社会開発調査部報告書

No. 2

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

WATER RESOURCES RESEARCH INSTITUTE
NATIONAL WATER RESEARCH CENTER
MINISTRY OF PUBLIC WORKS AND WATER RESOURCES
THE ARAB REPUBLIC OF EGYPT

SOUTH SINAI GROUNDWATER RESOURCES STUDY

IN

THE ARAB REPUBLIC OF EGYPT

DATA BOOK

MARCH 1999

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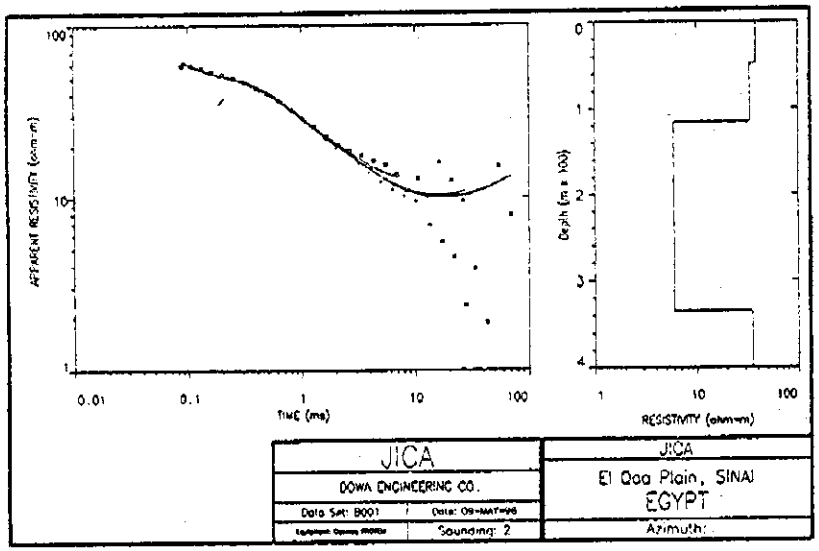
1.1 TEM Method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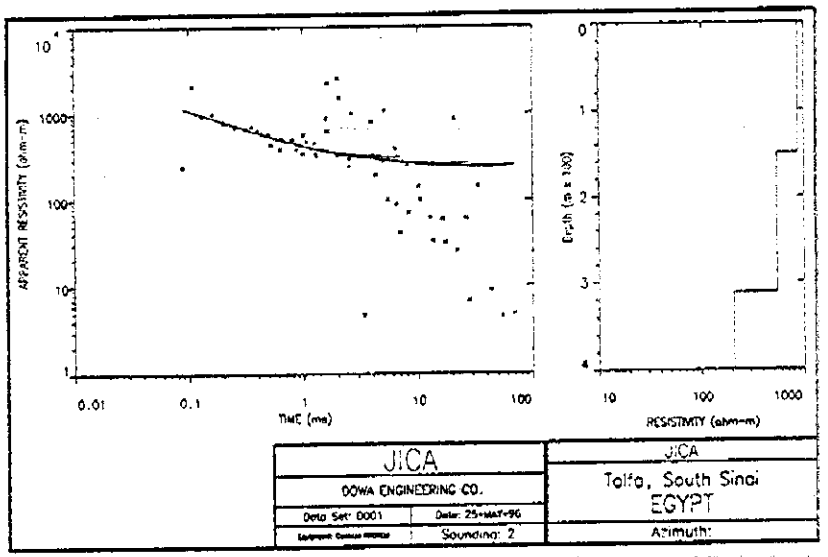
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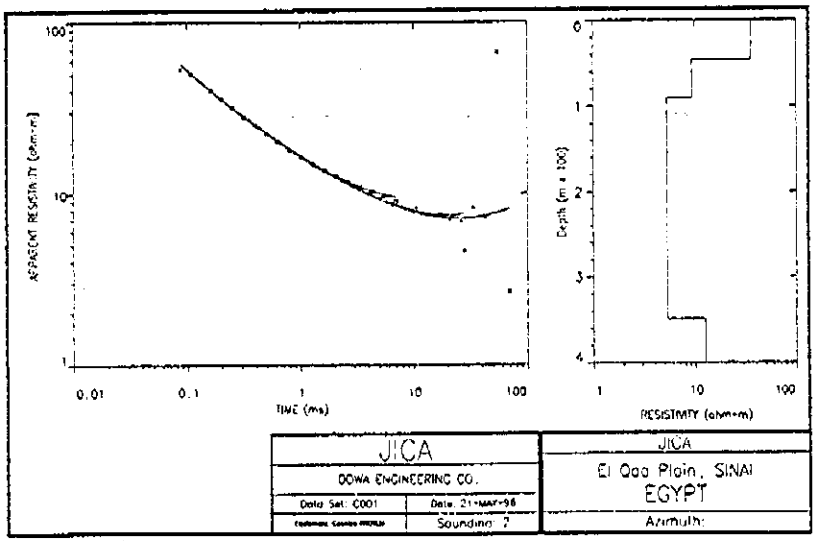
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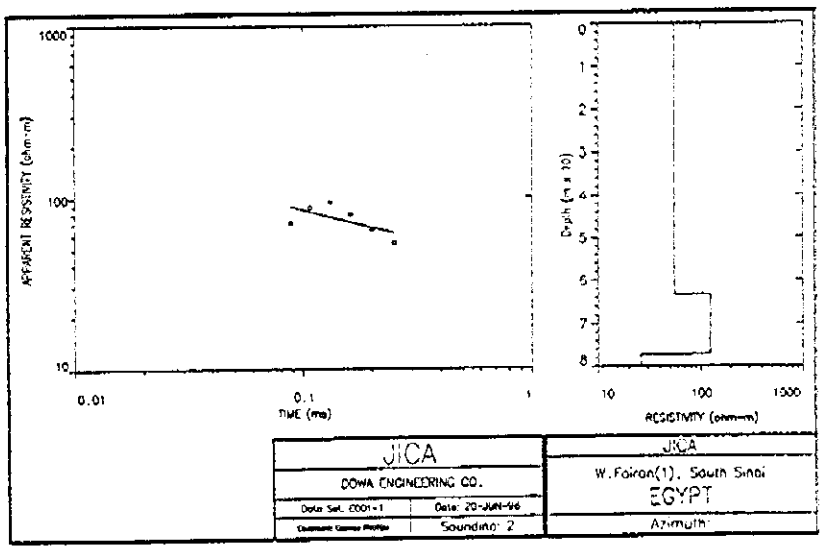
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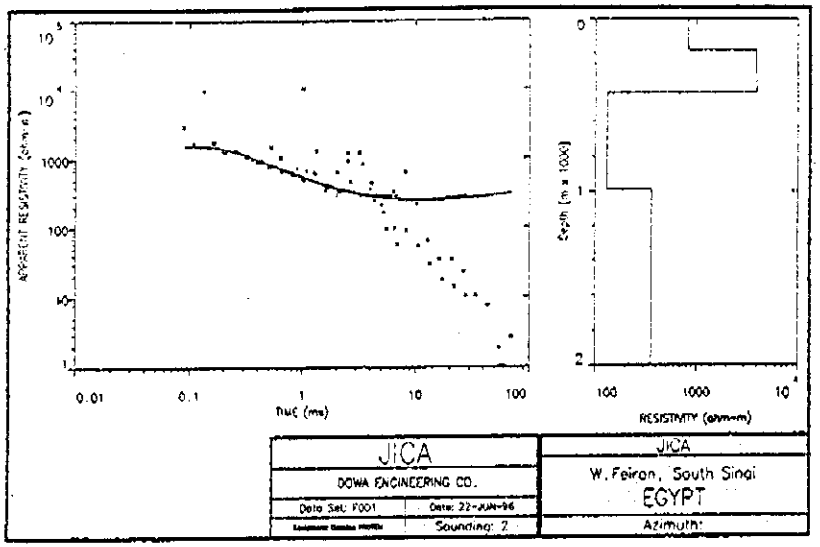
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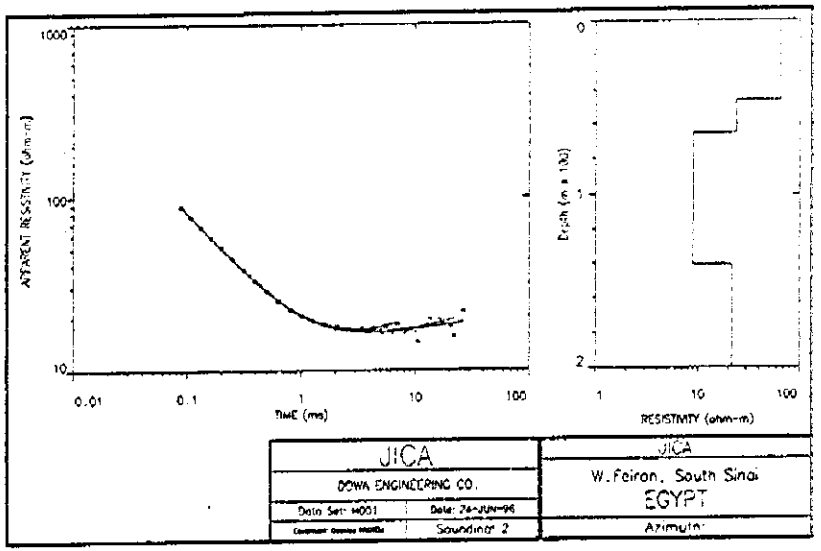
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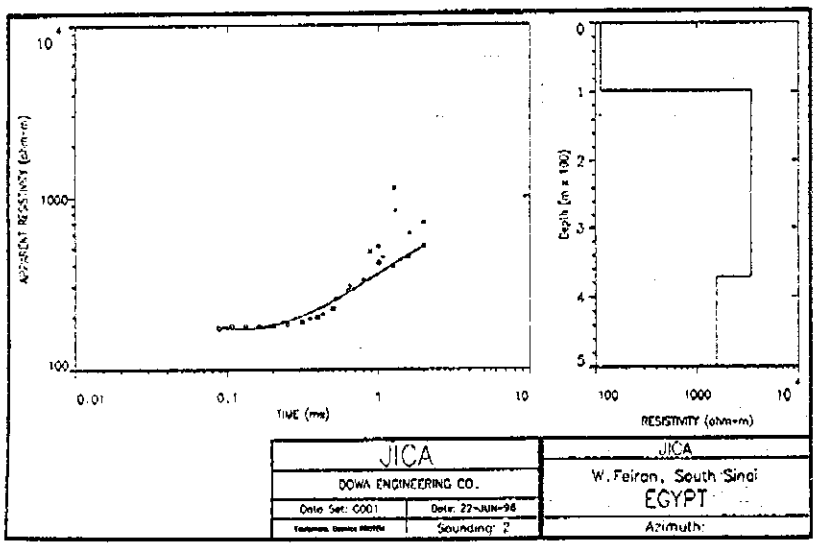
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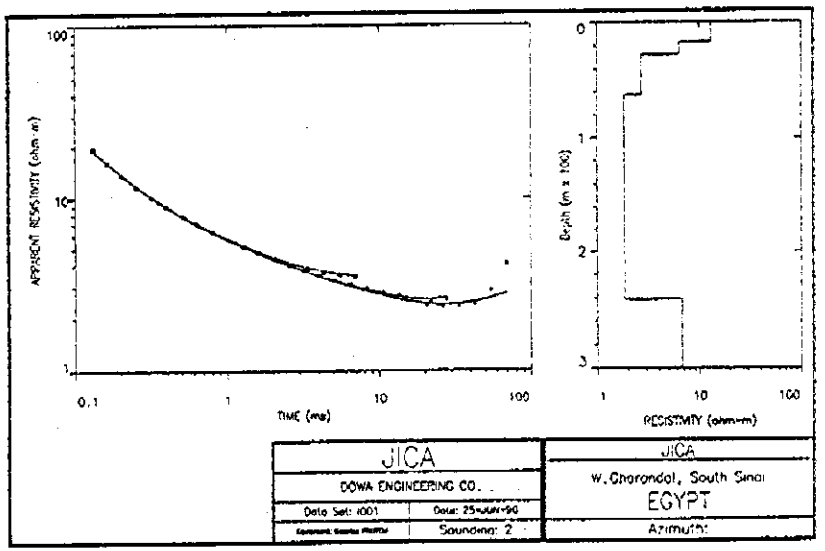
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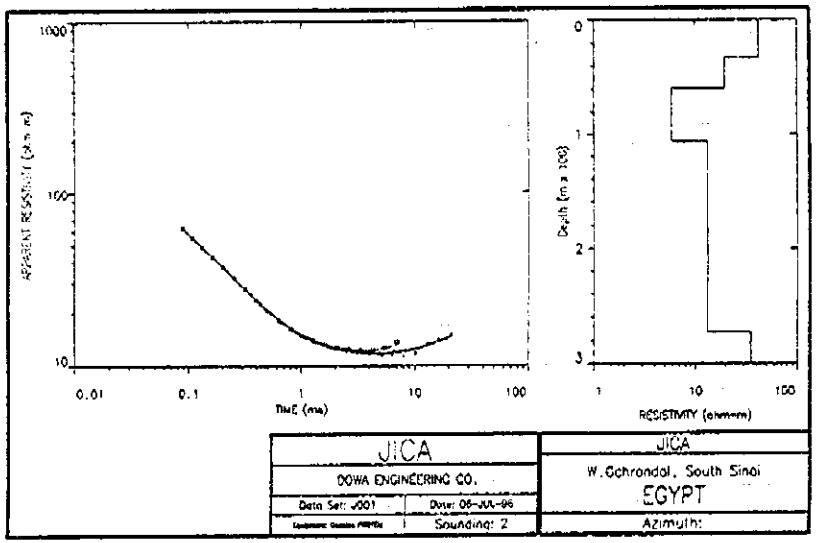
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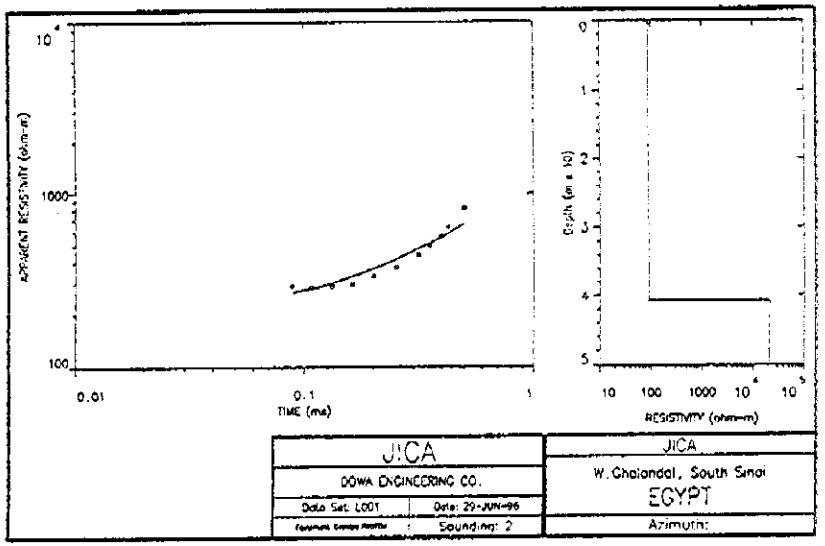
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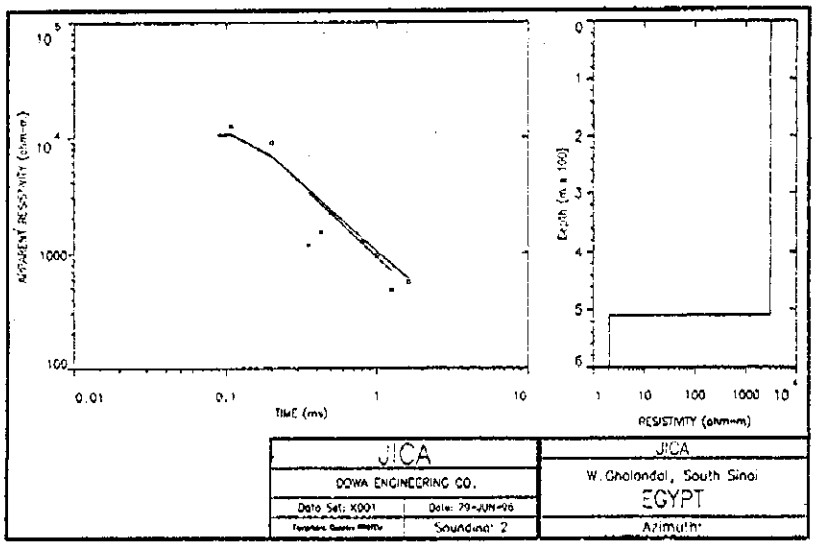
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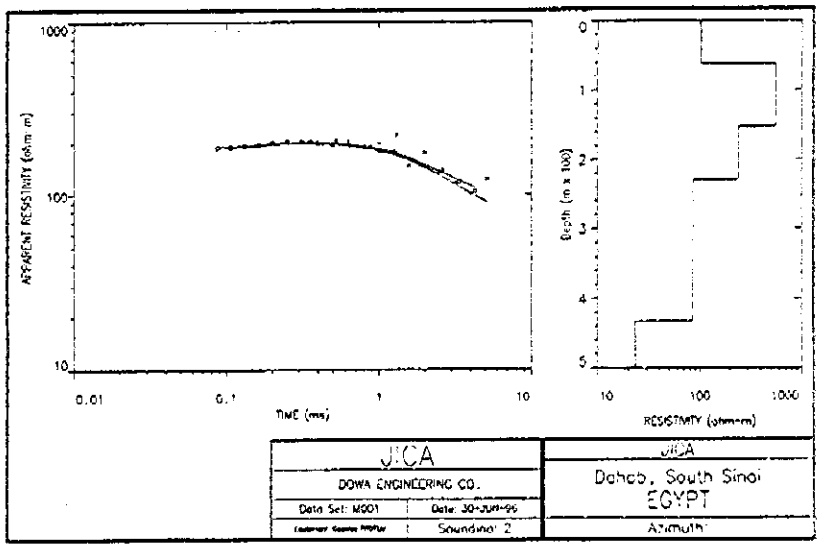
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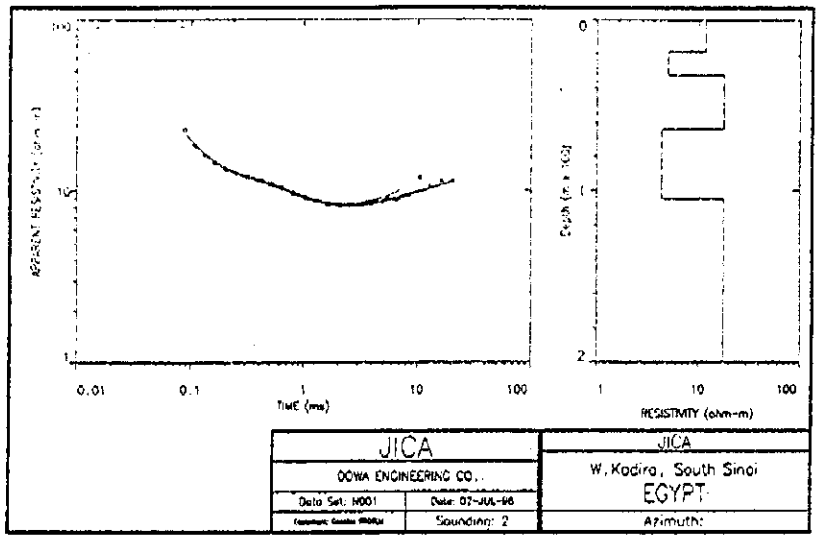
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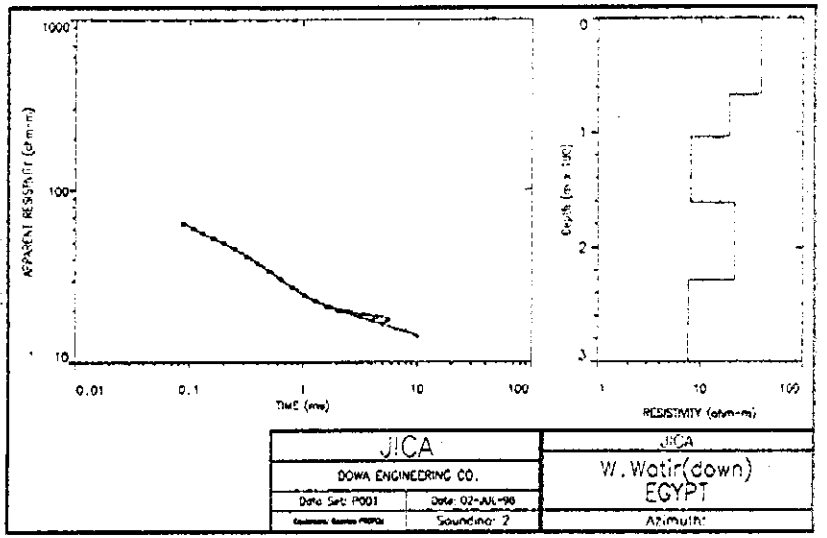
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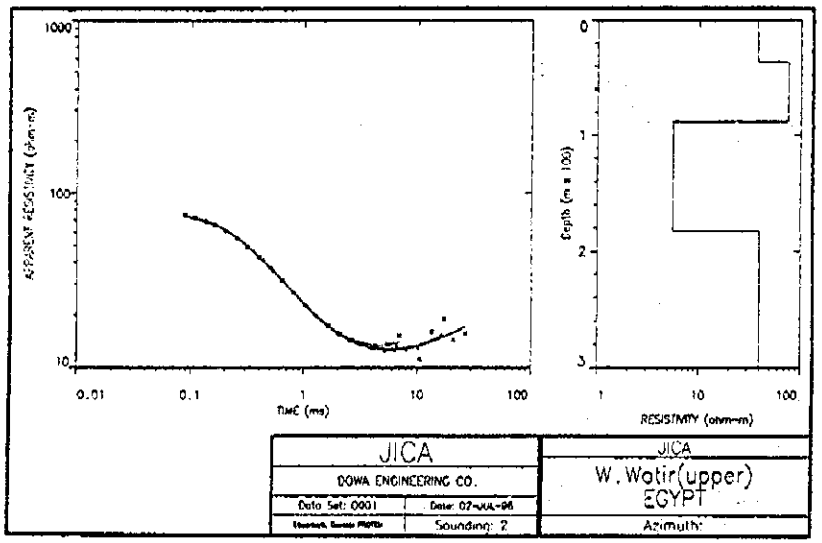
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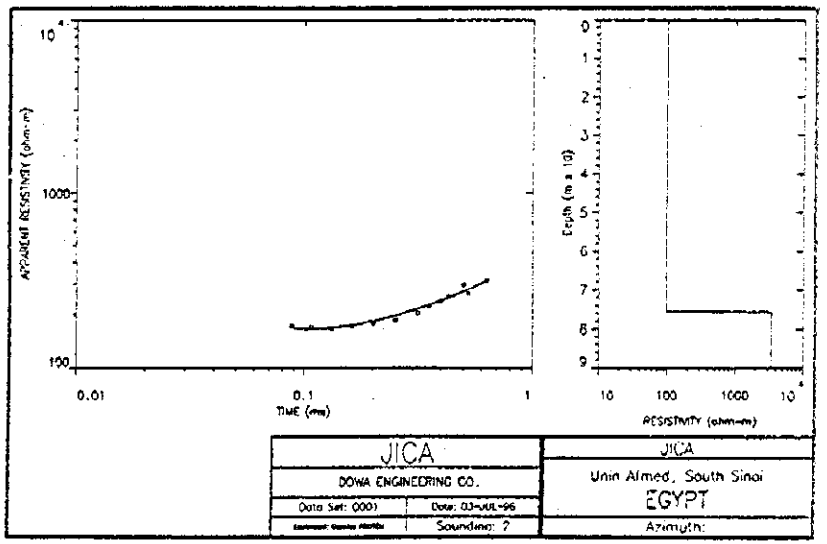
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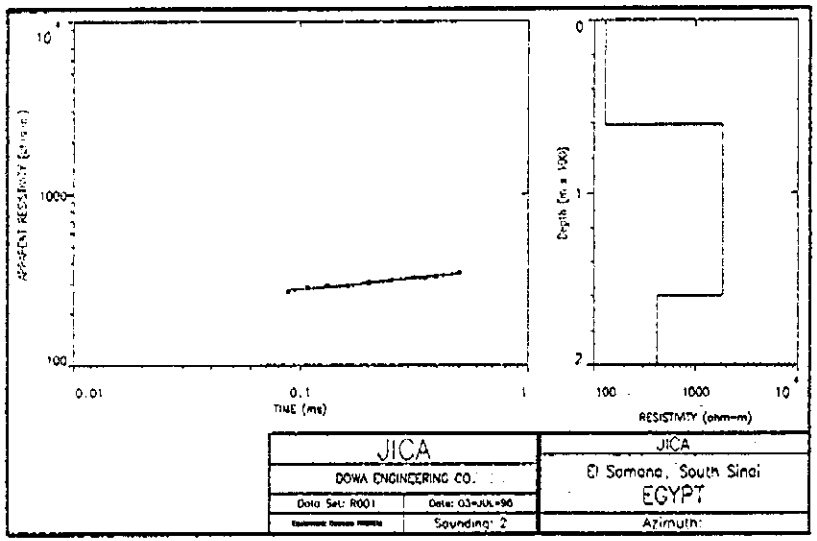
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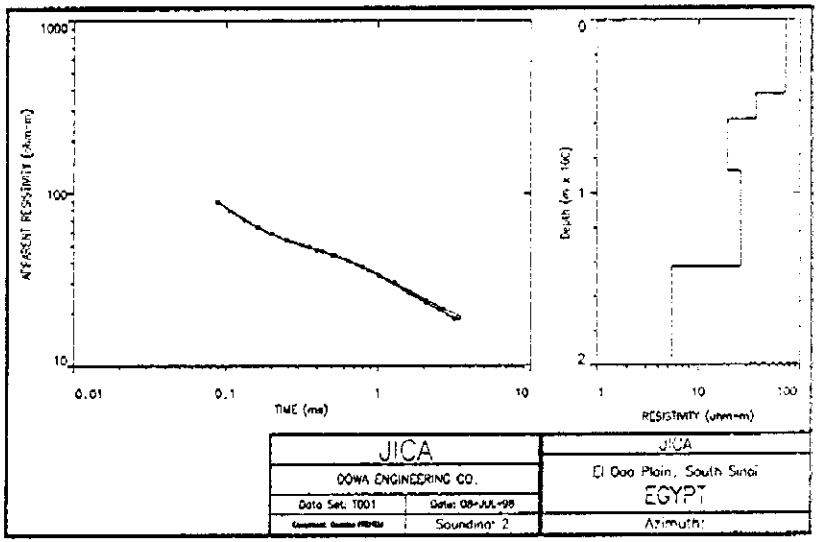
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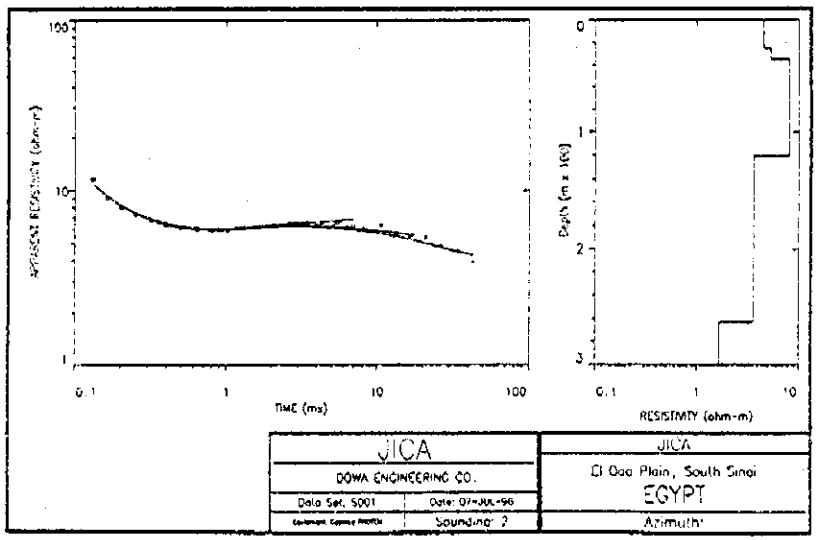
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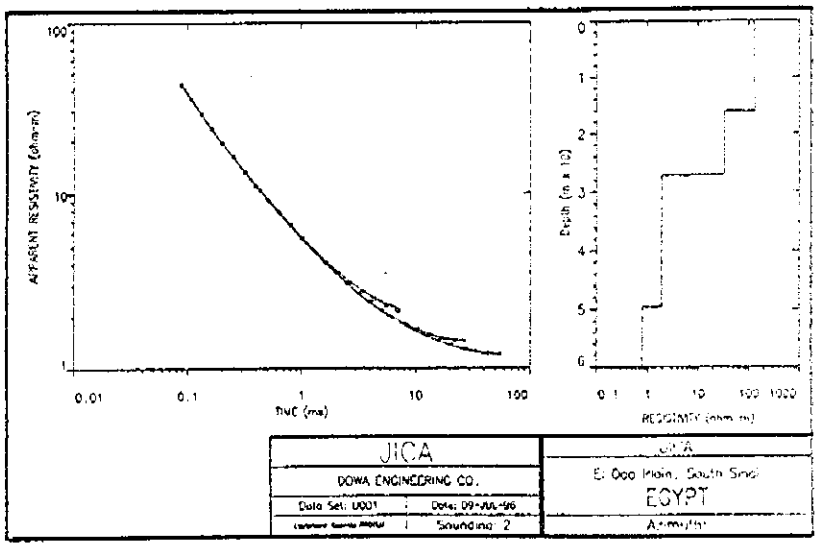
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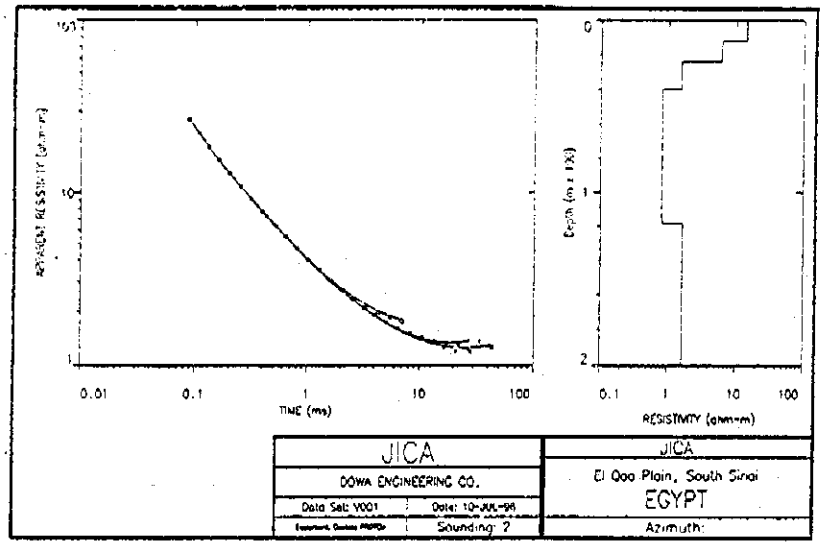
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EGYPT
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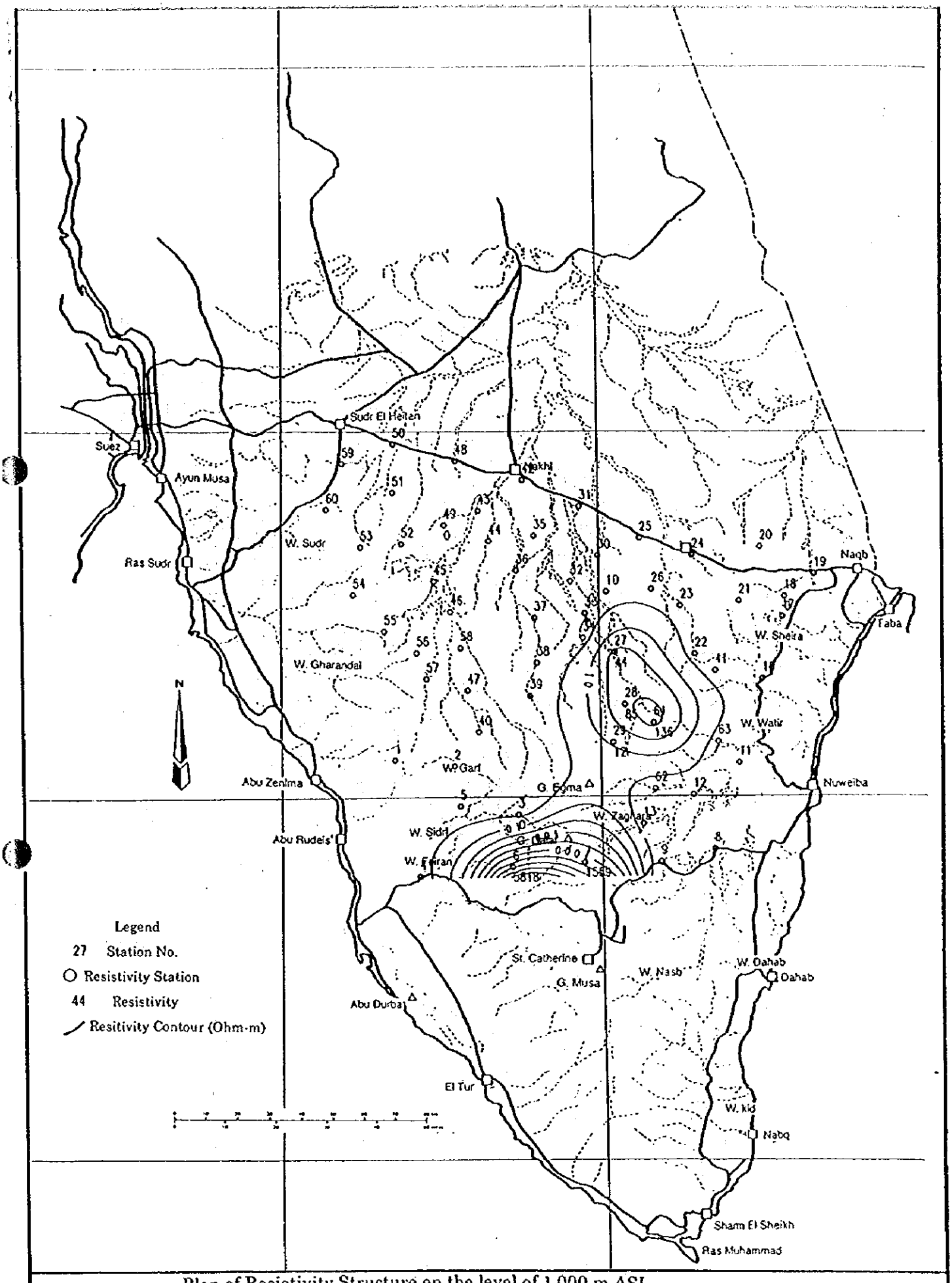
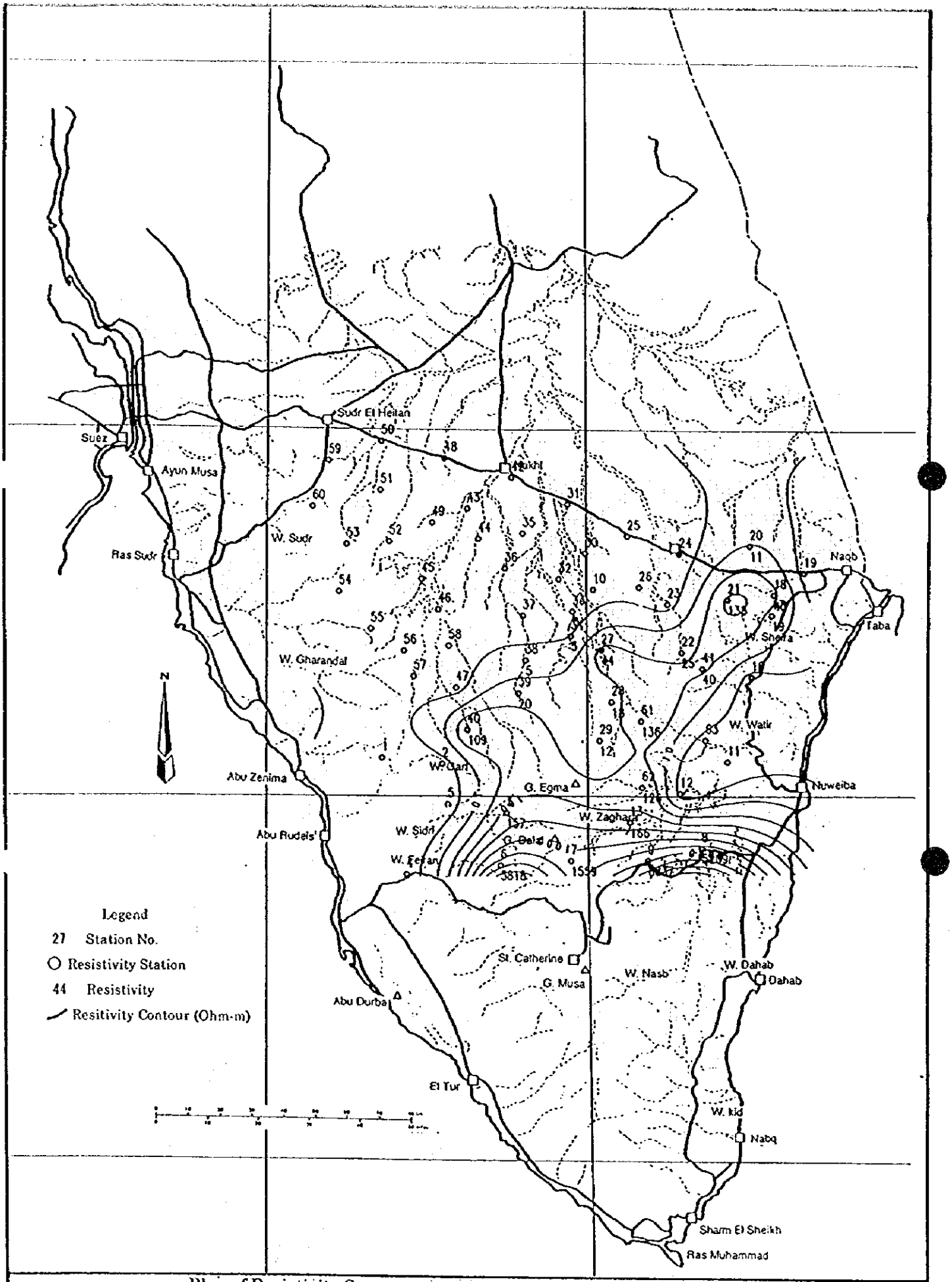
1.2 Schlumberger Method



Plan of Resistivity Structure on the level of 1,000 m ASL.

SOUTH SINAI GROUNDWATER RESOURCES STUDY IN THE ARAB REPUBLIC OF EGYPT | JICA



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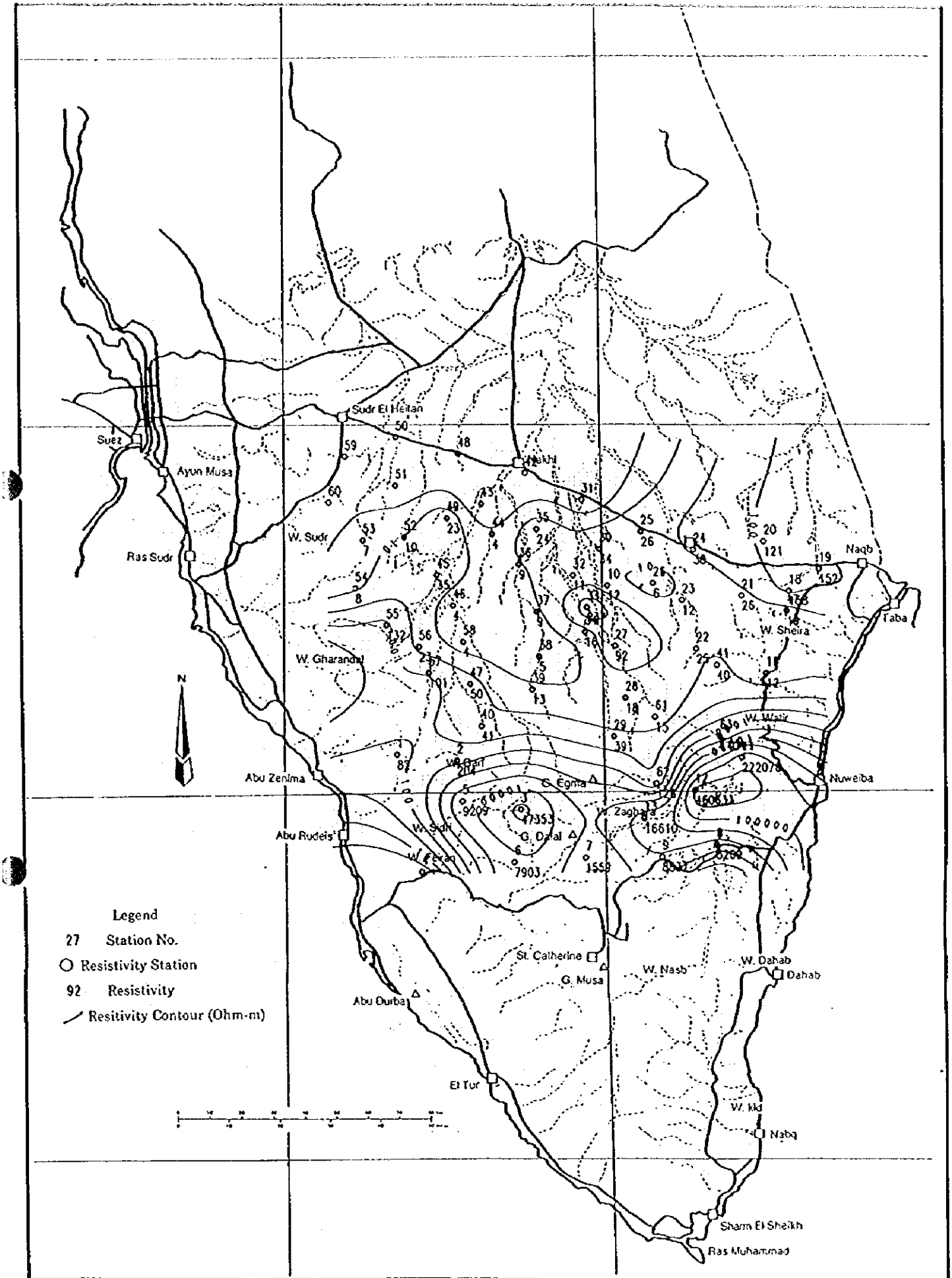

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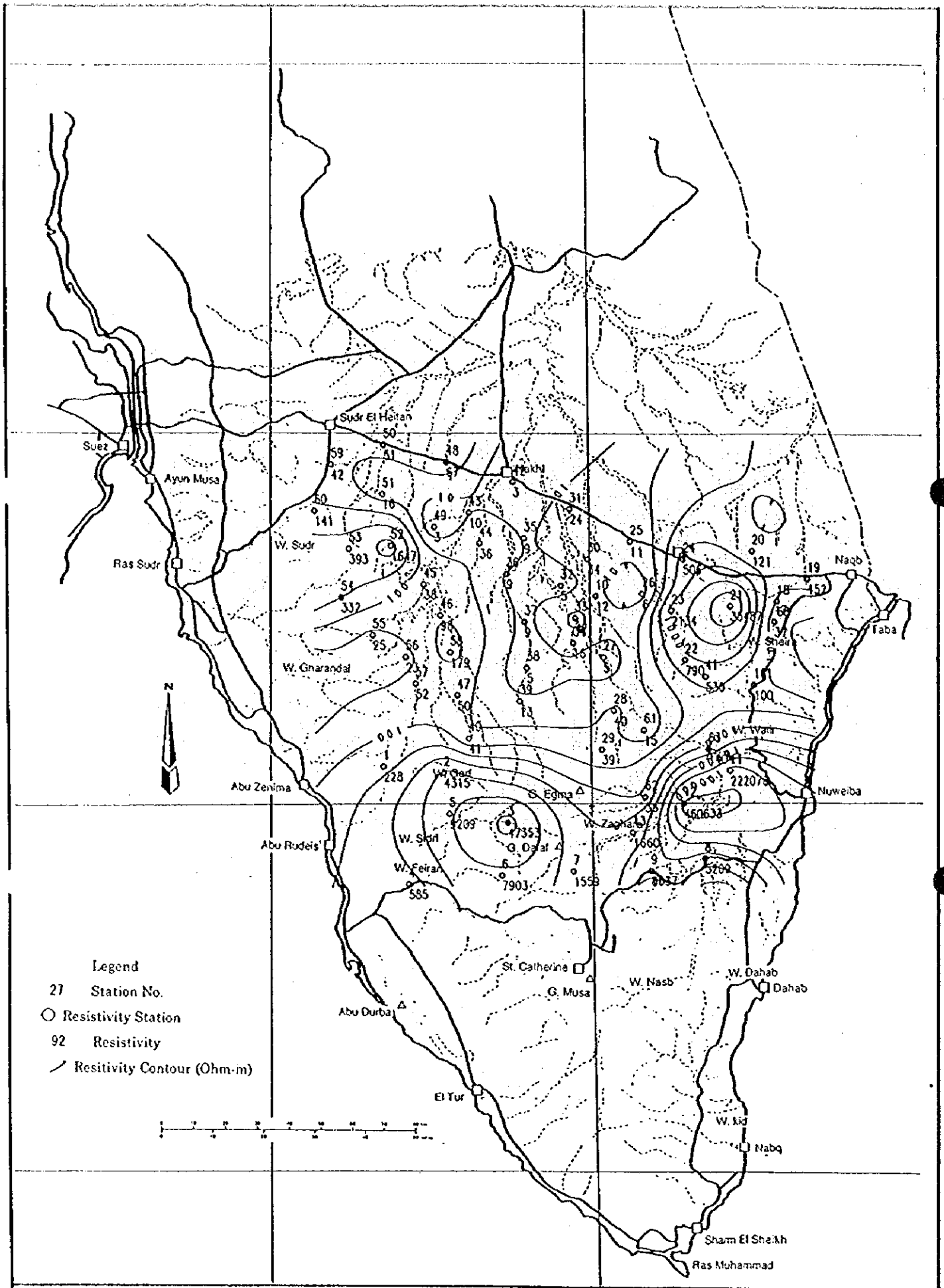

Plan of Resistivity Structure on the level of 250 m ASL.

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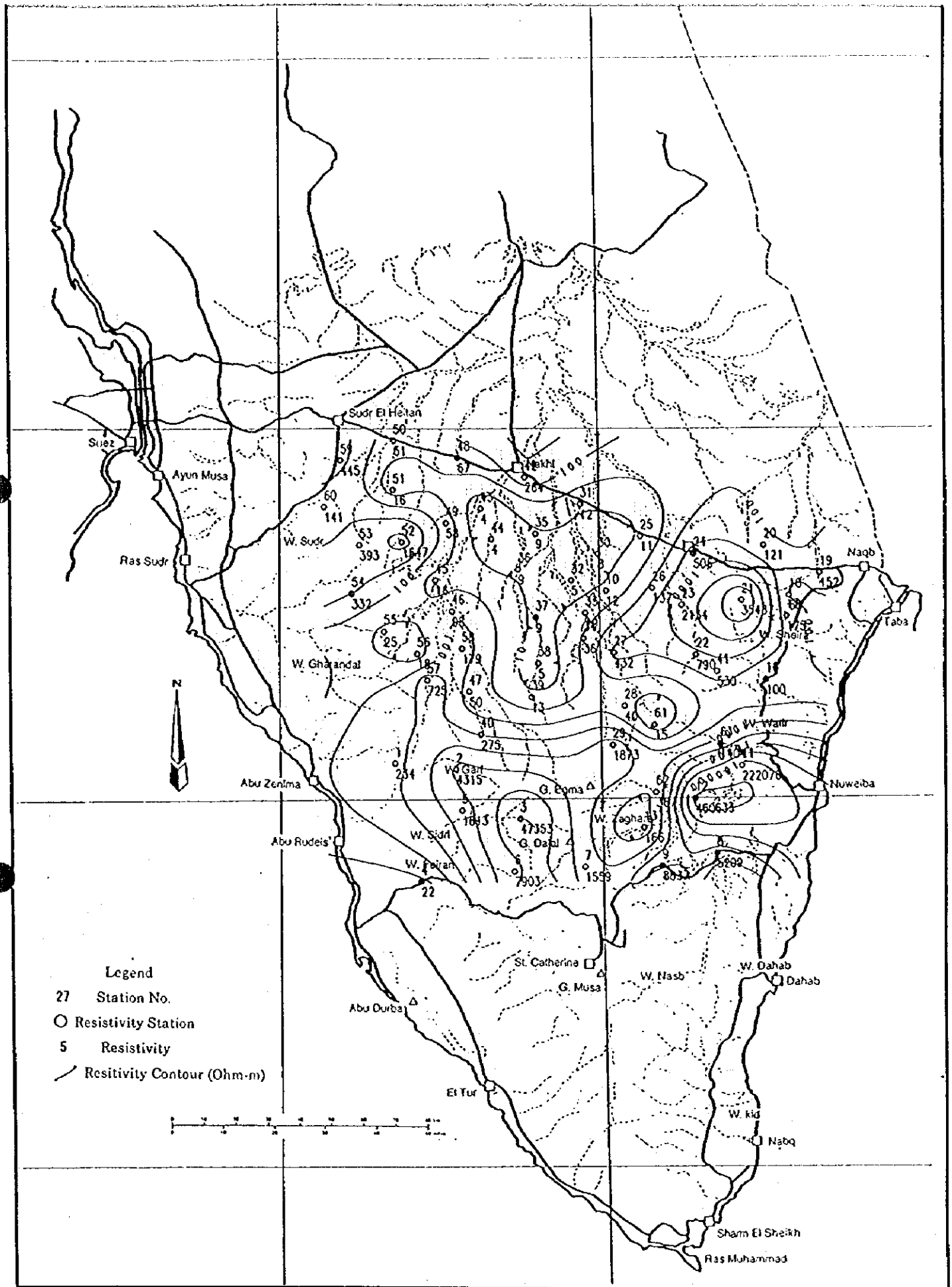

Plan of Resistivity Structure on the sea level

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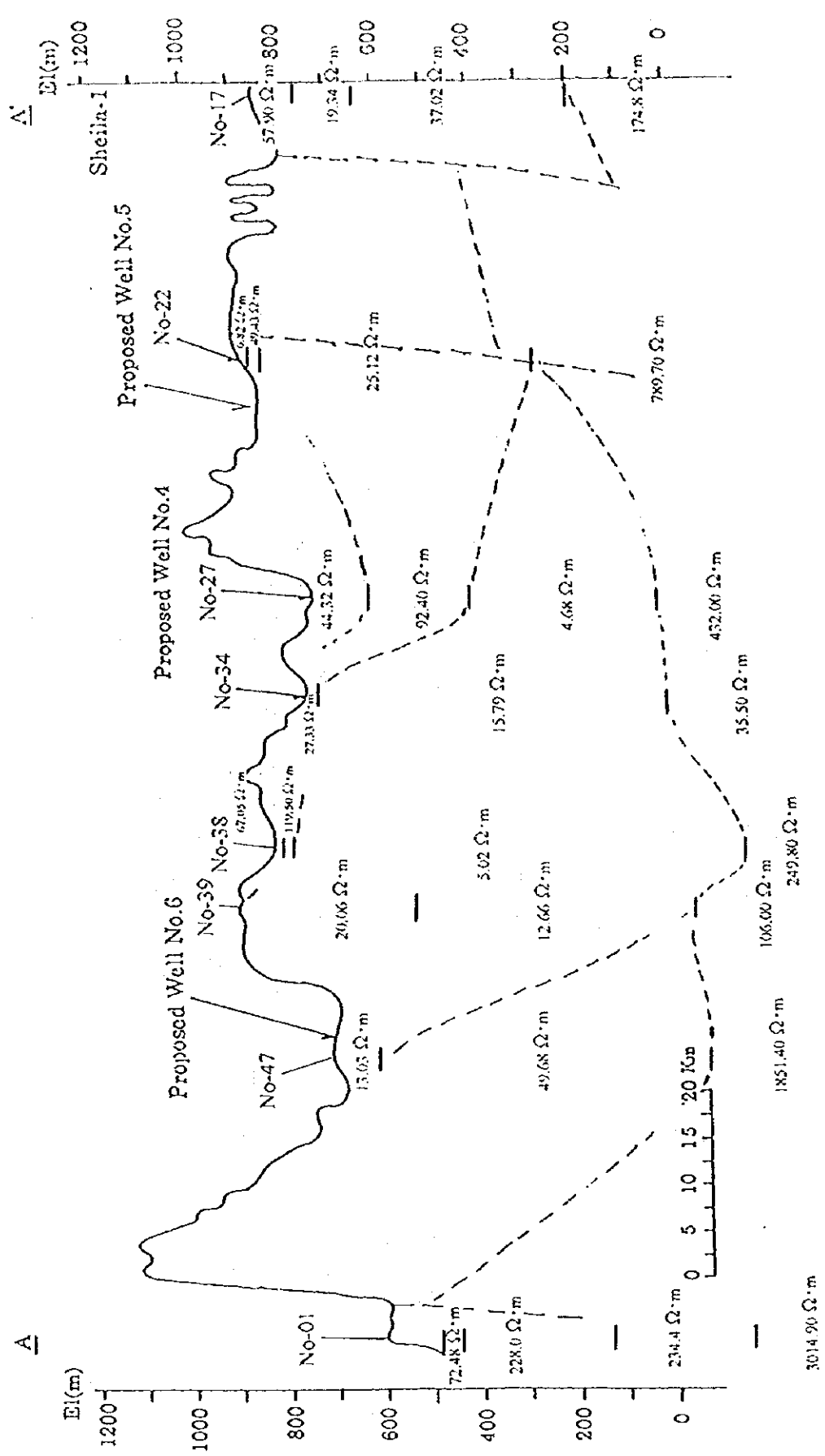
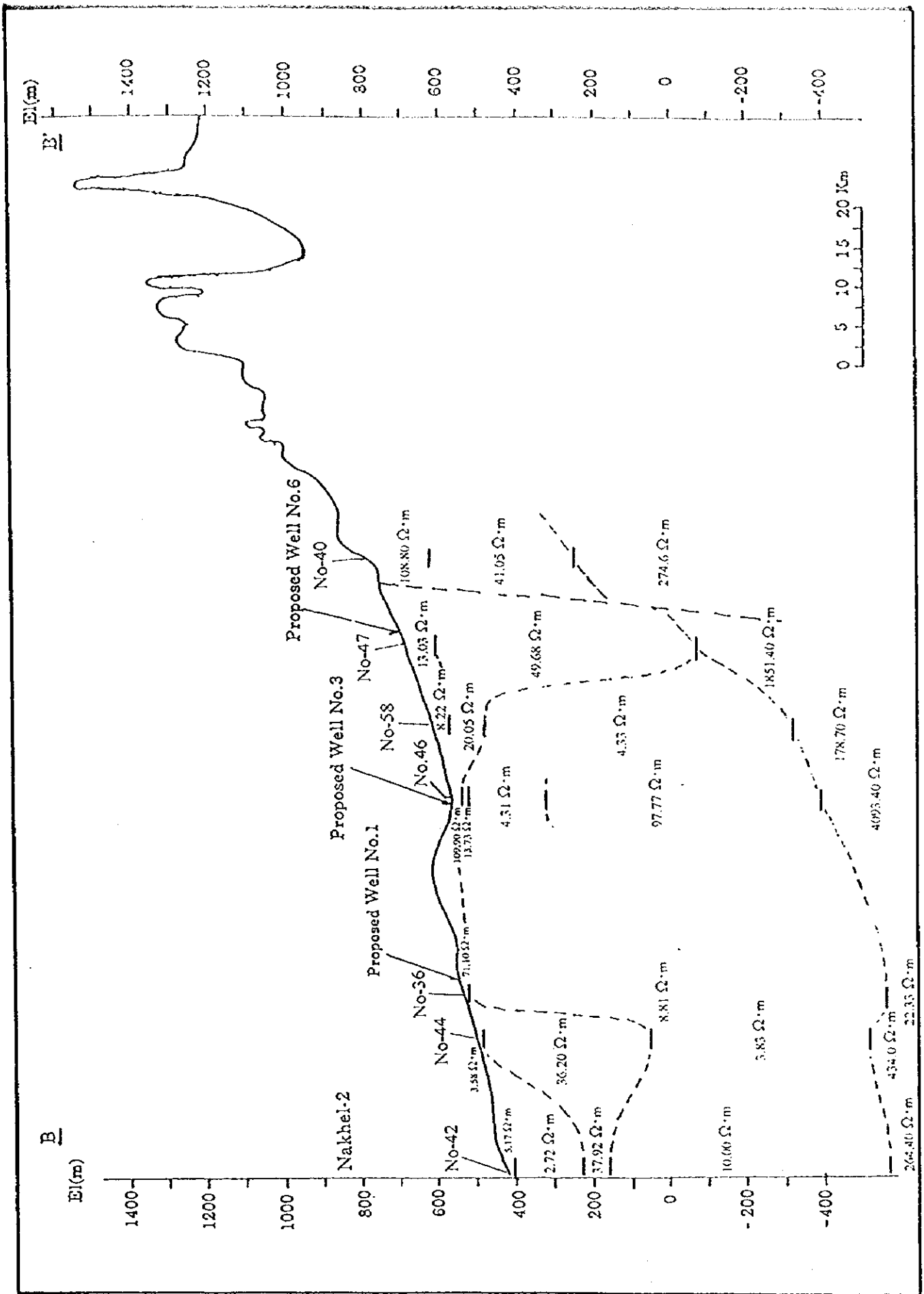


Section of Resistivity Structure (Line A - A')

SOUTH SINAI GROUNDWATER RESOURCES STUDY IN THE ARAB REPUBLIC OF EGYPT | JICA



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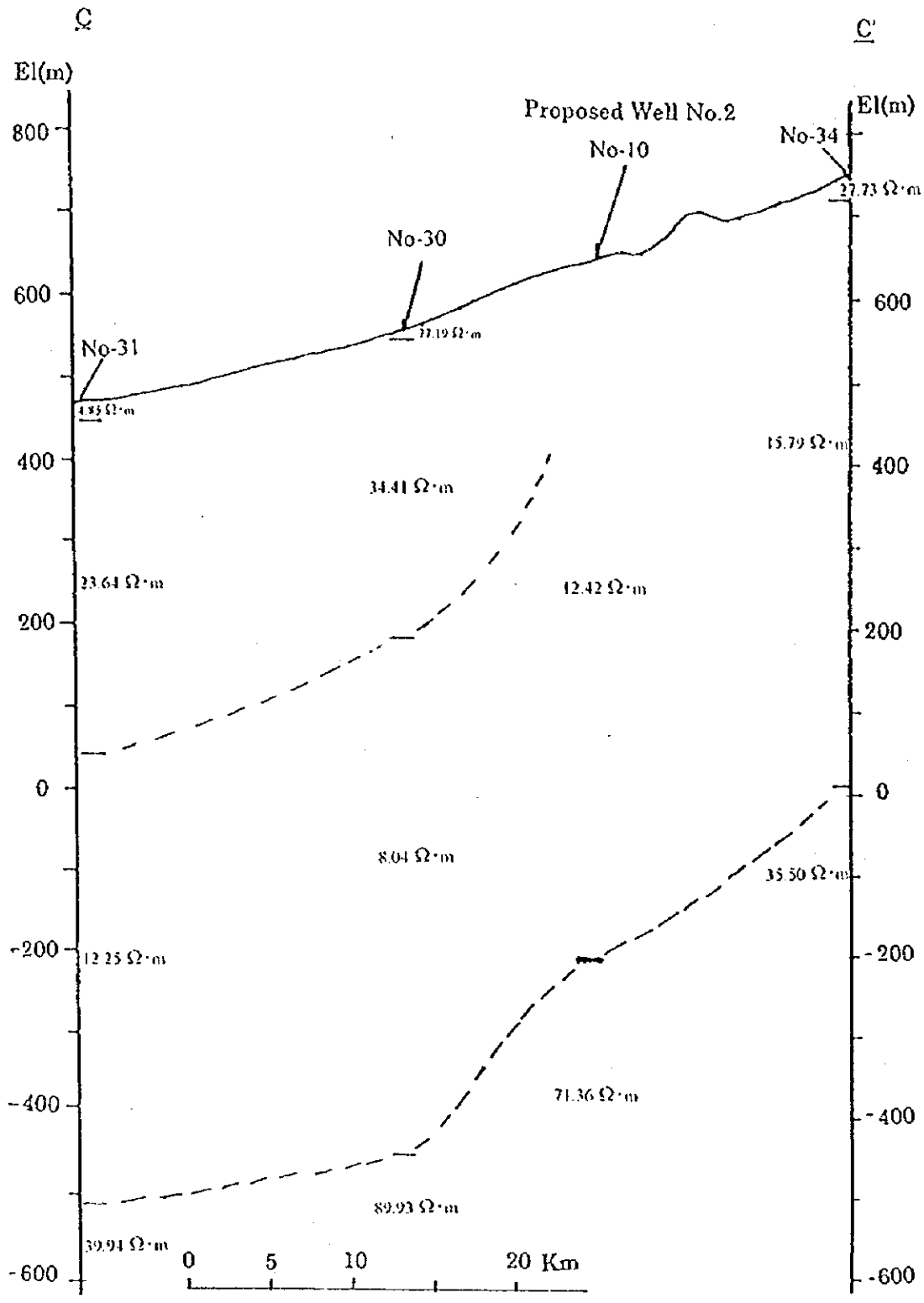

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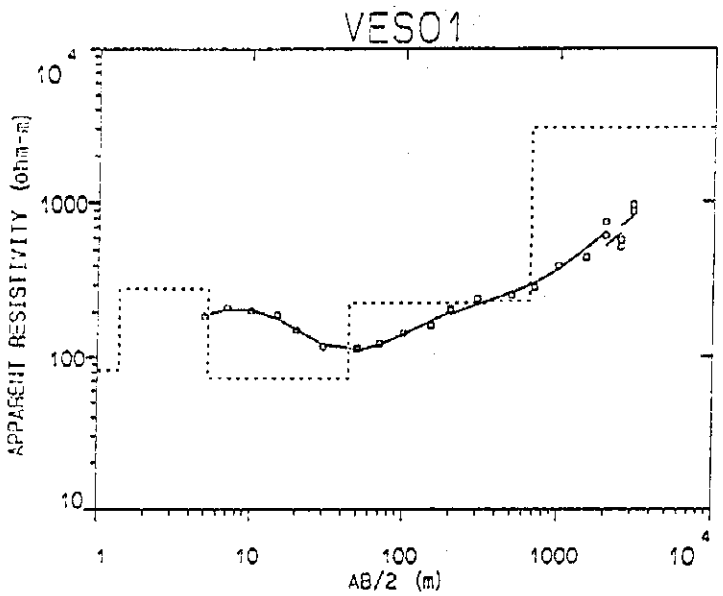
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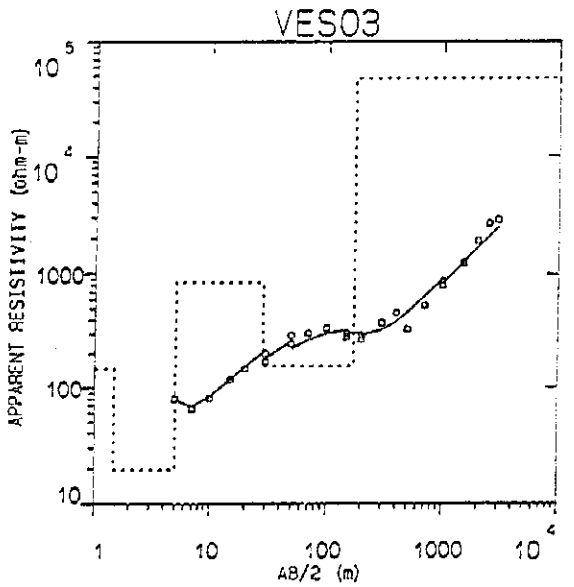
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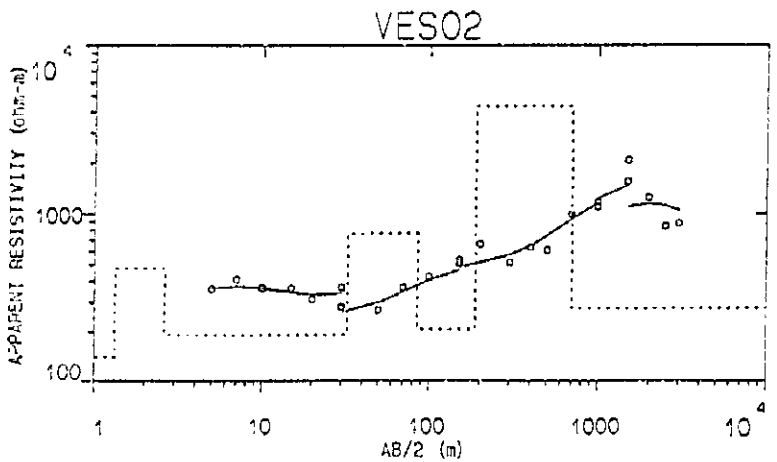
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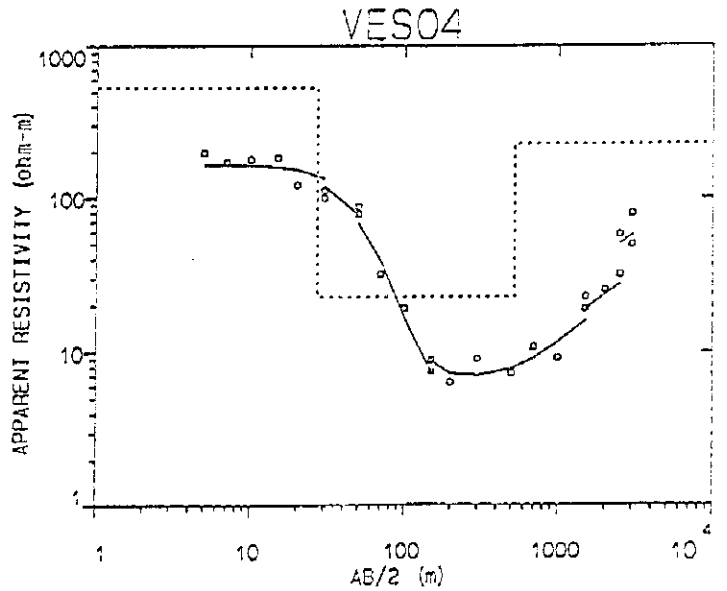
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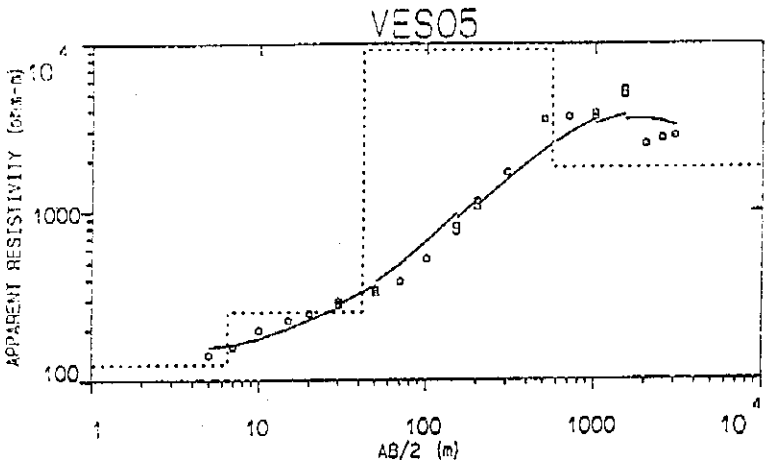
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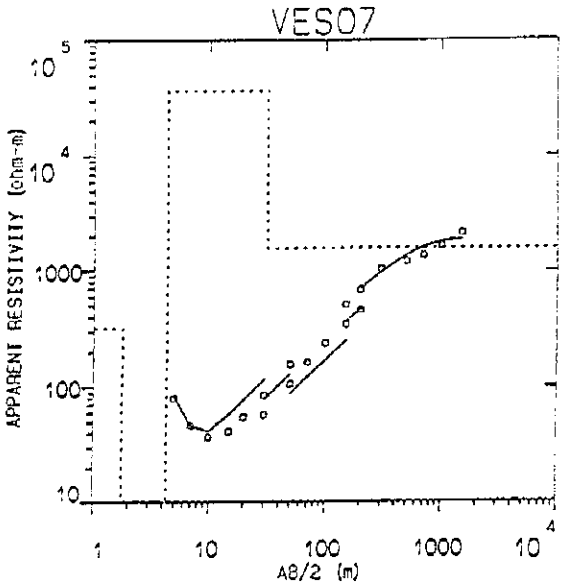
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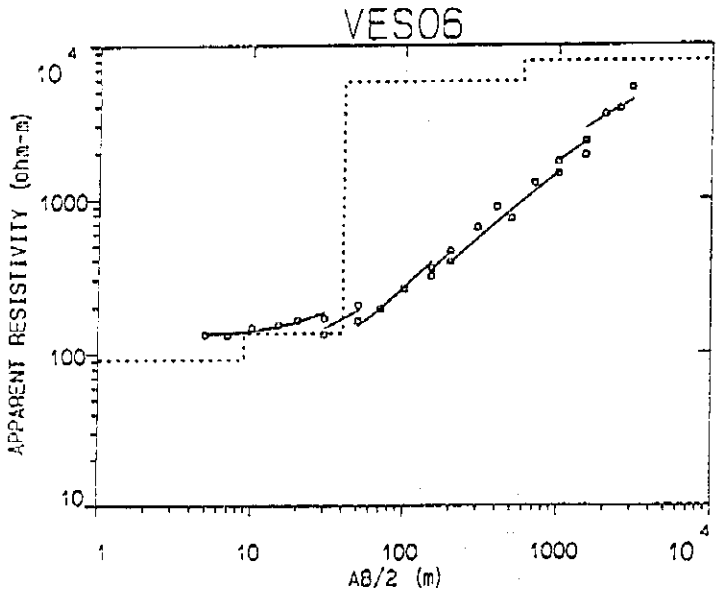
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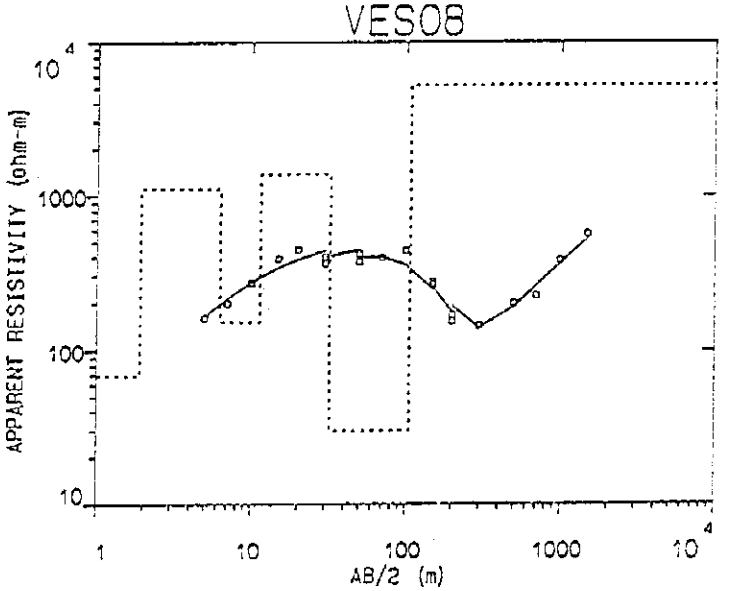
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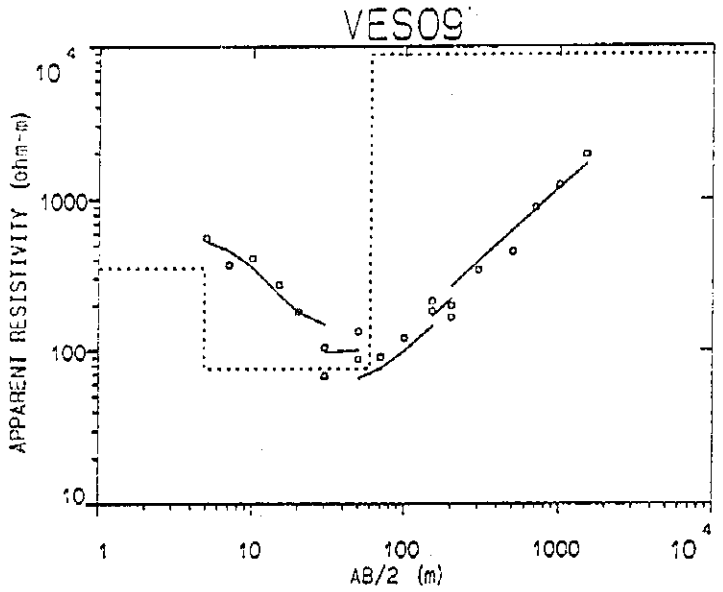
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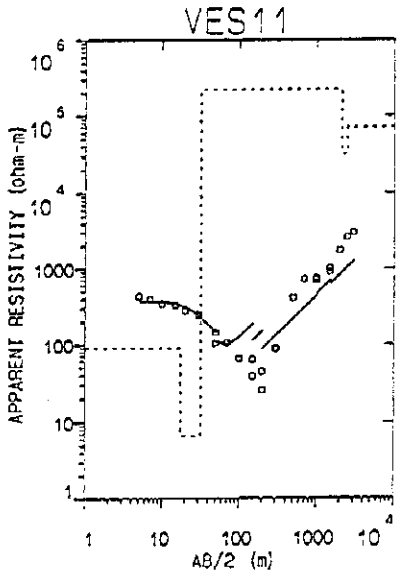
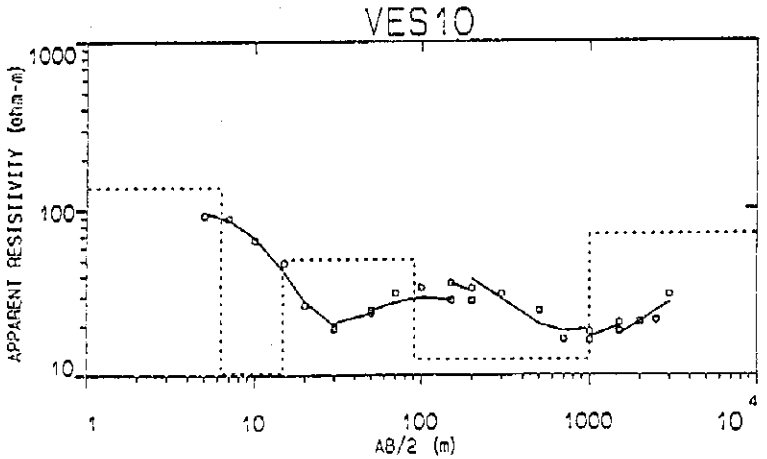
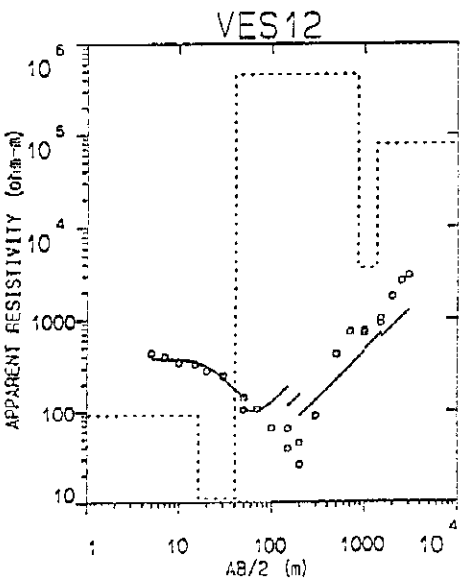
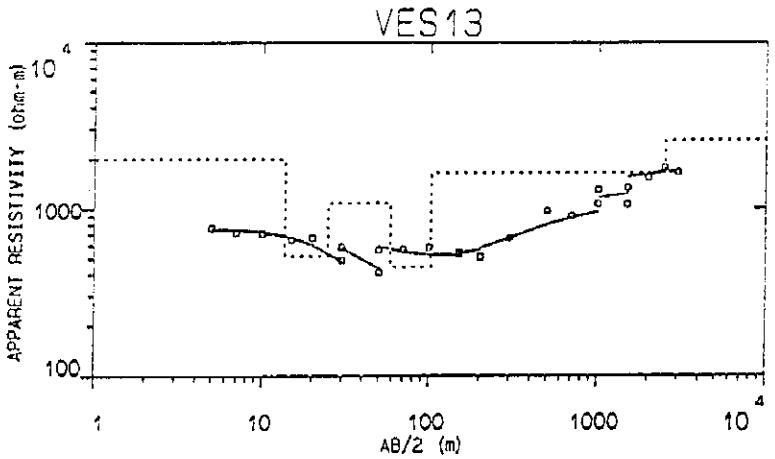
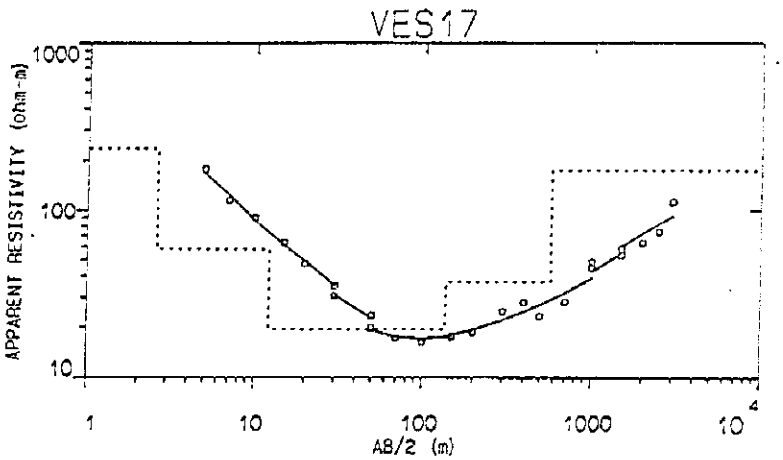
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

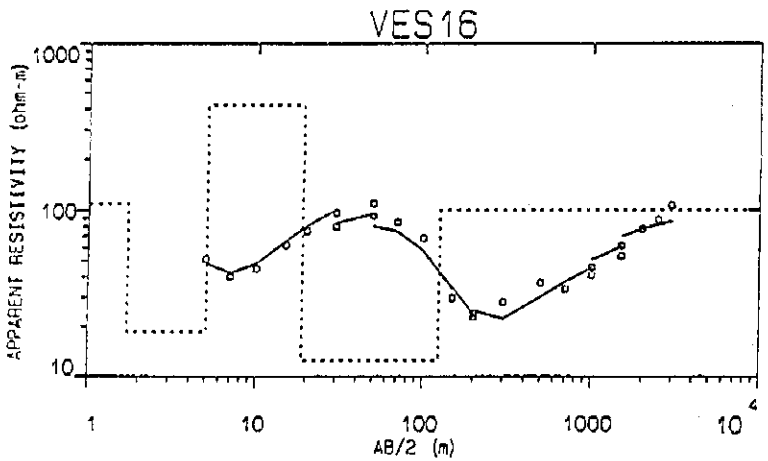

VES11
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

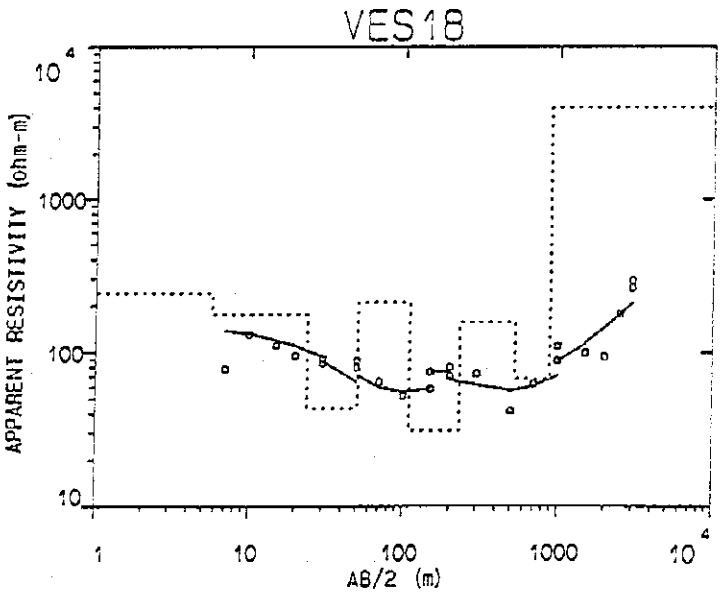

VES10
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

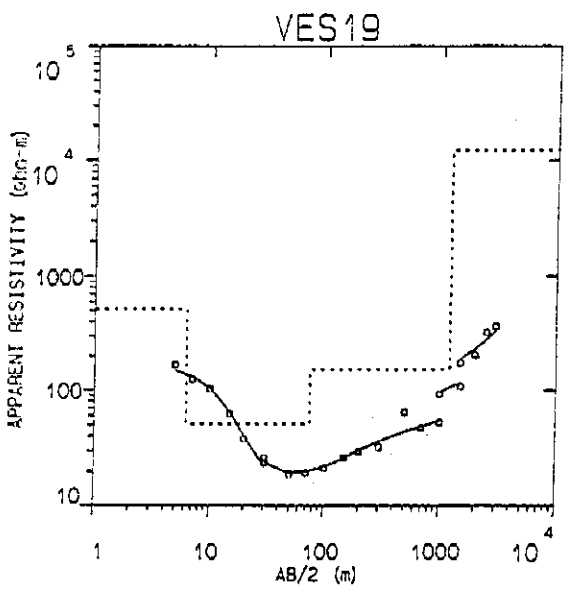

VES12
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

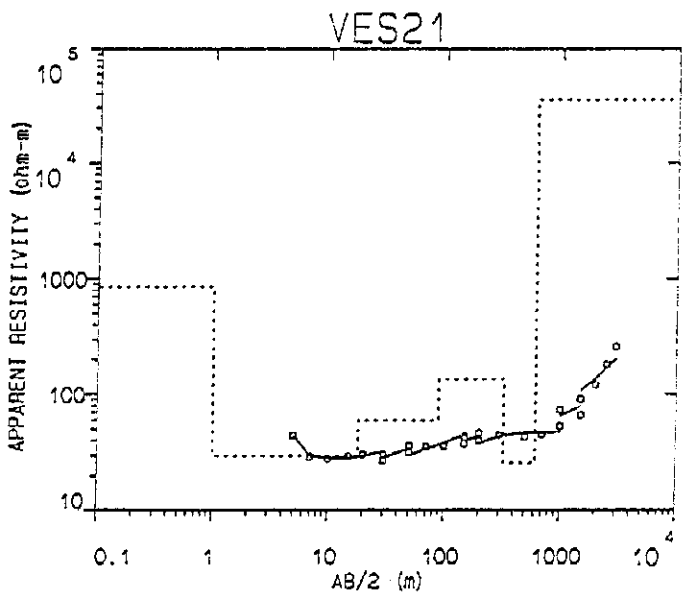

VES13
APPARENT RESISTIVITY (ohm-m)
10^4
1000
100
1
10
100
1000
10^4
AB/2 (m)

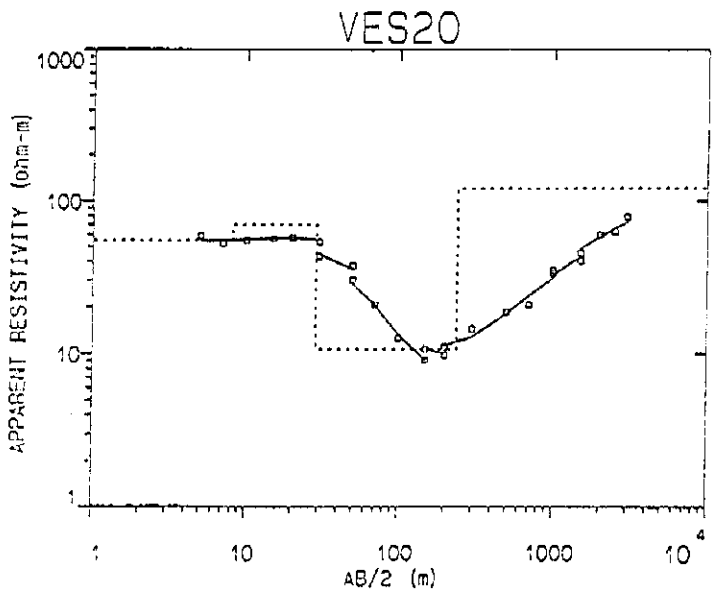

VES17
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
10
100
1000
10^4
AB/2 (m)

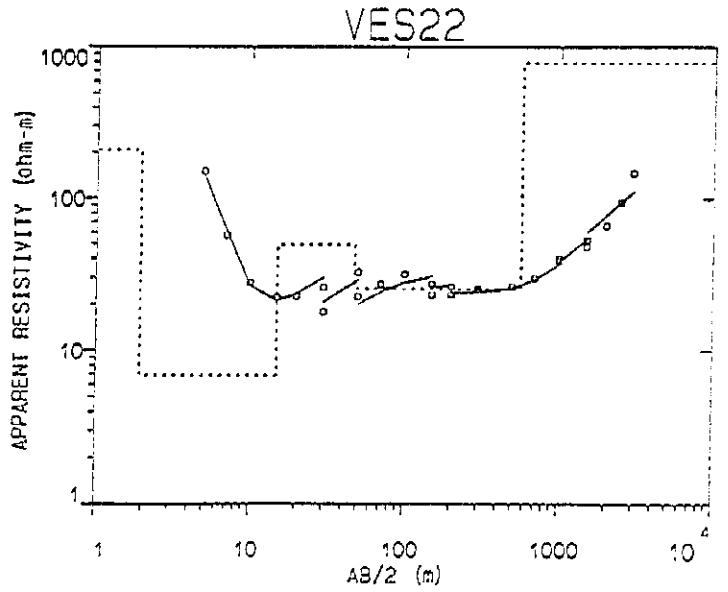

VES16
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
10
100
1000
10^4
AB/2 (m)

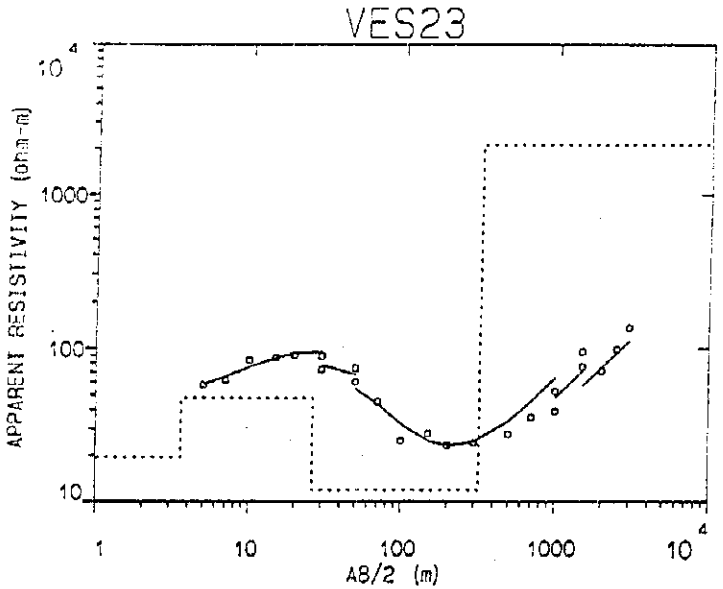

VES18
APPARENT RESISTIVITY (ohm-m)
10^4
1000
100
10
1
10
100
1000
10^4
AB/2 (m)

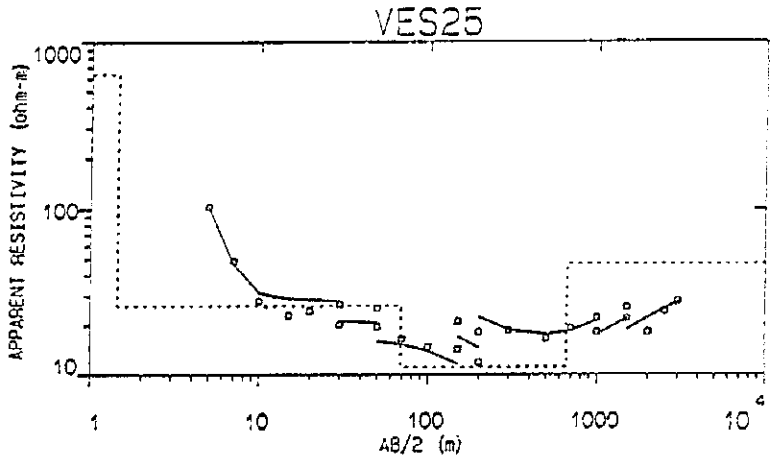

VES19
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

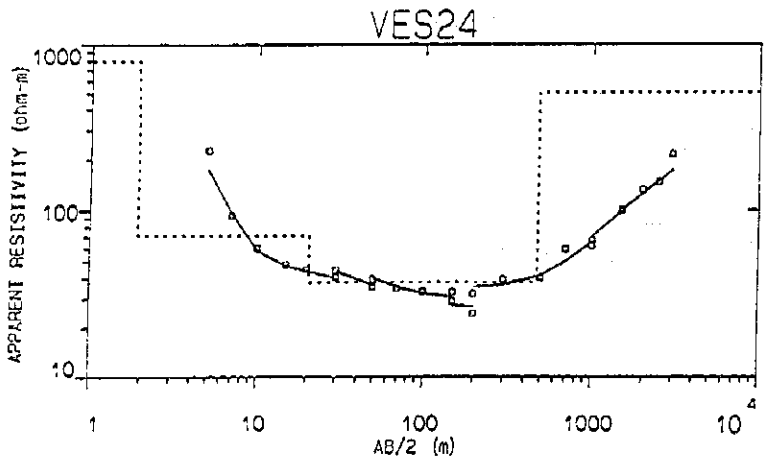

VES21
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

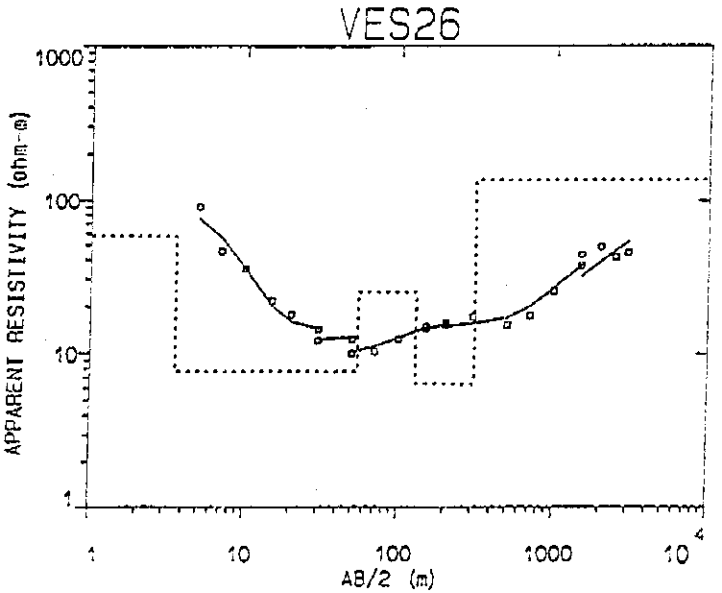

VES20
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

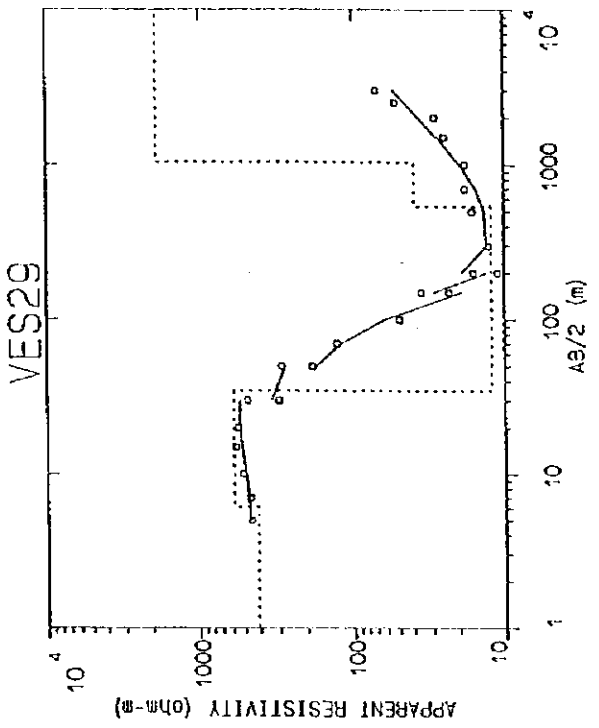

VES22
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

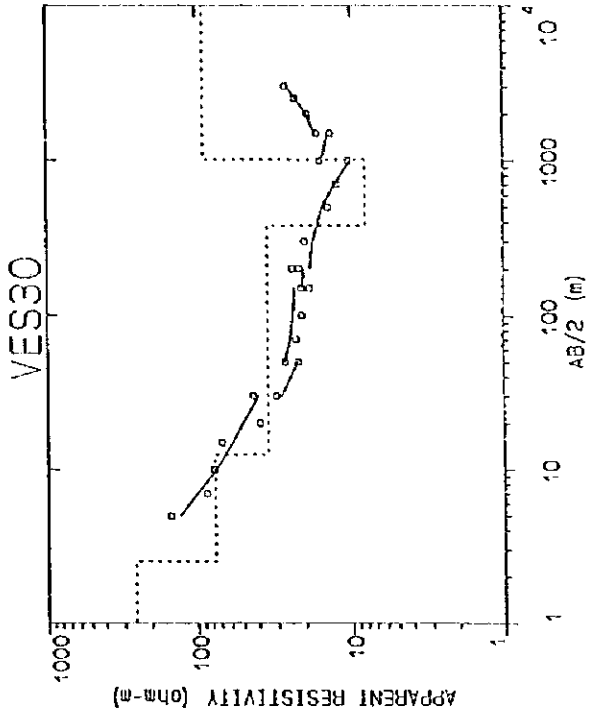

VES23
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

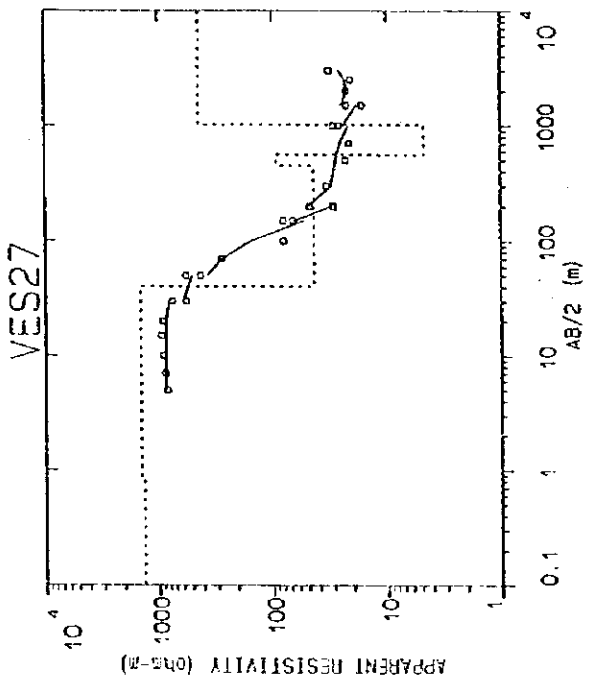

VES25
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

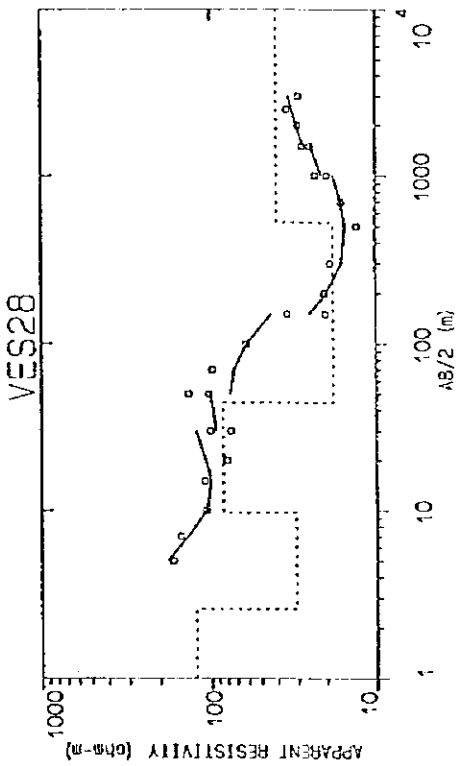

VES24
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

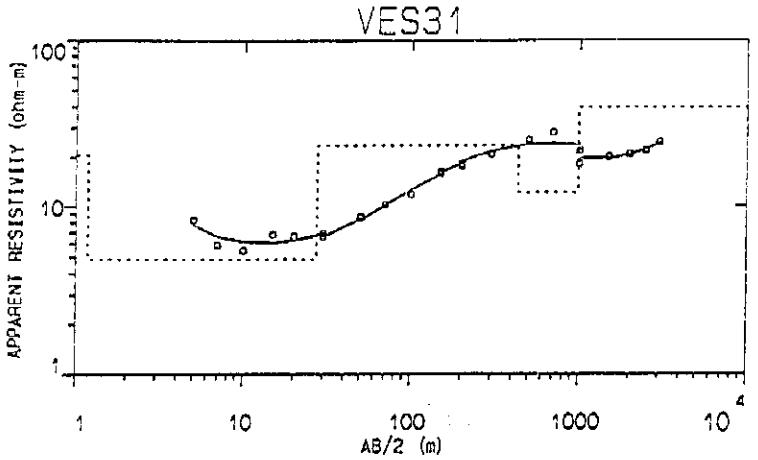

VES26
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

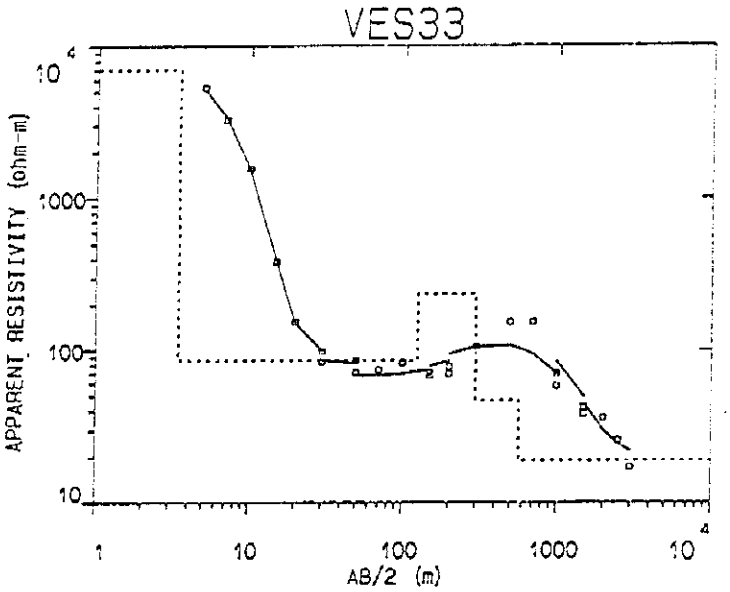

VES29
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

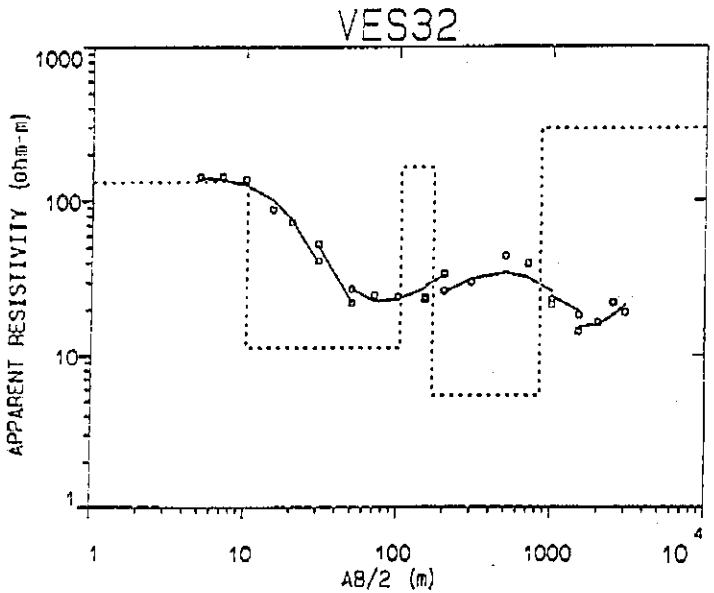

VES30
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

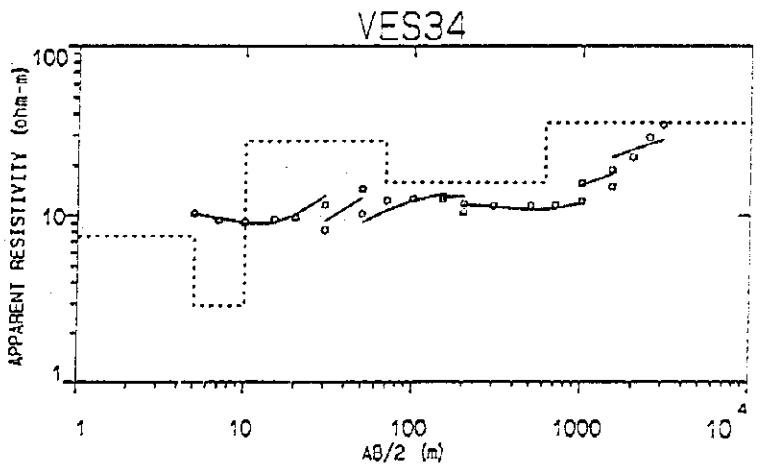

VES27
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

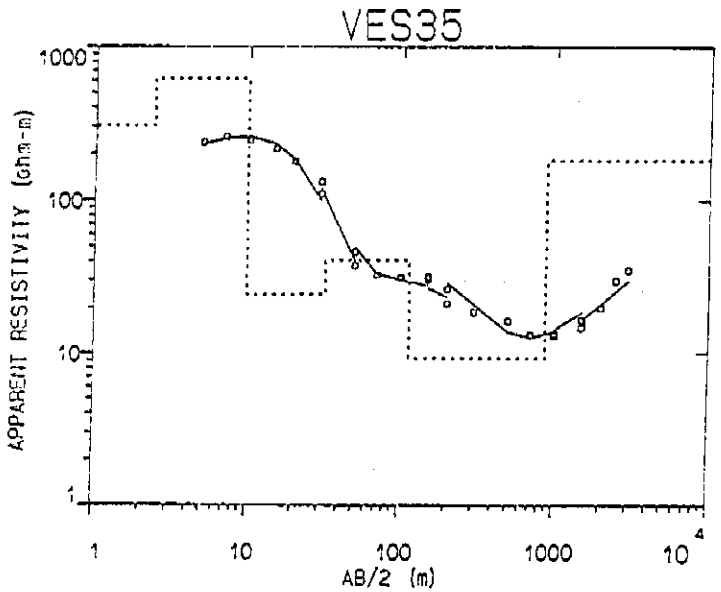

VES28
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

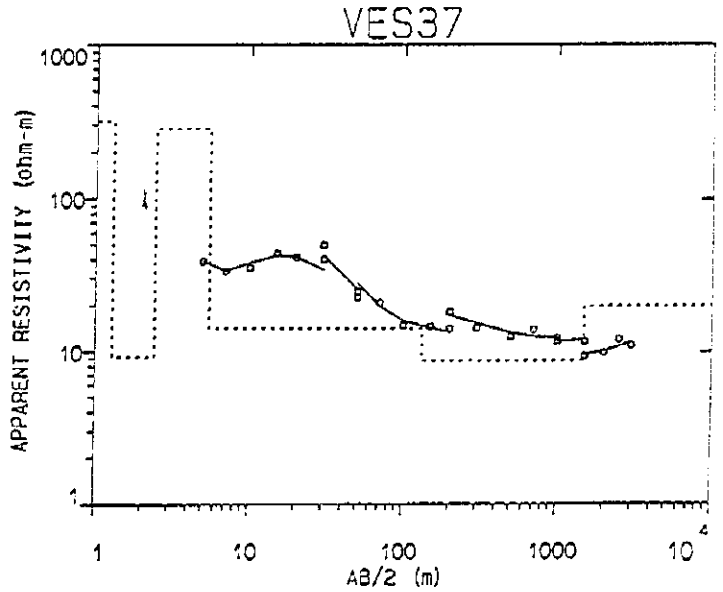

VES31
APPARENT RESISTIVITY (ohm-m)
100
10
1
1
10
100
1000
10^4
AB/2 (m)

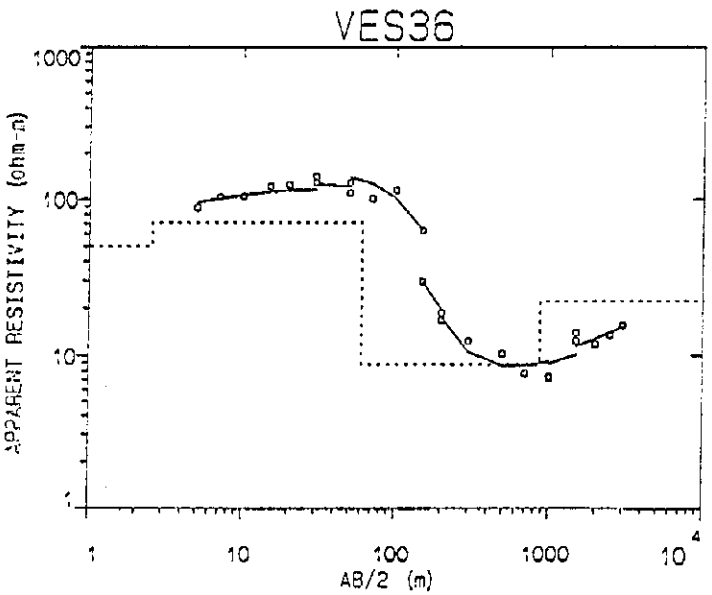

VES33
APPARENT RESISTIVITY (ohm-m)
10^4
1000
100
10
1
10
100
1000
10^4
AB/2 (m)

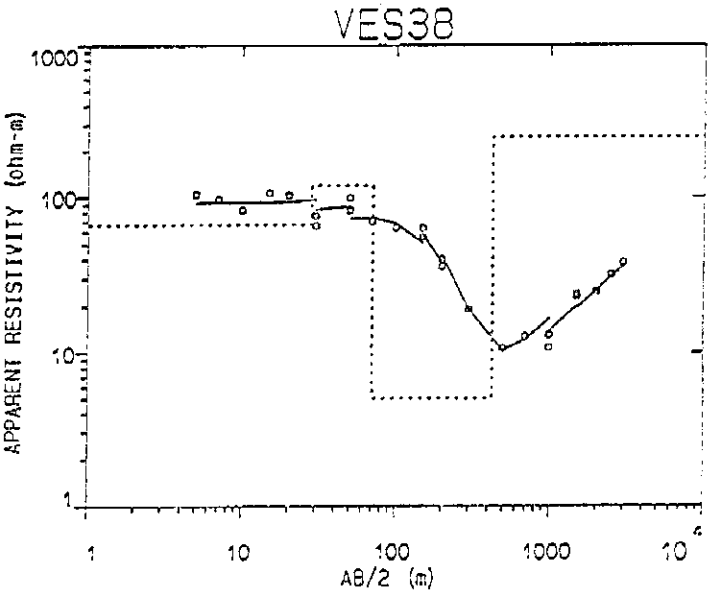

VES32
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
1
10
100
1000
10^4
AB/2 (m)

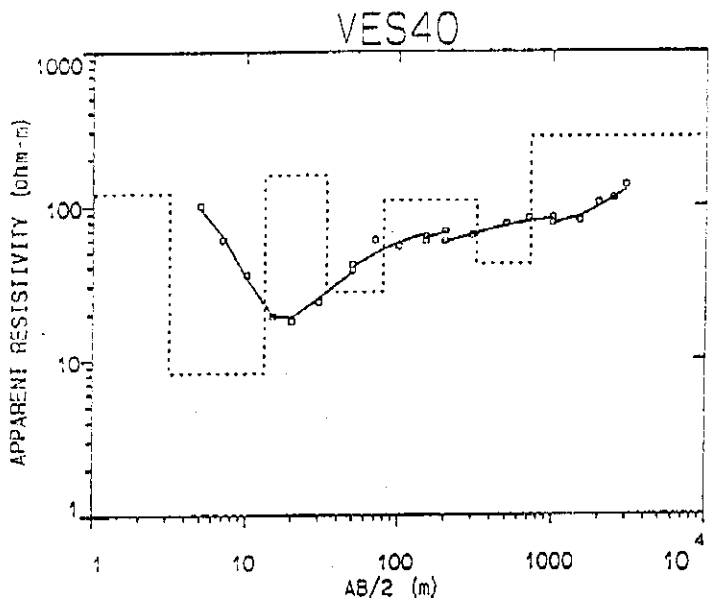

VES34
APPARENT RESISTIVITY (ohm-m)
100
10
1
1
10
100
1000
10^4
AB/2 (m)

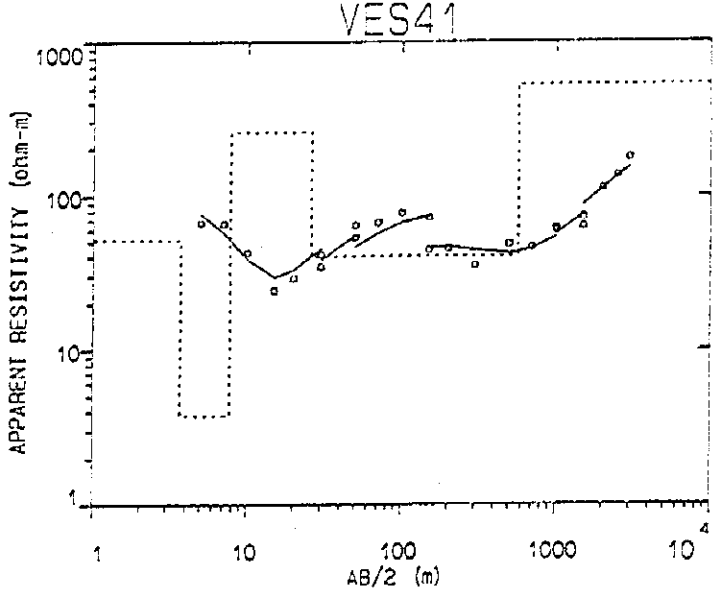

VES35
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
1
10
100
1000
10^4
AB/2 (m)

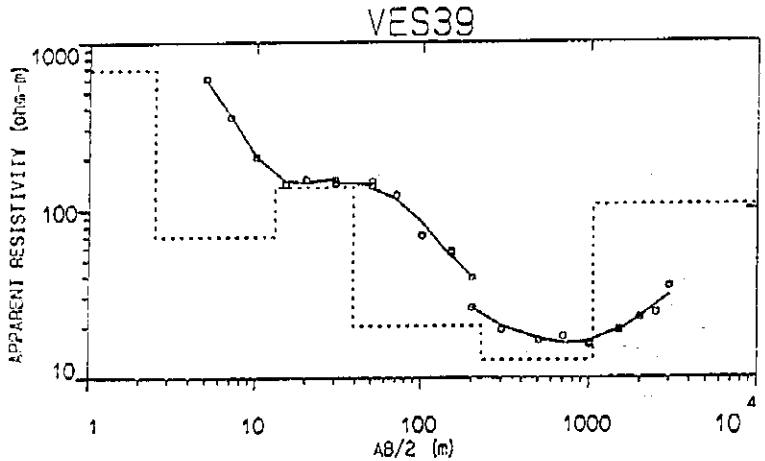

VES37
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
1
10
100
1000
10^4
AB/2 (m)

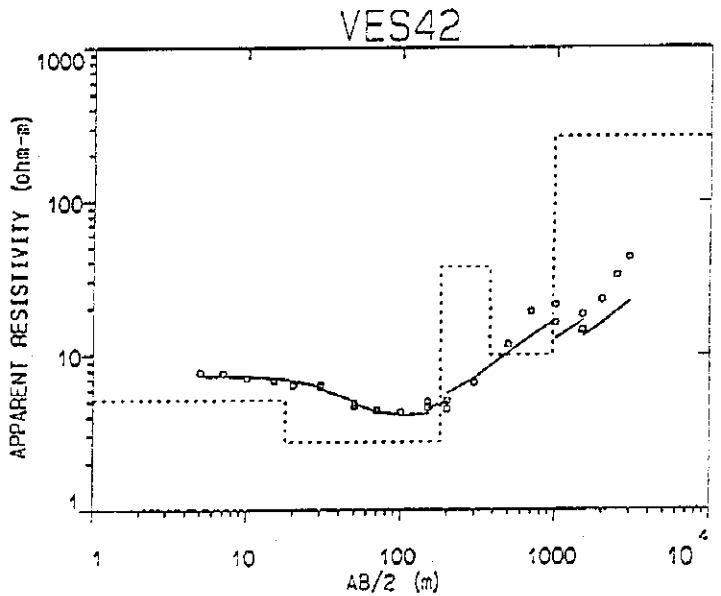

VES36
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
1
10
100
1000
10^4
AB/2 (m)

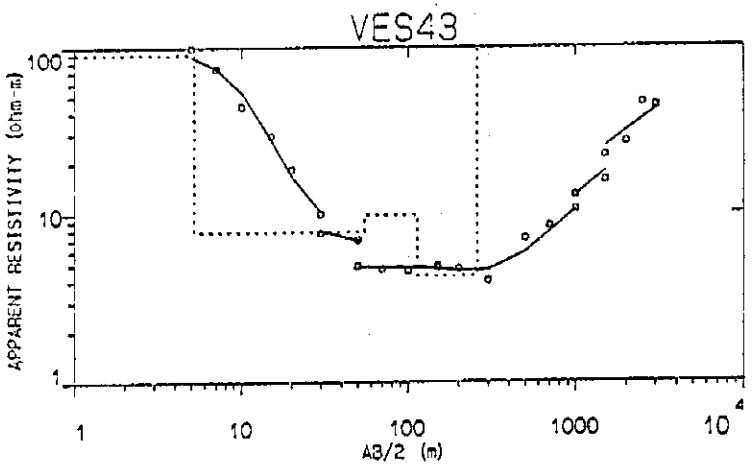

VES38
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
1
10
100
1000
10^4
AB/2 (m)

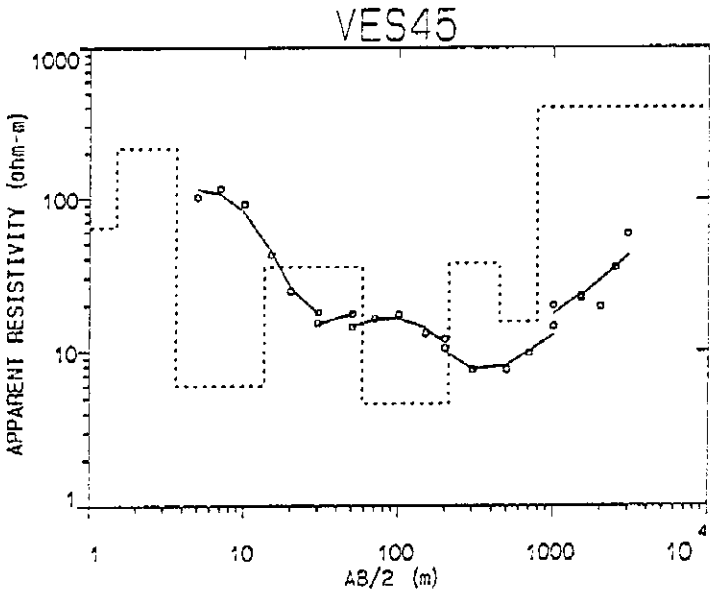

VES40
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
1
10
100
1000
10^4
AB/2 (m)

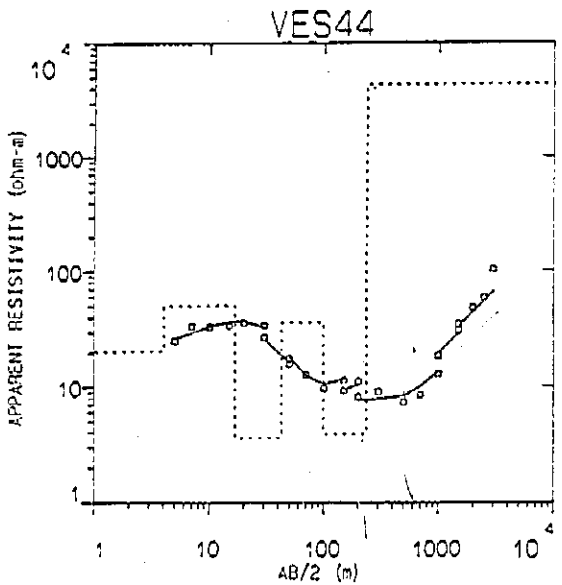

VES41
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
1
10
100
1000
10^4
AB/2 (m)

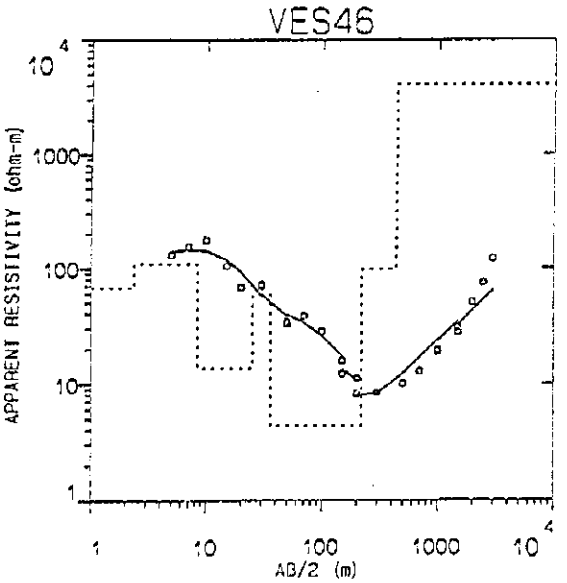

VES39
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
10
100
1000
10^4
AB/2 (m)

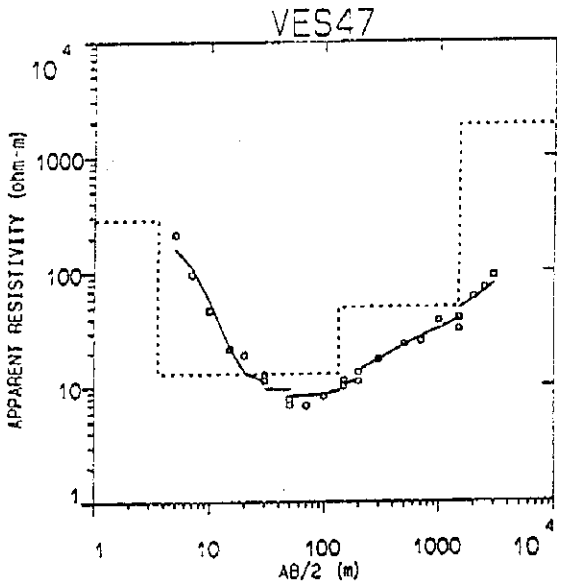

VES42
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
1
10
100
1000
10^4
AB/2 (m)

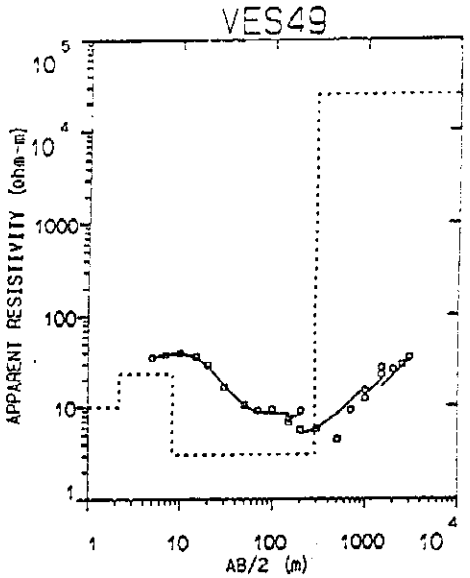

VES43
APPARENT RESISTIVITY (ohm-m)
100
10
1
1
10
100
1000
10^4
AB/2 (m)

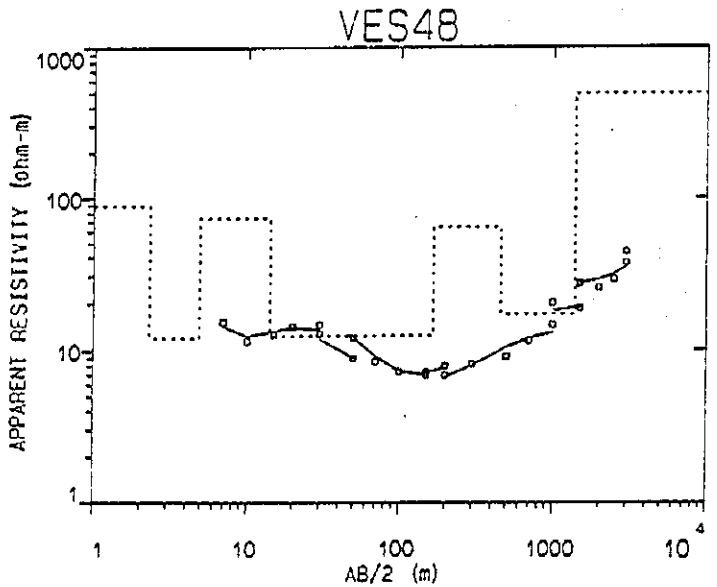

VES45
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
1
10
100
1000
10^4
AB/2 (m)

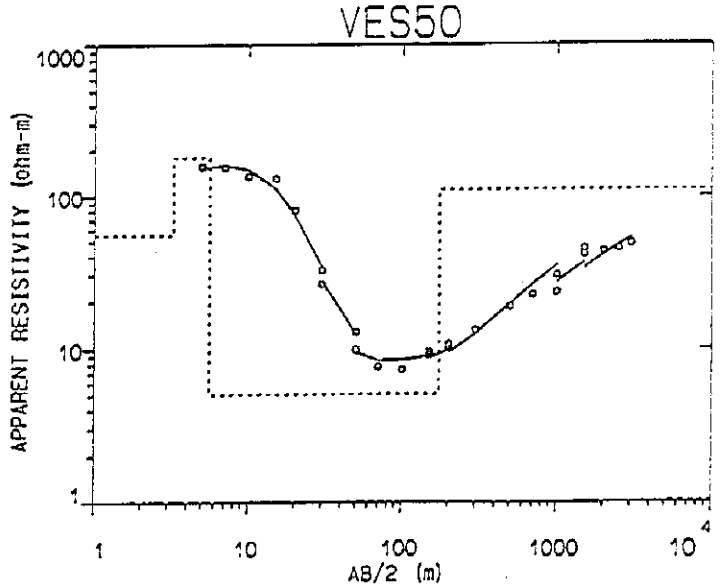

VES44
APPARENT RESISTIVITY (ohm-m)
10^4
1000
100
10
1
1
10
100
1000
10^4
AB/2 (m)

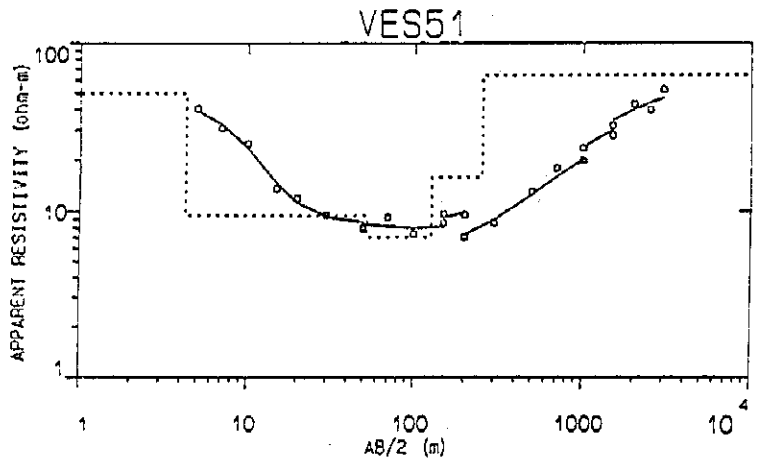

VES46
APPARENT RESISTIVITY (ohm-m)
10^4
1000
100
10
1
1
10
100
1000
10^4
AB/2 (m)

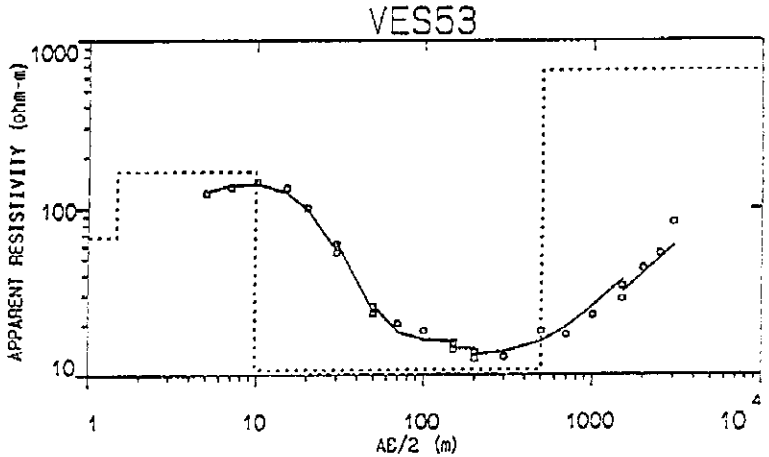

VES47
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

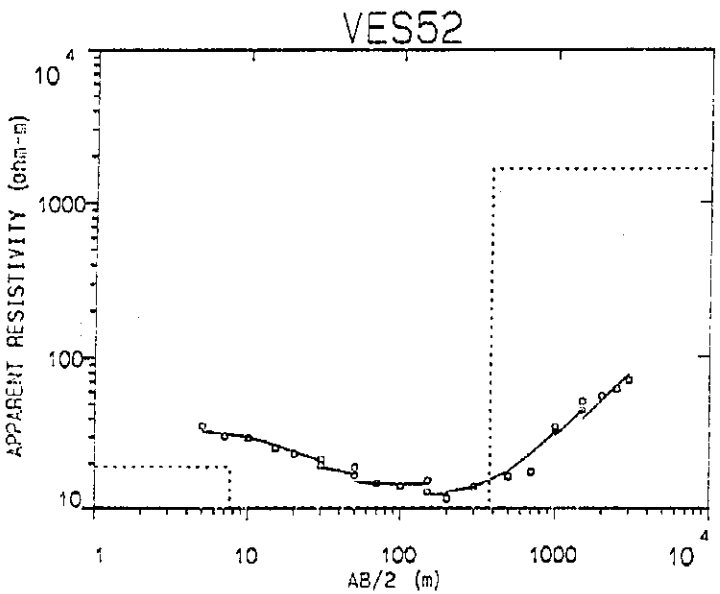

VES49
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

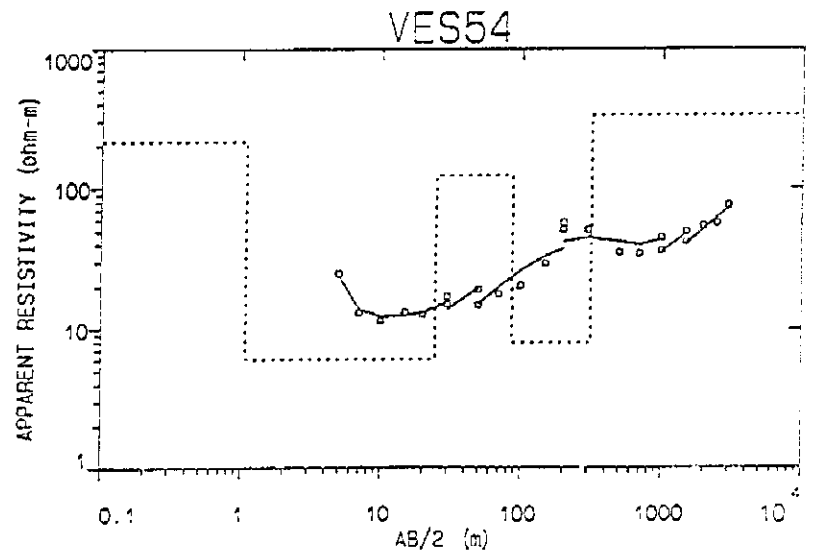

VES48
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

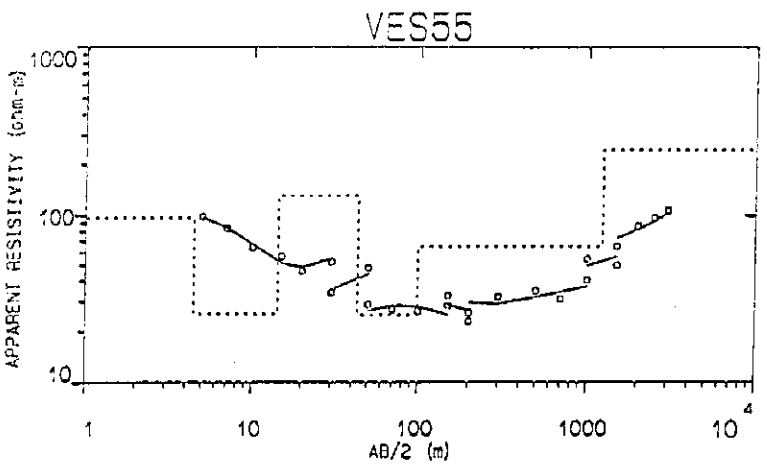

VES50
APPARENT RESISTIVITY (ohm-m)
AB/2 (m)

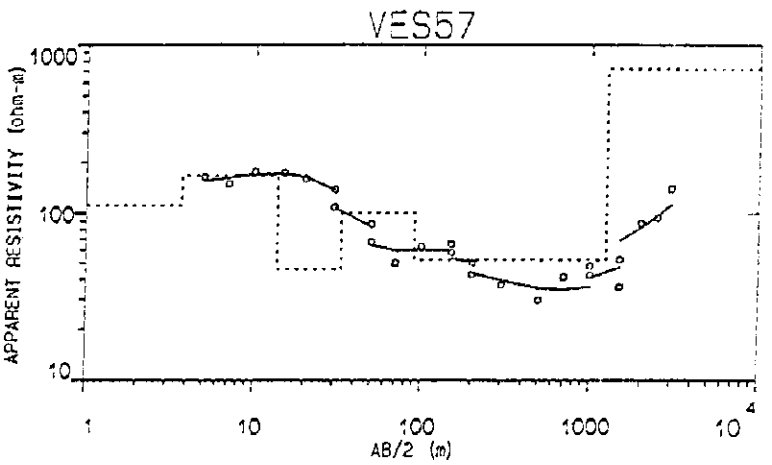

VES51
APPARENT RESISTIVITY (ohm-m)
100
10
1
1
10
100
1000
10^4
AB/2 (m)

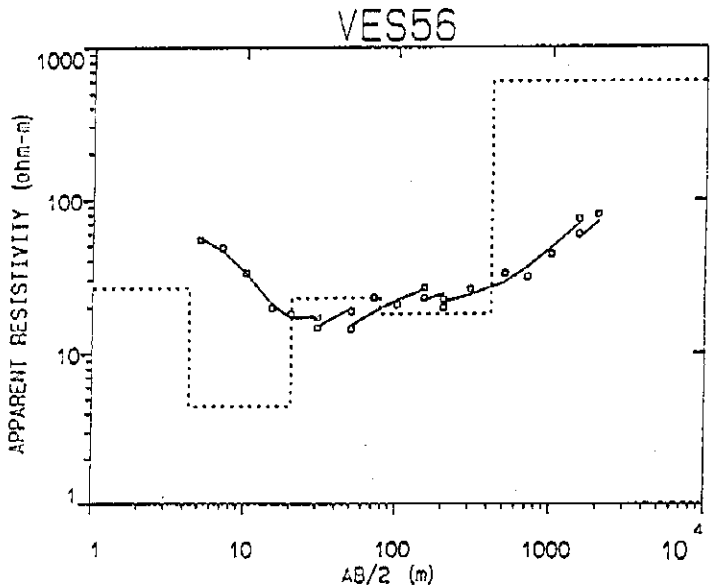

VES53
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
10
100
1000
10^4
AB/2 (m)

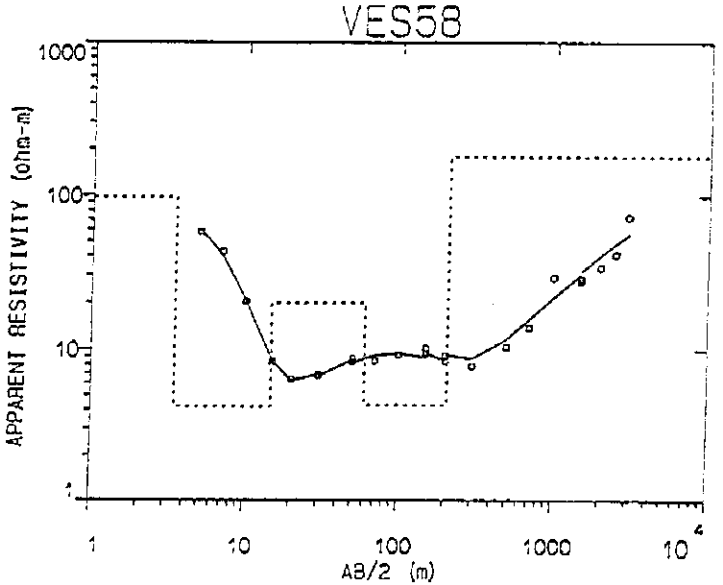

VES52
APPARENT RESISTIVITY (ohm-m)
10^4
1000
100
10
1
10
100
1000
10^4
AB/2 (m)

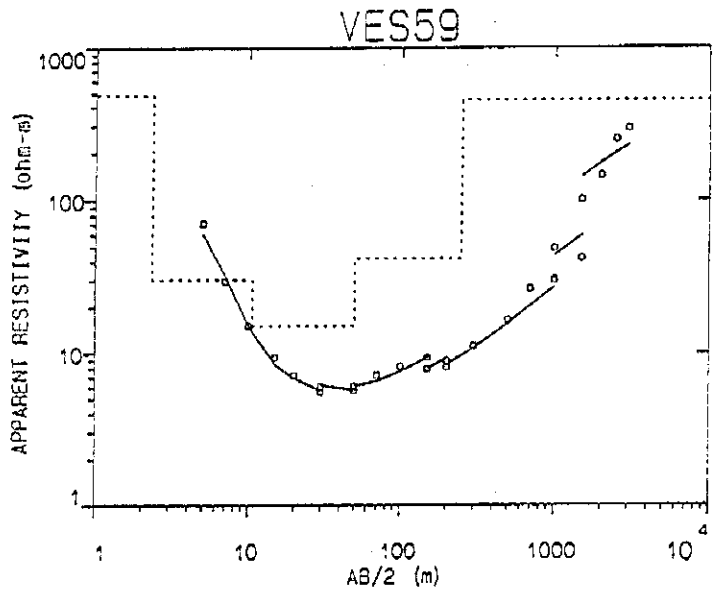

VES54
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
0.1
1
10
100
1000
AB/2 (m)

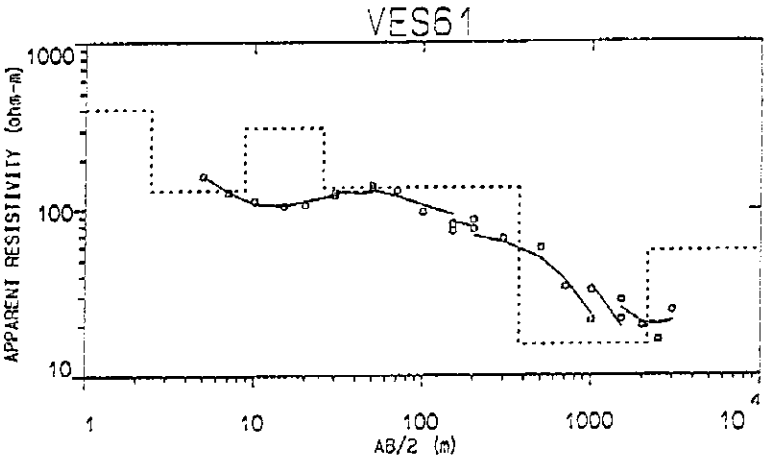

VES55
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
10
100
1000
10^4
AB/2 (m)

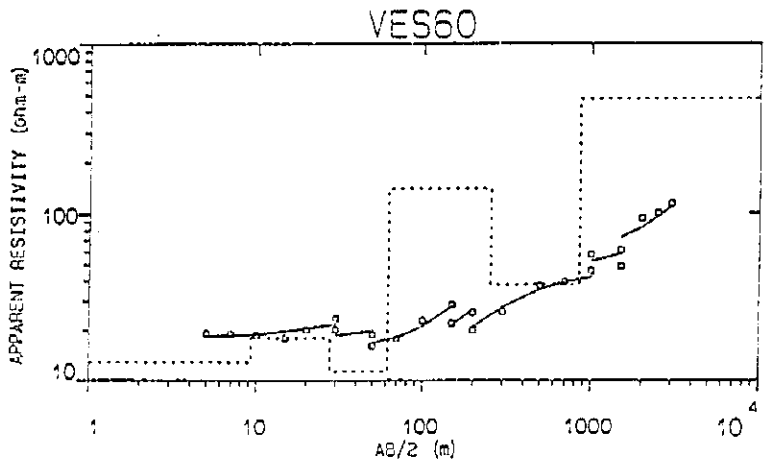

VES57
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
10
100
1000
10^4
AB/2 (m)

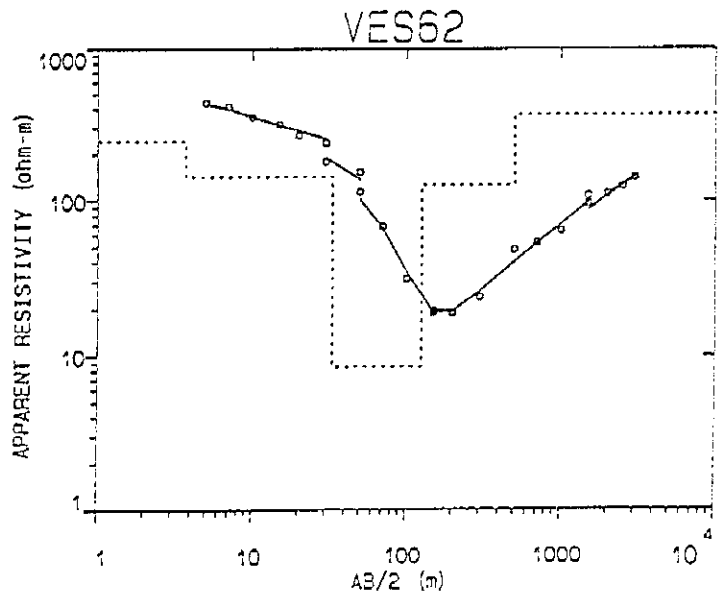

VES56
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
10
100
1000
10^4
AB/2 (m)

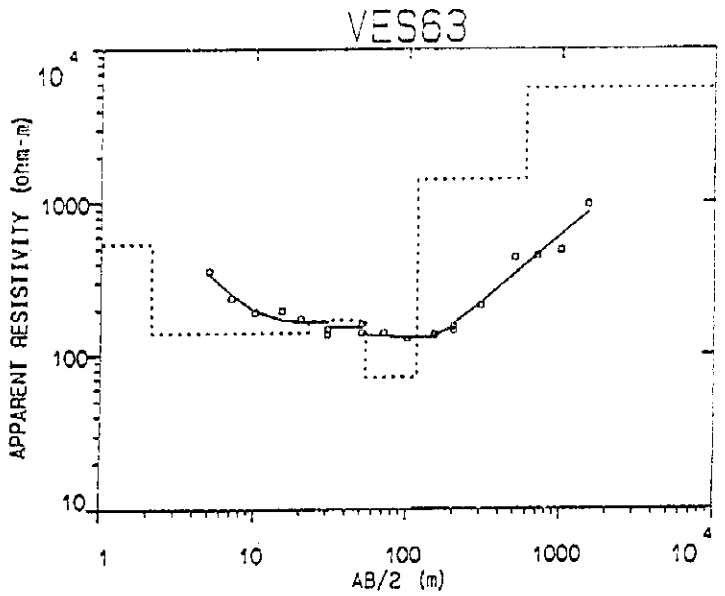

VES58
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
10
100
1000
10^4
AB/2 (m)


VES59
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
1
10
100
1000
10
AB/2 (m)


VES61
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
10
100
1000
10
AB/2 (m)


VES60
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
10
100
1000
10
AB/2 (m)


VES62
APPARENT RESISTIVITY (ohm-m)
1000
100
10
1
1
10
100
1000
10
AB/2 (m)


VES63
APPARENT RESISTIVITY (ohm-m)
10 4
1000
100
10
1
10
100
1000
10 4
AB/2 (m)

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 2. May. 1996 LATITUDE: 29 deg 05' 34"N
ST. No. : YES01 LONGITUDE: 33 deg 20' 55"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV÷0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (ohm-m)
5.0	1.0	3.2099E+01	10	5.4700	5V	2710.0000	186.0
7.0	1.0	7.5398E+01	5	1.5350	1V	434.0000	213.2
10.0	1.0	1.5551E+02	2.5	1.5450	0.5V	200.0000	204.3
15.0	1.0	3.5186E+02	2.5	1.5590	250.0	84.0000	190.2
20.0	1.0	6.2675E+02	2.5	1.5450	100.0	37.5000	152.1
30.0	1.0	1.4121E+03	2.5	1.5475	25.0	12.9500	110.2
30.0	5.0	2.7489E+02	2.5	1.5450	250.0	66.2500	117.9
50.0	1.0	3.9254E+03	2.5	1.5475	10.0	4.5600	115.7
50.0	5.0	7.7754E+02	2.5	1.5475	50.0	22.6000	113.8
70.0	5.0	1.5315E+03	2.5	1.5475	25.0	12.4250	123.0
100.0	5.0	3.1337E+03	2.5	1.5550	10.0	7.1300	143.7
150.0	5.0	7.0607E+03	2.5	1.5050	5.0	3.5800	161.5
150.0	30.0	1.1310E+03	2.5	1.5625	50.0	22.4500	162.5
200.0	5.0	1.2559E+04	2.5	1.5650	5.0	2.6050	209.0
200.0	30.0	2.0473E+03	2.5	1.5675	25.0	15.5750	203.4
300.0	30.0	4.6653E+03	2.5	1.5700	25.0	8.2000	243.7
400.0	30.0	8.3305E+03	2.5	1.5650	25.0	3.1200	256.7
500.0	30.0	1.3043E+04	2.5	1.5600	5.0	1.7500	287.9
1000.0	30.0	5.2313E+04	2.5	1.5800	2.5	1.1825	391.5
1500.0	30.0	1.1776E+05	2.5	1.5725	2.5	0.5950	445.6
2000.0	30.0	2.0939E+05	2.5	1.5550	5.0	0.6800	741.8
2000.0	150.0	4.1652E+04	2.5	1.5890	10.0	2.3000	606.3
2500.0	30.0	3.2720E+05	2.5	1.5850	1.0	0.2500	516.1
2500.0	150.0	6.5214E+04	2.5	1.5850	2.5	1.3875	570.9
3000.0	30.0	4.7119E+05	2.5	1.5750	1.0	0.3180	951.4
3000.0	150.0	9.4012E+04	2.5	1.5750	5.0	1.4500	865.5

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 04. May. 1996 LATITUDE: 29 deg 05' 30"N
ST. No. : YES02 LONGITUDE: 33 deg 32' 13"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV÷0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (ohm-m)
5.0	1.0	3.2099E+01	5.0	2.6450	5V	2520.0	329.7
7.0	1.0	7.5398E+01	5.0	1.5550	2.5V	810.0	408.8
10.0	1.0	1.5551E+02	2.5	1.5800	0.5V	370.0	364.7
15.0	1.0	3.5186E+02	2.5	1.5725	250.0	163.0	363.8
20.0	1.0	6.2675E+02	2.5	1.5550	250.0	77.6	311.5
30.0	1.0	1.4121E+03	2.5	1.5925	100.0	41.5	368.0
30.0	5.0	2.7489E+02	10.0	4.1900	1V	429.0	281.4
50.0	1.0	3.9254E+03	10.0	5.8100	250.0	39.9	263.6
50.0	5.0	7.7754E+02	10.0	5.8100	1V	199.5	267.0
70.0	5.0	1.5315E+03	5.0	2.2600	100.0	51.0	365.9
100.0	5.0	3.1337E+03	5.0	2.0300	50.0	27.5	424.9
150.0	5.0	7.0607E+03	5.0	2.5600	25.0	18.5	513.0
150.0	30.0	1.1310E+03	5.0	2.5150	250.0	118.5	532.9
200.0	30.0	2.0473E+03	2.5	0.4050	50.0	33.1	659.7
300.0	30.0	4.6653E+03	2.5	1.4300	25.0	15.8	519.8
400.0	30.0	8.3305E+03	2.5	1.6275	25.0	12.4	632.1
500.0	30.0	1.3043E+04	2.5	0.4925	5.0	2.9	606.5
700.0	30.0	2.5609E+04	2.5	0.9250	5.0	3.6	937.0
1000.0	30.0	5.2313E+04	2.5	1.4875	10.0	3.1	1100.6
1000.0	150.0	1.0230E+05	2.5	1.6450	50.0	18.9	1824.5
1500.0	30.0	1.1776E+05	5.0	1.6400	10.0	2.9	2082.9
1500.0	150.0	2.3326E+04	2.5	1.3975	25.0	9.4	1569.7
2000.0	150.0	4.1652E+04	2.5	1.4650	10.0	4.4	1251.0
2500.0	150.0	6.5214E+04	2.5	1.6225	5.0	2.1	844.1
3000.0	150.0	9.4012E+04	2.5	1.1225	5.0	1.1	879.4

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 07. May. 1996 LATITUDE: 28 deg 57' 22"N
ST. No. : YES03 LONGITUDE: 33 deg 44' 14"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV÷0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (ohm-m)
5.0	1.0	3.2099E+01	2.5	1.5500	0.5V	329.0	80.0
7.0	1.0	7.5398E+01	2.5	1.5500	250.0	134.0	65.2
10.0	1.0	1.5551E+02	2.5	1.5500	100.0	80.9	81.2
15.0	1.0	3.5186E+02	2.5	1.5475	100.0	52.1	118.5
20.0	1.0	6.2675E+02	2.5	1.5525	50.0	36.7	148.0
30.0	1.0	1.4121E+03	2.5	1.5525	50.0	22.2	201.9
30.0	5.0	2.7489E+02	2.5	1.5525	250.0	86.3	170.4
50.0	1.0	3.9256E+03	2.5	1.5450	25.0	11.4	290.3
50.0	5.0	7.7754E+02	2.5	1.5475	100.0	69.1	246.7
70.0	5.0	1.5315E+03	2.5	1.5525	50.0	30.8	361.8
100.0	5.0	3.1337E+03	2.5	1.5525	25.0	16.7	537.1
150.0	5.0	7.0607E+03	2.5	1.5575	10.0	6.7	901.5
150.0	30.0	1.1310E+03	2.5	1.5550	50.0	38.7	281.5
200.0	5.0	1.2559E+04	2.5	1.5525	5.0	3.5	285.5
200.0	30.0	2.0473E+03	2.5	1.5525	25.0	20.3	267.4
300.0	30.0	4.6653E+03	2.5	1.5550	25.0	12.5	373.5
400.0	30.0	8.3305E+03	2.5	1.5600	25.0	8.6	457.9
500.0	30.0	1.3043E+04	2.5	1.5525	10.0	3.9	329.3
700.0	30.0	2.5609E+04	2.5	1.4700	5.0	3.1	534.8
1000.0	30.0	5.2313E+04	2.5	1.5700	5.0	2.6	873.0
1000.0	150.0	1.0230E+04	2.5	1.5675	25.0	12.3	801.6
1500.0	30.0	1.1776E+05	2.5	1.5700	2.5	1.6	1226.4
1500.0	150.0	2.3326E+04	2.5	1.5650	25.0	8.4	1255.7
2000.0	150.0	4.1652E+04	2.5	1.5625	10.0	7.2	1911.3
2500.0	150.0	6.5214E+04	2.5	1.5700	10.0	6.4	2662.6
3000.0	150.0	9.4012E+04	2.5	1.5600	10.0	4.3	2680.6

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT

SCHLUMBERGER METHOD LATITUDE : 29 deg 06' 34" N
DATE: 1. May. 1996 LONGITUDE: 33 deg 20' 55" E
ST. No. : YES04

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT, RED RANGE	CH1:CURRENT, RED READINGS	I	CH2:POTENTIAL, GREEN RANGE	CH2:POTENTIAL, GREEN READINGS	APPARENT RESISTIVITY
			mV	mV	(Amp)	mV	mV	ohm-m
5.0	1.0	3.770E+01	2.5	1.530	0.153	10.0V	7990.000	196.9
7.0	1.0	7.540E+01	5.0	2.020	0.202	10.0V	4580.000	170.2
10.0	1.0	1.555E+02	5.0	1.940	0.194	5.0V	2215.000	177.6
15.0	1.0	3.519E+02	5.0	2.205	0.221	5.0V	1140.000	181.9
20.0	1.0	6.267E+02	5.0	2.195	0.220	1.0V	426.000	122.6
30.0	1.0	1.412E+03	5.0	0.950	0.095	0.5V	75.000	111.5
30.0	5.0	2.749E+02	2.5	0.713	0.071	0.5V	259.000	99.5
50.0	1.0	3.925E+03	1.0	0.226	0.023	50.0	16.100	87.1
50.0	5.0	7.775E+02	2.5	0.690	0.069	250.0	69.000	77.8
70.0	5.0	1.532E+03	2.5	1.545	0.155	50.0	32.150	91.9
100.0	5.0	3.134E+03	2.5	1.215	0.122	10.0	7.410	19.2
150.0	5.0	7.061E+03	10.0	2.370	0.237	5.0	1.270	3.8
150.0	30.0	1.131E+03	10.0	2.180	0.218	50.0	8.600	4.5
200.0	5.0	1.256E+04	5.0	1.655	0.166	5.0	0.845	6.4
200.0	30.0	2.047E+03	5.0	1.695	0.170	25.0	5.325	6.4
300.0	30.0	4.665E+03	5.0	1.540	0.154	10.0	2.930	9.1
500.0	30.0	1.304E+04	0.5	0.211	0.021	0.5	0.115	7.3
700.0	30.0	2.561E+04	1.0	0.559	0.056	1.0	0.236	10.8
1000.0	30.0	5.231E+04	2.5	1.545	0.155	1.0	0.271	9.2
1000.0	150.0	1.024E+04	5.0	1.540	0.154	5.0	1.585	9.2
1500.0	30.0	1.178E+05	5.0	1.555	0.156	1.0	0.252	19.1
1500.0	150.0	2.333E+04	5.0	1.610	0.161	5.0	1.575	22.8
2000.0	150.0	4.165E+04	2.5	1.555	0.156	5.0	0.946	25.3
2500.0	150.0	6.521E+04	5.0	1.595	0.160	2.5	0.778	31.8
3000.0	150.0	9.401E+04	5.0	1.560	0.156	2.5	0.830	50.0
2500.0	30.0	3.272E+05	5.0	1.595	0.160	0.5	0.283	58.1
3000.0	30.0	4.712E+05	5.0	1.550	0.155	1.0	0.264	73.3

Sheet1

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE:05. May. 1996 LATITUDE: 28 deg 58' 49"N
ST. No. : VES05 LONGITUDE: 33 deg 33' 14"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV=0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (ohm-m)
5.0	1.0	3.7698E-01	5.0	2.9450	2.5V	3100.0	140.8
7.0	1.0	7.5398E-01	5.0	2.9300	1.0V	614.0	157.5
10.0	1.0	1.5551E+00	5.0	2.9400	0.5V	295.5	198.6
15.0	1.0	3.5186E-02	5.0	2.9350	250.0	189.8	227.5
20.0	1.0	6.2675E-02	5.0	2.8850	250.0	115.5	249.5
30.0	1.0	1.4121E+03	2.5	2.9250	100.0	58.8	283.9
30.0	5.0	2.7489E+02	5.0	2.9250	0.5V	316.0	297.0
50.0	1.0	3.9254E+03	5.0	1.5450	25.0	13.0	330.9
50.0	5.0	7.7754E+02	5.0	1.5450	250.0	68.8	346.6
70.0	5.0	1.5315E+03	5.0	1.5500	100.0	39.2	387.3
100.0	5.0	3.1337E+03	5.0	1.5600	50.0	26.2	526.3
150.0	5.0	7.0607E+03	5.0	1.5600	50.0	18.2	823.5
150.0	30.0	1.1310E+03	5.0	1.5550	250.0	104.8	761.9
200.0	5.0	1.2559E+04	5.0	1.5500	25.0	14.8	1154.8
200.0	30.0	2.0473E+03	2.5	1.5550	250.0	80.8	1063.1
300.0	30.0	4.6653E+03	2.5	1.5500	100.0	56.5	1694.5
500.0	30.0	1.3043E+04	2.5	1.5500	100.0	41.7	3508.9
700.0	30.0	2.5609E+04	2.5	1.5550	50.0	22.2	3647.9
1000.0	30.0	5.2313E+04	2.5	1.5500	25.0	11.4	3647.5
1000.0	150.0	1.0236E+04	2.5	1.5500	100.0	54.0	3619.0
1500.0	30.0	1.1776E+05	5.0	1.5600	25.0	7.1	5322.0
1500.0	150.0	2.3326E+04	5.0	1.5550	100.0	33.1	4965.5
2000.0	150.0	4.1652E+04	5.0	1.5600	25.0	9.4	2509.8
2500.0	150.0	6.5214E+04	5.0	1.5550	10.0	6.5	2717.6
3000.0	150.0	9.4012E+04	5.0	1.5550	10.0	4.6	2805.9

Sheet1

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE:06. May. 1996 LATITUDE: 28 deg 58' 41"N
ST. No. : VES06 LONGITUDE: 33 deg 43' 01"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV=0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (ohm-m)
5.0	1.0	3.7698E-01	2.5	1.5475	1.0V	547.0	133.3
7.0	1.0	7.5398E-01	2.5	1.5500	1.0V	271.0	131.8
10.0	1.0	1.5551E+00	2.5	1.5450	250.0	145.5	146.5
15.0	1.0	3.5186E-02	2.5	1.5450	100.0	67.1	152.8
20.0	1.0	6.2675E-02	2.5	1.5450	100.0	40.4	163.9
30.0	1.0	1.4121E+03	2.5	1.5450	50.0	18.5	168.6
30.0	5.0	2.7489E+02	2.5	1.5450	100.0	74.7	192.9
50.0	1.0	3.9254E+03	2.5	1.5450	10.0	8.0	203.3
50.0	5.0	7.7754E+02	2.5	1.5475	50.0	32.3	162.0
70.0	5.0	1.5315E+03	2.5	1.5500	25.0	19.6	193.7
100.0	5.0	3.1337E+03	2.5	1.5500	25.0	12.8	259.9
150.0	5.0	7.0607E+03	2.5	1.5575	10.0	7.8	353.6
150.0	30.0	1.1310E+03	2.5	1.5425	100.0	42.8	313.8
200.0	5.0	1.2559E+04	2.5	1.5525	10.0	5.7	457.0
200.0	30.0	2.0473E+03	2.5	1.5450	50.0	29.5	390.2
300.0	30.0	4.6653E+03	2.5	1.5525	50.0	21.9	656.6
400.0	30.0	8.3305E+03	2.5	1.5500	25.0	16.8	890.8
500.0	30.0	1.3043E+04	2.5	1.5500	25.0	8.8	751.0
700.0	30.0	2.5609E+04	2.5	1.5550	10.0	7.7	1266.5
1000.0	30.0	5.2313E+04	2.5	1.5525	10.0	4.9	1459.0
1000.0	150.0	1.0236E+04	2.5	1.5475	50.0	26.2	1733.1
1500.0	30.0	1.1776E+05	2.5	1.5575	5.0	2.5	1916.7
1500.0	150.0	2.3326E+04	2.5	1.5500	25.0	15.6	2343.9
2000.0	150.0	4.1652E+04	2.5	1.5600	25.0	13.2	3524.4
2500.0	150.0	6.5214E+04	2.5	1.5525	25.0	9.1	3833.0
3000.0	150.0	9.4012E+04	2.5	1.5550	25.0	8.7	5244.7

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 20. May. 1996 LATITUDE: 29° 49' 29"N ELEVATION: 1,297m
ST. No. : VES07 LONGITUDE: 33° 56' 26"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV=0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7698E+01	5	3.265	1000	698	80.6
7.0	1.0	7.5398E+01	5	3.255	500	201.5	45.5
10.0	1.0	1.5551E+02	6	3.265	100	77.2	36.8
15.0	1.0	3.5186E+02	5	3.25	100	38.1	41.2
20.0	1.0	6.2675E+02	5	3.23	50	28.3	54.9
30.0	1.0	1.4121E+03	5	3.235	25	19.4	84.7
30.0	5.0	2.7489E+02	5	3.175	100	65.8	57.0
50.0	1.0	3.9254E+03	5	3.17	25	12.575	155.7
50.0	5.0	7.7754E+02	2.5	1.55	50	21.05	105.6
70.0	5.0	1.5315E+03	2.5	1.545	25	16.325	161.8
100.0	5.0	3.1337E+03	2.5	1.55	25	13.225	232.1
150.0	5.0	7.0607E+03	2.5	1.55	10	7.8	346.2
150.0	30.0	1.1310E+03	2.5	1.5475	100	69.2	505.7
200.0	5.0	1.2559E+04	2.5	1.545	10	5.6	455.2
200.0	30.0	2.0473E+03	2.5	1.545	100	51.8	672.3
300.0	30.0	4.6653E+03	2.5	1.55	50	34	1023.3
500.0	30.0	1.3043E+04	2.5	1.5525	25	14.225	1195.1
700.0	30.0	2.5609E+04	2.5	1.555	10	8.21	1352.1
1000.0	30.0	5.2313E+04	2.5	1.5525	10	4.88	1644.4
1000.0	150.0	1.0236E+04	2.5				
1500.0	30.0	1.1776E+05	2.5	1.5525	5	2.815	2135.3
1500.0	150.0	2.3326E+04	2.5				
2000.0	150.0	4.1652E+04	2.5				
2500.0	150.0	6.5214E+04	2.5				
3000.0	150.0	9.4012E+04	2.5				

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 23. May. 1996 LATITUDE: 28° 51' 18"N ELEVATION: 805m
ST. No. : VES08 LONGITUDE: 34° 20' 58"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV=0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7698E+01	2.5	1.5525	1000.0	665	161.5
7.0	1.0	7.5398E+01	2.5	1.5550	500.0	413	200.3
10.0	1.0	1.5551E+02	2.5	1.5500	500.0	271	271.9
15.0	1.0	3.5186E+02	2.5	1.5425	250.0	172	391.1
20.0	1.0	6.2675E+02	2.5	1.5500	250.0	111	448.8
30.0	1.0	1.4121E+03	2.5	1.5550	50.0	44.35	402.6
30.0	5.0	2.7489E+02	2.5	1.5525	250.0	205.50	363.9
50.0	1.0	3.9254E+03	2.5	1.3625	25.0	14.60	429.6
50.0	5.0	7.7754E+02	2.5	1.4025	100.0	62.60	373.4
70.0	5.0	1.5315E+03	2.5	1.4050	50.0	36.35	396.2
100.0	5.0	3.1337E+03	2.5	0.9400	25.0	12.225	440.9
150.0	5.0	7.0607E+03	2.5	0.7840	5.0	2.940	264.8
150.0	30.0	1.1310E+03	2.5	0.5910	25.0	14.400	275.6
200.0	5.0	1.2559E+04	2.5	1.4225	2.5	1.835	152.9
200.0	30.0	2.0473E+03	2.5	1.2100	25.0	9.950	168.3
300.0	30.0	4.6653E+03	2.5	1.5250	10.0	4.860	144.0
500.0	30.0	1.3043E+04	2.5	1.6250	5.0	2.490	199.9
700.0	30.0	2.5609E+04	2.5	1.4325	2.5	1.250	224.5
1000.0	30.0	5.2313E+04	2.5	1.4525	2.5	1.0575	389.9
1000.0	150.0	1.0236E+04					
1500.0	30.0	1.1776E+05	1.0	0.9010	1.0	0.4030	565.9
1500.0	150.0	2.3326E+04					
2000.0	150.0	4.1652E+04					
2500.0	150.0	6.5214E+04					
3000.0	150.0	9.4012E+04					

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 20, May, 1996 LATITUDE: 28° 49' 20"N ELEVATION: 1,201m
ST. No. : VES09 LONGITUDE: 34° 10' 51"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5550	2500	2297.5	557.0
7.0	1.0	7.5398E+01	2.5	1.5550	1000	758	367.5
10.0	1.0	1.5551E+02	2.5	1.5600	1000	407	405.7
15.0	1.0	3.5186E+02	2.5	1.5650	250	121	222.0
20.0	1.0	6.2675E+02	2.5	1.5500	50	44.6	180.3
30.0	1.0	1.4121E+03	2.5	1.5450	25	11.45	104.7
30.0	5.0	2.7489E+02	2.5	1.5450	50	38.35	68.2
50.0	1.0	3.9254E+03	2.5	1.5500	10	5.3	134.2
50.0	5.0	7.7254E+02	2.5	1.5550	25	17.55	87.8
70.0	5.0	1.5315E+03	2.5	1.5550	25	9.175	90.4
100.0	5.0	3.1337E+03	2.5	1.5500	10	5.90	121.1
150.0	5.0	7.0607E+03	2.5	1.5550	5	4.01	182.1
150.0	30.0	1.1310E+03	2.5	1.5525	50	29	211.3
200.0	5.0	1.2559E+04	2.5	1.5575	2.5	2.0625	165.5
200.0	30.0	2.0473E+03	2.5	1.5550	25	15	197.5
300.0	30.0	4.6653E+03	2.5	0.2275	10	5.29	339.2
500.0	30.0	1.3043E+04	2.5	1.5600	10	5.4	451.5
700.0	30.0	2.5609E+04	2.5	1.5600	10	5.41	868.1
1000.0	30.0	5.2313E+04	2.5	1.5650	10	3.75	1737.7
1000.0	150.0	1.0236E+04	2.5				
1500.0	30.0	1.1776E+05	2.5	1.5725	5	2.6	1947.1
1500.0	150.0	2.3326E+04	2.5				
2000.0	150.0	4.1652E+04	2.5				
2500.0	150.0	6.5214E+04	2.5				
3000.0	150.0	9.4012E+04	2.5				

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 12, June, 1996 LATITUDE: 29° 34' 13"N ELEVATION: 590m
ST. No. : VES10 LONGITUDE: 34° 01' 15"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5550	500.0	378.5	91.9
7.0	1.0	7.5398E+01	2.5	1.5525	250.0	182	88.4
10.0	1.0	1.5551E+02	2.5	1.5525	100.0	65.7	65.8
15.0	1.0	3.5186E+02	2.5	1.5575	50.0	21.25	48.0
20.0	1.0	6.2675E+02	2.5	1.5525	10.0	8.56	26.5
30.0	1.0	1.4121E+03	2.5	1.5750	5.0	2.12	19.0
30.0	5.0	2.7489E+02	2.5	1.5750	25.0	11.36	19.7
50.0	1.0	3.9254E+03	2.5	1.5500	2.5	0.84	23.7
50.0	5.0	7.7254E+02	2.5	1.5500	10.0	4.91	24.6
70.0	5.0	1.5315E+03	2.5	1.5725	5.0	3.21	31.3
100.0	5.0	3.1337E+03	2.5	1.5700	2.5	1.700	33.9
150.0	5.0	7.0607E+03	2.5	1.5825	1.0	0.636	28.9
150.0	30.0	1.1310E+03	2.5	1.5675	10.0	5.020	36.7
200.0	5.0	1.2559E+04	2.5	1.5575	0.5	0.350	28.2
200.0	30.0	2.0473E+03	2.5	1.5550	5.0	2.560	33.7
300.0	30.0	4.6653E+03	2.5	1.5550	2.5	1.039	31.1
500.0	30.0	1.3043E+04	2.5	1.5500	0.5	0.290	24.4
700.0	30.0	2.5609E+04	2.5	1.5650	1.0	0.100	16.4
1000.0	30.0	5.2313E+04	2.5	1.5800	0.5	0.0550	18.2
1000.0	150.0	1.0236E+04	2.5	1.5775	1.0	0.2500	16.2
1500.0	30.0	1.1776E+05	10.0	8.3900	1.0	0.1470	20.7
1500.0	150.0	2.3326E+04	10.0	8.5850	2.5	0.6775	18.4
2000.0	150.0	4.1652E+04	25.0	1.5900	0.5	0.0800	21.0
2500.0	150.0	6.5214E+04	10.0	3.7700	0.5	0.1245	21.5
3000.0	150.0	9.4012E+04	10.0	4.6600	0.5	0.1525	30.8

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 15, May, 1996 LATITUDE: 29° 05' 34"N ELEVATION: 620m
ST. No. : VES11 LONGITUDE: 34° 26' 00"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5550	5000	1795.0	435.2
7.0	1.0	7.5398E+01	2.5	1.5575	5000	822.5	398.2
10.0	1.0	1.5551E+02	2.5	0.7075	500	157.5	346.2
15.0	1.0	3.5186E+02	2.5	0.5375	250	50.5	330.6
20.0	1.0	6.2675E+02	2.5	0.3700	100	16.6	281.2
30.0	1.0	1.4121E+03	2.5	0.3325	50	5.925	251.6
30.0	5.0	2.7489E+02	2.5	0.3150	100	28.000	244.3
50.0	1.0	3.9254E+03	5.0	0.4500	10	1.655	144.2
50.0	5.0	7.7254E+02	5.0	0.4350	25	5.650	134.6
70.0	5.0	1.5315E+03	5.0	0.9550	50	6.650	106.6
100.0	5.0	3.1337E+03	5.0	1.1550	25	2.400	65.1
150.0	5.0	7.0607E+03	5.0	1.5600	10	1.410	63.8
150.0	30.0	1.1310E+03	5.0	4.0900	50	14.000	38.7
200.0	5.0	1.2559E+04	5.0	1.4150	25	0.506	44.4
200.0	30.0	2.0473E+03	5.0	1.0100	10	1.270	25.7
300.0	30.0	4.6653E+03	5.0	0.9200	10	1.750	88.7
500.0	30.0	1.3043E+04	5.0	1.8950	25	6.050	416.4
700.0	30.0	2.5609E+04	5.0	0.7750	10	2.205	728.6
1000.0	30.0	5.2313E+04	5.0	0.0750	0.5	0.191	704.5
1000.0	150.0	1.0236E+04	5.0	0.0950	2.5	0.695	743.9
1500.0	30.0	1.1776E+05	5.0	0.4250	1	0.351	1016.9
1500.0	150.0	2.3326E+04	5.0	0.3710	5	1.445	908.5
2000.0	150.0	4.1652E+04	5.0	3.0100	25	12.675	1754.0
2500.0	150.0	6.5214E+04	5.0	0.1590	5	0.635	2804.5
3000.0	150.0	9.4012E+04	5.0	1.0650	10	3.400	3001.3

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 16, May, 1996 LATITUDE: 29° 00' 21"N ELEVATION: 856m
ST. No. : VES12 LONGITUDE: 34° 17' 06"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	5	1.545	5000	3500.0	854.0
7.0	1.0	7.5398E+01	2.5	1.5475	5000	1995.0	928.2
10.0	1.0	1.5551E+02	2.5	1.5475	2500	992.50	997.3
15.0	1.0	3.5186E+02	2.5	1.55	1000	442.00	1003.4
20.0	1.0	6.2675E+02	2.5	1.555	500	248.50	993.5
30.0	1.0	1.4121E+03	2.5	1.555	250	110.25	1005.8
30.0	5.0	2.7489E+02	2.5	1.5525	1000	478.00	859.4
50.0	1.0	3.9254E+03	2.5	1.565	100	42.80	1093.5
50.0	5.0	7.7254E+02	2.5	1.5625	500	181.50	920.3
70.0	5.0	1.5315E+03	2.5	1.57	250	97.75	957.5
100.0	5.0	3.1337E+03	2.5	1.5575	100	49.60	999.0
150.0	5.0	7.0607E+03	2.5	1.565	50	19.50	879.6
150.0	30.0	1.1310E+03	2.5	1.58	250	122.50	988.1
200.0	5.0	1.2559E+04	2.5	1.5725	25	9.875	788.7
200.0	30.0	2.0473E+03	2.5	1.5675	100	61.500	803.2
300.0	30.0	4.6653E+03	2.5	1.5775	50	30.750	909.4
500.0	30.0	1.3043E+04	2.5	1.565	25	14.275	1187.7
700.0	30.0	2.5609E+04	2.5	1.5725	25	7.260	1294.0
1000.0	30.0	5.2313E+04	2.5	1.5875	10	4.810	1585.0
1000.0	150.0	1.0236E+04	2.5	1.555	50	27.060	1740.7
1500.0	30.0	1.1776E+05	2.5	1.555	5	2.765	2094.0
1500.0	150.0	2.3326E+04	2.5	1.555	25	15.250	2287.6
2000.0	150.0	4.1652E+04	2.5	1.5575	25	9.260	3469.4
2500.0	150.0	6.5214E+04	2.5	1.5725	25	8.025	3329.1
3000.0	150.0	9.4012E+04	2.5	1.58	25	6.850	4075.8

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 13 May, 1996 LATITUDE: 28° 55' 40"N ELEVATION: 1,033m
ST. No.: VES13 LONGITUDE: 34° 07' 35"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5525	5000	3145	763.7
7.0	1.0	7.5398E+01	2.5	1.5500	2500	1472.5	716.3
10.0	1.0	1.5551E+02	2.5	1.5500	1000	703	705.3
15.0	1.0	3.5186E+02	2.5	1.5500	500	285	647.0
20.0	1.0	6.2675E+02	2.5	1.5500	250	184.75	666.2
30.0	1.0	1.4121E+03	2.5	1.5500	100	53.4	436.5
30.0	5.0	2.7489E+02	2.5	1.5450	500	329	585.4
50.0	1.0	3.9254E+03	2.5	1.5450	25	16.25	412.9
50.0	5.0	7.7354E+02	2.5	1.5450	250	112	560.7
70.0	5.0	1.5315E+03	2.5	1.5375	250	57.5	568.1
100.0	5.0	3.1337E+03	2.5	1.5500	50	28.85	583.3
150.0	5.0	7.0607E+03	2.5	1.5550	25	16.7	531.3
150.0	30.0	1.1310E+03	2.5	1.5525	100	74.8	544.9
200.0	5.0	1.2559E+04	2.5	1.5525	25	6.25	505.8
200.0	30.0	2.0473E+03	2.5	1.5500	50	39.15	517.1
300.0	30.0	4.6653E+03	2.5	1.5550	25	22.175	665.3
500.0	30.0	1.3043E+04	2.5	1.5650	25	11.2	975.1
700.0	30.0	2.5609E+04	2.5	0.6235	10	2.22	906.0
1000.0	30.0	5.2313E+04	2.5	0.7750	2.5	1.5875	1071.6
1000.0	150.0	1.0236E+04	2.5	0.5350	10	6.84	1308.7
1500.0	30.0	1.1776E+05	2.5	0.3425	1	0.31	1055.9
1500.0	150.0	2.3326E+04	2.5	0.3335	5	1.95	1347.7
2000.0	150.0	4.1652E+04	2.5	0.4500	5	1.675	1550.4
2500.0	150.0	6.5214E+04	2.5	0.7800	5	2.125	1776.7
3000.0	150.0	9.4012E+04	2.5	0.4725	2.5	0.65	1673.5

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 14 May, 1996 LATITUDE: 29° 19' 25"N ELEVATION: 582m
ST. No.: VES16 LONGITUDE: 34° 30' 43"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.535	500	207.5	51.0
7.0	1.0	7.5398E+01	2.5	1.5325	250	80	39.5
10.0	1.0	1.5551E+02	2.5	1.5325	100	43.5	44.5
15.0	1.0	3.5186E+02	2.5	1.5425	50	27.1	61.8
20.0	1.0	6.2675E+02	2.5	1.5425	50	13.45	75.0
30.0	1.0	1.4121E+03	2.5	1.54	25	10.425	95.6
30.0	5.0	2.7489E+02	2.5	1.5375	100	43.6	29.4
50.0	1.0	3.9254E+03	2.5	1.54	10	4.3	109.6
50.0	5.0	7.7354E+02	2.5	1.5375	50	18.3	92.5
70.0	5.0	1.5315E+03	2.5	1.54	25	8.5	84.5
100.0	5.0	3.1337E+03	2.5	1.54	10	3.33	67.8
150.0	5.0	7.0607E+03	2.5	1.5375	1	0.641	29.4
150.0	30.0	1.1310E+03	2.5	1.5375	10	4.08	30.0
200.0	5.0	1.2559E+04	2.5	1.5425	1	0.279	22.7
200.0	30.0	2.0473E+03	2.5	1.535	5	1.79	23.9
300.0	30.0	4.6653E+03	2.5	1.545	2.5	0.9275	28.0
500.0	30.0	1.3043E+04	2.5	1.5425	1	0.433	36.8
700.0	30.0	2.5609E+04	2.5	1.545	0.5	0.2025	33.6
1000.0	30.0	5.2313E+04	2.5	1.545	0.5	0.12	40.6
1000.0	150.0	1.0236E+04	2.5	1.54	2.5	0.6825	45.4
1500.0	30.0	1.1776E+05	2.5	1.5475	0.5	0.07	51.3
1500.0	150.0	2.3326E+04	2.5	1.5425	1	0.404	61.1
2000.0	150.0	4.1652E+04	2.5	1.5475	1	0.285	76.7
2500.0	150.0	6.5214E+04	2.5	1.5575	1	0.208	97.1
3000.0	150.0	9.4012E+04	2.5	1.5475	1	0.175	106.3

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 13 May, 1996 LATITUDE: 29° 23' 39"N ELEVATION: 741m
ST. No.: VES17 LONGITUDE: 34° 34' 52"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5450	1000	729.00	177.9
7.0	1.0	7.5398E+01	2.5	1.5425	500	235.00	114.9
10.0	1.0	1.5551E+02	2.5	1.5375	250	88.50	89.5
15.0	1.0	3.5186E+02	2.5	1.5375	50	27.65	63.3
20.0	1.0	6.2675E+02	2.5	1.5350	25	11.63	47.5
30.0	1.0	1.4121E+03	2.5	1.5300	10	3.79	35.0
30.0	5.0	2.7489E+02	2.5	1.5300	25	17.08	30.7
50.0	1.0	3.9254E+03	2.5	1.5375	2.5	0.91	23.2
50.0	5.0	7.7354E+02	2.5	1.5350	10	3.91	19.8
70.0	5.0	1.5315E+03	2.5	1.5375	5	1.73	17.2
100.0	5.0	3.1337E+03	2.5	1.5375	2.5	0.79	16.2
150.0	5.0	7.0607E+03	2.5	1.5350	1	0.38	17.3
150.0	30.0	1.1310E+03	2.5	1.5325	5	2.46	17.7
200.0	5.0	1.2559E+04	2.5	1.5325	0.5	0.23	18.6
200.0	30.0	2.0473E+03	2.5	1.5300	2.5	1.40	18.7
300.0	30.0	4.6653E+03	2.5	1.5425	2.5	0.81	24.6
400.0	30.0	8.3305E+03	2.5	1.5500	1	0.52	22.9
500.0	30.0	1.3043E+04	2.5	1.5425	0.5	0.27	23.0
700.0	30.0	2.5609E+04	2.5	1.5425	0.5	0.17	28.1
1000.0	30.0	5.2313E+04	2.5	1.5425	0.5	0.13	44.9
1000.0	150.0	1.0236E+04	2.5	1.5400	1	0.73	48.5
1500.0	30.0	1.1776E+05	2.5	1.5450	0.5	0.07	53.4
1500.0	150.0	2.3326E+04	2.5	1.5400	1	0.39	58.3
2000.0	150.0	4.1652E+04	2.5	1.5450	0.5	0.24	63.4
2500.0	150.0	6.5214E+04	2.5	1.5450	0.5	0.18	73.9
3000.0	150.0	9.4012E+04	2.5	1.5450	0.5	0.19	112.6

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 12 May, 1996 LATITUDE: 29° 33' 03"N ELEVATION: 748m
ST. No.: VES18 LONGITUDE: 34° 35' 22"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5425	500	319.70	78
7.0	1.0	7.5398E+01	2.5	1.5425	500	265.90	130.0
10.0	1.0	1.5551E+02	2.5	1.5400	250	110.30	111.4
15.0	1.0	3.5186E+02	2.5	1.5425	100	41.67	95.0
20.0	1.0	6.2675E+02	2.5	1.5450	50	22.41	90.9
30.0	1.0	1.4121E+03	2.5	1.5425	25	9.29	85.0
30.0	5.0	2.7489E+02	2.5	1.5400	50	44.40	79.3
50.0	1.0	3.9254E+03	2.5	1.5475	5	3.48	88.1
50.0	5.0	7.7354E+02	2.5	1.5500	25	12.93	64.8
70.0	5.0	1.5315E+03	2.5	1.5650	10	5.39	52.7
100.0	5.0	3.1337E+03	2.5	1.5500	5	2.90	58.6
150.0	5.0	7.0607E+03	2.5	1.5750	5	1.69	75.1
150.0	30.0	1.1310E+03	2.5	1.5750	25	11.20	89.4
200.0	5.0	1.2559E+04	2.5	1.5525	2.5	0.88	70.8
200.0	30.0	2.0473E+03	2.5	1.5500	10	5.55	73.3
300.0	30.0	4.6653E+03	2.5	1.5525	2.5	1.40	41.9
500.0	30.0	1.3043E+04	2.5	1.5675	2.5	0.76	63.2
700.0	30.0	2.5609E+04	2.5	1.5575	1	0.55	88.1
1000.0	30.0	5.2313E+04	2.5	1.5525	0.5	0.33	110.4
1000.0	150.0	1.0236E+04	2.5	1.5590	5	1.50	98.7
1500.0	30.0	1.1776E+05	2.5	1.5625	0.5	0.13	101.0
1500.0	150.0	2.3326E+04	2.5	1.5575	2.5	0.63	84.4
2000.0	150.0	4.1652E+04	2.5	1.5625	2.5	0.67	177.3
2500.0	150.0	6.5214E+04	2.5	1.5575	1	0.63	261.2
3000.0	150.0	9.4012E+04	2.5	1.5575	1	0.49	292.8

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 11 May, 1995 — LATITUDE: 29° 36' 39"N — ELEVATION: 742m
ST.No.: VES19 — LONGITUDE: 34° 41' 02"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5450	1.00	680.00	165.9
7.0	1.0	7.5398E+01	2.5	1.5450	0.5V	258.50	124.2
10.0	1.0	1.5551E+02	2.5	1.5450	250.00	102.00	102.1
15.0	1.0	3.5186E+02	2.5	1.5475	50.00	27.450	62.4
20.0	1.0	6.2675E+02	2.5	1.5475	25.00	9.375	38.0
30.0	1.0	1.4121E+03	2.5	1.5435	5.00	2.605	23.8
30.0	5.0	2.7489E+02	2.5	1.5475	25.00	14.650	26.0
50.0	1.0	3.9254E+03	2.5	1.5475	1.00	0.735	18.6
50.0	5.0	7.7754E+02	2.5	1.5475	5.00	3.725	19.0
70.0	5.0	1.5315E+03	2.5	1.5450	5.00	1.945	19.3
100.0	5.0	3.1337E+03	2.5	1.5500	2.50	1.055	21.3
150.0	5.0	7.0607E+03	2.5	1.5550	1.00	0.573	26.0
150.0	30.0	1.1310E+03	2.5	1.5525	25.00	3.625	26.4
200.0	5.0	1.2559E+04	2.5	1.5500	1.00	0.365	29.6
200.0	30.0	2.0473E+03	2.5	1.5500	5.00	2.250	29.7
300.0	30.0	4.6653E+03	2.5	1.5525	2.50	1.075	32.3
500.0	30.0	1.3043E+04	2.5	1.5500	2.50	0.765	64.4
700.0	30.0	2.5609E+04	2.5	1.5475	0.50	0.288	47.6
1000.0	30.0	5.2313E+04	2.5	1.5525	0.50	0.156	52.6
1000.0	150.0	1.0236E+04	2.5	1.5500	2.50	1.490	92.5
1500.0	30.0	1.1776E+05	2.5	1.5600	0.50	0.142	107.2
1500.0	150.0	2.3326E+04	2.5	1.5575	2.50	1.155	173.0
2000.0	150.0	4.1652E+04	2.5	1.5525	2.50	0.763	204.6
2500.0	150.0	6.5214E+04	2.5	1.5550	2.50	0.723	324.0
3000.0	150.0	9.4012E+04	2.5	1.5750	2.50	0.633	385.6

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 27, May, 1996 — LATITUDE: 29° 41' 21"N — ELEVATION: 576m
ST.No.: VES20 — LONGITUDE: 34° 39' 49"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5475	500.0	240.5	59.6
7.0	1.0	7.5398E+01	2.5	1.5450	250.0	127.25	62.3
10.0	1.0	1.5551E+02	2.5	1.5550	100.0	54.5	54.6
15.0	1.0	3.5186E+02	2.5	1.5450	50.0	24.75	56.4
20.0	1.0	6.2675E+02	2.5	1.5450	25.0	14.1	57.2
30.0	1.0	1.4121E+03	2.5	1.5450	10.0	5.85	53.4
30.0	5.0	2.7489E+02	2.5	1.5450	50.0	24.30	43.7
50.0	1.0	3.9254E+03	2.5	1.5450	2.5	1.45	37.5
50.0	5.0	7.7754E+02	2.5	1.5450	10.0	6.02	30.2
70.0	5.0	1.5315E+03	2.5	1.5450	2.5	2.19	20.8
100.0	5.0	3.1337E+03	2.5	1.5450	1.0	0.621	12.6
150.0	5.0	7.0607E+03	2.5	1.5450	0.5	0.199	9.1
150.0	30.0	1.1310E+03	2.5	1.5425	2.5	1.456	10.7
200.0	5.0	1.2559E+04	2.5	1.5450	0.5	0.121	9.8
200.0	30.0	2.0473E+03	2.5	1.5450	1.0	0.839	11.1
300.0	30.0	4.6653E+03	2.5	1.5450	1.0	0.479	14.5
500.0	30.0	1.3043E+04	2.5	1.5450	0.5	0.220	19.6
700.0	30.0	2.5609E+04	2.5	1.5550	0.5	0.126	20.8
1000.0	30.0	5.2313E+04	2.5	1.5475	0.5	0.0990	33.5
1000.0	150.0	1.0236E+04	2.5	1.5525	1.0	0.5300	34.9
1500.0	30.0	1.1776E+05	2.5	1.5700	0.5	0.0135	10.1
1500.0	150.0	2.3326E+04	2.5	1.5700	1.0	0.3020	45.6
2000.0	150.0	4.1652E+04	2.5	1.5475	0.5	0.2225	59.9
2500.0	150.0	6.5214E+04	2.5	1.5500	0.5	0.1500	63.1
3000.0	150.0	9.4012E+04	2.5	1.5500	0.5	0.1300	78.8

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 05 June, 1996 — LATITUDE: 29° 32' 21"N — ELEVATION: 881m
ST.No.: VES21 — LONGITUDE: 34° 26' 29"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5525	250.0	182.25	44.3
7.0	1.0	7.5398E+01	2.5	1.5500	100.0	69.1	29.2
10.0	1.0	1.5551E+02	2.5	1.5500	50.0	27.95	28.9
15.0	1.0	3.5186E+02	2.5	1.5475	25.0	13.025	29.6
20.0	1.0	6.2675E+02	2.5	1.5500	10.0	7.61	30.8
30.0	1.0	1.4121E+03	2.5	1.5450	5.0	3.36	30.7
30.0	5.0	2.7489E+02	2.5	1.5400	25.0	15.21	27.1
50.0	1.0	3.9254E+03	2.5	1.5400	2.5	1.42	36.3
50.0	5.0	7.7754E+02	2.5	1.5375	10.0	6.29	31.8
70.0	5.0	1.5315E+03	2.5	1.5425	5.0	3.61	35.8
100.0	5.0	3.1337E+03	2.5	1.5600	2.5	1.791	36.0
150.0	5.0	7.0607E+03	2.5	1.5500	1.0	0.948	43.2
150.0	30.0	1.1310E+03	2.5	1.5375	10.0	5.140	37.8
200.0	5.0	1.2559E+04	2.5	1.5450	0.5	0.573	46.6
200.0	30.0	2.0473E+03	2.5	1.5375	5.0	3.020	40.2
300.0	30.0	4.6653E+03	2.5	1.5425	2.5	1.480	44.8
500.0	30.0	1.3043E+04	2.5	1.5475	1.0	0.513	43.2
700.0	30.0	2.5609E+04	2.5	1.5550	0.5	0.274	45.1
1000.0	30.0	5.2313E+04	2.5	1.5450	0.5	0.1580	53.5
1000.0	150.0	1.0236E+04	2.5	1.5490	2.5	1.1125	73.9
1500.0	30.0	1.1776E+05	2.5	1.5525	0.5	0.0875	66.4
1500.0	150.0	2.3326E+04	2.5	1.5475	2.5	0.6000	90.7
2000.0	150.0	4.1652E+04	2.5	1.5700	2.5	0.4550	120.7
2500.0	150.0	6.5214E+04	2.5	1.5575	1.0	0.4300	189.0
3000.0	150.0	9.4012E+04	2.5	1.5550	1.0	0.4300	259.0

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 04 June, 1996 — LATITUDE: 29° 23' 37"N — ELEVATION: 592m
ST.No.: VES22 — LONGITUDE: 34° 17' 44"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5500	1000.0	619	150.9
7.0	1.0	7.5398E+01	2.5	1.5500	250.0	117.25	57.0
10.0	1.0	1.5551E+02	2.5	1.5500	50.0	27.55	27.6
15.0	1.0	3.5186E+02	2.5	1.5475	25.0	9.775	22.2
20.0	1.0	6.2675E+02	2.5	1.5450	10.0	5.52	22.4
30.0	1.0	1.4121E+03	2.5	1.5500	5.0	2.80	25.7
30.0	5.0	2.7489E+02	2.5	1.5450	25.0	9.95	17.7
50.0	1.0	3.9254E+03	2.5	1.5475	2.5	1.27	32.2
50.0	5.0	7.7754E+02	2.5	1.5475	5.0	4.44	22.3
70.0	5.0	1.5315E+03	2.5	1.5475	5.0	2.31	26.8
100.0	5.0	3.1337E+03	2.5	1.5500	2.5	1.550	31.3
150.0	5.0	7.0607E+03	2.5	1.5475	1.0	0.592	27.0
150.0	30.0	1.1310E+03	2.5	1.5475	5.0	3.150	23.0
200.0	5.0	1.2559E+04	2.5	1.5475	1.0	0.320	28.0
200.0	30.0	2.0473E+03	2.5	1.5450	2.5	1.243	23.1
300.0	30.0	4.6653E+03	2.5	1.5500	1.0	0.829	25.0
500.0	30.0	1.3043E+04	2.5	1.5500	0.5	0.311	29.2
700.0	30.0	2.5609E+04	2.5	1.5550	0.5	0.180	29.6
1000.0	30.0	5.2313E+04	2.5	1.5525	0.5	0.1145	38.6
1000.0	150.0	1.0236E+04	2.5	1.5475	2.5	0.6375	40.2
1500.0	30.0	1.1776E+05	2.5	1.5525	0.5	0.0835	49.2
1500.0	150.0	2.3326E+04	2.5	1.5500	1.0	0.3550	53.4
2000.0	150.0	4.1652E+04	2.5	1.5600	1.0	0.2500	66.8
2500.0	150.0	6.5214E+04	5.0	2.8550	1.0	0.4150	94.5
3000.0	150.0	9.4012E+04	5.0	2.8700	1.0	0.4500	147.4

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 04, June, 1996
ST. No. : VES23
LATITUDE: 29° 31' 43"N
LONGITUDE: 34° 35' 31"E
ELEVATION: 650m

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5525	500.0	237.5	57.7
7.0	1.0	7.5398E+01	2.5	1.5509	250.0	127.75	62.4
10.0	1.0	1.5551E+02	2.5	1.5503	100.0	80.1	80.4
15.0	1.0	3.5186E+02	2.5	1.5500	50.0	38.3	86.9
20.0	1.0	6.2675E+02	2.5	1.5500	25.0	22.3	90.2
30.0	1.0	1.4121E+03	2.5	1.5500	25.0	9.75	88.8
30.0	5.0	2.7489E+02	2.5	1.5500	50.0	41.00	72.7
50.0	1.0	3.9254E+03	2.5	1.5500	5.0	2.93	74.2
50.0	5.0	7.7254E+02	2.5	1.5475	25.0	12.03	60.4
70.0	5.0	1.5315E+03	2.5	1.5500	10.0	4.55	45.0
100.0	5.0	3.1337E+03	2.5	1.5500	2.5	1.240	25.1
150.0	5.0	7.0607E+03	2.5	1.5550	1.0	0.616	28.0
150.0	30.0	1.1310E+03	2.5	1.5500	5.0	3.830	27.9
200.0	5.0	1.2559E+04	2.5	1.5525	0.5	0.2915	23.5
200.0	30.0	2.0473E+03	2.5	1.5500	2.5	1.760	23.2
300.0	30.0	4.6653E+03	2.5	1.5500	1.0	0.810	24.4
500.0	30.0	1.3043E+04	2.5	1.5525	0.5	0.330	27.7
700.0	30.0	2.5609E+04	2.5	1.5525	0.5	0.2175	35.7
1000.0	30.0	5.2313E+04	2.5	1.5525	0.5	0.1555	52.4
1000.0	150.0	1.0236E+04	2.5	1.5500	1.0	0.5900	39.0
1500.0	30.0	1.1726E+05	2.5	1.5550	0.5	0.1255	95.0
1500.0	150.0	2.3026E+04	2.5	1.5525	1.0	0.5050	75.9
2000.0	150.0	4.1652E+04	2.5	1.5550	1.0	0.2650	71.0
2500.0	150.0	6.5214E+04	2.5	1.5550	0.5	0.2350	98.6
3000.0	150.0	9.4312E+04	2.5	1.5525	0.5	0.2250	136.2

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 03, June, 1996
ST. No. : VES24
LATITUDE: 29° 40' 09"N
LONGITUDE: 34° 12' 31"E
ELEVATION: 603m

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5475	4500.0	932.5	227.2
7.0	1.0	7.5398E+01	2.5	1.5500	250.0	192.25	93.5
10.0	1.0	1.5551E+02	2.5	1.5450	100.0	59.6	60.0
15.0	1.0	3.5186E+02	2.5	1.5475	25.0	21.2	43.2
20.0	1.0	6.2675E+02	2.5	1.5475	25.0	11.15	45.2
30.0	1.0	1.4121E+03	2.5	1.5475	10.0	4.43	40.4
30.0	5.0	2.7489E+02	2.5	1.5450	50.0	25.00	44.5
50.0	1.0	3.9254E+03	2.5	1.5475	2.5	1.40	35.5
50.0	5.0	7.7754E+02	2.5	1.5450	10.0	7.81	39.3
70.0	5.0	1.5315E+03	2.5	1.5450	5.0	3.50	34.7
100.0	5.0	3.1337E+03	2.5	1.5475	2.5	1.643	33.3
150.0	5.0	7.0607E+03	2.5	1.5475	1.0	0.223	33.6
150.0	30.0	1.1310E+03	2.5	1.5375	5.0	3.955	29.1
200.0	5.0	1.2559E+04	2.5	1.5500	1.0	0.303	24.5
200.0	30.0	2.0473E+03	2.5	1.5500	5.0	2.443	32.2
300.0	30.0	4.6653E+03	2.5	1.5450	2.5	1.299	39.2
500.0	30.0	1.3043E+04	2.5	1.5450	1.0	0.476	40.2
700.0	30.0	2.5609E+04	2.5	1.5475	1.0	0.397	59.1
1000.0	30.0	5.2313E+04	2.5	1.5475	0.5	0.1825	61.7
1000.0	150.0	1.0236E+04	2.5	1.5375	2.5	1.9000	86.6
1500.0	30.0	1.1726E+05	2.5	1.5475	0.5	0.1300	99.9
1500.0	150.0	2.3026E+04	2.5	1.5425	1.0	0.8700	101.3
2000.0	150.0	4.1652E+04	2.5	1.5500	1.0	0.4900	131.7
2500.0	150.0	6.5214E+04	2.5	1.5525	1.0	0.3500	147.0
3000.0	150.0	9.4312E+04	2.5	1.5800	1.0	0.3600	214.2

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 02, June, 1996
ST. No. : VES25
LATITUDE: 29° 43' 08"N
LONGITUDE: 34° 07' 48"E
ELEVATION: 663m

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5575	500.0	425	102.9
7.0	1.0	7.5399E+01	2.5	1.5550	250.0	100.5	48.7
10.0	1.0	1.5551E+02	2.5	1.5500	50.0	27.95	26.0
15.0	1.0	3.5186E+02	2.5	1.5500	25.0	10.025	22.8
20.0	1.0	6.2675E+02	2.5	1.5500	10.0	6.02	24.3
30.0	1.0	1.4121E+03	2.5	1.5500	5.0	2.91	26.5
30.0	5.0	2.7489E+02	2.5	1.5500	25.0	11.33	20.1
50.0	1.0	3.9254E+03	2.5	1.5500	2.5	1.00	25.3
50.0	5.0	7.7254E+02	2.5	1.5475	5.0	3.88	19.5
70.0	5.0	1.5315E+03	2.5	1.5500	2.5	1.66	16.4
100.0	5.0	3.1337E+03	2.5	1.5500	1.0	0.729	14.7
150.0	5.0	7.0607E+03	2.5	1.5500	0.5	0.311	14.2
150.0	30.0	1.1310E+03	2.5	1.5475	5.0	2.860	20.9
200.0	5.0	1.2559E+04	2.5	1.5475	0.5	0.145	14.8
200.0	30.0	2.0473E+03	2.5	1.5450	2.5	1.368	18.1
300.0	30.0	4.6653E+03	2.5	1.5475	1.0	0.614	18.5
500.0	30.0	1.3043E+04	2.5	1.5500	0.5	0.197	16.5
700.0	30.0	2.5609E+04	2.5	1.5475	0.5	0.136	19.1
1000.0	30.0	5.2313E+04	2.5	1.5475	0.5	0.0690	22.0
1000.0	150.0	1.0236E+04	2.5	1.5475	0.5	0.2740	18.1
1500.0	30.0	1.1726E+05	2.5	1.5475	0.5	0.0335	25.5
1500.0	150.0	2.3026E+04	2.5	1.5475	0.5	0.1450	21.9
2000.0	150.0	4.1652E+04	2.5	1.5500	0.5	0.0675	18.1
2500.0	150.0	6.5214E+04	2.5	1.5550	0.5	0.0575	24.2
3000.0	150.0	9.4312E+04	10.0	6.6500	0.5	0.1950	27.7

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 12, June, 1996
ST. No. : VES26
LATITUDE: 29° 34' 32"N
LONGITUDE: 34° 09' 52"E
ELEVATION: 587m

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5425	500.0	368.5	90.1
7.0	1.0	7.5398E+01	2.5	1.5650	250.0	95	45.8
10.0	1.0	1.5551E+02	2.5	1.5450	100.0	34.8	35.0
15.0	1.0	3.5186E+02	2.5	1.5475	25.0	9.525	21.7
20.0	1.0	6.2675E+02	2.5	1.5475	10.0	4.37	17.7
30.0	1.0	1.4121E+03	2.5	1.5475	5.0	1.57	14.3
30.0	5.0	2.7489E+02	2.5	1.5400	10.0	6.84	12.2
50.0	1.0	3.9254E+03	2.5	1.5500	1.0	0.48	12.3
50.0	5.0	7.7754E+02	2.5	1.5450	2.5	1.93	10.0
70.0	5.0	1.5315E+03	2.5	1.5550	2.5	1.65	10.3
100.0	5.0	3.1337E+03	2.5	1.5600	1.0	0.618	12.4
150.0	5.0	7.0607E+03	2.5	1.5575	0.5	0.329	14.9
150.0	30.0	1.1310E+03	2.5	1.5500	2.5	1.998	14.6
200.0	5.0	1.2559E+04	2.5	1.5575	0.5	0.197	15.8
200.0	30.0	2.0473E+03	2.5	1.5475	2.5	1.158	15.3
300.0	30.0	4.6653E+03	2.5	1.5550	1.0	0.572	17.2
500.0	30.0	1.3043E+04	2.5	1.5575	0.5	0.182	15.2
700.0	30.0	2.5609E+04	2.5	1.5525	0.5	0.106	17.5
1000.0	30.0	5.2313E+04	10.0	8.6900	0.5	0.4160	25.6
1000.0	150.0	1.0236E+04	10.0	8.6700	5.0	2.1500	25.4
1500.0	30.0	1.1726E+05	25.0	11.5250	1.0	0.4270	43.6
1500.0	150.0	2.3026E+04	25.0	11.4750	2.5	1.8250	33.1
2000.0	150.0	4.1652E+04	25.0	10.6500	2.5	1.2825	49.2
2500.0	150.0	6.5214E+04	25.0	11.0000	1.0	0.7100	42.1
3000.0	150.0	9.4312E+04	25.0	13.7500	0.5	0.6575	45.0

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 10, June, 1996 LATITUDE: 29° 24' 08"N ELEVATION: 263m
ST. No.: VES27 LONGITUDE: 34° 02' 36"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV=0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5625	5000.0	3455	833.3
7.0	1.0	7.5398E+01	2.5	1.5625	2500.0	1837.5	869.4
10.0	1.0	1.5551E+02	2.5	1.5600	1000.0	914	899.6
15.0	1.0	3.5186E+02	2.5	1.5725	1000.0	423	943.5
20.0	1.0	6.2675E+02	2.5	1.2550	500.0	182	908.9
30.0	1.0	1.4121E+03	2.5	1.5875	100.0	84.50	759.7
30.0	5.0	2.7439E+02	2.5	1.5500	500.0	317.00	562.2
50.0	1.0	3.9254E+03	2.5	1.2975	50.0	18.75	562.3
50.0	5.0	7.7754E+02	2.5	1.2625	100.0	74.00	422.3
70.0	5.0	1.5315E+03	2.5	1.5750	50.0	28.35	273.7
100.0	5.0	3.1337E+03	2.5	1.5375	10.0	4.110	80.6
150.0	5.0	7.0607E+03	2.5	1.6150	10.0	1.530	66.9
150.0	30.0	1.3310E+03	2.5	1.6025	25.0	11.450	80.8
200.0	5.0	1.2559E+04	2.5	1.6250	2.5	0.390	30.1
200.0	30.0	2.0473E+03	2.5	1.6350	5.0	3.825	47.9
300.0	30.0	4.6653E+03	2.5	1.6475	2.5	1.218	34.5
500.0	30.0	1.3043E+04	2.5	1.5750	0.5	0.282	23.3
700.0	30.0	2.5609E+04	2.5	1.9875	0.5	0.165	21.5
1000.0	30.0	5.2313E+04	2.5	1.6250	0.5	0.0825	26.6
1900.0	150.0	1.0236E+05	2.5	1.6225	1.0	0.4700	29.7
1500.0	30.0	1.1776E+05	5.0	2.3800	0.5	0.0335	18.6
1500.0	150.0	2.3326E+04	5.0	2.3650	1.0	0.2300	22.7
2000.0	150.0	4.1652E+04	2.5	1.6975	2.5	0.0825	22.8
2500.0	150.0	6.5214E+04	2.5	1.6050	0.5	0.0515	20.9
3000.0	150.0	9.4012E+04	2.5	0.7200	0.5	0.0250	32.6

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 10, June, 1996 LATITUDE: 29° 15' 31"N ELEVATION: 1,228m
ST. No.: VES28 LONGITUDE: 34° 03' 25"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV=0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5425	1000.0	685	167.4
7.0	1.0	7.5398E+01	2.5	1.5425	500.0	308	150.6
10.0	1.0	1.5551E+02	2.5	1.5420	250.0	164	107.9
15.0	1.0	3.5186E+02	2.5	1.5425	100.0	47.7	109.9
20.0	1.0	6.2675E+02	2.5	1.5400	25.0	13.65	80.6
30.0	1.0	1.4121E+03	2.5	1.5430	25.0	13.95	100.6
30.0	5.0	2.7439E+02	2.5	1.5375	50.0	42.50	76.0
50.0	1.0	3.9254E+03	2.5	1.5425	10.0	5.32	135.6
50.0	5.0	7.7754E+02	2.5	1.5375	25.0	20.30	132.7
70.0	5.0	1.5315E+03	2.5	1.5425	25.0	9.85	97.6
100.0	5.0	3.1337E+03	2.5	1.5425	5.0	3.010	61.7
150.0	5.0	7.0607E+03	2.5	1.5500	1.0	0.798	34.5
150.0	30.0	1.3310E+03	2.5	1.5450	5.0	2.755	70.2
200.0	5.0	1.2559E+04	2.5	1.5350	1.0	0.255	20.3
200.0	30.0	2.0473E+03	2.5	1.5725	5.0	4.585	73.6
300.0	30.0	4.6653E+03	2.5	1.5500	1.0	0.623	18.8
500.0	30.0	1.3043E+04	2.5	0.7300	0.5	0.073	13.0
700.0	30.0	2.5609E+04	2.5	1.5625	0.5	0.099	16.1
1000.0	30.0	5.2313E+04	25.0	10.8500	1.0	0.4080	19.7
1000.0	150.0	1.0236E+05	25.0	10.8000	5.0	2.4500	23.2
1500.0	30.0	1.1776E+05	50.0	12.4500	0.5	0.2300	25.0
1500.0	150.0	2.3326E+04	50.0	10.9000	5.0	2.2550	22.8
2000.0	150.0	4.1652E+04	10.0	6.0350	1.0	0.4300	29.7
2500.0	150.0	6.5214E+04	10.0	8.5000	1.0	0.4510	34.6
3000.0	150.0	9.4012E+04	10.0	5.1500	0.5	0.1600	29.2

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 10, June, 1996 LATITUDE: 29° 09' 14"N ELEVATION: 1,204m
ST. No.: VES29 LONGITUDE: 34° 02' 05"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV=0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5625	2500.0	1837.5	453.0
7.0	1.0	7.5398E+01	2.5	1.5625	2500.0	950	459.4
10.0	1.0	1.5551E+02	2.5	1.5600	1000.0	516	514.4
15.0	1.0	3.5186E+02	2.5	1.5600	500.0	292.5	569.5
20.0	1.0	6.2675E+02	2.5	1.5625	250.0	137	549.5
30.0	1.0	1.4121E+03	2.5	1.5625	100.0	52.90	478.4
30.0	5.0	2.7439E+02	2.5	1.5625	250.0	170.25	299.5
50.0	1.0	3.9254E+03	2.5	1.5625	25.0	18.50	288.9
50.0	5.0	7.7754E+02	2.5	1.5550	50.0	36.90	184.5
70.0	5.0	1.5315E+03	2.5	1.5575	25.0	33.03	128.1
100.0	5.0	3.1337E+03	2.5	1.5575	5.0	2.455	49.4
150.0	5.0	7.0607E+03	2.5	1.5525	1.0	0.509	23.1
150.0	30.0	1.3310E+03	2.5	1.5525	10.0	4.830	35.2
200.0	5.0	1.2559E+04	2.5	1.5525	0.5	0.138	11.1
200.0	30.0	2.0473E+03	2.5	1.5525	2.5	1.220	16.1
300.0	30.0	4.6653E+03	2.5	1.5525	1.0	0.421	12.7
500.0	30.0	1.3043E+04	2.5	1.5575	0.5	0.195	16.3
700.0	30.0	2.5609E+04	2.5	1.5550	0.5	0.110	18.0
1000.0	30.0	5.2313E+04	2.5	1.5575	0.5	0.0535	18.0
1000.0	150.0	1.0236E+04	2.5	1.5525	1.0	0.2750	18.1
1500.0	30.0	1.1776E+05	2.5	1.5525	0.5	0.0320	24.3
1500.0	150.0	2.3326E+04	2.5	1.5525	1.0	0.1650	24.8
2000.0	150.0	4.1652E+04	2.5	1.7950	0.5	0.1225	28.4
2500.0	150.0	6.5214E+04	25.0	8.9250	2.5	0.7600	52.0
3000.0	150.0	9.4012E+04	10.0	4.9300	2.5	0.3275	70.0

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 10, June, 1996 LATITUDE: 29° 40' 18"N ELEVATION: 565m
ST. No.: VES30 LONGITUDE: 33° 59' 47"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV=0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5525	1000.0	620	150.6
7.0	1.0	7.5398E+01	2.5	1.5475	500.0	379.5	82.5
10.0	1.0	1.5551E+02	2.5	1.5425	100.0	77.6	73.2
15.0	1.0	3.5186E+02	2.5	1.5425	50.0	30.35	69.2
20.0	1.0	6.2675E+02	2.5	1.5475	25.0	9.625	39.0
30.0	1.0	1.4121E+03	2.5	1.5450	10.0	4.71	43.0
30.0	5.0	2.7439E+02	2.5	1.5450	25.0	17.93	30.5
50.0	1.0	3.9254E+03	2.5	1.5500	5.0	0.87	22.0
50.0	5.0	7.7754E+02	2.5	1.5475	2.5	5.32	26.7
70.0	5.0	1.5315E+03	2.5	1.5500	5.0	2.29	22.6
100.0	5.0	3.1337E+03	2.5	1.5500	2.5	1.030	20.8
150.0	5.0	7.0607E+03	2.5	1.5550	1.0	0.457	23.6
150.0	30.0	1.3310E+03	2.5	1.5500	5.0	2.535	18.5
200.0	5.0	1.2559E+04	2.5	1.5525	0.5	0.295	23.5
200.0	30.0	2.0473E+03	2.5	1.5475	2.5	1.630	21.6
300.0	30.0	4.6653E+03	2.5	1.5525	1.0	0.690	19.8
500.0	30.0	1.3043E+04	2.5	1.5600	0.5	0.153	14.0
700.0	30.0	2.5609E+04	5.0	4.6000	0.5	0.194	12.4
1000.0	30.0	5.2313E+04	25.0	14.5750	0.5	0.2885	10.4
1000.0	150.0	1.0236E+04	25.0	12.0750	2.5	1.8600	15.8
1500.0	30.0	1.1776E+05	100.0	37.3000	1.0	0.4290	13.5
1500.0	150.0	2.3326E+04	50.0	40.9500	5.0	2.8950	15.5
2000.0	150.0	4.1652E+04	5.0	3.8050	0.5	0.1730	18.9
2500.0	150.0	6.5214E+04	50.0	22.4000	2.5	0.7750	22.6
3000.0	150.0	9.4012E+04	50.0	18.8500	2.5	0.5250	25.2

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 02, June, 1996 LATITUDE: 29° 48' 32"N ELEVATION: 393m
ST.No.: VES31 LONGITUDE: 33° 56' 33"E

AB/2 (m)	MN/2 (m)	k	CH1 CURRENT RANGE (mV)	CH1 CURRENT READINGS (mV÷0.1A)	CH2 POTENTIAL RANGE (mV)	CH2 POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω - m)
5.0	1.0	3.7699E+01	2.5	1.5450	100.0	34.2	8.3
7.0	1.0	7.5398E+01	2.5	1.5475	25.0	12.075	5.9
10.0	1.0	1.5551E+02	2.5	1.5425	10.0	5.44	5.5
15.0	1.0	3.5186E+02	2.5	1.5450	5.0	3.005	6.6
20.0	1.0	6.2675E+02	2.5	1.5450	2.5	1.6225	6.6
30.0	1.0	1.4121E+03	2.5	1.5450	1.0	0.75	6.9
30.0	5.0	2.7489E+02	2.5	1.5400	5.0	3.69	6.6
50.0	1.0	3.9254E+03	2.5	1.5450	0.5	0.34	6.7
50.0	5.0	7.7354E+02	2.5	1.5425	2.5	1.70	6.6
70.0	5.0	1.5315E+03	2.5	1.5450	2.5	1.04	10.3
100.0	5.0	3.1337E+03	2.5	1.5475	1.0	0.588	11.9
150.0	5.0	7.0607E+03	2.5	1.5475	0.5	0.351	16.0
150.0	30.0	1.1310E+03	2.5	1.5425	5.0	2.245	16.5
200.0	5.0	1.2559E+04	2.5	1.5450	0.5	0.219	17.7
200.0	30.0	2.0473E+03	2.5	1.5450	2.5	1.380	18.3
300.0	30.0	4.6653E+03	2.5	1.5450	1.0	0.908	21.1
500.0	30.0	1.3043E+04	2.5	1.5475	0.5	0.302	25.4
700.0	30.0	2.5609E+04	2.5	1.5475	0.5	0.172	28.4
1000.0	30.0	5.2313E+04	25.0	13.8250	1.0	0.5800	21.9
1000.0	150.0	1.0236E+04	25.0	13.8250	5.0	2.4750	18.3
1500.0	30.0	1.1778E+05	25.0	12.9250	1.0	0.2240	20.3
1500.0	150.0	2.3326E+04	25.0	12.9250	2.5	1.1200	20.1
2000.0	150.0	4.1652E+04	25.0	8.1250	1.0	0.4090	21.0
2500.0	150.0	6.5214E+04	25.0	10.4250	1.0	0.3520	22.1
3000.0	150.0	9.4012E+04	25.0	9.9250	1.0	0.2620	24.7

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 18, June, 1996 LATITUDE: 29° 35' 59"N ELEVATION: 615m
ST.No.: VES32 LONGITUDE: 33° 54' 42"E

AB/2 (m)	MN/2 (m)	k	CH1 CURRENT RANGE (mV)	CH1 CURRENT READINGS (mV÷0.1A)	CH2 POTENTIAL RANGE (mV)	CH2 POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω - m)
5.0	1.0	3.7699E+01	2.5	1.5500	1000.0	532	142.8
7.0	1.0	7.5398E+01	2.5	1.5425	500.0	293.5	143.5
10.0	1.0	1.5551E+02	2.5	1.5425	250.0	130	127.1
15.0	1.0	3.5186E+02	2.5	1.5425	50.0	39.55	87.2
20.0	1.0	6.2675E+02	2.5	1.5475	25.0	18	72.5
30.0	1.0	1.4121E+03	2.5	1.5475	10.0	4.52	41.2
30.0	5.0	2.7489E+02	2.5	1.5375	50.0	29.55	52.6
50.0	1.0	3.9254E+03	2.5	1.5450	1.0	0.87	22.1
50.0	5.0	7.7354E+02	2.5	1.5375	10.0	5.34	22.0
70.0	5.0	1.5315E+03	2.5	1.5450	5.0	2.43	24.7
100.0	5.0	3.1337E+03	2.5	1.5425	2.5	1.168	23.1
150.0	5.0	7.0607E+03	2.5	1.5550	2.5	0.510	23.2
150.0	30.0	1.1310E+03	2.5	1.5525	5.0	3.295	24.0
200.0	5.0	1.2559E+04	2.5	1.5400	1.0	0.417	34.0
200.0	30.0	2.0473E+03	2.5	1.5400	2.5	1.993	26.4
300.0	30.0	4.6653E+03	2.5	1.5550	2.5	1.003	30.1
500.0	30.0	1.3043E+04	2.5	1.5625	1.0	0.529	44.2
700.0	30.0	2.5609E+04	2.5	1.5575	0.5	0.240	39.5
1000.0	30.0	5.2313E+04	10.0	9.1600	1.0	0.4070	23.2
1000.0	150.0	1.0236E+04	10.0	9.1100	5.0	1.9150	21.5
1500.0	30.0	1.1778E+05	10.0	9.4000	0.5	0.1660	18.3
1500.0	150.0	2.3326E+04	10.0	9.3400	1.0	0.5370	14.8
2000.0	150.0	4.1652E+04	10.0	9.3800	1.0	0.3700	16.4
2500.0	150.0	6.5214E+04	5.0	2.5800	0.5	0.0975	22.1
3000.0	150.0	9.4012E+04	5.0	4.5450	0.5	0.0925	19.1

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 11, June, 1996 LATITUDE: 29° 33' 37"N ELEVATION: 780m
ST.No.: VES33 LONGITUDE: 33° 57' 18"E

AB/2 (m)	MN/2 (m)	k	CH1 CURRENT RANGE (mV)	CH1 CURRENT READINGS (mV÷0.1A)	CH2 POTENTIAL RANGE (mV)	CH2 POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω - m)
5.0	1.0	3.7699E+01	2.5	1.1725	25000.0	16475	5292.2
7.0	1.0	7.5398E+01	2.5	0.6900	5000.0	2975	3250.9
10.0	1.0	1.5551E+02	2.5	0.6175	1000.0	913	1543.8
15.0	1.0	3.5186E+02	2.5	0.5130	100.0	56.6	383.7
20.0	1.0	6.2675E+02	2.5	0.6710	25.0	16.475	153.9
30.0	1.0	1.4121E+03	2.5	0.9925	25.0	6.85	92.5
30.0	5.0	2.7489E+02	2.5	1.0475	100.0	31.90	83.7
50.0	1.0	3.9254E+03	2.5	1.5500	10.0	3.36	85.8
50.0	5.0	7.7354E+02	2.5	1.5450	25.0	14.03	70.6
70.0	5.0	1.5315E+03	2.5	1.5475	10.0	7.47	73.9
100.0	5.0	3.1337E+03	2.5	1.5500	10.0	4.080	82.5
150.0	5.0	7.0607E+03	2.5	1.5650	5.0	1.490	67.2
150.0	30.0	1.1310E+03	2.5	1.5575	25.0	9.750	70.2
200.0	5.0	1.2559E+04	2.5	0.9275	2.5	0.513	69.4
200.0	30.0	2.0473E+03	2.5	0.9525	10.0	3.600	77.4
300.0	30.0	4.6653E+03	2.5	1.1000	10.0	2.500	106.0
500.0	30.0	1.3043E+04	2.5	0.9400	2.5	1.113	154.4
700.0	30.0	2.5609E+04	2.5	1.5600	2.5	0.938	153.9
1000.0	30.0	5.2313E+04	5.0	2.4050	0.5	0.2250	61.7
1000.0	150.0	1.0236E+04	5.0	2.4950	2.5	1.7000	69.7
1500.0	30.0	1.1778E+05	5.0	2.4900	1.0	0.0890	42.1
1500.0	150.0	2.3326E+04	5.0	2.4500	1.0	0.4090	38.1
2000.0	150.0	4.1652E+04	0.5	0.2030	0.5	0.0175	35.9
2500.0	150.0	6.5214E+04	10.0	5.3200	1.0	0.2100	25.7
3000.0	150.0	9.4012E+04	10.0	4.0800	0.5	0.0745	17.2

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 06, June, 1996 LATITUDE: 29° 26' 31"N ELEVATION: 743m
ST.No.: VES34 LONGITUDE: 33° 56' 53"E

AB/2 (m)	MN/2 (m)	k	CH1 CURRENT RANGE (mV)	CH1 CURRENT READINGS (mV÷0.1A)	CH2 POTENTIAL RANGE (mV)	CH2 POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω - m)
5.0	1.0	3.7699E+01	2.5	1.5475	50.0	42.25	10.3
7.0	1.0	7.5398E+01	2.5	1.5475	50.0	19.25	9.4
10.0	1.0	1.5551E+02	2.5	1.5450	25.0	9.05	9.1
15.0	1.0	3.5186E+02	2.5	1.5475	10.0	4.2	9.5
20.0	1.0	6.2675E+02	2.5	1.5450	5.0	2.39	9.7
30.0	1.0	1.4121E+03	2.5	1.5450	2.5	1.27	11.6
30.0	5.0	2.7489E+02	2.5	1.5450	10.0	4.60	8.2
50.0	1.0	3.9254E+03	2.5	1.5425	1.0	0.57	14.4
50.0	5.0	7.7354E+02	2.5	1.5475	5.0	2.04	10.2
70.0	5.0	1.5315E+03	2.5	1.5475	2.5	1.25	12.3
100.0	5.0	3.1337E+03	2.5	1.5475	1.0	0.621	12.6
150.0	5.0	7.0607E+03	2.5	1.5450	0.5	0.287	13.1
150.0	30.0	1.1310E+03	2.5	1.5450	2.5	1.723	12.6
200.0	5.0	1.2559E+04	2.5	1.5450	0.5	0.845	11.8
200.0	30.0	2.0473E+03	2.5	1.5450	1.0	0.789	10.5
300.0	30.0	4.6653E+03	2.5	1.5450	1.0	0.381	11.5
500.0	30.0	1.3043E+04	2.5	1.5475	0.5	0.137	11.5
700.0	30.0	2.5609E+04	2.5	1.5500	0.5	0.070	11.6
1000.0	30.0	5.2313E+04	25.0	8.5000	0.5	0.1985	12.2
1000.0	150.0	1.0236E+04	25.0	8.5000	2.5	1.3025	15.7
1500.0	30.0	1.1778E+05	25.0	7.7250	0.5	0.0385	14.9
1500.0	150.0	2.3326E+04	25.0	7.5000	2.5	0.6050	18.8
2000.0	150.0	4.1652E+04	10.0	8.4100	1.0	0.4530	22.4
2500.0	150.0	6.5214E+04	10.0	7.6300	1.0	0.3400	29.1
3000.0	150.0	9.4012E+04	10.0	3.6800	0.5	0.1350	34.5

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 09 July 1996 LATITUDE: 29° 43' 44"N ELEVATION: 845m
ST.No.: VES35 LONGITUDE: 33° 41' 56"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV=0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5625	2500.0	980	236.4
7.0	1.0	7.5398E+01	2.5	1.5575	1000.0	531	257.1
10.0	1.0	1.5551E+02	2.5	1.5525	500.0	244.5	244.9
15.0	1.0	3.5188E+02	2.5	1.5475	250.0	94.75	215.4
20.0	1.0	6.2675E+02	2.5	1.5500	100.0	44.1	178.3
30.0	1.0	1.4121E+03	2.5	1.5475	25.0	12.00	109.5
30.0	5.0	2.7489E+02	2.5	1.5475	100.0	74.20	121.8
50.0	1.0	3.9254E+03	2.5	1.5775	2.5	1.49	37.1
50.0	5.0	7.7354E+02	2.5	1.5750	25.0	9.25	45.7
70.0	5.0	1.5315E+03	2.5	1.5500	5.0	3.28	32.4
100.0	5.0	3.1337E+03	2.5	1.5525	2.5	1.543	31.1
150.0	5.0	7.0607E+03	2.5	1.5525	1.0	0.690	31.4
150.0	30.0	1.1310E+03	2.5	1.5500	5.0	4.155	30.3
200.0	5.0	1.2559E+04	2.5	1.5600	2.5	0.260	21.1
200.0	30.0	2.0473E+03	2.5	1.5525	2.5	1.898	26.2
300.0	30.0	4.6053E+03	2.5	1.5575	1.0	0.620	18.6
500.0	30.0	1.3043E+04	2.5	1.5625	0.5	0.195	16.3
700.0	30.0	2.5609E+04	5.0	1.5575	0.5	0.081	13.2
1000.0	30.0	5.2313E+04	2.5	1.5550	0.5	0.0385	13.0
1000.0	150.0	1.0236E+04	2.5	1.5550	1.0	0.2030	33.4
1500.0	30.0	1.1726E+05	25.0	11.8000	1.0	0.1660	16.6
1500.0	150.0	2.3326E+04	25.0	11.8000	2.5	0.7500	14.8
2000.0	150.0	4.1652E+04	25.0	16.4000	2.5	0.7825	19.9
2500.0	150.0	6.5214E+04	5.0	3.5450	1.0	0.1625	29.9
3000.0	150.0	9.4012E+04	5.0	2.8000	0.5	0.1045	35.1

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 08 July 1996 LATITUDE: 29° 31' 53"N ELEVATION: 685m
ST.No.: VES36 LONGITUDE: 34° 44' 30"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV=0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5700	500.0	397.5	95.5
7.0	1.0	7.5398E+01	2.5	1.5700	500.0	215	103.5
10.0	1.0	1.5551E+02	2.5	1.5675	233.0	104.75	139.9
15.0	1.0	3.5188E+02	2.5	1.5650	100.0	54.2	121.9
20.0	1.0	6.2675E+02	2.5	1.5625	50.0	31.65	124.5
30.0	1.0	1.4121E+03	2.5	1.5650	25.0	18.30	122.0
30.0	5.0	2.7489E+02	2.5	1.5600	100.0	63.00	141.0
50.0	1.0	3.9254E+03	2.5	1.5625	10.0	4.34	110.4
50.0	5.0	7.7354E+02	2.5	1.5575	50.0	25.45	129.7
70.0	5.0	1.5315E+03	2.5	1.5450	25.0	19.13	160.9
100.0	5.0	3.1337E+03	2.5	1.5475	10.0	5.640	114.2
150.0	5.0	7.0607E+03	2.5	1.5425	2.5	1.388	69.5
150.0	30.0	1.1310E+03	2.5	1.5350	5.0	4.060	29.9
200.0	5.0	1.2559E+04	2.5	1.5450	0.5	0.231	18.7
200.0	30.0	2.0473E+03	2.5	1.5400	2.5	1.263	16.9
300.0	30.0	4.6053E+03	2.5	1.5575	1.0	0.415	12.5
500.0	30.0	1.3043E+04	2.5	1.5550	0.5	0.123	10.3
700.0	30.0	2.5609E+04	5.0	3.1600	0.5	0.095	7.7
1000.0	30.0	5.2313E+04	2.5	1.5650	0.5	0.0220	7.4
1000.0	150.0	1.0236E+04	2.5	1.5600	0.5	0.1100	7.2
1500.0	30.0	1.1726E+05	5.0	3.7600	0.5	0.0295	17.5
1500.0	150.0	2.3326E+04	2.5	1.5625	0.5	0.0040	14.0
2000.0	150.0	4.1652E+04	2.5	1.5550	0.5	0.0240	11.8
2500.0	150.0	6.5214E+04	10.0	6.5200	0.5	0.0350	13.5
3000.0	150.0	9.4012E+04	2.5	1.5650	0.5	0.0258	35.5

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 07 July 1996 LATITUDE: 29° 29' 59"N ELEVATION: 809m
ST.No.: VES37 LONGITUDE: 33° 47' 49"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV=0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5675	250.0	162.5	39.1
7.0	1.0	7.5398E+01	2.5	1.5650	100.0	69.5	33.5
10.0	1.0	1.5551E+02	2.5	1.5600	50.0	35.3	35.2
15.0	1.0	3.5188E+02	2.5	1.5600	25.0	19.575	44.2
20.0	1.0	6.2675E+02	2.5	1.5600	25.0	10.35	41.6
30.0	1.0	1.4121E+03	2.5	1.5675	10.0	4.46	49.2
30.0	5.0	2.7489E+02	2.5	1.5625	50.0	28.40	58.0
50.0	1.0	3.9254E+03	2.5	1.5600	2.5	0.90	22.7
50.0	5.0	7.7354E+02	2.5	1.5575	10.0	4.98	24.9
70.0	5.0	1.5315E+03	2.5	1.5575	5.0	2.14	21.0
100.0	5.0	3.1337E+03	2.5	1.5600	1.0	0.245	15.9
150.0	5.0	7.0607E+03	2.5	1.5650	0.5	0.326	14.7
150.0	30.0	1.1310E+03	2.5	1.5600	2.5	2.025	14.7
200.0	5.0	1.2559E+04	2.5	1.5650	0.5	0.177	14.2
200.0	30.0	2.0473E+03	2.5	1.5625	2.5	1.393	18.9
300.0	30.0	4.6053E+03	2.5	0.4800	0.5	0.149	14.4
500.0	30.0	1.3043E+04	2.5	1.5950	0.5	0.154	12.6
700.0	30.0	2.5609E+04	25.0	9.7000	1.0	0.530	14.0
1000.0	30.0	5.2313E+04	2.5	1.5800	2.5	0.0375	12.4
1000.0	150.0	1.0236E+04	2.5	1.5725	0.5	0.1900	11.7
1500.0	30.0	1.1726E+05	2.5	1.5725	0.5	0.0157	11.7
1500.0	150.0	2.3326E+04	2.5	1.5625	0.5	0.0625	9.3
2000.0	150.0	4.1652E+04	2.5	1.5775	0.5	0.0375	9.9
2500.0	150.0	6.5214E+04	5.0	2.9090	0.5	0.0548	12.1
3000.0	150.0	9.4012E+04	5.0	4.3590	0.5	0.0545	11.1

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 07 July 1996 LATITUDE: 29° 22' 31"N ELEVATION: 785m
ST.No.: VES38 LONGITUDE: 33° 43' 10"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV=0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5525	1000.0	431	104.7
7.0	1.0	7.5398E+01	2.5	1.5500	500.0	193.5	97.0
10.0	1.0	1.5551E+02	2.5	1.5500	100.0	82.6	82.9
15.0	1.0	3.5188E+02	2.5	1.5525	100.0	47.1	106.7
20.0	1.0	6.2675E+02	2.5	1.5500	50.0	29.5	103.1
30.0	1.0	1.4121E+03	2.5	1.5500	10.0	8.29	76.1
30.0	5.0	2.7489E+02	2.5	1.5500	50.0	37.65	85.7
50.0	1.0	3.9254E+03	2.5	1.5475	5.0	3.91	93.7
50.0	5.0	7.7354E+02	2.5	1.5475	25.0	16.40	82.4
70.0	5.0	1.5315E+03	2.5	1.5500	10.0	7.13	70.5
100.0	5.0	3.1337E+03	2.5	1.5550	5.0	3.175	64.0
150.0	5.0	7.0607E+03	2.5	1.5525	2.5	1.722	66.8
150.0	30.0	1.1310E+03	2.5	1.5525	10.0	8.760	63.4
200.0	5.0	1.2559E+04	2.5	1.5600	1.0	0.447	36.0
200.0	30.0	2.0473E+03	2.5	1.5550	5.0	3.040	40.0
300.0	30.0	4.6053E+03	2.5	1.5575	1.0	0.635	19.0
500.0	30.0	1.3043E+04	2.5	1.5575	0.5	0.128	10.7
700.0	30.0	2.5609E+04	2.5	1.5575	0.5	0.077	12.7
1000.0	30.0	5.2313E+04	5.0	4.1700	0.5	0.1049	13.0
1000.0	150.0	1.0236E+04	5.0	4.1800	1.0	0.4390	10.8
1500.0	30.0	1.1726E+05	5.0	4.6350	0.5	0.0945	24.0
1500.0	150.0	2.3326E+04	5.0	4.6450	1.0	0.4500	23.1
2000.0	150.0	4.1652E+04	10.0	7.2500	1.0	0.4320	24.9
2500.0	150.0	6.5214E+04	5.0	2.8750	1.0	0.1400	31.8
3000.0	150.0	9.4012E+04	25.0	10.8250	1.0	0.4150	33.2

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE : 07, July, 1996 — LATITUDE : 29° 32' 05"N — ELEVATION : 930m
ST. No. : VES39 — LONGITUDE : 33° 46' 46"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV÷0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5600	5000.0	2500	694.2
7.0	1.0	7.5398E+01	2.5	1.5690	1000.0	228	351.9
10.0	1.0	1.5551E+02	2.5	1.5525	250.0	202.25	202.6
15.0	1.0	3.5186E+02	2.5	1.5525	100.0	61.9	140.3
20.0	1.0	6.2675E+02	2.5	1.5500	50.0	36.6	148.0
30.0	1.0	1.4121E+03	2.5	1.5450	25.0	18.23	143.3
30.0	5.0	2.7489E+02	2.5	1.5425	100.0	78.90	140.6
50.0	1.0	3.9254E+03	2.5	1.5425	10.0	5.60	144.5
50.0	5.0	7.7254E+02	2.5	1.5375	50.0	27.05	136.8
70.0	5.0	1.5315E+03	2.5	1.5375	50.0	12.08	120.3
100.0	5.0	3.1337E+03	2.5	1.5400	5.0	3.450	70.2
150.0	5.0	7.0607E+03	2.5	1.5400	2.5	1.200	55.0
150.0	30.0	1.1310E+03	2.5	1.5400	10.0	7.210	56.6
200.0	5.0	1.2559E+04	2.5	1.5400	2.5	0.483	39.3
200.0	30.0	2.0473E+03	2.5	1.5375	2.5	1.923	25.6
300.0	30.0	4.6953E+03	2.5	1.5525	1.0	0.635	19.1
500.0	30.0	1.3043E+04	2.5	1.5590	0.5	0.197	15.5
700.0	30.0	2.5609E+04	2.5	1.5575	0.5	0.106	17.4
1000.0	30.0	5.2313E+04	2.5	1.5525	0.5	0.0483	15.6
1000.0	150.0	1.0236E+04	2.5	1.5425	0.5	0.2390	15.9
1500.0	30.0	1.1776E+05	2.5	1.5550	0.5	0.0253	19.2
1500.0	150.0	2.3326E+04	2.5	1.5500	0.5	0.1250	18.8
2000.0	150.0	4.1652E+04	2.5	1.5525	1.0	0.0640	22.5
2500.0	150.0	6.5214E+04	2.5	1.5600	0.5	0.0525	24.0
3000.0	150.0	9.4012E+04	2.5	1.5550	1.0	0.0570	34.5

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE : 02, July, 1996 — LATITUDE : 29° 11' 09"N — ELEVATION 1,033m
ST. No. : VES40 — LONGITUDE : 33° 33' 03"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV÷0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5525	500.0	414.5	100.7
7.0	1.0	7.5398E+01	2.5	1.5525	250.0	123.25	59.9
10.0	1.0	1.5551E+02	2.5	1.5525	50.0	35.35	35.4
15.0	1.0	3.5186E+02	2.5	1.5550	10.0	8.51	19.3
20.0	1.0	6.2675E+02	2.5	1.5700	10.0	4.49	17.9
30.0	1.0	1.4121E+03	2.5	1.5525	5.0	2.61	23.7
30.0	5.0	2.7489E+02	2.5	1.5525	25.0	93.50	23.9
50.0	1.0	3.9254E+03	2.5	1.5525	2.5	1.49	37.7
50.0	5.0	7.7254E+02	2.5	1.5525	25.0	8.20	41.1
70.0	5.0	1.5315E+03	2.5	1.5550	10.0	6.05	59.6
100.0	5.0	3.1337E+03	2.5	1.5900	5.0	2.750	54.2
150.0	5.0	7.0607E+03	2.5	1.5825	2.5	1.405	62.7
150.0	30.0	1.1310E+03	2.5	1.5755	10.0	8.180	58.7
200.0	5.0	1.2559E+04	2.5	1.5950	2.5	0.868	68.3
200.0	30.0	2.0473E+03	2.5	1.6000	10.0	4.590	58.7
300.0	30.0	4.6953E+03	2.5	1.5725	5.0	2.165	64.0
500.0	30.0	1.3043E+04	2.5	1.5875	2.5	0.938	77.0
700.0	30.0	2.5609E+04	1.0	0.4060	0.5	0.133	83.9
1000.0	30.0	5.2313E+04	1.0	0.4870	0.5	0.0800	84.2
1000.0	150.0	1.0236E+04	1.0	0.4530	1.0	0.3500	73.4
1500.0	30.0	1.1776E+05	2.5	1.4525	0.5	0.1000	84.1
1500.0	150.0	2.3326E+04	2.5	1.3450	1.0	0.4650	80.6
2000.0	150.0	4.1652E+04	2.5	1.5875	1.0	0.4000	105.0
2500.0	150.0	6.5214E+04	2.5	1.6225	0.5	0.2800	117.5
3000.0	150.0	9.4012E+04	2.5	1.2750	0.5	0.1850	136.4

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE : 18, July, 1996 — LATITUDE : 29° 20' 54"N — ELEVATION : 872m
ST. No. : VES41 — LONGITUDE : 34° 21' 35"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV÷0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5475	500.0	276	67.2
7.0	1.0	7.5398E+01	2.5	1.5475	250.0	136	66.3
10.0	1.0	1.5551E+02	2.5	1.5450	100.0	42.2	42.5
15.0	1.0	3.5186E+02	2.5	1.5475	25.0	10.575	24.0
20.0	1.0	6.2675E+02	2.5	1.5525	10.0	2.13	28.8
30.0	1.0	1.4121E+03	2.5	1.5500	10.0	4.50	41.0
30.0	5.0	2.7489E+02	2.5	1.5475	25.0	19.23	34.2
50.0	1.0	3.9254E+03	2.5	1.5525	5.0	2.55	64.3
50.0	5.0	7.7254E+02	2.5	1.5500	25.0	10.63	53.3
70.0	5.0	1.5315E+03	2.5	1.5600	10.0	6.82	67.0
100.0	5.0	3.1337E+03	2.5	1.5525	10.0	3.840	77.5
150.0	5.0	7.0607E+03	2.5	1.5550	5.0	1.590	72.2
150.0	30.0	1.1310E+03	2.5	1.5725	10.0	6.100	62.9
200.0	5.0	1.2559E+04	2.5	1.5625	1.0	0.554	44.5
200.0	30.0	2.0473E+03	2.5	1.5575	10.0	3.400	44.7
300.0	30.0	4.6953E+03	2.5	1.5825	2.5	1.175	34.6
500.0	30.0	1.3043E+04	2.5	1.5725	2.5	0.575	47.2
700.0	30.0	2.5609E+04	2.5	1.5725	1.0	0.280	45.6
1000.0	30.0	5.2313E+04	2.5	1.5625	0.5	0.1800	59.5
1000.0	150.0	1.0236E+04	2.5	1.5750	2.5	0.9500	61.7
1500.0	30.0	1.1776E+05	2.5	1.5825	0.5	0.0850	63.3
1500.0	150.0	2.3326E+04	2.5	1.5750	1.0	0.4000	72.6
2000.0	150.0	4.1652E+04	2.5	1.5725	1.0	0.4200	111.2
2500.0	150.0	6.5214E+04	2.5	1.5775	1.0	0.3250	134.4
3000.0	150.0	9.4012E+04	2.5	1.5725	1.0	0.2900	173.4

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE : 01, June, 1996 — LATITUDE : 29° 53' 05"N — ELEVATION : 434m
ST. No. : VES42 — LONGITUDE : 33° 45' 56"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV÷0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5625	50.0	32.2	7.8
7.0	1.0	7.5398E+01	2.5	1.5625	25.0	16	7.7
10.0	1.0	1.5551E+02	2.5	1.5575	10.0	7.18	7.2
15.0	1.0	3.5186E+02	2.5	1.5575	5.0	3.07	6.9
20.0	1.0	6.2675E+02	2.5	1.5550	2.5	1.62	6.5
30.0	1.0	1.4121E+03	2.5	1.5525	1.0	0.72	6.5
30.0	5.0	2.7489E+02	2.5	1.5525	5.0	3.56	6.3
50.0	1.0	3.9254E+03	2.5	1.5950	0.5	0.39	4.9
50.0	5.0	7.7254E+02	2.5	1.5500	1.0	0.94	4.7
70.0	5.0	1.5315E+03	2.5	1.5500	1.0	0.44	4.4
100.0	5.0	3.1337E+03	2.5	1.5590	0.5	0.211	4.3
150.0	5.0	7.0607E+03	2.5	1.5500	0.5	0.101	4.6
150.0	30.0	1.1310E+03	2.5	1.5500	1.0	0.690	5.0
200.0	5.0	1.2559E+04	2.5	1.5500	0.5	0.056	4.5
200.0	30.0	2.0473E+03	2.5	1.5475	0.5	0.384	5.1
300.0	30.0	4.6953E+03	2.5	1.5525	0.5	0.223	6.7
500.0	30.0	1.3043E+04	2.5	1.5500	0.5	0.139	11.7
700.0	30.0	2.5609E+04	2.5	1.5500	0.5	0.115	89.0
1000.0	30.0	5.2313E+04	2.5	1.5500	0.5	0.0625	21.1
1000.0	150.0	1.0236E+04	2.5	1.5475	1.0	0.2440	16.1
1500.0	30.0	1.1776E+05	2.5	1.5525	0.5	0.0240	18.2
1500.0	150.0	2.3326E+04	2.5	1.5450	0.5	0.0550	14.5
2000.0	150.0	4.1652E+04	2.5	1.5500	0.5	0.0650	22.6
2500.0	150.0	6.5214E+04	2.5	1.5475	0.5	0.0780	32.5
3000.0	150.0	9.4012E+04	2.5	1.5525	0.5	0.0710	43.0

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 17, July, 1996 LATITUDE: 29° 47' 57"N ELEVATION: 468m
ST.No.: VES43 LONGITUDE: 33° 37' 30"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV÷0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5500	1000.0	409	99.5
7.0	1.0	7.5398E+01	2.5	1.5500	500.0	351.5	73.7
10.0	1.0	1.5551E+02	2.5	1.5500	100.0	43.8	42.9
15.0	1.0	3.5186E+02	2.5	1.5500	25.0	13	29.5
20.0	1.0	6.2675E+02	2.5	1.5500	10.0	4.54	18.4
30.0	1.0	1.4121E+03	2.5	1.5500	2.5	1.10	10.0
30.0	5.0	2.7489E+02	2.5	1.5475	10.0	4.31	7.7
50.0	1.0	3.9254E+03	2.5	1.5475	0.5	0.28	2.0
50.0	5.0	7.7754E+02	2.5	1.5475	2.5	0.98	4.9
70.0	5.0	1.5315E+03	2.5	1.5475	1.0	0.47	4.7
100.0	5.0	3.1337E+03	2.5	1.5500	0.5	0.229	4.6
150.0	5.0	7.0602E+03	2.5	1.5500	0.5	0.109	4.9
150.0	30.0	1.1310E+03	2.5	1.5500	1.0	0.664	4.8
200.0	5.0	1.2559E+04	2.5	1.5590	0.5	0.095	4.7
200.0	30.0	2.0473E+03	2.5	1.5475	0.5	0.352	4.7
300.0	30.0	4.6853E+03	2.5	1.5575	0.5	0.134	4.0
500.0	30.0	1.3043E+04	2.5	1.5525	0.5	0.084	7.1
700.0	30.0	2.5609E+04	25.0	6.5500	0.5	0.215	8.4
1000.0	30.0	5.2313E+04	10.0	6.4800	0.5	0.1305	10.5
1000.0	150.0	1.0236E+04	10.0	6.4700	2.5	0.8075	32.8
1500.0	30.0	1.1776E+05	10.0	8.2000	0.5	0.1095	15.7
1500.0	150.0	2.3326E+04	10.0	8.2000	2.5	0.7800	22.2
2000.0	150.0	4.1652E+04	25.0	9.9750	2.5	0.6425	26.8
2500.0	150.0	6.5214E+04	10.0	8.1100	2.5	0.5675	45.6
3000.0	150.0	9.4012E+04	25.0	14.6000	2.5	0.8750	43.5

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 17, July, 1996 LATITUDE: 29° 42' 59"N ELEVATION: 410m
ST.No.: VES44 LONGITUDE: 33° 33' 28"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV÷0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5575	250.0	104.5	25.1
7.0	1.0	7.5398E+01	2.5	1.5550	100.0	63.2	31.5
10.0	1.0	1.5551E+02	2.5	1.5425	50.0	32.25	33.0
15.0	1.0	3.5186E+02	2.5	1.5400	25.0	14.925	31.1
20.0	1.0	6.2675E+02	2.5	1.5550	10.0	8.95	36.0
30.0	1.0	1.4121E+03	2.5	1.5400	10.0	3.71	31.0
30.0	5.0	2.7489E+02	2.5	1.5325	25.0	15.03	27.0
50.0	1.0	3.9254E+03	2.5	1.5425	2.5	0.62	15.6
50.0	5.0	7.7754E+02	2.5	1.5350	5.0	3.50	17.7
70.0	5.0	1.5315E+03	2.5	1.5475	2.5	1.27	12.6
100.0	5.0	3.1337E+03	2.5	1.5350	1.0	0.470	9.6
150.0	5.0	7.0602E+03	2.5	1.5475	0.5	0.249	11.3
150.0	30.0	1.1310E+03	2.5	1.5350	2.5	1.250	9.2
200.0	5.0	1.2559E+04	25.0	15.3500	1.0	1.360	11.1
200.0	30.0	2.0473E+03	25.0	15.3500	10.0	6.050	8.1
300.0	30.0	4.6853E+03	2.5	1.5500	1.0	0.295	9.0
500.0	30.0	1.3043E+04	2.5	1.5500	0.5	0.085	7.2
700.0	30.0	2.5609E+04	10.0	6.8800	1.0	0.290	8.4
1000.0	30.0	5.2313E+04	10.0	6.5200	1.0	0.1310	10.6
1000.0	150.0	1.0236E+04	10.0	6.9000	5.0	1.6000	18.3
1500.0	30.0	1.1776E+05	25.0	31.6000	1.0	0.3003	30.5
1500.0	150.0	2.3326E+04	10.0	4.9200	2.5	0.7325	34.2
2000.0	150.0	4.1652E+04	10.0	7.0800	2.5	0.8175	48.1
2500.0	150.0	6.5214E+04	2.5	1.5500	1.0	0.1365	58.3
3000.0	150.0	9.4012E+04	50.0	24.5800	5.0	2.6950	103.1

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 10, July, 1996 LATITUDE: 29° 36' 12"N ELEVATION: 508m
ST.No.: VES45 LONGITUDE: 33° 28' 43"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV÷0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5575	1000.0	422	103.1
7.0	1.0	7.5398E+01	2.5	1.5575	500.0	249.5	116.4
10.0	1.0	1.5551E+02	2.5	1.5550	250.0	91.25	91.3
15.0	1.0	3.5186E+02	2.5	1.5550	50.0	18.65	42.2
20.0	1.0	6.2675E+02	2.5	1.5550	10.0	6.12	24.7
30.0	1.0	1.4121E+03	2.5	1.5550	5.0	1.95	17.8
30.0	5.0	2.7489E+02	2.5	1.5525	10.0	8.58	15.2
50.0	1.0	3.9254E+03	2.5	1.5550	1.0	0.69	17.4
50.0	5.0	7.7754E+02	2.5	1.5525	5.0	2.88	14.4
70.0	5.0	1.5315E+03	2.5	1.5550	5.0	1.65	16.2
100.0	5.0	3.1337E+03	2.5	1.5525	2.5	0.858	17.3
150.0	5.0	7.0602E+03	2.5	1.5525	1.0	0.292	13.3
150.0	30.0	1.1310E+03	2.5	1.5550	2.5	1.785	13.0
200.0	5.0	1.2559E+04	2.5	1.5575	0.5	0.149	12.0
200.0	30.0	2.0473E+03	2.5	1.5525	2.5	0.800	10.5
300.0	30.0	4.6853E+03	2.5	1.5525	1.0	0.294	7.6
500.0	30.0	1.3043E+04	2.5	1.5550	0.5	0.091	7.6
700.0	30.0	2.5609E+04	5.0	1.5575	0.5	0.059	9.7
1000.0	30.0	5.2313E+04	2.5	1.5500	0.5	0.0434	14.6
1000.0	150.0	1.0236E+04	2.5	1.5500	1.0	0.3050	20.1
1500.0	30.0	1.1776E+05	10.0	6.6400	0.5	0.0916	23.2
1500.0	150.0	2.3326E+04	10.0	6.6300	1.0	0.4450	22.4
2000.0	150.0	4.1652E+04	2.5	1.4900	0.5	0.0705	19.7
2500.0	150.0	6.5214E+04	2.5	1.5575	0.5	0.0950	35.6
3000.0	150.0	9.4012E+04	2.5	1.5575	0.5	0.0925	58.9

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
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SCHLUMBERGER METHOD
DATE: 04, July, 1996 LATITUDE: 29° 31' 06"N ELEVATION: 266m
ST.No.: VES46 LONGITUDE: 33° 31' 53"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV÷0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5475	1000.0	541	131.6
7.0	1.0	7.5398E+01	2.5	1.5475	500.0	319	155.4
10.0	1.0	1.5551E+02	2.5	1.5475	250.0	175.5	176.4
15.0	1.0	3.5186E+02	2.5	1.5500	100.0	66.4	105.3
20.0	1.0	6.2675E+02	2.5	1.5500	25.0	16.8	67.9
30.0	1.0	1.4121E+03	2.5	1.5475	10.0	7.60	69.4
30.0	5.0	2.7489E+02	2.5	1.5450	50.0	49.40	71.9
50.0	1.0	3.9254E+03	2.5	1.5500	2.5	1.29	32.7
50.0	5.0	7.7754E+02	2.5	1.5475	10.0	6.61	34.2
70.0	5.0	1.5315E+03	2.5	1.5550	10.0	3.68	39.2
100.0	5.0	3.1337E+03	2.5	1.5525	2.5	1.408	28.4
150.0	5.0	7.0602E+03	2.5	1.5550	1.0	0.345	15.7
150.0	30.0	1.1310E+03	2.5	1.5550	2.5	1.673	12.2
200.0	5.0	1.2559E+04	2.5	1.5575	0.5	0.139	11.2
200.0	30.0	2.0473E+03	2.5	1.5575	1.0	0.624	8.2
300.0	30.0	4.6853E+03	2.5	1.5725	0.5	0.251	8.3
500.0	30.0	1.3043E+04	2.5	1.5650	0.5	0.120	10.0
700.0	30.0	2.5609E+04	2.5	1.5675	0.5	0.079	12.6
1000.0	30.0	5.2313E+04	2.5	1.5650	0.5	0.0590	19.7
1000.0	150.0	1.0236E+04	2.5	1.5625	1.0	0.2930	19.0
1500.0	30.0	1.1776E+05	2.5	1.5675	0.5	0.0490	39.4
1500.0	150.0	2.3326E+04	2.5	1.5600	0.5	0.1335	29.0
2000.0	150.0	4.1652E+04	2.5	1.5725	0.5	0.1500	50.2
2500.0	150.0	6.5214E+04	2.5	1.5250	0.5	0.1300	74.5
3000.0	150.0	9.4012E+04	2.5	1.5875	0.5	0.2050	121.6

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
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SCHLUMBERGER METHOD
DATE: 04 July, 1996 LATITUDE: 29° 18' 04"N ELEVATION: 1,025m
ST.No.: VES47 LONGITUDE: 33° 34' 59"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5525	2500.0	820	211.3
7.0	1.0	7.5398E+01	2.5	1.5500	250.0	195	95.3
10.0	1.0	1.5551E+02	2.5	1.5475	100.0	46.7	45.9
15.0	1.0	3.5186E+02	2.5	1.5375	25.0	9.475	21.5
20.0	1.0	6.2875E+02	2.5	1.5500	10.0	4.69	19.0
30.0	1.0	1.4121E+03	2.5	1.5450	25.0	1.40	12.8
30.0	5.0	2.7499E+02	2.5	1.5450	10.0	6.35	11.3
50.0	1.0	3.9254E+03	2.5	1.5450	0.5	0.31	7.9
50.0	5.0	2.7754E+02	2.5	1.5450	2.5	1.40	7.0
70.0	5.0	1.5315E+03	2.5	1.5450	1.0	0.69	6.9
100.0	5.0	3.1337E+03	2.5	1.5475	1.0	0.412	8.3
150.0	5.0	7.0607E+03	2.5	1.5475	0.5	0.226	10.3
150.0	30.0	1.1310E+03	2.5	1.5475	2.5	1.550	11.3
200.0	5.0	1.2559E+04	2.5	1.5450	0.5	0.338	11.2
200.0	30.0	2.0473E+03	2.5	1.5450	2.5	1.013	13.4
300.0	30.0	4.6653E+03	2.5	1.5525	2.5	0.580	17.4
500.0	30.0	1.3043E+04	2.5	1.5500	0.5	0.279	23.4
700.0	30.0	2.5609E+04	2.5	1.5500	0.5	0.152	25.1
1000.0	30.0	5.2313E+04	2.5	1.5525	0.5	0.1134	38.2
1000.0	150.0	1.0236E+04	2.5	1.5525	1.0	0.5670	37.4
1500.0	30.0	1.1776E+05	2.5	0.2700	0.5	0.0209	31.9
1500.0	150.0	2.3326E+04	2.5	0.5000	0.5	0.1000	39.5
2000.0	150.0	4.1652E+04	2.5	1.5500	0.5	0.2250	60.5
2500.0	150.0	6.5214E+04	2.5	1.5300	0.5	0.1150	72.2
3000.0	150.0	9.4012E+04	2.5	1.5600	0.5	0.1525	91.9

SOUTH SINAI GROUNDWATER RESOURCES STUDY
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SCHLUMBERGER METHOD
DATE: 03 June, 1996 LATITUDE: 29° 56' 26"N ELEVATION: 373m
ST.No.: VES48 LONGITUDE: 33° 32' 14"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5425	100.0	62.2	15.2
7.0	1.0	7.5398E+01	2.5	1.5475	50.0	23.6	11.8
10.0	1.0	1.5551E+02	2.5	1.5450	25.0	12.5	12.8
15.0	1.0	3.5186E+02	2.5	1.5475	10.0	6.23	11.2
20.0	1.0	6.2875E+02	2.5	1.5450	5.0	2.595	14.6
30.0	1.0	1.4121E+03	2.5	1.5450	2.5	1.40	12.8
30.0	5.0	2.7499E+02	2.5	1.5450	10.0	5.00	8.8
50.0	1.0	3.9254E+03	2.5	1.5425	1.0	0.47	12.0
50.0	5.0	2.7754E+02	2.5	1.5450	2.5	1.70	8.5
70.0	5.0	1.5315E+03	2.5	1.5475	1.0	0.74	7.3
100.0	5.0	3.1337E+03	2.5	1.5500	1.0	0.382	6.9
150.0	5.0	7.0607E+03	2.5	1.5500	0.5	0.159	7.2
150.0	30.0	1.1310E+03	2.5	1.5450	2.5	1.078	7.5
200.0	5.0	1.2559E+04	2.5	1.5500	0.5	0.086	6.9
200.0	30.0	2.0473E+03	2.5	1.5475	1.0	0.810	8.1
300.0	30.0	4.6653E+03	2.5	1.5500	0.5	0.393	9.1
500.0	30.0	1.3043E+04	2.5	1.5500	0.5	0.137	11.5
700.0	30.0	2.5609E+04	2.5	1.5500	0.5	0.058	14.5
1000.0	30.0	5.2313E+04	50.0	24.2000	2.5	0.9200	19.9
1000.0	150.0	1.0236E+04	10.0	8.4700	5.0	1.5200	18.4
1500.0	30.0	1.1776E+05	25.0	9.0750	0.5	0.2050	26.6
1500.0	150.0	2.3326E+04	25.0	9.0750	2.5	0.9675	24.9
2000.0	150.0	4.1652E+04	10.0	7.1700	1.0	0.4830	29.3
2500.0	150.0	6.5214E+04	25.0	8.5750	1.0	0.4830	36.7
3000.0	150.0	9.4012E+04	25.0	8.6000	1.0	0.3970	43.4

SOUTH SINAI GROUNDWATER RESOURCES STUDY
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SCHLUMBERGER METHOD
DATE: 11 July, 1996 LATITUDE: 29° 45' 38"N ELEVATION: 413m
ST.No.: VES49 LONGITUDE: 33° 30' 54"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5450	250.0	143	34.9
7.0	1.0	7.5398E+01	2.5	1.5450	100.0	76.8	37.5
10.0	1.0	1.5551E+02	2.5	1.5400	50.0	39.05	39.4
15.0	1.0	3.5186E+02	2.5	1.5350	25.0	15.7	36.0
20.0	1.0	6.2875E+02	2.5	1.5325	10.0	7.31	29.1
30.0	1.0	1.4121E+03	2.5	1.5375	5.0	1.80	18.5
30.0	5.0	2.7499E+02	2.5	1.5350	10.0	9.05	16.2
50.0	1.0	3.9254E+03	2.5	1.5350	0.5	0.41	10.5
50.0	5.0	2.7754E+02	2.5	1.5350	2.5	2.05	10.4
70.0	5.0	1.5315E+03	2.5	1.5500	2.5	0.91	9.0
100.0	5.0	3.1337E+03	2.5	1.5400	1.0	0.454	9.2
150.0	5.0	7.0607E+03	2.5	1.5400	0.5	0.160	7.3
150.0	30.0	1.1310E+03	2.5	1.5400	2.5	0.918	8.7
200.0	5.0	1.2559E+04	2.5	1.5450	0.5	0.810	8.9
200.0	30.0	2.0473E+03	2.5	1.5400	1.0	0.419	5.6
300.0	30.0	4.6653E+03	2.5	1.5475	0.5	0.188	5.1
500.0	30.0	1.3043E+04	25.0	12.5060	2.5	0.425	4.6
700.0	30.0	2.5609E+04	25.0	10.5250	1.0	0.372	9.1
1000.0	30.0	5.2313E+04	10.0	4.0150	1.0	0.1150	15.0
1000.0	150.0	1.0236E+04	10.0	4.4500	2.5	0.5250	12.1
1500.0	30.0	1.1776E+05	2.5	1.5675	0.5	0.0355	26.7
1500.0	150.0	2.3326E+04	2.5	1.5400	0.5	0.1475	22.3
2000.0	150.0	4.1652E+04	25.0	9.8000	2.5	0.6900	25.5
2500.0	150.0	6.5214E+04	25.0	12.2500	2.5	0.5425	28.9
3000.0	150.0	9.4012E+04	25.0	10.1250	2.5	0.3700	34.4

SOUTH SINAI GROUNDWATER RESOURCES STUDY
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SCHLUMBERGER METHOD
DATE: 03 June, 1996 LATITUDE: 29° 59' 19"N ELEVATION: 426m
ST.No.: VES50 LONGITUDE: 33° 23' 17"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5525	1000.0	647	157.1
7.0	1.0	7.5398E+01	2.5	1.5525	500.0	320	155.6
10.0	1.0	1.5551E+02	2.5	1.5500	250.0	135.25	135.7
15.0	1.0	3.5186E+02	2.5	1.5500	100.0	57.8	131.2
20.0	1.0	6.2875E+02	2.5	1.5425	50.0	26	81.0
30.0	1.0	1.4121E+03	2.5	1.5500	5.0	3.53	32.1
30.0	5.0	2.7499E+02	2.5	1.5450	25.0	14.63	26.0
50.0	1.0	3.9254E+03	2.5	1.5425	1.0	0.50	12.8
50.0	5.0	2.7754E+02	2.5	1.5425	2.5	1.95	9.9
70.0	5.0	1.5315E+03	2.5	1.5500	1.0	0.78	7.7
100.0	5.0	3.1337E+03	2.5	1.5475	0.5	0.363	7.4
150.0	5.0	7.0607E+03	2.5	1.5475	0.5	0.209	9.5
150.0	30.0	1.1310E+03	2.5	1.5475	2.5	1.248	9.1
200.0	5.0	1.2559E+04	2.5	1.5450	0.5	0.132	10.7
200.0	30.0	2.0473E+03	2.5	1.5450	1.0	0.777	10.3
300.0	30.0	4.6653E+03	2.5	1.5475	1.0	0.434	13.1
500.0	30.0	1.3043E+04	2.5	1.5450	0.5	0.213	18.4
700.0	30.0	2.5609E+04	2.5	1.5500	0.5	0.133	21.9
1000.0	30.0	5.2313E+04	25.0	1.5525	0.5	0.0690	29.7
1000.0	150.0	1.0236E+04	25.0	1.5475	1.0	0.3440	22.8
1500.0	30.0	1.1776E+05	25.0	1.5475	0.5	0.0590	44.9
1500.0	150.0	2.3326E+04	25.0	1.5475	0.5	0.2720	41.0
2000.0	150.0	4.1652E+04	25.0	1.5475	0.5	0.1630	43.1
2500.0	150.0	6.5214E+04	25.0	1.5475	0.5	0.1065	44.9
3000.0	150.0	9.4012E+04	25.0	1.5500	0.5	0.0900	48.5

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
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SCHLUMBERGER METHOD
DATE: 15, July, 1996 LATITUDE: 29° 51' 09"N ELEVATION: 238m
ST.No.: VES51 LONGITUDE: 33° 21' 04"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5450	250.0	155.5	40.4
7.0	1.0	7.5398E+01	2.5	1.5500	100.0	63.2	30.7
10.0	1.0	1.5551E+02	2.5	1.5600	50.0	24.9	24.8
15.0	1.0	3.5186E+02	2.5	1.5450	10.0	5.90	13.0
20.0	1.0	6.2675E+02	2.5	1.5400	10.0	2.92	11.9
30.0	1.0	1.4121E+03	2.5	1.5500	2.5	1.06	9.6
30.0	5.0	2.7489E+02	2.5	1.5425	10.0	5.30	9.4
50.0	1.0	3.9254E+03	2.5	1.5475	1.0	0.31	8.0
50.0	5.0	7.7254E+02	2.5	1.5400	2.5	1.54	7.8
70.0	5.0	1.5315E+03	2.5	1.5450	2.5	0.93	9.2
100.0	5.0	3.1337E+03	2.5	1.5425	1.0	0.380	7.3
150.0	5.0	7.0607E+03	2.5	1.5425	0.5	0.186	8.5
150.0	30.0	1.1310E+03	2.5	1.5300	2.5	1.303	9.6
200.0	5.0	1.2559E+04	25.0	10.2250	2.5	0.850	9.5
200.0	30.0	2.0473E+03	25.0	10.2250	10.0	3.860	7.0
300.0	30.0	4.6653E+03	2.5	1.5450	0.5	0.281	8.5
500.0	30.0	1.3043E+04	2.5	1.5500	0.5	0.155	13.0
700.0	30.0	2.5609E+04	2.5	1.5500	0.5	0.108	17.0
1000.0	30.0	5.2313E+04	25.0	9.1000	0.5	0.3410	19.0
1000.0	150.0	1.0236E+04	25.0	9.0000	5.0	2.0550	23.4
1500.0	30.0	1.1776E+05	10.0	8.0200	0.5	0.1900	27.9
1500.0	150.0	2.3326E+04	10.0	8.0000	2.5	1.0975	32.0
2000.0	150.0	4.1652E+04	2.5	1.5250	0.5	0.1575	43.0
2500.0	150.0	6.5214E+04	25.0	10.7750	2.5	0.6575	39.8
3000.0	150.0	9.4012E+04	25.0	15.0000	2.5	0.8490	52.6

SOUTH SINAI GROUNDWATER RESOURCES STUDY
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SCHLUMBERGER METHOD
DATE: 14, July, 1996 LATITUDE: 29° 42' 33"N ELEVATION: 291m
ST.No.: VES52 LONGITUDE: 33° 22' 42"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5450	250.0	149	35.5
7.0	1.0	7.5398E+01	2.5	1.5450	100.0	62.3	30.3
10.0	1.0	1.5551E+02	2.5	1.5525	50.0	29.25	29.2
15.0	1.0	3.5186E+02	2.5	1.5475	25.0	11.975	27.1
20.0	1.0	6.2675E+02	2.5	1.5425	10.0	5.6	22.1
30.0	1.0	1.4121E+03	2.5	1.5500	5.0	2.33	21.1
30.0	5.0	2.7489E+02	2.5	1.5500	25.0	10.68	10.3
50.0	1.0	3.9254E+03	2.5	1.5425	1.0	0.75	10.4
50.0	5.0	7.7254E+02	2.5	1.5425	10.0	3.02	15.1
70.0	5.0	1.5315E+03	2.5	1.5450	2.5	1.56	14.2
100.0	5.0	3.1337E+03	2.5	1.5500	1.0	0.805	15.1
150.0	5.0	7.0607E+03	2.5	1.5475	1.0	0.336	15.3
150.0	30.0	1.1310E+03	2.5	1.5490	2.5	1.755	12.9
200.0	5.0	1.2559E+04	25.0	10.2250	5.0	0.933	11.8
200.0	30.0	2.0473E+03	25.0	10.2250	30.0	5.870	11.8
300.0	30.0	4.6653E+03	10.0	4.6500	5.0	1.400	14.0
500.0	30.0	1.3043E+04	25.0	8.2000	2.5	1.025	16.3
700.0	30.0	2.5609E+04	25.0	8.0000	2.5	0.545	17.1
1000.0	30.0	5.2313E+04	25.0	13.3250	2.5	0.8850	34.7
1000.0	150.0	1.0236E+04	25.0	11.2250	10.0	3.5800	32.5
1500.0	30.0	1.1776E+05	25.0	20.7500	2.5	0.9075	51.5
1500.0	150.0	2.3326E+04	25.0	20.7500	10.0	4.0000	45.0
2000.0	150.0	4.1652E+04	50.0	26.9500	10.0	3.5500	65.7
2500.0	150.0	6.5214E+04	25.0	11.6500	10.0	1.1000	61.6
3000.0	150.0	9.4012E+04	25.0	14.6750	10.0	1.1000	70.5

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
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JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 14, July, 1996 LATITUDE: 29° 42' 05"N ELEVATION: 623m
ST.No.: VES53 LONGITUDE: 33° 14' 42"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5500	1000.0	505	122.9
7.0	1.0	7.5398E+01	2.5	1.5500	500.0	274	133.3
10.0	1.0	1.5551E+02	2.5	1.5500	250.0	143	143.5
15.0	1.0	3.5186E+02	2.5	1.5475	100.0	58	131.9
20.0	1.0	6.2675E+02	2.5	1.5500	50.0	24.95	100.9
30.0	1.0	1.4121E+03	2.5	1.5500	10.0	6.02	54.8
30.0	5.0	2.7489E+02	2.5	1.5475	50.0	34.75	61.7
50.0	1.0	3.9254E+03	2.5	1.5475	2.5	0.93	23.4
50.0	5.0	7.7254E+02	2.5	1.5450	10.0	5.13	25.8
70.0	5.0	1.5315E+03	2.5	1.5500	5.0	2.05	20.3
100.0	5.0	3.1337E+03	2.5	1.5525	2.5	0.995	19.3
150.0	5.0	7.0607E+03	2.5	1.5400	1.0	0.335	15.4
150.0	30.0	1.1310E+03	2.5	1.5400	2.5	1.920	14.1
200.0	5.0	1.2559E+04	2.5	1.5500	0.5	0.168	13.6
200.0	30.0	2.0473E+03	2.5	1.5490	2.5	0.942	12.5
300.0	30.0	4.6653E+03	2.5	1.5500	1.0	0.424	12.8
500.0	30.0	1.3043E+04	25.0	10.1000	2.5	1.410	18.2
700.0	30.0	2.5609E+04	10.0	6.2100	2.5	0.420	17.3
1000.0	30.0	5.2313E+04	25.0	20.8500	2.5	0.9100	22.8
1000.0	150.0	1.0236E+04	25.0	20.8250	10.0	4.6100	22.7
1500.0	30.0	1.1776E+05	25.0	12.2250	2.5	0.3550	34.2
1500.0	150.0	2.3326E+04	25.0	12.2250	2.5	1.4350	28.5
2000.0	150.0	4.1652E+04	10.0	4.2300	2.5	0.4525	43.9
2500.0	150.0	6.5214E+04	25.0	12.2250	2.5	1.0075	53.7
3000.0	150.0	9.4012E+04	25.0	10.9000	2.5	0.9650	83.2

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
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SCHLUMBERGER METHOD
DATE: 14, July, 1996 LATITUDE: 29° 33' 06"N ELEVATION: 693m
ST.No.: VES54 LONGITUDE: 33° 03' 12"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5500	250.0	191.5	24.7
7.0	1.0	7.5398E+01	2.5	1.5650	50.0	22.2	13.1
10.0	1.0	1.5551E+02	2.5	1.5550	25.0	11.475	11.5
15.0	1.0	3.5186E+02	2.5	1.5425	10.0	5.75	13.2
20.0	1.0	6.2675E+02	2.5	1.5450	5.0	3.12	12.7
30.0	1.0	1.4121E+03	2.5	0.8325	5.0	1.00	17.0
30.0	5.0	2.7489E+02	2.5	0.8025	10.0	4.40	15.1
50.0	1.0	3.9254E+03	2.5	1.5525	1.0	0.76	13.2
50.0	5.0	7.7254E+02	2.5	1.5525	5.0	2.97	18.2
70.0	5.0	1.5315E+03	2.5	1.5450	5.0	1.79	17.7
100.0	5.0	3.1337E+03	2.5	1.5600	2.5	1.013	20.3
150.0	5.0	7.0607E+03	2.5	1.5550	1.0	0.651	23.6
150.0	30.0	1.1310E+03	2.5	1.5500	10.0	4.030	29.4
200.0	5.0	1.2559E+04	5.0	1.5525	2.5	0.635	51.4
200.0	30.0	2.0473E+03	5.0	1.5500	5.0	4.345	57.0
300.0	30.0	4.6653E+03	2.5	1.5559	5.0	1.700	51.0
500.0	30.0	1.3043E+04	2.5	1.5575	1.0	0.470	35.2
700.0	30.0	2.5609E+04	5.0	2.8450	1.0	0.383	34.5
1000.0	30.0	5.2313E+04	25.0	13.0000	2.5	1.1425	44.6
1000.0	150.0	1.0236E+04	25.0	12.9050	10.0	4.5900	35.4
1500.0	30.0	1.1776E+05	25.0	9.7500	1.0	0.4100	69.5
1500.0	150.0	2.3326E+04	25.0	9.7250	5.0	1.7450	43.9
2000.0	150.0	4.1652E+04	5.0	4.3100	1.0	0.5600	53.4
2500.0	150.0	6.5214E+04	10.0	8.4200	2.5	0.7325	95.7
3000.0	150.0	9.4012E+04	25.0	11.4150	2.5	0.9300	76.4

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
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JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE : 13 July, 1996 LATITUDE: 29° 22' 55"N ELEVATION : 214m
ST. No. : VES55 LONGITUDE: 33° 19' 07"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV=0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7692E+01	2.5	1.5500	500.0	405.57	99.8
7.0	1.0	7.5398E+01	2.5	1.5475	250.0	172.25	83.9
10.0	1.0	1.5551E+02	2.5	1.5500	100.0	64	64.2
15.0	1.0	3.5186E+02	2.5	1.5475	50.0	24.9	56.6
20.0	1.0	6.2675E+02	2.5	1.5450	25.0	11.35	46.0
30.0	1.0	1.4121E+03	2.5	1.5425	10.0	5.24	52.5
30.0	5.0	2.7499E+02	2.5	1.5425	25.0	19.00	33.9
50.0	1.0	3.9254E+03	2.5	1.5450	2.5	1.90	49.2
50.0	5.0	7.7754E+02	2.5	1.5400	10.0	5.70	28.8
70.0	5.0	1.5315E+03	2.5	1.5650	5.0	2.25	26.9
100.0	5.0	3.1337E+03	2.5	1.5500	2.5	1.295	26.2
150.0	5.0	7.0607E+03	2.5	1.5525	1.0	0.621	28.2
150.0	30.0	1.1310E+03	2.5	1.5475	5.0	4.435	32.4
200.0	5.0	1.2559E+04	2.5	1.5475	0.5	0.281	22.8
200.0	30.0	2.0473E+03	2.5	1.5475	2.5	1.935	25.6
300.0	30.0	4.6653E+03	2.5	1.5500	2.5	1.058	31.6
500.0	30.0	1.3043E+04	2.5	1.5500	1.0	0.414	34.6
700.0	30.0	2.5609E+04	2.5	1.2875	1.0	0.156	31.0
1000.0	30.0	5.2313E+04	2.5	1.5500	0.5	0.1700	40.5
1000.0	150.0	1.0236E+04	2.5	1.5475	2.5	0.8250	54.6
1500.0	30.0	1.1776E+05	5.0	3.6350	0.5	0.1545	50.1
1500.0	150.0	2.3326E+04	5.0	3.5850	2.5	1.0000	65.1
2000.0	150.0	4.1652E+04	25.0	10.8250	5.0	2.2500	86.6
2500.0	150.0	6.5214E+04	10.0	4.6200	1.0	0.6850	98.7
3000.0	150.0	9.4012E+04	2.5	1.5825	1.0	0.1800	106.9

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
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JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE : 10 July, 1996 LATITUDE: 29° 24' 12"N ELEVATION : 672m
ST. No. : VES56 LONGITUDE: 33° 25' 18"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV=0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7692E+01	2.5	1.5575	500.0	226	54.7
7.0	1.0	7.5398E+01	2.5	1.5550	250.0	100.25	43.6
10.0	1.0	1.5551E+02	2.5	1.5700	50.0	33.65	33.3
15.0	1.0	3.5186E+02	2.5	1.5575	25.0	8.75	19.6
20.0	1.0	6.2675E+02	2.5	1.5675	10.0	4.5	18.0
30.0	1.0	1.4121E+03	2.5	1.5575	5.0	1.90	19.2
30.0	5.0	2.7499E+02	2.5	1.5600	25.0	8.33	18.7
50.0	1.0	3.9254E+03	2.5	1.5560	1.0	0.74	18.7
50.0	5.0	7.7754E+02	2.5	1.5625	5.0	2.90	14.6
70.0	5.0	1.5315E+03	2.5	1.5625	5.0	2.35	23.0
100.0	5.0	3.1337E+03	2.5	1.5550	2.5	1.025	20.7
150.0	5.0	7.0607E+03	2.5	1.5500	1.0	0.564	26.6
150.0	30.0	1.1310E+03	2.5	1.5575	5.0	3.195	22.9
200.0	5.0	1.2559E+04	2.5	1.5475	0.5	0.275	22.3
200.0	30.0	2.0473E+03	2.5	1.5525	2.5	1.500	19.8
300.0	30.0	4.6653E+03	2.5	1.5535	2.5	0.835	26.2
500.0	30.0	1.3043E+04	2.5	1.5450	1.0	0.391	33.0
700.0	30.0	2.5609E+04	5.0	1.5375	0.5	0.189	31.4
1000.0	30.0	5.2313E+04	2.5	1.5825	0.5	0.1330	44.3
1000.0	150.0	1.0236E+04	2.5	1.5450	2.5	0.6625	43.9
1500.0	30.0	1.1776E+05	5.0	1.5700	0.5	0.1000	25.0
1500.0	150.0	2.3326E+04	2.5	1.5625	1.0	0.4300	59.7
2000.0	150.0	4.1652E+04	2.5	1.5550	1.0	0.3000	80.4

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
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JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 09 July, 1996 LATITUDE: 29° 19' 59"N ELEVATION : 645m
ST. No. : VES57 LONGITUDE: 33° 27' 07"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV=0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7692E+01	2.5	1.5550	1000.0	.673	163.2
7.0	1.0	7.5398E+01	2.5	1.5550	500.0	308	149.3
10.0	1.0	1.5551E+02	2.5	1.5575	250.0	175.5	175.2
15.0	1.0	3.5186E+02	2.5	1.5575	100.0	78.8	173.5
20.0	1.0	6.2675E+02	2.5	1.5700	100.0	40	159.7
30.0	1.0	1.4121E+03	2.5	1.5575	25.0	15.25	138.9
30.0	5.0	2.7499E+02	2.5	1.5700	100.0	62.30	109.1
50.0	1.0	3.9254E+03	2.5	1.5575	5.0	3.44	85.7
50.0	5.0	7.7754E+02	2.5	1.5550	25.0	13.43	67.4
70.0	5.0	1.5315E+03	2.5	1.5650	10.0	5.12	50.1
100.0	5.0	3.1337E+03	2.5	1.5550	5.0	3.135	63.2
150.0	5.0	7.0607E+03	2.5	1.5600	2.5	1.448	65.5
150.0	30.0	1.1310E+03	2.5	1.5550	10.0	8.000	58.2
200.0	5.0	1.2559E+04	2.5	1.5550	1.0	0.621	50.2
200.0	30.0	2.0473E+03	2.5	1.5550	5.0	3.250	42.8
300.0	30.0	4.6653E+03	2.5	1.5675	2.5	1.240	36.9
500.0	30.0	1.3043E+04	2.5	1.5775	0.5	0.360	29.8
700.0	30.0	2.5609E+04	5.0	1.0250	0.5	0.165	41.2
1000.0	30.0	5.2313E+04	2.5	1.6050	1.0	0.1300	42.4
1000.0	150.0	1.0236E+04	2.5	1.4400	2.5	0.6750	48.0
1500.0	30.0	1.1776E+05	25.0	1.5550	0.5	0.0425	36.0
1500.0	150.0	2.3326E+04	25.0	1.5550	1.0	0.3500	52.5
2000.0	150.0	4.1652E+04	25.0	1.5700	1.0	0.3300	87.5
2500.0	150.0	6.5214E+04	5.0	1.6075	1.0	0.2330	94.5
3000.0	150.0	9.4012E+04	5.0	1.6025	1.0	0.2400	140.8

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 10 July, 1996 LATITUDE: 29° 25' 02"N ELEVATION : 803m
ST. No. : VES58 LONGITUDE: 33° 39' 44"E

AB/2 (m)	MN/2 (m)	k	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV=0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5725	500.0	240.5	57.7
7.0	1.0	7.5398E+01	2.5	1.5700	250.0	89	42.7
10.0	1.0	1.5551E+02	2.5	1.5575	50.0	20.5	20.5
15.0	1.0	3.5186E+02	2.5	1.5650	10.0	3.74	8.4
20.0	1.0	6.2675E+02	2.5	1.5650	2.5	1.5975	6.4
30.0	1.0	1.4121E+03	2.5	1.5575	1.0	0.76	6.9
30.0	5.0	2.7499E+02	2.5	1.5550	5.0	3.78	6.7
50.0	1.0	3.9254E+03	2.5	1.5575	0.5	0.35	8.8
50.0	5.0	7.7754E+02	2.5	1.5550	2.5	1.93	8.4
70.0	5.0	1.5315E+03	2.5	1.5550	1.0	0.87	8.5
100.0	5.0	3.1337E+03	2.5	1.5550	1.0	0.460	9.3
150.0	5.0	7.0607E+03	2.5	1.5725	0.5	0.212	9.5
150.0	30.0	1.1310E+03	2.5	1.5675	2.5	1.415	10.2
200.0	5.0	1.2559E+04	2.5	1.5650	0.5	0.197	8.5
200.0	30.0	2.0473E+03	2.5	1.5650	1.0	0.792	9.2
300.0	30.0	4.6653E+03	2.5	1.5600	1.0	0.284	7.9
500.0	30.0	1.3043E+04	2.5	1.5725	0.5	0.127	10.5
700.0	30.0	2.5609E+04	5.0	1.5750	0.5	0.086	14.0
1000.0	30.0	5.2313E+04	2.5	1.5750	0.5	0.0885	29.4
1000.0	150.0	1.0236E+04	2.5	1.5750	1.0	0.6510	29.3
1500.0	30.0	1.1776E+05	5.0	3.0850	0.5	0.0723	27.6
1500.0	150.0	2.3326E+04	5.0	3.0850	1.0	0.3910	29.8
2000.0	150.0	4.1652E+04	2.5	1.5525	0.5	0.1275	34.1
2500.0	150.0	6.5214E+04	2.5	1.5750	1.0	0.1000	41.4
3000.0	150.0	9.4012E+04	2.5	1.5700	1.0	0.1220	73.1

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 16, July, 1996 — LATITUDE: 29° 56' 06"N — ELEVATION: 433m
ST. No.: VES59 — LONGITUDE: 33° 11' 20"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5550	500.0	294.5	73.4
7.0	1.0	7.5398E+01	2.5	1.5450	250.0	61	29.8
10.0	1.0	1.5551E+02	2.5	1.5425	50.0	14.95	15.1
15.0	1.0	3.5186E+02	2.5	1.5375	10.0	4.1	9.4
20.0	1.0	6.2675E+02	2.5	1.5490	10.0	1.78	7.2
30.0	1.0	1.4121E+03	10.0	7.0000	5.0	2.77	5.6
30.0	5.0	2.7489E+02	10.0	6.9000	25.0	15.58	6.1
50.0	1.0	3.9254E+03	25.0	9.6750	2.5	1.41	5.7
50.0	5.0	7.7254E+02	2.5	1.5525	2.5	1.22	6.1
70.0	5.0	1.5315E+03	2.5	1.5475	1.0	0.73	7.2
100.0	5.0	3.1337E+03	25.0	7.8250	5.0	2.050	8.2
150.0	5.0	7.0607E+03	25.0	11.9750	5.0	1.575	9.3
150.0	30.0	1.1310E+03	25.0	12.0250	25.0	8.375	7.9
200.0	5.0	1.2559E+04	25.0	10.0750	2.5	1.145	8.9
200.0	30.0	2.0473E+03	25.0	15.8750	10.0	6.200	8.1
300.0	30.0	4.6653E+03	10.0	8.4000	5.0	2.065	11.1
500.0	30.0	1.3043E+04	25.0	10.6750	2.5	1.345	16.4
700.0	30.0	2.5609E+04	25.0	14.3000	2.5	1.480	26.5
1000.0	30.0	5.2313E+04	10.0	7.2500	1.0	0.4500	30.4
1000.0	150.0	1.0236E+04	10.0	7.2200	10.0	3.7000	49.1
1500.0	30.0	1.1726E+05	25.0	11.2500	1.0	0.4040	42.3
1500.0	150.0	2.3326E+04	25.0	11.2250	25.0	4.8500	100.8
2000.0	150.0	4.1652E+04	25.0	12.1250	25.0	4.2000	144.3
2500.0	150.0	6.5214E+04	10.0	7.3000	10.0	2.7600	246.6
3000.0	150.0	9.4012E+04	25.0	9.0250	10.0	2.7800	269.6

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 16, July, 1996 — LATITUDE: 29° 03' 24"N — ELEVATION: 374m
ST. No.: VES60 — LONGITUDE: 33° 03' 10"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5525	250.0	78.25	19.0
7.0	1.0	7.5398E+01	2.5	1.5500	100.0	33.9	16.9
10.0	1.0	1.5551E+02	2.5	1.5500	50.0	18.65	19.7
15.0	1.0	3.5186E+02	2.5	1.5500	10.0	7.91	18.0
20.0	1.0	6.2675E+02	2.5	1.5500	10.0	4.98	20.1
30.0	1.0	1.4121E+03	2.5	1.5525	5.0	2.59	23.9
30.0	5.0	2.7489E+02	2.5	1.5500	25.0	11.34	20.2
50.0	1.0	3.9254E+03	2.5	1.5500	1.0	0.73	18.6
50.0	5.0	7.7254E+02	2.5	1.5500	10.0	3.24	16.1
70.0	5.0	1.5315E+03	2.5	1.5500	5.0	1.81	17.8
100.0	5.0	3.1337E+03	2.5	1.5500	2.5	1.123	22.7
150.0	5.0	7.0607E+03	2.5	1.5500	1.0	0.630	25.2
150.0	30.0	1.1310E+03	2.5	1.5500	5.0	3.005	21.9
200.0	5.0	1.2559E+04	2.5	1.5500	1.0	0.318	25.4
200.0	30.0	2.0473E+03	2.5	1.5500	2.5	1.515	20.0
300.0	30.0	4.6653E+03	2.5	1.5500	2.5	0.850	25.6
500.0	30.0	1.3043E+04	2.5	1.5550	1.0	0.430	34.6
700.0	30.0	2.5609E+04	10.0	4.2100	1.0	0.642	39.1
1000.0	30.0	5.2313E+04	10.0	4.7100	1.0	0.4000	45.5
1000.0	150.0	1.0236E+04	10.0	4.7000	5.0	2.6100	59.6
1500.0	30.0	1.1726E+05	2.5	1.5525	0.5	0.0635	48.2
1500.0	150.0	2.3326E+04	2.5	1.5525	0.5	0.4020	60.2
2000.0	150.0	4.1652E+04	2.5	1.5600	1.0	0.3569	93.5
2500.0	150.0	6.5214E+04	2.5	1.5700	1.0	0.2430	155.7
3000.0	150.0	9.4012E+04	10.0	8.4300	2.5	1.0250	114.2

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 09, June, 1996 — LATITUDE: 29° 02' 23"N — ELEVATION: 8.147m
ST. No.: VES61 — LONGITUDE: 34° 09' 53"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5625	1000.0	661	159.0
7.0	1.0	7.5398E+01	2.5	1.5650	500.0	262.5	126.5
10.0	1.0	1.5551E+02	2.5	1.5625	250.0	113	112.5
15.0	1.0	3.5186E+02	2.5	1.5700	100.0	46.7	104.2
20.0	1.0	6.2675E+02	2.5	1.5650	50.0	26.55	106.3
30.0	1.0	1.4121E+03	2.5	1.5675	25.0	13.50	121.6
30.0	5.0	2.7489E+02	2.5	1.5675	100.0	72.20	126.6
50.0	1.0	3.9254E+03	2.5	1.5675	10.0	5.37	134.5
50.0	5.0	7.7254E+02	2.5	1.5625	50.0	28.10	139.8
70.0	5.0	1.5315E+03	2.5	1.5650	25.0	13.25	129.7
100.0	5.0	3.1337E+03	2.5	1.5675	10.0	4.850	97.0
150.0	5.0	7.0607E+03	2.5	1.5700	2.5	1.835	82.5
150.0	30.0	1.1310E+03	2.5	1.5700	25.0	10.425	75.1
200.0	5.0	1.2559E+04	2.5	1.5700	2.5	1.095	87.6
200.0	30.0	2.0473E+03	2.5	1.5650	10.0	5.890	77.1
300.0	30.0	4.6653E+03	2.5	1.5975	5.0	2.310	67.5
500.0	30.0	1.3043E+04	2.5	1.5675	1.0	0.712	59.2
700.0	30.0	2.5609E+04	2.5	1.5775	0.5	0.213	34.5
1000.0	30.0	5.2313E+04	2.5	1.5825	0.5	0.0650	21.5
1000.0	150.0	1.0236E+04	2.5	1.5250	1.0	0.5050	32.8
1500.0	30.0	1.1726E+05	5.0	2.4350	0.5	0.0460	21.8
1500.0	150.0	2.3326E+04	5.0	2.4350	0.5	0.3040	28.5
2000.0	150.0	4.1652E+04	2.5	1.5725	0.5	0.0750	19.9
2500.0	150.0	6.5214E+04	5.0	3.0250	0.5	0.0525	11.3
3000.0	150.0	9.4012E+04	10.0	4.4300	0.5	0.1175	24.6

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 18, May, 1996 — LATITUDE: 29° 01' 25"N — ELEVATION: 94m
ST. No.: VES62 — LONGITUDE: 34° 09' 55"E

AB/2 (m)	MN/2 (m)	k	CH1: CURRENT RANGE (mV)	CH1: CURRENT READINGS (mV=0.1A)	CH2: POTENTIAL RANGE (mV)	CH2: POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	2.5	1.5625	2500	1925	463.5
7.0	1.0	7.5398E+01	2.5	1.5500	2500	852.5	414.7
10.0	1.0	1.5551E+02	2.5	1.5525	500	352.5	353.1
15.0	1.0	3.5186E+02	2.5	1.5475	250	139	316.9
20.0	1.0	6.2675E+02	2.5	1.5500	100	66.1	267.3
30.0	1.0	1.4121E+03	2.5	1.5550	50	26.2	237.9
30.0	5.0	2.7489E+02	2.5	1.5525	250	101	178.8
50.0	1.0	3.9254E+03	2.5	1.5525	10	6.04	152.7
50.0	5.0	7.7254E+02	2.5	1.5500	50	22.7	113.9
70.0	5.0	1.5315E+03	2.5	1.5500	10	6.9	69.7
100.0	5.0	3.1337E+03	2.5	1.5600	2.5	1.599	31.2
150.0	5.0	7.0607E+03	2.5	1.5575	1	0.418	18.9
150.0	30.0	1.1310E+03	2.5	1.5600	5	2.695	19.5
200.0	5.0	1.2559E+04	2.5	1.5625	0.5	0.235	18.9
200.0	30.0	2.0473E+03	2.5	1.5550	2.5	1.435	18.9
300.0	30.0	4.6653E+03	2.5	1.5725	2.5	0.865	23.9
500.0	30.0	1.3043E+04	2.5	1.5550	1	0.577	43.4
700.0	30.0	2.5609E+04	2.5	1.5675	0.5	0.3295	53.8
1000.0	30.0	5.2313E+04	2.5	1.5825	1	0.195	64.5
1000.0	150.0	1.0236E+04	2.5	0.8315	2.5	0.528	64.2
1500.0	30.0	1.1726E+05	2.5	1.5525	0.5	0.1425	108.1
1500.0	150.0	2.3326E+04	2.5	1.5500	1	0.54	96.5
2000.0	150.0	4.1652E+04	2.5	1.5525	1	0.415	111.3
2500.0	150.0	6.5214E+04	2.5	1.5550	1	0.295	123.7
3000.0	150.0	9.4012E+04	2.5	1.5550	1	0.235	142.1

SOUTH SINAI GROUNDWATER RESOURCES STUDY
IN
THE ARAB REPUBLIC OF EGYPT
JAPAN INTERNATIONAL COOPERATION AGENCY

SCHLUMBERGER METHOD
DATE: 21 May, 1996
SP. No.: YES93

LATITUDE: 29° 09' 09"N
LONGITUDE: 34° 21' 57"E
ELEVATION: 686m

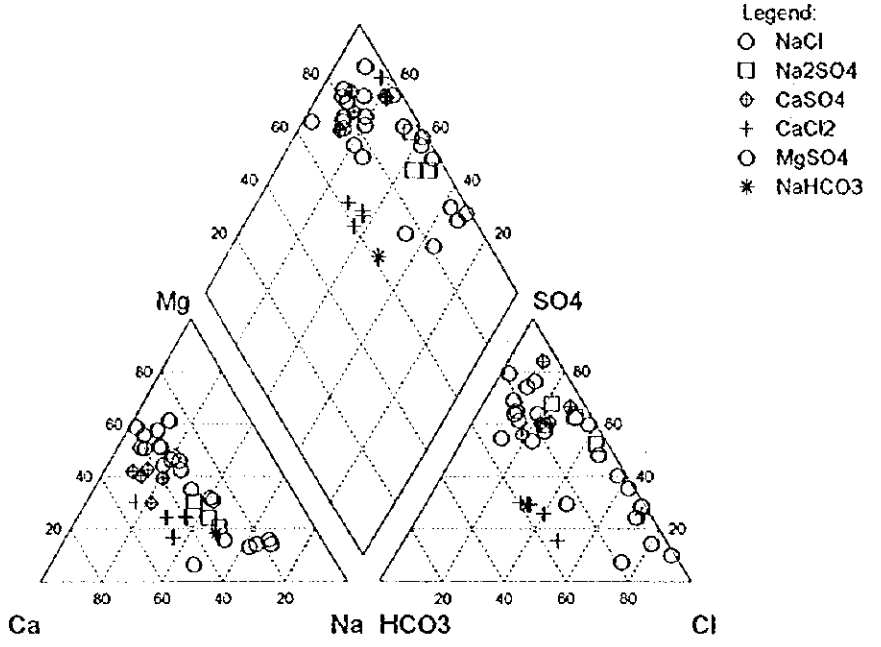
AB/2 (m)	MN/2 (m)	K	CH1:CURRENT RANGE (mV)	CH1:CURRENT READINGS (mV÷0.1A)	CH2:POTENTIAL RANGE (mV)	CH2:POTENTIAL READINGS (mV)	APPARENT RESISTIVITY (Ω・m)
5.0	1.0	3.7699E+01	5.0	3.0500	5000	2865	354.1
7.0	1.0	7.5398E+01	5.0	3.0450	1000	593	236.0
10.0	1.0	1.5551E+02	5.0	3.0400	500	375	191.8
15.0	1.0	3.5186E+02	5.0	3.0500	250	169.5	199.5
20.0	1.0	6.2675E+02	5.0	3.0450	100	83.7	172.3
30.0	1.0	1.4121E+03	5.0	3.0090	50	31.25	147.1
30.0	5.0	2.7489E+02	5.0	2.8850	250	143	136.3
50.0	1.0	3.9259E+03	5.0	3.0050	25	12.4	157.3
50.0	5.0	2.7754E+02	5.0	3.0450	100	54.4	138.3
70.0	5.0	1.5315E+03	5.0	3.0650	50	27.75	138.7
100.0	5.0	3.1337E+03	5.0	1.5550	10	6.26	126.2
150.0	5.0	7.0007E+03	2.5	1.5725	5	2.99	134.3
150.0	30.0	1.1330E+03	2.5	1.5700	25	18.95	136.5
200.0	5.0	1.2559E+04	2.5	1.5750	2.5	1.8	143.5
200.0	30.0	2.0473E+03	2.5	1.5750	25	11.7	152.1
300.0	30.0	4.6653E+03	2.5	1.5925	10	7.17	210.0
500.0	30.0	1.3043E+04	2.5	1.5900	10	5.24	429.8
700.0	30.0	2.5609E+04	2.5	1.6225	5	2.795	441.2
1000.0	30.0	5.2313E+04	2.5	1.5650	2.5	1.455	490.2
1300.0	150.0	1.0236E+05	2.5				
1500.0	30.0	1.1726E+05	2.5	1.5800	2.5	1.295	995.2
1500.0	150.0	2.3328E+04	2.5				
2000.0	150.0	4.1652E+04	2.5				
2500.0	150.0	6.5214E+04	2.5				
3000.0	150.0	9.4012E+04	2.5				

Part-2 WATER QUALITY ANALYSIS

2.1 Water Quality on Quaternary Aquifer

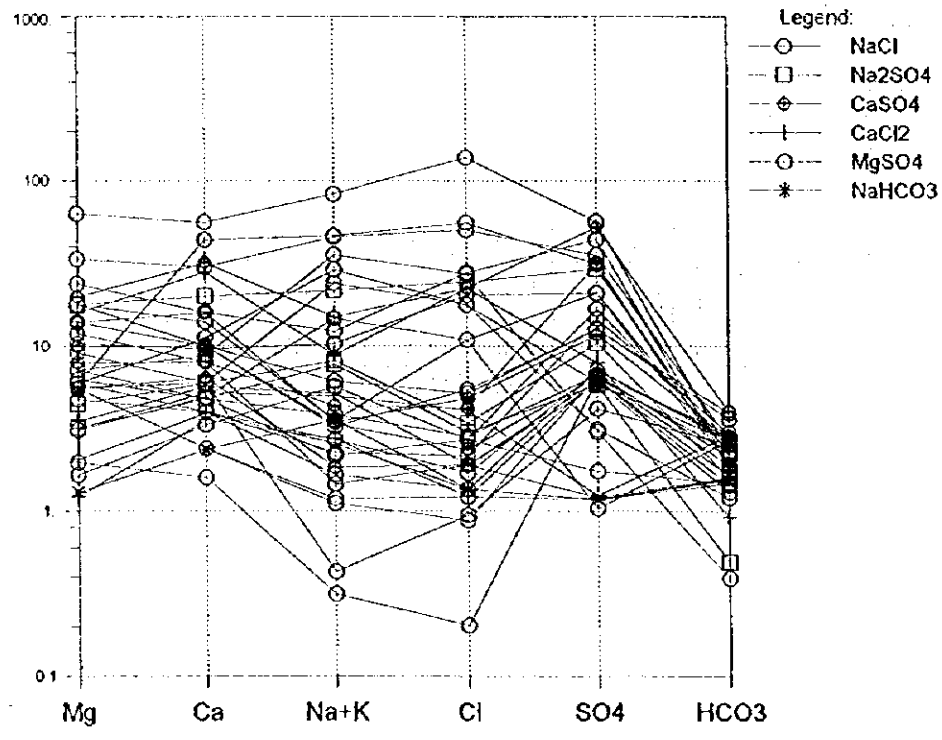
2.1.1 Piper Diagram and Schoeller Graph of Major Water Points (as of February 97)

Piper Diagram of Major Water Points (as of February 97)



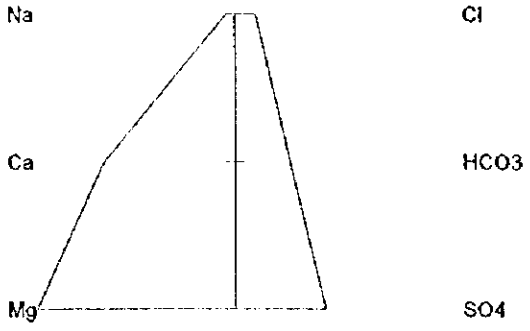
Schoeller Graf of Major Water Points (as of February 97)

Concentration (meq/l)

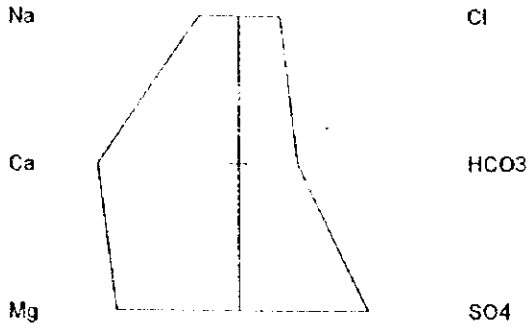


2.1.2 Stiff Diagrams of Major Water Points (as of February 97)

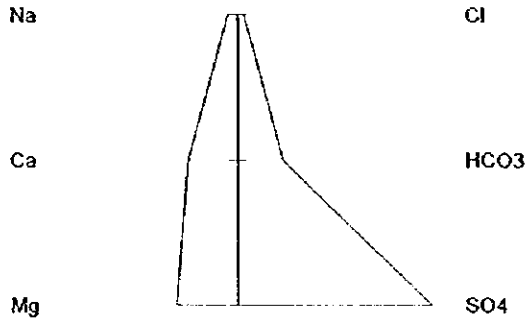
St. Catherine Haroun Well 20



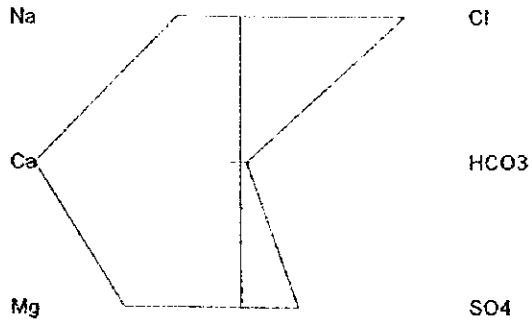
St. Catherine Soyara 1 21



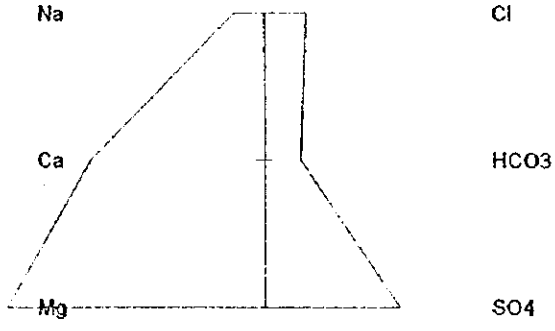
St. Catherine El Rabba Spring 22



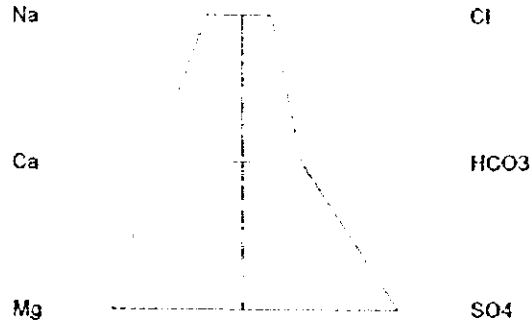
Wadi Dahab Reservoir Tank 29



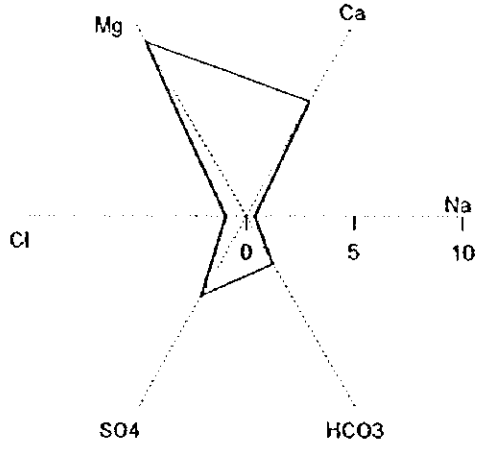
Wadi Feiran M. Salem 1 17



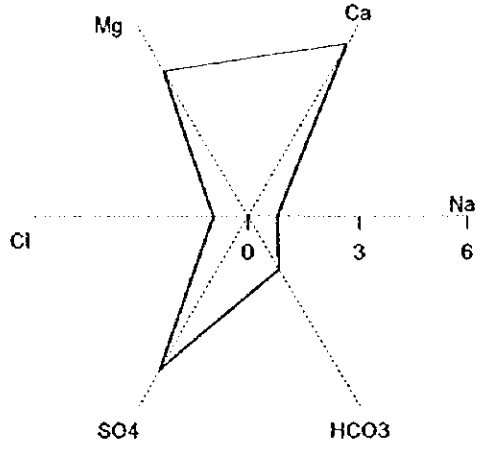
Wadi Feiran Refaay 18



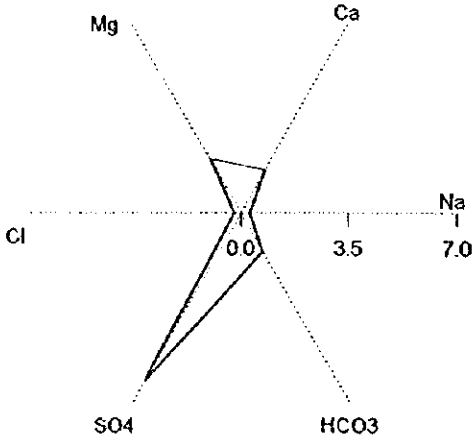
St. Catherine Haroun Well 20



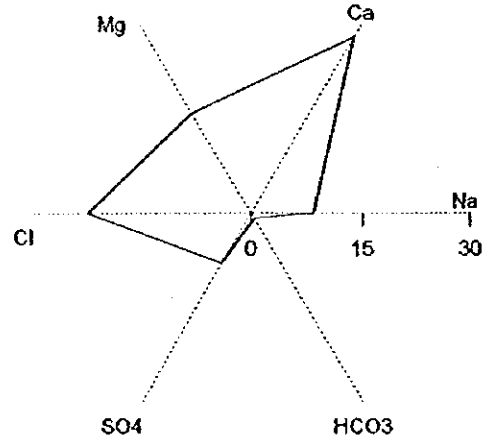
St. Catherine Soyara 1 21



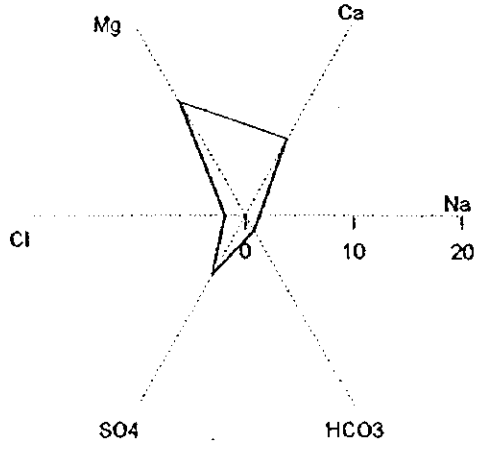
St. Catherine El Rabba Spring 22



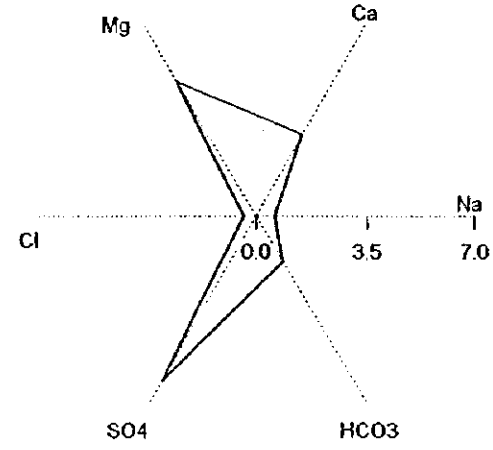
Wadi Dahab Reservoir Tank 29



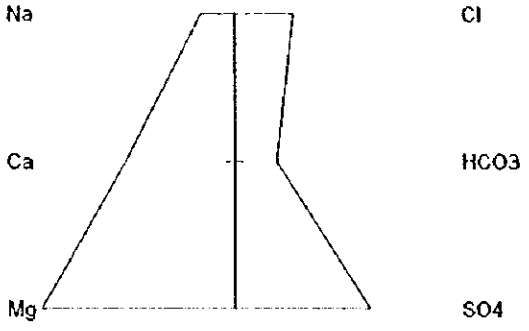
Wadi Feiran M. Salem 1 17



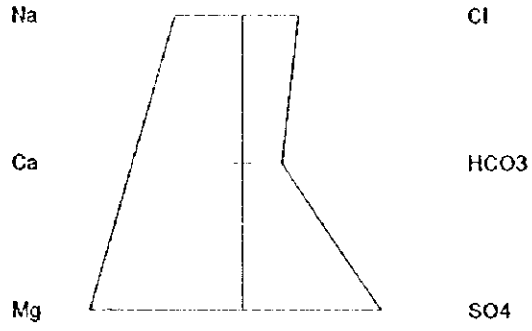
Wadi Feiran Refaay 18



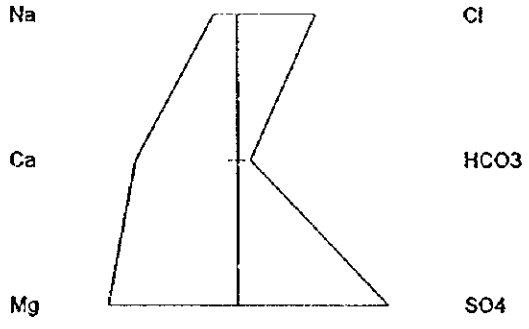
El Malha Abd Allah Seleman Well (1) 33



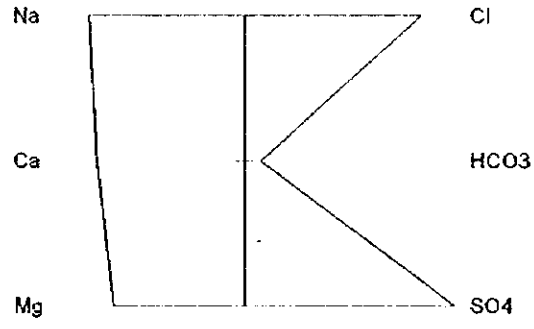
El Malha Abd Allah Seleman Well (2) 34



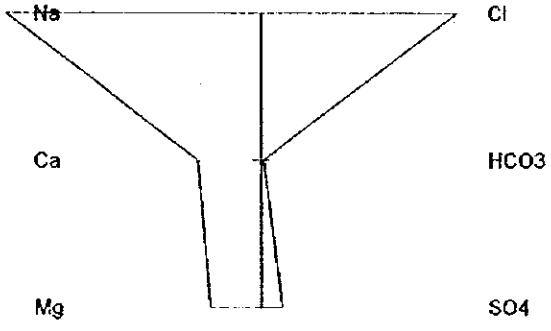
Nuweiba Coastal Plain E. Hemyed 26



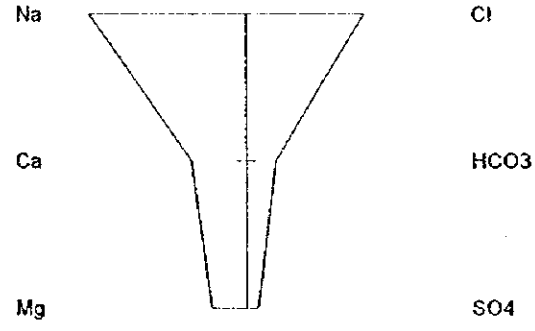
Nuweiba Coastal Plain A. A. Hemad 27



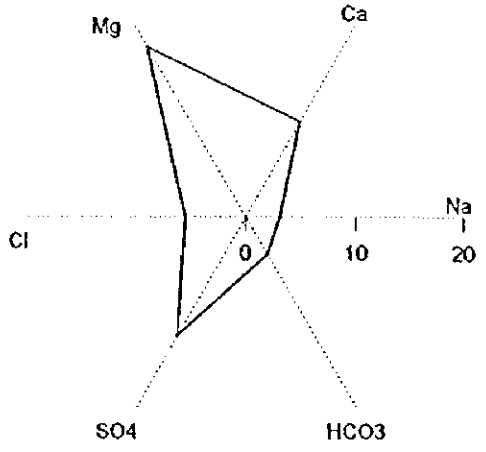
El Qaa Plain PZ-8 1



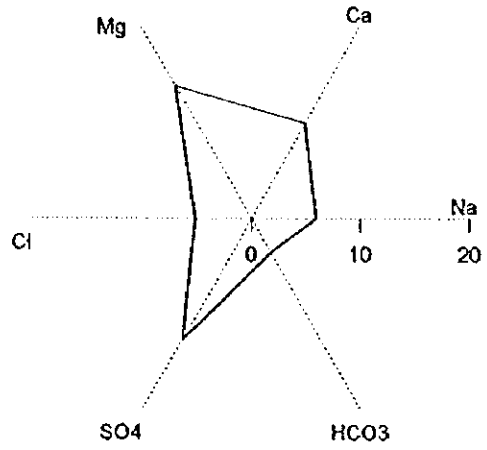
El Qaa Plain QAA10 2



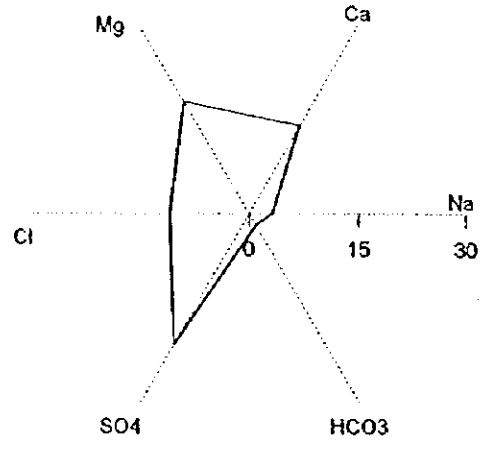
El Malha Abd Allah Seleman Well (1) 33



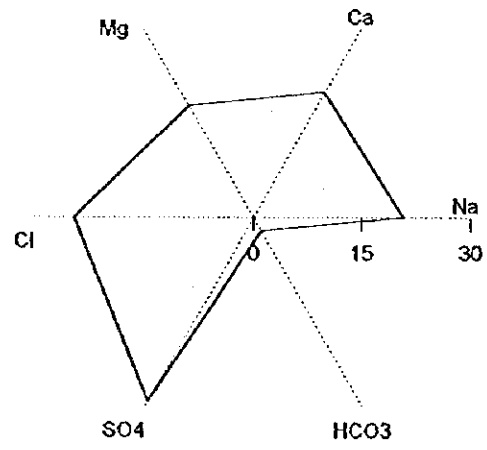
El Malha Abd Allah Seleman Well (2) 34



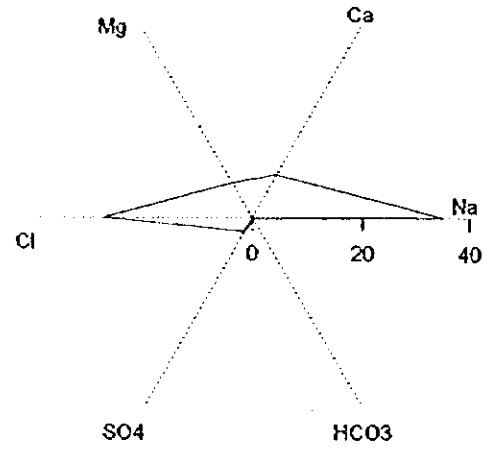
Nuweiba Coastal Plain E. Hemyed 26



Nuweiba Coastal Plain A. A. Hemad 27



El Qaa Plain PZ-8 1



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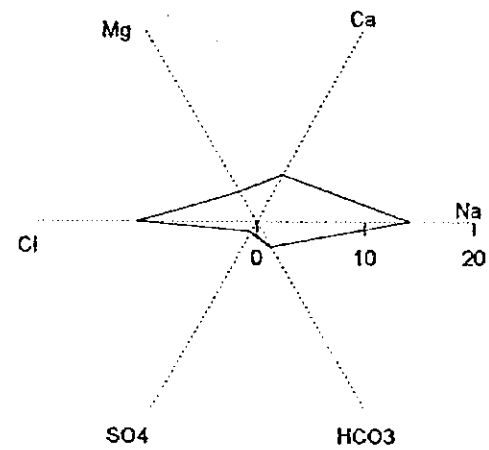

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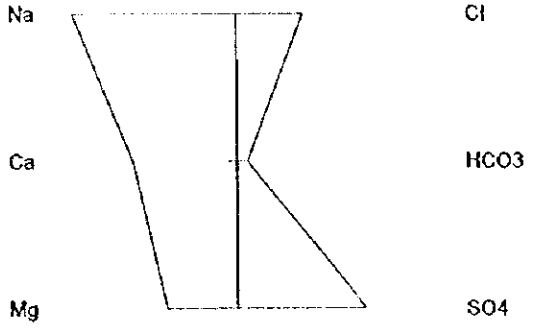

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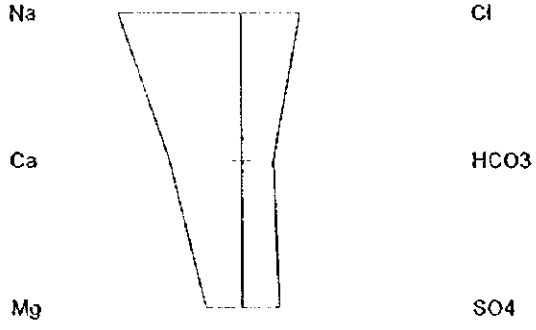

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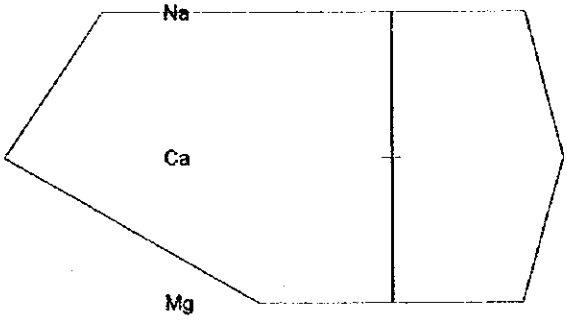

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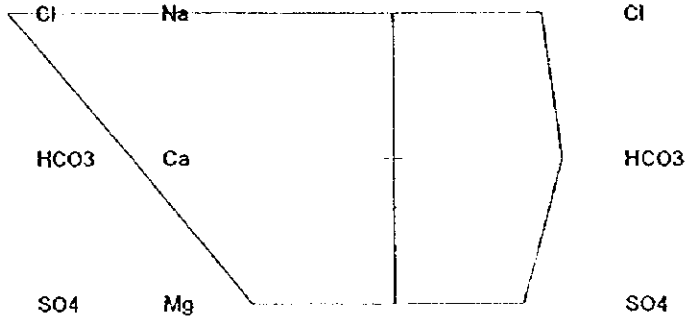

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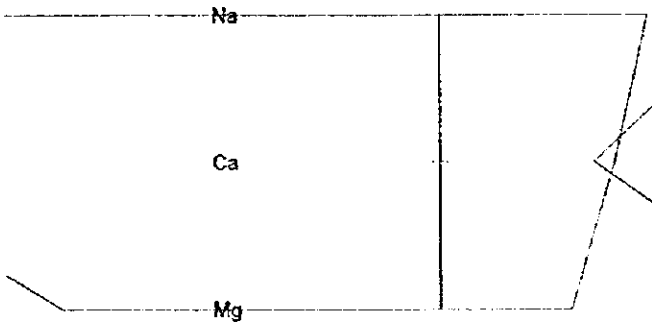

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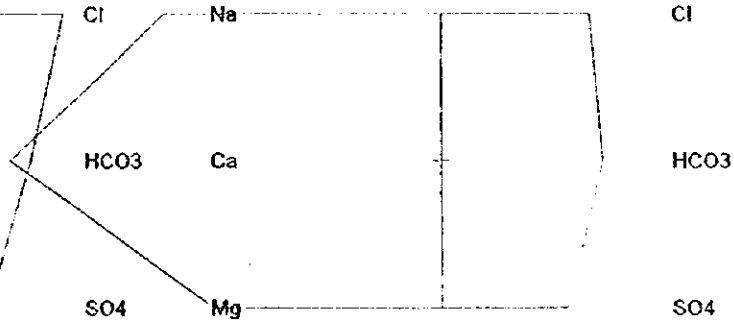

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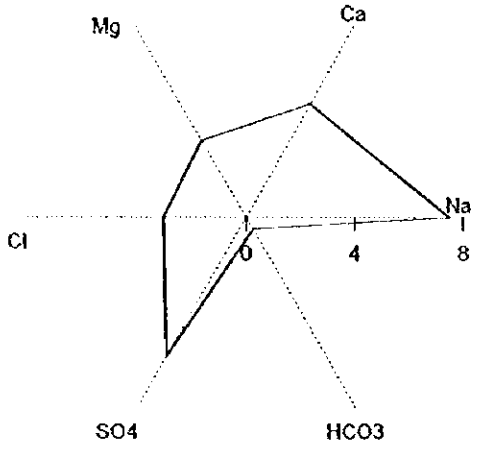

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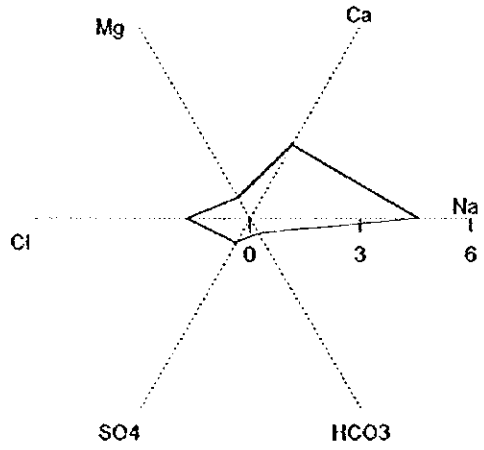

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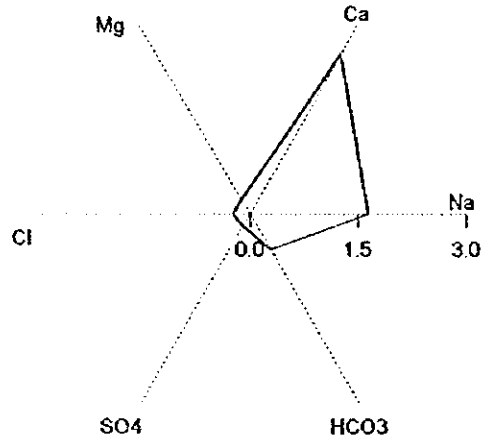

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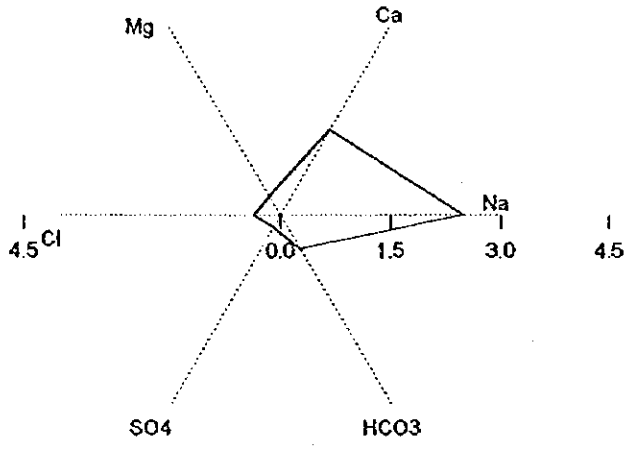

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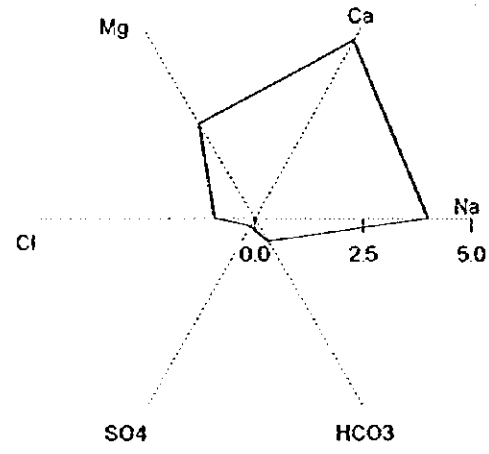

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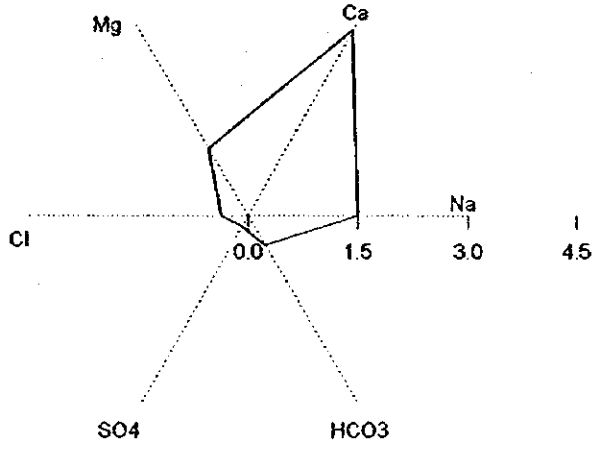
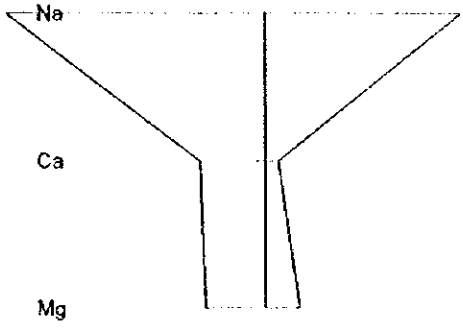
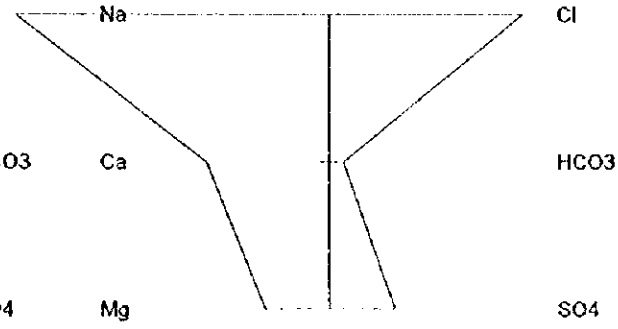


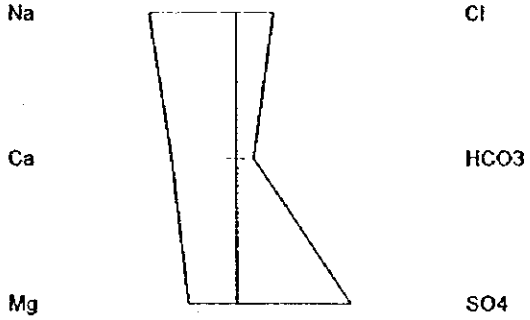
El Qaa Plain Abu Kalam 9



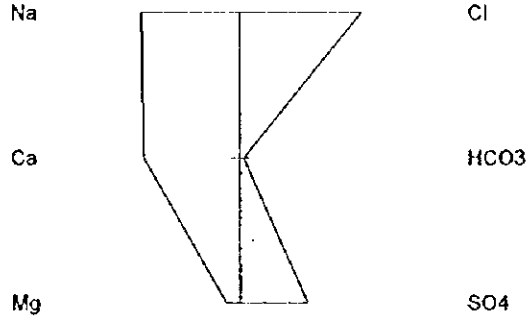
El Qaa Plain M Abu Salem 10



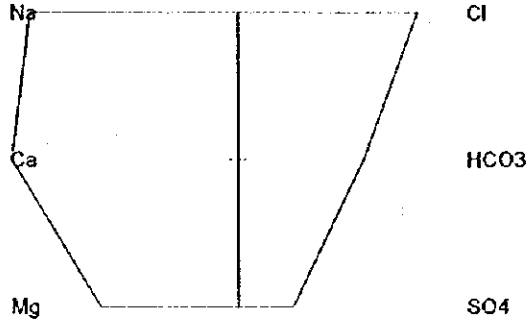
El Qaa Plain El Hag Sobahe 11



El Qaa Plain Hamam Musa 12



El Qaa Plain W. Hibran 13



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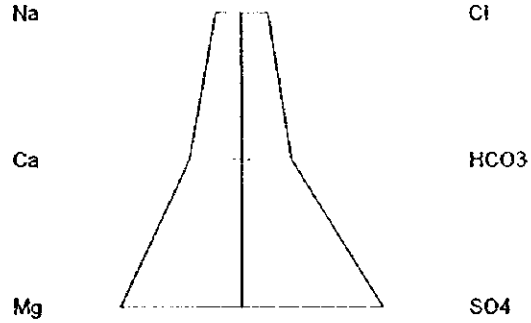

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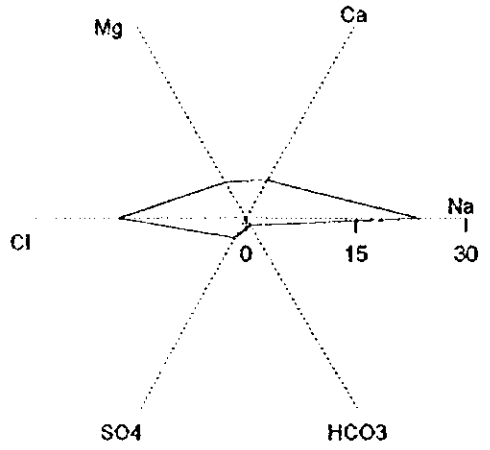

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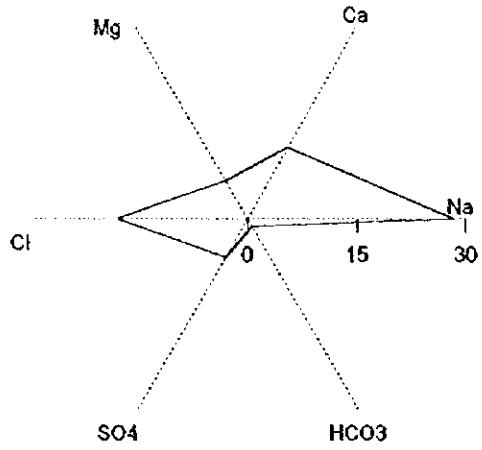
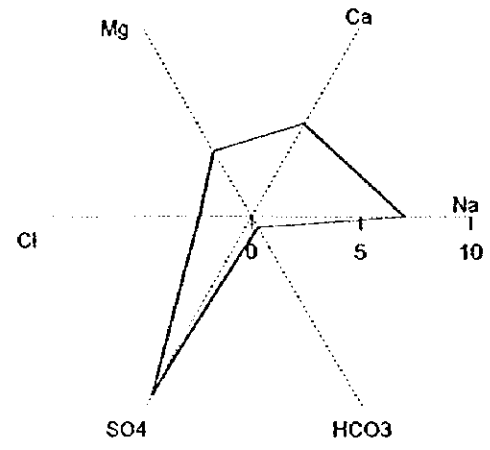


El Qaa Plain El Hag Sobahe 11



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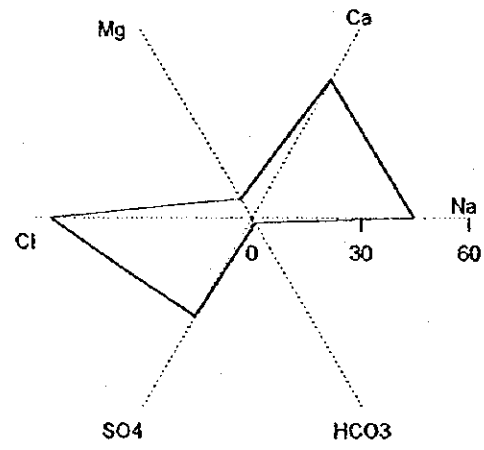

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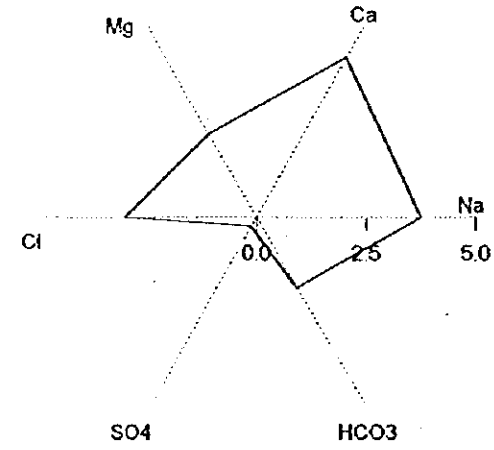

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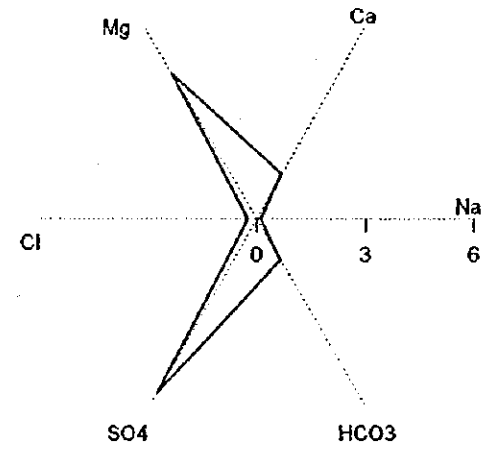
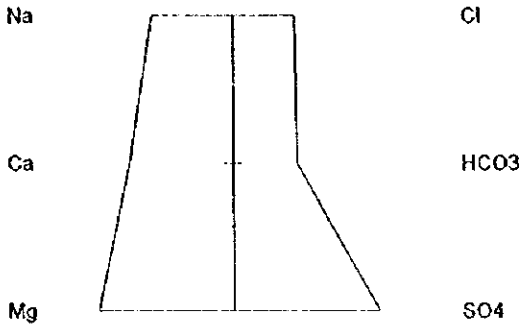
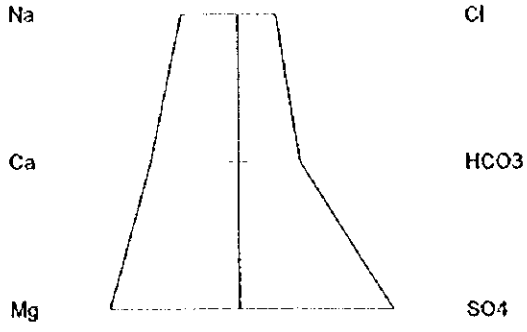


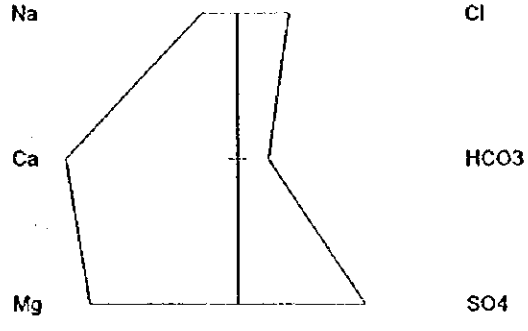
El Qaa Plain W. Thman 15



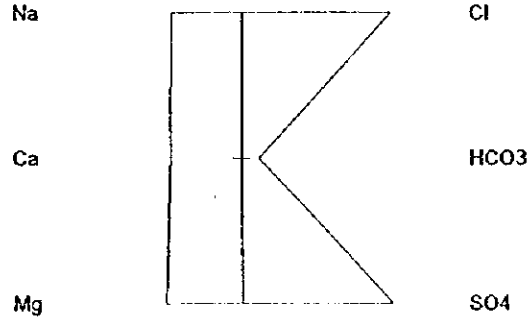
El Qaa Plain W. Isra 16



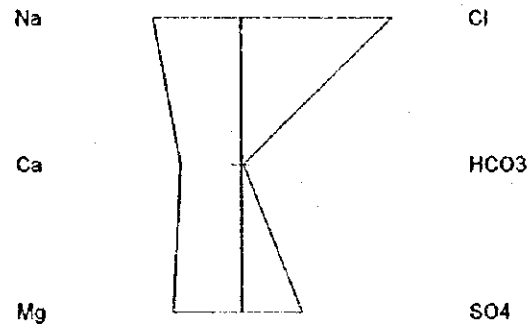
Wadi Sheira Sheira-1 30



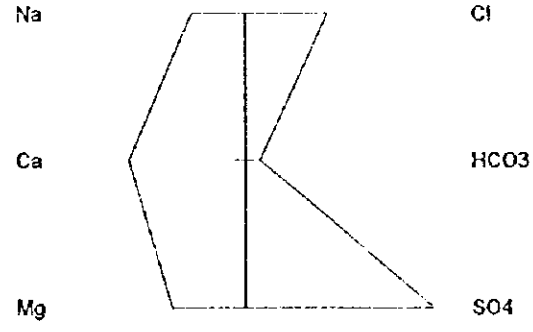
Other Springs Aynn Musa Spring 35



Other Springs Hammam Faraoun Hot Spring



Other Springs Ain Om Ahmed Spring 37



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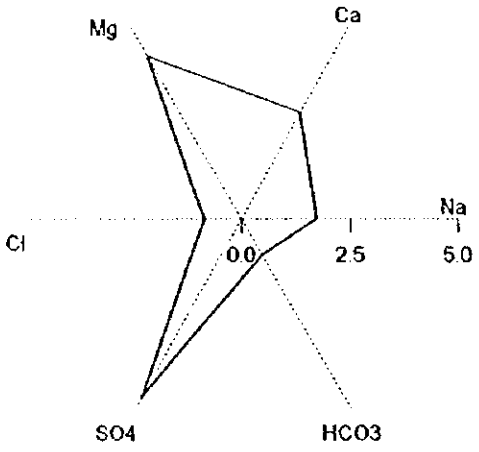

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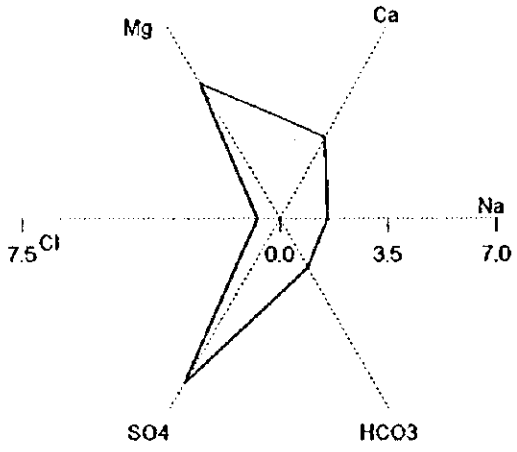

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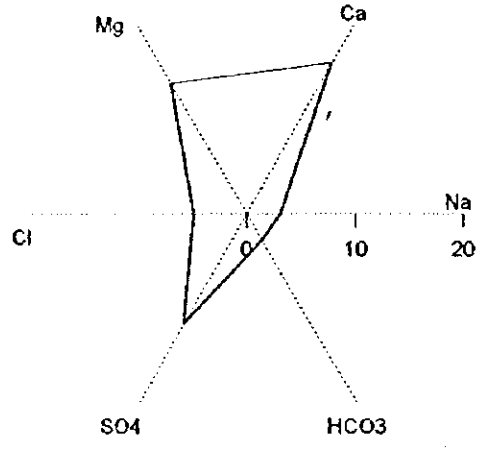
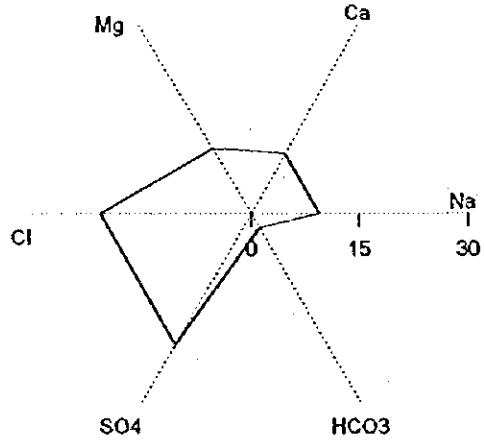
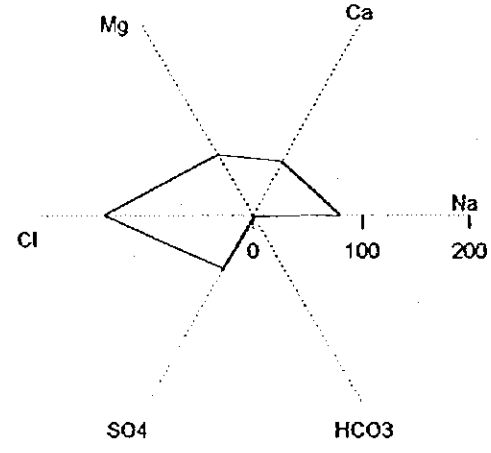


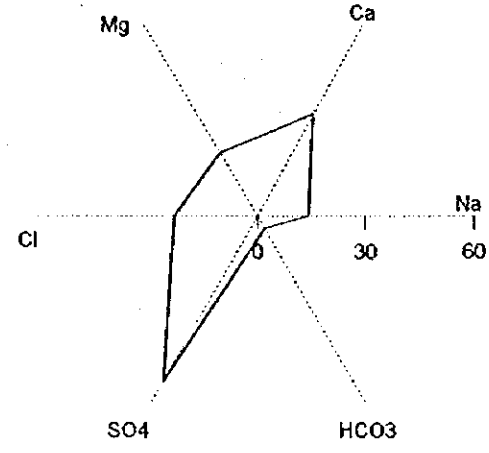
Other Springs Aynn Musa Spring 35



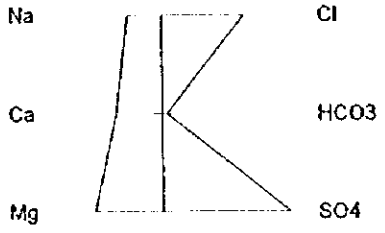
Other Springs Hammam Faraoun Hot Spring



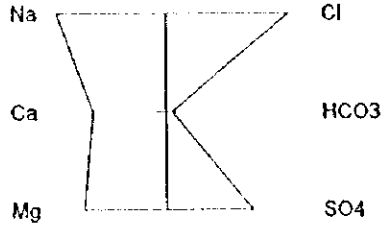
Other Springs Ain Om Ahmed Spring 37



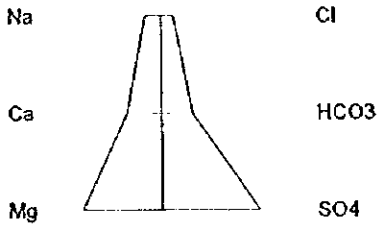
Rus Sudr A. K. Khamis 31



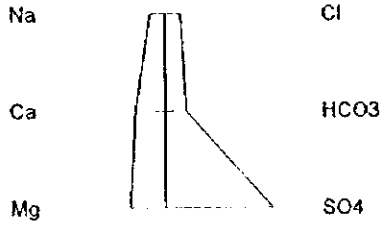
Rus Sudr Ain Abou Ragem 32



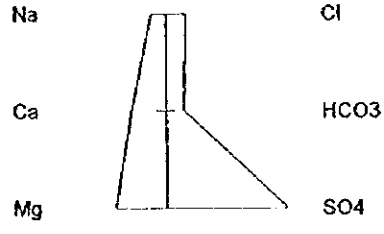
El Talfa Gomaa Khamis 19



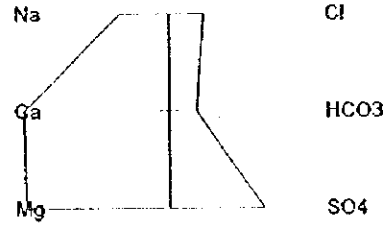
Wadi Watir Furtaga-1 23



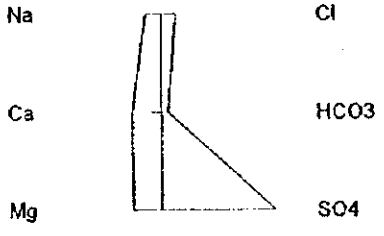
Wadi Watir Saleh Seleem 24



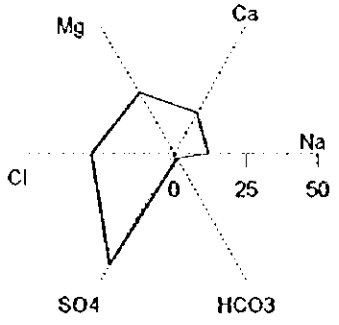
Wadi Zaghara Dug Well 28



Wadi Zalaga Ainez Well 25



Rus Sudr A. K. Khamis 31



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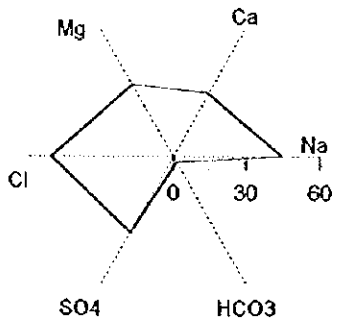
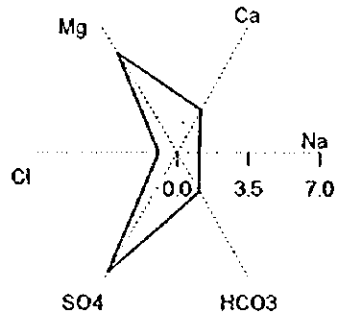
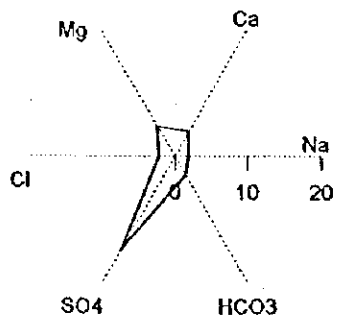


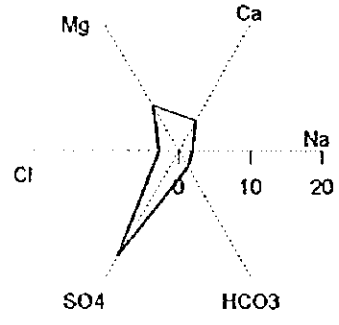
El Talfa Gomaa Khamis 19



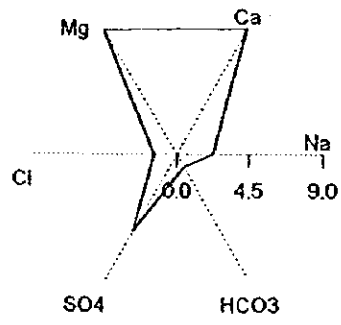
Wadi Watir Furtaga-1 23



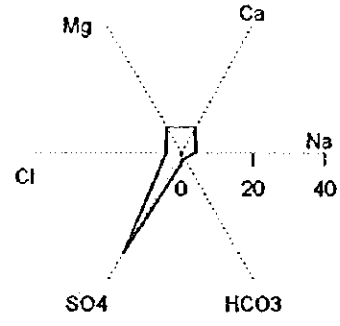
Wadi Watir Saleh Seleem 24



Wadi Zaghara Dug Well 28



Wadi Zalaga Ainez Well 25



2.1.3 Water Quality Data Sheets of Major Water Points (as of February 97)

Database: C:\programs\whi\AquaChem\Sinai Winter.HC3

Cat01	Haroun Well	St. Catherin	Sand and G	Mg-Ca-SO4-HCO3	0020
Cat02	Soyara 1	St. Catherin	Sand and G	Ca-Mg-SO4-HCO3	0021
Cat03	El Rabba Spr	St. Catherin	Sand and G	Mg-Ca-SO4-HCO3	0022
Dahab01	Reservoir Ta	Wadi Dahab	Sand and G	Ca-Mg-Na-Cl	0029
FeiranDW	M. Salem 1	Wadi Feiran	Sand and G	Mg-Ca-SO4	0017
FeiranDW	Refaay	Wadi Feiran	Sand and G	Mg-Ca-SO4-HCO3	0018
Malha01	Abd Allah Se	El Malha	Limestone	Mg-Ca-SO4-Cl	0033
Malha02	Abd Allah Se	El Malha	Limestone	Mg-Ca-Na-SO4-Cl	0034
Nuwe01	E. Hemyed	Nuweiba Coas	Sand and G	Mg-Ca-SO4-Cl	0026
Nuwe02	A. A. Hemad	Nuweiba Coas	Sand and G	Na-Ca-Mg-SO4-Cl	0027
QaaCW01	PZ-8	El Qaa Plain	Sand and G	Na-Ca-Cl	0001
QaaCW02	QAA10	El Qaa Plain	Sand and G	Na-Ca-Cl	0002
QaaCW03	QAA8	El Qaa Plain	Sand and G	Na-Ca-Mg-SO4-Cl	0003
QaaCW04	QAA12	El Qaa Plain	Sand and G	Na-Ca-Mg-Cl-SO4	0004
QaaCW05	QAA15	El Qaa Plain	Sand and G	Ca-Na-Mg-HCO3-C	0005
QaaCW06	QAA23	El Qaa Plain	Sand and G	Na-Ca-Mg-HCO3-C	0006
QaaCW07	QAA21	El Qaa Plain	Sand and G	Ca-Na-Mg-Cl	0007
QaaCW08	QAA29	El Qaa Plain	Sand and G	Ca-Na-Mg-HCO3-C	0008
QaaCW09	Abu Kalam	El Qaa Plain	Sand and G	Na-Ca-Cl	0009
QaaDW01	M Abu Salem	El Qaa Plain	Sand and G	Na-Ca-Cl	0010
QaaDW02	El Hag Sobah	El Qaa Plain	Sand and G	Na-Ca-Mg-SO4-Cl	0011
QaaSP01	Hamam Musa	El Qaa Plain	Sand and G	Na-Ca-Cl-SO4	0012
QaaSP02	W. Hibran	El Qaa Plain	Sand and G	Ca-Na-Mg-Cl-HCO	0013
QaaSP03	W. Mear	El Qaa Plain	Sand and G	Mg-Ca-SO4-HCO3	0014
QaaSP04	W. Thman	El Qaa Plain	Sand and G	Mg-Ca-Na-SO4-HC	0015
QaaSP05	W. Isra	El Qaa Plain	Sand and G	Mg-Ca-Na-SO4-HC	0016
Sheira01	Sheira-1	Wadi Sheira	Sand Stone	Ca-Mg-SO4	0030
Spring01	Aynn Musa Sp	Other Spring	Sand Stone	Mg-Ca-Na-SO4-Cl	0035
Spring02	Hammam Farao	Other Spring	Limestone	Na-Mg-Ca-Cl-SO4	0036
Spring03	Ain Om Ahmed	Other Spring	Granite	Ca-Mg-SO4-Cl	0037
Sudr01	A. K. Khamis	Rus Sudr	Sand and G	Mg-Ca-SO4-Cl	0031
Sudr02	Ain Abou Rag	Rus Sudr	Limestone	Na-Mg-Ca-Cl-SO4	0032
TalfaDW0	Gomaa Khamis	El Talfa	Sand and G	Mg-Ca-SO4-HCO3	0019
Watir01	Furtaga-1	Wadi Watir	Sand and G	Mg-Ca-SO4	0023
Watir02	Saleh Seleem	Wadi Watir	Sand and G	Mg-Ca-SO4	0024
Zaghara0	Dug Well	Wadi Zaghara	Sand and G	Ca-Mg-SO4	0028
Zalaga01	Ainez Well	Wadi Zalaga	Sand and G	Ca-Mg-SO4	0025

SampleID	:	Cat01
Location	:	St. Catherine
Site	:	Haroun Well
Sampling Date	:	Feb1997
Geology	:	Sand and G
Watertype	:	Mg-Ca-SO4-HCO3

Sum of Anions (meq/l)	:	7.64
Sum of Cations (meq/l)	:	15.50
Balance:	:	34.0%

Total dissolved solids	:	23.1 meq/l	628.3 mg/l

Hardness	:	meq/l	°f	°g	mg/l CaCO3
Total hardness	:	15.07	75.35	42.20	753.5
Permanent hardness	:	12.55	62.73	35.13	627.3
Temporary hardness	:	2.52	12.62	7.07	126.2
Alkalinity	:	2.52	12.62	7.07	126.2

(1 °f = 10 mg/l CaCO3/l 1 °g = 10 mg/l CaO)

Major ion composition

	mg/l	mmol/l	meq/l	meq%
Na+	9.2	0.4	0.4	1.729
K +	1.09	0.028	0.028	0.121
Ca++	120.0	2.994	5.988	25.88
Mg++	110.4	4.541	9.083	39.257
Cl-	33.6	0.948	0.948	4.097
SO4--	200.0	2.082	4.164	17.997
HCO3-	154.0	2.524	2.524	10.909

Ratios			Comparison to Seawater	
	mg/l	mmol/l	mg/l	mmol/l
Ca/Mg	1.087	0.659	0.319	0.194
Ca/SO4	0.6	1.438	0.152	0.364
Na/Cl	0.274	0.422	0.556	0.858

Dissolved Minerals:		mg/l	mmol/l
Halite (NaCl)	:	23.41	0.4002
Dolomite (CaMg(CO3)2):		836.061	4.541
Anhydrite (CaSO4)	:	283.585	2.082

SampleID : Cat02
Location : St. Catherine
Site : Soyara 1
Sampling Date : Feb 1997
Geology : Sand and G
Watertype : Ca-Mg-SO4-HCO3

Sum of Anions (meq/l) : 10.42
Sum of Cations (meq/l) : 13.75
Balance: : 13.8%

Total dissolved solids : 24.2 meq/l 749.4 mg/l

Hardness	: meq/l	°f	°g	mg/l CaCO3
Total hardness	: 11.92	59.58	33.36	595.8
Permanent hardness	: 9.23	46.14	25.84	461.4
Temporary hardness	: 2.69	13.44	7.53	134.4
Alkalinity	: 2.69	13.44	7.53	134.4

(1 °f = 10 mg/l CaCO3/l 1 °g = 10 mg/l CaO)

Major ion composition

	mg/l	mmol/l	meq/l	meq%
Na+	41.4	1.801	1.801	7.451
K +	1.37	0.035	0.035	0.145
Ca++	128.0	3.194	6.387	26.424
Mg++	67.2	2.764	5.529	22.874
Cl-	67.3	1.898	1.898	7.852
SO4--	280.0	2.915	5.83	24.119
HCO3-	164.0	2.688	2.688	11.121

Ratios			Comparison to Seawater	
	mg/l	mmol/l	mg/l	mmol/l
Ca/Mg	1.905	1.155	0.319	0.194
Ca/SO4	0.457	1.096	0.152	0.364
Na/Cl	0.615	0.949	0.556	0.858

Dissolved Minerals:	mg/l	mmol/l
Halite (NaCl) :	105.346	1.8008
Dolomite (CaMg(CO3)2):	508.907	2.764
Anhydrite (CaSO4) :	397.018	2.915

SampleID	:	Cat03
Location	:	St. Catherine
Site	:	El Rabba Spring
Sampling Date	:	Feb 1997
Geology	:	Sand and G
Watertype	:	Mg-Ca-SO4-HCO3
Sum of Anions (meq/l)	:	7.89
Sum of Cations (meq/l)	:	3.89
Balance:	:	34.0%
Total dissolved solids	:	11.8 meq/l 458.7 mg/l

Hardness	:	meq/l	°f	°g	mg/l CaCO3
Total hardness	:	3.57	17.86	10.00	178.6
Permanent hardness	:	2.13	10.64	5.96	106.4
Temporary hardness	:	1.44	7.21	4.04	72.1
Alkalinity	:	1.44	7.21	4.04	72.1

(1 °f = 10 mg/l CaCO3/l 1 °g = 10 mg/l CaO)

Major ion composition

	mg/l	mmol/l	meq/l	meq%
Na+	6.9	0.3	0.3	2.547
K +	0.55	0.014	0.014	0.119
Ca++	32.0	0.798	1.597	13.559
Mg++	24.0	0.987	1.974	16.76
Cl-	7.2	0.203	0.203	1.724
SO4--	300.0	3.123	6.246	53.031
HCO3-	88.0	1.442	1.442	12.243

Ratios			Comparison to Seawater	
	mg/l	mmol/l	mg/l	mmol/l
Ca/Mg	1.333	0.809	0.319	0.194
Ca/SO4	0.107	0.256	0.152	0.364
Na/Cl	0.958	1.478	0.556	0.858

Dissolved Minerals:		mg/l	mmol/l
Halite (NaCl)	:	0.335	0.0057
Anhydrite (CaSO4)	:	425.377	3.123

SampleID	:	Dahab01
Location	:	Wadi Dahab
Site	:	Reservoir Tank
Sampling Date	:	Feb1997
Geology	:	Sand and G
Watertype	:	Ca-Mg-Na-Cl
Sum of Anions (meq/l)	:	31.20
Sum of Cations (meq/l)	:	52.46
Balance:	:	25.4%
Total dissolved solids	:	83.7 meq/l 2185.3 mg/l

Hardness	:	meq/l	°f	°g	mg/l CaCO3
Total hardness	:	43.74	218.70	122.47	2187.0
Permanent hardness	:	42.82	214.11	119.90	2141.1
Temporary hardness	:	0.92	4.59	2.57	45.9
Alkalinity	:	0.92	4.59	2.57	45.9

(1 °f = 10 mg/l CaCO3/l 1 °g = 10 mg/l CaO)

Major ion composition

	mg/l	mmol/l	meq/l	meq%
Na+	195.5	8.504	8.504	10.164
K +	8.58	0.219	0.219	0.262
Ca++	560.0	13.972	27.944	33.399
Mg++	192.0	7.898	15.796	18.88
Cl-	793.2	22.373	22.373	26.74
SO4--	380.0	3.956	7.912	9.457
HCO3-	56.0	0.918	0.918	1.097

Ratios			Comparison to Seawater	
	mg/l	mmol/l	mg/l	mmol/l
Ca/Mg	2.917	1.769	0.319	0.194
Ca/SO4	1.474	3.532	0.152	0.364
Na/Cl	0.246	0.38	0.556	0.858

Dissolved Minerals:		mg/l	mmol/l
Halite (NaCl)	:	497.466	8.5037
Carbonate (CaCo3)	:	212.016	2.1202
Dolomite (CaMg(CO3)2)	:	1454.019	7.898
Anhydrite (CaSO4)	:	538.811	3.956

SampleID	:	FeiranDW01
Location	:	Wadi Feiran
Site	:	M. Salem 1
Sampling Date	:	Feb1997
Geology	:	Sand and G
Watertype	:	Mg-Ca-SO4

Sum of Anions (meq/l)	:	9.78
Sum of Cations (meq/l)	:	21.29
Balance:	:	37.0%

Total dissolved solids	:	31.1 meq/l	805.7 mg/l

Hardness	: meq/l	°f	°g	mg/l CaCO3
Total hardness	: 19.83	99.16	55.53	991.6
Permanent hardness	: 18.19	90.96	50.94	909.6
Temporary hardness	: 1.64	8.20	4.59	82.0
Alkalinity	: 1.64	8.20	4.59	82.0

(1 °f = 10 mg/l CaCO3/l 1 °g = 10 mg/l CaO)

Major ion composition

	mg/l	mmol/l	meq/l	meq%
Na+	32.2	1.401	1.401	4.509
K +	2.18	0.056	0.056	0.18
Ca++	160.0	3.992	7.984	25.695
Mg++	144.0	5.923	11.847	38.128
Cl-	67.3	1.898	1.898	6.108
SO4--	300.0	3.123	6.246	20.102
HCO3-	100.0	1.639	1.639	5.275

Ratios			Comparison to Seawater	
	mg/l	mmol/l	mg/l	mmol/l
Ca/Mg	1.111	0.674	0.319	0.194
Ca/SO4	0.533	1.278	0.152	0.364
Na/Cl	0.478	0.738	0.556	0.858

Dissolved Minerals:	mg/l	mmol/l
Halite (NaCl) :	81.936	1.4006
Dolomite (CaMg(CO3)2):	1090.514	5.923
Anhydrite (CaSO4) :	425.377	3.123

SampleID	:	FeiranDW02
Location	:	Wadi Feiran
Site	:	Refaay
Sampling Date	:	Feb1997
Geology	:	Sand and G
Watertype	:	Mg-Ca-SO4-HCO3
Sum of Anions (meq/l)	:	11.12
Sum of Cations (meq/l)	:	11.57
Balance:	:	2.0%
Total dissolved solids	:	22.7 meq/l 743.1 mg/l

Hardness	:	meq/l	°f	°g	mg/l CaCO3
Total hardness	:	9.92	49.58	27.76	495.8
Permanent hardness	:	7.23	36.13	20.24	361.3
Temporary hardness	:	2.69	13.44	7.53	134.4
Alkalinity	:	2.69	13.44	7.53	134.4

(1 °f = 10 mg/l CaCO3/l 1 °g = 10 mg/l CaO)

Major ion composition

	mg/l	mmol/l	meq/l	meq%
Na+	36.8	1.601	1.601	7.054
K +	2.18	0.056	0.056	0.247
Ca++	80.0	1.996	3.992	17.588
Mg++	72.0	2.962	5.923	26.096
Cl-	48.1	1.357	1.357	5.979
SO4--	340.0	3.54	7.079	31.189
HCO3-	164.0	2.688	2.688	11.843

Ratios			Comparison to Seawater	
	mg/l	mmol/l	mg/l	mmol/l
Ca/Mg	1.111	0.674	0.319	0.194
Ca/SO4	0.235	0.564	0.152	0.364
Na/Cl	0.765	1.18	0.556	0.858

Dissolved Minerals:		mg/l	mmol/l
Halite (NaCl)	:	2.239	0.0383
Anhydrite (CaSO4)	:	482.094	3.54

SampleID : Malha01
Location : El Malha
Site : Abd Allah Seleman Well (1)
Sampling Date : Feb1997
Geology : Limestone
Watertype : Mg-Ca-SO4-Cl

Sum of Anions (meq/l) : 21.85
Sum of Cations (meq/l) : 30.97
Balance: : 17.3%

Total dissolved solids : 52.8 meq/l 1523.6 mg/l

Hardness	: meq/l	°f	°g	mg/l CaCO3
Total hardness	: 27.75	138.75	77.70	1387.5
Permanent hardness	: 23.82	119.08	66.69	1190.8
Temporary hardness	: 3.93	19.67	11.02	196.7
Alkalinity	: 3.93	19.67	11.02	196.7

(1 °f = 10 mg/l CaCO3/l 1 °g = 10 mg/l CaO)

Major ion composition

	mg/l	mmol/l	meq/l	meq%
Na+	71.99	3.131	3.131	5.928
K +	3.32	0.085	0.085	0.161
Ca++	200.0	4.99	9.98	18.895
Mg++	216.0	8.885	17.77	33.644
Cl-	192.3	5.424	5.424	10.269
SO4--	600.0	6.246	12.493	23.653
HCO3-	240.0	3.934	3.934	7.448

Ratios

	mg/l	mmol/l	Comparison to Seawater mg/l	mmol/l
Ca/Mg	0.926	0.562	0.319	0.194
Ca/SO4	0.333	0.799	0.152	0.364
Na/Cl	0.374	0.577	0.556	0.858

Dissolved Minerals:	mg/l	mmol/l
Halite (NaCl) :	183.185	3.1314
Anhydrite (CaSO4) :	850.754	6.246

SampleID	:	Malha02
Location	:	El Malha
Site	:	Abd Allah Seleman Well (2)
Sampling Date	:	Feb1997
Geology	:	Limestone
Watertype	:	Mg-Ca-Na-SO4-Cl
Sum of Anions (meq/l)	:	21.46
Sum of Cations (meq/l)	:	29.87
Balance:	:	16.4%
Total dissolved solids	:	51.3 meq/l 1521.5 mg/l

Hardness	:	meq/l	°f	°g	mg/l CaCO3
Total hardness	:	23.8	119.01	66.64	1190.1
Permanent hardness	:	20.2	100.98	56.55	1009.8
Temporary hardness	:	3.61	18.03	10.10	180.3
Alkalinity	:	3.61	18.03	10.10	180.3

(1 °f = 10 mg/l CaCO3/l 1 °g = 10 mg/l CaO)

Major ion composition

	mg/l	mmol/l	meq/l	meq%
Na+	138.0	6.003	6.003	11.694
K +	2.77	0.071	0.071	0.138
Ca++	200.0	4.99	9.98	19.441
Mg++	168.0	6.911	13.821	26.923
Cl-	182.7	5.153	5.153	10.038
SO4--	610.0	6.35	12.701	24.741
HCO3-	220.0	3.606	3.606	7.024

Ratios			Comparison to Seawater	
	mg/l	mmol/l	mg/l	mmol/l
Ca/Mg	1.19	0.722	0.319	0.194
Ca/SO4	0.328	0.786	0.152	0.364
Na/Cl	0.755	1.165	0.556	0.858

Dissolved Minerals:		mg/l	mmol/l
Halite (NaCl)	:	8.503	0.1454
Anhydrite (CaSO4)	:	864.933	6.35

SampleID	:	Nuwe01
Location	:	Nuweiba Coastal Plain
Site	:	E. Hemyed
Sampling Date	:	Feb1997
Geology	:	Sand and G
Watertype	:	Mg-Ca-SO4-Cl

Sum of Anions (meq/l)	:	33.57
Sum of Cations (meq/l)	:	35.23
Balance:	:	2.4%

Total dissolved solids	:	68.8 meq/l	2080.6 mg/l

Hardness	:	meq/l	°f	°g	mg/l CaCO3
Total hardness	:	31.74	158.71	88.88	1587.1
Permanent hardness	:	29.84	149.20	83.55	1492.0
Temporary hardness	:	1.9	9.51	5.32	95.1
Alkalinity	:	1.9	9.51	5.32	95.1

(1 °f = 10 mg/l CaCO3/l 1 °g = 10 mg/l CaO)

Major ion composition

	mg/l	mmol/l	meq/l	meq%
Na+	74.75	3.251	3.251	4.725
K +	9.36	0.239	0.239	0.347
Ca++	280.0	6.986	13.972	20.307
Mg++	216.0	8.885	17.77	25.828
Cl-	384.5	10.845	10.845	15.763
SO4--	1000.0	10.411	20.821	30.262
HCO3-	116.0	1.901	1.901	2.763

Ratios			Comparison to Seawater	
	mg/l	mmol/l	mg/l	mmol/l
Ca/Mg	1.296	0.786	0.319	0.194
Ca/SO4	0.28	0.671	0.152	0.364
Na/Cl	0.194	0.3	0.556	0.858

Dissolved Minerals:		mg/l	mmol/l
Halite (NaCl)	:	190.208	3.2514
Anhydrite (CaSO4)	:	1417.923	10.411

SampleID	:	Nuwe02
Location	:	Nuweiba Coastal Plain
Site	:	A. A. Hemad
Sampling Date	:	Feb1997
Geology	:	Sand and G
Watertype	:	Na-Ca-Mg-SO4-Cl
Sum of Anions (meq/l)	:	55.75
Sum of Cations (meq/l)	:	59.19
Balance:	:	3.0%
Total dissolved solids	:	114.9 meq/l 3517.5 mg/l

Hardness	:	meq/l	°f	°g	mg/l CaCO3
Total hardness	:	37.73	188.65	105.65	1886.5
Permanent hardness	:	35.53	177.67	99.49	1776.7
Temporary hardness	:	2.2	10.98	6.15	109.8
Alkalinity	:	2.2	10.98	6.15	109.8

(1 °f = 10 mg/l CaCO3/l 1 °g = 10 mg/l CaO)

Major ion composition

	mg/l	mmol/l	meq/l	meq%
Na+	480.7	20.909	20.909	18.191
K +	21.45	0.549	0.549	0.478
Ca++	400.0	9.98	19.96	17.365
Mg++	216.0	8.885	17.77	15.46
Cl-	865.3	24.407	24.407	21.234
SO4--	1400.0	14.575	29.15	25.361
HCO3-	134.0	2.196	2.196	1.911

Ratios	mg/l	mmol/l	Comparison to Seawater mg/l	mmol/l
Ca/Mg	1.852	1.123	0.319	0.194
Ca/SO4	0.286	0.685	0.152	0.364
Na/Cl	0.556	0.857	0.556	0.858

Dissolved Minerals:		mg/l	mmol/l
Halite (NaCl)	:	1223.182	20.9091
Anhydrite (CaSO4)	:	1985.092	14.575