

**ESTUDIO DE LOS RECURSOS HIDRICOS
SUBTERRANEOS DE LA UNIDAD DEL
SUBBETICO DE MURCIA**

TOMO 6. ANEXO III

**HOJAS DE DATOS Y CURVAS DE CAMPO Y
ORDENADOR DE LOS S.E.V. EL SABINAR**

TOMO 6

A N E X O III

**HOJAS DE DATOS Y CURVAS DE CAMPO Y ORDENADOR DE LOS SEV.
EL SABINAR**

DATA SET: 11

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1270.00
 SOUNDING COORDINATES: X: 571790.0000 Y: 4229780.0000

DATE: 91
 SOUNDING: 11
 AZIMUTH: N-72-E
 EQUIPMENT: ADARD

Schlumberger Configuration

FITTING ERROR: 7.087 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1270.0	
1	116.9	/	0.778	1269.2	0.00666
2	298.2		7.93	1261.2	0.0266
3	493.7		8.83	1252.4	0.0179
4	1600.8		22.46	1229.9	0.0140
5	73.45				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	198.6	198.8	-2.71
2	3.73	223.7	224.9	-0.563
3	5.18	259.7	249.2	4.05
4	7.20	383.7	272.2	4.03
5	10.00	298.1	296.6	0.479
6	13.90	318.2	328.2	-3.12
7	19.30	358.0	373.1	-4.22
8	26.80	413.6	434.2	-5.00
9	37.30	478.1	505.4	-5.72
10	51.80	539.7	563.7	-4.44
11	72.00	607.9	575.8	5.10
12	100.0	614.5	612.1	15.67
13	139.0	415.7	391.8	5.98
14	193.0	227.1	246.3	-8.48
15	268.0	125.7	140.4	-11.76
16	373.0	99.90	92.35	7.55

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.63									
P 2	-0.01	0.98								
P 3	-0.01	0.01	0.35							
P 4	0.00	-0.02	0.08	0.58						
P 5	0.00	0.00	0.01	-0.02	0.99					
T 1	-0.46	-0.04	0.01	-0.02	0.00	0.37				
T 2	0.02	-0.04	-0.41	-0.01	0.00	-0.03	0.53			
T 3	-0.01	0.04	-0.14	-0.10	0.01	0.05	0.20	0.38		
T 4	0.00	0.01	0.04	0.43	0.02	0.02	0.07	0.18	0.52	
	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4	



Proyecto:
 Zona: *El Sabinar*
 Observador: *P. Panuel / P. Penchero*
 Situación: *Sobre plano 1/50.000 n.º 889*

COORDENADAS
 X *571.790*
 Y *4.229.780*
 Z *1.270*

mV: *Adaro 01*
 mA: *Geotrou 328*
 S.E.V.:
1

Rumbo AB
N-72°E
 Perfil:
P-I

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER
 SIMETRICO
 MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2,68	1	18	30mV	540	193,6							21,78			
2	3,73		16,5	100mV	86	223,7						<i>Proximo a pie de monte Calizaf</i>	42,92			
3	5,18		18	"	56	259,8							83,51			
4	7,2		20	"	35	283,7							182,1			
5	10		18,5	30mV	17,6	298,1							313,4			
6	13,9		16	100mV	8,4	318,3							606,2			
7	19,3		16	"	4,9	358							1.189	109,2		
8	26,8		15	"	2,75	413,6	10	15	100mV	30	435,6		2.256	217,8		
9	37,3		85	"	9,3	478,1		85	"	96	484,7		4.370	429,2		
10	51,8	10	82	100mV	53	539,8							4.479	836,1		
11	72		80	"	30	607,9							16.290	1.621		
12	100		102	80mV	20	614,5							31.400	3.134		
13	139		160	"	11	416,8							60.700	6.062	1.175	
14	193		175	100mV	3,4	227,1								11.890	2.301	
15	268		280	30mV	1,56	125,7								22.580	4.474	
16	373		280	100mV	0,64	99,9								43.700	8.702	4.292
17	518		570		0,95	140,5						<i>Ala Oeste foca en Calizaf</i>	84.290	16.820	8.361	
18	720												162.900	32.530	16.210	
19	1.000													62.790	31.340	
20	1.300													121.400	60.620	
21	1.930													234.000	116.900	
22	2.680													451.200	226.600	
23	3.730														437.000	
24	5.180														842.880	
25	7.200														1.628.520	
26	10.000														3.141.510	

OBSERVACIONES:

FECHA: *5-2-91*

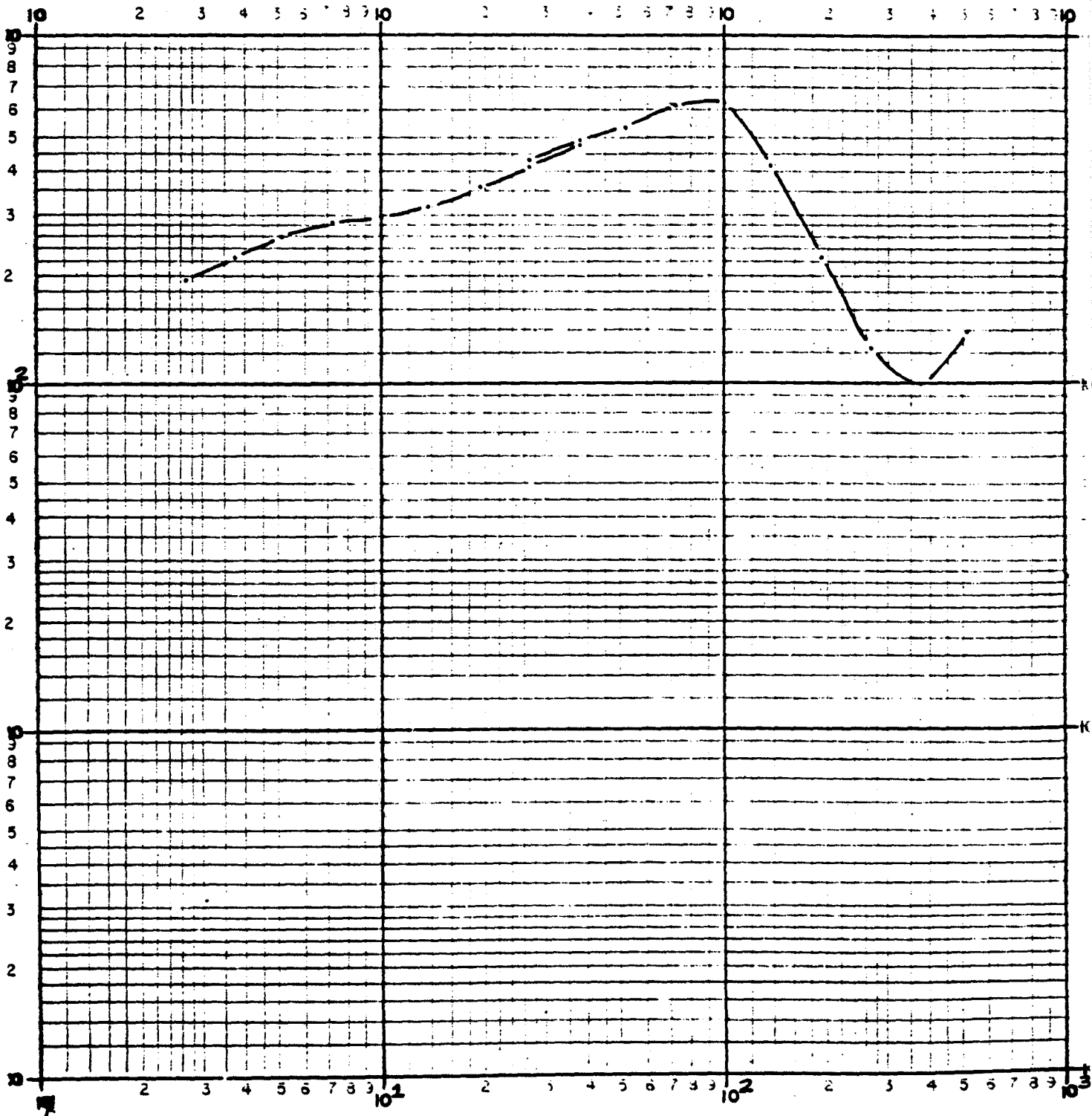


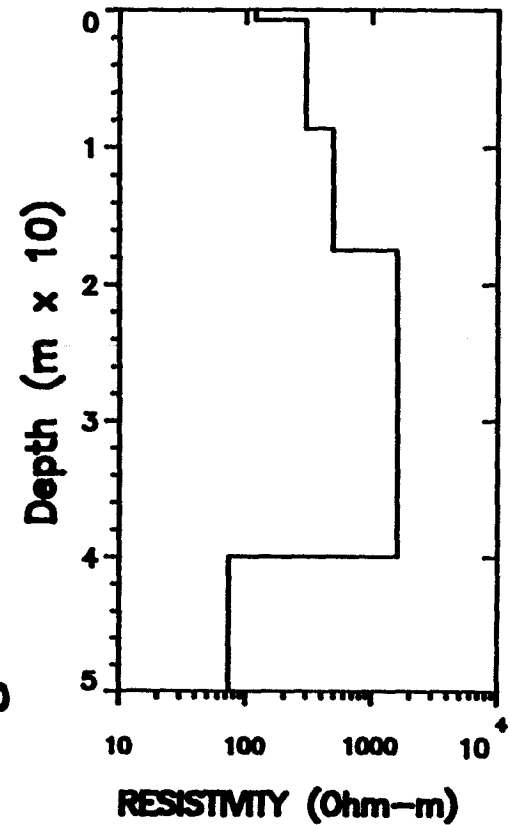
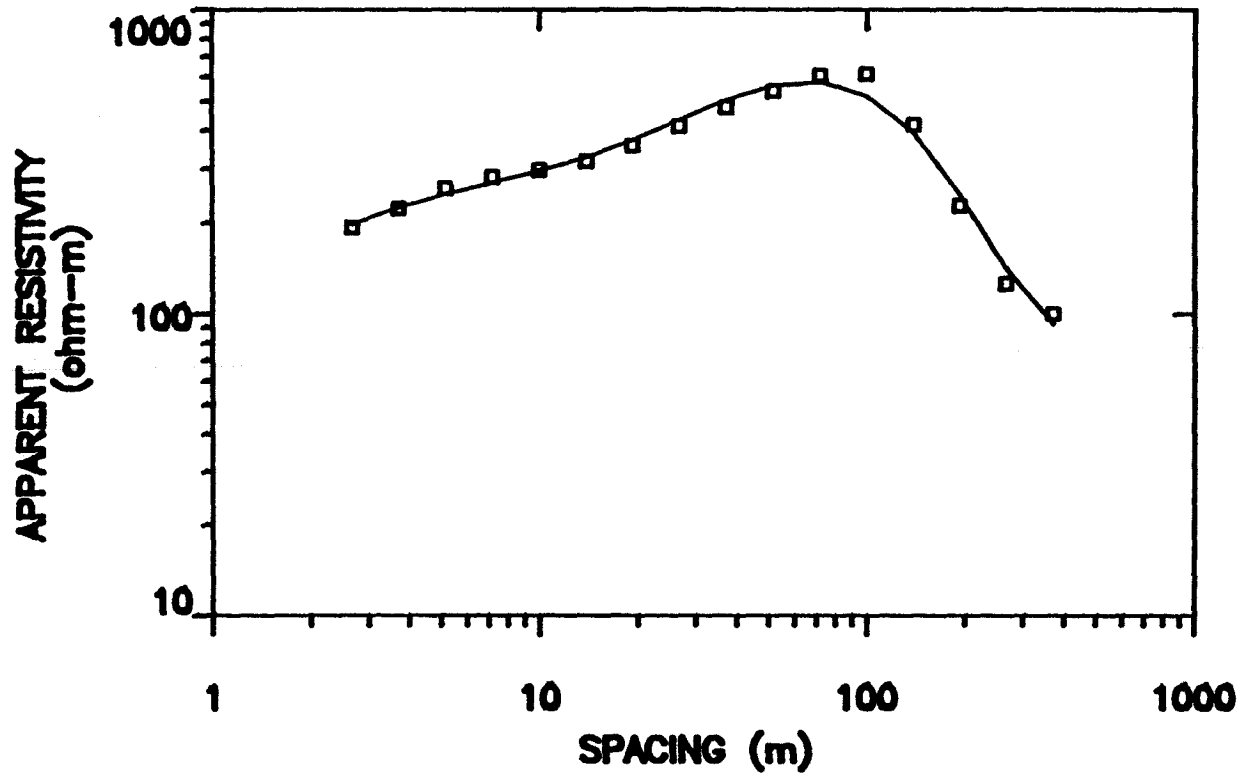
Departamento de Geofísica

Estudio El Sabinar S.E.V. 1

Fecha 5-2-91 Rumbo AB N-72°E PERFIL P-I

<p>Interpretación</p>	<p>Observaciones:</p>
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 11	Date: 91	
Equipment: ADARO	Sounding: 11	Azimuth: N-72-E

DATA SET: 21

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1210.00
 SOUNDING COORDINATES: X: 571900.0000 Y: 4228950.0000

DATE: 91
 SOUNDING: 21
 AZIMUTH: N-66-E
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 6.290 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1210.0	
1	44.54		1.32	1208.6	0.0297
2	521.3		5.98	1202.6	0.0114
3	634.0		29.22	1173.4	0.0460
4	134.0		88.20	1085.2	0.658
5	151.5		17.75	1067.5	0.117
6	450.5		27.33	1040.1	0.0608
7	41.02				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	80.80	80.40	0.482
2	3.73	101.9	104.7	-2.84
3	5.18	133.1	136.1	-2.29
4	7.20	184.5	174.5	5.40
5	10.00	226.8	219.4	3.28
6	13.90	270.5	270.0	0.155
7	19.30	314.2	323.6	-3.00
8	26.80	360.2	374.7	-4.04
9	37.30	417.7	413.8	0.918
10	51.80	410.8	426.6	-3.83
11	72.00	410.0	400.9	2.19
12	100.0	390.0	337.3	13.49
13	139.0	219.5	257.4	-17.26
14	193.0	192.8	191.2	0.860
15	268.0	154.8	148.1	4.33
16	373.0	111.8	115.6	-3.42

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ADARO

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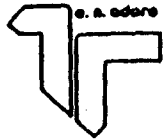
No.	Seeding (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
17	518.0	102.2	85.37	16.46

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.72										
P 2	-0.12	0.73									
P 3	0.01	0.09	0.92								
P 4	0.01	0.04	-0.05	0.83							
P 5	0.00	0.00	0.00	0.08	0.03						
P 6	0.00	0.00	0.01	0.10	0.07	0.22					
P 7	0.00	0.00	0.00	-0.01	0.06	0.23	0.29				
T 1	-0.32	-0.18	0.03	0.02	0.00	0.00	0.00	0.62			
T 2	0.00	-0.11	-0.03	0.00	-0.01	-0.01	0.00	-0.01	0.07		
T 3	0.00	-0.08	0.11	0.12	-0.03	-0.05	0.00	-0.02	0.20	0.77	
T 4	0.00	0.00	0.00	-0.06	0.05	0.21	0.27	0.00	0.01	0.01	
T 5	0.00	0.00	0.00	-0.01	0.01	0.04	0.05	0.00	0.00	0.00	
T 6	0.00	0.00	0.01	0.08	0.07	0.21	0.22	0.00	-0.01	-0.05	
	P 1	P 2	P 3	P 4	P 5	P 6	P 7	T 1	T 2	T 3	

SECOND PART OF RESOLUTION MATRIX:

T 4	0.25			
T 5	0.05	0.01		
T 6	0.20	0.04	0.20	
	T 4	T 5	T 6	



Proyecto:
 Zona: El Sabinar.....
 Observador: A. G. / A. Penhara.....
 Situación: Sobre plano 1/50.000 n.º 889.....

COORDENADAS
 X 571.900
 Y 4.228.950
 Z 1.210

mV: Adaro 01
 mA: Geotron 328
 S.E.V.
2

Rumbo AB
N-66°E
 Perfil:
P-I

CONSTANTES PARA DISPOSITIVO SCHULMBERGER
 SIMETRICO
 MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2.68	/	31	300mV	115	80,8							21,78			
2	3.73		32	100mV	76	101,9							42,92			
3	5.18		32	4	51	133,1							83,51			
4	7.2		29	4	33	184,5							182,1			
5	10		29	30mV	21	226,9							313,4			
6	13.9		32.5	0	14.5	270,5							606,2			
7	19.3		32	10mV	8.6	314,2							1.169	109,2		
8	26.8		31	4	4.95	360,2							2.268	217,8		
9	37.3		34	4	3.25	417,7	10	34		33	416,6		4.370	429,2		
10	51.8	10	31.5	30mV	15.5	410,9							8.429	836,1		
11	72		68	4	17.2	410							16.290	1.821		
12	100		45	10mV	5.6	390							31.470	3.134		
13	139		185	4	6.7	219,5							60.700	6.062	1.175	
14	193		200	4	3.3	192,9								11.690	2.301	
15	268		335	4	2.3	154,9								22.560	4.474	
16	373		430	3mV	1.1	111,8								43.700	8.702	4.292
17	518		330	4	0.4	102,2								84.290	16.820	8.351
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.390														121.400	60.620
21	1.930														234.000	116.900
22	2.680														461.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: 5-2-91



Departamento de Geofísica

Estudio El Sabinar

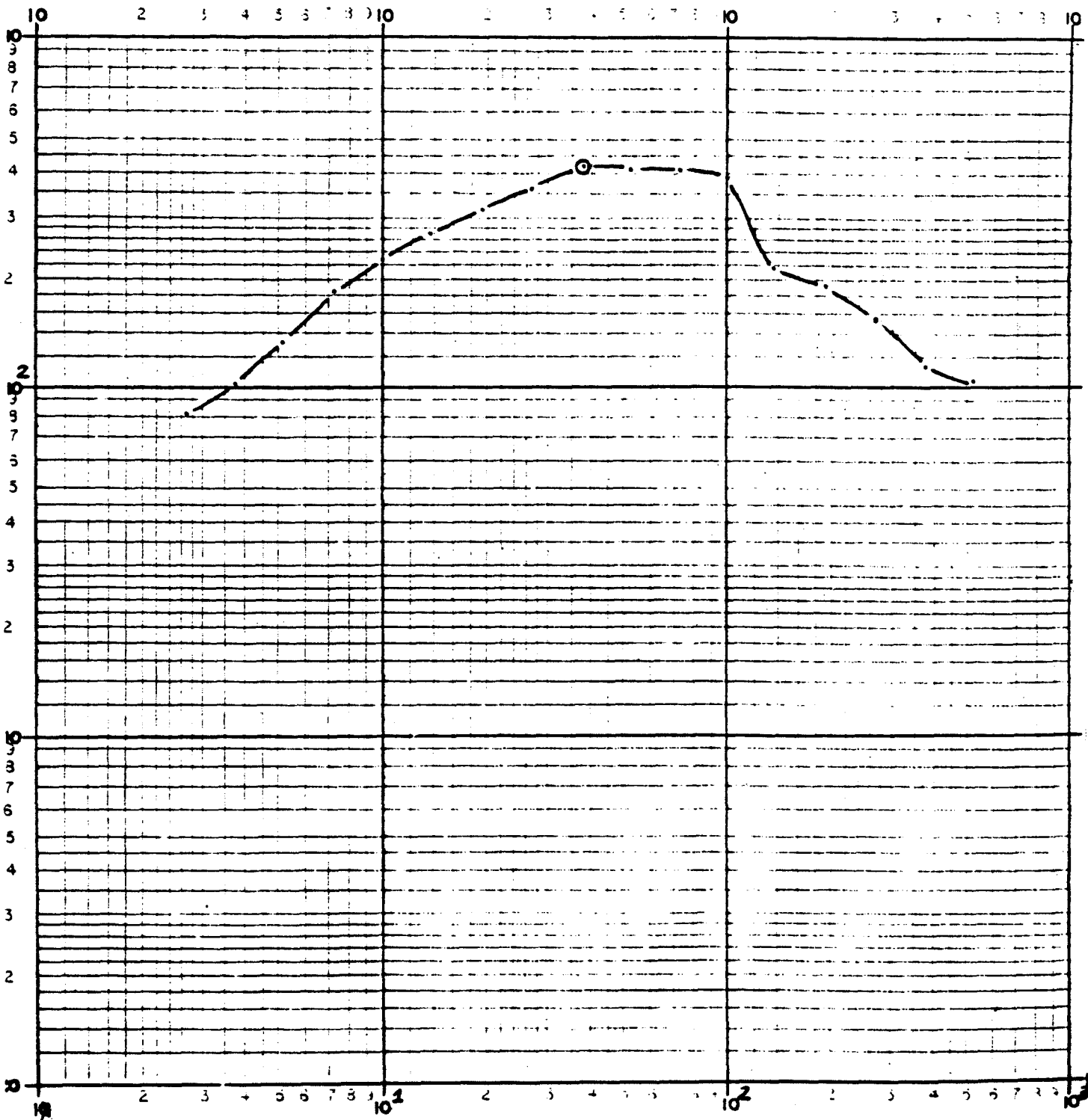
S.E.V. 2

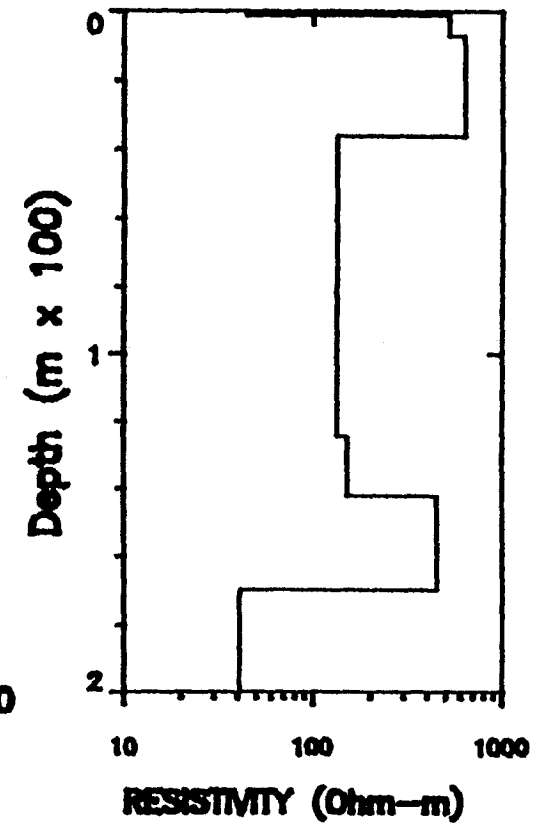
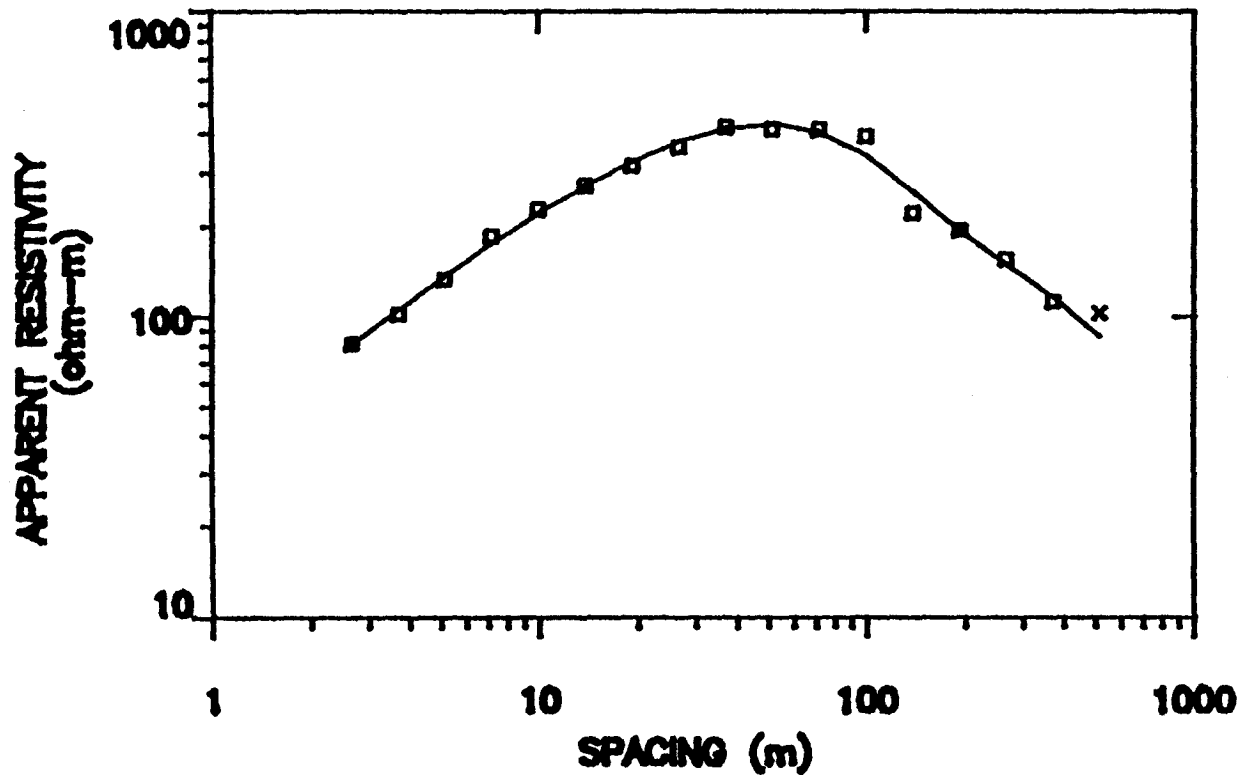
Fecha 5-2-91 Rumbo AB N-66°E

PERFIL P-I

Interpretación

Observaciones:





for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 21	Date: 91	Azimuth: N-66-E
Equipment: ADARO	Sounding: 21	

DATA SET: 31

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1210.00
 SOUNDING COORDINATES: X: 572440.0000 Y: 4227460.0000

DATE: 91
 SOUNDING: 31
 AZIMUTH: N-58-E
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 5.735 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
1	53.07		2.67	1210.0	
2	31.22		2.99	1207.3	0.0504
3	48.91		8.98	1204.3	0.0758
4	1118.4		17.89	1195.3	0.183
5	4.21		145.7	1177.4	0.0160
6	50.57			1031.6	34.62

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	50.10	50.98	-1.76
2	3.73	50.10	48.92	2.34
3	5.18	46.40	46.19	0.436
4	7.20	43.40	44.09	-1.59
5	10.00	44.50	44.61	-0.263
6	13.90	50.10	49.29	1.60
7	19.30	60.10	59.01	1.79
8	26.80	73.00	74.55	-2.13
9	37.30	87.40	95.81	-9.63
10	51.80	113.6	120.1	-5.30
11	72.00	151.3	143.0	5.43
12	100.0	172.3	156.8	9.01
13	139.0	169.0	152.9	9.47
14	193.0	126.1	126.8	-0.570
15	268.0	75.20	84.57	-12.46
16	373.0	44.60	44.07	1.18
17	518.0	45.00	21.74	51.36

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ADARO

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ADDED

T 5 0.26
T 5

SECOND PART OF RESOLUTION MATRIX:

	F 1	F 2	F 3	F 4	F 5	F 6	T 1	T 2	T 3	T 4
T 5	0.00	0.00	-0.01	0.01	-0.39	-0.05	0.00	0.00	0.00	0.00
T 4	0.00	-0.01	0.03	0.49	0.03	0.00	0.00	0.00	0.07	0.51
T 3	0.00	0.09	-0.07	-0.06	0.03	0.00	-0.06	0.15	0.87	
T 2	0.00	-0.17	-0.23	-0.01	0.01	0.00	0.11	0.15		
T 1	0.02	0.19	-0.18	0.00	0.01	0.00	0.76			
P 6	0.00	0.00	0.00	0.00	0.08	0.01				
P 5	0.00	-0.01	0.04	-0.01	0.61					
P 4	0.00	0.00	-0.03	0.51						
P 3	0.01	0.15	0.64							
P 2	-0.01	0.32								
P 1	1.00									

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER



Proyecto:
 Zona: El Sabinar
 Observador: P. J. J. de la Cruz Sanchez
 Situación: Sobre plano 1/50.000 n.º 889

COORDENADAS
 X 572.440
 Y 4.227.460
 Z 1.210

mV: Adaro n.º 01
 mA: Geotron 328
 S.E.V.:
3

Rumbo AB
N-58°-E
 Perfil:
I

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER
 SIMETRICO
 MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	1 m	10 m	50 m	100 m	
1	2.68	1	20	100mV	46	50.1						Zona con nieve	21.78				
2	3.73		24	"	28	50.1							42.92				
3	5.18		27	30mV	15	46.4							83.51				
4	7.2		31	10mV	8.3	43.4							162.1				
5	10		31	"	4.4	44.5							313.4				
6	13.9		115	"	9.5	50.1							606.2				
7	19.3		110	"	5.7	60.1	89						1.189	109.2			
8	26.8		102	"	3.3	73	10	102		35	74.7		2.256	217.8			
9	37.3		100	"	2.0	87.4		100		21	90.1		4.370	429.2			
10	51.8		230	"	3.1	113.6		230		33	119.8		8.429	836.1			
11	72	10	225	30mV	21	151.3							16.290	1.621			
12	100		260	"	14.3	172.4							31.520	3.134			
13	139		260	10mV	7.25	169.0							60.700	6.062	1.175		
14	193		190	"	2.05	126.1								11.690	2.301		
15	268		450	3mV	1.5	75.2								22.560	4.474		
16	373		460	"	0.47	44.6		500		0.51	44.6			43.700	8.702	4.292	
17	518		450	1mV	0.24	45.0 (45)								84.290	16.820	8.361	
18	720													162.900	32.530	16.210	
19	1.000														62.790	31.340	
20	1.390															121.400	60.620
21	1.930															234.000	116.900
22	2.680															461.200	225.600
23	3.730																437.000
24	5.180																842.880
25	7.200																1.628.620
26	10.000																3.141.510

OBSERVACIONES:

FECHA: 5-2-91



Departamento de Geofísico

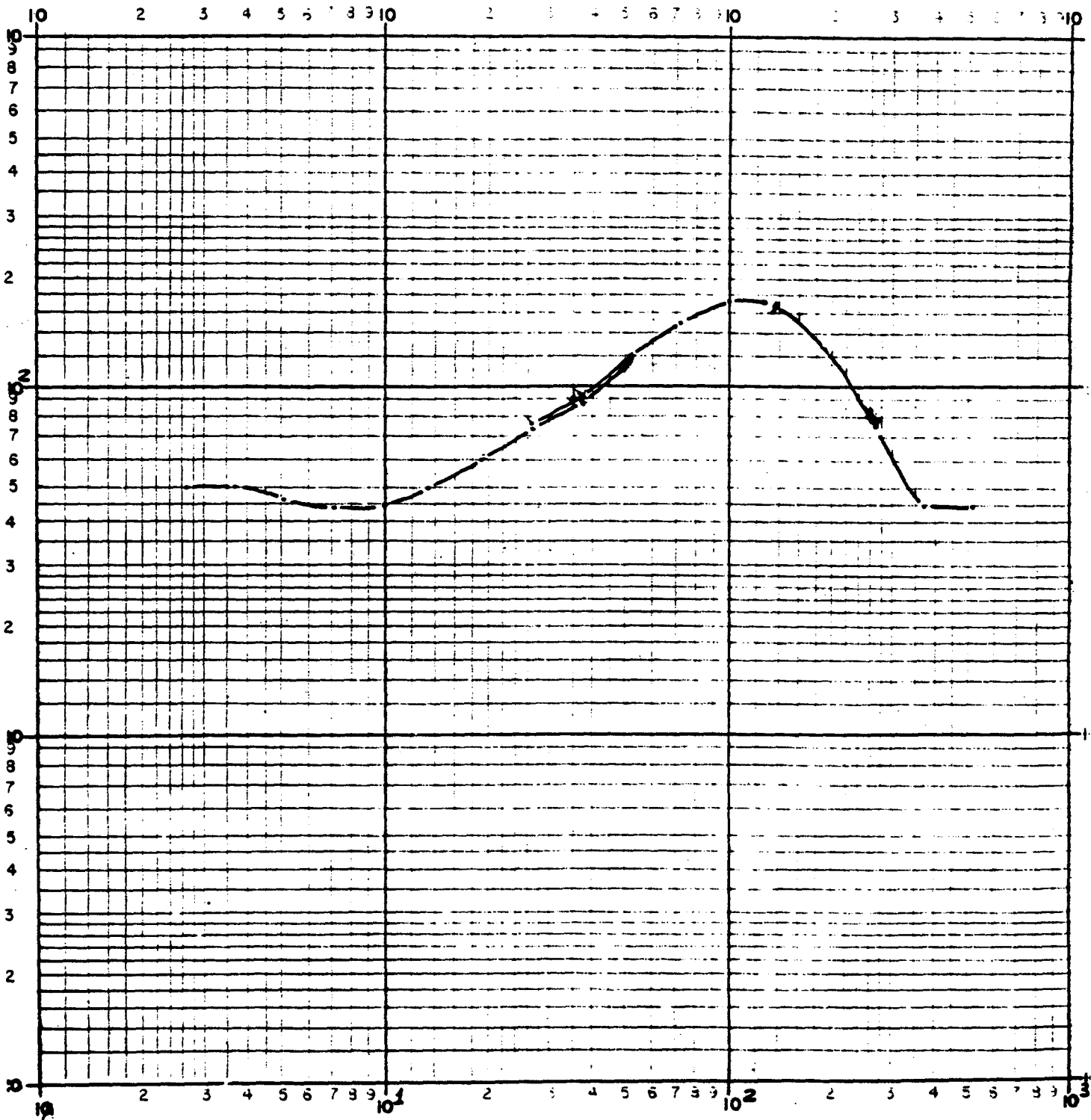
Estudio *El Sabinar*

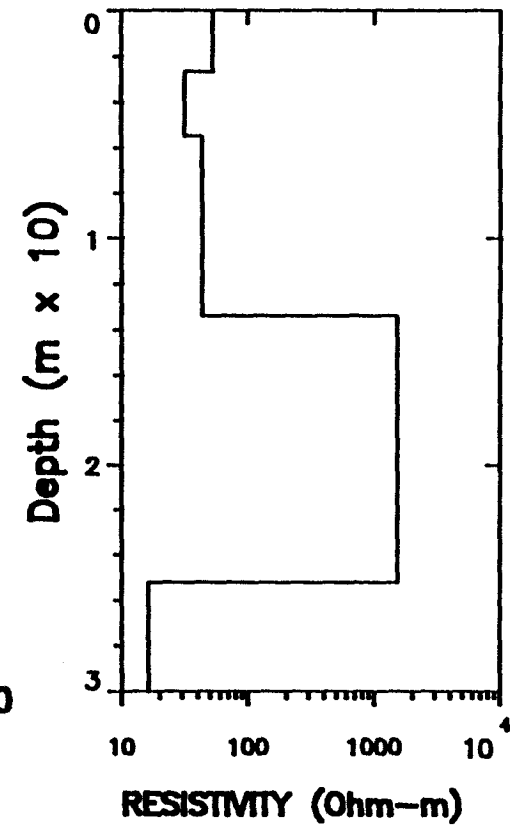
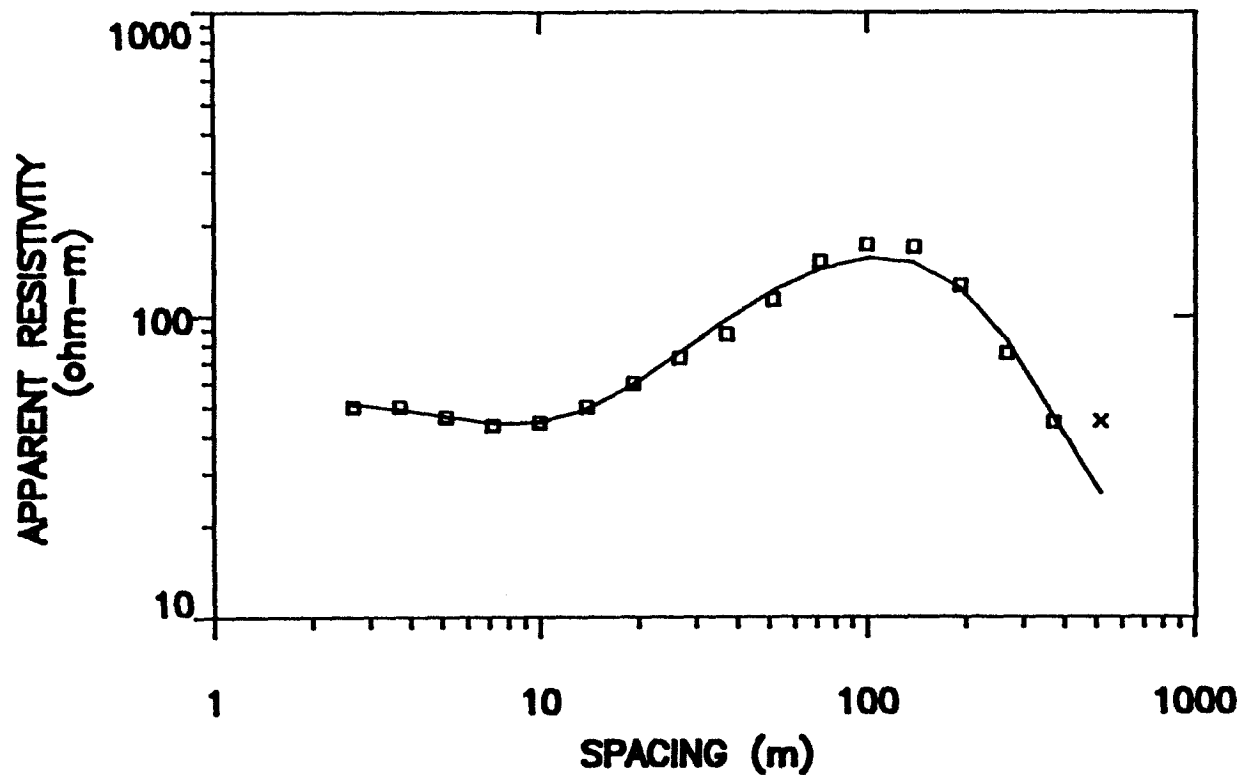
S.E.V. 3

Fecha *5-2-91* Rumbo AB *N° 58° E*

PERFIL *P-I*

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 31	Date: 91	Azimuth: N-58-E
Equipment: ADARO	Sounding: 31	

DATA SET: 4II

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1270.00
 SOUNDING COORDINATES: X: 572950.0000 Y: 4230225.0000

DATE: 91
 SOUNDING: 4II
 AZIMUTH: N-60-E
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 3.431 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1270.0	
1	143.9		3.02	1266.9	0.0210
2	12.78		22.39	1244.5	1.75
3	17.58		44.81	1199.7	2.54
4	2739.9				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	DATA	PA (ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	128.3	129.6	-1.04
2	3.73	116.3	113.3	2.54
3	5.18	86.30	87.49	-1.38
4	7.20	56.70	56.70	-0.0174
5	10.00	31.30	31.73	-1.38
6	13.90	19.20	18.73	2.44
7	19.30	14.60	14.70	-0.717
8	26.80	13.70	14.13	-3.19
9	37.30	14.90	14.72	1.18
10	51.80	16.70	16.26	2.59
11	72.00	19.80	19.13	3.34
12	100.0	22.80	24.07	-5.59
13	139.0	30.30	32.08	-5.90
14	193.0	43.00	43.96	-2.23
15	268.0	63.30	60.62	4.22
16	373.0	89.70	83.69	6.69
17	518.0	115.3	114.9	0.290

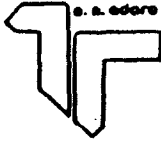
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ADARO

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PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.99						
P 2	0.00	0.99					
P 3	0.00	0.01	0.63				
P 4	0.00	0.00	-0.03	0.03			
T 1	0.00	0.00	0.00	0.00	1.00		
T 2	-0.01	-0.03	-0.38	-0.01	0.01	0.30	
T 3	0.01	0.02	-0.05	-0.06	-0.01	0.17	0.81
	P 1	P 2	P 3	P 4	T 1	T 2	T 3



Proyecto:
 Zona: *El Sabinar*
 Observador: *M. Manuel M. Sanchez*
 Situación: *Sobre plano 1/50,000 n.º 889*

COORDENADAS
 X *572.950*
 Y *4.230.225*
 Z *1.270*

m V: *Adaro 01*
 m A: *Geotru 328*
 S.E.V. *4*

Rumbo AB *N-60°E*
 Perfil: *P-II*

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2.68	1	11.2	100mV	66	128.3							21.78			
2	3.73		10.7		29	116.3						<i>Proximo a Piedra muerta</i>	42.92			
3	5.18		15	30mV	15.5	86.3							83.51			
4	7.2		18	10mV	6.3	56.7							182.1			
5	10		76	"	7.6	31.3							313.4			
6	13.9		79	"	2.5	19.2							606.2			
7	18.3		152	3mV	1.8	13.8	10	150	30mV	20	14.6		1.169	109.2		
8	26.8		175	"	1.0	12.9		175	"	11	13.7		2.256	217.8		
9	37.3	10	230	10mV	8.0	14.9							4.370	429.2		
10	51.8		270	"	5.4	16.7							8.420	835.1		
11	72		270	"	3.3	19.8							16.290	1.621		
12	100		275	"	2.0	22.8							31.420	3.134		
13	139		420	"	2.1	30.3							60.700	6.062	1.175	
14	193		340	3mV	1.25	43.0								11.690	2.301	
15	268		570	"	1.6	63.3								22.560	4.474	
16	373		560	"	1.15	89.7								43.700	8.702	4.292
17	518		380	1mV	0.52	115.3								84.290	16.820	8.351
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.390														121.400	60.620
21	1.930														234.000	116.900
22	2.680														451.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: *6-2-91*

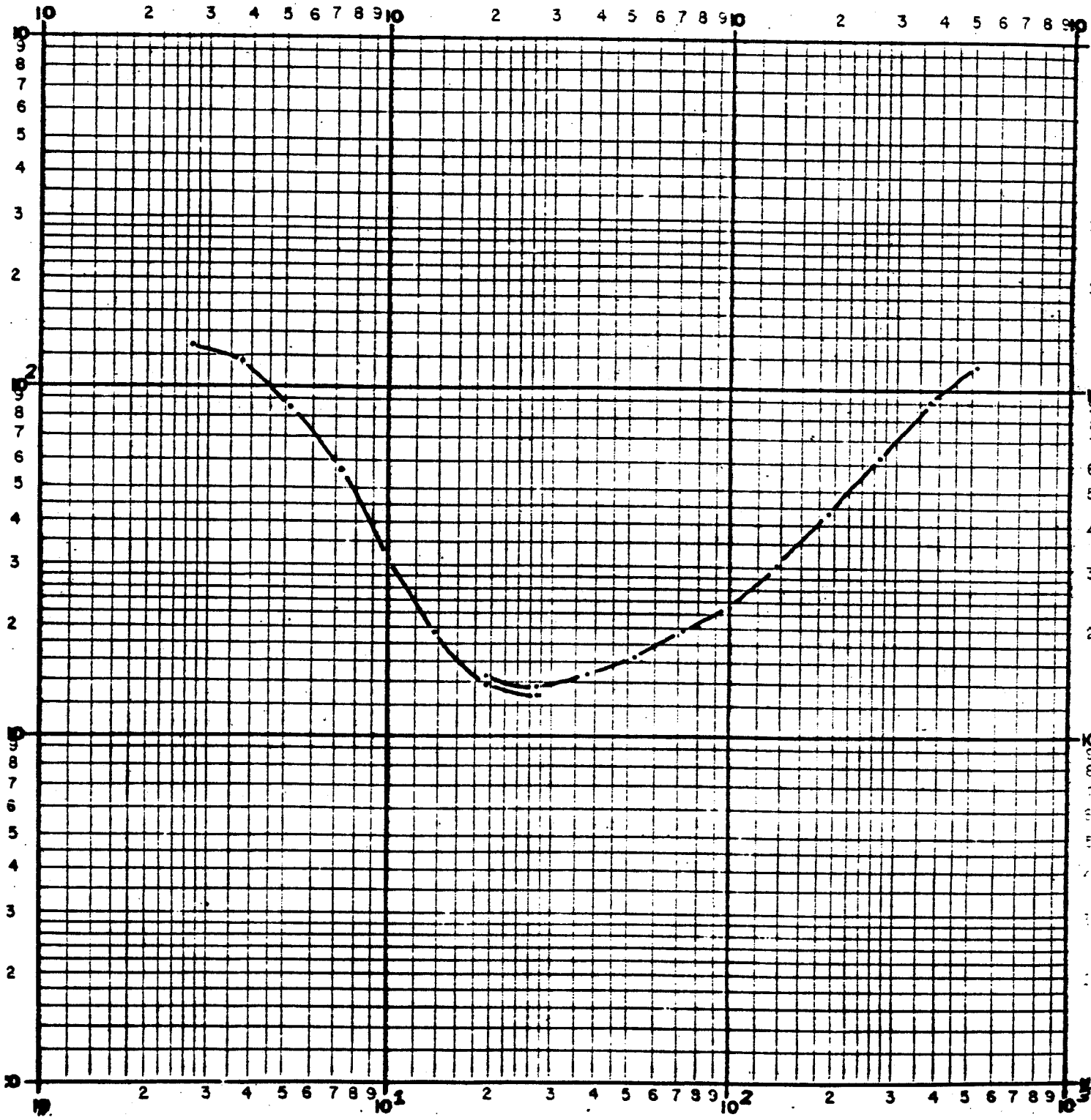


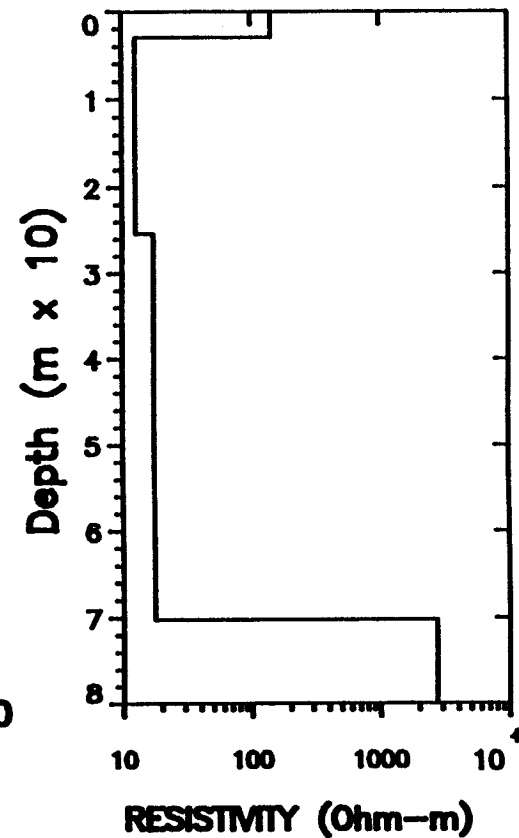
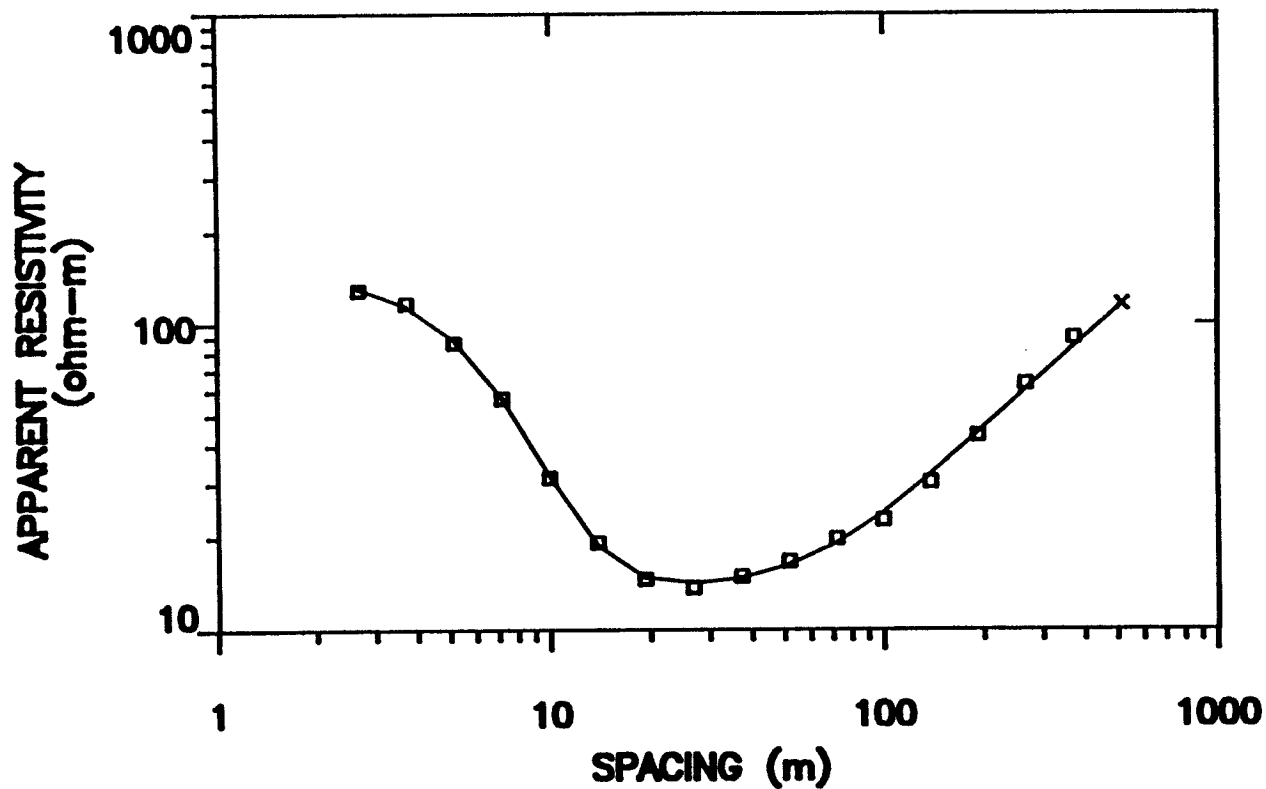
Departamento de Geofísica

Estudio *El Sabinar* S.E.V. *4*

Fecha *6-2-91* ... Rumbo AB *N=60°E* ... PERFIL *P-II*

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		
Data Set: 4II	Date: 91	SABINAR (AB)
Equipment: ADARO	Sounding: 4II	
		Azimuth: N-60-E

DATA SET: 511

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1220.00

DATE: 91
 SOUNDING: 511
 AZIMUTH: N-64-E
 EQUIPMENT: ADARO

SOUNDING COORDINATES: X: 573210.0000 Y: 4229490.0000

Schlumberger Configuration

FITTING ERROR: 2.273 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1220.0	
1	43.07		2.84	1217.1	0.0659
2	19.49		3.46	1213.6	0.177
3	220.8		48.13	1165.5	0.217
4	81.83		259.8	905.7	3.17
5	107.8				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	41.00	41.21	-0.520
2	3.73	40.00	39.39	1.50
3	5.18	36.50	37.22	-1.97
4	7.20	36.80	36.39	1.09
5	10.00	39.70	39.53	0.406
6	13.90	47.60	47.97	-0.793
7	19.30	59.40	60.83	-2.42
8	26.80	77.60	76.71	1.14
9	37.30	95.80	94.51	1.34
10	51.80	115.6	112.2	2.89
11	72.00	125.8	127.1	-1.03
12	100.0	134.8	135.1	-0.220
13	139.0	127.0	133.6	-5.25
14	193.0	129.8	123.4	4.98
15	268.0	108.8	109.8	-0.931
16	373.0	98.60	99.27	-0.684
17	518.0	106.4	94.94	10.76

*

ADARO

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PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER

P 1	0.99																			
P 2	-0.01	0.65																		
P 3	0.00	-0.02	0.95																	
P 4	0.00	0.00	-0.02	0.91																
P 5	0.00	0.00	0.02	0.18	0.15															
T 1	0.02	0.18	-0.01	-0.01	0.00	0.56														
T 2	-0.01	-0.42	-0.04	0.00	0.00	0.22	0.47													
T 3	-0.01	0.02	0.10	0.12	-0.15	0.03	0.05	0.71												
T 4	0.00	0.00	-0.01	-0.12	-0.09	0.00	0.00	0.10	0.05											
	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4											

* ADARFO *



Proyecto:
 Zona: *El Sabinar*
 Observador: *J. Anue / J. Sanchez*
 Situación: *Sobre plano 1/50.000 n.º 889*

COORDENADAS
 X *573.210*
 Y *4.229.490*
 Z *1.220*

mV: *Adaro 01*
 mA: *Geotron 328*
 S.E.V. *5*

rumbo α_D
N-64°E
 Perfil:
P-II

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER
 SIMETRICO
 MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN			
													1 m	10 m	50 m	100 m
1	2.68	1	26	100mV	49	41						<i>Pruebas de fugas → Ben</i>	21,78			
2	3.73		31	"	29	40							42,92			
3	5.18		32	30mV	14	36,5							83,51			
4	7.2		33	10mV	7,5	36,8							182,1			
5	10		150	30mV	19	39,7							313,4			
6	13.9		140	"	11	47,6							606,2			
7	19.3		260	"	13,2	59,4							1.169	109,2		
8	26.8		128	10mV	4,4	77,6							2.256	217,8		
9	37.3		112	"	2,6	101,4	10	112	100mV	25	95,8		4.370	429,2		
10	51.8		195	"	2,8	121		195	"	27	115,6		8.429	836,1		
11	72	10	290	30mV	22,5	125,8						16.290	1.621			
12	100		360	"	15,5	134,9						31.420	3.134			
13	139		370	10mV	7,75	127,0	(127)					60.700	6.062	1.175		
14	193		360	"	4,0	129,9							11.690	2.301		
15	268		570	"	2,75	108,8							22.560	4.474		
16	373		470	3mV	1,06	98,6							43.700	8.702	4.292	
17	518		515		0,65	106,4		530		0,67	106,6		84.290	16.820	8.361	
18	720												162.900	32.530	18.210	
19	1.000													62.790	31.340	
20	1.390													121.400	60.620	
21	1.930													234.000	116.900	
22	2.680													461.200	225.600	
23	3.730														437.000	
24	5.180														842.880	
25	7.200														1.628.520	
26	10.000														3.141.510	

OBSERVACIONES:

FECHA: *5-2-91*

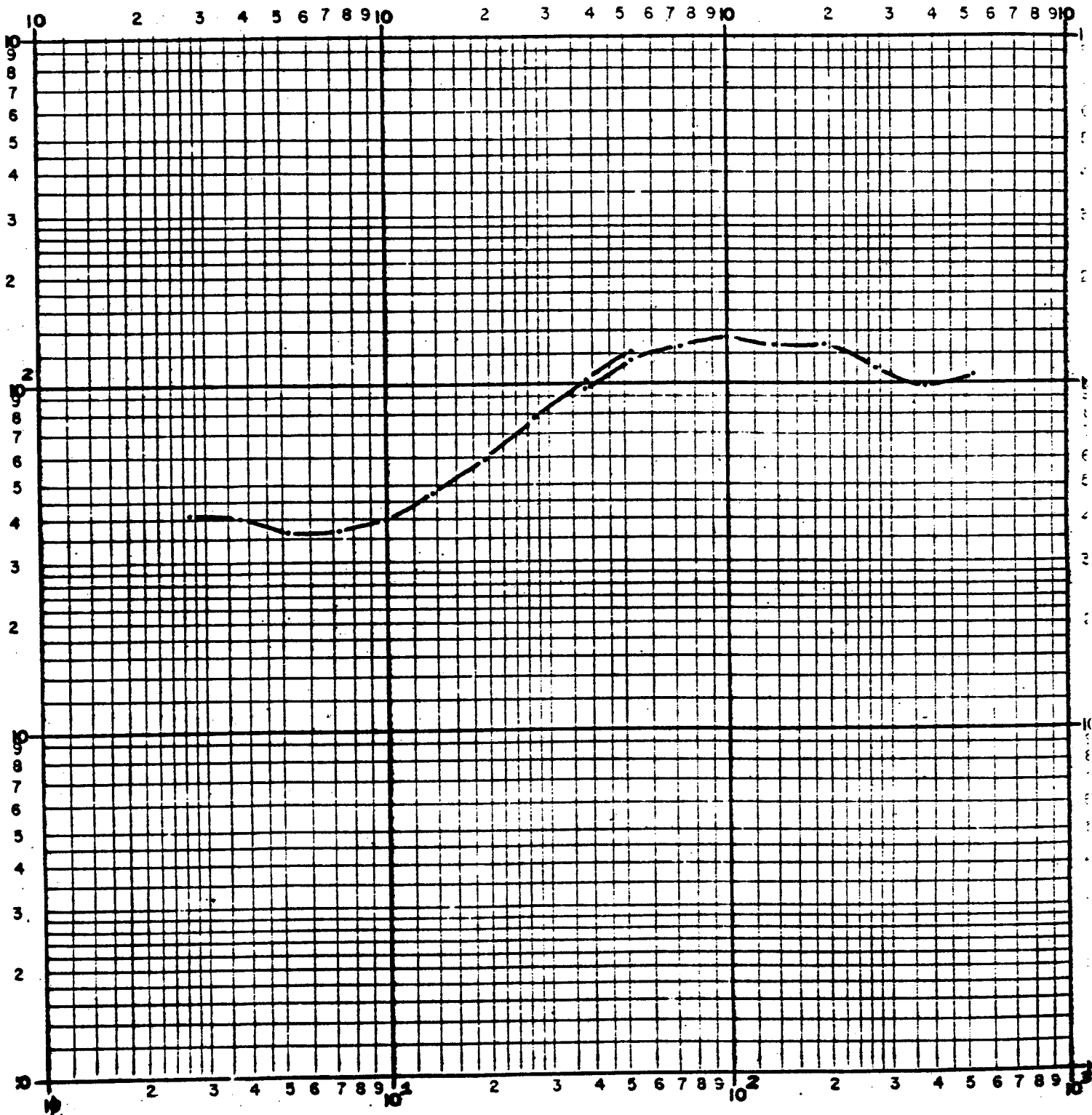


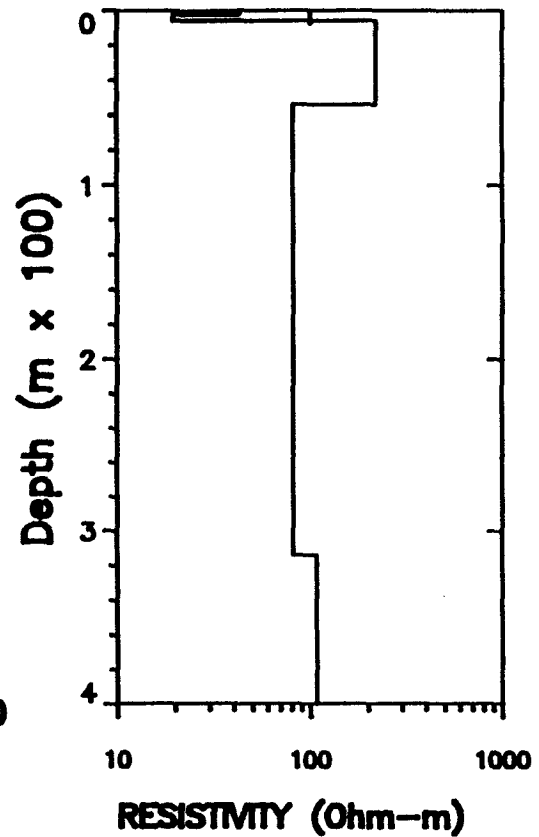
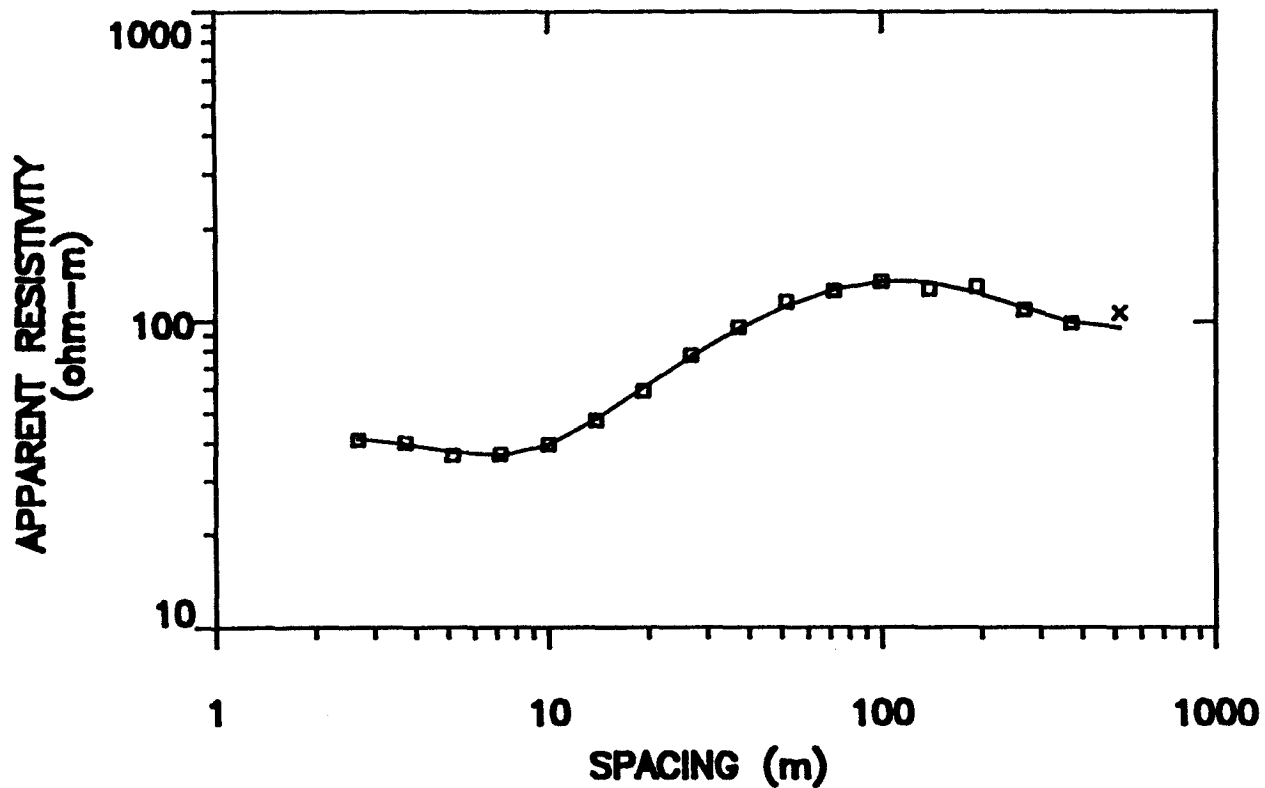
Departamento de Geofísica

Estudio El Sabinar S.E.V. 5

Fecha 5-2-94 ... Rumbo AB N-64°E PERFIL P-II

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 5II	Date: 91	Azimuth: N-64-E
Equipment: ADARO	Sounding: 5II	

DATA SET: 6II

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1215.00
 SOUNDING COORDINATES: X: 573800.0000 Y: 4228840.0000

DATE: 91
 SOUNDING: 6II
 AZIMUTH: N-66-E
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 3.173 PERCENT

#	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1215.0	
1	365.0		3.74	1211.2	0.0102
2	390.8		2.01	1209.2	0.00227
3	4236.0		6.62	1202.6	0.00156
4	19.46		47.23	1155.3	2.42
5	61.77		151.8	1003.5	2.45
6	75.51				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	392.0	382.4	2.42
2	3.73	391.6	406.4	-3.78
3	5.18	451.0	454.7	-0.836
4	7.20	567.0	539.6	4.82
5	10.00	649.0	663.0	-2.16
6	13.90	766.0	808.1	-5.50
7	19.30	945.0	933.9	1.16
8	26.80	973.0	985.1	-1.24
9	37.30	920.0	908.7	1.22
10	51.80	735.0	694.6	5.48
11	72.00	417.0	410.6	1.52
12	100.0	170.0	180.0	-5.89
13	139.0	68.50	69.20	-1.02
14	193.0	45.00	44.45	1.20
15	268.0	46.00	46.84	-1.83
16	373.0	52.80	52.39	0.762
17	518.0	71.60	57.97	19.02

* ADARO *

PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER

P 1	1.00										
P 2	0.00	0.05									
P 3	-0.01	0.04	0.55								
P 4	0.00	0.01	-0.04	0.79							
P 5	0.00	-0.01	0.02	-0.01	0.64						
P 6	0.00	0.00	-0.01	-0.08	0.30	0.55					
T 1	-0.01	-0.21	-0.02	0.01	-0.01	0.00	0.91				
T 2	0.01	-0.03	-0.06	0.00	0.02	0.01	0.15	0.23			
T 3	0.00	0.03	0.45	0.05	-0.03	0.02	0.03	0.11	0.53		
T 4	0.00	0.00	-0.02	-0.30	-0.27	0.08	0.00	0.02	0.03	0.37	
T 5	0.00	0.00	0.00	0.02	-0.09	-0.12	0.00	0.00	0.00	-0.01	
	P 1	P 2	P 3	P 4	P 5	P 6	T 1	T 2	T 3	T 4	

SECOND PART OF RESOLUTION MATRIX:

T 5	0.03
	T 5



Proyecto:
 Zona: *El Sabinar*
 Observador: *V. P. Saucedo / J. Sanchez*
 Situación: *Sobre plano 1/50.000 n.º 889*

COORDENADAS

X 573.800
 Y 4.228.840
 Z 1.215

m V: *Adaro 01*
 m A: *Geotrou 328*
 S.E.V.
 6

Rumbo AB

N-66°E

Perfil:

P-II

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2,68	/	9	300mV	162	392						<i>Zona de calizzi.</i>	21,78			
2	3,73		13,7		125	391,6						<i>Proximo a El Sabinar y junta a la carretera de Aforadilla.</i>	42,92			
3	5,18		10	100mV	54	451,							83,51			
4	7,2		8	"	28	567							182,1			
5	10		14	"	39	649							313,4			
6	13,9		53	"	67	766							606,2			
7	19,3		50		40,5	945							1.189	109,2		
8	26,8		51	30mV	22	973							2.256	217,8		
9	37,3		33,5	10mV	7,05	920	10	33,5		72	922		4.370	429,2		
10	51,8		51	"	4,45	735		51		45	737		8.429	836,1		
11	72	10	42	30mV	10,8	417							16.790	1.621		
12	100		94	10mV	5,1	170							31.420	3.134		
13	139		230	"	2,6	68,5							60.700	6.062	1.175	
14	193		260	3mV	1,0	45,0								11.690	2.301	
15	268		255	1mV	0,52	46								22.560	4.474	
16	373		265	"	0,32	52,8								43.700	8.702	4.292
17	518		265	"	0,225	71,6								84.290	16.820	8.361
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.390														121.400	60.620
21	1.930														234.000	116.900
22	2.680														461.200	226.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: *5-2-91*



Departamento de Geofísica

Estudio El Sabinar

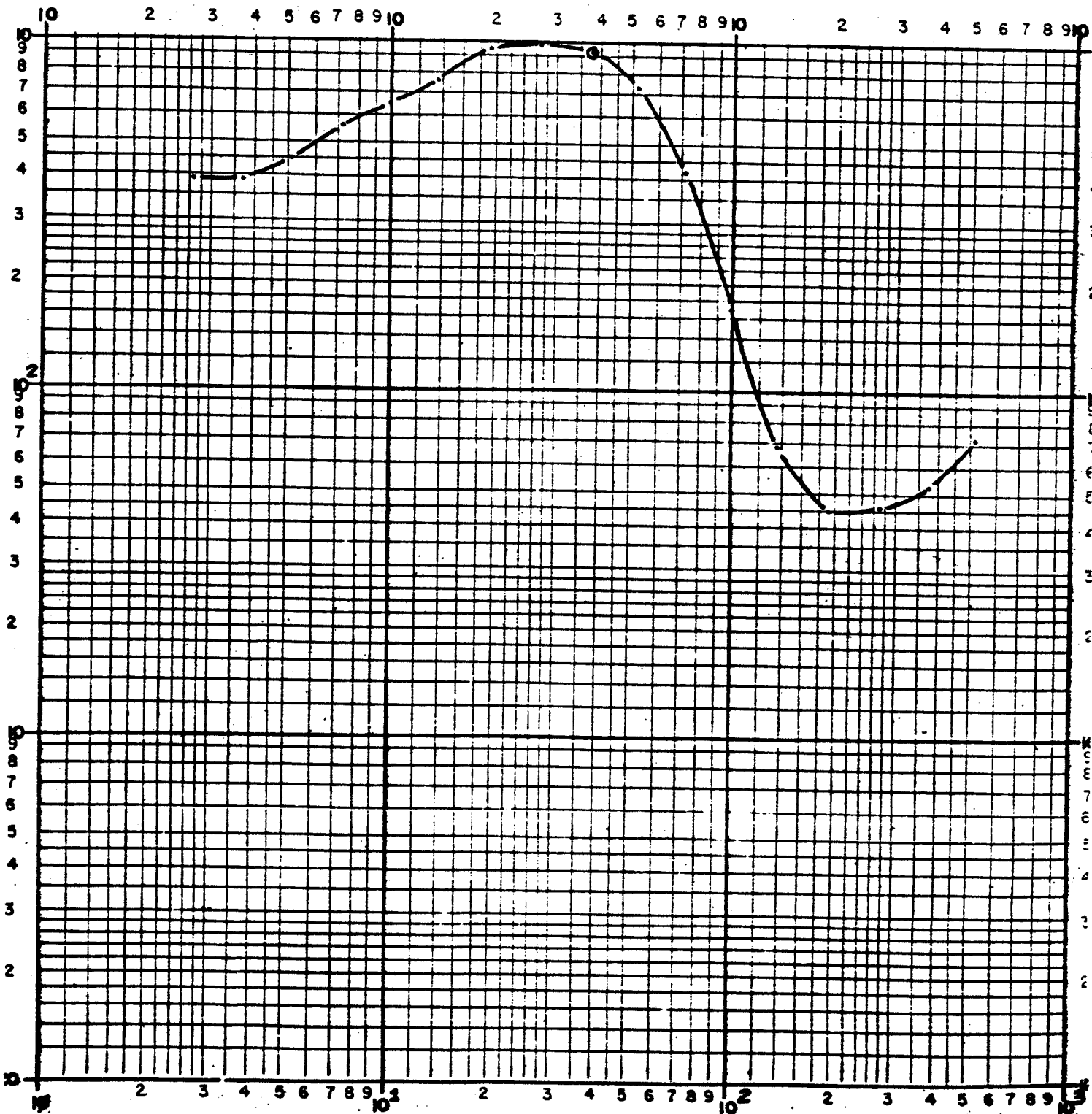
S.E.V. 6

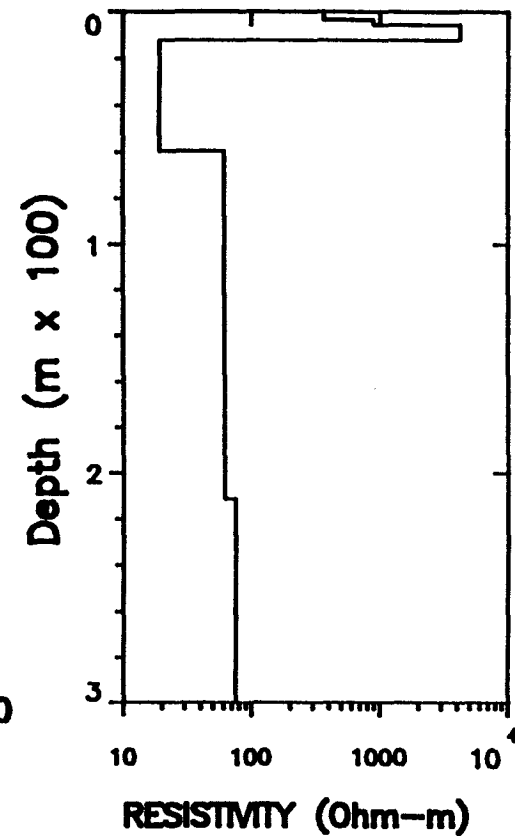
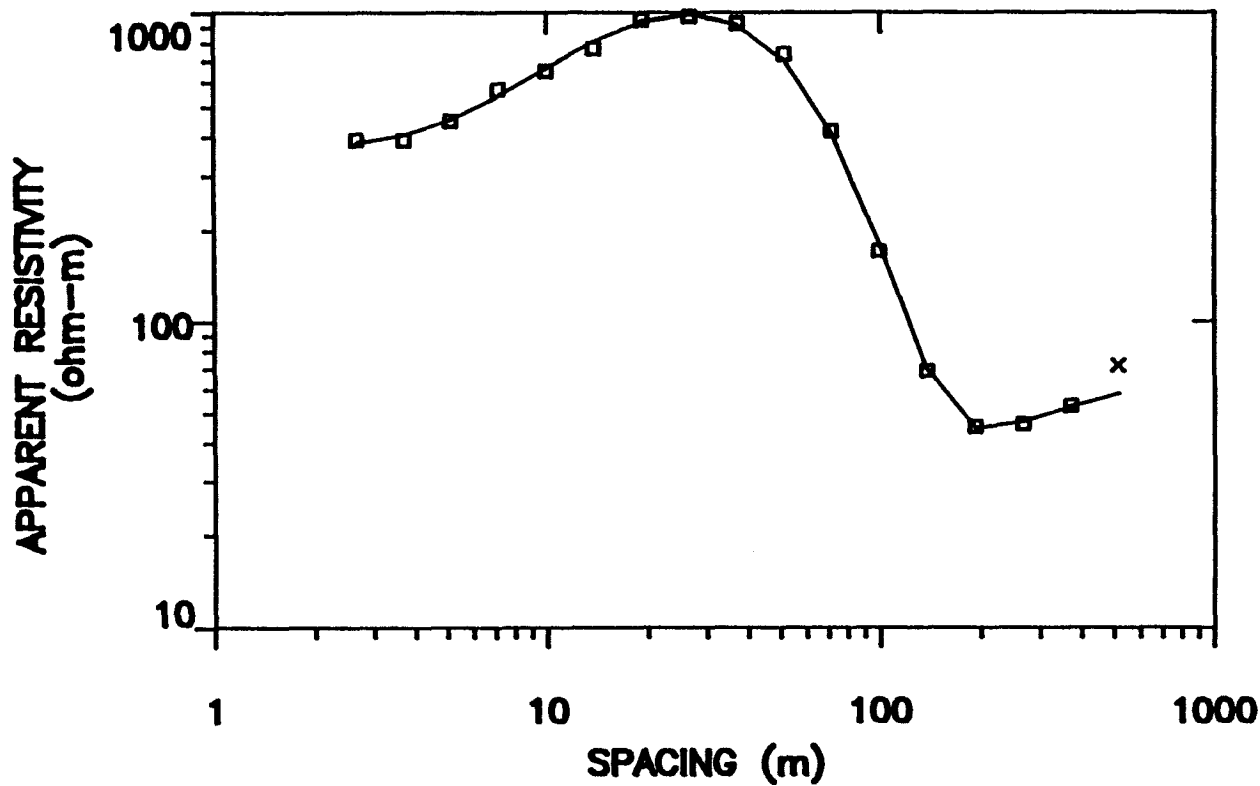
Fecha 5-2-91 Rumbo AB N-66°E

PERFIL P-II

Interpretación

Observaciones:





for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 611	Date: 91	Azimuth: N-66-E
Equipment: ADARO	Sounding: 611	

DATA SET: 711

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1190.00
 SOUNDING COORDINATES: X: 574000.0000 Y: 4228200.0000

DATE: 91
 SOUNDING: 711
 AZIMUTH: N-70-E
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 3.333 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1190.0	
1	32.43		2.37	1187.6	0.0782
2	11.29		8.60	1179.0	0.762
3	23.04		20.57	1158.4	0.892
4	282.6		59.49	1098.9	0.210
5	5.43				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	29.40	28.99	1.37
2	3.73	24.70	25.73	-4.20
3	5.18	22.30	21.43	3.86
4	7.20	17.20	17.35	-0.912
5	10.00	14.60	14.87	-1.90
6	13.90	14.70	14.39	2.06
7	19.30	15.30	15.56	-1.28
8	26.80	18.60	18.13	2.52
9	37.30	22.00	22.09	-0.411
10	51.80	27.70	27.80	-0.330
11	72.00	34.90	35.60	-2.01
12	100.0	44.10	45.03	-2.11
13	139.0	54.40	54.67	-0.510
14	193.0	64.90	61.89	4.52
15	268.0	68.00	63.35	6.92
16	373.0	53.00	56.33	-6.28
17	518.0	50.00	41.60	16.79

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ADARO

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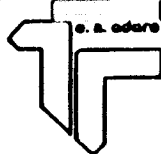
PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.99									
P 2	-0.01	0.96								
P 3	0.00	-0.02	0.52							
P 4	0.00	0.00	-0.02	0.53						
P 5	0.00	0.00	0.02	0.03	0.03					
T 1	0.02	0.04	0.01	0.00	0.00	0.95				
T 2	-0.02	-0.10	-0.39	0.00	0.00	0.08	0.48			
T 3	0.01	0.04	-0.14	-0.10	0.04	-0.04	0.03	0.83		
T 4	0.00	0.00	0.02	0.48	0.06	0.00	0.00	0.09	0.50	
	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4	

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ADARO

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Proyecto:
 Zona: El Sabinar
 Observador: Alfonso J. Penabaz
 Situación: Sobre plano 1/50.000 n.º 889

COORDENADAS
 X 574.000
 Y 4.228.200
 Z 1.190

m V: Adaro 01
 m A: Geotron 328
 S.E.V. F

rumbo N-70°E
 Perfil: P-II

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	OBSERVACIONES	CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN				
													1 m	10 m	50 m	100 m	
1	2,68	1	23	10mV	31	29,4						Cambiamos la ubicación del s.e.v. por no tener acceso a causa de la nieve.	21,78				
2	3,73		33	10mV	19	24,7							42,92				
3	5,18		150	"	40	22,3							83,51				
4	7,2		150	30mV	15,9	17,2							182,1				
5	10		280	"	13	14,6							313,4				
6	13,9		305	10mV	7,4	14,7							608,2				
7	19,3		335	"	4,4	15,3							1.169	109,2			
8	26,8		270	3mV	2,1	17,6	10	270	30mV	23	18,6			2.256	217,8		
9	37,3		340	"	1,6	20,6		335	"	17,2	22,0			4.370	429,2		
10	51,8	10	280	10mV	9,3	27,7								8.789	836,1		
11	72		330	"	7,1	34,9							16.290	1.621			
12	100		370	"	5,2	44,1							31.470	3.134			
13	139		390	"	3,5	54,4							60.700	6.062	1.175		
14	193		360	"	2,0	64,9								11.890	2.301		
15	268		365	3mV	1,1	68								22.560	4.474		
16	373		610	1mV	0,74	53								43.700	8.702	4.292	
17	518		420	"	1,25	50								84.290	16.820	8.351	
18	720													162.900	32.530	16.210	
19	1.000														62.780	31.340	
20	1.390														121.400	60.620	
21	1.930														234.000	116.900	
22	2.680														461.200	226.600	
23	3.730															437.000	
24	5.180															842.880	
25	7.200															1.628.520	
26	10.000															3.141.510	

OBSERVACIONES:

FECHA: 6-2-91

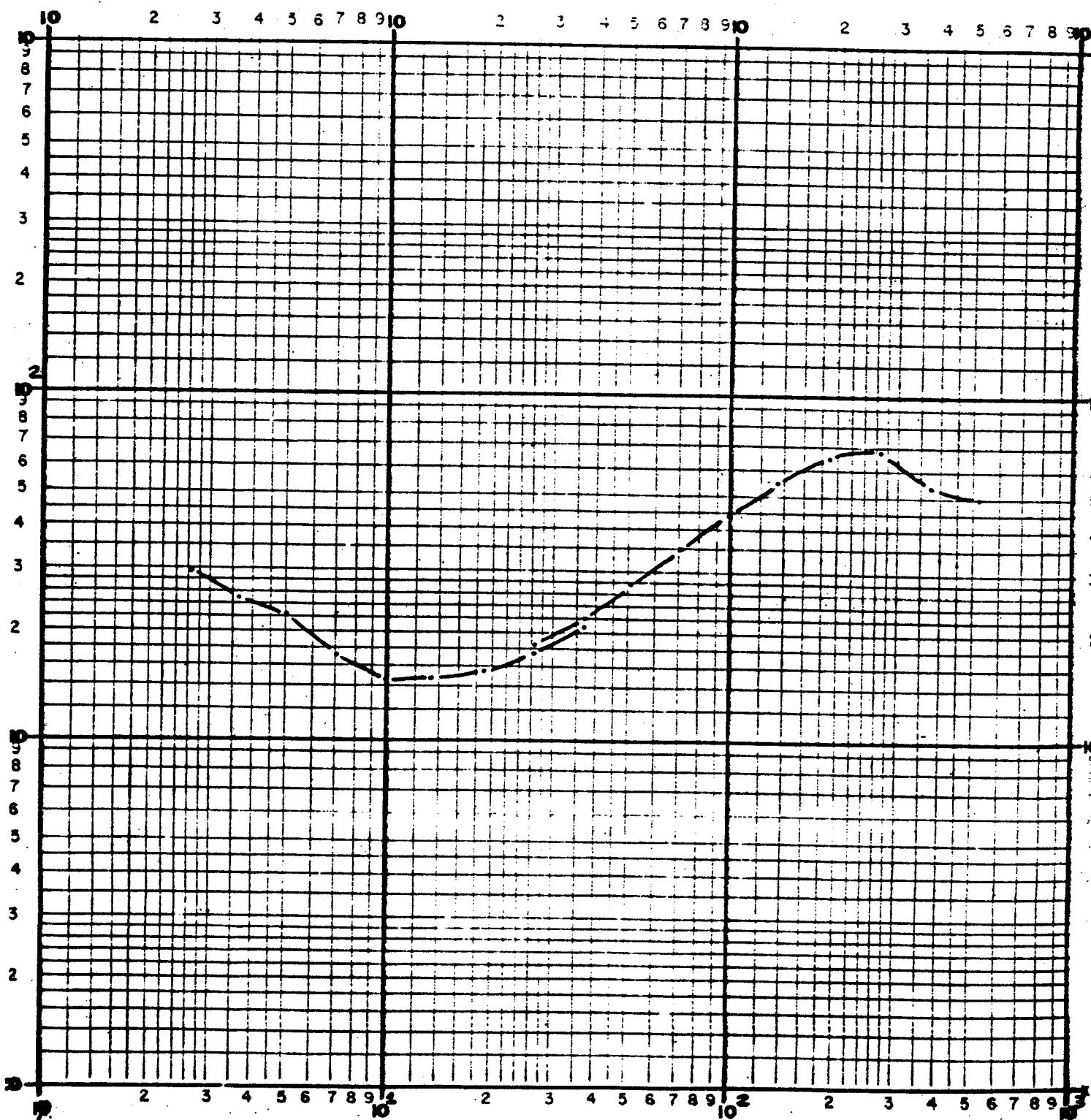


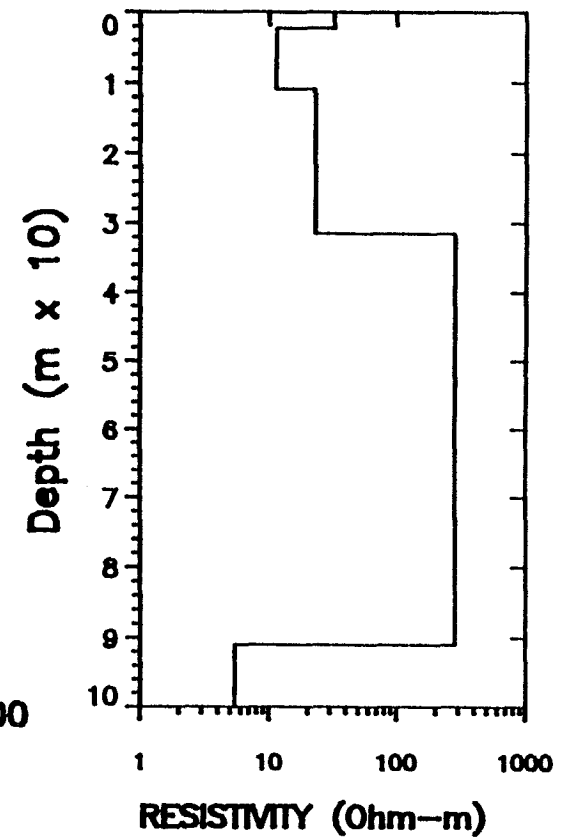
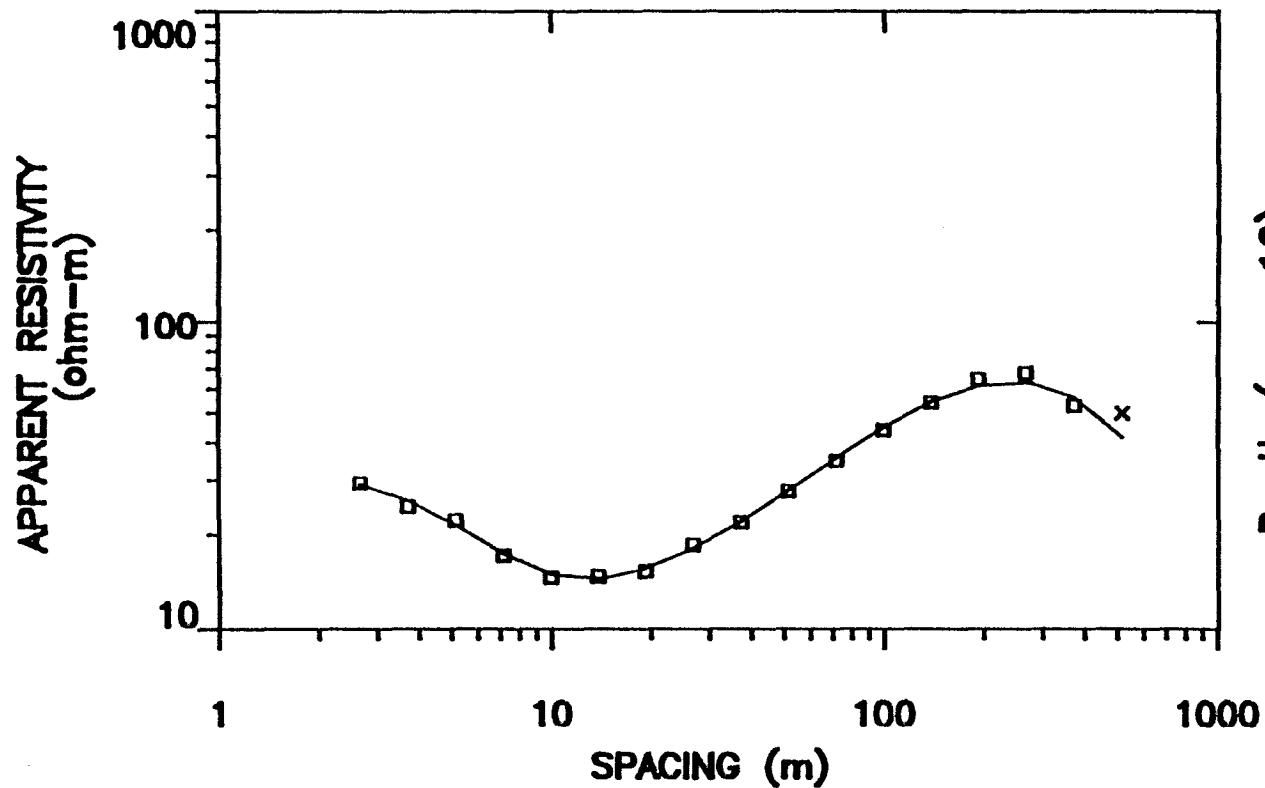
Departamento de Geofísica

Estudio *El Sabinar* S.E.V. *7*

Fecha *6-2-91* Rumbo AB. *N-70°E* PERFIL *P-II*

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 7II	Date: 91	Azimuth: N-70-E
Equipment: ADARO	Sounding: 7II	

DATA SET: 8III

CLIENT: ITGE	DATE: 91
LOCATION: SABINAR	SOUNDING: 8III
COUNTY: (AB)	AZIMUTH: N-70-E
PROJECT: SEGURA	EQUIPMENT: ADARO
ELEVATION: 1230.00	
SOUNDING COORDINATES: X: 574570.0000 Y: 4229950.0000	

Schlumberger Configuration

FITTING ERROR: 6.055 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1230.0	
1	73.11		1.70	1228.2	0.0233
2	28.73		5.75	1222.5	0.200
3	75.88		5.57	1216.9	0.0734
4	448.3		21.05	1195.9	0.0469
5	35.26		166.2	1029.6	4.71
6	116.5				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	59.40	59.58	-0.313
2	3.73	51.00	50.89	0.202
3	5.18	42.20	42.95	-1.79
4	7.20	40.30	38.88	3.50
5	10.00	41.20	40.19	2.43
6	13.90	44.10	46.90	-6.36
7	19.30	53.60	58.51	-9.16
8	26.80	69.10	74.28	-7.50
9	37.30	93.20	92.73	0.494
10	51.80	120.9	110.3	8.71
11	72.00	137.5	122.2	11.05
12	100.0	129.5	123.0	4.95
13	139.0	109.4	110.2	-0.808
14	193.0	81.20	88.55	-9.05
15	268.0	66.40	68.96	-3.85
16	373.0	64.10	60.85	5.06
17	518.0	78.70	64.35	18.22

*

ADARO

*

PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER

P 1	0.63																			
P 2	0.03	0.70																		
P 3	0.01	0.09	0.07																	
P 4	0.01	0.00	0.04	0.45																
P 5	-0.01	0.00	-0.01	0.12	0.48															
P 6	0.00	0.00	0.00	-0.01	0.13	0.05														
T 1	0.26	0.18	-0.07	-0.02	0.01	0.00	0.45													
T 2	-0.01	-0.27	-0.17	-0.06	0.05	0.00	0.19	0.45												
T 3	-0.02	-0.05	-0.06	-0.02	0.04	0.00	0.06	0.16	0.07											
T 4	0.00	-0.01	0.02	0.42	0.14	-0.01	0.01	0.01	0.02	0.41										
T 5	0.00	0.00	0.00	0.01	-0.25	-0.08	0.00	-0.01	-0.01	0.00										
	P 1	P 2	P 3	P 4	P 5	P 6	T 1	T 2	T 3	T 4										

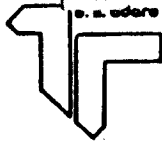
SECOND PART OF RESOLUTION MATRIX:

T 5 0.15
 T 5

*

ADARO

*



Proyecto:
 Zona: *El Sabinar*
 Observador: *Manuel Mendez*
 Situación: *Sobre plano 1/50.000 n.º 889*

COORDENADAS

X *574.570*
 Y *4.229.950*
 Z *1.230*

mV: *Adaro 01*
 mA: *Geotrou 328*
 S.E.V. *8*

bo A
N-70°E
 Perfil:
P-III

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	P (Ωm)	MN	I (mA)	Esc. Volt.	V (mV)	P (Ωm)	OBSERVACIONES	CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN			
													1 m	10 m	50 m	100 m
1	2.68	1	22	100mV	60	59.4							21.78			
2	3.73		160	300mV	190	51							42.92			
3	5.18		170	100mV	86	42.2							83.51			
4	7.2		165	"	41	40.3							182.1			
5	10		175	"	23	41.2							313.4			
6	13.9		165	30uV	12	44.1							606.2			
7	19.3		170	10uV	7.8	53.6							1.189	109.2		
8	26.8		160	"	4.9	69.1							2.256	217.8		
9	37.3		175	"	3.65	91.1	10	175		38	93.2		4.370	429.2		
10	51.8		190	"	2.6	115.3		190		27.5	120.9		8.429	836.1		
11	72	10	165	30uV	14	137.5							16.290	1.621		
12	100		242	"	10	129.5							31.430	3.134		
13	139		205	10uV	3.7	109.4							60.100	6.062	1.175	
14	193		360	"	2.5	81.2								11.690	2.301	
15	268		340	3uV	1.0	66.4		0.20		0.19				22.560	4.474	
16	373		300	1uV	0.44	64.1								43.700	8.702	4.292
17	518		300	"	0.28	78.7								84.290	16.820	8.351
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.390														121.400	60.620
21	1.930														234.000	116.900
22	2.680														451.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: *6-2-91*

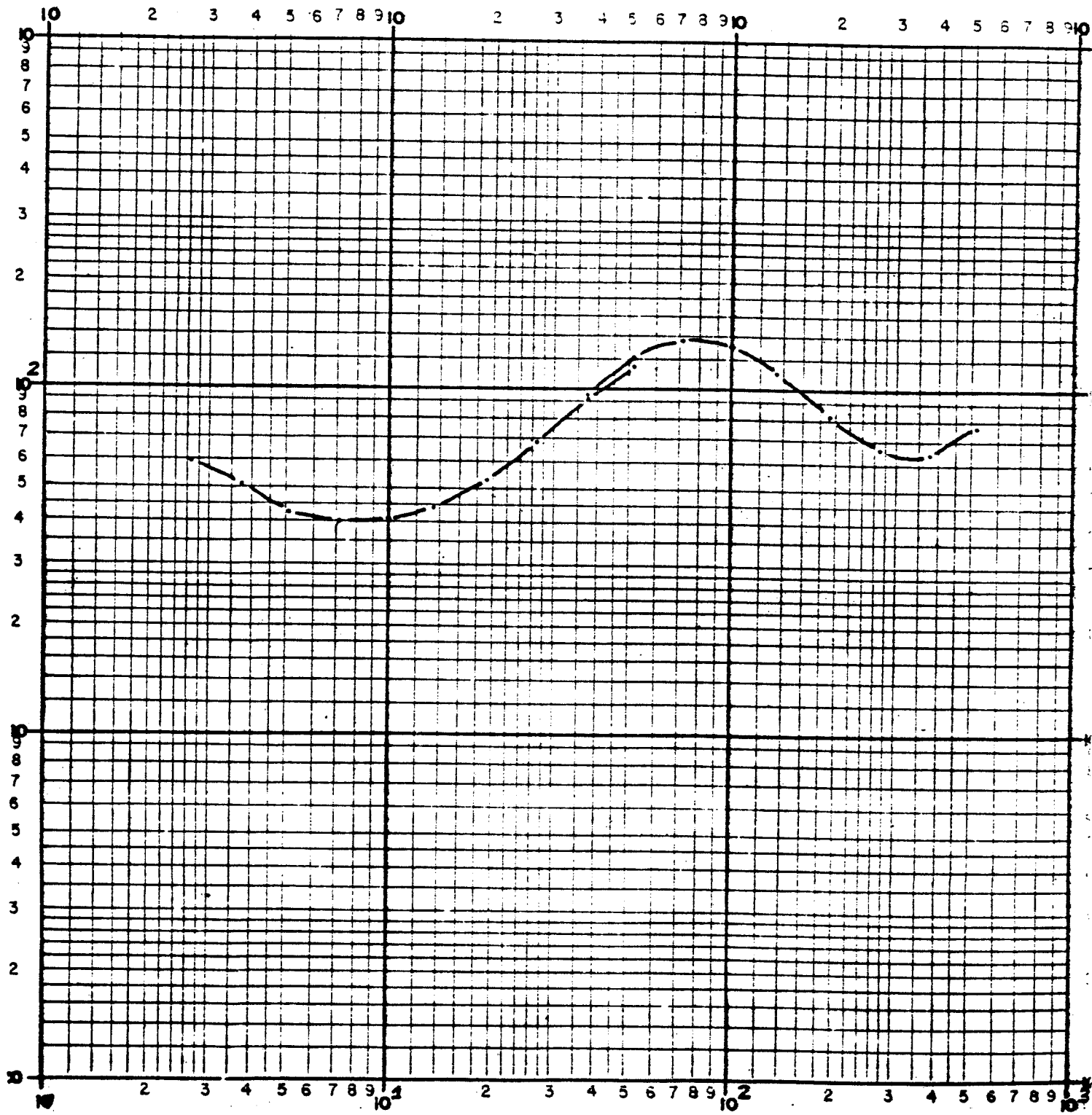


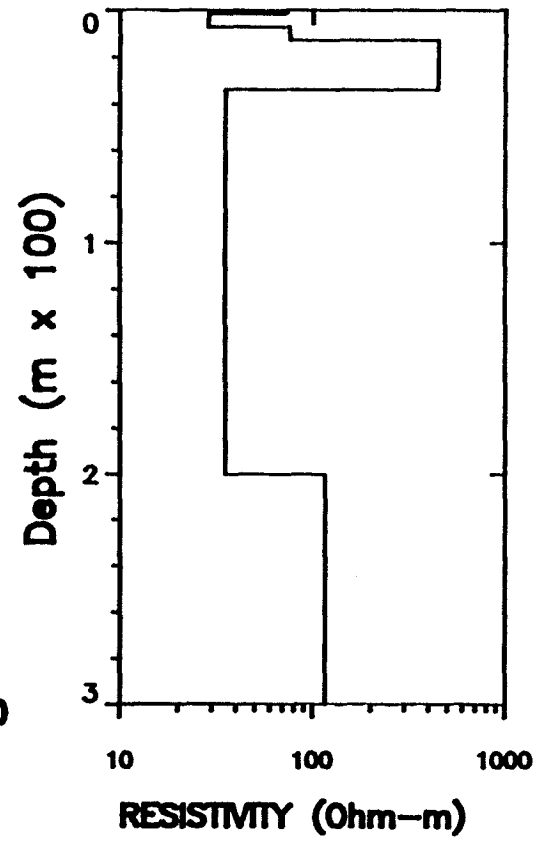
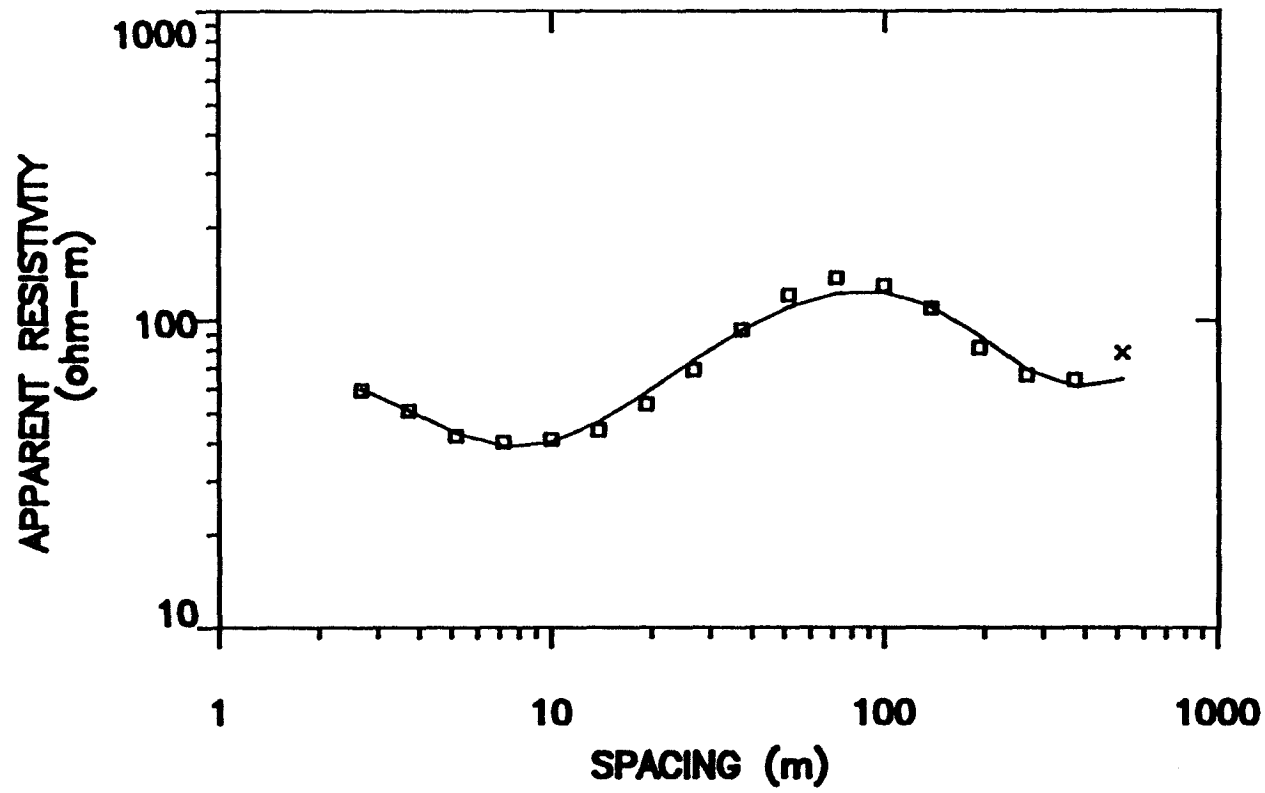
Departamento de Geofísica

Estudio EL Sabinar S.E.V. 8

Fecha 6-2-91 Rumbo AB N-70°E PERFIL P-III

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 8III	Date: 91	Azimuth: N-70-E
Equipment: ADARO	Sounding: 8III	



Proyecto:
 Zona: El Sabinar
 Observador: Ismael Lafrechera
 Situación: Sobresplau 1/50.000 n.º 889

COORDENADAS

X 575.060
 Y 4.228.450
 Z 1.175

mV: Adaro 01
 mA: Geotron 328

Rumbo λ_D
N-88°E

S.E.V.

9

Perfil:

P-III

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER
SIMETRICO
MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	$\rho(\Omega m)$	MN	I (mA)	Esc. Volt.	V (mV)	$\rho(\Omega m)$	OBSERVACIONES	SIMETRICO MN			
													1 m	10 m	50 m	100 m
1	2,68	/	8,5	10mV	56	143,5							21,78			
2	3,73		9	"	23	109,7							42,92			
3	5,18		52	"	47	75,5							83,51			
4	7,2		58	"	20	55,9							162,1			
5	10		50	10mV	6,8	42,6							313,4			
6	13,9		62	"	3,6	35,2							606,2			
7	19,3		140	"	3,7	30,9							1.169	109,2		
8	26,8		165	3mV	2,2	30,1	10	165		19,5	25,7		2.256	217,8		
9	37,3		160	"	1,05	28,7		160		9,5	25,5		4.370	429,2		
10	51,8	10	158	10mV	5,1	27							8.420	836,1		
11	72		150	"	2,9	31,3							16.390	1.621		
12	100		330	"	4,0	38							31.420	3.134		
13	139		270	"	2,1	47,1							60.700	6.062	1.175	
14	193		490	"	2,6	62								11.690	2.301	
15	268		380	3mV	1,5	89								22.560	4.474	
16	373		650	"	1,4	94,1								43.700	8.702	4.292
17	518		560	"	0,62	93,3								84.290	16.820	8.351
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.390														121.400	60.620
21	1.930														234.000	116.900
22	2.680														461.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: 6-2-91

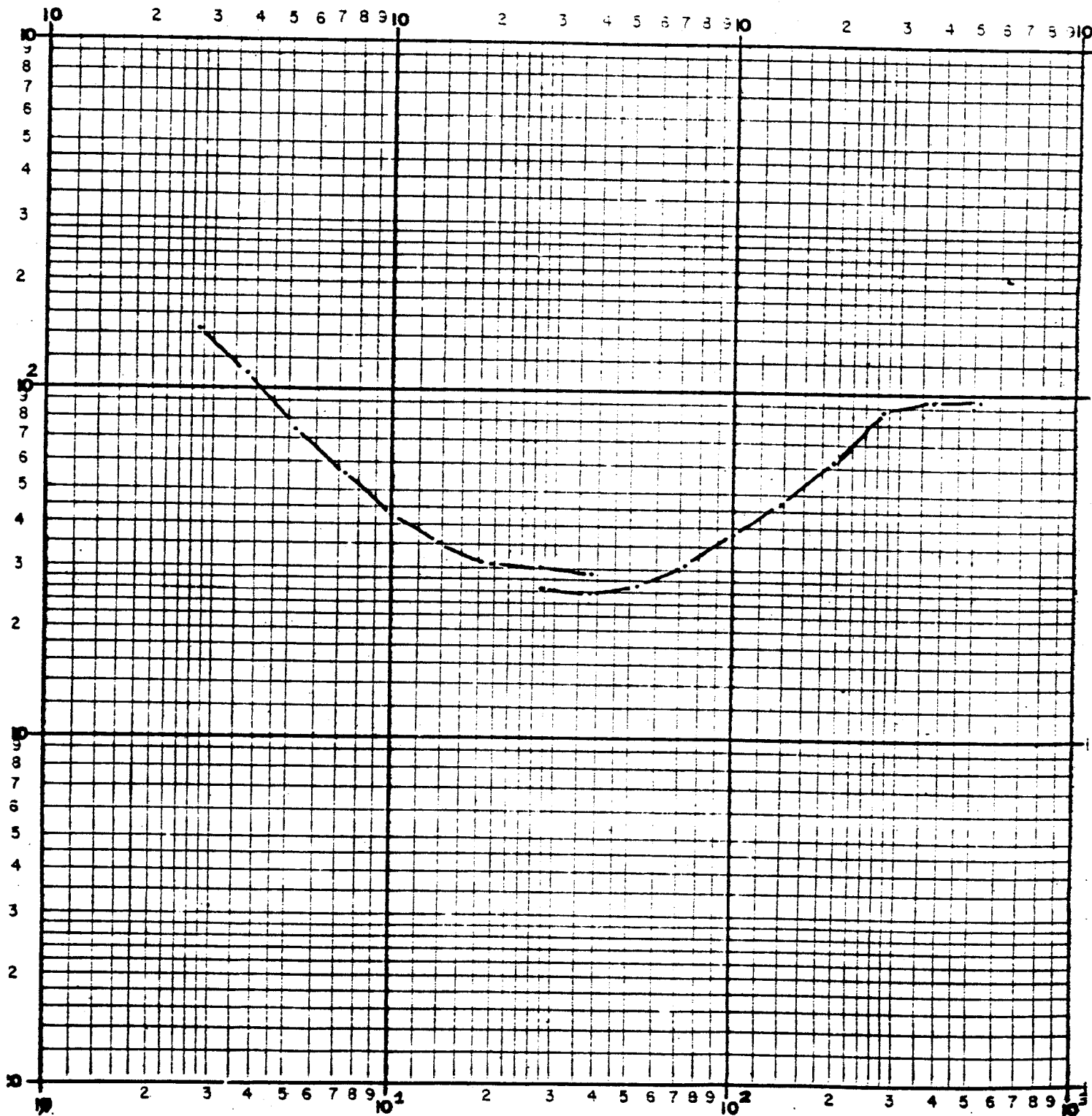


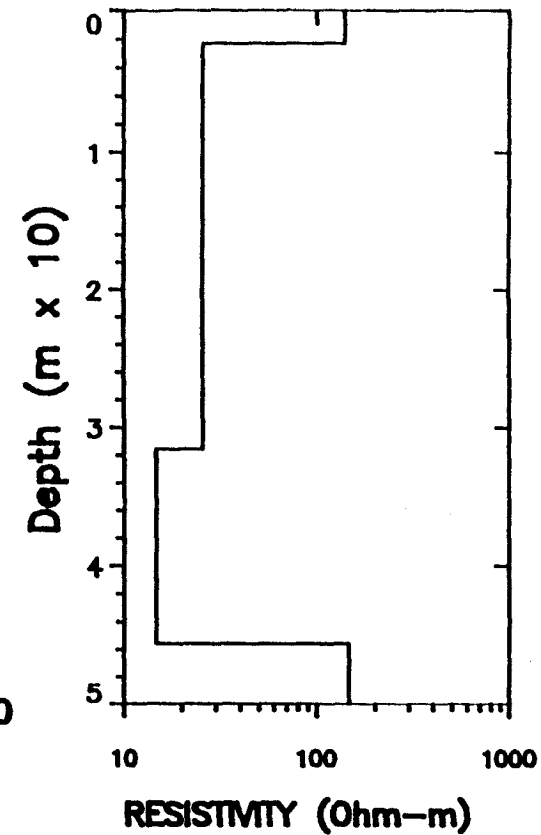
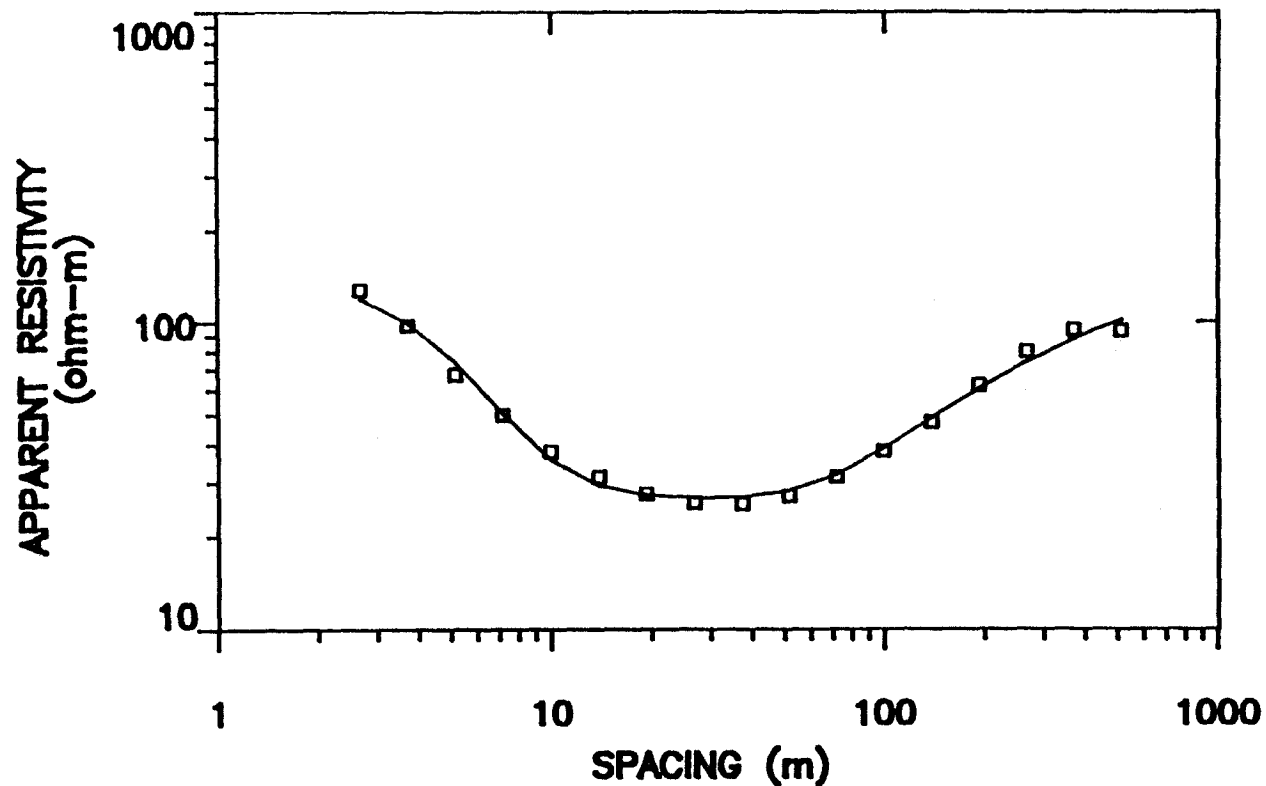
Departamento de Geofísica

Estudio *El Sabinar* S.E.V. *9*

Fecha *6-2-91* ... Rumbo AB *N-88°E* ... PERFIL *P-III*

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 9III	Date: 91	Azimuth: N-88-E
Equipment: ADARO	Sounding: 9III	

DATA SET: 10IV

CLIENT: ITGE	DATE: 91
LOCATION: SABINAR	SOUNDING: 10IV
COUNTY: (AB)	AZIMUTH: N-70-E
PROJECT: SEGURA	EQUIPMENT: ADARO
ELEVATION: 1240.00	
SOUNDING COORDINATES: X: 575350.0000 Y: 4231180.0000	

Schlumberger Configuration

FITTING ERROR: 4.368 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1240.0	
1	146.7		0.733	1239.2	0.00500
2	210.7		1.97	1237.2	0.00936
3	216.5		2.89	1234.3	0.0133
4	75.16		19.93	1214.4	0.265
5	81.49		45.94	1168.5	0.563
6	1364.1				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	181.5	183.6	-1.18
2	3.73	196.8	189.6	3.65
3	5.18	184.1	189.5	-2.94
4	7.20	177.3	180.1	-1.63
5	10.00	165.3	160.1	3.18
6	13.90	130.8	132.3	-1.50
7	19.30	108.8	107.6	1.02
8	26.80	90.80	91.82	-1.13
9	37.30	84.30	86.03	-2.05
10	51.80	91.20	88.00	3.49
11	72.00	99.40	97.40	2.01
12	100.0	112.9	116.8	-3.52
13	139.0	140.1	149.8	-6.99
14	193.0	194.8	197.7	-1.52
15	268.0	289.0	260.9	9.69
16	373.0	360.0	340.9	5.29
17	518.0	406.0	437.1	-7.68

*

ADARO

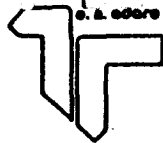
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PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER

P 1	0.73												
P 2	0.10	0.88											
P 3	-0.13	0.16	0.66										
P 4	0.00	0.00	-0.03	0.97									
P 5	-0.01	0.00	0.04	0.04	0.89								
P 6	0.00	0.00	0.01	0.01	-0.06	0.85							
T 1	-0.25	-0.11	0.12	0.01	-0.01	0.00	0.11						
T 2	0.06	-0.05	0.17	0.04	-0.05	-0.01	0.04	0.19					
T 3	0.09	-0.07	0.25	0.06	-0.08	-0.02	0.06	0.28	0.41				
T 4	0.00	0.00	0.00	0.00	-0.09	-0.03	0.00	0.00	0.00	0.13			
T 5	-0.01	0.01	0.01	0.03	-0.07	-0.08	0.00	-0.02	-0.04	0.31			
	P 1	P 2	P 3	P 4	P 5	P 6	T 1	T 2	T 3	T 4			

SECOND PART OF RESOLUTION MATRIX:

T 5	0.77
	T 5



S.A. edora

Proyecto:
 Zona: El Sabinar
 Observador: Manuel Monchero
 Situación: Sobre plaza 1/50.000 n.º 889

COORDENADAS

X 575.350
 Y 4.231.180
 Z 1.240

mV: Hdara 01
 mA: Geotron 328
 S.E.V.:
10

Radio AB

N-70°E

Perfil:

P-IV

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER
 SIMETRICO
 MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	OBSERVACIONES	CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN			
													1 m	10 m	50 m	100 m
1	2.68	1	18	300 mV	150	181,5						Proximo a pie de monte	21,78			
2	3.73		17	300 mV	78	196,9							42,92			
3	5.18		19.5	4	43	184,1							83,51			
4	7.2		16	4	17.5	177,3							182,1			
5	10		72	4	38	165,4							313,4			
6	13.9		88	30 mV	19	130,9							606,2			
7	19.3		87	10 mV	8.1	108,8							1.169	109,2		
8	26.8		72	4	3.2	100,3	10	72	300 mV	30	90,8		2.256	217,8		
9	37.3		112	4	2.5	97,5		112	4	22	84,3		4.370	429,2		
10	51.8	10	142	30 mV	15.5	91,2							8.489	836,1		
11	72		150	10 mV	9.2	99,4							16.290	1.621		
12	100		222	4	8.0	112,9							31.420	3.134		
13	139		225	4	5.2	140,1							60.100	6.062	1.175	
14	193		180	4	3.0	194,8								11.690	2.301	
15	268		250	4	3.20	289	(289)							22.560	4.474	
16	373		170	3 mV	1.9	360								43.700	8.702	4.292
17	518		135	4	0.65	406		150		0.72	404			84.290	16.820	8.361
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.300														121.400	60.620
21	1.930														234.000	116.900
22	2.680														461.200	226.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: 7-2-91

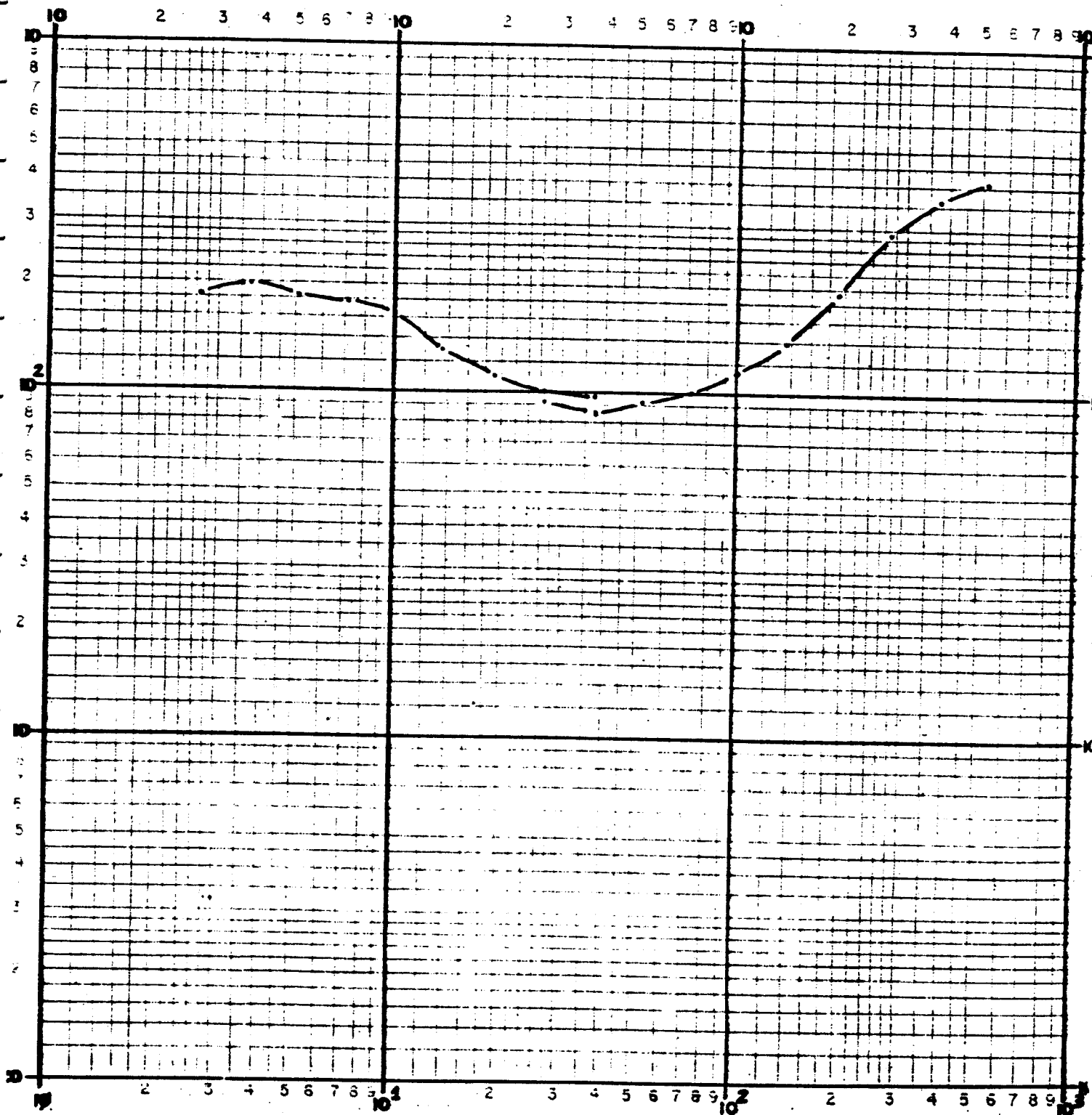


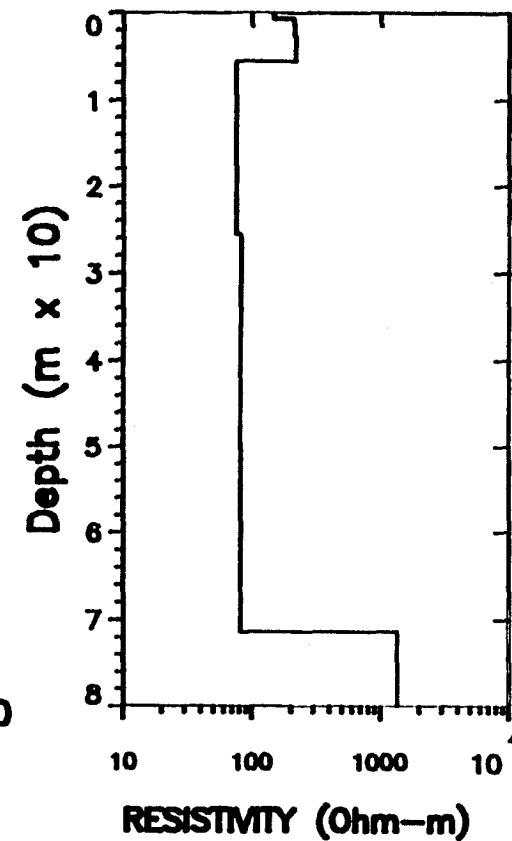
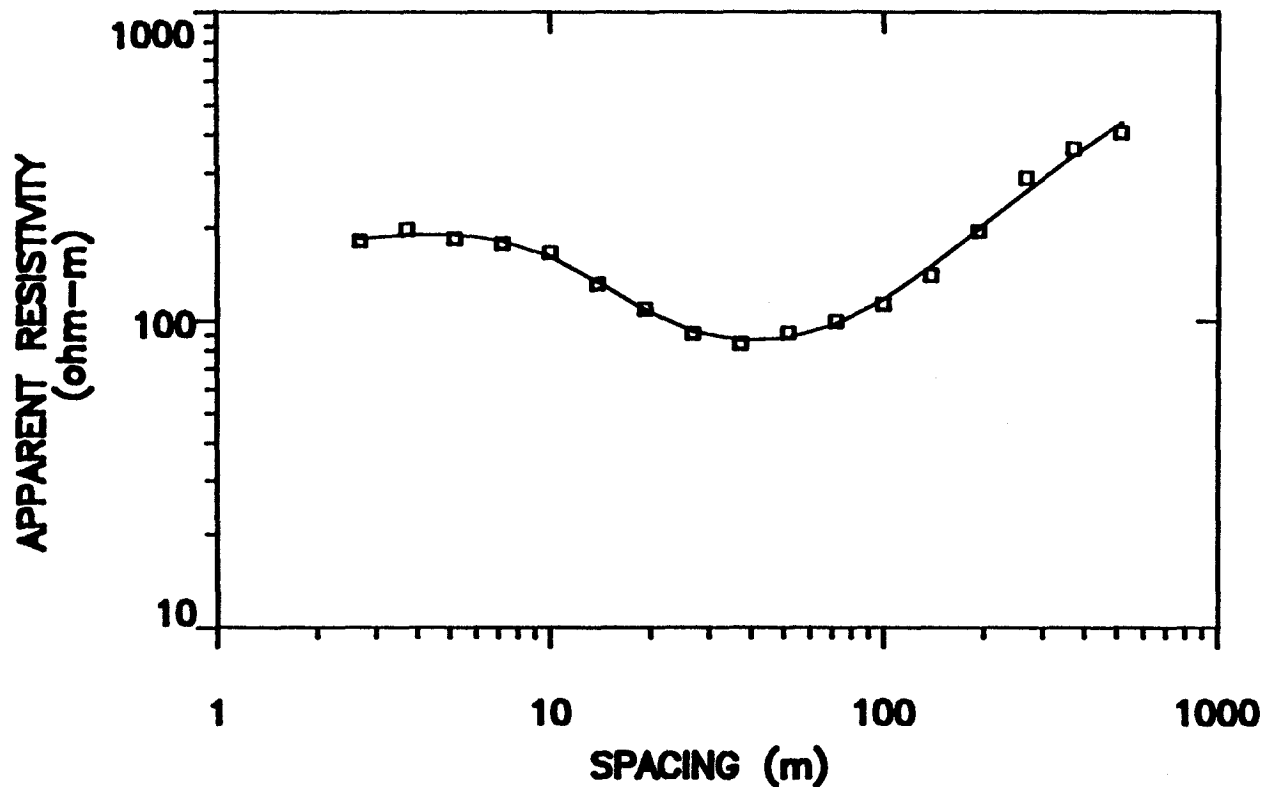
Departamento de Geodesia

Estudio El Sabinar S.E.V. 10

Fecha 7-2-91 Rumbo AB N-20°E PERFIL P-IV

<p>Interpretación</p>	<p>Observaciones:</p>
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 10V	Date: 91	Azimuth: N-70-E
Equipment: ADARO	Sounding: 10V	

DATA SET: 111V

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1210.00
 SOUNDING COORDINATES: X: 575690.0000 Y: 4230425.0000

DATE: 91
 SOUNDING: 111V
 AZIMUTH: N-75-E
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 1.561 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
1	52.49		4.40	1210.0	
2	22.10		7.83	1205.5	0.0838
3	78.60		59.50	1197.7	0.354
4	20.03		28.03	1138.2	0.757
5	266.7			1110.2	1.39

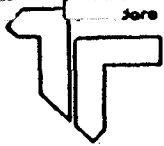
ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	51.60	51.55	0.0958
2	3.73	50.40	50.23	0.323
3	5.18	46.80	47.62	-1.76
4	7.20	44.10	43.38	1.61
5	10.00	38.60	38.41	0.468
6	13.90	34.30	35.04	-2.16
7	19.30	36.10	35.45	1.79
8	26.80	39.70	39.68	0.0288
9	37.30	45.50	45.03	-1.18
10	51.80	52.60	52.55	0.0844
11	72.00	58.50	58.13	0.620
12	100.0	63.60	62.27	2.07
13	139.0	63.40	65.78	-3.76
14	193.0	73.10	71.51	2.16
15	268.0	83.40	82.98	0.565
16	373.0	99.80	101.0	-1.24
17	518.0	124.4	123.5	0.563

* ADARO *

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

F 1	1.00								
F 2	0.00	0.98							
F 3	0.00	-0.01	1.00						
F 4	0.00	0.00	0.00	0.52					
F 5	0.00	0.00	0.00	-0.01	0.99				
T 1	0.00	0.01	0.00	0.00	0.00	0.99			
T 2	0.00	-0.03	-0.01	0.00	0.01	0.02	0.94		
T 3	0.00	0.02	0.01	0.06	-0.01	-0.01	0.03	0.96	
T 4	0.00	0.00	0.00	-0.49	-0.01	0.00	-0.01	0.07	0.48
	F 1	F 2	F 3	F 4	F 5	T 1	T 2	T 3	T 4



Proyecto:
 Zona: El Sabinar
 Observador: Juan Manuel Jofre
 Situación: Sobre plano 1/50,000 n° 889

COORDENADAS
 X 575.690
 Y 4.230.425
 Z 1.210

m V: Adaro 01
 mA: Geotron 328
 S.E.V. 11

BOA N-75°E
 Perfil: P-IV

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER
 SIMETRICO
 MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2.68	/	19	100mV	45	51.6							21.78			
2	3.73		20	"	23.5	50.4							42.92			
3	5.18		25	"	14	46.8							83.51			
4	7.2		125	"	34	44.1							182.1			
5	10		130	30mV	16	38.6							313.4			
6	13.9		135	10mV	7.65	34.3							606.2			
7	19.3		110	"	3.4	36.1							1.189	109.2		
8	28.8		125	"	2.2	39.7	10	125		23	40.1		2.256	217.8		
9	37.3		240	"	2.5	45.5		240		26	46.5		4.370	429.2		
10	51.8	/0	270	30mV	17	52.6							8.429	836.1		
11	72		255	10mV	9.2	58.5							16.200	1.621		
12	100		165	"	3.35	63.6							31.200	3.134		
13	139		215	"	2.25	63.4							60.700	6.062	1.175	
14	193		240	3mV	1.5	73.1								11.690	2.301	
15	268		460	"	1.7	83.4								22.560	4.474	
16	373		460	"	1.05	99.8								43.700	8.702	4.292
17	518		305	1mV	0.45	124.4								84.290	16.820	8.351
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.390														121.400	60.620
21	1.930														234.000	116.900
22	2.680														461.200	226.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: 7-2-91



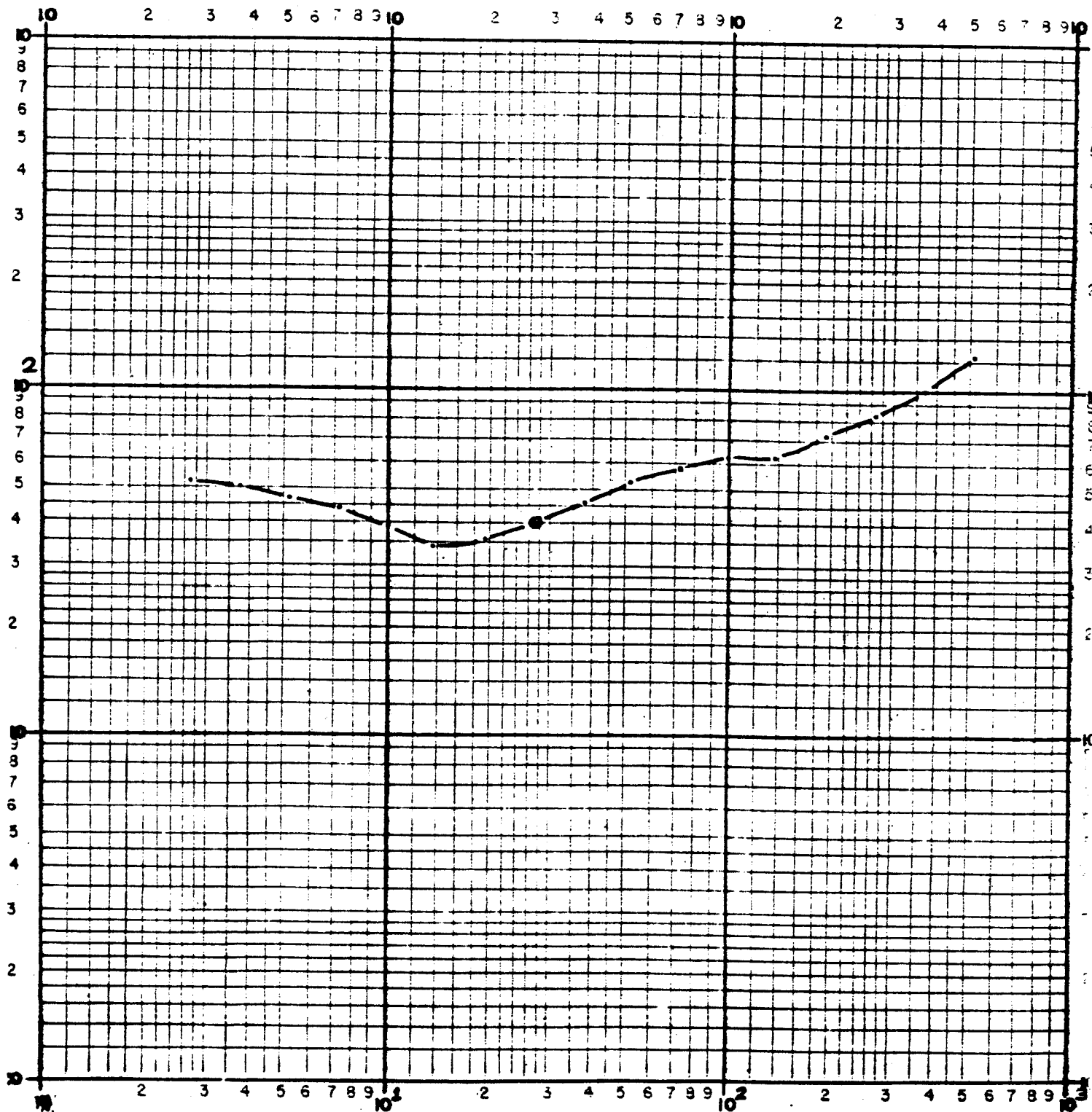
Departamento de Geofísica

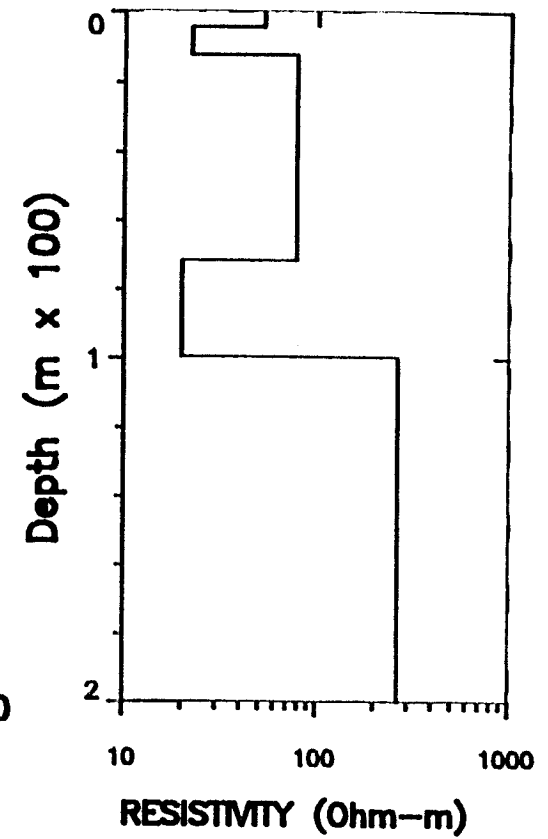
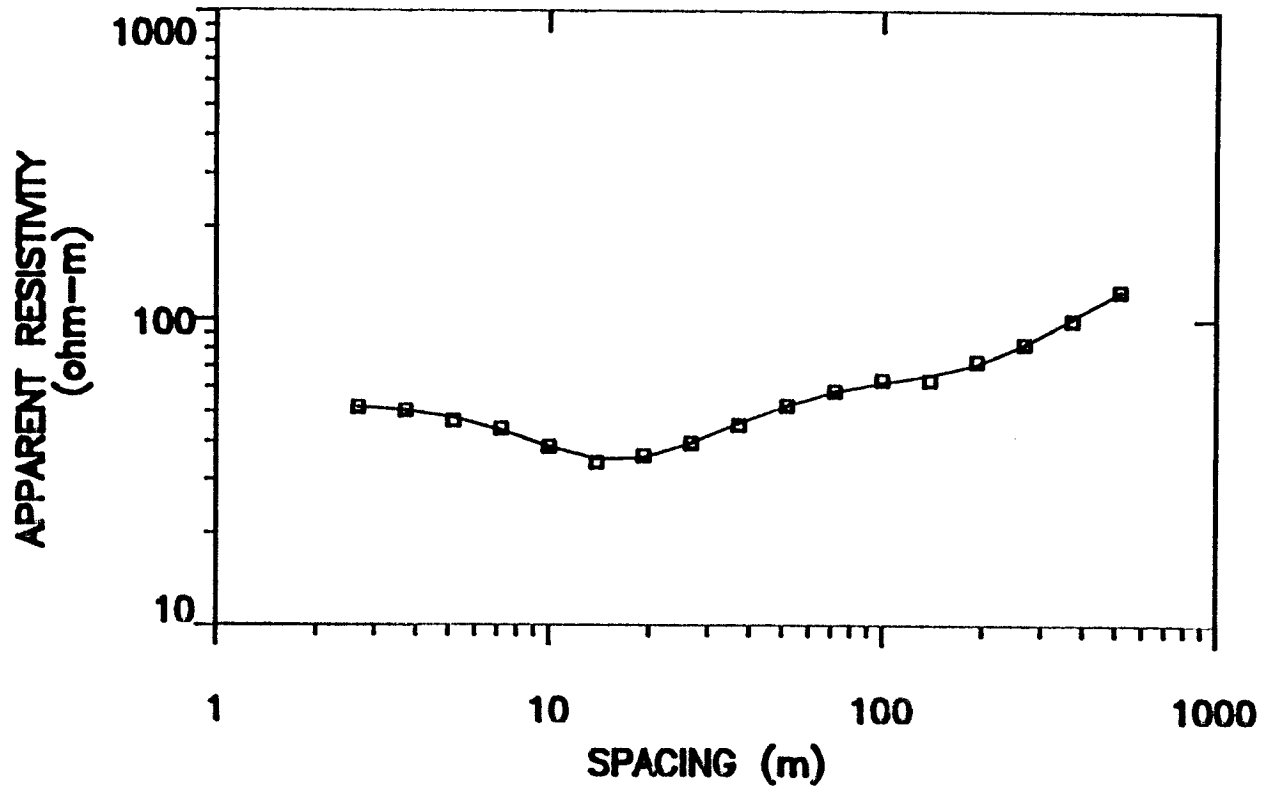
Estudio *El Sabinar* S.E.V. *11*

Fecha *7-2-91* ... Rumbo AB *N-75°E* PERFIL *P-IV*

Interpretación

Observaciones:





for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 11V	Date: 91	
Equipment: ADARO	Sounding: 11V	Azimuth: N-75-E

DATA SET: 12IV

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1160.00
 SOUNDING COORDINATES: X: 576250.0000 Y: 4229150.0000

DATE: 91
 SOUNDING: 12IV
 AZIMUTH: E-W
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 1.776 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfa)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1160.0	
1	43.89		0.727	1159.2	0.0165
2	20.18		5.83	1152.3	0.340
3	14.11		43.15	1109.2	3.05
4	12.68		23.06	1086.1	1.79
5	167.1				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	25.10	25.00	0.374
2	3.73	22.00	22.40	-1.84
3	5.18	21.60	21.01	2.72
4	7.20	20.10	20.09	5.832E-04
5	10.00	19.00	19.18	-0.967
6	13.90	17.80	18.05	-1.44
7	19.30	15.90	16.84	0.317
8	26.80	16.00	15.85	0.889
9	37.30	15.60	15.35	1.55
10	51.80	15.40	15.53	-0.881
11	72.00	15.70	15.68	0.0778
12	100.0	19.20	19.36	-0.865
13	139.0	23.60	24.20	-2.57
14	193.0	31.80	31.39	1.28
15	268.0	42.80	40.31	4.63
16	373.0	52.70	52.45	0.469
17	518.0	64.90	65.79	-1.68

* ADARO *

PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER

P 1	0.39								
P 2	-0.02	0.99							
P 3	-0.01	0.00	0.99						
P 4	0.01	0.01	0.03	0.21					
P 5	0.00	0.00	-0.01	-0.04	0.88				
T 1	0.37	0.03	0.01	-0.02	0.01	0.72			
T 2	0.02	0.02	0.03	-0.09	0.03	-0.05	0.80		
T 3	-0.01	0.00	0.00	-0.29	-0.07	0.01	0.02	0.65	
T 4	0.00	0.00	0.00	-0.15	-0.03	0.01	0.01	0.33	0.17
	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4

+ ADARKO +



Proyecto:

Zona: *El Sabinar*

Observador: *Manuel Menchero*

Situación: *Sobre Plano 1/50.000 n.º 889*

COORDENADAS

X *576.250*

Y *4.229.150*

Z *1.160*

mV: *Adaro 01*

mA: *Geotron 328*

S.E.V.

12

Rumbo AB

E-W

Perfil:

P-IV

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER
SIMETRICO
MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	OBSERVACIONES	CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN				
													1 m	10 m	50 m	100 m	
1	2.68	/	26	10mV	30	25.1							21.78				
2	3.73		52	u	78	32							42.92				
3	5.18		155	"	40	21.6							83.51				
4	7.2		145	30mV	18	20.1							182.1				
5	10		137	10mV	8.3	19							313.4				
6	13.9		150	u	4.4	17.8							606.2				
7	19.3		260	u	3.75	16.9							1.189	109.2			
8	26.8		310	3mV	2.2	16	10	310	30mV	24.5	17.2		2.256	217.8			
9	37.3		330	u	1.05	13.9		330	u	12	15.6		4.370	429.2			
10	51.8	10	325	10mV	6.0	15.4							8.499	836.1			
11	72		310	u	3.2	16.7							16.890	1.621			
12	100		440	u	2.7	19.2							31.420	3.134			
13	139		540	u	2.1	23.6							60.700	6.062	1.175		
14	193		680	u	1.85	31.8								11.890	2.301		
15	268		580	3mV	1.1	42.8								22.560	4.474		
16	373		630	1mV	0.76	52.7								43.700	8.702	4.292	
17	518		610	u	0.42	64.9								84.290	16.820	8.351	
18	720													162.900	32.530	16.210	
19	1.000														62.790	31.340	
20	1.390															121.400	60.620
21	1.930															234.000	116.900
22	2.680															451.200	225.600
23	3.730																437.000
24	5.180																842.880
25	7.200																1.628.520
26	10.000																3.141.510

OBSERVACIONES:

FECHA: *6-2-91*

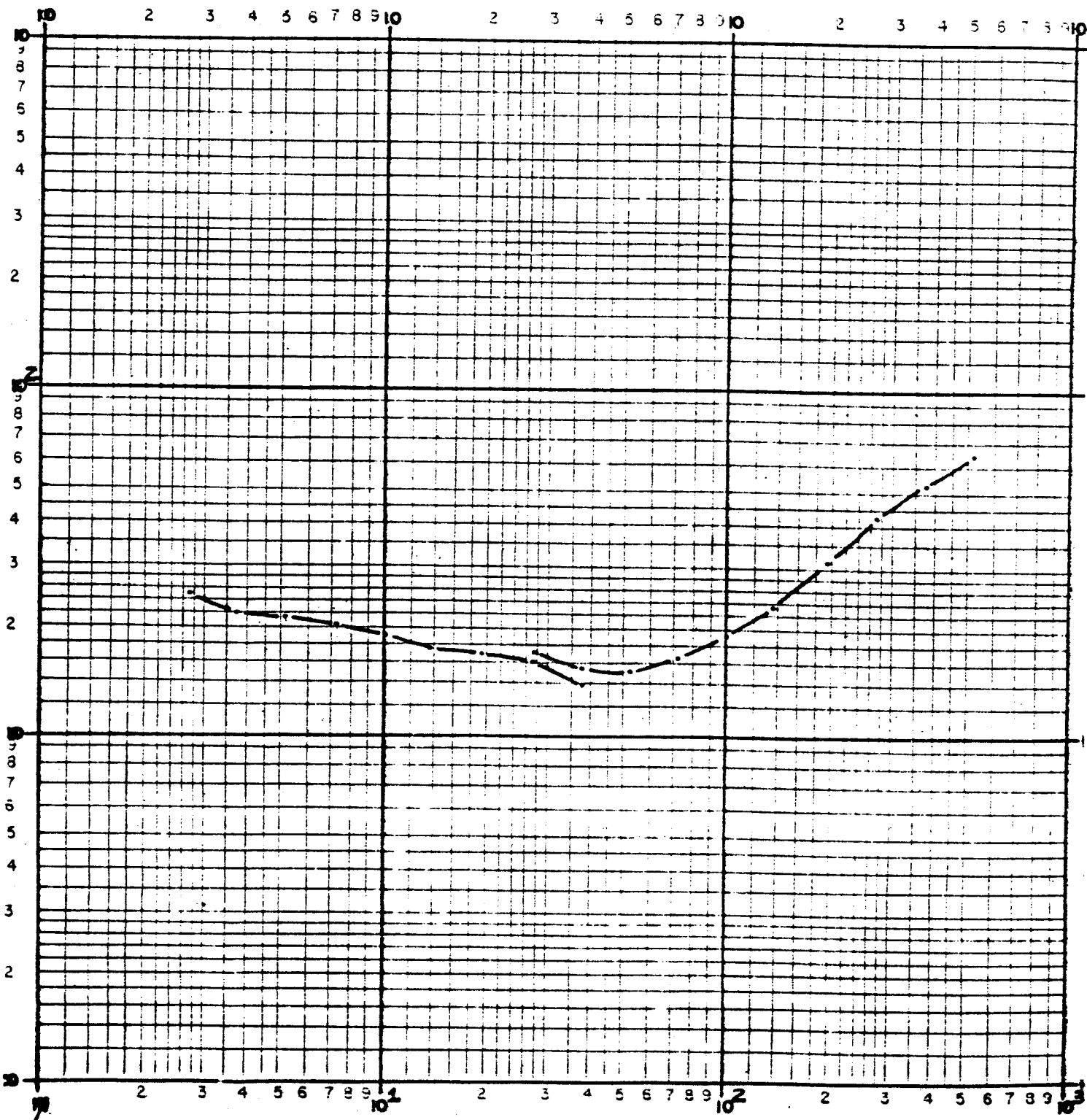


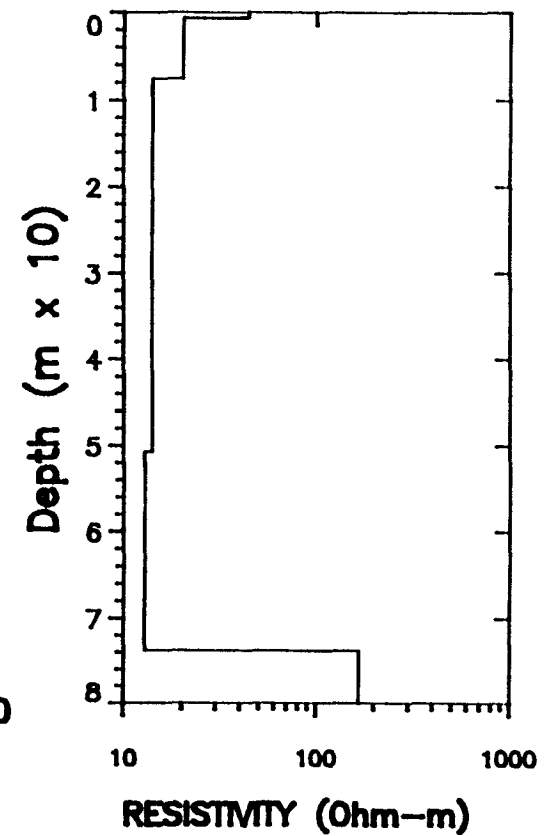
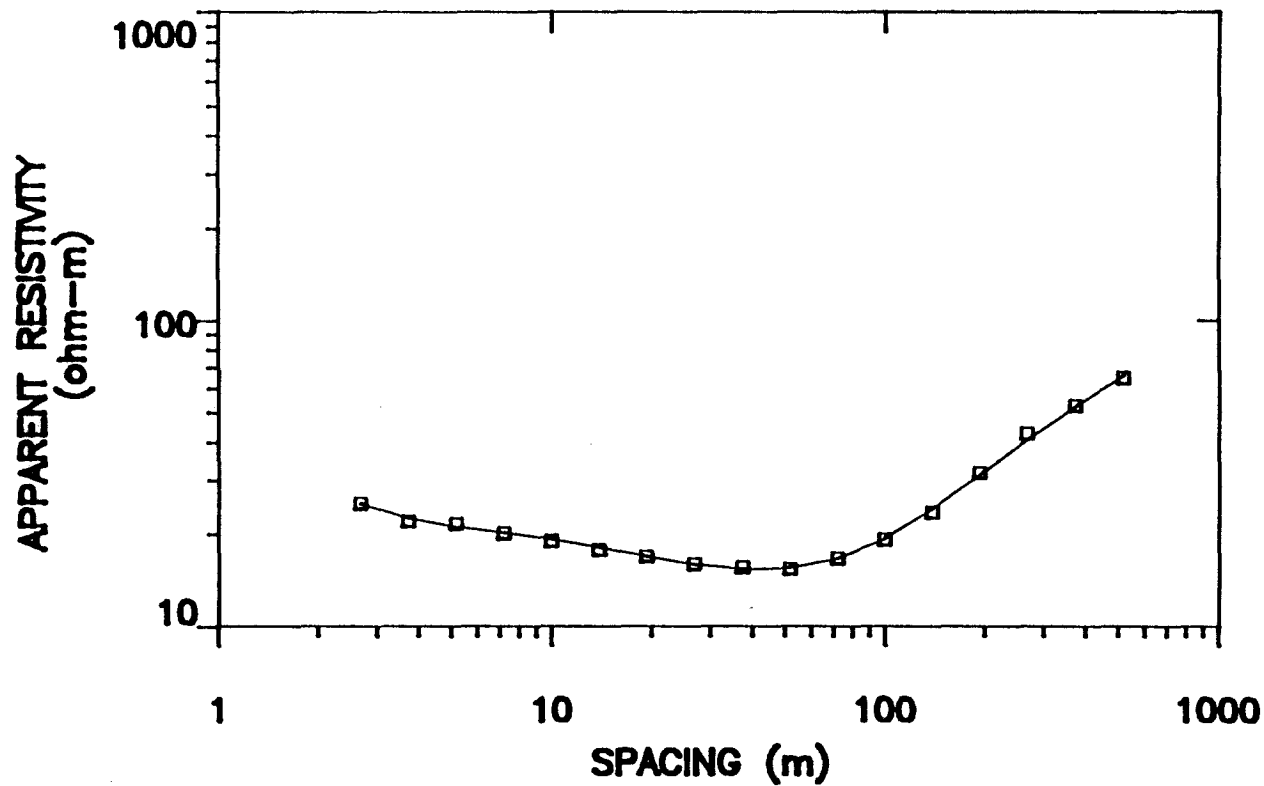
Departamento de Geofísica

Estudio *El Sabinar* S.E.V. *12*

Fecha *6-2-91* ... Rumbo AB *E-W* ... PERFIL *P-IV*

Interpretación	Observaciones:
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PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER

P 1	0.54																			
P 2	0.13	0.61																		
P 3	-0.03	0.07	0.80																	
P 4	0.00	0.01	0.02	0.79																
P 5	0.00	0.00	0.01	-0.03	0.95															
P 6	0.00	0.00	-0.01	0.02	0.05	0.06														
T 1	-0.45	-0.07	0.06	-0.03	0.00	0.00	0.39													
T 2	-0.07	0.42	0.10	-0.06	-0.01	0.00	0.10	0.37												
T 3	-0.03	0.08	-0.29	-0.23	-0.02	0.01	0.04	0.10	0.26											
T 4	0.01	-0.02	0.07	-0.09	-0.04	0.03	-0.02	-0.03	0.02	0.91										
T 5	0.00	0.00	0.01	-0.05	-0.13	-0.13	0.00	-0.01	-0.02	-0.07										
	P 1	P 2	P 3	P 4	P 5	P 6	T 1	T 2	T 3	T 4										

SECOND PART OF RESOLUTION MATRIX:

T 5	0.29
	T 5



Proyecto:
 Zona: *El Sabinar*
 Observador: *Manuel M. M. M.*
 Situación: *Sobre plano 1/50,000 n.º 889 de Moratalla*

COORDENADAS
 X *576.390*
 Y *4.228.400*
 Z *1.190*

mV: *Adara 01*
 mA: *Geotrou 328*
 S.E.V. *13*

Rumbo AB
N-104°E
 Perfil:
P-IV

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2.68	/	24	100uV	17	15.4							21.78			
2	3.73		87	u	34	16.8							42.92			
3	6.18		84	30uV	15.2	15.1							83.51			
4	7.2		85	10uV	7.25	13.8							182.1			
5	10		83	u	3.6	13.6							313.4			
6	13.9		80	u	1.9	14.4							606.2			
7	19.3		160	u	2.2	16.1	10	155		23	16.2		1.169	109.2		
8	26.8		240	u	2.1	19.7		240		22	20		2 256	217.8		
9	37.3	10	245	30uV	14	24.5							4.970	429.2		
10	61.8		240	u	9.0	31.3							8 429	835.1		
11	72		260	10uV	6.6	41.1							16.290	1.621		
12	100		350	u	6.3	56.4							31 420	3.134		
13	139		320	u	3.9	73.9							60.700	6.062	1.175	
14	193		280	u	2.25	93.9								11.690	2.301	
15	268		340	20uV	1.7	112.8								22.560	4.474	
16	373		305	u	0.95	136.1								43.700	8.702	4.292
17	518		300	u	0.62	174.2								84.290	16.820	8.351
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.390														121.400	60.620
21	1.930														234.000	116.900
22	2.680														461.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: *11-2-91*

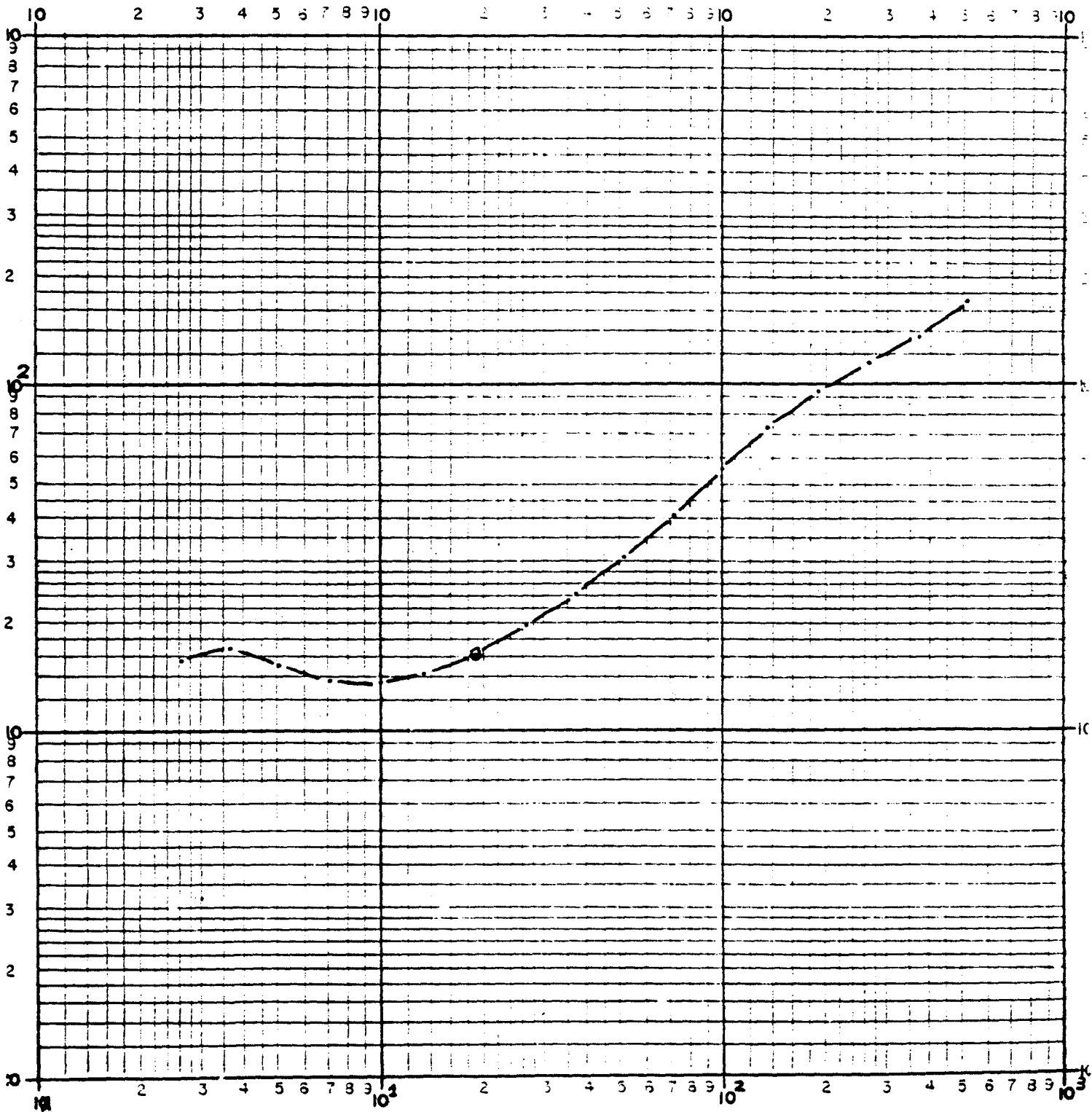


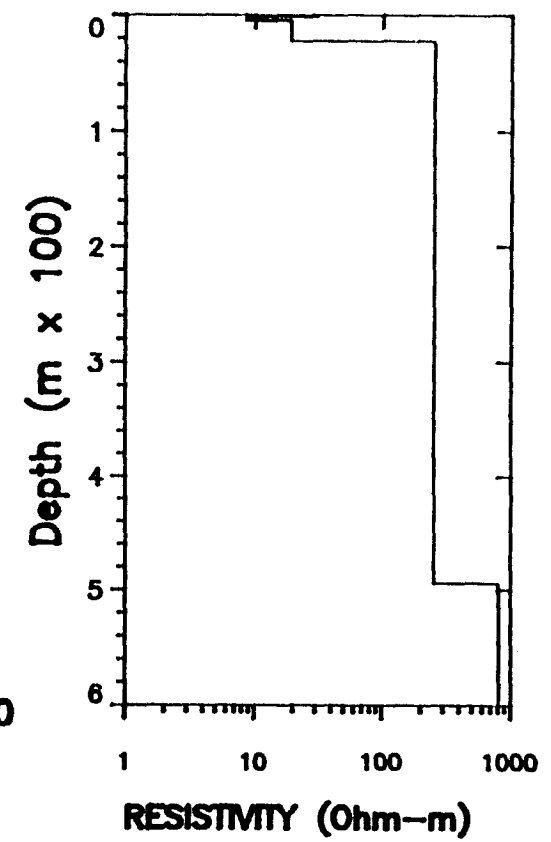
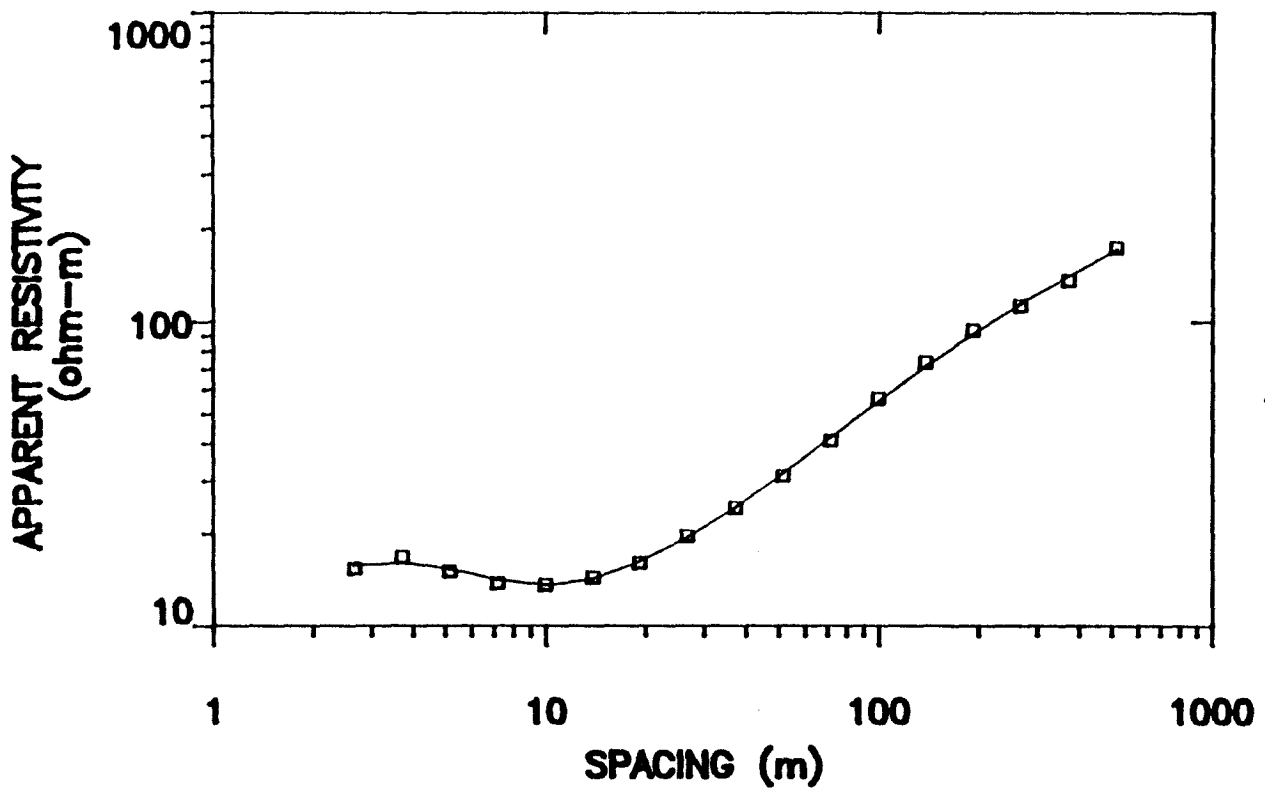
Departamento de Geofísica

Estudio El Sabinar S.E.V. 13

Fecha 11-2-91 Rumbo AB. N-104° E PERFIL P-IV

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 13V	Date: 91	Azimuth: N-104-E
Equipment: ADARO	Sounding: 13V	

DATA SET: 14IV

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1190.00

DATE: 91
 SOUNDING: 14IV
 AZIMUTH: N-120-E
 EQUIPMENT: ADARO

SOUNDING COORDINATES: X: 576400.0000 Y: 4227410.0000

Schlumberger Configuration

FITTING ERROR: 1.946 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1190.0	
1	42.06		1.26	1188.7	0.0301
2	27.54		4.90	1183.8	0.177
3	15.06		43.31	1140.5	2.87
4	3.83		71.52	1068.9	18.63
5	258.6				

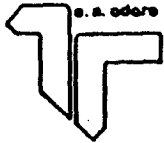
ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	35.30	35.50	-0.594
2	3.73	33.40	32.40	2.98
3	5.18	28.60	29.52	-3.24
4	7.20	26.80	26.87	-0.291
5	10.00	24.30	24.10	0.814
6	13.90	21.10	21.14	-0.189
7	19.30	18.50	18.50	-0.0233
8	26.80	16.40	16.58	-1.09
9	37.30	15.00	15.17	-1.19
10	51.80	14.30	13.80	3.49
11	72.00	11.70	12.04	-2.92
12	100.0	10.30	10.09	2.00
13	139.0	9.70	8.88	-2.10
14	193.0	9.70	9.43	2.77
15	268.0	11.80	11.96	-1.39
16	373.0	16.20	16.19	0.00905
17	518.0	22.20	21.98	0.946

* ADARO *

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	1.00									
P 2	0.00	1.00								
P 3	0.00	0.00	1.00							
P 4	0.00	-0.01	-0.01	0.82						
P 5	0.00	0.00	0.00	-0.07	0.89					
T 1	0.01	0.01	0.00	0.02	0.00	0.94				
T 2	0.00	0.00	0.00	0.02	0.00	-0.01	0.99			
T 3	0.00	0.00	0.00	0.05	0.02	-0.01	-0.01	0.98		
T 4	0.00	-0.01	-0.01	-0.20	-0.08	0.02	0.02	0.06	0.78	
	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4	



Proyecto:
 Zona: *El Sabinar*
 Observador: *Manuel Menchero*
 Situación: *Sobre plano 1/50.000 n.º 889 de Moratalla*

COORDENADAS

X *576.400*
 Y *4.227.410*
 Z *1.190*

mV: *Adaro 01*
 mA: *Geotrou 828*
 S.E.V. *14*

Rumbo AB
N-120°E

Perfil:
P-IV

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	1 m	10 m	50 m	100 m	
1	2.68	1	21	30mV	34	35,3						<i>Junto a pie de monte; al Sur Zona de cargas</i>	21,78				
2	3.73		27	"	21	33,4							42,92				
3	5.18		31	30mV	10,6	28,6							83,51				
4	7.2		29	10mV	4.8	26,8							182,1				
5	10		31	"	2.4	24,3							313,4				
6	13.9		135	"	4.7	21,1							606,2				
7	19.3		120	"	1.9	18,5							1.189	109,2			
8	26.8		220	"	1.6	16,4	10	220	30mV	17	16,8		2.256	217,8			
9	37.3	10	230	"	8.0	15							4.370	429,2			
10	51.8		175	"	3.0	14,3							8.429	835,1			
11	72		270	"	1.95	11,7							16.200	1.621			
12	100		320	3mV	1.05	10,3							31.420	3.134			
13	139		420	"	0.6	8,7							60.100	6.062	1.175		
14	193		420	1mV	0.35	9,7								11.690	2.301		
15	268		440	"	0.23	11,8								22.560	4.474		
16	373		350	"	0.13	16,2								43.700	8.702	4.292	
17	518		380	"	0.19	22,2									84.290	16.820	8.351
18	720														162.900	32.530	16.210
19	1.000															62.790	31.340
20	1.390															121.400	60.620
21	1.930															234.000	116.900
22	2.680															451.200	225.600
23	3.730																437.000
24	5.180																842.880
25	7.200																1.628.520
26	10.000																3.141.510

OBSERVACIONES:

FECHA: *11-2-91*

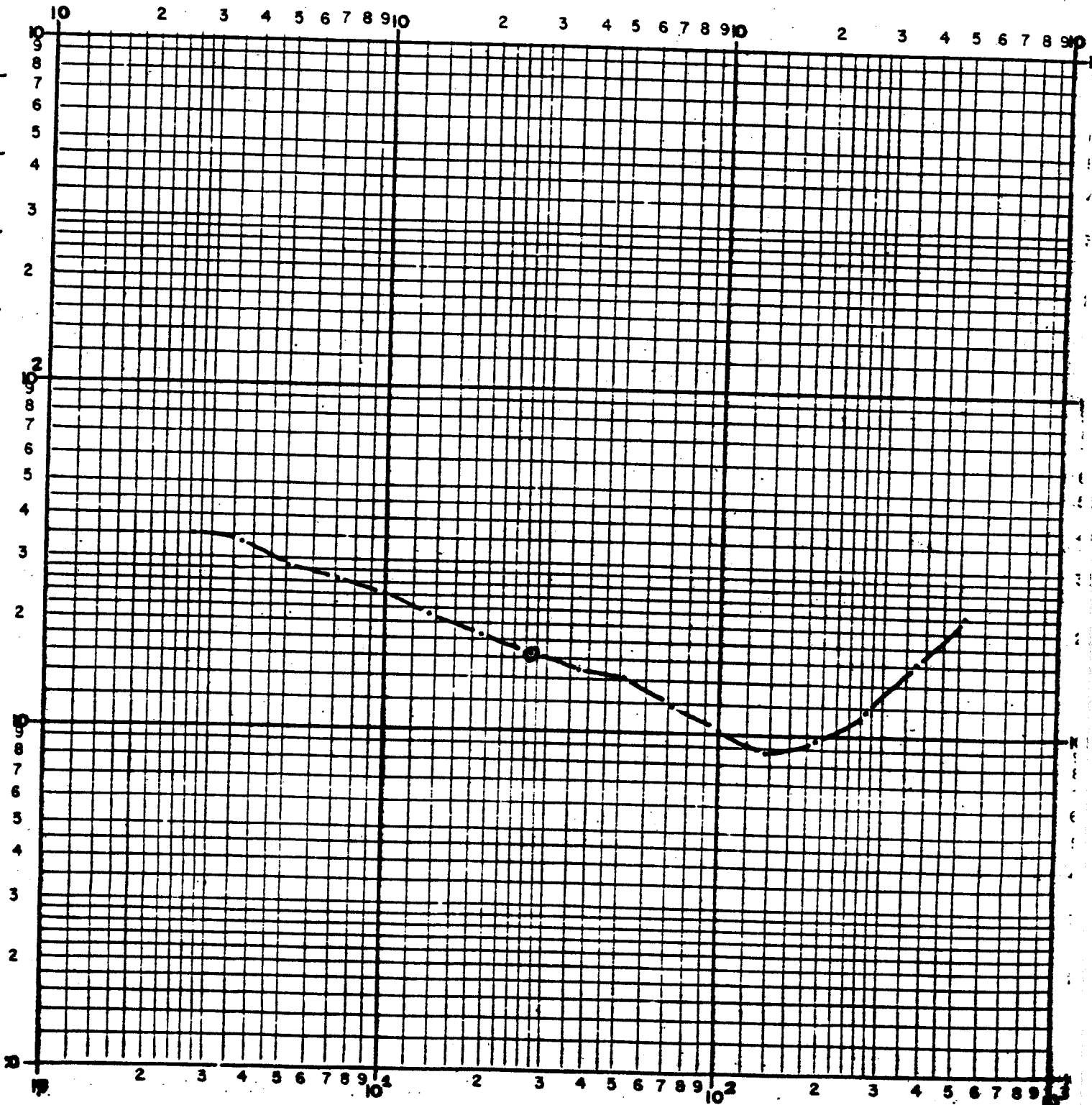


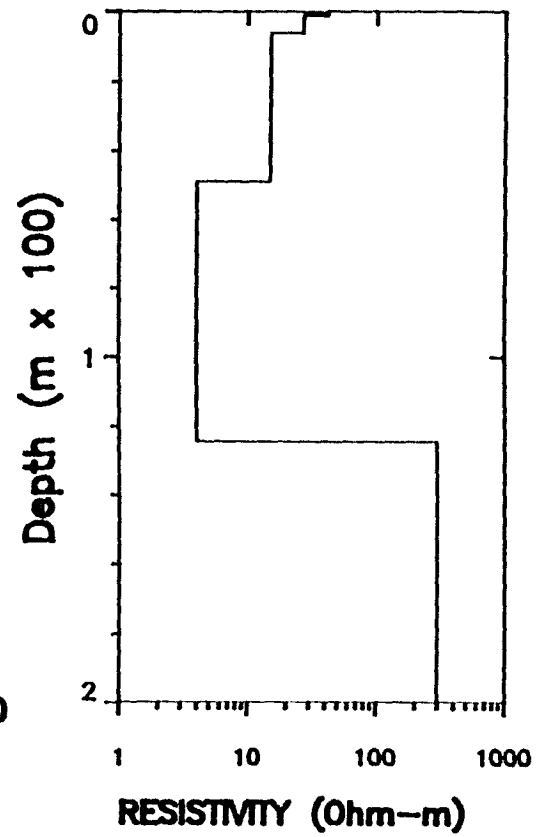
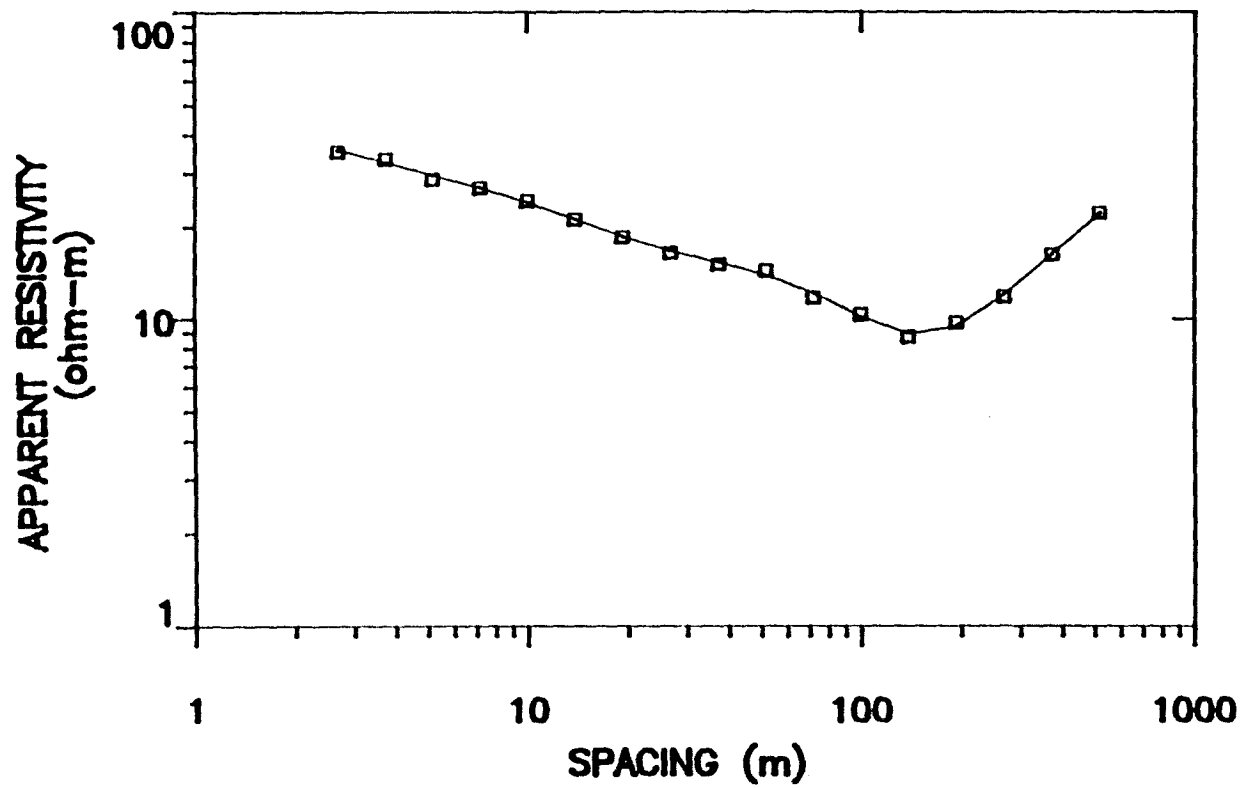
Departamento de Geofísica

Estudio *El Sabinar* S.E.V. *14*

Fecha *11-2-91* ... Rumbo AB. *N-120°E* PERFIL *P-IV*

Interpretación	Observaciones:
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for: ITGE	
by: ADARO	
Data Set: 14V	Date: 91
Equipment: ADARO	Sounding: 14V

SEGURA
SABINAR (AB)
Azimuth: N-120-E

DATA SET: 15V

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1230.00

DATE: 91
 SOUNDING: 15V
 AZIMUTH: N-75-E
 EQUIPMENT: ADARO

SOUNDING COORDINATES: X: 577250.0000 Y: 4231825.0000

Schlumberger Configuration

FITTING ERROR: 3.016 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1230.0	
1	43.30		6.07	1223.9	0.140
2	33.73		10.12	1213.7	0.300
3	57.68		10.37	1203.4	0.179
4	34.73		11.08	1192.3	0.319
5	40.45		94.63	1097.7	2.33
6	1917.9				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	41.80	43.20	-3.35
2	3.73	43.80	43.06	1.68
3	5.18	41.80	42.73	-2.24
4	7.20	43.20	42.07	2.59
5	10.00	43.30	41.04	5.21
6	13.90	38.60	39.88	-3.31
7	19.30	37.30	39.22	-5.16
8	26.80	41.10	39.59	3.66
9	37.30	42.10	40.74	3.21
10	51.80	39.90	41.91	-5.03
11	72.00	43.70	43.01	1.55
12	100.0	45.40	45.17	0.492
13	139.0	50.30	50.37	-0.150
14	193.0	61.60	61.11	0.782
15	268.0	78.70	79.79	-1.38
16	373.0	106.8	108.0	-1.20
17	518.0	150.0	146.9	2.05

* ADARO *

PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER

P 1	1.00																			
P 2	0.00	0.94																		
P 3	0.00	0.07	0.59																	
P 4	0.00	-0.03	0.30	0.25																
P 5	0.00	-0.01	0.02	0.17	0.89															
P 6	0.00	-0.01	0.02	0.03	-0.06	0.12														
T 1	0.01	0.13	-0.17	0.03	0.04	0.01	0.48													
T 2	0.00	-0.14	-0.14	0.04	0.05	0.00	0.22	0.19												
T 3	0.00	-0.01	0.20	0.14	0.01	0.00	0.00	0.01	0.09											
T 4	0.00	0.00	-0.01	-0.01	-0.04	-0.01	0.00	0.01	0.01	0.01										
T 5	0.00	0.00	0.05	0.08	-0.10	-0.12	0.05	0.13	0.12	0.09										
	P 1	P 2	P 3	P 4	P 5	P 6	T 1	T 2	T 3	T 4										

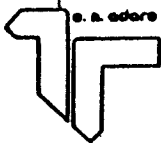
SECOND PART OF RESOLUTION MATRIX:

T 5	0.85
	T 5

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ADARD

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Proyecto:
 Zona: *El Sabinar*
 Observador: *J. Manuel Pinedero*
 Situación: *Sobre plano 1/50.000 n.º 889*

COORDENADAS

X *577.250*
 Y *4.231.825*
 Z *1.230*

mV: *Adaro 01*
 mA: *Geotrou 328*

rumbo Δ

N-75°E

S.E.V.

15

Perfil:

P-V

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER
SIMETRICO
MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	P (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	P (Ω m)	OBSERVACIONES	CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN				
													1 m	10 m	50 m	100 m	
1	2,68	/	11,2	30mV	21,5	41,8						<i>Proximo a pie de monte Caliza</i>	21,78				
2	3,73		14,2	"	14,5	43,8							42,92				
3	5,18		12,8	10mV	6,4	41,8							83,51				
4	7,2		15	"	4,0	43,2							182,1				
5	10		55	"	7,6	43,3							313,4				
6	13,9		88	"	5,6	38,6							606,2				
7	19,3		69	"	2,2	37,3							1.169	109,2			
8	26,8		180	"	3,2	40,1	10	180		34	41,1		2.256	217,8			
9	37,3		112	3mV	1,02	39,8		112		11	42,1		4.370	429,2			
10	51,8	10	159	10mV	7,6	39,9							8.429	835,1			
11	72		115	"	3,1	43,7						16.290	1.621				
12	100		200	"	2,9	45,4						31.420	3.134				
13	139		235	"	1,95	50,3						60.700	6.062	1.175			
14	193		220	3mV	1,16	61,6							11.690	2.301			
15	268		258	"	0,9	78,7							22.560	4.474			
16	373		225	1mV	0,55	106,8							43.700	8.702	4.292		
17	518		180	"	0,32	150,0											
18	720													84.290	16.820	8.351	
19	1.000													162.900	32.530	16.210	
20	1.390														62.790	31.340	
21	1.930														121.400	60.620	
22	2.680														234.000	116.900	
23	3.730														451.200	225.600	
24	5.180															437.000	
25	7.200															842.880	
26	10.000															1.628.620	
																3.141.510	

OBSERVACIONES:

FECHA: *8-2-91*

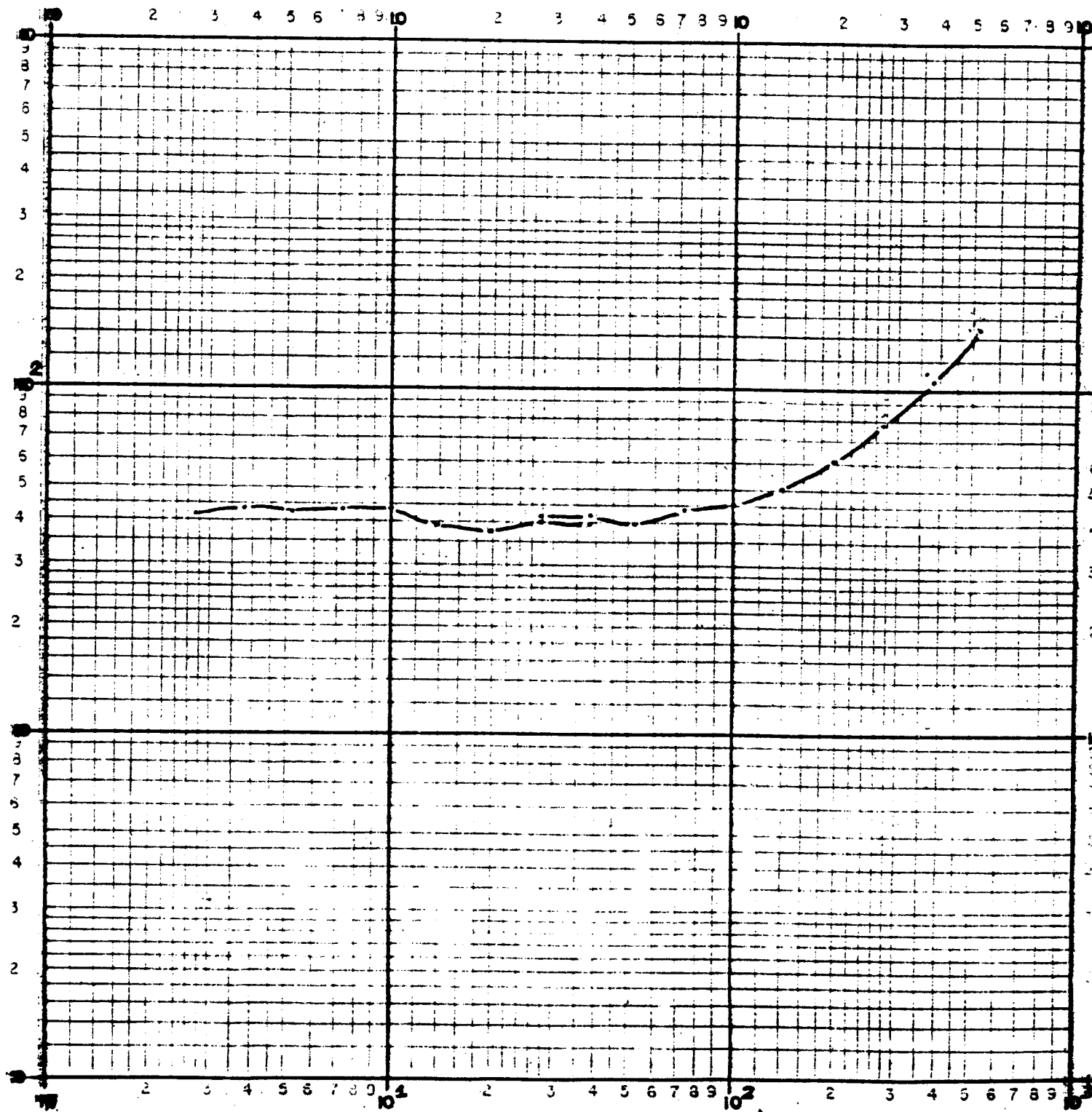


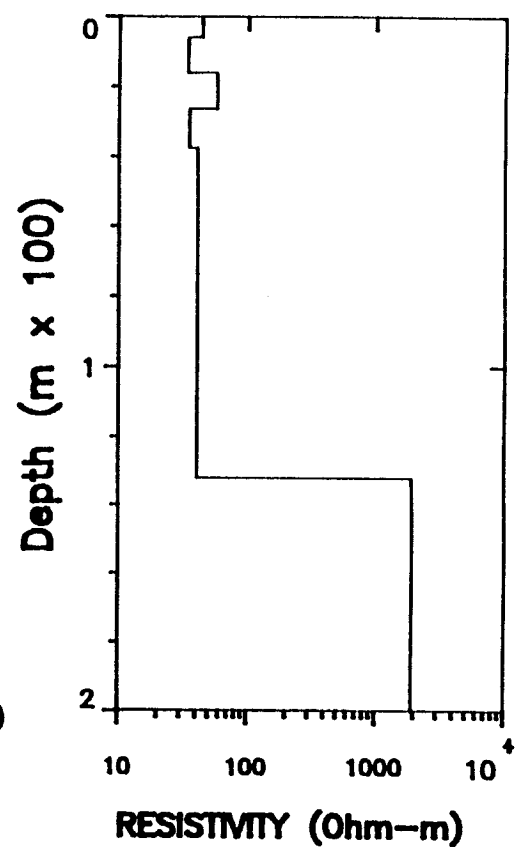
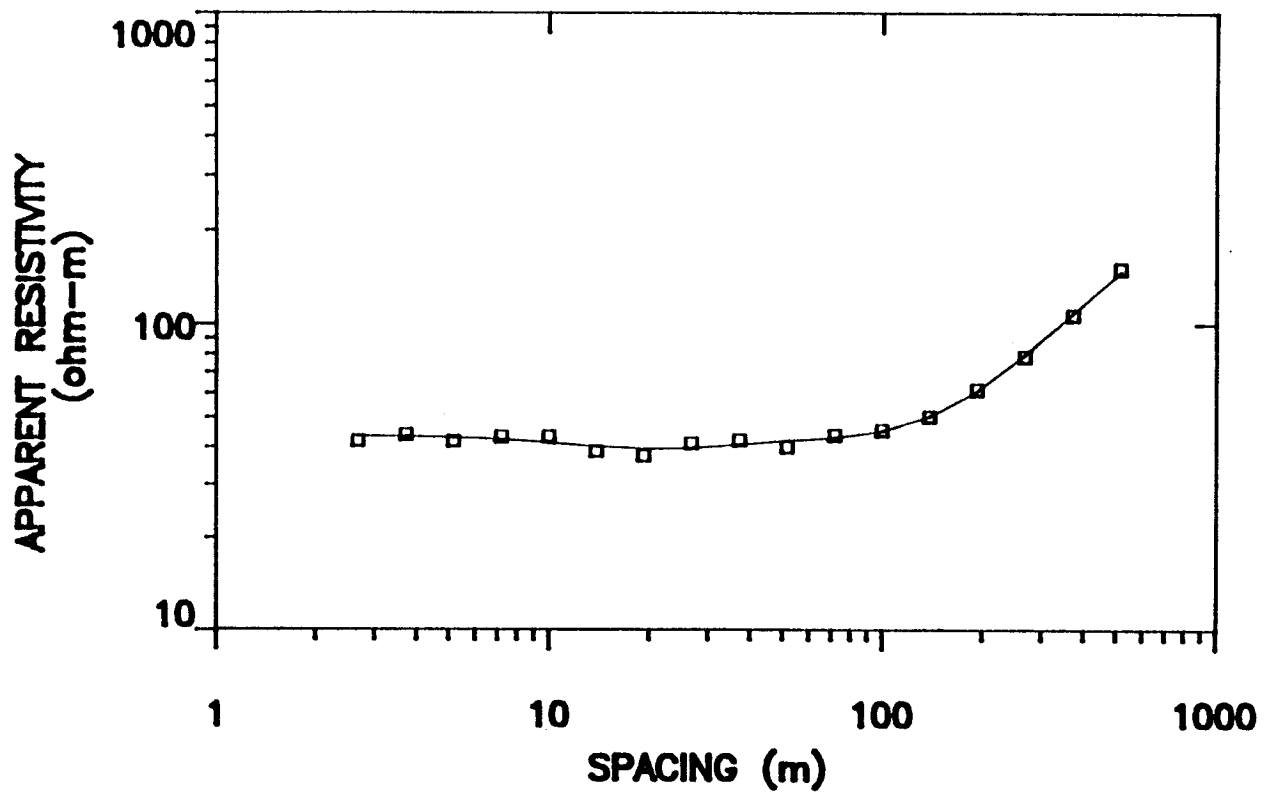
Departamento de Geodesia

Estudio El Sabinar S.E.V. 15

Fecha 8-2-91 Rumbo AB N-75°E PERFIL P-V

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 15V	Date: 91	Azimuth: N-75-E
Equipment: ADARO	Sounding: 15V	

DATA SET: 16V

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1210.00
 SOUNDING COORDINATES: X: 577150.0000 Y: 4230980.0000

DATE: 91
 SOUNDING: 16V
 AZIMUTH: N-85-E
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 2.347 PERCENT

#	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1210.0	
1	73.69		1.95	1208.0	0.0265
2	18.90		3.13	1204.9	0.165
3	71.06		23.97	1180.9	0.337
4	34.38		47.89	1133.0	1.39
5	97.62		204.5	928.4	2.09
6	2020.6				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	59.70	60.10	-0.686
2	3.73	50.80	50.15	1.27
3	5.18	39.60	40.29	-1.76
4	7.20	35.70	34.94	2.11
5	10.00	34.70	35.77	-3.08
6	13.90	41.10	40.55	1.31
7	19.30	47.40	46.31	2.27
8	26.80	50.80	51.26	-0.907
9	37.30	53.40	54.29	-1.66
10	51.80	55.20	54.74	0.826
11	72.00	53.30	53.28	0.0300
12	100.0	53.50	52.35	2.14
13	139.0	52.40	55.02	-5.01
14	193.0	66.20	62.86	5.03
15	268.0	74.80	76.03	-1.64
16	373.0	94.50	95.78	-1.36
17	518.0	126.4	124.9	1.17

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ADARO

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PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER

P 1	0.98												
P 2	-0.03	0.69											
P 3	0.01	-0.02	0.95										
P 4	0.00	0.01	0.00	0.78									
P 5	0.00	-0.01	0.03	0.03	0.57								
P 6	0.00	0.00	0.00	0.00	0.01	0.02							
T 1	0.03	0.13	0.00	0.00	0.01	0.00	0.92						
T 2	-0.04	-0.39	-0.07	0.02	0.01	0.00	0.16	0.46					
T 3	-0.01	0.02	0.11	0.17	-0.14	0.01	0.01	0.12	0.54				
T 4	0.00	0.01	0.00	-0.30	-0.26	0.01	0.00	0.02	0.20	0.34			
T 5	0.00	0.00	0.00	0.08	-0.25	-0.10	0.00	-0.01	-0.07	-0.03			
	P 1	P 2	P 3	P 4	P 5	P 6	T 1	T 2	T 3	T 4			

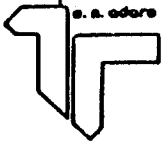
SECOND PART OF RESOLUTION MATRIX:

T 5	0.75
	T 5

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ADARO

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Proyecto:
 Zona: El Sabinar
 Observador: J. Manuel V. Fernandez
 Situación: Sobre plano 1/50.000 n.º 889

COORDENADAS

X 577.150
 Y 4.230.980
 Z 1.310

mV: Adaro 01
 mA: Geotron 328
 S.E.V. 16

Rumbo N-85ºE
 Perfil: P-V

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	P (Ωm)	MN	I (mA)	Esc. Volt.	V (mV)	P (Ωm)	OBSERVACIONES	SIMETRICO MN			
													1 m	10 m	50 m	100 m
1	2.68	1	135	100mV	37	59.7	(59.7)						21.78			
2	3.73		19	"	22.5	50.8							42.92			
3	6.18		95	"	45	39.6							83.51			
4	7.2		100		22	35.7							182.1			
5	10		185	30mV	20.5	34.7							313.4			
6	13.9		180	"	12.2	41.1							606.2			
7	19.3		170	10mV	6.9	47.4							1.169	109.2		
8	26.8		200	"	4.5	50.8	10	200	100mV	45	49		2.256	217.8		
9	37.3	10	185	30mV	23	53.4							4.370	429.2		
10	51.8		215	"	14.2	55.2							8.429	836.1		
11	72		140	10mV	4.6	53.3							16.290	1.621		
12	100		240	"	4.1	53.5							31.420	3.134		
13	139		440	"	3.8	52.4							61.700	6.062	1.175	
14	193		300	"	1.7	66.2								11.690	2.301	
15	268		350	3mV	1.16	74.8								22.560	4.474	
16	373		370	"	0.8	94.5								43.700	8.702	4.292
17	518		440	1mV	0.66	126.4								84.290	16.820	8.351
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.380														121.400	60.620
21	1.930														234.000	116.900
22	2.680														461.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: 7-2-91

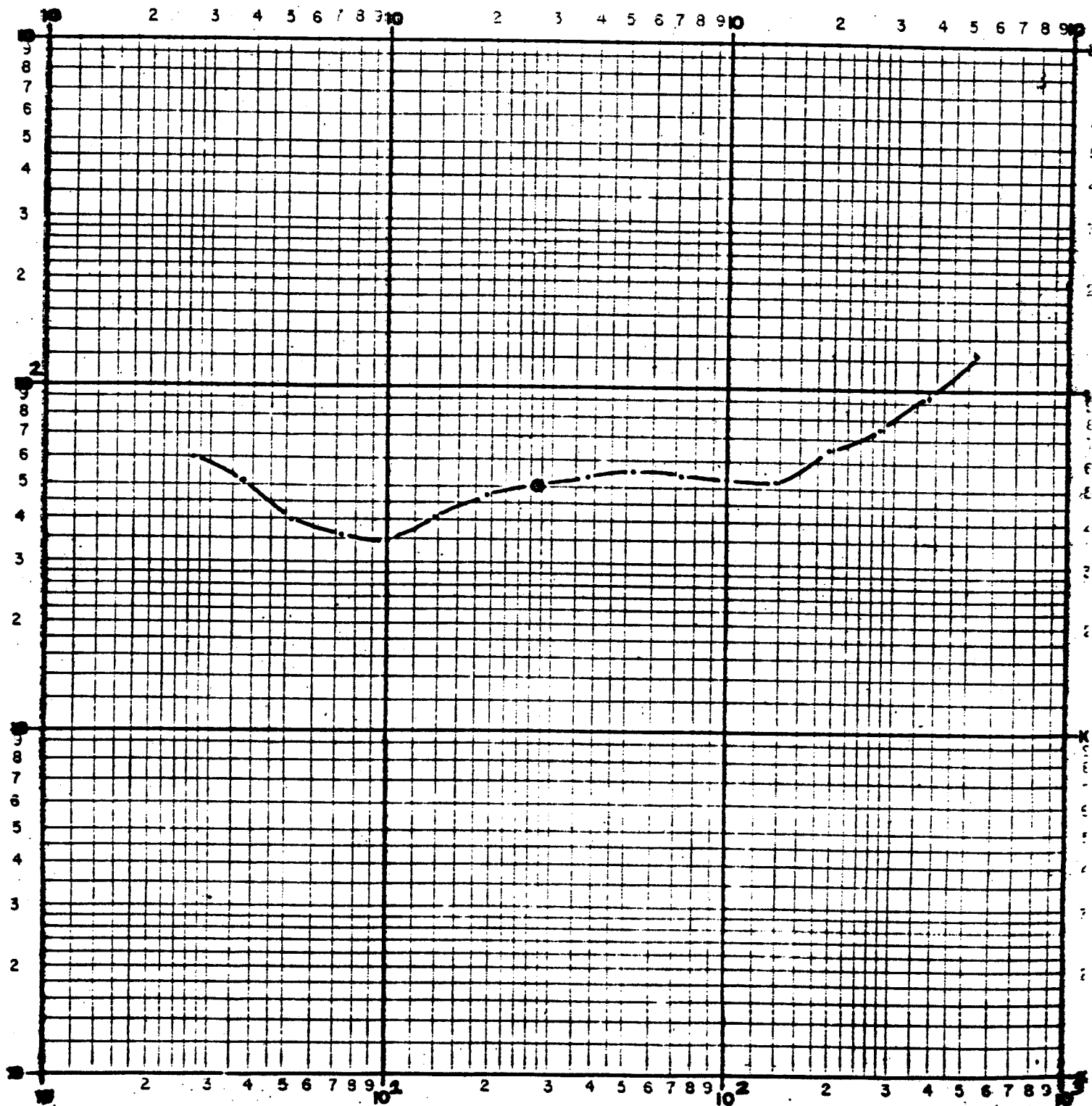


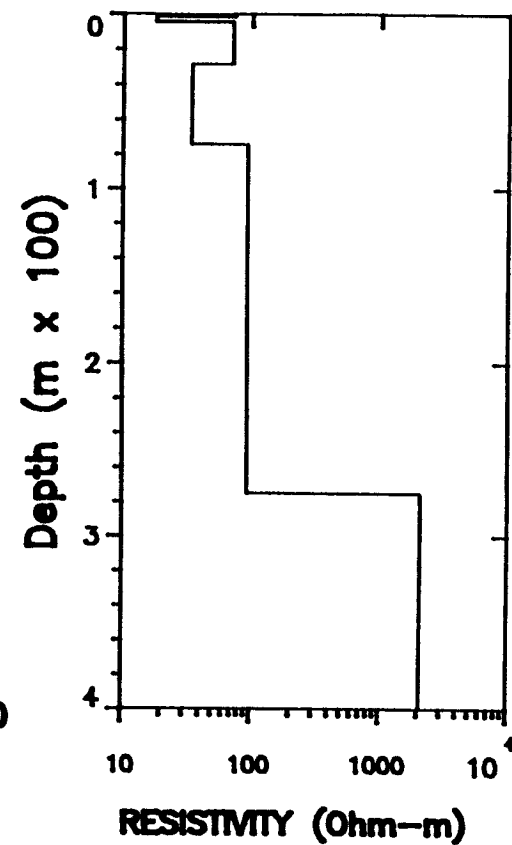
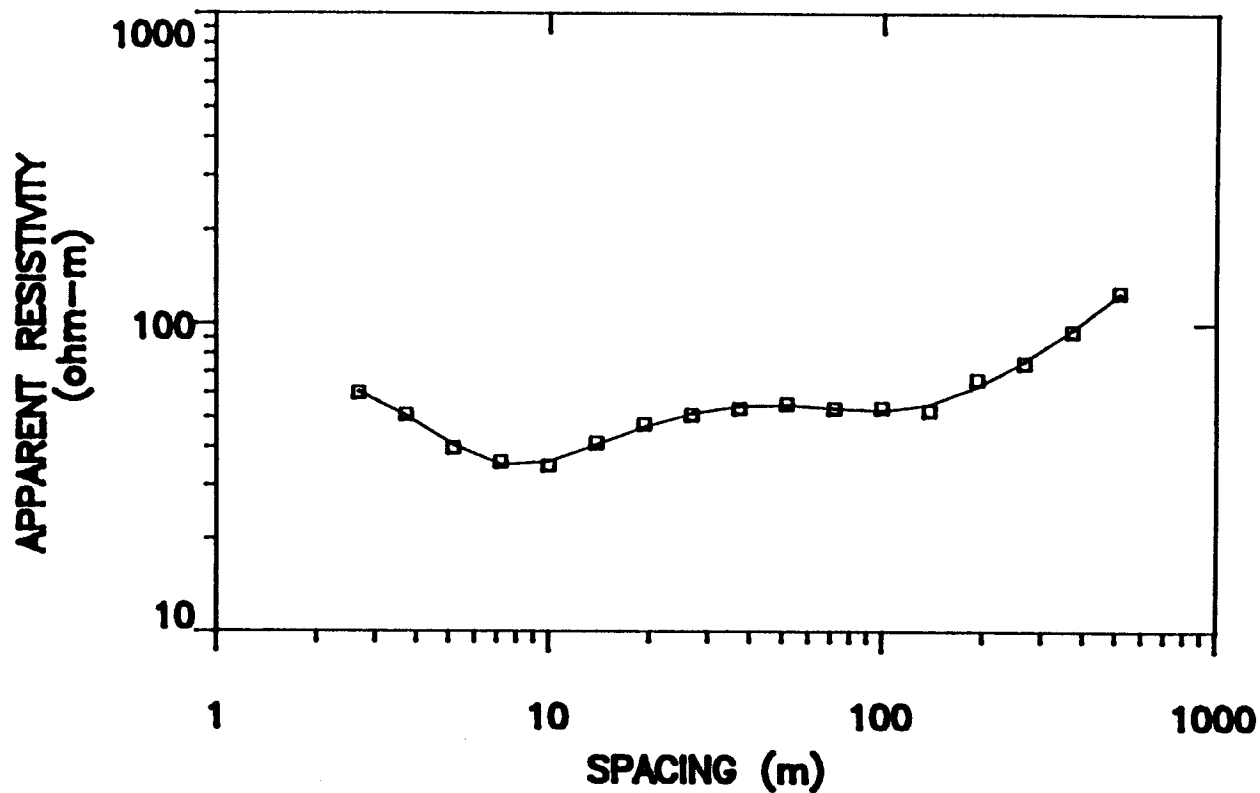
Departamento de Geodesia

Estudio *El Sabinar* S.E.V. *16*

Fecha *7-2-91* Rumbo AB *N. 85° E.* PERFIL *P-V*

<p>Interpretación</p>	<p>Observaciones:</p>
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 16V	Date: 91	Azimuth: N-85-E
Equipment: ADARO	Sounding: 16V	

DATA SET: 17V

CLIENT: ITGE	DATE: 91
LOCATION: SABINAR	SOUNDING: 17V
COUNTY: (AB)	AZIMUTH: N-75-E
PROJECT: SEGURA	EQUIPMENT: ADARO
ELEVATION: 1165.00	
SOUNDING COORDINATES: X: 577600.0000 Y: 4230030.0000	

Schlumberger Configuration

FITTING ERROR: 3.547 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1165.0	
1	391.4		2.07	1162.9	0.00530
2	55.76		10.97	1151.9	0.196
3	23.02		61.09	1090.8	2.65
4	23.01		48.37	1042.4	2.10
5	973.2				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	286.7	308.1	-7.44
2	3.73	257.5	240.3	6.64
3	5.18	172.2	163.2	5.20
4	7.20	95.50	101.9	-6.74
5	10.00	68.10	69.12	-1.50
6	13.90	56.10	55.10	1.76
7	19.30	47.80	46.58	2.54
8	26.80	38.60	38.53	0.169
9	37.30	30.80	31.72	-2.99
10	51.80	27.80	27.59	0.724
11	72.00	26.20	26.21	-0.0635
12	100.0	28.00	27.26	2.62
13	139.0	30.30	31.15	-2.81
14	193.0	39.00	38.99	0.0202
15	268.0	52.10	51.80	0.564
16	373.0	70.50	70.34	0.220
17	518.0	95.30	95.19	0.113

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ADARO

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PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	1.00								
P 2	0.00	1.00							
P 3	0.00	0.00	1.00						
P 4	0.00	0.00	0.01	0.86					
P 5	0.00	0.00	0.00	-0.10	0.81				
T 1	0.00	0.00	0.00	0.00	0.00	1.00			
T 2	0.00	0.00	0.00	-0.01	0.00	0.00	1.00		
T 3	0.00	0.00	0.00	-0.06	-0.06	0.00	0.00	0.59	
T 4	0.00	0.00	0.00	-0.05	-0.04	0.00	0.00	0.46	0.36
	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4

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ADARO

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Proyecto:
 Zona: *EL Sabinar*
 Observador: *Manuel M. M. M.*
 Situación: *Sobre plano 1/50.000 n.º 889 de Moratalla*

COORDENADAS
 X *577.600*
 Y *4.230.030*
 Z *1.165*

mV: *Adaro 01*
 mA: *Geotron 378*
 S.E.V. *17*

Kumbo AB
N-75° E
 Perfil:
P-V

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	$\rho(\Omega m)$	MN	I (mA)	Esc. Volt.	V (mV)	$\rho(\Omega m)$	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2.68	1	6	100mV	7.9	286.8							21.78			
2	3.73		5.5	"	33	257.5							42.92			
3	5.18		8	30mV	16.5	172.2							83.51			
4	7.2		9	10mV	5.3	95.5							182.1			
5	10		35	"	7.6	68.1							313.4			
6	13.9		40	"	3.7	56.1							606.2			
7	19.3		71	"	2.9	47.8							1.169	109.2		
8	26.8		110	"	1.75	35.9	10	110	30mV	19.5	38.6		2.256	217.8		
9	37.3		120	3mV	0.8	29.1		120	10mV	8.6	30.8		4.370	429.2		
10	51.8	10	120	10mV	4.0	27.8							8.420	836.1		
11	72		210	"	3.4	26.2							16.790	1.621		
12	100		190	"	1.7	28							31.470	3.134		
13	139		200	3mV	1.0	30.3							60.700	6.062	1.175	
14	183		210	"	0.7	39								11.690	2.301	
15	268		195	1mV	0.45	52.1								22.560	4.474	
16	373		220	"	0.355	70.5								43.700	8.702	4.292
17	518		230	"	0.26	95.3								84.290	16.820	8.351
18	720													182.900	32.530	16.210
19	1.000														62.790	31.340
20	1.390														121.400	60.620
21	1.930														234.000	116.900
22	2.680														451.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: *11-2-91*

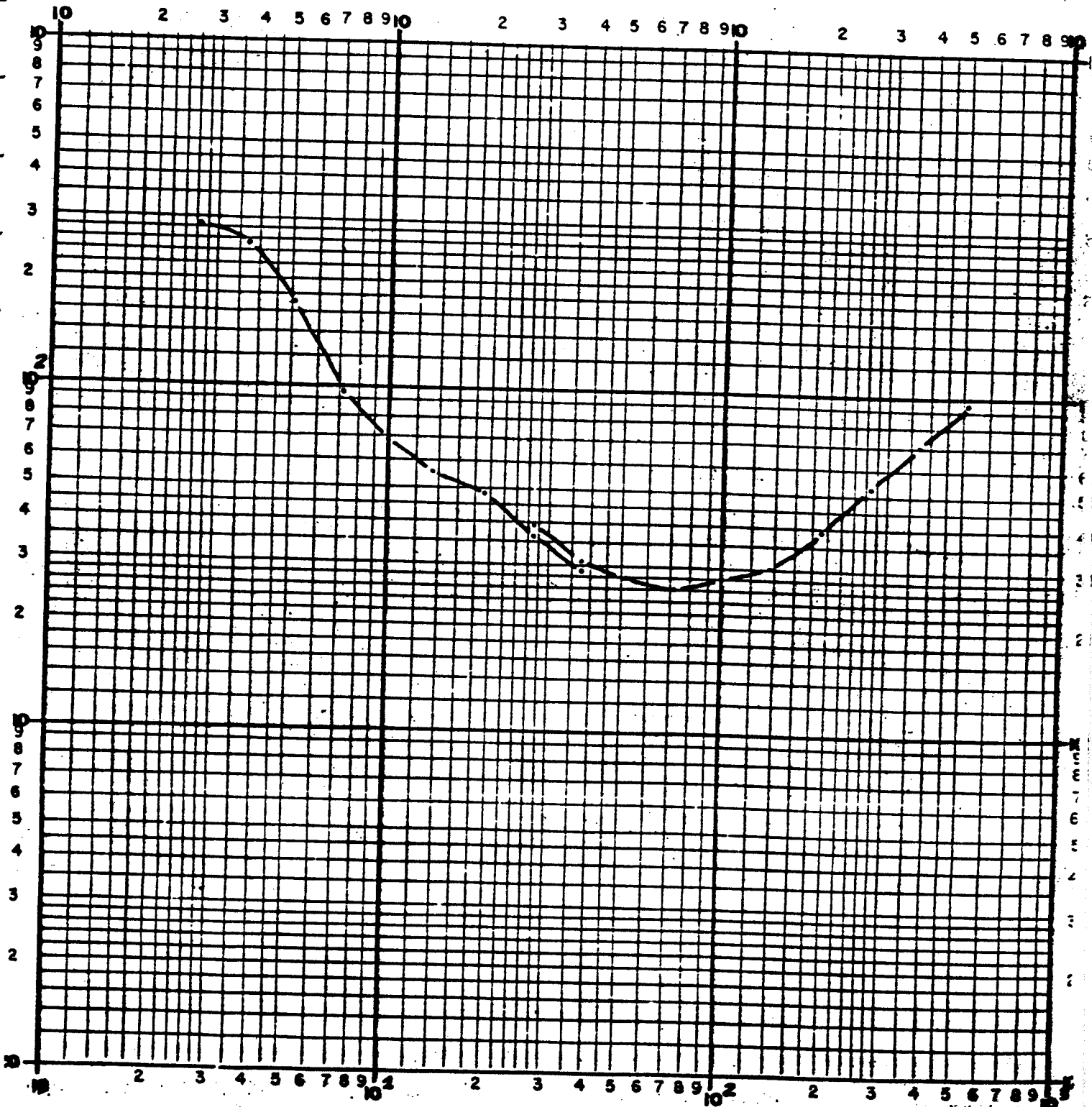


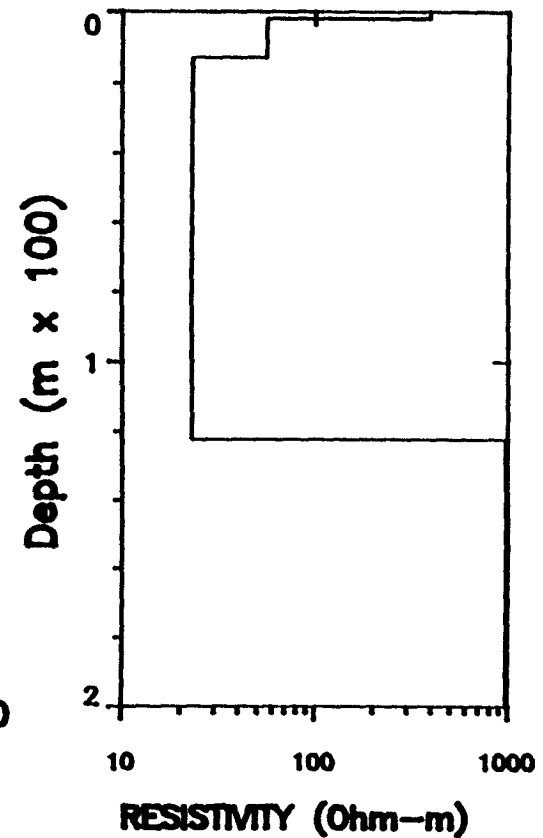
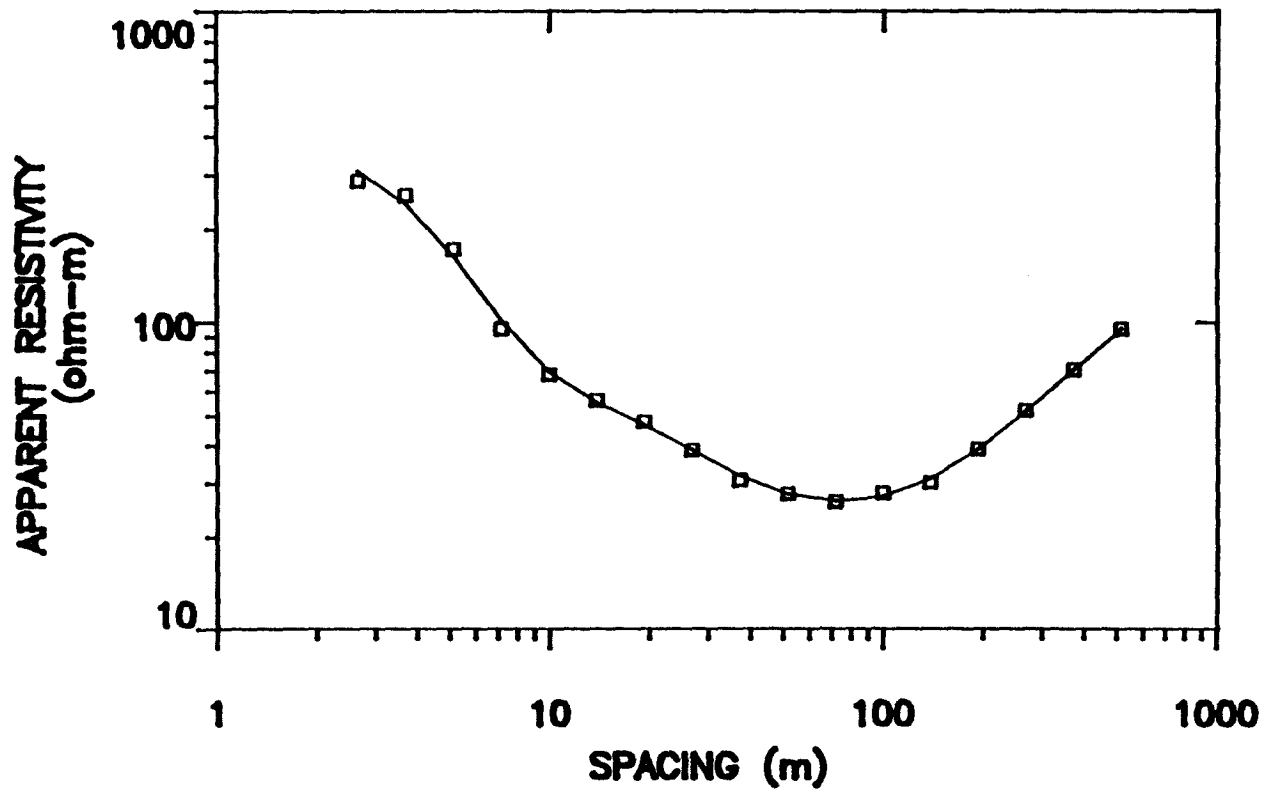
Departamento de Geodesia

Estudio..... *El Sabinar* S.E.V. *17*

Fecha *11-2-91* ... Rumbo AB *N: 75° E* ... PERFIL *P.V*

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 17V	Date: 91	
Equipment: ADARO	Sounding: 17V	Azimuth: N-75-E

DATA SET: 18V

CLIENT: ITGE	DATE: 91
LOCATION: SABINAR	SOUNDING: 18V
COUNTY: (AB)	AZIMUTH: N-80-E
PROJECT: SEGURA	EQUIPMENT: ADARO
ELEVATION: 1130.00	
SOUNDING COORDINATES: X: 577560.0000 Y: 4228780.0000	

Schlumberger Configuration

FITTING ERROR: 3.152 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1130.0	
1	60.02		3.76	1126.2	0.0627
2	13.10		51.70	1074.5	3.94
3	3.58		37.58	1036.9	10.49
4	1214.7				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	DATA	PA (ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	53.39	57.35	-7.42
2	3.73	55.20	53.86	2.41
3	5.18	49.20	47.43	3.59
4	7.20	39.02	37.88	2.92
5	10.00	27.60	27.49	0.378
6	13.90	19.00	19.60	-3.17
7	19.30	15.15	15.52	-2.42
8	26.80	13.80	13.92	-0.873
9	51.80	12.90	12.53	2.84
10	72.00	12.00	11.77	1.90
11	100.0	11.40	11.12	2.40
12	139.0	10.90	11.44	-5.01
13	193.0	13.40	13.71	-2.31
14	268.0	18.20	18.27	-0.391
15	373.0	25.60	25.18	1.63
16	518.0	35.70	34.70	2.80

PARAMETER RESOLUTION MATRIX:

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ADARO

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"F" INDICATES FIXED PARAMETER

P 1	1.00							
P 2	0.00	0.99						
P 3	0.00	0.00	0.53					
P 4	0.00	0.00	0.01	0.02				
T 1	0.00	0.00	0.00	0.00	0.99			
T 2	0.00	0.01	0.08	-0.02	-0.01	0.95		
T 3	0.00	0.00	-0.49	-0.01	0.00	0.09	0.49	
	P 1	P 2	P 3	P 4	T 1	T 2	T 3	

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ADARO

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Proyecto:
 Zona: El Sabinar
 Observador: M. Manuel M. Mancharo
 Situación: Sobre plano 1/50000 n.º 859 de Aforatalla

COORDENADAS
 X 577.560
 Y 4.228.780
 Z 1130
(1130)

mV: Adaro 01
 mA: Geotrou 328
 S.E.V. 18

Rumbo AB
N-80°E
 Perfil:
P-V

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER
 SIMETRICO
 MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	P (Ωm)	MN	I (mA)	Esc. Volt.	V (mV)	P (Ωm)	OBSERVACIONES	CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN			
													1 m	10 m	50 m	100 m
1	2.68	1	24	100mV	52	47.2							21.78			
2	3.73		22	4	25	48.8							42.92			
3	5.18		165	4	86	43.5							83.51			
4	7.2		155	4	33	34.5							162.1			
5	10		145	30mV	11.3	24.4							313.4			
6	13.9		135	10mV	3.75	16.8							606.2			
7	19.3		140	4	1.6	13.4							1.169	109.2		
8	26.8		240	4	1.3	12.2	10	240	30mV	15.2	13.8		2.256	217.8		
9	37.3		245	3mV	0.62	11.1		245		7.6	13.3		4.370	429.2		
10	51.8	10	265	10mV	4.1	12.9							8.709	836.1		
11	72		270	4	2.0	12.							16.290	1.621		
12	100		275	3mV	1.0	11.4							11.420	3.134		
13	139		250	10mV	0.45	10.9							60.700	6.062	1.175	
14	193		280	"	0.32	13.4								11.690	2.301	
15	268		310	"	0.25	18.2								22.560	4.474	
16	373		290	4	0.17	25.6								43.700	8.702	4.292
17	518		260		0.11	35.7								84.290	16.820	8.361
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.300														121.400	60.620
21	1.930														234.000	116.900
22	2.680														461.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: 11-2-91

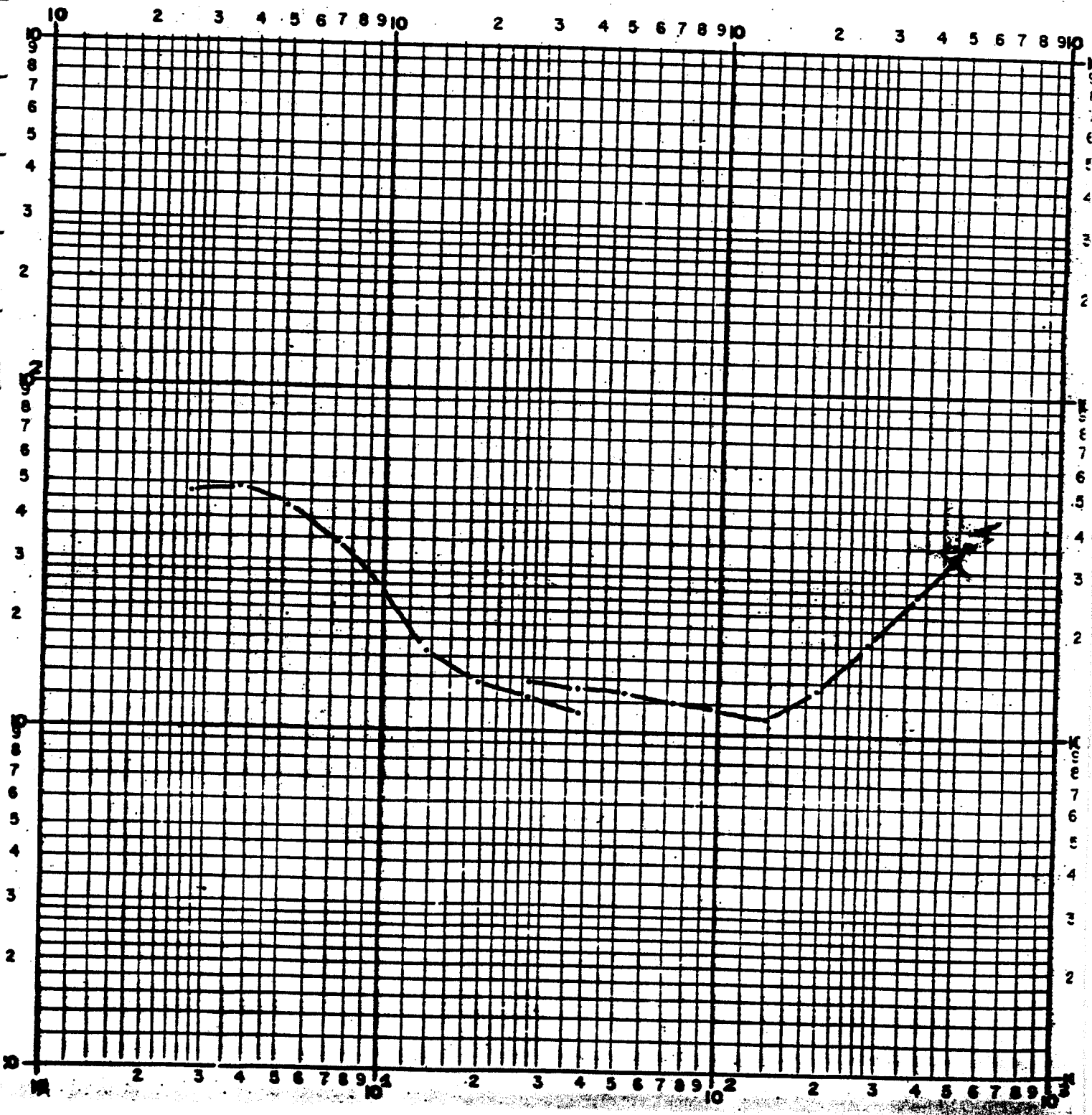


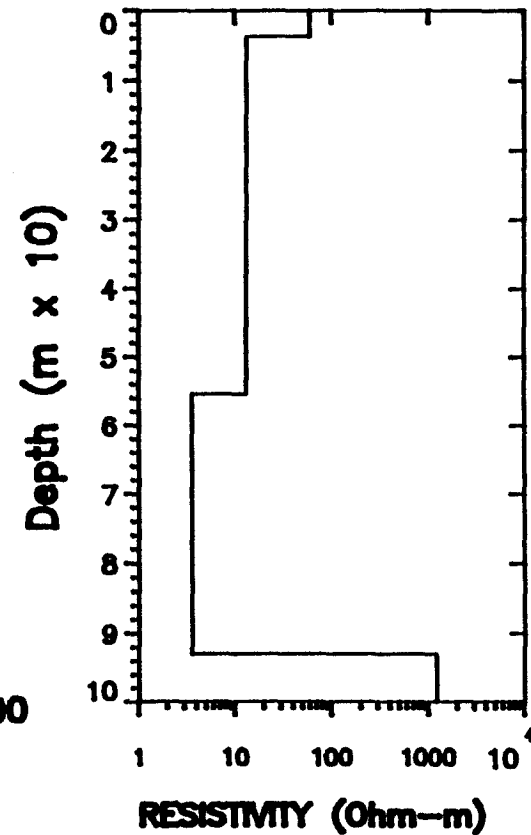
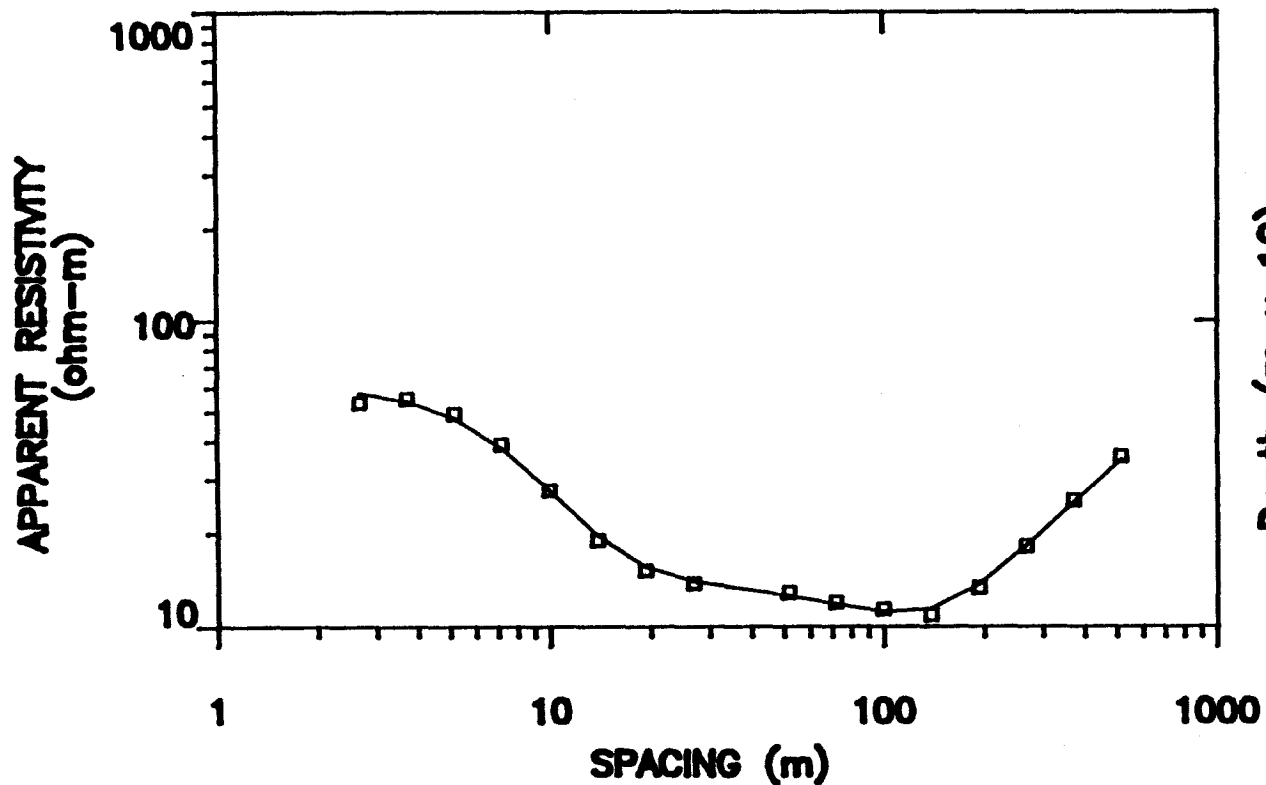
Departamento de Geodesia

Estudio *El Sabinar* S.E.V. *18*

Fecha *11-2-91* Rumbo AB *N-80°E* PERFIL *P-V*

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 18V	Date: 91	
Equipment: ADARO	Sounding: 18V	Azimuth: N-80-E

PARAMETER RESOLUTION MATRIX:

"F" INDICATES FIXED PARAMETER

P 1	0.93									
P 2	-0.02	0.99								
P 3	-0.02	-0.02	0.86							
P 4	0.01	0.01	0.03	0.79						
P 5	0.00	0.00	0.00	-0.01	0.98					
T 1	0.04	0.01	0.01	-0.01	0.00	0.98				
T 2	0.02	0.02	0.08	-0.03	0.00	-0.02	0.94			
T 3	-0.01	-0.01	-0.21	-0.24	-0.01	0.01	0.09	0.16		
T 4	0.01	0.01	0.10	-0.22	-0.07	-0.01	-0.05	0.00	0.33	
	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4	



Proyecto:
 Zona: *El Sabinar*
 Observador: *V. Anve. V. Penchere*
 Situación: *Sabre plaza 1/50.000 n.º 889 de Maratalla*

COORDENADAS
 X *578.225*
 Y *4.227.850*
 Z *1.150*

mV: *Adaro 01*
 mA: *Geotron 328*
 S.E.V. *19*

Rumbo AB
E-W
 Perfil:
P-V

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	OBSERVACIONES	CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN			
													1 m	10 m	50 m	100 m
1	2.88	/	5,5	100μV	77	305							21,78			
2	3.73		6	"	28	200							42,92			
3	5.18		11	30μV	17,5	132,9							83,51			
4	7.2		32	"	21	106,4							182,1			
5	10		49	"	14,2	90,8							313,4			
6	13.9		40	10μV	5,4	81,9							606,2			
7	19.3		53	"	3,0	66,2							1.189	109,2		
8	26.8		108	"	2,4	50,1	10	108	30μV	22	44,4		2.256	217,8		
9	37.3		120	"	1,1	40,1		125	"	10	34,3		4.370	429,2		
10	51.8	10	120	"	4,9	34,1							8.429	836,1		
11	72		122	"	2,7	35,9							16.590	1.621		
12	100		185	"	2,2	37,3							31.420	3.134		
13	139		225	"	1,6	43,1							60.700	6.062	1.175	
14	193		420	3μV	1,7	47,3								11.690	2.301	
15	268		270	"	0,65	54,3								22.560	4.474	
16	373		320	"	0,43	58,7								43.700	8.702	4.292
17	518		430	"	0,31	60,8								84.290	16.820	8.351
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.390														121.400	60.620
21	1.930														234.000	116.900
22	2.680														451.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: *11-2-91*

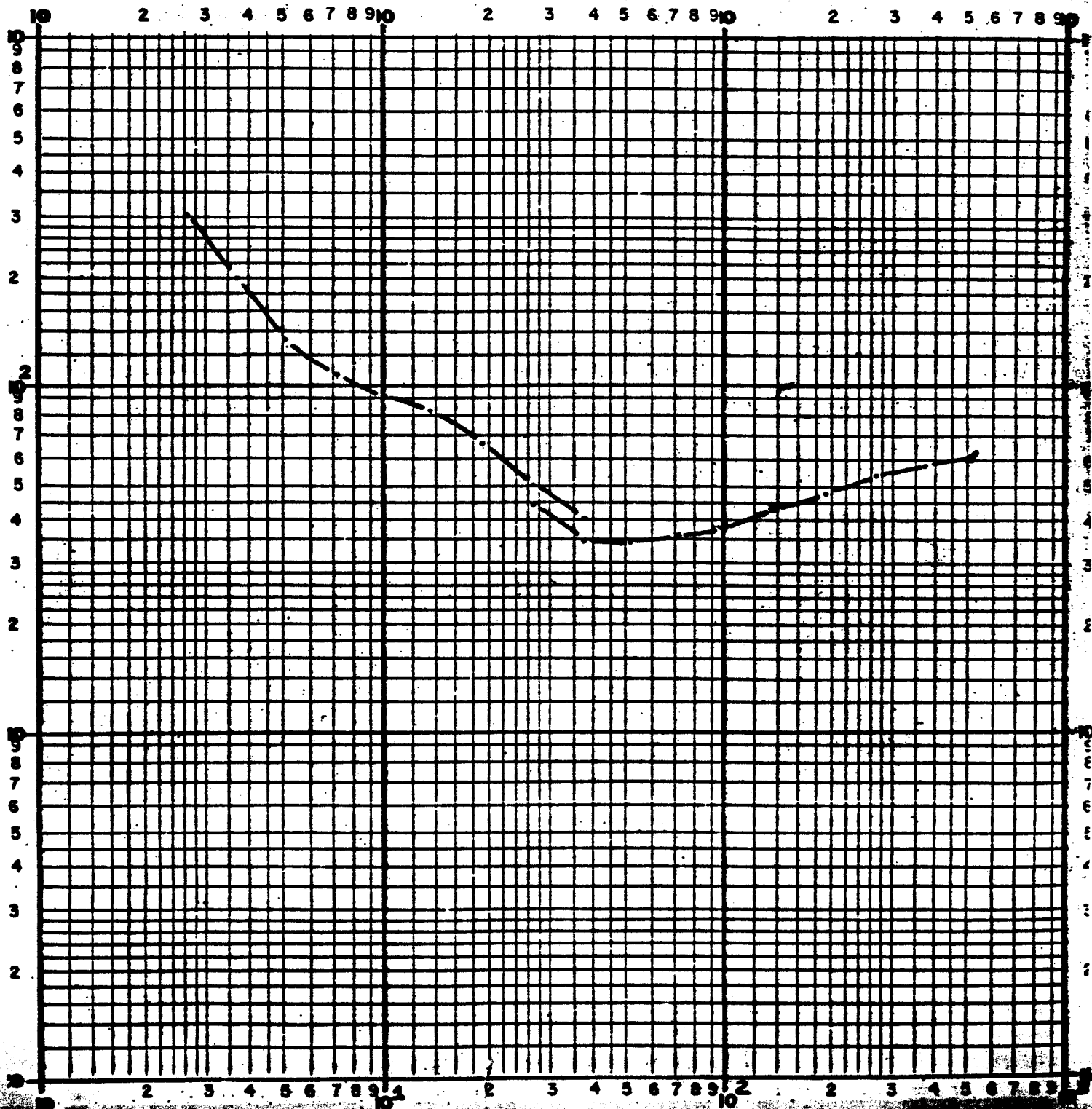


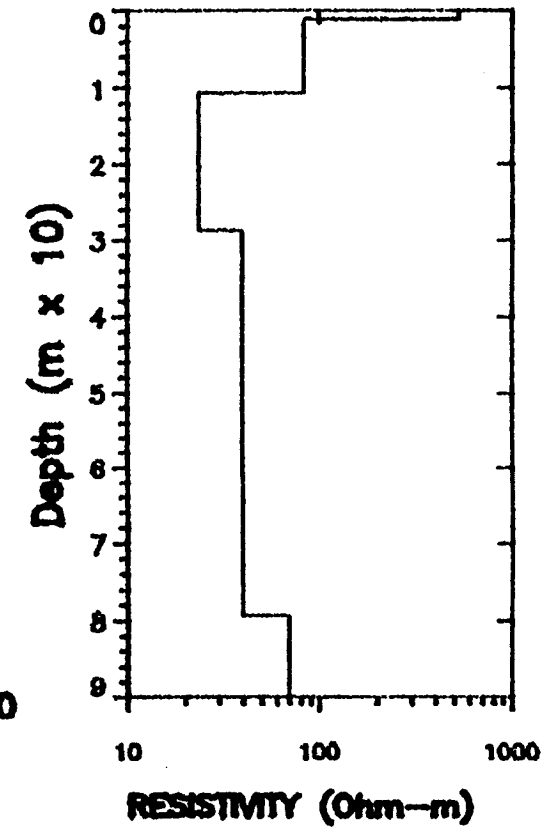
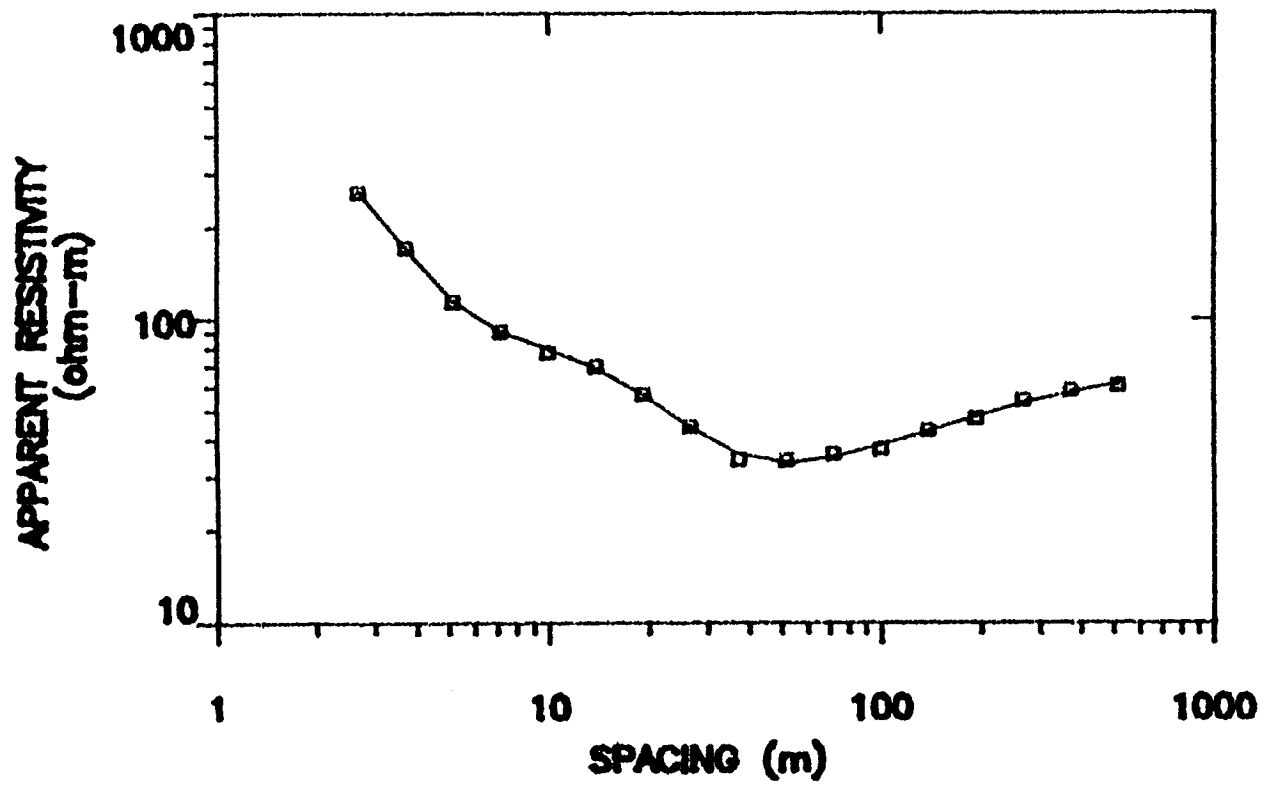
Departamento de Geodesia

Estudio El Sabinar S.E.V. 19

Fecha 11-2-91 Rumbo AB E-W PERFIL P.V

<p>Interpretación</p>	<p>Observaciones:</p>
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Date Set 18V	Date: 91	Azimuth: E-W
Equipment: ADARO	Soundings 18V	

DATA SET: 20V

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1165.00
 SOUNDING COORDINATES: X: 578360.0000 Y: 4226525.0000

DATE: 91
 SOUNDING: 20V
 AZIMUTH: N-76-E
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 2.436 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1165.0	
1	161.0		1.25	1163.7	0.00777
2	204.8		3.15	1160.5	0.0153
3	129.9		1.81	1158.7	0.0139
4	92.70		36.58	1122.1	0.394
5	101.3		8.20	1113.9	0.0809
6	58.50		59.92	1054.0	1.02
7	115.8				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	FA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	178.0	174.1	2.14
2	3.73	171.7	178.2	-3.83
3	5.18	173.3	177.8	-2.54
4	7.20	177.8	169.7	4.54
5	10.00	154.0	153.6	0.216
6	13.90	131.0	133.5	-1.94
7	19.30	114.6	115.7	-0.971
8	26.60	104.1	103.7	0.321
9	37.30	97.70	96.84	0.875
10	51.80	89.00	92.26	-3.67
11	72.00	92.30	87.88	4.78
12	100.0	82.60	83.38	-0.952
13	139.0	78.60	80.55	-2.48
14	193.0	82.80	81.71	1.31
15	268.0	87.00	86.94	0.0615
16	373.0	94.50	94.07	0.445

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
17	518.0	100.4	100.7	-0.394

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.93										
P 2	0.01	0.97									
P 3	0.01	0.03	0.31								
P 4	0.00	-0.01	0.00	0.99							
P 5	-0.01	0.01	-0.03	0.02	0.17						
P 6	0.00	0.00	0.00	0.00	0.13	0.86					
P 7	0.00	0.00	0.00	0.00	0.01	0.00	0.97				
T 1	-0.18	-0.06	0.15	0.00	0.01	0.00	0.00	0.15			
T 2	0.00	0.06	0.39	0.01	-0.03	0.01	-0.01	0.17	0.50		
T 3	0.02	-0.02	0.11	0.01	-0.02	0.01	-0.01	0.03	0.14	0.06	
T 4	-0.01	0.01	-0.04	0.01	0.26	0.12	-0.04	0.01	-0.01	-0.01	
T 5	0.00	0.00	-0.01	0.00	0.07	0.03	-0.01	0.00	-0.01	0.00	
T 6	0.00	0.00	-0.01	0.00	0.07	-0.27	-0.07	0.00	0.01	0.01	
	P 1	P 2	P 3	P 4	P 5	P 6	P 7	T 1	T 2	T 3	

SECOND PART OF RESOLUTION MATRIX:

T 4	0.49		
T 5	0.12	0.03	
T 6	0.23	0.06	0.28
	T 4	T 5	T 6



Proyecto:

Zona: *El Sabinar*

Observador: *J. Arvel / J. Sanchez*

Situación: *Sobre plano 1/50.000 n° 889 de perforación*

COORDENADAS

X *578.360*

Y *4.226.525*

Z *1.165*

mV: *Adaro 01*

mA: *Geotron 328*

S.E.V.

20

Rumbo AB

N-76°E

Perfil:

P-V

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2,68	1	10,5	100mV	86	178						<i>S.E.V. paralelo al arroyo Perena</i>	21,78			
2	3,73		12	"	48	171,7							42,92			
3	5,18		13	"	27	173,4							83,51			
4	7,2		15,5	30mV	17	177,8							162,1			
5	10		17,5	10mV	8,6	154							313,4			
6	13,9		18,5	"	4,0	131							606,2			
7	19,3		50	"	4,9	114,6							1.169	109,2		
8	26,8		65	"	3,0	104,1	10	64	100mV	31	105		2.256	217,8		
9	37,3		85	"	1,9	97,7		85		19,5	98,5		4.370	429,2		
10	51,8	10	76	"	8,1	89							8.429	836,1		
11	72		72	"	4,1	92,3							16.290	1.621		
12	100		110	"	2,9	82,6							31.420	3.134		
13	139		185	"	2,4	78,6							60.700	6.062	1.175	
14	193		240	"	1,7	82,8								11.690	2.301	
15	268		415	"	1,6	87								22.560	4.474	
16	373		370	3mV	0,8	94,5								43.700	8.702	4.292
17	518		420	"	0,5	100,4								84.290	16.820	8.361
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.390														121.400	60.620
21	1.930														234.000	116.900
22	2.680														451.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: *11-2-91*

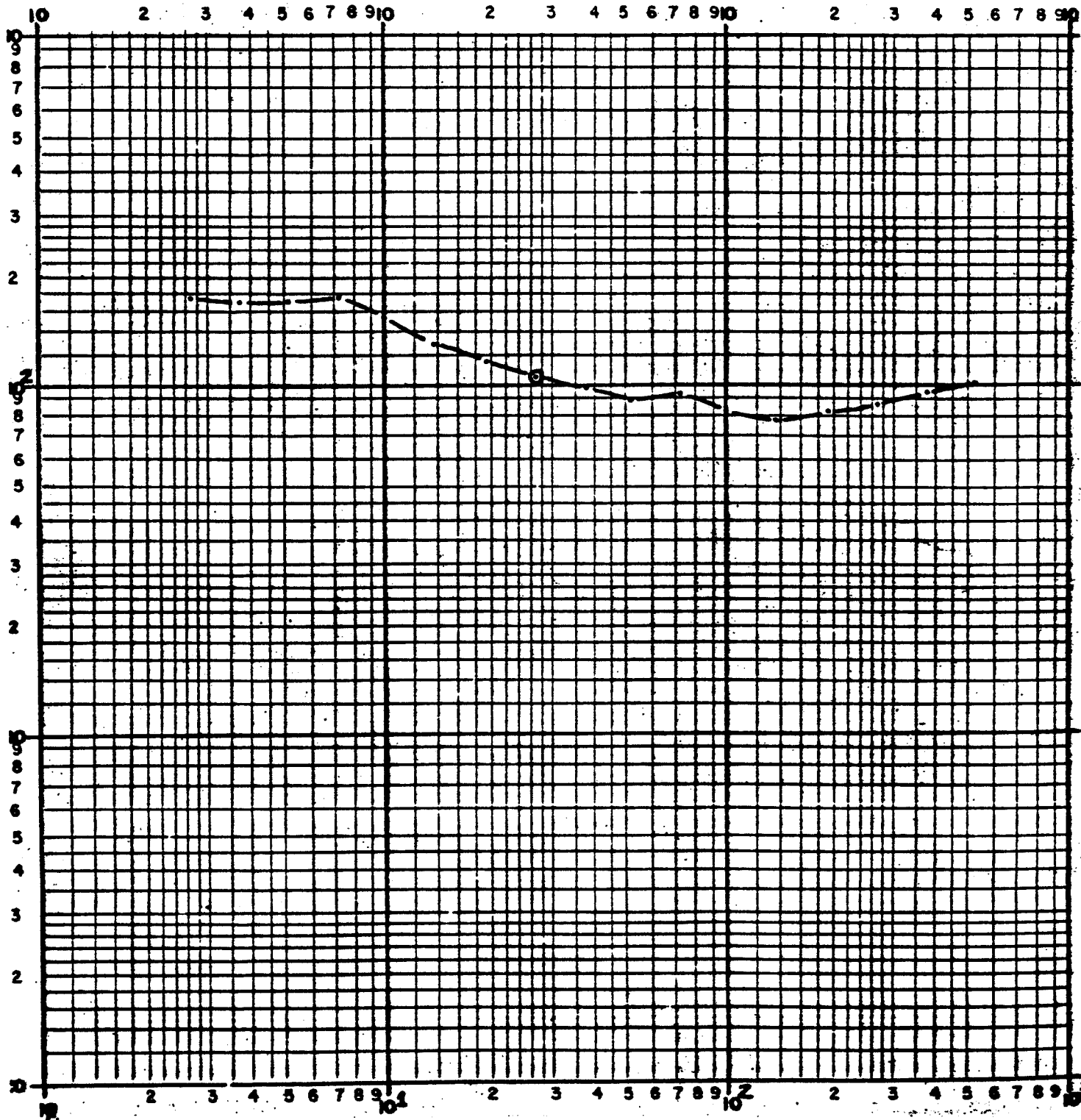


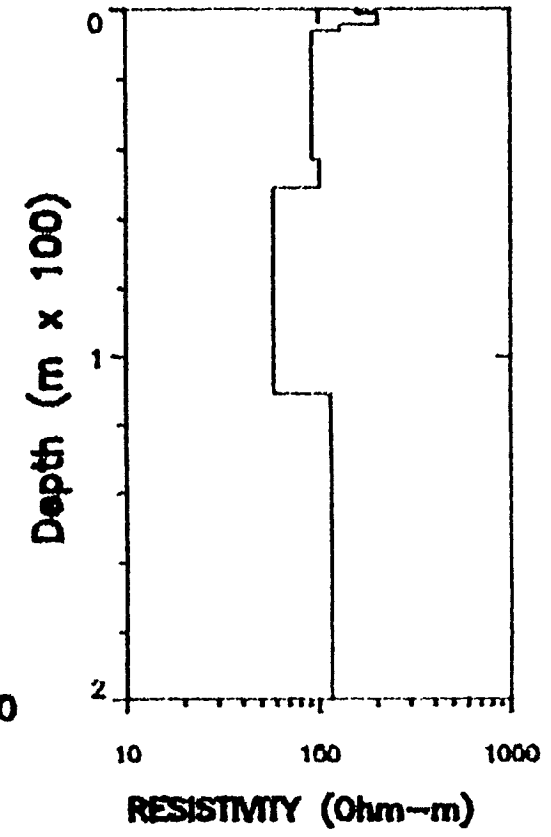
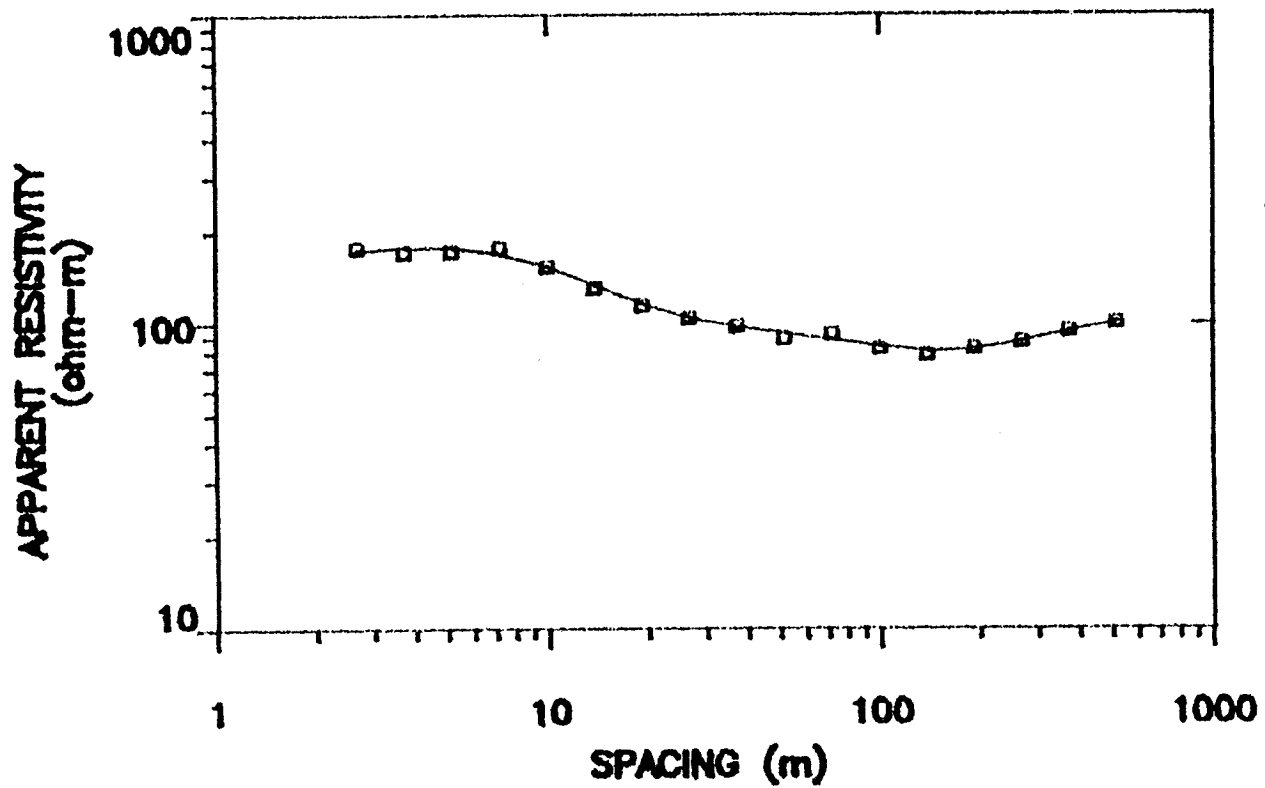
Departamento de Geofísica

Estudio EL Sabinar S.E.V. 20

Fecha 11-2-91 Rumbo AB N-76°E PERFIL P-V

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 20V	Date: 91	Azimuth: N-76-E
Equipment: ADARO	Sounding: 20V	

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	1.00									
P 2	0.00	1.00								
P 3	0.00	0.00	0.99							
P 4	0.00	0.00	0.00	0.98						
P 5	0.00	0.00	0.01	-0.04	0.47					
T 1	0.00	0.00	0.00	0.00	0.00	1.00				
T 2	0.00	0.00	-0.01	0.00	0.01	0.00	0.99			
T 3	0.00	-0.01	-0.04	-0.09	0.00	0.00	-0.04	0.46		
T 4	0.00	0.00	0.01	0.09	0.38	0.00	0.01	0.28	0.55	
	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4	



Proyecto:
 Zona: *El Sabinar*
 Observador: *J. Ángel Sánchez*
 Situación: *Sobre plano 1/50.000 n.º 889 de Moratalla*

COORDENADAS
 X *578.925*
 Y *4.225.850*
 Z *1.180*

mV: *Adaro 01*
 mA: *Geotron 328*
 S.E.V. *21*

Rumbo AB
N-56°-E
 Perfil:
P-V

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER
 SIMETRICO
 MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2.88	/	5.2	nom	70	293							21.78			
2	3.73		5.5	4	36	281							42.92			
3	5.18		8.5	4	22.5	221							83.51			
4	7.2		37	4	36	158							182.1			
5	10		44	30mV	14	99.7							313.4			
6	13.9		44	10mV	4.8	66.1							606.2			
7	19.3		95	4	4.2	51.7							1.169	109.2		
8	26.8		125	4	3.1	56	10	125	nom	34	59.2		2.256	217.8		
9	37.3		130	4	1.9	63.9		130	4	20.5	67.7		4.370	429.2		
10	51.8	10	105	30mV	10	79.5							0.499	836.1		
11	72		125	10mV	6.7	86.9							16.700	1.621		
12	100		140	4	4.5	100.7							31.720	3.134		
13	139		105	4	1.9	109.7							60.700	6.062	1.175	
14	183		130	30mV	1.4	125.9								11.690	2.301	
15	268		140	4	0.77	124.1								22.560	4.474	
16	373		150	1mV	0.44	128.2								43.700	8.702	4.292
17	518		165	4	0.23	117.5								84.290	16.820	8.351
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.390														121.400	60.620
21	1.930														234.000	116.900
22	2.680														451.200	226.600
23	3.730															437.000
24	5.180															842.800
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: *14-2-91*

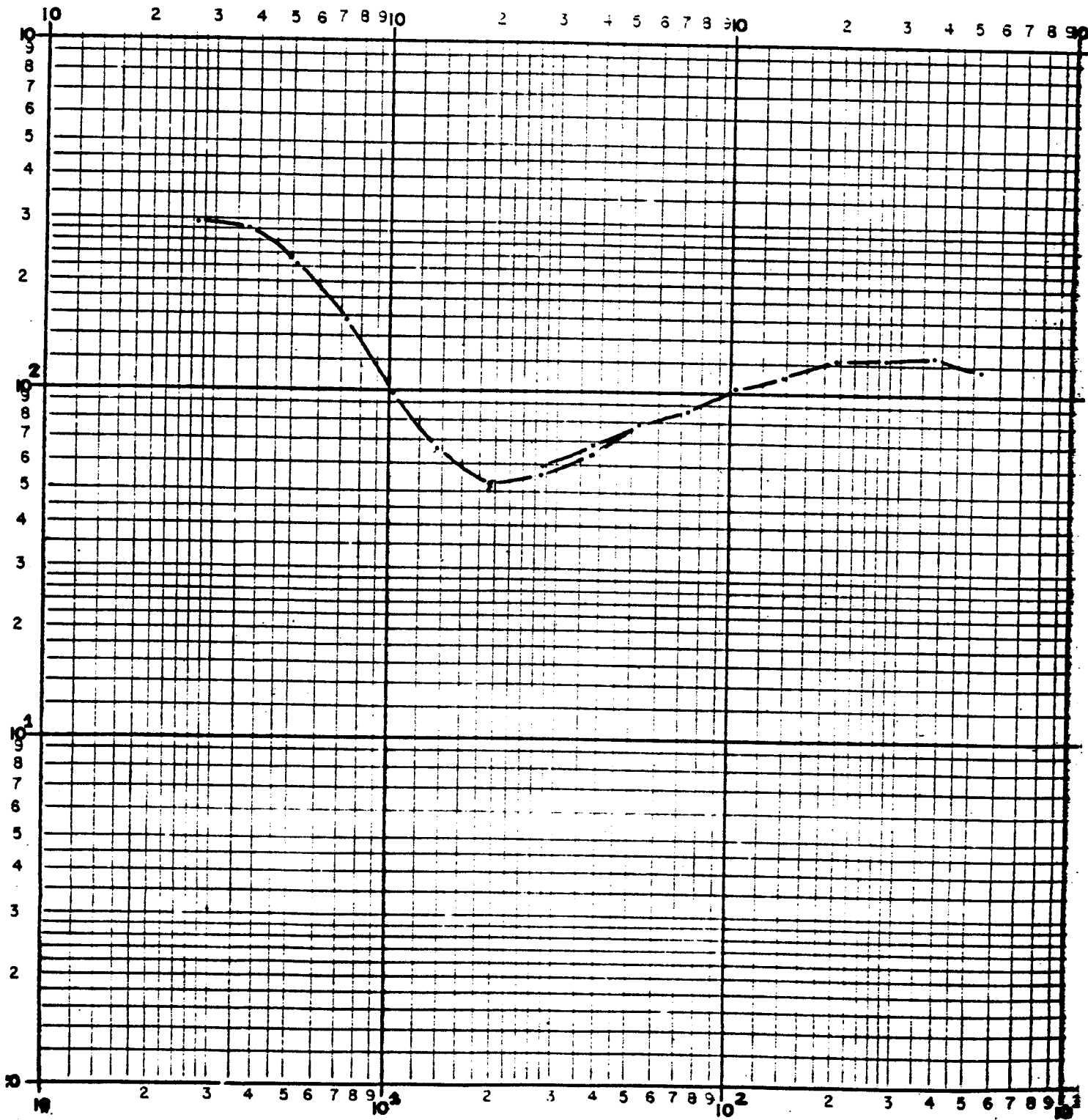


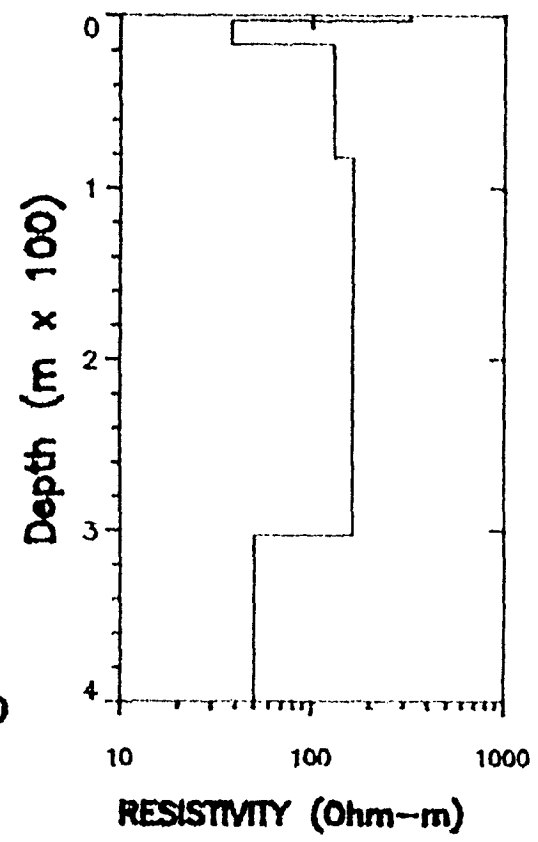
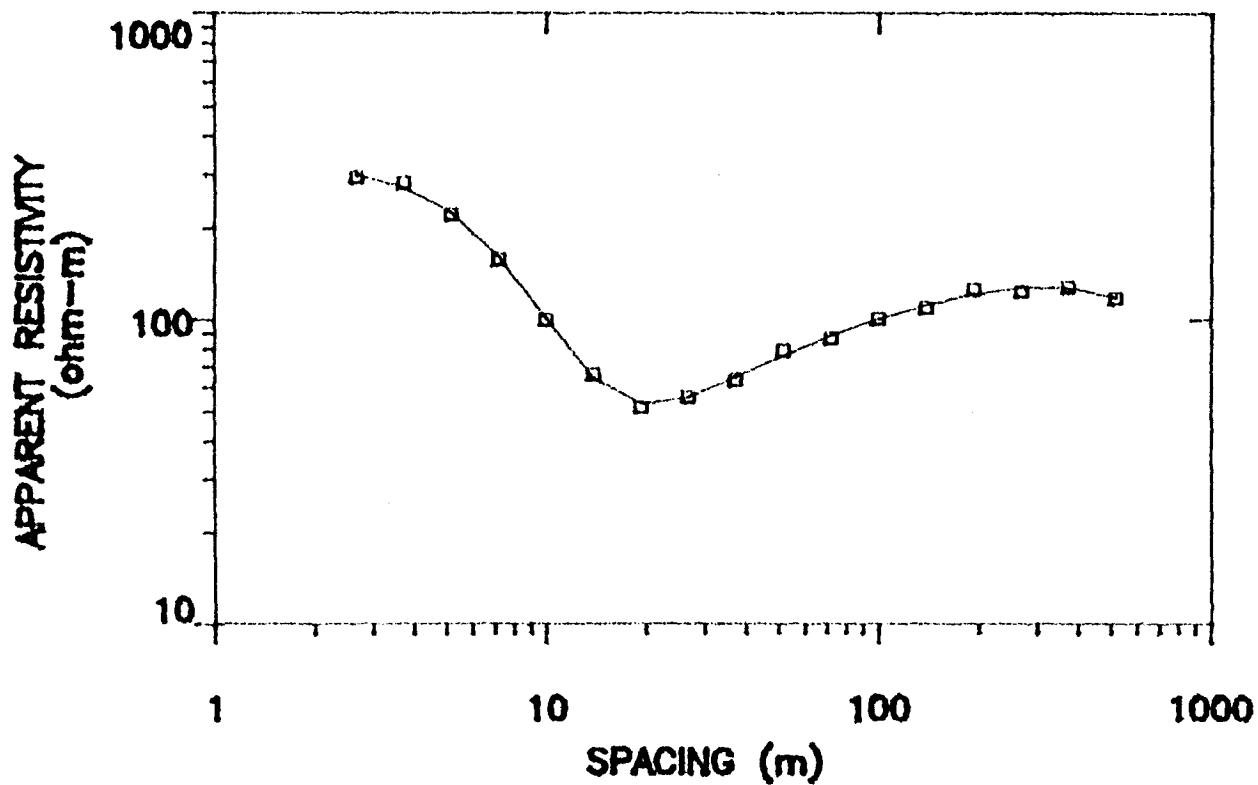
Departamento de Geofísica

Estudio *El Sabinar* S.E.V. *21*

Fecha *14-2-91* ... Rumbo AB *N-56°E* ... PERFIL *P-V*

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 21V	Date: 91	Azimuth: N-56-E
Equipment: ADARO	Sounding: 21V	

DATA SET: 22VI

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1255.00
 SOUNDING COORDINATES: X: 578210.0000 Y: 4232250.0000

DATE: 91
 SOUNDING: 22VI
 AZIMUTH: N-80-E
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 5.542 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1255.0	
1	324.1		1.44	1253.5	0.00447
2	1579.1		13.13	1240.4	0.00832
3	871.8		54.55	1185.8	0.0625
4	154.7		94.48	1091.3	0.610
5	609.8				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	505.6	485.5	3.97
2	3.73	574.6	595.5	-3.63
3	5.18	689.9	727.8	-5.49
4	7.20	868.1	871.3	-0.366
5	10.00	1014.8	1011.2	0.360
6	13.90	1173.8	1129.8	3.74
7	19.30	1276.0	1204.6	5.59
8	26.80	1247.0	1215.9	2.49
9	37.30	1145.0	1156.1	-0.970
10	51.80	931.0	1040.6	-11.77
11	72.00	856.0	892.7	-4.29
12	100.0	795.0	724.1	8.91
13	139.0	576.0	543.9	5.57
14	193.0	373.0	395.6	-6.07
15	268.0	313.0	327.4	-4.62
16	373.0	364.0	337.4	7.28
17	518.0	374.0	384.2	-2.74

* ADARO *

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.54								
P 2	0.04	0.76							
P 3	-0.02	0.09	0.65						
P 4	0.00	-0.02	0.01	0.42					
P 5	0.00	0.00	0.00	0.22	0.25				
T 1	-0.42	-0.11	0.05	-0.01	0.00	0.38			
T 2	-0.03	0.15	0.23	0.01	-0.01	0.04	0.13		
T 3	0.02	-0.08	0.23	0.17	-0.07	-0.02	0.05	0.56	
T 4	0.00	0.00	0.01	-0.31	-0.22	0.00	0.01	-0.01	0.27
	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4



Proyecto:
 Zona: *El Sabinar*
 Observador: *P. S. de la Cruz*
 Situación: *Sobre plaza 1/50.000 n.º 889*

COORDENADAS

X *578.210*
 Y *4.232.250*
 Z *1.255*

mV: *Adaro 01*
 mA: *Geotrou 328*
 S.E.V. *22*

Rumbo AB *N-80°E*
 Perfil: *P-VI*

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2.68	/	6.2	300mV	165	579						<i>Proximo a Pie de monte</i>	21.78			
2	3.73		6	100mV	92	658						<i>Calizaf</i>	42.92			
3	5.18		5.5	"	52	790							83.51			
4	7.2		6.2	"	38	994							182.1			
5	10		5.8	30mV	21.5	1162							313.4			
6	13.9		6	"	13.3	1344							606.2			
7	19.3		6	10mV	7.5	1461							1.189	109.2		
8	26.8		5.5	"	3.5	1435	10	5.5	100mV	31.5	1247		2.256	217.8		
9	37.3		7.5	"	2.25	1311		7.5		20	1145		4.370	429.2		
10	51.8	10	26	30mV	29	931							8.439	836.1		
11	72		36	"	19	856							16.290	1.821		
12	100		67	"	17	795							31.420	3.134		
13	139		61	10mV	5.8	576							60.700	6.062	1.175	
14	193		130	"	4.15	373								11.690	2.301	
16	268		155	"	2.15	313								22.580	4.474	
18	373		180	"	1.5	364								43.700	8.702	4.292
17	518		185	3mV	0.82	374								84.290	16.820	8.361
18	720													162.900	32.530	16.210
19	1.000														82.790	31.340
20	1.300														121.400	60.620
21	1.830														234.000	116.900
22	2.600														451.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.610

OBSERVACIONES:

FECHA: *7-2-91*

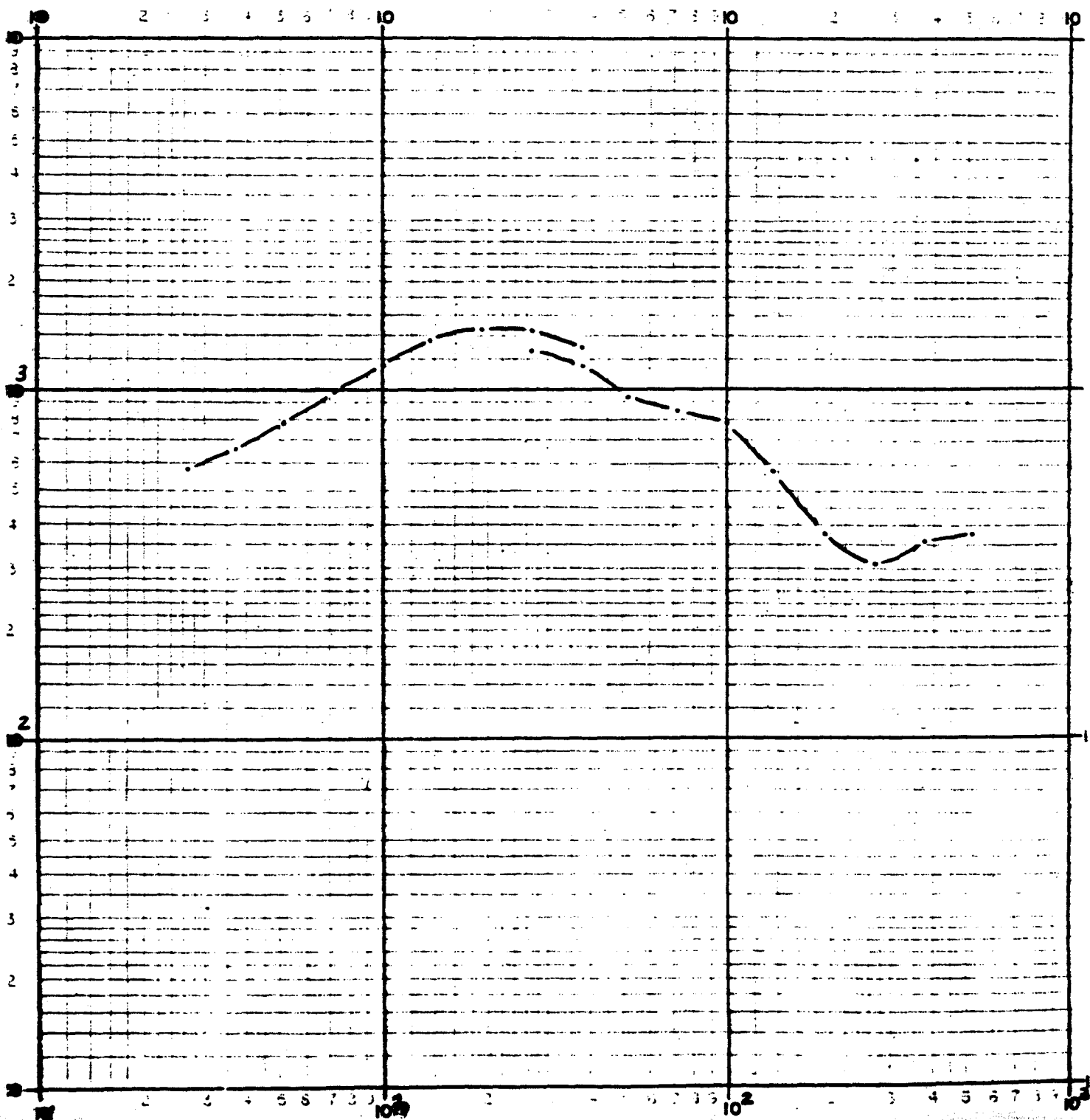


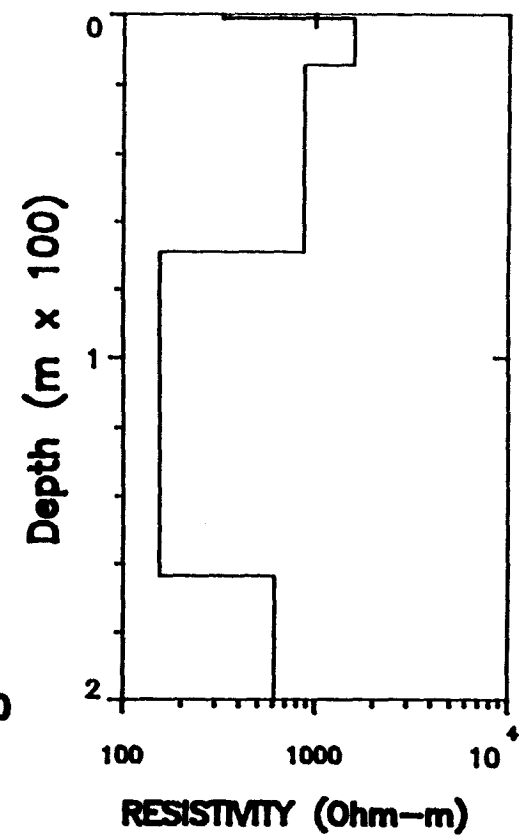
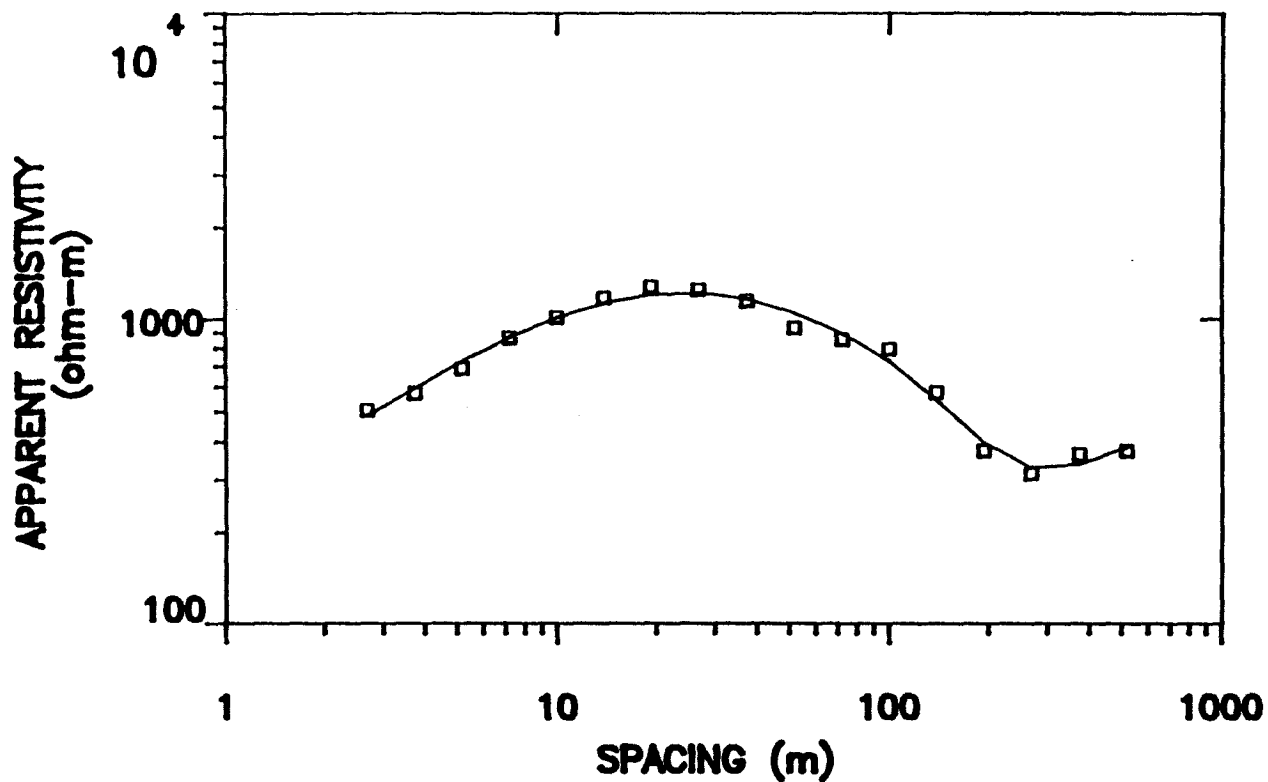
Departamento de Geología

Estudio El Sabinar S.E.V. 22

Fecha 7-2-91 Rumbo AB N-80°E PERFIL P-VI

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 22VI	Date: 91	Azimuth: N-80-E
Equipment: ADARO	Sounding: 22VI	

DATA SET: 23VI

CLIENT: ITGE	DATE: 91
LOCATION: SABINAR	SOUNDING: 23VI
COUNTY: (AB)	AZIMUTH: N-90-E
PROJECT: SEGURA	EQUIPMENT: ADARO
ELEVATION: 1195.00	
SOUNDING COORDINATES: X: 578250.0000 Y: 4231200.0000	

Schlumberger Configuration

FITTING ERROR: 3.569 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1195.0	
1	220.5		0.977	1194.0	0.00443
2	538.3		8.91	1185.1	0.0165
3	1573.2		19.22	1165.8	0.0122
4	42.62		177.7	988.0	4.17
5	990.4				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	FA (ohm-m)		DIFFERENCE (percent)
		DATA	SYNTHETIC	
1	2.68	335.8	335.8	0.0100
2	3.73	373.7	383.3	-2.57
3	5.18	435.1	430.0	1.18
4	7.20	502.7	475.3	5.44
5	10.00	523.1	523.1	0.0127
6	13.90	544.7	581.6	-6.76
7	19.30	641.4	654.7	-2.07
8	26.80	784.0	728.5	7.07
9	37.30	735.7	765.2	-4.00
10	51.80	744.2	719.2	3.36
11	72.00	572.5	571.6	0.144
12	100.0	356.6	363.8	-2.03
13	139.0	179.6	183.3	-2.07
14	193.0	94.40	90.51	4.11
15	268.0	68.20	70.86	-3.90
16	373.0	85.00	84.47	0.621
17	518.0	112.4	111.4	0.855

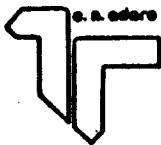
*

ADARO

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PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.70								
P 2	-0.02	0.96							
P 3	0.00	-0.02	0.69						
P 4	0.00	0.01	-0.06	0.89					
P 5	0.00	0.00	0.00	-0.03	0.04				
T 1	-0.41	-0.07	-0.02	0.01	0.00	0.33			
T 2	0.02	-0.05	-0.20	-0.01	0.00	-0.03	0.80		
T 3	0.00	0.03	0.36	0.07	0.00	0.04	0.24	0.59	
T 4	0.00	0.01	-0.06	-0.13	-0.12	0.01	-0.01	0.08	0.83
	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4



Proyecto:
 Zona: El Sabinar
 Observador: Manuel M. Penchero
 Situación: Sobre plano 1/50000 n.º 889

COORDENADAS

X 578.250
 Y 4.231.200
 Z 1.195

mV: Adaro 01
 mA: Geotron 328

S.E.V. 23

Rumbo AB N-80°E

Perfil: P-VI

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	P (Ωm)	MN	I (mA)	Esc. Volt.	V (mV)	P (Ωm)	OBSERVACIONES	CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN					
													1 m	10 m	50 m	100 m		
1	2,68	/	7	300mV	116	361												
2	3,73		7,8	100mV	73	401,7							Sobre torza de fibra sintética en Calizaf.	21,78				
3	5,18		7,5	"	42	467,7								42,92				
4	7,2		7,8	"	26	540,3								83,51				
5	10		6,8	30mV	12,2	562,3								162,1				
6	13,9		8,8	10mV	8,5	585,5								313,4				
7	19,3		7,8	"	4,6	689,4								606,2				
8	26,8		10		3,7	834,7	10	10		36	784			1.169	109,2			
9	37,3		10,5		1,9	790,8		10,5		18	735,8			2.256	217,8			
10	51,8	/0	4,6	10mV	41	744,3								4.370	429,2			
11	72		4,7	30mV	16,6	572,5								8142	836,1			
12	100		5,8	10mV	6,6	356,6								16.790	1.621			
13	139		8,1	"	2,4	179,6								31.420	3.134			
14	193		2,60	"	2,1	94,4								60.700	6.082	1.175		
15	268		2,15	3mV	0,65	68,2												
16	373		1,85	1mV	0,36	85												
17	518		2,25	"	0,30	112,4												
18	720																	
19	1.000																	
20	1.300																	
21	1.930																	
22	2.680																	
23	3.730																	
24	5.180																	
25	7.200																	
26	10.000																	

OBSERVACIONES:

FECHA: 7-2-91

3.141.510



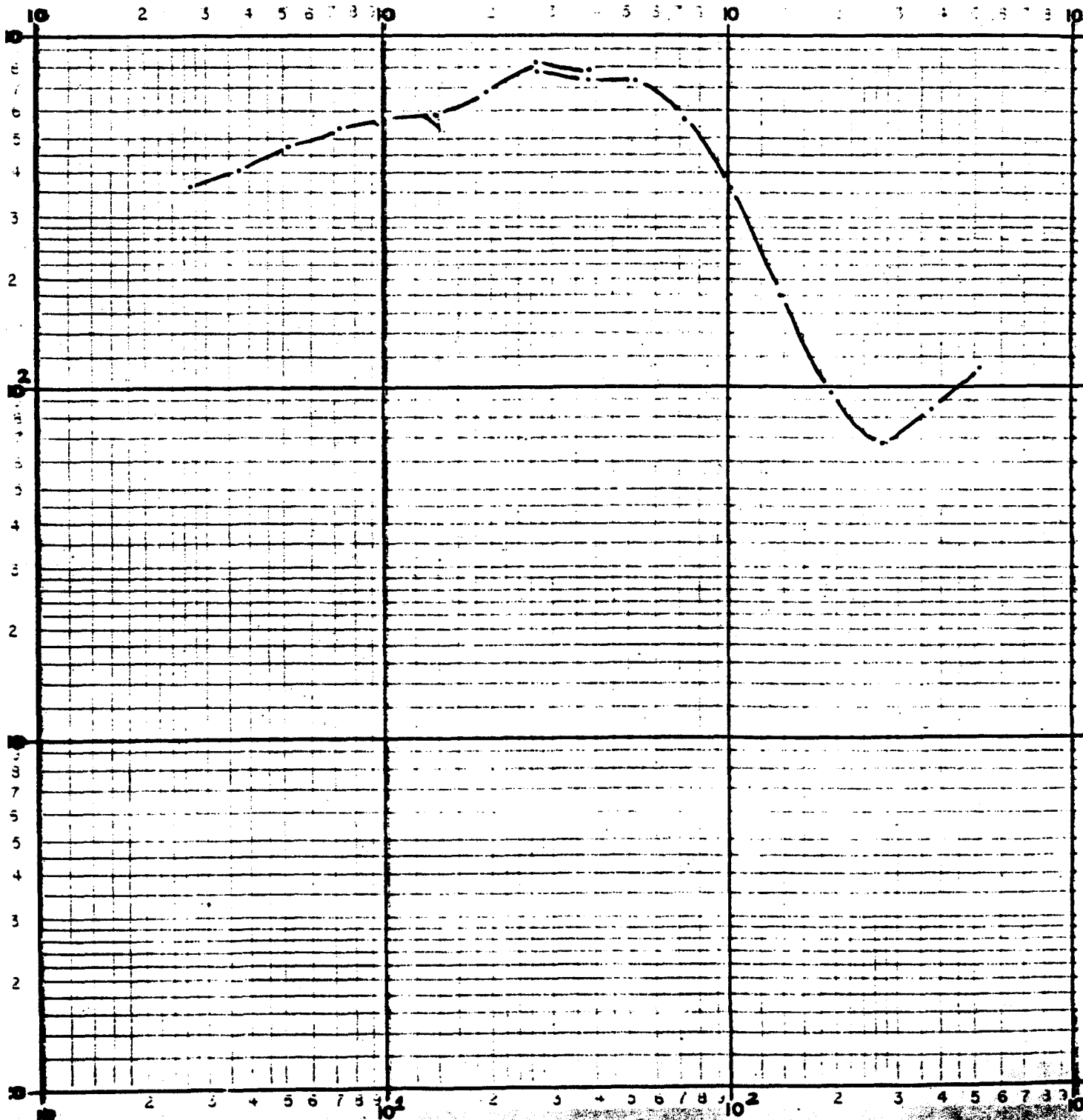
Departamento de Geodesia

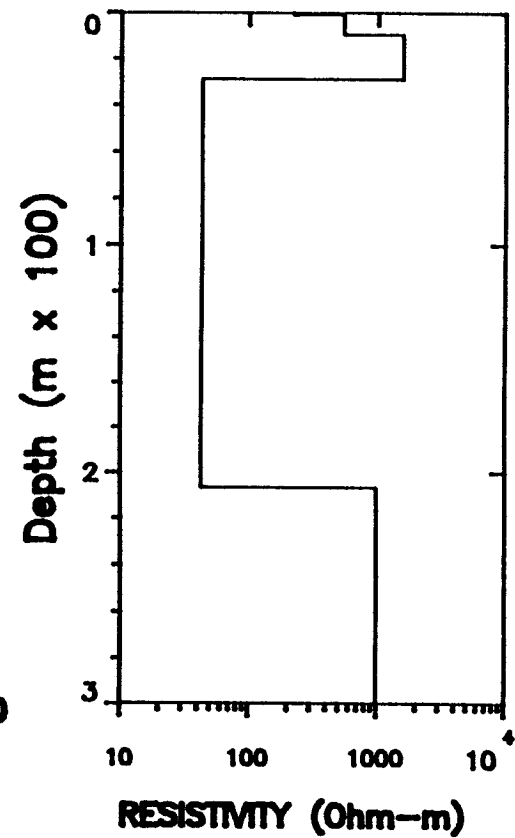
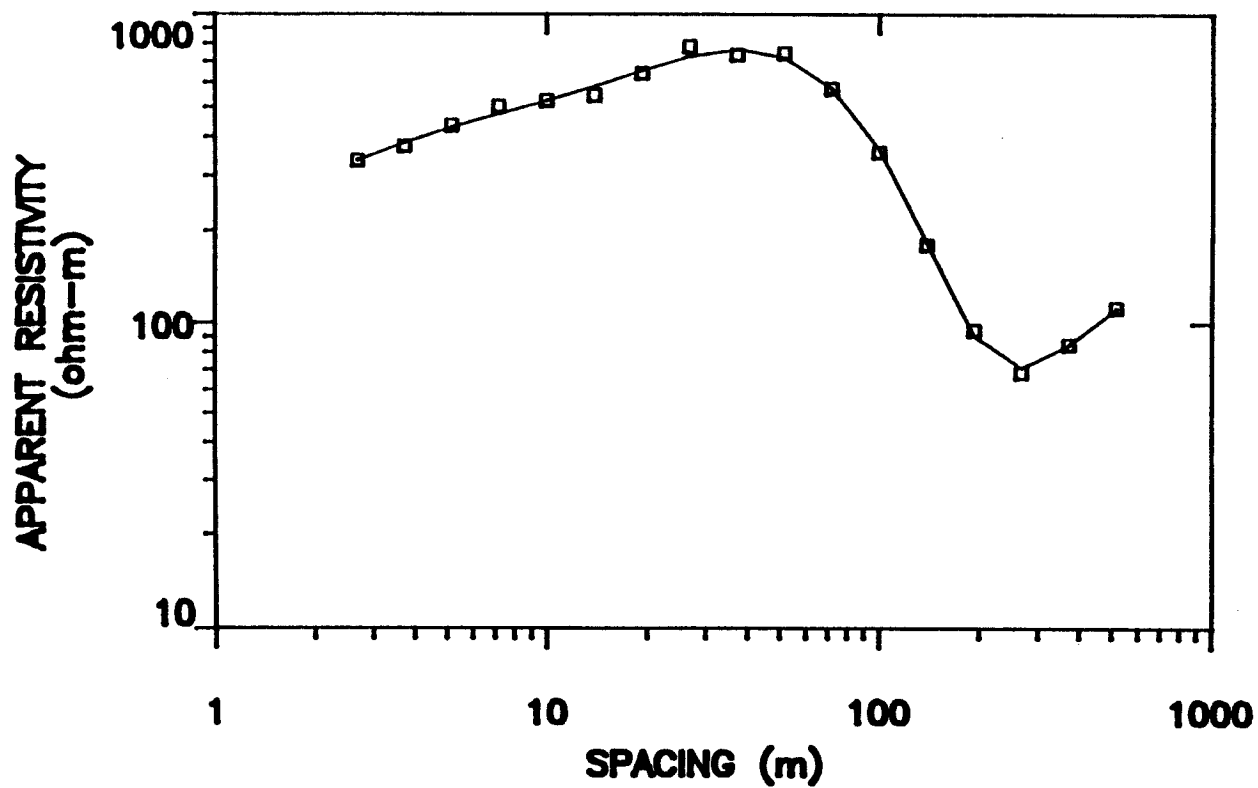
Estudio..... *El Sabinar*..... S.E.V. *23*.....

Fecha *7-2-91*... Rumbo AB *N-80°E*... PERFIL *P-VI*.....

Interpretación

Observaciones:





for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 23VI	Date: 91	Azimuth: N-80-E
Equipment: ADARO	Sounding: 23VI	

DATA SET: 24VI

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1170.00
 SOUNDING COORDINATES: X: 578780.0000 Y: 4230150.0000

DATE: 91
 SOUNDING: 24VI
 AZIMUTH: N-85-E
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 3.107 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1170.0	
1	371.4		0.721	1169.2	0.00194
2	77.36		1.57	1167.7	0.0203
3	281.1		2.43	1165.2	0.00868
4	29.09		21.35	1143.9	0.734
5	11.35		107.8	1036.0	9.50
6	72.79		39.89	996.1	0.548
7	2434.1				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	FA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	133.0	132.9	0.0559
2	3.73	121.0	120.7	0.198
3	5.18	121.0	123.5	-2.07
4	7.20	125.0	123.1	1.49
5	10.00	111.0	109.9	0.940
6	13.90	86.60	85.07	1.76
7	19.30	55.10	58.13	-5.49
8	26.80	39.90	38.53	3.42
9	37.30	28.20	27.59	2.14
10	51.80	20.30	21.30	-4.92
11	72.00	17.30	17.12	1.02
12	100.0	15.70	15.17	3.31
13	139.0	15.60	15.71	-0.757
14	193.0	17.90	18.82	-5.16
15	268.0	25.20	24.78	1.62
16	373.0	32.90	34.02	-3.42

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ADARO

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No.	Spacing (m)	FA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
17	518.0	49.50	46.96	5.11

PARAMETER RESOLUTION MATRIX:

"F" INDICATES FIXED PARAMETER

P 1	0.19										
P 2	0.00	0.68									
P 3	0.02	0.07	0.56								
P 4	-0.02	0.03	-0.02	0.94							
P 5	-0.01	0.00	0.00	-0.03	0.95						
P 6	0.00	0.00	0.00	0.00	0.00	0.00					
P 7	0.00	0.00	0.00	0.00	-0.01	0.00	0.01				
T 1	0.24	0.15	-0.05	0.00	0.00	0.00	0.00	0.84			
T 2	-0.04	-0.39	-0.05	0.05	0.01	0.00	0.00	0.18	0.45		
T 3	-0.03	-0.02	0.47	0.04	0.01	0.00	0.00	0.03	0.12	0.47	
T 4	0.02	-0.02	0.00	0.08	0.08	-0.01	0.01	-0.01	-0.04	-0.03	
T 5	-0.01	0.01	0.00	-0.04	-0.06	-0.05	-0.02	0.00	0.02	0.02	
T 6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	P 1	P 2	P 3	P 4	P 5	P 6	P 7	T 1	T 2	T 3	

SECOND PART OF RESOLUTION MATRIX:

T 4	0.84		
T 5	0.10	0.91	
T 6	0.00	0.06	0.00
	T 4	T 5	T 6



Proyecto:
 Zona: El Sabinar
 Observador: Manuel Menchero
 Situación: Sobre plano 1/50.000 n° 889

COORDENADAS

X 578.780
 Y 4.230.150
 Z 1.170

mV: Adaro 01
 mA: Geotron 328

Rumbo AB
N-85°E

S.E.V.

24

Perfil:
P-VI

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	P (Ωm)	MN	I (mA)	Esc. Volt.	V (mV)	P (Ωm)	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2.68	1	8	100mV	49	133							21.78			
2	3.73		13.8	"	39	121							42.92			
3	5.18		14.5	"	21	121							83.51			
4	7.2		66	"	51	125							182.1			
5	10		55	30mV	19.5	111							313.4			
6	13.9		70	"	30	86.6							606.2			
7	19.3		70	10mV	3.3	55.1							1.189	109.2		
8	26.8		130	"	2.3	39.9	10	130		24	40.2		2.256	217.8		
9	37.3	10	105	"	6.9	28.2							4.370	429.2		
10	51.8		142	"	3.45	20.3							8.479	836.1		
11	72		150	"	1.6	17.3							16.290	1.821		
12	100		200	3mV	1.0	15.7							31.420	3.134		
13	130		350	"	0.9	15.6							60.100	6.062	1.176	
14	193		320	1mV	0.49	17.9								11.690	2.301	
15	268		260	"	0.29	25.2								22.580	4.474	
16	373		305	"	0.23	32.9								43.700	8.702	4.292
17	518		460	"	0.27	49.5								84.290	16.820	8.361
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.300														121.400	60.620
21	1.930														234.000	116.900
22	2.680														461.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: 7-2-91

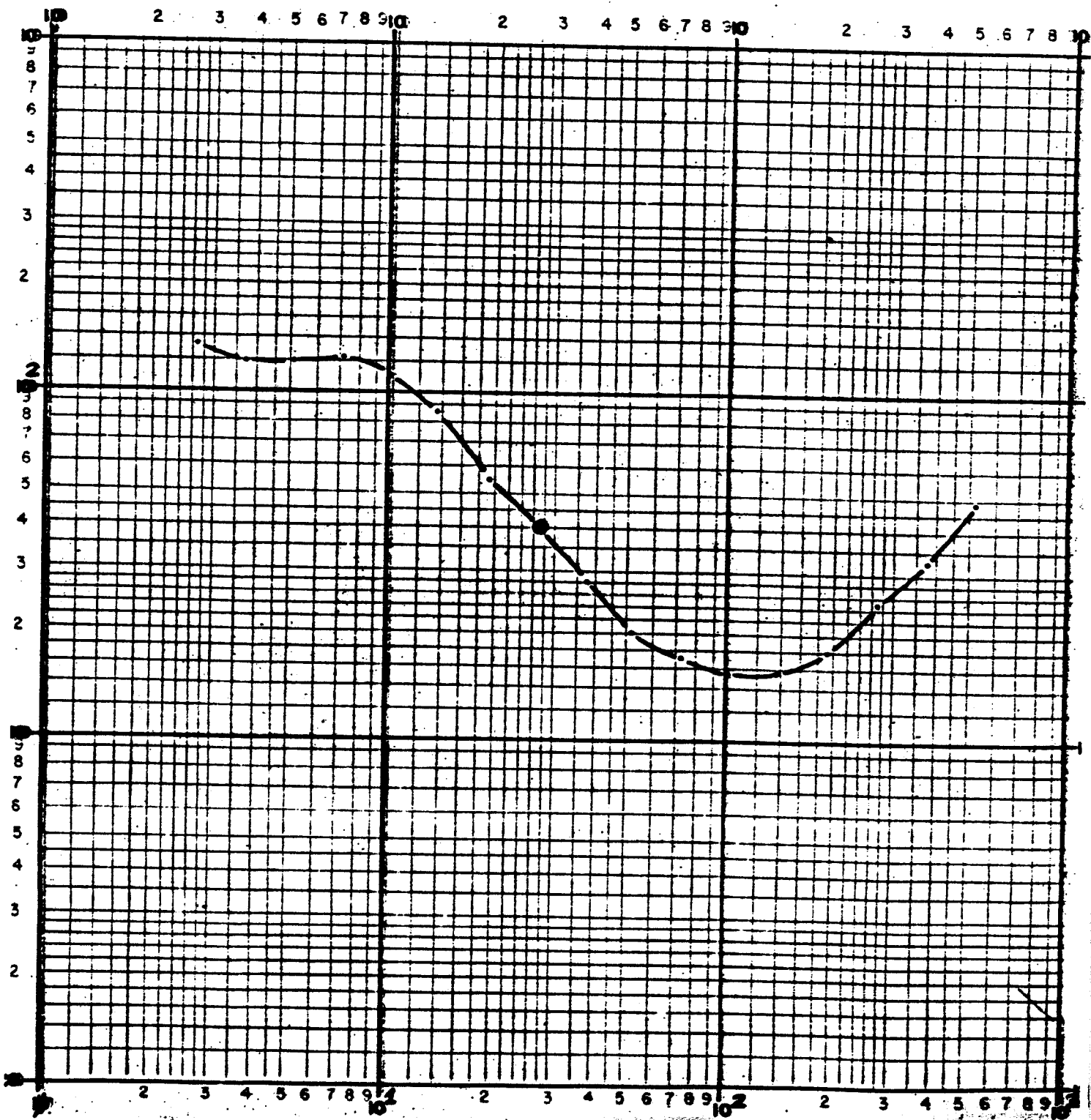


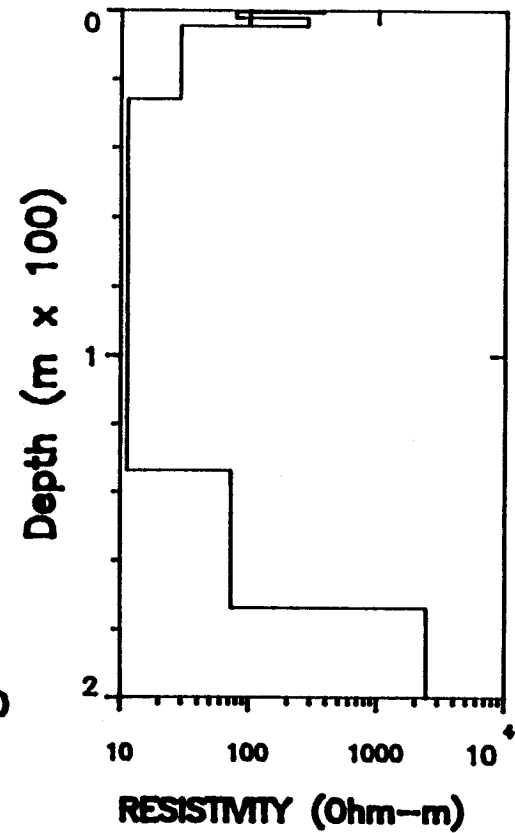
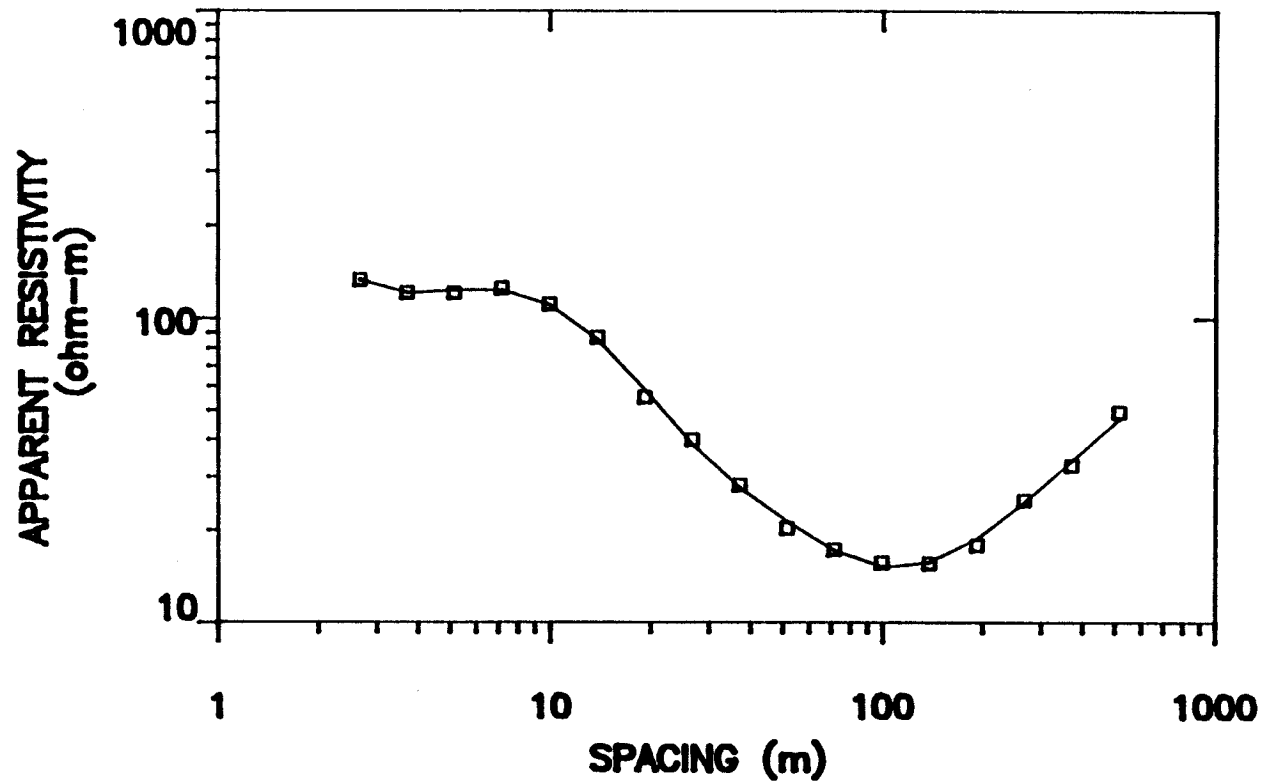
Departamento de Geofísica

Estudio *El Sabinar* S.E.V. 24

Fecha *7-2-21* Rumbo AB *N-85°E* PERFIL *P-VI*

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 24VI	Date: 91	
Equipment: ADARO	Sounding: 24VI	Azimuth: N-85-E

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.84									
P 2	-0.03	0.99								
P 3	-0.03	-0.02	0.84							
P 4	0.00	0.00	-0.05	0.89						
P 5	0.00	0.00	0.00	0.00	0.88					
T 1	0.10	0.03	0.03	0.00	0.00	0.92				
T 2	0.01	0.01	0.05	0.01	0.00	-0.02	0.98			
T 3	-0.04	-0.03	-0.24	-0.14	0.01	0.04	0.07	0.58		
T 4	0.00	0.00	-0.01	-0.16	-0.22	0.00	0.00	-0.10	0.23	
	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4	

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ADARO

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Proyecto:
 Zona: El Sakinar
 Observador: J. Manuel J. Sanchez
 Situación: Sobre plaza 1/50000 n.º 889 de Infrotalla

COORDENADAS

X 578.900
 Y 4.229.150
 Z 1130

mV: Adaro 01
 mA: Geotou 328
 S.E.V. 25

Rumbo AB

N-135°E

Perfil:

P-VI

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	$\rho(\Omega m)$	MN	I (mA)	Esc. Volt.	V (mV)	$\rho(\Omega m)$	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2,68	1	8	100mV	79	215						Se cambia de direccion en el s.e.v	21,78			
2	3,73		6,5	"	25	165						por tener hacia el Este. Alforanque de Calizay				
3	5,18		32	"	48	125							83,51			
4	7,2		42	30mV	27,5	106							182,1			
5	10		38	"	11,6	95,7							313,4			
6	13,9		37	10mV	4,3	70,5							608,2			
7	19,3		78	"	3,15	47,2							1.169	109,2		
8	26,8		135	30mV	1,7	28,4	10	135	30mV	21	33,9		2.256	217,8		
9	37,3		185	"	0,9	21,3		185		10,8	25,1		4.370	428,2		
10	51,8	10	125	10mV	3,8	25,4							8.488	836,1		
11	72		195	"	3,5	29,1							16.780	1.621		
12	100		215	"	2,5	36,4							31.420	3.134		
13	138		270	3mV	1,9	40,4							60.100	6.062	1.175	
14	193		235	"	0,92	45,8								11.690	2.301	
15	268		330	1mV	0,77	52,6								22.580	4.474	
16	373		320	"	0,45	61,5								43.700	8.702	4.292
17	518		420	"	0,34	68,3								84.290	16.820	8.351
18	720													142.900	32.530	16.210
19	1.000														62.790	31.340
20	1.380														121.400	60.620
21	1.930														234.000	116.900
22	2.680														451.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.528.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: 8-2-91

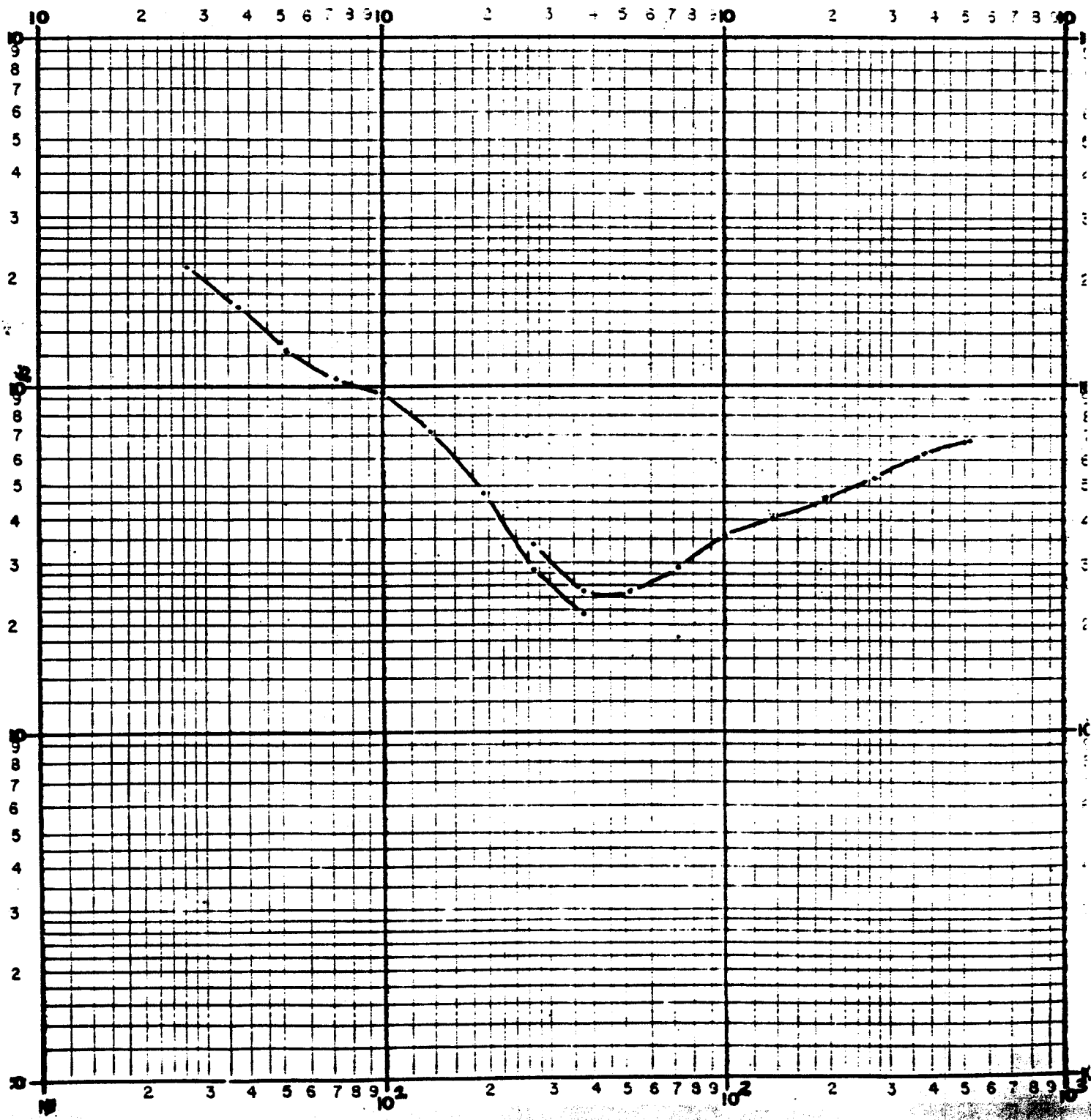


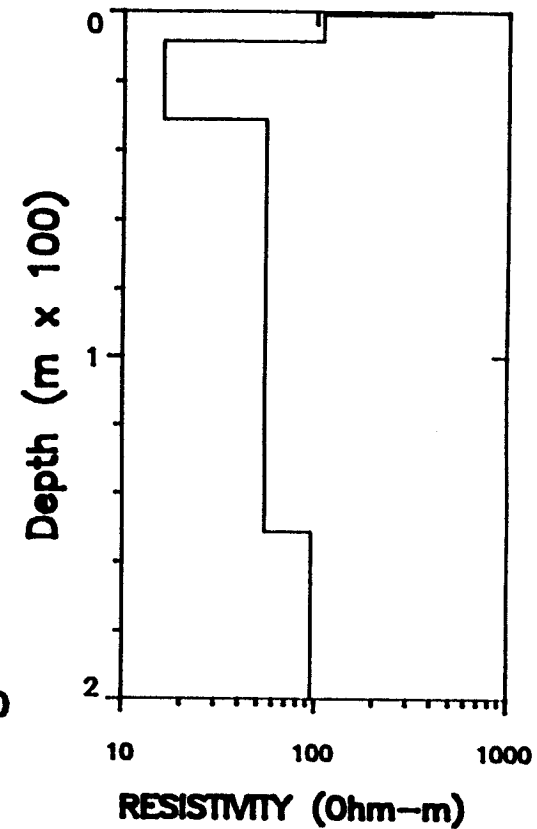
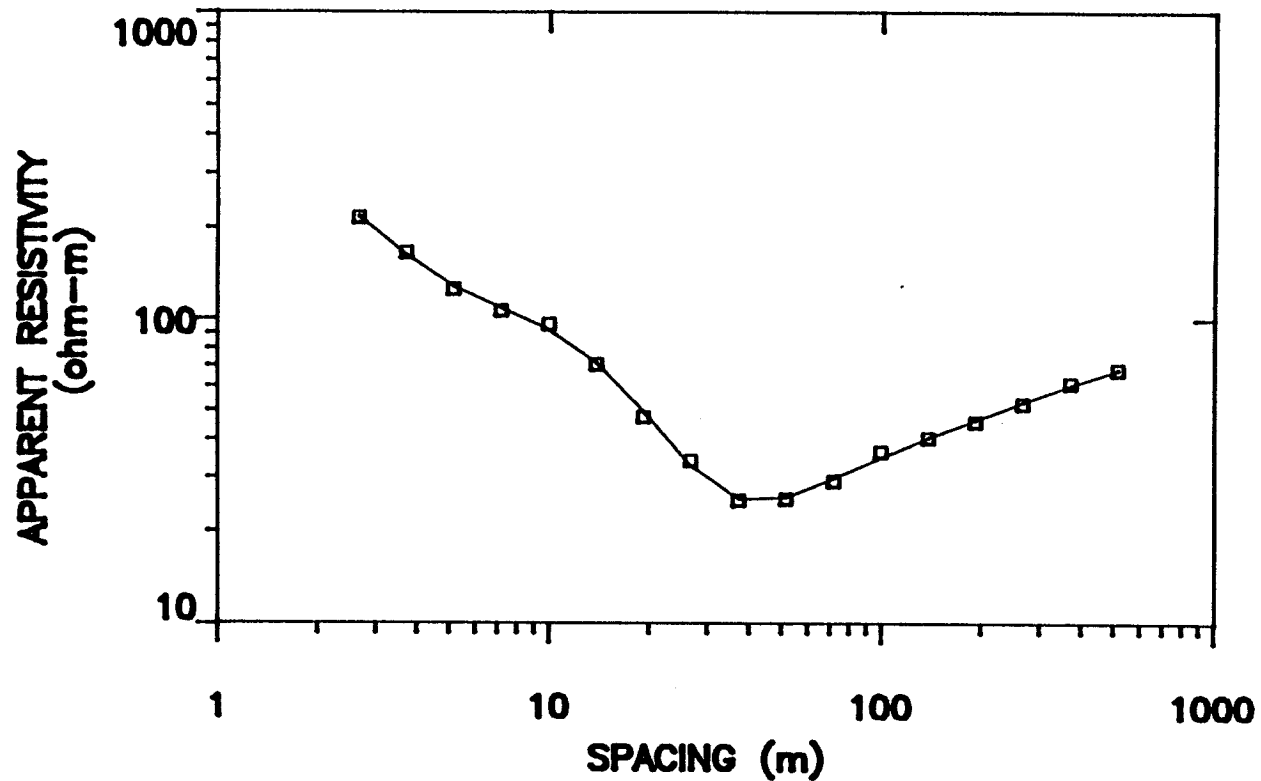
Departamento de Geofísica

Estudio El Sabinar S.E.V. 25

Fecha 8-2-91 Rumbo AB N-135°-E PERFIL P-VI

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		
Data Set: 25VI	Date: 91	SABINAR (AB)
Equipment: ADARO	Sounding: 25VI	
		Azimuth: N-135-E

DATA SET: 26VI

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1125.00
 SOUNDING COORDINATES: X: 579425.0000 Y: 4227600.0000

DATE: 91
 SOUNDING: 26VI
 AZIMUTH: N-126-E
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 2.738 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1125.0	
1	261.5		0.990	1124.0	0.00379
2	144.6		2.91	1121.0	0.0201
3	247.1		3.40	1117.6	0.0137
4	67.08		35.48	1082.2	0.528
5	50.16		79.14	1003.0	1.57
6	144.6				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	191.7	192.2	-0.279
2	3.73	177.0	174.8	1.18
3	5.18	162.6	166.2	-2.24
4	7.20	165.0	162.9	1.26
5	10.00	162.0	156.9	3.12
6	13.90	132.0	141.6	-7.27
7	19.30	124.7	118.2	5.18
8	26.80	94.00	95.07	-1.14
9	37.30	78.90	78.94	-0.0599
10	51.80	68.20	70.14	-2.85
11	72.00	67.50	65.25	3.33
12	100.0	62.70	62.76	-0.0994
13	139.0	62.40	63.55	-1.85
14	193.0	68.80	68.90	-0.159
15	268.0	78.80	78.60	0.248
16	373.0	92.50	90.89	1.73
17	518.0	102.5	103.4	-0.964

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ADARO

*

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.77											
P 2	-0.03	0.93										
P 3	0.03	0.06	0.70									
P 4	-0.01	0.01	-0.02	0.96								
P 5	0.00	0.00	0.01	0.00	0.94							
P 6	0.00	0.00	0.00	0.01	-0.03	0.93						
T 1	0.29	0.13	-0.11	0.00	0.00	0.00	0.48					
T 2	-0.07	-0.15	-0.04	0.03	-0.01	-0.01	0.27	0.46				
T 3	-0.04	-0.01	0.39	0.03	-0.01	-0.01	0.06	0.23	0.38			
T 4	0.02	-0.01	0.01	0.06	0.12	0.00	-0.01	-0.07	-0.05	0.38		
T 5	0.00	0.00	0.00	0.00	-0.15	-0.11	0.00	0.00	0.00	0.00	0.34	
	P 1	P 2	P 3	P 4	P 5	P 6	T 1	T 2	T 3	T 4		

SECOND PART OF RESOLUTION MATRIX:

T 5	0.56											
	T 5											



Proyecto:

Zona: *El Sabinar*

Observador: *M. Rafael M. Mendez*

Situación: *Sobre plano 1/50.000 n.º 889 de S. Rafaela*

COORDENADAS

X *579.425*

Y *4.227.600*

Z *1.125*

m V: *Adaro 01*
m A: *Geotron 328*

S.E.V. *26*

Rumbo AB

N-126°E

Perfil:

P-VI

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2.68	1	10	norm	88	191.7							21.78			
2	3.73		8	"	33	177							42.92			
3	6.18		9.5	30mm	18.5	162.6							83.51			
4	7.2		10.8	"	11	165							182.1			
5	10		8.5	10mm	4.4	162							313.4			
6	13.9		11	"	2.4	132							606.2			
7	19.3		60	"	6.4	134.7							1.169	109.2		
8	26.8		54	"	2.25	94	10	54		23	92.3		2.258	217.8		
9	37.3		72	"	1.3	78.9		72		12.4	73.9		4.370	429.2		
10	51.8	10	60	"	4.9	68.2							8.429	836.1		
11	72		72	"	3.0	67.5							16.200	1.621		
12	100		105	"	2.1	62.7							31.620	3.134		
13	139		340	"	3.5	62.4							60.700	6.062	1.175	
14	193		340	"	2.0	68.8								11.690	2.301	
15	268		390	3mm	1.36	78.7								22.560	4.474	
16	373		425	"	0.9	92.5								43.700	8.702	4.292
17	518		370	"	0.45	102.5								84.290	16.820	8.361
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.390														121.400	60.620
21	1.930														234.000	116.900
22	2.680														461.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: *11-2-91*

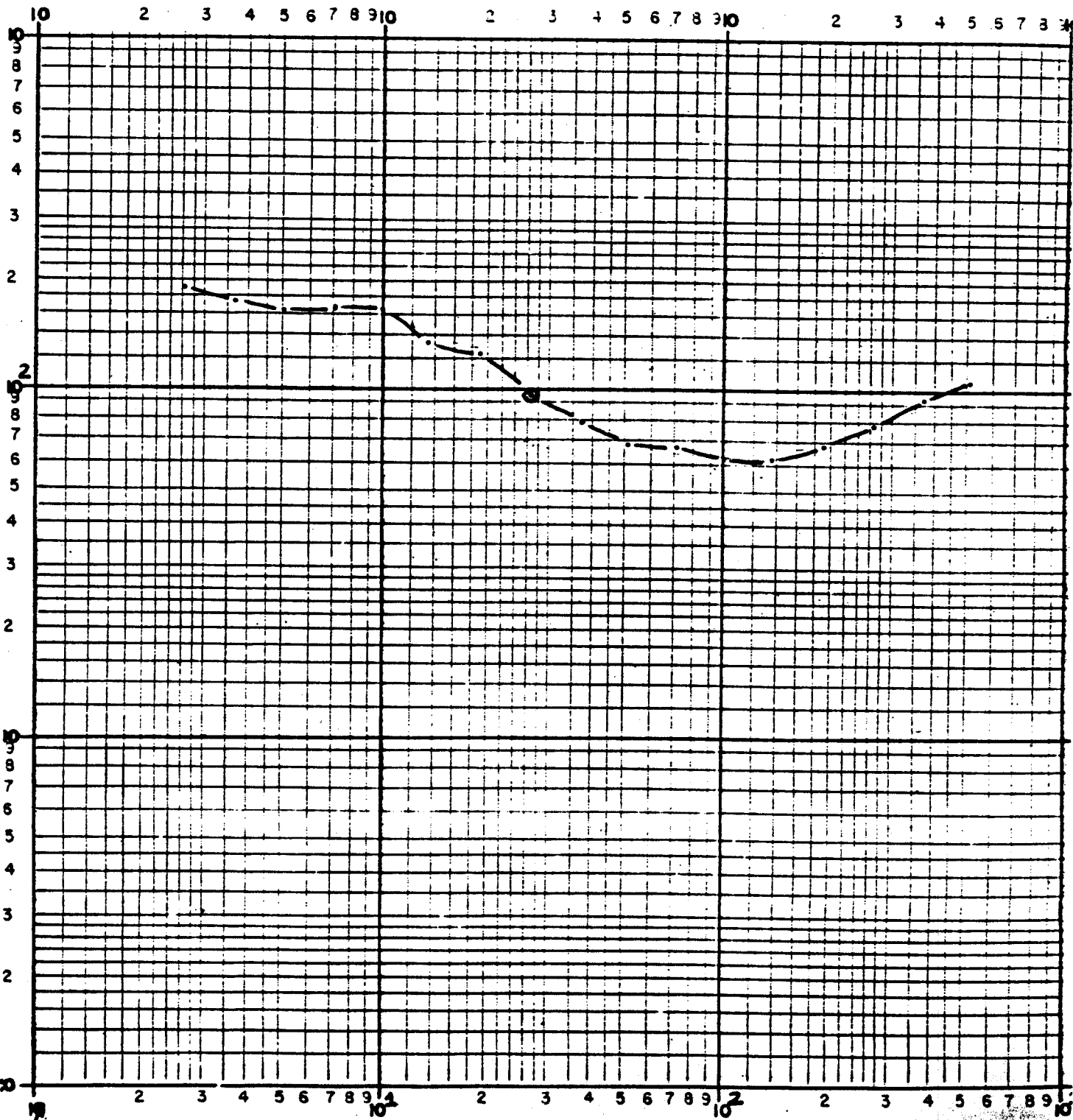


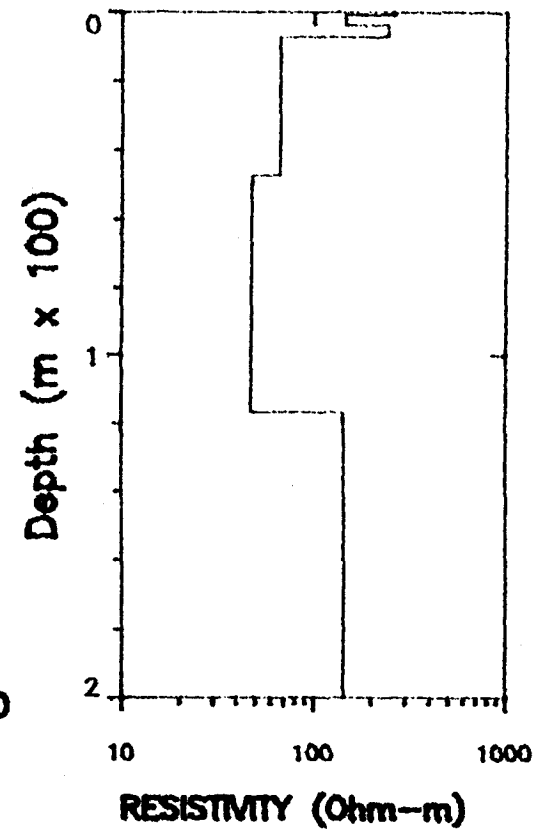
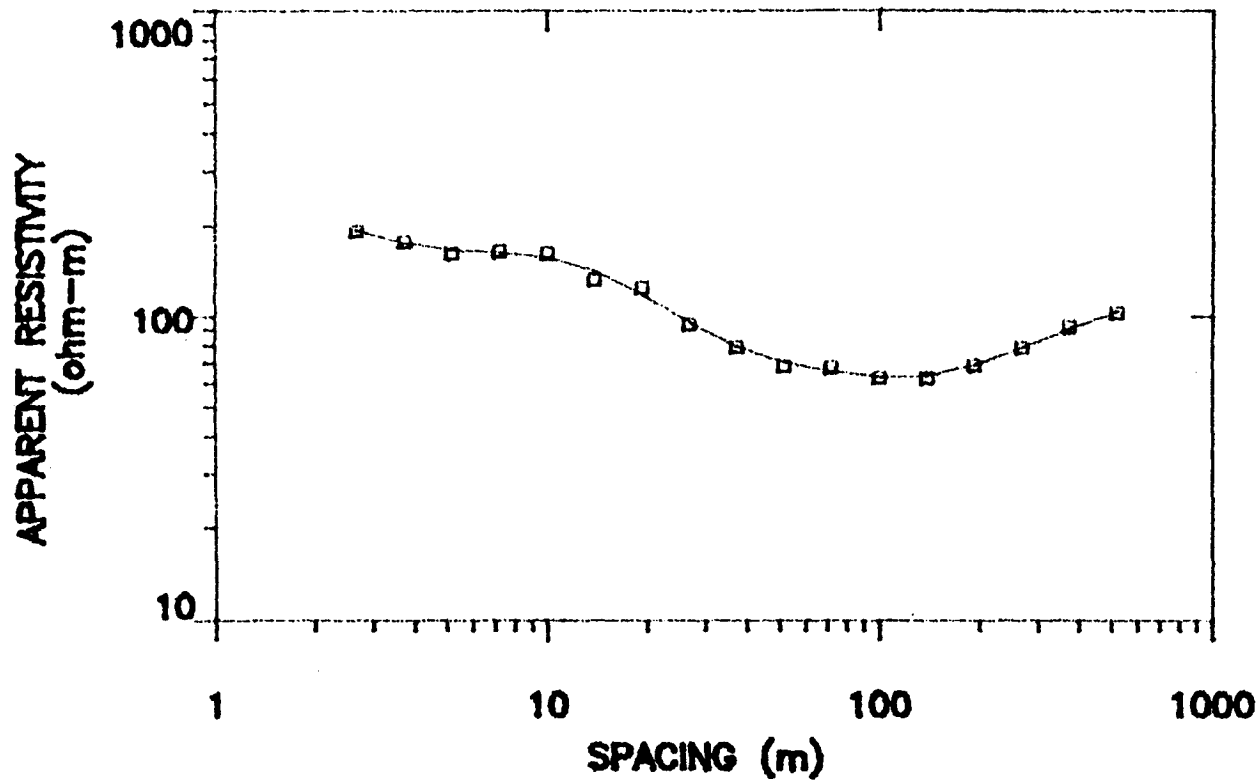
Departamento de Geología

Estudio..... *El Sabinar*..... S.E.V. 26.....

Fecha *11-2-91*... Rumbo AB. *N-126°E*... PERFIL *P-VI*.....

<p>Interpretación</p>	<p>Observaciones:</p>
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 26VI	Date: 91	Azimuth: N-126-E
Equipment: ADARO	Sounding: 26VI	

DATA SET: 27VI

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1135.00
 SOUNDING COORDINATES: X: 579790.0000 Y: 4226450.0000

DATE: 91
 SOUNDING: 27VI
 AZINUTH: N-70-E
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 3.207 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1135.0	
1	249.3		3.44	1131.5	0.0138
2	17.98		3.50	1128.0	0.194
3	109.3		64.00	1064.0	0.585
4	559.5		103.7	960.2	0.185
5	29.47				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	217.8	231.4	-6.24
2	3.73	217.1	209.3	3.58
3	5.18	172.0	171.5	0.238
4	7.20	130.0	122.1	6.04
5	10.00	74.80	78.74	-5.26
6	13.90	57.00	57.75	-1.32
7	19.30	58.40	57.72	1.16
8	26.80	68.00	66.67	1.94
9	37.30	77.10	77.54	-0.573
10	51.80	89.90	88.92	1.08
11	72.00	103.0	101.7	1.22
12	100.0	115.0	117.7	-2.39
13	139.0	135.0	138.6	-2.69
14	193.0	166.0	162.0	2.40
15	268.0	179.0	180.0	-0.597
16	373.0	190.0	182.2	4.09
17	518.0	157.0	161.3	-2.78

*

ADARO

*

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.99									
P 2	-0.01	0.53								
P 3	0.00	0.00	0.96							
P 4	0.00	0.00	-0.01	0.54						
P 5	0.00	0.00	0.01	0.07	0.05					
T 1	0.00	0.04	-0.01	0.00	0.00	0.99				
T 2	0.00	-0.48	-0.04	0.00	0.01	0.04	0.47			
T 3	0.00	0.01	-0.05	-0.11	0.06	-0.01	-0.03	0.90		
T 4	0.00	0.00	0.01	0.47	0.10	0.00	0.00	0.10	0.47	
	F 1	F 2	F 3	F 4	P 5	T 1	T 2	T 3	T 4	



Proyecto:
 Zona: *El Sabinar*
 Observador: *U. Paredes, U. Sanchez*
 Situación: *Sobre plaza 1/50.000 n° 889 de Uforatalla*

COORDENADAS

X *579.790*
 Y *4.226.450*
 Z *1.135*

mV: *Adaro 01*
 mA: *Geotron 328*
 S.E.V. *27*

Rumbo AB *N-70°E*
 Perfil: *P-VI*

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	OBSERVACIONES	CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN			
													1 m	10 m	50 m	100 m
1	2.68	/	10	300mV	100	217.8							21.78			
2	3.73		8.5	300mV	43	217.1							42.92			
3	5.18		10.2	"	21	172							83.51			
4	7.2		36	"	29	130							182.1			
5	10		44	300mV	10.5	74.8							313.4			
6	13.9		50	10mV	4.7	1200 (57.0)							606.2			
7	19.3		42	"	2.1	58.4							1.189	109.2		
8	26.8		63	"	1.9	68							2.258	217.8		
9	37.3		85	3mV	1.5	77.1	10	85	300mV	16	80.1		4.370	429.2		
10	51.8		93	"	0.9	81.6		93	"	10	89.8		8.429	836.1		
11	72	10	66	10mV	4.2	103							16.290	1.821		
12	100		145	"	5.3	115							31.420	3.134		
13	138		135	"	3.0	135							60.700	6.062	1.175	
14	193		155	"	2.2	166							11.690	2.301		
15	268		290	"	2.3	179							22.580	4.474		
16	373		310	3mV	1.35	190						<i>A la Este atraviesa un arroyo</i>	43.700	8.702	4.292	
17	518		290		0.54	157							84.290	16.820	8.351	
18	720												162.900	32.530	16.210	
19	1.000													62.790	31.340	
20	1.300													121.400	60.620	
21	1.930													234.000	116.900	
22	2.680													451.200	225.600	
23	3.730														437.000	
24	5.180														842.880	
25	7.200														1.628.520	
26	10.000														3.141.510	

OBSERVACIONES:

FECHA: *13-2-91*

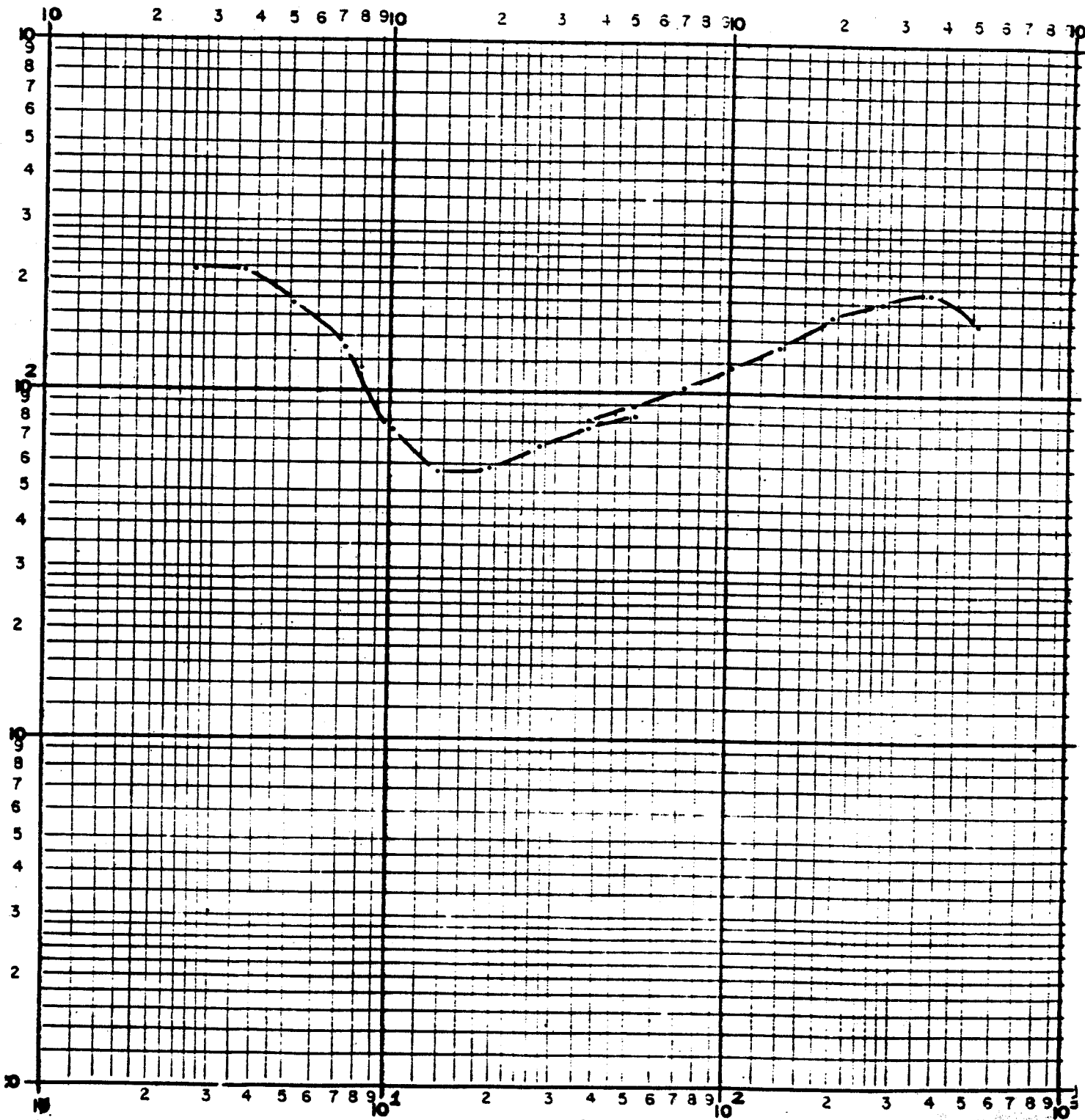


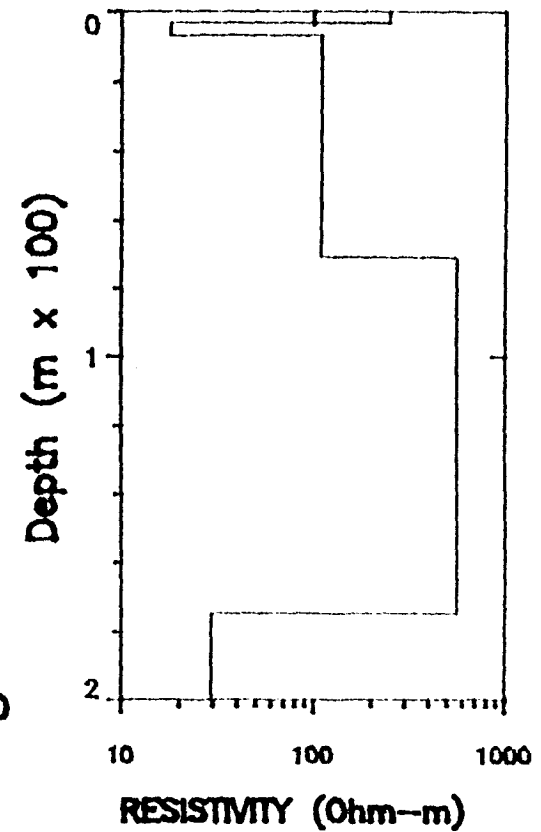
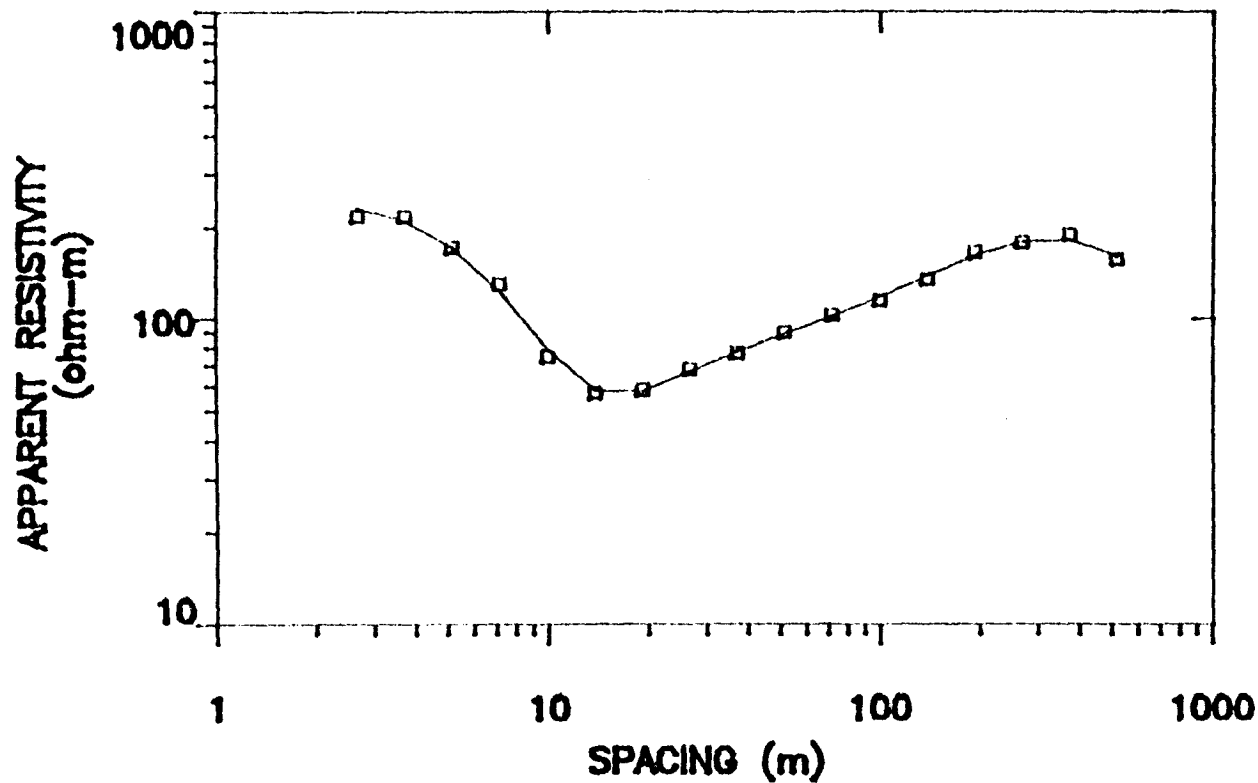
Departamento de Geofísica

Estudio *El Sabinar* S.E.V. *27*

Fecha *13-2-91* Rumbo AB. *N-20°E* PERFIL *P-VI*

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 27/1	Date: 91	Azimuth: N-70-E
Equipment: ADARO	Sounding: 27/1	

PARAMETER RESOLUTION MATRIX:

"F" INDICATES FIXED PARAMETER

P 1	0.39													
P 2	0.00	0.83												
P 3	0.01	-0.06	0.43											
P 4	0.00	0.00	0.05	0.01										
P 5	0.00	0.01	0.18	0.02	0.38									
P 6	0.00	0.00	0.00	0.00	0.03	0.01								
T 1	0.30	0.15	0.04	0.00	-0.01	0.00	0.40							
T 2	-0.05	0.08	0.14	0.00	-0.03	0.00	-0.02	0.89						
T 3	0.00	-0.01	0.06	0.01	-0.12	-0.02	0.01	0.01	0.12					
T 4	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.02	0.00				
T 5	0.00	-0.01	-0.12	-0.01	-0.37	-0.04	0.01	0.03	0.16	0.01				
	P 1	P 2	P 3	P 4	P 5	P 6	T 1	T 2	T 3	T 4				

SECOND PART OF RESOLUTION MATRIX:

T 5	0.37
	T 5



Proyecto:
 Zona: *El Sabinar*
 Observador: *J. Manuel M. Sanchez*
 Situación: *Sobre plaza 1/50.000 n.e. 389 de Maratilla*

COORDENADAS

X *579.100*
 Y *4.231.950*
 Z *1.240*

mV: *Adaro 01*
 mA: *Geotron 328*
 S.E.V. *28*

Rumbo AB *NE E-W*
 Perfil: *P-VII*

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2,68	/	3,2	300mV	265	1803						<i>Junto a pie de rofante Profante Bajo Abbramiento de calizas</i>	21,78			
2	3,73		4	"	170	1824							42,92			
3	5,18		4,2	100mV	84	1670							83,51			
4	7,2		4,8	"	34	1148							182,1			
5	10		4	30mV	14,2	1112							313,4			
6	13,9		4,5	10mV	7,2	970							606,2			
7	19,3		5,2	"	3,9	877							1.189	109,2		
8	26,8		19	"	5,2	617	10	19	100mV	61	699		2.266	217,8		
9	37,3		27,5	"	2,6	413		27,5	"	29	453		4.370	429,2		
10	51,8	/10	23	"	5,5	200							8.499	836,1		
11	72		31	"	2,2	115						16.320	1.821			
12	100		80	"	2,0	78						31.420	3.134			
13	139		140	3mV	1,5	65						60.700	6.062	1.175		
14	183		110	"	0,70	74,4							11.690	2.301		
15	268		180	"	0,8	100,3							22.560	4.474		
16	373		130	1mV	0,41	137,8							43.700	8.702	4.292	
17	518		120	"	0,280	196,7							84.290	16.820	8.361	
18	720												162.900	32.530	16.210	
19	1.000													62.780	31.340	
20	1.300														121.400	60.620
21	1.930														234.000	116.900
22	2.680														451.200	225.600
23	3.730															437.000
24	5.180															842.890
25	7.200															1.828.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: *12-2-91*

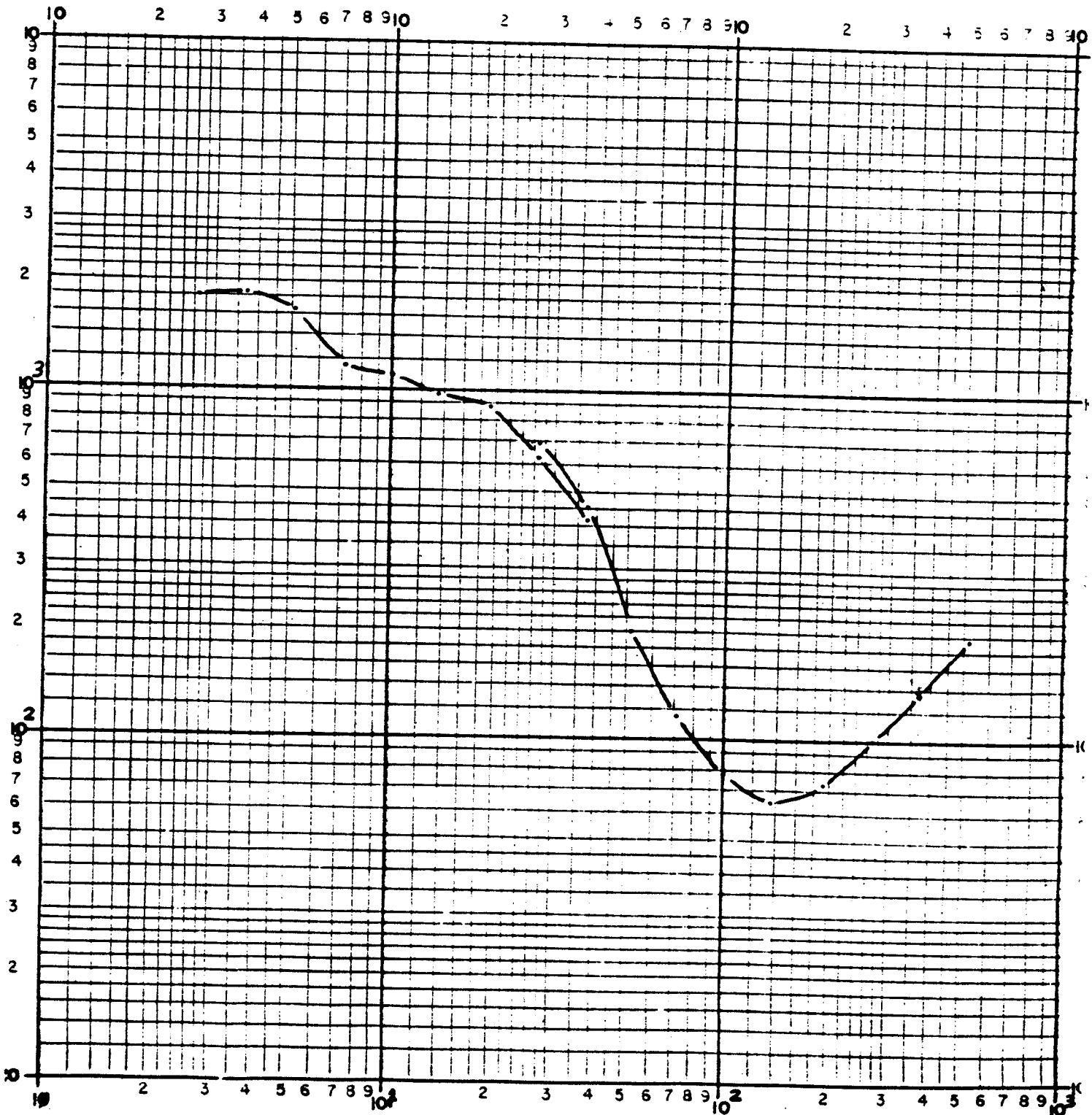


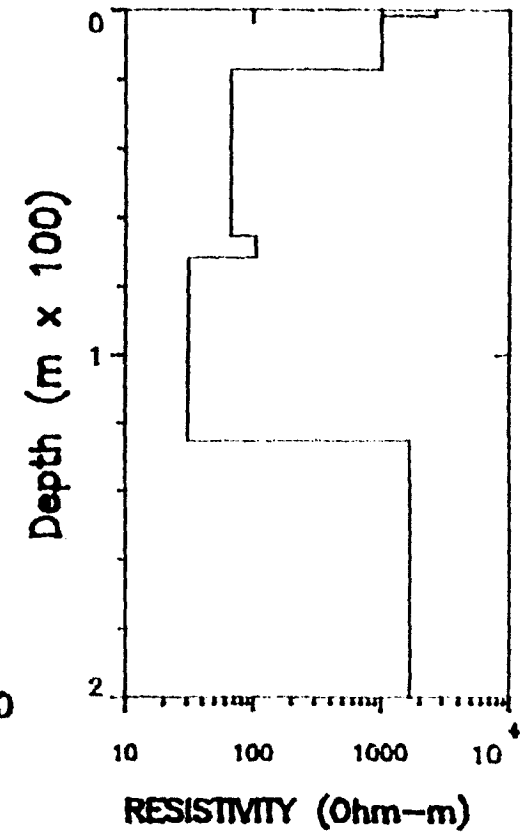
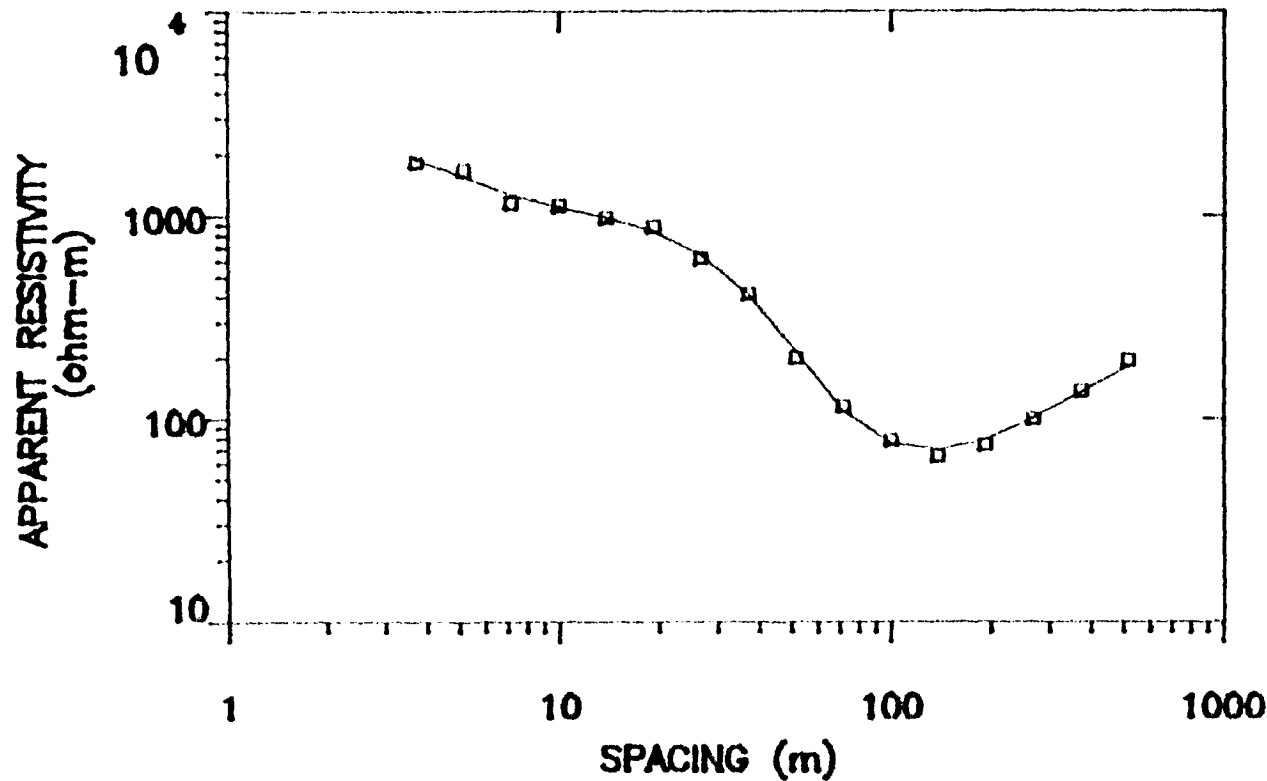
Departamento de Geofísica

Estudio *El Sabioar* S.E.V. *28*)

Fecha *12-2-91* Rumbo AB *E-W* PERFIL *P-VII*

Interpretación	Observaciones: <i>Afloramientos Calizas</i>
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Date Set: 28VII	Date: 91	Azimuth: E-W
Equipment: ADAKO	Soundings: 28VII	

DATA SET: 29VII

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1200.00
 SOUNDING COORDINATES: X: 579450.0000 Y: 4231350.0000

DATE: 91
 SOUNDING: 29VII
 AZIMUTH: N-85-E
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 4.858 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1200.0	
1	89.27		1.02	1198.9	0.0115
2	152.8		4.83	1194.1	0.0316
3	862.9		31.09	1163.0	0.0360
4	266.8		11.14	1151.8	0.0417
5	198.3		85.47	1066.4	0.430
6	112.3				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	119.8	117.0	2.33
2	3.73	127.7	130.2	-1.95
3	5.18	139.1	146.5	-5.30
4	7.20	172.2	169.2	1.74
5	10.00	219.0	203.1	7.26
6	13.90	264.7	251.3	5.05
7	19.30	303.4	311.7	-2.70
8	26.80	341.0	378.4	-10.96
9	37.30	429.0	441.7	-2.97
10	51.80	501.0	485.7	3.04
11	72.00	506.0	492.4	2.66
12	100.0	462.0	450.6	2.46
13	139.0	352.0	368.8	-4.79
14	193.0	289.0	277.0	4.12
15	268.0	204.0	203.2	0.363
16	373.0	146.0	156.7	-7.33
17	518.0	139.0	132.5	4.63

*

ADARO

*

PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER

P 1	0.43										
P 2	0.23	0.62									
P 3	-0.02	0.02	0.62								
P 4	0.00	0.00	0.06	0.01							
P 5	0.00	0.01	0.06	0.03	0.36						
P 6	0.00	0.00	-0.03	-0.02	0.16	0.70					
T 1	-0.19	-0.20	-0.01	0.00	0.01	0.00	0.11				
T 2	0.09	-0.24	-0.16	0.02	0.08	-0.01	0.04	0.52			
T 3	0.01	-0.01	0.33	0.07	0.23	0.01	0.01	0.11	0.39		
T 4	0.00	0.00	0.01	0.00	0.03	0.02	0.00	0.01	0.02	0.00	
T 5	0.00	0.00	-0.02	0.00	0.14	0.18	0.00	0.01	0.04	0.01	
	P 1	P 2	P 3	P 4	P 5	P 6	T 1	T 2	T 3	T 4	

SECOND PART OF RESOLUTION MATRIX:

T 5	0.09
	T 5

*

ADARO

*



Proyecto:
 Zona: El Sabinar
 Observador: Manuel Menchaca
 Situación: Sobre plaza 1/50.000 n° 889

COORDENADAS
 X 579.450
 Y 4.231.350
 Z 1.200

m V: Adaro 01
 m A: Geotron 328
 S.E.V. 29

Rumbo AB
N-85°E
 Perfil:
P-VII

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	OBSERVACIONES	CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN			
													1 m	10 m	50 m	100 m
1	2.68	1	8.5	100mV	41	105						<i>Derribos de Caliza</i>	21.78			
2	3.73		10	"	26	112							42.92			
3	6.18		36	"	52.5	122							83.51			
4	7.2		29	"	27	151							182.1			
5	10		31	30mV	19	192							313.4			
6	13.9		28	"	10.7	232							606.2			
7	19.3		33	10mV	7.5	266							1.169	109.2		
8	26.8		30	"	4.1	308	10	30	100mV	47	341		2.256	217.8		
9	37.3		43	"	3.7	376		43	"	43	429		4.370	429.2		
10	51.8	10	35	30mV	21	501							6.499	836.1		
11	72		56	"	17.5	506						16290	1.621			
12	100		78	"	11.5	462						31420	3.134			
13	139		105	10mV	6.1	352						60700	6.062	1.175		
14	193		105	"	2.6	289							11.690	2.301		
15	268		155	"	1.4	204							22.560	4.474		
16	373		170	1mV	0.57	146							43.700	8.702	4.292	
17	518		170	"	0.28	139							84.290	16.820	8.351	
18	720												162.900	32.530	16.210	
19	1.000													62.790	31.340	
20	1.390													121.400	60.620	
21	1.930													234.000	116.900	
22	2.680													451.200	225.600	
23	3.730														437.000	
24	5.180														842.880	
25	7.200														1.628.620	
26	10.000														3.141.610	

OBSERVACIONES:

FECHA: 8-2-91

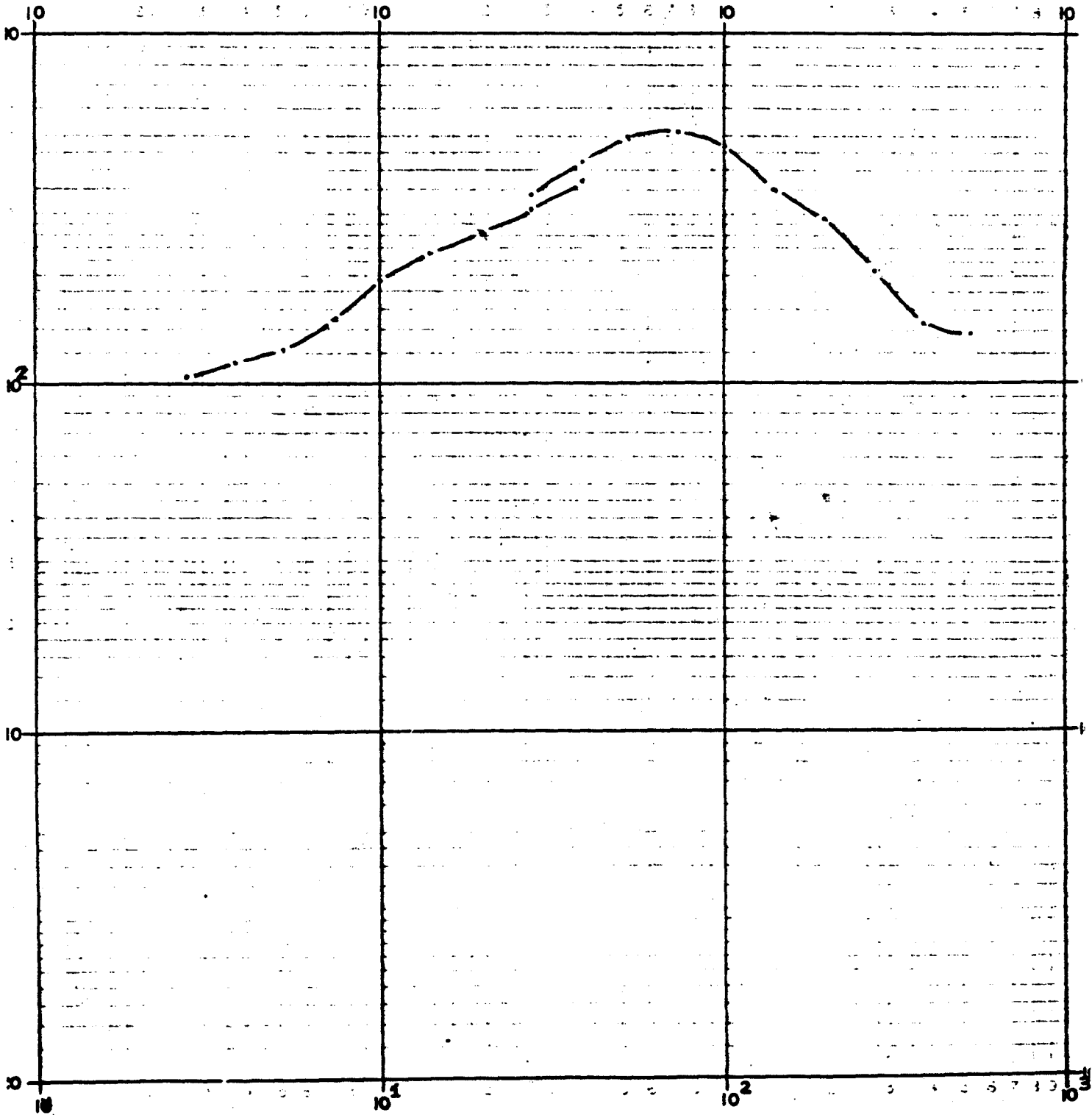


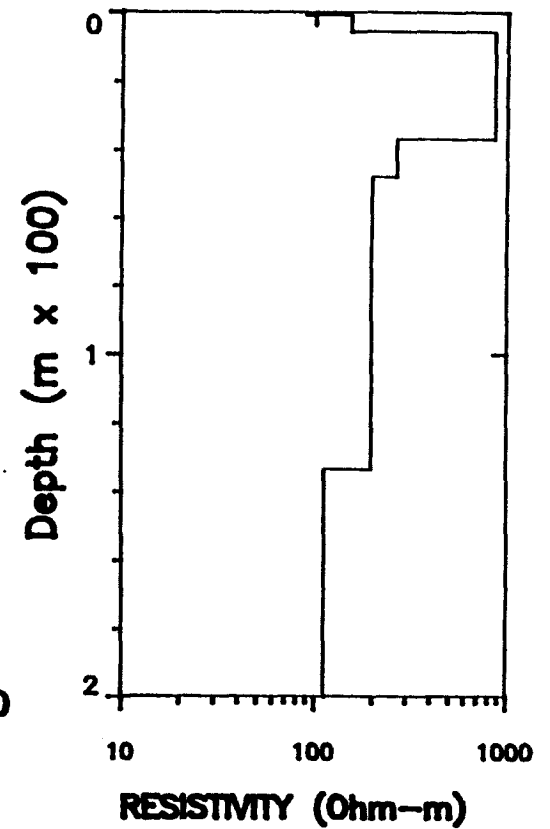
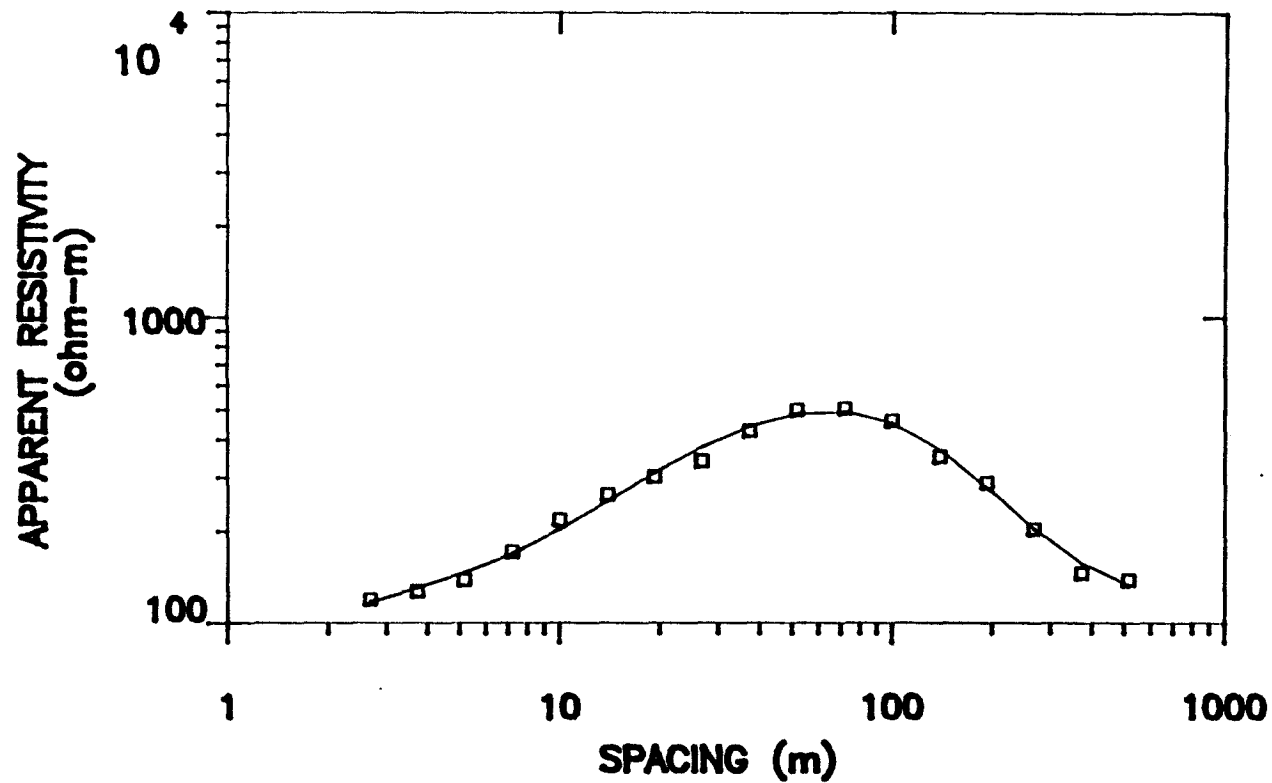
Departamento de Geofísica

Estudio *El Sabinar* S.E.V. *29*

Fecha *8-2-91* ... Rumbo AB *N-85°E* ... PERFIL *P-VII*

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 29VI	Date: 91	
Equipment: ADARO	Sounding: 29VI	Azimuth: N-85-E

DATA SET: 30VII

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1175.00
 SOUNDING COORDINATES: X: 579680.0000 Y: 4230450.0000

DATE: 91
 SOUNDING: 30VII
 AZIMUTH: E-W
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 2.601 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1175.0	
1	72.70		2.71	1172.2	0.0373
2	15.43		33.31	1138.9	2.15
3	20.72		79.88	1059.0	3.85
4	77.09		64.41	994.6	0.835
5	2184.4				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	DATA	PA (ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	65.30	65.23	0.0993
2	3.73	58.50	57.33	1.98
3	5.18	44.50	45.69	-2.68
4	7.20	32.70	32.97	-0.837
5	10.00	23.90	23.37	2.18
6	13.90	18.40	18.45	-0.292
7	19.30	16.70	16.68	0.100
8	26.80	16.40	16.20	1.16
9	37.30	15.90	16.30	-2.57
10	51.80	16.70	16.90	-1.23
11	72.00	18.40	18.11	1.53
12	100.0	20.70	20.17	2.52
13	139.0	23.30	23.64	-1.48
14	193.0	29.00	29.48	-1.68
15	268.0	39.20	38.90	0.754
16	373.0	50.30	53.06	-5.49
17	518.0	77.80	72.86	6.34

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ADARO

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ADARO

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PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER

	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4
P 1	0.99								
P 2	0.00	1.00							
P 3	0.00	0.00	0.83						
P 4	0.00	0.00	0.00	-0.01	0.05				
P 5	0.00	0.00	-0.03	0.01	0.02				
T 1	0.01	0.00	0.00	0.00	0.00	0.99			
T 2	-0.01	-0.02	-0.29	-0.03	-0.03	0.01	0.31		
T 3	0.00	0.01	-0.01	-0.19	-0.04	-0.01	0.11	0.82	
T 4	0.00	0.00	0.07	-0.06	-0.03	0.00	0.06	0.21	0.09



Proyecto:
 Zona: El Sabinar
 Observador: Manuel Menchero
 Situación: Sobre plano 1/50.000 n.º 889 de Matallá

COORDENADAS
 X 579.680
 Y 4.230.450
 Z 1.175

m V: Adaro 01
 m A: Geotru 328
 S.E.V. 30

Rumbo AB E-W
 Perfil: P-VII

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER
 SIMETRICO
 MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	OBSERVACIONES	CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN			
													1 m	10 m	50 m	100 m
1	2.68	1	65	300mV	195	65,3							21,78			
2	3.73		66	100mV	90	58,5							42,92			
3	5.18		62	u	33	44,5							83,51			
4	7.2		67	30mV	13,5	32,7							182,1			
5	10		72	10mV	5,5	23,9							313,4			
6	13.9		66	u	2,0	18,4							608,2			
7	18.3		140	3mV	2,0	16,7							1.189	109,2		
8	26.8		140	u	1,02	16,4	10	140		10,5	16,3		2.256	217,8		
9	37.3	10	135	10mV	5,0	15,9							4.379	429,2		
10	51.8		115	u	2,3	16,7							8.429	836,1		
11	72		132	3mV	1,5	18,4							16.290	1.621		
12	100		220	u	1,45	20,7							31.420	3.134		
13	139		260	u	1,0	23,3							60.700	6.062	1.175	
14	193		290	1mV	0,72	29								11.690	2.301	
15	268		380	u	0,66	39,2								22.560	4.474	
16	373		400	u	0,46	50,3								43.700	8.702	4.292
17	518		260	u	0,24	77,8								84.290	16.820	8.361
18	720													162.900	32.530	16.210
19	1.000														62.780	31.340
20	1.380														121.400	60.620
21	1.930														234.000	116.900
22	2.680														461.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: 8-2-91

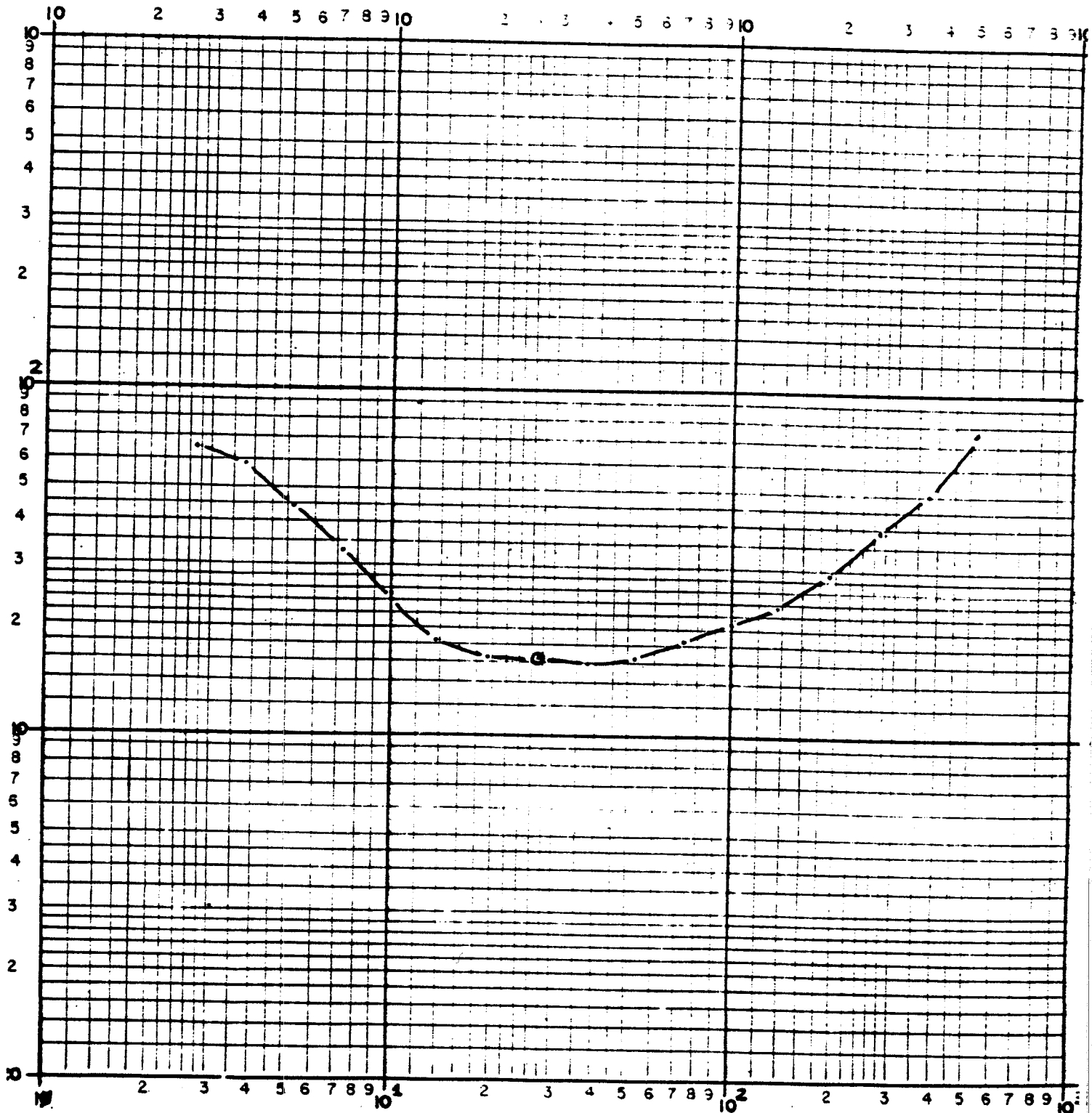


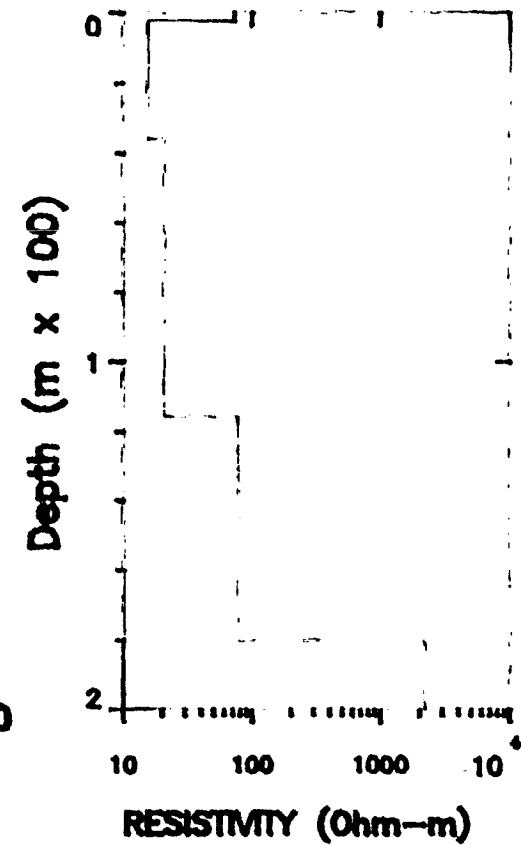
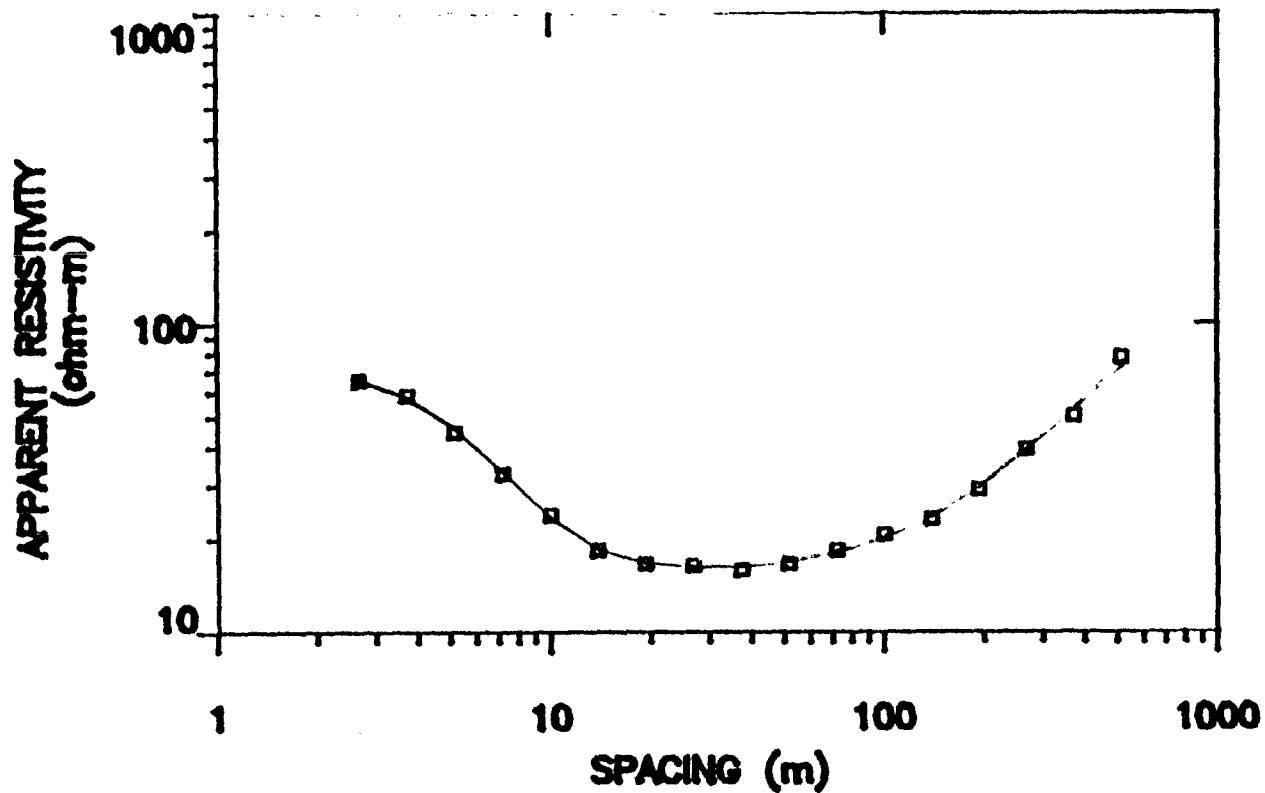
Departamento de Geofísico

Estudio *El Sabinar* S.E.V. 30

Fecha *8-2-91* Rumbo AB *E-W* PERFIL *P-VII*

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 30VI	Date: 91	Azimuth: E-W
Equipment: ADARO	Soundings: 30VI	

DATA SET: 31VII

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1145.00
 SOUNDING COORDINATES: X: 579950.0000 Y: 4229450.0000

DATE: 91
 SOUNDING: 31VII
 AZIMUTH: N-70-E
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 4.654 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
1	28.72		1.44	1145.0	
2	101.5		4.75	1143.5	0.0504
3	30.67		23.59	1138.7	0.0468
4	102.3		12.40	1115.2	0.769
5	28.05		97.36	1102.7	0.121
6	161.4			1005.4	3.47

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA (ohm-m)		DIFFERENCE (percent)
		DATA	SYNTHETIC	
1	2.68	41.90	40.03	4.44
2	3.73	44.60	47.17	-5.77
3	5.18	51.70	54.67	-5.75
4	7.20	62.40	60.63	2.83
5	10.00	64.10	62.88	1.89
6	13.90	64.30	60.10	6.52
7	19.30	52.90	53.21	-0.603
8	26.80	43.00	45.65	-6.16
9	37.30	40.10	40.95	-2.13
10	51.80	40.30	40.06	0.582
11	72.00	41.30	40.94	0.857
12	100.0	44.80	41.42	7.54
13	139.0	41.30	41.55	-0.613
14	193.0	39.70	43.53	-9.66
15	268.0	49.90	49.60	0.590
16	373.0	63.00	60.13	4.54
17	518.0	73.50	73.60	-0.139

* ADARO *

PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER

P 1	0.58												
P 2	0.09	0.60											
P 3	-0.02	0.09	0.72										
P 4	0.01	-0.03	0.13	0.18									
P 5	0.00	-0.01	0.04	0.15	0.59								
P 6	0.00	0.00	-0.01	-0.06	0.11	0.12							
T 1	-0.39	-0.12	0.06	-0.02	-0.01	0.00	0.34						
T 2	-0.05	0.33	0.14	-0.05	-0.03	0.00	0.07	0.29					
T 3	-0.01	0.04	-0.21	-0.05	-0.03	-0.04	0.01	0.04	0.12				
T 4	0.00	-0.02	0.08	0.15	0.11	-0.06	-0.01	-0.03	-0.03	0.12			
T 5	0.00	-0.01	0.03	0.05	-0.33	-0.21	0.00	0.00	0.04	0.06			
	F 1	P 2	P 3	P 4	P 5	P 6	T 1	T 2	T 3	T 4			

SECOND PART OF RESOLUTION MATRIX:

T 5	0.37
	T 5



Proyecto:
 Zona: *El Sabinar*
 Observador: *M. Panva / M. Herrera*
 Situación: *Sobre plana 1/50,000 n.º 889 de Maratalla*

COORDENADAS
 X *579.950*
 Y *4.229.450*
 Z *1.145*

mV: *Adaro 01*
 mA: *Geotrac 328*
 S.E.V.
31

Rumbo AL
N-70°E
 Perfil:
P-VII

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER
 SIMETRICO
 MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2,68	1	13	100mV	25	41,9						<i>Junto al Cochijo del Prior</i>	21,78			
2	3,73		51	"	53	44,6							42,92			
3	5,18		59	"	36,5	51,7							83,51			
4	7,2		52	30mV	20	62,4							182,1			
5	10		45	"	9,2	64,1							313,4			
6	13,9		50	10mV	5,3	64,3							606,2			
7	19,3		53	"	2,4	52,9							1.169	109,2		
8	26,8		105	"	2,0	43	10	105	30mV	20	41,5		2.256	217,8		
9	37,3	10	92	"	8,6	40,1							4.330	429,2		
10	51,8		112	"	5,4	40,3							8.479	835,1		
11	72		110	"	2,8	41,3							16.290	1.621		
12	100		140	"	2,0	44,8							31.420	3.134		
13	139		220	3mV	1,5	41,3						<i>Alz Este a travesa al arroyo</i>	60.700	6.062	1.175	
14	193		250	"	0,85	39,7								11.690	2.301	
15	268		235	"	0,52	49,9								22.560	4.474	
16	373		215	1mV	0,31	63								43.700	8.702	4.292
17	518		195	"	0,17	73,5								84.290	16.820	8.351
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.390														121.400	60.620
21	1.930														234.000	116.900
22	2.690														451.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: *13-2-91*

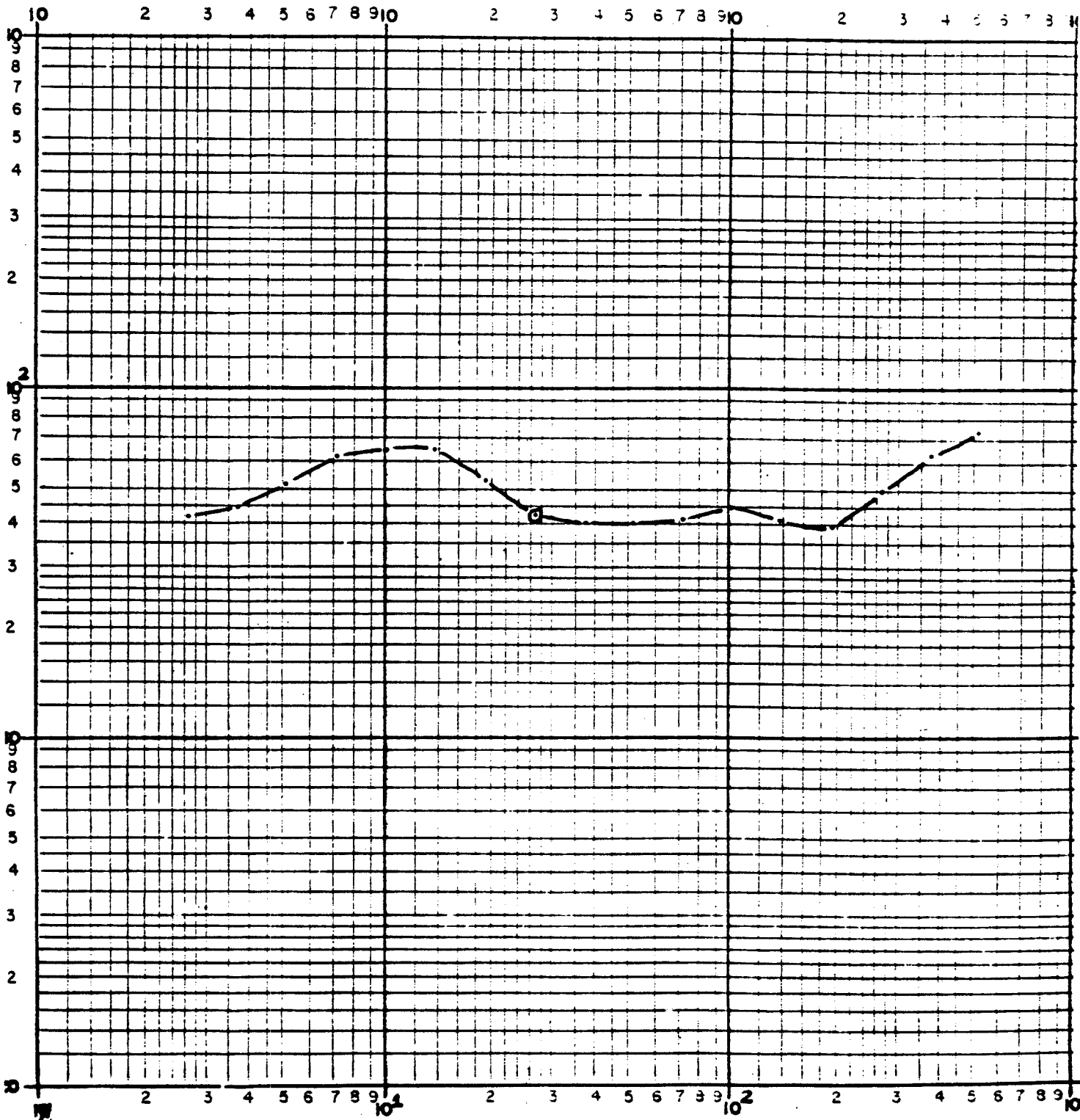


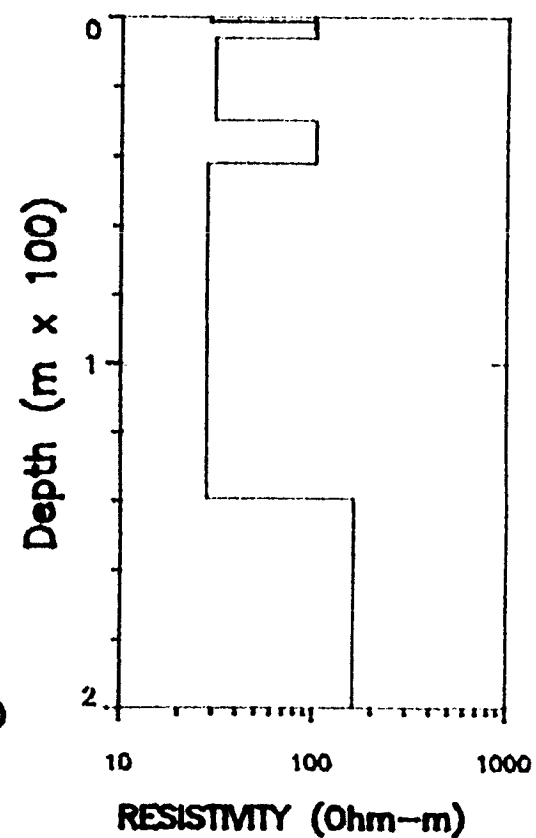
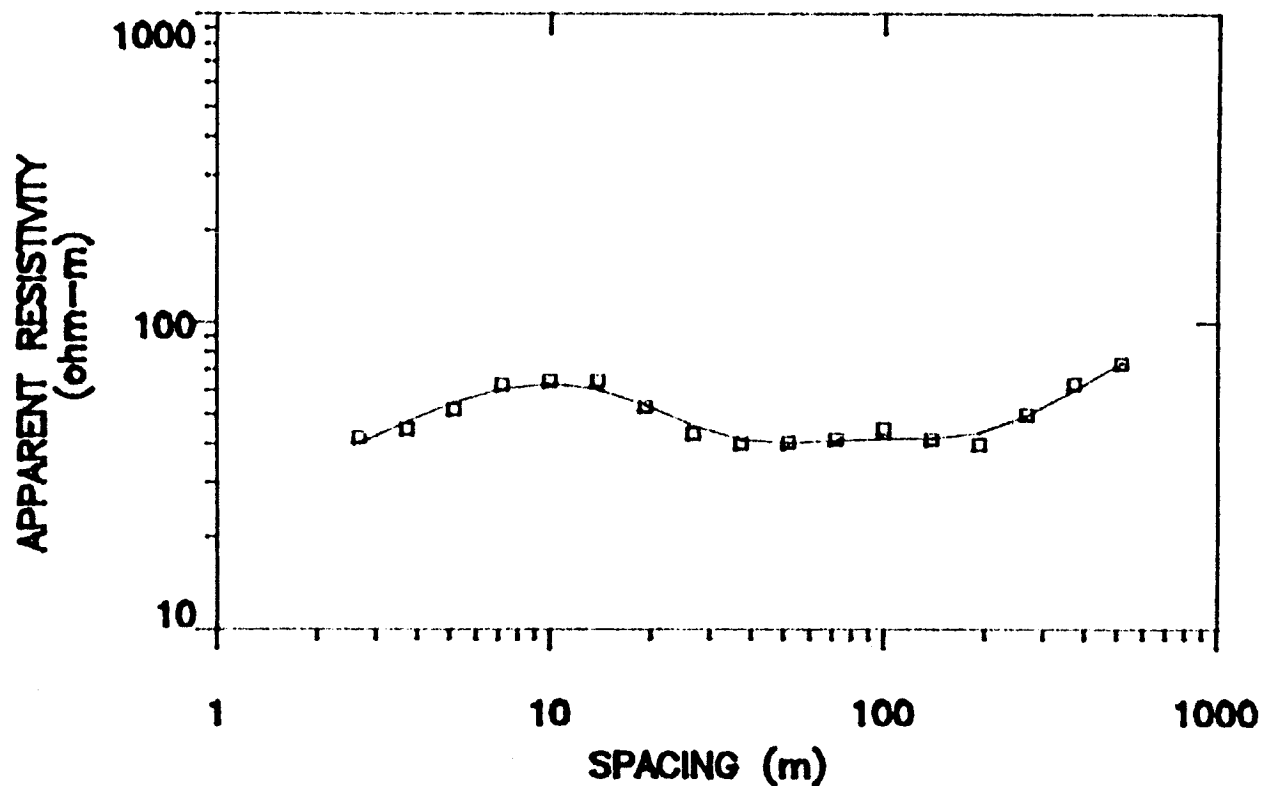
Departamento de Geofísico

Estudio *El Sabinar* S.E.V. *31*

Fecha *13-2-91* Rumbo AB *N-70°E* PERFIL *P-VII*

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 31VII	Date: 91	Azimuth: N-70-E
Equipment: ADARO	Soundings: 31VII	

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
17	518.0	57.40	56.61	1.37

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.60											
P 2	-0.12	0.92										
P 3	-0.01	-0.03	0.89									
P 4	0.01	0.02	0.06	0.72								
P 5	0.00	-0.01	-0.03	0.14	0.64							
P 6	0.01	0.01	0.00	-0.02	0.04	0.74						
P 7	0.00	0.00	0.00	0.00	0.01	0.00	0.06					
T 1	0.16	0.07	0.01	-0.01	0.00	0.00	0.00	0.93				
T 2	-0.19	-0.16	-0.14	0.09	-0.04	0.01	0.00	0.11	0.61			
T 3	-0.01	0.02	0.20	0.11	-0.07	0.07	-0.02	0.00	0.18	0.30		
T 4	0.00	0.01	0.03	-0.32	-0.05	0.10	-0.02	0.00	0.04	0.12		
T 5	0.00	0.00	0.00	-0.06	0.40	0.12	-0.03	0.00	0.00	0.06		
T 6	0.01	0.01	-0.01	-0.02	0.03	-0.28	-0.15	0.00	0.01	0.08		
	P 1	P 2	P 3	P 4	P 5	P 6	P 7	T 1	T 2	T 3		

SECOND PART OF RESOLUTION MATRIX:

T 4	0.27		
T 5	0.15	0.39	
T 6	0.11	0.16	0.63
	T 4	T 5	T 6



Proyecto:
 Zona: *El Sabinar*
 Observador: *Manuel Manchero*
 Situación: *Sobre plano 1:50.000 n.º 889 de Moratalla*

COORDENADAS
 X *580.350*
 Y *4.228.650*
 Z *1.120*

mV: *Adaro 01*
 mA: *Geotro 328*
 S.E.V. *32*

Rumbo α *N-80°-E*
 Perfil: *P-VII*

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMÉTRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMÉTRICO MN			
													1 m	10 m	50 m	100 m
1	2.68	1	10	100mV	37	80.6							21.78			
2	3.73		36	"	45	53.7							42.92			
3	5.18		34	"	20	49.1							83.51			
4	7.2		39	30mV	11.5	47.8							182.1			
5	10		39	10mV	6.6	53							313.4			
6	13.9		36	"	3.7	62.3							608.2			
7	19.3		45	"	2.8	72.7							1.189	109.2		
8	26.8		55	"	1.7	69.7	10	55	30mV	17	67.3		2.256	217.8		
9	37.3	10	62	"	9.4	65							4.879	429.2		
10	51.8		43	"	3.25	63.1							8.429	835.1		
11	72		57	"	2.4	68.3							16.290	1.621		
12	100		170	"	8.5	64.5							31.420	3.134		
13	139		200	"	1.9	57.6							60.700	6.082	1.176	
14	193		205	3mV	0.9	51.3								11.690	2.301	
15	268		205	1mV	0.92	46.2						<i>Ala Este atravesa un arroyo</i>		22.560	4.474	
16	373		220	"	0.23	45.7								43.700	8.702	4.292
17	518		235	"	0.16	57.4								84.290	16.820	8.351
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.390														121.400	60.620
21	1.930														234.000	116.900
22	2.680														451.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: *14-2-91*



Departamento de Geofísica

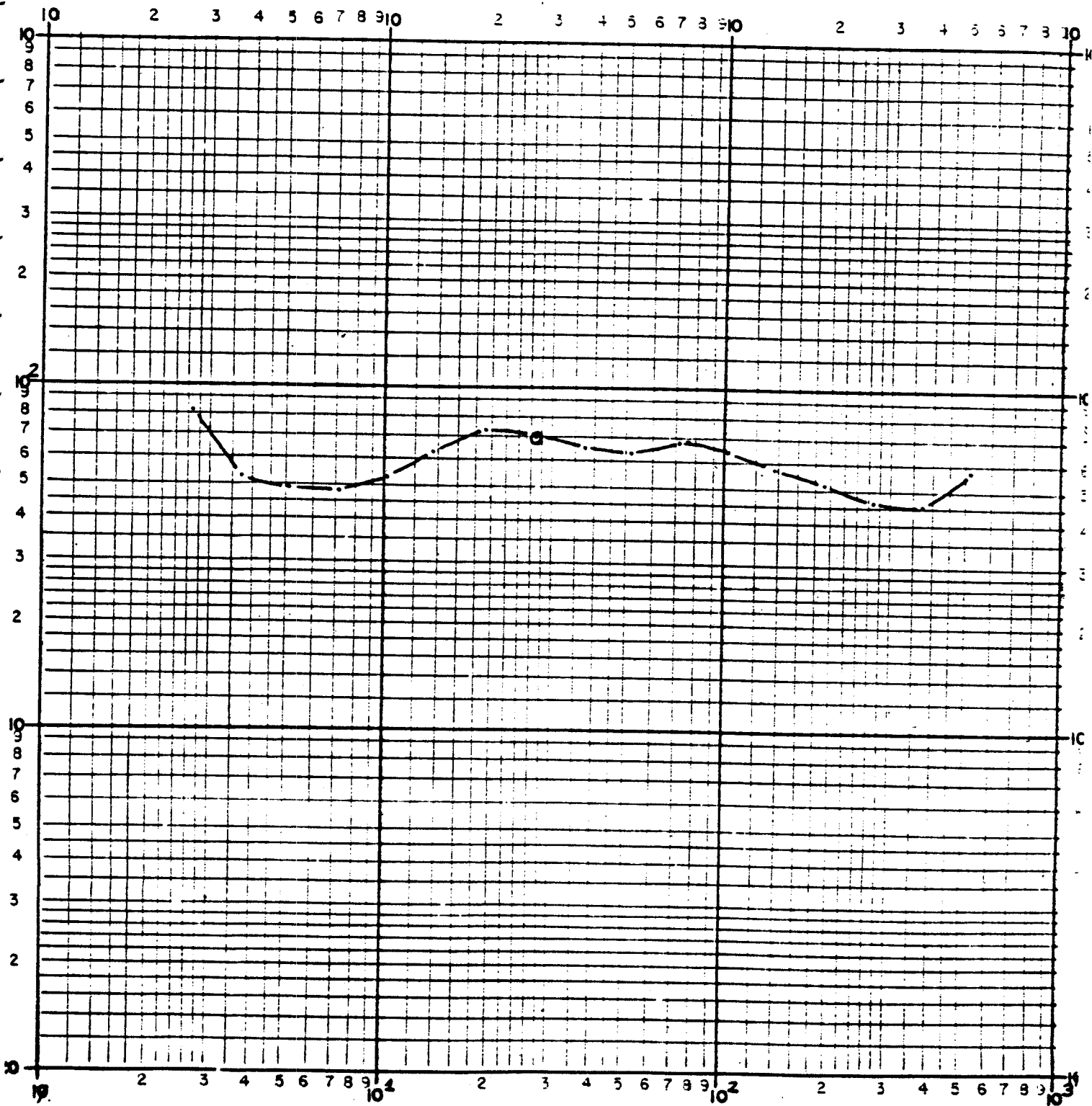
Estudio..... *El Sabinar*

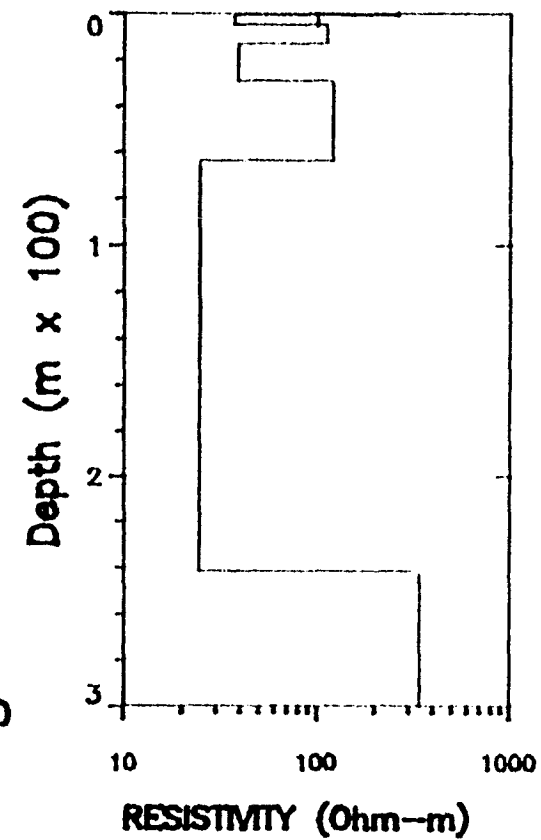
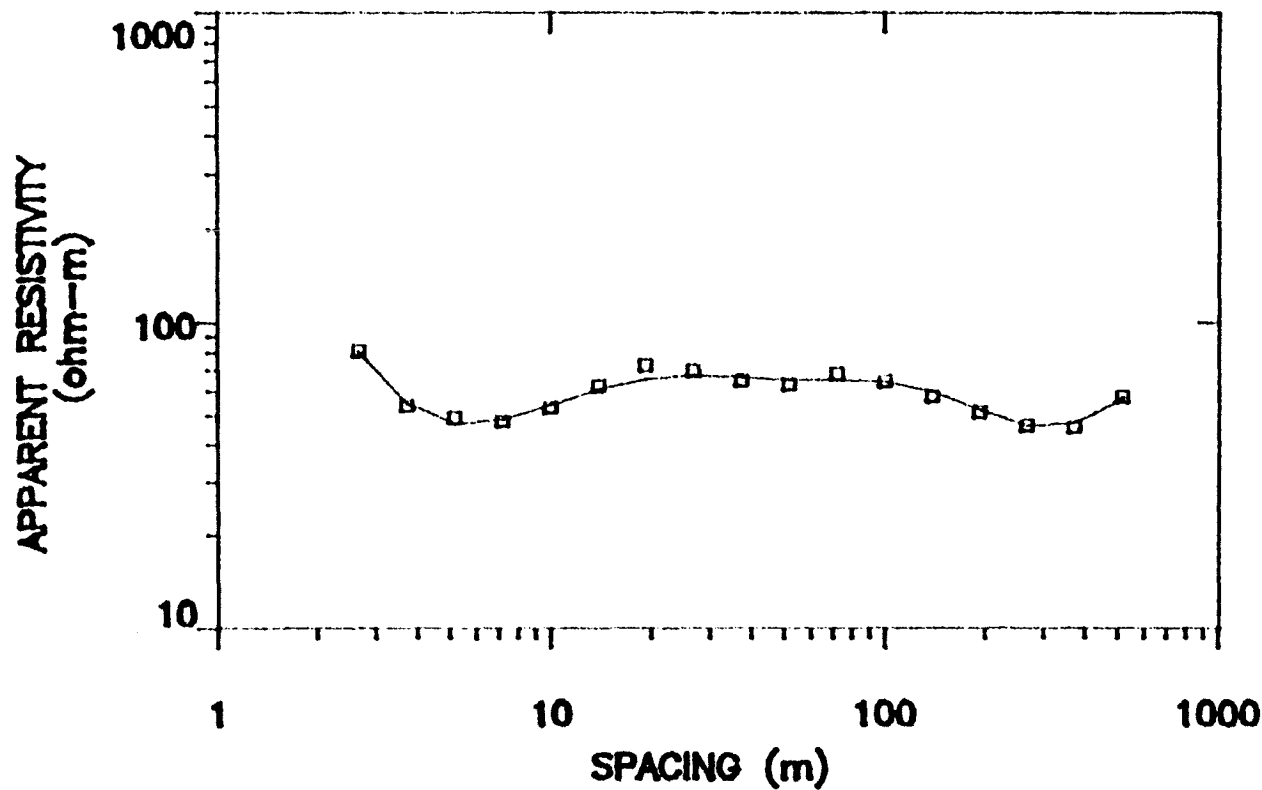
S.E.V. 32.....

Fecha *14-2-91*... Rumbo AB *N-80°-E*

PERFIL *P-VIII*.....

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 32VII	Date: 91	Azimuth: N-80-E
Equipment: ADARO	Sounding: 32VII	

DATA SET: 33VII

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1080.00
 SOUNDING COORDINATES: X: 580950.0000 Y: 4227475.0000

DATE: 91
 SOUNDING: 33VII
 AZIMUTH: N-70-E
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 2.344 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1080.0	
1	36.85		4.32	1075.6	0.117
2	74.88		14.30	1061.3	0.190
3	291.1		201.5	859.8	0.692
4	77.11				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	38.70	37.54	2.97
2	3.73	38.10	38.54	-1.17
3	5.13	39.00	40.63	-4.19
4	7.20	45.00	44.39	1.34
5	10.00	50.30	50.03	0.519
6	13.90	58.80	57.44	2.29
7	19.30	65.80	66.75	-1.44
8	26.80	77.10	79.04	-2.51
9	37.30	97.10	95.84	1.29
10	51.80	120.9	117.2	3.02
11	72.00	141.8	142.1	-0.249
12	100.0	164.8	168.2	-2.10
13	139.0	187.0	192.6	-3.04
14	193.0	213.2	210.9	1.04
15	268.0	225.6	217.6	3.53
16	373.0	203.0	207.1	-2.03

PARAMETER RESOLUTION MATRIX:

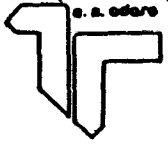
*

ADARO

*

"F" INDICATES FIXED PARAMETER

P 1	1.00							
P 2	-0.01	0.87						
P 3	0.00	-0.03	0.97					
P 4	0.00	0.01	0.00	0.17				
T 1	-0.02	-0.14	-0.02	0.01	0.82			
T 2	0.00	-0.10	-0.05	0.02	-0.08	0.88		
T 3	0.00	0.05	0.07	0.33	0.04	0.09	0.69	
	P 1	P 2	P 3	P 4	T 1	T 2	T 3	



Proyecto:
 Zona: El Sabinar
 Observador: José Manuel Vofendero
 Situación: Sobre plaza 1/50.000 n.º 889 de unforatalla

COORDENADAS
 X 580.950
 Y 4.227.475
 Z 1.080

mV: Adara 01
 mA: Geotron 328
 S.E.V. 33

Rumbo α
N-70°E
 Perfil:
P-VII

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER
 SIMETRICO
 MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN			
													1 m	10 m	50 m	100 m
1	2.68	1	22.5	100mV	40	38.7							21.78			
2	3.73		22.5	"	20	38.1							42.92			
3	5.18		22.5	30mV	10.5	39							83.51			
4	7.2		85	"	25	47.7	45						182.1			
5	10		81	"	13	50.3							313.4			
6	13.9		165	"	16	58.8							606.2			
7	19.3		160	"	9.0	65.8							1.189	109.2		
8	26.8		155	10mV	5.3	77.1	10	100		53	75		2.256	217.8		
9	37.3	10	115	30mV	26	97.1							4370	429.2		
10	51.8		152	"	22	120.9						<i>Ala Oeste, para el arroyo</i>	8.428	835.1		
11	72		160	"	14	141.8						"	16.190	1.621		
12	100		175	100mV	9.2	164.8							31.420	3.134		
13	139		175	"	5.4	187							60.100	6.062	1.175	
14	193		170	"	3.1	213.2								11.690	2.301	
15	268		310	"	3.1	225.6								22.560	4.474	
16	373		280	"	1.3	203								43.700	8.702	4.292
17	518											<i>Ala Este un puede para por un arroyo</i>	84.290	16.820	8.351	
18	720												182.900	32.530	16.210	
19	1.000													62.790	31.340	
20	1.390													121.400	60.620	
21	1.930													234.000	116.900	
22	2.680													461.200	225.600	
23	3.730														437.000	
24	5.180														842.880	
25	7.200														1.828.520	
26	10.000														3.141.510	

OBSERVACIONES:

FECHA: 13-2-91

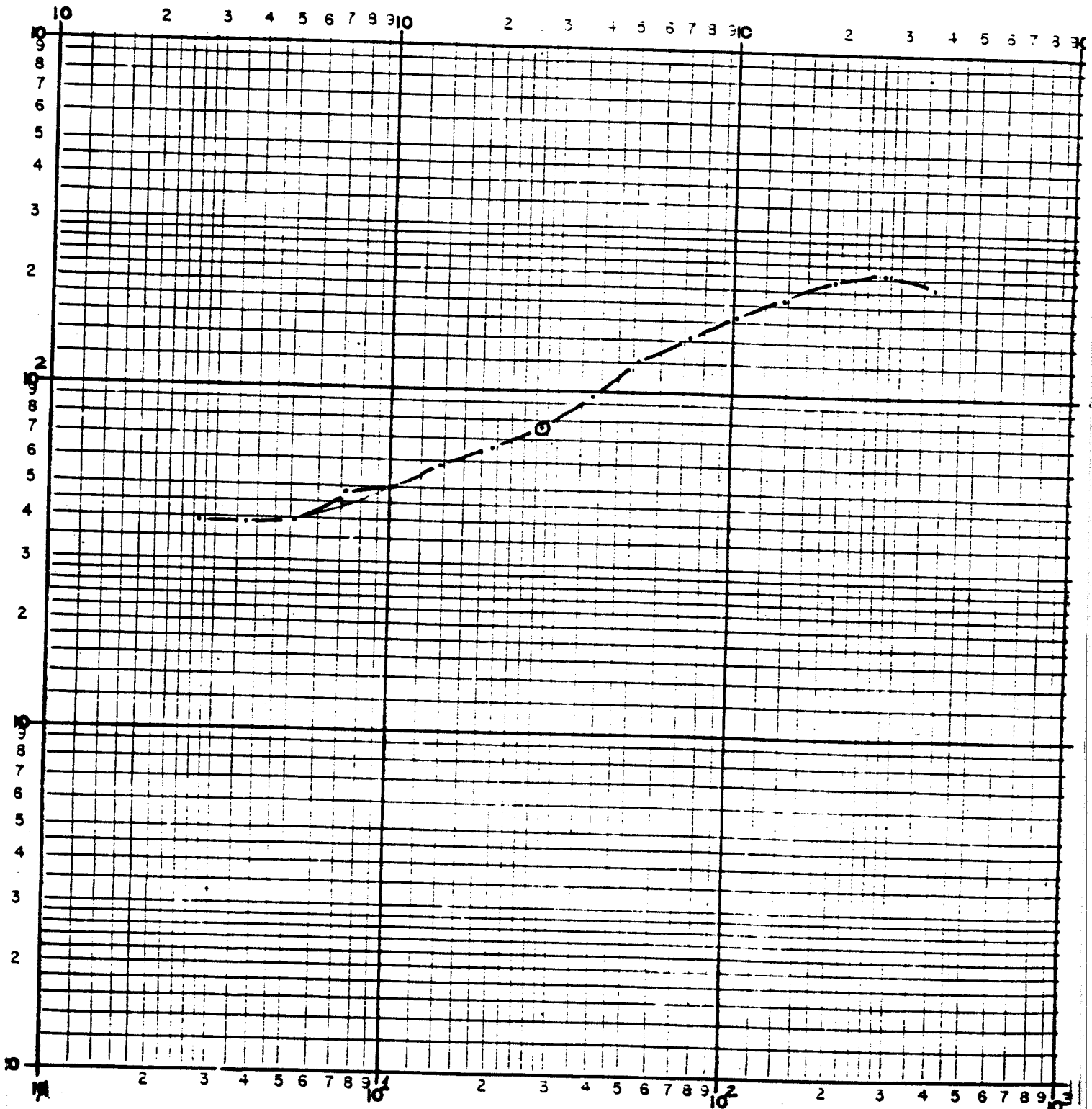


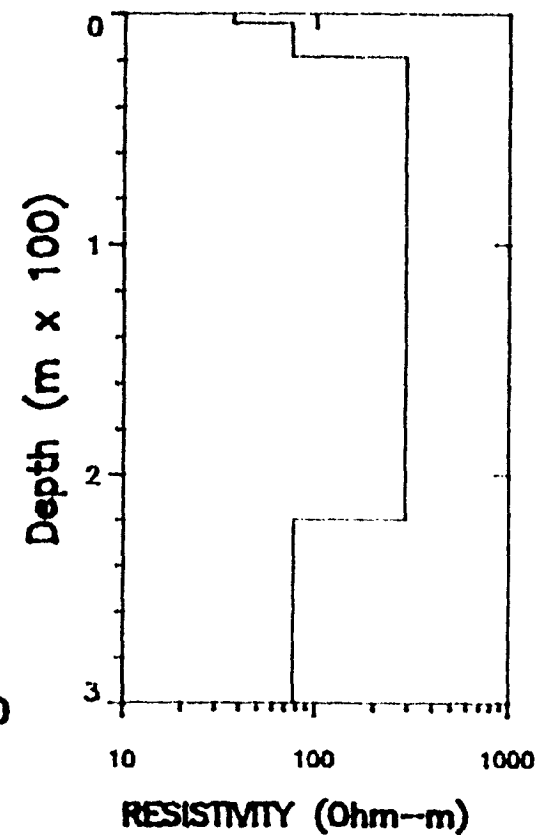
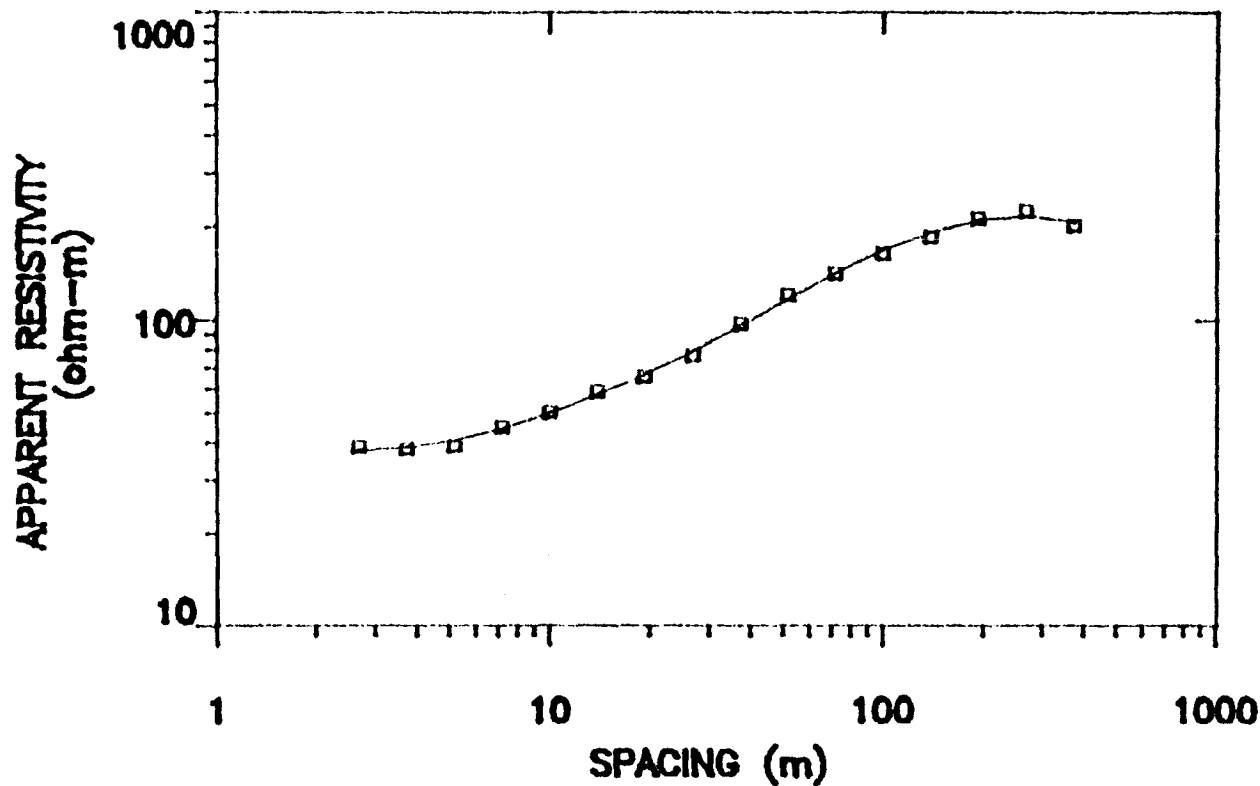
Departamento de Geofísica

Estudio *El Sabinar* S.E.V. *33*

Fecha *3-2-91* ... Rumbo AB. *N-70°E* ... PERFIL *P-VII*

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 33VII	Date: 91	Azimuth: N-70-E
Equipment: ADARO	Sounding: 33VII	

DATA SET: 34V111

CLIENT: ITGE	DATE: 91
LOCATION: SABINAR	SOUNDING: 34-8
COUNTY: (AB)	AZIMUTH: N-100-E
PROJECT: SEGURA	EQUIPMENT: ADARO
ELEVATION: 1300.00	
SOUNDING COORDINATES: X: 581400.0000 Y: 4232125.0000	

Schlumberger Configuration

FITTING ERROR: 1.165 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1300.0	
1	146.8		1.46	1298.5	0.00996
2	77.45		19.98	1278.5	0.258
3	120.4		45.08	1233.4	0.374
4	115.6		237.6	995.8	2.05
5	323.2				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	121.0	120.6	0.274
2	3.73	106.0	106.4	-0.467
3	5.18	93.70	94.11	-0.443
4	7.20	87.30	86.01	1.47
5	10.00	82.30	81.94	0.427
6	13.90	78.40	80.53	-2.72
7	19.30	81.30	81.03	0.328
8	26.80	85.00	83.50	1.75
9	37.30	88.80	88.21	0.655
10	51.80	93.10	94.61	-1.62
11	72.00	101.3	101.4	-0.136
12	100.0	107.0	107.4	-0.374
13	139.0	113.7	112.1	1.36
14	193.0	116.9	115.3	0.429
15	268.0	119.8	121.9	-1.77
16	373.0	132.3	131.4	0.711
17	518.0	162.5	147.5	9.21

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ADARO

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PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.96								
P 2	-0.01	1.00							
P 3	0.00	0.00	0.94						
P 4	0.00	0.00	0.04	0.95					
P 5	0.00	0.00	-0.05	0.05	0.15				
T 1	0.05	0.01	0.01	0.00	0.00	0.90			
T 2	-0.03	-0.02	-0.12	0.06	-0.07	0.07	0.69		
T 3	0.00	0.00	0.02	-0.02	-0.05	0.00	0.03	0.02	
T 4	0.00	0.00	0.08	-0.12	-0.24	-0.01	0.13	0.08	0.39
	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4



Proyecto:
 Zona: *El Sabinar*
 Observador: *Manuel Mendez*
 Situación: *Sobre plano 1/50.000 n.º 889 de Apatzingán*

COORDENADAS

X *581.400*
 Y *4.232.125*
 Z *1.300*

m V: *Adaro 01*
 m A: *Geotron 328*

Rumbo AB

N-100°E

S.E.V.

34

Perfil:

P-VIII

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	OBSERVACIONES	CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN			
													1 m	10 m	50 m	100 m
1	2,68	/	6,5	100mV	36	121						<i>Cambio de ubicación por caer en el monte y mal los contactos A 150mts del Cortijo de Bajel</i>	21,78			
2	3,73		8,5	v	21	106							42,92			
3	5,18		41	v	46	93,7							83,51			
4	7,2		39	"	21	87,3							162,1			
5	10		40	30mV	10,5	82,3							313,4			
6	13,9		41	10mV	5,3	78,4							606,2			
7	19,3		46	"	3,2	81,3							1.169	109,2		
8	26,8		77	v	2,9	85							2.256	217,8		
9	37,3		64	"	1,3	88,8	10	63	30mV	13	88,6		4.370	429,2		
10	51,8	10	61	v	6,8	93,1							8.429	836,1		
11	72		72	"	4,5	101,3						16.190	1.621			
12	100		120	"	4,1	107						31.420	3.134			
13	139		160	"	3,0	113,7						60700	6.062	1.175		
14	193		150	30mV	1,5	116,9							11.690	2.301		
15	268		145	"	0,77	119,8							22.560	4.474		
16	373		165	1mV	0,50	132,4							43.700	8.702	4.292	
17	518		140	"	0,27	162,5							84.290	16.820	8.351	
18	720												162.900	32.530	16.210	
19	1.000													62.790	31.340	
20	1.390													121.400	60.620	
21	1.930													234.000	116.900	
22	2.680													451.200	225.600	
23	3.730														437.000	
24	5.180														842.880	
25	7.200														1.628.520	
26	10.000														3.141.510	

OBSERVACIONES:

FECHA: *12-2-91*

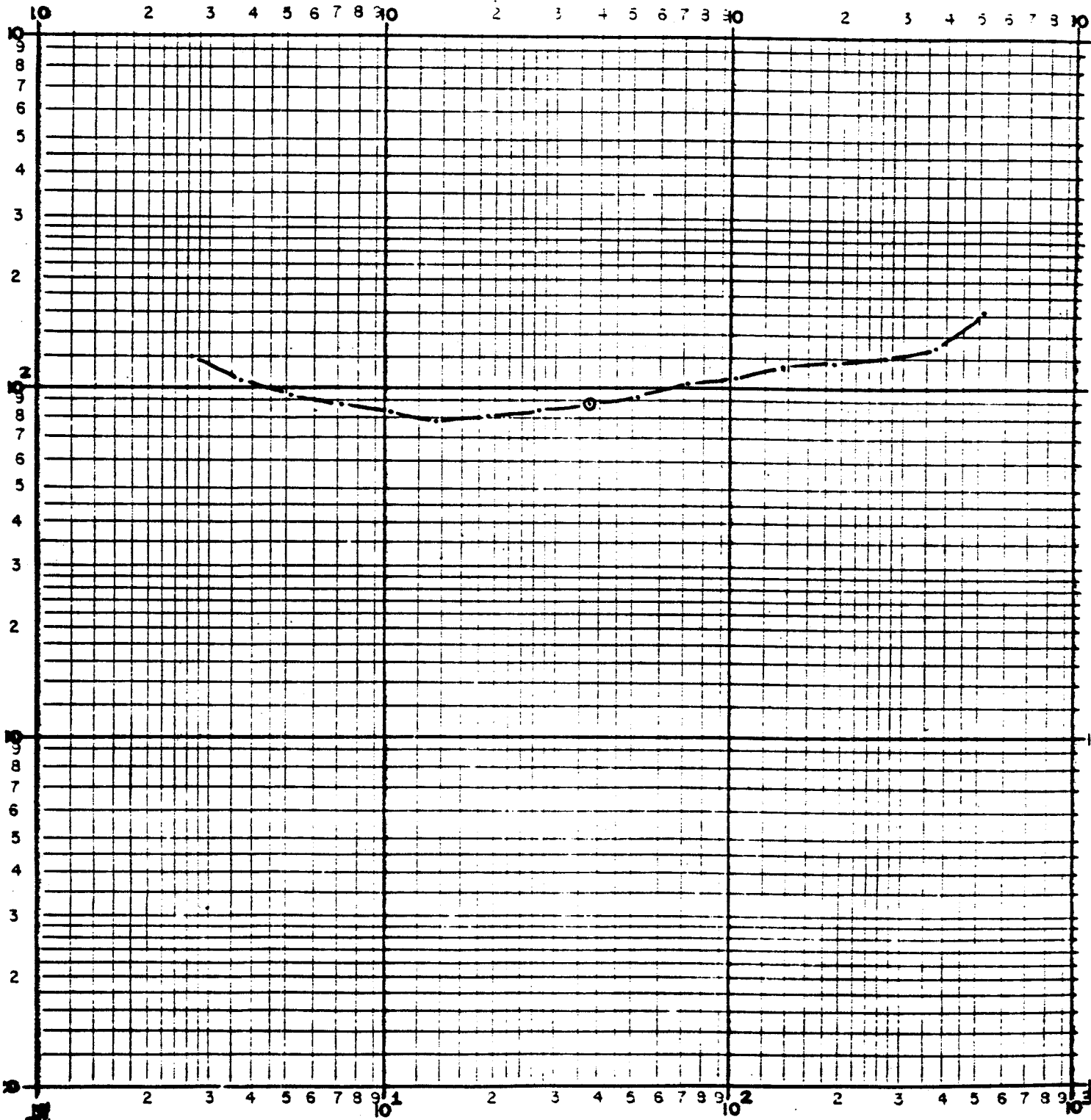


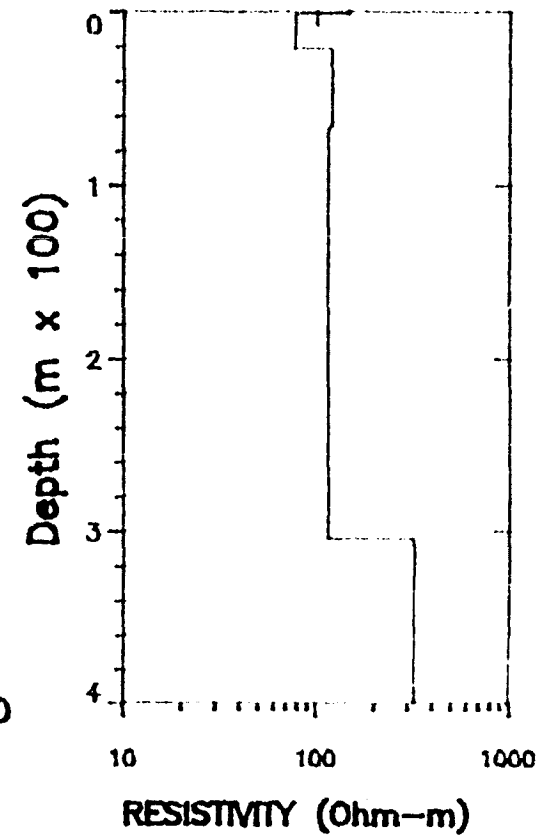
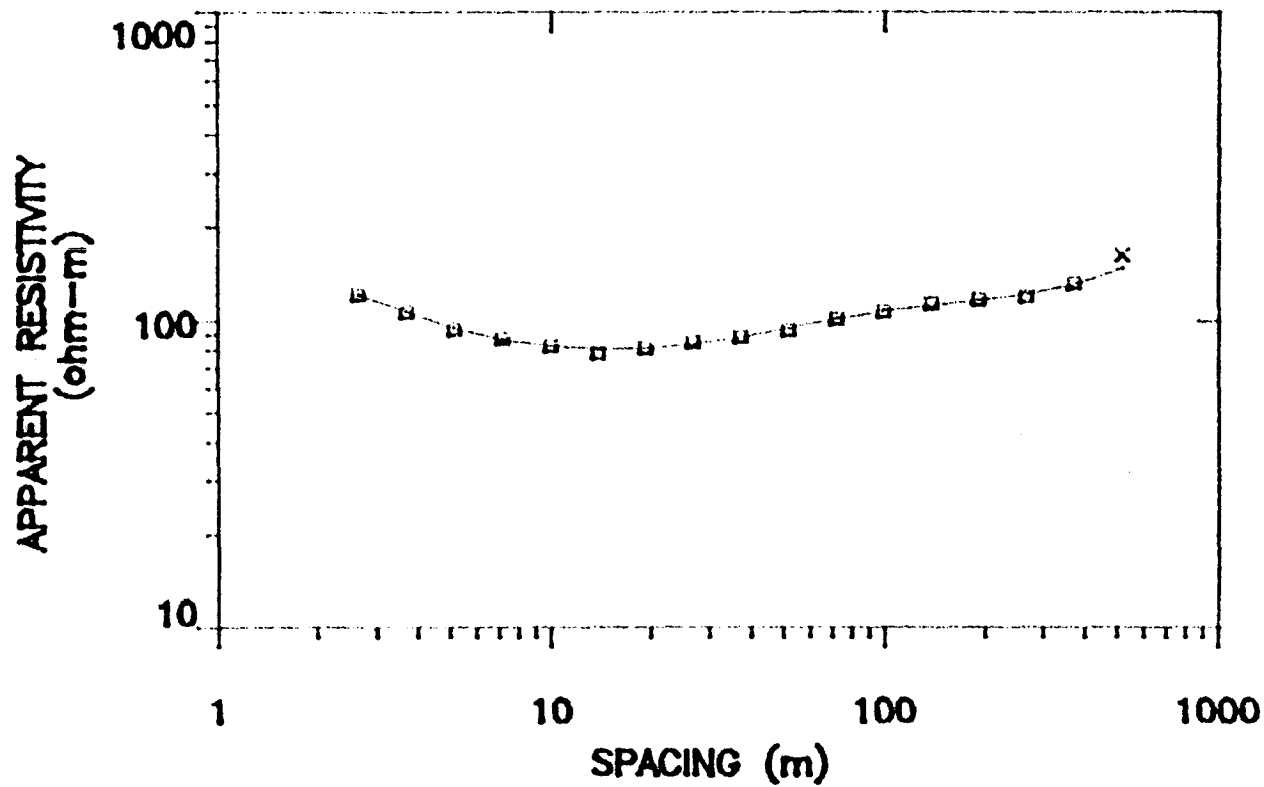
Departamento de Geofísica

Estudio *EL Sabinar* S.E.V. *34*

Fecha *12-2-91* .. Rumbo AB *N-100°-E* .. PERFIL *P-VIII*

<p>Interpretación</p>	<p>Observaciones:</p>
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 34/III	Date: 91	Azimuth: N-100-E
Equipment: ADARO	Sounding: 34-8	

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.88								
P 2	-0.01	0.94							
P 3	0.01	0.00	0.96						
P 4	0.00	0.00	0.00	0.99					
P 5	0.00	0.01	0.00	-0.04	0.49				
T 1	-0.25	-0.10	0.03	0.00	0.00	0.33			
T 2	0.01	0.16	0.08	0.00	-0.02	0.23	0.41		
T 3	0.03	-0.01	-0.12	-0.05	-0.09	0.07	0.23	0.45	
T 4	0.00	-0.01	0.01	0.04	0.27	-0.01	0.00	0.15	0.23
	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4



Proyecto:
 Zona: *El Sabinar*
 Observador: *Manuel Menchero*
 Situación: *Sobre plano 1/50.000 n° 889 de Moratalla*

COORDENADAS

X *581.540*
 Y *4.231.000*
 Z *1.230*

mV: *Adaro 01*
 mA: *Geotron 328*
 S.E.V. *35*

Rumbo AB
N-75°-E
 Perfil:
P-VIII

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	OBSERVACIONES	CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN			
													1 m	10 m	50 m	100 m
1	2.68	1	4.5	100mV	70	339						<i>Caliza</i>	21.78			
2	3.73		3.8	u	32	361							42.92			
3	5.18		4.5	u	21	390							83.51			
4	7.2		5	30mV	11.8	382							182.1			
5	10		14	u	16.8	376							313.4			
6	13.9		18.8	u	11	355							606.2			
7	19.3		15.5	10mV	4.5	339							1.189	109.2		
8	26.8		16.5	u	2.5	342	10	16.5	30mV	24.5	323		2.256	217.8		
9	37.3		16	3mV	1.29	352		16	u	12.3	330		4.370	429.2		
10	51.8	10	20	10mV	8.5	355							6.420	836.1		
11	72		21.5	u	5.0	377							16.290	1.821		
12	100		43	u	5.1	372							31.420	3.134		
13	139		50	u	3.0	364							60.700	6.062	1.175	
14	183		110	u	3.15	335								11.890	2.301	
15	268		125	8mV	1.6	289								22.560	4.474	
16	373		165	u	0.8	212								43.700	8.702	4.292
17	518		160	u	0.31	163								84.290	16.820	8.351
18	720													162.900	32.530	16.210
19	1.000														62.780	31.340
20	1.300														121.400	60.620
21	1.930														234.000	116.900
22	2.680														451.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: *12-2-91*

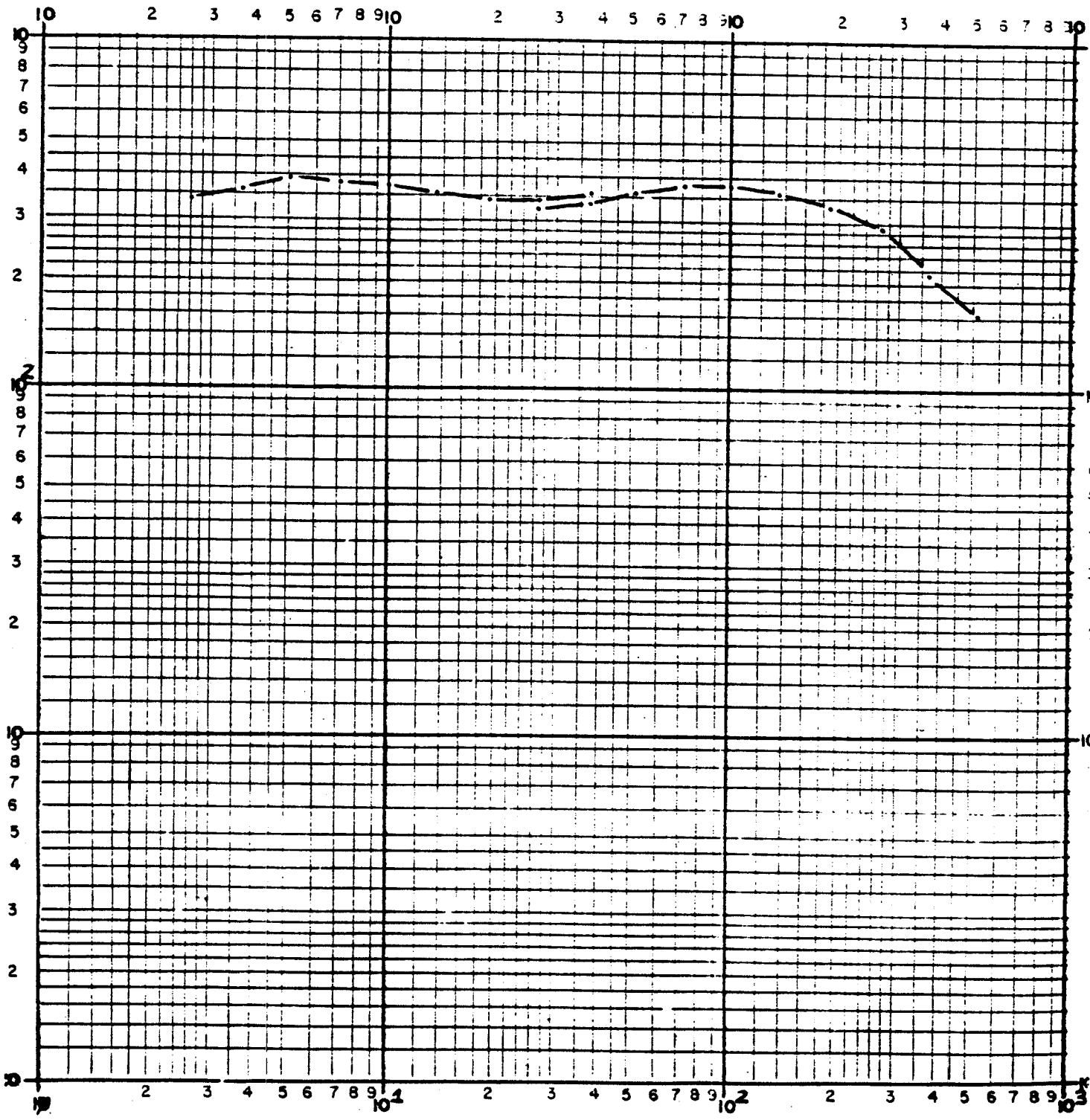


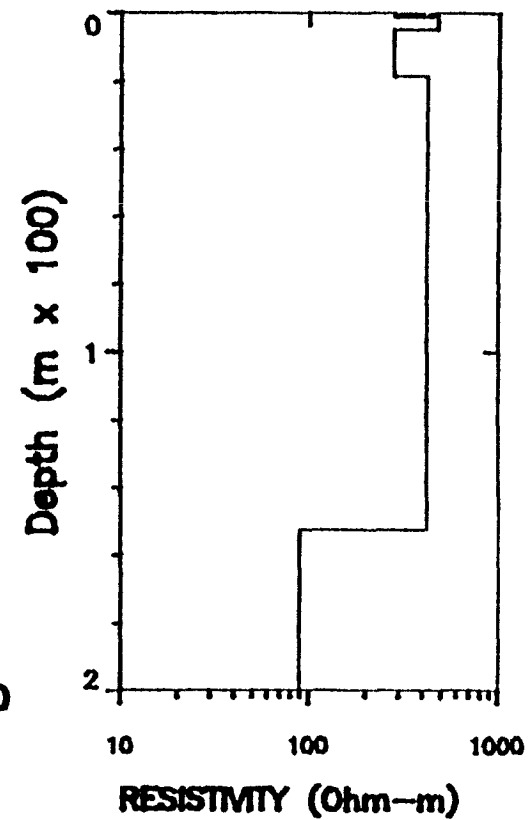
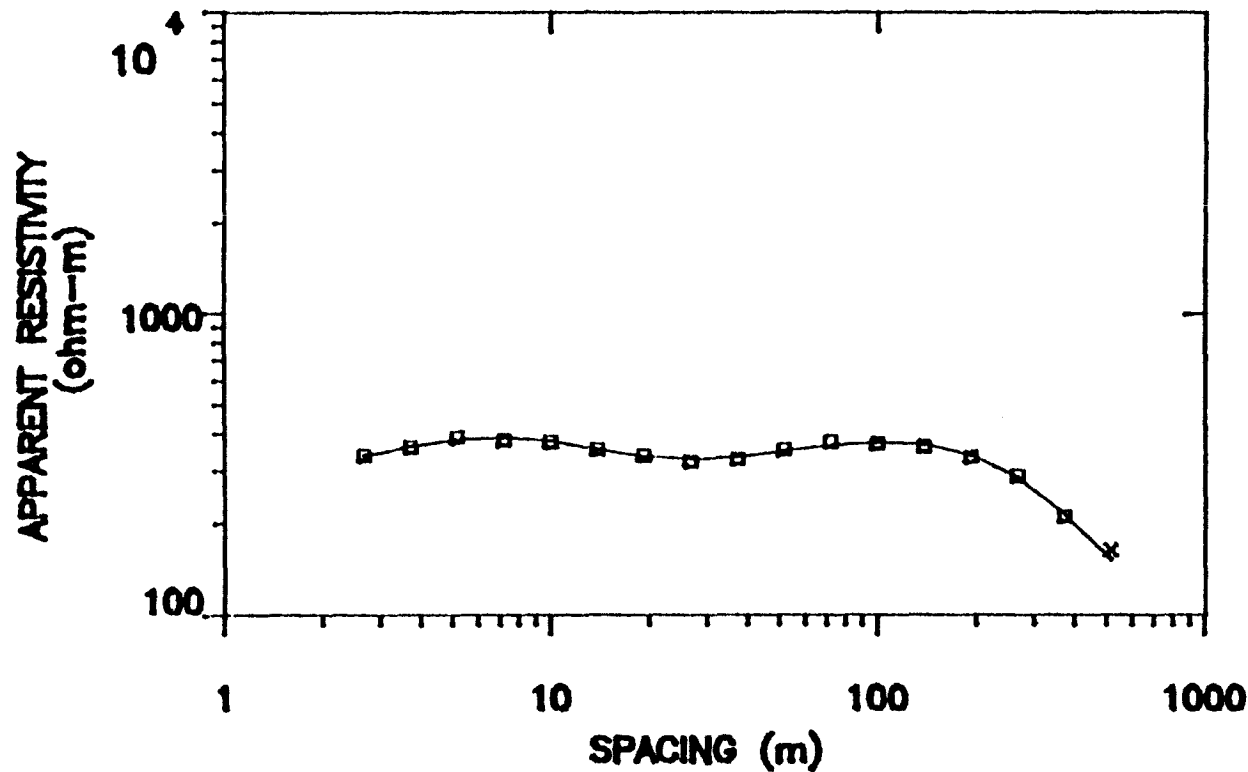
Departamento de Geofísica

Estudio *El Sabinar* S.E.V. *35*

Fecha *12-2-91* ... Rumbo AB. *N-75°E* ... PERFIL *P-VIII*

Interpretación	Observaciones: <i>Calizas</i>
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 35VII	Date: 91	Azimuth: N-75-E
Equipment: ADARO	Sounding: 35-8	

DATA SET: 36VIII

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1140.00

DATE: 91
 SOUNDING: 36-8
 AZIMUTH: N-100-E
 EQUIPMENT: ADARO

SOUNDING COORDINATES: X: 581080.0000 Y: 4229425.0000

Schlumberger Configuration

FITTING ERROR: 2.136 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1140.0	
1	88.06		3.68	1136.3	0.0418
2	51.13		28.40	1107.9	0.555
3	121.4		34.90	1073.0	0.287
4	34.19		98.37	974.6	2.87
5	130.9				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	3.73	86.16	83.92	2.59
2	5.18	76.79	79.60	-3.66
3	7.20	73.98	73.13	1.14
4	10.00	64.80	65.84	-1.59
5	13.90	60.59	59.80	1.29
6	19.30	57.59	56.36	2.14
7	26.80	55.80	55.57	0.411
8	37.30	54.60	57.22	-4.81
9	51.80	61.90	60.99	1.46
10	72.00	66.20	65.51	1.03
11	100.0	68.90	68.23	0.971
12	139.0	65.90	67.35	-2.20
13	193.0	63.50	64.21	1.95
14	268.0	61.90	63.11	-1.96
15	373.0	68.60	67.57	1.49
16	518.0	76.60	76.95	-0.469

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ADARO

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PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.99									
P 2	0.00	0.99								
P 3	0.00	-0.01	0.67							
P 4	0.00	0.01	0.09	0.65						
P 5	0.00	-0.01	0.00	0.04	0.69					
T 1	0.02	0.02	0.01	-0.02	0.02	0.91				
T 2	-0.01	-0.03	-0.17	0.09	-0.05	0.07	0.81			
T 3	0.00	0.00	0.39	0.11	-0.10	0.00	0.15	0.35		
T 4	0.00	0.00	0.06	-0.38	-0.22	0.00	0.04	0.09	0.35	
	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4	

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ADARO

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Proyecto:
 Zona: *El Sabinar*
 Observador: *U. Manuel M. M. M.*
 Situación: *Sobre plano 1/50.000 n.º 889 de Moratalla*

COORDENADAS
 X *581.080*
 Y *4.229.425*
 Z *1.140*

mV: *Adaro 01*
 mA: *Geotrau 328*
 S.E.V. *36*

Rumbo AB
N-100°E
 Perfil:
P-VIII

CONSTANTES PARA DISPOSITIVO SCHULLMBERGER
 SIMETRICO
 MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2.68	1	10	100mV	41	89.3						<i>Cambio de situacion, por un terreno</i>	21.78			
2	3.73		14	"	30	92						<i>acceso al sitio de origen.</i>	42.92			
3	5.18		62	"	61	82							83.51			
4	7.2		41	"	20	79						<i>Marques y Calzap</i>	182.1			
5	10		86	30mV	19	69.2							313.4			
6	13.9		75	10mV	8.0	64.7							606.2			
7	19.3		135	"	7.1	61.5							1.169	109.2		
8	26.8		125	"	3.35	60.5	10	125	100mV	82	55.8		2.258	217.8		
9	37.3		150	"	2.0	58.3		165		21	54.6		4.370	429.2		
10	51.8	10	135	30mV	10	61.9							8.429	836.1		
11	72		142	10mV	5.8	66.2							16.790	1.621		
12	100		282	"	6.2	68.9							31.420	3.134		
13	139		285	"	3.1	65.9							60.700	6.082	1.175	
14	193		250	30mV	1.4	65.5								11.690	2.301	
15	268		255	"	0.7	61.9								22.560	4.474	
16	373		255	10mV	0.4	68.6								43.700	8.702	4.292
17	518		220	"	0.2	76.6								84.290	16.820	8.351
18	720													182.900	32.530	16.210
19	1.000														62.790	31.340
20	1.300														121.400	60.620
21	1.930														234.000	116.900
22	2.880														461.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: *14-2-91*

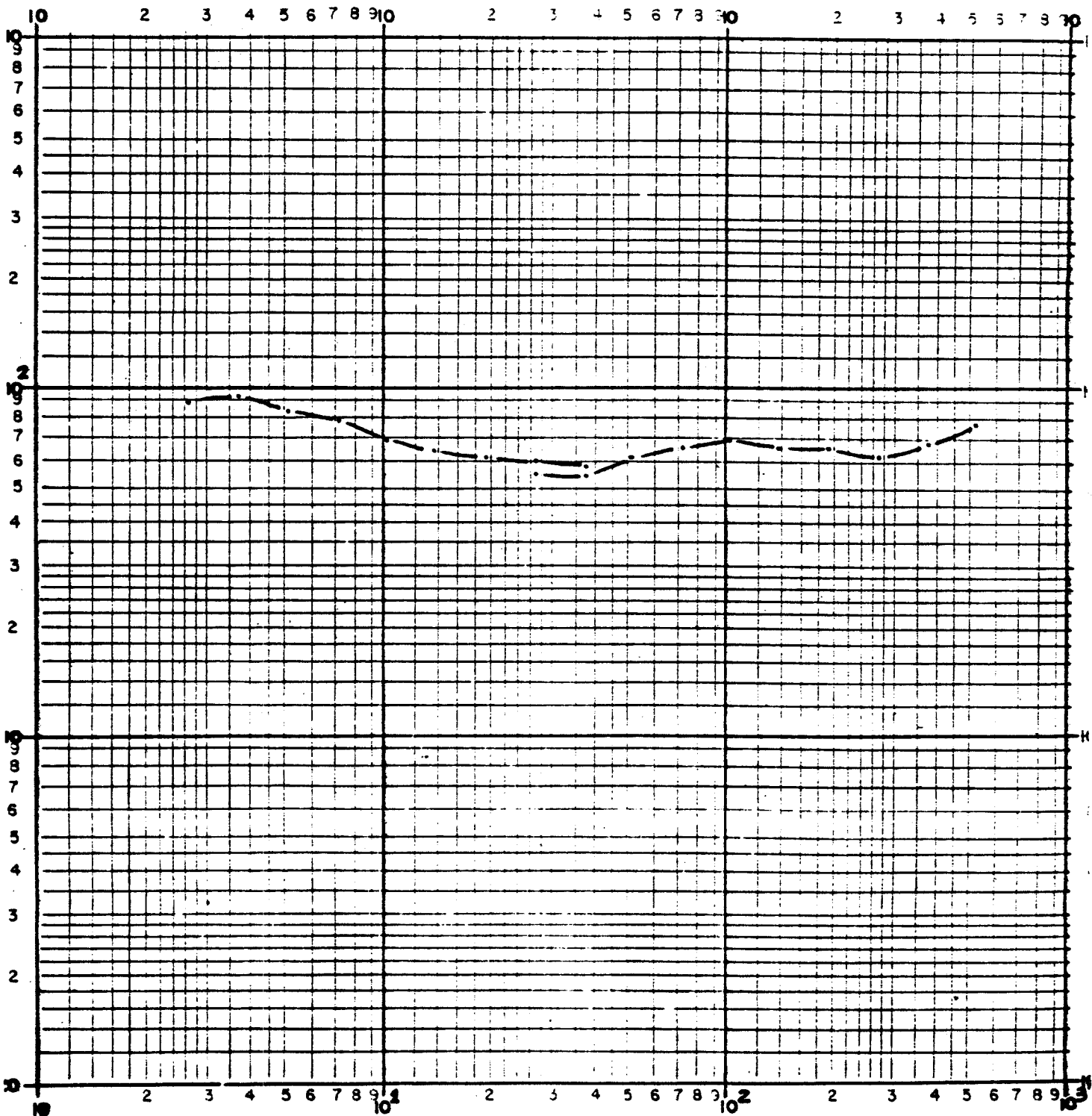


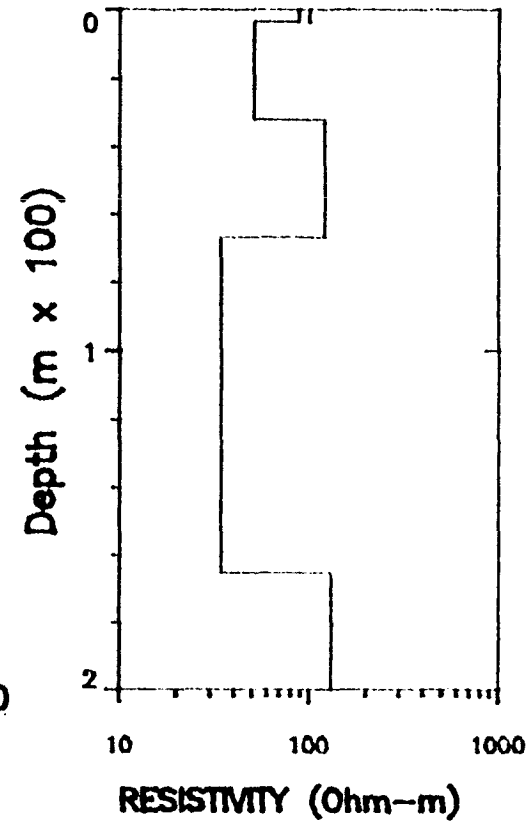
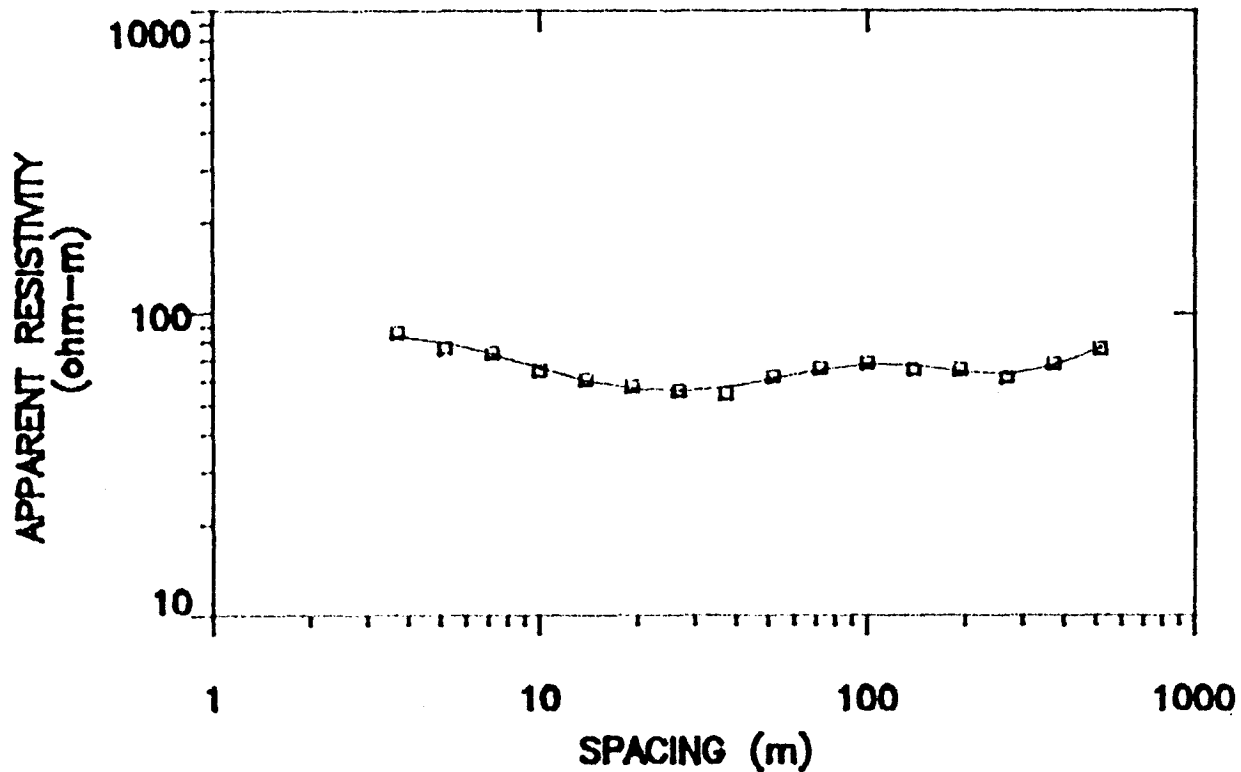
Departamento de Geofísica

Estudio *El Sabioar* S.E.V. 36

Fecha *14-2-91* ... Rumbo AB *N-100°E* ... PERFIL *P-VIII*

Interpretación	Observaciones:
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for:	ITGE
by:	ADARO
Data Set: 36VIII	Date: 91
Equipment: ADARO	Sounding: 36-8

SEGURA
SABINAR (AB)
Azimuth: N-100-E

DATA SET: 37VIII

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1150.00

DATE: 91
 SOUNDING: 37-8
 AZIMUTH: N-70-E
 EQUIPMENT: ADARO

SOUNDING COORDINATES: X: 582150.0000 Y: 4229000.0000

Schlumberger Configuration

FITTING ERROR: 2.259 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1150.0	
1	200.0		0.978	1149.0	0.00489
2	57.70		4.46	1144.5	0.0773
3	10.57		5.73	1138.8	0.542
4	83.78		23.42	1115.3	0.279
5	13.12		76.53	1038.8	5.82
6	154.8				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	RA (ohm-m)		DIFFERENCE (percent)
		DATA	SYNTHETIC	
1	2.68	99.89	100.5	-0.627
2	3.73	77.10	75.45	2.13
3	5.18	57.96	59.38	-2.44
4	7.20	47.54	47.67	-0.271
5	10.00	37.69	36.95	1.94
6	13.90	29.09	28.90	0.655
7	19.30	25.54	26.61	-4.16
8	26.80	30.00	29.43	1.88
9	37.30	35.40	34.02	3.89
10	51.80	35.90	37.36	-4.07
11	72.00	38.60	37.83	1.98
12	100.0	34.70	35.20	-1.45
13	139.0	32.20	31.49	2.17
14	193.0	29.90	30.41	-1.72
15	268.0	34.30	34.38	-0.235
16	373.0	43.70	42.94	1.72
17	518.0	53.90	54.31	-0.778

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ADARO

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PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER

P 1	0.63												
P 2	-0.09	0.95											
P 3	-0.02	-0.03	0.55										
P 4	0.03	0.02	0.03	0.64									
P 5	-0.01	-0.01	0.01	0.02	0.61								
P 6	0.00	0.00	-0.02	0.04	-0.04	0.58							
T 1	0.23	0.08	0.03	-0.03	0.01	0.00	0.84						
T 2	0.02	0.03	0.11	-0.04	0.01	0.00	-0.03	0.95					
T 3	-0.02	-0.02	-0.46	-0.09	0.03	-0.02	0.02	0.10	0.47				
T 4	-0.02	-0.02	-0.04	0.40	0.12	-0.07	0.03	0.04	0.08	0.49			
T 5	-0.01	-0.01	0.00	0.01	-0.41	-0.17	0.01	0.01	0.02	0.13			
	P 1	P 2	P 3	P 4	P 5	P 6	T 1	T 2	T 3	T 4			

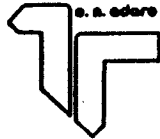
SECOND PART OF RESOLUTION MATRIX:

T 5	0.52
	T 5

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ADARO

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Proyecto:
 Zona: El Sabinar
 Observador: Manuel Sanchez
 Situación: Sobre plano 1/50,000 n° 889 de Moratalla

COORDENADAS

X 582.150
 Y 4.229.000
 Z 1.150

m V: Adaro 01
 m A: Geotru 328
 S.E.V. 37

Rumbo AB N-70°E
 Perfil: P-VIII

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	P (Ωm)	MN	I (mA)	Esc. Volt.	V (mV)	P (Ωm)	OBSERVACIONES	1 m	10 m	50 m	100 m	
1	2.68	1	8.5	100mV	34	87.2											
2	3.73		44	"	69	67.3											
3	5.18		38	"	23	50.6											
4	7.2		43	30mV	11	41.5											
5	10		41	10mV	4.3	32.9											
6	13.9		105	"	4.4	25.4											
7	19.3		105	"	2.0	22.3											
8	26.8		160	"	1.9	26.8	10	160	30mV	22	30						
9	37.3		170	3mV	1.2	30.9		170	"	14	35.4						
10	51.8	10	135	10mV	5.8	35.9											
11	72		130	"	3.1	38.6											
12	100		235	"	2.6	34.7											
13	139		245	3mV	1.3	32.2											
14	193		215	"	0.15	29.9											
16	268		230	1mV	0.35	34.3											
16	373		220	"	0.22	43.7											
17	518		250	"	0.16	53.9											
18	720																
19	1.000																
20	1.380																
21	1.930																
22	2.680																
23	3.730																
24	5.180																
26	7.200																
28	10.000																

En pie de montaña; afloramientos
 Calizas

Alca Este, en una vaguada
 Topografía muy irregular

OBSERVACIONES:

FECHA: 14-2-91

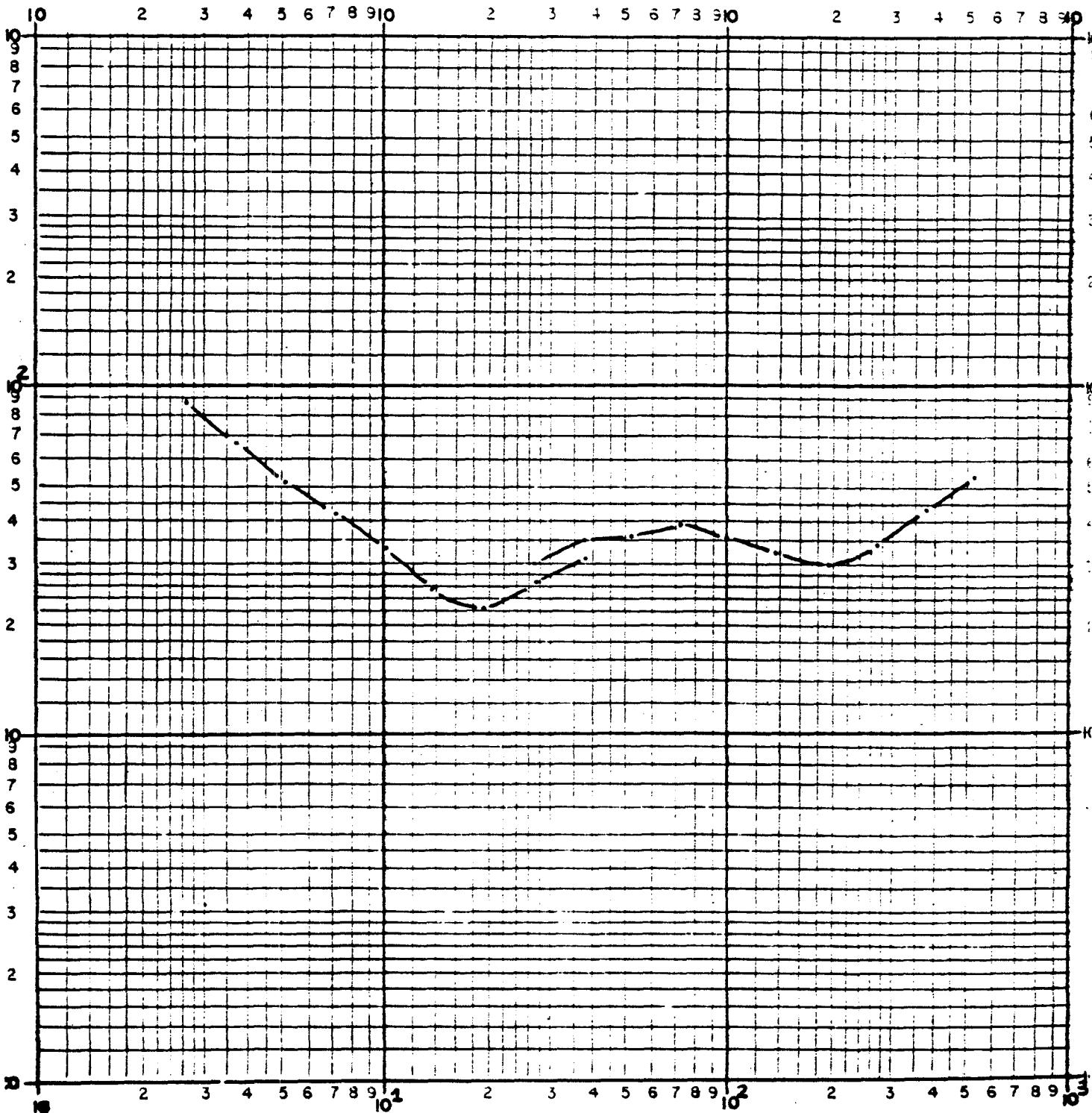


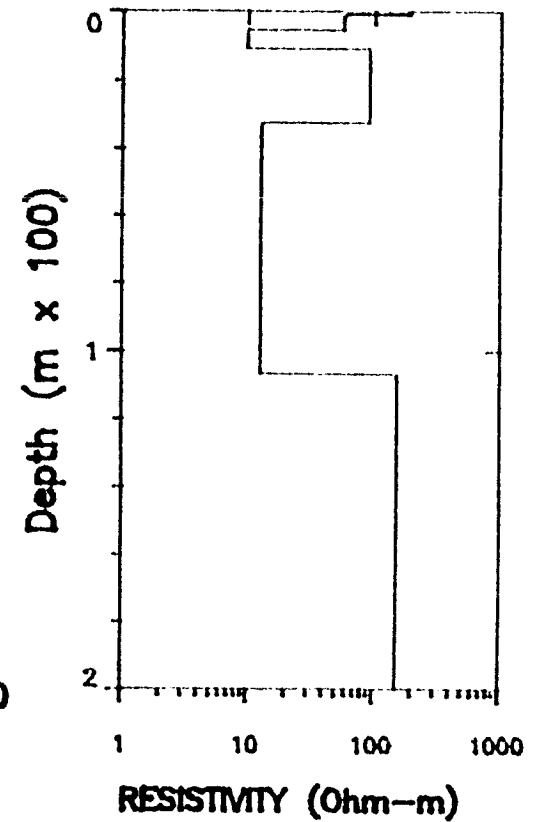
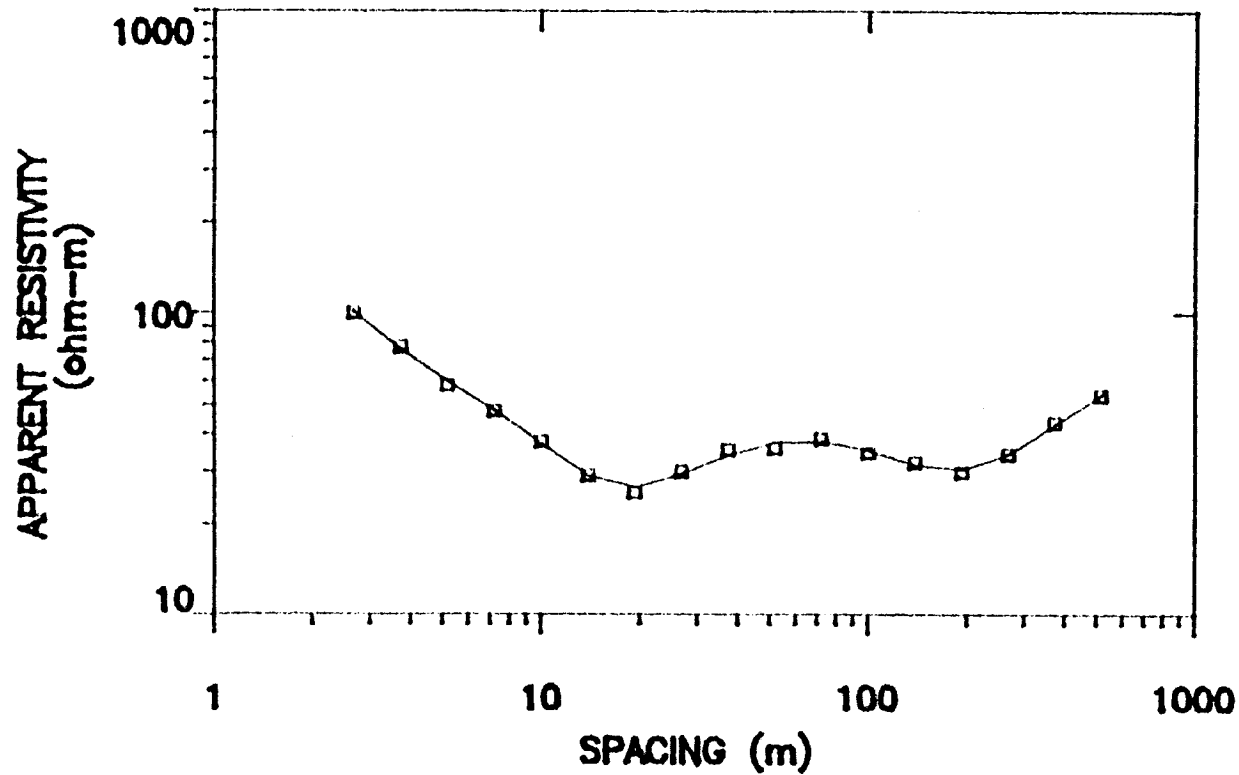
Departamento de Geofísica

Estudio *El Sabinar* S.E.V. *37*

Fecha. *14-2-91*.. Rumbo AB. *N-70°E*.. PERFIL .. *P-VIII*

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 37/III	Date: 91	Azimuth: N-70-E
Equipment: ADARO	Sounding: 37-8	

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.84								
P 2	0.06	0.63							
P 3	0.02	0.05	0.74						
P 4	0.00	0.00	0.00	1.00					
P 5	-0.01	0.01	0.00	-0.01	0.42				
T 1	-0.26	-0.06	0.10	-0.01	-0.02	0.44			
T 2	0.00	0.42	0.08	0.00	-0.01	0.16	0.38		
T 3	0.02	0.06	-0.38	-0.01	-0.04	0.10	0.12	0.35	
T 4	0.00	0.00	0.01	-0.01	-0.15	-0.01	-0.01	-0.01	0.95
	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4

*

ADARO

*



Proyecto:
 Zona: *El Sabinar*
 Observador: *M. J. Anel, M. Sanchez*
 Situación: *Sobre plano 1/50.000 n.º 889 de Vitoria*

COORDENADAS

X *582.250*
 Y *4.228.250*
 Z *1.070*

mV: *Adaro 01*
 mA: *Geotron 328*
 S.E.V. *38*

Rumbo AB

N-72°E

Perfil:

P-VIII

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	1 m	10 m	50 m	100 m	
1	2,68	1	10	100mV	30	65,3							21,78				
2	3,73		13	"	20	66,0							42,92				
3	5,18	(52)	10	"	42	67,5							83,61				
4	7,2	(52)	10	"	20	62,4							182,1				
5	10		48	100mV	8,2	53,5							313,4				
6	13,9		45	"	3,7	49,8							606,2				
7	19,3		37	"	1,6	50,6							1.169	109,2			
8	26,8		190	"	4,4	52,2	10	185	100mV	42	49,5		2.256	217,8			
9	37,3		145	"	1,9	57,3		145	"	18	53,3		4.370	429,2			
10	51,8	10	150	30mV	10,5	58,5							6.429	836,1			
11	72		205	100mV	7,3	57,7							16.790	1.621			
12	100		205	"	4,0	61,1							31.420	3.134			
13	139		235	"	2,5	64,5							60.700	6.062	1.176		
14	193		220	30mV	1,35	71,7								11.690	2.301		
15	268		195	"	0,75	86,8								22.560	4.474		
16	373		250	100mV	0,60	104,9								43.700	8.702	4.292	
17	518		240	"	0,39	137,0								84.290	16.820	8.361	
18	720													162.900	32.530	16.210	
19	1.000														62.790	31.340	
20	1.390															121.400	60.620
21	1.930															234.000	116.900
22	2.680															451.200	225.600
23	3.730																437.000
24	5.180																842.880
25	7.200																1.628.520
26	10.000																3.141.510

OBSERVACIONES:

FECHA: *14-2-91*

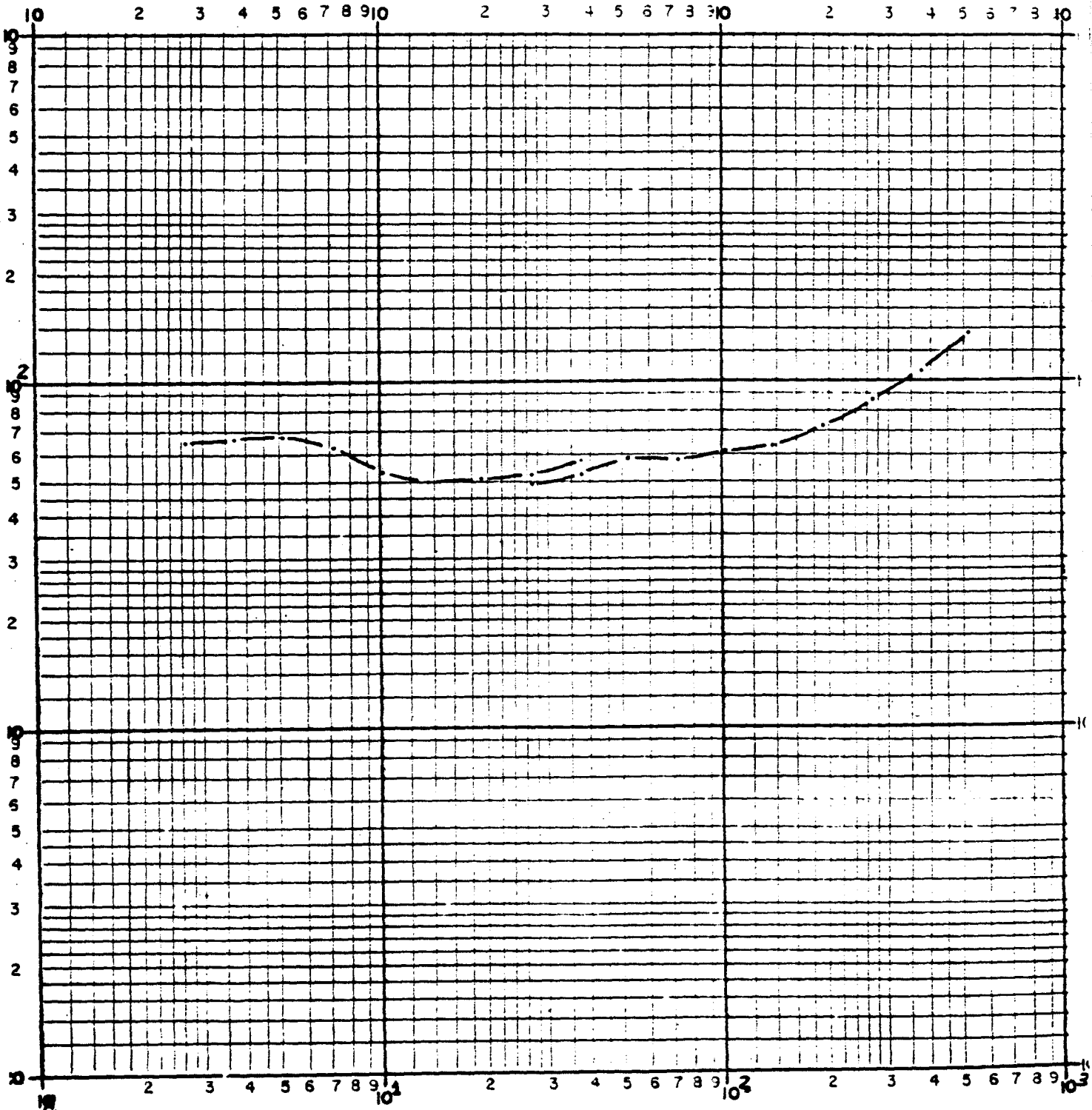


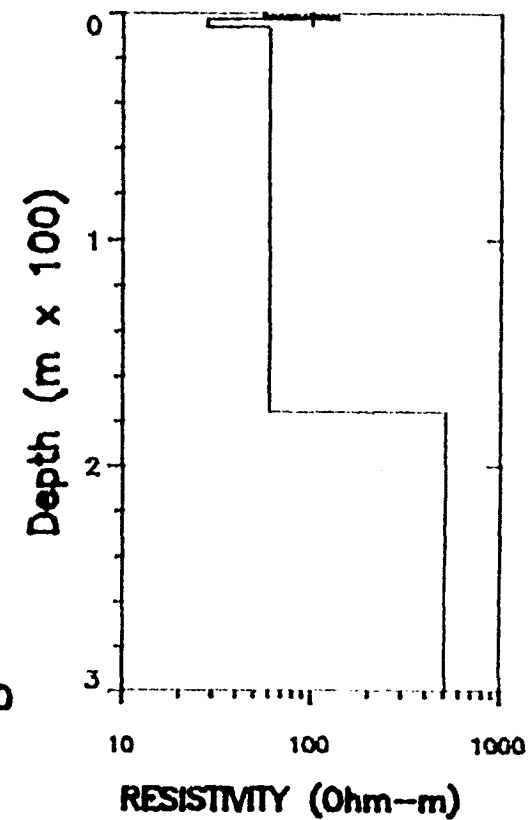
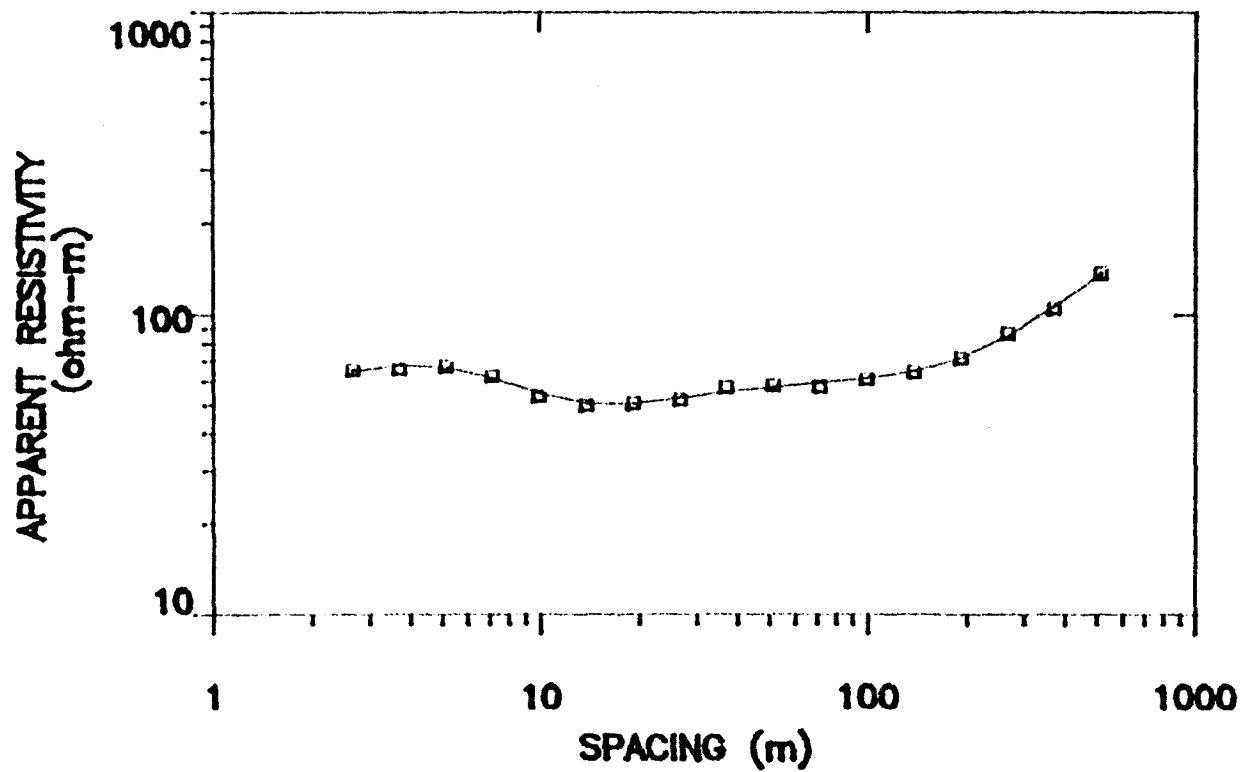
Departamento de Geofísico

Estudio..... *El Sabinar*..... S.E.V. *38*.....

Fecha *14-2-91*... Rumbo AB *N-72°E*... PERFIL *P-VIII*.....

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 38VII	Date: 91	Azimuth: N-72-E
Equipment: ADARO	Sounding: 38-8	

DATA SET: 40IX

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1270.00

DATE: 91
 SOUNDING: 40IX
 AZIMUTH: N-80-E
 EQUIPMENT: ADARO

SOUNDING COORDINATES: X: 582850.0000 Y: 4231560.0000

Schlumberger Configuration

FITTING ERROR: 1.008 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1270.0	
1	87.48		0.926	1269.0	0.0105
2	189.4		6.02	1263.0	0.0317
3	116.5		5.71	1257.3	0.0490
4	434.7		12.78	1244.5	0.0294
5	81.37		109.9	1134.6	1.35
6	36.63		86.36	1048.2	2.35
7	751.7				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	129.0	128.7	0.210
2	3.73	143.0	143.5	-0.357
3	5.18	157.0	156.0	0.610
4	7.20	162.0	164.9	-1.83
5	10.00	172.0	169.9	1.17
6	13.90	175.0	172.8	1.24
7	19.30	174.0	177.4	-2.00
8	26.80	187.0	186.1	0.467
9	37.30	194.0	193.1	0.428
10	51.80	187.0	188.0	-0.567
11	72.00	168.0	166.3	0.979
12	100.0	135.0	135.2	-0.173
13	139.0	106.0	107.3	-1.29
14	193.0	92.00	90.77	1.33
15	268.0	86.50	86.60	-0.120
16	373.0	95.00	95.86	-0.911

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ADARO

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No.	Spacing (m)	FA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
17	518.0	120.0	119.2	0.598

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.72										
P 2	-0.01	0.97									
P 3	0.01	0.04	0.67								
P 4	-0.01	0.00	0.09	0.59							
P 5	0.00	-0.01	0.01	0.00	0.92						
P 6	0.00	0.00	-0.01	-0.01	0.08	0.51					
P 7	0.00	0.00	0.00	0.00	0.01	0.04	0.06				
T 1	-0.40	-0.06	0.07	-0.02	0.00	0.00	0.00	0.34			
T 2	0.02	0.08	0.05	-0.08	0.06	-0.05	0.00	0.13	0.48		
T 3	0.01	0.00	-0.39	-0.06	0.03	-0.03	0.00	0.01	0.21	0.35	
T 4	0.00	0.00	-0.04	0.46	0.06	-0.05	0.00	0.00	0.07	0.10	
T 5	-0.01	0.00	0.00	-0.03	0.13	-0.01	-0.15	0.00	-0.06	-0.04	
T 6	0.00	0.00	0.00	0.00	-0.03	-0.43	-0.08	0.00	0.02	0.01	
	P 1	P 2	P 3	P 4	P 5	P 6	P 7	T 1	T 2	T 3	

SECOND PART OF RESOLUTION MATRIX:

T 4	0.43		
T 5	-0.06	0.61	
T 6	0.02	0.20	0.43
	T 4	T 5	T 6

*

ADARD

*



e. a. eders

Proyecto:
 Zona: El Sabinar
 Observador: Manuel Mendez
 Situación: Sobre plano 1/50.000 n.º 889 de Moratalla

COORDENADAS
 X 582.850
 Y 4.231.560
 Z 1.270

mV: Adaro 01
 mA: Geotron 328
 S.E.V.
40

Rumbo AB
N-80°E
 Perfil:
P-IX

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER
 SIMETRICO
 MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	OBSERVACIONES	CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN			
													1 m	10 m	50 m	100 m
1	2.68	1	11	100mV	65	129						Calizal	21,78			
2	3.73		10,5	"	35	143							42,92			
3	5.18		12	"	22,5	157							83,51			
4	7.2		11	30mV	11	162							182,1			
5	10		42	"	23	172							313,4			
6	13,9		45	"	13	175							606,2			
7	19,3		47	10mV	7,0	174							1.169	109,2		
8	26,8		47	"	3,9	187	10	47	100mV	39	181		2.256	217,8		
9	37,3	10	53	30mV	24	194							4.370	429,2		
10	51,8		125	"	28	187							8.429	836,1		
11	72		83	10mV	8,5	168							16.290	1.621		
12	100		100	4	4,3	135							31.420	3.134		
13	139		120	"	2,1	106							60.900	6.062	1.175	
14	193		165	3mV	1,3	92								11.690	2.301	
15	268		185	1mV	0,71	86,5								22.560	4.474	
16	373		160	"	0,35	95								43.700	8.702	4.292
17	518		175	"	0,25	120								84.290	16.820	8.361
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.390														121.400	60.620
21	1.930														234.000	116.900
22	2.680														451.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: 12-2-91

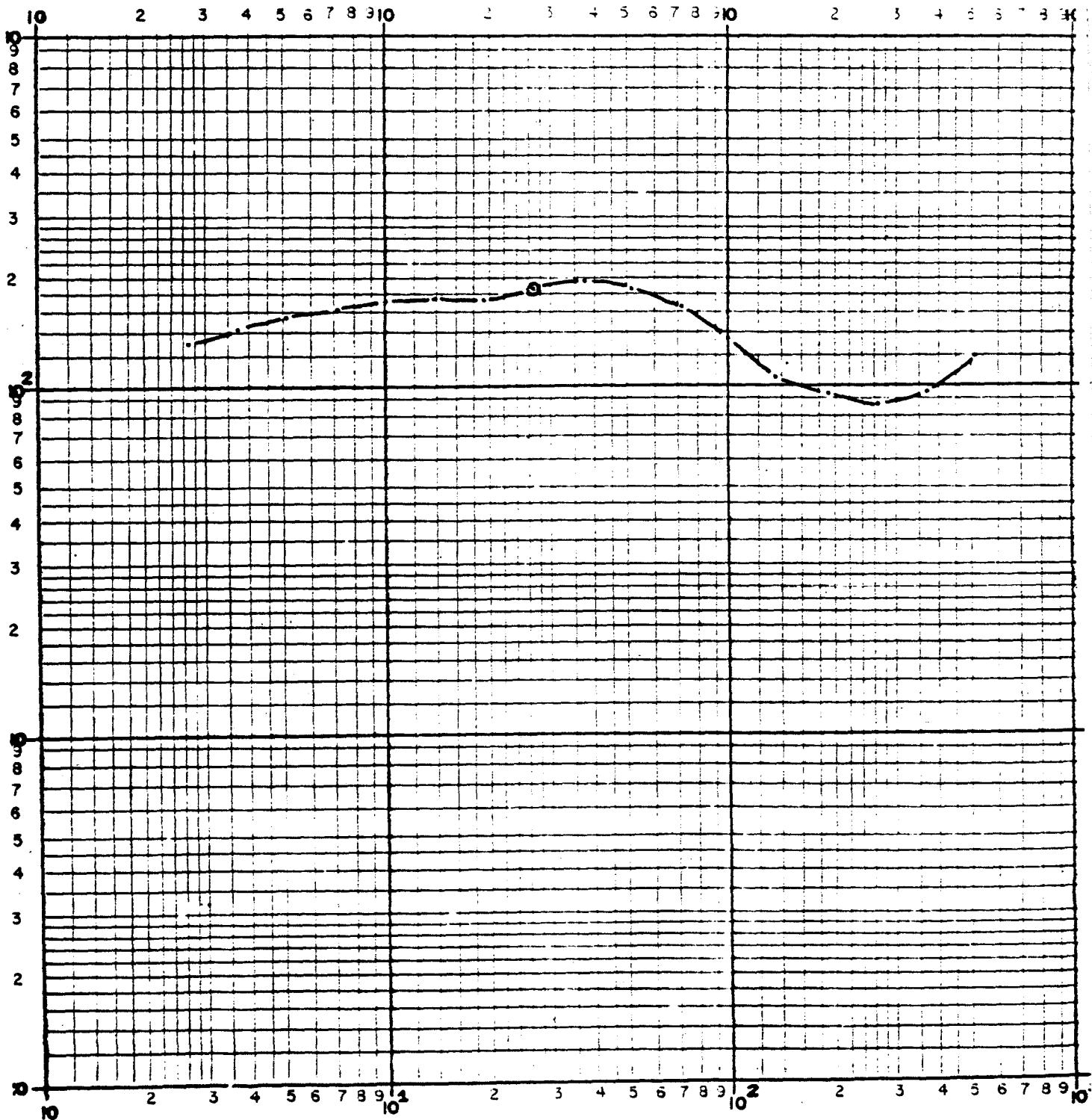


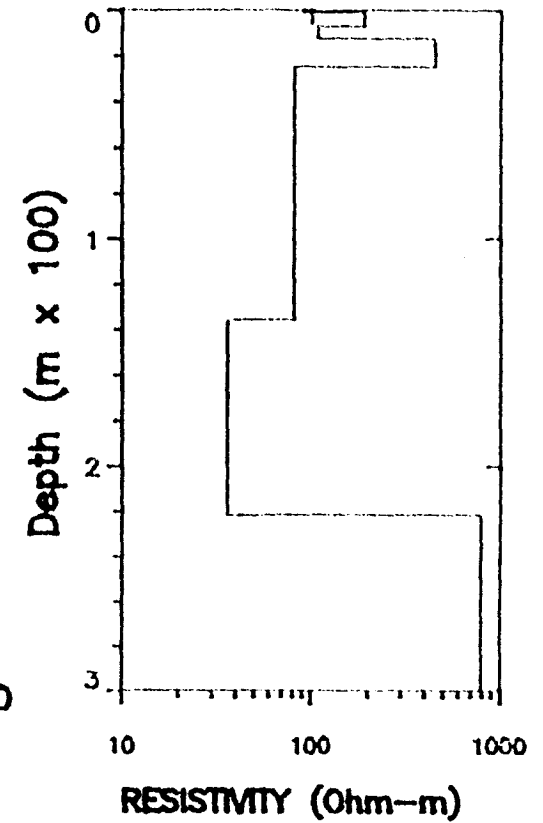
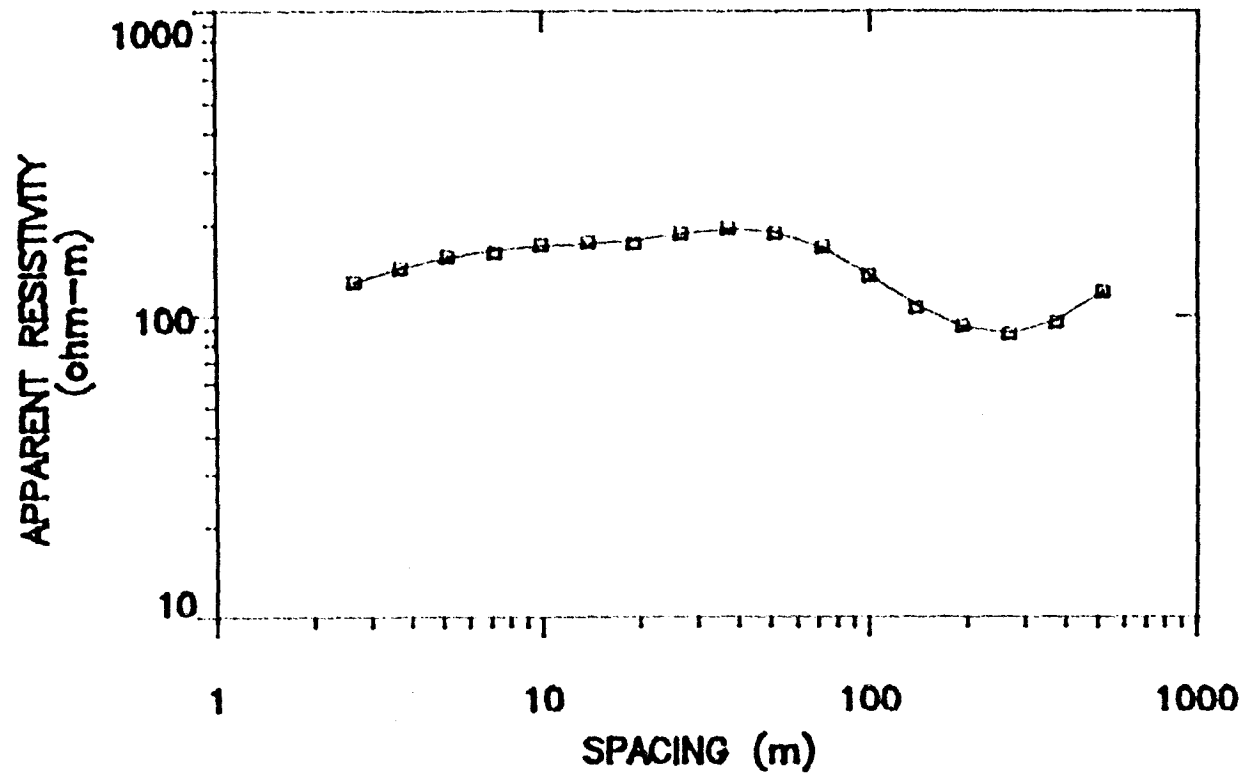
Departamento de Geofísica

Estudio *El Sabinac* S.E.V. *40*

Fecha *12-2-91* ... Rumbo AB. *N-80°E* PERFIL *P-IX*

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 40IX	Date: 91	Azimuth: N-80-E
Equipment: ADARO	Sounding: 40IX	

DATA SET: 411X

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1300.00
 SOUNDING COORDINATES: X: 583400.0000 Y: 4230550.0000

DATE: 91
 SOUNDING: 411X
 AZIMUTH: N-58-E
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 2.588 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
1	1482.0		0.829	1300.0	
2	1821.2		1.65	1299.1	5.600E-04
3	1714.0		1.53	1297.5	9.064E-04
4	2298.4		2.61	1295.9	8.945E-04
5	1360.2		49.49	1293.3	0.00114
6	1492.0		52.63	1243.8	0.0363
7	2525.9		101.5	1191.2	0.0352
8	211.3			1089.7	0.0401

ALL PARAMETERS ARE FREE

No.	Spacing (m)	DATA	RA (ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.58	1655.0	1675.1	-1.21
2	3.73	1803.0	1725.5	4.29
3	5.18	1670.0	1753.0	-5.57
4	7.20	1815.0	1784.1	1.69
5	10.00	1822.0	1774.2	2.61
6	13.90	1657.0	1717.1	-3.62
7	19.30	1650.0	1622.7	1.65
8	26.80	1541.0	1526.3	0.950
9	37.30	1431.0	1456.8	-1.80
10	51.80	1409.0	1421.6	-0.901
11	72.00	1418.0	1416.3	0.118
12	100.0	1496.0	1436.3	3.98
13	139.0	1437.0	1471.6	-2.40
14	193.0	1461.0	1491.6	-2.09
15	262.0	1462.0	1436.6	1.73

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ADARO

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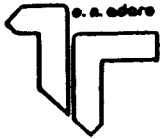
No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
16	373.0	1248.0	1241.4	0.522
17	518.0	910.0	917.1	-0.790

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.83											
P 2	0.11	0.87										
P 3	-0.15	0.19	0.55									
P 4	0.03	-0.05	0.25	0.70								
P 5	0.00	0.00	-0.01	0.01	1.00							
P 6	0.00	-0.01	0.03	-0.02	0.02	0.76						
P 7	0.00	0.01	-0.02	0.02	-0.01	0.15	0.62					
P 8	0.00	0.00	0.01	-0.01	0.01	0.03	-0.02	0.21				
T 1	-0.16	-0.08	0.00	0.04	0.01	-0.02	0.01	0.00	0.05			
T 2	0.01	0.01	-0.09	0.08	0.01	-0.04	0.02	-0.01	0.02	0.07		
T 3	0.03	-0.02	-0.12	0.07	0.01	-0.04	0.02	-0.01	0.02	0.07		
T 4	0.03	-0.02	-0.03	0.30	0.02	-0.05	0.03	-0.01	0.04	0.09		
T 5	0.00	0.00	0.00	0.00	0.00	-0.28	0.03	0.11	0.00	0.01		
T 6	0.00	-0.01	0.02	-0.02	0.01	-0.13	-0.01	0.16	-0.01	-0.02		
T 7	0.00	0.00	0.01	-0.01	0.00	0.02	0.37	0.17	0.00	0.00		
		P 1	P 2	P 3	P 4	P 5	P 6	P 7	P 8	T 1	T 2	

SECOND PART OF RESOLUTION MATRIX:

T 3	0.07					
T 4	0.09	0.19				
T 5	0.01	0.01	0.21			
T 6	-0.02	-0.02	0.17	0.20		
T 7	0.00	0.00	0.18	0.20	0.43	
		T 3	T 4	T 5	T 6	T 7



Proyecto:

Zona: *El Sabinar*

Observador: *Ismael Sanchez*

Situación: *Sobre plano 1/50.000 n.º 889 de Moratalla*

COORDENADAS

X *583.400*

Y *4.230.550*

Z *1.300*

mV: *Adaro 01*
mA: *Geotrac 328*

S.E.V.

41

Rumbo AB

N-58°E

Perfil:

P-IX

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	P (Ωm)	MN	I (mA)	Esc. Volt.	V (mV)	P (Ωm)	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2,68	<i>1</i>	<i>2,5</i>	<i>300mV</i>	<i>190</i>	<i>1655</i>						<i>En camino al repetidor de TV.</i>	21,78			
2	3,73		<i>2</i>	<i>100mV</i>	<i>84</i>	<i>1803</i>						<i>¡ Monte alto ! Descubrimos Calizay</i>	42,92			
3	5,18		<i>2,7</i>	<i>"</i>	<i>54</i>	<i>1670</i>						<i>Calizay</i>	83,51			
4	7,2		<i>2,5</i>	<i>"</i>	<i>28</i>	<i>1815</i>							182,1			
6	10		<i>4,3</i>	<i>"</i>	<i>25</i>	<i>1822</i>							313,4			
8	13,9		<i>15</i>	<i>"</i>	<i>41</i>	<i>1657</i>							606,2			
7	19,3		<i>17</i>	<i>"</i>	<i>24</i>	<i>1650</i>							1.169	109,2		
8	28,8		<i>20,5</i>	<i>300mV</i>	<i>14</i>	<i>1541</i>	<i>70</i>	<i>20</i>	<i>300mV</i>	<i>137</i>	<i>1492</i>		2.258	217,8		
9	37,3	<i>10</i>	<i>21</i>	<i>100mV</i>	<i>70</i>	<i>1431</i>							4.270	429,2		
10	51,8		<i>16</i>	<i>"</i>	<i>27</i>	<i>1409</i>							8.429	835,1		
11	72		<i>20</i>	<i>300mV</i>	<i>17,5</i>	<i>1418</i>							16290	1.621		
12	100		<i>22</i>	<i>"</i>	<i>10,5</i>	<i>1496</i>							31.420	3.134		
13	139		<i>31</i>	<i>100mV</i>	<i>7,35</i>	<i>1437</i>							60.700	6.062	1.175	
14	193		<i>30</i>	<i>"</i>	<i>3,75</i>	<i>1461</i>								11.690	2.301	
15	268		<i>54</i>	<i>"</i>	<i>3,5</i>	<i>1462</i>								22.560	4.474	
16	373		<i>49</i>	<i>"</i>	<i>1,4</i>	<i>1248</i>								43.700	8.702	4.292
17	518		<i>125</i>	<i>"</i>	<i>1,35</i>	<i>910</i>								84.290	16.820	8.351
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.390														121.400	60.620
21	1.930														234.000	116.900
22	2.680														451.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: *13-2-91*

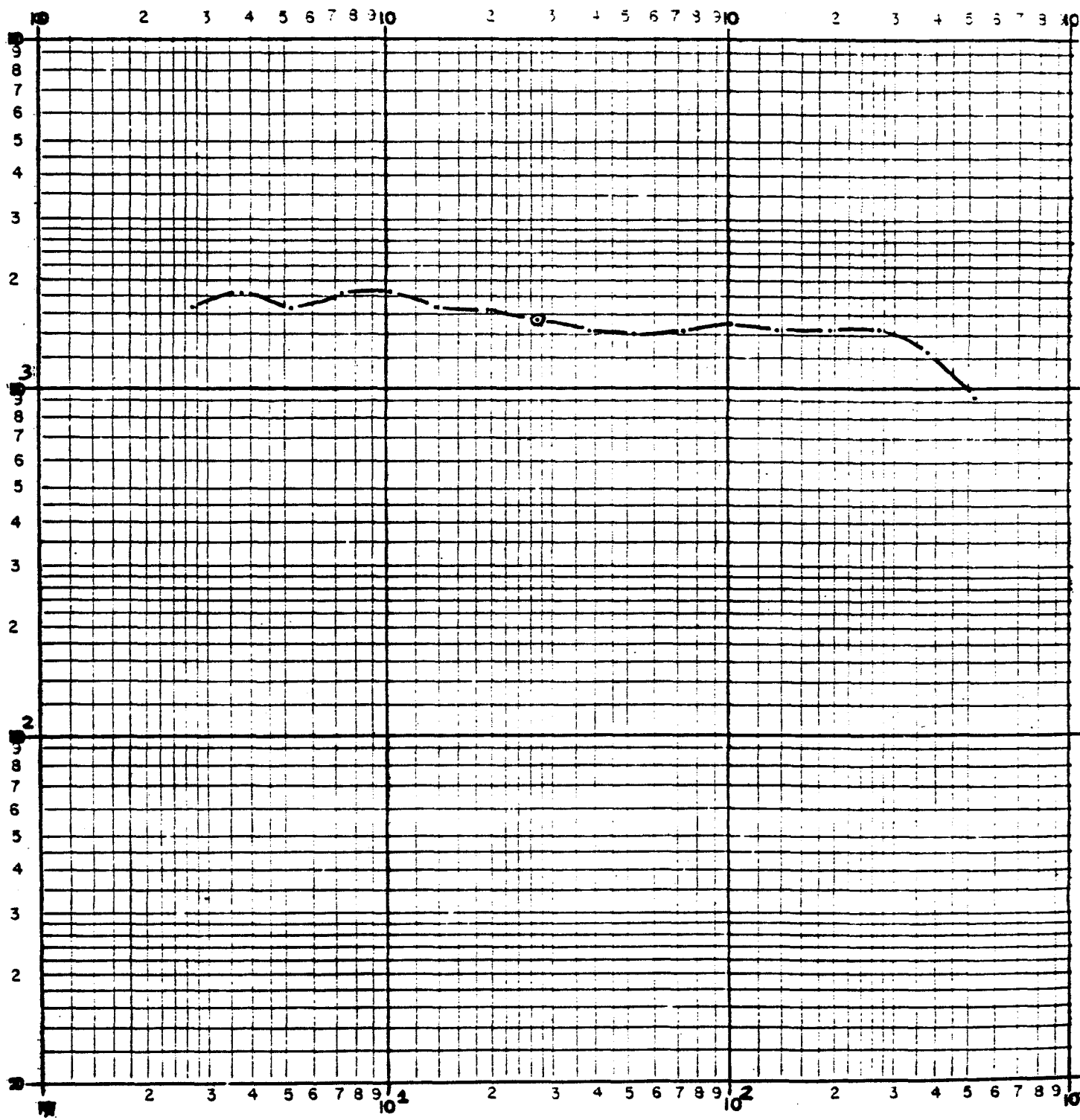


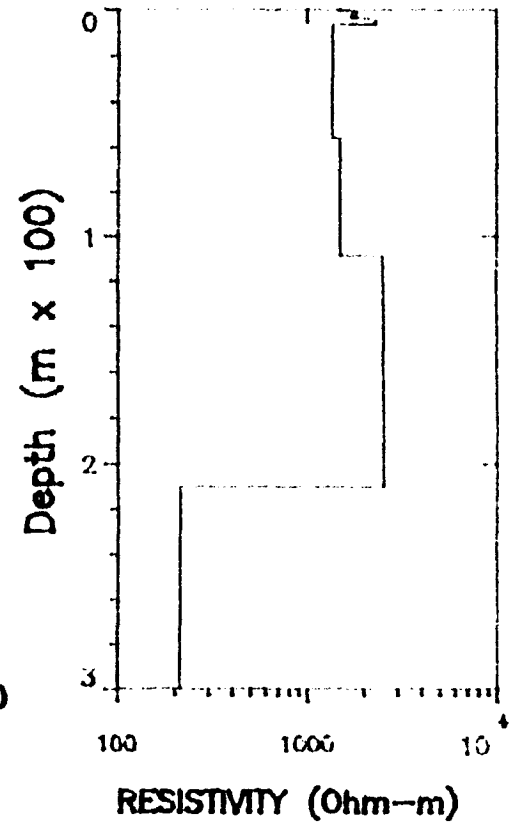
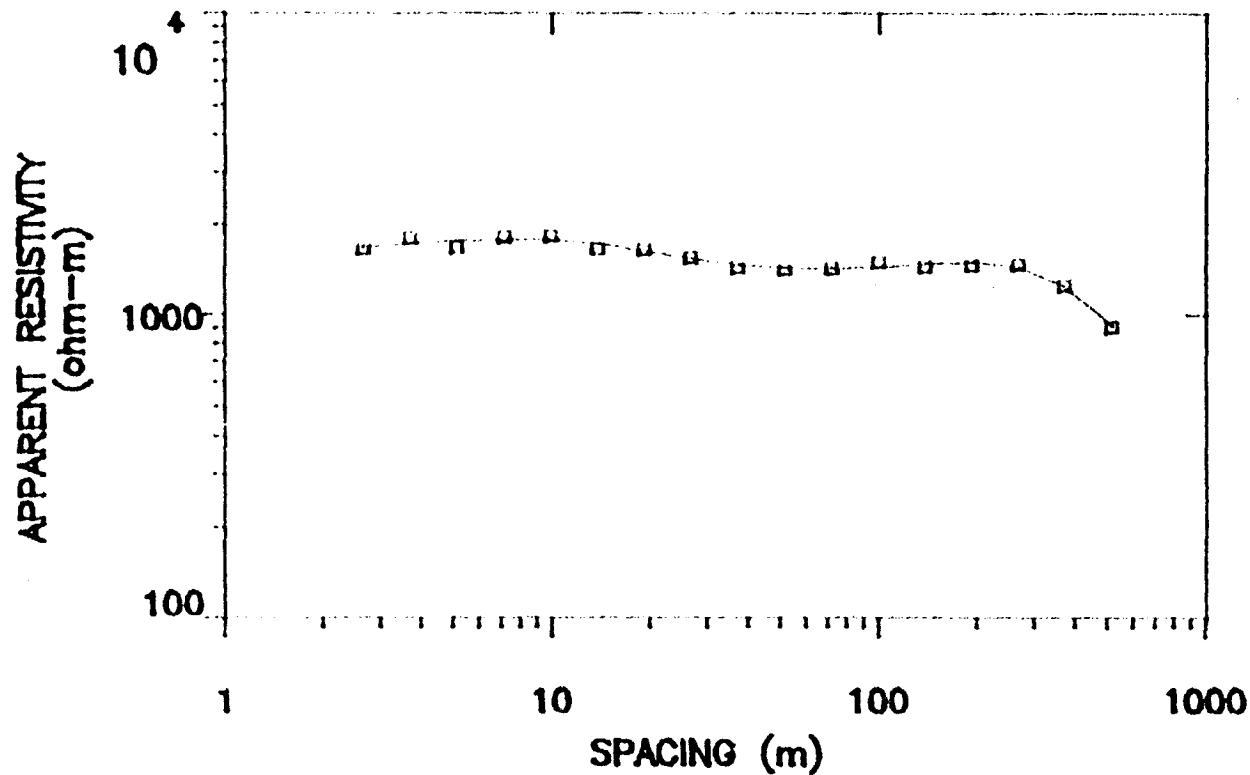
Departamento de Geofísica

Estudio *EL Sabioar* S.E.V. *41*

Fecha *13-2-91* ... Rumbo AB *N-58°-E* PERFIL *P-IX*

<p>Interpretación</p>	<p>Observaciones: <i>Calizas</i></p>
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for: ITGE		SEGURA
by: ADARO		
Data Set: 41IX	Date: 91	SABINAR (AB)
Equipment: ALARO	Sounding: 41IX	
		Azimuth: N-58-E

DATA SET: 42IX

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA

DATE: 91
 SOUNDING: 42IX
 AZIMUTH: N-46-E
 EQUIPMENT: ADARO

ELEVATION: 1115.00

SOUNDING COORDINATES: X: 583580.0000 Y: 4228980.0000

Schlumberger Configuration

FITTING ERROR: 4.028 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1115.0	
1	46.41		2.34	1112.6	0.0505
2	29.33		18.52	1094.1	0.631
3	40.69		6.92	1087.2	0.170
4	155.5		8.78	1078.4	0.0564
5	4041.3		44.14	1034.2	0.0109
6	9.74				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	FA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	43.60	43.94	-0.301
2	3.73	41.40	41.59	-0.479
3	5.18	39.80	38.42	3.44
4	7.20	34.70	35.23	-1.54
5	10.00	31.80	32.96	-3.67
6	13.90	33.30	32.12	3.53
7	19.30	32.70	33.02	-1.00
8	26.80	37.00	36.43	1.52
9	37.30	43.70	43.84	-0.339
10	51.80	54.80	56.80	-3.66
11	72.00	73.00	76.45	-4.73
12	100.0	99.70	103.1	-3.45
13	139.0	136.3	137.2	-0.626
14	193.0	190.7	178.0	6.64
15	268.0	238.1	222.3	6.62
16	373.0	276.0	262.0	5.05
17	518.0	263.0	282.3	-7.53

* ADARO *

PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER

P 1	0.99													
P 2	0.00	0.99												
P 3	0.01	0.02	0.07											
P 4	0.00	0.00	0.01	0.01										
P 5	0.00	0.00	0.00	0.01	0.49									
P 6	0.00	0.00	0.00	0.00	0.01	0.00								
T 1	0.03	0.02	-0.04	0.01	0.01	0.00	0.85							
T 2	-0.01	-0.01	-0.20	-0.08	-0.01	0.00	0.04	0.85						
T 3	0.00	0.01	-0.05	-0.02	0.00	0.00	-0.01	0.24	0.07					
T 4	0.00	0.01	-0.01	-0.01	0.00	0.00	-0.02	0.09	0.03	0.02				
T 5	0.00	0.00	0.00	0.00	0.49	0.01	0.00	0.00	0.00	0.00				
	P 1	P 2	P 3	P 4	P 5	P 6	T 1	T 2	T 3	T 4				

SECOND PART OF RESOLUTION MATRIX:

T 5	0.49
	T 5

*

ADARO

*



Proyecto:

Zona: *El Sabinar*

Observador: *Manuel Menchere*

Situación: *Sobre plana 1/50.000 n.º 889 de Moratalla*

COORDENADAS

X *583.580*

Y *4.228.980*

Z *1.115*

m V: *Adaro 01*
m A: *Geotron 328*

Rumbo AB
N-46°E

S.E.V.
42

Perfil:
P-IX

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER
SIMETRICO
MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2.68	/	32	100mV	64	43.6							21.78			
2	3.73		55	"	53	41.4							42.92			
3	5.18		63	"	30	39.8							83.51			
4	7.2		42	10mV	9.0	34.7							182.1			
5	10		64	"	6.5	31.8							313.4			
6	13.9		120	"	6.6	33.3							606.2			
7	19.3		100	"	2.8	32.7							1.189	206.8		
8	26.8		125	3mV	2.05	37	10	120	30mV	17.5	31.8		2.296	217.8		
9	37.3		120	"	1.2	43.7		120	"	11	39.3		4.370	429.2		
10	51.8	10	125	10mV	8.2	54.8							8.429	836.1		
11	72		120	"	5.4	73							16.890	1.621		
12	100		132	"	4.2	99.2							31.420	3.134		
13	139		120	"	2.7	136.4							60.700	6.062	1.175	
14	193		190	"	3.1	190.7								11.690	2.301	
15	268		180	"	1.9	236.1								22.560	4.474	
16	373		190	3mV	1.2	276								43.700	8.702	4.292
17	518		160	"	0.5	263								84.290	16.820	8.351
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.390														121.400	60.620
21	1.930														234.000	116.900
22	2.680														451.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: *14-2-91*

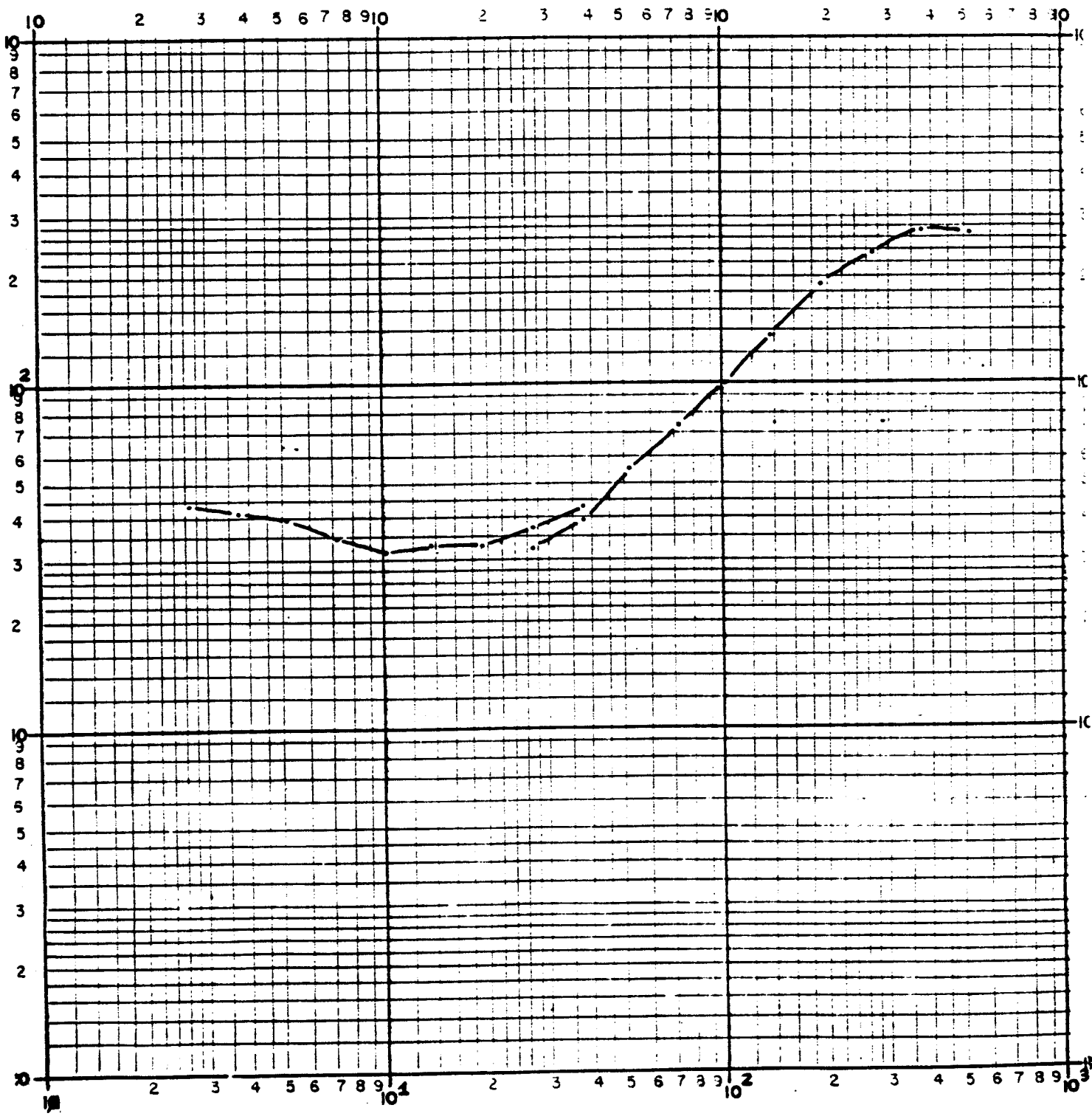


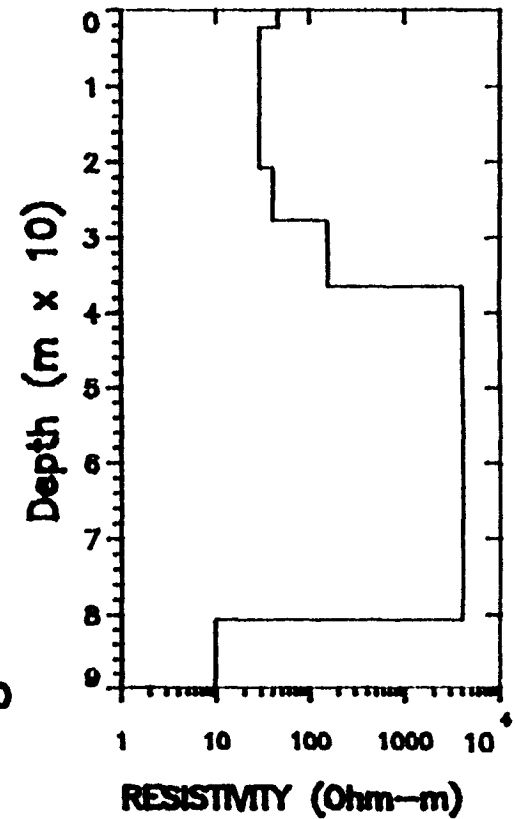
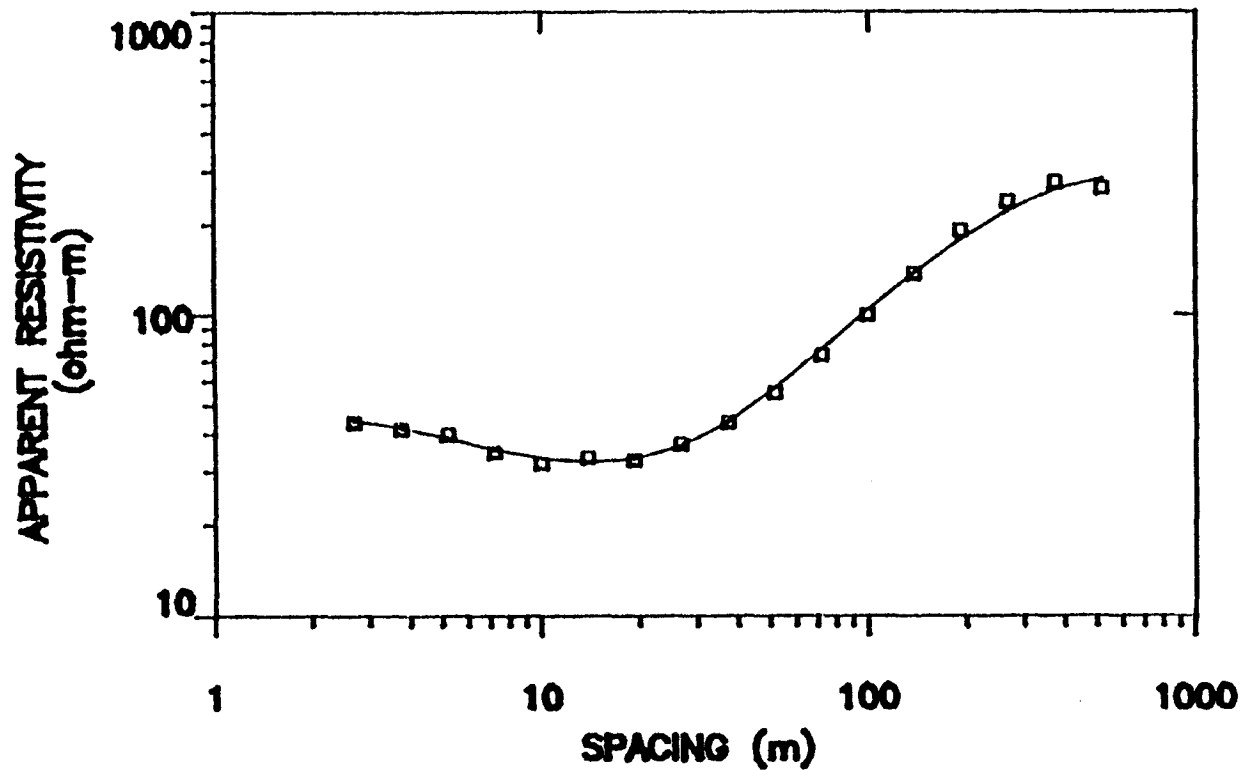
Departamento de Geofísico

Estudio *El Sabinar* S.E.V. *42*

Fecha *14-2-91* ... Rumbo AB *N-46°E* ... PERFIL *P-IX*

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Date Set: 42IX	Date: 91	
Equipment: ADARO	Sounding: 42IX	Azimuth: N-46-E

DATA SET: 44X

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1280.00

DATE: 91
 SOUNDING: 44X
 AZIMUTH: N-70-E
 EQUIPMENT: ADARO

SOUNDING COORDINATES: X: 584550.0000 Y: 4232725.0000

Schlumberger Configuration

FITTING ERROR: 1.368 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
1	52.48		3.90	1280.0	
2	135.8		39.46	1276.0	0.0743
3	53.27		149.6	1236.6	0.290
4	272.0			1086.9	2.80

ALL PARAMETERS ARE FREE

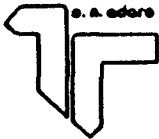
No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	5.18	61.26	61.09	0.278
2	7.20	69.06	68.74	0.465
3	10.00	76.67	79.06	-3.10
4	13.90	92.08	90.57	1.64
5	19.30	102.6	101.4	1.14
6	26.80	112.3	110.2	1.84
7	37.30	113.4	115.2	-1.67
8	51.80	112.4	114.8	-2.22
9	72.00	109.6	107.8	1.63
10	100.0	95.10	95.22	-0.128
11	139.0	82.30	82.15	0.172
12	193.0	75.00	75.27	-0.370
13	268.0	78.50	78.39	0.127
14	373.0	91.50	91.46	0.0397
15	518.0	111.5	111.5	-0.0189

PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER

*

ADARO

*



Proyecto:
 Zona: El Sabinar
 Observador: M. Ángel Mofuchero
 Situación: Sobre plano 1:50.000 n.º 889 de Moratalla

COORDENADAS

X 584.550
 Y 4.232.725
 Z 1.280

m V: Adaro 01
 m A: Geotron 328
 S.E.V. 44

Rumbo AB N-70°E
 Perfil: P-X

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2.68	/	44	300mV	13.5	66.8						Junto a pared de muelle Topografía muy irregular	21.78			
2	3.73		36	100mV	56	66.8							42.92			
3	5.18		70	"	54	64.4							83.51			
4	7.2		67	"	30	72.6							182.1			
5	10		70	30mV	18	80.6							313.4			
6	13.9		72	"	11.5	96.8							606.2			
7	19.3		65	10mV	6.0	107.9							1.169	109.2		
8	26.8		63	"	3.2	114.6	10	64	100mV	33	112.3		2.256	217.8		
9	37.3		66	"	1.8	119.2		67		17.7	113.4		4.370	429.2		
10	51.8	10	130	30mV	17.5	112.4							6.429	836.1		
11	72		105	10mV	7.1	109.6						16.290	1.621			
12	100		145	"	4.4	95.1						31.720	3.134			
13	130		140	"	1.9	82.3						60.700	6.062	1.176		
14	193		265	30mV	1.7	75							11.690	2.301		
15	268		250	"	0.87	78.5							22.560	4.474		
16	373		215	1mV	0.45	91.5							43.700	8.702	4.292	
17	518		310	"	0.41	111.5							84.290	16.820	8.361	
18	720												162.900	32.530	16.210	
19	1.000													62.790	31.340	
20	1.300													121.400	60.620	
21	1.930													234.000	116.900	
22	2.690													461.200	226.600	
23	3.730														437.000	
24	5.180														842.880	
25	7.200														1.628.520	
26	10.000														3.141.610	

OBSERVACIONES:

FECHA: 14-2-91

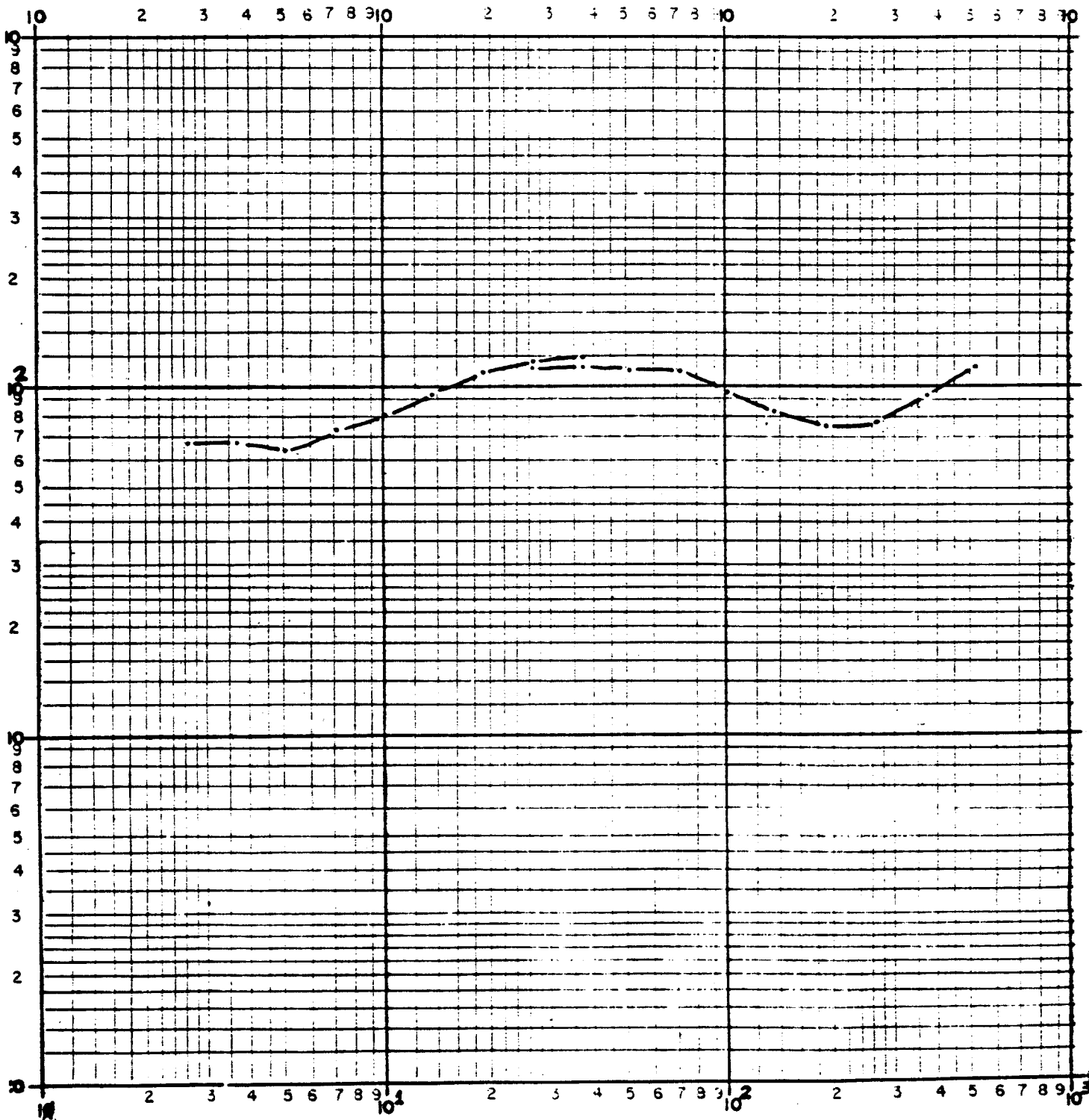


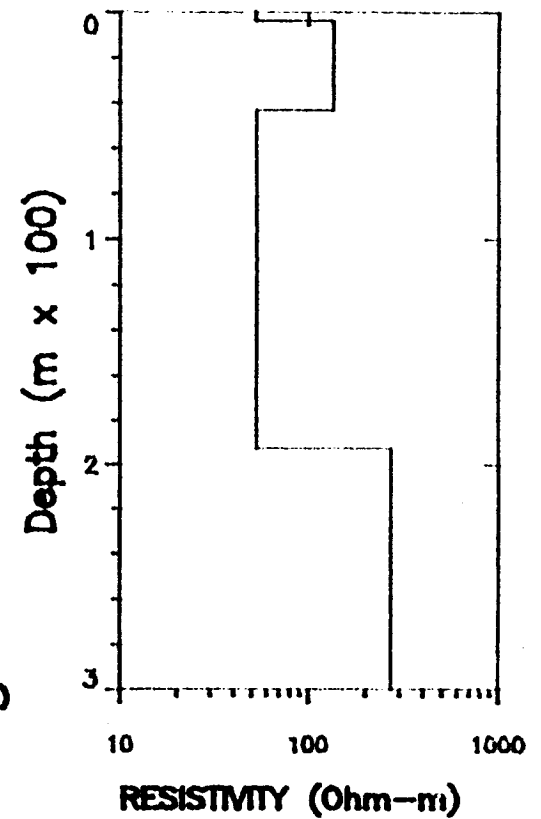
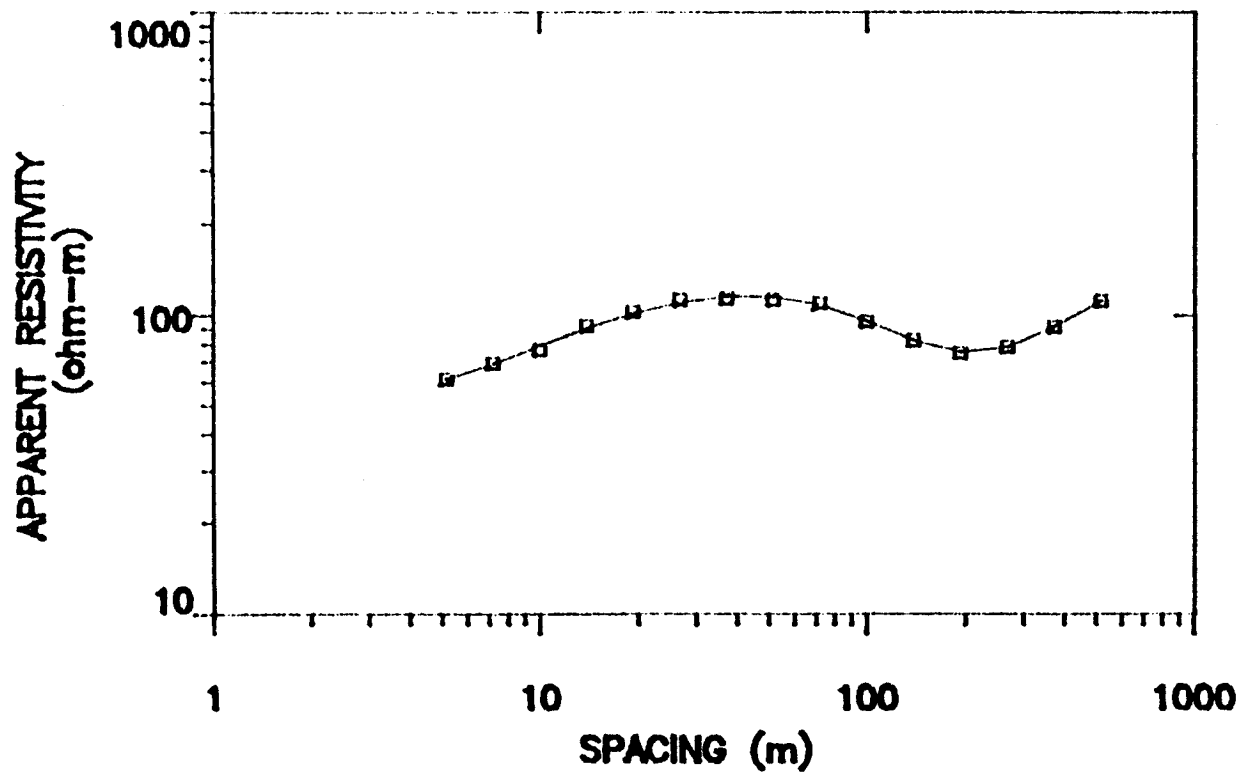
Departamento de Geofísica

Estudio El Sabinar S.E.V. 44

Fecha 14-2-91 Rumbo AB N-70°E PERFIL P-X

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		
Data Set: 44X	Date: 91	SABINAR (AB)
Equipment: ADARO	Sounding: 44X	
		Azimuth: N-70-E

DATA SET: 45X

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1295.00
 SOUNDING COORDINATES: X: 584210.0000 Y: 4231950.0000

DATE: 91
 SOUNDING: 45X
 AZIMUTH: N-95-E
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 2.664 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1295.0	
1	68.93		0.746	1294.2	0.0108
2	360.0		1.68	1292.5	0.00468
3	141.8		40.13	1252.4	0.283
4	408.7		68.24	1184.1	0.166
5	126.5		30.75	1153.4	0.242
6	8.36				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	150.0	149.8	0.110
2	3.73	172.0	171.7	0.152
3	5.18	162.0	165.5	-1.96
4	7.20	192.0	188.1	2.00
5	10.00	183.0	180.5	1.31
6	13.90	167.0	168.4	-0.863
7	19.30	154.0	158.1	-2.69
8	26.80	156.0	153.0	1.88
9	37.30	150.0	154.0	-2.70
10	51.80	167.0	161.8	3.07
11	72.00	180.0	176.8	1.75
12	100.0	194.0	194.7	-0.408
13	139.0	200.0	205.2	-2.62
14	193.0	189.0	195.2	-3.32
15	268.0	159.0	158.0	6.46
16	373.0	99.00	101.7	-2.73

* ADARO *

PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER

P 1	0.53												
P 2	0.05	0.66											
P 3	0.00	0.00	0.99										
P 4	0.00	0.00	-0.01	0.63									
P 5	0.00	0.00	0.00	0.06	0.01								
P 6	0.00	0.00	0.00	-0.02	0.01	0.05							
T 1	-0.48	-0.07	0.01	0.00	0.00	0.00	0.45						
T 2	-0.06	0.43	0.02	0.01	0.00	-0.01	0.07	0.38					
T 3	0.01	-0.01	-0.01	-0.16	0.03	0.02	0.01	0.04	0.90				
T 4	0.00	0.00	0.01	0.40	0.08	0.07	-0.01	-0.02	0.17	0.52			
T 5	0.00	0.00	0.00	0.05	0.01	0.02	0.00	-0.01	0.03	0.08			
	P 1	P 2	P 3	P 4	P 5	P 6	T 1	T 2	T 3	T 4			

SECOND PART OF RESOLUTION MATRIX:

T 5	0.01
	T 5



Proyecto:
 Zona: El Sabinar
 Observador: A. Sanvej. A. Menchero
 Situación: Sobre plano 1:50.000 n.º 889 de cofratalla

COORDENADAS

X 584.210
 Y 4.232.950
 Z 1.295

mV: Adaro 01
 mA: Geotron 328
 S.E.V. 45

Rumbo AB N-95°E
 Perfil: P-X

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ω m)	OBSERVACIONES	1 m	10 m	50 m	100 m
1	2.68	/	4.5	100mV	31	150						Con nieve.	21.78			
2	3.73		15	u	60	172							42.92			
3	5.18		16.5	u	36	182							83.51			
4	7.2		16.5	u	19.5	192							162.1			
5	10		125	u	73	183							313.4			
6	13.9		120	u	33	167							606.2			
7	19.3		95	30mV	12.5	154							1.169	109.2		
8	26.8		100		6.9	156	10	100	100mV	70	152		2.256	217.8		
9	37.3	10	110	100mV	38.5	150							4.270	429.2		
10	51.8		85	30mV	17	167							8.429	836.1		
11	72		90	u	10	180							16.890	1.621		
12	100		100	10mV	6.2	194							31.420	3.134		
13	139		100	u	3.3	200							60.700	6.062	1.175	
14	193		105	u	1.7	189								11.690	2.301	
15	268		180	30mV	1.35	169								22.560	4.474	
16	373		185	1mV	0.42	99								43.700	8.702	4.292
17	518		175	u	2.19	91								84.290	16.820	8.351
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.390														121.400	60.620
21	1.930														234.000	116.900
22	2.680														451.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: 13-2-91

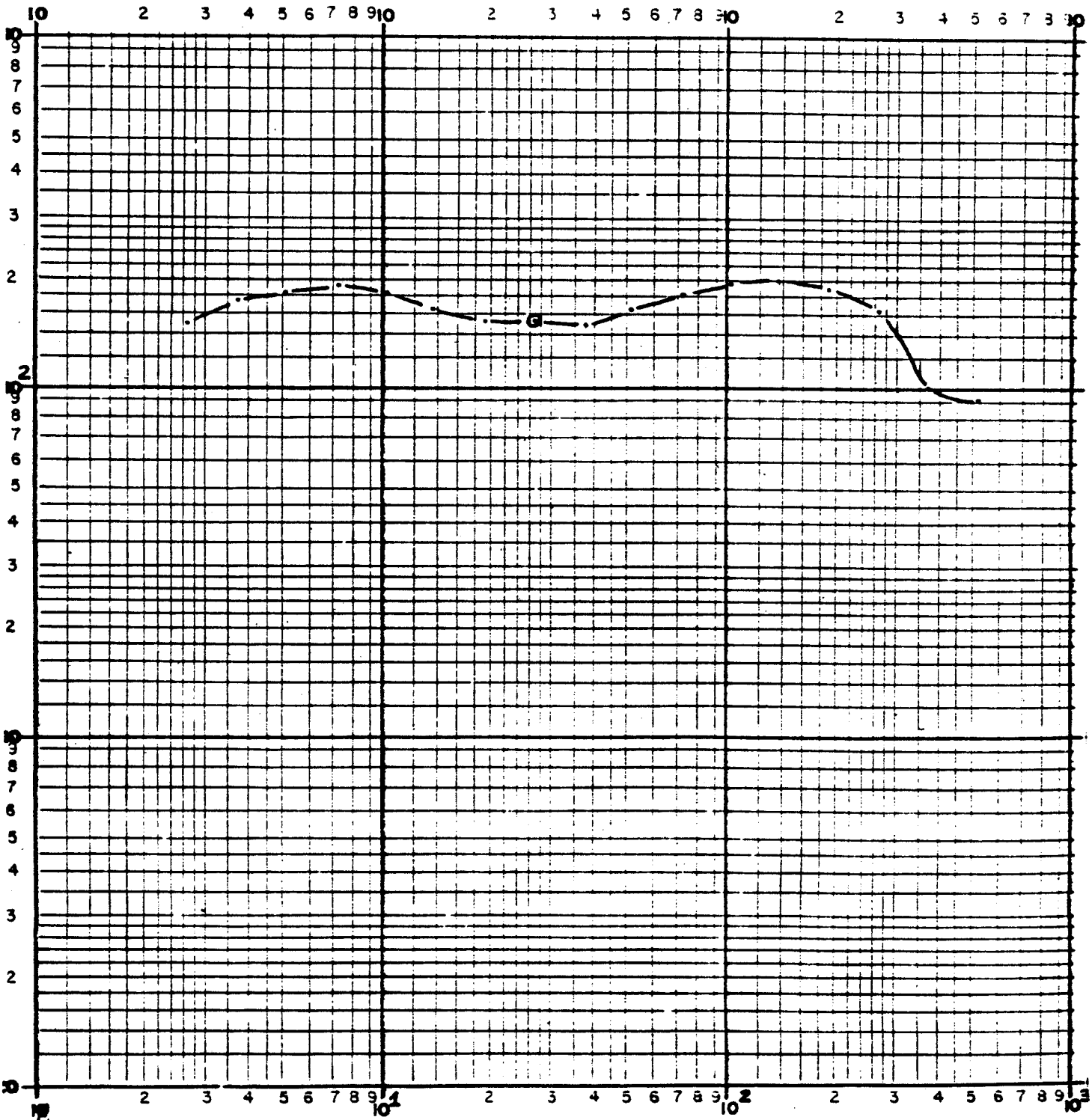


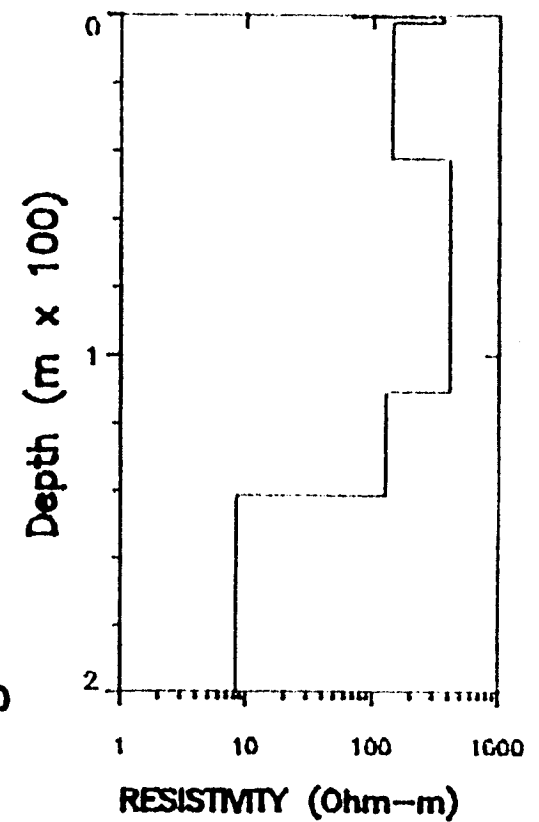
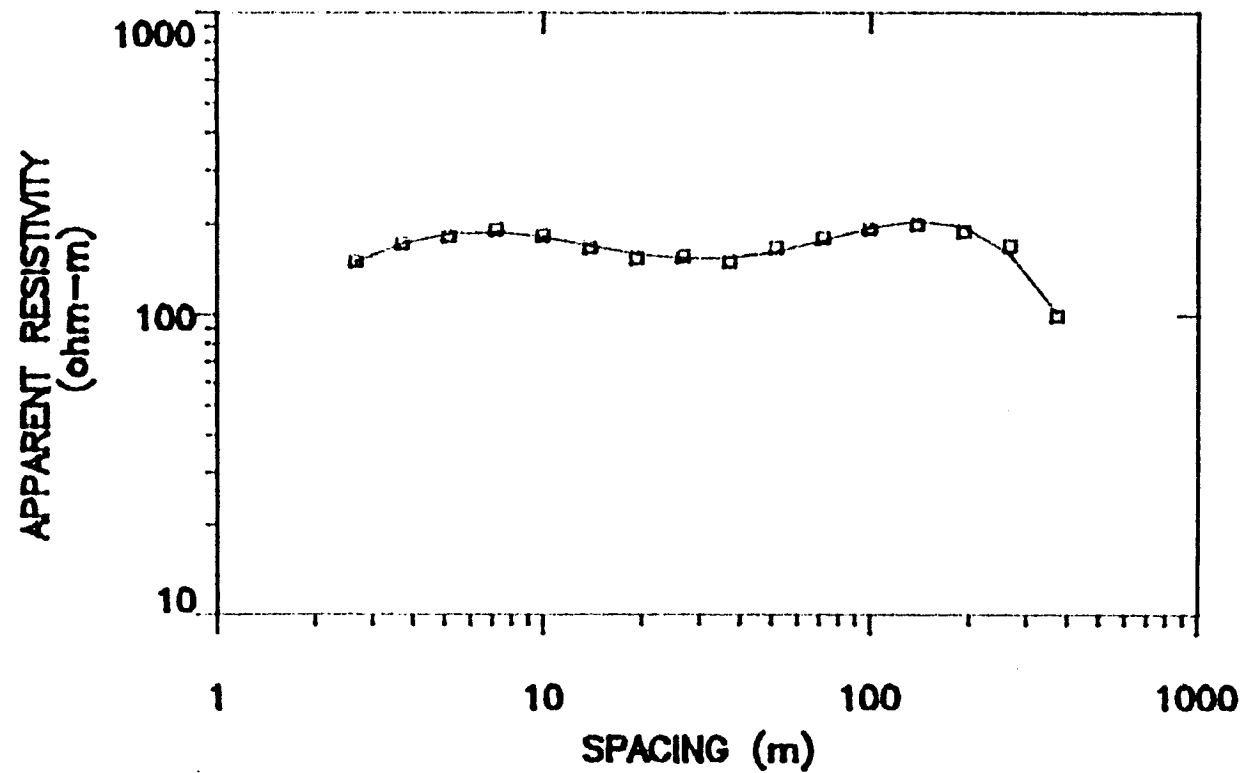
Departamento de Geodesia

Estudio *El Sabioz* S.E.V. *45*

Fecha *13-2-91* ... Rumbo AB *N-95°E* ... PERFIL *P-X*

<p>Interpretación</p>	<p>Observaciones:</p>
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for: ITGE		SEGURA
by: ADARO		
Data Set: 45X	Date: 91	SABINAR (AB)
Equipment: ADARO	Soundings: 45X	
		Azimuth: N-95-E

DATA SET: 46X

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1300.00

DATE: 91
 SOUNDING: 46X
 AZIMUTH: N-47-E
 EQUIPMENT: ADARO

SOUNDING COORDINATES: X: 584550.0000 Y: 4231400.0000

Schlumberger Configuration

FITTING ERROR: 2.376 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
1	129.8		1.92	1300.0	
2	165.3		4.78	1298.0	0.0148
3	100.6		4.78	1273.2	0.0288
4	281.0		18.58	1288.5	0.0474
5	1475.7		53.60	1269.7	0.0661
6	128.6			1216.3	0.0363

ALL PARAMETERS ARE FREE

No.	Spacing (m)	DATA	FA (ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	136.0	135.5	0.316
2	3.73	139.0	140.1	-0.798
3	5.18	145.0	145.2	-0.141
4	7.20	153.0	149.4	2.35
5	10.00	149.0	152.1	-2.12
6	13.90	154.0	155.9	-1.26
7	19.30	170.0	166.5	2.04
8	26.80	194.0	189.6	2.22
9	37.30	223.0	228.1	-2.28
10	51.80	272.0	281.5	-3.50
11	72.00	341.0	348.0	-2.07
12	100.0	418.0	417.6	0.0895
13	139.0	487.0	471.6	3.14
14	193.0	512.0	486.6	4.94
15	268.0	443.0	446.5	-0.800
16	373.0	347.0	357.3	-2.98
17	518.0	313.0	256.2	18.12

PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER

P 1	0.83												
P 2	0.11	0.74											
P 3	-0.05	0.18	0.30										
P 4	-0.01	0.01	0.21	0.31									
P 5	0.00	-0.01	0.00	0.08	0.48								
P 6	0.00	0.01	0.00	-0.02	0.14	0.10							
T 1	-0.11	-0.06	-0.01	-0.05	-0.01	0.01	0.04						
T 2	-0.02	0.11	-0.05	-0.15	-0.03	0.02	0.03	0.10					
T 3	0.02	-0.05	-0.21	-0.23	-0.02	0.01	0.03	0.09	0.19				
T 4	-0.01	0.03	-0.06	-0.22	-0.06	0.06	0.05	0.12	0.12	0.25			
T 5	0.00	0.00	-0.01	0.01	0.43	0.16	0.01	0.01	0.02	0.04			
	P 1	P 2	P 3	P 4	P 5	P 6	T 1	T 2	T 3	T 4			

SECOND PART OF RESOLUTION MATRIX:

T 5	0.41
	T 5

*

ADARO

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Proyecto:
 Zona: *El Sabinar*
 Observador: *M. Farve / M. Sanchez*
 Situación: *Sobre plano 1/50.000 n.º 889 de M. Soratalla*

COORDENADAS

X *584.550*
 Y *4.231.400*
 Z *1.300*

m V: *Adaro 01*
 m A: *Geotrou 328*
 S.E.V.

46

Rumbo AB

N-47°E

Perfil:

P-X

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	OBSERVACIONES	CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN			
													1 m	10 m	50 m	100 m
1	2,68	1	8,8	100mV	55	136						<i>Junto a pie de monte</i>	21,78			
2	3,73		10	"	32,5	139							42,92			
3	5,18		11,5	"	20	145							83,51			
4	7,2		36	"	34	153							182,1			
5	10		42	"	20	149							313,4			
6	13,9		102	"	26	154							606,2			
7	19,3		110	30mV	16	170							1.169	109,2		
8	26,8		100	10mV	8,6	194	10	100	100mV	86	187		2.256	217,8		
9	37,3	10	102	100mV	53	223							4.376	429,2		
10	51,8		95	"	31	272							8.429	836,1		
11	72		95	30mV	20	341						16.290	1.621			
12	100		105	"	14	418						31.420	3.134			
13	139		112	"	9,0	487						60.700	6.062	1.176		
14	193		105	10mV	4,6	512							11.890	2.301		
15	268		112	"	2,2	443							22.560	4.474		
16	373		195	30mV	1,55	347							43.700	8.702	4.292	
17	518		215	"	0,8	313							84.290	16.820	8.361	
18	720												182.900	32.530	16.210	
19	1.000													62.790	31.340	
20	1.390													121.400	60.620	
21	1.930													234.000	116.900	
22	2.680													461.200	226.600	
23	3.730														437.000	
24	5.180														842.880	
25	7.200														1.828.620	
26	10.000														3.141.510	

OBSERVACIONES:

FECHA: *13-2-91*

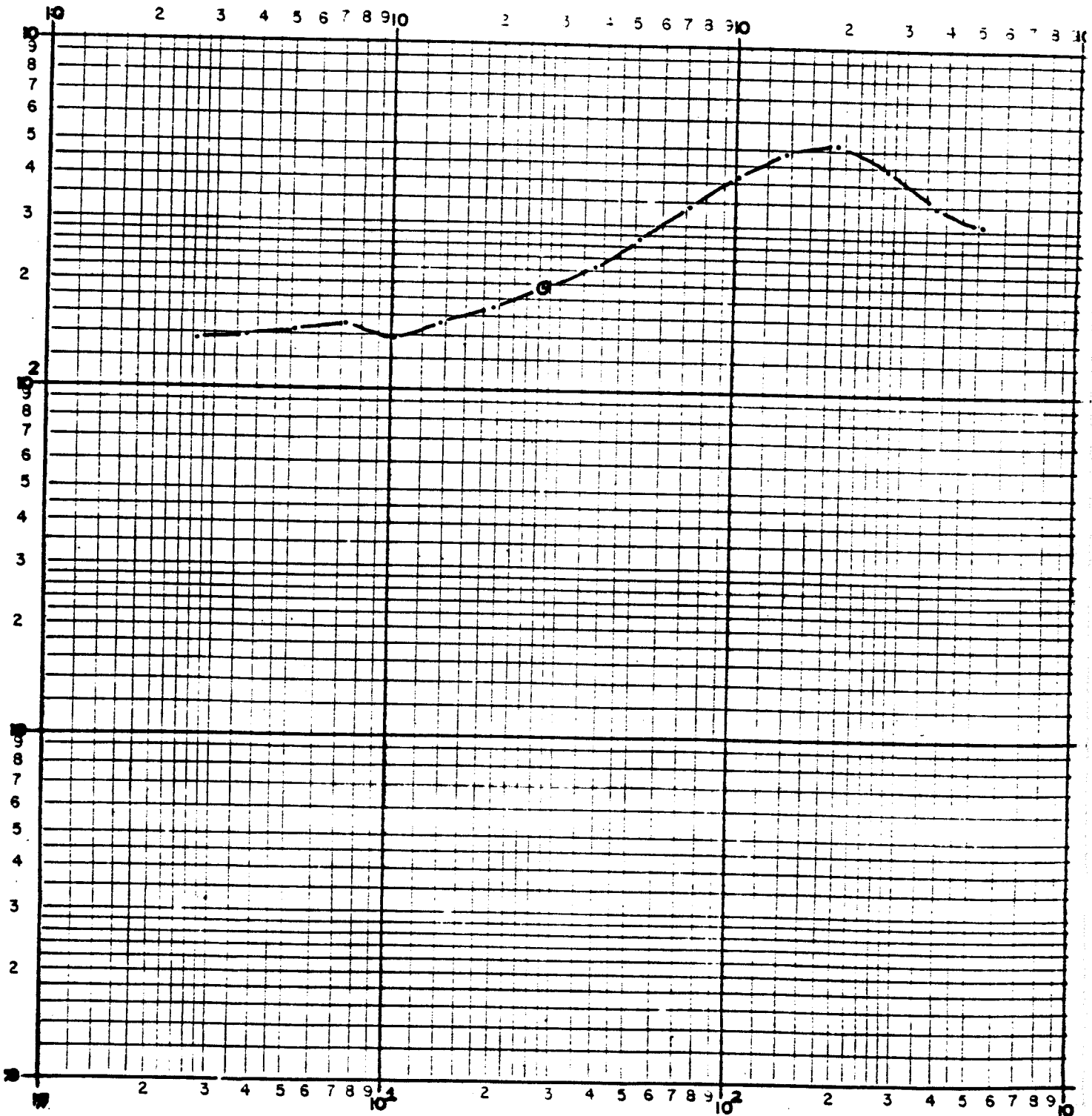


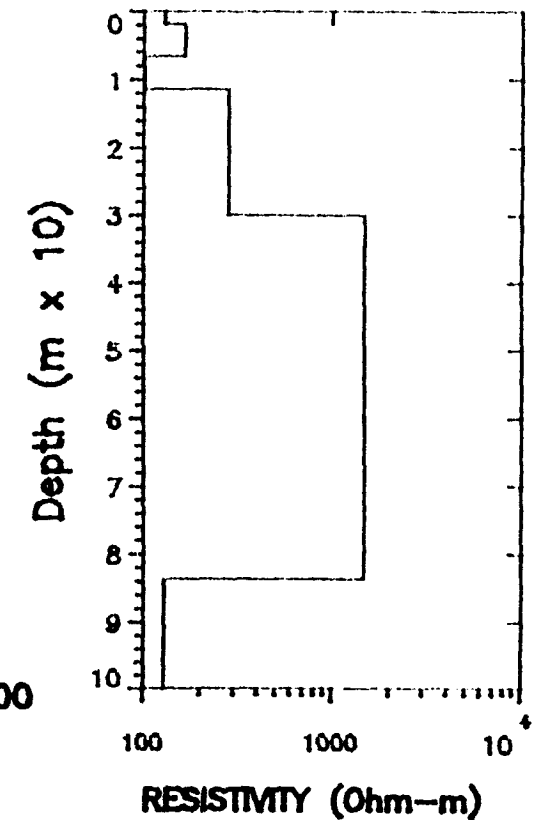
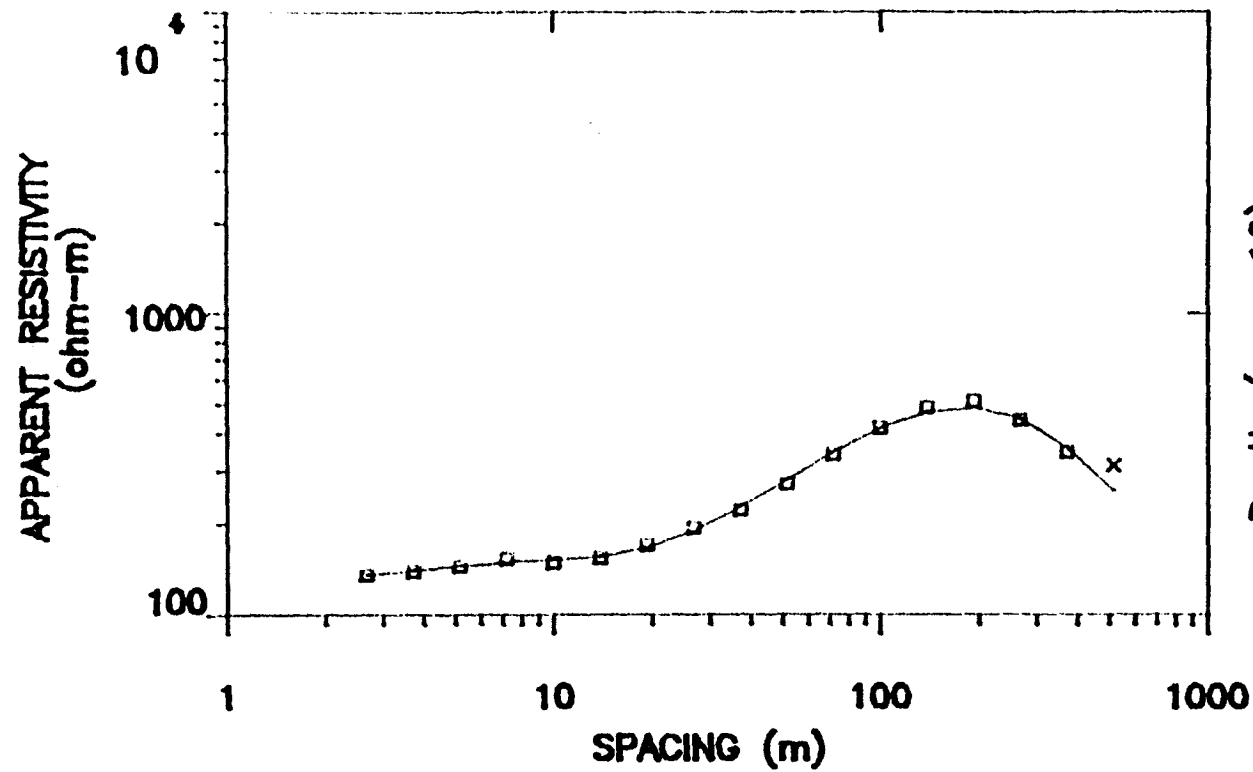
Departamento de Geofísica

Estudio *El Sabinar* S.E.V. *46*

Fecha *3-2-91* Rumbo AB *N-47°E* PERFIL *P-X*

Interpretación	Observaciones:
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for: ITGE	
by: ADARO	
Data Set: 46X	Date: 91
Equipment: ADARO	Sounding: 46X

SEGURA
SABINAR (AB)
Azimuth: N-47-E

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.38									
P 2	-0.05	0.72								
P 3	0.03	0.12	0.69							
P 4	0.00	-0.02	0.06	0.11						
P 5	0.00	0.00	-0.02	0.11	0.56					
T 1	0.30	0.18	-0.08	0.01	0.00	0.66				
T 2	0.01	-0.17	-0.19	-0.01	-0.02	0.06	0.11			
T 3	-0.01	0.07	-0.22	-0.21	-0.14	-0.03	0.03	0.47		
T 4	0.00	0.00	0.00	-0.05	-0.09	0.00	0.01	0.08	0.03	
	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4	



Proyecto:
 Zona: *El Sabinar*
 Observador: *Manuel Menchero*
 Situación: *Sobre plano 1/50.000 n.º 889 de Urcatalla*

COORDENADAS

X *585.450*
 Y *4.233.050*
 Z *1.230*

mV: *Adaro 01*
 mA: *Geotron 328*
 S.E.V. *47*

Rumbo AB
N-65°-E
 Perfil:
P-XI

CONSTANTES PARA DISPOSITIVO SCHULUMBERGER SIMETRICO MN

Estación	AB/2	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	MN	I (mA)	Esc. Volt.	V (mV)	ρ (Ωm)	OBSERVACIONES	SIMETRICO MN			
													1 m	10 m	50 m	100 m
1	2,68	1	13	100mV	42	70,4						<i>Niere, junto a la Aldea de Castilla</i>	21,78			
2	3,73		14	"	18	55							42,92			
3	6,18		54	"	25	38,7							83,51			
4	7,2		52	30mV	12	37,4							162,1			
5	10		54	10mV	6,7	38,9							313,4			
6	13,9		55	"	3,9	43							606,2			
7	19,3		120	"	4,8	46,8							1.169	109,2		
8	26,8		120	"	2,75	51,7	10	120		28	50,8		2.256	217,8		
9	37,3	10	115	30mV	16	59,7							4.370	429,2		
10	51,8		120	"	10,5	73,1							8.429	835,1		
11	72		115	10mV	6,4	90,2							16.299	1.621		
12	100		135	"	4,85	112,6							31.420	3.134		
13	139		135	"	3,2	143,7							60.000	6.062	1.175	
14	193		148	"	2,3	181,7								11.690	2.301	
15	268		170	3mV	1,6	212,3								22.560	4.474	
16	373		150	"	0,8	233,1								43.700	8.702	4.292
17	518		190	"	0,52	248,4								84.290	16.820	8.351
18	720													162.900	32.530	16.210
19	1.000														62.790	31.340
20	1.390														121.400	60.620
21	1.930														234.000	116.900
22	2.680														451.200	225.600
23	3.730															437.000
24	5.180															842.880
25	7.200															1.628.520
26	10.000															3.141.510

OBSERVACIONES:

FECHA: *13-2-91*

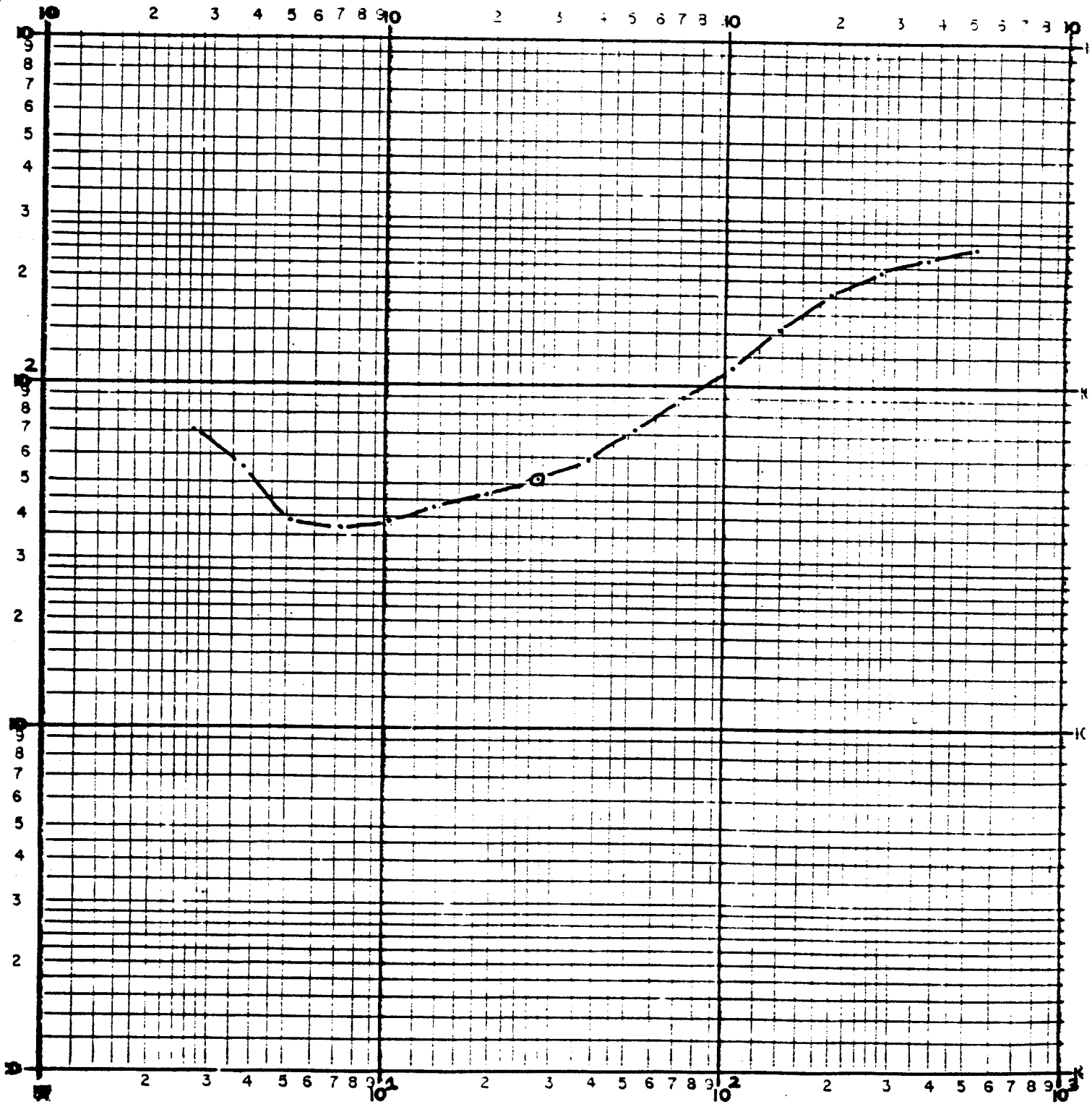


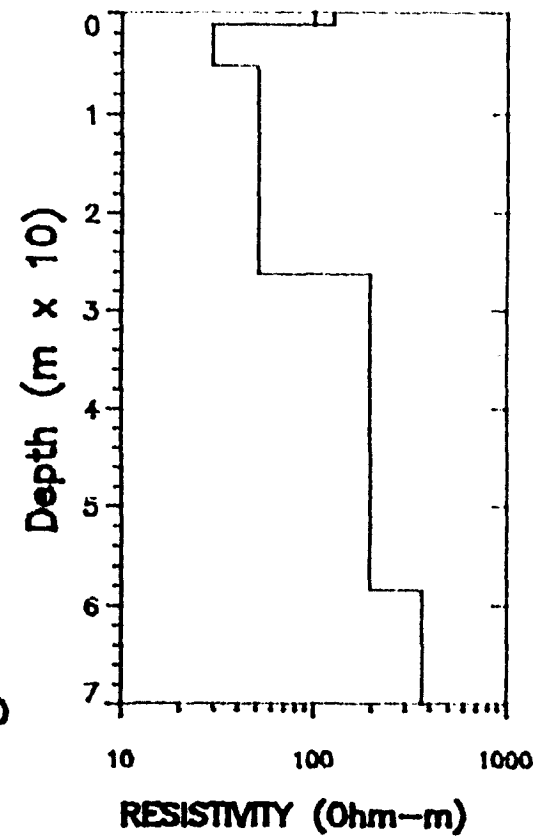
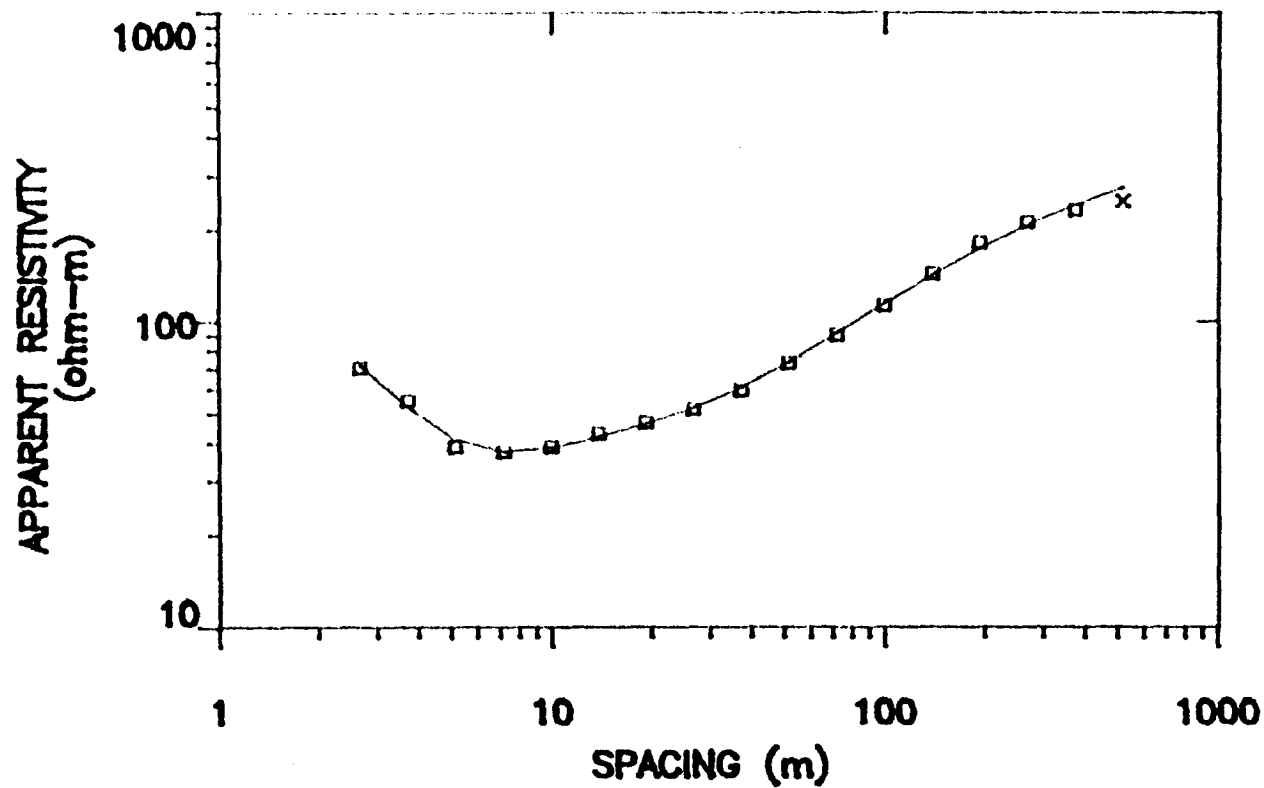
Departamento de Geofísica

Estudio El Sabinar S.E.V. 47

Fecha 13-2-91 Rumbo AB N-65°E PERFIL P-XI

Interpretación	Observaciones:
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for: ITGE		SEGURA
by: ADARO		SABINAR (AB)
Data Set: 47X1	Date: 91	Azimuth: N-65-E
Equipment: ADARO	Sounding: 47X1	

DATA SET: 11

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AR)
 PROJECT: SEGURA
 ELEVATION: 1270.00
 SOUNDING COORDINATES: X: 571790.0000 Y: 4229780.0000

DATE: 91
 SOUNDING: 11
 AZIMUTH: N-72-E
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 7.164 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (ofs)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (siemens)
1	123.8		0.820	1270.0	0.00663
2	299.8		10.03	1269.1	0.0341
3	1007.6		19.50	1239.5	0.0193
4	1020.5		22.43	1217.2	0.0219
5	32.77		121.1	1095.0	3.58
6	1020.8				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	DATA	FA (ohm-m)	SYNTHETIC	DIFFERENCE (percent)
1	2.58	153.6	199.5	199.5	-3.06
2	3.73	223.7	224.6	224.6	-0.409
3	5.18	259.7	247.9	247.9	4.57
4	7.20	283.7	270.1	270.1	4.79
5	10.00	298.1	294.3	294.3	1.24
6	13.20	318.2	327.1	327.1	-2.78
7	17.30	358.0	375.3	375.3	-4.83
8	22.80	413.6	440.0	440.0	-6.39
9	37.30	478.1	510.9	510.9	-6.97
10	51.80	539.7	565.3	565.3	-4.73
11	72.00	607.9	675.4	675.4	-5.34
12	100.0	614.5	516.0	516.0	16.02
13	139.0	415.7	387.3	387.3	5.95
14	193.0	227.1	238.6	238.6	-5.10
15	268.0	125.7	126.1	126.1	-3.31
16	373.0	99.90	107.1	107.1	-7.22
17	513.0	140.5	127.2	127.2	9.46

* ADARO *

PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER.

F 1	0.36																		
F 2	0.15	0.79																	
F 3	-0.03	0.05	0.36																
F 4	0.00	0.00	0.21	0.28															
F 5	0.00	0.00	-0.01	0.03	0.46														
F 6	0.00	0.00	0.00	0.00	0.04	0.01													
T 1	-0.26	-0.14	0.01	0.00	0.00	0.00	0.19												
T 2	0.03	-0.17	-0.22	0.07	0.03	0.00	-0.05	0.47											
T 3	0.00	0.00	0.13	0.23	0.04	0.00	0.00	0.10	0.21										
T 4	0.00	0.00	0.17	0.28	0.04	0.00	0.00	0.11	0.25	0.29									
T 5	0.00	0.00	0.01	0.00	-0.44	-0.04	0.00	0.00	0.00	0.00	0.00								
	F 1	F 2	F 3	F 4	F 5	F 6	T 1	T 2	T 3	T 4									

SECOND PART OF RESOLUTION MATRIX:

T 5	0.43
	T 5

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	1.00									
P 2	0.00	0.89								
P 3	0.00	0.07	0.87							
P 4	0.00	0.00	-0.01	0.50						
P 5	0.00	0.00	0.00	0.00	1.00					
T 1	0.01	0.11	-0.08	0.00	0.00	0.88				
T 2	0.00	-0.13	-0.16	0.00	0.00	0.08	0.11			
T 3	0.00	0.05	0.01	-0.02	0.00	-0.04	0.20	0.94		
T 4	0.00	0.00	0.01	0.50	0.00	0.00	0.01	0.02	0.50	
	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4	

PARAMETER RESOLUTION MATRIX:

"F" INDICATES FIXED PARAMETER

P 1	0.75								
P 2	-0.03	0.92							
P 3	0.02	0.05	0.14						
P 4	0.00	0.00	0.06	0.17					
P 5	0.00	0.00	0.02	0.13	0.11				
T 1	0.15	0.06	-0.03	0.00	0.00	0.81			
T 2	-0.02	-0.05	-0.24	-0.15	-0.05	0.03	0.44		
T 3	-0.01	-0.04	-0.15	-0.07	-0.02	0.03	0.25	0.15	
T 4	0.00	0.00	0.03	0.12	0.10	0.00	-0.07	-0.03	0.09
	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4

PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER

P 1	0.99								
P 2	-0.01	0.96							
P 3	0.00	-0.01	0.99						
P 4	0.00	0.01	0.01	0.42					
T 1	0.00	0.01	0.00	0.00	0.99				
T 2	-0.01	-0.05	-0.02	0.03	0.02	0.90			
T 3	0.00	0.02	0.04	0.42	-0.01	0.06	0.45		
	F 1	P 2	P 3	P 4	T 1	T 2	T 3		

* ADARO *

DATA SET: 22VI

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1255.00
 SOUNDING COORDINATES: X: 578210.0000 Y: 4232250.0000

DATE: 91
 SOUNDING: 22VI
 AZIMUTH: N-80-E
 EQUIPMENT: ADARO

Schlumberger Configuration

FITTING ERROR: 6.369 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1255.0	
1	327.3		1.42	1253.5	0.00436
2	1493.6		23.66	1229.9	0.0158
3	279.8		7.67	1222.2	0.0274
4	963.5		33.60	1188.6	0.0348
5	155.1		96.80	1091.8	0.623
6	604.1				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	505.6	489.0	3.29
2	3.73	574.6	597.2	-3.92
3	5.18	689.9	725.9	-5.21
4	7.20	868.1	864.2	0.449
5	10.00	1014.8	999.7	1.49
6	13.90	1173.8	1118.4	4.71
7	19.30	1276.0	1201.3	5.84
8	26.80	1247.0	1228.5	1.47
9	37.30	1145.0	1179.6	-3.02
10	51.80	931.0	1052.1	-13.01
11	72.00	856.0	878.3	-2.60
12	100.0	795.0	702.2	11.66
13	139.0	576.0	538.7	6.47
14	193.0	373.0	404.2	-8.38
15	268.0	313.0	333.6	-6.59
16	373.0	364.0	335.8	7.72
17	518.0	374.0	378.8	-1.29

* ADARO *

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.55										
P 2	0.03	0.84									
P 3	-0.01	0.04	0.07								
P 4	0.01	-0.02	0.03	0.36							
P 5	0.00	-0.01	-0.04	0.12	0.41						
P 6	0.00	0.01	0.01	-0.03	0.22	0.24					
T 1	-0.42	-0.09	0.02	0.01	-0.01	0.00	0.39				
T 2	-0.03	0.18	0.13	0.22	0.01	-0.02	0.09	0.43			
T 3	0.01	-0.03	-0.05	0.00	0.05	-0.02	-0.02	-0.08	0.05		
T 4	0.01	-0.03	-0.02	0.31	0.13	-0.05	-0.01	0.12	0.05	0.30	
T 5	0.00	0.00	0.01	-0.01	-0.30	-0.22	0.00	0.02	-0.01	-0.01	
	P 1	P 2	P 3	P 4	P 5	P 6	T 1	T 2	T 3	T 4	

SECOND PART OF RESOLUTION MATRIX:

T 5	0.26										
	T 5										

DATA SET: 27VI

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1135.00

DATE: 91
 SOUNDING: 27VI
 AZIMUTH: N-70-E
 EQUIPMENT: ADARO

SOUNDING COORDINATES: X: 579750.0000 Y: 4826450.0000

Schlumberger Configuration

FITTING ERROR: 4.548 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1135.0	
1	261.4		2.76	1132.2	0.0105
2	66.84		2.22	1130.0	0.0333
3	34.21		7.39	1122.6	0.216
4	123.2		31.44	1061.1	0.498
5	410.0		125.4	935.7	0.305
6	52.36				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	DATA	PA (ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	217.8	236.5	-8.62
2	3.73	217.1	209.4	3.53
3	5.18	172.0	167.8	2.43
4	7.20	130.0	119.4	8.09
5	10.00	74.80	80.10	-7.08
6	13.90	57.00	59.93	-5.14
7	19.30	58.40	57.49	1.54
8	26.80	68.00	64.97	4.44
9	37.30	77.10	76.39	0.919
10	51.80	89.90	89.17	0.811
11	72.00	103.0	103.3	-0.307
12	100.0	115.0	117.3	-4.21
13	139.0	135.0	139.8	-3.56
14	193.0	166.0	161.2	2.87
15	268.0	179.0	177.7	0.701
16	373.0	190.0	180.3	5.07
17	518.0	157.0	163.2	-3.98

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ADARO

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PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER

P 1	0.83										
P 2	-0.01	0.08									
P 3	-0.05	0.10	0.54								
P 4	0.02	0.01	0.11	0.61							
P 5	0.00	0.00	-0.03	0.10	0.46						
P 6	0.00	0.00	0.00	0.00	0.12	0.04					
T 1	0.11	0.22	0.09	-0.04	0.01	0.00	0.78				
T 2	-0.03	0.03	0.02	-0.06	0.01	0.00	0.10	0.04			
T 3	-0.01	-0.03	-0.32	-0.20	0.02	0.00	0.04	0.04	0.27		
T 4	0.00	0.00	0.05	-0.23	-0.10	0.02	-0.01	0.00	-0.01	0.25	
T 5	0.00	0.00	-0.01	0.02	0.55	0.11	0.00	0.00	0.01	0.01	
	F 1	F 2	F 3	F 4	F 5	F 6	T 1	T 2	T 3	T 4	

SECOND PART OF RESOLUTION MATRIX:

T 5	0.31
	T 5

PARAMETER RESOLUTION MATRIX:

"F" INDICATES FIXED PARAMETER

P 1	0.55								
P 2	0.03	0.77							
P 3	-0.02	-0.01	0.16						
P 4	0.01	-0.02	0.02	0.64					
P 5	0.00	0.00	0.00	0.02	0.02				
T 1	0.26	0.20	0.02	0.01	0.00	0.25			
T 2	-0.08	0.12	0.30	0.01	0.00	0.01	0.63		
T 3	0.01	-0.10	0.15	0.14	-0.02	0.06	0.21	0.39	
T 4	0.00	-0.02	0.00	-0.35	-0.07	0.01	0.02	0.12	0.51
	P 1	P 2	P 3	P 4	P 5	T 1	T 2	T 3	T 4

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ADARD

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PARAMETER RESOLUTION MATRIX:
 "F" INDICATES FIXED PARAMETER

P 1	0.60													
P 2	0.02	0.89												
P 3	0.01	-0.01	0.99											
P 4	0.00	0.00	-0.01	0.62										
P 5	0.00	0.00	0.00	0.09	0.02									
P 6	0.00	0.00	0.00	-0.02	0.01	0.97								
T 1	-0.45	-0.08	0.01	0.00	0.00	0.00	0.39							
T 2	-0.03	0.22	0.04	0.01	-0.01	-0.01	0.14	0.49						
T 3	0.02	-0.03	-0.03	-0.15	0.04	0.01	0.01	0.11	0.88					
T 4	0.00	0.00	0.01	0.42	0.10	0.04	0.00	-0.02	0.16	0.45				
T 5	0.00	0.00	0.00	0.03	0.01	0.02	0.00	-0.01	0.03	0.06				
	P 1	P 2	P 3	P 4	P 5	P 6	T 1	T 2	T 3	T 4				

SECOND PART OF RESOLUTION MATRIX:

T 5	0.01
	T 5

DATA SET: 45X

CLIENT: ITGE
 LOCATION: SABINAR
 COUNTY: (AB)
 PROJECT: SEGURA
 ELEVATION: 1295.00

DATE: 91
 SOUNDING: 45X
 AZIMUTH: N-95-E
 EQUIPMENT: ADARO

SOUNDING COORDINATES: X: 584210.0000 Y: 4231950.0000

Schlumberger Configuration

FITTING ERROR: 4.454 PERCENT

L #	RESISTIVITY (ohm-m)	CHARGEABILITY (pfe)	THICKNESS (meters)	ELEVATION (meters)	CONDUCTANCE (Siemens)
				1295.0	
1	76.94		0.781	1294.2	0.0101
2	295.1		2.38	1291.8	0.00807
3	137.6		37.46	1254.3	0.272
4	556.1		40.98	1213.3	0.0737
5	113.8		25.48	1187.9	0.223
6	13.65		49.73	1138.1	3.64
7	110.0				

ALL PARAMETERS ARE FREE

No.	Spacing (m)	PA DATA	(ohm-m) SYNTHETIC	DIFFERENCE (percent)
1	2.68	150.0	150.1	-0.0853
2	3.73	172.0	171.1	0.487
3	5.18	182.0	185.1	-1.73
4	7.20	192.0	188.5	1.79
5	10.00	183.0	181.3	0.876
6	13.90	167.0	168.6	-1.00
7	19.30	154.0	157.2	-2.13
8	26.80	156.0	151.6	2.32
9	37.30	150.0	153.2	-2.18
10	51.80	167.0	163.1	2.32
11	72.00	180.0	180.3	-0.184
12	100.0	194.0	198.1	-2.13
13	139.0	200.0	204.1	-2.08
14	193.0	189.0	187.9	0.544
15	268.0	169.0	150.9	10.70
16	373.0	99.00	109.5	-10.67

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ADARO

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No.	Spacing (m)	DATA	PA (ohm-m) SYNTHETIC	DIFFERENCE (percent)
17	518.0	91.00	84.69	6.92

PARAMETER RESOLUTION MATRIX:
"F" INDICATES FIXED PARAMETER

P 1	0.56										
P 2	0.03	0.80									
P 3	0.01	-0.01	0.99								
P 4	0.00	0.00	0.00	0.55							
P 5	0.00	0.00	0.00	0.07	0.01						
P 6	0.00	0.00	0.01	0.02	0.02	0.19					
P 7	0.00	0.00	0.00	-0.02	0.02	0.29	0.66				
T 1	-0.46	-0.09	0.01	0.00	0.00	0.00	0.00	0.42			
T 2	-0.06	0.32	0.03	0.00	0.00	-0.02	0.00	0.12	0.42		
T 3	0.02	-0.02	-0.02	-0.10	0.02	0.04	-0.01	0.01	0.07	0.93	
T 4	0.00	0.00	0.00	0.47	0.07	0.05	-0.02	0.00	-0.01	0.10	
T 5	0.00	0.00	0.00	0.05	0.01	0.00	-0.03	0.00	0.00	0.02	
T 6	0.00	0.00	-0.01	-0.01	-0.02	-0.19	-0.30	0.00	0.01	-0.03	
	P 1	P 2	P 3	P 4	P 5	P 6	P 7	T 1	T 2	T 3	

SECOND PART OF RESOLUTION MATRIX:

T 4	0.46		
T 5	0.05	0.01	
T 6	-0.03	0.01	0.18
	T 4	T 5	T 6