Table B30. TI-2: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)
A	-10.0	6.5	7.1	-0.6
M	138.5	8.6	5.4	3.2
B	285.0	12.4	7.3	5.1
Geophone				
1	0.0	6.5	6.8	-0.3
2	25.0	6.5	6.8	-0.3
3	50.0	7.0	7.7	-0.7
4	75.0	7.4	6.2	1.2
5	100.0	8.0	5.7	2.3
6	125.0	8.5	4.7	3.8
7	150.0	8.9	6.1	2.8
8	175.0	8.6	6.2	2.4
9	200.0	8.5	7.5	1.0
10	225.0	8.8	7.7	1.1
11	250.0	9.2	7.3	1.9
12	275.0	12.7	7.7	5.0

	Layer 1	Layer 2
Velocities used	1131.	5550.

Table B31. BST-1: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	3.0	-25.0	0.0	0.0
A	3.5	-10.0	0.0	0.0
M	3.3	137.5	10.0	0.0
B	4.9	285.0	0.0	0.0
R	4.9	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	3.5	0.0	0.0	14.5	1	8.4	1	37.5	2	62.0	3	63.5	3
2	4.7	25.0	0.0	20.8	2	19.0	2	33.0	2	59.5	3	61.0	3
3	4.4	50.0	0.0	26.6	2	24.2	2	28.7	2	55.0	3	57.2	3
4	4.2	75.0	0.0	33.0	2	29.5	2	24.0	2	52.0	2	54.5	2
5	3.8	100.0	0.0	35.0	2	32.8	2	15.4	2	43.6	2	46.5	2
6	3.4	125.0	0.0	40.2	2	37.3	2	11.0	1	39.4	2	41.0	2
7	3.3	150.0	0.0	44.5	2	43.0	2	11.0	1	35.2	2	37.5	2
8	3.3	175.0	0.0	49.0	2	46.5	2	14.5	2	29.5	2	32.5	2
9	3.7	200.0	0.0	53.0	2	50.0	2	20.6	2	24.2	2	27.0	2
10	4.5	225.0	0.0	58.2	3	55.0	2	25.5	2	18.6	2	22.5	2
11	4.7	250.0	0.0	62.0	3	58.0	3	29.2	2	14.0	2	17.4	2
12	4.9	275.0	0.0	66.0	3	63.3	3	34.0	2	8.1	1	13.0	1

Table B32. BST-1: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	3.5	9.9	-6.4	53.9	-50.4
M	137.5	3.3	7.4	-4.1	52.7	-49.4
B	285.0	4.9	7.9	-3.0	48.7	-43.8
Geophone						
1	0.0	3.5	9.7	-6.2	53.8	-50.3
2	25.0	4.7	9.6	-4.9	54.8	-50.1
3	50.0	4.4	10.3	-5.9	54.4	-50.0
4	75.0	4.2	10.6	-6.4	54.3	-50.1
5	100.0	3.8	7.5	-3.7	53.4	-49.4
6	125.0	3.4	7.3	-3.9	52.9	-49.5
7	150.0	3.3	7.5	-4.2	52.7	-49.4
8	175.0	3.3	6.8	-3.5	52.5	-49.1
9	200.0	3.7	6.2	-2.5	52.8	-49.1
10	225.0	4.5	6.1	-1.6	53.2	-48.7
11	250.0	4.7	5.9	-1.2	50.0	-45.3
12	275.0	4.9	6.9	-2.0	48.3	-43.4

	Layer 1	Layer 2	Layer 3
Velocities used	1497.	5110.	6343.

Table B33. BST-2: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	4.5	-25.0	0.0	0.0
A	4.7	-10.0	0.0	0.0
M	5.2	136.5	10.0	0.0
B	6.2	285.0	0.0	0.0
R	6.2	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	4.9	0.0	0.0	12.0	1	7.5	1	36.6	3	62.5	3	67.0	3
2	4.9	25.0	0.0	19.0	2	17.5	2	34.5	2	61.5	2	65.0	3
3	4.1	50.0	0.0	25.0	2	22.0	2	30.0	2	56.5	2	59.5	2
4	4.3	75.0	0.0	28.8	2	27.0	2	22.8	2	50.0	2	53.7	2
5	4.5	100.0	0.0	34.4	2	32.0	2	19.2	2	45.0	2	49.5	2
6	4.9	125.0	0.0	39.0	2	36.5	2	13.3	1	41.0	2	44.6	2
7	5.2	150.0	0.0	44.0	2	43.0	2	14.0	1	36.5	2	41.0	2
8	5.6	175.0	0.0	49.2	2	47.0	2	19.2	2	35.0	2	33.3	2
9	6.1	200.0	0.0	52.0	2	51.0	2	22.5	2	25.8	2	25.2	2
10	6.1	225.0	0.0	57.0	2	56.0	2	29.0	2	18.0	2	20.6	2
11	6.4	250.0	0.0	63.0	3	60.5	2	32.0	2	14.0	2	17.0	2
12	6.2	275.0	0.0	65.0	3	64.0	2	37.0	2	9.0	1	14.0	1

Table B34. BST-2: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	4.7	6.4	-1.7	48.9	-44.2
M	136.5	5.2	9.9	-4.7	60.2	-55.0
B	285.0	6.2	7.2	-1.0	52.5	-46.3
Geophone						
1	0.0	4.9	7.0	-2.1	48.3	-43.4
2	25.0	4.9	9.1	-4.2	49.2	-44.3
3	50.0	4.1	9.9	-5.8	49.4	-45.3
4	75.0	4.3	9.1	-4.8	47.4	-43.1
5	100.0	4.5	9.3	-4.8	44.6	-40.1
6	125.0	4.9	9.5	-4.6	57.4	-52.5
7	150.0	5.2	10.0	-4.8	63.1	-57.9
8	175.0	5.6	9.8	-4.2	63.8	-57.9
9	200.0	6.1	6.8	-0.7	64.2	-58.1
10	225.0	6.1	6.3	-0.2	64.1	-58.0
11	250.0	6.4	6.4	-0.0	64.1	-57.7
12	275.0	6.2	6.5	-0.3	51.6	-45.4

	Layer 1	Layer 2	Layer 3
Velocities used	1443.	4936.	12074.

Table B35. BST-3: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	6.2	-25.0	0.0	0.0
A	6.2	-10.0	0.0	0.0
M	5.2	137.0	10.0	0.0
B	7.0	285.0	0.0	0.0
R	7.0	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	6.2	0.0	0.0	13.0	1	9.0	1	30.5	3	62.0	3	64.5	3
2	6.2	25.0	0.0	17.0	2	18.5	2	29.5	2	55.5	3	62.6	3
3	5.8	50.0	0.0	19.4	2	23.8	2	20.0	2	44.5	2	59.4	3
4	5.5	75.0	0.0	29.8	2	28.5	2	16.0	2	40.0	2	55.0	2
5	5.2	100.0	0.0	33.6	2	31.8	2	12.0	2	37.0	2	49.0	2
6	5.2	125.0	0.0	40.0	2	37.8	2	11.7	1	35.5	2	41.6	2
7	5.2	150.0	0.0	44.5	2	42.8	2	12.7	1	33.0	2	41.0	2
8	5.7	175.0	0.0	51.0	2	48.0	2	14.0	2	23.5	2	30.3	2
9	6.0	200.0	0.0	54.0	2	53.0	2	16.8	2	20.5	2	21.5	2
10	6.7	225.0	0.0	58.8	2	56.8	2	19.8	2	18.5	2	19.5	2
11	6.8	250.0	0.0	63.2	3	62.0	2	21.5	2	15.5	2	17.0	2
12	6.9	275.0	0.0	65.0	3	66.0	3	22.5	2	7.5	1	13.0	1

Table B36. BST-3: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	6.2	6.4	-0.2	56.5	-50.3
M	137.0	5.2	7.3	-2.1	59.6	-54.4
B	285.0	7.0	9.0	-0.2	32.4	-25.4
Geophone						
1	0.0	6.2	6.6	-0.4	51.6	-45.4
2	25.0	6.2	8.1	-1.9	54.0	-47.8
3	50.0	5.8	6.6	-0.8	62.9	-57.1
4	75.0	5.5	8.5	-3.0	58.5	-53.0
5	100.0	5.2	7.5	-2.3	54.1	-48.9
6	125.0	5.2	6.8	-1.6	50.0	-44.8
7	150.0	5.2	7.8	-2.6	70.1	-64.9
8	175.0	5.7	6.6	-0.9	57.4	-51.7
9	200.0	6.0	5.3	0.7	51.3	-45.3
10	225.0	6.7	6.2	0.5	45.5	-38.8
11	250.0	6.8	7.5	-0.7	39.2	-32.4
12	275.0	6.9	8.9	-2.0	35.1	-28.2

	Layer 1	Layer 2	Layer 3
Velocities used	1486.	5530.	7432.

Table B37. BWT-1: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	5.5	-25.0	0.0	0.0
M	4.2	139.5	10.0	0.0
R	1.7	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	M	SP	R
1	5.5	0.0	0.0	13.5	1	35.5	2	64.2	3
2	5.3	25.0	0.0	19.0	2	31.0	2	58.8	3
3	5.4	50.0	0.0	25.5	2	27.5	2	55.3	2
4	5.2	75.0	0.0	30.8	2	22.0	2	51.3	2
5	5.0	100.0	0.0	38.3	2	18.3	2	46.0	2
6	4.5	125.0	0.0	40.4	2	12.2	1	40.2	2
7	3.8	150.0	0.0	45.1	2	11.2	1	34.4	2
8	3.5	175.0	0.0	49.5	2	16.6	2	28.8	2
9	3.2	200.0	0.0	56.4	2	22.0	2	25.1	2
10	3.1	225.0	0.0	60.2	3	27.0	2	20.0	2
11	2.0	250.0	0.0	63.2	3	29.5	3	13.2	2
12	1.7	275.0	0.0	66.9	3	33.3	3	8.4	1

Table B38. B6T-1: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
F	-25.0	5.5	3.1	2.4	98.3	-92.8
M	139.5	4.2	9.2	-5.0	57.3	-53.1
R	300.0	1.7	2.3	-0.6	16.7	-15.0
Geophone						
1	0.0	5.5	4.4	1.1	92.4	-86.9
2	25.0	5.3	7.0	-1.7	86.3	-81.0
3	50.0	5.4	8.8	-3.4	80.5	-75.1
4	75.0	5.2	9.7	-4.5	74.3	-69.1
5	100.0	5.0	11.0	-6.0	68.2	-63.2
6	125.0	4.5	10.0	-5.5	61.8	-57.3
7	150.0	3.8	8.5	-4.7	53.8	-50.0
8	175.0	3.5	8.3	-4.8	46.3	-42.8
9	200.0	3.2	9.3	-6.1	42.5	-39.3
10	225.0	3.1	8.2	-5.1	37.5	-34.4
11	250.0	2.0	3.8	-1.8	27.8	-25.8
12	275.0	1.7	3.1	-1.4	22.5	-20.8

	Layer 1	Layer 2	Layer 3
Velocities used	2043.	4913.	6013.

Table B39 CL-1: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	5.0	-25.0	0.0	0.0
M	6.5	140.0	25.0	0.0
R	6.5	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	M	SP	R
1	5.0	0.0	0.0	15.0	1	31.0	2	65.0	3
2	5.0	25.0	0.0	20.9	2	26.5	2	60.4	2
3	5.2	50.0	0.0	25.0	2	20.3	2	55.8	2
4	6.2	75.0	0.0	30.2	2	17.5	2	52.7	2
5	6.5	100.0	0.0	33.0	2	14.5	2	47.0	2
6	6.5	125.0	0.0	43.3	2	14.2	1	43.8	2
7	6.5	150.0	0.0	47.6	2	17.0	1	40.5	2
8	6.5	175.0	0.0	51.2	2	19.0	2	31.6	2
9	6.5	200.0	0.0	54.2	2	23.5	2	30.4	2
10	6.5	225.0	0.0	59.8	3	28.6	2	25.6	2
11	6.5	250.0	0.0	61.6	3	34.0	2	17.3	2
12	6.5	275.0	0.0	65.0	3	41.8	2	12.0	1

Table B40. CL-1: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
F	-25.0	5.0	1.7	3.3	48.9	-43.9
M	140.0	6.5	11.3	-4.8	97.9	-91.4
R	300.0	6.5	17.5	-11.0	108.0	-101.5
Geophone						
1	0.0	5.0	2.7	2.3	55.6	-50.6
2	25.0	5.0	6.1	-1.1	60.4	-55.4
3	50.0	5.2	5.8	-0.6	67.7	-62.5
4	75.0	6.2	7.5	-1.3	75.7	-69.5
5	100.0	6.5	7.5	-1.0	83.1	-76.6
6	125.0	6.5	11.1	-4.6	90.2	-83.7
7	150.0	6.5	11.5	-5.0	103.0	-96.5
8	175.0	6.5	11.5	-5.0	103.6	-97.1
9	200.0	6.5	12.4	-5.9	103.2	-96.7
10	225.0	6.5	13.2	-6.7	100.3	-93.8
11	250.0	6.5	13.9	-7.4	103.9	-97.4
12	275.0	6.5	16.6	-10.1	107.4	-100.9

	Layer 1	Layer 2	Layer 3
Velocities used	1847.	5210.	9338.

Table B41. DS3CT: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	9.0	-25.0	0.0	0.0
A	9.0	-10.0	0.0	0.0
M	9.0	137.5	10.0	0.0
B	9.0	285.0	0.0	0.0
R	9.0	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	9.0	0.0	0.0	15.3	1	10.0	1	34.2	2	56.1	3	61.5	3
2	8.5	25.0	0.0	18.0	2	14.1	2	33.0	2	52.2	3	59.7	3
3	8.0	50.0	0.0	18.6	2	17.6	2	28.6	2	49.1	3	57.0	3
4	7.5	75.0	0.0	20.5	2	19.5	2	20.3	2	47.0	3	52.0	3
5	8.0	100.0	0.0	28.8	2	22.5	2	18.0	2	45.0	2	50.0	2
6	9.0	125.0	0.0	35.5	2	26.3	2	13.7	1	39.5	2	44.8	2
7	9.0	150.0	0.0	41.0	2	36.0	2	14.0	1	34.0	2	41.5	2
8	8.5	175.0	0.0	47.2	2	37.3	2	20.0	2	28.2	2	32.0	2
9	9.0	200.0	0.0	53.9	2	40.4	2	21.0	2	21.0	2	26.0	2
10	9.0	225.0	0.0	56.2	3	42.7	3	23.5	2	16.5	2	19.0	2
11	9.0	250.0	0.0	61.2	3	46.4	3	27.3	2	19.2	2	17.0	2
12	9.0	275.0	0.0	64.0	3	47.4	3	30.0	2	9.0	1	15.8	1

Table B62. DS3CT: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	9.0	4.2	4.8	14.5	-5.5
M	137.5	9.0	7.8	1.2	59.9	-50.9
B	285.0	9.0	4.4	4.6	52.2	-43.2
Geophone						
1	0.0	9.0	4.4	4.6	17.5	-8.5
2	25.0	8.5	5.9	2.6	37.9	-29.4
3	50.0	8.0	4.1	3.9	49.9	-41.9
4	75.0	7.5	1.4	6.1	52.4	-44.9
5	100.0	8.0	6.1	1.9	55.3	-47.3
6	125.0	9.0	7.7	1.3	58.7	-47.3
7	150.0	9.0	7.8	1.2	61.1	-52.1
8	175.0	8.5	6.0	2.5	63.0	-54.5
9	200.0	9.0	5.0	4.0	56.9	-47.9
10	225.0	9.0	2.4	6.6	52.8	-43.8
11	250.0	9.0	6.1	2.9	54.5	-45.5
12	275.0	9.0	4.7	4.3	53.0	-44.0

	Layer 1	Layer 2	Layer 3
Velocities used	1273.	5439.	8720.

Table B43. DS5CT: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	8.5	-25.0	0.0	0.0
A	8.5	-10.0	0.0	0.0
M	8.5	137.5	10.0	0.0
B	8.5	285.0	0.0	0.0
R	8.5	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	8.5	0.0	0.0	17.0	1	9.5	1	42.5	2	65.5	3	66.5	3
2	8.5	25.0	0.0	19.3	2	23.6	2	36.9	2	61.1	3	63.3	3
3	8.5	50.0	0.0	21.8	2	26.1	2	33.6	2	57.1	3	60.0	3
4	8.5	75.0	0.0	23.7	2	33.5	2	26.4	2	51.8	2	55.7	3
5	8.5	100.0	0.0	36.8	2	36.6	2	24.1	2	50.0	2	54.0	2
6	8.5	125.0	0.0	40.0	2	42.5	2	13.6	1	43.7	2	45.5	2
7	8.5	150.0	0.0	46.2	2	45.4	2	13.7	1	42.1	2	41.8	2
8	8.5	175.0	0.0	49.6	2	49.5	2	23.9	2	34.5	2	37.3	2
9	8.5	200.0	0.0	53.8	2	54.0	2	25.8	2	28.1	2	28.8	2
10	8.5	225.0	0.0	59.3	2	55.5	3	28.0	2	25.5	2	24.5	2
11	8.5	250.0	0.0	61.2	3	58.5	3	39.0	2	19.5	2	22.8	2
12	8.5	275.0	0.0	65.5	3	61.7	3	44.0	2	9.2	1	17.7	1

Table B44. [S5CT: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	8.5	9.6	-1.1	58.9	-50.4
M	137.5	8.5	9.9	-1.4	57.4	-48.9
B	285.0	8.5	10.5	-2.0	10.5	-2.0
Geophone						
1	0.0	8.5	9.6	-1.1	59.0	-50.5
2	25.0	8.5	9.7	-1.2	57.2	-48.7
3	50.0	8.5	8.5	-0.0	55.3	-46.8
4	75.0	8.5	7.2	1.3	60.8	-52.3
5	100.0	8.5	10.3	-1.8	59.5	-51.0
6	125.0	8.5	9.9	-1.4	58.3	-49.8
7	150.0	8.5	9.9	-1.4	56.6	-48.1
8	175.0	8.5	9.5	-1.0	45.1	-36.6
9	200.0	8.5	7.6	0.9	33.0	-24.5
10	225.0	8.5	7.3	1.2	21.0	-12.5
11	250.0	8.5	10.0	-1.5	13.7	-5.2
12	275.0	8.5	10.4	-1.9	10.4	-1.9

	Layer 1	Layer 2	Layer 3
Velocities used	1228.	5096.	7146.

Table B45. EPT-1: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	4.5	-25.0	0.0	0.0
A	4.5	-10.0	0.0	0.0
M	4.2	136.0	10.0	0.0
B	1.8	285.0	0.0	0.0
R	1.8	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	4.5	0.0	0.0	19.0	2	9.8	1	37.0	2	61.0	3	65.0	3
2	5.2	25.0	0.0	22.5	2	19.0	2	31.0	2	57.5	3	60.5	3
3	4.3	50.0	0.0	27.4	2	23.0	2	26.7	2	52.5	3	57.0	3
4	4.3	75.0	0.0	31.8	2	27.6	2	21.0	2	49.0	2	51.0	2
5	4.4	100.0	0.0	38.6	2	34.5	2	15.0	2	44.0	2	45.0	2
6	4.2	125.0	0.0	42.0	2	39.0	2	10.0	1	38.8	2	40.5	2
7	4.1	150.0	0.0	47.0	2	44.6	2	11.0	1	32.0	2	35.5	2
8	3.8	175.0	0.0	52.0	2	49.0	2	16.0	2	28.0	2	30.5	2
9	3.4	200.0	0.0	56.6	2	53.0	2	20.4	2	22.3	2	25.0	2
10	3.0	225.0	0.0	60.0	2	58.0	2	24.5	2	15.0	2	19.0	2
11	2.0	250.0	0.0	64.5	3	62.4	3	30.0	2	12.0	2	14.7	2
12	2.0	275.0	0.0	67.8	3	65.0	3	33.5	3	6.0	1	9.1	2

Table B46. EPT-1: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	4.5	8.9	-4.4	36.2	-31.7
M	136.0	4.2	7.2	-3.0	59.1	-54.9
B	285.0	1.8	2.2	-0.4	55.4	-53.6
Geophone						
1	0.0	4.5	8.8	-4.3	38.1	-33.6
2	25.0	5.2	8.3	-3.1	40.8	-35.6
3	50.0	4.3	7.8	-3.5	42.0	-37.7
4	75.0	4.3	7.3	-3.0	47.6	-43.3
5	100.0	4.4	7.6	-3.2	52.6	-48.2
6	125.0	4.2	7.2	-3.0	62.0	-57.8
7	150.0	4.1	7.1	-3.0	55.3	-51.2
8	175.0	3.8	7.0	-3.2	49.0	-45.2
9	200.0	3.4	6.2	-2.8	45.6	-42.2
10	225.0	3.0	4.9	-1.9	52.1	-49.1
11	250.0	2.0	5.0	-3.0	52.9	-50.9
12	275.0	2.0	3.0	-1.0	54.8	-52.8

	Layer 1	Layer 2	Layer 3
Velocities used:	1435.	4906.	6852.

Table B47. EPT-2: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	2.0	-25.0	0.0	0.0
A	2.0	-10.0	0.0	0.0
M	3.3	140.0	10.0	0.0
B	7.3	285.0	0.0	0.0
R	7.2	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	2.0	0.0	0.0	10.1	2	4.6	1	31.5	2	62.5	3	63.0	3
2	3.7	25.0	0.0	15.2	2	10.3	2	28.0	2	58.0	3	61.5	3
3	3.7	50.0	0.0	18.9	2	14.2	2	22.2	2	54.8	3	57.0	3
4	2.1	75.0	0.0	24.2	2	17.8	2	18.5	2	50.5	2	52.6	2
5	2.7	100.0	0.0	28.0	2	23.8	2	15.0	2	45.8	2	48.2	2
6	3.3	125.0	0.0	32.9	2	30.5	2	9.5	1	41.0	2	44.4	2
7	3.3	150.0	0.0	38.5	2	35.6	2	11.0	1	38.5	2	40.4	2
8	6.4	175.0	0.0	43.0	2	41.0	2	16.0	2	33.8	2	34.8	2
9	7.1	200.0	0.0	50.5	2	46.3	2	22.7	2	29.0	2	31.0	2
10	7.0	225.0	0.0	58.5	3	54.5	3	27.5	2	25.0	2	26.5	2
11	7.0	250.0	0.0	61.5	3	57.0	3	34.2	2	19.0	2	23.0	2
12	7.3	275.0	0.0	64.0	3	61.0	3	38.0	3	12.5	1	15.3	1

Table B48. EFT-2: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-25.0	2.0	3.8	-1.8	54.1	-52.1
M	140.0	3.3	4.1	-0.8	58.7	-55.4
B	285.0	7.3	8.3	-1.0	57.2	-49.9
Geophone						
1	0.0	2.0	2.9	-0.9	54.8	-52.8
2	25.0	3.7	3.3	0.4	58.4	-54.7
3	50.0	3.7	1.9	1.8	60.2	-56.5
4	75.0	2.1	2.3	-0.2	60.4	-58.3
5	100.0	2.7	3.0	-0.3	62.7	-60.0
6	125.0	3.3	4.0	-0.7	62.3	-59.0
7	150.0	3.3	4.2	-0.9	56.3	-53.0
8	175.0	6.4	6.0	0.4	53.4	-47.0
9	200.0	7.1	7.3	-0.2	50.8	-43.7
10	225.0	7.0	9.4	-2.4	50.6	-43.6
11	250.0	7.0	10.1	-3.1	53.0	-46.0
12	275.0	7.3	8.6	-1.3	56.3	-49.0

	Layer 1	Layer 2	Layer 3
Velocities used:	1558.	5190.	7274.

Table B49. EPT-3: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	7.2	-25.0	0.0	0.0
A	7.2	-10.0	0.0	0.0
M	7.5	137.5	10.0	0.0
B	8.0	285.0	0.0	0.0
R	7.8	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	7.3	0.0	0.0	21.5	2	9.0	1	34.0	2	63.4	3	67.0	3
2	7.1	25.0	0.0	25.0	2	19.0	2	31.2	2	59.0	3	64.5	3
3	7.7	50.0	0.0	30.0	2	23.0	2	24.5	2	52.5	2	62.0	3
4	7.7	75.0	0.0	35.0	2	27.0	2	19.0	2	48.0	2	57.0	2
5	7.7	100.0	0.0	40.0	2	34.0	2	15.6	2	41.0	2	52.0	2
6	7.2	125.0	0.0	45.0	2	38.0	2	12.6	1	39.5	2	47.5	2
7	7.2	150.0	0.0	48.0	2	42.7	2	12.9	1	28.5	2	42.4	2
8	7.5	175.0	0.0	55.0	2	48.4	2	17.5	2	20.0	2	32.0	2
9	7.5	200.0	0.0	59.0	2	52.0	2	20.0	2	17.0	2	31.0	2
10	4.9	225.0	0.0	64.0	2	57.0	2	24.1	2	13.0	2	24.5	2
11	4.9	250.0	0.0	68.0	3	61.0	3	29.2	2	12.0	2	15.0	2
12	4.9	275.0	0.0	69.5	3	63.0	3	32.6	3	5.4	1	12.2	2

Table 850. EPT-3: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	7.2	9.2	-2.0	55.0	-47.8
M	137.5	7.5	6.5	1.0	56.6	-49.1
B	285.0	8.0	4.2	3.8	44.0	-36.0
Geophone						
1	0.0	7.3	8.5	-1.2	56.3	-49.0
2	25.0	7.1	7.8	-0.7	58.2	-51.1
3	50.0	7.7	6.6	1.1	60.8	-53.1
4	75.0	7.7	6.1	1.6	62.6	-54.9
5	100.0	7.7	6.5	1.2	59.8	-52.1
6	125.0	7.2	6.6	0.6	57.3	-50.1
7	150.0	7.2	5.8	1.4	55.4	-48.2
8	175.0	7.5	6.4	1.1	55.9	-48.4
9	200.0	7.5	4.9	2.6	63.2	-55.7
10	225.0	4.9	3.7	1.2	58.4	-53.5
11	250.0	4.9	3.1	1.8	36.2	-31.3
12	275.0	4.9	1.6	3.3	40.7	-35.8

	Layer 1	Layer 2	Layer 3
Velocities used:	1484.	4954.	9536.

Table B51. EPT-4: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	4.9	-10.0	0.0	0.0
M	7.6	137.5	10.0	0.0
R	8.6	285.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	M	SP	R
1	4.9	0.0	0.0	7.0	2	33.0	3	60.0	3
2	8.0	25.0	0.0	10.0	2	31.0	3	55.5	3
3	8.0	50.0	0.0	15.0	2	28.5	2	53.4	3
4	7.8	75.0	0.0	22.0	2	22.0	2	52.0	2
5	7.6	100.0	0.0	29.0	2	16.0	2	47.0	2
6	7.4	125.0	0.0	34.7	2	12.5	1	44.0	2
7	8.1	150.0	0.0	41.0	2	12.5	1	37.6	2
8	8.1	175.0	0.0	44.0	2	19.0	2	29.0	2
9	8.1	200.0	0.0	50.0	2	20.0	2	23.0	2
10	8.7	225.0	0.0	52.6	3	26.0	2	22.0	2
11	8.7	250.0	0.0	56.3	3	31.0	2	18.0	2
12	8.8	275.0	0.0	58.0	3	37.0	2	12.0	2

Table B52. EPT-4: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
F	-10.0	4.9	2.2	2.7	38.9	-34.0
M	137.5	7.6	8.5	-0.9	44.7	-37.1
R	285.0	8.6	7.0	1.6	51.1	-42.5
Geophone						
1	0.0	4.9	1.6	3.3	40.7	-35.8
2	25.0	8.0	3.5	4.5	44.2	-36.2
3	50.0	8.0	6.9	1.1	44.6	-36.6
4	75.0	7.8	7.8	0.0	50.9	-43.1
5	100.0	7.6	8.3	-0.7	44.8	-37.2
6	125.0	7.4	8.5	-1.1	41.9	-34.5
7	150.0	8.1	8.9	-0.8	47.9	-39.8
8	175.0	8.1	7.4	0.7	49.5	-41.4
9	200.0	8.1	5.8	2.3	48.9	-40.8
10	225.0	8.7	6.7	2.0	49.0	-40.3
11	250.0	8.7	7.4	1.3	50.1	-41.4
12	275.0	8.8	7.3	1.5	51.2	-42.4

	Layer 1	Layer 2	Layer 3
Velocities used:	1281.	4734.	6654.

Table B53. FE-2: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	4.0	-25.0	0.0	0.0
A	4.0	-10.0	0.0	0.0
M	5.3	137.5	10.0	0.0
B	6.3	285.0	0.0	0.0
R	6.3	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	4.0	0.0	0.0	13.0	2	9.0	2	33.5	2	56.2	2	62.6	2
2	4.1	25.0	0.0	18.5	2	13.0	2	28.0	2	54.2	2	58.0	2
3	4.4	50.0	0.0	21.3	2	15.2	2	24.0	2	48.4	2	52.0	2
4	4.7	75.0	0.0	27.5	2	20.1	2	20.0	2	40.5	2	48.7	2
5	5.0	100.0	0.0	33.0	2	27.5	2	15.5	2	38.5	2	43.0	2
6	5.2	125.0	0.0	35.0	2	30.8	2	14.5	2	31.5	2	41.0	2
7	5.5	150.0	0.0	41.5	2	38.6	2	14.5	2	26.5	2	37.3	2
8	5.7	175.0	0.0	45.0	2	42.6	2	18.2	2	20.5	2	30.4	2
9	5.8	200.0	0.0	48.0	3	46.7	3	19.0	2	17.5	2	25.2	2
10	6.0	225.0	0.0	55.0	3	49.0	3	25.1	2	16.5	2	22.0	2
11	6.1	250.0	0.0	59.8	3	56.5	3	28.1	2	16.0	2	18.5	2
12	6.3	275.0	0.0	61.0	3	60.2	3	34.5	2	9.5	1	14.8	2

Table B54. SE-2: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	4.0	3.3	0.7	40.6	-36.6
M	137.5	5.3	3.4	1.9	48.3	-43.0
B	285.0	6.3	5.6	0.7	33.9	-27.6
Geophone						
1	0.0	4.0	3.0	1.0	41.1	-37.1
2	25.0	4.1	2.4	1.7	42.5	-38.4
3	50.0	4.4	1.8	2.6	44.1	-39.7
4	75.0	4.7	2.0	2.7	45.8	-41.1
5	100.0	5.0	2.8	2.2	47.4	-42.4
6	125.0	5.2	3.1	2.1	48.9	-43.7
7	150.0	5.5	3.7	1.8	47.7	-42.2
8	175.0	5.7	3.5	2.2	50.1	-44.4
9	200.0	5.8	2.1	3.7	52.6	-46.8
10	225.0	6.0	2.4	3.6	49.9	-43.9
11	250.0	6.1	3.5	2.6	40.5	-34.3
12	275.0	6.3	4.8	1.5	34.6	-28.3

	Layer 1	Layer 2	Layer 3
Velocities used:	920.	5335.	6874.

Table B55. FE-3: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	6.3	-25.0	0.0	0.0
A	6.3	-5.0	0.0	0.0
M	7.4	137.0	5.0	0.0
N	7.4	138.0	15.0	0.0
B	8.0	280.0	0.0	0.0
R	8.0	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	4.0	0.0	0.0	13.7	2	7.5	1	37.0	2	35.0	2	58.0	3
2	4.1	25.0	0.0	18.2	2	14.0	2	34.7	2	33.8	2	56.0	3
3	4.4	50.0	0.0	19.0	2	21.5	2	27.8	2	27.7	2	54.0	3
4	4.7	75.0	0.0	23.2	2	24.5	2	22.0	2	22.5	2	50.0	2
5	5.0	100.0	0.0	29.5	2	29.5	2	20.0	2	19.8	2	44.5	2
6	5.2	125.0	0.0	36.0	2	35.8	2	15.0	1	13.0	2	36.0	2
7	5.5	150.0	0.0	42.8	2	38.6	2	16.0	1	14.9	2	34.0	2
8	5.7	175.0	0.0	46.7	2	43.0	2	20.3	2	19.5	2	24.7	2
9	5.8	200.0	0.0	49.0	2	47.5	2	21.1	2	26.5	2	20.8	2
10	6.0	225.0	0.0	52.2	3	50.0	3	29.0	2	29.3	2	16.0	2
11	6.1	250.0	0.0	56.3	3	55.0	3	33.8	2	32.4	2	14.8	2
12	6.3	275.0	0.0	59.4	3	58.0	3	40.2	2	38.0	2	5.0	1

Table B56. FE-3: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-5.0	6.3	4.6	1.7	35.8	-29.5
M	137.0	7.4	6.3	1.1	46.1	-38.7
N	138.0	7.4	6.3	1.1	46.2	-38.8
B	280.0	8.0	5.9	2.1	58.6	-50.6
Geophone						
1	0.0	4.0	2.5	1.5	32.3	-28.3
2	25.0	4.1	4.5	-0.4	30.6	-26.5
3	50.0	4.4	3.6	0.8	29.1	-24.7
4	75.0	4.7	3.1	1.6	36.3	-31.6
5	100.0	5.0	4.5	0.5	40.6	-35.6
6	125.0	5.2	4.3	0.9	42.9	-37.7
7	150.0	5.5	4.1	1.4	45.3	-39.8
8	175.0	5.7	3.6	2.1	47.7	-42.0
9	200.0	5.8	3.6	2.2	49.2	-43.4
10	225.0	6.0	3.7	2.3	51.6	-45.6
11	250.0	6.1	3.8	2.3	54.0	-47.9
12	275.0	6.3	4.3	2.0	56.5	-50.2

	Layer 1	Layer 2	Layer 3
Velocities used:	887.	5176.	8125.

Table B57. IR-1: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	5.0	-25.0	0.0	0.0
A	5.1	-10.0	0.0	0.0
M	5.9	140.0	10.0	0.0
B	7.0	285.0	0.0	0.0
R	7.1	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	5.2	0.0	0.0	15.0	1	8.3	1	37.5	2	67.3	3	68.4	3
2	5.4	25.0	0.0	21.3	2	16.5	2	34.5	2	65.2	3	67.1	3
3	5.6	50.0	0.0	25.0	2	20.0	2	27.4	2	58.6	2	62.0	2
4	5.6	75.0	0.0	30.0	2	24.0	2	23.0	2	54.4	2	56.5	2
5	5.7	100.0	0.0	34.6	2	30.0	2	17.0	2	49.0	2	52.2	2
6	5.8	125.0	0.0	39.8	2	36.0	2	13.0	1	43.3	2	48.3	2
7	6.0	150.0	0.0	46.0	2	41.0	2	11.5	1	39.5	2	42.2	2
8	6.4	175.0	0.0	51.3	2	47.5	2	17.0	2	36.5	2	36.0	2
9	6.5	200.0	0.0	57.3	2	51.5	2	19.0	2	30.0	2	30.0	2
10	6.7	225.0	0.0	62.2	2	57.2	2	22.0	2	27.0	2	25.5	2
11	6.9	250.0	0.0	67.5	3	64.0	3	26.0	2	21.0	2	19.4	2
12	7.0	275.0	0.0	70.5	3	68.2	3	29.0	2	9.5	1	17.0	1

Table B58. IE-1: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	5.1	6.8	-1.7	77.8	-72.7
M	140.0	5.9	8.2	-2.3	82.0	-76.1
B	285.0	7.0	8.2	-1.2	83.5	-76.5
Geophone						
1	0.0	5.2	6.9	-1.7	78.0	-72.8
2	25.0	5.4	8.1	-2.7	79.0	-83.6
3	50.0	5.6	7.7	-2.1	80.1	-74.5
4	75.0	5.6	7.6	-2.0	78.4	-72.8
5	100.0	5.7	7.6	-1.9	80.0	-74.3
6	125.0	5.8	8.3	-2.5	81.2	-75.4
7	150.0	6.0	8.2	-2.2	84.1	-77.7
8	175.0	6.4	8.7	-2.2	84.1	-77.7
9	200.0	6.5	7.6	-1.1	85.1	-78.6
10	225.0	6.7	7.7	-1.0	83.1	-76.4
11	250.0	6.9	6.2	0.7	83.4	-76.5
12	275.0	7.0	7.4	-0.4	83.5	-76.5

	Layer 1	Layer 2	Layer 3
Velocities used	1335.	5066.	9299.

Table B59. IR-2: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	7.0	-25.0	0.0	0.0
A	7.0	-10.0	0.0	0.0
M	8.4	141.0	10.0	0.0
B	10.0	285.0	0.0	0.0
R	10.0	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	7.0	0.0	0.0	17.4	1	9.0	1	42.0	2	64.8	3	68.6	3
2	7.1	25.0	0.0	22.3	2	19.0	2	39.0	2	63.4	3	65.8	3
3	7.5	50.0	0.0	26.2	2	20.0	2	33.0	2	59.7	2	61.4	2
4	7.8	75.0	0.0	29.5	2	23.0	2	27.5	2	51.5	2	56.3	2
5	8.0	100.0	0.0	35.8	2	32.5	2	22.0	2	46.0	2	51.7	2
6	8.3	125.0	0.0	39.2	2	37.0	2	14.2	1	33.0	2	45.3	2
7	8.6	150.0	0.0	44.8	2	43.5	2	12.3	1	29.0	2	40.5	2
8	9.2	175.0	0.0	50.8	2	50.2	2	22.2	2	26.6	2	35.9	2
9	9.4	200.0	0.0	54.0	2	52.0	2	22.8	2	25.0	2	32.1	2
10	9.5	225.0	0.0	58.0	2	58.0	2	26.5	2	23.2	2	30.0	2
11	10.0	250.0	0.0	63.6	3	63.3	3	37.0	2	21.6	2	27.3	2
12	10.0	275.0	0.0	67.7	3	67.0	3	41.5	2	13.0	1	20.2	1

Table B60. ER-2: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	7.0	6.9	0.1	83.5	-76.5
M	141.0	8.4	5.5	2.9	73.0	-64.6
B	285.0	10.0	10.5	-0.5	47.6	-37.6
Geophone						
1	0.0	7.0	7.4	-0.4	83.5	-76.5
2	25.0	7.1	9.5	-2.4	83.5	-76.4
3	50.0	7.5	8.0	-0.5	83.9	-76.4
4	75.0	7.8	6.2	1.2	82.7	-74.9
5	100.0	8.0	6.8	1.2	80.7	-72.7
6	125.0	8.3	4.8	3.5	76.1	-67.8
7	150.0	8.6	6.0	2.6	71.4	-62.8
8	175.0	9.2	7.0	2.2	67.1	-57.9
9	200.0	9.4	6.2	3.2	62.4	-53.0
10	225.0	9.5	7.5	2.0	57.6	-48.1
11	250.0	10.0	10.9	-0.9	54.2	-44.2
12	275.0	10.0	10.2	-0.2	49.5	-39.5

	Layer 1	Layer 2	Layer 3
Velocities used	1163.	5239.	8213.

Table B61. LWT-1: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	6.7	-25.0	0.0	0.0
A	6.7	-10.0	0.0	0.0
M	7.0	137.5	10.0	0.0
B	8.0	285.0	0.0	0.0
R	7.5	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	6.7	0.0	0.0	14.4	1	9.1	1	34.5	2	62.5	3	64.0	3
2	6.7	25.0	0.0	17.6	2	19.5	2	31.4	2	60.5	3	63.0	3
3	6.5	50.0	0.0	19.1	2	21.0	2	26.2	2	57.6	3	59.3	3
4	6.1	75.0	0.0	23.4	2	23.5	2	21.0	2	51.0	2	55.3	2
5	5.8	100.0	0.0	25.3	2	25.0	2	17.6	2	49.0	2	48.0	2
6	5.6	125.0	0.0	27.8	2	29.0	2	12.5	1	44.5	2	46.0	2
7	6.8	150.0	0.0	38.4	2	37.0	2	13.0	1	42.7	2	39.6	2
8	9.5	175.0	0.0	48.3	2	47.5	2	15.9	2	34.4	2	31.0	2
9	10.5	200.0	0.0	56.0	3	54.2	3	21.0	2	26.5	2	21.5	2
10	10.5	225.0	0.0	60.0	3	59.5	3	30.0	2	18.5	2	18.0	2
11	10.0	250.0	0.0	65.0	3	64.5	3	36.9	2	15.0	2	17.3	2
12	9.5	275.0	0.0	68.0	3	69.0	3	40.0	2	9.5	1	14.5	1

Table B62. LWT-1: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	6.7	5.6	1.1	45.2	-38.5
M	137.5	7.0	7.8	-0.8	75.4	-68.4
B	285.0	8.0	8.1	-0.1	98.0	-90.0
Geophone						
1	0.0	6.7	5.1	1.6	42.1	-35.4
2	25.0	6.7	6.7	-0.0	45.6	-38.9
3	50.0	6.5	4.4	2.1	46.5	-40.0
4	75.0	6.1	3.7	2.4	50.5	-44.4
5	100.0	5.8	5.6	0.2	59.2	-53.4
6	125.0	5.6	6.7	-1.1	69.0	-63.4
7	150.0	6.8	7.2	-0.4	80.1	-73.3
8	175.0	9.5	8.7	0.8	85.7	-76.2
9	200.0	10.5	7.4	3.1	88.6	-78.1
10	225.0	10.5	8.6	1.9	89.4	-78.9
11	250.0	10.0	10.9	-0.9	93.9	-83.9
12	275.0	9.5	9.6	-0.1	98.3	-88.8

	Layer 1	Layer 2	Layer 3
Velocities used	1358.	4692.	6827.

Table B63. LWT-2: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	8.6	-25.0	0.0	0.0
A	8.6	-10.0	0.0	0.0
M	6.6	137.0	10.0	0.0
B	6.7	285.0	0.0	0.0
R	6.7	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	8.6	0.0	0.0	14.3	1	9.2	1	23.1	3	61.0	3	65.3	3
2	7.1	25.0	0.0	17.0	2	18.0	2	22.0	3	59.1	3	63.8	3
3	7.1	50.0	0.0	20.0	2	18.2	2	19.6	2	56.0	3	58.0	3
4	7.0	75.0	0.0	27.7	2	27.4	2	17.4	2	50.5	2	52.8	2
5	6.8	100.0	0.0	34.0	2	30.8	2	15.0	2	48.2	2	44.0	2
6	6.4	125.0	0.0	41.5	2	37.2	2	11.5	1	41.0	2	40.5	2
7	6.8	150.0	0.0	48.5	2	41.3	2	12.0	1	35.2	2	37.5	2
8	7.1	175.0	0.0	53.5	3	47.7	2	17.3	2	27.5	2	29.0	2
9	8.6	200.0	0.0	55.3	3	50.5	2	23.4	2	24.5	2	24.9	2
10	6.7	225.0	0.0	58.2	3	56.2	3	24.2	3	20.5	2	20.7	2
11	6.7	250.0	0.0	62.4	3	62.2	3	25.1	3	12.5	2	19.8	2
12	6.7	275.0	0.0	65.0	3	63.8	3	26.8	3	9.0	1	18.0	1

Table B64. LWT-2: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	8.6	6.7	1.9	6.7	1.9
M	137.0	6.6	6.0	0.6	42.0	-35.4
B	285.0	6.7	5.8	0.9	43.5	-36.8
Geophone						
1	0.0	8.6	6.8	1.8	6.8	1.8
2	25.0	7.1	6.0	1.1	43.7	-36.6
3	50.0	7.1	4.1	3.0	47.5	-40.4
4	75.0	7.0	4.9	2.1	54.1	-47.1
5	100.0	6.8	4.7	2.1	60.5	-53.7
6	125.0	6.4	6.0	0.4	47.9	-41.5
7	150.0	6.8	6.0	0.8	35.7	-28.9
8	175.0	7.1	3.8	3.3	45.6	-38.5
9	200.0	8.6	4.6	4.0	37.3	-28.7
10	225.0	6.7	5.4	1.3	74.0	-67.3
11	250.0	6.7	6.4	0.3	49.8	-43.1
12	275.0	6.7	5.1	1.6	42.1	-35.4

	Layer 1	Layer 2	Layer 3
Velocities used	1343.	4847.	10259.

Table B65. NT-1: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	6.1	-25.0	0.0	0.0
A	5.6	-10.0	0.0	0.0
M	5.3	137.5	10.0	0.0
B	5.5	285.0	0.0	0.0
R	5.5	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	5.1	0.0	0.0	15.3	1	8.3	1	32.1	2	60.0	3	65.2	3
2	5.3	25.0	0.0	17.2	2	14.0	2	28.7	2	58.0	3	61.3	3
3	5.4	50.0	0.0	22.4	2	18.9	2	25.0	2	53.5	3	58.2	3
4	5.6	75.0	0.0	27.0	2	24.0	2	20.7	2	49.3	2	53.7	2
5	5.3	100.0	0.0	31.8	2	29.3	2	18.0	2	42.3	2	51.2	2
6	5.3	125.0	0.0	40.3	2	35.0	2	13.5	1	37.2	2	45.7	2
7	5.4	150.0	0.0	45.0	2	41.0	2	14.0	1	31.4	2	36.8	2
8	5.2	175.0	0.0	50.7	2	46.3	2	19.2	2	25.0	2	29.0	2
9	5.0	200.0	0.0	52.8	2	51.2	2	22.5	2	19.4	2	23.0	2
10	5.1	225.0	0.0	60.0	3	56.4	3	27.8	2	15.8	2	20.0	2
11	5.3	250.0	0.0	62.4	3	61.0	3	31.7	2	14.6	2	17.0	2
12	5.5	275.0	0.0	66.3	3	64.7	3	39.0	2	10.0	1	14.3	1

Table B66. NT-1: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	5.6	3.1	2.5	55.7	-50.1
M	137.5	5.3	6.4	-1.1	67.8	-62.5
B	285.0	5.5	5.1	0.4	50.8	-45.3
Geophone						
1	0.0	5.1	2.9	2.2	55.9	-50.8
2	25.0	5.3	3.5	1.8	58.3	-53.0
3	50.0	5.4	4.0	1.4	60.6	-55.2
4	75.0	5.6	5.0	0.6	58.7	-53.1
5	100.0	5.3	5.8	-0.5	60.7	-55.4
6	125.0	5.3	6.7	-1.4	66.9	-61.6
7	150.0	5.4	6.1	-0.7	68.8	-63.4
8	175.0	5.2	5.2	-0.0	68.3	-63.1
9	200.0	5.0	3.7	1.3	67.6	-62.6
10	225.0	5.1	3.7	1.4	62.4	-57.3
11	250.0	5.3	5.4	-0.1	53.2	-47.9
12	275.0	5.5	5.1	0.4	52.3	-46.8

	Layer 1	Layer 2	Layer 3
Velocities used	1320.	4922.	7155.

Table B67. NT-2: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	4.7	-25.0	0.0	0.0
A	4.5	-10.0	0.0	0.0
M	6.1	136.0	10.0	0.0
B	5.8	285.0	0.0	0.0
R	5.8	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	4.2	0.0	0.0	14.7	1	10.3	1	31.2	2	64.1	3	69.0	3
2	3.5	25.0	0.0	19.0	2	17.2	2	26.5	2	61.4	3	64.5	3
3	3.5	50.0	0.0	23.8	2	21.5	2	24.3	2	57.0	2	59.4	2
4	4.7	75.0	0.0	28.7	2	27.4	2	19.5	2	48.2	2	54.5	2
5	5.5	100.0	0.0	34.2	2	32.0	2	14.8	2	37.0	2	48.0	2
6	6.1	125.0	0.0	42.3	2	40.5	2	12.2	1	25.0	2	43.3	2
7	6.1	150.0	0.0	46.2	2	44.5	2	13.2	1	21.5	2	35.5	2
8	6.0	175.0	0.0	51.0	2	50.0	2	15.2	2	20.6	2	34.0	2
9	6.0	200.0	0.0	55.3	2	54.5	2	17.0	2	17.3	2	31.5	2
10	6.0	225.0	0.0	59.6	2	58.4	2	20.5	2	16.0	2	25.0	2
11	6.0	250.0	0.0	64.0	3	62.7	2	23.0	2	12.8	2	18.0	2
12	5.8	275.0	0.0	68.7	3	65.0	3	25.4	2	8.8	1	15.1	1

Table B68. NT-2: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	4.5	5.2	-0.7	74.0	-69.5
M	136.0	6.1	8.1	-2.0	69.4	-63.3
B	285.0	5.8	4.2	1.6	72.4	-66.6
Geophones						
1	0.0	4.2	4.9	-0.7	73.3	-69.1
2	25.0	3.5	5.5	-2.0	72.6	-69.1
3	50.0	3.5	8.1	-4.6	72.6	-69.1
4	75.0	4.7	7.8	-3.1	73.8	-69.1
5	100.0	5.5	6.0	-0.5	74.6	-69.1
6	125.0	6.1	8.3	-2.2	68.2	-62.1
7	150.0	6.1	7.9	-1.8	7.10	-65.4
8	175.0	6.0	6.9	-0.9	71.4	-65.4
9	200.0	6.0	7.2	-1.2	72.0	-66.0
10	225.0	6.0	7.4	-1.4	72.5	-66.5
11	250.0	6.0	6.5	-0.5	72.5	-66.5
12	275.0	5.8	4.4	1.4	72.3	-66.5

	Layer 1	Layer 2	Layer 3
Velocities used	1331.	5343.	6927.

Table B69. NT-3: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	6.2	-25.0	0.0	0.0
A	6.5	-10.0	0.0	0.0
M	6.5	137.5	10.0	0.0
B	5.6	285.0	0.0	0.0
R	5.9	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	6.3	0.0	0.0	16.0	2	8.1	1	24.0	2	64.5	3	67.5	3
2	6.0	25.0	0.0	18.0	2	17.7	2	23.0	2	59.8	3	62.1	3
3	5.7	50.0	0.0	20.0	2	19.2	2	19.8	2	57.0	3	60.0	3
4	5.8	75.0	0.0	23.0	2	23.0	2	18.7	2	53.4	2	53.5	2
5	6.0	100.0	0.0	24.2	2	25.7	2	14.5	2	44.4	2	49.0	2
6	6.2	125.0	0.0	28.5	2	33.1	2	12.7	1	31.9	2	40.0	2
7	7.0	150.0	0.0	35.0	2	37.1	2	12.4	1	22.3	2	28.6	2
8	7.8	175.0	0.0	49.3	2	46.0	2	13.0	2	19.2	2	25.4	2
9	6.3	200.0	0.0	54.5	2	51.6	2	17.2	2	17.5	2	24.8	2
10	6.0	225.0	0.0	62.0	3	60.2	3	20.5	2	15.8	2	24.5	2
11	5.2	250.0	0.0	64.5	3	63.2	3	25.2	2	12.0	2	21.0	2
12	5.5	275.0	0.0	66.0	3	65.0	3	29.4	2	8.5	1	11.5	1

Table B70. NC-3: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	6.5	9.6	-3.1	79.0	-72.5
M	137.5	6.5	6.5	-0.0	95.6	-89.1
B	285.0	5.6	5.2	0.4	106.7	-101.1
Geophone						
1	0.0	6.3	9.3	-3.0	79.9	-73.6
2	25.0	6.0	8.1	-2.1	82.1	-76.1
3	50.0	5.7	6.0	-0.3	84.3	-78.6
4	75.0	5.8	9.9	-4.1	86.9	-81.1
5	100.0	6.0	8.6	-2.6	89.5	-83.5
6	125.0	6.2	6.9	-0.7	93.7	-87.5
7	150.0	7.0	6.4	0.6	97.6	-90.6
8	175.0	7.8	9.5	-1.7	98.0	-90.2
9	200.0	6.3	9.7	-3.4	99.0	-92.7
10	225.0	6.0	7.8	-1.8	101.2	-95.2
11	250.0	5.2	7.5	-2.3	102.9	-97.7
12	275.0	5.5	5.1	0.4	105.7	-100.2

	Layer 1	Layer 2	Layer 3
Velocities used:	1428.	5881.	8453.

Table B71. NT-4: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	5.2	-25.0	0.0	0.0
A	5.3	-10.0	0.0	0.0
M	5.0	137.5	10.0	0.0
B	5.0	285.0	0.0	0.0
R	5.0	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	5.5	0.0	0.0	12.8	2	8.8	1	32.5	2	53.6	3	59.0	3
2	5.3	25.0	0.0	17.0	2	14.1	2	28.0	2	52.5	3	55.0	3
3	5.1	50.0	0.0	22.5	2	17.8	2	23.9	2	49.5	3	52.0	3
4	5.0	75.0	0.0	23.4	2	24.7	2	18.9	2	45.0	2	47.0	2
5	4.9	100.0	0.0	26.5	2	27.0	2	15.2	2	39.3	2	40.0	2
6	4.9	125.0	0.0	28.5	2	30.5	2	10.4	1	36.7	2	35.5	2
7	5.0	150.0	0.0	33.0	2	35.3	2	10.3	1	28.8	2	33.0	2
8	5.0	175.0	0.0	38.4	2	36.0	2	14.4	2	27.8	2	26.4	2
9	5.0	200.0	0.0	44.3	2	41.1	2	17.8	2	23.0	2	23.7	2
10	5.0	225.0	0.0	50.1	3	44.0	3	23.6	2	18.4	2	20.1	2
11	5.0	250.0	0.0	52.2	3	46.1	3	30.2	2	17.0	2	15.5	2
12	5.0	275.0	0.0	54.5	3	49.5	3	31.8	3	10.2	1	12.0	2

Table B72. NC-4: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	5.3	6.7	-1.4	77.5	-72.2
M	137.5	5.0	4.2	0.8	62.7	-57.7
B	285.0	5.0	8.0	-3.0	10.0	-5.0
Geophone						
1	0.0	5.5	6.8	-1.3	77.4	-71.9
2	25.0	5.3	6.0	-0.7	72.5	-67.2
3	50.0	5.1	6.4	-1.3	67.5	-62.4
4	75.0	5.0	6.6	-1.6	75.9	-70.9
5	100.0	4.9	5.1	-0.2	76.7	-71.8
6	125.0	4.9	4.4	0.5	67.8	-62.9
7	150.0	5.0	3.9	1.1	57.4	-52.4
8	175.0	5.0	4.1	0.9	47.0	-42.0
9	200.0	5.0	4.9	0.1	36.5	-31.5
10	225.0	5.0	6.7	-1.7	27.3	-22.3
11	250.0	5.0	8.4	-3.4	22.9	-17.9
12	275.0	5.0	7.6	-2.6	13.5	-8.5

	Layer 1	Layer 2	Layer 3
Velocities used:	1303	6033.	9810.

Table B73. PT-1: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	4.7	-25.0	0.0	0.0
A	4.8	-10.0	0.0	0.0
M	6.0	140.0	10.0	0.0
B	5.0	285.0	0.0	0.0
R	5.2	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	5.3	0.0	0.0	17.7	2	9.8	1	39.0	2	66.7	3	69.0	3
2	5.6	25.0	0.0	22.0	2	17.9	2	33.5	2	62.0	3	63.5	3
3	5.7	50.0	0.0	26.0	2	22.5	2	27.5	2	55.8	3	57.6	3
4	5.9	75.0	0.0	31.8	2	29.5	2	23.3	2	53.0	2	55.0	2
5	6.0	100.0	0.0	37.0	2	34.7	2	17.0	2	47.3	2	49.5	2
6	6.0	125.0	0.0	42.3	2	38.8	2	13.4	1	42.0	2	45.0	2
7	4.8	150.0	0.0	46.3	2	43.4	2	11.3	1	35.0	2	38.0	2
8	5.2	175.0	0.0	50.0	2	46.0	2	14.4	2	29.0	2	32.3	2
9	5.8	200.0	0.0	56.2	2	52.8	2	19.0	2	25.8	2	28.5	2
10	5.6	225.0	0.0	62.2	2	59.0	2	25.0	2	21.0	2	25.0	2
11	5.5	250.0	0.0	67.0	3	63.9	3	30.0	2	16.0	2	20.0	2
12	5.3	275.0	0.0	70.2	3	66.4	3	36.9	2	8.0	1	15.5	2

Table B74. PT-1: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (Ft)	Layer 3 Elev (ft)
A	-10.0	4.8	7.4	-2.6	14.6	-9.8
M	140.0	6.0	6.3	-0.3	26.5	-20.5
B	285.0	5.0	6.6	-1.6	22.6	-17.6
Geophone						
1	0.0	5.3	7.8	-2.5	15.8	-10.5
2	25.0	5.6	7.3	-1.7	18.0	-12.4
3	50.0	5.7	6.5	-0.8	20.0	-14.3
4	75.0	5.9	7.3	-1.4	21.1	-15.2
5	100.0	6.0	6.9	-0.9	23.2	-17.2
6	125.0	6.0	6.9	-0.9	25.3	-19.3
7	150.0	4.8	4.6	0.2	26.1	-21.3
8	175.0	5.2	4.1	1.1	28.5	-23.3
9	200.0	5.8	5.4	0.4	31.1	-25.3
10	225.0	5.6	6.4	-0.8	22.0	-16.4
11	250.0	5.5	6.3	-0.8	22.7	-17.2
12	275.0	5.3	6.7	-1.4	23.4	-18.1

	Layer 1	Layer 2	Layer 3
Velocities used:	1218.	4908.	5373.

Table B'5. PT-2: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	4.2	-25.0	0.0	0.0
A	4.2	-10.0	0.0	0.0
M	4.5	137.5	10.0	0.0
B	5.4	285.0	0.0	0.0
R	5.6	300.0	0.0	0 0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	4.2	0.0	0.0	13.0	2	8.6	1	35.4	2	66.0	3	69.0	3
2	4.0	25.0	0.0	19.0	2	16.2	2	31.0	2	62.0	3	65.0	3
3	4.0	50.0	0.0	24.0	2	21.9	2	27.0	2	56.0	3	59.3	3
4	4.0	75.0	0.0	30.0	2	26.6	2	22.5	2	52.0	3	55.5	3
5	4.9	100.0	0.0	35.5	2	33.6	2	18.0	2	47.3	2	51.0	2
6	4.5	125.0	0.0	40.8	2	38.5	2	13.4	1	40.8	2	45.3	2
7	4.3	150.0	0.0	45.8	2	44.3	2	13.5	1	37.5	2	41.2	2
8	4.7	175.0	0.0	51.5	3	50.6	2	18.5	2	34.0	2	37.0	2
9	4.7	200.0	0.0	54.2	3	53.5	3	21.0	2	26.4	2	29.2	2
10	4.7	225.0	0.0	58.3	3	58.3	3	26.0	2	21.0	2	25.5	2
11	5.0	250.0	0.0	66.1	3	63.6	3	31.2	2	16.2	2	23.0	2
12	5.3	275.0	0.0	72.0	3	68.8	3	38.4	2	10.0	1	17.0	2

Table B76. PT-2: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	4.2	4.2	-0.0	16.0	-11.8
M	137.5	4.5	6.6	-2.1	31.3	-26.8
B	285.0	5.4	6.0	-0.6	42.4	-37.0
Geophone						
1	0.0	4.2	4.3	-0.1	17.1	-12.9
2	25.0	4.0	4.9	-0.9	18.8	-14.8
3	50.0	4.0	5.6	-1.6	20.8	-16.8
4	75.0	4.0	5.9	-1.9	22.8	-18.8
5	100.0	4.9	6.3	-1.4	25.7	-20.8
6	125.0	4.5	6.2	-1.7	32.7	-28.2
7	150.0	4.3	6.7	-2.4	29.7	-25.4
8	175.0	4.7	7.5	-2.8	33.0	-28.3
9	200.0	4.7	4.3	0.4	35.0	-30.3
10	225.0	4.7	4.4	0.3	36.9	-32.2
11	250.0	5.0	5.5	-0.5	39.2	-34.2
12	275.0	5.3	6.1	-0.8	41.5	-36.2

	Layer 1	Layer 2	Layer 3
Velocities used:	1136.	4949.	5128.

Table B77. PT-3: Shotpoint informat on, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	4.2	-25.0	0.0	0.0
A	4.3	-10.0	0.0	0.0
M	4.3	139.5	10.0	0.0
B	4.0	285.0	0.0	0.0
R	4.0	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	4.4	0.0	0.0	13.0	2	9.0	1	34.5	2	63.0	3	66.5	3
2	4.5	25.0	0.0	17.0	2	15.0	2	30.5	2	60.5	3	64.0	3
3	4.6	50.0	0.0	21.0	2	18.2	2	25.5	2	56.0	3	60.0	3
4	4.2	75.0	0.0	26.6	2	23.0	2	19.5	2	50.5	2	55.0	3
5	4.2	100.0	0.0	31.7	2	28.8	2	16.5	2	45.5	2	50.0	2
6	4.3	125.0	0.0	40.0	2	37.8	2	13.8	1	43.8	2	47.5	2
7	4.5	150.0	0.0	43.3	2	41.0	2	11.7	1	35.5	2	40.0	2
8	4.7	175.0	0.0	47.8	2	46.0	2	16.7	2	30.3	2	34.0	2
9	3.7	200.0	0.0	53.5	2	51.0	2	22.1	2	26.0	2	30.0	2
10	4.0	225.0	0.0	59.5	2	60.5	2	30.5	2	24.0	2	27.5	2
11	4.2	250.0	0.0	62.4	3	60.8	3	33.0	3	15.0	2	18.0	2
12	4.0	275.0	0.0	67.0	3	65.7	3	37.0	3	8.3	1	14.0	2

Table B78. FT-3: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	4.3	3.9	0.4	34.5	-30.2
M	139.5	4.3	6.4	-2.1	42.9	-38.6
B	285.0	4.0	4.6	-0.6	25.5	-21.5
Geophone						
1	0.0	4.4	4.2	0.2	35.3	-30.9
2	25.0	4.5	4.7	-0.2	36.4	-31.9
3	50.0	4.6	3.8	0.8	37.6	-33.0
4	75.0	4.2	3.5	0.7	39.9	-35.7
5	100.0	4.2	4.5	-0.3	42.6	-38.4
6	125.0	4.3	7.5	-3.2	42.8	-38.5
7	150.0	4.5	5.9	-1.4	43.3	-38.8
8	175.0	4.7	5.6	-0.9	43.3	-38.6
9	200.0	3.7	6.3	-2.6	42.2	-38.5
10	225.0	4.0	8.5	-4.5	41.4	-37.4
11	250.0	4.2	4.3	-0.1	28.7	-24.5
12	275.0	4.0	4.6	-0.6	26.9	-22.9

	Layer 1	Layer 2	Layer 3
Velocities used:	1208.	4846.	5837

Table B79. ST-1: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	2.8	-25.0	0.0	0.0
A	2.8	-10.0	0.0	0.0
M	4.1	137.5	10.0	0.0
B	5.5	285.0	0.0	0.0
R	5.2	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	2.8	0.0	0.0	11.0	2	7.8	1	32.5	2	61.5	3	64.0	3
2	3.2	25.0	0.0	16.7	2	14.0	2	29.5	2	58.2	3	61.2	3
3	3.3	50.0	0.0	21.2	2	18.7	2	24.8	2	54.0	3	56.0	3
4	3.5	75.0	0.0	25.3	2	22.6	2	19.1	2	49.4	2	51.5	3
5	3.8	100.0	0.0	31.5	2	28.6	2	14.8	2	45.0	2	47.0	2
6	4.1	125.0	0.0	37.0	2	33.0	2	11.0	1	40.7	2	43.5	2
7	4.2	150.0	0.0	41.0	2	37.3	2	11.0	1	35.5	2	38.5	2
8	5.5	175.0	0.0	46.3	2	43.0	2	16.8	2	31.0	2	34.3	2
9	5.5	200.0	0.0	51.4	2	47.8	2	21.0	2	25.8	2	28.5	2
10	6.5	225.0	0.0	56.0	3	52.0	2	25.3	2	20.0	2	23.0	2
11	6.0	250.0	0.0	60.0	3	56.9	3	30.4	2	14.0	2	17.6	2
12	5.7	275.0	0.0	64.2	3	60.8	3	34.2	2	8.9	1	12.0	2

Table B80. SP-1: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (Ft)
A	-10.0	2.8	5.0	-2.2	39.6	-36.8
M	137.5	4.1	6.6	-2.5	28.6	-24.5
B	285.0	5.5	6.4	-0.9	17.8	-12.3
Geophone						
1	0.0	2.8	4.7	-1.9	38.7	-35.9
2	25.0	3.2	5.3	-2.1	37.4	-34.2
3	50.0	3.3	5.2	-1.9	35.9	-32.6
4	75.0	3.5	5.2	-1.7	39.4	-35.9
5	100.0	3.8	6.3	-2.5	36.5	-32.7
6	125.0	4.1	6.8	-2.7	29.8	-25.7
7	150.0	4.2	6.5	-2.3	27.6	-23.4
8	175.0	5.5	7.3	-1.8	26.6	-21.1
9	200.0	5.5	6.7	-1.2	24.3	-18.8
10	225.0	6.5	5.9	0.6	23.1	-16.6
11	250.0	6.0	5.4	0.6	19.5	-13.5
12	275.0	5.7	5.5	0.2	15.2	-9.5

	Layer 1	Layer 2	Layer 3
Velocities used:	1329.	5111.	5938.

Table B81. ST-2: Shotpoint information, geophone data, and arrival times. Time are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	6.0	-25.0	0.0	0.0
A	5.8	-10.0	0.0	0.0
M	4.1	137.5	10.0	0.0
B	3.5	285.0	0.0	0.0
R	3.2	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	5.7	0.0	0.0	12.1	2	10.3	1	37.0	3	65.0	3	66.5	3
2	5.2	25.0	0.0	19.0	2	17.0	2	34.0	2	63.0	3	64.0	3
3	4.3	50.0	0.0	24.2	2	22.2	2	28.2	2	57.0	3	59.7	3
4	4.3	75.0	0.0	30.4	2	28.8	2	24.2	2	52.5	3	54.4	3
5	4.3	100.0	0.0	36.4	2	34.5	2	19.0	2	49.0	2	50.7	2
6	4.2	125.0	0.0	40.3	3	38.5	2	13.0	1	44.0	2	46.0	2
7	4.1	150.0	0.0	45.2	3	42.5	3	13.8	1	37.0	2	39.7	2
8	4.4	175.0	0.0	48.0	3	46.2	3	18.0	2	32.0	2	34.0	2
9	4.2	200.0	0.0	52.5	3	50.0	3	28.5	2	27.0	2	29.3	2
10	4.1	225.0	0.0	59.0	3	58.7	3	31.5	2	25.0	2	28.0	2
11	4.0	250.0	0.0	63.5	3	61.5	3	33.5	3	16.4	2	19.0	2
12	4.0	275.0	0.0	66.0	3	65.5	3	38.0	3	9.0	1	13.5	2

Table B82. SP-2: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	5.8	5.5	0.3	16.9	-11.1
M	137.5	4.1	9.2	-5.1	46.6	-42.5
B	285.0	3.5	5.5	-2.0	9.3	-5.8
Geophone						
1	0.0	5.7	5.6	0.1	15.2	-9.5
2	25.0	5.2	7.7	-2.5	21.7	-16.5
3	50.0	4.3	8.1	-3.8	37.3	-33.0
4	75.0	4.3	9.7	-5.4	29.5	-25.2
5	100.0	4.3	10.8	-6.5	25.5	-21.2
6	125.0	4.2	10.0	-5.8	34.5	-30.3
7	150.0	4.1	8.5	-4.4	58.8	-54.7
8	175.0	4.4	8.7	-4.3	54.9	-50.5
9	200.0	4.2	10.8	-6.6	30.4	-26.2
10	225.0	4.1	11.5	-7.4	19.6	-15.5
11	250.0	4.0	7.8	-3.8	16.5	-12.5
12	275.0	4.0	6.0	-2.0	11.3	-7.3

	Layer 1	Layer 2	Layer 3
Velocities used:	1119.	4743.	5802.

Table B83. ST-3: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	4.0	-25.0	0.0	0.0
A	4.0	-10.0	0.0	0.0
M	4.1	137.5	10.0	0.0
B	6.0	285.0	0.0	0.0
R	6.0	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	4.0	0.0	0.0	13.5	2	7.5	1	33.5	2	60.4	3	63.1	3
2	4.0	25.0	0.0	19.5	2	16.5	2	30.2	2	58.0	3	59.1	3
3	4.0	50.0	0.0	24.0	2	20.5	2	25.1	2	52.5	2	53.9	3
4	3.8	75.0	0.0	28.3	2	25.2	2	20.0	2	47.4	2	49.2	2
5	3.9	100.0	0.0	33.3	2	30.7	2	16.0	2	44.5	2	45.2	2
6	4.1	125.0	0.0	37.5	2	33.7	2	11.0	1	38.2	2	39.0	2
7	4.2	150.0	0.0	42.0	2	39.0	2	11.8	1	34.0	2	35.5	2
8	4.3	175.0	0.0	47.0	2	44.0	2	16.0	2	29.0	2	30.2	2
9	4.5	200.0	0.0	51.6	2	48.0	2	20.0	2	24.5	2	25.4	2
10	5.0	225.0	0.0	54.5	2	48.0	2	20.0	2	24.5	2	21.5	2
11	6.3	250.0	0.0	61.5	3	58.0	2	29.5	2	16.0	2	15.5	2
12	6.0	275.0	0.0	64.5	3	61.5	2	32.5	2	8.2	1	10.5	2

Table B84. ST-3: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	4.0	6.8	-2.8	13.4	-9.4
M	137.5	4.1	5.2	-1.1	44.6	-40.5
B	285.0	6.0	4.1	1.9	26.1	-20.1
Geophone						
1	0.0	4.0	6.0	-2.0	11.3	-7.3
2	25.0	4.0	6.0	-2.0	7.6	-3.6
3	50.0	4.0	5.3	-1.3	16.7	-12.7
4	75.0	3.8	5.0	-1.2	33.1	-29.3
5	100.0	3.9	5.9	-2.0	38.2	-34.3
6	125.0	4.1	5.2	-1.1	42.5	-38.4
7	150.0	4.2	5.3	-1.1	46.7	-42.5
8	175.0	4.3	5.0	-0.7	51.0	-46.7
9	200.0	5.0	4.0	1.0	44.7	-39.7
10	225.0	4.5	4.6	-0.1	56.4	-51.9
11	250.0	6.3	4.7	1.6	28.1	-21.8
12	275.0	6.0	3.9	2.1	23.9	-17.9

	Layer 1	Layer 2	Layer 3
Velocities used:	1341.	5437.	7106.

Table B8). ST-4: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	6.3	-25.0	0.0	0.0
A	6.1	-10.0	0.0	0.0
M	4.9	135.0	10.0	0.0
B	5.3	285.0	0.0	0.0
R	5.3	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	6.0	0.0	0.0	13.2	2	9.0	1	32.0	2	59.7	2	61.5	3
2	5.8	25.0	0.0	18.4	2	16.5	2	27.5	2	53.6	2	58.0	3
3	5.6	50.0	0.0	23.7	2	20.2	2	24.2	2	49.8	2	52.5	2
4	5.4	75.0	0.0	28.8	2	24.9	2	18.1	2	45.2	2	49.0	2
5	5.0	100.0	0.0	33.0	2	28.5	2	15.8	2	41.0	2	43.9	2
6	4.8	125.0	0.0	38.9	2	33.3	2	11.7	1	37.0	2	38.0	2
7	4.9	150.0	0.0	44.5	2	39.8	2	13.0	1	25.0	2	26.9	2
8	4.9	175.0	0.0	50.9	2	45.5	2	17.2	2	23.8	2	25.6	2
9	5.0	200.0	0.0	54.0	3	50.0	2	19.8	2	20.0	2	22.0	2
10	5.1	225.0	0.0	57.3	3	53.8	3	20.2	2	17.2	2	19.9	2
11	5.3	250.0	0.0	62.7	3	57.9	3	24.7	2	14.3	2	16.5	2
12	5.3	275.0	0.0	66.7	3	62.3	3	27.8	2	8.2	1	13.3	2

Table B86. IT-4: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	6.1	4.2	1.9	25.6	-19.5
M	135.0	5.7	-0.8	36.9	32.0	
B	285.0	5.3	6.3	-1.0	6.3	-1.0
Geophone						
1	0.0	6.0	3.9	2.1	23.9	17.9
2	25.0	5.8	4.2	1.6	29.2	-23.4
3	50.0	5.6	4.5	1.1	34.5	-28.9
4	75.0	5.4	4.6	0.8	34.8	-29.4
5	100.0	5.0	4.9	0.1	35.5	-30.5
6	125.0	4.8	5.5	-0.7	36.4	-31.6
7	150.0	4.9	6.0	-1.1	37.6	-32.7
8	175.0	4.9	4.6	0.3	34.4	-29.5
9	200.0	5.0	2.9	2.1	26.7	-21.7
10	225.0	5.1	3.9	1.2	20.2	-15.1
11	250.0	5.3	5.8	-0.5	17.0	-11.7
12	275.0	5.3	6.2	-0.9	6.2	-0.9

	Layer 1	Layer 2	Layer 3
Velocities used:	1232.	5665.	6254.

Table B87. ST-5: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	3.6	-25.0	0.0	0.0
A	3.0	-10.0	0.0	0.0
M	6.5	136.0	10.0	0.0
B	3.5	285.0	0.0	0.0
R	2.8	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	2.6	0.0	0.0	12.8	2	9.0	2	33.0	2	62.0	3	60.5	3
2	2.8	25.0	0.0	18.5	2	13.1	2	28.7	2	56.0	3	65.0	3
3	3.1	50.0	0.0	21.5	2	18.5	2	25.0	2	52.4	3	52.5	3
4	5.0	75.0	0.0	26.0	2	24.0	2	21.2	2	49.0	3	50.0	3
5	6.7	100.0	0.0	32.4	2	30.3	2	16.5	2	45.0	3	45.6	3
6	6.6	125.0	0.0	39.0	2	37.3	2	13.4	1	42.0	2	42.1	3
7	6.5	150.0	0.0	45.5	2	43.0	2	12.5	1	37.5	2	39.3	2
8	6.6	175.0	0.0	50.5	2	47.8	2	18.5	2	32.0	2	34.0	2
9	7.9	200.0	0.0	54.0	3	51.0	3	23.0	2	25.5	2	28.8	2
10	8.6	225.0	0.0	60.0	3	55.5	3	28.0	2	20.5	2	23.2	2
11	9.5	250.0	0.0	63.0	3	60.4	3	32.5	2	15.5	2	17.5	2
12	9.0	275.0	0.0	68.2	3	64.3	3	38.5	2	9.8	2	18.2	2

Table B88. HT-5: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	3.0	4.2	-1.2	4.2	-1.2
M	136.0	6.5	8.2	-1.7	19.4	-12.9
B	285.0	3.5	2.2	1.3	2.2	1.3
Geophone						
1	0.0	2.6	3.7	-1.1	3.7	-1.1
2	25.0	2.8	3.9	-1.1	3.9	-1.1
3	50.0	3.1	3.7	-0.6	3.7	-0.6
4	75.0	5.0	4.1	0.9	4.1	0.9
5	100.0	6.7	5.4	1.3	5.4	1.3
6	125.0	6.6	7.7	-1.1	16.4	-9.8
7	150.0	6.5	9.1	-2.6	23.4	-16.9
8	175.0	6.6	9.1	-2.5	21.4	-14.8
9	200.0	7.9	8.9	-1.0	19.8	-11.9
10	225.0	8.6	8.5	0.1	17.6	-9.0
11	250.0	9.5	8.3	1.2	15.2	-5.7
12	275.0	9.0	8.0	1.0	8.0	1.0

Velocities used:	Layer 1	Layer 2	Layer 3
	1243.	4924.	5434.

Table B89. ST-6: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	6.6	-25.0	0.0	0.0
A	6.6	-10.0	0.0	0.0
M	5.0	137.5	10.0	0.0
B	2.8	285.0	0.0	0.0
R	2.8	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	6.6	0.0	0.0	16.0	2	8.1	1	38.0	2	61.0	3	65.0	3
2	6.6	25.0	0.0	20.4	2	19.5	2	34.5	2	58.5	3	61.0	3
3	6.3	50.0	0.0	25.9	2	23.5	2	28.9	2	54.0	3	57.0	3
4	5.8	75.0	0.0	30.2	2	29.5	2	23.3	2	50.0	2	52.5	3
5	5.5	100.0	0.0	36.1	2	34.2	2	18.8	2	44.5	2	48.5	2
6	4.5	125.0	0.0	46.3	2	39.8	2	14.9	1	41.0	2	43.3	2
7	3.2	150.0	0.0	49.5	3	43.4	2	14.9	1	35.0	2	39.0	2
8	3.1	175.0	0.0	54.0	3	47.1	2	18.7	2	29.5	2	33.5	2
9	3.0	200.0	0.0	54.0	3	51.2	2	23.7	2	23.0	2	28.0	2
10	3.2	225.0	0.0	59.3	3	55.3	3	28.0	2	18.5	2	23.0	2
11	3.0	250.0	0.0	64.0	3	61.0	3	32.8	2	14.3	2	17.2	2
12	2.8	275.0	0.0	67.0	3	64.6	3	37.1	2	8.0	1	11.6	1

Table B90. ST-6: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	6.6	7.9	-1.3	12.5	-5.9
M	137.5	5.0	9.5	-4.5	56.2	-51.2
B	285.0	2.8	4.8	-2.0	38.0	-35.2
Geophone						
1	0.0	6.6	8.1	-1.5	15.6	-9.0
2	25.0	6.6	8.4	-1.8	23.0	-16.4
3	50.0	6.3	8.2	-1.9	33.3	-27.0
4	75.0	5.8	8.3	-2.5	36.4	-30.6
5	100.0	5.5	8.5	-3.0	44.8	-39.3
6	125.0	4.5	8.8	-4.3	53.4	-48.9
7	150.0	3.2	8.0	-4.8	56.8	-53.6
8	175.0	3.1	7.0	-3.9	55.9	-52.8
9	200.0	3.0	6.1	-3.1	49.3	-46.3
10	225.0	3.2	5.8	-2.6	44.3	-41.1
11	250.0	3.0	5.6	-2.6	41.3	-38.3
12	275.0	2.8	4.7	-1.9	38.7	-35.9

	Layer 1	Layer 2	Layer 3
Velocities used:	1359.	5048	5973.

Table B91. THC-1: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	4.9	-25.0	0.0	0.0
A	4.9	-10.0	0.0	0.0
M	4.9	137.5	10.0	0.0
B	3.7	285.0	0.0	0.0
R	3.7	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	4.9	0.0	0.0	11.4	2	9.0	1	26.0	2	51.0	3	53.0	3
2	4.6	25.0	0.0	13.4	2	15.0	2	22.5	2	48.0	3	51.0	3
3	4.4	50.0	0.0	18.9	2	18.0	2	17.8	2	44.5	3	49.0	3
4	4.5	75.0	0.0	22.0	2	23.0	2	15.4	2	41.4	2	45.0	2
5	4.7	100.0	0.0	26.0	2	29.8	2	13.0	2	37.0	2	41.0	2
6	4.9	125.0	0.0	32.2	2	32.0	2	10.6	1	34.0	2	37.0	2
7	5.1	150.0	0.0	37.0	2	36.0	2	10.8	1	29.2	2	31.0	2
8	5.3	175.0	0.0	46.0	2	43.5	2	16.8	2	24.5	2	28.5	2
9	5.5	200.0	0.0	48.0	2	49.8	2	20.0	2	22.0	2	27.0	2
10	5.3	225.0	0.0	53.4	3	51.7	3	24.7	2	16.0	2	21.5	2
11	5.1	250.0	0.0	56.3	3	53.6	3	29.3	2	13.2	2	18.8	2
12	3.9	275.0	0.0	57.5	3	55.5	3	31.5	3	6.0	1	10.7	1

Table B92. TBC-1: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	4.9	6.1	-1.2	54.9	-50.0
M	137.5	4.9	7.0	-2.1	76.8	-71.9
B	285.0	3.7	6.2	-2.5	68.7	-65.0
Geophone						
1	0.0	4.9	6.2	-1.3	56.2	-51.3
2	25.0	4.6	5.5	-0.9	60.1	-55.5
3	50.0	4.4	5.4	-1.0	57.9	-53.5
4	75.0	4.5	4.8	-0.3	60.7	-56.2
5	100.0	4.7	6.0	-1.3	67.2	-62.5
6	125.0	4.9	6.7	-1.8	73.8	-68.9
7	150.0	5.1	7.4	-2.3	80.0	-74.9
8	175.0	5.3	9.6	-4.3	72.9	-67.6
9	200.0	5.5	10.1	-4.6	71.5	-66.0
10	225.0	5.3	6.8	-1.5	69.8	-64.5
11	250.0	5.1	7.9	-2.8	71.0	-65.9
12	275.0	3.9	6.5	-2.6	69.5	-65.6

	Layer 1	Layer 2	Layer 3
Velocities used:	1621.	5857.	10250.

Table B93. THC-2: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	3.7	-25.0	0.0	0.0
A	3.8	-10.0	0.0	0.0
M	7.0	137.5	10.0	0.0
B	6.5	285.0	0.0	0.0
R	6.3	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	3.9	0.0	0.0	12.5	2	8.2	1	30.0	2	64.0	3	63.0	3
2	5.0	25.0	0.0	16.0	2	12.9	2	25.4	2	63.0	3	59.0	3
3	5.5	50.0	0.0	20.7	2	16.5	2	19.5	2	59.0	2	53.5	3
4	6.3	75.0	0.0	24.5	2	21.0	2	16.0	2	55.2	2	50.0	2
5	6.4	100.0	0.0	30.0	2	26.0	2	13.0	2	48.0	2	45.4	2
6	6.5	125.0	0.0	34.7	2	30.2	2	9.0	1	45.0	2	41.0	2
7	7.0	150.0	0.0	42.2	2	36.5	2	9.0	1	39.0	2	33.3	2
8	7.0	175.0	0.0	45.3	2	41.5	2	14.5	2	29.5	2	26.7	2
9	7.5	200.0	0.0	50.0	2	44.0	2	18.4	2	25.3	2	22.5	2
10	7.0	225.0	0.0	56.3	2	51.0	2	22.4	2	22.3	2	20.6	2
11	6.9	250.0	0.0	62.8	3	54.5	3	28.0	2	17.7	2	15.0	2
12	6.9	275.0	0.0	64.0	3	57.0	3	35.5	2	12.5	1	10.0	1

Table B94. TI 3-2: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	3.8	3.3	0.5	192.9	-189.1
M	137.5	7.0	7.4	-0.4	104.2	-97.2
B	285.0	6.5	6.9	-0.4	27.9	-21.4
Geophone						
1	0.0	3.9	3.5	0.4	186.0	-182.1
2	25.0	5.0	4.3	0.7	169.9	-164.9
3	50.0	5.5	5.6	-0.1	153.1	-147.6
4	75.0	6.3	7.0	-0.7	136.6	-130.3
5	100.0	6.4	7.1	-0.7	119.4	-113.0
6	125.0	6.5	7.2	-0.7	102.2	-95.7
7	150.0	7.0	7.1	-0.1	105.7	-98.7
8	175.0	7.0	5.6	1.4	84.9	-77.9
9	200.0	7.5	5.1	2.4	63.9	-56.4
10	225.0	7.0	7.0	-0.0	41.9	-34.9
11	250.0	6.9	8.3	-1.4	24.2	-17.3
12	275.0	6.9	8.3	-1.4	23.5	-16.6

	Layer 1	Layer 2	Layer 3
Velocities used:	1616.	5124.	8538.

Table B95. THC-3: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	6.9	-25.0	0.0	0.0
A	6.9	-10.0	0.0	0.0
M	5.8	137.5	10.0	0.0
B	6.7	285.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B
1	6.9	0.0	0.0	14.6	2	8.5	1	35.0	2	62.0	3
2	6.3	25.0	0.0	19.0	2	13.0	2	26.4	2	56.0	3
3	6.1	50.0	0.0	22.5	2	25.0	2	22.8	2	54.0	3
4	5.9	75.0	0.0	27.0	2	32.5	2	18.6	2	49.0	2
5	5.7	100.0	0.0	30.5	2	37.5	2	14.2	2	43.7	2
6	5.7	125.0	0.0	37.6	2	41.1	2	11.3	1	41.0	2
7	6.0	150.0	0.0	40.0	2	47.5	2	11.7	1	34.0	2
8	4.8	175.0	0.0	44.8	2	48.3	2	14.0	2	26.5	2
9	5.2	200.0	0.0	53.0	2	54.5	2	18.0	2	20.0	2
10	5.3	225.0	0.0	61.5	3	59.0	2	26.5	2	15.5	2
11	5.5	250.0	0.0	57.0	3	57.6	3	22.0	2	16.5	2
12	6.6	275.0	0.0	64.0	3	64.0	3	32.8	2	9.3	1

Table B96. TUC-3: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	6.9	8.3	-1.4	23.8	-16.9
M	137.5	5.8	8.8	-3.0	77.0	-71.2
B	285.0	6.7	7.5	-0.8	74.3	-67.6
Geophone						
1	0.0	6.9	8.3	-1.4	23.5	-16.6
2	25.0	6.3	5.1	1.2	34.8	-28.5
3	50.0	6.1	7.8	-1.7	40.5	-34.4
4	75.0	5.9	9.0	-3.1	51.0	-45.1
5	100.0	5.7	8.8	-3.1	61.2	-55.5
6	125.0	5.7	9.1	-3.4	71.7	-66.0
7	150.0	6.0	8.5	-2.5	82.5	-76.5
8	175.0	4.8	6.2	-1.4	91.8	-87.0
9	200.0	5.2	6.5	-1.3	91.6	-86.4
10	225.0	5.3	4.8	0.5	79.9	-74.6
11	250.0	5.5	5.0	0.5	79.2	-73.7
12	275.0	6.6	5.7	0.9	76.3	-69.7

	Layer 1	Layer 2	Layer 3
Velocities used:	1259.	5107.	7108.

Table B97. THC-4: Shotpoint information, geophone data, and arrival times. Times are in msec.

SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	5.5	-25.0	0.0	0.0
A	5.8	-10.0	0.0	0.0
M	7.8	137.5	10.0	0.0
B	8.5	285.0	0.0	0.0
R	9.1	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	6.6	0.0	0.0	12.3	2	9.2	1	39.0	3	60.5	3	65.0	3
2	7.0	25.0	0.0	17.5	2	18.0	2	37.5	2	59.5	3	64.0	3
3	7.5	50.0	0.0	25.0	2	21.0	2	28.5	2	56.5	2	60.0	2
4	8.0	75.0	0.0	33.0	2	27.0	2	20.0	2	49.5	2	55.0	2
5	7.7	100.0	0.0	36.5	2	29.5	2	16.1	2	38.5	2	44.5	2
6	7.2	125.0	0.0	40.8	2	33.0	2	12.2	1	29.3	2	42.0	2
7	7.6	150.0	0.0	46.5	2	38.0	2	12.2	1	23.5	2	38.0	2
8	6.5	175.0	0.0	48.5	2	45.0	2	16.0	2	20.0	2	31.0	2
9	8.5	200.0	0.0	55.0	3	50.0	2	17.0	2	17.5	2	20.0	2
10	4.3	225.0	0.0	58.0	3	53.0	2	18.0	2	15.5	2	15.0	2
11	5.1	250.0	0.0	62.5	3	57.5	2	22.5	2	15.0	2	13.5	2
12	8.5	275.0	0.0	66.5	3	60.8	3	31.5	2	12.5	1	10.5	1

Table B98. THC-4: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	5.8	5.0	0.8	77.1	-71.3
M	137.5	7.8	6.8	1.0	56.9	-49.1
B	285.0	8.5	3.9	4.6	55.3	-46.8
Geophone						
1	0.0	6.6	5.8	0.8	76.3	-69.7
2	25.0	7.0	10.2	-3.2	71.4	-64.4
3	50.0	7.5	10.8	-3.3	66.6	-59.1
4	75.0	8.0	9.9	-1.9	61.8	-53.8
5	100.0	7.7	6.4	1.3	68.2	-60.5
6	125.0	7.2	6.2	1.0	55.7	-48.5
7	150.0	7.6	6.5	1.1	57.2	-49.6
8	175.0	6.5	5.4	1.1	56.0	-49.5
9	200.0	8.5	6.2	2.3	57.7	-49.2
10	225.0	4.3	2.2	2.1	54.2	-49.9
11	250.0	5.1	3.8	1.3	53.6	-48.5
12	275.0	8.5	4.1	4.4	55.5	-47.0

	Layer 1	Layer 2	Layer 3
Velocities used:	1379.	5227.	9743.

Table B99. THC-5: Shotpoint information, geophone data, and arrival times. Times are in msec.

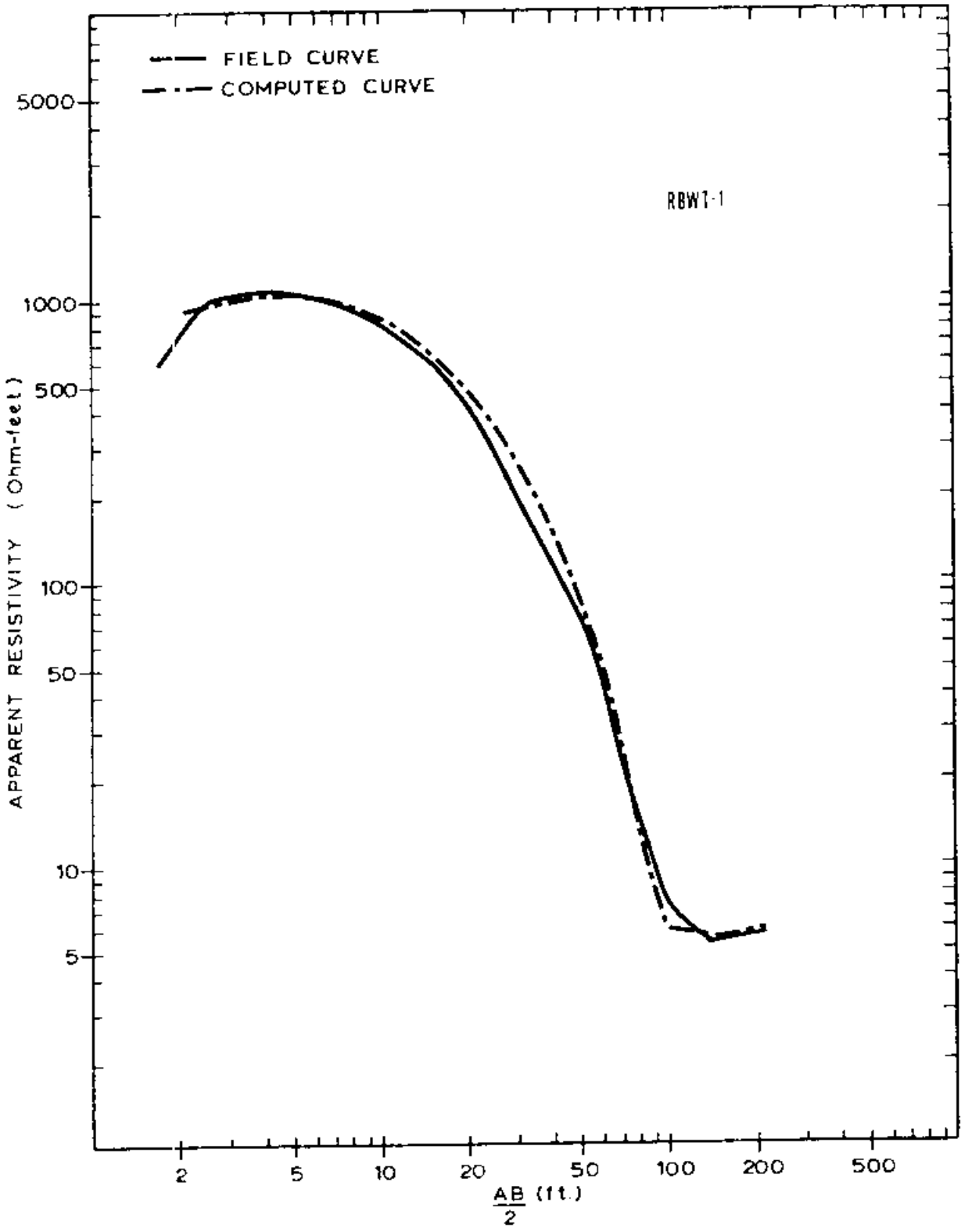
SP	Elev (ft)	X Loc (ft)	Y Loc (ft)	Depth (ft)
F	8.5	-25.0	0.0	0.0
A	7.5	-10.0	0.0	0.0
M	5.7	140.0	10.0	0.0
B	6.1	285.0	0.0	0.0
R	6.3	300.0	0.0	0.0

Geo	Elev (ft)	X Loc (ft)	Y Loc (ft)	SP	F	SP	A	SP	M	SP	B	SP	R
1	5.4	0.0	0.0	13.0	2	10.0	1	34.0	2	52.0	3	54.0	3
2	4.9	25.0	0.0	16.5	2	12.0	2	28.5	2	50.5	3	52.5	3
3	4.2	50.0	0.0	23.0	2	15.0	2	21.0	2	48.0	2	50.0	3
4	4.8	75.0	0.0	25.0	2	16.3	2	18.0	2	41.8	2	47.0	2
5	5.4	100.0	0.0	28.3	2	20.0	2	16.0	2	39.0	2	42.0	2
6	5.9	125.0	0.0	34.5	2	25.0	2	14.0	1	37.3	2	40.0	2
7	6.4	150.0	0.0	41.2	2	43.0	2	12.5	1	33.0	2	35.3	2
8	7.0	175.0	0.0	45.0	2	45.3	2	19.5	2	22.0	2	30.2	2
9	7.0	200.0	0.0	49.0	2	48.0	2	23.0	2	18.5	2	28.0	2
10	6.4	225.0	0.0	52.0	3	50.0	2	25.5	2	15.3	2	24.0	2
11	6.3	250.0	0.0	57.2	3	54.0	3	31.0	2	14.2	2	17.4	2
12	6.1	275.0	0.0	60.0	3	54.5	3	33.5	3	10.6	1	13.1	2

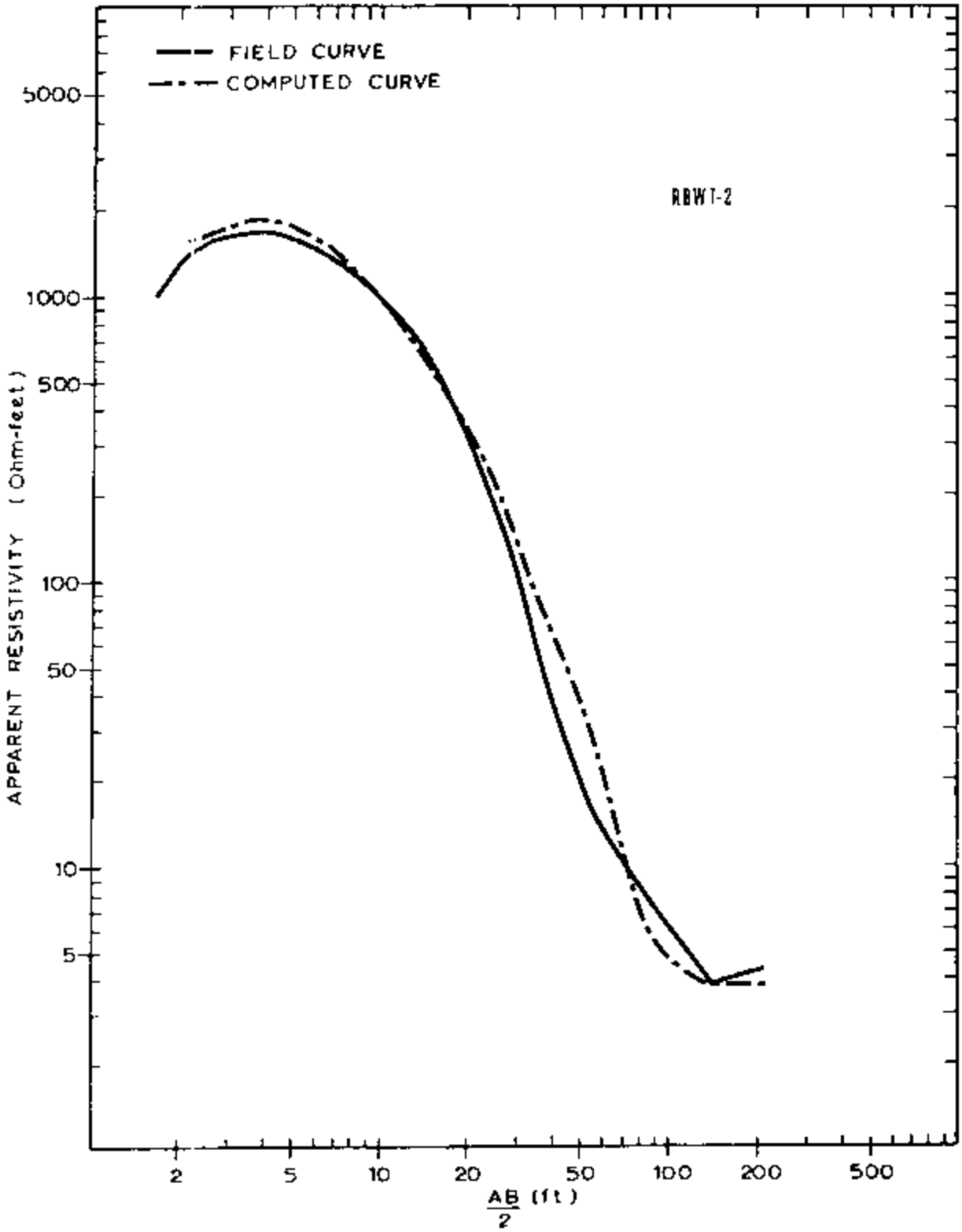
Table B100. THC-5: Smoothed position of layers beneath shotpoints and geophones.

SP	Position	Surface Elev (ft)	Layer 2 Depth (ft)	Layer 2 Elev (ft)	Layer 3 Depth (ft)	Layer 3 Elev (ft)
A	-10.0	7.5	5.3	2.2	5.3	2.2
M	140.0	5.7	4.3	1.4	69.0	-63.3
B	285.0	6.1	3.8	2.3	98.3	-92.2
Geophone						
1	0.0	5.4	3.1	2.3	3.1	2.3
2	25.0	4.9	3.3	1.6	28.6	-23.7
3	50.0	4.2	2.9	1.3	38.9	-34.7
4	75.0	4.8	1.8	3.0	46.0	-41.2
5	100.0	5.4	2.6	2.8	55.1	-49.7
6	125.0	5.9	3.7	2.2	64.1	-58.2
7	150.0	6.4	5.5	0.9	73.1	-66.7
8	175.0	7.0	5.2	1.8	85.2	-78.2
9	200.0	7.0	5.0	2.0	105.3	-98.3
10	225.0	6.4	4.8	1.6	82.3	-75.9
11	250.0	6.3	5.1	1.2	89.7	-83.4
12	275.0	6.1	3.8	2.3	97.0	-90.9

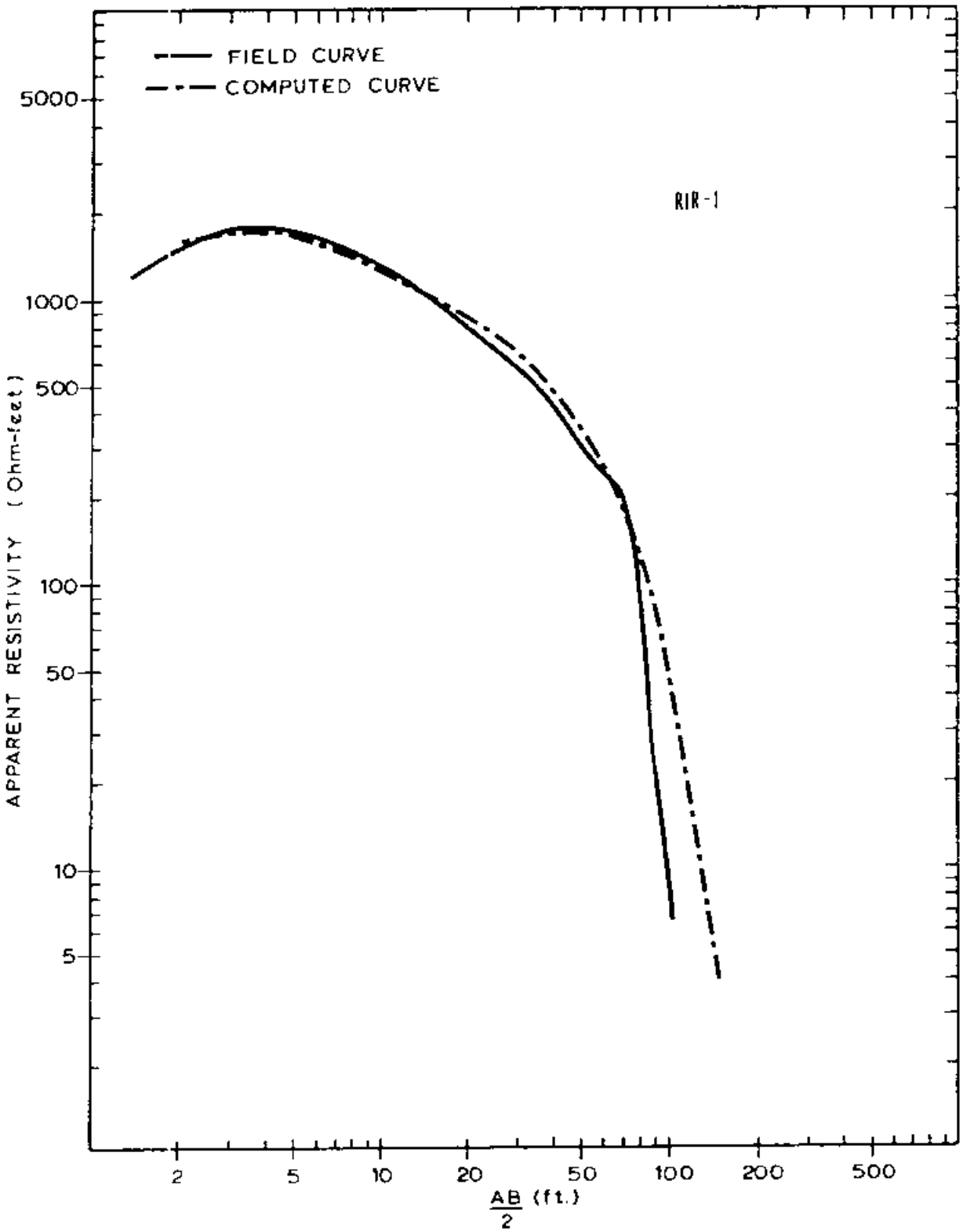
	Layer 1	Layer 2	Layer 3
Velocities used:	1096.	5633.	12361.



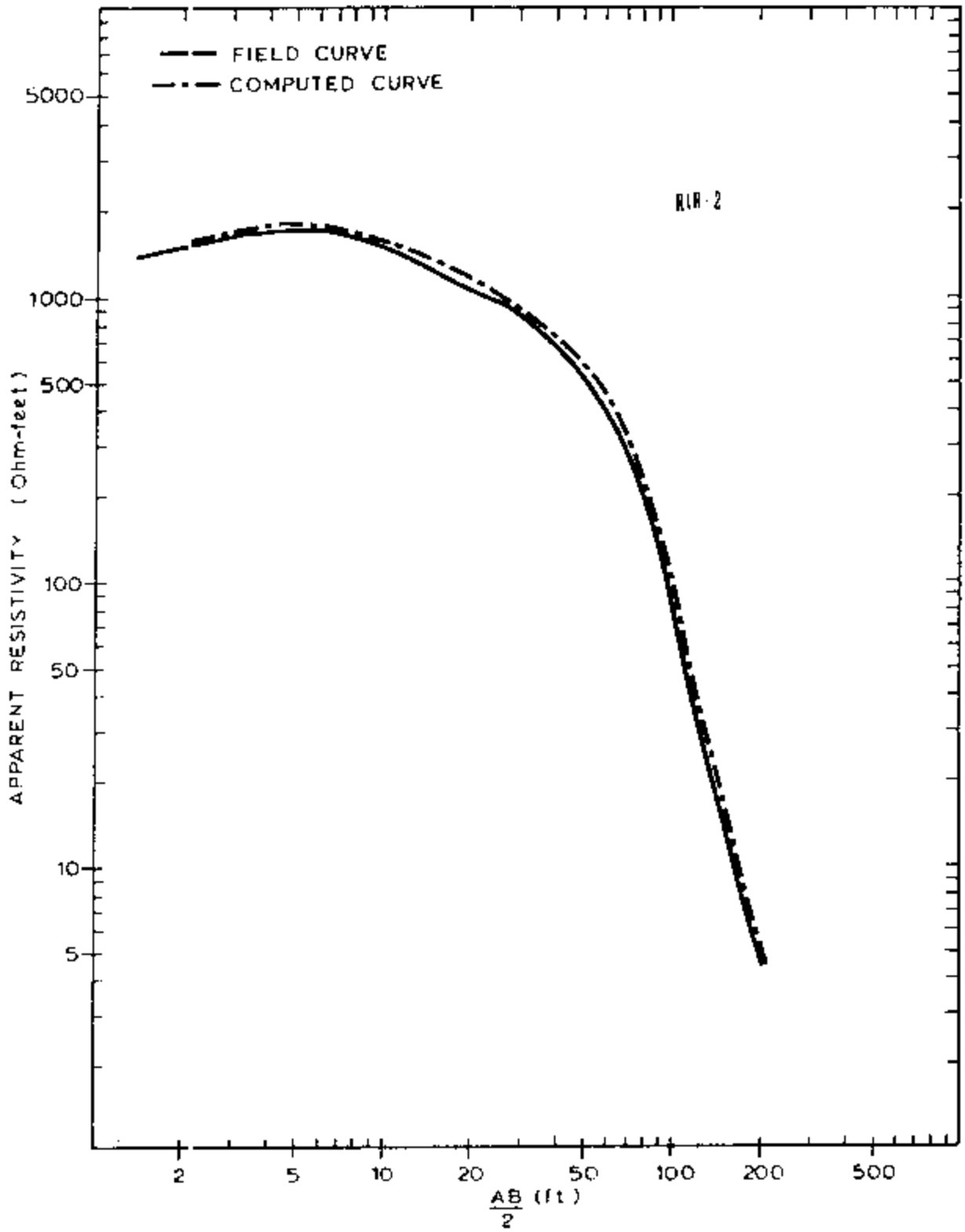
Station 1: Field VES cruve and computed VES curve.



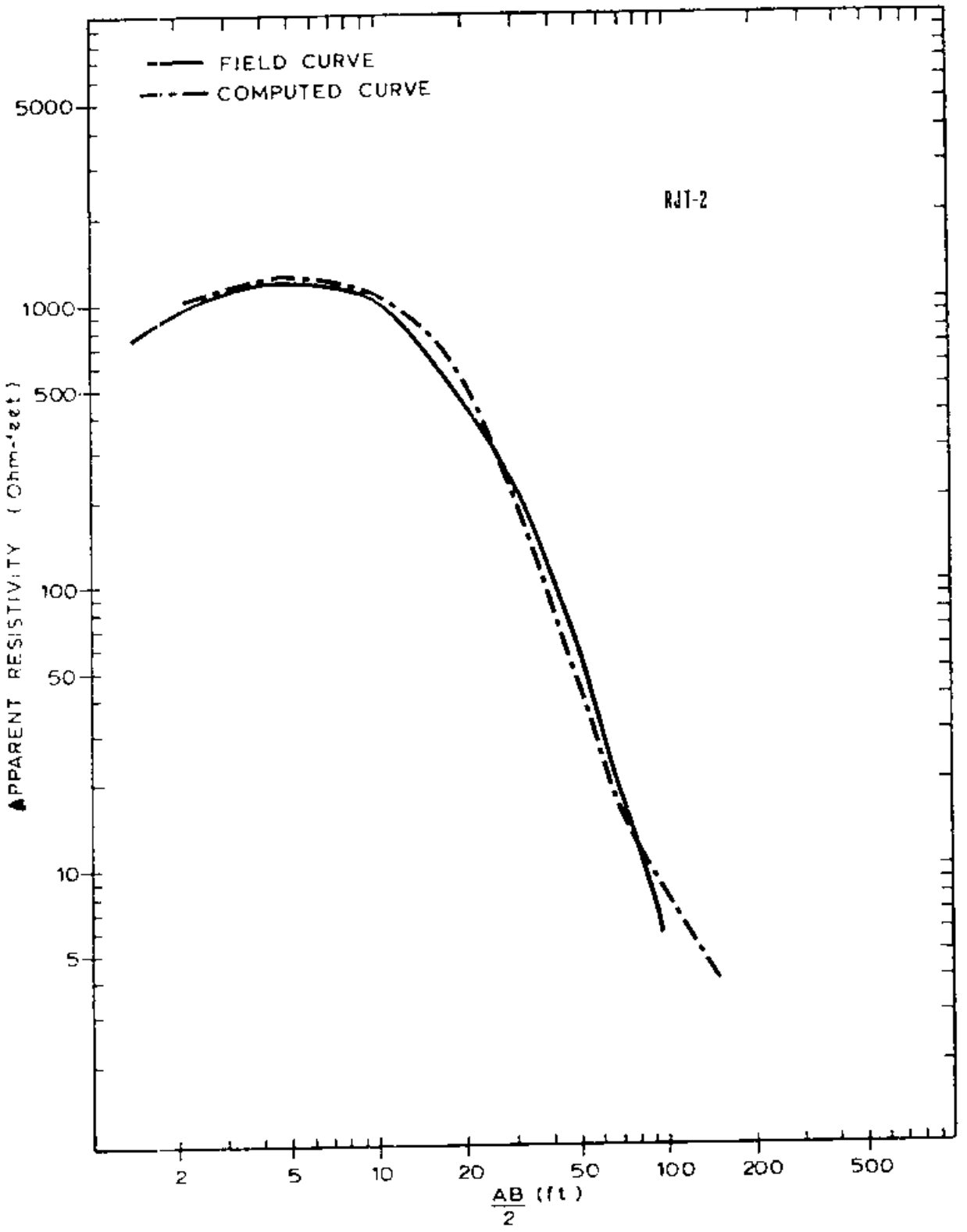
Station 2: Field VES cruve and computed VES curve.



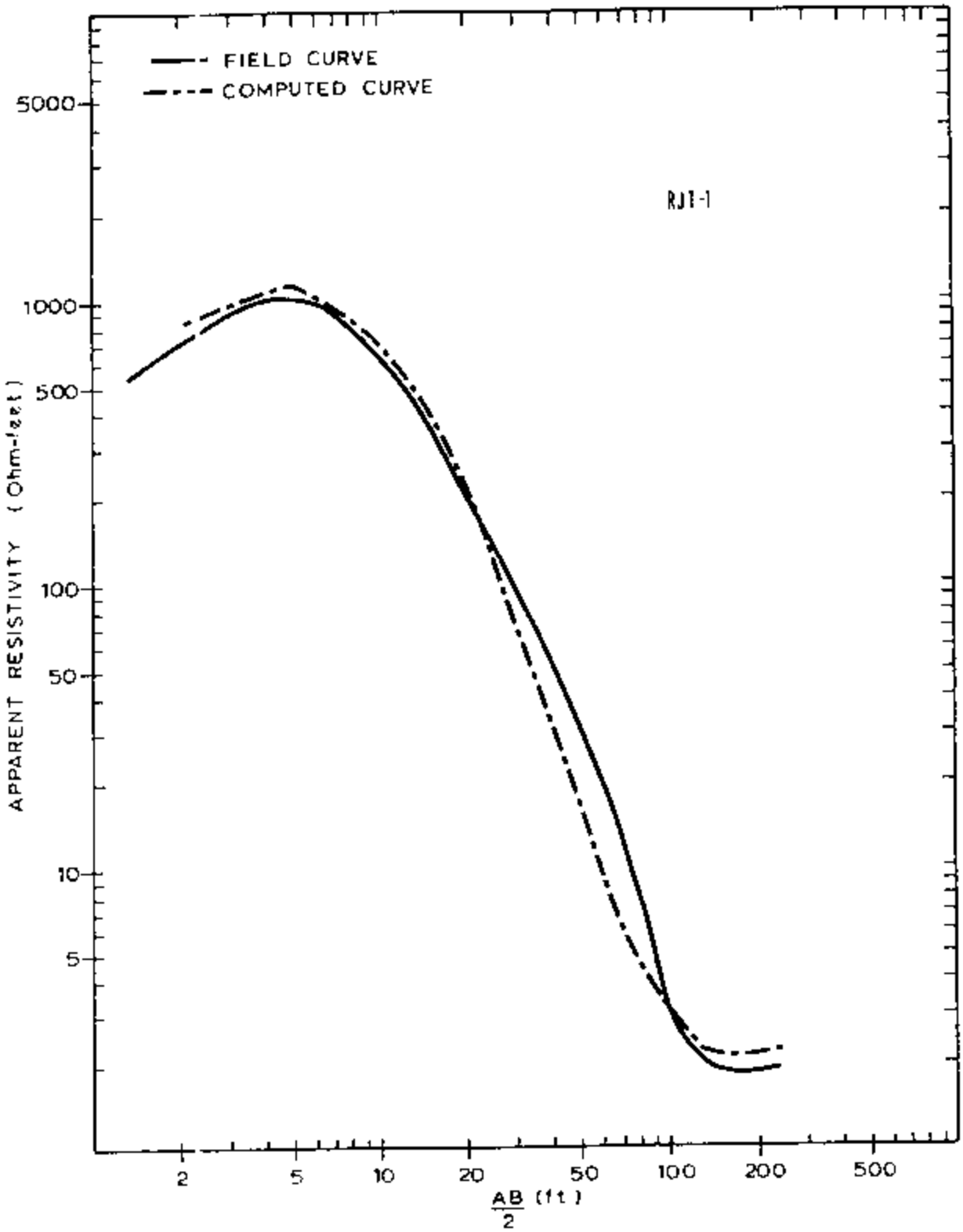
Station 3: Field VES curve and computed VES curve.



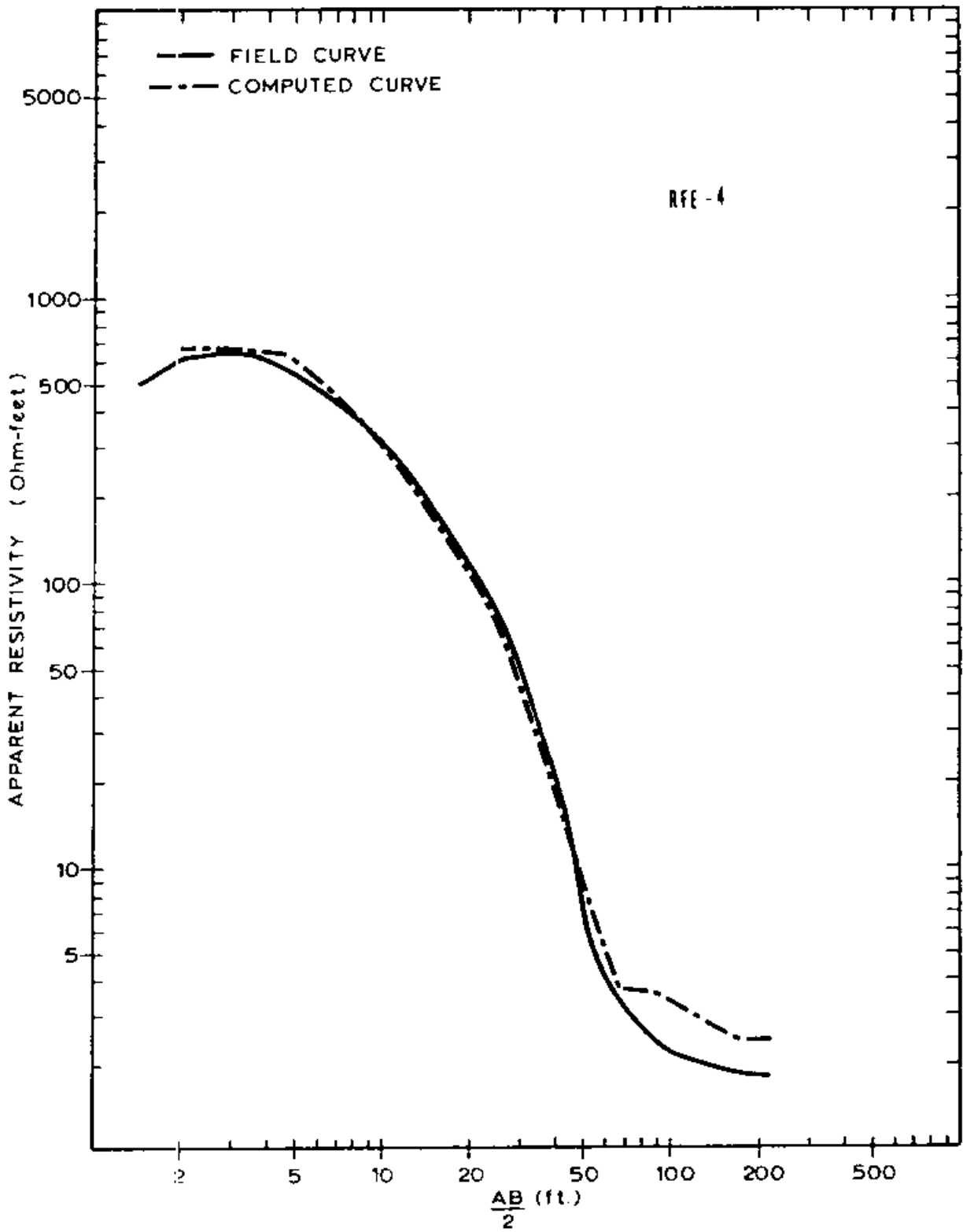
Station 4: Ffield VES curve and computed VES curve.



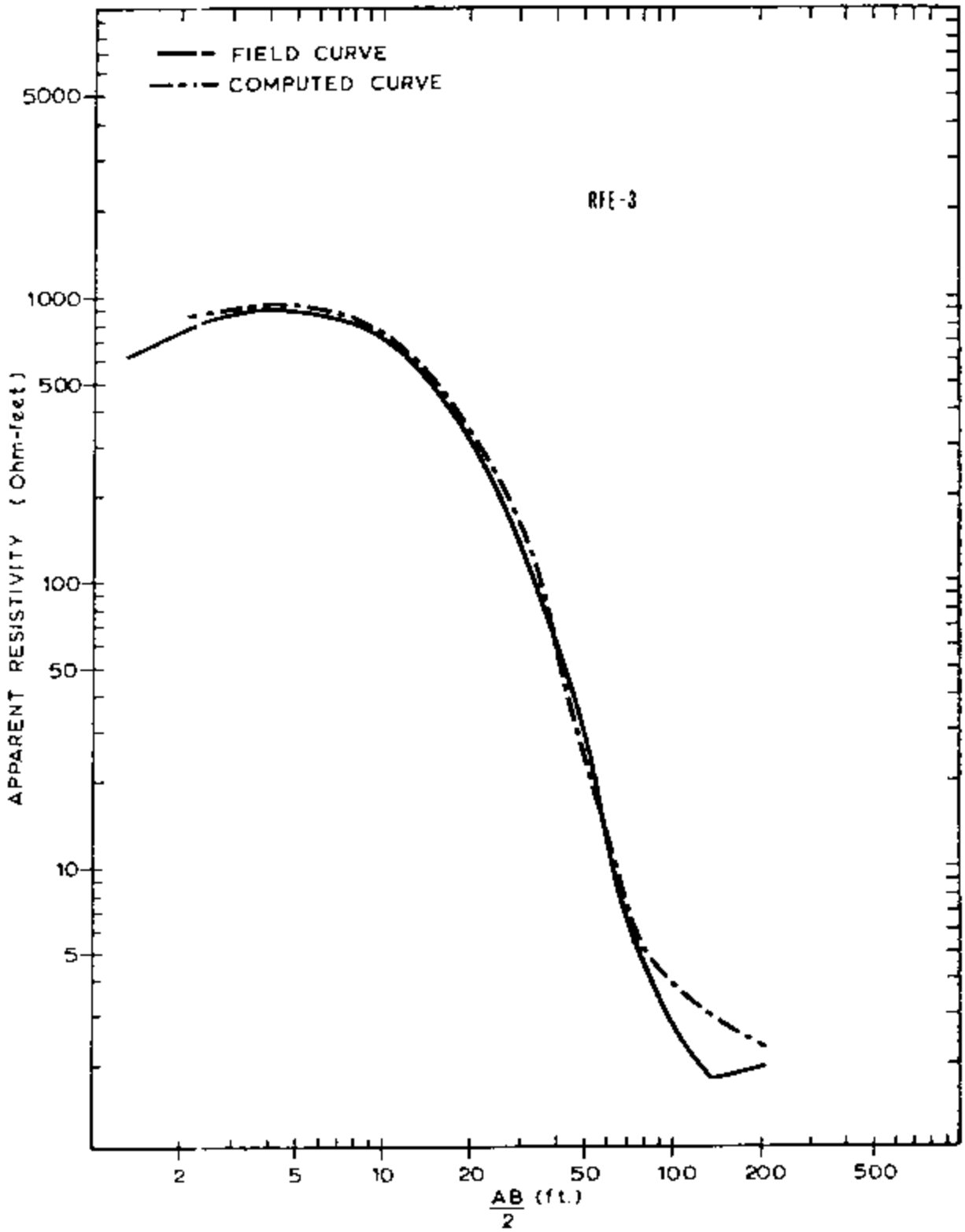
Station 5: Field VES curve and computed VES curve.



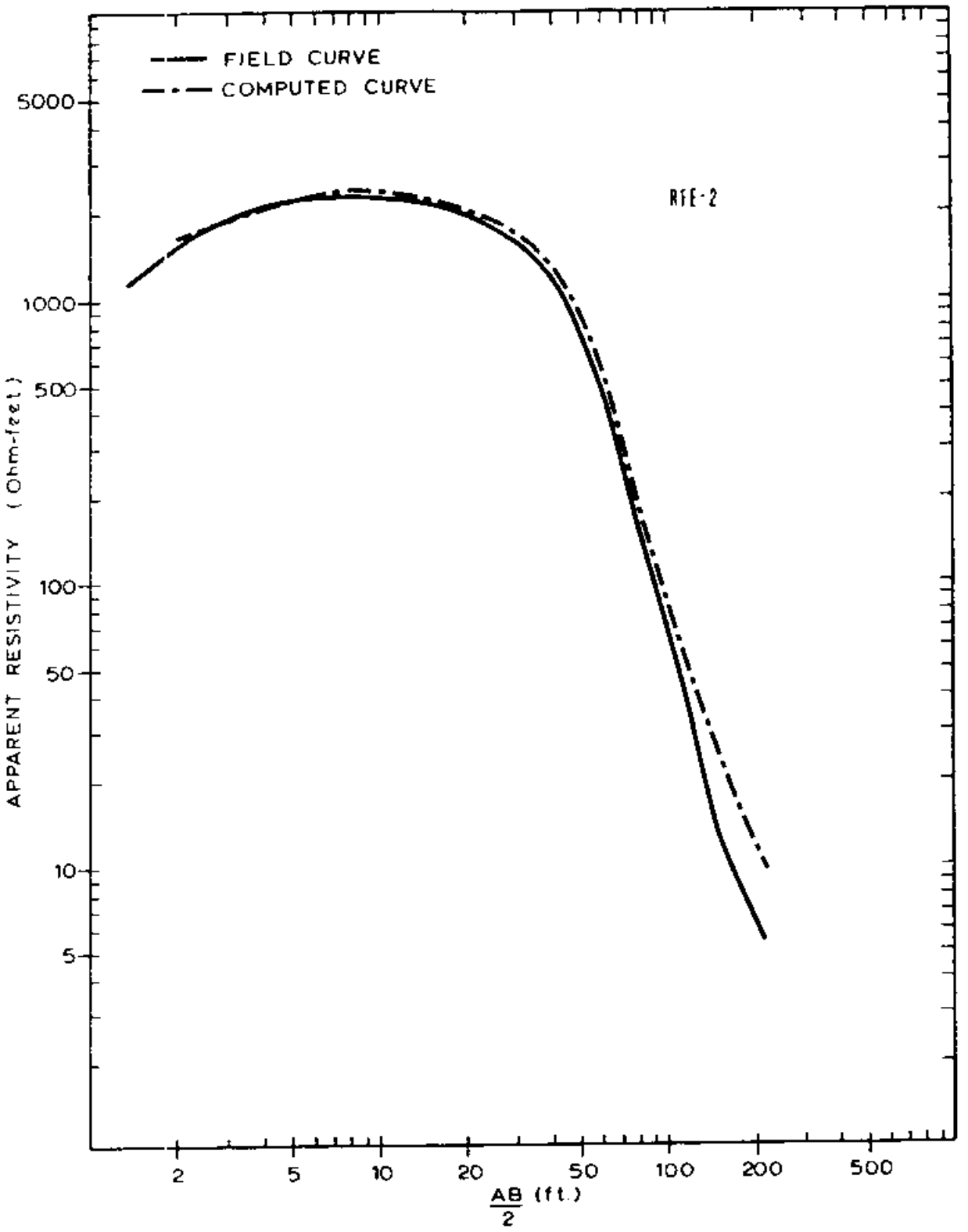
Station 6: Field VES curve and computed VES curve.



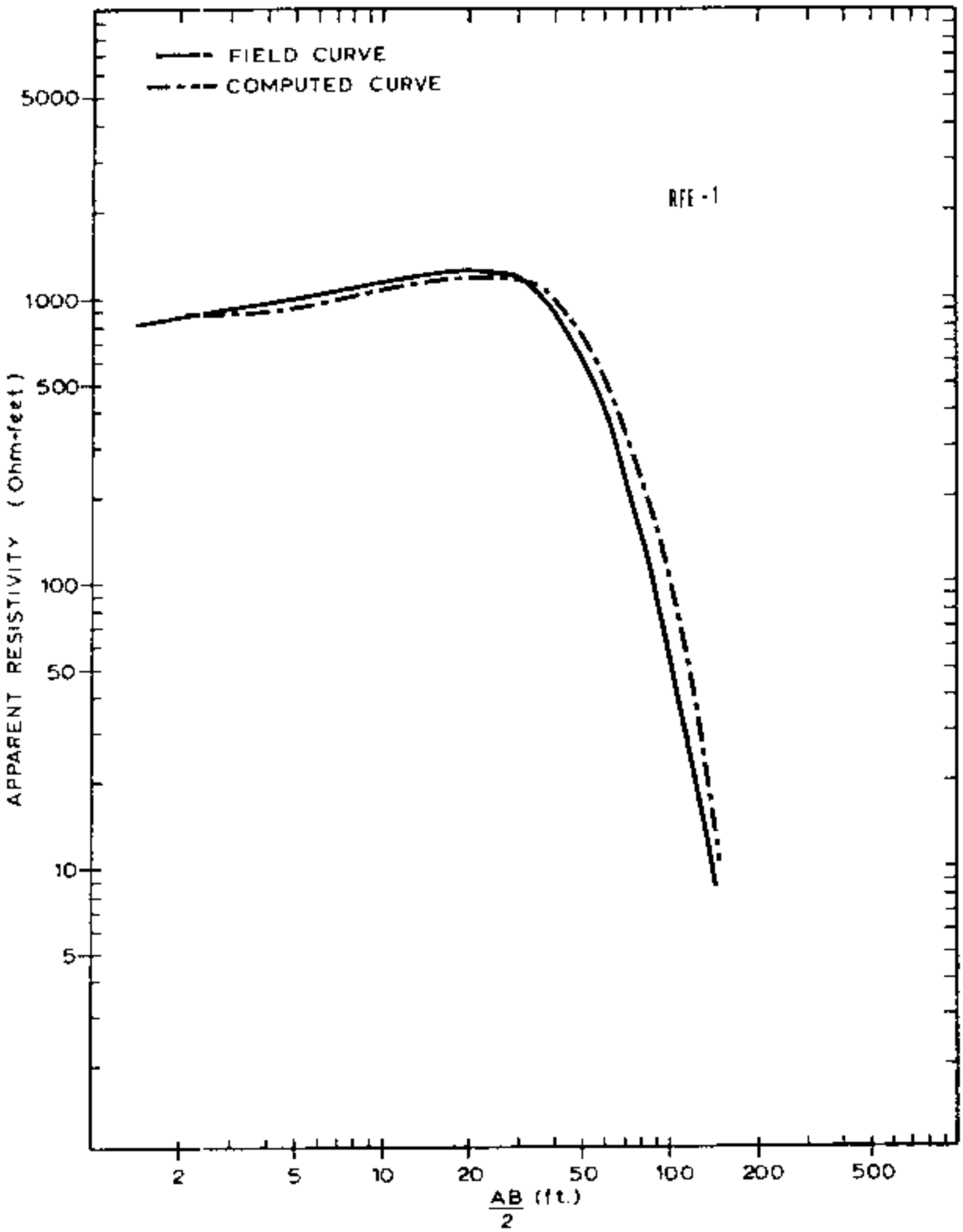
Station 7: Field VES curve and computed VES curve.



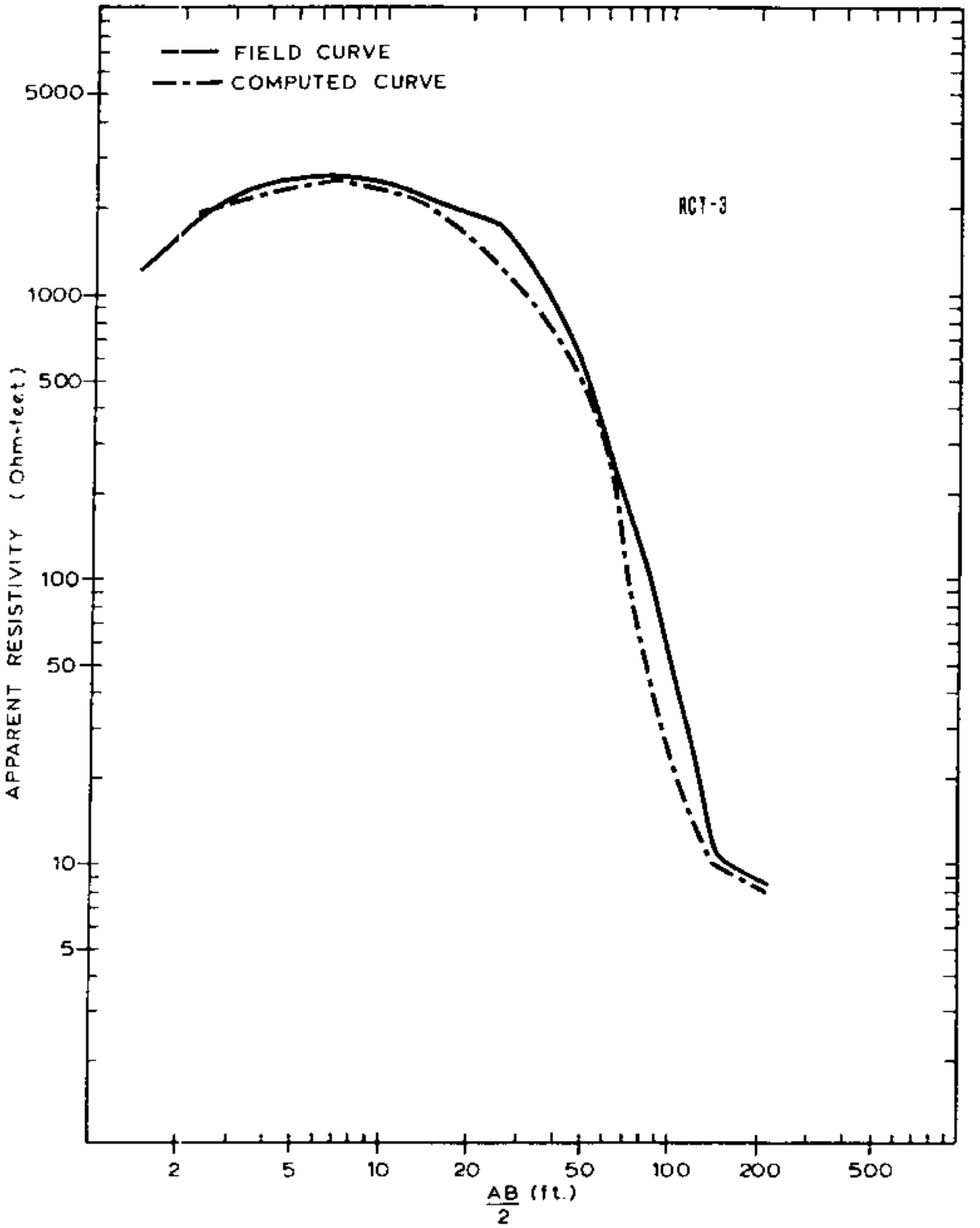
Station 8: Fie d VES curve and computed VES curve.



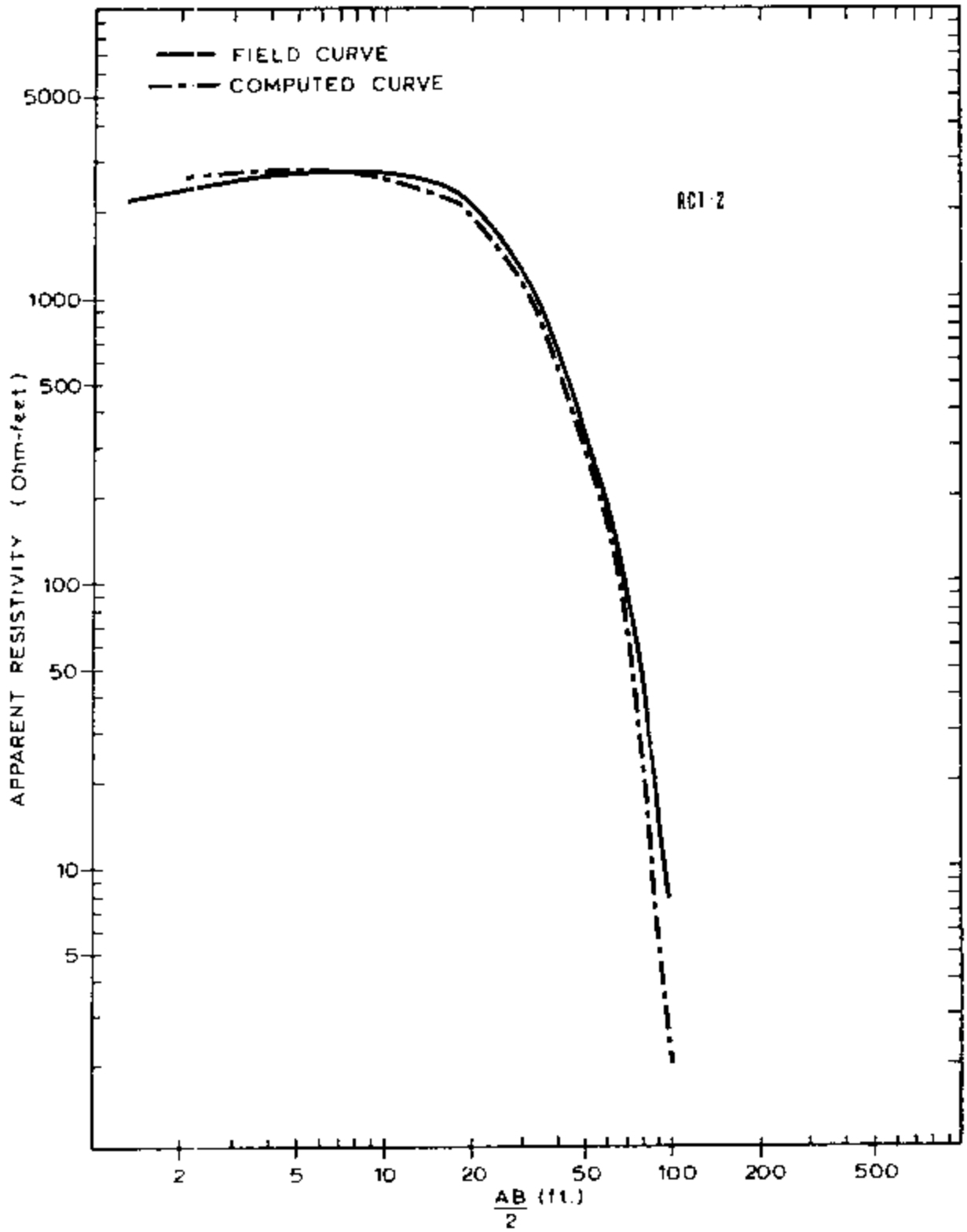
Station 9: Field VES curve and computed VES curve.



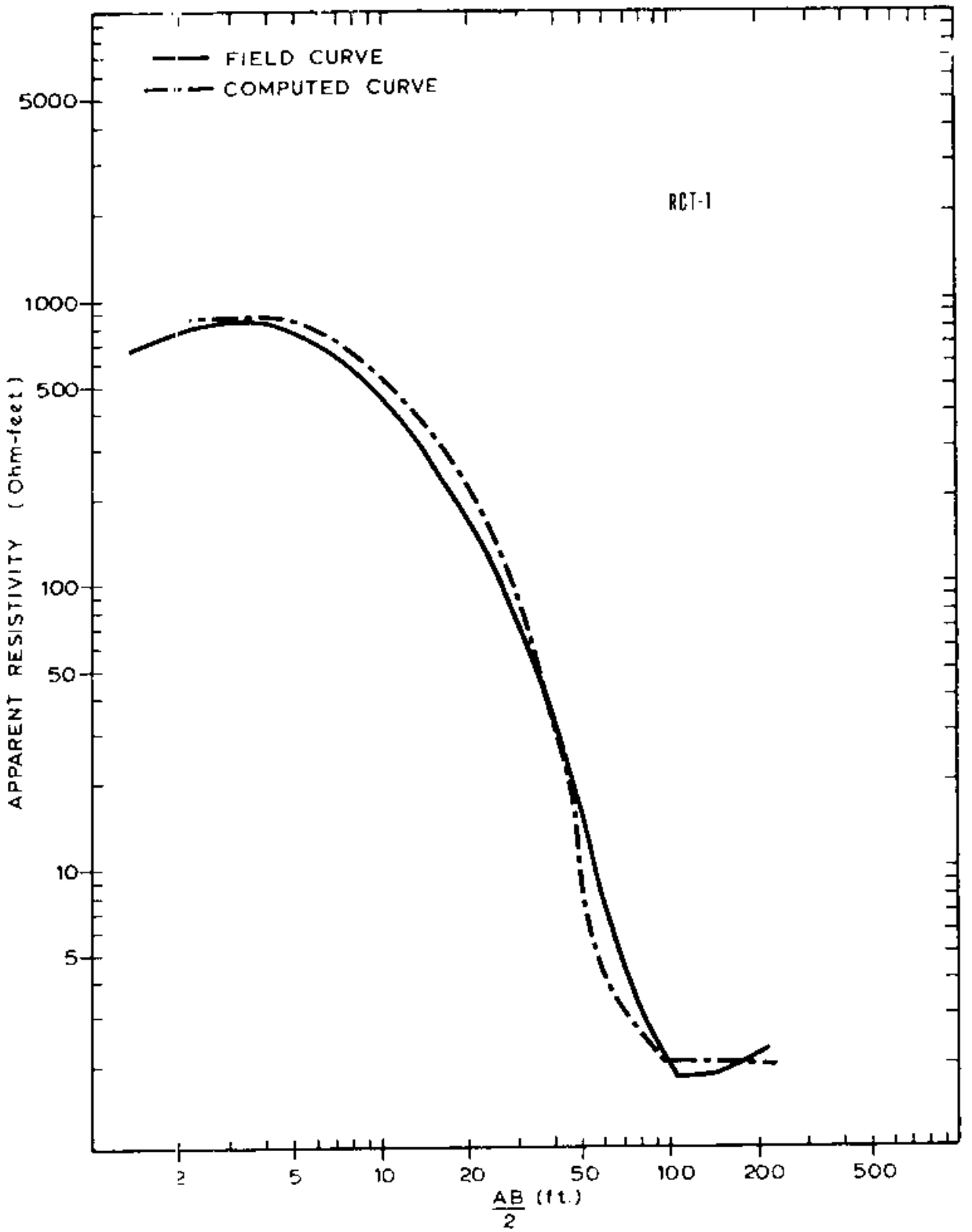
Station 10: Field VES curve and computed VES curve.



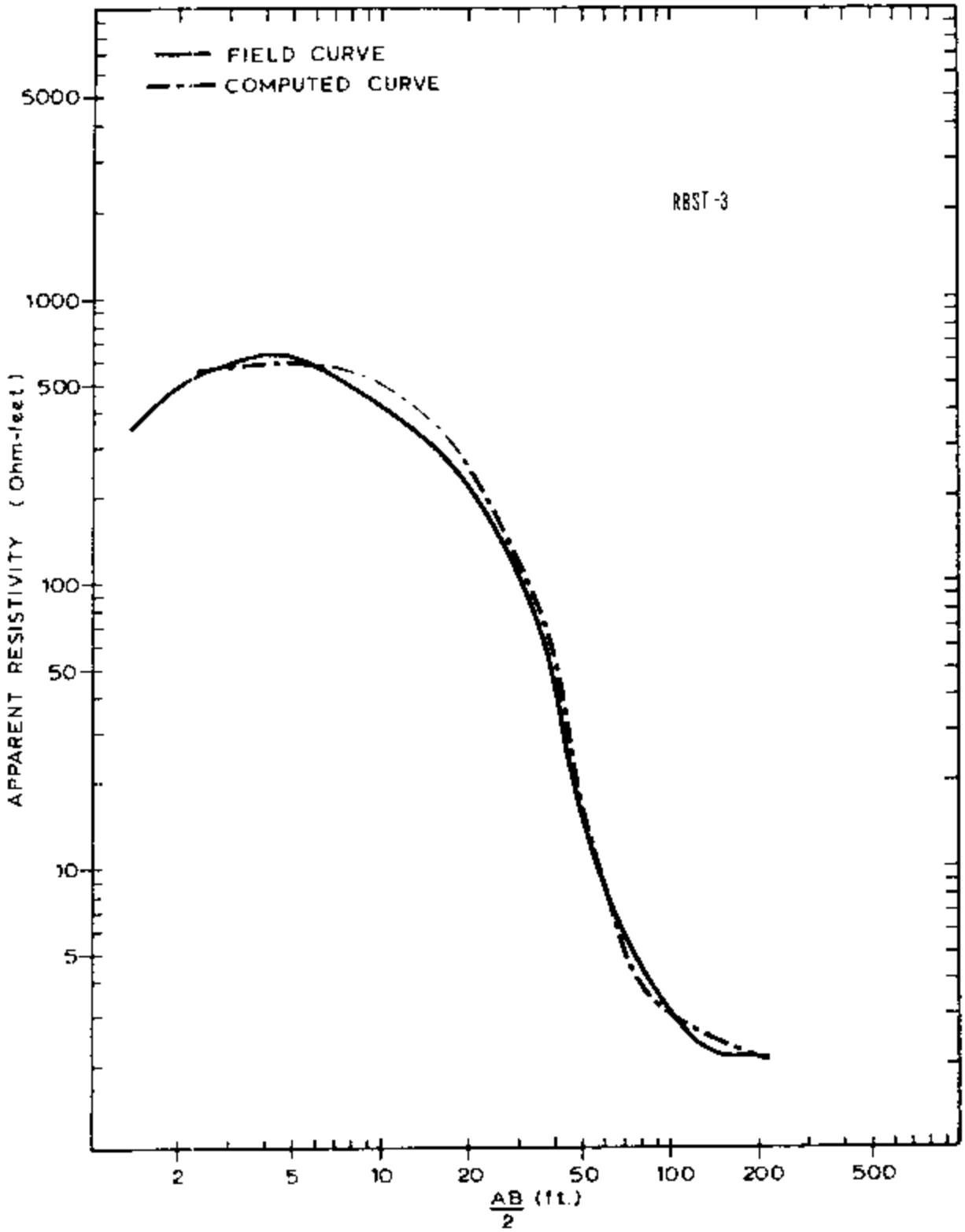
Station 11: Field VES curve and computed VES curve.



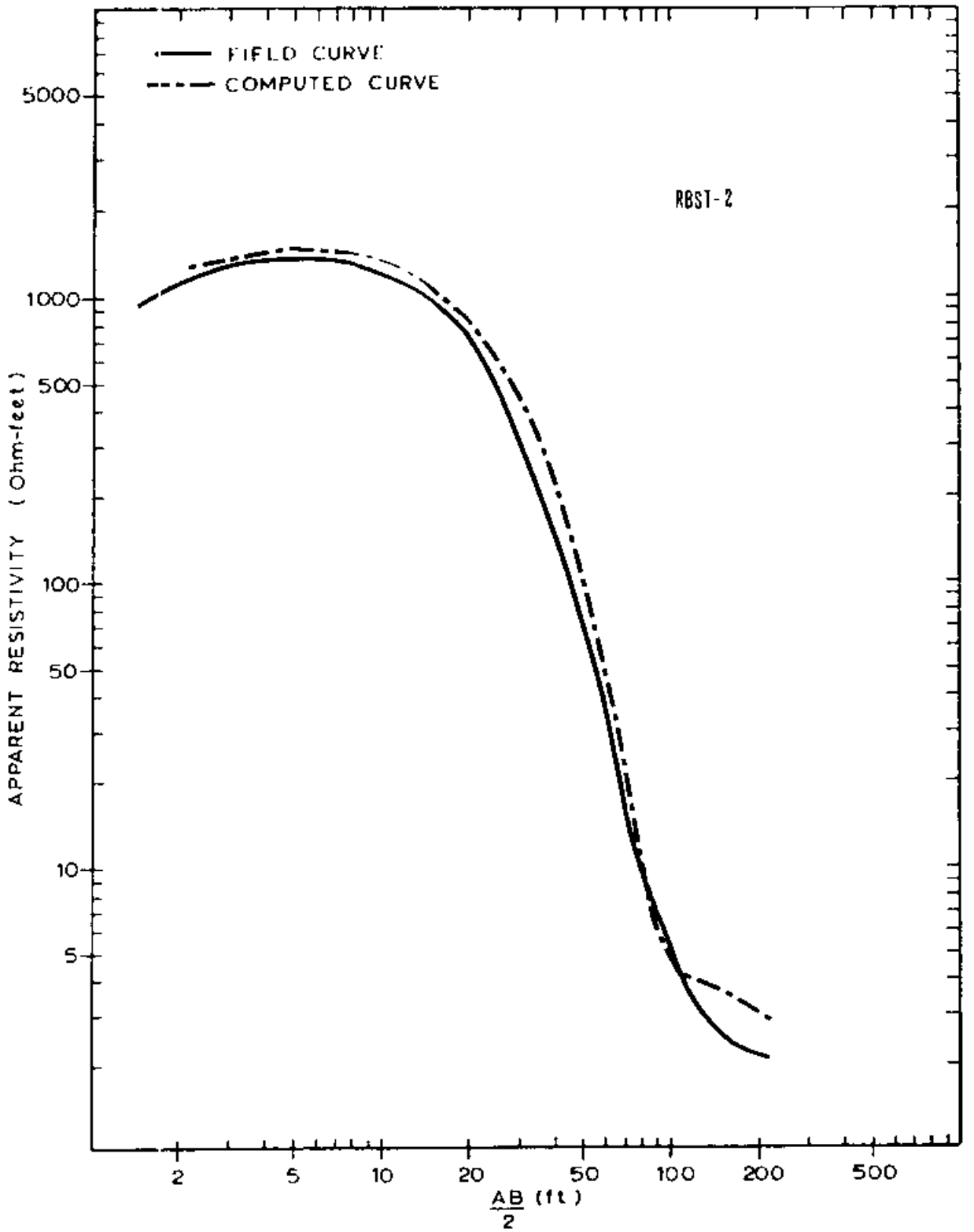
Station 12: Field VES curve and computed VES curve.



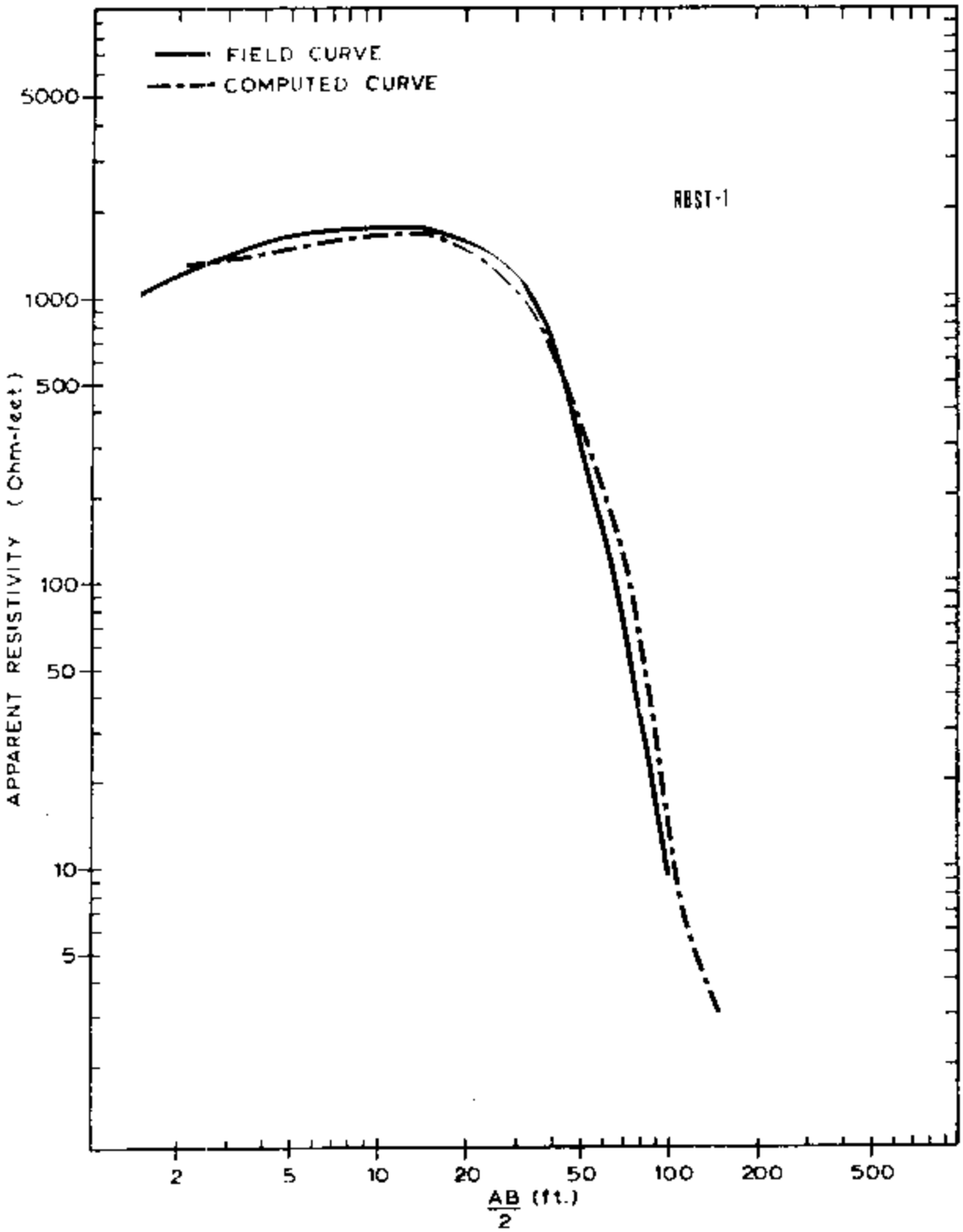
Station 13: Field VES curve and computed VES curve.



Station 14: Field VES curve and computed VES curve.



Station 15: Field VES curve and computed VES curve.

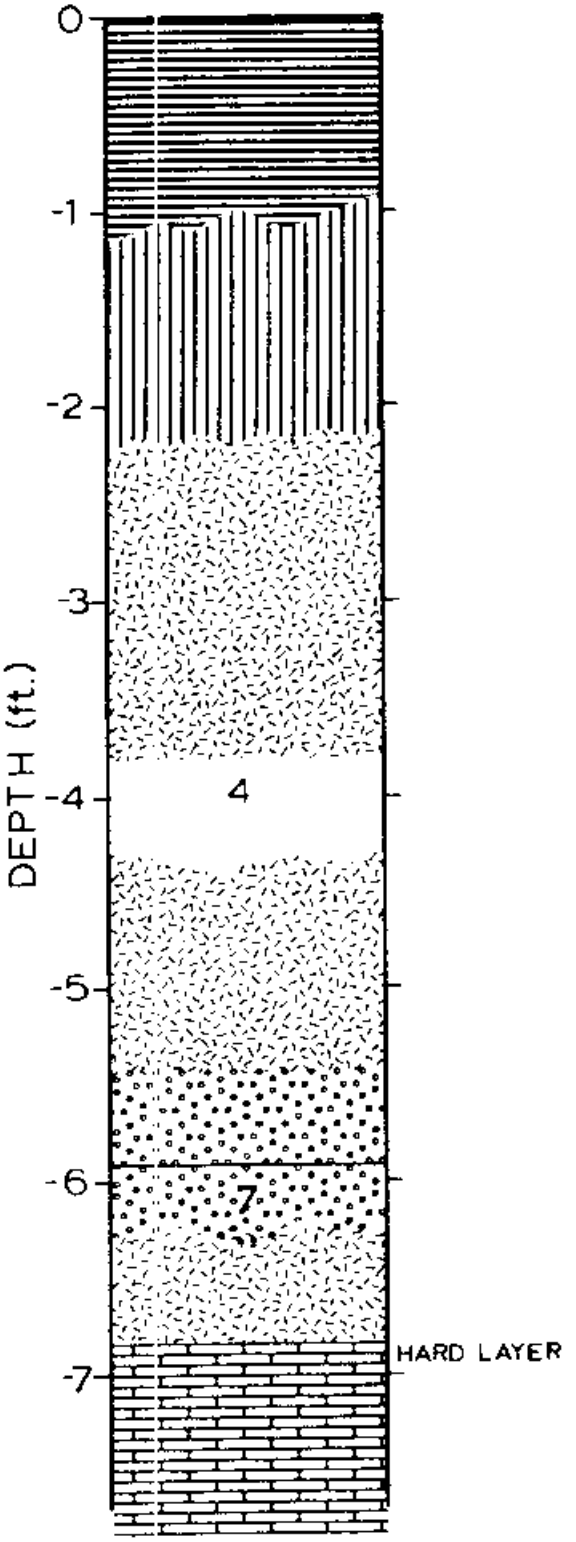


Station 16: Field VES curve and computed VES curve.

APPENDIX C

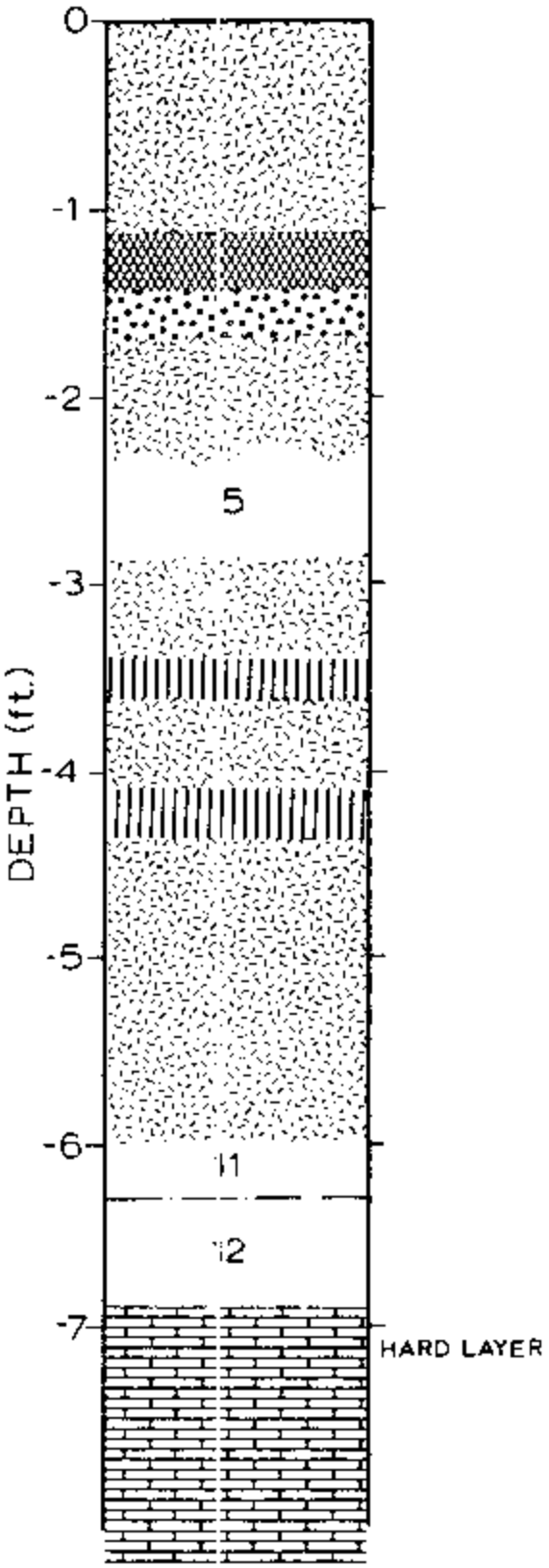
CONTENTS

Stratigraphic secton at DS-3 drill site.



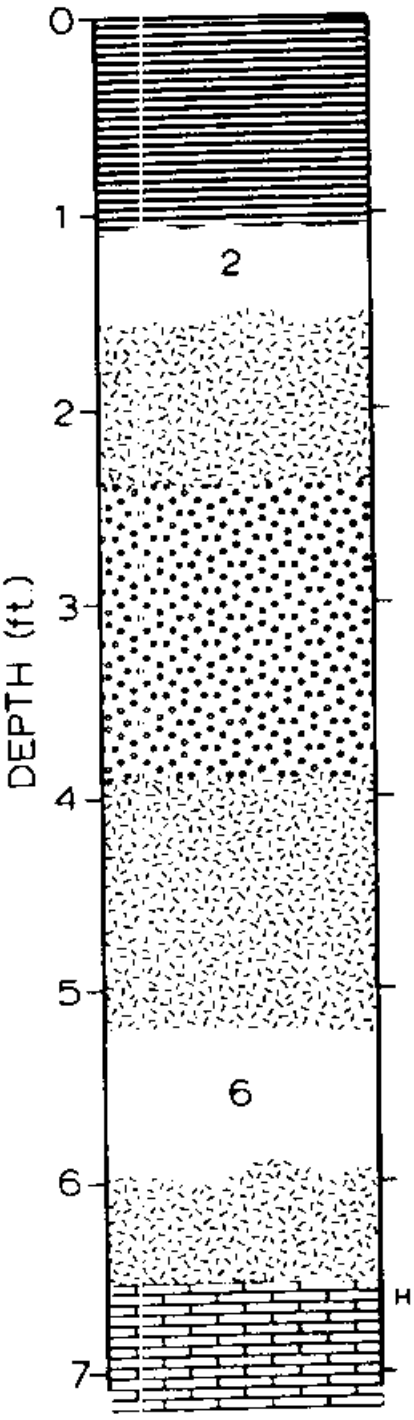
1. Washover unit. Dark brown to black soil zone containing 30 to 40% foraminiferal sand with 60 to 70% medium to coarse pebbles and rare small cobbles. Root fragments and root casts are common.
2. Washover unit. light grey to white zone composed of 20% foraminiferal sand and 80% medium to coarse pebbles with small cobbles. Sharp contact with the underlying stratigraphic unit.
3. Beach unit. light pink zone composed of foraminiferal sand, layers 3 to 4 inches thick alternating with 1 inch layers of fine to very fine coral pebbles.
4. Washover unit. Grey to light brown zone containing 60% medium to coarse gravel and 40% foraminiferal sand as filling. Root fragments and root casts are common.
5. Beach unit. light pink zone composed of 60% foraminifera sand with scattered very fine pebbles in 3" to 4" layers, alternating with 1" thick fine pebble layers.
6. Washover unit. light pink zone composed of 60% fine to very coarse pebbles with scattered small cobbles and 40% foraminifera sand filling spaces between pebbles.
7. Washover unit. light pink zone composed of 60% fine to very coarse pebbles with scattered small cobbles and 40% foraminiferal sand filling spaces between pebbles. This zone is loosely cemented.
8. Light pink zone containing 60% foraminiferal sand with 1" thick discontinuous fine to very fine pebble layers.

Stratigraphic section at DS-4 drill site.



1. Beach unit. light pink foraminiferal sand with scattered angular fine to medium pebbles. Pebbles make up 30% of distribution.
2. Beach unit. light grey layer composed of fine to medium pebble-sized angular coral fragments and purple echinoid spines.
3. Washover unit. light pink layer of foraminiferal sand with rare fine to very fine pebbles.
4. Washover unit. light grey to white zone composed of cobbles and pebbles. Sand present as space filling. The lower contact is a distinct boundry.
5. Beach unit. zone composed of sand with 30% fine to medium angular coral pebbles.
6. Beach unit. light pink foraminiferal sand with scattered small pebbles.
7. Beach unit. light grey to white layer with fine to medium coral fragments and echinoid spines.
8. Beach unit. light pink foraminiferal sand with scattered small pebbles.
9. Beach unit. light grey to white layer with fine to medium coral fragments and purple echinoid spines.
10. Beach unit. light pink foraminiferal sand with rare scattered small pebbles.
11. Washover unit. zone composed of 70% angular coarse pebbles with sand between larger particles.
12. Washover unit. zone composed of angular cobbles with sand and small pebbles filling spaces. Occasional small boulders.

Stratigraphic section at A6 test pit.



1. Washover unit. dark brown to black soil zone containing 30% foraminiferal sand sand 70% medium to coarse pebbles with common small cobbles. Roots and root casts are common.

2. Washover unit. light grey zone composed of 35 to 40% foraminiferal sand and 60 to 65% medium to coarse pebbles with common small cobbles. Roots and root casts are less abundant.

3. Beach unit. light pink zone composed of alternating 3"-4" layers of foraminifera sand with 1" to 1.5" well-sorted, very fine pebble layers. Pebble layers dip 2 to 3 degrees toward Southeast.

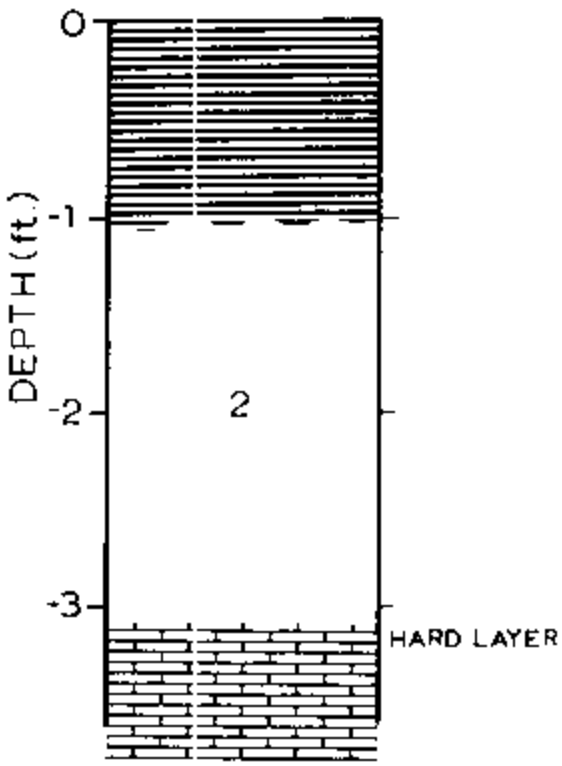
4. Washover unit. light pink to white zone containing angular medium to very coarse pebbles with cobbles. foraminiferal sand filling spaces between larger particles.

5. Beach unit. light pink zone composed of alternating 3"-4" layers of foraminiferal sand with 1" to 1.5" thick well-sorted, very fine pebble layers. Pebble layers dip 5 to 7 degrees toward Southeast.

6. Washover unit. light grey to pink zone composed of 60% angular coarse to very coarse pebbles and abundant cobbles with rare small boulders. Foraminiferal sand composes remaining 40% as space filling.

7. light pink foraminiferal sand with scattered very fine to medium pebbles. Pebbles compose 20 to 30% of the distribution.

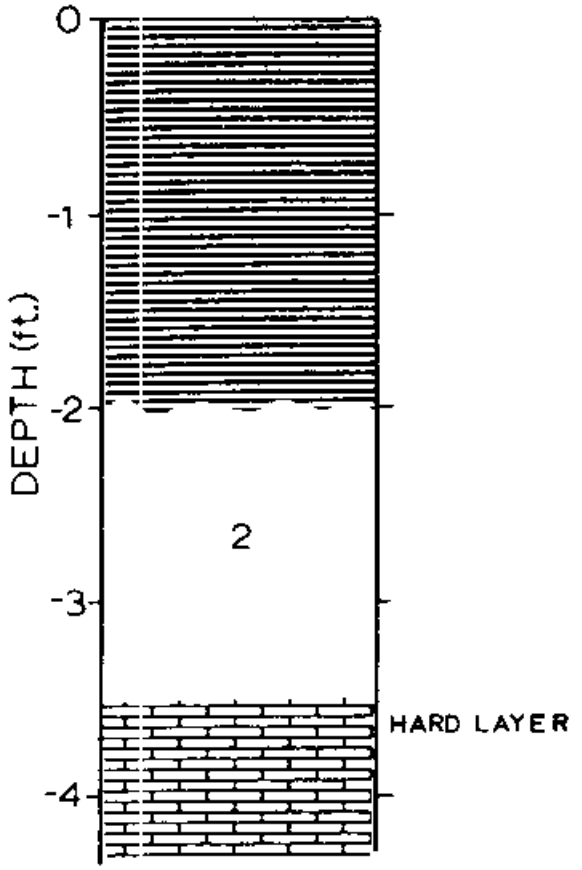
Stratigraphic section at Pz-1 drill site.



1. Dark brown to black soil zone composed of large cobbles of angular coral fragments in grain supported matrix. Pebbles and sand are found filling spaces between larger particles. Roots are abundant.

2. Light pink to grey zone composed of large cobbles of angular coral fragments in grain supported matrix. Pebbles and sand are found filling spaces between larger particles. Roots are rare.

Stratigraphic section at Pz-2 drill site.



1. Dark brown soil zone composed of cobbles and small boulder size angular coral fragments in grain supported matrix. Pebbles and sand are found as fillings. Roots are quite large and very common.

2. Light pink to grey zone composed of cobbles and small boulder-size angular coral fragments in grain supported matrix. Sand is more abundant in this zone. Sand and pebbles are found filling spaces between the larger grains. Roots are quite rare.

DEKE ISLAND DRILLING LOG

Drill Site: DS1 Drilling Dates: 20 and 21 February

Core Diameter: 1" and split-spoon Total Depth Drilled: 15 ft.

Total Core Recovery: 0 Depth From Surface to Hard Layer: not found

Depth (Below Hard Layer)	Run No.	Recovery (ft)	Drilling Characteristics
15 ft from surface	1 and 2	0	unconsolidated sediments; Primarily Baculogypsina and calcarina sands; Core drill and split spoon sampling not successful; excessive caving and saturated sediments.

DEKE ISLAND DRILLING LOG

Drill Site: DS2

Drilling Dates: 25 and 26 February

Core Diameter: 1" and split-spoon

Total Depth Drilled: 15 ft.

Total Core Recovery: 0

Depth From Surface to Hard Layer: not found

Depth (Below Hard Layer)	Run No.	Recovery (ft)	Drilling Characteristics
0-15'	1	0	Unconsolidated sediments; primarily Baculogypsina and calcarina sands; core drill sampling not successful.
from 5-7' below surface	2	2	split spoon sample of sediments collected by driving sampler into sediments at base of pipe mount casing; sediments were from caving of hole after core drilling attempts; 2 samples, taken-at upper 1' and lower 1' of sampled section. Lower 1 sediments contain more small to medium pebbles, which were near water table.

DEKE ISLAND DRILLING LOG

Drill Site: DS3 Drilling Dates: 3, 5, 6, and 8 March

Core Diameter: 1" Total Depth Drilled: 61 ft.

Total Core Recovery: 15.5 ft. Depth From Surface to Hard Layer: 7.5 ft.

Depth (Below Hard Layer)	Run No.	Recovery (ft)	Drilling Characteristics
0-5	1	4.7	very hard drilling; no cavities; few natural breaks; compact recent reef with cemented Baculogypsina and calcarina sands; encrusting foraminifera, Tridacna shell, very sparse coralline algae.
5-10	2	1.3	0.5 ft. hard drilling, broke thru hard layer and lost circulation; 1 ft sandy pocket; easy drilling with same crunchy drilling (sand or gravel ?).
10-15	3	0.8	2 ft. easy drilling; 3 ft. of easy drilling with medium hard layers of 1 to 3" thickness; 75 psi for easy drill and 100 psi for harder drilling (marine pump).
15-20	4	1.0	1 ft. cave in with possible sand/gravel; easy drilling with few medium hard thin layers; 50-60 psi (marine pump).
20-25	5	1.4	2.5 ft of cave in with possible sand/gravel; easy drilling with thin medium hard layer and hard layer at 22 ft.

DEKE ISLAND DRILLING LOG

Drill Site: DS3 continued Drilling Dates: 3, 5, 6, and 8 March

Core Diameter: 1" Total Depth Drilled: 61 ft.

Total Core Recovery: 15.5 ft. Depth From Surface to Hard Layer: 7.5 ft.

Depth (Below Hard Layer)	Run No.	Recovery (ft)	Drilling Characteristics
25-30	6	1.1	2.5 ft of cave in with possible sand/gravel; there was 8" hard (coral) in caved material; alternating easy and medium hard layers ranging from 2-8" thick; 95 psi (marine pump).
30-35	7	0	5 ft. of cave-in, feels like gravel-drilled pipe to starting depth; very easy drill from 30-35 ft. with thin crunchy layers; 75 psi (marine pump).
35-40	8	0.5	hole closed from 27 to 29 ft., gravel (?) and open from 29 to 34 ft; 1 ft easy drilling; 4 ft of alternating easy and medium hard drilling; 65 psi (marine pump).
40-45	9	0.8	hole closed from 26 to 29 ft, gravel (?) and partly to mostly open to 40 ft; alternating easy drilling and thin medium hard layers.
45-51	10	1.2	back filled to 27 ft with few open pockets to 45 ft.; 2 ft easy drilling with a thin hard layers; 3 ft alternating easy to thin medium hard layers; 1 ft of rough bouncy drilling; 55-60 psi (marine pump); possible facies change at 51 ft.

DEKE ISLAND DRILLING LOG

Drill Site: DS3 continued Drilling Dates: 3, 5, 6, and 8 March

Core Diameter: 1" Total Depth Drilled: 61 ft.

Total Core Recovery: 15.5 ft. Depth From Surface to Hard Layer: 7.5 ft.

Depth (Below Hard Layer)	Run No.	Recovery (ft)	Drilling Characteristics
51-61	11	2.7	back filled at 25 ft. and 34 ft. with few open pockset to 51 ft.; 2 ft. medium hard drilling at 400-500 psi (freshwater pump); 2 ft. alternating medium hard and easy drilling layers; 2 ft. alternating thin very hard and easy drilling layers; 4 ft. alternating easy drilling and thin medium hard layers at 70-75 psi (marine pump); Halimeda rich facies.

DEKE ISLAND DRILLING LOG

Drill Site: DS4 Drilling Dates: 12, 13, and 14 March

Core Diameter: 1" Total Depth Drilled: 70 ft.

Total Core Recovery: 15.3 ft. Depth From Surface to Hard Layer: 10 ft.

Depth (Below Hard Layer)	Run No.	Recovery (ft)	Drilling Characteristics
0-4.7	1	1.5	hard layer 2.7 ft thick, with hard to very hard drilling; lost circulation below base hard layer; pocket of Calcarina sand with few rough spots (sandy layer with cobbles); 80 psi marine pump; hard layer material similar to DS3.
4.7-9.7	2	2.2	Easy drilling with few thin medium hard to hard layers and rough spots.
9.7-19.7	3	0.8	Easy drilling with 6-8" hard layer and few rough spots.
19.7-29.7	4	0.9	backfilled 0.3 ft, possible sand/gravel; alternating easy drilling with medium hard layers; few thin (1 to 2") hard layers; few small crunchy zones-like gravel; 80 psi (marine pump).
29.7-39.7	5	1.5	back filled 10ft., possible sand and gravel with few protrusions wall of along hole; alternating easy drilling and thin hard layers; 4 ft. rough bouncy drilling with few rough spots from 4-10 ft. of run.

DEKE ISLAND DRILLING LOG

Drill Site: DS4 continued Drilling Dates:

Core Diameter: Total Depth Drilled:

Total Core Recovery: Depth From Surface to Hard Layer:

Depth (Below Hard Layer)	Run No.	Recovery (ft)	Drilling Characteristics
39.7-49.7	6	2.0	backfilled to 30 ft. level, rough crunchy material like pea gravel; at 38 ft. sandy (soft); 2 ft. of easy drilling with few hard layers; 6 ft. alternating easy drilling and medium hard layers with some rough bouncy drilling, change in facies-Halimeda rich; 50-65 psi (marine pump).
49.7-59.7	7	2.2	back filled to 36 ft. level; 2 ft. easy drilling with few thin hard layers at 50-60 psi (marine pum); 2 ft. crunchy (gravel) and slightly bouncy medium hard drilling; 2 ft. of thinly layered easy drilling and bouncy medium to hard layers; 4 ft. of alternating medium hard bouncy to hard layers at 70 psi (marine pump).
59.7-69.7	8	4.3	backfilled to 37 ft. level; jammed core barrel with calcarina sand in cleaning of hole; 10 ft. of alternating easy crunchy drilling and medium hard layers with few rough and bouncy spots; sand packing around bit; 70-75 psi (marine pump).

DEKE ISLAND DRILLING LOG

Drill Site: DS5 Drilling Dates: 14 March

Core Diameter: 1" Total Depth Drilled: 17 ft.

Total Core Recovery: 3.8 ft. Depth From Surface to Hard Layer: 8.4 ft.

Depth (Below Hard Layer)	Run No.	Recovery (ft)	Drilling Characteristics
0-1.8	1	1.8	hard layer, very hard drilling; rough and bouncy; difficulty with drilling at 1.8 ft., very rough drilling; hard layer material similar to DS3 and DS4.
1.8-6.8	2	2.0	very hard drilling in hard layer; broke thru at 4 ft. and lost circulation, recovery from run all hard layer material; below hard layer easy drilling (sand).
6.8-16.8	3	0	backfilled 2 ft., to lower level of hard layer, 4 ft.; 10 ft. easy drilling with only one medium hard layer (fragment of Tridacna shell); sand packing around bit, very difficult to retrieve; after pull-out, hole caved in to base hard layer.

DEKE ISLAND DRILLING LOG

Drill Site: PS1 **Drilling Dates:** 23 February

Core Diameter: 1/2" Total Depth Drilled: 3 ft.

Total Core Recovery: 2.7 ft. Depth From Surface to Hard Layer: Reef flat, 0

Depth (Below Hard Layer)	Run No.	Recovery (ft)	Drilling Characteristics
0-3	1	2.7	Reef flat at edge of steep sloped beach; very hard drilling with small cavity at 2.5-2.7 ft.; top 2" core is 1" diameter, coral; finished with smaller bit, because 1" bit coupler bent; Recent reef material similar to DS3, DS4, DS5; cavity area had more Heliopora coral; did not break thru hard layer.

DEKE ISLAND DRILLING LOG

Drill Site: PS2 Drilling Dates: 1 March

Core Diameter: 1/2" Total Depth Drilled: 2.5 ft.

Total Core Recovery: 2.5 ft. Depth From Surface to Hard Layer: hard layer in DS3, 7.5 ft.

Depth (Below Hard Layer)	Run No.	Recovery (ft)	Drilling Characteristics
0-2	1	2.0	hard layer in open pit at DS3, prior to cementing drill mounting pipe; surface of hard layer smooth and solid; very hard drilling; Layers of cemented calcarina sands and Heliopora coral; encrusting foraminifera, Homotrema, Carpenteria and Sporadotrema.
2-2.5	2	0.5	hard layer; very hard, slightly rough drilling; sand binding bit; material same as in run 1; drilled thru Tridacna shell.

DEKE ISLAND DRILLING LOG

Drill Site: PS3 Drilling Dates: 11 and 14 March

Core Diameter: 1/2" Total Depth Drilled: 8 ft.

Total Core Recovery: 4.9 ft. Depth From Surface to Hard Layer: 3 ft.

Depth (Below Hard Layer)	Run No.	Recovery (ft)	Drilling Characteristics
Surface sediments			sediments are gravel and white sand with surface soil layer of 3-4", beds of cobble and sand, then sand, with layer of large coral clasts near hard layer contact; fresh water ponded on surface.
0-1.7	1	1.5	hard layer; smooth surface with no visible breaks or cavities; very hard drilling; Calcarina sands and Heliopora coral, very little coralline algae, mollusk debris, coral interstices infilled with white "mud"; hard layer material similar to DS3, DS4, DS5, and PS1, PS2.
1.7-3.5	2	1.7	hard layer with hard to medium hard drilling, slightly rough in spots; Calcarina sands, abundant Heliopora coral (medium hard) which is bored and infilled with white "mud"; coral not in situ; lower 6" is mostly cemented foraminiferal sand (Calcarina, Baculogypsina, and few Amphistegina).

DEKE ISLAND DRILLING LOG

Drill Site: PS3 continued Drilling Dates: 11 and 14 March

Core Diameter: 1/2" Total Depth Drilled: 8 ft.

Total Core Recovery: 4.9 ft. Depth From Surface to Hard Layer: 3 ft.

Depth (Below Hard Layer)	Run No.	Recovery (ft)	Drilling Characteristics
3.5-5.5	3	1.2	Hard layer with hard to medium hard drilling and few easy drilling spots, slightly rough drilling in spots; lost circulation at 5.3 ft, base of hard layer; cemented Calcarina sand, appears bedded; fragments of eroded Heliopora.
5.5-7.5	4	0.5	Alternating easy drilling and hard to medium hard layers, below hard layer; Heliopora coral and cemented fine grained rubble, encrusters; no Calcarina sand; water bubbling and "hissing" out of hole.

DEKE ISLAND DRILLING LOG

Drill Site: PS4 Drilling Dates: 15 March

Core Diameter: 1/2" Total Depth Drilled: 5.5 ft.

Total Core Recovery: 1.6 ft. Depth From Surface to Hard Layer: 3 ft.

Depth (Below Hard Layer)	Run No.	Recovery (ft)	Drilling Characteristics
0-1.5	1	0.8	hard layer, very hard to hard drilling with few rough spots; hard layer about 1.5 ft. thick; cemented fine grained sediments with rubble, coarse sand, some Calcarina sands, and coralline encrustations on coral fragments; maybe bedded.
1.5-3.5	2	0.5	Alternating layers of easy and medium hard drilling; coral and cemented Calcarina sand.
3.5-5.5	3	0.3	Easy drilling with few rough spots (coral rubble); possible sand/gravel layer; water bubbling and "hissing" out of hole.

DEKE ISLAND DRILLING LOG

Drill Site: PS5 Drilling Dates: 16 March

Core Diameter: 1/2" Total Depth Drilled: 4 ft.

Total Core Recovery: 0.2 ft. Depth From Surface to Hard Layer: about 4 ft.

Depth (Below Hard Layer)	Run No.	Recovery (ft)	Drilling Characteristics
0-4	1	0.2	Drilled into surface of taro pit; surface hard layer, top slightly irregular with coral rubble and encrusting coralline algae; 4" moderate drilling, remainder easy drilling; lost circulation at 0.8 ft; water bubbled out and stood above hard layer; core contained coral fragments, Heliopora, Porolithon fragment, no cemented sand.

Slab Sample: PG 1-1

Field Relations: Sample was taken from the reef flat surface at the junction of two fractures, approximately 1200 feet along traverse 1.

Constituents: Predominantly Acropora (in growth position?), the lower portion is encrusted by coralline algae, Homotrema and Sporadotrema. Below this encrusted zone, infilling of the coral has taken place. Above the encrustion are several small pockets within Acropora that contain sand fill. This sand fill consists mainly of Baculogypsina (about ~1mm in longest dimension), coralline algae, echinoid spines, Calcarina, and fine-grained cement. Acropora coral pieces are also found dispersed throughout (4 to 5 mm in diameter).

Geometry, sorting etc. The sands are poorly sorted and some clasts are large, the largest being echinoid spines and Acropora branches. Orientation of grains is random, suggesting little or no reworking. larger grains are not in contact, but separated by the finer foram sand and cement. The infilled sediment below the coral and encrusted layer is clearly a skeletal grainstone.

Some worm borings with yellow-brown rings are found in coralline algal stringers (encrusted zone). Worm borings and other bioerosion is common along edges with fewer borings in center.

Vugs are less common than on most other reef flat rocks; highly cemented. Coral geometry suggests a growth position with encrustation before sediment influx took place.

Slab Sample: PG 3-2

Field Relation: Cemented rubble ridge 25 feet seaward from the toe of the beach.

Constituents: Pocillopora is main constituent. Other corals, Acropora and Porites, are also present. Coralline material as a whole makes up about 60% of the rock. Baculogypsina, Calcarina, and coralline algae are loosely cemented between interstices of coral. Minor grain components include echinoid spines, Homotrema, and benthonic forams.

Geometry, sorting, etc.: Coralline rubble and interstitutional grainstone lack an obvious arrangement. Sorting in sands is minimal. The foram grainstone portion is within the .75-1 mm size range; where as the coralline algae is commonly 2 mm or more in diameter.

Porosity may be as high as 20-25%, due to general lack of cement. In Addition, unfilled borings in the coralline material adds to the porosity.

Slab Sample: PG 4-1

Field Relation: Sample taken on reef flat, about 45 feet along traverse 4 in a butress zone elevated above remainder of the reef flat.

Constituents. Similar grains as seen in PG 11-2B; the foram Calcarina dominates over Baculogypsina. However, the major constituents are corals: Acropora, Heliopora, and other undifferentiated corals (20 to 30 percent of the slab). Coralline algae is also common (10 to 20 percent). The remainder of the rock is foram sand tightly cemented with cryptocrystalline carbonate (30 to 40 percent of the volume). Porosity constituents about 10 to 20 percent of slab. A minor component of the slab includes Homotrema, which is dispersed as detrital grains throughout foram sand areas. Cerithid gastropods, bivalves, and other gastropods are uncommon in the cemented foram sand and are volumetrically unimportant.

Geometry, sorting, etc.: A grainstone on two scales typifies PG 4-1. Size of clasts are generally smaller that PG 11-2B; they are usually 5 mm in diameter or width. However, some larger pieces of coral are present but not common. Cryptocrystalline carbonate or cement characterizes some areas. This can be observed most readily in the area surrounding partially filled worm burrows.

No unusual arrangement of grains; sorting is minimal with sand (1mm and less) filling intersitices between larger grains. Shelter porosity is common with other porosity types found as vugs or borings, which are partially filled with foram sand and coralline algal debris.

Slab Sample: PG 5-2

Field Relation: Sample taken from edge of reef plate between Pingelap and Deke islands. Portions of plate extend as fingers, lagoonward.

Constituents: Acropora coral (not in situ) has been intensely bio-eroded, producing porosity of 10-15%, and perhaps higher than normal permeability, especially where larger borings are interconnected. The large worm borings, up to 8x5 mm, are usually infilled with mud. Some of these show excellent geopetal structures. The exterior portion has small borings but with much closer spacing. The bio-eroded surface is blackish to yellow in color. Boring by Lithophaga bivalve.

Geometry, sorting, etc.: Coral shows extensive replacement by infilling of borings with yellow and white mud. Structure of coral mostly altered. Large borings show several generations of fine sediment infilling and cementation.

Slab Sample. PG 6-1

Field Relation: Sample taken on the reef flat along a fracture edge. Surface of the specimen was covered with a filamentous algal mat and abundant forams. Location approximately 1700 feet along transverse 6.

Constituents: Acorpora coral is the major constituent, possibly in growth position. Coral material is truncated in part and abutted with obvious detrital grains consisting of coralline algae (some round in cross section and chalky white) and forams (usually no more than 1 mm in greatest dimension). Coral fragments, approximately the size of most of the coralline algal fragments (3 to 5 mm in diameter), are common in this detrital mixture. Encrusting forams; and Tubpora coral are fairly sparse. Exterior edge of slab shows some algal laminations with minor worm borings.

Geometry, sorting etc.: Coral is possibly in situ, where as, other grains have been transported; slight indication of imbrication towards the center of the slab directly above the coral mass. Sorting is poor within the detrital or grainstone portion.

Slab Sample: PG 7-2

Field Relation: On outer reef flat within an exposed buttress zone. There are some raised algal(?) polygonal networks within vicinity of sampling site.

Constituents: Transported Acropora coral and other corals are major constituents. Vuggy porosity is commonly very large (5-7 mm in width and up to 3 cm in length). Most of the vugs are open, those that are partially filled contain cemented coral fragments, Baculogypsina, cerithid gastropods, Sporadotrema encrustations, and echinoid spines. Grains average 1 mm to 2 mm in size. Encrusting coralline algae appears as stringers across slab, commonly 2 mm wide, but up to 4 mm or slightly larger.

Outside of vugs, echinoid spines, Sporadotrema and other forams are common but are rarely in grain to grain contact. The majority of the slab is a coralline boundstone, with grainstone inside of the vugs.

Worm borings are commonly filled with very fine, white mud. A concentration of yellow to brown ringed borings is found within the white stringers of coralline algae, otherwise borings may be filled and lack color bands around the perimeter.

Geometry, sorting, etc.: Sorting is good in the coarse sand that infills vugs. In the massive portions of the slab, sorting is not much of a factor, since there are only a few forams and pieces of coralline algae. These grains appear to be distributed randomly. The slab is tightly cemented.

Slab Sample: PG 8-1

Field Relation: Sample taken on reef flat, about 1,000 feet along traverse 8 on seaward edge of a cemented rubble lobe.

Constituents: Helipora and Acropora corals constitute about 25% of sample. Both coral types show boring by blue-green algae and some of the bores are infilled with light (very white) mud.

Sands filling interstices makes up about 60% of rock. The larger coralline algal pieces, taken as a single component make up 10-15% of the rock volume. The coralline algae is found as solid cylinder or as an encruster (most pieces are 1 mm thick zones with yellow-brown ringed worm borings). The sands are finer grained (.5-.75 mm) compared to most other reef flat rubble zones. Calcarina, Baculogypsina and coralline algae are the most common sand components. In addition, lesser amounts of echinoid spines, and Homotrema are present.

Geometry, sorting, etc.: Individual lenses and pockets of sand are, relatively, well sorted. Fine white carbonate cements are pervasive throughout, especially in coralline algal/foram sands (grainstone). This sample of rubble zone grainstone can be considered as "two grainstones in one" - large grains and a finer grained sandy portion which fills the interstices between larger grains.

Slab Sample: PG 9-1

Field Relation: Sample taken on reef flat area within a buttress zone, approximately 45 feet along traverse 9.

Constituents: Acropora coral makes up about 70% of slab. Heliopora coral has been encrusted (<30%) and then overgrown by Acropora. Both corals are apparently in growth position, a fine grained foram (Baculogypsina, Calcarina, and Homotrema) grainstone fills the interstices of chalky, white coralline algae. This filling is in abrupt contact with Acropora portion of slab. Bioerosion around the outside portion, probably by blue-green algae and worms is very prevalent.

A similar slab for thin sectioning of PG 9-1 revealed a control that worm burrows had on arrangement of various constituents. The zone of white coralline algal encrustation on Heliopora and through parts of the Acropora mass had yellow-brown filled and unfilled worm borings (.5 to .75 mm in diameter) that are limited only to this surface. Larger worm borings are infilled with mostly well cemented foram grainstone (very fine .75 mm or less in diameter). Since most of the slab is coral, small portions show a tendency towards grainstone. Cementation is good and corals appear to be highly replaced.

Slab Sample: PG 11-2B

Field Relation: Collected on a cemented rubble ridge apron, at 10 cm above low tide water level.

Constituents: Pocillopora coral rubble makes up 50 to 60 percent of the slab. Other large clasts, which constitute 10 to 20 percent of the slab, include echinoid spines, and coralline algae. Sands found between coral branches are mostly foram sands, dominanted by Calcarina. Baculogypsina is present but subordinate to Calcarina sands. Rarer constituents include Caulastrea coral, Heliopora coral and forams Heterostegina and Homotrema.

Geometry, sorting etc.: The arrangement of the rubble grains is chaotic with an imbrication of coralline material. These larger coral clasts are 5 to 8 mm in narrowest dimension and about 10 to 20 mm in the longest dimension. Foram sand between the coral is typically 1 to 1.5 mm in size, dependent on foram species. The whole rock can be considered a grainstone; both larger clasts and other sand filling in interstices.

Porosity is found in various forms; mostly shelter, intraparticle (in corals), and vuggy. All these porosity types combined produce 10 to 20 percent total porosity throughout the whole slab.

Boring algae has contributed to the porosity of the slab, this is most noticable as a red outline at the upper most portion (edge) of the slab. In addition, many of the corals have been bored by other bioeroders and refilled with sediment.

Cementation is rather good even though this material is from a reef flat rubble zone. Initually most rubble was friable and currently this sample is in later stages of cementation.

Slab Sample: PGA 2-A

Field Relations: Abandoned taro pit on Deke Island. The surface of "hard layer" is very uneven as opposed to other surfaces in taro pits. The irregularity of the surface is possibly defined by patchy cementation of coarse rubble.

Constituents: Porites? coral head, probably in growth position. The foram sands around the coral base are accreted onto the periphery of the coral. The sand fraction is dominated by coralline algae (Porolithon), Calcarina, Baculogypsina, coral fragments, echinoid spine fragments, Cerithid gastropods, and Homotrema. Serpulid worm tubes are present on base of coral.

Geometry, sorting, etc.: The foram sand is well sorted with a ϕ range from 0 to .5. This sand is loosely cemented, for the most part. Arrangement of foram grainstone or sands suggests material filtered down to base of coral and filled interstices before eventually completely burying coral. Some minor worm borings in the coral contribute to porosity; However, most is intraparticle and shelter porosity within coral and at base of coral, respectively.

Slab Sample: PGA 6B

Field Relation: Sample taken from a taro pit on Deke Island. Collection of sample was from 12 cm below surface of "hard layer". Coral heads were found within a coarse matrix of cemented debris.

Constituents: A large Tridacna bivalve is encrusted and bored. The outer encrustation is a similar material which fills a large bore. The Tridacna was bored prior to burial with a detrital material which filled voids and accreted around the shell. Most of this material is a detrital sand dominated by Calcarina, Baculogypsina, coralline algae and lesser amounts of Homotrema, Marginopora, and echnioid spines.

Geometry, sorting, etc.: These sands can be classed as an algal/foram grainstone. The average grain size is controlled by foram test size (usually 1 to 1.5 mm). Some of the coralline algal grains are larger. This cemented sand makes a very well indurated rock.

Slab Sample: PGA-7

Field Relation: A cemented layer 30 cm below the floor of a double taro pit on Deke Island. The upper zone above the layer has 5 cm of clean, foram sand. The slab surface is generally smooth with a slight undulatory relief. This "hard layer" is exceptionally hard below the uppermost layer which is chalky, bored, and lacks any indurated crust. The rock surface was covered with abundant bulbous coralline algae along (Porolithon), with Heliopora coral and other small coral fragments.

Constituents: Most of the corals show evidence of transport and are not in growth position. They constitute the major component of the slab. Coralline algae, seen as round to elliptical, chalky white masses are also prevalent. Towards the center of the slab is a foram grainstone that fills the interstices between the larger coral mass. Echinoid spines and Homotrema are interdispersed throughout.

Geometry, sorting etc.: The foram grainstone portion is generally poorly sorted with the exception of a few "clean" zones with ϕ range of 0.0 to -0.5. Imbrication, especially in the foram grainstone suggests flow from left to right.

Porosity is mainly vuggy with average vugs rarely more than 1.5 or 2 mm in diameter. However, some large vugs up to 5 mm wide occur. Intraparticle porosity is well developed in most foram tests and to a lesser extent in corals.

This sample is in a very indurated condition and contains very fine cements. Although some vugs are common in places, overall this slab has less pore space than most rocks found on the reef flat which contain detritus or rubble.

Slab Sample: PGA 10B

Field Relation: Sample taken at D-1 site. Thin layer with a fairly sharp contact, level top that grades into gravel and an uncemented zone.

Constituents: Well cemented Acropora coral head, in possible growth position. Coralline algae encrusts exterior of coral. Few small borings in edges of coral, generally not filled.

Geometry, sorting, etc.: Porosity is mainly intraparticle.

Slab Sample: PGA 13A

Field Relation: In a hand-dug pit on Deke Island. Sample was extracted from a cemented layer that appeared to be discontinuous unlike the typical "hard layer" that commonly is indurated and has much greater lateral continuity. This lightly cemented or encrusted rubble was from an interval 20 to 30 cm below the water table at low tide (March 21, 1984). Not all portions of this layer appeared to be rubble, some evidence suggested in situ growth position.

Constituents: Acropora (at bottom of slab) and Favites? or Goniastera? constitute the coral material which makes up the bulk of the slab. Most corals are encrusted with coralline algae and minor Homotrema. Outer edges of coral have a thin rind of accreted foram and coralline algae sands. Worm borings are rare.

Geometry Sorting, etc.: This slab suggests in situ growth of corals and associated encrusting algae. Although field observation does not suggest that this is the "hard layer" it is possibly more than a rubble deposit. Perhaps it is an incipient "hard layer" in early stages of cementation or has been exposed to dissolution or may be a water table cemented layer. Some portions of the slab show vuggy porosity, but generally intraparticle porosity is prevalent in Acropora and less in the other corals.

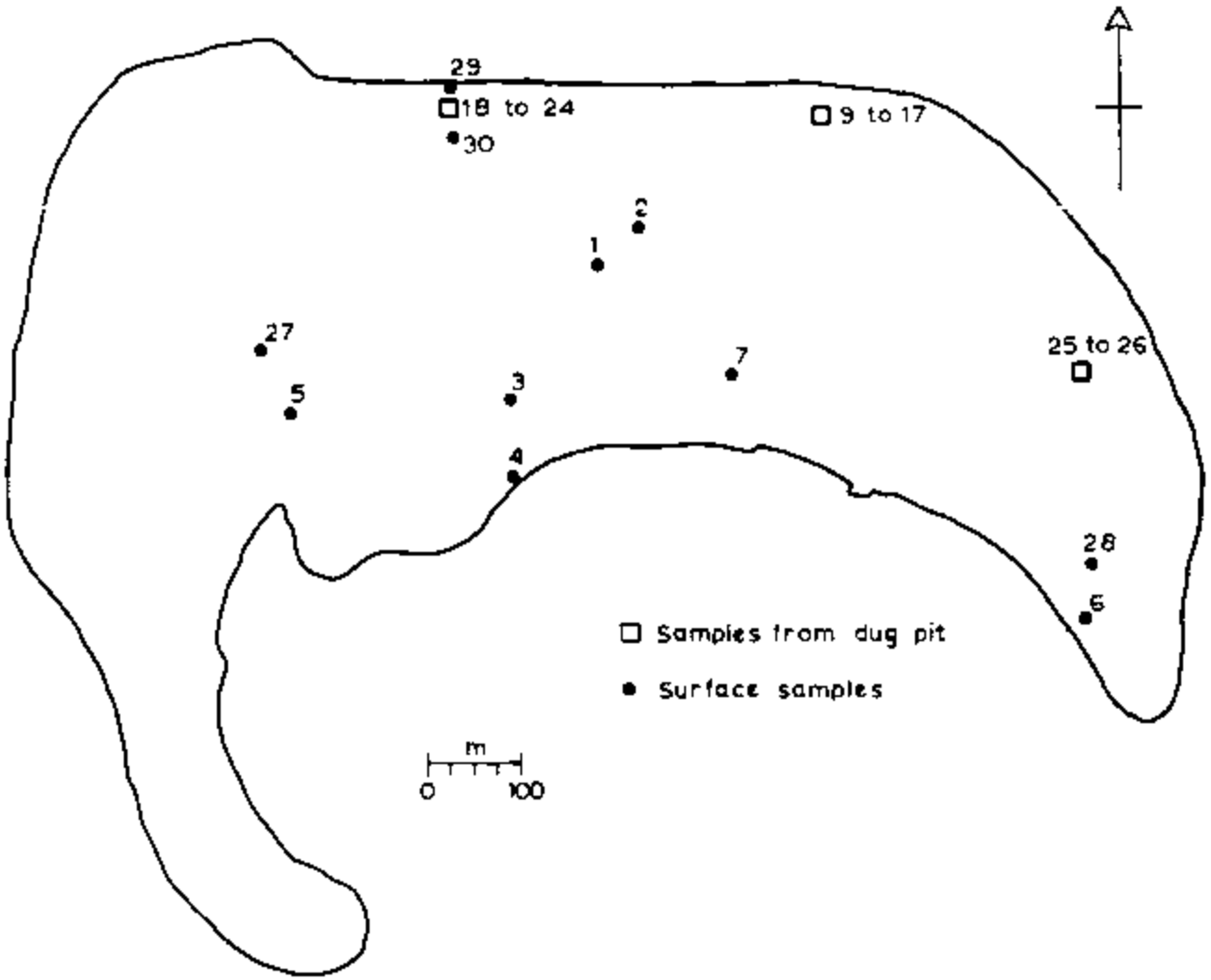


Figure C1. Map of Deke Island showing the location of collection sites for sediment size analysis.

Table C1. Sample no. 1: Sieve analysis.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	49.05	18.4	18.4
G	-3.66	29.73	11.2	29.6
R	-2.68	24.23	9.1	38.6
A	-2.35	9.65	3.6	42.3
V	-1.76	9.08	3.4	45.6
E	-1.24	11.01	4.1	49.8
L	-0.61	11.24	4.2	54.0
	-0.22	14.31	5.4	59.4
	0	6.63	2.5	61.9
	0.50	35.08	13.2	75.0
	0.75	13.82	5.2	80.2
S	1.75	6.28	2.4	82.6
A	2.33	24.24	9.1	91.7
N	2.74	10.04	3.8	95.4
D	3.24	4.22	1.6	97.0
	3.74	2.06	0.8	97.8
	4.04	1.16	0.4	98.2
	Pan	4.65	1.7	99.9

Percent Gravel: 59.4
Percent Sand: 38.8
Percent Pan: 1.7

Table C2. Sample no. 2: Sieve analysis.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	8.1	4.3	4.3
G	-3.66	23.1	12.2	16.5
R	-2.68	9.9	5.2	21.7
A	-2.35	5.4	2.8	24.6
V	-1.76	2.6	1.3	25.9
E	-1.24	3.5	1.8	27.8
L	-0.61	4.5	2.4	30.1
	-0.22	9.0	4.8	34.9
	0	6.2	3.3	38.2
	0.50	47.1	24.9	63.1
	0.75	22.7	12.0	75.1
S	1.75	8.8	4.6	79.7
A	2.33	24.5	12.9	92.6
N	2.74	7.9	4.1	96.8
D	3.24	3.0	1.6	98.4
	3.74	1.6	0.9	99.2
	4.04	0.9	0.4	99.7
	Pan	0.6	0.3	100

Percent Gravel: 34.9
Percent Sand: 64.8
Percent Pan: 0.3

Table C3. Sample no. 3: Sieve analysis.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	19.9	17.8	17.8
G	-3.66	6.2	5.6	23.3
R	-2.68	11.0	9.9	33.2
A	-2.35	4.7	4.2	37.4
V	-1.76	3.8	3.4	40.9
E	-1.24	2.9	2.6	43.5
L	-0.61	3.9	3.5	47.0
	-0.22	6.4	5.7	52.7
	0	3.8	3.4	56.1
	0.50	19.8	17.7	73.8
	0.75	9.0	8.1	81.9
S	1.75	2.8	2.5	84.5
A	2.33	8.2	7.3	91.8
N	2.74	4.2	3.8	95.5
D	3.24	1.9	1.7	97.2
	3.74	1.4	1.2	98.4
	4.04	0.7	0.6	99.1
	Pan	1.0	0.9	100.0

Percent Gravel: 52.7
Percent Sand: 46.4
Percent Pan:

Table C4. Sample no. 4: Sieve analysis.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	39.8	23.1	23.1
G	-3.66	18.6	10.8	24.0
R	-2.68	26.4	15.4	49.4
A	-2.35	5.6	3.3	52.6
V	-1.76	4.4	2.6	55.2
E	-1.24	4.1	2.4	57.6
L	-0.61	6.6	3.8	61.5
	-0.22	6.3	3.7	66.1
	0	1.7	1.0	66.1
	0.50	18.3	10.6	76.7
	0.75	12.4	7.3	84.1
S	1.75	4.4	2.5	86.6
A	2.33	11.6	6.7	93.4
N	2.74	4.1	2.4	95.7
D	3.24	3.4	2.0	97.7
	3.74	2.0	1.2	98.9
	4.04	1.0	0.6	99.4
	Pan	1.0	0.9	100.0

Percent Gravel: 65.1
Percent Sand: 34.6
Percent Pan: 0.3

Table C5. Sample no. 5: Sieve analysis.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	68.6	27.4	24.4
G	-3.66	52.3	20.9	48.4
R	-2.68	24.4	9.8	58.1
A	-2.35	4.7	1.9	60.0
V	-1.76	3.2	1.3	61.3
E	-1.24	2.4	1.0	62.2
L	-0.61	4.1	1.6	63.9
	-0.22	5.1	2.0	65.9
	0	2.8	1.1	67.0
	0.50	16.2	6.5	73.5
	0.75	18.4	7.3	80.9
S	1.75	8.8	3.5	84.4
A	2.33	22.4	8.9	93.3
N	2.74	8.0	3.2	96.5
D	3.24	3.5	1.4	97.9
	3.74	2.7	1.1	99.0
	4.04	1.4	0.6	99.6
	Pan	1.0	0.4	100.0

Percent Gravel: 65.9
Percent Sand: 33.6
Percent Pan: 0.4

Table C6. Sample no. 6: Sieve analysis.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cumulative Wt. (%)
	-4.22	9.1	4.4	4.4
G	-3.66	16.8	8.1	12.4
R	-2.68	34.4	16.5	28.9
A	-2.35	5.0	2.4	31.3
V	-1.76	4.3	2.1	33.4
E	-1.24	4.0	1.9	35.3
L	-0.61	4.2	2.0	37.3
	-0.22	4.1	2.0	39.3
	0	1.2	0.6	39.9
	0.50	16.1	7.7	47.6
	0.75	26.6	12.8	60.4
S	1.75	14.6	7.0	67.4
A	2.33	46.4	22.3	89.6
N	2.74	11.9	5.7	95.3
D	3.24	3.7	1.8	97.1
	3.74	2.4	1.1	98.3
	4.04	1.8	0.9	99.1
	Pan	1.8	0.9	100.0

Percent Gravel: 39.3
Percent Sand: 59.8
Percent Pan: 0.9

Table C7. Sample no. 7: Sieve analysis. Sample depth 0.6 ft.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	189.8	57.6	57.6
G	-3.66	53.5	16.2	73.8
R	-2.68	25.2	7.7	81.5
A	-2.35	3.7	1.1	82.6
V	-1.76	2.3	0.7	83.3
E	-1.24	3.4	1.0	84.4
L	-0.61	4.1	1.2	85.6
	-0.22	4.4	1.3	86.9
	0	1.7	0.5	87.4
	0.50	6.5	2.0	89.4
	0.75	6.6	2.0	91.4
S	1.75	2.9	0.9	92.3
A	2.33	10.6	3.2	95.5
N	2.74	7.8	2.4	97.9
D	3.24	3.0	0.9	98.8
	3.74	1.1	0.3	99.5
	4.04	0.7	0.2	99.9
	Pan	0.7	0.2	100.0

Percent Gravel: 86.9
Percent Sand: 12.9
Percent Pan: 0.2

Table C8. Sample no. 8: Sieve analysis. Sample depth 1.2 ft.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummulative Wt. (%)
	-4.22	20.1	7.9	7.9
G	-3.66	92.4	36.2	44.1
R	-2.68	88.9	34.9	79.0
A	-2.35	5.1	2.0	81.0
V	-1.76	2.7	1.1	82.1
E	-1.24	2.2	0.9	83.0
L	-0.61	2.2	0.8	83.8
	-0.22	2.2	0.9	84.7
	0	2.1	0.8	85.5
	0.50	4.9	1.9	87.4
	0.75	6.5	2.6	90.0
S	1.75	2.9	1.1	91.1
A	2.33	11.4	4.5	95.6
N	2.74	6.0	2.3	97.9
D	3.24	2.8	1.0	99.0
	3.74	1.6	0.6	99.6
	4.04	0.8	0.3	99.9
	Pan	0.1	0.1	100.0

Percent Gravel: 84.7
Percent Sand: 15.2
Percent Pan: 0.1

Table C9. Sample no. 9: Sieve analysis. Sample depth 1.8 ft.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	148.7	45.2	45.2
G	-3.66	44.9	13.6	58.8
R	-2.68	19.7	13.6	64.8
A	-2.35	2.9	0.9	64.7
V	-1.76	2.3	0.7	66.4
E	-1.24	3.3	1.0	67.4
L	-0.61	4.9	1.5	68.9
	-0.22	6.8	2.1	71.0
	0	3.6	1.1	72.1
	0.50	32.0	9.7	81.8
	0.75	23.4	7.1	88.9
S	1.75	9.5	2.9	91.8
A	2.33	19.3	5.9	97.7
N	2.74	4.1	1.3	99.0
D	3.24	1.1	0.3	99.3
	3.74	1.3	0.4	99.7
	4.04	0.7	0.2	99.9
	Pan	0.7	0.2	100.0

Percent Gravel: 71.0
Percent Sand: 28.9
Percent Pan: 0.2

Table C10. Sample no. 10: Sieve analysis. Sample depth 2.8 ft.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	56.5	24.0	24.0
G	-3.66	36.0	15.3	39.2
R	-2.68	31.4	13.3	52.6
A	-2.35	10.9	4.6	57.2
V	-1.76	10.7	4.5	61.8
E	-1.24	7.6	3.2	65.0
L	-0.61	7.0	3.0	67.9
	-0.22	10.0	4.2	72.2
	0	5.9	2.5	74.7
	0.50	16.8	7.1	81.3
	0.75	9.7	4.1	86.0
S	1.75	4.7	2.0	88.0
A	2.33	18.7	7.9	95.9
N	2.74	4.0	1.7	97.6
D	3.24	1.6	0.7	98.3
	3.74	1.2	0.5	98.8
	4.04	0.8	0.3	99.1
	Pan	2.0	0.8	100.0

Percent Gravel: 72.2
Percent Sand: 27.0
Percent Pan: 0.8

Table C11. Sample no. 11: Sieve analysis. Sample depth 3.6 ft.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	45.2	16.7	16.7
G	-3.66	13.0	4.8	21.5
R	-2.68	30.8	11.4	32.9
A	-2.35	10.3	3.8	36.8
V	-1.76	7.6	2.8	39.5
E	-1.24	10.3	3.8	43.3
L	-0.61	9.8	3.6	47.0
	-0.22	18.6	6.9	53.9
	0	15.0	5.6	59.4
	0.50	40.0	14.8	74.2
	0.75	23.4	8.7	82.9
S	1.75	10.3	3.8	86.7
A	2.33	27.6	10.2	97.0
N	2.74	4.3	1.6	98.6
D	3.24	1.5	0.6	99.1
	3.74	1.3	0.5	99.6
	4.04	0.7	0.2	00.9
	Pan	2.0	0.1	100.0

Percent Gravel: 53.9
Percent Sand: 46.0
Percent Pan: 0.1

Table C12. Sample no. 12: Sieve analysis. Sample depth 3.8 ft.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	43.9	24.7	24.7
G	-3.66	22.2	12.5	37.2
R	-2.68	6.1	3.4	40.6
A	-2.35	6.8	3.8	44.4
V	-1.76	5.5	3.1	47.5
E	-1.24	5.1	2.9	50.4
L	-0.61	14.0	7.9	58.2
	-0.22	2.6	1.5	59.7
	0	8.1	4.5	64.2
	0.50	25.2	14.2	78.4
	0.75	8.3	4.6	83.0
S	1.75	5.0	2.8	85.9
A	2.33	17.8	10.0	95.9
N	2.74	3.5	2.0	97.9
D	3.24	1.3	0.7	98.6
	3.74	1.2	0.7	99.3
	4.04	0.7	0.4	99.7
	Pan	0.5	0.3	100.0

Percent Gravel: 59.7
Percent Sand: 40.0
Percent Pan: 0.3

Table C13. Sample no. 13: Sieve analysis. Sample depth 4.2 ft.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	67.0	31.5	31.5
G	-3.66	15.4	7.2	38.7
R	-2.68	15.0	7.0	45.8
A	-2.35	3.3	1.6	47.3
V	-1.76	6.7	3.1	50.5
E	-1.24	7.6	3.6	54.1
L	-0.61	7.1	3.3	57.4
	-0.22	11.8	5.5	62.9
	0	8.1	3.8	66.7
	0.50	24.9	11.7	78.4
	0.75	8.9	4.2	82.6
S	1.75	4.5	2.1	84.7
A	2.33	22.2	10.4	95.1
N	2.74	5.3	2.5	97.6
D	3.24	1.9	0.9	98.5
	3.74	1.3	0.6	99.1
	4.04	1.1	0.5	99.6
	Pan	0.8	0.4	100.0

Percent Gravel:	62.9
Percent Sand:	36.7
Percent Pan:	0.4

Table C14. Sample no. 14: Sieve analysis. Sample depth 5.6 ft.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	0.0	0.0	0.0
G	-3.66	0.0	0.0	0.0
R	-2.68	8.9	18.4	18.4
A	-2.35	1.4	3.0	21.4
V	-1.76	1.9	3.9	25.3
E	-1.24	3.0	6.2	31.5
L	-0.61	3.5	7.3	38.8
	-0.22	6.3	13.3	52.1
	0	2.4	4.9	57.0
	0.50	9.7	20.0	77.1
	0.75	3.9	8.1	85.2
S	1.75	1.7	3.5	88.6
A	2.33	4.0	8.3	96.9
N	2.74	0.8	1.8	98.7
D	3.24	0.2	0.5	99.2
	3.74	0.2	0.3	99.5
	4.04	0.1	0.2	99.7
	Pan	0.1	0.3	100.0

Percent Gravel: 52.1
Percent Sand: 47.6
Percent Pan: 0.3

Table C15. Sample no. 15: Sieve analysis. Sample depth 5.9 ft.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	26.7	15.6	15.6
G	-3.66	22.7	13.3	28.9
R	-2.68	30.0	17.6	46.5
A	-2.35	6.8	4.0	50.5
V	-1.76	6.1	3.6	54.1
E	-1.24	5.3	3.1	57.2
L	-0.61	5.9	3.4	60.7
	-0.22	13.5	7.9	68.6
	0	6.7	3.9	72.5
	0.50	20.7	12.1	84.6
	0.75	9.3	5.4	90.1
S	1.75	3.6	2.1	92.2
A	2.33	9.6	5.6	97.8
N	2.74	1.8	1.0	98.9
D	3.24	0.6	.4	99.2
	3.74	0.5	.3	99.5
	4.04	0.4	.2	99.8
	Pan	0.4	.2	100.0

Percent Gravel: 68.6
Percent Sand: 31.2
Percent Pan: .2

Table C16. Sample no. 16: Sieve analysis. Sample depth 6.2 ft.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	91.2	36.6	36.6
G	-3.66	14.8	5.9	42.5
R	-2.68	16.6	6.6	49.1
A	-2.35	6.3	2.5	51.7
V	-1.76	2.9	1.2	52.9
E	-1.24	4.8	1.9	54.9
L	-0.61	5.3	2.1	56.9
	-0.22	12.9	5.2	62.1
	0	6.3	2.5	64.6
	0.50	25.5	10.2	74.8
	0.75	14.9	6.0	80.8
S	1.75	7.0	2.8	83.6
A	2.33	28.1	11.3	94.8
N	2.74	5.1	2.0	96.9
D	3.24	4.3	1.7	98.6
	3.74	1.9	.8	99.4
	4.04	0.8	.3	99.7
	Pan	0.7	.3	100.0

Percent Gravel: 62.1
Percent Sand: 37.6
Percent Pan: .3

Table C17. Sample no. 17: Sieve analysis. Sample depth 5.1 ft.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cumulative Wt. (%)
	-4.22	5.7	9.4	9.4
G	-3.66	6.3	10.5	19.9
R	-2.68	5.7	9.5	29.4
A	-2.35	1.6	2.7	32.1
V	-1.76	0.8	1.3	33.4
E	-1.24	1.4	2.3	35.7
L	-0.61	2.2	3.7	39.4
	-0.22	5.0	8.3	47.8
	0	3.3	5.5	53.3
	0.50	18.1	29.9	83.2
	0.75	3.8	6.4	89.6
S	1.75	1.2	1.9	91.5
A	2.33	3.5	5.8	97.3
N	2.74	0.8	1.3	98.6
D	3.24	0.2	.4	99.0
	3.74	0.4	.6	99.7
	4.04	0.4	.2	99.8
	Pan	0.1	.1	100.0

Percent Gravel: 47.8
Percent Sand: 52.1
Percent Pan: .1

Table C18. Sample no. 18: Sieve analysis. Sample depth 1.5 ft.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	0.0	0.0	0.0
G	-3.66	0.0	0.0	0.0
R	-2.68	3.0	.4	.4
A	-2.35	1.2	1.3	4.7
V	-1.76	1.7	1.9	6.7
E	-1.24	2.2	2.5	9.1
L	-0.61	4.3	4.9	14.0
	-0.22	14.8	16.8	30.8
	0	10.8	12.2	43.1
	0.50	42.9	48.8	91.9
	0.75	4.5	5.1	97.0
S	1.75	1.0	1.1	98.0
A	2.33	1.0	1.2	99.2
N	2.74	0.2	.2	99.4
D	3.24	0.1	.1	99.6
	3.74	0.1	.1	99.7
	4.04	0.1	.1	99.8
	Pan	0.2	.2	100.0

Percent Gravel: 30.8
Percent Sand: 69.0
Percent Pan: .2

Table C19. Sample no. 19: Sieve analysis. Sample depth 2.2 ft.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	50.7	26.3	26.3
G	-3.66	69.4	36.1	62.4
R	-2.68	18.3	9.5	71.9
A	-2.35	1.7	0.9	72.8
V	-1.76	1.7	0.9	73.7
E	-1.24	1.7	0.9	74.6
L	-0.61	1.3	0.7	75.3
	-0.22	5.5	2.9	78.2
	0	3.5	1.8	80.0
	0.50	25.6	13.3	93.3
	0.75	5.4	2.8	96.2
S	1.75	1.2	0.6	96.8
A	2.33	3.5	1.8	98.6
N	2.74	1.2	0.6	96.8
D	3.24	0.4	0.2	99.5
	3.74	0.3	0.1	99.6
	4.04	0.1	0.1	99.7
	Pan	0.6	.3	100.0

Percent Gravel: 78.2
Percent Sand: 21.5
Percent Pan: .3

Table C20. Sample no. 20: Sieve analysis. Sample depth ?.6 ft.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	12.8	7.9	7.9
G	-3.66	9.5	5.9	13.8
R	-2.68	17.9	11.1	24.8
A	-2.35	4.3	2.7	27.5
V	-1.76	3.6	2.2	29.7
E	-1.24	2.3	1.4	31.1
L	-0.61	3.3	2.0	33.2
	-0.22	9.0	5.5	38.7
	0	8.4	5.2	43.9
	0.50	31.1	19.2	63.1
	0.75	15.1	9.3	72.4
S	1.75	6.9	4.3	76.0
A	2.33	30.3	18.7	95.5
N	2.74	0.1	0.0	95.5
D	3.24	6.1	3.7	99.3
	3.74	0.6	0.4	99.7
	4.04	0.3	0.2	99.9
	Pan	0.2	0.1	100.0

Percent Gravel: 38.7
Percent Sand: 61.2
Percent Pan: .1

Table C21. Sample no. 21: Sieve analysis. Sample depth 3.5 ft.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	138.0	45.2	45.2
G	-3.66	50.4	16.5	61.7
R	-2.68	34.1	11.2	72.9
A	-2.35	9.0	2.9	75.8
V	-1.76	9.8	3.2	79.1
E	-1.24	7.7	2.5	81.6
L	-0.61	7.1	2.3	83.9
	-0.22	8.4	2.8	86.7
	0	6.0	2.0	88.7
	0.50	19.0	6.2	94.9
	0.75	5.5	1.8	96.7
S	1.75	1.3	0.4	97.1
A	2.33	5.1	1.7	98.8
N	2.74	1.8	0.6	99.3
D	3.24	0.7	0.2	99.5
	3.74	0.6	0.2	99.7
	4.04	0.4	0.1	99.8
	Pan	0.3	0.1	99.9

Percent Gravel: 86.7
Percent Sand: 13.2
Percent Pan: .1

Table C22. Sample no. 22: Sieve analysis. Sample depth 5.8 ft.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	0.0	0.0	0.0
G	-3.66	0.0	0.0	0.0
R	-2.68	0.6	0.8	0.8
A	-2.35	0.4	0.5	1.3
V	-1.76	1.0	1.3	2.6
E	-1.24	2.0	2.7	5.3
L	-0.61	2.5	3.2	8.5
	-0.22	9.0	11.8	20.3
	0	7.0	9.2	29.5
	0.50	39.7	52.1	81.6
	0.75	2.2	2.9	84.5
S	1.75	2.7	3.5	88.0
A	2.33	7.3	9.6	97.6
N	2.74	1.0	1.4	99.0
D	3.24	0.3	.4	99.4
	3.74	0.2	.3	99.7
	4.04	0.1	.1	99.8
	Pan	0.2	.2	100.0

Percent Gravel: 20.3
Percent Sand: 79.5
Percent Pan: .2

Table C23. Sample no. 24: Sieve analysis. Sample depth 4.0 ft.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	12.5	19.3	19.3
G	-3.66	0.0	0.0	19.3
R	-2.68	2.9	6.0	25.3
A	-2.35	5.3	8.1	33.4
V	-1.76	8.4	12.9	46.3
E	-1.24	8.6	13.2	59.5
L	-0.61	5.2	8.0	67.5
	-0.22	6.32	9.6	77.1
	0	2.7	4.2	81.6
	0.50	6.1	9.4	91.0
	0.75	1.3	2.1	93.1
S	1.75	0.6	.9	94.0
A	2.33	2.3	3.5	97.5
N	2.74	1.1	1.7	99.2
D	3.24	0.4	.6	99.8
	3.74	0.2	.2	100.0
	4.04	0.1	.1	100.1
	Pan	0.1	.1	100.3

Percent Gravel: 59.5
Percent Sand: 40.3
Percent Pan: .2

Table C24. Sample no. 25: Sieve analysis. Sample depth 1.5 ft.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	55.4	29.9	29.9
G	-3.66	31.3	16.9	46.8
R	-2.68	22.5	12.1	58.9
A	-2.35	2.6	1.4	60.3
V	-1.76	5.8	3.1	63.4
E	-1.24	6.2	3.4	66.8
L	-0.61	7.5	4.1	70.9
	-0.22	8.0	4.3	75.2
	0	3.8	2.9	77.2
	0.50	17.6	9.5	86.7
	0.75	10.7	5.8	92.5
S	1.75	2.7	1.4	93.9
A	2.33	6.3	3.4	97.3
N	2.74	2.1	1.1	98.4
D	3.24	1.6	0.8	99.2
	3.74	0.7	0.4	99.6
	4.04	0.1	0.1	99.7
	Pan	0.1	0.1	99.8

Percent Gravel: 75.2
Percent Sand: 0.0
Percent Pan: .1

Table C25. Sample no. 26: Sieve analysis. Sample depth 2.5 ft.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	165.6	39.9	39.9
G	-3.66	18.9	4.5	44.4
R	-2.68	33.8	8.1	52.5
A	-2.35	12.5	3.0	55.5
V	-1.76	10.2	2.4	57.9
E	-1.24	10.9	2.6	60.5
L	-0.61	12.1	2.9	63.4
	-0.22	20.6	5.0	68.4
	0	17.9	4.3	72.7
	0.50	45.0	10.8	83.5
	0.75	22.3	5.4	88.9
S	1.75	8.8	2.1	91.0
A	2.33	22.5	5.4	96.4
N	2.74	6.2	1.5	97.9
D	3.24	3.8	0.9	98.8
	3.74	1.7	0.4	99.2
	4.04	1.6	0.4	99.6
	Pan	0.8	0.2	99.8

Percent Gravel: 68.4
Percent Sand: 31.4
Percent Pan: .2

Table C.6. Sample no. 27: Sieve analysis.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	0.0	0.0	0.0
G	-3.66	17.0	6.1	6.1
R	-2.68	18.5	6.7	12.8
A	-2.35	4.4	1.6	14.4
V	-1.76	4.4	1.6	16.0
E	-1.24	5.8	2.1	18.1
L	-0.61	8.2	3.0	21.1
	-0.22	14.4	5.2	26.3
	(	10.7	3.9	30.2
	0.50	45.4	16.4	46.6
	0.75	29.6	10.7	57.3
S	1.75	13.1	4.7	62.0
A	2.33	55.9	20.2	82.2
N	2.74	28.6	10.3	92.5
D	3.24	13.4	4.8	97.3
	3.74	4.7	1.7	99.0
	4.04	1.5	0.5	99.5
	Pan	0.8	0.2	100.0

Percent Gravel: 26.3
Percent Sand: 73.2
Percent Pan: .5

Table C27. Sample no. 28: Sieve analysis.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummlative Wt. (%)
	-4.22	128.5	31.0	31.0
G	-3.66	67.5	16.3	47.3
R	-3.68	22.7	5.5	52.8
A	-2.35	3.9	.9	53.7
V	-1.76	4.8	1.2	54.9
E	-1.24	6.1	1.5	56.4
L	-0.61	9.6	2.3	60.3
	-0.22	9.6	2.3	60.3
	0	2.8	.7	61.0
	0.50	27.5	6.6	67.6
	0.75	31.4	7.6	75.2
S	1.75	14.9	3.6	78.8
A	2.33	50.6	12.2	91.0
N	2.74	25.7	6.1	97.1
D	3.24	6.0	1.4	98.5
	3.74	2.8	.7	99.2
	4.04	1.4	.3	99.5
	Pan	0.4	.3	99.8

Percent Gravel: 60.3
Percent Sand: 39.4
Percent Pan: .3

Table C28. Sample no. 29: Sieve analysis.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cumulative Wt. (%)
	-4.22	16.4	5.8	5.8
G	-3.66	0.0	0.0	5.8
R	-2.68	5.2	1.8	7.6
A	-2.35	1.2	.4	8.0
V	-1.76	2.1	.8	8.8
E	-1.24	2.2	.7	8.8
L	-0.61	3.2	1.1	10.6
	-0.22	13.2	4.7	15.3
	0	15.6	5.5	20.8
	0.50	148.1	57.5	73.3
	0.75	45.6	16.2	89.5
S	1.75	8.9	3.1	92.6
A	2.33	16.5	5.9	98.5
N	2.74	1.8	.6	99.1
D	3.24	.6	.2	99.3
	3.74	.6	.2	99.5
	4.04	.3	.1	99.6
	Pan	.7	.2	99.8

Percent Gravel: 15.3
Percent Sand: 84.3
Percent Pan: .2

Table C29. Sample no. 30: Sieve analysis.

	Class (phi)	Fraction Wt. (gm)	Weight (%)	Cummulative Wt. (%)
	-4.22	56.5	13.0	13.0
G	-3.66	95.0	21.9	34.9
R	-2.68	39.3	9.1	44.0
A	-2.35	4.7	1.1	45.1
V	-1.76	3.7	.9	46.0
E	-1.24	3.9	.9	46.0
L	-0.61	5.1	1.2	48.1
	-0.22	15.4	3.5	51.6
	0	10.5	2.4	54.0
	0.50	66.1	15.2	69.2
	0.75	46.2	10.7	79.9
S	1.75	14.5	3.3	83.2
A	2.33	45.0	10.4	93.6
N	2.74	19.3	4.4	98.0
D	3.24	4.5	1.0	99.0
	3.74	3.0	0.7	99.7
	4.04	1.7	0.4	100.1
	Pan	1.0	0.2	100.3

Percent Gravel: 51.6
Percent Sand: 48.2
Percent Pan: 0.2

APPENDIX D

CONTENTS

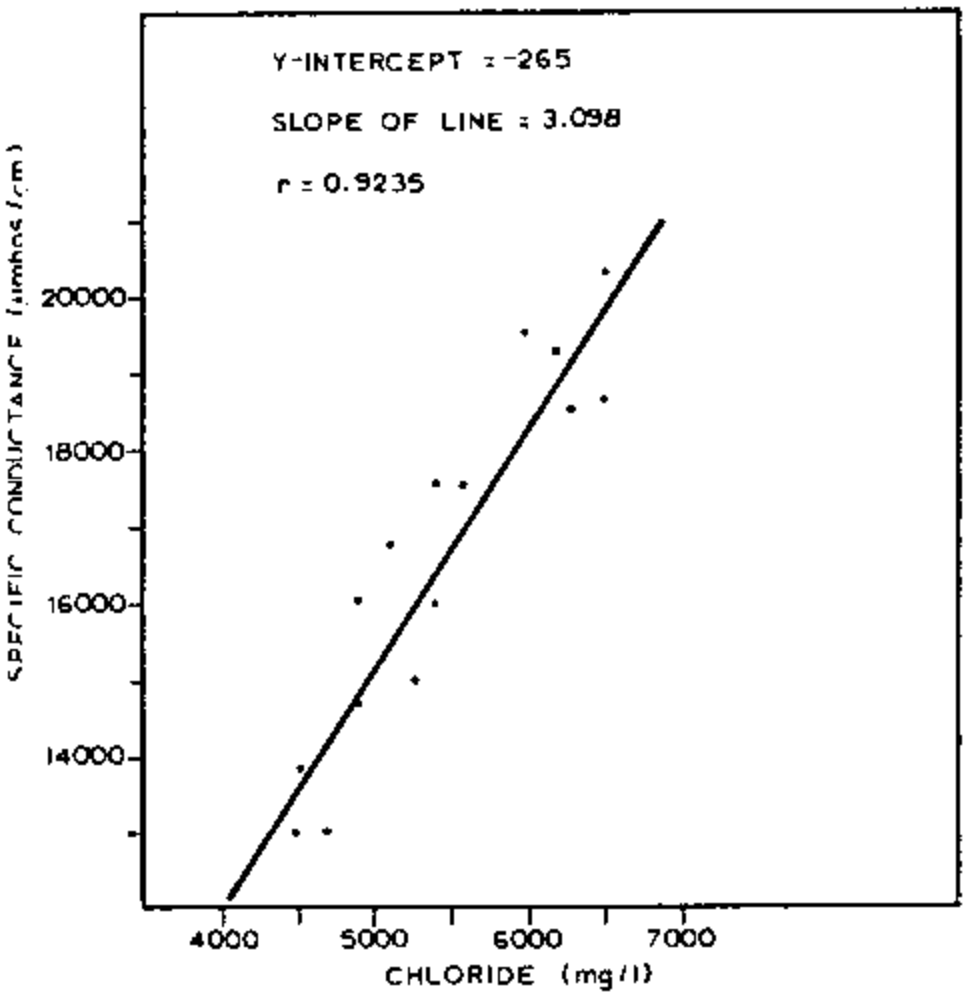


Figure D1. Calibration curve of specific conductance vs. chloride-ion concentration. Curve is used for Cl^- determination in collected water samples and borehole conductance measurements.

Table D1. Depth related specific-conductance and estimated chloride-ion data for DS3.

Depth below max water table (ft)	Profile 1 Date: 3-6-84 Time: 0900 S.Cond.	Chl	Profile 2 Date: 3-7-84 Time: 1330 S.Cond.	Chl	Profile 3 Date: 3-9-84 Time: 0930 S.Cond.	Chl	Profile 4 Date: 3-13-84 Time: 0830 S.Cond.	Chl	Profile 5 Date: 3-14-84 Time: 0810 S.Cond.	Chl	Profile 6 Date: 3-14-84 Time: 1730 S.Cond.	Chl
1												
2												
3												
4	2725	705	120	>100	1800	385	6500	2005	3900	1110	2050	470
5			3400	935					6500	2005	2050	470
6	2725	705	3425	945	1950	435	5250	1575	6500	2005	2025	460
7			3425	955					6250	1920	2025	460
8	2750	710	3050	955	2000	455	2450	610	3200	865	2025	460
9			2450	610					2450	610	2100	490
10	2400	590	2275	550	2100	490						
11									2300	555	2200	520
12	2300	555	2275	550	2200	540	2350	575	2250	575	2250	540
13							2350	575				
14	2600	660	2350	575	3000	800	2450	610	2400	590	2600	660
15							2500	625				
16	2950	780	2650	675	2550	645	2500	625	3100	830		
17			3050	815			2650	675				
18	5500	1660	3650	1020	7000	2175	3500	970	3000	830	6500	2005
19							4500	1315	3600	1005	7500	2350
20	7050	2195	6000	1835	13000	4245	8250	2610	8000	2520	12000	4245
21			9050	2885			10300	3315	12500	4075	17000	5625
22	16000	5280			20000	6660	18000	5970	17000	5625	20000	6660
23	20500	6835					20000	6660	19500	6490	22500	7525
24	25000	8385			26250	8815	25500	8560	25000	8385	26750	8990
25							29000	9765	27500	9245	29500	9935
26					30000	10110	30250	10195	29250	9850	30250	10195
27							31250	10540	30250	10195	30500	10280
28					31000	10455	32000	10800	31250	10540	30750	10370

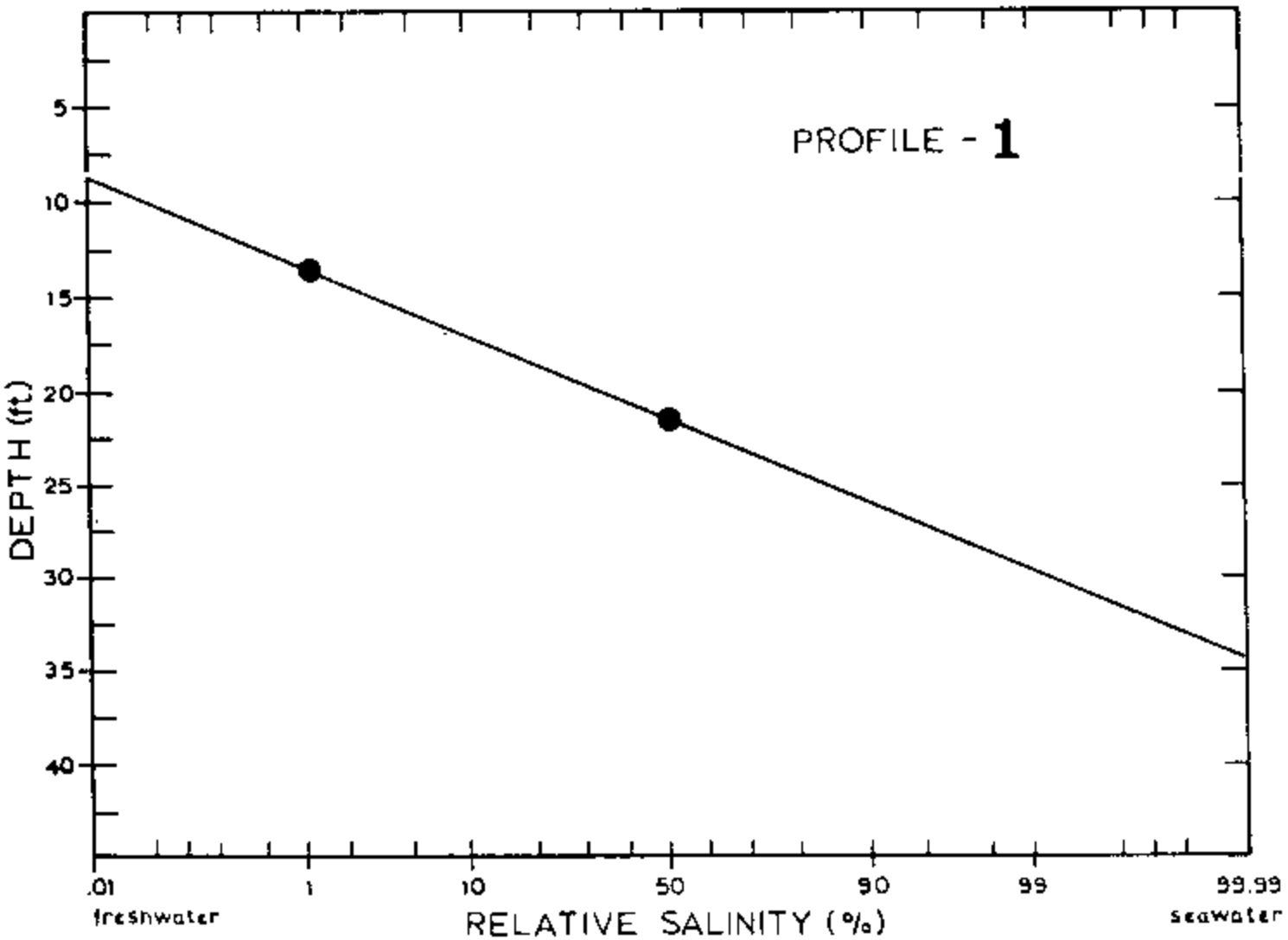
* S. Cond. - Specific conductance, µmhos/cm.

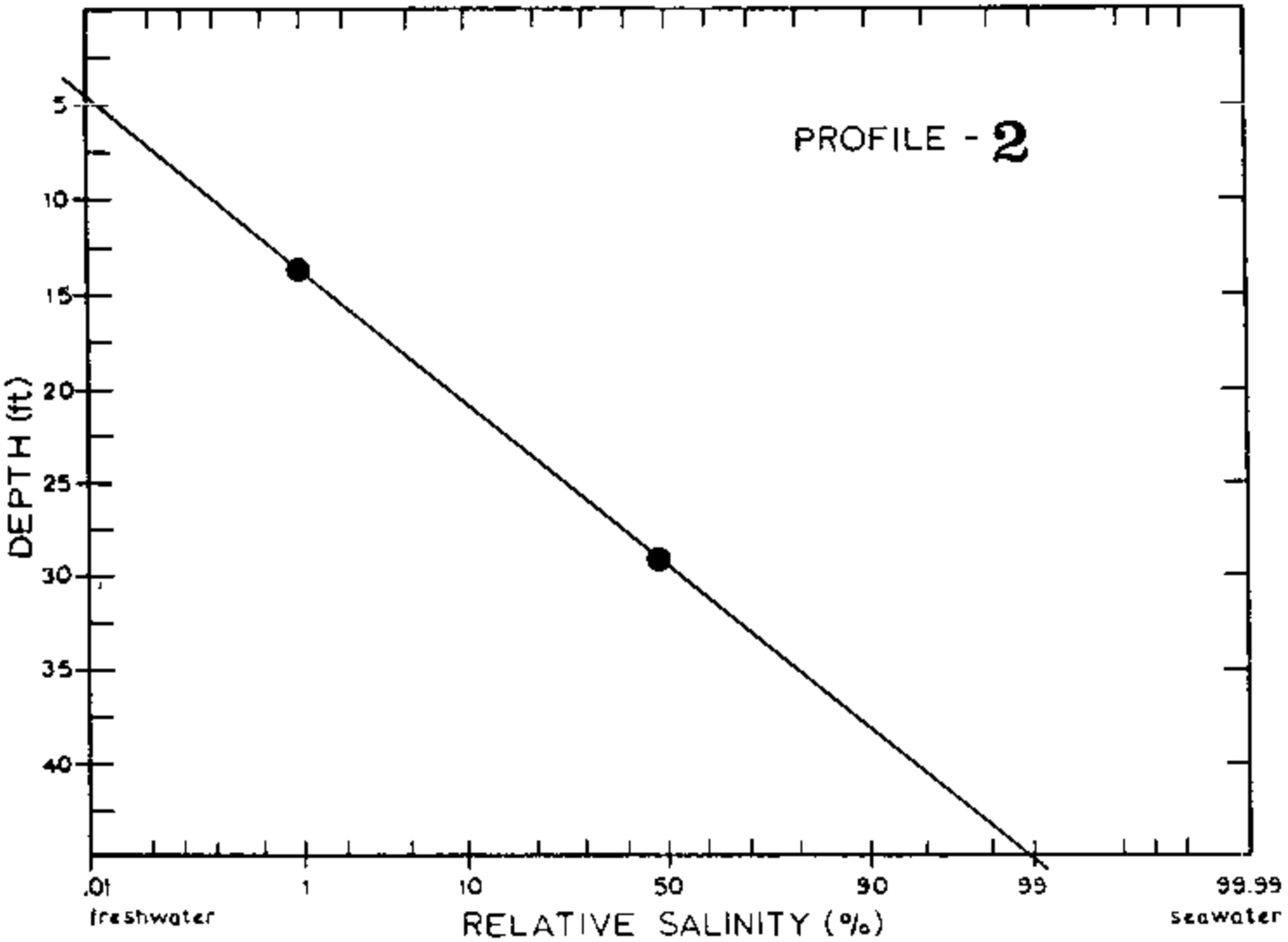
** Chl. - estimated chloride (mg/ℓ), based on graphical data.

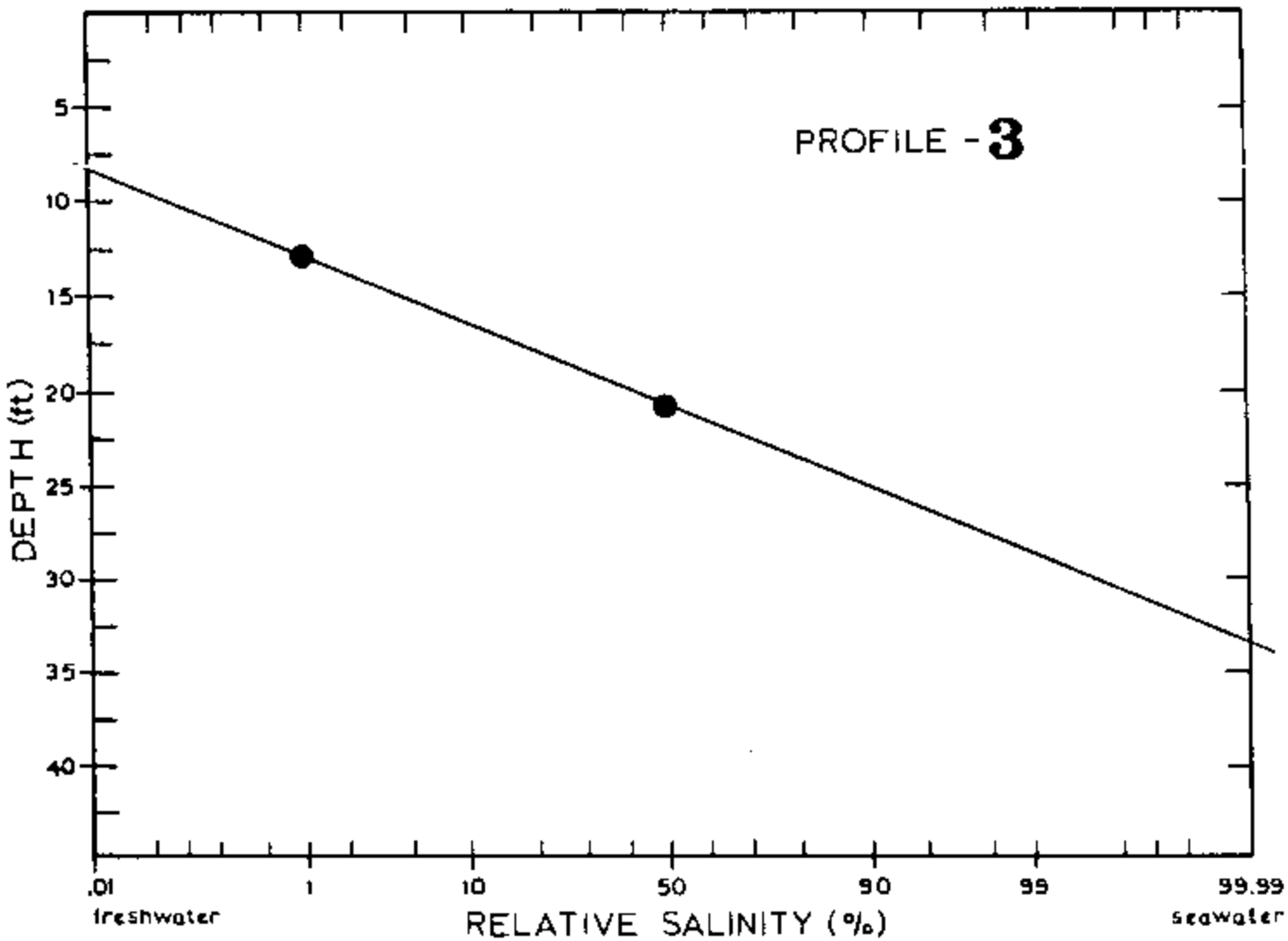
Table D1. Continued

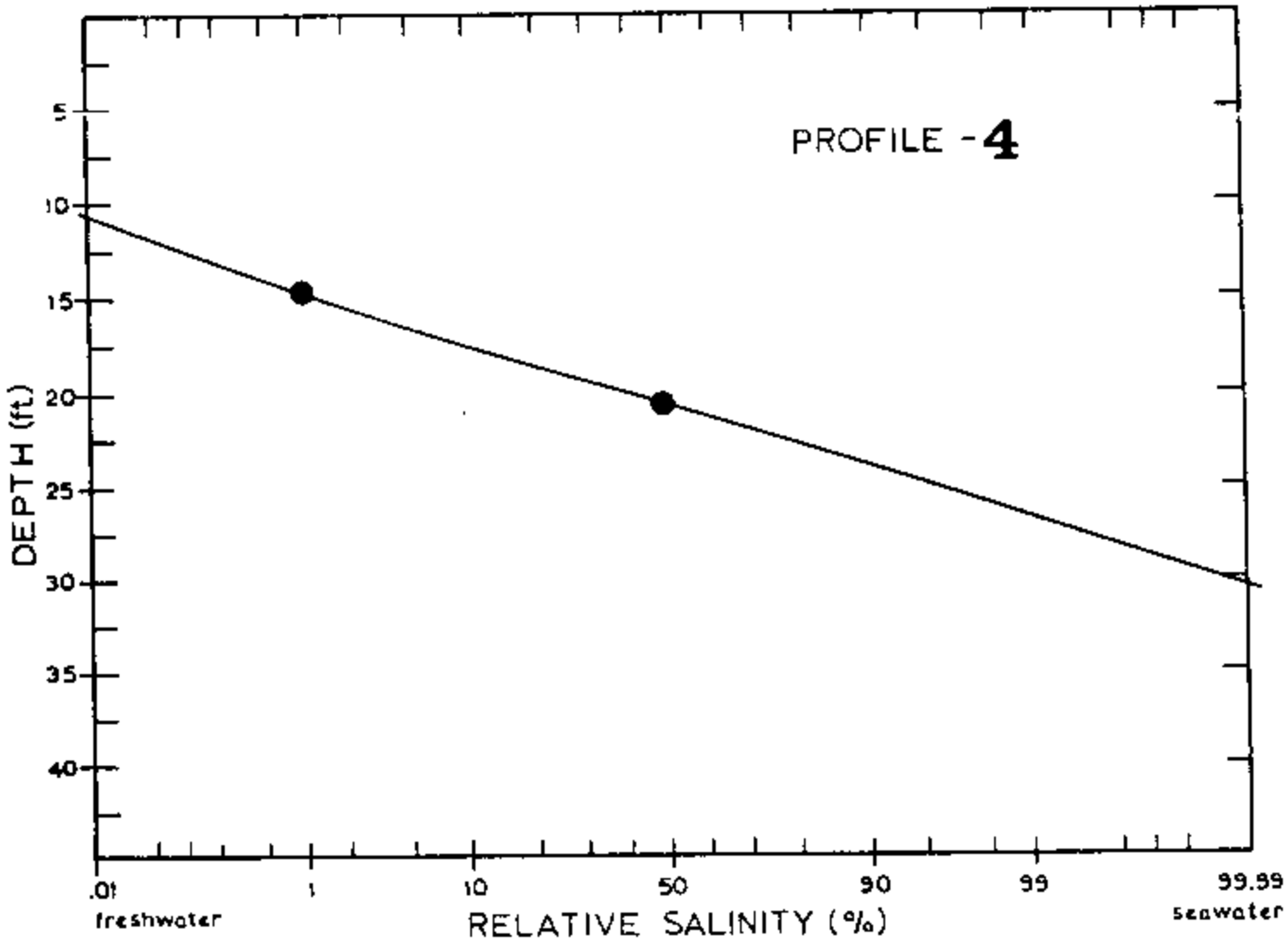
Depth below max water table (ft)	Profile 7 Date: 3 15 84 Time: 0830 S.Cond.*	Chl**	Profile 8 Date: 3 16 84 Time: 0830 S.Cond.	Chl.	Profile 9 Date: 3 17 84 Time: 0800 S.Cond.	Chl	Profile 10 Date: 3 17 84 Time: 1545 S.Cond.	Chl	Profile 11 Date: 3 18 84 Time: 1115 S.Cond.	Chl	Profile 12 Date: 3 18 84 Time: 1515 S.Cond.	Chl
1											3500	970
2							2175	515			3500	970
3							2225	530			3550	990
4	185	<100	400	<100	dry		2350	575	305	<100	3550	990
5	2800	730	1500	280	1350	230	2375	580	1300	<100	3575	995
6	2975	790	2400	590	2300	555	2375	580	2300	555	3575	995
7	3175	860	2550	645	2300	555	2400	590	2375	580	3575	995
8	2750	710	2575	650	2325	565	2400	590	2375	580	3600	1005
9	2450	610	2475	615	2450	610	2375	580	2450	610	3600	1005
10	2400	590	2475	615	2475	615	2400	590	2475	615	3600	1005
11	2375	580	2500	625	2500	625	2425	600	2500	625	3650	1020
12	2400	590	2525	635	2600	660	2475	615	2525	635	3700	1040
13	2400	590	2600	660	2875	755	3250	885	2700	695	4400	1175
14	2400	590	2600	660	2875	755	3250	885	2700	695	4400	1280
15	2450	610	2725	705	3000	800	3500	970	2800	730	4500	1315
16	2500	625	2750	710	3250	885	3575	995	2850	745	4550	1330
17	3000	800	3000	800	3100	830	5500	1660	3000	800	5000	1490
18	3500	970	3600	1005	4700	1385	8000	2520	3400	935	7800	2455
19	6000	1835	8000	2520	6250	1920	8750	2780	4050	1160	8500	2695
20	800	2520	10000	3210	11750	3820	13000	4245	8250	2610	13500	4420
21	12500	4075	14000	4590	15750	5195	17000	5625	12250	3990	18000	5970
22	17000	5625	18000	5970	19000	6315	19750	6570	17000	5625	20000	6660
23	19500	6490	20000	6660	20750	6920	23000	7695	19250	6400	23750	7955
24	24750	8300	26000	8730	27000	9075	28000	9420	24500	8215	28000	9420
25	27500	9245	28000	9420	29000	9765	30000	10110	27750	9335	31000	10455
26	29500	9935	29000	9765	30750	10370	31000	10455	30000	10110	32000	10800
27	30000	10110	30000	10110	31250	10540	31500	10625	30750	10370	32500	10970
28	3025	10280	32000	10800	31500	10625	31500	10625	3100	10455	32500	10970

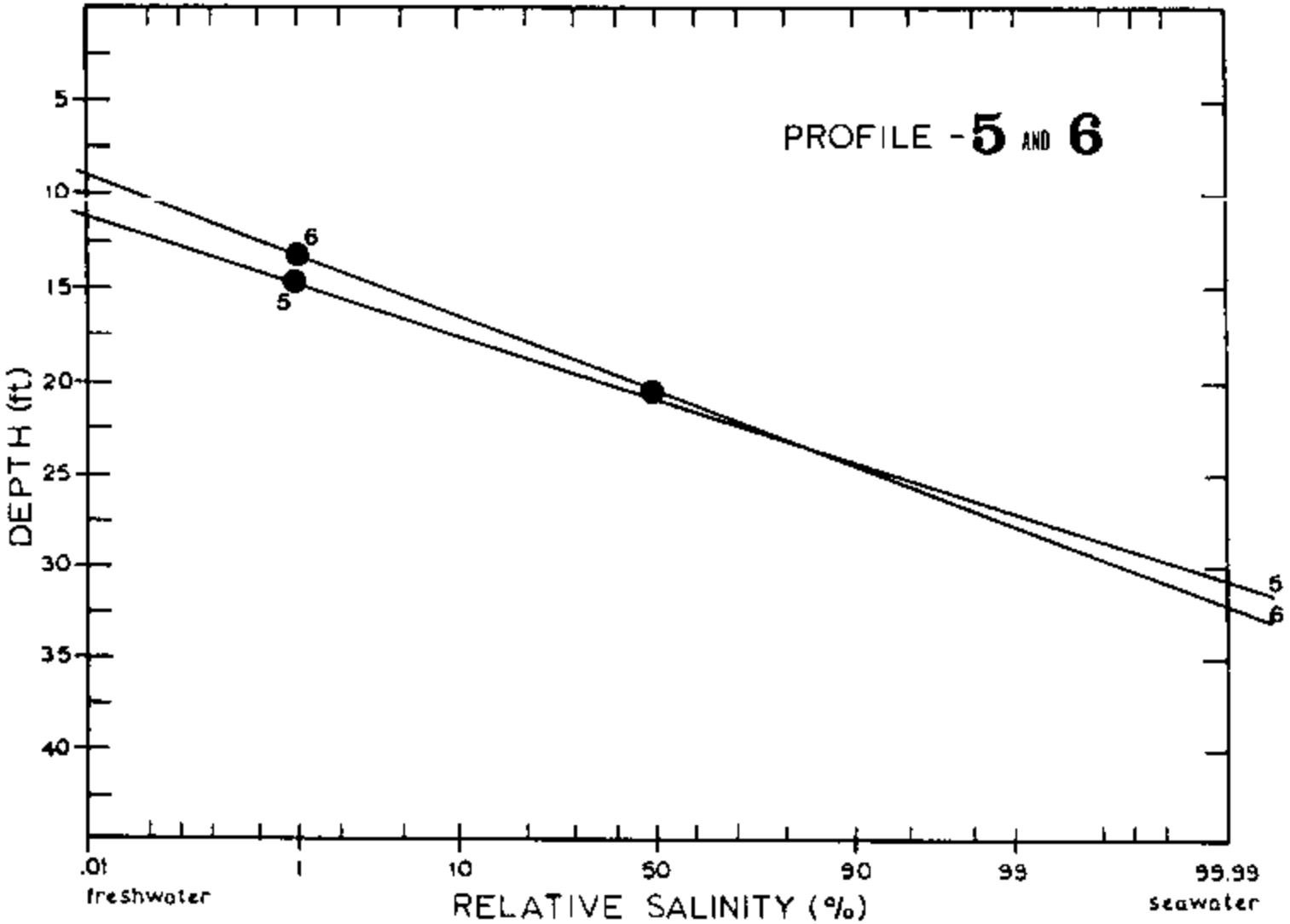
* S. Cond. = Specific conductance, umhos/cm

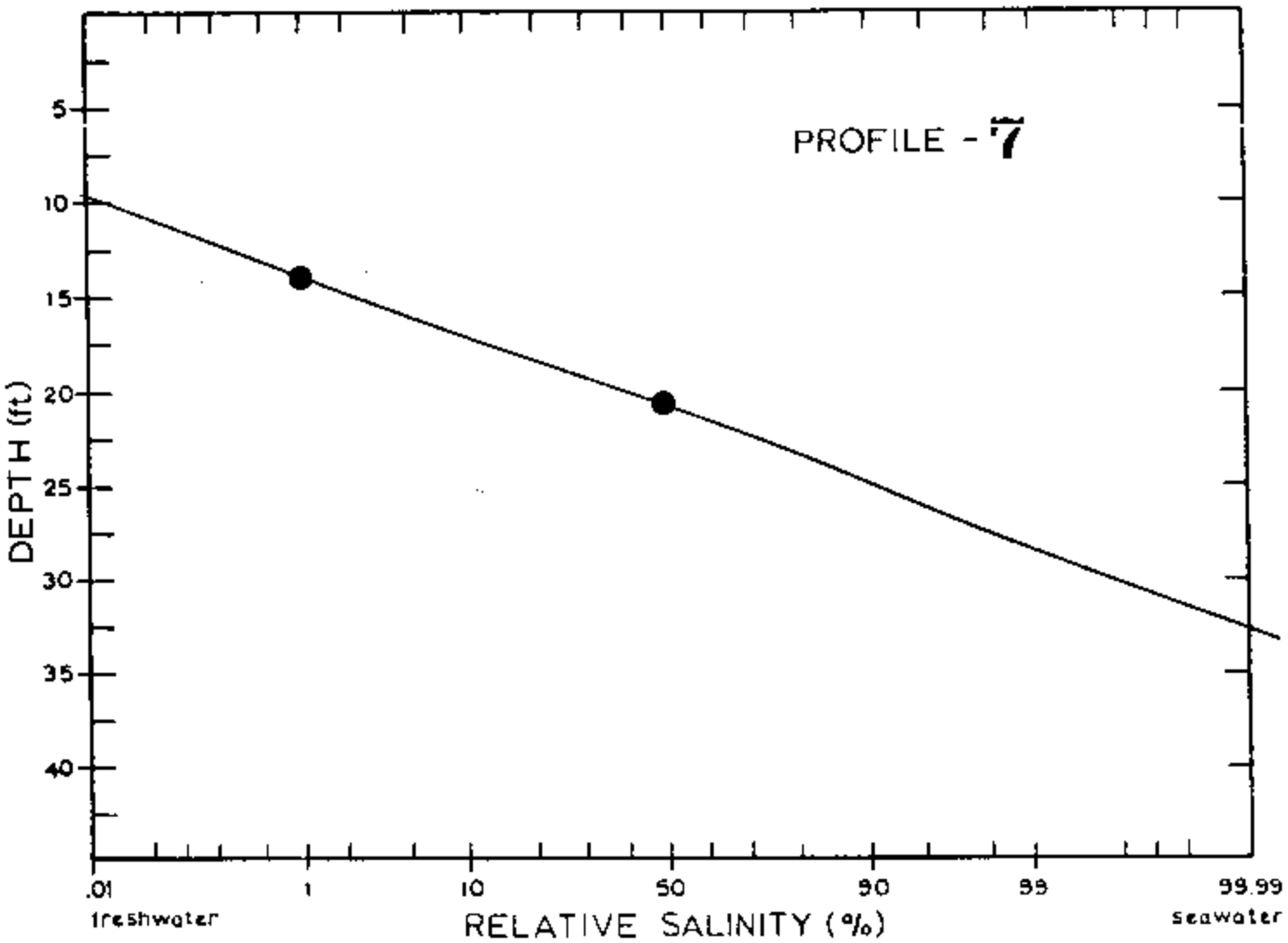

PROFILE - 1
DEPTH (ft)
5
10
15
20
25
30
35
40
.01
freshwater
1
10
50
90
99
99.99
seawater
RELATIVE SALINITY (‰)

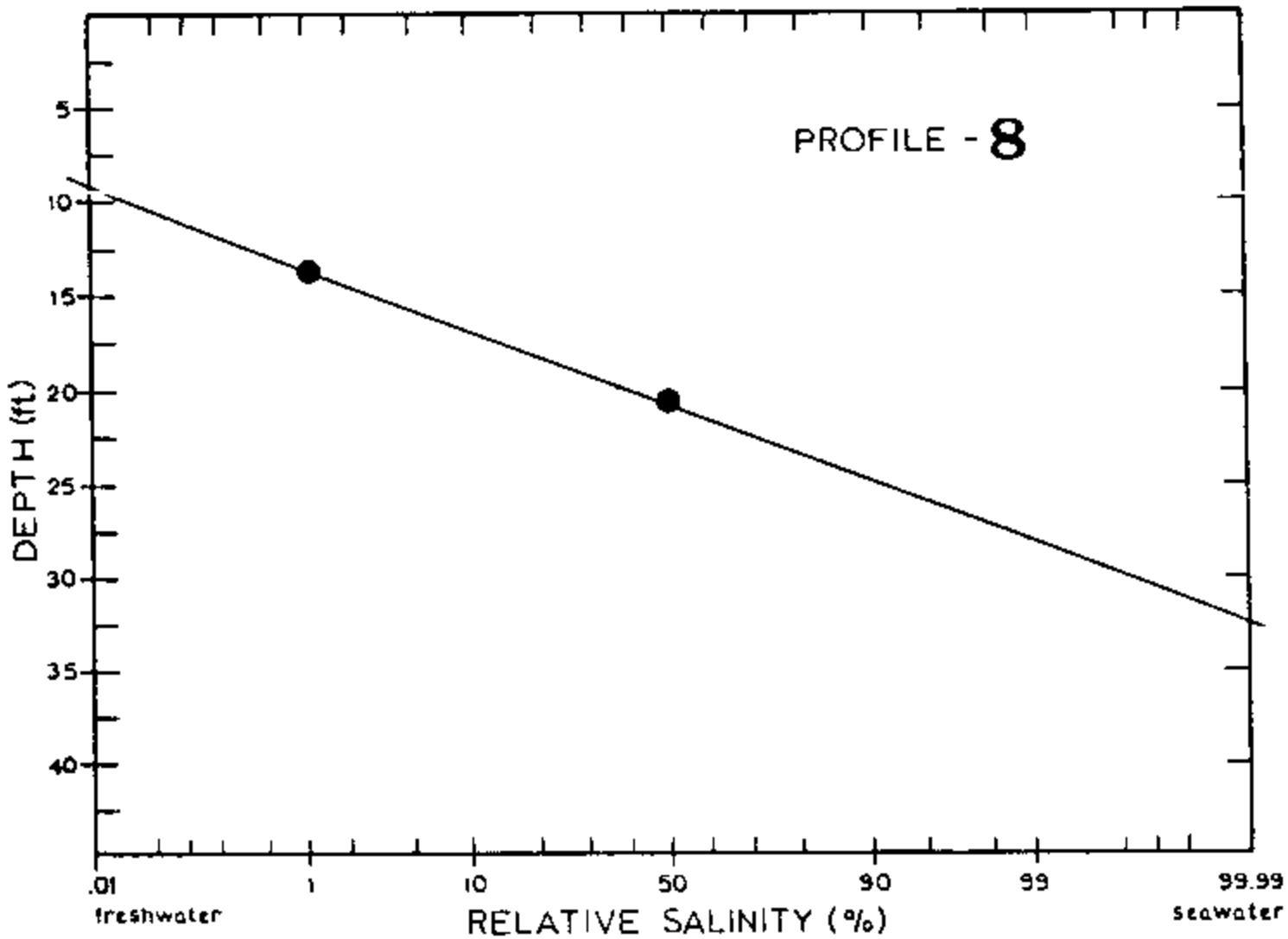

PROFILE - 2
DEPTH (ft)
5
10
15
20
25
30
35
40
.01
freshwater
1
10
50
90
99
99.99
seawater
RELATIVE SALINITY (‰)

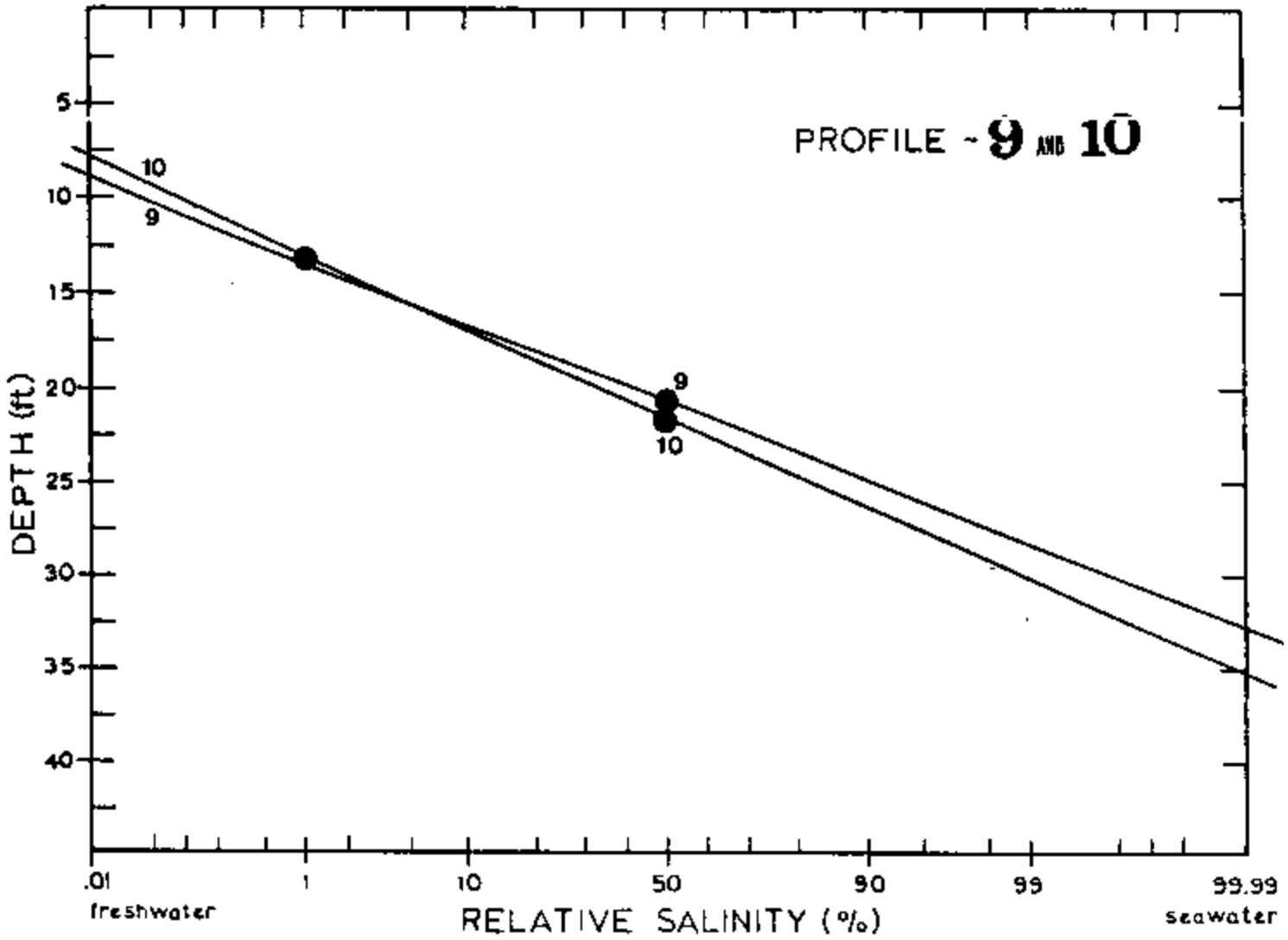

PROFILE - 3
DEPTH (ft)
5
10
15
20
25
30
35
40
.01
freshwater
1
10
50
90
99
99.99
seawater
RELATIVE SALINITY (‰)


PROFILE - 4
DEPTH (ft)
5
10
15
20
25
30
35
40
.01
freshwater
1
10
50
90
99
99.99
seawater
RELATIVE SALINITY (‰)


PROFILE - 5 AND 6
DEPTH (ft)
5
10
15
20
25
30
35
40
6
5
5
6
.01
freshwater
1
10
50
90
99
99.99
seawater
RELATIVE SALINITY (%)


PROFILE - 7
DEPTH (ft)
5
10
15
20
25
30
35
40
.01
freshwater
1
10
50
90
99
99.99
seawater
RELATIVE SALINITY (%)


PROFILE - 8
DEPTH (ft.)
5
10
15
20
25
30
35
40
.01
freshwater
1
10
50
90
99
99.99
seawater
RELATIVE SALINITY (%)


PROFILE - 9 AND 10
DEPTH (ft)
5
10
15
20
25
30
35
40
10
9
9
10
.01
freshwater
1
10
50
90
99
99.99
seawater
RELATIVE SALINITY (%)

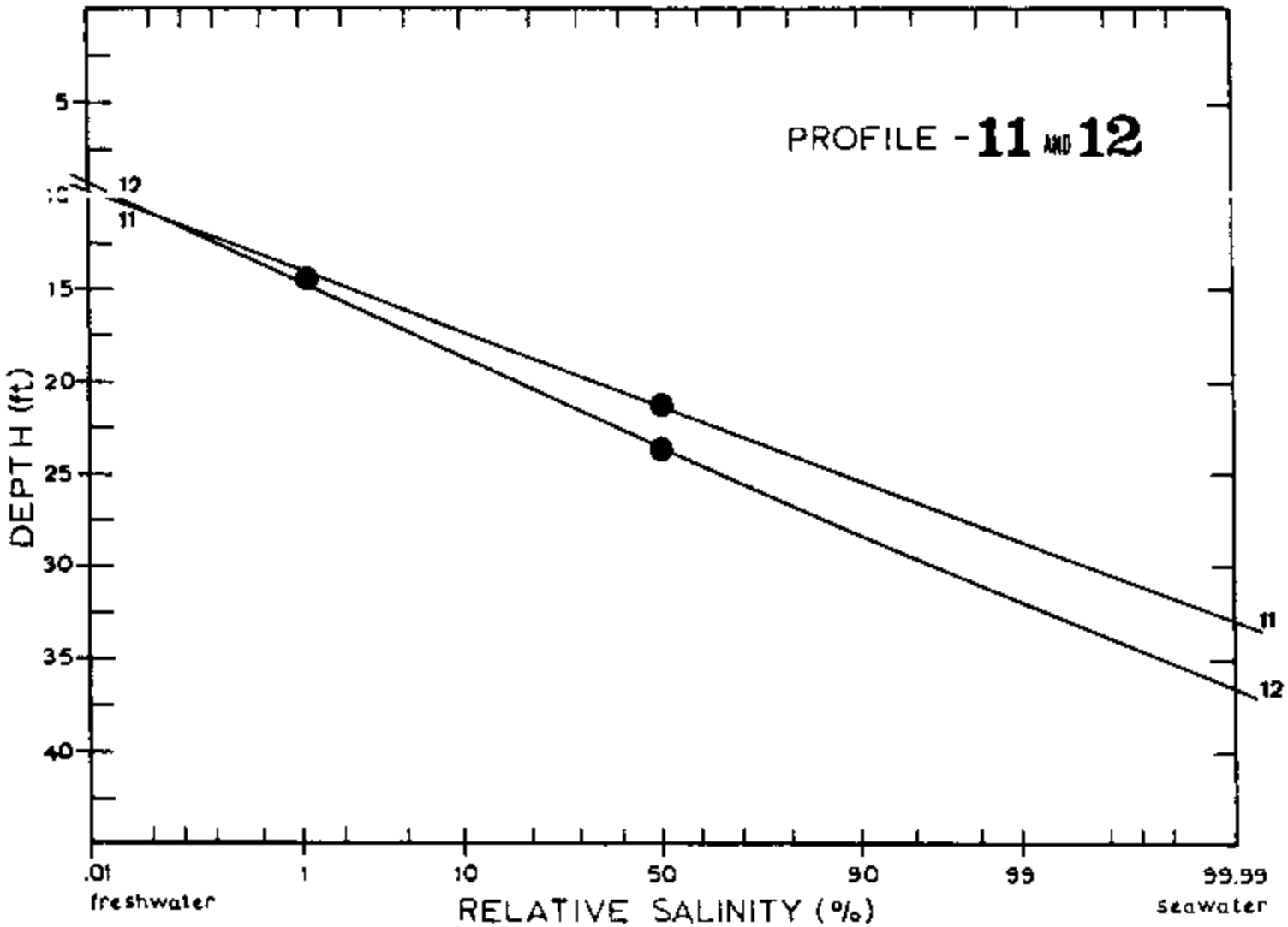

PROFILE - 11 AND 12
DEPTH (ft)
5
15
20
25
30
35
40
12
11
11
12
.01
freshwater
1
10
50
90
99
99.99
seawater
RELATIVE SALINITY (%)

Table D2. Depth related specific-conductance and estimated chloride-ion data for DS4.

Depth below max water table (ft)	Profile 1 Date: 3-15-84 Time: 0845 S.Cond.*	Chl**	Profile 2 Date: 3-16-84 Time: 0805 S.Cond.	Chl	Profile 3 Date: 3-17-84 Time: 0740 S.Cond.	Chl	Profile 4 Date: 3-18-84 Time: 0912 S.Cond.	Chl
1	205	<100	118	<100	dry		dry	
2	2075	480	2000	455	190	<100	145	<100
3	2050	470	2150	505	1900	420	1800	385
4	2125	495	2375	580	2450	610	2300	555
5	6500	2005	6900	2145	8800	2800	7500	2350
6	12000	3900	13750	4505	16000	5280	15750	5195
7	12750	4160	14000	4590	16250	5365	16500	5455
8	12750	4160	14000	4590	16250	5365	16500	5455
9	12750	4160	13750	4505	16250	5365	16500	5280
10	13250	4335	14000	4590	16750	5540	16250	5365
11	15250	5025	16000	5280	18000	5970	17000	5625
12	17500	5800	16250	5365	18000	5970	17750	5885
13	19250	6400	17000	5625	20000	6660	18000	5970
14	21000	7005	19000	6315	24000	8040	18500	6145
15	21250	7090	20000	6660	24500	8215	19000	6315
16	22000	7350	20750	6920	25000	8385	19250	6400
17	22000	7350	21250	7180	25500	8560	20000	6660
18	22000	7350	21250	7180	25500	8560	20000	6660
19	22250	7435	21500	7265	25500	8560	20000	6660
20	22250	7435	21750	7265	25500	8560	20250	6745
21	22250	7435	22000	7350	25750	8645	20250	6475
22	22250	7435	22000	7350	25750	8645	20500	6835
23	22250	7435	22000	7350	26000	8730	20500	6835
24	22250	7435	22000	7350	26000	8730	20500	6835

* S. Cond. - Specific conductance, µmhos/cm.

** Chl. - estimated chloride (mg/ℓ), based on graphical data.