A follow up on using resisivity for
Treasure Hunting

The four best arrays I use, their setup and value of the information I hope to attain.

1- **The Pole-to-Pole**

Using this array you use a 4-probe system, you use two remote probes set away from your grid 20 times the distance of the two measuring probes. The measuring probes are moved together taking readings, and are always the same distance apart. The max. Depth is determined by how far apart the measuring probes are spaced.
The disadvantage of this array is the distance you must set your remote probes. The best use for this array is looking for old building foundations or targets 2 feet or less deep. I use a jig I made with the measuring probes spaced 3 feet apart, and set my remote probes 60 feet from the grid.

2- **The two probe using one probe for measuring**

Using this array you use only two probes, one remote probe and one measuring probe. You set up your grid and set the remote probe 30 feet from it. With the measuring probe start in the upper left corner of your grid, and take readings no more than 3 feet apart across the row until you finish it, then drop down to the second row taking readings until you have finished your grid. The best use of this array is using computer software looking for targets two to six feet deep. This array will probably go deeper; I have tested it on a 6 feet deep known target.

3- **The two probe averaging array**

Using this array you use only two probes, set up your grid, but do not take measurements inside the grid. Instead you set each probe on the edges of your grid, and take your reading down the edge. Move both probes the same distance each time down the edge of your grid (appox. 3 feet apart between readings), take the next reading, keep doing this until you have reached the end of the grid. Then set your probes on the left side of grid, one at top and one at the bottom, and take readings across the grid in the right direction every 3 feet. If you make a drawing of your grid before you run it, and write the data reading down in each cell. All your cells will have 4 data readings around it. Add these together and divide by 4 and you have your average data reading for that cell. Do all the rest of the cells the same and put these average readings into computer software.

The disadvantage of this array is you must use computer software, since you are averaging your data you will not have the high peaks in your data readings you have with other arrays. IT will be very hard without using computer software to see a possible target from this field data. Using computer software will show a smooth pattern around targets and background trends.

The best use of this array is when the terrain around the target area, is rocky or for other reasons you have problems driving your probes in the ground.

4- Four probes in straight line array

Using this array all 4 probes are placed in a straight-line equal distance apart. Data readings are taken between probes 1 and 2, 1 and 3, 1 and 4, 2 and 3, 2 and 4, 3 and 4. You can see taking readings this way gives you a lot of different ways of checking the depth of a target. After you take these readings you move the entire line of probes up 10 feet and repeat collecting same data readings. You do this until you reach the end of your grid.

The best use of this array is finding Caves, Tunnels, or Deep objects

These are my favorites;

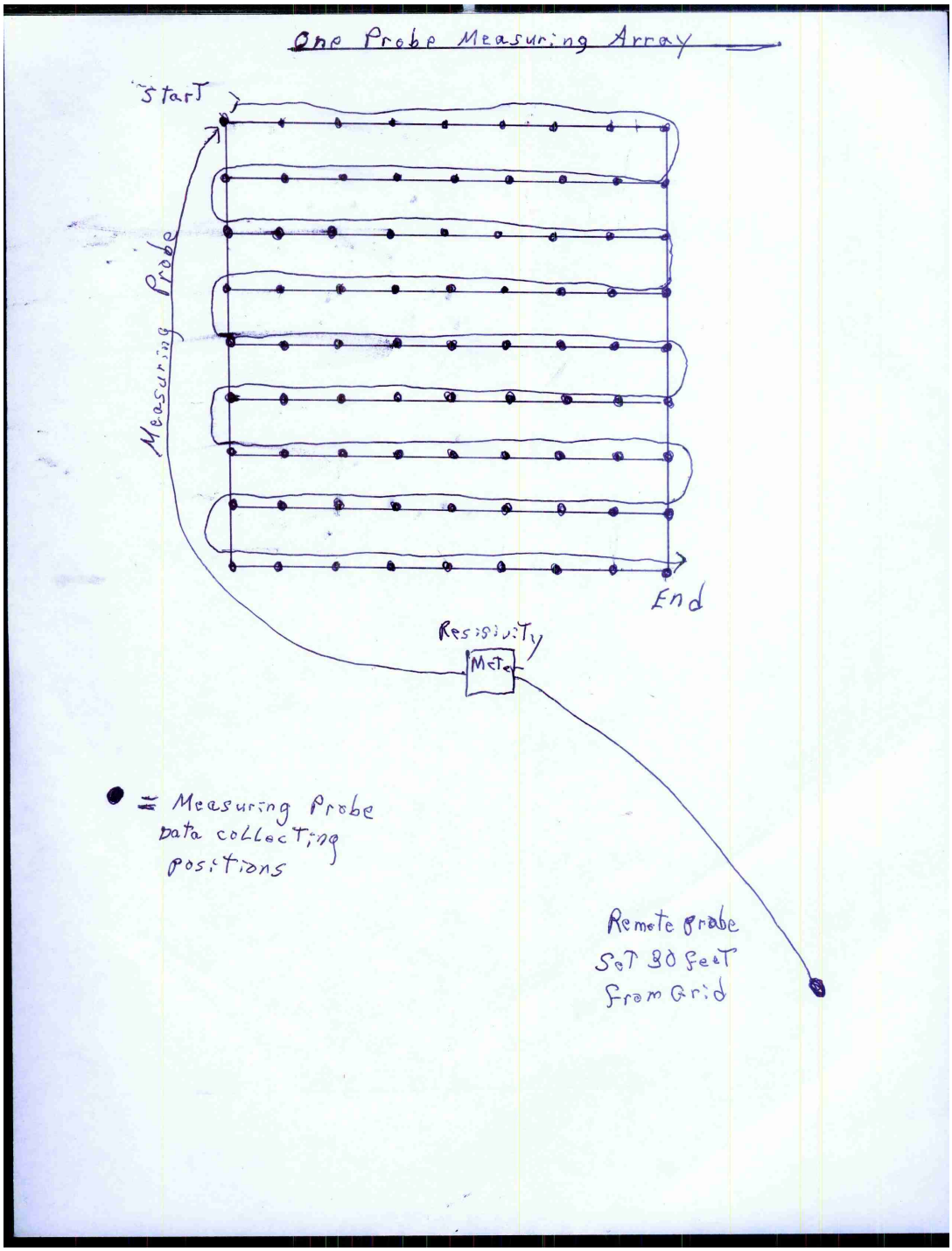
There is another array that is good for large areas, if you have the option of switching 6-ways. That is the square array like the Mother-Lode-Locator manual recommends. You set up a square grid and switch between the 4 outside probes and the diagonal probes for data readings in one setup. You look for a 25% drop or increase in data readings and move you next grid in that direction, making it about ½ the size.

For more in-depth information on different arrays, go to this site.

http://www.heritagegeophysics.com/images/lokenote.pdf

Kybob

Two probe array using one probe for measuring



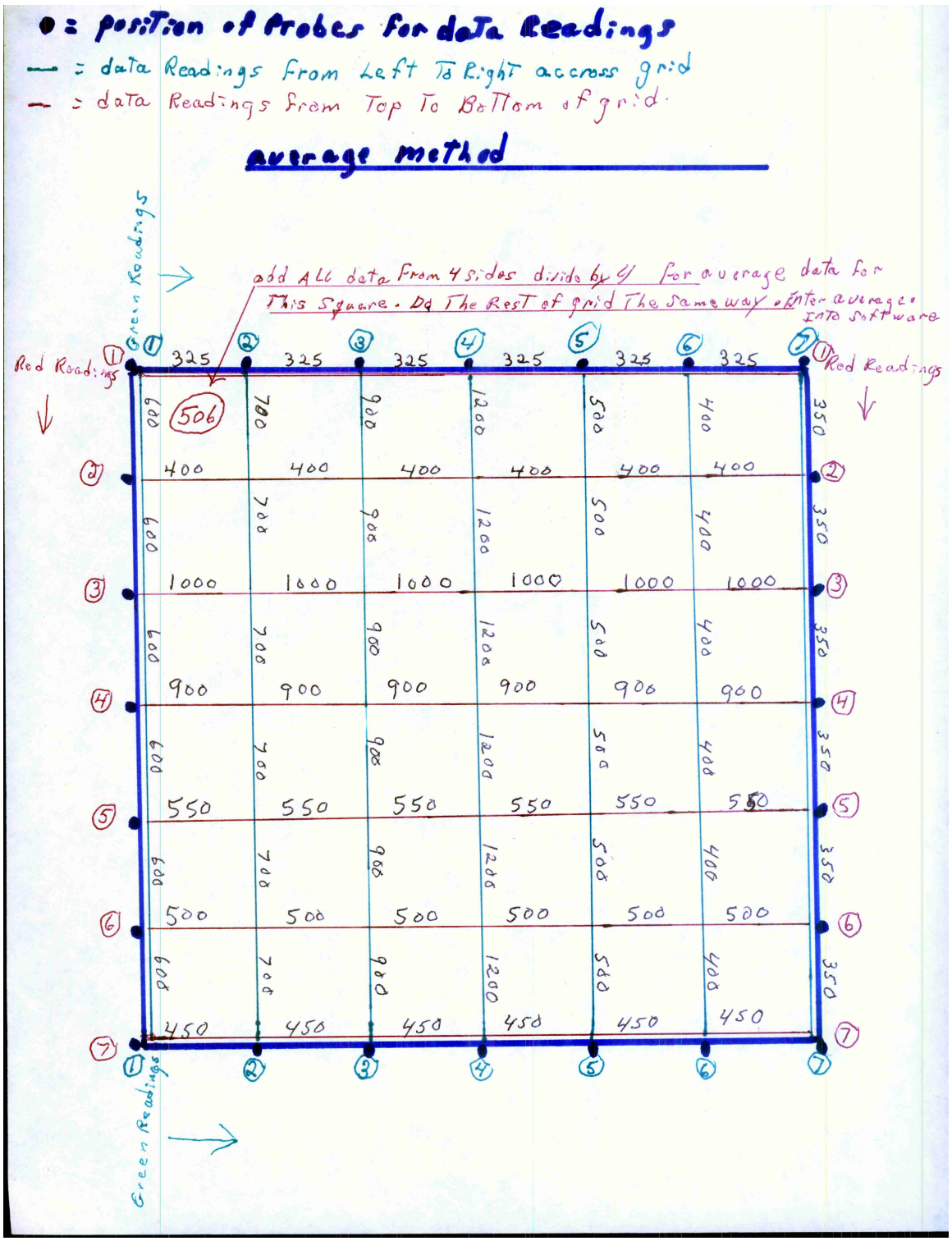
Pole-to-Pole Array

Pole-Pole Resistivity Depth Data
Best Array for Computer Software
.867 x Spread of c1 and p1 probes = Image Depth
Ze = Image Depth
Ze x 1.6 = Max. Current depth
Ze x .5 = Min. Current depth

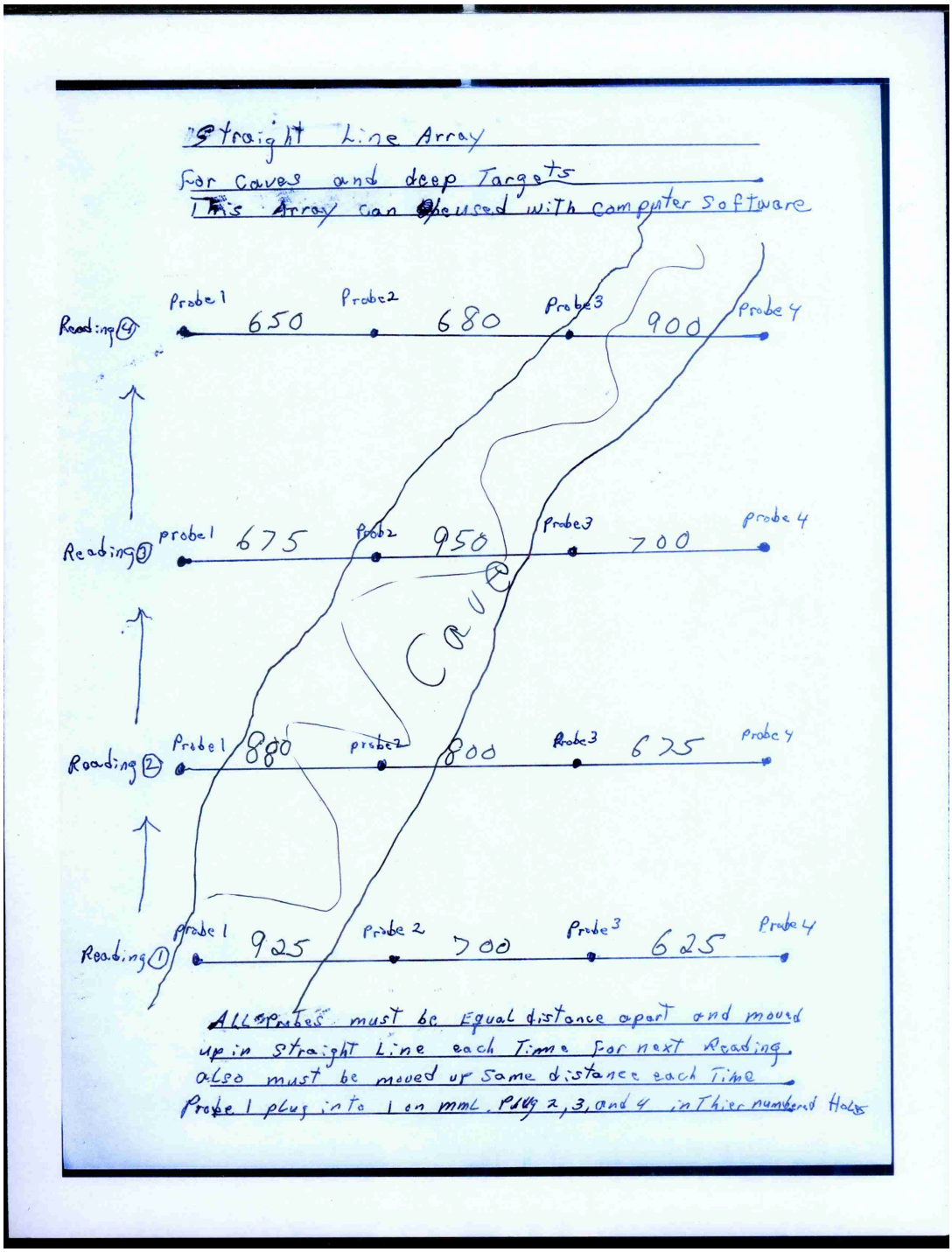
Probe Spread	Image Depth			Distance of Remote Probes		
	Ze Min.	Ze	Ze Max.	10x	15x	20x
3 feet	1.30 ft	2.60 feet	4.16 ft	30 ft.	45 ft.	60 ft
4 feet	1.73 ft	3.47 feet	5.55 ft	40 ft.	60 ft.	80 ft.
5 feet	2.16 ft	4.33 feet	6.93 ft	50 ft.	75 ft.	100 ft.
6 feet	2.60 ft	5.20 feet	8.32 ft	60 ft.	90 ft.	120 ft.
7 feet	3.03 ft	6.06 feet	9.70 ft	70 ft.	105 ft.	140 ft.
8 feet	3.46 ft	6.93 feet	11.09 ft	80 ft.	120 ft.	160 ft.
9 feet	3.90 ft	7.80 feet	12.48 ft	90 ft.	135 ft.	180 ft.
10 feet	4.33 ft	8.67 feet	13.87 ft	100 ft.	150 ft.	200 ft.
11 feet	4.76 ft	9.53 feet	15.25 ft	110 ft.	165 ft.	220 ft.
12 feet	5.20 ft	10.40 feet	16.64 ft	120 ft.	180 ft.	240 ft.
13 feet	5.63 ft	11.27 feet	18.03 ft	130 ft.	195 ft.	260 ft.
14 feet	6.06 ft	12.13 feet	19.40 ft	140 ft.	210 ft.	280 ft.
15 feet	6.50 ft	13.00 feet	20.80 ft	150 ft.	225 ft.	300 ft.
16 feet	6.93 ft	13.87 feet	22.19 ft	160 ft.	240 ft.	320 ft.
17 feet	7.37 ft	14.74 feet	23.58 ft	170 ft.	255 ft.	340 ft.
18 feet	7.80 ft	15.60 feet	24.96 ft	180 ft.	270 ft.	360 ft.
19 feet	8.23 ft	16.47 feet	26.35 ft	190 ft.	285 ft.	380 ft.
20 feet	8.67 ft	17.34 feet	27.74 ft	200 ft.	300 ft.	400 ft.

Note! ***Use 20x for remote distance when possible!***

Example of Data collection using the average Array



Example of Straight Line Array



Above example in Software