CR 8968
E10/WR21/7-T4,8

SECOND ANNUAL REPORT FOR THE PERIOD 2 JUNE 1996 TO 1 JUNE 1997 FOR **ELs 9022 - 9025, 9325 - 9327 AND 9570 HELEN SPRINGS PROJECT, NT**

1:250,000 Map Sheet Helen Springs SE53-10

NUNN, TL

APRIL 1997

Exploration Licences held by:

BHP MINERALS PTY LTD
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14/7/97

SUMMARY

The Helen Springs project area is located approximately 120 km north of Tennant Creek, NT and is bisected by the Stuart Highway.

The area covers mid-Proterozoic sedimentary and subordinate volcanic rocks of the Tomkinson Creek Subgroup, within the Tennant Creek Block. It is suggested that this area represents the southern extension of the McArthur Basin, host to HYC Zn-Pb-Ag deposit. Zircon dating confirmed an HYC equivalent age (~1640 Ma).

Regional stream sediment sampling in the previous field season delineated base metal anomalism warranting follow up work. Extensive soil sampling in the Bootu Creek area exposed anomalism in Cu, Pb and Zn (455 ppm, 1140 ppm and 292 ppm respectively). Willieray area soils returned disappointing results. Rock chips from Bootu Creek also produced very high assays (1.5% Cu, 2.6% Pb, 46.9% Mn), however Willieray was again disappointing.

A GEOTEM survey was flown to cover both the Bootu Creek and Willieray area. Four "priority one" anomalies were delineated, 2 at Willieray and 2 at Bootu Creek. Ground EM was carried out over all four anomalies.

Initially 4 drill holes were sited on EM targets. The 2 holes at Willieray intersected clay-rich deep weathered zone, the clay interpreted as the source of the conductors. Two diamond holes were drilled at Bootu Creek targeted on EM anomalies. Both intersected massive Mn at modelled conductor depths. Downhole logging of these holes confirmed the Mn as the source of the conductors.

Elevated base metals were encountered in chalcopyrite- galena- and pyrite-bearing, carbonate veins within a black shale unit. Scavenging of these metals by the Mn higher in the sequence explains the anomalous base metal content in the surface sampling.

Follow up of the Mn intersection in the eastern drill hole at Bootu Creek was carried out. Four percussion holes were drilled results from which suggest the Mn body is stratigraphic, has at least a 400 m strike length and a likely strike length of 5 km. Also based on EM modeling, it is likely the ore occurs as multiple lenses, occurring over a width of 1 km. Potential exists for a high tonnage, low - medium grade Mn resource.

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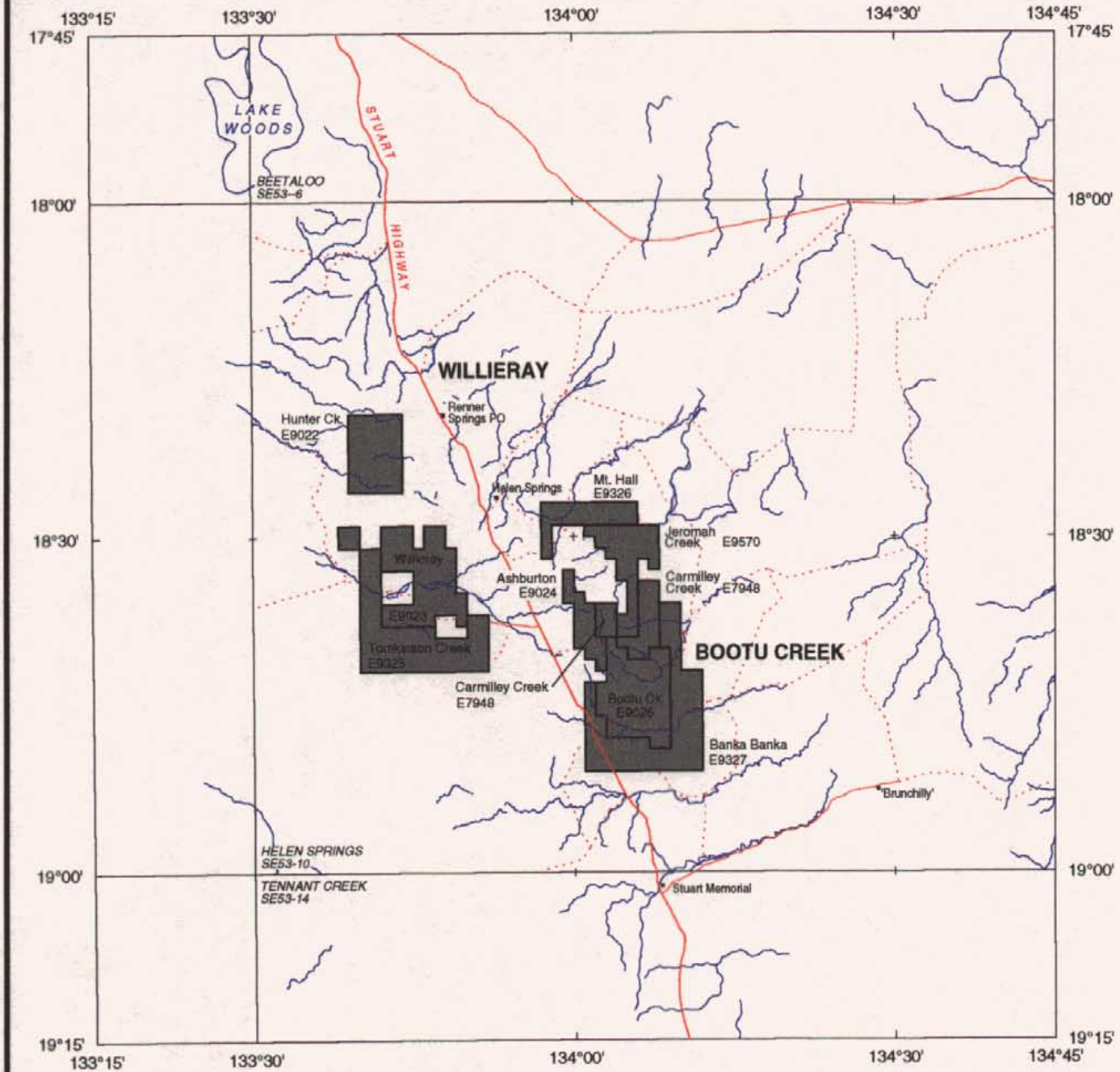

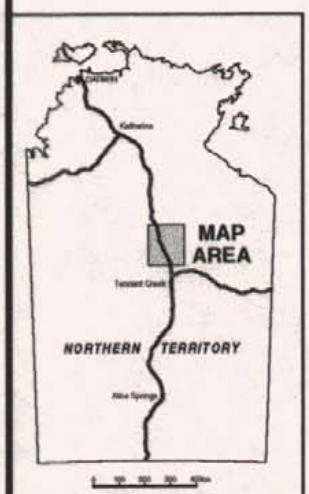

Willeray E9023

BHP tenement location name and number

Scale 1 : 1,000,000

0 20 40 60 80 km

UTM Projection Zone 53

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Drawn : R.J.Clark	NORTHERN PLATFORMS PROGRAM **HELEN SPRINGS PROJECT**	Drg. No. : A4-6235
Date : 18.2.97	**LOCATION OF TENEMENTS**	FIGURE 1
Revised : 11.6.97		

1. INTRODUCTION

The following report details work done in the Helen Springs Project area between 1 July, 1996 and 30 June 1997. The project was the target of a Proterozoic sediment hosted base metal search, beginning in 1995.

1.1 Location and Access

The project is divided into two areas: Willieray (ELs 9022, 9023, 9325) and Bootu Creek (ELs 9326, 9327, 9570, 9024, 9025), separated by the Stuart Highway.

Willieray is accessed by a track 3 km south of Renner Springs roadhouse west of the Stuart Highway. A good network of station and previous exploration tracks exist allowing access to the greater part of this area.

Bootu Creek is located east of the Stuart Highway, approximately 110 km north of Tennant Creek and is accessed by a station track 44 km south of the Renner Springs Roadhouse. Station tracks in both areas are subject to flooding and wash outs during the Northern Territory wet season (November to March). Four-wheel drives are recommended. A location plan of these areas are shown in Figure 1.

1.2 Previous Work (see BHP internal CR 8236)

Manganese mining began in 1955 along a ridge outcropping on Banka Banka Station to supplement the Rum Jungle uranium treatment plant in the north. The grades averaged 68% MnO_2 but only a small tonnage was extracted (400 ton). The majority of "good grade" ore comprises psilomelane and minor pyrolusite (Jones, 1955). Most of the previous base metals exploration was done in the Willieray area by consultant Don Ward of Ward and Associates in conjunction with Clifford Acacia Minerals, Hunter Resources and later MIM. CRA and Ashton drilled and sampled for diamond indicators while Lone Pine Gold, NT Gold Mines and Rosequartz Mining sampled for gold. Eupene Exploration Enterprises searched for Mn and Au but did not generate any anomalies.

1.3 Tenement Status

Helen Springs tenements were granted between 2nd June 1995 and 9th September 1996 for a period of six years. Tenement history is given in Table 1.

1.4 Regional Geology

Stratigraphy of the Tennant Creek Block has been discussed by Donnellan et al (1994) as a part of a recent mapping revision by the NTGS. That part of the stratigraphy outcropping in this area is the Proterozoic Tomkinson Creek Subgroup (TCS) of the Churchills Head Group, which consists of sedimentary and subordinate volcanic rocks.

The TCS was mapped previously by BHP geologists and also by Don Ward (Ward, 1988a, b). Ward considers the TCS equivalent to the Roper, McArthur, and Tawallah Groups of the McArthur Basin. The rocks fill a N-S trending trough, similar in orientation to the Batten Trough (host to the world class HYC base metal deposit). A summary of stratigraphic subdivisions for the TCS is shown in Table 2.

The structure is dominated by N-S trending faults and their subsidiary structures as well as N-plunging open folds reflecting an E-W compressional event, post-lithification. Interpreted talus breccia is located near one of the major N-S faults suggesting these structures probably were active during sedimentation.

Metamorphic grade is Lower Greenschist facies.

2. RECONNAISSANCE

2.1 Mapping

Additional to the mapping done in previous field seasons, BHP geologists reviewed the Bootu Creek area in more detail during the 1996 field season. Although no formal geology map was produced, a greater understanding of the local stratigraphy was achieved. A geology map produced by BHP geologists in 1995 is shown in Plate 1.

2.2 Zircon Dating

Drill hole H2DD (AMG 359698E, 7976712N) in the Willieray area intersected interpreted Barney Creek Formation which hosts altered green illitic tuff. A tuff sample was sent to ANU for dating of contained zircon grains. Primary magmatic grains gave an age of 1639 ± 27 Ma, equivalent to the 1640 Ma HYC base metal mineralisation.

3. GEOCHEMISTRY

Sampling was initially regional, however later programmes focussed on prospective Attack Creek Formation which outcrops in the Bootu Creek Syncline and extensively in the Burke Creek Dome area of Willieray (refer Plate 1 for position of these geologic features).

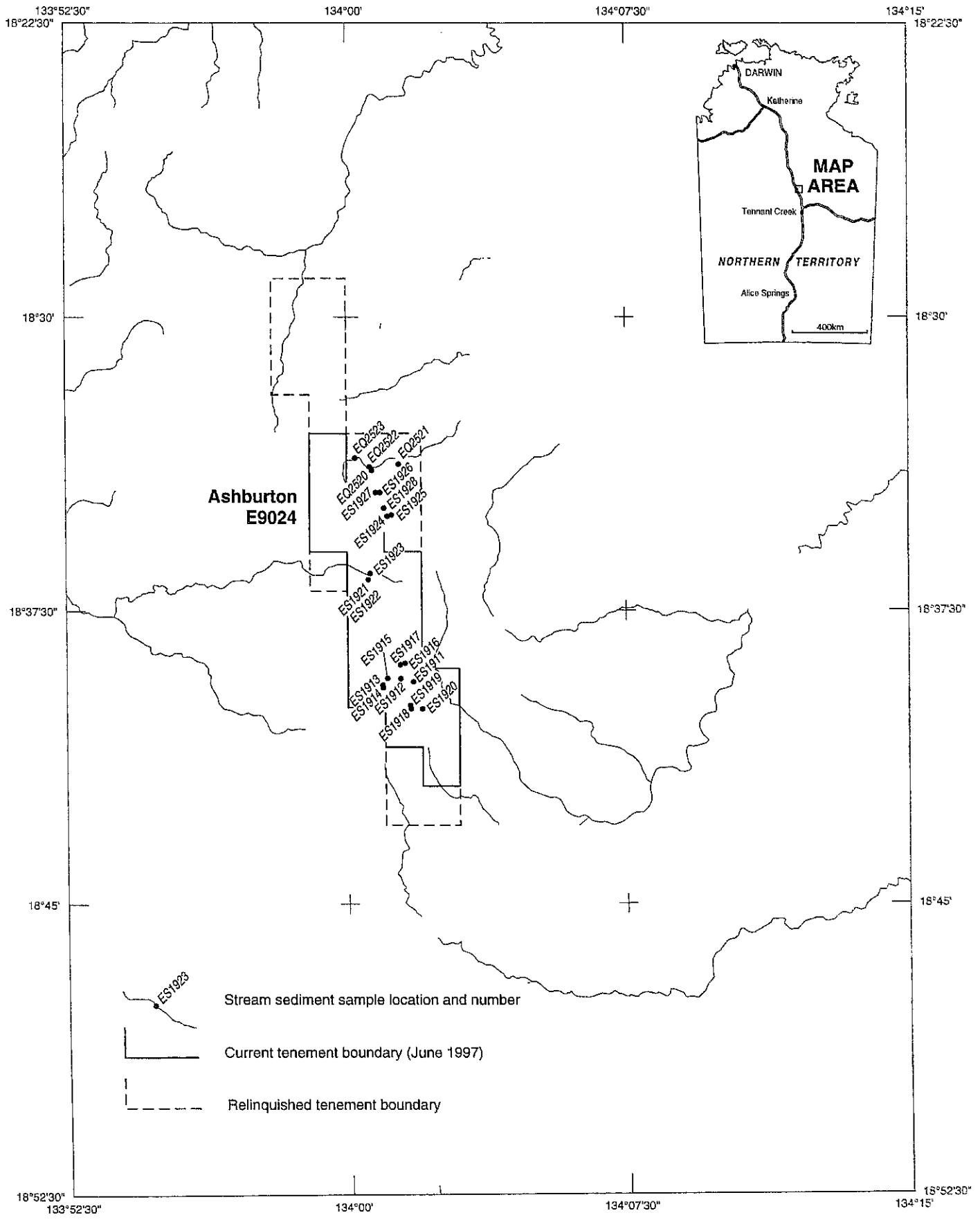
3.1 Stream Sediment Sampling

Regional stream sediment sampling undertaken during the previous field season was followed up during 1996. An additional 22 samples were taken to in-fill spaces on E 9024 (Ashburton) and sent to Analabs for ICP analysis. Low levels in all base metals were recorded (maximum values of 28 ppm Cu, 40 ppm Zn, 24 ppm Pb) with the exception of one sample which recorded 1210 ppm Co. Figure 2 shows sample site locations. Results are shown in Appendix 2.

3.2 Soil Sampling

3.2.1 Bootu Creek

As a response to stream anomalies found near the Bootu Creek syncline (BCS), a soil sampling program was planned. Initially a broadly spaced program was implemented with lines 1 km apart and approximately 2 km long with a -80#, 100g sample from each sample site taken. The samples were prepared by digestion in a perchloric / aqua regia mix and analysed by ICPOES for Ag, As, Bi, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, P, Pb, Sb, V and Zn. A second series of samples were taken to infill this sampling. These samples were taken at 400 m line spacing and 100 m sample spacing with lines between



Prepared : T.Nunn	BHP	Exploration - BHP Minerals BHP Minerals Pty. Ltd., A.C.N. 008 694 782	Centre : Perth
Drawn : R.J.Clark	NORTHERN PLATFORMS PROGRAM HELEN SPRINGS PROJECT		Drg. No. : A4-6372
Date : 11.6.97	**BOOTU CREEK - STREAM SEDIMENT SAMPLE LOCATIONS (1996 SAMPLING)**		FIGURE 2
Revised :			

1 and 2.5 km in length. Two lag sample lines were taken covering the magnetic anomaly at 400 m line spacing and 100 m sample spacing. In addition to these, a further 199 soil samples were taken and sieved to -80#, +80#-18#, +18#-10#, and +10#-4#. The results from these surveys are displayed in Appendix 3. Sample site locations are shown in Plate 2.

A veneer of transported sand over most of the eastern limb of the BCS prevented meaningful geochemical anomalies. However, some ferruginous, manganiferous subcrop exists which provided a window to the Proterozoic target rock below. Anomalous results include 455 ppm Cu, 292 ppm Zn, 1140 ppm Pb, 15% Fe and 5% Mn.

3.2.2 Willieray

3 soil lines were carried out for 100 samples at Willieray targeted on EM anomalies (as discussed later in section 4.2.2). These samples were sent to Assaycorp Pine Creek for ICP analysis for a suite of 18 elements including Cu Zn Pb Ni Fe Mn As Mo Co Cr Na K Ba Mg Sb P V and Ca. Low levels were detected in all base metal analyses. This is due in part to poor sampling medium - transported sand dilutes large tracts of the area. Plate 3 shows sample site locations while the results of the Willieray soil lines is also shown in Appendix 3.

3.3 **Rock Chip Sampling**

3.3.1 Bootu Creek

The ferruginous manganiferous subcrop provided a good medium for rock chip sampling, particularly on the western limb of the syncline where the ridge of manganiferous material outcrops almost continuously for the length of the limb. Data from this survey is shown in Appendix 4. Impressive base metal and manganese levels were contained within these rock samples (up to 1.5% Cu, 2.6% Pb and 46.9% Mn on the western limb of the BCS and 0.3% Cu, 0.2% Pb and 36.7% Mn on the eastern limb).

3.3.2 Willieray

19 rock chip samples were taken in conjunction with the soil sampling described in 3.2.2. The samples were analysed by ICP at Assaycorp - Pine Creek NT. Most samples contained low levels of base metals with occasional abnormally high values (eg 181 ppm Cu in "EQ2720"- chert, 361 and 156 ppm Zn in "EQ2712" and "EQ2749" - both ferruginous saprolite). Sample site locations for both the Bootu Creek and Willieray surveys are shown in Plate 4.

4. GEOPHYSICS

4.1 GEOTEM

An airborne GEOTEM survey was flown in May 1996 by Geoterrex Pty Ltd over the Bootu Creek and Willieray areas in search of conductive metalliferous sub-basins. Specifications of the surveys can be seen in Appendix 5. Plate 5 shows an outline and flight lines of both surveys.

4.1.1 Bootu Creek

967 line km were flown at a line spacing of 500 m covering the BCS and 1000 m elsewhere in the Bootu Creek survey. 20 channels of both X and Z component data was collected. A number of images of late time channels were produced which highlighted two anomalies located within prospective Proterozoic rocks. An image of GEOTEM channel X 14 is presented in Plate 6. A geological interpretation of the GEOTEM data, showing significant bedrock conductors is presented as Plate 7. A "priority 1" anomaly approximately 5 km long and up to 1 km wide was evident in the east. Also, a smaller "priority 1" anomaly was evident more or less coincident with a weak magnetic anomaly found in the NTGS data on the western limb of the syncline. Data over the western anomaly (called "Rossi") indicated a near-vertical dip which did not conform to either stratigraphy or the magnetic modelling. Data over the eastern anomaly (called "Redwing") gave ambiguous indications of dip due to the superposition of multiple conductors.

4.1.2 Willieray

942 line km at 1000 m line spacing were flown in the Willieray GEOTEM survey. 20 channels of both X and Z component data were collected. A 1:50,000 scale image of GEOTEM Z channel 14 is presented in Plate 8. 2 "priority 1" anomalies were found to exist in prospective stratigraphy with less than 10 Ωm resistivities. Both of these anomalies (called WY1 and WY3) were followed up with ground TEM .

4.2 Ground TEM

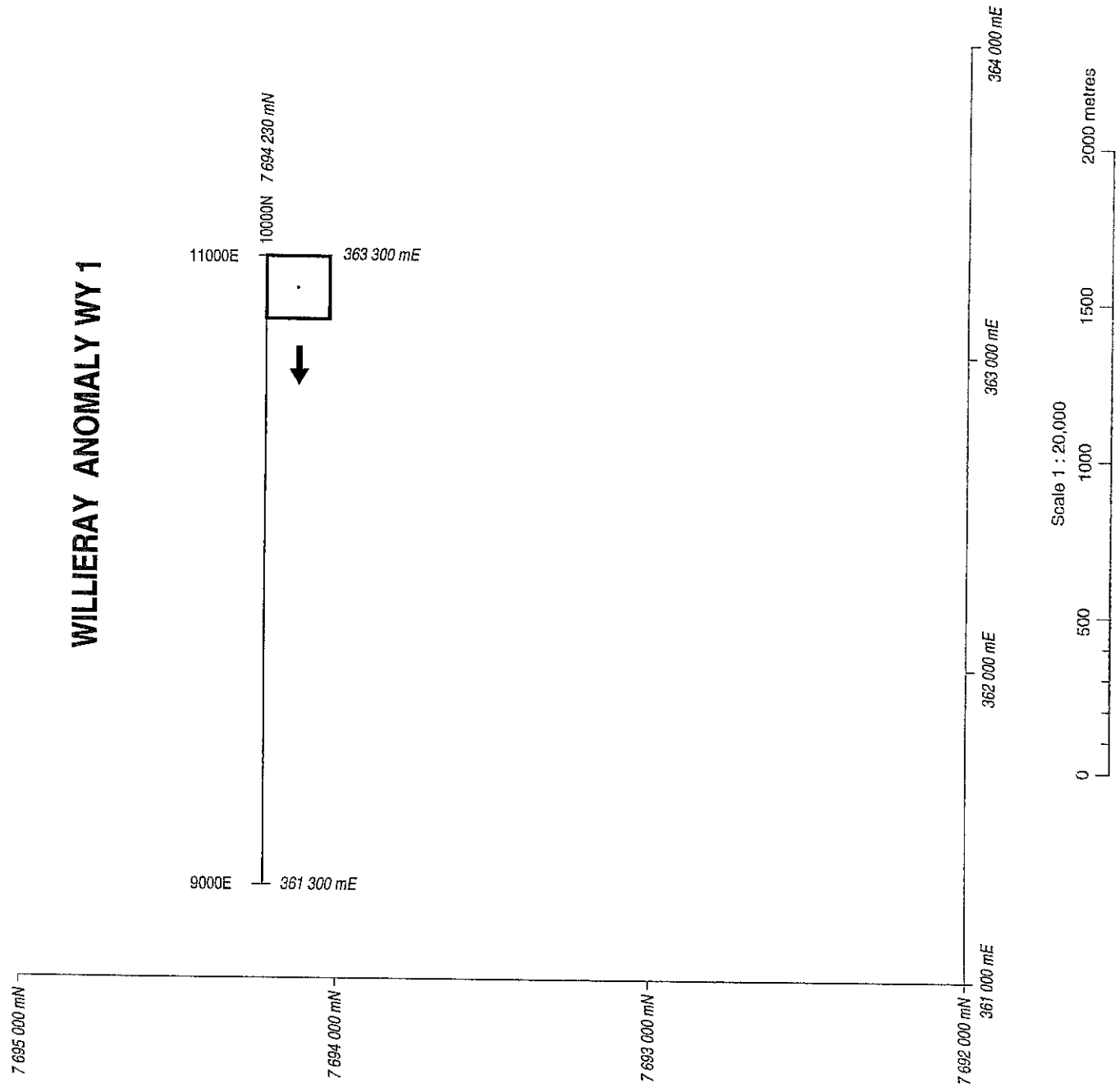
Moving loop and fixed loop ground TEM surveys were conducted over the WY1, WY3, Redwing and Rossi anomalies. Locations of these surveys are shown in Figure 3a, b, c and d. Survey specifications and data are presented in Appendix 6.

4.2.1 Redwing

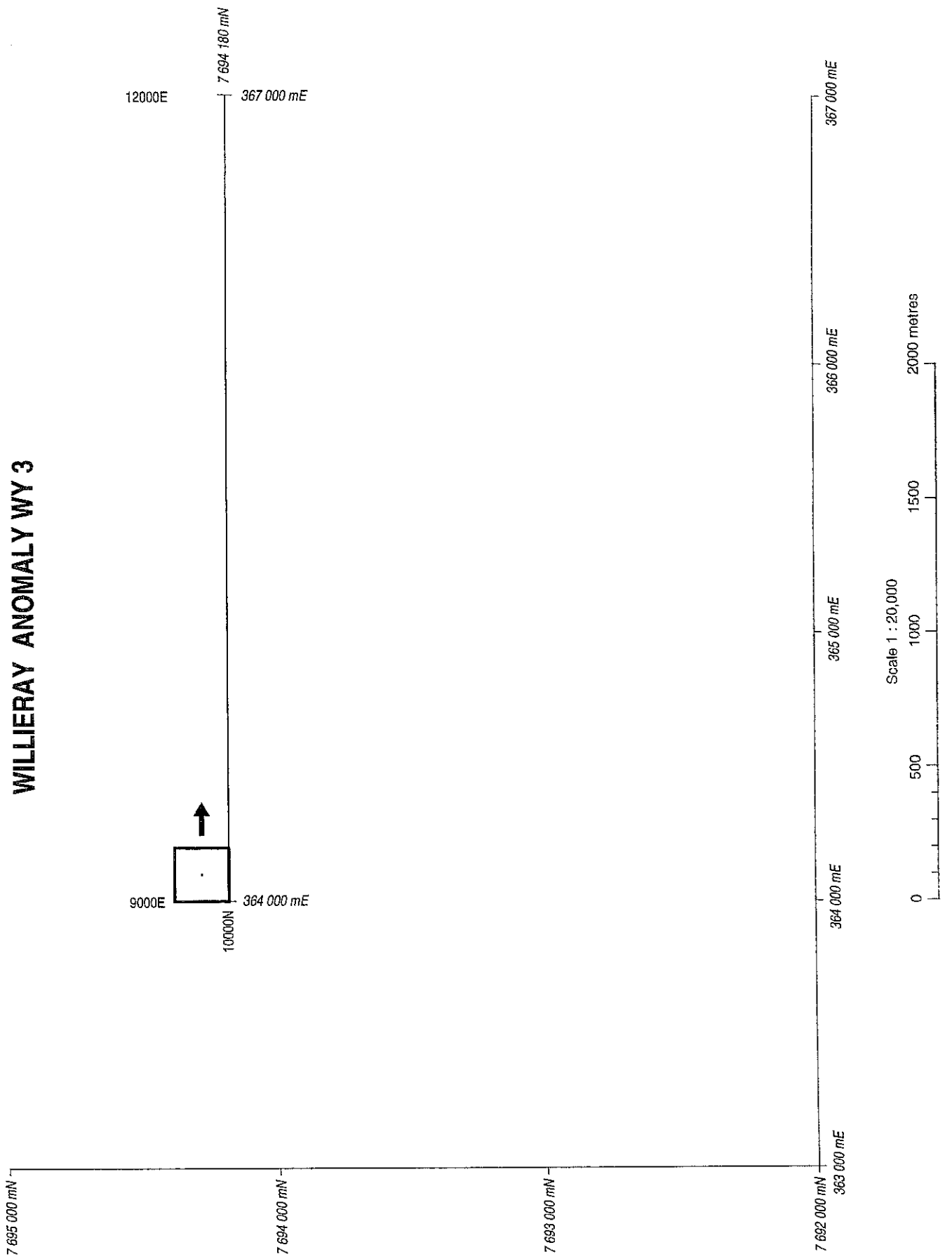
Two 2 km long Moving Loop TEM lines were sited using GEOTEM data and limited geochemical data. The soil geochemical survey was hampered by large areas of transported sandy cover. The moving loop data confirmed the presence of bedrock conductors but interpretation of dip was complicated by the superposition of conductors, and Induced Polarisation (IP) effects at late times.

A Fixed Loop TEM survey was sited using data from the southern Moving Loop line. 9900N. Three 1.1 km lines were surveyed from a pair of 600 m x 300 m fixed loops. The fixed loop data was quite complex to interpret. On all three lines the two loops appeared to give conflicting dip indications. The amplitude of the anomaly was fairly similar on all three lines, but slightly stronger and cleaner on line 10200N, so interpretation was initially concentrated on this line.

Data from the west loop indicated a steep dip to the west. Data from the east loop indicated a steep dip to the east. Geological dip was between 25 to 35 degrees to the west. In order to test the entire range of potential geometries, two drill holes were initially proposed in a V-shaped configuration. The first hole to be drilled was the hole testing the plate models dipping to the west, as they were considered to have a higher



Prepared : T.Kerr	BHP	Exploration - BHP Minerals BHP Minerals Pty. Ltd., A.C.N. 008 694 782	Centre : Perth
Drawn : R.J.Clark	NORTHERN PLATFORMS PROGRAM		Drg. No. : A4-6260
Date : 17.3.97	WILLIERAY ANOMALY WY 1 MOVING LOOP LOCATION MAP		FIGURE 3a
Revised :			



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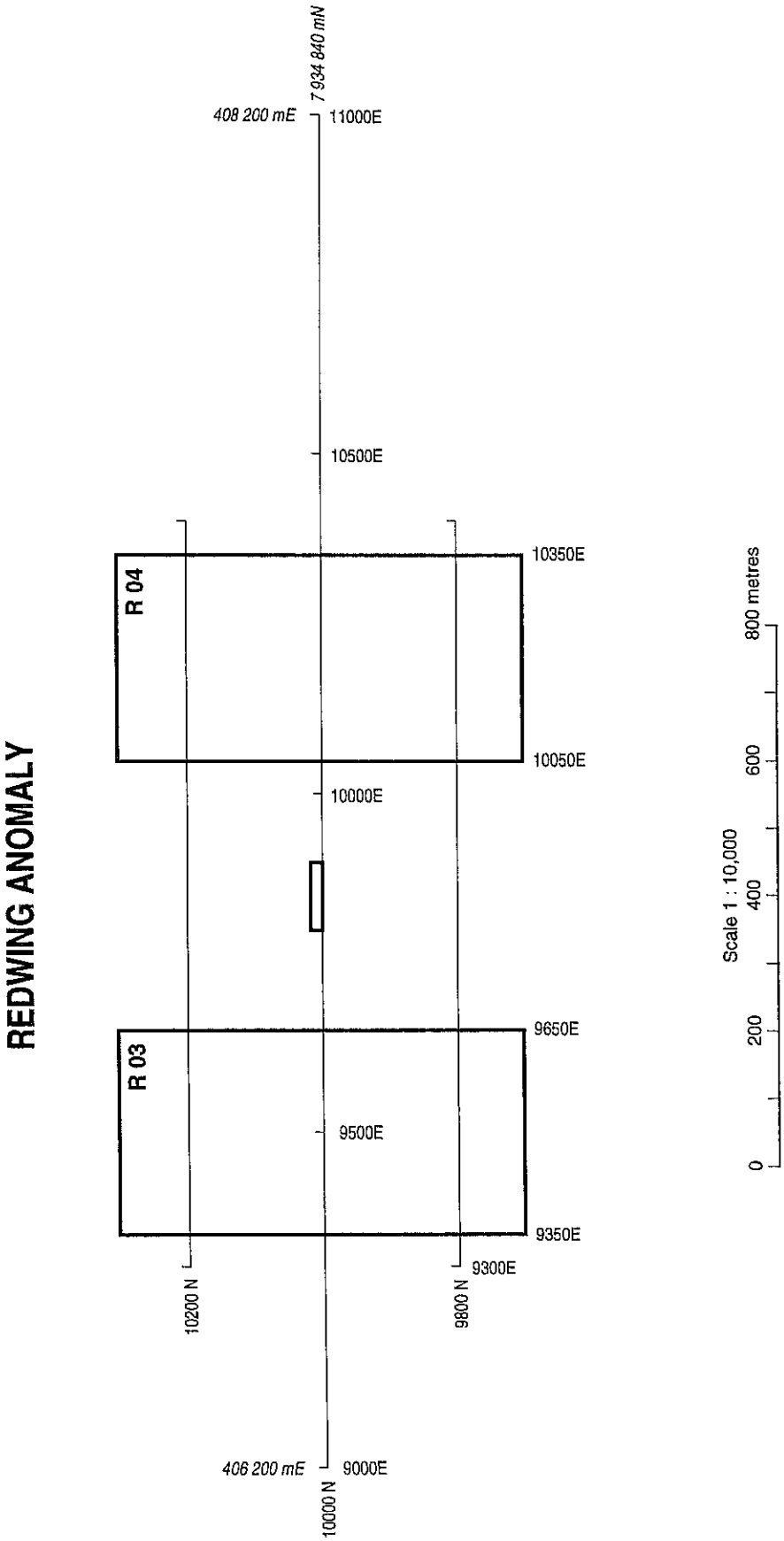
Drawn : R.J.Clark	NORTHERN PLATFORMS PROGRAM		Drg. No. : A4-6261
Date : 17.3.97	WILLIERAY ANOMALY WY 3 MOVING LOOP LOCATION MAP		FIGURE 3b
Revised :			



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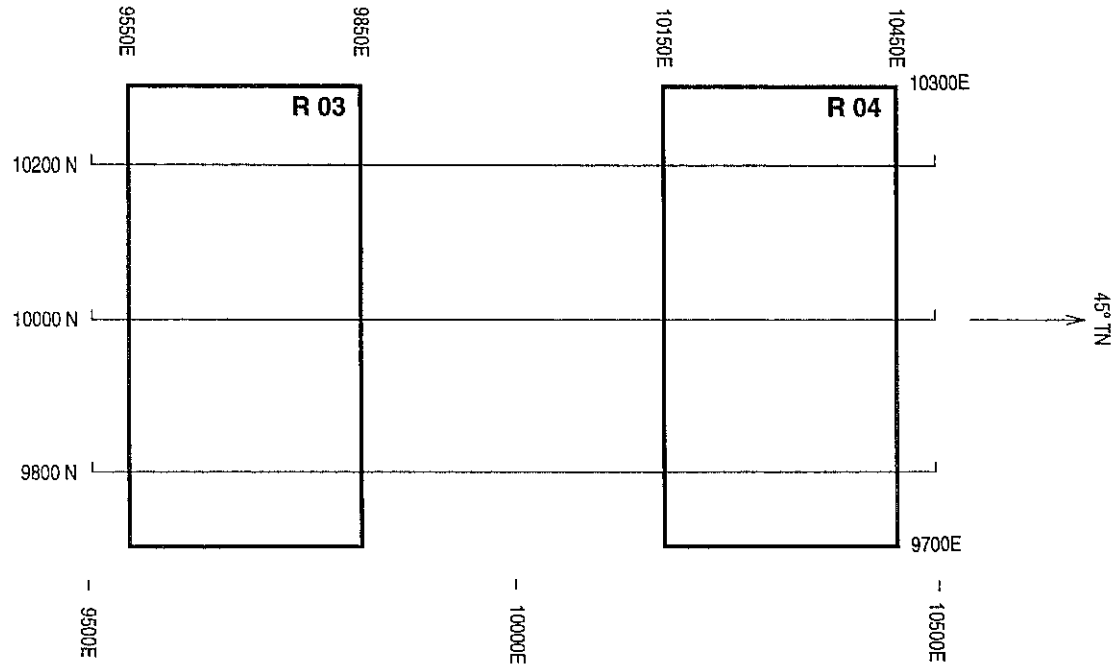
Drawn : R.J.Clark	NORTHERN PLATFORMS PROGRAM REDWING PROSPECT		Drg. No. : A4-6248
Date : 6-3-97	REDWING ANOMALY FIXED LOOP TEM LOCATION MAP		FIGURE 3c
Revised :			

ROSSI FIXED LOOP



Scale 1 : 10,000

0 200 400 600 800 metres

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Drawn : R.J.Clark	NORTHERN PLATFORMS PROGRAM ROSSI PROSPECT		Drg. No. : A4-6347
Date : 19.5.97	ROSSI FIXED LOOP LOCATION MAP		FIGURE 3d
Revised :			

probability of being correct due to the consistency with geological dip. This hole was HSD001. The second proposed hole to complete the "V" was not drilled.

4.2.2 Rossi

One 2 km moving loop line was sited using GEOTEM data and magnetic data. The moving loop data confirmed the presence of a bedrock conductor, centred on 10000E. The source appears to dip steeply to the east, but at late times the data were once again severely degraded by IP effects.

The Fixed Loop TEM survey was sited using the moving loop data on line 10100N. Three 1.1 km lines were surveyed from a pair of 600m x 300m fixed loops. Data on all three lines from both loops gave a consistent response. A steep easterly 75° dip was indicated, which conflicted with the gentler geological dip of 25°, and the modelled dip of the magnetic source.

4.2.3 WY1

A 2 km line of moving loop PROTEM data was collected. This work confirmed the airborne data modelling showing a flat-lying body approximately 1.5 x 2 km in extent, at a depth of <50 m.

4.2.4 WY3

A 3 km line of moving loop PROTEM data was collected. This data indicated an east-dipping conductive layer with a vertical thickness of approximately 70 m.

4.3 Magnetics

As a follow up to the weak anomaly discovered in the NTGS magnetics data, a ground magnetics survey was carried out in 1995 (see earlier annual report). Since this ground work was surveyed on a different grid to the ground TEM, coincident lines were resurveyed and modelled to ensure that the drill hole targeted on the conductor would also test the magnetic target. The body was modelled to have a depth to the top of 40

to 90 m, dipping 25° to the east. Modelled susceptibilities range from 0.008 to 0.095 SI. The position of the magnetic survey relative to the EM conductor is shown in Figure 4.

Drill hole HSD002 was sited to test both the magnetic and TEM targets.

5. DRILLING: PHASE ONE

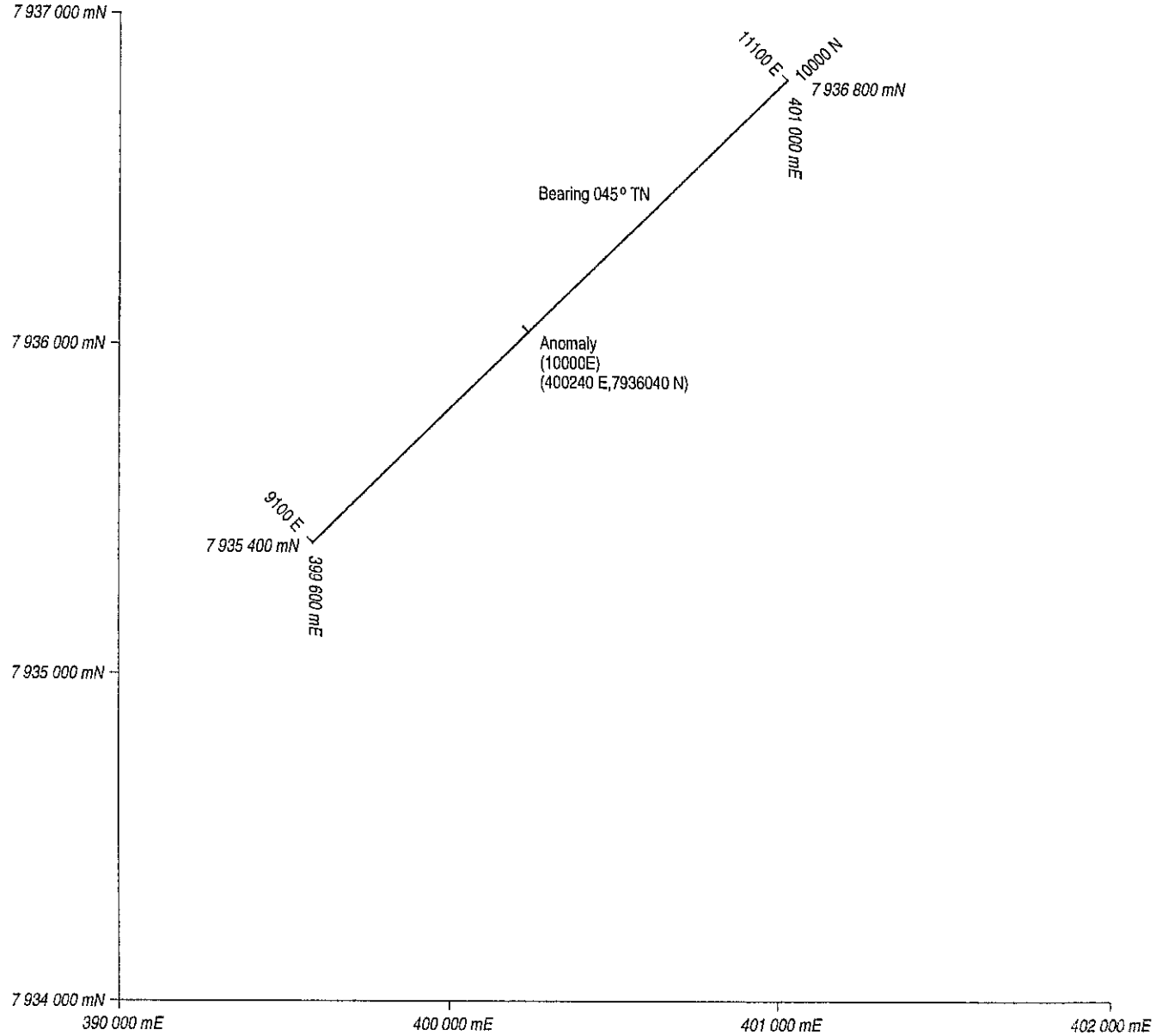
Three diamond holes and one percussion hole were planned based on the EM models. The Redwing hole was called "HSD001". The Rossi hole, called "HSD002", was also constrained by ground magnetic data. WY1 was tested with a percussion hole called "HSP002" and WY2 with a diamond hole called "HSD003". To supplement the drilling program a water bore (called "HSP001") was also drilled, positioned on a fault on the western limb of the BCS. A table of drilling statistics is shown in Table 3. Drill logs are presented in Appendix 7.

5.1 Geology

5.1.1 Bootu Creek Holes

Logging of HSD001 and HSD002 showed a good correlation from one limb of the BCS to the other. A cross section showing these diamond holes is presented in Figure 5. Weathered, leached siltstone and quartz sandstone dominate the upper levels of the holes before massive to rich Mn was intersected overprinting a probable quartz sandstone and a dolomitic siltstone. In HSD002, a free-hanging magnet was attracted to the manganiferous core suggesting magnetite was also present explaining the weak magnetic response in the NTGS data. The upper contact of this manganiferous horizon was drilled both times with an RC bit so is as yet undefined. In HSD001, the base of the manganese is also undefined due to drilling style. This hole reveals moderately weathered to fresh dolomitic siltstone underlying the Mn horizon. This dolomite is absent in HSD002, where the base of the manganese is a sheared contact with a black pyritic shale which is leached white at the contact. This shale has interlaminated dolomitic zones which appear to be early replacement with remobilisation while still semilithified. Possibly during this remobilisation, base metal influx occurred in a $CaCO_3$ rich fluid producing pyrite, chalcopyrite and galena blebs in calcite veins, concentrating

ROSSI ANOMALY



Scale 1 : 20,000

0 500 1000 1500 2000 metres

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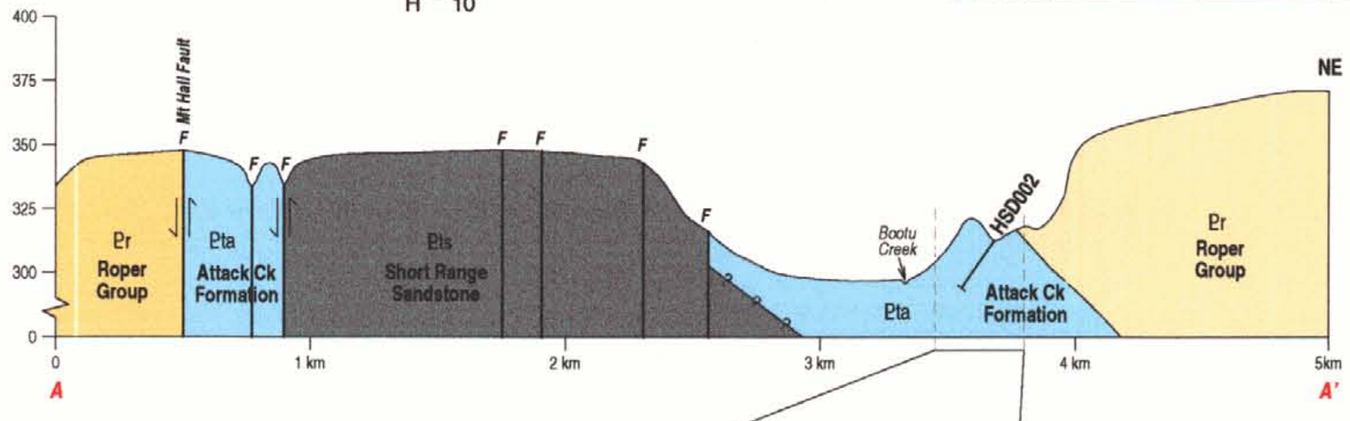
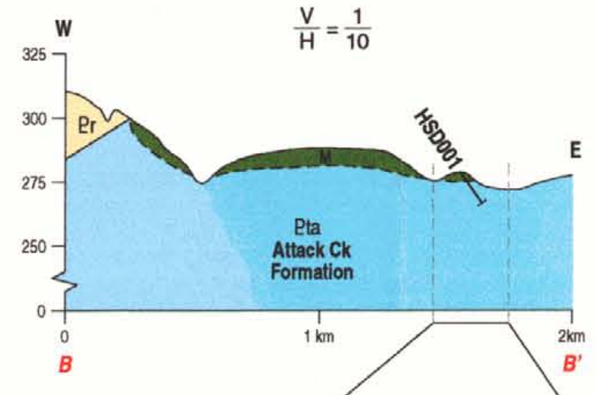
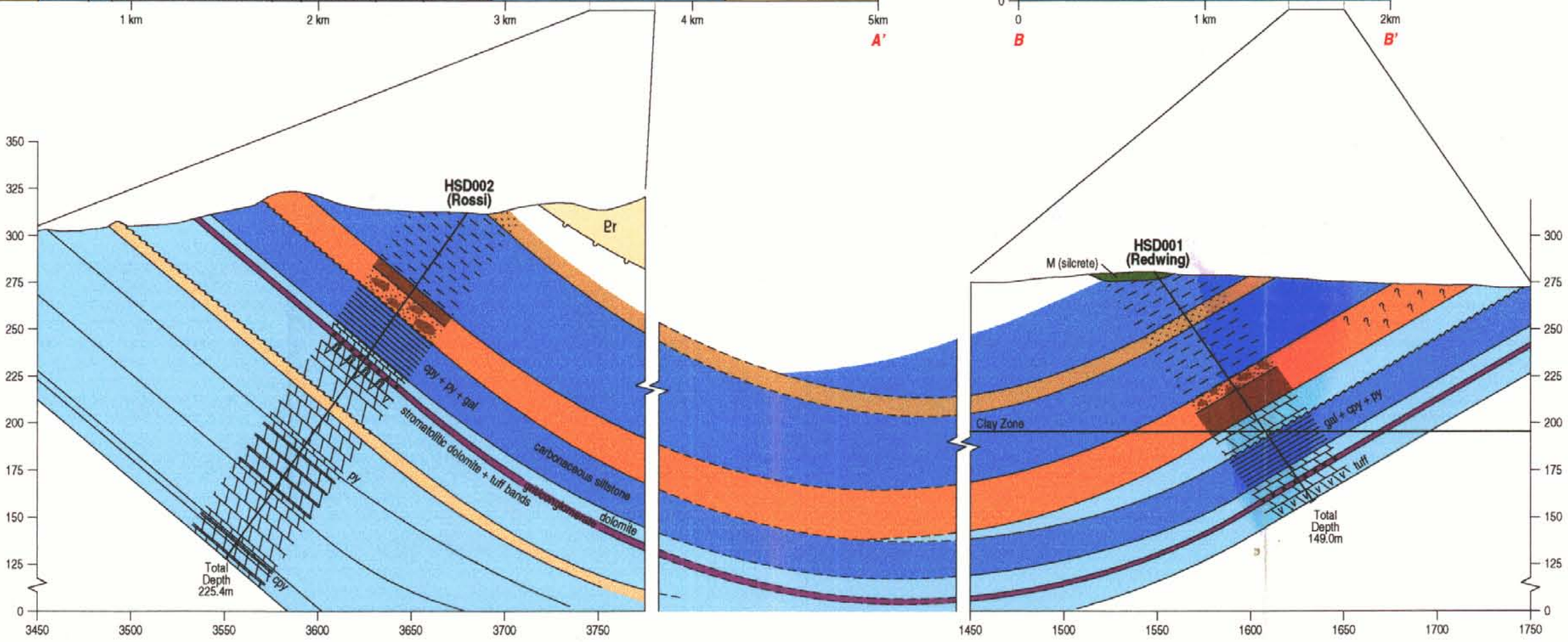
Drawn : R.J.Clark	NORTHERN PLATFORMS PROGRAM BOOTU CREEK PROSPECT	Drg. No. : A4-6250
Date : 6.3.97	POSITION OF THE BOOTU CREEK MAGNETIC SURVEY OF THE EM CONDUCTOR	FIGURE 4
Revised :		

Horizontal Scale 1 : 25,000

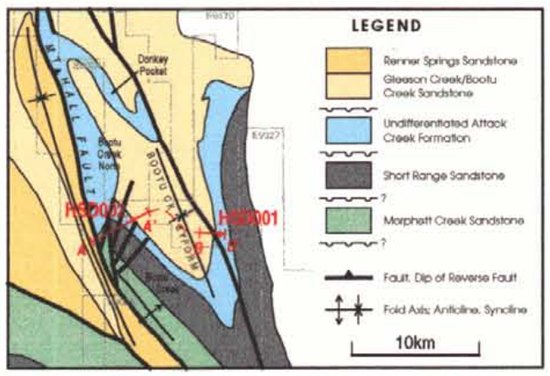
0 500 1000 1500 2000 metres







Dolomite
Dolomitic siltstone
Siltstone
Sandstone
Carbonaceous siltstone
Massive Mn
Poddy Mn
Stromatolitic dolomite
Marker grit horizon
Tuff bed
Shear zone
gal Galena
cpy Chalcopyrite
py Pyrite



Horizontal Scale 1 : 2,500

0 50 100 150 200 metres

BHP

Exploration - BHP Minerals

BHP Minerals Pty. Ltd., A.C.N. 008 694 782

HELEN SPRINGS PROJECT
BOOTU CREEK, N.T.

REDWING (HSD001) & ROSSI (HSD002) DRILLSITES AND GEOLOGY

Prepared : T.Nunn	Date : 22-1-97	FIGURE 5
Drawn : A.R.Veale	Revised : 10-2-97	
Centre : Perth	Drg. No.: A3-4088	

along the dolomitic zones. Another possible scenario would be that the calcite and base metals were late with respect to dolomite remobilisation in which case the dolomitic zones were more porous than the shale host rock and thus acted as preferential conduits for the fluids. Minor sulphides also occur in bedding parallel shears. It is assumed that these metal occurrences account for the base metal anomalism in the surface sampling. The enrichment of base metals in rock chip samples is attributed to scavenging by Mn. Underlying the shale, a coarse crystalline to fine grained laminated to massive dolomite interval occurs. Within this interval there is a thin (30 cm) polymict pebble conglomerate with 3 to 4 normally graded cycles, some having cross-laminated tops. The clasts are dominantly rounded to elongate oxidised, leached and tuffaceous siltstone up to 1.5 cm diameter. The unit probably represents a slope failure at the basin edge due either to oversupply of volcanic detritus or to tectonic disruption, both of which could initiate a high-density turbidity current eventually depositing coarse material in a series of pulses resulting in graded cycles.

Below the pebble conglomerate the dolomite interval becomes stromatolithic and tuffaceous. The presence of stromatolites indicates the basin water depth is shallowing at this point however it is not entirely obvious whether the domes are *in situ* due to extensive recrystallization. If they are remobilised clasts, then water depth is unconstrained. The presence of water lain tuffaceous material (now green fissile clay) indicates palaeo-subaerial to -shallow marine volcanism was prevalent during sedimentation.

Dolomitic siltstone, coarse crystalline dolomite and minor quartz sandstone make up the remainder of the section.

5.1.2 Willieray Holes

HSP002 (WY1) and HSD003 (WY3) were drilled on the northern and southern flanks of the Burke Creek Dome, respectively. Both holes intersected similar lateritic profiles characterised by an upper pallid zone and a lower ferruginous clay zone and terminated still within the weathered zone. Red clay and blue-brown cherty (RC) fragments prevail throughout the holes, the latter of which was probably dololutite or algal mat carbonate which was altered to silica during diagenesis. Minor Mn was also intersected downhole.

The HSD003 diamond tail ended in weathered, leached siltstone. Limited lithological evidence suggests both holes intersected Attack Creek Formation. The source of the conductors was interpreted to be an unusually deep clay-rich weathered zone.

5.2 Downhole Geochemistry

5.2.1 Bootu Creek Holes

6 metre composite samples were taken from both the RC chips and core and sent to Assaycorp in Pine Creek, NT, for ICP-MS / -OES analysis. A suit of 15 elements were chosen for assay. These were Ag, As, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, P, Pb, Tl, V, Zn. HSD001 had a number of interesting intersections including 15 m @ 18.6% Mn, 30 m @ 0.12% Cu and 12 m @ 0.15% Pb; while HSD002 produced 21 m @ 13.9% Mn, 33 m @ 0.12% Cu and 33 m @ 0.21% Pb. Generally Zn is relatively low. HSP001 (water bore) did not have any spectacular assays. Results are presented in Appendix 8.

5.2.2 Willieray Holes

6 metre composite samples were taken from both the RC chips and core and sent to Assaycorp in Pine Creek, NT, for ICP-MS / OES analysis. A suit of 15 elements were chosen for assay. These were Ag, As, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, P, Pb, Tl, V, Zn. Results are also presented in Appendix 7.

5.3 Downhole Geophysical Logging: Bootu Creek Holes

Drill holes HSD001 (Redwing) and HSD002 (Rossi) were logged using an AUSLOG Digital Logging System 2 (DLS 2). The holes were surveyed for natural gamma and inductive conductivity. Logs for HSD001 and HSD002 are presented as Plates 9 and 10 respectively.

The survey at Redwing confirmed that manganese was the source of the GEOTEM conductor. The downhole manganiferous interval from 70 to 90m corresponds very closely to a very conductive zone, as shown in Plate 9. The manganese has a conductivity of more than 1 S/m, and a conductance of more than 20S. Unfortunately

HSD002 (Rossi) was blocked just above the manganese intersection at 60 m, so the interval could not be logged. It was however evident that the conductivity was rising just before the blockage.

6. DRILLING: PHASE TWO

Interesting Mn assays in HSD001 and EM evidence that suggests a conductive strike length of 5 km, warranted further drilling. Another 4 percussion holes were planned to constrain the dip and geometry of the body, after reviewing the ground TEM data. Two holes were planned to determine it's dip with a step-out of 50 m east and west of HSD001 but because of unfavourable topography, the westerly step-out was reduced to 35 m. The geometry of the body was to be defined by two holes, one stepping out 200 m south and the second 400 m south from HSD001. These holes were called HSP003, HSP004, HSP005 and HSP006. Holes HSP003, HSP004 and HSP006 reached 97 m, while HSP005 only reached 91 m all with anticipated depths of 120 m (due to deteriorated drilling conditions). All holes were drilled at 60° towards 090°. Table 4 gives drilling statistics pertinent to these holes. Refer to Appendix 7 for drill logs.

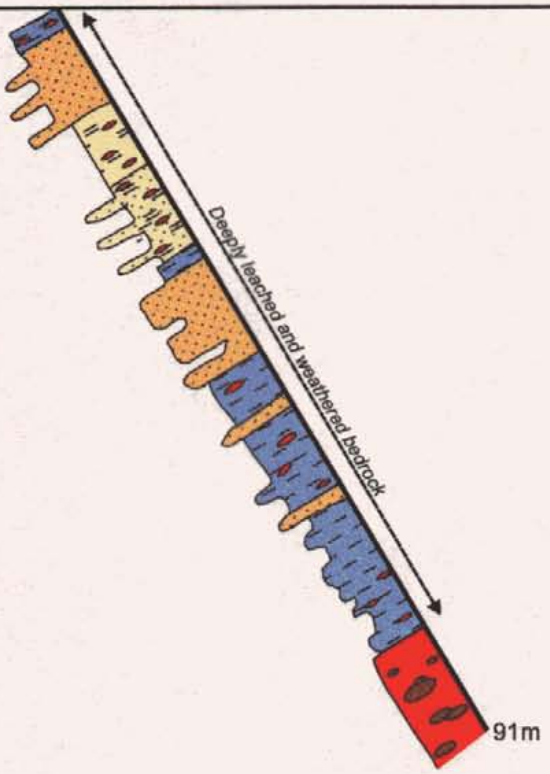
6.1 Geology

A cross section of all Redwing holes is shown in Figure 6a and b. The Mn body dips at approximately 35° which is equivalent to bedding and extends at least 400 m south as proved by HSP005 and HSP006. Downhole geophysical logging has been carried out on these holes, however the data has not as yet been fully interpreted so will not be reported on this year.

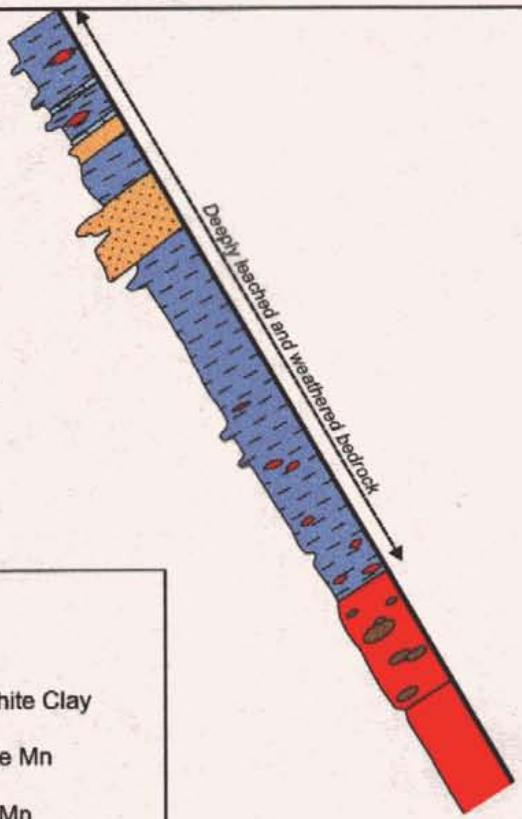
6.2 Downhole Geochemistry

The richest Mn intervals from each hole were sent as 2 m composite samples for metallurgical testing at GEMCO, Groote Eylandt, NT. The entire length of each hole was also sampled as 6 m composites for ICP analysis at Assaycorp. The results from this work is presented in Appendix 9. The GEMCO results were promising with a maximum 2 m interval of 44.7% Mn unwashed or 47.6% washed. The best intersection was 12 m @ 36.4% Mn. The main gangue concern during Mn beneficiation is P and

HSP005



HSP006

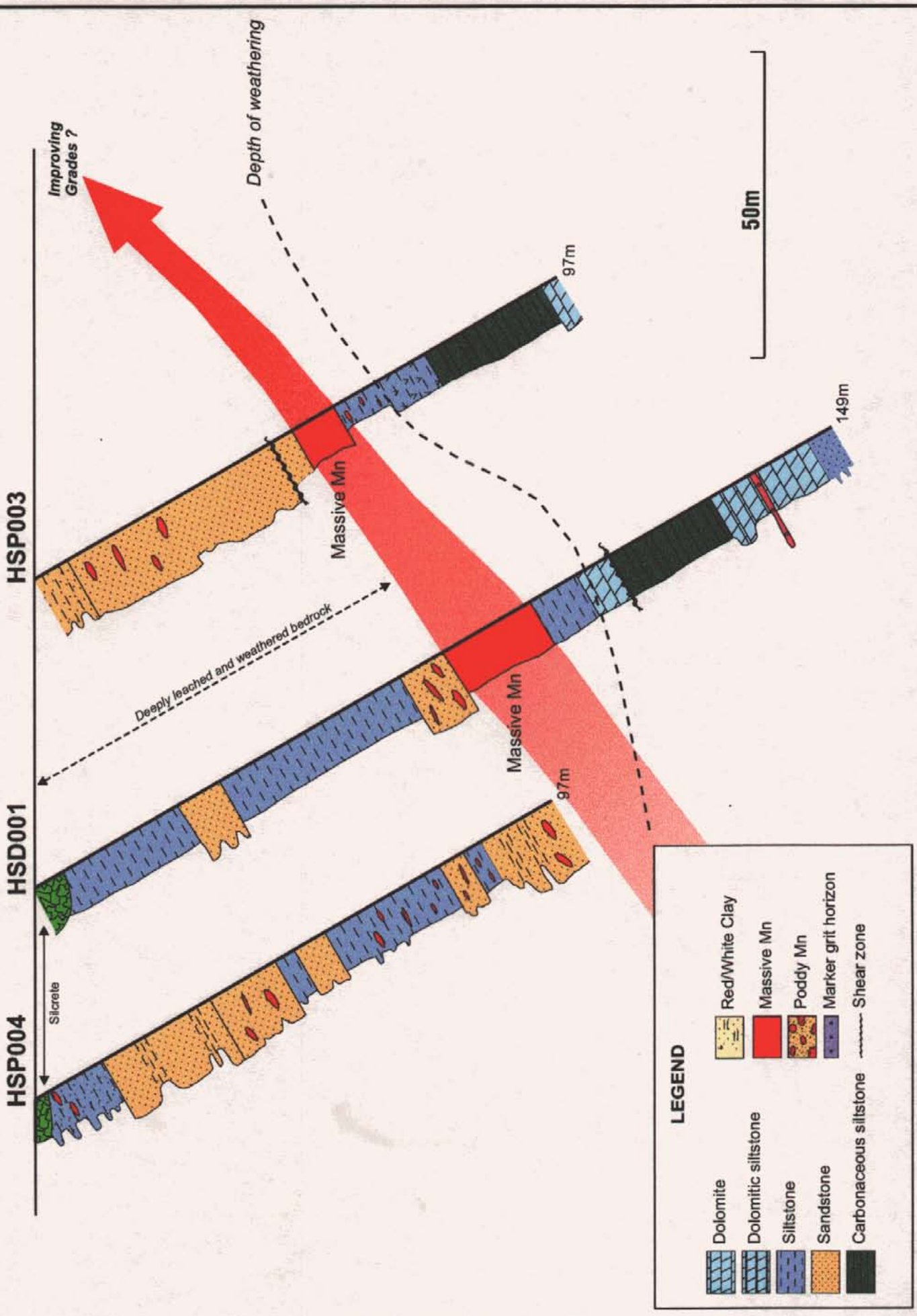


50m

LEGEND

- Dolomite
- Dolomitic siltstone
- Siltstone
- Sandstone
- Carbonaceous siltstone
- Red/White Clay
- Massive Mn
- Poddy Mn
- Marker grit horizon

Prepared : T.Nunn/R.Smit	BHP	Exploration - BHP Minerals BHP Minerals Pty Ltd A.C.N. 008 694 782	Centre : Perth
Drawn : R.J.Clark	**BOOTU CREEK MANGANESE PROSPECT DRILL SECTIONS HSP 5 & HSP 6**		Drg. No. A4-6353.CDR
Date : 12.5.97			FIGURE 6a
Revised :			



Prepared : T.Nunn/R.Smit	BHP	Exploration - BHP Minerals BHP Minerals Pty Ltd A.C.N. 008 694 782	Centre : Perth
Drawn : R.J.Clark	**BOOTU CREEK MANGANESE PROSPECT**		Drg. No. A4-6354.CDR
Date : 12.5.97	**DRILL SECTIONS HSP 3, 4 & HSD 1**		FIGURE 6b
Revised :			

Al_2O_3, both of which are sufficiently low in the Redwing ore to be attractive for production. However the ore does have high SiO_2 ranging from 2.1% up to 76.2% SiO_2 and averaging 42%.

A set of geochemical cross sections have been generated and are presented in Appendix 10 showing relative concentrations of Mn, P, Al_2O_3, Cu, Pb and Zn.

7. CONCLUSIONS

Helen Springs has satisfactorily been tested for base metal potential. The significant geochemical anomalies have been explained (primarily be scavenging by Mn). GEOTEM screened the area for conductors and most significant anomalies have been tested. Final interpretation of the EM data in southern Willieray area remains outstanding and is expected to be completed later this year.

Other work planned focuses on upgrading the manganese discovery. Further work is still necessary to fully understand the potential of this deposit. Only 4 holes have intersected the body and only two of those penetrated its entire thickness. As well, only a portion of its strike length has been tested. Also, GEOTEM data at Redwing indicate that there are numerous parallel conductive trends, indicating probable stacked ore lenses, only one of which has been drill tested.

8. REFERENCES

Jones, N.O., 1955. Preliminary geological report on the Mucketty Manganese deposit. Unpublished report: Bureau of Mineral Resources, Geology and Geophysics.

TABLE 1: Tenement status

EL NUMBER	EL NAME	DATE GRANTED	NO BLOCKS PRE-1ST REDUCTION	NO BLOCKS POST-1ST REDUCTION
9022	HUNTER CREEK	2 JUNE 1995	71	35
9023	WILLIERAY	2 JUNE 1995	101	51
9024	ASHBURTON	2 JUNE 1995	32	16
9025	BOOTU CREEK	2 JUNE 1995	52	WAIVER
9325	TOMKINSON CREEK	10 MAY 1996	65	-
9326	MT HALL	6 DECEMBER 1995	21	-
9327	BANKA BANKA	16 MAY 1996	66	-
9570	JEROMAH CREEK	9 SEPTEMBER 1996	30	-

TABLE 2: BHP Tomkinson Creek Subgroup Stratigraphy (after Jones, 1996)

Roper Group Equivalent	Powell Creek Snst			Ptp
	Renner Springs Snst			Ptr
	Gleeson Ck / Bootu Ck Snst			Ptg/Ptb
Nathan / McArthur Group Equivalents	Attack Creek Formation		DW Nathan Group	Pta_u
			DW Nathan Breccia	
			DW Barney Creek Fmn	
			DW Teena Dolomite	
			DW Emmerugga Dolm	
			DW Tooganinie Fmn	
		Middle Sandstone Facies	DW Tatoola Snst	Pta_m
		Lower Siltstone / Carbonate Facies	DW Amelia Dolm	Pta_l
			DW Mallapunyah Fmn	
Masterton Snst Equivalent	Short Range Sandstone	Upper		Pts_2
		Lower		Pts_1
Tawallah Group Equivalent	Morphett Creek Fmn	Upper Sandstone / Siltstone Lithofacies		Ptm_u
		Middle Carbonate / Siltstone Lithofacies		Ptm_m
		Lower Sandstone Lithofacies		Ptm_l
	Hayward Creek Fmn	Whittington Range Member		Pth_w
		Upper		Pth_u
		Middle		Pth_m
		Lower		Pth_l

TABLE 3: Phase One drilling statistics

HOLE NAME	EASTING	NORTHING	DEPTH (m)	DIP / AZIMUTH	5 ¼" RC (m)	DIAMOND NQ (m)
HSD001	407060	7935035	149	55°→090	92	58
HSD002	400279	7936135	225.4	60°→270	64	161.4
HSD003	362300	7966200	150.5	90°	115.5	35
HSP001	404238	7932006	44	90°	44	-
HSP002	365100	7964200	115	90°	115	-

TABLE 4: Phase Two drilling statistics

HOLE NAME	EASTING	NORTHING	DEPTH (m)	DIP / AZIMUTH	5 ¼" RC (m)
HSP003	407173	7935100	97	60°→090	97
HSP004	407058	7935041	97	60°→090	97
HSP005	407116	7934852	91	60°→090	91
HSP006	407115	7934610	97	60°→090	97

Hole No.	From - To	Sample No.	SiO2
HSP003	46-48	ES1859D	56.3
HSP003	48-50	ES1860D	53.2
HSP003	50-52	ES1861D	54.8
HSP003	52-54	ES1862D	41.5
HSP003	54-56	ES1863D	4.1
HSP003	56-58	ES1864D	30.1
HSP005	78-80	ES1865D	85.8
HSP005	80-82	ES1866D	68.2
HSP005	82-84	ES1867D	55.2
HSP005	84-86	ES1868D	75.2
HSP005	86-88	ES1869D	52.2
HSP005	88-90	ES1870D	42.2
HSP005	90-91	ES1871D	45.1
HSP006	80-82	ES1872D	56.1
HSP006	82-84	ES1873D	60.9
HSP006	84-86	ES1874D	62.0
HSP006	86-88	ES1875D	66.2
HSP006	88-90	ES1876D	61.6
HSP006	90-92	ES1877D	67.0
HSP006	92-94	ES1878D	36.1
HSP006	94-96	ES1879D	33.1
HSP006	96-97	ES1880D	30.8

APPENDIX 1

EXPENDITURE AND WORK PROGRAMS

E9022 - HUNTER CREEK

2 JUNE 1996 to 1 JUNE 1997

Wages and Salaries	5,588
Field Support	3,778
Drilling	10,704
Vehicles	1,361
Equipment	4,889
Geochemistry	1,340
Geophysics	26,536
Surveys	14
Office Expenses	342
Other	2,108
Computer Expenses	399
Consultants	1,596
In-House Services:	
Geophysics	2,551
Geochemistry	1,030
Drafting	805
Sub-Total	**63,041**
20% of Total for Corporate Overheads	12,608
TOTAL	**$75,649**

REF: \\MINXPER_SRV01\USERS\RICHARDS\SEC\FGDAYR\EXPENDITURE\HUNTER9022.DOC

PROPOSED WORK PROGRAM
EL9022 (HUNTER CREEK)

Further to an airborne EM survey (Geotem) flown last year and the ensuing interpretation of the data, a second pass interpretation will be carried out to target priority 2 anomalies. Any interresting anomalies will be followed up with ground EM and soil sampling. Provided encouraging results are obtained, drilling will also take place.

PROPOSED EXPENDITURE

Geotem Interpretation
3 days @$500/day.....$1,500

1 Line moving loop EM
1day @$2500/day.....$2,500

4 lines soil samples
80 samples @$15/sample.....$1,200

1percussion drillhole
150m@$60/m.....$9,000

Staff and Wages.....$3,000

Office costs.....$1,000

TOTAL.....$17,200

E9023 - WILLIERAY

2 JUNE 1996 to 1 JUNE 1997

Wages and Salaries	11,618
Field Support	8,108
Vehicles	3,223
Equipment	1,218
Geochemistry	3,389
Geophysics	29,211
Surveys	14
Office Expenses	967
Other	2,243
Computer Expenses	869
Consultants	992
In-House Services:	
Geophysics	1,452
Geochemistry	2,060
Drafting	288
Sub-Total	**65,652**
20% of Total for Corporate Overheads	13,130
TOTAL	**$78,782**

REF: \\MINXPER_SRV01\USERS\RICHARDS\SEC\FGDAYR\EXPENDITURE\WILLIERAY9023.DOC

PROPOSED WORK PROGRAM
EL9023 (WILLIERAY)

Further to an airborne EM survey (Geotem) flown last year and the ensuing interpretation of the data, a second pass interpretation will be carried out to target priority 2 anomalies. Any interresting anomalies will be followed up with ground EM and soil sampling. Provided encouraging results are obtained, drilling will also take place.

PROPOSED EXPENDITURE

Geotem Interpretation
3 days @$500/day.....$1,500

1 Line moving loop EM
1day @$2500/day.....$2,500

4 lines soil samples
80 samples @$15/sample.....$1,200

1percussion drillhole
150m@$60/m.....$9,000

Staff and Wages.....$3,000

Office costs.....$1,000

TOTAL.....$17,200

E9024 - ASHBURTON

2 JUNE 1996 to 1 JUNE 1997

Wages and Salaries	5,190
Field Support	1,346
Vehicles	226
Geochemistry	19
Geophysics	9,236
Surveys	29
Office Expenses	251
Other	2,300
Library	28
Consultants	1,450
In-House Services:	
Geophysics	2,781
Geochemistry	1,803
Sub-Total	**24,659**
20% of Total for Corporate Overheads	4,932
TOTAL	**$29,591**

REF: \\MINXPER_SRV01\USERS\RICHARDS\SEC\FGDAYR\EXPENDITURE\ASHBURTON9024.DOC

PROPOSED WORK PROGRAM
EL9024 (ASHBURTON)

Further to an airborne EM survey (Geotem) flown last year and the ensuing interpretation of the data, a second pass interpretation will be carried out to target priority 2 anomalies. Any interresting anomalies will be followed up with ground EM and soil sampling. Provided encouraging results are obtained, drilling will also take place.

PROPOSED EXPENDITURE

Geotem Interpretation
3 days @$500/day.....$1,500

1 Line moving loop EM
1day @$2500/day.....$2,500

4 lines soil samples
80 samples @$15/sample.....$1,200

1percussion drillhole
150m@$60/m.....$9,000

Staff and Wages.....$3,000

Office costs.....$1,000

TOTAL.....$17,200

E9025 - BOOTU CREEK

2 JUNE 1996 to 1 JUNE 1997

Wages and Salaries	33,609
Field Support	12,040
Drilling	43,182
Vehicles	8,809
Equipment	17,742
Geochemistry	8,945
Geophysics	33,612
Surveys	24
Office Expenses	1,215
Other	3,545
Computer Expenses	652
Consultants	1,573
In-House Services:	
Geophysics	6,979
Geochemistry	2,833
Drafting	3,738
Sub-Total	**178,498**
20% of Total for Corporate Overheads	35,700
TOTAL	**$214,198**

REF: \\MINXPER_SRV01\USERS\RICHARDS\SEC\FGDAYR\EXPENDITURE\BOOTU9025.DOC

PROPOSED WORK PROGRAM
EL9025 (BOOTU CREEK)

Following a significant Mn discovery on this licence last year, delineation work is required. Further airborne EM data interpretation is necessary to asses the Mn potential for the rest of the licence. Drilling out the above mentioned Mn body will also be carried out this field season.

PROPOSED EXPENDITURE

Geotem Interpretation
3 days @$500/day.....$1,500

4 Percussion drillholes
480m @$60/m.....$28,800

Staff and Wages
10 days @$1000/day.....$10,000

Office overheads.....$1,000

TOTAL.....$41,300

E9325 - TOMKINSON CREEK

10 MAY 1996 to 1 JUNE 1997

Wages and Salaries	4,321
Field Support	441
Vehicles	1,546
Geophysics	17,614
Surveys	211
Office Expenses	94
Other	2,158
Computer Expenses	911
Consultants	1,241
In-House Services:	
Geophysics	824
Drafting	115
Sub-Total	**29,476**
20% of Total for Corporate Overheads	5,895
TOTAL	**$35,371**

REF: \\MINXPER_SRV01\USERS\RICHARDS\SEC\FGDAYR\EXPENDITURE\9325TOMKINSON.DOC

PROPOSED WORK PROGRAM
EL9325 (TOMKINSON CREEK)

An airborne EM survey flown in 1996 was interpreted late lsat year. Due to time limitations prior to the commencement of drilling, only the northern half of the survey was interpreted fully. To extend our targetting in this area the remainder of the survey (which covers EL9325) will be interpreted this season. Consequent to the discovery of further anomalies,sampling and drilling will take place.

PROPOSED EXPENDITURE

Geotem Interpretation
5days @$500/day.....$2,500

4 lines soil samples
80 samples @$15/sample.....$1,200

1percussion drillhole
150m@$60/m.....$9,000

Staff and Wages.....$3,000

Office costs.....$1,000

TOTAL.....$16,700

E9326 - MT HALL

2 JUNE 1996 to 1 JUNE 1997

Wages and Salaries	2,987
Field Support	1,234
Vehicles	1,745
Geophysics	3,432
Surveys	27
Office Expenses	11
Other	2,115
Computer Expenses	530
Consultants	975
In-House Services:	
Geophysics	412
Drafting	76
Sub-Total	**13,544**
20% of Total for Corporate Overheads	2,709
TOTAL	**$16,253**

REF: U:\RICHARDS\SEC\FGDAYR\EXPENDITURE\MTHALL9326.DOC

PROPOSED WORK PROGRAM
EL9326 (MT HALL)

Further to an airborne EM survey (Geotem) flown last year and the ensuing interpretation of the data, a second pass interpretation will be carried out to target priority 2 anomalies. Any interresting anomalies will be followed up with ground EM and soil sampling. Provided encouraging results are obtained, drilling will also take place.

PROPOSED EXPENDITURE

Geotem Interpretation
3 days @$500/day.....$1,500

1 Line moving loop EM
1day @$2500/day.....$2,500

4 lines soil samples
80 samples @$15/sample.....$1,200

1percussion drillhole
150m@$60/m.....$9,000

Staff and Wages.....$3,000

Office costs.....$1,000

TOTAL.....$17,200

E9327 - BANKA BANKA

16 MAY 1996 to 1 JUNE 1997

Wages and Salaries	4,268
Field Support	3,160
Vehicles	1,970
Equipment	2,050
Geophysics	12,006
Surveys	30
Office Expenses	259
Other	2,158
Consultants	952
In-House Services:	
Geophysics	1,545
Drafting	778
Sub-Total	**29,176**
20% of Total for Corporate Overheads	5,835
TOTAL	**$35,011**

REF: U:\RICHARDS\SEC\FGDAYR\EXPENDITURE\BANKA(2)9327.DOC

PROPOSED WORK PROGRAM
EL9327 (BANKA BANKA)

Following a significant Mn discovery on the adjacent licence EL9025(Bootu Creek) last year, the possibility of mineralised extensions into this licence exist. Further airborne EM data interpretation is necessary to asses the Mn potential of the licence..

PROPOSED EXPENDITURE

Geotem Interpretation
3 days @$500/day.....$1,500

2 Percussion drillholes
480m @$60/m.....$14,400

Staff and Wages
5 days @$1000/day.....$5,000

Office overheads.....$1,000

TOTAL.....$21,900

E9570 - JEROMAH CREEK

9 SEPTEMBER 1996 to 1 JUNE 1997

Wages and Salaries	1,894
Field Support	1,770
Vehicles	355
Office Expenses	33
Other	2,115
Computer Expenses	655
Consultants	1,162
In-House Services:	
Geophysics	412
Drafting	230
Sub-Total	**8,626**
20% of Total for Corporate Overheads	1,725
TOTAL	**$10,351**

REF: \\MINXPER_SRV01\USERS\RICHARDS\SEC\FGDAYR\EXPENDITURE\JEROMAH9570.DOC

PROPOSED WORK PROGRAM
EL9570 (JEROMAH CREEK)

Further to an airborne EM survey (Geotem) flown last year and the ensuing interpretation of the data, a second pass interpretation will be carried out to target priority 2 anomalies. Any interresting anomalies will be followed up with ground EM and soil sampling. Provided encouraging results are obtained, drilling will also take place.

PROPOSED EXPENDITURE

Geotem Interpretation
3 days @$500/day.....$1,500

1 Line moving loop EM
1day @$2500/day.....$2,500

4 lines soil samples
80 samples @$15/sample.....$1,200

1percussion drillhole
150m@$60/m.....$9,000

Staff and Wages.....$3,000

Office costs.....$1,000

TOTAL.....$17,200

APPENDIX 2

STREAM SEDIMENT GEOCHEMISTRY 1996

Mesh	Sample no	Easting	Northing	Cu	Zn	Pb	Ni	Fe	Mn	As	Mo	Co	Cr	P	Cd	V
-80#	EQ2520	395648	7946927	12	20	15	11	25100	220	5	-2	37	129	200	-1	54
-80#	EQ2521	396930	7947210	13	31	10	10	21300	117	9	4	25	129	150	-1	37
-80#	EQ2523	394868	7947515	13	16	11	10	18600	100	-2	8	32	233	100	-1	53
-80#	ES1912	397022	7937130	25	33	24	18	16600	1260	3	6	645	184	150	1	43
-80#	ES1914	396200	7936690	11	20	14	14	12700	371	3	-2	54	55	100	-1	32
-80#	ES1913	396178	7936823	9	23	13	10	13900	94	-2	-2	175	113	100	-1	31
-80#	ES1923	395590	7942100	13	26	15	12	26400	330	-2	-2	49	74	150	-1	52
-80#	ES1922	395500	7941820	22	40	21	19	33200	668	3	-2	26	51	350	-1	65
-80#	ES1921	395500	7941820	21	35	21	18	32600	657	-2	-2	33	50	350	-1	64
-80#	ES1920	398050	7935700	12	29	12	11	17000	140	3	3	42	112	200	-1	40
-80#	ES1919	397483	7935860	10	24	12	13	13200	88	-2	-2	100	102	150	-1	31
-80#	ES1918	397517	7935700	10	19	8	9	11000	56	2	4	62	117	100	-1	32
-80#	ES1917	397000	7937800	12	22	15	10	18500	122	2	-2	77	84	150	-1	41
-80#	ES1916	397227	7937870	13	36	10	15	18600	168	5	4	100	126	150	-1	48
-80#	ES1928	396236	7945180	13	23	12	12	18000	99	-2	6	26	156	150	-1	52
-80#	ES1927	395850	7945900	10	19	11	7	12000	81	-2	-2	30	74	150	-1	31
-80#	ES1926	396050	7945900	12	24	13	11	19600	135	-2	-2	12	55	250	-1	44
-80#	ES1925	396600	7944860	12	24	14	11	20300	150	3	-2	40	96	200	-1	43
-80#	ES1924	396400	7944800	10	22	11	10	15200	145	2	-2	9	33	150	-1	35
-80#	ES1915	396400	7937138	10	22	13	10	14600	142	-2	-2	52	45	150	-1	36
-80#	ES1911	397624	7936981	28	30	13	24	18200	216	3	-2	1210	161	150	1	37
-80#	EQ2522	395564	7947110	13	23	16	11	31300	107	10	-2	96	323	150	-1	73

APPPENDIX 3

SOIL GEOCHEMISTRY RESULTS 1996

Sample no	Mesh	Easting	Northing	Cu	Zn	Pb	Ni	Fe	Mn	As	Mo	Co	Cr	Na	K	Ba	Mg	Sb	P	V	Ca
JS3000A	+4#	399592	7935244	22	11	2	0	25900	139	1.6	0.6	2.8	25	0	0	33	93	0.1	0	0	184
JS3000B	+10#-4#	399592	7935244	4	15	3	0	4180	58	0.3	0.1	1.1	8	0	0	314	152	0.0	0	0	602
JS3000D	+80#-18#	399592	7935244	3	6	4	0	4840	160	0.4	0.1	1.9	4	0	0	86	97	0.0	0	0	397
JS3001	+4#	399667	7935340	79	38	26	0	50500	3540	2.4	1.4	74.5	28	0	0	327	256	0.2	0	0	340
JS3001C	+18#-10#	399667	7935340	22	72	24	0	19900	1040	0.2	0.0	10.4	17	0	0	292	273	0.0	0	0	851
JS3001B	+10#-4#	399667	7935340	23	15	14	0	6940	1570	0.4	0.1	13.1	8	0	0	454	267	0.0	0	0	878
JS3003C	+18#-10#	399800	7935500	12	96	19	0	21400	1180	0.1	0.0	9.1	20	0	0	242	273	0.0	0	0	1080
JS3003B	+10#-4#	399800	7935500	5	9	11	0	2920	1500	0.3	0.1	10.6	4	0	0	185	181	0.0	0	0	1340
JS3003	-80#	399800	7935500	74	33	14	0	57300	4410	1.9	1.0	45.6	35	0	0	199	506	0.1	0	0	534
JS3002E	-80#	399724	7935413	2	1	1	0	4100	289	-0.1	0.2	9.5	2	0	0	67	188	0.0	0	0	952
JS3002D	+80#-18#	399724	7935413	4	8	3	0	4930	258	0.3	0.0	1.7	3	0	0	66	142	0.0	0	0	661
JS3002C	+18#-10#	399724	7935413	14	82	21	0	48900	1710	0.4	0.1	15.1	43	0	0	531	448	0.0	0	0	1430
JS3002B	+10#-4#	399724	7935413	11	27	10	0	38600	2340	0.9	0.1	16.6	24	0	0	48	377	0.1	0	0	3870
JS3001E	-80#	399667	7935340	8	1	3	0	4000	273	-0.1	0.2	23.7	2	0	0	58	254	0.1	0	0	1210
JS3006D	+80#-18#	400042	7935737	61	17	57	0	3740	3880	0.3	0.0	18.9	1	0	0	1320	726	0.0	0	0	3870
JS3006C	+18#-10#	400042	7935737	71	78	102	0	6160	5070	-0.1	0.0	29.2	6	0	0	2190	499	0.0	0	0	1680
JS3006B	+10#-4#	400042	7935737	37	4	48	0	3190	2120	0.1	0.0	11.1	3	0	0	1100	262	0.0	0	0	1170
JS3006A	+4#	400042	7935737	59	48	95	0	7480	5880	0.2	0.0	28.0	6	0	0	1760	293	0.0	0	0	886
JS3005E	-80#	399938	7935630	3	0	2	0	3720	284	-0.1	0.0	14.4	2	0	0	53	237	0.0	0	0	959
JS3005D	+80#-18#	399938	7935630	3	4	4	0	3340	234	0.3	0.0	2.0	2	0	0	42	136	0.0	0	0	567
JS3005C	+18#-10#	399938	7935630	27	75	67	0	15000	5210	0.1	0.0	25.8	12	0	0	990	371	0.0	0	0	995
JS3005B	+10#-4#	399938	7935630	19	6	13	0	4030	1550	0.2	0.0	13.8	4	0	0	335	177	0.0	0	0	769
JS3005A	+4#	399938	7935630	13	7	8	0	20000	611	0.5	0.3	4.5	16	0	0	252	159	0.1	0	0	219
JS3004E	-80#	399890	7935590	3	1	2	0	3650	139	-0.1	0.1	11.2	2	0	0	53	276	0.0	0	0	1360
JS3004D	+80#-18#	399890	7935590	4	6	3	0	3940	117	0.2	0.0	1.6	2	0	0	48	213	0.0	0	0	1030
JS3004C	+18#-10#	399890	7935590	13	107	30	0	18300	1840	0.1	0.0	9.5	18	0	0	482	391	0.0	0	0	1410
JS3004B	+10#-4#	399890	7935590	70	18	39	0	15700	4660	0.5	0.2	15.1	11	0	0	644	375	0.1	0	0	1550
JS3004A	+4#	399890	7935590	22	9	5	0	26800	249	0.8	0.4	3.0	18	0	0	102	216	0.1	0	0	308
JS3003E	-80#	399800	7935500	3	1	2	0	3450	320	-0.1	0.1	12.8	2	0	0	50	200	0.0	0	0	761

JS3003D	+80#-18#	399800	7935500	3	4	3	0	3930	277	0.3	0.0	2.0	2	0	0	45	140	0.0	0	0	547
JS3008B	+10#-4#	400102	7935830	58	46	78	0	5530	5820	-0.1	0.0	25.5	3	0	0	2300	148	0.0	0	0	285
JS3008A	+4#	400102	7935830	69	47	99	0	3920	3840	0.2	0.0	20.4	2	0	0	1830	147	0.0	0	0	147
JS3007E	-80#	400090	7935736	11	1	8	0	3180	1380	-0.1	0.2	61.3	1	0	0	625	263	0.1	0	0	939
JS3007D	+80#-18#	400090	7935736	36	15	89	0	6120	5150	0.4	0.1	29.8	3	0	0	1610	246	0.0	0	0	824
JS3007C	+18#-10#	400090	7935736	76	137	144	0	9910	8190	-0.1	0.0	55.1	9	0	0	3070	300	0.0	0	0	756
JS3007B	+10#-4#	400090	7935736	28	2	43	0	3110	2970	0.1	0.0	16.7	4	0	0	854	193	0.0	0	0	755
JS3007A	+4#	400090	7935736	38	33	38	0	3630	2750	0.1	0.0	15.4	4	0	0	1250	151	0.0	0	0	247
JS3006E	-80#	400042	7935737	27	1	14	0	3830	2550	-0.1	0.3	70.6	2	0	0	894	779	0.1	0	0	4110
JS3011D	+80#-18#	400243	7935913	73	13	61	0	2550	3750	0.2	0.0	28.5	1	0	0	1160	590	0.0	0	0	489
JS3011C	+18#-10#	400243	7935913	103	82	68	0	2400	4100	-0.1	0.0	27.0	-1	0	0	1460	287	0.0	0	0	906
JS3011B	+10#-4#	400243	7935913	95	54	51	0	1600	3180	-0.1	0.0	22.4	-1	0	0	1400	218	0.0	0	0	596
JS3011A	+4#	400243	7935913	123	48	71	0	2360	4450	0.1	0.0	29.2	-1	0	0	1870	797	0.0	0	0	354
JS3010E	-80#	400213	7935883	8	1	12	0	6310	2020	0.2	0.2	72.8	3	0	0	865	321	0.0	0	0	797
JS3010D	+80#-18#	400213	7935883	63	14	59	0	3810	3440	0.5	0.0	22.6	2	0	0	1340	246	0.0	0	0	604
JS3010C	+18#-10#	400213	7935883	89	109	51	0	5970	3600	0.2	0.0	30.9	3	0	0	424	284	0.0	0	0	1460
JS3010B	+10#-4#	400213	7935883	76	46	43	0	5760	3420	-0.1	0.0	21.7	2	0	0	2310	230	0.0	0	0	465
JS3014E	-80#	400355	7936008	4	0	5	0	4700	434	-0.1	0.1	27.3	2	0	0	235	138	0.1	0	0	385
JS3014D	+80#-18#	400355	7936008	13	9	18	0	4410	524	0.4	0.0	6.8	2	0	0	306	127	0.0	0	0	349
JS3014C	+18#-10#	400355	7936008	13	87	32	0	3320	828	-0.1	0.0	5.9	2	0	0	525	146	0.0	0	0	583
JS3014B	+10#-4#	400355	7936008	9	86	17	0	2560	679	0.2	0.0	4.2	2	0	0	247	103	0.0	0	0	745
JS3014A	+4#	400355	7936008	9	5	12	0	4390	263	0.8	0.0	1.7	2	0	0	144	162	0.0	0	0	309
JS3013E	-80#	400294	7935989	3	1	3	0	2710	456	-0.1	0.1	19.4	1	0	0	137	90	0.0	0	0	199
JS3013D	+80#-18#	400294	7935989	19	11	53	0	9750	3620	0.4	0.0	18.3	4	0	0	748	159	0.0	0	0	233
JS3013C	+18#-10#	400294	7935989	35	96	77	0	6330	4990	-0.1	0.0	24.0	6	0	0	1190	154	0.0	0	0	517
JS3019C	+18#-10#	401974	7933620	20	15	46	0	25400	2340	0.3	0.1	12.6	34	0	0	654	348	0.0	0	0	659
JS3019B	+10#-4#	401974	7933620	8	105	100	0	74600	3870	0.3	0.1	16.0	53	0	0	940	2760	0.1	0	0	4880
JS3018E	-80#	401950	7933584	2	0	1	0	2870	547	-0.1	0.1	15.2	1	0	0	85	286	0.1	0	0	2140
JS3018D	+80#-18#	401950	7933584	3	5	2	0	4550	328	0.2	0.0	2.0	3	0	0	56	164	0.0	0	0	1050
JS3018C	+18#-10#	401950	7933584	8	19	57	0	101000	4190	1.1	0.2	24.2	79	0	0	175	263	0.1	0	0	1330
JS3017E	-80#	401849	7933494	2	0	1	0	4300	662	-0.1	0.2	26.5	2	0	0	52	134	0.0	0	0	672
JS3017D	+80#-18#	401849	7933494	3	4	3	0	7730	520	0.2	0.1	4.1	4	0	0	54	91	0.0	0	0	350

JS3016E	-80#	401812	7933416	3	0	1	0	3030	601	-0.1	0.1	25.3	1	0	0	60	154	0.0	0	0	624
JS3045E	-80#	407976	7934288	2	0	5	0	3880	81	-0.1	0.2	6.4	2	0	0	56	206	0.1	0	0	391
JS3044E	-80#	406859	7934396	2	1	2	0	6010	271	-0.1	0.1	16.1	2	0	0	186	103	0.0	0	0	223
JS3043E	-80#	402096	7933753	5	0	6	0	4030	286	-0.1	0.5	21.4	2	0	0	86	233	0.1	0	0	778
JS3042E	-80#	400213	7935883	60	0	14	0	5760	1760	0.1	0.2	67.5	3	0	0	752	312	0.0	0	0	803
JS3040E	-80#	408101	7934357	9	1	7	0	3360	179	-0.1	0.2	14.4	2	0	0	56	284	0.1	0	0	1230
JS3040D	+80#-18#	408101	7934357	3	3	9	0	4870	182	-0.1	0.1	13.1	3	0	0	51	255	0.1	0	0	1420
JS3040C	+18#-10#	408101	7934357	14	17	61	0	11700	490	0.3	0.0	6.2	14	0	0	305	237	0.0	0	0	541
JS3040B	+10#-4#	408101	7934357	7	60	20	0	7650	164	0.1	0.0	2.0	8	0	0	104	140	0.0	0	0	499
JS3040A	+4#	408101	7934357	6	6	10	0	14000	78	0.3	0.1	0.9	13	0	0	182	60	0.1	0	0	151
JS3039E	-80#	407976	7934288	16	0	5	0	3070	81	0.1	0.4	6.7	2	0	0	47	199	0.1	0	0	374
JS3039D	+80#-18#	407976	7934288	1	2	6	0	5300	94	-0.1	0.2	6.2	4	0	0	68	121	0.1	0	0	370
JS3039C	+18#-10#	407976	7934288	13	7	32	0	8710	415	0.3	0.0	4.6	13	0	0	453	187	0.0	0	0	201
JS3039B	+10#-4#	407976	7934288	10	39	21	0	11300	373	0.1	0.0	3.6	13	0	0	385	160	0.0	0	0	311
JS3039B	+10#-4#	407976	7934288	10	39	21	0	11300	373	0.1	0.0	3.6	13	0	0	385	160	0.0	0	0	311
JS3039A	+4#	407976	7934288	11	7	6	0	6660	50	0.4	0.0	1.0	10	0	0	100	304	0.0	0	0	1620
JS3038E	-80#	407865	7934373	3	0	2	0	2370	116	-0.1	0.1	16.5	1	0	0	67	147	0.0	0	0	274
JS3038D	+80#-18#	407865	7934373	2	5	2	0	4540	99	-0.1	0.1	9.1	3	0	0	50	113	0.1	0	0	502
JS3038C	+18#-10#	407865	7934373	35	12	101	0	24500	1690	0.3	0.0	17.9	35	0	0	844	329	0.0	0	0	290
JS3038B	+10#-4#	407865	7934373	21	59	42	0	53200	1240	0.5	0.1	12.5	40	0	0	148	290	0.0	0	0	1240
JS3037E	-80#	407750	7934375	8	1	4	0	2490	344	-0.1	0.1	26.5	-1	0	0	100	228	0.0	0	0	508
JS3037D	+80#-18#	407750	7934375	3	4	4	0	5010	236	-0.1	0.2	16.9	3	0	0	130	153	0.1	0	0	554
JS3037C	+18#-10#	407750	7934375	61	15	191	0	15200	3950	0.3	0.0	41.0	20	0	0	1320	352	0.0	0	0	298
JS3037B	+10#-4#	407750	7934375	38	75	101	0	27700	5380	0.2	0.1	46.3	20	0	0	317	368	0.0	0	0	1260
JS3036E	-80#	407658	7934390	10	0	6	0	2850	259	-0.1	0.1	37.8	2	0	0	338	279	0.0	0	0	720
JS3036D	+80#-18#	407658	7934390	7	6	9	0	3670	375	-0.1	0.1	44.2	2	0	0	377	281	0.0	0	0	937
JS3036C	+18#-10#	407658	7934390	40	11	77	0	4360	1670	0.4	0.0	17.5	5	0	0	881	232	0.0	0	0	361
JS3036B	+10#-4#	407658	7934390	39	56	72	0	6600	1970	0.2	0.0	15.1	7	0	0	1080	211	0.0	0	0	357
JS3036A	+4#	407658	7934390	23	4	27	0	9240	524	0.3	0.0	5.0	7	0	0	711	131	0.0	0	0	166
JS3035E	-80#	407542	7934400	12	0	5	0	2900	396	-0.1	0.1	70.4	1	0	0	381	581	0.0	0	0	701
JS3035D	+80#-18#	407542	7934400	8	6	6	0	4320	369	-0.1	0.0	53.6	2	0	0	383	500	0.0	0	0	859
JS3035C	+18#-10#	407542	7934400	38	11	41	0	3890	828	0.3	0.0	12.9	4	0	0	898	235	0.0	0	0	240

JS3035B	+10#-4#	407542	7934400	27	64	27	0	3320	647	-0.1	0.0	5.5	2	0	0	859	210	0.0	0	0	316
JS3035A	+4#	407542	7934400	43	6	18	0	8860	152	0.4	0.0	2.7	5	0	0	769	211	0.0	0	0	181
JS3034E	-80#	407426	7934339	102	1	8	0	2800	435	0.1	0.1	32.6	1	0	0	420	136	0.0	0	0	414
JS3034D	+80#-18#	407426	7934339	105	4	200	0	5040	693	-0.1	0.0	47.0	2	0	0	568	133	0.1	0	0	765
JS3034C	+18#-10#	407426	7934339	235	17	200	0	9570	3730	0.3	0.0	37.4	8	0	0	1590	226	0.0	0	0	298
JS3034B	+10#-4#	407426	7934339	76	71	50	0	3970	859	0.2	0.0	8.3	3	0	0	846	69	0.0	0	0	233
JS3034A	+4#	407426	7934339	73	7	10	0	5740	88	0.3	0.0	1.6	2	0	0	715	66	0.0	0	0	108
JS3033E	-80#	407281	7934426	15	0	2	0	2840	362	-0.1	0.0	43.8	1	0	0	659	214	0.0	0	0	508
JS3033D	+80#-18#	407281	7934426	12	7	9	0	6010	926	-0.1	0.0	59.3	3	0	0	756	196	0.1	0	0	491
JS3033C	+18#-10#	407281	7934426	24	10	23	0	4290	1400	0.2	0.0	17.0	6	0	0	988	188	0.0	0	0	202
JS3033B	+10#-4#	407281	7934426	24	77	20	0	5080	1710	0.1	0.0	14.7	5	0	0	1090	163	0.0	0	0	302
JS3033A	+4#	407281	7934426	21	9	1	0	6750	314	0.3	0.0	3.8	11	0	0	30	394	0.0	0	0	2630
JS3032E	-80#	407200	7934384	5	0	7	0	3220	261	-0.1	0.1	21.2	1	0	0	92	124	0.0	0	0	313
JS3032D	+80#-18#	407200	7934384	4	6	12	0	5170	418	-0.1	0.1	19.3	3	0	0	354	98	0.1	0	0	285
JS3032C	+18#-10#	407200	7934384	42	16	200	0	9130	4750	0.2	0.0	33.6	7	0	0	1660	286	0.0	0	0	269
JS3032B	+10#-4#	407200	7934384	29	103	137	0	23200	3230	0.1	0.0	18.4	14	0	0	1220	331	0.0	0	0	391
JS3031E	-80#	407101	7934375	2	0	2	0	2860	425	-0.1	0.1	25.1	1	0	0	50	95	0.0	0	0	258
JS3031D	+80#-18#	407101	7934375	2	4	3	0	6960	354	-0.1	0.1	21.2	4	0	0	106	92	0.0	0	0	320
JS3031C	+18#-10#	407101	7934375	7	7	8	0	5430	273	0.2	0.0	3.5	5	0	0	81	158	0.0	0	0	192
JS3031B	+10#-4#	407101	7934375	4	91	7	0	3000	169	-0.1	0.0	2.3	3	0	0	78	88	0.0	0	0	297
JS3031A	+4#	407101	7934375	6	4	4	0	5120	68	0.3	0.0	1.1	3	0	0	127	101	0.0	0	0	219
JS3030E	-80#	406966	7934420	2	0	2	0	3110	277	-0.1	0.0	15.6	1	0	0	49	110	0.0	0	0	397
JS3030D	+80#-18#	406966	7934420	2	5	2	0	4650	230	-0.1	0.1	12.2	3	0	0	56	95	0.0	0	0	492
JS3030C	+18#-10#	406966	7934420	4	6	7	0	4620	197	0.2	0.0	2.3	5	0	0	44	93	0.0	0	0	253
JS3030B	+10#-4#	406966	7934420	4	67	7	0	4750	291	0.1	0.0	1.8	5	0	0	60	80	0.0	0	0	279
JS3030A	+4#	406966	7934420	4	3	5	0	4510	264	0.3	0.0	1.9	3	0	0	69	79	0.0	0	0	149
JS3029E	-80#	406859	7934396	1	0	1	0	3510	175	-0.1	0.2	13.9	1	0	0	66	101	0.0	0	0	228
JS3029D	+80#-18#	406859	7934396	1	4	2	0	6820	183	-0.1	0.1	12.0	3	0	0	46	90	0.1	0	0	336
JS3029C	+18#-10#	406859	7934396	3	7	7	0	4290	342	0.3	0.0	3.3	4	0	0	70	97	0.0	0	0	159
JS3029B	+10#-4#	406859	7934396	3	75	7	0	2910	413	-0.1	0.0	4.0	3	0	0	98	76	0.0	0	0	281
JS3029A	+4#	406859	7934396	4	8	5	0	4810	356	0.4	0.0	3.1	4	0	0	422	98	0.0	0	0	102
JS3028E	-80#	406744	7934412	2	0	1	0	4110	234	-0.1	0.2	14.2	2	0	0	54	119	0.0	0	0	331

JS3028D	+80#-18#	406744	7934412	2	5	2	0	7170	189	-0.1	0.2	10.8	4	0	0	76	107	0.1	0	0	414
JS3028C	+18#-10#	406744	7934412	6	7	8	0	8990	238	0.2	0.0	2.0	8	0	0	68	165	0.0	0	0	244
JS3028B	+10#-4#	406744	7934412	4	74	7	0	4960	152	0.1	0.0	1.4	4	0	0	83	82	0.0	0	0	293
JS3028A	+4#	406744	7934412	6	4	4	0	6320	96	0.3	0.0	1.1	4	0	0	307	121	0.0	0	0	98
JS3027E	-80#	406652	7934418	2	1	3	0	3040	207	-0.1	0.0	38.4	1	0	0	114	528	0.0	0	0	1060
JS3027D	+80#-18#	406652	7934418	2	4	3	0	4950	197	-0.1	0.1	37.4	3	0	0	120	493	0.0	0	0	1020
JS3027C	+18#-10#	406652	7934418	5	6	19	0	4510	550	0.3	0.0	5.7	6	0	0	116	194	0.0	0	0	268
JS3027B	+10#-4#	406652	7934418	3	71	14	0	3390	355	-0.1	0.0	4.5	3	0	0	107	154	0.0	0	0	318
JS3027A	+4#	406652	7934418	5	5	9	0	6710	122	0.5	0.0	2.2	4	0	0	106	107	0.0	0	0	109
JS3026E	-80#	406562	7934424	1	0	1	0	3250	212	-0.1	0.1	15.3	2	0	0	65	137	0.1	0	0	490
JS3026D	+80#-18#	406562	7934424	1	4	2	0	5020	172	-0.1	0.2	11.8	3	0	0	55	122	0.1	0	0	476
JS3026C	+18#-10#	406562	7934424	4	6	9	0	9320	368	0.3	0.0	2.7	8	0	0	68	153	0.0	0	0	378
JS3026B	+10#-4#	406562	7934424	2	86	7	0	3580	332	0.2	0.0	2.8	3	0	0	68	75	0.0	0	0	702
JS3026A	+4#	406562	7934424	4	4	5	0	9610	168	0.6	0.0	2.1	7	0	0	35	101	0.0	0	0	150
JS3025E	-80#	406470	7934434	2	0	2	0	3210	242	-0.1	0.1	18.6	1	0	0	50	178	0.0	0	0	479
JS3025D	+80#-18#	406470	7934434	1	2	2	0	5590	174	-0.1	0.0	12.3	3	0	0	46	130	0.1	0	0	366
JS3025C	+18#-10#	406470	7934434	4	5	6	0	5270	209	0.2	0.0	1.6	6	0	0	49	111	0.0	0	0	181
JS3025B	+10#-4#	406470	7934434	2	82	5	0	3630	69	0.1	0.0	0.8	4	0	0	16	75	0.0	0	0	500
JS3025A	+4#	406470	7934434	4	3	3	0	9620	41	0.8	0.0	0.5	7	0	0	10	87	0.0	0	0	91
JS3024E	-80#	402342	7933983	2	0	2	0	4160	221	-0.1	0.0	21.3	2	0	0	58	357	0.1	0	0	807
JS3024D	+80#-18#	402342	7933983	2	6	3	0	4140	243	-0.1	0.1	24.3	2	0	0	69	461	0.1	0	0	1230
JS3024C	+18#-10#	402342	7933983	11	9	31	0	22900	1410	0.3	0.0	12.0	22	0	0	382	666	0.0	0	0	2600
JS3024B	+10#-4#	402342	7933983	8	162	16	0	6910	1320	0.3	0.0	9.9	5	0	0	120	190	0.0	0	0	1600
JS3024A	+4#	402342	7933983	3	8	7	0	8850	472	0.3	0.1	4.6	8	0	0	118	179	0.0	0	0	294
JS3023E	-80#	402281	7933900	2	0	2	0	2850	175	-0.1	0.2	19.2	2	0	0	50	177	0.1	0	0	738
JS3023D	+80#-18#	402281	7933900	1	4	2	0	7480	171	-0.1	0.2	13.3	4	0	0	48	139	0.1	0	0	546
JS3023C	+18#-10#	402281	7933900	27	13	34	0	16100	2450	0.4	0.0	17.1	21	0	0	513	296	0.0	0	0	416
JS3023B	+10#-4#	402281	7933900	12	80	38	0	5040	1380	-0.1	0.0	9.8	7	0	0	235	148	0.0	0	0	651
JS3023A	+4#	402281	7933900	43	9	20	0	5880	3910	0.2	0.0	12.7	5	0	0	484	119	0.0	0	0	84
JS3022E	-80#	402228	7933836	3	0	4	0	2000	475	-0.1	0.2	34.5	-1	0	0	55	125	0.0	0	0	283
JS3022D	+80#-18#	402228	7933836	2	6	4	0	4120	310	-0.1	0.2	18.5	2	0	0	52	97	0.0	0	0	310
JS3022C	+18#-10#	402228	7933836	33	14	101	0	13900	4510	0.3	0.0	21.6	17	0	0	905	191	0.0	0	0	211

JS3022B	+10#-4#	402228	7933836	22	63	48	0	5050	3020	-0.1	0.0	11.9	7	0	0	529	158	0.0	0	0	541
JS3022A	+4#	402228	7933836	3	8	12	0	6250	462	0.4	0.0	3.9	5	0	0	130	136	0.0	0	0	224
JS3021E	-80#	402096	7933753	4	1	3	0	3300	284	-0.1	0.1	19.8	2	0	0	55	200	0.0	0	0	757
JS3021D	+80#-18#	402096	7933753	3	7	3	0	5510	278	-0.1	0.2	18.7	3	0	0	88	159	0.1	0	0	768
JS3021C	+18#-10#	402096	7933753	57	21	107	0	19000	7460	0.3	0.0	37.5	21	0	0	1780	328	0.0	0	0	373
JS3021B	+10#-4#	402096	7933753	39	98	43	0	9730	3830	-0.1	0.0	19.7	11	0	0	945	282	0.0	0	0	554
JS3021A	+4#	402096	7933753	25	47	29	0	8940	7000	0.5	0.1	20.4	5	0	0	1670	262	0.0	0	0	327
JS3020E	-80#	402064	7933710	5	0	2	0	2900	225	-0.1	0.0	21.3	1	0	0	93	207	0.0	0	0	756
JS3020D	+80#-18#	402064	7933710	3	4	3	0	4860	244	-0.1	0.1	14.8	2	0	0	63	133	0.0	0	0	501
JS3020C	+18#-10#	402064	7933710	42	17	84	0	16800	5400	0.2	0.0	32.1	19	0	0	1390	217	0.0	0	0	406
JS3020B	+10#-4#	402064	7933710	73	112	55	0	16500	6320	0.3	0.0	32.8	18	0	0	505	349	0.0	0	0	1450
JS3020A	+4#	402064	7933710	5	12	91	0	78200	2350	0.9	0.4	15.3	50	0	0	482	348	0.1	0	0	290
JS3019E	-80#	401974	7933620	2	0	1	0	2360	138	-0.1	0.1	10.1	1	0	0	143	146	0.0	0	0	580
JS3019D	+80#-18#	401974	7933620	2	4	2	0	7070	150	0.2	0.1	1.6	4	0	0	31	94	0.0	0	0	301
JS3016D	+80#-18#	401812	7933416	4	3	3	0	3980	573	0.2	0.0	5.1	2	0	0	80	115	0.0	0	0	390
JS3016C	+18#-10#	401812	7933416	29	12	45	0	22600	4080	0.4	0.1	25.1	21	0	0	143	276	0.0	0	0	1500
JS3016B	+10#-4#	401812	7933416	43	71	53	0	24700	6960	1.3	0.1	41.9	17	0	0	10	447	0.0	0	0	10400
JS3015E	-80#	400404	7936053	2	0	2	0	3480	286	-0.1	0.2	13.5	2	0	0	70	84	0.0	0	0	417
JS3015D	+80#-18#	400404	7936053	3	4	7	0	4480	451	0.3	0.0	2.7	2	0	0	114	50	0.0	0	0	196
JS3015C	+18#-10#	400404	7936053	18	111	38	0	7300	2880	0.2	0.1	12.1	4	0	0	633	116	0.0	0	0	544
JS3015B	+10#-4#	400404	7936053	5	75	12	0	5290	916	0.2	0.0	4.1	4	0	0	228	99	0.0	0	0	667
JS3015A	+4#	400404	7936053	3	7	8	0	6060	647	0.1	0.1	2.9	5	0	0	104	184	0.0	0	0	205
JS3013B	+10#-4#	400294	7935989	11	95	18	0	2490	1220	0.3	0.0	5.5	3	0	0	271	88	0.0	0	0	769
JS3013A	+4#	400294	7935989	11	8	18	0	4080	1370	0.4	0.0	5.2	4	0	0	256	155	0.0	0	0	268
JS3012E	-80#	400310	7935966	5	0	4	0	2460	481	-0.1	0.0	29.5	-1	0	0	489	126	0.0	0	0	579
JS3012D	+80#-18#	400310	7935966	18	11	26	0	3930	1600	0.4	0.0	11.9	2	0	0	813	150	0.0	0	0	613
JS3012C	+18#-10#	400310	7935966	19	171	26	0	3310	1370	-0.1	0.0	9.5	3	0	0	824	170	0.0	0	0	783
JS3012B	+10#-4#	400310	7935966	14	68	18	0	2680	1220	-0.1	0.0	8.5	2	0	0	810	118	0.0	0	0	405
JS3012A	+4#	400310	7935966	12	17	22	0	3570	1300	0.2	0.0	8.6	3	0	0	639	212	0.0	0	0	442
JS3011E	-80#	400243	7935913	23	1	200	0	2420	3230	-0.1	0.0	137.0	-1	0	0	926	773	0.1	0	0	494
JS3010A	+4#	400213	7935883	93	48	65	0	4370	3580	0.1	0.0	27.1	2	0	0	1810	693	0.0	0	0	324
JS3009E	-80#	400191	7935866	22	0	11	0	2320	2310	-0.1	0.2	89.0	-1	0	0	993	239	0.0	0	0	685

JS3009D	+80#-18#	400191	7935866	43	14	61	0	3960	4180	0.5	0.0	26.4	2	0	0	1570	193	0.0	0	0	490
JS3009C	+18#-10#	400191	7935866	44	164	55	0	3760	3390	-0.1	0.0	21.5	5	0	0	1720	194	0.0	0	0	774
JS3009B	+10#-4#	400191	7935866	34	4	27	0	1960	1840	-0.1	0.0	12.0	3	0	0	1350	138	0.0	0	0	301
JS3009A	+4#	400191	7935866	89	49	61	0	4210	3700	0.2	0.0	28.5	3	0	0	1890	214	0.0	0	0	168
JS3008D	+80#-18#	400102	7935830	46	18	80	0	4840	5180	0.4	0.0	29.0	2	0	0	1930	219	0.0	0	0	526
JS3008C	+18#-10#	400102	7935830	44	55	61	0	3110	2510	-0.1	0.0	16.5	3	0	0	1700	179	0.0	0	0	348
JS3001D	+80#-18#	399667	7935340	10	8	5	0	4170	262	0.5	0.0	3.5	3	0	0	59	162	0.0	0	0	759
JS3000E	-80#	399592	7935244	1	1	2	0	4860	120	-0.1	0.2	11.6	2	0	0	149	125	0.1	0	0	411
JS3000C	+18#-10#	399592	7935244	7	94	11	0	14100	334	0.3	0.1	3.1	16	0	0	224	199	0.0	0	0	569
DG2987	-80#	401542	7933800	8	9	6	6	16400	118	-2.0	3.0	3.0	91	0	0	0	0	0.0	100	30	0
DG2989	-80#	401409	7933697	7	9	8	10	17200	130	-2.0	-2.0	4.0	32	0	0	0	0	0.0	100	39	0
DG2991	-80#	401278	7933544	8	10	8	10	16700	140	4.0	-2.0	4.0	33	0	0	0	0	0.0	100	38	0
DG2993	-80#	401148	7933385	11	11	8	12	19600	326	3.0	-2.0	8.0	34	0	0	0	0	0.0	100	45	0
DG2992	-80#	401230	7933459	7	9	6	8	14100	138	-2.0	-2.0	4.0	25	0	0	0	0	0.0	100	31	0
EI2535	-80#	402869	7932402	20	16	9	11	16400	285	-2.0	-2.0	5.0	37	0	0	0	0	0.0	100	34	0
EI2534	-80#	402997	7932496	36	23	13	16	25900	643	-2.0	-2.0	11.0	52	0	0	0	0	0.0	200	52	0
DG3000	-80#	400717	7932861	8	9	6	8	12500	148	4.0	-2.0	4.0	26	0	0	0	0	0.0	100	30	0
DG2999	-80#	400778	7932919	8	9	6	8	14200	153	-2.0	-2.0	5.0	55	0	0	0	0	0.0	150	35	0
DG2998	-80#	400842	7932989	9	11	9	10	17700	135	-2.0	-2.0	5.0	26	0	0	0	0	0.0	150	41	0
DG2997	-80#	400898	7933073	11	12	9	13	20300	172	4.0	-2.0	8.0	50	0	0	0	0	0.0	150	47	0
DG2996	-80#	400959	7933155	11	12	10	13	20400	322	-2.0	-2.0	9.0	30	0	0	0	0	0.0	150	46	0
DG2995	-80#	401008	7933232	11	12	9	12	21000	116	4.0	-2.0	5.0	40	0	0	0	0	0.0	150	47	0
ES7297	-80#	399906	7934870	8	10	-5	5	10200	174	4.0	-2.0	4.0	63	0	0	0	0	0.0	200	24	0
ES7296	-80#	399789	7934826	15	17	12	12	18100	231	2.0	5.0	7.0	194	0	0	0	0	0.0	300	48	0
ES7295	-80#	399736	7934749	6	8	8	6	12200	152	-2.0	-2.0	6.0	28	0	0	0	0	0.0	100	26	0
ES7294	-80#	399676	7934668	9	10	11	9	18200	232	-2.0	-2.0	6.0	47	0	0	0	0	0.0	100	37	0
ES7293	-80#	399610	7934597	15	16	12	13	25700	224	4.0	-2.0	12.0	93	0	0	0	0	0.0	150	48	0
ES7292	-80#	399558	7934516	10	12	11	11	21600	100	-2.0	-2.0	5.0	30	0	0	0	0	0.0	150	42	0
ES7291	-80#	399482	7934443	8	10	7	8	17400	73	-2.0	-2.0	4.0	25	0	0	0	0	0.0	100	35	0
ES7290	-80#	399417	7934368	7	9	6	7	14600	56	-2.0	-2.0	3.0	30	0	0	0	0	0.0	100	29	0
ES7289	-80#	399359	7934282	10	12	10	11	19900	162	-2.0	-2.0	6.0	33	0	0	0	0	0.0	100	39	0
ES7288	-80#	399288	7934211	11	14	13	13	25900	137	-2.0	-2.0	6.0	32	0	0	0	0	0.0	150	50	0

ES7287	-80#	399218	7934174	11	14	11	12	21200	332	-2.0	-2.0	8.0	33	0	0	0	0	0.0	150	42	0
ES7286	-80#	399924	7934971	11	11	7	10	14600	268	-2.0	-2.0	9.0	55	0	0	0	0	0.0	150	33	0
ES7285	-80#	399997	7935043	11	8	11	7	11600	202	-2.0	-2.0	5.0	25	0	0	0	0	0.0	100	27	0
ES7284	-80#	400067	7935121	13	21	15	11	16200	57	7.0	-2.0	3.0	53	0	0	0	0	0.0	100	38	0
ES7283	-80#	400100	7935215	13	20	13	11	17400	371	-2.0	-2.0	5.0	38	0	0	0	0	0.0	100	36	0
ES7282	-80#	400181	7935282	9	11	7	5	8800	84	-2.0	-2.0	-2.0	48	0	0	0	0	0.0	50	27	0
ES7281	-80#	400265	7935348	18	14	13	6	11800	184	-2.0	-2.0	6.0	88	0	0	0	0	0.0	50	26	0
ES7280	-80#	400360	7935445	41	16	9	11	16000	1430	-2.0	-2.0	11.0	51	0	0	0	0	0.0	100	34	0
ES7279	-80#	400366	7935486	44	12	16	10	15200	931	-2.0	-2.0	10.0	39	0	0	0	0	0.0	150	33	0
ES7278	-80#	400474	7935570	31	9	12	7	12200	771	3.0	-2.0	7.0	37	0	0	0	0	0.0	100	24	0
ES7277	-80#	400514	7935614	235	13	177	9	18000	3520	-2.0	-2.0	28.0	79	0	0	0	0	0.0	200	46	0
ES2000	-80#	397777	7935458	10	12	12	8	13700	131	-2.0	-2.0	6.0	67	0	0	0	0	0.0	100	29	0
ES1998	-80#	397939	7935685	7	9	7	6	10700	236	4.0	-2.0	5.0	24	0	0	0	0	0.0	100	21	0
ES1997	-80#	398007	7935685	11	12	9	8	15600	139	-2.0	-2.0	4.0	39	0	0	0	0	0.0	150	32	0
ES1996	-80#	398078	7935768	15	17	9	12	20900	209	7.0	-2.0	7.0	35	0	0	0	0	0.0	150	39	0
ES1995	-80#	398148	7935846	14	16	7	9	14400	407	3.0	-2.0	5.0	50	0	0	0	0	0.0	150	31	0
ES1994	-80#	398220	7935911	43	9	7	8	13400	721	3.0	-2.0	9.0	27	0	0	0	0	0.0	150	27	0
ES1993	-80#	398220	7935911	46	11	8	9	14800	768	-2.0	2.0	9.0	70	0	0	0	0	0.0	150	32	0
ES1992	-80#	398279	7935993	16	13	8	9	16400	413	-2.0	-2.0	8.0	42	0	0	0	0	0.0	100	31	0
ES1991	-80#	398327	7936093	19	50	15	12	20300	321	7.0	-2.0	7.0	36	0	0	0	0	0.0	150	39	0
ES1990	-80#	398412	7936143	17	43	14	9	14400	505	4.0	-2.0	8.0	41	0	0	0	0	0.0	100	26	0
ES1989	-80#	398458	7936226	19	37	23	10	14300	442	4.0	-2.0	5.0	35	0	0	0	0	0.0	100	26	0
ES1988	-80#	398536	7936286	43	20	5	10	12900	240	-2.0	-2.0	8.0	54	0	0	0	0	0.0	200	31	0
ES1987	-80#	398605	7936330	16	16	10	10	15600	616	4.0	-2.0	9.0	40	0	0	0	0	0.0	150	30	0
ES1986	-80#	398680	7936444	13	24	9	12	26800	1000	9.0	-2.0	7.0	33	0	0	0	0	0.0	150	36	0
ES1985	-80#	398751	7936511	18	48	19	17	37700	633	11.0	-2.0	9.0	43	0	0	0	0	0.0	200	54	0
ES1984	-80#	398820	7936591	15	28	8	9	18600	604	6.0	-2.0	6.0	67	0	0	0	0	0.0	200	27	0
ES1983	-80#	398872	7936664	13	25	9	9	17900	689	2.0	-2.0	7.0	49	0	0	0	0	0.0	150	29	0
ES1982	-80#	398958	7936757	10	15	7	7	13500	431	5.0	-2.0	5.0	25	0	0	0	0	0.0	100	24	0
ES1981	-80#	399000	7936805	17	19	9	8	13100	780	-2.0	-2.0	6.0	55	0	0	0	0	0.0	100	25	0
ES1980	-80#	398218	7935334	9	11	10	8	10400	136	-2.0	-2.0	7.0	36	0	0	0	0	0.0	100	23	0
ES1979	-80#	398310	7935306	9	9	8	7	11100	139	5.0	-2.0	3.0	50	0	0	0	0	0.0	100	23	0

ES1978	-80#	398417	7935304	8	10	9	9	13700	60	-2.0	-2.0	3.0	32	0	0	0	0	0.0	100	27	0
ES1977	-80#	398499	7935291	7	9	8	7	14300	57	-2.0	-2.0	2.0	32	0	0	0	0	0.0	100	29	0
ES1976	-80#	398600	7935297	6	8	5	6	13000	55	-2.0	-2.0	3.0	35	0	0	0	0	0.0	100	26	0
ES1975	-80#	398088	7935309	6	9	9	6	9500	131	-2.0	-2.0	3.0	51	0	0	0	0	0.0	150	22	0
ES1974	-80#	398016	7935309	7	9	7	6	11000	173	-2.0	-2.0	4.0	63	0	0	0	0	0.0	150	23	0
ES1973	-80#	398016	7935309	8	9	8	6	11100	171	-2.0	-2.0	3.0	44	0	0	0	0	0.0	150	25	0
ES1972	-80#	397929	7935308	7	8	7	7	12000	243	-2.0	-2.0	5.0	21	0	0	0	0	0.0	100	24	0
ES1971	-80#	397774	7935277	11	12	7	7	11100	115	3.0	-2.0	4.0	59	0	0	0	0	0.0	100	29	0
ES1970	-80#	397677	7935311	6	11	8	7	10700	177	-2.0	-2.0	4.0	30	0	0	0	0	0.0	150	24	0
ES1969	-80#	397214	7936306	6	7	7	5	10300	47	6.0	-2.0	-2.0	62	0	0	0	0	0.0	50	24	0
ES1968	-80#	397608	7935286	7	8	8	6	11000	197	-2.0	-2.0	5.0	96	0	0	0	0	0.0	100	23	0
ES1967	-80#	397520	7935300	7	8	8	6	10300	78	-2.0	-2.0	2.0	66	0	0	0	0	0.0	100	25	0
ES1966	-80#	397394	7935278	5	8	7	6	10200	201	-2.0	-2.0	4.0	41	0	0	0	0	0.0	100	24	0
ES1965	-80#	397286	7935289	8	10	7	9	16400	208	-2.0	-2.0	5.0	28	0	0	0	0	0.0	100	34	0
ES1964	-80#	397190	7935306	6	8	8	7	12300	191	3.0	-2.0	5.0	28	0	0	0	0	0.0	100	27	0
ES1963	-80#	397098	7935308	12	9	10	9	14800	219	3.0	-2.0	5.0	37	0	0	0	0	0.0	100	30	0
ES1962	-80#	397101	7936306	6	8	8	5	9700	187	-2.0	-2.0	5.0	47	0	0	0	0	0.0	50	22	0
ES1961	-80#	397306	7936291	7	12	11	6	10000	164	4.0	-2.0	5.0	33	0	0	0	0	0.0	100	24	0
ES1960	-80#	397405	7936308	7	10	7	5	10200	121	-2.0	-2.0	3.0	24	0	0	0	0	0.0	100	24	0
ES1959	-80#	397495	7936304	9	10	8	7	11200	47	-2.0	-2.0	3.0	59	0	0	0	0	0.0	100	26	0
ES1958	-80#	397607	7936281	11	13	10	9	13100	167	-2.0	-2.0	6.0	42	0	0	0	0	0.0	100	27	0
ES1957	-80#	397709	7936292	17	18	10	13	13500	223	4.0	3.0	7.0	86	0	0	0	0	0.0	100	31	0
ES1956	-80#	397809	7936292	16	29	11	12	22600	291	-2.0	-2.0	8.0	22	0	0	0	0	0.0	150	40	0
ES1955	-80#	397941	7936313	9	25	9	7	10300	187	-2.0	-2.0	4.0	40	0	0	0	0	0.0	100	22	0
ES1954	-80#	398000	7936277	13	95	9	9	22300	673	-2.0	-2.0	9.0	36	0	0	0	0	0.0	200	31	0
ES1953	-80#	398000	7936277	15	97	9	9	23100	688	-2.0	-2.0	8.0	53	0	0	0	0	0.0	200	34	0
ES1952	-80#	398091	7936303	51	33	14	19	29000	1530	6.0	-2.0	13.0	30	0	0	0	0	0.0	150	53	0
ES1951	-80#	398172	7936274	44	57	44	29	20900	723	4.0	-2.0	12.0	36	0	0	0	0	0.0	150	45	0
ES1950	-80#	398322	7936310	17	68	22	14	25300	679	4.0	-2.0	8.0	26	0	0	0	0	0.0	150	39	0
ES1949	-80#	398386	7936314	44	80	35	21	30100	591	10.0	-2.0	12.0	43	0	0	0	0	0.0	150	67	0
ES1948	-80#	398502	7936317	26	17	11	10	15500	295	-2.0	-2.0	7.0	28	0	0	0	0	0.0	100	30	0
ES1947	-80#	398605	7936330	27	22	11	19	15800	700	-2.0	-2.0	9.0	38	0	0	0	0	0.0	150	30	0

ES1946	-80#	398589	7937310	30	19	8	9	12100	402	3.0	-2.0	7.0	38	0	0	0	0	0.0	150	27	0
ES1945	-80#	398541	7937286	21	16	9	8	16400	367	5.0	-2.0	6.0	48	0	0	0	0	0.0	250	34	0
ES1944	-80#	398400	7937312	21	16	8	8	23000	723	3.0	-2.0	8.0	26	0	0	0	0	0.0	200	35	0
ES1943	-80#	398276	7937317	7	14	9	6	9500	194	5.0	-2.0	4.0	45	0	0	0	0	0.0	100	24	0
ES1942	-80#	398224	7937306	11	13	9	7	11100	207	-2.0	-2.0	5.0	24	0	0	0	0	0.0	100	25	0
ES1941	-80#	398224	7937306	11	22	10	7	11100	206	4.0	-2.0	5.0	41	0	0	0	0	0.0	100	26	0
ES1940	-80#	398083	7937326	38	27	14	15	21400	277	6.0	-2.0	9.0	24	0	0	0	0	0.0	150	54	0
ES1939	-80#	397986	7937318	12	13	9	7	11500	165	6.0	-2.0	4.0	50	0	0	0	0	0.0	100	32	0
ES1938	-80#	397906	7937306	20	21	9	9	15500	194	2.0	-2.0	4.0	44	0	0	0	0	0.0	100	34	0
ES1937	-80#	397815	7937281	18	23	14	14	27000	87	-2.0	-2.0	5.0	38	0	0	0	0	0.0	150	53	0
ES1936	-80#	397645	7937290	13	15	10	10	15800	383	-2.0	-2.0	7.0	24	0	0	0	0	0.0	150	34	0
ES1935	-80#	397616	7937295	19	21	8	9	14800	160	-2.0	-2.0	4.0	34	0	0	0	0	0.0	100	35	0
ES1934	-80#	397481	7937299	23	18	10	13	20500	254	-2.0	-2.0	8.0	37	0	0	0	0	0.0	150	45	0
ES1933	-80#	397394	7937288	8	17	7	10	17500	538	7.0	-2.0	6.0	49	0	0	0	0	0.0	150	29	0
ES1932	-80#	397394	7937288	8	16	11	9	16800	507	6.0	-2.0	7.0	44	0	0	0	0	0.0	150	27	0
ES1931	-80#	397303	7937301	13	20	13	13	24900	122	4.0	-2.0	7.0	54	0	0	0	0	0.0	150	46	0
ES1930	-80#	397201	7937291	10	11	9	7	11400	188	5.0	-2.0	6.0	57	0	0	0	0	0.0	100	25	0
ES1929	-80#	397102	7937289	12	29	16	17	22300	367	-2.0	-2.0	11.0	72	0	0	0	0	0.0	100	50	0
ES1910	-80#	397752	7935392	8	11	10	8	12000	126	3.0	-2.0	4.0	34	0	0	0	0	0.0	100	29	0
EI4200	-80#	402046	7934447	28	14	18	7	12300	157	-2.0	-2.0	5.0	70	0	0	0	0	0.0	100	30	0
EI4199	-80#	401981	7934390	177	24	29	12	17600	4290	2.0	-2.0	45.0	41	0	0	0	0	0.0	200	39	0
EI4198	-80#	401931	7934295	233	28	57	14	22800	1340	-2.0	-2.0	31.0	48	0	0	0	0	0.0	200	49	0
EI4197	-80#	401865	7934217	80	32	14	15	20000	1380	5.0	-2.0	15.0	45	0	0	0	0	0.0	250	41	0
EI4196	-80#	401833	7934126	31	25	10	14	23500	397	6.0	-2.0	8.0	46	0	0	0	0	0.0	150	48	0
EI4195	-80#	401833	7934126	30	20	12	13	22800	376	-2.0	-2.0	8.0	43	0	0	0	0	0.0	150	46	0
EI4194	-80#	401781	7934061	19	23	13	14	21600	945	-2.0	-2.0	11.0	58	0	0	0	0	0.0	150	45	0
EI4193	-80#	401704	7933971	12	14	9	10	16500	675	4.0	-2.0	7.0	34	0	0	0	0	0.0	150	35	0
EI4192	-80#	401595	7933914	26	107	22	17	18400	679	-2.0	-2.0	14.0	55	0	0	0	0	0.0	200	41	0
EI2539	-80#	402649	7932084	11	12	7	11	15500	144	-2.0	-2.0	5.0	36	0	0	0	0	0.0	150	38	0
EI2538	-80#	402717	7932162	23	15	14	10	15400	396	9.0	-2.0	6.0	29	0	0	0	0	0.0	200	42	0
EI2537	-80#	402770	7932230	22	23	14	13	21300	387	5.0	-2.0	7.0	37	0	0	0	0	0.0	150	45	0
EI2536	-80#	402825	7932324	17	17	13	8	14000	415	3.0	-2.0	7.0	49	0	0	0	0	0.0	100	30	0

DG2994	-80#	401091	7933315	11	14	9	12	20000	380	3.0	-2.0	8.0	29	0	0	0	0	0.0	150	44	0
DG2990	-80#	401334	7933630	10	12	8	10	19300	178	-2.0	-2.0	6.0	33	0	0	0	0	0.0	150	43	0
DG2988	-80#	401453	7933738	9	12	10	11	23600	127	-2.0	-2.0	6.0	42	0	0	0	0	0.0	150	48	0
EI2542	-80#	401655	7930872	13	16	11	10	18900	329	-2.0	-2.0	8.0	62	0	0	0	0	0.0	350	43	0
EI2600	-80#	402577	7932034	0	0	0	0	0	0	0.0	0.0	0.0	0	0	0	0	0	0.0	0	0	0
EI2599	-80#	402516	7931953	7	11	7	7	13200	142	-2.0	-2.0	7.0	39	0	0	0	0	0.0	150	26	0
EI2598	-80#	402455	7931873	27	14	9	10	18400	197	4.0	-2.0	7.0	53	0	0	0	0	0.0	200	37	0
EI2597	-80#	402390	7931790	11	13	11	9	18500	229	-2.0	-2.0	13.0	64	0	0	0	0	0.0	200	41	0
EI2596	-80#	402357	7931674	10	13	11	8	15500	185	-2.0	-2.0	6.0	77	0	0	0	0	0.0	150	37	0
EI2595	-80#	402257	7931619	13	14	14	12	24600	108	3.0	-2.0	7.0	43	0	0	0	0	0.0	150	52	0
EI2594	-80#	402257	7931619	12	14	11	12	24600	95	2.0	-2.0	8.0	50	0	0	0	0	0.0	150	53	0
EI2593	-80#	402212	7931538	11	13	12	13	22100	356	-2.0	-2.0	11.0	35	0	0	0	0	0.0	150	47	0
EI2548	-80#	402167	7931466	9	11	9	9	18100	277	2.0	-2.0	9.0	53	0	0	0	0	0.0	150	41	0
EI2547	-80#	402091	7931392	8	11	9	8	15200	278	-2.0	-2.0	7.0	27	0	0	0	0	0.0	150	33	0
EI2546	-80#	402023	7931322	9	12	10	8	16200	217	5.0	2.0	7.0	87	0	0	0	0	0.0	200	39	0
EQ2519	-80#	409483	7930555	11	12	11	12	14300	263	7.0	-2.0	11.0	95	0	0	0	0	0.0	200	33	0
EQ2518	-80#	409426	7930588	13	15	11	13	20200	143	-2.0	-2.0	9.0	61	0	0	0	0	0.0	100	44	0
EQ2517	-80#	409345	7930668	13	14	10	11	17500	174	5.0	-2.0	8.0	38	0	0	0	0	0.0	150	38	0
EQ2516	-80#	409250	7930720	9	14	10	12	17900	119	-2.0	-2.0	9.0	68	0	0	0	0	0.0	100	40	0
EQ2515	-80#	409182	7930778	10	14	9	12	18500	85	-2.0	-2.0	12.0	69	0	0	0	0	0.0	100	38	0
EQ2514	-80#	409108	7930844	11	15	8	11	17100	75	-2.0	-2.0	9.0	71	0	0	0	0	0.0	100	38	0
EQ2513	-80#	409009	7930898	11	14	11	8	14400	149	3.0	-2.0	6.0	37	0	0	0	0	0.0	100	33	0
EQ2512	-80#	408930	7930950	12	13	8	7	11900	152	4.0	3.0	9.0	111	0	0	0	0	0.0	100	31	0
EQ2511	-80#	408861	7931021	9	12	11	7	13200	145	-2.0	-2.0	10.0	61	0	0	0	0	0.0	100	29	0
EQ2510	-80#	408766	7931076	15	18	15	10	17700	201	3.0	-2.0	6.0	43	0	0	0	0	0.0	100	39	0
EQ2509	-80#	408681	7931169	15	21	11	11	20500	288	-2.0	-2.0	14.0	70	0	0	0	0	0.0	150	42	0
EQ2508	-80#	408600	7931169	19	19	13	8	16000	361	3.0	-2.0	8.0	73	0	0	0	0	0.0	100	34	0
EQ2507	-80#	408532	7931253	15	15	11	8	14900	316	3.0	-2.0	13.0	84	0	0	0	0	0.0	100	30	0
EQ2504	-80#	408263	7931388	19	19	15	11	19400	527	4.0	-2.0	12.0	57	0	0	0	0	0.0	150	42	0
EQ2503	-80#	408189	7931456	11	17	11	10	20900	232	4.0	-2.0	8.0	30	0	0	0	0	0.0	100	43	0
EQ2502	-80#	408102	7931513	20	25	12	13	21200	491	-2.0	-2.0	11.0	63	0	0	0	0	0.0	200	45	0
EQ2501	-80#	407990	7931604	12	11	9	7	10600	170	-2.0	-2.0	7.0	53	0	0	0	0	0.0	100	25	0

EI2543	-80#	401704	7930936	11	12	13	12	20600	369	-2.0	-2.0	11.0	32	0	0	0	0	0.0	200	45	0
EI2545	-80#	401963	7931244	9	12	10	9	19000	208	3.0	-2.0	7.0	50	0	0	0	0	0.0	250	38	0
EI2544	**-80#**	**401834**	**7931086**	**14**	**20**	**14**	**10**	**20100**	**257**	**3.0**	**-2.0**	**8.0**	**56**	**0**	**0**	**0**	**0**	**0.0**	**400**	**45**	**0**
DG3001	-80#	399657	7937241	17	25	11	9	17200	215	8.0	-2.0	5.0	20	0	0	0	0	0.0	300	31	0
DG3033	-80#	400079	7936342	15	12	34	5	20800	387	4.0	-2.0	6.0	17	0	0	0	0	0.0	150	26	0
DG3032	-80#	399651	7936775	59	17	6	12	17300	1670	4.0	-2.0	13.0	18	0	0	0	0	0.0	150	27	0
DG3031	-80#	399580	7936697	27	23	8	12	21500	557	-2.0	-2.0	8.0	23	0	0	0	0	0.0	250	38	0
DG3029	-80#	399508	7936619	25	37	-5	11	21800	450	7.0	-2.0	7.0	20	0	0	0	0	0.0	200	36	0
DG3028	-80#	399437	7936540	10	12	-5	9	16800	315	-2.0	-2.0	4.0	18	0	0	0	0	0.0	150	31	0
DG3027	-80#	399365	7936462	16	24	-5	10	18000	379	-2.0	-2.0	6.0	19	0	0	0	0	0.0	100	34	0
DG3026	-80#	399294	7936384	14	24	-5	8	15800	362	3.0	-2.0	5.0	18	0	0	0	0	0.0	100	31	0
DG3025	-80#	399222	7936306	31	71	15	9	16300	383	4.0	-2.0	6.0	19	0	0	0	0	0.0	150	35	0
DG3052	-80#	399455	7935733	11	11	8	8	12800	244	2.0	-2.0	5.0	20	0	0	0	0	0.0	150	27	0
DG3051	-80#	399489	7935767	11	10	7	7	11900	240	3.0	-2.0	4.0	19	0	0	0	0	0.0	100	25	0
DG3050	-80#	399524	7935801	16	33	9	8	13800	311	-2.0	-2.0	5.0	21	0	0	0	0	0.0	150	30	0
DG3049	-80#	399559	7935834	19	29	14	11	19100	358	-2.0	-2.0	6.0	27	0	0	0	0	0.0	150	39	0
DG3048	-80#	399593	7935868	13	15	-5	8	16500	321	-2.0	-2.0	6.0	17	0	0	0	0	0.0	150	32	0
DG3047	-80#	399628	7935902	14	15	-5	7	15300	403	2.0	-2.0	5.0	17	0	0	0	0	0.0	150	28	0
DG3046	-80#	399663	7935936	23	32	-5	9	17800	412	3.0	-2.0	6.0	20	0	0	0	0	0.0	150	34	0
DG3045	-80#	399697	7935970	20	26	-5	9	18000	417	3.0	-2.0	7.0	18	0	0	0	0	0.0	150	32	0
DG3068	-80#	399608	7935342	17	23	11	11	16200	203	-2.0	-2.0	4.0	22	0	0	0	0	0.0	100	33	0
DG3067	-80#	399612	7935347	20	26	12	11	18900	295	-2.0	-2.0	5.0	23	0	0	0	0	0.0	150	42	0
DG3066	-80#	399612	7935347	22	26	16	12	19500	311	-2.0	-2.0	5.0	22	0	0	0	0	0.0	150	42	0
DG3065	-80#	399616	7935352	24	32	13	15	25300	417	-2.0	-2.0	6.0	24	0	0	0	0	0.0	200	51	0
DG3064	-80#	399621	7935358	39	42	26	14	22900	835	2.0	-2.0	10.0	31	0	0	0	0	0.0	250	43	0
DG3063	-80#	399625	7935363	116	42	54	17	29000	3680	9.0	-2.0	20.0	33	0	0	0	0	0.0	450	50	0
DG3062	-80#	399629	7935368	42	13	28	9	16100	1530	-2.0	-2.0	12.0	21	0	0	0	0	0.0	200	34	0
DG3061	-80#	399633	7935373	51	17	27	12	23100	1760	-2.0	-2.0	14.0	25	0	0	0	0	0.0	250	42	0
DG4010	-80#	406920	7930454	14	15	14	9	16300	374	-2.0	-2.0	6.0	19	0	0	0	0	0.0	100	33	0
DG4009	-80#	406819	7930458	16	15	12	10	17600	273	-2.0	-2.0	5.0	20	0	0	0	0	0.0	100	36	0
DG4008	-80#	406717	7930462	14	15	10	10	16500	346	-2.0	-2.0	6.0	18	0	0	0	0	0.0	100	34	0
DG4007	-80#	406717	7930462	15	15	11	10	17400	356	3.0	-2.0	6.0	17	0	0	0	0	0.0	100	35	0

DG4006	-80#	406615	7930466	16	16	14	10	16600	413	-2.0	-2.0	7.0	19	0	0	0	0	0.0	100	34	0
DG4005	-80#	406514	7930470	17	15	10	10	16300	299	-2.0	-2.0	6.0	20	0	0	0	0	0.0	100	33	0
DG4004	-80#	406412	7930473	18	18	10	12	20600	315	-2.0	-2.0	7.0	21	0	0	0	0	0.0	150	42	0
DG4003	-80#	406310	7930477	38	17	13	13	20600	286	-2.0	-2.0	7.0	21	0	0	0	0	0.0	150	42	0
DG4002	-80#	406208	7930481	15	16	9	11	17000	190	4.0	-2.0	5.0	20	0	0	0	0	0.0	100	35	0
DG3198	-80#	406107	7930485	21	20	19	14	22000	577	-2.0	-2.0	9.0	22	0	0	0	0	0.0	150	44	0
DG3197	-80#	406005	7930489	17	17	12	12	19200	399	-2.0	-2.0	7.0	21	0	0	0	0	0.0	150	40	0
DG3196	-80#	405903	7930492	20	18	11	14	22700	269	-2.0	-2.0	7.0	24	0	0	0	0	0.0	150	45	0
DG3195	-80#	405802	7930496	16	20	12	13	22900	246	-2.0	-2.0	6.0	22	0	0	0	0	0.0	150	45	0
DG3194	-80#	405700	7930500	13	16	11	10	16900	300	-2.0	-2.0	6.0	21	0	0	0	0	0.0	150	34	0
DG3193	-80#	405718	7930152	17	41	11	13	18800	399	-2.0	-2.0	7.0	19	0	0	0	0	0.0	150	40	0
DG3192	-80#	405841	7930148	16	33	12	14	21300	353	2.0	-2.0	8.0	21	0	0	0	0	0.0	150	43	0
DG3191	-80#	405963	7930144	19	23	9	14	19900	335	-2.0	-2.0	8.0	23	0	0	0	0	0.0	150	38	0
DG3190	-80#	406086	7930140	26	25	14	16	23100	325	-2.0	-2.0	7.0	24	0	0	0	0	0.0	150	50	0
DG3188	-80#	406208	7930136	20	16	15	12	18800	215	-2.0	-2.0	7.0	22	0	0	0	0	0.0	100	40	0
DG3187	-80#	406331	7930132	17	14	12	12	17800	169	-2.0	-2.0	6.0	23	0	0	0	0	0.0	100	37	0
DG3186	-80#	406454	7930128	12	18	7	10	15100	243	-2.0	-2.0	5.0	19	0	0	0	0	0.0	100	33	0
DG3185	-80#	406576	7930124	13	13	11	10	15000	245	-2.0	-2.0	5.0	18	0	0	0	0	0.0	100	33	0
DG3184	-80#	406699	7930120	23	20	15	14	21200	552	-2.0	-2.0	10.0	21	0	0	0	0	0.0	150	44	0
DG3183	-80#	406822	7930116	18	17	11	11	18900	256	4.0	-2.0	6.0	20	0	0	0	0	0.0	100	39	0
DG3182	-80#	406944	7930112	25	25	24	17	28700	375	-2.0	-2.0	9.0	23	0	0	0	0	0.0	150	56	0
DG3181	-80#	407067	7930108	23	26	18	16	27100	483	-2.0	-2.0	10.0	22	0	0	0	0	0.0	150	54	0
DG3180	-80#	407189	7930104	23	28	22	14	22900	477	4.0	-2.0	10.0	21	0	0	0	0	0.0	150	48	0
DG3179	-80#	407312	7930100	21	25	13	15	26300	367	-2.0	-2.0	8.0	22	0	0	0	0	0.0	150	51	0
DG3177	-80#	407292	7929686	32	27	23	17	28200	618	-2.0	-2.0	12.0	24	0	0	0	0	0.0	200	57	0
DG3176	-80#	407190	7929698	34	20	15	16	23700	379	-2.0	-2.0	11.0	22	0	0	0	0	0.0	150	49	0
DG3175	-80#	407089	7929710	21	15	17	14	18600	242	-2.0	-2.0	7.0	18	0	0	0	0	0.0	100	43	0
DG3174	-80#	406987	7929721	25	17	17	14	19900	268	-2.0	-2.0	8.0	20	0	0	0	0	0.0	100	44	0
DG3173	-80#	406885	7929733	29	14	15	12	17400	248	-2.0	-2.0	7.0	20	0	0	0	0	0.0	150	40	0
DG3172	-80#	406784	7929745	20	16	11	13	18600	255	-2.0	-2.0	7.0	20	0	0	0	0	0.0	150	39	0
DG3170	-80#	406682	7929757	15	16	12	13	18600	191	4.0	-2.0	6.0	22	0	0	0	0	0.0	100	39	0
DG3169	-80#	406580	7929769	10	13	14	10	13800	137	-2.0	-2.0	5.0	19	0	0	0	0	0.0	100	34	0

DG3168	-80#	406479	7929780	14	17	16	12	16800	153	-2.0	-2.0	6.0	21	0	0	0	0	0.0	150	38	0
DG3167	-80#	406377	7929792	10	15	10	10	14900	128	-2.0	-2.0	5.0	21	0	0	0	0	0.0	100	35	0
DG3166	-80#	406275	7929804	10	15	12	10	14700	284	-2.0	-2.0	9.0	18	0	0	0	0	0.0	150	34	0
DG3165	-80#	406174	7929816	15	35	12	12	16400	394	-2.0	-2.0	12.0	19	0	0	0	0	0.0	100	38	0
DG3164	-80#	406072	7929828	8	12	15	7	12600	340	3.0	-2.0	6.0	20	0	0	0	0	0.0	150	30	0
DG3163	-80#	405970	7929839	9	13	15	7	12300	145	-2.0	-2.0	4.0	18	0	0	0	0	0.0	150	33	0
DG3162	-80#	405869	7929851	14	14	15	8	14800	125	-2.0	-2.0	5.0	20	0	0	0	0	0.0	150	37	0
DG3161	-80#	405767	7929863	12	13	13	10	16600	167	-2.0	-2.0	6.0	20	0	0	0	0	0.0	150	38	0
DG3160	-80#	402374	7933970	14	23	19	15	20300	250	-2.0	-2.0	9.0	24	0	0	0	0	0.0	200	48	0
DG3159	-80#	402303	7933897	13	14	13	9	15600	269	3.0	-2.0	7.0	21	0	0	0	0	0.0	150	35	0
DG3158	-80#	402232	7933823	33	20	24	10	15200	428	-2.0	-2.0	11.0	17	0	0	0	0	0.0	150	33	0
DG3157	-80#	402232	7933823	37	23	23	10	15700	435	-2.0	-2.0	11.0	16	0	0	0	0	0.0	150	34	0
DG3156	-80#	402161	7933750	29	23	20	12	20900	369	-2.0	-2.0	8.0	20	0	0	0	0	0.0	150	41	0
DG3155	-80#	402090	7933677	56	24	12	15	24600	334	-2.0	-2.0	9.0	23	0	0	0	0	0.0	150	49	0
DG3154	-80#	402019	7933604	12	15	10	11	17900	214	-2.0	-2.0	5.0	19	0	0	0	0	0.0	100	36	0
DG3153	-80#	401948	7933530	14	17	11	11	16900	544	-2.0	-2.0	6.0	19	0	0	0	0	0.0	200	32	0
DG3152	-80#	401877	7933457	11	11	6	10	11500	765	-2.0	-2.0	7.0	16	0	0	0	0	0.0	100	23	0
DG3151	-80#	401806	7933384	7	9	7	9	12900	303	3.0	-2.0	7.0	16	0	0	0	0	0.0	100	28	0
DG3150	-80#	401568	7933801	8	10	13	7	11700	209	2.0	-2.0	5.0	16	0	0	0	0	0.0	100	29	0
DG3149	-80#	401568	7933801	6	10	8	7	12200	240	-2.0	-2.0	5.0	19	0	0	0	0	0.0	100	30	0
DG3148	-80#	401640	7933873	37	28	30	10	17500	314	6.0	-2.0	8.0	19	0	0	0	0	0.0	150	39	0
DG3147	-80#	401712	7933944	14	19	11	12	18500	715	-2.0	-2.0	10.0	20	0	0	0	0	0.0	150	38	0
DG3146	-80#	401784	7934016	18	20	13	13	25200	575	2.0	-2.0	9.0	22	0	0	0	0	0.0	150	46	0
DG3145	-80#	401856	7934087	35	23	15	14	23500	517	-2.0	-2.0	9.0	20	0	0	0	0	0.0	150	44	0
DG3144	-80#	401928	7934159	48	43	22	15	22900	934	-2.0	-2.0	13.0	23	0	0	0	0	0.0	250	44	0
DG3143	-80#	402000	7934230	126	33	40	15	22400	2360	-2.0	-2.0	26.0	23	0	0	0	0	0.0	250	40	0
DG3142	-80#	402072	7934302	61	22	25	10	17300	547	3.0	-2.0	18.0	20	0	0	0	0	0.0	200	36	0
DG3141	-80#	402144	7934373	8	10	11	5	7800	89	2.0	-2.0	3.0	15	0	0	0	0	0.0	100	18	0
DG4100	-80#	407202	7932472	16	14	11	10	2	207	-2.0	-2.0	6.0	11	0	0	0	0	0.0	50	35	0
DG4099	-80#	407102	7932478	22	18	16	11	2	274	-2.0	-2.0	8.0	16	0	0	0	0	0.0	100	37	0
DG4098	-80#	407001	7932483	17	11	11	8	1	354	6.0	-2.0	8.0	13	0	0	0	0	0.0	100	27	0
DG4097	-80#	407001	7932483	17	12	13	8	1	324	2.0	-2.0	8.0	18	0	0	0	0	0.0	150	29	0

DG4096	-80#	406901	7932489	23	12	18	9	1	604	-2.0	-2.0	9.0	11	0	0	0	0	0.0	100	28	0
DG4095	-80#	406801	7932494	12	14	10	10	1	123	4.0	-2.0	5.0	11	0	0	0	0	0.0	100	33	0
DG4094	-80#	406701	7932500	9	11	10	7	1	154	3.0	-2.0	5.0	13	0	0	0	0	0.0	100	25	0
DG4093	-80#	406601	7932505	9	12	10	7	1	89	5.0	-2.0	3.0	15	0	0	0	0	0.0	50	25	0
DG4092	-80#	408376	7932097	14	14	12	9	1	369	-2.0	-2.0	7.0	16	0	0	0	0	0.0	100	31	0
DG4091	-80#	408277	7932097	16	14	8	9	1	301	-2.0	-2.0	5.0	10	0	0	0	0	0.0	50	33	0
DG4090	-80#	408179	7932098	18	17	12	12	2	426	-2.0	-2.0	9.0	15	0	0	0	0	0.0	100	44	0
DG4089	-80#	408080	7932098	22	15	10	9	1	597	6.0	-2.0	8.0	12	0	0	0	0	0.0	100	31	0
DG4088	-80#	407981	7932099	14	14	7	8	2	1390	2.0	-2.0	21.0	16	0	0	0	0	0.0	100	29	0
DG4087	-80#	407883	7932099	31	14	10	10	2	789	-2.0	-2.0	13.0	17	0	0	0	0	0.0	150	34	0
DG4086	-80#	407784	7932099	52	17	18	11	2	396	5.0	-2.0	10.0	11	0	0	0	0	0.0	100	43	0
DG4085	-80#	407685	7932100	36	20	12	13	2	370	2.0	-2.0	9.0	11	0	0	0	0	0.0	100	42	0
DG4084	-80#	407587	7932100	20	14	12	11	2	375	-2.0	-2.0	7.0	15	0	0	0	0	0.0	100	38	0
DG4083	-80#	407488	7932101	13	11	8	9	2	216	-2.0	-2.0	5.0	14	0	0	0	0	0.0	50	34	0
DG4082	-80#	407488	7932101	14	11	10	10	2	230	-2.0	-2.0	6.0	20	0	0	0	0	0.0	100	37	0
DG4081	-80#	407390	7932101	15	9	7	9	2	225	-2.0	-2.0	5.0	20	0	0	0	0	0.0	100	30	0
DG4080	-80#	407291	7932101	19	9	8	9	2	282	-2.0	-2.0	6.0	20	0	0	0	0	0.0	100	28	0
DG4079	-80#	407192	7932102	21	7	10	8	2	317	-2.0	-2.0	6.0	19	0	0	0	0	0.0	100	26	0
DG4078	-80#	407094	7932102	45	8	12	7	2	483	4.0	-2.0	7.0	17	0	0	0	0	0.0	100	25	0
DG4077	-80#	406995	7932103	0	0	0	0	0	0	0.0	0.0	0.0	0	0	0	0	0	0.0	0	0	0
DG4076	-80#	406896	7932103	34	17	12	9	2	1220	-2.0	-2.0	14.0	17	0	0	0	0	0.0	100	28	0
DG4075	-80#	406798	7932103	29	12	16	11	2	366	-2.0	-2.0	13.0	21	0	0	0	0	0.0	100	37	0
DG4074	-80#	406699	7932104	10	10	9	9	2	144	-2.0	-2.0	5.0	20	0	0	0	0	0.0	50	34	0
DG4073	-80#	406600	7932104	9	9	8	8	2	139	-2.0	-2.0	5.0	21	0	0	0	0	0.0	50	32	0
DG4072	-80#	406502	7932105	10	9	8	7	1	98	-2.0	-2.0	3.0	19	0	0	0	0	0.0	50	26	0
DG4071	-80#	406403	7932105	7	7	6	8	1	80	-2.0	-2.0	4.0	21	0	0	0	0	0.0	50	25	0
DG4070	-80#	406403	7931702	5	6	6	6	1	68	-2.0	-2.0	2.0	19	0	0	0	0	0.0	-50	24	0
DG4069	-80#	406504	7931701	8	7	8	8	1	104	-2.0	-2.0	4.0	21	0	0	0	0	0.0	50	27	0
DG4068	-80#	406604	7931701	10	9	9	7	1	130	-2.0	-2.0	5.0	19	0	0	0	0	0.0	50	26	0
DG4067	-80#	406705	7931700	9	9	10	9	1	129	-2.0	-2.0	5.0	23	0	0	0	0	0.0	100	27	0
DG4066	-80#	406806	7931700	10	9	9	8	1	205	-2.0	-2.0	6.0	20	0	0	0	0	0.0	100	29	0
DG4065	-80#	406906	7931699	11	9	9	9	1	151	-2.0	-2.0	5.0	22	0	0	0	0	0.0	100	31	0

DG4064	-80#	407007	7931699	10	8	9	9	1	175	-2.0	-2.0	6.0	19	0	0	0	0	0.0	50	30	0
DG4063	-80#	407108	7931698	13	10	8	10	2	187	-2.0	-2.0	6.0	21	0	0	0	0	0.0	100	33	0
DG4062	-80#	407208	7931698	16	11	12	10	2	241	-2.0	-2.0	7.0	21	0	0	0	0	0.0	100	35	0
DG4061	-80#	407309	7931697	20	12	11	12	2	258	-2.0	-2.0	7.0	23	0	0	0	0	0.0	100	39	0
DG4060	-80#	407410	7931697	34	14	15	13	2	565	3.0	-2.0	14.0	24	0	0	0	0	0.0	150	38	0
DG4059	-80#	407410	7931697	36	15	18	13	2	574	-2.0	-2.0	14.0	23	0	0	0	0	0.0	150	40	0
DG4058	-80#	407510	7931696	33	21	20	15	2	833	-2.0	-2.0	17.0	23	0	0	0	0	0.0	150	46	0
DG4057	-80#	407611	7931696	33	23	16	16	2	562	-2.0	-2.0	12.0	23	0	0	0	0	0.0	150	49	0
DG4056	-80#	407712	7931695	23	21	13	13	2	406	-2.0	-2.0	8.0	26	0	0	0	0	0.0	150	47	0
DG4055	-80#	407812	7931695	25	22	16	13	22100	654	-2.0	-2.0	9.0	28	0	0	0	0	0.0	150	45	0
DG4054	-80#	407913	7931694	10	9	7	7	13800	126	-2.0	-2.0	3.0	19	0	0	0	0	0.0	100	30	0
DG4053	-80#	407914	7931276	15	16	11	11	18500	485	-2.0	-2.0	7.0	21	0	0	0	0	0.0	100	37	0
DG4052	-80#	407813	7931277	13	16	12	10	16800	488	-2.0	-2.0	6.0	19	0	0	0	0	0.0	100	35	0
DG4051	-80#	407713	7931279	12	15	11	10	17900	297	4.0	-2.0	6.0	21	0	0	0	0	0.0	100	37	0
DG4050	-80#	407612	7931280	11	13	8	8	14400	334	-2.0	-2.0	5.0	19	0	0	0	0	0.0	100	30	0
DG4049	-80#	407511	7931281	16	17	12	11	19800	264	-2.0	-2.0	6.0	23	0	0	0	0	0.0	100	42	0
DG4048	-80#	407411	7931282	21	18	20	12	19200	292	-2.0	-2.0	7.0	20	0	0	0	0	0.0	150	41	0
DG4047	-80#	407310	7931284	45	18	23	12	19100	416	-2.0	-2.0	10.0	20	0	0	0	0	0.0	150	41	0
DG4046	-80#	407209	7931285	26	20	16	16	24300	599	-2.0	-2.0	12.0	28	0	0	0	0	0.0	150	48	0
DG4045	-80#	407109	7931286	18	16	11	12	20100	332	-2.0	-2.0	8.0	24	0	0	0	0	0.0	100	41	0
DG4044	-80#	407008	7931287	13	14	11	12	20000	258	-2.0	-2.0	7.0	23	0	0	0	0	0.0	100	41	0
DG4043	-80#	407008	7931287	12	14	11	11	18500	237	-2.0	-2.0	6.0	21	0	0	0	0	0.0	100	38	0
DG4043	-80#	399732	7936004	12	14	11	11	18500	237	-2.0	-2.0	6.0	21	0	0	0	0	0.0	100	38	0
DG4042	-80#	406907	7931289	12	11	12	10	16900	191	-2.0	-2.0	6.0	21	0	0	0	0	0.0	100	35	0
DG4041	-80#	406806	7931290	15	9	11	8	13000	134	-2.0	-2.0	4.0	20	0	0	0	0	0.0	50	27	0
DG4040	-80#	406706	7931291	8	8	8	7	13200	111	-2.0	-2.0	4.0	19	0	0	0	0	0.0	50	28	0
DG4039	-80#	406605	7931292	5	6	7	6	10600	74	-2.0	-2.0	3.0	18	0	0	0	0	0.0	50	24	0
DG4038	-80#	406504	7931294	7	8	8	8	13000	175	-2.0	-2.0	5.0	18	0	0	0	0	0.0	100	28	0
DG4037	-80#	406404	7931295	9	10	10	11	18300	142	-2.0	-2.0	5.0	21	0	0	0	0	0.0	100	38	0
DG4036	-80#	406303	7931296	8	11	9	10	17100	115	-2.0	-2.0	4.0	23	0	0	0	0	0.0	100	36	0
DG4035	-80#	406202	7931297	7	10	8	8	14300	96	-2.0	-2.0	4.0	20	0	0	0	0	0.0	100	31	0
DG4034	-80#	406102	7931299	8	12	9	8	13800	216	-2.0	-2.0	4.0	20	0	0	0	0	0.0	100	30	0

DG4033	-80#	406001	7931300	10	11	9	8	12200	127	-2.0	-2.0	5.0	17	0	0	0	0	0.0	100	28	0
DG4032	-80#	405714	7930996	18	20	12	11	20700	348	-2.0	-2.0	6.0	20	0	0	0	0	0.0	100	42	0
DG4031	-80#	405813	7930989	25	24	13	12	23100	290	-2.0	-2.0	7.0	19	0	0	0	0	0.0	150	49	0
DG4030	-80#	405912	7930983	16	22	11	9	15200	393	-2.0	-2.0	5.0	18	0	0	0	0	0.0	150	32	0
DG4029	-80#	406011	7930976	10	13	9	8	13700	169	-2.0	-2.0	4.0	18	0	0	0	0	0.0	100	30	0
DG4028	-80#	406110	7930969	11	12	9	8	14200	148	3.0	-2.0	4.0	18	0	0	0	0	0.0	100	32	0
DG4027	-80#	406209	7930962	10	15	10	10	16300	270	-2.0	-2.0	5.0	21	0	0	0	0	0.0	150	36	0
DG4026	-80#	406308	7930956	8	12	11	9	13200	212	-2.0	-2.0	4.0	20	0	0	0	0	0.0	100	30	0
DG4025	-80#	406407	7930949	7	10	8	8	12600	146	-2.0	-2.0	3.0	19	0	0	0	0	0.0	100	29	0
DG4024	-80#	406506	7930942	6	10	7	7	11500	65	-2.0	-2.0	3.0	18	0	0	0	0	0.0	50	26	0
DG4023	-80#	406506	7930942	7	9	7	7	11300	62	-2.0	-2.0	3.0	17	0	0	0	0	0.0	50	26	0
DG4022	-80#	406605	7930935	10	12	9	9	13400	149	-2.0	-2.0	5.0	18	0	0	0	0	0.0	100	28	0
DG4021	-80#	406704	7930929	12	14	15	9	14500	182	-2.0	-2.0	5.0	18	0	0	0	0	0.0	100	30	0
DG4020	-80#	406803	7930922	18	18	14	11	19600	445	-2.0	-2.0	9.0	21	0	0	0	0	0.0	150	42	0
DG4019	-80#	406902	7930915	16	16	10	10	17000	453	-2.0	-2.0	6.0	19	0	0	0	0	0.0	150	36	0
DG4018	-80#	407001	7930908	20	18	16	10	19000	502	-2.0	-2.0	7.0	20	0	0	0	0	0.0	150	41	0
DG4017	-80#	407100	7930902	12	14	11	8	15200	318	-2.0	-2.0	5.0	18	0	0	0	0	0.0	100	32	0
DG4016	-80#	407199	7930895	16	18	11	10	17900	434	-2.0	-2.0	7.0	20	0	0	0	0	0.0	150	38	0
DG4015	-80#	407298	7930888	12	14	9	9	15200	329	-2.0	-2.0	5.0	18	0	0	0	0	0.0	100	30	0
DG4014	-80#	407327	7930439	16	22	11	14	26400	231	-2.0	-2.0	7.0	20	0	0	0	0	0.0	100	53	0
DG4013	-80#	407225	7930443	13	15	11	10	17800	258	4.0	-2.0	5.0	19	0	0	0	0	0.0	100	37	0
DG4012	-80#	407124	7930447	10	10	7	7	11400	184	-2.0	-2.0	3.0	16	0	0	0	0	0.0	100	24	0
DG4011	-80#	407022	7930450	8	9	7	6	11200	151	4.0	-2.0	3.0	16	0	0	0	0	0.0	100	23	0
EP4452	-80#	408029	7936075	15	15	13	12	2	333	2.0	-2.0	8.0	19	0	0	0	0	0.0	150	45	0
EP4451	-80#	407926	7936077	19	18	22	14	2	461	6.0	-2.0	9.0	22	0	0	0	0	0.0	150	49	0
EP4450	-80#	407823	7936079	10	11	14	9	1	128	2.0	-2.0	4.0	18	0	0	0	0	0.0	100	27	0
EP4449	-80#	407720	7936081	9	9	11	8	1	472	-2.0	-2.0	6.0	16	0	0	0	0	0.0	100	29	0
EP4448	-80#	407616	7936082	26	18	18	16	2	470	-2.0	-2.0	10.0	24	0	0	0	0	0.0	200	52	0
EP4447	-80#	407513	7936084	24	16	19	15	2	241	-2.0	-2.0	10.0	20	0	0	0	0	0.0	150	48	0
EP4446	-80#	407410	7936086	30	15	23	12	2	258	-2.0	-2.0	9.0	21	0	0	0	0	0.0	150	44	0
EP4445	-80#	407307	7936088	29	12	17	10	2	189	4.0	-2.0	7.0	19	0	0	0	0	0.0	100	38	0
EP4444	-80#	407204	7936090	16	11	12	9	2	347	-2.0	-2.0	10.0	19	0	0	0	0	0.0	150	37	0

EP4443	-80#	407101	7936092	11	10	17	8	1	302	-2.0	-2.0	6.0	16	0	0	0	0	0.0	100	25	0
EP4442	-80#	406998	7936094	13	11	10	10	1	223	-2.0	-2.0	6.0	18	0	0	0	0	0.0	100	32	0
EP4441	-80#	406894	7936095	8	9	8	7	1	184	-2.0	-2.0	4.0	18	0	0	0	0	0.0	100	27	0
EP4440	-80#	406894	7936095	8	8	14	7	1	189	-2.0	-2.0	4.0	17	0	0	0	0	0.0	100	26	0
EP4439	-80#	406791	7936097	8	10	9	7	1	107	-2.0	-2.0	4.0	15	0	0	0	0	0.0	100	28	0
EP4438	-80#	406688	7936099	11	13	10	8	2	228	-2.0	-2.0	6.0	20	0	0	0	0	0.0	200	38	0
EP4437	-80#	406585	7936101	9	11	18	7	1	109	-2.0	-2.0	3.0	18	0	0	0	0	0.0	100	32	0
EP4433	-80#	408055	7935673	14	14	16	12	2	169	-2.0	-2.0	8.0	21	0	0	0	0	0.0	150	47	0
EP4432	-80#	407959	7935676	26	23	24	18	3	388	-2.0	-2.0	11.0	23	0	0	0	0	0.0	200	66	0
EP4431	-80#	407863	7935679	17	13	20	12	2	307	3.0	-2.0	9.0	23	0	0	0	0	0.0	150	55	0
EP4430	-80#	407766	7935682	9	8	10	8	1	144	5.0	-2.0	4.0	18	0	0	0	0	0.0	100	32	0
EP4429	-80#	407670	7935685	19	13	14	10	2	354	2.0	-2.0	6.0	18	0	0	0	0	0.0	100	35	0
EP4428	-80#	407670	7935685	17	11	13	10	2	356	-2.0	-2.0	6.0	21	0	0	0	0	0.0	100	35	0
EP4427	-80#	407574	7935688	20	12	16	11	2	227	-2.0	-2.0	8.0	22	0	0	0	0	0.0	100	41	0
EP4426	-80#	407478	7935692	28	9	19	7	1	146	4.0	-2.0	5.0	15	0	0	0	0	0.0	100	29	0
EP4425	-80#	407381	7935695	118	30	143	24	5	256	-2.0	-2.0	14.0	24	0	0	0	0	0.0	200	91	0
EP4424	-80#	407285	7935698	14	11	11	8	2	129	-2.0	-2.0	5.0	18	0	0	0	0	0.0	100	34	0
EP4423	-80#	407189	7935701	12	12	9	6	1	137	-2.0	-2.0	5.0	17	0	0	0	0	0.0	100	25	0
EP4422	-80#	407093	7935704	16	18	18	12	2	97	-2.0	-2.0	7.0	22	0	0	0	0	0.0	100	50	0
EP4421	-80#	406996	7935707	10	11	8	7	1	123	2.0	-2.0	4.0	17	0	0	0	0	0.0	100	30	0
EP4420	-80#	406900	7935710	8	8	10	6	2	146	2.0	-2.0	5.0	16	0	0	0	0	0.0	100	35	0
EP4419	-80#	407009	7935340	12	10	15	6	1	187	4.0	-2.0	5.0	16	0	0	0	0	0.0	100	25	0
EP4418	-80#	407113	7935335	21	14	22	10	1	399	8.0	-2.0	11.0	20	0	0	0	0	0.0	150	36	0
EP4417	-80#	407216	7935330	20	23	17	8	1	241	-2.0	-2.0	8.0	20	0	0	0	0	0.0	150	36	0
EP4416	-80#	407320	7935326	63	10	36	10	2	348	-2.0	-2.0	13.0	15	0	0	0	0	0.0	150	37	0
EP4415	-80#	407423	7935321	44	13	48	9	2	133	-2.0	-2.0	6.0	15	0	0	0	0	0.0	150	40	0
EP4414	-80#	407527	7935316	12	8	12	7	1	303	-2.0	-2.0	6.0	18	0	0	0	0	0.0	100	31	0
EP4413	-80#	407630	7935311	37	19	11	7	1	156	-2.0	-2.0	5.0	20	0	0	0	0	0.0	100	35	0
EP4412	-80#	407734	7935306	10	8	13	7	1	287	-2.0	-2.0	4.0	18	0	0	0	0	0.0	100	25	0
EP4411	-80#	407837	7935301	10	8	13	5	1	122	-2.0	-2.0	3.0	16	0	0	0	0	0.0	100	27	0
EP4410	-80#	407941	7935297	9	8	12	7	1	118	-2.0	-2.0	4.0	17	0	0	0	0	0.0	100	29	0
EP4409	-80#	408044	7935292	10	10	7	7	1	235	-2.0	-2.0	4.0	16	0	0	0	0	0.0	100	29	0

EP4408	-80#	408148	7935287	7	7	5	6	1	113	-2.0	-2.0	3.0	18	0	0	0	0	0.0	50	24	0
EP4407	-80#	408079	7934997	20	16	16	8	1	70	3.0	-2.0	3.0	21	0	0	0	0	0.0	150	39	0
EP4406	-80#	407974	7934985	23	22	21	11	2	393	-2.0	-2.0	8.0	22	0	0	0	0	0.0	200	50	0
EP4405	-80#	407868	7934979	27	19	18	12	2	417	-2.0	-2.0	8.0	22	0	0	0	0	0.0	150	47	0
EP4404	-80#	407868	7934979	23	18	16	12	2	450	3.0	-2.0	8.0	21	0	0	0	0	0.0	150	47	0
EP4403	-80#	407763	7934973	30	17	19	11	2	224	-2.0	-2.0	7.0	23	0	0	0	0	0.0	150	45	0
EP4402	-80#	407658	7934967	26	16	15	10	2	474	-2.0	-2.0	8.0	19	0	0	0	0	0.0	150	40	0
EP4401	-80#	407553	7934961	69	13	40	9	1	268	2.0	-2.0	9.0	16	0	0	0	0	0.0	100	34	0
EP4400	-80#	407448	7934955	30	14	15	8	1	191	5.0	-2.0	8.0	16	0	0	0	0	0.0	100	28	0
EP4399	-80#	407344	7934949	54	26	16	19	3	287	-2.0	-2.0	17.0	21	0	0	0	0	0.0	150	62	0
EP4398	-80#	407239	7934943	30	19	11	9	1	195	-2.0	-2.0	11.0	12	0	0	0	0	0.0	100	34	0
EP4397	-80#	407134	7934937	55	37	14	15	3	316	15.0	-2.0	18.0	23	0	0	0	0	0.0	150	54	0
EP4396	-80#	407030	7934931	33	18	20	11	2	213	5.0	-2.0	12.0	17	0	0	0	0	0.0	100	41	0
EP4395	-80#	406925	7934924	27	11	10	7	1	255	4.0	-2.0	8.0	14	0	0	0	0	0.0	150	28	0
EP4394	-80#	406820	7934918	35	17	15	9	2	378	8.0	-2.0	11.0	18	0	0	0	0	0.0	150	33	0
EP4393	-80#	406715	7934912	11	14	12	10	2	238	6.0	-2.0	7.0	15	0	0	0	0	0.0	100	37	0
EP4392	-80#	406611	7934906	7	11	13	6	2	357	-2.0	-2.0	8.0	20	0	0	0	0	0.0	150	36	0
EP4391	-80#	406506	7934900	10	11	7	6	2	122	-2.0	-2.0	5.0	15	0	0	0	0	0.0	150	30	0
EP4390	-80#	406598	7934613	8	12	9	8	1	149	2.0	-2.0	5.0	16	0	0	0	0	0.0	150	34	0
EP4389	-80#	406704	7934608	8	11	9	7	1	192	-2.0	-2.0	5.0	14	0	0	0	0	0.0	100	29	0
EP4388	-80#	406704	7934608	10	11	8	7	1	190	-2.0	-2.0	6.0	14	0	0	0	0	0.0	100	29	0
EP4387	-80#	406809	7934603	27	21	22	15	3	363	5.0	-2.0	15.0	21	0	0	0	0	0.0	200	60	0
EP4386	-80#	406915	7934598	15	10	13	7	2	259	-2.0	-2.0	6.0	17	0	0	0	0	0.0	100	28	0
EP4385	-80#	407021	7934592	12	10	13	7	2	245	-2.0	-2.0	6.0	16	0	0	0	0	0.0	100	29	0
EP4384	-80#	407126	7934587	20	10	16	9	2	315	-2.0	-2.0	7.0	17	0	0	0	0	0.0	100	32	0
EP4383	-80#	407232	7934582	19	9	17	7	1	518	-2.0	-2.0	9.0	12	0	0	0	0	0.0	100	26	0
EP4382	-80#	407338	7934577	99	11	107	8	2	342	-2.0	-2.0	10.0	15	0	0	0	0	0.0	150	32	0
EP4381	-80#	407443	7934572	112	22	20	15	3	322	-2.0	-2.0	11.0	16	0	0	0	0	0.0	200	60	0
EP4380	-80#	407549	7934567	332	9	190	8	2	579	2.0	-2.0	12.0	15	0	0	0	0	0.0	150	31	0
EP4379	-80#	407655	7934562	121	19	29	16	2	364	3.0	-2.0	15.0	13	0	0	0	0	0.0	150	52	0
EP4378	-80#	407760	7934557	57	14	38	10	2	301	-2.0	-2.0	10.0	13	0	0	0	0	0.0	150	40	0
EP4377	-80#	407866	7934551	49	17	23	11	2	310	-2.0	-2.0	8.0	16	0	0	0	0	0.0	150	44	0

EP4376	-80#	407972	7934546	16	12	14	8	2	129	-2.0	-2.0	6.0	17	0	0	0	0	0.0	100	38	0
EP4375	-80#	408077	7934541	21	15	27	8	2	122	-2.0	-2.0	5.0	14	0	0	0	0	0.0	150	41	0
EP4374	-80#	408183	7934536	19	21	20	7	1	179	5.0	-2.0	4.0	17	0	0	0	0	0.0	100	32	0
EP4373	-80#	408430	7934058	12	11	10	8	1	67	-2.0	-2.0	3.0	10	0	0	0	0	0.0	100	34	0
EP4372	-80#	408323	7934061	33	22	15	10	2	403	-2.0	-2.0	8.0	17	0	0	0	0	0.0	150	43	0
EP4371	-80#	408216	7934063	30	24	16	13	3	192	-2.0	-2.0	9.0	19	0	0	0	0	0.0	150	55	0
EP4370	-80#	408109	7934066	56	15	87	7	1	212	-2.0	-2.0	7.0	15	0	0	0	0	0.0	100	29	0
EP4369	-80#	408002	7934069	28	12	18	8	1	94	-2.0	-2.0	6.0	13	0	0	0	0	0.0	100	34	0
EP4368	-80#	407894	7934072	35	9	14	7	1	118	-2.0	-2.0	5.0	11	0	0	0	0	0.0	50	29	0
EP4367	-80#	407894	7934072	36	11	21	7	1	127	-2.0	-2.0	5.0	16	0	0	0	0	0.0	100	32	0
EP4366	-80#	407787	7934074	18	9	10	6	1	136	-2.0	-2.0	5.0	15	0	0	0	0	0.0	100	28	0
EP4365	-80#	407680	7934077	13	9	12	8	1	174	-2.0	-2.0	6.0	14	0	0	0	0	0.0	100	32	0
EP4364	-80#	407573	7934080	55	12	29	9	1	251	4.0	-2.0	10.0	14	0	0	0	0	0.0	150	30	0
EP4363	-80#	407466	7934082	25	15	39	10	2	130	-2.0	-2.0	6.0	20	0	0	0	0	0.0	100	42	0
EP4362	-80#	407359	7934085	14	14	16	11	2	115	-2.0	-2.0	6.0	19	0	0	0	0	0.0	100	43	0
EP4361	-80#	407252	7934088	16	14	17	11	2	187	5.0	-2.0	7.0	20	0	0	0	0	0.0	100	38	0
EP4360	-80#	407145	7934090	13	10	15	9	2	95	-2.0	-2.0	5.0	18	0	0	0	0	0.0	100	35	0
EP4359	-80#	407037	7934093	23	11	29	9	2	184	-2.0	-2.0	6.0	21	0	0	0	0	0.0	100	35	0
EP4358	-80#	406930	7934096	7	9	7	7	1	103	-2.0	-2.0	4.0	15	0	0	0	0	0.0	50	28	0
EP4357	-80#	406823	7934099	9	10	7	8	1	94	-2.0	-2.0	4.0	19	0	0	0	0	0.0	50	30	0
EP4356	-80#	406716	7934101	9	8	6	8	1	123	6.0	-2.0	4.0	20	0	0	0	0	0.0	100	28	0
EP4355	-80#	406609	7934104	7	8	5	7	1	70	-2.0	-2.0	3.0	16	0	0	0	0	0.0	50	24	0
EP4354	-80#	406599	7933719	7	9	6	8	1	61	-2.0	-2.0	4.0	18	0	0	0	0	0.0	50	30	0
EP4353	-80#	406704	7933718	9	9	6	7	1	84	-2.0	-2.0	4.0	20	0	0	0	0	0.0	50	30	0
EP4352	-80#	406810	7933718	8	7	7	8	1	104	-2.0	-2.0	4.0	19	0	0	0	0	0.0	50	27	0
EP4351	-80#	406915	7933717	9	9	8	8	1	136	4.0	-2.0	5.0	20	0	0	0	0	0.0	50	30	0
EP4350	-80#	407020	7933716	7	8	11	7	1	104	-2.0	-2.0	4.0	12	0	0	0	0	0.0	-50	27	0
EP4349	-80#	407126	7933715	10	10	7	8	1	128	-2.0	-2.0	5.0	12	0	0	0	0	0.0	50	29	0
EP4348	-80#	407126	7933715	10	8	7	8	1	126	-2.0	-2.0	5.0	12	0	0	0	0	0.0	50	28	0
EP4347	-80#	407231	7933715	11	10	7	9	1	143	3.0	-2.0	5.0	18	0	0	0	0	0.0	100	33	0
EP4346	-80#	407336	7933714	15	12	11	10	2	189	3.0	-2.0	6.0	21	0	0	0	0	0.0	100	33	0
EP4345	-80#	407442	7933713	16	15	10	10	2	254	-2.0	-2.0	6.0	20	0	0	0	0	0.0	100	40	0

EP4344	-80#	407547	7933713	31	18	16	13	2	598	-2.0	-2.0	11.0	17	0	0	0	0	0.0	150	41	0
EP4343	-80#	407653	7933712	26	18	17	14	2	438	5.0	-2.0	9.0	21	0	0	0	0	0.0	100	49	0
EP4342	-80#	407758	7933711	128	18	15	14	2	693	3.0	-2.0	12.0	17	0	0	0	0	0.0	150	53	0
EP4341	-80#	407863	7933711	18	11	13	10	2	373	-2.0	-2.0	9.0	20	0	0	0	0	0.0	100	40	0
EP4340	-80#	407969	7933710	59	17	20	14	2	265	-2.0	-2.0	9.0	16	0	0	0	0	0.0	100	42	0
EP4339	-80#	408074	7933709	34	21	25	14	2	153	-2.0	-2.0	7.0	14	0	0	0	0	0.0	100	49	0
EP4338	-80#	408179	7933708	21	20	16	14	2	290	-2.0	-2.0	8.0	19	0	0	0	0	0.0	100	46	0
EP4337	-80#	408285	7933708	31	23	17	13	2	413	-2.0	-2.0	8.0	22	0	0	0	0	0.0	150	48	0
EP4336	-80#	408390	7933707	11	10	10	7	1	112	3.0	-2.0	3.0	20	0	0	0	0	0.0	100	28	0
EP4335	-80#	408404	7933174	23	13	12	9	2	177	3.0	-2.0	5.0	14	0	0	0	0	0.0	50	35	0
EP4334	-80#	408298	7933182	18	17	12	12	2	201	3.0	-2.0	7.0	16	0	0	0	0	0.0	100	48	0
EP4333	-80#	408193	7933191	23	18	14	12	2	429	-2.0	-2.0	8.0	19	0	0	0	0	0.0	100	43	0
EP4332	-80#	408087	7933199	22	17	10	12	2	292	-2.0	-2.0	7.0	16	0	0	0	0	0.0	100	43	0
EP4331	-80#	407981	7933207	43	15	16	10	1	673	-2.0	-2.0	9.0	15	0	0	0	0	0.0	100	33	0
EP4330	-80#	407875	7933216	65	13	10	10	2	642	5.0	-2.0	9.0	19	0	0	0	0	0.0	100	36	0
EP4329	-80#	407770	7933224	63	9	8	6	1	494	-2.0	-2.0	8.0	12	0	0	0	0	0.0	50	23	0
EP4328	-80#	407770	7933224	64	9	8	6	1	516	-2.0	-2.0	7.0	12	0	0	0	0	0.0	100	23	0
EP4327	-80#	407664	7933232	27	19	11	14	2	483	5.0	-2.0	8.0	22	0	0	0	0	0.0	150	52	0
EP4326	-80#	407558	7933241	25	18	15	13	2	735	-2.0	-2.0	10.0	21	0	0	0	0	0.0	150	46	0
EP4325	-80#	407452	7933249	13	12	17	9	1	173	-2.0	-2.0	5.0	14	0	0	0	0	0.0	100	31	0
EP4324	-80#	407347	7933257	14	10	10	9	1	149	-2.0	-2.0	4.0	14	0	0	0	0	0.0	100	31	0
EP4323	-80#	407241	7933265	10	10	7	8	1	133	-2.0	-2.0	4.0	15	0	0	0	0	0.0	50	29	0
EP4322	-80#	407135	7933274	11	9	7	9	2	165	-2.0	-2.0	5.0	18	0	0	0	0	0.0	100	31	0
EP4321	-80#	407029	7933282	12	9	7	7	1	108	3.0	-2.0	4.0	22	0	0	0	0	0.0	50	28	0
EP4320	-80#	406924	7933290	8	7	11	7	1	93	3.0	-2.0	3.0	19	0	0	0	0	0.0	50	28	0
EP4319	-80#	406818	7933299	10	8	10	6	1	105	6.0	-2.0	3.0	12	0	0	0	0	0.0	-50	25	0
EP4318	-80#	406712	7933307	8	8	8	7	1	69	3.0	-2.0	3.0	13	0	0	0	0	0.0	50	28	0
EP4317	-80#	406798	7932909	13	11	6	7	1	104	-2.0	-2.0	3.0	16	0	0	0	0	0.0	50	26	0
EP4316	-80#	406910	7932910	8	9	13	7	1	112	3.0	-2.0	4.0	16	0	0	0	0	0.0	50	26	0
EP4315	-80#	407022	7932911	10	10	7	8	1	164	-2.0	-2.0	5.0	17	0	0	0	0	0.0	100	27	0
EP4314	-80#	407022	7932911	10	9	7	7	1	156	-2.0	-2.0	5.0	14	0	0	0	0	0.0	100	26	0
EP4313	-80#	407134	7932913	13	10	5	7	1	155	2.0	-2.0	4.0	16	0	0	0	0	0.0	50	27	0

EP4312	-80#	407246	7932914	10	9	8	8	1	168	4.0	-2.0	4.0	19	0	0	0	0	0.0	100	29	0
EP4311	-80#	407358	7932915	14	13	12	9	2	226	3.0	-2.0	6.0	20	0	0	0	0	0.0	100	36	0
EP4310	-80#	407470	7932916	12	12	11	9	1	192	2.0	-2.0	4.0	15	0	0	0	0	0.0	100	32	0
EP4309	-80#	407582	7932917	15	15	10	11	2	273	-2.0	-2.0	6.0	16	0	0	0	0	0.0	100	40	0
EP4308	-80#	407695	7932919	16	14	9	10	2	323	-2.0	-2.0	6.0	18	0	0	0	0	0.0	100	36	0
EP4307	-80#	407807	7932920	17	15	11	12	2	296	2.0	-2.0	6.0	18	0	0	0	0	0.0	100	40	0
EP4305	-80#	407919	7932921	19	15	9	10	2	323	-2.0	-2.0	6.0	12	0	0	0	0	0.0	100	36	0
EP4304	-80#	408031	7932922	21	18	13	13	2	431	-2.0	-2.0	7.0	17	0	0	0	0	0.0	100	44	0
EP4303	-80#	408143	7932923	22	18	9	12	2	562	-2.0	-2.0	9.0	18	0	0	0	0	0.0	150	37	0
EP4302	-80#	408255	7932924	19	17	12	10	2	436	-2.0	-2.0	7.0	17	0	0	0	0	0.0	100	39	0
EP4301	-80#	408367	7932926	18	16	11	9	2	441	-2.0	-2.0	6.0	20	0	0	0	0	0.0	100	37	0
EP4300	-80#	408479	7932927	15	14	13	9	2	207	-2.0	-2.0	5.0	12	0	0	0	0	0.0	100	35	0
EP4299	-80#	408591	7932928	25	10	16	7	1	201	-2.0	-2.0	5.0	12	0	0	0	0	0.0	50	28	0
EP4298	-80#	408603	7932396	13	17	9	9	1	411	-2.0	-2.0	6.0	17	0	0	0	0	0.0	100	30	0
EP4297	-80#	408503	7932401	20	19	20	12	2	441	-2.0	-2.0	8.0	20	0	0	0	0	0.0	150	41	0
EP4296	-80#	408403	7932407	17	20	11	14	2	298	-2.0	-2.0	7.0	20	0	0	0	0	0.0	100	50	0
EP4295	-80#	408303	7932412	13	16	8	10	2	225	2.0	-2.0	6.0	11	0	0	0	0	0.0	50	39	0
EP4294	-80#	408203	7932418	16	16	11	11	2	259	-2.0	-2.0	6.0	14	0	0	0	0	0.0	100	41	0
EP4293	-80#	408103	7932423	20	19	10	13	2	351	-2.0	-2.0	8.0	14	0	0	0	0	0.0	100	46	0
EP4292	-80#	408002	7932429	31	12	12	9	2	280	-2.0	-2.0	6.0	17	0	0	0	0	0.0	100	35	0
EP4291	-80#	407902	7932434	28	18	13	13	2	354	5.0	-2.0	9.0	20	0	0	0	0	0.0	100	48	0
EP4290	-80#	407802	7932440	17	16	12	12	2	232	7.0	-2.0	7.0	11	0	0	0	0	0.0	50	42	0
EP4289	-80#	407702	7932445	18	14	8	9	2	225	-2.0	-2.0	5.0	12	0	0	0	0	0.0	50	34	0
EP4288	-80#	407602	7932451	16	16	10	12	2	186	2.0	-2.0	8.0	17	0	0	0	0	0.0	100	48	0
EP4287	-80#	407502	7932456	15	16	9	12	2	173	-2.0	-2.0	6.0	19	0	0	0	0	0.0	100	47	0
EP4286	-80#	407402	7932461	15	13	6	10	2	192	4.0	-2.0	6.0	19	0	0	0	0	0.0	100	38	0
EP4285	-80#	407302	7932467	15	11	10	8	1	156	-2.0	-2.0	4.0	10	0	0	0	0	0.0	50	30	0
DG3140	-80#	401965	7934800	10	11	9	7	15300	181	5.0	-2.0	6.0	18	0	0	0	0	0.0	150	31	0
DG3139	-80#	401894	7934723	16	15	14	9	12600	214	4.0	-2.0	5.0	17	0	0	0	0	0.0	150	29	0
DG3138	-80#	401822	7934646	51	34	40	17	27100	374	-2.0	-2.0	10.0	26	0	0	0	0	0.0	200	55	0
DG3137	-80#	401751	7934570	75	17	42	9	14800	588	-2.0	-2.0	8.0	18	0	0	0	0	0.0	200	35	0
DG3136	-80#	401679	7934493	40	15	11	9	16800	378	-2.0	-2.0	8.0	18	0	0	0	0	0.0	100	34	0

DG3135	-80#	401608	7934416	42	28	14	13	19100	737	-2.0	-2.0	8.0	19	0	0	0	0	0.0	150	37	0
DG3134	-80#	401536	7934339	14	15	9	8	17700	417	-2.0	-2.0	5.0	18	0	0	0	0	0.0	100	31	0
DG3133	-80#	401465	7934263	17	19	11	12	20600	291	-2.0	-2.0	7.0	21	0	0	0	0	0.0	150	44	0
DG3132	-80#	401393	7934186	27	32	16	12	21100	245	2.0	-2.0	9.0	22	0	0	0	0	0.0	200	49	0
DG3131	-80#	401322	7934109	13	13	10	9	16200	241	-2.0	-2.0	7.0	19	0	0	0	0	0.0	150	36	0
DG3130	-80#	401081	7934390	78	292	38	26	28000	167	17.0	-2.0	7.0	20	0	0	0	0	0.0	250	63	0
DG3129	-80#	401149	7934464	35	93	21	22	43400	1450	-2.0	-2.0	21.0	27	0	0	0	0	0.0	250	63	0
DG3128	-80#	401217	7934537	27	19	14	12	21200	522	-2.0	-2.0	8.0	18	0	0	0	0	0.0	350	44	0
DG3127	-80#	401286	7934611	36	29	14	9	17500	603	8.0	-2.0	7.0	18	0	0	0	0	0.0	150	32	0
DG3126	-80#	401354	7934684	87	33	23	17	25800	747	-2.0	-2.0	13.0	20	0	0	0	0	0.0	150	46	0
DG3125	-80#	401422	7934758	74	16	24	10	22200	530	4.0	-2.0	10.0	17	0	0	0	0	0.0	150	33	0
DG3124	-80#	401490	7934831	105	16	43	7	19100	1040	6.0	-2.0	13.0	18	0	0	0	0	0.0	150	29	0
DG3123	-80#	401559	7934905	22	11	15	6	22800	235	3.0	-2.0	4.0	18	0	0	0	0	0.0	150	27	0
DG3122	-80#	401627	7934978	7	8	6	5	25700	144	6.0	-2.0	4.0	13	0	0	0	0	0.0	100	28	0
DG3121	-80#	401695	7935052	9	10	6	6	15000	224	5.0	-2.0	5.0	16	0	0	0	0	0.0	150	26	0
DG3120	-80#	401366	7935303	12	11	11	6	15200	190	4.0	-2.0	6.0	14	0	0	0	0	0.0	150	27	0
DG3119	-80#	401295	7935232	15	11	12	6	14500	119	3.0	-2.0	3.0	17	0	0	0	0	0.0	150	25	0
DG3118	-80#	401224	7935161	110	24	33	8	27000	1080	9.0	-2.0	14.0	18	0	0	0	0	0.0	250	33	0
DG3117	-80#	401154	7935089	43	18	18	9	20000	349	-2.0	-2.0	5.0	17	0	0	0	0	0.0	150	35	0
DG3116	-80#	401083	7935018	28	17	11	12	21400	378	8.0	-2.0	8.0	19	0	0	0	0	0.0	150	43	0
DG3115	-80#	401012	7934947	19	15	9	9	15100	651	-2.0	-2.0	5.0	18	0	0	0	0	0.0	100	31	0
DG3114	-80#	401012	7934947	20	15	9	10	16300	678	-2.0	-2.0	5.0	20	0	0	0	0	0.0	100	30	0
DG3113	-80#	400941	7934876	24	23	14	14	24900	447	-2.0	-2.0	8.0	23	0	0	0	0	0.0	150	48	0
DG3112	-80#	400871	7934804	22	23	12	9	15500	637	-2.0	-2.0	6.0	18	0	0	0	0	0.0	150	29	0
DG3111	-80#	400800	7934733	15	15	9	9	14500	237	3.0	-2.0	4.0	17	0	0	0	0	0.0	100	32	0
DG3110	-80#	400729	7934662	44	27	9	21	27600	1070	11.0	-2.0	25.0	22	0	0	0	0	0.0	150	56	0
DG3109	-80#	400465	7935002	17	14	7	10	15600	151	-2.0	-2.0	3.0	20	0	0	0	0	0.0	100	39	0
DG3108	-80#	400536	7935076	17	30	11	10	15500	374	-2.0	-2.0	6.0	17	0	0	0	0	0.0	150	33	0
DG3107	-80#	400607	7935151	28	27	18	11	20100	736	-2.0	-2.0	8.0	21	0	0	0	0	0.0	200	39	0
DG3106	-80#	400677	7935225	78	67	25	27	31900	1170	3.0	-2.0	20.0	28	0	0	0	0	0.0	200	63	0
DG3105	-80#	400748	7935300	34	12	20	8	151000	255	-2.0	-2.0	8.0	19	0	0	0	0	0.0	200	36	0
DG3104	-80#	400819	7935374	21	12	13	8	16200	317	-2.0	-2.0	6.0	21	0	0	0	0	0.0	200	35	0

DG3103	-80#	400890	7935448	14	13	22	11	18600	92	3.0	-2.0	5.0	22	0	0	0	0	0.0	150	39	0
DG3102	-80#	400960	7935523	14	12	11	10	18200	201	3.0	-2.0	6.0	23	0	0	0	0	0.0	150	36	0
DG3101	-80#	400960	7935523	14	13	11	10	18500	242	3.0	-2.0	6.0	23	0	0	0	0	0.0	150	37	0
DG3100	-80#	401031	7935597	15	14	15	13	18700	387	-2.0	-2.0	10.0	23	0	0	0	0	0.0	200	41	0
DG3099	-80#	399876	7935041	13	12	11	8	14100	191	-2.0	-2.0	6.0	20	0	0	0	0	0.0	150	32	0
DG3098	-80#	399912	7935076	14	17	22	10	14300	414	-2.0	-2.0	9.0	18	0	0	0	0	0.0	150	31	0
DG3097	-80#	399948	7935110	21	25	12	11	17200	443	3.0	-2.0	8.0	20	0	0	0	0	0.0	200	38	0
DG3096	-80#	399984	7935145	15	29	12	10	15200	266	-2.0	-2.0	6.0	19	0	0	0	0	0.0	150	35	0
DG3095	-80#	400020	7935179	14	33	8	9	12800	301	3.0	-2.0	5.0	18	0	0	0	0	0.0	150	28	0
DG3094	-80#	400056	7935214	8	13	7	6	8400	92	-2.0	-2.0	2.0	20	0	0	0	0	0.0	50	30	0
DG3093	-80#	400093	7935249	16	30	15	14	20300	667	-2.0	-2.0	6.0	26	0	0	0	0	0.0	150	43	0
DG3092	-80#	400129	7935283	16	21	12	13	17500	1240	-2.0	-2.0	7.0	21	0	0	0	0	0.0	100	33	0
DG3091	-80#	400165	7935318	9	13	10	5	9200	87	4.0	-2.0	-2.0	19	0	0	0	0	0.0	50	28	0
DG3090	-80#	400201	7935353	16	17	16	7	15300	191	-2.0	-2.0	3.0	21	0	0	0	0	0.0	100	37	0
DG3089	-80#	400237	7935387	15	15	9	6	12400	268	3.0	-2.0	4.0	17	0	0	0	0	0.0	100	28	0
DG3088	-80#	400273	7935422	30	22	16	10	17000	821	4.0	-2.0	9.0	22	0	0	0	0	0.0	200	34	0
DG3087	-80#	400309	7935456	43	18	12	12	16500	1500	3.0	-2.0	13.0	20	0	0	0	0	0.0	150	36	0
DG3086	-80#	400345	7935491	48	19	11	16	19700	2320	4.0	-2.0	18.0	24	0	0	0	0	0.0	150	46	0
DG3085	-80#	400345	7935491	51	19	12	15	19800	2430	5.0	-2.0	19.0	25	0	0	0	0	0.0	150	45	0
DG3084	-80#	400381	7935526	51	15	15	11	17200	1070	-2.0	-2.0	12.0	23	0	0	0	0	0.0	150	41	0
DG3083	-80#	400417	7935560	209	33	23	22	28500	6005	9.0	-2.0	45.0	31	0	0	0	0	0.0	300	0	0
DG3082	-80#	400454	7935595	38	10	16	7	12700	802	3.0	-2.0	8.0	18	0	0	0	0	0.0	150	26	0
DG3081	-80#	400490	7935630	147	25	62	12	22000	3240	-2.0	-2.0	28.0	26	0	0	0	0	0.0	200	40	0
DG3080	-80#	400526	7935664	267	21	203	11	20800	3660	5.0	-2.0	30.0	27	0	0	0	0	0.0	250	55	0
DG3079	-80#	400562	7935699	107	20	66	11	23800	2410	3.0	-2.0	26.0	18	0	0	0	0	0.0	200	34	0
DG3078	-80#	400598	7935733	88	30	30	14	27400	1060	8.0	-2.0	18.0	24	0	0	0	0	0.0	200	37	0
DG3077	-80#	400634	7935768	38	17	18	9	17100	676	5.0	-2.0	10.0	20	0	0	0	0	0.0	200	31	0
DG3076	-80#	399576	7935300	13	11	13	8	12800	150	-2.0	-2.0	5.0	19	0	0	0	0	0.0	100	30	0
DG3075	-80#	399580	7935305	58	17	9	11	15000	377	3.0	-2.0	7.0	20	0	0	0	0	0.0	100	34	0
DG3074	-80#	399584	7935310	43	23	11	10	13700	390	-2.0	-2.0	7.0	19	0	0	0	0	0.0	150	31	0
DG3073	-80#	399588	7935316	27	44	11	10	14100	312	-2.0	-2.0	6.0	20	0	0	0	0	0.0	150	32	0
DG3072	-80#	399592	7935321	16	26	7	10	11800	449	3.0	-2.0	4.0	17	0	0	0	0	0.0	100	25	0

DG3071	-80#	399596	7935326	15	19	12	9	13200	457	-2.0	-2.0	5.0	17	0	0	0	0	0.0	100	28	0
DG3070	-80#	399600	7935331	15	17	9	10	14100	316	4.0	-2.0	4.0	18	0	0	0	0	0.0	100	30	0
DG3069	-80#	399604	7935337	18	25	12	11	15800	385	3.0	-2.0	6.0	20	0	0	0	0	0.0	150	32	0
DG3060	-80#	399637	7935379	96	18	53	12	24500	3860	15.0	-2.0	26.0	26	0	0	0	0	0.0	250	42	0
DG3059	-80#	399641	7935384	46	16	36	9	15400	2140	-2.0	-2.0	13.0	20	0	0	0	0	0.0	250	28	0
DG3058	-80#	399645	7935389	116	13	46	8	17900	2620	-2.0	-2.0	18.0	18	0	0	0	0	0.0	150	26	0
DG3057	-80#	399649	7935394	455	38	1140	287	39100	50900	1119.0	15.0	-2.0	400	0	0	0	0	0.0	35	2	0
DG3056	-80#	399653	7935400	40	16	28	11	32100	576	-2.0	-2.0	10.0	25	0	0	0	0	0.0	200	33	0
DG3055	-80#	399657	7935405	20	11	13	7	20200	279	3.0	-2.0	6.0	21	0	0	0	0	0.0	150	33	0
DG3054	-80#	399661	7935410	41	13	37	7	29400	564	8.0	-2.0	9.0	20	0	0	0	0	0.0	150	31	0
DG3053	-80#	399420	7935699	10	10	7	8	11900	745	-2.0	-2.0	14.0	15	0	0	0	0	0.0	150	25	0
DG3044	-80#	399732	7936004	35	15	12	9	18800	726	-2.0	-2.0	8.0	20	0	0	0	0	0.0	200	32	0
DG3042	-80#	399767	7936037	65	14	8	13	29800	1270	5.0	-2.0	16.0	22	0	0	0	0	0.0	200	48	0
DG3041	-80#	399802	7936071	48	15	6	15	28100	1420	8.0	-2.0	18.0	24	0	0	0	0	0.0	150	54	0
DG3040	-80#	399836	7936105	40	17	15	12	27600	1110	-2.0	-2.0	9.0	24	0	0	0	0	0.0	250	38	0
DG3039	-80#	399871	7936139	147	21	78	14	33900	5150	-2.0	-2.0	37.0	26	0	0	0	0	0.0	200	51	0
DG3038	-80#	399906	7936173	241	20	822	10	21800	8460	-2.0	-2.0	35.0	23	0	0	0	0	0.0	500	54	0
DG3036	-80#	399975	7936240	293	24	380	14	47600	3030	20.0	-2.0	35.0	24	0	0	0	0	0.0	350	70	0
DG3035	-80#	400010	7936274	54	18	61	9	35100	1230	8.0	-2.0	14.0	17	0	0	0	0	0.0	250	33	0
DG3024	-80#	399151	7936228	23	14	-5	11	19200	659	-2.0	-2.0	9.0	20	0	0	0	0	0.0	150	36	0
DG3023	-80#	399079	7936149	29	11	-5	8	15500	412	-2.0	-2.0	5.0	18	0	0	0	0	0.0	150	34	0
DG3022	-80#	399008	7936071	101	14	-5	14	21900	1590	7.0	-2.0	26.0	22	0	0	0	0	0.0	250	45	0
DG3021	-80#	398936	7935993	29	19	-5	14	25400	478	4.0	-2.0	14.0	25	0	0	0	0	0.0	150	52	0
DG3020	-80#	398936	7935993	25	17	-5	14	24800	502	5.0	-2.0	14.0	24	0	0	0	0	0.0	150	51	0
DG3019	-80#	398871	7935922	11	13	-5	9	18600	322	-2.0	-2.0	4.0	22	0	0	0	0	0.0	150	43	0
DG3018	-80#	398570	7936100	9	12	-5	10	14500	959	-2.0	-2.0	12.0	17	0	0	0	0	0.0	200	30	0
DG3017	-80#	398638	7936171	44	20	14	16	25200	3480	6.0	-2.0	18.0	24	0	0	0	0	0.0	200	52	0
DG3016	-80#	398706	7936243	16	53	6	10	17100	304	-2.0	-2.0	5.0	20	0	0	0	0	0.0	150	33	0
DG3015	-80#	398774	7936314	19	23	-5	10	19600	384	3.0	-2.0	6.0	21	0	0	0	0	0.0	100	38	0
DG3014	-80#	398842	7936385	23	28	-5	12	16300	486	3.0	-2.0	10.0	20	0	0	0	0	0.0	150	32	0
DG3013	-80#	398910	7936457	15	35	-5	12	25000	542	4.0	-2.0	7.0	21	0	0	0	0	0.0	150	38	0
DG3012	-80#	398978	7936528	26	101	13	20	31300	609	9.0	-2.0	9.0	26	0	0	0	0	0.0	200	53	0

DG3011	-80#	399046	7936599	22	61	6	15	29600	665	3.0	-2.0	8.0	24	0	0	0	0	0.0	250	43	0
DG3010	-80#	399114	7936671	16	44	-5	12	20200	636	-2.0	-2.0	6.0	20	0	0	0	0	0.0	200	32	0
DG3009	-80#	399114	7936671	17	45	-5	12	20700	668	-2.0	-2.0	7.0	19	0	0	0	0	0.0	200	34	0
DG3004	-80#	399453	7937027	19	12	-5	11	18800	566	-2.0	-2.0	9.0	19	0	0	0	0	0.0	200	33	0
DG3005	-80#	399385	7936956	26	18	6	12	20500	417	-2.0	-2.0	8.0	20	0	0	0	0	0.0	200	37	0
DG3006	-80#	399317	7936884	29	22	-5	12	19600	413	2.0	-2.0	9.0	20	0	0	0	0	0.0	200	36	0
DG3008	-80#	399181	7936742	16	24	-5	9	17100	379	-2.0	-2.0	6.0	20	0	0	0	0	0.0	150	30	0
DG3007	-80#	399249	7936813	26	17	6	12	20800	680	-2.0	-2.0	9.0	20	0	0	0	0	0.0	200	39	0
DG3003	-80#	399521	7937098	66	28	12	17	28500	2340	-2.0	-2.0	19.0	24	0	0	0	0	0.0	350	46	0
DG3002	-80#	399589	7937170	84	20	146	19	14800	795	2.0	-2.0	28.0	17	0	0	0	0	0.0	300	25	0

APPENDIX 4

ROCK CHIP GEOCHEMISTRY RESULTS
1996

BOOTU CREEK ROCK CHIP SAMPLE RESULTS

Sample No	Easting	Nothing	Cu	Zn	Pb	Ni	Fe	Mn	As	Mo	Co	Cr	Na	K	Ba	Mg	Sb	P	Cd	V	Ca
EQ2821	407040	7939812	36	11	35	16	10303	97	7	3	3	31	147	2446	481	1920	3	90	-1	15	2535
EQ2822	406482	7941075	141	74	28	39	273034	595	94	3	24	92	158	3597	3615	1277	5	942	-1	287	629
EQ2824	406377	7941110	351	159	18	43	389389	732	46	3	28	36	136	3312	8037	1853	3	2002	-1	29	1769
EQ2826	406917	7934475	48	22	30	16	270591	198	33	-1	8	42	154	4454	497	1966	3	159	-1	31	1966
EQ2828	406853	7933867	2220	84	1370	25	96300	367360	23	5	987	44	484	8030	71900	768	2	252	-1	29	1431
EQ2827	406853	7933867	242	54	31	28	448047	799	68	1	33	44	138	2705	24546	1342	2	210	-1	39	1241
EQ2837	401944	7934357	3089	224	307	17	20055	266816	13	3	1164	26	500	9230	20639	947	4	263	1	11	1929
EQ2836	403220	7932680	2278	291	50	49	501035	5527	202	-1	267	86	119	685	184	1201	3	414	-1	210	2085
EQ2835	403400	7932610	399	149	517	67	506506	2563	51	2	75	30	122	1895	840	1578	2	1028	-1	41	2130
EQ2834	403550	7932440	267	63	43	32	435034	852	82	1	34	70	137	2634	2737	1365	2	618	-1	88	1439
EQ2833	403667	7932320	258	88	157	27	393694	887	63	2	53	34	140	3067	12310	1388	7	778	-1	61	1222
EQ2832	403900	7932150	320	216	88	28	466973	2481	44	1	52	70	122	1604	444	1289	7	992	1	178	1563
EQ2831	404690	7931470	543	68	61	36	505371	2057	70	1	33	50	125	1593	357	860	2	968	-1	78	657
EQ2830	406777	7932600	2442	133	3111	31	44311	302793	29	1	2121	34	775	7632	66331	809	6	203	1	143	989
EQ2845	401590	7935102	476	16	84	10	414873	1667	100	-1	11	122	150	2241	1196	1398	4	900	-1	246	1489
EQ2844	401590	7935102	3247	154	513	17	16644	268119	13	1	1119	19	825	6590	38984	1207	3	253	1	-5	2237
EQ2843	401571	7934802	4731	304	3877	56	37792	281057	35	1	1945	21	696	4275	12532	1461	2	175	1	58	2472
EQ2842	401625	7934890	55	27	71	15	430900	2339	28	-1	15	29	116	2421	300	1384	2	281	-1	33	1547
EQ2841	401625	7934790	2842	123	1403	19	11484	283468	-5	8	766	22	443	6771	5828	895	4	211	3	115	1639
EQ2840	401832	7934498	15125	593	10471	43	12947	451405	30	9	3256	28	929	13756	12957	2015	7	268	5	76	3549
EQ2839	401890	7934439	7690	434	22905	23	19312	452550	46	28	3024	25	603	8427	76332	1304	7	832	2	295	2578
EQ2838	401890	7934439	184	21	745	28	10937	2334	12	4	45	37	162	1647	1193	1191	4	418	-1	29	1700
EQ2852	399756	7937000	2203	152	3441	-2	29645	451725	27	-1	1152	40	2027	13531	11109	886	6	86	3	101	1753
EQ2851	399756	7937000	1109	70	1584	-2	18667	440865	-5	-1	766	33	1815	11283	8594	626	2	505	1	14	1394
EQ2850	399756	7937000	203	35	160	24	444197	2843	262	7	73	45	100	237	5445	715	2	2351	-1	36	983
EQ2849	399756	7937000	306	45	248	25	453174	3947	244	5	67	41	108	210	9467	592	3	3420	-1	39	756
EQ2848	399859	7936246	301	36	178	16	236175	4228	47	2	42	66	296	10371	7829	4310	4	554	-1	78	3215
EQ2847	399859	7936246	264	38	233	29	356759	19443	34	-1	138	33	208	5068	34311	2080	2	196	-1	44	1070
EQ2846	400612	7935555	4855	390	135	34	44961	458984	33	8	2610	37	620	20861	38566	1208	1	535	1	24	1527

EQ2829	406777	7932600	2359	107	2177	22	74378	299547	33	1	1788	41	812	10406	67001	366	4	-20	-1	61	586
EQ2825	406960	7934702	380	61	80	38	447123	737	128	3	37	121	150	6445	433	4004	5	679	-1	242	3209
EQ2823	406377	7941110	211	147	19	38	428227	866	31	1	25	28	164	4121	10248	1762	2	1787	-1	26	1436

WILLIERAY ROCK CHIP SAMPLE RESULTS

Sample no	Easting	Northing	Cu	Zn	Pb	Ni	Fe	Mn	As	Mo	Co	Cr	Na	K	Ba	Mg	Sb	P	Cd	V	Ca
EQ2710	361400	7966230	42	10	12.8	20	27576	192	4.8	4.8	2.9	51	533	23660	566	2284	1.1	113	-0.1	17	2986
EQ2712	363290	7966050	50	361	15.6	27	237707	330	35.5	5.5	17.3	77	104	1256	135	615	1.6	2614	0.3	32	595
EQ2713	363290	7966050	66	81	30.2	19	227448	158	44.3	4.6	4.7	79	107	873	103	864	2.3	3348	-0.1	45	1226
EQ2720	363190	7964180	181	6	9.8	19	21924	349	13.1	4.1	3.3	40	144	785	394	1131	8.7	82	-0.1	21	804
EQ2722	363090	7964180	45	4	52.2	20	22393	162	8.2	4.6	3.2	41	116	285	141	643	1.4	60	-0.1	17	974
EQ2723	362990	7964180	76	14	5.5	41	38869	346	9.4	5.9	19.4	52	125	240	287	396	1.6	84	-0.1	10	477
EQ2724	362890	7964180	25	5	10.3	14	16312	85	2.1	3.2	1.9	36	149	1040	141	608	0.8	62	-0.1	16	507
EQ2730	362790	7964180	65	2	6.4	33	31425	209	3.2	7.9	3.1	70	117	558	167	544	1.6	82	-0.1	21	646
EQ2743	364400	7964180	16	2	11.2	9	178368	34	41.4	1.4	4.1	90	108	295	81	501	3.2	153	-0.1	446	657
EQ2749	363335	7966124	33	156	10.0	33	274889	354	9.1	5.1	15.8	46	105	2735	92	901	1.3	1610	-0.1	18	336
EQ2762	360000	7964175	35	4	4.9	16	20068	114	3.3	4.2	1.7	38	110	1199	256	445	0.9	66	-0.1	8	473
EQ2778	358600	7964175	23	4	6.2	16	15547	142	1.7	3.8	1.7	35	-100	159	553	320	0.5	58	-0.1	0	488
EQ2782	364100	7966250	17	4	3.7	13	12640	93	1.7	2.7	1.2	27	115	1425	89	520	0.5	75	-0.1	5	488
EQ2783	364150	7966250	9	7	14.7	7	16672	61	3.4	1.4	1.1	18	127	6357	131	1355	1.0	135	-0.1	14	450
EQ2784	364200	7966250	7	5	6.2	6	7464	35	3.9	1.1	0.7	13	125	4278	119	829	0.5	111	-0.1	7	358
EQ2785	364250	7966250	18	5	2.8	14	20856	90	4.4	3.1	1.5	31	115	4769	69	930	0.9	65	-0.1	11	283
EQ2786	364300	7966250	17	10	7.8	13	21819	76	2.9	3.3	1.6	30	132	5828	89	1070	1.2	75	-0.1	12	404
EQ2787	364350	7966250	34	8	5.5	26	26147	125	3.6	4.2	2.4	44	138	4524	78	5105	1.2	76	-0.1	9	7036
EQ2788	364400	7966250	28	6	2.1	21	22826	97	8.2	3.5	2.0	37	130	4951	108	2505	1.4	114	-0.1	8	3022

APPENDIX 5

GEOTEM SPECIFICATIONS

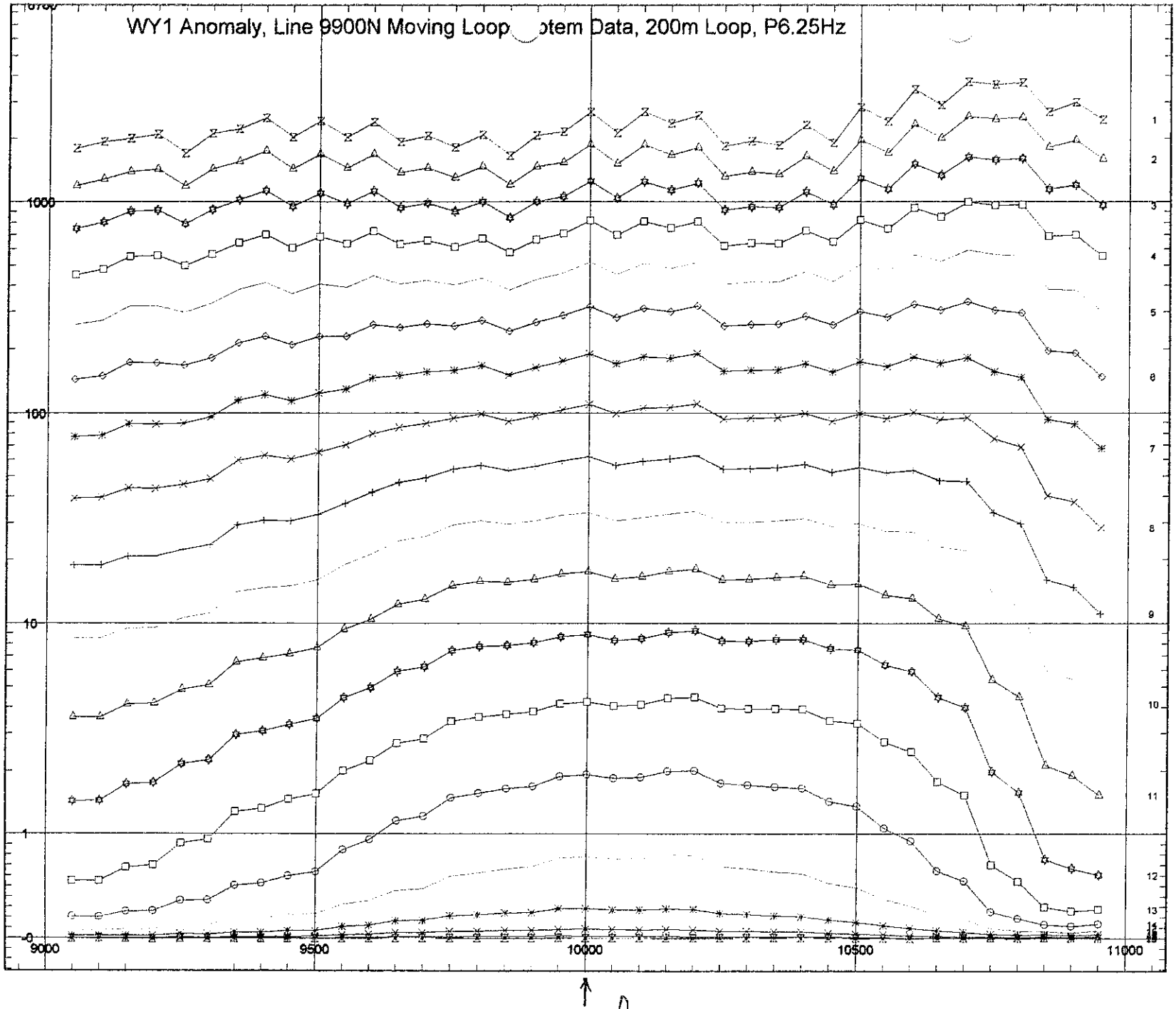
Aircraft			-	CASA C212-200 Turbo Prop					
Magnetometer			-	Scintrex Cesium Vapour Optical Absorption					
Resolution			-	0.01 nT					
Cycle Rate			-	1.0 second					
Sample Interval			-	60 metres					
Electromagnetic System			-	GEOTEM III Time Domain EM					
Transmitter Base Frequency			-	25 Hz					
Transmitter Pulse Width			-	4 msec					
Receiver			-	x and z, dual axis receiver coil in towed bird					
Cycle Rate			-	0.25 sec (X and Z components)					
Sample Interval			-	15 metres					
Window mean times (msec)			-						
em1	0.4609	em2	0.4766	em3	0.4922	em4	0.5156	em5	0.5469
em6	0.5859	em7	0.6328	em8	0.6875	em9	0.7578	em10	0.8438
em11	0.9453	em12	1.0625	em13	1.2031	em14	1.3750	em15	1.5938
em16	1.8594	em17	0.0469	em18	0.0781	em19	0.1094	em20	0.1406
Data Acquisition			-	RMS GR33 Thermal Dot Matrix Recorder					
			-	GEODAS Digital Acquisition System					
Flight Line Direction			-	075° (Bootu Creek) 090 - 270° (Willieray)					
Flight Line Spacing			-	1,000 metres					
Mean Terrain Clearance			-	105 metres					
Navigation			-	GPS satellite positioning / Doppler					

APPENDIX 6

GROUND EM SPECIFICATION AND RESULTS

GROUND EM SPECIFICATIONS

Survey type	Moving Loop
Contractor	Geoterrex Pty Ltd
Date	July 1996
Equipment	Digital PROTEM receiver TEM37 transmitter single component air-cored coil
Frequency	6.25 Hz
Loop Size	200 m x 200 m loops, 100 m moves
Station Spacing	Two readings were taken for each loop, one at the centre of the loop and another 50 m offset along the survey line resulting in a station spacing of 50 m.


WY1 Anomaly, Line 9900N Moving Loop tem Data, 200m Loop, P6.25Hz
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100
10
1
0
9000
9500
10000
10500
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2
3
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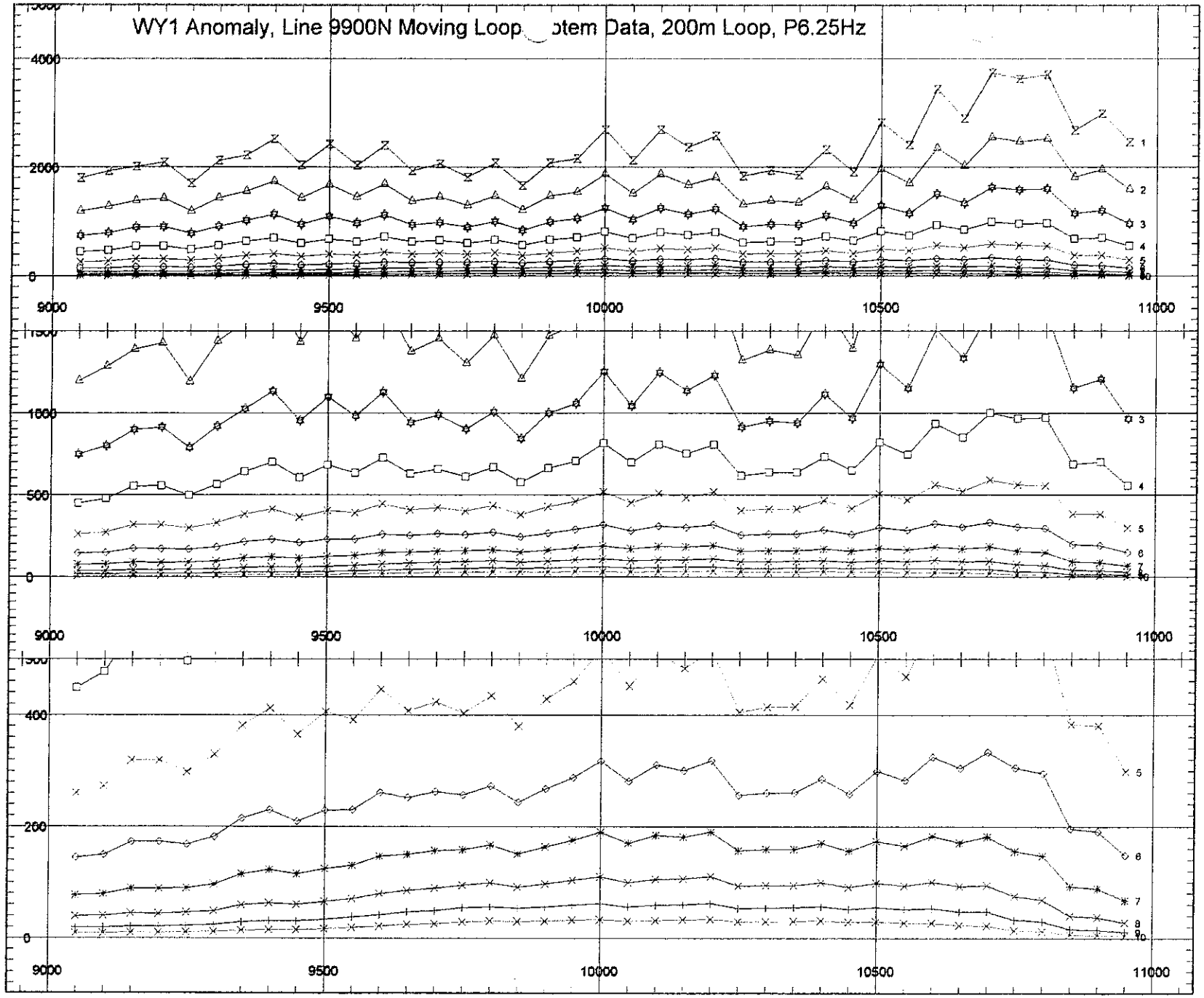
5
6
7
8
9
10
11
12
13
Drillsite


WY1 Anomaly, Line 9900N Moving Loop
Data, 200m Loop, P6.25Hz
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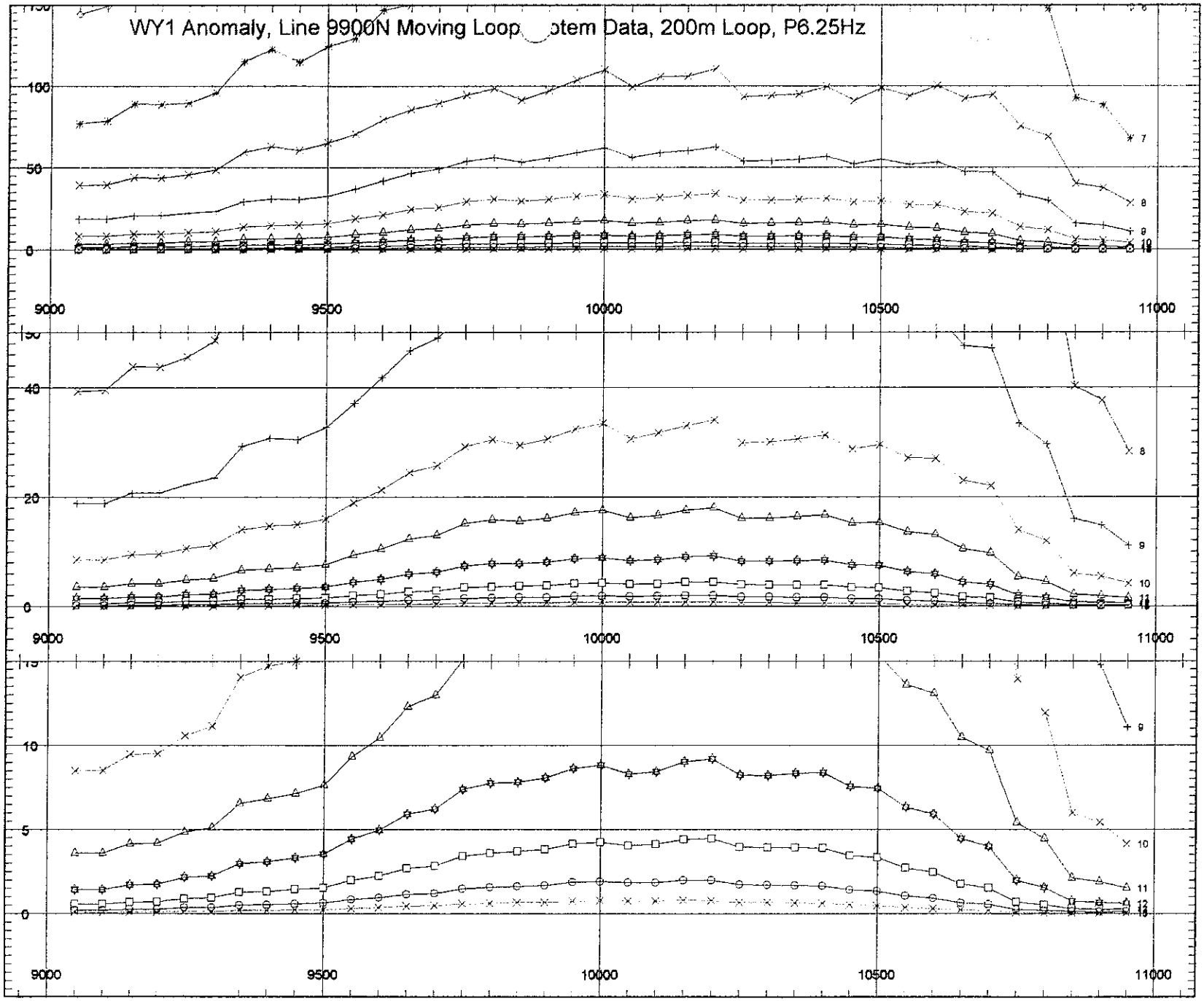
2000
0
9000
9500
10000
10500
11000
1
2
3
4
5
6
7
8
9
1500
1000
500
400
200


WY1 Anomaly, Line 9900N Moving Loop
tem Data, 200m Loop, P6.25Hz
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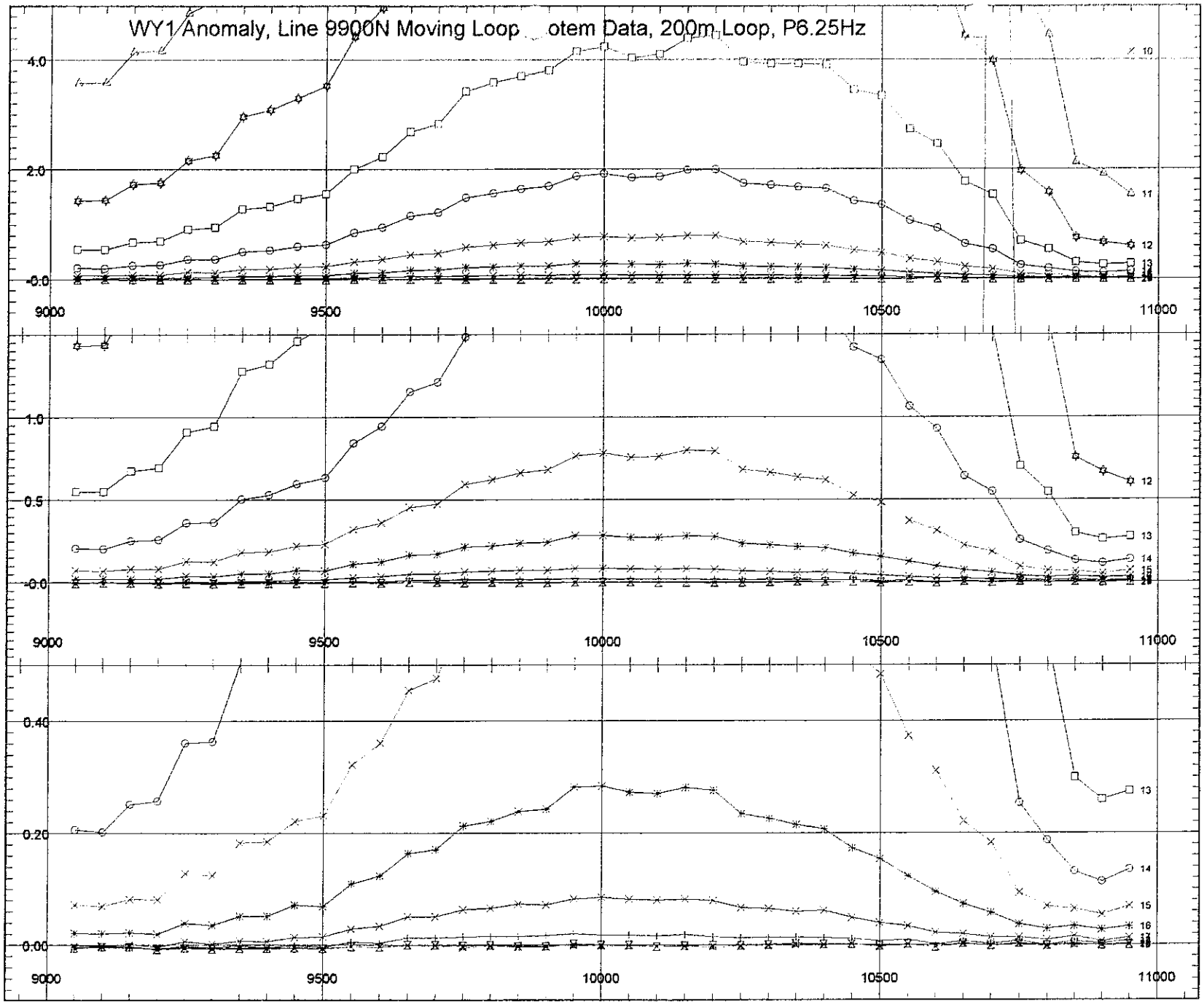
50
0
9000
9500
10000
10500
11000
7
8
9
40
20
0
9000
9500
10000
10500
11000
8
9
10
10
5
0
9000
9500
10000
10500
11000
9
10
11


WY1 Anomaly, Line 9900N Moving Loop otem Data, 200m Loop, P6.25Hz
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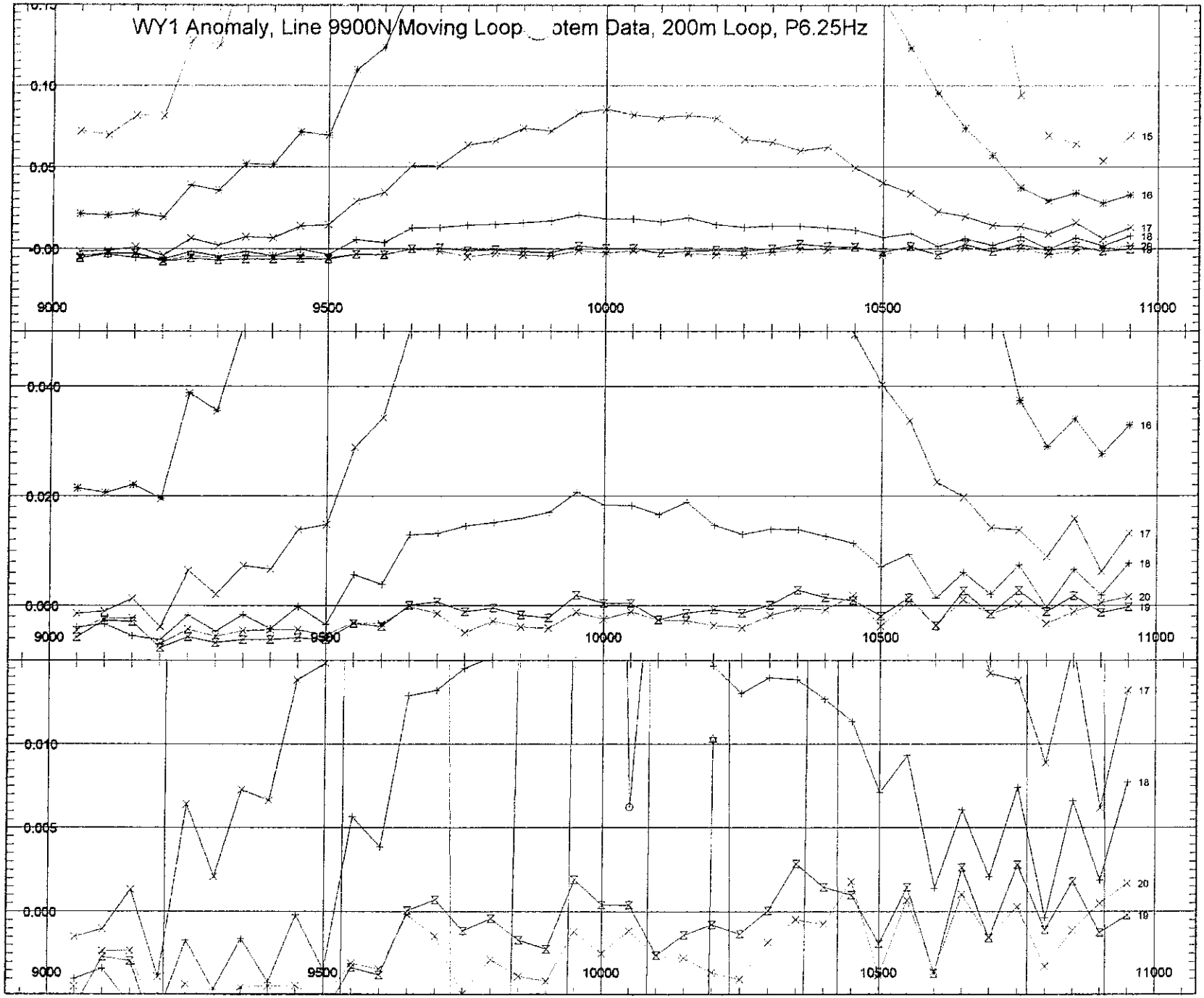
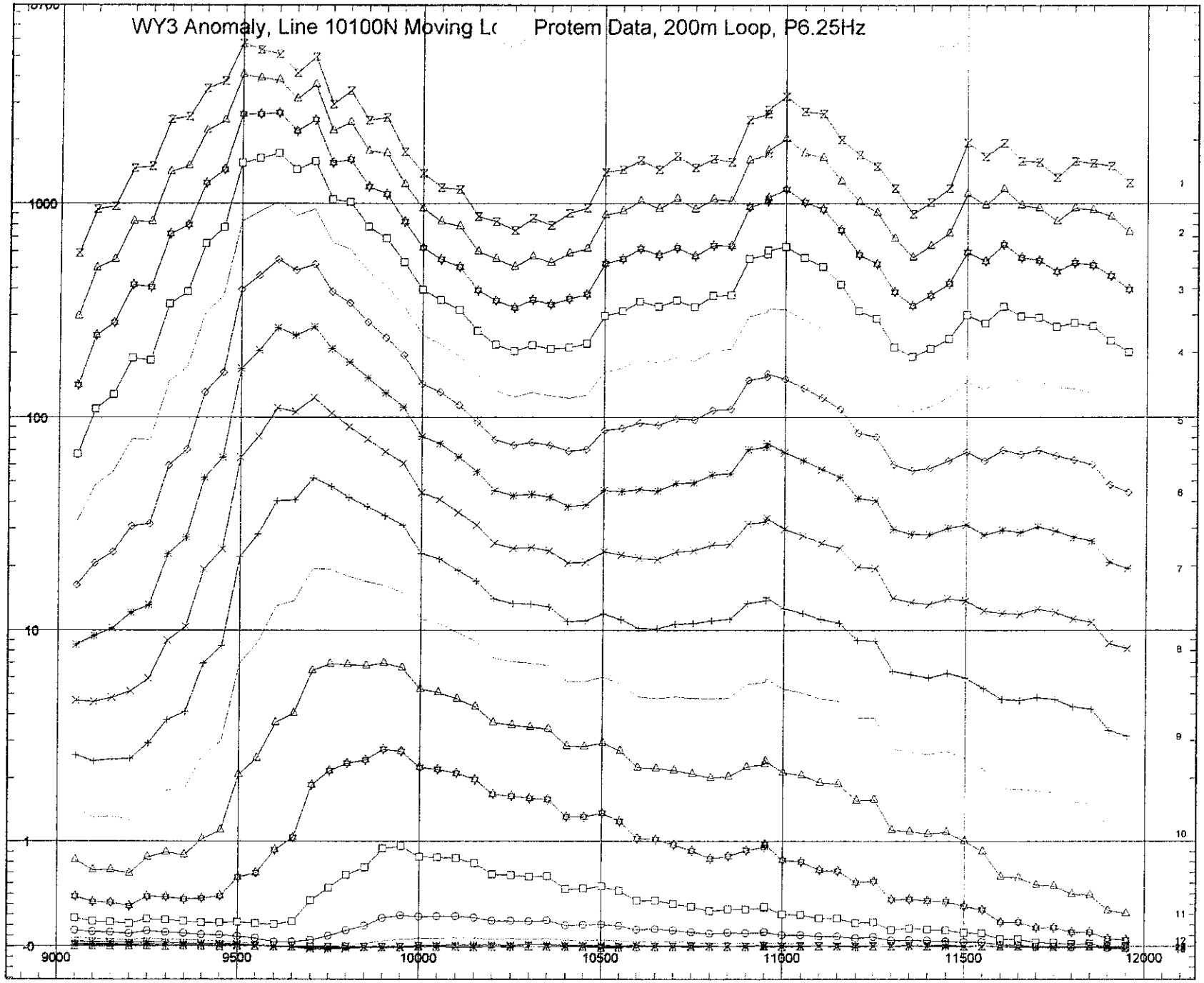
2.0
-0.0
9000
9500
10000
10500
11000
10
11
12
13
1.0
0.5
14
15
0.40
0.20
0.00
16


WY1 Anomaly, Line 9900N/Moving Loop _ otem Data, 200m Loop, P6.25Hz
0.10
0.05
-0.00
9000
9500
10000
10500
11000
15
16
17
18
0.040
0.020
0.000
20
19
0.010
0.005


WY3 Anomaly, Line 10100N Moving Lo
Protem Data, 200m Loop, P6.25Hz
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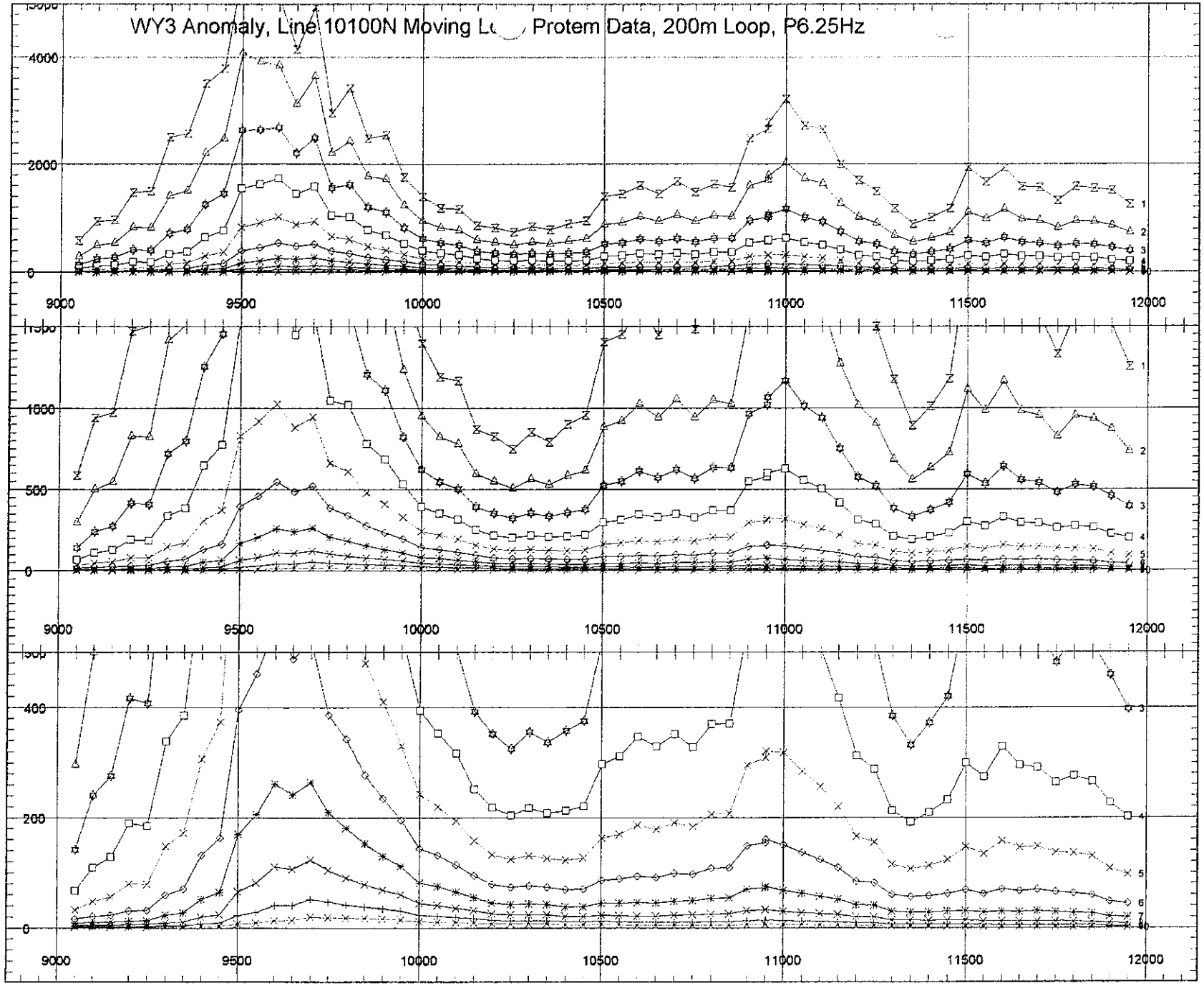
100
10
1
0
9000
9500
10000
10500
11000
11500
12000
1
2
3
4
5
6
7
8
9
10
11
12


WY3 Anomaly, Line 10100N Moving L Protem Data, 200m Loop, P6.25Hz
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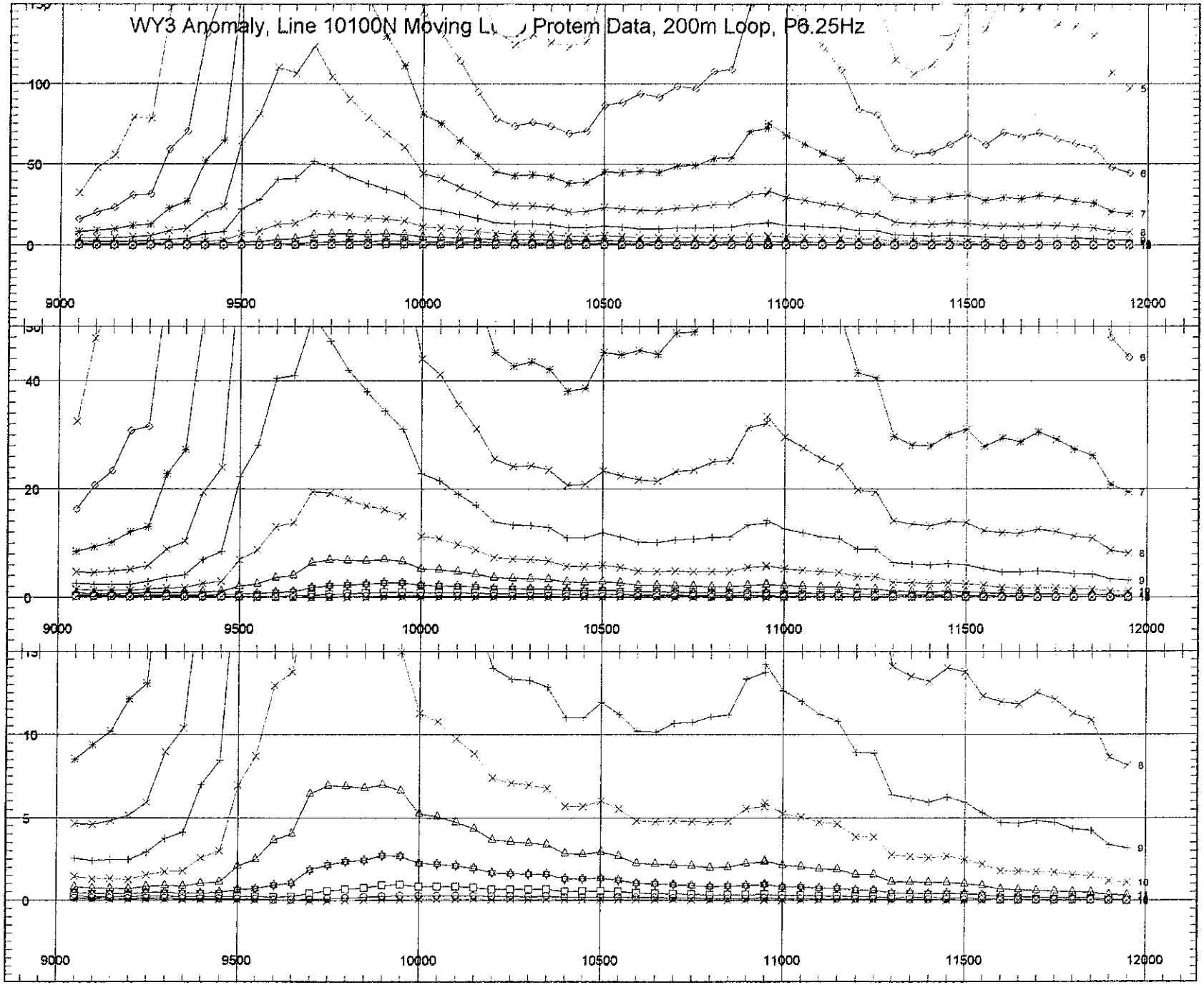
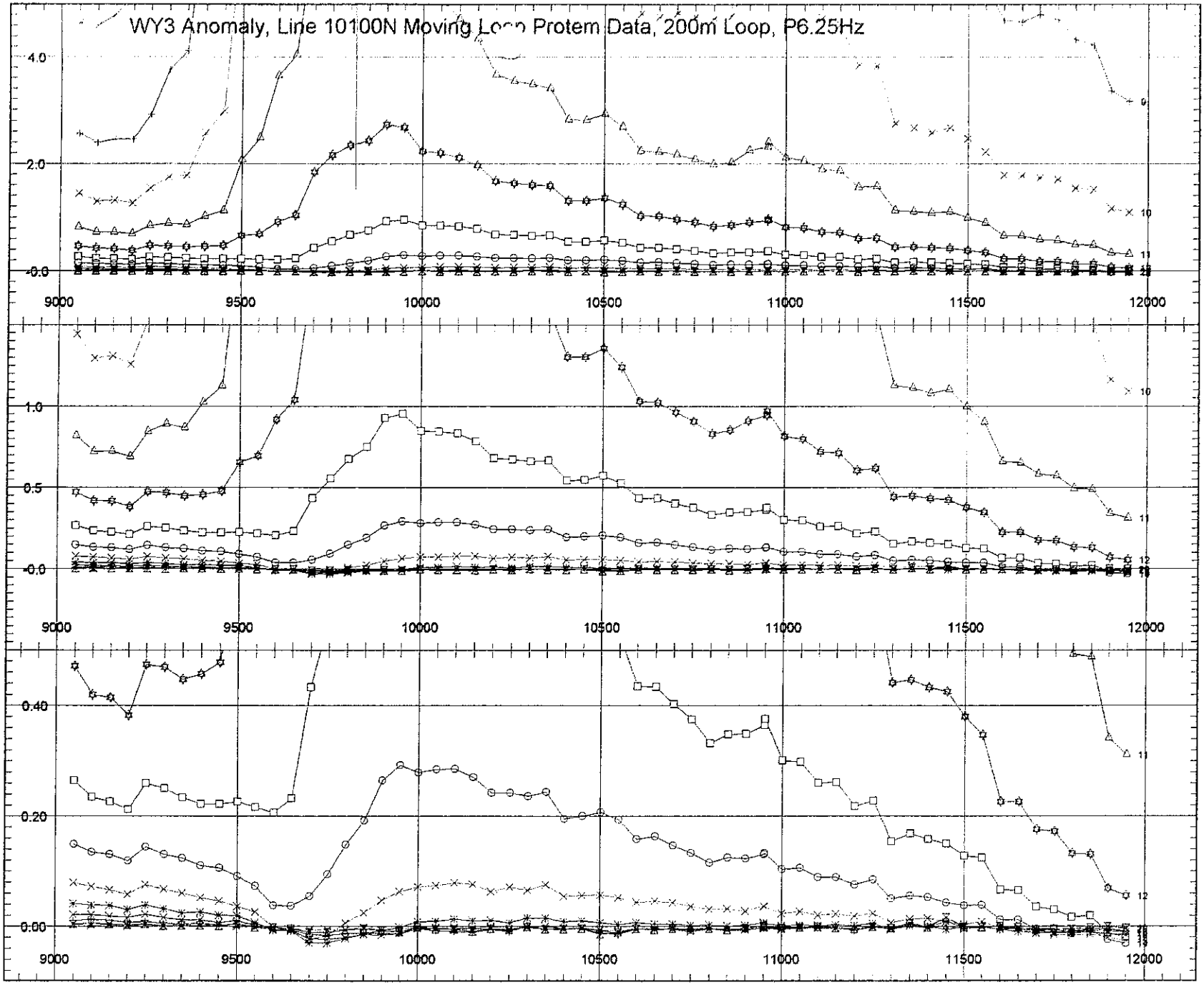
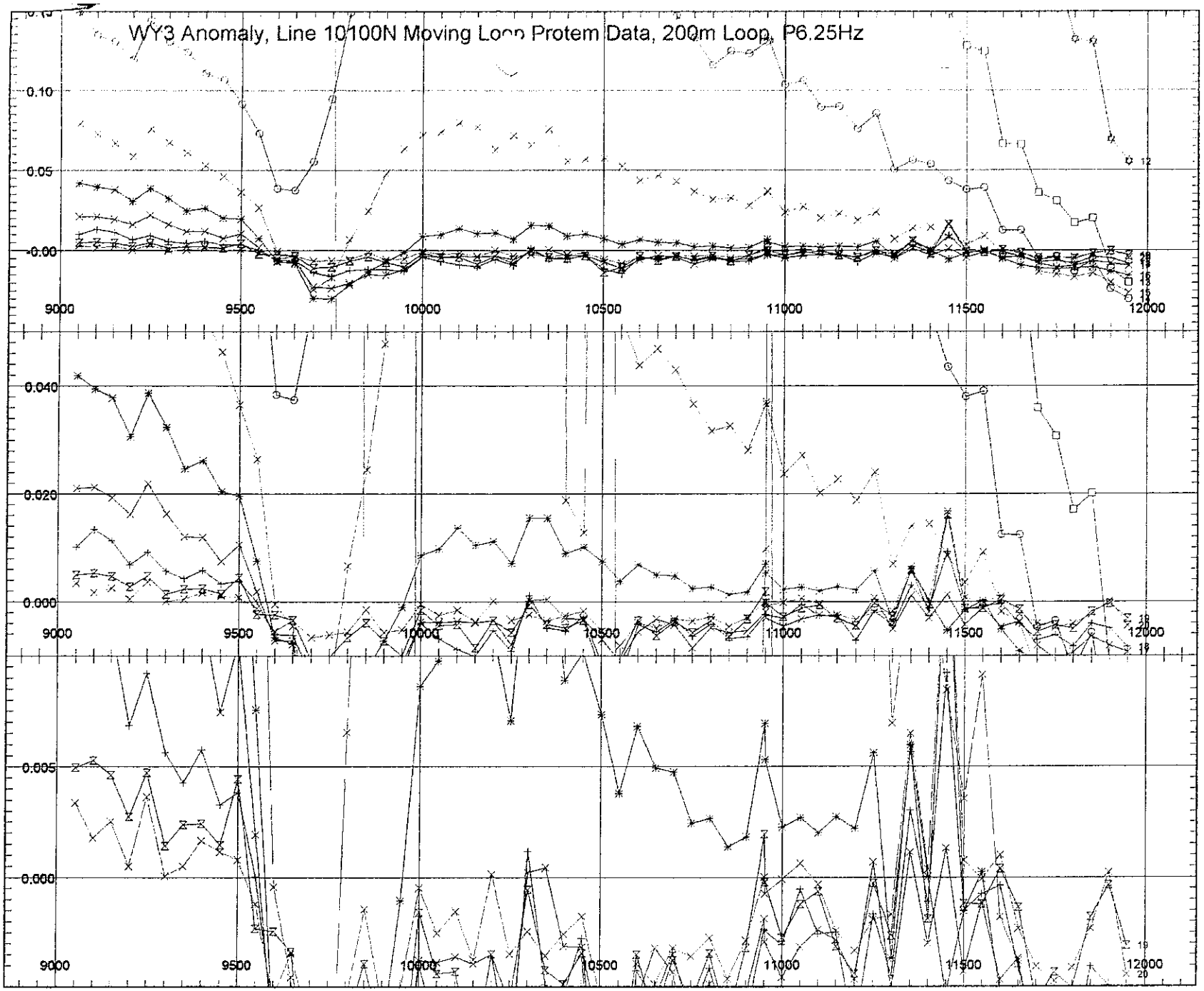
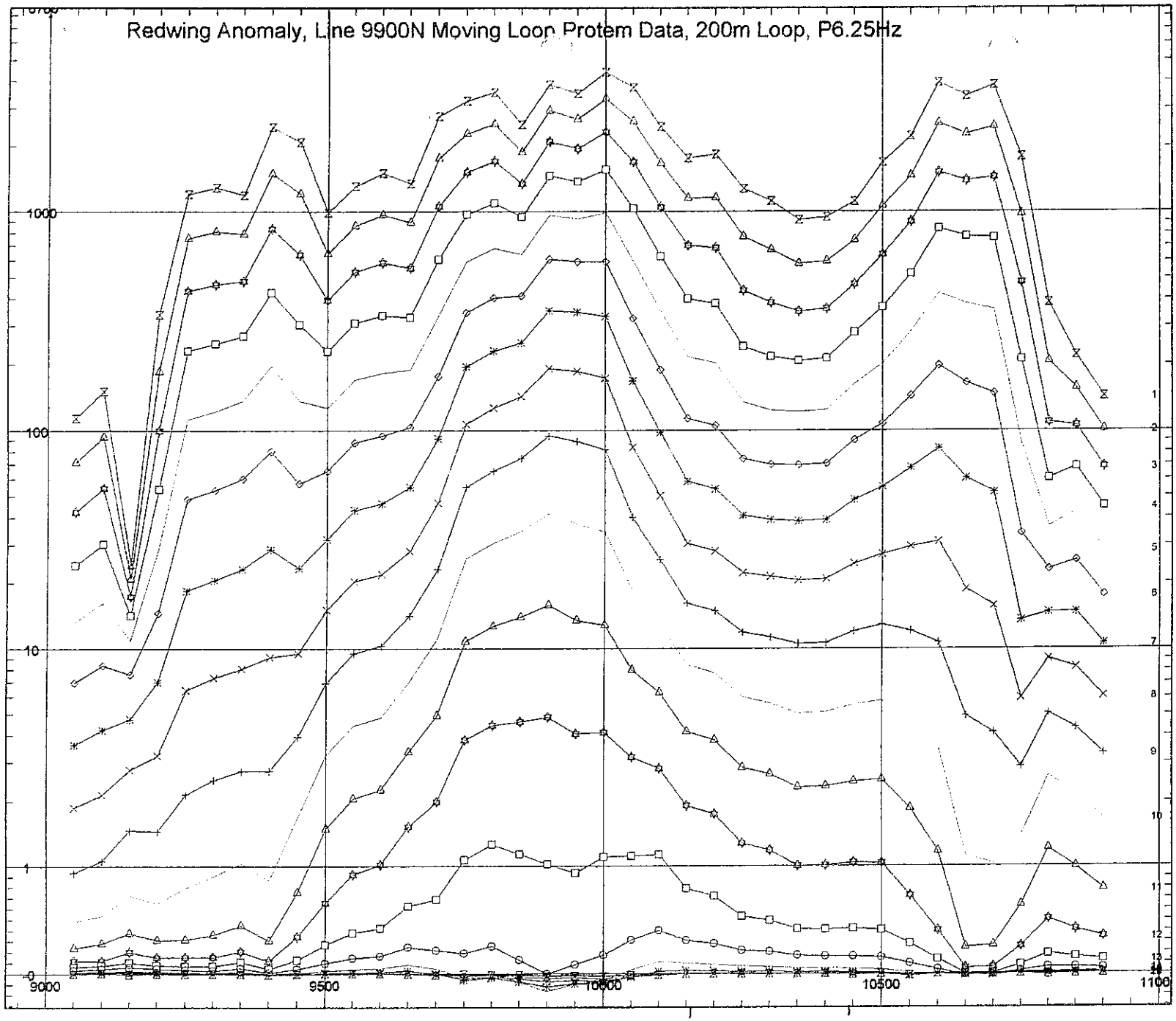
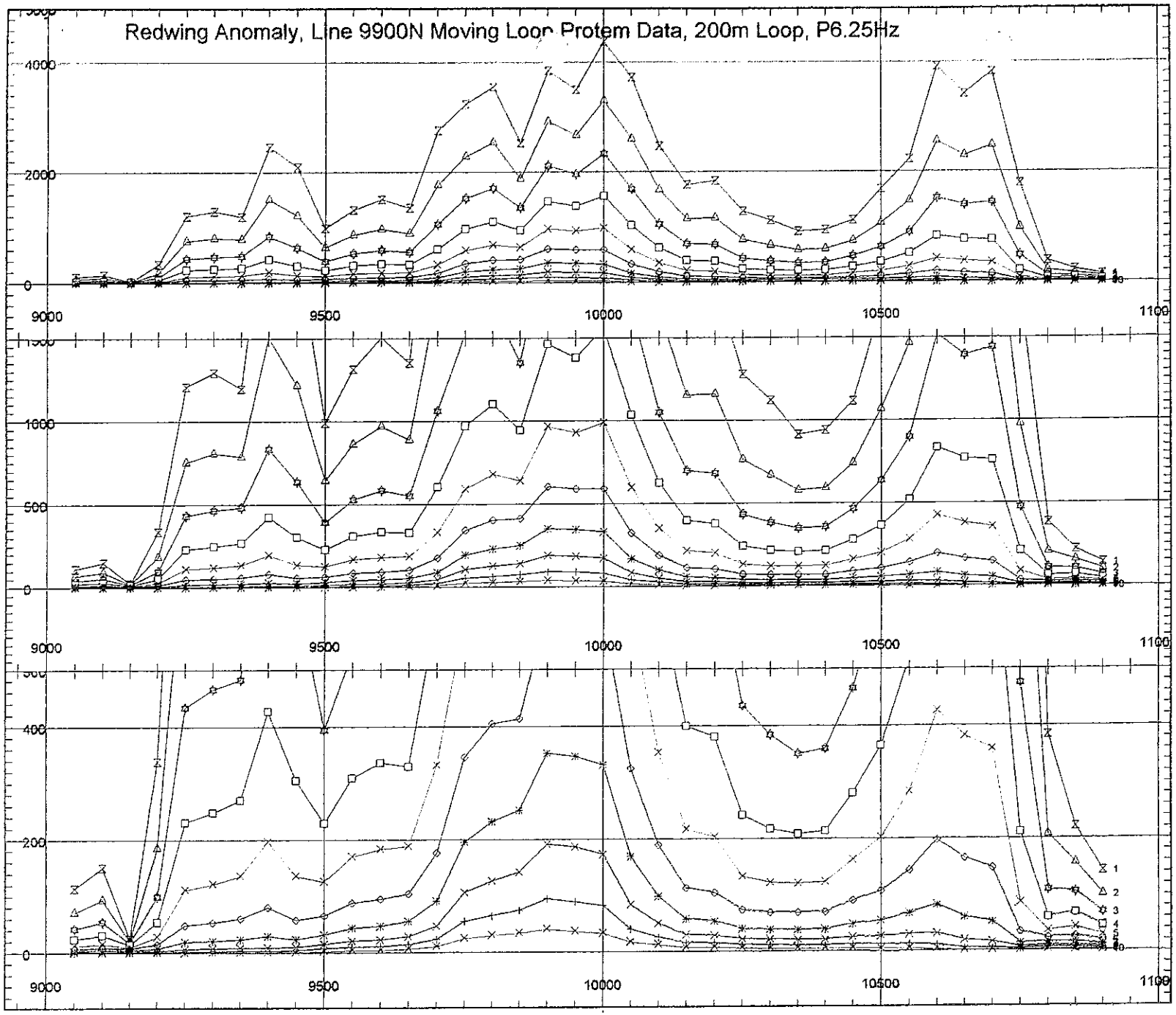
2000
0
9000
9500
10000
10500
11000
11500
12000
1
2
3
4
5
6
7
8
1600
800
400
200
0

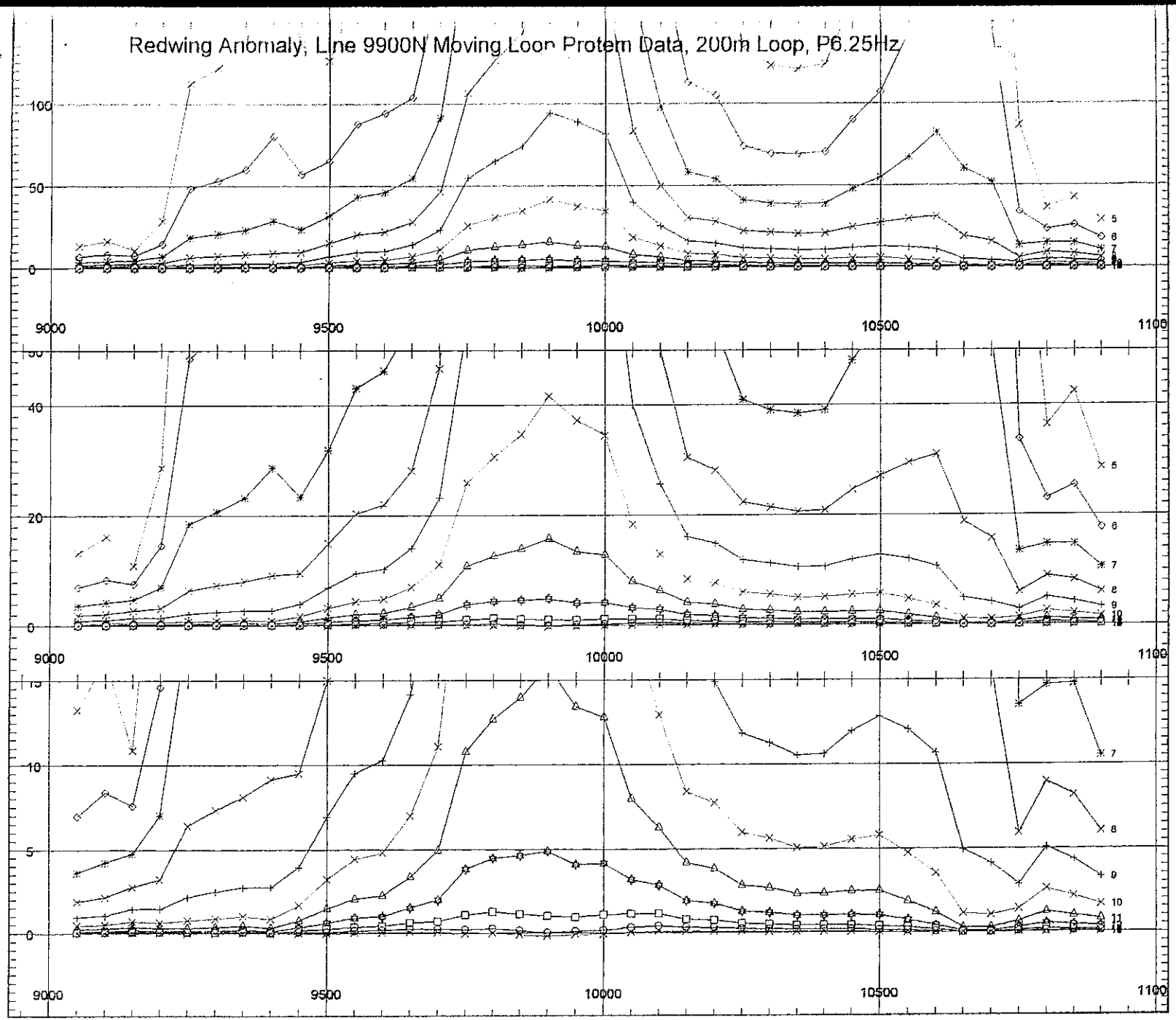

WY3 Anomaly, Line 10100N Moving L Protem Data, 200m Loop, P6.25Hz
100
50
0
9000
9500
10000
10500
11000
11500
12000
5
6
7
8
9
10
40
20
0
9000
9500
10000
10500
11000
11500
12000
6
7
8
9
10
10
5
0
9000
9500
10000
10500
11000
11500
12000
8
9
10

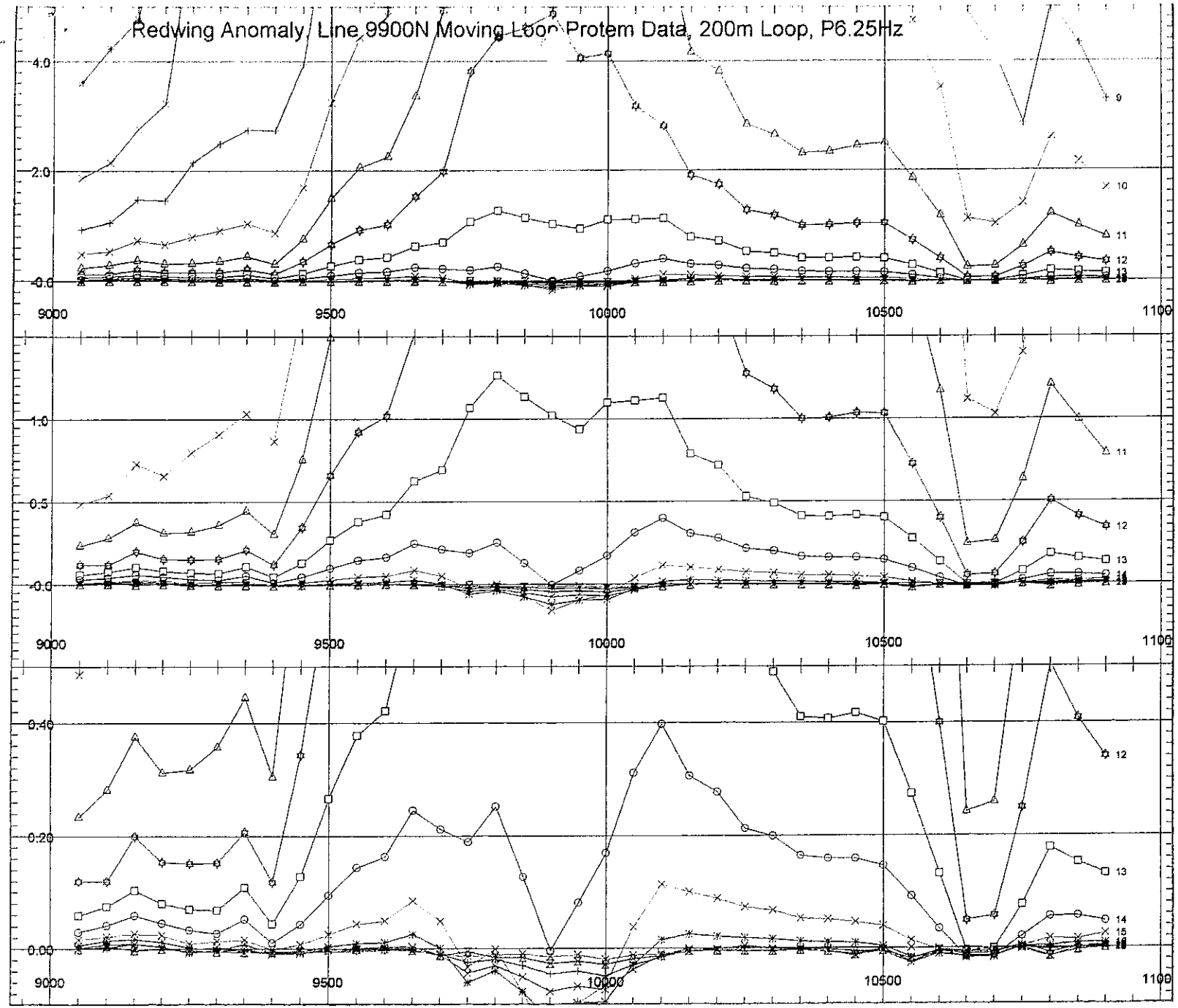

WY3 Anomaly, Line 10100N Moving Loop Protem Data, 200m Loop, P6.25Hz
4.0
2.0
0.0
1.0
0.5
0.40
0.20
0.00
9000
9500
10000
10500
11000
11500
12000

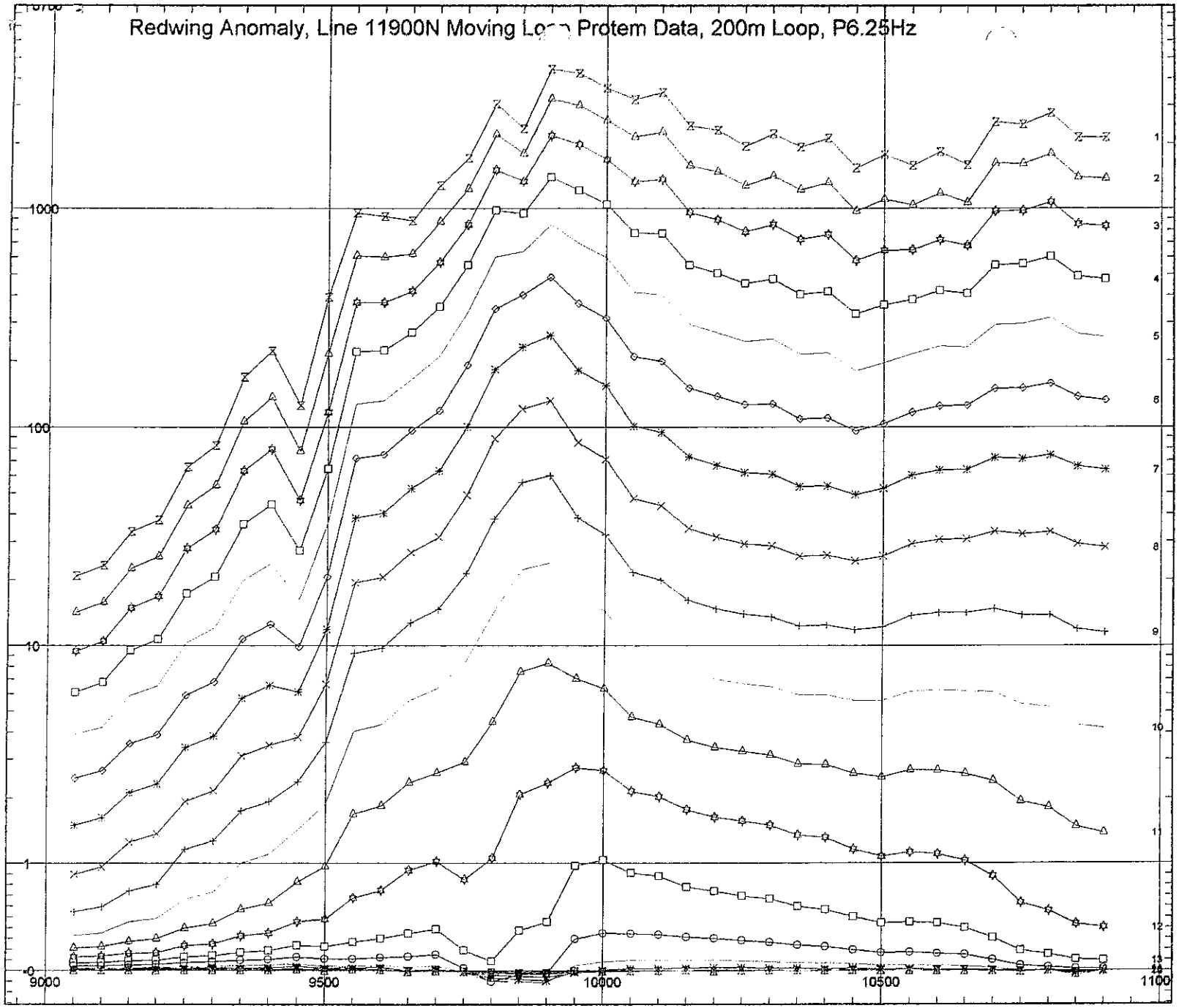

WY3 Anomaly, Line 10100N Moving Loop Protem Data, 200m Loop, P6.25Hz
0.10
0.05
0.00
9000
9500
10000
10500
11000
11500
12000
0.040
0.020
0.000
0.005
0.000

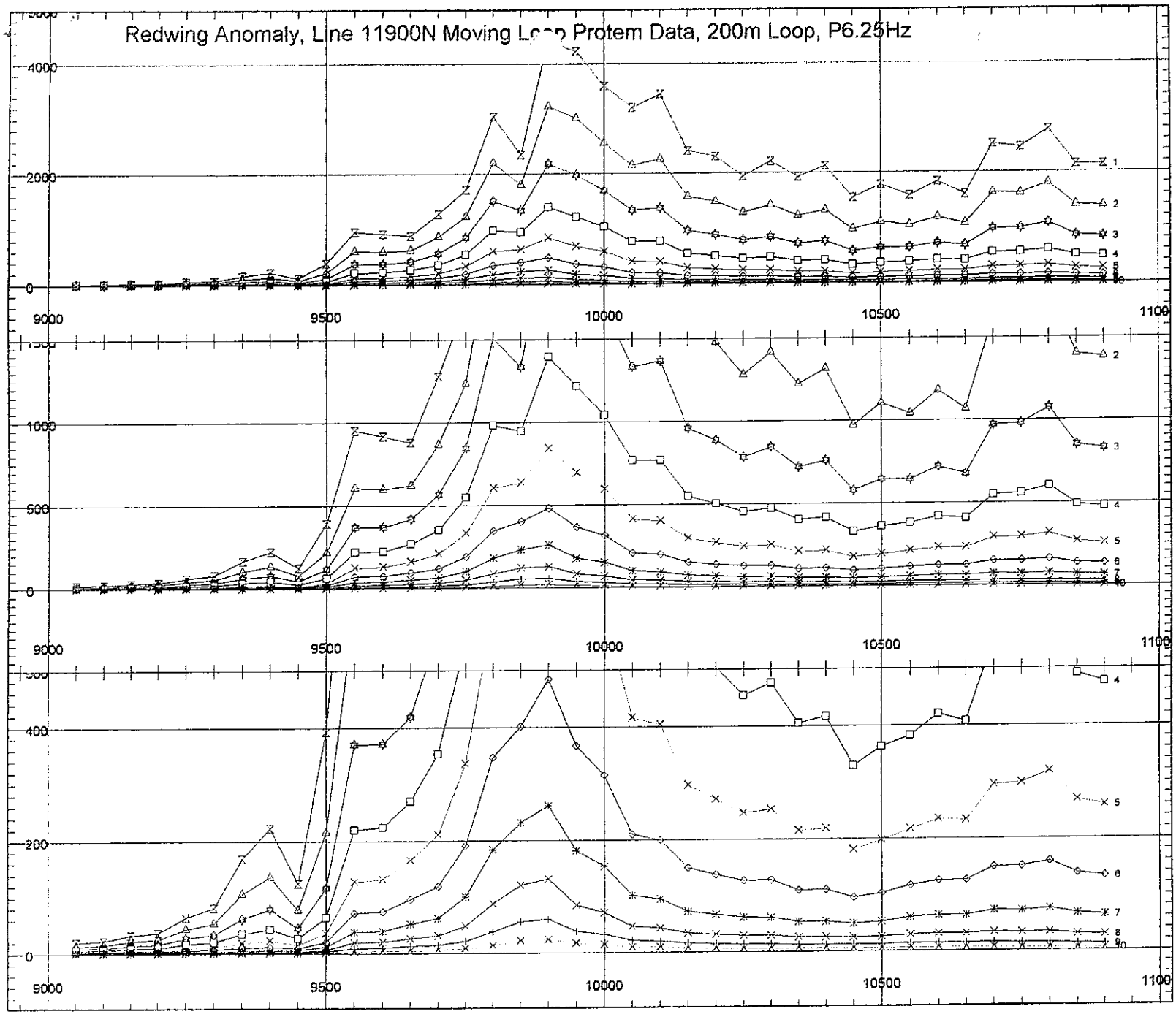

Redwing Anomaly, Line 9900N Moving Loop Protem Data, 200m Loop, P6.25Hz
1000
100
10
1
0
9000
9500
10000
10500
11000

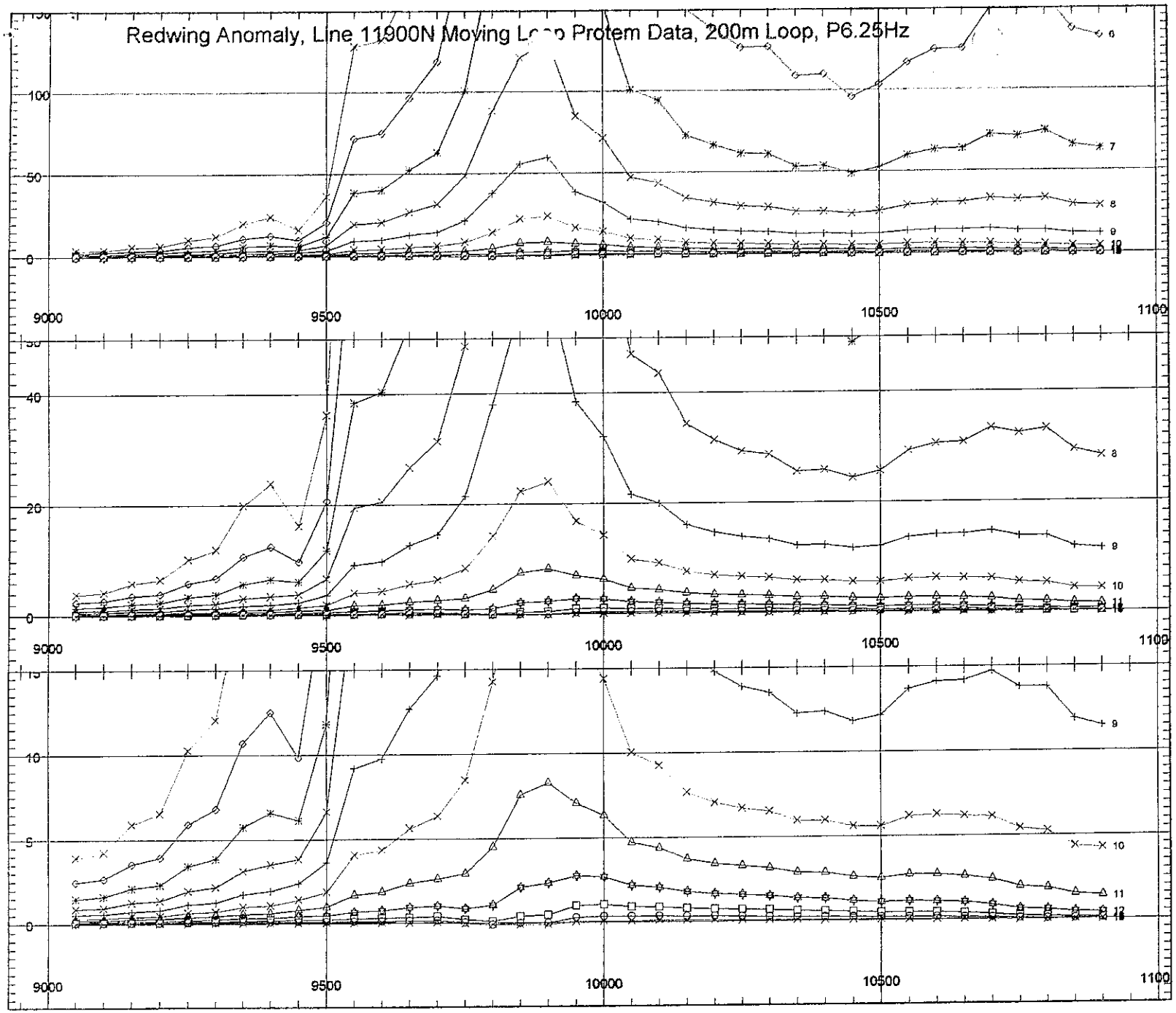

Redwing Anomaly, Line 9900N Moving Loop Protem Data, 200m Loop, P6.25Hz
4000
2000
0
9000
9500
10000
10500
1100
1000
500
400
200
1
2
3
4
5
6
7
8

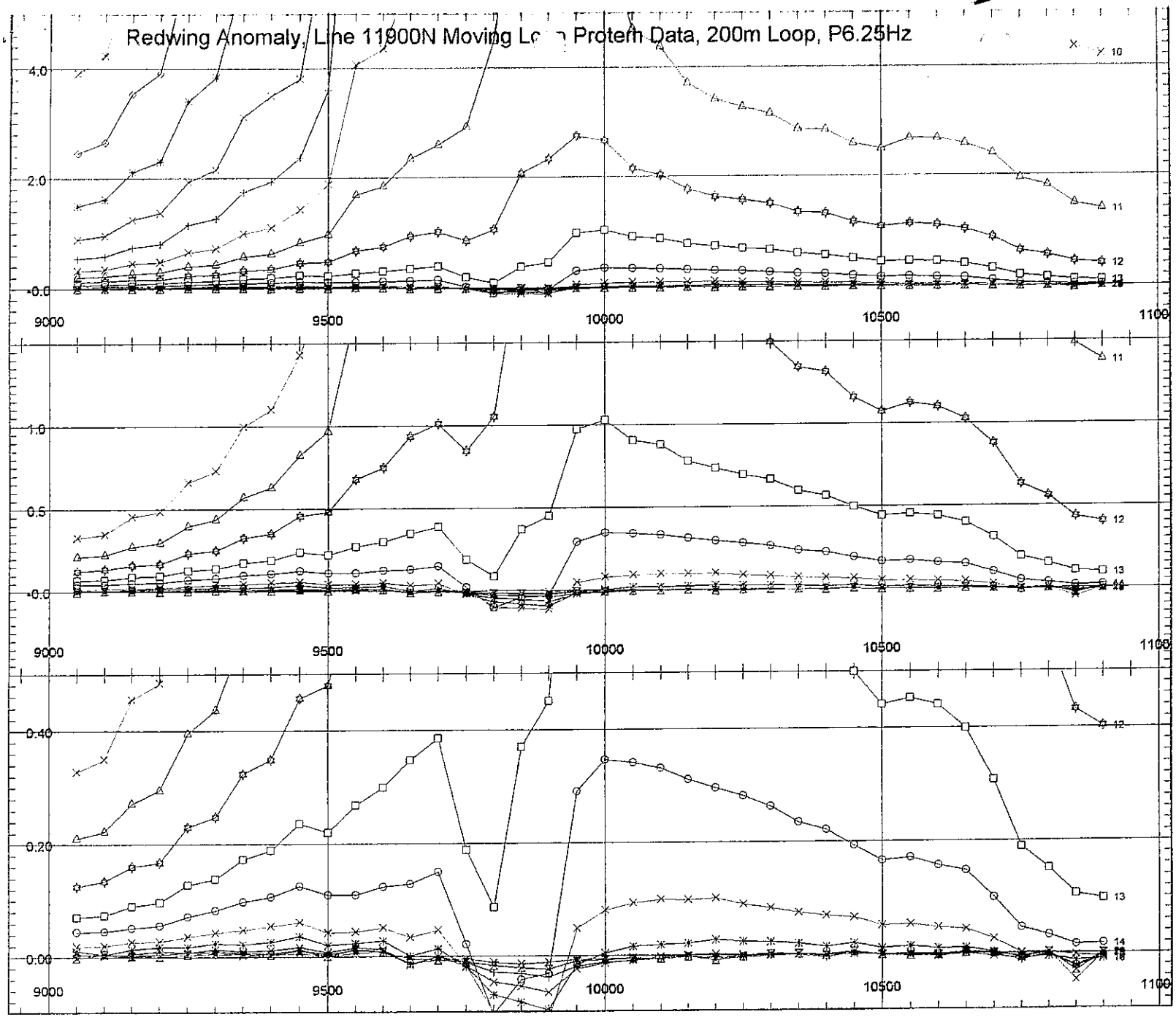

Redwing Anomaly, Line 9900N Moving Loop Protem Data, 200m Loop, P6.25Hz
100
50
0
9000
9500
10000
10500
1100
5
6
7
40
20
0
9000
9500
10000
10500
1100
5
6
7
8
9
10
15
10
5
0
9000
9500
10000
10500
1100
7
8
9
10
11


Redwing Anomaly, Line 9900N Moving Loop, Protem Data, 200m Loop, P6.25Hz
4.0
2.0
-0.0
9
10
11
12
13
9000
9500
10000
10500
1100
1.0
0.5
-0.0
11
12
13
9000
9500
10000
10500
1100
0.40
0.20
0.00
12
13
14
15
9000
9500
10000
10500
1100


Redwing Anomaly, Line 11900N Moving Loop Protem Data, 200m Loop, P6.25Hz
1000
100
10
1
9000
9500
10000
10500
1
2
3
4
5
6
7
8
9
10
11
12


Redwing Anomaly, Line 11900N Moving Loop Protem Data, 200m Loop, P6.25Hz
4000
2000
0
9000
9500
10000
10500
1100
1
2
3
4
5
1000
500
400
200
6
7
8
9


Redwing Anomaly, Line 11900N Moving Loop Protem Data, 200m Loop, P6.25Hz
100
50
0
9000
9500
10000
10500
6
7
8
9
40
20
10
5
11

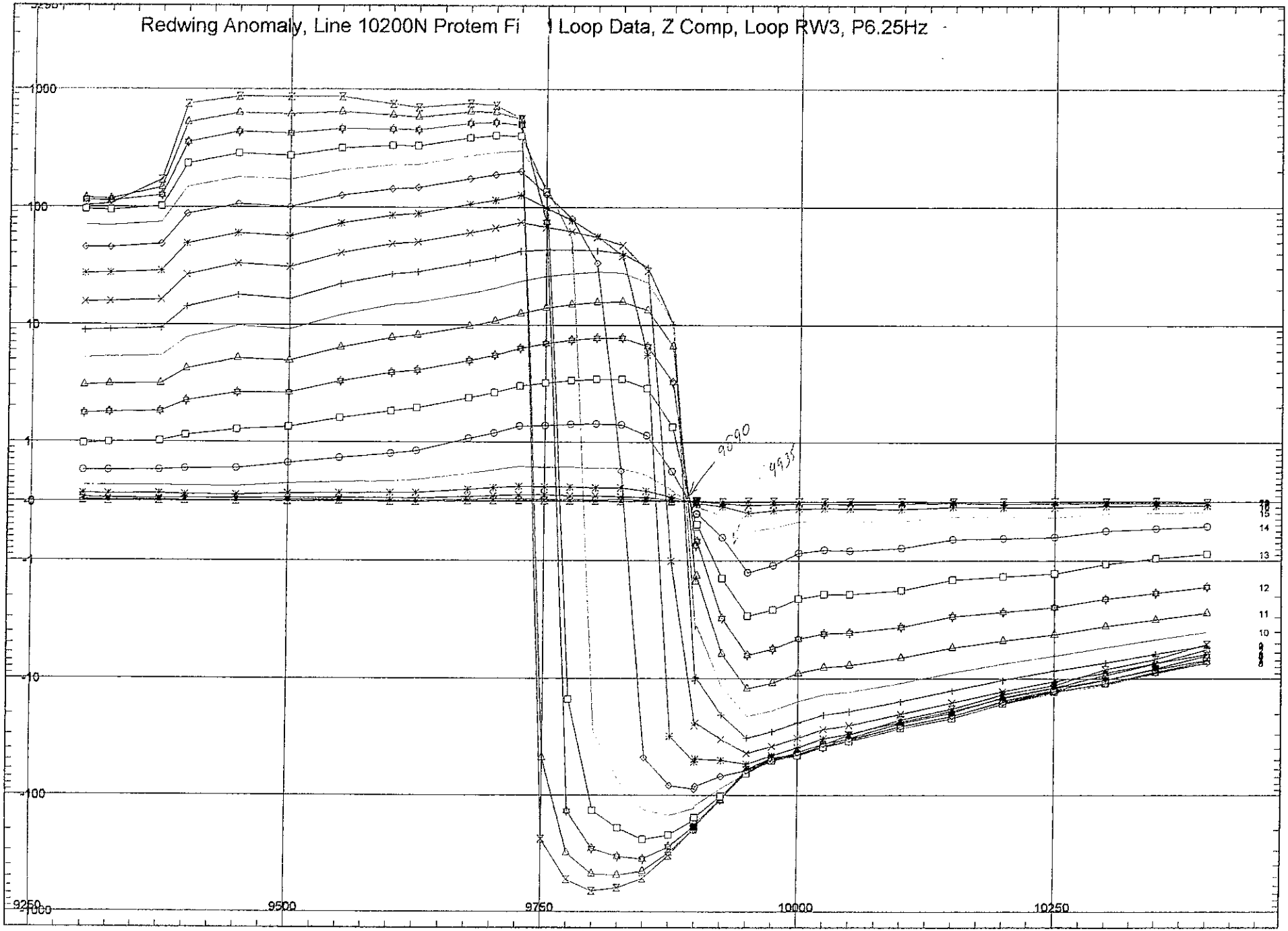

Redwing Anomaly, Line 11900N Moving Loop Protem Data, 200m Loop, P6.25Hz
4.0
2.0
0.0
9000
9500
10000
10500
11000
10
11
12
1.0
0.5
0.0
13
0.40
0.20
0.00
14

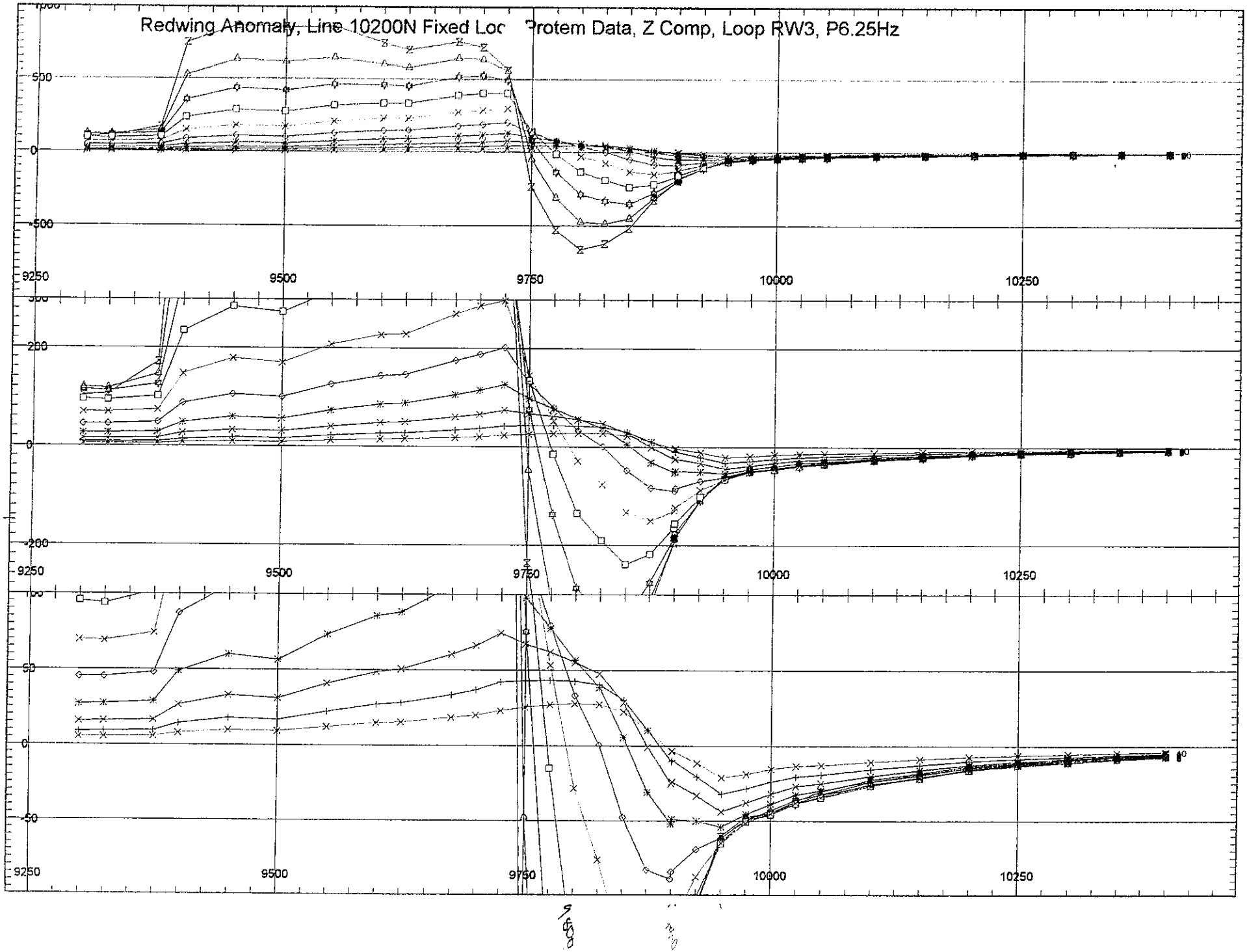
REDWING

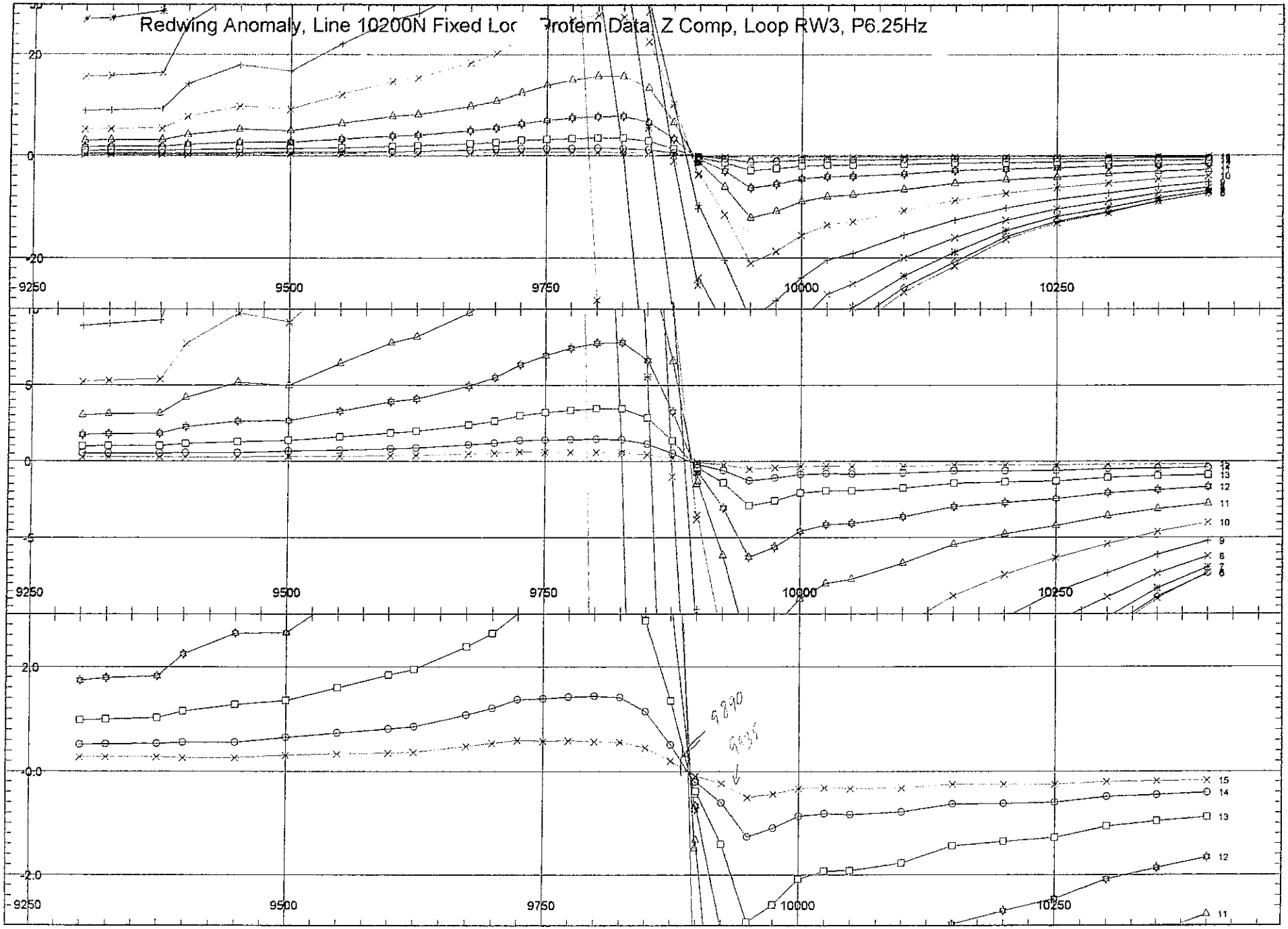
LINE 10200N

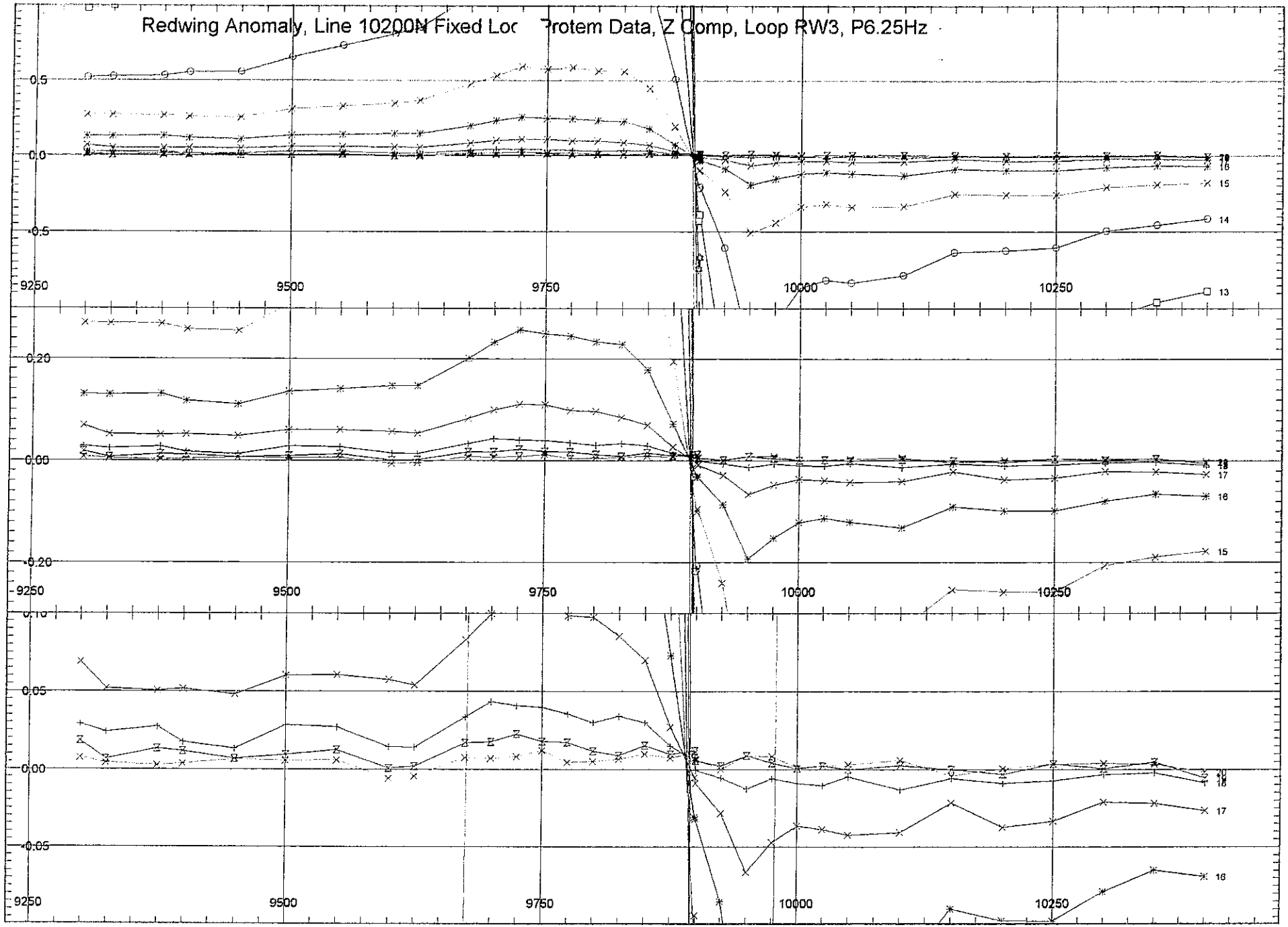
FIXED LOOP

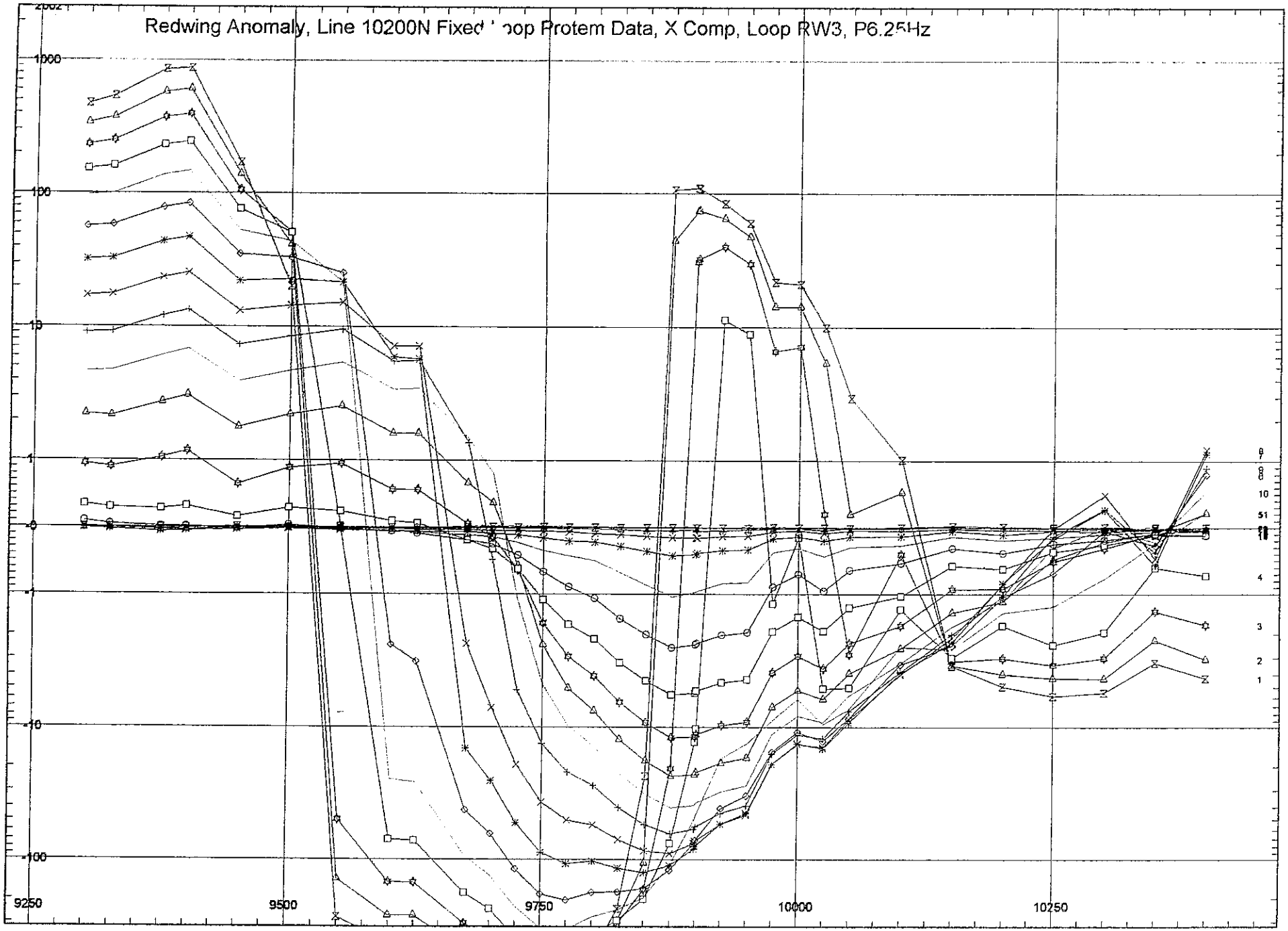
DATA & MODELS

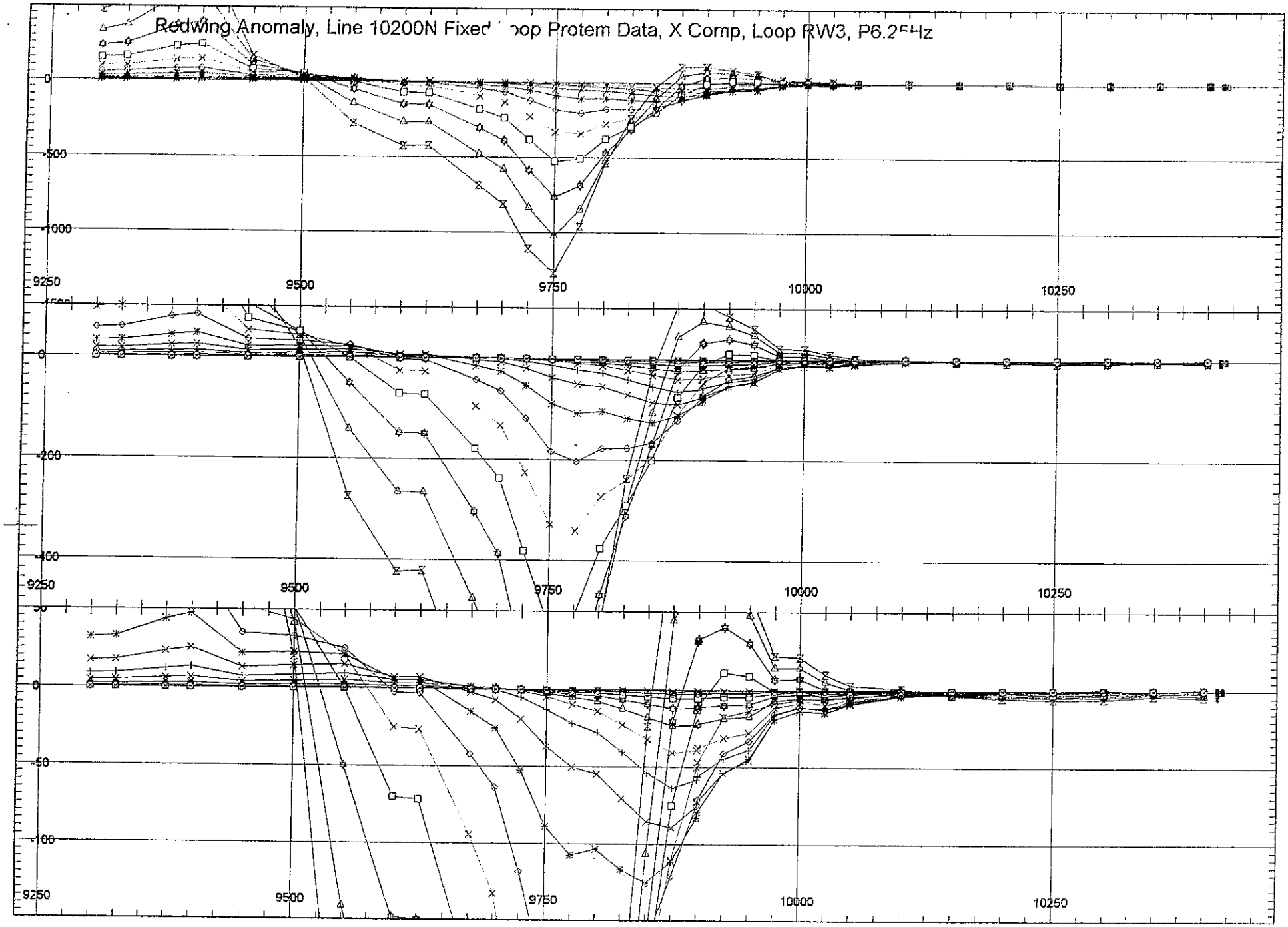

Redwing Anomaly, Line 10200N Protem Fi
Loop Data, Z Comp, Loop RW3, P6.25Hz
1000
100
10
1
-0
-1
-10
-100
-1000
9250
9500
9750
10000
10250
9090
4933
15
14
13
12
11
10

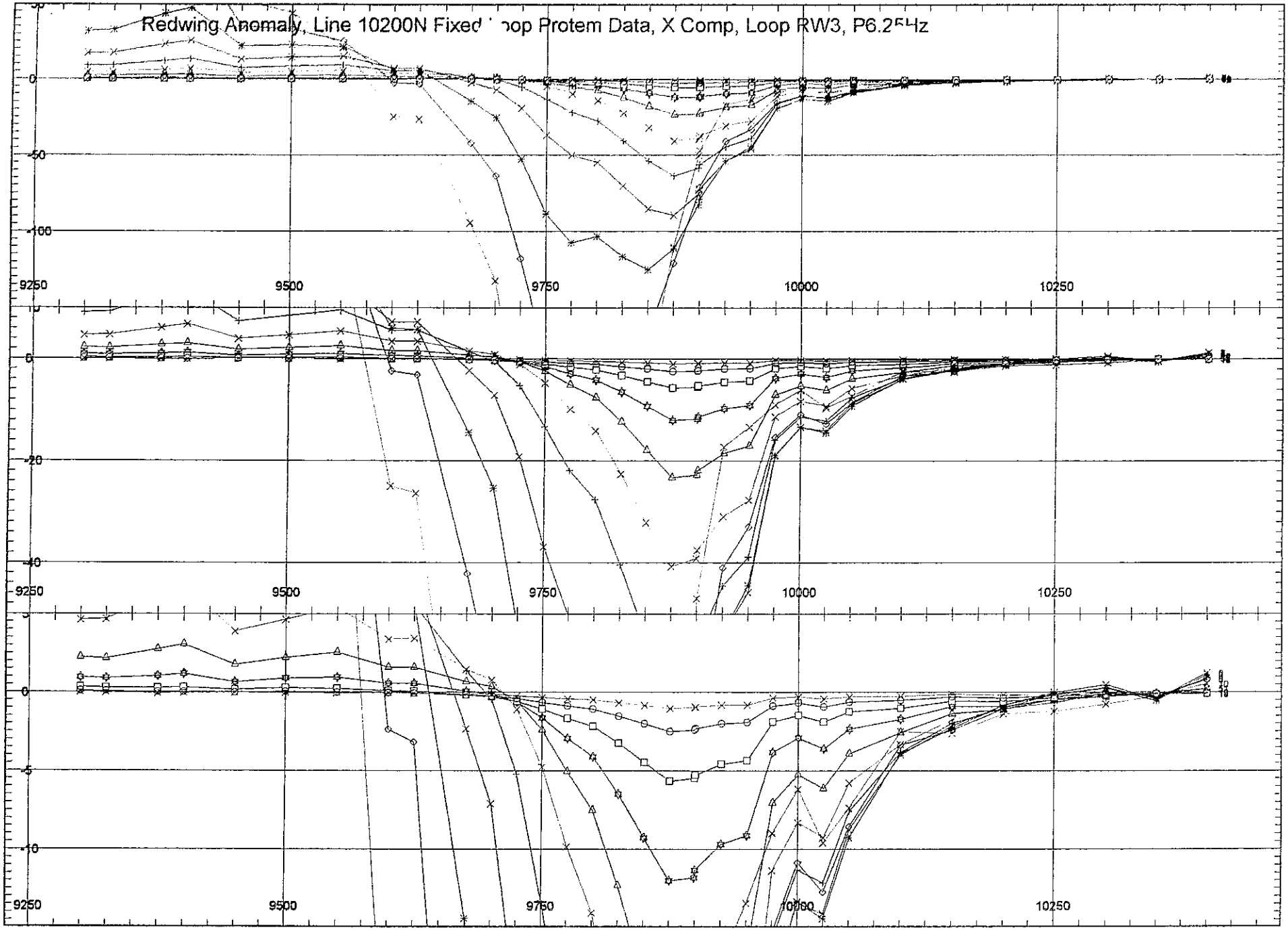

Redwing Anomaly, Line 10200N Fixed Loc Protem Data, Z Comp, Loop RW3, P6.25Hz
500
0
-500
9250
9500
9750
10000
10250
200
0
-200
9250
9500
9750
10000
10250
50
0
-50
9250
9500
9750
10000
10250

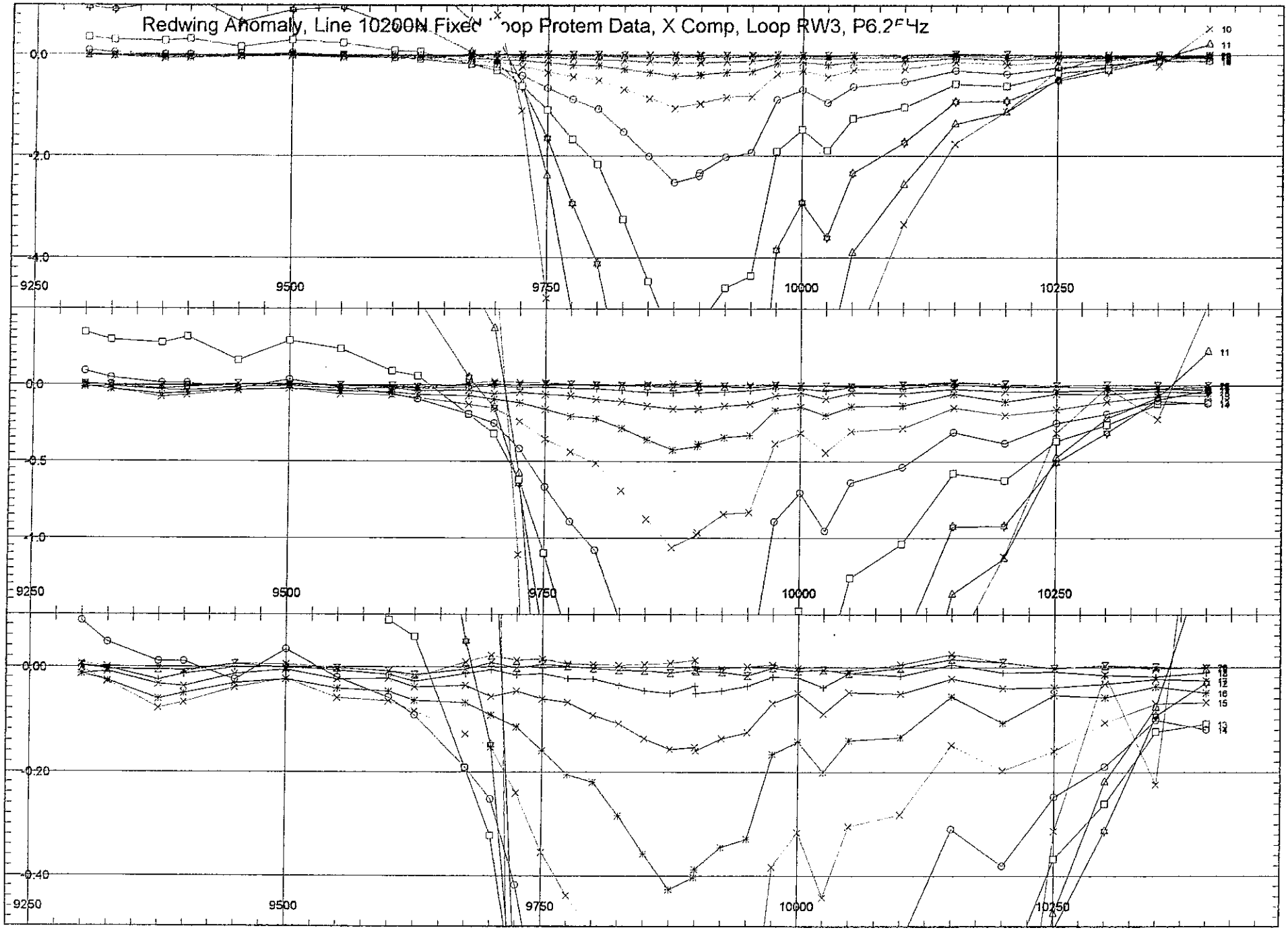

Redwing Anomaly, Line 10200N Fixed Loc Protem Data, Z Comp, Loop RW3, P6.25Hz
20
0
-20
9250
9500
9750
10000
10250
15
14
13
12
11
10
9
8
7
6
5
0
-5
2.0
-0.0
-2.0
9830
9655

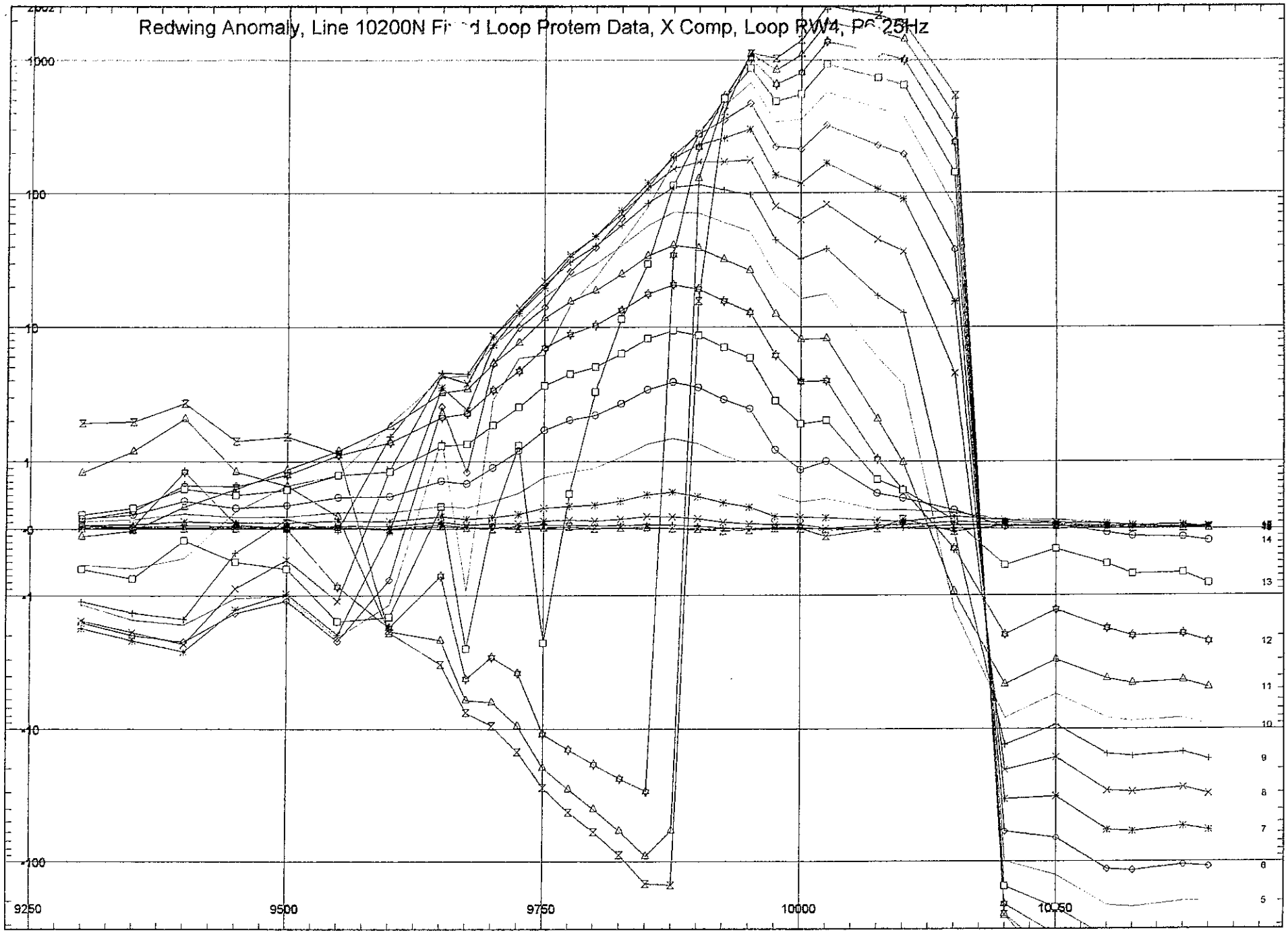

Redwing Anomaly, Line 10200N Fixed Loc Protem Data, Z Comp, Loop RW3, P6.25Hz
0.5
0.0
-0.5
9250
9500
9750
10000
10250
13
14
15
16
17
18
0.20
0.00
-0.20
0.10
0.05
-0.05

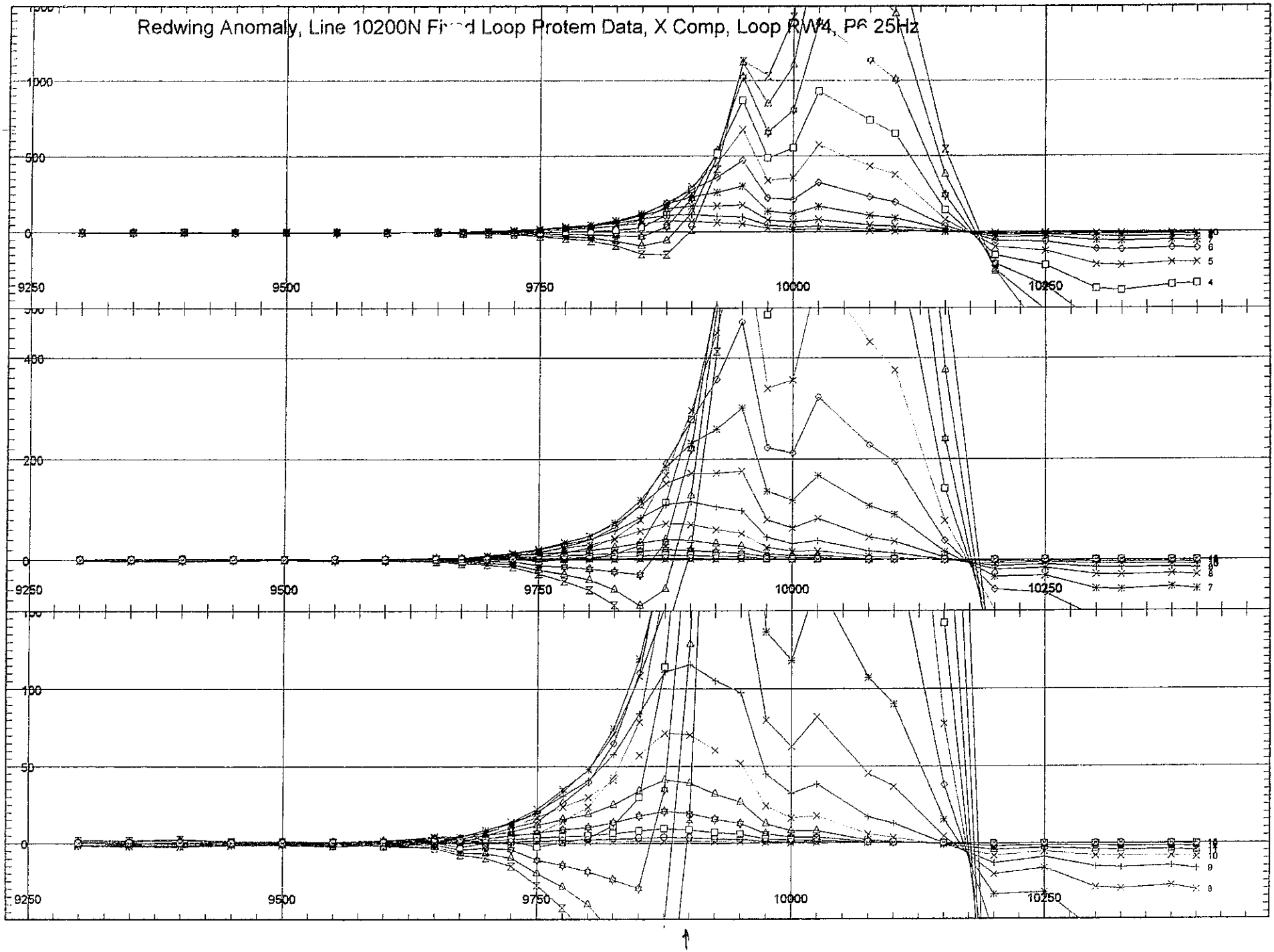

Redwing Anomaly, Line 10200N Fixed Loop Protem Data, X Comp, Loop RW3, P6.25Hz
1000
100
10
1
0
-1
-10
-100
9250
9500
9750
10000
10250
9
8
10
51
4
3
2
1

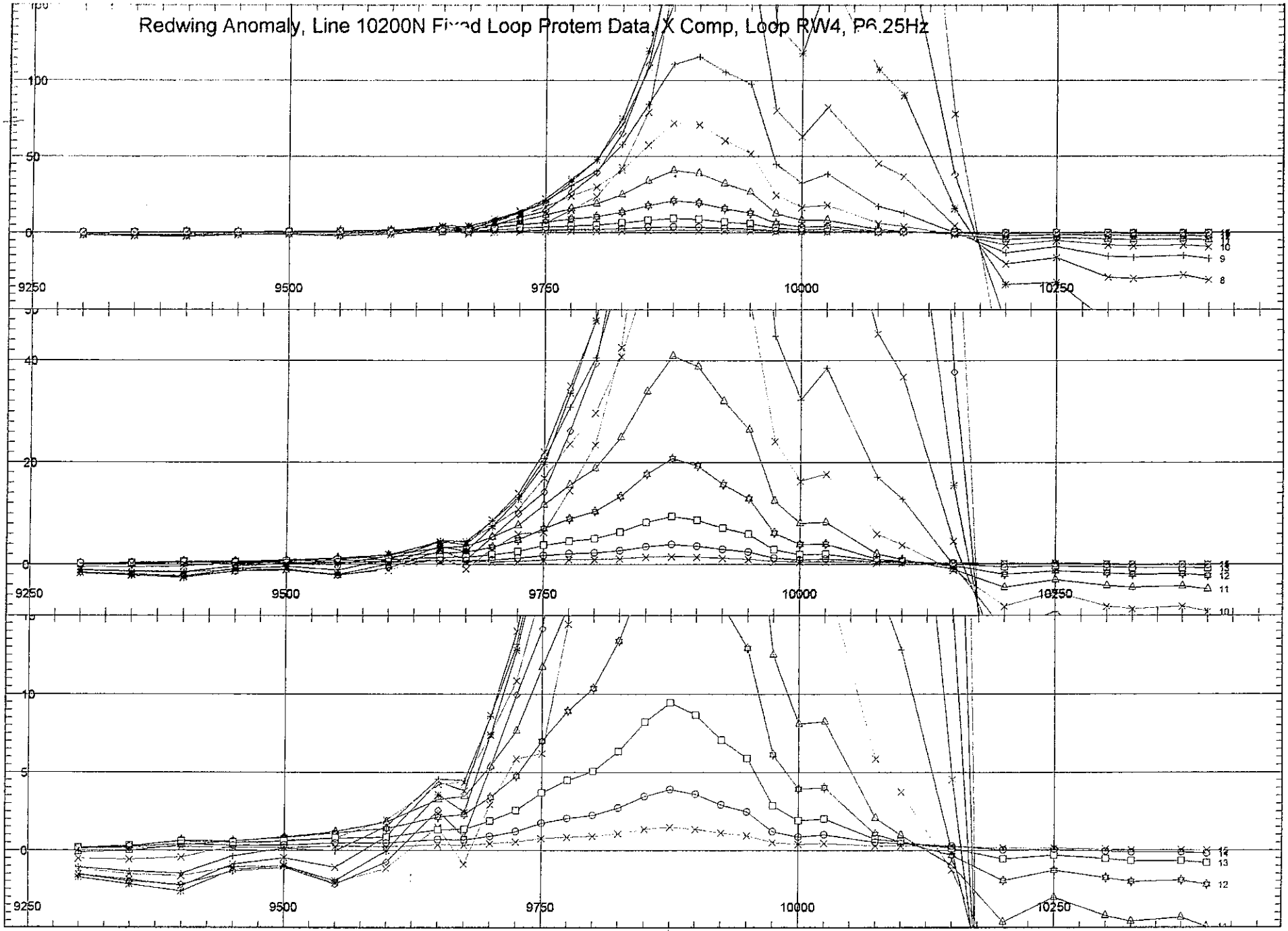

Redwing Anomaly, Line 10200N Fixed Loop Protem Data, X Comp, Loop RW3, P6.25Hz
0
-500
-1000
9250
9500
9750
10000
10250
0
-200
-400
9250
9500
9750
10000
10250
0
-50
-100
9250
9500
9750
10000
10250

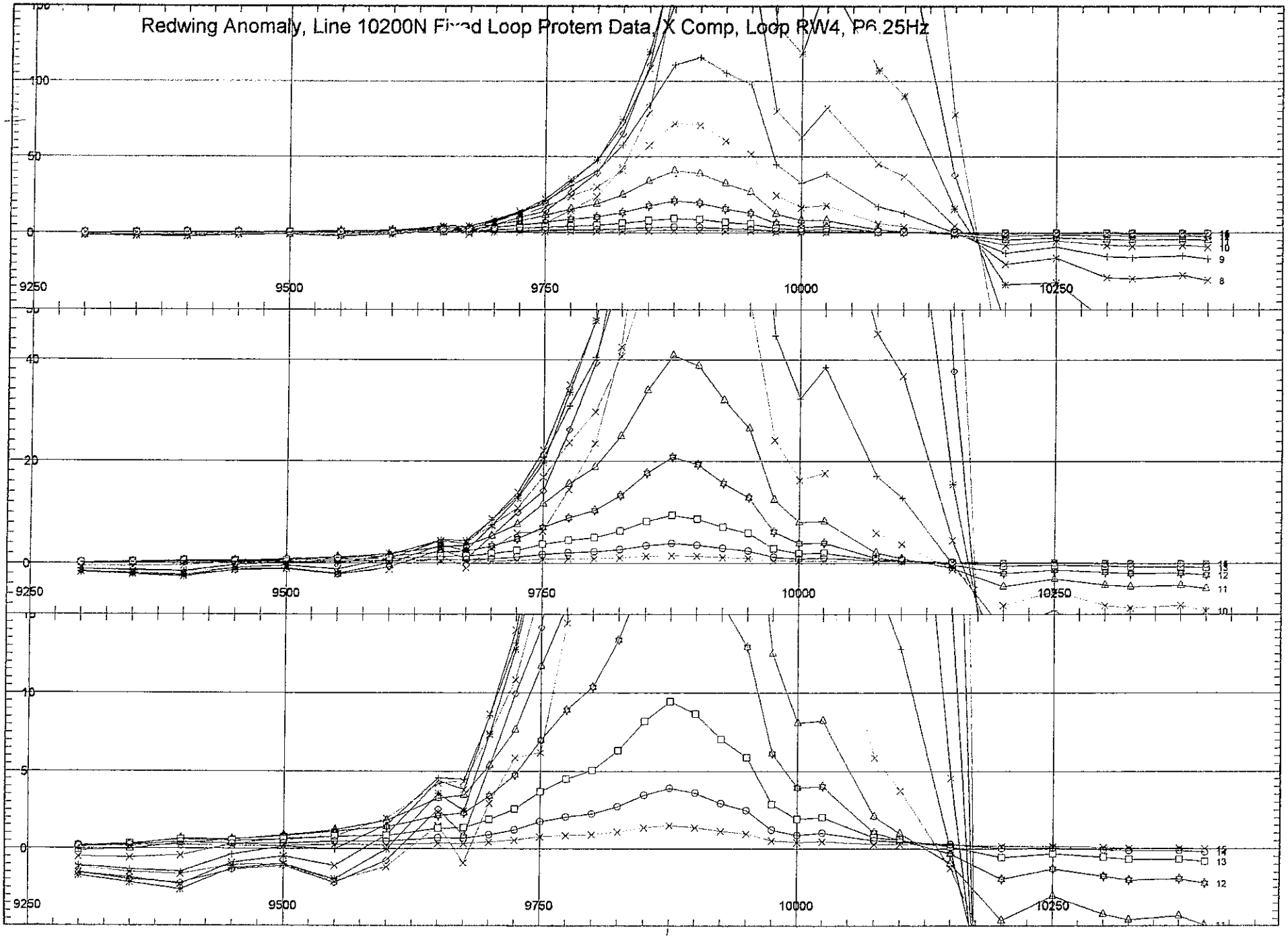

Redwing Anomaly, Line 10200N Fixed Loop Protem Data, X Comp, Loop RW3, P6.25Hz
0
-50
-100
9250
9500
9750
10000
10250
0
-20
-40
9250
9500
9750
10000
10250
0
-5
-10
9250
9500
9750
10000
10250

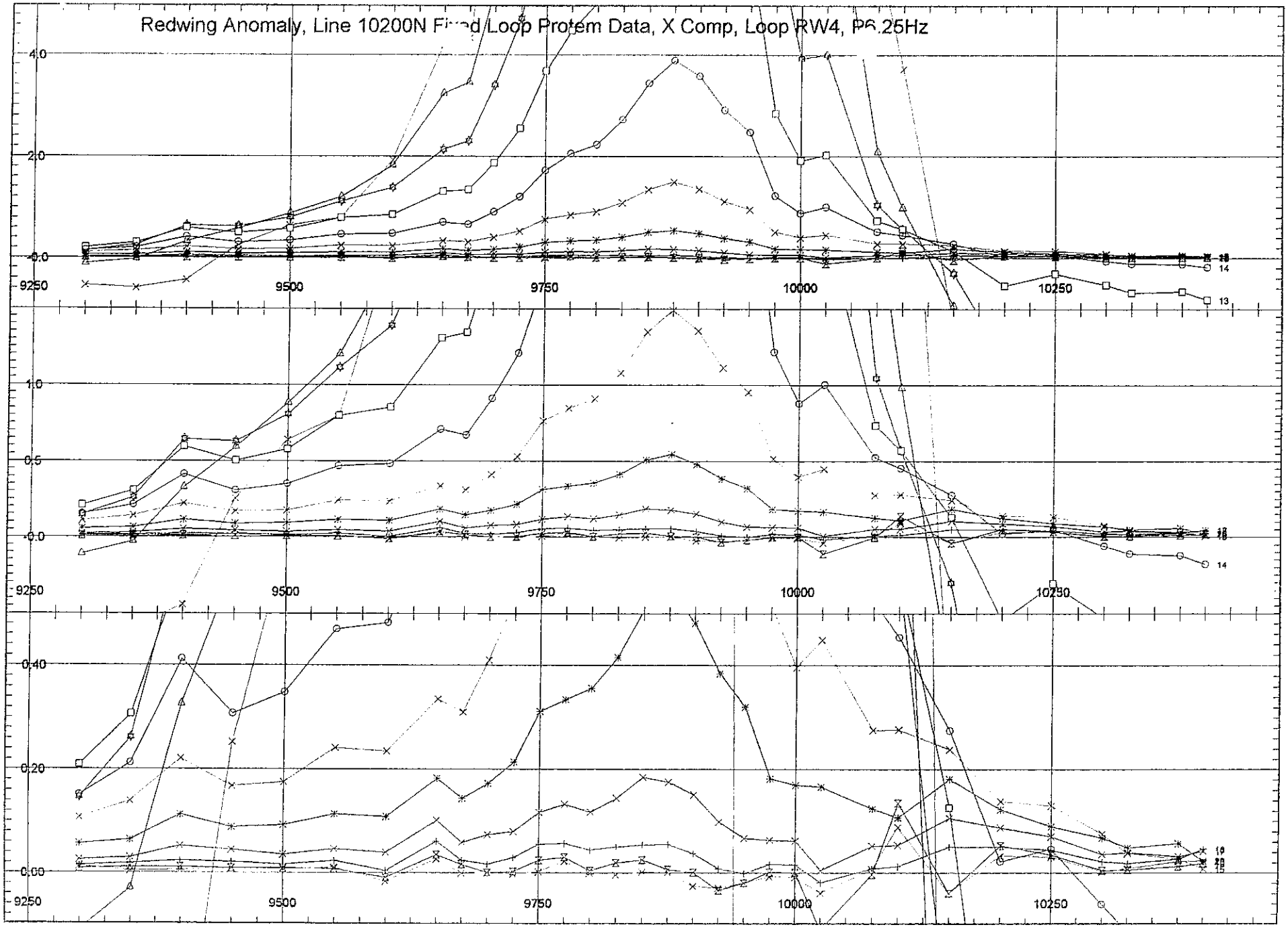

Redwing Anomaly, Line 10200N Fixed Loop Protem Data, X Comp, Loop RW3, P6.2 Hz
0.0
-2.0
-4.0
9250
9500
9750
10000
10250
10
11
0.0
-0.5
-1.0
9250
9500
9750
10000
10250
11
0.00
-0.20
-0.40
9250
9500
9750
10000
10250
12
16
15
13
14

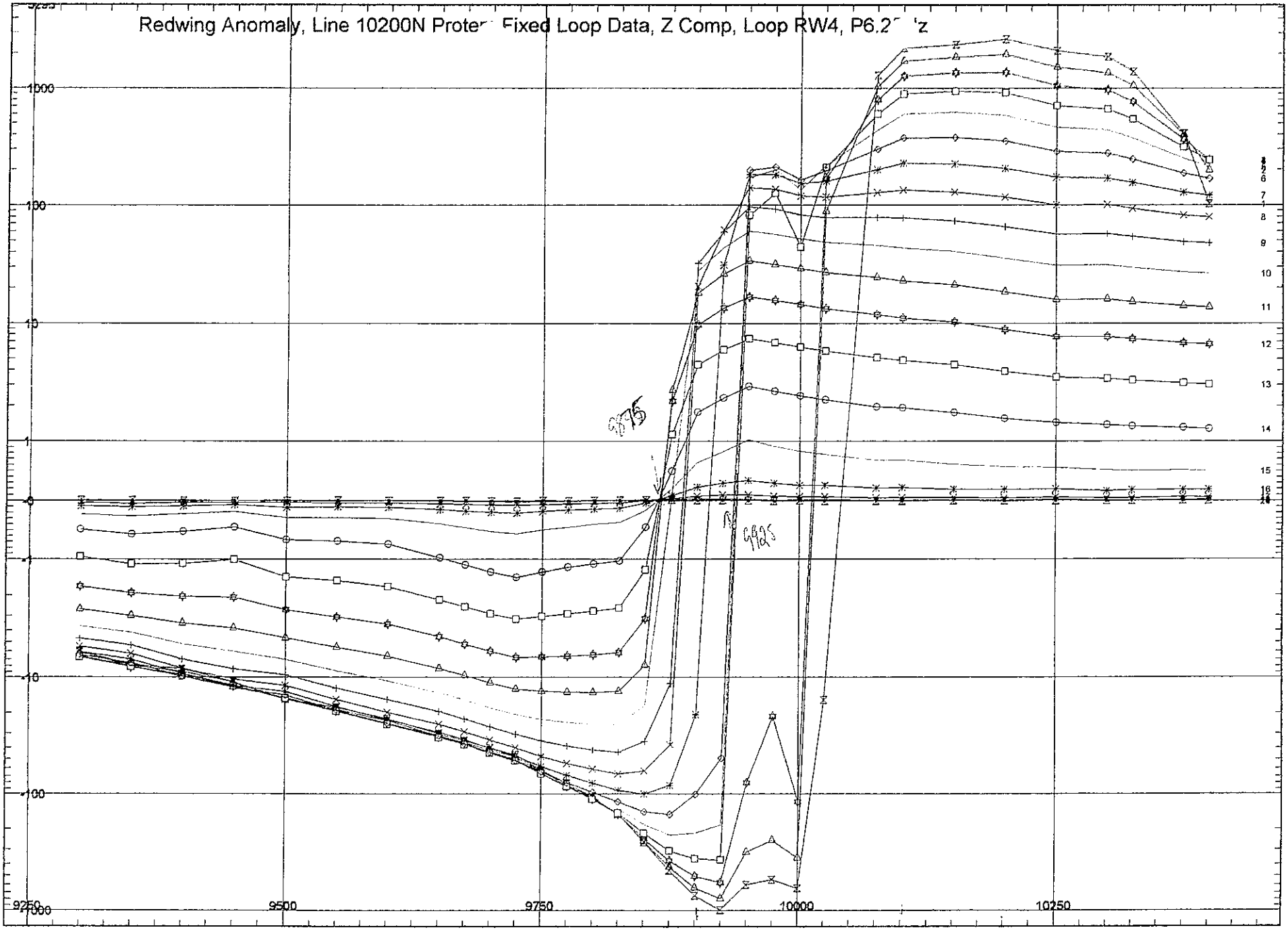

Redwing Anomaly, Line 10200N Fi d Loop Protem Data, X Comp, Loop RW4, P 25Hz
1000
100
10
1
-1
-10
-100
9250
9500
9750
10000
10050
14
13
12
11
10
9
8
7
6
5

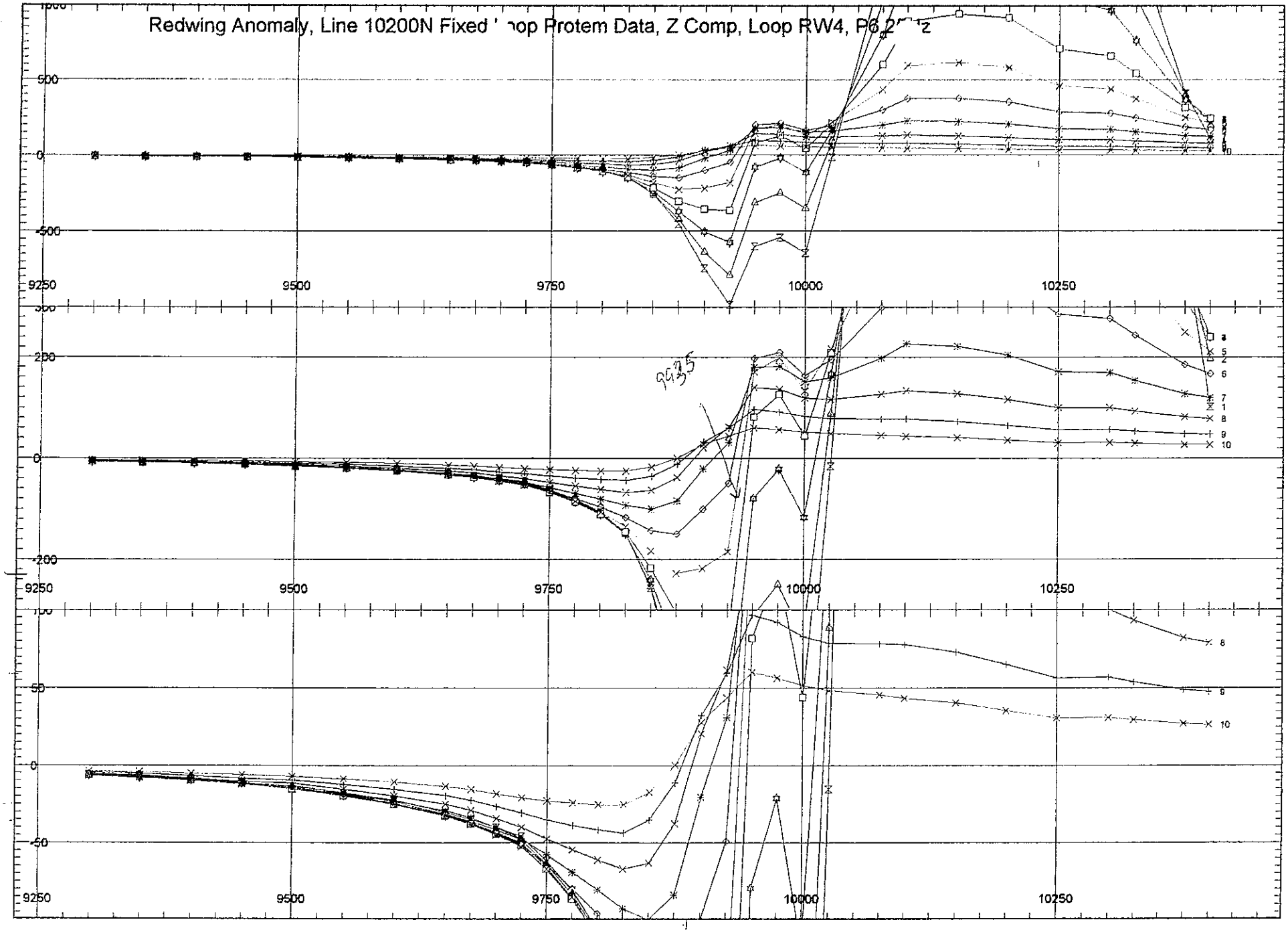

Redwing Anomaly, Line 10200N Fixed Loop Protem Data, X Comp, Loop RW4, P6 25Hz
1000
500
0
9250
9500
9750
10000
10250
6
5
4
400
200
0
9250
9500
9750
10000
10250
8
7
100
50
0
9250
9500
9750
10000
10250
10
9
8

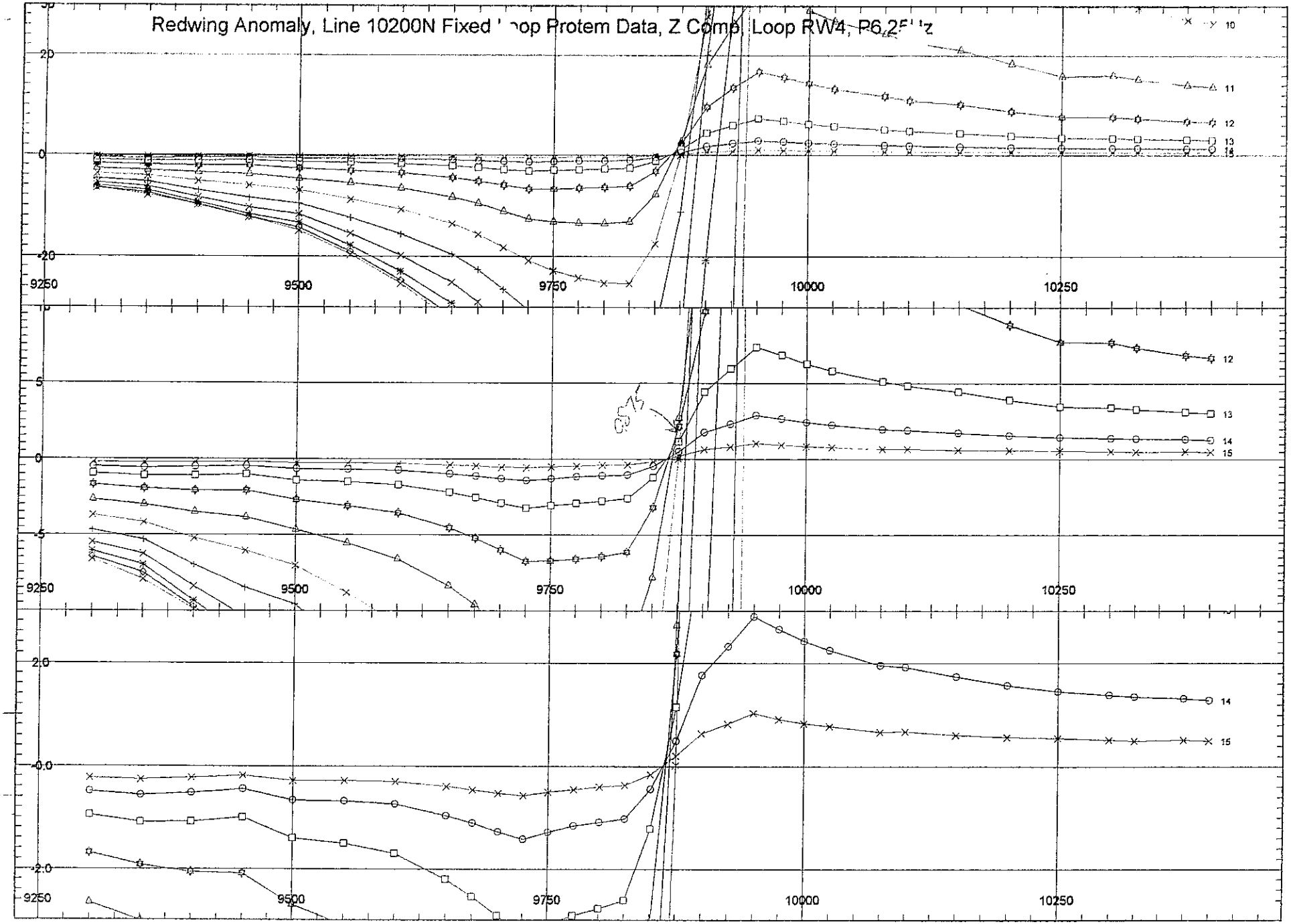

Redwing Anomaly, Line 10200N Fixed Loop Protem Data, X Comp, Loop RW4, P6.25Hz
100
50
0
9250
9500
9750
10000
10250
8
9
10
40
20
0
11
12
10
5
0
13
14

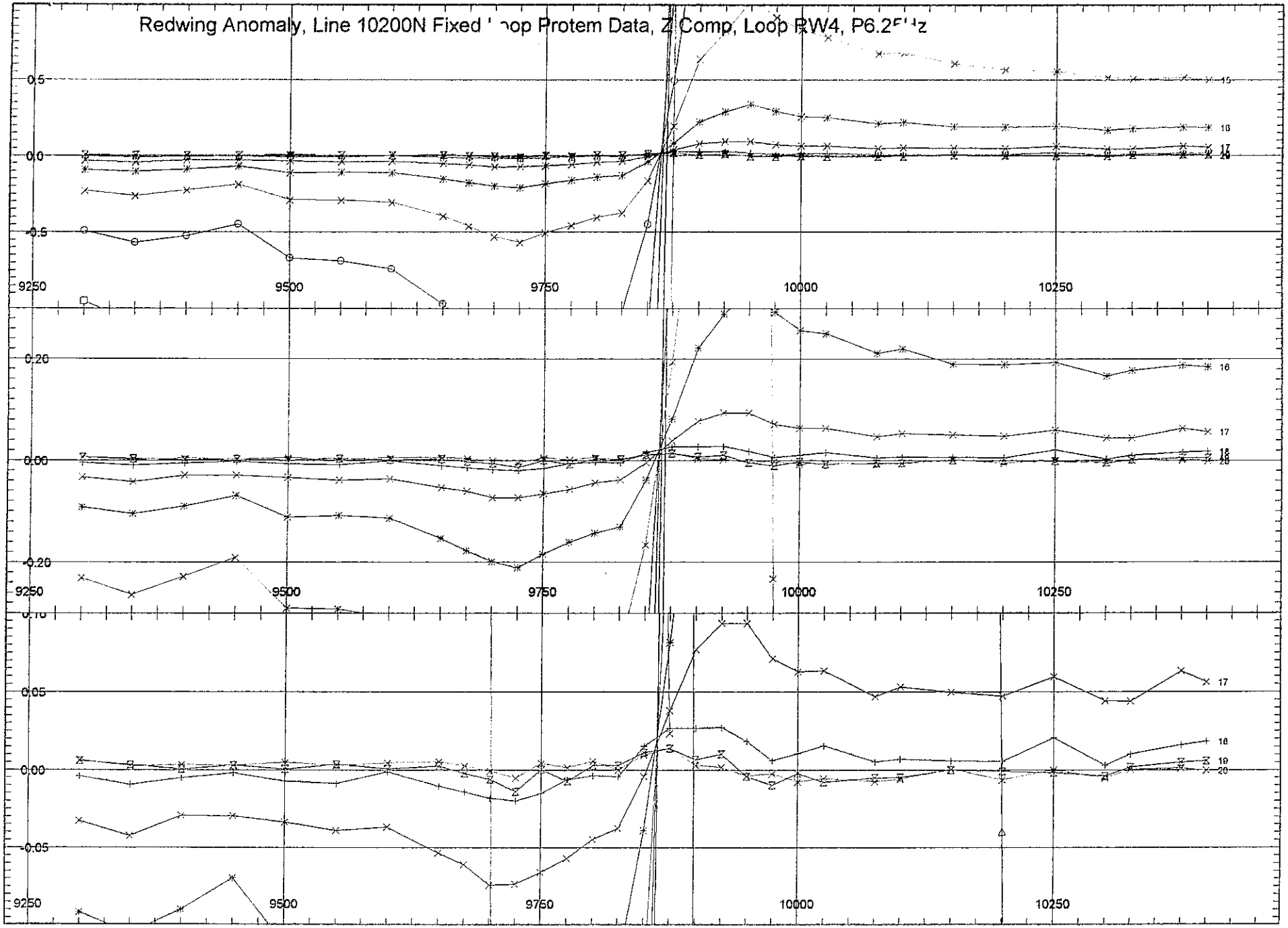

Redwing Anomaly, Line 10200N Fixed Loop Protem Data, X Comp, Loop RW4, P6.25Hz
100
50
0
9250
9500
9750
10000
10250
40
20
0
9250
9500
9750
10000
10250
10
5
0
9250
9500
9750
10000
10250


Redwing Anomaly, Line 10200N Fixed Loop Protem Data, X Comp, Loop RW4, P6.25Hz
4.0
2.0
0.0
9250
9500
9750
10000
10250
14
13
1.0
0.5
0.0
9250
9500
9750
10000
10250
14
0.40
0.20
0.00
9250
9500
9750
10000
10250


Redwing Anomaly, Line 10200N Proter Fixed Loop Data, Z Comp, Loop RW4, P6.2 Hz
1000
100
10
1
0
-1
-10
-100
9250
9500
9750
10000
10250
9375
9925


Redwing Anomaly, Line 10200N Fixed
Protem Data, Z Comp, Loop RW4,
500
0
-500
9250
9500
9750
10000
10250
200
-200
50
-50
8
9
10

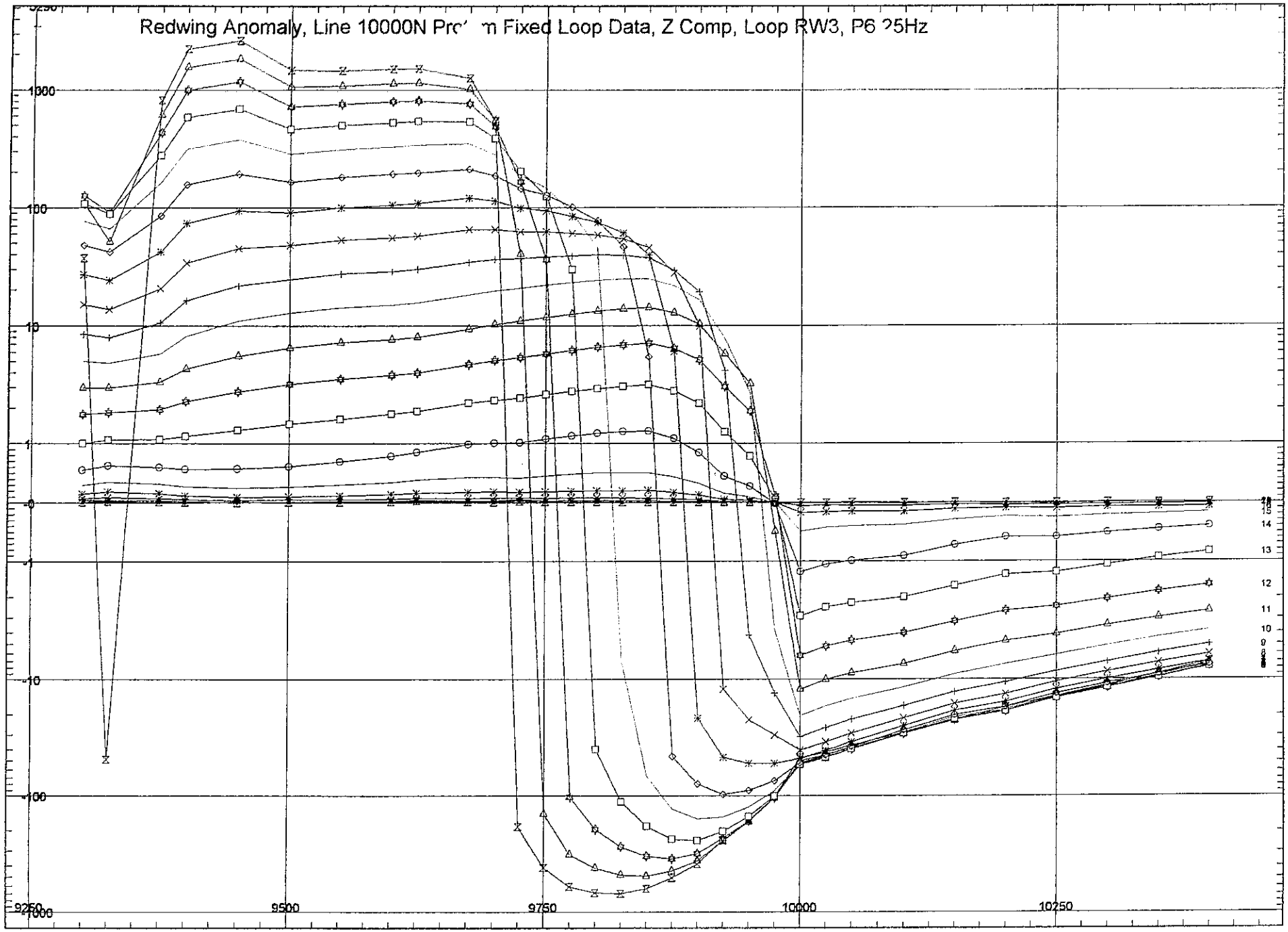

Redwing Anomaly, Line 10200N Fixed Loop Protem Data, Z Comp, Loop RW4, P6,25 Hz
20
0
-20
9250
9500
9750
10000
10250
10
11
12
13
15
5
0
-5
12
13
14
15
2.0
-0.0
-2.0
14
15

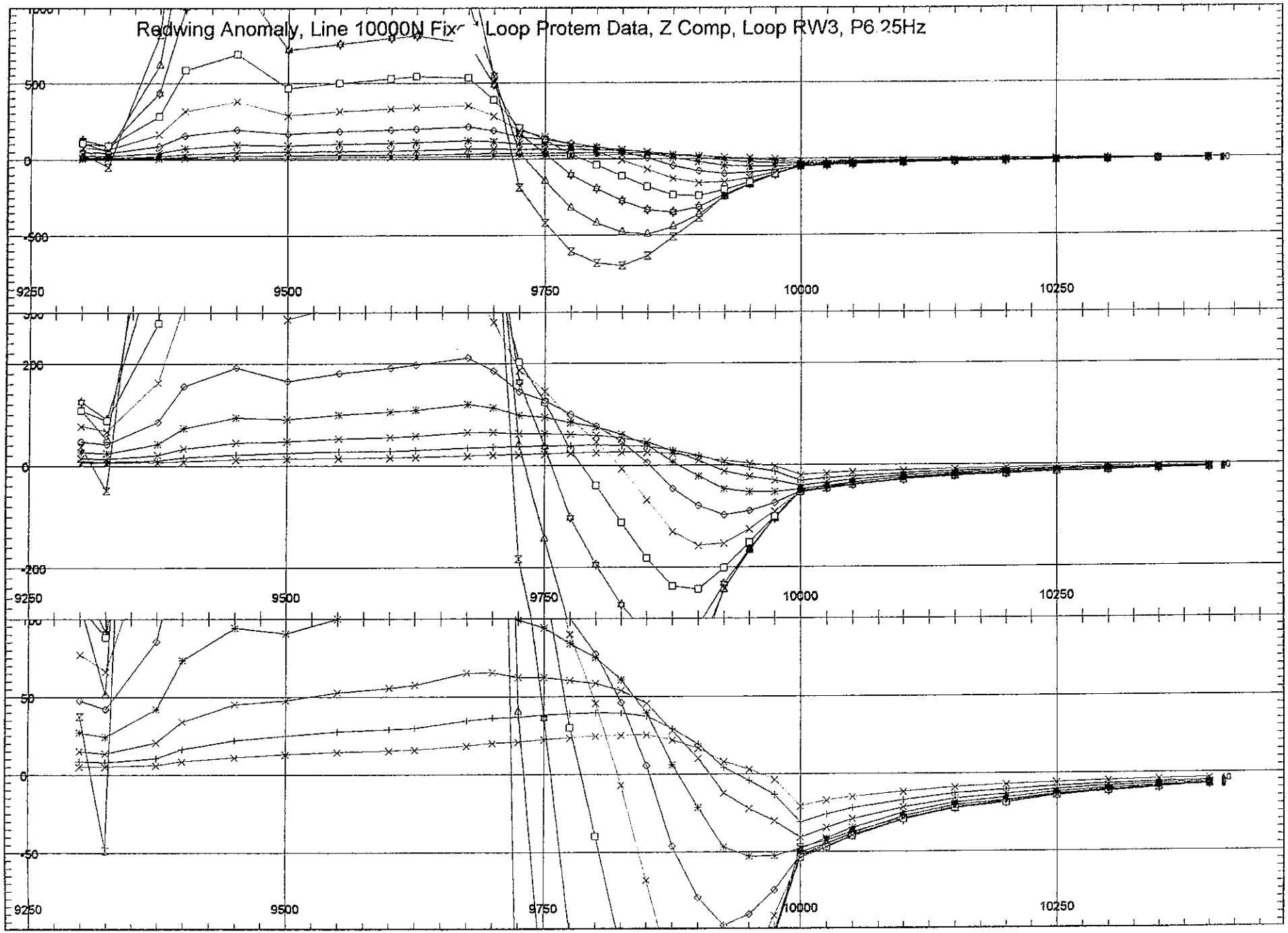

Redwing Anomaly, Line 10200N Fixed Loop Protem Data, Z Comp, Loop RW4, P6.2 Hz
0.5
0.0
-0.5
9250
9500
9750
10000
10250
15
16
17
0.20
0.00
-0.20
0.05
-0.05
18
19
20

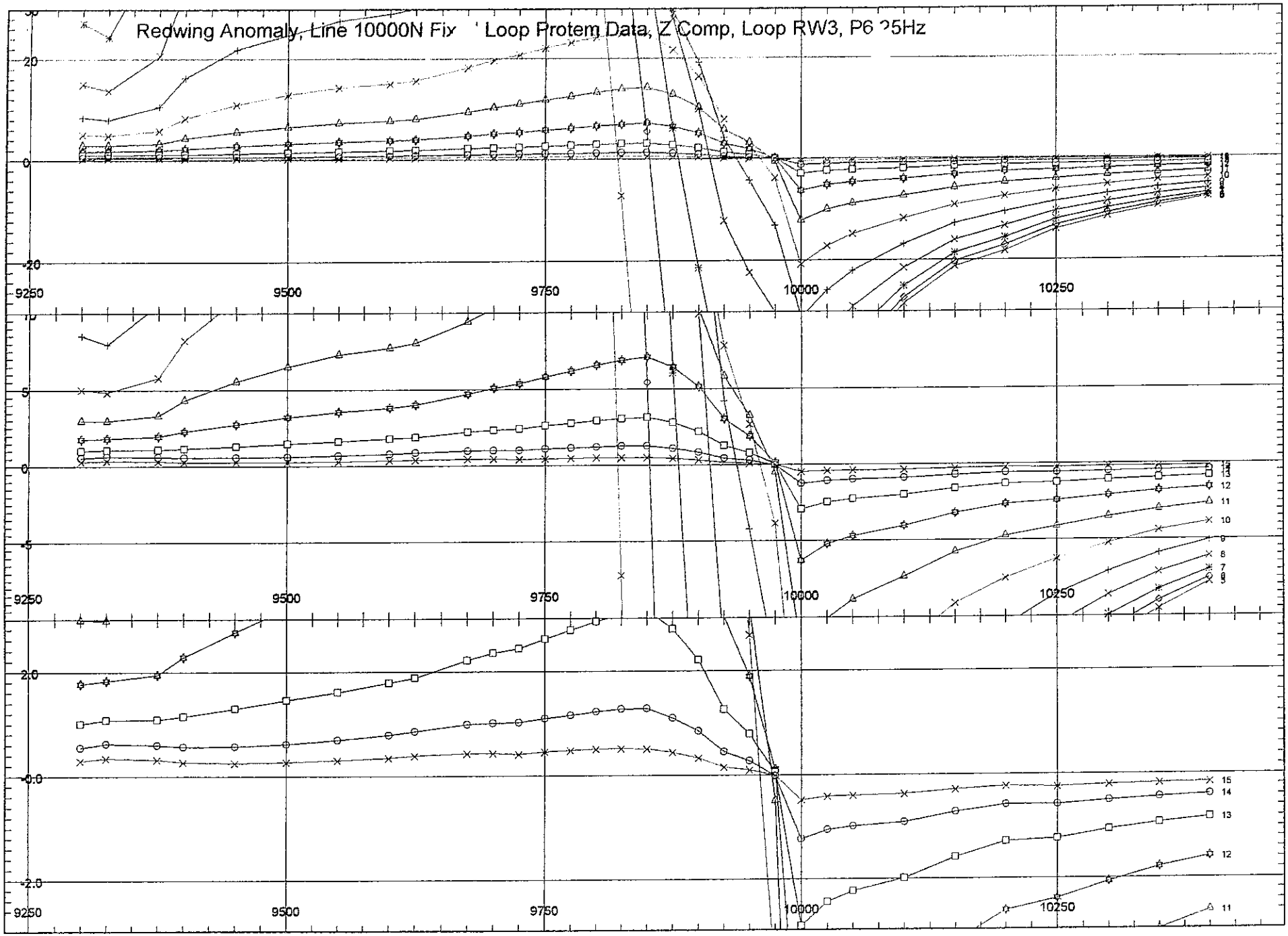
REDWING

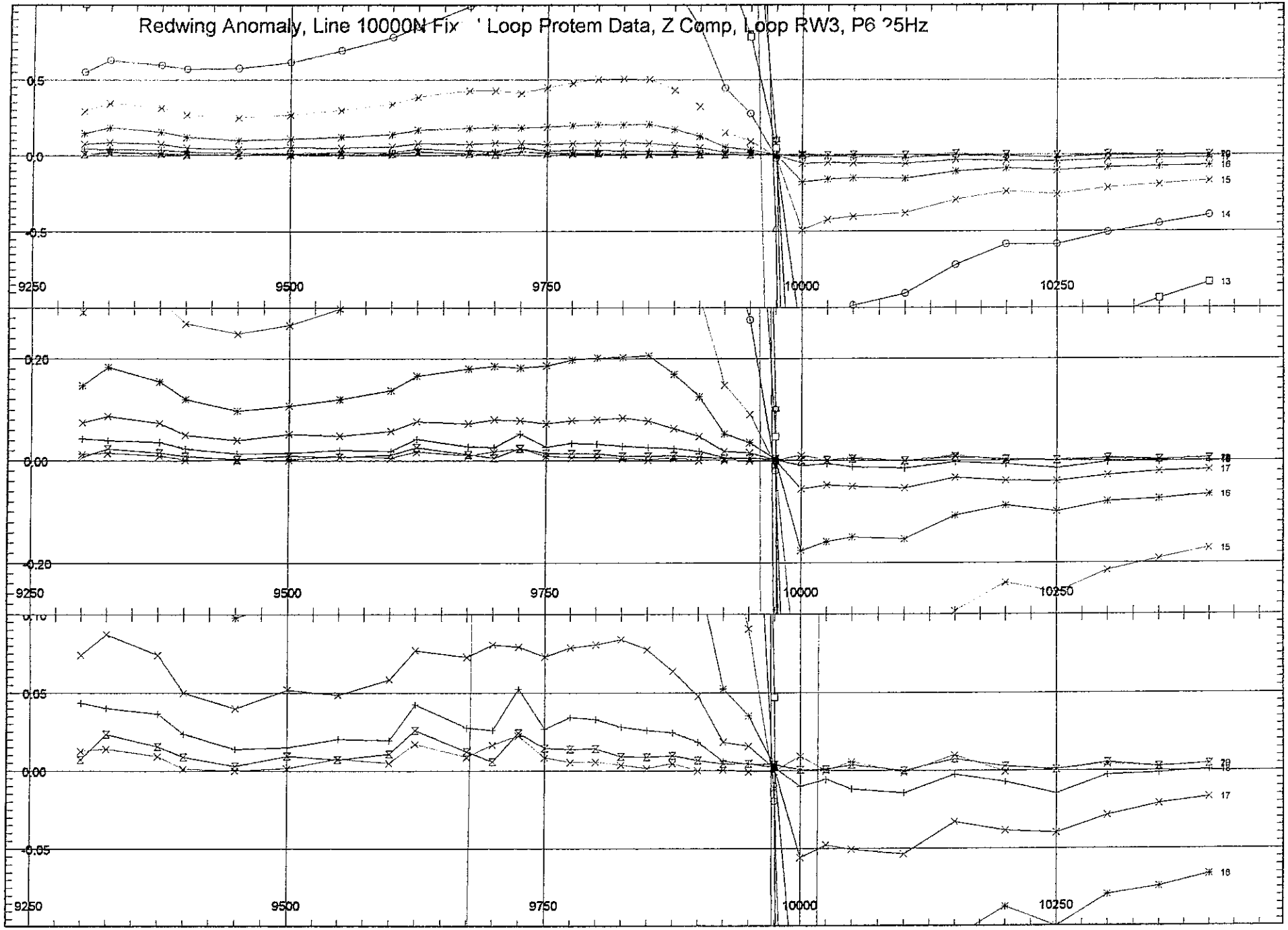
LINE 10000N

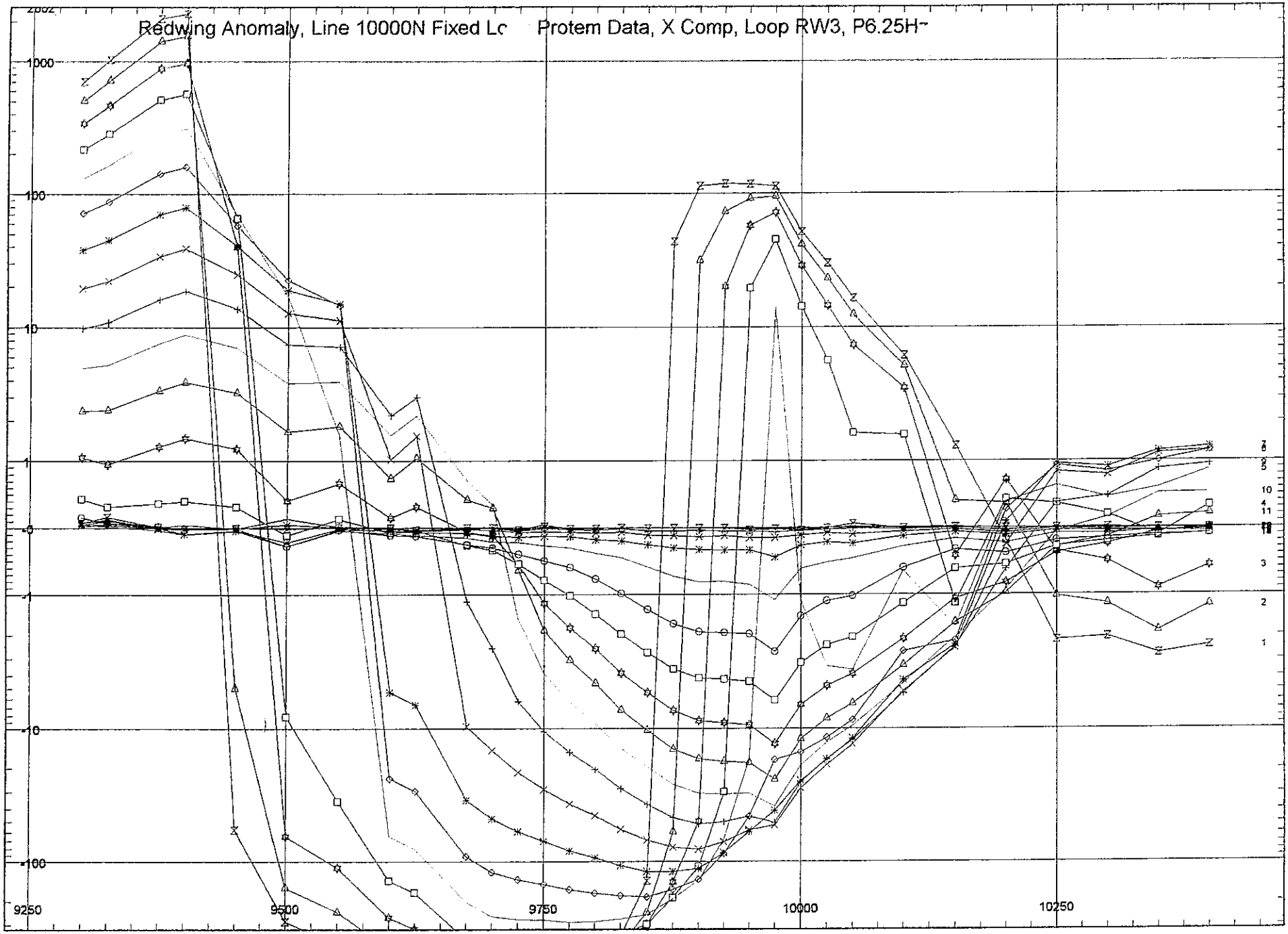
FIXED LOOP DATA & MODELS

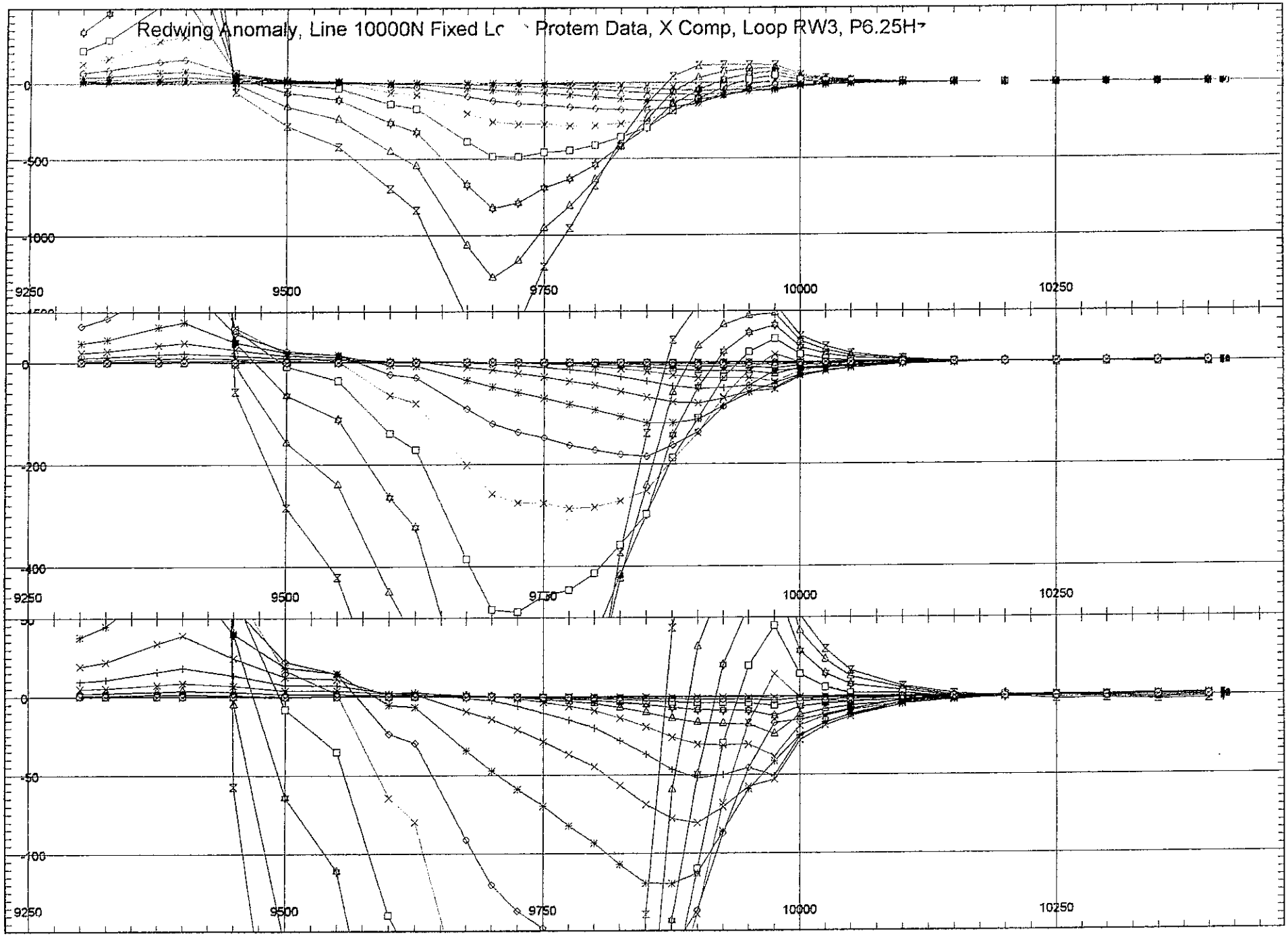

Redwing Anomaly, Line 10000N Pro' 'n Fixed Loop Data, Z Comp, Loop RW3, P6 25Hz
1000
100
10
1
-0
-1
-10
-100
-1000
9250
9500
9750
10000
10250
15
14
13
12
11
10
9

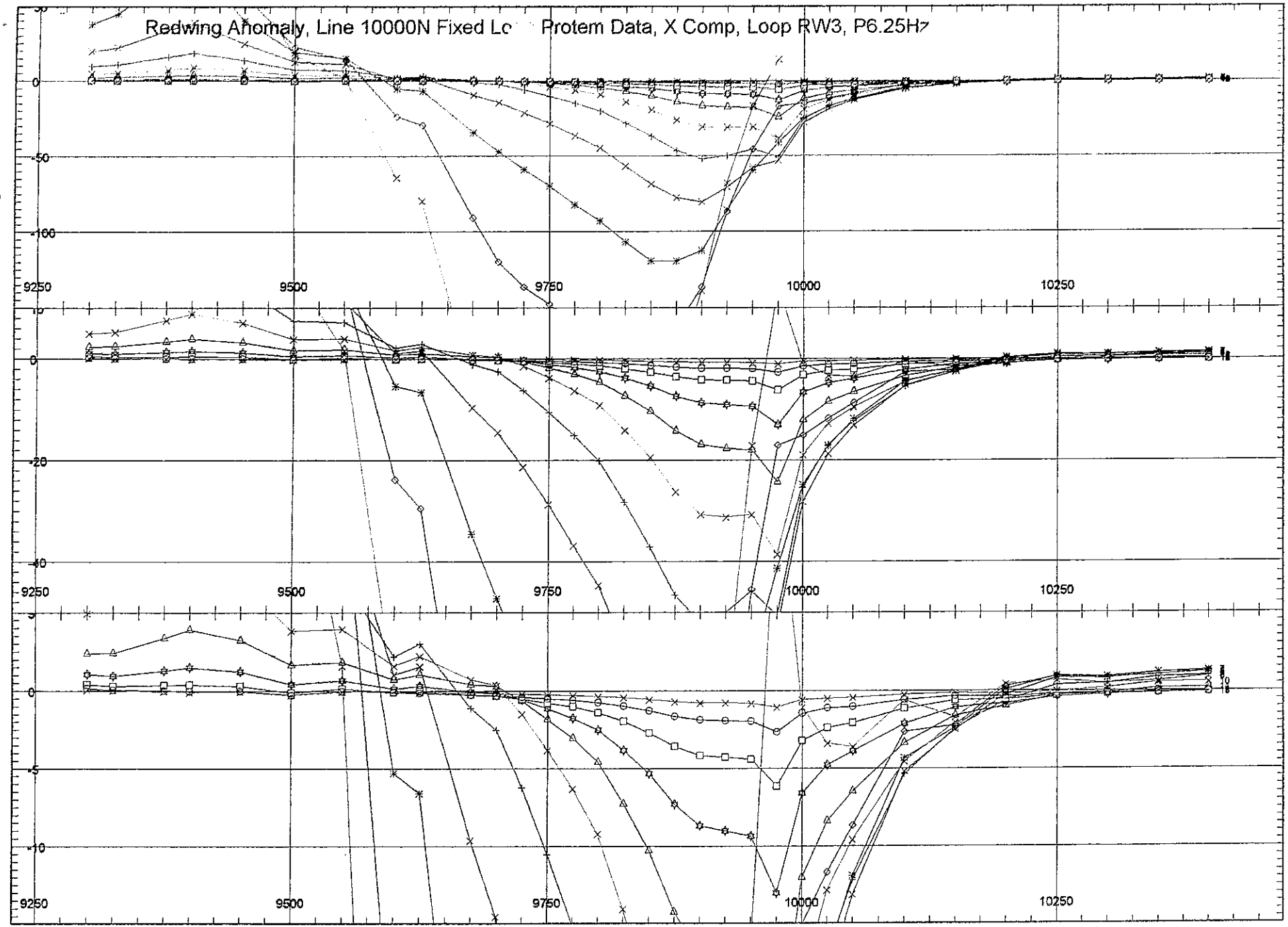

Redwing Anomaly, Line 10000N Fix Loop Protem Data, Z Comp, Loop RW3, P6.25Hz
500
0
-500
9250
9500
9750
10000
10250
200
0
-200
9250
9500
9750
10000
10250
50
0
-50
9250
9500
9750
10000
10250

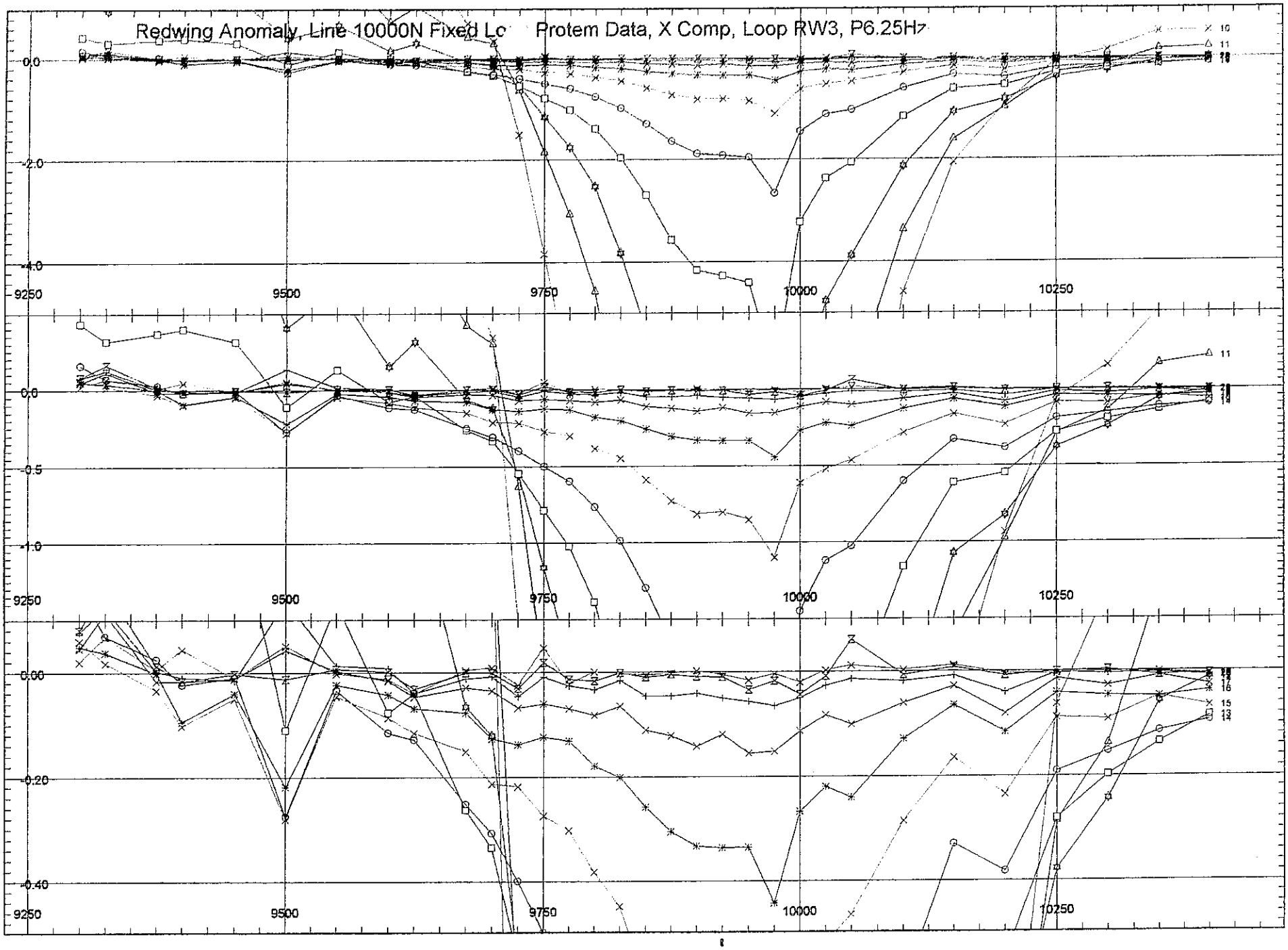

Redwing Anomaly, Line 10000N Fix ' Loop Protem Data, Z Comp, Loop RW3, P6 25Hz
20
0
-20
9250
9500
9750
10000
10250
5
0
-5
2.0
-0.0
-2.0
15
14
13
12
11
10
9
8
7

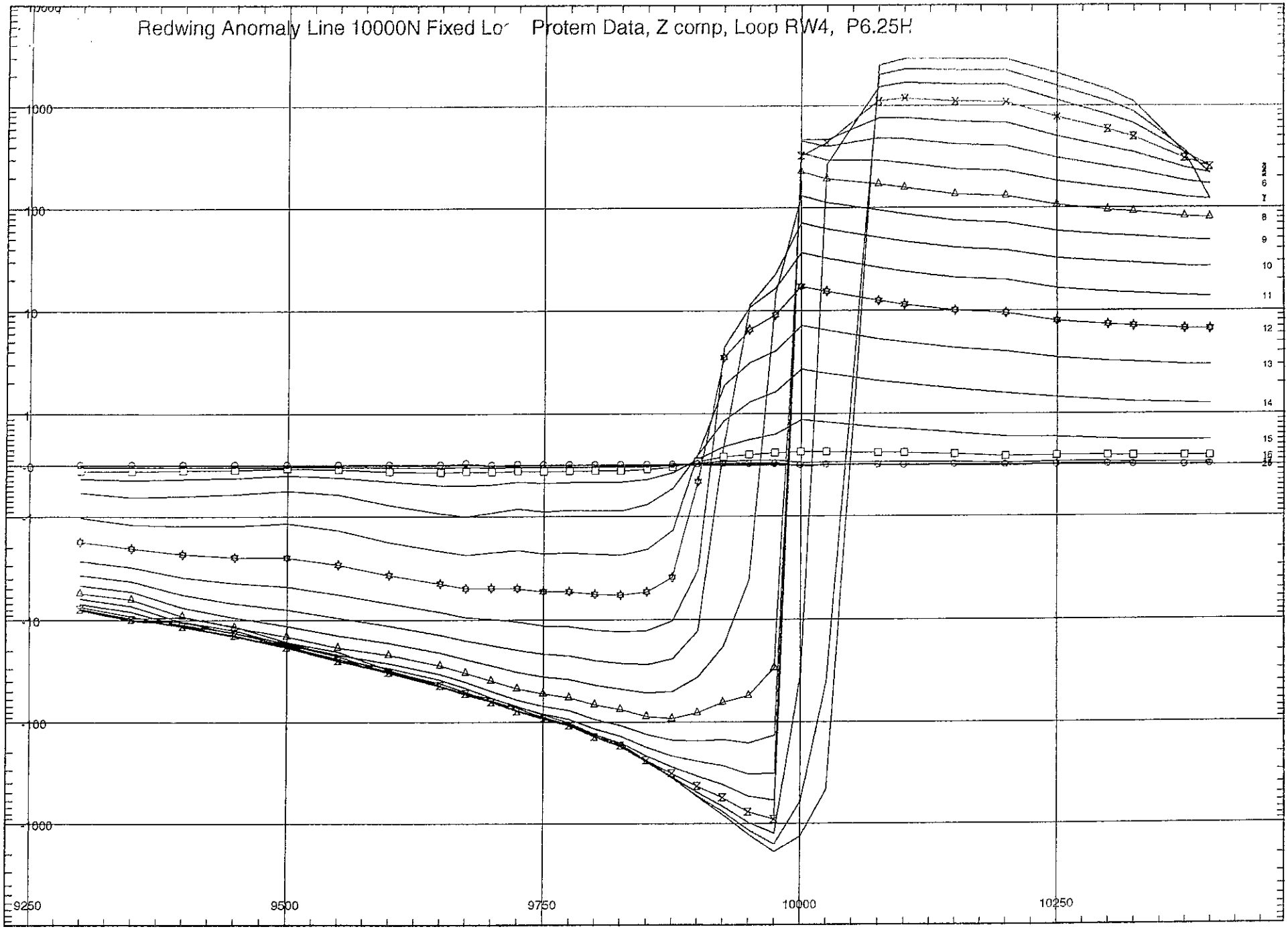

Redwing Anomaly, Line 10000N Fix ' Loop Protem Data, Z Comp, Loop RW3, P6 25Hz
0.5
0.0
-0.5
9250
9500
9750
10000
10250
20
18
15
14
13
0.20
0.00
-0.20
17
16
15
0.10
0.05
0.00
-0.05
20
18
17
18

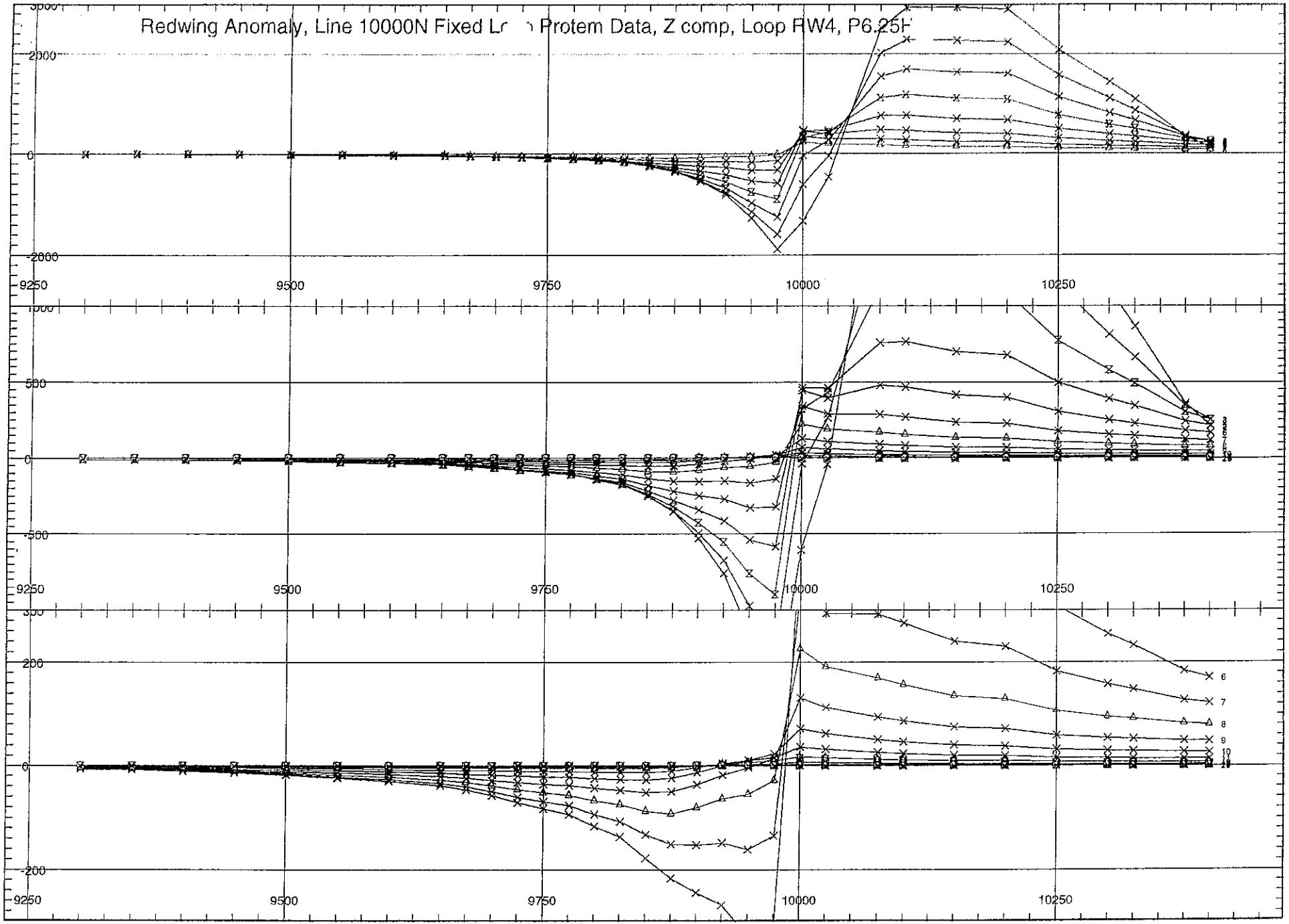

Redwing Anomaly, Line 10000N Fixed Lc
Protem Data, X Comp, Loop RW3, P6.25H~
1000
100
10
1
-0
-1
-10
-100
9250
9500
9750
10000
10250
7
6
9
5
10
4
11
3
2
1

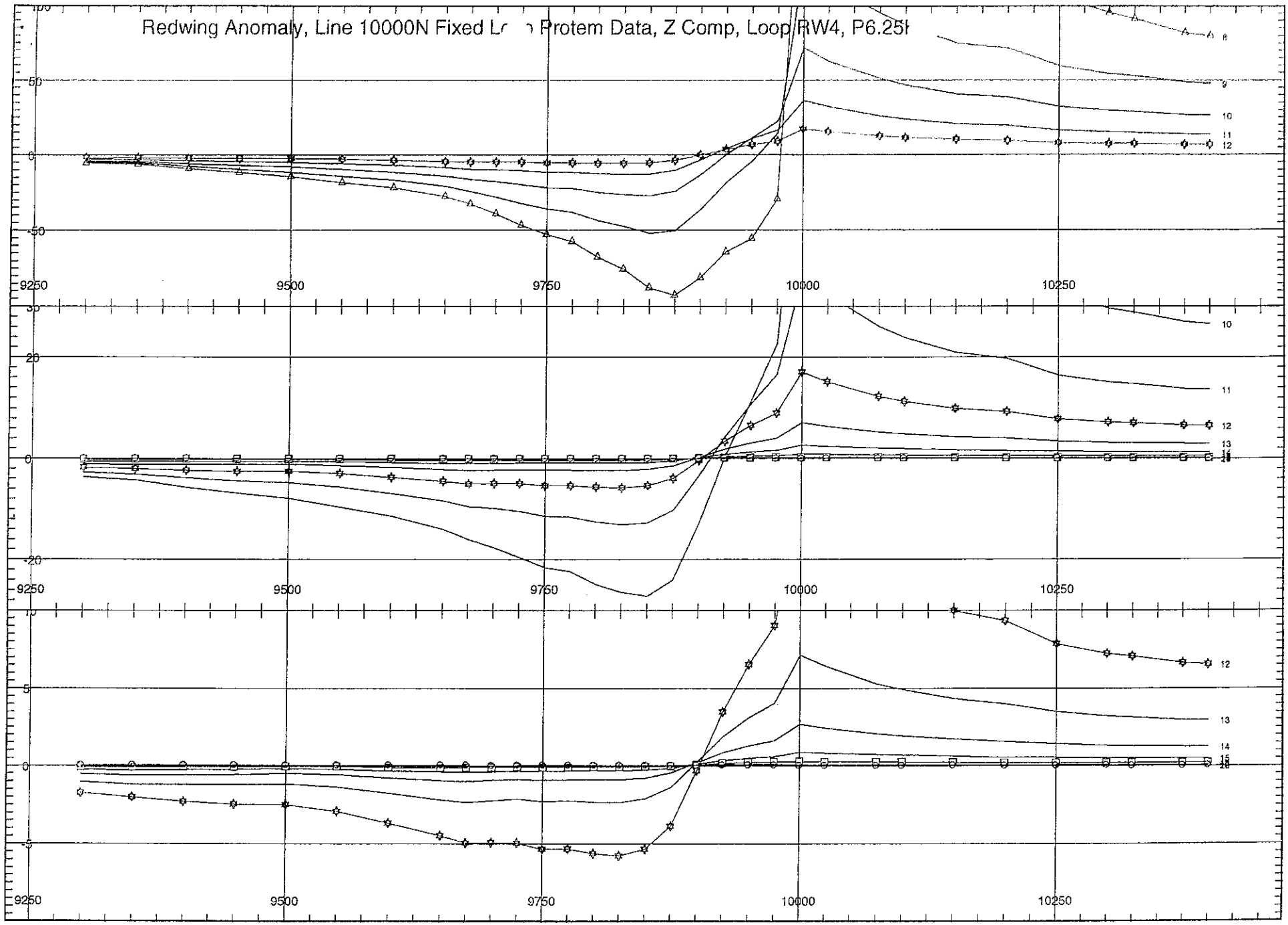

Redwing Anomaly, Line 10000N Fixed Lc
Protem Data, X Comp, Loop RW3, P6.25H
0
-500
-1000
9250
9500
9750
10000
10250
0
-200
-400
9250
9500
9750
10000
10250
0
-50
-100
9250
9500
9750
10000
10250

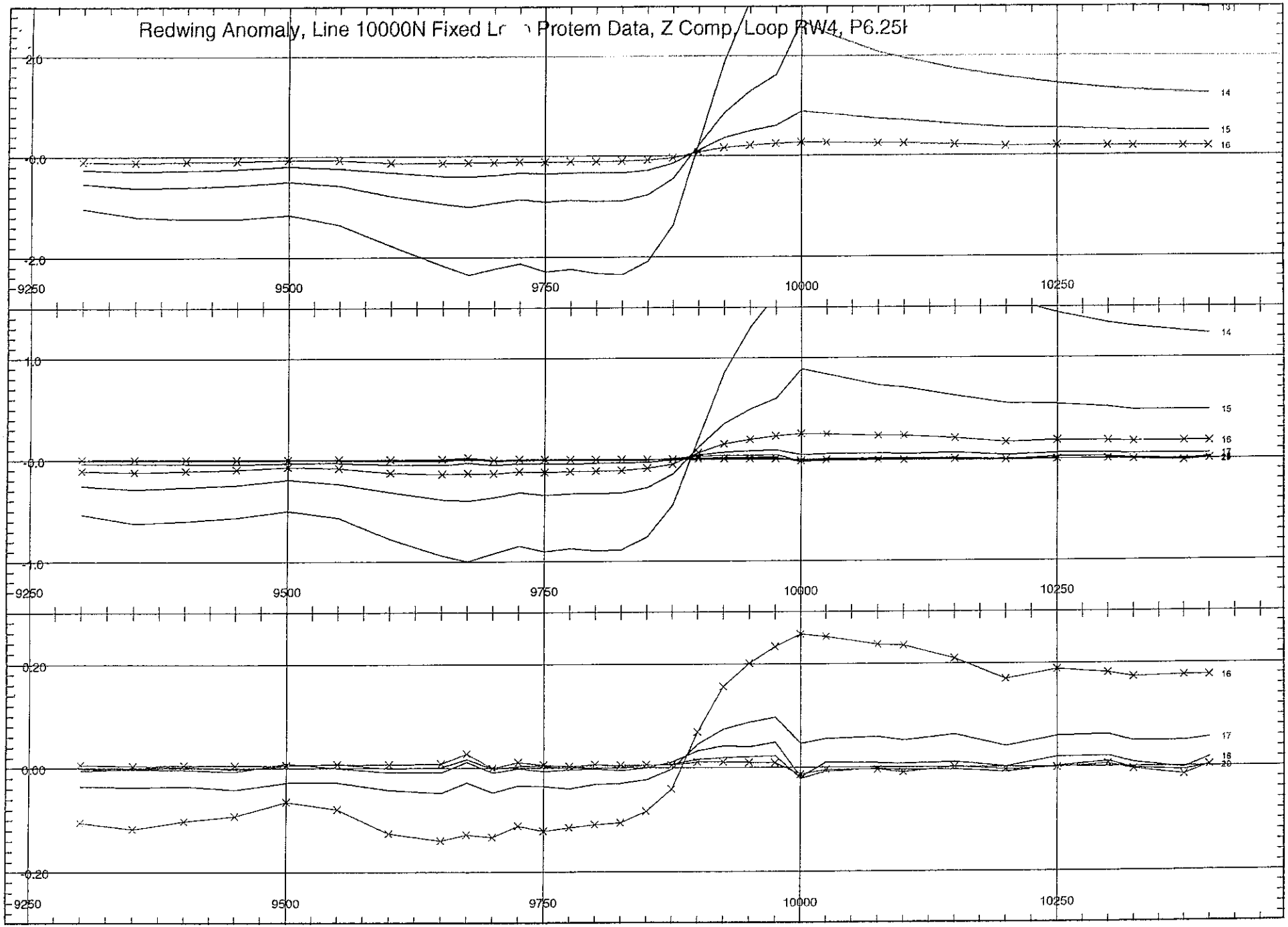

Redwing Anomaly, Line 10000N Fixed Lo Protem Data, X Comp, Loop RW3, P6.25Hz
0
-50
-100
9250
9500
9750
10000
10250
10
0
-20
-40
9250
9500
9750
10000
10250
5
0
-5
-10
9250
9500
9750
10000
10250

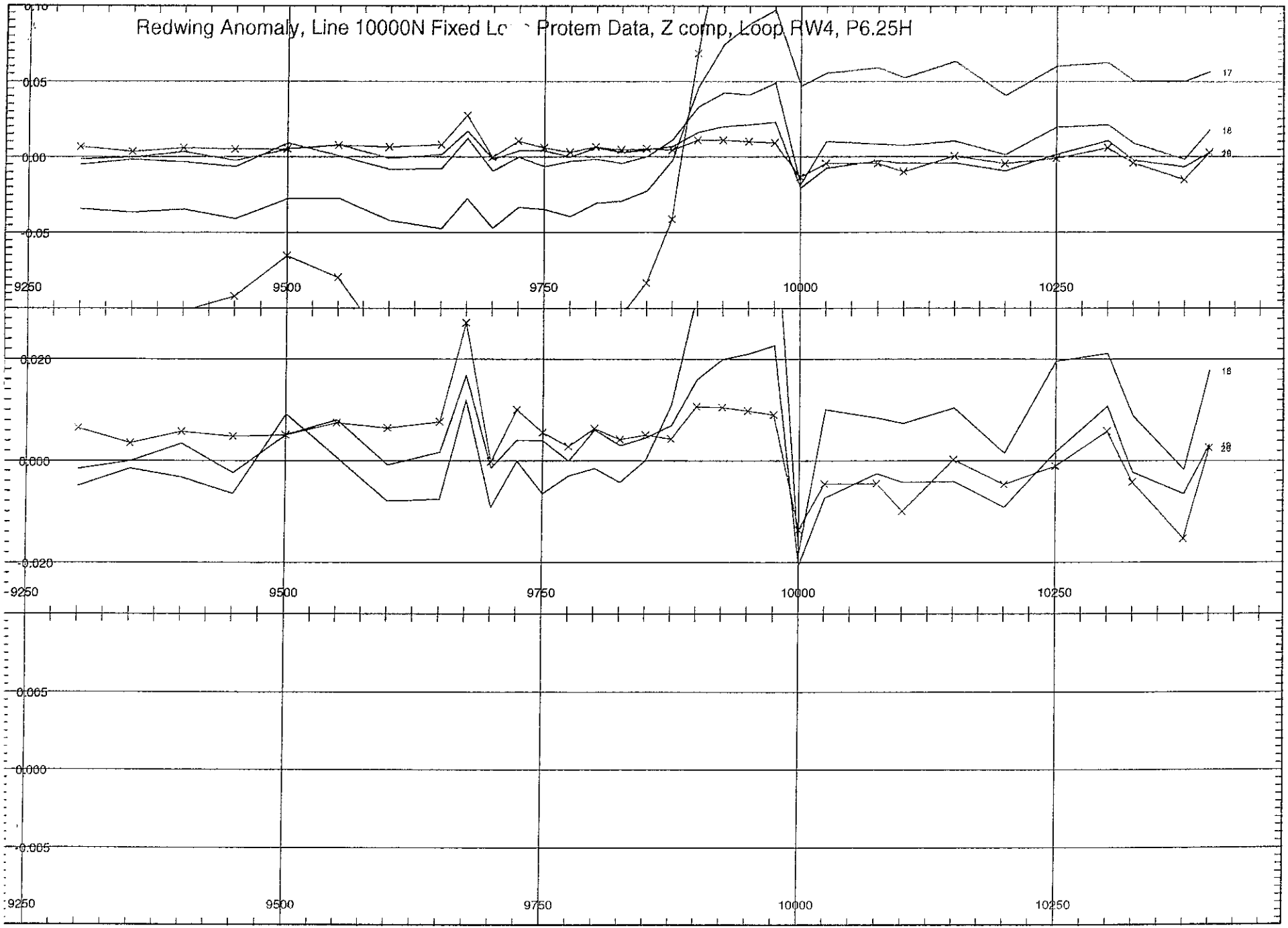

Redwing Anomaly, Line 10000N Fixed Lc Protem Data, X Comp, Loop RW3, P6.25Hz
0.0
-2.0
-4.0
9250
9500
9750
10000
10250
0.0
-0.5
-1.0
0.00
-0.20
-0.40

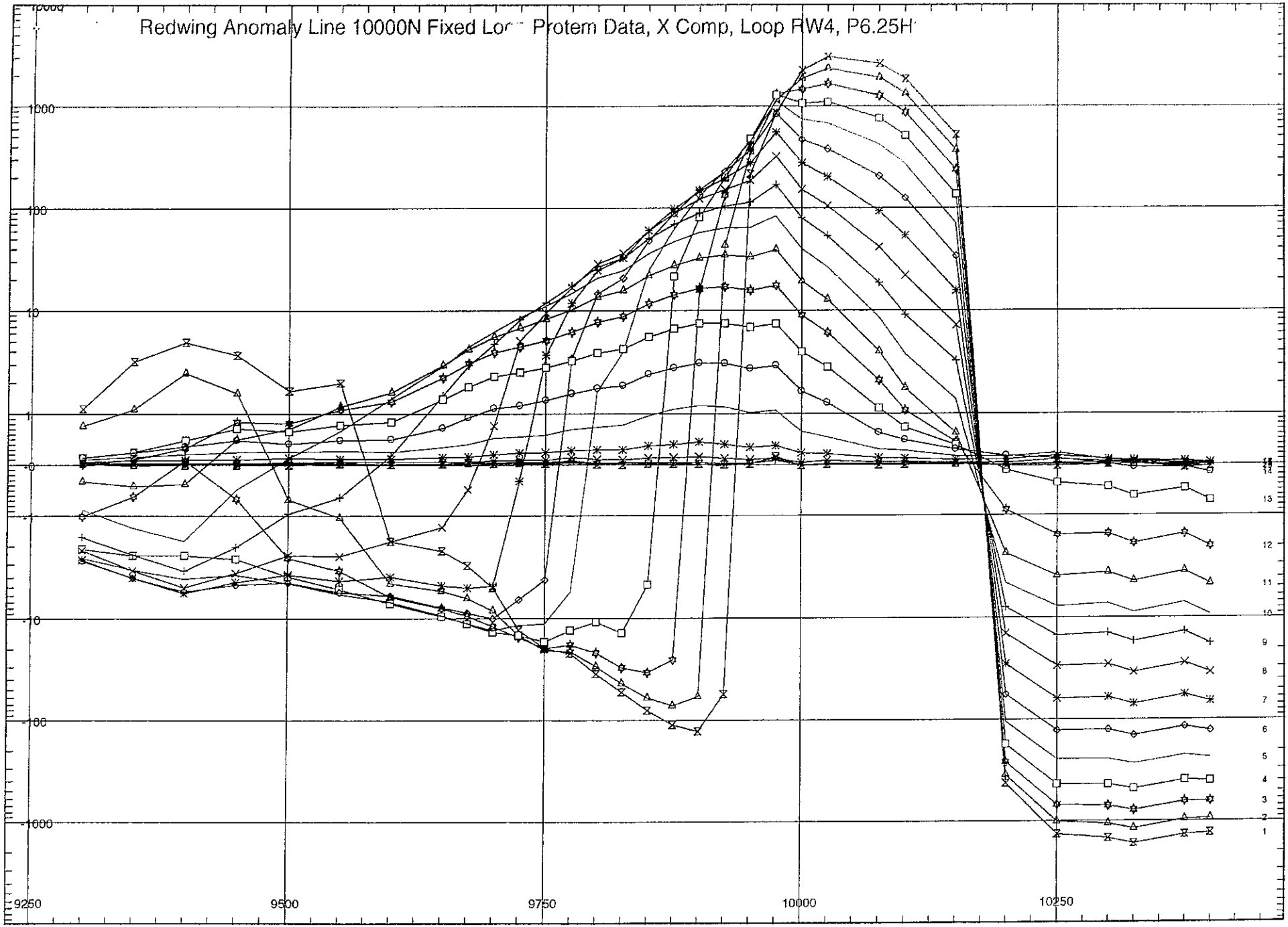

Redwing Anomaly Line 10000N Fixed Lo Protem Data, Z comp, Loop RW4, P6.25H
1000
100
10
1
0
-1
-10
-100
-1000
9250
9500
9750
10000
10250
2
6
7
8
9
10
11
12
13
14
15

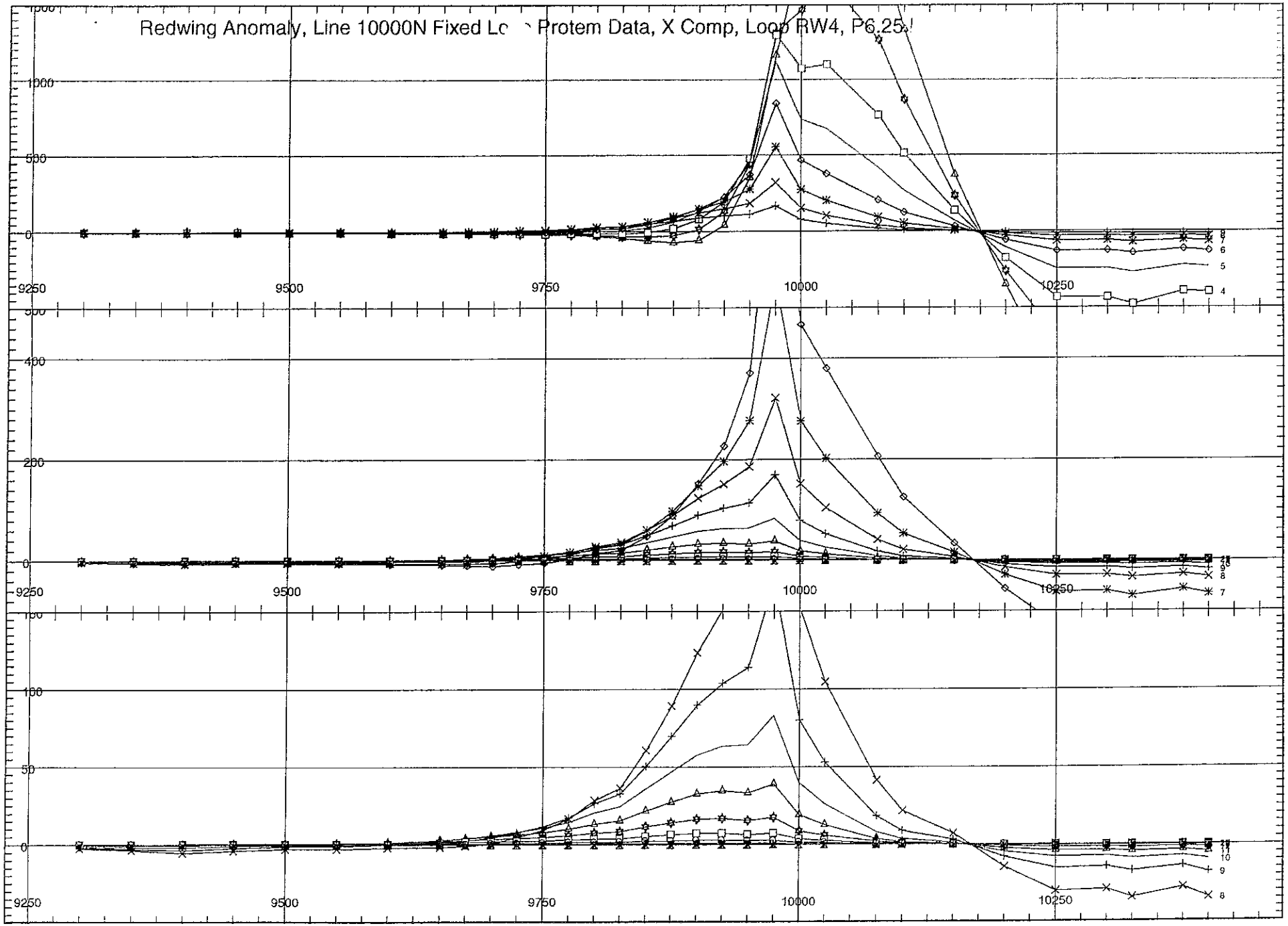

Redwing Anomaly, Line 10000N Fixed Lr) Protem Data, Z comp, Loop RW4, P6.25F
2000
0
-2000
9250
9500
9750
10000
10250
1000
500
0
-500
9250
9500
9750
10000
10250
300
200
0
-200
9250
9500
9750
10000
10250
6
7
8
9
10
11

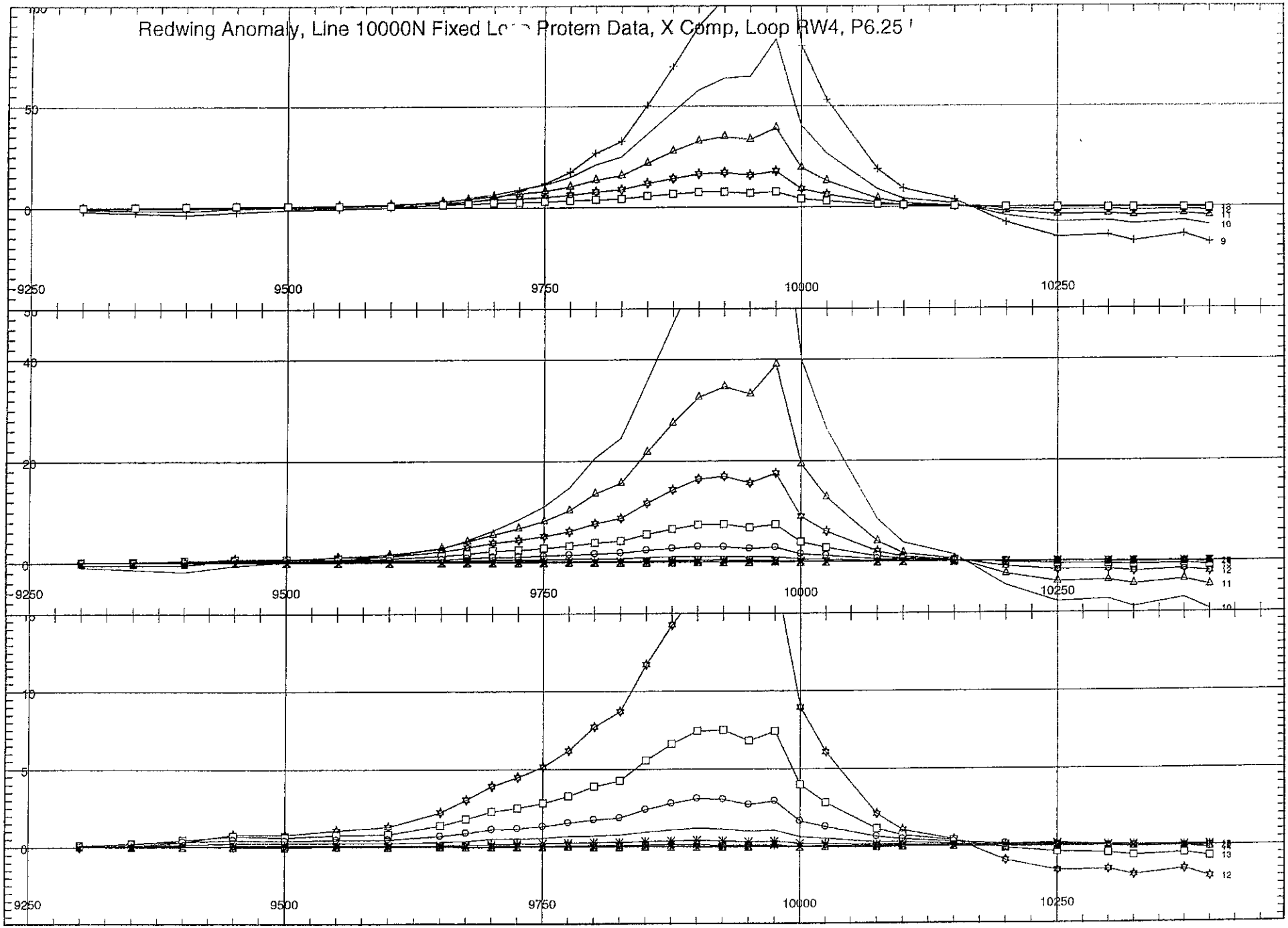

Redwing Anomaly, Line 10000N Fixed L
Protem Data, Z Comp, Loop RW4, P6.25
50
0
-50
9250
9500
9750
10000
10250
8
9
10
11
12
30
20
0
-20
13
15
16
5
-5
14


Redwing Anomaly, Line 10000N Fixed Lo Protem Data, Z Comp, Loop RW4, P6.25I
2.0
0.0
-2.0
9250
9500
9750
10000
10250
14
15
16
1.0
-1.0
17
0.20
0.00
-0.20
18
20


Redwing Anomaly, Line 10000N Fixed Lc Protem Data, Z comp, Loop RW4, P6.25H
0.10
0.05
0.00
-0.05
9250
9500
9750
10000
10250
17
18
19
0.020
0.000
-0.020
0.065
0.000
-0.065


Redwing Anomaly Line 10000N Fixed Lo Protem Data, X Comp, Loop RW4, P6.25H
1000
100
10
1
-0
-1
-10
-100
-1000
9250
9500
9750
10000
10250
13
12
11
10
9
8
7
6
5
4
3
2
1


Redwing Anomaly, Line 10000N Fixed Lo Protem Data, X Comp, Loop RW4, P6.25
1000
500
0
9250
9500
9750
10000
10250
6
7
5
4
400
200
0
9250
9500
9750
10000
10250
8
7
100
50
0
9250
9500
9750
10000
10250
10
9
8

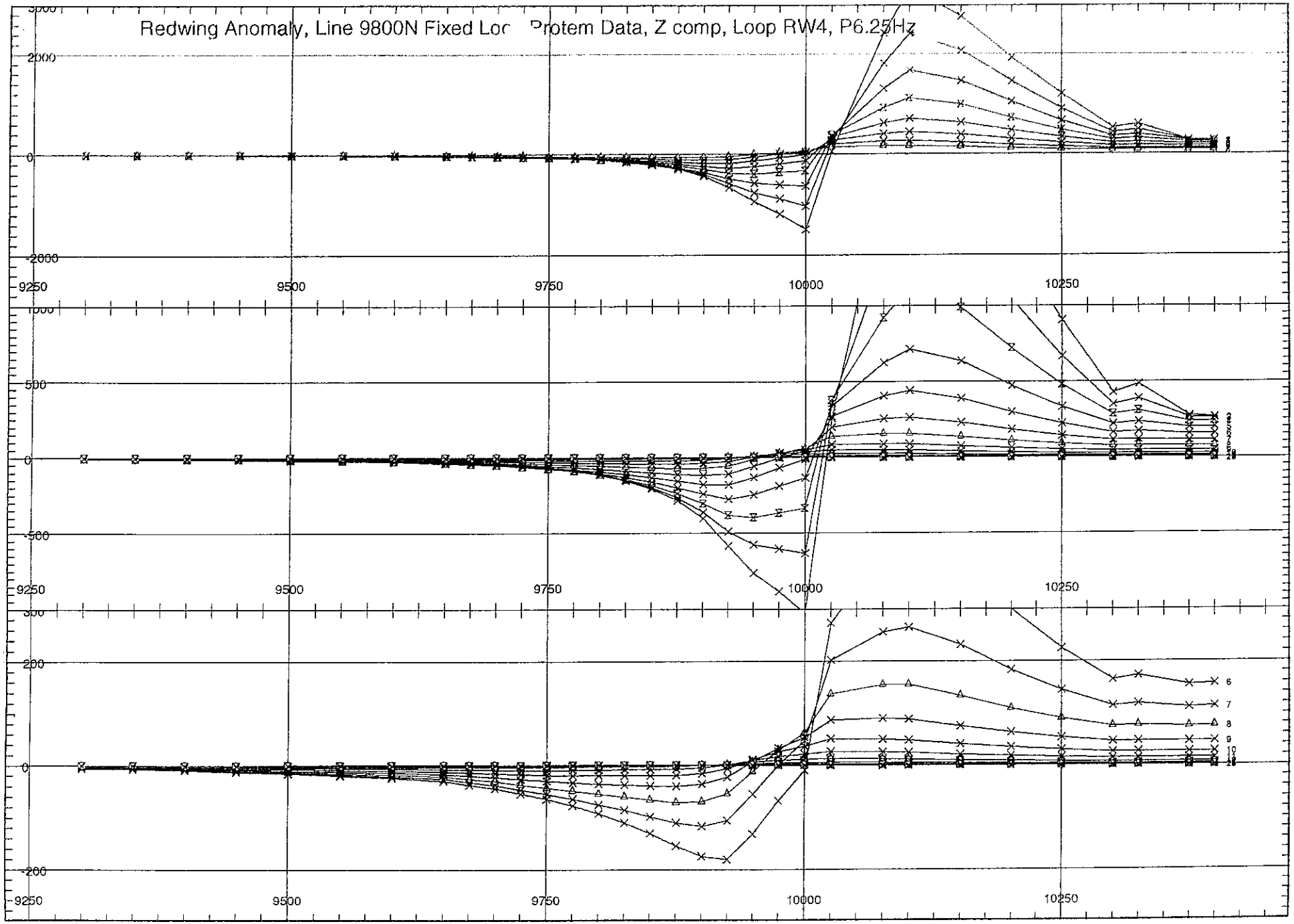

Redwing Anomaly, Line 10000N Fixed Lo Protem Data, X Comp, Loop RW4, P6.25
50
0
9250
9500
9750
10000
10250
13
11
10
9
40
20
0
12
11
10
5
13
12

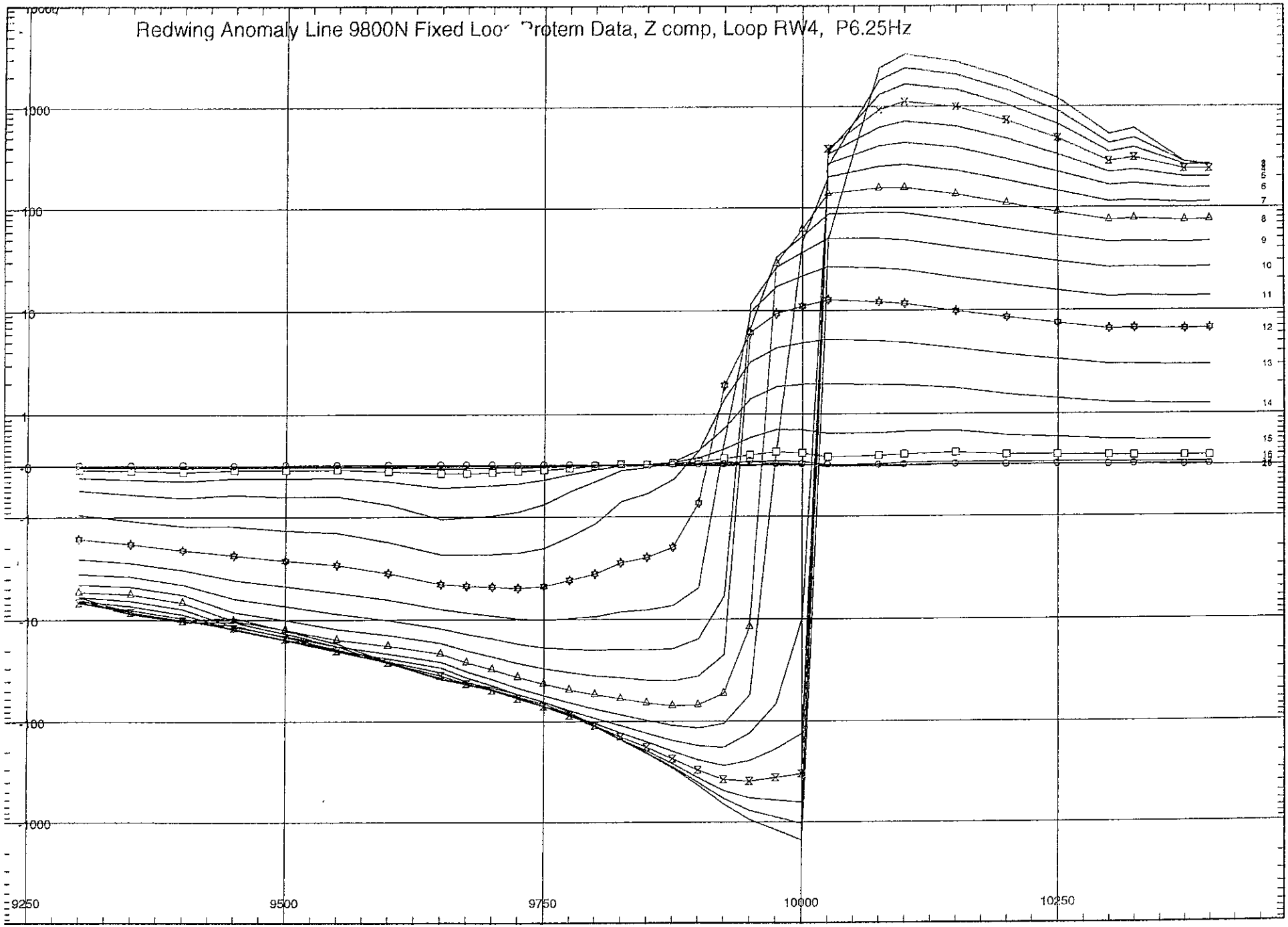
REDWING

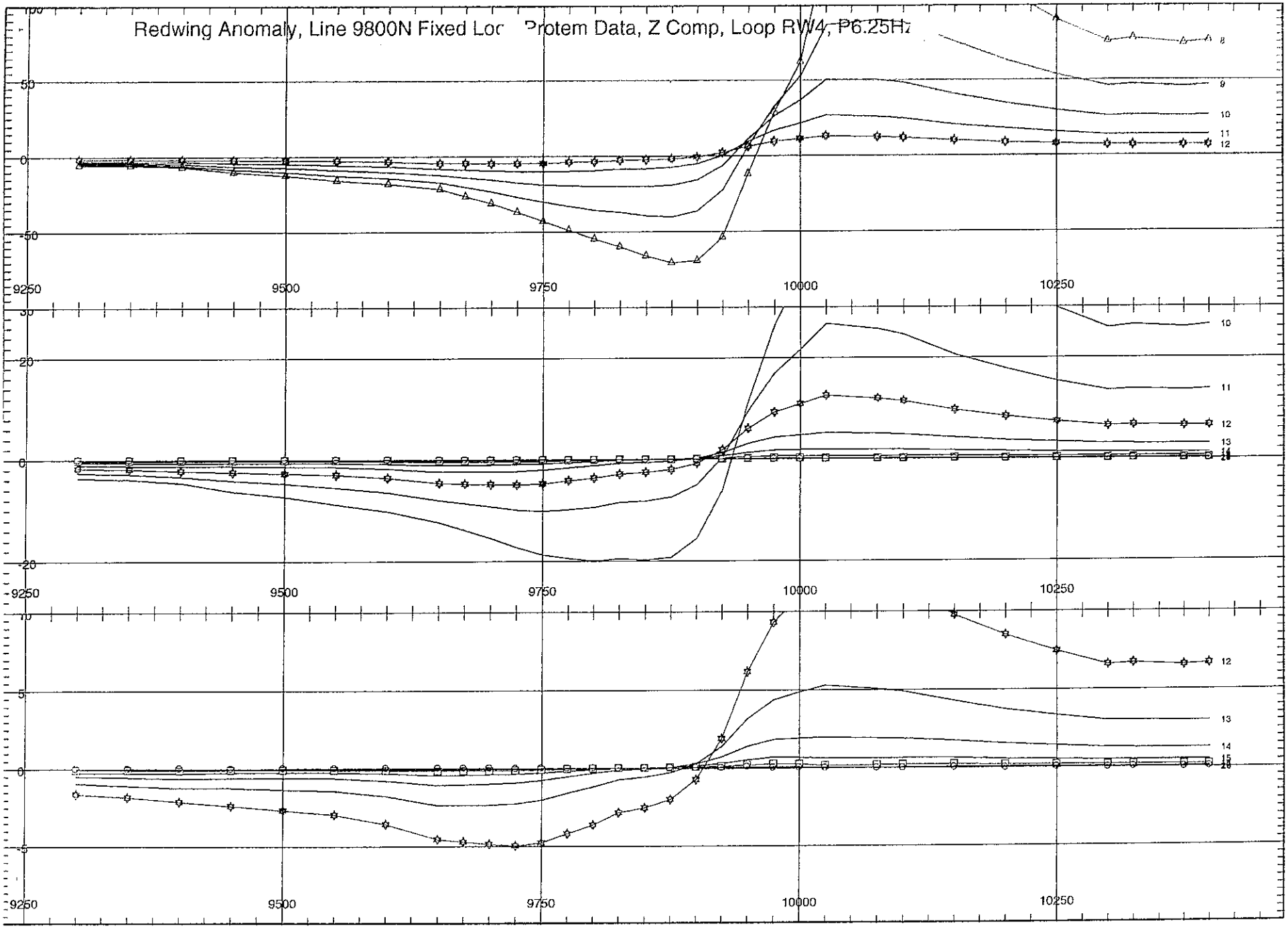
LINE 9800N

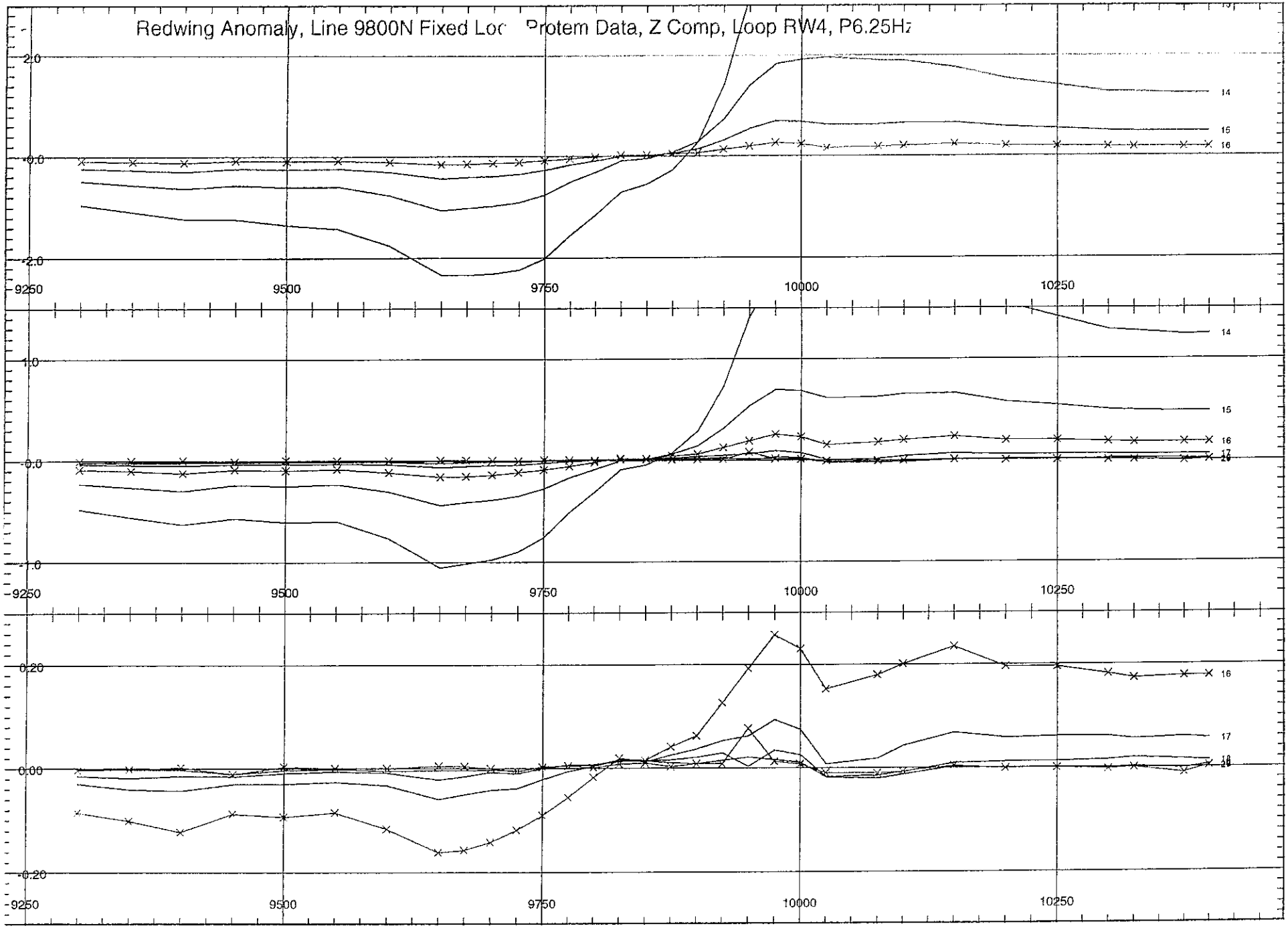
FIXED LOOP

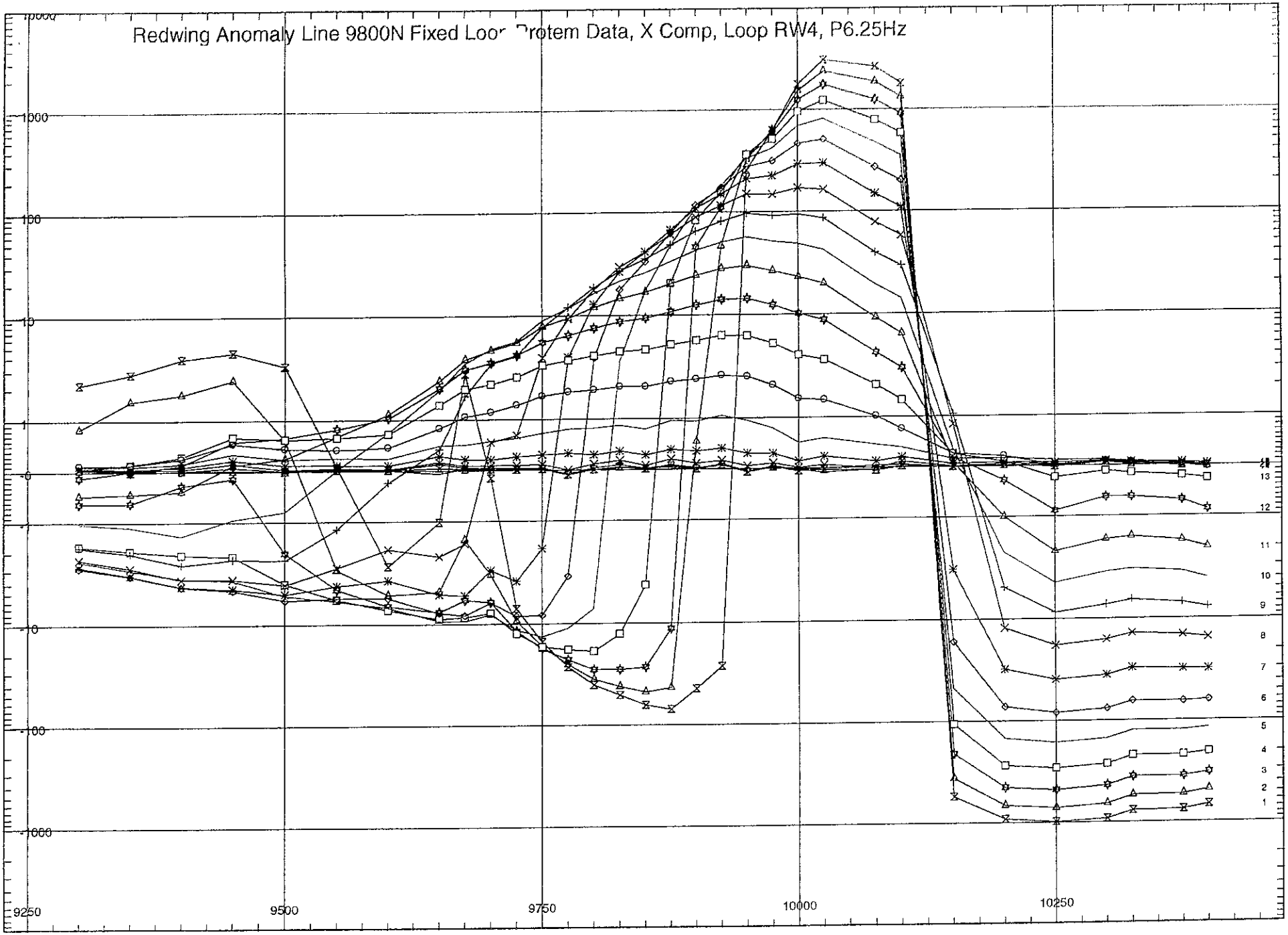
DATA & MODELS

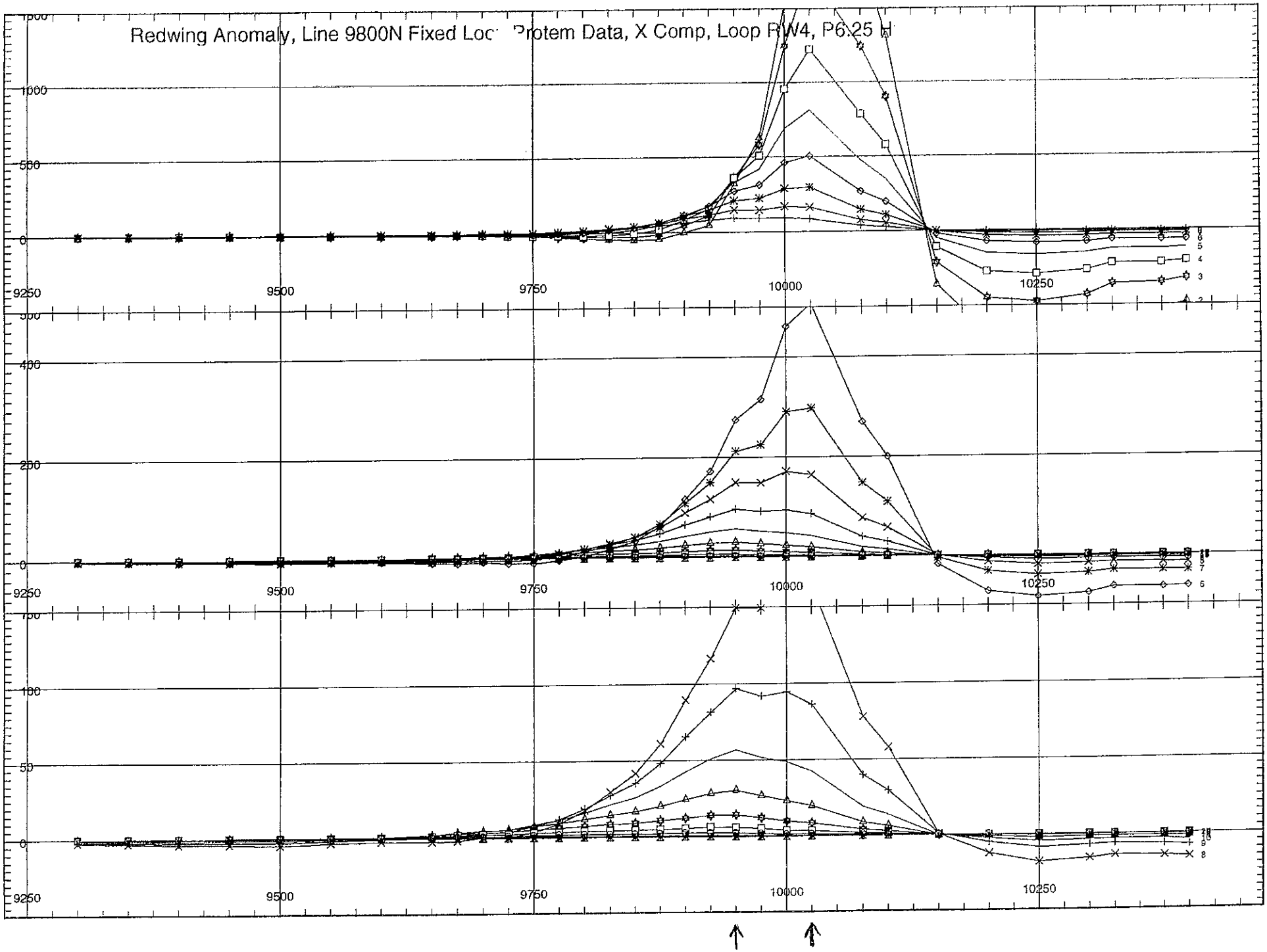

Redwing Anomaly, Line 9800N Fixed Loc Protem Data, Z comp, Loop RW4, P6.25Hz
2000
0
-2000
9250
9500
9750
10000
10250
1000
500
0
-500
9250
9500
9750
10000
10250
300
200
0
-200
9250
9500
9750
10000
10250
6
7
8
9
10

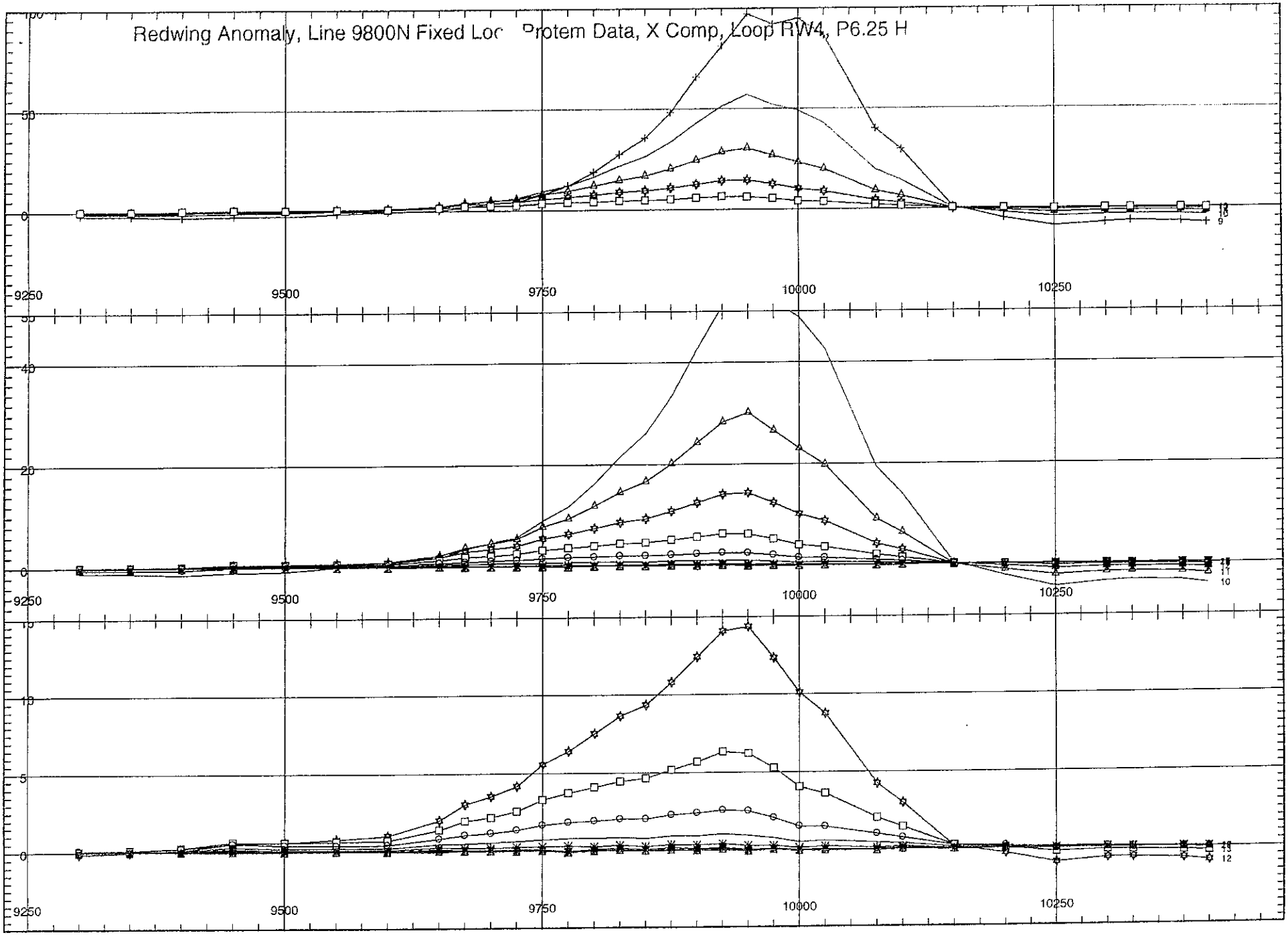

Redwing Anomaly Line 9800N Fixed Loop Protem Data, Z comp, Loop RW4, P6.25Hz
1000
100
10
1
0
-1
-10
-100
-1000
9250
9500
9750
10000
10250
5
6
7
8
9
10
11
12
13
14
15
16

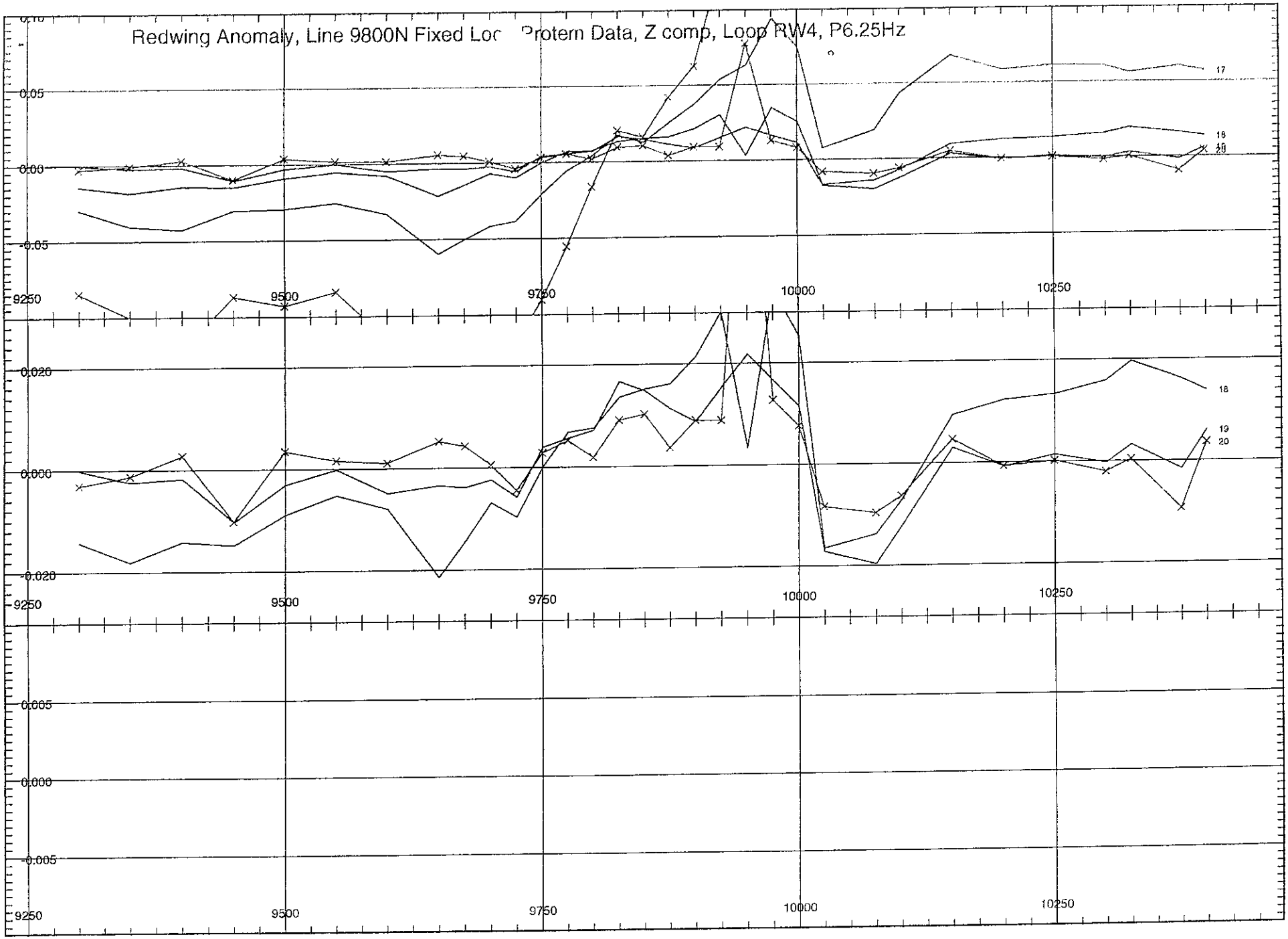

Redwing Anomaly, Line 9800N Fixed Loc Protem Data, Z Comp, Loop RW4, P6.25Hz
100
50
0
-50
9250
9500
9750
10000
10250
8
9
10
11
12
30
20
0
-20
9250
9500
9750
10000
10250
10
11
12
13
10
5
0
-5
9250
9500
9750
10000
10250
12
13
14
15
16

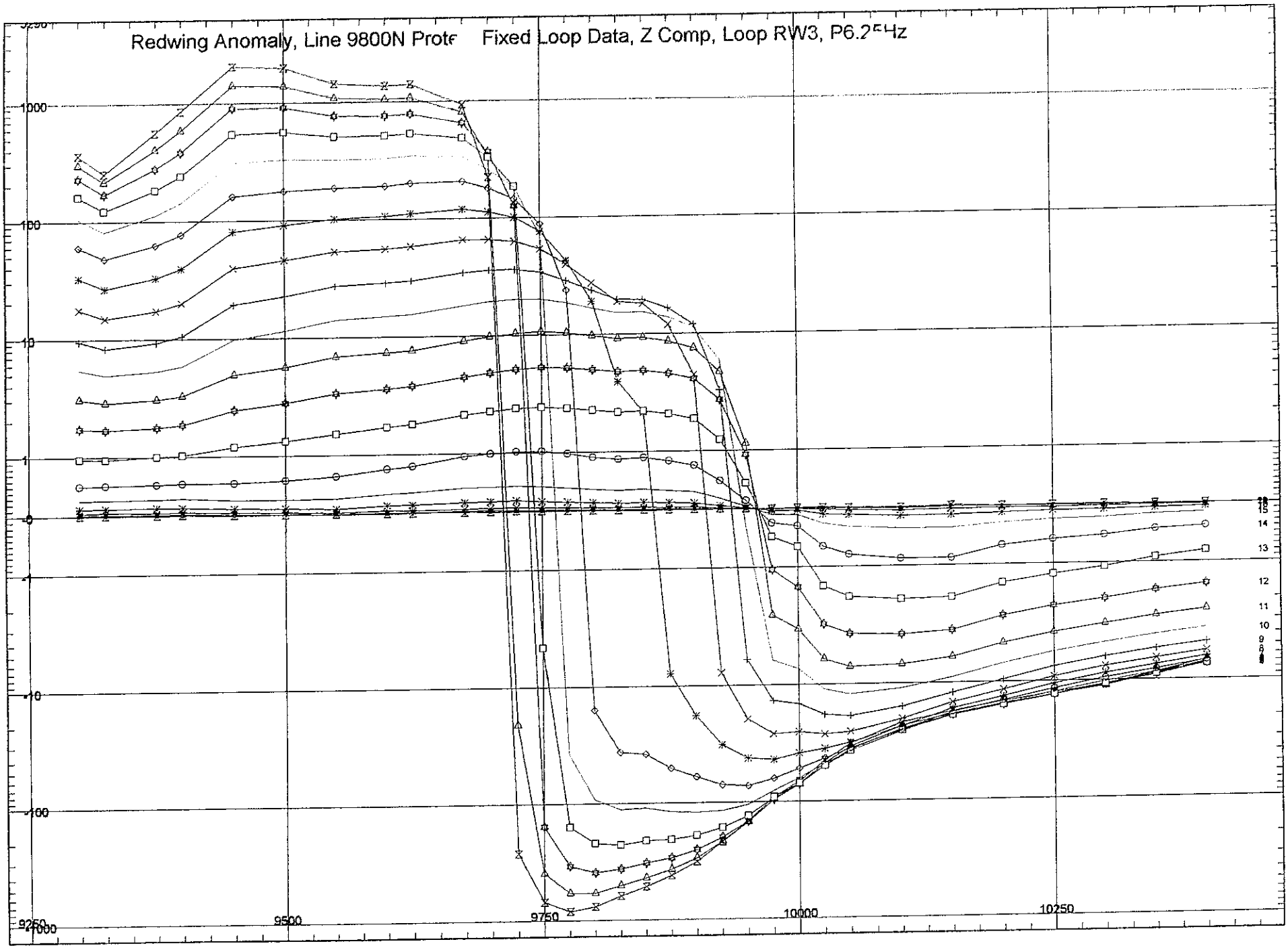

Redwing Anomaly, Line 9800N Fixed Loc Protem Data, Z Comp, Loop RW4, P6.25Hz
2.0
0.0
-2.0
9250
9500
9750
10000
10250
14
15
16
1.0
-1.0
17
0.20
0.00
-0.20
18

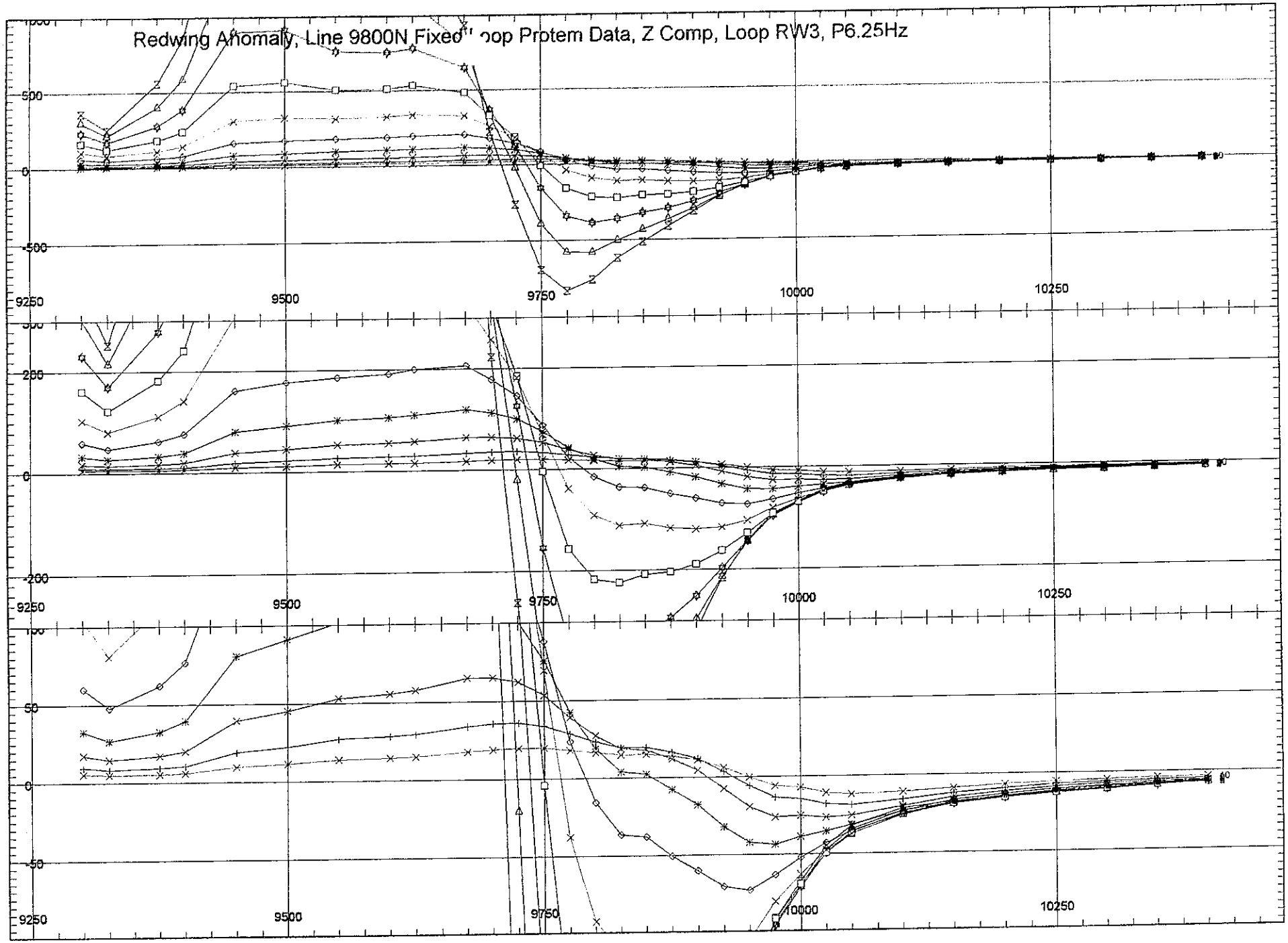

Redwing Anomaly Line 9800N Fixed Loop Protem Data, X Comp, Loop RW4, P6.25Hz
1000
100
10
1
-0
-10
-100
-1000
9250
9500
9750
10000
10250
13
12
11
10
9
8
7
6
5
4
3
2
1

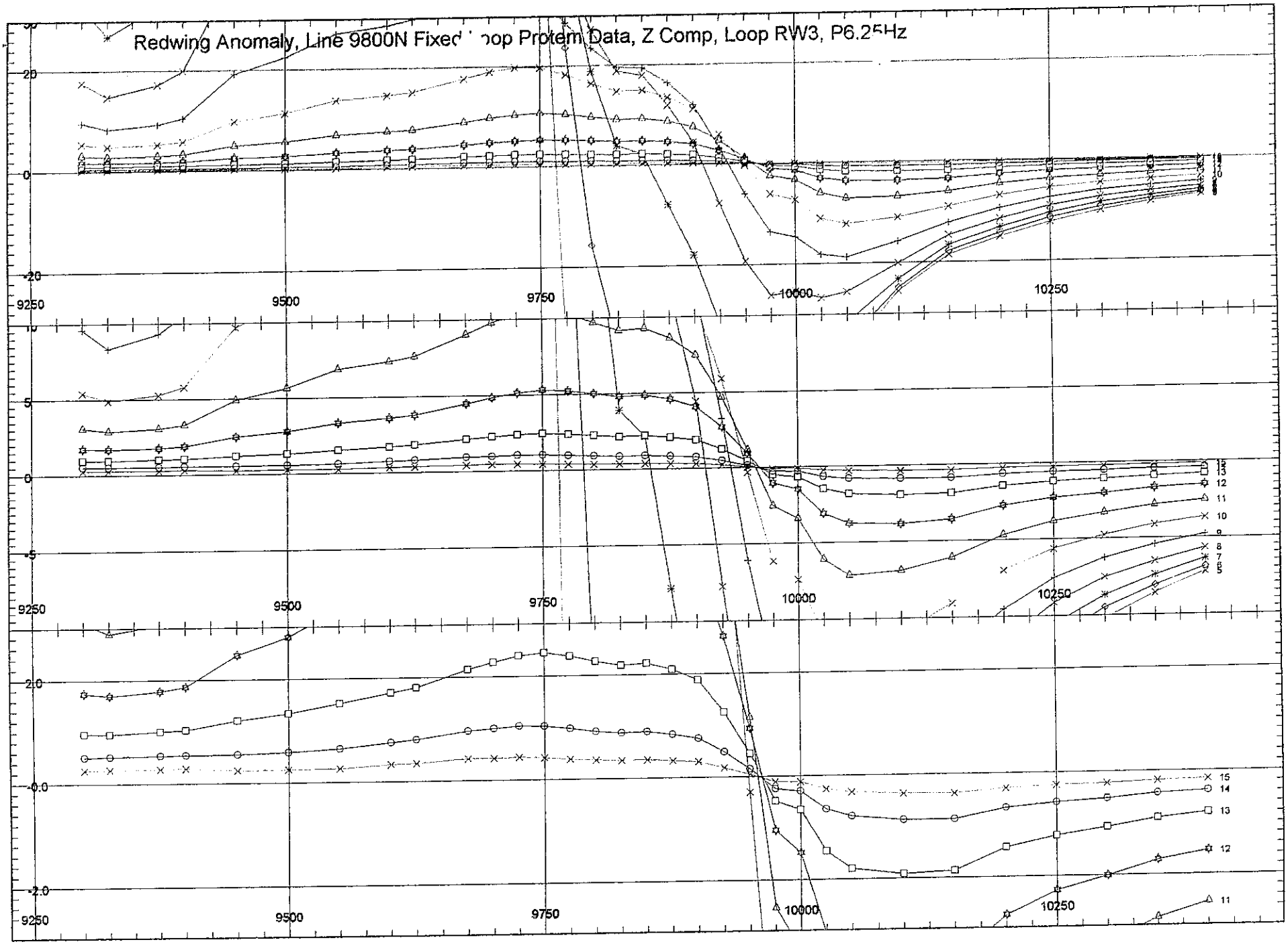

Redwing Anomaly, Line 9800N Fixed Loc Protem Data, X Comp, Loop RW4, P6.25 H
1000
500
0
9250
9500
9750
10000
10250
400
200
100
50

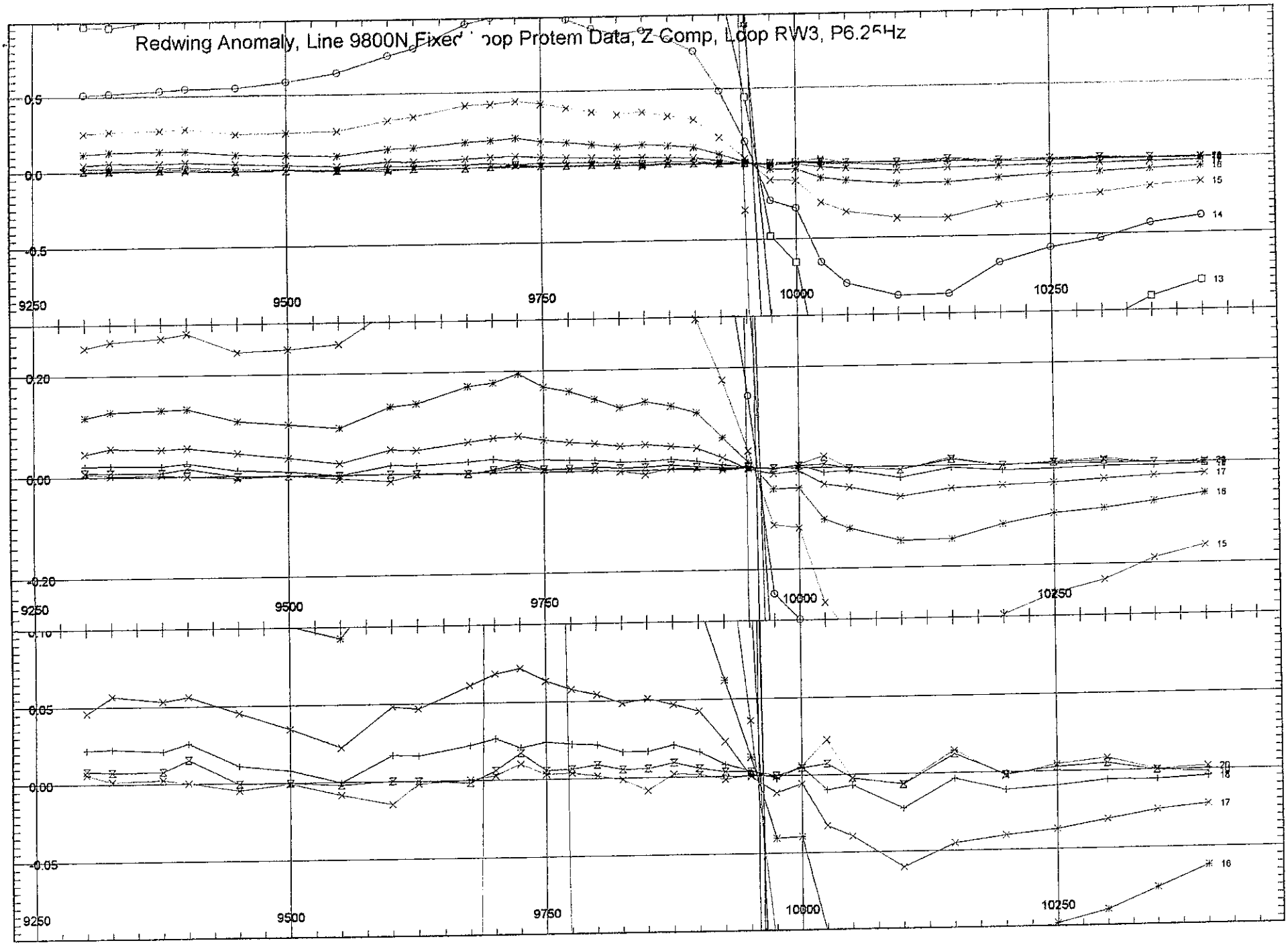

Redwing Anomaly, Line 9800N Fixed Loc Protem Data, X Comp, Loop RW4, P6.25 H
50
0
9250
9500
9750
10000
10250
9
40
20
0
9250
9500
9750
10000
10250
11
10
10
5
0
9250
9500
9750
10000
10250
13
12

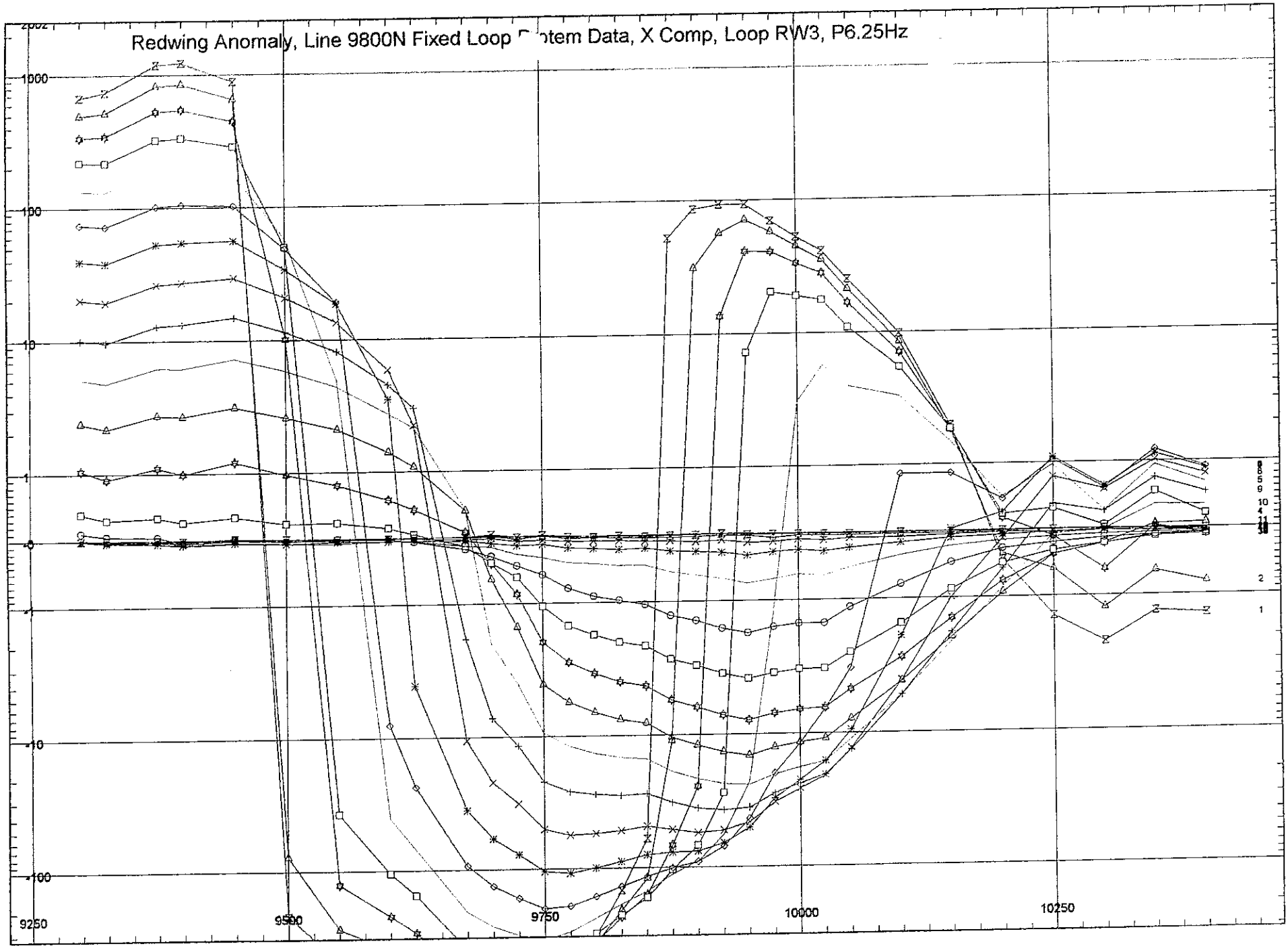

Redwing Anomaly, Line 9800N Fixed Loc Protem Data, Z comp, Loop RW4, P6.25Hz
0.05
0.00
-0.05
9250
9500
9750
10000
10250
17
18
19
20
0.020
0.000
-0.020
0.005
-0.005

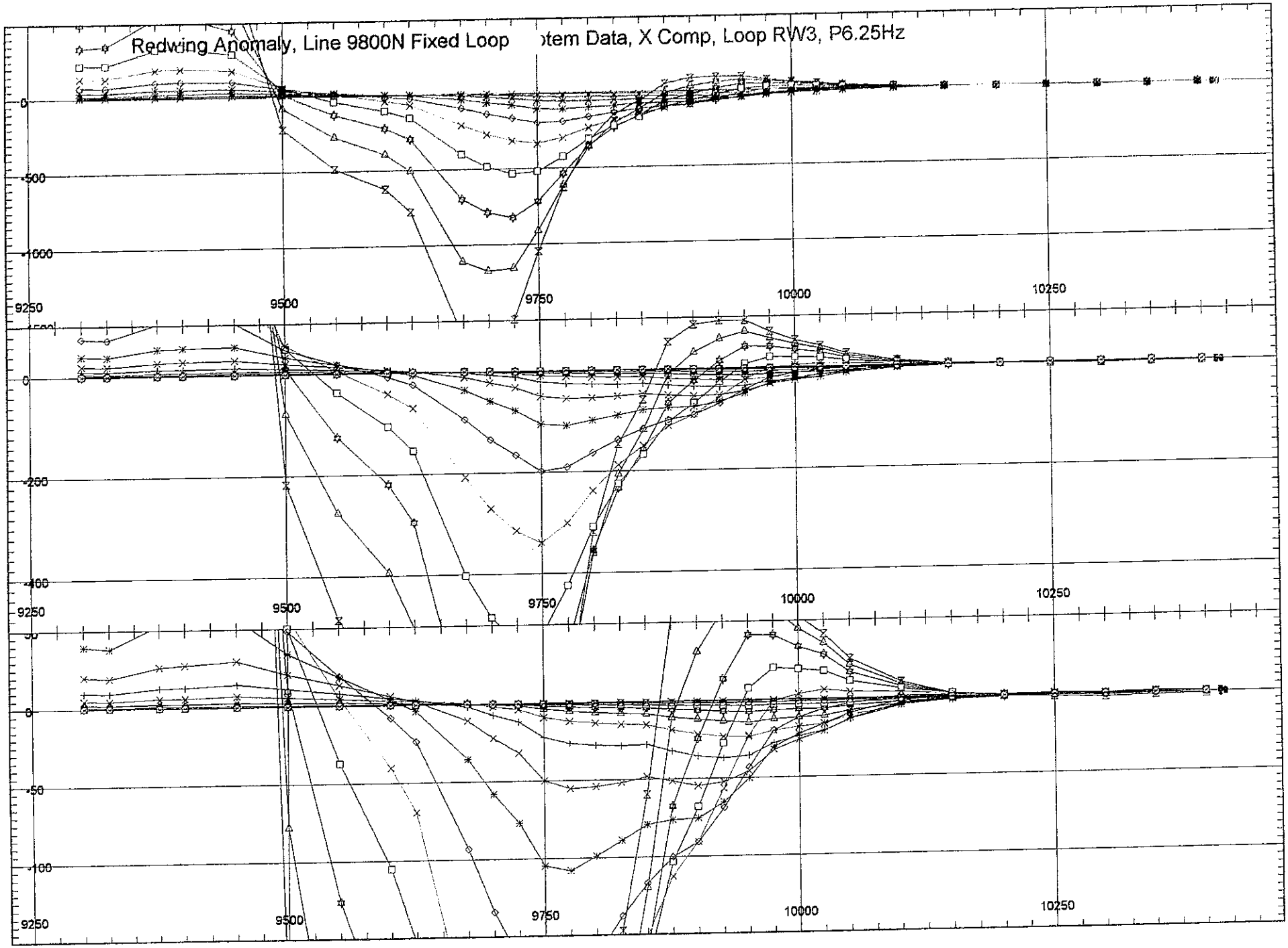

Redwing Anomaly, Line 9800N Prote Fixed Loop Data, Z Comp, Loop RW3, P6.2[illegible]Hz
1000
100
10
1
-0
-1
-10
-100
-1000
9250
9500
9750
10000
10250
15
14
13
12
11
10
9
8

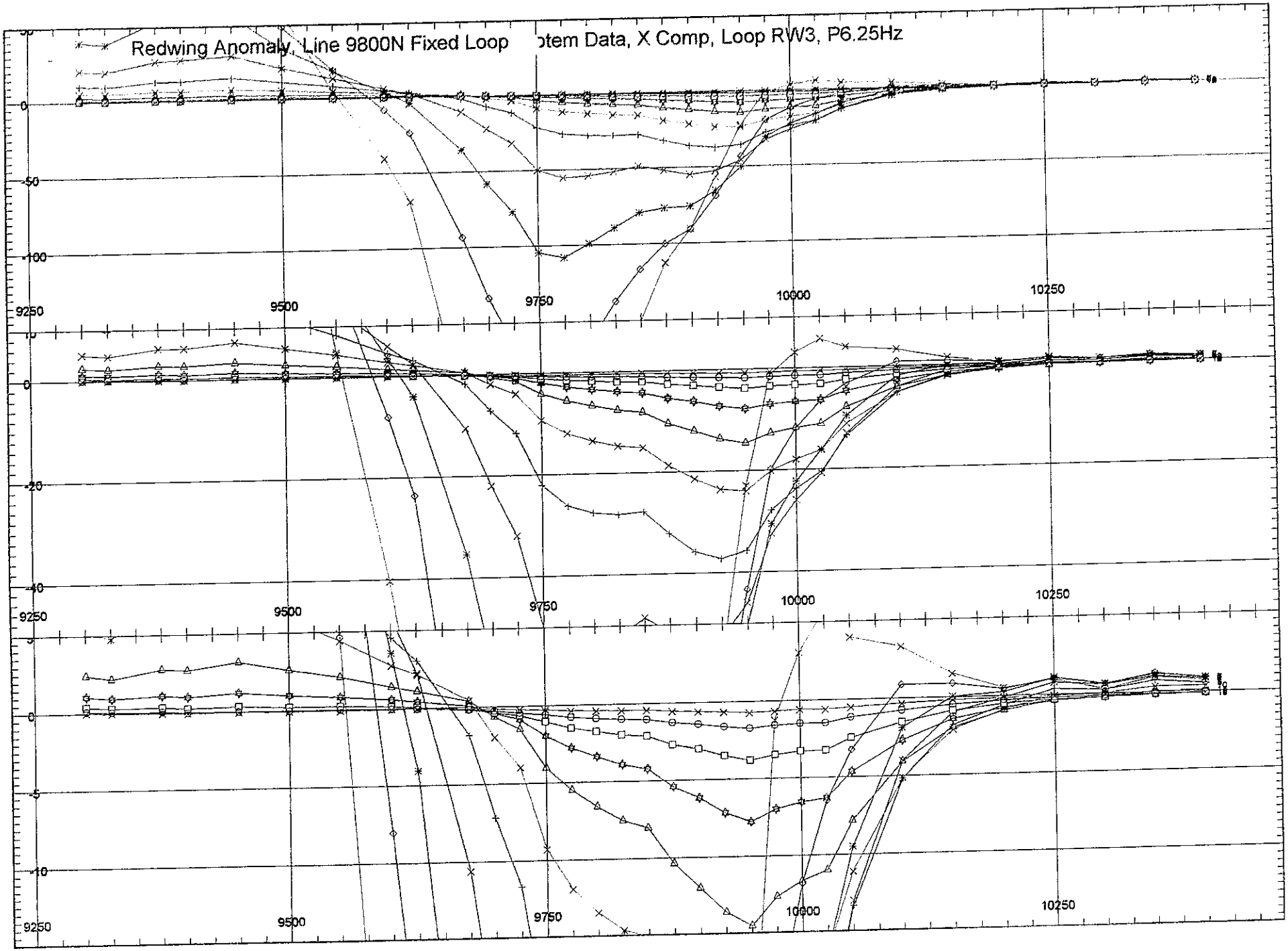

Redwing Anomaly, Line 9800N Fixed Loop Protem Data, Z Comp, Loop RW3, P6.25Hz
500
0
-500
9250
9500
9750
10000
10250
200
0
-200
9250
9500
9750
10000
10250
50
0
-50
9250
9500
9750
10000
10250

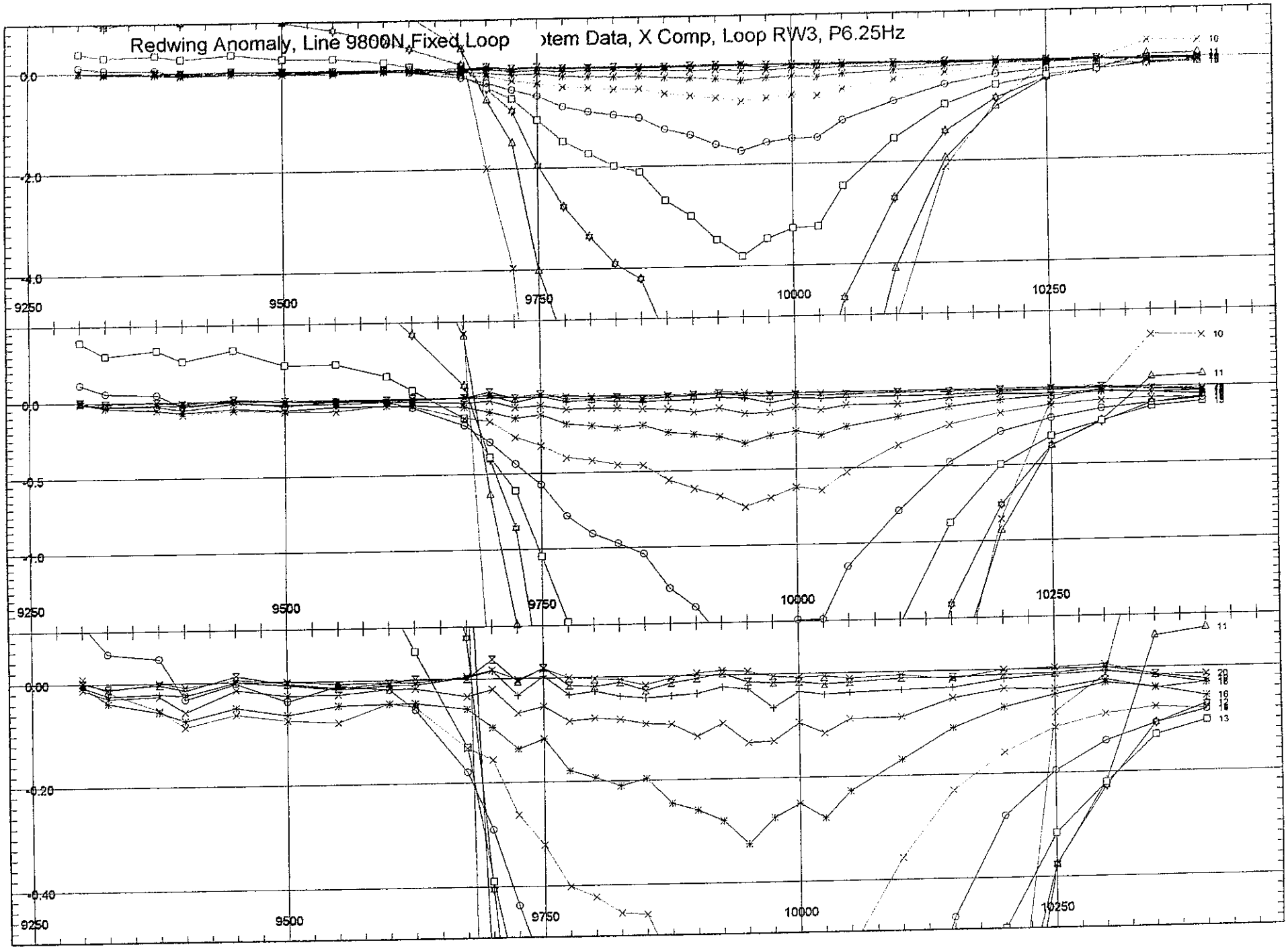

Redwing Anomaly, Line 9800N Fixed Loop Protem Data, Z Comp, Loop RW3, P6.25Hz
20
0
-20
9250
9500
9750
10000
10250
15
14
13
12
11
10
9
8
7
6
5
10
5
0
-5
2.0
-0.0
-2.0


Redwing Anomaly, Line 9800N Fixed Loop Protem Data, Z Comp, Loop RW3, P6.25Hz
0.5
0.0
-0.5
9250
9500
9750
10000
10250
13
14
15
0.20
0.00
-0.20
17
18
0.10
0.05
0.00
-0.05
16


Redwing Anomaly, Line 9800N Fixed Loop
tem Data, X Comp, Loop RW3, P6.25Hz
1000
100
10
1
0
-1
-10
-100
9250
9500
9750
10000
10250
2
1

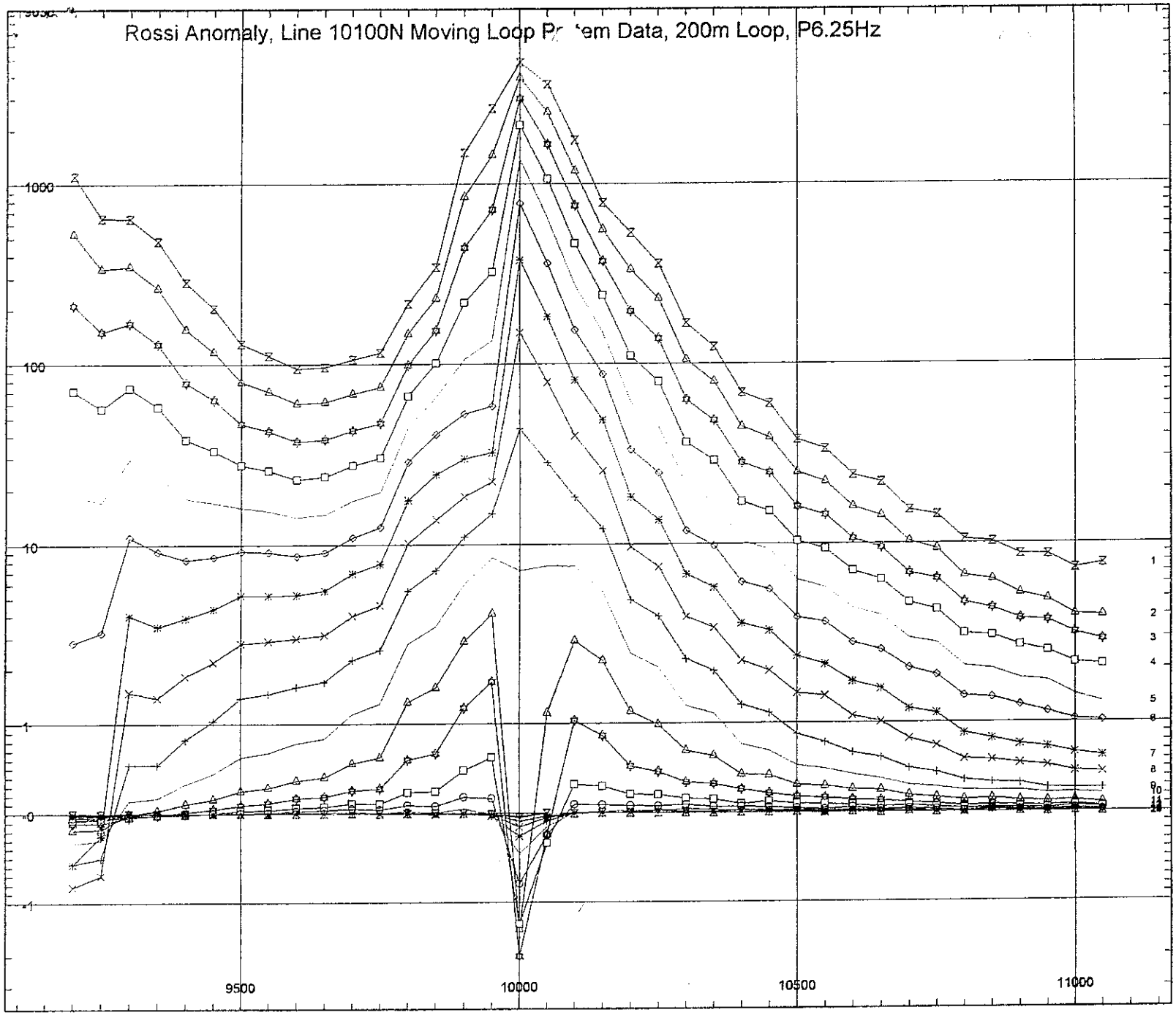

Redwing Anomaly, Line 9800N Fixed Loop tem Data, X Comp, Loop RW3, P6.25Hz
0
-500
-1000
9250
9500
9750
10000
10250
0
-200
-400
9250
9500
9750
10000
10250
0
-50
-100
9250
9500
9750
10000
10250

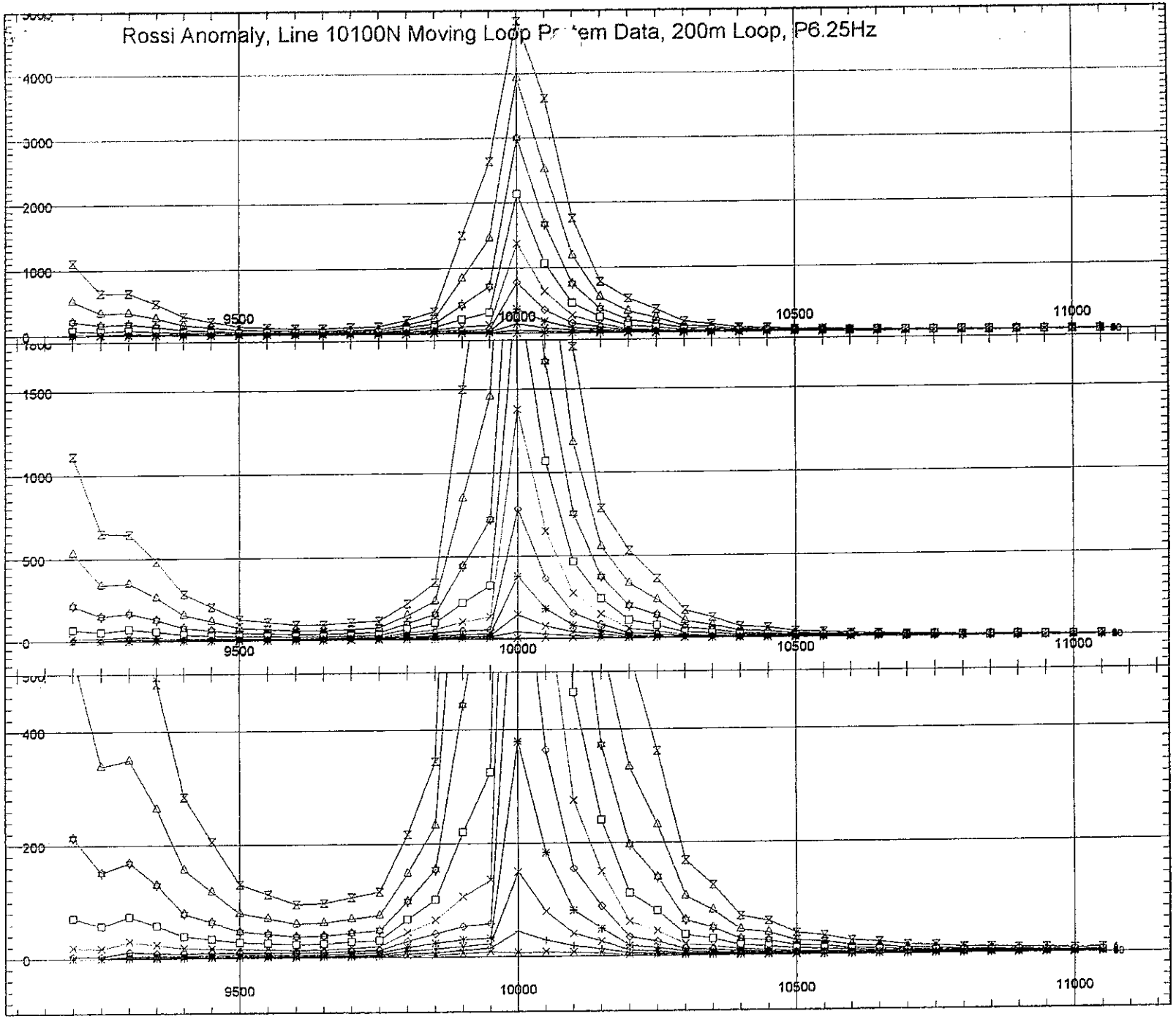

Redwing Anomaly, Line 9800N Fixed Loop
tem Data, X Comp, Loop RW3, P6.25Hz
0
-50
-100
9250
9500
9750
10000
10250
0
-20
-40
9250
9500
9750
10000
10250
0
-5
-10
9250
9500
9750
10000
10250

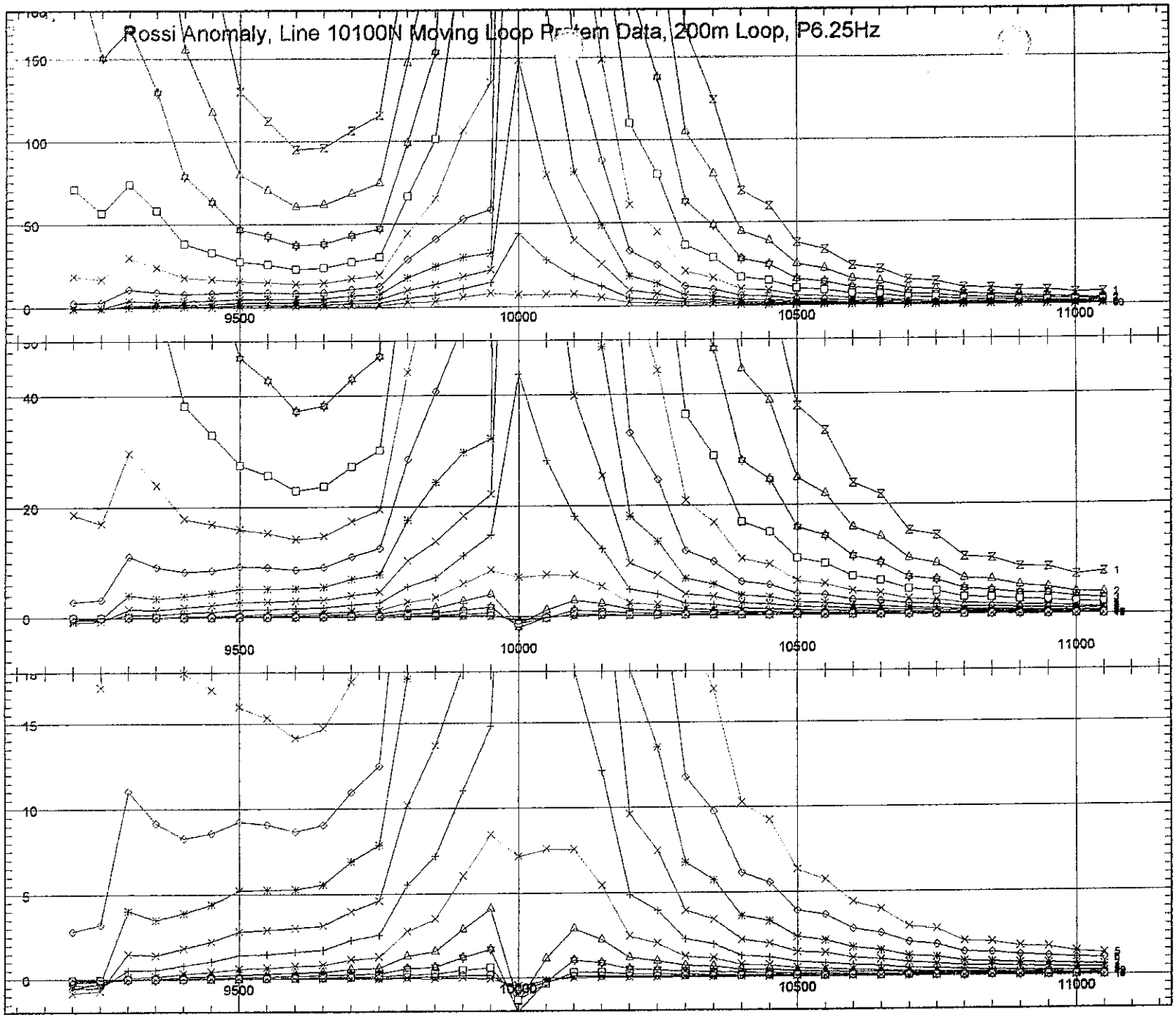

Redwing Anomaly, Line 9800N,Fixed Loop tem Data, X Comp, Loop RW3, P6.25Hz
0.0
-2.0
-4.0
9250
9500
9750
10000
10250
10
11
0.0
-0.5
-1.0
9250
9500
9750
10000
10250
10
11
0.00
-0.20
-0.40
9250
9500
9750
10000
10250
11
20
18
16
14
12
13

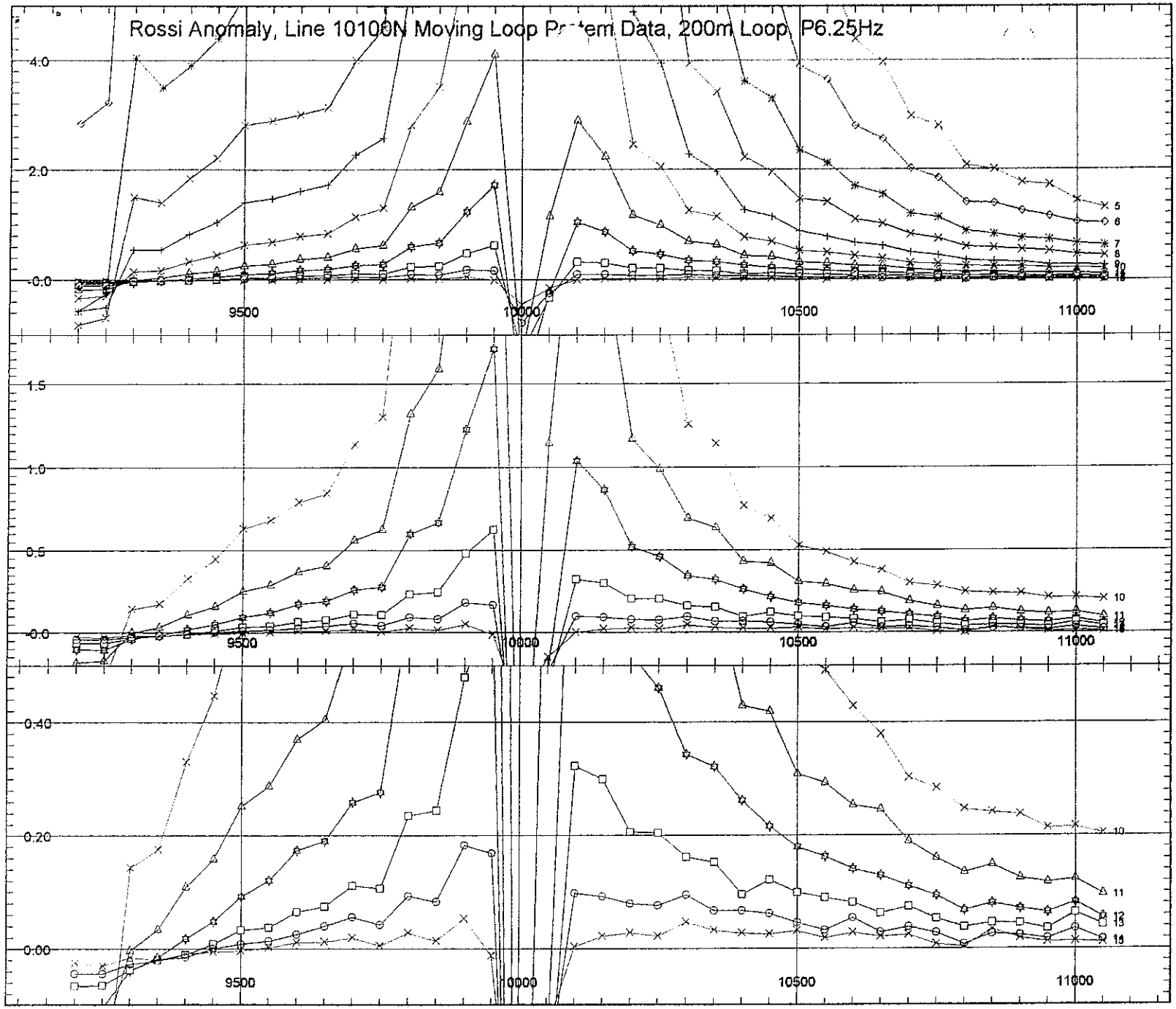
ROSSI

MOVING LOOP DATA


Rossi Anomaly, Line 10100N Moving Loop Pr 'em Data, 200m Loop, P6.25Hz
1000
100
10
1
-0
-1
9500
10000
10500
11000
Z
1
2
3
4
5
6
7
8
9
10
11
12


Rossi Anomaly, Line 10100N Moving Loop Pr em Data, 200m Loop, P6.25Hz
4000
3000
2000
1000
0
9500
10000
10500
11000
1500
1000
500
0
9500
10000
10500
11000
400
200
0
9500
10000
10500
11000

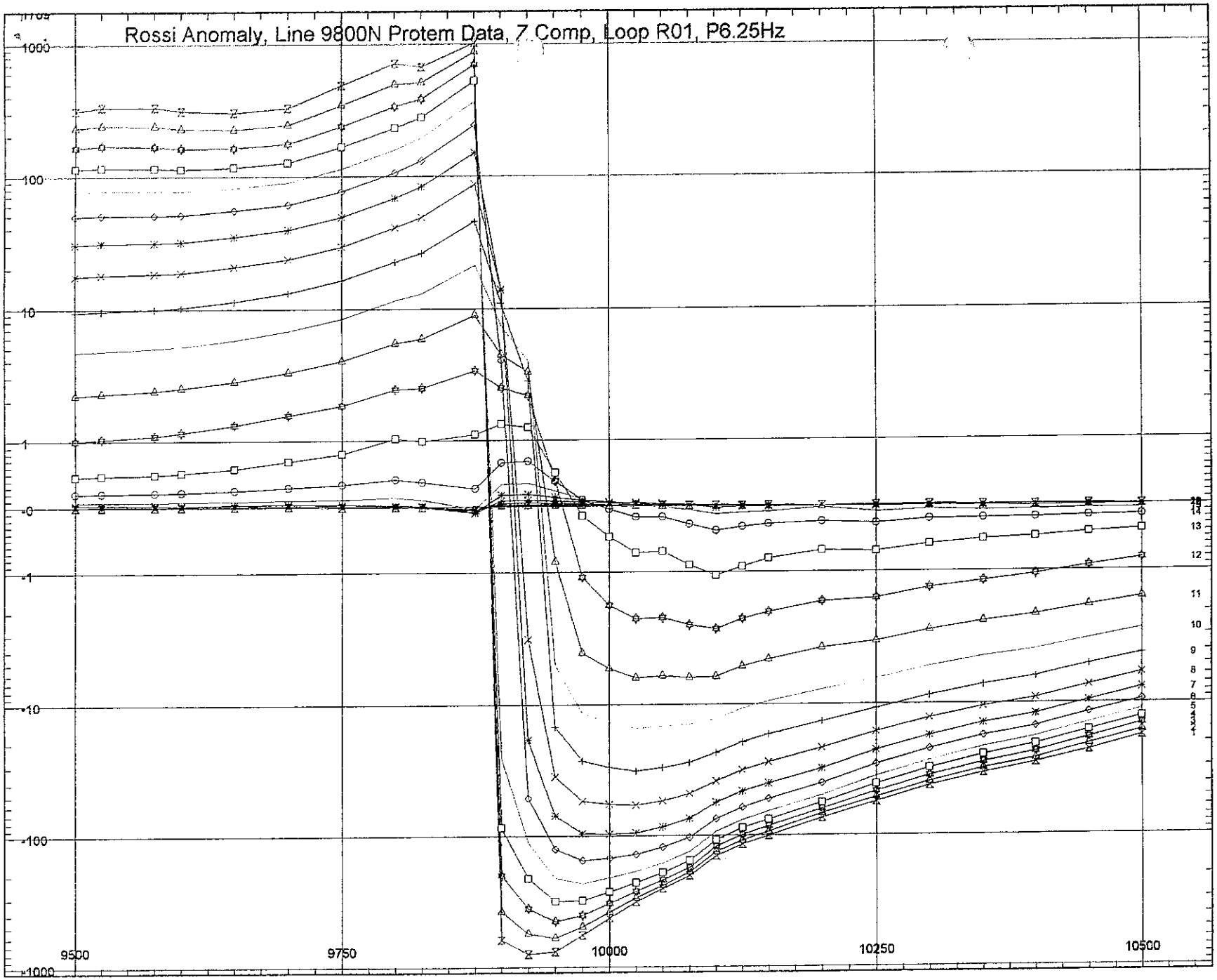

Rossi Anomaly, Line 10100N Moving Loop Pr tem Data, 200m Loop, P6.25Hz
150
100
50
0
9500
10000
10500
11000
40
20
15
10
5

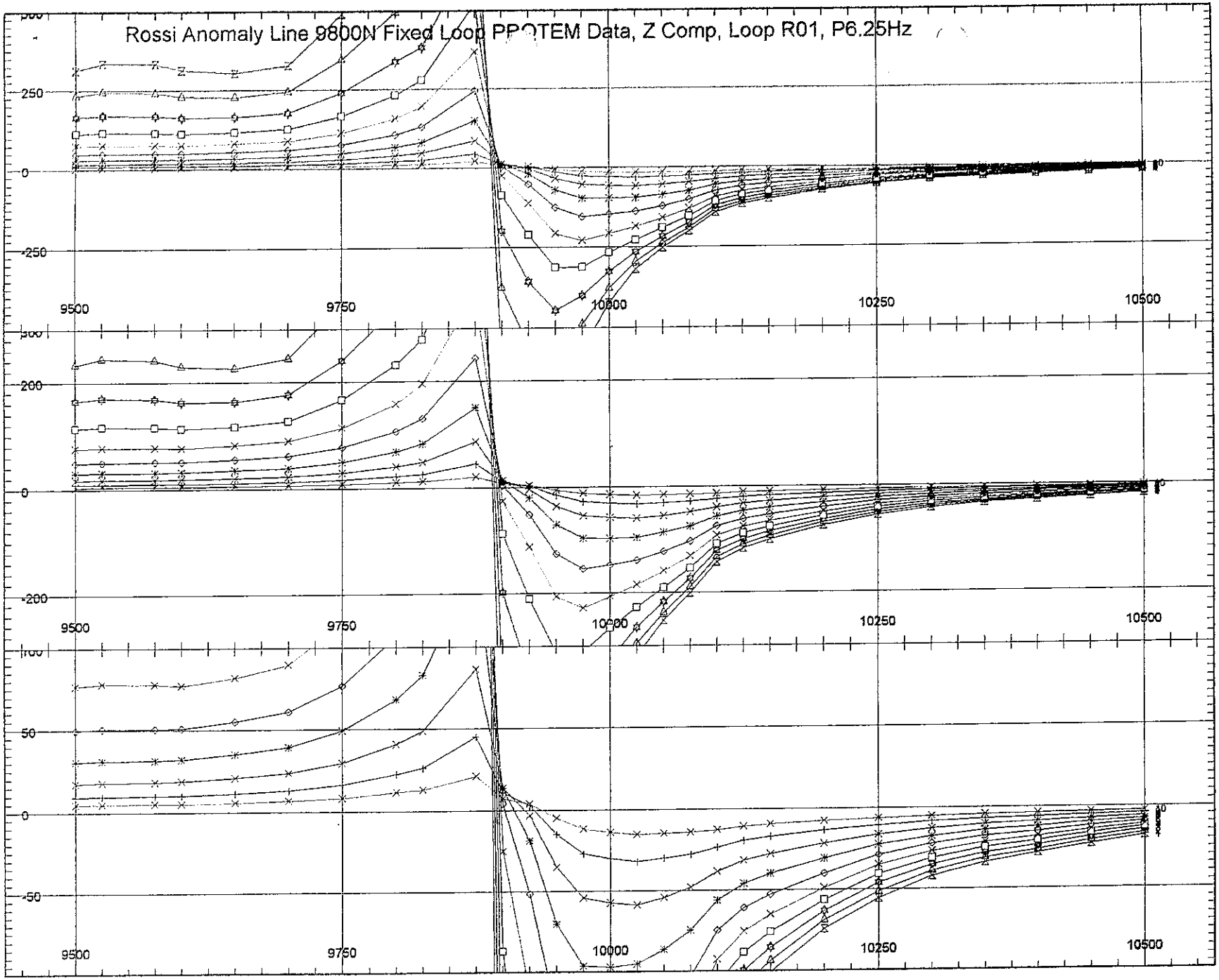

Rossi Anomaly, Line 10100N Moving Loop Pattern Data, 200m Loop, P6.25Hz
4.0
2.0
-0.0
9500
10000
10500
11000
5
6
7
8
1.5
1.0
0.5
-0.0
10
0.40
0.20
0.00
11
12
13
14

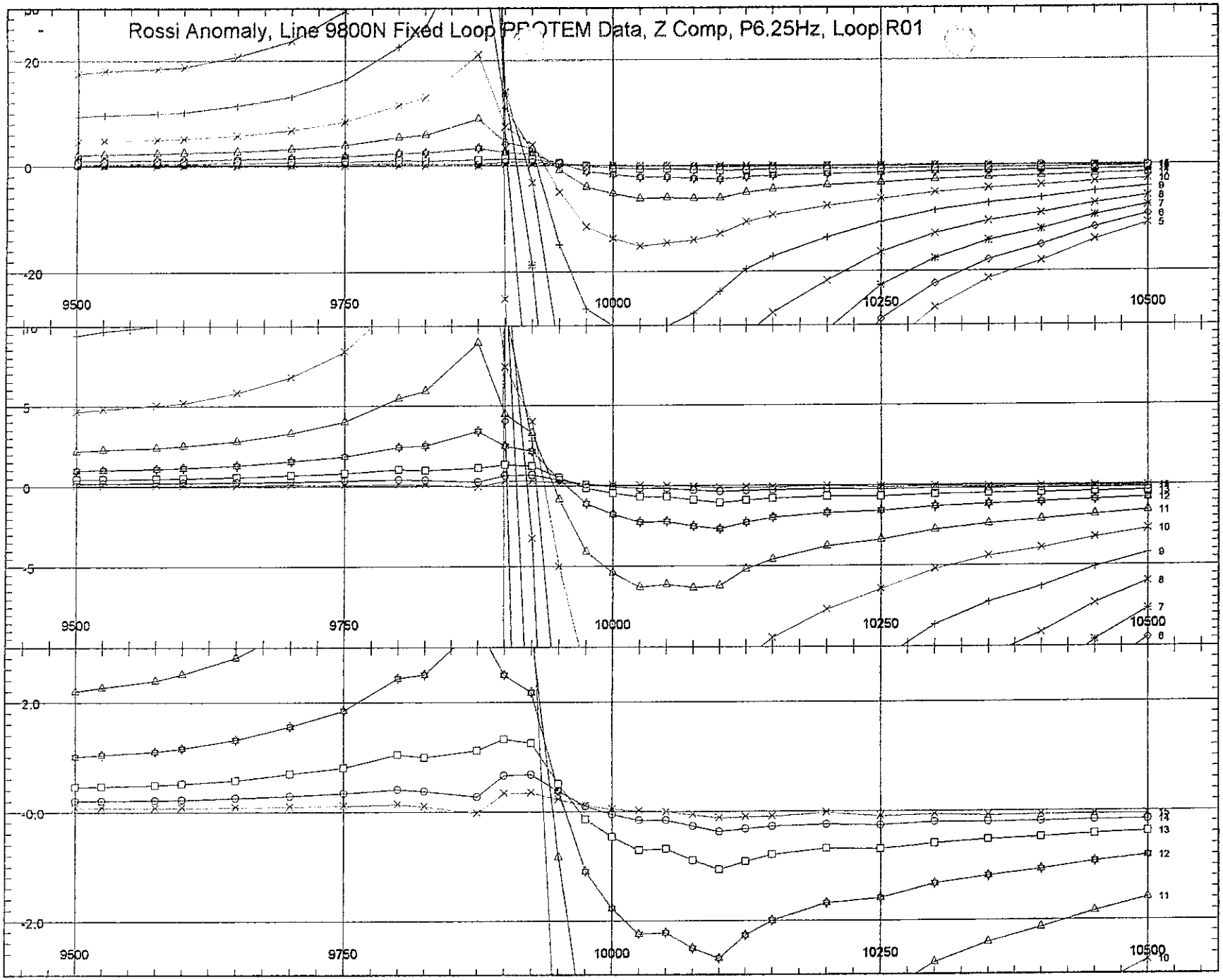
ROSSI

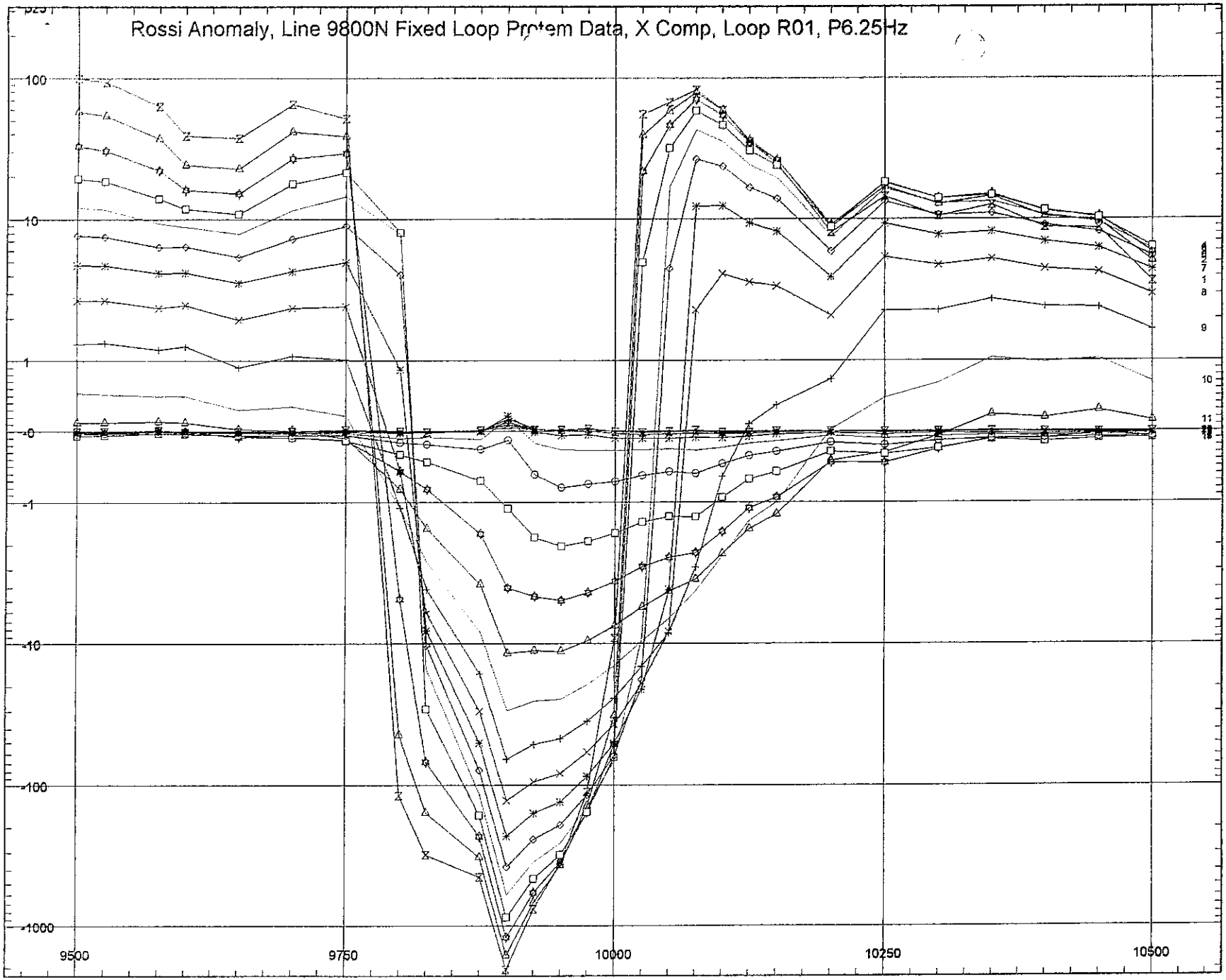
FIXED LOOP DATA

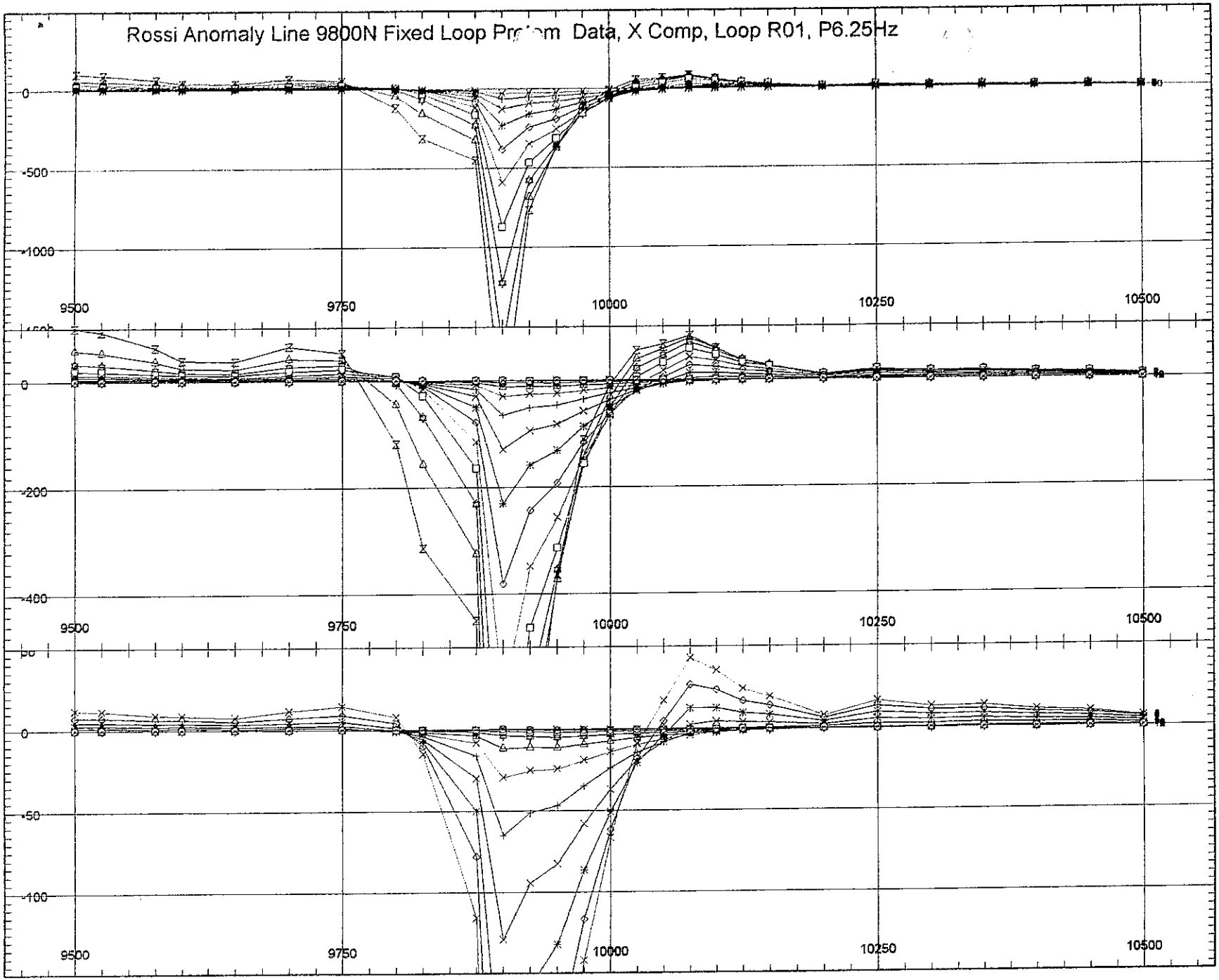
& MODELS

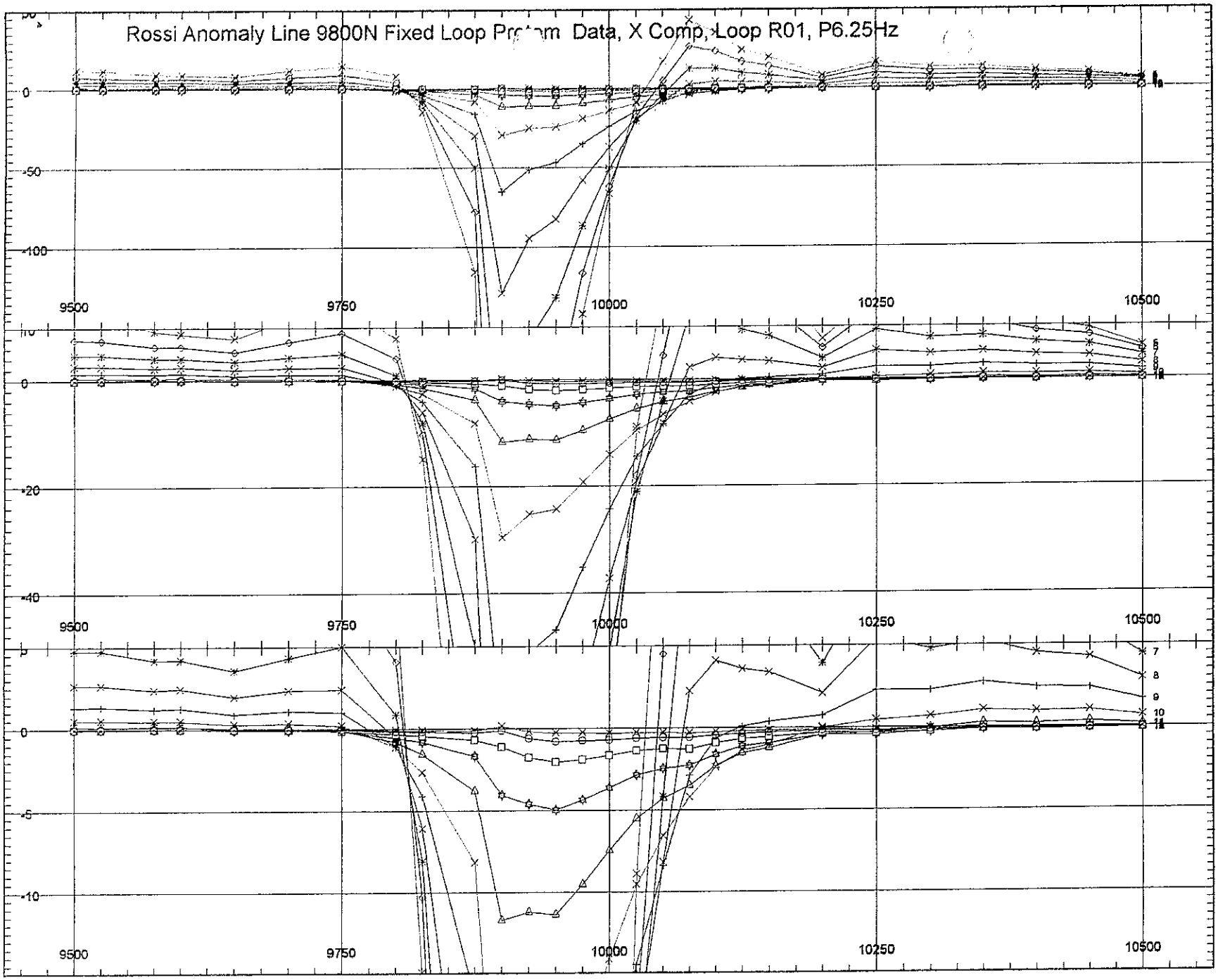

Rossi Anomaly, Line 9800N Protem Data, 7 Comp, Loop R01, P6.25Hz
1000
100
10
1
0
-1
-10
-100
-1000
9500
9750
10000
10250
10500
14
13
12
11
10
9
8
7
6
5
4
3
2
1

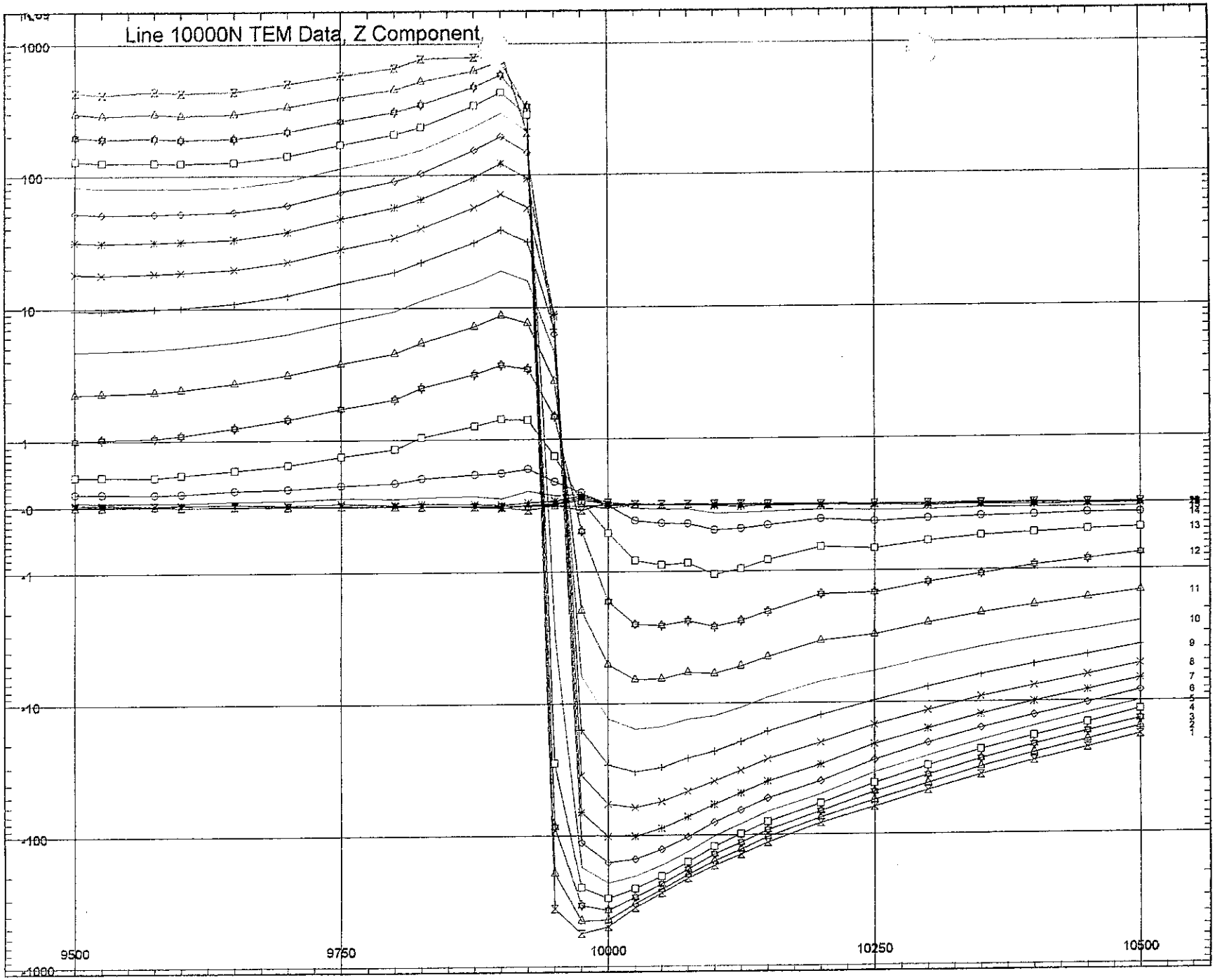

Rossi Anomaly Line 9800N Fixed Loop PROTEM Data, Z Comp, Loop R01, P6.25Hz
250
0
-250
9500
9750
10000
10250
10500
200
0
-200
9500
9750
10000
10250
10500
50
0
-50
9500
9750
10000
10250
10500


Rossi Anomaly, Line 9800N Fixed Loop PROTEM Data, Z Comp, P6.25Hz, Loop R01
20
0
-20
9500
9750
10000
10250
10500
15
14
13
12
11
10
9
8
7
6
5
10
5
0
-5
9500
9750
10000
10250
10500
12
11
10
9
8
7
6
2.0
0.0
-2.0
9500
9750
10000
10250
10500
13
12
11
10


Rossi Anomaly, Line 9800N Fixed Loop Protem Data, X Comp, Loop R01, P6.25Hz
100
10
1
-0
-1
-10
-100
-1000
9500
9750
10000
10250
10500


Rossi Anomaly Line 9800N Fixed Loop Program Data, X Comp, Loop R01, P6.25Hz
0
-500
-1000
9500
9750
10000
10250
10500
0
-200
-400
9500
9750
10000
10250
10500
0
-50
-100
9500
9750
10000
10250
10500


Rossi Anomaly Line 9800N Fixed Loop Program Data, X Comp, Loop R01, P6.25Hz
0
-50
-100
9500
9750
10000
10250
10500
0
-20
-40
5
6
7
8
9
10
0
-5
-10
7
8
9
10

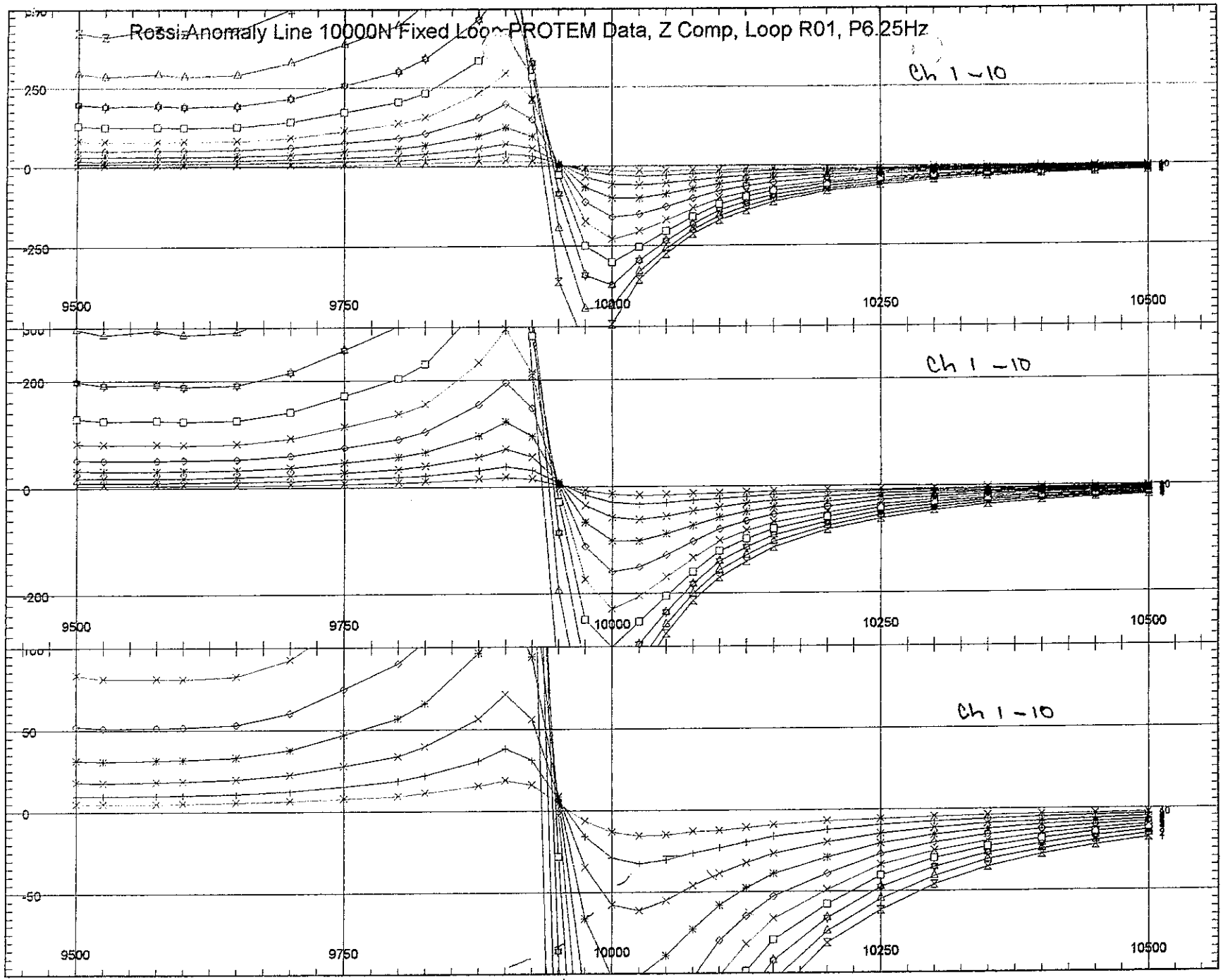


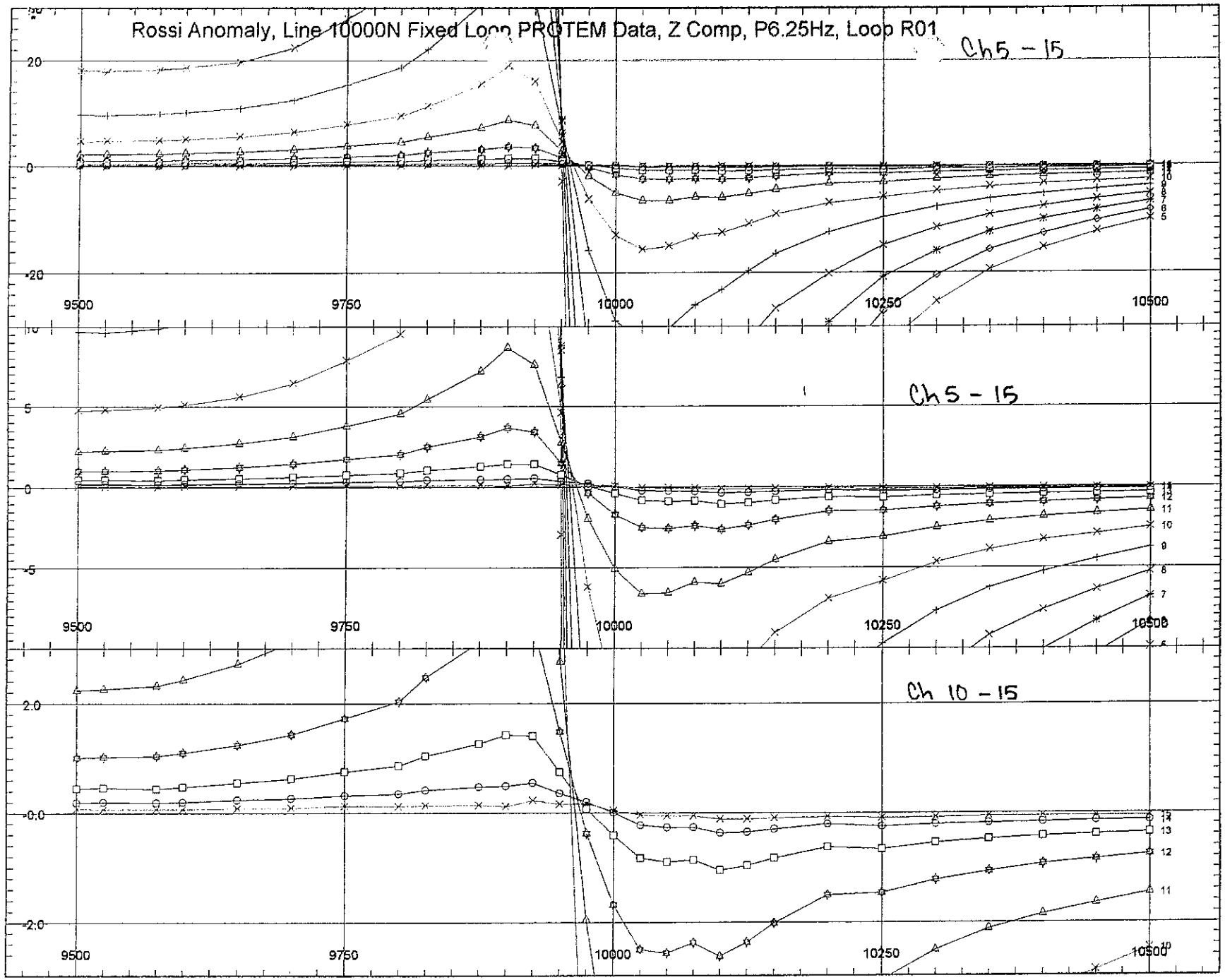
Fixed Loop Protem
Survey

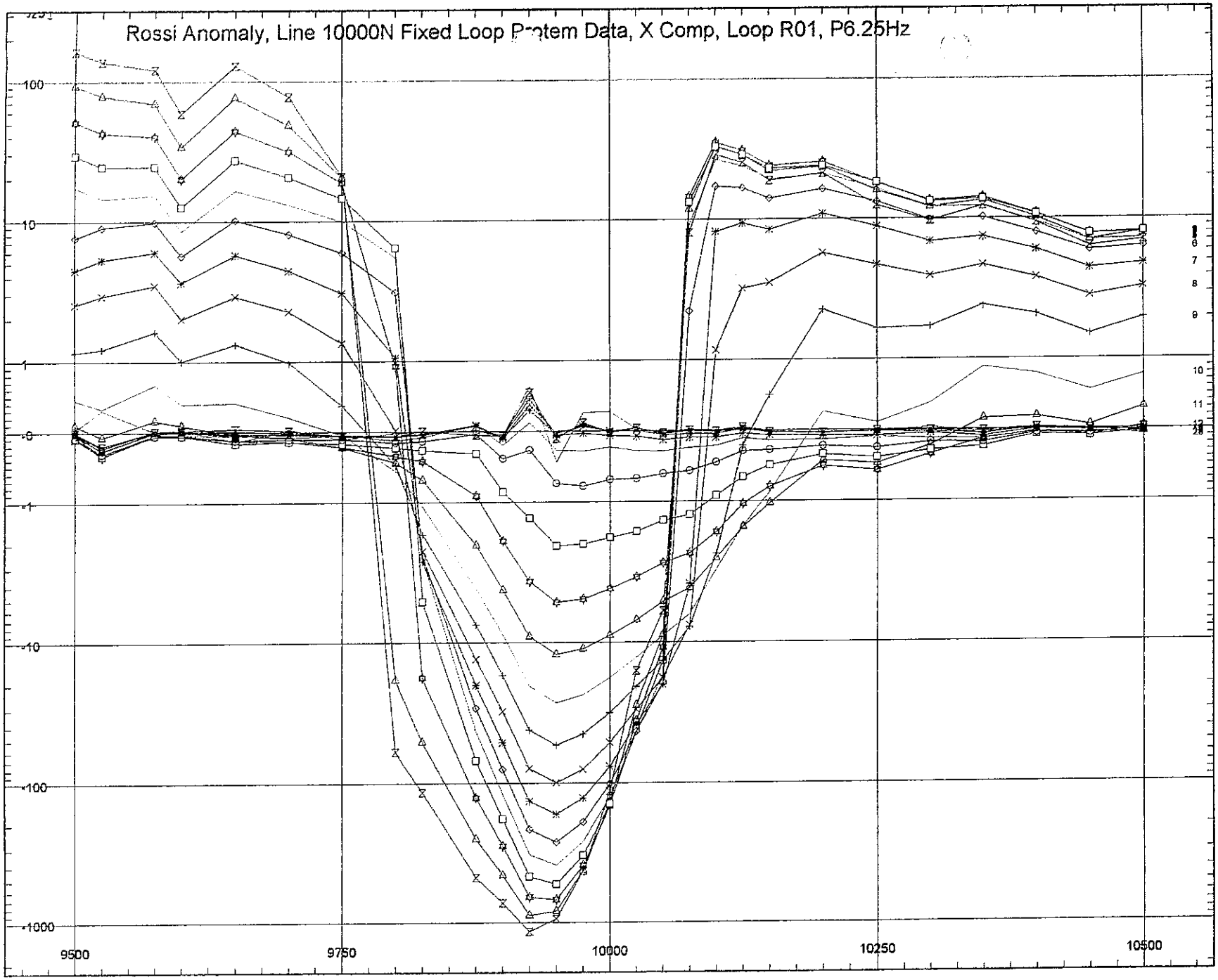
Loop RØ1

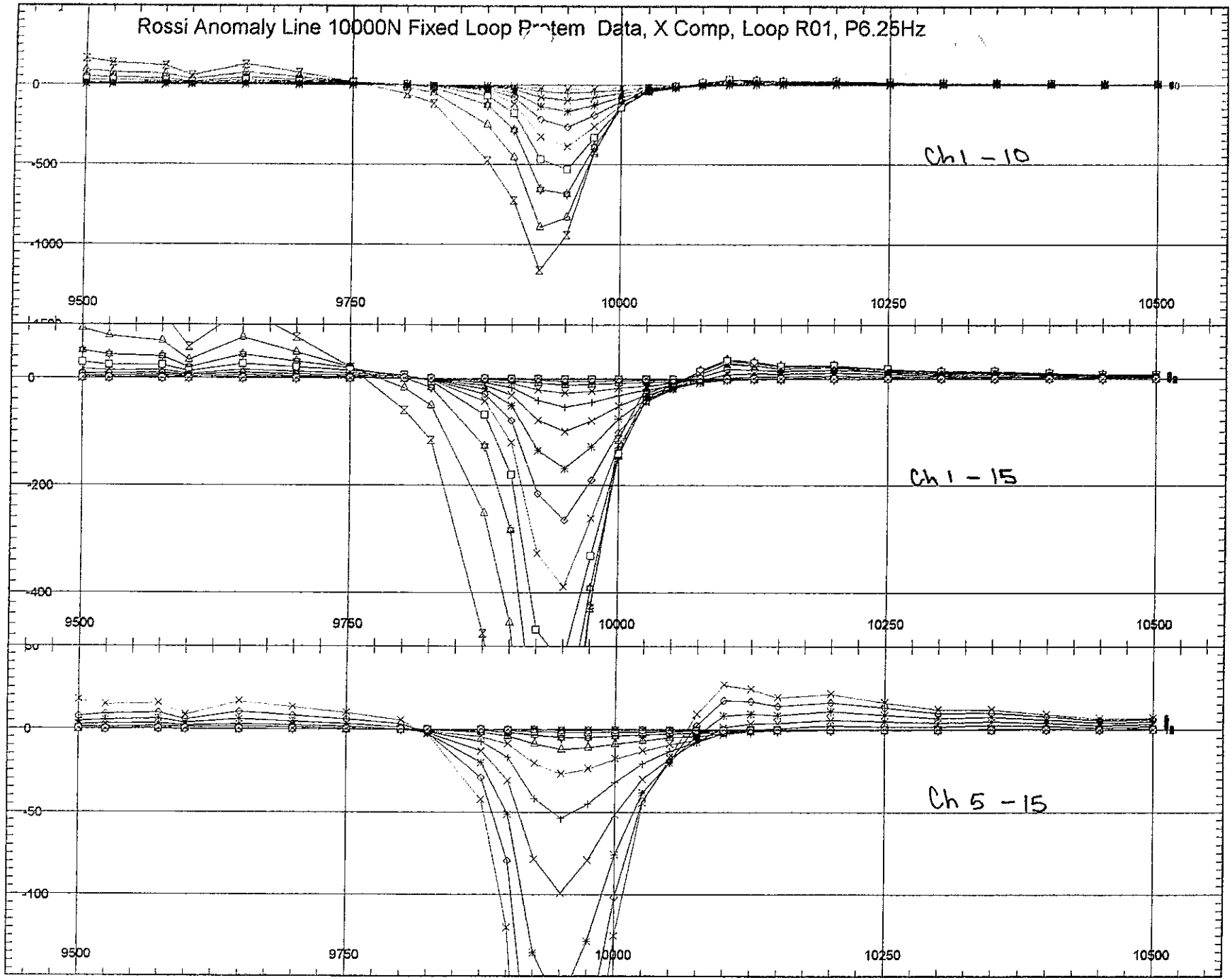
Frequency 6·25 l

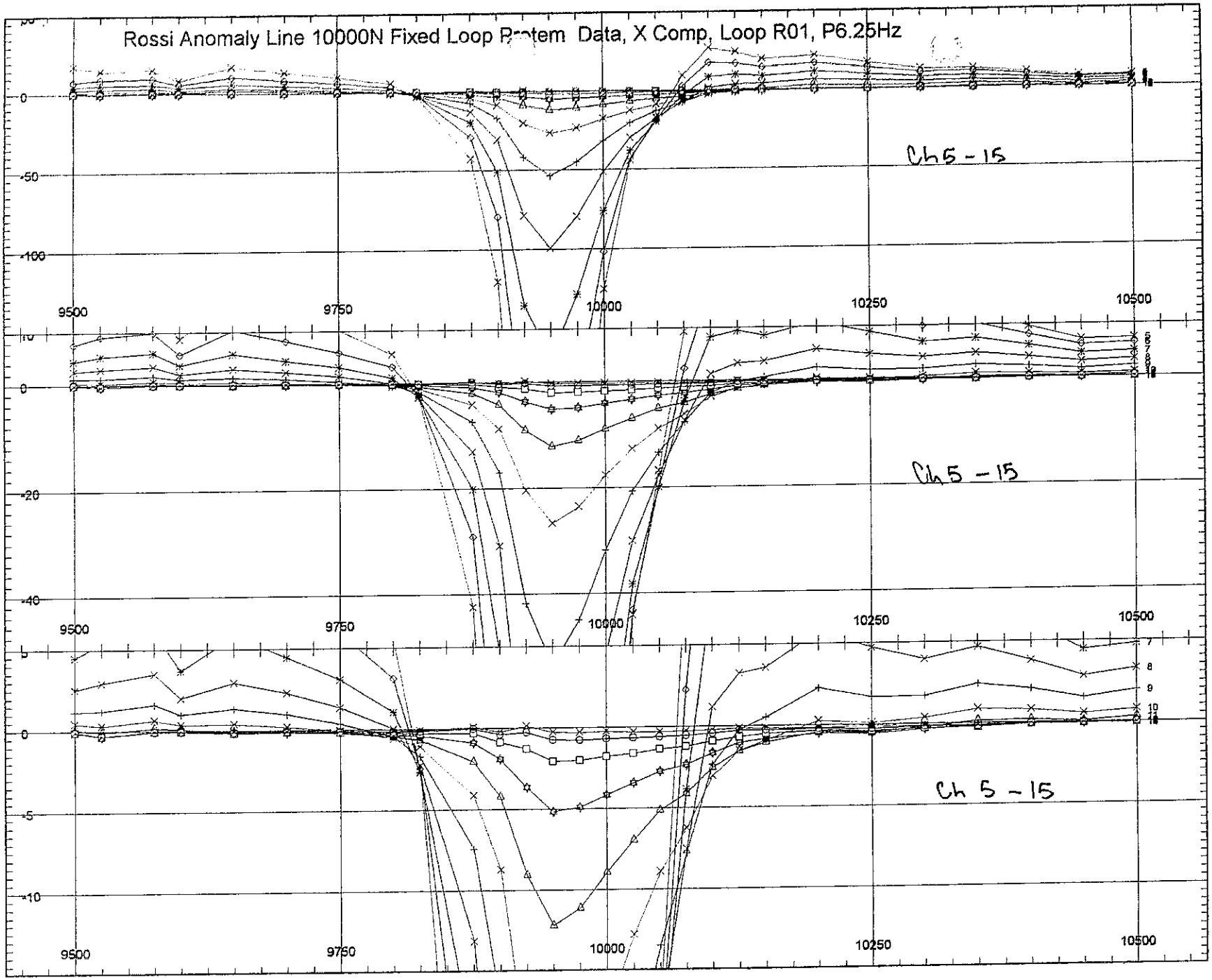
Rossi Anomaly

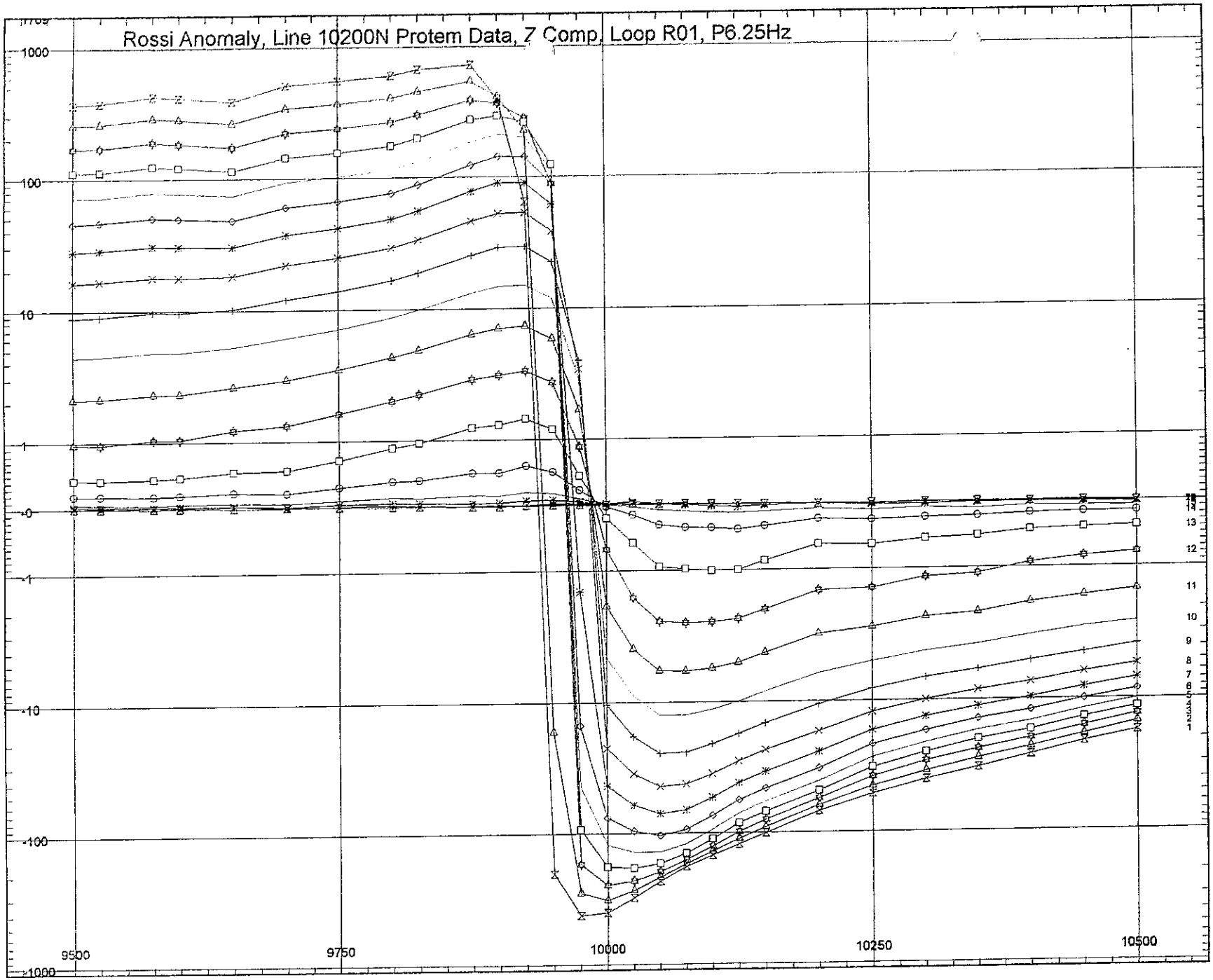

Rossi Anomaly Line 10000N Fixed Loop PROTEM Data, Z Comp, Loop R01, P6.25Hz
Ch 1 ~10
Ch 1 ~10
Ch 1 ~10
250
0
-250
200
-200
100
50
-50
9500
9750
10000
10250
10500

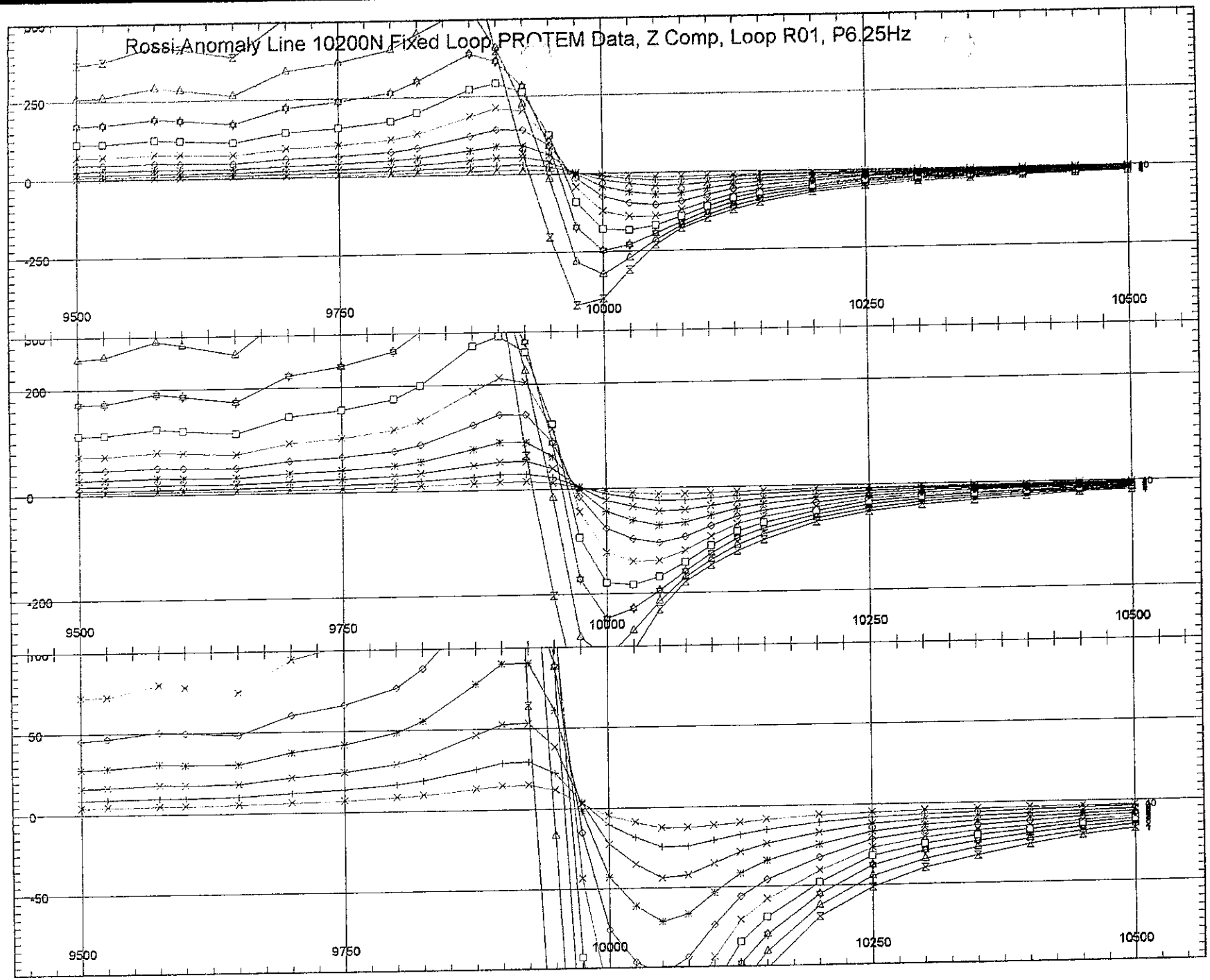

Rossi Anomaly, Line 10000N Fixed Loop PROTEM Data, Z Comp, P6.25Hz, Loop R01
Ch 5 - 15
20
0
-20
9500
9750
10000
10250
10500
Ch 5 - 15
5
0
-5
Ch 10 - 15
2.0
-0.0
-2.0

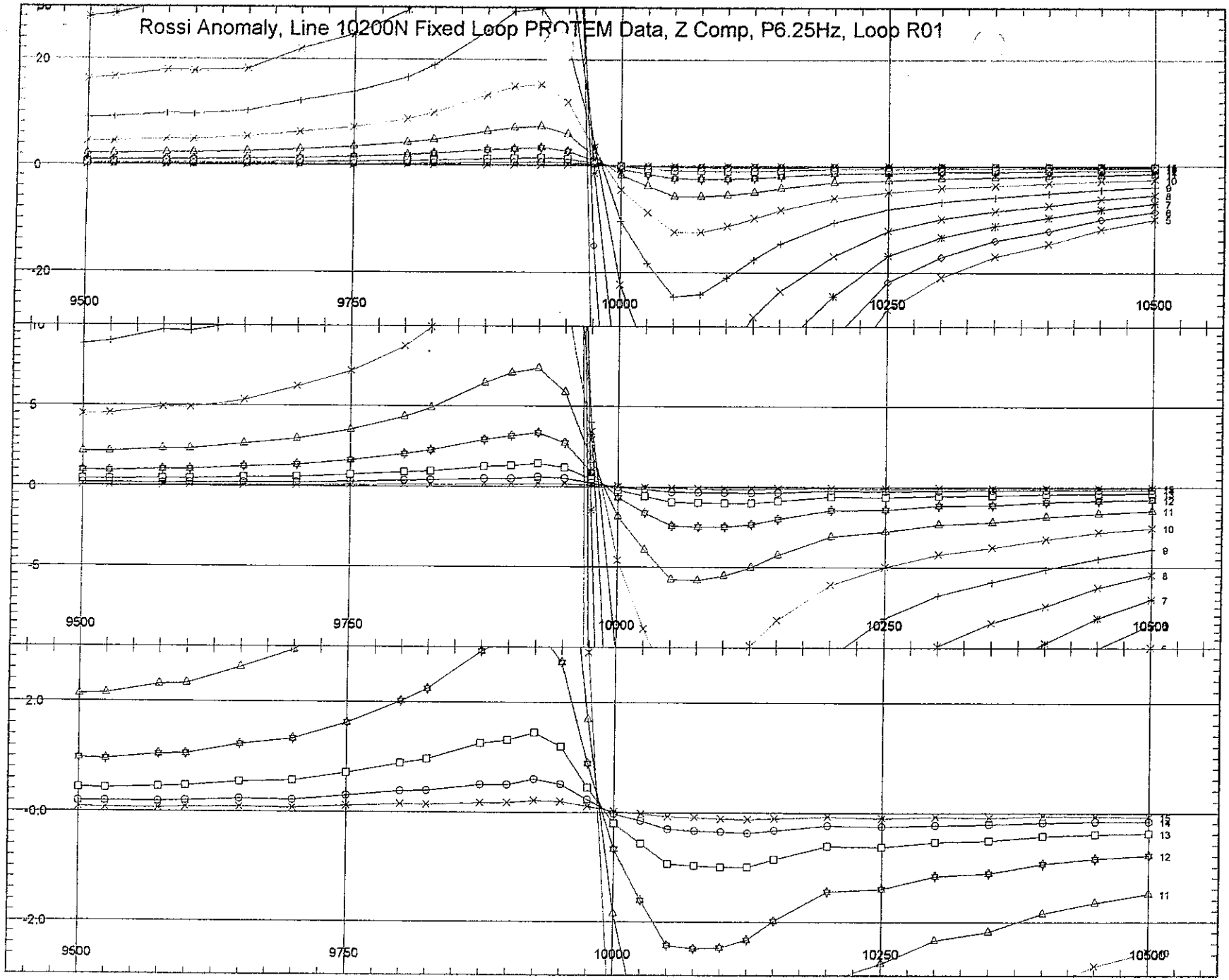

Rossi Anomaly, Line 10000N Fixed Loop P?otem Data, X Comp, Loop R01, P6.25Hz
100
10
1
-0
-1
-10
-100
-1000
9500
9750
10000
10250
10500
6
7
8
9
10
11

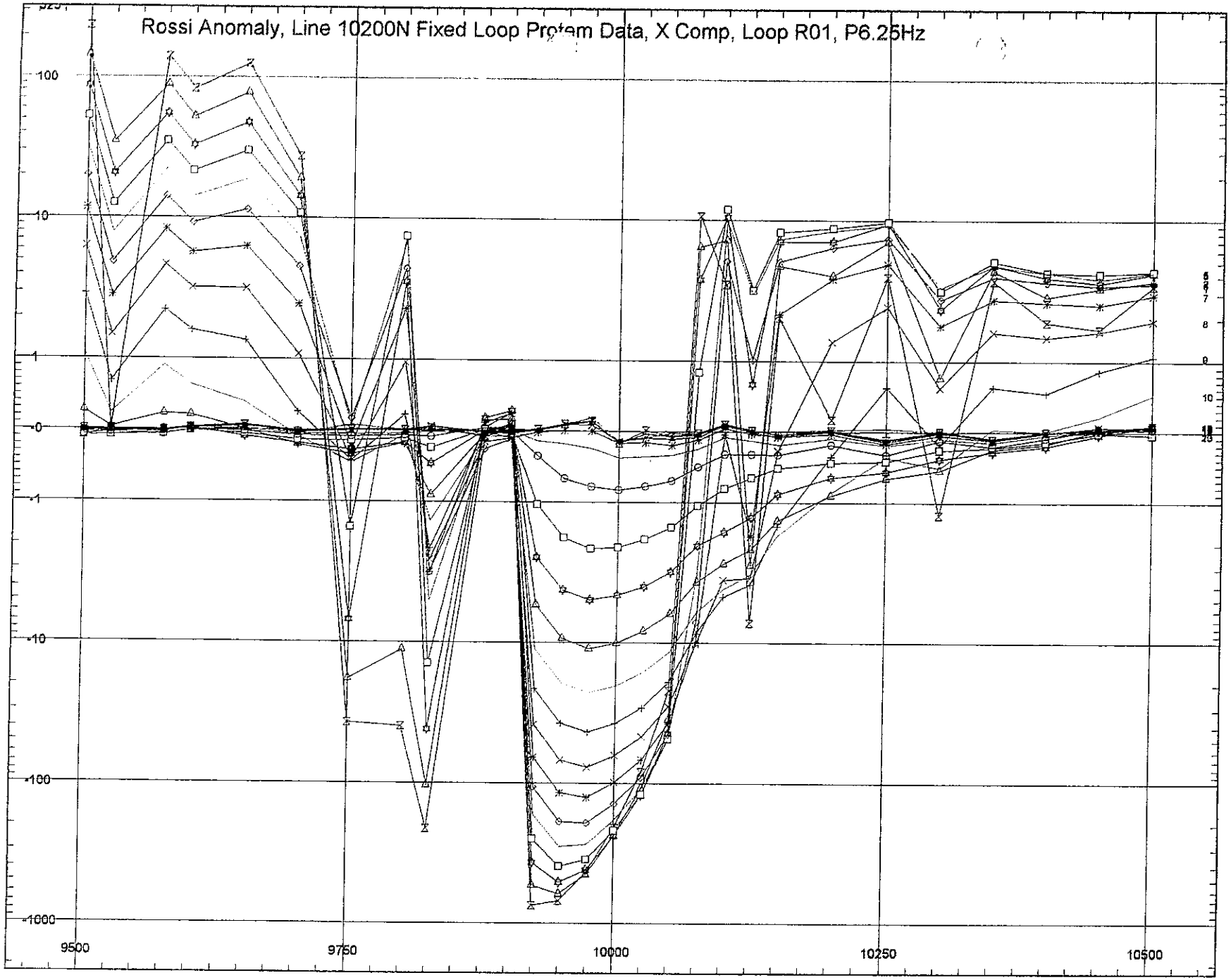

Rossi Anomaly Line 10000N Fixed Loop Pulse Data, X Comp, Loop R01, P6.25Hz
Ch 1 - 10
Ch 1 - 15
Ch 5 - 15
0
-500
-1000
-200
-400
-50
-100
9500
9750
10000
10250
10500

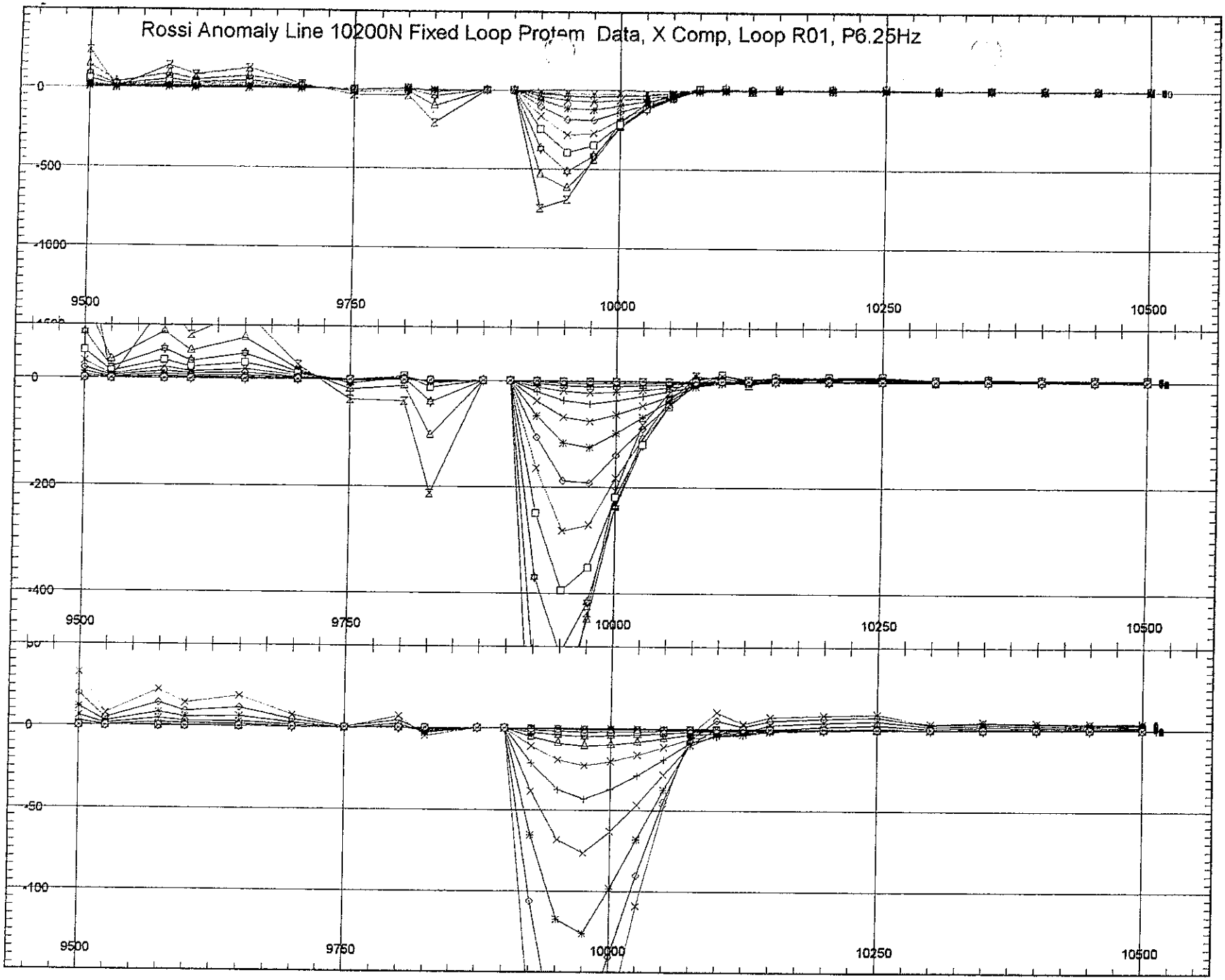

Rossi Anomaly Line 10000N Fixed Loop Pretem Data, X Comp, Loop R01, P6.25Hz
Ch 5 - 15
Ch 5 - 15
Ch 5 - 15
9500
9750
10000
10250
10500
0
-50
-100
-20
-40
-5
-10
5
6
7
8
9
10
11
12
13
14
15

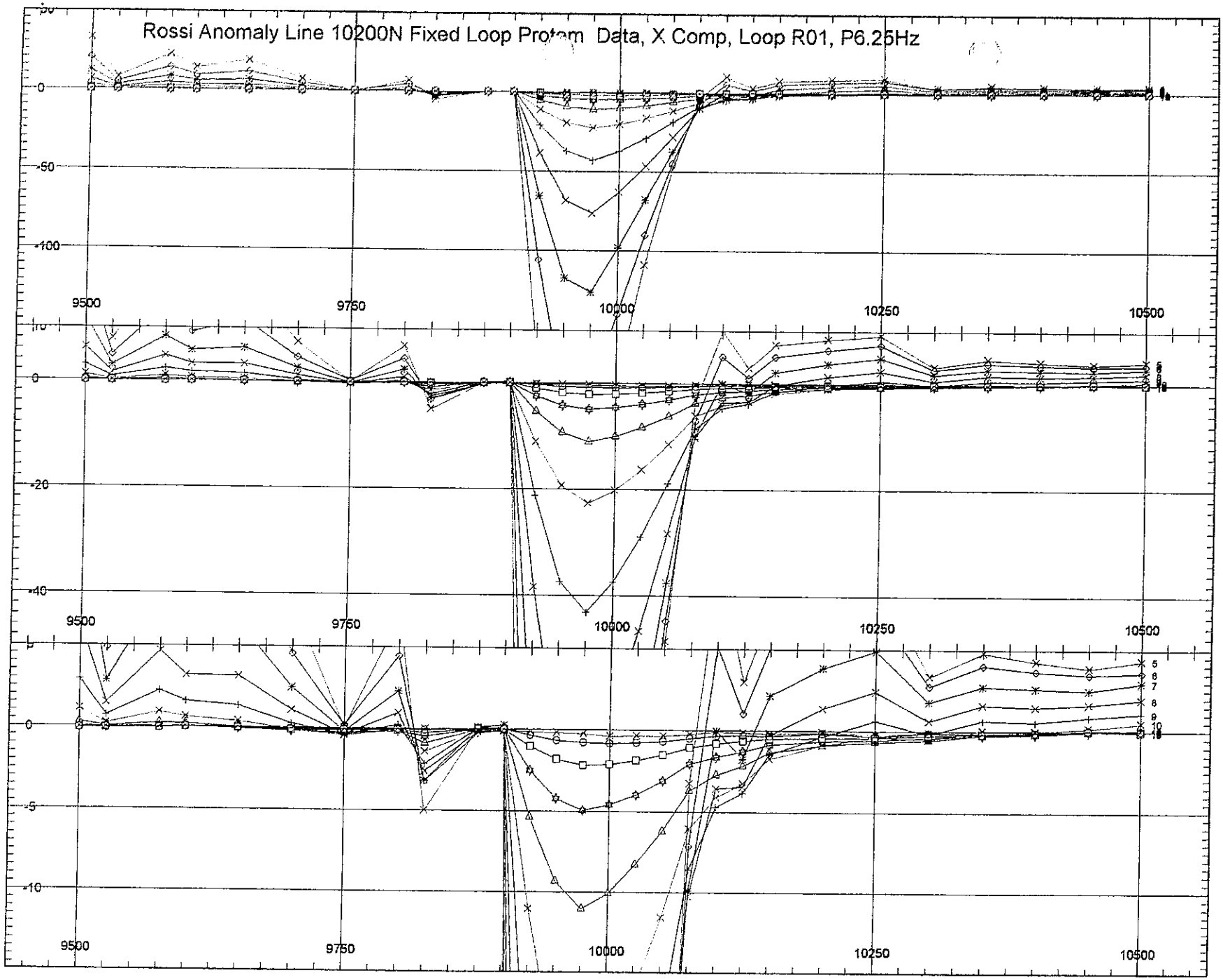

Rossi Anomaly, Line 10200N Protem Data, Z Comp, Loop R01, P6.25Hz
1000
100
10
1
+0
-1
-10
-100
-1000
9500
9750
10000
10250
10500
13
12
11
10
9
8
7
6
5
4
3
2
1

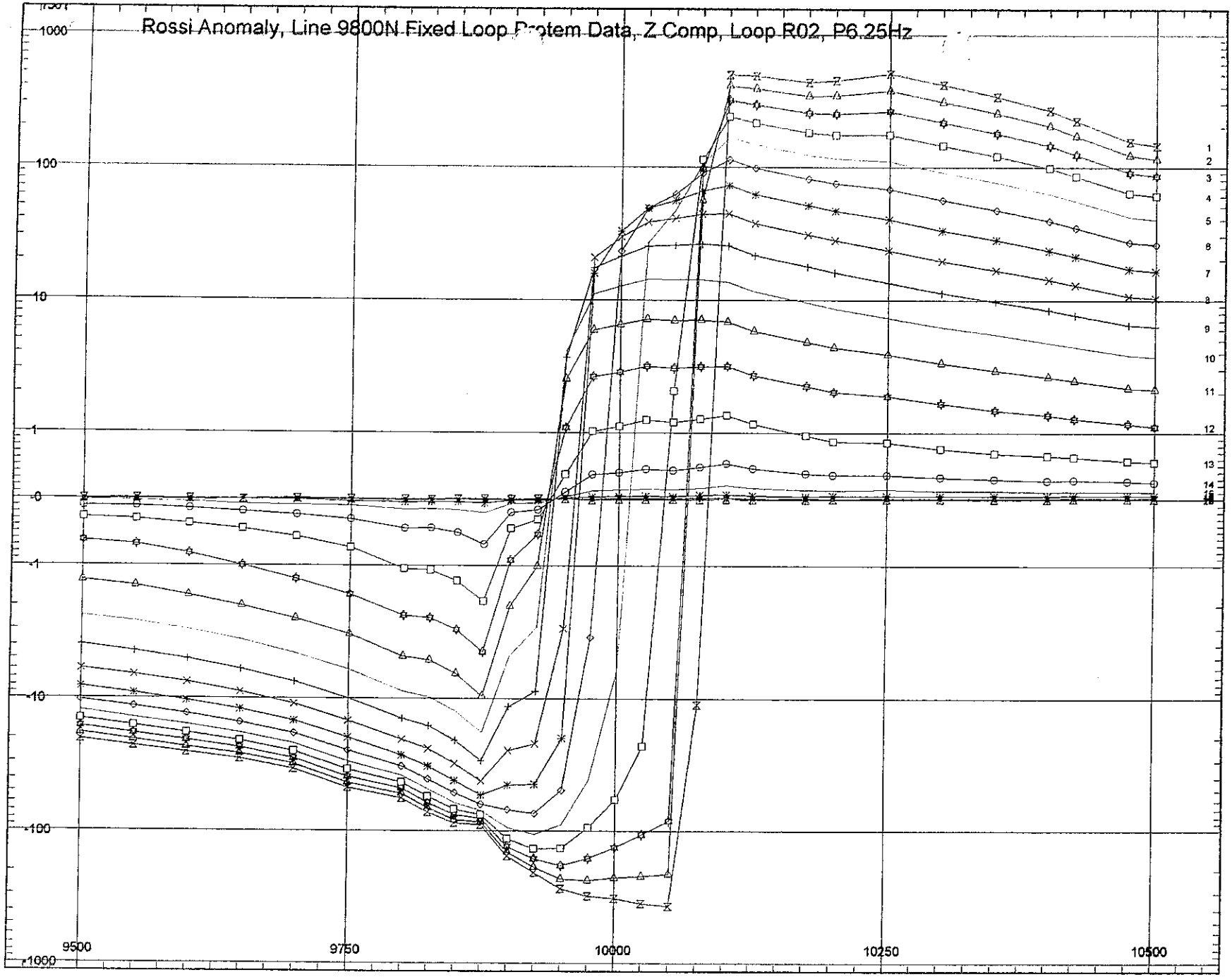

Rossi Anomaly Line 10200N Fixed Loop PROTEM Data, Z Comp, Loop R01, P6.25Hz
250
0
-250
200
-200
50
-50
9500
9750
10000
10250
10500

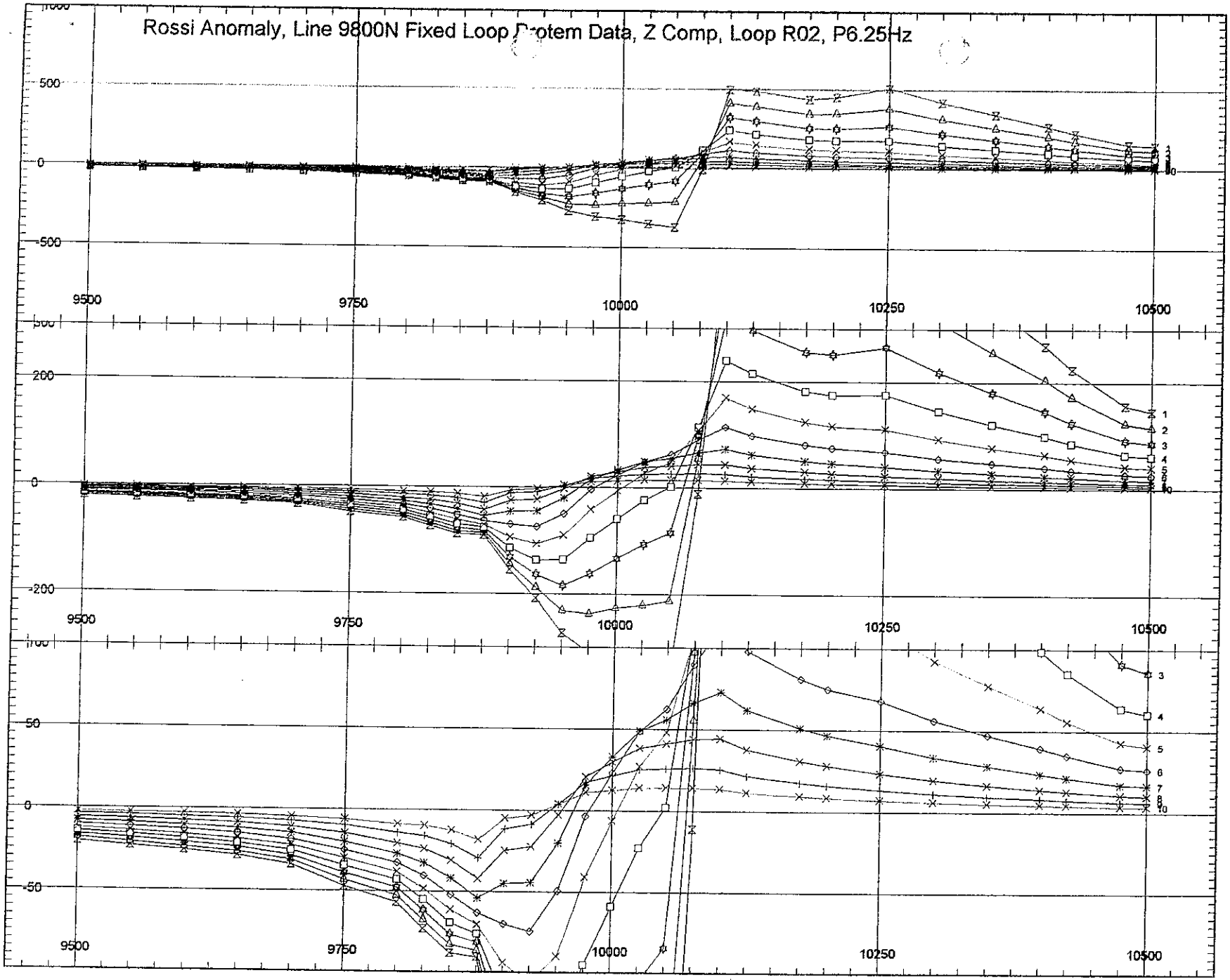

Rossi Anomaly, Line 10200N Fixed Loop PROTEM Data, Z Comp, P6.25Hz, Loop R01
20
0
-20
9500
9750
10000
10250
10500
15
14
13
12
11
10
9
8
7
6
5
10
5
0
-5
9500
9750
10000
10250
10500
15
12
11
10
9
8
7
2.0
0.0
-2.0
9500
9750
10000
10250
10500
15
13
12
11

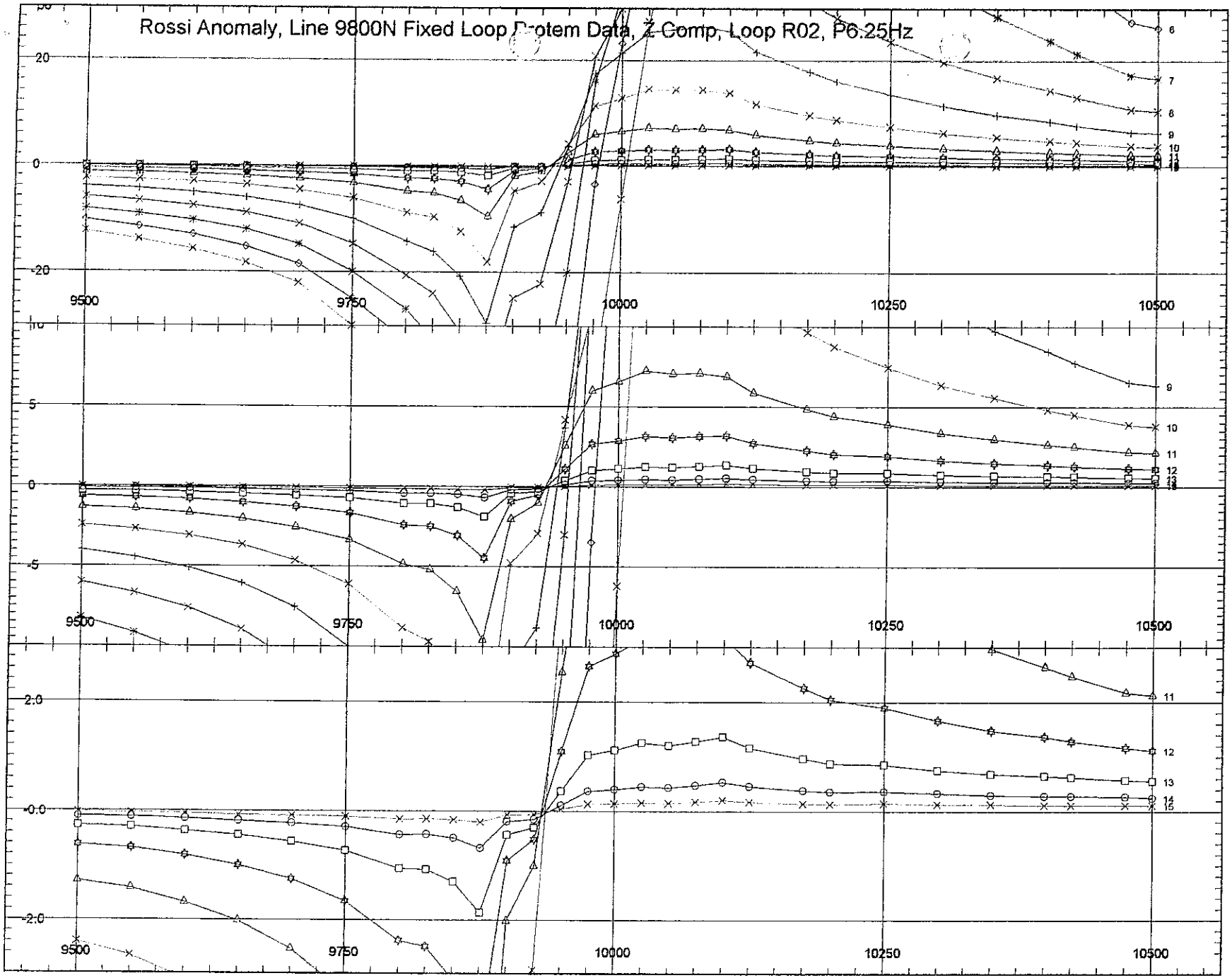

Rossi Anomaly, Line 10200N Fixed Loop Protem Data, X Comp, Loop R01, P6.25Hz
100
10
1
0
-1
-10
-100
-1000
9500
9750
10000
10250
10500

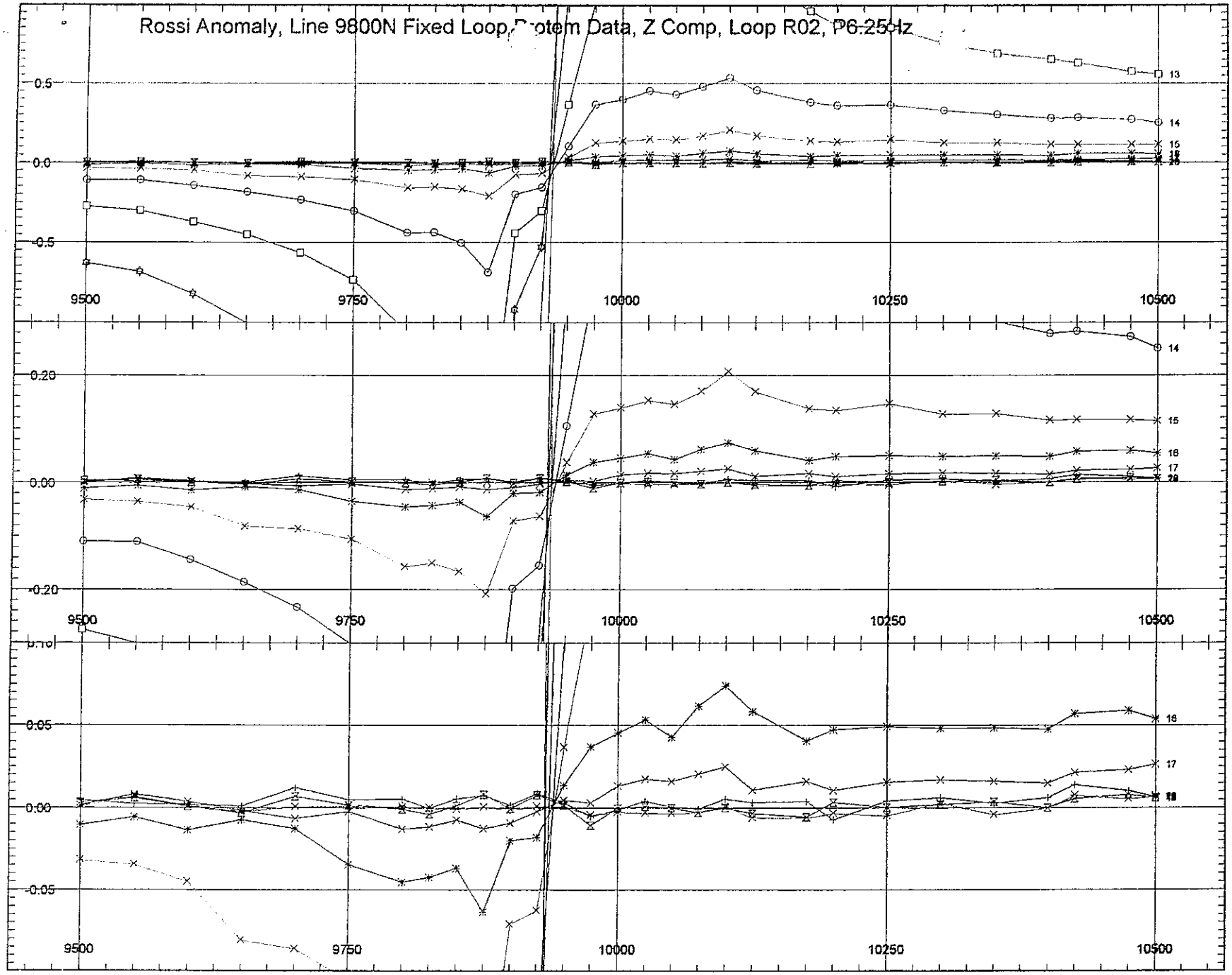

Rossi Anomaly Line 10200N Fixed Loop Protem Data, X Comp, Loop R01, P6.25Hz
0
-500
-1000
9500
9750
10000
10250
10500
0
-200
-400
9500
9750
10000
10250
10500
0
-50
-100
9500
9750
10000
10250
10500

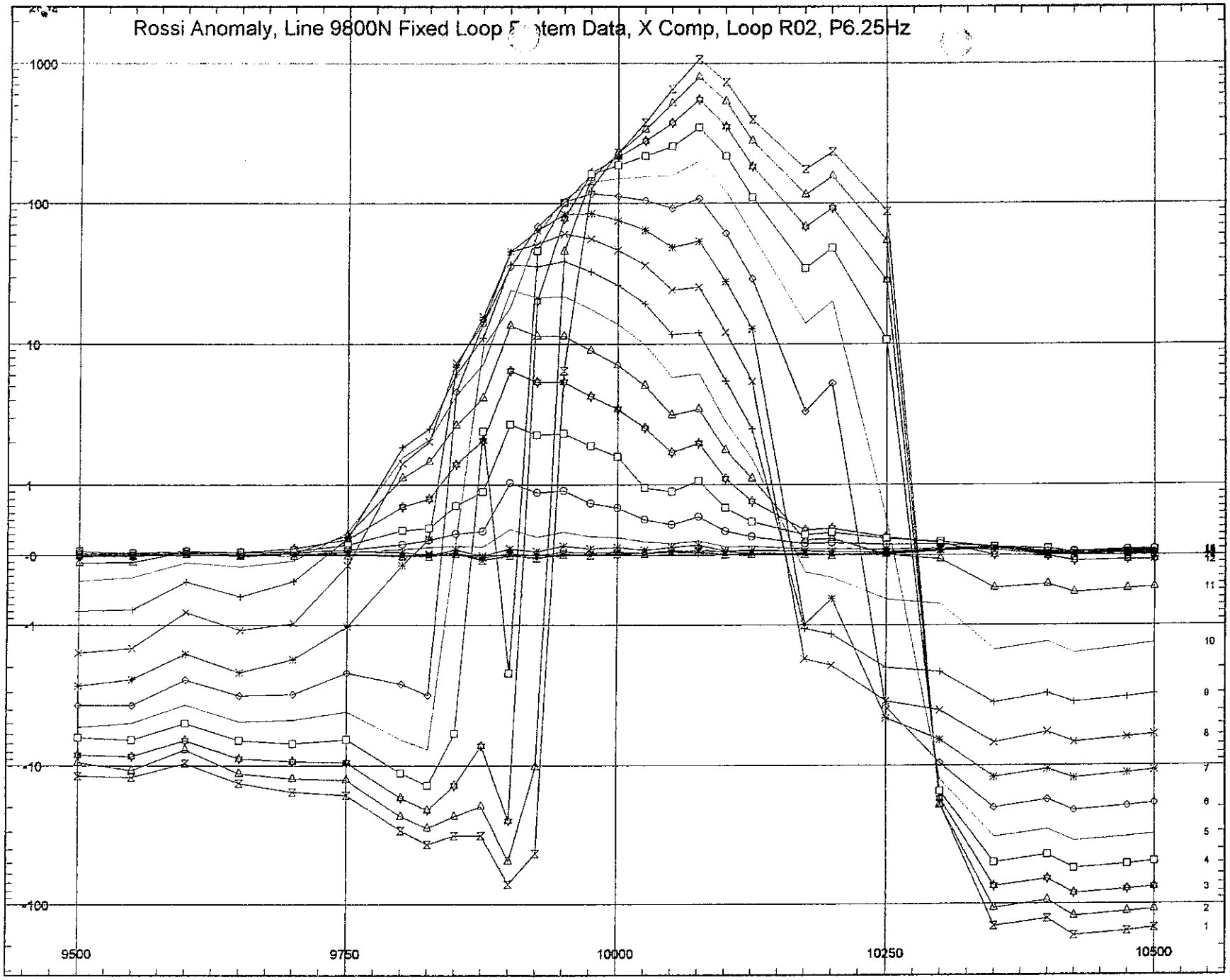

Rossi Anomaly Line 10200N Fixed Loop Protem Data, X Comp, Loop R01, P6.25Hz
0
-50
-100
9500
9750
10000
10250
10500
0
-20
-40
9500
9750
10000
10250
10500
5
6
7
8
9
10
11
0
-5
-10
9500
9750
10000
10250
10500

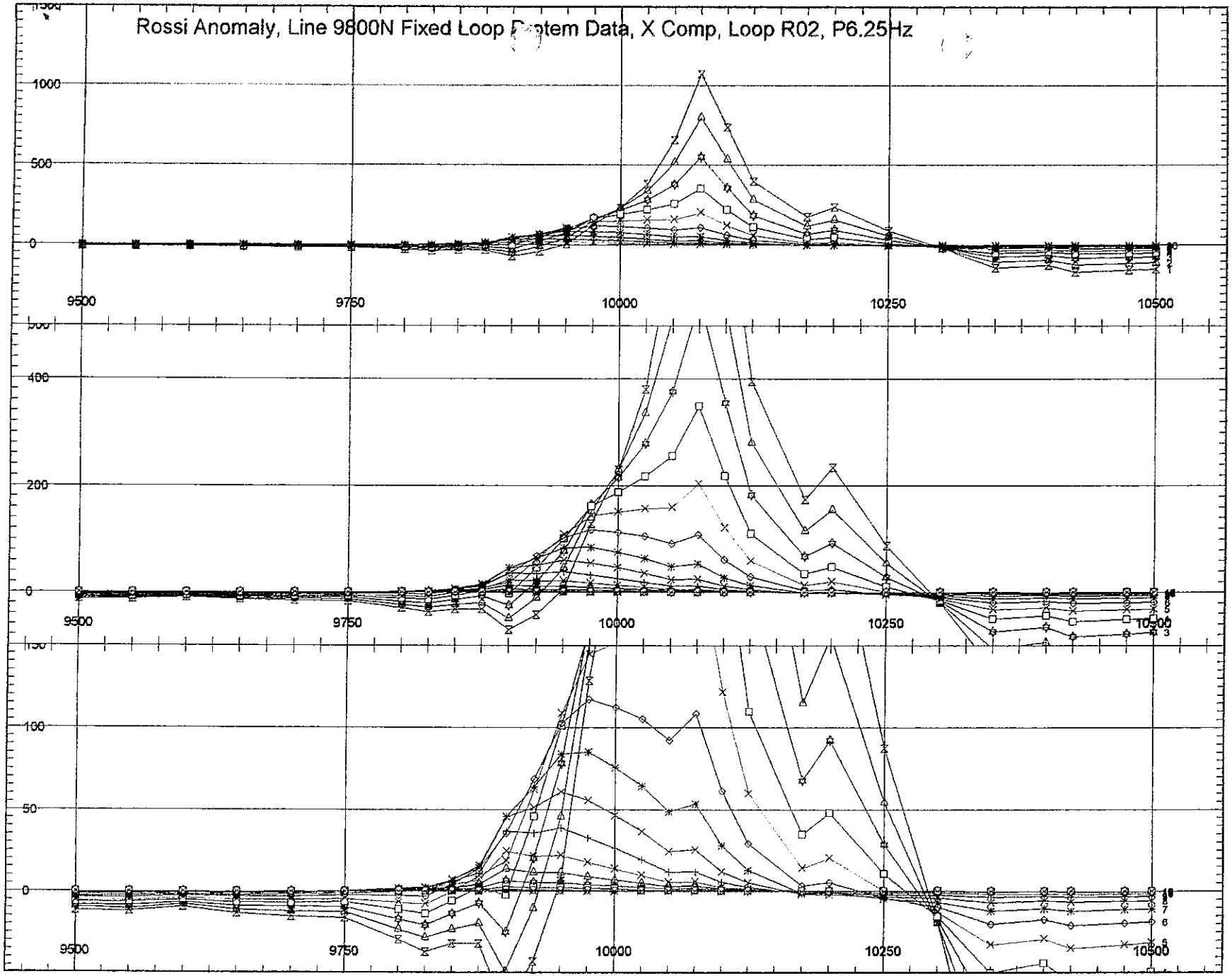

Rossi Anomaly, Line 9800N Fixed Loop Protem Data, Z Comp, Loop R02, P6.25Hz
1000
100
10
1
0
-1
-10
-100
-1000
9500
9750
10000
10250
10500
1
2
3
4
5
6
7
8
9
10
11
12
13
14

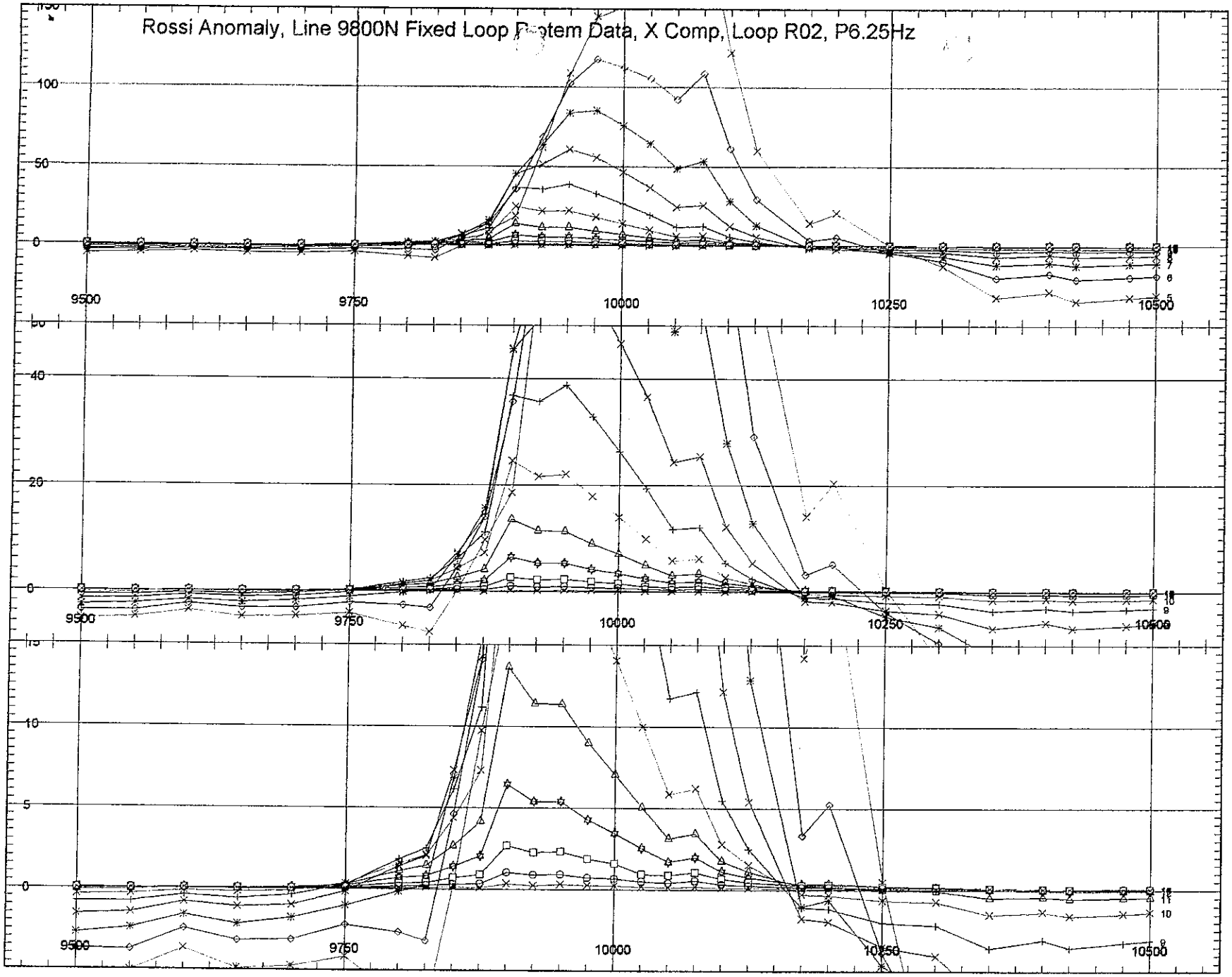

Rossi Anomaly, Line 9800N Fixed Loop Protem Data, Z Comp, Loop R02, P6.25Hz
500
0
-500
9500
9750
10000
10250
10500
200
-200
50
-50
1
2
3
4
5
6
7
8
10

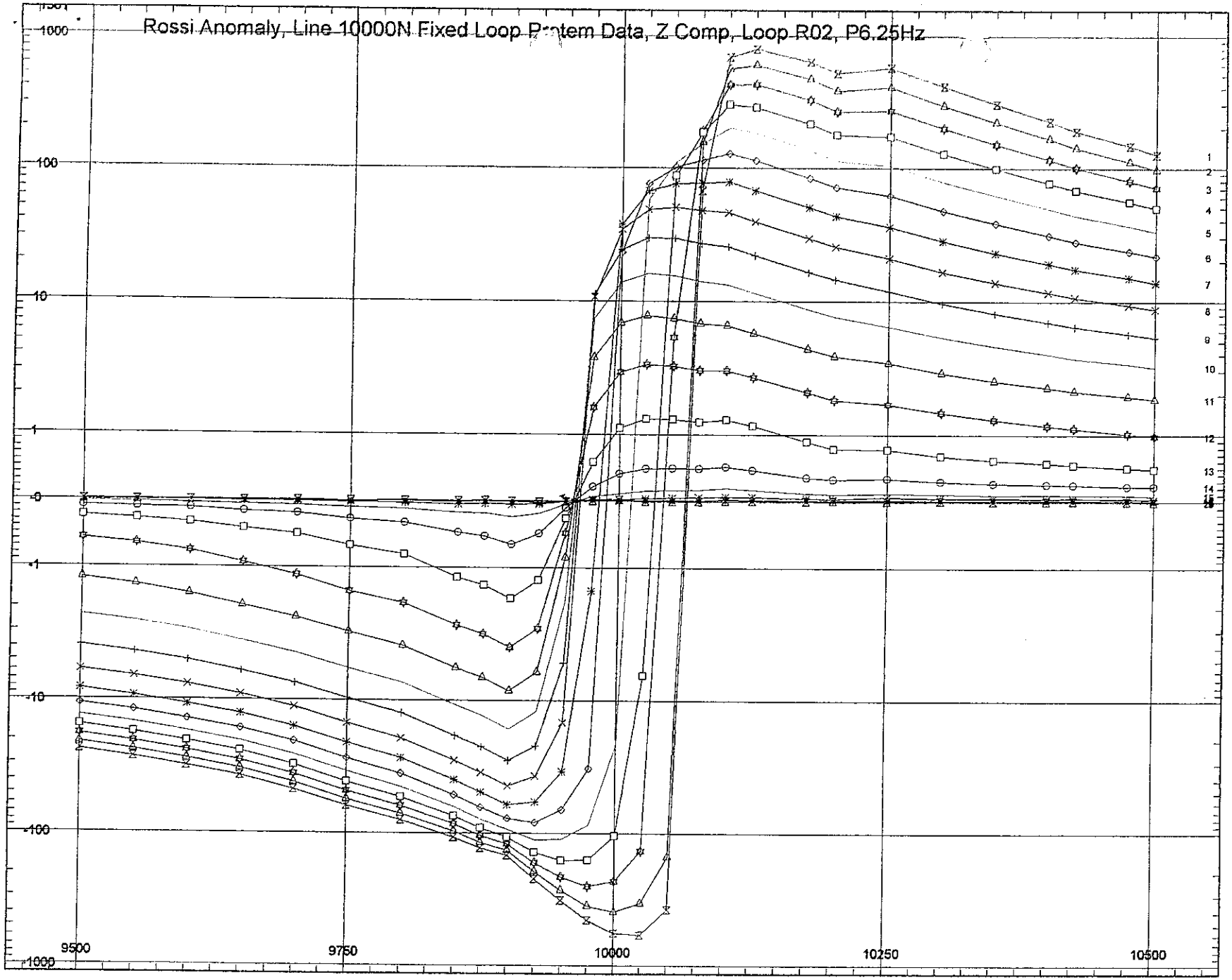

Rossi Anomaly, Line 9800N Fixed Loop Protem Data, Z Comp, Loop R02, P6.25Hz
20
0
-20
9500
9750
10000
10250
10500
6
7
8
9
10
11
5
0
-5
2.0
-0.0
-2.0
12
13
14
15

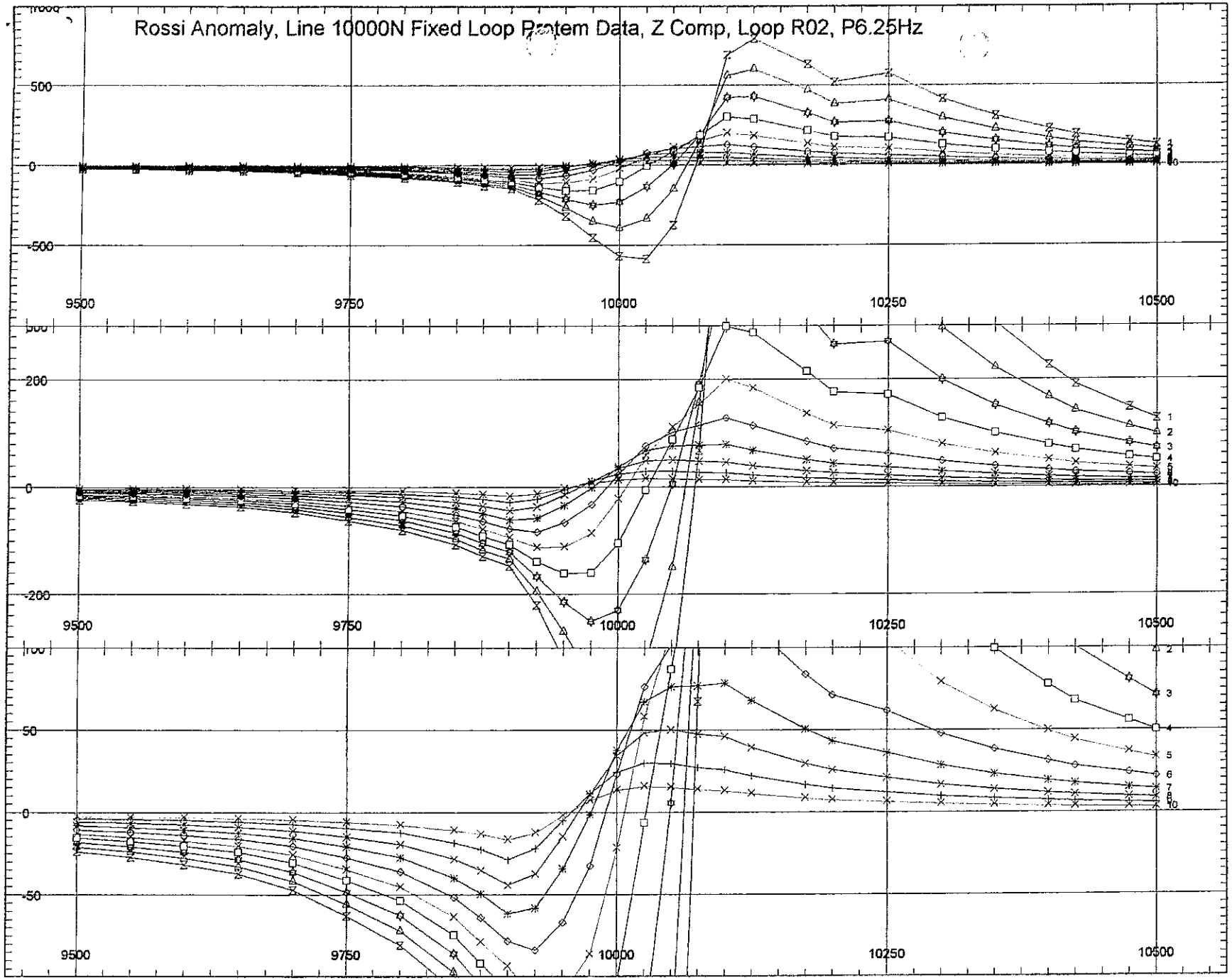

Rossi Anomaly, Line 9800N Fixed Loop, Protem Data, Z Comp, Loop R02, P6.25 Hz
0.5
0.0
-0.5
9500
9750
10000
10250
10500
13
14
15
0.20
0.00
-0.20
0.05
-0.05
16
17
18

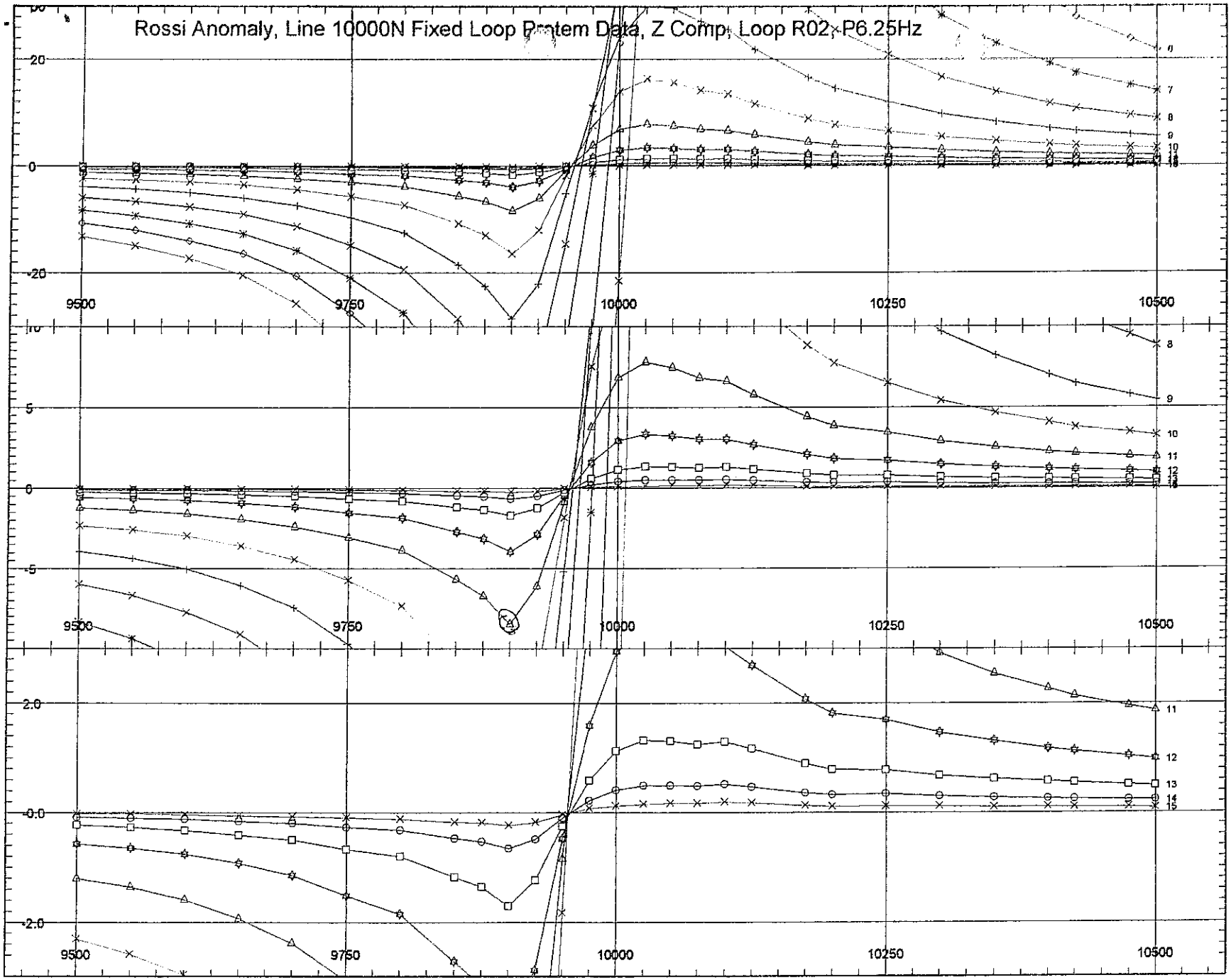

Rossi Anomaly, Line 9800N Fixed Loop E tem Data, X Comp, Loop R02, P6.25Hz
1000
100
10
1
-0
-1
-10
-100
9500
9750
10000
10250
10500
12
11
10
9
8
7
6
5
4
3
2
1

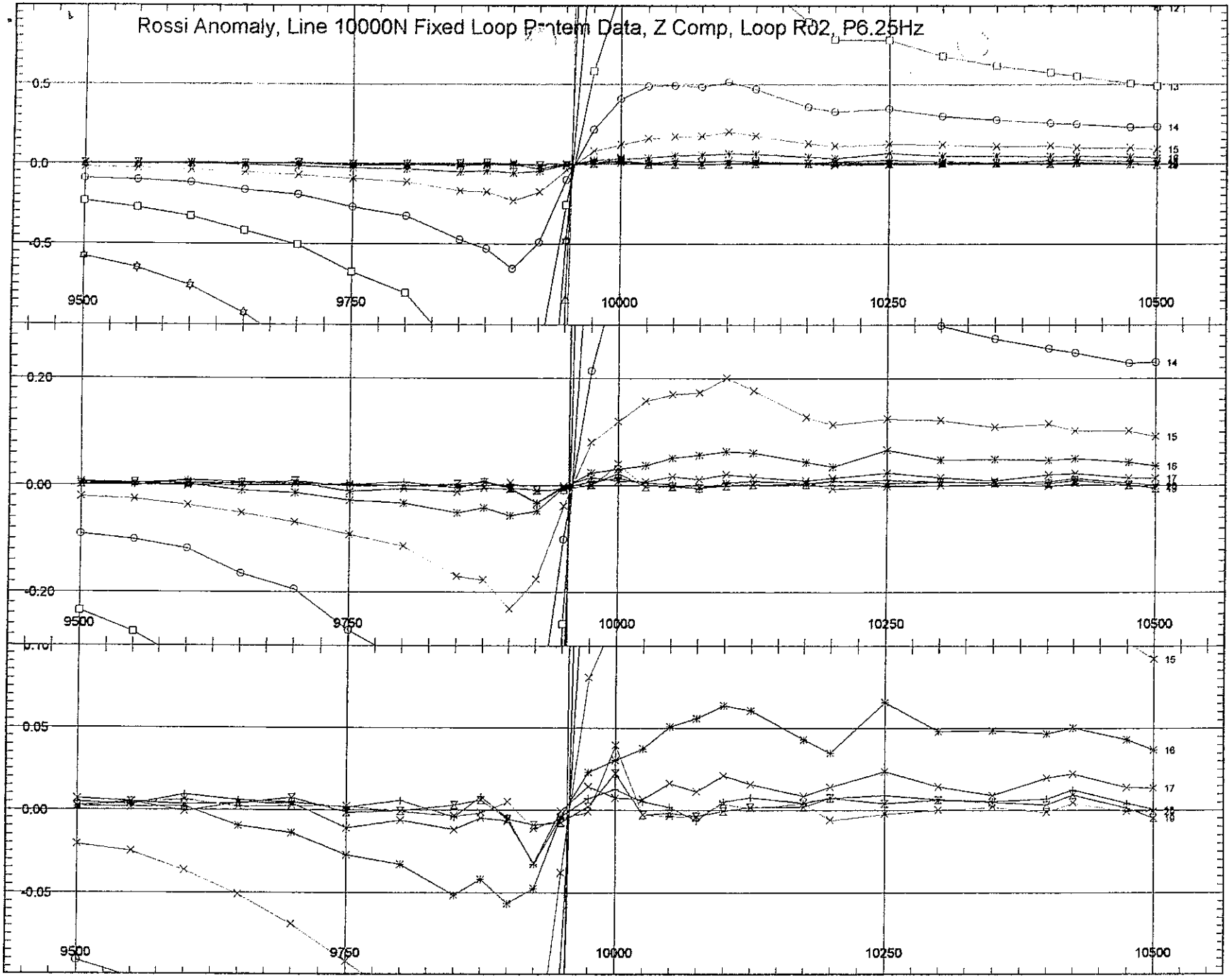

Rossi Anomaly, Line 9800N Fixed Loop System Data, X Comp, Loop R02, P6.25Hz
1000
500
0
9500
9750
10000
10250
10500
400
200
0
9500
9750
10000
10250
10500
100
50
0
9500
9750
10000
10250
10500

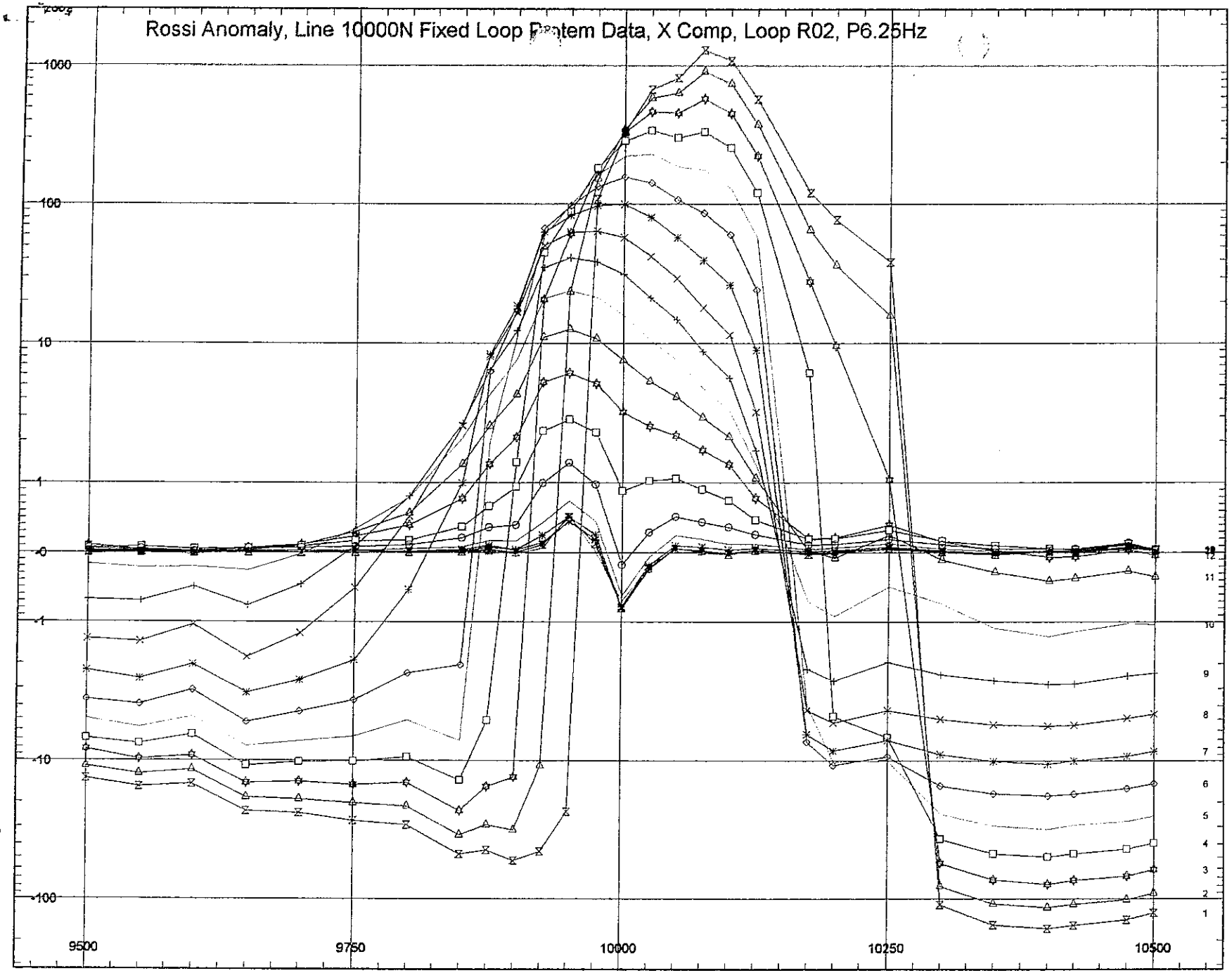

Rossi Anomaly, Line 9800N Fixed Loop System Data, X Comp, Loop R02, P6.25Hz
100
50
0
9500
9750
10000
10250
10500
40
20
0
9500
9750
10000
10250
10500
10
5
0
9500
9750
10000
10250
10500

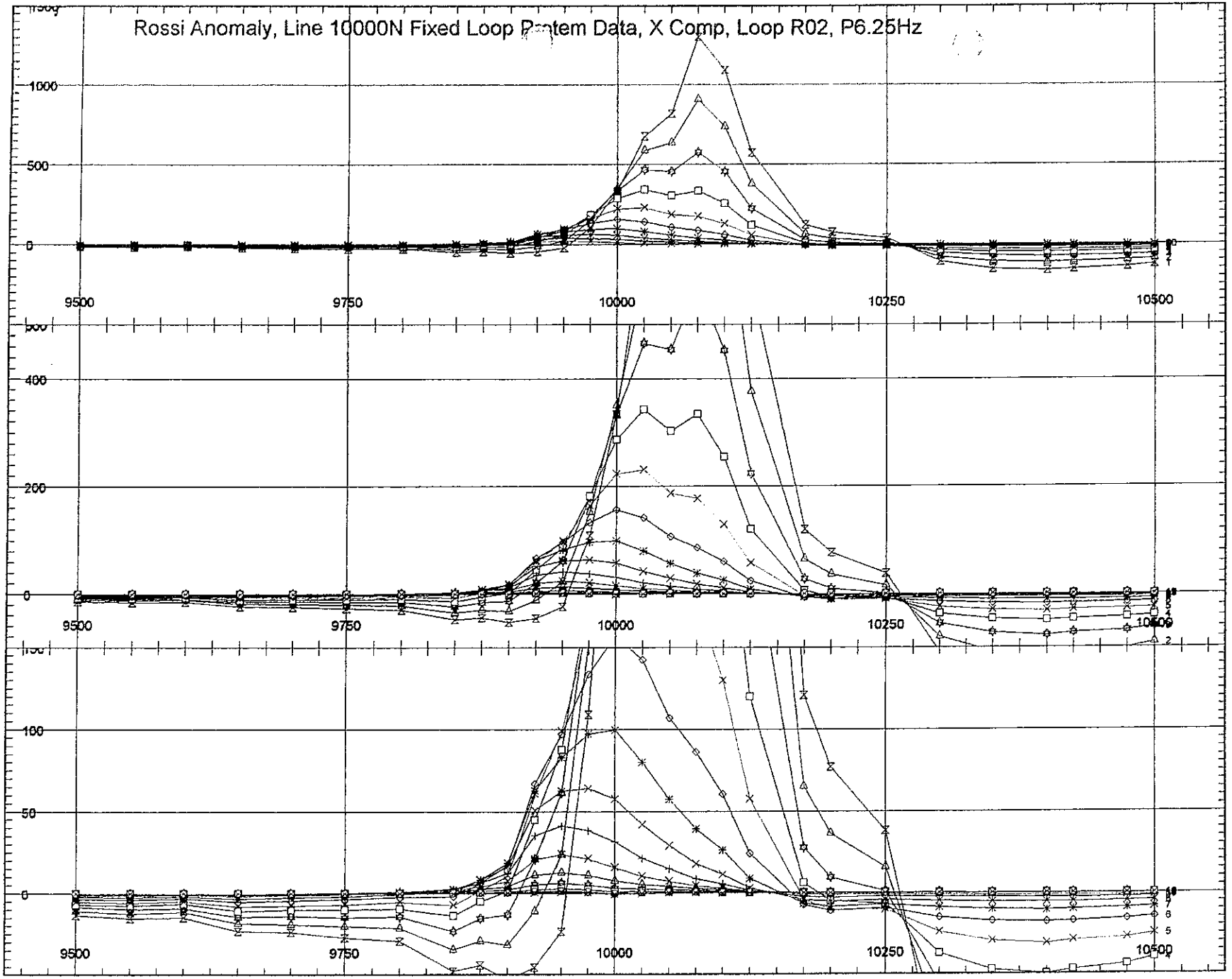

Rossi Anomaly, Line 10000N Fixed Loop Protem Data, Z Comp, Loop R02, P6.25Hz
1000
100
10
1
-0
-1
-10
-100
-1000
9500
9750
10000
10250
10500
1
2
3
4
5
6
7
8
9
10
11
12
13
14

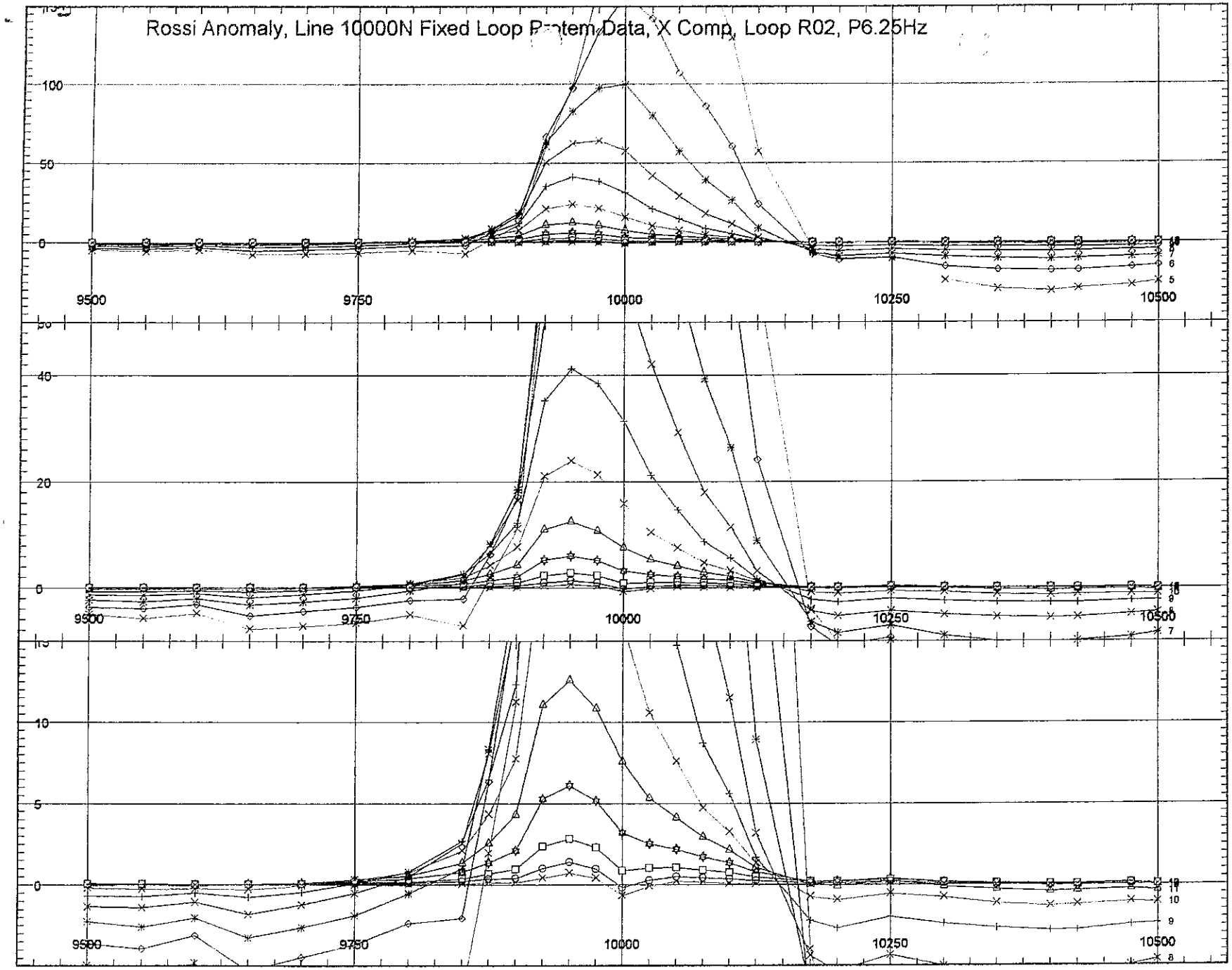

Rossi Anomaly, Line 10000N Fixed Loop Pxtem Data, Z Comp, Loop R02, P6.25Hz
500
0
-500
9500
9750
10000
10250
10500
200
0
-200
50
-50

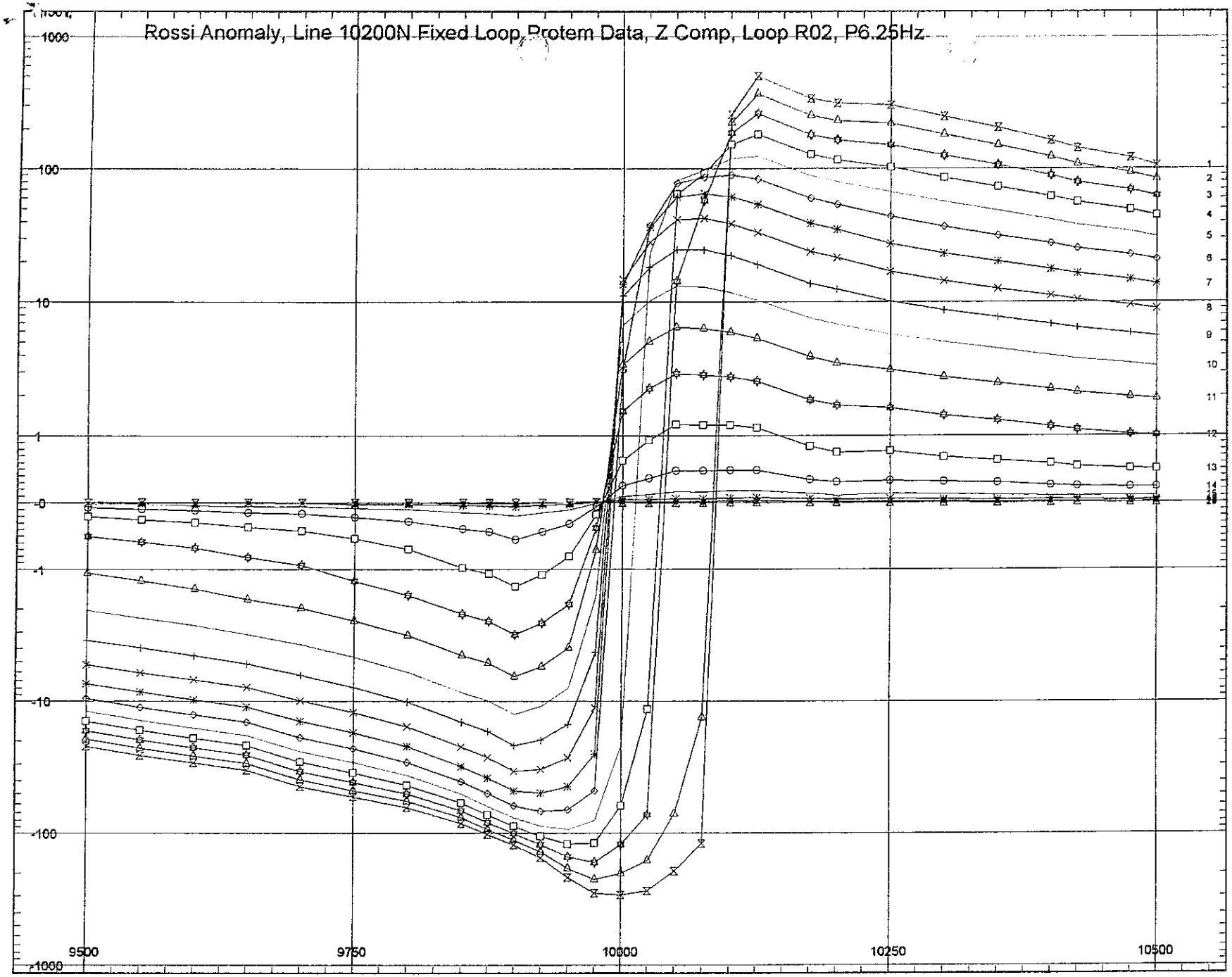

Rossi Anomaly, Line 10000N Fixed Loop Pratem Data, Z Comp, Loop R02, P6.25Hz
20
0
-20
9500
9750
10000
10250
10500
6
7
8
9
10
5
0
-5
2.0
-0.0
-2.0
11
12
13
14
15

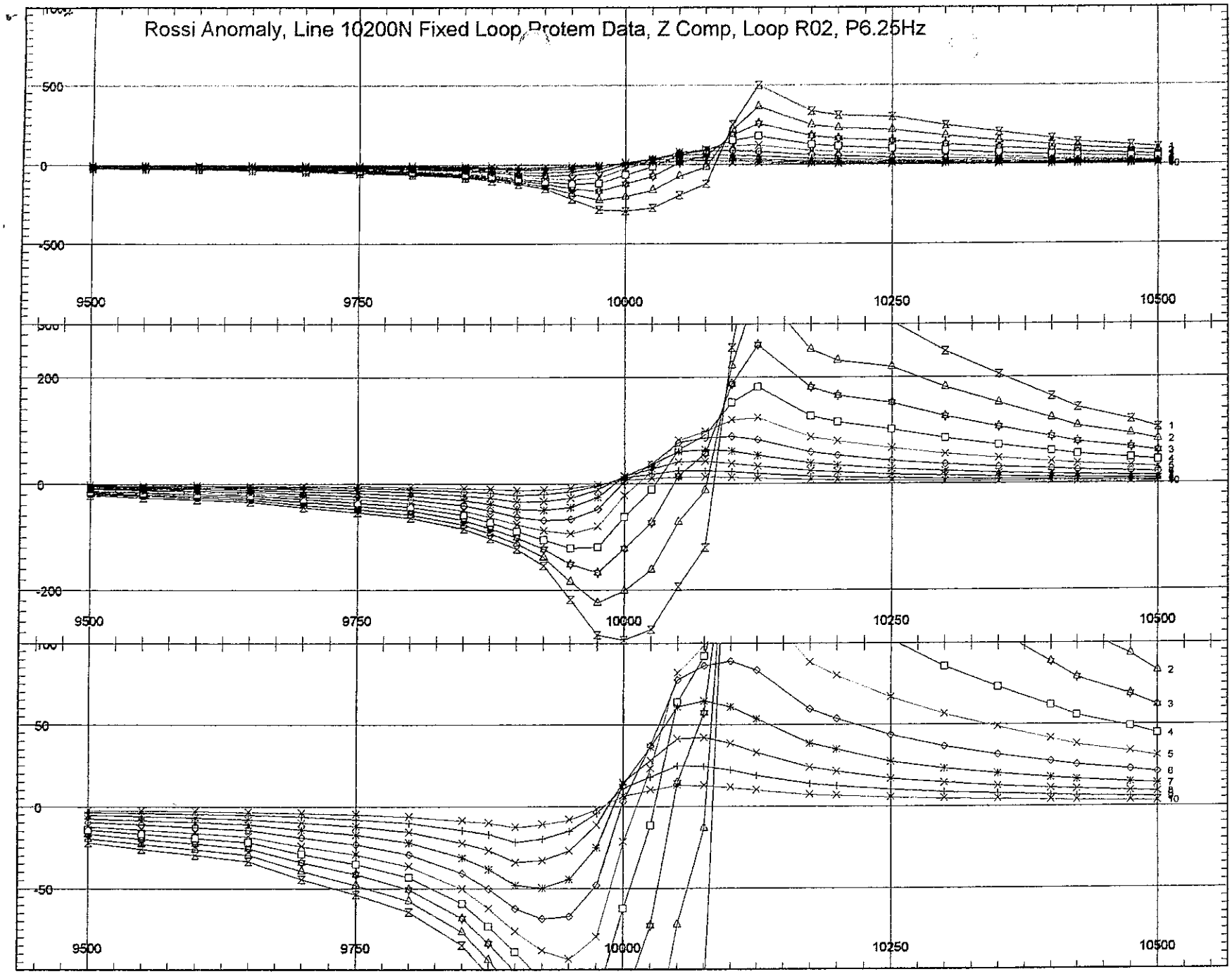

Rossi Anomaly, Line 10000N Fixed Loop Pantem Data, Z Comp, Loop R02, P6.25Hz
0.5
0.0
-0.5
9500
9750
10000
10250
10500
13
14
15
0.20
0.00
-0.20
0.10
0.05
-0.05
16
17

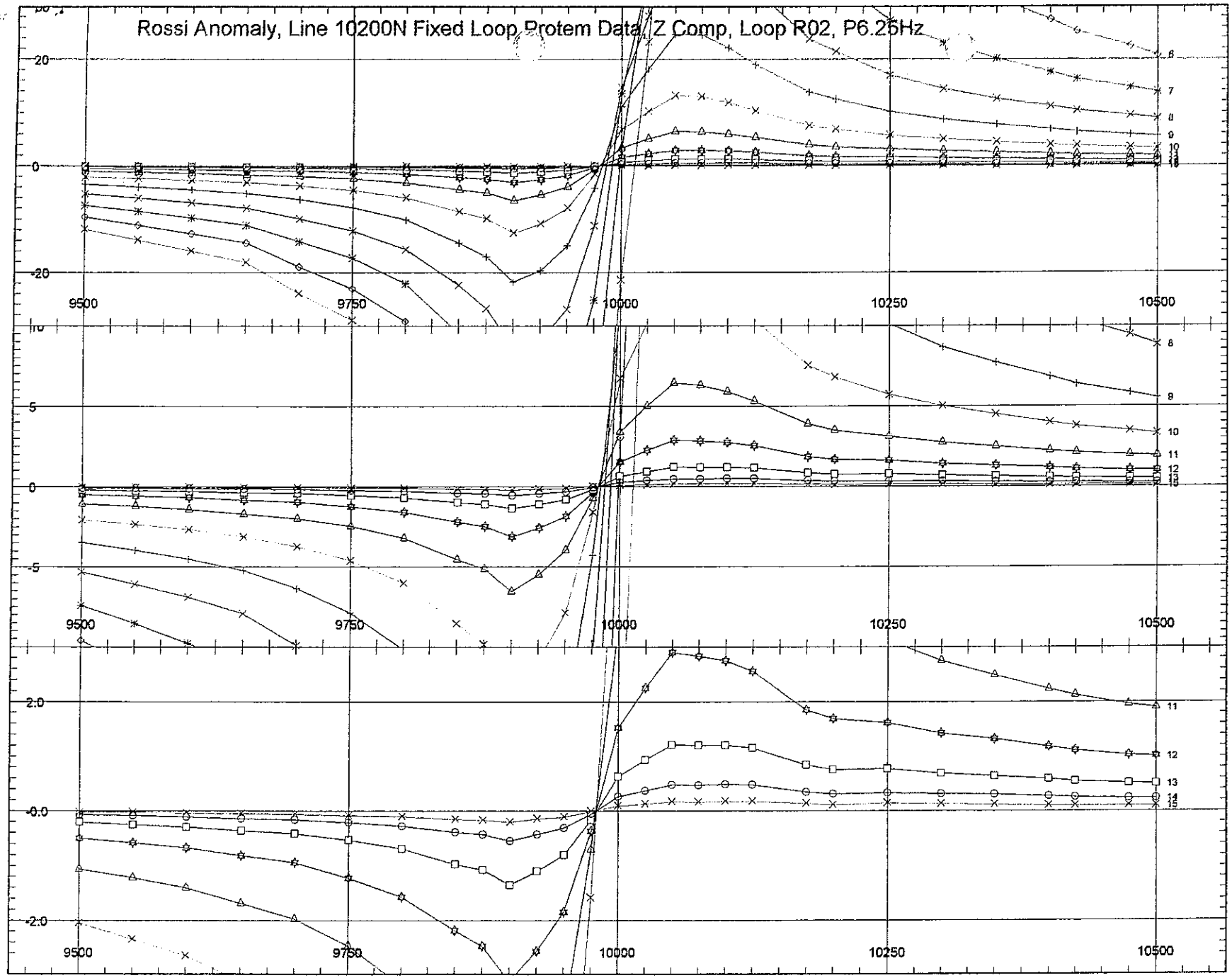

Rossi Anomaly, Line 10000N Fixed Loop Pulse Data, X Comp, Loop R02, P6.25Hz
1000
100
10
1
0
-1
-10
-100
9500
9750
10000
10250
10500
12
11
10
9
8
7
6
5
4
3
2
1

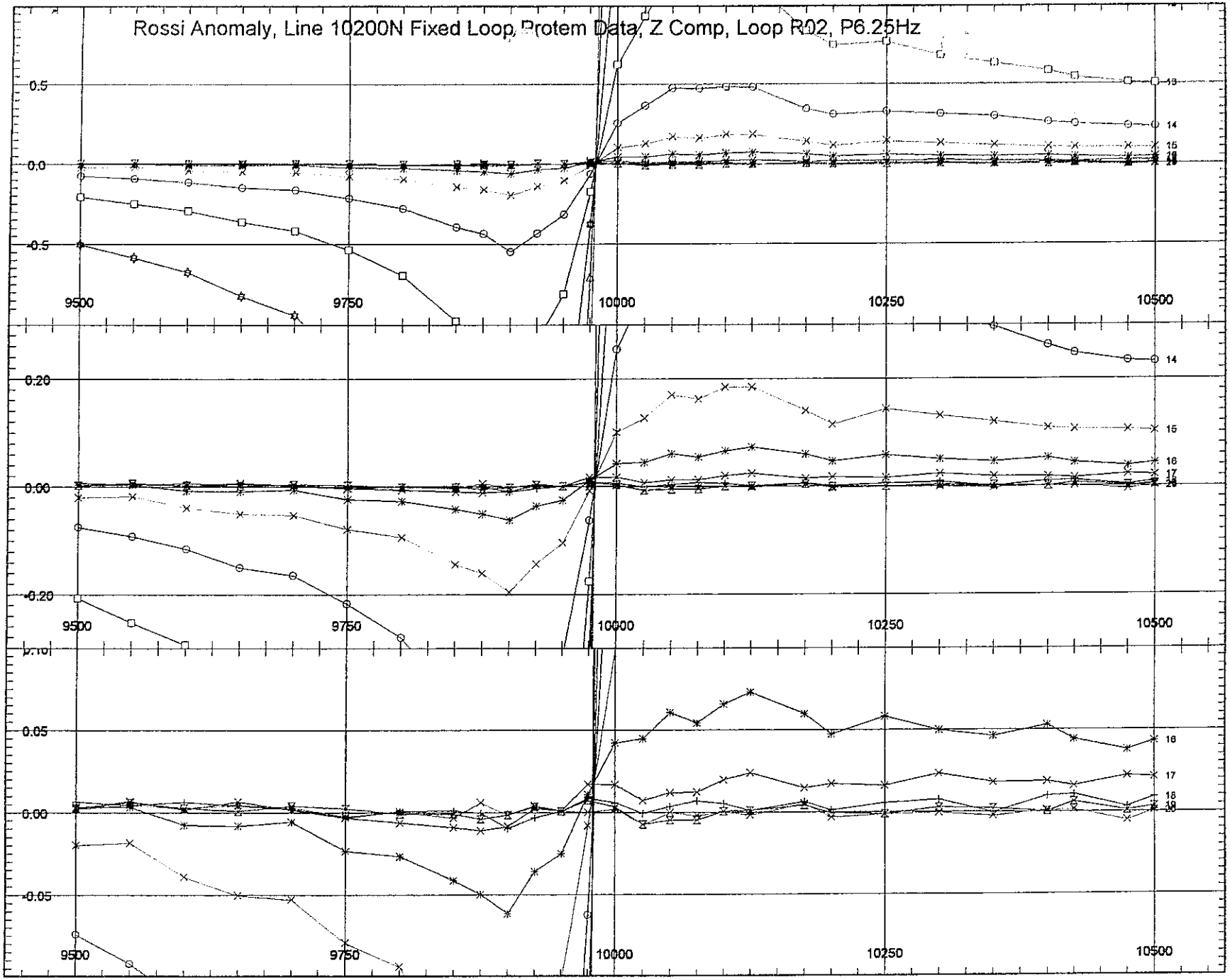

Rossi Anomaly, Line 10000N Fixed Loop P-ntem Data, X Comp, Loop R02, P6.25Hz
1000
500
0
9500
9750
10000
10250
10500
400
200
100
50

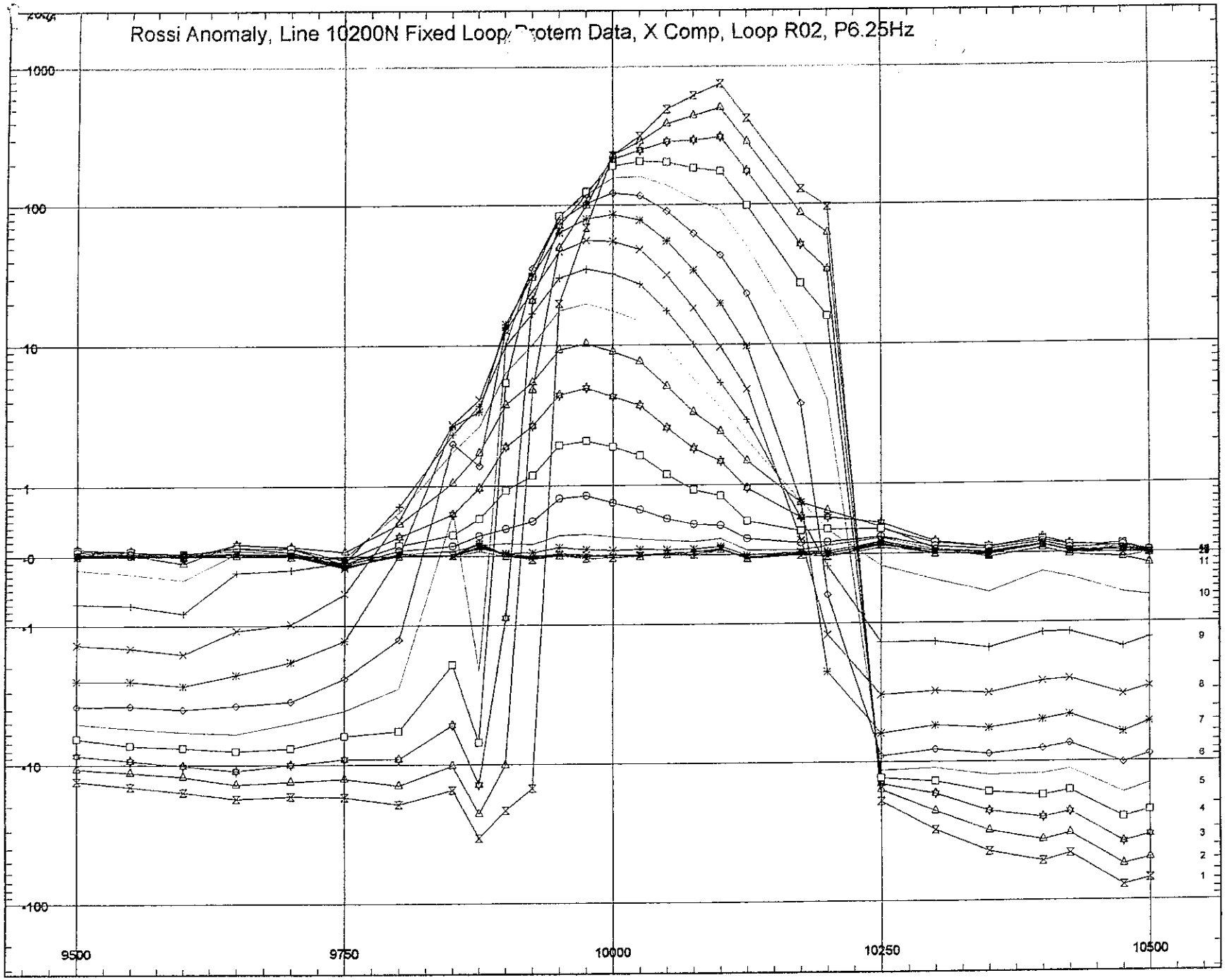

Rossi Anomaly, Line 10000N Fixed Loop Pulse Data, X Comp, Loop R02, P6.25Hz
100
50
0
9500
9750
10000
10250
10500
40
20
0
10
5
0

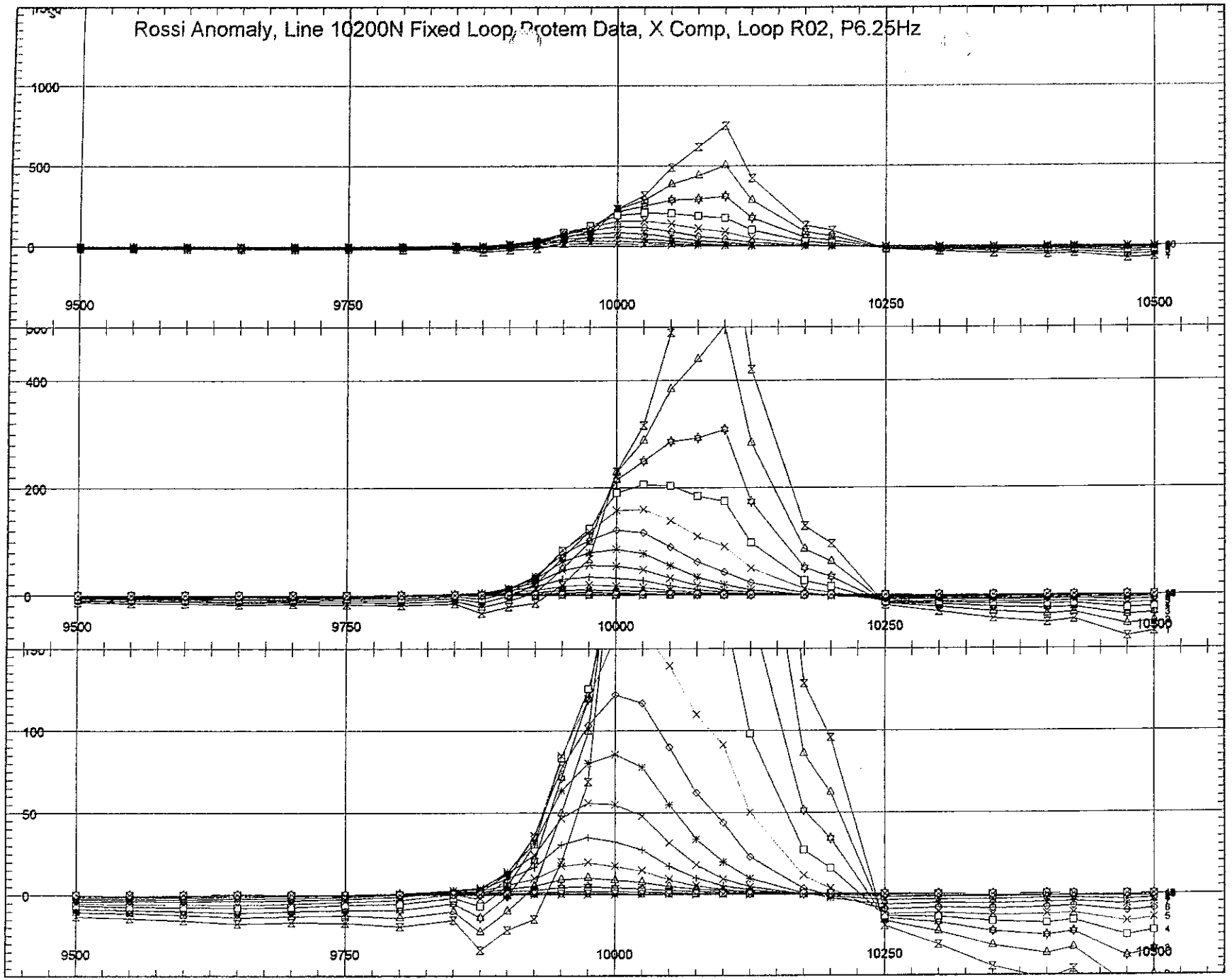

Rossi Anomaly, Line 10200N Fixed Loop Protem Data, Z Comp, Loop R02, P6.25Hz
1000
100
10
1
-0
-1
-10
-100
-1000
9500
9750
10000
10250
10500
1
2
3
4
5
6
7
8
9
10
11
12
13
14

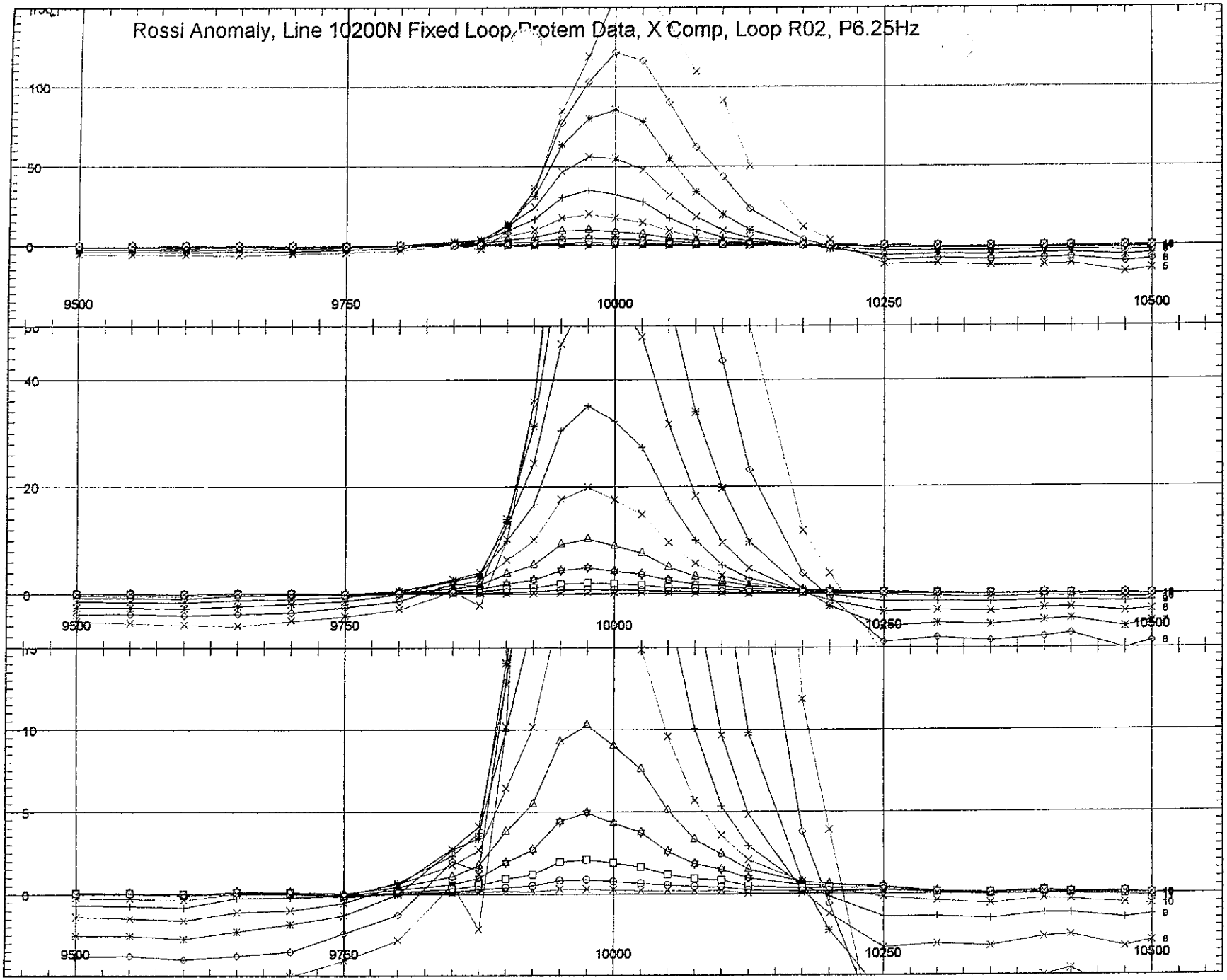

Rossi Anomaly, Line 10200N Fixed Loop Protem Data, Z Comp, Loop R02, P6.25Hz
500
0
-500
9500
9750
10000
10250
10500
200
-200
1
2
3
50
-50


Rossi Anomaly, Line 10200N Fixed Loop Protem Data, Z Comp, Loop R02, P6.25Hz
20
0
-20
9500
9750
10000
10250
10500
6
7
8
9
10
5
0
-5
11
12
2.0
-0.0
-2.0


Rossi Anomaly, Line 10200N Fixed Loop, Protem Data, Z Comp, Loop R02, P6.25Hz
0.5
0.0
-0.5
9500
9750
10000
10250
10500
14
15
16
17
18
19
0.20
0.00
-0.20
0.10
0.05
0.00
-0.05


Rossi Anomaly, Line 10200N Fixed Loop, Protem Data, X Comp, Loop R02, P6.25Hz
1000
100
10
1
-0
-1
-10
-100
9500
9750
10000
10250
10500
11
10
9
8
7
6
5
4
3
2
1


Rossi Anomaly, Line 10200N Fixed Loop, Protem Data, X Comp, Loop R02, P6.25Hz
1000
500
0
9500
9750
10000
10250
10500
400
200
100
50
6
5
4


Rossi Anomaly, Line 10200N Fixed Loop, Protem Data, X Comp, Loop R02, P6.25Hz
100
50
0
9500
9750
10000
10250
10500
40
20
0
9500
9750
10000
10250
10500
10
5
0
9500
9750
10000
10250
10500

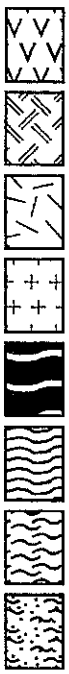
APPENDIX 7

DRILL LOGS FOR HELEN SPRINGS HOLES

LEGEND

LITHOLOGY

Siltstone, undefined
Siltstone, laminated
Black shale
Interbedded sandstone / siltstone
Sandstone, undefined
Conglomerate
Breccia
Dolomite, laminated
Dolomite, undefined
Volcaniclastic rock
Felsic volcainc



Mafic volcanic
Ultramafic (general)
Mafic intrusion
Felsic intrusion
Hornfels
Phyllite
Schist
Gneiss

MINERALISATION

Sphalerite
Pyrrhotite
Pyrite
Chalcopyrite
Galena

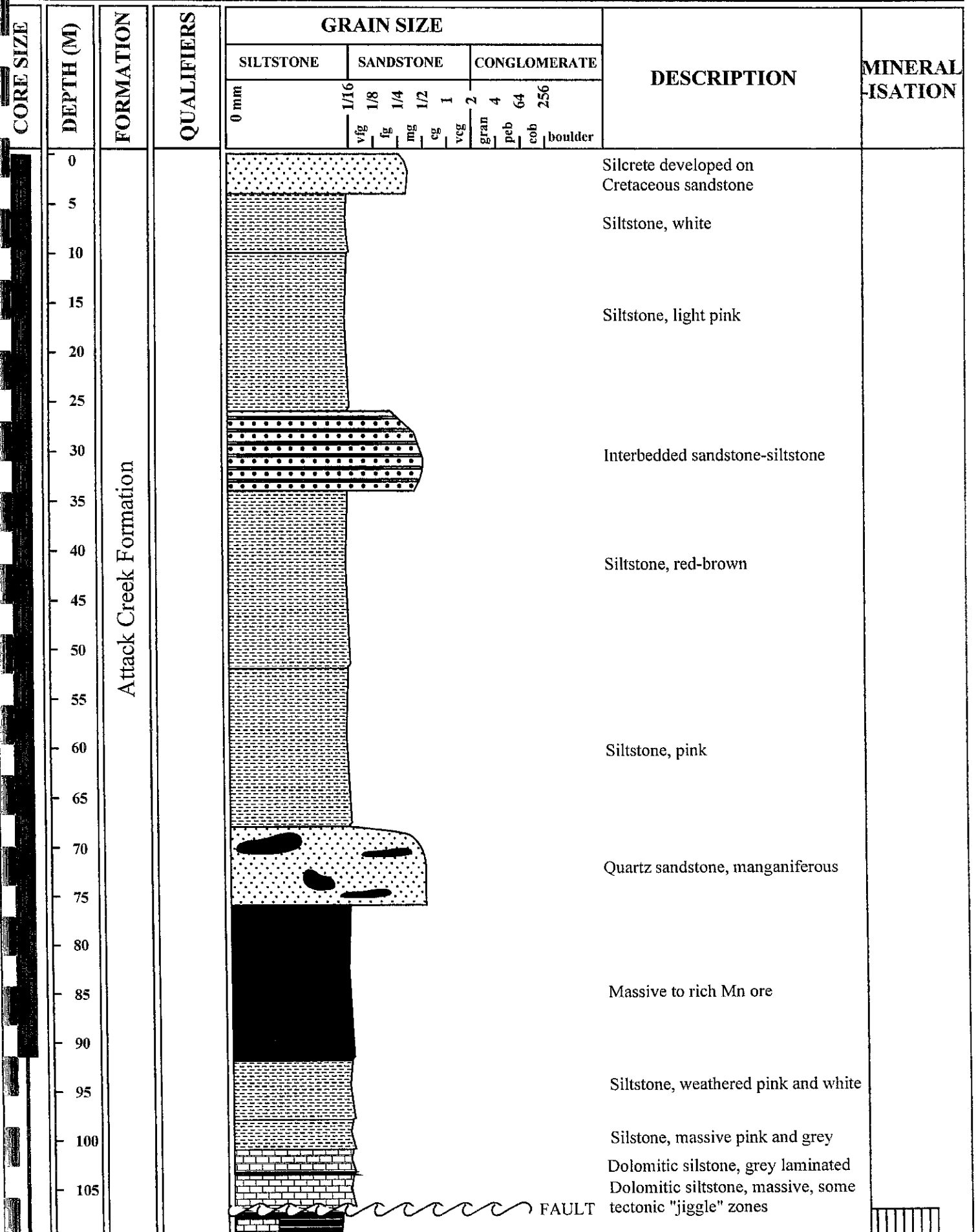
QUALIFIERS

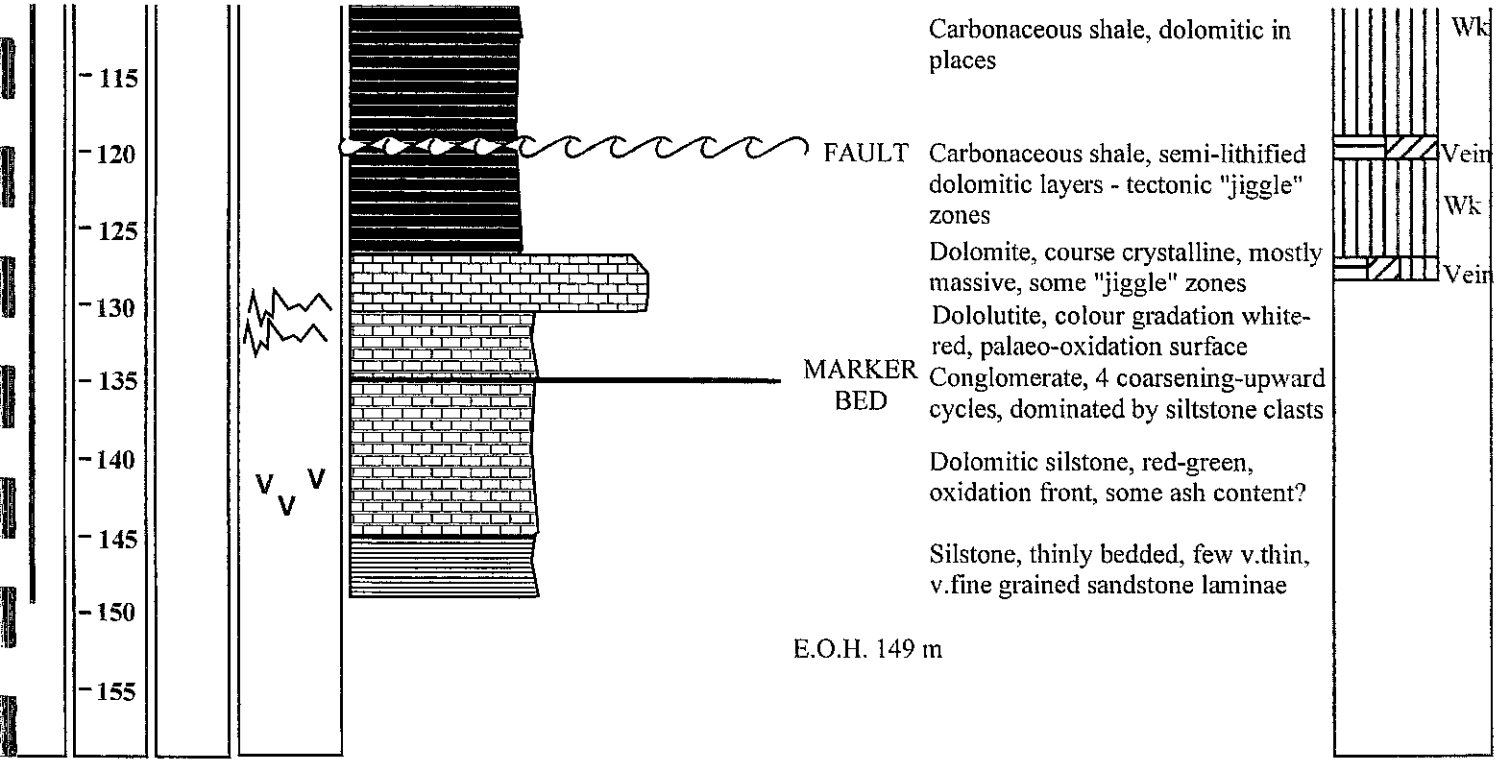
Stromatolitic
Evaporitic
Cross-bedded, planar
Cross-bedded, trough
Tuffaceous
Cauliflower chert
Soft sediment slumping
Flame structures
Teepee structures
Load casts
Ripple cross-lamination
Stylolites
Dessication cracks
Gypsum (pseudomorphs)
XXXX Recrystallisation
Fault / shear
Unconformity

DRILL ROD SIZE

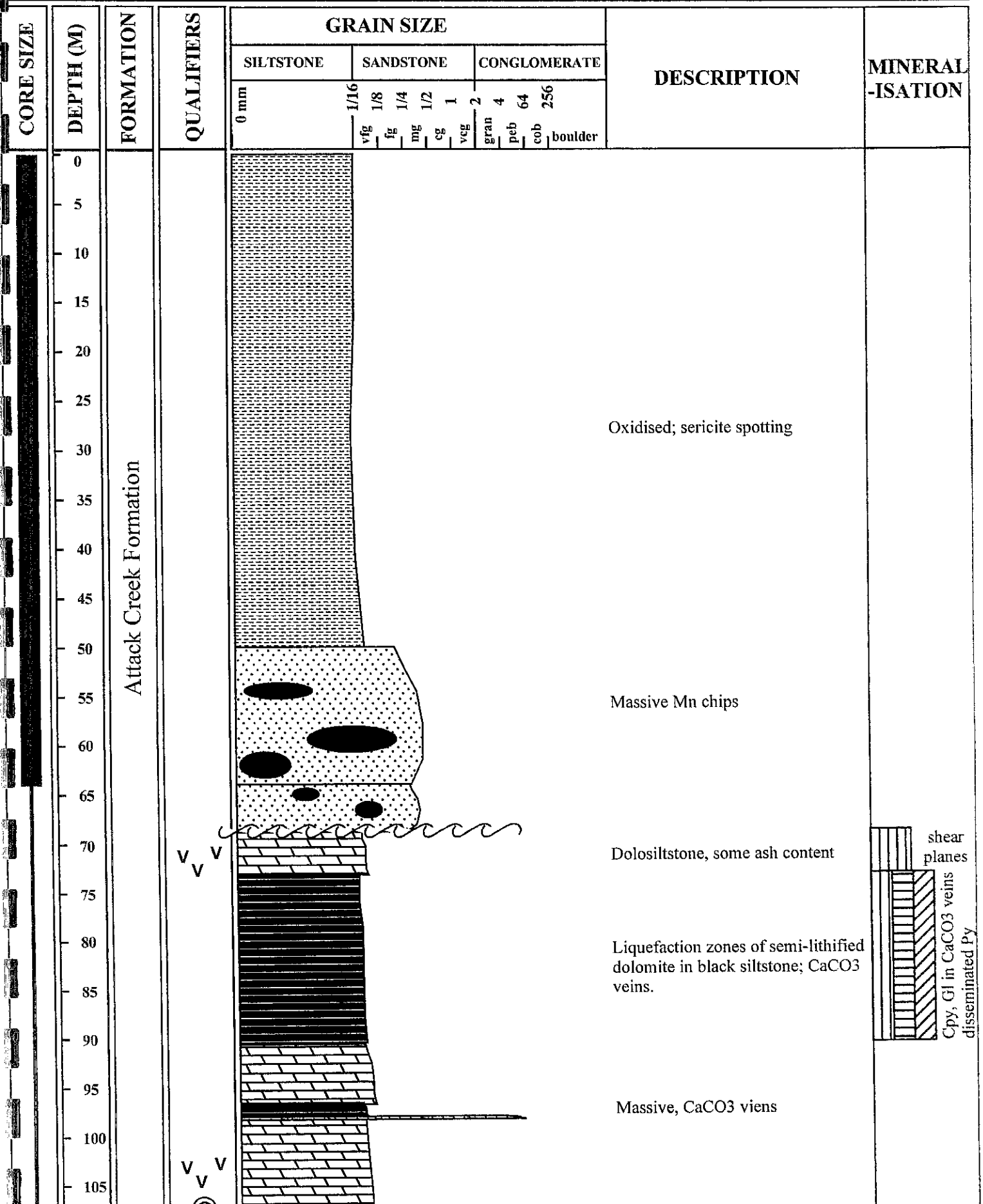
Percussion rods **PQ rods** **HQ rods** **NQ rods**

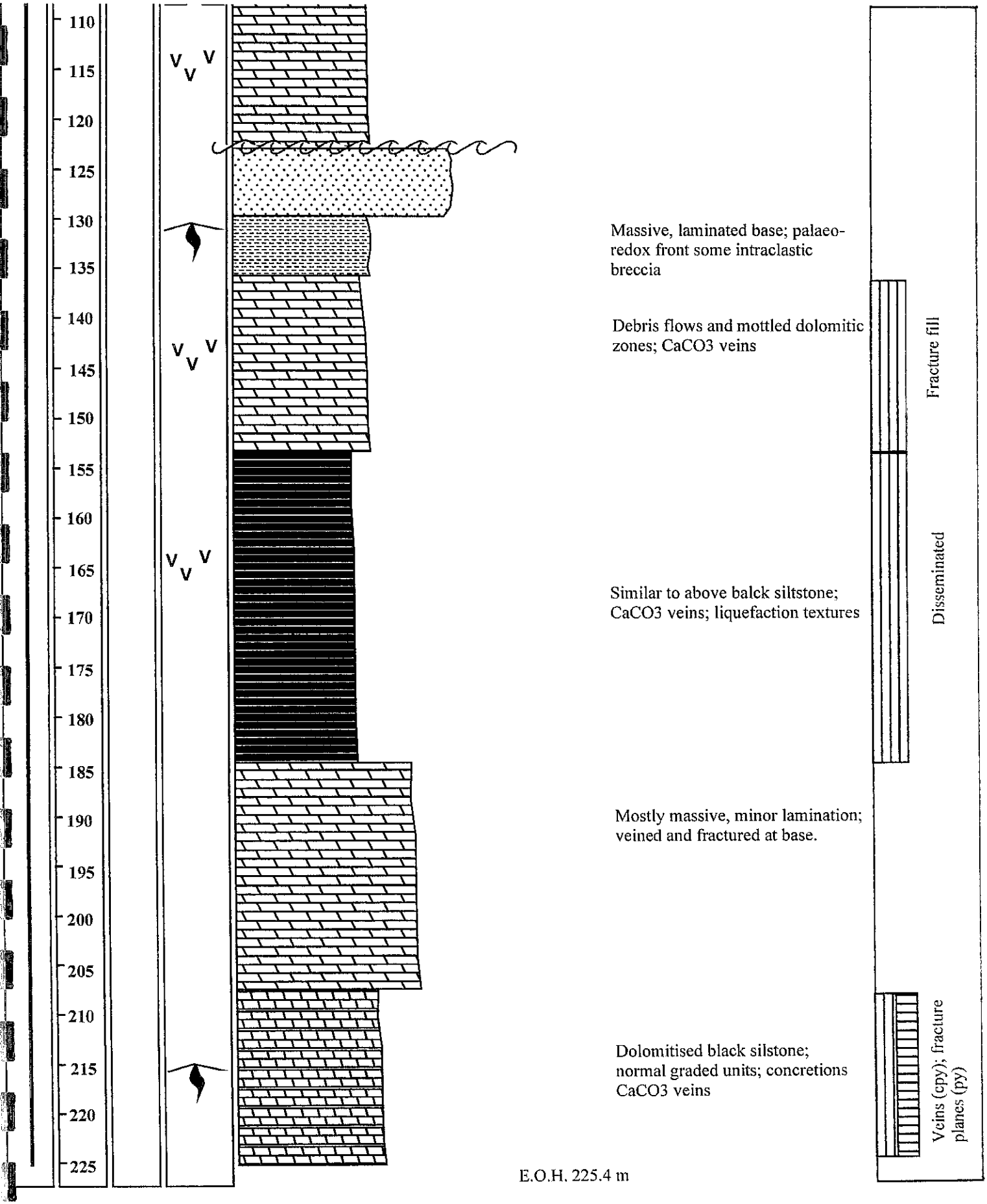
HOLE NAME: HSD001	HOLE TYPE: PERC + NQ
DRILLED BY: GADEN DRILLING	DATE DRILLED: 10 - 14/8/96
LOGGED BY: T. NUNN	SCALE: 1:500




115
120
125
130
135
140
145
150
155
FAULT
MARKER BED
Carbonaceous shale, dolomitic in places
Carbonaceous shale, semi-lithified dolomitic layers - tectonic "jiggle" zones
Dolomite, course crystalline, mostly massive, some "jiggle" zones
Dololutite, colour gradation white-red, palaeo-oxidation surface
Conglomerate, 4 coarsening-upward cycles, dominated by siltstone clasts
Dolomitic silstone, red-green, oxidation front, some ash content?
Silstone, thinly bedded, few v.thin, v.fine grained sandstone laminae
E.O.H. 149 m
Wk
Vein
Wk
Vein

HOLE NAME: HSD002	HOLE TYPE: PERC + NQ
DRILLED BY: GADEN DRILLING	DATE DRILLED: 15 - 19/8/96
LOGGED BY: T. NUNN	SCALE: 1:500



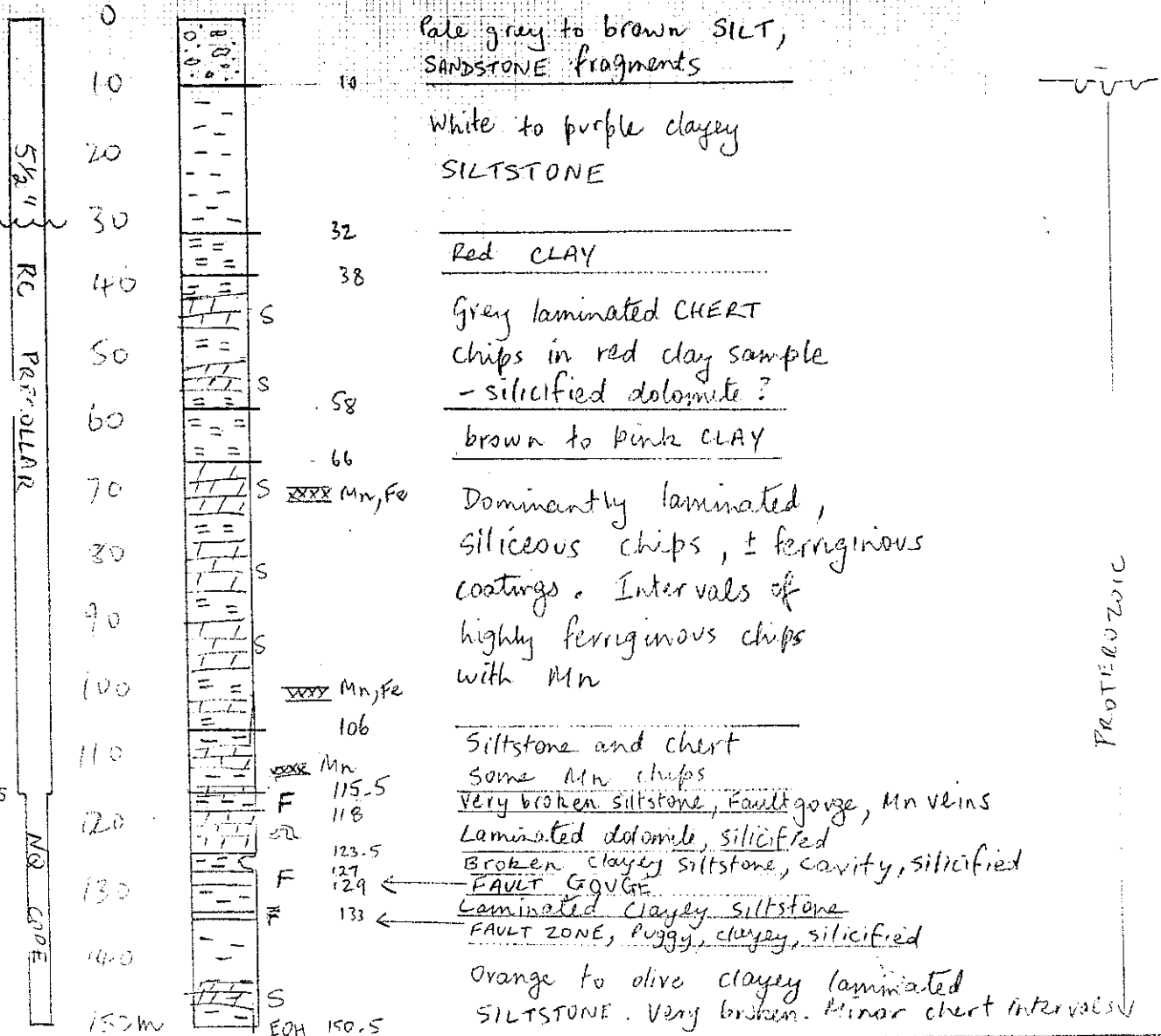

110
115
120
125
130
135
140
145
150
155
160
165
170
175
180
185
190
195
200
205
210
215
220
225
Massive, laminated base; palaeo-redox front some intraclastic breccia
Debris flows and mottled dolomitic zones; CaCO3 veins
Similar to above balck siltstone; CaCO3 veins; liquefaction textures
Mostly massive, minor lamination; veined and fractured at base.
Dolomitised black silstone; normal graded units; concretions CaCO3 veins
Fracture fill
Disseminated
Veins (cpy); fracture planes (py)

E.O.H. 225.4 m

HSD003

Wilkeran GEOTEM ANOMALY WY1

Total Depth 150.5 m



SILTSTONE DOLOMITE

CLAY S silicified

Comments: F Fault

AMG EAST: 362 300

" NORTH: 7966 200

" ZONE: 53K

START: 21/8/96

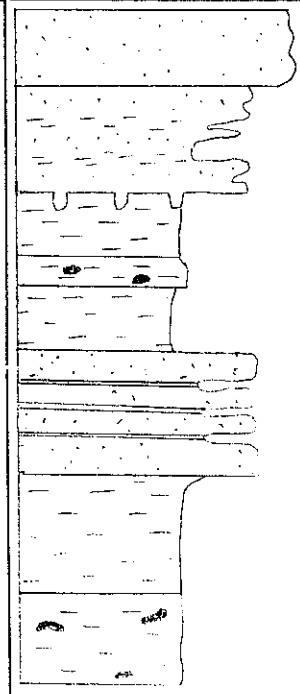
FINISH: 23/8/96

RIG: UDR650

CASING: 50mm PVC to 130 m water in Fault zone ?!

- Lithologies moderately weathered to strongly throughout
- Strongly oxidised, reddened in Fault zones
- No lithologies react to HCl → dolomites silicified, dolomitic siltstones leached?
- EM source: deep weathering &/or minor Fe/Mn &/or Fault zone &/or ground

HOLE NAME: HSP001	**HOLE TYPE:** RC
DRILLED BY: GADEN DRILLING	**DATE DRILLED:** 8-9/8/96
LOGGED BY: T NUNN	**SCALE: 1:500**

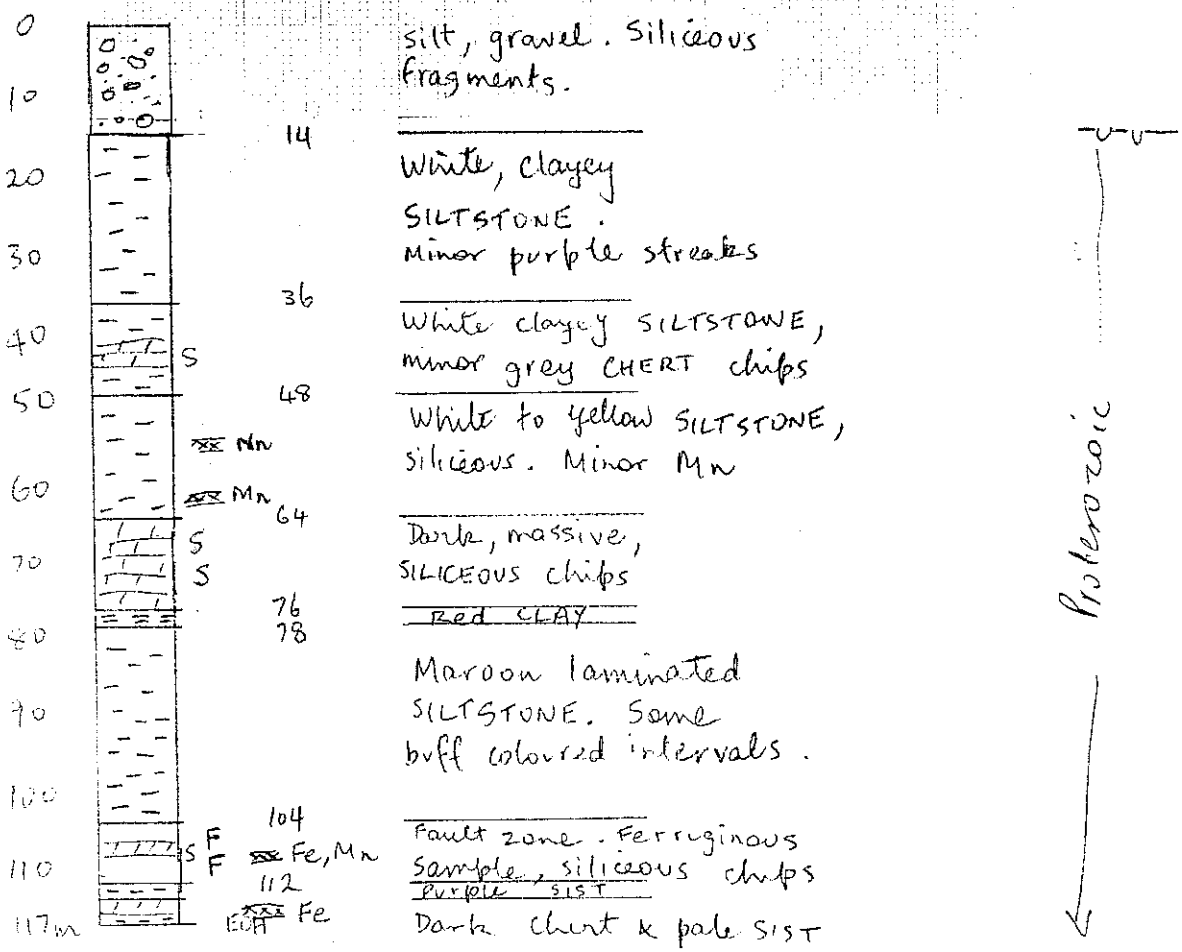
CORE SIZE	DEPTH (M)	FORMATION	QUALIFIERS	GRAIN SIZE	DESCRIPTION	MINERAL-ISATION
				SILTSTONE / SANDSTONE / CONGLOMERATE 0 mm; 1/16 vfg; 1/8; 1/4 fg; 1/2 mg; 1 cg; 2 vcg; 4 gran; 64 peb; 256 cob; boulder		
5½" RC	0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105	ATTACK CREEK FORMATION			Quartz sandstone, transported material Quartz sandstone and siltstone, transported Saprolite, siltstone, clay Leached siltstone with Mn blebs Clay-rich siltstone Interbedded siltstone and sandstone Clay-rich siltstone Fe rich siltstone with Mn blebs	

E.O.H. 44 m

HSR002

Willeray GEOTEM Anomaly WY3

Total Depth 117m. 5½" RC.



AMG EAST: 365100

NORTH: 7964200

ZONE: 53K

START: 24/8/96

FINISH: 24/8/96

RIG: UDR 650

CASING: 50mm PVC to 109m.

Comments:

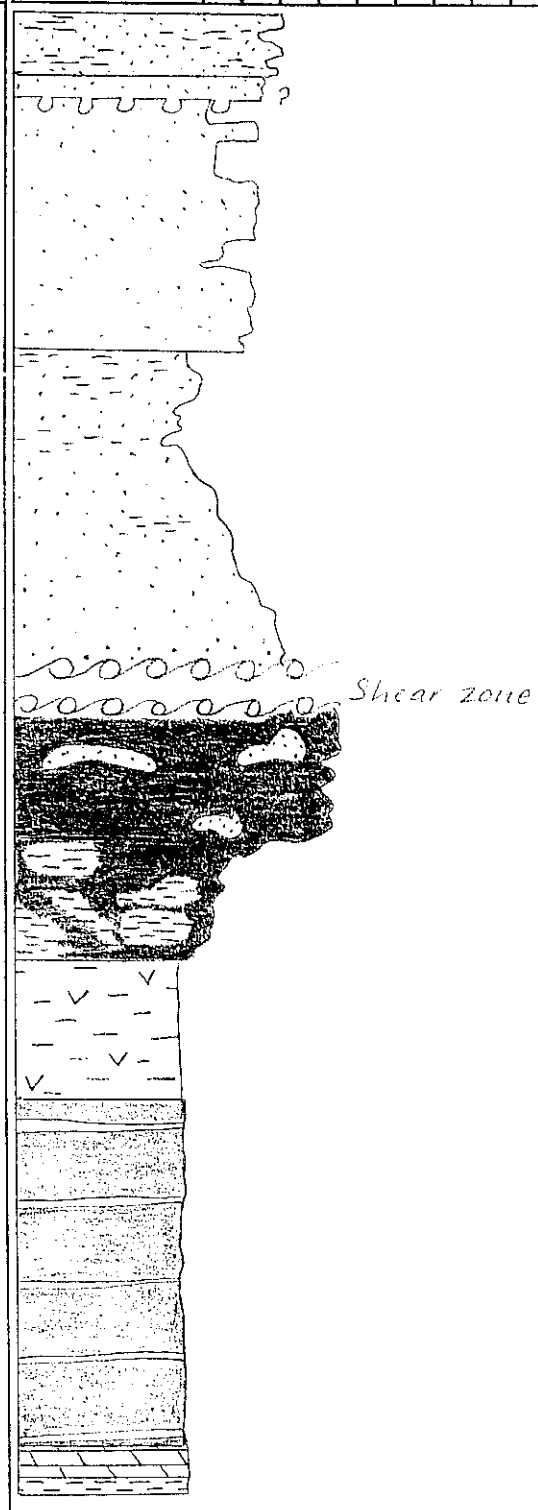
- Very loose ground, large water inflow and ferruginous sample suggest fault zone at 104 – 112 m.

HOLE NAME: HSP003 | **HOLE TYPE:** RC

DRILLED BY: GADEN DRILLING | **DATE DRILLED:** 29/10/96

LOGGED BY: T NUNN | **SCALE:** 1:500

CORE SIZE	DEPTH (M)	FORMATION	QUALIFIERS	GRAIN SIZE	DESCRIPTION	MINERAL-ISATION
				SILTSTONE / SANDSTONE / CONGLOMERATE (0 mm, 1/16, 1/8, 1/4, 1/2, 1, 2, 4, 64, 256; vfg, fg, mg, cg, vcg, gran, peb, cob, boulder)		



Weathered siltstone, sandstone - transported

Quartz sandstone, clay and Mn blebs (pisolitic?)

Leached clay, siltstone

Pink sandstone - increasing towards base

Coarse grained Mn ox... hosted in qtz ... sandstone

Fine grained manganiferous rock (siltstone?) red clay

Khaki green siltstone some tuffaceous comp... oncnt

Black shale, ... pyritic/chalcopyritic

Light grey dolomitic SLST Red siltstone. Palaeo Redox front

EOH : 97 m

HOLE NAME: HSP 004 | **HOLE TYPE:** RC

DRILLED BY: Graden Drilling. | **DATE DRILLED:** 29/30 oct 96

LOGGED BY: T. Nunn | **SCALE:** 1:500

CORE SIZE	DEPTH (M)	FORMATION	QUALIFIERS	GRAIN SIZE (SILTSTONE / SANDSTONE / CONGLOMERATE)	DESCRIPTION	MINERAL-ISATION
	0	Alfacle Creek Formation Pla.			Qtz Silcrete - sandstone? vein qtz, red clay	
	2				Red clay red siltstone with black (Mn?) spotting, white siltstone.	
	6				white-yellow silt. fine grained qtz sst white clay.	
	12m				White fine grained qtz sandstone, minor yellow siltstone, white clay.	
	32m				Orange-pink fine grained qtz sandstone with Mn spotting, white & red clay.	
	44m				Red siltstone, red clay, fine grained qtz sandstone.	
	48m				Grey fine grained qtz sandstone, red-yellow siltstone red clay.	
	54m				Red siltstone, white siltstone, red clay.	
	58m				Red siltstone, white siltstone, white fine grained sandstone. with possible Mn blebs	Mn blebs.
	68m				Red clay, red siltstone, yellow siltstone, Mn chips	Mn chips
	76m				Black Mn chips, ferruginous sandstone, tan siltstone	Mn
	80m				Red clay, brown silt, tan silt, black Mn blebs, pink vfg sandstone.	Mn
	84m				Fine grained qtz sandstone (pink) - poorly sorted, round grains, red clay, pink siltstone.	
	92m				EOH 97m.	
	105					

AMG 53K
607058E,
7935061 N.

Did not intersect Mn target presumably target is deeper

HOLE NAME: HSP005	**HOLE TYPE:** RC
DRILLED BY: Garden Drilling	**DATE DRILLED:** 30/10/96
LOGGED BY: T. Munn.	**SCALE: 1:500**

CORE SIZE	DEPTH (M)	FORMATION	QUALIFIERS	GRAIN SIZE (SILTSTONE / SANDSTONE / CONGLOMERATE)	DESCRIPTION	MINERAL-ISATION
	0	Plg. Formation Creek Attack			2m Cream clay, white silt, black Mn chips	
	5				white siltstone, white clay, pink-red qtz sandstone	
	10				12m	
	15				white clay red clay Mn chips	
	20				20m	
	25				white clay, red clay, Mn chips, fine grained qtz sandstone	
	30				30m	
	35				Red siltstone 32m	
	40				very fine grained red sandstone, cream siltstone, red clay	
	45				46m	
	50				Red clay, white siltstone, yellow fine grained sandstone Mn/Fe chips	
	55					
	60				62m	
	65				Pink clay white siltstone	
	70				70m	
	75				Pink clay, white siltstone, black Mn/Fe chips.	
	80				78m Massive Mn to rich Mn/Fe chips	Mn.
	85					
	90				91m	
	95				EOH. 91m	
	100					
	105					

AMG S3K
407166, 7934852 N.

Ended in Mn target
Mn thickness?.

HOLE NAME: HSP 006	HOLE TYPE: RC
DRILLED BY: Gaden Drilling	DATE DRILLED: 30/10/96
LOGGED BY: T. Mann	SCALE: 1:500

CORE SIZE	DEPTH (M)	FORMATION	QUALIFIERS	GRAIN SIZE (SILTSTONE 0 mm; SANDSTONE 1/16 vfg, 1/8 fg, 1/4 mg, 1/2 cg, 1 vcg; CONGLOMERATE 2 gran, 4 peb, 64 cob, 256 boulder)	DESCRIPTION	MINERAL-ISATION
	0–16m	Attack Creek Formation u/a.			white siltstone, yellow siltstone, very fine grained sandstone (grey-red), red clay, laminated chert, Mn chips.	
	16m–70m				Red clay, red siltstone, white siltstone, white-red, fine grained qtz sandstone. Mn chips.	
	70m–84m				Massive Mn & ferruginous chips (Mn/Fe)	Mn.
	84m–97m				Massive Mn.	Mn
	97m				EOH 97m.	

Depth scale: 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105

AMG 53K
607115E,
7934610N.

Ended in Mn target due to drilling conditions.

APPENDIX 8

DOWNHOLE GEOCHEMISTRY
HSD001, HSD002, HSD003,
HSP001 (WATER BORE), HSP002

BOOTU CREEK DRILL HOLE GEOCHEMISTRY RESULTS

Hole Name	Sample No	Sample type	From	To	Ag	As	Cd	Co	Cr	Cu	Fe	Mn	Mo	Ni	P	Pb	Tl	V	Zn
HSP001	EQ2853	PCRC	0.0	6.0	0.1	19.3	-0.1	9.3	218.0	65.0	9445.0	84.0	1.6	15.0	90.0	21.7	0.3	31.0	50.0
HSP001	EQ2854	PCRC	6.0	12.0	-0.1	14.6	-0.1	6.1	232.0	26.0	16644.0	75.0	3.1	18.0	96.0	14.6	0.2	39.0	27.0
HSP001	EQ2855	PCRC	12.0	18.0	0.1	20.4	-0.1	34.4	83.0	137.0	10536.0	508.0	1.4	19.0	168.0	98.0	0.8	56.0	87.0
HSP001	EQ2856	PCRC	18.0	24.0	0.1	28.9	0.1	29.5	124.0	176.0	23197.0	473.0	2.1	26.0	317.0	177.0	1.3	104.0	107.0
HSP001	EQ2857	PCRC	24.0	30.0	0.2	20.6	-0.1	16.7	104.0	86.0	12381.0	250.0	1.9	13.0	138.0	29.2	0.6	46.0	64.0
HSP001	EQ2858	PCRC	30.0	36.0	0.2	29.8	-0.1	28.2	99.0	74.0	14463.0	320.0	1.1	15.0	183.0	36.7	0.9	57.0	90.0
HSP001	EQ2859	PCRC	36.0	42.0	0.1	25.7	0.1	64.3	109.0	113.0	19999.0	2242.0	1.3	28.0	531.0	38.4	1.8	67.0	200.0
HSP001	EQ2860	PCRC	42.0	44.0	0.2	33.0	0.7	239.0	95.0	193.0	89632.0	15418.0	3.1	66.0	651.0	45.2	3.4	102.0	335.0
HSD001	EQ2862	DRL-CHP	0.0	6.0	0.2	26.2	-0.1	16.8	121.0	90.0	9732.0	662.0	1.3	15.0	120.0	24.9	0.5	33.0	37.0
HSD001	EQ2864	DRL-CHP	6.0	12.0	0.2	28.7	-0.1	16.6	136.0	95.0	9067.0	602.0	1.1	14.0	129.0	20.4	0.5	31.0	36.0
HSD001	EQ2865	DRL-CHP	12.0	18.0	0.2	40.3	0.1	26.3	102.0	112.0	10200.0	805.0	1.2	15.0	232.0	22.4	0.6	42.0	69.0
HSD001	EQ2866	DRL-CHP	18.0	24.0	0.1	27.0	-0.1	48.2	107.0	196.0	16706.0	892.0	0.8	27.0	162.0	24.8	1.1	74.0	174.0
HSD001	EQ2867	DRL-CHP	24.0	30.0	0.1	22.6	0.1	127.0	106.0	261.0	18366.0	2368.0	1.2	38.0	274.0	29.8	1.5	77.0	199.0
HSD001	EQ2868	DRL-CHP	30.0	36.0	0.2	28.1	0.1	77.8	192.0	484.0	22221.0	1196.0	2.5	32.0	252.0	61.4	0.7	96.0	112.0
HSD001	EQ2869	DRL-CHP	36.0	42.0	0.2	29.0	0.3	222.0	92.0	565.0	67686.0	7717.0	3.1	59.0	351.0	87.4	1.6	92.0	178.0
HSD001	EQ2870	DRL-CHP	42.0	48.0	0.2	25.4	0.2	159.0	94.0	226.0	62982.0	9097.0	3.5	44.0	255.0	70.7	1.2	84.0	101.0
HSD001	EQ2871	DRL-CHP	48.0	54.0	2.0	18.2	0.2	118.0	95.0	92.0	55403.0	10989.0	2.9	44.0	505.0	50.0	1.4	83.0	141.0
HSD001	EQ2872	DRL-CHP	54.0	60.0	0.4	12.9	0.5	155.0	137.0	48.0	44868.0	17389.0	1.5	50.0	304.0	16.5	1.4	86.0	270.0
HSD001	EQ2873	DRL-CHP	60.0	66.0	0.1	12.5	0.1	107.0	126.0	119.0	15390.0	2340.0	1.7	33.0	187.0	17.0	1.4	59.0	136.0
HSD001	EQ2874	DRL-CHP	66.0	72.0	-0.1	19.3	0.1	60.3	204.0	194.0	26575.0	2319.0	2.0	27.0	171.0	21.9	0.9	55.0	113.0
HSD001	EQ2875	DRL-CHP	72.0	78.0	0.1	27.6	0.2	307.0	132.0	202.0	42413.0	83160.0	3.2	44.0	274.0	37.0	1.5	55.0	246.0
HSD001	EQ2876	DRL-CHP	78.0	84.0	0.1	27.8	0.2	305.0	171.0	196.0	43492.0	81090.0	2.9	45.0	262.0	36.1	1.3	53.0	240.0
HSD001	EQ2878	DRL-CHP	84.0	90.0	0.1	19.9	0.1	637.0	76.0	1440.0	62310.0	283500.0	2.7	40.0	373.0	534.0	0.8	52.0	164.0
HSD001	EQ2879	DRL-CHP	90.0	93.0	0.1	34.7	0.1	326.0	62.0	323.0	72051.0	116100.0	2.9	74.0	803.0	71.8	1.5	69.0	200.0
HSD001	EQ2894	DCS	93.0	99.0	-0.1	7.1	-0.1	113.0	34.0	274.0	30636.0	21780.0	1.0	19.0	359.0	44.9	0.7	40.0	24.0
HSD001	EQ2895	DCS	99.0	105.0	0.3	3.7	-0.1	52.4	49.0	1469.0	20868.0	3699.0	1.0	24.0	451.0	16.4	0.9	51.0	33.0
HSD001	EQ2896	DCS	105.0	111.0	0.2	6.6	-0.1	69.4	66.0	1078.0	26467.0	2979.0	3.5	30.0	468.0	27.0	1.3	87.0	40.0
HSD001	EQ2897	DCS	111.0	117.0	0.8	47.2	0.1	115.0	49.0	1350.0	33488.0	4302.0	8.6	31.0	540.0	629.0	4.0	77.0	30.0
HSD001	EQ2898	DCS	117.0	123.0	0.8	57.1	0.1	115.0	43.0	914.0	27410.0	4059.0	16.9	29.0	741.0	1155.0	4.3	72.0	27.0

												Fe	Mn		P				
HSD001	EQ2899	DCS	123.0	129.0	1.3	55.2	0.6	144.0	35.0	1248.0	28491.0	5396.0	13.6	33.0	699.0	1925.0	6.4	140.0	77.0
HSD001	EQ2900	DCS	129.0	135.0	0.1	19.0	0.2	56.1	131.0	202.0	162934.0	1321.0	2.8	55.0	350.0	50.7	0.4	38.0	158.0
HSD001	EQ2901	DCS	135.0	141.0	-0.1	4.2	-0.1	31.9	23.0	56.0	20697.0	4803.0	0.9	12.0	339.0	19.7	0.4	30.0	23.0
HSD001	EQ2902	DCS	141.0	147.0	0.1	4.8	-0.1	37.0	17.0	196.0	19105.0	7766.0	1.5	12.0	300.0	11.8	0.3	33.0	22.0
HSD001	EQ2903	DCS	147.0	149.0	0.1	13.2	-0.1	48.3	45.0	46.0	34781.0	5966.0	2.8	26.0	587.0	28.5	0.7	61.0	43.0
HSD002	EQ2880	DRL-CHP	0.0	6.0	0.1	29.8	-0.1	16.4	120.0	188.0	25974.0	1660.0	2.2	15.0	231.0	108.0	0.5	64.0	34.0
HSD002	EQ2881	DRL-CHP	6.0	12.0	0.2	39.9	-0.1	21.8	112.0	209.0	37278.0	855.0	1.4	14.0	350.0	148.0	0.9	59.0	79.0
HSD002	EQ2882	DRL-CHP	12.0	18.0	0.1	20.6	-0.1	34.0	115.0	253.0	35851.0	862.0	1.8	22.0	313.0	145.0	1.4	76.0	134.0
HSD002	EQ2884	DRL-CHP	18.0	24.0	0.1	20.7	0.1	76.7	124.0	666.0	39843.0	2023.0	3.3	24.0	426.0	388.0	1.4	70.0	91.0
HSD002	EQ2885	DRL-CHP	24.0	30.0	-0.1	28.0	0.1	110.0	91.0	1154.0	65371.0	7166.0	4.0	30.0	557.0	534.0	1.6	82.0	126.0
HSD002	EQ2886	DRL-CHP	30.0	36.0	-0.1	23.7	0.2	128.0	119.0	837.0	81257.0	16020.0	4.2	41.0	603.0	412.0	1.4	88.0	198.0
HSD002	EQ2887	DRL-CHP	36.0	42.0	-0.1	10.5	0.2	102.0	129.0	430.0	42835.0	12212.0	1.9	36.0	361.0	173.0	1.1	68.0	185.0
HSD002	EQ2889	DRL-CHP	42.0	48.0	-0.1	11.2	0.1	142.0	153.0	281.0	34859.0	16380.0	2.6	32.0	482.0	436.0	1.0	49.0	149.0
HSD002	EQ2890	DRL-CHP	48.0	54.0	0.2	82.2	0.1	392.0	150.0	926.0	21226.0	90000.0	2.3	28.0	177.0	411.0	1.7	30.0	64.0
HSD002	EQ2891	DRL-CHP	54.0	60.0	0.3	17.2	-0.1	436.0	137.0	865.0	17672.0	134100.0	2.9	25.0	165.0	697.0	1.9	28.0	74.0
HSD002	EQ2893	DRL-CHP	60.0	66.0	0.2	25.7	0.1	522.0	62.0	1230.0	15684.0	193500.0	3.7	24.0	140.0	5205.0	1.5	35.0	54.0
HSD002	EQ2929	DCS	63.0	69.0	0.1	26.9	0.2	856.0	42.0	1637.0	67650.0	137700.0	3.7	29.0	850.0	3326.0	1.6	46.0	104.0
HSD002	EQ2930	DCS	69.0	75.0	0.1	3.7	0.1	76.8	37.0	669.0	18587.0	5327.0	0.6	15.0	419.0	19.7	1.1	49.0	47.0
HSD002	EQ2931	DCS	75.0	81.0	0.6	29.7	-0.1	73.1	40.0	1699.0	17534.0	3250.0	2.6	24.0	448.0	656.0	3.0	73.0	25.0
HSD002	EQ2932	DCS	81.0	87.0	0.8	48.4	0.4	61.6	37.0	652.0	21395.0	3098.0	13.4	26.0	639.0	1416.0	4.3	68.0	50.0
HSD002	EQ2933	DCS	87.0	93.0	1.1	74.7	0.3	70.9	26.0	1429.0	17922.0	4530.0	18.9	26.0	675.0	1986.0	6.1	100.0	45.0
HSD002	EQ2934	DCS	93.0	99.0	0.2	21.2	-0.1	52.3	34.0	522.0	35704.0	6102.0	303.0	21.0	485.0	87.0	0.7	52.0	38.0
HSD002	EQ2935	DCS	99.0	105.0	0.1	12.6	0.1	35.7	13.0	228.0	12110.0	5546.0	1.8	12.0	405.0	24.1	0.4	32.0	23.0
HSD002	EQ2936	DCS	105.0	111.0	-0.1	9.4	-0.1	36.4	15.0	42.0	21653.0	8433.0	2.3	13.0	324.0	11.5	0.4	37.0	23.0
HSD002	EQ2937	DCS	111.0	117.0	0.1	30.1	-0.1	52.2	42.0	40.0	42691.0	4706.0	3.6	26.0	512.0	27.0	0.8	64.0	41.0
HSD002	EQ2938	DCS	117.0	123.0	0.1	5.1	-0.1	46.6	35.0	26.0	13343.0	6692.0	0.6	12.0	276.0	4.6	0.4	34.0	20.0
HSD002	EQ2939	DCS	123.0	129.0	0.1	11.4	-0.1	10.6	31.0	40.0	6890.0	104.0	4.4	5.0	46.0	3.2	0.1	8.0	7.0
HSD002	EQ2940	DCS	129.0	135.0	0.1	20.3	0.1	27.5	45.0	56.0	37568.0	3944.0	1.3	16.0	1148.0	9.6	0.4	60.0	39.0
HSD002	EQ2941	DCS	135.0	141.0	0.1	10.5	-0.1	15.6	12.0	156.0	9137.0	6530.0	0.9	7.0	242.0	7.9	0.3	25.0	14.0
HSD002	EQ2942	DCS	141.0	147.0	0.2	3.6	-0.1	9.5	17.0	66.0	11269.0	4158.0	1.5	7.0	223.0	20.9	0.4	21.0	13.0
HSD002	EQ2943	DCS	147.0	153.0	0.1	6.1	0.1	8.4	16.0	74.0	17110.0	3061.0	1.1	7.0	390.0	24.4	0.5	26.0	19.0
HSD002	EQ2944	DCS	153.0	159.0	0.1	5.6	-0.1	10.3	31.0	21.0	17054.0	1511.0	0.7	16.0	517.0	14.6	0.6	43.0	19.0

HSD002	EQ2945	DCS	159.0	165.0	0.1	6.0	-0.1	10.1	30.0	20.0	17470.0	923.0	0.5	15.0	485.0	20.9	0.8	52.0	23.0
HSD002	EQ2946	DCS	165.0	171.0	0.1	9.5	0.1	12.0	36.0	33.0	17932.0	827.0	0.6	20.0	599.0	71.4	0.9	67.0	58.0
HSD002	EQ2947	DCS	171.0	177.0	0.1	6.4	-0.1	9.2	27.0	14.0	15966.0	855.0	0.6	13.0	534.0	13.2	0.6	44.0	24.0
HSD002	EQ2948	DCS	177.0	183.0	0.2	8.6	0.3	9.8	30.0	20.0	14930.0	1042.0	0.5	15.0	635.0	79.4	0.6	49.0	107.0
HSD002	EQ2949	DCS	183.0	189.0	0.2	3.7	0.1	7.7	8.0	28.0	7006.0	2572.0	0.5	5.0	414.0	55.4	0.2	20.0	21.0
HSD002	EQ2950	DCS	189.0	195.0	0.1	0.7	-0.1	7.3	5.0	23.0	6038.0	3199.0	0.1	4.0	298.0	1.3	0.1	13.0	14.0
HSD002	EQ2951	DCS	195.0	201.0	0.1	1.9	-0.1	6.3	-5.0	78.0	5416.0	2602.0	0.2	3.0	243.0	2.6	0.1	13.0	7.0
HSD002	EQ2952	DCS	201.0	207.0	0.3	12.6	0.1	6.6	9.0	56.0	6633.0	2788.0	0.8	5.0	359.0	140.0	0.2	16.0	13.0
HSD002	EQ2953	DCS	207.0	213.0	0.3	4.7	-0.1	7.1	10.0	194.0	7146.0	2518.0	0.4	5.0	342.0	20.3	0.2	21.0	8.0

WILLIERAY DRILL HOLE GEOCHEMISTRY RESULTS

Hole Name	Sample No	Sample type	From	To	Ag	As	Cd	Co	Cr	Cu	Fe	Mn	Mo	Ni	P	Pb	Tl	V	Zn
HSD003	EQ2905	DRL-CHP	0.0	6.0	0.1	12.0	-0.1	9.9	142.0	30.0	36933.0	599.0	1.3	17.0	86.0	31.5	0.3	95.0	19.0
HSD003	EQ2906	DRL-CHP	6.0	12.0	0.1	14.8	-0.1	9.7	97.0	17.0	34534.0	353.0	0.8	17.0	94.0	20.1	0.3	72.0	18.0
HSD003	EQ2907	DRL-CHP	12.0	18.0	-0.1	5.5	-0.1	4.5	93.0	14.0	14070.0	164.0	0.7	16.0	81.0	11.6	0.3	38.0	15.0
HSD003	EQ2908	DRL-CHP	18.0	24.0	-0.1	4.6	-0.1	4.3	78.0	12.0	18814.0	132.0	0.7	16.0	79.0	10.0	0.3	45.0	15.0
HSD003	EQ2909	DRL-CHP	24.0	30.0	0.1	4.9	-0.1	5.2	93.0	11.0	20920.0	168.0	0.6	17.0	85.0	9.0	0.4	44.0	16.0
HSD003	EQ2910	DRL-CHP	30.0	36.0	-0.1	4.8	-0.1	3.5	59.0	15.0	18216.0	129.0	0.7	13.0	151.0	16.2	0.3	31.0	12.0
HSD003	EQ2911	DRL-CHP	36.0	42.0	-0.1	3.9	-0.1	3.5	34.0	23.0	23411.0	326.0	0.8	9.0	90.0	17.5	0.2	25.0	9.0
HSD003	EQ2912	DRL-CHP	42.0	48.0	-0.1	3.3	-0.1	2.6	95.0	26.0	14627.0	236.0	1.2	10.0	31.0	9.9	0.1	14.0	6.0
HSD003	EQ2913	DRL-CHP	48.0	54.0	0.1	3.1	-0.1	2.2	182.0	30.0	11986.0	136.0	1.3	13.0	43.0	8.7	0.2	19.0	8.0
HSD003	EQ2914	DRL-CHP	54.0	60.0	0.1	14.7	0.1	12.1	112.0	93.0	49791.0	164.0	1.9	28.0	182.0	21.5	0.2	43.0	58.0
HSD003	EQ2915	DRL-CHP	60.0	66.0	0.1	12.8	0.1	33.0	119.0	164.0	134166.0	763.0	1.7	37.0	323.0	16.0	0.2	39.0	123.0
HSD003	EQ2916	DRL-CHP	66.0	72.0	0.1	15.6	-0.1	74.2	38.0	457.0	35479.0	4403.0	4.2	21.0	479.0	43.5	0.6	53.0	35.0
HSD003	EQ2917	DRL-CHP	72.0	78.0	0.1	15.8	0.1	34.1	82.0	100.0	83884.0	1177.0	1.9	40.0	274.0	12.6	0.3	37.0	81.0
HSD003	EQ2918	DRL-CHP	78.0	84.0	0.1	10.6	-0.1	8.9	188.0	67.0	29382.0	457.0	1.9	22.0	110.0	10.1	0.1	14.0	19.0
HSD003	EQ2919	DRL-CHP	84.0	90.0	0.1	11.9	0.1	13.5	227.0	92.0	45206.0	546.0	2.8	26.0	192.0	8.9	0.2	22.0	32.0
HSD003	EQ2920	DRL-CHP	90.0	96.0	0.1	9.4	-0.1	12.3	269.0	105.0	36908.0	373.0	2.0	21.0	132.0	8.7	0.1	18.0	20.0
HSD003	EQ2921	DRL-CHP	96.0	102.0	0.1	14.6	0.1	25.4	211.0	300.0	96116.0	827.0	3.6	36.0	337.0	11.0	0.1	29.0	64.0
HSD003	EQ2922	DRL-CHP	102.0	108.0	0.2	5.7	0.1	18.5	174.0	100.0	24649.0	1679.0	2.2	25.0	114.0	6.5	0.2	12.0	22.0
HSD003	EQ2923	DRL-CHP	108.0	114.0	0.2	10.6	1.4	120.0	117.0	220.0	34118.0	30420.0	2.2	39.0	442.0	12.7	4.6	41.0	75.0
HSD003	EQ2924	DRL-CHP	114.0	115.5	0.3	13.0	0.3	41.7	108.0	185.0	41265.0	13500.0	3.1	25.0	358.0	12.6	0.7	35.0	49.0
HSD003	EQ2958	DCS	115.5	121.5	0.1	5.8	0.1	11.7	15.0	39.0	13070.0	5951.0	1.8	6.0	270.0	8.0	0.2	12.0	14.0
HSD003	EQ2959	DCS	121.5	127.5	0.2	7.1	0.1	16.4	89.0	54.0	14774.0	1891.0	1.6	11.0	232.0	8.4	0.2	19.0	18.0
HSD003	EQ2960	DCS	127.5	133.5	0.1	7.7	0.1	16.0	43.0	44.0	22111.0	2705.0	2.1	14.0	542.0	25.6	0.5	43.0	27.0
HSD003	EQ2961	DCS	133.5	139.5	0.2	9.6	0.1	14.2	90.0	91.0	19531.0	2438.0	1.1	16.0	509.0	10.0	0.5	40.0	30.0
HSD003	EQ2962	DCS	139.5	145.5	0.2	8.4	0.1	15.5	47.0	92.0	23428.0	400.0	1.6	24.0	611.0	9.9	0.6	49.0	44.0
HSD003	EQ2963	DCS	145.5	150.5	0.2	10.5	-0.1	16.9	110.0	66.0	22806.0	613.0	1.1	29.0	619.0	12.0	0.6	50.0	50.0
HSP002	EV8000	PCRC	0.0	6.0	2.7	11.4	-0.1	4.7	116.0	22.0	22014.0	91.0	1.7	19.0	93.0	35.7	0.2	60.0	20.0
HSP002	EV8001	PCRC	6.0	12.0	0.7	2.6	-0.1	2.2	123.0	16.0	9439.0	49.0	1.2	15.0	53.0	15.4	0.2	56.0	11.0
HSP002	EV8002	PCRC	12.0	18.0	0.2	2.3	-0.1	1.8	81.0	10.0	8505.0	34.0	0.8	10.0	63.0	14.1	0.3	70.0	11.0

HSP002	EV8003	PCRC	18.0	24.0	0.1	3.6	-0.1	1.5	66.0	10.0	7433.0	38.0	0.5	8.0	52.0	14.1	0.3	53.0	12.0
HSP002	EV8004	PCRC	24.0	30.0	0.1	2.7	-0.1	1.8	81.0	11.0	10748.0	35.0	0.4	8.0	85.0	14.9	0.3	103.0	11.0
HSP002	EV8005	PCRC	30.0	36.0	0.2	3.2	-0.1	2.5	90.0	14.0	9847.0	37.0	0.5	10.0	103.0	12.1	0.3	68.0	13.0
HSP002	EV8006	PCRC	36.0	42.0	0.2	7.9	-0.1	9.1	73.0	37.0	25798.0	332.0	0.8	16.0	179.0	9.7	0.4	62.0	31.0
HSP002	EV8007	PCRC	42.0	48.0	0.1	10.8	0.3	57.0	80.0	138.0	110280.0	3055.0	1.2	47.0	398.0	13.4	1.0	81.0	61.0
HSP002	EV8008	PCRC	48.0	54.0	0.1	9.6	0.4	54.0	102.0	80.0	89655.0	6170.0	1.3	41.0	308.0	12.3	1.4	59.0	59.0
HSP002	EV8009	PCRC	54.0	60.0	0.2	8.9	0.6	36.5	99.0	50.0	66960.0	6292.0	1.5	31.0	286.0	14.5	1.2	44.0	48.0
HSP002	EV8010	PCRC	60.0	66.0	0.1	8.1	0.2	31.3	129.0	48.0	79627.0	4761.0	1.4	31.0	251.0	13.8	0.9	54.0	48.0
HSP002	EV8011	PCRC	66.0	72.0	0.2	6.6	0.2	14.0	167.0	32.0	71011.0	2180.0	2.9	34.0	201.0	9.5	0.5	38.0	31.0
HSP002	EV8012	PCRC	72.0	78.0	0.1	4.6	0.1	13.1	91.0	35.0	30064.0	1613.0	1.6	21.0	134.0	14.9	0.5	46.0	26.0
HSP002	EV8013	PCRC	78.0	84.0	0.1	1.8	-0.1	7.9	73.0	36.0	19157.0	227.0	1.3	22.0	137.0	6.9	0.6	47.0	33.0
HSP002	EV8014	PCRC	84.0	90.0	0.1	1.9	-0.1	13.2	64.0	17.0	23174.0	213.0	0.7	26.0	165.0	8.1	0.6	46.0	38.0
HSP002	EV8015	PCRC	90.0	96.0	0.2	2.2	-0.1	14.6	65.0	27.0	26428.0	484.0	0.8	22.0	203.0	9.9	0.6	51.0	36.0
HSP002	EV8016	PCRC	96.0	102.0	0.5	5.2	0.1	13.5	81.0	95.0	21938.0	111.0	0.8	21.0	215.0	13.5	0.6	71.0	31.0
HSP002	EV8017	PCRC	102.0	108.0	0.4	8.6	0.1	27.9	148.0	308.0	36673.0	4843.0	2.0	26.0	331.0	32.9	0.4	50.0	30.0
HSP002	EV8018	PCRC	108.0	114.0	0.4	8.6	0.1	22.5	133.0	161.0	36039.0	2818.0	1.9	25.0	659.0	15.5	0.5	66.0	32.0
HSP002	EV8019	PCRC	114.0	117.0	0.4	5.9	0.1	17.1	152.0	232.0	31435.0	4330.0	3.4	27.0	771.0	14.5	0.5	53.0	33.0

APPENDIX 9

DOWNHOLE GEOCHEMISTRY
HSP003-6
GEMCO AND ASSAYCORP DATA

Drill hole geochemistry
HSP 003-6

Hole name	Sample No	Sample type	Depth-from	Depth-to	Ag	As	Cd	Co	Cr	Cu	Fe	Mn	Mo	Ni	P	Pb	Tl	V	Zn
HSP003	DU9125	PCRC	0.0	6.0	0.1	0.0	0.1	71.0	58.0	415.0	15200.0	1780.0	0.0	23.0	83.0	47.0	0.0	0.0	55.0
HSP003	DU9126	PCRC	6.0	12.0	0.0	0.0	0.1	115.0	65.0	550.0	44100.0	3330.0	0.0	34.0	110.0	71.0	0.0	0.0	74.0
HSP003	DU9127	PCRC	12.0	18.0	0.1	0.0	0.2	89.0	64.0	435.0	58600.0	3300.0	0.0	37.0	156.0	83.0	0.0	0.0	88.0
HSP003	DU9128	PCRC	18.0	24.0	0.1	0.0	0.1	47.0	75.0	208.0	24600.0	1020.0	0.0	22.0	170.0	18.0	0.0	0.0	65.0
HSP003	DU9129	PCRC	24.0	30.0	0.0	0.0	-0.1	24.0	68.0	198.0	14100.0	500.0	0.0	15.0	221.0	20.0	0.0	0.0	49.0
HSP003	DU9130	PCRC	30.0	36.0	0.0	0.0	-0.1	29.0	51.0	320.0	11000.0	465.0	0.0	15.0	203.0	25.0	0.0	0.0	66.0
HSP003	DU9131	PCRC	36.0	42.0	0.1	0.0	-0.1	15.0	72.0	146.0	4600.0	142.0	0.0	10.0	74.0	30.0	0.0	0.0	27.0
HSP003	DU9132	PCRC	42.0	48.0	0.3	0.0	0.1	211.0	50.0	440.0	7620.0	94400.0	0.0	22.0	144.0	112.0	0.0	0.0	72.0
HSP003	DU9133	PCRC	48.0	54.0	0.3	0.0	0.2	680.0	32.0	1340.0	37700.0	270000.0	0.0	31.0	97.0	270.0	0.0	0.0	140.0
HSP003	DU9134	PCRC	54.0	60.0	0.1	0.0	0.2	850.0	40.0	1100.0	78700.0	301000.0	0.0	52.0	500.0	340.0	0.0	0.0	192.0
HSP003	DU9135	PCRC	60.0	66.0	0.4	0.0	-0.1	92.0	36.0	1650.0	22900.0	20700.0	0.0	17.0	410.0	11.0	0.0	0.0	28.0
HSP003	DU9136	PCRC	66.0	72.0	0.0	0.0	-0.1	54.0	55.0	485.0	24800.0	4580.0	0.0	25.0	495.0	14.0	0.0	0.0	41.0
HSP003	DU9137	PCRC	72.0	78.0	0.8	0.0	0.1	174.0	58.0	2530.0	32900.0	4680.0	0.0	36.0	585.0	255.0	0.0	0.0	35.0
HSP003	DU9138	PCRC	78.0	84.0	0.6	0.0	0.2	119.0	47.0	1610.0	69600.0	11800.0	0.0	30.0	570.0	565.0	0.0	0.0	28.0
HSP003	DU9139	PCRC	84.0	90.0	1.0	0.0	0.2	103.0	48.0	1210.0	38200.0	5250.0	0.0	35.0	890.0	3140.0	0.0	0.0	48.0
HSP003	DU9140	PCRC	90.0	96.0	0.3	0.0	0.1	87.0	32.0	1020.0	27800.0	8020.0	0.0	19.0	445.0	555.0	0.0	0.0	27.0
HSP003	DU9141	PCRC	96.0	97.0	0.2	0.0	0.1	74.0	34.0	236.0	36800.0	22500.0	0.0	18.0	540.0	102.0	0.0	0.0	40.0
HSP003	**ES1859D**	**PCRC**	**46.0**	**48.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**17000.0**	**213000.0**	**0.0**	**0.0**	**260.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP003	**ES1860D**	**PCRC**	**48.0**	**50.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**32000.0**	**220000.0**	**0.0**	**0.0**	**260.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP003	**ES1861D**	**PCRC**	**50.0**	**52.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**48000.0**	**196000.0**	**0.0**	**0.0**	**280.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP003	**ES1862D**	**PCRC**	**52.0**	**54.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**44000.0**	**279000.0**	**0.0**	**0.0**	**240.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP003	**ES1863D**	**PCRC**	**54.0**	**56.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**105000.0**	**447000.0**	**0.0**	**0.0**	**650.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP003	**ES1864D**	**PCRC**	**56.0**	**58.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**100000.0**	**220000.0**	**0.0**	**0.0**	**800.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP003	**ES1859A**	**PCRC**	**46.0**	**48.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**18000.0**	**347000.0**	**0.0**	**0.0**	**380.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP003	**ES1860A**	**PCRC**	**48.0**	**50.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**31000.0**	**304000.0**	**0.0**	**0.0**	**250.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP003	**ES1861A**	**PCRC**	**50.0**	**52.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**42000.0**	**306000.0**	**0.0**	**0.0**	**290.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP003	**ES1862A**	**PCRC**	**52.0**	**54.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**42000.0**	**368000.0**	**0.0**	**0.0**	**280.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP003	**ES1863A**	**PCRC**	**54.0**	**56.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**90000.0**	**476000.0**	**0.0**	**0.0**	**600.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP003	**ES1864A**	**PCRC**	**56.0**	**58.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**68000.0**	**382000.0**	**0.0**	**0.0**	**650.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP004	DU9142	PCRC	0.0	6.0	0.0	0.0	-0.1	38.0	69.0	182.0	36100.0	2200.0	0.0	26.0	170.0	100.0	0.0	0.0	41.0
HSP004	DU9143	PCRC	6.0	12.0	0.0	0.0	-0.1	17.0	55.0	148.0	17000.0	355.0	0.0	19.0	137.0	14.0	0.0	0.0	39.0
HSP004	DU9144	PCRC	12.0	18.0	0.0	0.0	-0.1	14.0	47.0	126.0	12000.0	280.0	0.0	15.0	140.0	14.0	0.0	0.0	40.0
HSP004	DU9146	PCRC	18.0	24.0	0.0	0.0	-0.1	16.0	48.0	125.0	12100.0	345.0	0.0	15.0	143.0	20.0	0.0	0.0	50.0
HSP004	DU9147	PCRC	24.0	30.0	0.0	0.0	-0.1	21.0	63.0	106.0	13700.0	320.0	0.0	18.0	153.0	17.0	0.0	0.0	59.0
HSP004	DU9148	PCRC	30.0	36.0	0.1	0.0	0.1	59.0	53.0	70.0	18600.0	3030.0	0.0	29.0	4840.0	13.0	0.0	0.0	93.0
HSP004	DU9149	PCRC	36.0	42.0	0.1	0.0	-0.1	47.0	51.0	41.0	31300.0	5560.0	0.0	22.0	730.0	18.0	0.0	0.0	84.0
HSP004	DU9150	PCRC	42.0	48.0	0.0	0.0	-0.1	58.0	94.0	79.0	37400.0	2980.0	0.0	31.0	650.0	25.0	0.0	0.0	190.0
HSP004	DU9151	PCRC	48.0	54.0	0.0	0.0	-0.1	82.0	70.0	142.0	33400.0	4580.0	0.0	31.0	670.0	26.0	0.0	0.0	160.0
HSP004	DU9152	PCRC	54.0	60.0	0.0	0.0	0.1	174.0	105.0	360.0	54700.0	9980.0	0.0	45.0	620.0	55.0	0.0	0.0	141.0
HSP004	DU9153	PCRC	60.0	66.0	0.0	0.0	-0.1	153.0	84.0	315.0	72400.0	5630.0	0.0	40.0	675.0	82.0	0.0	0.0	93.0
HSP004	DU9154	PCRC	66.0	72.0	0.0	0.0	-0.1	119.0	70.0	184.0	74700.0	8590.0	0.0	38.0	825.0	85.0	0.0	0.0	76.0
HSP004	DU9155	PCRC	72.0	78.0	0.0	0.0	0.1	129.0	137.0	107.0	115000.0	29200.0	0.0	37.0	1950.0	50.0	0.0	0.0	80.0
HSP004	DU9156	PCRC	78.0	84.0	0.0	0.0	0.1	121.0	74.0	124.0	49000.0	28400.0	0.0	30.0	630.0	27.0	0.0	0.0	82.0
HSP004	DU9157	PCRC	84.0	90.0	0.0	0.0	-0.1	57.0	82.0	50.0	30500.0	11200.0	0.0	19.0	400.0	17.0	0.0	0.0	50.0

Drill hole geochemistry
HSP 003-6

Hole name	Sample No	Sample type	Depth-from	Depth-to	Ag	As	Cd	Co	Cr	Cu	Fe	Mn	Mo	Ni	P	Pb	Tl	V	Zn
HSP004	DU9158	PCRC	90.0	96.0	0.1	0.0	-0.1	45.0	58.0	71.0	21800.0	6840.0	0.0	12.0	320.0	16.0	0.0	0.0	39.0
HSP004	DU9159	PCRC	96.0	97.0	0.1	0.0	-0.1	70.0	65.0	115.0	28600.0	11200.0	0.0	16.0	335.0	27.0	0.0	0.0	41.0
HSP005	DU9160	PCRC	0.0	6.0	0.1	0.0	-0.1	36.0	62.0	176.0	12600.0	1230.0	0.0	17.0	130.0	32.0	0.0	0.0	84.0
HSP005	DU9161	PCRC	6.0	12.0	0.0	0.0	-0.1	44.0	62.0	229.0	13400.0	610.0	0.0	24.0	183.0	24.0	0.0	0.0	128.0
HSP005	DU9162	PCRC	12.0	18.0	0.0	0.0	-0.1	27.0	58.0	201.0	13600.0	260.0	0.0	22.0	143.0	10.0	0.0	0.0	117.0
HSP005	DU9163	PCRC	18.0	24.0	0.0	0.0	-0.1	47.0	75.0	242.0	14700.0	455.0	0.0	24.0	152.0	14.0	0.0	0.0	142.0
HSP005	DU9164	PCRC	24.0	30.0	0.0	0.0	0.1	68.0	82.0	270.0	13400.0	1100.0	0.0	24.0	139.0	30.0	0.0	0.0	107.0
HSP005	DU9165	PCRC	30.0	36.0	0.0	0.0	-0.1	65.0	74.0	355.0	15800.0	655.0	0.0	28.0	138.0	38.0	0.0	0.0	93.0
HSP005	DU9166	PCRC	36.0	42.0	0.0	0.0	0.1	150.0	84.0	615.0	44100.0	3880.0	0.0	40.0	206.0	79.0	0.0	0.0	126.0
HSP005	DU9167	PCRC	42.0	48.0	0.0	0.0	0.1	110.0	79.0	325.0	80200.0	2540.0	0.0	40.0	204.0	75.0	0.0	0.0	124.0
HSP005	DU9168	PCRC	48.0	54.0	0.1	0.0	0.1	101.0	71.0	207.0	109000.0	1980.0	0.0	49.0	255.0	61.0	0.0	0.0	120.0
HSP005	DU9169	PCRC	54.0	60.0	0.2	0.0	0.1	86.0	71.0	122.0	88400.0	2430.0	0.0	50.0	265.0	52.0	0.0	0.0	135.0
HSP005	DU9170	PCRC	60.0	66.0	0.0	0.0	-0.1	85.0	88.0	52.0	44900.0	2290.0	0.0	36.0	192.0	23.0	0.0	0.0	140.0
HSP005	DU9173	PCRC	72.0	78.0	0.0	0.0	-0.1	86.0	94.0	59.0	23100.0	945.0	0.0	30.0	145.0	23.0	0.0	0.0	83.0
HSP005	DU9174	PCRC	78.0	84.0	0.3	0.0	0.1	295.0	48.0	405.0	54800.0	105000.0	0.0	25.0	183.0	82.0	0.0	0.0	85.0
HSP005	DU9175	PCRC	84.0	90.0	0.3	0.0	0.3	580.0	58.0	1270.0	57800.0	213000.0	0.0	38.0	69.0	193.0	0.0	0.0	106.0
HSP005	**ES1865D**	**PCRC**	**76.0**	**78.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**41000.0**	**7000.0**	**0.0**	**0.0**	**270.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP005	**ES1866D**	**PCRC**	**78.0**	**80.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**61000.0**	**104000.0**	**0.0**	**0.0**	**300.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP005	**ES1867D**	**PCRC**	**80.0**	**82.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**61000.0**	**175000.0**	**0.0**	**0.0**	**280.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP005	**ES1868D**	**PCRC**	**82.0**	**84.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**31000.0**	**98000.0**	**0.0**	**0.0**	**170.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP005	**ES1869D**	**PCRC**	**84.0**	**86.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**74000.0**	**197000.0**	**0.0**	**0.0**	**260.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP005	**ES1870D**	**PCRC**	**86.0**	**88.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**48000.0**	**282000.0**	**0.0**	**0.0**	**240.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP005	**ES1871D**	**PCRC**	**88.0**	**90.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**80000.0**	**222000.0**	**0.0**	**0.0**	**180.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP005	**ES1865A**	**PCRC**	**76.0**	**78.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**152000.0**	**50000.0**	**0.0**	**0.0**	**540.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP005	**ES1866A**	**PCRC**	**78.0**	**80.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**66000.0**	**162000.0**	**0.0**	**0.0**	**310.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP005	**ES1867A**	**PCRC**	**80.0**	**82.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**51000.0**	**272000.0**	**0.0**	**0.0**	**250.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP005	**ES1868A**	**PCRC**	**82.0**	**84.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**31000.0**	**210000.0**	**0.0**	**0.0**	**180.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP005	**ES1869A**	**PCRC**	**84.0**	**86.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**71000.0**	**251000.0**	**0.0**	**0.0**	**320.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP005	**ES1870A**	**PCRC**	**86.0**	**88.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**45000.0**	**294000.0**	**0.0**	**0.0**	**230.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP005	**ES1871A**	**PCRC**	**88.0**	**90.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**72000.0**	**290000.0**	**0.0**	**0.0**	**190.0**	**0.0**	**0.0**	**0.0**	**0.0**
HSP006	DU9176	PCRC	0.0	6.0	0.2	0.0	-0.1	20.0	66.0	143.0	19200.0	485.0	0.0	22.0	201.0	33.0	0.0	0.0	55.0
HSP006	DU9177	PCRC	6.0	12.0	0.2	0.0	-0.1	30.0	92.0	189.0	26500.0	510.0	0.0	24.0	223.0	23.0	0.0	0.0	87.0
HSP006	DU9178	PCRC	12.0	18.0	0.0	0.0	0.1	65.0	86.0	131.0	43100.0	2790.0	0.0	28.0	175.0	24.0	0.0	0.0	169.0
HSP006	DU9179	PCRC	18.0	24.0	0.0	0.0	-0.1	50.0	75.0	202.0	41200.0	655.0	0.0	29.0	265.0	25.0	0.0	0.0	177.0
HSP006	DU9180	PCRC	24.0	30.0	0.0	0.0	0.1	77.0	75.0	590.0	43600.0	1420.0	0.0	25.0	228.0	51.0	0.0	0.0	80.0
HSP006	DU9182	PCRC	30.0	36.0	0.0	0.0	-0.1	114.0	83.0	765.0	66200.0	2490.0	0.0	35.0	201.0	71.0	0.0	0.0	97.0
HSP006	DU9183	PCRC	36.0	42.0	0.0	0.0	0.1	131.0	72.0	365.0	63700.0	2890.0	0.0	51.0	335.0	65.0	0.0	0.0	105.0
HSP006	DU9184	PCRC	42.0	48.0	0.0	0.0	-0.1	108.0	70.0	163.0	95700.0	2750.0	0.0	51.0	530.0	79.0	0.0	0.0	104.0
HSP006	DU9185	PCRC	48.0	54.0	0.1	0.0	0.1	103.0	85.0	96.0	67600.0	8400.0	0.0	39.0	300.0	44.0	0.0	0.0	116.0
HSP006	DU9186	PCRC	54.0	60.0	0.0	0.0	-0.1	58.0	100.0	48.0	35000.0	1870.0	0.0	38.0	280.0	22.0	0.0	0.0	86.0
HSP006	DU9187	PCRC	60.0	66.0	0.0	0.0	0.1	72.0	126.0	36.0	48500.0	2320.0	0.0	42.0	236.0	16.0	0.0	0.0	125.0
HSP006	DU9188	PCRC	66.0	72.0	0.0	0.0	-0.1	56.0	111.0	43.0	40500.0	870.0	0.0	28.0	227.0	19.0	0.0	0.0	118.0
HSP006	DU9189	PCRC	72.0	78.0	0.0	0.0	0.1	87.0	120.0	89.0	51700.0	3300.0	0.0	37.0	212.0	23.0	0.0	0.0	144.0

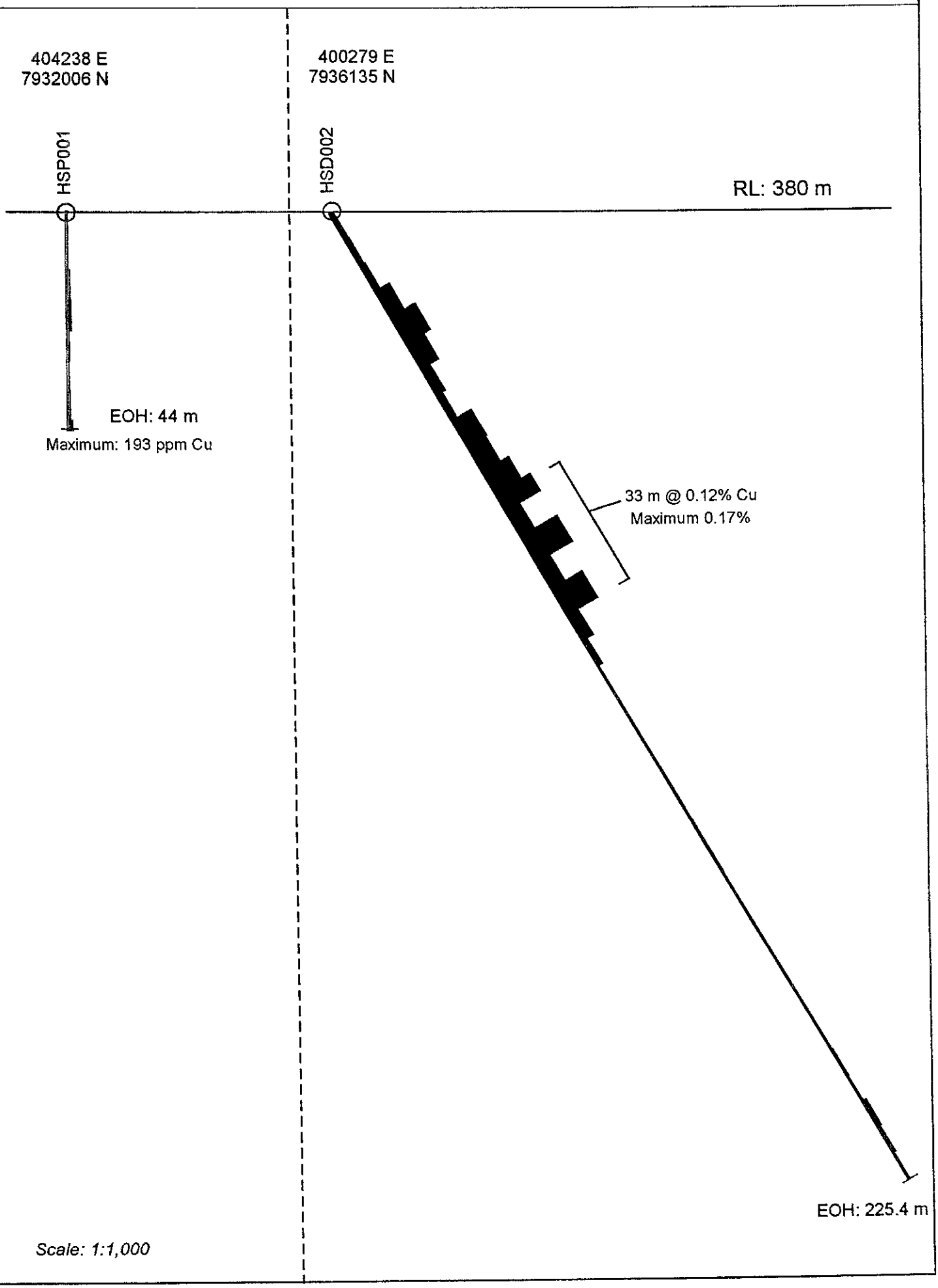
Drill hole geochemistry
HSP 003-6

ole name	Sample No	Sample type	Depth-from	Depth-to	Ag	As	Cd	Co	Cr	Cu	Fe	Mn	Mo	Ni	P	Pb	Tl	V	Zn
HSP006	DU9190	PCRC	78.0	84.0	0.1	0.0	0.1	198.0	71.0	137.0	51200.0	28000.0	0.0	30.0	345.0	29.0	0.0	0.0	83.0
HSP006	DU9191	PCRC	84.0	90.0	0.3	0.0	0.1	415.0	51.0	245.0	55000.0	123000.0	0.0	24.0	97.0	111.0	0.0	0.0	51.0
HSP006	DU9192	PCRC	90.0	97.0	0.2	0.0	0.1	700.0	32.0	1450.0	55200.0	242000.0	0.0	36.0	214.0	169.0	0.0	0.0	93.0
HSP006	ES1872A	PCRC	80.0	82.0	0.0	0.0	0.0	0.0	0.0	0.0	92000.0	224000.0	0.0	0.0	430.0	0.0	0.0	0.0	0.0
HSP006	ES1873D	PCRC	82.0	84.0	0.0	0.0	0.0	0.0	0.0	0.0	37000.0	38000.0	0.0	0.0	200.0	0.0	0.0	0.0	0.0
HSP006	ES1873A	PCRC	82.0	84.0	0.0	0.0	0.0	0.0	0.0	0.0	22000.0	92000.0	0.0	0.0	140.0	0.0	0.0	0.0	0.0
HSP006	ES1874D	PCRC	84.0	86.0	0.0	0.0	0.0	0.0	0.0	0.0	42000.0	174000.0	0.0	0.0	230.0	0.0	0.0	0.0	0.0
HSP006	ES1874A	PCRC	84.0	86.0	0.0	0.0	0.0	0.0	0.0	0.0	28000.0	188000.0	0.0	0.0	240.0	0.0	0.0	0.0	0.0
HSP006	ES1875D	PCRC	86.0	88.0	0.0	0.0	0.0	0.0	0.0	0.0	58000.0	144000.0	0.0	0.0	150.0	0.0	0.0	0.0	0.0
HSP006	ES1875A	PCRC	86.0	88.0	0.0	0.0	0.0	0.0	0.0	0.0	55000.0	213000.0	0.0	0.0	230.0	0.0	0.0	0.0	0.0
HSP006	ES1876D	PCRC	88.0	90.0	0.0	0.0	0.0	0.0	0.0	0.0	88000.0	129000.0	0.0	0.0	200.0	0.0	0.0	0.0	0.0
HSP006	ES1876A	PCRC	88.0	90.0	0.0	0.0	0.0	0.0	0.0	0.0	37000.0	193000.0	0.0	0.0	260.0	0.0	0.0	0.0	0.0
HSP006	ES1877D	PCRC	90.0	92.0	0.0	0.0	0.0	0.0	0.0	0.0	49000.0	133000.0	0.0	0.0	270.0	0.0	0.0	0.0	0.0
HSP006	ES1877A	PCRC	90.0	92.0	0.0	0.0	0.0	0.0	0.0	0.0	34000.0	174000.0	0.0	0.0	120.0	0.0	0.0	0.0	0.0
HSP006	ES1878D	PCRC	92.0	94.0	0.0	0.0	0.0	0.0	0.0	0.0	43000.0	333000.0	0.0	0.0	440.0	0.0	0.0	0.0	0.0
HSP006	ES1878A	PCRC	92.0	94.0	0.0	0.0	0.0	0.0	0.0	0.0	39000.0	359000.0	0.0	0.0	430.0	0.0	0.0	0.0	0.0
HSP006	ES1879D	PCRC	94.0	96.0	0.0	0.0	0.0	0.0	0.0	0.0	59000.0	330000.0	0.0	0.0	540.0	0.0	0.0	0.0	0.0
HSP006	ES1879A	PCRC	94.0	96.0	0.0	0.0	0.0	0.0	0.0	0.0	51000.0	360000.0	0.0	0.0	560.0	0.0	0.0	0.0	0.0
HSP006	ES1880A	PCRC	96.0	97.0	0.0	0.0	0.0	0.0	0.0	0.0	53000.0	375000.0	0.0	0.0	600.0	0.0	0.0	0.0	0.0
HSP006	ES1880D	PCRC	96.0	97.0	0.0	0.0	0.0	0.0	0.0	0.0	60000.0	356000.0	0.0	0.0	640.0	0.0	0.0	0.0	0.0

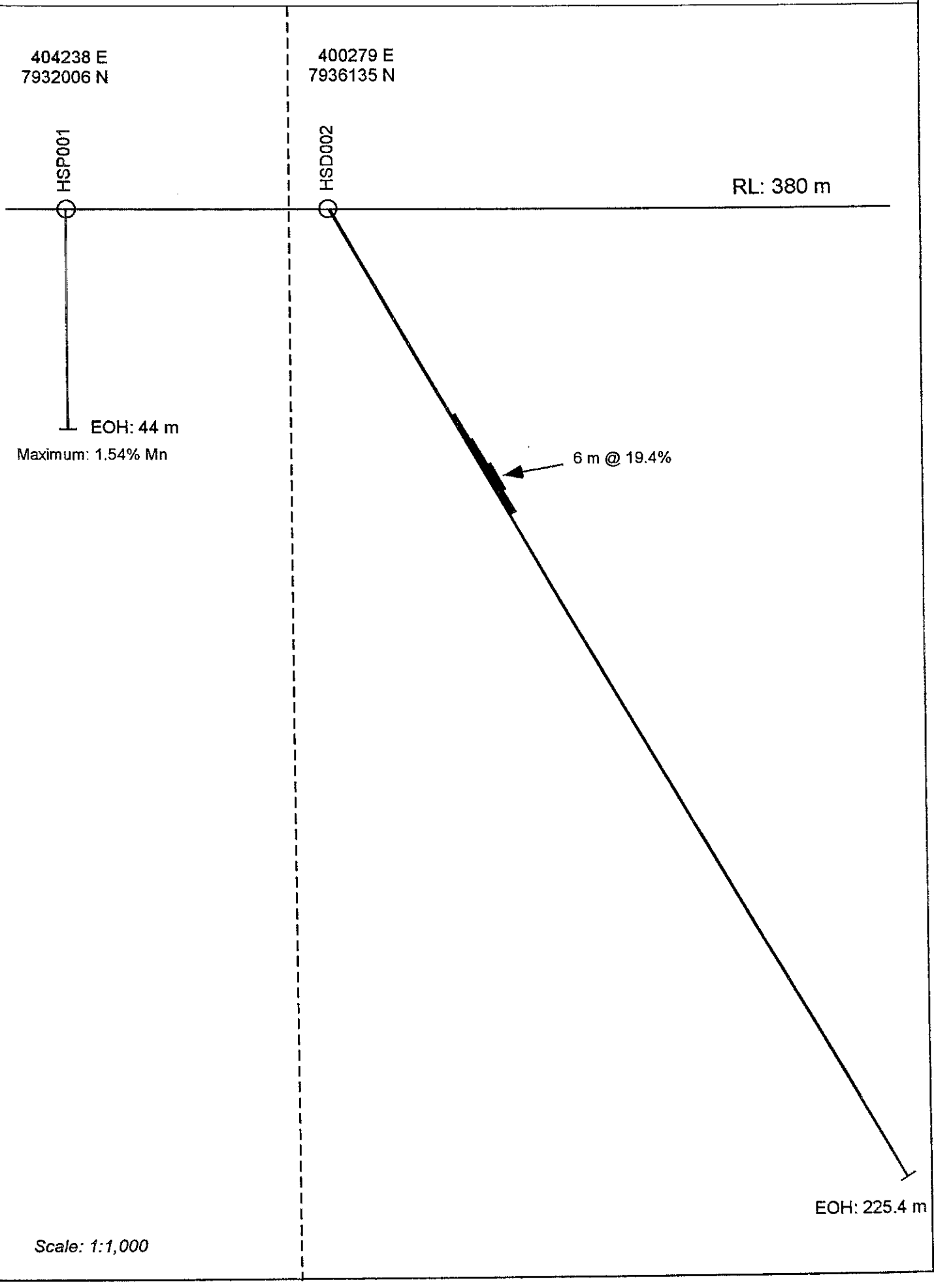
APPENDIX 10

GEOCHEMISTRY SECTIONS
HSP003-6, HSD001

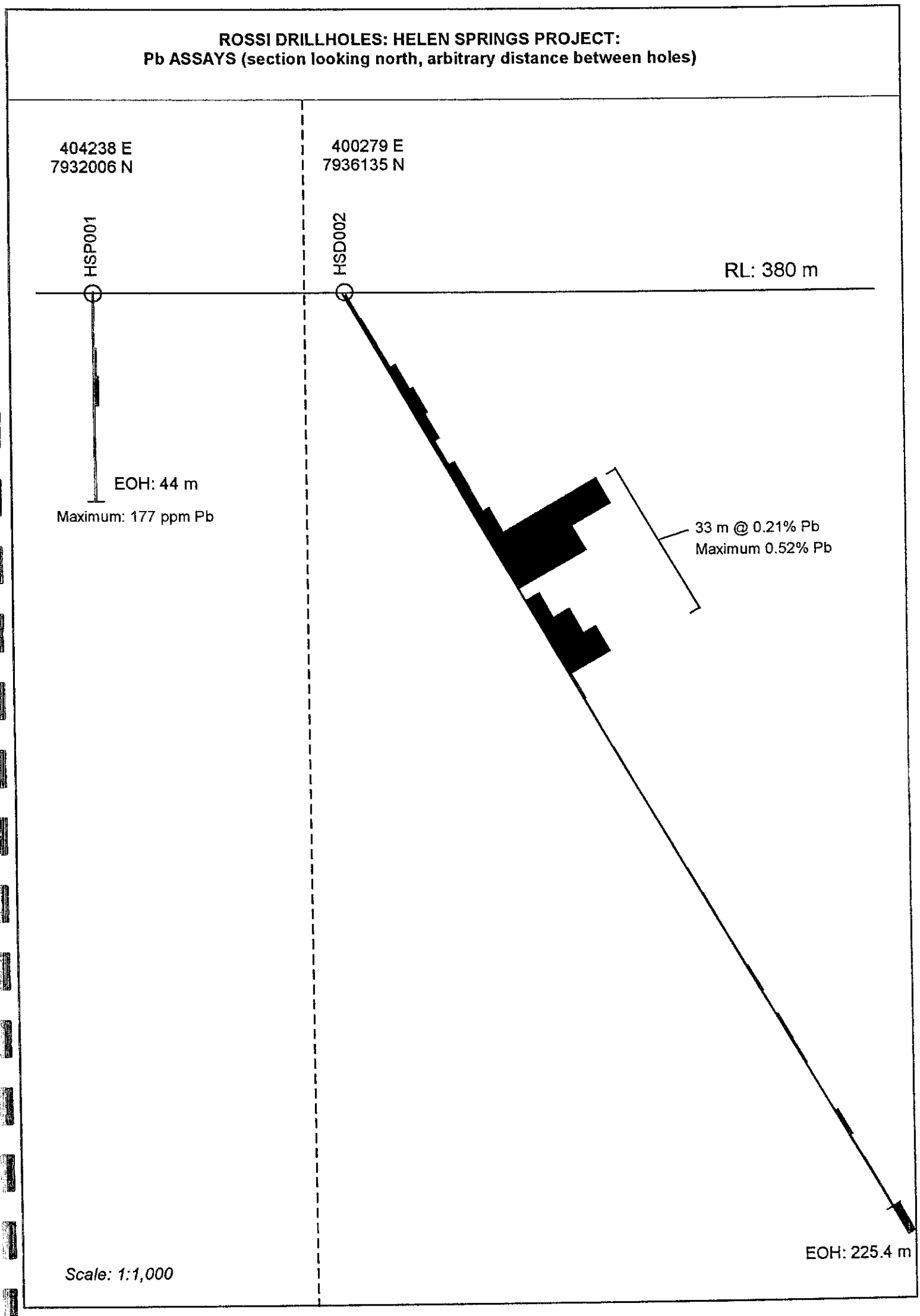
ROSSI DRILLHOLES: HELEN SPRINGS PROJECT:
Cu ASSAYS (section looking north, arbitrary distance between holes)



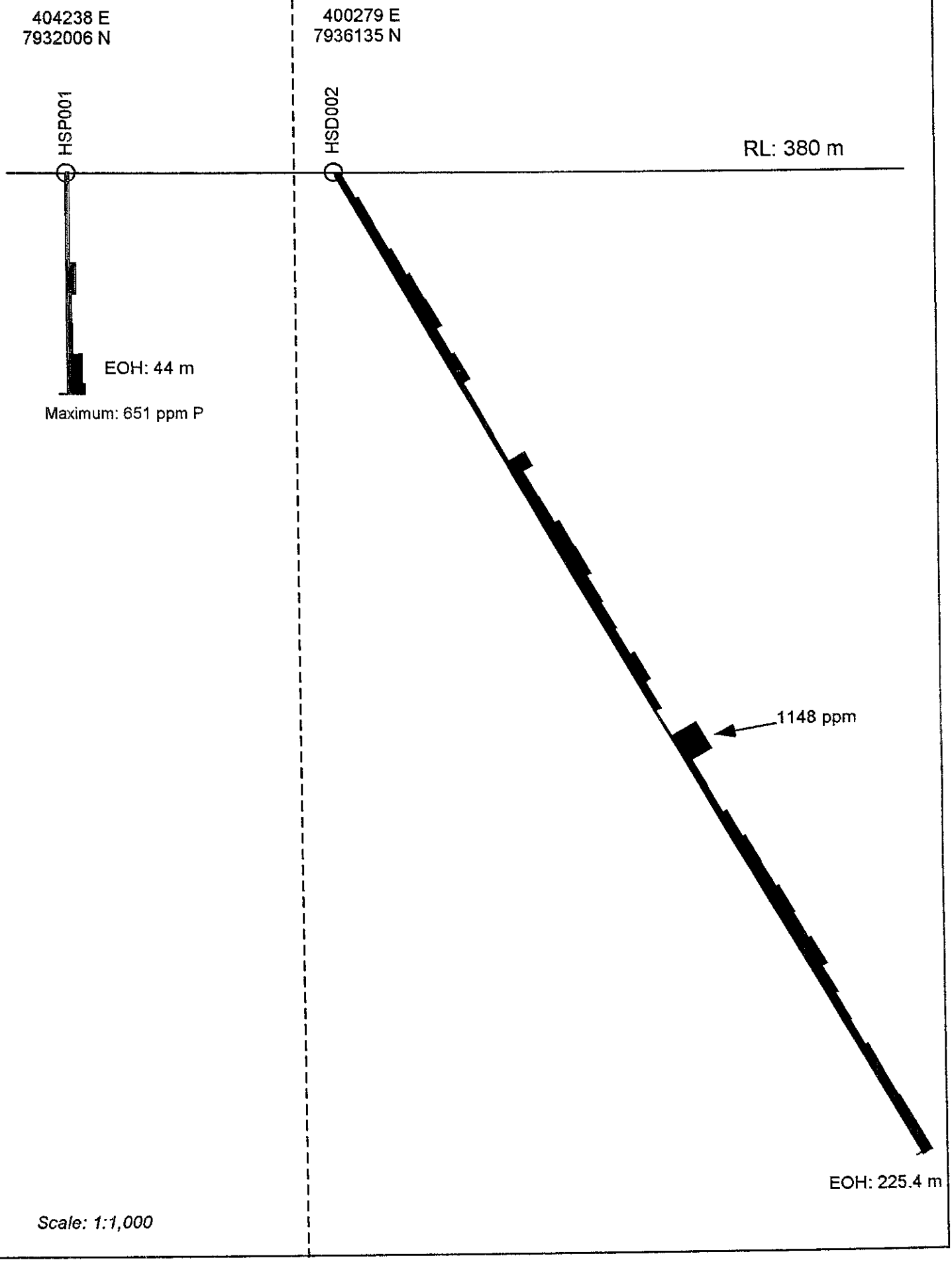
ROSSI DRILLHOLES: HELEN SPRINGS PROJECT:
Mn ASSAYS (section looking north, arbitrary distance between holes)



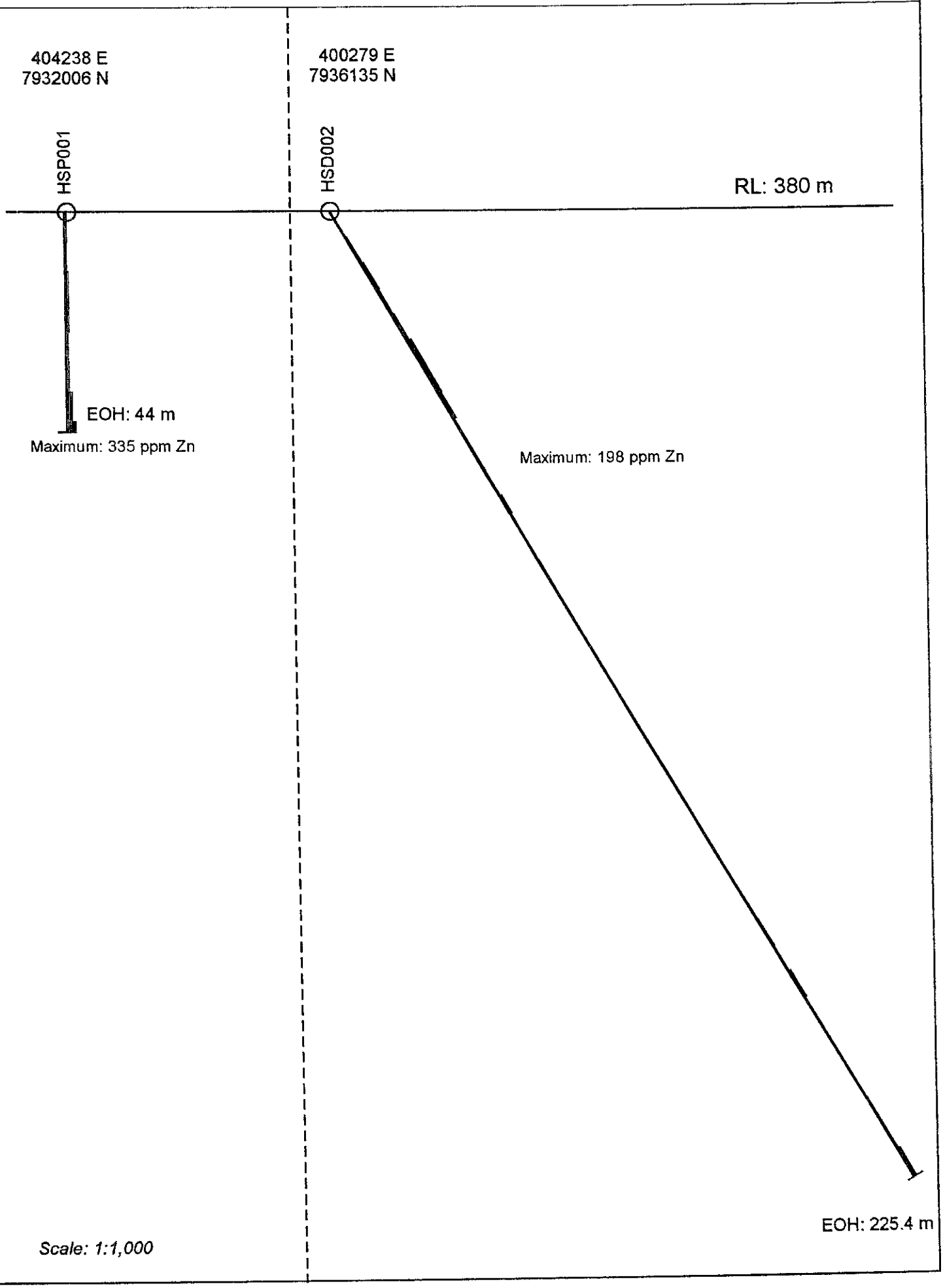
ROSSI DRILLHOLES: HELEN SPRINGS PROJECT:
Pb ASSAYS (section looking north, arbitrary distance between holes)



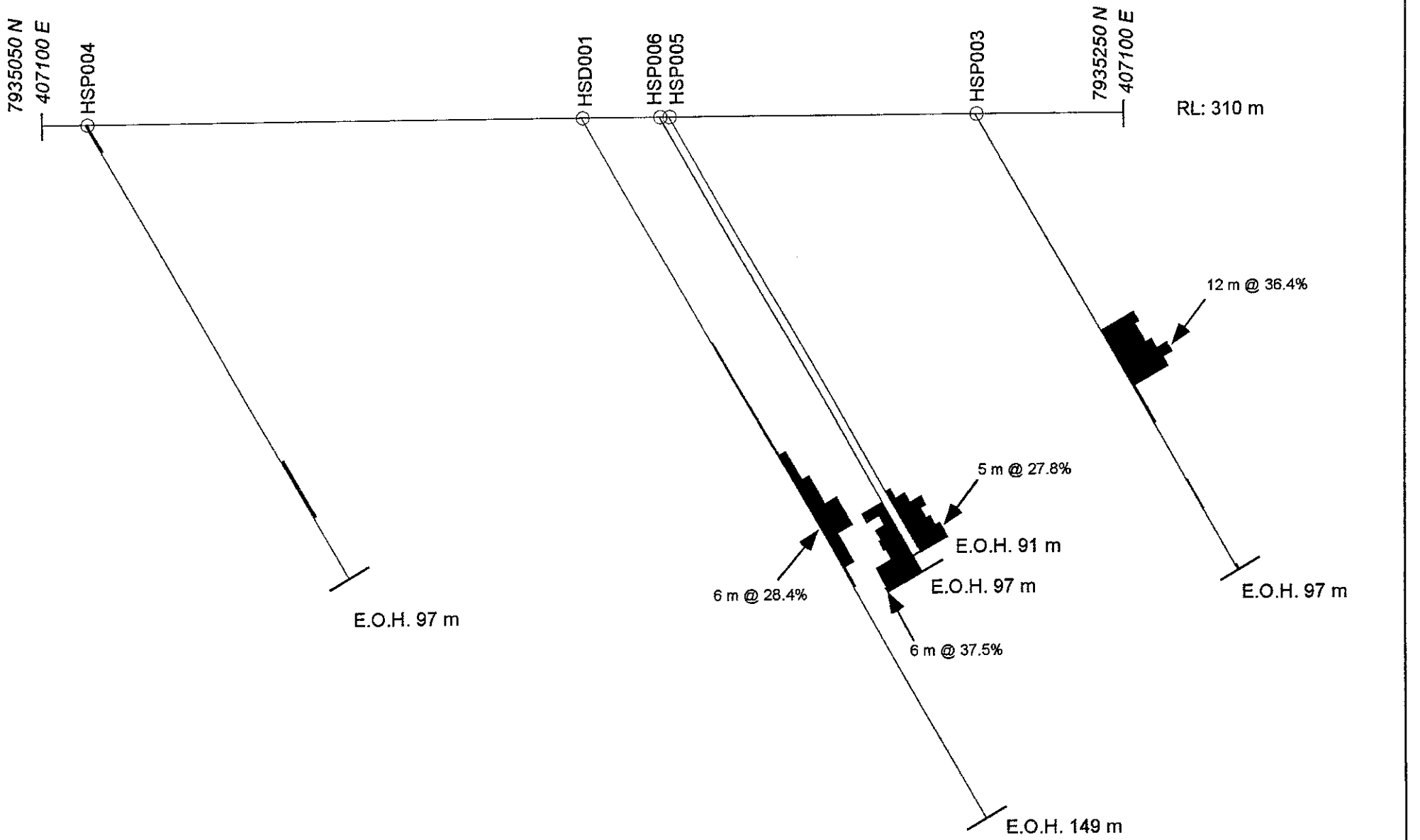
ROSSI DRILLHOLES: HELEN SPRINGS PROJECT:
P ASSAYS (section looking north, arbitrary distance between holes)



ROSSI DRILLHOLES: HELEN SPRINGS PROJECT:
Zn ASSAYS (section looking north, arbitrary distance between holes)



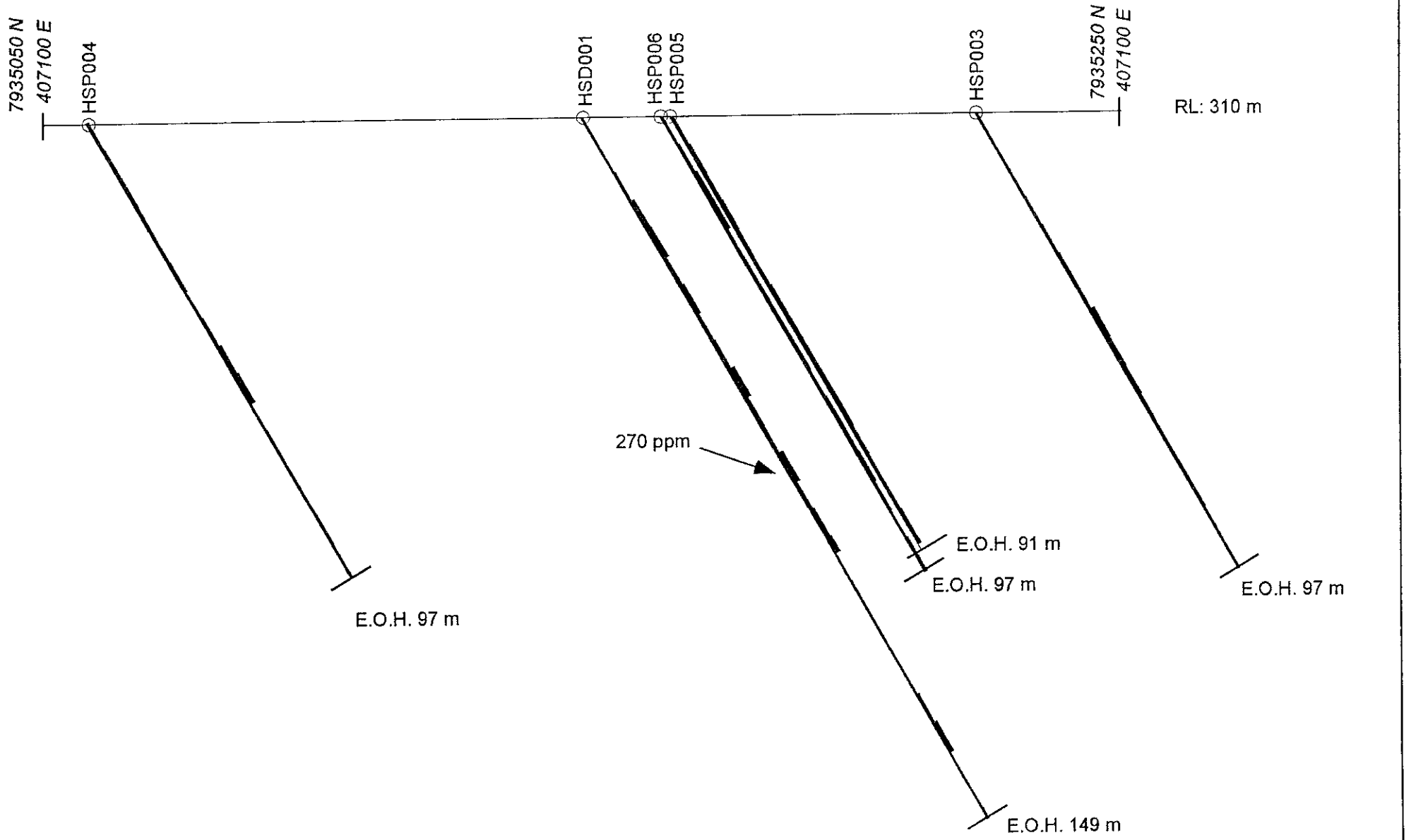
REDWING DRILLHOLES, HELEN SPRINGS PROJECT:
Mn ASSAYS (section looking north, through 400 m)



Scale: 1:1,000

Max. value: 47.6%
Min. value: 1%

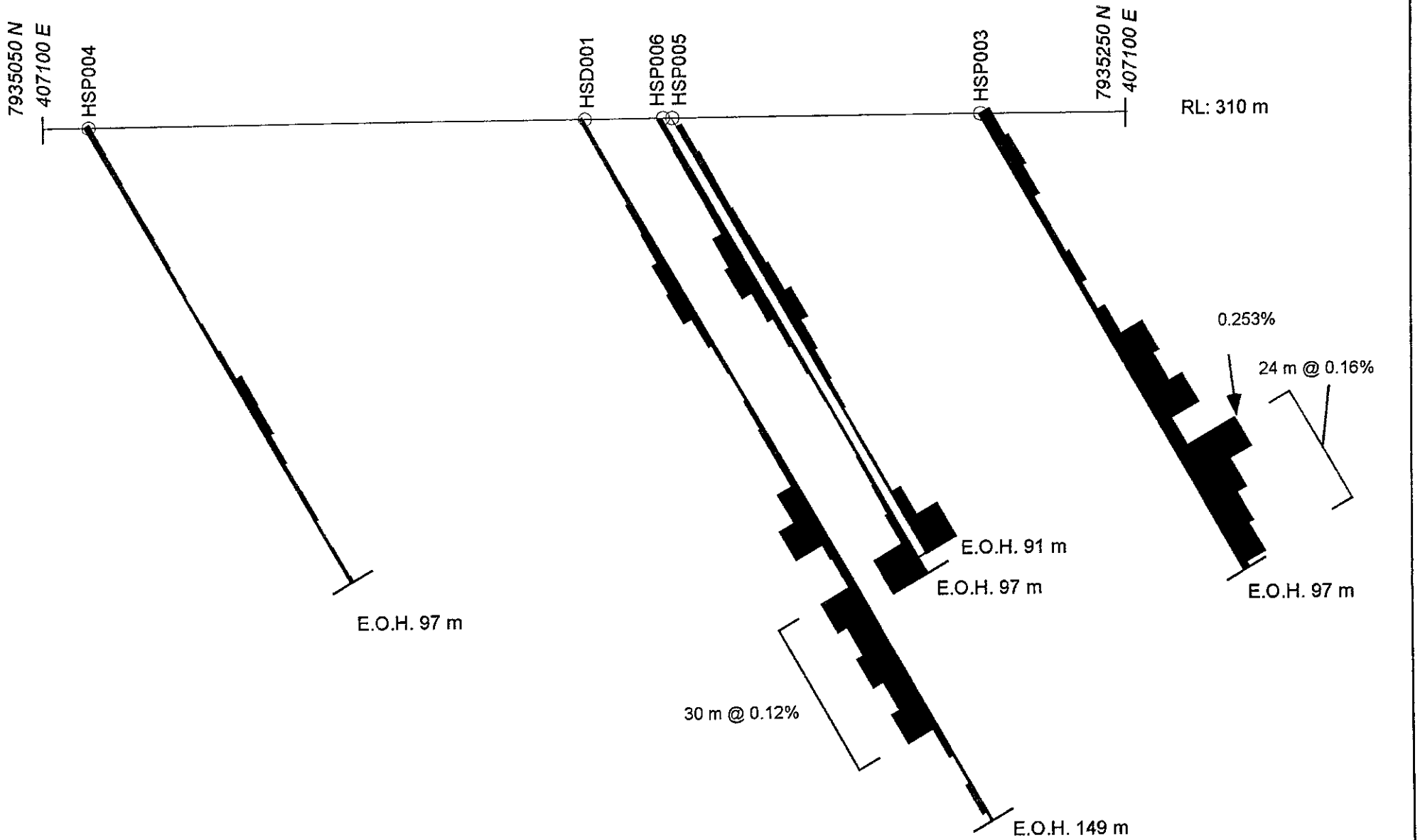
REDWING DRILLHOLES, HELEN SPRINGS PROJECT:
Zn ASSAYS (section looking north, through 400 m)



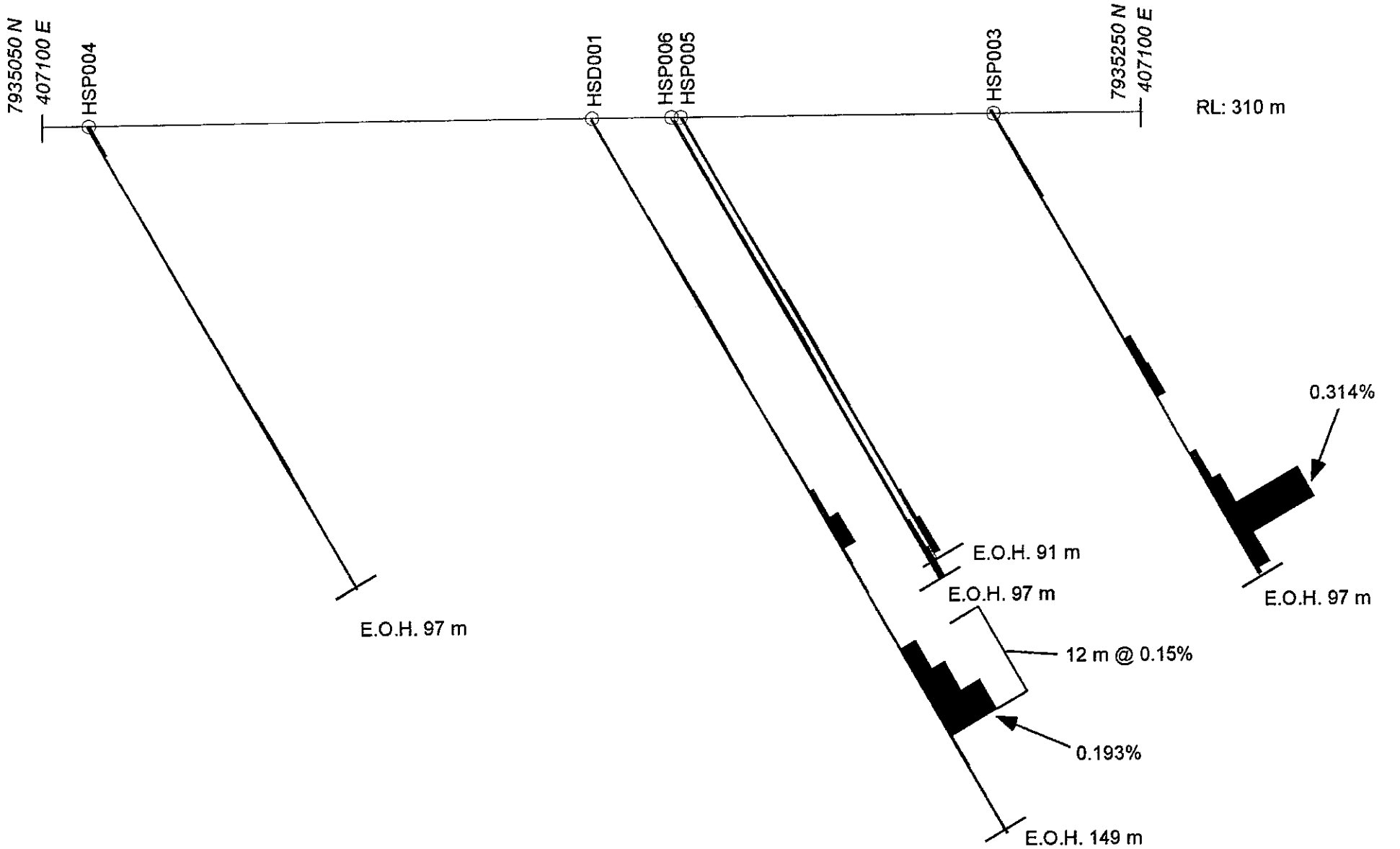
Max. value: 270 ppm

Scale: 1:1,000

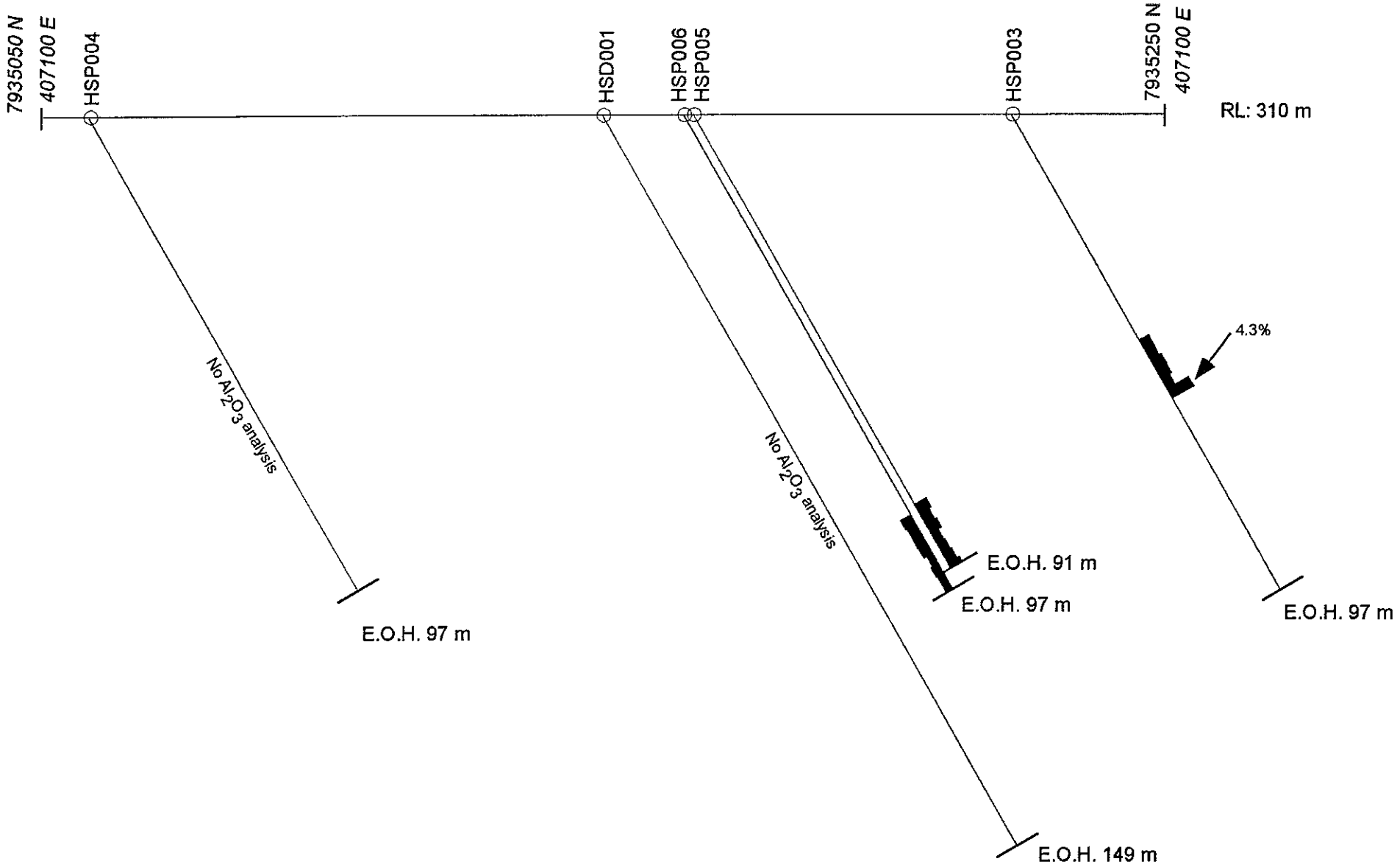
REDWING DRILLHOLES, HELEN SPRINGS PROJECT:
Cu ASSAYS (section looking north, through 400 m)



REDWING DRILLHOLES, HELEN SPRINGS PROJECT:
Pb ASSAYS (section looking north, through 400 m)



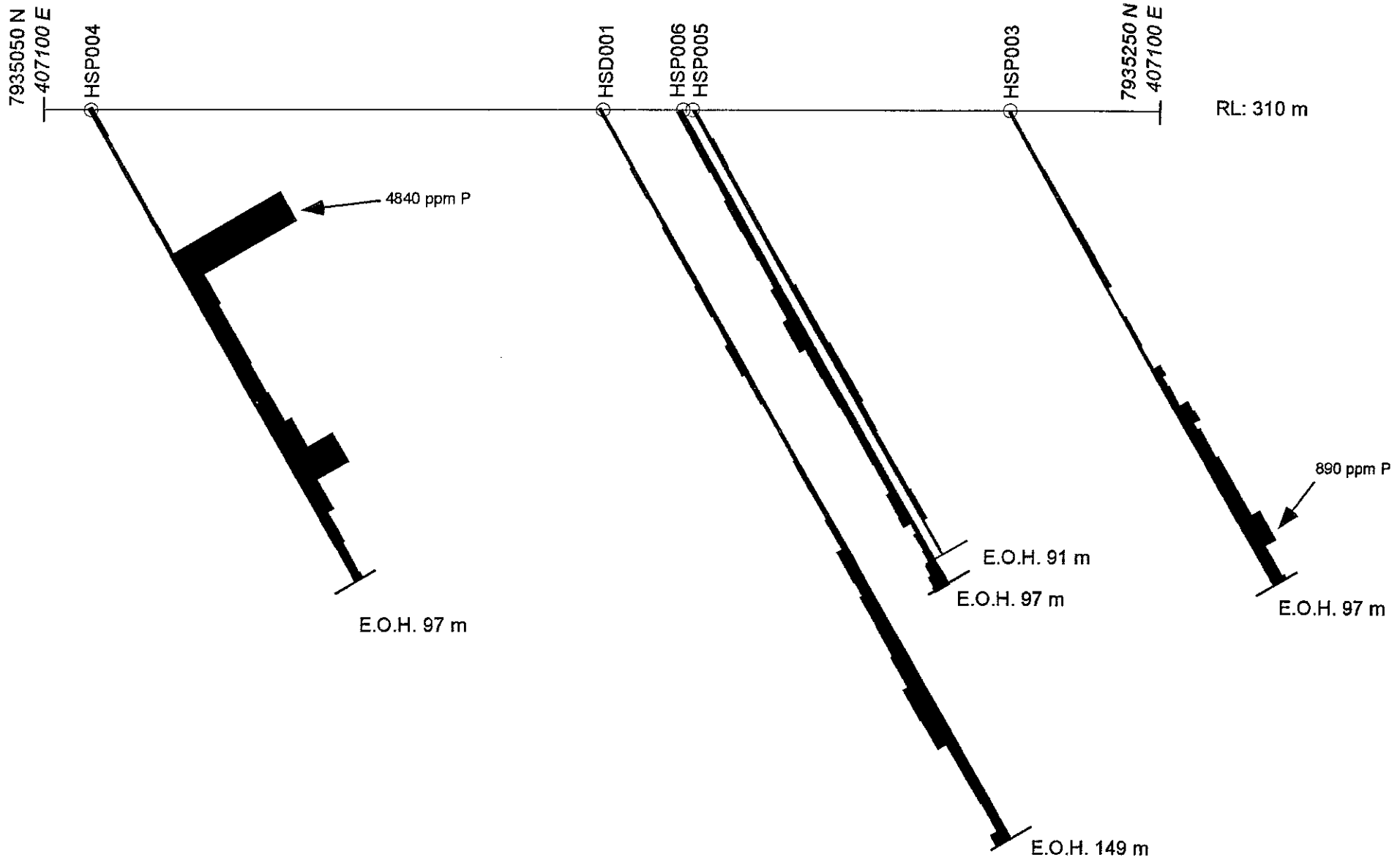
REDWING DRILLHOLES, HELEN SPRINGS PROJECT:
Al_2O_3 ASSAYS (section looking north, through 400 m)



Scale: 1:1,000

Acceptable Al2O3 levels for Mn production <6%)

REDWING DRILLHOLES, HELEN SPRINGS PROJECT:
P ASSAYS (section looking north, through 400 m)



Scale: 1:1,000

Max. value: 0.484%

Acceptable P levels for Mn production < 800 ppm

TOMKINSON CREEK SUBGROUP STRATIGRAPHY

McArthur Basin Equivalent	Stratigraphic Unit	Sub unit		Description	
				Recessive dolerite dykes/sills	
Roper Group Equivalent	Unnamed Sandstone			Quartz arenite	
	Unnamed Sandstone			Recessive fine quartz arenite, mudstone	
	Powell Creek Sandstone (300 - 700 m)			m quartz arenite with mudstone intraclasts, minor granule and conglomerate beds, quartz and chert clasts, ~4 fining up cycles, bidirectional crossbedding, ripples, dessication cracks	Ptp
	Renner Springs Sandstone (300 m)			Recessive fine quartz arenite, mudstone	Ptr
	Gleeson Creek/Bootu Creek Sandstone (900 m)			m-c subrkosic arenite, pebbly subarkosic arenite, conglomerate, micaceous, spherical quartz arenite clasts, ~5 fining up cycles, crossbedded. Basal unit f-m subarkosic arenite with mudstone intraclasts, micaceous, ferruginous, rippled, dessication cracks	Ptg/Ptb
McArthur/ Nathan Group Equivalent	Attack Creek Formation (600 - 2100 m)	Upper Carbonate/ Siltstone Facies (800 - 1200 m)	"DW Nathan Group"	Quartz arenite, mudstone, evaporitic carbonate	Ptau
			"DW Nathan Breccia"	Talus breccia	
			"DW Barney Creek Fm"	Recessive carbonaceous dolomitic siltstone, tuff	
			"DW Teena Dolomite"	Dololutite, coxco gypsum pseudomorphs	
			"DW Emmerugga Dolm"	Silicified algal dolomite	
			"DW Tooganinie Fm"	f-m quartz arenite, mudstone, carbonaceous dolomitic siltstone, algal dolomite, tuff, halite casts	
		Middle Sandstone Facies (100 - 400 m)	"DW Tatoola Sandstone"	m quartz arenite with mudstone intraclasts, ripples, halite casts, quartz vugs	Ptam
		Lower Siltstone/ Carbonate Facies (200 - 500 m)	"DW Amelia Dolomite"	Silicified algal dolomite, gypsum pseudomorphs	Ptal
			"DW Mallapunyah Fm"	Ferruginous mudstone, silicified algal dolomite, cauliflower chert	
Masterton Sandstone Equivalent	Short Range Sandstone (700 - 900 m)	Upper		f-m quartz arenite with mudstone intraclasts, planar laminated (some crossbedding and ripples at top), dessication cracks, silicified, ferruginous and vugs at top	Pts2
		Lower		f-m quartz arenite with mudstone intraclasts, bidirectional crossbeds, ripples, dessication cracks	Pts1
Tawallah Group Equivalent	Morphett Creek Formation (2500 - 4200 m)	Upper Sandstone/Siltstone Lithofacies		m-c quartz arenite + arkosic arenite with mudstone intraclasts, mudstone, graded beds, crossbedded, dessication cracks	Ptmu
		Middle 'Carbonate'/Siltstone Lithofacies		m-c quartz arenite + subarkosic arenite, bidirectional crossbedding + f quartz arenite, planar laminated	Ptmm
		Lower Sandstone Lithofacies		m-c subarkosic arenite with mudstone intraclasts, mudstone, micaceous at base, crossbedded	Ptml
	Hayward Creek Formation (3600 m)	Whittington Range Member (300 m)		Recessive porphyritic andesite	Pthw
		Upper		m-c quartz arenite, pebbly to conglomeratic, quartz pebble clasts + minor volcanic clasts, 3 main fining up cycles, crossbedded, silicified and quartz veined	Pthu
		Middle			Pthm
		Lower			Pthl

DW = Don Ward McArthur Basin Stratigraphic Equivalent

LEGEND

- Dolerite Dyke/Sill
- Unnamed Sandstone
- Unnamed Sandstone
- Powell Creek Sandstone
- Renner Springs Sandstone
- Gleeson Creek/Bootu Creek Sandstone
- Undifferentiated Attack Creek Formation
- DW Nathan Group
- Upper Carbonate/Siltstone Facies/Middle Sandstone Facies
- Lower Siltstone/Carbonate Facies
- Short Range Sandstone
- ?
- Morphett Creek Sandstone
- ?
- Whittington Range Member
- Hayward Creek Formation
- Flynn Subgroup
- Fault, Dip of Reverse Fault
- Fold Axis; Anticline, Syncline
- 31450 DW Cross-section, Section Number
- F9 Geological Traverse, Figure Number
- Tenement boundary

Powell Creek
Hunter Sub-Basin
Burke Creek Dome
Willieray Trough
Southern Dome
Helen Springs
Jeromah Creek
Donkey Pocket
Bootu Creek North
Bootu Creek
Attack Creek
HUNTER FAULT
WILLIERAY FAULT
MAGNETIC FAULT
HELEN SPRINGS SYFORM
MT HALL FAULT
BOOTUCK SYFORM
ATTACK CREEK SYNFORM
TOMKINSON CREEK FAULT
E9022
E9023
E9025
E9325
E9326
E9327
F4
F5
F6
F9
F10
F11
F12
F14
6200
32600
32400
32059
31450
33800
14700
14100
14000
31700

MAP AREA
NORTHERN TERRITORY

Scale 1 : 250,000
0 5 10 15 20 km

BHP — Exploration - BHP Minerals
BHP Minerals Pty. Ltd., A.C.N. 008 694 782

NORTHERN PLATFORMS PROGRAM
HELEN SPRINGS PROJECT, N.T.

TOMKINSON CREEK SUBGROUP SOLID GEOLOGY

Prepared : B.Jones	Date : April 1996	PLATE 1
Drawn : Digital Mapping/A.R.V.	Revised : 12-6-96	
Centre : Perth	Drawing No : A0-2484	

400 000 mE

405 000 mE

7 935 000 mN

7 930 000 mN

E9024

E9025

E7948

5 km

Soil sample location and number

Scale 1 : 25,000

0 500 1000 1500 2000 metres

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NORTHERN PLATFORMS PROGRAM
HELEN SPRINGS PROJECT - BOOTU CREEK
SOIL SAMPLE LOCATIONS

Prepared : T.Nunn	Date : 19.2.97	PLATE 2
Drawn : R.J.Clark	Revised :	
Centre : Perth	Drawing No : A2-2565	

360 000 mE

365 000 mE

370 000 mE

7 970 000 mN

7 965 000 mN

E9022

EQ2711 EQ2709 EQ2708 EQ2707 EQ2705 EQ2704 EQ2703 EQ2702 EQ2701 EQ2761 EQ2760 EQ2759 EQ2758 EQ2757 EQ2756 EQ2755 EQ2754 EQ2753 EQ2752 EQ2751 EQ2750 EQ2748

EQ2780 EQ2781

EQ2789 EQ2791 EQ2793 EQ2795 EQ2797 EQ2799 EQ2801 EQ2803 EQ2805 EQ2807 EQ2809 EQ2811 EQ2813 EQ2815 EQ2817 EQ2819

EQ2790 EQ2792 EQ2794 EQ2796 EQ2798 EQ2800 EQ2802 EQ2804 EQ2806 EQ2808 EQ2810 EQ2812 EQ2814 EQ2816 EQ2818

EQ2779 EQ2777 EQ2776 EQ2775 EQ2774 EQ2773 EQ2772 EQ2771 EQ2770 EQ2769 EQ2768 EQ2767 EQ2766 EQ2765 EQ2764 EQ2763

EQ2747 EQ2746 EQ2745 EQ2744 EQ2742 EQ2741 EQ2740 EQ2739 EQ2738 EQ2737 EQ2736 EQ2735 EQ2734 EQ2733 EQ2732 EQ2731 EQ2728 EQ2729 EQ2727 EQ2726 EQ2725

EQ2721 EQ2719 EQ2718 EQ2717 EQ2716 EQ2715 EQ2714

360 000 mE

365 000 mE

EQ2727 • Soil sample location and number

Scale 1 : 25,000

0 500 1000 1500 2000 metres

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BHP Minerals Pty. Ltd., A.C.N. 008 694 782

NORTHERN PLATFORMS PROGRAM
HELEN SPRINGS PROJECT - WILLIERAY

SOIL SAMPLE LOCATIONS

Prepared : T.Nunn	Date : 13.6.97	PLATE 3
Drawn : R.J.Clark	Revised :	
Centre : Perth	Drawing No : A2-2602	

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BHP Minerals Pty. Ltd., A.C.N. 009 694 782

NORTHERN PLATFORMS PROGRAM
HELEN SPRINGS PROJECT

LOCATION OF ROCK CHIP SAMPLES

Prepared : T.Nunn	Date : 13.6.97	PLATE 4
Drawn : R.J.Clark/A.R.Veale	Revised : 28.7.97	
Centre : Perth	Drawing No : A0-2592	

CR97/4414

350 000 mE | 360 000 mE | 370 000 mE | 380 000 mE | 390 000 mE | 400 000 mE | 410 000 mE | 420 000 mE

133°45' | 134°00' | 134°15'

18°07'30" | 18°15' | 18°30' | 18°45' | 18°52'30"

7 990 000 mN | 7 980 000 mN | 7 970 000 mN | 7 960 000 mN | 7 950 000 mN | 7 940 000 mN | 7 930 000 mN | 7 920 000 mN

E9022

E9023

E9325

WILLIERAY

E9326

E9570

BOOTU CREEK

E9024

E7948

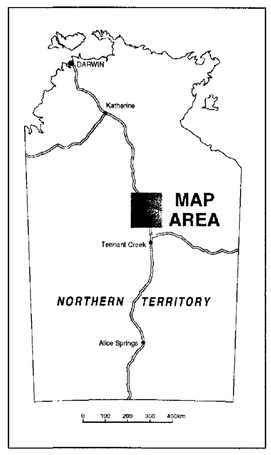
E9025

E9327

WILLIERAY GEOTEM SURVEY

AIRBORNE SURVEY SPECIFICATIONS

Contractor	Geoterrex
Aircraft	CASA C212 200 Turbo Prop
Magnetometer	Cesium Vapour
Magnetometer Sample Interval	1 second (approx 65 metres)
Electromagnetic System	GEOTEM III Time Domain EM
Transmitter Base Frequency	25 Hz
Transmitter Pulse Width	4 msec
Receiver	Horizontal (X) and Vertical (Z) area coils in towed bird
Cycle Rate	0.25 secs (X and Z components)
Sample Interval	15 metres
Flight Path Recovery	GPS
Flight Line Direction	90 degrees
Flight Line Spacing	1000 metres
Flying Height	105 metres
Survey flown	May 1996



BOOTU GEOTEM SURVEY

AIRBORNE SURVEY SPECIFICATIONS

Contractor	Geoterrex
Magnetometer	Cesium Vapour
Magnetometer Sample Interval	1 second (approx 65 metres)
Flight Path Recovery	DOPPLER and GPS
Flight Line Direction	75 degrees
Flight Line Spacing	600, 1000 metres
Flying Height	105 metres
Total line kms of survey	1018 km
Survey flown	May 1996

Scale 1 : 100,000

0 2 4 6 8 km

UTM Projection - Zone 53

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Exploration - BHP Minerals

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NORTHERN PLATFORMS PROGRAM
HELEN SPRINGS PROJECT

GEOTEM FLIGHT LINE DIAGRAM
BOOTU CREEK AND WILLIERAY

Prepared : T.Nunn	Date : 16.6.97	PLATE 5
Drawn : R.J.Clark	Revised : 28.7.97	
Centre : Perth	Drawing No : A0-2593	

CR97/444

BHP

Exploration ‡ BHP Minerals

BHP Minerals Pty.Ltd. .A.C.N 008 694 782

Northern Platforms

Bootu Creek. NT

Geotem X Channel 14

Linear Stretch

Prepared : T.K.	Date : May 1996	PLATE 6
Drawn: M.J.	Revised:	
Centre : Perth	Dwg No :	

390000E 395000E 400000E 405000E 410000E 415000E

7960000N 7955000N 7950000N 7945000N 7940000N 7935000N 7930000N 7925000N 7920000N 7915000N

S18°30′ S18°35′ S18°40′ S18°45′ S18°50′

1300
1030
757
487
217
-53

Scale 1:50 000

0 4 8 12

Kilometers

E134° E134°5′ E134°10′

390000mE
400000mE
410000mE
7960000mN
7950000mN
7940000mN
7930000mN
7920000mN

BC12
BC13
BC10
BC11
BC9
BC8
BC7
BC4
BC6
BC5
BC3
BC14

Mn
ROSSI
BC2
HSD002
REDWING
BC1
HSD001
see enlargement
Bootu Creek Syntorm

Enlargement
HSP004
HSD001
HSP003
HSP005
HSP006

Prc
(at depth below magnetic
?cambrian basalts)

LEGEND

- Quaternary cover - surficial, conductive
- Cambrian - magnetic / surficialy conductive

ROPER GROUP EQUIVALENT
- Roper Group - resistive
- Roper Group - highly conductive (Mantungula Fm. & Mainoru Fm. equivalent
- Probable Roper Group - Possible Short Range Sandstone
- Probable Roper Group - Possible Attack Creek Formation

McARTHUR GROUP / NATHAN GROUP EQUIVALENT
- Attack Creek Formation - moderately conductive

MASTERSON SANDSTONE EQUIVALENT
- Short Range Sandstone - very resistive

TAWALLAH GROUP EQUIVALENT
- -Morphett Creek Sandstone - weakly conductive / resistive
- Probable Morphett Creek Sandstone

- Mn — Manganese subcrop
- HSD001 — Drill hole
- Mooving Loop TEM lines
- Major Structure
- ROSSI Magnetic Anomaly
- BC11 — Significant bedrock conductors
- Zone of significant bedrock conductors

Scale 1 : 50,000
0 1 2 3 4 km
UTM Projection Zone 53

BHP
Exploration - BHP Minerals
BHP Minerals Pty. Ltd., A.C.N. 008 694 782

BOOTU CREEK GEOTEM SURVEY
NORTHERN TERRITORY

GEOLOGICAL INTERPRETATION

Prepared : T. Kerr	Date : 17.2.96	PLATE 7
Drawn : Digital Mapping	Revised :	
Centre : Perth	Drawing No : A0-2534	

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Exploration - BHP Minerals

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Northern Platforms

Willieray, NT

Geotem Z Channel 14

Linear Stretch

Prepared : T.K.	Date : May 1996	PLATE 8
Drawn: M.J.	Revised:	
Centre : Perth	Dwg No :	

Scale 1:50 000

0 3 6 9

Kilometers

5700

2990

285

-2419

-5129

-7829

355000E 360000E 365000E 370000E 375000E 380000E

E133°40′ E133°45′ E133°50′

S18°15′ S18°20′ S18°25′ S18°30′ S18°35′ S18°40′

7980000N 7975000N 7970000N 7965000N 7960000N 7955000N 7950000N 7945000N 7940000N 7935000N

HSD001
Redwing

GEOLOGY

Gamma
CPS
0
340

Conductivity
mS/m
100
3300

Depth (m)
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140

SNSTQS
SIST
SNSTQZ
SIST
SNST
ROCK
SIST
SISTMS
DOLU
SISTLM
DOLUMS
FAGO
DOLULM
BLSH
FAZN
BLSH
DOLULM
DOLMMS
DOLU
DOLUMS
PBCG
DOLUMS
DOLUBD

PLATE 9

HSD002
Rossi

GEOLOGY

Gamma
CPS
10
120

Conductivity
mS/m
-50
0
1900

Depth (m)
0
10
20
30
40
50
60

SIST
SNSTQZ
SIST
SILT
SNST
SIST
SNST
SIST
SNST
SNSTQZ
SNSTDT
SNSTCY
FAZNS
SIST
SISTCY

PLATE 10