

MAGNETIC
FIELD
ANGLE
FROM
VERTICAL
DEGREES

DEPTH

TABLE

(MULTIPLY $\frac{d}{l}$ BY DISTANCE FROM GND ZERO TO OBTAIN DEPTH)
FOR HORIZONTAL TRANSMIT COIL

ANGLE	depth length	ANGLE	$\frac{d}{l}$	ANGLE	$\frac{d}{l}$	ANGLE	$\frac{d}{l}$	ANGLE	$\frac{d}{l}$
0.5°	171.89	19.5°	4.36	38.5°	2.12	57.5°	1.33	76.5	.910
1°	85.94	20°	4.24	39	2.09	58	1.32	77	.901
1.5	57.29	20.5	4.13	39.5	2.06	58.5	1.30	77.5	.893
2	42.97	21	4.03	40	2.03	59	1.29	78	.884
2.5	34.37	21.5	3.94	40.5	2.01	59.5	1.28	78.5	.876
3	28.64	22	3.84	41	1.98	60	1.26	79	.868
3.5	24.55	22.5	3.75	41.5	1.95	60.5	1.25	79.5	.860
4	21.47	23	3.67	42	1.93	61	1.24	80	.852
4.5	19.09	23.5	3.59	42.5	1.90	61.5	1.22	80.5	.844
5	17.17	24	3.51	43	1.88	62	1.21	81	.836
5.5	15.61	24.5	3.44	43.5	1.85	62.5	1.20	81.5	.828
6	14.31	25	3.37	44	1.83	63	1.19	82	.820
6.5	13.20	25.5	3.30	44.5	1.80	63.5	1.17	82.5	.813
7	12.25	26	3.23	45	1.78	64	1.16	83	.805
7.5	11.44	26.5	3.17	45.5	1.76	64.5	1.15	83.5	.798
8	10.72	27	3.10	46	1.74	65	1.14	84	.790
8.5	10.09	27.5	3.05	46.5	1.71	65.5	1.13	84.5	.783
9	9.52	28	2.99	47	1.69	66	1.12	85	.776
9.5	9.02	28.5	2.93	47.5	1.67	66.5	1.10	85.5	.769
10	8.57	29	2.88	48	1.65	67	1.09	86	.761
10.5	8.15	29.5	2.83	48.5	1.63	67.5	1.08	86.5	.754
11	7.78	30	2.78	49	1.61	68	1.07	87	.748
11.5	7.44	30.5	2.73	49.5	1.59	68.5	1.06	87.5	.741
12	7.13	31	2.68	50	1.58	69	1.05	88	.734
12.5	6.84	31.5	2.64	50.5	1.56	69.5	1.04	88.5	.727
13	6.57	32	2.59	51	1.54	70	1.03	89	.720
13.5	6.33	32.5	2.55	51.5	1.52	70.5	1.02	89.5	.714
14	6.10	33	2.51	52	1.50	71	1.01	90	.707
14.5	5.89	33.5	2.47	52.5	1.49	71.5	1.00	90.5	.701
15	5.69	34	2.43	53	1.47	72	.992		
15.5	5.50	34.5	2.39	53.5	1.45	72.5	.982		
16	5.33	35	2.35	54	1.44	73	.973		
16.5	5.16	35.5	2.32	54.5	1.42	73.5	.963		
17	5.01	36	2.28	55	1.41	74	.954		
17.5	4.86	36.5	2.25	55.5	1.39	74.5	.945		
18	4.72	37	2.22	56	1.38	75	.936		
18.5	4.59	37.5	2.18	56.5	1.36	75.5	.927		
19	4.47	38	2.15	57	1.35	76	.918		

See p 56
for equation
and program

$$\frac{d}{l} = \frac{3 \cos \theta + \sqrt{8 + \cos^2 \theta}}{4 \sin \theta}$$