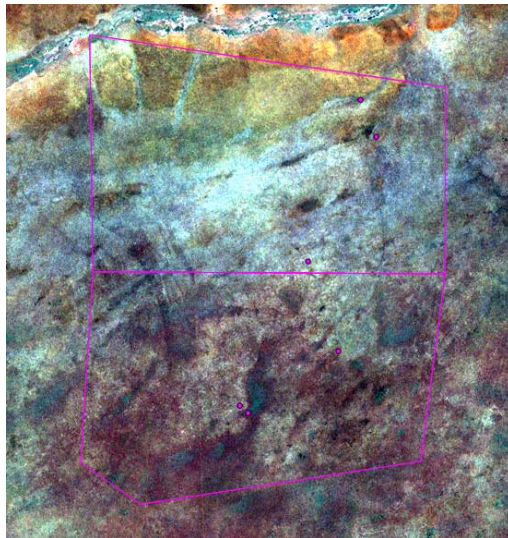


DONKERBOS RESETTLEMENT FARM OMAHEKE

HYDROGEOLOGICAL EXPLORATION



Assessed by:



Assessed for:



September 2010

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LIST OF ABBREVIATIONS

EM	Electromagnetic
SP	Self Potential
NNW	North-Northwest
NNE	North-Northeast
NE	Northeast
NW	Northwest

1. Introduction

Five targets for further investigation were identified during a hydrogeological desk study of the area. Geological lineament mapping was conducted to identify geological structures to be further investigated. These lineaments are depicted in Figure 1. A frequency domain electromagnetic (EM) geophysical tool was utilised to locate these targets in the field and to evaluate the various lineament. This information was then used to select drill targets.

Two prominent lineament directions are present. These are north-northwest trending and northeast trending. The north-northwest trending lineaments are probably associated with the Khoisan Lineament. The Khoisan Lineament stretches from northern Namibia into Botswana where it has faulted the northern end of the Kalahari Trend, and continue into South Africa. The northeast trending lineaments are parallel to the Eiseb Graben, further north, but also relatively parallel with the normal strike direction of the Damara formations in the area.

Geology on the farm is reported to consist of Kalahari sediments, underlain by quartzite, conglomerate, schist and or marble of the Kamtsas Formation.

2. Donkerbos 1

This target is located near the intersection of a NNW and a NE trending lineaments, as indicated in Figure 1. The surface geology at this point consists of a surface soil cover of unknown thickness. An EM profile, followed by a SP profile was conducted in a NNE direction, targeting the lineament intersection area. Results of selected frequencies of the EM profile are depicted in Figure 2. The profiles indicated a relatively broad anomalous zone between stations 45 and 65. This coincides with a SP anomaly. Station 50 was selected for drilling.

The Consultant was also requested to evaluate a nearby target selected by the Community. No large lineament is associated with this target. The SSE trending EM profile conducted across the site, with station 100 of the profile corresponding with the community drill target, shows that the target area is more resistive, although the SP survey do indicate an anomaly in the area. Station 60 of the survey is more interesting, with both the EM and the SP having anomalies that correspond, see Figure 3.

3. Donkerbos 2

This target is located north of the intersection of a NNW and a NE trending lineaments, as indicated in Figure 1. The surface geology at this point consists of a surface soil cover of unknown thickness. An EM profile, followed by a SP profile was conducted in an almost northerly direction, targeting the lineament intersection area as well as an omuramba running parallel with the NE trending lineament. Results of selected frequencies of the EM profile are depicted in Figure 4. The profiles indicated a relatively broad anomalous zone between stations 160 and 300. The anomaly is very prominent in the lower frequencies suggesting a deep target. SP results indicate a small anomaly at 285m. This is near the selected drill target at 280m.

4. Donkerbos 3

No surveying was conducted here as no access road was provided as requested.

5. Donkerbos 4

This target is located just east of the intersection of a NNW and a NE trending lineaments, as indicated in Figure 1. The surface geology at this point consists of a surface soil cover of unknown thickness. An EM profile, followed by a SP profile was conducted in a southwesterly direction, targeting the lineament intersection. Results of selected frequencies of the EM profile are depicted in Figure 5. The profiles indicated a very distinct anomaly around stations 60, where the profile crossed the NE trending lineament and also between stations 100 and 135 where the profile crossed the NNW trending lineament. Both anomalies are very prominent in

the lower frequencies suggesting a deep target. SP results correspond well with both anomalous areas. Station 60 is selected as the primary target, with station 120 as an alternative.

6. Donkerbos 5

This target is located at the intersection of a NW, a NNW and a NE trending lineaments, as indicated in Figure 1. The surface geology at this point consists of a surface soil cover of unknown thickness. An EM profile, followed by a SP profile was conducted in an easterly direction, targeting the lineament intersection. Results of selected frequencies of the EM profile are depicted in Figure 6. The profiles indicated an anomaly between stations 80 and 110 where the profile crossed the lineament crossing point. The anomaly is very prominent in the lower frequencies suggesting a deep target. SP results correspond with the anomalous area. Station 100 is selected as the drill target.

An anomaly between station 25 and 45 is interpreted as mostly probably a geological contact in the underlying geological layers.

7. Conclusion & Recommendation

It can be concluded that the water strikes in the area can be expected relatively deep as the EM responded the best in the lower frequencies. From previous drilling results in the area, combined with the results of this survey it is advised that the boreholes be drilled at least to a depth of 250m. Evaluation of the drill cuttings is advised to evaluate if drilling to deeper depths would be advisable.

Drilling targets are advised in order of interpreted best targets and are depicted in Table 1.

Table 1. Dill Target Locations

Drill Order	Site Name:	Profile Station	Latitude °S	Longitude °E
1	Donkerbos 4	60	21.676155	20.56874
2	Donkerbos 1	50	21.691414	20.539104
3	Donkerbos 2	280	21.606038	20.575378
4	Donkerbos 5	100	21.651155	20.559466
	Donkerbos Community Site	60	21.693473	20.541626

Sincerely,

WATER SCIENCES



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17 September 2010

Appendix A

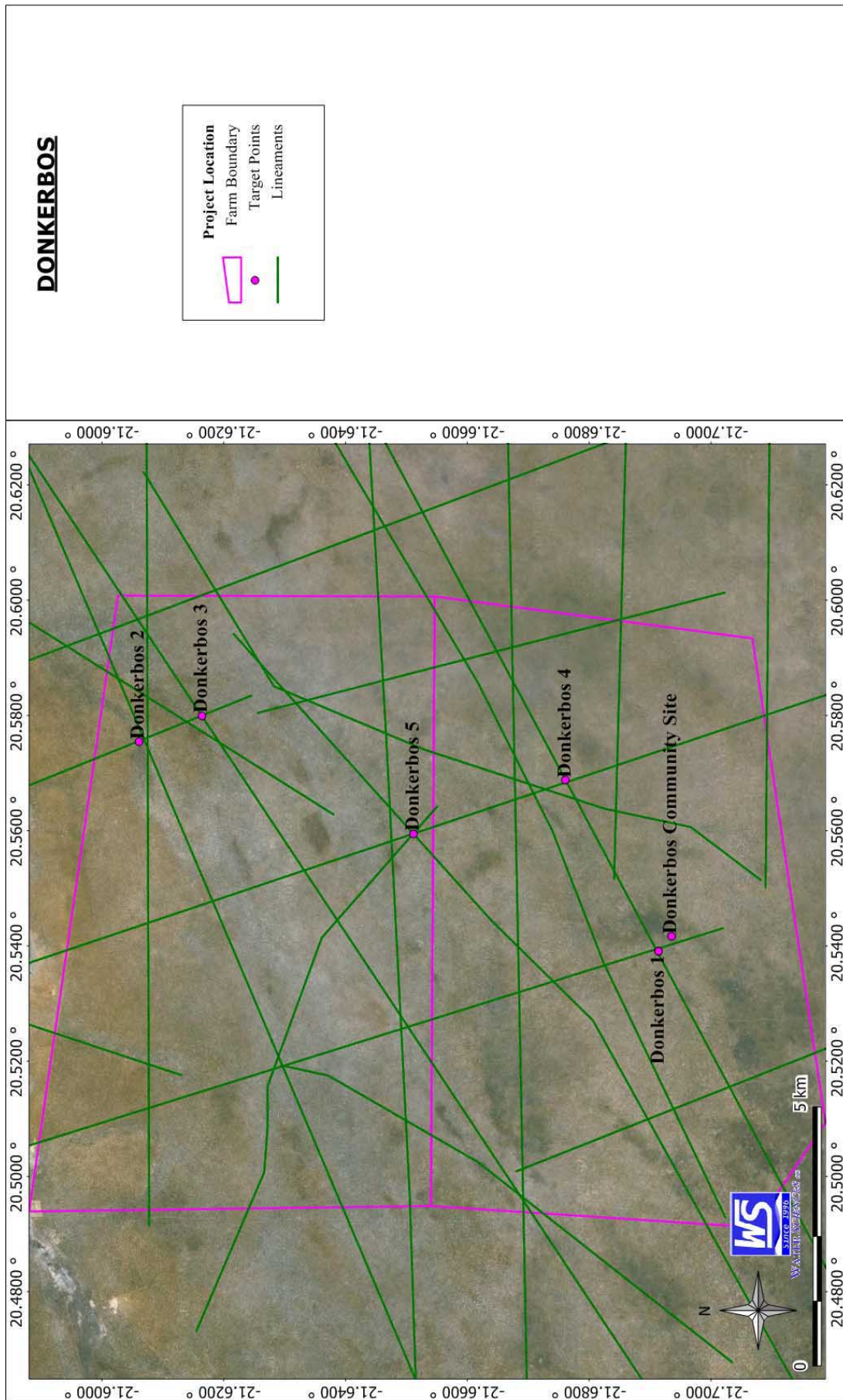


Figure 1. Location Map

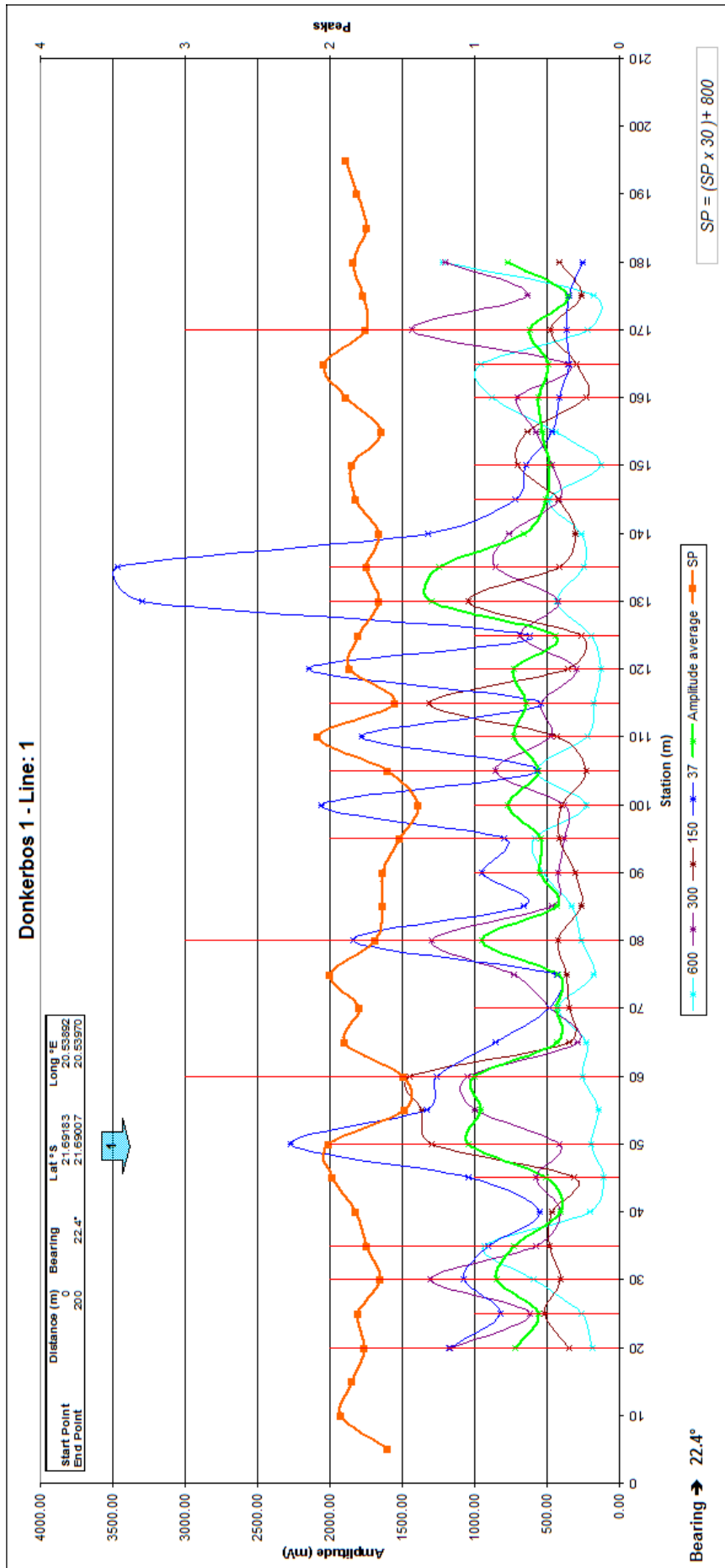


Figure 2. EM Profile Donkerbos 1

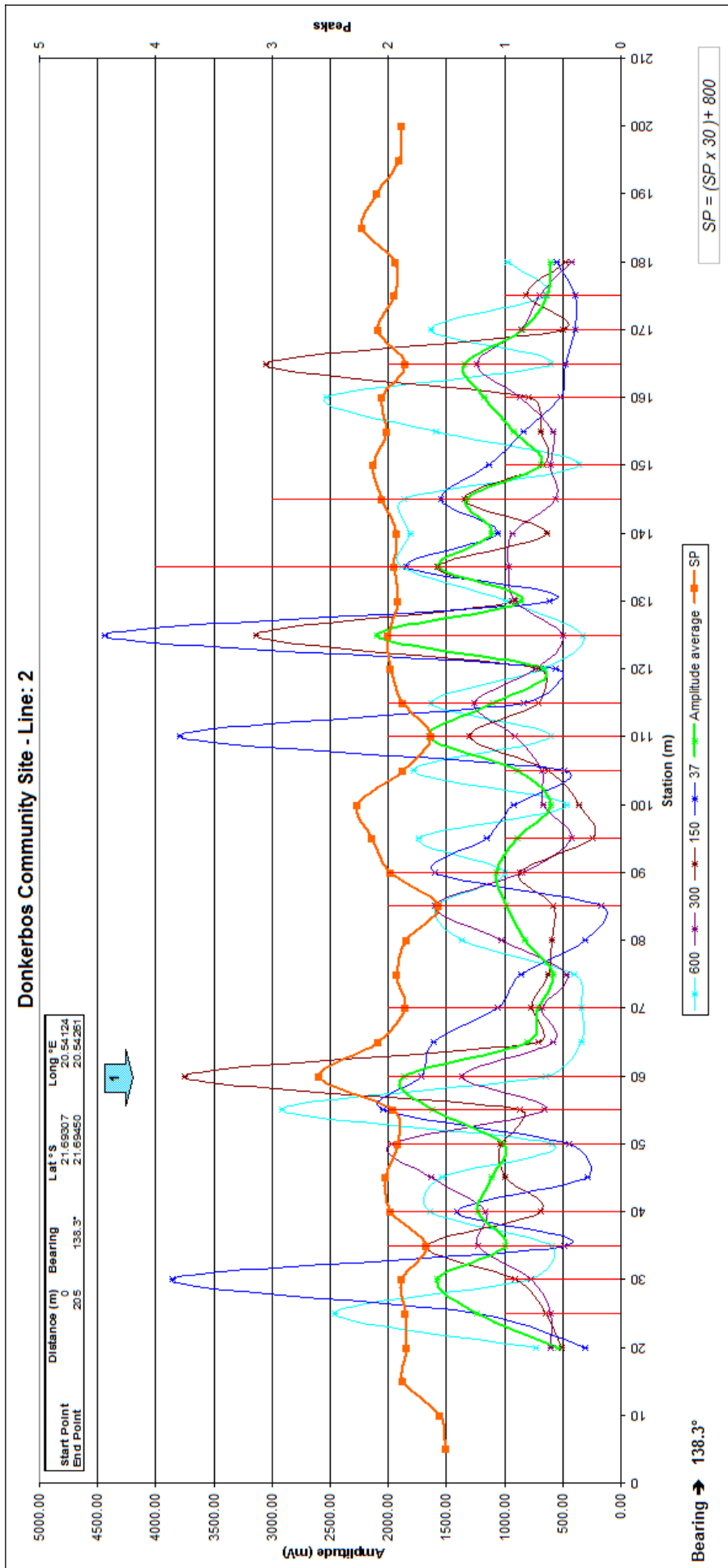


Figure 3. EM Profile Donkerbos Community Site

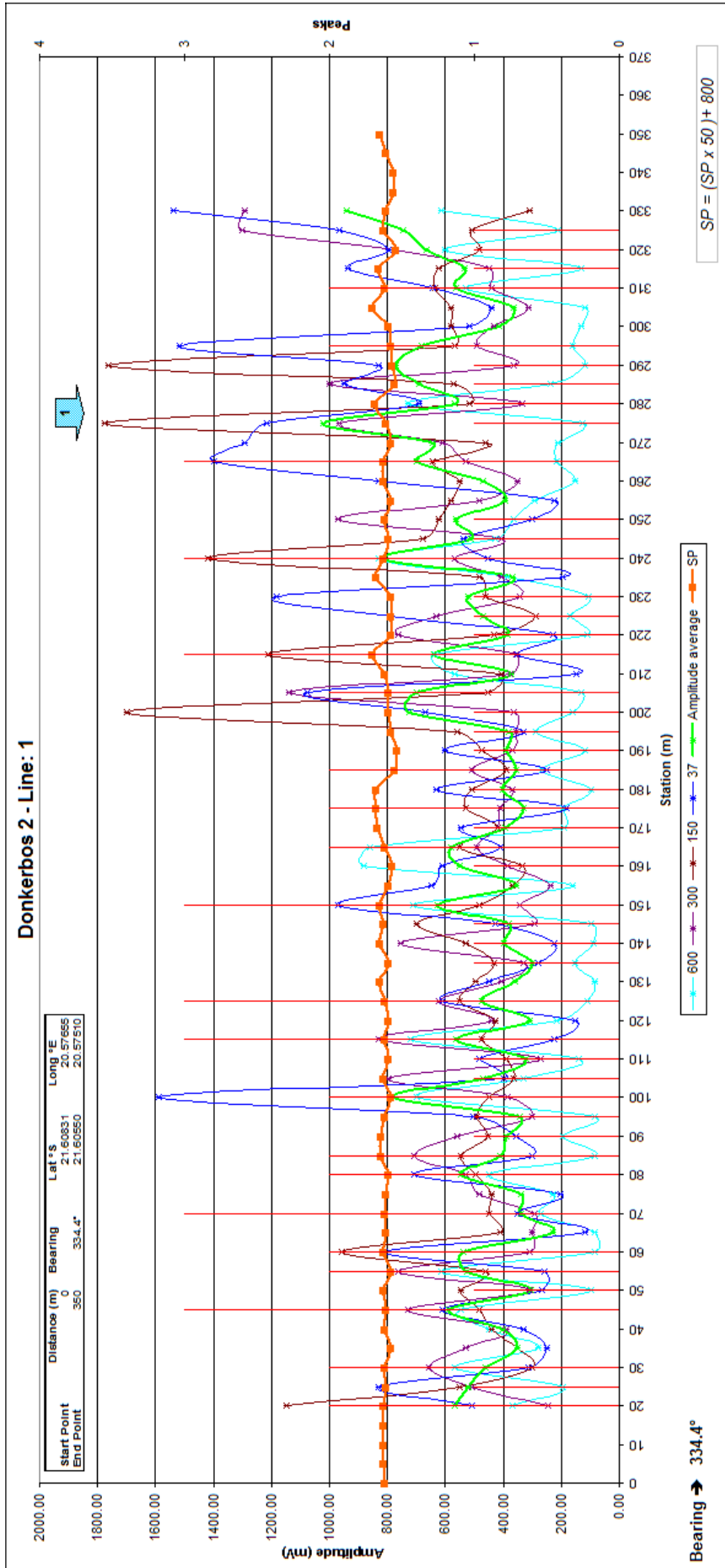


Figure 4. EM Profile Donkerbos 2

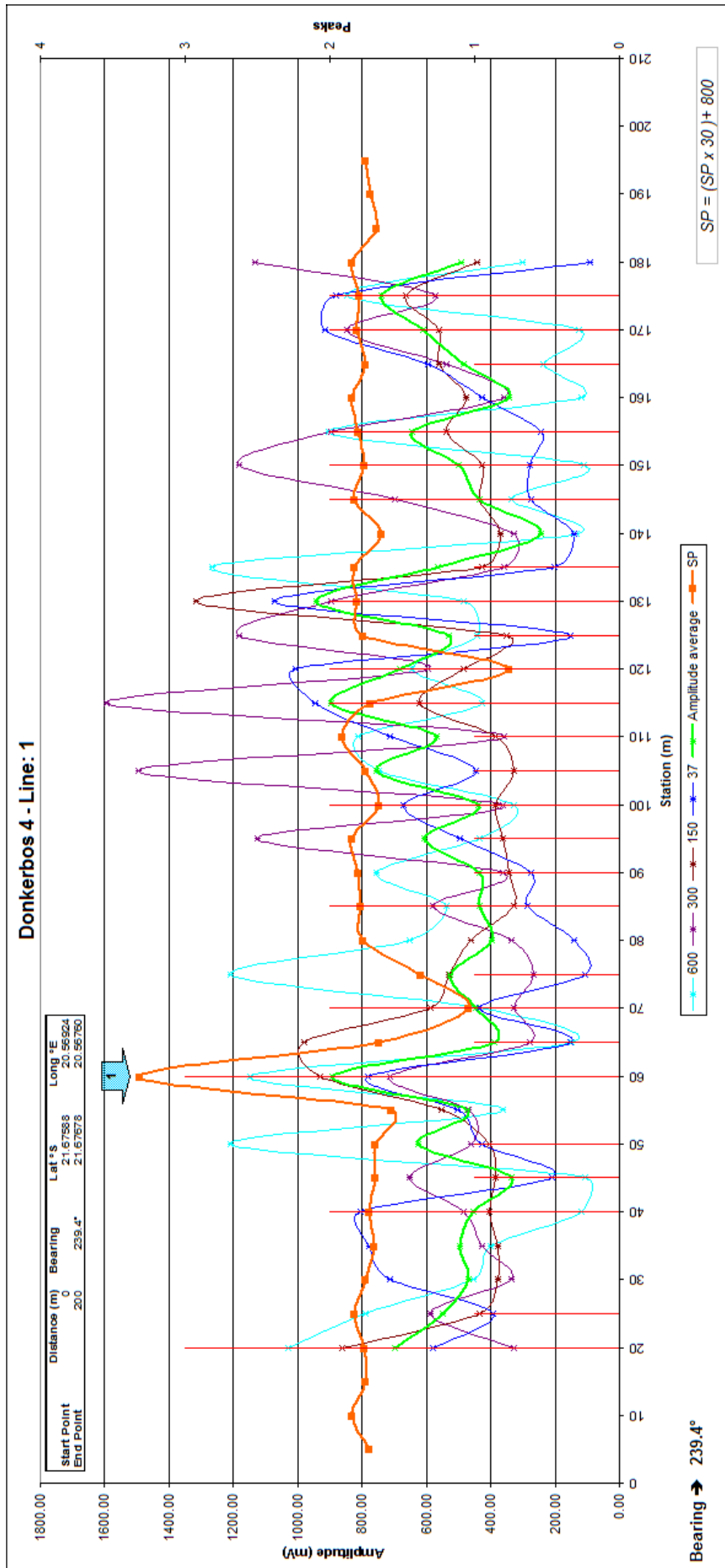


Figure 5. EM Profile Donkerbos 4

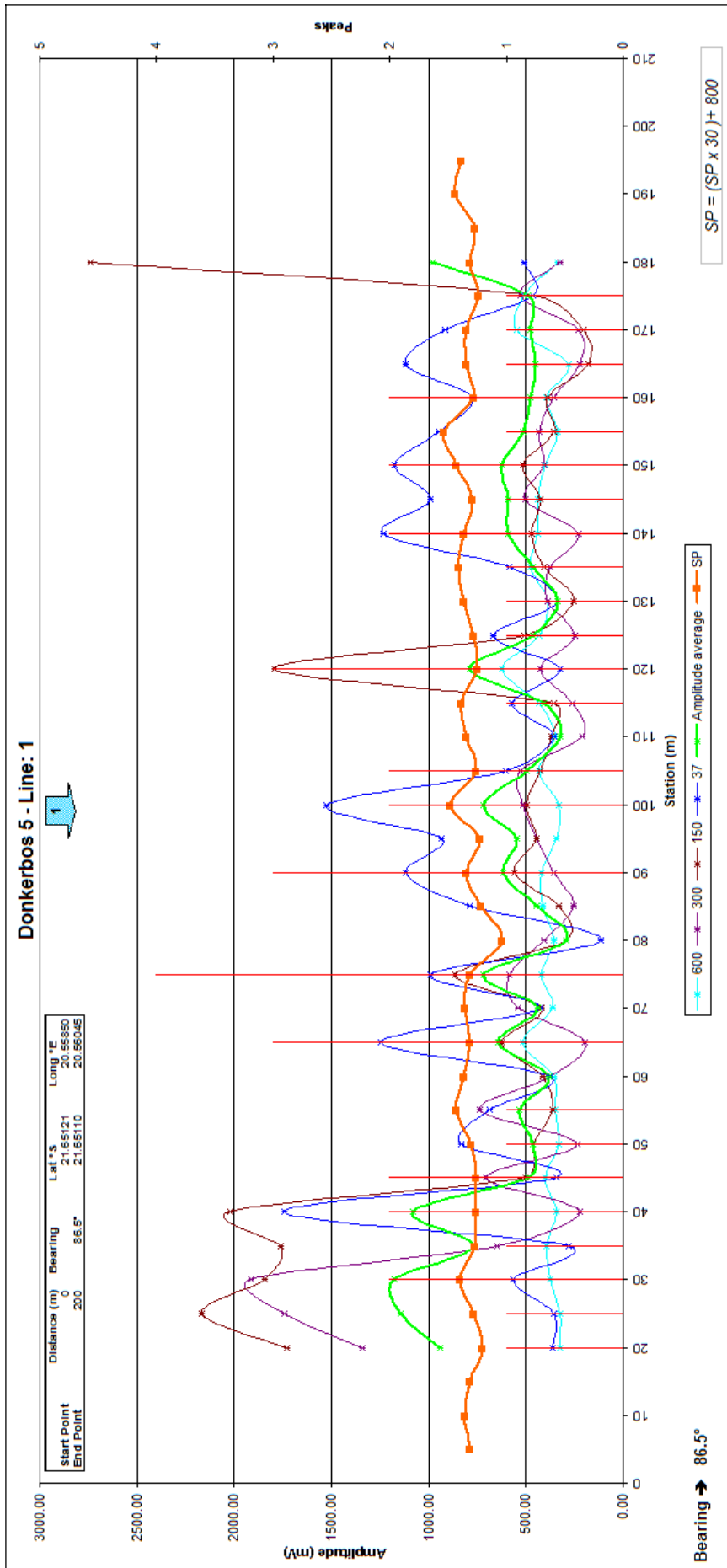


Figure 6. EM Profile Donkerbos 5