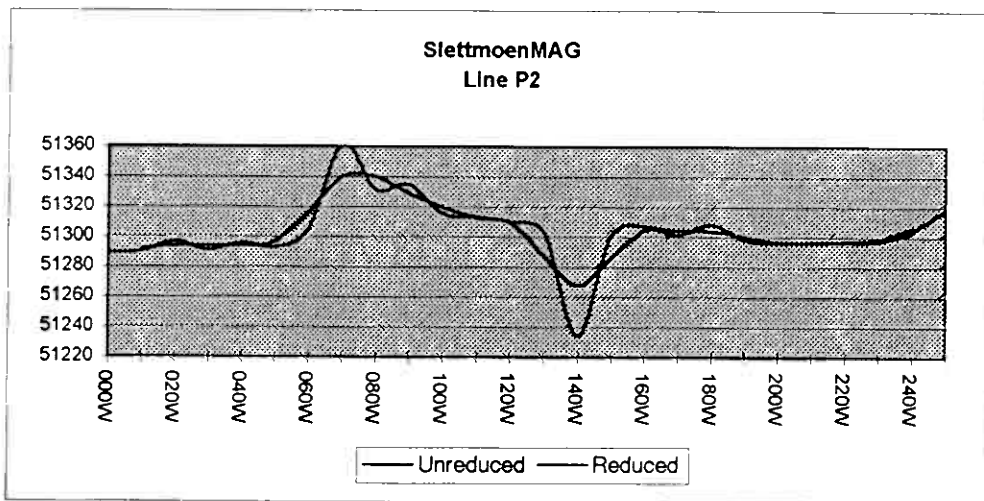
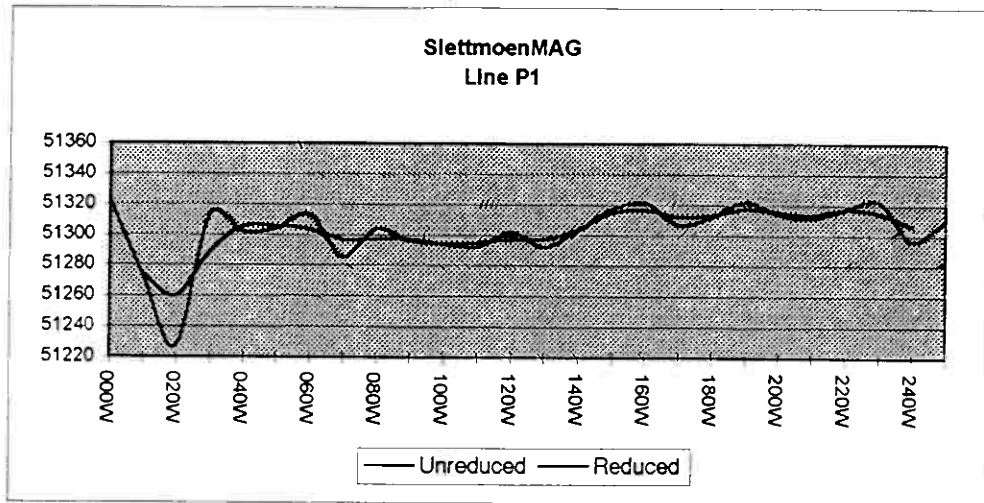
SLETTMOEN VLF
P1 (Filtered)



SLETTMOEN VLF
P2 (Filtered)

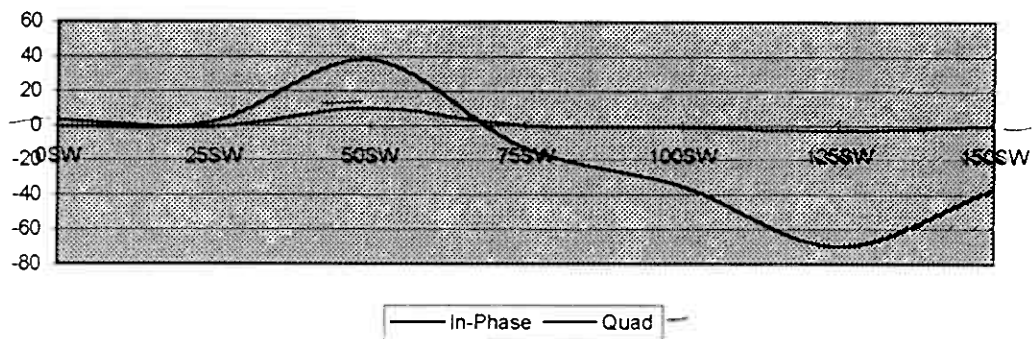


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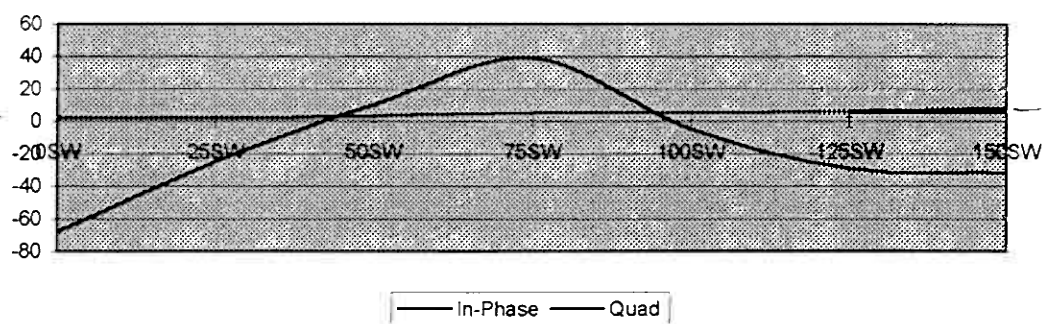


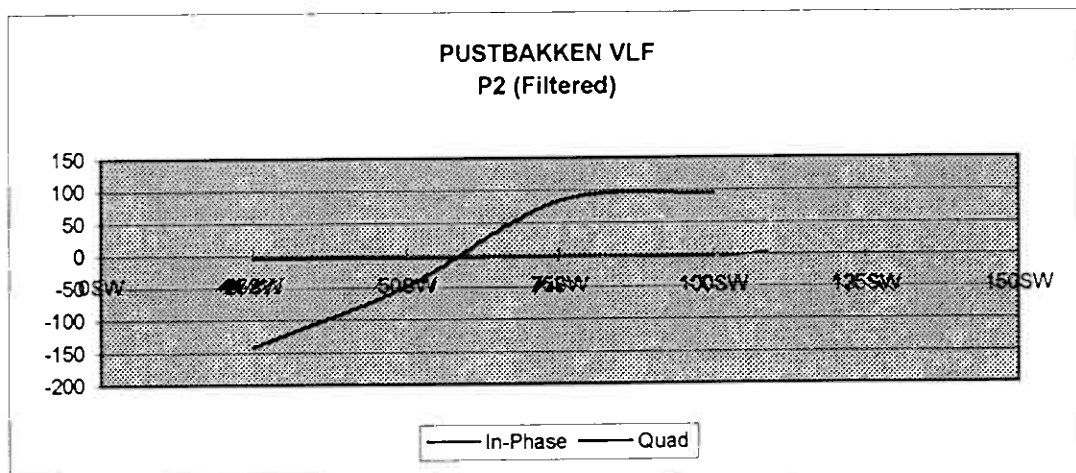
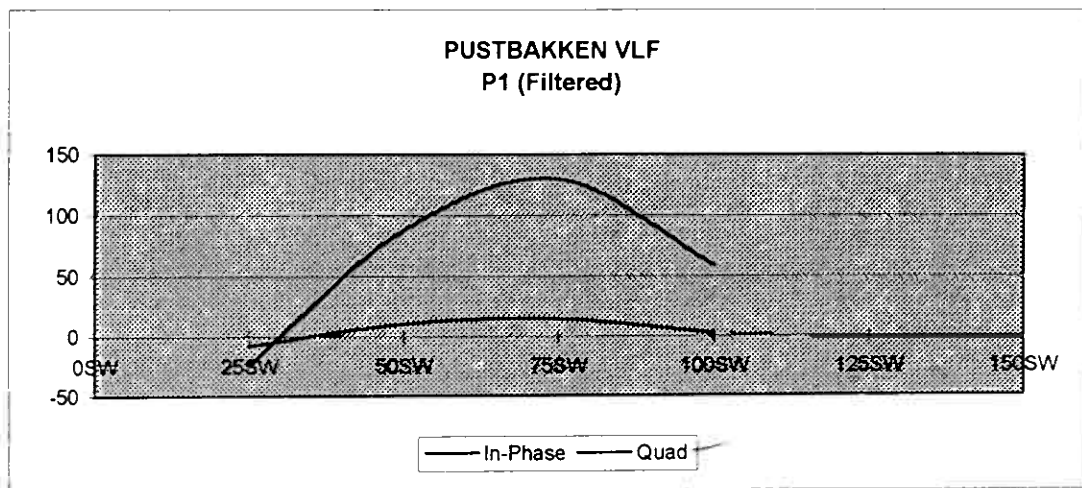
19

PUSTBAKKEN VLF
P1 (Unfiltered)

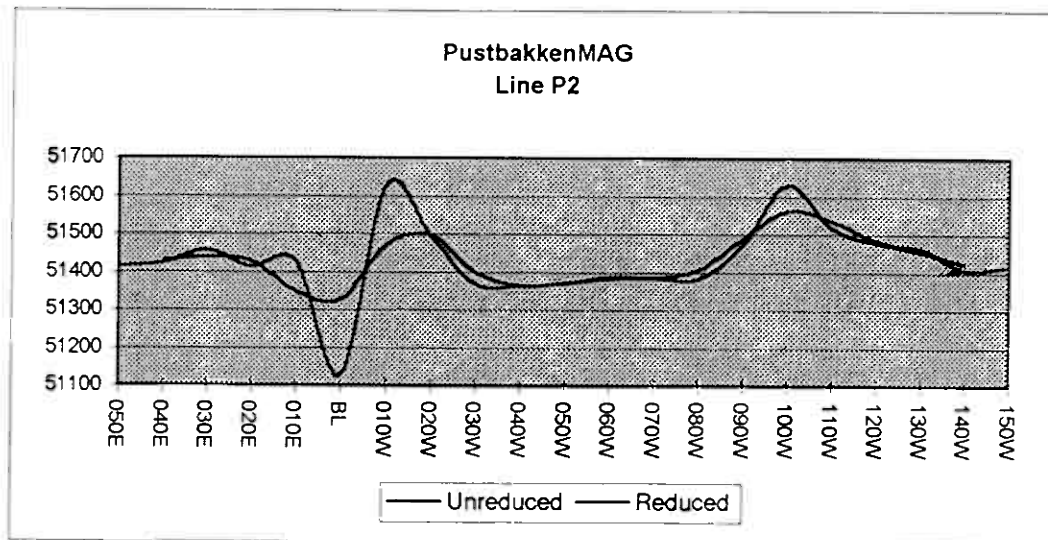
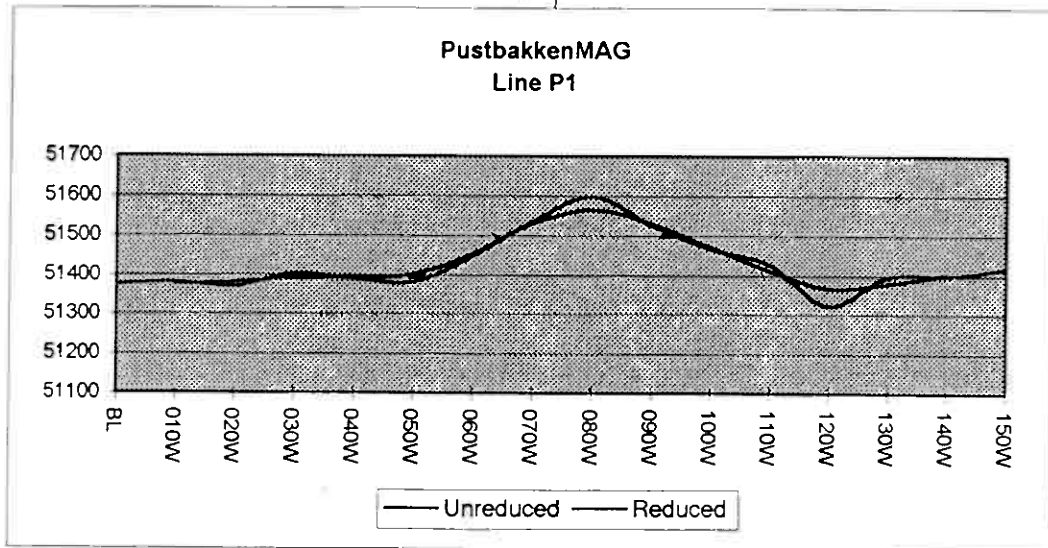


PUSTBAKKEN VLF
P2 (Unfiltered)

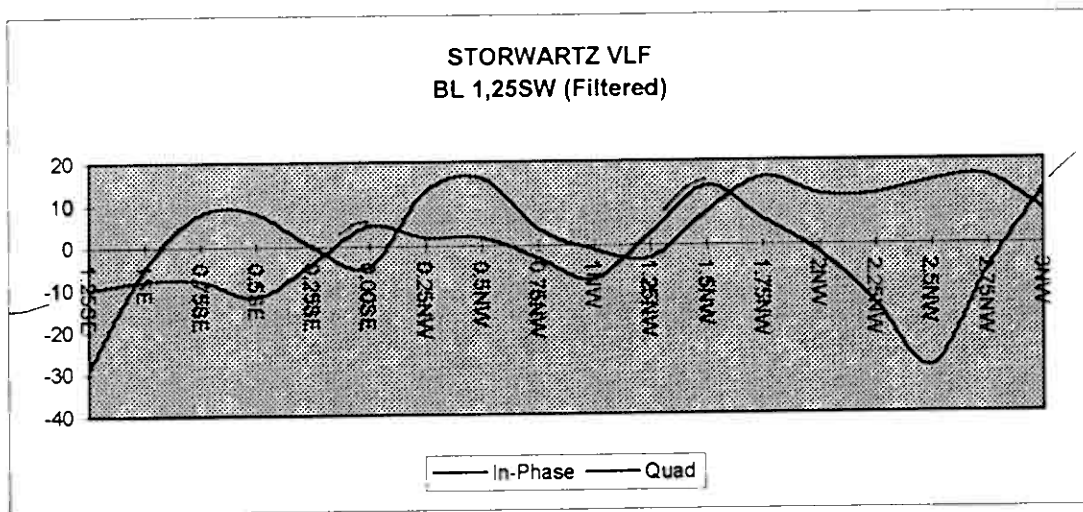
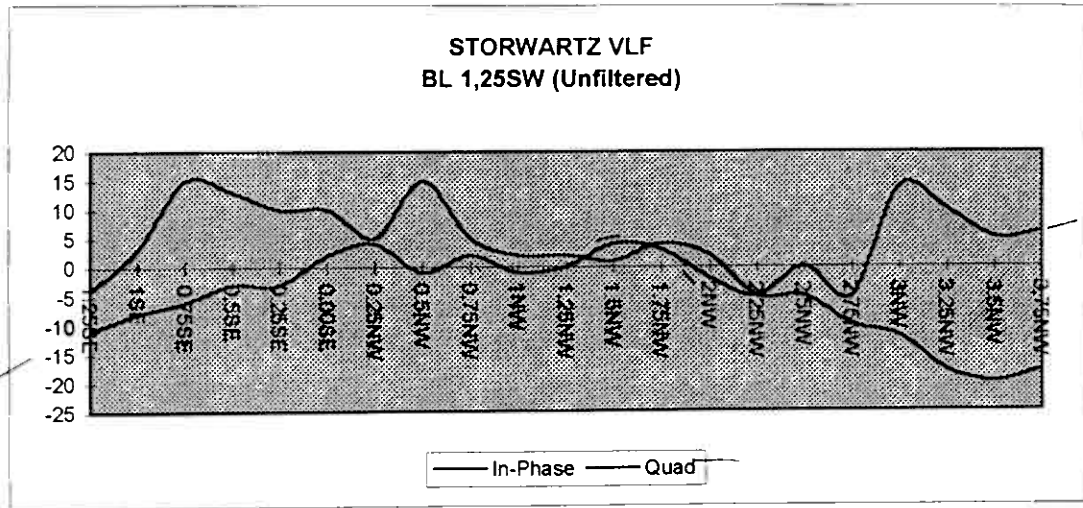




19

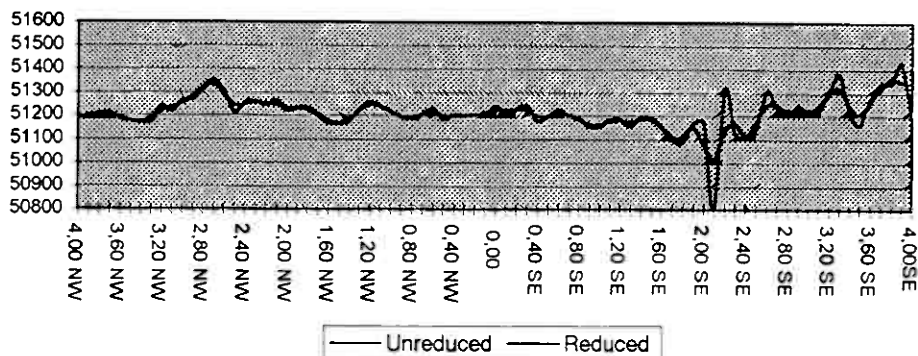


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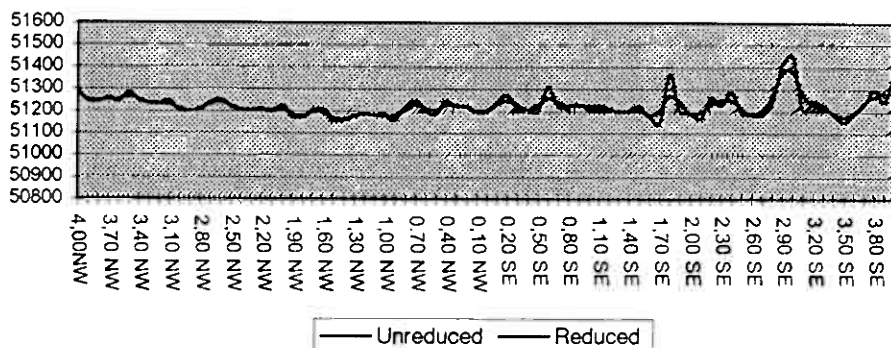


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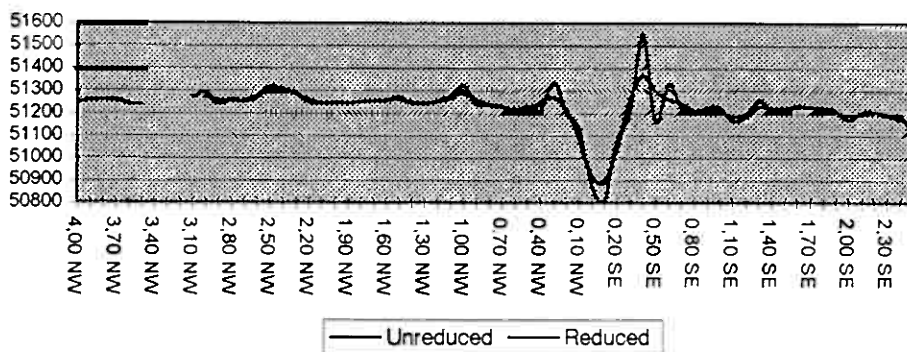
StorwartzMAG
Line P1

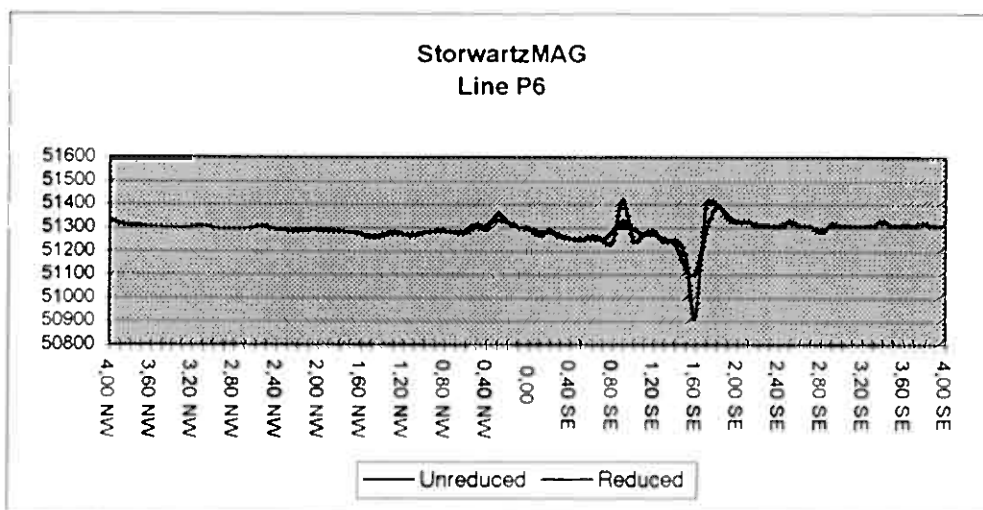
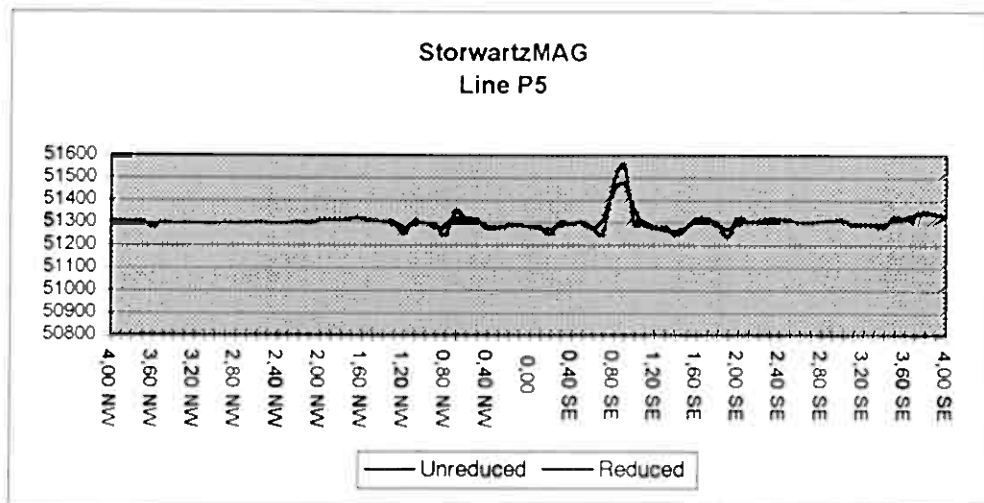
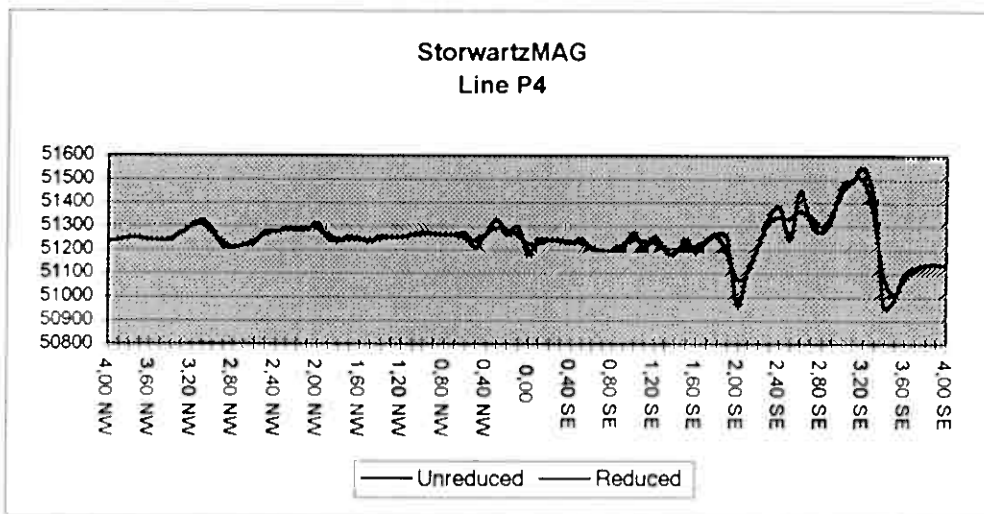


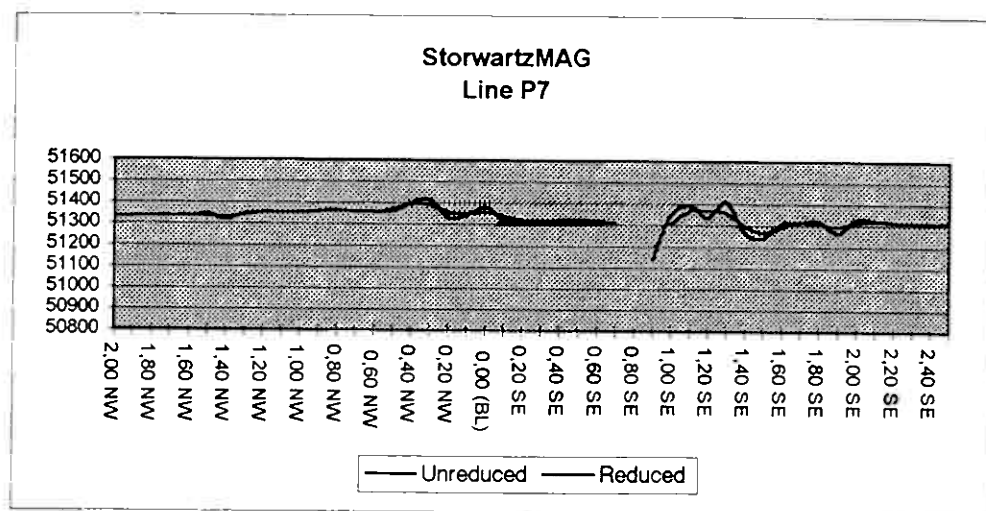
StorwartzMAG
Line P2



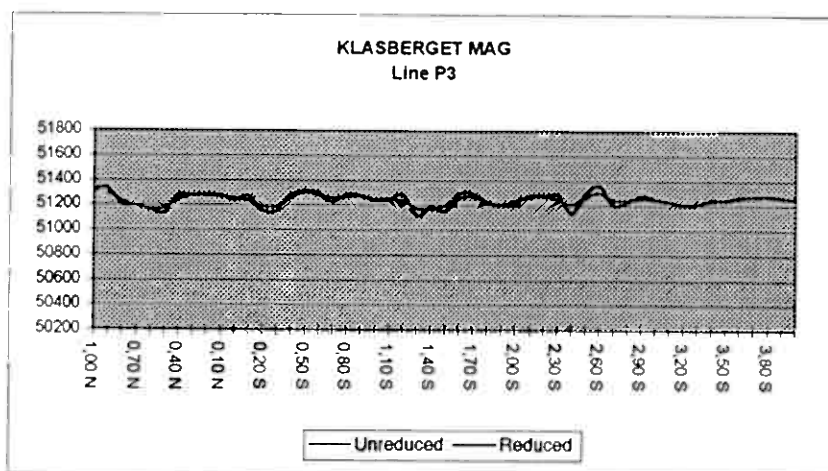
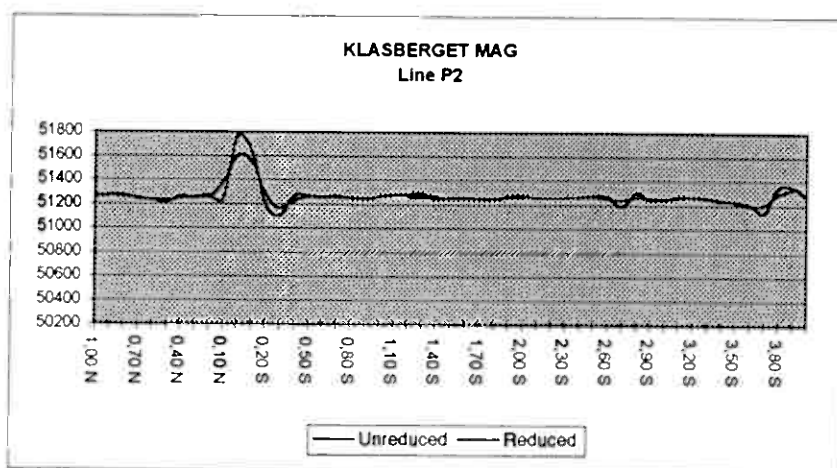
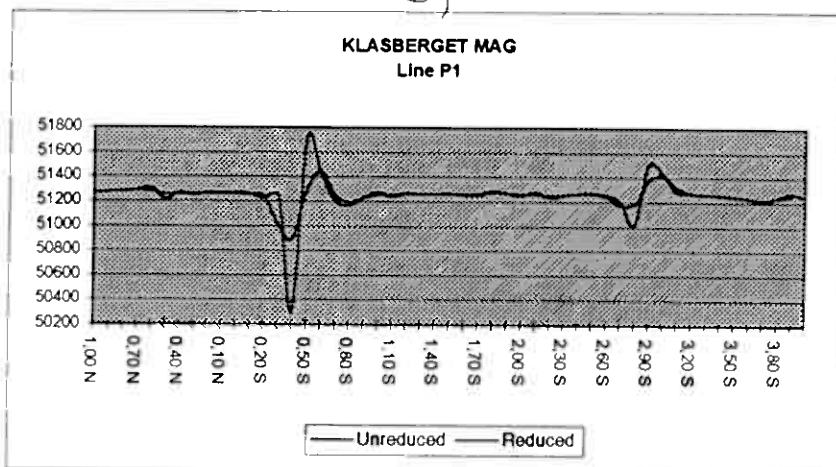
StorwartzMAG
Line P3

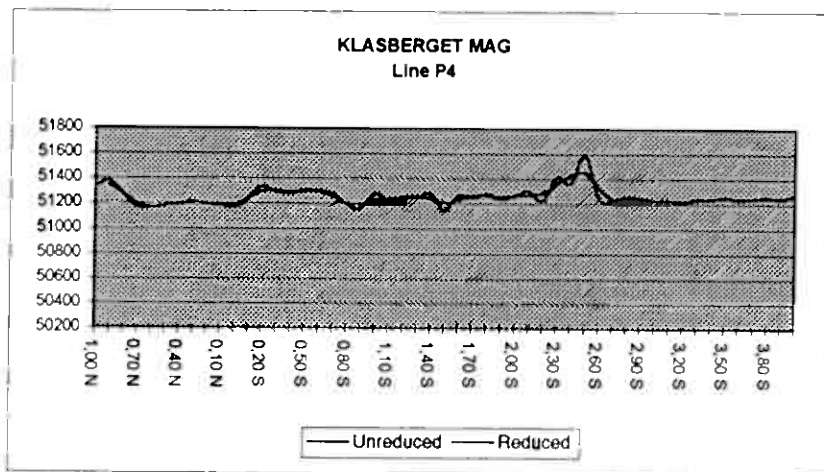




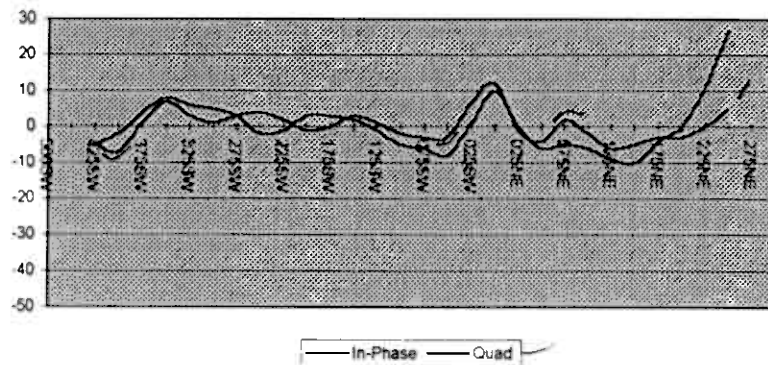


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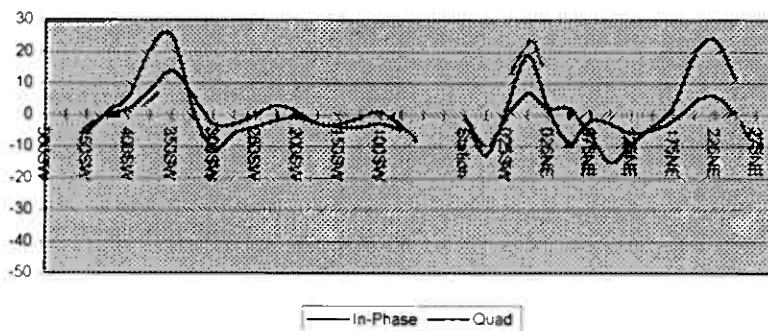




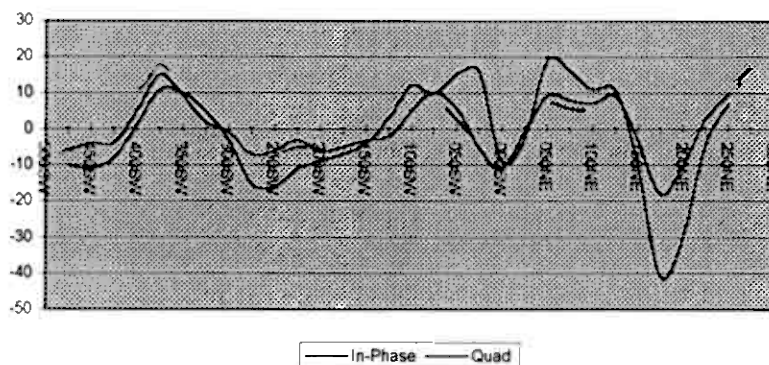
ABRAHAMS VLF
P0 (Filtered)

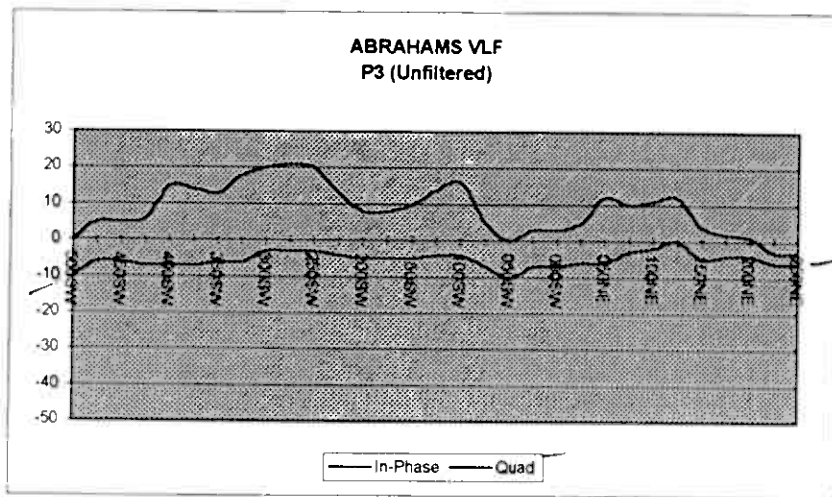


ABRAHAMS VLF
P1 (Filtered)

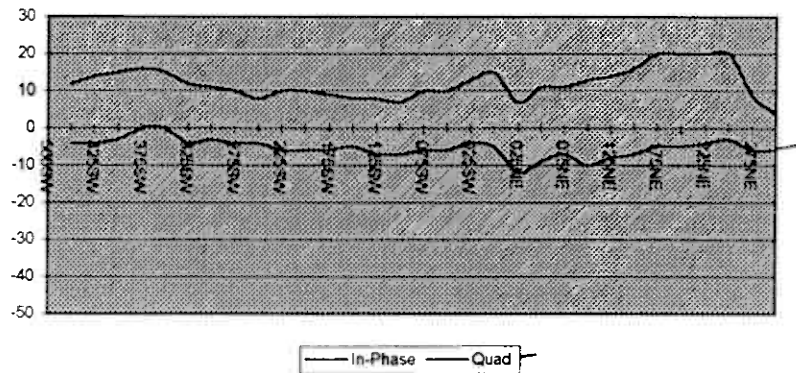


ABRAHAMS VLF
P2 (Filtered)

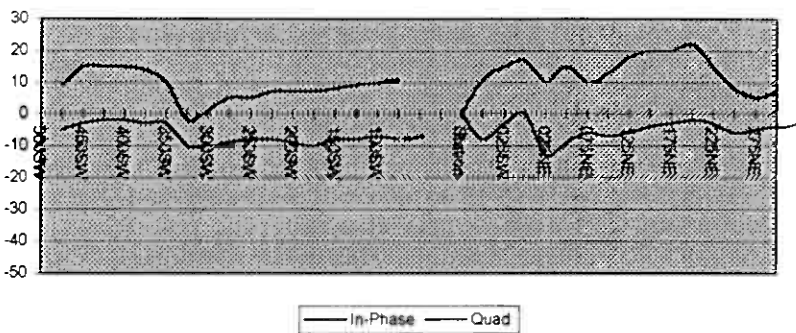




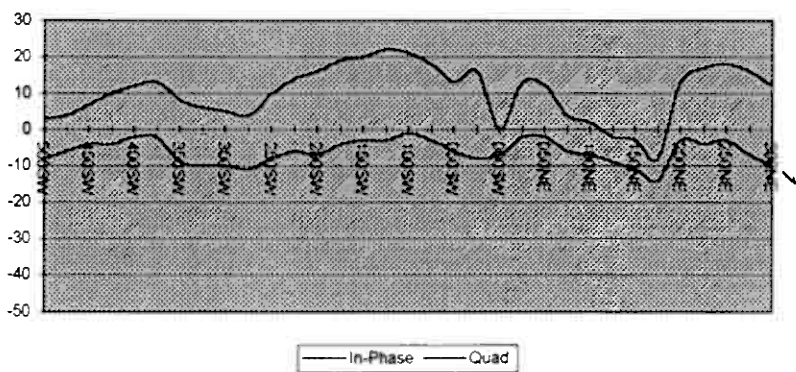
ABRAHAMS VLF
P0 (Unfiltered)



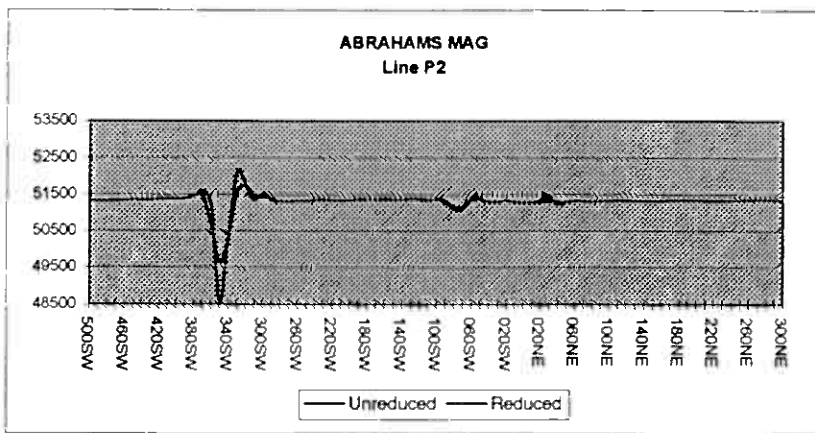
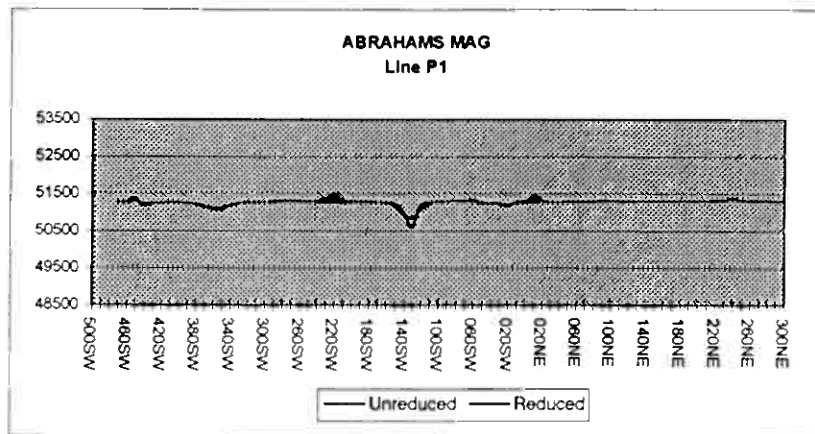
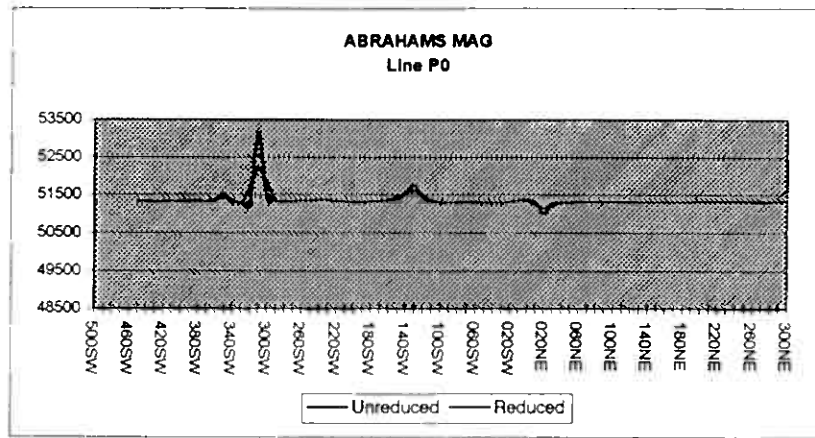
ABRAHAMS VLF
P1 (Unfiltered)

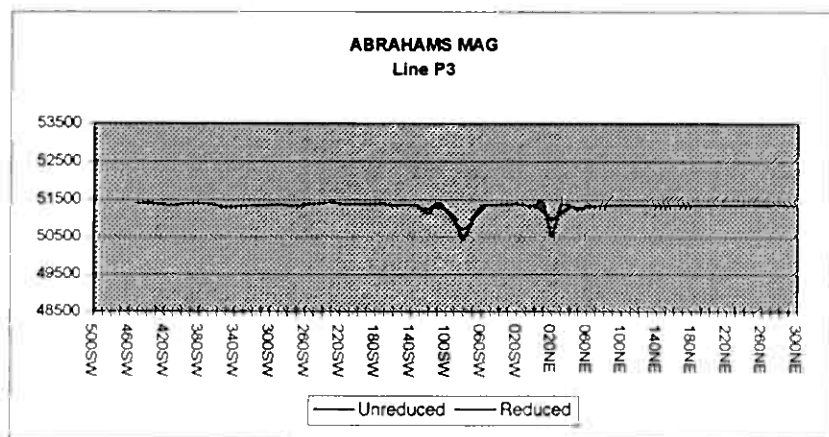


ABRAHAMS VLF
P2 (Unfiltered)

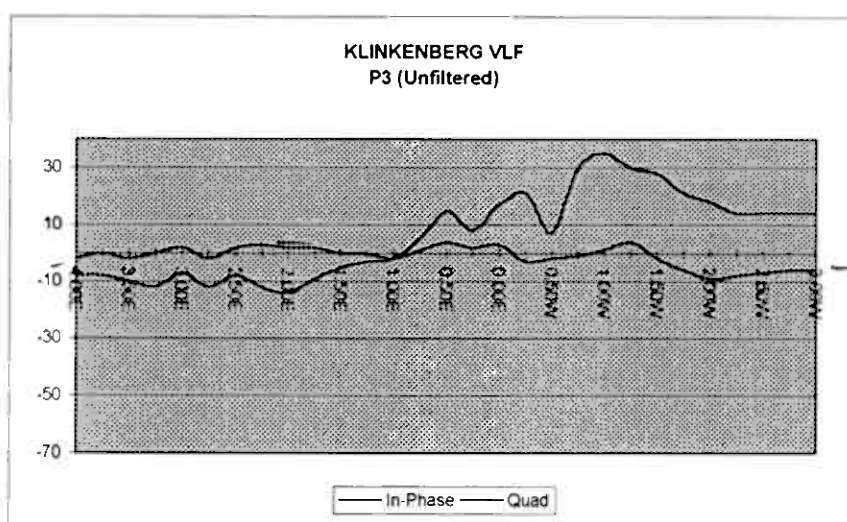
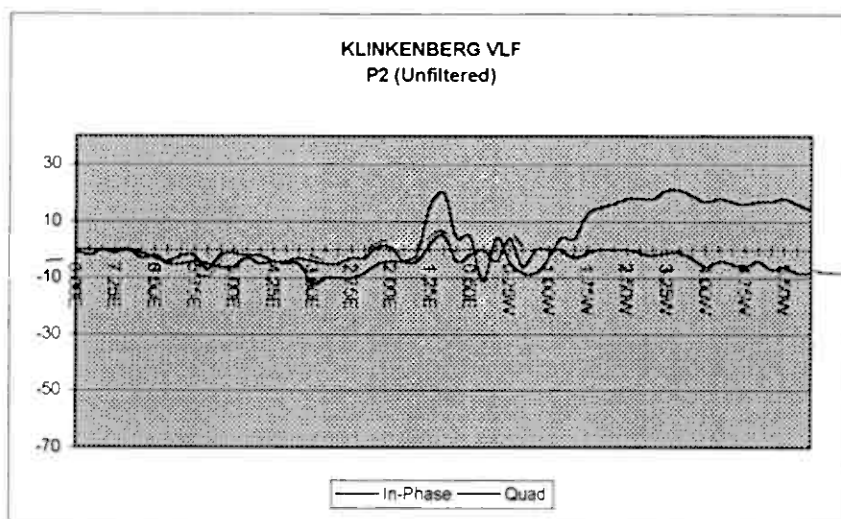
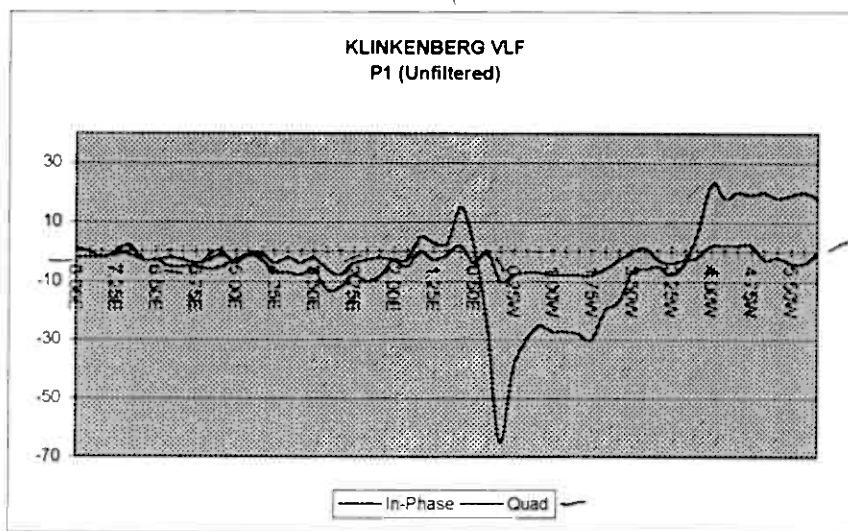


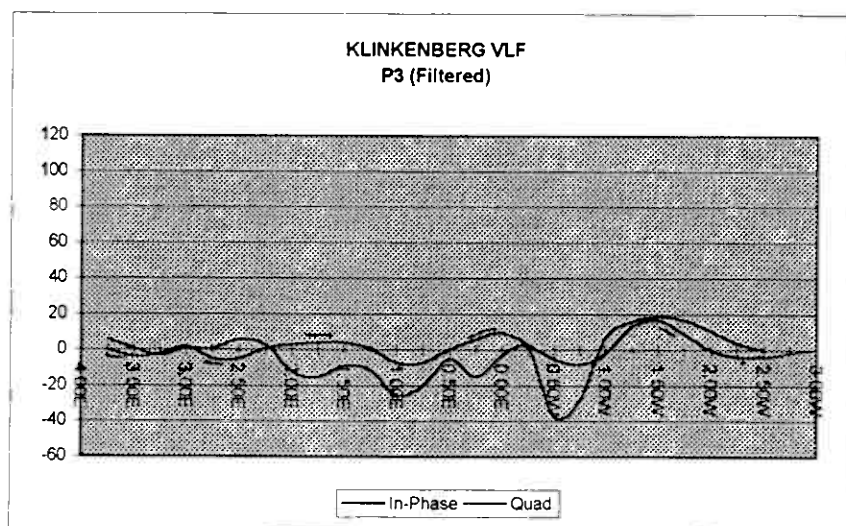
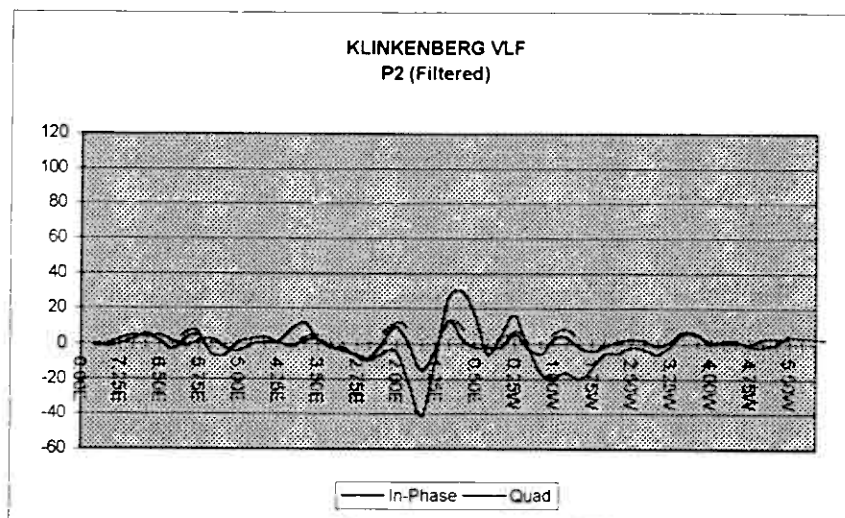
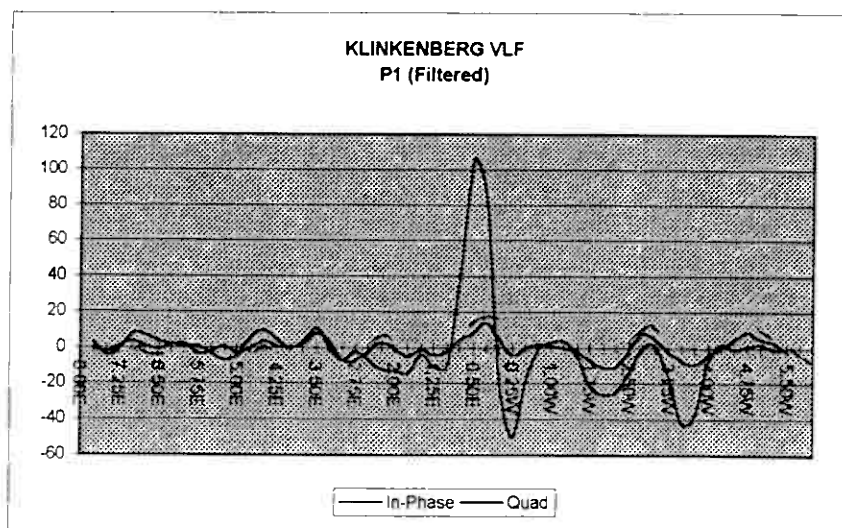
31



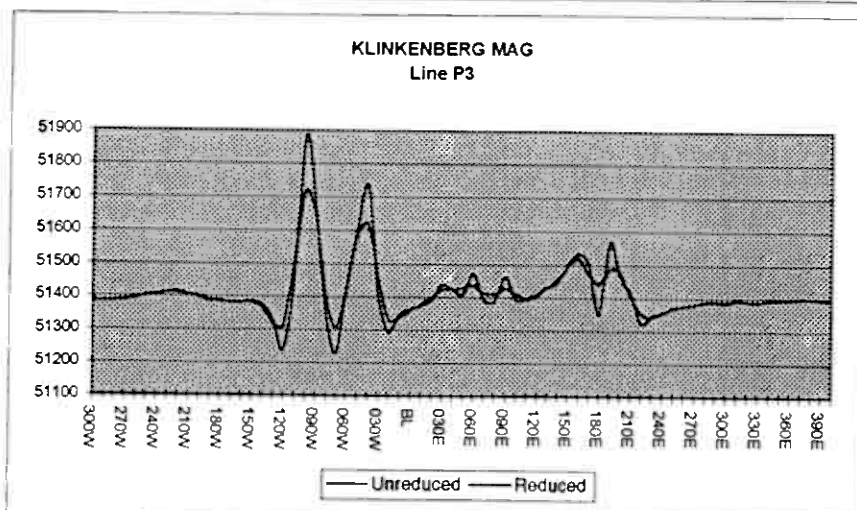
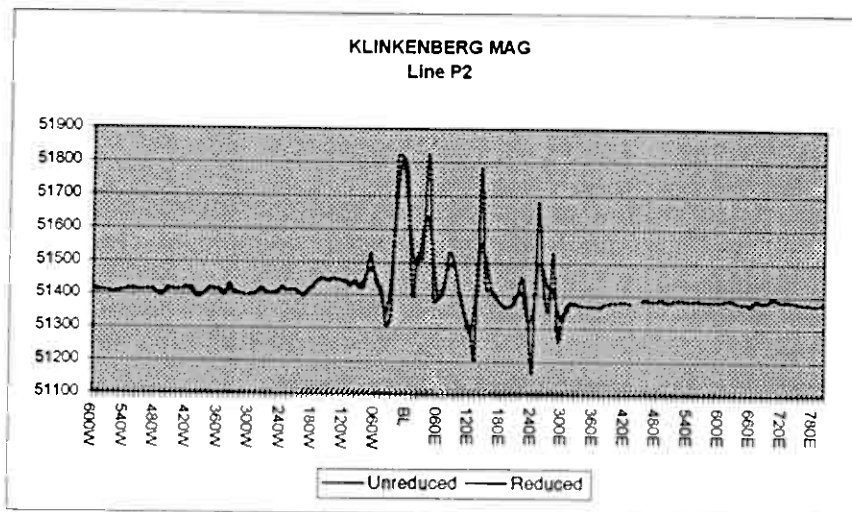
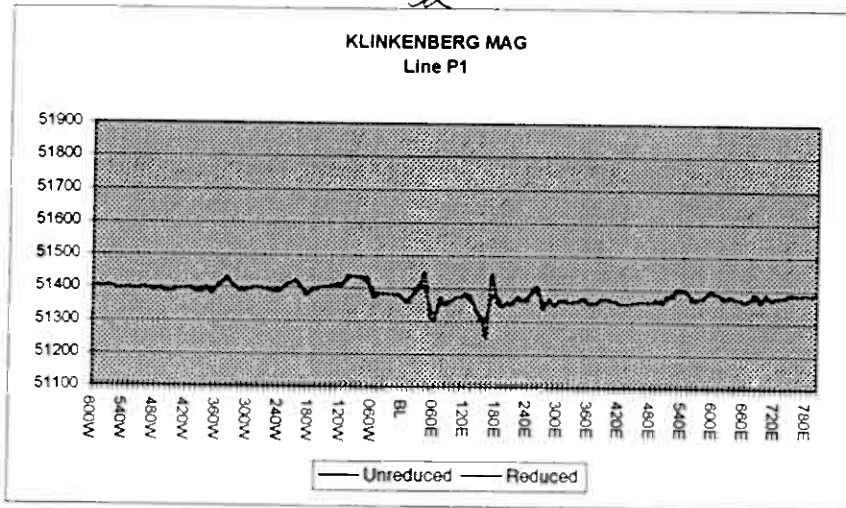


32

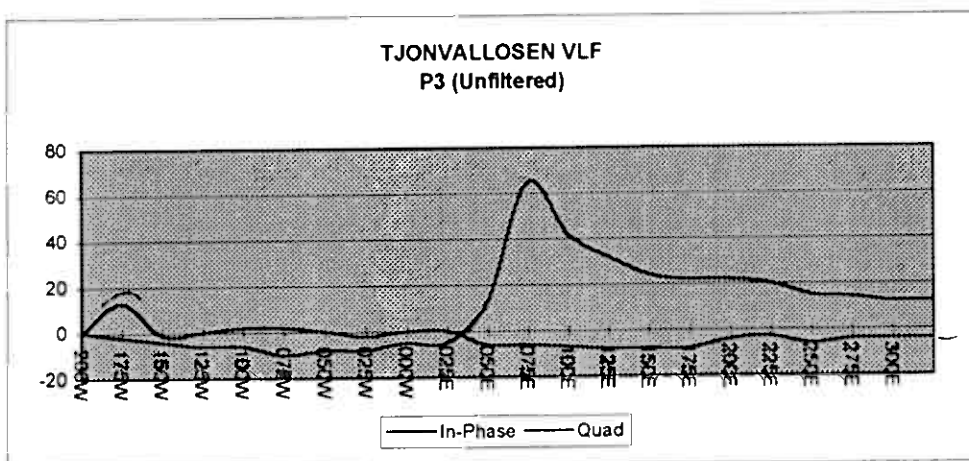
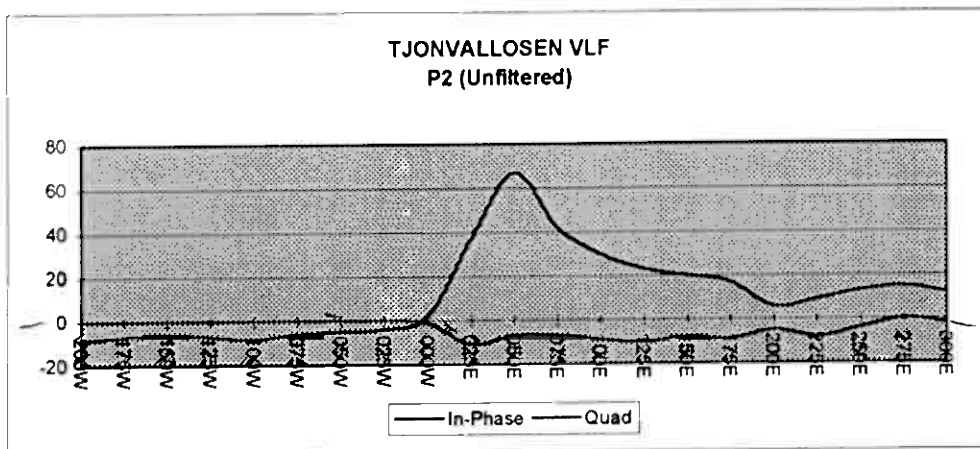
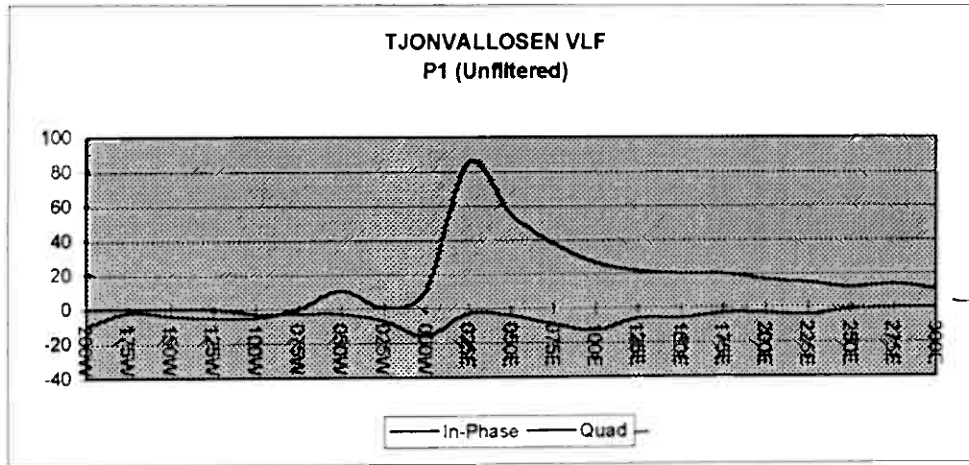


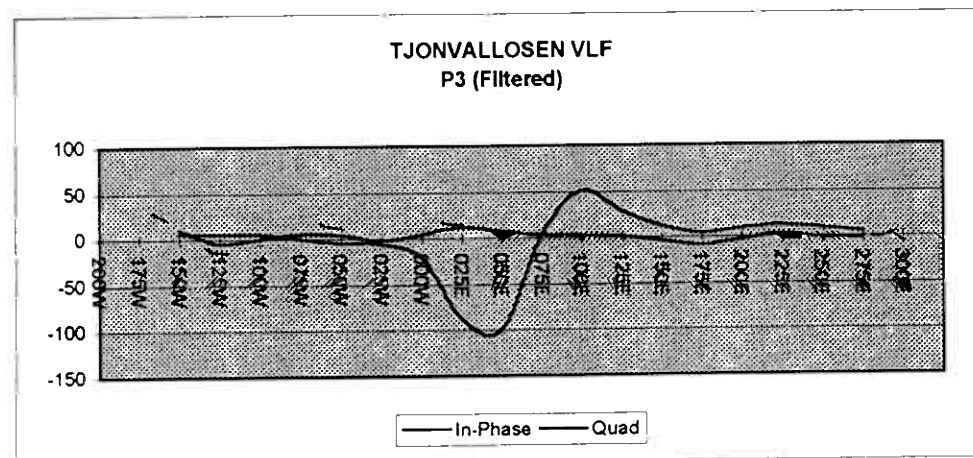
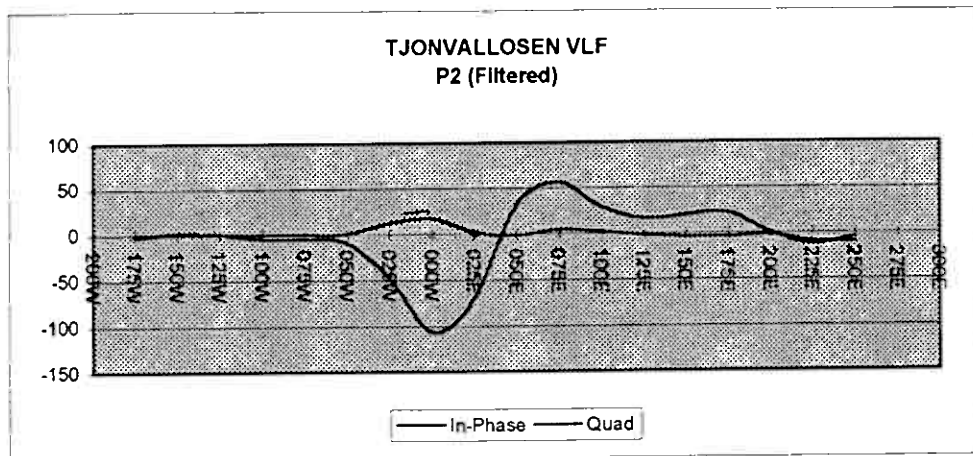
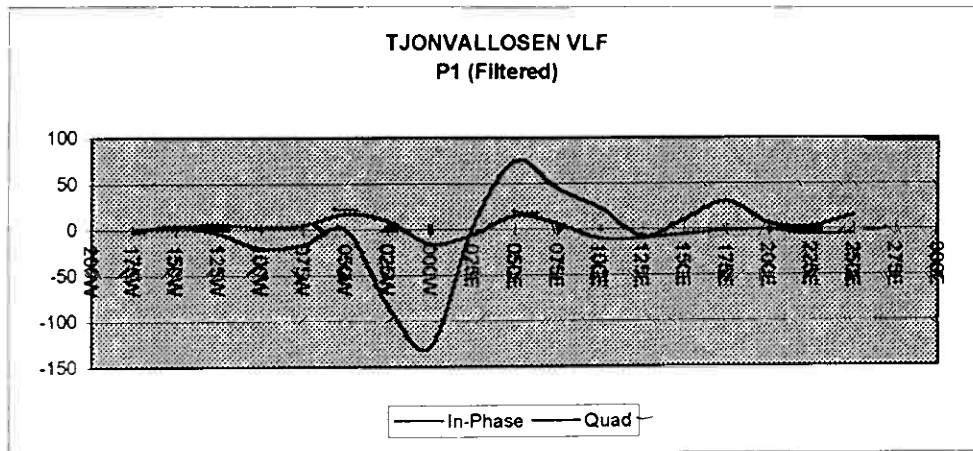


32

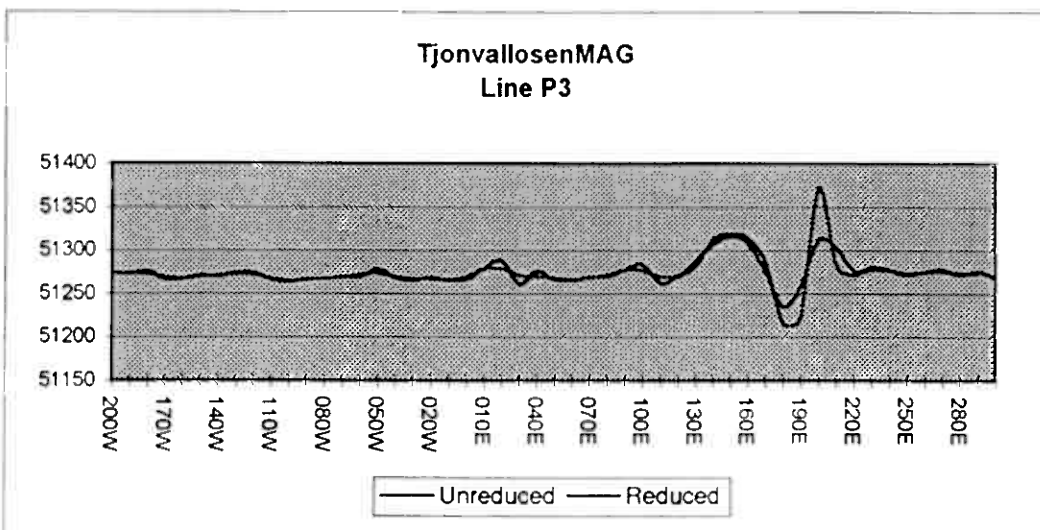
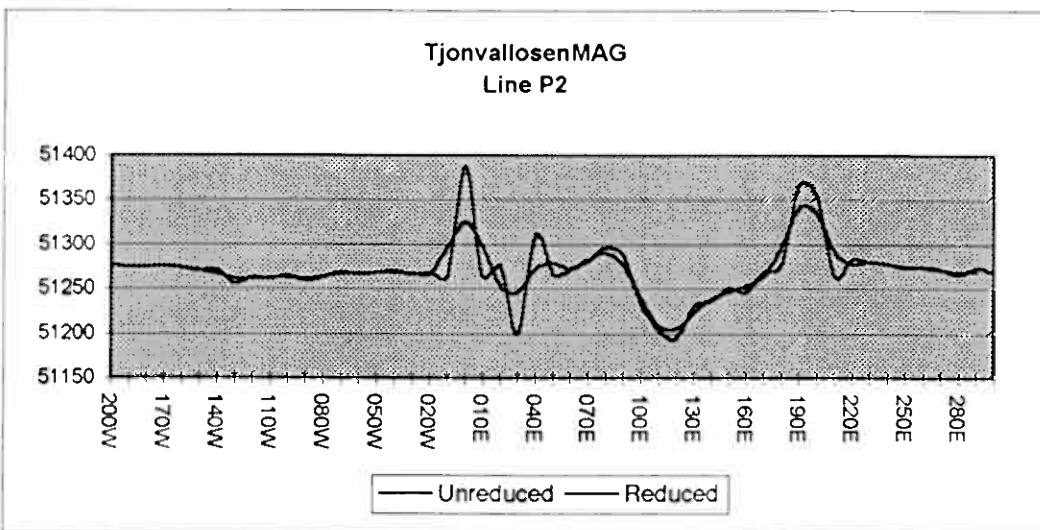
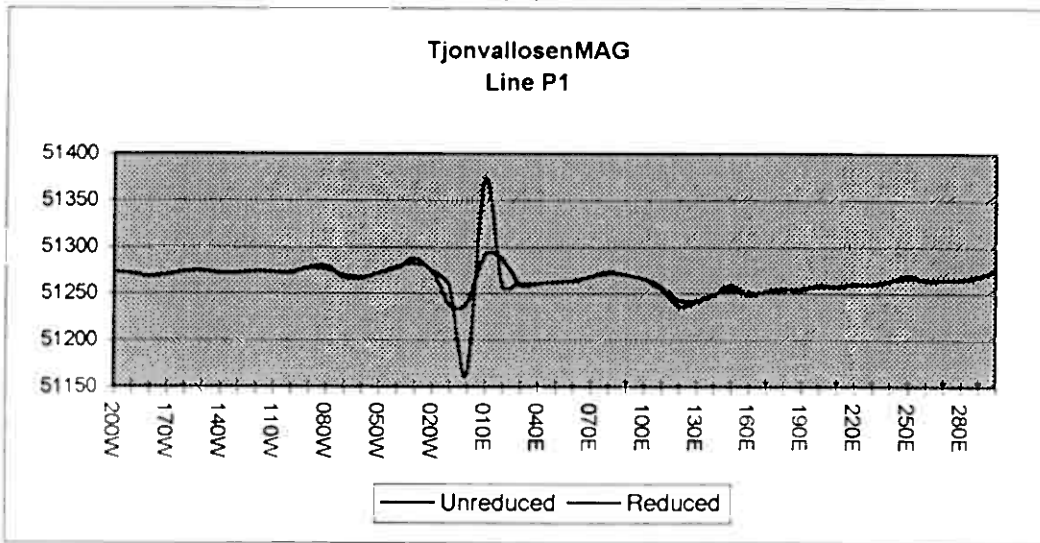


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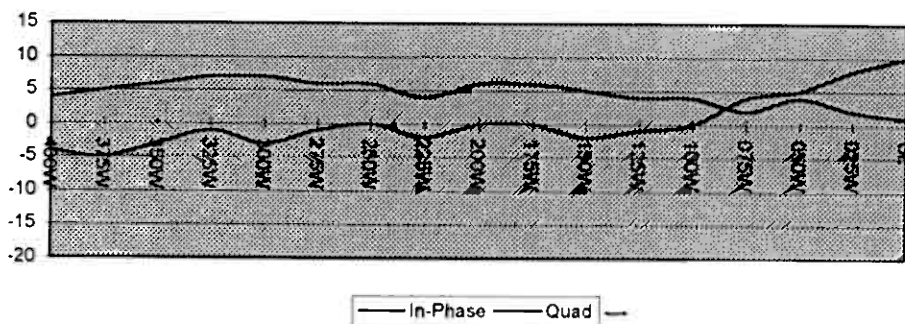




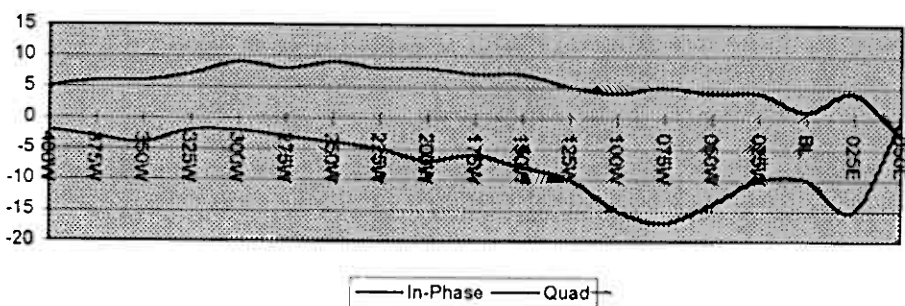
37



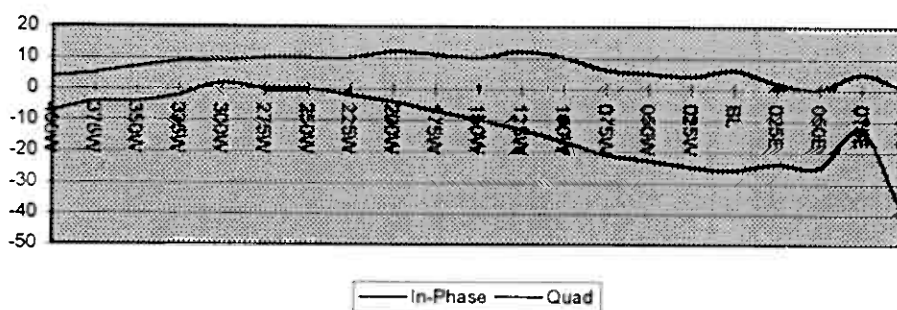
KILLINGDALS VLF
P1 (Unfiltered)



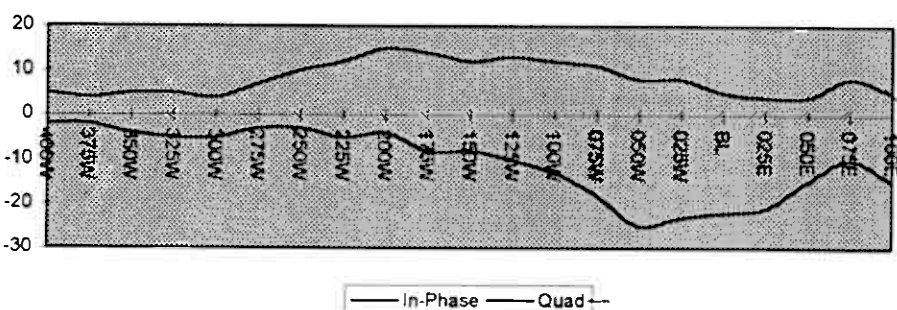
KILLINGDALS VLF
P2 (Unfiltered)



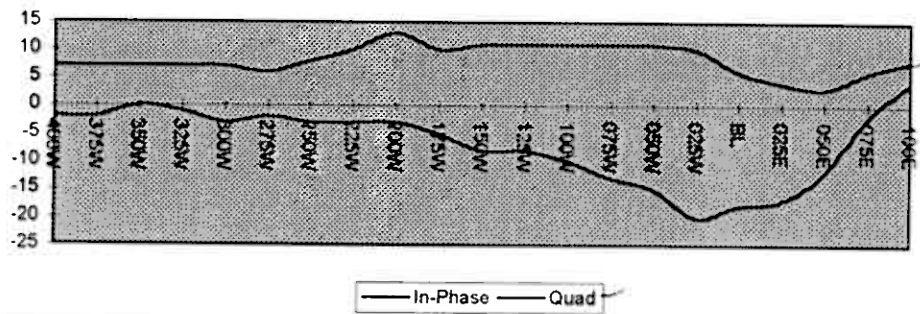
KILLINGDALS VLF
P3 (Unfiltered)



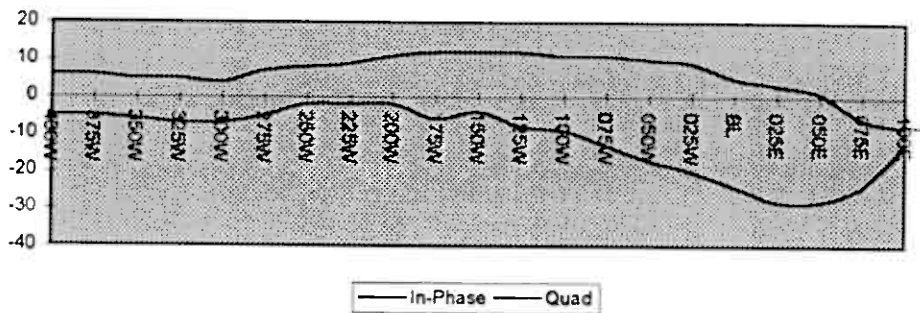
KILLINGDALS VLF
P4 (Unfiltered)



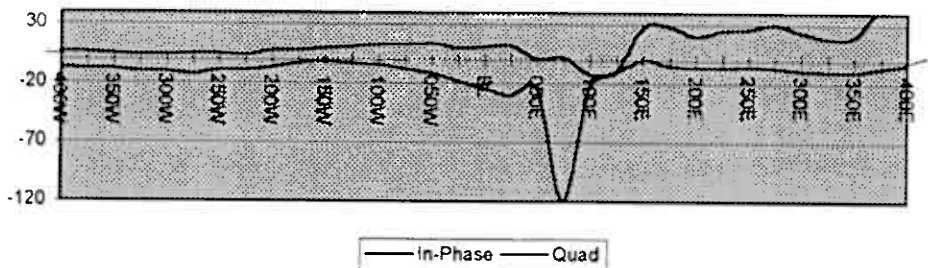
KILLINGDALS VLF
P5 (Unfiltered)



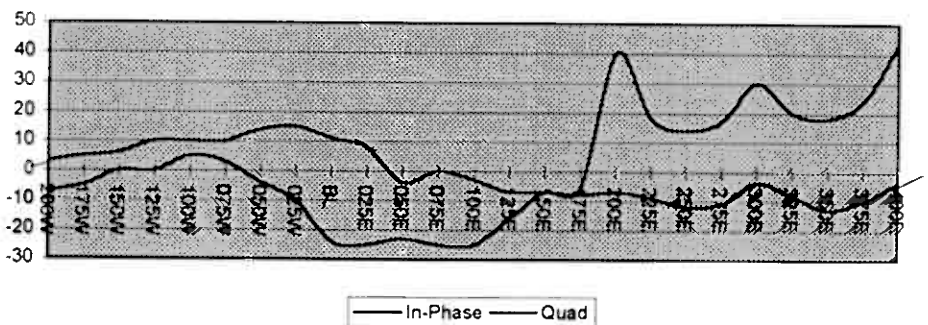
KILLINGDALS VLF
P6 (Unfiltered)



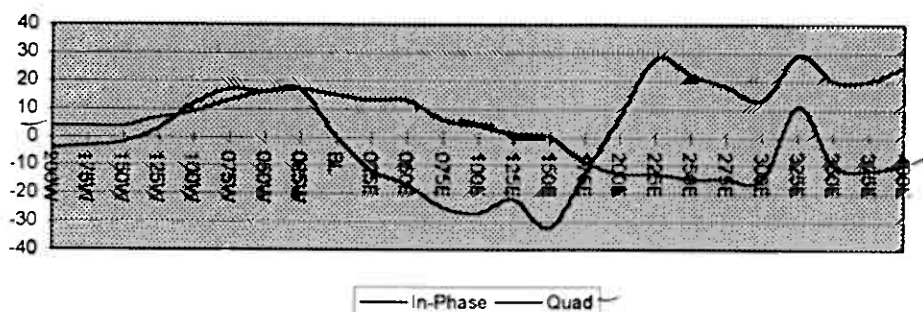
KILLINGDALS VLF
P7 (Unfiltered)



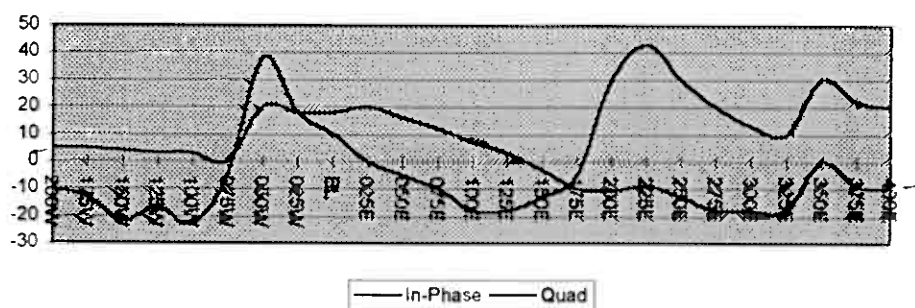
KILLINGDALS VLF
P8 (Unfiltered)



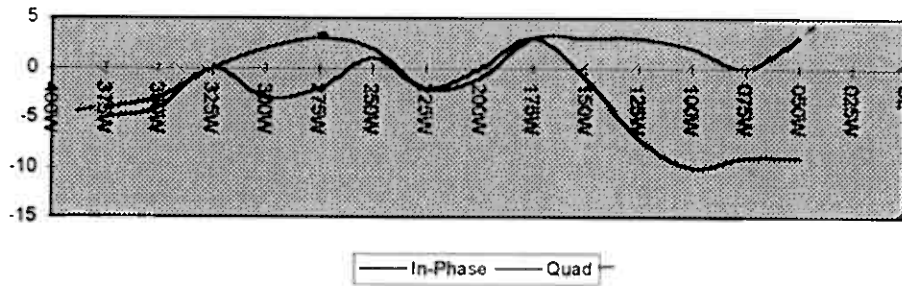
KILLINGDALS VLF
P9 (Unfiltered)



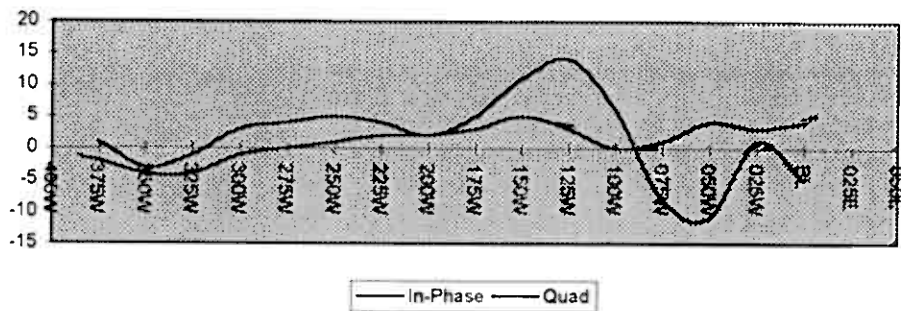
KILLINGDALS VLF
P10 (Unfiltered)



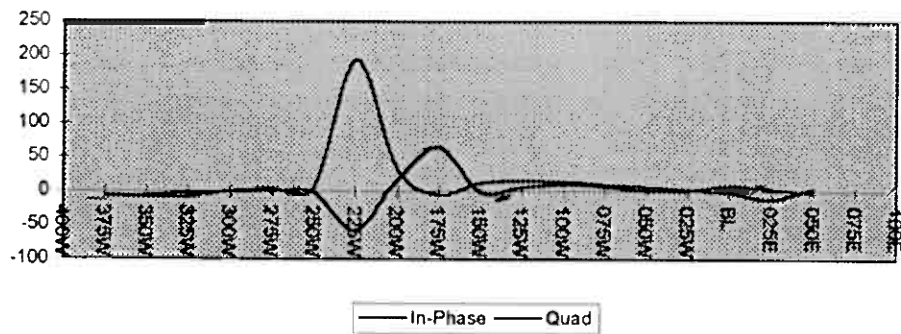
KILLINGDALS VLF
P1 (Filtered)



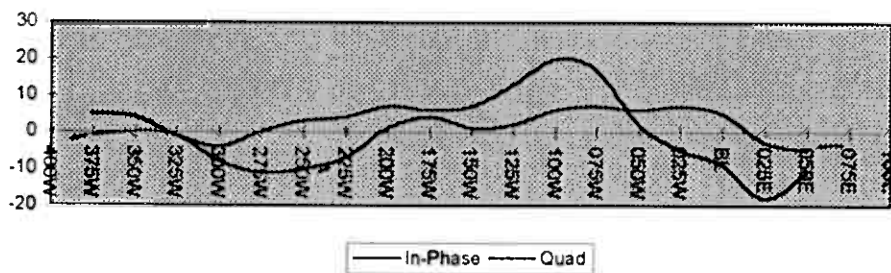
KILLINGDALS VLF
P2 (Filtered)



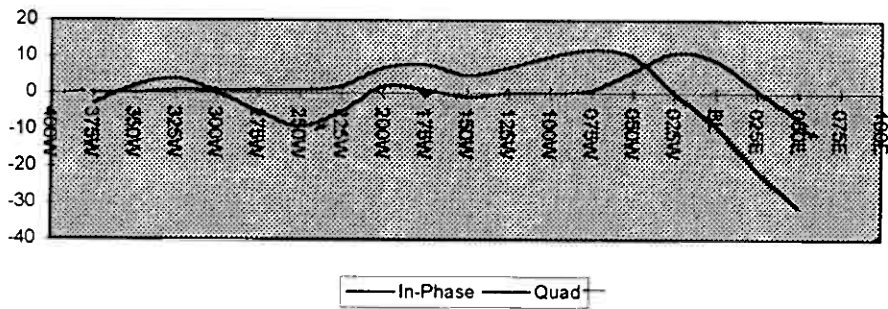
KILLINGDALS VLF
P3 (Filtered)



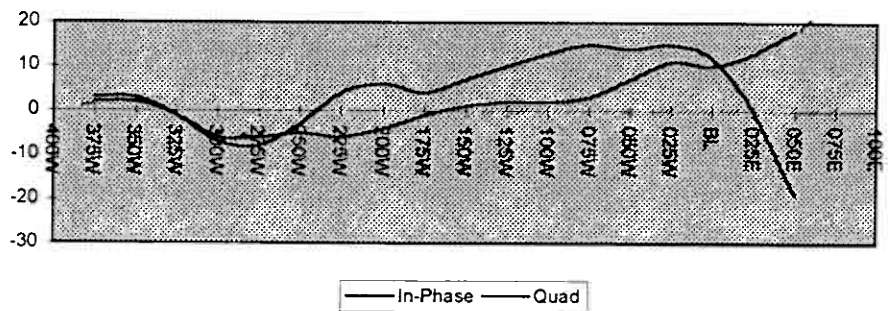
KILLINGDALS VLF
P4 (Filtered)



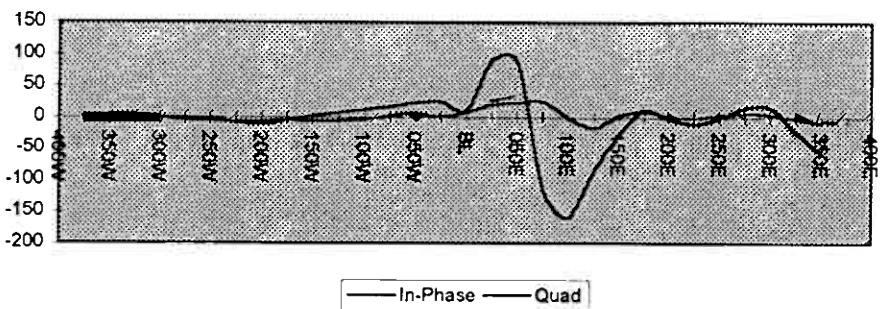
KILLINGDALS VLF
P5 (Filtered)



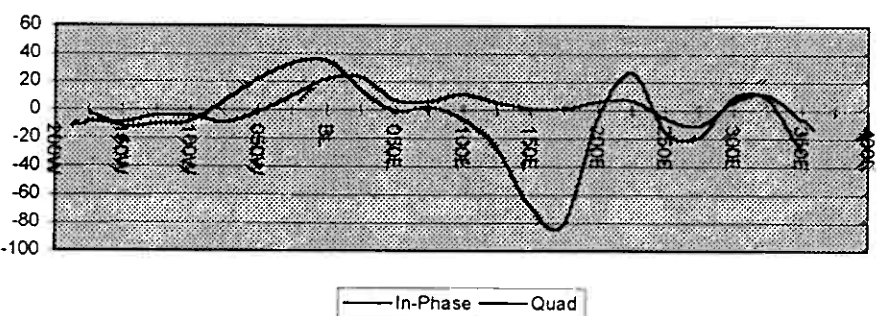
KILLINGDALS VLF
P6 (Filtered)

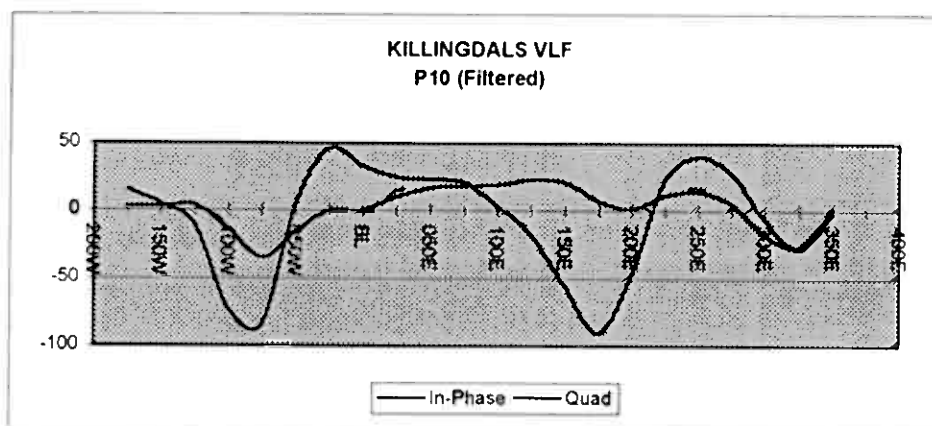
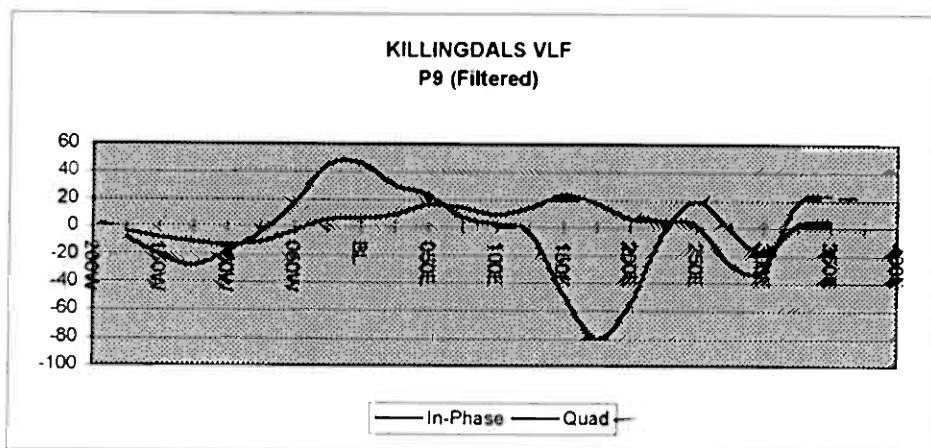


KILLINGDALS VLF
P7 (Filtered)

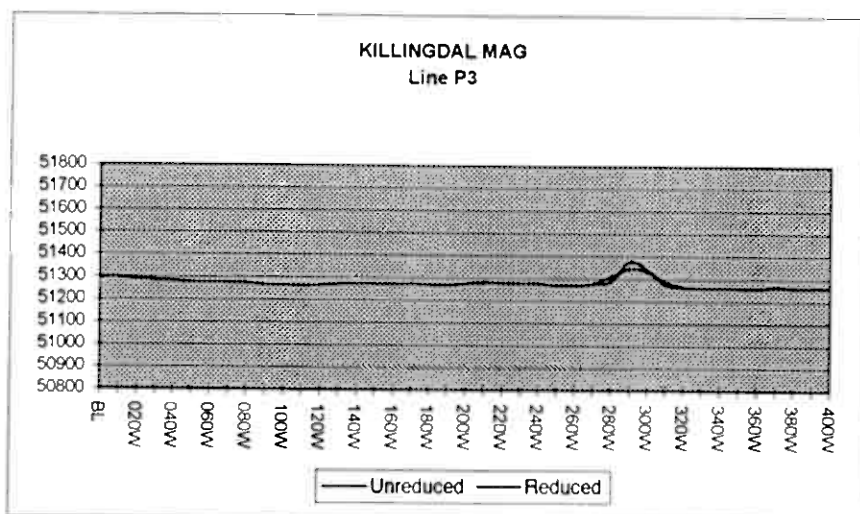
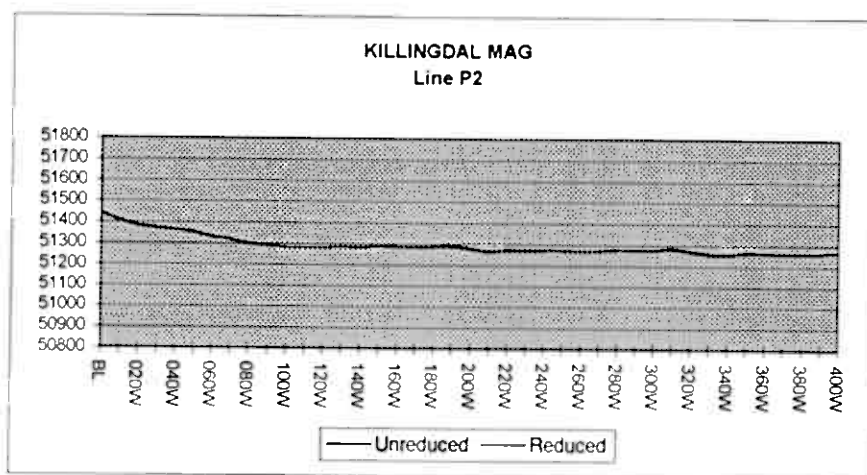
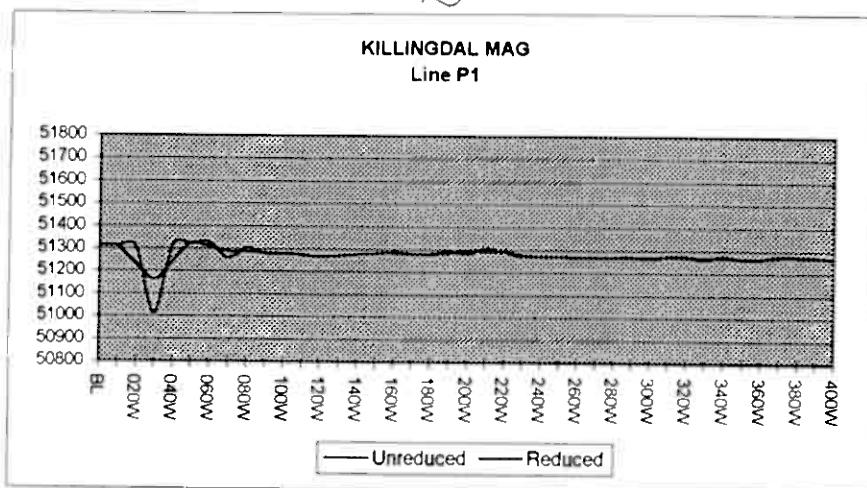


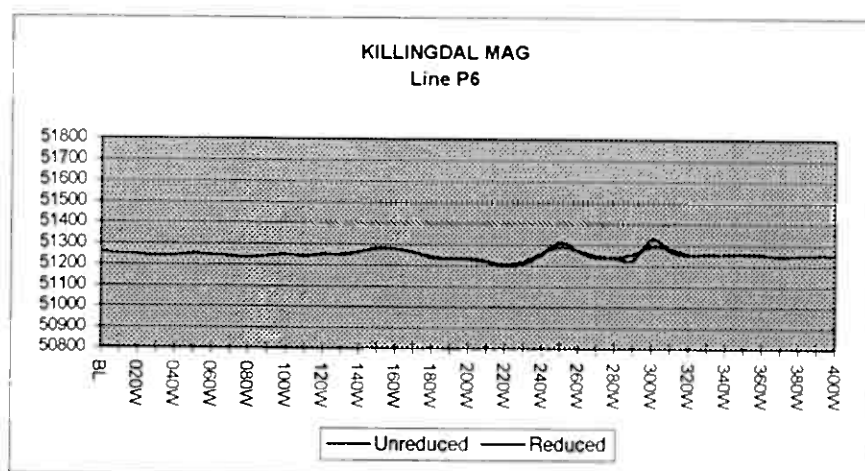
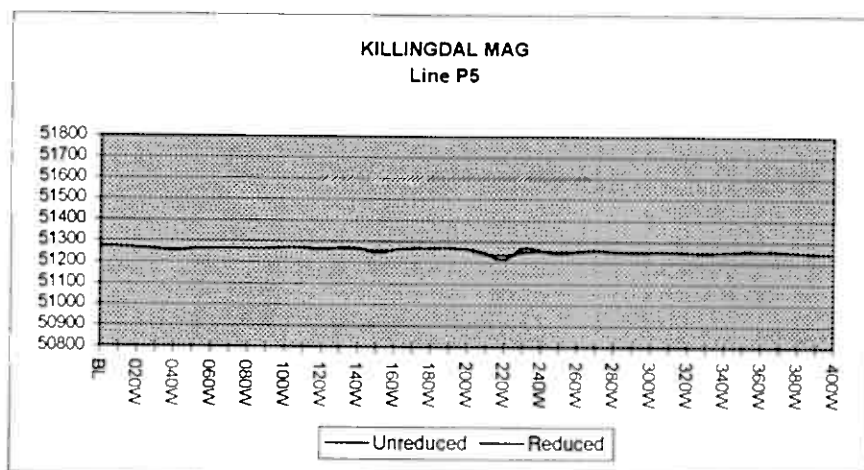
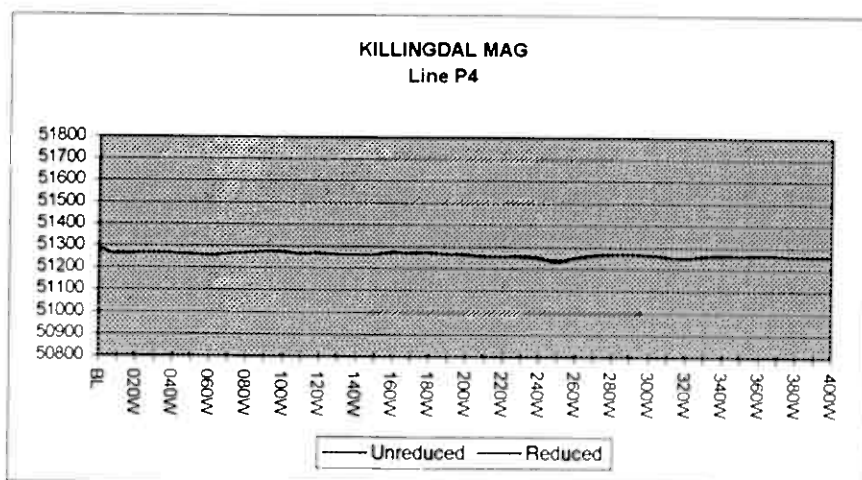
KILLINGDALS VLF
P8 (Filtered)

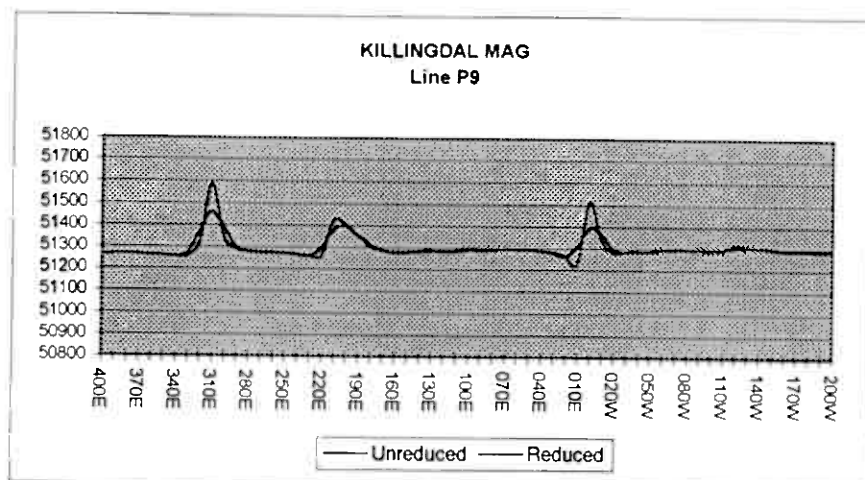
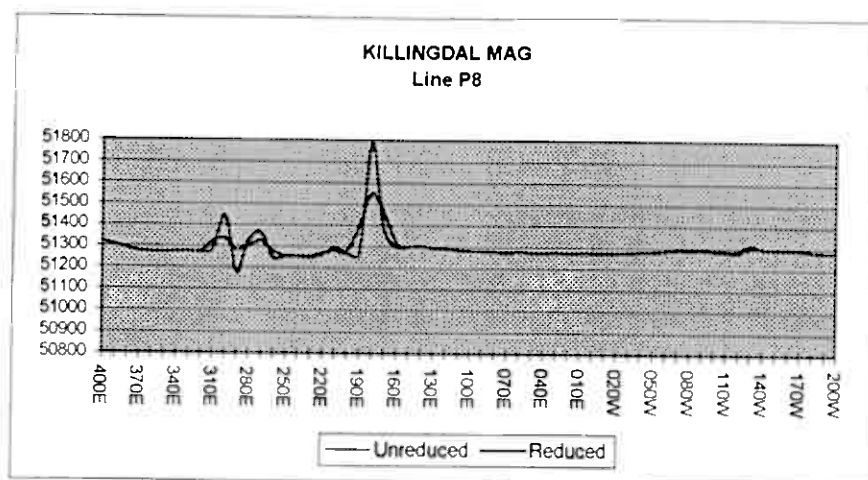
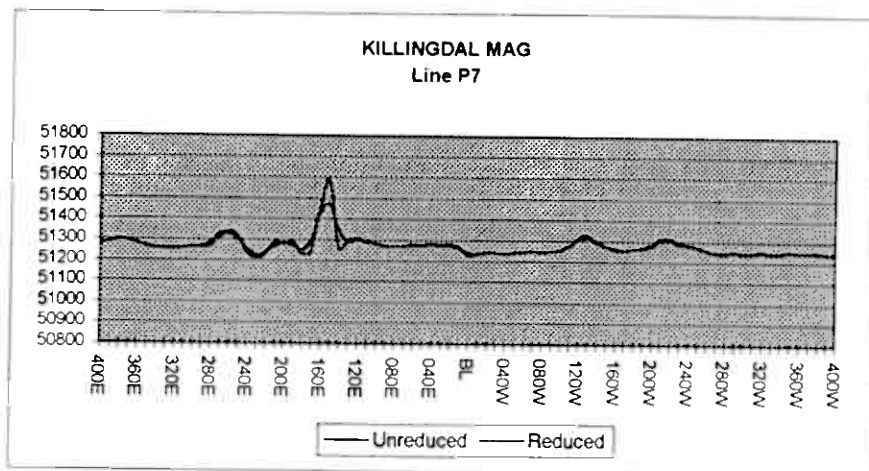


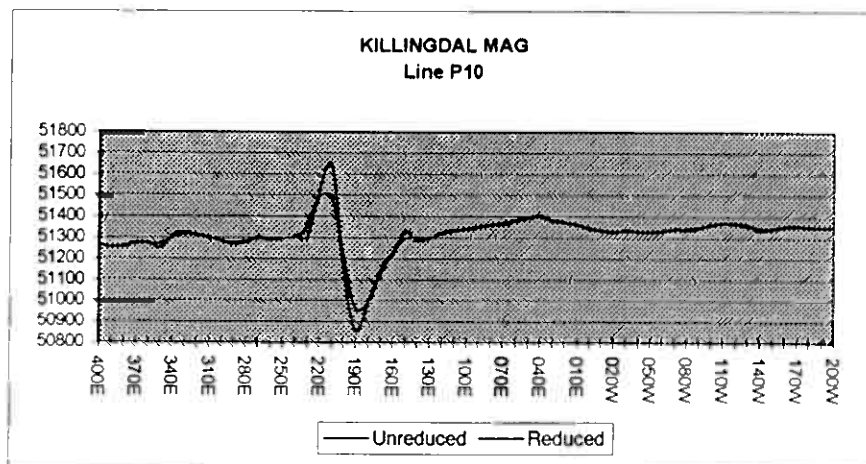


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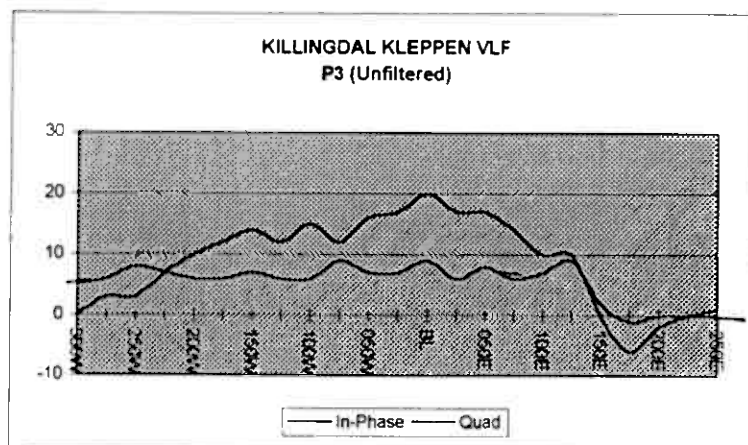
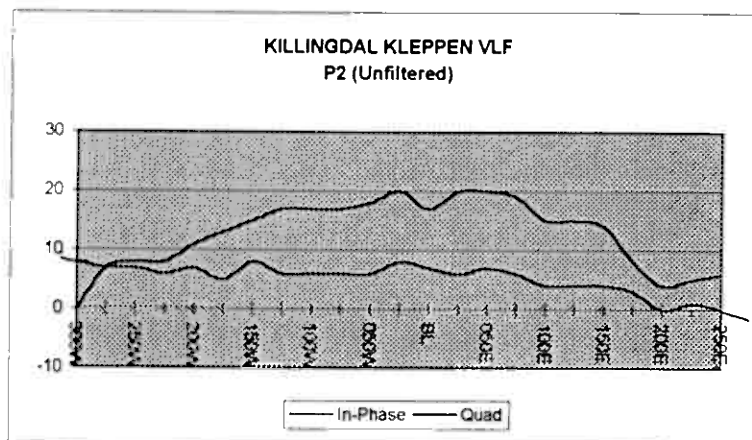
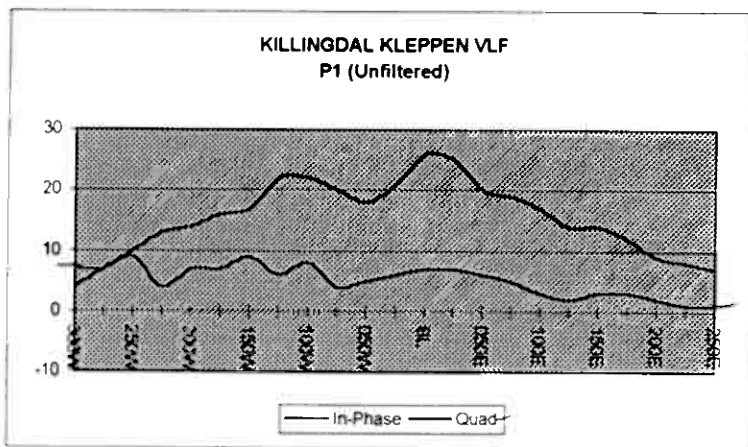


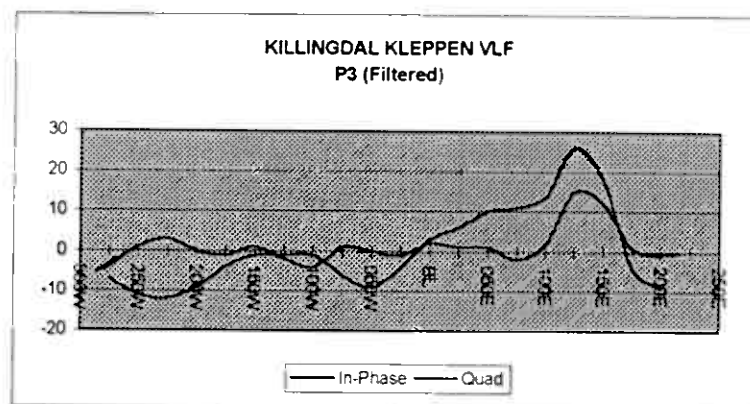
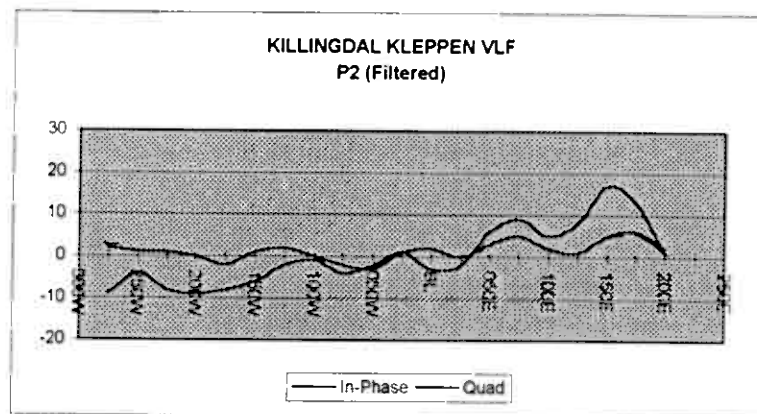
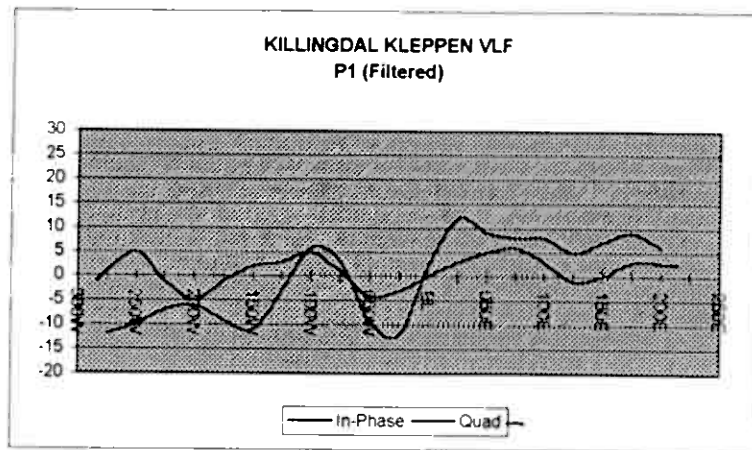




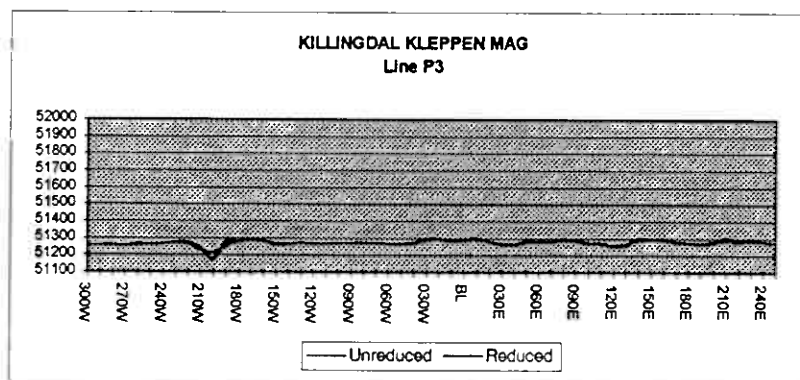
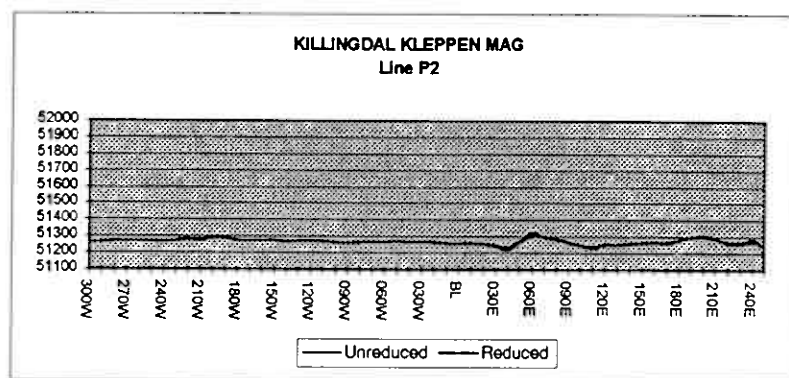
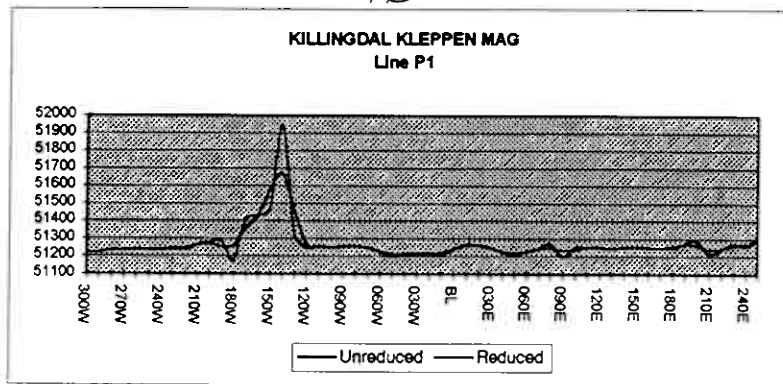


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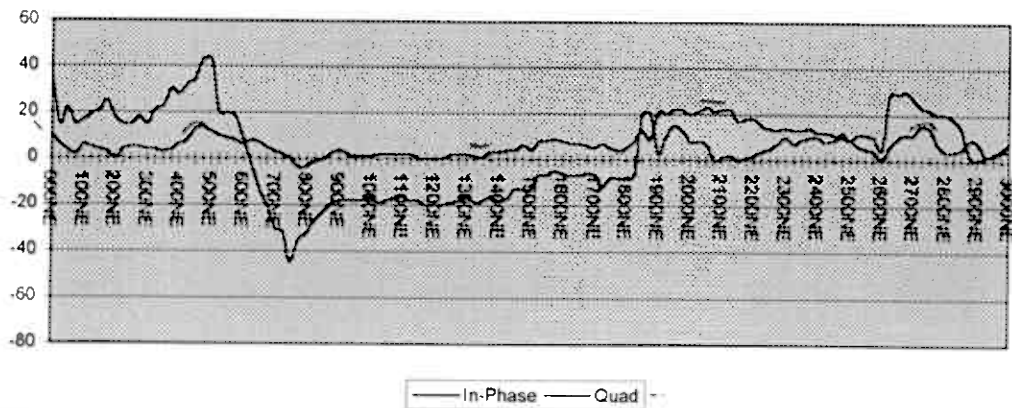


46

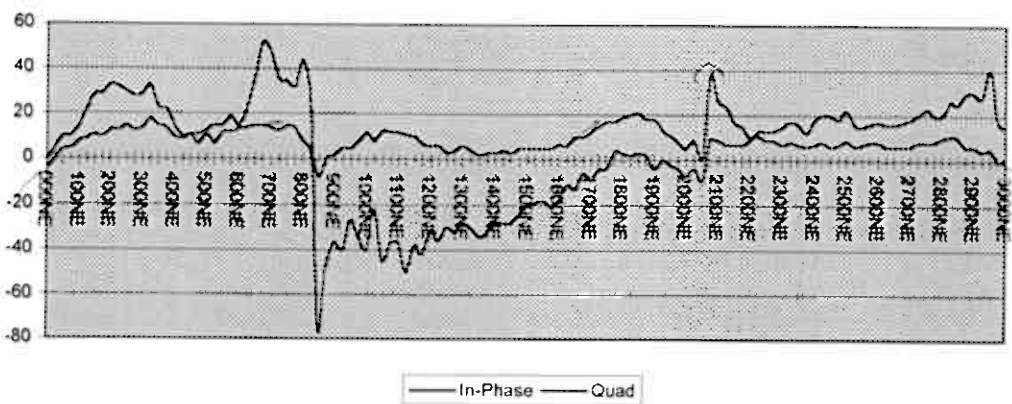


62.63.64

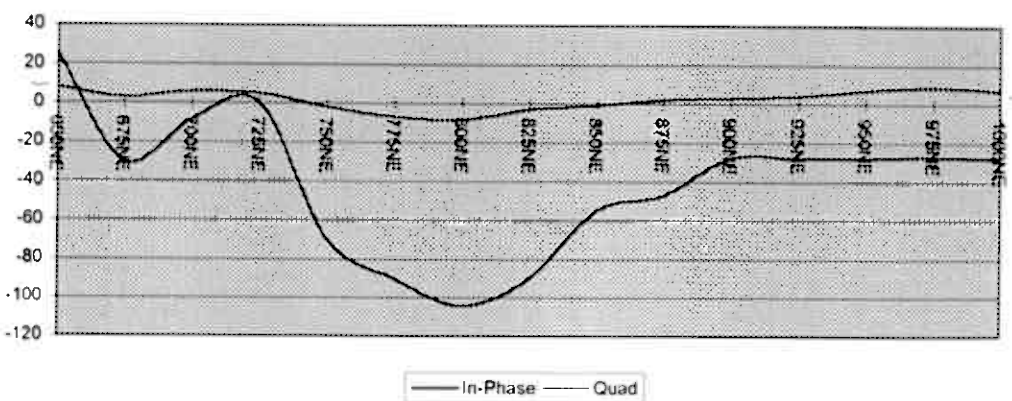
MENNA VLF
P1 (Unfiltered)



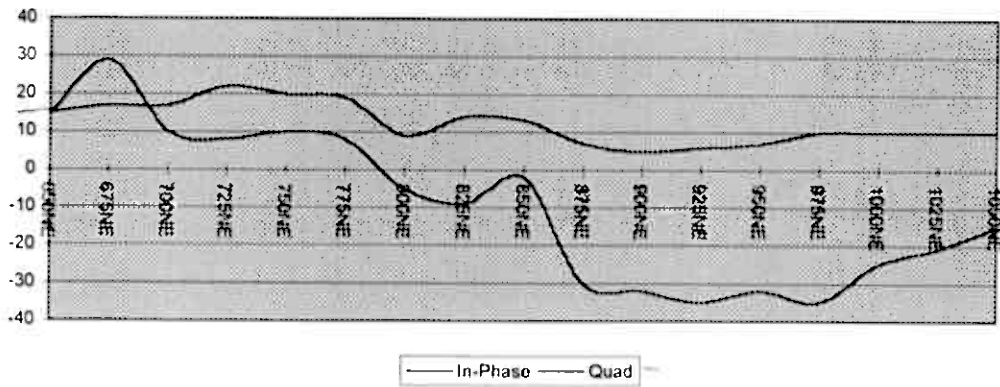
MENNA VLF
P2 (Unfiltered)



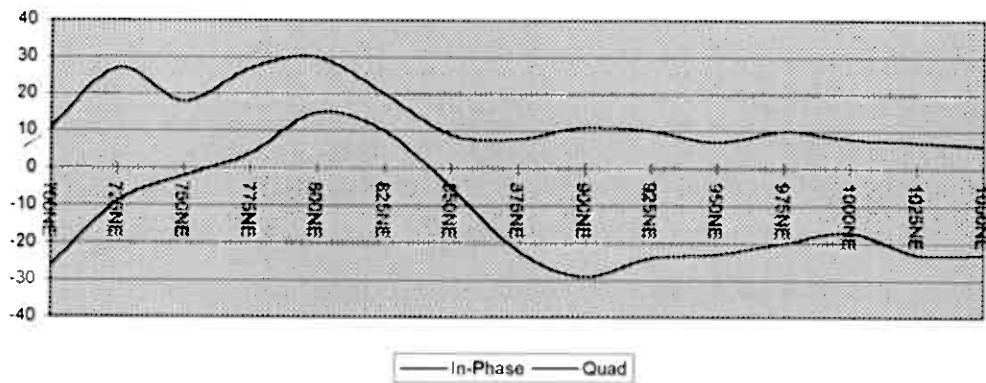
MENNA VLF
P3 (Unfiltered)



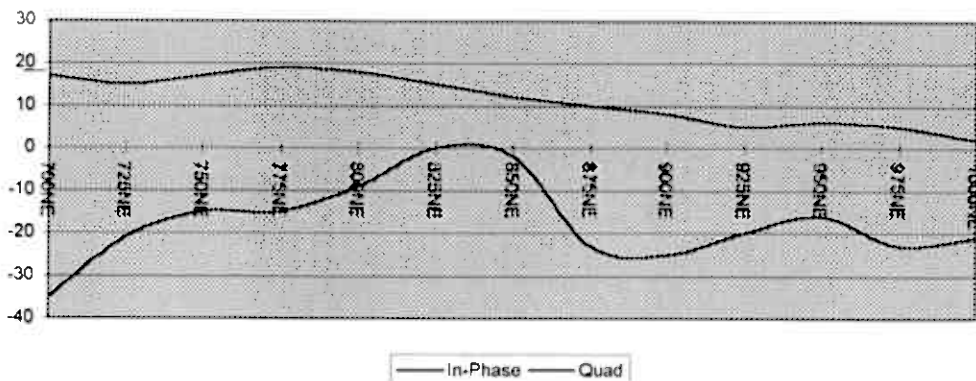
MENNA VLF
P4 (Unfiltered)

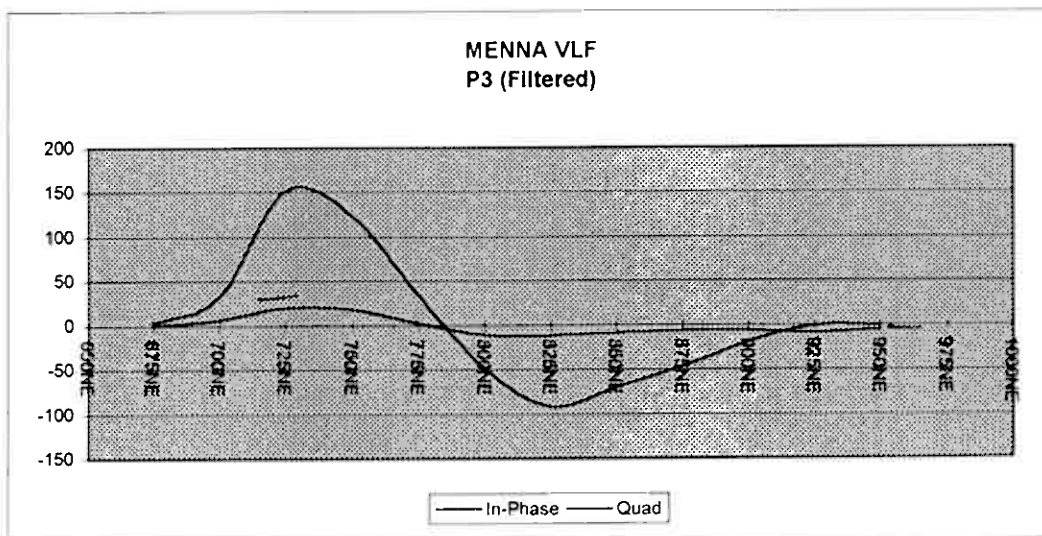
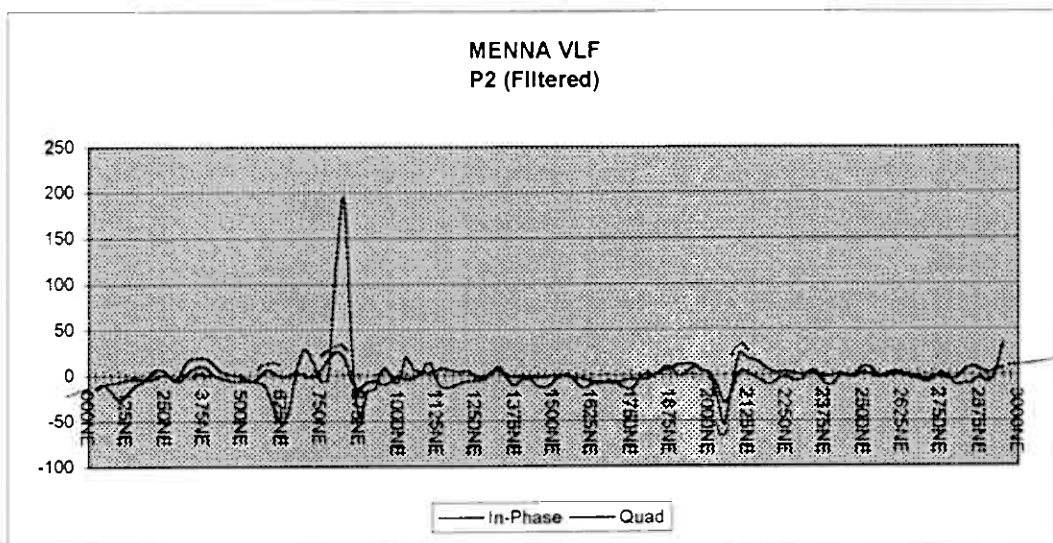
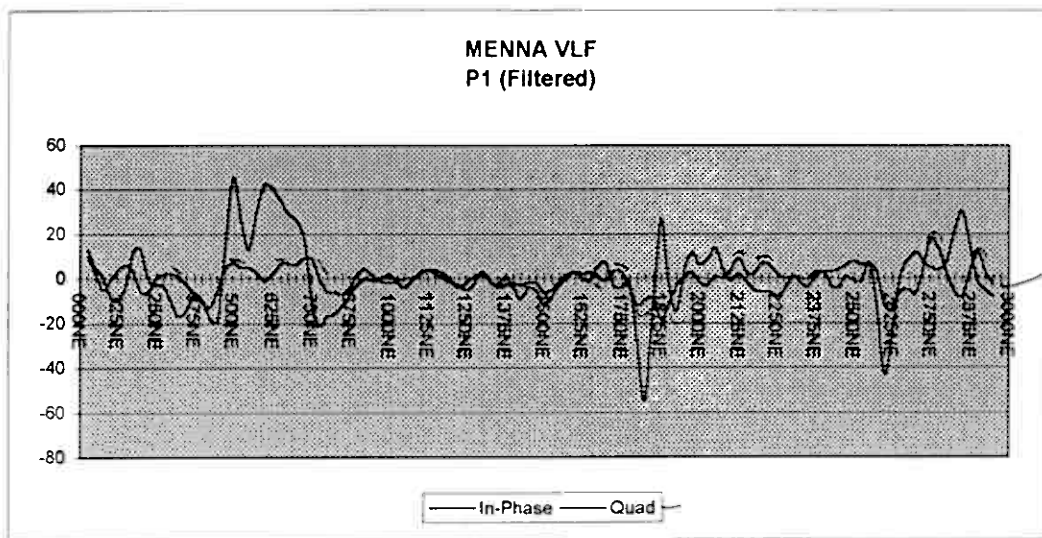


MENNA VLF
P5 (Unfiltered)

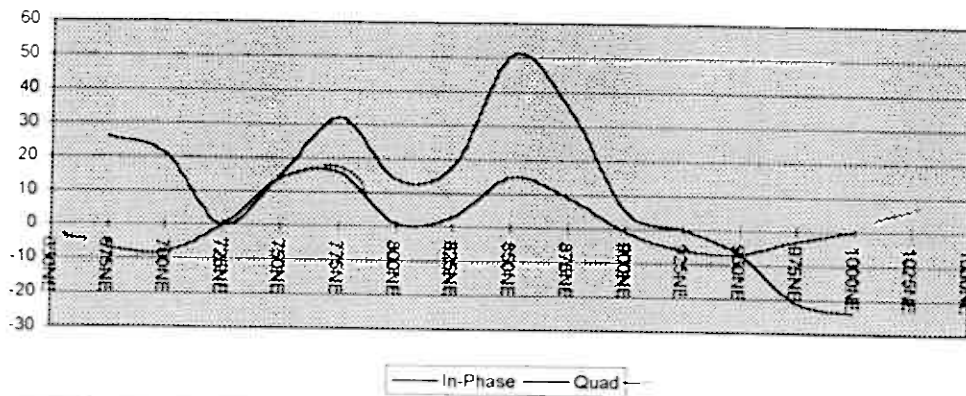


MENNA VLF
P6 (Unfiltered)

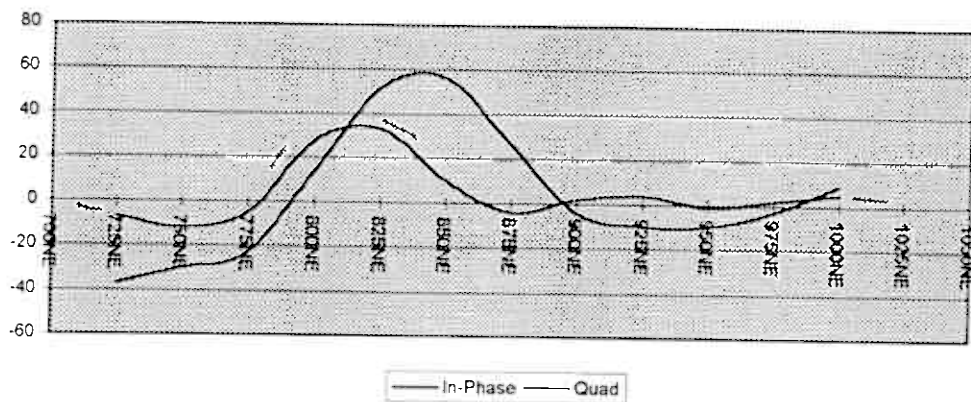




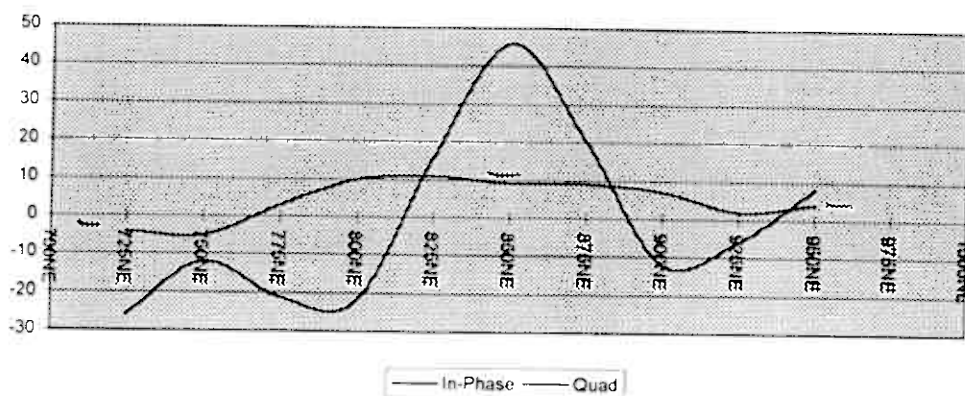
MENNA VLF
P4 (Filtered)

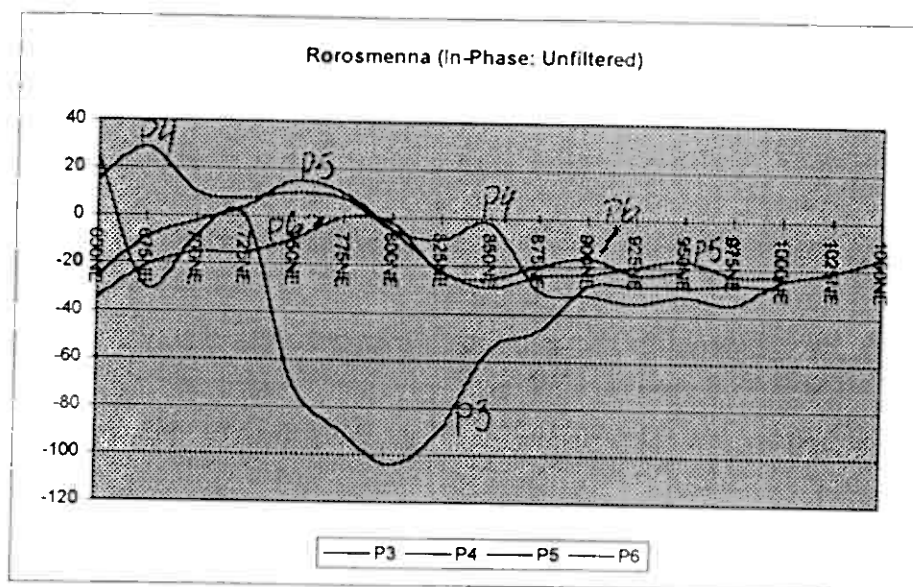
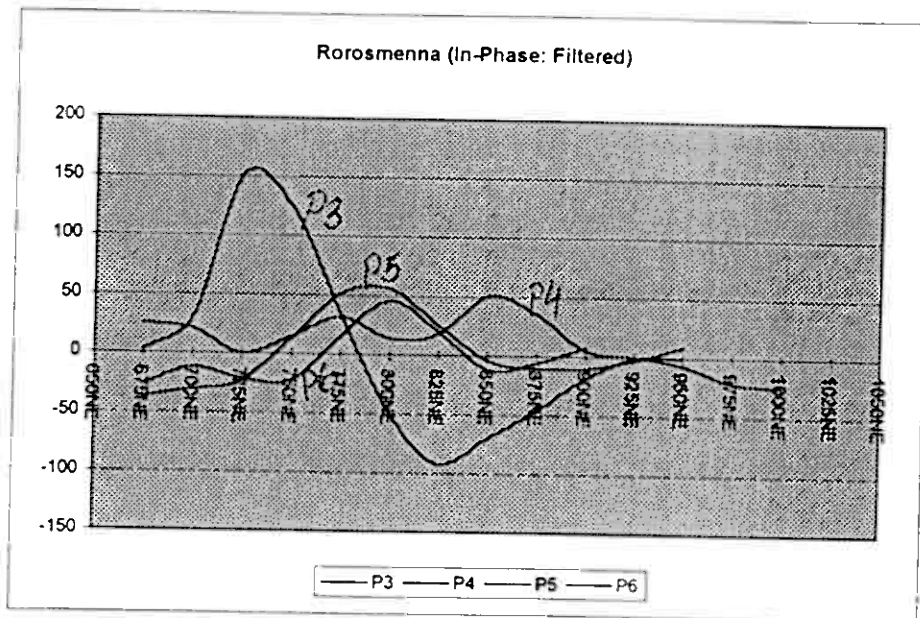


MENNA VLF
P5 (Filtered)

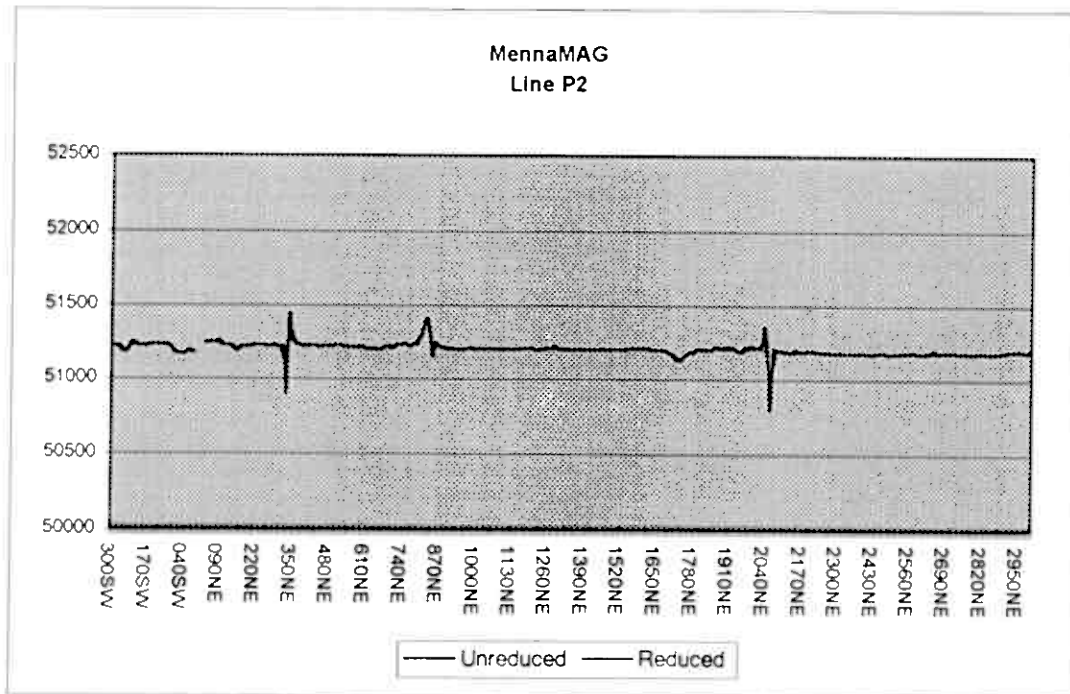
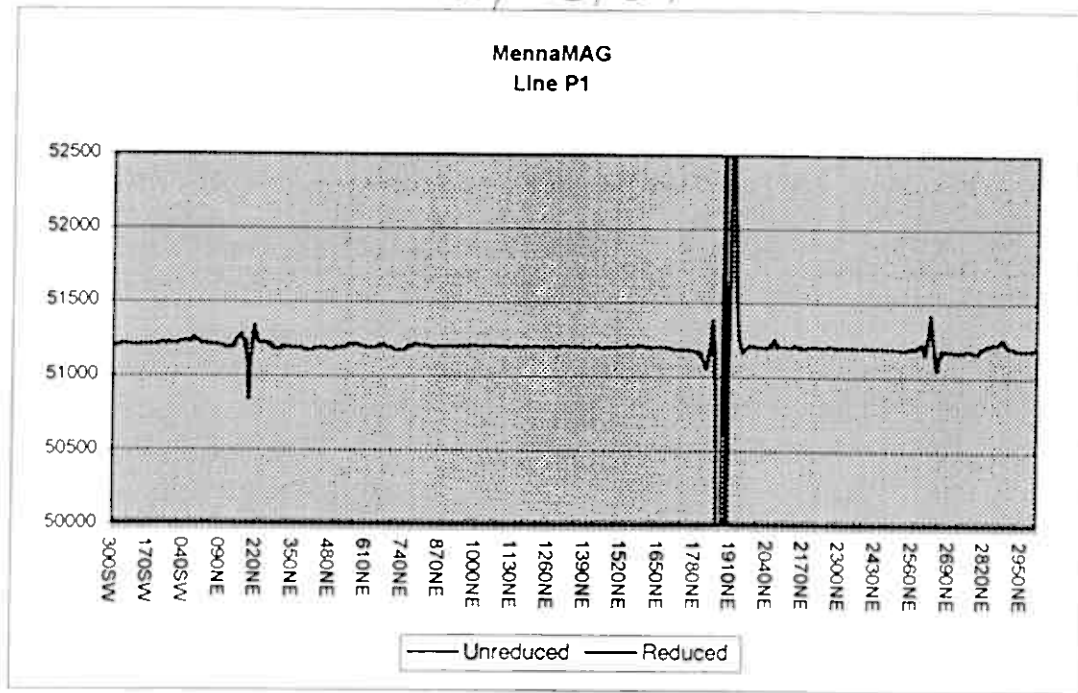


MENNA VLF
P6 (Filtered)

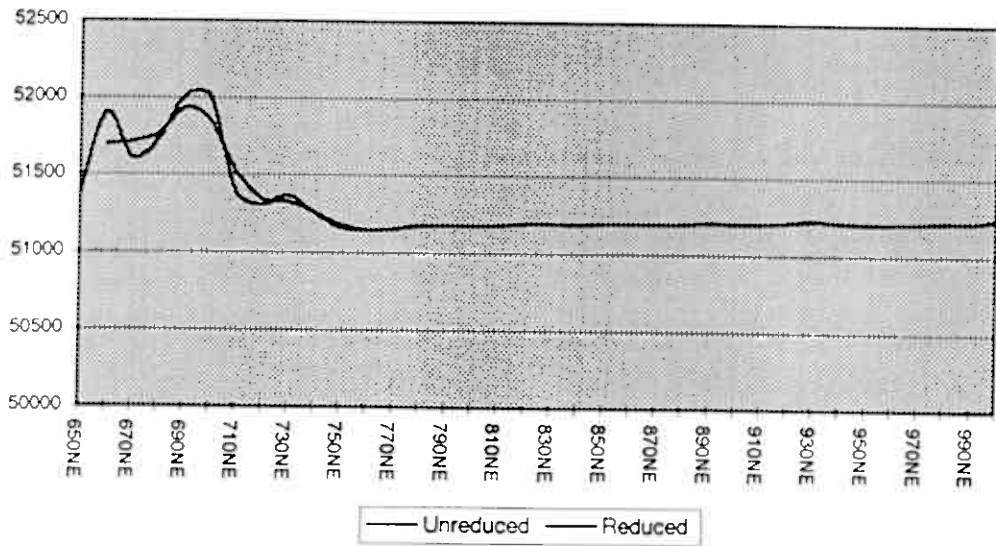




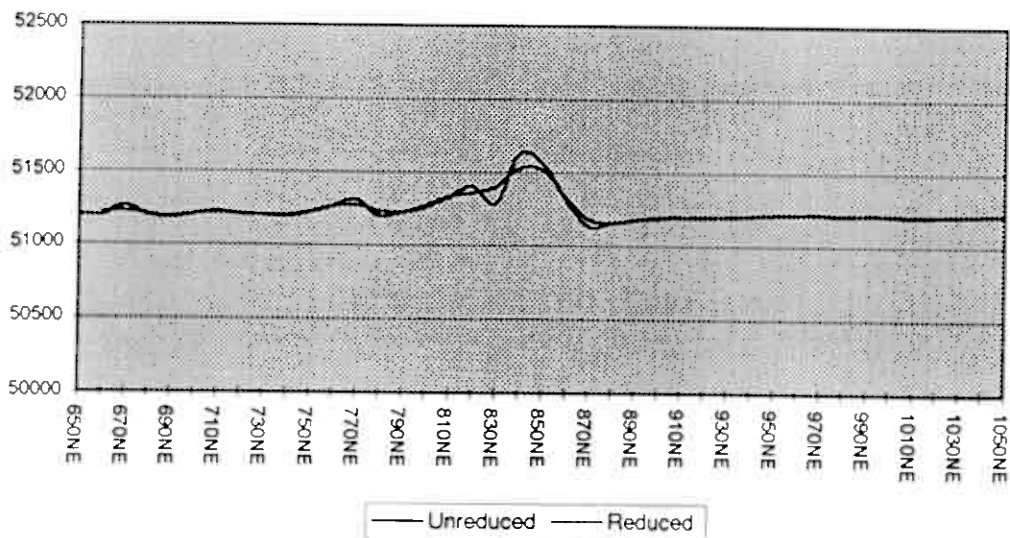
62, 63, 64

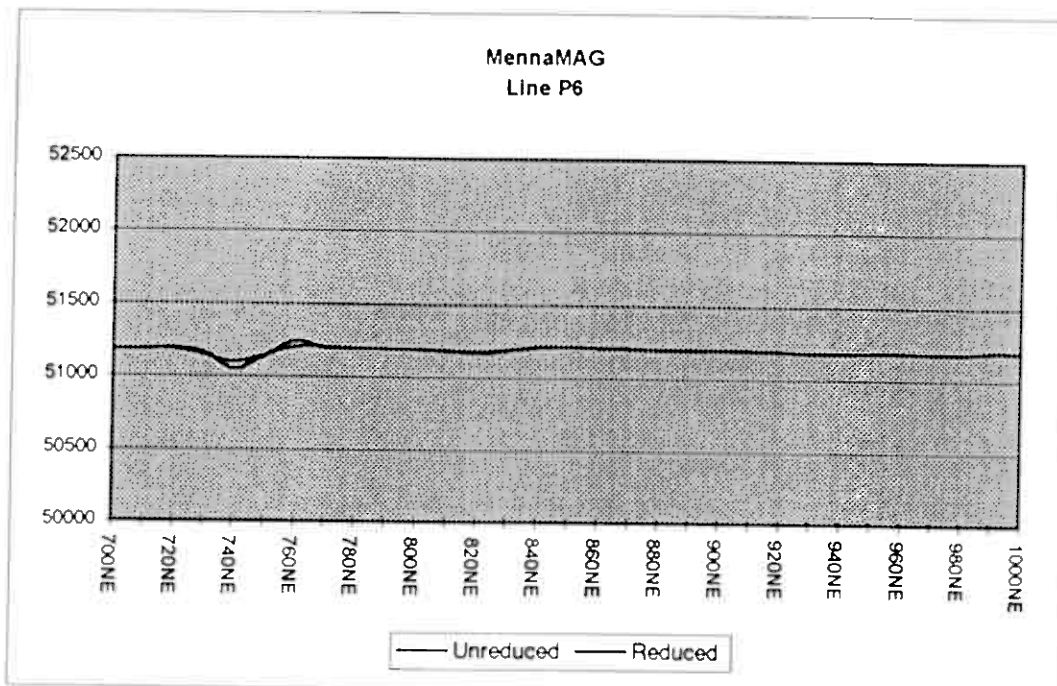
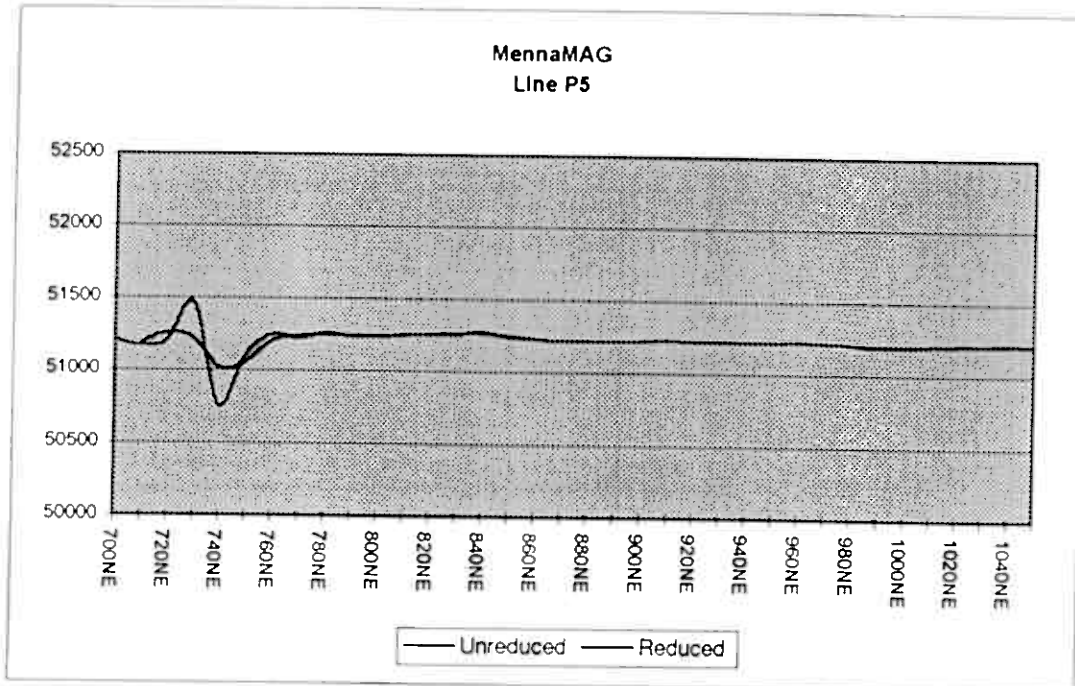


MennaMAG
Line P3



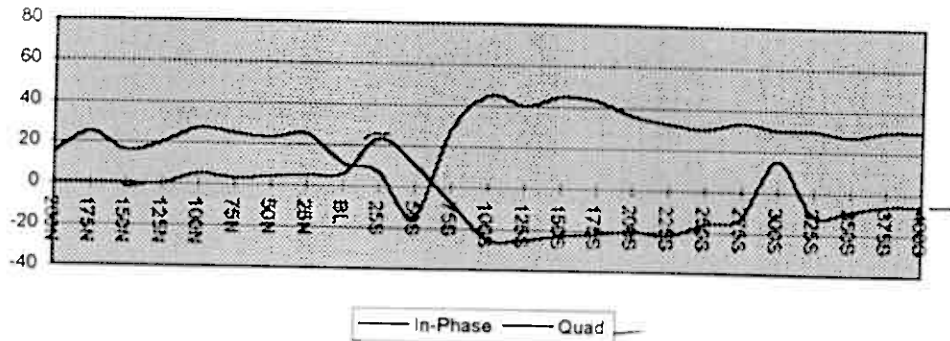
MennaMAG
Line P4



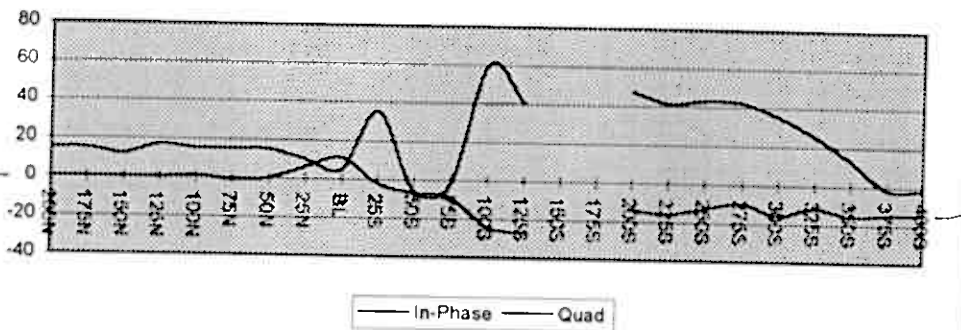


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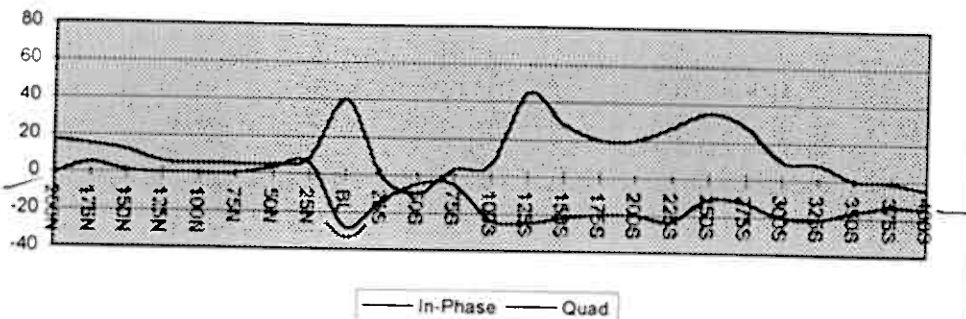
LUNGDAHSVOLLEN VLF
P1 (Unfiltered)



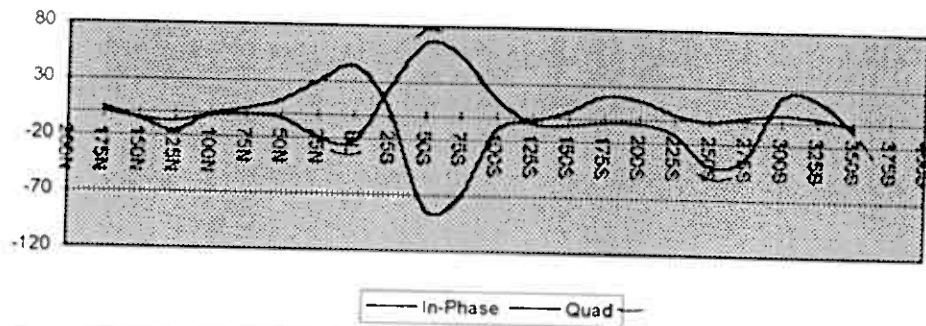
LUNGDAHSVOLLEN VLF
P2 (Unfiltered)



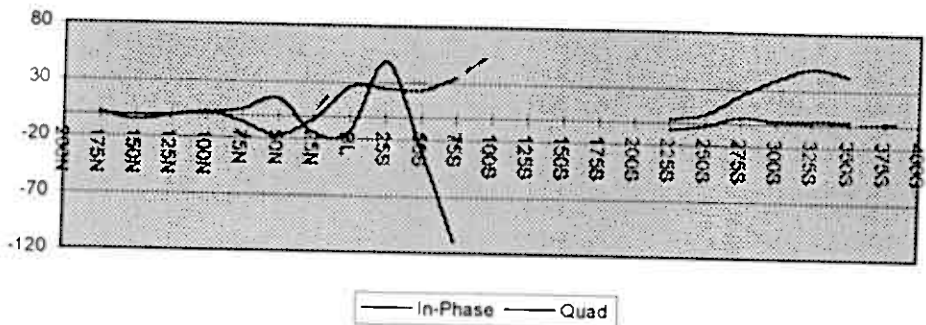
LUNGDAHSVOLLEN VLF
P3 (Unfiltered)



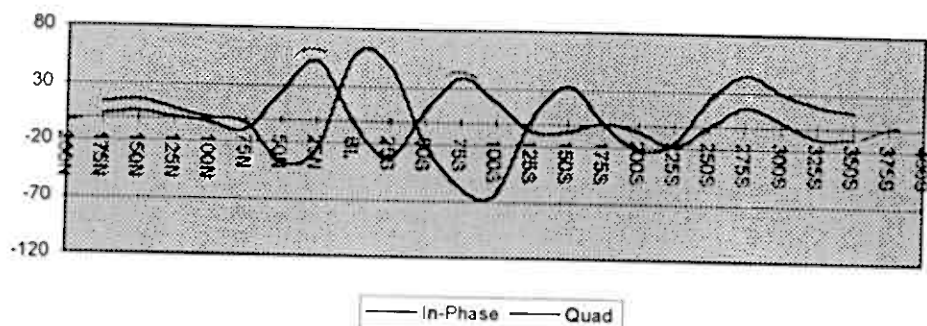
LUNGDAHSVOLLEN VLF
P1 (Filtered)



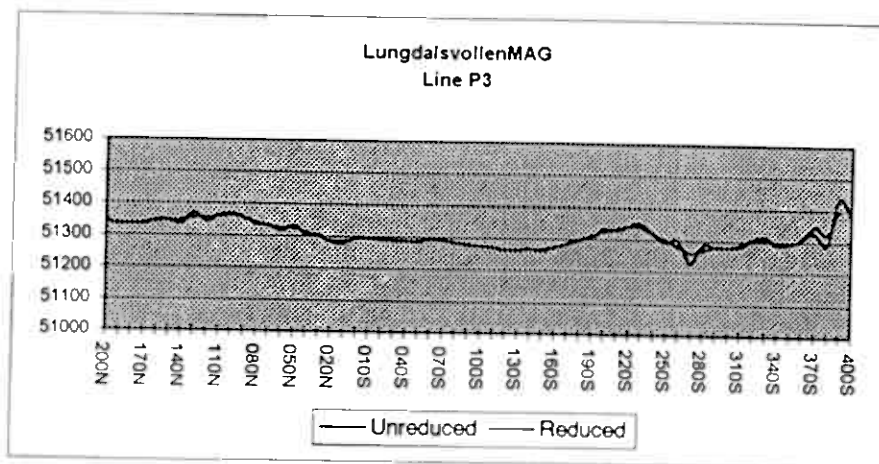
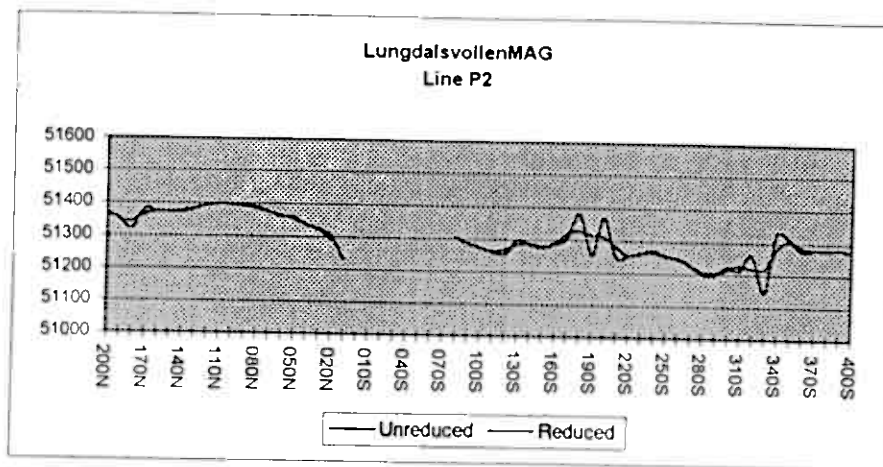
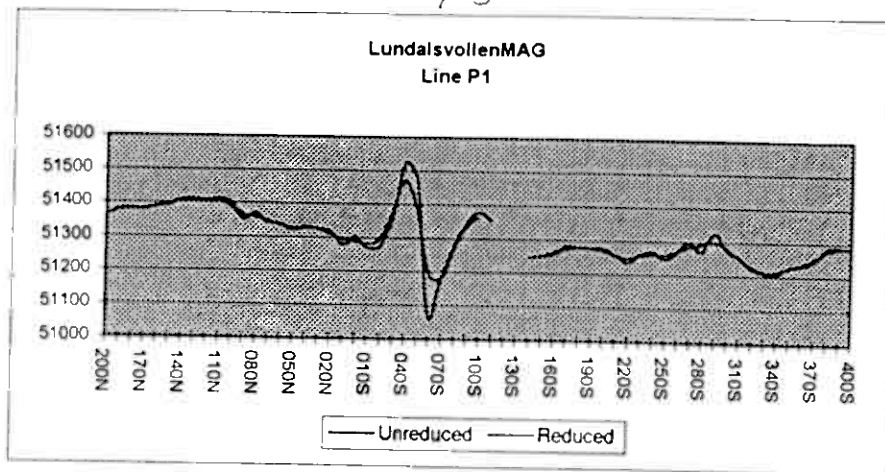
LUNGDAHSVOLLEN VLF
P2 (Filtered)



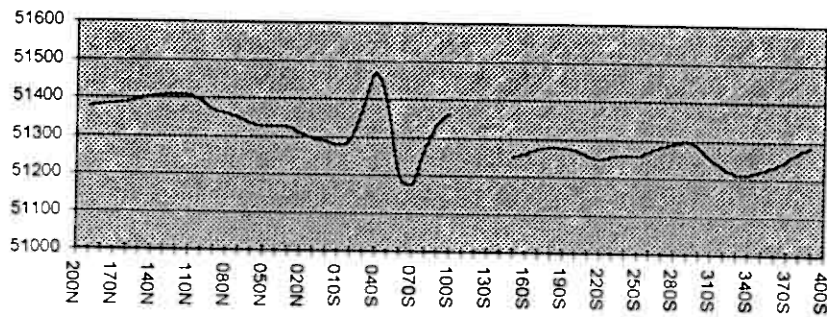
LUNGDAHSVOLLEN VLF
P3 (Filtered)



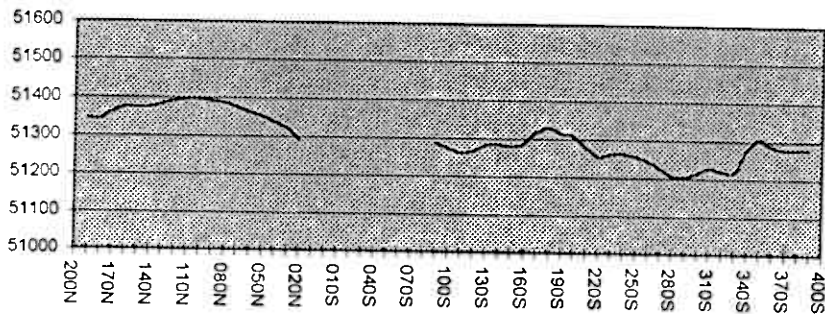
78



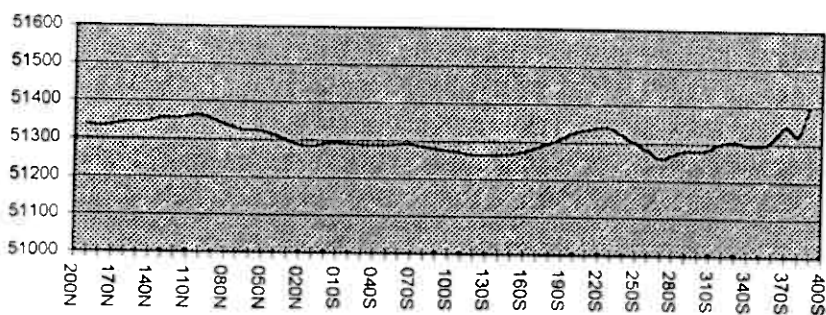
**LungdalsvollenMAG
P1 (Reduced)**



**LungdalsvollenMAG
P2 (Reduced)**

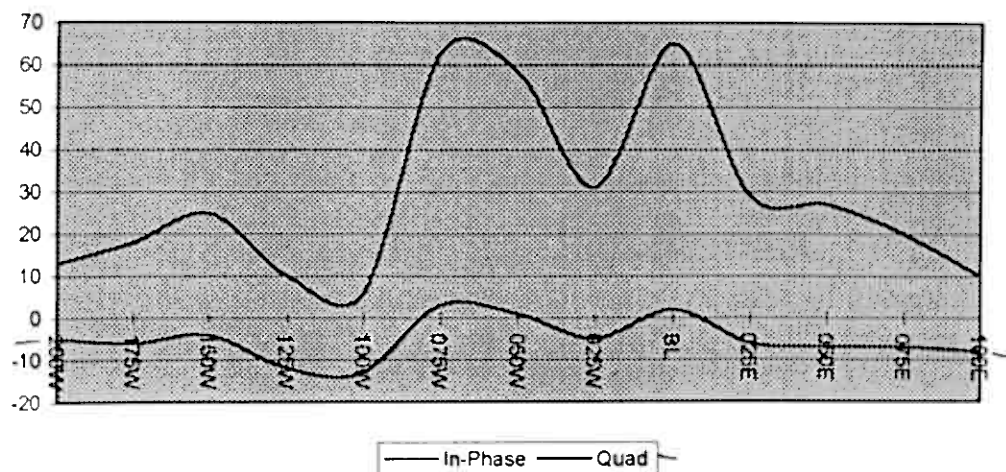


**LungdalsvollenMAG
P3 (Reduced)**

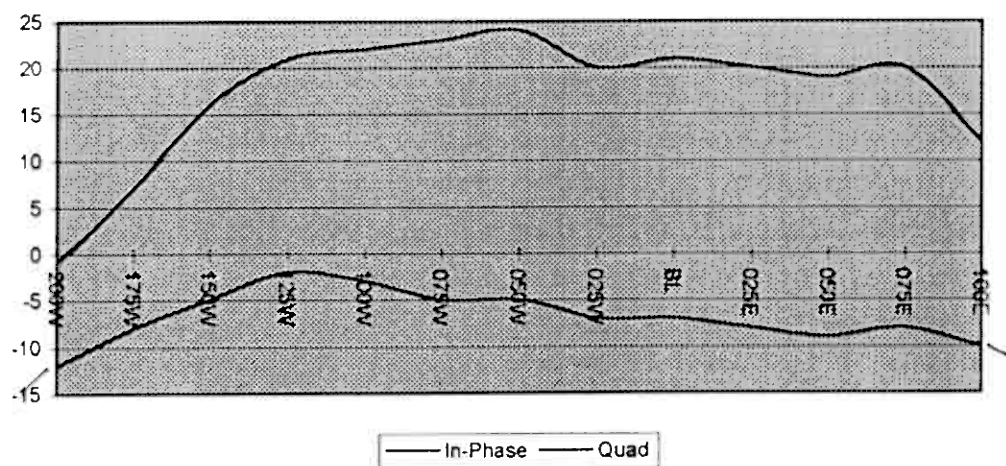


88

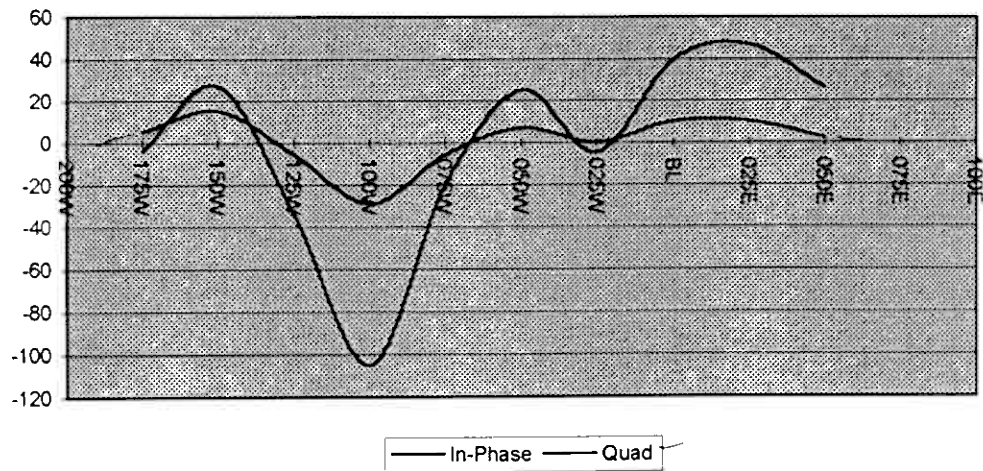
SAGSKJERPET VLF
P1 (Unfiltered)



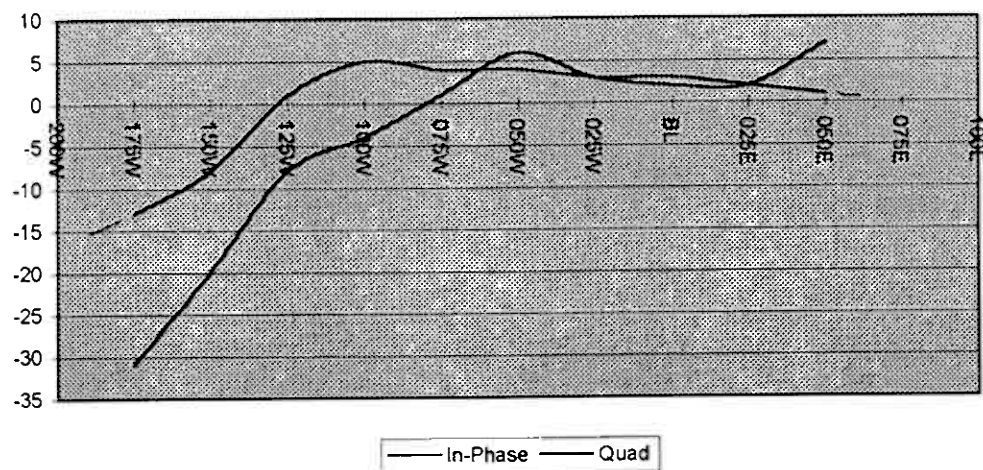
SAGSKJERPET VLF
P2 (Unfiltered)



SAGSKJERPET VLF
P1 (Filtered)

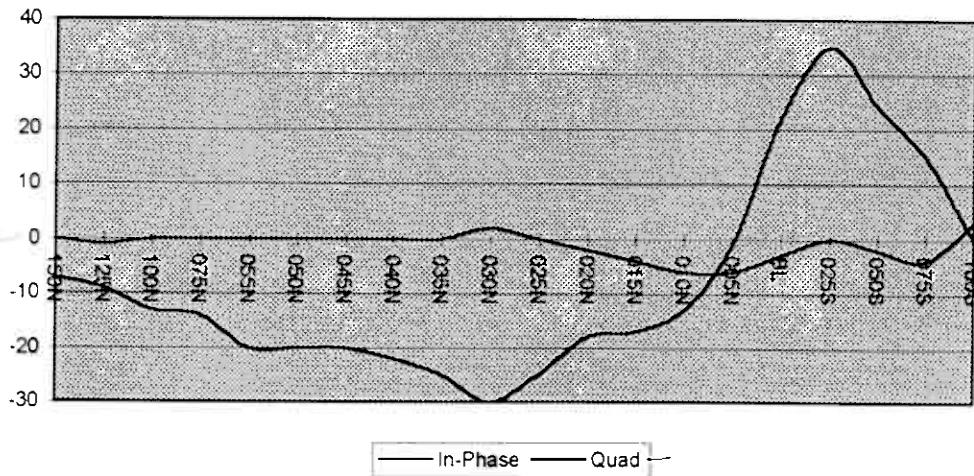


SAGSKJERPET VLF
P2 (Filtered)

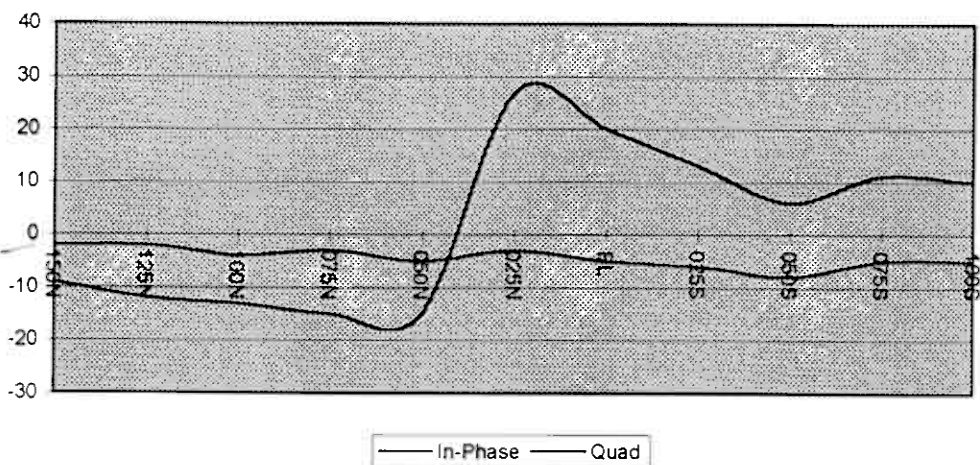


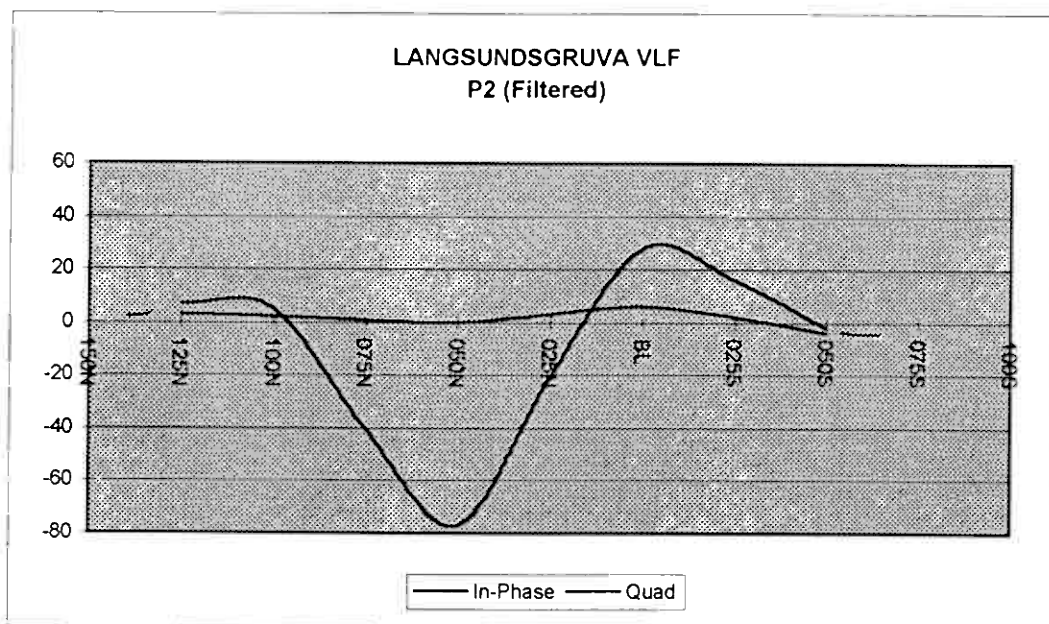
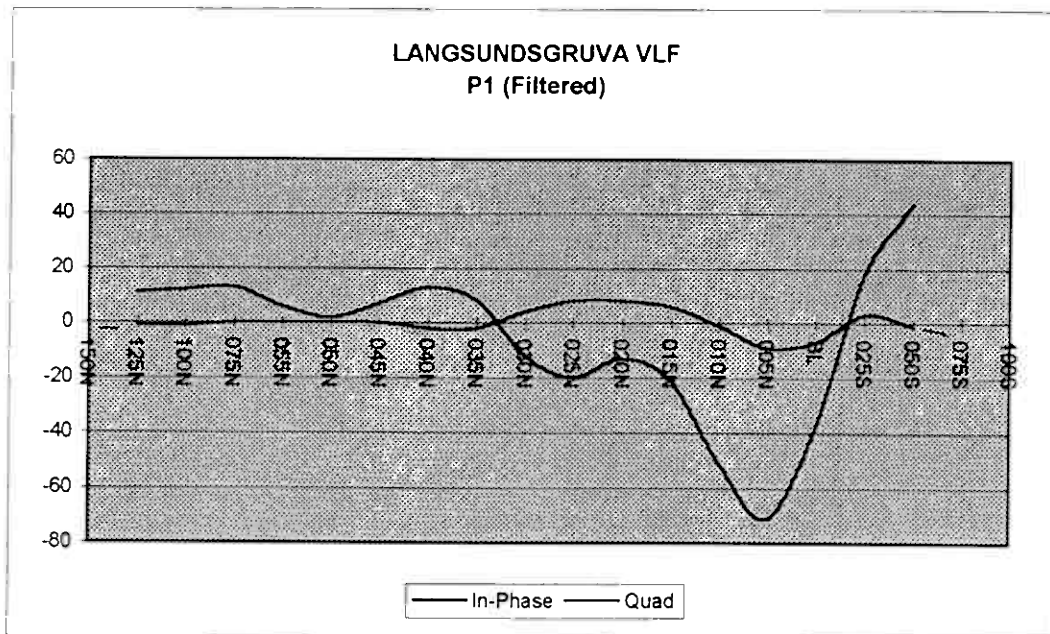
90

LANGSUNDSGRUVA VLF
P1 (Unfiltered)

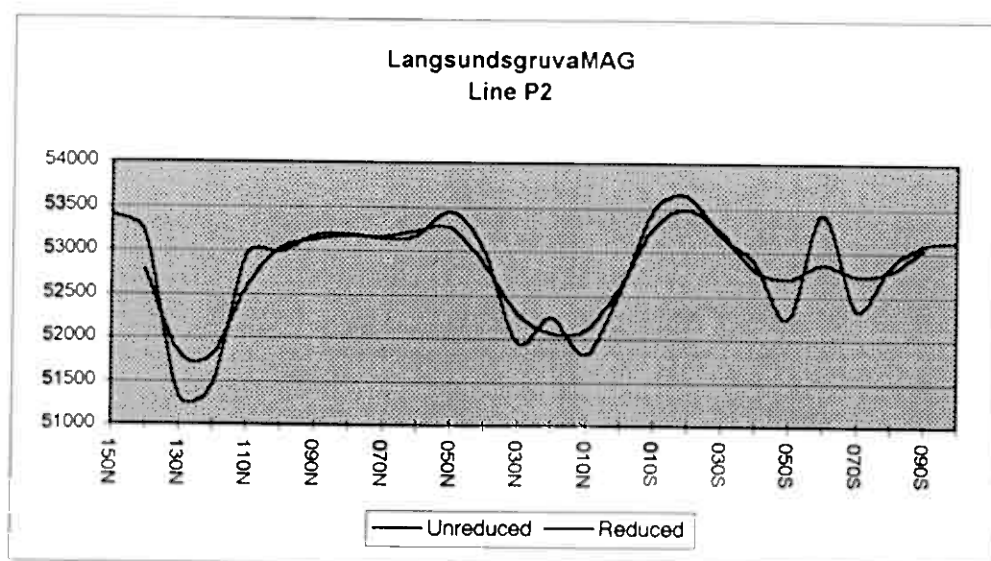
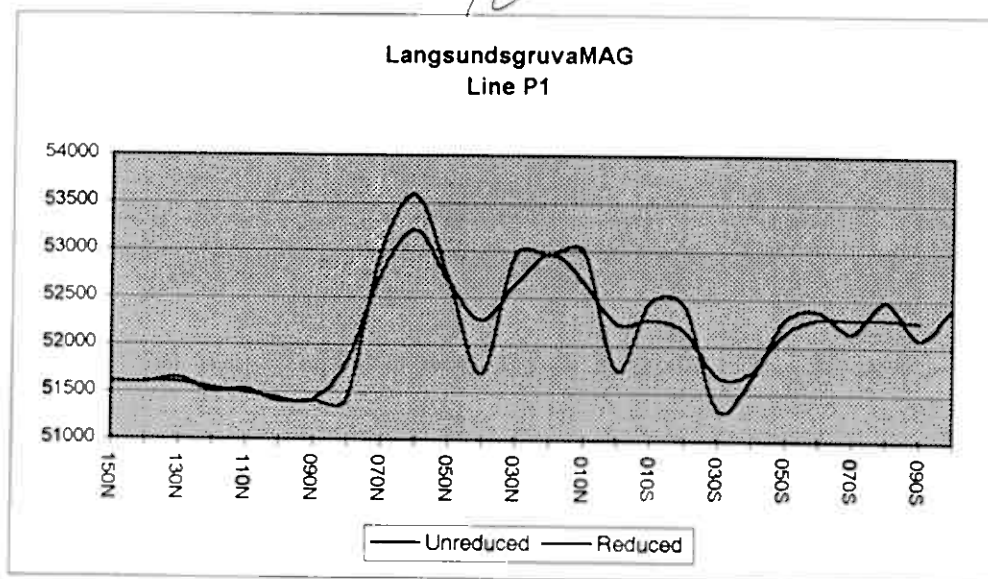


LANGSUNDSGRUVA VLF
P2 (Unfiltered)

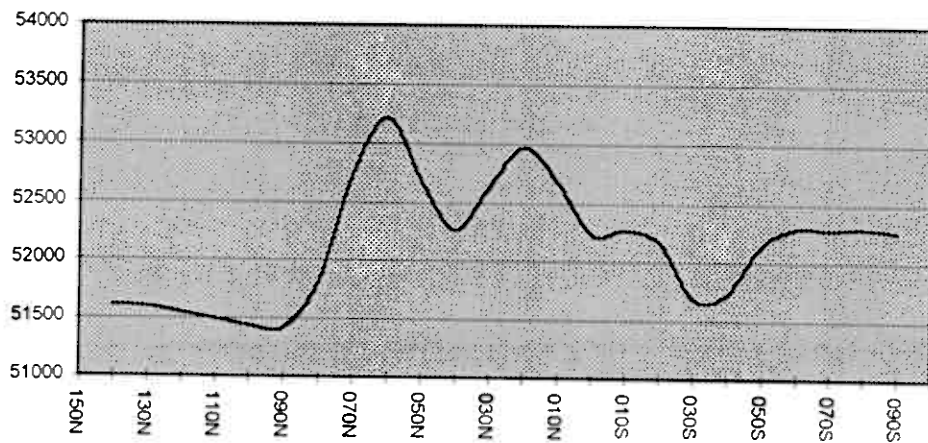




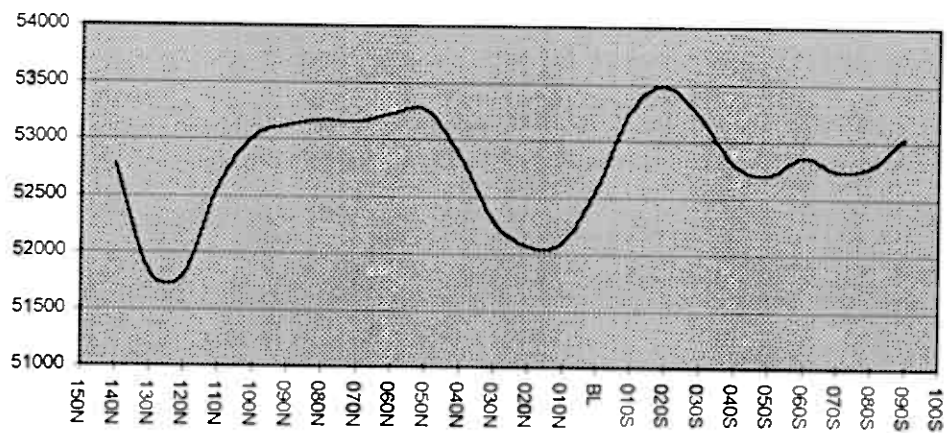
90



LangsundgruvaMAG
P1 (Reduced)

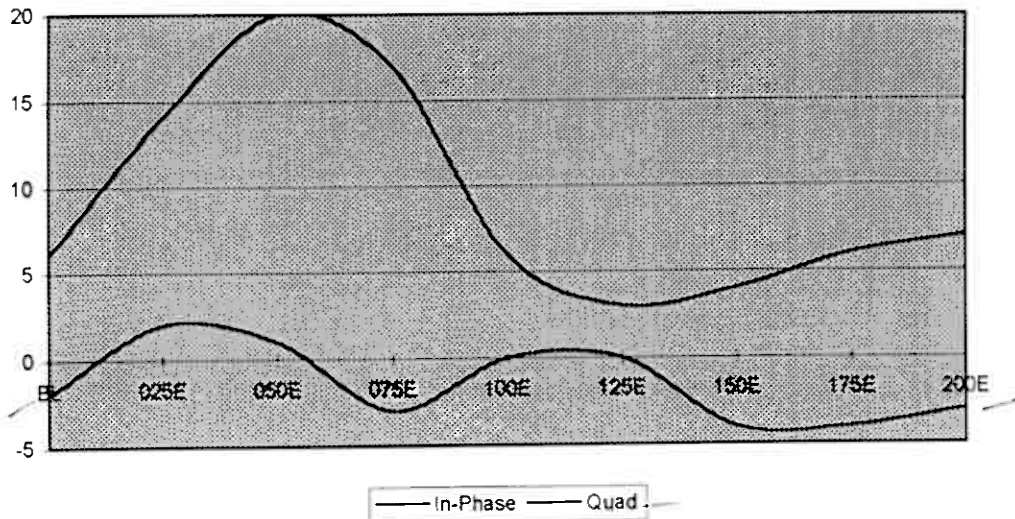


LangsundgruvaMAG
P2 (Reduced)

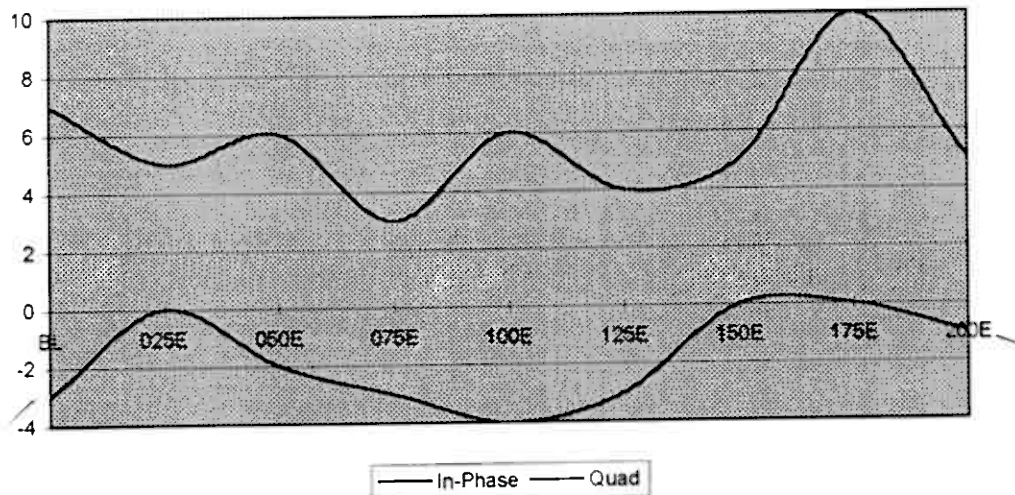


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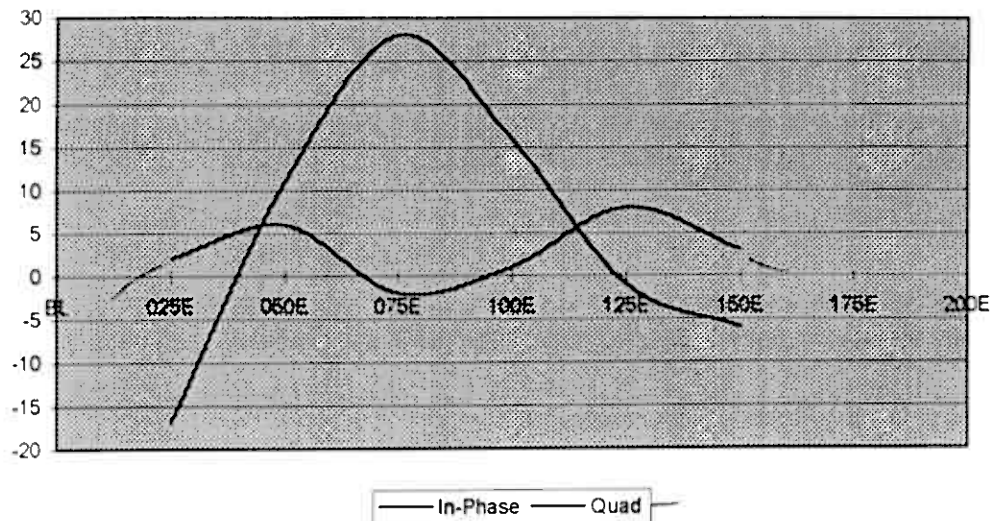
SONDRE-NORDVE VLF
P1 (Unfiltered)



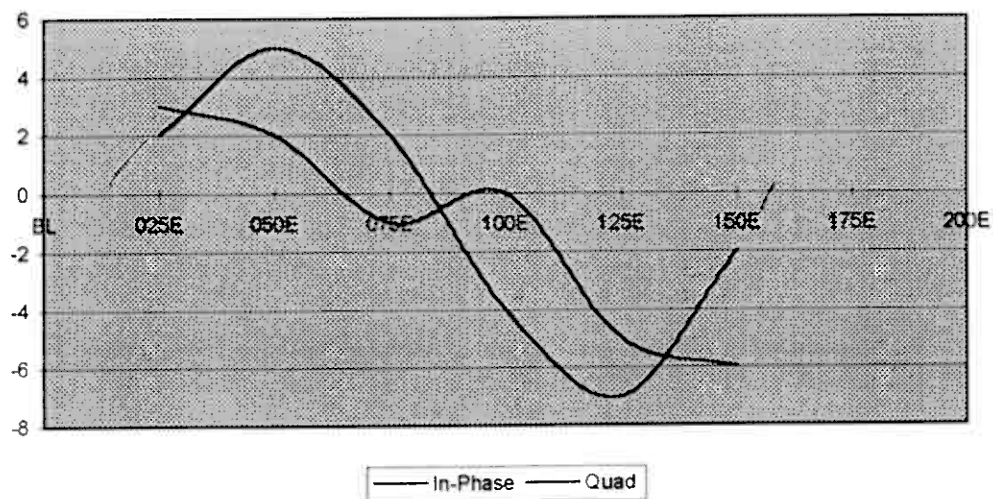
SONDRE-NORDVE VLF
P2 (Unfiltered)



SONDRE-NORDVE VLF
P1 (Filtered)

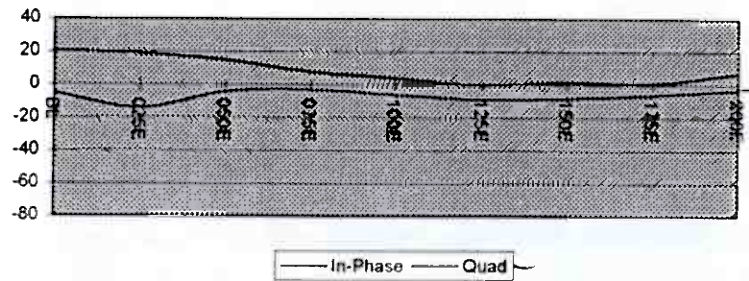


SONDRE-NORDVE VLF
P2 (Filtered)

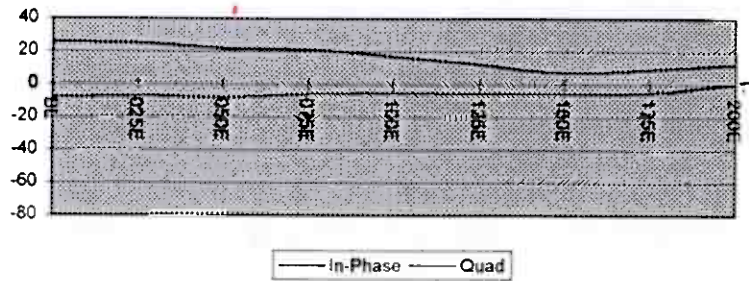


93-94

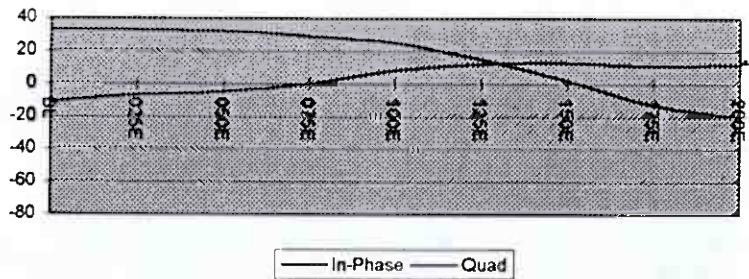
ANNA-GOSTA VLF
P1 (Unfiltered)



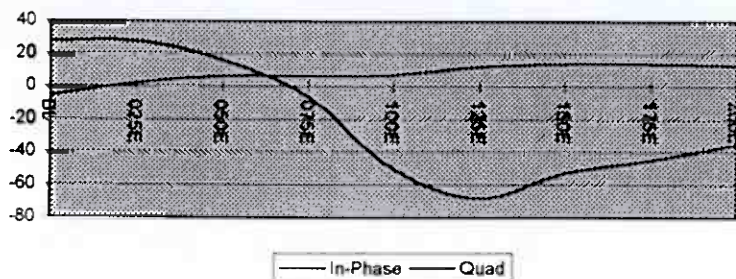
ANNA-GOSTA VLF
P2 (Unfiltered)

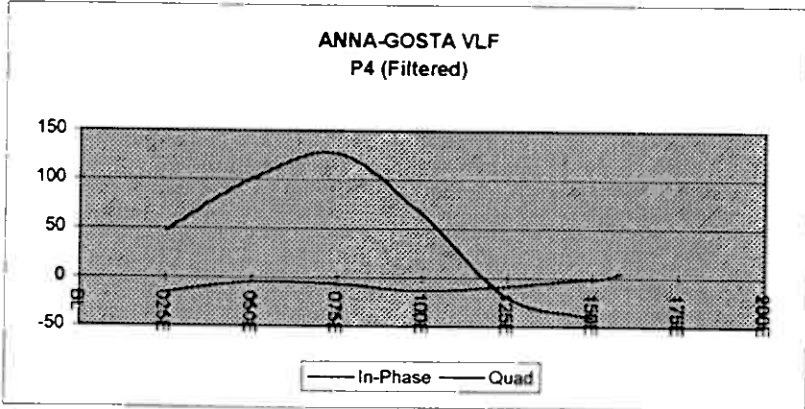
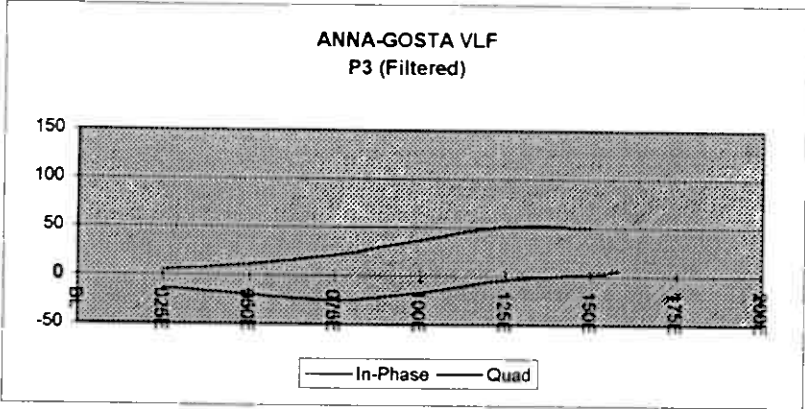
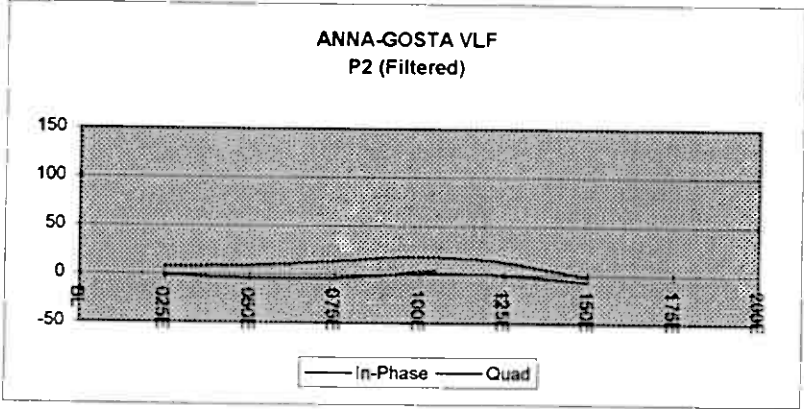
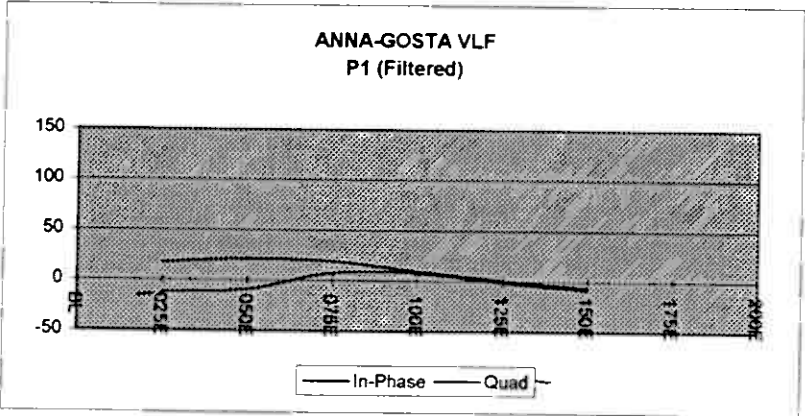


ANNA-GOSTA VLF
P3 (Unfiltered)



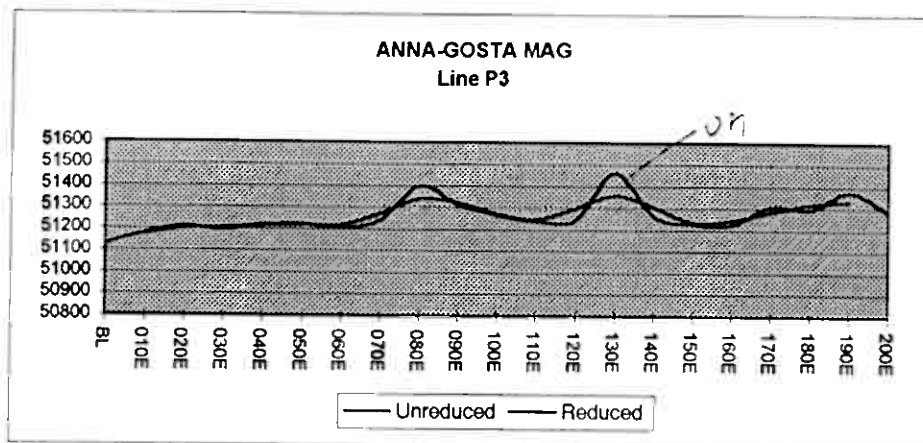
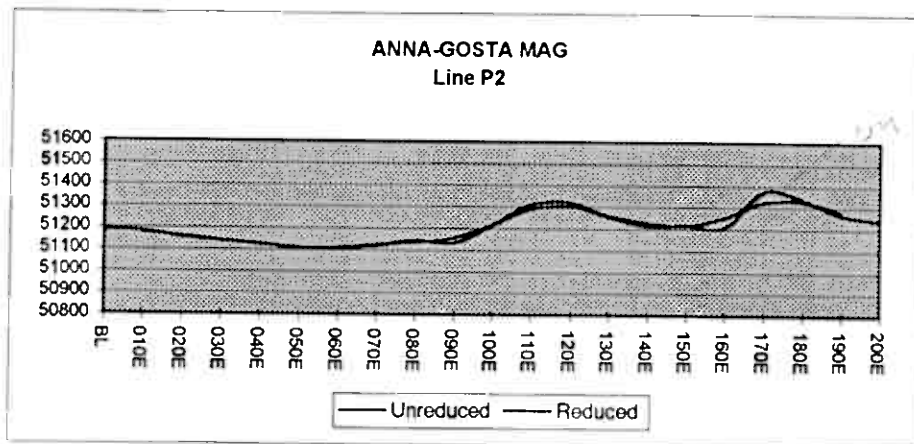
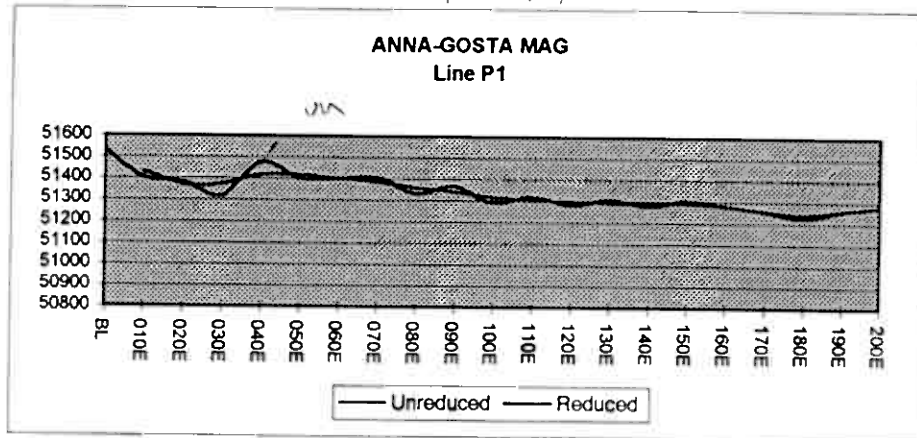
ANNA-GOSTA VLF
P4 (Unfiltered)

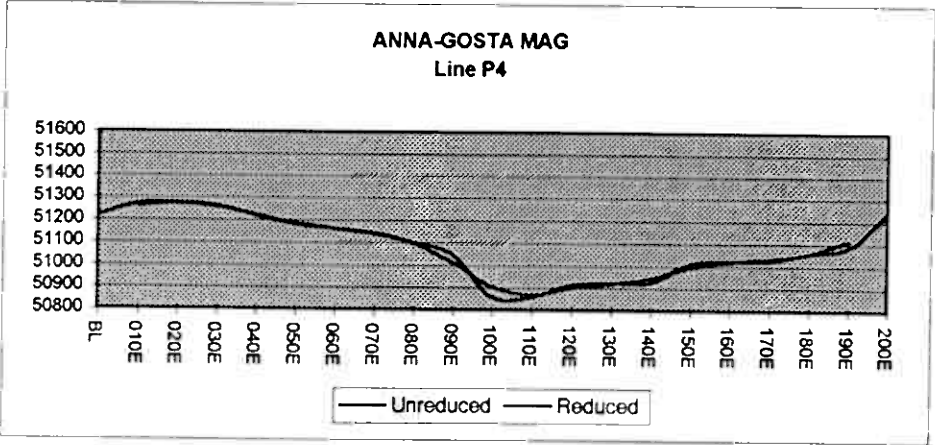




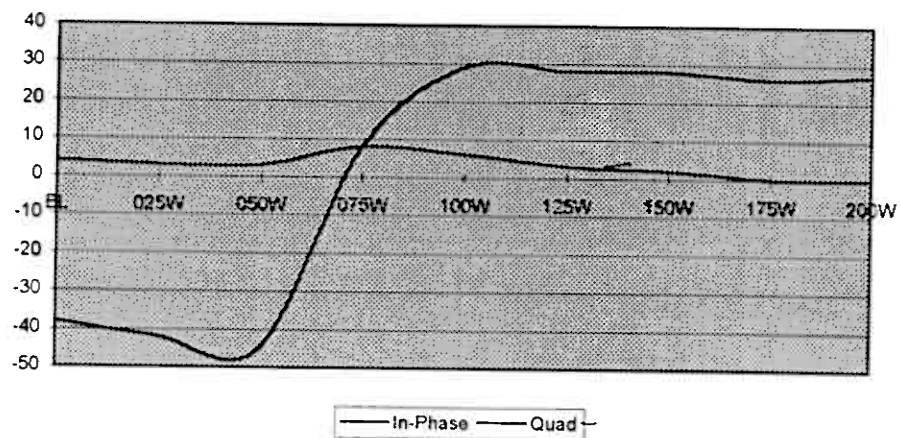
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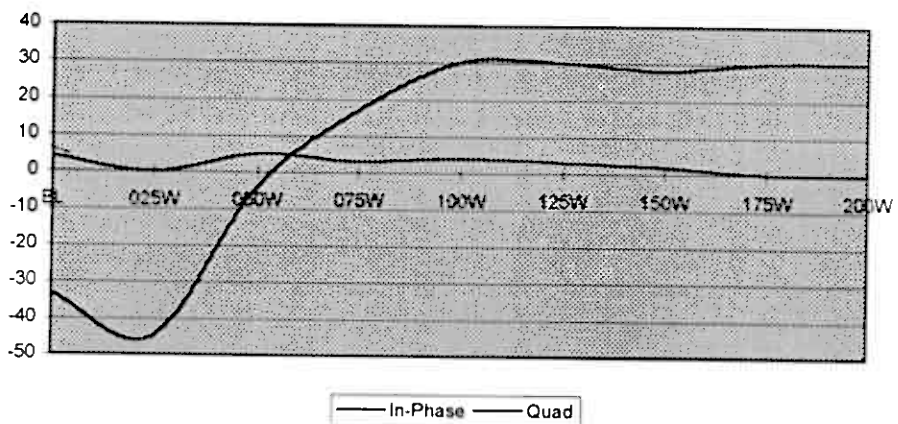




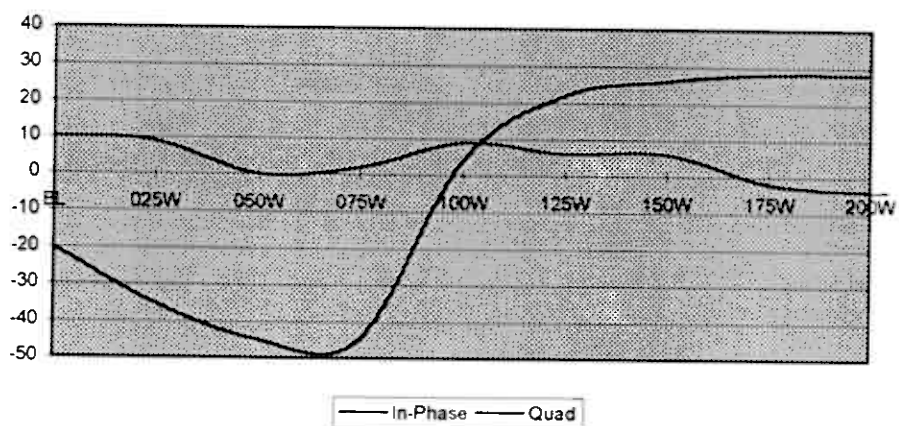
DUDDU VLF
P1 (Unfiltered)



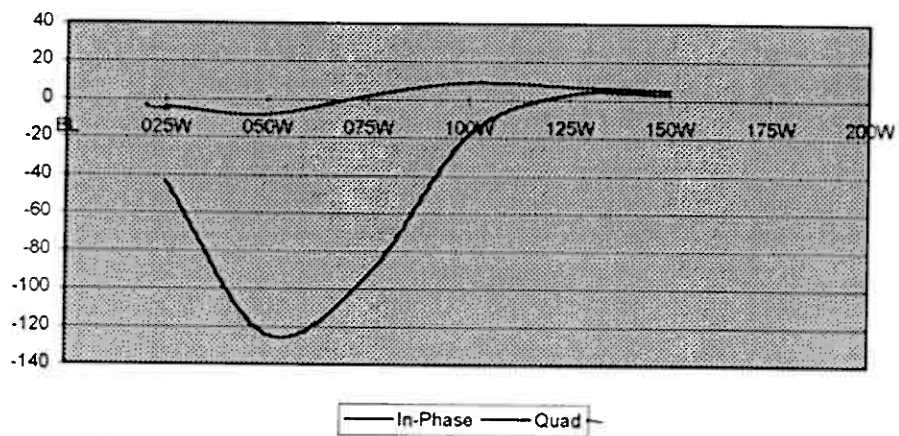
DUDDU VLF
P2 (Unfiltered)



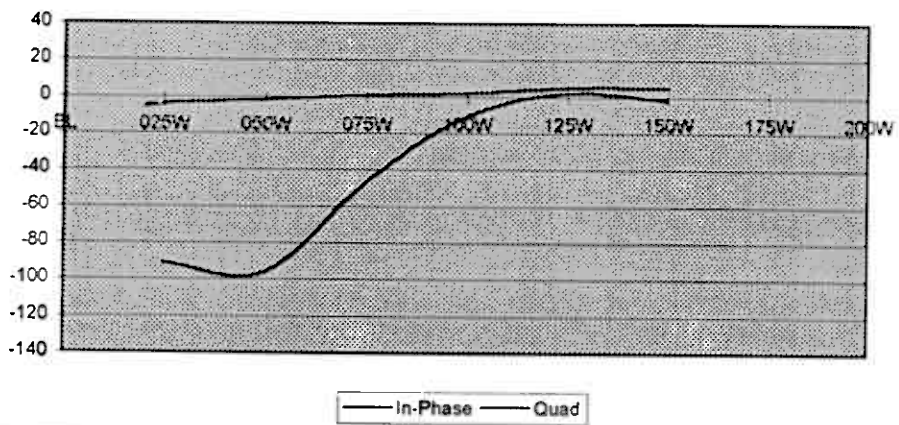
DUDDU VLF
P3 (Unfiltered)



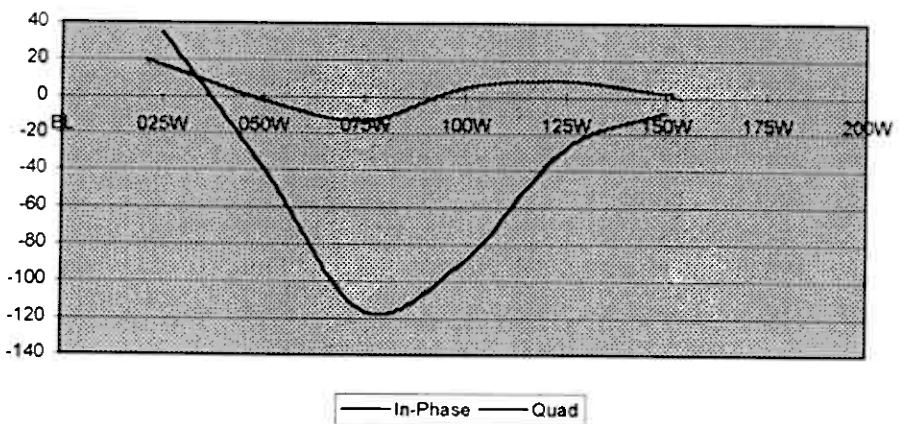
DUDDU VLF
P1 (Filtered)



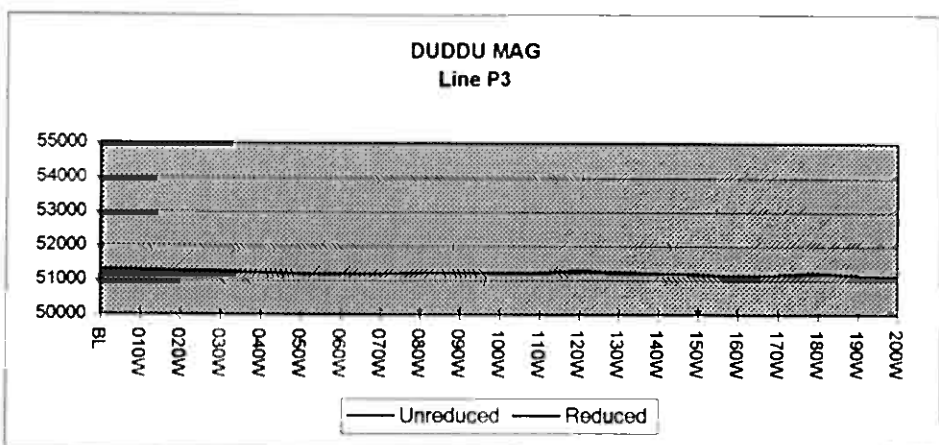
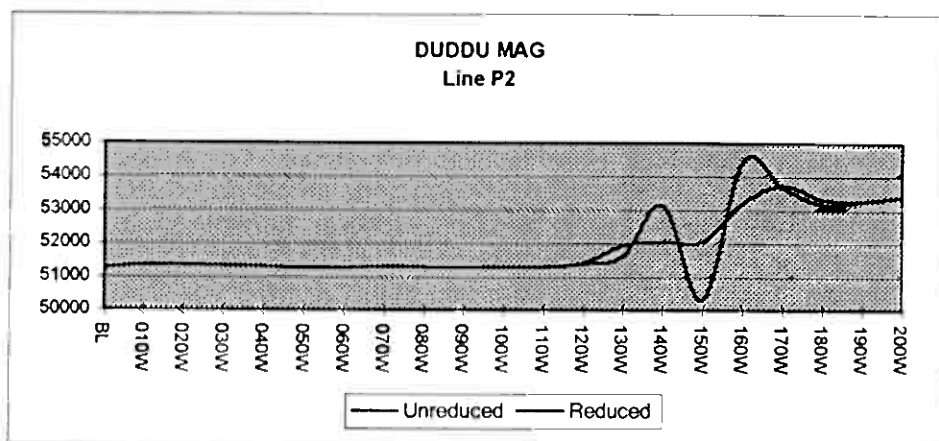
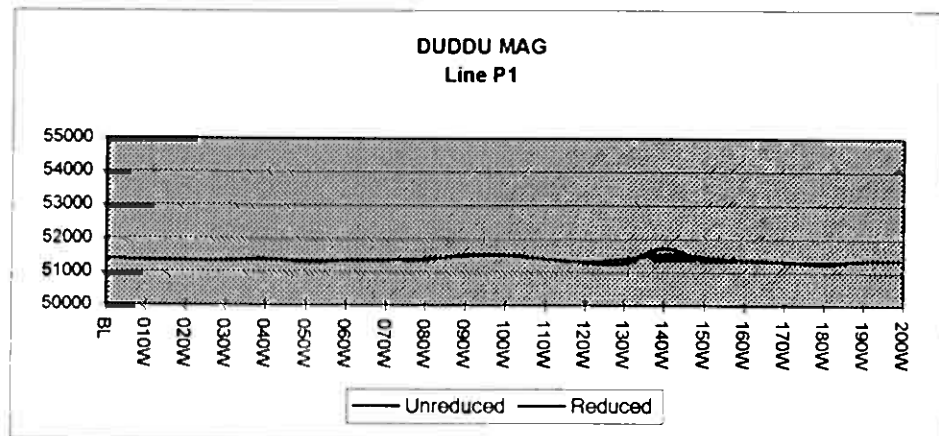
DUDDU VLF
P2 (Filtered)



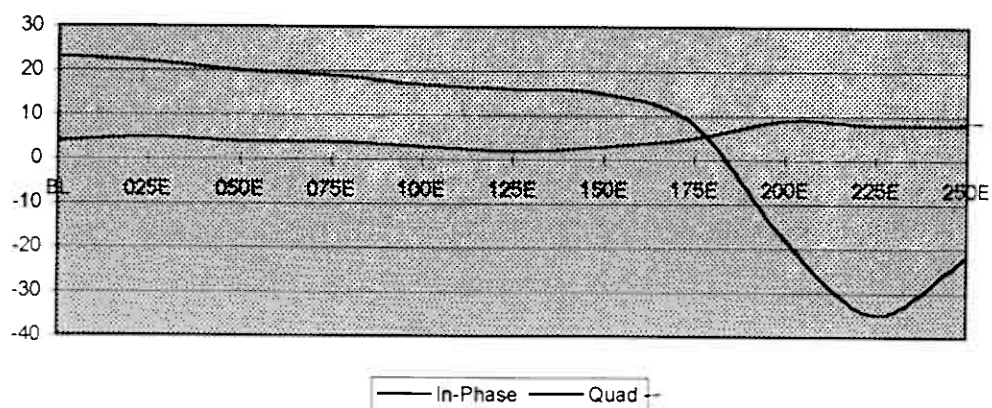
DUDDU VLF
P3 (Filtered)



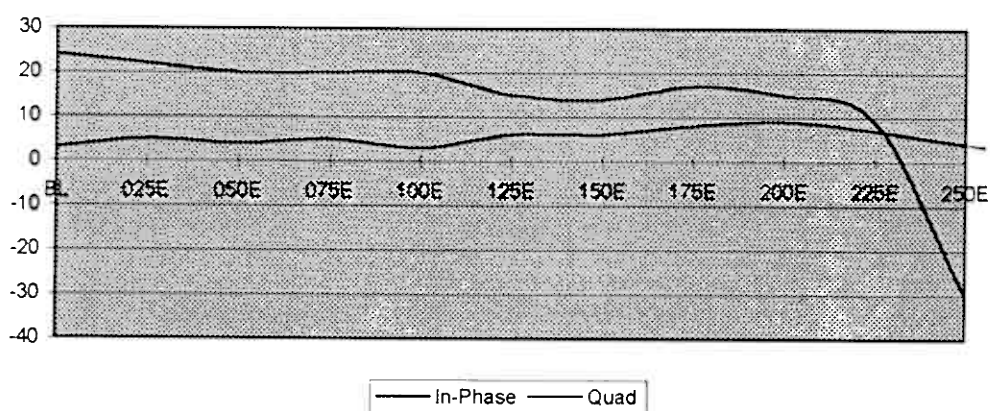
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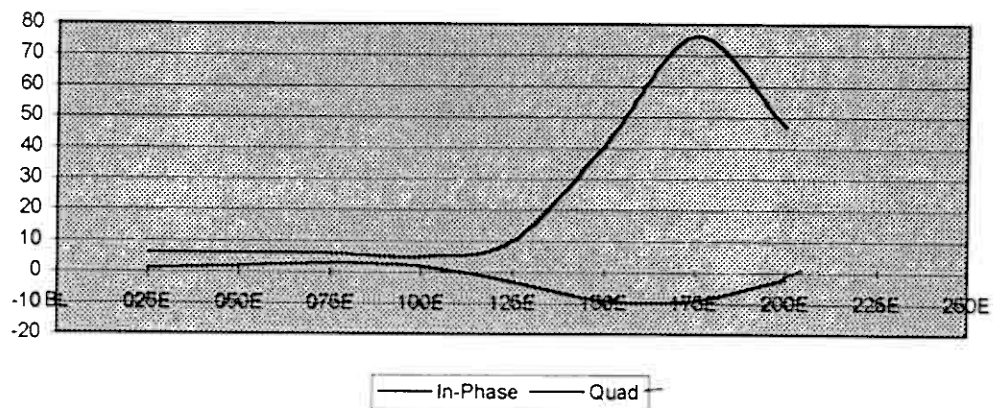
EBBA VLF
P1 (Unfiltered)



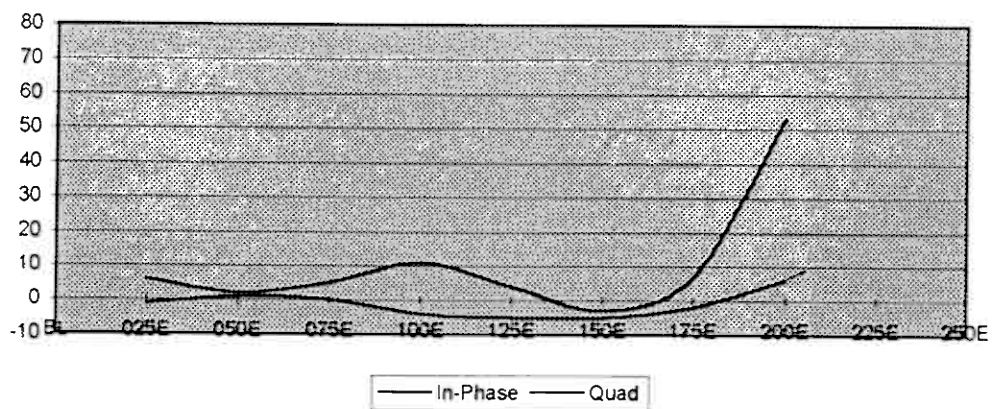
EBBA VLF
P2 (Unfiltered)



EBBA VLF
P1 (Filtered)



EBBA VLF
P2 (Filtered)



E E T

